Digital Continuity in ICT Services Procurement and Contract Management

This guidance relates to:

Stage 1: Plan for action

Stage 2: Define your digital continuity requirements

Stage 3: Assess and address risks to digital continuity

Stage 4: Maintain digital continuity

This guidance should be read **before** you start to manage digital continuity. The full suite of guidance is available on The National Archives' website.

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1   Introduction

Digital continuity is the ability to use your information in the way that you need, for as long as you need.

If you do not actively work to ensure digital continuity, your information can easily become unusable. Understanding and maintaining the digital continuity of your information requires particular care and attention when working with external suppliers, to ensure that changes are not introduced during the procurement and contracting process that will have an impact on the usability of your information. Including the _Information Asset Register_ (IAR) in an Information and communication technology (ICT) services contract helps to ensure that the contracting authority continues to have appropriate access to, and usability from, its information assets for the duration of the services contract.

As well as maintaining digital continuity, the benefits for both the contractor and the contracting authority in using an IAR in ICT services procurement and contract management include solving problems before they occur and identifying opportunities for cost savings. It also supports an organisation in working transparently, legally and accountably.

1.1   What is the purpose of this guidance?

This guidance provides you with practical information and support to help you maintain the digital continuity of your information when updating ICT services contracts or creating new ones, as well as highlighting the impacts that IARs have on an organisation's ability to perform.

This will enable you to answer the following questions:

- What are the key principles for managing digital continuity through ICT services procurement?
- What is an ICT Services Information Asset Register?
- What are the benefits and outcomes from using an IAR in ICT services procurement and contracts?
- How should you use the IAR in ICT services procurement or an existing contract?

The latest Crown Commercial Service framework includes a provision for managing a register of information assets. This guidance will help assist contracting organisations in developing and implementing an IAR within their contractual relationships.

The current guidance forms part of a suite of guidance that The National Archives has delivered as part of a digital continuity service for government, in consultation with central government departments.

We strongly advise that you to read *Identifying Information Assets and Business Requirements* before reading this guidance.

1.2   Who is this guidance for?

This guidance is primarily aimed at procurement and IT professionals involved with negotiating and managing contracts with suppliers. It may also be useful as a reference for any staff involved with managing IARs.

2   Why consider digital continuity during ICT procurement?

Managing digital continuity requires putting in place processes and technical strategies that can ensure information remains usable by the business for its full lifecycle. Digital continuity is put at risk by change, including changes to the IT environment, supporting contracts, business process and organisational function and structure.

Procuring new ICT services often introduces new technology or solutions, and may also signify wider changes in the organisation. As such, it is critical that digital continuity is considered in the procurement and contracting process, to ensure that this does not introduce changes that impact on the usability of the information. This will also ensure the effective management of further changes within, and at the end of, the contract period. It is important to ensure that your information remains usable and that you protect its digital continuity during changes in service providers.

The key principles for managing digital continuity during ICT procurement that you should adhere to are as follows:

2.1   Establish digital continuity as a strategic business requirement

Digital continuity is a long-term business aim of strategic importance, as it ensures the ongoing ability of the organisation to deliver services, operate effectively and remain accountable, transparent and legally compliant. However, digital continuity might not be considered in the shorter term requirements for individual procurement projects focused in immediate needs during the contract duration. Establishing digital continuity as an overarching strategic business requirement that needs to be factored into all procurement will help to ensure that the long term needs of the organisation are appropriately prioritised and recognised during procurement projects.

2.2   Define usability requirements for information

Digital continuity is the ability to use your information in the way that you need, when you need. To ensure digital continuity, you need to clearly define how you need to use your information and ensure that this usability requirement is reflected in your procurement process.

Your usability requirements should include consideration of how the business may need to find, open, work with, understand and trust the information now and in the future, informed by the lifecycle of the information and wider strategic needs of the organisation. Your usability requirements will vary across your information assets and lines of business, depending on what you need to do with the information, for how long, and how valuable it is. Your usability requirements may go beyond the simple ability to open and edit

documents for example, as you may depend on particular contextual metadata to understand information, or related audit and logging data to use the information as evidence.

