An Coimisiún um
Rialáil Cumarsáide
Commission for
Communications Regulation

# Migration from Legacy Infrastructure to Modern Infrastructure

## Submissions to Call for Inputs

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**An Coimisiún um Rialáil Cumarsáide**
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alto

alternative operators in the communications market

# Call for Inputs – Migration from Legacy Infrastructure to Modern Infrastructure - Ref: 21/78

## Submission By ALTO

**Date: September 14th 2021**

ALTO is pleased to respond to the Call for Inputs on the Migration from Legacy infrastructure to Modern Infrastructure – Ref: 21/78.

ALTO welcomes this opportunity to comment on this Call for Inputs.

ALTO's role and engagement on this subject is so critical that in July 2021 we commissioned an independent paper entitled:

> "*Towards an orderly, fair and efficient "copper switch-off" (CSO) process in accordance with Article 81 of EECC*"

We append a copy of the paper together with this submission to ComReg.

**Preliminary Remarks**

It is essential that the 'Copper Switch-off' ("**CSO**") process is orderly, fair and efficient. The paper, which ALTO have commissioned, outlines a set of key principles to ensure this.

While the Eircom white paper centres the concerns of investors, ALTO is of the view that it is consumers, and in particular vulnerable consumers who must be at the heart of this process.

Transparency, communication and fairness must therefore be placed to the forefront, while ensuring that both the benefits and costs of transition are distributed equitably.

The complexity of migrating customers from copper to fibre should not be underestimated. A critical first step in this process will therefore be collaborative engagement between Eircom and Other Alternative Operators ("**OAOs**"). This should be instigated by ComReg, in accordance with Article 79 of the European Electronic Communications Code ("**EECC**"). The forums that were used in 2013 at

the time of the introduction of fibre by Eircom provide a good historical precedent of how this process could be best managed.

Transparency will be a crucial component of any successful CSO process. ComReg must ensure, for example, that Eircom provide accurate information in their Advanced Prequal ("**APQ**") file that OAOs can rely on. The reality is that what is currently provided in this regard is not fit for purpose and would be grossly inadequate in the context of what CSO potentially entails.[1]

Transparency is also required with the regard to the costs of migration and as to where this burden should fall. The Eircom White Paper approach on this issue can best be described as '*all stick, no carrot*' with OAOs, and ultimately, consumers expected to shoulder a clearly excessive cost burden, both when it comes to maintaining their existing service and when migrating to Fibre to the Home ("FTTH"). This is proposed, despite the fact that Irish customers already face amongst the highest broadband costs in Europe. For CSO to be a success, an entirely different approach will have to be taken, with OAOs – and consumers – incentivised to migrate to FTTH, on terms that work for all market participants, including, most importantly, consumers.

A well-managed communications process will also be critical to CSO's success. To this end, it is imperative that OAOs communicate with their own customers regarding any potential migration process. It is clearly inappropriate that such communications would be managed by Eircom and any such approach would likely be both confusing and ineffective. As noted in the previous paragraph, consideration also needs to be given to how customers are encouraged to transition to modern infrastructure. If the overall goal is to achieve this speedily, then the communications process with these customers must focus on positively incentivising them to make the move. Clearly,

[1] We would note, for example, that in March 2021 Eircom announced that they had passed 820k homes with FTTH. In June 2021 however, this figure stood at 675k. The CSO process simply will not work if issues such as this are not addressed.

the simplest way of doing this will be for migration to be made as attractive as possible, both financially and logistically.

Special consideration must also be given to that subset of customers who are both vulnerable and/or who potentially face a particularly complex migration journey (or potentially do not have a journey available to them at all). It is imperative that nobody left is behind by this process. Indeed, there is a risk that should it be designed in such a way that this is even a possibility, then the process itself may undermined.

It is quite clear to ALTO that business products are in scope, yet there is very little detail at this stage about which business products are in scope.[2] We require clarity around which products will be impacted by CSO and the proposed timings applicable. Similarly, ALTO members operating in the business markets will need greater clarity about the timing of each stage of migration, having that information in advance and in a structured manner, with sufficient time to assess, inform, plan migration and then ultimately migrate customers.

Specialised business services which need to be considered which may be impacted by switch off, for example, back-up lines, lift lines, POS lines, and out-of-band modems, etc.

The attached paper, which has been commissioned by ALTO and prepared by RegOpp covers all of the above issues, and much more besides.

We trust that our submission will be useful contribution to the CSO process.

ALTO will not be addressing each Consultation Question posed in the ComReg Call for Input paper.

[2] We suggest that ComReg accept this as an answer to Question 14 concerning differentiated handling of the business-to-business market in so far as this issue must be fully considered and planned by all market stakeholders.

We believe that the ALTO commissioned RegOpp paper does more than address the issues raised by ComReg and should widen the collective industry thinking on this subject.

ALTO makes itself available to ComReg in relation to its forthcoming Consultation and deliberations on the subject of CSO.

**ALTO**

**14th September 2021**

**Appendix:** "*Towards an orderly, fair and efficient "copper switch-off" (CSO) process in accordance with Article 81 of EECC*"

# Towards an orderly, fair and efficient "copper switch-off" (CSO) process in accordance with Article 81 of EECC

Paper prepared for ALTO

July 2021

## Contents

# 1. Executive Summary

An **orderly, fair and efficient** approach to CSO can deliver benefits to all stakeholders in the Irish market. Establishing its optimal path may be best facilitated through stakeholder engagement leading to cooperative arrangements subject to the associated procedural requirements under the Code. Whatever route is taken, however, before final implementation can occur a thorough analysis of the markets and services impacted by CSO will be necessary to ensure the interests of competition and rights of end-users are catered for in way that maximises benefit in terms of **price, choice and quality**.

**Safeguarding competition and the rights of end-users** lies at the heart of the enabling migration from legacy to upgraded infrastructure under Article 81 of the Code[1]. The process and conditions under which migration is facilitated under Art 81 should therefore, always be informed by both. Under the Code, ComReg has a statutory duty to "ensure" that it delivers on those requirements as part of any "copper-switch off" (CSO) associated with Eircom services that are currently subject to regulation. **New or amended regulatory obligations** on services in markets impacted by CSO (and where Eircom has SMP) may well be required before ComReg can ascertain that the appropriate "conditions" exist that would allow it to proceed with the withdrawal of existing obligations on the services supported by the legacy infrastructure. The imposition, amendment or withdrawal of such obligations can only occur following public consultation and subject to the notification procedures under the Code (*see **Section 3***).

Apart from focussing on the benefits of higher speeds, from a thematic perspective the interests of competition and end-users do not feature heavily in the Eircom "white paper" ("the Eircom Paper"), which claims to be a notice in accordance with Art 81 (1)[2] of the Code. Proposals for transition/migration contained therein range from "incentivising" migrations through **the imposition of higher prices**, **to service cessation** where migration has not occurred quickly enough. There is no consideration given to the treatment of the potentially significant costs other authorised operators (OAOs) would incur in facilitating CSO – much of which is likely to get passed on to consumers. Based on reasonable and conservative assumptions under Eircom's proposed approach, this paper estimates that broadband bills for the current FTTC customer base alone would increase by more than **€45m** per annum with an additional **€60m** in upfront connection/migration wholesale charges also likely to hit customers' monthly bills (*see **Section 5.1***).

Such an outcome could potentially have a material and detrimental impact on competition and end-users. In contemplating this prospect, it is worth noting Irish retail consumers are already on the receiving end of among the worst deals from a broadband pricing perspective in Europe (Ireland currently ranks **27th out of 28** on the EC DESI[3] for broadband pricing). Consequently, any approach that leads to a further deterioration in that performance for Irish consumers should be avoided. It is worth noting that Eircom's owners in France under the 'Free' brand offer free connections to upgrade customers from copper to fibre in facilitating the transition from legacy to fibre services (see **Section 6 (D)**). It is also important to note that there is currently no evidence to support the presumption in Ireland that a **cost oriented FTTH price** should necessarily be higher than the current FTTC price and

[1] European Electronic Communications Code
[2] The report does not comment on the legal status of such a notification (published in March 2021) in the absence of the Code being transposed into Irish law.
[3] European Commission's Digital Economy and Society Index

with the possible exception of the footprint covered by the SIRO network, there is a strong *prima facie* case for such an obligation being imposed as a perquisite to any FTTC CSO (*see* ***Figure 8***).

With cost oriented FTTC prices in Ireland due to fall further for reasons outlined in the **Access Network Review** (ANR), it is difficult see how any policy that forces customers on to much higher priced alternatives or being hit with a "penalty" to encourage migration would be consistent with the specific provisions of Art 81 or indeed, with the general objectives of the Code or the Irish Communications Regulations Act 2002 ("the Act").

In any event, conditions for CSO as it relates to FTTC should have regard to **the unique status of FTTC as a "next generation" (NGA) service in its own right**. While the Code does promote transition to "*very high-capacity networks*" (VHCNs) as a general objective, Art 81 (and its supporting Recital) deliberately avoids any reference to VHCNs where transition from CGA to FTTC is itself a category of network upgrade contemplated by Art 81. The treatment of FTTC is probably the most important and potentially contentious issue in the context of CSO and is dealt with extensively in **Section 5**.

One of the key challenges ComReg will face in relation to CSO notifications will be in appraising Eircom's legitimate arguments for CSO e.g., realising efficiencies associated with operating a single network on the one hand, with its incentive to **exploit the opportunity to lessen or remove regulatory obligations** for other reasons e.g., to push customers on to higher priced services (*see* ***Section 4.1.2***). Establishing Eircom's *bona fides* in relation to CSO plans can be informed by its behaviours in the market where it has options to progress the CSO agenda through the choices it is free to make even where it subject to regulation. For example, continuing to promote bundled services that rely on copper and fibre connections (POTS FTTH) or committing to operate WLR service for another 6-7 years (free of regulation) are not policies or proposals consistent with efficiency arguments being advanced in the Eircom Paper.

To assist in informing ComReg on this issue and in fulfilling its statutory duties under Art 81, promoting or even mandating Eircom-OAO engagement with a view to achieving consensus via "cooperative arrangements" under Art 79 should be considered. ComReg can only consider imposing binding commitments (offered up voluntarily) on Eircom after it has conducted a "market test" on those commitments under Art 79 (2). The prospect of stakeholder support during this procedural phase would be greatly enhanced **if commitments offered are achieved through consensus and cooperative arrangements**. It is worth recalling that this approach to consensus building was instrumental in facilitating the orderly introduction of Eircom's FTTC and FTTH services in 2013.

Such a process ought to balance the benefits Eircom derives from CSO with the disruption it is likely to have on RSPs/OAOs and their customers. While it should be acknowledged that migrated customers are likely to benefit from better "quality" service assuming an orderly CSO process, the extent to which their rights are maintained in relation to "price and choice" are equally important considerations. Creating the right incentives for CSO, including through compensation for OAOs and/or customers, should factor into ComReg's considerations.

Such an outcome would also recognise OAOs contribution to the fact that Eircom's **€400m** investment in FTTC is set to have returned **€1bn** in wholesale charges alone by the end of 2021 with almost half the networks useful asset life yet to be exploited. Taking into account ComReg's own analysis that OAOs overpaid for FTTC services[4] for years, being forced off that network early through CSO while simultaneously having to incur the cost of transition would be inherently unfair and unreasonable. In a 2016 Call for Inputs ("Transition CFI") on this topic, ComReg proposed a principle that OAOs **should**

[4] A position supported by ComReg's analysis re "excessive returns" in D11/18

**not have to incur significant cost in relation to CSO**. Adopting such a principle as a condition of CSO under Art 81 would be both fair and reasonable.

The same Transition CFI noted that irrespective of what approach was adopted with respect to CSO that it should only proceed after conducting **trials at an exchange level**. This approach would greatly assist in ensuring the integrity (or gaps therein) of the proposed migration processes implemented pursuant to Art 81. Trials will allow all stakeholders to ascertain that everything is working as it should and would be consistent with the transparency principle at the heart of Art 81.

While value can be derived from understanding approaches to CSO developments in other countries, care needs to be taken to avoid "*cherry picking*" aspects of particular countries' policies without a full appreciation of the underlying market conditions that informed those policies. In this regard it is notable that the Eircom Paper advances a case from the UK for increased legacy network prices to send "signals" to legacy service customers but fails to mention the regulatory counterbalance that seeks to protect these customers in mandating a cost oriented FTTH "equivalent service" where FTTC is retired.

In addition to detailed 'relevant market' analysis that will have to be carried out in advance of CSO, ensuring accurate information in Eircom's Advanced Prequal (APQ) file, defining what is meant by service "availability", treatment of non-standard migration orders (e.g. blocked ducts) and the removal of copper assets following CSO **are just a sample of critical operational issues that must be accounted for** in establishing terms and conditions for an appropriate CSO process.

**This paper concludes that if an orderly, fair and efficient CSO process is to be realised it should incorporate at least the following principles:**

- **Be assessed in the context of the specific markets and services within those markets impacted by the proposals – a broad brush "copper to fibre" approach that takes no account of specific markets/services should be avoided**
- **Take account of and cater for the impact on and costs to all stakeholders, including retail customers and OAOs through appropriate incentive schemes**
- **Be achieved through industry consensus to the greatest extent possible including via "cooperative arrangements" similar to the process that led to the launch of NGA in 2013**
- **Only be implemented following exchange level trials which in turn will give confidence to ComReg that it can meet its statutory duty of "ensuring" an appropriate CSO process has been put in place that protects competition and the rights of end-users.**
- **CSO should not result in a further deterioration of Irelands already poor standing on the European Commission's DESI on broadband pricing**
- **Where obligations are withdrawn as a consequence of facilitating CSO, actual switch-off must occur as otherwise market distortions are likely to ensue where obligations have been withdrawn based on a false premise.**

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## 2. Background to CSO Paper

On 4 March, 2021 Eircom Limited ("Eircom") submitted a letter to ComReg under the heading "*Establishing a Protocol for Copper switch-off*" to which was attached a "white paper" ("Eircom Paper") it had authored entitled "*Copper switch-off: Leaving a legacy for the Future*" which was subsequently published on Eircom's website.

On 1 April, 2021 ComReg responded to Eircom welcoming the initiative and affirming its support for an efficient migration from copper to fibre based networks while noting Eircom's obligation not to withdraw "*access to facilities already granted without the prior approval of ComReg"* and to the relevance of Article 81 of the European Electronic Communications Code (EECC) regarding migration from legacy infrastructure. Both sets of correspondence were published by ComReg on 9 April, 2021 by way of an Information Notice wherein it indicated that it planned to engage with Eircom and other stakeholders on this important matter.

On 5 May, 2021 ComReg issued a further Information Notice fleshing out in greater detail its own role in the "copper switch-off" (CSO) process including details around plans for stakeholder engagement in preparation for such eventualities.

Against this backdrop RegOpp has been engaged by members of ALTO to identify some of the key issues that will need to be considered in the context of CSO. In authoring this paper RegOpp has been mindful of the positions advanced in the Eircom Paper, standing market review decisions, the Code, the Act and ComReg's previous commentary on CSO and will refer to each where relevant under following themes:

- The legal/regulatory context in which CSO can be facilitated including a procedural assessment
- Implication for existing market review decisions and how CSO might impact on those markets
- Identifying ways in which CSO may be fairly and efficiently facilitated under the Code
- The role of cooperative arrangements in facilitating an orderly and fair CSO process
- Implications for end-users particularly in relation to price and customer experience
- References to international experience where relevant to Ireland
- The extent to which CSO will entail full "decommissioning" including through the removal and disposal of copper assets.

Although the EECC has yet to be transposed into Irish law this report assumes a faithful transposition will be enacted in Irish law and for simplicity where this document refers to Art 81 it should also be read as "Art 81 when transposed under Irish law".

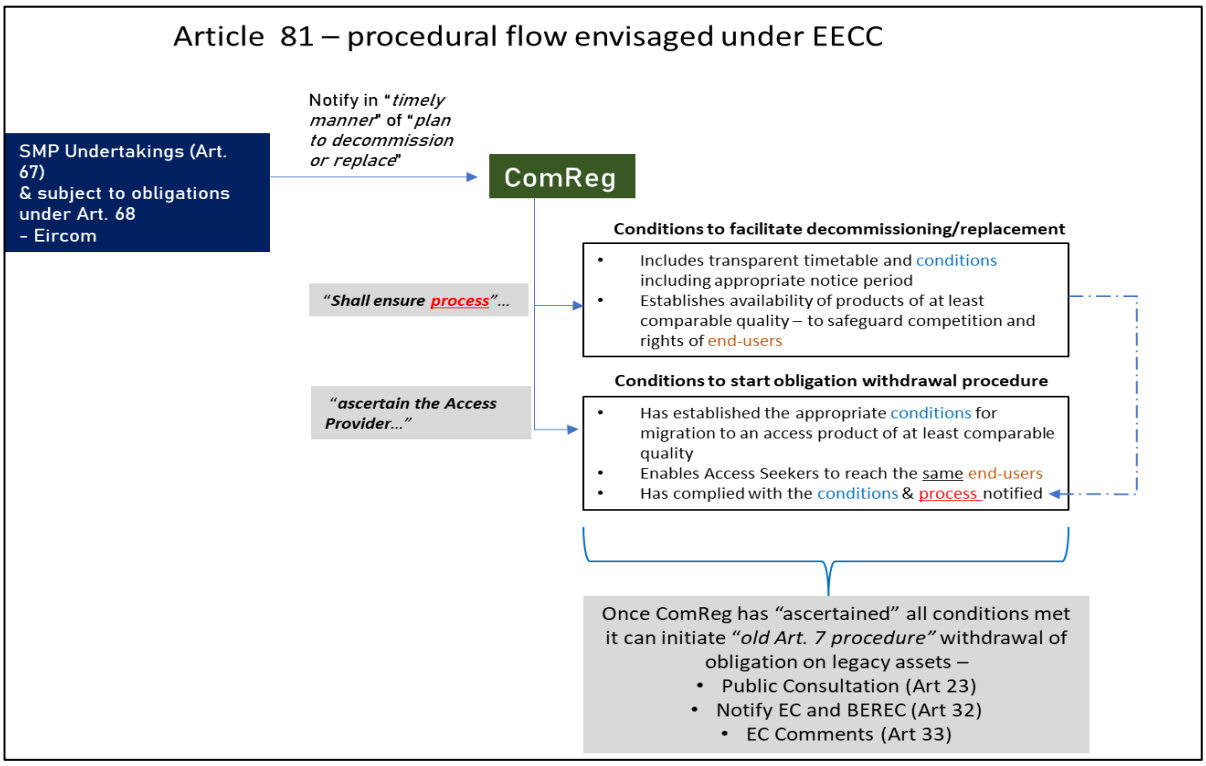
## 3. The CSO regulatory process under Article 81

Today, where ComReg imposes an obligation on a SMP provider following the market analysis process, the statutory duty to comply with that obligation currently sits with the SMP operator. ComReg can require that party to demonstrate its compliance with obligations and take enforcement proceedings (on an *ex-post* basis) against the party where it has been found not to be in compliance with those obligations. With respect to CSO in the context of Article 81, the statutory duty falls on ComReg itself to "*ensure*" that a **process that is transparent and meets specific conditions** particularly with respect to "*safeguarding competition and the rights of end-users*" is implemented.

Furthermore, the process of notifying the EC on the withdrawal of SMP obligations with respect to specific copper services, in specific **relevant markets**, can only occur once ComReg has "*ascertained*" that critical conditions have been met on an *ex-ante* basis in order to allow for that withdrawal or amendment of obligations. In particular, ComReg must ascertain the CSO in a relevant market has established appropriate "*conditions*" for migration to a product of at least comparable quality and in a way that enables access seekers to reach "*the same end-users*".

A schematic of the Art 81 procedural flow envisaged under the EECC is outlined in ***Figure 1***.

**Figure 1**




### ComReg's role in the CSO process

ComReg Information Notice 21/ recognises its role as depicted in ***Figure 1*** and that the withdrawal of obligations under CSO can only occur under certain conditions and subject to current Art 7 procedures (Art 32 of the Code). Even prior to the Code placing a greater emphasis on ComReg's central role in the CSO process via Art 81, ComReg recognised its remit in this regard under existing Irish and

European legislation when it issued its Call for Inputs on "*Transition from Eir's copper network*"[5] in January 2016 ("Transition CFI"). While this document would need to be updated to account for market developments and the implications of the Code it nevertheless provides starting point for a discussion on how to manage CSO in the context of Art 81.

Establishing the process for decommissioning/replacement and ascertaining that it works appropriately is complicated by the fact that the designated SMP operator, Eircom, may not have end to end control of the process as envisaged by Art 81.

For example, in the NBP footprint, Eircom is likely to seek to "*decommission*" its copper network and seek a withdrawal of obligations with respect to the associated regulated services in that footprint. However, in these circumstances Eircom will not be "*replacing*" those assets to ensure the same end-users that has lost access to their service is provided with a quality of service at least equivalent to one it seeks to withdraw. In this regard, Eircom (and ComReg) will be relying on NBI to provide the 'replacement' infrastructure that facilitates the provision of such services e.g. VOIP over FTTH broadband.

**Factoring in National Broadband Ireland**

The fact that NBI is **not currently designated as having SMP in any relevant market** to date, complicates how CSO will apply in a current "market review" status quo. Notwithstanding it will be in NBI's commercial interest to facilitate the migration from Eircom's copper to NBI's fibre service in a timely manner, this alone may not give sufficient comfort to ComReg where it has a statutory duty to fulfil in terms of safeguarding competition and the rights of end-users and in particular with respect to the migration process that is implemented under Art 81. While ComReg anticipated the prospect of this scenario in its Transition CFI, the options considered in addressing such an outcome (i.e. Eircom not being the NBP provider) were not presented in the context of Art 81[6] and would need to be looked at through that prism before being adopted, amended or expanded on.

Nevertheless, it will be worth recalling these principles as proposed as they relate to NBP and more generally to CSO throughout this report where relevant. The Transition CFI considered principles that might apply in a wholesale and retail context, key among which were:

- **Wholesale - Replicability** – OAOs should be able to rely on wholesale inputs provided over the New Network after CSO to replicate services they already provide.
- **Wholesale - Seamless migrations at no cost to OAOs** – CSO should be facilitated "*without having to incur significant additional cost*" or "*make significant changes to…order handling, provisioning and billing systems*". The process should be seamless and not "*involve unnecessary delay or disruption for RSPs and wholesale operators*". This principle should apply to single and bulk migrations.
- **Retail** – **Replicability** - "*readily available*" alternatives for the purposes of USO and potential for battery back-up on VOIP services[7].

[5] Transition from Eir's copper network: proposed principles and notification procedures, ComReg 16/01, 1 January 2016.

[6] Arguably the Eircom-NBI type scenario was itself not properly contemplated in the drafting of Art 81 and stakeholders might consider how any potential gap may be catered for at a national level, that remains at the time of transposition while maintaining alignment with the minimum requirements of the Code.

[7] The Call for Inputs indicated that a separate consultation on this issue would be required. A discussion around battery back up is beyond the scope of this paper but it should be noted that given the large percentage of Irish customers that has been on VOIP type services (including over DOCSIS) for years in the Irish

- **Retail** – **Consumer protection** – while consumers should not be entitled to existing services indefinitely, they should be treated fairly including allowing time to arrange replacement services.

The Transition CFI also considered what notification process and procedures might be applied in the case of CSO and considered the scenario where Eircom did not compete for/win the tender for the NBP.

**Trials**

ComReg also noted that "*irrespective of the approach adopted with respect to CSO, there should no de-facto CSO in any exchange area until migration to the New Network has been trialled at an agreed number of exchanges*". There is nothing that has occurred since the publication of the Transition CFI, including through the publication of the Code, that would challenge this eminently sensible approach which is likely to assist in ensuring the integrity (or gaps therein) of the proposed migration processes implemented under Art 81. Trials will also better inform ComReg in discharging its own duties under Art 81 and in particular "ascertaining" that the conditions that informs decisions around the imposition, amendment or withdrawal of obligations associated with CSO can be made with a high degree of confidence. In simple terms trials allows all stakeholders to ascertain that everything is working as it should.

Another way in which ComReg can gain confidence in the CSO process is through the benefits that accrue from transparent industry dialogue and agreement on key aspects of that process that leads to efficient and fair outcomes.

Even at this high level it is clear that the three-stage proposal outlined in the Eircom Paper for CSO fails to consider the fundamental underpinnings of Art 81. Typically, a "white paper" might be expected to take greater account of the legal/regulatory environment applicable to the problems identified and the solutions proposed. In this respect, CSO under Art 81 can only be facilitated in the context of the **specific relevant markets** in which an undertaking is designated as having SMP. The Eircom Paper[8] however, proposes a broad-brush "copper to fibre" transition but makes no reference to the specific services or regulated markets in which it has SMP that will be impacted by its proposals.

## 3.1. Voluntary Commitments via Cooperative Arrangements

Under existing law, ComReg cannot factor in "voluntary commitments" to any decision on the withdrawal of obligations on the SMP provider. ComReg acknowledged this fact in the Draft FACO Market Review Decision[9] ("Notified Decision") on 18 June, where it noted that it had no basis "*in Irish law on which to accept commitments and make them binding*" in conducting in its market analysis.

By contrast, the Code does make provision for consideration of voluntary commitments in relation to imposition, amendment or withdrawal of obligations in circumstances **particular to access** and/or co-

market, if the need for such a contingency were necessary evidence, to support that conclusion would likely have come to ComReg's attention some time ago.

[8] Which claims to be a "notification" pursuant to Art 81 (1)

[9] Market Reviews: Retail Access to the Public Telephone Network at a Fixed Location for Residential and Non-Residential Customers Wholesale Fixed Access and Call Origination Broadcasting Transmission Services in Ireland. Publication and notification to the European Commission (EC), the Body of European Regulators for Electronic Communications (BEREC), and Member State National Regulatory Authorities (NRAs) of draft measures under Article 32 of Directive 2018/1972

investment under Art 79 of the Code. Although not limited to these, three specific circumstances are called out where voluntary commitments can be considered, namely (a) co-operative arrangements (b) co-investment in very high-capacity networks (VHCN) or (c) through voluntary separation procedures.

While "*cooperative arrangements*" has not been defined by the Code, a plain reading of what is intended by this in an Irish context suggests that bilateral agreements between Eircom and OAOs[10] could be used a basis for supporting the imposition, amendment or withdrawal of obligations. This interpretation is reinforced by Art 3 (4) (d) of the Code which speaks to "*cooperative arrangements*" as being effected "*between investors* [Eircom] *and parties seeking access* [OAOs]".

Although the Eircom Paper suggests it is offering up voluntary commitments as part of CSO in terms laid out in a letter to ComReg on January 8th, 2021 and again in a letter of 21 April, 2021, it is understood these are unilateral proposals that have not been shared with or discussed with access seekers (OAOs). The Notified Decision also makes note of the fact that Eircom appears to construe Art 79 as providing scope for a "*bargaining process*" between Eircom and ComReg[11] aimed at the "*lessening or removal of SMP obligations*". ComReg however rejected this interpretation noting that any such commitments are subject to a "market test" with relevant stakeholders under Art 79 (2) of the Code.

It should be noted that Eircom has standing obligations in all markets in which it has been designated as having SMP, to negotiate access with OAOs in "*good faith*" pursuant to Regulation 12 (2) (b) of the Access Regulations. Many of the issues that will be central to CSO under Art 81 would appear to fall squarely under the heading of "access" including how migrations will be handled, how order handling systems will be updated/cleansed, whether specific order types need to be developed, whether new service assurance provisions are required to ensure end-users are safeguarded etc. It is therefore reasonable to assume that bi-lateral negotiation that leads to "*cooperative arrangements*" should be seen as a **key enabler to facilitating an orderly and non-discriminatory CSO process**.

In addition, where withdrawal of access obligations is being sought contingent on pricing commitments (something the proposal in the Eircom Paper incorporates), it would seem both fair and reasonable, and likely to lead to more efficient outcomes, if OAOs and Eircom seek to negotiate such pricing on a bi-lateral basis before presentation to ComReg by Eircom as voluntary commitments under Art 79 in parallel to future CSO notifications under Art 81.

As "*cooperative arrangements*" is specifically called out in the Code as a mechanism through which transition to VHCN might be achieved, bi-lateral negotiation between Eircom and OAOs on all terms and conditions for CSO (including related to price) is not just permissible[12] but arguably promoted. This new front for bi-lateral engagement will be opened up upon transposition of the Code and there are good reasons why ComReg should promote such an approach within the industry.

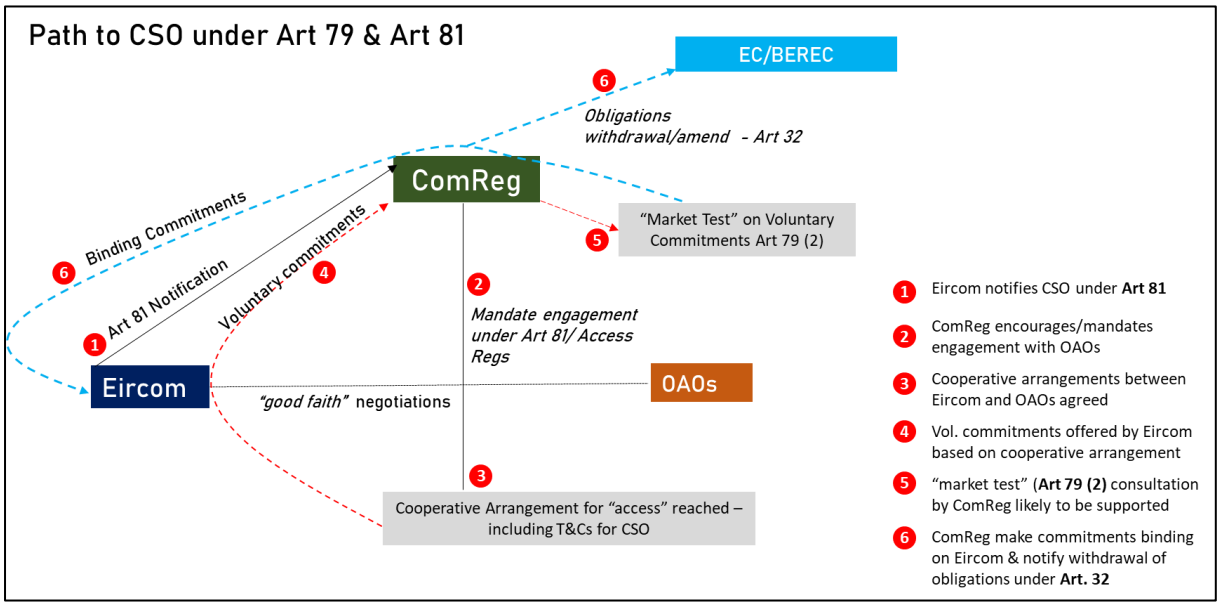
It is recommended that any such bi-lateral engagement that culminates in cooperative arrangements and in turn binding commitments (voluntarily given), should be constituted on an equal footing where the interests of OAOs (and their customers) carry equal weight to those of the incumbent. Oversight and input from ComReg in such discussions may also assist and such intervention can be justified given

[10] References to "bi-lateral" arrangements/negotiations in this context (and elsewhere in the paper) should be considered in terms of being between Eircom and another or many OAOs.
[11] Para. 10.41
[12] In the UK prior to Brexit the Openreach GEA discount scheme was negotiated between Openreach and ISPs (OAOs)

ComReg's own statutory duties under Art 81 to "*ensure*" an appropriate CSO process is put in place that safeguards the interests of competition and end-users, as well as relevant EU law[13]

Any agreed proposals would still be subject to public consultation, must be applied on a non-discriminatory basis and must ultimately be approved and/or reviewed by ComReg[14], the EC and BEREC under Art 32 of the Code. The prospect of the "market test" envisaged under Art 79 (2) of the Code **gaining support for voluntary commitments from Eircom is likely to be substantially improved** if those commitments are the product of having been entered into under commercial access arrangements. See ***Figure 2*** for a schematic of how Art 79 in conjunction with Art 81 might provide the best path to an orderly and fair CSO.

**Figure 2**




Finally, it should be noted that even before the Code was drafted, some degree of cooperation between Eircom and access seekers was identified by ComReg as being appropriate in its Transition CFI which noted a "*coordinated industry-led process would be a useful component*" in informing customers of withdrawal and migration processes. The best prospect of achieving such an outcome would appear to be through "*good-faith*" bi-lateral negotiation.

Were ComReg to be of the view that an orderly CSO process would benefit from binding voluntary commitments on Eircom then encouraging[15] bi-lateral engagement to achieve that end may prove to be an optimal approach. The successful bi-lateral engagement (Eircom and OAOs) that preceded the launch of Eircom's NGA services in Ireland in 2013 may also provide a useful template in terms of informing an approach to CSO in the coming years. We return to this subject in **Section 5**.

[14] As noted by ComReg in paragraph 10.41 of the Notified Decision, "*Article 79 envisages the analysis of any remedies to be carried having regard to the commitments which have been made binding*".
[15] Arguably, ComReg could mandate such engagement pursuant to its obligations under Art 81 if it was of the view that this offered the best prospect of safeguarding competition and end-users in the context of CSO.

## 4. Regulatory status of markets currently served by copper or fibre infrastructure

In carrying out this assessment we consider three geographic "Areas" based on footprints identified by ComReg in its Access Network Review (ANR) consultations[16] last year, namely, NBP Intervention Area (NBP-IA), the Urban Commercial Area (UC) and the Rural Commercial Area, (RC). For the avoidance of doubt these geographic areas should not be taken to constitute market definitions in accordance with established practice under European law[17] but rather are used to inform a high-level *prima facie* overview that is consistent with the approach taken by ComReg in the ANR consultations.

From a cursory review of ***Figure 3*** applying the three-stage broad-brush approach advanced by the Eircom Paper to all copper services as a universal policy, is likely to result in materially different outcomes for each regulated market with varying degrees of impact across each footprint. By extension this will have implications for competition and end-users across different markets and geographies and underscores the need to carefully assess the implication of CSO on those markets. Indeed, it may be the case that not only will ComReg need to ensure the appropriate process and conditions are in place for CSO before initiating withdrawal of obligation procedures but in parallel it may be necessary to impose new obligations on Eircom in another market or another service in the same market before CSO can be facilitated e.g. a cost orientation obligation on FTTH before CSO applies to FTTC may be warranted.

**Figure 3**

| Availability & Regulatory Status | Key |
|---|---|
| Available - Cost Regulated | ✓ |
| Available - Regulated but due to be deregulation | ✓ |
| Available - Regulated excl. Cost Regulation | ✓ |
| Not Available | ✖ |
| Available & Regulated - but zero to neglible takeup | ✖ |
| Available - Unregulated | ✖ |

| Regulated Services provided by Eircom | NBP-IA | Rural Commercial | Urban Commercial |
|---|---|---|---|
| WLR | ✓ | ✓ | ✓ |
| SA FTTC VUA | ✖ | ✖ | ✓ |
| SA FTTC BS | ✖ | ✖ | ✓ |
| POTS FTTC VUA | ✖ | ✖ | ✓✓[1] |
| POTS FTTC BS | ✖ | ✖ | ✓✓ |
| SA FTTH VUA | ✖ | ✓ | ✓ |
| SA FTTH BS | ✖ | ✓ | ✓ |
| POTS FTTH VUA | ✖ | ✓✓ | ✓✓ |
| POTS FTTH BS | ✖ | ✓✓ | ✓✓ |
| CGA SABB (Bitstream) [2] | ✖ | ✖ | ✖ |
| POTS CGA BS (BMB/BIP with PSTN WLR) | ✓✓ | ✓✓ | ✓✖ |
| LLU (full) [3] | ✖ | ✖ | ✖ |
| LLU Lineshare[4] | ✖ | ✖ | ✓ |
| SLU | ✖ | ✖ | ✖ |

| Relevant Market | Geographic scope |
|---|---|
| FACO | National/Prospectively deregulated where NGA available |
| WLA | National (only available in Urban) |
| WCA | Regional (not available regionally) |
| FACO/WLA | POTS element - National/Prospectively deregulated |
| FACO/WCA | POTS element - National/Prospectively deregulated (not available regionally) |
| WLA | National (not available in NBP-IA, partially available in Urban Commerical) |
| WCA | Regional |
| FACO/WLA | POTS element - National/Prospectively deregulated |
| FACO/WCA | POTS element - National/Prospectively deregulated |
| WCA | Regional |
| FACO/WCA | Regional for CGA BS. POTS element National/prospectively degregulated where NGA available |
| WLA | National (neglible take-up in Urban) |
| WLA | National (take-up in Urban only) |
| WLA | National (little or not take-up) |

[1] e.g. FACO element is regulated but due to be deregulated/WLA element is current cost regulated
[2] Based on splits in "Top Down Volume Calcs" in Access Network Model, CGA SABB accounts for less than 20k customers national split approx 2:1:1 across 3 footprints in sequence
[3] Full LLU - less than 2k customers nationally as of Q4 2020
[4] LLU Line-Share - less than 18k subscribers as of Q4 2020

[16] ComReg documents 20/81 and 20/101
[17] Commission Notice on the definition of relevant market for the purposes of Community competition law (OJ C 372, 9.12.1997, p. 5)

The next sub-sections considers CSO in the context of the services and markets covered in ***Figure 3*** from a qualitative perspective. For the avoidance of doubt this high-level analysis seeks to identify potential issues, *prima facie* and is not presented as a substitute for detailed market analysis procedures under Art 67 of the Code which ComReg must engage in.

## 4.1. FACO

**Key service impacted by CSO:** Standalone Single Billing – **Wholesale Line Rental** (WLR), **POTS-based** CGA BS, **POTS-based** FTTC (VUA & BS), **POTS-based** FTTH (VUA & BS)

**Regulatory Status:** Last reviewed in 2015, decision on latest review was notified to the European Commission on 18 June 2021 and final decision expected in coming months

**Geographic Scope of market:** Currently National but prospectively split into Regional and Urban markets with deregulation of Urban FACO Market expected

In the Notified Decision[18] ComReg has proposed significant deregulation of the FACO market on a geographic basis proposing to withdraw obligations on Eircom in the Urban FACO Markets while maintaining regulation in the Regional FACO Markets[19]. The proposed deregulation[20] is largely based on the prevalence of "next generation" (NG) broadband, which is capable of enabling the provision of Managed Voice over Internet Protocol (VOIP).

Notably in its assessment of the FACO market ComReg considers NG broadband to cover *'technologies which include partial or full optical component including FTTC, FTTP and DOCSIS'*. ComReg's assessment in this regard is critical to CSO implications associated with FTTC in particular, which is covered in greater detail in **Section 5**.

Given the proposed deregulation of WLR is largely predicated on the provision of wholesale NGA services by Eircom, it is reasonable to assume that in the main regulation of Eircom's WLR service will only continue in the NBP-IA following implementation of the Notified Decision. This means that, subject to compliance with "sunset periods" or other winding down obligations that may arise, the topic of CSO with respect to WLR in the UC and RC Areas will not arise in the context of Art 81 as Eircom will not be obliged to notify ComReg of its decommissioning/replacement plans where it does not have SMP (i.e. Urban FACO Markets[21]).

### 4.1.1. Urban FACO Markets

The withdrawal of obligations on Eircom in Urban FACO Markets will potentially have a material impact on any operators currently selling Eircom "POTS-based" broadband products, both CGA and

[18] The Notified Decision is currently subject to the Art. 32 process under the Code and this draft decision may yet be subject to change.
[19] The Urban and Regional FACO markets are made up of the Urban Low and High Level FACO markets and the Regional Low and High Level FACO markets.
[20] This report adopts the assumption that the Notified Decision will be implemented as drafted and makes no commentary on the appropriateness or otherwise of the Notified Decision.
[21] To avoid confusion, it is worth clarifying that the Rural Commercial Area identified by ComReg in the ANR is effectively a subset of the Urban FACO Markets identified in the Notified Decision as NGA services are available in the RC Area.

NGA. The ability to migrate seamlessly from "POTS-based" to standalone alternatives will therefore be critical to the smooth transition to the deregulated environment. Inherent in the proposed FACO deregulation **is the working assumption** that those seamless migration processes are already catered for under obligations imposed on Eircom in the WLA and WCA markets through ComReg Decision D10/18 including for '*VUA and Bitstream Soft Migrations*'.[22]

While Eircom will not have to go through the Art 81 process for CSO if Urban FACO Markets are deregulated, the migration provisions covered by D10/18 appear to at least accord to the spirit of Art 81 in terms of safeguarding competition and protecting the interests of end-users **from a service access perspective**. Therefore, monitoring the effectiveness and compliance with those provisions as laid out in D10/18 during the FACO "sunset period" should be used to inform whether further intervention by ComReg would be merited in advance of the expiration of that "sunset period"[23].

