Cross-Platform Switching

Gaining Provider Led Front-End Process Use Cases

Document Control			
Title:	Cross-Platform Switching Gaining Provider Led Front-End Process Use Cases		
Saved: 28/07/2016	Printed: 28/07/2016	Version: 4.0	
Project:	Ofcom - Consumer Cross-Platform Switching		
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Filename:	Specification 2 FE GPL_v3.docx		

Summary of changes

Version	Section	Description
0.1	n/a	First internal release.
0.2		Internal review.
1.0		Draft for Ofcom review.
2.0		Updated to incorporate Ofcom feedback and additional internal changes.
3.0		Updated to incorporate Ofcom final feedback and additional internal changes.
4.0		Update of process diagrams.

References

Ref.	Title	Version	Author/Company
[1]	TM Forum TAM Documentation	R15.5.0	TM Forum
[2]	Cross Platform Switching – Back-End via EMP Process Use Cases	1.0	Ted Davies / Adam Tickner
[3]	Cross Platform Switching – Back-End via Direct Inter-CP Process Use Cases	1.0	Ted Davies / Adam Tickner

Glossary of Terms

Term or Abbreviation	Description
Account/service record	This term is used to describe the set of account and service level data that allow a CP to identify an individual instance of a service on a customer account. For example, account reference, post code, service type and one or more service identifiers. The customer would be expected to know or have access to this information. They would need to use it to identify the service for the purpose of switching that service.
AO	Access Operator – usually the operator providing the connection to the customer's premises. Note however that BT Wholesale could also be considered an access operator in some contexts;
BAU	Business As Usual
BSS	Business Support Systems
CLI	Calling Line Identifier
CP	Communications Provider
C&R	Cease & Re-Provide
CSR	Customer Services Representative
ETC	Early Termination Charges
GP	Gaining Provider – the CP to whom the customer is switching
GPL	Gaining Provider Led – describes a switching process in which the consumer interacts with the Gaining Provider and does not need to directly contact the Losing Provider
IVR	Interactive Voice Response - technology that allows a computer to interact with humans through the use of voice and keypad inputs
LP	Losing Provider – the CP from whom the customer is switching
IS	Implications of Switching – the (potential) consequences of moving an end user's service(s) from one provider to another, including but not limited to Early Termination Charges
NoT	Notice of Transfer
OSS	Operations Support Systems
PONR	Point of No Return
SLA	Service Level Agreement
Switch Reference ID	A unique reference generated by either the GP or Openreach to identify the customers' switch order request

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1 Introduction

Within Ofcom's wider programme of work on consumer switching, Ofcom engaged Cartesian to conduct a feasibility study on different options to reform the existing switching processes for voice, broadband and pay TV services delivered across different platforms. The objective of Cartesian's work was to identify, define and cost a set of alternative process options that sought to address consumer harms that had been identified as part of recent consumer research and through other evidence.

Two alternative switching options have been chosen for assessment:

1. Enhanced Cease & Re-Provide (EC&R) Cross-Platform switching model
2. Gaining Provider led (GPL) Cross-Platform switching model

In both cases, an inter-CP communication channel is proposed for implementation. Again, two alternative options have been chosen for assessment:

3. Openreach EMP System Extension
4. New Direct Inter-CP Communication Channel

For each of the chosen options, Cartesian has developed use case documents. This documentation is intended to provide Communication Providers (CPs) with sufficient information to conduct their own assessment of the potential costs and implications of adopting these models.

In the documentation, a distinction is made between '*front-end*' and '*back-end*' activities. The '*front-end*' is the initial interaction between the consumer and CP(s) to validate the switching request and obtain the consumer consent. The '*back-end*' covers both the internal CP and CP-to-CP technical activities.

This document concerns the 'front-end' activities of option 2, "*GPL Cross-Platform Switching Model*". This document should be read in combination with the documentation addressing alternative back-end implementations – see References [2] and [3].

1.1 Aim and Document Scope

The focus of the project was on the technical and operational aspects of consumer switching of communications services between communication providers (CPs) that use different delivery platforms, i.e. cross-platform switches. This included a consideration of both the processes

(operational activities) that the CPs undertake and the systems (software applications) that support the CPs' business operations.

Ofcom had recently (late 2015) carried out quantitative and qualitative research across a full range of switching scenarios of triple play switching to better understand the nature and scale of harms experienced by consumers. Ofcom shared with Cartesian the findings and Cartesian was then asked to develop potential alternatives to the current switching processes that would help to address the issues identified. In particular, measures that could help to address loss of service; double paying; difficulties contacting the losing provider (LP)/cancelling existing services and lack of awareness of implications of switching (IS). Cartesian also considered how to mitigate potential unintended consequences of the measures and assessed the impact to industry should these be adopted.

The following switching cases were within the scope of the project:[a]

- Switching of fixed voice, broadband and/or pay TV services between Virgin Media and another CP
- Switching of satellite pay TV from Sky to another CP (switched either by itself or alongside voice and/or broadband)

The following items were outside the scope of the project:

- Switches that only involve services delivered on the Openreach network, i.e. where there is no cross-platform switch occurring
- Over-the-top TV services, e.g. NOW TV, Netflix (services offered over broadband that are agnostic to which CP is supplying the broadband connection)
- Mobile voice and broadband services
- Switching during a home move
- The commercial and legal implications of the potential alternative options

1.2 Assumptions

The following assumptions have been made in the development of this process option.

1. When switching more than one service, all of the services have the same switch date

[a] The original scope of the project was broadened to include the switching of standalone pay TV services.

2. When switching more than one service, if the GP encounters a problem with the delivery of one of the services, then the switch date will be postponed for all of the services
3. The information provided under the banner of "Implications of Switching" is driven by differences between the GP and LP products as well as contractual considerations (e.g. there may be discounts that are conditional on subscribing to specific combinations of services, or the customer may incur early termination charges if switching before the end of the minimum contract period). While these should not have a major impact on the process described in this document, consideration should still be given to the type and level of information required here
4. The asset validation phase of the process defined in this document is treated in a real-time manner. The GP's sales conversation is completed at this stage so the customer would not be waiting on-line or have to be contact a second time
5. The customer perception of the quality of service is outside of the remit of this document. The processes in this document cover the activation and cease of active, live services and the provision of such equipment as is necessary to access the service in good working order. CPs may wish to implement additional, post-switch activities to assure that customers are satisfied with their new services.
6. A unique reference is automatically generated, either by the GP or Openreach, to identify the customers' switch order request – Switch Reference ID.[b] A means by which to identify the GP would need to be included in the reference. This is outlined in the back end documentation (see References)

[b] Openreach will generate the reference if the EMP back end proposal is used. The GP will do it if the 'Direct' back-end proposal is used.