2.3   Ensure requirements reflect the information lifecycle

It is critical that any requirements developed for ICT service procurement consider not just immediate business needs, but also the wider and longer term information usability requirements of the organisation. This is especially important if it is likely that the information lifecycle will last longer than the duration of the contract and the technology that is being provided. The information lifecycle and retention period needs to be made explicit and included in the usability requirements.

2.4   Reflect digital continuity in planning for end of contracts

The likelihood that information will be used by the business for longer than any given contract period means that particular attention needs to be paid to end of contracts and provision for the safe handover of information in usable forms, either to the contracting authority or another provider.

You should ensure that the procurement and contracting process considers not only how the ICT service will be implemented, but also decommissioned or handed-over at the end of the contract, clearly outlining supplier and contracting authority responsibilities and expectations. Easy contractual transfer between service providers will be significantly restricted if the information isn't held in a usable form that can be seamlessly transferred to another provider.

A significant factor in the specification and selection of systems and services should be the conformance with open standards and the ease of import and export of information in a way that retains the usability the business needs at the end of the technology or contract life.

2.5   Ensure your suppliers understand digital continuity

It is critical that your suppliers understand digital continuity, the business requirements that you need from your information, and are committed to managing it – not just contractually, but through a thorough understanding of what information they are responsible for, what the business needs, and how they will provide assurance that the information remains usable throughout the management of their services.

It can be helpful for suppliers to understand the wider context in which they are delivering their services, either as part of the contracting process or the ongoing relationship post-contract. If they know that the digital continuity of your information is a long term, strategic business objective, this will make it easier for them to ensure that their services meet your needs and will enable more meaningful and consistent dialogue and strengthened relationship between you during the lifespan of the contract.

Consider asking your supplier to nominate a 'supply side' Information Manager who can understand the client side issues and become an interface to their technical and contractual colleagues.

2.6   Test for continuity after changes in technology and service provision

You should plan for appropriate testing of your information for digital continuity after changes in technology and service provision to verify that the information is still usable. Ensure that requirements and responsibilities for this testing are reflected in your contracts. This will flag any problems early and provide ongoing assurance that you are effectively managing your digital continuity.

If the change is within a contract period, you need to identify who should be responsible for testing the usability of information after any changes assessed as potentially impacting on digital continuity. For example, the contactor could be responsible for testing, but with a mechanism agreed for the contracting authority to validate and assure the results.

At the start of a new contact, you could require the contractor to test for the continuity of the information covered by their service and obligate them to ensure its continuity throughout the contract term. However, it may be more cost-effective for you to test the continuity of the information, assuring that it is in a usable state, prior to commencement of a new contract. In this case it is likely that the contractor will be relieved of any usability obligations pre-dating the contract start.

2.7   Manage change within contracts using an IAR

Managing digital continuity within a contract term is also important, especially over long-term contracts, e.g. outsourcing of IT services for several years, where at least one technology refresh is expected. It is vital that both the contracting authority and contracted service provider clarify roles and responsibilities for managing aspects of digital continuity. A key responsibility is to assess the impact on digital continuity arising from changes during the contract. This obviously includes technology change, but may also include changes to how information is structured and organised, changes to policies and procedures, or changes to governance and management by either party.

> **Example of managing change within a contract**
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> The service provider plans a technical refresh, which includes an operating system upgrade. This means that some niche applications and their associated data will no longer be supported by their vendors. The service provider contractor should be responsible for identifying such digital continuity issues arising from the technical change, communicating and explaining them to the Authority and agreeing appropriate mitigations with the Authority prior to the upgrade.

An IAR (see section 3) can be particularly helpful to ensure your supplier understands what information they are responsible for, your usability requirements and to help ensure that the impact of changes with the contract period, on the digital continuity of the information can be effectively assessed.

> Use of an IAR in procurement is one key way that you can help to assure digital continuity both during the contract period, and most importantly, across multiple contracts for the life of the information.
>
> The rest of this guidance focuses on how you can use an IAR as a tool in your ICT service procurement, to help assure that digital continuity is retained through changes to technology and service provision.

