Answering matrix

1. The templates below are intended to collect high-level information on the capacity of potential suppliers to either develop a system that would meet the description above or to instead adapt an existing system accordingly.
2. Most importantly, and in order assess the scope or future evolution of the CTS, the focus should be on providing detailed information on the capabilities of the systems proposed and how they meet the OECD’s requirements. Likewise, where required, it is important to estimate the time it would take to develop such systems and the associated costs. While precision is preferable, estimates could also be presented in ranges or as high-level qualitative descriptions.
3. No response will in any way be seen as binding on the respondent (and caveats and disclaimers may be provided by the respondent) but will instead be used to inform the analysis to determine the future CfT for the future CTS.
4. **Respondents may respond in relation to all or some of the objectives highlighted below**

## Core Service Functionality

1. When replying to the question, please provide as many references as possible in the form of whitepapers, client references, supporting documents, commercial proposals, etc. to substantiate your inputs.

### Service Continuity

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| Current Service |
| CS.1: Please describe briefly the solution proposed to implement the Core Service Functionality. |
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| CS.2: Please set out below the overall timeline you consider reasonable for the CTS 3.0 development and the key related milestones. |
|  |
| CS.3: Please set out any ancillary services you would suggest providing to support the successful transmission of data (e.g. training and support in file preparation) and a rough estimate of their costs. |
|  |
| CS.4: Please describe briefly how would you envisage a transition of the users from the current supplier to a new one. |
|  |
| CS.5: Please indicate if your system has any limitation to meet the Expected Outcome for the Core Functionality of CTS 3.0 as described above. |
|  |
| CS.6: Please set out below, in high-level terms, the key factors behind each of the cost estimates and the impact they have on the overall estimates. |
|  |

Cost Estimates

1. Please detail the cost structure that is proposed to provide the Core Service Functionality. Below you will find a template but is possible to propose an alternative structure based on different parameters of the proposed solution or an overall cost estimate based on specific assumptions.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** |
| **Fixed Costs** |
| System development costs |  |  |  |  |  |
| System maintenance costs |  |  |  |  |  |
| Costs to connect users |  |  |  |  |  |
| **Variable Costs** |
| Support costs (helpdesk etc.) |  |  |  |  |  |
| Other variable user costs (e.g. by usage) |  |  |  |  |  |

### Service Improvements

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| Improvements |
| CS.6: Please indicate if you see any potential gaps in the design of the Core Functionality and, if so, how can they be addressed? |
|  |
| CS.7: Any other suggestions on how the Core Functionality could be further improved? |
|  |

### Service Evolution

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| Certification Authorities |
| CS.8: Please propose any enhancements that would verify securely the identity of the tax administrations but are not reliant on external Certification Authorities. |
|  |
| CS.9: Please indicate how you propose to encrypt the data in a way that it is only possible for it to be deciphered it by the peer jurisdiction if an architecture without Certification Authorities is used? |
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| Peer-multipeer |
| CS.10: Please indicate if you are aware of alternative technologies used in production systems that offer both peer-to-peer exchanges and peer-multi peer exchange capabilities, and describe their functionality and your experience with them. |
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| Log immutability |
| CS.11: Please describe how the system could implement log immutability for administrators’ actions. |
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## Quantum Computing

1. When replying to the question, please provide as many references as possible in the form of whitepapers, client references, supporting documents, commercial proposals, etc. to substantiate your inputs.

|  |
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| Quantum. General. |
| QC.1: Please indicate the areas your company is working on and what your interest and expertise is on Quantum Computing. |
|  |
| QC.2: Please indicate if your company is able to carry out a risk assessment on quantum threats and on the preparation of a business case to make a solution quantum-safe. |
|  |
| QC.3: Please indicate if your company has the experience and competences to explain and discuss solutions for the quantum-threat at executive level and/or at technical level. |
|  |

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| Quantum Computing. Overall Considerations. |
| QC.4: What else should the OECD take into consideration to ensure that CTS 3.0 is ready to cope with the threat of Quantum Computing? |
|  |
| QC.5: Based on your expertise and insights, do you have any estimations on when a Quantum Computer with enough stable qubits to break RSA – 4096 will be available? |
|  |

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| Quantum Readiness |
| QC.6: If you are operating a platform for exchange of confidential data, are you considering the implications of Quantum Computing for the security of your system? Can you indicate how you will address it and include any reference to public documentation? |
|  |
| QC.7: If you are operating a public Certification Authority, are you considering the implications of Quantum Computing for the security of your system? Can you indicate how you will address it and include any reference to public documentation? |
|  |
| QC.8: If you are an infrastructure supplier (cloud), are you considering the implications of Quantum Computing for the security of your system? Can you indicate how you will address it and include any reference to public documentation? |
|  |