2 Overview of Process

The proposed front-end process of the GPL Cross-Platform model enables a consumer cross-platform switching journey with a single touch point. Note however that some customers may contact the LP first. In these cases, the LP needs to inform the customer about the GPL process in place and explain that they do not have to cancel their services with the LP. A short summary of the front-end process is detailed below:

- The switching process is a GPL process. The GP is responsible for receiving the switching request from the consumer, orchestrating the activation of the services and coordinating the cease of services with the LP.
- The process aligns with the GPL NoT+ process that is used for switching services within the Openreach platform
- It applies to the following cross-platform switching cases:

- Switching of fixed voice, broadband and/or pay TV services between Virgin Media and another CP
- Switching of satellite pay TV from Sky to another CP (switched either by itself or alongside voice and/or broadband).

- Consumers can use the GP's telesales, online and retail channels to request a switch. In the retail channel it is assumed that CPs would effectively re-use either the telesales or online systems
- The GP validates in real-time the consumer's assets and account details with the current provider (LP) and is able to request the cease of services on behalf of the consumer

During the sales process, the customer provides the GP with:

- Name
- Address and postcode
- Current provider name
- Services they wish to switch
- Account reference with current provider

The GP must identify the customer to the LP during the Asset/Account Validation step, i.e. the interaction between the two CPs to identify the assets used to provide the consumer's service. The LP Account Reference and/or the CLI of the line to be switched can be used. The CP name, and customer's postcode are also requested from the customer by the GP. The postcode is sent

with the LP Account Reference / CLI as a means to prevent erroneous transfers due to miskeying of account references.

- The GP will elicit a statement of consent from the customer, e.g. “Do you wish to switch service(s) X from LP to GP?”
- This statement of consent is recorded by the GP and stored in a durable form; the record is able to be retrieved in the case of a slamming allegation or other dispute (as per the existing GPL NoT+ process that is used for switching services within the Openreach platform)
- Following the order placement with the GP, communications from the LP will be used to confirm to customers any early termination charges and other service implications. A welcome letter from the GP will be sent to the customer setting out the details of the new service.
- GP and LP communications should be sent in a timely manner to reassure the customer that the contact was acknowledged and that the request is progressing. It is recommended that letters are sent within one working day. Electronic communications can be triggered automatically and will ideally be sent immediately. The above recommendations also apply to any subsequent communications, e.g. to advise on a change of the switch date.

