



# Mobile number portability

Review of the porting process

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Consultation

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## Section 1

# Executive Summary

- 1.1 An essential element in the health of the UK's mobile market is the ability of consumers to choose between competing providers – and to switch between providers quickly and easily. When switching, consumers have the right – if they wish – to retain their mobile telephone number. The facility that enables consumers to retain their mobile telephone number whilst switching provider is called mobile number portability (or “MNP”).
- 1.2 This consultation sets out Ofcom's evaluation of the current arrangements for the MNP process. We see certain problems with the current process and room to make the process work better for consumers. We also note the implications of the proposed new European Union (“EU”) Regulatory Framework for electronic communications which, if passed, would require the introduction of one working day porting, across the EU.
- 1.3 We set out a number of different options for change and we invite stakeholders to submit views and provide evidence about what steps, if any, we should take to change the process of porting mobile numbers in the UK.

## Background

- 1.4 In the UK, the current process for MNP is ‘donor-led’. This means that consumers are required to approach their existing operator for authority to take their mobile phone number to a new provider and consumers are responsible for passing on the Porting Authorisation Code (“PAC”) to their new provider. The current regulations relating to MNP are set out in General Condition 18 (“GC18”), which requires that MNP takes place within two working days from the point at which the consumer passes the PAC to their new provider.
- 1.5 The UK is almost unique within Europe in having an MNP process of this type. Most countries operate a “recipient-led” process. Under those arrangements, the transfer of a mobile number to a new network is dealt with by the new provider and there is no need for the consumer to contact their old provider in order to obtain a PAC, nor pass on the PAC to the new provider.
- 1.6 The length of time taken for the porting process to complete, and for calls to be routed to the new network, varies significantly within the EU.
- 1.7 Some questions dealt with in this consultation were the subject of an earlier decision by Ofcom that was set aside on appeal. On 29 November 2007, Ofcom published a statement entitled *Telephone number portability for consumers switching suppliers* (“the November 2007 Statement”) which required, amongst other things, mobile providers to implement recipient-led porting and reduce the time to port mobile numbers from two working days to two hours by 1 September 2009.<sup>1</sup> Vodafone appealed the November 2007 Statement in early 2008, and on 18 September 2008 it this was set aside in its entirety by the Competition Appeal Tribunal (“CAT”). The CAT remitted the matter back to Ofcom for reconsideration. Following the CAT's decision, we began a new review of the MNP process.

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<sup>1</sup> <http://www.ofcom.org.uk/consult/condocs/gc18review/statement/statement.pdf>

- 1.8 During our review, we have met with and listened to service providers (fixed and mobile), consumers' representatives and other stakeholders. We have conducted quantitative and qualitative research, as well as a mystery shopping exercise into consumers' experiences of obtaining the PAC that they need to commence the porting process. We have also analysed complaints made by consumers to the Ofcom Advisory Team ("OAT") relating to the MNP process.
- 1.9 To be most effective, porting should be as convenient, fast and easy as possible for consumers. Our research found that a majority of consumers are satisfied with the current process and that it works well for many people.
- 1.10 Nevertheless, the research also identified a number of ways in which the current process causes difficulties for a significant minority of consumers. This evidence suggests that there may be benefits to consumers, and potentially to competition, that could result from improvements to the current process, although we recognise that any action we may take must be proportional to the amount of harm it is addressing. In considering options for improvement to the process, we have also been mindful of the European Commission's proposed new requirements for number portability.

### Evidence considered and options for change

- 1.11 We have found evidence that suggests consumers can face difficulties and delays in obtaining a PAC from their current provider. The extent of this problem varies considerably between providers and users and can delay porting significantly for some consumers.
- 1.12 Our research indicates that consumers would benefit from a faster porting process. The evidence also suggests that consumers would prefer a recipient-led process rather than the existing donor-led arrangements. Under a recipient-led process, the transfer of a mobile number is dealt with by the new provider and there is no need for the consumer to obtain and pass on a PAC.
- 1.13 This consultation sets out our initial estimates of the costs of improving the MNP process. We have compared four principal options. These cover alternative arrangements for speeding up the porting process within either a recipient- or donor-led regime.
- 1.14 We also set out the evidence we have obtained about the benefits of each option, including the extent to which consumers state they would value a faster process. Our research suggests that consumers have indicated a preference for a "recipient-led" process<sup>2</sup>). We also highlight some of the qualitative benefits that may arise from a move to recipient-led porting and how we intend to proceed to further evaluate the costs and benefits associated with the four options.
- 1.15 Against today's two working day process, we have considered both two hour and one working day porting. Combined with the option to move to a recipient-led process, we have considered the following options and have evaluated them compared to a 'do-nothing' counterfactual.
- **Option A:** recipient-led process with porting completed within two hours;

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<sup>2</sup> 53% of consumers who had switched, or had considered switching, favoured a recipient-led process versus 20% who favoured a donor-led process. TNS, Omnibus Survey, December 2008.

- **Option B:** donor-led process with porting completed within two hours;
  - **Option C:** recipient-led process with porting completed the next working day; and
  - **Option D:** donor-led process with porting completed the next working day.
- 1.16 If the porting process remains donor-led, then we think that the consistency and speed of providing PACs to consumers needs to improve significantly. While it is generally possible to provide a PAC immediately, providers do not have commercial incentives to do so. In some cases consumers only receive a PAC four days or more after their request.<sup>3</sup> We propose that under any future donor-led process, Mobile Network Operators (“MNOs”) will be required to supply PACs immediately over the phone or by SMS within a maximum of two hours after receiving a PAC request.
- 1.17 Our provisional analysis suggests that, in general, all of the options set out above could be justified in a cost-benefit analysis. We intend to conduct further work to develop our view of the costs and benefits associated with each option and we invite stakeholders’ views and evidence on this. In this consultation, we also set out the way in which we intend to proceed with further work and stakeholder engagement over the coming months. We will refine the specification of each alternative and develop our understanding of the costs and benefits associated with each option. Taken together, this evidence will be used to inform our decision.
- 1.18 Following consultation, in the event that we decide that it is appropriate to intervene to address the consumer harm identified, the likely route will be through a modification to GC18.
- 1.19 Of particular relevance to this review, as highlighted above, is the European Commission’s (“the Commission”) proposals for one working day porting across the EU. The current MNP arrangements may not be aligned with the Commission’s proposed requirements for number portability, which, if passed, are likely to require implementation by EU Member States during 2011. We have therefore taken into consideration whether the options we have proposed are likely to be consistent with the Commission’s proposals.

## Related issues

- 1.20 Some consumers find it difficult to get a PAC as quickly as they would like. In some cases it appears that mobile providers may be engaging in conduct that may constitute a contravention of General Condition 18.1 (“GC 18.1”), which sets out the rules for MNP, by not providing number portability as soon as reasonably practicable on reasonable terms. We have initiated a pre-enforcement programme to monitor MNO compliance with GC18.1 and to address the consumer harm that is currently being experienced.<sup>4</sup> If compliance remains unacceptably poor, we will consider further action, including formal enforcement against providers and/or more prescriptive rules on the issuing of PACs.
- 1.21 This review is confined to the mobile porting process. Fixed porting processes are being considered separately by Ofcom’s project looking at migration, switching and mis-selling. Alongside this review of the MNP process, we are also reviewing the rules governing the routing of calls to ported numbers. New proposals on routing of

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<sup>3</sup> Synovate, *PAC Mystery Shopping*, April 2009. The average time taken to receive a PAC via post was four days.

<sup>4</sup> [http://www.ofcom.org.uk/bulletins/comp\\_bull\\_index/comp\\_bull\\_ocases/open\\_all/cw\\_01018/](http://www.ofcom.org.uk/bulletins/comp_bull_index/comp_bull_ocases/open_all/cw_01018/)

calls to ported mobile numbers have been published separately today and can be found at [www.ofcom.org.uk/consult/condocs/gc18\\_routing/](http://www.ofcom.org.uk/consult/condocs/gc18_routing/). However, should this consultation on changes to the mobile porting process result in a requirement for two hour porting, then there may be links between the routing requirements and the process requirement (such as, for example, the need for a central database). We will consider the impact of any such linkages during our assessment of the consultation responses.

## Next Steps

- 1.22 We invite responses to this consultation on or before **5pm on 26 October 2009**.
- 1.23 We expect that we will consult on our proposed final decision about changes to the MNP regime in the first half of 2010. In order to progress to this decision, we expect that we will need to undertake additional market research, obtain further expert advice about the technical requirements of change and engage closely with industry to refine the estimates underpinning our preliminary cost-benefit analysis and other qualitative factors that will inform our decision.

## Section 2

# Introduction

2.1 This document sets out:

- the background to, and the functioning of, the existing MNP process and the current legal framework;
- whether the current process is working well for all consumers;
- whether there is evidence supporting an intervention to change the current process;
- a range of options that could be considered in order to improve the process for the benefit of consumers;
- our initial estimates of the cost of each option and the evidence that we have obtained about the benefits of each option;
- other factors that we have identified that need to be taken into account when determining which option is most appropriate; and
- the steps that we will now take in order to determine which option should be implemented.

2.2 MNP is a process that enables consumers to change service provider whilst keeping their existing mobile number. It plays an important part in fostering consumer choice and effective competition by allowing consumers to switch their service provider without the costs or inconvenience of changing their telephone number. Our research has shown that 71% of mobile consumers consider keeping their number to be important when switching provider.<sup>5</sup>

2.3 We initiated this review following a judgment by the CAT which set aside Ofcom's November 2007 Statement, (see paragraph 2.8 below).<sup>6</sup> The review is looking afresh at whether there is any evidence of a need to introduce changes to the current porting process.

2.4 This section outlines the history of the MNP process, the review of porting following the CAT judgment, and the current EU regulatory framework. We also provide an outline of the structure of the remainder of this document.

## History of the MNP process

2.5 In the UK, MNP was introduced in January 1999, following consultation by Oftel.<sup>7</sup> Originally, the process used a recipient-led paper-based porting system that involved faxing porting requests. Initially porting took up to 25 days. In October 2001 the industry agreed that this process should be shortened and simplified, and decided to

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<sup>5</sup> TNS Omnibus Survey, December 2008.

<sup>6</sup> <http://www.ofcom.org.uk/consult/condocs/gc18review/statement/statement.pdf>

<sup>7</sup> Oftel, *Number Portability in the Mobile Telephony Market; Explanatory Note*, 3 October 1997. [http://www.ofcom.org.uk/static/archive/oftel/publications/1995\\_98/numbering/mobport.htm](http://www.ofcom.org.uk/static/archive/oftel/publications/1995_98/numbering/mobport.htm).

change from a recipient-led system to the current donor-led system. This, alongside other changes, allowed the process to be reduced from 25 to five days.

- 2.6 In November 2006 we published the *Review of General Condition 18 – Number Portability* which consulted on proposals to change the existing arrangements for number portability, including a reduction in mobile porting lead times.<sup>8</sup> After considering responses to that consultation, we published the statement *The arrangements for porting phone numbers when consumers switch supplier* (the “July 2007 Statement and Consultation”) which concluded that mobile porting lead times should be reduced to a maximum period of two working days from 31 March 2008.<sup>9</sup>
- 2.7 The July 2007 Statement and Consultation also consulted on proposals to require that the porting of mobile numbers was achieved by a near-instant (i.e. no longer than two hours) process. We considered that, in order for such a proposal to be effective, the process would need to be recipient-led to minimise the time taken by the process and the inconvenience to consumers.
- 2.8 In our final statement, the “November 2007 Statement”<sup>10</sup>, we concluded, amongst other things, that mobile providers should make the following changes to the mobile porting process:
- implement a recipient-led porting process by 1 September 2009; and
  - reduce the mobile port lead time from two working days to two hours by 1 September 2009.
- 2.9 In the November 2007 Statement we also set out a requirement for all calls to ported numbers to be routed directly to the consumer’s new provider (rather than being onward routed via the consumer’s original provider). We stated that in order to achieve direct routing, the industry had to co-operate to develop a shared central database which would hold details of all ported numbers and facilitate calls to ported numbers to be routed directly.
- 2.10 Vodafone (subsequently supported by interveners British Telecommunications Plc, T-Mobile (UK) Limited, Orange Personal Communications Services Limited and Telefónica O2 UK Limited) appealed the November 2007 Statement in early 2008, and on 18 September 2008 Ofcom’s Statement was set aside in its entirety by the CAT.<sup>11</sup> The CAT found that the process by which Ofcom had reached its decision did not allow stakeholders to provide realistic estimates of the likely costs of adopting the modifications to implement direct routing and establish a central database. In the light of this, in this review we have clearly set out the likely anticipated costs of each option, based on the best information we have available at this time ( see Section 5) and will seek stakeholder input on our cost benefit analysis.
- 2.11 Having found that the decision to require the implementation of direct routing was flawed, the CAT did not need to reach a further conclusion regarding the move to a recipient-led two hour porting process. The CAT remitted the whole matter back to Ofcom for reconsideration and ordered that the modifications made to the General

<sup>8</sup> Ofcom, *Review of General Condition 18 – Number portability*, 16 November 2006.

<http://www.ofcom.org.uk/consult/condocs/gc18/gc18r.pdf> .

<sup>9</sup> Ofcom, *Arrangements for porting phone numbers when consumers switch supplier – a review of General Condition 18*, 17 July 2007.

<http://www.ofcom.org.uk/consult/condocs/gc18review/numberportability.pdf>

<sup>10</sup> <http://www.ofcom.org.uk/consult/condocs/gc18review/statement/statement.pdf>

<sup>11</sup> <http://www.catribunal.org.uk/238-657/1094-3-3-08-Vodafone-Limited.html>



Condition of Entitlement 18 (“GC18”) following the November 2007 Statement be set aside.

## **Review of the porting process following the CAT judgment**

- 2.12 Following the November 2007 Statement being set aside, we initiated a fresh internal policy review of the MNP process. Our aim was to reconsider and identify what, if any, changes should be made to ensure that MNP arrangements met the needs of UK consumers in terms of facilitating consumer choice and effective competition in a broadly competitive communications market.
- 2.13 We initiated a similar review into the routing arrangements for ported calls. New proposals on routing of calls to ported mobile numbers have been published separately today and can be found at [www.ofcom.org.uk/consult/condocs/gc18\\_routing/](http://www.ofcom.org.uk/consult/condocs/gc18_routing/). They are being considered separately from the proposals discussed in this document. However, should this consultation on changes to the mobile porting process result in a requirement for near-instant porting, then there may be links between the routing requirements and the process requirement (such as, for example, the need for a central database). We will consider the impact of any such links during our assessment of the consultation responses.
- 2.14 Our review of the MNP process has involved both industry engagement and the conduct of research into the porting process. We conducted quantitative research among consumers to better understand the levels of switching and porting in Great Britain (“GB”) and consumers’ views on the length of the process. We have also undertaken qualitative research to gather consumers’ views of the existing porting process.
- 2.15 Our qualitative research suggested that one area of the porting process that might be causing problems was the process for consumers to request and obtain PACs from their existing operators. We therefore conducted a further mystery shopping exercise into the PAC process to gain further evidence of the scale of this problem. We used the same mystery shopping exercise to gather information about the length of time it took to obtain a PAC. Table 1 summarises all the research we have carried out under this review.
- 2.16 In addition, we have analysed complaints received by the OAT in relation to this issue. The OAT takes calls from consumers who wish to complain about any telecommunications issues and provides advice on how to handle those complaints.

**Table 1: Consumer research carried out as part of the MNP review**

Type of research	Company	Date	Sample	Method
Quantitative Omnibus	TNS Research	December 2008	2,000 GB consumers	Face to face and CAPI (computer assisted personal interviews)
Quantitative Omnibus	TNS Research	February 2009	1,020 Irish consumers	Telephone and CAPI
Qualitative	Jigsaw Research	March 2009	<ul style="list-style-type: none"> <li>• 36 consumers in six groups</li> <li>• six mystery shops</li> <li>• ten business consumers</li> </ul>	<ul style="list-style-type: none"> <li>• Six mini-group discussions with consumers who had switched in the last two years or had considered switching.</li> <li>• Six mystery shops with consumers going through the switching/porting process.</li> <li>• Ten in-depth telephone interviews with business consumers who had switched in the last two years, or were considering switching.</li> </ul>
Mystery shopping	Synovate	April 2009	151 shops (72 pay as you go, 79 pay monthly)	Mystery shoppers called their existing mobile provider to request a PAC and filled in a questionnaire on their experience.

2.17 This review is not considering the porting processes for fixed networks. These are currently being considered by Ofcom's projects looking at migration, switching and mis-selling.<sup>12</sup>

### Current EU regulatory framework

2.18 Number portability is recognised by Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services ("the Universal Service Directive") as "a key facilitator of consumer choice and effective competition in a competitive environment such that end-users who so request should

<sup>12</sup> Ofcom, *Migrations, switching and mis-selling*, 16 February 2006. <http://www.ofcom.org.uk/consult/condocs/migrations/migrations.pdf>.

*be able to retain their number(s) on the public telephone network independently of the organisation providing the service.”<sup>13</sup>*

2.19 Article 30 of the Universal Service Directive provides that:

“1. Member States shall ensure that all subscribers of publicly available telephone services, including mobile services, who so request can retain their number(s) independently of the undertaking providing the service:

(a) in the case of geographic numbers, at a specific location; and

(b) in the case of non-geographic numbers, at any location.

This paragraph does not apply to the porting of numbers between networks providing services at a fixed location and mobile networks.

2. National regulatory authorities shall ensure that pricing for interconnection related to the provision of number portability is cost oriented and that direct charges to subscribers, if any, do not act as a disincentive for the use of these facilities.

3. National regulatory authorities shall not impose retail tariffs for the porting of numbers in a manner that would distort competition, such as by setting specific or common retail tariffs.”

## Current UK regulatory framework

2.20 The requirements of Article 30 of the Universal Service Directive were implemented in the UK by setting GC18 pursuant to its powers under sections 45 and 48 of the Communications Act 2003 (“the Act”). GC18.1<sup>14</sup> states:

“The Communications Provider shall provide Number Portability as soon as it is reasonably practicable on reasonable terms, including charges, to any of its Subscribers who so requests”

2.21 GC18.2 also specifies the timeframe in which this should occur:

“The Communications Provider shall, pursuant to a request from another Communications Provider, provide Portability (other than Paging Portability) as soon as is reasonably practicable in relation to that request on reasonable terms. In the case of Mobile Portability, where the request is for porting a total of less than 25 Telephone Numbers, the total period for providing Portability in respect of those Telephone Numbers shall not exceed two business days.”

2.22 The current text of GC18 does not describe the MNP process in further detail, although a number of specific arrangements are set out in an industry established and maintained process manual (the “Industry Manual”).<sup>15</sup> The Industry Manual is published by the Operator Steering Committee<sup>16</sup> (“OSG”) and it sets out a number of

<sup>13</sup> Universal Service Directive at recital 40.

<sup>14</sup> Available at: [http://www.ofcom.org.uk/telecoms/ioi/g\\_a\\_regime/gce/cvogc150807.pdf](http://www.ofcom.org.uk/telecoms/ioi/g_a_regime/gce/cvogc150807.pdf)

<sup>15</sup> [http://www.ofcom.org.uk/telecoms/ioi/numbers/num\\_port\\_info/mob\\_num\\_portab/mnp.pdf](http://www.ofcom.org.uk/telecoms/ioi/numbers/num_port_info/mob_num_portab/mnp.pdf)

<sup>16</sup> The Operator Steering Committee is a voluntary mobile industry body established to set standards and processes for MNP.

rules agreed by the OSG to drive the processes for porting mobile numbers between providers.

### Ofcom's statutory duties

2.23 The EU regulatory framework together with the Act and other relevant UK legislation provide a framework of statutory duties and powers within which Ofcom must make its decisions.

### Ofcom's general duties

2.24 Section 3(1) of the Act sets out our general duties and provides that our principal duties are:

- to further the interests of citizens in relation to communications matters; and
- to further the interests of consumers in relevant markets, where appropriate by promoting competition.

2.25 Section 3(2)(b) of the Act requires that, in the carrying out of its functions Ofcom must secure, *inter alia*, the availability throughout the UK of a wide range of electronic communications services.

2.26 Section 3(3) of the Act provides that, in performing our principal duties, we must in all cases have regard to the principles of transparency, accountability, proportionality and consistency as well as ensure that our actions are targeted only at cases in which action is needed.

2.27 Section 3(4) of the Act requires us in performing our principal duties to have regard to a number of factors as appropriate, including the desirability of promoting competition, as well as encouraging investment and innovation in relevant markets.

2.28 Section 3(5) specifies that in performing our duty of furthering the interest of consumers we must have regard, in particular, to the interests of those consumers in respect of choice, price, quality of service and value for money.

### The Community requirements

2.29 In carrying out our functions, we also have to comply with the six Community requirements set out in section 4 of the Act.

2.30 We consider that the following Community requirements are particularly relevant in relation to the consumer process for achieving mobile number portability:

- the requirement to promote competition;<sup>17</sup>
- the requirement to secure that Ofcom's activities contribute to the development of the European internal market;<sup>18</sup>
- the requirement to promote the interests of all persons who are citizens of the European Union;<sup>19</sup> and

<sup>17</sup> This is the first Community requirement, set out in Section 4(3) of the Act.

<sup>18</sup> This is the second Community requirement, set out in Section 4(4) of the Act.

- the requirement to adopt a technological neutral approach.<sup>20</sup>

## **Compliance with Ofcom's statutory duties**

- 2.31 We believe that by pursuing a faster and easier MNP process for consumers we will be fulfilling our duty of promoting citizen and consumer interests, because we will improve consumer's experience of the MNP process, giving them an improved quality of service and we will also ensure that consumers' choice over whether to port their number is not adversely influenced by the process involved.
- 2.32 We recognise that the UK mobile market is relatively competitive but we believe that the introduction of a faster and easier mobile porting process will play an important part in fostering consumer choice and promoting competition by allowing consumers to switch their business between suppliers faster and more simply without the costs or inconvenience of changing their telephone number.
- 2.33 By introducing options that are likely to comply with the Commission's proposed New Telecoms Package and the introduction of one working day porting, we are also likely to contribute to the development of the European internal market, and the introduction of a faster porting process across Europe.

## **Impact Assessment and Equality Impact Assessment**

- 2.34 The analysis presented in Section 5 of this document is an impact assessment, as defined in section 7 of the Act.<sup>21</sup>
- 2.35 We also considered whether we were required to undertake a full Equality Impact Assessment for this review. On the basis of our Initial Equality Impact Assessment Screening we determined that this was not required, because any changes to the MNP process do not raise specific equality issues; they will affect consumers equally, regardless of race, gender or disability.

## **Modifications to the UK regulatory framework**

- 2.36 As explained above, porting is currently regulated by GC18. Therefore, if we conclude, following the consultation process, that changes to the current regime are required, we would likely introduce these by means of a modification to this general condition pursuant to our powers under sections 45 and 48 of the Act and in accordance with the legal tests set out in Section 47 of the 2003 Act (namely, objective justification, no undue discrimination, proportionality and transparency). We also consider that, for the reasons outlined in this document, that the rationale for the required changes to the mobile porting process would be to protect the interests of end-users (in terms of improving the porting experience) and to secure the proper and effective functioning of public electronic communications networks (be creating a faster porting process) under section 51(1) of the Act.
- 2.37 Our preliminary view is that, if we were to implement changes to GC18 in accordance with the options presented in Section 5, we may meet the legal test set out in section 47 of the Act, being the requirements that the revised condition is:

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<sup>19</sup> This is the third Community requirement, set out in Section 4(5) of the Act.

<sup>20</sup> This is the fourth Community requirement, set out in Section 4(6) of the Act.

<sup>21</sup> Impact assessments provide a valuable way of assessing different options for regulation and showing why the preferred option was chosen. They form part of best practice policy-making. For further information about our approach to impact assessments, see the guidelines, Better policy-making: Ofcom's approach to impact assessment, which are on our website: [http://www.ofcom.org.uk/consult/policy\\_making/guidelines.pdf](http://www.ofcom.org.uk/consult/policy_making/guidelines.pdf)

- **objectively justifiable:** because of the reduction in consumer harm caused by difficulties with the current porting process, fostering consumer choice and the benefits in promoting switching and taking note of the EU's one working day porting proposal;
- **non-discriminatory:** the requirement will apply equally to all MNOs;
- **proportionate:** following this consultation and review of the stakeholder responses in relation to the options set out in Section 5, in considering which option is preferred we will act in accordance with the requirement of proportionality; and
- **transparent:** because we will further consult stakeholders on any proposed change to GC18 and the requirement will be clearly set out in the revised general condition together with the concluding statement.

2.38 Following this consultation we will revisit our assessment of whether changes to the current UK MNP process will meet these legal tests.

### The proposal for a new EU regulatory framework

2.39 As stated above, we consider that any intervention by Ofcom to improve the mobile porting process would likely fall within the scope of our existing duties and powers. In addition when considering the exercise of our discretion to intervene, of particular relevance is the current EU proposal to revise the regulatory framework to deliver faster porting. Although the EU proposals are only preliminary in nature and have yet to be finalised, the EU's current review of number portability arrangements is timely and is a relevant factor that we should have regard to in addressing the consumer harm identified.

2.40 By way of background, the Commission's adopted proposals on 13 November 2007, to update the EU Regulatory Framework for electronic communications agreed in 2002, including the "Universal Service Directive, in order to introduce a revised framework (the "New Telecoms Package"). EU approval of the New Telecoms Package is awaited and expected by the end of this year.

2.41 Once approved, Member States<sup>22</sup> can expect to have approximately 12 to 18 months to transpose the New Telecoms Package into national law. The transposition date is therefore likely to be during 2011.

### The draft text of Article 30 of the Universal Service Directive

2.42 As part of the New Telecoms Package, the Commission has proposed to introduce a requirement for one working day porting. In particular, Commissioner Viviane Reding has announced that she wants "*all Europeans to be able to switch their phone operator – whether mobile or fixed – within one single day, as it is already the case in Ireland and in Malta*", specifying that "*technically, this is very doable if operators and national regulators make an effort*".<sup>23</sup>

<sup>23</sup> See [http://ec.europa.eu/commission\\_barroso/reding/video/text/message\\_20090323.pdf](http://ec.europa.eu/commission_barroso/reding/video/text/message_20090323.pdf).

<sup>23</sup> See [http://ec.europa.eu/commission\\_barroso/reding/video/text/message\\_20090323.pdf](http://ec.europa.eu/commission_barroso/reding/video/text/message_20090323.pdf).