While an effective migration process from POTS-based NGA services to standalone NGA services will ensure customers can continue to avail, almost seamlessly[24], of voice services through VOIP, a greater concern arises in relation to migration from POTS-based CGA services to standalone CGA services e.g. from POTS-based CGA bitstream to CGA SABB[25] or from LLU-LS[26] to full LLU supported by an OAO voice service. In these scenarios a voice service cannot be secured through a soft migration process because CGA SABB technically cannot support voice services and the prospect of an OAO that was availing of LLU-LS developing its own copper voice service through a fully unbundled CGA product in a small and declining volume market seems improbable.

While customers are likely to have the option of upgrading to a NGA service that supports voice in the majority of cases, ComReg's proposed deregulation of Urban FACO Markets in the Notified Decision is grounded in a criterion of 80% exchange area NGA coverage. Beyond the "sunset period" Eircom can legitimately increase the prices for the POTS-based element of a CGA broadband offering as a strategy to move customers on to NGA services or it can simply withdraw service of the POTS element altogether to force such an outcome. However, an element that is of key concern is that **where customers do not have the option of switching to a NGA service, Eircom may still increase prices or withdraw service altogethe**r and the negative impact such an outcome would have on end-users is obvious. This issue may be of particular concern in the RC Area where access to alternative providers is limited to non-existent. It should be noted that Eircom's commitments to the government **is not for full NGA coverage** in RC Area and even where NGA services are available customers may have to pay significant costs for connection to the network[27].

Turning again to **Figure 3** we can see once deregulation of the Urban FACO Markets is concluded, the RC Area (which is subset of the Urban FACO market) will be the least regulated geography in the state from a price control perspective with only CGA SABB continuing to be subject to a cost orientation obligation but it is a service that has no more than negligible take-up in the market. This again highlights the importance of ComReg continuing to monitor the impact on competition and end-users beyond the "sunset period" to better inform future iterations of CSO pursuant to notifications by

[22] Under Section 7 of the relevant Decision Instruments in ComReg D10/18. Also see *fn* 791 of the Notified Decision

[23] ComReg has reserved the right re-examine competitive conditions in the market (e.g. para 1.82 of Notified Decision)

[24] Some customers will still require new CPE for voice services

[25] Standalone Broadband

[26] Local Loop Unbundled – Line Share

[27] Eircom's current FTTH installation process requires customers to bear the cost of certain non-standard delivery orders e.g. customers are required to clear or build their own ducts in certain circumstances.

Eircom under Art 81. In doing so ComReg will be better placed to ensure an appropriate CSO process and conditions are implemented to ensure all end-users are adequately protected from the perspective **of price, choice and quality**[28].

Indeed, monitoring Eircom's behaviours where it continues to be subject to regulatory obligations but yet has strategic options at its disposal to advance the transition from copper to fibre can also be informative in terms of ensuring a fair and non-discriminatory path to CSO under Art 81. In this regard it is worth considering the specific case of Eircom's POTS-based FTTH service.

### 4.1.2.The case of POTS-based FTTH

Prior to rolling of its rural FTTH network in 2017 in what is here classified as the RC Area, Eircom wrote to ComReg in mid-2016 signalling its intention to do so as well as seeking approval for the withdrawal of "access" to a range of copper-based services in geographic areas once "*there* [was] *widespread availability of NGA facilities*". Among the services listed as been marked for withdrawal in this circumstance were key services identified in ***Figure 3*** above, namely, SB-WLR, CGA bitstream services and LLU-LS. Eircom noted that in areas where NGA technology was delivered using VDSL over the copper sub-loop there were no plans to retire the service and noted that it expected to launch its own Voice Over Broadband (VOB) service before the end of 2016. It should be noted that, unlike the Eircom Paper, the Eircom request for approval in July 2016 recognised the need to seek such approval pursuant to the various Decision Instruments appended to the market review determinations which related to each of the services listed.

Eircom further noted in the correspondence that "*it will not be economically efficient for eir to maintain parallel NGA and CGA networks and services and eir would therefore like to be in a position to undertake the orderly and timely retirement of legacy networks and services*".

Against this background, including the fact that Eircom had planned to launch its own VOB solution that ought to have entirely removed the need for any reliance on a copper line to deliver a voice solution, it was reasonable to have expected **that Eircom itself** would deploy a retail strategy[29] that reflected its ambition not to maintain parallel NGA and CGA networks even if it had not yet been granted approval to withdraw access to such a solution for other providers. Instead, 5 years later, it is understood a significant volume of customers in the RC Area are availing of a POTS-based FTTH service with the majority of these retail customers currently with Eircom's retail division[30].

This is a surprising development when considered in the context of the Eircom Paper that raises concerns about behaviour that sees customers "*continuing to rely on copper services….due to long term restrictions on access or other factors beyond the control of operators making installation of new networks difficult or impossible*". In the case of POTs-based FTTH, it is not customer behaviour that resulted in copper services continuing to be provided where they were not required (due to VOB), but rather Eircom's behaviour in pursuing a dual network strategy to provide services that could have been provided over a single fibre connection.

This outcome raises a number of important questions that will be pertinent to future Art 81 notification assessments. The first is in relation to claims associated with inefficiencies linked to

[28] As per Section 12 (2) (1) (i) of the Act

[29] It is important to note that Eircom Ltd is not functionally or legally separated at the wholesale level and so no "eir/open eir" distinction applies in relation to the entity on which SMP obligations falls.

[30] ComReg will be in a position to ascertain the precise figures

operating parallel CGA and NGA networks. A comparison of Eircom's wholesale POTS-based FTTH prices versus its standalone FTTH prices ought to shed some light on that issue.

Given that Eircom currently has a cost orientation and non-discrimination obligation for the provision of WLR (in the FACO market) and a non-discrimination obligation (including on price) in relation to the provision of FTTH (in the WLA/WCA markets), the price delta between POTS-based FTTH and standalone FTTH should accurately convey the incremental cost of operating a parallel CGA (WLR) and NGA (FTTH) access service. If the true **incremental cost** associated with dual network operation, were higher than this delta Eircom could potentially be in breach of its non-discrimination obligations in one or both of the aforementioned markets.

We can see from ***Figure 4*** that the implied incremental cost of operating a parallel fibre and copper line **from the exchange to the customer** (which is how POTS-based FTTH is delivered) is **€2.18** per month. By comparison the current regulated and calculated incremental cost of operating a parallel fibre and copper line **from the exchange to the cabinet only** (POTS-based FTTC) is **€2.97**.

What this analysis unexpectedly suggests is that the inefficiency (cost) associated with operating a dual network in the provision of POTS-based FTTH is less than the inefficiency (cost) associated with operating a (partially) dual network in the provision of POTS-based FTTC. The anomaly is compounded by the fact that POTS-based FTTC is only available over shorter lines (deploying less assets) in the UC Area where incidences of faults are considerably less than in the RC Area where (longer line) POTS-based FTTH take-up is most prevalent.

**Figure 4**

| FTTH Service Speed Mbps | 300 | 500 | 1000 | 2000[1] |
|---|---|---|---|---|
| Regulated PSTN Price[2] | €16.59 | €16.59 | €16.59 | €16.59 |
| Current POTS based FTTH VUA Price[3] | €9.09 | €9.09 | €14.09 | €25.31 |
| Total | €25.68 | €25.68 | €30.68 | €41.90 |
| Standalone FTTH VUA price | €23.50 | €23.50 | €28.50 | €39.72 |
| Implied incremental cost of maintaining parallel copper and fibre line from exchange to customer | €2.18 | €2.18 | €2.18 | €2.18 |
| Calculated incremental cost of maintaining copper and fibre line to cabinet only[4] | €2.91 | | | |

[1] Proposed prices
[2] open eir Reference Interconnect Offer Price List
[3] Broadband Service Price List
[4] 2019/20 Supplement POTS Costs – Annex 7 ComReg D11/18

It is important to reiterate that it is not relevant that Eircom does not have a cost orientation obligation on its FTTH service. Once it has a cost orientation obligation on its WLR service and a non-discrimination price obligation on its WLR and FTTH services then the implied delta should reflect the incremental cost of operating both lines as opposed to operating the standalone fibre service. Eircom's **€23.50** monthly charge for standalone FTTH can theoretically be above or below cost where it faces no cost orientation obligation, but its non-discrimination obligation means that any such over or under recovery of costs is applied equally whether FTTH is bundled with other services or not. Where it is bundled with a cost-oriented service (like WLR), therefore, the incremental cost associated

with operating a copper and fibre line is given by the difference between standalone FTTH price and the aggregate bundled service (POTS-based FTTH) price.

This paper recommends that further investigation of this matter is warranted **in the context of CSO** given the primacy given to efficiency arguments in the CSO debate generally. For example, if it was the case that the incremental cost of running parallel CGA and NGA networks was found to be of the order of just c**€2** per subscriber per month the need for CSO may be over-stated and the benefits of maintaining a parallel network may outweigh its decommissioning. If on the other hand the incremental costs were found to be considerably higher than this (which seems likely in the RC Area at least) then Eircom's decision to drive take-up of POTS-based FTTH versus Standalone FTTH in this footprint requires some explanation because it is reasonable to at least assume Eircom's decision to maintain active copper[31] and fibre lines at these premises was deemed to be commercially optimal.

This brings into focus an important issue ComReg will have to grapple with in carrying out CSO notification assessments in terms of appraising Eircom's incentives grounded in legitimate considerations e.g., realising efficiencies associated with operating one network, with those seeking to exploit the opportunity presented by Art 81 to lessen or remove regulatory obligations for other reasons e.g., to push customers on to higher priced services. In the same vein care also needs to be taken where obligations are withdrawn ostensibly to facilitate CSO but where Eircom continues to operate parallel CGA and NGA networks.

#### 4.1.3. Implications of continuing to operate legacy network after CSO was expected

In practical terms there is no need to go through Art 81 notification processes if Eircom's intent is to continue to operate its copper network in parallel to the new fibre network. Such an outcome is entirely a matter for Eircom and it can already do this today. However, if ComReg is going to notify the European Commission of its intent to amend or withdraw SMP obligations in a particular market **on the basis that the legacy network which supported those regulated services is being "decommissioned" or "replaced"** then the Art 81 notification processes needs to happen, otherwise the case for withdrawal of obligations will have been based on an entirely false premise.

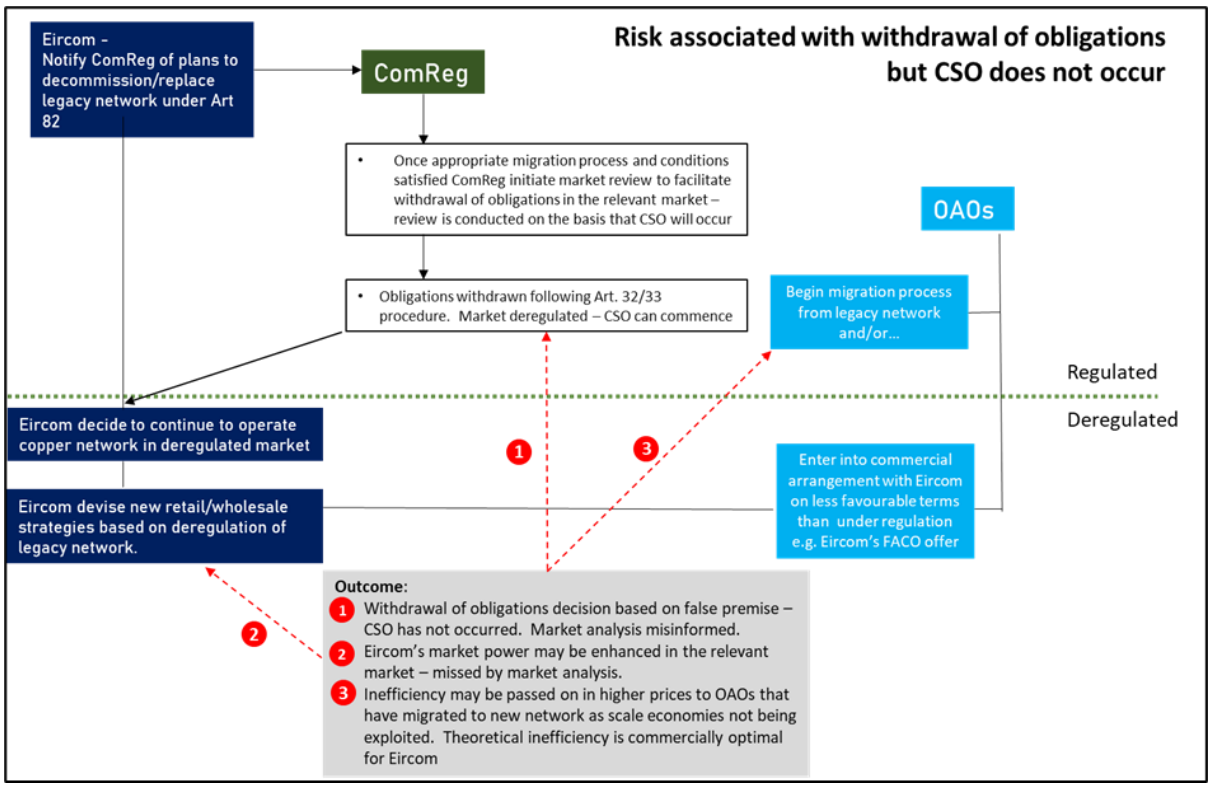
In this regard Eircom's *bona fides* in relation to Art 81 notifications will need to be clearly established and ComReg might consider the extent to which binding commitments can be secured on this issue as part of the conditions it puts in place around the Art 81 process. The discussion around POTS-based FTTH is a case in point where in mid-2016 Eircom sought the withdrawal of obligations in the FACO market under Section 7.5 (ii) of the relevant Decision Instrument on the basis that it planned retire various copper services in areas covered by NGA, yet today a situation pertains whereby Eircom has determined it is commercially optimal to operate a parallel copper network for a large volume of premises even where ait has a VOB solution that would allow full service delivery over a fibre line. Had ComReg withdrawn obligations in the FACO market around the time of Eircom request assuming Eircom's would decommission its copper network, this might have led to a range of market distortions where Eircom continued to operate the copper network for its own use but free of regulatory

[31] It is not an answer to suggest that given there is an obligation on Eircom to maintain and operate the copper network anyway, that selling POTS services itself would add no further costs to that regulatory burden. This is because a significant portion of WLR costs are driven on a line-by-line basis i.e. if a line is not active it does not require maintenance and faults will not be reported on it so these costs are entirely avoidable where the line is not activated.

obligations. Such distortions could range from barriers to switching, to margin squeeze, to undermining the transparency objectives inherent in accounting separation obligations.

A similar concern arises in relation to Eircom's voluntary commitments as published[32] with the Notified Decision. There is an obvious tension between Eircom's proposed voluntary FACO commitments of 20 February 2020 (and again in April 2021[33]) and its proposal for CSO in the Eircom Paper of March 2021. On the one hand we have commitments to maintain PSTN WLR and ISDN (BRA) services for a period of 6-7 years (when the sunset period is included), which of course requires maintaining and operating a parallel CGA/NGA network, while on the other hand a case for withdrawal of copper services is being advanced on the grounds of the inefficiencies associated with running such parallel networks in the Eircom Paper. While ComReg had no legal basis under which to consider Eircom's voluntary commitments in the context of the FACO review, following transposition of the Code, voluntary commitments can be taken into consideration in certain scenarios. Nevertheless, this example further underlines the importance of distinguishing between legitimate commercial considerations around CSO versus Eircom identifying commercial opportunity around the withdrawal of obligations that could lead to the **detriment outcomes for competition and end-users**.

**Figure 5**




An outcome that translates into in *de facto* CSO applying to OAOs but where Eircom continue to operate the CGA network for commercial gain can lead to outcomes where SMP market power is actually enhanced, inefficiencies get passed on to consumers of services on the "new network" and most notably, the *ex-ante* assessment that informed the withdrawal/amendment to obligations will have been based on an erroneous assumption which in turn could leading to erroneous/irrational

[32] ComReg Document 20/46c
[33] Ibid, Notified Decision, section 10.4

decisions. The risks associated with withdrawal of obligations but where CSO does not occur as expected is captured in ***Figure 5*** which has been adapted from ***Figure 1***.

In summary, while it would appear that CSO in the Urban FACO Markets will be able to proceed independent of the Art 81 notification process, **it is recommended** that the behaviours of Eircom in these markets in the period following the withdrawal of obligations should be closely monitored by ComReg for the purposes of making more informed decision in relation to future Art 81 notifications.

## 4.2. Rural FACO Markets

Assuming ComReg plans for deregulation of the FACO market is implemented in accordance with the position in the Notified Decision, then the NBP-IA will be the only geographic footprint in the state where Eircom's WLR service will continue to be subject to any regulation, including cost regulation.

Although ComReg's current proposals[34] on CEI pricing forecasts some CSO on an exchange-by-exchange basis[35] actual CSO can only occur pursuant to a withdrawal of existing (and proposed under the Notified Decision) SMP obligations. While the Notified Decision proposes that ComReg will conduct a Mid-term Assessment[36] (MTA) and continue to apply an 80% exchange coverage (by NBI) criterion[37] in determining whether obligations are withdrawn from Eircom in the Rural FACO Markets, given the Code will be transposed into Irish law long before this occurs, it may be more optimal that this exercise is facilitated through the Art 81 process at the relevant time.

As discussed in **Section 3** above, given ComReg currently has no legal basis on which to impose obligations on NBI (due to its current absence of SMP), a more orderly CSO process in the NBP-IA may be better advanced through the Art 81 process rather than through the cruder withdrawal of obligations on Eircom as currently envisaged in the Notified Decision.

Under this approach ComReg could impose conditions for CSO that avoids outcomes like the POTS-based FTTH scenario discussed in **Section 4.1.** By way of example, if FACO obligations were withdrawn based on the simple "80% coverage criterion" customers in the uncovered 20% currently served by a POTS-based CGA bitstream product with an OAO that did not sell a standalone variant[38] could find themselves losing not just their voice service (through FACO deregulation) but also their broadband service as a consequence of its current service provider's inability to provide such a service in the absence of that POTS element.

In this scenario Eircom could benefit by withdrawing access from OAOs but continuing to provide copper services on materially worse terms (particularly in relation to price) to end-users itself. Eircom's ability to do so would be as a result of the decline in effective competition in the 20% uncovered area where VOIP offerings over NBI's NGA network will not act as a competitive supply side constraint (because it is not available) and where OAOs are pushed out of the market (absent uneconomic investment in new service development) if they relied on the POTS element to provide broadband.

[34] Pricing of Eircom's Civil Engineering Infrastructure, CEI Pricing in the context of the National Broadband Plan (NBP), 9 September, 2020.
[35] *Ibid*, Section 5.8.3
[36] 24 Months after the effective date of a final decision
[37] Ibid, Notified Decision, para 11.67
[38] It is understood a number of ALTO members do not currently sell CGA SABB and any investment in developing such a variant, including IT development, would be unlikely to be recovered at this stage.

Applying USO on Eircom in this case would only apply to the retail services offerings of the designated USP and in any case Eircom has been permitted to meet its USO obligations increasingly on the basis of offering a Fixed Cellular Service (FCS) technology which cannot support broadband. This sort of outcome would be anathema to the entire premise under which the withdrawal of obligations is justified i.e. the market has been deemed to be effectively competitive and so **no deterioration in competition should follow on as a consequence of withdrawing those obligations**.

This is just an illustrative example of why proceeding with "effective CSO" under the process outlined in the Notified Decision might lead to outcomes contrary to objectives of the Code/Act as significant damage to competition and end-users can occur while the gap from 80 to 100%[39] NGA coverage is closed. The Art 81 process would appear to offer ComReg greater scope to address such risks upfront, through for example imposing explicit conditions around migration processes that can then be taken into consideration in amendment or withdrawal of existing obligations.

For example, ComReg could impose a condition that only permitted CSO against addresses that had active copper services where a "ready for order" (RFO) NBI NGA service was listed against such addresses. Thereafter having "ascertained" that such a binding process had been put in place, it could proceed with withdrawing access and other obligations on Eircom for copper services at those addresses where that condition is met. Such an approach would also adhere to the principle of "Replicability" identified by ComReg in its Transition CFI and protect the (potentially) 20% of premises being left behind in the current Notified Decision approach.

It may be the case that NBI's commercial interests allows them to also offer commitments on timelines or prioritisation for vulnerable users[40] etc that could be incorporated by ComReg into the Art 81 process. Such an outcome would mitigate the risk of issuing determinations based on assumptions around **what NBI plans to do, relative to setting conditions for CSO contingent on what it actually does**. In fact, ComReg's Transition CFI anticipated that (in the event Eircom was not the NBP provider) it would still be able to provide details to OAOs on what arrangements it had entered into with the NBP provider and how CSO could be coordinated with it.

ComReg may be of the view that independent of Art 81, the MTA of the FACO market would allow it to issue such conditional withdrawal obligations on Eircom but the MTA is not due to be conducted until 24 months from the effective date of the Notified Decision and more efficient and optimal solutions could be agreed by industry (NBI, Eircom and OAOs) in relation to the NBP-IA which provides greater confidence that competition and the rights of end-users will be protected through CSO. In addition, the MTA always runs the risk of not being conducted in a timely manner for a variety of reasons and may have to go through several further iterations before full CSO in the NBP-IA is achieved.

[39] Unlike Eircom in the RC Area , NBI has an obligation for 100% coverage with no contribution from premises on connection costs required except in circumstances where connection costs exceeds €5000.
[40] Where lists of vulnerable customers could be shared with NBI by Eircom/ComReg and prioritised for connection.

## 4.3. Regional WCA/National WLA Markets

**Key service impacted by CSO:** SA & POTS-based CGA **bitstream**, SA and POTS-based **FTTC (VUA & BS)**, **LLU-Line share**

**Regulatory Status:** Last reviewed November 2018, variation on pricing remedies decision associated with Access Network Review pending sometime in 2021

**Geographic Scope of market:** National for **LLU-LS** and **FTTC VUA** (in practical terms only available/used in UC Area), Regional for **CGA bitstream** and **FTTC BS** (in practical terms FTTC exchanges are not present outside the UC Area).

As with FACO any future Art 81 notification that is seeking to facilitate CSO should only be catered for following a detailed assessment of individual markets and the services offered within those markets and so a broad-brush copper-to-fibre transition approach **cannot legitimately** be applied as advocated for in the Eircom Paper as this promotes an approach where no detailed assessment (including consultation on same) of individual services and markets is carried out. There are no relevant markets or services within those markets that fall under the category of "copper" and "fibre"

### 4.3.1. Regional CGA Bitstream

Given the proposed deregulation of FACO in Urban FACO markets, which includes the RC Area due to the presence of NGA service (where VOIP can be sold), if access obligations on CGA Bitstream (CGA SABB, BMB and BIP) is also withdrawn in the Regional WCA market, **there will no longer be any service** (excluding voice termination/ancillary services) carried over either copper or fibre that will be subject to a cost orientation obligation in the RC Area.

While the extent to which CGA broadband acts as a competitive constraint on FTTH services in the RC Area may be open to debate, the fact is the current market definition for WCA and WLA includes both CGA and NGA services and so ComReg has determined in D10/18 that some degree of substitutability does exist. Consequently, the removal of CGA broadband services (following CSO) from the RC Area should prompt revisiting the question as to whether new or amended obligations should be considered for FTTH services in this footprint. Indeed, by the time this market is next reviewed there may well be a case for cost orientation of FTTH in the RC Area independent of what happens with CGA broadband there.

This is because in 2018 the main reasons ComReg did not impose cost orientation obligations on FTTH pricing in the RC Area[41] was due to uncertainty around demand for FTTH and the fact that the service was still being rolled out in the footprint. It is fast approaching the time where neither of those concerns could reasonably be offered as the basis for not imposing cost orientation obligations pursuant the 2013 ND Recommendation[42].

Intuitively it would be difficult to reconcile the fact that if CSO on CGA broadband commences in the footprint, then the least regulated (from a cost orientation perspective) footprint in the state for the

[41] Which was identified as the "Rural 300k Footprint" in D10/18.

[42] Commission Recommendation on consistent non-discrimination and costing methodologies to promote competition and enhance broadband investment environment – C(2013) 5761

provision of broadband services would be the footprint with the lowest level of competition provided by alternative infrastructure providers (zero[43]) or by alternative services provided Eircom itself (as FTTH will be the only fixed broadband variant sold). Indeed, even in the absence of CSO ComReg expressed reservations about regulatory forbearance on FTTH pricing in the RC Area in 2018 where it noted:

> "*there is little or no competing infrastructure through which a sufficiently meaningful competitive constraint could be exercised on Eircom's pricing over the period of the current market review. ComReg plans to keep this under review over the review period and consider whether more stringent price control obligations are required in the future (including when considered alongside other factors)" [emphasis added]*

Consequently, in accordance with its own assessment in 2018, any consideration of CSO pertaining to Regional CGA bitstream service in the RC Area **ought to prompt ComReg revisiting the question of cost orientation of FTTH pricing in this footprint.**

This scenario highlights how the amendment or withdrawal of obligations (as part of CSO) on a particular service in one market may have implications for competitive outcomes in another market or even on different services in the same market. It is also an issue ComReg anticipated in the Transition CFI where it noted **that that a likely "*prerequisite*" to CSO in markets** where Eircom had SMP is to ensure that the competition problems identified in those markets are adequately addressed in by "*wholesale obligations pertaining to the New Network*".[44]

### 4.3.2. LLU-LS

According to ComReg's latest quarterly report there is currently circa 15k customers currently on LLU-LS and further c1,800 customers on full LLU. Given these numbers are relatively small, this is unlikely to be an area of serious contention within the industry with respect to CSO and it is understood certain operators are already winding down LLU operations as they are no longer viable in the medium to long term. Administratively, however, ComReg will still have to carry out market assessments in accordance with the process outlined in Chapter 3 to ensure no issues arise and to facilitate the removal of existing SMP obligations on Eircom.

### 4.3.3. FTTC VUA and Bitstream

The manner in which CSO is applied to FTTC VUA and Bitstream (including POTS-based variants under FACO) is by far the most complex and material subset of key services under consideration. Based on ComReg's most recent quarterly data over **634k customers** currently have an active FTTC line (either CVDSL/EVDSL). This means that based on today's numbers the cohort of FTTC customers impacted by CSO outstrips all other service/market subsets of customers combined by more than a factor of two. The issue is further complicated by the fact that FTTC is rightly classified as a "next generation service" in its own right. Consequently, a more detailed examination of the potential implications of CSO as it pertains to FTTC is warranted and covered in the next section of this paper.

[43] FWA is currently not considered to be part of the relevant markets
[44] *Ibid,* Transition CFI, para. 17

## 5. FTTC

Eircom announced plans for the deployment of its FTTC network in July 2011 and launched FTTC services in May 2013 following extensive engagement with industry stakeholders through Industry fora chaired by ComReg. The industry fora covered topics ranging from notification periods around deployment plans, to migration processes, to identifying trial exchanges among many other associated issues. The industry fora provided a platform for constructive bilateral negotiation between Eircom on the one hand, and access seekers on the other that culminated in achieving provisional consensus on multiple issues that were then subject to ComReg approval and/or public consultation.

In parallel, following public consultation, ComReg issued a decision D03/13[45] specifically aimed at facilitating the launch of Eircom's FTTC service. The **role played by the industry fora is acknowledged by ComReg as being central to facilitating the launch of FTTC** and informing decisions captured in D03/13 itself[46]. The adoption of a similar approach in the context of facilitating CSO is something ComReg and all stakeholders should consider given that the Code allows ComReg to take account of voluntary commitments based on "cooperative arrangements" arrived at between Eircom and access seekers to inform amendment to or withdrawal of existing obligation on Eircom (as discussed in greater detail in **Section 3**).

It should be noted that Eircom's launch of FTTC was characterised much more by a "carrot" rather than "stick" approach to stimulating take-up of the new service from a wholesale pricing perspective. For example, connection/migration charges were set a **€2.50** with actual costs amortised over several years, while a charge of **€27.50** applied to technician visits to customers premises. These charges continue to apply today.

Eircom also offered a significant discount promotion of €3 per month[47] associated with the POTS element of FTTC (cognisant of the fact the most/no operators had yet developed a VOIP solution). By contrast the high-level proposals in the Eircom paper to stimulate migration from copper to fibre appears to be entirely grounded in a "stick" approach. That strategic approach is likely to be commercially optimal for Eircom particularly if it can be justified to consumers as being sanctioned by ComReg but it is an approach that is unlikely to safeguard the interests of competition and end-users which ComReg is bound to ensure under the general objectives of the Code and the specific provisions of Art 81.

ComReg's role in discharging its duties under Art 81 provides it with some leverage in terms of challenging Eircom and access seekers to finding potentially more optimal and fairer solutions for stimulating migration from FTTC to FTTH. The unique nature of FTTC services by comparison to CGA services in the CSO debate may in fact suggest that only a "carrot" rather than a "stick" approach should be applied in facilitating the transition.

As such ComReg should exercise caution in considering the recommendations of the CSO paper produced by WIK on behalf of the FTTH Council of Europe and cited in the Eircom Paper which, notwithstanding its valuable insights to European experiences, explicitly promotes the interest of investors in FTTH networks as its primary consideration when it comes to making recommendations.

[45] Remedies for Next Generation Access Markets, D03/13, 31 January, 2013
[46] *Ibid*, para 1.3, 2.2, 10.709.
[47] This promotion ran from May 2013 until January 2015.

This approach is probably most starkly brought to light in relation to WIKs summary[48] of "*challenges-causes-solutions*" in relation to CSO with respect to the specific "challenge" its classifies as "*Customer resistance to switching*".

In this regard WIK note that the "cause" of this challenge is associated with customers being unable to tell the difference between "*FTTC/cable and FTTH products*", "*FTTC being significantly cheaper than FTTH*" and "*practical challenges in switching platform*". These are critical factors that ComReg will need to take into consideration in accounting for the interests of end-users and competition in assessing CSO notifications. If a customer is completely satisfied with a FTTC service enjoyed at a better price than offered by FTTH and can avoid the inconvenience of intrusive installation work in its premises, then forcing such customers to migrate on worse terms than they currently enjoy is not something ComReg should lightly endorse.

These are considerations that the WIK report does not appear to lend any weight to before recommending, as the Eircom Paper does, allowing the price of FTTC to increase as the principle ("stick") solution to confronting the so-called challenge. The paper characterises the end-user as a problem to be solved but national regulatory authorities are bound to protect the interests of those same end-users and so ought not to adopt this mindset in relation to CSO.

As noted above the highly successful launch of FTTC in 2013 was predicated on a strategy of attracting customers to the service rather than driving them off existing CGA services but that is an option that does not feature in the current Eircom Paper. The extent to which Eircom's thinking in this regard is informed by the promotion of VHCNs in the Code generally and how that might manifest itself in terms trumping the interests of customers through such aggressive initiatives is unclear and while there may be at least arguable cases for taking this approach in relation to certain CGA services (e.g. WLR), the unique status of FTTC as a NGA service in its own right marks it out for special consideration on this front.

## 5.1. FTTCs unique status in the CSO debate

While FTTC is not categorised as VHCN service, the Code recognises that FTTC represents a "*significant upgrade or extension to copper…networks*"[49] and falls into the category of a "*next-generation network*". It is important therefore to distinguish between the urgency to upgrade to VHCNs in the absence of NG services like FTTC, and where such services are already available in the market. In this regard the Code recognises the priority of facilitating step change migrations from "*legacy copper networks to next-generation networks*"[50] which by definition includes FTTC.

ComReg itself rightly defines NG technologies as including FTTC[51] for purpose of market analysis and policy initiatives. FTTC coverage is also a key driver behind Irelands 96% "NGA coverage" statistic recorded in the 2020 EC Digital Economy and Society (DESI) Index. This level of coverage in fact placed Ireland at 6th out of 28 European member states. This notable performance gives more balanced view of the quality of Irelands current broadband coverage by comparison to claims in the Eircom Paper

[48] See Table 8 of WIK's "Copper switch-off – European experience and practical considerations", 30 November, 2020.
[49] e.g. see Recital 63 of the Code
[50] See Recital 209 of the Code
[51] E.g. in the Notified Decision

that Ireland is lagging behind its peers where its focus is solely on VHCNs[52]. The fact is that many of Ireland's peers did not already have extensive coverage of NG services like FTTC (e.g. Spain) or are now only in the process of upgrading networks to FTTC (e.g. Italy). It would therefore be misleading to conclude that Ireland is lagging behind Spain when developments in recent years there is to a large extent being driven by how far it lagged behind the rest of Europe in terms of providing NGA services, including FTTC over that period. Spain's urgency therefore, in the deployment of VHCNs is likely to be a product of the substantial gap it was seeking to close between VHCNs and unacceptably slow CGA broadband, a gap that (excluding NBP-IA) in Ireland is small by comparison by virtue of FTTC.

It should be noted that Eircom's FTTC network is also enhanced by the use of vectoring technology (unlike for example FTTC in the UK) which can bring network speeds of over 100Mbps depending on the premises distance from the cabinet. In effect the deployment of vectoring technology places Ireland/Eircom's FTTC product at a premium to many of its European counterparts. It also is notable that the 2020 DESI report references activity associated upgrading to VDSL vectoring across members states under the heading of "*Progress towards a gigabit society*"[53].

Critically, Art 81 itself is not so prescriptive to even to mention VHCN but rather focuses on decommissioning and/or replacement generally to "*upgraded network infrastructure*". The context around what should be covered by "*upgraded network infrastructure*" in turn can be taken from the relevant Recital to the Article which points to its purpose being to "*facilitate the migration from legacy copper networks to next generation networks*" of which FTTC (VDSL, VDSL-2, vectoring) is clearly a subset.

It is notable that in a recent survey[54] conducted on behalf of ComReg, customers in "densely populated areas" and Dublin (both characterised by the availability of FTTC) satisfaction with reliability of service and speed stood at 83% and 93% respectively with overall satisfaction ratings of 88% and 95%. Given the prevalence of FTTC in these areas relative to all other technologies combined it is reasonable to assume a large portion of the samples considered were currently using FTTC technology.

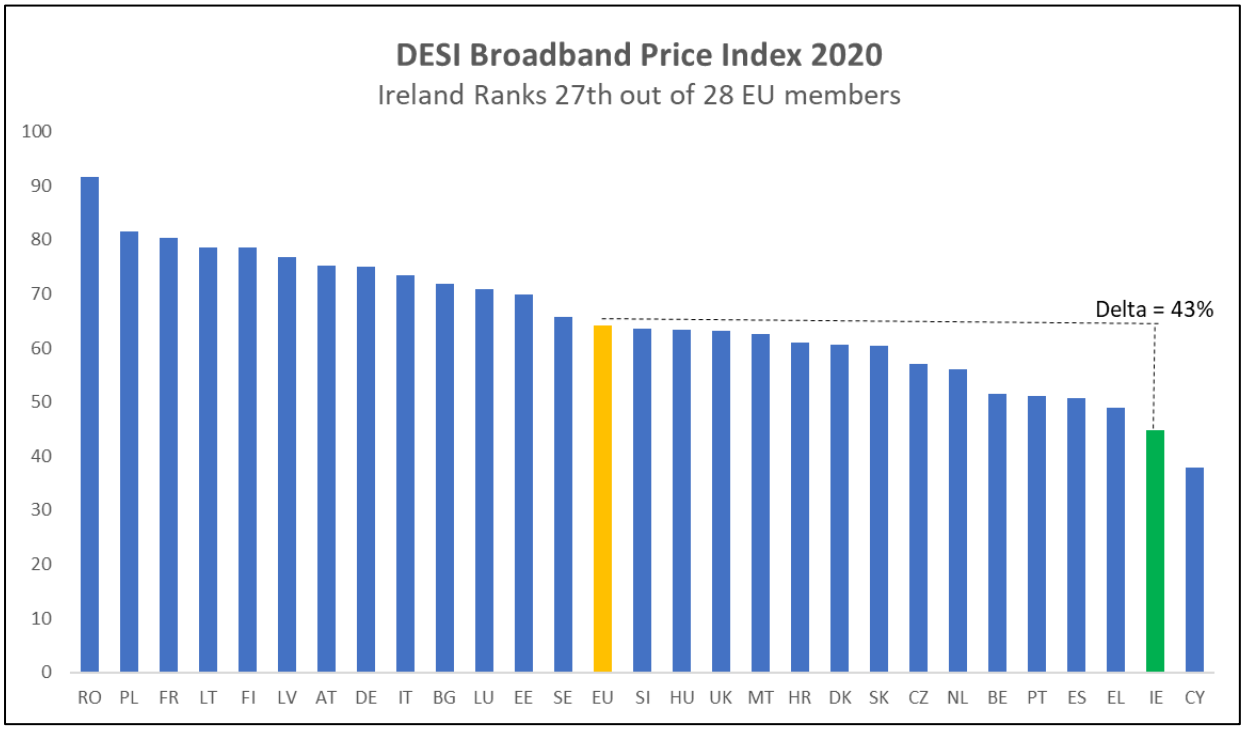
Consequently, it is clear that FTTC should not be placed on the same footing as legacy copper services like WLR, LLU and CGA bitstream when reviewing the Regional WCA and National WLA markets as part of a CSO process under Art 81. The Eircom Paper makes little or no distinction between FTTC and legacy copper services in that regard although it does make reference to voluntary commitments on FTTC pricing that would "*allow FTTC customers to stay with their retail provider in medium term if desired*".

Although Eircom has not shared the proposed voluntary committed prices referenced in the Eircom Paper there is a strong implication that the intention is to increase prices and possibly up to "*entry level FTTP profile speed wholesale price*"[55]. This ought to raise concern in terms of the implications such a proposal would have for competition and end-users not least because in the aforementioned DESI for 2020, Ireland ranks **second lowest of** EU members in its broadband price index with only

[52] The Eircom Paper refers to the 2019 DESI Index which does not include a metric for VHCNs. The EC has used new definitions in 2020 DESI Index which notes Irelands coverage for VHCNs increased from 13% to 21% from 2019 to 2020.
[53] See Section 3.5 of the 2020 DESI Report
[54] ComReg Connectivity Survey, REDC, ComReg 20/30 March 2021
[55] The Eircom Paper in the preceding paragraph suggests "*eir should be allowed to increase the wholesale copper only prices for voice and broadband services up to the entry level FTTP profile speed wholesale price*" – it is not clear if this principle also applies to the voluntary committed FTTC prices although that seems a reasonable assumption to make.

Cyprus ranking lower (see ***Figure 6***) – the lower the index rating, the more consumers in that country are paying for broadband. Further context is given to what this means in relative terms by comparison to our EU partners by observing the gap between the EU Average and Irish ratings. In simple terms Irish consumers would need to see a material improvement (43%) in relative pricing to simply achieve the European average.

**Figure 6**




If the largest block of broadband consumers on any technology (and FTTC far outstrips all other technologies in this regard) are forced on to either (a) a higher priced technology or (b) a higher price on FTTC by virtue of a "copper penalty" as advocated for by the Eircom Paper, then Ireland's position as a European outlier in terms of the worst pricing outcomes for consumers is likely to deteriorate further.

This would seem to be an important consideration for ComReg in assessing notifications under Art 81 of the Code that relate to amendments/withdrawal of existing obligations on FTTC in the Regional WCA/National WLA markets. Any such assessment would also need to balance the promotion of VHCNs with general objectives under the Code/Act to promote competition and the interests of end-users by "*maximising benefits in terms of price, choice and quality*"[56]. While VHCNs are likely to provide for equivalent or better quality than FTTC, careful consideration needs to be given as how CSO can contribute to maximising consumer benefits in terms of the o**ther two metrics, namely, "*price*" and "*choice*".**

The implications for Irish consumers in terms of annual cost in an environment where FTTC customers are migrated to higher priced VHCNs or have "penalty" price signals imposed on them where they stay on FTTC, as per the proposals in the Eircom Paper, can be approximated by applying reasonable assumptions to a range of scenarios presented in ***Figure 7***.

