Analytical Assistance on the Implementation of Ofcom's Proposals for Switching Fixed Voice and Broadband on the Openreach Copper Network

A report for Ofcom

14th June 2013

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Document Controls

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Contents

1. Introduction

Report Purpose

1.1 The purpose of this paper is to consider some of the practical developmental and implementation issues that sit at the heart of a number of the options proposed within Ofcom's 2012 Consultation as part of the Strategic Review of switching (the Consultation Document). This paper is an independent analysis of the technical, systems and programme management challenges related to the implementation of the key elements of a number of harmonised and enhanced switching processes.

Scope

1.2 The purpose of this document is to consider in detail the practicality and overall feasibility of implementing the following options:

1. Enhanced NoT;
2. GPL TxC;
3. LPL TxC; and
4. Other options, as set out in the Use Cases developed by CSMG.

1.3 It also includes a high level review of some of the implementation issues associated with the remaining harmonised and unharmonised options.

Exclusions

1.4 This paper does not amend or replace the process work already undertaken by CSMG and Cartesian. The scope of the paper covers proposed changes to the switching process for fixed line services (calls and broadband) on the Openreach copper network. Where appropriate, we consider future service lines that might be added to a governance regime or use the Hub and Database (H&D). We do not consider the ordering processes in this paper where no change is envisaged.

1.5 This paper is not an Implementation Plan, nor does it set out an exhaustive list of implementation issues. It is a general scoping paper that answers a set of questions Ofcom asked us to consider. Ofcom's questions are set out in Annex 1.

1.6 We have included CSMG process diagrams (simplified for our purposes) where it would be useful for our discussion. The definitive versions are contained in the CSMG documents and here are included for reference purposes only.

Terminology

1.7 A full glossary of terms can be found in Appendix B.

Our Approach

1.8 Our approach mirrors the requirements set out in the Invitation to Tender and subsequently in the list of questions provided by Ofcom. We have held three meetings with Ofcom since award of the work and the paper, where relevant, reflects those conversations. This paper has been amended following feedback on the initial draft.

2. Executive Summary

2.1 Ofcom's 2012 Switching consultation presented two broad options for harmonising the future of fixed telephony and broadband switching[1]; the major variance being whether or not the old or new (losing or gaining) provider led the customer through the switching process.

2.2 Gemserv has been asked by Ofcom to consider the implementation challenges and outline some considerations relating to a number of options that have been consulted on in 2012. There will be numerous challenges, many consistent across all options and some unique to individual options. In Section 4, we address general implementation considerations that are common to all options. In Sections 5-8 we go into greater detail for strategic switching changes, considering the specific implementation challenges for the three main options. Each of the models offers advantages and disadvantages in terms of implementation. For each option, we propose a feasible roadmap that sets out the primary tasks and resources that the project will require. We consider the detail of what workgroups would need to address the varying technical and stakeholder challenges. We put forward an indication of how optimal implementation could be driven forward and recognise some options will be more time consuming and complex than others.

2.3 Based on the work in this document, and a number of assumptions that sit beneath it, we estimate the following implementation timescales for each proposal:

1. Enhanced NoT would take no more than four Quarters (where a Quarter of a year was measured from a project start date), using a lower degree of resource for implementation compared to the other two options;
2. GPL TxC would take six-seven Quarters, and the depth and breadth work needed during that process would represent the heaviest burden on the market and providers;
3. LPL TxC would take no more than five Quarters and would require considerable commitment from stakeholders; and
4. Other enhanced and harmonised options would vary but would take less than four Quarters to implement, as they have the narrowest scope and scale for implementation.

[1] A further option was also considered where switching processes are not harmonised and both Gaining Provider Led and Losing Provider Led processes are used.

3. Current Processes and Future Options

3.1 For a number of years Ofcom, industry participants and stakeholders have broadly agreed that existing non-harmonised processes for switching fixed-voice and broadband services could be improved to easy, reliable switching for consumers.

3.2 Consumers should be able to switch between services and providers without undue effort, disruption or anxiety. The strong belief that this is not the case for consumers who wish to switch their fixed-voice or broadband services has led to Ofcom undertaking a strategic review of switching, culminating in the Consultation on 9th February 2012.

3.3 In this section we provide a brief summary as to what the key issues currently are. This is useful not only to provide context but also to allow an understanding of issues that need to be improved when considering the implementation of the proposed options.

3.4 There are currently three switching processes for fixed-voice and broadband customers[2];

1. The Notification of Transfer (NoT) process:
   This is a Gaining Provider Led (GPL) process that applies to consumers switching fixed-voice services only or services using Metallic Path Facility (MPF), where the consumer only needs to contact their (new) Gaining Provider (GP) to switch. The GP informs the (current) Losing Provider (LP) on behalf of the consumer in order to organise the transfer. The consumer receives letters from both providers confirming the planned switch before it happens. This provides an opportunity for the consumer to stop the order going ahead where they change their mind or in cases where they have no knowledge or have not given their consent to the attempted switch.

[2] Ofcom (2012) 9th February consultation document, section 3, p. 25

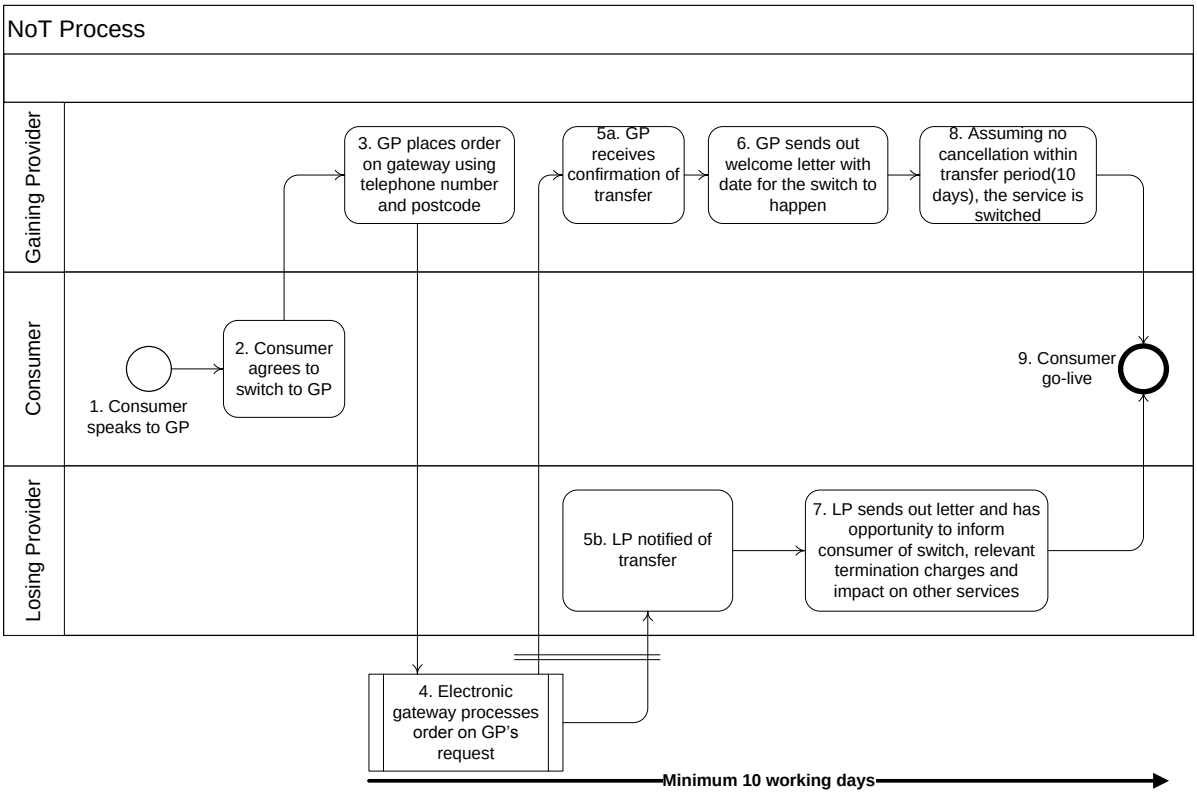

Figure 1 – The Notification of Transfer (NoT) process

2. The Migration Authorisation Code (MAC) process:

   This is a Losing Provider led (LPL) process that applies where only broadband is being switched. It means that if a consumer wishes to change their provider, they need to obtain a code from the LP and give it to the GP. On receiving a request for the code, the LP carries out checks to confirm that the consumer making the request is the legitimate account holder and they have an opportunity to discuss the implications of switching. The consumer must supply the code to their GP to allow the switch to go ahead.

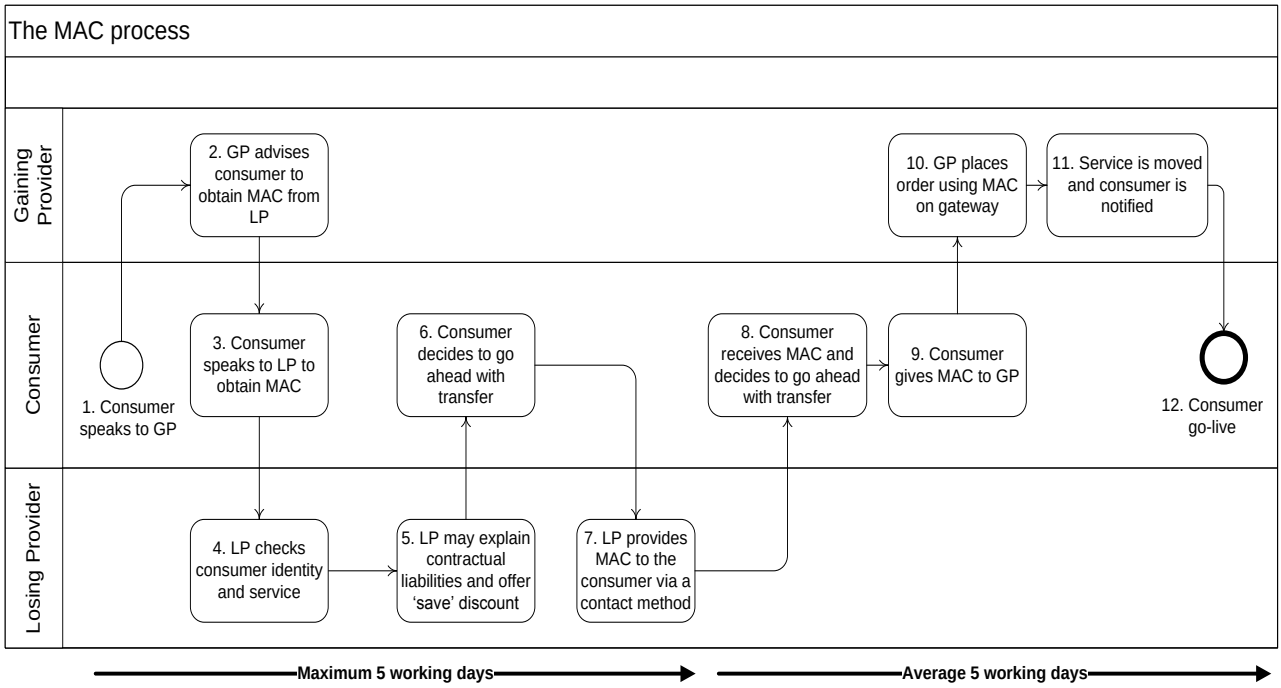

Figure 2 – The Migration Authorisation Code (MAC) process

3. The Cease and Re-provide (C&R) process:

   Where there are no agreed switching processes in place that enable a seamless transfer of services between providers, the process is described as Cease and Re-provide. Here, the consumer terminates their contract with the LP and requests a new service from the GP. This process requires the consumer to manage the cease and start of their services.

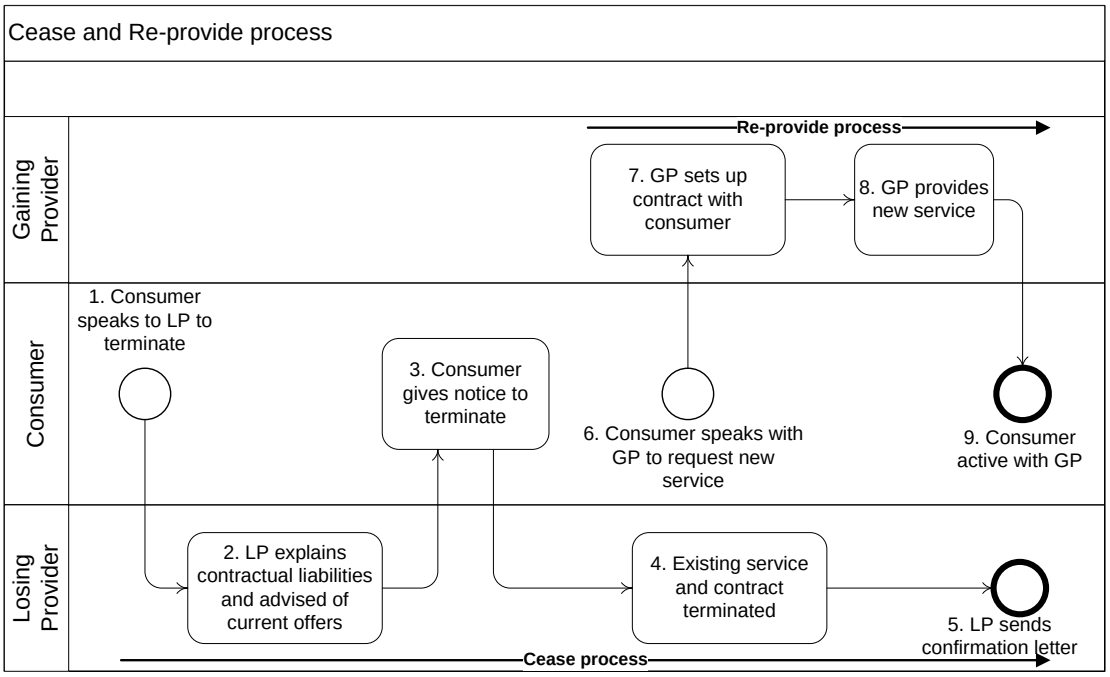

Figure 3 – The Cease and Re-provide (C&R) process

3.5 Any option chosen must be able to work with the existing structure of the industry, namely that there may or may not be a wholesaler between the access operator and the provider.

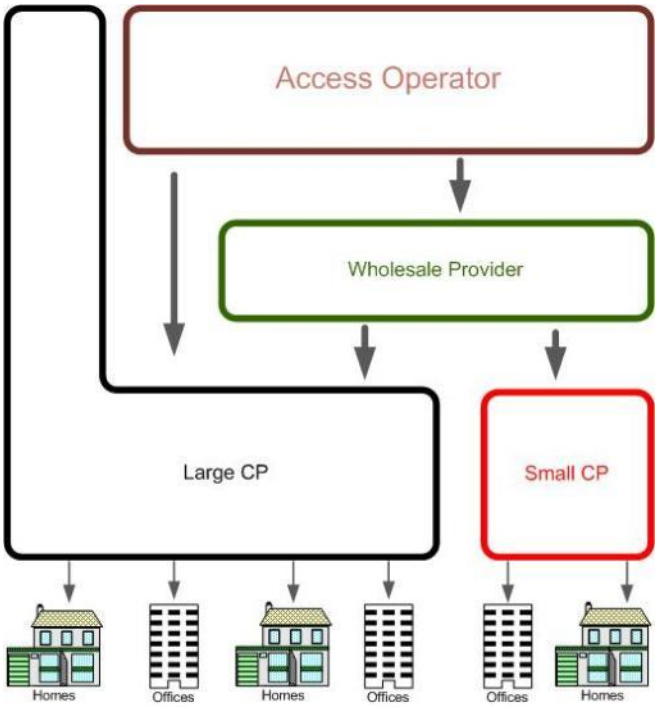

Figure 4 – Market Structure & Communication Providers

Options Considered in this Document

3.7 Prior to considering general implementation challenges and relating them to the implementation structure that would optimise their introduction, we step through the high-level process options for switching, based on the work undertaken by CSMG and Cartesian, on behalf of Ofcom.[3]

3.8 There are a number of alternative switching options, not discussed in this paper, that have been considered by Ofcom during the consultation process. Gemserv has considered a sub-set of those options and an outline of the brief we were given is attached as Appendix A to this paper.

[3] The design specification produced by CSMG provides the detailed impact both on interfaces between various layers in the supply chain and the standard applications used by the industry using the TM forum Application map (TAM) as a generic baseline guide. It also defines the supply chain; giving each of these blocks a specific defined function to help identify what data would be included in data flows and the direction of data flow.

Enhanced NoT

3.10 This process retains the current NoT features and makes incremental improvements, such as in areas of policy mandates for the 'cancel other' processes and to the provision of compulsory simultaneous provide functionality. There is also improved visibility of all Caller Line Identifications (CLIs) across all CPs and improved communication regards Early Termination Charges (ETCs) and Service Implications (SIs). All switches, including those that previously followed the MAC process are harmonised to follow the Enhanced NoT process.

1. A consumer wishing to switch contacts their new provider (GP) and informs them of their desire to transfer services. The consumer is required to provide their caller line identification (CLI or telephone number) and postcode. Once a sale is agreed, the GP places the order via the service provider gateway using the CLI and the postcode.
2. The applicable Access Operator (AO) validates the order against its consumer database. If the order is valid, the AO confirms the order and sends electronic notification with details of the impending switch to both the GP and the LP, otherwise the order is rejected.
3. This notification triggers letters from both the GP and the LP to notify the consumer of the pending switch.
4. Providers use this letter to remind the consumer that they may be liable for ETCs as a result of switching.
5. The consumer retains the right to cancel the order where they have changed their mind, not consented, or have no knowledge of the switch.
6. The transfer date is 10 Working Days from the electronic notification from AO to GP/ LP.

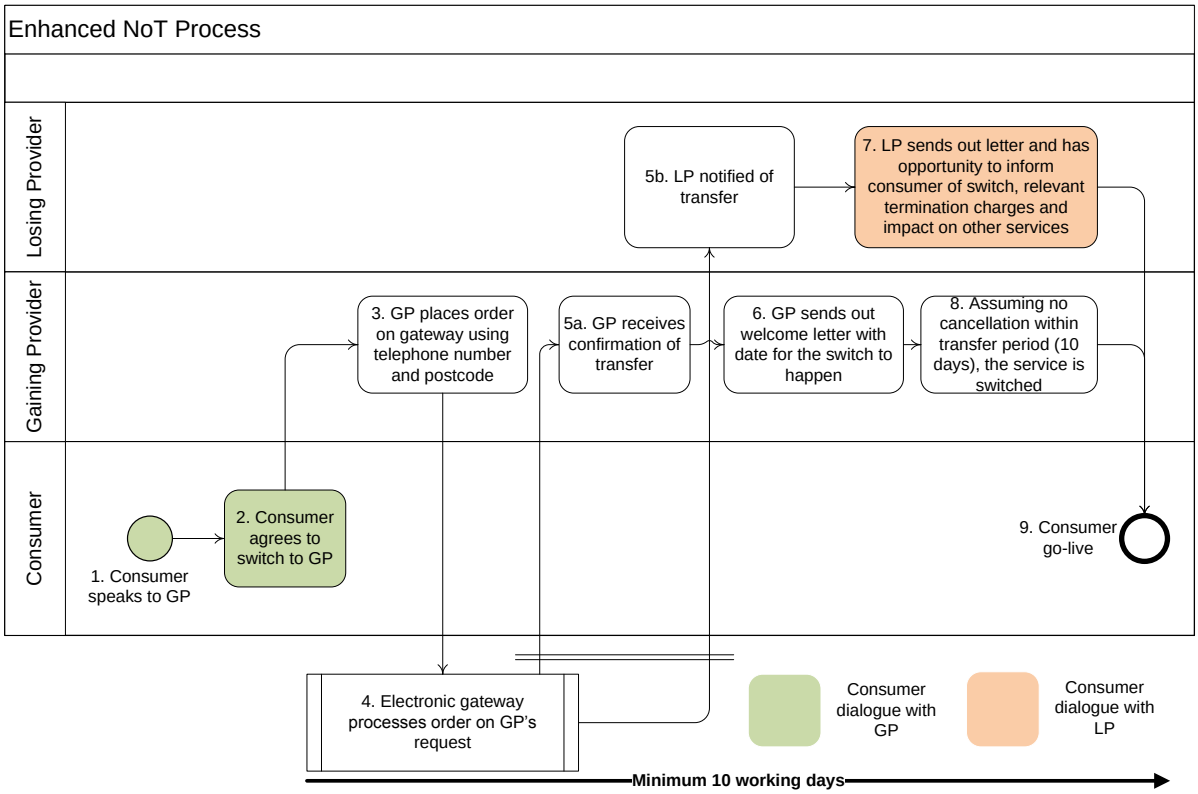

Figure 5 – Enhanced NoT Process

Gaining Provider Led with Transfer Code (GPL TxC)

3.11 The key changes from the current NoT process to the GPL TxC are:

1. The NoT process only applies to fixed-voice and MPF consumers. The GPL TxC is a harmonised option and would apply to all types of consumer transfers, immaterial of the type of technology they are on or service they are switching within the Openreach network;
2. The NoT process does not use a central H&D[4] like the proposed GPL TxC process does;
3. The H&D will hold consumer information including a list of account numbers, consumer names, addresses, postcodes and CLIs;
4. The NoT process uses the GP's independent system to query the Openreach setup for validation, the GPL TxC will use the central H&D for validation via the LP; and

[4] A central H&D as discussed by SWG during the 2010-11 industry meetings and further defined by CSMG for the consumer switching programme, Ofcom (2011), http://stakeholders.ofcom.org.uk/binaries/consultations/switching-fixed-voice-broadband/annexes/csmg_report.pdf

5. The NoT process uses the current system of line transfer via the Openreach setup without any code involved. The GPL TxC process would request the TxC from the AO via the central Hub, tagging the line to be transferred along the way. The GP will use this TxC to initiate the back-end switching.

3.12 This process is GPL, but utilises a transfer code option. It is similar to the current NoT process, but addresses problems with the back-end processes. All switches would be harmonised to follow this process.

1. A consumer contacts their GP regarding their desire to switch, tells the GP which service they would like to switch and provides the account number and additional information such as their name, postcode and current provider, as part of the signup process.
2. The GP queries the Hub to validate consumer details via the LP. The Hub holds a central database that includes a list of account numbers, consumer names, addresses, postcodes and CLIs.
3. If the consumer does not have their account number to hand, the GP sales agent uses other consumer information to query the central database to uniquely identify the consumer's account.
4. The GP requests a TxC from the Hub via the LP's supplier chain after providing it with the consumer information. The LP verifies consumer information and contacts the AO via its wholesaler provider, who obtains the TxC from the Hub, and this is passed down the supply chain. The asset involved in the switch is tagged whilst the TxC is forwarded to the GP. The GP uses this TxC to initiate the back-end switching.
5. To keep the data consistent, the Hub automatically updates the central database. The CPs update the database if there are to be any other changes to the service other than switching or any other changes to consumer information in the database.
6. The consumer is made aware of the implications of the switch (including any ETCs and service impacts) before the actual switch takes place.

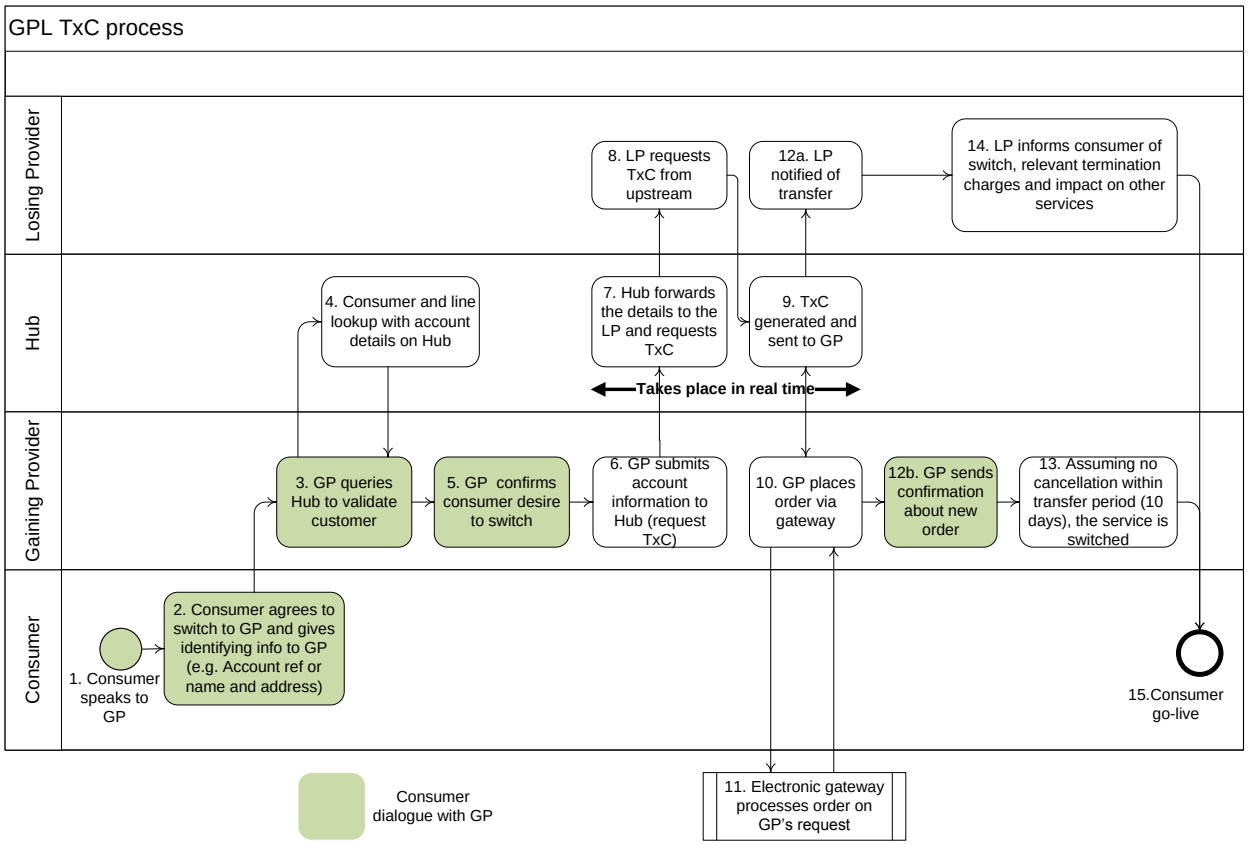

Figure 6 – GPL TxC Process

Losing Provider Led with Transfer Code (LPL TxC)

3.13 The key differences of the current MAC process to the LPL TxC are:

1. The MAC process applies where only broadband is being switched. The LPL TxC is a harmonised option and would apply to all types of consumer transfers immaterial of the type of technology they are on within the Openreach network;
2. The MAC process does not use any Transfer Code Issuing Authority (TxCIA) like the proposed LPL TxC process does; and
3. The MAC process uses the current system of line transfer via the Openreach setup by requesting the code directly from the AO and the consumer giving it to the GP. The LPL TxC process would request the TxC from the AO via the TxCIA, tagging the line to be transferred along the way. The GP will use this TxC to initiate the back-end switching.

4. LPL TxC is a LPL transfer code option. The transfer code is similar to the MAC process currently in use for broadband migrations but changes are focused on addressing the problems with back-end systems. The intention is to improve the consumer experience of the transfer process; additionally, reactive save activity will be banned. All switches would be harmonised to follow this process.

