Recommendations for a Reasonable Call Handling Fee (CHF) associated with the Emergency Call Answering Services (ECAS)

Final non-confidential report

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Summary

0 Executive summary

The Department of Communications, Energy and Natural Resources (DCENR), selected BT Ireland in 2008 as the provider of Emergency Call Answering Service ("ECAS") in Ireland for a period of 5 years. The service by BT started in July 2010. In order to recover the cost of running the ECAS operation, BT Ireland charges a Call Handling Fee ("CHF") to operators for emergency calls which originate on their networks. Section 58D of the 2007 Act requires ComReg to review the maximum emergency CHF and to ensure that the CHF enables BT to recover its reasonable costs. In 2010 and again in 2011, ComReg reviewed the CHF, which is currently at €3.35 per call. Based on the review of costs incurred in the first two years of operation and on BT's forecasts, the CHF may be adjusted with the adjustment taking effect on 12 February 2013. The CHF is indeed set to ensure that BT recovers its costs over the period of the contract, which includes past and future years.

This review has been conducted, as with last year's review, with the requirement to assess what costs have been incurred and if they are deemed to be reasonable.

In order to verify that BT's ECAS costs during last year's operations are reasonable and to determine the level of the CHF that will take effect on 12 February 2013, it is necessary to thoroughly understand the types of costs incurred by BT for the provision of ECAS, in order to compare them with available best practices and to assess how they will evolve. BT's ECAS costs consist of:

- Operator costs: BT pays a fixed charge per hour worked by operators to its sub-contractor,
- BT pay costs: for the management of ECAS operation,
- BT non pay costs: which include accommodation costs, facilities management, maintenance of fixed assets, network services, etc.,
- Depreciation charges: for fixed assets and set-up costs. These were verified in the first review in 2010 by ComReg[1].
- Financial costs: which include costs for the Guaranteed Rate of Return, the Section 58D fund (or the Sinking Fund) and past under-recovered costs.

The costs allowed from this year's review do not deviate significantly from what BT submitted, since BT has kept to their commitment to the rationalisation

[1] HBC, 2010, Final Report to ComReg re ECAS fee review.

programme following last year's reports. An important reduction in costs was therefore achieved.

It should also be recognised that the efficiency of ECAS operation has considerably improved. The call centre operational review reveals that ECAS is run effectively against the service targets and quality requirements and overall is approaching 'best practice'

Nevertheless, in order to retain only reasonable costs to run ECAS, a few changes are required and listed below:

- Regarding operator costs:
    - The cost per hour paid by BT to its operator sub-contractor is deemed reasonable following BT's adopting of the recommended rate from last year's report.
    - A number of observations were made last year on the approach to determine the relevant number of hours required to resource the service. Most of these observations have been implemented. However the observation regarding forecasting time for training has not been implemented. The number of hours requested by BT for ECAS to its sub-contractor still therefore seems high compared to a reasonable calculation. Therefore, the number of hours requested as calculated by Orbita is used in the calculation of the CHF from 1st of July 2012 rather than BT's own calculations. BT should be expected to follow Orbita's recommendations in calculating the level of operator resource required going forward.
- Regarding BT non pay costs, parts of facilities management charges have also been disallowed based on BT's benchmark of similar practices elsewhere and due to lack of data provided by the sub-contractor.

Between August 2011 and August 2012, there have been more calls to the emergency services than expected mainly due to a conservative estimate of call volumes in last year's review. The decrease rate of call volumes has proved therefore to be lower than forecasted in last year's review. TERA Consultants has adjusted its forecasts for the following years accordingly (-2.5% per annum instead of -3.5%). This results in higher than expected revenues for BT for the past year as the CHF was higher than what it should have been with higher volumes.

Considering these main changes, a specific calculation is carried out to set a CHF value that enables BT to recover its costs for the provision of ECAS over the full contract period (including interests and past under/over recoveries). Using this approach, and considering the reasonable costs identified in this

report, **TERA Consultants proposes a CHF of € 2.96 per call to be applied from February 2013 to February 2014 and this rate would apply until the end of the Concession Agreement if call volumes and costs do not change materially from those forecast to the end of the contract.**

It is important to note that the calculated level of CHF is stable over the full contract period, which enables the ECAS provider to recover its costs over this period.

1 Introduction

The Emergency Call Answering Service ("ECAS") receives all emergency calls (999/112) that are made in Ireland. The ECAS centres are responsible for forwarding every genuine call to the responsible emergency service, as quickly and effectively as possible.

All emergency calls are free of charge to the caller as required by European Union legislation. In Ireland, ECAS is funded through the Call Handling Fee ("CHF") payable by telephone network operators present in the country and/or the telephone call service provider. In order to recover the cost of running the ECAS operation, the provider of emergency call answering services charges the CHF to operators for calls which originate on their network.

In 2008, the Department of Communications, Energy and Natural Resources (DCENR) chose BT Ireland through a public procurement process to provide emergency call answering services on behalf of the state of Ireland. The Concession Agreement will see BT Ireland operate the service until mid-2015.

BT has since developed and made fully functional three ECAS centres, in Navan in Co. Meath, Ballyshannon in Co. Donegal, and EastPoint in Dublin 3. These centres are also known as Public Safety Answering Points ("PSAP").

Under Section 58D of the Communications Regulation (Amendment) Act 2007, each year, ComReg is required to review the maximum CHF that may be charged. ComReg may confirm the existing maximum CHF or, following consultation with the ECAS provider, ComReg may raise or lower the existing maximum CHF. Section 58D states that, when reviewing the CHF ComReg "*shall have regard to – the need for the ECAS operator to cover the reasonable costs likely to be incurred by it in operating the service*." ComReg has clarified the meaning of "reasonable costs" and stated that "*in assessing whether costs are reasonable, ComReg will have regard to similar operations in other countries and international best practice. Incurred costs which are clearly unnecessary, excessive or avoidable may not be deemed reasonable, and may have an impact on the 'Call Handling Fee' for the period following any review".* In 2010 and again in 2011, ComReg reviewed the CHF and it is currently at €3.35 per call.

ComReg has appointed TERA Consultants to conduct a review of the current CHF. The present study focuses mainly on the rationalisation programme presented by BT last year and the implementation of recommendations from

last year's review. Following this review and if deemed necessary by ComReg, the CHF can be adjusted with the adjustment taking effect on 12 February 2013 for the following 12 months.

The approach followed by TERA Consultants consists in assessing whether past costs incurred were reasonable and to understand the cost drivers in order to produce forecasts. To assess call centre staff costs, Orbita Consultancy has been involved in the project. Orbita's consultants have considerable expertise in reviewing and operating call handling centres and rostering operators and reviewing and developing call handing centre volume and especially emergency call handling centre (such as Yorkshire Ambulance Service, North West Ambulance Service, NHS Direct, Strathclyde Constabulary, Cambridgeshire Constabulary, etc.). For the review of call centre staff costs, Orbita made several site visits to PSAPs in Navan, Ballyshannon and BT's Service Management Centre in Belfast on 3rd and 4th September 2012, and these included:

- Discussions with ComReg;
- Interviews and meetings with ECAS representatives from BT and the sub-contractor providing call operators:
    - Head of operations,
    - First Line Managers,
    - Scheduling and planning,
    - Call takers;
- Side by side listening to live 999 / 112 emergency calls.

Data on volume of calls, on staffing and activity (organisational structure, 'Not ready' code data and other off phone activities, sickness and other absences, attrition and recruitment), on contracts and service levels, on workforce planning (forecasts and forecast performance, forecast models and capacity plan, schedules and schedule metrics, shrinkages and allowances), on management information, on relationship and service management (processes, incidents, activities and improvements) have been gathered for this project. The analysis used specific techniques designed by Orbita, industry knowledge and benchmarking data. Special attention was also dedicated to the workforce management review due to the particular characteristics of ECAS operations. Accounting information was also provided by BT.

All this enables TERA Consultants to establish a recommendation to ComReg for the CHF from 12 February 2013 to 11 February 2014 for this year's review.

