Moving to a Recipient Led Switching Regime in UK Mobile. Reply to Ofcom's Consumer Switching Call for Inputs. Non-confidential

Contents

1 Executive Summary

Ofcom has harmonised fixed switches on the Openreach network to a Recipient Led regime, and is now considering the case for reform in other telecom sectors. The Call for Inputs invites stakeholders' views about potential reform of processes used to switch mobile providers and fixed bundles.

Mobile phones have become an integral part of people's lives. UK consumers now consider mobile voice and text to be more essential, both personally and for society, than having a fixed internet connection or making voice calls from a landline. This reflects changes in the way consumers communicate – in particular the growing importance of ubiquitous, always-on communication and declining popularity of traditional means of contact.

It is therefore very important that the mobile market works well for consumers. Ensuring that consumers are able to switch quickly and easily between providers is a key enabler of competition and is one of Ofcom's priorities. Three strongly supports this objective.

Mobile switching is in urgent need of reform. It is now seven years since Ofcom's attempt to introduce a Recipient Led system in Mobile Number Portability was derailed by the incumbents. UK consumers still need to contact their existing provider in order to switch, whether they want to port their number or not. As a result, too many consumers are put off switching every year because they expect it to be difficult, or because they think the cost in terms of time and effort will outweigh the benefits.

The requirement to contact the existing operator adds hassle to the customer journey and induces millions of UK consumers to incur a double bill or lose service temporarily. It also incentivises operators to haggle and 'hide away' their best deals until a consumer threatens to switch. This reduces competitive intensity, makes it more difficult for consumers to compare prices and puts smaller players at a disadvantage.

Three proposes to harmonise existing switching processes in mobile to a single Recipient Led regime. This would allow consumers to switch with just one call to their new provider, aligning their interests with those of the operator in charge of the switch. If properly designed, our proposed solution would also put an end to double bills, breaks in service and bad retention practices.

A Recipient Led regime would also deliver stronger competition, particularly from smaller players and new entrants. Incumbents would be less able to frustrate switches with 'under the counter' deals reserved for potential switchers. They would have a stronger incentive to make their best offers more widely available in order to pre-empt switching, which would allow consumers to compare prices across the market more easily.

The mobile industry can implement a Recipient Led regime quickly and at little cost. The regime used for Mobile Number Portability took a cross-industry team 18 months to develop. The changes now required are nowhere near as involved. They require upgrading the current Internet Web solution used for Mobile Number Portability. Three estimates that this can be done in 12-18 months, at a cost of around £1.2m (one-off) to the industry and an annual operational cost of c£325k to be shared between all industry participants.

Section 2 provides an overview of the two processes currently used to switch mobile operator in the UK: Donor Led Mobile Number Portability and Cease and Re-provide. The consumer and competition problems created by those processes are discussed in Section 3. Section 4 goes on to explain why reform of mobile switching is more urgent than reform of other telecoms sectors, including switches of fixed bundles.

In Section 5, Three explains why a Recipient Led regime would tackle the current problems and deliver better consumer and competition outcomes. Finally, Sections 6 and 7 set out our proposed implementation of a Recipient Led regime in UK mobile, and the associated cost and timeline.

2 Overview of Switching Processes in UK Mobile

Consumers wishing to switch mobile operator in the UK have two options:

- **Mobile Number Portability ('MNP'): Donor Led PAC regime** – contract and Pay as You Go ('PAYG') consumers must use this process if they want to port their mobile number. In particular, customers need to ask their existing provider (Donor Service Provider, 'DSP') for authorisation in the form of a PAC code, and then pass it to the new provider (Recipient Service Provider, or 'RSP'). The consumer must also agree a new service with the RSP. This process has been agreed by the industry and is set out in the MNP Porting Process Manual;

- **No porting: Cease & Re-provide ('C&R')** – consumers who do not port their number must arrange the stop and start of the services themselves, because there is no agreed industry process. Contract customers will need to contact the DSP to cancel the contract (typically by giving 30-day notice) and arrange the new service with the RSP. PAYG customers can arrange the new service with the RSP and use up their remaining credit without contacting the DSP.

The UK is alone in Europe in having an outdated Donor Led PAC regime for MNP. Other European countries use a **Recipient Led** regime where the consumer only needs to speak to the RSP in order to port. The RSP then arranges the transfer and cancels the old contract on behalf of the customer. Customers who do not port their number in other European countries typically follow a C&R process.

Figure 1 shows an example of a Vodafone customer switching to Three. In order to switch, mobile subscribers in the UK [1] must contact their DSP and go through the retention process, either to ask for the PAC (in the case of MNP) or to give 30-day notice (in C&R). As discussed in Section 3, this is at the heart of switching problems in UK mobile.

[1] All excepting PAYG customers who do not port their numbers

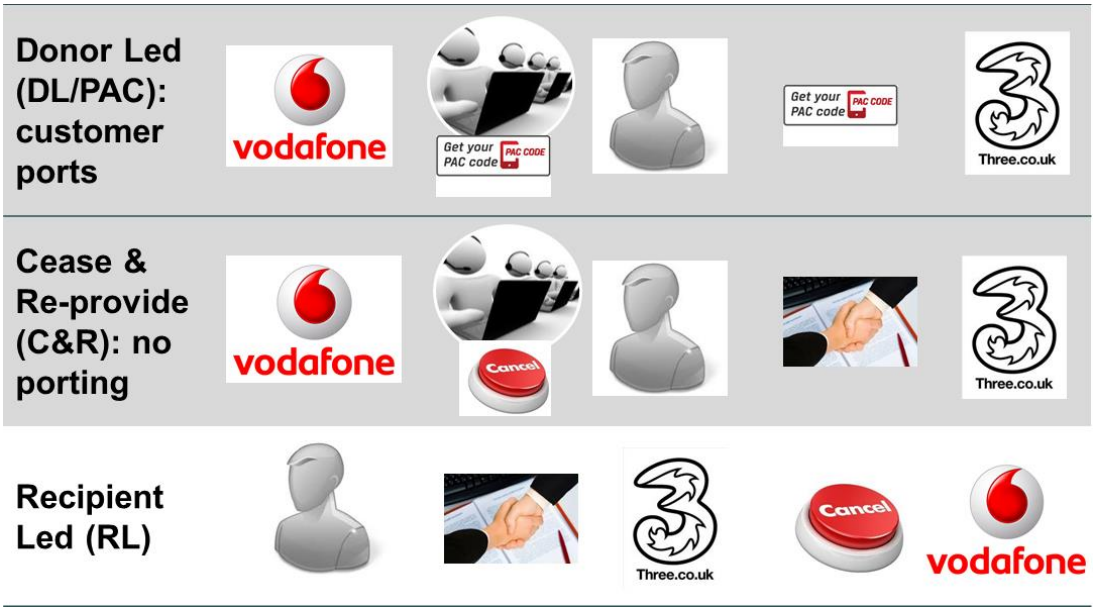


Figure 1: Switching processes used in UK mobile

Ofcom's Strategic Review of Consumer Switching (Ofcom, 2010) estimated that 44% of mobile switchers ported their number in 2010, whereas 36% went through Cease & Re-provide. A substantial number of customers (20%) did not know which process they used.

