2016 update.

NIFO Factsheet – United Kingdom

In the United Kingdom, the main source for interoperability related matter is:

- UK Government Transformation Strategy (published February 2017);
- UK ICT strategy resources: https://www.gov.uk/government/collections/ict-strategy-resources
- The Standards Hub: http://standards.data.gov.uk/

Main interoperability highlights

United Kingdom has developed a Government ICT Strategy[1]. The UK government technology strategy is expressed in policy and guidance on GOV.UK, the single website for civil servants and citizens to find services and information. The overarching strategy setting out how the government will use digital to transform the relationship between the citizen and the state was published on 9 February 2017.

The Technology Code of Practice lists 14 guidelines that government organisations must follow when designing, building and buying technology. The second guideline is dedicated to interoperability, requiring organisations to 'promote the exchange of systems and information and build flexibility into their technology'. Government users are explicitly prompted to use open standards, clarify what data their systems will hold, avoiding data duplication, and consider the use of RESTful APIs for integration. There is additional guidance for each of the points in the Technology Code of Practice to advise government organisations exactly how to meet the criteria.

In addition, the Digital Service Standard is a set of 18 criteria that all public facing transactional services must meet. It's used by departments and the Government Digital Service (GDS) to check whether a service is good enough for public use, and has been built in such a way that promotes flexibility and interoperability.

The Service Manual provides guidance specifically for service teams across government to achieve the level of interoperability required by the Digital Service Standard.

Alongside the Service Manual, a complementary Service Toolkit collates all this guidance, as well as common patterns and tools built and maintained by the Government Digital Service. By sharing patterns and tools, government users are suitably equipped to create consistent, component-based services.

As well as front-end code and design patterns, the Service Toolkit also includes information about Government as a Platform (GaaP), a common core infrastructure of shared digital systems, technology and processes on which it's easy to build user-centric government services.

GaaP includes:

- GOV.UK Pay - to process payments online

[1] See: https://www.gov.uk/government/publications/uk-government-ict-strategy-resources

- GOV.UK Verify - to prove a user's identity online
- GOV.UK Notify - to send emails and text messages to users
- GOV.UK Platform as a Service - to deploy and host applications
- Registers - to get accurate and up-to-date data

Service teams across the UK government are encouraged to use and share these common technology components, and must justify alternatives if they choose other technology. As set out in the transformation strategy, the government will make sure government buildings have common, interoperable technology.

Common Technology Services (CTS), part of GDS helps government departments and agencies move more quickly to adopt modern IT. As well as providing cross government IT solutions such as wifi and printing, CTS also provides guidance on:

- applications (cloud based email, document and records management)
- end user computing (end user devices, operating systems and printing)
- hosting
- identity and integration (user account management)
- networks (internet connectivity, wireless and wired networks)
- service management (service desk, alerting, reporting, and monitoring)

As part of the government ICT strategy the UK has published several policy papers, including:

- Government ICT strategy strategic implementation plan[2];
- ICT sub strategies[3];
- Information principles for the UK public sector[4];
- Concept model for the UK public sector[5]

In addition, the government published four strategies covering G-Cloud, end-user services, ICT capability and green government ICT that together aim to "radically transform the ICT landscape to create a more productive, flexible workforce that delivers digital public services in a much more cost effective way."[6] To enable delivery of interoperable and open ICT solutions so that they can be shared and reused, providing common language, terms and descriptions to identify common areas of business, data, application and technologies the Government has published the UK government ICT reference architecture (UKRA)7 containing the Business Reference Model, Information Reference Model, Application Reference Model and Technical Reference Model as well as component descriptions.

[2] See: https://www.gov.uk/government/publications/government-ict-strategy-strategic-implementation-plan
[3] See: https://www.gov.uk/government/publications/ict-sub-strategies-minister-for-the-cabinet-office-foreword
[4] See: https://www.gov.uk/government/publications/information-principles-for-the-uk-public-sector
[5] See: https://www.gov.uk/government/publications/concept-model-for-the-uk-public-sector
[6] See: https://www.gov.uk/government/collections/ict-strategy-resources
[7] See: http://www.ukceb.org/RWFilePub.php?&cat=195&dx=1&ob=3&rpn=catviewleafpublic195&id=105485

The Open Standards Board and Standards Hub exist to evaluate and approve open standards for government IT. The process aims to bring together policy priorities with existing public sector data standard groups and the wider open data community. Once approved, standards are shared across government. For example, the Standards Board selected ODF as the default document standard.

Other initiatives on interoperability

In February 2016, GOV.UK Pay, was introduced to provide a single form of payment, regardless of what government service the user is connected to. The platform has the double objective of being a simple and easy online payment method, together with making possible for the user to receive refunds more quickly.

"GOV.UK Verify tool", a service acting as the central government's official verification tool, was launched in May 2016. Through a simple and standardised way to authenticate (950.000 individual personal accounts have been verified until now), it provides connection to government services in order to complete transactions.

A new digital platform supporting the delivery of digital public services with the release of GOV.UK Notify has been unveiled by the Government Digital Service (GDS) in June 2016. This allows to give automatic updates and reminders on the status of current service delivery (e.g. loans, lasting power of attorney, passports and voter registration).