1. A consumer wishing to switch contacts their current provider (LP), to request a TxC. For telecommunication this would be through a dedicated channel where retention activity is banned.
2. The LP verifies the consumer information via the existing methods i.e. using an account reference number or the password on the account. Once the consumer is verified, the LP may inform them about the ETCs or service impact(s) that would occur as a result of the switch.
3. The LP performs asset validation, which needs to take place while the consumer is on the call (or online). The LP requests the TxC up its supply chain via its Wholesaler and AO. The CP's AO requests the TxC from the issuing authority and it is passed down the supply chain. The assets involved in the switch are tagged and the LP is handed the TxC who then provides it to the consumer.
4. The consumer is able to provide the TxC to their GP, which once validated, is used by the GP to initiate the back-end switching process.
5. The transfer date and the service impact are re-confirmed with consumer via a pre-defined way of communication before the switch takes place.

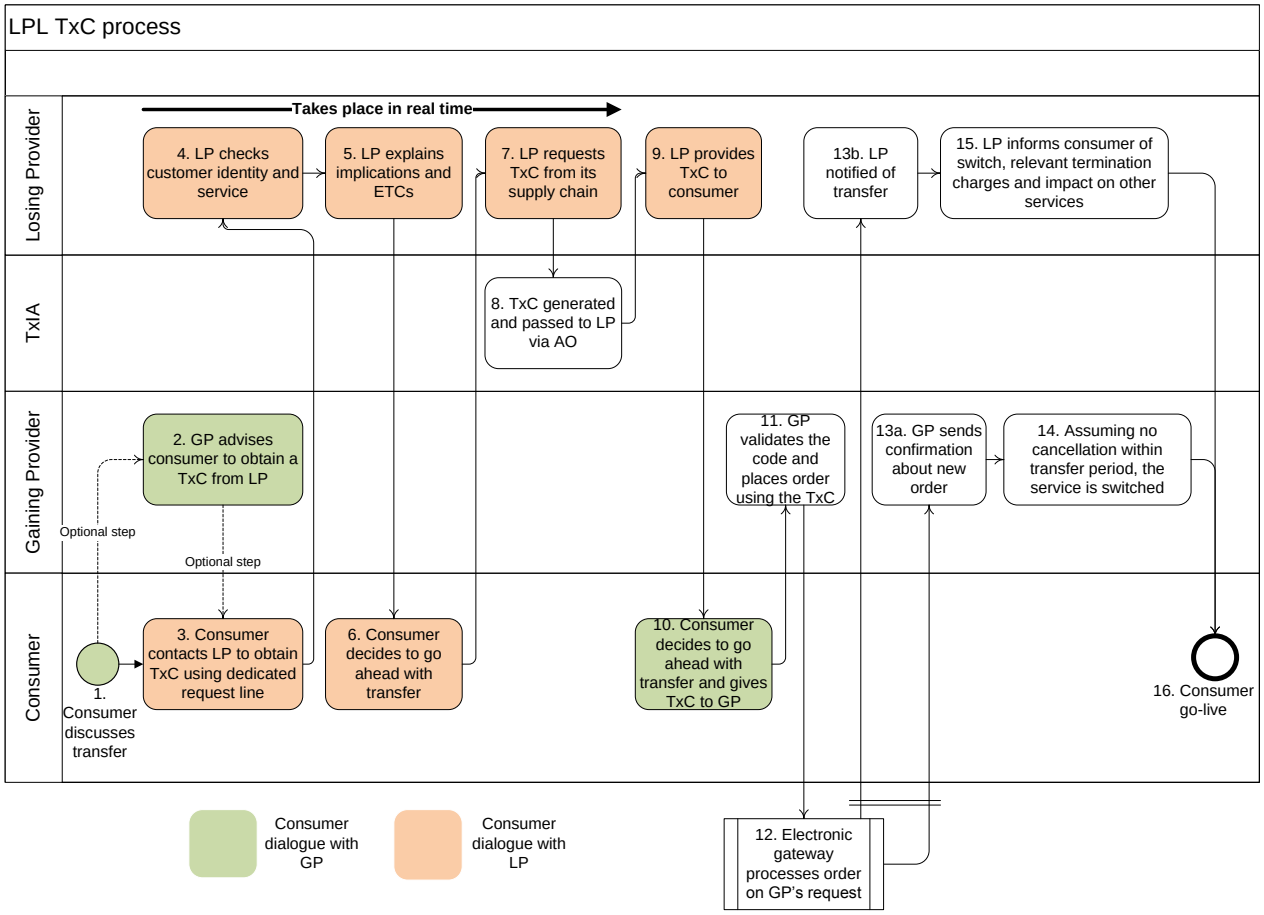

Figure 7 – LPL TxC Process

4. General Implementation Considerations

4.1 Regardless of which option is chosen to deliver the most beneficial long-term solution for switching, a common set of considerations are enduring for any of these. Before considering the bespoke complexities and programme management structure for each switching option in turn in this section, we will discuss common considerations that are relevant to all options.

4.2 In Section 5 we reference the need for some form of governance around implementation, but suggest that this might be in the form of a pop-up group rather than an ongoing governance mechanism. The issues listed below are all relevant to a discussion on Enhanced NoT, although it is noteworthy that some of the issues may be less complex. For example, the discussion on information security for Enhanced NoT will be significantly simpler in scope.

Stakeholders

4.3 A significant challenge in implementing any option will be persuading all of the industry of the benefits of change within a reasonable timeframe and cost; working around a complex set of interdependencies to get options implemented to meet the varying overall requirements of the project. The project planning will need to take into account potential delay from legal challenges to the process, and include some contingency and standstill time.

4.4 For any options for switching, Ofcom's Implementation Strategy will need to address issues of opposition and inertia when it comes to implementation. The Stakeholder Management Plan will also need a robust framework for ensuring smaller providers are able to implement change internally and manage industry change.

4.5 We reflect the position of some providers in our roadmaps for each option on the basis of the following assumptions:

1. The degree of opposition or inertia from stakeholders would directly impact timeframes for implementation;
2. A high degree of co-operation from providers will allow the development of agreements, User Requirements and associated documentation in a reduced timetable;

3. Stakeholder opposition or inertia would reduce the likelihood of providers offering to dedicate experienced resource to the implementation process, in the form of workshops or on the Board; and
4. Reduced need for standstill would allow the timetable to be truncated by removing some of the contingency periods.

4.6 For these reasons, we suggest that some of the LPL models could be implemented a full Quarter (or more, depending on stakeholder responses) earlier than GPL.

4.7 Despite the preference from some providers for the LPL TxC option, there were many companies and stakeholders who, in response to consultation, expressed a preference for GPL. This also represents an issue for the Implementation Strategy, and specifically the communications and stakeholder plan. Stakeholder issues to consider would be:

1. The GPL group seem to be specialist and/or smaller in size than the average provider, although this is a simplification of a more complex picture. It may be that alternative/ additional communication approaches are needed to ensure that there are no questions of perceived discrimination on the basis of access to the debate;
2. Opposition from those parties who preferred the GPL option and inertia to the LPL option would be a risk for implementation;
3. Some providers already exclusively use GPL processes for switching customers. We return to this in the section below as a technical issue, but it would be unwise to view the LPL TxC option as change free. In implementation terms, it may be appropriate to have separate working groups for providers who are GPL exclusive, as their needs and requirements would be different to the rest of the community. If LPL TxC is chosen, we would suggest early meetings with the providers to establish the commercial, technical, regulatory and business changes that they would need to make internally; and

4. There may be an issue for providers who are not engaged at all in the process and may (potentially erroneously) have inferred from the last consultation that GPL was the Regulatory preference and its implementation was therefore inevitable. They may have made commercial or technical decisions on the basis of that assumption. Ofcom's Communication plan as part of the Implementation Strategy would need to take into account this possibility, and maintain a robust and possibly pro-active plan, to ensure that companies are not left behind.

Scale of Project

4.8 It is difficult to estimate the scale of the work from a provider point of view. However, based on similar projects in other utility industries, we would estimate the following roles would be necessary for the options that will be more complex, most particularly a GPL H&D option; assuming that the project were to run to roughly the timescales and methodology set out in the section below:

1. One lead policy person from Ofcom to chair the Board and to maintain overall responsibility and oversight of the Project;
2. One or two Project leads from Ofcom to attend working groups, possibly chair, and to be the day-to-day contact for matters of policy that arise. Also to liaise with all providers and contractors and to be the lead contact point for tenders and contracts;
3. IT, Legal and Commercial support from Ofcom internal teams would be required, to issue tenders etc;
4. Project Manager (PM) – either internal Ofcom PM resource or externally appointed. We would see this role as either a full time or a heavy part-time role, particularly in the heaviest/ initial phases. This role would undertake all the general implementation work (but specifically would not set policy, which would remain the remit of the Board). Normally they would run the administration and management of the Project, manage the risk register, provide a liaison point between providers and Ofcom and undertake implementation tasks as directed by the Board;
5. Project support might be required such as administrative support, intelligent secretariat, or on-call support such as IT or process work;
6. Each workgroup would require a Chairman and meeting organisation (preparation of agendas, discussion papers, organisation of voting mechanisms, and agreed reports for Ofcom, Proposals etc). This would be provided by the Project Management Office (PMO), Ofcom internal resource, or provider-appointed Chairman (utilising their own

internal resource). The latter option would keep costs down, but may potentially deter smaller providers from volunteering to take the role. Alternatively, the chairmanship of each group could be taken on by the Office of Telecommunications Adjudicator (OTA) which would provide a consistent approach, although during the heaviest phases this would be very resource intensive; and

7. Providers and Ofcom would need to support each workgroup (as appropriate) with capable resource. In our experience, this has been done by Regulatory Affairs Managers or Commercial and Legal Managers, rather than Directors or graduate grade staff. We would expect their involvement on an intensive, but part-time basis.

Equity of Participant Burden

4.9 Implementing all options require, albeit to a different degree, new systems and processes at a central level, and AOs, wholesalers and providers will all need to dedicate considerable resources to the Project. They will also need to undertake internal training programmes for call centre and frontline staff, and will possibly wish to operate their own internal project management functions.

4.10 For the critical development period we would expect Tier A providers to support several or all workgroups, possibly sitting on the Project Board (PB) and providing other support where necessary, e.g. drafting discussion papers for discussion at the workgroups. Tier B/C providers may choose to dip in and out of the Project, or focus resource in one particular area of concern.

4.11 Alternatively, smaller providers may choose to cover the meetings collaboratively, e.g. small provider views would be represented by Provider X on the Design Group, by Provider Y on the Governance group and so on.

4.12 In addition to the externally facing roles, providers will need to dedicate a small team of IT and technical resource to internal systems development. Naturally this will vary depending on the quality of the existing systems (e.g. is it one well planned system, or is it a series of historical systems that sit together?) and the size and nature of any other projects ongoing.

4.13 Careful consideration will need to be given to smaller providers to ensure that they are able to engage with the project, and feed any specific concerns or issues into the User Requirements. We will discuss workgroups and subgroups in more detail in Section 5.

Implementation Project Management

4.14 There are a number of common considerations in implementing any of the proposed options. These are:

Planning for Implementation

4.14.1 In practice, there are a range of factors that contribute to a successful implementation. In the first instance, a clear plan and timetable are essential, with logical key phases on the roadmap. Setting out the vision in a detailed scoping document will ensure that stakeholders understand both the journey that is being planned and the interim deadlines and requirements. This roadmap is essential to involve stakeholders in the development of the market arrangements and is crucial to ensure participants are fully engaged and any issues can be handled in an open and transparent way. Workshops, webinars and a process for handling industry questions are also useful and informative.

Future Proofing the System

4.14.2 Standardised governance procedures will not create a perfect world in which change is avoidable. What governance can offer is a framework for future change – a mechanism through which providers and Ofcom can debate, shape and implement change in an organised and formal manner, and one that protects all providers. If the document was drafted mindfully, it would be simple to add Schedules for other technologies as they arise, such as fibre, mobiles etc. Having a governance mechanism in place would ensure that all the industry meetings could focus on the discussions of substance rather than re-open discussions on governance each time a new technology required greater co-operation.

4.14.3 For this reason, we would propose that Ofcom maintain the widest definition of stakeholder in its implementation planning as, although only providers on the copper network are currently impacted by the work, it is likely that other companies might be impacted in time.

Speed of Change

4.14.4 When designing the governance regime, Ofcom should take an early view on what would be regarded as an acceptable pace of change for the industry, and closely align those high level requirements to the roadmap. The amount of time taken to implement governance changes can be considerable – parties that oppose the change will necessarily wish to slow down the pace of change, attempt to subvert the discussions, and object to all elements of the structure, even those that seem irrelevant to the specific position.

4.14.5 Therefore strong and strategically focused chairmanship will be required from Ofcom to ensure that the Project does not stall or deviate, as well as disciplined and experienced project management. Below, we set out a standard governance model that could be used.

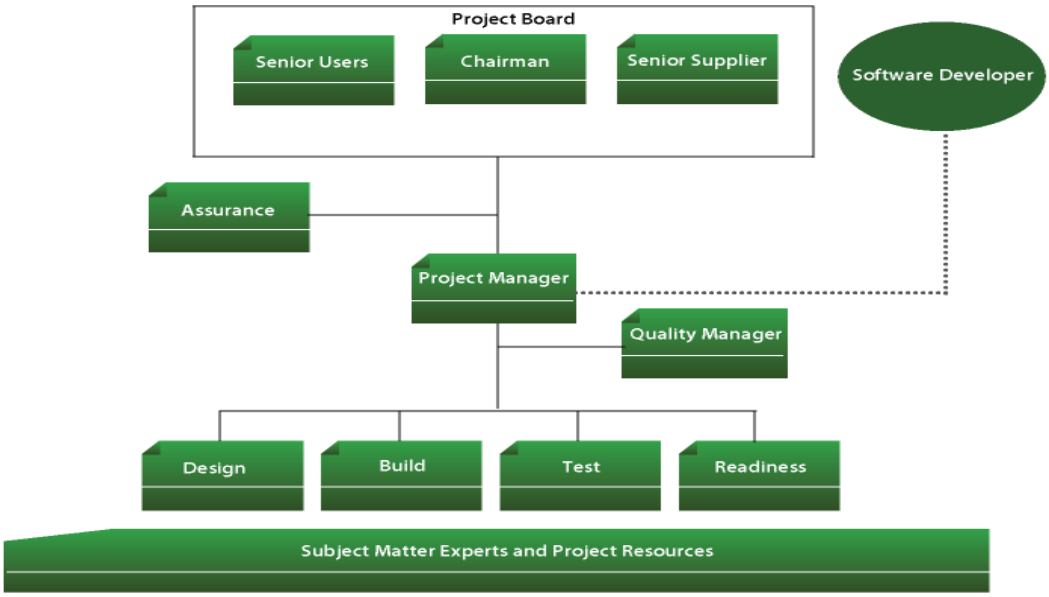

Figure 15 – Project Board and Delivery Structure

4.15 The key role or objective for each workgroup would be:

1. Governance – Development of the governance vehicle, based on the design chosen by Ofcom/ PB, after consultation. It would debate issues such as funding, voting etc. of the new agreement and any agency that sat around it. This group would need to meet intensively during Q2. The output would be a series of proposals to the PB. Technical support from the PMO would be required;
2. Technical – This group would be responsible for the development of the User Requirements for the H&D; based on the design chosen by Ofcom/ PB, after consultation. This group is likely to meet intensively during Q2 in order to get the User Requirements finalised ready for the tender for the H&D Provider. It would require people with an understanding of the CSMG process maps, internal systems and processes, and the proposals set out in the consultation. In other similar projects, such meetings have run three quarter/ full day Tuesday to Thursday weekly until the deliverables have been met. Technical support from the PMO would be required;
3. Procurement and Contracts – One of the key roles for the newly formed Agency would be to undertake the management of the H&D supplier. This group would develop the contractual terms for a tender, e.g. what SLAs they would expect, length of contract etc. We would expect this group to meet a limited number of times, and the output would be a proposed contract sent to the PB;
4. Stakeholder Management – This could either be a separate workstream, or a piece of work undertaken by the PMO on behalf of the PB. This group would ensure the equality of access for all providers, so the group may hold briefing sessions for smaller providers, consumer groups and other stakeholders;
5. Risk Management – This could either be a separate workstream, or a piece of work undertaken by the PMO on behalf of the PB. A tightly managed risk register, regularly updated and with mitigation approaches identified is essential;
6. Implementation Planning – We see this as potentially a one-off meeting at the start of the process, although it may be useful to hold another meeting later in the lifecycle. This meeting would set out to all providers and stakeholders the process which the PB intends to follow for implementation, the key deliverables, objectives and other key information. Based on the Implementation Plan, this would be an information sharing meeting; and
7. Communication, Monitoring and Review – Ofcom may prefer these functions to be delivered by the PMO on behalf of the PB, or through a workstream. The objectives

could include regular reporting, newsletters, project updates, seminars and webinars, and briefing sessions for providers on request.

5. Implementing Enhanced NoT

5.1 General implementation issues that cross all options to a lesser or greater degree are covered in Section 4. In this section, we discuss the specific implementation challenges for Enhanced NoT, covering the following ground:

1. Roadmap for implementation;
2. Three key challenges;
3. Technical implementation challenges;
4. Other implementation issues;
5. Implementation Project management;
6. Stakeholders' views; and
7. Summary.

Roadmap for Implementation

5.2 We have made a number of assumptions in planning the Roadmap for Enhanced NoT. We have assumed higher stakeholder engagement with the process and have assumed that current structures could be relied on for governance. As such, the timescales could remain tightly controlled and four Quarters should be sufficient for implementation.

5.3 The diagram below is also attached in Annex 4.

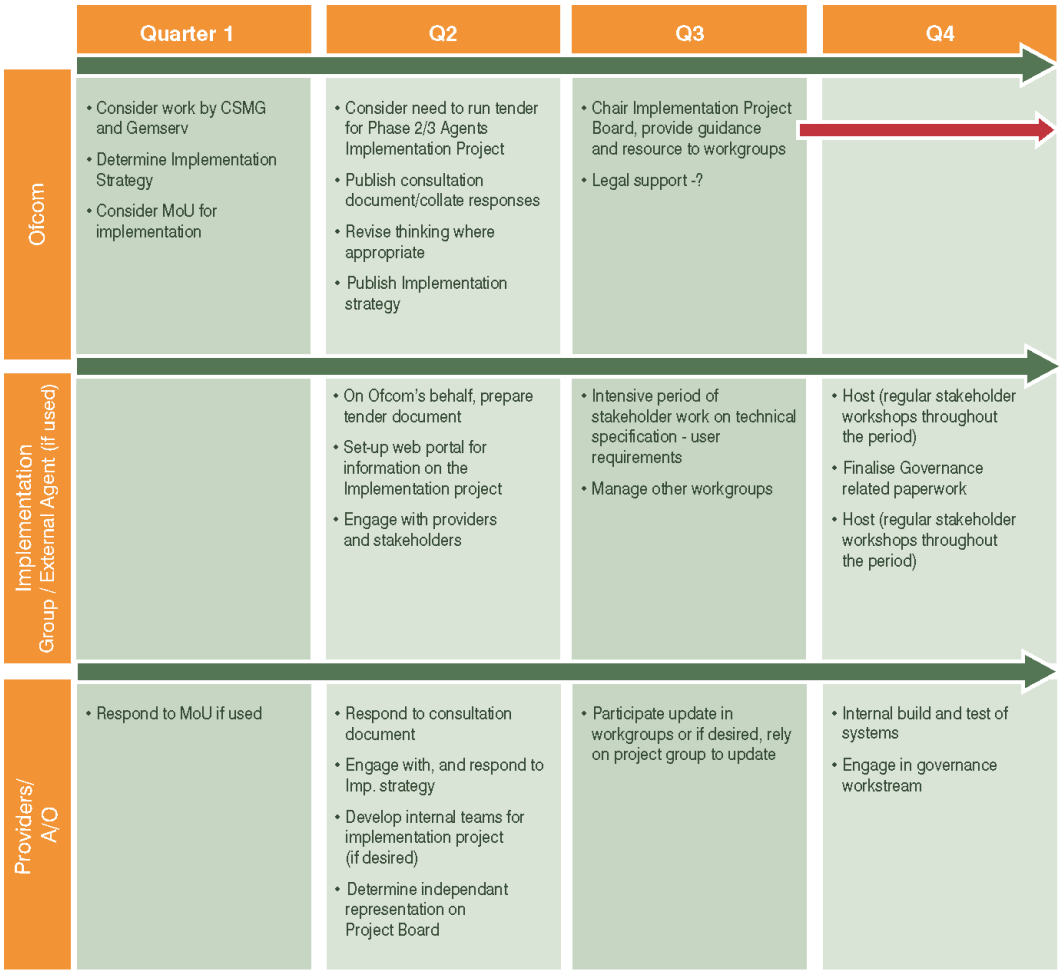

Figure 8 – Enhanced NoT Roadmap

5.4 All steps play a part in optimum implementation and each step should commence and conclude within a Quarter unless otherwise indicated.

5.5 Several steps are dependent on one another, for example:

1. Timely and on-budget development of systems and processes is dependent on having accurate User Requirements established;
2. The development of accurate User Requirements is dependent on timely, appropriate interaction from providers and other stakeholders;
3. In order to engage with providers and other stakeholders, Ofcom should publish an Implementation Strategy that deals with the key features and expectations of the project; and
4. Appointing third parties (if used) is dependent on a timely tender process, and on having more than one company in the process.

Key Issues

5.6 We estimate that implementation of Enhanced NoT could be done in a shorter timescale than GPL TxC and LPL TxC, due to a number of stakeholder and technical issues. Three key issues would need to be addressed when writing an Implementation Strategy for Enhanced NoT:

1. Broadband only providers – Currently it is unclear what the scale and scope of work is that would be required to get broadband only providers to compliance. We would recommend early engagement with providers in order to understand their issues and current position. We would also recommend that a separate workgroup be formed to ensure continuous engagement throughout the process;
2. Switching process scope – If the scope of the switching process were to be widened to other networks, further industry workgroups may be needed to develop the processes to enable switching between these platforms; and
3. Governance – It is not clear what governance process would be used to implement Enhanced NoT. We have assumed that a specific workgroup would be set up for implementation, comprised of all the relevant participants and stakeholders, probably co-ordinated and chaired by Ofcom or a support company. We would expect such a group to be relatively informal in its structure and greater formality might be required for strategic change.

Technical Implementation Challenges

5.7 We refer to the current setup where the NoT process is coupled with MAC to consider some technical implementation issues pertaining to Enhanced NoT. Both processes provide migration for two separate services – the voice and broadband. De-coupling the current approach and harmonising NoT on its own (without any other process re-engineering change) would immediately present some implementation challenges. A high level of co-ordination with the MPF providers and AOs would be required for sharing data and this is discussed in the Section 6.61 of this paper.

5.8 The Enhanced NoT process is currently restricted to the Openreach footprint, it cannot be used for switches involving networks. As discussed in the 2012 Consultation, the current NoT process does not allow the AO the visibility of CLI for MPF lines.[5] In implementation terms, it is worth considering how this information might be included in the medium term, as unless the data is complete, consumer switching will be affected.

5.9 Furthermore, the process design for Enhanced NoT suggests that many parts of the process would need to be mandated by Ofcom, for example, cancel other, simultaneous provide functionality, agreed improvements on communication and so on. In the absence of an industry agreement of a self-governance mechanism, it is inevitable that much of the compliance burden would fall on Ofcom. This would be an ongoing regulatory overhead which is why we suggest the governance model cited on pages 31-32 in regards to implementing Enhanced NoT.

5.10 Finally, in regards to implementation for Enhanced NoT, the previous unharmonised NoT options had an ambiguity around consumer consent validation, and this can be seen with large number of erroneous transfers. This issue will need to be resolved in the implementation phase.

Other Issues

Market Overview

5.11.1 We analysed a non-exhaustive list of 118 Communication Providers[6], both resellers and wholesalers for the products and services they offer. These providers offer services to home and small businesses on the Openreach copper network. More than 90% of these providers offer service for at least broadband that employs the current MAC process, around 52% offer both landline and broadband services. If a customer chooses to switch between providers they may go through all three processes; NoT, MAC or Cease and Re-provide services. Clearly, if the market harmonised to an enhanced NoT model, with the abolition of the MAC, all these providers would have to abolish at least part of their current setup and adopt new processes.

[5] The MPF Access Line ID Helpline is now available to provide MPF visibility but this is a tactical fix and is not part of the NoT process.

[6] List of Communication Providers available on websites ISP review, home-phone choices and simplify digital

5.11.2 While most of these providers supply home phone and broadband, many also offer broadband as a standalone product (ADSL, ADSL2+) on a working landline, also known asBT Line (Openreach provided).

5.11.3 This broadband option is mainly used by consumers working from home as a main source of connection to internet for their small or medium size business for services like hosting, communication and networks. Hence, to ensure that the consumer experience of switching is not adversely impacted by implementation, time could be allocated to trials or pilots with stakeholders.

Workgroups

5.11.4 Many industry projects are implemented via a pop up governance group. For example, when proposing considerable changes to the relationship between gas suppliers and transporters, a new group was set up, the Gas Industry Governance Group. Although it had its own internal governance, issues such as representation and voting continued to be an issue throughout the project, and were a distraction to the implementation process. One concern is that because the group is pop up and not associated with ongoing work, the work it produces may not be as future proof an option as the other models in this document. This may be because participants in the group are delivery oriented, and drive towards one particular goal with a deadline; where an ongoing group can take a more consistent and co-ordinated approach to short, medium and long term change.

Speed of Change

5.11.5 Enhanced NoT is limited change and we therefore consider that it could be implemented in a matter of months. In earlier sections, we raised concerns about the speed of change representing the needs of the broader community and all stakeholders. Two options for implementation exist: the formation of a specific Implementation Working Group, which would need to work closely with a variety of other parties to ensure that implementation went broader than the immediate attendees; or to rely on individual CPs to make sure that they were compliant with the regulations.

Funding and Voting, Fair Representation

5.11.6 If the Implementation Working Group option were taken, consideration would need to be given to formal mechanisms to protect the views of the minority or specialist provider, to ensure that the views of the broader stakeholder community (e.g. consumer groups) are adequately represented.

5.11.7 Naturally, if individual CPs are responsible for implementation internally, and for their own compliance, there would be no issues around funding, voting or representation.

Cost of Implementation

5.11.8 For this model, it would be our expectation that costs would be apportioned according to the current market methodology. We understand this as companies bearing their own costs of participation in the groups and of internal implementation, and that there are no externally incurred costs to be divided across the industry. We have assumed that there would be relatively low central costs of implementation.

5.11.9 Ofcom may wish to consider assistance for smaller or more specialist providers who do not currently attend but whose early involvement would be helpful for implementation purposes.

Implementation Project Management

5.12 Below we have set out what an implementation framework might look like and what the key considerations, timeframes and workgroups are to implement Enhanced NoT. This builds on the general information in Section 4.

Project Structure

5.12.1 Ofcom may choose to use formal project management for this Project (and set up PB, working groups and formal governance, etc.) or it may decide to use a more ad-hoc methodology. If used, groups may look like:

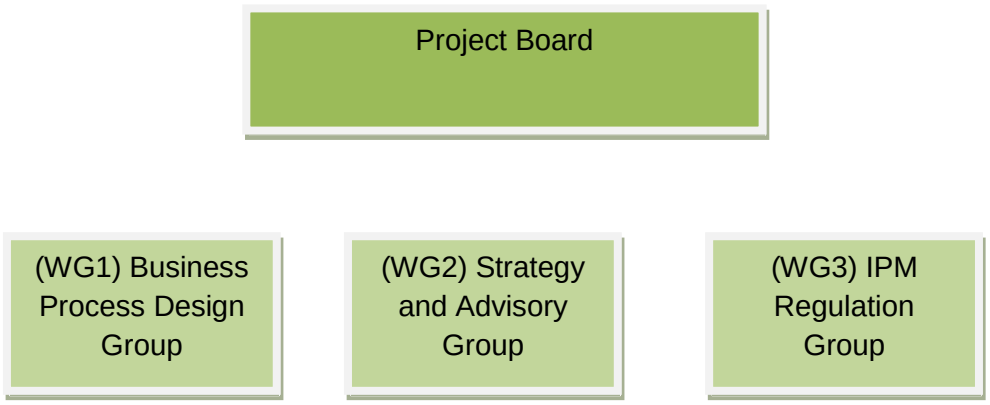

Figure 10 – IPM Forum for Harmonised Programme and Interaction with Other Switching Groups

WG 1 – Business Process Design Group

5.12.2 This group would provide a means of obtaining stakeholder input into the design and delivery of process models.

5.12.3 The deliverables could include stakeholder input into the design and delivery of processes.

WG2 – Programme Strategy and Advisory Group

5.12.4 This group would consider consequential amendments to legacy system changes and strategy in dealing with implementation. It would consider consumer education and programme public relations.