The following sections are structured around two main analyses: the number of calls to ECAS and the various costs incurred through the ECAS provision. Different types of costs borne by the ECAS operator are analysed:

- Operational costs: these are costs directly incurred for the operation of ECAS, such as operator costs, BT pay costs, BT non pay costs, depreciation charges;
- Financial costs: these include cost of capital, cost of the Sinking fund, under or over recoveries.

2 Volumes of calls

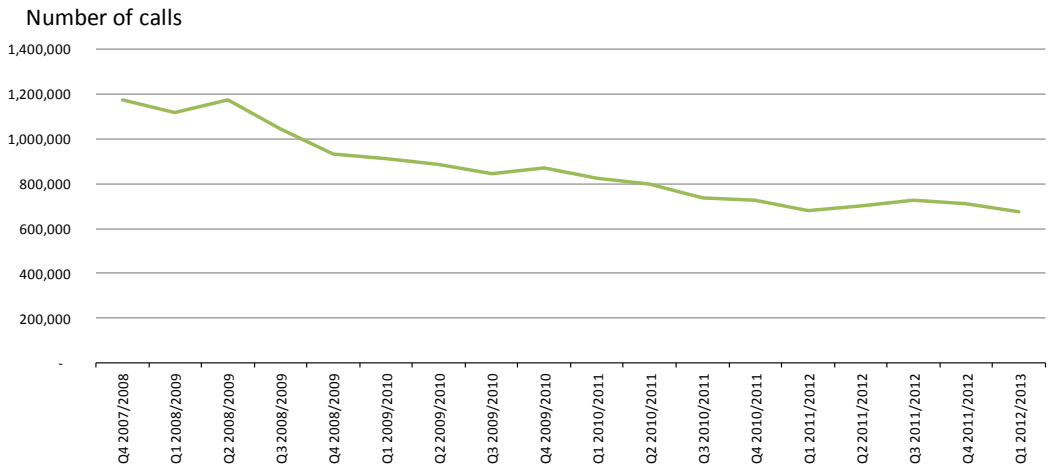
This section analyses the past trend in volumes of calls made to ECAS and the possible trend of development during the remaining time of the contract.

The CHF is calculated as the ratio between the total costs of ECAS provision and the total number of calls to ECAS. Since a considerable proportion of the relevant costs is fixed, the total number of calls to ECAS has therefore an important impact on the level of CHF.

In order to forecast correctly the total number of calls in the coming months, it is necessary to know the trend and carry out a detailed analysis of volumes of calls in past months. The trend in volumes of calls is characterised by two distinct phases. The first phase is when the number of calls decreased rapidly in the first months of BT ECAS operations. In its document N°11/65[2], ComReg informed the industry that the number of emergency calls handled by the ECAS operator had decreased by around 17% between the first six months of 2010 and the six first months of 2011 (see Figure 1). During last year's review, it was found that the high number of calls during the first months of ECAS operation undertaken by BT was due to false emergency calls resulting from faulty lines in eircom's network. The significant decrease in the number of calls to ECAS reflects the operator's effort in remediating these lines. Since then, however, the number of calls has decreased at a much more stable rate of -1.5% between the first six months of 2012 and the first six months of 2011 (see Table 1).

[2] ComReg, Emergency Call Answering Service ("ECAS"): Volume of emergency calls for the period January-June 2011, 13 September 2011.

Figure 1 – Evolution of the number of calls handled by ECAS from 2007 (per quarter – Q4 2007/2008 starts in January 2008)



Source: TERA Consultants' analysis of BT's data

Table 1 - Volume of calls to the ECAS operator for the period January 2012 to June 2012

Period	2011	2012	Difference	% Difference
January	249,480	245,126	-4,354	-1.7%
February	240,324	222,636	-17,688	-7.4%
March	236,994	241,281	+4,287	+1.8%
April	232,753	231,510	-1,243	-0.5%
May	228,079	222,724	-5,355	-2.3%
June	218,909	221,589	+2,680	+1.2%
January to June Total	**1,406,539**	**1,384,866**	**-21,673**	**-1.5%**

Source: ComReg, Volume of emergency calls January 2012-June 2012, 20 September 2012

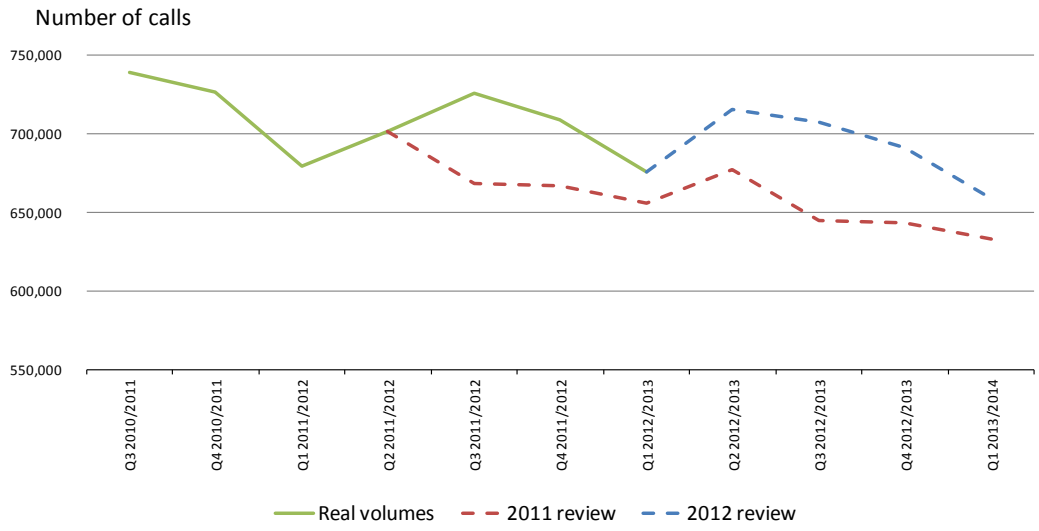
Last year's review took into account these characteristics and based its forecasts on the number of calls without the faulty line effect. The overall assumption was a conservative net annual growth for ECAS demand of -3.5%. This was derived from a total population growth of 1.5% per annum[3] and a -5% annual gross rate of demand for ECAS.

It is important to use appropriate forecasts so that BT would recover all incurred costs for ECAS provision while other operators pay a correct price reflecting the true cost of the service. A high-volume estimate of the number of calls generates a lower CHF. However, if the number of calls turns out to be lower, BT risks under-recovering its costs unless a significant increase in the CHF is

[3] Source: Central Statistics Office, 2008, "Regional Population Projections 2011-2026", http://www.cso.ie/en/media/csoie/releasespublications/documents/population/current/poppro.pdf

imposed over the remaining life of the contract. As the volumes of calls has a significant impact on the level of the CHF, a low-volume assumption is preferred to make sure that, in case volumes of calls were to decrease significantly in the future, no significant increase in the CHF would be necessary. On the contrary, if volumes of calls were to decrease at a lower than expected rate, then the calculated CHF would decrease in the future years, which is what is currently observed. As it turned out, a higher than estimated number of calls was made to ECAS during last year (see Figure 2). This is due mainly to the conservative estimate used in the last year's forecast.

Figure 2 – Comparison of volume forecasts and real volumes in recent quarters



Source: TERA Consultants' analysis of BT's data

In the present report, forecasts consider a stable and decreasing trend, and the recent figures of calls to ECAS. The estimate is based on a net annual growth of -2.5% for ECAS demand, based on a 1.5%[4] population growth rate and a conservative annual gross rate of demand for ECAS of -4%. The resulting trend is slightly higher than what was forecasted in the 2011 review, as highlighted in Figure 2 for recent quarters. This trend is considered a reasonable trend as it falls between the recent observed trend (-1.5%, see

Table 1) and the trend considered last year (-3.5%).

[4] Source: Central Statistics Office, "Regional Population Projections 2011-2026", 2008, available at http://www.cso.ie/releasespublications/documents/population/current/poppro.pdf

However, this also depends on remediation programmes undertaken by all operators. As the operators are consulted on their coming remediation programmes, several forecast scenarios are proposed. Five scenarios were considered where the decline rate in volumes of calls to ECAS, at 0%, -1.5%, -2.5%, -3.5% and -5%. The impact of the change in volume on the CHF will be analysed in section 5.

