



Office of the
Telecommunications
Adjudicator

EECC Requirements Consumer Switching & Porting

ECWG Cost Estimates and Methodology



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1 Overview & Background

The new European Electronic Communications Code (EECC) placed a requirement on Industry to establish a new, pan-infrastructure, Gaining Provider-Led 'switching and porting' process by 21 December 2020

In their letter to industry, 1 August 2019, Ofcom declared that their preference was for industry to take the lead in developing a solution to meet the EECC requirements and, to that end, commissioned OTA2 to facilitate this process and report Industry's preferred solution by the end of November 2019.

Commencing September 2019, the overall development journey can be broken down into 3 phases:

1.1 Phase 1 – September 2019 to December 2019

Commencing 2 September 2019, OTA2 contacted all known industry stakeholders (including trade associations) to initiate the engagement needed to develop and agree Industry's preferred option by the end of December 2019.

Half-way through this initial phase, it emerged that Stakeholder views around the table were clearly divided, with one group proposing a 'Two-stage' GP-led solution (Option X), whilst the other group proposed a 'Single-stage' GP-led solution (Option Y).

To conclude this phase, OTA2, on behalf of ECWG, submitted 2 discrete proposals excluding costs (i.e. X solution & Y solution) to Ofcom on 18 December 2019

1.2 Phase 2 – January 2020 to March 2020

Ofcom subsequently wrote to OTA2 and Industry on 20 January 2020 requesting further work be undertaken by industry to provide more detail regarding the 2 solutions proposed (including costs and timescales), and to submit revised proposals to Ofcom by 28 February 2020.

a. Approach:

OTA2 hosted an initial 'Take 2' kick-off briefing (23 January 2020) involving the entire ECWG stakeholder community.

Both groups recognised the importance of providing a lot more detail to underpin their respective proposals, as this would enable Ofcom to undertake a more informed assessment than would otherwise be the case.

Despite concerns expressed regarding the resources needed to satisfy Ofcom's request in such a short timeframe, the group agreed the following approach; -

- i. The 2 groups (X & Y) would work separately on their proposals throughout the period.
- ii. OTA2 would immediately organise a series of workshop sessions spanning the period to end-February 2020 and dispatch separate invites to the individual X & Y group participants.

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- iii. Each group would ‘take ownership’ of their respective tasks with OTA2 providing active support and direction to both groups at every stage throughout the period.
- iv. OTA2 also ensured that any assumptions relating to generic issues or decisions were shared and understood, ensuring consistency across both groups

b. Deliverables

A set of Target Deliverables were agreed with both groups as follows: -

- i. Overall Summary
- ii. Detailed customer journey description (Process Workflow diagram with associated narrative description)
- iii. Overall Process & Technical architecture
- iv. Indicative costs and timescales

1.3 Phase 3 – April to September 2020

During this period, both X & Y advocate groups responded to specific questions raised by Ofcom as part of their ongoing evaluation.

On 17 June 2020, Ofcom sent a letter to CPs to explain why, in their present view, some parts of industry’s proposals did not meet the ‘express consent’ requirements.

Specifically, Ofcom declared that it was unclear how Option Y, as presented, met the express consent requirement of the high-level rules proposed in Ofcom’s December 2019 consultation.

Ofcom asked OTA2 to continue to work with both groups, where appropriate, to update their respective solutions (and associated cost estimates) in order to satisfy the ‘express consent’ requirement.

1.4 Solution Reliability & Complexity

Separately, Ofcom asked OTA2 to investigate concerns regarding the reliability of the proposed solutions and to share their findings, for information/feedback, with the Stakeholder groups concerned (i.e. X, Y, Openreach)

To that end, OTA2 developed a model to help evaluate the relative reliability/complexity characteristics of each of the solution architectures proposed.

The model will be shared with all parties concerned to solicit feedback.