5.12.5 The deliverables could include:

1. Cataloguing the potential consequential changes to industry and regulations;
2. Developing ways to implement strategies by producing detailed approaches and work plans for Testing and Pilot trials;
3. Identifying solutions for operational issues for consumer trail and rollout; and
4. Preparation of a rollout strategy.

5.12.6 This group would provide a means of obtaining stakeholder input into the design and delivery of mandated processes and policies.

5.12.7 The deliverables could include:

- Input to assist in the development of options for programme governance arrangements; and
- Input for the frame of the programme and ongoing operation.

Stakeholders' Views

5.13 During consultation and in responses, stakeholders main concern related to the impact of the Enhanced NoT options once implemented, compared to the current system; rather than raising challenges the industry might come across during implementation of this option.

5.14 Key concerns raised are:

1. Issues of effective mitigation measurement;
2. Requirement of an enforcement programme;
3. Record (call) keeping obligation may be onerous for small CPs; and
4. Difficult for consumers to be aware of implications of switching (such as ETCs).

5.15 The main implementation challenge from the stakeholder view is the issue with consumer intent validation.

Summary

5.16 This option would require a shorter timeframe for delivery (we estimate a maximum of four Quarters for implementation) than the GPL TxC and LPL TxC. There would be a lower burden on providers and Ofcom in terms of attendance at working groups, and the changes that providers would need to make to internal systems would be lower. As there would not be a need for procurement for externally sourced IT systems, the timescales can be truncated.

6. Implementing GPL TxC

6.1 General implementation issues that cross all options to some degree are covered in Section 4. In this section, we discuss the specific implementation challenges for GPL TxC, covering the following ground:

1. Roadmap for implementation;
2. Three key challenges;
3. Technical implementation challenges;
4. Other implementation Issues;
5. Governance;
6. Stakeholders' comments; and
7. Summary.

6.1.1 Additionally, we also discuss the implementation challenges of setting up the H&D.

6.2 The implementation complexities of GPL TxC outweigh the other options in terms of the time needed to successfully implement that option and the system development involved. We anticipate that some elements of the design will evolve and develop over time e.g. we anticipate that the central database may look different in some aspects than what was proposed or that the governance requirements might need to change over time as the market develops. However, we believe all obstacles can be overcome from a practical perspective if the optimal implementation framework was set out with the right governance, allowing decisions to be made and the correct workgroups addressing the technical challenges.

Roadmap for Implementation

6.3 Here, we set out an implementation roadmap for the GPL TxC option, in which we estimate a six Quarter timeline for the delivery of the work associated with this option. It assumes a certain amount of pre-planning7 has started prior to the Project Start Date, and that key resource is fully available from that date. Elsewhere in this document, we have referred to the heavy phases of the Project, and for this particular model, we would highlight the critical phases as:

1. Q3 – For providers, Ofcom, Project management, stakeholders, and development workgroups; and
2. Q4 – H&D development. This phase cannot commence without the User Requirements having been fully specified and agreed by the industry.

6.4 Critical dependencies are the production of technical documentation and the appointment of sub-contractors and providers on the timescales set out in the roadmap.

6.5 The diagram below is also attached in Annex 4.

[7] Identification of, and communication with, all stakeholders; internal Ofcom planning in terms of expectations, dates, deliverables; internal Ofcom resource planning to free up necessary project and specialist resource; identification of, and contracting with, support companies if required.

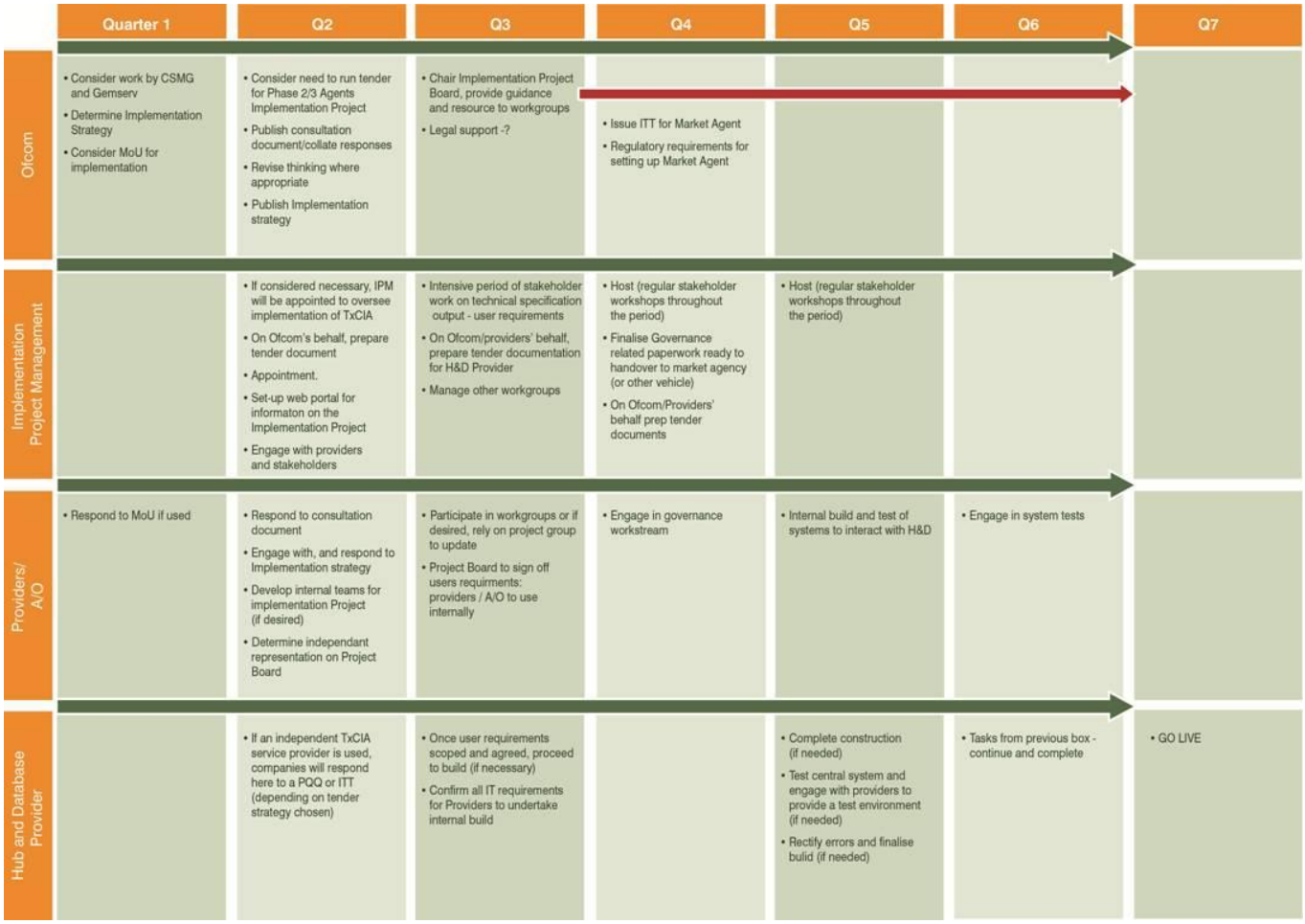

Figure 11 – GPL TxC Roadmap

6.6 All steps play a part in optimum implementation: and each step should commence and conclude within a Quarter unless otherwise indicated.

6.7 Similar to the Enhanced NoT option, the following steps are dependent on one another for GPL TxC:

1. Timely and on-budget development of systems and processes are dependent on having accurate User Requirements established;
2. The development of accurate User Requirements is dependent on timely, appropriate interaction from providers and other stakeholders;
3. In order to engage with providers and other stakeholders, Ofcom should publish an Implementation Strategy that deals with the key features and expectations of the project; and
4. Appointing third parties (if used) is dependent on a timely tender process and on having more than one company in the process.

6.8 The complexity of this Project in comparison to Enhanced NoT is highlighted in the longer list of dependencies. In addition to the ones set out above, the following additional dependencies would need to be considered:

1. Internal Ofcom resource would be needed for the production of two tenders, which places a dependency on appropriate legal and commercial resource availability;
2. Likelihood of the need for Ofcom internal legal capability on the Project. Several aspects (e.g. appointment of agents, drafting agreements) would be dependent on available, suitable and timely resource; and
3. Greater depth and breadth of IT development will increase the level of testing requirement and the dependency on Providers/ AOs to engage and complete user testing.

Key Issues

6.9 The number of new bodies, processes and agreements that would be required for GPL TxC necessitates a broader and deeper Project than for other options, as the tasks are more numerous and will involve a fuller range of participants. Once consultation on the options has closed, Ofcom can prepare the Implementation Plan, which will set out the key deliverables and dates for the project.

6.10 There are a significant number of tasks that would need to be included in the implementation plan for a GPL TxC model. One of the great risks of this model is capturing sufficient detail in the plan – the larger the Project, the more essential the pre-planning and the planning stage becomes. The roadmap set out above contains a number of activities detailed which are dependent on other tasks, and the number of dependencies raises the risks for implementation.

6.11 In addition, a risk for the Project is the number of participants who would need to be involved in the process. This risk can be mitigated by a strong PB and Project implementation team, working from a robust Implementation Strategy document that sets out the direction of the Project, the deliverables and the timelines.

6.12 The three key issues that would need to be addressed in the implementation plan for GPL TxC would be:

1. Scale and scope of the project generally – Implementing this option requires full Programme Management, with thorough pre-planning and planning stages. We anticipate that the Programme will have to run tenders for two service providers – one to operate the Agreement, and one to develop and build the H&D. Not only will the scale and the scope of the Programme be much greater than that for the two alternatives, it will take longer, and will require greater resource from Ofcom and companies;
2. Design, Development and Implementation of H&D – Commissioning a new system will require considerable input from stakeholders, providers and Ofcom. It will require clarity in User Requirements, and close working relationships to ensure delivery. Providers will need accurate information to allow them to build internal systems and develop new processes and procedures; and
3. Stakeholder management – The responses to consultation indicate split opinions over the optimal model for implementation. Working with stakeholders and providers closely throughout the Programme will be critical to maintaining momentum and achieving a successful outcome. In particular, it is essential to have sufficient range of providers on the stakeholder workstreams in order to capture a wide range of user opinions and requirements.

Programme Governance

6.13 Essentially, good governance creates a framework through which divergent parties or groups of parties can reach a transparent, collective decision about an area of common interest (a market agreement, processes, or data requirements) that is mutually acceptable. That is not to say that it delivers 100% consensus: not all parties will find all decisions acceptable, but it provides a formalised process for debate, voting and appeal, such that providers can initiate, debate, accept and reject changes.

6.14 Governance therefore provides the rules of the game, defined to resolve conflicts between providers, using participation to achieve consensus. Effective governance is the fundamental building block on which effective markets and competition are based. Without governance, decisions are less durable or informed and this structure needs to be there from the start.

6.15 The requirement for new switching options provides an opportunity to introduce optimal governance mechanisms to the market, not only for the short term but also enduring solutions, which would be needed for the TxC options. The implementation of good governance will go a long way to mitigate some of Ofcom's concerns about the competitive market in that it will provide a level playing field between providers by creating formal voting mechanisms and funding arrangements.

6.16 In many markets, change is managed through a multi-party agreement, which is a legally binding contract between the various companies in the industry. Because providers will be reasonably and equitably represented with the agreement, and will have voting rights to veto changes, they will be able to manage relationships and issues closely, e.g. contract management terms or setting the process for price increases with those who provide services. Equally, they will be able to determine the length of contracts and the tendering process for central services.

Principles of Good Governance

6.17 As defined by the Better Regulation Task Force (BRTF), a governance body should:

1. Promote inclusive, accessible and effective consultation;
2. Be governed by processes that are transparent and easily understood;
3. Be administered in an independent and objective manner;
4. Provide rigorous, high quality analysis of any case for change;
5. Be cost effective;
6. Contain rules and processes that are sufficiently flexible to allow for efficient change management; and
7. Be delivered in a manner that results in a proportionate regulatory burden.

6.17.1 All the options for governance will be set against these criteria.

Different Types of Governance

6.18 Below, we suggest four types of governance regimes that could operate in the communications sector for managing the implementation and ongoing delivery of switching processes, starting with lighter touch regulatory regimes.

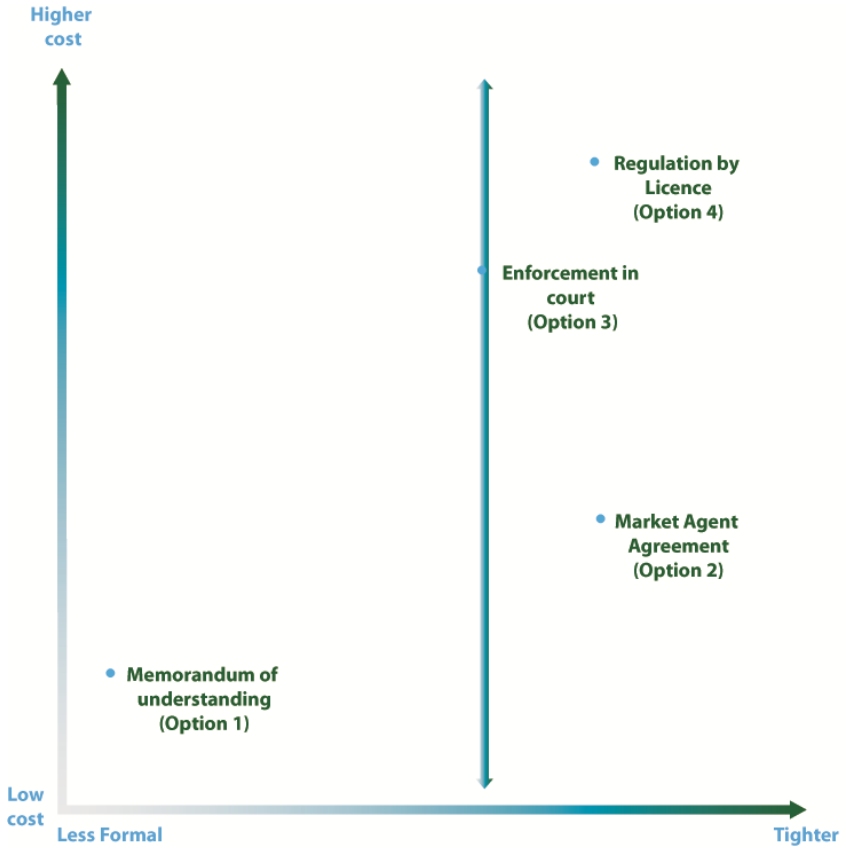

Figure 12 – Comparison of Governance Regimes

Option 1: Memorandum of Understanding

6.18.1 The simplest form of market governance would be to use a gentlemen's agreement and ask providers to sign a non-binding, non-contractual memorandum of understanding (MoU). This MoU would simply oblige providers to use best or reasonable endeavours to operate the associated codes (which would oversee the switching arrangements) agreed under the MoU. In effect this is a statement of intent, with little legal backing to enforce the agreement, and would be analogous to the current OTA Best Practice Guidelines. This approach would offer the following advantages:

1. Low barrier to entry for providers, particularly in terms of compliance and legal obligations;
2. Fast to draft, sign and set up – potentially weeks not months;
3. No requirement for distinctions between types of providers, therefore no requirements for separate schedules or obligations;
4. The agreement could be time-limited, relate to one implementation project, or it could be ongoing. If it were the latter, it might grow into a more formal delivery structure; if not, there may be a concern that this option was not future-proof;
5. Costs would be in the region of hundreds of thousands of pounds per year to operate, resulting in only single figures of pence per customer per year; and
6. Regulatory burden for all providers would be low and would be non-discriminatory.

6.18.2 However, there would be disadvantages to this approach:

1. No options for escalated problems – no options for enforcement other than removing the party from the agreement;
2. The sanction for removal from the agreement is relatively low – it would not stop a CPs ability to market to customers or transfer their services;
3. The thin level of governance over the codes could result in variable interpretation and compliance, and providers may not be able to rely on each other's consistent delivery;
4. Difficult to engage with stakeholders, e.g. consumer groups;
5. Concern that management and leadership of groups, or technical sub-groups, would come from only the big players who would be able to provide the resource – who may therefore be able to exert influence; and

6. Providers may refuse to sign up in the first place, or may be quite happy to leave the arrangement at any time (see also footnote 15 on page 42). Companies may be able to argue that despite the existence of a General Condition obliging companies to use particular processes for switching, the company could comply by using the processes, but not signing up to the agreement.

6.18.3 This arrangement is therefore most suited to a business model where parties are agreeing to a certain level of performance, but where the impacts of non-performance do not directly impact other providers. We would not recommend this approach for implementation and ongoing governance of switching arrangements, as the processes are highly inter-dependent and non-compliance would have a significant impact on consumers.

6.18.4 However, a MoU might be useful as an interim step to get providers talking, to start the governance debate whilst a more robust document was being drafted.

Option 2: Market Agent Agreement

6.18.5 A second approach would be to set up an independent market agreement and oblige "Providers of Public Electronic Communication Services or Networks" to be parties to the agreement as part of a General Condition of Entitlement[8]. The agreement would not be an Ofcom document, but would be managed and developed by providers, and the central work associated with the agreement would probably be delivered by an agent appointed by the Board.[9] Normally, parties to an agreement would appoint an operational group or Board to run the agreement in practical terms, generally by representing various types of organisations (perhaps AOs, providers and wholesalers). Whilst companies would remain responsible for discharging their general corporate and regulatory duties, the Board would be responsible for delivery of common obligations such as data security of the H&D, and for monitoring any service providers contracted to the agreement for delivery of services, e.g. meeting management and financial services.

[8] Arguably, many of the current General Conditions could be placed in a market agreement and removed from the primary legislation, e.g. Schedule 14 or Schedule 18.

[9] For example, the Scottish Water market is operated by a Central Registration Authority which is neutral from the regulator. It delivers centralised and mutualised governance, and holds the industry-owned sets of procedures and data dictionary.

6.18.6 The advantages of governing strategic switching processes under such an agreement would be:

1. Ofcom would have only limited roles in the design, development and maintenance of the agreement and providers would have the widest range of options for the development of the industry. Appeals would be possible but retained for critical matters only;[10]
2. Self-regulation would encourage co-operation and the adoption of best practices across the industry, and would alleviate Competition Act concerns by creating a formal and transparent process (e.g. by publishing agendas and minutes, allowing all parties to attend meetings);
3. As the agreement would be a requirement on all providers, companies could rely on the performance of other providers;
4. The agreement could stipulate process maps and data requirements, and could develop and manage a H&D (GPL TxC only) to support switching;
5. All parties would have a vote on how the industry develops, and could propose changes with an equal voice (although there may be issues around companies/ groups of affiliates if one used One Member One Vote (OMOV) as a voting mechanism); and
6. Depending on the drafting, additional technologies could be added to the document at a later date, utilising the same governance mechanism for co-ordination; thus building a stable platform for future technology governance.

[10] The MRA experience is that of the 3,270 changes raised over the period 1998 to 2009, there have been 37 appeals to the MRA Forum, of which less than a Quarter (nine) have been escalated to Ofgem for decision.

6.18.7 The implementation of this model may be as follows:

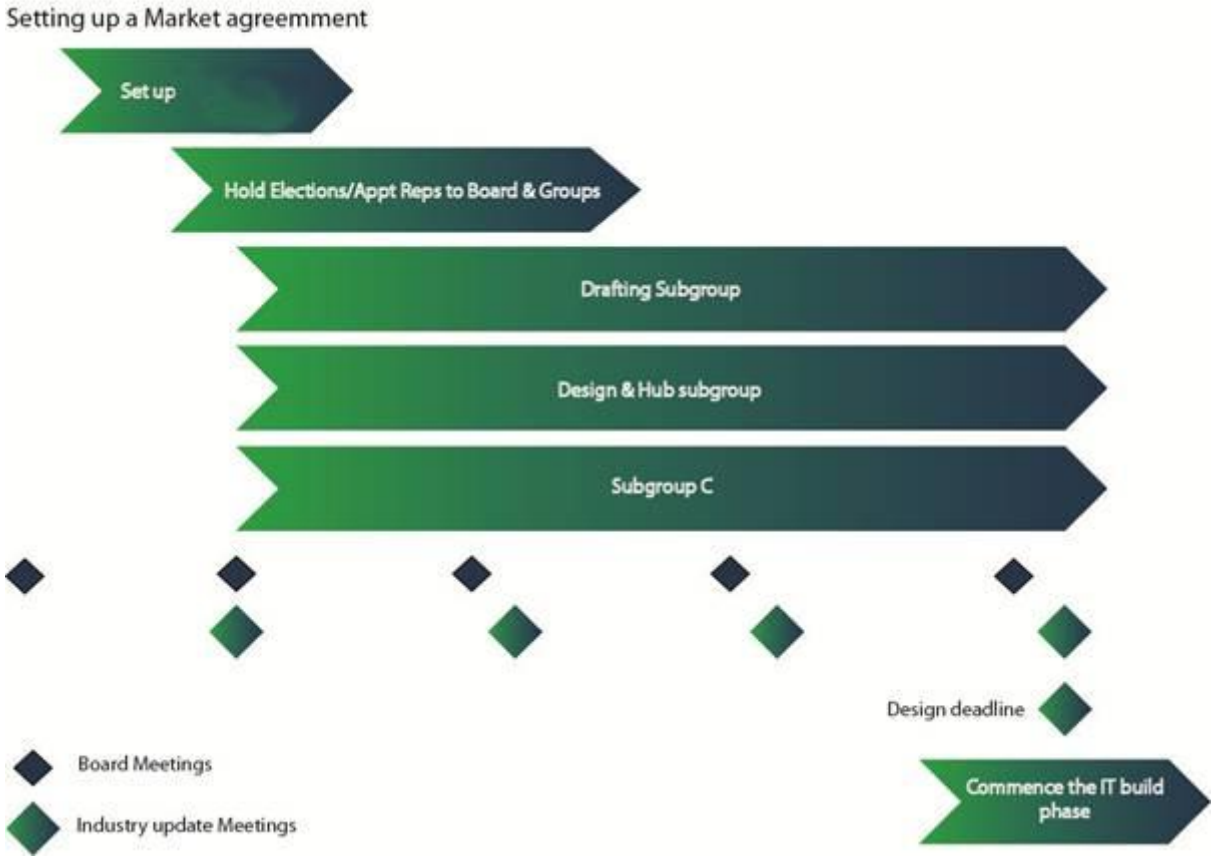

Figure 14 – Phases for Setting up a Market Agreement

6.18.8 Beneath each line would be a secondary set of detail. The up-front work would run simultaneously (and in this diagram, Subgroup C can represent as many other groups as are necessary for the process) with regular update meetings, both Board and industry update meetings. The work of the sub-groups would culminate in a design deadline, after which provider and central systems would be procured and built.

6.18.9 Disadvantages of this approach may be:

1. Providers may not wish to formalise the relationship in this way and may choose not to sign up, or may prevaricate unless pressed;[11]
2. There would be greater costs associated with this option than the first option – although in our experience, we would estimate those costs to be no more than single

[11] The Supply Point Administration Agreement was introduced by Ofgem in 2003 and suppliers of domestic energy must sign up to the code. However, participation is voluntary for suppliers in the Industrial and Commercial sectors, who largely do not wish to sign, and Ofgem has had very little success to date in encouraging them. Therefore, compliance with the Codes of Practice is variable.

figures of millions of pounds per year. If so, the costs of governance would be low tens of pence per customer per year; and

3. Compliance would come through a contractual mechanism to discharge a General Condition but governance through a direct licence (Option 4) to operate would create a tighter legal relationship between providers and Ofcom.

Option 3: Independent CP Agreement

6.18.10 A third option would be to obligate switching processes on providers, but leave all elements of compliance to the providers to implement through contractual means – i.e. there would be a set of Codes of Practice or a formal agreement that would co-ordinate the switching processes, but that sanction for non-compliance would be through the courts. In this way, Ofcom would set the rules but would allow the market to police itself, and would stand back from disagreements between companies. The advantages of this approach would be:

1. Lower costs of governance for companies who were not a party to a legal complaint;
2. Simplicity of compliance model – if a provider considered another company was in breach of the Codes or Agreement, the legal system is a tried and tested model for resolving contractual disputes;
3. Separation between the roles and responsibilities of the providers and Ofcom; and
4. Other advantages of a multi-party agreement as above would also apply.

6.18.11 Disadvantages would be:

1. Potentially high costs for parties, and ultimately for their customers, if they end up in court;
2. Ofcom would have no powers of enforcement and would lose an element of oversight of the processes;
3. Approach may potentially discriminate against smaller providers who may not have the same equality of access;
4. Potential liabilities for non-compliance would not result in a governance model that focused on best-practice/ co-operative model; and
5. Concern that parties might not comply with the agreement but not go to court; leaving the market in paralysis, with consequences for consumers.

Option 4: Regulation By License

6.18.12 The final approach would be to implement a new form of licence for providers, and operate a governance model through specific licence obligation, as per the energy sector. This would be the most robust form of governance for switching and market codes, in that all12 changes to the market would be overseen by Ofcom. However, this would also mean a change to primary legislation[13], and would assume that all providers were willing to move towards this type of regulatory structure.

6.18.13 Advantages of this process would be:

1. Greater regulatory certainty regarding monitoring and compliance – consistent application of the switching arrangements and other market services would be delivered to a highly regularised standard;
2. Reduction in slamming likely as compliance increases generally; and
3. Reduction in the number of areas covered by the General Condition as operational matters could be included in a licence to operate.

6.18.14 There would, however, be a number of disadvantages.

1. Lead time for set up would considerable (many months or years) to get agreement, undertake and agree drafting;
2. Implementation costs would be high for both Ofcom and providers;
3. Costly to run as both implementation and maintenance would be expensive;
4. High regulatory burden on providers may impact new entrants or smaller businesses disproportionately; and
5. Providers (and Ofcom) may see such direct regulatory intervention in the market via a licensing mechanism as a retrograde step.

[12] It would be possible for Ofcom to oversee all decisions, or just selected elements in the form of Reserved Matters. Ofgem approves (or rejects) all changes to the Balancing and Settlement Code, the electricity wholesale market, irrespective of the nature of the proposed changes.

[13] The obligations of the Telecommunications Act 1984 were amended by the new EU communications regime in the UK on 25 July 2003, when the individual licences granted under the Telecommunications Act 1984 were replaced by the General Authorisation regime. This could be amended, however.

6.18.15 When considering the criteria set out by the BRTF, we would consider that Option 4 fails to meet the standard required in a number of areas. Whilst it is undoubtedly a transparent and rigorous way to regulate the market, it would not be cost-effective, nor would it be a proportionate regulatory burden given the alternatives.

Governance Summary

6.18.16 All of the options have advantages and disadvantages: Options C and D fail to meet a sufficient number of the criteria for good governance to be considered in relation to the implementation on ongoing governance of switching mechanisms. Option A is insufficiently robust or future proof to be an ongoing option given the vital importance of the communications sector; so we base our implementation structure on Option B. Whilst there are some challenges in this, it provides a stable platform for all providers to initiate, discuss, manage and introduce new switching regimes.