3 Operational costs[5]

This section details the costs incurred by BT excluding financial costs (see next section) and analyses them. ECAS operational costs include call centre staff costs (operator costs, see section 3.1), management costs and support costs from BT (BT pay, see section 3.2), non-pay costs (see section 3.3) and depreciation charges (see section 3.4). As can be seen from Figure 3 below, call centre operators and depreciation and set up costs account for more than ✂of total costs.

Figure 3 – Breakdown of BT ECAS operational costs (inc. depreciation) as provided by BT for Q4 2011/2012

✂

Source: TERA Consultants, based on BT data

The primary source of information for the costs incurred by BT for the provision of ECAS is the Cost analysis Q1 2012/2013 by BT for ComReg, and the Quarterly Management Accounts, Q1 2012/2013. BT also provided other information as requested by ComReg during the review.

3.1 Operator costs

A sub-contractor provides BT with call centre operators, which entails training and a lead operator with managerial responsibilities for all the operators. BT pays a fixed charge per hour for each hour requested from the sub-contractor. The hours include those incurred by the operators, by the lead operator and training hours. The sub-contractor is paid a ✂% mark-up on the hourly rate for the additional responsibilities that lead operators undertake. The sum of costs incurred on the operators, the training hours and the lead operators makes the total costs of the sub-contractor operators.

Operator costs represent approximately ✂of BT's ECAS costs (see Figure 3).

To assess whether the costs paid by BT to BT's operator sub-contractor for the supply of the call centre operator staff is reasonable, it is necessary to verify that the cost per hour on the one hand and the number of operator hours paid

[5] including Capital expenditure such as set-up costs and fixed assets.

by BT on the other hand are reasonable. This year's review consists of three main steps, one for the hourly rate paid by BT to its subcontractor, one for the workforce management and the other for the operational review. Details of the workforce management review are discussed in section 3.1.2. Details of the operational review and its findings are listed in the Annex[6].

3.1.1 Operator cost per hour

TERA has reviewed the components of the hourly rate paid by BT to its contractor. This hourly rate is made of the following elements:

- Basic rate (for wages)
- Bonus
- Employers Pay Related Social Insurance (PRSI)
- Churn
- Uplift for unavailable hours
- Resourcing
- Call centre coordinators
- Trainers
- Recruiters
- Agency and recruitment
- Overhead
- EBITDA margin.

During last year's review, TERA and ComReg carried out a thorough and vigorous benchmark and analysis on each cost item, which lead to a significant revision of hourly cost from €34.72 to €28.07, the equivalent of a 19% reduction. This new rate is applied currently. Some issues were raised with the sub-

[6] PSAP operational review was carried out by Orbita in order to complement the study on staffing levels and associated costs. The review reveals that ECAS is run effectively against the service targets and quality requirements and overall is approaching 'best practice'.

contractor regarding the cost of staff turnover (churn): a detailed analysis was carried out including requests of information from BT. The churn rate was proved to be quite important and TERA accepted the churn cost as provided as reasonable.

TERA Consultants is therefore of the view that an hourly rate of approximately €28.07 is reasonable.

For estimates of future costs, an annual wage inflation of 0.6%[7] was used and applied to the hourly rate. This is an increase from last year's wage inflation, at -0.3%[8], due to impact of the economic crisis when wages inflated at a negative rate during several years.

3.1.2 Workforce management training and number of operator hours

Besides the review of the full workforce management lifecycle being carried out by BT and the sub-contractor, Orbita independently developed a capacity planning model in order to determine whether the number of operator hours paid by BT to its sub-contractor is reasonable. Orbita has analysed the forecasting process (see 3.1.2.1), the capacity planning (see 3.1.2.2) and the scheduling (see 3.1.2.3) and has obtained the reasonable numbers of operator hours. The conclusions of the analysis carried out by Orbita are detailed hereafter.

NB: The Work Force Planning (WFP) responsibility is divided between BT and the sub-contractor[9].

3.1.2.1 Forecasting

Demand forecasting is based on predictions of call volumes and average handling times, and for ECAS it is undertaken by BT[10]. It is standard practice within the industry to perform long, medium and short-term forecasts:

[7] Source: Davy Research, Macro Forecasts, updated July 13th 2012, Inflation wage of 2013F.

[8] Source: Davy Research, Macro Forecasts, updated September 2011

[9] Forecasting (BT), Capacity plans (BT), Schedule production (sub-contractor), Schedule management (sub-contractor), Performance management (Shared), Intraday management (BT), Management Information & Reporting (BT)

- Long-term Demand Forecasts are produced for the calendar year at a monthly granularity for inbound call volumes. These are reviewed at on a monthly basis with updates and estimations based on actual call volumes for the preceding months. This provides an historic 'Growth Contraction Factor' that can then be applied to future months.
- Medium-term Demand Forecasts are produced approximately six weeks in advance for a calendar month. The period of the forecast will be four to five weeks (depending on the number of weeks that cover the calendar month). These forecasts are based on historical analysis of the corresponding period from the previous year and cover both call volumes and call handling times at an intra-day (15min interval) level. The intra-day volumes are used to produce a smoothed profile called the Time of Day factor (TOD), which is combined with the long-term monthly volume forecast to produce the anticipated call demand.
- Short term daily or intra-day re-forecasts are not formally undertaken, though operations management will review and confirm the scheduled operators either if the on-day service levels are not being met or if expected resource levels are not attained due to sickness or other absence.

The primary driver for forecasting is to base predictions on historical volumes for the corresponding period. However there is consideration of other influencing factors such as:

- Impending operational process updates / changes;
- Exceptional circumstances that may cause volume peaks such as extreme weather.

Forecast accuracy is being monitored, though not formally reported by BT. It is measured on a daily, weekly and monthly basis but does not include an intraday period analysis. The performance of the forecasts is close to industry standards for the measures being applied. The stability of the call volumes in the last year will be a contributing factor to this improved performance.

Table 2 – Forecast practise

Forecast	Average	Max / min	Best practise	Measured

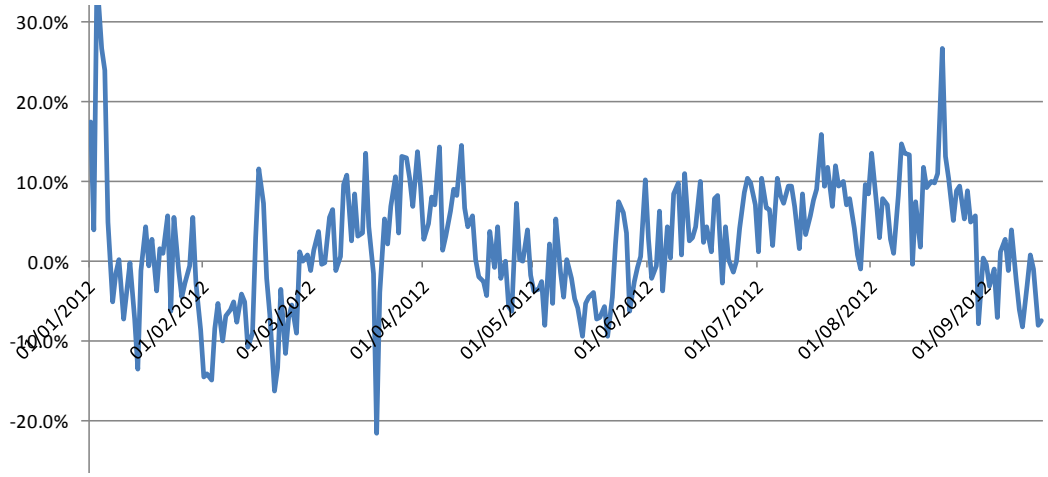
[10] BT's forecasts are produced using an Excel spreadsheet, which is suitable for an operation of this size with a single channel and single agent skill set.

	deviation + / -		average	
Monthly	5.1% / -4.2%	9% / -6%	5% / -5%	Yes
Weekly	6.1% / -3.6%	13% / -10%	5% / -5%	Yes
Daily	6.9% / -5.1%	36% / 22%	5% / -5%	Yes
Intraday	NA	NA	+/- 5% for 90% of periods	No

Source: Orbita

The following chart displays daily actual calls versus forecast from January 2012 to September 2012.