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| Quantum Mitigation and migration |
| QC.9: Does your company have experience or knowledge in implementing a system to exchange information, such as the CTS, but only using symmetric encryption? Is there, in your view, any advantages or challenges with such approach? |
|  |
| QC.10: What approach do you recommend for migrating existing algorithms to quantum-resistant ones? (Hybrid, quantum-only, etc.) Which quantum-resistant algorithm(s) could be the best choice? |
|  |
| QC.11: What approach would you recommend implementing crypto-agility (i.e.: the capacity to change easily the cryptographic algorithms in an exchange system)? |
|  |
| QC.12: How and when could you safely adopt a Post Quantum standard cryptographic algorithm? |
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| Quantum Infrastructure |
| QC.13: What is the timeframe that you estimate for the development of optical infrastructure that allows the use of a native stack of quantum technologies: QKD, OTP, etc.? |
|  |
| QC.14: What approach do you recommend to future-proof an exchange system to migrate to quantum-native technologies such as QKD, OTP, etc? |
|  |

## Real-time functionality

1. When replying to the question, please provide as many references as possible in the form of whitepapers, client references, supporting documents, commercial proposals, etc. to substantiate your inputs.

**Secure Videoconference**

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| Secure Videoconference |
| QRT.1: Are you aware or systems that propose secure and encrypted videoconference? Please provide a list of functionalities of the solution. Please describe also your experience managing such systems. |
|  |
| QRT.2: Please describe what is the business operation model of secure videoconference services. Please describe the technical and non-technical procedures that are in place to ensure the confidentiality of the conferences. |
|  |
| QRT.3: Please describe how the proposed system ensures the data and operational sovereignty.  |
|  |
| QRT.4: Please indicate whether you see any other major challenge when implementing a secure cross-border videoconference system handling confidential information? |
|  |

Cost Estimates

1. Please detail the cost structure of the secure videoconference system that is proposed. Below you will find a template but is possible to propose an alternative structure based on different parameters of the technical solution.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** |
| **Fixed Costs** |
| Security, Maintenance and Supervision |  |  |  |  |  |
| Other fixed costs |  |  |  |  |  |

|  |  |
| --- | --- |
|  | **Variable Cost** |
| Costs per jurisdiction |  |
| Costs per annual number of conferences |  |
| Costs per nominative user/organiser |  |
| Cost per participant |  |
| Other variable user costs  |  |

**Secure virtual data room**

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| Secure data-room |
| QRT.5: Are you aware of any systems that offer secure virtual data rooms (to share encrypted files)? Please describe the solutions and your experience managing such systems. |
|  |
| QRT.6: Please describe what is the business operation model of the proposed virtual data room systems.  |
|  |
| QRT.7: How can the system ensure that system administrators or platform suppliers cannot access the data uploaded to the virtual data room?  |
|  |
| QRT.8: Please indicate whether you see any other major challenge when implementing a secure cross-border data-room system handling confidential information? |
|  |

Cost Estimates

1. Please detail the cost structure of the secure virtual data room system that is proposed. Below you will find a template but is possible to propose an alternative structure or an overall cost estimate based on specific assumptions.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** |
| **Fixed Costs** |
| Security, Maintenance and Supervision |  |  |  |  |  |
| Other fixed costs |  |  |  |  |  |

|  |  |
| --- | --- |
|  | **Variable Cost** |
| Costs per jurisdiction |  |
| Costs per data volume |  |
| Costs per nominative user/organiser |  |
| Costs per participant |  |
| Other variable user costs  |  |

**Secure Email**

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| Secure Email |
| QRT.9: Are you aware or systems that propose secure and encrypted end-to-end email? Either using a web-browser, or connecting a corporate email infrastructure to a system that ensures the end-to-end confidentiality. Please describe the solutions and your experience managing such systems. |
|  |
| QRT.10: Please describe how the proposed system ensures the data confidentiality and how its guaranteed that the emails cannot be decrypted if they are intercepted by a 3rd- party.  |
|  |
| QRT.11: Please describe what is the business operation model of Secure Email. |
|  |

Cost Estimates

1. Please detail the cost structure of the Secure Email system that is proposed. Below you will find a template but is possible to propose an alternative structure or an overall cost estimate based on specific assumptions.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** |
| **Fixed Costs** |
| Security, Maintenance and Supervision |  |  |  |  |  |
| Other fixed costs |  |  |  |  |  |

|  |  |
| --- | --- |
|  | **Variable Cost** |
| Costs per jurisdiction |  |
| Costs per data volume |  |
| Costs per nominative user/organiser |  |
| Costs per participant |  |
| Other variable user costs  |  |