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2 Cost methodology and estimates

2.1 Phase 2 Deliverable – 23 March 2020

For Phase 2, both groups completed their revised solution designs, and these were duly submitted to Ofcom on 29 February 2020.

At this point, both proposals excluded costs and timescales.

a. CP Costs – Approach & Methodology

As the 2 groups were unable to accurately assess costs and timescales until after they had established a more detailed view of the technical architecture needed to support their respective proposals, and, because both groups had yet to share each other's revised proposal, Ofcom agreed a further 2 week period for both groups to complete the following additional tasks:

- i. Provide a comprehensive 'critique' of each other's proposed solution using the 'base capabilities' template as a reference point. Critiques were duly submitted to Ofcom on 17 March 2020.
- ii. Provide indicative ROM (Rough order of Magnitude) costs (i.e. Capex and Opex), to deliver and maintain both solutions (i.e. X & Y).

To help facilitate this, Ofcom produced a costings 'framework' statement which OTA2 transposed into an excel 'template' (**Appendices E & F - ECWG X and Y Cost estimate – Template & Guidance documents**) which CPs used to capture a high-level breakdown of their estimated costs.

OTA2 also provided both groups with some baseline 'non-functional' requirements to assist them in their respective assessments (**Appendix G - Volumetrics Statement refers**).

CP cost Estimates were duly received from all the major X and Y group participants, including (where provided) supporting details.

b. OTA2 Health Warnings

OTA2 Health warning ratings were assigned to each CP's estimate based upon OTA2's informed view of the CP effort put in to produce their indicative costs.

OTA2 would also attach a health warning to any comparisons drawn between Total X and Total Y in that they both include cost estimates provided by participants in the 'other' group and may therefore be slightly biased.

That said, OTA2 concluded that any such 'bias' would not have materially influenced the overall totals.

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c. 3rd Party costs

Both X and Y solutions dictated the involvement of 3 types of 3rd party support at different points within the architecture: -

- i. Centralised Hub Service
- ii. TPI service
- iii. Systems Partner (e.g. for Small/Medium-sized Altnets)

OTA2 reached out to a small number of suppliers who provide such services to request indicative costs

OTA2 engaged 5 potential 'hub service' providers to request their best estimate of providing a 'hub service' to support both the X and Y solutions.

OTA2 also engaged directly with 2 well-established system integrators to get a view of indicative costs to provide TPI-type services for the large community of small retailers.

N.B. The 2 TPIs concerned already have well-established relationships in place with the SME market retailer community (i.e. FCS, ITSPA).

d. Hub Service Costs - Approach and Methodology

Potential 'hub service' vendors were asked to provide outline solution designs (including 'indicative' cost estimates) to establish the 'hub service' capability needed to support both X and Y options.

Each vendor was provided with the (December 2019) Final Report documents along with a 'Volumetrics' statement prepared by OTA2 (**Appendix G - Volumetrics Statement refers**).

The vendors were invited to assess both proposals without judging the merits or otherwise of the 2 solutions, and to provide their expert feedback on the practical feasibility of deploying a 'hub' solution capable of supporting the anticipated transaction volumes.

OTA2 stressed the need for the hub solution to be secure, GDPR compliant, API and GUI accessible, and extremely resilient. The costs for such a solution to be broken down in terms of initial design, build, test and deploy (i.e. set-up Capex) and ongoing operating costs (i.e. Opex). A provisional timeline to deliver the vendor's proposal was also requested.

Despite the very short notice, 5 vendors provided outline solution designs and estimated costs which OTA2 used to derive a credible cost estimate which was incorporated into the overall cost summary.