Figure 4 – Actual versus forecast daily volume



Source: Orbita's analysis

This demonstrates that in general forecasts are close to the actual volumes. With this improved accuracy, BT and the sub-contractor have been able to plan resourcing with more confidence.

3.1.2.2 Capacity plans

The responsibility for capacity planning is divided across BT and the sub-contractor and is done in line with the medium term forecasts. It is focused purely on the level of staffing. Considerations of technology or facilities availability were not observed and therefore these are not linked to the staffing

capacity planning process. The responsibility for each stage in the process is as follows:

- BT utilises a manual spreadsheet to undertake the capacity calculations. This is linked manually to the forecasting spreadsheet and employs industry standard formulae to calculate the level of call handling resource required by 15 minute intervals. The sub-contractor must ensure there are available staff at this level to ensure required service levels are met.
- The sub-contractor applies an agreed shrinkage factor (✂%) to the base hours required, that allows for the following off-phone activities:
    - Refresher training;
    - Coaching and feedback;
    - Meetings;
    - 1 to 1s;
    - Paid breaks.
- The resulting hours are chargeable to BT.
- Further shrinkage for sickness, annual leave, other absence, additional training, coaching and meetings are then implicitly built into the level of staffing passed to the scheduling process. These elements are accounted for in the calculation of the hourly rate charged for call taker time and are reported as equating to ✂that is to cover sickness, leave and other absence.

The underlying methodology used for capacity planning is unchanged from last year. However, some definitions and calculations differ from standard practice:

- Normally, service levels apply to calls offered and this is how capacity planning is done for ECAS. However, for reporting purposes, BT is required to achieve the 97.5% service target to the number of calls *answered*, effectively ignoring calls abandoned. So in reality, the resourcing calculation is based on a volume of calls above that required to meet service levels.
- During the base operator requirement calculation an additional ✂is added to the staffing figure where the requirement per 15 min period is above ✂call takers. This is stated to allow for 'not ready time' which covers off phone activities (described in more detail later). Whilst it is usual practise to allow for this time, it is normally done via an explicit percentage uplift which ties the level of shrinkage to staffing in a linear relationship. The method employed for the ECAS planning results in an

equivalent uplift per week of between ✂% and ✂% depending on the period in question.

- As all three sites are operational 24x7 there is a significant proportion of intraday periods where the minimum staffing requirement per site (two operators) results in a planned level over and above the number needed to maintain services levels.
- The application of the ✂% shrinkage allowance is at the end of the process. This means it is applied to all periods, even where there already may be an over resourcing as a consequence of the minimum staffing per site requirement (see above).

Within the last year the use of not ready codes on the Automatic Call Distributor (ACD) has been more formalised and reports are now available on their usage. Not ready codes are used by the operator to assign time spent on offline activities to categories defined by BT. The description of the codes and average percentage of logged in time for April to August 2012 are shown below.

Table 3 – Not ready code definitions and the associated average percentage of logged in time

	Not Ready	Wrap (NRW)	DSE (NRD)	Training (NRT)	Admin (NRA)	Lead Operator
Description	Miscellaneous	Post call work	Comfort breaks	Coaching, refresher training and 1 to 1s	Meetings with The sub-contractor Service Co-ordinator	Lead operator role
Average %	✂%	✂%	✂%	✂%	✂%	✂%

Source: Orbita from BT

The rationale for the total shrinkage levels applied separately by BT and the sub-contractor is shown in the following table.

Table 4 – Explanations of applied shrinkage levels[11]

Shrinkage type	Parameter	Level used	Rational / explanation
✂% applied to base hours	Paid breaks	✂%	Reduced from ✂% following 2011 review, measured by not ready code 'DSE (NRD)'
	Coaching, training and 1 to 1s	✂%	BT stated that ✂% accounts for other activities – training, coaching and lead operator. Not ready code 'Training (NRT)' averages ✂% and 'Lead Operator' ✂%
	Lead Operator		
✂uplift to sub-contractor hourly rate[12]	Annual leave and public holidays	✂	Equivalent to ✂ days per annum
	Sickness and absence	✂	✂is short term sick, ✂long term sick and ✂other absence
Other hourly rate uplifts	Unpaid breaks	-	1 hour of breaks is applied to full working hours (8.5 per day) which negates the impact
	Training, coaching, etc.	✂	Training and team meetings ✂coaching ✂personal ✂

Source: Orbita from BT

There is some contrast to the 2011 review when the ✂% (now ✂%) uplift to base hours was reported as being based on ✂% for paid breaks and ✂% for training, coaching and 1 to 1s. There also appears to be a duplication of the allowance for training and coaching as it appears in both the base hours and the call handling fee uplifts.

[11] The definitions are taken from a BT email communication and from 'BT Response to ComReg', 18 May 2011.

[12] During site visits and from the information requested, the definition of the ✂was given as ✂sickness and ✂annual leave. While this may not reflect the explanation provided to ComReg as part of its site visits and with 'BT Response to ComReg', 18 May 2011 document definitions shown in the table, they both result in the same total.

3.1.2.3 Scheduling

Scheduling review consists of schedule production and schedule management analyses.

As regards schedule production, key points and observations are:

- The scheduling function is run by a dedicated sub-contractor team.
- Although schedules are produced in ✂workforce management software, the available automation and optimisation is not being utilised. The Scheduler uses a less efficient manual process that is started from scratch each time. This could also result in an uneven allocation of shifts and days off – which was supported by comments made by operators during site visits.
- There are no formal rules to govern work patterns, e.g. consecutive days off. Operator feedback during site visits suggested this is sometimes an issue.
- The stated process provides for 6 weeks of schedules on a rolling basis, though evidence provided by staff on site suggested that they are not routinely being produced this far in advance.
- Staff are grouped into three categories: Days, Nights and Part-time. Shifts are rotated within these parameters. This simplifies the process, but does reduce the flexibility available to the Scheduler.
- There is an informal link to the training and recruitment function to inform requirements and activity.
- A rule of thumb is applied by the Scheduler to increase the base hours' requirement by at least two operators in any one period to cater for the shrinkage allowances (and potentially up to 6 more than requirement). This is a simplistic methodology and greater efficiency could be gained from understanding training and other off-phone requirements in more detail to enable more specific planning.
- Leave is tracked and managed via a spreadsheet. Requests are presented to the scheduler for approval. The decision is based on ability to maintain coverage.
- Weekly reviews take place between the scheduler and the Service Coordinators to discuss the week ahead in terms of staff coverage against the requirement at an intraday level and to understand the

holiday requests / allowances. This is in line with expected practise for an operation of this size and complexity.

- No specific analysis is done to feed into the recruitment process in terms of hours of coverage etc. Recruitment tends to be like for like replacements e.g. night shift, part-time, etc. This means it is likely that the optimum mix of staffing is not known and the current model is perpetuated.
- The over allocation of resources leads to low utilisation levels. An average of ✂% talk time as a proportion of logged in time, is observed for a recent 4 week period which is typical. This compares to the following industry averages:
    - Emergency control rooms 40%,
    - Public sector healthcare providers 55% to 65%,
    - Financial services 70% to 80%.

In summary, the function is well established and creates consistent rosters that are in line with the current requirements for efficiency and effectiveness. There are however opportunities to streamline and formalise the build process and there are also steps that could be taken to improve the efficiency of resource deployment. These would enable more efficient use of operators and make the reduction of capacity uplifts more workable.

Schedule management, is also the responsibility of the sub-contractor and is performed by the same scheduling function, with input from the Service Coordinators:

- Weekly reviews take place between the Scheduler and the Service Coordinators to discuss the week ahead in terms of staff coverage against the requirement at an intraday level and to understand the holiday requests / allowances. This is in line with expected practise for an operation of this size and complexity.
- The schedule is accessed at each site by a terminal that links to the eWFM system. Operators do not have access to the system; shifts and breaks are communicated via printouts to staff on a daily basis. The lack of direct access to the eWFM system means that the management of schedules is a far more manual process, but the reduced cost of licences should offset this activity. The relatively small size of the operation means that it is not too onerous to release and manage the schedules in this way.
- Late requests for absence, e.g. for holidays, training, etc. are considered, with a general rule in place that a reduction of one operator per shift, per

centre, per day can be accommodated. Any requests that may exceed this rule will be the responsibility of the local Service Co-ordinator to accept or decline.