Figure 1: High-level Overview of the GPL Cross-Platform Switching Model

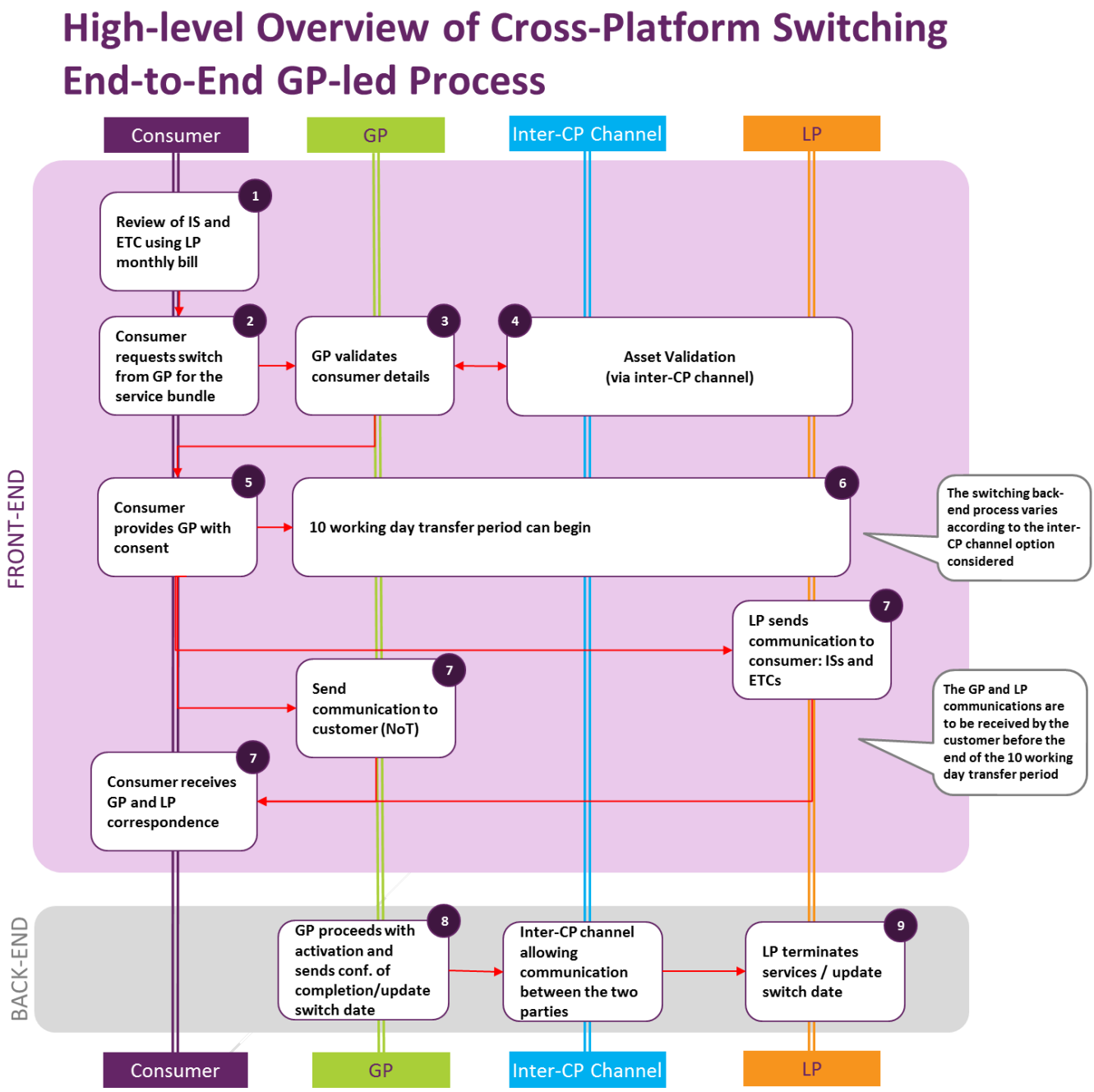


Table 1: High-level Steps in the GPL Cross-Platform Switching Process

Area	Step	Description
Front-end	**1**	**Consumer reviews ISs and ETCs**. The consumer has the option of proactively checking the costs and implications of switching before contacting the GP. CPs make this information available for telephone, broadband and pay TV services via the monthly bill.[c] **IS added to the monthly bill:** The implications of switching (IS) are included on the consumer monthly bill. This includes end of contract date, the value of any ETCs and disconnection charges, and potentially a full list of services and products impacted.
Front-end	**2**	**Consumer requests GP to switch their current services.** The consumer can use online, telesales and retail channels. In the retail channel it is assumed that CPs would re-use either the telesales or online systems.
Front-end	**3**	**GP validates consumer details.** The GP ensures that they have all necessary details to set up a new contract and completes the internal checks on whether services are available and whether an engineer visit is required.
Front-end	**4**	**Asset validation**. The GP uses information provided by the customer to validate the customer account and active services with the LP. The GP must explain the process to the customer and asks them for consent (because customer data is involved). **Customer Information for Validation:** The GP can use the customer's LP account number and/or CLI as the primary means of identifying the customer to the LP. To avoid erroneous transfers (disconnections), the primary identifying information should be sent to the LP with the customer's surname, address or postcode.
Front-end	**5**	**Consumer provides GP with consent.** GP elicits statement of customer consent and records and stores record of consent. **Record of Consent:** The GP makes a durable record of the consumer's decision to switch their services to a new CP. The record can consist of a letter signed by the consumer, a voice record, an online transaction or other record type. The GP is responsible for holding and storing this record.

[c] Note that although Openreach-to-Openreach switching cases are out of scope of this document. (They follow the GPL NoT+ process.) These two enhancements would benefit all customer switching scenarios. This could lead to a reduction in the number of inbound calls to the LP in GPL NoT+ switches.

Area	Step	Description
Front-end	**6**	**10 working day transfer period can begin.** GPs can decide whether to start certain tasks earlier (line of sight visit, cable pull etc.). The consumer can decide to cancel within 10 working days and will need to contact the GP to confirm the decision. **Transfer period** A 10 working day transfer period is built in the switching process to give the consumer the necessary time to receive, review and potentially act, on any notifications sent by the CPs. This helps the consumer avoid slamming and also enables them to reflect on the implications and costs of switching communicated to them.
Front-end	**7**	**GP and LP sent out the communications to the consumer.** Communications are to be sent in a durable format such as letter and/or email. CPs may also provide updates by SMS although this is optional and is not required for the impact assessment. **Send GP and LP letters with IS** The switch request triggers both CPs to send letters to the consumer: a notice of transfer (NoT) from the GP informing the customer that the switching process is in progress and another one from the LP that lists the implications of switching, including any ETCs and disconnection charges. These letters follow a standard format similar to the one used in the GPL NoT+ process to improve readability and understanding to the consumer. Both letters will include the switching date. The LP letter must balance the need to ensure the customer is informed, versus overwhelming the customer with too much detail. **Align the notice period to the switch period** A standard minimum switch period for all products across all platforms is introduced. The customer's notice period will align with the agreed switch date. This is consistent to the current arrangements for switching in Openreach platform for voice and broadband (GPL NoT+). This period will accommodate the minimum lead times for the GP to provision/activate all the three services on its platform.
Front-end	**7**	**Consumer receives GP and LP correspondence**. The consumer has a 10 working day transfer period.

Area	Step	Description
Back-end	**8**	**GP sends confirmation of completed switch to LP via the inter-CP communication channel.** This avoids unexpected service loss should problems arise with the GP service delivery on the switch date. **Proactively rescheduling the switch date** If delays occur during the GP service activation then the GP is able to update the switch date, as long as this is before the point of no return (PONR). The switch date may also be postponed by the GP in response to a customer request. The switch date refers to all components of the services being switched.
Back-end	**9**	LP cancels services / update switch date

3 Overview of Impacted Areas

3.1 Overview of Use Cases

The following table summarises the use cases described in more detail later in this document. All use cases are focused on the switching process and how the scenario affects the elements of that process.

Table 2 Overview of Use Cases

Ref	Scenario	Sect.	Figure	Description
FE-GPL-UC01	Customer Switch Request	4.1	2	Process followed when a customer switches the services within scope of this process
FE-GPL-UC02	Customer-initiated Change Switch Date	4.2	3	Process to be followed when requesting a change of switching date.
FE-GPL-UC03	Customer-initiated Cancel Switch	4.3	4	Process followed when a customer chooses to cancel an order, whether through change of mind, having discovered they are being slammed. This can also be used by the GP if the GP discovers a technical issue resulting in switch not being possible.

3.2 Interfaces

The following table summarises the interfaces referenced in the use cases in this document. Exact details of these interfaces will vary from one CP to another. The intention here is to cover at a generic level the types of interfaces that will be required and that will be impacted by the proposed switching process.

Table 3: Overview of Interfaces

Interface	Description
CP order entry	This covers the front end interfaces used to input customer and order data, such as the applications used by the CSRs and any customer self-service front ends.
CP-customer communications	This covers the means of a retail CP informing their customers of information pertaining to a switch and can be via a postal letter or via electronic communication.
CP billing	This covers a CP's bill presentation, whether in paper or electronic format.
CP <- -> CP channel interface	This covers the interactions between CPs to manage requests and how their acknowledgements and their responses in relation to existing (and potential new) back-end switching processes will be orchestrated.
Customer online account portal	This covers customer self-service front end for presentation of customer information.

3.3 Applications

Each operator will have a unique suite of applications in their OSS/BSS architecture. To provide a common language, this document uses the "Level 1" application names and descriptions in the TM Forum's Application Framework (a.k.a. TAM). This industry standard framework can be mapped by CPs to their own specific application architecture.

The descriptions below are replicated from the TM Forum's TAM Map document and are included for ease of reference. Please refer to the TM Forum documentation (Reference [1]) for more detail on TAM.

Table 4: Overview of Applications

Application	Description
Channel Sales Management	The Channel Sales Management application provides the necessary functionality to sell to a number of specific sales channels.
Knowledge Management	Knowledge Management (KM) comprises a range of practices used in an organisation to identify, create, represent, distribute and enable adoption of insights and experiences. Such insights and experiences comprise knowledge, either embodied in individuals or embedded in organizational processes or practice.
Customer Information Management	Customer Information Management ensures the delivery of a consistent, accurate and complete customer view to operational and analytical touch-points across the service provider enterprise, thus enabling the optimization of key business processes and the leverage of new revenue opportunities. Customer information is typically scattered across mixed environment with fragmented, isolated customer data which needs to be consolidated, directly or using data federation. A Customer Information Management application, using context sensitive business logic, synchronizes customer information across all of service provider systems and reconciles customer data inconsistencies. Customer Information Management traditionally lies within the boundaries of Master Data Management (MDM), however, it is not mandatory.
Customer Self-Management	Customer self-empowered applications provide an internet technology driven interface to the customer to undertake a variety of business functions directly for themselves. These applications interact to provide fully automated service or assisted service over various customers touch points. Although customer self-management applications primarily trigger functionality defined in the rest of the CRM, Service Management and Resource Management applications, they should also contain functionality specific to customer self-empowerment.