All the potential vendors offered various commercial models, but OTA2 simplified the cost modelling to a 'basic' format that aligned with cost inputs received from ECWG members

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e. Overall cost summary – 23 March 2020

OTA2 submitted an overall cost summary to Ofcom on 23 March 2020 based on the cost estimates submitted by each of the major CP stakeholders (including Openreach), along with costs associated with providing the centralised hub & TPI services. (**Appendix H - Overall Cost summary template refers**)

Given the very limited time available, it was necessary for OTA2 to strike a balance between securing specific ROM estimates from all the major CP stakeholders, on the one hand, whilst separately formulating an informed estimate of 3rd party costs based on inputs solicited from a representative group of vendors.

f. Scale of costs

It was clear that the biggest costs would be incurred by the large, well-established CPs and that these costs were heavily influenced by having to adapt their existing, large scale (legacy) suite of systems (e.g. CRM, Order management, billing, etc) in order to ‘consume’ a new switching process.

Conversely, the new Altnets have much smaller, more modern and flexible systems to adapt. They also have the advantage of having no embedded switching process to transition from.

There are a small number of large (or potentially large) Altnets who already develop/manage their own systems and OTA2 obtained indicative costs from 3 such CPs.

For the large number of new, and typically smaller, Altnets, OTA2 were able to engage directly with a Systems Partner who currently ‘provides and manages’ OSS services for many in this community, and was well placed to provide a credible estimate of costs to consume the new switching process.

g. CP Diversity

The cost to each CP to ‘build & consume’ the new switching process will be dictated by a combination of the following factors: -

- i. CP size - larger CPs rely on internal development capacity whereas smaller CPs will rely on 3rd party services/support)
- ii. CP longevity – Well established CPs may have to incur the significant cost of adapting legacy systems, whereas new entrants (e.g. Altnet CPs) will not have this problem.
- iii. CP experience – CPs who do not currently support a ‘switching process’ will need to establish a new support operation whereas CPs who currently support the NOT+ switching process will be able to more readily adapt their existing operations.
- iv. CP role – the ‘Retailer’ must ensure the End Customer’s switch request is fully satisfied whereas the wholesaler need only satisfy their reseller’s needs. As such, CPs’ costs to

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consume the new switching process will vary depending on their role(s) in the 'supply chain'.

h. CP Stakeholder 'size'

The cost estimate summary categorises CP stakeholders by their 'size' and by the supply chain 'role' they each perform.

Clearly, there is a diverse range of CPs who will incur a wide range of costs needed to 'build & consume' the new switching process.

- i. Large Network Provider – network providers with a UK wide footprint, utilising 'in-house' capabilities (teams and software solutions) who provided the cost estimates
- ii. Large CPs - CPs who wholesale and/or retail services across the UK, utilising 'in-house' capabilities (teams and software solutions) who provided the cost estimates
- iii. Medium Network Providers - network providers with a targeted UK footprint, utilising 'in-house' capabilities (teams and software solutions) or have strategic system partners who provided the cost estimates
- v. Regional/small Altnets - network providers with a localised or targeted service footprint, typically partnering with strategic system partners who provided the cost estimates
- vi. Large Retailers/Resellers – retailers typically partnering with strategic system partners to develop systems solutions
- vii. Small/Medium Retailers – small retailers partnering with TPIs (Third Party Integrators) who provide supply chain access to the retailer allowing them to sell and maintain services.

i. CP Stakeholder 'role'

- i. Access Provider – CP provides the 'access' infrastructure needed to underpin service delivery by the Retailer
- ii. Wholesaler – CP sells a wholesale service to multiple retailers/resellers
- iii. Retailer – CP sells and delivers service directly to the End Customer

N.B – Different CPs may perform one or more of the above roles

2.2 Phase 3 Deliverable – 25 September 2020

a. Express Consent

Ofcom sent a letter to CPs (17 June 2020) to explain why, in their present view, some parts of industry's proposals did not meet the 'express consent' requirements.

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Specifically, Ofcom declared that it was unclear how Option Y, as presented, met the express consent requirement of the high-level rules proposed in Ofcom's December 2019 consultation, in all circumstances.