2.43 The proposed text of Article 30 of the Universal Service Directive reads as follows<sup>24</sup>:

*“Article 30 - Facilitating change of provider*

*1. Member States shall ensure that all subscribers with numbers from the national telephone numbering plan who so request can retain their number(s) independently of the undertaking providing the service in accordance with the provisions of Part C of Annex I.*

*2. National regulatory authorities shall ensure that pricing between operators and/or service providers related to the provision of number portability is cost-oriented, and that direct charges to subscribers, if any, do not act as a disincentive for subscribers against changing service provider.*

*3. National regulatory authorities shall not impose retail tariffs for the porting of numbers in a manner that would distort competition, such as by setting specific or common retail tariffs.*

***4. Porting of numbers and their subsequent activation shall be carried out within the shortest possible time. In any case, subscribers who have concluded an agreement to port a number to a new undertaking shall have that number activated within one working day [emphasis added].***

*Without prejudice to the first subparagraph, competent national authorities may establish the global process of porting of numbers, taking into account national provisions on contracts, technical feasibility and the need to maintain continuity of service to the subscriber. In any event, loss of service during the process of porting shall not exceed one working day. Competent national authorities shall also take into account, where necessary, measures ensuring that subscribers are protected throughout the switching process and are not switched against their will.*

*Member States shall ensure that appropriate sanctions on undertakings are provided for, including an obligation to compensate subscribers in case of delay in porting or abuse of porting by them or on their behalf.*

*5. Member States shall ensure that contracts concluded between consumers and undertakings providing electronic communications services do not mandate an initial commitment period that exceeds 24 months. Member States shall also ensure that undertakings offer users the possibility to subscribe to a contract with a maximum duration of 12 months.*

*6. Without prejudice to any minimum contractual period, Member States shall ensure that conditions and procedures for contract termination do not act as a disincentive against changing service provider”*

2.44 The relevant Recital (i.e. Recital 37) provides that:

“In order to take full advantage of the competitive environment, consumers should be able to make informed choices and to change providers when it is in their interests. It is essential to ensure that they can do so without being hindered by legal, technical or practical

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<sup>24</sup> The text is available here: <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P6-TA-2009-0360+0+DOC+XML+V0//EN&language=EN#BKMD-15>.

obstacles, including contractual conditions, procedures, charges and so on. This does not preclude the imposition of reasonable minimum contractual periods in consumer contracts. **Number portability is a key facilitator of consumer choice and effective competition in competitive markets for electronic communications and should be implemented with the minimum delay, so that the number is functionally activated within one working day and the user does not experience a loss of service lasting longer than one working day** [emphasis added]. Competent national authorities may prescribe the global process of the porting of numbers, taking into account national provisions on contracts and technological developments. Experience in certain Member States has shown that there is a risk of consumers being switched without consent. While that is a matter that should primarily be addressed by law-enforcement authorities, Member States should be able to impose such minimum proportionate measures regarding the switching process as are necessary to minimise such risks and to guarantee that consumers are protected throughout the switching process, including imposing appropriate sanctions, without making the process less attractive for consumers”.<sup>25</sup>

- 2.45 This text is still provisional and could still change. However, since no further amendments have been tabled in relation to these provisions, we would expect that no material changes will be introduced, if the EU reforms go ahead.

### Structure of the document

- 2.46 In Section 3 we explain the existing MNP process in the UK and compare that to the process in other countries.
- 2.47 We then assess whether the current MNP process is working well for consumers and whether there is evidence of consumer harm arising from the process. Our assessment of whether the current process is working and potential areas of harm is outlined in Section 4.
- 2.48 We then consider options to address the potential harm identified. We have assessed these options in relation to the benefits to consumers as well as the potential costs for introducing a change. Where these costs and benefits can reasonably be quantified, we have provided our current estimates. We also acknowledge that there are a number of other issues that may need to be taken into account when determining which option is the most appropriate. These options are set out in Section 5. We have also set out more detailed specifications of these options in Annex 6.
- 2.49 Section 6 outlines our proposed next steps in deciding which of these options to adopt and how we intend to go about introducing any changes.
- 2.50 We welcome stakeholder comments on all of the options presented. We have also asked some specific questions in relation to each of the proposed options and on the process for concluding this review, on which we would also welcome stakeholder responses. The deadline for responses to this consultation is **5pm on 26 October 2009**. The process for responding is set out in Annex 1.

<sup>25</sup> Again, see <http://www.europarl.europa.eu/sides/getDoc.do?pubRef=-//EP//TEXT+TA+P6-TA-2009-0360+0+DOC+XML+V0//EN&language=EN#BKMD-15>.



## Section 3

# The MNP process

3.1 This section outlines the way in which MNP operates in the UK. It also considers how mobile porting operates in other countries.

### How does the process operate in the UK?

3.2 The mobile industry operates at least two distinct processes; a 'consumer port', and another for 'bulk ports'.

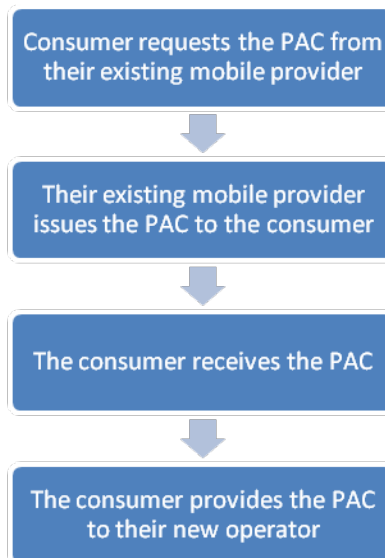
- **'Consumer port'**: This typically involves the porting of an individual number from one provider's network to another. It also can involve multiple ports. Multiple ports are likely to involve the porting of more two or more numbers linked to a single account, up to a maximum of 25 numbers. Multiple ports may include families with several mobile numbers linked to a single account, as well as small to medium size businesses that will also often have several mobile numbers under a single account. An additional variation is where a single consumer wishes to port a number which is part of a multi-line account. In this case, the consumer wishing to port would require permission from the registered account holder.
- **'Bulk ports'**: These involve porting of more than 25 mobile numbers and typically involve larger businesses. The Industry Manual specifies the separate process involved with bulk ports; this separation of the process for bulk porting is intended to recognise the additional work involved for the existing MNO to process simultaneous port requests involving more than 25 numbers. This separate process also reflects the particular needs of business consumers with a large number of mobile phones.

3.3 This consultation is primarily concerned with arrangements for consumer ports. We acknowledge that bulk ports are usually subject to different arrangements between consumers and MNOs and we have not identified significant consumer harm arising from existing arrangements.

*Q3.1: Do you agree that the bulk porting process should not be included in this review and should be left to industry agreement?*

### MNP in the UK

3.4 In the UK, the MNP process is donor-led. This means that if a consumer wishes to change mobile operator, but retain their existing phone number, they must first speak to their existing operator (the "donor operator") and request a Port Authorisation Code (the "PAC".) The donor operator carries out an authorisation check to confirm that consumer making the request is the legitimate account holder. Once the consumer has been validated subject to certain other conditions described in paragraph 3.6 below, the donor operator is required to issue the consumer a PAC. The consumer must then supply this PAC to their new MNO (the "recipient operator") in order to allow the company to 'port in' the consumer's number into its network. This section of the process typically consists of four stages, as set out Figure 1 below.

**Figure 1: Consumer stages in MNP process**

- 3.5 The Industry Manual sets out the specific rules operators are expected to follow when they receive a PAC request from a consumer. The Industry Manual is operated and maintained by industry, although Ofcom has in the past requested operators modify the guidelines where we considered it necessary. For example, the guidelines were recently changed to ensure that outstanding debt was not a valid reason to refuse a PAC request.
- 3.6 The Industry Manual states that once a consumer has requested a PAC, they must be provided with one unless:
- the number does not belong to an account held with the donor operator;
  - the account has been terminated (i.e. the consumer is no longer active on the account or has ended the contract prior to their request to port);
  - the account holder is deceased;
  - the donor operator has already issued a PAC that is still valid; and/or
  - the consumer fails to provide adequate identification to confirm that he or she is the legitimate account holder.
- 3.7 As highlighted above, the Industry Manual specifies that matters relating to unpaid debt on the part of the consumer may not be used as grounds to refuse the issuing of a PAC.
- 3.8 The Industry Manual also outlines a number of other requirements in relation to the PAC:
- the PAC is valid for a period of 30 calendar days from the date it is issued;
  - if the consumer contacts the donor operator by phone the PAC may be issued immediately. Written confirmation of the PAC must be dispatched to the consumer within two working days of the request;

- if the consumer contacts the donor operator by fax, email or letter, the operator must respond with the PAC or reason for its non-issue within two working days of the request; and
- the written response to the consumer must indicate the PAC, the validity period, and the number to which it applies.

3.9 Therefore, according to the Industry Manual, the minimum requirement for MNOs is that PACs have to be issued in writing within two working days of the consumer making a legitimate request.

3.10 Once the consumer has obtained the PAC and passed it to the recipient operator, the recipient operator can initiate the porting process. To facilitate the transfer process, operators exchange data through a web-based system operated by Syniverse. The operators also use the Syniverse system to generate PACs.<sup>26</sup>

### What kind of process operates in other countries?

3.11 As indicated in the table below, in almost all countries in Europe, and in many other comparable markets elsewhere in the world, the MNP process is recipient-led. Given that the UK MNOs all have a presence in other European countries it is therefore likely that they will have experience of offering a recipient-led MNP process in those countries.

**Table 2: International MNP processes**

Country	Recipient-led process	Date MNP introduced
Australia	✓	2001
Canada	✓	2007
Denmark	✓	2001
Finland	✓	2003
France <sup>27</sup>	✗	2003
Germany	✓	2002
Italy	✓	2002
Ireland	✓	2003
Netherlands	✓	1999
Spain	✓	2000
Sweden	✓	2001
UK	✗	1999
USA	✓	2003

Source: Ofcom research

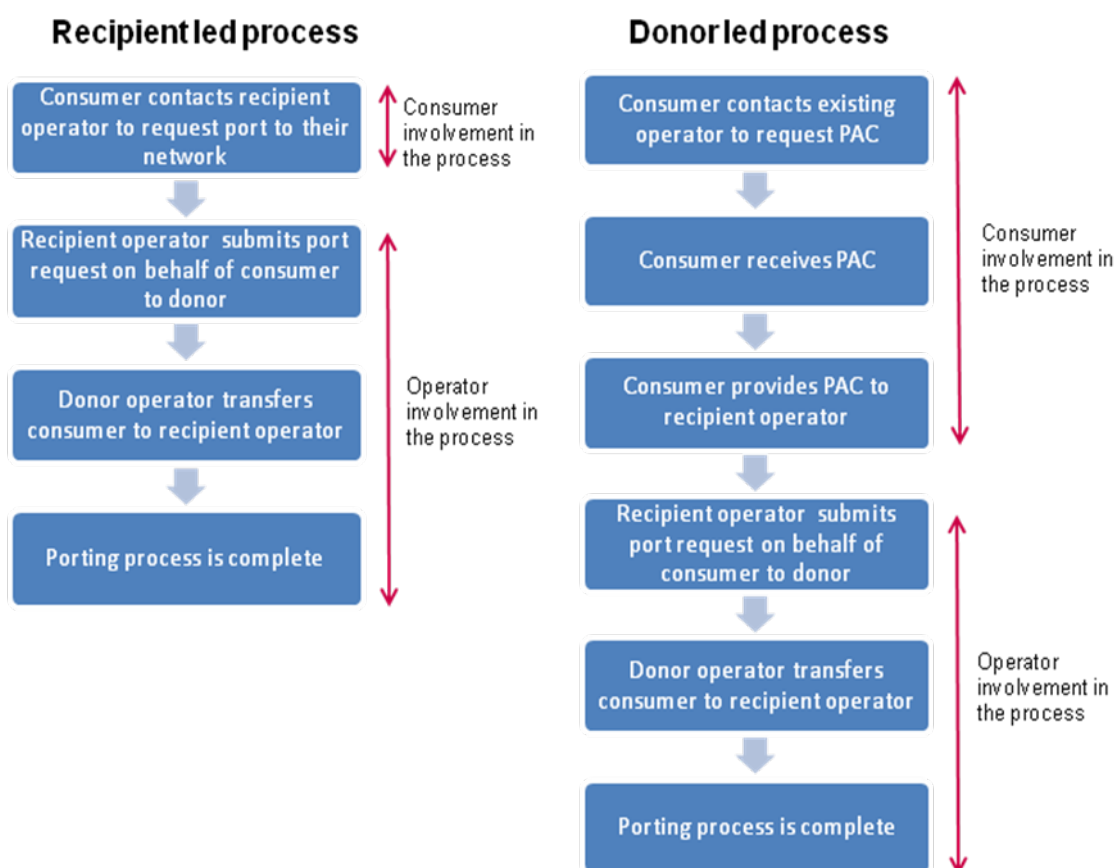
3.12 A recipient-led process means that the recipient operator is enabled to act on behalf of the consumer to instruct the donor operator to make arrangements to port the

<sup>26</sup> <http://www.syniverse.com/content/home>

<sup>27</sup> The French system contains elements of both a donor-led process (the consumer must call the donor operator) and a recipient-led process (there is an automated PAC process).

consumer's number. There are fewer steps involved for the consumer in a recipient-led process compared to a donor-led process, as shown by Figure 2.

**Figure 2: Recipient vs Donor-led process**



- 3.13 The UK's current porting system was developed in 1999 before it was possible to draw on the wider international experience in relation to MNP. Most other markets introducing porting much later, and based on accumulated experience from elsewhere, adopted a recipient-led process from the outset. The UK is therefore one of only a small number of countries that have had to consider moving from a donor-led to a recipient-led process.
- 3.14 One exception is France, which from 2003 had a donor-led process similar to the UK, but introduced significant amendments in May 2007.<sup>28</sup> Under the French system, the consumer has to contact a specific freephone number on their existing provider's network to obtain a PAC equivalent, in line with a donor-led process. However, the consumer PAC request process is automated, and donor MNOs are able to verify the consumer's details without having to speak with them. The consumer then receives their PAC immediately (via SMS, in the case of a consumer port) which also includes details of when their contract is due to expire. The consumer can then contact their new MNO to complete the port, which typically takes five working days. This process is therefore notable for retaining the "PAC" requirement of a donor-led process, but it gives consumers more control over the process, by providing quick access to their PAC.

<sup>28</sup> [ARCEP press release, May 2007.](#)

## What is the length of the end-to-end porting process in the UK?

- 3.15 The time taken to port a number in the UK depends on two separate elements:
- the time it takes for the consumer to obtain the PAC from the donor operator and pass it on to the recipient operator; and
  - the time taken to port the number onto the recipient operator network following receipt of the PAC by the recipient operator (that is, the time it takes to make the technical changes required to enable the number to terminate on the new network).

### Obtaining a PAC and passing it on to the recipient operator

- 3.16 Requesting a PAC is usually done over the phone. After it has been requested, and the consumer's status has been verified, the PAC must then be issued by the donor operator. Depending on which MNO is processing the request, and the type of consumer, the PAC may be issued over the phone, by SMS, by post, or via email. The method of PAC issue is decided by the MNOs and impacts how long it takes for a consumer to receive a PAC.
- 3.17 The time taken for a consumer to pass on the PAC to the recipient operator is obviously not within the providers' control. Once issued, a PAC is valid for 30 days<sup>29</sup> and a consumer may decide, for a variety of reasons, not to use their PAC immediately (or, potentially, at all). There is no evidence of consumer harm arising from long-held or unused PACs and we have not focussed on this aspect of the process as part of this review.
- 3.18 As outlined above, GC18 does not specify the process or time in which MNOs issue PACs to consumers, as long as MNP is provided "*as soon as it is reasonably practicable on reasonable terms*".<sup>30</sup> The Industry Manual, however, sets a minimum requirement for MNOs to despatch PACs in writing, within two working days of the request.<sup>31</sup>
- 3.19 We asked MNOs about their processes for issuing PACs to consumers. We found there was significant variation, both between and within MNOs (depending on the type of consumer) in their processes. Two operators issued the majority of their PACs via post within two working days. Some operators provide them immediately over the phone, and others issue their PACs via SMS. Some issue their PAC immediately via SMS, while one issues them within 24 hours. All operators indicated differences in the way they issued PACs depending on the type of consumer. For example, one operator that issues the majority of its PACs by post indicated that it issued PACs via email to consumers with multi-line accounts.
- 3.20 We commissioned a mystery shopping exercise to obtain evidence about the consumer experience of this aspect of the process and how these differences affected consumers in practice.<sup>32</sup> 151 shoppers took part in the PAC mystery

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<sup>29</sup> This is a technical requirement which is specified in the Industry Manual. It is not a requirement of GC18 or any other regulation.

<sup>30</sup> This is a key difference compared to the process in France, where PACs are required to be issued immediately via SMS.

<sup>31</sup> [http://www.ofcom.org.uk/telecoms/ioi/numbers/num\\_port\\_info/mob\\_num\\_portab/mnp.pdf](http://www.ofcom.org.uk/telecoms/ioi/numbers/num_port_info/mob_num_portab/mnp.pdf), see p.10.

<sup>32</sup> Synovate, *PAC Mystery Shopping*, April 2009. More details about our mystery shopping research are provided in Section 4.

shopping exercise. This assessed areas including the method of consumers' making a PAC request, the operators' methods of issuing the PAC, and the time it took for a consumer to receive the PAC after their initial request.

- 3.21 The results of the mystery shopping showed that 47%<sup>33</sup> of shoppers who received PACs were given it during the phone call they made to request the PAC. The rest of the PACs issued were either by SMS (28%) or post (22%) Only 2% of shoppers were issued the PAC via email.
- 3.22 For shoppers who were issued their PAC by SMS, 89%<sup>34</sup> received it within two days. For shoppers who were issued their PAC by post, only 20%<sup>35</sup> had received it in less than two days, with four days being the average length of time from PAC request to receipt.

### **Time taken to port a number**

- 3.23 Currently GC18 requires that the time taken to port a mobile number is two working days, unless the request is for porting of 25 telephone numbers or more. The two working days is measured from the point at which a consumer provides their PAC to the recipient provider to the time when the consumer's number is active on the recipient provider's network.
- 3.24 Internationally the timeframes for porting vary considerably. The process is generally measured from when the new operator requests the port from the donor operator, as in the UK. In Ireland, the US, Canada and Australia porting times are only a few hours. In Europe, porting times typically range from five to ten days (excluding Ireland).
- 3.25 Figure 3 below shows the results of the Commission's report detailing MNP times across the majority of EU countries. According to this data, the UK has shorter porting times than the majority of these EU countries, although the reported porting timeframe of two working days in the UK does not take account of the time taken for UK consumers to obtain a PAC from their existing operator. As set out above, this can add up to four days extra to the total time taken to port if the process measured from the point at which a consumer contacts the donor operator to request a PAC.

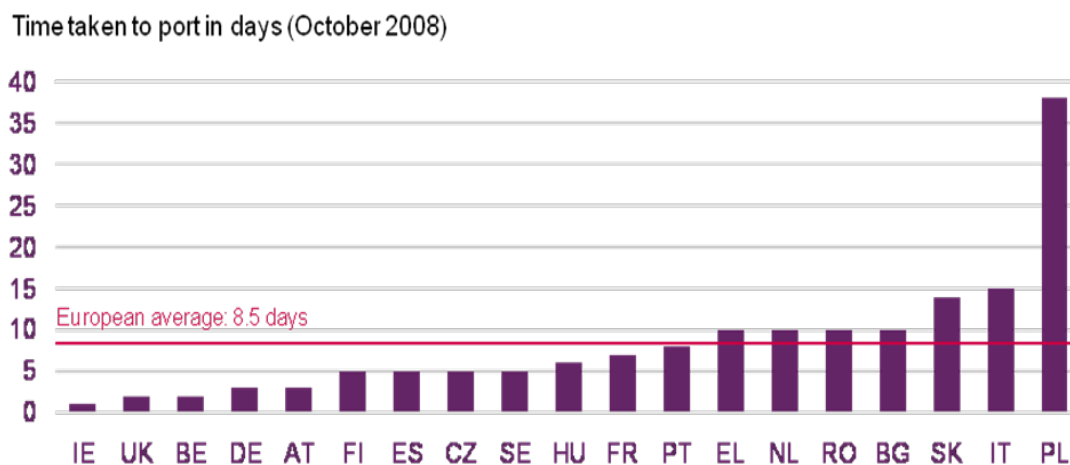
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<sup>33</sup> Synovate, *PAC Mystery Shopping*, April 2009

<sup>34</sup> Synovate, *PAC Mystery Shopping*, April 2009

<sup>35</sup> Synovate, *PAC Mystery Shopping*, April 2009

**Figure 3: European timeframes for MNP**



Source: European Commission, *Progress report on the single electronic communications market 2008 (14<sup>th</sup> Report)*, 24 March 2009<sup>36</sup>

<sup>36</sup> Available at: <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2009:0140:FIN:EN:PDF>

## Section 4

# Is the current process working well for consumers?

- 4.1 As outlined in Section 2, as part of this review we have undertaken several strands of consumer research to identify how the current process is working and consumers' experiences of that process.
- 4.2 This section outlines the findings of that research and identifies specific areas of the process that we consider may not be working well for consumers. We have set out how some of these areas may be dealt with through enforcement of the existing regulations and how other areas require change to the current process.

## Overall findings

- 4.3 As highlighted in paragraph 3.3, we have no evidence of any problems specific to the bulk porting process; the process for bulk ports is usually tailored to meet the requirements of the business involved and takes longer (as it is typically timed to coincide with a planned change to a new provider in a manner that imposes minimum disruption). This review will therefore be considering the process for 'consumer ports' only.
- 4.4 We commissioned an Omnibus survey in December 2008, which found that consumers value the ability to retain their mobile telephone number when transferring between mobile networks; 71% of all mobile phone consumers said that the retention of their existing number when changing network was "important" or "very important".<sup>37</sup>
- 4.5 The research found that a significant proportion of consumers are satisfied with the current process and that it works well for many people. For example, the Omnibus survey found that 80% of mobile consumers who had switched and kept their mobile number were satisfied with the overall process.<sup>38</sup> Similarly our mystery shopping research also found that about eight in ten participants thought the process of obtaining a PAC was clear and straightforward.<sup>39</sup>
- 4.6 We also found little evidence to suggest that the porting process in particular was acting as a significant barrier to switching. Mobile consumers who had never switched network were asked for reasons why. One per cent of them responded that 'it was too much hassle to keep [their] existing number' and one per cent said 'it would take too long to transfer [their] existing phone number'.<sup>40</sup> Furthermore, there are relatively high levels of switching between mobile providers currently (approximately 15% of consumers switch each year)<sup>41</sup> and 79% of consumers report that they find it easy to switch mobile providers.<sup>42</sup> This is compared with 71% of

<sup>37</sup> TNS, *Omnibus Survey*, December 2008.

<sup>38</sup> TNS, *Omnibus Survey*, December 2008.

<sup>39</sup> Synovate, *PAC Mystery Shopping*, April 2009.

<sup>40</sup> TNS, *Omnibus Survey*, December 2008.

<sup>41</sup> TNS, *Omnibus Survey*, December 2008.

<sup>42</sup> Ofcom, *Communications Market Report*, August 2008, p. 343. Available at: <http://www.ofcom.org.uk/research/cm/cmr08/>.



fixed-line users and 61% of internet users finding the process of switching either easy or very easy.<sup>43</sup>

4.7 Nevertheless, our research also identified that there were a few ways in which the current process is causing difficulties for a significant minority of consumers. These areas of concern were also highlighted in a number of consumer complaints made to the OAT. These were:

- unwanted or excessive save activity imposed on consumers by the donor network at the point of PAC request;
- refusal or failure to issue PACs to consumers, despite receipt of a valid request; and
- delays that extended the length of the end-to-end porting process; in particular in MNOs issuing PACs to consumers.

4.8 We discuss each of these issues in turn below, as well as examining the further issues that may arise as a consequence of these problems.

### **Unwanted or excessive save activity**

4.9 The current donor-led process provides the donor operator with an opportunity to try and retain or 'save' the consumer when they call and ask for a PAC. MNOs typically try to retain the consumer by offering them cheaper call tariffs, new mobile handsets or other incentives to remain with them. We understand that all MNOs have commission or bonus payment schemes in place for staff that manage to successfully retain consumers, either through providing an upgrade or getting them to sign up to a new contract. Our mystery shopping research has confirmed that consumers requesting their PAC often experience some form of save activity.<sup>44</sup>

4.10 Being offered more favourable terms as part of 'save' activity is not, of course, necessarily a negative experience for consumers. There are some ways in which this process can be beneficial for consumers; most obviously it can provide an opportunity for consumers to get a better deal on their mobile without having to switch operators. This point was highlighted in our qualitative market research, which also found that some consumers felt the offer of a better deal created a feeling of being a valued consumer. In addition, business consumers indicated that they felt generally happy to give their existing provider the opportunity to match a deal and they felt confident in handling such negotiations.<sup>45</sup>

4.11 Nevertheless, there are problems that can arise as a result of save activity which mean that it is not a clear-cut issue. For instance, our qualitative research also found that many consumers would prefer to avoid conversations with retention teams when trying to obtain their PAC.<sup>46</sup> Some consumers wanted to avoid dealing with what they saw as a difficult conversation while others felt that being offered a good deal to stay highlighted the lack of attention they received as existing consumers. If a

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<sup>43</sup> Ibid,

<sup>44</sup> Synovate, *PAC Mystery Shopping*, April 2009 – 60% of those who requested their PAC experienced retention activity

<sup>45</sup> Jigsaw Research, *Review of Number Porting; Expectations and Experience among residential and business customers*, a qualitative research report prepared for Ofcom, ("qualitative research"), February 2009.

<sup>46</sup> Jigsaw, *qualitative research*, February 2009.

consumer expresses a desire to avoid save activity but still experiences it then this save activity is clearly *unwanted*, which has a negative impact on the consumer.

- 4.12 We have also received complaints to the OAT about save activity that goes beyond what might be considered reasonable, in particular where it is persistent, unwanted, and frustrating for consumers. In these instances, save activity is an entirely negative experience for the consumer and is therefore a cause for concern. For consumers who just want to obtain their PAC, this unwanted and excessive save activity creates a considerable nuisance, adds friction to the porting process and might act as a barrier to consumers who wish to port.
- 4.13 We receive approximately 70 complaints per month to the OAT relating to MNP, most of which relate to frustration experienced by consumers when trying to obtain the PAC.<sup>47</sup> We have analysed complaints received between October 2008 and April 2009 and found that of those complaints, some were specifically about excessive or unwanted save activity directed at consumers who call up to request a PAC. These complaints have highlighted instances of operators persistently pursuing sales with the consumer despite their express request for a PAC, with some consumers being kept on the line for over an hour and operators' retention staff being rude and obstructive.
- 4.14 Although these are only examples, and the level of complaints to the OAT that specifically related to unreasonable retention activity is not high in absolute terms, we are aware that they could nevertheless be symptomatic of a significant underlying problem given that consumers are likely to react differently to this experience and only a small number might feel motivated to contact Ofcom to make a complaint. Therefore, in order to investigate the extent of this issue we commissioned mystery shopping research (referred to in Table 1) specifically into the process of consumers requesting PACs from their operators. The aim of this research was to understand the typical consumer experience among a group of 'professional shoppers' and part of this involved exploring any retention activity deployed by donor operators.