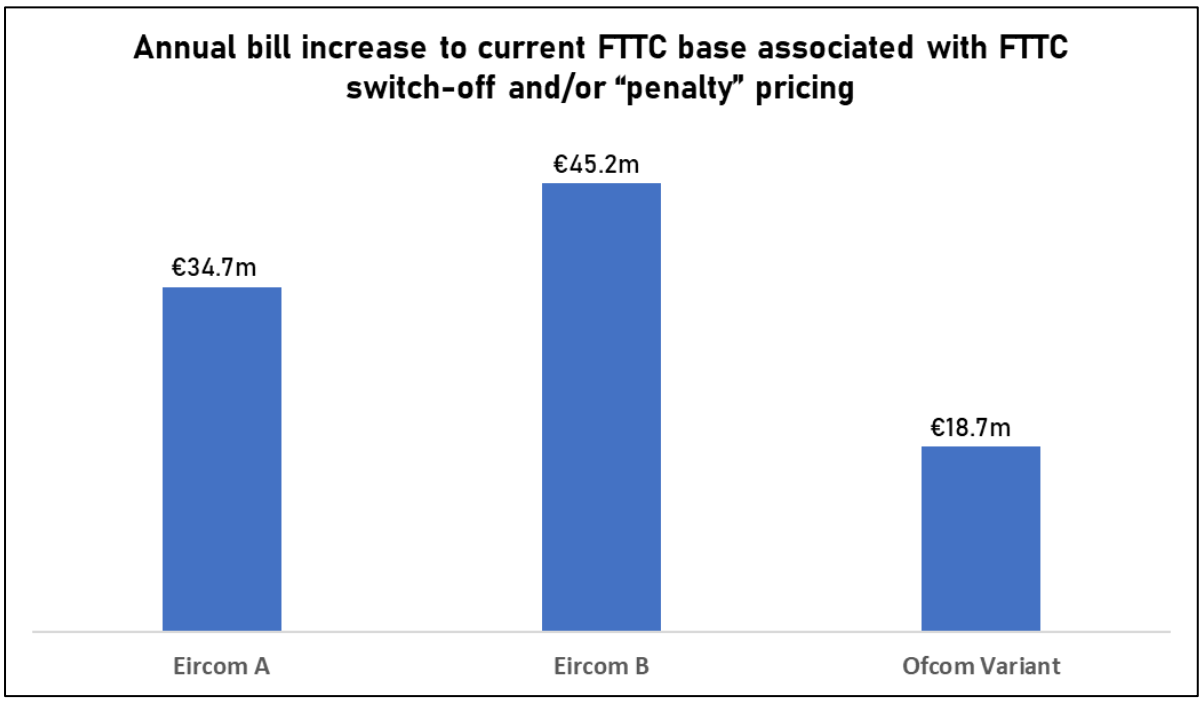
[56] Article 3 (2) (d) of the Code

**Scenario 1** ("***Eircom A***") – Current FTTC base (635k customers) ultimately pays the difference between, the entry level wholesale FTTH price and the current wholesale standalone FTTC price, in higher retail prices (incl. VAT) but with no additional retail mark-up.

**Scenario 2** ("***Eircom B***")– Current FTTC base ultimately pay the difference between, the wholesale entry level FTTH price and the wholesale standalone FTTC price[57] using the updated cost of capital (5.41%), in higher retail prices (incl. VAT) but with no additional retail mark-up.

**Scenario 3** ("***Ofcom variant***") - Current FTTC base ultimately pay a c€2/month (incl. VAT) premium to the current wholesale standalone FTTC price on a new FTTH entry level service, where that c€2 premium is passed on in higher retail prices but with no additional retail mark-up. This scenario captures the implications of a decision made by Ofcom in relation to CSO if a similar approach was followed in Ireland. The decision requires Openreach to provide an equivalent FTTH service to the regulated "40/10 FTTC" service where CSO takes place but allows for £1.70 premium on the new service. This initiative is discussed in greater detail below including how it might be applied in Ireland.

**Figure 7**




For any of the scenarios considered the projected increase in annual costs to customers will be substantial and underlines the need for caution when CSO is considered in the context of FTTC. It should be noted that these costs **do not include connection charges or any mark-up to retail charges beyond the expected higher wholesale monthly charge**. At the current wholesale connection charge to Eircom's FTTH service of €100, transferring the current FTTC base will cost RSPs a further **€63.5m** which could either be passed on directly to customers as an upfront retail charge or would have to be recovered in monthly charges (with VAT to be added in both cases).

While ***Figure 7*** has only considered three of many possible scenarios in how CSO in the context of FTTC could play out from a price perspective, those scenarios highlight the potential risks for end-users and for competition inherent in approaches advocated by the Eircom Paper. Simply adopting the "stick"

[57] Based on the 2021 price calculated by ComReg consultants TERA and published in Section 2.2 of TERA's "NGA/NGN Model Update" – August 14, 2020

approach (or even the "soft stick" approach in the Ofcom Variant Scenario) to incentivising migration to the fibre network may have an unduly adverse effect. Furthermore, it illustrates the care that needs to be taken in assessing legitimate commercial considerations in terms of cost efficiency around CSO and incidences where it is seen an opportunity to simply boost revenue (see **Section 3.1**)

ComReg has already determined that Eircom has the "*ability and incentive to price excessively*" absent cost-orientation obligations[58] in relation to FTTC and so the extent to which that "*ability and incentive*" carries forward to the product/s that replaces FTTC should be carefully considered. In this regard where a cost-oriented service is replaced by one that is not cost oriented, the implications of that outcome should be central to CSO considerations.

Ireland is a European outlier in a negative sense on broadband pricing as demonstrated by DESI (**27th**) yet is performing very well in terms of NGA coverage on the same index (**6th**). A CSO outcome therefore that accepts a further deterioration in pricing outcomes for Irish consumers as a *quid pro quo* for yet higher speeds may not be in the best interest of end-users and may fail to achieve the correct balance between price and speed variables.

## 5.2. Implications where cost-oriented service replaced by service with no charge control as part of CSO

If Eircom notify plans for a CSO with respect to FTTC in the Regional WCA and National WLA markets pursuant to Article 81 when the Code is transposed into Irish law, a detailed review of the implications that will have for those markets will be necessary. In D11/18 ComReg determined it was necessary to impose a cost orientation obligation on FTTC services for the first time since the service launched in 2013. ComReg noted in that decision, that following incidences of significant increases in FTTC charges over the period 2013-2018 "***excessive over recovery of costs*** *in the context of FTTC is* ***the key issue*** *which ComReg is addressing in this decision*" [emphasis added].

The imposition of this cost orientation measure was deemed to be proportionate to the nature of the market failure it was seeking to address i.e. excessive pricing risks where Eircom had SMP. Where a service that was being regulated under those conditions is being replaced by another service (provided by the same SMP provider) across the same geography, then *all else being equal* **there is every reason to be concerned the same market failure will simply apply in relation to the replacement service** (i.e. FTTH). ComReg recognised the risk the withdrawal of obligations poses where the replacement network does not carry the same wholesale obligations in the Transition CFI[59].

This risk is particularly acute in the case of FTTC, as a cost oriented **FTTC pricing itself would have been expected to act as a competitive constraint on FTTH pricing**. In losing FTTC therefore, OAOs and consumers not only lose the protection of a cost-oriented service but the competitive constraint that service placed on FTTH pricing unless an equivalent obligation is placed on the FTTH service (the replacement service). As such, all else would not be equal. *Prima facie* there are good reasons to believe that competitive conditions in the WCA/WLA markets will worsen since the 2018 market review in a scenario where Eircom's cost oriented FTTC service is replaced by an FTTH service that has no such obligation. One possible exception to this might pertain to the footprint in which SIRO provides FTTH services.

[58] E.g. paragraph 3.22 of D11/18
[59] Transition CFI, para 17

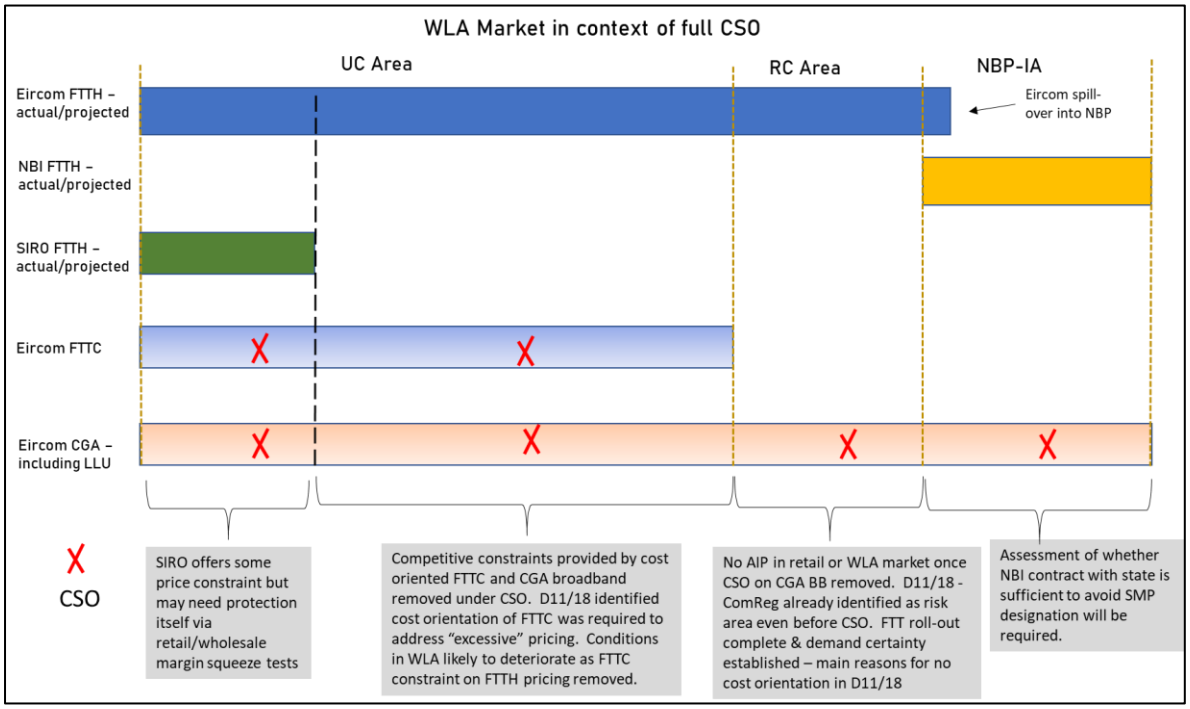
**The SIRO Footprint**

With the exception of the SIRO footprint, where coverage and the level of penetration is likely to have markedly increased since D11/18, there does not appear to have been notable market developments in Eircom's FTTC footprint. While this is just a high-level observation in the absence of detailed market analysis under Article 67 of the Code, if this were the case then it would be a strong basis for imposition of a new cost orientation obligation on FTTH prices across the existing FTTC footprint with potential variation to obligations in the SIRO footprint. In this respect SIROs status as an open access wholesale only provider is distinct from that Virgin Media's network, which based on ComReg's analysis in D10/18 could not technically provide "*VULA type services*" over its CATV network[60].

Were competitive conditions found to be different in the "SIRO footprint" by comparison the rest of Eircom's FTTH network in the Regional WCA and/or National WLA markets it is unlikely this would amount to a withdrawal of obligations on Eircom with respect to the footprint i.e. Eircom would still be likely to have SMP in those markets in that footprint. In this scenario the focus may turn to ensuring Eircom cannot damage existing competition in the SIRO footprint where a decoupling of FTTH remedies is justified in and outside the that footprint.

For example, were Eircom to face a cost orientation obligation on FTTH services outside the SIRO footprint only, following CSO, this would at the same time mean Eircom could charge different wholesale prices for FTTH inside and outside the footprint. In such a scenario, where Eircom still had SMP, its incentive might be to pursue an aggressive/predatory wholesale or retail pricing strategies aimed at undermining SIRO and OAOs in the footprint. Appropriate protections would therefore need to be retained or enhanced to mitigate against that risk e.g. the existing wholesale and retail margin squeeze test[61] obligations pursuant to D11/18.

**Figure 8**




[60] See paragraph 4.182 of D10/18

[61] See Section 5 and 6 of the D11/18 WLA and WCA Decision Instruments

***Figure 8*** provides a graphical summary of what full CSO could mean for the WLA market, including for the SIRO footprint. As discussed above special consideration will need to be given to the treatment of Eircom's FTTH services where CSO occurs in relation to currently cost oriented services given the market failures identified in D11/8 especially where CSO results in the removal of all key competitive constraints including FTTC, CGA BS and LLU (including Line Share).

## 5.3. Cost-oriented FTTH prices not necessarily higher than current (due to fall) FTTC prices

Before examining whether a cost oriented FTTH price would exceed an FTTC equivalent, in the first instance it is worth pointing out that the current cost oriented FTTC price itself may fall substantially when CSO in the NBP-IA and RC Area is carried out. This is because under the current cost methodology and proposals in the Access Network Review, FTTC lines share numerous categories of costs associated with what ComReg has defined as "non-commercial" copper services (including CGA broadband and WLR) where FTTC is not available. For example, the ANR proposes making no distinction in cost distribution between higher instances of faults in the UC Area with the RC Area and the NBP-IA where instances of faults are much higher. Consequently, as these "loss-making" lines outside the FTTC footprint are removed from consideration, then all else being equal, cost orientated FTTC prices as currently calculated should fall below the current level (independent of the updating of WACC in the relevant models which of course in its own right will push current prices down). In such circumstances the gap between a cost oriented FTTC price and the entry level FTTH price would be even greater than any of the scenarios considered in ***Figure 7*** and so the actual annual cost to consumers would be potentially much higher in both Eircom scenarios considered therein.

While this paper does not speculate on whether a cost oriented FTTH price would be higher than the current FTTC price (VUA and BS) in the absence of detailed costing analysis, there is evidence that suggests **such a hypothesis should certainly not be adopted as a working assumption**. In this respect it is notable that in the aforementioned WIK report, that although comparison are only made between FTTH prices and cost oriented ADSL products (which typically themselves would cost less than FTTC and there is plenty of evidence to support this across Europe), in the case of Estonia cost-oriented FTTH charges have been set at the same level as legacy copper services and in the case of Poland they have been set at less than the legacy copper 10Mbps product provided by the incumbent there (€13 per month v €16 per month)[62].

Furthermore, the Eircom Paper itself notes FTTH networks require "*less maintenance and less energy relative to their copper counterparts*" and that FTTH has "*fewer faults and more weather resilient properties*". In addition, in a GPON network the active equipment is located in the exchange so the cost of bringing power to cabinets in the access network does not arise (unlike with FTTC). **These are all characteristics that point to lower not higher costs**. In its investor relations communications Eircom has consistently noted that its FTTC network has been "*future proofed",* a position supported by the "open eir" website that notes with respect to its 7000 FTTC cabinets "*each cabinet has enough spare fibre capacity to deploy Fibre to the Home to all connected premises*, *offering speeds up to 1000 megabits per second as home and business needs change in time*"

[62] *Ibid,* WIK Report, Table 5

## 5.4. OAOs contribution to Eircom's FTTC success should be factored into establishing equitable FTTC CSO solutions

It was widely reported that Eircom invested **€400m** in deployment of its FTTC network that launched in May 2013. Since that time based purely on wholesale charges at the standalone FTTC VUA rates and the reported subscriber base on FTTC each quarter since, the network has generated over **€900m** in revenue (at a current quarterly run rate of nearly **€40m**[63]) with almost half of average asset life of the network yet to be exploited (based on an average network asset life assumption of 15 years). By the end of 2021 the investment will have generated more than **€1bn** in wholesale revenues alone.

While a more thorough analysis of the figures may be required, at a high level they are remarkable and suggest that even after accounting for a contribution to the copper sub-loop which FTTC utilises, the entire investment is likely to have been already substantially recovered including with a reasonable return on capital and operating costs. Such a conclusion is also consistent with ComReg's view that "*excessive over recovery of costs*" has been a feature of Eircom's FTTC based NGA services[64].

Given the current Eircom Paper does not appear to cater for the costs OAOs would incur where CSO applied to Eircom's FTTC network (e.g. wholesale connection charges associated with migration/new modems/increased call centre activity/marketing etc) a more in-depth analysis those figures may be justified where ComReg (or Eircom and OAOs through negotiations) seek to find equitable solutions to deliver an orderly and fair migration CSO process. In this regard any equitable solution around the terms and conditions for migration pursuant to Art 81 ought to take such matters into consideration.

Eircom's broadband subscriber base (across copper based services including FTTC) grew from 668,000 in June 2013 to over 900,000 today (a 35% increase) before Eircom launched FTTH services[65] in 2017. Eircom's retail base over this period has remained largely stagnant and **so all of the subscriber growth on its network over this period is attributable to its wholesale customers[66]**. Again, in exploring equitable outcomes in relation to FTTC CSO, requiring OAOs to incur significant costs to migrate its customers from a platform that could well remain viable at current prices even at substantially lower subscriber numbers (based on the above analysis), while ignoring such fundamental and historical realities may be unreasonable, unfair and discriminatory. As we will return in ***Section 6***, it is notable that Ofcom acknowledge that the contribution made by OAOs to the success of a retiring network in the context of CSO is a relevant consideration in setting regulated prices.

## 5.5. Ofcom contingency for "40/10 FTTC" CSO

While care should be taken in lending undue weight to recent regulatory decisions by Ofcom in the UK as these are no longer subject to European Commission or BEREC oversight, given the Eircom Paper appears to put some weight on developments in the UK we examine this in the context of FTTC CSO where FTTH is the replacement service.

In the UK the FTTC retail market diverges from the approach taken in Ireland where all FTTC lines are sold at their maximum speed capability e.g. in the UK a "choked" speed of 40Mbps is a feature of the

[63] €37.6m based on latest quarterly figures reported by ComReg, Q1 2021 (635k subscribers) at current FTTC standalone VUA charge of €19.79
[64] D11/18, para 3.101
[65] Excluding 2013 pilot exchanges in Wexford and Sandyford in 2013.
[66] This remains the case up to Q1 2021

retail market regardless of line speed capability. The underlying "40/10" Openreach wholesale service has been subject to a "cost-based" control since June 2018 but there is no cost-orientation obligation on FTTC speeds above this threshold. By contrast, in Ireland, FTTC has been sold on an "up to 100Mbps" basis with all lines delivering speeds up to their technical limit at the wholesale level and there is no evidence that retail operators have competed on speeds being restricted below that maximum capability[67]. The maximum speed on FTTC technology in UK is 80Mbps[68] but due to the deployment of vectoring technology across all FTTC exchanges in Ireland, speeds of up 100Mbps and beyond can be reached.

A cost-orientation obligation has applied to all FTTC lines in Ireland since new prices controls came into effect in March 2019, with no wholesale price differentiation applying regardless of actual speed the line can deliver. In the UK, Ofcom determined that a cost-orientation obligation was not required for speeds above 40Mbps to address Openreach's SMP in the WLA market. It should also be noted that Ofcom's most recent market analysis has also been informed by a FTTC discount scheme[69] negotiated by Openreach and various OAOs in the UK which was underpinned by an objective of moving customers off legacy copper products to NGA services (including FTTC)[70].

Furthermore, Openreach is legally separated from its publicly traded parent company BT, which offers retail services in the UK. By contrast in Ireland Eircom is privately owned vertically integrated operator with no functional separation. As such the regulatory protections enjoyed by OAOs and customers under the UK structure does not apply in Ireland so, all else being equal, **more stringent regulatory controls in other areas are to be expected.**

This summary reflects some **material differences** between the Irish and UK markets and underlines the need to be careful in drawing comparisons between the two jurisdictions. Nevertheless, some interesting insights can be observed in the UK from an Irish/European perspective.

Firstly, it is notable that progress has been made towards a transition to NG networks from legacy copper service through commercial negotiation between BT and access seekers and this serves to further support a case for such engagement as covered in ***Section 3.1***. Secondly the output of those negotiations incapsulates an approach to promoting transition from copper to fibre entirely based on "carrot" rather "stick" incentives. In this regard the incentive programme includes discounted pricing on Openreach's full fibre and GFast propositions[71]. Thirdly, despite being in the process of rolling out FTTH/P services in the UK the Openreach discount scheme applies to all variants of FTTC which further supports the conclusions of this paper around the unique status of FTTC in the CSO debate as discussed in **Section 5.1**.

Turning to developments with Ofcom, while its latest WLA decision[72] acknowledges a key objective as being the promotion of "*full-fibre*" (i.e. which is consistent with the objectives of the Code on VHCNs) it has sought to protect consumers by maintaining price caps on existing anchor services at their current level in real terms ("Price Continuity") i.e. for 40/10 FTTC and LLU. It has also introduced a

[67] Perhaps, somewhat counterintuitively, on a strictly cost causal basis, lower speed FTTC lines would cost more than higher speed lines given they are further from the cabinet and so use more passive infrastructure per line than shorter higher speed lines.
[68] This excludes g-fast which can deliver speeds up to 160Mbps.
[69] Wholesale Fixed Telecoms Market Review (WFTMR 2021) 2021-26, Volume 4 Pricing Remedies
[70] *Ibid* para. 1.56
[71] "*Volume commitment special offer on GEA-FTTC, Gfast and GEA-FTTP Available from Tuesday 21 August 2018*" Openreach – updated 21 March, 2021
[72] *Ibid,* WFTMR 2021

new obligation on a FTTP "*40/10 equivalent product*" to replace the current charge controlled 40/10 FTTC product if and when CSO takes place. In recognition of the "*higher reliability as well as support of higher speeds*[73]" this variant provides by comparison to the FTTC 40/10, Ofcom determined that a premium of £1.70 (circa €2) should be added to the FTTC cost based price.

Were Ireland to take a similar approach to the UK, an equivalent to the current cost oriented FTTC service for "up to 100Mbps" would be implemented for FTTH ("*100/20 FTTH equivalent*") at a circa €2 premium to the ultimately determined cost-oriented price for FTTC in the pending ANR decision. It is a proposal that, while affording some protection, would still have a significant impact on consumers that are forced to migrate from FTTC to FTTH (see "Ofcom Variant" scenario considered in ***Figure 7.***

The Eircom Paper makes no reference to the consumer protection initiatives inherent in UK approach. In any event, as already noted, while international experience (even outside the EU) may provide useful reference points to ComReg, there are material difference between the competitive landscapes in Ireland and the UK and only a thorough assessment of regulated Irish market is relevant to CSO considerations in Ireland that are consistent with the objectives of the Code/Act

[73] *Ibid,* para 1.34

## 6. Specific considerations for CSO on a per market basis

### A. Exchange "coverage" metrics

Chapter 3 already outlines why CSO pursuant to an Art. 81 application can only occur following a full assessment of the relevant market in which Eircom has SMP. Withdrawal of SMP obligations in order to facilitate CSO equally can only occur where Eircom offers a service of equivalent quality to the one being switched off. As such the approach advocated for in the Eircom Paper that advances a case for CSO based on a simple coverage threshold per exchange would not appear to be compliant with the requirements of the Code.

The problems associated with overarching arbitrariness of this approach is further undermined by arbitrary and potentially discriminatory elements within the approach itself. In this respect, the Eircom Paper appears to qualify FTTH "availability" as coverage being provided by NBI or Eircom only[74]. It promotes the idea that Eircom should be allowed to stop selling copper-based broadband where it has SMP, based on aggregate FTTH coverage including coverage provided by one third party operator (NBI) in one area of the WLA market (NBP-IA) but it is unclear how this would apply to other operators in other footprints. A clear justification for alternative approaches depending on the market and footprint would seem only to be permissible through a full market review.

In any case and as already noted where an application for CSO is made under Art. 81 it would appear irrelevant what coverage an exchange area has through any combination of operators because under the provisions of Art. 81, 100% of customers would have to be catered for in terms of being able to access a service of at least equal quality to the one being switched off (e.g. FTTC).

### B. Line status – "availability", active lines & inactive in-situ

The proposals in the Eircom Paper distinguishes between incidences of whether a customer is looking to connect to a legacy service or whether they are already active on it. Conditions around CSO under Art 81 will certainly have to consider such circumstances but a more granular approach will likely need to be adopted than covered by the Eircom Paper. In the first instance ComReg will need to satisfy itself as to what is meant by "*availability*" of services on the "new network". A broad interpretation of "availability" could mean when an address is listed in Eircom, NBI or SIRO's APQ files (or equivalents).

However, NBI currently have a "ready for order" lead time of up to 5 months. versus much shorter lead times for SIRO and Eircom. Meanwhile OAOs has reported incidences of fibre not actually being available at addresses where Eircom's APQ file has indicated it is. Such factors suggest a tighter definition around "availability" may be required where CSO is concerned if detriment to end-users is to be avoided. A customer waiting for connection to a service may be denied access to WLR, CGA broadband or FTTC on the basis that fibre is "available" in their area but for example, is it reasonable that a customer should wait 5 months in the case of NBI RFO date (assuming they meet this timeline)? or what alternative will the customer have in the case of an Eircom address error in the APQ? – will Eircom's systems be updated whereby that customer can be offered a copper service where such an error is substantiated? This level of granular scenario-based assessments will be required **if principles around transparency are to be observed** and the safeguarding of competition and end-users is placed

[74] Eircom Paper fn 19

at the heart of the CSO processes. Eircom's current IPM's[75] outline multiple BAU scenarios such as this and similar detailed examples in the context of any CSO process will also be required.

Different processes and conditions may also be justified depending on whether a customer is seeking to connect for the first time, whether it has an inactive in-situ line that can be activated remotely, whether they just need a NTU faceplate replaced (in the case of FTTC) etc. It may not be reasonable that a customer that must wait a lengthy period of time for a fibre connection would not be provided service where an in-situ copper line at the premises could be remotely activated for a small incremental cost.

The extent to which active customers are forced to migrate should also take account of work that may be required to upgrade to the fibre network e.g. with respect to wayleaves, unblocking ducts or tree-trimming etc. Such customers are likely to suffer the greatest disruption (and by extension this will add cost to their RSPs) particularly if they are already satisfied with their existing service and so special consideration should be given in relation to who bears the cost of such "forced" migration, whatever form that takes (e.g. loss of service or higher prices imposed on existing services).

Negotiated cooperative arrangements could play a significant role in shedding light on and ultimately finding solutions to many of the problems CSO might otherwise cause for customers, OAOs and Eircom itself. The Eircom Paper offers assurances that service outages should only be for a "*short period of time*"[76] and this should be welcomed but the extent to which this objective can be met will need to examined in detail for all migration scenarios.

**C. WEIL and backhaul capacity at FTTH exchanges**

Where exchanges in effect become FTTH only exchanges as a consequence of CSO, it is reasonable to assume a significant increase in bandwidth capacity demanded at the exchange will be a by-product of that development. Eircom should ensure sufficient increments of Wholesale Ethernet Interconnect Links (WEILs) capacity required by OAOs is made available within a reasonable timeframe. All such exchanges are likely to require ordering of blocks of 10Gb WEILs and in some case 100Gb WEILs depending on the exchange size. New SLAs associated with core network performance on FTTH bitstream products may also be required to ensure Eircom is incentivised to make the necessary investment in upgrading its core network where necessary. As part of CSO proposals Eircom should provide transparency on its long-term roadmap for exchange-by-exchange capacity upgrades and ensure appropriate SLAs around WEIL ordering timelines are in place. An outcome where OAOs take steps to voluntarily migrate customers from CGA/FTTC to FTTH and are suddenly faced with not having sufficient access to capacity at the exchange should be avoided at all costs. Conditions around WEILs in this regard should be required as otherwise customers risk being migrated to lower quality product which would be contrary to the requirements of Art 81.

**D. FTTH connections under CSO conditions should cover all connections at same price (incl. non-standard)**

Based on feedback provided by OAOs to RegOpp a sizeable portion of customers in the RC Area and increasingly in the UC Area ordering Eircom's wholesale FTTH service either face paying significant charges above the standard connection charges in order to receive service or OAOs themselves must incur the costs. It is one thing for customers that wishes to upgrade service having to incur additional costs associated with unblocking ducts (and go through several rounds of appointing) but another

[75] E.g. "open eir's" Bitstream Service Industry Process Manual
[76] Eircom Paper, p.9

entirely where this occurs as a consequence of being forced off (through pricing penalties or pending service cessation) due to CSO. If the interest of consumers is to be safeguarded, as ComReg is required to ensure under Art 81 it would seem reasonable that **these charges going forward should not be incurred on an individual customer basis** and all customers connecting to the "new network" should be allowed to do so on the same terms regardless of costs associated with individual connections. We believe that this would be consistent with how Eircom's connection costs are recovered for PSTN, CGA SABB and NGA SA FTTC services today.

In fact, there is no charge for new PSTN connections today as these costs are spread across all customers and recovered in monthly rental charges. It should be noted that Eircom itself supported this move to zero connection charges as recorded in ComReg Decision D03/16[77] in recognition that the costs would be recovered through rental charges. Where FTTH replaces copper as the network anchor product then a similar logic on connection cost recovery should apply given that precisely the same issues (e.g. blocked ducts, wayleave delays, customer missed appointments etc) that Eircom encountered in making PSTN connections applies equally with respect to FTTH connections.

Again, ComReg needs to take care that the incentives for driving CSO is not motivated by attempting to overhaul existing wholesale pricing arrangements with new pricing or pricing structures that are commercially favourable to Eircom but put OAOs and end-users in a relatively worse position than prior to CSO. PSTN, CGA broadband and FTTC currently **face zero to very low connection** charges in a pricing regime that still permits Eircom to recover its costs, there is no reason as similar regime could not be applied as a condition of CSO under Art 81 where FTTH becomes the new network "anchor product".

Eircom's owners who also operate a fibre network under the "Free" brand in France noted in a recent consultation response[78] to ARCEP that in order to encourage transition to fibre **it was offering free FTTH connections to customers upgrading from copper services** including the costs of modem ("Free box") and notably remarked that '*Free don't generally differentiate between the price of copper and fibre offers*' which would support an assumption that no material cost differences apply in operating either network. Furthermore, it pointed out 'the main levers for customer migration are therefore not tariff based but linked to service availability'[79] which raises questions about whether the argument in the Eircom Paper that suggests "signals" through higher copper prices would be required at all, if fibre services were offered at the same level as current copper prices. Were Eircom's owners minded to agree to conditions reflecting **a similar approach for Ireland that it appears to endorse in France** i.e. funding migration from its copper to fibre network and maintaining fibre prices at the same level as copper prices, CSO may be facilitated in a more timely manner with the support of industry and with reduced disruption to customers.

It is also worth noting that throughout the same response to ARCEP, Eircom's owners has not advocated for increasing the incumbent's (Orange) copper access services as a mechanism to create incentives to switch to fibre (as the Eircom Paper does) but rather that its copper tariffs should be reduced to the level of "avoidable" operating costs (with no recovery of capital costs) to ensure Orange could earn no more than avoidable costs in order to "*send the correct economic signals*". It

[77] See para 11.24 of Decision on Current Generation Wholesale Access, D03/16

[78] See Iliad response to of ARCEP Consultation - "Accès fixe à haut et très haut débit : bilan du cycle en cours et les perspectives pour le prochain cycle d'analyse des marchés", 2020. [Translated: 'Fixed Broadband and very high-speed access: assessment of the pricing cycle and outlook for next round of market analysis'

[79] *Ibid*, p. 10 - [Original text "Les principaux leviers de migration des clients ne sont donc pas tarifaires mais liés à la disponibilité des offer"]

seems unlikely that Eircom would support such a proposal in Ireland if it were advanced by alternative infrastructure provides (AIPs) such as NBI, SIRO or Virgin Media in relation to Eircom's copper assets where AIP networks were present. Attention is brought to this point purely to reinforce caution in relation to matters discussed in **Section 4.1**.

**E. OAO costs of migration**

As discussed previously, OAOs are likely to incur significant costs associated with being forced to migrate customers as a consequence of CSO. RSPs will have to make financial provision for increased call centre activity where multiple communications may be required to facilitate migration of effected customers, many of which may have been satisfied with existing service.

OAO and customer disruption will be an inevitable consequence of CSO even where keeping this outcome to a minimum, as proposed by ComReg in the Transition CFI[80], is enshrined as a principle in the CSO process. Customers will have to enter new contracts with OAOs on potentially worse terms, will require one or more technician appointments to their homes, may have to carry out their own ducting work at their own expense (if this issue is not addressed as part of the CSO process) or may even face significant delays in restoring service if order handling systems contain inaccurate data about availability of fibre to their address.

As a result, operators are also likely to face increased customer churn to other RSPs or alternative infrastructure platforms as a consequence of the disruption. In the alternative they may have to be financially compensate customers for the disruption in order to avoid a churn event. In most cases new modems and in many cases new CPE (for VOIP services) will be required by customers migrating from copper based to fibre services. In addition, if the replacement service wholesale charges are higher than the existing service charges this will inevitably translate into higher retail charges in a competitive market[81] if OAOs are to remain viable.

At a high level it is clear therefore that CSO will have significant cost implications for OAOs and if competition and the interests of end-users is to be safeguarded then how these costs will be catered for should be central to considerations around the "process" and "conditions" under which CSO is permitted to occur. The current proposals in the Eircom Paper justifies moving to fibre only services on grounds of efficiency, but the inefficiencies imposed on OAOs through the migration process it advocates for is given no consideration. CSO under those terms would arguably be discriminatory and the accounting for OAOs costs associated with CSO should therefore be central to the conditions and process around facilitated it.

**F. Accurate Advanced Prequalification (APQ) information will be critical to minimising competition and customer disruption**

Transparency is a principle that lies at the heart of Recital 209 that informs Art 81 of the Code. Having access to reliable information in a timely manner is central to meeting the objectives of that principle. OAOs have consistently reported concerns about the quality of information in Eircom's APQ file where customers have been sold services by retail agents only for OAOs to subsequently receive an order rejection on the basis that the service is actually not available at the address in question.

[80] *Ibid*, Transition CFI, para. 31

[81] In a competitive market retail prices will already be at a level where operators are earning no more that a reasonable rate of return and so high input prices will result in higher retail prices if a reasonable return continues to be made.

Such incidences increase OAO call centre costs, cause reputational damage and often result in lost sales.. Currently there is no penalty on Eircom associated with such events and as such retail operators are incurring significant costs to effectively drive the surveying of Eircom's network on an order-by-order basis. While Eircom are willing to take on the cost of sending a field engineer (although these are ultimately recovered through wholesale charges anyway) to survey the network where a sale has been put through, it has to date been unwilling to complete a full survey of its entire network to identify definitively which of its services can be connected to each address on its database and under what conditions such connections can be made (e.g. standard v non-standard). By contrast it is understood that NBI and SIRO has or are currently conducting such surveys to ensure OAOs has reliable information to advise prospective customers and this should perhaps be considered as a prerequisite to CSO.

A particular problem could arise with respect to Eircom's FTTC exchange address data vis-à-vis its FTTH exchange address data. whereby a customer homed for FTTC services on one exchange may not be mapped to the same FTTH exchange. Under these conditions, applying CSO rules on the basis of the percentage of an exchange area covered by FTTH, as proposed in the Eircom paper, has the potential to significantly inconvenience a sizeable portion of customers who are theoretically covered in the "exchange area" but are actually homed/mapped to a different exchange for existing services.

ComReg will need to consider how these operational issues should be addressed in the context of CSO as any such problems are likely to be exacerbated due to increased migration activity in a CSO environment, with potentially serious implications for competition and almost certainly for end-users. Mandated network surveying in support of transparency objectives could be imposed as a condition of facilitating CSO under Art 81. Alternatively, an SLA penalty regime that fully compensates OAOs where it makes sales it ultimately cannot complete due to APQ errors could provide a financial incentive to Eircom to ensure such incidences are kept to a minimum.

It is notable that Eircom's owners recognise the importance of providing accurate addresses information in relation to the roll-out VHCN in its response[82] to ARCEPs consultation on VHCNs in France. In its response Iliad, sought the imposition of regulatory obligations on parties responsible for updating the publicly maintained "IPE" high speed fibre database. The problems encountered by Iliad (FREE) in France are strikingly similar in many instances to those encountered by OAOs in Ireland.

### G. Treatment of sale copper and associated assets following CSO

A key consideration of CSO pertains to the sale of copper assets following CSO. The extraction of copper from the retired network offers the potential for a significant financial windfall to Eircom net of extraction costs. Incentivising copper extraction from ducts, when it is profitable to do so, will also be important in terms of promoting competition through increased access to passive infrastructure. ComReg's "*Draft ECS Strategy Statement 2021-2023*" notes it intends to conduct a Physical Infrastructure Access (PIA) consultation over this period in "*recognition of the desire to address competition bottlenecks at the most upstream level possible*". Removing idle/redundant copper from the network to clear space for alternative infrastructure would seem an obvious place to start in tackling such bottle necks. Reusable duct would also provide an additional revenue stream for Eircom and the associated economies of scope should reduce the costs of services that share that duct e.g. FTTH.

It is notable that as part of the 2018 WLA market review, Ofcom accounted for the net proceeds from the sale of copper and property in its cost modelling exercises that informed its "charge control"

[82] Ibid, Illiad response to ARCEP, Sheet 8.3

remedies[83]. Ofcom reasoned that OAOs should benefit from the proceeds of the copper they have contributed towards and to incentivise the incumbent to clear duct space for PIA services:

> *"Users of BT's network have contributed towards the investment of this copper and therefore we consider it is appropriate that they should benefit from potential future proceeds. In addition, by including these expected proceeds in the charge control, we are incentivising BT to realise that income in the future and clear space in its ducts for PIA services."*

Ofcom estimated that the cost of copper extraction on the E-side only of the exchange at the time to be c**£2,800** per tonne, while it is worth noting copper commodity prices on the London Metal Exchange (LME) have been trading in a 10 year high range of $9,000-10,000/tonne in recent months[84].

Where copper extraction is promoted as part of any CSO considerations then it would seem to make sense that the net proceeds from such activity should be accounted for in pricing remedies associated with the migrated-to network whether it is relation to existing obligations (e.g. cost orientation of ancillary services such as connections) or in relation to new obligation imposed as a consequence of CSO (e.g. cost orientation of FTTH VUA prices).

[83] See Annex 22 of "Wholesale Line Access Market Review: Statement – Annexes 17-27", Ofcom, 28 March 2018

[84] Source: London Metal Exchange

## 7. Specific comments on publications referenced in the Eircom Paper

The Eircom Paper has presented evidence from **Sweden**[85]**,** apparently in support of its position for CSO drawing on a correlation between employment levels and fibre penetration. Care should be taken that the evidence from Sweden is not taken out of context as a supporting argument for CSO, particularly as it relates to FTTC and taking account of fact that fibre penetration in rural areas is going to be driven by NBI and not Eircom, in any event

The first thing to note that the OECD analysis focusses on Swedish municipal networks. The Swedish municipal networks are in the main publicly owned networks where the municipalities themselves are Physical Infrastructure Providers (PIPs) of passive infrastructure (including dark fibre). This means that much of the duplication of infrastructure that can be observed in Ireland is less prevalent in Sweden. This distinction is important because the underlying structure of the Swedish market may be contributing to the positive correlation observed between fibre penetration in Sweden and employment levels. As noted in the OECD paper municipalities differ from "*vertically integrated operators whose networks primarily are provided to maximise returns to shareholders*" with several references to municipalities contributing to "*lower prices to consumers*"[86].

**In contrast the proposals in the Eircom Paper centre around increasing prices** to consumers and so there is no reason to be believe trends observed in Sweden under should be expected to be repeated in Ireland under such materially different conditions. The impact of increasing prices for consumers and businesses could well have the opposite causal effect. In this regard it is important to note the OECD paper clearly calls out with respect to its analysis that 'correlation' should not be interpreted as 'causation' where it states:

> "*..the regression analysis presented in this work only proves correlation between fibre penetration and a number of socio-economic factors, and does not claim to verify the causality between increased fibre penetration and the socio-economic variables presented*"[87]

The Eircom Paper further relies on a 2019 Oxera Report[88] commissioned by the Broadband Stakeholder Group (BSG), a government advisory forum for UK telecommunications policy. The information it has drawn attention to from the report is the "*expected increase…in the number of business operating in an area where speeds double*" of between 0.4% and 3.2%. The report itself relies on that upper limit estimate of 3.2% based on a French study, Hasbi (2017)[89]. **The Hasbi report in fact defines "*very high-speed broadband*" as including all speeds "*above 30Mbps*"**[90] and is not to be confused with VHCNs referenced in the Code. The report therefore includes Orange's VDSL lines (FTTC) in its analysis as contributing to the observed output.

The lower 0.4% estimate is based on the Ipsos MORI (2018)[91] which has in the main focussed on the benefits of "*subsidised coverage*" in the UK which would likely support a case for NBP approach taken

[85] Development of High-speed Networks and the Role of Municipal Networks, OECD Science, Technology and Industry Policy Papers, No. 26, OECD Publishing, Paris
[86] Ibid, p. 5, 18, 25 & 51
[87] Ibid, p. 24
[88] Impact at a local level of full-fibre and 5G investments, prepared for BSG, September 2019.
[89] Impact of Very High-Speed Broadband on Local Economic Growth: Empirical Evidence, Maud Hasbi (2017) JEL classification - L13, L50, L96
[90] Ibid, p. 2
[91] Superfast Broadband Programme Evaluation, Annex B: Economic Impacts, July 2018

in Ireland, which again is an area characterised by zero FTTC coverage. This is likely to be an important comparative variable to take into account in assessing the value the Ipsos report in an Irish context.