- As agents are not directly logged into the workforce planning system, schedule adherence is manually recorded but is limited to significant events such as coaching and Lead Operator duties.
- Adherence to shift and break start and end times is not measured and therefore the true level of schedule adherence is not fully understood. It should be possible to link the ACD into the workforce planning system and therefore upload data on operator activity which would allow automated adherence reporting down to timing of breaks, etc.

Currently the activity undertaken to manage schedules is in line with requirements, though the importance of more rigorous schedule management and adherence would increase if the level of latent operator capacity is reduced.

3.1.2.4 Implications and impact

The following table shows the current planning parameters against a new set of assumptions which include identified improvement opportunities, taking into account the actual shrinkage levels observed and best practise planning processes.

Table 5 – Opportunities identified in the planning process

Category	Parameter	Current level	Alternative assumptions	Notes
Base hours shrinkage	Paid hours	✂%	✂%	No change, DSE Not Ready average is ✂%.
	Coaching, training and 1 to 1s	✂%	✂%	No change – the 'Training NRT' not ready average is ✂% and 'Lead Operator' average is ✂%.
	Lead operator			
	Miscellaneous not ready time	✂%	✂%	Un-coded not ready time averages ✂%. Majority of this time is shown to be a duplication of shrinkage already allowed for training and development and has therefore been disallowed.
	Total	**✂%**	**✂%**	
Model Methodology	Base agent calculation	Calls offered	Calls offered	No change, current parameter is reasonable.
	Application of shrinkage	Post the rounding and allowance for minimum staffing at all sites	Post the rounding and allowance for minimum staffing at all sites.	No change, but there is an opportunity for improvement to the process. The increase for minimum staffing will preclude the need for shrinkage increases at some points in the day. (See explanation at the top of page 27)

Uplift to the hourly operator cost	Annual leave and public holidays	✂%	✂%	No change to current assumptions
	Sickness and absence	✂%	✂%	No change to current assumptions.
	Training, coaching, etc.	✂%	✂%	No change. (See explanation at the top of page 27)

Source: Orbita

In order to demonstrate the impact of the alternative assumptions, the following table shows the effect of implementing them against the hourly resource requirement (based on an average week during for Q1 2012/13 which equates to 50,868 calls).

Table 6 – Impact of removing additional level of coaching and sickness from the base hour's shrinkage on hourly operator cost

Category	Parameter	Current assumption	Alternate assumptions
Model methodology	Call volumes used	Calls offered	Calls offered
	Application of shrinkage	Post min staffing	Post min staffing
Base hours shrinkage	Shrinkage	✂%	✂%
	Average weekly hours	✂	✂
	Average weekly charge at €28.07	€✂	€✂

Source: Orbita

Considering the fact that Orbita identified similar opportunities in respect of training last year for the calculation of the number of hours required[13], TERA Consultants has therefore decided to apply Orbita's calculated number of hours from the 1st of July 2012. This has been incorporated in the calculation of the proposed CHF. This leaves BT 3 months to implement Orbita's recommendations.

In addition to the immediate changes to the level of shrinkage being applied to the number of resource hours required, it is also recommended that two other areas of change are examined further.

- Application of shrinkage – this will require an update to the forecasting model used. BT has agreed to undertake a review with a view to change.

[13] See TERA Consultants and Orbita's report Recommendations for a reasonable Call Handling Fee (CHF) associated with the Emergency Call Answering Services (ECAS) - Final report, 2 November 2011.

- Training and coaching uplift built into the hourly charge – the 3rd party supplier has agreed to review this in light of not ready data that has recently become available.

3.1.3 Costs of Training, Lead Operator and others

Besides the basic costs of call operators, the sub-contractor also charges BT the cost of training the operators and the cost associated with the role of lead operators:

- The cost of training is the number of hours of training required times the hourly cost. The hourly cost of training is equal to the hourly cost of one operator.

- The cost of supervision is represented by a ✂% mark-up of the hourly cost of an operator entitled “Lead operator”.

For future estimates, TERA has calculated the percentage of hours of training (✂%) and supervising (✂%) needed based on past figures submitted by BT. This percentage is then multiplied by the number of operator hours forecasted as explained in section 3.1.2 to get the number of hours needed for future training and supervision. As the number of operator hours have been reviewed and forecasted vigorously, TERA Consultants considers that the resulting cost forecasts for training and supervision are reasonable.

Exceptionally, for internal human resource reason, BT needed the service of a First Line Manager (FLM) between November 2011 and August 2012. The sub-contractor provided the FLM as needed in order to ensure a smooth ECAS operation. TERA Consultants has reviewed the number of hours and the costs associated with this FLM and considered them to be reasonable.

3.2 BT pay costs

BT pay costs result from BT’s responsibility for the overall service performance. There is a management team present at each Public Safety Answering Points (PSAP) to coordinate the call centre operators and to ensure a smooth functioning of the day-to-day ECAS operations.

The pay costs for the provision of ECAS fall within three categories:

- BT Direct Labour Cost: this corresponds to the costs of the core managerial and technical team responsible for ECAS, including for example First Line Managers and 24*7 service engineers;
- BT Direct Support costs: this corresponds to the costs of the legal, regulatory and finance teams;
- BT Other support function costs.

The breakdown of different BT pay costs in Q4 2011/2012 is given below. The direct labour costs accounts for the majority of the total BT pay costs, with more than ✂% of total BT Pay costs. Furthermore, as shown in Figure 3, BT pay costs represent ✂% of BT's ECAS costs.

Figure 5 - Breakdowns of BT pay costs in Q4 2011/2012

✂

Source: TERA Consultants' analysis of BT's data

TERA Consultants has reviewed all items of each type of cost to verify whether these costs were reasonable. The assessment is done by analysing information provided by BT, through communications with BT, as well as available benchmarks.

Having reviewed these elements, TERA Consultants notes the following elements:

- BT has indeed phased out several positions following decisions to adopt organisational changes as communicated to ComReg during the review last year. Most of these positions are no longer in place or incurred at significantly lower costs compared to the previous year. These include (period references are to BT's financial year ended 31 March):
    - Four First Line mangers (FLMs): there were nine FLMs up to Q1 2011/2012, in Q4 2011/2012, there were only five[14];

[14] The optimal number of FLMs is six. For internal human resource reason, between November 2011 and August 2012, the sixth FLM was not available for ECAS. During this time, BT asked the sub-contractor who provided call centre operators to provide a FLM as needed in order to

- Emergency Services Liaison manager: this position was phased out completely in Q3 2011/2012;
- Policy & Performance manager: phased out in Q3 2011/2012;
- Business manager: phased out in Q3 2011/2012;
- Call centre manager: phased out in Q1 2011/2012;
- ECAS procedure writer: phased out in Q2 2011/2012;
- Forecasting and scheduling: phased out in Q2 2011/2012.

Some of the positions were phased out at a slightly later date than previously communicated by BT in its letter of 26 September, 2011. For example, the role of the Emergency Services Liaison manager was expected to cease in September 2011. However, the costs incurred after these dates were not very significant, neither do they last for more than three months after the announced date. TERA Consultants considers that these costs are reasonable given the important gain in efficiency BT has made.

TERA Consultants notes that since last year's review, there have been new positions within the ECAS team, such as the Head of ECAS operations, starting from Q2 2011/2012, and other positions related to IT. The creation of the position of Head of ECAS operations, which in Q1 2012/2013 accounts for ✂% of total direct labour cost, was notified to ComReg by BT in its letter of 6 October 2011. The Head of ECAS operations replaced the Policy & Performance manager and amalgamated some other roles. As regards the new positions related to IT, which account for ✂% of total direct labour cost in Q1 2012/2013, TERA Consultants has assessed that they are necessary for the ECAS operations and considers the costs associated with these positions reasonable.