### Results of mystery shopping research on retention activity

- 4.15 The research used a mystery shopping methodology where 151 professional mystery shoppers used their own mobiles to call their existing operator to request a PAC.<sup>48</sup> The results found that the majority of participants in our sample had a positive view of the experience. However, participants made a number of comments about the high pressure nature of the save activity they experienced. In fact, a quarter of the mystery shoppers (the "shoppers") thought operators were particularly insistent and pushy in their retention efforts.<sup>49</sup>
- 4.16 The results showed that more than two-thirds of pay monthly consumers in our sample experienced save activity compared to half of pay as you go consumers. Pay monthly consumers were typically offered a new phone or better tariff as an incentive

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<sup>47</sup> OAT records.

<sup>48</sup> The sample was broadly drawn across different networks and across different types of customer (i.e. monthly contract and prepay customers.) The sample was used to provide a broad overview of the MNP process across the market. It was not intended to be a statistically significant representation of the population as a whole, nor of the PAC-requesting population.

<sup>49</sup> Synovate, *PAC Mystery Shopping*, April 2009

to stay whereas pay as you go consumers were more likely to be offered extra texts or credit.<sup>50</sup>

- 4.17 Several participants commented on the ‘hard sell’ approach adopted by operators when they made the PAC request. Participants described experiences of having to go through ‘negotiation battles’ with the operator in order to get them to release the PAC. One shopper noted: *“I felt I was being put under increasing and unacceptable pressure to continue my contract”*.<sup>51</sup>
- 4.18 One participant in our mystery shopping exercise spent over an hour on the phone while their operator tried to change their mind by offering different incentives. Others reported feeling intimidated by pushy and insistent behaviour from the operators, for example the customer service representative repeatedly insisting that they could provide a better deal and not providing the PAC as a result: one shopper noted *“every time I asked for a PAC he again started to try and put me off by insisting that [the operator] could do a better deal than anyone else”*.<sup>52</sup>
- 4.19 It is important to understand these results in the context of who the participants were, i.e. professional mystery shoppers who were likely to be experienced and confident in handling negotiations of this kind and also were in a position where they were tasked with persisting with the call until they had obtained the PAC, despite the efforts of the retention team. The shoppers would have already had the process explained to them and knew that they were entitled to obtain the PAC. One shopper noted specifically that had it not been his specific objective to obtain the PAC he would have been likely to give up. It is likely therefore that in normal circumstances consumers would not necessarily be as determined or resilient when experiencing the same kind of persistent save activity. This may indicate that the percentage of consumers who successfully obtain their PAC may be lower than the numbers indicated in our mystery shopping exercise.
- 4.20 Therefore, although the majority of save activity may not be problematic, it is a matter of concern that at least some element of save activity appears to cause difficulties for consumers wanting to exercise their right to port a number between providers.
- 4.21 These difficulties in obtaining a PAC may also be one reason why in our consumer research, consumers who had switched, or had considered switching, expressed a strong preference for a recipient-led porting process. This is because a recipient-led process dispenses with the need for consumers to obtain a PAC from their existing operator when they want to port their number.<sup>53</sup>

### Refusal to issue PACs

- 4.22 As indicated in Section 3, the Industry Manual sets out the rules for issuing PACs. The Industry Manual states that a PAC must be despatched to a consumer within two days of the request.<sup>54</sup> The rules also advise that only in exceptional circumstances can a PAC be refused (see paragraph 3.6 above).

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<sup>50</sup> Synovate, *PAC mystery shopping*, April 2009.

<sup>52</sup> Synovate, *PAC Mystery Shopping*, April 2009

<sup>53</sup> TNS Omnibus Survey, *December 2008*. 53% of consumers expressed a preference for a recipient-led process.

<sup>54</sup> [http://www.ofcom.org.uk/telecoms/ioi/numbers/num\\_port\\_info/mob\\_num\\_portab/mnp.pdf](http://www.ofcom.org.uk/telecoms/ioi/numbers/num_port_info/mob_num_portab/mnp.pdf)

- 4.23 A number of the complaints received by the OAT indicated that some consumers were unable to obtain their PACs because they were being told misleading or incorrect information and having their PAC request refused by their operators. These refusals mostly related to consumers being told that they had to pay early termination fees before a PAC would be issued (if they were still within their minimum contract term) and that all contractual requirements had to be met before a PAC would be issued. These complaints were received between October 2008 and April 2009. However, since May 2008, the Industry Manual has specifically identified that matters relating to unpaid debt on the part of the consumer cannot be used as grounds to refuse to issue a PAC.<sup>55</sup>
- 4.24 Consequently, another aim of the mystery shopping research was to establish the frequency of these problems and how often consumers were being refused PACs.

### Results of mystery shopping on refusal to issue the PAC

- 4.25 The results revealed that seven per cent of shoppers in our sample who requested their PAC were told they were not allowed to have it, despite all shoppers being entitled to receive it according to the Industry Manual.<sup>56</sup> In line with the complaints to the OAT, the main reasons for refusal were supposed requirements to pay early termination fees or to pay out the remainder of the contract in full before the PAC would be issued. Other reasons given for refusal included that the consumer was not in the last 30 days of their contract or that the consumer had to cancel their contract before the operator could issue the PAC.
- 4.26 Again, these results have to be considered in their particular context and bearing in mind the nature of the participants. The mystery shoppers were aware of the process and were tasked with persisting with the call until they had obtained the PAC. Overall the shoppers were told that they could have their PAC in 93% of cases. In seven per cent of cases, however, MNOs refused a valid request for a PAC, even when the fully briefed shoppers persisted with their request. Ordinary consumers are unlikely to be as informed, determined or committed in pursuit of their PAC and therefore the seven per cent refusal rate in this sample may be higher in practice.
- 4.27 This evidence indicates that a significant minority of valid consumer requests for a PAC could be being refused, thereby preventing consumers from completing the porting process. It also raises questions about the extent to which the industry is following the procedures set out in its own operating manual.

### Delays that extended the length of the end to end process

- 4.28 The MNOs each operate different processes for issuing PACs to consumers and these different methods can lead to differences in the time taken for consumers to obtain the PAC. For example some operators provide PACs immediately, some via SMS arriving within the next day, and others only issue PACs by post, which can take several days.
- 4.29 Complaints to the OAT indicated that delay in receiving and obtaining PACs was a particular issue for consumers, and that this was often related to the method of the PAC being issued. Approximately half of the complaints about MNP related to these delays. The causes of the delays were varied and included: the consumer being passed around the call centre; cutting the consumer off mid-call; and being told the

<sup>55</sup> [http://www.ofcom.org.uk/telecoms/ioi/numbers/num\\_port\\_info/mob\\_num\\_portab/mnp.pdf](http://www.ofcom.org.uk/telecoms/ioi/numbers/num_port_info/mob_num_portab/mnp.pdf)

<sup>56</sup> Synovate, *PAC mystery shopping*, April 2009.

PAC had been posted, but it subsequently not arriving. Within these complaints it was notable that the highest levels of complaints were against those operators that usually issue PACs by letter in the post.

- 4.30 The potential concern in this area was further highlighted in the qualitative research.<sup>57</sup> One area where timing was a particular issue was obtaining the PAC and this was highlighted as the biggest pain point for consumers. Difficulties and delays in obtaining the PAC were commonplace for consumers in the sample. Several consumers felt that their existing provider was intentionally making it difficult for them to leave by using delaying tactics in issuing the PAC. In line with complaints to the OAT, consumers reported being told that the ‘system was down’, some were put on hold for long periods of time and others repeatedly had to call back because they had not received the PAC as promised. A majority of participants received their PAC by letter posted to them, which they felt was outdated and unreliable; several participants had to chase the donor operator because the PAC did not turn up, with operators usually blaming the post.
- 4.31 As outlined above, our analysis suggests that there is a considerable variability in the period of time that is taken by different operators to issue a PAC, with some operators providing PACs immediately and others taking up to two days to issue a PAC. Nevertheless, as far as we are aware, the operators who take longer to issue PACs do not use this additional time for any particular purpose within the porting process e.g. to carry out further consumer verification checks. We have therefore provisionally concluded that unnecessary delays in the issue of a PAC are against the interests of consumers by delaying and potentially frustrating the porting process.

### Results of the mystery shopping on delay of PAC receipt

- 4.32 Our mystery shopping aimed to further understand consumer experiences of these issues and whether delays, particularly in obtaining the PAC, were a common experience.
- 4.33 Among our sample, the average length of a phone call to request a PAC took 10½ minutes.<sup>58</sup> For pay monthly consumers the average length of a phone call increased to almost 13 minutes. 47% of shoppers received their PAC over the phone during that call. The time it took for the shoppers to receive the PAC in each format, as well as the percentage that received it in that format are set out in the table below:

**Table 3: Average PAC request and receipt time**

PAC Issue method	Average time taken for consumer to receive PAC (days) <sup>59</sup>	% of PACs issued via this method
Over phone	0	47%
SMS	0.5	28%
Post	4	22%
Email	1	2%

Source: Synovate PAC mystery shopping, April 2009

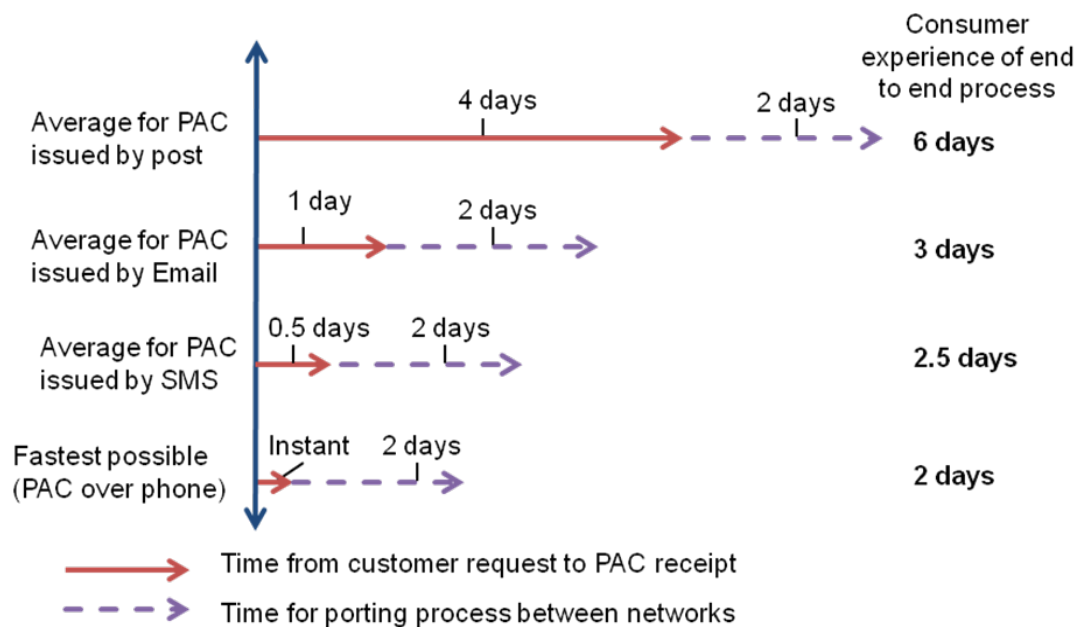
<sup>57</sup> Jigsaw, *qualitative research*, February 2009.

<sup>58</sup> Synovate, *PAC Mystery Shopping*, April 2009

<sup>59</sup> These are weighted averages based on all mystery shopping responses.

- 4.34 This shows that although 47% of PACs in our sample were issued over the phone immediately if the PAC is issued by post, it took an average of four days from the time the PAC is requested before the consumer to receive it. A significant proportion (22%) of the PACs were issued in this way. It can be seen that the length of time from PAC request to PAC receipt has a direct and significant impact on the length of time for the end to end MNP process for consumers.
- 4.35 Figure 4 below demonstrates how the difference in the time taken to receive the PAC via the different formats in our sample would affect the total time taken for the consumer to port.

**Figure 4: Variations in the length of the MNP process**



Source: Synovate *PAC Mystery Shopping*, April 2009

Note: the porting process between networks takes approximately two working days (see paragraph 3.23)

- 4.36 The variation in the length of the MNP process is specifically linked to the time it takes for consumers to obtain the PAC from the donor operator. The research also revealed that three per cent of mystery shoppers did not receive their PAC once it was issued.<sup>60</sup> If this is combined with the evidence in paragraph 4.25 about consumers being refused PACs, it means that one in ten of the mystery shoppers tasked with obtaining a PAC did not receive one. In normal circumstances this would mean the consumer would have to contact the operator again to make a second request for the PAC, creating further delays to the process. Several of the complaints to the OAT also reported cases of having to make several requests for the PAC before it was received.
- 4.37 Although the majority of consumers may obtain their PACs without any problems and not experience delays in their issue, the evidence indicates that approximately one in ten PAC requests made in the mystery shopping exercise were either refused by the

<sup>60</sup> The shoppers waited for a period of five days after contacting the operator before reporting the PAC as not received.

donor operator or do not end up with the consumer receiving a PAC.<sup>61</sup> As we have set out, members of the general population might be expected to be less persistent in their pursuit of a PAC than the mystery shoppers in our sample; this might mean that the percentage of people being refused or failing to receive a PAC could be higher among the general population. These kinds of delays cause frustration and inconvenience to consumers of the types reported in the qualitative research.<sup>62</sup> In addition to the less tangible costs for people wishing to port such as inconvenience and additional time taken in trying to obtain the PAC it can mean actual costs in terms of delayed access to cheaper tariffs and act as a general barrier to utilising MNP. As indicated in the qualitative research, some consumers can even be put off porting their number at all, because of the difficulty involved.

- 4.38 Overall, we consider the evidence indicates that, were we to maintain a donor-led process, there are likely to be improvements that can be made to the PAC request/receipt process that will provide increased benefits to consumers. In particular, minimising the time from PAC request by consumers to PAC receipt by consumers is likely to yield benefits. It would mean shorter delay at the start of the end-to-end porting process and offer greater certainty to consumers about whether a PAC had actually been issued, meaning they can “chase” the donor operator in the event that they have not received a PAC within a short period of time, rather than wait for a considerable period (e.g. for a PAC letter to arrive in the post) before resubmitting a request.
- 4.39 Furthermore, the opportunity for consumers to avoid the PAC process entirely, and therefore avoid the delays highlighted above, could be a reason why in our research, consumers stated a preference for a recipient-led porting process.<sup>63</sup>

## Other related issues

### Speed of the porting process

- 4.40 In addition to concerns about the delays in the PAC process, the qualitative research also highlighted concerns about the length of the porting process once the PAC had been issued to the consumer and the consumer had presented this to the new operator. Despite two days generally being seen as an acceptable port lead time, in practice several participants felt that the timing was unnecessarily long. The transition period while the number was being ported created a lot of anxiety and frustration amongst consumers, largely because many consumers did not know when exactly the port would be completed. This also impeded planning and created a feeling of being out of control of an extended process.<sup>64</sup>
- 4.41 The experience of the consumers in the sample suggested that few were told the specific date and time that the number would be ported. Consumer experiences were also affected by confusion and uncertainty about whether or not they would maintain continual connection to their number and the potential loss of service. Some also indicated surprise that the technology did not already exist to allow instantaneous porting.<sup>65</sup>

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<sup>61</sup> Synovate, *PAC Mystery Shopping*, April 2009

<sup>62</sup> Jigsaw, *qualitative research*, February 2009.

<sup>63</sup> TNS *Omnibus Research*, December 2008. 53% of consumers who had switched or had considered switching said they would prefer a recipient-led process.

<sup>64</sup> Jigsaw, *qualitative research*, February 2009

<sup>65</sup> *Ibid.*

- 4.42 The amount of time taken to port therefore contributed to a sense of the process being difficult among both residential and business consumers. Consumers reported that they felt a lack of control over the process because of the length of time involved and that the shorter the timeframe the more in control they would feel, because there was less time for things to go wrong and less time to wait until they were able to use the number on a new phone.<sup>66</sup>
- 4.43 Although our quantitative research indicated that 78% of consumers who had ported their number were satisfied with the time it had taken, indicating that the majority of consumers were happy with the length of time involved, ten per cent of consumers who had ported were dissatisfied with the time it took.<sup>67</sup> Moreover, as indicated by the qualitative research, a minority of consumers also indicated they were put off porting because of the length of time involved. When mobile consumers who had switched without porting their number were prompted about why they had changed their number, seven per cent responded “it would have taken too long to arrange to keep [their] existing number”.<sup>68</sup> When prompted, 17% of mobile consumers who had never switched agreed with the statement “it takes so long to change to another mobile phone network that it puts me off from doing so”.<sup>69</sup>
- 4.44 Therefore, in addition to the delays identified above in obtaining a PAC from the donor operator, there is also some evidence that the two day process once the PAC has been provided to the recipient operator may be too long, or at least that there is an element of consumer uncertainty and confusion over the process, which means that it does not work as well for them as it would with a shorter delay. A narrower time-span for porting would reduce any period of uncertainty.
- 4.45 We believe there are benefits from the shortest possible porting time, consistent with the need to ensure that the process is both practical and realisable and that reducing the time does not introduce materially higher risks to the operation of the process (e.g. of failing to be able to implement the port within the specified time or of slamming / fraud etc). Our analysis shows that the current process could be reduced from two working days to one working day without significantly compromising any of these issues and, given the experience of other countries with near-instant porting times (e.g. Ireland, Australia, US etc.) we can see no reason why there are any special conditions that exist in the UK market that should prevent us similarly achieving faster porting times.

### Awareness and frequency of porting

- 4.46 The areas of concern highlighted above may give rise to further issues in terms of consumer propensity to port their number and awareness of their ability to do so. For example, only 56% of GB mobile phone users questioned in our survey said it was easy to keep their mobile number when switching compared to 85% of mobile phone users in Ireland (which has a two hour, recipient-led MNP process).<sup>70</sup>

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<sup>66</sup> Ibid.

<sup>67</sup> TNS *Omnibus Survey*, December 2008. The rest of those consumers were neither satisfied or dissatisfied (8%), or did not know (4%).

<sup>68</sup> TNS *Omnibus Survey*, December 2008. Although it is worth noting that only 2% of consumers spontaneously provided this as a reason for not porting their number.

<sup>69</sup> TNS *Omnibus Survey*, December 2008.

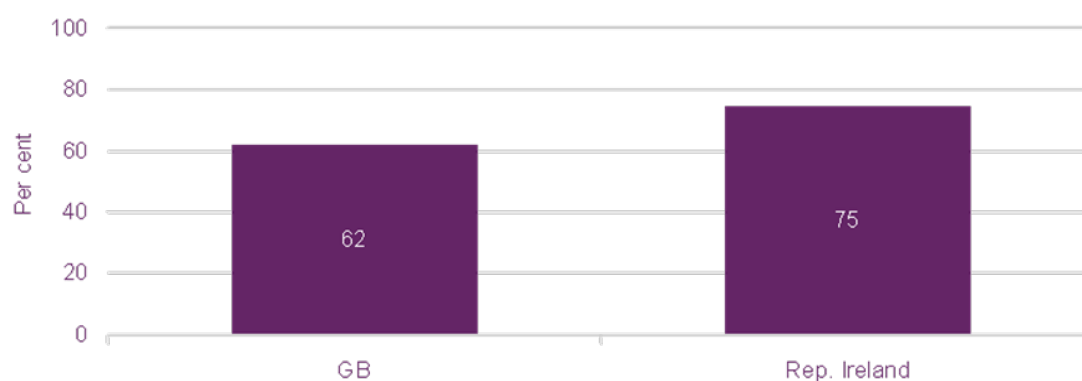
<sup>70</sup> For consumers who actually ported, 83% of GB respondents said they found it easy to do so compared to 93% in Ireland. TNS *Omnibus Survey*, December 2008 and TNS, *Republic of Ireland survey*, February 2009. Ireland has been considered for comparative purposes, although we note that it is a separate and smaller market than the UK.



- 4.47 We have previously discussed the idea that a requirement in the current process for the consumer to contact the donor operator in order to start the porting process may act as a disincentive on the recipient operator to promote porting, because that contact could trigger save activity by the donor operator.<sup>71</sup> Where that save activity becomes excessive, as outlined in paragraphs 4.12 to 4.18, there is likely to be an even greater disincentive for recipient operators to promote porting to consumers.
- 4.48 These disincentive effects may explain, in part, the relatively low levels of consumer awareness of the right to port. As indicated in Figure 5 below, only 62% of all mobile consumers are aware they can keep their number when switching, compared to 75% in Ireland.

**Figure 5: Awareness of the right to port**

If you change your mobile network, it is your right to keep the same mobile number. Before now, were you aware of this?



Source: TNS GB Face to Face omnibus, TNS Rep. Ireland telephone omnibus  
 Base: All who own a mobile phone (RoI n = 943, GB n = 1586)

- 4.49 Similarly, research found that 22% of mobile consumers that switched without porting said the reason was that they “did not know [they] could keep [their] number”, and 10% said that they “[weren’t] told [they] could keep [their] number/[weren’t] given the option”.<sup>72</sup> There is therefore likely to be a significant group of consumers who currently do not or would not port their numbers, because they are unaware that they are able to do so.
- 4.50 In turn this lower awareness of porting in GB may be part of the reason for relatively low levels of porting. In GB, for each of the last two years (on average) only 45% of consumers who switched MNO also ported their number.<sup>73</sup> British consumers are less likely to port than those in Ireland, where 75% of those who have ever switched ported their number.<sup>74</sup> Of consumers in GB who did not port their number when they switched network, only 17% actively wanted a new number.<sup>75</sup> The potential issues for consumers may be competition related, affecting consumers in different ways, and may impact on how easily switching occurs in bundles (see paragraph 5.126). These potential issues are discussed in further detail in the following section.

<sup>71</sup> The November 2007 Statement, for example, p.33.

<sup>72</sup> TNS, *Omnibus Survey*, December 2008

<sup>73</sup> TNS, *Omnibus Survey*, December 2008

<sup>74</sup> TNS, *Republic of Ireland Survey*, February 2009.

<sup>75</sup> 10% wanted a new number for privacy and 7% wanted a new number for other reasons. TNS, *Omnibus Survey*, December 2008

- 4.51 There are therefore further issues around the current awareness and understanding of porting, which are linked into the areas of concern outlined above, that need to be considered in relation to the current porting process.

*Q 4.1: Do you agree with Ofcom's view that the evidence suggests consumers would prefer a faster porting process?*

*Q 4.2: Do you agree with Ofcom's view that the current process does not work well for all mobile consumers?*

*Q4.3: Are there any other areas of consumer harm that have not been identified? Do you have any evidence to demonstrate other areas of consumer harm?*

### **Ofcom's approach to addressing these issues**

- 4.52 As set out above, we have identified evidence relating to three areas where the current process is causing problems for a significant minority of consumers. These are:
- i) unwanted or excessive retention activity imposed on consumers by the donor network at the point of PAC request;
  - ii) refusal or failure to issue PACs to consumers on receipt of a valid request; and
  - iii) delay that extended the length of the end to end porting process, in particular in MNOs issuing PACs to consumers.
- 4.53 The current regulation of MNP, via GC18.1, requires that all operators must provide porting as soon as reasonably practicable on reasonable terms. We consider that the evidence outlined above in relation to the first two points, the unwanted or excessive save activity and the refusals to issue PACs, are likely to fall under the description of 'unreasonable' activity under GC18 and therefore likely to be contrary to the requirements of GC18.1.
- 4.54 Separately from this consultation, we have reviewed complaints received from consumers regarding difficulties in obtaining PACs. The concerns outlined in paragraphs 4.13 and 4.23 have led to an own initiative pre-enforcement programme by Ofcom to monitor compliance with the current GC18.1.<sup>76</sup> We intend to monitor the level of these types of complaints going forward and where there is evidence of potential non-compliance we will take appropriate and proportionate action under this programme.
- 4.55 We also considered another option which would potentially address these two areas of concern, (unwanted retention activity and refusal to issue the PAC.) This option is a system similar to that used in France (see paragraph 3.14) where MNOs are required to provide a separate freephone number that consumers use specifically to obtain their PAC. Using a separate dedicated number for PAC requests would mean consumers would have a choice over whether they had to experience retention activity in order to obtain their PAC (i.e. if they wanted to give the donor operator a chance to offer them a better deal they could use the usual number to contact the operator but if they only wanted the PAC they could contact the dedicated PAC line). This system would therefore avoid any problems associated with unwanted retention activity, and would ensure the PAC is always received by the consumer when it was

<sup>76</sup> [http://www.ofcom.org.uk/bulletins/comp\\_bull\\_index/comp\\_bull\\_ocases/open\\_all/cw\\_01018/](http://www.ofcom.org.uk/bulletins/comp_bull_index/comp_bull_ocases/open_all/cw_01018/)

requested. Although there are costs involved in such an option, they are likely to be relatively modest incremental costs compared to the current costs of operating a call centre.

- 4.56 At present, however, we believe that there is still scope for MNOs to address the issues we have identified without Ofcom having to require such a system and we consider that there remains scope to resolve such issues through enforcement of the existing regulations. Nevertheless, depending on the outcome of this review, if enforcement of the current regulation does not prove an effective way of addressing consumer harm experienced in the PAC request process, then we may look at whether it is necessary to revisit this issue in future.<sup>77</sup> Furthermore, some of the options we have outlined in the next section include recipient-led processes. A recipient-led process would also address any problems caused by excessive or unwanted retention activity, because the consumer would not need to obtain a PAC from their donor operator in order to port their number.
- 4.57 With regards to the third point, the delays that extend the length of the end-to-end porting process, we consider that the existing requirements of GC18 are unlikely to provide a means to address the issues identified. The length of time and the process involved in obtaining a PAC are not prescribed in the current wording of GC18, and the Industry Manual also does not address this issue in enough detail to prevent the problems identified. This means it is left open for operators to adopt different processes, sometimes creating delays and inconvenience for consumers who want to port. There is clearly a need to consider the case for consistency and reduced delays being brought into the PAC process.
- 4.58 We therefore believe there is a need to change the current process to introduce improvements and we think that it is necessary to consider further the costs and benefits of additional regulation to address the delays inherent in the current end-to-end process of porting mobile numbers.

*Q4.4: Do you agree that Ofcom should intervene to introduce changes to the current MNP process to address the harm indentified?*

## Summary

- 4.59 We recognise that the MNP process works well for the majority of consumers and it can be a straightforward process where no problems arise. One in ten of the mystery shoppers in our sample failed to obtain a PAC<sup>78</sup> despite being entitled to receive one. We believe that this suggests that there are likely to be a substantial number of consumers who are adversely affected by the arrangements in place under the current process and there is therefore a need for us to take action to address these issues.
- 4.60 Currently, we believe that the appropriate way to deal with unreasonable save activity and the refusal of valid PAC requests<sup>79</sup> by MNOs is to use the existing regulation set out in GC18.1. However, if we find that these issues are not resolved then we may

<sup>77</sup> This specifically relates to items (i) and (ii) in paragraph 4.52.