Finally, the Eircom Paper also relies on forecasts from a 2016 Impact Assessment around options for the new regulatory framework (now the Code) that projected GDP growth associated with different take-up rates of broadband provided over the equivalent of VHCNs. While the projections are notable under certain scenarios one of the key observations from that report was the extent to which price impacts consumer decisions around take up. In this regard it stated that "*it is notable that quality **comes second to price** in nearly all countries as a deciding factor for consumers selecting broadband offers*"[92] [emphasis added]. So while ones eye is naturally drawn to GDP growth prospects identified, it is equally important to understand the conditions under which those projections are realisable. Proposals to increase (possibly significantly) monthly bills for migrating customers, as appears to be advanced by the Eircom Paper, are conditions that may not be consistent to achieving outcomes projected in that Impact Assessment especially given Irelands already poor performance vis-à-vis its EU partners in terms of broadband pricing as depicted in ***Figure 6***.

[92] Support for the preparation of the impact assessment accompanying the review of the regulatory framework for e-communications SMART 2015/0005 PART II – Detailed analysis by subject, p19

Confidentiality Notice:

# BT Communications Ireland Ltd ["BT"] Response to ComReg's Call for inputs:

# Migration from Legacy Infrastructure to Modern Infrastructure

Issue 1 - 14 Sept 2021

## 1.0 Introduction

We welcome this important Call for Inputs seeking initial views on the approach for migrating from the legacy copper access infrastructure to a modern fibre access infrastructure. Core networks are largely modernised, and we consider these generally out of scope for this response.

BT supports an orderly and managed approach to the modernisation of the access network and supports ComReg in running this Call for Inputs. We have the following key points.

1. We believe industry discussion with the oversight of ComReg is the optimum approach to develop the plan so that issues from the various stakeholders can be considered and discussed, and the plan improved rather than operators and customers/consumers risking a poor migration journey.
2. We believe a representative exchange area should be selected for a full trial so that real learning of the issues can be obtained. For example we need to learn the best way to communicate the changes to customers, the reaction of consumers, the reaction to forced migrations if such were to happen, the potential technical issues with Customer Premises Equipment, the accuracy of fibre rollout information etc.
3. We would ask that ComReg also engage users/consumers/businesses for their views.
4. Once the process starts there needs to be absolute clarity of timing and process with sufficient notice period for each stage of the process to allow stakeholders to make changes to their operating models and management of end customers/consumers.
5. We need to understand the plan and facilities for those customers that won't be served by fibre and who remain on copper. It's not good enough to say NBI will provide service to them as such could be some time away.
6. Separately we need far more detail for the approach and timing to switching off business products.
7. Critical Network Infrastructure (CNI). There would appear to be issues to consider both for the consumer market such as burglar alarms, health alarms and a review should be carried out for business services particularly for key utilities that may still be using legacy telemetry and control systems over copper.

## 2.0 Response to the Detailed Questions

**1 Do you agree with the wholesale migration and replicability principles set out above in section 2.1 to 2.2? Are there any other principles in this respect that should be considered? Please set out clearly the reasons for your response and any supporting evidence.**

BT Response

We agree with the wholesale migration and replicability principles set out in section 2.1 to 2.2 including for Eircom to undertake an analysis and impact assessment as part of the original ComReg request of 2016 for including plans and timelines of the withdrawal of copper-based service.

In addition we believe ComReg needs to conduct a detailed review of the process and impact of the approach to no new sales. We found the Eircom White Paper unclear as to whether phase one of the plan had already commenced and we seek clarity in this matter. For example to address the implications of the fibre only area declaration particularly where the same area has considerable copper in place. Are orders already being refused? Where wholesale copper sales are refused as records indicate the address has been passed for fibre supply, then the quality of the fibre data needs to be accurate otherwise operators and end customers get caught in a no supply loop.

**Q.2 What principles should guide ComReg in establishing the existence or not of ACP as described in section 2.2 above? Please set out clearly the reasons for your response and any supporting evidence.**

BT Response

We consider ComReg should include as a min the following principles in establishing the existence or not of ACP as described in section 2.2 above:

a. The accuracy of fibre data need needs to be good. We consider further improvement is required as a matter of urgency prior to such a major programme. Fixing the slung leads issue whilst helpful is not enough.
b. Premisses passed should be based on addresses available for service, not just streets passed as these two can be different.
c. There needs to be a solution to the DP full scenario which may show up as premises passed but there is no capacity to supply. Fibre services should be made available, and copper should be supplied if available in the absence of fibre supply.
d. To work from what has been build and not what is planned. You can't connect to a plan.
e. Interoperability of order handling systems. Whilst manual facilities are often available and require modest systems integration such become increasingly inefficient with higher volumes of orders and transactions. We believe ComReg is incorrect in clause 2.13 when automated order handling systems are deployed as we have found the reality is each access provider has different systems and ways of working. Automation to interwork with the various access systems takes considerable time and cost.
f. In most locations access will likely take the form of a duopoly of supply with similar competitive practices as single supply. Hence ComReg will need to continue to monitor the provision of access for anti-competitive practices.
g. We will address Customer Premises Equipment in Question 3.

**Q.3 What general retail (end user) principles do you believe are required in protecting end user interests during any Migration from Legacy Infrastructure? Please set out clearly the reasons and evidence for your response.**

BT Response

As an operator we consider the following principles to be important in any switch-off.

1. Agreement, clarity, transparency, and timelines for no new sales. If no new sales are to happen they should be discussed with industry and a ComReg public decision issued to proceed. This will allow operators to change their own practices so they can all compete fairly at the start of the phase. Not to follow this approach risks some operators knowing and others not which would be unfair.
2. Migrations – We consider the facility for bulk migrations should be made effective immediately. We note the ComReg Direction[1] in this matter, but also that the key roll-back facility for migrations may now not happen if the FACO decision is not issued. Artificially forcing operators to stay on legacy products completely goes against the principle of the copper withdrawal. We consider ComReg should now look to triggering the EECC regulation in this matter or not allow the start of the process until operators are enabled to bulk migrate from the legacy services. We are increasingly concerned that Eircom will have the motive and opportunity to raise price the WLR whilst restraining the ability of other operators to leave the product in an efficient bulk way.
3. Availability of fibre access. Whilst we can understand the availability of alternative products through access fibre services, it not clear what ComReg's position will be for those customers where fibre is not delivered or that it may be many years before such is available in their area. We note the State Aid initiative and the establishment of NBI; however we should only consider fibre delivered when it has been done rather than its planned. This should be a core principle as planned fibre is no use to a customer.
4. Pricing – We note Ofcom instigated the concept of a regulated anchor product where the price was set to ensure customers were price protected for specific products in FTTC and hard wired this to a specific FTTP rate. We consider ComReg should instigate the same or similar here to provide a safety net for FTTP charges. We consider such would be preferable to a contractual type agreement between ComReg and Eircom on a voluntary price that ComReg (hence industry) could not get out of if the market or other dynamics were to change. We are open to consider the views of ComReg in this matter but are concerned such could fetter the discretion of the regulator.

**Q.4 What matters relating to end user communications should be considered in the transition from Legacy to Modern Infrastructure?**

BT Response

Although BT Ireland is a network operator and aware of many issues in the retail market, we don't contract with Irish consumers hence we will leave end-user communication, contract changes etc. to the operators with first-hand experience to answer this question.

**Q.5 What are the matters relating to universal service that you believe should be considered during a transition from Legacy to Modern Infrastructure? Please set out clearly the reasons and evidence for your response.**

[1] Direction Issued further specifying the Migrations obligation in ComReg Decision D10/18. ComReg document reference 21/53 Dated: 14/06/2021.

BT Response

We believe the approach to USO in Ireland needs urgent reform to include the following:

1. To determine whether NBI will take over the USO in the rural areas and if this is the case this should be consulted on so NBI will have time to be aware of its obligations whilst its planning and building its network. The USO obligation could potentially alter NBI's approach or to its approach to recording costs.
2. Similarly to review the nature of the USO in other parts of the country.
3. We consider a key element of the migration from copper to fibre is to ensure we are not being double charged i.e. maintenance and replacement costs charged within the USO should not also be charged in replacing poles and ducts for NBI or the Eircom fibre rollout.
4. To determine whether the time has come to end some of the legacies of the past such as paper phone books. Whilst we note paper phone books must now be requested the costs reported by outsourcing this appears disproportionate.
5. Payphones, whilst we agree with the ComReg usage criteria established some years ago, again this is a legacy product and it's time to accept the mobile phones are ubiquitous and there is a Telephone Support Allowance (TSA) from the Department of Social Protection automatically paid to people who qualify for it. We understand it can be paid directly rather than through operators. Separately in technology terms It would seem to be disproportionate to use a fibre to provide a basic payphone telephony service (which is the part subject to the USO) so maybe the criteria should be updated to reflect the additional costs of fibre supply.
6. Given the long running issues between ComReg and Eircom concerning the USO, and the very recent Appeal issued by Eircom against its recent USO designation we consider we cannot offer more views in this area at this time.

**Q.6 What is your view on the Framework principles outlined in sections 4.1 and 4.2 above? Are there other aspects that should be considered?**

BT Response

We fully support ComReg's Framework principles outlined in section 4.1 and 4.2 as such bring structure, clarity, and the basis for timelines. We would also like to offer the following comments:

a. Examples of Critical Network Infrastructure (CNI) should be included within any exchange area trial, for example alarm systems, health alerting systems, telemetry systems (some may be on forgotten old analogue services). This trial would also capture situations such as analogue phones in lift shafts which are often deployed in state-of-the-art buildings given their independent power source and connectivity.

**Q.7 Do you agree with the concept of a copper switch-off trial in specified exchanges?**

BT Response

a. We strongly agree it would be beneficial to trial a representative exchange area for the switch over which is likely to flush out technical issues and more importantly the wider process issues and any organisational or customer impacts.

b. A trial of an exchange area would also provide the ability to test out a bulk migration of WLR.

**Q.8 What is your view regarding the concept of Stop Sell for legacy services for an exchange area?**

BT Response

a. We agree with the concept of Stop Sell for legacy services for an exchange area if it's a controlled trial with complete transparency of the finding as the trial progresses.
b. Safety mechanism. If the trial is found to negatively impact our customers then it should immediately stop for our customers and we will work with industry to understand and resolve the issues before agreeing for the trial to recommence for our customers.
c. If the learning from the trial indicates Stop Sell is workable then we will support depending on the specific conditions that are being applied.

**Q.9 What criteria and timelines would you consider appropriate in a Migration and Switch-off Phase?**

BT Response

Absent the availability to bulk migrate customers safely and effectively from WLR to VoIP then the timeline should allow for the intrinsic migration of base of WLR. Operators could provide their intrinsic migration rate in confidence to ComReg.

Whilst we welcome the Direction for the service features to become available on the UG during the bulk migration process, we are concerned that the recent serious doubts letter of the European Commission concerning the Fixed Access Call Origination (FACO) decision will negatively impact the introduction of the roll-back feature to support bulk migrations and consider ComReg should delay any agreement on copper withdrawal until the roll-back feature is provided.

**Q.10 What consideration should be given to the costs relating to connecting a premises for FTTP, including for mandatory migration from Legacy Infrastructure? If such costs were to be borne by Eircom, how should such costs be recovered?**

BT Response

BT Ireland does not trade in the consumer market so we are not generally commenting on retail costs in our response, but we would like to make the following observations in this area.

a. We note copper is a valuable commodity, and we would assume ComReg will build the value of revenue earned from selling scrap copper into the withdrawal calculations. We note Ofcom included this revenue stream in the UK costs.

**Q.11 What consideration should be given to the withdrawal of obligations and related conditions?**

BT Response

We would like to offer the following observations:

a. A representative exchange area should be chosen for a full trial run involving the industry. The industry should be involved in the detail of establishing this trial as they also must manage their end consumers within the trial area.
b. The results and learnings of the trial should be factored into the actual switch-off. For example we need to understand what will happen to the premises which were not reached by fibre.
c. Associated with b above, the data for premises passed for fibre needs to be of good quality and accurate to minimise the loop of preventing copper orders where fibre is mistakenly available.
d. A key principle of the switch off should be clarity, including areas impacted, proposed time scales both for the proposed rollout of Fibre in that area and the switch-off.
e. A clear copper Stop-Sell should be announced per exchange area and the notice timescales should be discussed by industry with ComReg having the final say. BT Ireland does not sell to consumers in Ireland so retail operators would have a better view of the implications and best timescales for their business.
f. Absent major problems with stop-sell in any area its assumed once the time is reached then the copper products will stop being traded. Once trading has finished there should not be instances of continuing copper sales unless due to data errors.
g. For business services work should be undertaken to look at Critical Network Infrastructure (CNI) and to address any legacy analogue services still being used for telemetry and control functions. It's possible some of these are so old that the analogue products were ceased some time ago, yet the services are still fully functional and could be significant to the smooth running of the State.

**Q.12 In addition to your responses above, what are your views on the context, transition proposal and conclusion presented in Eircom's White paper (Annex 2)?**

BT Response

We have several comments to the Eircom paper as follows:

a. We have issues with the Eircom approach of Stop-Sell being implemented at a premises level given the potential that some customers will be refused copper services based on fibre being available, and when ordered the fibre is not installed, or the DP is full. We would prefer notice to be given (not less than a year ahead) of stop sell in that specific area so It's clear to all when the stop sell is happening, and to allow time for Eircom to continue to improve the accuracy of its fibre data. Whilst we note progress has been made on issues such as slung leads, we note there were several other issues impacting accuracy and we have not heard any recent news on the progress of these.

b. We strongly disagree with the point that within 28 days of a premises being able to order fibre in an area that Eircom will contact them. We believe such could imply that fibre is only available from Eircom and such could be used as an exclusive marketing opportunity for Eircom. We believe either a multi-operator branded communication is issued or operators inform their own customers. We have seen a multi-operator approach work successfully in the UK for the launch of earlier forms of BB.

c. With reference to clause 5.9 of the consultation we consider ComReg should consider the approach of Ofcom which provided a 1yrs safety mechanism into the transition between stages. I.e. Once a stage threshold is reached then 1yrs notice of the next stage would commence to give operators time to adjust their trading practices for the next stage. Indeed we consider that the 75% per exchange area should apply to the 1st stage and not the second as proposed in the Eircom document, in that stop sell 1yr notice would commence when 75% of the area has fibre.

d. We have the following concerns with the approach of raising the copper only prices for voice and broadband services to the FTTP entry.

   i. Firstly ComReg's D10/18 and D11/18 do not seek to set the FTTP price, so any entry level price could be set. We note Ofcom created a regulated anchor FTTP price related to a mainstream FTTC price.
   ii. We are assuming the term copper only means copper all the way from the local exchange and so we understand this to exclude FTTC services.
   iii. Whilst we are aware of the issues with the proposed FACO Decision our understanding is the broadband copper only services are still regulated under D10/18 and this should continue in the areas still regulated.
   iv. We also note that although NBI is in receipt of State Aid for its roll-out, there has been no regulatory Decision concerning the USO applied to NBI. We appreciate that NBI's roll-out is in its early stages so its status will need to be treated as work in progress, however we consider ComReg should address the Designation of the USO to NBI as a matter of urgency including tying it to the roll-out.
   v. With regards to clause 5.11 we understand ComReg will soon complete the updates to its Access Network Model, and this should be the basis of the pricing for the coming years.

**Q.13 In your view, what role should pricing signals have in incentivising the migration from legacy services? What are your views on Eircom's proposal on pricing triggers? Please set out clearly the reasons and evidence for your response.**

BT Response

As BT Ireland does not trade in the consumer market we will leave this question to those operators more expert in consumer retail pricing.

**Q.14 What is your view on Eircom's proposal for differentiated handling of the business-to-business market?**

BT Response

The detailed process for business customers is not clear from the Eircom document and should be detailed separately. Most business headquarters and large sites will already be supplied with fibre and such would largely be out of scope for the project except for facilities such as the phone in lift shafts which are often still basic Plain Old Telephony (POT)s copper services power from the

Exchange. Small business, branches of bigger organisations such as bank branches may still have copper services and are clearly in scope.

We also consider that key utility Critical Network Infrastructure (CNI) should be in scope and this area would generally use business type products. A concern is that some of services used for telemetry and control may be so old that sales were ceased years ago, however the services may still be fully functional controlling CNI. This area should be reviewed in detail before any actions are taken.

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Its traditional with business services to give ample notice of end-of-sale and Eircom have done this over the years with products such as ATM services on a national basis. Where the products are regulated we don't see why the regulation should fall during this period unless due to market reviews etc.

Our learning is the stop-sale often goes ok, but the switch-off can be anything other than straight forward with business customers often not be working to the same timescales. Experience of migrating business customers for previous service shutdowns suggests this may be as difficult as the migration of consumers. It never appears to go to schedule and is always subject to customer complexity. One concern will be copper based ISDN 30 services working over 2Mbit/s cooper solutions where a large investment decision may be required by the customer to update/replace their PBX and internal call system. Business customers are likely to refuse to pay for the migration so funding will likely be a key issue.

**Q.15 Eircom propose that at the 'cessation date', where end users have not acted (i.e. end user did not order a fibre-based service) their legacy service will be terminated (unless self-declared to be a vulnerable user or a user providing critical national infrastructure). Do you think there should be a maximum threshold of users (of legacy services) before Eircom could terminate their legacy services? If so, how might that be calculated**?

BT Response

The scale of this issue will likely depend on earlier stages of the project of stop-sell and the length of time the project runs. The longer the time the project runs the more that will migrate naturally as an upgrade.

As in previous responses BT Ireland does not trade in the consumer market so we will leave this to those will expert knowledge of this market. However it would seem appropriate for ComReg to engage market research to understand what to expect. The migration from FTTC to FTTP does not have the same immediate impact as the move from ADSL to VDSL and the install process for fibre can be more difficult with the need to instal a new fibre drop to the customers premises.

We consider a lot more consideration needs to be applied to forced migrations.

**Q.16 What consideration should be given to a scenario where a significant number of end users choose not to migrate to an available ACP within defined notice periods?**

BT Response

As in previous responses BT Ireland does not trade in the consumer market so we will leave this to the retailers with expert knowledge of this market.

**Q.17 What structured stakeholder engagement do you think should be established to address the process of Migration from Legacy Infrastructure to Modern Infrastructure?**

BT Response

We have found by experience that industry negotiation with the oversight of ComReg has worked well for transformative changes. For example the work on the Next Generation Networks (NGN), the introduction of Wholesale Ethernet, and separately the extensive work on Next Generation Access (NGA) supported the smooth launch of high-speed (FFTC) broadband in 2013. Whist some of the discussions can be robust we have found this process does work well.

We believe there will be some hard issues to be resolved for copper withdrawal such as the subject of questions 15 and 16 which may ultimately need the good offices of ComReg to determine.

Additionally we would be concerned that the issuing of surprises or the railroading of industry simply drives the regulatory engagement model for operators to protect their rights and protect their customers. It would be better and faster to achieve an industry way forward for the greater good, including with the oversight of the regulator.

**Q.18 Are there matters relating to the objectives of public policy or environmental considerations which ComReg should consider in the context of its consultation process?**

BT Response

We would like to offer the following comments:

**Public Policy Objectives**

a. Moving to high-speed fibre access clearly aligns with public policy of all households having access to high-speed BB and as demonstrated by the National Broadband Plan to bring such to the areas that are uneconomic to serve.
b. Reliable high-speed broadband can also facilitate new services from the HSE for monitoring health in the home, advance medical monitoring etc.

**Environmental Considerations**

a. High-speed broadband is seen as enabler to other government objectives such as de-centralisation and climate protection (less travelling).
b. During the Covid emergency the telecoms industry has demonstrated its ability to support very substantial levels of home working without missing a beat. The rapid increase in the evolution of video conference services to support the sudden mass movement to home working demonstrated that BB has moved from nice to have to essential for many businesses.

**Q.19 Are there additional matters relating to Migration from Legacy Infrastructure not included above which ComReg should consider in the context of its consultation process?**

BT Response

a. We would suggest that ComReg also survey end users as one of the key stakeholders to understand their views.

End

# eir Response to ComReg Call for Inputs:

# Migration from Legacy Infrastructure to Modern Infrastructure

## ComReg Document 21/78

**14 September 2021**

**DOCUMENT CONTROL**

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| **Document name** | eir response to ComReg 21/78 |
| **Document Owner** | eir |
| **Status** | Non Confidential |

The comments submitted in response to this consultation document are those of Eircom Limited and Meteor Mobile Communications Limited (trading as ‘eir’ and ‘open eir’), collectively referred to as ‘eir Group’ or ‘eir’.

**Response to consultation**

1. eir welcomes the opportunity to comment on ComReg's Call for Inputs (CFI) regarding Migration from Legacy Infrastructure to Modern Infrastructure.

2. eir has set out its views on the merits of encouraging the migration to Very High Capacity Networks (VHCN) and copper switch off in its white paper, 'Copper switch-off: Leaving a legacy for the Future' (referred to in this document as 'eir's CSO proposal') which is appended to ComReg's Call for Inputs ('CFI'). We do not intend to repeat all that is in eir's CSO proposal in this submission but suffice to say eir remains of the view that the proposals set out in the CSO proposal are fair and reasonable and consistent with the criteria in Article 81.

3. eir welcomes ComReg's intention to issue a Decision on this important issue in 2022. The timeline graphic, figure 1 in the CFI, is a helpful representation of key milestones. The milestone for Eircom to complete the IFN rollout should be moved to 2026 following our recent announcement to extend the scope of the IFN to a further 200k premises. This means that 1.9 million premises will be able to avail of eir's FTTP network by 2026 and represents all of the commercial area.

4. eir also believes the milestone for Eircom to make a formal announcement regarding the withdrawal of access to copper services needs clarification. eir's CSO proposal advises on a progressive withdrawal of access in the consumer market as certain criteria are met. This would need to commence earlier than 2025.

5. Consistent with the process considered in the Code, eir requests ComReg to engage with it in respect to the CSO proposal as notified on 4 March 2021. Consistent with eir's views and those of the European Commission it is clear that such Articles can have direct effect. It is not clear from the CFI what views ComReg has on eir's CSO proposal and the various transparent stages, timetable and conditions etc. contained therein. It is a more effective and efficient use of industry's, ComReg's and eir's resources to focus on how eir actually proposes to undertake CSO as provided for by the Code and encourages ComReg to now engage in that process.

**Q.1 Do you agree with the wholesale migration and replicability principles set out above in section 2.1 to 2.2? Are there any other principles in this respect that should be considered?**

6. eir considers that a number of principles proposed by ComReg are already in place and therefore suggest that it would be beneficial for interested parties to understand what ComReg specifically considers to be in place and what it considers outstanding at this time.

7. Consideration should also be given that in the context, for example, of NBI deployment that such "ComReg principle" matters are not within the control of eir. In this context, it is important to note that some "ComReg principles" are also not envisioned by the Code. When the correct consideration is given to those envisioned by the Code it is evident that eir's CSO proposal meets those requirements.

8. By departing from the process prescribed by the Code under Article 81 ComReg has omitted to consider a key principle in eir's CSO proposal – in particular where Fibre-to-the Premises (FTTP) is already available at a location that the wholesale access offer should be fibre first (referred to as Stage 1). In section 2.1 ComReg's discussion considers only "large number" "bulk migrations" principles. As recognised in eir's CSO proposal there is of course an important consideration to ensure that fibre take-up (where available) is encouraged — such that the network efficiently migrates over time ensuring that the number of premises under a "bulk" switch-off event per eir's Stage 3 proposal is minimised.

9. In the context of the specific proposed principles set out by ComReg, each is considered in turn below:

***Wholesale Migration Principles***

10. eir notes that the proposed principles were first aired in 2016. Since then eir has rolled out its FTTP network to pass over 675,000 premises[1] and rollout continues apace towards 1.9 million premises by 2026. There are clear week on week trends of decline in the copper network line base (CGA and NGA services) and substantial growth in the FTTP base. It is also notable that within the FTTP connections very few, less than 14% have POTS associated and this figure is expected to decline. End users are already migrating from copper to fibre based services and the migration and ordering process for FTTP is more mature and now better understood than in 2016. As such the Wholesale Migration principle

[1] eir Group Results Q4 FY21

is already met. Processes are already in place to support migrations in accordance with the obligations imposed on Eircom following ComReg market reviews.

11. ComReg notes that processes should be available for the Access Seeker to project manage the migration of large numbers of migrations. This will also require project management with open eir so that an appointment schedule can be agreed to allow open eir to plan and deploy sufficient technicians to connect the end user premises to the fibre access network.

12. In the scenario of a bulk migration from eir's legacy infrastructure to another wholesale operator's infrastructure, the Access Seeker will have to coordinate with the wholesale operator to ensure the new service is available to the end user before terminating the legacy open eir service.

***Wholesale Replicability Principles***

13. With regard to the principle of Wholesale Replicability, eir would again observe that there is already active migration from copper to fibre based services and the necessary Alternative Comparable Products (ACPs) exist.

14. While eir agrees that the Code requires ComReg to consider whether ACPs are necessary, the wording of this conditional consideration is poorly phrased throughout ComReg's CFI. The clear conditionality of ACPs appears to be overlooked in the CFI and could be read that all current services are to be replicated in their entirety in all circumstances.

15. The replicable functionality of current product/service also requires consideration in terms of a service which is already replicable by retail providers themselves without open eir being mandated to provide such functionality. For example, in the context of legacy voice, while there is no wholesale Managed VOBB service provided by open eir, the "service functionality" is nevertheless already met by the ability of retail service providers to provide their own Managed VOBB on the FTTP network — as well as access to substitute products including mobile, Wifi-calling etc. In this context, potential demand will also need to be considered so that open eir is not required by ComReg to develop niche service offerings — eir considers that this should of course be considered by ComReg under its requirement to be proportionate. For example, in the case of a Standalone broadband offering to replicate standalone voice, open eir has not observed any demand for such a wholesale service (as evident by ComReg's own market research the number of standalone voice customers continues is in permanent state of decline) and has no plans to develop same.

16. As noted above, while the "ComReg principles" appears to place additional weight on the ACP, in the context of the Code Article 81.2 specifically identifies that ACP is clearly conditional *"least comparable quality providing access to the upgraded network infrastructure substituting the replaced elements if necessary to safeguard competition and the rights of end-users"* [emphasis added]. In that context, and without prejudice to eir's wider views regarding the FACO market analysis, ComReg's draft market analysis already recognises that exactly substituting the replaced copper network elements with those in a fibre context is not necessary to safeguard competition and that the major service providers already have access to Managed VOBB.

17. Finally, eir notes that "ComReg principles" regarding "Comparable quality" go beyond the wording and the spirit of the Code. Similarly, "Comparable price" is not mentioned in the Code and any consideration of same goes beyond the intended Framework. Each of these is discussed in turn below.

18. ComReg suggests that "Comparable quality" means *"providing access to the upgraded network infrastructure to at least the same degree of functionality and service quality"* which eir agrees is appropriate (see also paragraph 15). However, ComReg's suggestion that it also means *"appropriate guarantees regarding non-discrimination, oversight and governance where necessary as the regulated Legacy Infrastructure-based services"* cannot simply be assumed to be carried over from one market to another. Critically, as recognised by the Code in Article 81.3 such additional regulatory principles, if justifiably required, must follow the prescribed consultation procedures set out in Articles 67 and 68.

19. ComReg states that "Comparable price" may not mean equivalent prices, but rather that there is a differential or margin between prices for Legacy Infrastructure-based services and the price of ACPs provided over the Modern Infrastructure". First, no such "principle" is specified or contemplated in the Code and therefore any consideration by ComReg of such criterion is ultra-vires. Second, ComReg does not have the authority to specify or require there to be wholesale "differentials" or "margins" between legacy infrastructure-based services and those on FTTP infrastructures either entirely on eir's network or between eir's legacy network and competing alternative FTTP platforms. Finally, as recognised in our proposal Stage 2 Incentivising exchange area led migration, the cost of legacy services will increase over time due to the cost of continuing to maintain an additional copper network – which in the case of intervention areas will increase substantially due to the migration of end-users to the State-funded FTTP network and longer more costly remaining rural copper network paths. Consequently, the wholesale price of legacy copper-based services may

naturally increase over time. This is one of the reasons why eir provided wholesale pricing voluntary commitments to provide stable and consistent price signals over time.

**Q.2 What principles should guide ComReg in establishing the existence or not of ACP as described in section 2.2 above?**

20. eir believes that the market is already delivering the necessary ACPs. See also our response to question 1 regarding wholesale replicability.

21. Should ComReg consider it necessary to undertake a comparative review for the purposes of Article 81, it is important to note that the potential requirement for such access is conditional and it may not in fact be required – as recognised by the Code. As such, statements such as *"ComReg would also see that it would be necessary to ensure that access to ACPs over the Modern Infrastructure and information relating to the comparability of the quality of products as was available over Legacy Infrastructure is made available by Eircom or possibly other operators"* [emphasis added], is clearly premature.

22. In addition, ComReg must recognise that it may not be possible to deliver all existing functionality in the same manner over Modern Infrastructure. Ireland is not alone in transitioning to Modern infrastructure and the topic of functionality is best addressed by following a standards based approach to service delivery.

23. ComReg states at paragraph 2.12 "*An important difference between 2016 and 2021 has been the emergence of fibre-based network competition in the form of SIRO and, prospectively, NBI. We are interested in respondents' view as to the implications of this development for this principle*." At paragraph 2.15 ComReg lists the options for one or more operator's network to be defined as Modern Infrastructure. If ACPs are to be defined and their provision mandated (although it is not clear what powers ComReg has to make such provisions applicable to non-SMP regulated entities) then NBI should be included in Modern Infrastructure as they will be the sole wholesale supplier of Modern Infrastructure in the National Broadband Plan Intervention Area. It is likely that competitive market forces will encourage Siro and others to offer a relevant wholesale product suite.

24. Finally, as recognised in eir's CSO proposal, certain ACPs may not be the responsibility of open eir, nor mandated regulatory products. open eir will work with the existing retail providers to facilitate solutions where possible. However these services may no longer rely on an open eir connection and it may be that alternative solutions are available in the wider market which may be a choice for the consumer or business to purchase instead.

**Q. 3 What general retail (end user) principles do you believe are required in protecting end user interests during any Migration from Legacy Infrastructure?**

25. eir notes ComReg's proposal to establish a USO principle. If a USO regime is to be in place beyond the current designation then the scope and application of the USO regime and the designated Universal Service Providers will be set out in a separate ComReg Decision. Any future USO regime must be cognisant of the migration from legacy infrastructure and the obligations constructed accordingly. eir does not therefore see the need to specify a USO principle.

26. eir agrees it is important "*to ensure that obligations on all operators of electronic communications networks and services relating to availability of the service to end users, access to emergency services, access for disabled end users and provisions including those related to customer contracts are upheld during and following transition*."[2] eir therefore supports the principle that end user rights should be upheld.

27. The end user rights principle will be relevant in the later stage of migration – in particular eir's CSP proposal under Stage 3: Completing the transition and copper switch-off, when any remaining customers will be required to cease using legacy services. As noted by ComReg "*While end users have the right for universal services at a fixed location, they do not have the choice to retain legacy services indefinitely if there are ACPs available to them on a Modern Infrastructure*"[3] and eir is supportive of this.

[2] Paragraph 1.13
[3] Paragraph 3.11

**Q.4 What matters relating to end user communications should be considered in the transition from Legacy to Modern Infrastructure?**

28. In keeping with the Code, eir's CSO proposal provides clear timelines and guidance for open eir to communicate with end users, businesses and its wholesale customers. A structured programme providing information to home and business owners on the availability of FTTP and the network changes in geographic areas is required. This will facilitate the migration to better modern networks and allow the switch-off and ultimate removal of copper lines.

29. As clear and frequent information is clearly beneficial, it is unclear why ComReg appears to posit that such important wholesale network information "would first and foremost be conducted via their SP [Service Providers]" and that open eir only has a supporting role to play in informing SPs. eir believes that both the legacy network operator and the retail provider have a responsibility to communicate with the end user. This is no different to other comparable sectors such as electricity where the network operator may communicate directly with the end user on network related matters.

30. In eir's CSO proposal, eir identified that ComReg too has a role to play in informing industry regarding the availability of FTTP in areas and on the various milestones. Therefore, information regarding the three stages of transition, as proposed by eir, is partially reliant on other and competing network information that ComReg is best placed to communicate with industry.

**Q.5 What are the matters relating to universal service that you believe should be considered during a transition from Legacy to Modern Infrastructure?**

31. Any obligations in respect of universal service must be defined in accordance with the regulatory framework as set out in Part III, Title I of the European Code. The review to define any future USO must be cognisant of the migration from legacy services and the obligation on the regulator to promote the efficient use of network resources including the ability to decommission legacy networks.

**Q.6 What is your view on the Framework principles outlined in sections 4.1 and 4.2 above? Are there other aspects that should be considered?**

32. The Framework principles which ComReg propose are inconsistent with the process required by the Code. Article 81 of the Code is clear that the *"Undertakings which have been designated as having significant market power in one or several relevant markets in accordance with Article 67 shall notify the national regulatory authority in advance and in a timely manner when they plan to decommission or replace with a new infrastructure parts of the network, including legacy infrastructure necessary to operate a copper network, which are subject to obligations pursuant to Articles 68 to 80" [emphasis added]*. In other words, it is eir's proposal that must be considered by ComReg in the context of Article 81.2 and not the reverse which appears what ComReg is incorrectly proposing to set out in "principle" in Sections 4.1 and 4.2 of the Consultation. However, if ComReg is considering the application of the framework solely for undertaking the forced migration of the remaining legacy users prior to Exchange area switch off then the proposed framework may be appropriate if requirements for new migration process types have been identified over and above those already available.

33. Without prejudice to this view, in respect to the views sought on ComReg's "Framework principles" we offer comments on each phase as to how ComReg would propose to implement a CSO below.

**Enablement phase**

34. The proposed framework appears to link completion of the Enablement phase with the commencement of the migration and copper stop sell phase. In eir's CSO proposal that "stop sell" phase is applied progressively in the consumer market as individual premises can avail of the Modern Infrastructure. It is not clear if ComReg has already decided to reject such an approach but the description of the framework phases in section 4.1 does not appear to be compatible with the timely commencement of a progressive stop sell policy.

35. eir does not believe that an Enablement phase is necessary given that many premises have already effectively migrated to FTTP and the transition is ongoing. ComReg justifies this phase for two reasons 1) that the "ComReg wholesale principles" are in place and adhered to, and 2) that Access Seekers have the opportunity to successfully migrate trial end users to ACPs on the Modern Infrastructure.

36. In respect to the first reason, please see eir's response to Question 1. In any event, as premises can already effectively migrated, ComReg's first reason has already been confirmed as positive.

37. In respect to ComReg's second reason, the process for ordering and migration of customers is clear and well established. Please see also eir's response to Question 2 regarding ACPs. The access of ACPs is clearly a conditional requirement under the Code and ComReg should not continue to prejudge this requirement without evidence.

38. In summary, eir considers that this initial proposed phase as to how ComReg would undertake CSO is redundant.

**Migration and Switch-off phase**

39. For the reasons explained above, as an Enablement Phase is not necessary, eir does not consider that the move to ComReg's Migration and Switch-off phase is conditional on completion of an Enablement Phase "to ComReg's satisfaction" is appropriate or necessary.

40. In this phase ComReg notes its view that Eircom must publish a detailed 'Migration & Transition Plan' which would describe, in detail, its proposed mandatory migration approach and the overall timeline to the completion of the migration and switch-off for all legacy exchanges". In the context of Article 81 and specifically 81.1 – 81.2 it would be important to understand, with cogent reasoning, ComReg's view on eir's actual CSO proposal as provided on 4 March 2021.

41. eir considers for the reasons set out in the CSO proposal that a "Stop Sell" is appropriate for legacy copper services where fibre is available.

42. With respect, eir submits that ComReg continues to misapply the conditions of 81.1.a referencing "comparable quality" with ComReg's perceived desired requirement of needing to provide all ACPs on the new modern network. See also response to question 2. Finally, eir agrees with the principle that in the event that open eir publishes (on the pre-qual file) that a premises is capable of ordering an FTTP[4] service, but subsequently provisioning issues are encountered (the remediation of which is outside the control of the premises' owner) then the legacy service would continue to be provided at that premises until such time as an FTTP may be ordered and provisioned successfully.

[4] Note that while ComReg's Consultation has used the term ACP in respect to this "ComReg principle", we have replaced it with the term FTTP in this paragraph. For reasons set out earlier in this response, eir is concerned by ComReg's continued use of the term ACP and the associated meaning ComReg appears to attach to it.

43. Finally, the sequential removal of remedies proposed by ComReg with a replacement process appears out of kilter. In paragraph 4.11, ComReg states *"Following a switch-off complete milestone for a legacy exchange area, ComReg may withdraw the obligations to provide services on the legacy infrastructure for that exchange area, after having ascertained that Eircom has complied with such conditions as have been set down by ComReg in the transition Framework".* Importantly the Code considers that once the decommissioning or replacement process as notified by eir to ComReg is considered to meet the criteria in 81.2 *"that the national regulatory authority may withdraw the obligations after having ascertained that the access provider"* and that *"Such withdrawal shall be implemented in accordance with the procedures referred to in Articles 23, 32 and 33."* In other words, once a proposal is made that meets the criterion set out in the Code then ComReg can already commence the process to withdraw certain remedies. It is unclear how without the removal of certain regulatory obligations eir could undertake CSO, as the over-riding requirement of regulatory access obligations in certain legacy copper markets would appear to prevent it doing so. In any event, in the interim, eir considers that it would be prudent for ComReg to start future proofing its regulatory decision instruments to allow CSO.

**Decommissioning phase**

44. eir notes ComReg's request for views on the physical removal of legacy infrastructure post decommissioning of the legacy services. eir believes that the dismantling of the legacy network should be progressed at eir's sole discretion taking into account relevant matters, such as health and safety.

45. In addition, it is important to emphasise that pursuant to Article 81 the requirement is for eir's proposal to consider the decommission *or* replacement with a new infrastructure. As such, eir's proposal which focuses solely on migration and replacement and not decommissioning is consistent with the Code.

**Q.7 Do you agree with the concept of a copper switch-off trial in specified exchanges?**

46. eir has considered the merits of a copper switch-off trial in an exchange area and has not identified any tangible benefit. It would be artificial and potentially unmanageable to trial a full switch off in an exchange area in the near term. The migration phases would be expected to take place over a number of years such that at the end of the consumer led phase the number of remaining premises served by legacy services for the final migration would be a manageable size. A trial of all of the phases would delay overall progress by a number of years. eir believes that the best approach is an iterative approach where relevant learning from CSO can be applied to future exchanges that meet the notification criterion.

47. Similarly, for the carefully considered reasons in eir's CSO proposal the large business to business and government market is typically characterised by multi-year contracts for multi-geographic locations throughout Ireland. Such frameworks, tenders, and contracts can involve the requirement for a number of copper-based solutions. Consequently, an exchange led migration event is not appropriate until the conditions as set out in eir's CSO proposal are reached. See also eir's response to Question 7.

48. That said, open eir is willing to consider stakeholder inputs if they can demonstrate benefits from a tightly defined (in particular, a trial of eir's proposed Stage 1 and Stage 3, as set out in eir's CSO proposal) and time bound trial (in the context of truncating the notice period proposed by eir as part of Stage 3 for the purposes of the trial). open eir would welcome the opportunity to discuss its CSO proposal with industry in the Industry Engagement Forum.

**Q.8 What is your view regarding the concept of Stop Sell for legacy services for an exchange area?**

49. eir has set out its views in its CSO proposal. The first “stop sell” event is implemented at a premises level. The “stop sell” will be progressively applied as premises are added to open eir’s Pre-Qualification file. A variant of this is successfully being implemented in France.

50. eir is unable to provide more meaningful comment absent an understanding or visibility of ComReg’s view regarding eir’s proposal for the “stop sell” stage.

**Q.9 What criteria and timelines would you consider appropriate in a Migration and Switch-off Phase?**

51. eir has set out its views in in its CSO proposal. eir proposal is based on a clear, transparent three stage transition process each with appropriate conditions and associated timelines of what occurs in each stage including an appropriate notice period for transition.

52. eir is unable to provide more meaningful comment absent an understanding or visibility of ComReg's view regarding eir's CSO proposal for the relevant criteria and timelines etc.

**Q.10 What consideration should be given to the costs relating to connecting a premises for FTTP, including for mandatory migration from Legacy Infrastructure? If such costs were to be borne by Eircom, how should such costs be recovered?**

53. There is a well-established pricing framework and rules/conditions for the wholesale connection of premises to the fibre network. eir can see no reason why this should change during the migration and is surprised by ComReg's suggestion that eir should possibly bear more cost related to connections than it currently does.

54. eir also notes that the property owner is responsible for their facilities within the curtilage of their property (including potential increase in private property value as a result the connection to the new fibre network). Given the significant societal benefits anticipated from the migration to Modern Infrastructure the Government could consider some form of grant aid or tax relief if preparatory works are required on private property.