- Other support functions include logistic functions, network management centre, field transmission team (which were established post the set-up phase), time recording management function, management function, conference call, project delivery management function dedicated to ensure the successful delivery of the setup of the ECAS. These costs were deemed necessary during the first year of ECAS operations since

ensure a smooth ECAS operation. The costs associated with this sub-contracted FLM were reviewed in section 3.1.3.

there was a steep learning curve to follow. Last year's review accepted the high costs for these functions at the beginning of ECAS operations, which were based on a ✂% of the direct labour costs, but disallowed part of them during the next phase of the service, capping them at ✂% of direct labour costs. For this year's review, TERA Consultants asked BT to provide calculations and justifications as to why other support functions should amount to more than ✂%. On the basis of BT's detailed response on all cost elements within this category, it was understood that important support is devoted to any incident or changes within ECAS operations. This is crucial towards a smooth provision of ECAS. TERA Consultants has decided therefore to allow the ✂% limit for future estimates of these costs (around ✂per quarter), in line with previous estimates provided by BT.

For estimates of future wages, an annual wage inflation of 0.6%[15] was used. This is an increase from last year's wage inflation, at -0.3%[16], due to impact of the economic crisis when wages inflated at a negative rate during several years.

TERA Consultants has taken into account these elements to make sure that the CHF only recovers reasonable costs incurred by BT.

These adjustments lead to a decrease by around €✂per quarter in the future compared to last year's forecasts.

3.3 BT non pay costs

BT non pay costs consist mainly of the following elements:

- Accommodation and computing costs;
- Third Party Costs (HR, payroll);
- Other staff costs;
- Premises and related costs;
- Maintenance Costs (for fixed assets);
- Administration costs;

[15] Source: Davy Research, Macro Forecasts, updated July 13th 2012, Inflation wage of 2013F.

[16] Source: Davy Research, Macro Forecasts, updated September 2011

- Network Services (leased lines, data centre, termination charges).

According to Figure 6, among these elements, network services, premises and related costs, and maintenance costs represent nearly ✂% of BT non pay costs. BT non pay costs represent only ✂% of BT's ECAS costs (see Figure 3).

Figure 6 - Breakdown of BT non pay costs in Q4 2011/2012

✂

Source: TERA Consultants' analysis of BT's data

This year's review has found that the majority of BT non pay costs have been reasonable, except only for once instance.

Within premises and related costs, BT subcontracts facilities management to a third party. Last year, a large part of costs, about €10k out of € ✂k, charged by this sub-contractor was found to be unreasonable notably due to roles duplications and therefore was disallowed. During this year's review, TERA Consultants has asked BT to provide more calculations and justifications for the facilities management charges paid to the sub-contractor. BT has since then conducted a benchmark with results from providers of similar facilities management activities. It was found that the average cost of the benchmark is ✂% less than the price currently charged by the sub-contractor. As a result, TERA Consultants has decided to disallow the same amount as last year's disallowance, i.e. €10k, from the facilities management charge of every quarter between Q1 2011/2012 and Q2 2012/2013 inclusive. This results in an allowed facilities management charge that is on average ✂% less than what BT paid to the sub-contractor. The forecasts of facilities management costs are based on this allowed charge.

Accommodation costs account for a certain percentage of Direct Labour Costs. This figure remains quite stable over past quarters. Accordingly, for the forecasts of Accommodation costs, an average percentage of Direct Labour Costs between Q2 2010/11 and Q1 2012/13 was used, at ✂%.

Within Network Services costs, the majority of charges including for circuit, data centre hosting, interconnect and mast rentals are stable over long periods. This is due to either long term contract (for example rental contract) with the service providers or regulated services (for example interconnection services). The

forecasts take this into account and give the same charge level until the end of the ECAS contract.

Where appropriate, an annual wage inflation of 0.6%[17] or an annual inflation of 2%[18] was applied for estimates of future costs. For elements such as electricity charges within Premises and related costs, a rate of electricity price annual increase was applied, at 0.27%[19] respectively.

Overall, the only adjustment needed for BT non pay costs was the costs of facilities management within Premises and related category. Other elements submitted by BT were found to be reasonable.

3.4 Depreciation

3.4.1 Set-up costs

The review of set-up costs was completed in the 2010 review by ComReg[20].

Set-up costs are incurred as BT made expenses to set up the new work centres for ECAS provision. The most important elements of set-up costs include:

- Third party call centre costs (the sub-contractor);
- BT Direct Labour costs: Base;
- BT Labour cost: Direct Support;
- BT Labour cost: Other Support Functions;
- BT Labour cost: Accommodation;
- BT Labour cost: Third party costs;
- Premises and related costs;

[17] See section 3.2 for discussion of wage inflation.

[18] Source: Central Statistics Office, latest figure http://www.cso.ie/indicators/Maintable.aspx.

[19] Source: Eurostat, electricity prices for industrial consumers, between 2011 and 2012, http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&plugin=1&language=en&pcode=ten00114

[20] HBC, 2010, Final Report to TERA Consultants re ECAS fee review.

- Maintenance Costs;
- Network Services;
- Cost of Capital.

In general, set-up costs are only incurred at the beginning of ECAS operation.

The breakdowns of set-up costs are given below. It can be observed that all types of BT labour costs account for the majority ✂of set-up costs, among which Base Labour costs account for more than ✂of the total set-up costs.

Figure 7 - Breakdowns of set-up costs of up to Q4 2010/2011

✂

Source: ECAS QMA June 2012

TERA Consultants notes that the change in this year's set-up costs compared to last year's is due to several movements in set-up costs. These movements, in Q1 and Q4 2011/2012, were made in order to remove some charges requested by ComReg following last year's review, such as the €232k for Navan (see next paragraph) and ✂of lease interest.

During the 2010 review, ComReg disallowed €232k from the set-up costs as these were deemed to be unreasonable[21]. The 2011 review found that these costs were not excluded from BT's report of set-up costs and thus excluded this amount from the depreciation calculations. This year's review verified this issue and had the confirmation from BT that this amount was indeed excluded from BT's set-up costs in its data submission to ComReg[22].

3.4.2 Fixed assets

The review of fixed assets was completed in 2010 by ComReg[23].

Fixed assets are purchased by BT to enable its operational activities for ECAS provision. Fixed assets include mainly:

[21] HBC, 2010, Final Report to TERA Consultants re ECAS fee review.

[22] BT, ECAS QMA Q1 (April-June) 2012-13.

[23] HBC, 2010, Final Report to TERA Consultants re ECAS fee review.

- Hardware,
- Fit out Ballyshannon & Navan,
- Fit out Eastpoint,
- WAN,
- ECAS call handling platform,
- Software & Testing

As can be seen from the figure below, the major costs are:

- The fit out of Ballyshannon and Navan, the two buildings dedicated to ECAS provision which required most of the upgrading, which represents ✂of the total fixed-asset costs as of April 2012.
- The ECAS call handling platform, which represents ✂of total fixed-asset costs as of April 2012.

Figure 8 – Breakdowns of fixed asset costs as of 1 April 2012

✂

Source: ECAS QMA June 2012

The majority of these costs were reviewed in detail as part of the 2009/10 reasonable cost review.

It was noted that the costs of fixed assets has increased by ✂% from last year BT's report[24]. BT recorded a total of ✂as fixed asset costs as of April 2011, whereas this year, the same figure stands at ✂[25] excluding set up costs for SMS service development[26]. The increase mainly comes from additional costs

[24] ECAS Quarterly Management Accounts 30 June 2011 - Fixed Assets (Table 5)

[25] ECAS Quarterly Management Accounts 30 June 2012 - Fixed Assets (Table 5)

[26] In order to allow speech and hearing-impaired members of the public to make emergency calls to ECAS by texting via their mobile phones, BT developed and implemented the SMS (Short Messaging Service) capability for ECAS during the year ended 31 March 2012

of Hardware and ECAS call-handling platform that were incurred since the last review.

Set-up costs and expenses for fixed assets are categorised as capital expenditure, so they should be depreciated over the contract life as stipulated in the Concession Agreement. The contract life has been set at five years by the Department of Communications. These elements are taken into account to derive the annual costs.

3.5 Summary of operational costs

The total level of costs per quarter which BT should be allowed to recover (excluding under and over recovery) through the CHF is just under ✂per quarter, i.e. less than ✂per annum. This is more than ✂lower per quarter than what was planned in last year's report. This difference can be explained largely by the high reduction in BT pay costs, which is a result of BT's rationalisation programme following last year's review but also by the review of the number of hours that should be requested from the call centre sub-contractor.