In 2015, the Cabinet Office of the UK government has published the technical architecture approach[8]It is about using a logical approach and user-centred design to plan the structure of technology systems. Sections include dealing with legacy systems and integration, as well as standards compliance.

Data.gov.uk provides access to datasets from the public administration. The portal is currently making about 42.000 datasets available (http://data.gov.uk/data/search), the double compared to 2015. The sets are also accessible via ODIP (https://data.europa.eu/euodp/en/data), the pan-European single point of access to European datasets. Over 400 applications (http://data.gov.uk/apps) are reusing one or more datasets that are available on the portal.

GDS is leading the register projects. Each register is a canonical source of open data that is of high enough quality to build services on. So far GDS has launched registers for countries, territories, local authorities and schools, with many more in the pipeline.

Better management of open government data will improve experiences for end users (those working in policy, service teams and the private and civil society sectors). Data will be easier to find and use, and will be available in consistent structures and formats.

[8] https://www.gov.uk/guidance/digital-and-technology-skills/technical-architecture

Citizens can also be assured that government stores and processes data in a secure way, protecting them from misuse and fraud.

The Standards Hub aims at involving stakeholders in the process for prioritising and helping to select open standards for Government IT. The Standards Hub objects to choose a small set of core standards that are to be applied consistently across the UK government to make services better for users and to keep costs down. The process aims to bring together policy priorities with existing public sector data standards groups, whilst also broadening engagement to leverage the abilities of a wider "crowd" from the data standards community.

The process is designed to be modular and scalable, and thus able to cope with both rapid adoption of "obvious" existing standards but also to support complex long-term developments where necessary. It is end-to-end, as it is essential that it has the ability to see standards through to implementation across the public sector. Finally it is driven by the issuing of "challenges" which are used to give focus and momentum to the engagement activity.

The participants in the process are:

- **Users:** Including people from businesses, academic institutions, charities, non-for-profit organisations and government bodies. Users are involved at each phase of the selection and implementation of open standards for government IT.
- **Government technology officials:** A group of government technology officials seek user needs-based challenges that open standards might help to resolve. They agree on working on a set of challenges and making sure that there is a challenge owner in place, with sufficient resource to lead the work through to completion.
- **Challenge owners:** suggested by the group of government technology officials and appointed by the Office of the Chief Technology Officer. Challenge owners lead the work to develop proposals and standards profiles in response to challenges. They work closely with and take recommendations to and from a standards panel.
- **Open Standards Board**: A senior level board with the mandate to approve standards and drive adoption.
- **Standards Panels**: Bodies with the ability to undertake standards development work.

The steps in the process are:

- **Suggestions phase**: what challenges users of government services face that open standards can help to fix. The first stage of this is asking for suggestions on what they are. Assess your suggestions as they come in and look at the benefits that these might deliver: Where does government need to use open standards and why?
- **Challenge phase**: A challenge is created. Appointment of a senior owner to act as a champion for the challenge. They will be responsible for leading the development of proposals. The challenges are published on the site for comment, specifically to ask: Which standards or approaches would help government to address each challenge?
- **Proposal phase**: The challenge owner will use the comments from the challenge phase to create proposals for each challenge. There might be more than one proposal. These are pub-

lished for further comment: Which of these proposals will work best, or is there an alternate proposal we should consider?

- **Assessment/evaluation/decision phase**: Once gone through this process, the challenge owner will select one proposal to submit to the Open Standards Board. The Board will make the final decision on proposals, which will be published on the website as adopted standards.
- **Implementation phase**: Once standards have been adopted, implementation is tracked. The Standards Hub will encourage people to report when adopted standards are not being used or when there are issues with adopted standards on the Standards Hub.

The Digital Marketplace helps the public sector buy what it needs to deliver digital services. All public sector organisations can use the Digital Marketplace to find and buy cloud-based services, physical data centre space and specialists (including developers, designers, user researchers) who can work on digital projects.

The Digital Marketplace gives government buyers access to 3,974 suppliers across the UK, 92% of which are small and medium sized businesses (SMEs). The government has spent over £1.7 billion through the Digital Marketplace to December 2016, 56% of which has gone to SMEs. The Digital Marketplace has already exceeded the UK government's target to spend £1 in every £3 with SMEs by 2020.

UK is continually improving the buying process for all public sector organisations by applying user-centred principles to the design of procurements and contracts. The bigger vision is to completely transform how government buying and selling works to make the process better for both buyers and suppliers.

An example of the choice of a standard is ODF as default document standard.

- See: https://joinup.ec.europa.eu/community/osor/news/uk-government-makes-open-document-format-default
- See also: https://joinup.ec.europa.eu/news/setting-open-standards-document-formats-uk-using-camss-approach
- In March 2015, the Cabinet Office has published an ODF Guidance (https://www.gov.uk/government/collections/open-document-format-odf-guidance) and is supporting and monitoring the adoption of ODF in the public administrations – see an example of implementation plan at the Customs and Revenue (https://www.gov.uk/government/publications/hmrcs-plan-for-implementing-open-standards-for-documents).

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