Ofcom asked OTA2 to continue to work with both groups to support them in providing further submissions, should they wish to, and if so, to provide such information by 17 July 2020, or sooner, if possible.

b. Revised proposal from Y Group - 4 August 2020

Following protracted discussions, OTA2 submitted (to Ofcom) the Y group's revised proposal which sought to address the 'express consent' requirement, but offered 2 variants (YHUB and YGP) relating to the method by which the losing provider conveyed 'switch implications' details to the Customer to ensure they were fully informed before they were invited to give their 'express consent' to switch.

c. Revised CP cost estimates for YHUB and YGP - 27 August 2020

OTA2 asked all the X & Y group Stakeholders who had previously provided cost estimates to confirm any adjustments needed to support either YHUB, YGP or both.

OTA2 collated all Stakeholder responses received and proceeded to submit a revised summary to Ofcom on 24 September 2020.

OTA2's summary of CP responses is as follows; -

- i. 8 CPs (out of 9) provided a response to OTA2's request for revised estimates
- ii. 3 CPs (out of 8) advised only minor adjustments to their original Y 'capex' estimate to reflect the proposed solutions for YHUB & YGP. These adjustments were the same for either YHUB or YGP.
- iii. The other 5 CPs (out of 8) positively confirmed that they saw no need to adjust their original cost estimate to cater for either YHUB or YGP.
- iv. As a result of further internal assessment 1 CP (out of the 8) advised material changes to their original Opex estimates for X & YHUB/YGP.

N.B. These changes were not prompted by YHUB or YGP but more a result of further internal study (of all options) undertaken by the CP concerned.

- v. Despite further prompts, 1 CP (Vodafone) did not respond.
- vi. In summary, CPs do not envisage any material cost impact arising as a result of adopting a YHUB or YGP solution, relative to their previous submissions for Option Y.

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d. Revised 3rd Party costs for YHUB & YGP

OTA2 re-engaged 2 potential vendors (i.e. for Hub and TPI roles) to ascertain the likely cost impact (relative to their previous Phase 2 inputs) of supporting either YHUB or YGP.

Whilst OTA2 were unable, in the limited time available, to secure revised cost estimates, the 2 vendors concerned both undertook a rapid review of the YHUB/YGP proposals and advised a nominal 5-10% increase in costs would suffice to support the YHUB solution, although this has minimal impact at the aggregate level. Similarly, the TPI costs to support YHUB/YGP have also nominally increased.

OTA2 reflected this adjustment in the 'revised' overall cost summary, although further detailed engagement would be needed to produce a more accurate estimate, and this would form part of the tendering process in due course.

e. Overall 'revised' cost summary – 30 September 2020

OTA2 submitted an overall 'revised' cost summary to Ofcom on 30 September 2020 based on the latest cost estimates submitted by each of the major CP stakeholders (including Openreach), along with minor adjustments to the hub & TPI services. **(Appendix H - Overall Cost summary template refers)**

All costs are a RoM estimate (Rough order of Magnitude) and, as with any undertaking of this scale, will change as the detailed design process progresses and interface specifications are agreed.

3 Number Porting

Neither group have been able to design and cost a fully integrated number porting solution as any change to the existing NP process/operation would necessitate extensive dialogue and engagement with the broad spectrum of CPs who manage porting in both the Business & Domestic markets.

That being the case, the working assumption is that the new switching process will interface with the existing porting process, although there is clearly an opportunity to exploit the new hub-based architecture to provide an integrated 'switch & port' solution. This opportunity has not been factored into any of the proposed solutions (or costs) and will need further discussion with Industry and Ofcom.

3.1 Right to Port (R2P)

For clarity, the EECC requirements for customers' 'Right to Port' (R2P) is being progressed as a separate, OTA2 led, Industry development and is not been part of this journey.



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4 Appendices

- 4.1 Appendix E - ECWG X and Y Cost estimate – Template**
- 4.2 Appendix F - ECWG X and Y Cost estimate – Template Guidance**
- 4.3 Appendix G - Volumetrics Statement**
- 4.4 Appendix H - Overall Cost summary template**