4 Financial costs

In addition to the operational costs incurred by BT and reviewed in the previous section, BT incurs financial costs for the provision of ECAS. These financial costs are:

- **The cost of capital.** This is the guaranteed rate of return which level is determined in Schedule 22 part 4 of the Concession Agreement. It is equal to 6.63% and should be applied every year to the Gross Book Value of fixed assets and set up costs related to ECAS[27] as detailed in previous sections.

- **The cost of the Sinking fund**. The Sinking Fund is designed to accumulate, over the term of the ECAS contract, sufficient funds to cover the loss to BT if revenues from the CHF are below reasonable costs incurred by BT (including cost of capital). The cost of this fund is €250,000 per annum for BT.

- **The under recovery from first quarters of ECAS operations and the over recovery since last year's review**. At the beginning of the Concession Agreement, the CHF was lower than it is today. It was equal to €2.23 per call up to February 2011. As the CHF was set too low because of the important decline in call volumes, BT incurred losses in the initial quarters. These losses were taken into account in the last 2 years' CHF calculations to make sure that BT does not under recover its costs. On the other hand, since last year's review, there have been more calls to ECAS than expected and thus more revenues than expected: the CHF will as a result fall in this year's decision in order to make sure BT does not over recover its costs. The proposed CHF is at €2.96 per call.

- **The interest related to the under recovery**. The loss incurred by BT in early quarters obliged BT to incur financial costs to fund this loss. The agreed interest rate used to assess such costs is ✂%.

[27] This is different from traditional approaches to calculate cost of capital where cost of capital is generally calculated as a percentage of the Net Book Value. This has been agreed in the Concession Agreement.

Figure 9 – BT's ECAS profits and losses over the contract duration (5 years) with the proposed CHF at €2.96 per call starting from 12 February 2013, considering volume forecasts and cost forecasts as described in previous sections

✂

Source: TERA Consultants

5 Recommended CHF and sensitivity analyses

Once the operational costs, cost of capital and cost of the Sinking Fund and BT's ECAS revenues are calculated for each quarter, it is then possible to calculate the loss or gain for each quarter. This enables to assess whether BT has under-recovered or over-recovered its costs in past quarters. In order to make sure that BT is exactly recovering its reasonable costs incurred for the provision of ECAS over the contract period, the discounted sum of under and over recoveries of each quarter must be equal to 0 at the end of the contract period, based on a previously agreed discount rate.

Such a calculation is therefore carried out to set the CHF that enables BT to recover its costs over the full contract period (including interests and past under recoveries). Using this approach, TERA Consultants proposes a CHF of € 2.96 per call to be applied from February 2013 until February 2014 (which rate would apply to the end of the current contract if actual call volumes and costs do not differ materially from forecasts).

It is important to note that this level of CHF is the one that enables ECAS to recover its costs over the full contract period and is stable. Each year, depending on reasonable costs effectively incurred by BT compared to the ones forecasted here as well as on effective volume of calls, the CHF will need to be revised.

Also, it is important to note that TERA Consultants has used conservative assumptions, in particular regarding the number of calls or on the number of hours. Conservative assumptions have been considered in order to make sure that, in case volumes of calls were to decrease significantly or reasonable costs were to increase in the future, no significant increase in the CHF should be necessary. On the contrary, if volumes of calls were to increase or reasonable costs were to decrease, then the calculated CHF would need to decrease in the future years.

For information, some key assumptions have been used in the previous sections (such as assumptions for the calculation of the number of operator hours, hourly rate for operators, number of calls, etc.).

One of the main reasons for the change in the CHF is the fact that real volumes observed over the last year are higher than what was expected which enabled BT to recover more from the CHF than what was planned. It is therefore necessary to lower the CHF to compensate this over recovery.

Furthermore, the other reason for the change in CHF is the reduction in various costs that BT is allowed to recover. The overview of these changes is given below in Figure 10. It can be seen that the most important change is the reduction in BT pay, which amounts to nearly ✂over the contract period. As explained in section 3.2, this is thanks to the rationalisation programme carried out by BT following last year's review.

Figure 10 – Overview of change from last year's review[28]

✂

Source: TERA Consultants

NB: this graph shows how costs have changed but does not show the impact of the higher volumes than the one that were forecasted over last year.

As regards the future development of volumes of calls to ECAS, five scenarios were considered where the decline rate in volumes of calls to ECAS, at 0%, -1.5%, -2.5%, -3.5% and -5%. The impact of the change in volume on the CHF is shown in Figure 11, where changes in volumes and the resulting CHFs are compared to the case of no change in call volumes for the rest of the contract.

It can be seen that the higher the rate of decline in volumes of call, the higher the increase in CHF: at -1.5% of volume growth, the CHF will need to be increased by 3% compared to the CHF if volume growth is 0%; at -5% of volume growth, the CHF will need to gain another 11%.

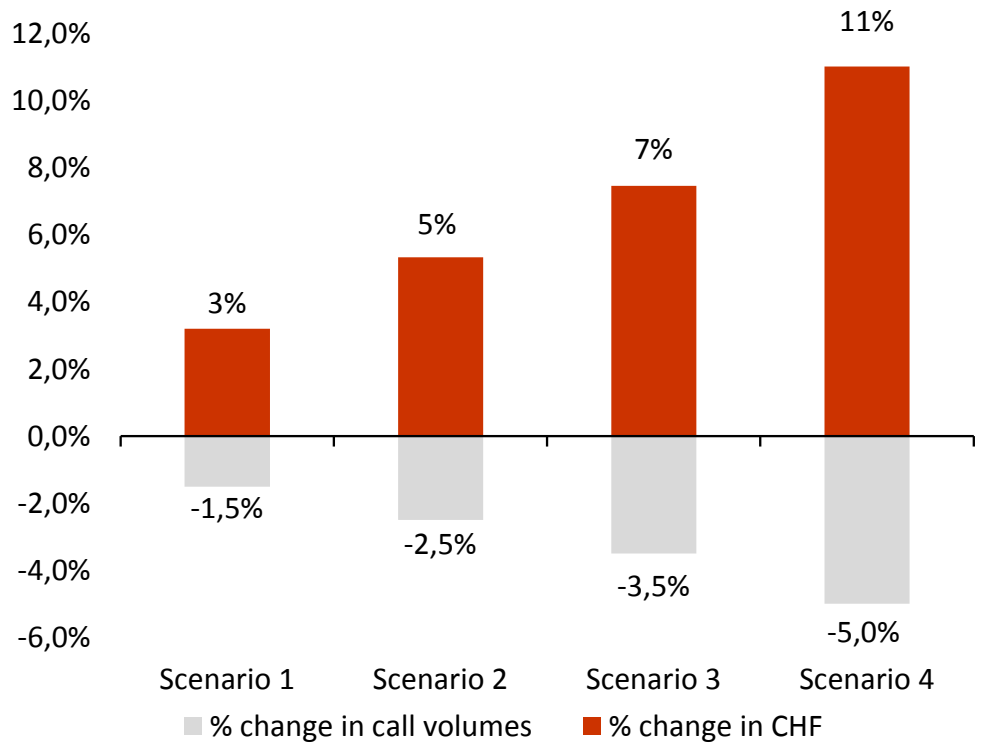
It was observed that the growth rate in volumes of calls to ECAS between the first six months of 2012 and the first six months of 2011 was slowed down at -1.5% (see

Table 1). TERA Consultants has therefore decided that the -2.5% rate would be used to calculate the proposed CHF. This figure might seem low compared to -1.5%, but the resulting CHF (€2.96) is already significantly reduced compared to last year's CHF (€3.35). Besides, the -2.5% assumption contributes an

[28] The increase in depreciation costs are due to a slight increase in CAPEX fixed assets and movements of transfers between in-live and CAPEX set up costs.

important change to the resulting CHF compared to the -3.5% assumption in last year's review.

Figure 11 – Cost volume relationship



Source: TERA Consultants

NB: this graph shows how CHF changes with different assumptions of the growth rate of call volume. The base assumption is a 0% growth rate of call volume at which the CHF is calculated to be €2.81.

