Food Standards Agency

ICT Strategy

Discovery Report v1.1

March 2016

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Executive Summary

A Discovery Phase has been conducted that has highlighted current issues and evaluated the Food Standards Agency's (FSA) capability to address upcoming challenges.

We have found that the existing arrangement for provision of service was **'of its time'** and that the contract was not let optimally: it **is static rather than dynamic** and has lead to the existence of **technical debt**. Current **user needs are not fully met** and there is little scope to consider future user needs.

Consistent with other comparable organisations using similar constructs, **the current cost profile is no longer competitive** in the current market and there are real **opportunities for savings** to be made through disaggregation.

The services provided by and the relationship with, Capita are well established and working well. There has been **recent improvement in service** (over the last 2 years) and **service levels are good**, however these Service Level Agreements **(SLAs) are no longer reflective of the service required** by FSA. The ongoing work to reprioritise the SLAs is expected to achieve additional improvement.

The current market is characterised by significant innovation and pace of change with new tools/services being launched on a regular basis and existing tools/services benefitting from improvement regularly. Current arrangements do not support the adoption of innovative tools, the need for which is likely to increase through the implementation of the FSA Strategy. Consequently, **FSA requires an architecture that best enables them benefit from innovation in new technologies.**

Such an approach will require a greater amount of control and FSA needs to take steps to **regain control through increasing capability in-house** whilst setting itself up to manage multiple suppliers. As the contract comes to an end, IT services not provided by Capita are brought under a shared governance arrangement, and new suppliers are on boarded, this needs to be carefully managed.

Information management and data exploitation are becoming increasingly important for FSA as demonstrated by the programme to make open FSA data. The existing approach to data is problematic and results in **an inability to make decisions based on insight from data**. As the FSA Strategy **develops it is going to be vital to have good quality data**, an architecture that makes that **data accessible** to the right people and **tools that enable that data to be analysed**. Getting good insight from data and taking the right action as a result will turn data into an asset.

We have produced a high level IT Strategy designed to address these issues and enable the FSA to transform itself to **better meet the needs of both the user and the business** in the context of the development of the Future Delivery Model.

A modern IT Strategy does not describe in fine detail the plan for the next 3-5 year period. Such an IT Strategy would not be fit for purpose for any organisation, let alone one in the process of fundamentally transforming its operating model. Instead, this IT Strategy outlines how to set up to benefit from evolving technology and how to adapt to changing business priorities. It should be considered a dynamic document so that it can needs to adapt to changing circumstances.

At each evolution of the strategy the following must be considered:

- the maturity of the user roles and their key needs

- what is available to buy and what needs to be built to meet needs
- whether time and attention is focused on areas to achieve the greatest benefit i.e. “high value and novel and new”

The IT strategy outlines a need to urgently:

- understand user needs: both now and in the future
- use those user needs to design future services
- stabilize network issues through the existing contractual vehicle
- commence disaggregation with commodity, Cloud based services where value chain mapping has shown them to be agnostic of future strategy related changes
- establish good quality data whilst a clear strategy and approach to data is devised

There is a clear need for fundamental change, **commencing immediately** and **delivered iteratively based on user needs**, in order for capability to increase over time and for trust to be restored between the business and IT function.

With the Capita contract expiring in February 2017 (with the ability to extend for 12 months beyond that point) **work needs to start now** to pave the way for service transition and to set up the architecture to support the anticipated large amount of business transformation expected over the course of the next year.

Transformation needs to **commence now** to pave the way for the delivery of the FSA Strategy and transition away from the current contract

Adopt **iterative delivery based on user needs** to embed new approach, build capability, restore confidence and deliver services that enable users to excel

Savings from disaggregation can be used to fund the transformation

Regain control through **increasing in-house capability** with out-tasked activities and services

Report Overview

Background

This Discovery phase was conducted at a time when the Food Standards Agency is experiencing a period of change that will have far reaching implications for its usage of ICT services. The drivers of these changes include:

- planning and mobilisation to deliver the FSA Strategy
- fast pace of change within the ICT market in terms of new technology and the commoditisation of many services
- proximity of the expiry point of the FSA's ICT contract with Capita in January 2017
- increasing need to support flexible working, in part driven by the upcoming end of lease for a number of buildings in the Agency's estate and Government estates rationalisation
- disruptive change pressures such as digitisation, civil service reform and austerity
- wider Cabinet Office sponsored policies relating to how ICT is procured and managed e.g. disaggregation

Current State Summary

Through our analysis, 3 key issues have been identified:

- Frustrated users
- Data does not enable insightful decision-making
- Obsolete / ageing estate

Users are frustrated

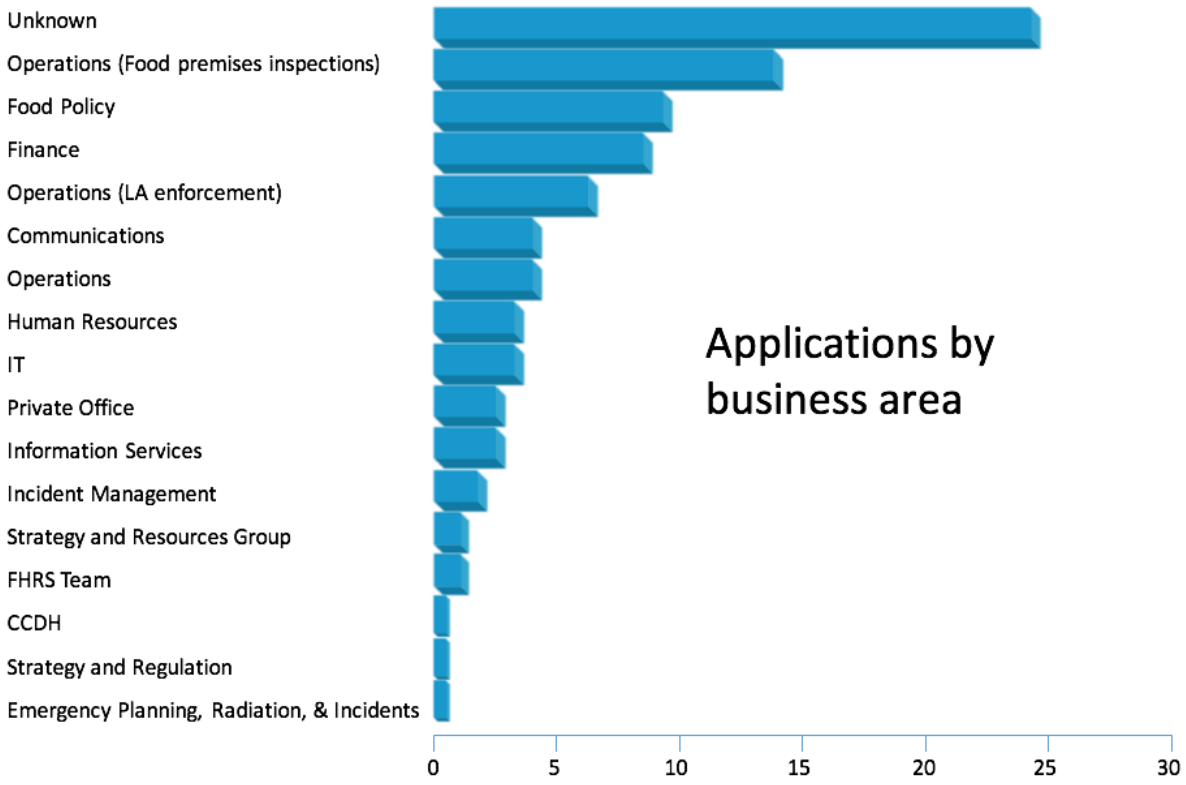
Users, who receive an adequate service, are **frustrated that they could be more effective**. IT is not very flexible and has a poor reputation. As a function of the legacy split between MHS and FSA infrastructure and network, some staff remain disconnected from PSN **causing serious frustrations when attempting to source data from multiple cross-network systems**. There is also **a lack of a compelling mobile working solution**, suitable for all of the FSA workforce.