6.18.17 One suggestion for a structure for a governance vehicle is shown below, which we refer to as the Market Agent (purely for ease of reference, any term could apply), which would manage the governance of the Market Agreement (again, any term could apply). The Market Agreement would be a contractual agreement between providers and other market operators, with each signatory being responsible for delivery, e.g. compliance with the Data Protection Act. The Market Agent, on their behalf would be the contracting agent for services, e.g. H&D. Obligations would therefore be jointly and severally discharged.

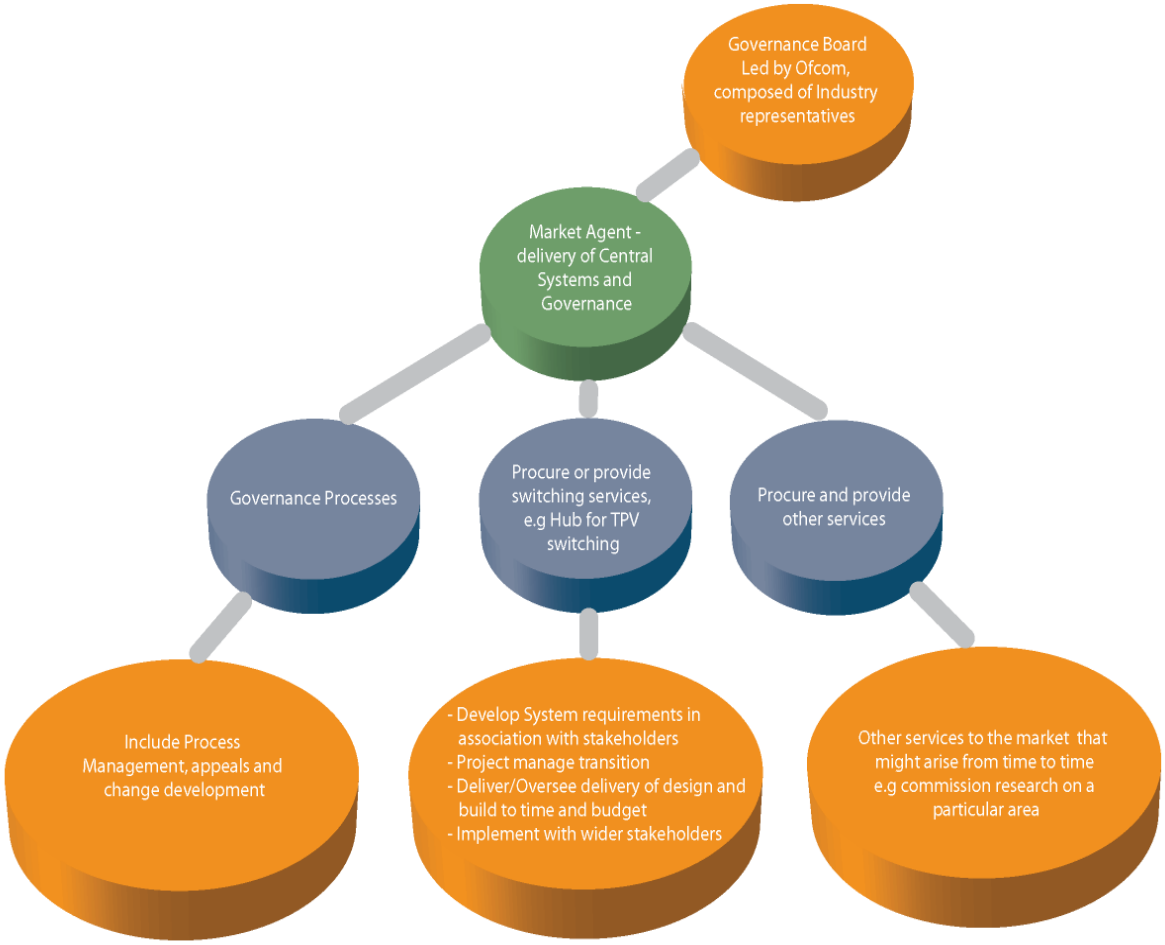

Figure 13 – Structure for a Governance Vehicle

General Governance Points

6.18.18 Irrespective of the governance structure chosen, there are a number of common implementation issues that would need to be resolved. Below, we list a number of issues to be debated at the earliest possible opportunity:

1. Criteria for change;
2. Fair representation;
3. Funding;
4. Voting; and
5. Roles and decision making.

Below, we take the list in greater detail.

Criteria for Change

6.18.19 Prior to opening the industry meetings, Ofcom will need to consider the governance of the implementation project – i.e. before the governance is live, there will be workgroups contending with important and contentious issues. Ofcom will need to arbitrate between providers, and it would be useful to have criteria set out up from the outset – for example, if choosing between conflicting proposals, Ofcom may give most weight to the proposal which best addresses the the consumer's need, or to pick the most economically advantageous approach assuming other criteria are met, or to pick the approach that is most likely to present a system that could be adapted for other technologies. In terms of implementation, clarifying the criteria that Ofcom propose to use throughout the period may reduce proposed changes that do not meet that criteria, and therefore streamline the process for both providers and Ofcom.

Fair Representation

6.18.20 Our experience in designing governance models informs our view that fair representation of the views of all parties to an agreement, or within an industry, and not just the voices that shout the loudest produces the most robust outcome for consumers and the industry as a whole. From the beginning of the implementation process, Ofcom and any service providers supporting it through the process, will need to consider carefully the way in which stakeholders views are represented, and consider a methodology to weigh up those views.

6.18.21 When trying to establish inclusive, accessible and effective decision making, the key question to ask is "do all stakeholders have an appropriate level of influence over the decisions that are made?". With particular reference to the implementation of a governance regime, questions will be:

1. Which groups of stakeholders will have representatives? Which consumer groups, if any?;
2. How many representatives will each group have?;

3. Will all providers or members get an equal vote (OMOV – One Member, One Vote)? What about providers that sit within a group of companies?[14]
4. How will the Chairman's powers be drafted? (Will it be an Ofcom appointment? If so, how will the other Board members be appointed?);
5. How will decisions be carried (overall majority, majority in each category, or unanimous decision)?; and
6. What would the Board have the power to make decisions on? (All proposed changes? Appeals?)

Funding

6.18.22 A critical discussion when setting up a governance regime is funding of the ongoing mechanism. Before we turn to this, there is an additional question about the costs of the implementation project. Normally, one would expect providers to bear their own costs of change and allow them to be as involved (or as remote) from the process as they see fit – e.g. whether they put forward people for workstreams, and if so, the type of resource. However, to ensure that new entrants and smaller providers are not excluded from the process by function of limited resource, we would recommend a transparent project management approach, in which agendas, minutes and circulars are produced and circulated widely (via a secure website) to keep providers up to date and allow them to dip in and out of the discussion.

6.18.23 With reference to the question of ongoing finance, the old adage is often quoted in these debates "no representation without taxation". This is shorthand for the principle that the level of funding should be commensurate with the share of the vote, e.g. if a party has 25% of the vote, that party should contribute 25% of the costs of running the agreement. While there is clear logic in this approach, parties with limited resources (which is common with new entrants), may be unable to finance their vote. The counter-argument is that there should be a relationship with a party's use of the service being provided and often a proxy for this is the market share that the provider has.

[14] As defined in the Companies Act

6.18.24 Gemserv considers that if the design of the voting arrangements is to address the issue of inclusivity and encourage participation in the decision making process, it is inevitable that a direct relationship between the share of the vote and funding will need to be weakened; although not severed. If this is the case, the use of market share is the primary candidate for determining the financial contribution for individual parties (although it can lead you into difficulties in terms of determining the market). Figures for market share can generally be checked against company annual reports and shareholder presentations for accuracy. Voting caps are the most efficient way of limiting influence and promoting open discussion.

Voting

6.18.25 Voting is one of the two factors which is the subject of most debate in governance design. Clearly the approach adopted has a direct correlation to the level of influence each provider will have on individual decisions. The inherent tension is providing sufficient voting rights to encourage active participation by smaller parties whilst as the same time avoiding a minority of parties/ market being able to veto change or impose disproportionate costs on the majority. There are several primary design aspects here which will determine the voting structure as outlined:

6.18.26 Frequent criteria used to determine the share of the vote include:

1. Market share (this is the approach adopted in some energy codes, especially at the retail end); and
2. One member/one vote – this can be a single vote for each panel member or one vote for each party to the agreement/ code, and is the approach used in wholesale agreements.

6.18.27 While the MRA (electricity retail code) does not have voting caps, a 20% cap applies to every supplier in SPAA (gas retail code). Voting thresholds would need to be considered, both within a constituency and as a whole.

6.18.28 For future proofing purposes, it may be useful to consider demonstrable interests, so a supplier solely in the fibre market cannot vote on matters that solely relate to the copper market.

Roles and Decision Making

6.18.29 Different industry agreements and codes adopt differing structures to execute the authority to make, and endorse, decisions. There are many variants of panels and executives that perform this role, but a central debate is whether agreement/ code decisions should be made by committee of experts or by representatives of the parties. Defining whether the agreement has constituents, and if so, what they are is a time-consuming business and we would recommend Ofcom considers as soon as possible what it feels the optimum outcome would be. On this decision, hangs a number of questions on how parties are represented and decisions made. Different constituents might be obliged to comply with different Schedules to the document, as set out below (examples are not indicative).

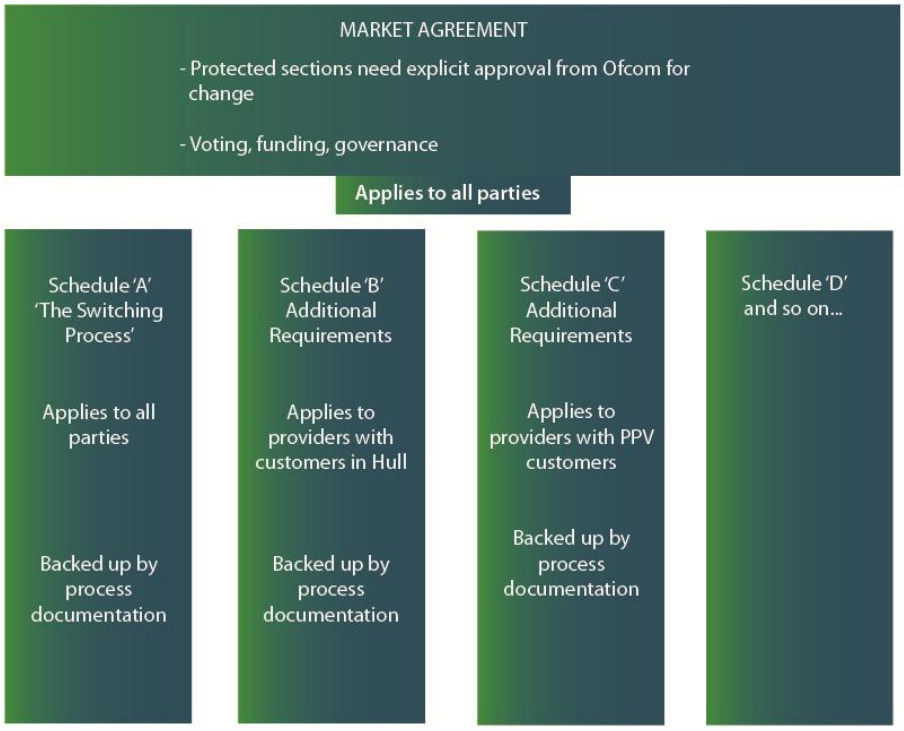

Figure 16 – Schedules

6.18.30 The case for a committee of experts is that they can provide an independent view of issues without being required (and potentially constrained) by representative duties. It also allows these experts to be appointed primarily according to their individual competencies, rather than because they come from a particular market constituency (albeit often the committee's composition does require experts from each constituency to ensure a broad church of perspectives). The counter-argument is whether it is feasible in reality for an individual to detach himself/ herself from their employer or constituency from which they originate, i.e. in practice it morphs into a representative role. If that is the case it can be argued that it is preferable to appoint a representative committee from the outset with a clear responsibility to advocate the views of their constituencies. This ensures absolute clarity of the role and associated responsibilities, avoiding the potential compromise by individuals between expert and representative positions.

6.18.31 A further point worth noting regards the practical arrangements for decision making specifically for changes to the agreement itself. For many industry agreements/ codes, there is a two tier approach whereby modifications are considered by sub-groups, e.g. workstreams under the Uniform Network Code or the Development Board under the MRA. However, these sub-groups can have differing levels of authority – the two main approaches (assuming a self governance modification) are:

1. The sub-group recommends a modification to the panel/ executive for approval/ rejection; or
2. The sub-group has delegated authority to consider modification proposals. The discussion and voting takes place at that sub-group, either rejecting or approving the proposal. This decision does not require approval by the panel/ executive before implementation (although clearly subject to appeal).

6.18.32 This second approach means that the panel/ executive focuses on strategic issues such as policy, budgets, compliance, market developments and accessions, delegating the operation of the change control processes to the sub-group.

6.18.33 Gemserv's experience in gas, water and electricity markets is that clarity of responsibility is critical and, where a representational role is adopted, it encourages active information sharing and debate prior to the executive committee or panel meetings. This facilitates an informed discussion at the meetings and can often facilitate the making of pragmatic decisions to the benefit of all parties. The use of a sub-group with delegated powers has proved an effective division of responsibility and facilitates the wider participation of parties with voting roles in the operational governance of the agreement/ code.

6.18.34 For implementing such an important and business critical project, we would recommend that Ofcom use one or more technical support companies. Both in terms of the actual project and the outcome of the governance work, using an independent or third party agent separates the process from the actors or companies who have an interest in the outcome, and can allow Ofcom to focus on the strategic aims of the project, rather than getting bogged down in the detail of the implementation.

Technical Implementation Challenges

6.19 Minimising, or at least addressing, the technological imposition of change is crucial. Where Gemserv has designed switching regimes in the past, participants have been able to decide whether they invest in a High Volume Interface (HVI), where a machine communicates with another machine and flows are highly automated, or invest in a Low Volume Interface (LVI), which relies on data being input manually. For HVI, a set of standard protocols would be defined for all standard data flows. Providers who choose to take the HVI option would take the protocols and design their own systems to interact with the HVI system, which would automate all standard flows thereby offering economies in processing. For smaller or new entrant companies, using the LVI process would offer a degree of flexibility in that processes would go via web interface on an individual basis.

6.20 This offers the additional advantage that as a company grows in the market, they could choose to automate certain flows (e.g. initiation of the switching process) to the HVI systems, and keep exceptions reporting and other less standard flows on the LVI system. This would allow them to make efficiencies without the need to build a fully automated system in one go[15].

6.21 Switching regimes can be implemented that sit complementary to providers' systems, rather than there being a need to fundamentally change systems. Implementing any of the options requires change, the key is to minimise the impact of these whilst maximising the efficiency, future proofing and complementing a positive consumer experience. Below we list some key technical considerations. This is not an exhaustive list and we do not try to resolve them in this paper. They are mentioned to allow an understanding of what challenges and subjects technical working groups will have to consider during the implementation timetable.

Provisioning Process Implementation

6.22.1 The intervention of Hub validation deviates from the status quo by virtue of the fact that there is additional functionality to ensure adherence to the current provisioning timescale. Using an automated web service or web-based portal to take new sales orders from consumers face-to-face, over the phone or online complicates existing systems and processes. One potential element to discuss on technical workgroups is the implementation of an order system to ensure that the time consumed by data flows between the provider and WP/ AO is minimised. The intervention by the Hub to co-ordinate the validation process and the generation of the TxC would result in the need for the AO to first run a cycle to tag the asset and then build the received order via the WP/ CP to start the provisioning process.

6.22.2 The implementation considerations would be to get an agreement on any process changes with incumbent providers and if the existing process needs to be re-engineered or updated to incorporate new changes.

6.22.3 The additional complication of TxC on the lead to cash (L2C) process means that would also be affected; currently the closest equivalent to this process is the MAC provisioning scenario.

[15] This is the process used in the Scottish Water market, and the LVI process allows self-supply, with a very low entry level for new entrants.

6.22.4 Under the use case UC01[16] the AO and WCP gets ready with the full setup changes and aligns its process to match with the current MAC process to facilitate efficient operation of TxC provisioning. This would mean provisioning could possibly occur, on average, in a five working day timeframe. However, for this there would need to be significant changes to the EMP platform and operation of dialogue service which will incur not insignificant costs.

6.22.5 In terms of implementation, the issue of provisioning timescale would require resolution at a relevant technical stakeholder group for both the GPL and LPL TxC options and expert input into an optimal outcome would be necessary to ensure consumer experience of the competitive market is not diminished. This process would be agreed between Quarter 2 and Quarter 5 of the implementation roadmap and could take between six and nine months to agree.

Impact on EMP Platform

6.22.6 Further considerations for introducing TxC is its impact on the EMP platform, including agreement of mandatory dates and new arrangements with the AO. In addition, for the TxC process to efficiently work, a partial or preferably complete automation is highly recommended for the generation of TxC to reduce the lead time. There are obviously cost implications for this. Considering the impact on the Hub[17], it would likely sit alongside the AO completing the validation process and passing order details to the AO gateway to complete the back-end process. With the asset validation already completed, the AO would only need to perform the switchover. However, the asset information and data integrity must have already been cleansed before the initial upload.

6.22.7 Further considerations for harmonisation and its impact on the EMP include agreement of mandatory dates and new arrangements with the AO.

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[16] CSMG (2012) Switching Process Use Cases – GPL TxC Model, Figure UC01: Set-up CP, p.20

[17] In the case of the GPL TTG option, asset information upload via the Hub is a mandatory requirement and still requires changes to the EMP platform. However, the impact of these changes would be minimal because a code is not generated and only existing information is used to process switching. In this regard, GPL TTG considerably reduces an implementation challenge that TxC poses.

6.22.8 Many small and medium size providers rely on third party integrators (TPIs) to interact with AOs, and clearly, any implementation change that required amendments to the EMP would result in a new release for the TPIs, for which there would be cost implications. If implementing a change to the EMP, it would be advantageous to plan for changes to coincide with the usual EMP heartbeat releases as it would minimise any additional downtime and therefore reduce overall costs. Technical groups would need to consider this between Quarter 2 and Quarter 5 of the implementation timetable.

Implementation of the Transfer Code (TxC)

6.23 In the GPL TxC option, the code will be issued by the central hub. Given the multiple relationships that this hub will have in the industry (it would need to have access to information from the AOs), we assume that there will be a web of interchanges of information. Technical groups to discuss the role of the hub are crucial. We talk extensively about the H&D that would be required for the implementation of the GPL TxC option in Section 6.31 to 6.45.

6.24 Most businesses use transfer codes currently in switching processes in some form. Therefore, we have made the assumption that implementation of the TxC would not require system development from scratch, nor total redesign. It is unclear how the relationship between MPF providers and the hub would work and whether future development would be in scope e.g. adding an AO providing fibre optic services.

6.25 Setting up the TxCIA is akin to the governance model needed for management and operation of the H&D in the case of GPL.

Other Technical Considerations

6.26 Changing provider if the process is harmonised for a GPL-only switching model would mean the risk of having service implications (SIs) similar to the current NoT process, such as loss of care alarms, e-mail addresses or calling features. Consideration must be given to how consumers know what services are provider-dependent (i.e. changing their provider could make them lose part or complete service provided by their broadband provider). Consumers, including those who are elderly or vulnerable, may be unaware of the service provider dependency of these services and could be affected substantially.

6.27 Considerations for mitigating the risk of losing inherent services is very important.[18] Separating bundled services could pose a longer term issue. The implementation planning process will need to review and improve the current communications process to keep consumers informed before Go Live.

6.28 We move on to consider bundled service transfer and vice-versa. The current CSMG design process uses case UC05[19] for consumer switching bundled services, which assumes that both phone and broadband are provided by a single MPF provider. In addition, the various derivations[20] from the happy path do not cover services for phone and broadband from different providers, this, in the worst case, could be where a consumer has WLR, CPS and SMPF BB with three different providers.[21]

[18] Moving to a GPL model may exacerbate the issues around Early Termination Charges (ETC). Any revised switching process would need to adopt a solution that mitigates this concern with more clearly defined communications when consumers switch to new products, with specific charges for the plan chosen calculated and the message written in a simple way. Whilst we appreciate that this is a design issue we did want to reference it in this section.

[19] CSMG (2012) Switching Process Use Cases – GPL TxC Model, Figure UC05: Customer switch – bundled services, p.45

[20] CSMG (2012) Switching Process Use Cases – GPL TxC Model Table 4.5.5 Deviation from happy path p.56-57

[21] OTA2(2012) http://www.offta.org.uk/IndustryBPG%20AppendixAMigrationScenarios.pdf, Appendix A - Migrations Scenarios

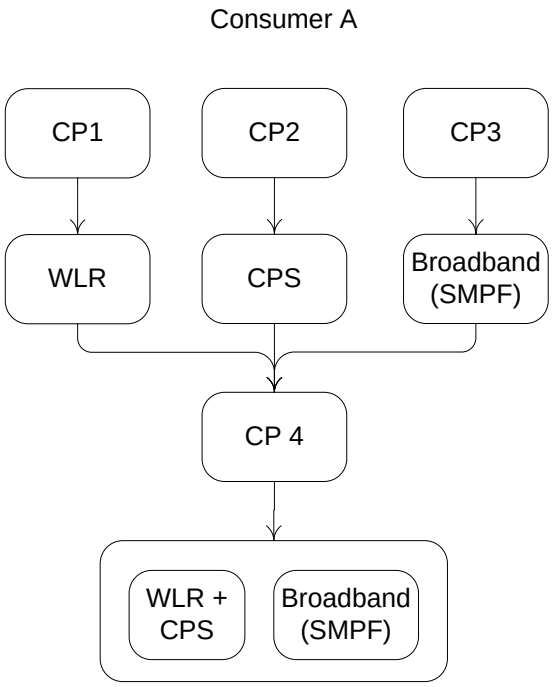

Figure 17 – Complexity of Service Types for Consumer Switching

6.29 As the stakeholder working groups develop the User Requirements to hand over to the H&D, if the GPL TxC option is chosen, the design has to be clear on the variations of service providers and address the technical difficulty of all various bundled scenarios. It must reflect the reality that a consumer can choose to either split an offer for phone and broadband, or change from a split offer to a bundled option. Bundling, unbundling and its many variations will require specific consideration when addressing data flows and data sets.

6.30 The complexity for bundled options can only be resolved with stakeholder agreement as validation of assets and direction of data flows for service migration would need to bring together phone and broadband. Thinking of future developments, the stakeholder working groups may also consider multiple AO variations. It may also be necessary to mandate linked order options.

Hub and Database

6.31 Ofcom, in the 2012 Consultation, described the inter-provider hub as enabling the GP to identify the correct service(s) to be switched and communicate this to the LP. The Hub would hold a centralised database which would include a list of all UK fixed voice and broadband services and providers, account references, customer names, addresses, postcodes and CLIs. This H&D would be utilised only for the consumer switching process.

6.32 A number of providers have highlighted concerns about the implementation of a central H&D in their responses to the 2012 Consultation. Moreover, we have been informed that this topic has been discussed in some detail at the SWG.

6.33 Concern has been raised about whether a database would cause a longer time to switch[22] and whether it would lead to inefficiency because it would be difficult to maintain a centralised industry database. Potential data integrity issues were mentioned because of the assertion that providers would have little incentive to update a centralised database. Further comments concerned longer implementation timescales, more complexity, the need for greater industry co-operation and agreement on database standards. There were also concerns about fairness, data privacy, cost and that the GPL TxC (which exclusively the H&D relates to) was not viable because of these issues.

6.34 On the opposite side, other stakeholders supported the idea of a database as long as the following principles were met;

1. Transparency;
2. Data minimisation;
3. Limitation of user types;
4. Data quality; and
5. High level security.

[22] BT (May 2012) BT's response to Ofcom's consultation document, paragraph 1.17, p. 4

6.35 We will consider these concerns in this section and try to demystify whether a H&D can work for telecoms and what it might look like. It is a fundamental part of the implementation of GPL TxC and therefore time must be spent to analyse what would need to be considered if it were to be implemented.

6.36 Clearly the design and development, and subsequent management of the H&D are of critical importance in terms of the implementation of a governance system. Specific implementation issues related to the H&D are discussed in section 6.5.7, but here we will touch on the elements as they relate to governance. A multi-party agreement or code is the ideal mechanism for managing a third party service provider either directly, or by creating a central market agent, who either procures or provides systems. This gives the maximum freedom to providers to outsource the H&D (based on the criteria set out by Ofcom) should it be economically advantageous. We would recommend that one stream of the workgroups established as part of the Implementation Project specifically look at the commercial arrangements relating to the H&D. Successful outsourcing of the IT elements will require detailed and accurate User Requirements from providers.

6.37 Absence of common, transparent processes across technologies could eventually be a detriment to new entrants which could impact the competitive markets and consumers. Procuring retail market services, rather than basing it on incumbent, AO or ex-monopolist systems encourages providers to accurately determine and describe their needs and requirements more effectively.[23]

6.38 We recognise that there are a number of stages needed to arrive at a proportionate solution, including technology being deployed in an appropriate and possibly innovative way, to provide these key services.

6.39 The five key steps towards implementation for the H&D are:

1. Scoping;
2. Design;
3. Establish project;
4. Build solution; and

[23] A separate paper on data sets in a H&D is provided under separate cover.

5. Implementation.

6.40 Scoping a system would further breakdown into sub-stages:

1. Reviewing the operational framework and process information from CSMG;
2. Reviewing the outputs of the Ofcom consultation;
3. Reviewing the outputs of the stakeholder working groups;
4. Establishing risks and dependencies;
5. Establishing where the system will be managed and maintained, whether this will be outsourced under support contract or owned in house; and
6. Establishing clear funding for the future of the mechanisms, which will be enduring.

6.41 The next stage would establish the design of the various systems needed to meet the specific requirements set out above. We would anticipate some or all of the flowing tasks:

1. Set out who the stakeholders are and what contribution they may make;
2. Get indicative costs to establish if the scale of the systems will be proportionate with the numbers of consumers and switching activity;
3. Review potential suppliers ready for RFI if needed through procurement;
4. Confirm a timetable for delivery and operation;
5. Establish earliest start date;
6. Set quality and performance criteria;
7. Carry out procurement for systems; and
8. Seek and gain regulatory and stakeholder approval.

6.42 It would be essential to manage this project using structured project methodology, e.g. PRINCE2 or MSP – notably an approach where there are defined controls, structure and project governance in place. PRINCE2 and MSP amongst others are international recognised and set up controlled environments and a de facto process-based method for effective project management. This would provide levels of assurance, assign responsibilities and identify suitable funding.

6.43 The project would be able to award the contract and manage the supplier through the development stages. Stages of the contract would include testing, data population, and the rollout of requirements that will be placed on providers to enable them to use the system. There will be a need to communicate development milestones to all stakeholders as well as to the central project office.

6.44 Training and workshops are good ways to advise and engage the participants in the implementation of the process. In terms of costs, common commissioning may reduce prices and therefore, the commercial burden on individual providers. It is our opinion that relatively low costs would be attached to a governance vehicle (other than the set up of the H&D and its ongoing annual costs), and depending on the proposed size, it should possible to set up a governance regime for £1m and to run it on an annual basis for around that figure.[24] Central and market costs would include directly incurred costs such as either directly employed staff and premises, or sub-contracted service providers; who would incur legal and regulatory costs of running the agreement (drafting proposals, discussion papers, papers for the Board and so on). This figure does not include the costs of development or maintenance of the H&D, although in other documentation provided to Ofcom, we have made an estimate of the costs based on our experience designing, setting up and operating numerous similar models in other markets with central systems in the electricity, gas, water and environmental sectors.

6.45 Clearly there are a significant number of tasks that would need to be included in the implementation plan for a GPL model. One of the great risks of this model is capturing sufficient detail in the plan – the larger the project, the more essential the pre-planning and the planning stage becomes. The roadmap set out above in Figure 11 contains a number of activities which are dependent on other tasks, and the number of dependencies raises the risks for implementation.