Application	Description
Customer Contact Management, Retention and Loyalty	Customer contact management, retention and loyalty applications are a varied group of functions that are generally sold as part of a Customer Relationship Management (CRM) suite of applications. These applications allow an operator create, update and view the customer's information (names, addresses, phone numbers, organizational hierarchy), record and view all customer interactions across different communication channels and department, so that whoever is speaking to a customer can see the history of issues that have concerned that customer, be they order issues, billing enquiries or service problems. More sophisticated systems allow capabilities to highlight customers as risk of switching to an alternative carrier (churn indicator) and provide comparisons with other operator's service packages to allow customer care agents to try to persuade a customer that their current operator can provide the best value for money. These indicators can be provided via integration to business intelligence platforms.
CSR Toolbox	The CSR toolbox addresses the need for rich interactions with the customer, comprising of applications from the Fulfilment, Assurance and Billing domains. The CSR toolbox provides additional functionality in a common look and feel across the applications – and is not simply a convoluted assembly of applications and processes across silo systems.
Customer Order Management	Customer Order Management applications manage the end to end lifecycle of a customer request for products. This includes order establishment (step guiding, data collection and validation), order publication as well as order orchestration and overall lifecycle management. A customer request may also pertain to already purchased product(s). Thus the Customer Order Management application handles order requests to suspend, resume, change ownership, amend, add, change and discontinue existing ordered products. Customer Order Management application should support repackaging of the purchased offers into alternate product offering (may require sales/contract negotiation). Customer Order Management applications typically serve all the customer touch points / channels, including call centre, retail, self-service, dealers, affiliates, etc. The order may be initiated by any channel and visible to the other channels if needed.
Customer Problem Management	The purpose of Customer Problem Management is to manage problems reported by customers, resolving these problems to the customer's satisfaction, and providing meaningful status on the issue as needed to the customer. Customer problems can include: • General questions on products purchased and being used by the customer • Problems with products already purchased and being used by the customer either due to lack of education or service/network problems. • Problems with a material purchase from the service provider, even if they do not have an account with the said service provider. • General inquiries, complaints, and commendations.
Service Order Management	Service Order Management applications manage the end to end lifecycle of a service request. This includes validating service availability as well as the service order request. Other functionality includes service order issuance, service and or product order decomposition, and service order tracking along with orchestrating the activation and the test and turn up processes. Notifications will be issued to the Customer Order Management during the service order orchestration process (especially upon completion). Such notification can trigger other steps in the Customer Order Management (e.g. service order completion concludes these steps with Customer Order Management). In addition, Service Order Management also provides service design and assignment functionality.

Application	Description
Service Inventory Management	Service Inventory Management represents the applications which contain and maintain information about the instances of services in a telecom organization. A Service Inventory application may store and manage customer or resource facing service instances, and their attributes. The Service Inventory may also store and manage service relationships.
Service Problem Management	Service Problem Management applications are responsible for receiving service affecting customer problems as well as network troubles/faults, relating the various problems, and resolving them in an efficient manner.
Partner Management	Most of the service providers now bring in a lot of products from partners to add to their service portfolio, so that customers can choose from a wide array to their preference and benefit. The service providers can also form channel partners through which they can offer their products to other markets where they don't have any direct access. As the market is getting polarized to service providers and customer owners, partnerships are going to be the key. Virtual world is opening up with increasing operations of players like MVNOs, extending services or products from other parties to their customers leveraging their brand power and customer access. Hence horizontal and vertical value chain integration is going to be a vital part of the consolidation and convergence strategy of any service provider. In the online content and commerce world, the length of value chain could go on to include content providers, brokers, intermediaries, network operators, payment processing entities, banks and so on. Revenue from the end customer needs to be shared among these value chain entities based on pre-defined agreements. Sometimes the revenue settlement process has to be done in real-time so that final transaction can be validated and output delivered to the end customer.
Transactional Document Production	Transactional Document Production applications can be used in the telecommunications activities that require bills, invoices, letters and statements to be created for subscribers. It can be deployed by any organization that provides these services. Transactional Document Production applications can process numeric, text and image content into print-ready and web-ready streams that can be reproduced using a predefined template on a variety of media. For instance, telecommunications companies can process data from a billing system into standard industry print streams to produce paper bills.
Bill Calculation	The purpose of this application is to calculate a convergent bill for next-generation voice, data, content, and commerce services - Including prepaid and post-paid services in a single convergent bill.

Application	Description
Application Integration Infrastructure[d]	The enterprise integration framework described in this document seeks to provide an effective, generic and flexible approach to such integration where changes can be made by operations people rather than software engineers. It is critical to the success of any 'lean operator' program that integration between processes, data and applications can be achieved progressively, accommodating both legacy applications as well as new systems sourced from commercial suppliers or built in-house. Some approaches to integration are really only applicable to 'clean-build situations and for most operators with legacy systems, it is most unlikely that they can deploy anything other than step-by-step progressive integration approach. This progressive approach assumes that an increasing number of steps in a lean operator's processes will be automated via applications, either by replacement of current manual process steps, replacement of existing applications with one's offering greater functionality or upgrades to existing systems. Thus the task of providing end-to-end, flexible process automation is essentially one of providing integration between "islands" of automation. There are 3 primary building blocks to achieving a generic and flexible approach to integration such process and application "islands". These are: • A common communications infrastructure between each application. Several leading middleware products are now well established to provide a common communications vehicle. The most common of these is currently enterprise application integration (EAI) bus technology that supports numerous interface types to cater for a variety of legacy operating systems, databases, data formats, standards etc. EAI is concerned foremost with application-to-application exchange of data, not user activity or interaction. Other common communications vehicles such as web based approaches can also be used. • A business process management (BPM) environment. BPM is an emerging class of technologies that work hand-in–hand with EAI technology to provide a range of facilities to manage process and information flows between applications. The real value of BPM is the ability to define and execute business processes independent of applications and infrastructure. While EAI and integration capabilities offer an important resource to BPM environments, EAI software alone typically lacks the ability to address the user-facing side of business processes. • Contract-defined interfaces between applications. In Frameworx parlance, these are defined as contract interfaces. Frameworx Contracts define the interfaces to Services made available by the OSS application. The data and metadata in Contract specifications use information defined in the Shared Information and Data model (SID).