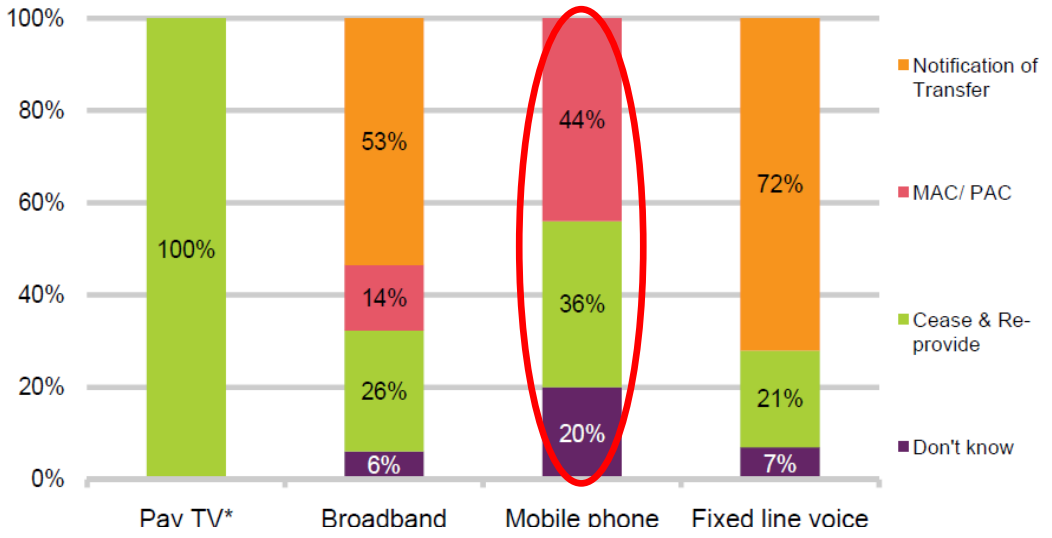


Figure 2 Switching process used to switch

In Three's view, [confidential].

3 Problems with Mobile Switching in the UK

This section explains current switching problems in UK mobile. The ability of consumers to switch suppliers is fundamental to a competitive market. UK consumers should be able to compare prices, choose operator and switch provider quickly and easily.

However, switching mobile operator in the UK is not as easy as it should be. Consumers will not switch to an operator offering a better deal if they expect that the cost of unlocking the phone, hassle and risk of experiencing problems will exceed the difference between the providers' prices. These switching barriers lock-in customers to their current networks. As a result, millions of consumers are put off from switching every year because they expect it to be difficult, or because they fear that problems such as being double-billed or suffering a break in service will outweigh the benefits.

Ofcom's 2013 Consumer Retention and Interoperability research shows that 86% of mobile consumers who do switch find the process easy.

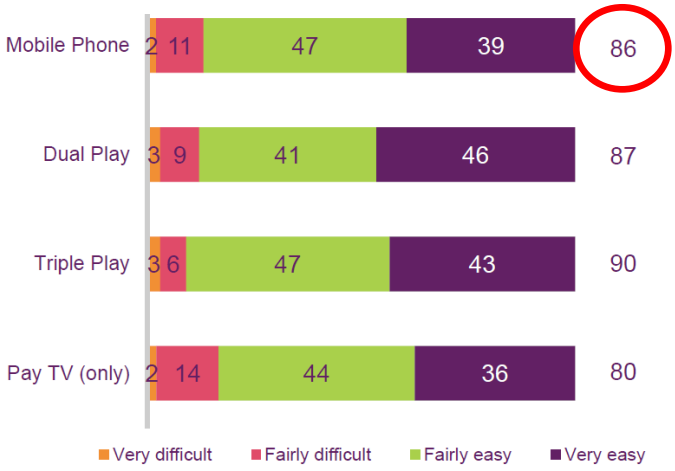


Figure 3: How easy or difficult was it to switch?

This statistic can be highly misleading. UK consumers find it easy enough to get a PAC and pass it on, or to arrange the stop and start of the services. But about two in five will receive two bills or experience a service break in the process. One in ten cite having to contact two providers as a key issue. This 'significant minority' represents millions of people experiencing problems every year. Importantly, reactive save dulls operators' incentives to compete and publicise their best offers more widely. Consumer harm from lower competition is largely invisible to consumers and is not widely appreciated.

3.1 Having Two Processes Encourages Bad Practices and Confusion

The existence of two different switching processes may partly explain why a significant proportion of mobile switchers (20%) in Figure 2 above did not know which process they used, more so than in other sectors.

This multiplicity of processes in mobile provides incentives for operators to 'game' the system. In the past, RSPs steered consumers towards the C&R process because a PAC conversation would give the DSP an opportunity to frustrate the switch. This resulted in low levels of porting and lack of consumer awareness of the right to port, and was a key concern behind Ofcom's 2007 decision to mandate a Recipient Led MNP regime.[2]

More recently this incentive has disappeared. The industry now requires contract customers to give 30-day notice before leaving. This forces people who do not want to port (ie who go through the C&R process) to also contact their DSP in order to switch. The effect of the 30-day notice is the same as the PAC – to ensure the customer cannot leave without going through the retention process.

As a consequence, Reactive Save is now also very common in the C&R process. Ofcom's statistics from 2010 show that 73% of mobile switchers who did not port their number received an offer from their previous provider, compared to 59% of those who ported.[3]

Figure 4 Experience of a Save Offer from the previous provider

3.2 The Need to Contact the DSP Generates Hassle, Double Bills, Breaks in Service and Reactive Save

The need to contact the DSP in order to switch under both regimes is the source of three common problems for mobile consumers (especially contract handset customers)[4], as shown in Figure 5:

[2] Telephone number portability for consumers switching suppliers. Concluding Statement (Nov 2007)
[3] Strategic Review of Consumer Switching (2010)
[4] PAYG customers who do not port can use up their remaining credit and move to the RSP without contacting the DSP. As explained above, few PAYG customers port their number.

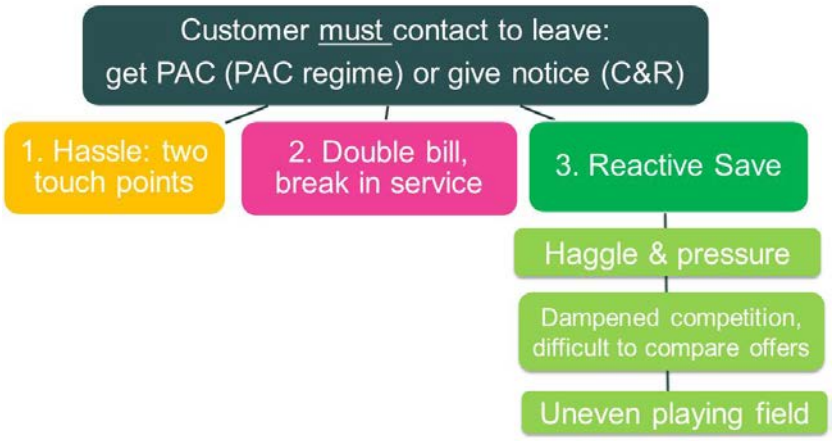


Figure 5 Problems with the current UK switching regime have a common source

- **Hassle** – the need to contact both the DSP and the RSP under both regimes adds unnecessary hassle and confusion to the consumer journey;

- **Problems with continuity of service & lack of awareness of the financial implications of switching** – two in five mobile contract switchers experience these problems every year. Consumers outside the minimum contract period can typically leave on 30 days' notice. Consumer awareness about the 30-day notice requirement and how it works is generally poor, which very often results in double bills or loss of service:

- *Double bill* – under the Donor Led MNP regime when the customer passes the PAC to the RSP, the transfer request by the RSP gives notice to terminate the DSP service and triggers the notice period. However, the notice period is taken to commence on the date of issue of the PAC. Inevitably, this confuses customers: unless they pass on the PAC to the RSP at the very end of the 30-day PAC validity period, they will have to pay both providers temporarily. Similarly, with the C&R regime many customers will agree a new service with the RSP unaware of the need to give notice to the DSP, and will have to pay the DSP for services which are no longer rendered in order to serve their notice period;

- *Break in service* – under the C&R regime, consumers arrange the stop and start of the service themselves and must synchronise it with the 30-day notice perfectly to avoid a break in service;[5]

[5] By contrast, the current Donor Led PAC process is designed to minimize unwanted service breaks: the DSP and RSP agree a common porting date, and the old service expires (and the new service starts) on that date.