[24] Central and market costs only (running the governance agreement or agency, costs associated with the agreement such as meetings, any directly incurred costs such as finance support, billing etc). It should be noted that this figure may vary depending on the capacity and support received from providers during the drafting process. It is noteworthy that our experience predicts a lower figure for both set up and ongoing annual costs than other industry documents.

6.46 In addition, a risk for the project is the number of participants who would need to be involved in the process. This risk can be mitigated by a strong PB and Project implementation team, working from a robust Implementation Strategy document that sets out the direction of the Project, the deliverables and the timelines.

Effective Development and Implementation of a H&D to Support Switching

6.47.1 Many markets rely on exchanges of data between participants in order to operate effectively. This gives a wide range of options, experience and lessons learnt to draw upon when considering options for a rapidly changing market such as the telecommunications sector.

6.47.2 Examples of centralised information exchange include:

1. Use of BACS in the banking sector, which relies on a common set of data and agreed transfer within tightly managed timescales;
2. Sharing of claims histories in the insurance industry, here the key is an agreement to share like for like information via a central exchange in order to ensure insured parties are correctly risk assessed and claims history considered when setting premiums;
3. Customer transfers and related metering and consumption data in the Scottish water market, where a single central system is used to manage all inter-participant transactions and to calculate wholesale settlement for water consumption based on meter reads provided by retailers; and
4. The transfer of customers between electricity suppliers in the GB market, which utilises a common set of data, unique references for each meter point, and mandated registration databases maintained by the electricity distribution companies.

6.47.3 All of the above have different characteristics in the detail of operation, but all share two things in common:

1. Use of common data keys to identify a dataset in a consistent manner for participants; and
2. Effective aligned data transfer protocols.

6.47.4 Any common arrangements developed in relation to a harmonised option for switching in the fixed line market will need to consider these core elements, whilst ensuring that wider legislative, regulatory and operational considerations are taken into account.

6.47.5 In our timelines, we have estimated a six-month period for designing, building and testing the database, based on an assumption that the User Requirements are in a workable form and ready by the correct date. We acknowledge that this is a tight timetable with little room for contingency, and the industry will need to be fully committed during the development of User Requirements phase in order to ensure the build phase remains on track.

6.47.6 It is also dependent on all the commercial arrangements for the H&D Developer being agreed prior to the six-month phase, and the test arrangements already having been discussed and agreed in the Implementation Strategy.

6.47.7 Questions that industry might wish to consider prior to the design phase:

1. How future-proof shall we make it? What changes might we reasonably expect that could be implemented as part of Go Live? (this is likely to be much cheaper);
2. What sort of developer does the industry need? What type of systems are needed?;
3. Will you use one company to design, build and maintain the systems, or will the roles be separated?;
4. What data protection standards will you use?; and
5. What service levels will you expect? (Or what is economical and appropriate?) Do all providers agree on the expected SLAs?

6.47.8 Additional information on datasets and options for the Hub and Database is set out in a separate discussion paper for Ofcom.

Use of Common Data in Switching

6.47.9 The current range of switching methods in the fixed line market utilises a number of different data items to identify and confirm that the correct services are being switched for the customer and it is recognised that, due to the range of underlying systems and technologies developed organically over time, this can lead to issues with identification and effective switching of services; in particular where such services are being bundled or unbundled during the switching process. The provider responsible for the unbundled line will issue a CLI not visible to the AO; some of data held by the AO is altered.

6.47.10 The use of a common network termination point (NTP) as one of the data sets for both customers and providers is a particular challenge. The customer is most likely to use one of two pieces of information (references) in discussions with their CP; the CLI which is currently fixed against the line, or their account number, which will only be relevant to their relationship with their current provider.

6.47.11 In contrast, providers will be seeking to use an industry reference in the switching process that is recognised by both the LP and GP in the switching process, and there is also a need for a reference that is recognised by the AO or WO for use in the related back-end processes, e.g. data set flowing between CP and AO/WO – ALK[25] (gold, silver or bronze), Address including postcode, service type and end-user name (for new line installation only).

Information Transfer

6.48.1 As important as agreeing the core data is having an agreed way of transferring information between participants. The transfer of information does not necessarily require a large central database, but will need to consider appropriate protocols and technology to ensure that the switching process is efficient and accurate for the customer, providers, and any other market participants involved in either front or back-end processes.

6.48.2 Given the volumes of switches in the market, and the associated indicative data needs, information transfer that utilises electronic data transfer, possibly via either the public internet or a private virtual intranet is indicated.

6.48.3 Any transfer protocols will need to take into account the appropriateness of the information being transferred and whether this will be stored and maintained centrally, or transferred as required to support specific events in the market.

6.48.4 In addition, information security and data protection of customer data will be significant considerations in any solutions that are developed, and these will need to be factored into any overall design to facilitate transfer of data.

[25] ALK – Access Level Key. This is unique asset identifier for address to match with Openreach network.

6.48.5 Key to such transfers will be a reliable and effective means of identifying both the sender and intended recipient of information, in many markets this is achieved via use of unique identifiers for each organisation in the market, and also by defining roles.

6.48.6 In the telecommunication industry, the current used data items such as CUPID or DUNS ID could be used to define provider function involved in the switching process for example, a provider may also be operating as a WO and an AO, and transfers could be internal or external to the organisation but still need to pass across the common interface.

Data Management Principles

6.48.7 We discussed earlier that some participants raised concerns regarding data protection and costs for the development and maintenance of such a central database. These concerns can be addressed to a large extent by ensuring that a number of good market data management principles are followed in any solution design, including:

1. Only that data which needs to be present should be included, information can be shared without the need to store everything in the middle;
2. Data should be normalised, this means that only essential data and data relationships are developed, thus reducing redundancy of data and ensuring as far as possible that data is used efficiently and has a single instance in the database;
3. Data should be arranged according to purpose, and datasets should have indexes or keys that link datasets together, this supports normalisation;
4. Access to data should be based on a need-to-know basis, i.e. users only see what they need to carry out a defined process or action;
5. The user interface should be appropriate for the user, this will often include consideration of both HVI and LVI to ensure that all participants are able to access information in a way appropriate to their organisation;
6. Data rules should be established, such that validation checks on data to be input are carried out and poor quality data is rejected;
7. Data ownership should be clearly defined, managed and governed, this ensures that all participants are aware of their responsibility in maintaining data at a given point in any process lifecycle; and

8. All transactions should be logged such that they can be monitored and any potential misuse identified quickly and readily.

6.48.8 By ensuring that these good principles are followed in the design stage, the resultant database will ensure best value in terms of support costs, whilst allowing for an effective security model to restrict access and track user interactions.

6.48.9 Of particular note is the conceptual separation between the transfer and storage of information, by minimising the data that are actually stored, the overall risks in data security and management terms are exponentially reduced.

Avoiding Mis-selling

6.49.1 We would recommend that a system is designed on the premise that companies are assumed to be operating correctly under good corporate governance to comply with a statute relevant to it. It would not be appropriate for burdens to be placed on the whole market in the absence of corporate non-compliance by participant organisations, for example requiring a system with so many checks and balances that it either frustrates competition, or penalises smaller providers or new market entrants. However, behind this, we would also recommend a robust IT solution that monitors behaviour and provides a verifiable audit trail of both companies' and individuals' actions.

6.49.2 The most secure systems provide every user with a unique login with their own user name and password, with controls such that a person logging onto the database would only be able to get data on a single account name or address, as is reasonable as part of a legitimate switching process. That user's actions would be logged and recorded and the system could also be developed to provide analysis of a person sitting on a system all day looking first at 1 Acacia Avenue, then number 2, then number 3 and so on, as the chances are this is not a random list of contacts; similarly if a sales agent looked up everyone called Green or Khan, this is unlikely to be best practice. Recent changes on the ECOES system have been to bar Agent login from more than one machine at a time, as one individual was logging onto multiple systems in order to gain more information.

6.49.3 The system could be designed to run monitoring activity and provide alerts and reports highlighting fishing trips, with that information being shared with the company who the user is associated with in the system, and an explanation sought. The company may have a reasonable explanation or they may have a rogue agent: either way, the system would provide checks to protect the information stored on it and ensure it is used appropriately.

6.49.4 We believe that by putting the information to the companies and letting them deal with it in the first instance (according to a pre-agreed process), companies will be effectively incentivised to employ, train and retain excellent staff who are committed to consumers' interests. More sophisticated records could be kept if it was decided by providers that multiple record look-up was required; again, keeping to the principle that simplicity and usability are key and, provided the incentives are in the right place, provider behaviour ought to meet expectations.

6.49.5 Alternatively, if a system-based solution were not chosen, you could oblige a regular warranty from each provider (at Director-level grade) that they had internal processes and procedures in place to guard against such abuse.

Key Features of a H&D Solution

6.50 Such a solution is likely to comprise a number of core elements:

- A central database to hold the minimal dataset required to allow effective operation of agreed switching processes;
- A hub to allow for the routing of information between participants;
- Agreed common interface and data transport structures and protocols;
- Agreed data keys to ensure consistency of information; and
- Clear governance covering processes and data to be used within those processes, and rules for access etc.

6.51 In addition, and in order to support effective market operation, the following might be considered:

- Provision of a central administration service to manage change, issues queries etc;
- Future-proofing to allow for further future integration of other processes and switching regimes as the market further matures; and

- A secure web-based portal to allow participants to perform data checks prior to a switch being initiated.

6.52 Hours of operation and availability also need to be considered, a fully supported 24/365 service will be costly to operate, and so consideration should be given to how costs are balanced against availability (noting that the two do not have to be fully aligned). It is possible to maintain a 100% availability but allowing for system upgrades and maintenance, common targets are 99.6%. Taking off 0.4% radically reduces the costs of operation. An example of this is ECOES, a central repository for information relating to meters in the UK electricity market. Typically, that system runs at 99.6 to 99.9%.

6.53 An alternative approach could be for the use of a virtual database whereby participants are required to maintain their own databases to facilitate data exchange.

6.54 This is the approach employed in the GB electricity market where Distribution Businesses all maintain a registration database containing common datasets. However, given the complexity of the wholesale arrangements in the telecoms market, this approach is likely to be more complex than a centralised solution and would also introduce additional costs in that each participant would need to develop and maintain their own IT solutions, rather than sharing costs for a central solution.

6.55 The Distributor's Meter Point Administration systems are all required under MRA rules to be available every Working Day between 08:00 and 18:00. System processing occurs overnight in a batch with responses sent on completion (usually around midnight, depending on traffic volumes received). If they fail these availability service levels, liquidated damages arise, which they pay directly to participants. Arrangements for interfacing with the systems outside of these hours can be agreed bi-laterally, on a user-pays basis (interactions during the core hours is not charged on a usage basis, but recovered through the general Use of System network charges).

6.56 In this electricity market operational model, the availability and processing is hosted on each system owner's platform; that is transactions and responses are directed to a specific address, rather than a central hub. In this scenario, participants also need to be aware of which system they need to interact with, which is codified into the MPAN for ease of reference. These factors would also need to be considered in the solution design and development/ implementation timetable.

Hub

6.57 The Hub element of the solution would likely be closely coupled to a central database. It is envisaged that all inter-provider messages would be routed via this Hub, including those to or from the actual database.

6.58 One advantage of such a Hub would be that the GP would not need to communicate bi-laterally with the LP, or even be aware of their identity, as the Hub would route based on the information held in the database. This would be particularly helpful where services are being bundled or unbundled.

6.59 In addition, the Hub would facilitate quality checks on incoming messages, for example where a GP is requesting the switching of multiple services it would validate that these are in place for the service point affected by the request. It could also be used (via a database look-up) to monitor where switches are in progress and report these as required.

6.60 Broadly, the implementation challenges for the Hub are no more than for distributed interfaces. Indeed, many challenges are mitigated such as a Hub being a single interface with a common specification.

6.61 In general, implementation issues for a central Hub are similar to those for distributed implementations, although the scale and coverage of the Hub may bring deeper considerations in some areas. We consider some of these below, noting that such matters equally apply to considerations for implementation across multiple platforms, and it should not be overlooked that, whilst the scale of implementing individual solutions may be smaller, time and cost inefficiencies will accrue through the extrapolation across many instances; whereas a single Hub implementation mitigates cost and time issues.

1. Processing capability – Reasonable traffic throughput is a factor to mitigate against service-denial issues arising from excessive use by one participant user. This can be mitigated through publishing reasonable thresholds and permitting exceptions to be arranged bi-laterally, perhaps during times of low usage, to smooth system traffic and processing;
2. Security protocols – There may be additional implications to certificate and key standards on a central hub, but this is dependent on the content of information passing across the hub and any data retention requirements. It should be noted that these considerations are not absent in participant-based solutions either, and a central hub can provide greater security and less administration of passwords, private key infrastructure and can provide greater oversight of misuse (as it will manifest as abuse more quickly in a single base than over distributed interfaces); and
3. Data take-on – A hub will likely be reliant on some level of data take-on from a variety of sources. A clear timetable and data format catalogue will mitigate any issues and enable a central validation of data standards. Where a hub is interfacing to recipient databases, it will result in a common standard, format, language and structure being used, which in turn will require all participants who interact with the hub to adopt that protocol and data language, at least from their gateway to and from the hub. This needs to be balanced against participants interacting directly with a number of systems, where interpretations and platform variations introduce less certainty in data format/ protocols, which introduce inefficiencies through transactions being rejected or, in extreme cases, being stranded.

6.62 The hub would also allow for the transfer of personal and commercially sensitive data without the need to store such information centrally, indeed by using effective data keys and routing, the hub would be blind to such information, thus mitigating data protection risks and information security risks.

6.63 The hub functionality could also be expanded to allow for messages to be passed between providers, WO and AO as required for events such as requests for new services and the back-end elements of switching. Conceptually, the hub could even be developed to allow for information exchange between AO and WO.

6.64 A final consideration in relation to the use of a hub is how participants will send and receive messages. Larger organisations are more likely to require a fully automated solution that allows for communications in such a way that minimises impact on their internal systems and processes. Against this, smaller participants (and particularly those entering the market) are not likely to have the resources to develop complex IT solutions in order to send and receive messages.

Uploading Information

6.65 A data upload presupposes that the option for a Hub to hold data is chosen – if we assume the Hub is a portal which transfers data from provider to provider (via possibly other parts of the supply chain, e.g. AOs and Wholesalers) then no formal upload from providers will be necessary. (Please refer to the chapter on H&D and other central systems for full information on what data would be stored where and when).

6.66 However, it will be necessary to test the flows and routers and Ofcom would need to create a master test case so that, prior to Go Live, we would expect a cleansed set of data from AOs to populate the Network Termination Point ID (NTPID) fields (or the key field). Where there is a distributed database, providers may need to add the reference to their own data set. This could be triangulated against other datasets to confirm the accuracy of the field. It may also be necessary to store some information from wholesalers on the system with regard to the identity of the provider so that switches could be affected.

6.67 There are benefits of the centralised approach: by undertaking a data cleanse as a specific project, data providers could develop effective mechanisms to ensure accuracy. The central system would also be sure of a baseline set of data on the system against which other data fields could be appended in the future. However, it would be time consuming and would require dedicated resource from data providers. Arguably one might say that a company who had in place good processes and procedures for data management would be less inconvenienced by the request.

6.68 An alternative approach would be to only flow information from AOs via a distributed model at the time of the customer switch and, from there, follow the normal flows of information. Again, there would be advantages and disadvantages of this approach. Upgrading the data would take longer to achieve and it would potentially require iterative switches. Providers would have a lower resource commitment to make but it would be a greater ongoing requirement.

Core Data Items and Data Take-on

6.69 This could be achieved via one of two methods, either:

1. Via a big bang approach were all participants provide data for an agreed start-up date which is validated and loaded into central systems; or
2. Using an incremental approach where required data is only loaded and a reference set allocated as needed to facilitate new switches from an agreed fixed date.

6.70 In the event that a big bang approach is to be adopted, an agreed data cleanse and validation process would need to be developed that would facilitate initial data triangulation between AO and WO records and those held by the CPs. This would allow for matching of addresses to services and the providers of those services, and the population of the core data items.

6.71 Whilst this approach may place an initial burden on the market in terms of provision and cleansing of data, it would provide other benefits in that, at completion, there would be a single view of market-wide data that would improve all interactions between participants on an enduring basis.

6.72 Were an incremental approach to take-on to be adopted, there would still need to be an agreed pre-population validation routine, and participants would need to agree and maintain processes to allow information to be gathered and entered into the central systems where required to facilitate a switch.

6.73 Whilst the initial costs may be lower for a gradual take-on, this would be an open-ended commitment and thus, over time, result in a higher cost burden on the market as a whole. It would also introduce uncertainty as it would lead to a need to operate multiple processes over an extended period of time; a situation which exists in the current multi-solution environment and is recognised as a burden on participants. For example, for many years in the Gas market, retailers have used one electronic system to switch customers on the national Transco market, but alternative electronic or, in some cases, fax-based systems for switching customers on independent gas network (unadopted pipeline systems, generally infill towns – towns where some parts have a gas network, but some estates or business parks developed at a later date don't have access to the network).

6.74 As a consequence, for many years, retailers offered one set of prices for customers on the standard network, and offered a much higher price to consumers on IGT networks to reflect the fact that they had to operate additional internal systems and had additional administrative costs of operating multiple processes.

Governance

6.75 Governance of the procedures for take-on of data is necessary and desirable. Governance of the implementation phase for GPL is discussed earlier in this paper. During the operational phase of the hub, we would expect the Agent to produce (after consultation and direction) a Schedule of proposed changes. This could be a monthly/ quarterly/ ad hoc release of system changes. If necessary, rules for urgent changes could also be written.

6.76 We would expect the system changes to be advertised across the community, so that providers or groups of providers which were particularly (or unexpectedly) impacted could feedback before the change went live.

6.77 We would also expect the Agent to provide tools for smaller/ specialist providers such as webinars, help functions and introductory sessions.

Information Security

6.78 Market participants already have obligations under the Data Protection Act (DPA). The introduction of a H&D to facilitate a more effective and efficient switching process however, will present a number of specific issues in relation to data protection which are considered below.

6.79 Early engagement with the Information Commissioners Office (ICO) in relation to data protection and ownership is invaluable in confirming that the relevant points of ownership and control meet the needs of data protection legislation.

6.80 Market participants who are party to the agreement should, through the form of a self-assessment, provide evidence that they have registered with the ICO either as a data controller26 or data processor. With the current envisaged structure of the H&D as described in Section 6.50 to 6.56, it is believed that the AO, WP and CPs would also be registered as data controllers.

6.81 There is a variant to an organisation being a data controller, whereby organisations may be joint controllers or controllers in common – where the AO, WP and CPs share a pool of data that can be considered personal data then they would be considered data controllers in common.

6.82 Where a service provider is contracted to manage the agreement between the parties, they would be required to register as a data processor with the ICO. Through this model, Ofcom will have minimal input into the both the setup and ongoing running of the database, it would be the parties who would negotiate the design of the database, to achieve a set of defined outcomes.

[26] In relation to data controllers, the term "jointly" is used where two or more persons (usually organisations) act together to decide the purpose and manner of any data processing. The term in common applies where two or more persons share a pool of personal data that they process independently of each other

Multiple controllers, risk mitigation and consumer engagement

6.83 With multiple market participants classified as data controllers under the DPA, it is important that clear processes are put in place to mitigate and reduce liability associated with any breaches by participants. Risk of data misuse, loss or damage can be significantly reduced by enshrining conditions with the information security element of the market agreement to specify a number of key elements:

1. Secure protocols and standards – For example, the use of a secure file transfer protocol (SFTP) connection to all participants for the secure, reliable and efficient transfer of large or small amounts of data to and from market participants, either automatically or on an ad hoc basis;
2. Data access – This can be controlled through participants having appropriate processes regarding systems access for all employees and agents;
3. Data access logging (time and data) – This will act to identify any data breaches. Clear records will need to be maintained that store access records detailing what data was accessed, by whom, where the access was made and when; and
4. Data separation – Through the design of the H&D there is a separation between the transfer and storage of information. Through this design, the associated data security and management are significantly reduced.

6.84 A case study of a similar system, ECOES, is attached to this document as Appendix C.

6.85 Clear communication with consumers as to how their information will be stored and used is the essential first step in providing comfort to consumers that their information will not be misused or shared with unauthorised third parties. At all stages in the engagement with providers, consumers need to be made aware of the DPA, supporting protocols, standards and processes that are in place to protect the use of their data. It should be clearly communicated to all consumers that providers have processes for any complaints about the use of their information, if this does not satisfy consumers there is the ICO whereby complaints can be escalated.

6.86 The message that the telecommunications industry is responsible can be reinforced by referencing that the number of data breaches reported to ICO in relation to telecoms is actually in decline with the number of data breaches, falling from six breaches in 2010/11 to zero in 2011/2012[27].

Implementing Good Information Security – Recommended Approach

6.87 Information security concerns can be addressed through a range of approaches from ISO 27001 through to less formalised processes and tracking to ensure compliance with the key principles of good information security. Different approaches to information security require varying degrees of investment by market participants and also an acceptance to manage different levels of risk. The simple range of approaches to information security are presented in the table below:

[27] A recent request under the Freedom of Information Act from the ICO supports these figures. http://www.net-security.org/secworld.php?id=13504

Information Security Approach	Basic Policies and Procedures	Advanced policies and procedure	ISO 27001 Certified
Description	Typical of many organisations: • Basic acceptable use policies in place but a lack of staff awareness. • No annual management review. • No formal risk assessment. • No governance processes. • Only IT incidents being logged/monitored	Part compliance with ISO27001: • Fit for purpose policies in place based on risk • Staff awareness training conducted • Annual review/update conducted • Some roles & responsibilities informally defied • A risk register is in place	Certified to ISO27001: • A full Information Security Management System (ISMS) is in place. • Formal risk assessment conducted, appropriate controls implemented • An Information Security Manager is appointed • An information Security Forum is established • An information asset list is established
Policies in place	• Acceptable Use Policy • IT policy • Basic BCP/DR	Basic policies plus: • HR policy • Access control Policy • Physical Security Policy	Advanced policies plus: • Third party management policy • Information classification and handling policy • Information retention policy
Additional procedures	• IT Incident monitoring • Informal staff starters/leavers • Ad-hoc IT testing conducted • **No formal management system**	• Staff starters/leavers • Full incident monitoring • Full IT testing • Formal BCP/DR • Risk assessment • **No formal management system**	All ISMS Governance procedures including: • Annual review • Risk management • BCP/DR exercising • 3rd party management • Internal audit • Measurements and KPI's • Corrective & preventative actions • Document control • **Best practice ISMS in place UKAS certification to ISO27001 achieved**
Risk Profile 0-5	5 (risks unknown)	3 (Known but not monitored)	1 (best practice ISMS in place)

Table 18 – Multiple Approaches to Information Security

6.88 The range of approaches to information security open to both Ofcom and market participants can be facilitated/ mandated through a number of mechanisms, whether they are contractual or agreement based.

6.89 Whilst market participants already have obligations under existing legislation, our recommended option to ensure compliance would be to create an additional general condition of Entitlement which mandates participants to be party to a Market Agreement/ MOU or other agreement between participants.[28]

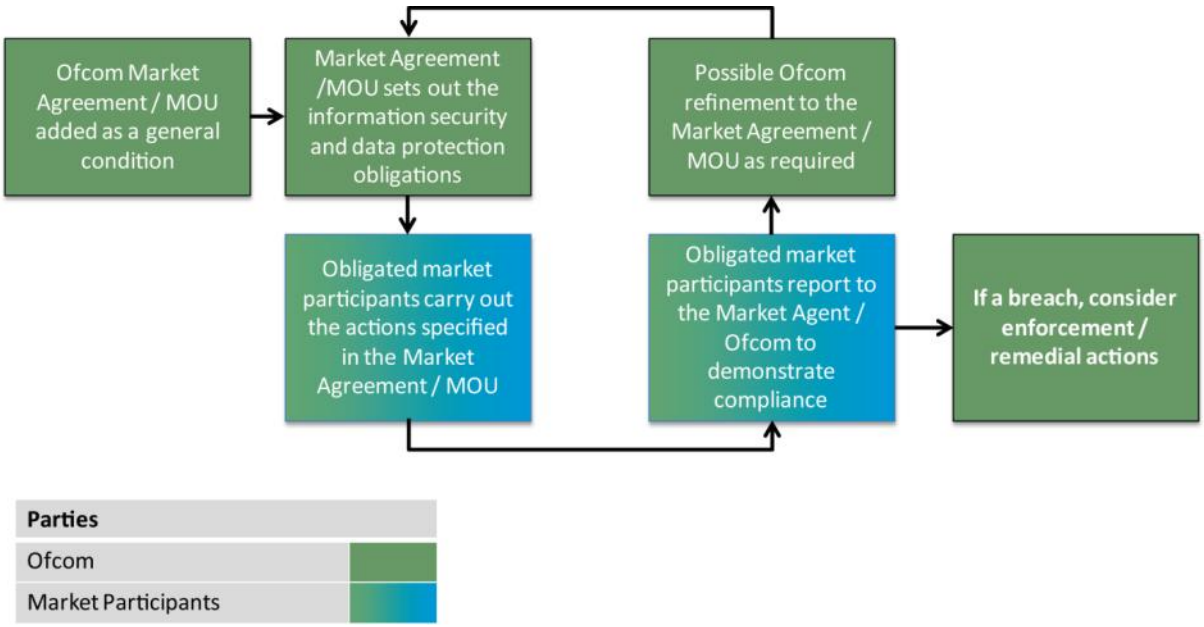

Figure 19 – Agreement to Ensure Information Security and Data Protection Compliance

6.90 Within the agreement document it would then be possible to require participants to demonstrate their compliance through a self auditing process; participants could provide evidence of the following:

1. ISO 27001 accreditation or similar;
2. Registration as a data controller/ processor with the ICO;
3. Appropriate processes regarding system access in relation to joiners, movers and leavers within the organisation;

[28] The different types of agreement are discussed in greater length in Section 6; as such the term agreement within this section refers to a Market Agreement, MoU or other contractual arrangement between parties to ensure compliance with an agreed set of objectives.

4. Non-transference of data outside of the EEA unless to a country or territory that ensures an adequate level of protection[29] for the rights and freedoms of data subjects in relation to the processing of personal data;
5. Compliance with minimum security standards for communication providers[30];
6. Appropriate training for users, including admin users being aware of criteria for access to, and use of the database in relation to their organisation; and
7. Appropriate processes and controls in place regarding access provided to Agents.

6.91 Where a market participant cannot demonstrate ISO 27001 accreditation and/or is not a registered data controller, evidence of an appropriate information security management system should be provided, such that it is clear that all risks regarding the database are appropriately managed i.e. mitigation is in place with regards to data protection.

6.92 The information provided by participants would form the basis of an information security audit report, which would be produced by the market agent (appointed by CPs) and would provide the basis for remedial action to be taken against participants. Where serious non-compliances are observed through the audit, the Agent would have the power to effectively suspend their access and interaction with the H&D. Further, the market Agent may identify participants which it will monitor and re-asses on a more regular basis compared to other participants who are compliant with the self-assessment process.

[29] The European Commission has decided that the following countries are considered to have adequate protection: Andorra, Argentina, Canada, Faroe Islands, Guernsey, Isle of Man, Israel, Jersey, Switzerland, and Uruguay. Although the United States of America (US) is not included in the European Commission list, the Commission considers that personal data sent to the US under the voluntary "Safe Harbor" scheme is adequately protected. The DPA applies equally to all countries of the United Kingdom, some DPA anomalies exist for example in exporting NHS data outside of England.
[30] An example could be compliance with NICC ND 1643 – Minimum security standard for interconnecting communications Providers.