<sup>78</sup> Synovate, *PAC Mystery Shopping*, April 2009 showed that 10% of mystery shoppers failed to receive a PAC. For the reasons set out elsewhere in this document, the percentage of failed requests among the general population might well be higher. This figure is also reinforced by the results of the Omnibus survey, in which 10% of consumers who had ported said it was difficult to port their number. Furthermore, 8% of consumers who had ported were dissatisfied with the process. TNS *Omnibus Survey*, December 2008.

<sup>79</sup> Specifically, items (i) and (ii) in paragraph 4.52.

reconsider this approach. Further, the options we have proposed in the next section include recipient-led processes, which, if adopted, would not only address the delays to the end-to-end process but would potentially provide the additional benefit of addressing these areas of harm, by removing the PAC process altogether.

- 4.61 We think that the delays in the end-to-end MNP process may be dealt with more appropriately through changes to the existing process. We have outlined the potential options for change in the following section.

## Section 5

# Evaluating the options

### Introduction

- 5.1 As explained above, the current UK MNP process is donor-led and requires that MNP takes place within two working days from when the consumer provides the PAC to their new operator. Therefore if improvements are justified we have proposed a number of options to speed up the process and deliver a better consumer experience. The most obvious starting point was either reduce the porting time to one working day, taking note of the proposed EU one working day requirement, or to seek to reduce it further to a near instant process of up to two hours, which would be in line with shorter porting times available in some other countries (e.g. Australia and Ireland). We have also presented options which either maintain the donor-led nature of the current process or change to a recipient-led model which is common in other markets.
- 5.2 We have considered each option with reference to the areas of consumer harm it addresses and have assessed the quantitative and qualitative benefits of each option. We have also set out our provisional estimates of the costs of each option, based on the information available to us at the current time. We recognise that these will have to be further refined as implementation options are developed in more detail.

### The citizen and/or consumer interest

- 5.3 The options presented below are intended to make the MNP process easier, quicker and/or more convenient for consumers. These options should improve consumers' experience of porting compared to the current process and may also bring additional benefits such as encouraging more consumers to enjoy the benefits of porting. The consumer benefits are explored in more detail with reference to each of the options presented.

### Ofcom's policy objectives

- 5.4 Our objective in proposing changes to the MNP process is to minimise the potential for consumer harm outlined in Section 4, and to improve consumer experience of the current MNP process.

### The proposed options: how can we improve the current arrangements?

- 5.5 Our four proposed options for changing the existing MNP process are based on a combination of two different factors, being the speed of the porting process (with the porting process shortened either to two hours or to within one working day) and the mode of transfer (either recipient-led or donor-led).
- 5.6 We are undertaking a separate project on consumer switching (migration), which will consider to what extent there is a need for harmonisation of switching processes across different services. The project will examine a broader set of issues around recipient- and donor-led processes for switching in different sectors, including the mobile sector. We will seek to ensure that decisions made in relation to the MNP process take into account the emerging evidence from the broader project on migration processes generally.

- 5.7 For a recipient-led process, in practice, the closest to a 'near-instant' process for porting mobile numbers is a process that takes a maximum of two hours.<sup>80</sup> We have assumed that a process that takes 'one working day' relates to a process that is completed by the end of the next working day, rather than strictly within 24 hours of the initial request. As set out below, we also believe that this interpretation is likely to be consistent with the proposals in the New Telecoms Package.
- 5.8 The technical process involved in transferring a number from one network to another is broadly similar whether the process is recipient-led or donor-led. The key differences between the processes relate to the means of authorising the porting of the number. In a recipient-led process, it is the new operator who carries out the authentication process rather than the donor network. In a donor-led process, there is a requirement for consumers to obtain, and then pass on to the recipient operator, a PAC. The consumer obtains the PAC by undergoing a verification process with the donor operator.
- 5.9 In particular, within the current porting process, the PAC achieves three things:
- it identifies the porting consumer to both the donor and the recipient operator;
  - it allows the donor to authenticate the consumer; and
  - it ensures that a consumer can have only one valid porting request at any one time.
- 5.10 With a recipient-led process, these actions could be achieved with the exchange of porting information between the recipient and donor operators through a central porting hub (i.e. each porting request contains a unique identifier which is linked to the telephone number of the porting consumer). The recipient operator forwards the necessary consumer identification data to the donor operator and the donor operator has the right to reject the porting request if this information does not adequately identify the consumer. The porting hub ensures that only one porting request per telephone number can be processed at any one time.
- 5.11 We have also considered how much time would be factored in to a future donor-led process to reflect the time required for consumers to receive a PAC. As set out in Section 4, the time taken for a PAC to reach a consumer can be a significant part of the total time taken for the end-to-end process and the slow delivery of a PAC can thwart any attempt to speed up the end-to-end porting process. We want to ensure that where a consumer has to obtain a PAC they can complete all the other necessary actions to port within one working day after the consumer has supplied the PAC to the recipient operator.
- 5.12 The donor-led options we are considering consequently include a requirement for the rapid delivery of a PAC in order to ensure that the porting times are not dissimilar from those provided under a recipient-led process.

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<sup>80</sup> This two hour timeframe allows time for the donor operator, recipient operator and range holder to complete all the actions required (e.g. consumer activation/deactivation, number allocation, billing, routing database, consumer care) whilst still allowing a small safety margin within the porting time in case of any issues. Porting could in practice be completed in just over an hour. See also paragraph A6.12 in Annex 6.

- 5.13 We are therefore proposing that maintaining a donor-led process, with either near-instant porting or next working day porting, would also involve a PAC process where the PAC can be delivered to the consumer, by default, either<sup>81</sup>:
- instantly over the phone, during the call from the consumer to request the PAC; or
  - through delivery of an SMS within two hours of the consumer making the PAC request.
- 5.14 Some operators already provide PACs through such methods. Our mystery shopping research found that 47% of PACs were issued over the phone and 28% were issued via SMS (with 76% receiving the SMS within a few hours).<sup>82</sup> We understand that bringing other operators into line with this process is likely to have modest cost implications for individual operators, and we have incorporated estimates of these costs into our cost-benefit analysis.
- 5.15 We understand it can be difficult for a PAC to be issued instantly by SMS because firstly, the operator needs to obtain the PAC through the Syniverse system (which in some cases can involve passing the request from a customer service agent to a back office agent, who manually keys in the request to the Syniverse system and then enters the response from the system into an SMS) and secondly the time taken for the SMS message to be delivered to the consumer's phone.
- 5.16 We consider that two hours for PAC issue by SMS is a reasonable timeframe. At least two operators are currently meeting this maximum timeframe already, another operator issues PACs by SMS within one working day, and the remaining operators should be able to automate their systems to issue PACs by SMS within the same speed.
- 5.17 We would welcome stakeholder comments on the proposed timeframe of two hours for issuing a PAC by SMS and will take into account any reasons to justify a different maximum time period if necessary, albeit that we would expect operators to issue PACs as soon as possible within that timeframe.
- 5.18 Table 4 below illustrates the proposed options and how they relate to each other:

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<sup>81</sup> An additional variation to this process may involve allowing, in some cases, for PACs to be sent by email if the consumer requests it, for example for multi-line PAC requests

<sup>82</sup> Synovate, *PAC Mystery Shopping*, April 2009.

**Table 4: Matrix of options for change**

		MODE OF TRANSFER	
		Recipient-led	Donor-led
TIME FOR PORTING PROCESS	2 hours	<b>Option A</b> 2 hour porting	<b>Option B</b> 2 hour PAC supply + 2 hour porting
	1 day	<b>Option C</b> 1 working day porting	<b>Option D</b> 2 hour PAC supply + 1 working day porting

- 5.19 As noted previously, the Commission is proposing to introduce the New Telecoms Package. We consider that the options presented are likely to be consistent with the Commission's proposals for one working day porting.
- 5.20 We have explained each of these options in more detail below. We have also assessed the costs and benefits associated with each option and the practical implications for UK industry and consumers. More detailed specifications of each of the options are presented in Annex 6. Respondents to the consultation questions in this section are invited to consider these more detailed specifications when providing their response. Before proceeding to explain the options being considered, we will set out our consideration of whether doing nothing is a viable option for the MNP process, given the current context.

### The 'do nothing' option

- 5.21 In assessing policy options we usually consider an option that would maintain the status quo. In this case, that would mean that the existing MNP process would be retained, with MNOs issuing PACs by different methods and in different time frames. The length of time taken to port numbers would also remain at two working days (and the total time taken to port sometimes considerably longer than this, depending on the method of issuing the PAC).
- 5.22 Given the consumer harm we have identified in Section 4 and based on the evidence currently available to us, and before taking into account the qualitative benefits that may apply, we consider it is possible that all of the four options would have the potential to deliver incremental benefit over and above the current arrangements, as expressed through the quantitative and qualitative cost benefit analysis. We therefore think the 'do nothing' option is unlikely to be appropriate in this case.
- 5.23 We will however, still evaluate this option, because it will act as the counterfactual against which the costs and benefits of the other options are assessed. In other words, the net benefits calculated at the end of this section represent estimates of the incremental benefits, net of any costs incurred, in excess of the net benefits already generated by the current process. Therefore, those options that have positive



net benefits would be ranked above the 'do nothing' option', while those that have negative net benefits would be ranked below the 'do nothing' option.

- 5.24 As previously noted, the EU is also considering the introduction of a one working day porting process as part of the proposed New Telecoms Package, which provides further support for changes to the existing arrangements..

*Q5.1: Do you agree with Ofcom's view that the 'do nothing' option is unlikely to be appropriate in light of (i) evidence of consumer harm and (ii) noting the proposed one working day porting requirement under the New Telecoms Package? If not, please give reasons for your views.*

### **Option A: Recipient-led, near-instant**

- 5.25 A recipient-led process would mean that consumers would only need to contact the recipient operator in order to initiate porting. This would remove the requirement for consumers to obtain a PAC. Instead, the recipient operator would be authorised to act on behalf of the consumer to request porting from the consumer's existing operator. It would be more straightforward and streamlined for consumers, because it would be a one step process. This option would therefore address not only delays in the end-to-end process of porting, but would also avoid any problems created by unwanted or excessive save activity or MNOs refusal to issue PACs, because it would remove the PAC process altogether.
- 5.26 A near-instant process would, in addition, reduce the time taken to port, requiring it to take place within two hours of the request being made by the consumer to the recipient operator.<sup>83</sup> The end-to-end process for consumers would therefore be completed within two hours, consistent with the proposed EU one working day rule.
- 5.27 The time taken to port under Option A would be considerably reduced from existing MNP arrangements. A two hour porting window would likely remove nearly all consumer uncertainty about when the port was due to take place. Unlike the existing MNP process, it would also restrict any opportunities to delay the process.
- 5.28 Option A would also require the recipient operator to ensure the port request is valid, most likely through an automated authentication process. This process will need to form part of the specification of this option to ensure that it is consistently applied across the industry.

### **What changes does Option A require?**

- 5.29 Option A would likely require significant changes to the recipient and donor operator internal systems and processes compared to the systems and processes that are in place today to support porting.<sup>84</sup> In particular, these relate to the validation of the consumer requesting a port, to ensure it is a legitimate request, the need to update call routing information for the donor network<sup>85</sup>, and to ensure adequate safe guards

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<sup>83</sup> For the avoidance of doubt, where a valid port request is received by the recipient operator during normal working hours, the port is required to be completed within two hours from receipt of that request.

<sup>84</sup> In some cases, the donor operator is also the range holder. If the donor is not the range holder, there must be a communication between the recipient, donor, and range holder advising of the new call routing information.

<sup>85</sup> Or other mechanism to ensure the call is routed correctly to the recipient network.

against mobile slamming. Under Option A, this must all be completed within two hours.

- 5.30 This new method of validation would require new (likely to be automated) systems to be implemented by all MNOs. For the verification process, the recipient and donor network would be required to exchange information regarding the identification and authorisation of the consumer and to mutually agree the transfer of a consumer. This would likely be through a combination of validation criteria, and may utilise parts of operators' existing consumer validation process. We have outlined potential authentication processes for Option A in Annex 6. For multi-line accounts, because of the need to validate that the port request is being made by the registered account holder (rather than the holder of that specific number) we have proposed that the donor operator would be able to contact the registered account holder in order to verify the port request.
- 5.31 Furthermore, an additional process will need to be built in to ensure that the consumer is made aware of any outstanding contractual liabilities they may have with their existing operator, for example if the consumer is still within their minimum contract term they may have to pay the outstanding monthly charges for that contract. Under the current process, the donor operator has an opportunity to inform the consumer of any charges before they port, but under a recipient-led option the recipient operator will not have access to that information and the recipient operator will need to ensure the consumer is aware that they could face these charges. Under the specification of the options, we have suggested that the donor operator would, if necessary, be able to send an SMS to the consumer once they received the port request to inform them of any outstanding contractual obligations.<sup>86</sup>
- 5.32 The next step after the consumer has been validated, and informed of any outstanding contractual liabilities, is to complete a network transfer for the number. This is to ensure that future calls to this number are routed to the recipient network. We consider that if this option were to be implemented it would be reasonable to expect the process to be automated, to ensure an efficient transfer between operators. This would require the recipient and donor network to communicate the necessary information to complete the transfer.
- 5.33 Based on the experience of implementing similar processes in other countries, and of the arrangements that were proposed under the UKPorting scheme (see paragraph 5.56 below), we consider that a new porting hub is likely required to ensure rapid completion of the consumer verification, and to achieve the network transfer within the required timeframe. However, in assessing the requirements and the corresponding costs, we have assumed that the process and system changes necessary to introduce near-instant porting can be implemented without the simultaneous adoption of direct routing. Therefore, we have assumed the need for a real time porting hub to allow the timely exchange of porting data when a consumer ports (including exchanging this information with the range holder as well as between the donor and recipient operators) along with a central database of ported numbers populated with data transferred across the porting hub.

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<sup>86</sup> In the event that operators choose to agree to send out an SMS informing consumers of their contractual liabilities, we would not expect the porting process to be contingent on the consumer confirming to the donor network that he/she had received the SMS.

## Option B: Donor-led, near-instant

- 5.34 This option would maintain the existing donor-led aspect of the porting process but the time taken to issue a PAC as part of that process would be reduced to two hours, i.e. operators would be required (at a maximum) to issue the PAC to consumers via SMS within two hours of the request.<sup>87</sup> In addition, as with Option A, the time taken to port (from the point at which the consumer provides the PAC to their recipient operator) would be reduced to two hours. Therefore a consumer would be able to complete the end-to-end MNP process within *four* hours.
- 5.35 This option would reduce some of the difficulties that consumers face around obtaining a PAC, because there would be a standard process across the operators. In addition, it could also reduce some of the consumer uncertainty about the process, because they would know to expect the PAC within two hours and that the port would be completed two hours after they provide their new operator with the PAC.
- 5.36 This option would also enable much of the existing porting system to be retained, for example the process of generating PACs. Some operators already have the capability to issue PACs via SMS immediately and therefore the level of change required would likely be less for those operators.
- 5.37 We understand operators that currently issue PACs by post usually use that letter as an opportunity to explain the process to the consumer and ensure they are made aware of any outstanding contractual liabilities (e.g. if they will be required to pay any early contract termination fees). However, operators that issue PACs via other methods are able to explain this information either over the phone or in the SMS and therefore we consider that the opportunity to explain the process and provide any necessary information to the consumer is unlikely to be lost if PACs are only issued over the phone or via SMS.

### What changes does Option B require?

- 5.38 Operators would be required to ensure a PAC is issued to consumers by SMS within two hours of the request.<sup>88</sup> Furthermore, once a consumer supplies the PAC to the recipient operator, the recipient and donor would be required to complete the network transfer within two hours of receipt of a valid port request.<sup>89</sup>
- 5.39 This is likely to require operators to implement changes to the timing and issue method for providing PACs to consumers. Those operators who currently do not issue PACs by SMS within two hours of a consumer's first request would be required to make changes to ensure this occurs.
- 5.40 Furthermore, it is likely that a new porting hub would have to be created to facilitate faster communication of PAC/porting requests. Operators would also have to make the necessary changes to their internal systems and processes to comply with the shorter network transfer time.

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<sup>87</sup> For the avoidance of doubt, where a valid PAC request is made during normal working hours the PAC must be issued to the consumer by SMS within two hours of that request.

<sup>88</sup> Alternative arrangements would be available for multi-line accounts.

<sup>89</sup> For the avoidance of doubt, where a valid port request is received by the recipient operator during normal working hours, the port is required to be completed within two hours from receipt of that request.

### Option C: Recipient-led, one working day process

- 5.41 This option would change the process to recipient-led, which (as with Option A) would remove the requirement for consumers to obtain PACs. In addition, it would reduce the current two day porting process to one day. In practice, this would mean that the port would be completed the day after the consumer made the request to the recipient operator (i.e. the next working day).
- 5.42 Although this option would be a longer process than Option A or B, it would still be shorter than the current process, particularly when the average length of time it can take for consumers to obtain a PAC is taken into account. Consumers should also have greater certainty about when the port was due to take place, because they would not need to wait to obtain a PAC or even contact their current operator.
- 5.43 As with Option A, any delays around consumers obtaining a PAC that might result from that process would be removed. The process would be more straightforward for consumers in that they would only need to speak to the recipient operator in order to start the process. Also similar to Option A, however, would be the need to consider consumer authentication processes and any additional authentication requirements for multi-line accounts.

#### What changes would Option C require?

- 5.44 As with Option A, Option C would require that industry design, test, and implement a new verification process to ensure that port requests were made by a legitimate consumer. This verification process should reduce the risk of slamming by ensuring there are adequate consumer safeguards, serving the same purpose as the current consumer verification checks.
- 5.45 There would also be changes to the time taken for the network transfer of a consumer, reducing this to one working day.

### Option D: Donor-led, one working day process

- 5.46 As with Option B, this option would likely maintain the existing donor-led process but would require operators to issue the PAC to consumers, within two hours of the request, via SMS. However, the time taken to port would only be reduced to one working day, as with Option C. Therefore in total the process would take one working day plus the two hours for consumers to obtain the PAC.
- 5.47 Similar to Option B, this option would reduce some of the difficulties around obtaining a PAC, because there would be a standard process across the operators. In addition, it should also reduce at least some of the consumer uncertainty about the process, because they would know to expect the PAC within two hours and that the port would be completed the day after they supplied the PAC to their new operator.
- 5.48 In terms of the overall length of the process, this option would be the longest. However, it would still be a significant improvement on the length of the current process, because it would reduce the time taken to obtain a PAC<sup>90</sup> and would also reduce the time taken to port the number by one day.

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<sup>90</sup> Synovate, *PAC Mystery Shopping*, April 2009.

## What changes would Option D require?

- 5.49 Option D requires few changes to the existing process. The PAC request and issue process is unchanged for some operators, and the network transfer must be completed within one day.
- 5.50 The primary change to the PAC issue process is that the PAC must always be issued within two hours by SMS on receipt of a valid request from a consumer.<sup>91</sup> However, most operators already have the capability to issue the PACs by SMS.<sup>92</sup> Operators will also be able to retain their existing verification process for consumers.
- 5.51 Changing the speed of the network transfer is likely to require most operators to automate the port-out process, as most operators already automate the port-in process. There would also need to be industry co-ordination to agree the timing of communication between the donor and recipient network, to confirm valid port requests, and complete the network transfer.

*Q5.2: Do you agree with the range of potential options Ofcom has set out?*

*Q5.3: Do you consider that there are additional options that Ofcom should have considered? If yes, please explain what option(s) should have been considered and why.*

*Q5.4: Do you agree that a two hour timeframe in which to issue the PACs for Options B and D is appropriate? If not, please give reasons for your views.*

*Q5.5: Do you agree there should be a difference between how the recipient-led processes in Option A and C should work for single account versus multi-account porting requests? Do you consider that the proposed authentication process (described in paragraph 5.30) for multi-line accounts is sufficient? Please explain any other differences you would expect to see whilst ensuring that any differences are still consistent with the overall objectives the options are trying to achieve.*

## Assessment of costs

- 5.52 In this section we describe the likely cost of implementing the four options based on the best information we have available at this time. We are interested in receiving additional information about the likely costs of all four options, and will give consideration to any additional estimates of the required level of capital and operating expenditure for each cost category for each option.
- 5.53 It is important to note that the following cost assessment is based on estimates of the standalone costs of implementing each option. However, it is possible that there are some economies of scope between the options being considered here, to address the porting process from the consumer perspective, and the options being considered as part of the *Routing calls to ported telephone numbers* consultation.<sup>93</sup> Therefore, depending on the outcome of both consultations, the implementation costs of the combined changes may prove to be lower than the separately estimated implementation costs of the two changes.

<sup>91</sup> Alternative arrangements would apply for multi-line accounts.

<sup>92</sup> Three operators already issue the majority of their PACs via SMS or immediately over the phone.

Two other operators issue the majority of their PACs via post.

<sup>93</sup> [http://www.ofcom.org.uk/consult/condocs/gc18\\_routing/](http://www.ofcom.org.uk/consult/condocs/gc18_routing/)

## Assessment of costs of Option A: recipient-led, near-instant

5.54 We have considered the changes required to implement Option A and have made the following provisional estimates of the likely costs to the industry of a near-instant recipient-led process:

**Table 5: Costs for Option A**

Cost type	£m <sup>94</sup>
Total MNO capital expenditure	[ X ]
Porting hub capital expenditure	[ X ]
<b>Total capital expenditure (across all MNOs)</b>	<b>14.2</b>
	<b>£m p.a.</b>
Additional labour expenditure	[ X ]
Total MNO operating expenditure	[ X ]
Porting hub operating expenditure	[ X ]
<b>Total operating expenditure (across all MNOs)</b>	<b>3.8</b>

5.55 The estimates have been formed using information obtained from operators about the costs of a near-instant recipient-led process through the 'UKPorting' working parties.

5.56 In response to the November 2007 Statement, fixed and mobile network operators set up the 'UKPorting' group.<sup>95</sup> This group sought to deliver a porting solution in accordance with Ofcom's original decision, which required a recipient-led two hour porting process and an 'all calls' (fixed and mobile) direct routing solution for calls to fixed and mobile ported numbers. This group was disbanded in September 2008 when the CAT set aside Ofcom's November 2007 Statement.<sup>96</sup>

5.57 We acknowledge UKPorting did not complete its work and that certain decisions on how the porting process would work in practice were still under debate. Nevertheless, we consider that the cost information provided by industry to Ofcom is likely to constitute a reasonable estimate based on a significant level of work undertaken to scope a two hour recipient-led process. The costs provided by UKPorting in relation to, for example, the possible need for some form of database and / or a porting hub are industry-wide cost estimates that would cover both the incumbent MNO and new MNO costs and are hence likely to form a reflection of the total cost to the UK mobile industry.

<sup>94</sup> Rounded to one decimal place.

<sup>95</sup> See: <http://www.ukporting.org.uk/index.htm>

<sup>96</sup> <http://www.catribunal.org.uk/238-657/1094-3-3-08-Vodafone-Limited.html>

- 5.58 In the case of cost estimates that are internal to each mobile operator, we have based our estimates on the information requested, and provided by the five largest MNOs (only). While newer MNOs are likely to also incur additional costs, we understand that these could be relatively modest, in particular for those operators who can quickly adopt the new processes prior to service launch.
- 5.59 In order to implement near-instant porting, we anticipate that it will be necessary to create a centralised porting hub, i.e. an order-handling platform through which all porting requests and corresponding information flows. This porting hub will act as a communication centre for all inter-operator porting messages.
- 5.60 The functionality of the porting hub will cover inter-operator message reception and audit trail logging, message validation and acknowledgement, registration of messages in a message repository, and distribution of messages from one operator to the appropriate destination participants.
- 5.61 At this stage we consider that the message hub does not necessarily need to be integrated with a centralised porting database, but that each operator can maintain their own database of ported numbers. However should direct routing also be implemented within a similar timescale, then it is likely that a common centralised database will be required, because in order to ensure that a number can be ported instantly, operators will need to make the necessary changes to the routing of the ported number instantly as part of that process.
- 5.62 We have estimated the costs of the porting hub for this option from the costs of the system as specified by UK Porting, adjusted as appropriate for those costs associated with the real time database functionality and the overall throughput requirements.
- 5.63 If any stakeholder (specifically, operators) has more complete information following the work undertaken through UKPorting or based on the experiences of implementing similar solutions in other countries, we are prepared to consider that information as part of the current consultation process. We also invite newer MNOs to make any submissions they wish about these issues, including whether we should be considering costs other than those already identified as part of our cost benefit analysis (“CBA”) set out below.

#### Total MNO capital expenditure

- 5.64 These are the costs required by operators to implement the necessary changes to their internal systems and processes. These fall into three areas: the exchange of information between the recipient and donor operators to allow verification / authorisation of the porting consumer; the connection of the porting hub to internal systems to allow for the exchange of ported consumer data and the establishment of internal databases; and corresponding processes to allow network provisioning and porting re-routing to be implemented within two hours.
- 5.65 In order to ensure a port request is valid, the recipient and donor must exchange information to both identify and verify the consumer. We anticipate that the validation process will be automated as far as possible and will use appropriate consumer identification information to validate the porting request. The exact details of this process were not finalised in the course of the UKPorting work. This will replace the existing file preparation and synchronised File Transfer Protocol (FTP) exchange.

- 5.66 Operators would need to ensure they are capable of updating the routing information much more rapidly than is currently the case, by implementing new upstream automated systems and processes to interconnect with both the provisioning of data on the Customer Support System (CSS) and call routing tables through the Network Management System (NMS).
- 5.67 In addition to the costs of equipment to communicate the validation and network transfer, we also anticipate a significant design, testing and implementation phase required before full roll-out. This is likely to require both internal and external people resource for MNOs.
- 5.68 We have extracted the relevant operator specific capital costs from responses to our information requests from the MNOs under section 135 (“s135”) of the Act. These responses contained information regarding a virtually simultaneous implementation of two hour, recipient-led porting with a change to direct routing. Therefore, as far as possible, we have separated the capital costs associated with the implementation of these two aspects.
- 5.69 The resulting capital costs varied from [ £ ] per operator to in excess of [ £ ] per operator. The differences are accounted for by two factors: the scope of the changes that are required by different operators and differences in the implementation approaches across operators. Taking the MNOs’ reported costs as a base, we have estimated the capital costs for Option A to be [ £ ] for the five MNOs as a whole. In line with Ofcom’s Mobile Call Termination Cost model (the “MCTC model”), we have assumed that the MNO capital costs under all options would have would have an asset life of ten years.<sup>97</sup>

#### Porting hub capital expenditure

- 5.70 As highlighted in paragraph 5.59, in order to implement near-instant porting, we anticipate that it will be necessary to create a centralised porting hub.<sup>98</sup>
- 5.71 We have examined the costs of the porting hub for this option from the costs of the system as specified by UKPorting, adjusted as appropriate for those costs associated with real time database functionality and the overall throughput requirements.