6 Annex - PSAP operational review and findings

6.1 Introduction

A short operational review was carried out by Orbita in order to complement the study on staffing levels and associated costs. Information was collected during visits to the contact centres at Navan and Ballyshannon on 3 and 4 September 2012 respectively.

In addition, on 4 September 2012, ComReg and Orbita visited BT's Service Management Centre in Belfast.

ECAS remains predominantly a call handling service. However, a number of initiatives are underway to investigate and introduce alternative media / channels, e.g. text messaging services to meet some diversity requirements associated with ECAS. Therefore, the terminology of 'contact centres' used in this part of the report includes telephony and other media.

6.2 Approach

Orbita consultants sat alongside five operators separately to listen to calls and gain their perspectives on the operation. Orbita also interviewed two First Line Managers (FLMs) from Navan and one at Ballyshannon; and the resource manager based at Navan demonstrated the process used for, scheduling and shift management.

Observations, interview structure and questions were taken from Orbita's comprehensive operational benchmarking service which compares findings to best practice and it was possible to examine some of the key aspects of operational performance.

6.3 Organisational structure

The ECAS operation is delivered by three contact centres at Eastpoint, Navan and Ballyshannon. Approximately 75 staff (full-time and part-time) constitute the contact handlers (operators) across these sites.

The operators are employed by the sub-contractor who is required to provide the necessary contact handling capacity as identified by BT for each period of the day. The sub-contractor manages its operator resource by providing a Service Coordinator at each site.

BT is responsible for service performance and employs two FLMs at each site for this purpose. The Resource Manager (the sub-contractor) and two administrators (BT) are based in Navan. FLM rotas are organised so as to provide coordinated FLM cover within and across the three contact centres.

Roles and responsibilities are split as follows:

- The sub-contractor's Service Coordinators manage core human resource aspects: recruitment, training for call handling, exit interviews, holiday bookings, absence, shift issues;
- BT's FLMs look after operational performance management: training, coaching, quality, contact handling service levels, adherence, team meetings, one-2-ones;
- Suitable operators become Lead Operators who, periodically and when required, take on key aspects of the FLM role when the on duty FLM has to attend to other work commitments.

6.4 Observations and findings

By reference to Orbita's own best practice guidelines and where possible, the findings have been graded as follows: exhibits / is consistent with 'best practice', indicates 'good practice', is just 'adequate practice', falls short and is 'poor practice'.

6.4.1 Team management

The ratio of ✂ FLM to ✂ operators is appropriate in the ECAS environment and consistent with 'best practice'.

- FLMs have clearly defined roles and responsibilities, and those interviewed demonstrated a good understanding of them. They described their day-to-day activities and interactions with their teams in a way that indicates 'good practice' in so far as their role allows.
- Observations and findings from this year's visit, plus interviews with Service Coordinators suggest 'good practice' in so far as their role allows.
- As FLMs share individual and team management with Service Coordinators, their role is not complete when compared with contact

centre 'best practice'. Also, the boundary can be blurred in certain circumstances and has the potential for exploitation by miscreant operators. None of this was observed, but the possibilities were discussed during interviews and previous occurrences were mentioned of using one management decision to change another in favour of an operator's preference.

- It was perceived that the FLMs and Service Coordinators do work closely together to aim for a seamless management regime.

6.4.2 Lead Operators

- Most if not all operators with sufficient tenure do become Lead Operators. FLMs assign the Lead Operator role carefully in order to share the attendant salary uplift among those who are eligible.

6.4.3 Training, coaching and feedback

- The sub-contractor delivers induction courses and training on fundamental call handling. BT is responsible for ECAS training for new recruits and on-going refresher training.
- FLMs monitor at least 10 calls per week per team member, and are required to provide weekly feedback. The feedback may only take a few minutes when the operator's service and quality requirements are met.
- FLMs also provide quarterly feedback to each of their team members. Quarterly feedback sessions last approximately 30 min.
- Training, coaching and feedback sessions are not scheduled because flexibility can be compromised. Instead, these sessions are done when there is surplus capacity; and FLMs liaise to ensure all are aware when operators are taken off the phone for these purposes.
- The time allocated to training as an initial duration and subsequently through shrinkage needs checking against what is fit for purpose and what actually happens.

6.4.4 Resource planning

- In the 2011 review, Orbita commented on the perceived arbitrary allocation of additional resource during the workforce planning process – acknowledging the creditable motives but recommending the adoption of a more scientific approach that could be definitively justified. However, there appears to have been little or no change, and routine practice is to ensure a surplus of between three and more than six operators with respect to the BT requirement.

- In other, non-emergency, customer service environments, this would be 'poor practice' because of the additional costs and the impact on reducing operator workload and employee satisfaction. However, given the critical nature of ECAS, the current approach was categorised as 'adequate' to 'good practice'.
- It is the approach to capacity planning that gets this grading; not the intentions to ensure adequate capacity in all circumstances.
- One incident that particularly stretched ECAS was the prolonged, torrential rainfall and extensive flooding that occurred in October 2011. At this time, FLMs, Service Coordinators and those 'on-call' were needed to cope with the demand and much was learnt from the experience.

6.4.5 Historic Management Information (MI)

- FLMs have weekly historic MI. Information may be transferred manually into spreadsheets for individual use. The periodicity and manual involvement is not consistent with 'best practice', and our grading for an MI set-up of this type would be 'adequate' to 'good practice'. However, day-to-day operational management, resource levels and team interactions appear to be ensuring adherence to service targets and quality requirements.

6.4.6 Staff turnover

- Operator attrition was discussed at Navan and Ballyshannon. The impression was one of a very stable organisation. At the time, the BT requirement was 55 FTE and 55.7 FTE were employed. Against this requirement, the sub-contractor would want more than 59 FTE and was recruiting six more operators.
- From information supplied by BT and the sub-contractor, during 2012, monthly attrition was below ✂% in February, March, May, June and July, ✂% in January and August and was ✂% in April. Year to date attrition is just under ✂%.
- Staff turnover at Ballyshannon is currently running at near ✂%; the last person to leave went in December 2011.
- Extrapolating year to date attrition gives an annual rate of approximately ✂%.

6.4.7 Managed Services Operational Centre

On 4 September 2012, ComReg and Orbita visited BT's Service Management Centre in Belfast; and BT kindly provided a guided tour of the facilities with a demonstration of the process, automation and management for:

- Monitoring the ECAS network and infrastructure
- Handling fault
- Monitoring 'time to fix' within service target requirements
- Communicating progress / solutions / escalation
- Maintaining availability and improving resilience

BT's Service Management Centre is set-up and operated to the required standards, including ITIL, and has the necessary formal accreditations. Some designated staff are assigned either full-time or part-time to ECAS; and others are involved on an 'as required' basis. Only the time spent on ECAS is recorded, collated and accounted for charging purposes.

BT demonstrated a professional, structured approach to the operation and management of the Centre. Whereas there is no reason to doubt that BT's service management is 'good value' it is not clear how BT ensures that time spent on ECAS is validated against 'good practice' and / or for efficiency and effectiveness purposes.

6.4.8 Conclusions

On the basis of visits to Navan and Ballyshannon and on information supplied during interviews and by BT and the sub-contractor, it is concluded that:

- ECAS is run effectively against the service targets and quality requirements and overall is approaching 'best practice';
- FLMs and Service Coordinators are good practitioners, but the joint roles in operational aspects of team management is not 'best practice' from a purist contact centre perspective;
- Workforce planning and resource management would benefit from a rationalised, structured approach that incorporates contingency in a scientific way;
- Operator satisfaction is affected by periods of inactivity when contact centre capacity far exceeds actual demand. This is attenuated by the diligence and attentiveness of the workforce;
- Operational management would be enhanced by more frequent historic MI presented in the required format in order to remove the need for manual manipulation;
- Recent, comparatively lower staff turnover rates, equating to an annual rate of ✂%, are approaching 'best practice' – being indicative of a well-run operation with a contented workforce.

- There has been demonstrable commitment to process improvement in the last 12 months. An example of which being the review and improvement of the silent call response script which has aided an overall call handling time reduction.