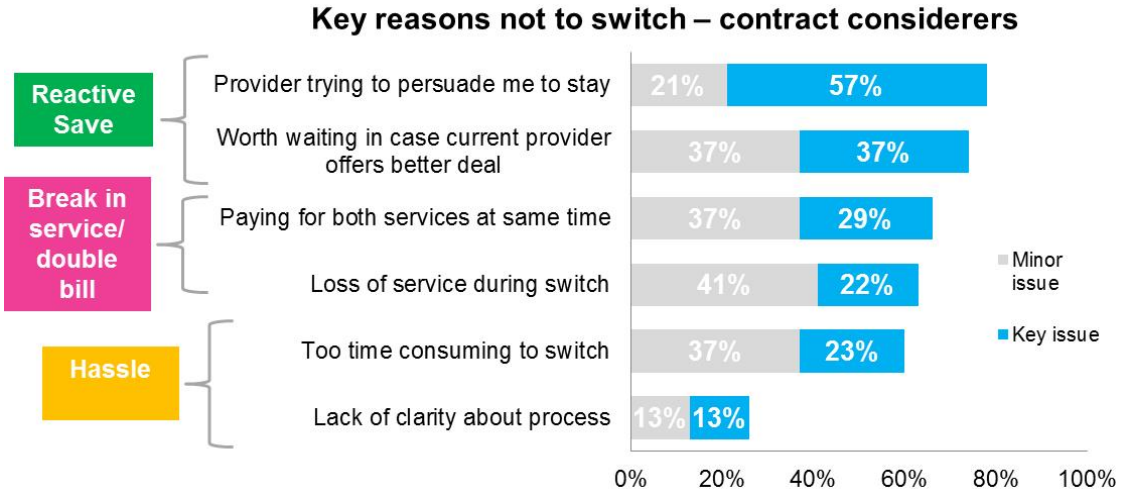
- **Reactive save** – bad retention practices and 'haggle' are widespread in UK mobile. Both the Donor Led and C&R regimes give operators an in-built opportunity to identify customers wanting to switch (through the PAC request and 30-day notice respectively). The retention team can then try to retain them, in some cases by putting consumers under pressure to change their mind. All operators have put in place incentive schemes for retention staff linked to their success in retaining customers. This incentivises 'hard sell' tactics and 'pushy' behaviour. The impact of Reactive Save on competition is considered in section 3.3.

Ofcom's 2013 Consumer Retention and Interoperability Report quantifies the extent of these problems as reported by a survey of mobile contract 'switchers' and 'considerers' (i.e. customers who considered a switch but decided against it). The report concludes as follows:

- **Reactive Save**: being 'persuaded to stay' is one of the major factors in considerers' decisions not to switch. 57% of considerers identified this as the key issue. 17% of switchers cited provider persuasion to stay as a key issue during the switch and 15% said their provider made it difficult to switch;

- **Double bill/break in service**: between 22% and 29% of contract considerers in the survey cited the risk of a break in service or double bill as key reasons for their decision not to switch. 21% of contract switchers claimed they had to pay for both services at the same time, and similar proportions say arranging services to stop and start at the same time or loss of service were key issues experienced (18% and 17% respectively);

- **Hassle**: 23% of considerers did not switch because it was too time consuming, while 13% blamed lack of clarity about the process. 11% of contract switchers cited having to contact two providers as a key issue, and 13% highlighted lack of clarity about the process.



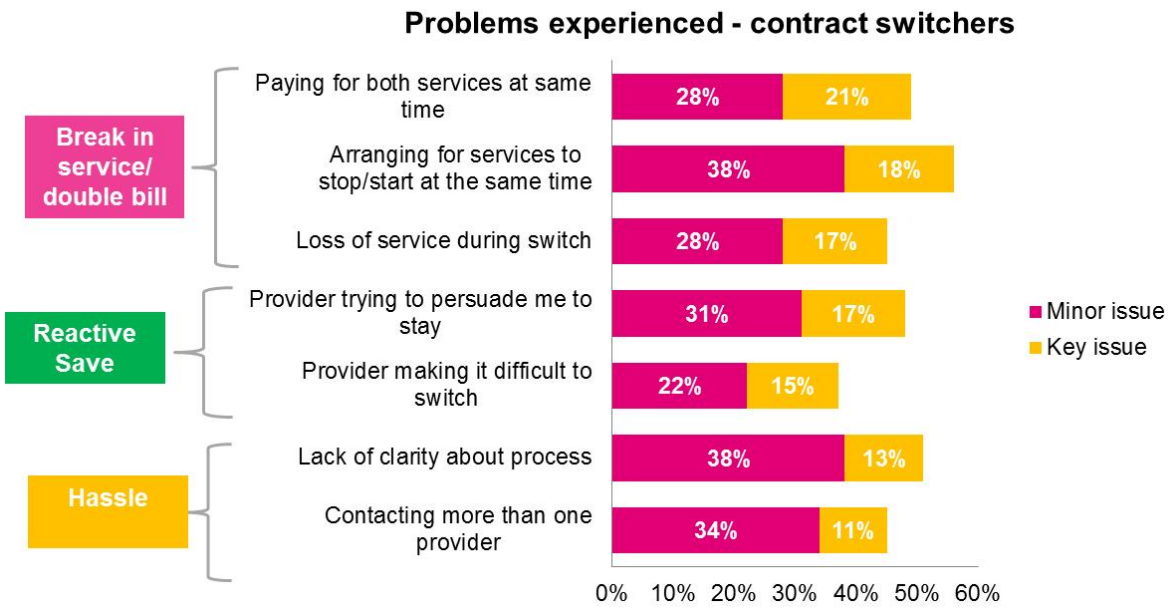


Figure 6 Problems with the current UK switching regime

Three estimates that c6.6m contract handset consumers switched operator in 2013. If the percentages in Figures 3 and 6 are extrapolated at national level, the number of mobile consumers affected by switching problems every year runs into the millions, as shown in Table 2.

Problem	%	Contract consumers affected in 2013
Double Bill	21%	1,386,000
Loss of Service	17%	1,122,000
Provider trying to persuade me to stay	17%	1,122,000
Provider making it difficult	15%	990,000
Lack of Clarity About Process	13%	858,000
Found process difficult	13%	858,000
Contacting more than one Provider	11%	726,000

Table 2. Number of consumers affected by switching problems in mobile

3.3 The Current Processes Hinder Competition and Put Smaller Operators at a Disadvantage

Both the Donor Led and C&R regimes force consumers to contact their DSP in order to switch. This provides operators with an in-built opportunity to identify customers wanting to switch, which has a negative impact on competition in three key respects:

- **Reactive Save dampens competition** – the current regime insulates operators from competition and encourages them to focus on 'harvesting' their customer base rather than winning new customers. Operators lack an incentive to keep headline prices competitive for the majority of customers, who are typically inactive.[6] The regime enables them to identify customers wanting to switch and make an 'under the counter' offer if the customer threatens to leave. Non-transparent pricing also makes it more difficult for consumers to compare prices across the market;

- **Reactive Save puts smaller operators at a disadvantage** – Reactive Save depresses churn levels across the industry. This works against smaller operators who, in a mature mobile market, need to win customers from incumbents to gain scale. Incumbents have developed sophisticated incentive systems to retain customers with targeted offers without fear of cannibalisation. Smaller players then need to match incumbents' 'under the counter' deals, not their headline prices in order to gain customers. In addition, their acquisition efforts are less successful so smaller operators acquire fewer customers at a higher cost per customer. Because incumbents will offer better discounts to high value customers, smaller players will also tend to gain less profitable customers;

- **Reactive Save can create competitive asymmetries** – Figure 3 shows that Reactive Save is even more common in the C&R process than in the Donor Led PAC regime. This can give rise to competitive asymmetries to the extent that operators have different port in and port out ratios.[7]

Consumer harm from lower retail competition is likely to be very large and is less visible to consumers than haggle, double bills or breaks in service, which they experience directly. Ofcom has found in another context that even small reductions in competitive intensity can have a substantial detrimental impact on consumers, given the size and importance of the mobile market to consumers. For instance, a 1% decrease in consumer surplus from lower competition in mobile would have a net present value of £1.1 billion if it were sustained over five years.[8]

[6] For example, operators will have a large number of out of contract at any given time. By definition, these customers are paying over the odds since their monthly tariff includes a handset element that has already been paid over the duration of the contract. Under the current regime operators have an incentive to wait until these customers contact them and profit from customer inertia and ignorance, instead of proactively approaching them with a better deal (for instance, a SIM-only tariff).