#### Additional labour expenditure

- 5.72 Implementing the changes is likely to require new staff for initial implementation of the new process and for ongoing monitoring and compliance. We anticipate that this will include both technical and operating staff. We also have assumed that this may require that some functions that are currently conducted off-shore by some operators will be relocated onshore in order to achieve the porting timescales. We have included a total incremental annual cost, averaged across the period under evaluation, of [ £ ] per year per MNO or [ £ ] per year for the industry.<sup>99</sup> We have estimated this cost to be the same across all options.

<sup>97</sup> Ofcom’s MCTC model is available on request here:

[http://www.ofcom.org.uk/consult/condocs/mobile\\_call\\_term/statement/info/](http://www.ofcom.org.uk/consult/condocs/mobile_call_term/statement/info/).

<sup>98</sup> The functionality of the porting hub will cover inter-operator message reception and audit trail logging, message validation and acknowledgement, registration of messages in a message repository, and distribution of messages from one operator to the appropriate destination participants.

<sup>99</sup> Based on the cost of 3-4 new employees for each MNO.



### Total MNO operational expenditure

- 5.73 In addition to the capital costs outlined above, we anticipate that there will be additional ongoing operating costs for the new process, such as operations and maintenance, staff costs and site costs.
- 5.74 Operators were not able to provide sufficient information in their responses to our requests to accurately estimate what these operator specific operational costs would be. Therefore, we looked for a proxy that would enable us to estimate operating costs using the available information on capital costs. We decided to use Ofcom's MCTC model for this purpose because it has information on single asset capital and operating costs over time.<sup>100</sup> We have calculated the ratio of operating to capital costs for relevant assets in the MCTC model, and applied this ratio to the actual capital costs supplied to estimate operating costs.
- 5.75 We identified the relevant assets in the MCTC model and summed the 2G and 3G asset capital and operating costs separately over the period 2009/10 to 2020/21. Then we divided the summed operating costs by the summed capital costs to calculate the opex:capex ratio for 2G and 3G assets. The resulting 2G and 3G ratios were weighted by the average proportion of traffic forecast to be carried on 2G and 3G networks over 2009/10 to 2020/21 (also from the MCTC Model) to estimate a combined 2G/3G ratio. The traffic forecast was lagged two years i.e. the 2007/8 forecast was used for 2009/10 to reflect the fact that it takes some time for the operational expenditure benefits of falling traffic to flow through. The resulting 2G/3G ratio is 13%, and we have used this to estimate the annual MNO operating cost portion of the initial MNO capital expenditure.<sup>101</sup>
- 5.76 Therefore we estimated the annual operational expenditure for MNOs, under Option A, to be:

$$13\% \times [\text{£}] = [\text{£}] \text{ per annum}$$

### Porting hub operating expenditure

- 5.77 The ongoing operational costs of the porting hub are for third party vendor support and maintenance of the porting hub. These costs have been estimated from the [£] recurring annual charges supplied by UKPorting. In the CBA model we used to compare the four options, this information is expressed as a ratio. In other words, the annual porting hub operating cost figure for each option is calculated as 28 per cent of the initial capital expenditure for the porting hub of that option. For Option A, these costs are calculated to be [£] per annum over the lifetime of the porting hub. [£]. The NPV analysis is discussed below from paragraph 5.151.
- 5.78 Therefore, for this option, we have estimated the porting hub operational expenditure to be:

$$28\% \times [\text{£}] = [\text{£}] \text{ per annum.}$$

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<sup>100</sup> [http://www.ofcom.org.uk/consult/condocs/mobile\\_call\\_term/statement/info/](http://www.ofcom.org.uk/consult/condocs/mobile_call_term/statement/info/)

<sup>101</sup> This value is based on equivalent assumptions made in Ofcom's MCTC model,

## Assessment of costs for Option B: donor-led, near-instant

5.79 We have considered the likely changes required for Option B, and have provisionally estimated the following costs to industry for a near-instant donor-led process for industry:

**Table 6: Costs for Option B**

Cost type	£m <sup>102</sup>
Total MNO capital expenditure	[ < ]
Porting hub capital expenditure	[ < ]
<b>Total capital expenditure (across all MNOs)</b>	<b>12.0</b>
	<b>£m p.a.</b>
Additional labour expenditure	[ < ]
Total MNO operating expenditure	[ < ]
Porting hub operating expenditure	[ < ]
<b>Total operating expenditure (across all MNOs)</b>	<b>3.5</b>

### Total MNO capital expenditure

- 5.80 In the case of Option B, the capital costs associated with permitting the network transfer to be completed within two hours are as described in Option A including implementing new automated systems and processes to interconnect with both Customer Support Systems (CSS ) provisioning and Network Management Systems (NMS) provisioning.
- 5.81 However, since Option B is donor-led, the costs included in facilitating the exchange of information between the recipient and donor operators to allow verification of the porting consumer are no longer required.
- 5.82 Instead, under Option B, it is necessary to ensure that every operator is capable of issuing a PAC either immediately when requested, or within two hours by SMS.
- 5.83 We are aware that at least two MNOs are able to issue a PAC by SMS shortly after it has been requested. Another operator also issues PACs by SMS, usually within one day. For the remaining operators, further automation may be required e.g. to develop an Application Programme Interface (API)<sup>103</sup> to link the existing Syniverse PAC system to existing IT internal systems available to the call agent. This will allow the agent to issue the PAC immediately.

<sup>102</sup> Figures are to one decimal place.

<sup>103</sup> An interface which defines the way by which an application programme may request services from operating systems.

5.84 Based on information obtained from the MNOs we have extracted the relevant operator specific capital costs concerning the implementation of two hour porting. We estimate that the resulting capital costs are [ X ]. To this we have added a further [ X ] capital sum to enable all operators to issue PACs by SMS within two hours. Therefore overall we have estimated the operator specific capital costs of Option B to be [ X ] across all MNOs.

### Porting hub capital expenditure

5.85 For Option B, the costs of the porting hub have been broadly estimated as the same as Option A.

5.86 Thus, as in Option A, we estimate that the capital cost of the porting hub would be [ X ].

### Total operating expenditure

5.87 Operating costs per annum are estimated as previously described for Option A including:

- additional labour expenditure of [ X ];
- total MNO operating expenditure: [ X ]; and
- porting hub operating expenditure: [ X ].

### **Assessment of the costs for Option C: recipient-led, one working day**

5.88 We have considered which changes are likely to be made for Option C from the existing MNP process. As with Option A, there are costs of implementing a new verification process, and costs of a faster network transfer. The estimated costs are set out below:

**Table 7: Costs for Option C**

Cost type	£m
Total MNO capital expenditure	[ X ]
Porting hub capital expenditure	[ X ]
<b>Total capital expenditure (across all MNOs)</b>	<b>12.5</b>
	<b>£m p.a.</b>
Additional labour expenditure	[ X ]
Total MNO operating expenditure	[ X ]
Porting hub operating expenditure	[ X ]
<b>Total operating expenditure (across all MNOs)</b>	<b>3.3</b>

MNO capital expenditure

- 5.89 For Option C there are three capital requirements: changes to the implementation of the existing process to reduce the porting time from two working days to one working day, the implementation of a porting hub for the exchange of the consumer porting requests associated with the change to a recipient-led process, and implementation of the consumer authorisation process also associated with the recipient-led process.
- 5.90 Following discussions with some of the stakeholders, we believe that the existing process for porting numbers could be reduced from two working days to one working day by retaining the current process whereby blocks of porting requests are batched together and handled as a block (rather than being dealt with individually as they occur), and by making appropriate modifications to the existing timetables for both the day in which the porting request is submitted and the day in which porting actually takes place. This would allow time for coordination and problem resolution whilst still enabling a reduction to the overall porting time for the majority of porting consumers. This would also require that any activities that would have been performed during the intermediate day would have to be performed prior to the porting day.
- 5.91 We estimate that the average capital cost per MNO to implement both Graphical User Interface (“GUI”) and Simple Object Access Protocol (“SOAP”) interfacing to the porting hub to allow for screen handling of individual porting requests as well as automated machine to machine processing of messages in XML data formats, along with the necessary changes to further automate the existing process would result in an average capital cost per MNO of [ £ ] giving [ £ ] for the five MNOs as a whole.

Porting hub capital expenditure

- 5.92 In order to support the message exchange associated with the move to recipient-led, we have assumed that Option C will require a porting hub implementation.
- 5.93 In this option, the functionality of the porting hub will include inter operator message reception and audit trail logging, message validation and acknowledgement, registration of messages in a message repository, and distribution of messages from one operator to the appropriate destination participants.
- 5.94 However, at this stage we consider that the porting hub does not need to be integrated with a real time capable central porting database, nor does it need to be integrated with the Network Management System (“NMS”) provisioning since this can be performed as at present.
- 5.95 Taking the total porting system costs from UKPorting, we have removed the database costs, the real time functionality costs and corresponding availability requirements as well as scaling down the overall capacity and throughput requirements. From this we estimate that the capital costs for the porting hub for Option C will be [ £ ].

Total operating expenditure

- 5.96 Operating costs per annum are calculated as previously described for earlier options:
- additional labour expenditure of [ £ ];
  - total MNO operating expenditure: [ £ ]; and

- porting hub operating expenditure: [ £ ].

### Assessment of costs for Option D: donor-led, one working day

5.97 We consider that this is likely to be the least costly option. It should be able to maintain many parts of the existing MNP process and is likely to have minimal internal costs of change for operators. Our estimation of the costs is set out below:

**Table 8: Costs for Option D**

Cost type	£m
Total MNO capital expenditure	[ £ ]
Porting hub capital expenditure	[ £ ]
<b>Total capital expenditure (across all MNOs)</b>	<b>1.8</b>
	<b>£m p.a.</b>
Additional labour expenditure	[ £ ]
Total MNO operating expenditure	[ £ ]
Porting hub operating expenditure	[ £ ]
<b>Total operating expenditure (across all MNOs)</b>	<b>1.6</b>

#### Total MNO capital expenditure

5.98 In assessing the capital costs for Option D we have made two key assumptions: (i) that the existing process for porting numbers can be largely retained, but that it can be reduced from two days to one day by modifications to the existing timetables for both the initial day and the porting day and (ii) that relatively modest enhancements are required to all MNOs to be able to issue PACs within two hours (because only some operators will need to make these enhancements).

5.99 On this basis we have estimated that the overall capital costs of implementing Option D will be [ £ ], comprising [ £ ] to make the changes necessary to reduce the porting time to one day, and [ £ ] for the automation changes necessary to achieve two hour PAC allocation.

#### Porting hub capital expenditure

5.100 We have also identified a further [ £ ] capital sum to enhance the Syniverse system to amend the scheduled porting hub capital expenditure

#### Total operating expenditure

5.101 Operating costs per annum are calculated as previously described for earlier options:

- additional labour expenditure of [ £ ];
- total MNO operating expenditure: [ £ ]; and
- porting hub operating expenditure: [ £ ].

## Summary – costs of the Options

5.102 The costs of each option are estimated to be as follows:

**Table 9: Summary of estimated costs for each option**

Cost type	Option A: Recipient- led, near- instant	Option B: Donor- led, near- instant	Option C: Recipient- led, one day	Option D: Donor- led, one day
Total initial capital expenditure (across all MNOs) (m)	14.2	12.0	12.5	1.8
Total annual operating expenditure (across all MNOs) (m)	3.8	3.5	3.3	1.6

*Q5.6: For each of the options set out, do you consider that Ofcom has captured all the appropriate categories of cost likely to be incurred? If not, explain what categories you disagree with / believe are missing.*

*Q5.7: Do you agree with Ofcom's analysis of costs for each cost category? If not, please explain why. Please also state whether you are able to provide Ofcom with a more accurate view of costs and if so, please submit your assessment, together with supporting evidence with your response to this consultation.*

*Q5.8: In the case of new entrant MNOs, what additional costs are likely to be incurred internally within each of the networks for each of the options? Please submit your estimates in your response to Ofcom.*

## Assessment of benefits

5.103 The benefits that could result from improvements to the number portability process fall into three categories:

- benefits to the porting individual;
- benefits to those calling a porting individual who would not have ported under the current system; and
- benefits to competition in the mobile market.

5.104 Each of these benefits categories and the possible distributional impacts of a change to the MNP process are discussed in detail below.

## Benefits to the porting individual

- 5.105 Mobile customers who wish to retain their number when switching providers would benefit directly through improvements to the porting process. Our mystery shopping highlighted that for some consumers the end-to-end porting process takes significantly more than two days. It also informed us that some consumers experience confusion and uncertainty about when the port will occur, and consumers were not always provided with sufficient information about service availability during the process. A shorter process would remove a significant amount of uncertainty about the end-to-end length for the network transfer and minimise the time for which consumers were worried about a loss of service.
- 5.106 Where the improved process makes porting a more attractive option, then any additional consumers that would port (who would not have ported under the existing process) are also likely to benefit from retaining their number whilst moving network.
- 5.107 In addition, issuing the PAC by SMS could significantly reduce the number of PACs issued but not received, and therefore the number of people who may have to request their PAC again.

### Quantifying benefits from a shorter process

- 5.108 In order to get an indication of the value of the benefits to individuals of moving to a shorter porting process, we commissioned a survey to establish consumer willingness to pay. We asked mobile phone owners how much they were willing to pay for a faster MNP process. Specifically, they were asked how much they were willing to pay (50p, £5, £10 and £20) for each of:
- an immediate (or near-instant) process; and
  - a one day process.
- 5.109 Consumers were asked to indicate for each value whether they:
- i) would definitely pay;
  - ii) would probably pay;
  - iii) may or may not pay;
  - iv) would probably not pay; or
  - v) would definitely not pay.
- 5.110 From the stated preference survey results we estimated the benefit to individual consumers from a faster MNP process.
- 5.111 We have used these results to estimate the willingness to pay for faster porting by consumers who own a mobile phone. As would be expected intuitively, some respondents indicated that they would be willing to pay more for an immediate process than for a one day process. We also specifically identified from this sample those consumers that had been through the porting process.

## Benefits of a near-instant process

5.112 Table 10 illustrates the proportion of those who stated they would 'definitely pay' and those who would 'definitely pay or probably pay' (i.e. those who indicated they would definitely pay added to those who indicated that they would probably pay at each price point) for a near-instant process:

**Table 10: Willingness to pay for a near-instant process<sup>104</sup>**

£'s	Would definitely pay	Would definitely or probably pay
0.5	32%	45%
5	10%	22%
10	5%	11%
20	3%	6%

Source: TNS Omnibus, December 2008

Base: All who own a mobile phone (1,586)

5.113 Our research indicates that there are around 47.1m consumers aged 16+ in GB and 89% of those are mobile consumers.<sup>105</sup> Of those mobile consumers, 14% switch each year and 45% of those who switched ported their number.<sup>106</sup> This enables us to estimate the total number of people who port each year that might benefit from a faster porting process.

$$47.1\text{m} \times 0.89 \times 0.14 \times 0.45 = 2.6\text{m}$$

5.114 We used this information, combined with the willingness to pay results contained in Table 10, to generate the demand curves in Figure 6.

<sup>104</sup> In calculating the benefits we have used the survey data from all those who own a mobile phone rather than the data only from those respondents who had ported their number the last time they switched providers. Using either of these survey pools would have been justifiable. However, we have chosen the former approach as it primarily provides a larger sample size. If we had chosen to use the data including only those who had indicated that they had ported their number the last time they switched providers Table 10 would be as follows:

£'s	Would definitely pay	Would definitely or probably pay
0.5	33%	51%
5	9%	23%
10	3%	12%
20	1%	7%

Source: TNS Omnibus, December 2008

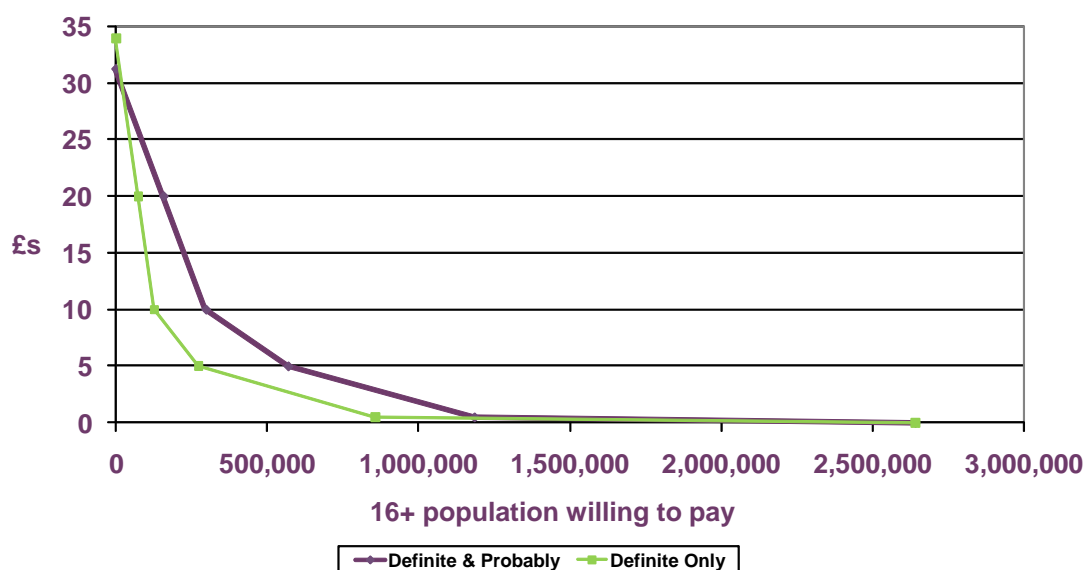
Base: All who switched and kept old number (346)

<sup>105</sup> TNS, Omnibus Survey, December 2008

<sup>106</sup> Ibid.



**Figure 6: Consumer willingness to pay for a near-instant process**



Source: TNS Omnibus Survey, December 2008

- 5.115 The area under the lower curve in Figure 6 – £5.9m – represents the benefit (or total willingness to pay), of a move to a near-instant porting process from the current process, to those consumers who port each year, based on survey respondents who stated that they were ‘definitely’ willing to pay.<sup>107</sup>
- 5.116 This may provide a conservative estimate of the individual benefits, for two primary reasons. Firstly, it does not account for the possibility that the rate of porting could increase from current porting levels if the process was shortened. Therefore, the 2.6m figure might underestimate the annual number of porters going forward. Secondly, as discussed earlier, this estimate of benefits is based only on survey respondents who indicated that they would definitely pay for an immediate process. Therefore, if some of the respondents who indicated they would probably pay or may or may not pay do in fact value the move to a near-instant process, the figure could understate the total mobile user’s willingness to pay.
- 5.117 Therefore, the total benefits to individuals might actually be higher than those estimated in the above case.
- 5.118 If we also take into account those mobile users that stated they would probably be willing to pay we get a higher result. The area under the higher curve in Figure 6 – £10.2m – represents the benefit (or total willingness to pay), of a move to a near-instant porting process from the current process, to those consumers who port each year, based on survey respondents who indicated that they were ‘definitely’ willing to pay as well as those who indicated that they were ‘probably’ willing to pay (Annex 5 contains a sensitivity analysis of these results).
- 5.119 Therefore, based on the findings of this research, we consider that a reasonable estimate of the plausible range of benefits to consumers who port under a near-instant process is £5.9m to £10.2m per annum.

<sup>107</sup> As this demand curve is based on limited information (only four price points) it is possible that the area under the curve is an over or under estimation of the average consumer willingness to pay.

### Benefit to porting individuals of a one working day process

5.120 Based on the same sample utilised for our estimate of the benefits of a near-instant process, Table 11 illustrates the proportion of those who stated that they would definitely pay and those who stated they would 'definitely pay or probably pay' for a one day process:

**Table 11: Willingness to pay for a one day process<sup>108</sup>**

£'s	Would definitely pay	Would definitely or probably pay
0.5	24%	41%
5	7%	16%
10	3%	9%
20	2%	5%

Source: TNS Omnibus, December 2008  
Base: All mobile phone users (1,598)

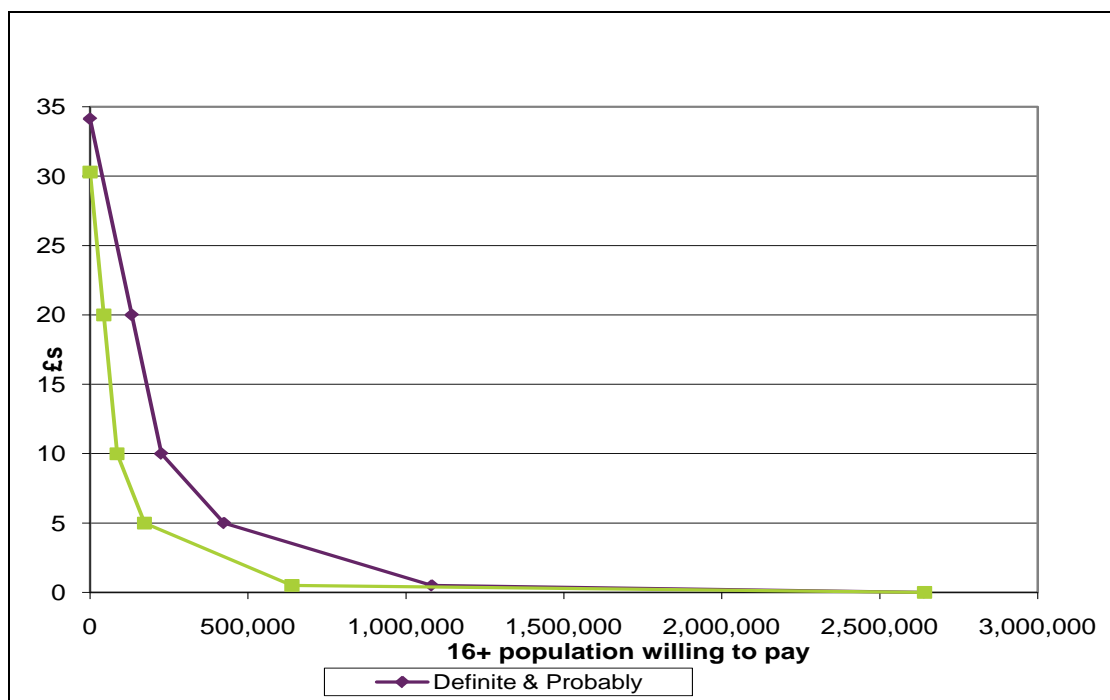
5.121 The area under the lower curve in Figure 7 – £4.2m – represents the benefit (or total willingness to pay), of a move to a one day porting process from the current process, to those consumers who port each year, based on survey respondents who stated that they were 'definitely' willing to pay.

<sup>108</sup> We have used the same method to calculate the benefits as outlined in footnote 104. If we had chosen to use the data including only those who had indicated that they had ported their number the last time they switched providers Table 11 would be as follows:

£'s	Would definitely pay	Would definitely or probably pay
0.5	42%	56%
5	14%	27%
10	5%	15%
20	3%	8%

Source: TNS Omnibus, December 2008  
Base: All who switched and kept old number (346)

**Figure 7: Consumer willingness to pay for a one day process**



Source: TNS Omnibus Survey, December 2008

5.122 On the same basis set out for the near-instant porting data described previously, the area under the lower curve might be considered a relatively conservative estimate of the benefits of a one day process. The area under the higher curve in Figure 7 – £8.7m – represents the benefit (or total willingness to pay), of a move to a one day porting process from the current process, to those consumers who port each year, based on survey respondents who stated that they were ‘definitely’ willing to pay as well as those who indicated that they were ‘probably’ willing to pay.

5.123 Therefore, based on the findings of this research, we consider that a reasonable estimate of the plausible range of benefits to consumers who port under a one day process is £4.2m to £8.7m per annum.

#### Additional individual benefits from moving to a recipient-led MNP process

5.124 The benefits estimated above do not distinguish between recipient-led or donor-led processes. Accordingly, they do not take account of any consumer preferences of one method of porting over another.

5.125 In the Omnibus survey, all mobile consumers were also asked about their preferences for either a donor or a recipient-led process. The results showed that among those who expressed a preference, the recipient-led process was preferred to a donor-led process by a ratio of 2.7:1.<sup>109</sup> If this preference for recipient-led processes translated into a greater willingness to pay, then the individual benefits of Option A (recipient-led, near-instant) and Option C (recipient-led one day) are likely to be higher than the benefits of Option B and D respectively. We intend to commission further consumer research in order to investigate consumers’ willingness to pay for a recipient-led process versus a donor-led process.

<sup>109</sup> 53% of consumers who had switched, or had considered switching, favoured a recipient-led process versus 20% who favoured a donor-led process. TNS Omnibus Survey, December 2008.

- 5.126 A general adoption of recipient-led processes might also be valued by consumers who wish to switch from individual contracts for different services to bundled contracts for multiple services. This is because if these consumers wish to switch provider bundles they would not have to contact the donor operator to obtain a PAC. If all the relevant services have recipient-led switching and porting processes, consumers moving to a bundled product for the first time would only need to contact one (recipient) provider to switch their service provider. However, if the relevant services all have donor-led processes, then these consumers would need to obtain authorisation from several (donor) operators before setting up their bundle. However, the adoption of a recipient-led process might also increase the risk of 'slamming',<sup>110</sup> for some services.
- 5.127 Given that the bundling of mobile voice products with other services is currently relatively limited, we have not attempted to quantify this potential benefit, although given trends towards convergence, the prospect of additional bundling of services in future may change as a relevant factor in assessing the policy options. The potential impact of bundling on future migration processes will be examined in Ofcom's separate review of migration processes as mentioned in paragraph 5.6.
- 5.128 Moving from the current donor-led process to a recipient-led process might also benefit porting individuals by removing the donor provider's opportunity to frustrate the issuing of a PAC through unwanted retention activity and/or introduce delay into the process. By removing the need for consumers to request and pass on the PAC, this change would also simplify the process from the consumer's perspective, making it easier and faster for individuals to port.
- 5.129 However, removing the requirement for a consumer to contact their leaving provider might also disadvantage some porting individuals as they will miss the opportunity to double check the terms and conditions of their existing contract. This could lead to an increase in the number of individuals who switch providers without realising they still have financial obligations for their previous contract. Additionally, switching consumers might miss the opportunity to be offered improved rates and conditions by their donor provider which they could value more than the offer they receive from the recipient provider. We are not assuming that all retention activity is unwanted.
- 5.130 Under a recipient-led process, MNOs might also have stronger incentives to promote porting, compared to their incentives today. This is because at present, the recipient MNO may be reluctant to promote porting to new or potential consumers because the call to request a PAC may trigger retention activity by the 'losing' MNO. Recipient MNOs may therefore feel more confident about promoting MNP under a recipient-led porting regime, potentially raising awareness of the porting option and ultimately increasing the overall number of porting consumers.
- 5.131 In GB, 35% of mobile phone owners are unaware that they are able to keep their number when they switch and 22% of consumers who switched and changed their number said they had not ported because they did not know they could keep their number.<sup>111</sup> In Ireland, which has a recipient-led process, consumer awareness is higher with 75% of mobile phone owners being aware of their right to port their number (i.e. only 25% of consumers were unaware, see Figure 5 in Section 4).<sup>112</sup>

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<sup>110</sup> 'Slamming' is used to describe a situation where a customer is switched without their permission or knowledge

<sup>111</sup> TNS, *Omnibus Survey*, December 2008.