3 Why do you need an Information Asset Register in ICT services procurement?

> **An information asset** is a body of information, defined and managed as a single unit so it can be understood, shared, protected and exploited effectively. Information assets have recognisable and manageable value, risk, content and lifecycles.
>
> An *Information Asset Register* (IAR) describes the information an organisation holds, what use is required from it, as well as technical information, such as file format.

When used in ICT services and contracts, the IAR refers to the specific assets which relate to the service and are held by the service provider.

Establishing an IAR enables all parties to maintain a shared understanding of the information, and its required business use, clarifying responsibilities and allowing better management of change. In other words, the IAR helps to ensure that you continue to have appropriate access to, and usability from, your information assets for the duration of the contract, as well as post contract.

Used in conjunction with an Output Based Specification (OBS), an IAR can be used to ensure that contractors understand and support the usability required from your information. It is intended to **protect both the Authority and the Contractor** by forming part of a clear scope of works and defining responsibilities.

3.1 What is the role of an IAR in procurement?

The IAR is prepared by the Authority and defines and describes the information assets and their usability requirements, in the way that is relevant to the organisation in the context of their long term digital continuity needs.

The relevant sections of the IAR are provided to the bidders as part of the bidding process. The IAR sits outside the contract, but is referenced by it, and the contractor has an obligation to maintain the register and return at the end of the term.

An OBS should include the need to preserve the usability of information relevant to services covered by the contract, with the IAR providing the detail of what usability means in more detail. The risk of maintaining this usability for the duration of the contract then lies with the contractor.

There is therefore an obligation on the contractor (using the IAR) to identify any circumstances where a proposed change to the solution/contract could negatively impact the usability of the information. Once such situations are identified, it is for the Authority to decide on how to proceed to mitigate the potential impact, in consultation with the contractor.

Note: The IAR described in this guidance is one required to facilitate procurement and to manage change in an ICT Services contract. It may form a sub-set of a more comprehensive organisation-wide IAR which your organisation holds (beyond the contractual context, the Authority may want to maintain additional information, for instance on other information assets, information value, disposal schedules etc.). You should consult your information management team, or Chief Executive Officer, and wherever possible work with the resources and records they already have available to build your IAR. It is vital that if there are multiple IARs in an organisation they are all consistent. This way, the resource impact of including and maintaining an IAR in your procurement will also be minimised.

3.2   What are the benefits of using an IAR?

Using the IAR during procurement and management of ICT Services can help you to:

- form part of an OBS, showing what information assets a contractor will be expected to support and in what way, ensuring clarity and understanding between both parties
- design a service that fully meets usability requirements for information and takes into account any legacy technology issues
- identify potential digital continuity issues, and agree on issue resolutions during solution design phase rather than relying on more expensive and risky post-contract change control
- identify and eliminate redundant data, leading to cost and process savings
- identify redundant licensing, leading to cost savings
- identify alternative file formats options which could affect software selection
- reduce the risk of digital continuity issues being introduced inadvertently by change through the life of the agreement

3.3   Who creates the IAR and who maintains it?

Once the ICT Services Contract is in place, and if the IAR guidance in the model contract is implemented, the IAR is then referenced from, but not included in, the contract, and will be maintained by the contractor. The ongoing maintenance of the IAR will need to be supported by staff within your organisation; the aim is to ensure business requirements are always documented as they change over time. It is your organisation's responsibility to make sure that the contractor is kept informed of any changes to the data within the IAR to enable them to update the document. For short-term contracts technical change may not take place at all.

For both long- and short-term contracts it is important that the IAR is up to date at time of contract completion, which is a significant point of change and therefore risk to digital continuity.

The IAR is referenced from the contract by:

- including it as one of the registers that the contractor is obliged to maintain
- specifying which information assets support and relate to each of the services within the service description

Our guidance *Identifying Information Assets and Business Requirements* will help you to:

- understand and identify information assets
- identify how you need to use your information
- document the relationships between business requirements and information assets

4   Using the IAR in ICT services procurement

The role of an IAR during ICT services procurement is to clearly define the information assets that the contractor will be expected to manage and return to the organisation as part of its service. As stated, this includes meeting your usability requirements, which in turn requires an understanding of your business needs.