[7] For instance, operators with low port in ratios (relative to port out) may find it more difficult to acquire new customers, because the majority of its incoming customers will receive reactive save offers from their existing providers.

[8] Second consultation on assessment of future mobile competition and proposals for the award of 800 MHz and 2.6 GHz spectrum and related issues. Annex 6: Revised Competition Assessment (Jan 2012), para 2.69

	£ billion net present value reduction in consumer surplus over:		
Percentage fall in consumer surplus:	1 year	5 years	10 years
0.5%	0.1	0.6	1.0
1%	0.2	1.1	2.1
5%	1.2	5.6	10.3
10%	2.4	11.2	20.5

Table 3. Ofcom's estimates of consumer harm from reduced competition in mobile

In addition, the current system hampers competition for wholesale consumers. Mobile Virtual Network Operators ('MVNOs') and other resellers typically buy network access and use number ranges allocated to their host network to provide retail services. These operators are not currently able to port their customers' numbers in bulk from one provider to another. Ofcom's view is that only end users, and not MVNOs and resellers, have a right to port their number.

This makes it difficult for MVNOs to change wholesale provider, because it would mean asking all of their customers to change their number or request portability individually. [Confidential]. Lack of bulk porting processes lock-in MVNOs and their customers to incumbent operators and raise switching barriers at the wholesale level.

3.4 Erroneous Transfers and Slamming are Less Significant Problems

In mobile it is uncommon for customers to be switched without their knowledge or consent ('slamming'). Unlike gas, electricity or a fixed landline, switching mobile provider involves a change of handset or SIM card. Therefore, it is very difficult for a mobile customer to be switched against her will without realising it.

Error ports are also infrequent. In the current Donor Led system the DSP carries out a customer authentication check before issuing the PAC. The passing of the PAC to the RSP means that consumers have to validate themselves with both parties. This dual validation significantly reduces, if not totally eliminates, porting errors.

When they do occur, however, error ports can have a negative impact because they affect two consumers: the customer who intended to port and the erroneously ported customer. Moreover, because the MNP process requires numbers to be ported on the next working day, a customer ported in error will have to wait a minimum of 1 day before the service is restored with her chosen provider (assuming a reverse port is the approach taken to resolving porting errors).

4 Why Reform of Mobile Switching Should be a Priority

Ofcom's Call for Inputs considers switching in two areas: i) bundles of fixed voice, broadband and Pay TV switched between providers using the Openreach, Virgin cable and Sky satellite networks; and ii) mobile switching.

This section explains why, in Three's view, reform of mobile switching is by far the more important task and should be given priority. The impact on consumers of switching problems in each sector will depend on three main variables:

- **Number of switchers per year** – the higher the number of switchers, the greater the number of consumers potentially affected by switching problems in the sector;

- **Incidence of switching problems experienced** – for a given number of switchers in a year, the greater the share of consumers experiencing problems during the process, the greater the potential for consumer detriment;

- **The importance of the service to consumers** – the more important the service for the affected consumers, the greater the consumer harm associated with switching problems. For instance, a double bill will have a greater impact on consumers the larger their monthly spend on the service. Likewise, a temporary loss of service will be more damaging if consumers consider the service to be an essential tool in their daily lives.

Ofcom's statistics clearly show that switching problems are likely to cause much greater harm in mobile than with fixed bundles. The reason is that the number of mobile switchers is much higher, the incidence of problems is greater in mobile, and because UK consumers now consider mobile to be more important than fixed communications or Pay TV. As an evidence-based regulator, Three expects Ofcom to prioritise reform of mobile switching.

4.1 The Number of Mobile Switches is Much Greater than the Number of Fixed Switches

According to Ofcom's Comms Markets Report, in 2013 there were 83.1m active mobile subscriptions in the UK. Less than 1% of UK consumers purchase mobile in a bundle of services. In terms of the number of mobile switches:

- Ofcom has estimated that 11% of mobile subscribers (9m people) switched operator in 2013. This includes contract and PAYG switchers for both handsets, mobile broadband and data-only SIMs. In consequence, Ofcom's 9m figure provides an upper bound estimate of the number of switchers potentially affected by switching problems in mobile;

- Three estimates that, out of the 83.1m active mobile subscriptions, 44.1m will be contract handset subscribers. Industry churn for those customers is 15%, so 6.6m will have switched operator in 2013. This provides a lower bound estimate of the number of people potentially impacted because as discussed in Section 3.2 contract handset subscribers are particularly affected by switching problems.

Mobile 2013	Active subscriptions (m)	Switchers (%)	Switchers (m)
Contract Handset	44.1	15%	**6.6**
PAYG Handset	34.0		
Dongles and other	4.9		
Total Mobile	**83.1**	**11%**	**9.2**
Fixed 2013	**Households (m)**	**% of households who switched**	**Households switching at least 1 service (m)**
Residential exchange lines	23.4	9%	2.10
Residential broadband connections	20.9	9%	1.88
Pay TV households	16.0	4%	0.64
Total household switches			**4.60**
Less switches on the Openreach network			-2.80
Fixed switches pending to be reviewed			**1.80 (= max 4.4m switchers)**

Table 3: Number of switchers in the UK, 2013

As regards fixed bundles, the number of UK residential lines, broadband connections and Pay TV households is set out in Table 3. Ofcom has estimated switching levels in each market (including switching of services within bundles) of 9% in the fixed line and broadband markets and 4% among households with a pay-TV service.[9] Based on these figures, we estimate that a maximum of 4.6m UK households switched at least one service in 2013.

The 4.6m household figure should be adjusted downwards for three reasons:

- **Switches on the Openreach network** – the 4.6m figure includes 2.8m fixed switches on the Openreach copper network, which Ofcom has already reviewed and harmonized to a Recipient Led regime.[10] Once those switches are deducted, the maximum number of fixed switches to be reviewed is 1.8m. With an average UK household size of 2.4 people, and assuming all household members are equally affected by switching problems, the maximum number of switchers potentially affected is 4.4m;

- **Double-counting of bundle switches** – the figure of 1.8m households and 4.4m switchers is still a gross overestimate of the number of people potentially affected, because households switching bundles are counted several times over. For instance, a household switching its residential line and broadband in 2013 will be included in both the 2.10m and the 1.88m household switch figures in Table 3;

- **Figure includes stand-alone switches** – the estimate in Table 3 will also include households switching stand-alone services, whereas Ofcom only considers switches involving bundles for the next stage of its switching work.

[9] Consumer Experience Report 2013, Section 8.2.1
[10] Consumer Switching. A Statement and Consultation (Aug 2013)

4.2 Switching Problems Have Greater Incidence in Mobile

Ofcom's 2013 Consumer Retention and Interoperability research (see Figure 3 above) indicates that 13% of mobile switchers found the switching process to be fairly or very difficult. This compares with 12% for dual play switchers (fixed line phone and fixed broadband) and 9% for triple play switchers (fixed line, fixed broadband and Pay TV). Only switchers of stand-alone Pay TV services found the process more difficult than mobile switchers (16%). [11]

A shown in Figure 7, Ofcom's research also shows that, with very few exceptions, a larger proportion of mobile contract switchers actually experienced problems compared with switchers of double-play and triple-play fixed bundles.[12] Given that the absolute number of switchers in mobile is also greater, the number of consumers actually experiencing problems is likely to be much larger in mobile.