<sup>112</sup> TNS, Republic of Ireland survey, February 2009.

5.132 It seems reasonable that there is a link between awareness of porting and the decision to port, so likely increased awareness could lead to increased porting among consumers. In Ireland, the percentage of consumers who have switched and ported their number is significantly higher than in GB (75% in Ireland compared to 45% in GB. This is separate from the awareness figures highlighted above). Therefore, as well as providing additional value per consumer, if a recipient-led process created increased awareness of the ability to port, it might also increase porting above the level it would be under a donor-led process. This would lead to additional benefits to consumers who decided to port their numbers that would have otherwise been unaware of the option to port.

### Summary – benefits to the individual

5.133 The annual value of the benefits to the individual of each option are estimated to be as follows:

- **Option A** (Recipient-led, near-instant): £5.9 to 10.2m.
- **Option B** (Donor-led, near-instant): £5.9 to 10.2m.
- **Option C** (Recipient-led, one working day): £4.2 to 8.7m.
- **Option D** (Donor-led, one working day): £4.2 to 8.7m.

5.134 As discussed, the benefits for Options A and C could be understated relative to those for B and D, since the calculations take no account of consumer preference for a recipient-led process rather than a donor-led process.

### **Benefits to callers**

5.135 Those individuals and businesses who make a telephone call to a consumer who has switched and ported as a result of the improvements to the porting process (i.e. would have switched but not ported before) would also benefit from an improvement to the number porting process. This is because such callers would not incur costs from updating their records or calling the wrong number.

5.136 We have not attempted to quantify this external benefit, but believe it is unlikely to be as significant as the benefits to those individuals who port. This is because the benefits to porters affects all those individuals who port, while the benefit to callers only affects callers to those marginal porting individuals who would have switched provider but, instead, changed their number under the current system.

### **Benefits to competition from changes to the MNP process**

#### Potential benefits to competition from a shorter process

5.137 Improving the process for MNP could have a positive effect on competition if it results in more mobile customers switching providers or makes customers more likely to switch providers. As discussed in paragraph 4.6, our research found little evidence to suggest that the porting process in particular was acting as a significant barrier to switching. Therefore it is unclear to what extent additional switching would occur if the porting process were shortened.

### Potential distributional and competition effects from a recipient-led process

- 5.138 A donor-led process can provide a means for operators to offer targeted discounts to certain groups of consumers – effectively providing a mechanism for price discrimination. A switch to a recipient-led process is therefore likely to have a distributional effect (as it could influence the prices individual groups of consumers pay), and also an effect on average prices. In addition, it may influence the level and effectiveness of competition. We consider each of these effects in turn.
- 5.139 The distributional effect of a move to a recipient-led process would arise from a reduction in targeted price discrimination. Our consumer research indicated 14% of mobile users switch providers each year and 45% of these switchers port their number.<sup>113</sup> Therefore, under the current system, donor providers have the chance to target discounts and other offers to at least 45% of the 14% of customers that switch (active consumers) each year. This might allow providers to charge relatively higher prices to non-switching (passive) consumers.
- 5.140 The level of our concern about targeted discounts depends – at least to some extent – on the types of consumers that might be affected. Targeted discounts tend to benefit active consumers to the detriment of inactive consumers. Hence we would potentially be concerned if a significant proportion of passive consumers were from more vulnerable groups,
- 5.141 Under a recipient-led process, providers would have less information about which consumers are active and which are passive. Therefore, they would be less able to target discounts specifically at consumers planning to switch providers. Providers might therefore divide discounts more evenly among their customers and so a move to a recipient-led system might advantage passive customers at the expense of active consumers.
- 5.142 Our market research provides some indication about the types of customers that are most likely to be passive. When considered by income group, those in the highest and lowest income groups (AB and DE<sup>114</sup>) are most likely to be passive consumers. When considered by age, those consumers over 65 are the least likely age group to have switched mobile provider at any time.
- 5.143 Therefore a move to a recipient-led process might advantage some low income and high income consumers – and some elderly consumers - at the expense of some middle income consumers (who appear to switch the most).
- 5.144 However, the reasons why particular groups of consumers are passive may be driven by factors beyond the nature of the porting process. Additionally, there are numerous ways in which operators can target discounts to specific customers. Therefore, it is not clear whether price sensitive consumers would miss out on discounts under a recipient-led process or whether average prices for passive customers would decrease.
- 5.145 Overall, while there might be beneficial distributional effects among mobile consumers from a move from a donor-led to a recipient-led mobile porting process,

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<sup>113</sup> TNS, *Omnibus Survey*, December 2008.

<sup>114</sup> This is a method of classifying people by class, based on the occupation of the head of the household. There are six social classifications, A, B, C1, C2, D and E. The group ABC1 includes higher managerial, administrative and professional workers and intermediate managerial, administrative or professional workers.

we do not have evidence at this stage which indicates that a particularly vulnerable sub-set of consumers are systematically disadvantaged under the current regime.

- 5.146 The effect on average prices is also difficult to determine. Price discrimination can provide a mechanism for firms to reflect consumers' willingness to pay in a manner that expands output and leads to lower average prices. However, depending on demand conditions, price discrimination may also lead to higher average prices.
- 5.147 A more substantial concern is that a donor-led process might create a barrier to entry, particularly in a relatively saturated market. In such circumstances, new entrant providers are reliant on enticing consumers to switch away from existing providers in order to grow their business. Targeted discounting strategies which cannot be replicated by entrants could make entry or expansion more difficult.
- 5.148 Moreover, under a donor-led regime, the success of the porting process is dependent upon the actions of the losing network, which might have an incentive to delay or discourage customers from switching providers, for example, delaying the customer's access to a PAC. If this behaviour does occur and serves to deter consumers from switching providers, it could reduce competition.
- 5.149 However, given that the UK mobile market already appears reasonably competitive<sup>115</sup> and has relatively higher switching rates compared to other communications sectors (see paragraph 4.6) it is not clear that save activity resulting from a donor-led porting process leads to material consumer harm (provided that such activity is not unduly aggressive).
- 5.150 Nevertheless, even in a market which is considered to be competitive, policy decisions which could lead to an incremental gain in the degree of competition might be justifiable and appropriate (i.e. where the benefits outweigh the costs). We therefore welcome your views on the potential competition effects of recipient and donor-led processes.

*Q5.9: Do you agree with Ofcom's analysis of benefits for each option? If not, please explain why.*

*Q5.10: Please state whether you consider that Ofcom should take any additional benefits into account and explain how. To the extent possible, please provide any estimates of these benefits and the supporting evidence.*

### **CBA of the four policy options**

- 5.151 To quantify our CBA of each option, we calculated the net present value ("NPV") of moving to each option, compared to the current MNP process. To calculate the NPV of each option, we calculated the present value ("PV") of the benefits of each of the four options, less the present value of the costs for each option.
- 5.152 The NPV of each option has been calculated under the following assumptions:
- a) we have assumed that, should we decide to take action, the implementation of a change to the MNP process would be completed 12 months from the final decision date. Therefore, in our analysis we have assumed that the initial capital costs of the options would be incurred in year one (2011), but that the operating

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<sup>115</sup> This has been highlighted in the recent Mobile Sector Assessment work, for example *Mostly Mobile*, p.6, available at <http://www.ofcom.org.uk/consult/condocs/msa/msa.pdf>.

expenditure would not begin to be incurred until 2012. Therefore 2012 is assumed to be the first year in which the assets depreciate;

- b) we have also assumed that, should we decide to take action, the annual benefits of a change to the MNP process will begin to be realised only once the new process has been successfully implemented. As discussed, we consider that a new process would take 12 months to implement. Therefore, we have assumed that no benefits would be accrued in the implementation year (2011), and that consumers would begin to benefit from 2012 onwards;
- c) we have calculated the NPV over an 11 year horizon treating 2011 as year one (therefore costs and benefits are projected to 2021). The decision to use this time horizon for the NPV is based on the anticipated life time of the assets required to implement direct routing (e.g. the operator specific capital investment is assumed to have a useful life of ten years and will be installed in 2011, but not used until 2012. Therefore, its useful life is assumed to run from 2012 to 2021 inclusive).<sup>116</sup>
- d) we have used the social discount rate of 3.5%, across all sections of the NPV analysis. It is usual to use the social discount when evaluating policy proposals for which the benefits accrue directly to consumers;<sup>117</sup> and
- e) the PV figures are in 2009 prices and have been discounted back to 2009.

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<sup>116</sup> We recognise that operators may use different time horizons when assessing projects as part of their internal decision making. However, providing our analysis builds in the correct reward for risk (i.e. the correct discount rate) then the appropriate investment horizon is the economic life time of the asset. The ten year assumed asset life of operator specific investment is based on information from the MCTC model. The central database is assumed to have an asset life of seven years and additional reinvestment capex is included from years eight to ten.

<sup>117</sup> In assessing whether intervention is in the interests of society as a whole, the appropriate discount rate is the social time preference rate (STPR) as set by as set by HM Treasury in the Green Book. The Treasury Green Book ([www.hm-treasury.gov.uk/d/green\\_book\\_complete.pdf](http://www.hm-treasury.gov.uk/d/green_book_complete.pdf)) provides guidance on appraisal and evaluation for public policy makers. Paragraph 1.1 on page 1 of the Green book states that "All new policies, programmes and projects, whether revenue, capital or regulatory, should be subject to comprehensive but proportionate assessment, wherever it is practicable, so as best to promote the *public interest*. *The Green Book presents the techniques and issues that should be considered when carrying out assessments*" Among other things, the Green Book provides guidance on the appropriate discount rate to use in NPV analysis in public policy appraisal, paragraph 5.49 of the Green book states: "*The discount rate is used to convert all costs and benefits to 'present values', so that they can be compared. The recommended discount rate is 3.5%. Calculating the present value of the differences between the streams of costs and benefits provides the net present value (NPV) of an option. The NPV is the primary criterion for deciding whether government action can be justified.*" However, for the *Routing calls to ported telephone numbers* consultation

[www.ofcom.org.uk/consult/condocs/gc18\\_routing](http://www.ofcom.org.uk/consult/condocs/gc18_routing)

we consider it more appropriate to use the appropriate operator weighted average cost of capital ("WACC") – 11.5% – as the basis for discounting future cash flows. This is because we think that the immediate beneficiaries of change will be operators as a whole, and have therefore conservatively used the WACC as the discount rate, even though we expect that the benefits of change will ultimately feed-through to consumers. Where negative cash flows (e.g. initial investment) occur before positive cash flows (e.g. annual benefits exceeding annual ongoing costs), using the STPR will result in a higher NPV.



## Net present value of the four options

5.153 To complete the quantitative section of our CBA, we calculated the difference between the PV of the costs and the PV of the benefits of each option. The results of the CBA for each of the four options are listed in Table 12 below.

**Table 12: Net present value of the four options**

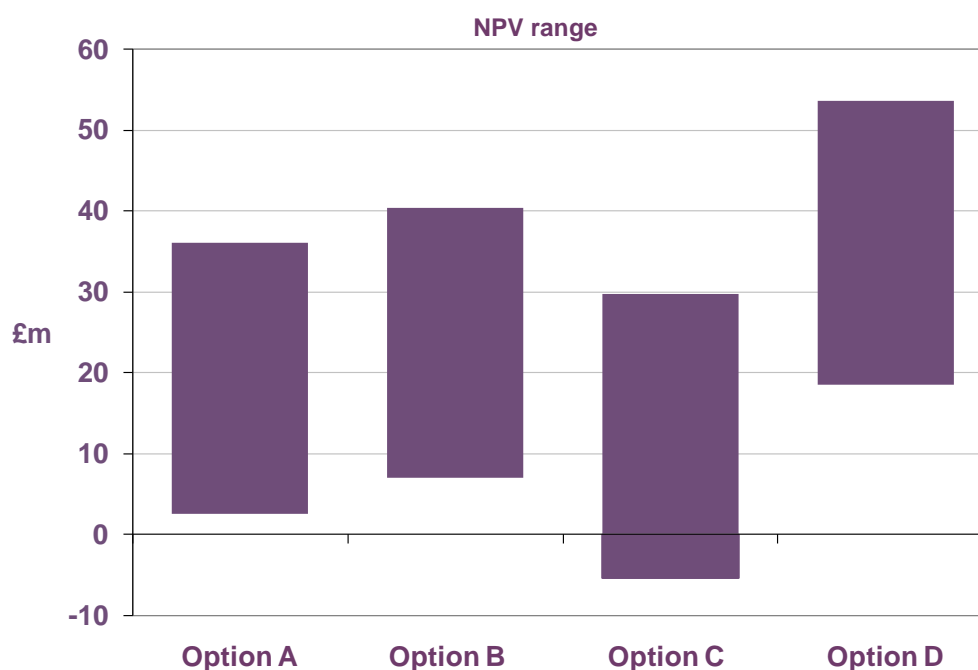
	Option A (£)		Option B (£)		Option C (£)		Option D (£)	
	Lower	Upper	Lower	Upper	Lower	Upper	Lower	Upper
Present value of benefits (Willingness to pay) (m)	46.1	79.5	46.1	79.5	32.3	67.3	32.3	67.3
Present value of costs (m)	43.5	43.5	39.2	39.2	37.7	37.7	13.8	13.8
Net present value (loss) (m)	2.5	36	6.9	40.3	(5.4)	29.7	18.4	53.5

Source: Ofcom Estimates

\* Brackets indicate negative numbers

5.154 The lower values of each option in Table 12 represent the estimated NPVs when only survey respondents who indicated that they would *definitely* be willing to pay are included in the benefits calculation. The upper values represent the estimated NPVs when survey respondents who indicated that they would *definitely* or *probably* be willing to pay are included. Costs have been held constant. This range of values is illustrated in Figure 8.

**Figure 8: NPV ranges of the four policy options**



5.155 From these results, it appears that Option D would provide the highest net benefit. One of the recipient-led processes (Option C) has a negative NPV at the lower bound, indicating that implementation would risk imposing higher costs on providers than the value placed on this option by consumers. However, as noted previously,

our estimation of the benefits of the four options does not account for the fact that it is likely that consumers would be willing to pay more for a recipient-led than for a donor-led process, reflecting their stated preference for the former.

- 5.156 Depending upon the extent to which consumer preference for a recipient-led process translates into willingness to pay, it is possible that reflecting this preference could result in a different ranking for the four options. For example, our sensitivity analysis shows that if consumers value a recipient-led process compared to a donor-led process at a ratio of 1.35:1 Option A would be the highest ranking policy option. Given the consumer preference ranking discussed in paragraph 5.125, this could be possible.<sup>118</sup> The CBA results are also sensitive to the estimations we have made about the costs, benefits and the discount rate chosen. See Annex 5 for a detailed sensitivity analysis of these results.
- 5.157 We intend to conduct further work to estimate the extent to which consumers' stated preference for recipient-led processes translate into their willingness to pay for an improved process. Further, we are seeking to refine our estimates of the costs of each option and are seeking further views and evidence from stakeholders in order to refine this analysis.
- 5.158 Additionally, these quantitative results only estimate the benefit of a change in process to the porting individual. They do not capture:
- benefits which may accrue to those calling a porting individual who would not have ported under the current system;
  - any benefits to competition in the mobile market (see paragraphs 5.137 to 5.150); or
  - distributional effects of the proposed changes among different consumer groups or types (see paragraphs 5.138 to 5.150).
- 5.159 It may not be possible to robustly quantify these effects. However, these qualitative benefits also need to be taken into account together with the quantified CBA when determining the most appropriate policy option.

*Q5.11: Please explain whether you agree with Ofcom's assessment of the pros and cons of each option and if not, why not.*

*Q5.12: Please state which option(s) you favour and why?*

*Q5.13: What do you consider a reasonable implementation period for each of the options and why?*

<sup>118</sup> We are unsure why some respondents valued a recipient-led process over a donor-led process in the survey taken, and therefore need more information before we can accurately comment on this point. For example, it is possible that the main reason that survey respondents would value a recipient-led process is because they believe it would be faster. Given that consumer preferences for a faster porting process is already captured in our analysis, consumers would need to value a recipient-led process for other reasons, such as the reduction in unwanted retention activity, for the preference to have an impact on our analysis.

## Section 6

# Next steps

### Introduction

6.1 In this section we explain how we propose to complete our assessment of these options and the process we will go through in order to decide which option may be the most appropriate to pursue. We also outline the potential timeframe for introducing the option that may be eventually selected.

### Reaching a conclusion

- 6.2 In order to bring this review to a conclusion and implement one of the four proposed options, if appropriate, there are three main activities that need to be undertaken:
- i) gather further evidence about the qualitative and quantitative benefits associated with each option;
  - ii) complete a more detailed assessment of the costs of each option and develop a full specification for the preferred option; and
  - iii) consult on the necessary changes before implementation.

### Assessment of benefits

- 6.3 As outlined in Section 5, our analysis to date suggests that consumers would benefit from an accelerated porting process and that the porting population would be willing to pay an aggregate of £4.2m to £10.2m per annum for this benefit. In addition, our analysis shows that, where they express a preference, consumers prefer a recipient-led process (compared to a donor-led process).
- 6.4 However, the current evidence we have does not enable us to quantify the preference for a recipient-led process in terms of how much extra consumers would be willing to pay for a recipient-led process.
- 6.5 We therefore intend to conduct a focused piece of further market research aimed at enabling us to fully quantify this preference and quantify more fully the benefits conferred by a recipient-led process, as compared to a donor-led process.
- 6.6 We intend to conduct this research once responses to this consultation have been considered.
- 6.7 In addition, there are further benefits that we may wish to take into account in determining the most appropriate policy option, some of which have been outlined in this document and some of which may emerge as a result of responses to this consultation.
- 6.8 The CBA of each option is a key part of our determination of whether the quantified costs for each option are outweighed by the quantified benefits and, therefore, whether each option yields a positive NPV. However, this CBA will generally inform rather than determine our decision. This is for two reasons: (i) fulfilling our statutory duties means that we also need to take account of issues that would fall outside a narrow consideration of the costs and benefits; and (ii) it is also difficult to quantify all

the costs and benefits which may make it difficult to identify which option has the highest net benefit. It is therefore necessary for us to describe and consider the non-quantifiable costs and benefits as part of our analysis, as appropriate.

- 6.9 If the NPV calculation does not reflect certain unquantified or qualitative benefits that attach to individual options, then careful judgement may be required to determine whether the ranking of such options based on NPV's alone is reliable. Where we identify that this is not the case, we will explain why we consider there are unquantified or qualitative reasons that have influenced our decision to choose a certain option.

### Assessment of costs

- 6.10 The costs we have indicated for each of the options in Section 5 are provisional and are our best estimates based on the outline specifications we have put together. These estimates need to be further refined and require engagement from industry to ensure that they reflect the actual level of costs that each option is likely to involve. The specifications themselves also need to be refined to fully reflect how the process will work in order to ensure that the costs of those specifications are accurately calculated.
- 6.11 We recognise that estimating these costs requires expertise in, and knowledge of, porting operating processes and in particular customer authentication, as well as customer operations. We also recognise that the costs of implementation are likely to vary by operator as internal business processes tend to be specific to a given organisation.
- 6.12 We consider that an independent expert or consultancy would be better qualified than Ofcom to undertake this work given the requirement for expert insights into the business processes prevalent in the mobile industry. Further, for this work to produce meaningful results, it is important for such a consultancy to have access to industry stakeholders to understand their existing processes and what effort and costs may be involved in implementing any sort of change.
- 6.13 It is therefore our intention to obtain further expert advice and to appoint such an independent expert or consultancy with a remit of:
- working with industry to better understand the specific technical specifications that might be required based on the four options we have set out in Section 5;
  - engaging with stakeholders to understand how each option could impact their existing operations and hence the costs associated with implementing each of these options; and
  - synthesising the results of this work into a coherent view of the costs and implementation issues associated with each of the options.

*Q6.1: Do you agree that it is appropriate for Ofcom to appoint a qualified independent consultant(s) to work with industry to develop cost estimates for different implementation options? If not, please state why.*

*Q6.2: Do you agree with the remit set out above for the consultant/expert? If not, please state why.*

*Q6.3: If you would like to recommend suitable experts / consultancies to Ofcom, please do so on a confidential basis.*

6.14 For this process to work effectively, we consider that the following conditions need to be in place:

- the process should be time-bound. Our initial view is that we consider that this work should complete within three months from commencement; and
- the mobile industry should look to engage with the consultant(s) in a constructive way by ensuring:
  - the appropriate experts within each organisation are engaged in the process and contribute in an effective manner;
  - that reasonable requests for access and information made by the consultant(s) are adhered to; and
  - participation and contribution towards discussions facilitated by the consultant(s) with the aim of generating a strong evidence base to inform Ofcom's decision.

6.15 We propose to appoint the consultant(s) once we have received responses to this consultation. Once appointed, stakeholders will have the opportunity to engage directly with the consultant(s) and to scrutinise and submit data regarding the technical specification and costing of each option.

6.16 Based on a three month engagement, we anticipate that the consultant(s) work would complete in of the early part of 2010. We would then use the conclusion of this work to complete our CBA and inform our decision about which option for MNP is the most appropriate.

*Q6.4: Do you agree that three months is an appropriate period of time for this feasibility assessment to be undertaken? If not, please explain why and what you consider to be an appropriate timescale.*

*Q6.5: Do you agree that the criteria for making this process effective as outlined under paragraphs 6.14 to 6.16 is appropriate? What else is required to make this process constructive?*

## **Consultation and implementation**

6.17 Once we have completed the steps set out above, we would then proceed to issue a final consultation setting out the evidence that we have used to inform our decision, the specification of the chosen option, the implementation timetable for the proposed option; and the notification of the necessary modification to GC18 for the proposed option, if required.

6.18 We anticipate that this consultation will be issued early next year, soon after the conclusion of the consultant(s)' work. We would then issue a final statement, which would include the modification to GC18 as necessary

6.19 Depending on the option selected and the proposed timetable associated with it, implementation could proceed during 2011/2012. .

*Q6.6: Do you agree with Ofcom's proposed next steps following responses to this consultation? If not, how do you consider Ofcom should complete its cost-benefit analysis and proceed to an implementation of one of the four options?*

*Q6.7: Do you have any comments on the proposed timings for reaching a conclusion for this review?*

## Annex 1

# Responding to this consultation

## How to respond

- A1.1 Ofcom invites written views and comments on the issues raised in this document, to be made **by 5pm on 26 October 2009**.
- A1.2 Ofcom strongly prefers to receive responses using the online web form at [http://www.ofcom.org.uk/consult/condocs/gc18\\_mnp](http://www.ofcom.org.uk/consult/condocs/gc18_mnp), as this helps us to process the responses quickly and efficiently. We would also be grateful if you could assist us by completing a response cover sheet (see Annex 3), to indicate whether or not there are confidentiality issues. This response coversheet is incorporated into the online web form questionnaire.
- A1.3 For larger consultation responses - particularly those with supporting charts, tables or other data - please email [elizabeth.gannon@ofcom.org.uk](mailto:elizabeth.gannon@ofcom.org.uk) attaching your response in Microsoft Word format, together with a consultation response coversheet.
- A1.4 Responses may alternatively be posted or faxed to the address below, marked with the title of the consultation.
- Elizabeth Gannon  
Floor 4  
Competition Group  
Riverside House  
2A Southwark Bridge Road  
London SE1 9HA
- Fax: 020 7783 3574
- A1.5 Note that we do not need a hard copy in addition to an electronic version. Ofcom will acknowledge receipt of responses if they are submitted using the online web form but not otherwise.
- A1.6 It would be helpful if your response could include direct answers to the questions asked in this document, which are listed together at Annex 4. It would also help if you can explain why you hold your views and how Ofcom's proposals would impact on you.

## Further information

- A1.7 If you want to discuss the issues and questions raised in this consultation, or need advice on the appropriate form of response, please contact Elizabeth Gannon on 020 7981 3501.

## Confidentiality

- A1.8 We believe it is important for everyone interested in an issue to see the views expressed by consultation respondents. We will therefore usually publish all responses on our website, [www.ofcom.org.uk](http://www.ofcom.org.uk), ideally on receipt. If you think your response should be kept confidential, can you please specify what part or whether

all of your response should be kept confidential, and specify why. Please also place such parts in a separate annex.

- A1.9 If someone asks us to keep part or all of a response confidential, we will treat this request seriously and will try to respect this. But sometimes we will need to publish all responses, including those that are marked as confidential, in order to meet legal obligations.
- A1.10 Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to Ofcom to use. Ofcom's approach on intellectual property rights is explained further on its website at <http://www.ofcom.org.uk/about/accoun/disclaimer/>

### Next steps

- A1.11 Following the end of the consultation period, Ofcom intends to publish a further consultation in the first part of 2010.
- A1.12 Please note that you can register to receive free mail Updates alerting you to the publications of relevant Ofcom documents. For more details please see: [http://www.ofcom.org.uk/static/subscribe/select\\_list.htm](http://www.ofcom.org.uk/static/subscribe/select_list.htm)

### Ofcom's consultation processes

- A1.13 Ofcom seeks to ensure that responding to a consultation is easy as possible. For more information please see our consultation principles in Annex 2.
- A1.14 If you have any comments or suggestions on how Ofcom conducts its consultations, please call our consultation helpdesk on 020 7981 3003 or email us at [consult@ofcom.org.uk](mailto:consult@ofcom.org.uk) . We would particularly welcome thoughts on how Ofcom could more effectively seek the views of those groups or individuals, such as small businesses or particular types of residential consumers, who are less likely to give their opinions through a formal consultation.
- A1.15 If you would like to discuss these issues or Ofcom's consultation processes more generally you can alternatively contact Vicki Nash, Director Scotland, who is Ofcom's consultation champion:

Vicki Nash  
Ofcom  
Sutherland House  
149 St. Vincent Street  
Glasgow G2 5NW

Tel: 0141 229 7401  
Fax: 0141 229 7433

Email [vicki.nash@ofcom.org.uk](mailto:vicki.nash@ofcom.org.uk)



## Annex 2

# Ofcom's consultation principles

A2.1 Ofcom has published the following seven principles that it will follow for each public written consultation:

### Before the consultation

A2.2 Where possible, we will hold informal talks with people and organisations before announcing a big consultation to find out whether we are thinking in the right direction. If we do not have enough time to do this, we will hold an open meeting to explain our proposals shortly after announcing the consultation.