[d] This is a domain rather than a level 1 application

4 Use Cases

The use cases in this section make reference to account/service information which is used by the LP to identify the customer to be switched. The account/service information is captured by the GP during the sales process. During the sales process, the customer provides the GP with:

- Name
- Address and postcode
- Current provider name
- Services they wish to switch
- Account reference with current provider

The primary means of identifying the customer (with the Losing Provider (LP)) is through the Account Reference and / or the CLI.

4.1 FE-GPL-UC01: Customer Switch Request

This phase contains the interaction between the consumer and the CP(s) to request the provisioning of new services and the ceasing of existing services. There are different channels the consumer might use for service activation. The majority of consumers are expected to interact with the CPs via the online and call centres. Where retail channels are supported by a GP, it is assumed that the online and/or telesales systems will be reused for consent validation.

The following aspects must be considered:

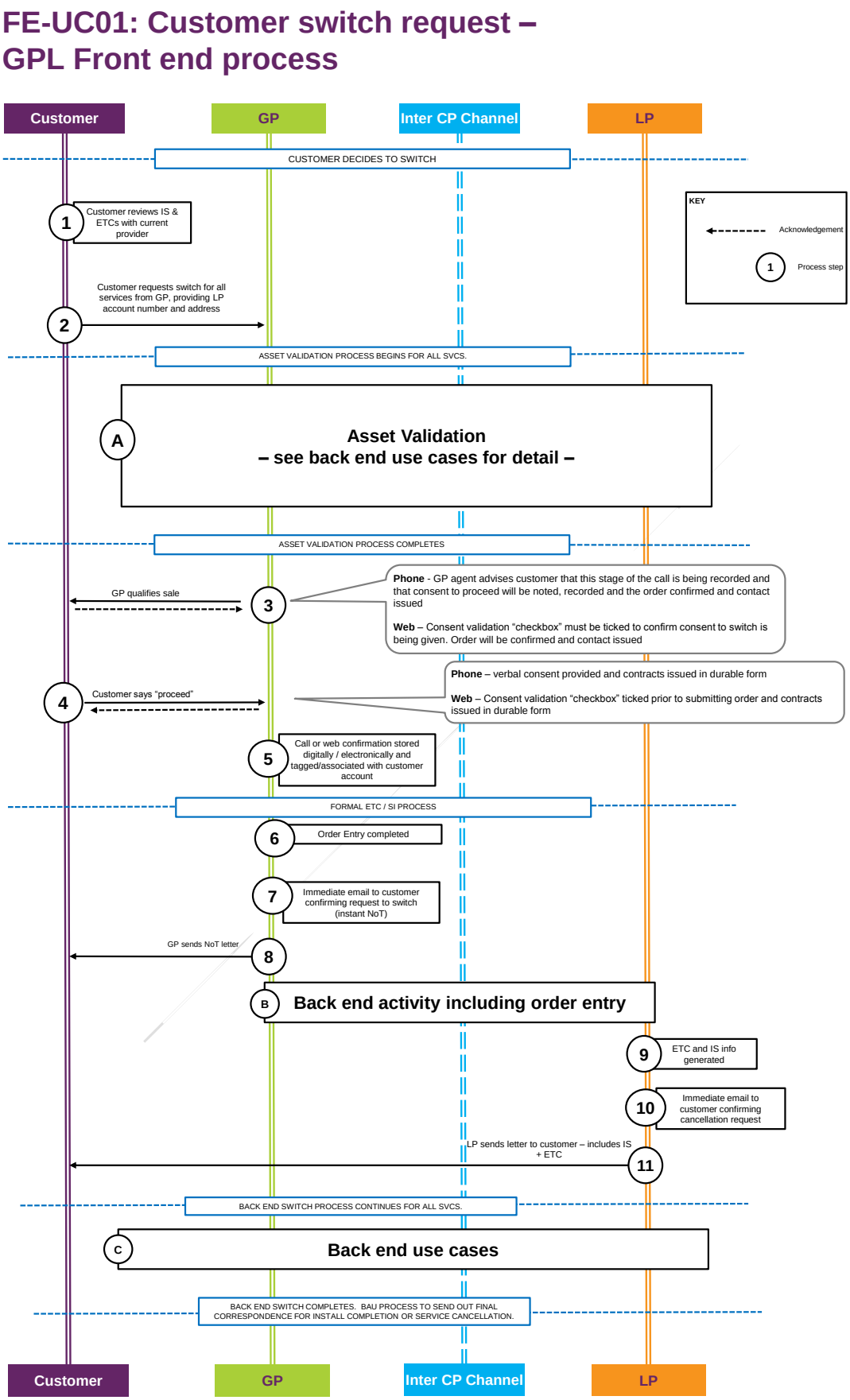
- The consumer will get a letter with the ISs from the LP after confirming the switching order with the GP
- The switch date is set by the GP during the front end process. Scheduling the switch takes place during, or shortly after, the GP interaction with the consumer and is defined by taking into account the GP's own availability in terms of resources and infrastructure capacity, the consumer's preferences and the notice period for the LP services to be switched.
- It is assumed that by default all services would be switched on the same date. Providing greater flexibility would add cost and complexity to any future solution.
- GP and LP communications should be sent in a timely manner to reassure the customer that the contact was acknowledged and that the request is progressing. It

is recommended that letters are sent within one working day. Electronic communications can be triggered automatically and will ideally be sent immediately. The above recommendations also apply to any subsequent communications, e.g. to advise on a change of the switch date.

4.1.1 Process

The following diagram walks through the process for this use case.

Figure 2: Use case FE-GPL-UC01



4.1.2 Use Case Steps

Table 5: FE-GPL-UC01 Steps

No	Description
2	Customer agrees deal with GP and requests a switch of service(s). The following information would be expected to be provided to the GP: • Name • Address • Postcode • Current CP (LP) name • LP Account Reference and CLI • Service types Note: The LP Account Reference will be used as the primary reference during the LP asset validation step.
A	**The GP performs the asset validation in real time internally and also with the LP – i.e. account validation. The asset/account validation with the LP is executed via the implemented inter-CP communications channel. The process steps and use cases are described in detail in the corresponding back-end process specification document (see References [2] and [3]).**
3	The GP completes the asset validation and understands the services and offers to be provided to the customer. The GP uses the data returned from step **A** to qualify the sale, informing the customer should any changes be necessary as a result of learning the existing service data held against the supplied account/service data. Note that this information only relates to the services supplied by the GP and does not include LP implications of switching. • **Phone** - GP agent advises customer that this stage of the call is being recorded and that consent to proceed will be noted, recorded and the order confirmed and contact set to be issued • **Web** – Consent validation "checkbox" must be ticked to confirm consent to switch is being given. Order will be confirmed and contracts set to be issued
4	The customer instructs the GP to proceed with the switch on the phone or on the web.
5	The GP records the customer consent, storing it in durable form. The intention is to allow resolution of disputes involving claims of unsolicited switch activity being made by the GP. The call recording must be stored in an easily retrievable format, identified by a customer/service identifier or LP account details. • **Phone** – verbal consent provided and contracts created • **Web** – Consent validation "checkbox" ticked prior to submitting order and contracts created. The GP web system must also flag which orders are placed by the customer via the online channel and which orders are coming through the retail channel.
6	The GP completes order entry in the system. This populates the GP systems with the customer data required to activate the GP services. Selected customer data is also communicated to the LP using the inter CP communications channel. A switch reference ID is generated automatically by the back-end systems (see References [2] and [3] for further detail).