**Q.11 What consideration should be given to the withdrawal of obligations and related conditions?**

55. As set out in eir's CSO proposal, eir proposes a progressive withdrawal of legacy service on a rolling basis.

56. See also paragraph 43.

57. It is unclear from this question what "related conditions" ComReg is referring to.

**Q.12 In addition to your responses above, what are your views on the context, transition proposal and conclusion presented in Eircom's White paper (Annex 2)?**

58. As evidenced in our CSO proposal, Ireland is clearly lagging behind its European peers in respect of FTTP availability. This can be reversed over the next few years through a combination of commercial and State investment in the deployment of FTTP high speed broadband networks ensuring Ireland continues to be an attractive place to live and to do business.

59. As modern networks are deployed it is important to encourage an orderly and timely transition from the legacy copper network to the faster and more reliable FTTP networks. eir remains of the view that the proposal set out is fair and reasonable and consistent with the criteria in Article 81. At each stage of eir's proposal there is a transparent timetable and conditions, including an appropriate notice period for transition. In each of the stages, either eir or ComReg has a role to play in establishing the availability of FTTP at premises within exchanges.

60. At each stage the pace of change accelerates in areas as the modern network becomes more widely available. In turn this facilitates a quick switch-off of the legacy copper network when rollout is completed in an area. Doing nothing now and waiting until the FTTP network is fully rolled out is not desirable or efficient.

**Q.13 In your view, what role should pricing signals have in incentivising the migration from legacy services? What are your views on Eircom's proposal on pricing triggers?**

61. eir presents its view on pricing signals in its CSO proposal.

62. eir is unable to provide more meaningful comment absent an understanding or visibility of ComReg's view regarding eir's CSO proposal for the relevant role pricing signals have incentivising the migration and relevant triggers on which they are based.

63. In this context eir notes that its voluntary commitments also have a role to play. eir encourages ComReg consistent with the Code (and as confirmed independently by the European Commission such commitments have direct effect) to consider those proposals and consult transparently with operators.

**Q.14 What is your view on Eircom's proposal for differentiated handling of the business to business market?**

64. eir has set out its views in its CSO proposal.

65. eir is unable to provide more meaningful comment absent an understanding or visibility of ComReg's view regarding eir's CSO proposal for the differentiated handling of the business to business market.

**Q.15 Eircom propose that at the 'cessation date', where end users have not acted (i.e. end user did not order a fibre-based service) their legacy service will be terminated (unless self-declared to be a vulnerable user or a user providing critical national infrastructure). Do you think there should be a maximum threshold of users (of legacy services) before Eircom could terminate their legacy services? If so, how might that be calculated?**

67. With respect, ComReg's question is approaching the issue from the wrong way. In the context of encouraging efficient migration, thinking about a maximum threshold cap on legacy services (importantly where FTTP services are already available to such premises) before copper switch-off can occur is clearly the wrong approach. The answer, as identified in eir's CSO proposal, is what threshold must FTTP availability reach before the notice period of CSO for those premise is appropriate. In support of this approach the Code states that *"To facilitate the migration from legacy copper networks to next-generation networks, which is in the interests of end-users, national regulatory authorities should be able to monitor network operators' own initiatives in this respect and to establish, where necessary, the conditions for an appropriate migration process, for example by means of prior notice, transparency and availability of alternative access products of at least comparable quality, once the network owner has demonstrated the intent and readiness to switch to upgraded networks. [emphasis added]"* In other words, and in summary, eir's proposed approach of when 95% of all premises within an open eir exchange area are capable of ordering fibre, open eir will inform the remaining consumer and small business copper customers in that exchange area who are passed by FTTP that their existing copper services will be withdrawn in 12 months' time is clearly consistent with the Code.

68. The Code also states that *"In order to avoid unjustified delays to the migration, national regulatory authorities should be empowered to withdraw access obligations relating to the copper network once an adequate migration process has been established and compliance with conditions and process for migration from legacy infrastructure is ensured. However, network owners should be able to decommission legacy networks"*. As such, the correct lens to prevent unjustified delays is FTTP availability and not copper thresholds.

**Q.16 What consideration should be given to a scenario where a significant number of end users choose not to migrate to an available ACP within defined notice periods?**

69. Under eir's proposed process such significant numbers are highly unlikely to occur in the Third stage and end of the 12 months advance notice period. In addition, it is proposed that customers will also receive a reminder of this notice from open eir within 3 months and 1 month of the withdrawal of their copper services.

70. eir considers that no "conditional exceptions" should be created. This would undermine the effectiveness of the migration process and are clearly not required once timelines are clear and transparent. See also eir's response to Question 15.

**Q.17 What structured stakeholder engagement do you think should be established to address the process of Migration from Legacy Infrastructure to Modern Infrastructure?**

71. eir welcomes open and transparent engagement and would propose to engage with operators through the Industry Engagement Forum and open eir's Product Development Workshops (in respect of related RAP developments).

**Q.18 Are there matters relating to the objectives of public policy or environmental considerations which ComReg should consider in the context of its consultation process?**

72. eir has set out its views in our CSO proposal on the public policy and environmental considerations. The migration to modern infrastructure is an important enabler of the Government's homeworking policy and the competitiveness of Ireland. Fibre networks are much more energy efficient and switching off the copper network will have environmental benefits. It will also allow, post decommissioning, the removal of some street furniture (cabinets).

**Q.19 Are there additional matters relating to Migration from Legacy Infrastructure not included above which ComReg should consider in the context of its consultation process?**

73. eir believes there is a clear need for Government / regulatory policy to be developed to promote open access to buildings and multi-dwelling units to enable connection to fibre access networks. We anticipate that ComReg will have an important role to play in this regard under Article 61 of the Code. The "Housing for All" plan recently published by the government makes it clear that a large share of the new homes to be delivered in the early years of that plan will be in multi-dwelling units in urban areas. Engagement with the Department of housing and the construction industry could lead to standards that include internal fibre optic cabling connecting each unit to a central communications room for MDUs above an agreed size. This outcome can help meet several of ComReg's objectives around universal access, efficient competition at the wholesale (network) level, and support for more environmentally friendly forms of mixed working.

74. Finally, eir requests again that ComReg publish its views on eir's CSO proposal so that it (and interested parties) can better understand ComReg's position relative to an actual proposal of how eir wishes to replace the legacy infrastructure (which is subject to obligations pursuant to Articles 68 to 80) with a new infrastructure or in the case of the intervention area to the State-funded FTTP network.

NBI
National Broadband Ireland

# Migration from Legacy Infrastructure to Modern Infrastructure

## Response to ComReg's Call for Inputs Document No. 21/78

**Issue Date :** 14th **September 2021**

BUILDING A LIMITLESS IRELAND

# Table of Contents

# 1 Introduction and response summary

National Broadband Ireland (NBI) is pleased to provide its response to ComReg's Call for Inputs on the "Migration from Legacy Infrastructure to Modern Infrastructure".[1]

In November 2019 NBI signed a Project Agreement with the Minister for the Environment, Climate and Communications, committing NBI to roll out a full-fibre network to those areas of the country where the commercial sector had no concrete plans to invest in next generation high-speed broadband networks.[2] NBI is a wholesale-only provider of electronic communications services and it has begun to connect end-users to its fibre network, with retail broadband services being provided to these customers by a variety of operators.

NBI offers wholesale Bitstream and Virtual Unbundled Access (VUA) to Retail Service Providers (RSPs) over its fibre network, pursuant to the requirements of the NBP Project Agreement. While NBI's product suite does not include a wholesale voice-only service it does facilitate the provision of Voice over Internet Protocol (VoIP) services by RSPs over its fibre network. As a result, end-users served by NBI's network will, if they wish, be able to maintain a fixed voice service as part of a bundle of services including high-speed broadband, when they transition from a legacy copper line to a fibre connection.

NBI is set to be an important player in the transition from copper to fibre connectivity over the coming years. Currently, 544,000 premises lie within the National Broadband Plan (NBP) Intervention Area[3], with this number expected to grow over the lifetime of the Project Agreement, and all of these will be passed by NBI's Fibre to the Premises (FTTP) network. NBI is already working with RSPs in migrating end-users from legacy copper connections to the new fibre network, where these end-users are availing of high-speed broadband services and associated offerings, including VoIP, from RSPs and so NBI is building up valuable insights and experience about the transition from an operational point of view.

[1] ComReg Call for Inputs, Document No. 21/78, 3rd August 2021.
[2] The Project Agreement signed by the Minister for the Environment, Climate and Communication and NBI is available at: https://www.gov.ie/en/publication/16717-national-broadband-plan-contract/.
[3] The NBP Intervention Area is that part of the country within which the premises identified to be served by the NBP network are located.

In summary, the key issues NBI has identified in relation to the Migration from Legacy to Modern Infrastructure are as follows:

- The transition from the legacy copper network to fibre networks represents a significant step-change, both in how electronic communications services are provided to end-users and the kinds of services that end-users are capable of accessing;
- As a result of this, the transition needs to be managed by addressing the issue in a forward-looking way, focusing on the services that are available over fibre - notably high-speed broadband, VoIP and other Over the Top (OTT) services such as Video-on-Demand (VoD) – and not by seeking to preserve and replicate the limited services currently available over the copper network;
- Because the migration represents such an important change for end-users, a major public information campaign needs to be put in place to help ensure that the transition from copper to fibre is seamless and to provide relevant information to end-users about the different broadband, voice and other offerings that will be available over the fibre network;
- While Eircom is the sole provider of copper network connectivity to end-users, it is just one of four fibre and equivalent networks. This means that the transition from copper to fibre needs to be managed not just as an Eircom-to-Eircom process but instead as one in which the other fibre and equivalent network operators, NBI included, are heavily involved as well;
- The shift from Legacy to Modern Infrastructure will have a knock-on effect in relation to regulation in the area of the provision of universal services to end-users. This will require a reappraisal of the current Universal Service Obligation (USO) and how this might be re-cast as a requirement to provide high-speed broadband services on a universal basis.

This response is arranged as follows:

- In *Section 2* we discuss a number of key issues that are relevant in the Migration from Legacy to Modern infrastructure;
- In *Section 3* we provide responses to the questions posed by ComReg in its Call for Inputs.

Appended to this response to ComReg's Call for Inputs is an accompanying report by Frontier Economics. This report forms parts of NBI's response to ComReg.

# 2 Key issues in migrating to Modern Infrastructure

The completion of the migration from Legacy to Modern Infrastructure within the electronic communications sector will represent a transformative shift, for the industry itself and for end-users, as well as for the Irish economy and wider society. Legacy voice telephony services provided over copper lines originated in the late 19th century and so migrating from copper to fibre will mark the end of a technology that has been in place for an extremely long period. While copper-based services have developed significantly in more recent times, in particular over the last two decades in supporting ever faster broadband speeds, the shift to fibre and equivalent services, and the cessation of telephony services over the legacy copper network, mark a major step-change for the industry and for customers.

The migration from copper to fibre is, indeed, already underway. Latest ComReg data show that, at end-Q2 2021, there were 308,924 FTTP connections in place, out of a total of 2.2 million fixed line subscriptions.[4] In addition, cable broadband subscriptions numbered 376,979.[5] Connections to fibre networks are also growing rapidly. ComReg's figures confirm this, with annual growth in FTTP connections of 53.6% at end-Q2 2021, while lower speed DSL connections declined by 23.1% over the same period.[6] However, this rapid growth in fibre lines is still from a relatively low base, with the bulk of the transition from legacy copper networks to fibre still to happen.

Completing the transition from Legacy to Modern Infrastructure will, then, be a major project for the electronic communications sector in Ireland, affecting large numbers of end-users, a significant number of whom will have had a copper telephony line in their homes for a long period of time, in some case for many decades. It is also a multi-operator initiative, with three major providers of fibre networks currently deploying infrastructure, while a whole plethora of operators provide retail services, including high-speed broadband, to end-users over the fibre networks, availing of wholesale inputs from Eircom, SIRO and NBI to do so. At the same time, Virgin Media has a large installed base of high-speed broadband customers on its cable network, over which it offers service speeds up to 1Gbps. The transition process, as a result, involves many different

[4] ComReg, Key Quarterly Data Report Q2 2021 (ComReg Document 21/88, 9th September 2021), Tables 1 and 2, available at https://www.comreg.ie/media/2021/09/ComReg-2188.pdf.
[5] Ibid., Table 2.
[6] Ibid.

players and so managing this process in a seamless and efficient manner will be key to its success.

ComReg's role in the transition from copper to fibre is, of course, a central one. This Call for Inputs, as well as other preparatory work ComReg has done to date on this issue, marks an important step on the road. The next part of the process – in which the detailed transition framework will be mapped out, along with timelines for its completion – is critical to enabling a successful transition to fibre in the manner envisaged.

The transition from copper to fibre represents, in effect, a bridge from the existing legacy network world to the Modern Infrastructure world and so ComReg needs to consider what the new world should look like before thinking about the transition from the one to the other. In this regard, it is worth noting that, under the European Electronic Communications Code (EECC), ensuring the rollout of high-capacity network and the take-up of advanced broadband services across Ireland will become a key part of ComReg's regulatory duties.[7]

In NBI's view, this initiative must start with a clearly articulated regulatory strategy from ComReg for the Modern Infrastructure that is being deployed, which reflects ComReg's objectives for that Infrastructure. The newly-deployed fibre networks will be capable of supporting a wide variety of advanced communications services, which are a world away from the 'Plain Old Telephony Service' (POTS) of the past. It is vital, therefore, for ComReg to view the transition through the prism of these future services – and all the economic and societal benefits that flow from them – and not in a backward-looking way, by seeking to preserve the POTS experience of old in the future fibre-only environment of the 21st century.

While ComReg has developed a coherent transition framework in outline form in its Call for Inputs, NBI is concerned that much of the detail it has set out – including the specifics of its proposed principles - risks being retrospective in nature. A transition that obliges Eircom[8] to replicate over fibre networks functional equivalents of legacy voice telephony and low-speed broadband services provided over copper would represent a major error, casting doubts in many end-users' minds about the need to move from copper to fibre at all and putting at risk the many benefits to be reaped from the move to far faster broadband services.

[7] EECC, Article 3.
[8] As the operator with Significant Market Power (SMP) in the relevant telephony markets.

Such an approach would also conflict with ComReg's duties under the EECC, as it would in all likelihood result in dampening take-up of higher speed broadband services and so discourage Eircom and others from further investing in fibre deployment. This in turn would create a risk of there being less than full coverage of Modern Infrastructure across the country, with more limited competition between Modern Infrastructure network providers in the commercial area.

It is also the case that ComReg's thinking appears to focus unduly on Eircom-to-Eircom migration. In NBI's view, it is important that ComReg consider migration to all Modern Infrastructure networks and to factor in the reality that Eircom's incentives to migrate customers may differ between the different networks. As a result, it will be important that the transition process does not enable Eircom to discriminate between different operators in a way that benefits Eircom at the expense of other operators and, ultimately, end-users.

In NBI's opinion, ComReg's plans for the migration need to be grounded on a forward-looking regulatory vision for the Modern Infrastructure, with the specific plans and processes for the transition aligned with this overarching vision. This should enable end-users across the country to take full advantage of fibre connectivity. Allied to this, a major public information campaign needs to form part of the migration plans, in the way that the successful transition from analogue to digital terrestrial TV was managed close to a decade ago, so that end-users are fully aware that the transition does mark a step change, ushering in an era of faster and more reliable 21st century connectivity.

Universal service also needs to be considered as part of this process. Just as the services that are available to end-users will alter fundamentally once the transition from copper to fibre has been completed, so too will the need to retain a Universal Service Obligation (USO) that is anchored to services defined by the technical limitations of the legacy copper network. It would make no sense to oblige the provision of legacy voice telephony and functional internet access services over fibre networks and it would similarly not be logical to maintain a USO for such services in a fibre-only network environment. Determining the appropriate process for shifting to fibre also needs to encompass a fundamental reappraisal of the current requirement for a USO and, if it is still a necessity in the future, what services and what customers it should apply to.

NBI's position on the various issues raised by ComReg is set out in the responses provided to ComReg's consultation questions and are further articulated in a report prepared by Frontier Economics, which is appended to and forms part of this response.

# 3 Responses to questions posed in ComReg's Call for Inputs

In this section NBI provides responses to the questions posed by ComReg in its Call for Inputs. In our responses to the various consultation questions, we make reference to the supporting report prepared for us by Frontier Economics.

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| *Q.1.* | *Do you agree with the wholesale migration and replicability principles set out above in section 2.1 to 2.2? Are there any other principles in this respect that should be considered? Please set out clearly the reasons for your response and any supporting evidence.* |

NBI agrees with the broad principles on wholesale migration and replicability that ComReg has set out in relation to the transition from Legacy to Modern Infrastructure. It is clearly important, from a competition and end user rights perspective, that protections are in place in both areas.

The shift from Legacy to Modern Infrastructure has major implications not just for Eircom as the dominant provider of access services over its copper network but also for all other operators who avail of wholesale access services from Eircom to offer retail services over the legacy network. Competition from these other providers must be protected in the transition and so ComReg is correct to identify this as a key principle in the transition. Access seekers must have sufficient information to plan for the migration from Legacy to Modern Infrastructure and there should be no discrimination in Eircom's migration procedures depending on which Modern Infrastructure is involved.

NBI's view is that ComReg's principles should include three additional considerations.

Firstly, they should be anchored to a forward-looking regulatory strategy setting out ComReg's objectives in relation to Modern Infrastructure. In NBI's opinion, setting such a strategy is an important first step as this would involve ComReg having to consider what services – including Universal Services - must be provided over Modern Infrastructure and what kind of price regulation is required in relation to such services. This forward-looking strategy should reflect both ComReg's existing regulatory duties, such as encouraging investment and innovation and promoting competition, and its additional duties under the EECC requiring it to promote full access to and take-up of high-capacity services across the country.

Secondly, ComReg's principles aim to ensure the replication of services that are available over the legacy copper network rather than focusing on what services should be considered essential over fibre (and equivalent) networks. In NBI's view, a more successful option would be to focus directly on the key products and services available on the Modern Infrastructure . As already noted earlier in this response (see Section 2) ComReg's proposed approach does not align fully with its duties under the EECC, as its plans risk dampening take-up of higher speed broadband services and so discouraging Eircom and others from further investing in fibre deployment.

Thirdly, there is an important opportunity to present the shift from Legacy to Modern Infrastructure as a step change in the way that the switchover from analogue to digital terrestrial television services were in the early part of the last decade. NBI believes that there would be considerable merit in presenting this technology shift in such a manner, as this would prepare end-users better for the service implications – in particular the enhancements – arising from the move from copper to fibre networks.

In reality, some customers are already aware of the benefits that arise from this, due to the obvious fact that they already subscribe to fibre and cable services. However, many customers still on copper network connections are not so aware and thus a public information campaign aimed at them would be of great use in making the transition from Legacy to Modern Infrastructure more seamless. Such an initiative would also align closely with the European Commission's aim for ubiquitous household access to high-speed broadband by 2025 and Gigabit connectivity for all by 2030[9] as well as with the connectivity goals set out in the Department of Environment, Climate and Communications' (DECC) Strategy Statement 2021 – 2023.[10] It would also be consistent with ComReg's duties under the EECC to encourage greater take-up of high-speed broadband services.

Arising from the above, NBI is also concerned that the suggested approach appears to be limited to migration from Eircom's Legacy Infrastructure to Eircom's Modern Infrastructure and does not appear to take due account of migration to the fibre networks of both SIRO and NBI and other networks, in particular that of Virgin Media. An over-emphasis on Eircom alone means that

[9] See: https://digital-strategy.ec.europa.eu/en/policies/connectivity.
[10] See: https://www.gov.ie/en/publication/1a70d-statement-of-strategy-2021-2023/. Included in DECC's strategic goals are that by 2023 "Ireland will support universal to high-speed broadband for better connected communities" and that, by 2030 "Ireland will have widespread access to connectivity underpinned by agile, responsive and resilient digital infrastructures."

ComReg may not give sufficient consideration to the different incentives Eircom faces depending on which network customers are migrating to. Where this migration is Eircom-to-Eircom the incumbent has a strong incentive to ensure swift and efficient migration but this incentive is considerably weakened when the migration is to another operator's fibre network.

Similarly, an over-emphasis on migration from Eircom's Legacy Infrastructure to its fibre network, combined with a retrospective approach to service availability over fibre, risks leading to a situation where ComReg might attempt to oblige operators of Modern Infrastructure who have not been designated with SMP to provide services replicating the quality and functionality of those available over Eircom's legacy network. ComReg would, of course, have no grounds to do this and any attempt to do so would reflect the fact that its approach is not oriented in the proper way.[11]

In summary, while ComReg is correct to ensure appropriate wholesale and end-user protections in the migration of end-users to Modern Infrastructure, its approach needs to be grounded on a forward-looking regulatory strategy and the migration principles need to be aligned with such a forward-looking approach.

Further discussion on this is set out in Frontier's report – see Sections 2 and 3.

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| *Q.2.* | *What principles should guide ComReg in establishing the existence or not of ACP as described in section 2.2 above? Please set out clearly the reasons for your response and any supporting evidence.* |

As outlined in the response to Q1 above, NBI takes the view that ComReg needs to approach the issue of Alternative Comparable Products (ACPs) from the standpoint of a forward-looking regulatory strategy on Modern Infrastructure. As a result, service replicability over fibre and equivalent networks should not be aimed at retaining services (in the main narrowband) that are

[11] In NBI's case, any attempt to oblige it to provide services mimicking those available over legacy networks would also put it in conflict with the Project Agreement it has signed with DECC as well as with applicable State aid rules, given that the European Commission's approval for State funding of the National Broadband Plan (NBP) project stipulated that the network should only be used for the provision of high-speed broadband services. See European Commission letter dated 15th November 2019 to the Minister for Foreign Affairs and Trade (SA.54472 National Broadband Plan - IE), available at: https://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=3_SA_54472

available over legacy copper networks but should instead sit within the kinds of services that are already being provided over fibre networks.

In this respect, ComReg needs to recognise at the outset that fibre and equivalent networks are capable of providing much more than voice and functional internet access services and so it makes no sense to seek the maintenance of legacy services of this kind over Modern Infrastructure. Instead, it needs to be recognised that circuit-switched voice services that were available over copper networks would cease once the customer has migrated to fibre and that, to the extent that customers wish to avail of a voice service over Modern infrastructure, this will be provided as a VoIP service. There should be no need to replicate wholesale inputs that support legacy services, including voice, and instead the focus should be on ensuring that access-based operators who use Bitstream and VUA wholesale inputs have seamless migration in relation to these services as they switch from Legacy to Modern Infrastructure.

While it should be a key requirement of the migration that processes are in place to ensure that alternative operators can do this in a seamless manner, ComReg also needs to be cognisant of what is already happening in this area when the transition is from Legacy to Modern Infrastructure operated by other market players. In NBI's case, it already has systems and processes, as well as published Reference Offers, which it is using on an ongoing basis to enable retail operators to migrate end-users onto its fibre network and to ensure that end-users have access to all of the retail products and services they require over the fibre network.

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| *Q.3.* | *What general retail (end user) principles do you believe are required in protecting end user interests during any Migration from Legacy Infrastructure? Please set out clearly the reasons and evidence for your response.* |

As already outlined in response to Q1 above, NBI believes the shift to Modern Infrastructure needs to be presented to the public as a significant step change, one that clears the way for enhanced services to be provided to end-users of electronic communications services.

Arising from this, seeking to uphold consumers' rights to basic telephony services after they have migrated to Modern Infrastructure is unnecessary. While telephony services will still be available to end-users over Modern Infrastructure, these will be VoIP services most likely provided as part of a bundle involving high-speed broadband and other services (such as TV). In any event, as

ComReg's own data confirm, most voice traffic in Ireland – some 86.3% of total voice minutes - is now carried over mobile, not fixed, networks.[12]

Likewise, there is no need to guarantee end-users' rights to functional internet access arising from the migration when Modern Infrastructure already supports the provision of high-speed broadband services, up to and in some cases above 1Gbps.

Instead, the shift from Legacy to Modern Infrastructure needs to prompt a reappraisal of the requirement for a USO in an environment where the fixed network over which electronic communications services are provided is a fibre or equivalent one. Issues that would need to be taken into account in such a reappraisal would include whether or not there is any ongoing requirement to have a USO at all and, if so, what services and customers are included in it.

The role of other networks – in particular mobile – would also need to be factored in, in light of the proportion of total voice traffic these networks now carry. Affordability of services would also need to be considered in this regard, as would services for particular classes of vulnerable users, including elderly customers and customers with disabilities. If ComReg has concerns about the affordability of services provided over the Modern Infrastructure for certain groups of customers, this should be dealt with by using either retail regulation or by policy tools such as vouchers rather than via wholesale regulation. This latter point is discussed more in our response to Q18 below.

The principles that end-user rights are not adversely affected and that consumers be kept informed of upcoming network changes are both important and are consistent with a forward-looking regulatory approach to the migration to Modern Infrastructure. Clear, consistent messaging to the public about the impending migration from the copper network to fibre or equivalent networks is key to this, as is the need to portray this as a significant step change in end-user experience. Customers also need to be informed about what the migration will mean for the services to which they already subscribe, with changes in services and terms and conditions around this explained in a clear and concise manner. The more end-users can be kept informed

[12] ComReg, Key Quarterly Data Report Q2 2021, Table 1.

about practicalities relating to the migration, then the smoother the shift will be from Legacy to Modern Infrastructure.

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| *Q.4.* | *What matters relating to end user communications should be considered in the transition from Legacy to Modern Infrastructure?* |

Clear and consistent communication with end-users needs to be a central component of the migration from Legacy to Modern Infrastructure. As already outlined in Section 2 and in the response to Q1 and Q3, NBI views this technology shift as analogous to Digital TV switchover and a public awareness campaign of equal magnitude needs to be planned for the transition to Modern Infrastructure and, with this, the subsequent switch-off of copper services.

This information campaign should be focused on informing the public about what will change in relation to service experience (for example that a new physical connection will need to be installed at the customer's premises, that new customer premises equipment will be needed, that broadband speeds will be much faster, that the fixed telephony – if required – will be provided over VoIP, that other services will now become feasible etc.) and what will stay the same (for example that customers can remain with their existing provider if they so choose, that customers can retain their fixed telephone number when moving to a VoIP service etc.). While the migration needs to be presented as a step change in service quality, it will also need to be stressed that the move will be a planned one and that consumer inconvenience will be kept to the absolute minimum.

Separately, retail operators will need to communicate directly with their own customers, both to reinforce the messaging being imparted in the public information campaign, and also to provide consumers with information on more practical aspects of the migration from copper to fibre services as well as contractual aspects of the change.

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| *Q.5.* | *What are the matters relating to universal service that you believe should be considered during a transition from Legacy to Modern Infrastructure? Please set out clearly the reasons and evidence for your response.* |

See response to Q3 above regarding Universal Service in the transition from Legacy to Modern Infrastructure. In NBI's view, the shift to fibre and the consequent switch-off of copper services should prompt a reappraisal of the USO, both in terms of the need for such a measure in the

future and, if it is found that it is still required, what services and customer groups are covered, as well as the role other technologies might play in its provision.

ComReg needs to give particular thought to a future USO requirement in light of the above-mentioned aims at European level and at national level for universal availability of high-speed broadband services. At national level, this is being driven by a mix of commercial deployment and NBI's rollout of the NBP fibre network within the NBP Intervention Area. NBI's network deployment will, in light of its contractual obligations in the Project Agreement with DECC, ensure that every premises within the NBP Intervention Area is passed and so will be available for connection to a high-speed broadband service. Outside the NBP Intervention Area, end-users should be able to connect to a high-speed broadband service made available by commercial operators but ComReg will need to satisfy itself that broadband services within the commercial area are available on a universal basis and, if not, what role an updated USO for high-speed broadband might play to ensure that this happens, bearing in mind the strategic goals enunciated by the European Commission and by DECC.

ComReg also needs to give particular thought to the protection of vulnerable users/services that need to be maintained in the switch from Legacy to Modern Infrastructure. Of particular regard in this respect are services provided to elderly customers and customers with disabilities. ComReg needs to work with retail service providers to ensure that the migration to Modern Infrastructure does not cause difficulties for such vulnerable customers.

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| *Q.6.* | *What is your view on the Framework principles outlined in sections 4.1 and 4.2 above? Are there other aspects that should be considered?* |

NBI agrees with ComReg's proposals in relation to the Transition Framework phases. It makes sense for the Framework to be broken down in the manner proposed and that all necessary work on design, test, implementation and trial be undertaken during the Enablement Phase, before moving to Migration and Switch-off.

In this regard it would be important for all migration scenarios – involving not just migration from Eircom's copper network to its FTTP network but also from Eircom to SIRO, NBI and Virgin Media – to be tested and trialled to ensure that these migration scenarios work equally well and within the same timelines as Eircom-to-Eircom migrations.

NBI notes ComReg's comment (Para 4.14) regarding the decommissioning of the copper network and its observation that Eircom, in its White Paper[13], made no reference to the removal of Legacy Infrastructure assets from its network. In NBI's view, the removal of such assets is an important part of the decommissioning process, in particular the removal of the bulky copper cables and enclosures currently deployed on its poles, and Eircom should be obliged to remove these network elements once its copper-based services have been discontinued. As Frontier notes in its report, copper asset recovery in the UK was in 2018 valued at £240m, taking into account the cost of removing copper cabling from the Openreach network.[14]

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| *Q.7. Do you agree with the concept of a copper switch-off trial in specified exchanges?* |

NBI agrees with the concept of a Copper Switch-Off (CSO) trial in specified exchanges but it is important that all different migration scenarios are included within such a trial and that it is not restricted solely to Eircom-to-Eircom migrations.

At outlined earlier in Section 2 and in response to Q1 and as discussed in depth in the Frontier report (Section 2.2.1) Eircom faces very different incentives and disincentives in relation to migrating customers from Legacy to Modern Infrastructure, depending on whether or not it is the operator of the Modern Infrastructure in question. As a result, it is important that CSO trials are also undertaken in those areas of the country where Eircom does not operate the Modern Infrastructure. Of particular relevance to NBI would be a CSO trial involving migrations to NBI's fibre network within the NBP Intervention Area.

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| *Q.8. What is your view regarding the concept of Stop Sell for legacy services for an exchange area?* |

NBI agrees with the concept of a 'Stop Sell' for legacy services, as part of a graduated move from copper to fibre services.

[13] See 'Copper Switch-off – Leaving a legacy for the Future', available at: https://www.openeir.ie/wp-content/uploads/2021/03/White-paper_Leaving-a-Legacy.pdf
[14] Frontier report, Section 3.2.5.

The same consideration also applies, however, as set out in the response to Q7, in that this tool should not only be used for migration from and to Eircom infrastructure but should also be used for migrations to other operators' Modern Infrastructures. In this respect, it also needs to be borne in mind that a 'Stop Sell' by Eircom exchange area may not be the appropriate delineation and, in the case of the NBP Intervention Area, a 'Stop Sell' by NBP Deployment Area[15] may be of greater relevance.

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| *Q.9.* | *What criteria and timelines would you consider appropriate in a Migration and Switch-off Phase?* |

NBI agrees with the proposed criteria set out by ComReg for a Migration and Switch-off Phase. As ComReg states, such an arrangement would help ensure that the migration takes place according to a transparent timetable and with appropriate conditions, in particular relating to notice periods.

It makes sense that the Migration and Switch-off Phase should commence once ComReg has satisfied itself that Eircom has met all of its requirements in the Enablement Phase, not least given that this will need to include the publication by Eircom of its Migration and Transition Plan. NBI also agrees that it would be appropriate to include a 'Stop Sell' process with the Migration and Switch-off Phase, subject to criteria and notification conditions as set out by ComReg.

As already noted in the responses to Q7 and Q8, Eircom's plans and ComReg's requirements in relation to a Migration and Switch-off Phase should not be limited to migration from and to Eircom infrastructure but should also be used for migrations to other operators' Modern Infrastructures. This also means that Migration and Switch-off plans should not be set out solely on the basis of Eircom exchange areas. As already noted in the response to Q8 above, in NBI's case the appropriate delineation for this would be by Deployment Areas within the NBP Intervention Area.

In NBI's view, timelines within the Migration and Switch-off need to be set in a way that ensures efficient completion of the transition process. This needs to include definitive dates (of which there are likely to be a number, if the switch-off of the legacy copper services occurs on a rolling

[15] NBI has defined 227 separate Deployment Areas for the purposes of the NBP fibre network rollout.

basis from one area to another) so that end-users are aware that, within their own area, the shift from copper to fibre will be completed within a given timeline.

To ensure efficient migration and to protect end-users' interests, there will also need to be an element of co-ordination between Eircom and providers of fibre and equivalent networks in relation to defining switch-off areas and the timelines for completing the switch-off within these areas. Such co-ordination would need to be overseen by ComReg as part of its role in managing the transition more generally.

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| *Q.10.* | *What consideration should be given to the costs relating to connecting a premises for FTTP, including for mandatory migration from Legacy Infrastructure? If such costs were to be borne by Eircom, how should such costs be recovered?* |

It is not clear that any issue arises in relation to the costs of providing FTTP connections to premises or that any special arrangements need to be made in relation to the recovery of the costs involved in putting in place these connections. In Eircom's case, this activity is happening on a commercial basis and so costs relating to it should be recovered commercially.

Eircom recently announced that it plans to continue rolling out its fibre network to a total of 1.9 million premises, comprising 84% of all premises in the State, all of which will be passed by a fibre connection on a commercial basis.[16] Likewise, SIRO's commercial FTTP rollout has passed approximately 400,000 premises to date[17], while Virgin Media has already connected 387,000 premises to its high-speed cable broadband network.[18] In addition, the NBP Project Agreement currently provides for NBI to connect 544,000 premises, including difficult to reach rural premises, with this number expected to grow over time and with the cost of connecting remote premises included within the State aid granted for the project.

Taken together, it appears clear that the majority of FTTP connections are being put in place commercially and, in the case of those premises that are not, they are being connected with the

[16] See: https://www.eir.ie/pressroom/eirs-Gigabit-Fibre-network-to-expand-to-a-further-200000-homes-and-businesses/.
[17] See: https://siro.ie/news-and-insights/siros-1-gigabit-fibre-broadband-roll-out-in-waterford-city-to-reach-9000-homes-and-businesses-by-end-2021/.
[18] See: https://www.virginmedia.ie/press-hub/.

aid of public funding under the NBP. As a result, the recovery of such costs would not appear to be a concern from a regulatory perspective.

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| *Q.11.* | *What consideration should be given to the withdrawal of obligations and related conditions?* |

The withdrawal of obligations on the SMP operator needs to be closely aligned with overall Migration and Switch-off plans, with particular regard given to the withdrawal of obligations in those areas of the country where Eircom does not plan to deploy its FTTP network, i.e. the NBP Intervention Area.

In this regard, NBI is concerned that some aspects of Eircom's White Paper do not contain sufficient safeguards to guard against possible discriminatory behaviour. Specifically, Eircom's proposed safeguard caps on FTTC prices in urban and suburban areas will protect end-users residing in these locations but will not do so for customers on copper connections. Absent appropriate safeguards, there is a danger that Eircom might raise its prices in copper-only areas, thus incentivising it to retain customers of legacy services within the NBP area and limiting the benefits that customers could obtain from higher-speed services provided over the NBP network.

See Section 4.2.2 of the accompanying report from Frontier for further discussion on Eircom's incentives in this respect.

It is also the case that Eircom's proposals give it the right but not the obligation to migrate customers to FTTP services and to switch off the legacy copper network. As noted earlier in this response and in the appended Frontier report, Eircom faces very different incentives and disincentives for migration and CSO depending on whether or not it is deploying Modern Infrastructure in a particular area and so it is important that it has an obligation to complete CSO across the entire country within an appropriate timeframe laid down by ComReg.

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| *Q.12.* | *In addition to your responses above, what are your views on the context, transition proposal and conclusion presented in Eircom's White paper (Annex 2)?* |

The approach set out by Eircom in its White Paper for the transition from Legacy to Modern Infrastructure and Copper Switch-off is broadly acceptable and is also well aligned with ComReg's own Migration Framework.

Under Eircom's plans, migration would happen on an area-by-area basis as FTTP is deployed. and this approach would help to build a stronger business case for rollout in general and encourage early take-up of high-speed broadband services in those areas where FTTP deployment has been completed.

As noted above, however, in the response to Q12, some aspects of Eircom's proposals are of concern in light of the lack of sufficient safeguards for customers and the absence of any obligation on Eircom to complete CSO, in particular in areas such as the NBP Intervention Area where it faces weak incentives to do so.

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| *Q.13.* | *In your view, what role should pricing signals have in incentivising the migration from legacy services? What are your views on Eircom's proposal on pricing triggers? Please set out clearly the reasons and evidence for your response.* |

NBI believes that pricing signals have a useful role to play in incentivising the migration from legacy to FTTP services. However, as outlined in the response to Q11 and more generally in this response, the different incentives Eircom itself has for migrating customers off the legacy copper network also need to be factored in, especially in those areas of the country where Eircom is not deploying its FTTP network and where instead migration will, in the main, be to NBI's network.

In this regard, it is important that price signals do not disadvantage particular customers and do not create any incentives for Eircom to seek to retain customers on its legacy network rather than migrating them to another operator's FTTP network.

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| *Q.14.* | *What is your view on Eircom's proposal for differentiated handling of the business to business market?* |

NBI is not convinced that business users of copper services need to be handled in a separate manner compared to residential customers in the transition to fibre connectivity.

While some businesses, in particular Small and Medium-Sized Enterprises (SMEs), may require additional time to migrate from legacy copper leased lines and ISDN connections, the timelines suggested by Eircom's proposed thresholds for switch-off would appear to be long enough to migrate all legacy services to fibre. In addition, there may be a requirement for an amount of on-site activities to support migrations, for example if a larger business has multiple PSTN or ISDN lines in operation. While this will increase workloads on some businesses as they transition from

copper to fibre, many have already made the move to fibre connections and, for those that have not, the likely timelines are such that they will still have adequate time to complete the transition within the overall timeframe laid down for completing the process within a given area.

Differentiating by customer (or service) type also makes less sense when the object of the CSO exercise is the cessation of all services over the legacy copper network and, ultimately, its decommissioning and the removal of copper network elements. Any transition process that provides for differentiated handling of particular types of customers risks significantly delaying the completion of the CSO project and undermining the message about it being a definitive 'step change' in network technology and the resultant cessation of all services provided over the legacy copper network.

Such an approach would also be inefficient and wasteful from Eircom's point of view, if it led to an outcome whereby it is obliged to keep in place parallel Legacy and Modern Infrastructure networks, perhaps for an extended period of time. Eircom's focus should instead be on migrating all customer types off the copper network and onto fibre at an early date consistent with the agreed transition timeline.

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| *Q.15.* | *Eircom propose that at the 'cessation date', where end users have not acted (i.e. end user did not order a fibre-based service) their legacy service will be terminated (unless self-declared to be a vulnerable user or a user providing critical national infrastructure). Do you think there should be a maximum threshold of users (of legacy services) before Eircom could terminate their legacy services? If so, how might that be calculated?* |

NBI supports the use of cessation dates based on identified thresholds of FTTP deployment to provide advance notice to other operators and to end-users that migration from the legacy copper network will happen in the near future.

Structured and timely notification to operators and end-users should be built into Eircom's migration plans and should also form part of a wider public information campaign that NBI believes is required to prepare the public more generally for the migration from Legacy to Modern Infrastructure and the ceasing of services over the legacy copper network.

| *Q.16. What consideration should be given to a scenario where a significant number of end users choose not to migrate to an available ACP within defined notice periods?* |
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There is no logical reason to believe that a significant number of customers would choose to remain on legacy copper services in circumstances where fibre services are available.

Well structured and timely public information is key to ensuring that end-users are aware of what is happening in relation to the transition from Legacy to Modern Infrastructure and that the public is also aware that the end-point of this transition will be the complete switch-off of all copper services at a defined point in the future and the decommissioning of this legacy network.

This latter point is particularly important, as it cannot be the case that some end-users choose to remain on the legacy network indefinitely. Previous experience, both in relation to digital terrestrial TV switchover and the resultant shutdown of the analogue terrestrial TV service in 2012, as well as the cessation by Virgin Media in 2016 of its Multichannel Multipoint Distribution System (MMDS) pay-TV service, are both relevant in this regard. In both instances, customers were given ample advance notice that the service was being discontinued on a defined date and they were advised about choices available to them in transitioning to alternative services.[19]

| *Q.17. What structured stakeholder engagement do you think should be established to address the process of Migration from Legacy Infrastructure to Modern Infrastructure?* |
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Stakeholder engagement will be crucial to ensure that the migration from Legacy to Modern Infrastructure proceeds smoothly and that all stakeholders' reasonable objectives are met in relation to the transition process.