Issues experienced by switchers	Contract Mobile	Dual Play	Triple Play
Costs involved	21%	8%	19%
Paying for both services at same time	21%	13%	17%
Under contract with previous supplier	19%	9%	16%
Arranging for services to stop/start at the same time	18%	17%	18%
Being without service during switch	17%	21%	22%
Provider trying to persuade me to stay	17%	12%	16%
Comparing offerings	17%	12%	10%
Having to change telephone number	17%	6%	10%
Previous provider made it difficult for me	15%	10%	15%
Learning how to use a new service	14%	5%	12%
Finding time to research the market	14%	6%	10%
Clarity of switching process	13%	14%	9%
Lack of info about moving content	13%	0%	7%
Problems moving content	12%	0%	0%
Losing personalised settings	12%	0%	10%
Needing to contact more than one provider	11%	5%	14%
Losing cost benefits	11%	6%	12%
Losing data/access services	10%	7%	9%
Other devices/products not working with new	9%	5%	12%
Losing other add-on services	9%	3%	9%
Losing extra services	6%	0%	9%
Issues regarding installation of new service	0%	13%	15%
Having to change e-mail address	0%	6%	10%

Chart key: >20% | 15-20% | 10-15% | <10%

Figure 7: Incidence of main or major problems during the switch by sector, 2013

Other problems like slamming and erroneous switches are not considered in Ofcom's research. They are relatively more common in fixed than mobile, but are relatively unimportant in comparison with the issues highlighted above. According to Ofcom, the number of UK households affected by fixed slamming per year is 84,300, and some 118,700 households experienced an erroneous transfer. Combined, these problems affect only 0.77% of UK households.[13]

[11] Jigsaw Consumer Retention and Interoperability Report for Ofcom (2013)
[12] Ibid
[13] Consumer Switching. A Statement and Consultation (8 Aug 2013), Figure 5.5

4.3 UK Consumers Consider Mobile to be More Important

Mobile phones have become an integral part of people's lives, with over 9 in 10 adults now having one. UK consumers use their mobile for voice and text and, increasingly, for instant messaging and to access the internet – 61% of UK adults now own a smartphone. Mobile phone use is highly valued even by population on lower incomes, who spend a substantial amount of their disposable income on mobile.

Ofcom's Comms Market Report 2014 shows that retail revenue, household penetration and average monthly spend are greater in mobile than in all other telecoms sectors. The percentage of mobile-only households is also greater at 15%, compared to 5% fixed-line only households. This is a clear indication of the relative importance that UK consumers attach to mobile relative to fixed and Pay TV services.

	Mobile	Residential lines	Pay TV	Fixed internet
Retail revenue	£15.6bn	£8.4bn	£5.9bn	£4.0bn
Subs/households	83.1m	25.0m	16.0m	22.6m
Household penetration	94%	84%	50%	80%
Avg monthly household spend	£47	£22	£32	£12
x-only households	16%	5%	-	-

Table 3: Sector Statistics, 2013

A recent Ofcom report confirms that UK consumers consider mobile voice and text to be more essential, both personally and for society, than having a fixed internet connection, making voice calls from a landline or having Pay TV.[14] This reflects changes in the way consumers communicate. UK consumers particularly value the ability to contact the emergency services, keep in touch with family and friends, or access information, education and entertainment, provided by mobile phones.

[14] Ofcom, Results of research into consumer views on the importance of communications services and their affordability (July 2014)

Figure 4.3: Services and devices seen as essential, personally in day to day life (on the left) compared with in society (on the right), by percentage of respondents

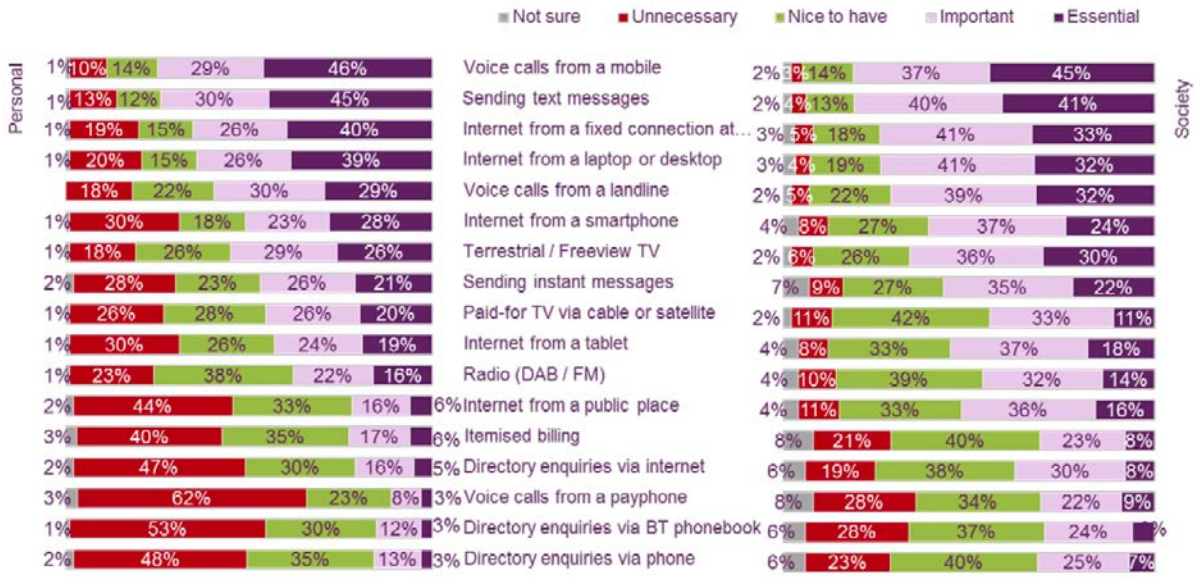


Figure 8: Essential services for UK consumers (2014)

5 Recipient Led Switching would Tackle the Cause of the Problems and Reduce their Incidence

It is generally accepted that the best switching systems are those which put the RSP in charge of the switch, as is currently the case in the banking and energy sectors. This section explains the benefits of adopting a Recipient Led regime in mobile and discusses the experience in other telecoms sectors.

5.1 Recipient Led Switching Produces Better Consumer and Competition Outcomes

Ofcom has found that Recipient Led switching processes are preferable to Donor Led and Cease & Re-provide regimes on a 'greenfield' basis, in terms of both consumer and competition outcomes.[15]

[15] Consumer Switching. A Statement and Consultation (Aug 2013), paragraph 2.9

Aim	Recipient Led	Donor Led	C&R
Easy for consumers to navigate	✓	–	✗
Delivers lower prices, choice & competition	✓	✗	✗

Figure 9: Recipient Led is better for consumers and competition

The fundamental problem with the current Donor Led and C&R processes is that they require DSPs to act against their interest in order to facilitate the switch. By contrast, moving to a Recipient Led process would align the interests of consumers with those of the operator in control of the switch. The RSP has every incentive to ensure the process is smooth, because any problem may lead to the consumer deciding not to switch.

A Recipient Led regime also delivers stronger competition, lower prices, and greater choice and innovation for consumers, particularly from smaller players and new entrants. It tackles switching problems very effectively because it removes their source: the obligation on the customer to contact the DSP in order to leave. Removing this obligation would make the switching process more akin to grocery shopping, where consumers can simply choose to shop elsewhere.

The key design objectives of a Recipient Led system in mobile should be to:

- **Minimise hassle** – consumers would have a single point of contact and rely on the RSP to handle the entire process on their behalf (a one-stop shop). They would be free to contact the DSP to get a better deal, but would be under no obligation to do so. This would reduce the number of mandatory touch points and the associated confusion;

- **Eliminate double bills and service breaks** – the RSP would notify the DSP of the contract cancellation on behalf of the customer. Ideally, this would automatically cancel the DSP contract (overriding any notice provision in it) and set up a new contract with the RSP at the same time.[16] This would automatically eliminate double bills and service breaks;

[16] There are similar provisions in the French MNP system, where consumers are not required to contact the DSP in order to cancel the contract, even when the contract requires notice to be given within a certain time or specifies the form of the notice (e.g. by registered mail with acknowledgement of receipt). If customers do not port their numbers, they must contact the DSP and request termination as stipulated by the contract.

- **Ban Reactive Save** – the DSP would be prohibited from using information received via the switching process to try to retain potential switchers. This would check unwanted haggle, lower switching barriers and level the playing field for smaller players. It would also incentivise operators to compete more aggressively. Operators would be less certain about which customers intend to leave and would have to keep headline prices competitive to pre-empt switching. There would be less of an incentive to reserve the best deals for departing customers, because consumers could leave without warning. Retention would become more pro-active – operators would be incentivised to contact out of contract customers to advertise current offers. This would make operators' best deals more widely available and make it easier for consumers to compare prices across the market;

- **Provide adequate safeguards** to inform customers of contractual liabilities and mininise erroneous ports and slamming – which are inherent risks with a Recipient Led regime in comparison with the current processes.