No	Description
7	On completion of taking the order, if the customer has opted-in to receive notifications via email, the GP sends an immediate email to the customer confirming request to switch ('instant NoT').
8	On completion of taking the order, the GP also sends a Notice of Transfer (NoT) letter. The letter should include details of the contract that was agreed during the sales process – e.g. service package. It should also include details of the 10 day transfer period and the implications of cancellation after that period. This information is to be presented in a format and to a level of detail covering specific key points to be agreed with Ofcom. **N.B:** The 10 working day transfer period allows the consumer to cancel the switch. Should the GP wish to perform pre-install activity in this period, it is conducted at the GP's own risk.
B	**Back end activity including order entry in inter CP communications channel begins. This is detailed in the back end use case documents (see References [2] and [3]).**
9	The LP determines the IS and calculates any ETCs and disconnection charges.
10	The LP communicates to the customer that it has received the switch request and confirms the services which are to be switched and the planned switch date. This communication shall also include details of any ETCs and other IS. By default the LP communications will be sent in a letter by post. If the customer has elected to receive communications by email from the LP, then email may be used as an alternative.
C	**The back end switching process continues through to installation and customer confirmation. This is covered in the back end use case documents (see References [2] and [3]).**

4.1.3 Deviations from Happy Path

Table 6: FE-GPL-UC01 Deviations from Happy Path

Step	Deviation	Alternative Process

Step	Deviation	Alternative Process
2	Customer is unable to identify their LP service (i.e. unable to provide LP account reference *and* unable to provide CLI)	Terminate flow. The GP may try to help the customer find the information on their bill or advise contacting the LP to obtain it. Customers without the information may also elect to place an order without a synchronised cease in which case the GP should advise them that they are responsible for cancelling any LP services that they no longer require.
3	GP is unable to supply the requested services at the customer's address	The GP advises the customer that it is unable to supply the customer at present.
A	LP has no record of the customer	GP to notify the customer that the LP was unable to identify their service based on the supplied information. If the customer wishes to reattempt a synchronised switch, the GP may try to help the customer find the information on their bill or advise contacting the LP to obtain it. Alternatively, a customer may elect to place an order without a synchronised cease in which case the GP should advise them that they are responsible for cancelling any LP services that they no longer require.

4.1.4 Application Impacts

The mapping of impacts to applications is illustrative, based on a generic application framework (see Reference [1]).

Table 7: FE-GPL-UC01 Application Impacts

Step	Impacted Applications															Party	Description
	Channel Sales Mgt.	Knowledge Mgt.	Customer Info. Mgt.	Customer Self-Mgt.	Cuts. Retention & loyalty	CSR Toolbox	Customer Order Mgt.	Customer Problem Mgt.	Service Order Mgt.	Service Inventory Mgt.	Service Problem Mgt.	Partner Mgt.	Transactional Doc. Prod.	Bill Calculation	App. Integ. Infrastructure		
1														✓		LP	Can look up information necessary for calculation of ETCs, for a specific date. Can calculate ETCs, for a specific date. Can look up information necessary to derive service implications.

Step	Impacted Applications															Party	Description
	Channel Sales Mgt.	Knowledge Mgt.	Customer Info. Mgt.	Customer Self-Mgt.	Cuts. Retention & loyalty	CSR Toolbox	Customer Order Mgt.	Customer Problem Mgt.	Service Order Mgt.	Service Inventory Mgt.	Service Problem Mgt.	Partner Mgt.	Transactional Doc. Prod.	Bill Calculation	App. Integ. Infrastructure		
2	✓		✓	✓		✓	✓		✓			✓				GP	Can store details of request, including: • LP account number • LP identifier Assuming GP systems already capture: • Customer name • Customer address • Customer postcode
3	✓	✓	✓	✓												GP	Can access mandatory statements, other information and scripts to inform the customer that calls will be recorded
4, 5	✓		✓	✓		✓	✓		✓							GP	Can store confirmation of customer's intent to proceed. Flag field to indicate if order placed in a retail environment
6	✓		✓	✓		✓	✓		✓	✓		✓		✓		GP	Can raise orders based upon customers choice of service and tariff. Changes required for cross-platform switching.
7,8							✓		✓							GP	Can look up information necessary for confirmation letter (NoT). Can generate confirmation letter to be sent by post, e-mail or other means.
9							✓		✓					✓		LP	Can look up information necessary for calculation of ETCs for a specific date. Can calculate ETCs for a specific date. Can look up information necessary to derive service implications.
10							✓		✓				✓			LP	Can generate NoT and IS communications to be sent by post or e-mail

4.1.5 Interface Impacts

Table 8: FE-GPL-UC01 Interface Impacts

Step	Impacted Interfaces					Parties	Data Description
	CP order entry	CP-customer communications	CP-CP channel interface	CP Billing	Customer online account portal		
1					✓	LP	Customer must be able to obtain ETC and IS detail via their online account
2					✓	GP	Fields must be available in the online ordering sections for a customer to input LP details
3,4, 5,	✓					GP	GP order entry platform allows creation of record of consent and contracts to be stored.
6	✓					GP	GP Order entry platform allows orders to be raised, tariffs to be associated to orders ,and new cross-platform switching details to be included (e.g. LP account details)
7,8		✓				GP	Allow production and sending of NoT letter to customer.
9				✓		LP	Allow production of IS and ETC information.
10		✓				LP	Allow production and sending of NoT letter (including IS and ETC) to customer.

4.2 FE-GPL-UC02: Customer-Initiated Change Switch Date

This use case covers the scenario whereby a customer wishes to change the agreed date of the switch. Nevertheless, it is worth noting that the initial switch date can also change due to delays in the service activation on the GP side. In the case where the GP changes the date, the consumer receives a notification with the new switch date from the GP and continues receiving service from the LP. This use case is described in the back-end process specs.