In NBI's view, this should happen at two levels:

[19] In relation to the analogue TV switch-off, see, for example, https://www.irishtimes.com/news/consumer/now-analogue-is-going-what-do-you-need-to-know-about-digital-tv-1.537694. For MMDS, see: https://www.virginmedia.ie/mmds/.

- **Industry Forum:** this grouping should comprise ComReg, operators deploying fibre or equivalent networks and other operators providing services to end-users, whose remit would be to consider and agree processes in relation to the implementation of the transition to Modern Infrastructure, pursuant to ComReg's Decision on the issue;
- **Stakeholder Forum:** this would be a wider grouping, comprising all of the Industry Forum representatives (including ComReg), as well as, possibly, DECC and relevant consumer bodies. Its remit would be to consider and agree details of the public information campaign relating to the transition and other measures relating to the transition impacting on end-users.

*Q.18. Are there matters relating to the objectives of public policy or environmental considerations which ComReg should consider in the context of its consultation process?*

In NBI's view, the Migration from Legacy to Modern Infrastructure needs to be presented by ComReg as a major public policy initiative, both from a domestic point of view in light of the Government's commitment to ensuring that high-speed broadband services are available on a nationwide basis – with the NBP as the cornerstone of this policy – and from an EU perspective, given the European Commission's vision of Gigabit connectivity for all citizens by 2030. These imperatives mean that the migration needs to be presented to the general public in the same manner and that stakeholders provide the required support for the initiative to ensure its successful completion.

An issue that could be considered from a policy point of view would be the use of publicly-funded voucher schemes, which could be used to promote the take-up of high-speed broadband services provided over Modern Infrastructure for certain groups. As is noted in the Frontier report[20], such schemes are already in operation within the EU – in both Greece and Italy – and their adoption in Ireland could be considered from a social inclusion perspective, as well as broader policy aims of universal connectivity.

No specific environmental considerations arise in relation to the migration. That said, the nationwide deployment of fibre networks has a role to play in building a more sustainable

[20] See Frontier report, Section 3.2.1.

economy and society from an environmental point of view, given how the availability of such connectivity facilitates more flexible models of working, which in turn promotes less commuting and balanced regional development.

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| *Q.19. Are there additional matters relating to Migration from Legacy Infrastructure not included above which ComReg should consider in the context of its consultation process?* |

NBI does not wish to add any further comments or observations relating to the Migration from Legacy Infrastructure at this time.

NBI looks forward to a positive engagement with ComReg and other operators on this issue in the months ahead and to playing an active part in the transition process itself.

# Appendix - Report by Frontier Economics

# COMREG CALL FOR INPUTS ON MIGRATION FROM LEGACY TO MODERN INFRASTRUCTURE

## A report for National Broadband Ireland

September 2021

# CONTENTS

# EXECUTIVE SUMMARY

One of the European Union's current policy priorities is to ensure the full deployment of "very high capacity networks" (VHCN)[1] throughout the Union. In Ireland full coverage of these networks will be delivered through a combination of Virgin Media's DOCSIS network and commercial and state-funded roll-out of Fibre-to-the Premise (FTTP) networks by a range of operators, including National Broadband Ireland (NBI), Eircom, and SIRO. All these networks have or will "overbuild" Eircom's existing nationwide copper-based network.

In the context of its FTTP roll-out Eircom published a white paper, in which it sets out a proposed process for migrating services from copper-based to fibre-based networks. This outlines a "staged process" for migration on an "area-by-area" basis across Ireland, based on the deployment of FTTP in each area. The "stages" includes measures to encourage customers to migrate to fibre networks (such as the deregulation and withdrawal of copper services), as well as protection on (FTTC-based) copper prices during the transition.

The migration process is also of key importance to ComReg, given it must ensure that the process is consistent with Eircom's current SMP obligations in copper-based service markets. It must also consider the migration process as part of its overall package of regulatory measures, including the impact of the process on VCHN investment and take-up, and on Universal Service Regulation. Promoting VCHN investment and take-up is a key objective for ComReg, given the European Electronic Communications Code ('EECC') will add a duty for it to ensure full coverage and widespread take-up of these services.

ComReg has now published a Call for Inputs (ComReg 21/78) requesting views on the appropriate migration process (termed "Migration from Legacy Infrastructure to Modern Infrastructure"[2]), including views on the specific proposals in Eircom's white paper. The Call for Inputs sets out a set of possible wholesale and retail market principles that the appropriate migration process should meet, as well as the transition framework for the process.

- The wholesale principles consider the set of wholesale products that should be available on the Modern Infrastructure ("wholesale replicability") and the process for access seekers' migration to these products ("wholesale migration"). The principles specifically require Modern Infrastructure operators to provide wholesale services of "comparable quality and price" to those on Eircom's legacy network, effectively "replicating" legacy services.
- The retail principles then consider the provision of Universal Services during the migration period ("End user Access to Universal Service") and the protection of end users during that period ("End user rights"). The Universal

[1] In relation to fixed-line services, "Very high capacity networks" are defined as those with fibre up to the premise (i.e. Fibre-to-the-Premise, FTTP, network), or alternative networks that are able to delivering under usual peak-time conditions a network performance equivalent to what is achievable by a FTTP network. See "BEREC Guidelines on Very High Capacity Networks", paragraph 13.

[2] ComReg defines Modern Infrastructure as the network infrastructure which replaces Eircom's legacy copper-based infrastructure, so we consider this to represent all existing and new VCHN networks that serve the areas currently covered by Eircom's copper network.

Service principle focusses on the provision of USO services during the transition, and specifically requires the current AFL USO to remain unaffected during this period.

- The transition framework then outlines a potential set of "phases" that the migration process must include taking into account these principles, including an "Enablement Phase" (where Eircom and Modern Infrastructure Providers must develop and test migration plans before implementation), a "Migration and Switch-off Phase" (where these plans are implemented), and a "Decommissioning Phase", where Eircom is then able to turn off its copper network.

NBI has commissioned Frontier to conduct a review of the proposals in the Call for Inputs, including ComReg's proposed principles and framework and the specific proposals in Eircom's white paper. To assess the proposals we first outline the appropriate framework for determining the appropriate migration process, including the relevant objectives that ComReg should be aiming to meet with that process. We then assess the key elements of the proposals against that framework.

## ComReg objectives and appropriate framework for determining the appropriate migration process

The migration process effectively acts as a "bridge" between a set of legacy services (and associated prices) on the one hand, and the services and prices offered on the replacement Modern Infrastructure on the other, with both sets of services and prices shaped by ComReg access and price regulation.

ComReg's decisions on the migration process therefore cannot be made in isolation from other regulatory decisions. It should first set out a forward-looking regulatory strategy for Modern Infrastructure, which aims to meet ComReg's objectives for VHCN and takes account of relevant market developments. This could include:

- a strategy for Modern Infrastructure and Universal Services, which considers the set of services that should be provided over Modern Infrastructure (including any services required to deliver any future Universal Services), and
- any proposed regulation for VHCN where an operator has SMP, including price regulation.

Only when ComReg is clear in its overall strategy with respect to VHCN can ComReg determine the appropriate migration process. The key aim of the migration process should be to move customers from the legacy products to the set of Modern Infrastructure services and prices defined by the overall regulatory strategy in the most appropriate way.

The relevant set of objectives for the process should reflect ComReg's existing statutory duties as well as the duties that will be added under the EECC. These should be to:

- Encourage investment in Modern Infrastructure across all of Ireland;
- Encourage take-up of higher quality services on Modern Infrastructure;

- Ensure that the migration process promotes both infrastructure-based and access-based competition during and after migration; and
- Ensure that end users are protected, through having access to services at reasonable cost and quality both on the Modern Infrastructure and on Legacy Infrastructure during the migration process.

ComReg should also consider Eircom's incentives, in particular that its incentives to migrate customers off its network maybe weaker in areas where rivals deploy Modern Infrastructure than where it undertakes "Eircom-to-Eircom" migration. The migration process must therefore ensure that Eircom by virtue of its SMP in legacy networks is not able to discriminate in its migration processes in a way which unduly limits Modern Infrastructure investment by rivals and hence distorts competition.

## Our assessment based on this framework

Overall, we conclude that the scope of ComReg's principles and the transition framework, as well as elements of Eircom's proposals, are appropriate:

- The proposed principles cover the key areas that ComReg need to think about when developing the migration process, including the relevant set of services to be offered on Modern Infrastructure (via the "Wholesale replicability" and "End user Access to Universal Service" principles), and the process through which access seekers and end users are migrated to these services ("Wholesale migration" and "End user rights" principles).
- The three stages of the transition framework are also consistent with ComReg's regulatory duties, with the "Enablement phase" in particular ensuring that the migration process has a transparent timetable (as required under the EECC) and that ComReg is able to approve any changes to Eircom's legacy services before these happen (consistent with Eircom's SMP obligations).
- Elements of Eircom's proposals are consistent with the need to encourage Modern Infrastructure investment and take-up (such as including measures like "stop-sell' to incentive customers to migrate), whilst also protecting customers (via proposed FTTC price safeguards).

However, we consider that changes are needed to the specifics of the principles and to certain Eircom proposals to ensure these are "forward looking", specifically to ensure these meet the relevant objectives for Modern Infrastructure, and ensure that this happens across all areas of Ireland.

- The set of wholesale products on Modern Infrastructure should provide a step change in quality, rather than just "replicating" legacy services. The latter would limit take-up of higher-quality services (and the benefits that end users and society obtain from those services), dampen Modern Infrastructure investment incentives, and in turn limit expected infrastructure-based competition.
- ComReg needs to consider the appropriate forward-looking USO requirement, as this will also impact the set of required services on Modern Infrastructure (such as the need for voice only wholesale services). ComReg needs to consider whether there is a need for an on-going AFL USO, and if so, what that should look like, and whether it is most efficient to provide those over Modern

Infrastructure or mobile networks. This should take into account recent market developments (such as the significant shift in provision of voice services to mobile networks), and the capabilities of the different networks that could support any USO services.

- Any concerns around the affordability of higher quality services for certain end users should be alleviated using retail regulation or other policy measures (such as “voucher schemes”), rather than through wholesale price regulation. The latter would again limit investment incentives and in turn infrastructure-based competition on Modern Infrastructure.
- The migration process should ensure that Eircom does not have the ability to unduly discriminate in its migration procedures between migration to its own network and to rivals’ Modern Infrastructure (where its incentives to migrate customer could be weaker), and require Eircom to negotiate in good faith with all Modern Infrastructure providers when developing migration procedures. This could be achieved by including a specific obligation on Eircom to implement key steps in the migration process, rather than having the flexibility to decide when and where these steps are implemented.
- The price safeguards proposed in Eircom’s white paper should be considered for both FTTC and copper only services. This is needed to protect the large number of customers in areas where FTTC services are not available, including the NBP area.

ComReg should also consider whether there is scope to streamline the requirements in the “Enablement Phase” to minimise the potential burden on Eircom and Modern Infrastructure providers. ComReg should also consider the merits of obligating Eircom to physically remove its copper-specific network assets from infrastructure after the copper network is decommissioned.

These findings are explained in more detail in the remainder of this report.

# 1 INTRODUCTION

## 1.1 Context for ComReg's Call for Inputs

One of the European Union's (EU) current policy priorities is to ensure the full deployment of "very high capacity networks" (VHCN)[3] throughout the Union, with the EU Connectivity objectives targeting deployment of upgradeable 100Mbps networks to all households by 2025, and full coverage of Gigabit networks by 2030.[4]

In Ireland, full coverage of VHCN is likely to be delivered through a combination of commercial and state-funding roll-out of Fibre-to-the Premise (FTTP) networks by a range of operators and Virgin Media's DOCSIS network. National Broadband Ireland (NBI) is currently in the process of rolling out a Fibre-to-the-Premises (FTTP) network under the state-funded National Broadband Plan (NBP), covering mainly rural parts of Ireland. Eircom have announced plans to roll-out FTTP in the majority of the remaining parts of Ireland under its "Ireland Fibre network (IFN) initiative, which supplements its existing FTTP deployment in rural areas. SIRO, a joint-venture between ESB and Vodafone, has also deployed FTTP in "Regional" parts of Ireland which it plans to extend over the coming years, with SIRO's deployment footprint likely to overlap with Eircom's FTTP roll-out areas. All these networks do or will "overbuild" Eircom's existing nationwide copper-based network, which it uses to provide (regulated) copper-based wholesale and retail services throughout Ireland.

In the context of its FTTP roll-out, Eircom published a white paper entitled *"Copper switch-off: Leaving a legacy for the Future"*[5], in which Eircom signals its intent to migrate services from copper-based to fibre-based networks, and sets out a proposed process for doing so.

As Eircom is currently designated as having Significant Market Power ('SMP') in a number of markets for copper-based services, ComReg has the power to intervene to ensure that the copper-to-fibre migration process is consistent with Eircom's SMP obligations.[6]

ComReg should also consider the migration process as part of its overall package of regulatory measures, including the impact of the process on VCHN investment and take-up and on Universal Service Regulation.

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[3] In relation to fixed-line services, "Very high capacity networks" are defined as those with fibre up to the premise (i.e. Fibre-to-the-Premise, FTTP, network), or alternative networks that are able to delivering under usual peak-time conditions a network performance equivalent to what is achievable by a FTTP network. See "BEREC Guidelines on Very High Capacity Networks", paragraph 13.

[4] See 2025 objectivise under the "European Gigabit Society" plan (https://digital-strategy.ec.europa.eu/en/library/connectivity-european-gigabit-society-brochure). and digital targets for 2030 in the "Europe's Digital Decade" plans (https://ec.europa.eu/info/strategy/priorities-2019-2024/europe-fit-digital-age/europes-digital-decade-digital-targets-2030_en).

[5] https://www.openeir.ie/wp-content/uploads/2021/03/White-paper_Leaving-a-Legacy.pdf

[6] For example, Eircom is current designated as having SMP in the markets for Wholesale Local Access and Wholesale Central Access, Wholesale Fixed Access and Call Origination, and Wholesale High Quality Access, and under the associated obligations, is required not to withdraw access to facilities already granted without the prior approval of ComReg

- The European Electronic Communications Code ('EECC'), which is due to be incorporated into ComReg's duties in 2021 after transposition into Irish Law, will add a duty for ComReg to ensure full coverage and widespread take-up of VHCN services.[7] Eircom's approach to copper-to-fibre migration is an important factor in this, as the process will impact the incentives of both Eircom and its rivals to roll-out these networks. This is because the migration affects the rate of take up of VHCN services, but also because wholesale pricing of copper-based services may form an indirect constraint on prices of VHCN services during the period when these networks are run in parallel.
- ComReg has designated Eircom as a Universal Service Provider ('USP') up to 30 October 2021, but is currently considering what the future scope of Universal Services and the associated obligations should be.[8] The copper-to-fibre migration process is an important factor in this, as Eircom's Universal Service Obligations ("USO") are currently met using its copper-based network.

Given this, ComReg has now published a Call for Inputs (ComReg 21/78) requesting views on the appropriate process for migrating services from copper-based to fibre-based networks, termed by ComReg as "Migration from Legacy Infrastructure to Modern Infrastructure".

ComReg defines Modern Infrastructure as the network infrastructure which replaces Eircom's legacy copper-based infrastructure[9], so we consider this to represent all existing and new VCHN networks that serve the areas currently covered by Eircom's copper network.

## 1.2 Contents of ComReg 21/78

ComReg's Call for Inputs outlines a set of possible principles that the appropriate migration process should meet, as well as a transition framework for this process.

- The principles cover both wholesale and retail markets. The wholesale principles relate to the set of products that should be available to access seekers on the Modern Infrastructure and the process of migration to these products. The retail principles relate to the impact on Universal Services and broader consumer protection.
- The transition framework then outlines a potential set of "phases" that the migration process must include, taking into account these principles.

The principles and framework largely reflect the principles that ComReg already set out in its Call for Inputs 16/01, when ComReg first asked for stakeholder views on the transition from Eircom's copper network. This was published in January 2016, prior to the publication of the EU's revised Connectivity targets, the development of the EECC, the NBP award and any significant deployment of FTTP in Ireland.

The Call for Inputs also outlines the specifics of Eircom's proposed migration process as set out in its white paper.

[7] More details on the requirements under the EECC are set out in Section 2 of this report.

[8] See ComReg 21/66, https://www.comreg.ie/media/2021/06/ComReg-2166.pdf

[9] ComReg Call for Inputs, paragraph 1.4.

ComReg is seeking views on whether the proposed principles and framework remain appropriate in the context of the EECC and recent market developments, as well as views on the specific proposals set out by Eircom.

## 1.3 Scope of this study

NBI has commissioned Frontier to conduct a review of the proposals in the Call for Inputs, in the context of migration from Eircom's copper-based network to NBI's FTTP network in the NBP Intervention Area.

In order to assess the proposals, we first outline a framework for determining the appropriate migration process, including relevant objectives that ComReg should be aiming to meet with that process.

We then provide our assessment of the key elements of the proposals, including:

- The possible principles and associated transition framework for migration set out by ComReg; and
- The specific migration process proposed in Eircom's white paper.

# 2 FRAMEWORK FOR DETERMINING THE APPROPRIATE MIGRATION PROCESS

Making a regulatory decision generally requires identifying a relevant set of objectives that the decision will aim to meet. To identify those objectives it is necessary to consider the NRA's regulatory mandate, which is defined by statute, and consider how this is applicable to the specific decision being made. In the case of the migration from Legacy to Modern Infrastructure, the relevant objectives should cover forward-looking aims for the Modern Infrastructure in the "new world" post-migration (such as ensuring investment and widespread coverage of this infrastructure), but also outcomes during the migration period (such as protecting access seekers and end users during that period).

Beyond these objectives, it is clear that ComReg's decisions on the migration process cannot be made in isolation from other regulatory decisions, as the migration process effectively acts as a "bridge" between a set of legacy services (and associated prices) on the one hand, and the services and prices offered on the replacement Modern Infrastructure on the other.

The legacy services and prices are shaped by the current regulatory framework, including the access and pricing regime imposed on Eircom under its Significant Market Power (SMP) designations, and ComReg's USO Regulation (as Universal Services are currently provided over Eircom's legacy network).

Similarly, the set of products and prices that are offered on the Modern Infrastructure will be shaped by ComReg's regulatory strategy for this infrastructure. This strategy should be designed to meet its relevant forward-looking regulatory objectives for Modern Infrastructure, with the set of products and prices resulting from this also consistent with meeting those aims. It should also take into account the market situation and dynamics, and relevant market developments.

It is then the job of the migration process to ensure the migration from the Legacy to the Modern products and prices resulting from that regulatory strategy happens in an appropriate way. This would mean the process meets any specific relevant objectives for the transition period (such as protecting end users during transition), but also that the process in itself facilitates the meeting of the forward-looking objectives for the Modern Infrastructure. This latter point is important, as the specifics of the migration process could significantly impact the meeting of those objectives: for example a faster migration process will increase expected demand on the Modern Infrastructure, increasing investment incentives and in turn the level of investment in this Infrastructure.

Given the above, in this section:

- We first consider the set of relevant regulatory objectives, based on ComReg's statutory mandate and other relevant duties, and how the migration process will impact these;
- We then outline other relevant factors that ComReg will need to consider when developing the migration process, including:

- Eircom's incentives to migrate customers from its legacy network in different areas;
- ComReg's wider regulatory framework; and
- Key relevant market developments since ComReg's original Call for Inputs in 2016.

- We then outline an appropriate economic framework for considering how the migration process should be developed to meet the relevant objectives.

## 2.1 Relevant regulatory objectives

### 2.1.1 ComReg's statutory objectives

ComReg's existing general statutory objectives, as set out in the Communications Regulation Act / Regulation 16 of the Framework Regulations, are to:

- Promote competition;
- Encourage efficient investment and innovation;
- Promote the interests of users by encouraging access to the internet at a reasonable cost; and
- Contribute to the development of the internal market.

The first three of these objectives are particularly relevant in the case of the copper-to-fibre migration process.

#### Promotion of competition and encouraging efficient investment and innovation

The migration process will primarily affect the wholesale and retail markets for fixed broadband services. ComReg needs to consider the impact of the process on infrastructure-based competition for these services, as well as access-based competition.

Promoting infrastructure-based competition is inherently linked to encouraging investment and innovation, as greater roll-out of Modern Infrastructure / VHCN by Eircom and its rivals will enhance this competition. As noted above, Eircom's approach to copper-to-fibre migration will impact the incentives for roll-out of these networks, as faster migration of customers to VHCN networks will increase take-up, improving the business case for roll-out.

Regarding access-based competition, ComReg needs to consider the impact of the migration process on access seekers' ability to continue offering services, both throughout the migration process (on Eircom's legacy network and on the Modern Infrastructure networks), and after the migration has been completed. For example, if the migration process limits the ability of access seekers to offer services, then this is likely to distort access-based competition.

Regarding the efficiency of investment, the migration process can encourage efficient investment by minimising the "dual running" of Eircom's legacy copper network and Modern Infrastructure. Modern Infrastructure provides higher quality

services than the legacy network, so any investment in maintaining that legacy network during this period can be considered as inefficient.

#### Promote the interests of users by encouraging access to the internet at a reasonable cost

Modern Infrastructure / VHCN provide benefits to customers and businesses through providing higher quality (higher speed, lower latency) services that cannot be achieved over legacy copper networks. For example, the European Commission's communications associated with its 2025 Connectivity targets stated that *"While basic broadband is available to every European, mainly enabled by legacy infrastructures, this is no longer good enough for the ongoing digital transformation"*, and highlighted the significant benefits to consumers and businesses that can be provided over higher-capacity networks: *"New digital applications - like virtual and augmented reality, increasingly connected and automated driving, remote surgery, artificial intelligence, precision farming – will require the speed, quality and responsiveness that can only be delivered by very high capacity broadband networks"*.[10]

An appropriate migration process would therefore promote the interests of end users by encouraging take-up of higher quality services on Modern Infrastructure / VCHN.

ComReg must also consider the cost of services to end users, both during and after the migration process. This will involve considering the cost of services on Modern Infrastructure, but also of copper-based services during the migration process. For example, while allowing Eircom to increase prices on copper-based services may on the one hand encourage take-up of Modern Infrastructure services, it raises consumer protection concerns for the customers that remain on the legacy network. This may be a particular concern in areas where Eircom has an incentive to actively retain customers on its copper network or does not have a strong incentive to migrate customers to Modern Infrastructure.[11]

### 2.1.2 ComReg duties under the EECC

In addition to its current statutory duties under the Communications Regulation Act, the EECC sets out a number of relevant duties on NRAs and SMP operators, which ComReg will have to consider once this has been transposed into Irish Law.

First, the EECC will add a duty to ComReg to ensure full coverage of Modern Infrastructure / VHCN across Ireland, as well as full take-up of services on these networks. In particular, Article 3 of the EECC, which specifies its general objectives, includes *"promot[ing] connectivity and access to, and take-up of, very high capacity networks, including fixed, mobile and wireless networks, by all citizens and businesses of the Union"*.

[10] European Commission, "Connectivity for a Competitive Digital Single Market - Towards a European Gigabit Society", Section 2. https://digital-strategy.ec.europa.eu/en/library/communication-connectivity-competitive-digital-single-market-towards-european-gigabit-society

[11] Parts of Ireland where this is likely to be the case are set out in Section 2.2.

The EECC also outlines more specific requirements on NRAs and SMP operators regarding the process of migration to Modern Infrastructure, and the wholesale products that must be available on that new infrastructure. In particular:

- It requires operators designated as having SMP in one or several relevant markets to notify NRA in advance, and in a timely manner, when they plan to decommission or replace parts of the network, including legacy infrastructure necessary to operate a copper network.[12]
- Requires NRAs to ensure that the decommissioning or replacement process includes a transparent timetable and conditions, including an appropriate notice period for transition.[13]
- NRAs may withdraw the obligations [on Legacy Infrastructure] only after having ascertained that an alternative access product of **at least** comparable quality to that on the legacy infrastructure is available to access seekers [on the Modern Infrastructure].[14]

### 2.1.3 Summary of relevant objectives

Given the above, the key objectives that ComReg should aim to achieve when developing the migration process are to:

1. Encourage investment in Modern Infrastructure / VHCN across all of Ireland;
2. Encourage take-up of higher quality services on Modern Infrastructure / VHCN across all of Ireland;
3. Ensure that the migration process promotes both infrastructure-based and access-based competition during and after migration; and
4. Ensure that end users are protected, in particular through having access to services at reasonable cost and quality both on the Modern Infrastructure and on Legacy Infrastructure during the migration process.

In meeting these objectives, ComReg will also need to ensure the following in order to meet its specific duties under the EECC:

- Ensure access seekers have access to wholesale services on Modern Infrastructure that is of "**at least** comparable quality" to those available on Legacy Infrastructure; and
- Ensure that there is a transparent timetable for the migration process, including ensuring ComReg are given appropriate notice of the planned migration, and that access seekers and end users have sufficient and timely information on the migration plan.

In addition to the above, ComReg should consider the practical implication of the migration process, including any administrative requirements of the process on Legacy and Modern Infrastructure providers, and the resulting time needed (and cost) of meeting those requirements.

[12] See Article 81(1)

[13] See Article 81(2)

[14] Again see Article 81(2).

## 2.2 Other relevant considerations

### 2.2.1 Eircom's incentives for migration

As noted above, the migration process will impact the incentives for Eircom and its rivals to invest in Modern Infrastructure and in turn the level of competition for services on that Infrastructure, both of which are key relevant objectives for ComReg.

As Eircom has SMP on wholesale services offered on Legacy copper infrastructure[15], its incentives regarding migration are likely to differ across Ireland depending on the Modern Infrastructure / VHCN roll-out plans of other operators:

- Eircom has strong incentives to migrate customers in areas where it plans to build FTTP but is not expecting rival investment. This is because migrating customers to its FTTP network will increase margins, as it is able to charge higher prices on its FTTP network, and able to save costs by decommissioning its parallel legacy network quicker. Its incentives are even stronger in areas where it expects rivals to also build FTTP but at a later date than Eircom, as migrating customers to its network before rival deployment will increase its FTTP take-up versus a situation where migration occurs after the rival has rolled-out.[16]
- However, Eircom has much weaker incentives where rivals build FTTP but where Eircom is unlikely to overbuild, such as in the NBP area, In this case Eircom will lose customers to the rival "for good" after migration, meaning it may be optimal for it to "sweat" its copper network assets and continue to obtain the return from more "sticky" (usually high margin) customers that don't actively migrate.
- Eircom's incentives are even weaker in areas that Eircom expects to build FTTP, but after a rival (for example in areas where SIRO has already rolled out FTTP, or is expected to do so before Eircom). In this case, Eircom has an incentive to actively retain customers on its copper network until it itself deploys FTTP. This can disincentivise rival FTTP investment and distort competition for FTTP services, as it reduces rivals' expected returns on FTTP by limiting its expected take-up.

[15] Eircom is current designated as having Significant Market Power ('SMP') in the markets for Wholesale Local Access, Wholesale Central Access, Wholesale Fixed Access and Call Origination ("FACO"), and Wholesale High Quality Access. These markets include a range of copper-based wholesale services, including Local Loop Unbundling (LLU), Sub Loop Unbundling (SLU), Line Share, FTTC-based Virtual Unbundled Access (VUA), and both Current Generation (CG) and FTTC-based Bitstream.

[16] This is because customers will have less choice at time of migration to FTTP, and will be less likely to switch to a rival network once on Eircom FTTP (moving to a rival network would require another in-person visit, which increases the barrier to switching).

**Figure 1 Eircom's incentives for copper-to-fibre migration depending on the "VHCN investment scenario"**

| VHCN investment scenario | Eircom incentives for copper-to-fibre migration |
|---|---|
| Where Eircom will roll out FTTP first, but expecting "overbuild" by rivals (e.g. SIRO) | **Strong incentive**<br>▪ Migrating customers will increase margins on its existing base (e.g. higher FTTP vs copper prices; able to decommission legacy network quicker)<br>▪ Migrating customers to its FTTP network before rivals build will maximise Eircom's FTTP take-up (less choice at time of migration to FTTP, less likely to switch to rival network once on Eircom FTTP). |
| Where Eircom roll out FTTP, but not expecting overbuild/competition | **Strong incentive**<br>▪ Migrating customers will increase margins on its existing base (e.g. higher FTTP vs copper prices; able to decommission legacy network quicker). |
| Where rivals build FTTP but Eircom is unlikely to overbuild (e.g. the NBP area) | **Weaker incentives**<br>▪ Eircom "lose" customers to rival after migration.<br>▪ It may be optimal for Eircom to "sweat" its copper network assets and continue to obtain the return from more "sticky" (usually high margin) customers that don't actively migrate. |
| Where rivals expected to build FTTP first, but Eircom plan to overbuild (e.g. existing SIRO footprint) | **Very weak incentives**<br>▪ Incentive to actively retain customers on its copper network until it itself deploys FTTP.<br>▪ Discourages rival investment by reducing take-up, increasing Eircom expected take-up when it builds. |

*Source: Frontier Economics*

Given this, Eircom is likely to have the incentive to discriminate between different areas regarding its copper-to-fibre migration plans, which would then influence rival investment in Modern Infrastructure / VHCN and limit competition. Such behaviour can be considered as Eircom using its SMP position on Legacy copper infrastructure to distort (limit) competition for services on Modern infrastructure.

It follows that in order to promote Modern Infrastructure investment and promote competition, an appropriate migration process should either (i) align Eircom's incentives for copper-to-fibre migration across different parts of Ireland, or (ii) restrict Eircom's ability to discriminate the migration process between different areas.

### 2.2.2 ComReg's wider regulatory framework

#### Current SMP obligations

Eircom is currently designated as having Significant Market Power ('SMP') in a number of legacy network service markets, including the markets for Wholesale Local Access and Wholesale Central Access[17], Wholesale Fixed Access and Call Origination ("FACO")[18], and Wholesale High Quality Access.[19]

[17] ComReg Decision D10/18
[18] ComReg Decision D05/15
[19] ComReg Decision D03/20

Under its SMP obligations Eircom is subject to access regulation, which obligates it to provide a range of wholesale access products across these markets. It is also subject to price regulation in the majority of these markets (margin squeeze obligations, and cost orientation on some products including copper only and FTTC broadband access products), which determines the prices of these wholesale products. Eircom is also obligated not to withdraw access to services in these markets without the prior approval of ComReg.

ComReg therefore needs to consider the set of legacy products and prices, and Eircom's obligations on withdrawal of access, when developing the appropriate migration process.

Its noted that no other wholesale operator (including VHCN providers such as SIRO, Virgin Media, and NBI) is deemed to have SMP under ComReg's current regulatory Decisions. This means that the wholesale services provided by these operators, and the pricing of these services, is not within the scope of ComReg's access and pricing obligations. ComReg therefore needs to ensure that the migration process is consistent with the scope of its powers.

## Future regulation of Modern Infrastructure

A key element of the migration process is the set of wholesale products (and associated prices) that will be offered on the Modern Infrastructure, as this defines the "end goal" of the migration process.

This set of products and prices will be impacted by any access and/or pricing regime that ComReg considers for SMP wholesale providers of Modern Infrastructure. Whilst this will directly impact SMP operators, it may also have an indirect impact on the services of other Modern Infrastructure providers - for example, under NBI's contract as part of the NBP, the prices of its wholesale products are benchmarked to prices of equivalent products provided by Eircom in commercial areas.

An access and pricing regime, and the resulting set of wholesale products and prices, will have a significant impact on ComReg's key relevant objectives – for example the introduction of price regulation, or an obligation to provide lower priced legacy quality wholesale products would dampen investment in Modern Infrastructure / VHCN and in turn risk limiting infrastructure-based competition for VHCN services.

Its therefore key that alongside developing the appropriate migration process, ComReg determines the regulatory regime for Modern Infrastructure that best meets its relevant objectives.

## Universal Service Regulation

Eircom is currently designated as a Universal Service Provider ('USP'), with this designation maintained by ComReg for an interim period up to 30 October 2021 in its Decision D21/66. Under these regulations Eircom is currently required to provide a range of retail services including fixed voice, which it delivers using its legacy copper network.

However ComReg states that it plans to assess the on-going need for and scope of Universal Services in the near future, based on relevant developments in the Electronic Communications sector including the deployment of FTTP networks.

ComReg's decision on the future of the USO is also relevant for the migration process, as this may impact the set of services that need to be provided on Modern Infrastructure. For example, if ComReg considers the need for the on-going provision of a voice telephony Universal Service, it will need to decide whether providers of retail services over Modern Infrastructure networks should be obliged to offer voice services post copper switch-off.

Given this, the development of the appropriate migration process must also be undertaken alongside its assessment of the future scope of the USO, and whether any Universal Services will be provided over Modern Infrastructure or via alternative technologies such as mobile.

### 2.2.3 Recent market developments

The principles and framework set out in ComReg's Call for Inputs largely reflect the principles set out the its previous Call for Inputs in 2016, so it is therefore important for ComReg to reflect relevant market developments since that date when developing the appropriate migration process.

#### Take-up of VCHN services in Ireland has increased significantly following FTTP deployment in recent years

Availability of VCHN services in Ireland has increased significantly in recent years, driven by the extensive roll-out of FTTP networks since 2016. As of September 2020 FTTP services were available to 1.04M (56%) of homes[20], up from less than 100,000 homes in 2016[21]. This has been driven by roll-out by Eircom, as well as rivals SIRO and by NBI under the NBP.

- Eircom began deploying FTTP in 2016, first deploying FTTP to the approximately 340,000 premises in Rural Ireland that were previously part of the NBP footprint, and had extended this deployment to 749,000 premises as of December 2020 under its Ireland's Fibre Network (IFN) initiative.[22]
- SIRO also began deploying FTTP in 2016, focussing on smaller towns and cities, with its network covering approximately 400,000 premises to date.[23]
- NBI began deploying FTTP under the NBP in 2020, and currently aims to have passed 60,000 premises by the end of 2021.

Virgin Media also provides VHCN services over its cable network, which covers approximately 800,000 premises across urban and suburban parts of Ireland.

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20 FTTH Council Europe FTTH 2021 Fibre Market Forecast and Panorama, https://www.ftthcouncil.eu/knowledge-centre/all-publications-and-assets/191/european-ftth-b-market-panorama-2021

21 European Commission, Study on Broadband Coverage in Europe 2019, https://digital-strategy.ec.europa.eu/en/policies/desi-connectivity

22 Eircom "Copper switch-off: Leaving a legacy for the Future" white paper, page 6, https://www.openeir.ie/wp-content/uploads/2021/03/White-paper_Leaving-a-Legacy.pdf

23 https://siro.ie/news-and-insights/siros-1-gigabit-fibre-broadband-roll-out-in-waterford-city-to-reach-9000-homes-and-businesses-by-end-2021/

The increase in FTTP roll-out coincided with a significant increase in take-up of VHCN services:

- The number of FTTP subscriptions increased to approximately 310,000 as of Q2 2021, a 110,000 (>50%) increase since Q2 2020 and increase from less than 10,000 subscriptions in Q2 2016.
- Similarly, the % of fixed broadband customers taking a service with download speeds of >=100Mbps doubled from 23% in Q2 2016 to 46% in Q2 2021.

**Figure 2 VHCN coverage and take-up in Ireland – 2016 to 2021**

| | Unit | 2016 | Latest |
|---|---|---|---|
| FTTP coverage | number (%) of households | 97,138 (5.5%) | 1,044,000 (56%) *As of Sept 2020* |
| FTTP take-up | number (%) of households | <10,000 (0.5%)[24] | 308,924 (12%) *Q2 2021* |
| Fixed BB customers with DL speeds >=100Mbps | % of fixed BB subscriptions | 22.8% | 46.4% *Q2 2021* |

*Source: Frontier based on ComReg Quarterly Key Data Report Q2 2016 and Q2 2021*

## Use of fixed voice services has declined, with customers largely migrating their voice usage to their mobile services

The importance of fixed voice services have declined in recent years.

ComReg's data shows that usage of fixed voice services has declined significantly since 2016, with the number fixed voice minutes falling by over 40% over the period to Q2 2021.

Usage of mobile voice services however increased, with 86% of voice traffic in Ireland now served using these services vs fixed voice, compared to 76% in 2016. Coverage of mobile voice (2G) services has also reached over 99% for all mobile networks, and up to 99.9% for some operators.[25]

**Figure 3 Fixed and mobile voice and mobile voice usage– Q2 2016 and Q2 2021**

| | Unit | Q2 2016 | Q2 2021 | Change |
|---|---|---|---|---|
| Fixed | Million mins | 1,012 | 568 | -43% |
| Mobile | Million mins | 3,155 | 3,578 | 13% |
| **Total** | **Million mins** | **4,167** | **4,145** | **-1%** |
| % Mobile | % | 76% | 86% | 10% |

*Source: ComReg Quarterly Key Data Reports*

[24] ComReg's Q2 2016 report states that presented FTTP subscriptions within the category "Other incl Satellite and Fibre", which included 10,206 subscriptions as of Q2 2016.

[25] https://www.virginmedia.ie/customer-support/support-by-products/mobile/mobile-network-and-data/mobile-coverage-map/

## 2.3 Appropriate framework for considering Legacy to Modern Infrastructure migration

Given the above, it is clear that the migration process cannot be developed in isolation from a forward-looking regulatory strategy for Modern Infrastructure and Universal Services.

We therefore consider it appropriate for ComReg to develop the migration process in two steps:

- First, set out a forward-looking regulatory strategy that will meet the relevant set of objectives for Modern Infrastructure outlined in Section 2.1 above, taking into account recent market developments. This should include a strategy for Modern Infrastructure and Universal Services, which outlines:
  - The services that should be provided over Modern Infrastructure, including any services required to deliver any future Universal Services; and
  - any proposed price regulation for Modern Infrastructure where an operator has SMP, including price regulation.
- Second, develop a migration process which appropriately moves customers from the legacy services to the set of Modern Infrastructure services and prices defined by that strategy, with that process also consistent with the relevant set of regulatory objectives. This will involve, for example, ensuring that Eircom is not able to "discriminate" its migration in a way which limits Modern Infrastructure / VCHN investment by rivals and distorts competition.

Sections 3 and 4 of this report outlines our assessment of ComReg's proposed principles / transition framework and Eircom's migration proposals based on this framework.

# 3 COMREG PROPOSED PRINCIPLES AND TRANSITION FRAMEWORK

## 3.1 ComReg's proposals

ComReg's Call for Inputs sets out a set of possible principles that the appropriate migration process should meet, as well as the a transition framework for this process.

### Principles

ComReg sets out four suggested principles for the process, two relating to wholesale markets and two to retail markets:

- **Wholesale Migration.** This states that Access Seekers must be able to migrate their end users from existing Legacy Infrastructure to the Modern Infrastructure with minimum disruption and maximum certainty in relation to conditions, process, timelines and prices. This includes a requirement on Eircom to ensure access seekers are able to plan their end user migration in advance, through making available information on the appropriate processes and procedures well in advance of the migration occurring.
- **Wholesale Replicability.** This requires that prior to withdrawal of access to Legacy Infrastructure-based services, the wholesale operator of Modern Infrastructure must make available a suite of wholesale products (ACPs) that are of "at least comparable quality"[26] and "comparable price"[27] to Legacy Infrastructure-based services. It also requires that access seekers are able to migrate end-users to Modern Infrastructure without incurring significant additional costs, and that the process does not result in unnecessary delay or disruption to these access seekers.
- **End user Access to Universal Service.** This requires the process to ensure that any AFL USO remains unaffected by any migration, and that citizens' rights to basic fixed telephony USO services are ensured i.e. end users continue to have access to relevant Universal Services at an affordable price and appropriate quality.
- **End user rights should be upheld during the Migration from Legacy Infrastructure.** The process must ensure that end users are not adversely affected in relation to their access and use of electronic communication services, in that they (i) have access to services of at least comparable quality and price on the Modern Infrastructure [a corollary of the principle of Wholesale Replicability principle], and (ii) are treated reasonably and appropriately. The latter means that end users must be are kept informed by retail providers of any

[26] "Comparable quality" would means providing access to the upgraded network infrastructure to at least the same degree of functionality and service quality, with appropriate guarantees regarding non-discrimination, oversight and governance where necessary as the regulated Legacy Infrastructure-based services.

[27] "Comparable price" may not mean equivalent prices, but rather that there is "a differential or margin between prices for Legacy Infrastructure-based services and the price of ACPs provided over the Modern Infrastructure."

changes to their services, any cost they may incur, and any changes required to their premises from the install of new services. [28]

### Transition framework

Under the transition framework, ComReg suggests that the migration process should include three phases:

- **"Enablement Phase"**. This is the phase in which Eircom and the relevant Modern Infrastructure provider ensures that the principles above are in place and will be adhered to. This may include the provision of "Migration & Transition plans" detailing the migration plan and associated timelines in line with the principles, and the ability for access seekers to "trial" migration to services on the Modern Infrastructure. Only when ComReg is satisfied that the principles will be met will measures to support migration, such as the switch-off of services on Legacy Infrastructure, be allowed.
- "**Migration and Switch-off Phase"**. This is the phase in which the "Migration & Transition plans" are implemented. It is in this Phase where measures to support migration will take place.
- **"Decommission Phase".** This is the phase where Eircom puts its Legacy Infrastructure into a state that is "permanently beyond use". It is in this phase where Eircom could physically remove its copper assets from its network.