5.2 Recipient Led Reduces Incidence of Switching Problems

A Recipient Led regime would reduce the incidence of switching problems significantly. Ofcom's 2013 Consumer Retention and Interoperability research quantifies the problems experienced by switchers across all UK telecoms sectors, namely:

- **Cease and Re-provide (C&R)** – customers switching to/from Virgin or switching Pay TV, or mobile contract customers not porting their numbers;

- **Donor Provider Led** – customers switching fixed line phone or broadband or mobile services, and who contacted the DSP to ask for a MAC/PAC code;

- **Recipient Provider Led** – customers switching fixed line phone or broadband who are not allocated to C&R and who only contacted the RSP.

Ofcom's statistics clearly show that the Recipient Led regime used in other UK telecoms sectors is much less prone to problems than the Donor Led and Cease & Reprovide regimes. Reactive Save, hassle and problems like breaks in service or double bills are much less common under a Recipient Led regime. This empirical evidence confirms that Recipient Led switching is generally preferable to other switching processes.

Figure 51: Issues experienced during the switching process (main and major) - by type of switching process

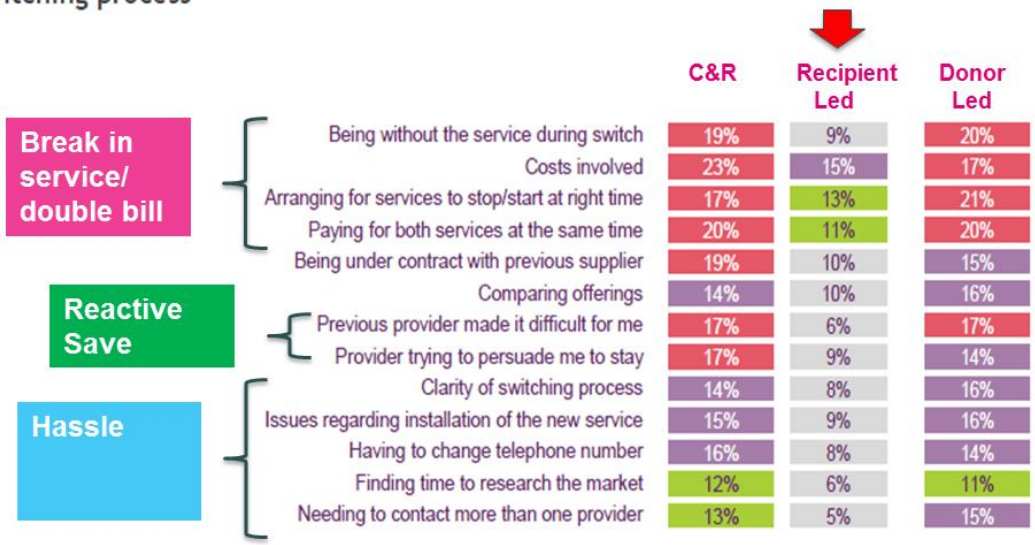


Figure 9: A Recipient Led Regime reduces incidence of switching problems

6 Our Proposed Recipient Led Switching Regime for UK Mobile

This section sets out Three's proposed Recipient Led solution based on a Service Provider Hub ('SP Hub'). The mobile industry can implement a Recipient Led regime quickly and at little cost, without major changes to the existing MNP process. This solution would replace the current Donor Led MNP and C&R systems with a single harmonised solution based on the existing web system used for MNP. The SP Hub would handle all mobile switches, including switches involving number porting and those where consumers do not wish to port.

In order to minimise cost and keep changes to the current system to a minimum, our proposal leaves the current system of routing calls to ported numbers as is. Calls to ported numbers would continue to be routed to the original network operator for onward routing to the recipient network operator.

6.1 How the Donor Led MNP Process Works

The current regulatory requirement to provide MNP is reflected in General Condition 18 of the General Conditions of Entitlement, which is published and monitored by Ofcom. The process is managed and agreed by the MNP OSG. The business rules that govern the process are owned by the MNP OSG and are open to change thorough a formal change control procedure set out in the MNP Porting Process Manual (MNP Process Manual, 2013).

The current porting process is illustrated in figure 5 and covers all porting scenarios from initial porting of a number from one network to another to subsequent ports. Additional details can be found in the process manual.

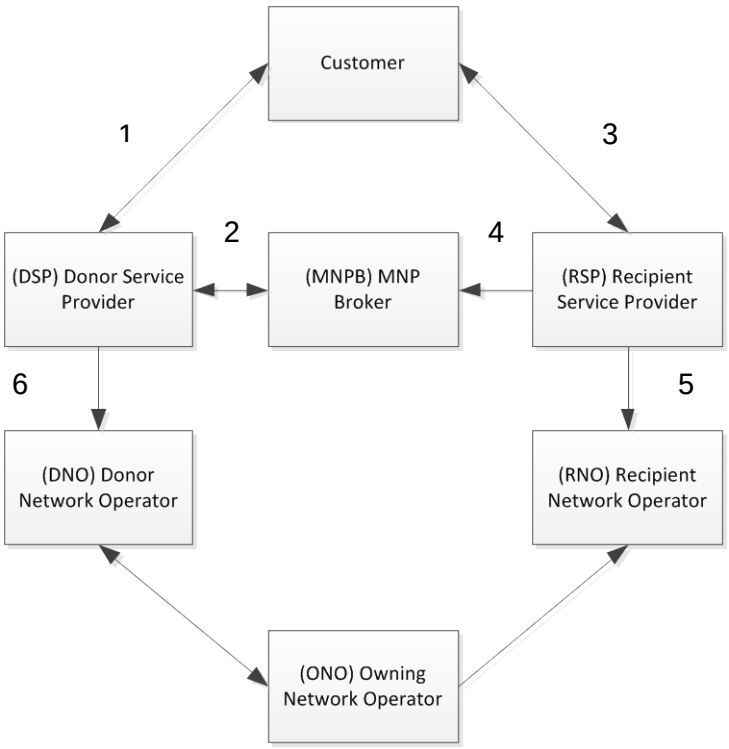


Figure 5: Current Porting Process

As shown in figure 5 the customer needs to communicate with both the DSP and the RSP in Steps 1 and 3. The port is facilitated by a PAC code that the customer needs to obtain from the DSP and provide to the RSP. The PACs are allocated to the DSP and managed by a web based system (MNP Broker, MNPB) operated by Syniverse on behalf of the mobile operators. Operators also use this system to exchange porting data between each other and to authorise ports.

In order to arrange a MSISDN port from one service provider to another the following activities are required:

1. The customer needs to contact the DSP in order to obtain a PAC code
2. The DSPs requests the PAC from the MNPB and must issue it to the customer immediately over the phone or within two hours by SMS – the PAC represents the DSP's agreement that the customer is entitled to port if a valid port request is received within the 30-day PAC validity period
3. The customer then needs to provide the PAC and the MSISDN they wish to port to the RSP
4. The RSP validates the PAC and MSISDN against the MNPB. If valid then the DSP and RSP agree a date of porting, which by default is the next available working day, unless the customer requests a later porting date. The port date will be provided to the customer.

Once a port and the date of execution have been agreed the following activities need to be carried out:

5. The RSP needs to update its business support systems with the ported in MSISDN and inform the RNO to update the network for the subscriber with the ported in MSISDN

6. The DSP needs to update its business support systems with the termination of the MSISDN This normally means the termination of the subscriber's account and generation of a final bill for the customer. The DSP also needs to update the DNO that the number has been ported to another network RSP.

6.2 A Recipient Led Switching Regime Based on a Service Provider Hub

Our proposed solution supports both types of switching: i.e. where customers wish to port their number or alternatively when they do not want to port. In both scenarios the customer would not need to contact the DSP to terminate the service, removing the opportunity for the DSP to engage in Reactive Save.

Additionally, our solution informs the customer of any outstanding commitments and financial liabilities with the DSP, without the need for the customer to contact the DSP and before signing a new contract with the RSP. This will prevent customers from receiving a double bill or incurring unnecessary Early Termination Charges. This is achieved via a two phase approach to switching outlined below.