An IAR can be used to help create part of the OBS, or be referenced by it. It will help provide an understanding of the data/information the contractor will receive and will form part of the handover on completion of the project. This detailed understanding will enable bidding suppliers to actively ensure that potential issues are identified, issue resolutions are agreed, and that the overall proposed solution is appropriate and proportionate to the contracting authority's needs.

4.1   Issue identification – solving problems before they start

The IAR will clearly identify all of the pre-existing information assets for which the new service provider will take responsibility. It needs to record the following information about the information assets:

- How they need to be used by the organisation
- Whether any of the assets are required in an ongoing capacity for another part of the organisation
- What must be provided to the contracting authority on completion of the project

This will enable a dialogue with bidding contractors to identify any existing or potential digital continuity issues in addition to other potential problems. During negotiation, solutions to any issues can be agreed pre-contract, avoiding the potential for unforeseen and possibly costly change mid-term.

4.2   Continuity through change

It is important to consider the long-term management of your digital information. In addition to the business benefits listed above, the use of an IAR is intrinsically linked with managing digital continuity, and will enable you to continue to use your information in the way you need, for as long as you need. Having a good understanding of the information a business holds and its usability requirements, and recording this information in an IAR, will help you to identify information that should be preserved, as well as that which is no longer needed.

The continuity of your digital information is most at risk during periods of change and you need to make sure you understand what information you have, and how to manage it through the transition. This change includes contract completion, when there may be staff and operational changes, but most importantly a high

likelihood of technical change, with information transferred from one technology solution to another and changing contractual obligations.

The IAR in the ICT services contract acts as a checklist of items to be assessed at times of change, such as beginnings and ends of contracts, to prevent digital continuity loss. The contractor needs to understand the consequences of technical environment or business change in relation to the information assets (either through an operational change procedure or a contract change procedure) and to make the authority aware of these consequences. The organisation and the supplier will have to work closely to ensure this takes place.

4.3   The IAR with a Service Description

An IAR with a Service Description can be used to ensure that digital information has been appropriately looked after and is in a state where it is useable, i.e. it can be found, opened, worked with, understood and trusted. This need to preserve usability, as defined in the IAR, can form part of the OBS.

The creation of the IAR and its association with the Services Description creates a clear baseline requirement, e.g. for end of project handover, which not only allows for the design of an appropriate system but also provides a valuable reference point against which future change can be assessed.

Example:

An organisation contracting for a new information management service specifies that 'certain regulatory requirements must be complied with, meaning that the organisation must be able to find quickly and produce specific information assets (IAR references IAR12 and IAR22) and demonstrate the integrity of the content (proving that it has not been altered)'.

The contractor can then determine the most appropriate and cost effective solution technical solution, and knows exactly what information assets this applies to and the usability it needs to maintain.

When a change in technology is proposed during the contract period, the Contractor and Authority can easily identify what information assets might be affected by the change, and assess the impact on their usability.

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5   Using the IAR in an existing ICT services contract

5.1   Changing the IAR

It will almost certainly be necessary, as time goes on, for the content of an IAR to change. It is important to note that the contract does not contain the detail of the file types, versions or systems that relate to each information asset; these will be contained in the IAR itself. Changes to the IAR will therefore take place under the Operational Change Procedure, unless such a proposed change would require a change to the agreement.

Any change in the association of information assets to service outcome would require a contract change, as with the case any change to an OBS.

5.2   Detailing responsibilities

The model contract contains several clauses which detail rights or responsibilities in relation to the IAR. In summary they are as follows:

- The contractor is obliged to ensure that the IAR is maintained
- Any changes to the IAR should go through the Operational Change Procedure or the Contract Change Procedure
- All changes which go through the Operational Change Procedure or the Contract Change Procedure will explicitly address the impact on the IAR
- The Authority has the right to audit the IAR for completeness and accuracy