### During the consultation

A2.3 We will be clear about who we are consulting, why, on what questions and for how long.

A2.4 We will make the consultation document as short and simple as possible with a summary of no more than two pages. We will try to make it as easy as possible to give us a written response. If the consultation is complicated, we may provide a shortened Plain English Guide for smaller organisations or individuals who would otherwise not be able to spare the time to share their views.

A2.5 We will consult for up to 10 weeks depending on the potential impact of our proposals.

A2.6 A person within Ofcom will be in charge of making sure we follow our own guidelines and reach out to the largest number of people and organisations interested in the outcome of our decisions. Ofcom's 'Consultation Champion' will also be the main person to contact with views on the way we run our consultations.

A2.7 If we are not able to follow one of these principles, we will explain why.

### After the consultation

A2.8 We think it is important for everyone interested in an issue to see the views of others during a consultation. We would usually publish all the responses we have received on our website. In our statement, we will give reasons for our decisions and will give an account of how the views of those concerned helped shape those decisions.

## Annex 3

# Consultation response cover sheet

- A3.1 In the interests of transparency and good regulatory practice, we will publish all consultation responses in full on our website, [www.ofcom.org.uk](http://www.ofcom.org.uk).
- A3.2 We have produced a coversheet for responses (see below) and would be very grateful if you could send one with your response (this is incorporated into the online web form if you respond in this way). This will speed up our processing of responses, and help to maintain confidentiality where appropriate.
- A3.3 The quality of consultation can be enhanced by publishing responses before the consultation period closes. In particular, this can help those individuals and organisations with limited resources or familiarity with the issues to respond in a more informed way. Therefore Ofcom would encourage respondents to complete their coversheet in a way that allows Ofcom to publish their responses upon receipt, rather than waiting until the consultation period has ended.
- A3.4 We strongly prefer to receive responses via the online web form which incorporates the coversheet. If you are responding via email, post or fax you can download an electronic copy of this coversheet in Word or RTF format from the 'Consultations' section of our website at [www.ofcom.org.uk/consult/](http://www.ofcom.org.uk/consult/).
- A3.5 Please put any parts of your response you consider should be kept confidential in a separate annex to your response and include your reasons why this part of your response should not be published. This can include information such as your personal background and experience. If you want your name, address, other contact details, or job title to remain confidential, please provide them in your cover sheet only, so that we don't have to edit your response.

## Cover sheet for response to an Ofcom consultation

### BASIC DETAILS

Consultation title:

To (Ofcom contact):

Name of respondent:

Representing (self or organisation/s):

Address (if not received by email):

### CONFIDENTIALITY

Please tick below what part of your response you consider is confidential, giving your reasons why

Nothing	<input type="checkbox"/>	Name/contact details/job title	<input type="checkbox"/>
Whole response	<input type="checkbox"/>	Organisation	<input type="checkbox"/>
Part of the response	<input type="checkbox"/>	If there is no separate annex, which parts?	

If you want part of your response, your name or your organisation not to be published, can Ofcom still publish a reference to the contents of your response (including, for any confidential parts, a general summary that does not disclose the specific information or enable you to be identified)?

### DECLARATION

I confirm that the correspondence supplied with this cover sheet is a formal consultation response that Ofcom can publish. However, in supplying this response, I understand that Ofcom may need to publish all responses, including those which are marked as confidential, in order to meet legal obligations. If I have sent my response by email, Ofcom can disregard any standard email text about not disclosing email contents and attachments.

Ofcom seeks to publish responses on receipt. If your response is non-confidential (in whole or in part), and you would prefer us to publish your response only once the consultation has ended, please tick here.

Name

Signed (if hard copy)

## Annex 4

# Consultation questions

A4.1 Here is a list of our consultation questions by section:

### Section 3

*Q3.1: Do you agree that the bulk porting process should not be included in this review and should be left to industry agreement?*

### Section 4

*Q4.1: Do you agree with Ofcom's view that the evidence suggests consumers would prefer a faster porting process?*

*Q4.2: Do you agree with Ofcom's view that the current process does not work well for all mobile consumers?*

*Q4.3: Are there any other areas of consumer harm that have not been identified? Do you have any evidence to demonstrate other areas of consumer harm?*

*Q4.4: Do you agree that Ofcom should intervene to introduce changes to the current MNP process to address the harm identified?*

### Section 5

*Q5.1: Do you agree with Ofcom's view that the 'do nothing' option is unlikely to be appropriate in light of (i) evidence of consumer harm and (ii) noting the proposed one working day porting requirement under the New Telecoms Package? If not, please give reasons for your views.*

*Q5.2: Do you agree with the range of potential options Ofcom has set out?*

*Q5.3: Do you consider that there are additional options that Ofcom should have considered? If yes, please explain what option(s) should have been considered and why.*

*Q5.4: Do you agree that a two hour timeframe in which to issue the PACs for Options B and D is appropriate? If not, please give reasons for your views.*

*Q5.5: Do you agree there should be a difference between how the recipient-led processes in Option A and C should work for single account versus multi-account porting requests? Do you consider that the proposed authentication process (described in paragraph 5.41) for multi-line accounts is sufficient? Please explain any other differences you would expect to see whilst ensuring that any differences are still consistent with the overall objectives the options are trying to achieve.*

*Q5.6: For each of the options set out, do you consider that Ofcom has captured all the appropriate categories of cost likely to be incurred? If not, explain what categories you disagree with / believe are missing.*

*Q5.7: Do you agree with Ofcom's analysis of costs for each cost category? If not, please explain why. Please also state whether you are able to provide Ofcom with a more accurate view of costs and if so, please submit your assessment, together with supporting evidence with your response to this consultation.*

*Q5.8: In the case of new entrant MNOs, what additional costs are likely to be incurred internally within each of the networks for each of the options? Please submit your estimates in your response to Ofcom.*

*Q5.9: Do you agree with Ofcom's analysis of benefits for each option? If not, please explain why.*

*Q5.10: Please state whether you consider that Ofcom should take any additional benefits into account and explain how. To the extent possible, please provide any estimates of these benefits and the supporting evidence.*

*Q5.11: Please explain whether you agree with Ofcom's assessment of the pros and cons of each option and if not, why not.*

*Q5.12: Please state which option(s) you favour and why?*

*Q5.13: What do you consider a reasonable implementation period for each of the options and why?*

## **Section 6**

*Q6.1: Do you agree that it is appropriate for Ofcom to appoint a qualified independent consultant(s) to work with industry to develop cost estimates for different implementation options? If not, please state why.*

*Q6.2: Do you agree with the remit set out above for the consultant/expert? If not, please state why.*

*Q6.3: If you would like to recommend suitable experts / consultancies to Ofcom, please do so on a confidential basis.*

*Q6.4: Do you agree that three months is an appropriate period of time for this feasibility assessment to be undertaken? If not, please explain why and what you consider to be an appropriate timescale.*

*Q6.5: Do you agree that the criteria for making this process effective as outlined under paragraphs 6.14 to 6.16 is appropriate? What else is required to make this process constructive?*

*Q6.6: Do you agree with Ofcom's proposed next steps following responses to this consultation? If not, how do you consider Ofcom should complete its cost-benefit analysis and proceed to an implementation of one of the four options?*

*Q6.7: Do you have any comments on the proposed timings for reaching a conclusion for this review?*

## Annex 5

# Sensitivity analysis of CBA

- A5.1 This annex explains the sensitivity analysis carried out on the cost benefit model produced to aid in the evaluation and comparison of the four policy proposals we are considering as options (Options A to D) to improve the MNP process.
- A5.2 The NPV analysis presented in Section 5 of this consultation document relates to our assessment of a plausible range of values of the proposed policy options. The bottom of this range was calculated using the data from those survey respondents that indicated that they would 'definitely' be willing to pay for a shorter porting process to assess the benefits. The top of this range of values was calculated using data from those survey respondents who indicated that they would 'definitely' be willing to pay, as well as those who indicated they would 'probably' be willing to pay for a shorter porting process.<sup>119</sup>
- A5.3 In this annex, we have considered how sensitive the results are to variations in other assumptions and key inputs. We have also considered how the evaluations and relative rankings would be affected if, as indicated by the survey data, we were able to ascertain that consumers placed a higher value on a recipient-led process than on a donor-led process.
- A5.4 Table A5.1 below summarises the sensitivity of our NPV evaluations to a variety of alternative assumptions for key input variables.

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<sup>119</sup> TNS Omnibus Survey, December 2008.

**Table A5.1 - Summary of sensitivities:**

Ofcom's policy options for improving the number porting process NPV* in 2009 prices (£m), discounted to 2009								
Sensitivity	Discount rate (real)	WTP survey results applied	Benefits	Costs**	NPV Option A (RL 2hrs)***	NPV Option B (DL 2hrs + 2hrs)***	NPV Option C (RL 1 day)***	NPV Option D (DL 2hrs + 1 day)***
1	3.5%	definitely only	100%	100%	2.5 (3)	6.9 (2)	-5.4	18.4 (1)
2	3.5%	definitely & probably	100%	100%	36.0 (3)	40.3 (2)	29.7 (4)	53.5 (1)
3	3.5%	definitely only	120%	100%	11.8 (3)	16.1 (2)	1.1 (4)	24.9 (1)
4	3.5%	definitely & probably	120%	100%	51.9 (3)	56.2 (2)	43.1 (4)	67.0 (1)
5	3.5%	definitely only	80%	100%	-6.7	-2.3	-11.9	12.0 (1)
6	3.5%	definitely & probably	80%	100%	20.1 (3)	24.4 (2)	16.2 (4)	40.0 (1)
7	4.2%	definitely only	100%	100%	2.0 (3)	6.2 (2)	-5.5	17.5 (1)
8	2.8%	definitely only	100%	100%	3.2 (3)	7.7 (2)	-5.2	19.4 (1)
9	3.5%	definitely only	100%	120%	-3.9	1.3 (2)	-10.8	17.6 (1)
10	3.5%	definitely only	100%	80%	9.0 (3)	12.5 (2)	0.0 (4)	19.2 (1)
11	3.5%	definitely & probably	120%	120%	45.4 (3)	50.6 (2)	37.7 (4)	66.2 (1)
12	3.5%	definitely & probably	120%	80%	58.3 (3)	61.8 (2)	48.6 (4)	67.8 (1)
13	3.5%	definitely only	80%	80%	-0.2	3.3 (2)	-6.4	12.8 (1)
14	3.5%	definitely only	80%	120%	-13.2	-7.9	-17.3	11.2 (1)

\*NPV calculated over a 11 year period, with the original capital investment occurring in year one  
 \*\*The variations are applied to all cost data except the 'Additional Opex' figure used to account for the additional labour costs of each option  
 \*\*\* The numbers in brackets represent the relative ranking of each positive NPV option under each sensitivity scenario  
 Note: Some negative options might become viable if the change to direct routing of calls to ported mobile numbers goes ahead (see the *Routing calls to ported telephone numbers* consultation at [http://www.ofcom.org.uk/consult/condocs/gc18\\_routing/](http://www.ofcom.org.uk/consult/condocs/gc18_routing/)), as some economies of scope are likely to arise between the investment necessitated by the introduction of direct routing and the options for improvements to the porting process

## Explanation of results

- A5.5 We have considered the sensitivity of our results to changes in the estimates of costs (sensitivities 9 to 14) and benefits (sensitivities 2 to 6, and 11 to 14) and to changes in the discount rate used (sensitivities 7 and 8), both individually and in combination.
- A5.6 The inclusion of the 'probably willing to pay' data (i.e. the top of our estimate range in section 5) has a greater impact on the NPV estimations than any single sensitivity change. The results are not sensitive to changes in the cost estimates. However, the sign (i.e. whether it is negative or positive) of the NPV estimates for some options could be changed by varying the cost estimate significantly.
- A5.7 Importantly, the sensitivity analysis shows that the estimated NPV of Option D remains positive even if we combine our lowest benefit scenario with our highest cost scenario (sensitivity 14). In fact, combined with a 20% higher cost estimate, our benefits estimate would need to be almost 55% below those used in the bottom of our estimate range to attain a negative NPV estimate for Option D. Therefore, even allowing for a significant margin of error, it is likely that the implementation of Option D would result in positive net benefits over the 11 year time horizon.

## Consideration of consumer preference for recipient-led processes

- A5.8 None of the sensitivity scenarios in table A5.1 impact the relative ranking of the four options. However, the relative rankings of the policy options might be affected if consumers value a recipient-led process significantly more than from a donor-led process.
- A5.9 In the same survey used to estimate consumer willingness to pay for a shorter porting process, consumers were asked about their preference for a donor-led or recipient-led process. The results showed that among those who expressed a preference, the recipient-led process was preferred to a donor-led process by a ratio of 2.7:1.<sup>120</sup> To reflect this, we have considered the impact, on the size and relative ranking of the four policy options, of varying the ratio of the benefits of a recipient-led process to the benefits of a donor-led process. Table A5.2 below summarises this sensitivity analysis.

<sup>120</sup> 53% favoured a recipient-led process while 20% favoured a donor-led process and 27% did not express a preference. We recognise that this result might be influenced by respondents' belief that a recipient-led process would be faster than a donor-led process, which would already be captured in our assessment of consumer willingness to pay for a faster process. TNS *Omnibus Survey*, December 2008.



**Table A5.2 - Summary of sensitivities:**  
variation of the relative valuation of a recipient-led process

Scenario*	ratio WTP RL:DL	NPV Option A (RL 2hrs)**	NPV Option B (DL 2hrs + 2hrs)**	NPV Option C (RL 1 day)**	NPV Option D (DL 2hrs + 1 day)**
A	1:1	2.5 (3)	6.9 (2)	-5.4	18.4 (1)
B	1.2:1	11.8 (2)	6.9 (3)	1.1 (4)	18.4 (1)
C	1.7:1	10.2 (2)	6.9 (3)	0.0 (4)	18.4 (1)
D	1.3:1	18.4 (1)	6.9 (3)	5.7 (4)	18.4 (2)
E	1.5:1	25.6 (1)	6.9 (4)	10.7 (3)	18.4 (2)
F	2:1	48.6 (1)	6.9 (4)	26.9 (2)	18.4 (3)

\*All scenarios in this table employ sensitivity 1 from table A5.1, with the only variation being in the ratio between willingness to pay for recipient-led and willingness to pay for donor-led. Some numbers have been rounded for simplicity.  
\*\*The numbers in brackets represent the relative ranking of each positive NPV option under each sensitivity scenario  
Note: it is possible that these rankings would also be affected if a decision were made to implement direct routing for calls to ported mobile numbers

## Explanation of results

A5.10 As we would expect, the table shows that if consumers have a sufficiently strong preference for a recipient-led process then the relative ranking of the options changes: specifically, if consumers place value on a recipient-led process that is more than 30% higher, then the NPV of Option A becomes equivalent to the NPV of Option D. However, while our current research suggests a preference for a recipient-led process, we are not able to determine the extent of that preference. We therefore propose to carry out additional research to shed more light on this issue.

## Annex 6

# Options - specifications

## Introduction

A6.1 In Section 5 above we outlined four different options for changing the MNP process. These were:

- **Option A:** recipient-led, near-instant;
- **Option B:** donor-led, near-instant;
- **Option C:** recipient-led, one working day; and
- **Option D:** donor-led, one working day;

A6.2 Each of these options has different requirements with regards to:

- i) the PAC allocation process and whether that is required;
- ii) whether consumer authentication of the porting request has to be undertaken by the recipient service provider (“RSP”); and
- iii) the reduction of the porting time-frame, i.e. either to one working day or to a near-instant process.

This is illustrated in the table below.

**Table A6.1: Specific requirements for each proposed option**

Option	A	B	C	D
<b>PAC allocation</b>	Not required	Maximum 2 hours	Not required	Maximum 2 hours
<b>Consumer authentication by RSP</b>	Required	Not required	Required	Not required
<b>Porting Process time</b>	Near-instant	Near-instant	1 working day	1 working day

A6.3 We have set out below a detailed specification for each of the four proposed options with particular reference to each of the requirements included in the table above.

A6.4 These specifications are, as far as possible, based on the existing processes implemented by the operators and as described in the Industry Manual.<sup>121</sup> Where appropriate the process description has been extended and modified to accommodate the additional functionality required within each of the options.

<sup>121</sup> [http://www.ofcom.org.uk/telecoms/loi/numbers/num\\_port\\_info/mob\\_num\\_portab/mnp.pdf](http://www.ofcom.org.uk/telecoms/loi/numbers/num_port_info/mob_num_portab/mnp.pdf)

- A6.5 These specifications are provisional and represent our own initial thoughts on how each option could work in practice. They have been used as the basis for our provisional estimates of the costs for each option. We would welcome stakeholder feedback on these specifications.

### **Option A: recipient-led, near-instant**

#### **PAC allocation**

- A6.6 There would be no PAC allocation under this option.

#### **Consumer authentication**

- A6.7 Under the current PAC based process, when the consumer contacts the donor service provider (“DSP”) for a PAC, any necessary identification and verification of the consumer can be carried out by the donor operator at that stage. Separately the consumer will contact the RSP to sign up for a new service (with a ported number) and the necessary identification and/or authentication checks required by the RSP can be undertaken at that stage.
- A6.8 Under this recipient-led option, however, the consumer only needs to have contact with the RSP. Therefore the RSP, as well as performing its own identification checks for the porting consumer, also has to collect and exchange information on behalf of the DSP. Once this information has been collected it would need to be passed to the DSP in a porting request. Thereafter, in order for the port to proceed, the DSP would need to perform the necessary checks on the submitted information and return the appropriate authorisation (i.e. port approved/rejected) to the RSP to allow the port to proceed.
- A6.9 Under this recipient-led option, we propose that the authentication process would likely need to comply with the following conditions:
- a) the process is controlled by the RSP;
  - b) the process will consist of a combination of an identity check of the consumer and a possession check of the SIM associated with the relevant consumer MSISDN(s) (Mobile Consumer Integrated Services Digital Network Number)<sup>122</sup>;
  - c) the relevant consumer information from the above checks will be collected by the RSP, will be assembled into a porting request and passed by the RSP to the DSP;
  - d) following receipt of the porting request, for the port to proceed, a positive approval message will be required to be sent from the DSP to the RSP;
  - e) the timescales for the submission of the information from the RSP to the DSP and the corresponding response times from the DSP to the RSP are to be agreed. However, it is assumed that the overall time for the authentication process (including acknowledgement responses) will not exceed the corresponding PAC issue process i.e. two hours maximum;

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<sup>122</sup> A number which uniquely identifies a subscription in a mobile network.

- f) porting requests must be submitted during working hours. However, in order to meet the required timescales, processing of requests may take place both inside and outside of normal working hours;
- g) the information to be collected and exchanged between the RSP and the DSP is to be agreed. For each consumer type, the porting request will likely contain some of the following information:<sup>123</sup>
  - o MSISDN;
  - o IMSI (International Mobile Consumer Identity)<sup>124</sup>;
  - o consumer name;
  - o consumer address;
  - o consumer date of birth;
  - o DSP allocated consumer ID;
  - o account type;
  - o other verification criteria; or
  - o ICC-ID (Integrated Circuit Card ID)<sup>125</sup>.
- h) all the information collected by the RSP must be retained for audit purposes or in case of a subsequent dispute;
- i) the possession check is to confirm the MSISDN porting number to both the RSP and the DSP. The possession check may consist of one of a number of options e.g.
  - o a check that the consumer is in physical possession of the SIM card at the time of porting;
  - o the submission by the consumer of a porting code sent by SMS by the RSP to the consumer's MSISDN; and
  - o generation of the CLI (caller line identification) from a call made from the consumer's MSISDN which can be verified by the RSP.
- j) different rules may apply for individual and business consumers;
- k) multi-line accounts may require additional checks and/or the DSP may be able to contact the registered account holder to verify the request;
- l) secondary MSISDNs may be subject to additional requirements;
- m) as an option, the DSP is allowed to send an SMS to the consumer to inform them of any outstanding contractual liabilities with respect to the service to be ceased;

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<sup>123</sup> Note that the set of information required may differ amongst different consumer types.

<sup>124</sup> A unique number associated with all mobile phone users which is stored in the SIM.

<sup>125</sup> Each SIM is identified by its ICC-ID, which is stored on the SIM and are also engraved or printed on the SIM.

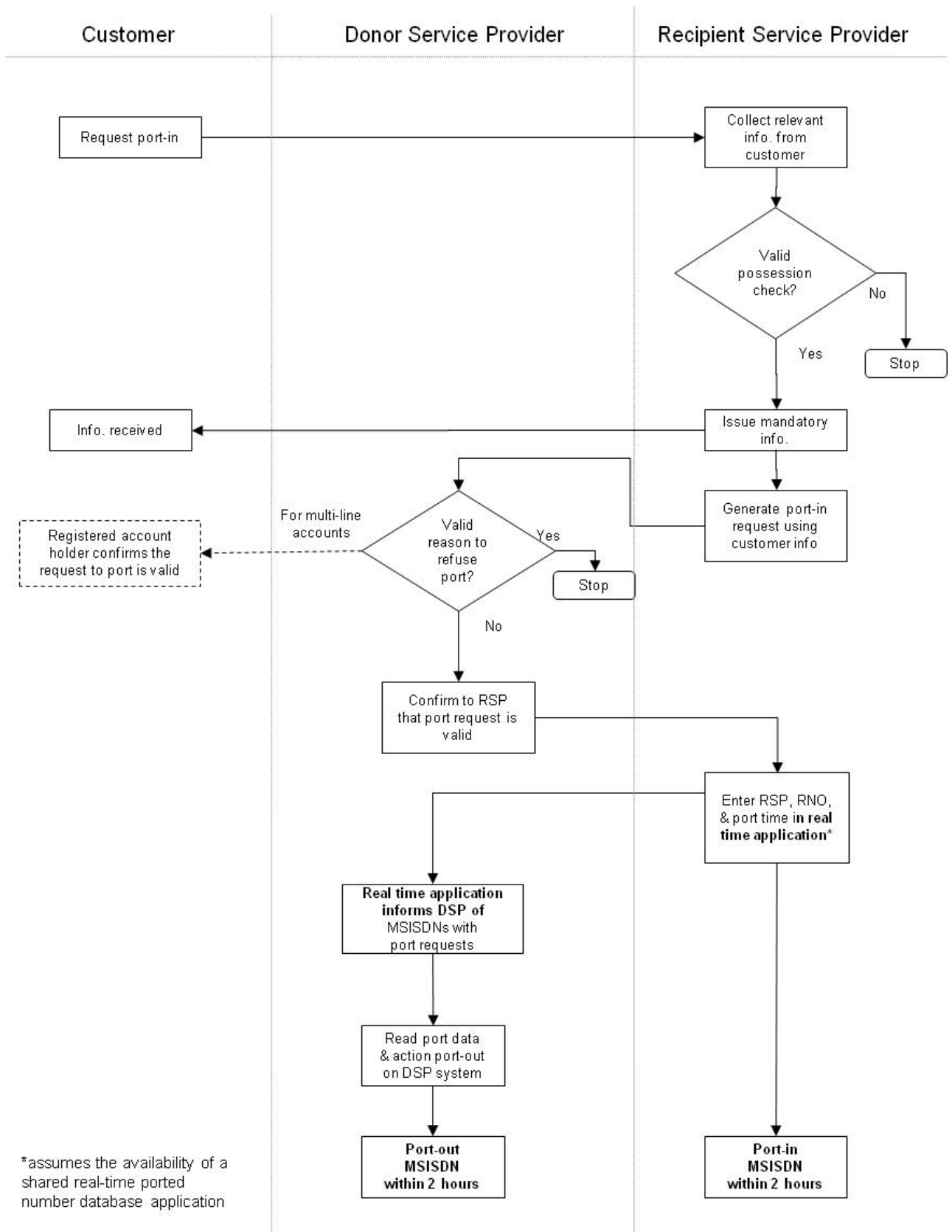
- n) SIMs that have previously been reported as lost / stolen must be replaced by the current service provider prior to a porting request being made. Similarly, damaged SIMs must be replaced prior to a porting request;
- o) the DSP may reject a porting request only in accordance with an agreed list of reasons e.g.
  - o the MSISDN is not assigned to the DSP;
  - o the MSISDN is not held by a consumer of the DSP;
  - o the consumer fails to provide adequate identification;
  - o the MSISDN does not match the ICC-ID;
  - o the MSISDN does not match with the relevant consumer details (including partial mismatch);
  - o the SIM has previously been reported as lost / stolen; or
  - o the porting request is incomplete and / or incorrect.
- p) the RSP may be required to provide mandatory information to the consumer during the porting request e.g. regarding treatment of outstanding pre-paid credit or payment of the contract until the end of its term.

### **Reduction to near-instant porting**

- A6.10 Reducing the porting timescale to near-instant (i.e. a maximum of two hours) will have a significant impact on current processes and may require substantial re-engineering of the processes.
- A6.11 A port has to interact with a large number of internal processes within the DSP and RSP systems (e.g. consumer activation / deactivation, number allocation, billing, routing database, consumer care). As the porting time reduces, so the real-time requirements for processes to interface with these systems increases. Further, because porting requires a sequence of events to be completed in a particular order, a reduced timescale overall puts more onerous requirements on each of these actions. Many of these actions need a finite time to be completed since there is a non-trivial time for changes (e.g. to network routing tables) to propagate through multiple replica databases within an operators network.
- A6.12 We anticipate that implementation of near-instant porting would require changes to the existing processes. In particular:
  - a) the introduction of an enhanced, real-time application to allow for the rapid exchange of porting request information between operators. In most porting environments, a central database performs this role but is not mandatory;
  - b) the ability to facilitate rapid changes to routing information as consumers port. At present, in the onward routed system, this involves actions by the range holder, who may, or may not, otherwise be involved in the port;
  - c) the two hour porting window must be specified to be fully within normal working hours;

- d) the proposed target timings under this option are as follows (maximum response time for 95% of requests):
- port Cutover Notification: five minutes;
  - port Cutover Notification Confirmation: one minute;
  - cutover process – DSP: 20 minutes;
  - cutover process – Range Holder (if required): 20 minutes;
  - cutover process – RSP: 20 minutes; and
  - port Cutover Completion Advice: five minutes.
- e) these timings will allow a two hour porting time to be achieved whilst still retaining a further safety margin period within the overall porting time.

Figure A6.2: Flow chart of Option A



## **Option B: donor-led, near-instant**

### **PAC allocation**

- A6.13 Although the process will remain donor-led, we propose to introduce new requirements regarding the PAC allocation process, as follows:
- a) operators will be required to issue a PAC on request from a consumer by an SMS sent to the relevant MSISDN;
  - b) the maximum time from submission of the request until the transmission of the SMS by the SMS centre must not exceed two hours. Operators are encouraged to treat this time as a maximum time, and wherever possible to send the PAC out at the earliest opportunity;
  - c) operators are encouraged to give out PACs verbally to consumers who request them wherever possible. However, where PACs are given verbally, a confirmation SMS must also be sent as above;
  - d) at their discretion, operators are additionally permitted to issue duplicate or supplementary information to the PAC via other media (e.g. email, post); and
  - e) for multi-line accounts operators are expected to issue PACs via email rather than text (also within the two hour timeframe), unless otherwise requested by the consumer.