6.93 The use of an agreement between parties is intended to be flexible, adapting over time to meet the current and future needs[31] of the participants and the market. The agreement between the parties would have a defined change procedure which would enable all parties to raise modification requests to the agreement. The agreement would also include a continuous improvement process, enabling Ofcom to actively monitor the performance of participants against the objectives of the agreement. The agreement will have multiple objectives, and for information security the scrutiny of an annual information security audit report will be one way by which Ofcom/ market Agent can evaluate the compliance of participants.

6.94 The mechanism is not intended to be onerous for participants; however, the agreement must be clear about the processes that participants should have in place. We do not believe that a mechanism would impose unreasonable cost for participants and aligns closely with better regulation principles.

Other Issues

Market Testing

6.95.1 In the roadmap, we refer to User (or market) testing of the H&D. We have assumed that if the H&D option were chosen, a central system that interacts with providers would be subject to testing prior to implementation.

6.95.2 As part of the Implementation Strategy, the PB would need to outline to providers what approach they intend to take, for example when the test infrastructure would be available to providers, and what depth of testing would be used to assess compliance. In inter-dependent utility markets, it is a common feature to undertake User testing prior to Go Live, and sometimes to make the Go Live decision itself dependent on it. This implementation phase would be additional to the internal system testing that we would assume the H&D provider would undertake prior to finishing the project.

[31] The agreement would be flexible enough for example to include potential changes associated with the a revised DPA in 2014/15.

6.95.3 The first option would be to allow providers to determine their own compliance by self-assessment, using test materials and a test space provided for them. Given that providers will no doubt be conducting internal testing, this would provide a useful reference point for that work and would deliver certainty for providers that their own build was successful. However, the challenges of self-assessment become apparent when participants in a market depend on each other for timely and accurate data flows. If there is an impact on other companies, this approach to market testing may be insufficient.

6.95.4 The second option is to independently verify implementation by providers, and to test their ability to interact with the H&D. A thin version of independent verification would be to provide test data/ scripts etc, and collect only the evidence of successful tests from providers but undertake no site work. Self-declaration with supporting documentation would offer a number of advantages for the H&D operator and the provider. A thicker depth of assurance will be gained from site visits and random analysis of independently run tests.

6.95.5 When considering User testing and assurance for the Go Live decision, we are aware that one size does not always fit all, and a blend of approaches may be necessary. Whilst one approach is to say that size is irrelevant for assurance if consumer protection is the ultimate criteria, another approach could be to weigh the consequences of non-delivery, and reduce the market testing requirements on smaller providers, so that they might take Option 1, and larger providers, Option 2.

Go Live Dates

6.95.6 In the roadmap, we refer several times to the Go Live date and, related to it, the decision by the Implementation Board to go ahead with the implementation. The Go Live date can be shorthand for one date, or several associated implementation dates – one approach is to have one or more soft landings in which segments of the market adopt the new processes and procedures before others[32] or a hard landing where all providers Go Live with the new processes and procedures at the flick of a switch.[33]

6.95.7 Ofcom could either use the market classification announced in 2004 by Ofcom in terms of number providers for each exchange or agree a completely new way of classification. Realistically, there is no suitable geographical factor that could be used in the communications market and a hard landing may be necessary.

6.95.8 To minimise the impact of any hard landings if chosen, Ofcom could implement switching caps on companies (possibly related to the market testing evidence collected) for a number of days or weeks before removing those limits. As part of the Implementation Strategy, Ofcom will need to consider the advantages and disadvantages for providers, the market and consumers of the two options. This discussion could be one of the deliverables for the stakeholder workgroups.

Implementation Project Management

6.96 Below we have set out how an optimal implementation framework might look and what the key considerations, timeframes and workgroups are to implement GPL TxC. This builds on the general information in Section 4.

[32] This approach was taken in the opening of the Gas market. The market opened for all companies but in geographical tranches, with the South West of England opening first. This created a flurry of media activity in the area and high activity from companies. In turn, this lead to high switching rates and created a sense of momentum.

[31] A hard landing was used in the Scottish Water market, where the Interim Registration Systems were used up until midnight on one day and the new systems from the next. In practice, only a very small number of registrations went through on the first live day, but built up steadily in numbers from there.

Project Structure

6.97.1 The PB would be set up and chaired by Ofcom in order to establish and maintain broader stakeholder engagement and to ensure effective governance processes. Underneath the PB will be a number of groups that would cover a number of issues. We suggest an indicative structure of the workgroups and their potential remit below.

6.97.2 Before we look at each in turn, it is important to summarise the key areas that need to be managed in this structure. These include;

1. Governance and project strategy – Development of the governance vehicle, based on the design chosen by Ofcom/ PB and consideration of issues such as funding, voting etc. of the new agreement and any agency that sat around it;
2. Technical issues – Development of User Requirements for the H&D and specifications to manage changes to the EMP;
3. Process design – Development of the processes to support the User Requirements;
4. Procurement and contracts – To undertake the management of the H&D supplier sent to the PB;
5. Risk management – A tightly managed risk register, regularly updated and with mitigation approaches identified; and
6. Communication, monitoring and review – Regular reporting, newsletters, project updates, seminars and webinars, and briefing sessions.

6.97.3 Below we discuss some possible workgroups to support the implementation of GPL TxC.

Workgroups

6.97.4 A critical element of the implementation plan for GPL is the scale, scope and number of workgroups that would be needed to ensure stakeholder engagement and education (referred to on the roadmap, on the provider line).

6.97.5 Given the responses that Ofcom has received to its consultation document, it remains an implementation issue that providers (and possibly AOs and wholesalers) may not engage early on or work hard to determine the optimal outcome. Engagement might be patchy or adversarial, and neither of these approaches will enhance implementation.

6.97.6 Naturally, Ofcom cannot compel companies to engage with the process if they do not wish to, for whatever reason.

6.97.7 Clarity on the process for implementation Project and the deliverables for each stage and sub-stage is essential. Setting out from the outset the dates at which the PB will be making a decision (e.g. on a working group recommendation for funding mechanisms) will provide a clear incentive for providers to engage early on and represent their views. Providers may also attend on the basis that they do not wish their competitors to develop processes and procedures in their absence.

6.97.8 Reaching out to the group of those who can't engage with the process rather than won't engage is covered in Section 4.14.

6.97.9 The number of workgroups represents the complexity of the GPL implementation project. We have suggested quite a lot of workgroups for GPL TxC, mainly to highlight the breadth of what needs to be done. However, not all will be active at the same time and some would meet less regularly than others. The key is to allow workgroups with clear terms of reference and have participants with the right skills to move the Project forward.

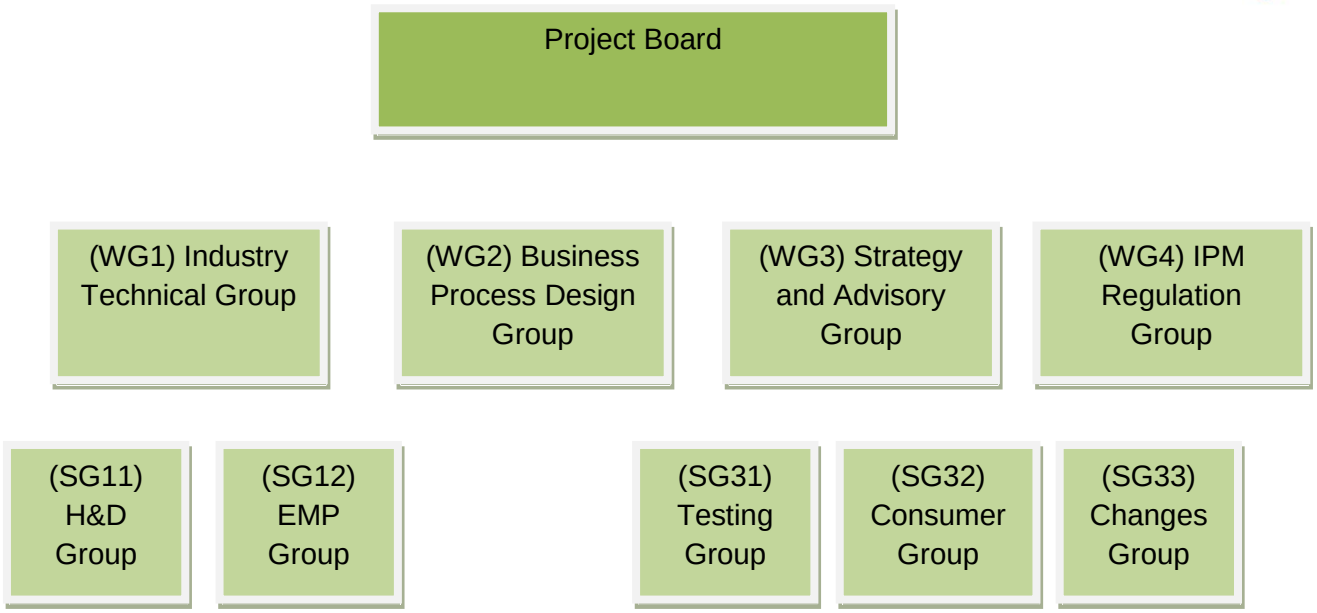

Figure 20 – PB/ IPM for Harmonised Programme and Interaction with other Switching Groups

WG 1 – Industry Technical Group

6.97.10 This group would provide a means of obtaining stakeholder input into technical changes necessary for implementation.

6.97.11 The deliverables could include:

1. Input into the development of the H&D requirements specification;
2. Cataloguing the requirements for the H&D;
3. Preparation of specifications for the procurement of H&D;
4. Input into the detailed policy design of the EMP and special process changes; and
5. Input into the development of the B2B interface and alternative processes for data exchange and related documents.

6.97.12 Further sub groups under WG1 could include a specific H&D Requirements Group (SG11) and the EMP Change Group (SG12) during peak times of the project.

WG 2 – Business Process Design Group

6.97.13 This group would provide a means of obtaining stakeholder input into the design and delivery of process models (after specifications have been set out).

6.97.14 The deliverables could include:

1. Design interfaces required between CPs and EMP;
2. Design interfaces required between CPs and H&D; and
3. Design TxC Processes.

WG3 – Programme Advisory and Strategy Group

6.97.15 This group would consider consequential amendments to legacy system changes and strategy in dealing with implementation. It would drive forward PB decisions and consider consumer education and programme public relations. It would address cross-cutting and end-to-end issues and inform stakeholders of developments in the overall design of the solution.

6.97.16 The deliverables could include:

1. Cataloguing the potential consequential changes to industry and regulations;
2. Development of ways to implement strategies by producing detailed approaches and work plans for Testing and Pilot trials;
3. Identifying solutions for operational issues for consumer trials and rollout;
4. Preparing a rollout strategy;
5. Input and undertaking of evaluation and analysis on issues considered by the programme;
6. Input in specific advice on the end-to-end design; and
7. Active identification of risks to the end to end solution and proposing mitigation.

6.97.17 Further sub-groups under WG3 could include Testing and Pilot Group (SG31), Consumer Engagement and Rollout Group (SG32) and Other Programme Changes Group (SG33).

WG 4 – IPM Regulation Panel

6.97.18 This group would provide a means of obtaining stakeholder input into the design and delivery of mandated processes and policies. It would design the governance code for operation between the H&D and CPs.

6.97.19 The deliverables could include:

1. Input to assist in the development of options for programme governance;
2. Input to the design of H&D obligations relating to ownership, installation and ongoing maintenance of equipment and data privacy; and
3. Cataloguing of rules/ policies for operation, the code.

Meeting Management

6.97.20 The PB will be chaired by Ofcom, whereas the workgroups and sub-groups would be chaired by industry leads and experts from providers. All meetings would have standard format and papers will be distributed in line with the agreed SLAs. The first draft Agenda sent to the PB within 10 Working Days and final draft within five Working Days before the scheduled meeting date. The draft meeting minutes sent out to the PB within five Working Days (or as otherwise agreed in advance with the working group Chair).

Stakeholders' Views

6.97.21 Responses to the consultation show a mixed opinion to the GPL TxC method from stakeholders. While many providers are opposed, stakeholders in the wider community are in favour of its implementation.

6.97.22 Larger CPs have raised concerns around fairness to be maintained during design, implementation and deployment of this central system. Also large portion of CPs are concerned about implementation to be longest for this Option.

6.97.23 Therefore, keeping the stakeholder engaged and align with direction of proposed implemention is seen as major challange. Related concerns raised in consultation reponses for this Options are:

1. Issues such as agreement on specification;
2. Location and operation of the H&D;
3. Funding agreement for H&D;
4. Agreement on roadmap for implementation;
5. Lengthy planning, development and implementation timescale;
6. Security challenges such as data privacy and protecting consumer data from misuse; and
7. Plan and governance requirement for recovery of cost and operation of H&D.

Summary

6.98 Based on our experience of other implementation projects, we estimate that six Quarters would be a realistic and feasible timetable for delivery of GPL TxC systems, processes and agreements.

6.99 The figure of six Quarters is a high-level estimate, which would be tested and clarified as part of the Implementation Strategy process. We have based this figure on our experience of similar projects, and have built it around the following substantial components:

1. Q1 – For pre-planning, development of the strategy and other necessary Ofcom work;
2. Q3 – An intensive period of stakeholder work resulting in the User Requirements output;
3. Q5 and Q6 – Design, build and test the systems. This is dependent on successful completion of the lines above; and
4. Around these phases, key work with providers and stakeholders to ensure legal regulatory and commercial requirements are in place.

6.100 The resource commitment for implementation is likely to be:

1. Two or three part time Ofcom staff, plus technical experience as required e.g. procurement and legal support;
2. Project management staff, appointed by tender;
3. Providers – part-time staff for workgroups plus internal technical teams for system development; and
4. Chairmanship of meetings (possibly including meeting management).

7. Implementing LPL TxC

7.1 General implementation issues that cross all Options to some degree are covered in Section 4. In this section, we discuss the specific implementation challenges for LPL TxC, covering the following ground:

1. Roadmap for implementation;
2. Three key challenges;
3. Technical implementation challenges;
4. Other implementation issues;
5. Governance;
6. Stakeholders' views; and
7. Summary.

Roadmap for Implementation

7.2 We estimate that the LPL TxC could be implemented in five Quarters, one Quarter less than GPL TxC. This is largely because of the reduced time needed for central system development.

7.3 In the timelines we have assumed that there might be a Tender process for the appointment of a service provider for TxCIA, and allowed sufficient time for this process to take place. We would recommend that a minimum of six weeks preparation is allowed for this, a month for companies to prepare a Tender, and then two weeks for consideration. This assumes a one stage process, with no pre-qualification, and is deliberately compressed in timescales.

7.4 Depending on the size of the IT and system changes required for providers and AOs, Ofcom may choose to require some User and System testing prior to Go Live, depending on an analysis of criticality. However, we have assumed that this might not be as comprehensive as the testing required for GPL TxC.

7.5 Equally, Ofcom and providers may not see a requirement for an externally provided Project implementation team. If so, several steps in this diagram could be eliminated; although the tasks would need to be picked up elsewhere.

7.6 The diagram below is also attached in Annex 4.

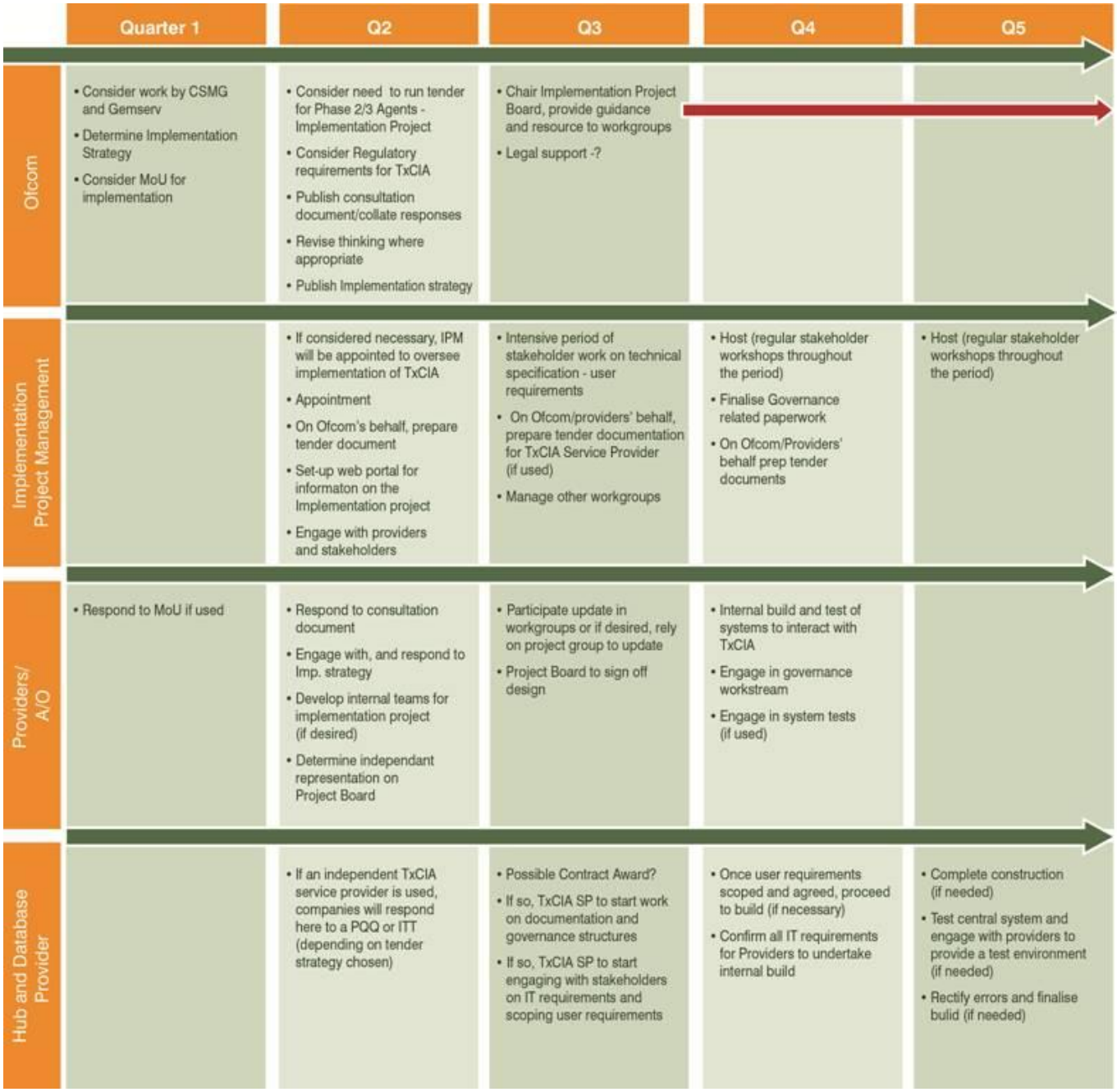

Figure 21– Roadmap for LPL TxC

7.7 All steps play a part in optimum implementation and each step should commence and conclude within a Quarter unless otherwise indicated.

7.8 Several steps are dependent on one another, and these are the same as those listed in the sections for Enhanced NoT, GPL TxC and LPL TxC, for example:

1. Timely and on-budget development of systems and processes is dependent on having accurate User Requirements established;
2. The development of accurate User Requirements is dependent on timely, appropriate interaction from providers and other stakeholders;
3. In order to engage with providers and other stakeholders, Ofcom should publish an Implementation Strategy that deals with the key features and expectations of the project; and
4. Appointing third parties (if used) is dependent on a timely tender process and on having more than one company in the process.

7.9 The complexity of this Project in comparison to Enhanced NoT is highlighted in the longer list of dependencies. In addition to the ones set out above, the following additional dependencies would need to be considered:

1. Internal Ofcom resource would be needed for the production of two tenders, which places a dependency on appropriate legal and commercial resource availability;
2. Likelihood of need for Ofcom internal legal capability on the Project. Several aspects (e.g. appointment of agents, drafting agreement) would be dependent on available, suitable and timely resource; and
3. Providers and AOs would need to factor in testing.

Key Issues

7.10 Implementation of the LPL TxC model would throw up several stakeholder, market and technical issues but, in general, the Project would be a smaller scale and scope than the GPL TxC model. However, we would still recommend that the principles of good project management are used; namely, project management, an Implementation Strategy and a governance mechanism for deciding on changes.

7.11 The three key areas to focus on with the Implementation Strategy would be:

1. TxCIA – Whilst not as large an implementation issue as a Market Agent or similar governance vehicle needed for GPL, setting up the TxCIA would require careful planning and work with stakeholders. Its legal form would need mindful consideration, and the need for an agent or service provider may mean that a tender process is necessary;
2. Providers using GPL only – We are aware of number of providers who use GPL systems only and implementation of LPL TxC would require them to make substantial changes. Early work would be needed to understand the position of these providers and possibly particular intervention to assist them through the process; and
3. Automation of TxC provision – LPL TxC methodologies put in place a series of manual or semi-automated systems, which allow a number of opportunities for deviation from the happy path. Putting in place internal systems that would monitor and intervene where necessary in the switching process would place a significant burden on providers in the medium term.

Technical Implementation Challenges

7.12 As The LPL TxC shares a similar Transfer Code functionality with the GPL TxC process, there are some common implementation challenges. These are discussed in Section 6.19 to 6.25 The common challenges are:

1. Provisioning timescale; and
2. Impact on the EMP.

7.13 In addition there are some changes unique to the LPL TxC. These are:

1. Implementing the TxCIA; and

2. Automating the TxC, costs and complexity.

Implementing the TxCIA

7.14 Similar to the GPL TxC option, the LPL TxC will require a Transfer Code Issuing Authority (TxCIA). In the LPL model, the TxC will be issued to the LP, so that the code can be provided to the consumer.34 Therefore, the same issues raised in Section 6.23 in the context of GPL TxC should be considered for the LPL TxC model.

7.15 Setting up the TxCIA is akin to the governance model needed for management and operation of the H&D in the case of GPL.

Automating the TxC, Costs and Complexity

7.16 The LPL TxC process (in comparison to the GPL TxC option) would rely on a two stage manual process in that, after notification that a consumer wished to switch, the LPL would communicate with the TxCIA, who would generate a TxC. The TxCIA code would be given manually to the consumer – by email, telephone, text or whatever process was agreed between the consumer and provider – and the consumer would share this with the GP.

7.17 This process is shown in Section 3.13 in the LPL TxC process map, and replicated below for reference:

[34] Depending on whether the CSMG documents are strictly adhered to in the design, questions to consider might be: is the assumption correct that the TxCIA would not be storing any personal data? Would they only be generating the code, which, once passed to the LPL, would cease to exist? Who would be responsible for the accuracy of the code? Would TxCIA be subject to any liabilities?

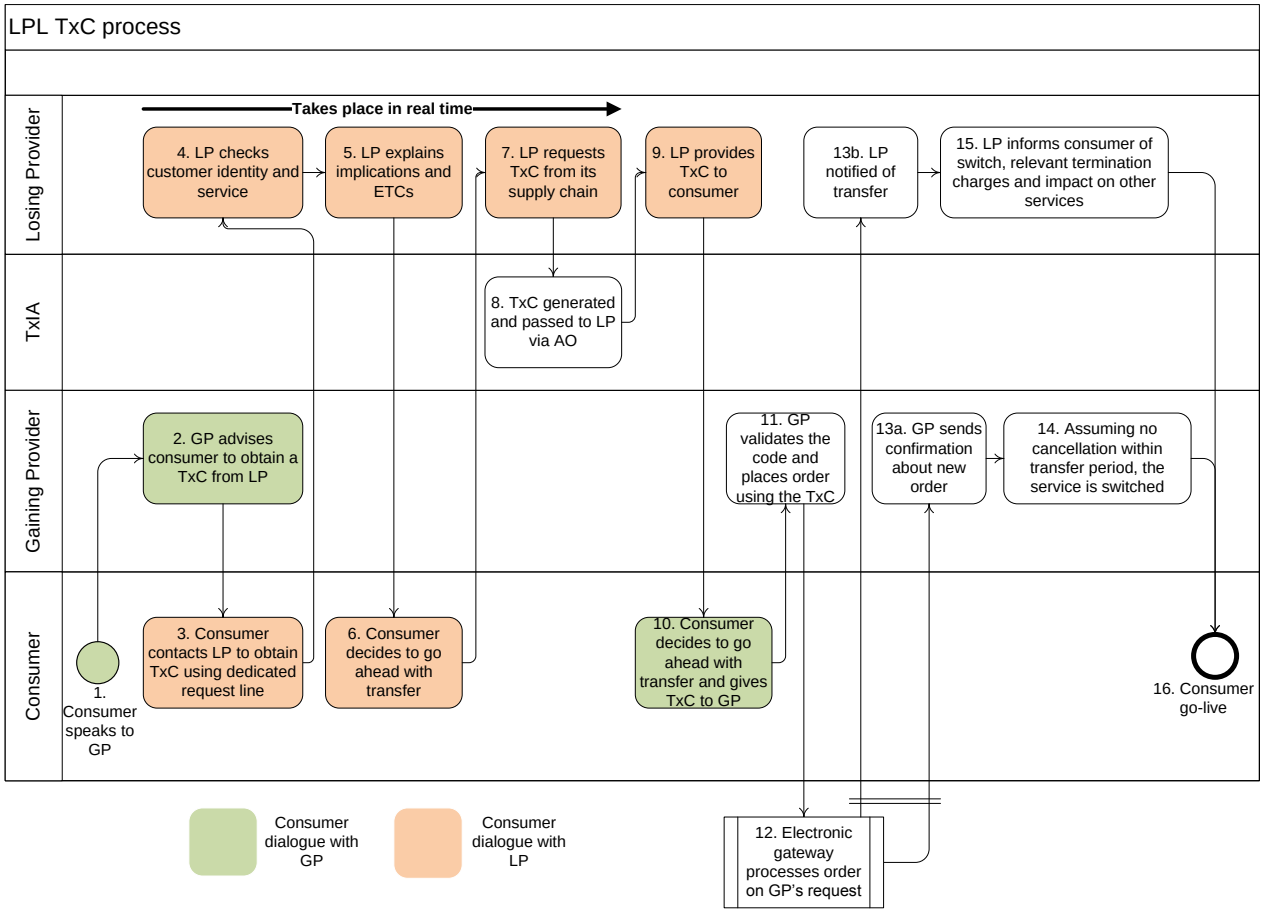

Figure 22 – LPL TxC (repeat)

7.18 This degree of manual or semi-automated communication gives rise to concern about the potential for deviation from the happy path and the potential impact for the GP. As part of their internal implementation plan, GPs would need to put in place additional testing and verification steps to ensure data quality, in comparison to a single, automatically generated, transfer code received directly from the Hub, as set out in the GPL model.

7.19 If we look again at the process map, specifically with reference to Box 7, we see that there are several layers of communication – LP to wholesaler, to the AO, and back down again. The issue would be further complicated for smaller CPs who use a Third Party Integrator (TPI) and the implementation plan would need to include additional time for TPI to develop and integrate this with existing CP arrangements. As is currently the case for the MAC process, most TPI products are off the self packaged software systems, built and tested over the years since the existence of MAC. Comparing this with the proposed LPL TxC process, the TPI products would need to consider the proposed design solution as a harmonised option for broadband and landline. In addition, other changes would need to be considered on how to integrate this with the TxCIA. All these would take some time for the changes to be developed and to integrate them to the CP's system.

7.20 This implementation issue is largely an internal one for providers, but it will represent a significant and ongoing operational cost in terms of resource required to manually operate systems, and to intervene where necessary. The degree of manual or semi-automated processes also give rise to the opportunity for mis-spelling or mis-typing a digit or number and therefore increases the chance for the wrong consumer to be identified during the switching process. We set out our recommendations of where this can be discussed in the LPL TxC section below so as to mitigate the potential issues. In terms of time required to set this up, it would take place during Q2 of the implementation roadmap. It must also be considered, however, that there are post-implementation considerations in regards to an ongoing dependency on CP's to conform with the new process.