Our assessment of the proposed principles and framework is set out in the remainder of this section.

## 3.2 Frontier assessment

As outlined in Section 2.3, the migration process should be developed by first setting out a forward-looking regulatory strategy to meet ComReg's relevant objectives for Modern Infrastructure. This will include the services that should be provided over Modern Infrastructure (including any Universal Services) and any proposed price regulation on SMP operators. The migration process should then be created based on that strategy, i.e. setting out the appropriate process for which access seekers and end users are migrated to those services.

The scope of ComReg's principles is consistent with that approach. In particular, the "wholesale replicability" and "End user Access to Universal Service" consider the relevant set of services to be offered on Modern Infrastructure, and the "wholesale migration" and "End user rights" principles consider the process through which access seekers and end users are migrated from Eircom's legacy network to the relevant Modern Infrastructure services.

However, the specifics of each principle appear to be "backward-looking" i.e:

- The principles focus on how the migration process can fit with the current regulatory framework, rather than ensuring the process meets the (new) forward-looking objectives for Modern Infrastructure;

[28] End users must also be notified about any changes to contractual terms and conditions, and give consent of any changes to these.

- The principles implicitly focus on migration from an Eircom's Copper to Eircom's FTTP network, and therefore does not consider the different concerns that may arise from migration to other Modern Infrastructure providers such as SIRO, NBI, or Virgin Media.

Our specific assessment of each principle is set out below.

### 3.2.1 Wholesale replicability

#### Any wholesale access and pricing regime should focus on the wholesale products offered by SMP operators

ComReg should only impose a wholesale access and pricing regime on operators which it has designated as having SMP in relevant markets, following a market review process.

ComReg should therefore focus on setting out the wholesale regime for Modern Infrastructure services for any SMP operators. This regime may then impact other non-SMP operators to the extent that their wholesale product sets are indirectly linked to that of the SMP operator[29], but ComReg should not impose access and pricing requirements directly on non-SMP operators.

#### The set of wholesale products on Modern Infrastructure should reflect ComReg's relevant objectives, rather than just replicating legacy services

As outlined in Section 2.1, ComReg's key objectives are to promote investment in Modern Infrastructure and take-up of high quality services on this Infrastructure, as well as promoting infrastructure-based competition.

Requiring Modern Infrastructure providers to offer a lower priced, lower quality wholesale service that is "comparable" to those on Legacy networks would be inconsistent with these objectives:

- Under this approach a potentially significant share of customers migrating to the Modern Infrastructure would be expected to take the lower-priced lower-quality service.
- This would limit take-up of higher quality services, and in turn limit the benefits to consumers and businesses that can be "unlocked" through use of Modern Infrastructure - as outlined in Section 2.1.2, the range of additional use cases that are possible using Modern Infrastructure-based services, such as new digital applications, are only possible when taking higher capacity services.
- This could also significantly reduce the expected returns from investing in Modern Infrastructure, which would damage incentives for commercial investment and in turn expected infrastructure-based competition. Whilst this would not impact investment incentives for NBI given NBI's investment is largely determined by the NBP contract, this could act to significantly increase

[29] As outlined in Section 2, this could occur in the case of NBI, where under its contract as part of the NBP the prices of its wholesale products are benchmarked to prices of equivalent products provided by Eircom in commercial areas.

the required government subsidy under the NBP, and therefore result in an increased cost to the taxpayer.[30]

- Such an approach would also render investment in Modern Infrastructure "inefficient", as this investment would be creating a new network where many customers take the same set of services available on the Legacy Infrastructure it is replacing.

A more appropriate approach would be ensure that the set of wholesale products on Modern Infrastructure provides a "step change" in quality, effectively increasing the "minimum quality of services" after migration. This would promote both take-up of higher quality services and investment in Modern Infrastructure, and in turn encourage greater infrastructure-based competition.

### Any potential consumer protection issues resulting from this should be dealt with using retail regulation or other available policy tools

Creating a step change in quality versus Legacy infrastructure is likely to result in some end users paying more for services after migration, to the extent that wholesale prices (and resulting retail prices) for the higher quality products are greater than the prices they paid for legacy services.

This could be considered acceptable for the majority of end users, given customers would be obtaining a higher quality service as a result of paying the higher price. This could however raise consumer protection concerns for a sub-set of customers who are unable to afford the higher quality services.

If this is the case, requiring a lower price to be charged for wholesale services would not be the appropriate approach to achieving affordability of services, as reducing wholesale prices would again reduce the expected returns on Modern Infrastructure investment, dampen commercial investment incentives and act to increase the NBP subsidy.

This would instead be more appropriately achieved through using retail regulation, such as the consideration of a USO mechanism or more "targeted" regulation at certain vulnerable groups. Publicly-funded initiatives, such as "broadband voucher schemes" which subsidise the cost of VCHN services for certain customer groups, have also been used in other EU countries to achieve this.[31]

Such an approach would ensure that end users are protected whilst also promoting Modern Infrastructure investment and competition.

[30] This is because NBI's returns are also determined by the NBP contract, so any impact on NBIs revenues would be likely to translate to a change in the NBP subsidy.

[31] For example, a broadband voucher scheme was introduced in Greece to improve affordability of VCHN for students in Greece (see SA.57357), with a similar scheme introduced for certain categories of families in Italy (SA.57495).

### 3.2.2 Wholesale migration

#### The premise of the principle is consistent with ComReg's relevant objectives and duties

Ensuring that the access seekers have sufficient information to plan for migration and will not be unduly disrupted by the migration process will help to protect access-based competition. This is also likely to limit any delays in the migration process, which will facilitate faster take-up of services on Modern Infrastructure and in turn increase investment incentives.

#### There should be no discrimination in Eircom's migration procedures depending on the MI provider

However, the principle appears to implicitly assume a migration from Eircom's legacy network to Eircom FTTP, and therefore does not consider how the migration process could differ for other Modern Infrastructure providers.

As outlined in Section 2.2, Eircom is likely to have weaker incentives to migrate customers to rival operators such as SIRO and NBI than to its own FTTP network, and therefore has an incentive to behave in a way which delays customer migration to these operators. This could be achieved through, for example, delaying negotiations with rival operators in developing migration procedures to their networks, or through providing more limited or less timely information to access seekers on those procedures. These delays would again reduce expected take-up on the rival's network, dampening investment incentives and competition (in the case of commercial build by rivals), and increasing the NBP subsidy (in the case of NBI).

The migration process should therefore ensure that Eircom does not have the ability to unduly discriminate in its migration procedures between migration to its own network versus rivals' Modern Infrastructure, and require Eircom to negotiate in good faith with all Modern Infrastructure providers when developing migration procedures.

#### ComReg should consider the impact of different access arrangements on the migration process

ComReg's proposal also appear to implicitly assume all Modern Infrastructure providers operate on an open access basis, and therefore that access seekers would be able to freely migrate customers to all Modern Infrastructure networks.

Whilst both Eircom and NBI operate on an open access basis, this is not the case for all Modern Infrastructure providers, such as Virgin Media. ComReg therefore needs to consider the impact on the migration process if an access seeker does not have a wholesale agreement with a given Modern Infrastructure provider.

### 3.2.3 End user Access to Universal Service

#### ComReg needs to determine an appropriate forward-looking USO requirement

The "End user Access to Universal Service" principle would require that any AFL USO remains unaffected by migration to Modern Infrastructure. This could be interpreted as "shifting the current USO" to the Modern Infrastructure, which would require Modern Infrastructure providers to replicate the characteristics of the copper-based wholesale services that underpin the current ALF USO services.

This approach does not reflect the significant developments in the provision of voice services since the development of the current Universal Service Regulation:

- The current Regulation was developed when there was a single fixed access network, with no alternative options for end users to make fixed voice calls.
- The market has shifted significantly since then, with fixed networks now being significantly less important for the provision of voice services. End users are now able to make voice calls via mobile services across the whole of Ireland, with the majority (86%) of voice traffic now being delivered via mobile services rather than fixed voice (see Section 2.2).

Before deciding what the appropriate migration process for Universal Services should be, ComReg should first set out an appropriate forward-looking USO requirement, reflecting the current market realities. In doing so ComReg should consider:

1. Is there a need for an on-going AFL USO?
2. If so, what are the appropriate characteristics of the Universal Service(s)?
3. Is it most efficient to provide these services over Modern Infrastructure, or alternative infrastructure such as mobile networks?

These questions should take into account the capabilities of Modern Infrastructure vs mobile networks in providing these services, for example whether additional functionality would need to be added to the networks in order to meet the required characteristics of the Universal Service.

#### Affordability of any on-going Universal Services should be achieved through retail regulation rather than regulating wholesale access

The Universal Service Regulation is a retail market regulation, with the Universal Service Provider (USP) responsible for providing the Universal Services being a retail operator. As such, the only relevant requirement on the wholesale network being used by the USP is that the Universal Services can be delivered using one of the wholesale products offered by that provider.

This means that any further requirements on the USP under the Universal Service Regulation, such as the requirement to ensure USO services are "affordable", should not impact wholesale providers. For example, affordability of USO services at the retail level can be achieved without affecting the price of the associated wholesale products, through use of the existing USO funding mechanism: if the

USP incurs any losses under those wholesale prices when it charges the "affordable" retail prices, these losses can be recovered via USO funding.

### 3.2.4 End user rights

#### The premise of the principle is consistent with ComReg's relevant objectives and duties

The premise that the migration process ensures end users are not adversely affected, and are kept informed about the process for migration and its impact on them, is consistent with ComReg's objective to protect end users. This is also in line with ComReg's duties under the EECC to provided appropriate information to end users as part of the migration process.

In addition, ensuring end users are aware of the migration process is also likely to limit any delays in the migration process, which will facilitate faster take-up of services on Modern Infrastructure and in turn increase investment incentives.

### 3.2.5 The transition framework

#### The three stages of the transition framework are again consistent with ComReg's relevant regulatory objectives and duties

The premise of having an "Enablement Phase", in which Eircom and the Modern Infrastructure providers develop "migration and transition plans" , is consistent with its requirement under the EECC to ensure that the decommissioning or replacement process includes a transparent timetable and conditions.

In addition, the requirement that ComReg signs off these plans before they proceed is consistent with Eircom's SMP obligations in legacy markets to inform ComReg before any changes to or withdrawal of services. This requirement also allows ComReg to monitor the specific migration plans being developed between Eircom and different Modern Infrastructure providers, and therefore identify quickly any undue behaviour (such as Eircom actively discriminating in its migration plans between migration to Eircom FTTP and other providers).

The inclusion of the "Decommissioning Phase" is also sensible, as it is reasonable to consider that Eircom would no longer keep its legacy network active once it is no longer in use.

#### ComReg should balance the practicality of requirements in the "Enablement Phase" with its duties under the EECC

The "migration and transition plans" within the Enablement phase ensure that access seekers and end users have sufficient and timely information on the process for migration, a key element of ComReg's duties under the EECC.

However it is possible that the production of these plans will be time-consuming and costly for both Eircom and Modern Infrastructure providers, which could extend this phase and therefore lengthen the time until the completion of migration. All else being equal this would again slow down expected take-up on Modern Infrastructure networks and dampen investment incentives.

ComReg may also consider conducting a wider public information campaign about the migration to Modern Infrastructure during this phase, similar to its campaign during the migration from analogue to Digital TV services, which could significantly raise awareness about the migration process, and potentially reduce the need for as much detail in these plans.

ComReg should therefore consider whether there is scope to streamline the requirements in this phase to minimise these potential impacts, whilst still ensuring it meets its duties under the EECC.

### ComReg should consider the merits of obligating Eircom to physically remove its copper-specific network assets

Once Eircom no longer provides services over Legacy Infrastructure, it would be able to remove assets that solely supported legacy services from its network, such as copper cabling.

ComReg should consider the merits of obligating Eircom to remove these assets, taking into account the potential benefits and cost associated with this. This should reflect that removing these assets is likely to increase the reliability of Modern Infrastructure networks. For example, where Modern Infrastructure is deployed using overhead poles that already hold Eircom's copper cabling (which is the case in relation to both Eircom's and NBI's FTTP roll-out), not removing this cabling could lead to these poles being overloaded, and in turn increased fault occurrence. Removing the legacy assets could therefore reduce fault occurrence and increase service continuity on Modern Infrastructure.

## 3.3 Conclusion on ComReg's proposed principles and transition framework

Overall we find that the proposed principles cover the key areas that ComReg needs to think about when developing the migration process, including the relevant set of services to be offered on Modern Infrastructure ( "Wholesale replicability" and "End user Access to Universal Service" principles), and the process through which access seekers and end users are migrated to these services ("Wholesale migration" and "End user rights" principles). The three stages of the transition framework (particularly the "Enablement Phase") are also consistent with ComReg's regulatory duties, including its requirements under the EECC to ensure a transparent timetable for the migration process.

However changes to the specifics of the principles should be considered to ensure these meet the key forward-looking objectives for Modern Infrastructure, and take account of both "Eircom-to-Eircom" and "Eircom-to-Other" migration. In particular:

- The set of wholesale products on Modern Infrastructure should provide a "step change" in quality, rather than just "replicating" legacy services.
- ComReg needs to consider the appropriate forward-looking USO requirement, including whether there is a need for an on-going AFL USO given recent market developments (such as the shift of voice usage to mobile networks), and if so,

whether it is most efficient to provide USO services over Modern Infrastructure or alternative infrastructure such as mobile.

- Any concerns around the affordability of higher quality services should be alleviated using retail regulation or other policy measures (such as “voucher schemes”), rather than through wholesale price regulation.
- The migration process should ensure that Eircom does not have the ability to “discriminate” in its migration procedures between migration to its own network versus rivals’ Modern Infrastructure, where Eircom’s incentives to migrate customers could be weaker.

ComReg should also consider whether there is scope to “streamline” the requirements in the “Enablement Phase” to minimise the potential burden on Eircom and Modern Infrastructure providers, and consider the merits of obligating Eircom to physically remove its copper-specific network assets after this network is decommissioned.

# 4 EIRCOM'S WHITE PAPER

## 4.1 Eircom's proposals

The Eircom paper sets out a proposal for the "Migration and Switch-off Phase" of ComReg's transition framework, with an associated communication plan for end users and the telecoms industry.

The proposals set out a plan for how the provision and price of Eircom's copper-based wholesale services, as well as ComReg's regulation of these services, would change as FTTP roll-out develops. These changes would happen "area-by-area", with changes happening in a given Eircom exchange once FTTP is available to a certain proportion of premises in that exchange, either from Eircom, SIRO, NBI or any other FTTP operator.

Eircom's plan includes three stages, with each stage "triggered" by the extent of FTTP roll-out in the Eircom exchange:

- **Stage 1: Consumer led migration**. Once FTTP is available at a premise, Eircom is allowed to stop selling wholesale copper services ("stop sell").
- **Stage 2: Incentivising exchange area led migration.** Once 75% of an Eircom exchange is passed with FTTP, copper-based wholesale prices in the exchange could be deregulated. For premises passed with FTTP, Eircom would be able to increase wholesale copper-only prices for voice and broadband services up to the price of the entry level FTTP wholesale price. There is however a safeguard cap on FTTC wholesale prices, which would remain at the level committed to by Eircom on January 2021 during this phase.
- **Stage 3: Completing the transition and copper switch-off**. Once 95% of an Eircom exchange is passed with FTTP, there would be full deregulation of Eircom's wholesale copper services across the exchange, including the lifting of all copper access and pricing obligations. The safeguards on FTTC prices in Stage 2 would also no longer apply.

  Eircom would then withdraw its copper-based services within 12 months of the start of Stage 3, with the exception of certain customer groups where an extension of 12-18 months could be provided on request (i.e. vulnerable users reliant on special services for medical emergency, users providing critical national infrastructure).

  Eircom also commits that all premises in the remaining 5% of premises in the exchange will have access to broadband with speeds greater than 30Mbps within three years of the start of Stage 3.

Our assessment of these proposals is outlined below. Overall we consider that elements of Eircom's proposals are consistent with ComReg's key objectives to encourage Modern Infrastructure / VHCN investment and take-up, whilst protecting customers. However changes need to be considered to ensure this happens across the whole of Ireland, including implementing price safeguards across both FTTC and copper-only wholesale prices, and ensuring Eircom has the obligation to migrate customers under the proposals.

## 4.2 Frontier assessment

### 4.2.1 Elements of Eircom's proposals are consistent with ComReg's objectives to encourage VHCN investment and take-up whilst protecting customers

The process will lead to greater incentives to invest in Modern Infrastructure /VHCN if migration begins as close as possible to the deployment of FTTP, as this will result in quicker take-up of services on the network and in turn improve the business case for roll-out.

Some elements of Eircom's approach facilitate this, in particular:

- Defining the FTTP roll-out "thresholds" for moving between stages based on the FTTP build of all operators, rather than just Eircom's. This ensures that the process incentivises both Eircom and rival VCHN deployment, as the migration process can be "triggered" by rivals as well as Eircom's roll-out.
- Taking an "area-by-area" approach, as this ensures migration process is "more closely linked" to the timing of FTTP deployment. If the thresholds were defined based on national FTTP coverage, for example, migration in areas covered in the initial "tranches" of FTTP roll-out would likely start a significant period after FTTP became available.

The approach to allow the cessation of copper services (i.e. stop sell), and removal of copper-based network regulation as migration develops, also encourages VHCN investment and take-up, as all else equal this will incentivise customers to move quicker to FTTP networks.

The consideration of price safeguards for copper-based services during the process will also protect customers, as it limits the price increases faced by customers who still remain on the legacy network during the migration.

### 4.2.2 Changes should be considered to ensure these objectives are met across all areas of Ireland

#### Safeguard caps should be considered for all copper-based wholesale products

Eircom's proposed safeguard caps on FTTC wholesale prices will protect customers in the urban and sub-urban areas covered by its FTTC footprint, but not the large number of customers in the NBP footprint where FTTC services are not available. These customers could face large price increases on copper services if Eircom decides to increase these to the level of FTTP prices, as is possible under its proposals.

The ability to increase copper-only prices also further increases Eircom's incentives to slow down the migration process in NBP areas, limiting take-up on the NBI FTTP network in those areas and increasing the required NBP subsidy. This is because increasing these prices will increase the margins Eircom can make

on customers that remain on its network in NBP areas, which all else equal will make it more profitable for Eircom to actively retain copper customers.

Including a safeguard cap on copper-only as well as FTTC prices will ensure that end users are protected and VCHN take-up is encouraged in the NBP areas.

### The process should include an obligation on Eircom to take the steps within the different migration stages

Eircom's proposals would give it the right to migrate customers and switch-off copper services within its proposed process, but not an obligation. This means it could decide not to do that if it doesn't have the incentive to do so.

As noted above and in Section 2, this could be the case in NBP areas, and particularly in commercial areas where rival networks such as SIRO have deployed (or will deploy) VCHN networks before Eircom: in those areas Eircom has a strong incentive to actively retain customers on its copper network until it itself deploys FTTP. This would again limit take-up of VCHN services in those areas, and in the case of the commercial areas where rivals may build before Eircom, significantly dampen rivals' investment incentives and in turn distort infrastructure-based competition.

Including an obligation for Eircom to take the steps within its proposed process will ensure VHCN investment and take-up is encouraged and competition protected across all areas of Ireland.

## 4.3 Conclusion on Eircom's proposals

Elements of Eircom's proposals are consistent with the need to encourage Modern Infrastructure investment and take-up (such as considering the migration process area-by-area and including measures to incentivise customers to migrate), whilst also protecting some customers via FTTC price safeguards.

However changes are needed to ensure that this happens everywhere, including through ensuring price safeguards apply across both FTTC and copper-only services, and including a specific obligation on Eircom to implement the steps in the migration process.

# 5 CONCLUSION AND RECOMMENDATIONS

In this paper we have assessed ComReg's proposed principles and transition framework for migration from Legacy to Modern Infrastructure, and the specific proposals in Eircom's white paper.

Overall, we conclude that the scope of ComReg's principles and the transition framework, as well as elements of Eircom's proposals, are appropriate:

- The proposed principles cover the key areas that ComReg needs to think about when developing the migration process, including the relevant set of services to be offered on Modern Infrastructure (via the "Wholesale replicability" and "End user Access to Universal Service" principles), and the process through which access seekers and end users are migrated to these services ("Wholesale migration" and "End user rights" principles).
- The three stages of the transition framework are also consistent with ComReg's regulatory duties, with the "Enablement phase" in particular ensuring that the migration process has a transparent timetable (as required under the EECC) and that ComReg is able to approve any changes to Eircom's legacy services before these happen (consistent with Eircom's SMP obligations).
- Elements of Eircom's proposals are consistent with the need to encourage Modern Infrastructure investment and take-up (such as including measures like "stop-sell' to incentive customers to migrate), whilst also protecting customers via the proposed FTTC price safeguards.

However, we consider that changes are needed to the specifics of the principles and to certain Eircom proposals to ensure these meet the key forward-looking objectives to encourage Modern Infrastructure investment and take-up and protect competition, and ensure that this happens across all areas of Ireland.

- The set of wholesale products on Modern Infrastructure should provide a step change in quality, rather than just "replicating" legacy services. The latter would limit take-up of higher-quality services (and the benefits that end users and society obtain from those services), dampen Modern Infrastructure investment incentives and in turn limit expected infrastructure-based competition.
- ComReg needs to consider the appropriate forward-looking USO requirement, taking into account recent market developments (such as the significant shift in provision of voice services to mobile networks), and the capabilities of the different networks that could support any USO services. It should consider whether there is a need for an on-going AFL USO, and if so, what that should look like, and whether it is most efficient to provide those over Modern Infrastructure or mobile networks.
- Any concerns around the affordability of higher quality services should be alleviated using retail regulation or other policy measures (such as "voucher schemes"), rather than through wholesale price regulation. The latter would again limit investment incentives and in turn infrastructure-based competition on Modern Infrastructure.

- The migration process should ensure that Eircom does not have the ability to unduly discriminate in its migration procedures between migration to its own FTTP network and rivals' Modern Infrastructure (where its incentives to migrate customers could be weaker), and require Eircom to negotiate in good faith with all Modern Infrastructure providers when developing migration procedures. This could be achieved by including a specific obligation on Eircom to implement the steps in the migration process, rather than having the flexibility to decide when and where these steps are carried out.
- The price safeguards proposed in Eircom's white paper should be considered for both FTTC and copper-only services, to protect the larger number of customers in areas where FTTC services are not available (such as the NBP area).

ComReg should also consider whether there is scope to streamline the requirements in the "Enablement Phase" to minimise the potential burden on Eircom and Modern Infrastructure providers, and consider the merits of obligating Eircom to physically remove its copper-specific network assets after that network is decommissioned.

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# Submissions to ComReg 21/78

Non-confidential submission by SIRO Ltd


14 September 2021

## 2. Wholesale principles

| Q.1 Do you agree with the wholesale migration and replicability principles set out above in section 2.1 to 2.2? Are there any other principles in this respect that should be considered? Please set out clearly the reasons for your response and any supporting evidence. |
|---|

SIRO partially agrees with the wholesale migration and replicability principles set out by ComReg. However, as further detailed in our response to questions 8 and 9 below, SIRO does not agree that ACPs and Modern Infrastructure need involve Eircom at all. If a product is truly an alternative product, the retail operator and end user should be agnostic to the network on which it is provided and there is no reason to require that Eircom's fibre infrastructure be available at that premises or indeed in that exchange area. Please also see responses to questions 8 and 9.

Also, SIRO would like to understand the process for a bulk migration and also how issues of breaking of customer contracts are managed due to migration from a legacy product to a full-fibre based product.

| Q.2 What principles should guide ComReg in establishing the existence or not of ACP as described in section 2.2 above? Please set out clearly the reasons for your response and any supporting evidence. |
|---|

SIRO does not currently have any comment on this question.

## 3. Retail principles

| Q.3 What general retail (end user) principles do you believe are required in protecting end user interests during any Migration from Legacy Infrastructure? Please set out clearly the reasons and evidence for your response. |
|---|

The most important principle is a commitment by the Regulator to underpin, through its regulatory provisions, support for competition in fibre-to-the-home (FTTH) broadband networks, particularly to promote both investment in networks and network competition, beyond the existing incumbent to include all market operators. This includes ensuring that the process of copper switch off does not confer a competitive advantage in the FTTH market to an incumbent.

This ensures end users can benefit from innovation, choice, and high quality FTTH broadband infrastructure. This includes ensuring that the process of copper switch off does not confer a competitive benefit to an incumbent.

Linked to the above is the requirement to prioritise consumer needs/end user rights throughout this migration process, particularly the impact on vulnerable users and the cohort who do not voluntarily migrate and are faced with forced copper switch off/withdrawal. In respect of these two cohorts, they may not have engaged with the market in many years so regulatory provisions which provides for information on the fibre options available to them is key.

Making the process of switching from copper to fibre-based services as easy as possible for end users and with minimal disruption is also essential. Achieving as high as possible levels of voluntary migration will only occur if end user understands the value of limitation of copper, benefits of fibre and can switch in an easy and convenient way.

Regulation must provide for fair, accessible, and transparent communication with end users and consumers to support competition and choice for consumers. See Q4 for greater detail.

## Q.4 What matters relating to end user communications should be considered in the transition from Legacy to Modern Infrastructure?

Existing proposals have not specifically set out how consumers will be made aware and informed about the migration process from copper to fibre and this must be set out.

Many end users remain both unaware of what broadband technology they currently have such as copper, FTTC or FTTH or confused as to the differences between these technologies. The Regulator and other relevant authorities should take a more active in addressing this vacuum, in particular in respect of copper migration in ensuring that advertising is not adding to this confusion and broadband advertising accurately describes the product being provided.

Another crucial part of the communication process must be raising awareness on the full range of options available to end users. The Regulator must play an active role in setting out conditions on how consumers are informed about all options available to them. It is not sufficient that end users whether voluntarily or being forced to switch from copper by the incumbent would then only receive information on the incumbents' fibre products vs. the full range open to that end user from all retailers. To this end ComReg should bear in mind that the incumbent's wholesale division will be responsible for copper migration whereas its retail arm will be only one of multiple retailers capable of providing fibre broadband to the end users concerned.

Equally, to support a competitive fibre broadband market, any Regulator-led public information campaign on migration must position this technology upgrade in a wider context than merely switching from the incumbent's copper to fibre service.

## Q.5 What are the matters relating to universal service that you believe should be considered during a transition from Legacy to Modern Infrastructure? Please set out clearly the reasons and evidence for your response.

The current proposals by the incumbent in relation to universal service are not clear and remain undeveloped.

We support the proposal that wholesalers must commit to providing a comparable broadband service.

However, the Regulator must clarify what is their definition of universal service in the context of the transition at issue. In the context of FTTH broadband provision, what services should be included in USO should be fully considered.

As part of these considerations, we believe there is merit in creating a distinction between Wholesale and Retailer USOs, given the structure of the broadband market in Ireland. Under this scenario, wholesale USOs would commit to providing a comparable broadband service; with retailers USOs mandating for a broader range of services such as VOIP.

Both critical national infrastructure and vulnerable end users must be considered more fully than heretofore as part of any copper switch off plan. These two groups of end users (critical infrastructure and vulnerable users) must be extensively tested and evaluated during copper switch trials off to understand the full consumer experience of transition.

## 4.1 Framework Phases

Q.6 What is your view on the Framework principles outlined in sections 4.1 and 4.2 above? Are there other aspects that should be considered?

Can ComReg please clarify its understanding of an “exchange area”, particularly with regards to parent/child exchanges and that a clear definition of these areas is established for the purpose of these discussions. For avoidance of doubt, it is important that a full shapefile of exchange boundaries is made available publicly as part of this consultation process, to allow OAOs to perform analysis of the likely impact of any exchange-level process.

Q.7 Do you agree with the concept of a copper switch-off trial in specified exchanges?

Yes, but given the differing customer profiles, topography and demographics which could be present in varying exchanges we recommend that more than one switch-off trial is included and that CNI services and vulnerable end users are included in the criteria and assessment of the any trials to ensure that the full implications of copper switch off are understood.

Q.8 What is your view regarding the concept of Stop Sell for legacy services for an exchange area?

Q.9 What criteria and timelines would you consider appropriate in a Migration and Switch-off Phase?

*(Questions 8 and 9 are addressed together)*

SIRO agrees with the concept of a "stop sell" mechanism to commence the process of copper switch-off from an end user perspective.

However, ComReg seem to imply that Stop Sell should be driven by the availability of Eircom-provided Modern Infrastructure, while Eircom, in their paper, propose that Stop Sell is driven by the availability of Eircom or NBI FTTH services.

SIRO strongly disagrees with these suggestions; a stop-sell should be implemented wherever a user can avail of any Modern Infrastructure ACP, regardless of the wholesale provider. Given that the stated objective of this migration process is to encourage the transition to Modern Infrastructure, it would be counterproductive for ComReg to allow Eircom to treat its own network differently to that of other providers of Modern Infrastructure. Eircom's proposal to include NBI-passed premises for Stop Sell, but exclude SIRO's passed premises, would be discriminatory.

SIRO believes that it is important that the Stop Sell stage be mandatory whenever a premises is passed by an MI ACP, and not optional. If it were to be optional, Eircom could choose to switch off services at certain premises based on purely commercial considerations and might never switch off copper service where a premises was passed by another wholesale network but was not yet passed by Eircom. An optional Stop Sell regime would not provide certainty or predictability to the market and would be contrary to ComReg's objectives in this regard.

Q.10 What consideration should be given to the costs relating to connecting a premises for FTTP, including for mandatory migration from Legacy Infrastructure? If **such costs were to be borne by Eircom, how should such costs be recovered?**

SIRO believes that no special cost allocation or recovery mechanisms are required except in the case of mandatory migrations. In this case, SIRO agrees that these costs should be borne by Eircom. However, ComReg should ensure that these are not used to disproportionately increase RAP costs.

Q.11 What consideration should be given to the withdrawal of obligations and related conditions?

SIRO has no comment on this question at present.

## 5. Eircom's white paper

Q.12 In addition to your responses above, what are your views on the context, transition proposal and conclusion presented in Eircom's White paper (Annex 2)?

SIRO has no further comments on this other than the answers already provided.

Q.13 In your view, what role should pricing signals have in incentivising the migration from legacy services? What are your views on Eircom's proposal on pricing triggers? Please set out clearly the reasons and evidence for your response.

SIRO agrees that pricing signals will be a useful way for Retail operators to be encouraged to migrate customers to Modern Infrastructure.

However, it is important to ensure that Eircom are not able to simply pass 75% of an exchange area for fibre and then make excess profits on the remaining 25% of copper-served premises indefinitely; to this end SIRO would urge ComReg to ensure that

1. increased pricing for copper services can only happen at a higher threshold than the 75% proposed by Eircom, e.g. 85%
2. will only apply for a limited period of time in each exchange area, e.g. a maximum of 12 months; and
3. additional revenues from this price increase are ringfenced, and not used to fund the overbuilding of other FTTH networks, which would essentially allow Eircom to leverage their dominance in the copper market to increase market share in the FTTH market

Q.14 What is your view on Eircom's proposal for differentiated handling of the business to business market?

SIRO does not agree that a product-based approach is appropriate for the busines market. The proposed residential "stop-sell" methodology would already allow Eircom to continue to support customer circuits that are currently in place. A separate product-based regime for business would only be required if Eircom was intending to continue to deliver new copper-based services to certain premises under the auspices of "frameworks, tenders and contracts" which have not caused a copper service to be active at the premises previously.

We also note that any such contracts or tenders would be retail, not wholesale, and the desire to continue to sell copper services to businesses and government appears to be a retail-driven issue.

It is unclear to SIRO how such an alternative regime is compatible with the aim of reducing the requirements for maintenance of the copper plant. It is also unclear why businesses would be allowed to continue to order new copper services while residential customers would not. Given the increasingly blurred lines between "work" and "home" it seems untenable to differentiate between customers on this basis.

Q.15 Eircom proposes that at the 'cessation date', where end users have not acted (i.e. end user did not order a fibre-based service) their legacy service will be terminated (unless self-declared to be a vulnerable user or a user providing critical national infrastructure). Do you think there should be a maximum threshold of users (of legacy services) before Eircom could terminate their legacy services? If so, how might that be calculated?

SIRO has no comment at this time.

Q.16 What consideration should be given to a scenario where a significant number of end users choose not to migrate to an available ACP within the defined notice period?

SIRO does not believe that this scenario is likely, assuming equal consideration is given to all providers of Modern Infrastructure, and does not believe it requires special consideration. In SIRO's experience, the migration trends in fibre-passed areas are strong. In addition, SIRO would be concerned that Eircom should not be allowed to increase copper prices indefinitely for any non-migrating customers as this may create counter-productive incentives for the incumbent.

# 6 Additional Matters

Q.17 What structured stakeholder engagement do you think should be established to address the process of Migration from Legacy Infrastructure to Modern Infrastructure?

A precedent exists from Eircom's migration process to FTTC in 2013, where ComReg itself chaired an industry fora on the process and which included extensive industry stakeholder engagement. Engagement between all stakeholders is key to a successful migration process, consideration should also be given to bi-lateral engagements between the incumbent and other alternative operators including SIRO to facilitate an orderly migration.

ComReg must also ensure that bilateral meetings are not used to create competitive advantages to particular parties and that any commitment agreed arising from these bilateral meetings are universally applicable to all relevant parties.

In addition, ComReg must facilitate a process which allows for sharing of information on premises passed between all providers of Modern Infrastructure and which is compliant with competition requirements and does not confer any competitive advantage to any particular party.

Q.18 Are there matters relating to the objectives of public policy or environmental considerations which ComReg should consider in the context of its consultation process?

See comments above on importance of Regulator safeguarding a competitive market environment for fibre broadband in Ireland.

Q.19 Are there additional matters relating to Migration from Legacy Infrastructure not included above which ComReg should consider in the context of its consultation process?

1. SIRO believes that ComReg should confirm whether it intends to undertake a competitiveness analysis to ensure that copper switch off will not undermine competition in the broadband market.
2. SIRO believes that ComReg should provide an estimate of the cost the migration process in totality and confirm its view regarding whether the incumbent will be liable for meeting these costs.

ComReg Document 21/78

# Call for Inputs
# Migration from Legacy Infrastructure to Modern Infrastructure

14 September 2021

Sky welcomes the opportunity to respond to this Call for Inputs and we have provided responses below under each of the questions set out in ComReg Document 21/78.

Some of the views expressed by Sky in this response will reiterate views expressed in a paper by RegOpp which was commissioned by ALTO and submitted as part of this process.

1. ***Do you agree with the wholesale migration and replicability principles set out above in section 2.1 to 2.2? Are there any other principles in this respect that should be considered? Please set out clearly the reasons for your response and any supporting evidence.***

Sky Ireland agrees with the wholesale migration and replicability principles set out by ComReg. However, we also would like to emphasise the importance of certain aspects of these principles for the success-or otherwise- of the migration process.

In relation to the suggested principle for access seekers and consumers that there is "**minimum disruption and maximum certainty** (in relation to conditions, process, timelines and prices)"[1], Sky agrees that minimum disruption and maximum certainty are crucial to this exercise. The accuracy of any data used as part of the migration process and the introduction of appropriate KPIs for the installation of FTTH will help to ensure consumer disruption is minimised. In relation to maximum certainty, it is our view that price certainty is of critical importance for both access seekers and consumers. Consumers should not face higher charges, instead they should be incentivised to switch to FTTH once the network is enabled which would ensure a higher uptake. To successfully bridge the digital divide ComReg must ensure that FTTH is affordable for consumers in line with its objectives.

ComReg also notes that "in order to achieve a smooth transition, it considers that particular attention must be given to ensuring that appropriate processes, procedures and necessary information are made available by Eircom to Access Seekers". Sky Ireland supports this position and underlines that without a detailed outline of the plan and timelines from Eircom as well as open engagement with Access Seekers through a stakeholder forum, it will be virtually impossible to achieve a smooth transition or to adhere to Article 81(2) of the EECC which obliges ComReg to ensure that there is a transparent timetable and related conditions in place.

2. ***What principles should guide ComReg in establishing the existence or not of ACP as described in section 2.2 above? Please set out clearly the reasons for your response and any supporting evidence***

While ComReg correctly highlights the emergence of SIRO and NBI since 2016 with regard to the deployment of modern infrastructure, it is important that regardless of the deployment of these networks (although it is worth noting that NBI is currently far behind on its targets) Eircom must still provide the requisite modern infrastructure for Access Seekers.

ComReg notes the principle that Eircom should be required, prior to the withdrawal of the legacy service, to provide Access Seekers with alternative products of at least comparable

[1] 'Call for Inputs Migration from Legacy Infrastructure to Modern Infrastructure' , ComReg 21/78, p.10

quality and comparable price. Sky Ireland fully supports this which is mandated by Article 81 of the EECC. In relation to comparable quality, operators should be provided with sufficient guarantees regarding non-discrimination, oversight and governance. We note that there does not appear to have been any significant improvements or developments as a result of the establishment of the Independent Oversight Body and the new regulatory governance model in Eircom. **We would ask that this be reviewed by ComReg and that steps be taken to ensure proper governance arrangements are in place prior to finalising the conditions and process for copper switch off**.

In respect of 'comparable price', we call for ComReg to intervene to ensure that FTTH prices are not inflated to the detriment of the migration process and ultimately Irish consumers.

Sky Ireland supports the principle presented by ComReg that Access Seekers should be able to "switch to the replacement wholesale inputs without having to incur significant additional cost or make significant changes to, inter alia, their order handling; provisioning; and billing systems"[2], and that this process should be "seamless". **Sky Ireland recommends that ComReg seeks clarification from Eircom on this important principle in its future analysis and specifically that Eircom can outline how it will ensure the process is seamless and guarantee that there will be no significant additional costs or signifi cant technical systems development for Access Seekers.** We also look forward to the new KPIs for FTTH which should assist in ensuring a seamless process for migrating consumers.

### *3. What general retail (end user) principles do you believe are required in protecting end user interests during any Migration from Legacy Infrastructure? Please set out clearly the reasons and evidence for your response.*

The principle laid out by ComReg that end users are not adversely affected in relation to their access is critically important, including that they are treated reasonably and appropriately. For Sky Ireland, this would include that end users (regardless of their service provider) can expect these principles to be upheld by Eircom. In particular, **Sky Ireland views it as a vital component of the CSO process for Eircom to outline in detail how they expect the migration process to work from an end-user perspective.**

ComReg must ensure that there is no loss of service for consumers during the migration process, or at the very least, that any necessary loss of service is kept to a minimum. It is crucial that the data showing what services are available to consumers in any particular location or exchange area is accurate and up to date. **As ComReg will be aware, there have been consistent issues with the quality of the data in the Eircom homes passed file which must be rectified.** This is evidenced by Eircom itself, which according to its own Quarterly Report had 820,000 FTTH premises passed in March 2021[3], however three months later Eircom announced that the number of premises passed was in fact 675,000[4]. This is a significant and material difference. The supply of inconsistent and erroneous data by Eircom will need to be addressed before the CSO process can commence.

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[2] 'Call for Inputs Migration from Legacy Infrastructure to Modern Infrastructure', ComReg 21/78, p.11

[3] 'eir announces third quarter FY21 results to 31 March 2021', found at https://www.eir.ie/pressroom/eir-announces-third-quarter-FY21-results-to-31-March-2021/

[4] 'eir announces results for the fourth quarter and twelve months to 30 June 2021', found at https://www.eir.ie/pressroom/eir-announces-results-for-the-fourth-quarter-and-twelve-months-to-30-June-2021/

Similarly, there is a need for better KPIs around provisioning to ensure smooth customer journeys with minimum disruption.ComReg will also be aware that we have made submissions on this point in the KPI consultation, and we look forward to the outcome of that consultation process and the introduction of fit for purpose KPIs. The primary KPI metrics of importance are measuring the ability to deliver in a single appointment and accurate recording of order cancelations. That is, whether the customer requested the cancellation or whether in fact the order was actually "undeliverable" by Eircom.
Cost is also hugely significant for consumers and a major factor in switching decisions. In a market where broadband pricing is amongst the highest in Europe, improving affordability would clearly have a positive impact in terms of incentivising consumers to switch.

### 4. *What matters relating to end user communications should be considered in the transition from Legacy to Modern Infrastructure?*

Sky supports the ComReg's proposal that Retail Providers should inform their customers of any potential changes to their service rather than Eircom.

Sky has the contractual relationship with its customers and has legal and regulatory obligations to keep them informed of any upcoming changes to their services or changes to their contractual terms and conditions.