### **Consumer authentication**

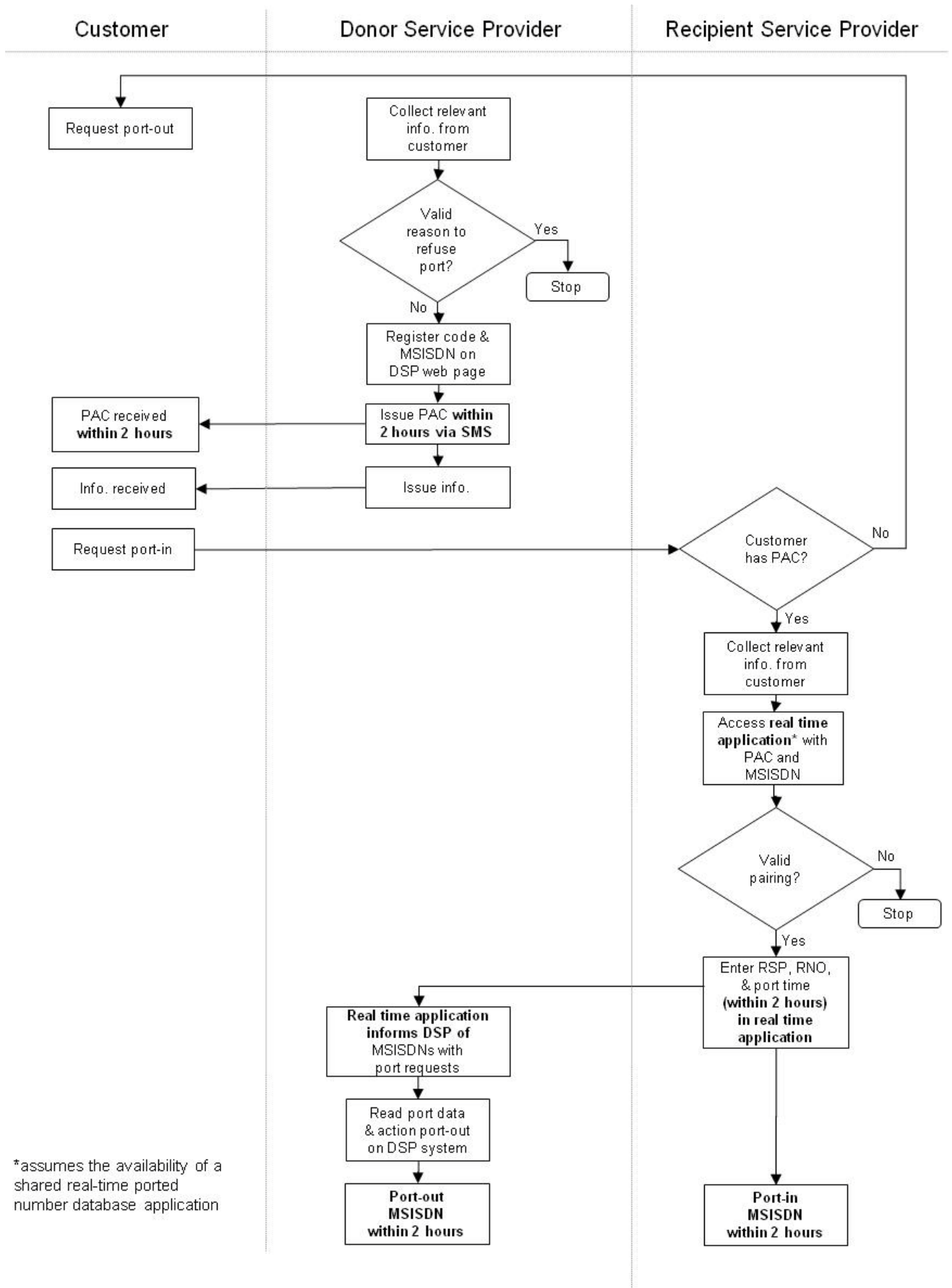
- A6.14 This option will maintain the donor-led aspect of the current porting process, i.e. consumers will continue to contact their DSP to obtain a PAC. The DSP will therefore continue to carry out any necessary consumer authentication and verification as it sees fit.

### **Reduction to near-instant porting**

- A6.15 The introduction of near-instant porting would be the same as under Option A (see paragraph A6.12 above).



Figure A6.3: Flow chart of Option B



## Option C: recipient-led, one working day

### PAC allocation

A6.16 As with Option A, there would be no PAC allocation process under this option.

### Consumer authentication

A6.17 Because this option would also be recipient-led, the RSP would need to carry out the consumer authentication on behalf of the DSP. The process for this would be the same as Option A, as outlined in paragraph A6.9 above.

### Reduction to one working day porting

A6.18 The current porting process timescale is defined in the Industry Manual.<sup>126</sup> This requires that the default port date will be two business days after the submission of the port-out request by the RSP.

A6.19 For a one day (e.g. next working day) process, we propose that the current batch operated system is retained, and that appropriate modifications are made to the existing timetables for both the initial day and the porting day. This will allow time for coordination and problem resolution whilst still enabling a reduction to the overall porting time for the majority of applicants. This will also require that any activities that would have been performed during the intermediate day will have to be performed at other times.

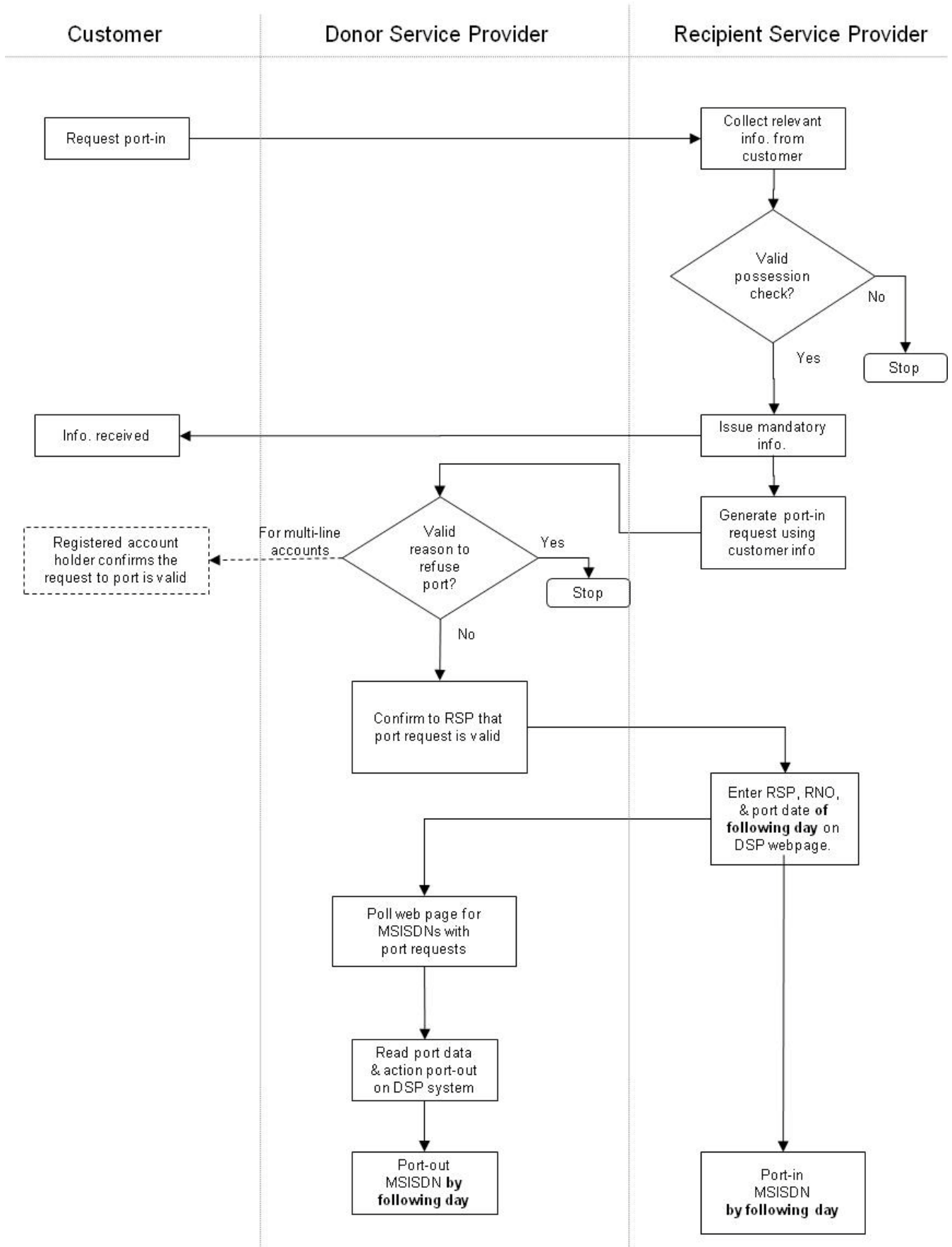
A6.20 For this approach it is proposed:

- a) that port-out requests submitted before a nominal cut-off time would have a default porting date of the following day;
- b) that port out requests submitted after the nominal cut-off time would have a default porting date of the day after the following day; and
- c) that the Porting Event Timeline for the porting date would remain as at present i.e.
  - o the RSP must activate the new subscription for the porting MSISDN by no later than 11:00 on the porting date;
  - o the DSP must initiate the port-out of the porting MSISDN no earlier than 11:00 hours, and by no later than 14:00 on the porting date; and
  - o all ports should have been completed and fully activated by 15:00 on the porting date.

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<sup>126</sup> [http://www.ofcom.org.uk/telecoms/ioi/numbers/num\\_port\\_info/mob\\_num\\_portab/mnp.pdf](http://www.ofcom.org.uk/telecoms/ioi/numbers/num_port_info/mob_num_portab/mnp.pdf)

Figure A6.4: Flow chart of Option C



## **Option D: donor-led, one working day**

### **PAC allocation**

A6.21 New requirements regarding the PAC allocation process would be introduced as with Option B (see paragraph A6.13) so that the PAC would be issued by SMS within two hours.

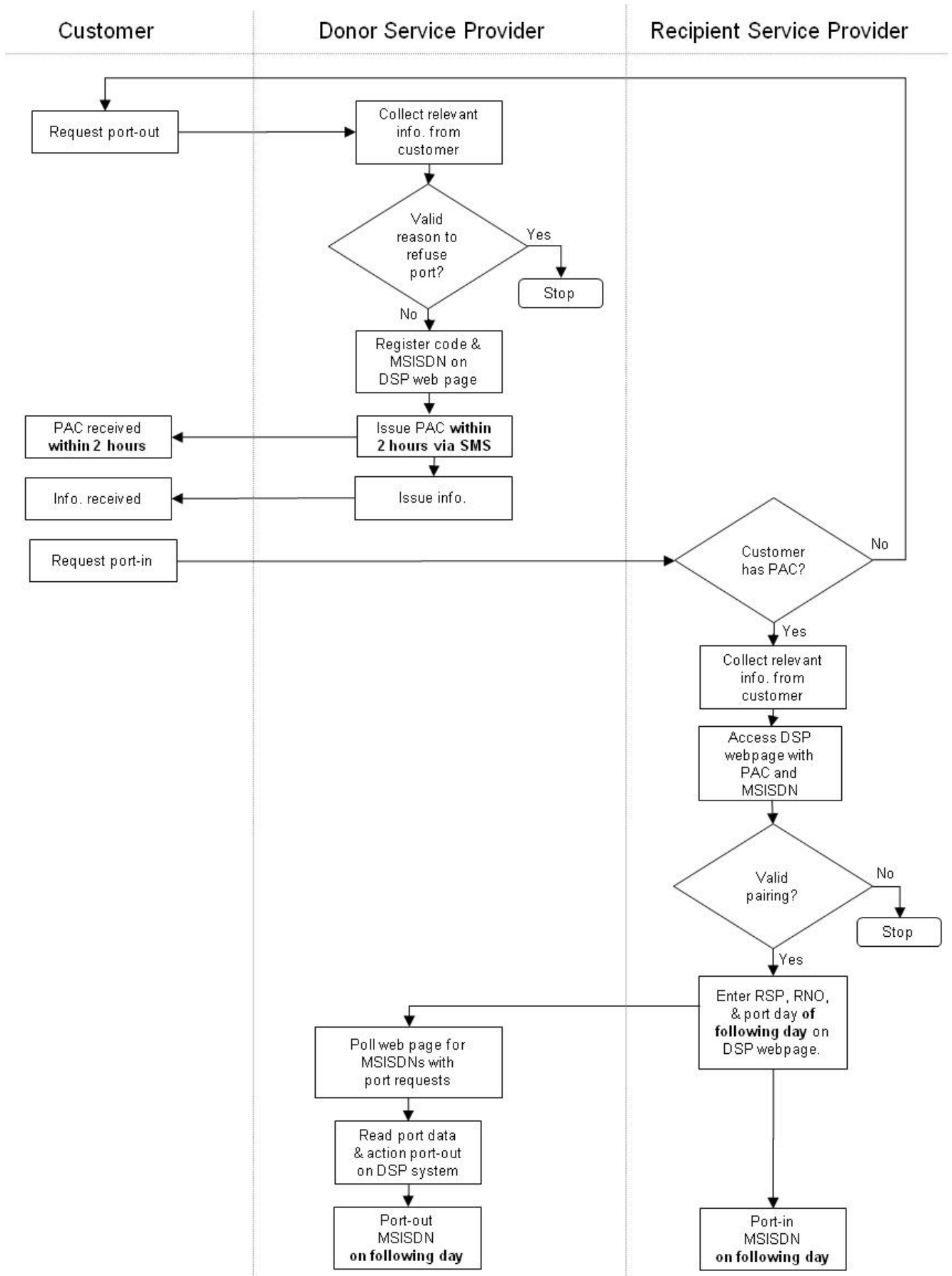
### **Consumer authentication**

A6.22 As with Option B, because this option would retain the donor-led aspect of the process, DSPs would continue to carry out any necessary consumer authentication or validation.

### **Reduction to one working day porting**

A6.23 The reduction to one working day porting would be the same as Option C with the specifications outlined in paragraph A6.20 above.

Figure A6.5: Flow chart of Option D



## Annex 7

# Market research willingness to pay results

## Introduction

A7.1 In the TNS Omnibus survey we commissioned in December 2008 we asked consumers whether they would be willing to pay for faster porting times. We specifically asked:

*Q.16: If you change your mobile phone network and decide to keep your phone number, it currently takes about 2 days for your new mobile network to change your number over. Would you be willing to pay to make the process quicker?*

*How likely would you be on the scale here to pay a one-off fee to do this if the price was... [50p, £5, £10, £20] and the process was:*

*(a) immediate*

*(b) one day*

A7.2 We have interpreted 'immediate' to be equivalent to near-instant, or two hour porting.

A7.3 In Section 5 we have used this consumer survey research to help us estimate the benefits of each option. The survey responses are consumers' stated intentions to pay. Survey data derived from stated intentions to pay should be treated with caution, and could under or overstate consumer's actual willingness to pay in the 'real world', where purchase decisions are influenced by a wide variety of consciously and sub-consciously considered factors. In this case we asked all mobile consumers if they were willing to pay for something (faster porting times) that they might be unfamiliar with and therefore may have found difficult to value. We consider this type of survey data to be the best evidence source available to us to estimate and quantify the benefits to consumers of a faster MNP process.

A7.4 Because the willingness to pay data constitutes an important part of our analysis we have reproduced the original data tables used to quantify the benefits of the proposed options in this Annex.

## Summary tables

A7.5 The tables below set out the summary tables of consumers stated willingness to pay for a one day process and for an immediate process at each of the given values.

**Table A7.1: Consumer willingness to pay for an immediate process**

	<b>50p</b>	<b>£5</b>	<b>£10</b>	<b>£20</b>
Unweighted Base	1,586	1,586	1,586	1,586
Weighted Base	38,855	38,855	38,855	38,855
I would (0.75) definitely pay	12,599 32%	4,023 10%	1,860 5%	1,083 3%
I would (0.3) probably pay	4,828 12%	4,356 11%	2,520 6%	1,234 3%
I may or (0.1) may not pay	2,954 8%	3,323 9%	2,597 7%	2,432 6%
I would (0) probably not pay	3,317 9%	5,573 14%	6,397 16%	5,816 15%
I would (0) definitely not pay	15,156 39%	21,580 56%	25,481 66%	28,289 73%
<b>SUMMARY CODES</b>	0	0	0	0
WOULD PAY	17,428 45%	8,379 22%	4,380 11%	2,318 6%
WOULDN'T PAY	18,473 48%	27,153 70%	31,878 82%	34,105 88%
<b>Mean Score</b>	0.288	0.12	0.062	0.037
<b>Standard Deviation</b>	0.334	0.234	0.172	0.134
<b>Error Variance</b>	0	0	0	0

Base: All who own a mobile phone (1,586) Source: Q16A TNS Omnibus Survey

**Table A7.1: Consumer willingness to pay for one day porting**

	<b>50p</b>	<b>£5</b>	<b>£10</b>	<b>£20</b>
Unweighted Base	1,586	1,586	1,586	1,586
Weighted Base	38,855	38,855	38,855	38,855
I would (0.75) definitely pay	9,400 24%	2,533 7%	1,255 3%	637 2%
I would (0.3) probably pay	6,511 17%	3,703 10%	2,069 5%	1,310 3%
I may or (0.1) may not pay	3,139 8%	3,140 8%	2,521 6%	2,107 5%
I would (0) probably not pay	3,572 9%	6,315 16%	6,499 17%	5,430 14%
I would (0) definitely not pay	16,233 42%	23,165 60%	26,511 68%	29,370 76%
<b>SUMMARY CODES</b>	0	0	0	0
WOULD PAY	15,912 41%	6,235 16%	3,324 9%	1,948 5%
WOULDN'T PAY	19,805 51%	29,479 76%	33,010 85%	34,801 90%
<b>Mean Score</b>	0.24	0.086	0.047	0.028
<b>Standard Deviation</b>	0.307	0.197	0.146	0.11
<b>Error Variance</b>	0	0	0	0

Base: All who own a mobile phone (1,586) Source: Q16B TNS Omnibus Survey

## Results by switching and porting behaviour

A7.6 The results also indicated the stated preferences of consumers broken down by consumer switching and porting behaviour. The results of the willingness to pay for both immediate and a one day process.



**Table A7.3: Consumers willingness to pay for an immediate process by switching behaviour**

Q.5 CHANGED MOBILE PHONE NETWORK								
50p		£5		£10		£20		
Ever changed	Never changed/ DK	Ever changed	Never changed/ DK	Ever changed	Never changed/ DK	Ever changed	Never changed/ DK	
Unweighted Base	789	797	789	797	789	797	789	797
Weighted Base	20,124	18731	20,124	18731	20,124	18731	20,124	18,731
I would (0.75) definitely pay	8,195 41%	4,405 24%	2,684 13%	1,340 7%	1,094 5%	767 4%	568 3%	516 3%
I would (0.3) probably pay	2,661 13%	2,167 12%	2,640 13%	1,716 9%	1,803 9%	716 4%	866 4%	368 2%
I may or (0.1) may not pay	1,238 6%	1,717 9%	1,623 8%	1,699 9%	1,337 7%	1,260 7%	1,209 6%	1,223 7%
I would (0) probably not pay	1,779 9%	1,538 8%	3,131 16%	2,442 13%	3,706 18%	2,691 14%	3,646 18%	2,170 12%
I would (0) definitely not pay	6,252 31%	8,904 48%	10,046 50%	11,534 62%	12,184 61%	13,297 71%	13,835 69%	14,454 77%
<b>SUMMARY CODES</b>	0	0	0	0	0	0	0	0
<b>WOULD PAY</b>	10,856 54%	6,572 35%	5,324 26%	3,056 16%	2,897 14%	1,483 8%	1,434 7%	884 5%
<b>WOULDN'T PAY</b>	8,031 40%	10,442 56%	13,177 65%	13,976 75%	15,890 79%	15,988 85%	17,481 87%	16,624 89%
<b>Mean Score</b>	0.351	0.22	0.147	0.09	0.074	0.049	0.04	0.033
<b>Standard Deviation</b>	0.344	0.308	0.257	0.203	0.184	0.157	0.137	0.13
<b>Error Variance</b>	0	0	0	0	0	0	0	0

Base: All who own a mobile phone (1,586). Source: Q16A TNS Omnibus Survey

**Table A7.4: Consumer willingness to pay for an immediate process by porting behaviour**

	<b>Q.8 WHETHER KEPT OR CHANGED NUMBER LAST TIME CHANGED NETWORK</b>							
	<b>50p</b>		<b>£5</b>		<b>£10</b>		<b>£20</b>	
	<b>Changed to new number</b>	<b>Kept old number</b>	<b>Changed to new number</b>	<b>Kept old number</b>	<b>Changed to new number</b>	<b>Kept old number</b>	<b>Changed to new number</b>	<b>Kept old number</b>
Unweighted Base	420	346	420	346	420	346	420	346
Weighted Base	10,396	9,137	10,396	9,137	10,396	9,137	10,396	9,137
I would (0.75) definitely pay	4,142 40%	3,868 42%	1,320 13%	1,296 14%	529 5%	497 5%	312 3%	256 3%
I would (0.3) probably pay	1,370 13%	1,244 14%	1,434 14%	1,194 13%	872 8%	920 10%	344 3%	469 5%
I may or (0.1) may not pay	733 7%	443 5%	664 6%	844 9%	626 6%	649 7%	474 5%	673 7%
I would (0) probably not pay	818 8%	936 10%	1,443 14%	1,615 18%	1,775 17%	1,831 20%	1,767 17%	1,779 19%
I would (0) definitely not pay	3,332 32%	2,647 29%	5,534 53%	4,188 46%	6,593 63%	5,241 57%	7,498 72%	5,961 65%
<b>SUMMARY CODES</b>	0	0	0	0	0	0	0	0
WOULD PAY	5,512 53%	5,112 56%	2,754 26%	2,490 27%	1,400 13%	1,417 16%	656 6%	725 8%
WOULDN'T PAY	4,151 40%	3,582 39%	6,977 67%	5,803 64%	8,369 81%	7,072 77%	9,265 89%	7,740 85%
<b>Mean Score</b>	0.345	0.363	0.143	0.155	0.069	0.078	0.037	0.044
<b>Standard Deviation</b>	0.343	0.345	0.253	0.262	0.179	0.185	0.138	0.138
<b>Error Variance</b>	0	0	0	0	0	0	0	0

Base: All who own a mobile phone (1,586). Source: Q16A TNS Omnibus Survey

**Table A7.6: Consumer willingness to pay for a one day process by switching behaviour**

	Q.5 CHANGED MOBILE PHONE NETWORK							
	50p		£5		£10		£20	
	Ever changed	Never changed/DK	Ever changed	Never changed/DK	Ever changed	Never changed/DK	Ever changed	Never changed/DK
Unweighted Base	789	797	789	797	789	797	789	797
Weighted Base	20,124	18,731	20,124	18,731	20,124	18,731	20,124	18,731
I would (0.75) definitely pay	6,067 30%	3,333 18%	1,466 7%	1,066 6%	631 3%	624 3%	280 1%	358 2%
I would (0.3) probably pay	3,846 19%	2,666 14%	2,561 13%	1,142 6%	1,389 7%	680 4%	825 4%	486 3%
I may or (0.1) may not pay	1,331 7%	1,808 10%	1,240 6%	1,900 10%	1,384 7%	1,138 6%	1,058 5%	1,049 6%
I would (0) probably not pay	1,921 10%	1,651 9%	3,534 18%	2,781 15%	3,730 19%	2,769 15%	3,349 17%	2,082 11%
I would (0) definitely not pay	6,959 35%	9,274 50%	11,323 56%	11,842 63%	12,991 65%	13,520 72%	14,614 73%	14,757 79%
<b>SUMMARY CODES</b>	0	0	0	0	0	0	0	0
<b>WOULD PAY</b>	9,913 49%	5,999 32%	4,027 20%	2,208 12%	2,020 10%	1,304 7%	1,104 5%	843 5%
<b>WOULDN'T PAY</b>	8,880 44%	10,925 58%	14,857 74%	14,623 78%	16,721 83%	16,289 87%	17,962 89%	16,838 90%
<b>Mean Score</b>	0.29	0.186	0.099	0.071	0.051	0.042	0.028	0.028
<b>Standard Deviation</b>	0.321	0.282	0.208	0.183	0.148	0.144	0.106	0.113
<b>Error Variance</b>	0	0	0	0	0	0	0	0

Base: All who own a mobile phone (1,586) Source: Q16B TNS Omnibus Survey

Figure A7.6: Consumer willingness to pay for a one day process by porting behaviour

	Q.8 WHETHER KEPT OR CHANGED NUMBER LAST TIME CHANGED NETWORK							
	50p		£5		£10		£20	
	Changed to new number	Kept old number	Changed to new number	Kept old number	Changed to new number	Kept old number	Changed to new number	Kept old number
Unweighted Base	420	346	420	346	420	346	420	346
Weighted Base	10,396	9,137	10,396	9,137	10,396	9,137	10,396	9,137
I would (0.75) definitely pay	2,916 28%	3,008 33%	669 6%	797 9%	352 3%	278 3%	214 2%	66 1%
I would (0.3) probably pay	2,175 21%	1,632 18%	1,199 12%	1,322 14%	556 5%	821 9%	266 3%	547 6%
I may or (0.1) may not pay	659 6%	611 7%	511 5%	679 7%	514 5%	792 9%	409 4%	571 6%
I would (0) probably not pay	915 9%	932 10%	1,764 17%	1,618 18%	1,905 18%	1,741 19%	1,646 16%	1,619 18%
I would (0) definitely not pay	3,731 36%	2,955 32%	6,252 60%	4,721 52%	7,068 68%	5,506 60%	7,860 76%	6,336 69%
<b>SUMMARY CODES</b>	0	0	0	0	0	0	0	0
WOULD PAY	5,091 49%	4,640 51%	1,869 18%	2,119 23%	909 9%	1,099 12%	480 5%	612 7%
WOULDN'T PAY	4,645 45%	3,887 43%	8,016 77%	6,339 69%	8,973 86%	72,47 79%	9,506 91%	7,954 87%
<b>Mean Score</b>	0.279	0.307	0.088	0.116	0.046	0.058	0.027	0.03
<b>Standard Deviation</b>	0.315	0.328	0.198	0.222	0.149	0.151	0.116	0.096
<b>Error Variance</b>	0	0	0	0	0	0	0	0

Base: All who own a mobile phone (1,586), Source: Q16B TNS Omnibus Survey