Other Issues

7.21 Based on our analysis, LPL TxC could be implemented a full Quarter (or more depending on stakeholder responses) earlier than GPL. Some implementation issues would remain in terms of the timing however, and these could have a material impact on the roadmap. Specifically:

1. Would the TxCIA be independent? If not, how would matters such as financial clarity, possibility for conflict of interest and governance is managed?
2. If it were independent, would a service provider be appointed? If so, how and when?
3. Would provider sign up and compliance be ensured through General Condition? and
4. Would we assume that the TxCIA/ its service provider would be implementing minor/ major/ fundamental IT changes? Would those changes be fundamental enough to require Go Live dates/ system testing and so on?

GPL Only Providers

7.22 GPL NoT processes are used for fixed voice transfers and transfers to or from MPF service providers.

7.23 Implementation issues for SMPF MAC Providers would be:

1. Upgrade to new setup – IT changes are likely to be substantial for those companies who do not use the processes already. Upgrades to internal processes and procedures and processing of externally generated data would be required. This would need to be addressed specifically within the stakeholder workgroups. It may be necessary to encourage attendance from this group in order to collect accurate data;
2. New TPI product – Changes would need to be made to TPI products used for provisioning of consumers;
3. Consumer understanding – investigation would be needed to ensure that the consumer experience was not impacted, and some testing and analysis would be helpful (this could be added);
4. CPS only providers – Some small providers offer service on CPS, this currently dependent on current NoT process. An implementation risk would be CPS running providers may still end up using current NoT process as technology restricts CPS activation on WLR status; and

5. Multiple line switching – For single SMEs using multiple landlines over the Openreach copper network from single or multiple providers would mean greater commercial and billing complexities. This would need to be addressed by one of the stakeholder workgroups.

7.24 It is prudent that these issues are looked at from Quarter 2 of the implementation roadmap.

Consumer Experience

7.25 If the LPL TxC process works correctly, obtaining the TxC from a LP would help validate the correct asset and identify correct consumer details, leading to a reduction in slamming and ETs. However, the process requires additional intervention from the consumer, who needs to pass on the TxC, similar to the current MAC process. As part of the Implementation Strategy, it would be necessary to put together a set of industry best-practice instructions for how to brief consumers and how to deal with sub-optimal transfers.

TxCIA Issuing Authority

7.26 Perhaps the most significant technical issue in the implementation of LPL TxC would be the preparation for the requirement for a TxCIA. We briefly mentioned the TxC issuing authority earlier in this section, and other criteria for workgroups and other issues here.

7.27 There would be financial benefits to setting up an independent body, principally the clarity on costs that it would allow. Costs may not be distinct from other business streams and therefore may be inaccurately allocated. Setting up an independent organisation or multi-party agency to operate the production and distribution of a switching code may allow for greater transparency of central costs.

7.28 We would expect that, in addition to production of the code, the TxCIA would need to have a variety of working practices to ensure that duplicate codes are not issued (for example) and to monitor and measure its own performance. Such a common operational agreement between providers and other parties (including service providers) is very similar to the governance required for H&D management, although here, the role of the issuing authority replaces the Hub. These tasks can be distributed as required to the IMP regulation panel to investigate and the outcome could be the code or agreement which all parties have to approve and sign.

TxCIA Code/ Agreement

7.29 We have assumed the TxCIA would be a substantially smaller organisation than a Market Agent/ agreement, and is unlikely to be used as a contracting vehicle for substantial

7.30 contracts such as the H&D design, production and maintenance. Arguably, the governance should reflect that this, and Option 1 might be more attractive as a less formal governance vehicle – with lower implementation costs and requirements, and lower ongoing costs. However, the accurate and timely production of TxCs is essential to the smooth functioning of the market and therefore, Option 2 should not be overlooked and commercial agreement, backed up by General Condition, may be appropriate.

7.31 Because the TxCIA would not be contracting database work out to a sub-contractor, the costs would be reduced significantly, and we would expect the agreement (The Transfer Code Issuing Authority Agreement, for example) to sit on the diagram as follows, with a lower cost, if an Option 2 style agreement were chosen:

Figure 23 – TxCIA Governance

Criteria for Change

7.32 Similarly to the discussion in the GPL Section, Ofcom would need to provide clear direction to the industry as to the criteria it would use to make decisions, both in the setting up of the agreement and its ongoing operation. In the GPL section, we propose that this forms part of the Implementation Strategy. Although the TxCIA may be a more focused organisation, a clear and detailed Implementation Strategy is still highly recommended.

Future Proofing the System

7.33 Arguably with a thinner governance vehicle – i.e. one that is associated with one function only – it would be harder to add future industry requirements to the agreement, though not impossible. If the appetite were there, the document would be written mindfully to allow future development.

Funding and Voting

7.34 The debates about funding and voting within the new TxCIA agreement are largely the same as those set out in Section 5, albeit noting that the smaller size of the agreement results in a lower amount of money to be divided between providers, irrespective of the methodology chosen for division.

Roles and Decision Making

7.35 Again, the smaller size of the agreement and its limited role might reduce the need for numerous working groups and representation. However, providers might feel differently and place great emphasis on all work surrounding the TxC given its central importance to the competitive market.

Cost of Implementation

7.36 The technology required to produce the transfer codes, track and store, and interact with providers is relatively simple. We consider that it would be possible to design and build the TxCIA systems without designing bespoke complicated systems and therefore, the central costs would be limited in scale. This is not to diminish the IT work that would be needed, but based on the evidence available, we do not consider it to be same scale or scope as GPL Implementation.

Implementation Project Management

7.37 Below we have set out what an optimal implementation framework might look like and what the key considerations, timeframes and workgroups are to implement LPL TxC. This builds on the general information in Section 4.

Project Structure

7.38 As with GPL TxC, an implementation PB would be set up and chaired by Ofcom in order to establish and maintain broader stakeholder engagement and to ensure effective governance processes for the Project.

7.39 The PB would be set up and chaired by Ofcom in order to establish and maintain broader stakeholder engagement and to ensure effective governance processes. Underneath the PB will be a number of groups that would cover a number of issues. We suggest an indicative structure of the workgroups and their potential remit below. The number of workgroups represents the complexity of the LPL implementation project, less complex than GPL but quite significant nonetheless.

7.40 Before we look at each in turn, it is important to summarise the key areas that need to be managed in this structure. These include:

1. Governance and project strategy – Development of the governance vehicle, based on the design chosen by Ofcom/ PB and consideration of issues such as funding, voting etc. of the new agreement and any agency that sat around it;
2. Technical issues – Management of the changes to the EMP;
3. Procurement and contracts – To undertake the management of TxCIA;
4. Risk management – A tightly managed risk register, regularly updated and with mitigation approaches identified; and
5. Communication, monitoring and review – Regular reporting, newsletters, project updates, seminars and webinars, and briefing sessions.

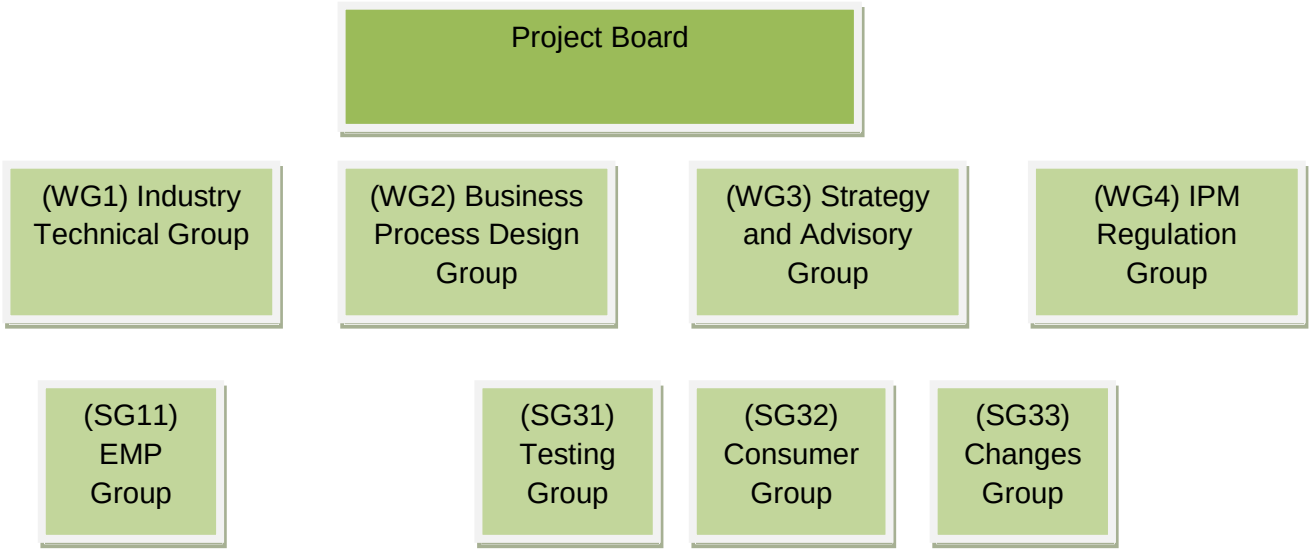

Figure 24 – PB/ IPM for Harmonised Programme and Interaction with other Switching Groups

WG 1 – Industry Technical Group

7.41 This group would provide a means of obtaining stakeholder input into technical changes necessary for implementation.

7.42 The deliverables could include:

1. Input into the detailed technical design of the EMP and special process changes;
2. Input into the development of the B2B interface and alternative processes for data exchange and related documents; and
3. TxC technical specifications.

7.43 Further sub groups under WG1 could include the EMP Change Group (SG11) during peak times of the project.

WG 2 – Business Process Design Group

7.44 This group would provide a means of obtaining stakeholder input into the design and delivery of process models.

7.45 The deliverables could include:

1. Design interfaces required between CPs and the EMP; and
2. Design TxC Processes.

WG3 – Programme Advisory and Strategy Group

7.46 This group would consider consequential amendments to legacy system changes and strategy in dealing with implementation. It would drive forward PB decisions and consider consumer education and programme public relations. It would address cross-cutting and end-to-end issues and inform stakeholders of developments in the overall design of the solution.

7.47 The deliverables could include:

1. Cataloguing the potential consequential changes to industry and regulations;
2. Development of ways to implement strategies by producing detailed approaches and work plans for Testing and Pilot trials;
3. Identifying solutions for operational issues for consumer trials and rollout;

4. Preparation of a rollout strategy;
5. Input and undertaking of evaluation and analysis on issues considered by the programme;
6. Input in specific advice on the end-to-end design; and
7. Active identification of risks to the end to end solution and proposing mitigation.

7.48 Further sub-groups under WG3 could include Testing and Pilot Group (SG31), Consumer Engagement and Rollout Group (SG32) and Other Programme Changes Group (SG33).

WG 4 – IPM Regulation Panel

7.49 This group would provide a means of obtaining stakeholder input into the design and delivery of mandated processes and policies.

7.50 The deliverables will include:

1. Input to assist in the development of options for programme governance; and
2. Cataloguing of rules/ policies for operation.

Meeting Management

7.51 The PB will be chaired by Ofcom, whereas the workgroups and sub-groups would be chaired by industry leads and experts from communications, and could be held at agreed locations. All meetings would have standard format and papers will be distributed in line with the agreed SLAs. The first draft Agenda sent to the PB within 10 Working Days and final draft within five Working Days before the scheduled meeting date. The draft meeting minutes sent out to the PB within five Working Days (or as otherwise agreed in advance with the working group Chair).

Stakeholders' Views

7.52 Stakeholders voiced some common concerns for implementation of this Option, where smaller CPs are concerned about migration and upgrade of their internal system and timescale of implementation. Larger CPs raised challenges to system upgrades and changes required to LP, GP and TPI platforms and systems.

7.53 The key consideration from stakeholders' views for implementation are:

1. Costs and funding for TxCIA;

2. Enduring operation and TxCIA assurance process;
3. Design of governance for this option to promote commercial benefit for LP; and
4. Stakeholder engagement to keep up with long implementation plan.

Summary

7.54 Implementing LPL TxC would be marginally shorter than GPL TxC because of reduced procurement timescales and potentially shorter workgroups to develop industry documentation. We estimate that it would take one Quarter less than GPL TxC. The resource requirements for Ofcom and providers would be largely the same, although it is possible that they could be reduced if fewer appointments were made via formal procurement.

8. Implementing Other Options

8.1 This section gives a high level analysis of the practical, developmental and implementation issues for the following two options:

1. Enhanced NoT and MAC (unharmonised); and
2. Implementation of Enhanced MAC (harmonised).

Enhanced NoT and MAC (Unharmonised)

8.2 Ofcom refers to the unharmonised option as Option 1b in its consultation document[35]. This option would see incremental changes to the current process rather than the implementation of a new switching regime. It would maintain the existing NoT and MAC processes and would be an evolution of existing processes.

8.3 Being an enhancement of existing unharmonised processes, there are less complex developmental and implementation issues than newly proposed harmonised switching options.

8.4 However, choosing this option could have a higher risk of not meeting the original requirements of the consultation or addressing the issues that the current switching process has identified.

Implementation Issues for Incremental Changes

8.5 In regards to the proposed changes for the NoT options with reference to Figure 24[36] in the Ofcom consultation document, there are four new enhancements suggested. Two of them would be to mandate the use of 'cancel other' and 'linked order'37 processes, one would be to agree LP communications to provide specific information on SIs and ETCs and the fourth would be to create visibility of all CLIs (including MPF) either through enhancements to the Openreach database or requiring MPF providers to establish their own dialogue services.

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[35] Ofcom (2012) 9th February consultation document, paragraph 6.11 p. 97
[36] Ofcom (2012) 9th February consultation document, Figure 24 p. 98
[37] Now referred to as 'simultaneous provide'

8.6 The changes to the current MAC process as per Figure 25[38] in the consultation document, are two proposed incremental changes – firstly, an improvement in MAC issuing within two hours by email or SMS (if not immediately over the phone) and secondly, setting up dedicated MAC provisioning facility with a call recording obligation.

8.7 Market governance arrangements between the communication participants may be required to maximise the implementation and ongoing effectiveness of these changes. For previous Options, we have suggested that bespoke governance arrangements would be needed for implementation. For this Option, we advocate a similar principle but with fewer groups for the implementation of enhancements to existing processes. However, such formality might be viewed as unnecessary.

8.8 A more defined governance framework could help initiate and manage new developmental improvements smoothly and efficiently. As with the more detailed governance structure, Ofcom would need to consider how big the workgroups would be and how the selection criteria would be established. We consider that options for implementing changes to processes would generally be one change at a time agreed within a small workgroup of industry experts. If Ofcom define clear terms of reference for these workgroups prior to initiation of the implementation, they would be better able to fulfil the objectives to enhance the switching process.

8.9 As the first two set of changes proposed to mandate processes would require full industry support, a challenge for successful implementation of this option would be provider engagement and establish why providers currently do not use 'cancel other' and 'linked order' process.

Other Issues

Future Proofing the System

8.10.1 As the unharmonised options are not presently associated with specific governance vehicles, it may be harder to add future industry requirements, as new governance bodies would need to be set up. As such, the implementation would be in two parts, with the larger part delayed until a later time. Additionally, current processes are designed only for Openreach network and are unharmonised – if cable or other services were to be added, further implementation analysis would be required.

[38] Ofcom (2012) 9th February consultation document, Figure 25 p. 101

Funding, Voting and Roles

8.10.2 The debates about funding and voting within the new incremental changes are largely the same, albeit noting that the smaller size of the agreement (if a formal agreement were set up) results in a lower amount of money to be divided between providers, irrespective of the methodology chosen for division. Again, the smaller size of the agreement (if chosen) and its limited role might reduce the need for numerous working groups and representation. However, providers might feel differently and place great emphasis on all work surrounding the impact on individual circumstance comparing cost to benefit measure to the competitive market.

Cost of Implementation

8.10.3 The technological changes required and cost of implementing for mandated 'cancel other' process is relatively low compared to 'linked order' and other policy obligations.

8.10.4 We consider that it would be possible to design and build the internal systems without designing bespoke complicated systems and therefore, the central costs would be limited in scale. This is not to diminish the IT work that would be needed, but based on the evidence available, we do not consider it to be same scale or scope as other options.

8.10.5 We believe that it would take one to two Quarters to implement this work, assuming that a suitable mechanism was found to bring providers and stakeholders together to discuss the outstanding issues.

Enhanced MAC (Harmonised)

8.11 The Enhanced MAC harmonised option was not shown in the consultation document, however, it makes changes to the current MAC process as per Figure 25 in the consultation document (p101).

8.12 The two proposed enhancements would be an improvement in MAC issuing, with new timeframes of delivery within two hours by email or SMS (if not immediately over the phone) and the creation of a dedicated MAC provisioning facility with a call recording obligation.

Implementation of Enhanced MAC

8.13 As a Harmonised Enhanced MAC process these enhancements should be applied to all technologies except cable i.e. MPF and fixed voice for both bundled and unbundled options.

8.14 Similarly to the unharmonised option, changes for the MAC would need to be agreed with the industry as whole, as improvements in the MAC issuing facility would mean providers would need to setup an SMS facility and additional resources to implement these changes.

8.15 Additionally, for the harmonised Enhanced MAC, setting up a dedicated MAC provisioning facility and recording all calls would require investment in processing MAC for technologies that currently use other processes instead. A defined governance structure would support these issues being dealt with.

8.16 Some implementation issues that an ad hoc or standing workgroup would need to consider in the first instance are:

1. Would there be single MAC for bundled services or unique MAC for each individual service?
2. What would be the mechanism to mandate linked order?
3. Agreement of universal visibility of CLI and asset information for MPF lines so that valid assets can be identified by the AO before tagging and issuing the MAC on LLU lines;
4. Impact on EMP as AO responsible for generation of MAC for MPF and fixed voice;
5. Validity of MAC? Would this be kept at 30 days? If not, agreement would be needed on a new validity period, and who will do this and how?
6. If MAC would be received from consumer or If MAC would be automatically obtained from LP for provisioning? and
7. Would current sales compliance be replaced or altered (is MAC a suitable proxy for consumer consent?).

Other Issues

Future Proofing the System

8.17 As the harmonised MAC options are not presently associated with specific governance vehicles, it may be harder to add future industry requirements, as new governance bodies would need to be set up. As such, the implementation would be in two parts, with the larger part delayed until a later time.

Funding, Voting and Roles

8.18 The debates about funding and voting within the new incremental changes are largely the same, albeit noting that the smaller size of the agreement (if a formal agreement were set up) results in a lower amount of money to be divided between providers, irrespective of the methodology chosen for division. Again, the smaller size of the agreement (if chosen) and its limited role might reduce the need for numerous working groups and representation. However, providers might feel differently and place great emphasis on all work surrounding the impact on individual circumstance comparing cost to benefit measure to the competitive market.

Cost of Implementation

8.19 The technological changes required and cost of implementing for Enhanced MAC is relatively low compared to other models. We consider that it would be possible to design and build the internal systems without designing bespoke complicated systems and therefore, the central costs would be limited in scale. This is not to diminish the IT work that would be needed, but based on the evidence available, we do not consider it to be same scale or scope as GPL TxC Implementation.

9. Conclusions

9.1 This document sets out considerations of implementing each of the three proposed Options.

9.2 The three Options vary in terms of scale and scope of implementation and this is represented in our estimation of the number of Quarters needed to put the model in place, from four Quarters to six or seven. GPL represents the most radical and strategic overhaul and therefore takes the longest of the three Options; LPL TxC and Enhanced NoT would take slightly less time to implement, partly because fewer structural changes need to be made and fewer tendering processes are required.

9.3 In addition to the differences in the length of the projects, the depth and breadth of resource commitment required for successful delivery would vary. Greater resources would be needed from Ofcom, providers and stakeholders for the GPL TxC option and, to a slightly lesser extent, in LPL TxC, and lower resources for the other Options. In some Options, externally sourced project management support would be required and IT providers would need to be appointed by competitive tender.

9.4 We would be pleased to revise any part of this paper should the assumptions it is based on prove to be incorrect.

Appendix A – ECOES

10.1 The Electricity Central Online Enquiry Service (ECOES) was established following an Ofgem-led review aimed at improving the customer transfer process for consumers. The service was set up to improve the customers' experience of switching in the Great Britain electricity market by providing information which reduces delays and errors.

10.2 ECOES is governed under the Master Registration Agreement (MRA)39 and gives a consolidated view of data relating to electricity Supply Points as provided by Meter Point Administration Service (MPAS) Providers and Meter Operators. It was primarily designed to assist Suppliers and their agents in the customer transfer process and is funded by Suppliers and Distribution Businesses.

10.3 Data is accessible via a web-based portal which provides for searches using key data items, including:

1. The Meter Point Administration Number (MPAN);
2. The Meter Point address; and,
3. The Meter Serial Number (MSN).

10.4 The service is utilised by Suppliers prior to initiating the transfer process to check the customer's Meter Point Administration Number (MPAN). This number is unique to every property and will provide the information to confirm whether the Supplier is able to support the customers metering. In addition, ECOES is used to assist in:

1. Resolution of queries relating to discrepancies in the data held by market participants;
2. Allocation of transactions in relation to prepayment metering; and,
3. Confirmation of information relating to Feed-In Tariffs (FITS) for microgeneration.

[39] The MRA is the agreement that provides governance for the competitive retail electricity market in Great Britain.

10.5 ECOES is available to Suppliers, their Agents (e.g. Meter Operators and Data Collectors), Distribution Businesses, and non-domestic customers. The MRA Development Board (MDB) may approve access to third parties in certain circumstances.

Gemserv's Role

10.6 Gemserv manages the Central Administration Service (CAS) which provides a central liaison point for ECOES. In support of this role Gemserv provides the following services:

1. An interface between the ECOES service provider and users of the service such as electricity suppliers and distributors as well as other market participants such as Meter Operators;
2. Secretariat services provided under the MRA Service Agreement;
3. Management of access to the service, including by third parties. We ensure that all requirements of access are met in accordance conditions set out in MRA Agreed Procedures and are approved by MDB; and
4. A helpdesk function, managing enquiries and any change proposals raised. Typically, there are upward of 300 enquiries per annum.

Benefits

10.7 Easy access to data in a common repository of key information has allowed parties to investigate any inconsistencies or anomalies earlier in the customer transfer process, enabling a swifter resolution. Gemserv ensures through robust assurance that ECOES data is only provided to licensed parties and protects it from wider circulation.

10.8 Errors and omissions are resolved through updates to the source systems, allowing for efficient data quality management through ongoing triangulation of data. ECOES is flexible enough to accommodate the addition of further data items and process enhancements that may be required to support changed future market needs. Such changes are controlled through MRA Change Procedures.

10.9 Feedback from the ECOES user community shows that the service is generally perceived as having a positive impact on a range of market interactions, thus enhancing the consumer experience and providing for processing efficiency for market participants.

Appendix B – Glossary of Terms

A

1. **ALK** – Access Level Key. This is unique asset identifier for address to match with Openreach network
2. **AO** – Access Operator (BTW/ Openreach)

B

3. **Broadband** – Service or connection that is capable of supporting 'always on' services that provide the end user with high data transfer speeds
4. **Bundle** – Where a consumer purchases two or more services from the same provider on a single bill and considers this to be a package of services. The consumer may or may not receive a discount

C

5. **CLI** – Calling Line Identification (telephone number)
6. **CMC** – Customer Management Centre. A service and solution centre operated by Openreach developed for the customers and customer facing units. CMC handles product or service related faults, complaints, issues and problems
7. **CSS** – Customer Services System
8. **CPE** – Customer Premises Equipment
9. **CP** – Communications Provider. A person who provides an Electronic Communications Network or provides an Electronic Communications Service, as defined in the Communications Act 2003
10. **CCT** – Consumer Contact Team. The Team within Ofcom responsible for dealing with complaints and enquiries from members of the public
11. **C&R** – Cease and Re-provide. The consumer terminates their contract with the Losing Provider and requests a new service from the Gaining Provider, not necessarily in this order (i.e. the consumer may request a new service first before terminating their contract)
12. **Competitive neutrality** – A situation where some providers enjoy a competitive advantage over others simply by virtue of the switching process associated with the service(s) they provide

13. **Consumer** – Any person who uses or requests a publicly available Electronic Communications Service for purposes which are outside his or her trade, business or profession
14. **Cable Network** – A hybrid fibre-coax Electronic Communications Network that uses a combination of optical fibres and coaxial cable
15. **Cancel Own** – During the NoT process, if the consumer changes their mind about switching, the GP initiates this process
16. **Cancel Other** – The industry term for a functionality that enables the Losing Provider to cancel wholesale orders (during the switchover period) placed by an alternative provider; where slamming has been alleged by the customer of the GP
17. **CPS** – Carrier Pre-selection
18. **CAD** – Customer agreed date
19. **CRD** – Customer request date
20. **CUPID** – Communications Provider ID

D

21. **DN** – Directory Number, term used by Openreach instead of CLI (telephone number)
22. **DS** – Dialogue Service. Operated between Openreach and communications providers regards services are available to them
23. **DUNS ID** – Dun & Bradstreet (Universal Numbering Scheme) assigns a nine-digit code to identify unique businesses

E

24. **ETC** – Early Termination Charge. Charge for consumers who terminate their contract before the end of any Minimum Contract Period (or Subsequent Minimum Contract Period)
25. **ET** – Erroneous transfers. Where the wrong customer's service is transferred as a result of a process failure
26. **EMP** – Equivalence Management Platform

F

27. **Fixed-line** – Narrowband call and/or line rental services provided to consumers and small business consumers

28. **Full LLU** – Services where the provision of access to the copper wires from the customer premises to a BT exchange allows a competing provider to provide the customer with both voice and data services over such copper wires
29. **FTTC** – Fibre to the cabinet. A form of fibre optic communication delivery in which the fibre network reaches the street-side cabinet. The street cabinet is usually located only a few hundred metres from the user's premises. The remaining segment of the access network from the cabinet to the customer is the existing copper pair.
30. **FTTP** – Fibre to the premises. Form of fibre optic communication delivery in which the fibre network is installed up to the user's premises.