Certain customers will also have stated preferences for how they wish to be communicated with, including customers with accessibility needs, which only their Retail Provider can and should have access to. Eircom does not have any role in this regard and should not be communicating directly with the retail customers of OAOs.

In addition to the legal considerations, Retail Providers taking charge of the communication strategy is also a practical and sensible proposal as it would be confusing for our customers to receive notifications from Eircom. ComReg has also suggested a "possible coordinated industry-led process" may be useful here for the communications framework. Sky would support ComReg establishing an industry led forum to discuss such issues, in particular how we receive notice of developments and potential 'stop sell' dates from Eircom.

Also, Retailers will want to manage the timing of the communications in various scenarios. For example, customers may have just migrated their copper services from another Operator to Sky and become in-scope for "copper switch" off at the early stages of their Retail contract. In addition, Sky will have minimum term commitments at a wholesale level that will need to be considered.

### 5. *What are the matters relating to universal service that you believe should be considered during a transition from Legacy to Modern Infrastructure? Please set out clearly the reasons and evidence for your response.*

PSTN only customers will be required to move to FTTH + VOIP (FCS is not an equivalent migration). Currently, there is no equivalent wholesale product available to serve this base. In respect of USO, customers that wish to obtain a talk only service and where the premises are passed for FTTH should be allowed avail of a wholesale Talk variant at equivalent rates.

### 6. *What is your view on the Framework principles outlined in sections 4.1 and 4.2 above? Are there other aspects that should be considered?*

The extraction of copper from the retired network offers the potential for a significant financial windfall to Eircom net of extraction costs. Incentivising copper extraction from ducts, when it is profitable to do so, will also be important in terms of promoting competition through increased access to passive infrastructure. ComReg's ECS Strategy Statement 2021-2023 notes that it intends to conduct a Physical Infrastructure Access (PIA) consultation over this period, in recognition of the desire to address competition bottlenecks at the most upstream level possible. Removing idle/redundant copper from the network to clear space for alternative infrastructure would seem an obvious place to start in tackling such bottle necks. Reusable ducts would also provide an additional revenue stream for Eircom and the associated economies of scope should reduce the costs of services that share those ducts, for example FTTH.

It is notable that as part of the 2018 WLA market review in the UK, Ofcom accounted for the net proceeds from the sale of copper and property in the cost modelling exercises that informed its charge control remedies. Ofcom took the view at the time that OAOs should benefit from the proceeds of the copper they have contributed towards and Ofcom wanted to incentivise the incumbent to clear duct space for PIA services:

> *"Users of BT's network have contributed towards the investment of this copper and therefore we consider it is appropriate that they should benefit from potential future proceeds. In addition, by including these expected proceeds in the charge control, we are incentivising BT to realise that income in the future and clear space in its ducts for PIA services."*[5]

Ofcom estimated that the cost of copper extraction on the E-side only of the exchange at the time to be circa £2,800 per tonne. It is also worth noting that copper commodity prices on the London Metal Exchange (LME) have been trading in a 10-year high range of $9,000-10,000/tonne in recent months.

Where copper extraction is promoted as part of any CSO considerations then it would seem to make sense that the net proceeds from such activity should be accounted for in pricing remedies associated with the migrated-to network whether it is in relation to existing obligations, for example cost orientation of ancillary services such as connections, or in relation to new obligations imposed as a consequence of CSO, for example cost orientation of FTTH VUA prices.

ComReg envisages that during the Migration and Switch-off Phase a premises will be considered passed by Modern Infrastructure when an Access Seeker is capable of ordering an ACP and having the ACP installed at the premises within a short time period. It should also be the case that there is no significant cost associated with ordering and installing the ACP within a short period of time and there should be appropriate KPIs in relation to timing.

[5] See Annex 22 of "Wholesale Line Access Market Review: Statement – Annexes 17-27", Ofcom, 28 March 2018

### 7. *Do you agree with the concept of a copper switch-off trial in specified exchanges?*

Sky Ireland fully supports the concept of copper switch-off trials. This would allow all stakeholders to understand how the process will work in practice, to identify any potential failings in the trial as well as ensuring that the process adheres to the objectives of Article 81 of the EECC.

Trials will also better inform ComReg in discharging its own duties under Article 81 of the EECC. It will assist ComReg in ascertaining that the conditions that inform its decisions around the imposition, amendment or withdrawal of obligations associated with CSO can be made with a high degree of confidence.

If a Trial is facilitated, Sky would like to be involved in the process of choosing the exchange(s) and defining success criteria prior to its commencement.

### 8. *What is your view regarding the concept of Stop Sell for legacy services for an exchange area?*

While Stop Sell may be a component of the overall CSO process, it should not be the centre-point of it. The CSO process should be focused on a customer friendly approach that actively incentivises customers to switch from legacy infrastructure and ensure a wide as possible take up.

There are also principles that need to be adhered to before Stop Sell can take place. Full transparency, including accurate and verifiable data, needs to be in place ahead of any Stop Sell initiative. For example, it is vitally important that there is an accurate way to verify that homes are actually passed for FTTH and are capable of getting connected to the service before access can be withdrawn. If this is not done, we will end up in a situation where consumers are left with no services available to them. Consumers cannot be left without service as a result of this CSO initiative and ComReg must ensure that consumers are protected.

ComReg must ensure that clear criteria are agreed in advance and are met before the Stop Sell phase of the CSO process can be engaged.

### 9. *What criteria and timelines would you consider appropriate in a Migration and Switch-off Phase?*

In terms of criteria, Sky Ireland believes there is no reason not to aim for 100% coverage in an exchange area before a switch-off can commence.

Timelines also need to be flexible to reflect the diversity of customers. It is important that particular attention is paid to customers who only use talk packages and/or have their copper service connected to house alarms or care alarms, and who most likely will be vulnerable customers. ComReg also needs to factor in that it simply may not be possible to migrate some customers at a particular time due to factors outside the control of the customer. Therefore, flexibility around timelines will be crucial.

***10. What consideration should be given to the costs relating to connecting a premises for FTTP, including for mandatory migration from Legacy Infrastructure? If such costs were to be borne by Eircom, how should such costs be recovered?***

In relation to connection costs, as the RegOpp paper also notes, Eircom's owners, who operate a fibre network under the "Free" brand in France, provide free FTTH connections to customers upgrading from copper services, which also includes covering the costs of the new modem.

In a consultation response to ARCEP it was also submitted that "Free don't generally differentiate between the price of copper and fibre offers" which would support an assumption that no material cost differences apply in operating either network.

Furthermore, it pointed out that "the main levers for customer migration are therefore not tariff based but linked to service availability" which obviously contradicts the suggestion in the Eircom paper that signals through higher copper prices would be required.

Conditions reflecting a similar approach for Ireland, i.e. funding the migration from Eircom's copper to fibre network and maintaining fibre prices at the same level as copper prices, could ensure that CSO is facilitated in a more timely manner with the support of industry and with reduced disruption to customers.

If the interests of consumers are to be safeguarded, as ComReg is required to ensure under Article 81 of the EECC, it would seem reasonable that these charges going forward should not be incurred on an individual customer basis and all customers connecting to the new network should be allowed to do so on the same terms regardless of the costs associated with individual connections. This would be consistent with how Eircom's connection costs are recovered for PSTN, CGA SABB and NGA SA FTTC services today.

In fact, there is no charge for new PSTN connections today as these costs are spread across all customers and recovered in monthly rental charges. **It should be noted that Eircom itself supported this move to zero connection charges as recorded in ComReg Decision D03/16 in recognition that the costs would be recovered through rental charges.** Where FTTH replaces copper as the network anchor product then a similar logic on connection cost recovery should apply given that precisely the same issues (e.g. blocked ducts, wayleave delays, customer missed appointments etc) that Eircom encountered in making PSTN connections applies equally with respect to FTTH connections.

***11. What consideration should be given to the withdrawal of obligations and related conditions?***

The withdrawal of obligations on Eircom in Urban FACO Markets will potentially have a material impact on any operators currently selling Eircom "POTS-based" broadband products, both CGA and NGA. The ability to migrate seamlessly from "POTS-based" to standalone alternatives will therefore be critical to the smooth transition to the deregulated environment. Inherent in the proposed FACO deregulation is the working assumption that those seamless migration processes are already catered for under obligations imposed on Eircom in the WLA and WCA markets through ComReg Decision D10/18 including for 'VUA and Bitstream Soft Migrations'.

While Eircom will not have to go through the Article 81 process for CSO if Urban FACO Markets are deregulated, the migration provisions covered by D10/18 appear to at least accord to the spirit of Article 81 in terms of safeguarding competition and protecting the interests of end-users from a service access perspective. Therefore, monitoring the effectiveness and compliance with those provisions as laid out in D10/18 during the FACO "sunset period" should be used to inform whether further intervention by ComReg would be merited in advance of the expiration of that "sunset period".

While an effective migration process from POTS-based NGA services to standalone NGA services will ensure customers can continue to avail, almost seamlessly, of voice services through VOIP, a greater concern arises in relation to migration from POTS-based CGA services to standalone CGA services, for example from POTS-based CGA bitstream to CGA SABB or from LLU-LS to full LLU supported by an OAO voice service. In these scenarios a voice service cannot be secured through a soft migration process because CGA SABB technically cannot support voice services and the prospect of an OAO that was availing of LLU-LS developing its own copper voice service through a fully unbundled CGA product in a small and declining volume market seems improbable.

While customers are likely to have the option of upgrading to a NGA service that supports voice in the majority of cases, ComReg's proposed deregulation of Urban FACO Markets in the Notified Decision is grounded in a criterion of 80% exchange area NGA coverage. Beyond the "sunset period" Eircom can legitimately increase the prices for the POTS-based element of a CGA broadband offering as a strategy to move customers on to NGA services or it can simply withdraw service of the POTS element altogether to force such an outcome. However, an element that is of key concern is that where customers do not have the option of switching to a NGA service, Eircom may still increase prices or withdraw service altogether and the negative impact such an outcome would have on end-users is obvious. This issue may be of particular concern in the RC Area where access to alternative providers is limited to non-existent. Eircom's commitment to the government is not for full NGA coverage in the RC Area and even where NGA services are available customers may have to pay significant costs for connection to the network.

In summary, while it would appear that CSO in the Urban FACO Markets will be able to proceed independent of the Article 81 notification process, it is recommended that the behaviours of Eircom in these markets in the period following the withdrawal of obligations should be closely monitored by ComReg for the purposes of making a more informed decision in relation to future Article 81 notifications.

***12. In addition to your responses above, what are your views on the context, transition proposal and conclusion presented in Eircom's White paper (Annex 2)?***

**Context**

Eircom presents as context to their proposed approach for CSO that Ireland is 'lagging' behind in terms of broadband coverage compared to our EU peers. However, the reality is that Ireland currently ranks **6th out of 27 EU member states** for broadband coverage, according to the European Commission's own analysis under the Digital Economy and Society (DESI) Index.

In fact, FTTC coverage in Ireland, which ComReg correctly defines as included under Next Generation (NG) technologies, is a key driver behind Ireland's 96% NGA coverage statistic recorded in the 2020 DESI index. This provides a more balanced view of the quality of Ireland's current broadband coverage. Many of Ireland's peers did not already have extensive coverage of NG services like FTTC (for example in Spain) or are now only in the process of upgrading networks to FTTC (for example in Italy). It would therefore be misleading to conclude that Ireland is lagging behind.

**Transition proposal**

Even at this high level it is clear that the three-stage proposal outlined in the Eircom Paper for CSO fails to consider the fundamental underpinnings of Article 81.

Typically, a "white paper" might be expected to take greater account of the legal/regulatory environment applicable to the problems identified and the solutions proposed. In this respect, CSO under Article 81 can only be facilitated in the context of the specific relevant markets in which an undertaking is designated as having SMP. The Eircom paper however proposes a broad-brush "copper to fibre" transition but makes no reference to the specific services or regulated markets in which it has SMP that will be impacted by its proposals.

While reference has been made to how other countries may choose to migrate from legacy to modern infrastructure, an optimal example from Ireland of what approach we could follow can be found less than a decade ago when Eircom rolled out FTTC in Ireland in 2013. It is worth highlighting the engagement and process that took place around that rollout when assessing what type of process could work for CSO. In particular, aspects of that roll out that worked well and could be easily applied in this process are:

***a) Industry fora chaired by ComReg***

As ComReg will be aware, to facilitate the roll-out of FTTC in 2013 ComReg chaired an industry forum covering topics ranging from notification periods around deployment plans, to migration processes, to identifying trial exchanges among many other associated issues.

This industry forum facilitated engagement between Eircom and relevant stakeholders, and more importantly it allowed the relevant parties to come to consensus on certain issues ahead of the public consultation and ComReg approval. In publishing its formal approval for the rollout ComReg acknowledged the positive role that such industry fora had on the rollout of FTTC. Sky Ireland strongly recommends that ComReg seek to establish an industry forum for CSO and encourage bilateral engagement between Eircom and stakeholders on topics outlined in this response.

***b) Incentivisation & pricing***

Eircom acknowledges that there may be challenges in migrating end-users from legacy to modern infrastructure. Eircom's proposal that end-users should be incentivised by increasing the prices for those end-users on legacy infrastructure with the hope that this will encourage them to switch to FTTH is clearly inappropriate. The rollout of FTTC by Eircom in 2013 provides an ideal roadmap for encouraging end-users through pricing. For example, connection/migration charges were set at €2.50 with actual costs amortised over several years, while a charge of €27.50 applied to technician visits to customers premises. These charges continue to apply today. Eircom also offered a significant discount promotion of €3

per month associated with the POTS element of FTTC (cognisant of the fact the most/no operators had yet developed a VOIP solution).

By contrast, the high-level proposals in the Eircom paper to stimulate migration from copper to fibre appear to be entirely grounded in a "stick" approach, and one which unsurprisingly seeks to maximise revenue for Eircom.

This also contrasts with Eircom's owners position in France (as highlighted above) where throughout their consultation response to ARCEP, they did not advocate for increasing the price of incumbent's (Orange) copper access services as a mechanism to create incentives to switch to fibre but rather that its copper tariffs should be reduced to the level of "avoidable" operating costs (with no recovery of capital costs) to ensure Orange could earn no more than avoidable costs in order to "send the correct economic signals".

Eircom's approach is likely to be commercially optimal for Eircom, particularly if it can be justified to consumers as being sanctioned by ComReg, but it is an approach that will not safeguard competition nor the interests of end-users which ComReg is bound to ensure under the general objectives of the EECC and the specific provisions of Article 81.

**We do not see any justification for overcharging customers on legacy products and ComReg must ensure that this does not happen.**

ComReg outlined the principle that "end users are not adversely affected in relation to their access and use of electronic communications access and services by the Migration from Legacy Infrastructure" and that ComReg views this principle as including the need for end users to be "treated reasonably and appropriately and in accordance with their rights during any migration"[6]. ComReg should also take note that although Eircom has not shared the proposed voluntary committed prices there is a strong implication that the intention is to increase prices possibly up to "entry level FTTP profile speed wholesale price". This ought to raise serious concerns in terms of the implications such a proposal would have for competition and end-users, not least because in the DESI for 2020, Ireland ranks second worst of 27 EU member states in its broadband price index, with only Cyprus ranked lower. This needs to be taken into account when considering the approach proposed by Eircom and how end-user's rights would be impacted by increasing the cost of their service.

### *c) Cost of migration for Access Seekers*

Other elements that need to be taken into consideration by ComReg in relation to Eircom's proposals are the significant costs and customer disruption that Access Seekers will have to manage during this process. From a practical perspective, Sky and other service providers will have to:

- Make financial provision for increased call centre activity where multiple communications may be required to facilitate the migration of affected customers, many of whom are satisfied with their existing service.
- Customers will require one or more technician appointments to their homes, may have to carry out ducting work at their own expense (if this issue is not addressed as part of the CSO process) or may even face significant delays in restoring service

[6] Call for Inputs Migration from Legacy Infrastructure to Modern Infrastructure' , ComReg 21/78, p.14

if order handling systems contain inaccurate data about availability of fibre to their address.
- Service providers, such as Sky, may have to financially compensate customers for the disruption if a smooth transition is not ensured.
- In most cases new modems and in many cases new CPE (for VOIP services) will be required by customers migrating from copper based to fibre services.
- If the replacement service wholesale charges are higher than the existing service charges this will also have to be provided for by OAOs.

At a high level it is clear therefore that CSO will have significant cost implications for OAOs. If competition and the interests of end-users are to be safeguarded, how these costs will be catered for should be central to the considerations around the "process" and "conditions" under which CSO is permitted.

The current proposals in the Eircom paper justify moving to fibre only services on grounds of efficiency, but the inefficiencies imposed on OAOs through the migration process it advocates for are given no consideration. CSO under those terms would arguably be discriminatory and the accounting for OAO costs associated with CSO should therefore be central to the conditions and process.

***d) Transparency***

Another aspect of Eircom's paper that requires further consideration and which has not been addressed by Eircom is how transparency in the process will be ensured.

There is an ongoing issue with Eircom's inability to provide accurate Advanced Prequalification (APQ) information. This is already a concern for Sky Ireland whereby we receive an order from a customer which appears to have access, only then to receive an order rejection from Eircom on the basis that the service is actually not available at the address in question. **This is an issue that must be resolved before the CSO process can commence.**

Eircom has been unwilling to undertake a full survey of its network to definitively identify which of its services can be connected to each address on its database and under what conditions such connections can be made (for example standard vs non-standard). This is despite other wholesale providers such as SIRO and NBI undertaking such surveys for their networks. There is no penalty for Eircom failing to provide the correct information and as a result there is no indication that this will change before CSO begins. As part of the analysis and assessment that Eircom must complete before submitting a CSO notification, Sky Ireland strongly recommends that ComReg ensures that Eircom undertakes a full survey of its entire network.

***13. In your view, what role should pricing signals have in incentivising the migration from legacy services? What are your views on Eircom's proposal on pricing triggers? Please set out clearly the reasons and evidence for your response.***

As outlined above, Sky Ireland does not agree with the proposed approach by Eircom that to incentivise customers from copper line services to FTTH they should pay more before switching to FTTH. As noted above, the highly successful launch of FTTC in 2013 was

predicated on a strategy of attracting customers to the service rather than driving them off existing CGA services.

Eircom's proposals for transition/migration range from incentivising migrations through the imposition of higher prices, to service cessation where migration has not occurred quickly enough. There is no consideration given to the detrimental impact on consumers or to the treatment of the potentially significant costs other authorised operators (OAOs) would incur in facilitating CSO – much of which is likely to get passed on to consumers in some form.

There is **no evidence to support the presumption that a cost oriented FTTH price should be higher than the current FTTC price**. We also believe there is a case for such an obligation being imposed as a perquisite to any FTTC CSO (*see Figure 8 of the RegOpp paper submitted by ALTO*). With cost oriented FTTC prices due to fall further for reasons outlined in the Access Network Review, it is difficult see how any policy that forces customers onto much higher priced alternatives or customers being hit with a penalty to encourage migration would be consistent with the specific provisions of Article 81 of the EECC or with the general objectives of the Code or the Communications Regulations Act, 2002.

Examples from other EU countries include the case of Estonia, where cost oriented FTTH charges have been set at the same level as legacy copper services and Poland where they have been set at less than the legacy copper 10Mbps product provided by the incumbent (€13 per month vs €16 per month).

Eircom has also submitted that FTTH networks require "less maintenance and less energy relative to their copper counterparts" and that FTTH has "fewer faults and more weather resilient properties". In addition, in a GPON network the active equipment is located in the exchange so the cost of bringing power to cabinets in the access network does not arise (unlike with FTTC). These are all characteristics that point to lower not higher costs.

In its investor relations communications Eircom has consistently noted that its FTTC network has been "future proofed", a position supported by the open eir website that notes with respect to its 7000 FTTC cabinets that "each cabinet has enough spare fibre capacity to deploy Fibre to the Home to all connected premises, offering speeds up to 1000 megabits per second as home and business needs change in time"[7].

While it should be acknowledged that migrated customers are likely to benefit from a better quality of service assuming an orderly CSO process, the extent to which their rights are maintained in relation to price and choice are equally important considerations.

ComReg should also recognise the OAO contribution to the fact that Eircom's €400m investment in FTTC is set to have returned €1bn in wholesale charges alone by the end of 2021, with almost half the network's useful asset life yet to be exploited.

We also believe (and we believe that ComReg's analysis would support this) OAOs have overpaid for FTTC services for many years. Therefore, being forced off that network early through CSO while simultaneously having to incur the cost of transition would be inherently unfair and unreasonable. OAOs should not have to incur significant cost in relation to CSO.

[7] Found at https://www.openeir.ie/our-network/

Adopting such a principle as a condition of CSO under Article 81 would be both fair and reasonable.

***14. What is your view on Eircom's proposal for differentiated handling of the business to business market?***

We do not believe that the markets should be handled differently as metrics utilised in one market could have unintended consequences for the other.

***15. Eircom proposes that at the 'cessation date', where end users have not acted (i.e. end user did not order a fibre-based service) their legacy service will be terminated (unless self-declared to be a vulnerable user or a user providing critical national infrastructure). Do you think there should be a maximum threshold of users (of legacy services) before Eircom could terminate their legacy services? If so, how might that be calculated?***

This will require further analysis once the trials and initial stages of the CSO process have started. This should be reviewed in detail and not defined before the process begins, allowing the process to be adaptable and flexible. In any case, consideration should be given to the time elapsed between when the premises became FTTH passed, when an offer was made to the customer and proposed time of switch off. Indeed, the type of offer made available will have a significant influence on whether a customer migrates.

***16. What consideration should be given to a scenario where a significant number of end users choose not to migrate to an available ACP within the defined notice period?***

As outlined in Question 9, there may be end users who are unable to migrate. What is important for this issue is that there is transparency and an excellent communication strategy in place to ensure that end-users are well aware of the migration from legacy infrastructure and the impact of it.

We also need to be absolutely certain that ACP is available and can be connected without cost to the customer before we can think about any forced migration of customers from current services.

***17. What structured stakeholder engagement do you think should be established to address the process of Migration from Legacy Infrastructure to Modern Infrastructure?***

ComReg can gain confidence in the CSO process through the benefits that accrue from transparent industry dialogue and agreement on key aspects of the process that will lead to efficient and fair outcomes.

As we have outlined above in Question 12, Sky Ireland is calling for an industry forum to be established by ComReg to facilitate CSO. The approach in the context of facilitating CSO is something ComReg and all stakeholders should consider given that the Code allows

ComReg to take account of voluntary commitments based on cooperative arrangements arrived at between Eircom and access seekers to inform amendment to or withdrawal of existing obligations on Eircom.

Oversight and input from ComReg in such discussions will also assist and such intervention can be justified given ComReg's own statutory duties under Article 81 to ensure an appropriate CSO process is put in place that safeguards the interests of competition and end-users.

***18. Are there matters relating to the objectives of public policy or environmental considerations which ComReg should consider in the context of its consultation process?***

It should be noted that the State is funding significant proportion of the connection costs in the IA. ComReg, should consider whether it is appropriate for consumers to fund the cost of connections to facilitate copper switch particularly when consumers may already be satisfied with the speeds available.

***19. Are there additional matters relating to Migration from Legacy Infrastructure not included above which ComReg should consider in the context of its consultation process?***

**Ofcom contingency for "40/10 FTTC" CSO**

As set out in the RegOpp paper, while care should be taken in lending undue weight to recent regulatory decisions by Ofcom in the UK as these are no longer subject to European Commission or BEREC oversight, given the Eircom Paper appears to put some weight on developments in the UK, these do need to be addressed .

In the UK, the FTTC retail market is characterised by choking speeds down to 40Mbps regardless of the line speed capability. The underlying "40/10" Openreach wholesale service has been subject to a "cost-based" control since June 2018 but there is no cost-orientation obligation on FTTC speeds above this threshold. By contrast, in Ireland, FTTC has been sold on an "up to 100Mbps" basis with all lines delivering speeds up to their technical limit at the wholesale level and there is no evidence that retail operators have competed on speeds being restricted below that maximum capability. The maximum speed on FTTC technology in the UK is 80Mbps but due to the deployment of vectoring technology across all FTTC exchanges in Ireland, speeds of up 100Mbps and beyond can be reached.

A cost-orientation obligation has applied to all FTTC lines in Ireland since new price controls came into effect in March 2019, with no wholesale price differentiation applying regardless of the actual speed the line can deliver. In the UK, Ofcom determined that a cost-orientation obligation was not required for speeds above 40Mbps to address Openreach's SMP in the WLA market. Ofcom's most recent market analysis has been informed by a FTTC discount scheme negotiated by Openreach and various OAOs in the UK with the objective of moving customers off legacy copper products to NGA services (including FTTC).

Furthermore, Openreach is legally separated from its publicly traded parent company BT, which offers retail services in the UK. Eircom is a privately owned vertically integrated operator with no functional separation. As such the regulatory protections enjoyed by

OAOs and customers under the UK structure do not apply in Ireland so, all else being equal, more stringent regulatory controls in other areas are to be expected.

This summary reflects some material differences between the Irish and UK markets and underlines the need to be careful in drawing comparisons between the two jurisdictions. Nevertheless, some interesting insights can be observed in the UK from an Irish/European perspective. For example, progress has been made towards a transition to NG networks from legacy copper through commercial negotiation between BT and access seekers providing incentives to migrate. In this regard, the incentive programme includes discounted pricing on Openreach's full fibre and GFast propositions.

Ofcom's latest WLA decision acknowledges a key objective as being the promotion of "full-fibre" however it has also sought to protect consumers by maintaining price caps on all services at their current level, including for FTTC and CGA broadband. It has also introduced a new obligation on a FTTP "40/10 equivalent product" to replace the current charge controlled 40/10 FTTC product when CSO takes place. In recognition of the higher reliability and higher speeds, Ofcom determined that a premium of £1.70 (circa €2) should be added to the FTTC cost based price.

Were Ireland to take a similar approach to the UK, an equivalent to the current cost oriented FTTC service for "up to 100Mbps" would be implemented for FTTH ("100/20 FTTH equivalent") at a circa €2 premium to the ultimately determined cost-oriented price for FTTC in the pending ANR decision. It is a proposal that, while affording some protection, would still have a significant impact on consumers that are forced to migrate from FTTC to FTTH.

It is noticeable that the Eircom paper makes no reference to the consumer protection initiatives inherent in UK approach.

**-ENDS-**

# Vodafone Response to Call for Input

## Migration from Legacy Infrastructure to Modern Infrastructure

Reference: ComReg Doc 21/78

Version: Non-Confidential

Date: 14/9/21

# Introduction

Vodafone welcome the opportunity to respond to ComReg Doc 21/78 calling for inputs on plans for migration from legacy infrastructure to modern fibre infrastructure, otherwise known as 'Copper Switch Off' (hereinafter 'CSO').

**Vodafone share the national ambition to fully modernise Irish infrastructure.** We support the multiple wholesale Irish fibre networks and are a market leader of retail fibre solutions for Irish consumers and business.

**The transition from copper to fibre is well underway** and at the end of Q2 2021 there was approximately 309K[1] FTTP connections growing 53% year on year. Vodafone, as a leading retailer of FTTP in Ireland, sells fibre services over the SIRO, Eircom and NBI networks. We recognise the benefits fibre can deliver to our customers and the efficiency benefits that arrive from reducing the amount of time during which copper and fibre networks must co-exist. The opportunity now exists to further accelerate the transformation from legacy to modern infrastructure.

Our responses to the consultation questions are set out below. **In summary Vodafone recommend**

- **The starting position is important,** and all efforts must be made to ensure we adopt a customer centric approach to ensure most customers willingly make the transition across to fibre. In this regard a collaborative effort is required to agree the conditions for transition and all participants in the transition programme including Eircom, ComReg and Retail Service Providers need to participate in the process in good faith.
- **Retail providers require certainty and safeguards** – this is essential before ComReg can consider amending or withdrawal of obligations.
- **Consumer and Business confidence is critical.** We encourage early communication of target dates and must ensure the number of customers impacted at time of CSO is minimal.
- **The call to action for consumers must make sense**. Consumers will be agnostic about the technology that delivers their broadband service. They may be willing to pay a premium for much faster speed, however, it will not be compelling if the proposal is to charge more in fibre rental for a similar speed to copper and to charge for install.
- **There is an opportunity to improve process.** To facilitate CSO detailed network analysis and network preparation should be completed including remediation of non-standard issues such as collapsed ducts.
- **The impact in different markets requires detailed review.** This would not prevent collaboration, commercial discussions and commitments being advanced in parallel. ComReg and/or Eircom may look to Article 79 of the Code to progress discussions.

[1] ComReg Quarterly report Q2 2021

## Consultation Questions

**Question 1: Do you agree with the wholesale migration and replicability principles set out above in section 2.1 to 2.2? Are there any other principles in this respect that should be considered? Please set out clearly the reasons for your response and any supporting evidence.**

Vodafone agree with the principle that to migrate customers from legacy to modern infrastructure. It is also appropriate that there should be incentives to assist the migration from Eircom legacy infrastructure to Eircom modern infrastructure. Regarding replicability ComReg are of the view that alternative products should be of comparable quality and price. It is also appropriate that the access seeker should have comparable certainty (or binding commitments) to fair terms and conditions for access products.

**Question 2: What principles should guide ComReg in establishing the existence or not of ACP as described in section 2.2 above? Please set out clearly the reasons for your response and any supporting evidence.**

Paragraph 2.13 of the ComReg paper states

*'ComReg would see as a guiding principle that Access Seekers are able to switch to the replacement wholesale inputs without having to incur significant additional cost or make significant changes to, inter alia, their order handling; provisioning; and billing systems.'*

A further principle is that the level of certainty currently available to access seekers should not degrade, because of moving from legacy Eircom infrastructure to modern Eircom infrastructure assets. This certainty is delivered through access, non-discrimination, transparency and cost-orientation remedies or equivalent binding commitments to same.

The approach will need to be adapted depending on the regulated markets and scenarios arising in different areas of the country. ComReg will need to assess the implication for different markets. For example, based on existing market remedies an operator availing of VUA based FTTC in urban locations will, under current conditions, forego regulatory protection if they migrate existing customers to VUA based FTTH. This jeopardy clearly inhibits further acceleration of transition and should not be overlooked.

**Question 3: What general retail (end user) principles do you believe are required in protecting end user interests during any Migration from Legacy Infrastructure? Please set out clearly the reasons and evidence for your response.**

The call for input highlights two principles, namely:

1. Access to USO; and
2. Maintenance of end-user rights during migration.

ComReg should also be focused on the in-life customer impacts once the customer migrates. The approach on pricing should not be detrimental to consumers. At present there is a premium on wholesale FTTH access prices and Eircom prices are subject to only light touch regulatory price control. Many customers, in particular customers that don't rely on copper for high speed data, will question the basis for additional access surcharges arising from the CSO programme. Customers will be agnostic about the technology that delivers their service is the experience is very similar to that which they experience on their copper line.

CSO will give rise to a wide number of challenging scenarios and exceptions for our customers. Many premises may prove challenging to switch due to location access issues (e.g multi-dwelling units). In many cases there may be local authority engagement requirements with associated complexity. We should also note the potential for issues around the state of existing infrastructure with ducting or overhead issues. The non-standard issues must be addressed in advance.

Vodafone agree that customer rights should be upheld during migration processes. It is important that once a retailer engages a customer to migrate, that the order is then completed on time and as committed, and if issues arise a committed timeframe is provided for the end customer. In this regard we should consider improvements in network through an Eircom pre-survey of customer locations. This will ensure mitigation of issues such as blocked/collapsed ducts or issues with overhead wires are flagged when an offer to migrate is being made. Eircom should also bear the cost to make ready any premises that are experiencing such issues to make them fit for purpose for sale/transition.

In paragraph 3.12 ComReg refer to the Eircom 'Leaving a Legacy Paper' – which sets out Eircom positions across the three high level stages of transition that eircom propose. In our view a framework for CSO its various stages and phasing, the regulatory oversight in different markets and the associated customer communications regarding CSO is more appropriately agreed by market analysis and through an agreed framework for engagement at industry level. This would not preclude discussions on future commitments with industry.

Question 4: What matters relating to end user communications should be considered in the transition from Legacy to Modern Infrastructure?

Vodafone agree a target date will be required and that periodic communications should issue. The benefits of transition need to be widely communicated. Customers will be able access faster, more resilient network services. They will benefit from a wider choice of bandwidths, facilitating adaptability to reflect their individual and changing needs. Faults rates are likely to be lower, with a more weather resilient network that is better able to cope with our climate. It must be a compelling proposition for customers – they will less likely to switch to same or similar speeds at an increased cost. They will also be less likely to, to agree to installation of new infrastructure in their homes if this imposes undue cost and inconvenience.

In paragraph 3.9 ComReg state that end-users ought to be kept informed by their retail provider. That can only be the case when retail providers have clear detail on the transitioning plan.

Communications will also be required on customer impacts and it is clear some customer services may not be supported on VoIP/FTTH solutions. Technical challenges occur when customers have monitored alarms, panic alarm services, fax lines, older applications relying on dial up and there can also be issues with certain legacy TV boxes. These issues are notably reducing over time however communication campaigns will still be required. The message should be clear that the benefits of fibre cannot be realised without some level of disruption and inconvenience for customers as they will need to change equipment coming into their home, CPE, and possibly will require changes around internal configuration of wiring.

It is essential for clarity on communications that ComReg establishes a clear policy position on contractual impacts for consumers. When stating this may involve a change to the end-user's contractual conditions specific guidance is required. The absence of clarity will delay communications and will also impose further uncertainty and jeopardy on access seekers which in turn undermines plans for efficient transition.

Question 5: What are the matters relating to universal service that you believe should be considered during a transition from Legacy to Modern Infrastructure? Please set out clearly the reasons and evidence for your response.

The USO principles and designations are established and shall continue to apply to modern infrastructure. The transition should not limit any access to basic services. The question of USO will require a review regardless in the context of the EU Code and the rollout of national broadband over the next 5 years - CSO adds another level of complexity.

Question 6: What is your view on the Framework principles outlined in sections 4.1 and 4.2 above? Are there other aspects that should be considered?

The requirement on ComReg under Article 81 is to ensure that the CSO process includes a transparent timetable and conditions with an appropriate notice period. The conditions are critical to access seekers in this regard and upfront agreement of conditions will be required.

The first phase of the Framework in our view should clearly set the conditions for migration. ComReg may view this as a necessary step in advance of the enablement phase in the reference in Paragraph 4.6 to the 'required information to be provided by Eircom to ComReg for the enablement phase to commence'.

ComReg and/or Eircom may look to Article 79 of the Code to progress discussions. As SMP operator Eircom can offer ComReg commitments on conditions for access moving forward. If such conditions can be agreed through industry collaboration that will ensure the project progresses efficiently from enablement phase through to decommissioning.

The operational demands also need to be considered. As aggressive switch off plan must not undermine business as usual activity and there will be significant demand for technicians and support staff to manage the migration efforts.

Question 7: Do you agree with the concept of a copper switch-off trial in specified exchanges?

Vodafone agrees that transition can only commence on completion of trials at exchange level. The objectives of the trial cannot be a simple pilot rolling over into a large-scale migration phase. There must be sufficient time taken to incorporate learnings identifying challenging and exceptional use cases and understanding the operational loads for both Eircom and retailers and the potential impact on normal competitive activity.

**Question 8: What is your view regarding the concept of Stop Sell for legacy services for an exchange area?**

Vodafone agree that a fibre first approach should be adopted, and we support the transition from copper to fibre. The concept of stop-sell and removal of regulatory protections can only be addressed when there is certainty on conditions for migration and access on modern infrastructure products. The customer requirements also need to be considered in deciding on a firm stop-sell and there will be a range of challenging usage scenarios that need to be managed across both residential and enterprise markets. It is also worth noting the position in Ireland is that fibre rollout is progressing on several fronts and, if wholesalers incentivise retail operators to encourage transition, this will happen. A hard stop will ultimately be required however it is preferable to take customers with the industry in transitioning to fibre.

**Question 9: What criteria and timelines would you consider appropriate in a Migration and Switch-off Phase?**

No comment at this time.

**Question 10: What consideration should be given to the costs relating to connecting a premises for FTTP, including for mandatory migration from Legacy Infrastructure? If such costs were to be borne by Eircom, how should such costs be recovered?**

It is counterintuitive to the objective if retailers are not incentivised to migrate customers across. A barrier to switching for consumers will be connection costs and premiums on access prices compared to copper services. The transition will also impose significant cost on retailers as CPE updates will be required and significant investment will be required in backhaul to manage fibre traffic back on to our network.

Regarding the cost of transition, it is universally acknowledged that the transition will deliver significant cost benefits to the access provider with lower fault rates, lower maintenance, energy cost savings and lower footprint requirements.

**Question 11: What consideration should be given to the withdrawal of obligations and related conditions?**

The question on withdrawal of obligations on copper can only be addressed when there is certainty on the conditions for migration and access on fibre-based products.

**Question 12: In addition to your responses above, what are your views on the context, transition proposal and conclusion presented in Eircom's White paper (Annex 2)?**

The proposals from Eircom are limited to pages 38 to 42 of the "Leaving a Legacy for the future" white paper. It is difficult to provide detailed views as the paper is extremely high-level. The paper is focused on relaxation of regulatory controls without any incentive for access seekers. It calls for removal of regulation on copper and proposes increasing copper prices to FTTH levels and stop-sell. That is clearly not a compelling

proposition. Vodafone supports the transition effort however only clear evidence of significant commitment to collaboration will accelerate the switch to fibre.

**Question 13: In your view, what role should pricing signals have in incentivising the migration from legacy services? What are your views on Eircom's proposal on pricing triggers? Please set out clearly the reasons and evidence for your response.**

There is little incentive on pricing for the transition as proposed. The ask of an access seeker seems to be to drive transition to higher priced fibre products with reduced regulatory protection. From past evidence on FTTC pricing behaviours in 2015 and 2016 we would be taking on greater jeopardy on access pricing. There is also no indication of any migration incentives. We would also point to a need to give confidence that Eircom will make ready premises requiring remediation to facilitate transition. This is the case with other wholesale offers in the Irish market.

There is currently a premium on wholesale fibre pricing and on lower speed profiles there is no significant difference in capability and customer experience when compared with higher end FTTC lines. This uplift would have to be justified to consumers who we are asking to install new equipment in their premises and then pay a premium on monthly access when the perceived benefit is limited. This will not provide the right signal to end users.

If there is certainty on fibre pricing this will facilitate greater competition at the retail level, and it is this activity that will drive the transition effort and mean the number of exceptions is reduced when moving towards decommissioning.

**Question 14: What is your view on Eircom's proposal for differentiated handling of the business to business market?**

Vodafone agrees that cohorts of customers including business customers will require differentiated handling. This may also be necessary for critical public services and in respect of more vulnerable customers.

**Question 15: Eircom propose that at the 'cessation date', where end users have not acted (i.e. end user did not order a fibre-based service) their legacy service will be terminated (unless self-declared to be a vulnerable user or a user providing critical national infrastructure). Do you think there should be a maximum threshold of users (of legacy services) before Eircom could terminate their legacy services? If so, how might that be calculated?**

It may not be necessary to establish the threshold in these initial stages. The priority needs to be to establish agreed conditions for transition with retail service providers who will drive the transition. If wholesale conditions improve for FTTH then the market will accelerate transition to fibre. Clearly at some point it will be necessary to terminate copper services however the objective needs to be that this should only impact a very small number of customers to cease and notifications will be necessary well in advance to ensure transition activity is planned.

Question 16: What consideration should be given to a scenario where a significant number of end users choose not to migrate to an available ACP within defined notice periods?

This will need to be monitored as part of the transition plan. The first step will be to ensure that the conditions for retail service providers are such that it makes sense to drive the transition effort. With incentives, accompanied by a strong communications programme, the reality is that there will be a much smaller cohort of customers 'forced' to migrate. It is likely however that the last 10% of customers will be the most difficult to switch from a commercial and operational perspective.

Question 17: What structured stakeholder engagement do you think should be established to address the process of Migration from Legacy Infrastructure to Modern Infrastructure?

All participants in the transition programme including Eircom, ComReg and retail service providers need to participate in the process. As stated above a key aspect will be the establishment of fair migration commercials. Stakeholder engagement is key in this regard and ComReg and or Eircom may seek to make use of the toolkit afforded under the EU Code. The reality is the move to fibre is well underway and if the desire is to put momentum behind that then the commercials need to be right for all parties.

Operational forums will also be required when moving towards any switch off decisions and this may need to be split into further sub-groups as the projects advance.

Question 18: Are there matters relating to the objectives of public policy or environmental considerations which ComReg should consider in the context of its consultation process?

No comment at this time.

Question 19: Are there additional matters relating to Migration from Legacy Infrastructure not included above which ComReg should consider in the context of its consultation process?

No comment at this time.

ENDS