In our proposal the MNPB acts as a hub between the service providers. It falls on the service providers to inform the network providers of the switching activity. This has the benefit that the MNPB does not have to maintain the relationships between the service providers and the network providers. The MNPB also needs to maintain which MSISDN ranges are owned by which network operators so that it can manage ONO updates that are required as a result of porting activity.

To provide an indication of how this could work an example process flow has been provided in figure 6. The actual process would need to be agreed by the industry.

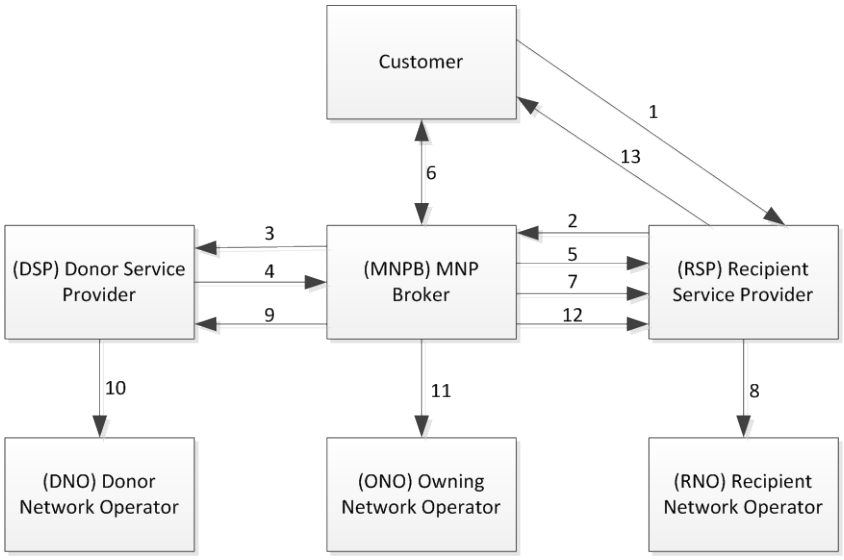


Figure 6: Interactions between parties for Service Provider Hub Switching Process

Phase A: Confirm switch eligibility and contractual liabilities. This phase of the switching process confirms that the customer is eligible to switch and ensures that the customer is made aware of any contractual liabilities with the DSP. All the steps in phase 1 need to be executed in real time such that a conversation can be supported between the RSP and customer.

Step 1 : Customer informs RSP that they would like to switch service providers. Customer provides the MSISDN, DSP and details about the subscription with the DSP, and authorises the RSP to request to switch.

Step 2 : The RSP requests the switch from the MNPB passing the required information. The MNPB generates a PAC to manage the switch. The PAC is used simply to identify the transaction and does not represent the DSP's agreement that the customer is entitled to switch service providers.

Step 3 : The MNPB passes the RSP, MSISDN, Customer Details and PAC to the DSP. The DSP validates the switch request to ensure they are the service provider for the associated MSISDN. The DSP also validates the customer details to ensure that they are eligible for switching. The exact validation rules need to be agreed between the service providers.

Step 4 : DSP sends the response back to the MNPB. This constitutes the DSP's agreement that the customer is entitled to switch or, in the case of a port request, that the DSP rejects the port for the stated reasons. The accepted reasons for rejecting a port request would need to be agreed, but they could include that the MSISDN is not held by a customer of the DSP or the MSISDN has been terminated.

Step 5 : MNPB sends the response back to the RSP. The RSP will then be able to support the customer through the next steps depending on the DSP response received via the MNPB. Where the customer wants to port and the DSP has declined it, the port process might stop here until the reason for declining the port has been addressed. The customer can also cancel a port request with the RSP.

Step 6 : MNPB notifies customer of the switching request result (by either email, SMS or IVR). The notification would disclose any contractual liabilities (Early Termination Charges or notice period to be served) and require the customer to take action to enable the switch to proceed. The exact details need to be confirmed, but this could be through responding to the SMS, accessing a website or calling an automated service to provide consent for the switch to proceed.

At this point the customer has the ability to stop the process by not providing consent or delaying consent until an appropriate time of their choosing. This is consistent with the current requirement for MNP that porting lead time should be one day, counting from the receipt by the RSP of the Subscriber Request to Port from its new Subscriber.

This step is also an appropriate point for a new service to be set up regardless of the service provider switching regime that the customer wishes to use. This will enable the RSP to associate the switch with a customer if a MSISDN port is required. The RSP will need to manage the service activation and porting activities through its service provisioning and activation processes.

Phase B: Execute Switch. When the customer provides consent for the switch to occur then the following steps are executed. The type of switch that is required will govern what steps need to be executed; as discussed below:

Step 7: The MNPB informs the RSP that the switch is to proceed. If the switch is a MSISDN port then the RSP will need perform the appropriate port in activities. If the switch is a cease and re-provide request then the RSP will not have to do anything.

Step 8 : If a port switch has been requested the RSP will need to inform the RNO that the number has been ported into its network. The RNO network will need to modify its network platforms as required to ensure that the calls a routed correctly. If a cease and re-provide service switch has been requested then this step does not need to be executed.

Step 9 : The MNPB informs the DSP to progress with the switch and the DSP systems are modified as appropriate.

Step 10 : If a port switch has been requested the DSP will need to inform the DNO that the number has been ported out. The DNO network will need to modify its network platforms as required to ensure that the calls a routed correctly. If a cease and re-provide service switch has been requested then this step does not need to be executed.

Step 11 : In the case of a MSISDN port switch and where the ONO is not the RNO or the DNO the MNPB informs the ONO which MSISDN has been ported to which RNO. In the case of a cease and re-provide switch and where the ONO is not the RNO or the DNO the MNPB informs the ONO which MSISDN is no longer in active use. In both switching options the ONO updates the residual subscription as required.

Step 12 : The MNPB informs the RSP that all switching executions activities have been completed.

Step 13 : The RSP informs the customer that the switch has been completed.

These activities can be executed in either batch or real time depending upon the capabilities of the network equipment deployed by the network operators. All interfaces between the service providers and MNPB are expected to be real time interfaces. This means that the interface between the service provider and network operators need to handle any network interface constraints that may exist. An appropriate SLA needs to be established for port execution across steps 7 to 12 and this will need to be agreed to by the industry.

6.3 Challenges with a Recipient Led Regime

There are two main issues to resolve under a Recipient Led approach:

- Informing the consumer of contractual commitments – ie existence of any remaining minimum contract term and early termination charges

- Dealing with erroneous switches and slamming – ie where a different customer is switched (instead of the customer who actually requested the switch), or where the switch is without the customer's knowledge or consent

6.3.1 Informing Customers of Contractual Liabilities

For consumers to make fully informed decisions they must be aware of the financial implications of changing provider prior to the port – in particular, any early termination charges (ETCs) and notice period payable.

The DSP is typically better placed to discuss financial implications of the switch with customers. Under the current regimes, customers can discuss outstanding charges with the DSP when asking for the PAC or calling to cancel. With a Recipient Led regime consumers need only contact the RSP and are may be less aware of the contractual liabilities with the DSP. Without safeguards this could increase the number of customers who inadvertently switch while in the minimum contract period or without having served their notice.

Our proposal requires the MNPB to notify the customer of any ETC and notice period to be served via SMS, email, website or IVR. This could alert of the existence of a liability or quantify the outstanding liability in real time, depending on the agreed technical requirements.

The notification would then require the customer to take action to enable the switch to proceed, for instance by responding to the SMS, accessing a website or calling an automated service. If there are any issues experienced the customer will need to contact the RSP, who will manage the fault through the RSP fault management process with the MNPB operator.

6.3.2 Dealing with Switching Errors and Slamming

Switching errors and slamming are more of a risk with a Recipient Led regime. In other European countries customers validate themselves first with the RSP, with a second round of validation by the DSP using some unique personal customer information (e.g. a code in France or a SIM card number/ID number in Portugal).