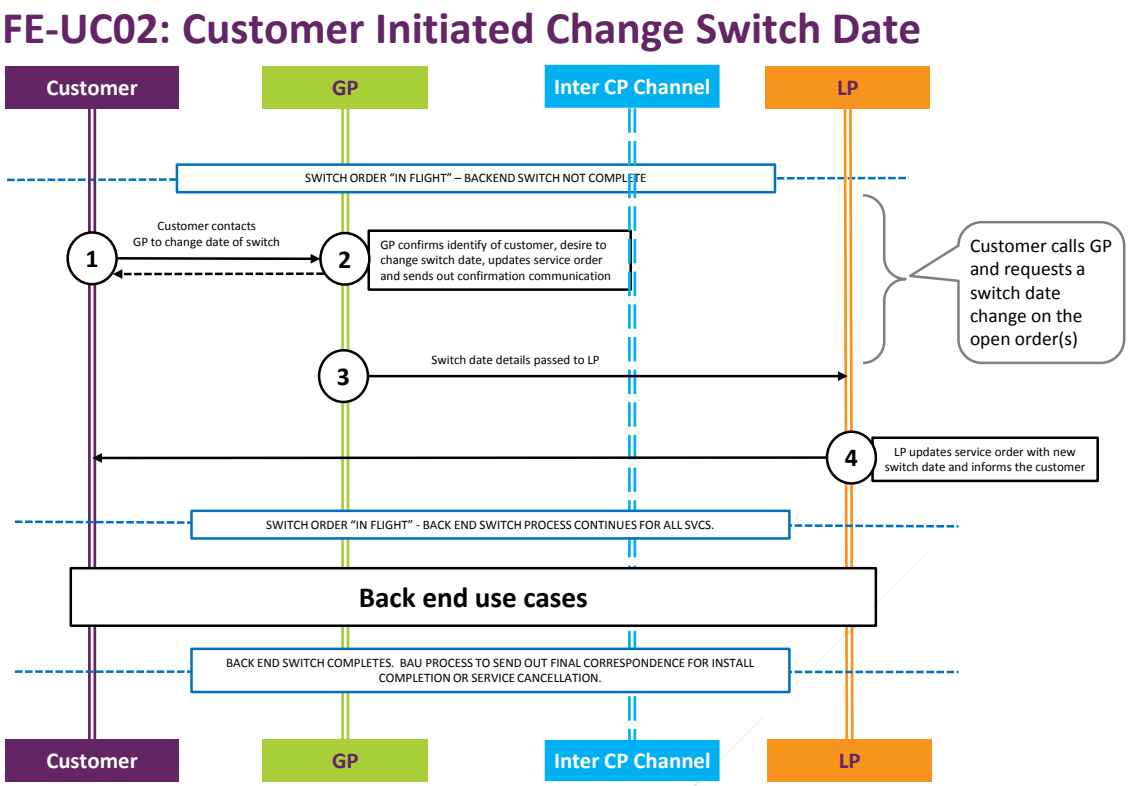
To change the date, the customer must contact the GP. As a minimum, CPs should allow customers to request changes to the switch date over the phone. CPs may optionally enable switch dates to be updated via other channels, but that is outside the scope of this document.

Upon receiving a request, the GP checks to confirm changing the switch date is possible, i.e. the Point Of No Return (PONR) has not yet passed. If a change is possible, the GP updates the activation date in its systems and uses the inter-CP channel to communicate the new switch date to the LP.

4.2.1 Process

The following diagram walks through the process for this use case.

Figure 3: Use case FE-GPL-UC02 – change of the switch date when requested by the customer



4.2.2 Use Case Steps

Table 9; FE-GPL-UC02 Steps

No	Description
1	The customer wishes to change the switch date for one or all of their services. An agreement is needed as to when the Point Of No Return (PONR) applies here. It could be that this is up to the switch date but it would be beneficial to agree a standard. E.g. Openreach have PONRs relating to their products.
2	The GP goes through their standard security validation and determines the order for which the customer wishes to amend the switch date. The GP agrees on a new switch date with the customer and update their systems. By default the communications will be sent in a letter by post. If the customer has elected to receive communications by email from the GP, then email may be used as an alternative. N.B.: this is a change of date for an existing order and it is not possible to change the order type. If the customer wants a different set of services switched, the existing order is cancelled and a new order is placed
3	The GP and LP interactions are outlined in the back-end use cases (see References [2] and [3]).
4	The LP updates service order with new switch date and communicates it to the customer. Any ETCs and other ISs will need to be recalculated. By default the LP communications will be sent in a letter by post. If the customer has elected to receive communications by email from the LP, then email may be used as an alternative.

4.2.3 Deviations from Happy Path

Table 10: FE-GPL-UC02 Deviations from Happy Path

Step	Deviation	Alternative Process
2	Customer places request after PONR	GP rejects change request and informs customer
3	LP unable to match Switch Reference ID to an active switch order	GP and LP escalate to jeopardy management team to identify customer and identify/issue new switch reference.

4.2.4 Application Impacts

Table 11: FE-GPL-UC02 Application Impacts

Step	Impacted Applications																Party	Description
	Channel Sales Mgt.	Knowledge Mgt.	Customer Info. Mgt.	Customer Self-Mgt.	CCM Retention & loyalty	CSR Toolbox	Customer Order Mgt.	Customer Problem Mgt.	Service Order Mgt.	Service Inventory Mgt.	Service Problem Mgt.	Partner Mgt.	Transactional Doc. Prod.	Bill Calculation	App. Integ. Infrastructure			
2									✓	✓					✓		GP	Can update the service orders with the new install date.
3									✓	✓					✓		LP	Can update the service orders with the new cease date from information received via the Inter CP Channel

4.2.5 Interface Impacts

Table 12 : FE-GPL-UC02 Interface Impacts

Step	Impacted Interfaces					Parties	Data Description
	CP order entry	CP-customer communication	CP <- -> CP channel interface	CP Billing	Customer Online Account Portal		
2, 3		✓		✓		GP, LP	Allow a billing recalculation. Update to the email and text interfaces.