G

31. **GP** – Gaining Provider. Provider to whom the customer is transferring
32. **GPL (TxC)** – Gaining Provider Led transfer code option. Similar to the current Notification of Transfer process but addresses problems with the back-end process
33. **GPL process** – Gaining Provider Led process. Switching process where the consumer only needs to contact the provider they are transferring to in order to switch
34. **GCs** – General Conditions. Set of regulations that apply to anyone who provides an electronic communication service or an electronic communications network

H

35. **H&D** – Hub and Database. Designed to capture the name, address, postcode, CLI, current CP, service type, technology type and account reference for each customer

I

36. **ICO** – Information Commissioners Office
37. **Inactive** – Those that have neither switched nor considered switching in the last year
38. **IPstream** – Wholesale broadband product provided by BT

J

K

39. **KCID** – Keeping Customers Informed Delay (messages). A type of message that tells Communications Providers about the reason for delayed orders that Openreach have accepted

40. **KCI** – Keeping Customers Informed, message that updates communications providers on the status of orders

L

41. **LORN** – Linked Order Reference Number, used to link the two orders together in the computer
42. **LP** – Losing Provider. Provider from whom the customer is transferring
43. **LPL process** – Losing Provider Led process. Switching process where the consumer needs to contact the Provider they are transferring away from as well as the provider they are transferring to in order to switch
44. **LPL (TxC)** – Losing Provider Led transfer code option. Similar to the Migrations Authorisation Code process currently used for broadband migrations, however changes are focused on addressing problems with the back-end systems, improving the consumer experience of a LPL switching process, and reactive save activity is banned
45. **LPL ALT** – Losing Provider Led Alternative option. Similar to LPL (TxC) but with a range of options on how the consumer interacts with the provider
46. **LLU** – Local loop unbundling. The regulatory process of allowing multiple tele-communications operators to use connections from the telephone exchange's central office to the customer's premises. The physical wire connection between customer and company is known as a "local loop" and is usually owned by the incumbent local exchange carrier
47. **LO** – Linked Orders. May also be referred to as a “simultaneous provide” or “sim-provide”
48. **Local loop** – The access network connection between the customer’s premises and the local serving exchange, usually comprised of two copper wires twisted together

M

49. **MBORC** – Matters Beyond Our Reasonable Control
50. **MDF** – Main Distribution Frame. A point in a telephone exchange where cables from outside can be connected to the exchange equipment
51. **MAC process** – Migration Authorisation Code process. A LPL process that applies to broadband only. It means that if a consumer wishes to change their provider, they need to obtain a code from the LP and give it to the GP. On receiving a request for the code, the LP carries out checks to confirm that the consumer making the request

is the legitimate account holder and has an opportunity to discuss the implications of switching with the consumer. The consumer must supply the code to their GP to allow the switch to go ahead

52. **MPF** – Metallic Path Facility. Is the product sold by Openreach to allow providers to gain full control of the local loop connecting to end users to deliver both voice and broadband to end users

53. **MAC** – Migration Authorisation Code. Unique code that a customer obtains from the losing broadband service provider and gives to the GP, that allows the service to be transferred from an existing service provider seamlessly and with little or no disruption of service

54. **MCP** – Minimum contract period. A minimum (fixed term) contractual period set at the start of a contract (often for 12 to 24 months)

55. **Mis-selling** – Irresponsible sales and marketing activities, such as the provision of false or misleading information, applying unacceptable pressure to change providers and where customers are switched without their express consent

56. **MNP** – Mobile Number Portability

N

57. **NAD** – Name and Address Database. The centralised location for contact details and services

58. **NAT** – Network Addressing Team. Provides address matching assistance to communications providers

59. **NIC** – National insurance contribution

60. **Narrowband** – Services provided over a traditional Public Telephone Network, excluding services provided over a Cable Network

61. **NGA** – Next generation access

62. **Notification of Transfer process** – A GPL process where the consumer only needs to contact the Gaining Provider to switch. The Gaining Provider informs the Losing Provider on behalf of the consumer in order to organise the transfer. The consumer receives letters from both providers confirming the planned switch before it happens. This provides an opportunity for the consumer to stop the order going ahead where they change their mind or in cases where they have no knowledge or have not given their consent to the attempted switch

63. **NTE5** – Network Termination Equipment version 5, also commonly known as the "master socket".

64. **NTE** – Network Terminating Equipment

O

65. **OFT** – Office of Fair Trading

66. **Ofcom** – Office of Communications. The regulator for the communications industries, created by the Office of Communications Act 2002

67. **Openreach** – BT's access services division

68. **OTA** – Office of the Telecommunications Adjudicator. Acts independently from industry and the regulator. Seeks to facilitate the implementation of process improvements particularly where multi-lateral engagement is necessary

P

69. **PONR** – Point Of No Return. The point in the provision process beyond which cancellation is no longer possible

70. **PAF** – Postcode and Address File (as supplied by the Royal Mail).

71. **PCP** – Primary Cross-connection Point, this is the local street cabinet

72. **Proactive save** – Where the LP offers the consumer an incentive not to switch without being alerted as part of the switching process that the consumer is intending to switch

73. **Price discrimination** – Where a provider sells the same good or service at a different price to different consumers

74. **Price guarantees** – Incentives offered by firms to retain or attract customers e.g. a firm may offer to match or beat any lower price a consumer finds at competing rivals or where a firm promises either to match the better terms offered by a rival or to release the customer so that they can take up the better offer without any penalties

75. **Public Telephone Network** – An Electronic Communications Network that is used to provide Publicly Available Telephone Services; it supports the transfer between Network Termination Points of speech communications, and also other forms of communication, such as facsimile and data

76. **PSTN** – Public Switched Telephone Network

77. **Provider** – Retail service provider (only “Provider” if referring to the process i.e. GPL Provider – all other instances it is “provider”)

Q

R

78. **RID Codes** – Reseller Identity Codes. Also known as “Retailer Identity Codes”, are three character alphabetic codes that are used to identify the reseller when a reseller wishes to offer carrier pre-selection (CPS) via a wholesale carrier (also known as a “CPS operator”). RID Codes are also used in the provision of wholesale line rental (WLR) when a WLR service provider wishes to transfer a particular line to WLR and retain the existing CPS arrangements on that line

79. **Reactive save** – Also known as “targeted save activity”. The LP is able to accurately identify, as a result of information the LP receives as part of the formal switching process, all those customers intending to switch and to make them a counter-offer not to switch. The LP is informed of the imminent switching either by the consumer via the code request under a LPL process or by the GP placing the order to transfer the service under a GPL process. The term does not refer to counter-offers requested by a consumer who explicitly contacts the LP with the purpose of obtaining a better offer

S

80. **SDSL** – Symmetric Digital Subscriber Line (also known as “Symmetric Digital Subscriber Loop”). Uses a single wire pair to carry a few Mbit/s of data

81. **SIM** – Simultaneous (as in Simultaneous Provision)

82. **Slamming** –

a. Where a CP has requested to takeover CPS, WLR and/or LLU services without the customer’s express knowledge and/or consent; that is in the following circumstances:
b. Where the customer has never been contacted by the Gaining Provider;
c. Where the customer has been contacted by the Gaining Provider, but has not given the Gaining Provider authorisation to transfer some or all of their telephone calls and/or line rental to the Gaining Provider;
d. Where the customer has agreed to purchase a product or service from the Gaining Provider and the Gaining Provider has submitted a request for a different product or service which the customer has not agreed to purchase; or
e. Where the customer has agreed to transfer some or all of their telephone calls and/or line rental to the Gaining Provider having understood, as a result of a deliberate

attempt by the Gaining Provider to mislead, that they are making an agreement with a different Provider

83. **SMPF** – Shared Metallic Path Facility. A way for Providers to gain partial control of the local loop connect to end users
84. **Small business consumers** – Business with up to 10 employees
85. **Switching costs** – Costs incurred by the changing supplier that are not incurred by remaining with the current provider. There are several types of switching costs, including transaction costs, compatibility costs, learning costs, contractual costs, equipment costs, uncertainty costs, psychological costs, shopping costs and search costs
86. **Switchers** – Consumers that have switched their provider in the last year
87. **Switching Working Group** – Was a joint industry, Office of the Telecommunications Adjudicator and Ofcom body, formed in 2010. Considered the problems with the existing NoT and MAC processes in more detail and developed detailed specifications and costs for different switching process options for fixed voice and broadband services on the Openreach copper network
88. **SMC** – Service Management Centre. The face of Openreach where customers can place orders or report problems
89. **SPG** – Service Provider Gateway. A provisioning gateway in a telecoms network

T

90. **TPON** – Telephony over Passive Optical Networks
91. **TxC** – Transfer code. Code that identifies the assets and services to be switched at each level in the supply chain
92. **TxCIA** – A Transfer Code issuing Authority/ Agency/ Agreement
93. **TPV** – Third party verification. Third party used to record a consumers consent to switch
94. **Technology agnostic** – A framework upon which new technologies can be built, without revolutionary change being required each time
95. **Triple play bundles** – Fixed voice, broadband and digital TV services

U

96. **USN** – Unique service number. Code that would be issued to consumers via their bills that they would need to give to the GP before they could switch

V

W

97. **WCP** – Wholesale communications provider
98. **WLR** – Wholesale line rental. A product that BT is obliged to provide to other communications providers. It enables other communications providers to offer both line rental and calls to end-users over BT's local network. Product offered by Openreach to communications providers to enable them to offer fixed voice services to end-users without having to fully manage the line
99. **WLR3** – Wholesale Line Rental 3. Offers a range of features that give you greater flexibility and control over the service CP offers to end customers
100. **WLT** – Working Line Takeover. A request to reuse a working telephone line for a new end-user at an existing end-user's address

Contractual Terms

1. **Background** – IP not created in the course of work under this Contract
2. **Confidential Information** – All information in whatever form obtained by the Contractor from Ofcom relating to and connected with the Contract and the Services, including but not limited to the Contract itself and the provisions of the Contract
3. **Contractor Foreground** – The part of the Foreground that is not Ofcom Foreground
4. **Deliverable** – Each item deliverable to Ofcom under this Contract together with any information and any computer software necessary to access a Deliverable
5. **Deliverable Contractor Background** – Background owned by the Contractor and incorporated in a Deliverable or required to Use a Deliverable
6. **Foreground** – All IP created in the course of work under this Contract
7. **IP** – Intellectual property. Comprises inventions, models, prototypes and other articles, know-how, information, trade secrets, designs, reports and other written material, drawings, semi-conductor mask works, database material, computer software and associated documentation and information

8. **IPR** – Intellectual property rights. Comprises legal protection for and rights in IP under laws relating to patents, petty patents design rights (whether registrable or not), trademarks, service marks, copyright, database right and semi-conductor chip protection, semi-conductor topography right, together with other legal rights associated therewith arising under common law, trade secret law and competition law in any country

9. **Liability** – Costs, claims, demands, liabilities, expenses, damages or losses (including direct/indirect financial loss, loss of profit, loss of reputation and all interest, penalties and legal and other professional costs and expenses)

10. **Ofcom** – Office of Communications. Established by the Office of Communications Act 2002

11. **Ofcom Background** – Background owned by Ofcom

12. **Ofcom Foreground** – All Foreground other than intellectual ideas, methodologies, designs, know-how and computer software provided that these are not specified to be a Deliverable

13. **Contractor –** Sole proprietor, partnership, incorporated company, co-operative

Annex 1 – Scope of this Study: Ofcom's Overview

Background to the study

In order to benefit from competition, consumers must have the confidence to exercise choice. This means that consumers should be able to switch between services and providers without undue effort, disruption and anxiety. A lack of confidence in the switching process may mean consumers choose not to switch.

On 9th February 2012, Ofcom published its latest consultation[40] as part of our strategic review of switching. Based on evidence and analysis of the problems to date, we stressed the need to move away from current processes in order to ensure we have a robust switching process that delivers easy, reliable switching and good competition outcomes for consumers. Therefore the consultation sought views on specific proposals for switching fixed and broadband services delivered over the Openreach copper network using current generation technology. Our proposed options included:

- Doing nothing or making incremental enhancements to the existing GPL and LPL processes;
- Harmonised GPL options which would include the creation of various new processes such as a transfer code, a unique service number, or a third party verification process; and
- Harmonised LPL options where the focus would be around addressing problems with back-end systems.

Aside from the do nothing and incremental change options, all of the proposed options are harmonised switching which will address back-end deficiencies and require significant system and process development. Therefore, for the purpose of this study the relevant options are:

Gaining Provider Led (GPL) option

- GPL TxC – Transfer code option that is similar to the current NoT process but addresses problems with the back-end process. This option will include a database but there are two variations on this. One option is holding the data centrally on a single database. Option 2 would be a virtual database where each CP holds its own data but allows other CPs access to that data in certain circumstances.

[40] http://stakeholders.ofcom.org.uk/consultations/switching-fixed-voice-broadband/

- (New option) Enhanced NoT (harmonised) – This option would work along similar lines to the current NoT process but with a number of additional elements such as mandating the use of cancel other and linked orders.

Losing Provider Led (LPL) options

- LPL TxC – Losing Provider Led (LPL) transfer code option that is similar to the MAC process currently in use for broadband migrations, but changes are focused on addressing problems with the back-end systems, improving the consumer experience of a LPL switching process and reactive save activity is banned.

It is the development and implementation of these new processes that Ofcom is seeking advice on. The purpose of this study is to consider some of the practical developmental and implementation issues that sit at the heart of a number of the options i.e. the H&D. Most of the harmonised GPL options would have a centralised database and an inter-provider hub. The centralised database would include a list of all UK fixed voice and broadband services, identified by either a USN or through the account reference.

Phase 1

Hub and Database

The development of central systems like the H&D are new systems which underpin the USN, GPL (TxC) and TPV options. The GPL (TxC) and TPV database was designed to capture the name, address, postcode, CLI, current CP, service type, technology type and account reference. The objectives of the study will be to consider the implementations issues for each of these elements and critically evaluate options for overcoming these issues. In particular, it would be useful to draw on experience in other countries/ sectors to provide evidence of how these issues have been successfully dealt with elsewhere.

For the development of the H&D, the types of issues to be considered include:

- Data quality – What issues are we likely to encounter and what measures should be taken to ensure that the data provided by CPs is accurate (both during the initial upload and once the system is live) to enable
  - Switching; and
  - The homemover processes to work effectively?
- The process for data collection and how we ensure comprehensive data is collected for all consumers. This will involve the collection of data from over 300 individual providers, both big and small; as such the tasks required maintaining the database must not be disproportionate for smaller CPs. This should include consideration of the

minimum amount of information required for the system to be effective e.g.it should consider the impact on the overall switching process should providers fail to input or update their consumer data;

- Recommendations to prevent CPs using the information stored on the database to target individual or particular types of consumers i.e. the potential for mis-selling or for direct marketing purposes;
- All relevant data protection and data security issues as a result of the database. This should include a range of options starting from the minimum amount of data and security required to carry out the database function through to a comprehensive database with a high level of security with a clear justification and recommendation on the appropriate option. It will also address issues such as ownership of the data (i.e. the role of the data controller) and the management of the database; and
- An assessment of any additional implementation issues you have identified which could impose significant costs on providers or be difficult to resolve.

Implementation

For the GPL TxC and enhanced NoT options[41] we are keen to understand in detail the practicality and overall feasibility of implementing this option. For the remaining harmonised options we require a high level review of the implementation process and the challenges we could face on a strategic and practical level.

Respondents to the consultation raised a number of general implementation issues. Ofcom will require advice on the issues raised.

Therefore, for this part of the study, our specific requirements are as follows:

- Determine the optimal implementation (including the governance processes required) for the GPL TxC switching process and highlight the key challenges likely to be faced implementing this option;[42]
- Provide a high level analysis of each of the harmonised LPL options and identify the top three challenges Ofcom will face should we decide to implement the LPL options (additional options may be added at a later date); and
- Address some of the specific the issues around implementation raised by the industry in response to our 2012 consultation.

[41] Potentially the GPL SSE option as well.
[42] Ofcom may add other options for detailed review at a later date.

Annex 2 – Implementing Governance for Additional Verification/ TPV

11.1 We understand the challenges of introducing new requirements to verify that sales to customers are not the consequence of slamming. One proposed approach in the consultation document was the introduction of TPV prior to a sale.

11.2 It is not necessarily the case that changes to the strategic switching process require changes to governance as a matter of course, and specifically with reference to verification. Ofcom could oblige all providers as part of the General Conditions to undertake a higher level of pre-sale verification (PSV) for all domestic customers (but not necessarily independent or third party), and rely on the providers to implement that obligation without any additional governance mechanism, by using a relatively loosely worded requirement to keep “appropriate records of the sale for a fixed period of time”. The provider would then be able to determine how to discharge the obligation, both in terms of the media used, the storage options taken and the depth of compliance chosen. This would capture many of the attractive features of TPV (reduction in slamming as the key prospect, and broader beneficial impacts on the switching market) whilst reducing the regulatory burden on providers.

11.3 If necessary, Ofcom may consider the requirement to have a very thin document that sets out the working arrangements for such a scheme, which could sit below the General Conditions but outside the Market Agreement if that were considered preferable. This is illustrated below.

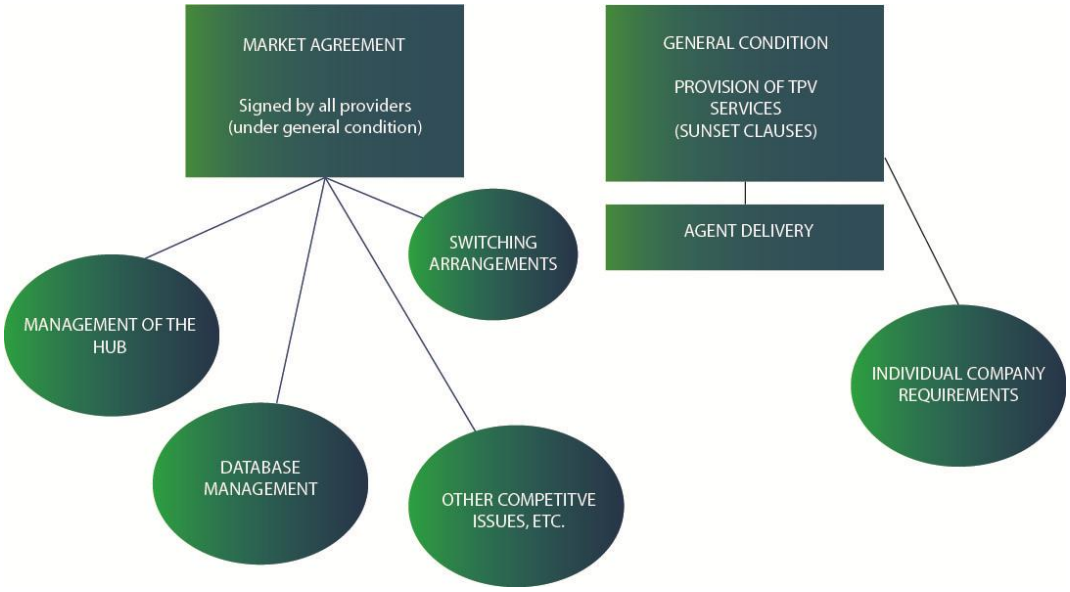


Figure 25 – Market Agreement and General Conditions

11.4 The requirement to operate additional or TPV could be placed within a specific governance vehicle of the Market Agreement, which would manage and monitor performance against the target. This governance vehicle could be thin and solely related to the delivery of TPV and TPV related work, or thick and offer a number of other market level services to providers (or be thin, but designed to be expandable in the future should providers wish it).

11.5 Options to reduce the regulatory obligation on providers to deliver additional PSV (possibly through TPV) may be to position it within a sunset clause, so that the obligation to operate a PSV/ TPV would cease on or before a set date (perhaps two years from the commencement).[43] A second option would be to measure a company's performance against another, and vary the additional assurance requirements for companies which were repeatedly meeting a pre-defined threshold, and indubitably, focus resources and attention on those who are not. Sampling may also be used to ensure standards remain high whilst not requiring a blanket obligation on providers. In the event that performance on slamming slipped during the period for either individual providers or the market as a whole, the obligation to offer TPV could be re-addressed and adopted through the governance regime.

[43] An option initially used by Ofgem to limit regulatory burden on doorstep selling requirements in the domestic energy market. It has since been renewed as participants were deemed not to be reducing customer detriment as Ofgem anticipated.

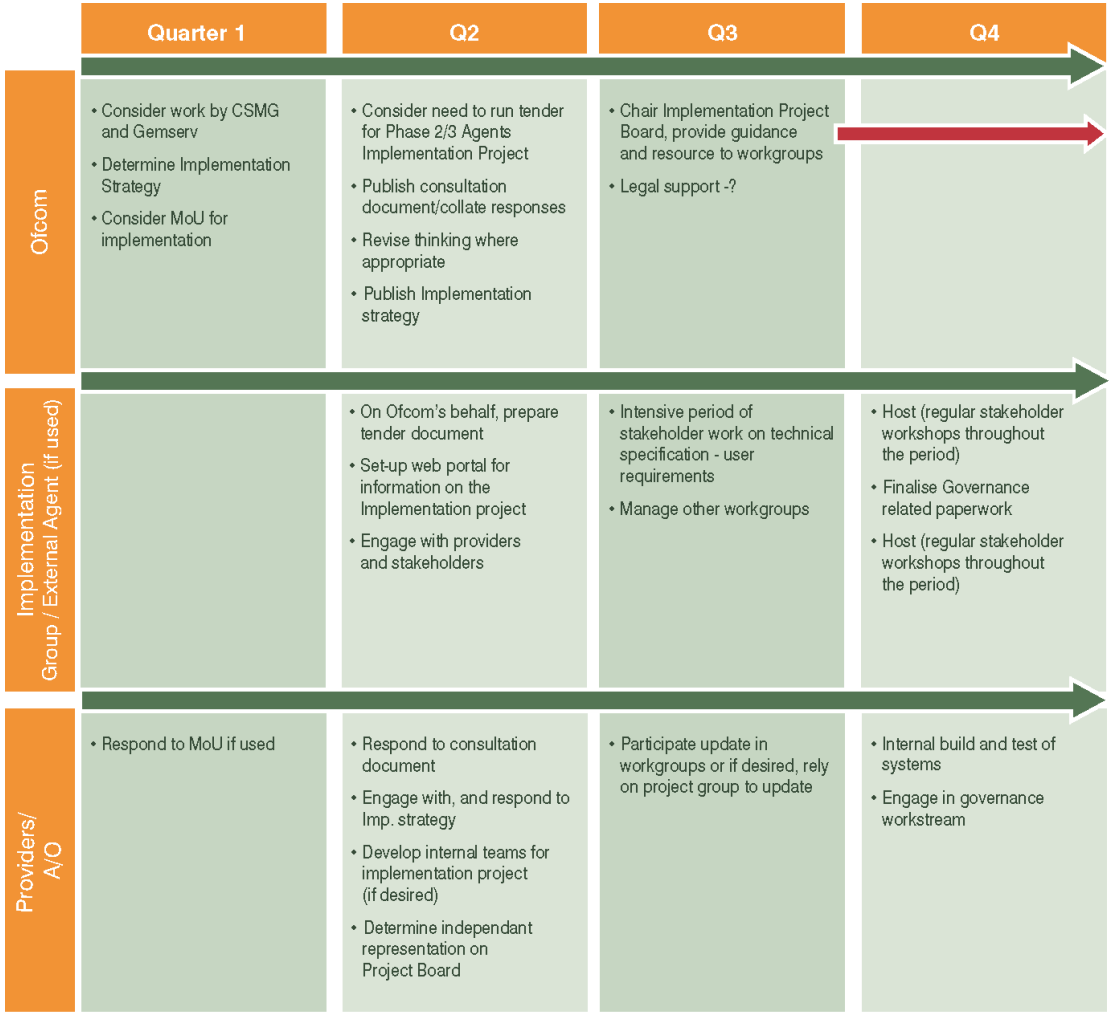
Annex 3 – Summary table of Implementation Challenges

Challenges / Options	Technical Implementation Challenges	Stakeholder Views/Concerns to Date	Scale of Project	Project Management Challenges	Key Implementation Challenges
Enhanced NoT	• Harmonisation • Coordination with MPF and AO • Setting up or altering processes i.e 'cancel other', 'linked order'	• Potential issues regarding consumer intent validation • Requirement of enforcement programme • Call record keeping obligation may be onerous for small CPs	• Relatively small and can be implemented quicker compared to other GPL TxC and LPL TxC options	• Relatively few but well defined groups required that need clear ToR, change management and decision making capabilities	• System changes for Providers offering BB only services to residential and SMEs • Governance arrangements agreed and adequate representation required
GPL TxC	• Design, development and implementation of H&D • Development of interfaces between provider and central system • Customer validation cycle for smaller CPs • Impact on the EMP	• Complexity of operation of the H&D • Cost of H&D • Security challenges such as data privacy and protecting consumer data from misuse • Gaining agreement on roadmap for implementation	• Large scale, relatively complex and more to consider in terms of scope of project	• Stakeholder commitment to represent on multiple working groups • Stakeholder commitment to support programme • Higher costs (than Enhanced NoT) and complexity	• Capturing sufficient detail in implementation plan • Large number of participants with different views • Setting up Governance arrangements that befit the programme and allow roadmap to be achieved
LPL TxC	• Impact on the EMP • Implementation of the TxCIA	• High implementation and ongoing funding for TxCIA • Concerns regarding	• Medium to large scale (in between options above)	• Stakeholder commitment to represent on multiple working groups • Stakeholder commitment to	• TxCIA would require careful planning, both with stakeholders and existing systems

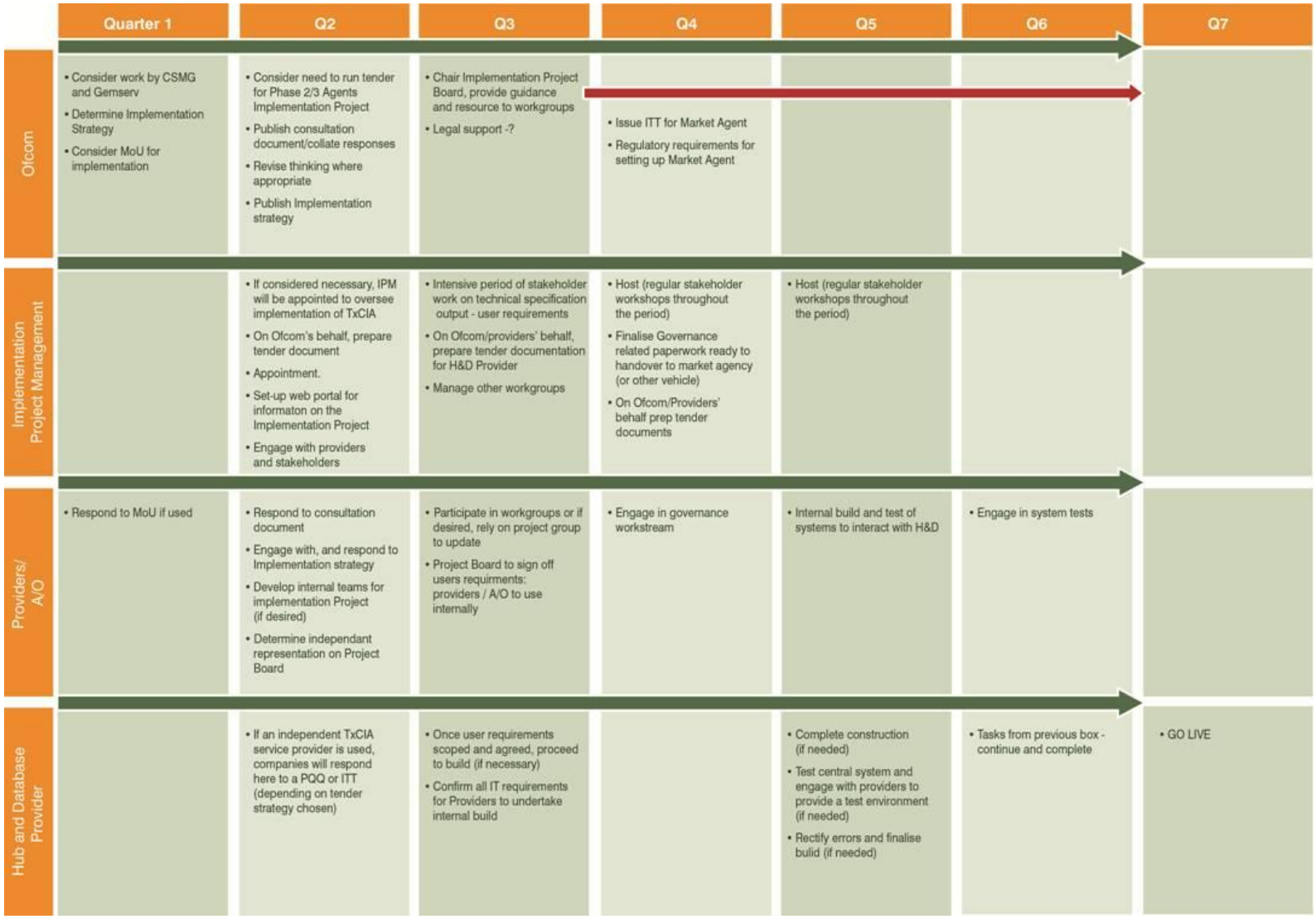
		enduring operation and TxCIA assurance processes • Careful design required so as to support competition • Stakeholder support for the duration of the long implementation lead time		support programme • High costs (than NoT) and complexity	• System upgrade required for providers currently offering GPL only services • Complexity of TxC provisioning implementation programme

Annex 4 – Roadmaps

Enhanced NoT Roadmap



GPL TxC Roadmap



Roadmap for LPL TxC