To address errors and slamming, our proposed solution includes the following safeguards:

- **An initial validation and authorisation stage** – the customer provides some personal details to the RSP, who obtains authority to cancel the DSP service. The RSP passes the customer info along with the MSISDN to the DSP (via the MNPB) for validation purposes and to authorise the port

- *Contract customers* – where a customer has a contract with the DSP, it will be easier to obtain personal details to prove consent. Example details could be date of birth, address numerics[17], account

[17] Address numerics are used to stop any differences in spelling of the address; for example Rd instead of Road.

- *PAYG customers* – these accounts are more challenging because the DSP may not hold personal details about the customer (although as explained in Section 3 the vast majority of PAYG customers do not port their numbers). This makes it hard to prove that the customer is the same customer. There are three options that could be used i) the personal validation could be ignored, with the fact that of knowing that it is a PAYG customer being enough; ii) registration of personal details with the DSP could be a precondition; iii) the account number could be provided through customer self-service.

- **A subsequent requirement for the customer to confirm the switch** – as set out above, the MNPB notifies the customer of any contractual liabilities via SMS, email, website or IVR. The notification requires the customer to take action for the switch to proceed, for instance by responding to the SMS or accessing a website. This will prove consent by the customer and minimise slamming and errors.

7 Cost of Implementing a Recipient Led System

This section provides a high level assessment of the costs to industry participants of implementing our proposed Recipient Led Service Provider Hub and the associated timelines.

7.1 Cost Methodology Used

We have carried out a bottom up assessment of costs for all parties in the process. The various functions of each component have been assessed and indicative costs have been estimated, broken down into initial one-off set up costs and ongoing annual operational costs.

The cost estimates reflect the incremental systems and process costs, relative to the processes and systems in place today. That is, we have only estimated the cost of the modifications required to the existing systems. [Confidential].

It is assumed that any interactions between parties involved in the porting process will integrate using a modern open standards protocol such as web services. It is also assumed that the porting service operation will be extended to a 365 day service, rather than the current working day service as it is at the time this report was written.

In a Recipient Led system consumers would no longer need to contact the DSP to obtain a PAC or give notice, depending on the design of the solution. This would lead to a significant reduction in call volumes and customer service costs for the industry. These cost reductions have not been reflected in our estimates.

7.2 High Level Cost Assessment for Each of the Parties

MNPB: The MNPB role in the porting process is to facilitate the port between the DSP and RSP. This involves acting as a Service Provider Hub. Given its central role it will be in a position to provide process reporting for the UK market. It is assumed that the components of the existing solution are end of life and that this would provide an opportunity to refresh the technology used.

Functional Point	One-off Setup Cost	Annual Operational Cost
Infrastructure (Hardware, Database, Application servers etc) assuming geo-graphical resilience.	£400K	£125K
Port initiation service used to start the porting process. Request sent by the RSP. Response to RSP sent once corresponding response received from DSP response logged for reporting purposes.	£150K	N/A
Port validation request sent to the DSP. Response logged for reporting purposes.	£50K	N/A
RSP requests for Port Progress	£50K	N/A
Progress request sent to DSP	£50K	N/A
If required MSISDN routing update request sent to ONO	£50K	N/A
Customer port notification request and confirmation to proceed with port	£250K	N/A
Service Management UI	£100K	
Operational Reporting	£100K	N/A
Operational Support		£200K
Total	**£1,200K**	**£325K**

Table 4: Indicative costs for MNPB

RSP: Due to the fact that the IT and (where the RSP has them) network platforms are operated 24x7, it is assumed that there is no additional operational cost incurred by the RSP.

Functional Point	One-off Setup Cost	Annual Operational Cost
Create port in request which allows for required information to be collected from customer and submitted to MNPB.	£150K	N/A
Process initiate port response from MNPB.	£50K	N/A
Submit proceed with port request to MNPB and processes port in (where RNO and RSP are the same organisation)	£150K	N/A
Submit proceed with port request to MNPB and submit port in to RNO (where RNO and RSP are different organisations)	£150K	N/A
Inform customer successful port	£25K	N/A
Total	**£525K**	**N/A**

Table 5: Indicative costs for RSP

DSP: Due to the fact that the IT and (where the DSP has them) network platforms are operated 24x7, it is assumed that there is no additional operational cost incurred by the DSP.

Functional Point	One-off Setup Cost	Annual Operational Cost
Provide service to validate port out request	£75K	N/A
Provide a service to process the port out triggering the network provisioning activities (if DSP is also the DNO)	£150K	N/A
Provide a service to process the port out calling a network port with the DNO (where the DSP and DNO are different)	£150K	N/A
Total	**£375K**	**N/A**

Table 6: Indicative costs for DSP

RNO: The RNO will need to provide a service to update the associated network subscription for the subscriber. Due to the fact that the provisioning and network platforms are operated 24x7 it is assumed that there is no additional operational cost incurred by the RNO.

Functional Point	One-off Setup Cost	Annual Operational Cost
Provide service for the RSP to call to enact the port in on the network	£75K	N/A

Table 7: Indicative costs for RNO

DNO: The DNO will need to provide a service to update the associated network subscription for the subscriber. Due to the fact that the provisioning and network platforms are operated 24x7 it is assumed that there is no additional operational cost incurred by the DNO.

Functional Point	One-off Setup Cost	Annual Operational Cost
Provide service for the DSP to call to enact the port out on the network	£75K	N/A

Table 8: Indicative costs for DNO

ONO: The ONO service is a relatively simple service, although the actual behaviour of some network interfaces vary in their implementation which means that these requests may have to be executed in batch. Due to the fact that the provisioning and network platforms are operated 24x7 it is assumed that there is no additional operational cost incurred by the ONO.

Functional Point	One-off Setup Cost	Annual Operational Cost
Provide service to update the call routing tables for a specific MSISDN	£75K	N/A

Table 9: Indicative costs for ONO

7.3 Cost Summary and Implementation Timelines

The table below provides a cost summary of the required changes to implement a Service Provider Hub solution. As can be seen in the table the majority of the costs are one-off setup costs, due to the fact that the IT and network systems are supported 24x7 already by the network operators and service providers.

Role in Porting Process	One-off Setup Cost	Annual Operational Cost
MNPB	£1,200K	£325K
DSP	£375K	N/A
DNO	£75K	N/A
RSP	£525K	N/A
RNO	£75K	N/A
ONO	£75K	N/A

Table 10: Summary indicative costs per component

The total cost to the industry may be calculated by estimating the number of operators in each of the service provider and network operator categories and multiplying by their individual cost. We have not estimated that figure given the uncertainty about the number of MVNOs in the UK market and hence about the number of service providers that would be affected by the reform.

Implementing the current Donor Led MNP process took a cross-industry team 18 months to develop. The changes required now are nowhere near as involved. The mobile industry can deliver a Recipient Led regime within 12-18 months. However, reform will be opposed by O2, Vodafone and EE, who have large subscriber bases to protect and oppose measures that would reduce barriers to switching.

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9 Appendix A – Glossary of Terms

Term	Meaning
Working Day	0900 to 1700 hours, Monday to Friday (excluding Bank Holidays).
RSP	Recipient Service Provider
DSP	Donor Service Provider
CP	Communications Provider
RNO	Recipient Network Operator
DNO	Donor network Operator
MNP SLA	MNP Service Level Agreement
CNO	Current Network Operator once porting has occurred
Current Subscription	The entity on the current NO which supports the provision of service against a porting MSISDN
New Subscription	The entity on the Recipient network which supports the provision of service against a porting MSISDN
Residual Subscription	The entity of the original network which supports the re-routing of mobile-terminating traffic for a ported MSISDN
PAC	Porting Authorisation code
MNP OSG	Mobile Number Portability Operator Steering Group
MSISDN	Mobile phone number
Customer	The user of the MSISDN
Account Holder	The person or entity with contractual responsibility for the customers MSISDN
Migrations	Transfer a MSISDN between SP's where the network Operator remains the same.
Closing Cut off	18:00 on a working day
Locking Cut off	21:00 on the working day before the port date.
URL	Universal Resource Location
MNP OSG	Mobile Number Porting Operator Steering Group

Table 13: Glossary of Terms