4.3 FE-GPL-UC03: Customer-initiated Cancel Switch

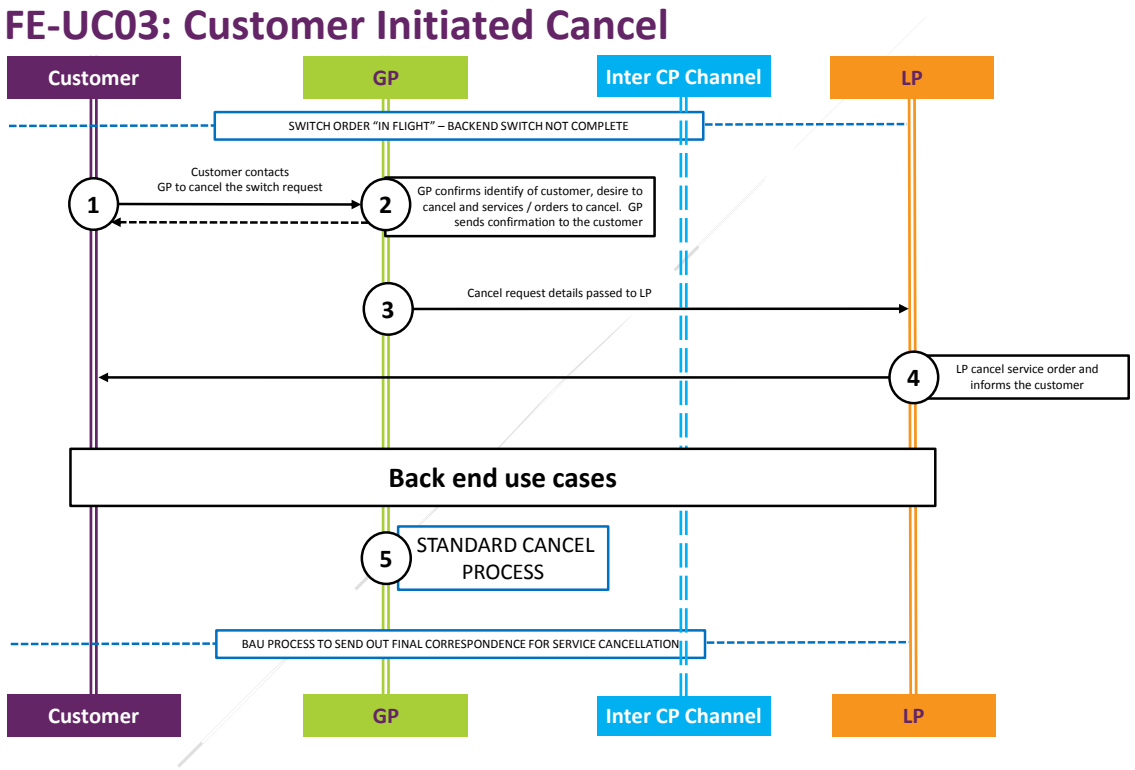
This use case covers the scenario whereby a customer cancels a switch. The request would be made by the customer to the GP.

A switch order can also be cancelled due to issues/errors on the GP side. This case is described in the back-end process specs document - see References.

4.3.1 Process

The following diagram walks through the process for this use case.

Figure 4: Use case FE-GPL-UC03



4.3.2 Use Case Steps

Table 13; FE-GPL-UC03 Steps

No	Description
1	The customer contacts the GP to cancel their switch. This can be done via phone or online.
2	The GP checks whether the customer is within the 10 day transfer period. If so, the GP confirms to the customer that the request has been accepted. By default the GP communications will be sent in a letter by post. If the customer has elected to receive communications by email from the GP, then email may be used as an alternative.

No	Description
3	The GP sends a cancel request to the LP. The GP and LP interactions are outlined in the back end use cases (see References [2] and [3])
4	The LP cancels the service cessation and communicates this to customer. By default the LP communications will be sent in a letter by post. If the customer has elected to receive communications by email from the LP, then email may be used as an alternative.
5	The GP cancels the switch request within its systems (BAU).

4.3.3 Deviations from Happy Path

Table 14 FE-GPL-UC03 Deviations from Happy Path

Step	Deviation	Alternative Process
2	Request is received outside of the 10 working day transfer period	GP advises the customer that at this stage the standard GP cancellation process and policies will apply. Customer decides whether or not to proceed with the cancellation.
3	LP unable to match Switch Reference ID to an active switch order	GP and LP escalate to jeopardy management team to identify customer and cancel LP service cease

4.3.4 Application Impacts

The mapping of impacts to applications is illustrative, based on a generic application framework

Table 15 FE-GPL-UC03 Application Impacts

Step	Impacted Applications															Party	Description
	Channel Sales Mgt.	Knowledge Mgt.	Customer Info. Mgt.	Customer Self-Mgt.	Customer Retention & loyalty	CSR Toolbox	Customer Order Mgt.	Customer Problem Mgt.	Service Order Mgt.	Service Inventory Mgt.	Service Problem Mgt.	Partner Mgt.	Transactional Doc. Prod.	Bill Calculation	App. Integ. Infrastructure		
1				✓			✓		✓							GP	The customer can cancel switch with the GP on the phone or online
2		✓	✓	✓		✓	✓		✓			✓			✓	GP	Can store confirmation of customer's intent to cancel switch. Can update systems with cancellation date. Can generate cancellation letter

4.3.5 Interface Impacts

Table 16 FE-GPL-UC03 Interface Impacts

Step	Impacted Interface						Data Description
	CP order entry	CP-customer communication	CP <- -> CP channel interface	CP Billing	Customer online account portal	Parties	
1	✓				✓	GP	Customer can cancel order online or via phone
2	✓					GP	Can cancel customer order for cross platform switching.

4.4 Common Elements across all Use Cases

4.4.1 Common Interface Impacts

It is assumed that each party communicating with another party via electronic means will be able to do the following:

1. Store details of any message sent to it, including details of the party that sent the message
2. Validate that the party sending it a message is allowed to do so
3. Provide and store the appropriate level of acknowledgement to the message, whether that be:
    a. an acknowledgement
    b. an acceptance code and message
    c. a rejection code and message
    d. data
    e. a combination of the above
4. Store details of any message it sends, including details of the party to which it sent the message
5. Store details of responses to any message it sends, including details of the party to have sent the response

4.4.2 Common Application Impacts

The common interface impacts described in section 4.4.1 above will impact each operator's Application Integration Infrastructure functionality (see section 3.3).

5 Non-Functional Areas

Non-functional areas need to be given consideration, including but not limited to the following:

- Amount of data storage required at CP level
    - Persistent data (*additional fields* x *number of non-closed services*)
    - Switch-related data (*additional fields* x *number of switched services*)
    - Messaging per switch (*variable message size* x *process touch-points* x *number of switches*)
    - Messaging for BAU (*variable message size* x *number of non-closed services* x *average number of non-switch, account/service record impacting transactions per service*)
- Performance requirements and SLAs for synchronous transactions
- Performance requirements and SLAs for asynchronous transactions
- Performance requirements and SLAs around asset validation process (synchronous – response time across multiple CPs; asynchronous – *steps in chain* x *time period* such that *total time* <= *n minutes/hours*)
- Method of audit to allow
    - Investigation whether customer actually agreed (recordings)
    - Interface messages received and processed