Data does not enable insightful decision making

The **data collected is of limited value to business decision making**. Information Management is a significant challenge within FSA: the data collected has unclear value, variable quality (from poor to excellent), and the responsibility for collection and dissemination has defaulted to FSA when that is not necessarily required / appropriate.

Data quality can be poor as:

- data is often transcribed from other sources, leading to inaccuracies
- quality of the data has not been explicitly managed
- there are challenges with combining data from multiple sources
- ownership and accountability is unclear (although steps are being undertaken to improve this) as highlighted by the chart below



Notable concerns from this analysis include the volume of applications without clear ownership and the sheer proliferation of ownership where owners could be identified.

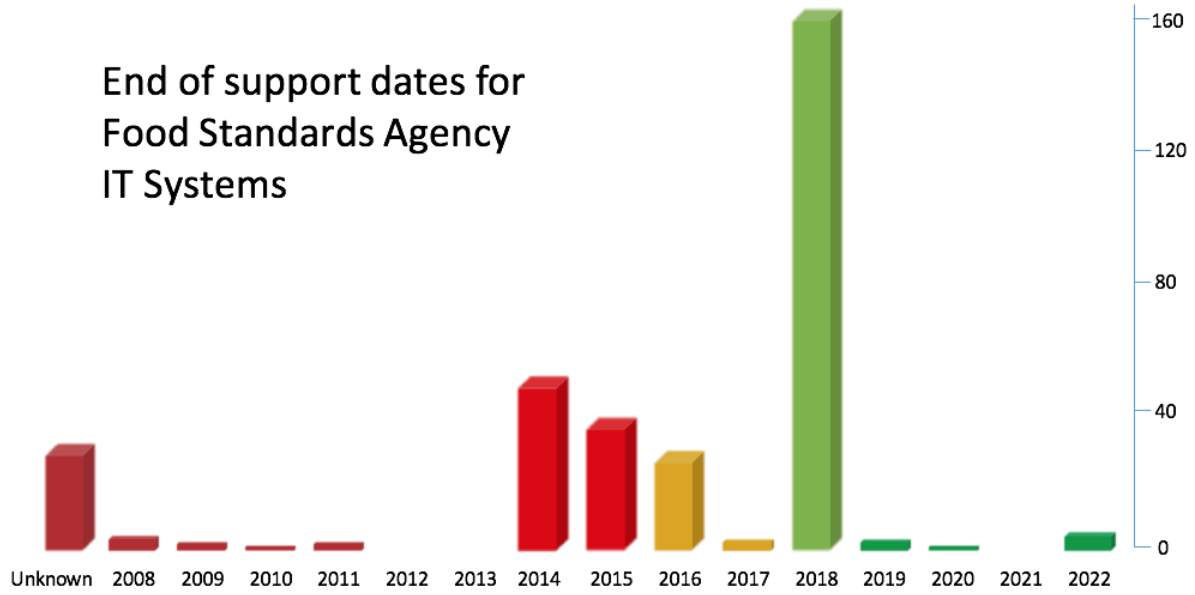
As a result of these issues, data is not trusted, which has lead to a reluctance to share data. There are also issues with disaggregated datasets which are held in multiple locations: providing access to these locations to parties has been problematic.

The current data approach does not meet current business needs let alone the needs of an organisation that has a vision of using science, evidence and information to tackle the challenges of today and to contribute to addressing emerging risks for the future.

Obsolete / ageing estate

The existing estate is rapidly ageing and becoming obsolete. There is also an increasing misalignment with business and user needs resulting in an increasing amount of **technical debt**.

The IT estate hasn't been effectively managed, leading to the high number of components that have not been maintained. The figure below illustrates how an under-managed estate has led to much of it either being out of support, or with an imminent requirement for upgrade to keep it in support:



This chart clearly shows:

- A lack of control (through the volume of unknowns)
- A degree of stagnation and lack of pro-activity (though the volume out of support)
- A number about to go out of support
- A significant number due to go out of support immediately after the end of the Capita contract

The IT function is currently working with the IT outsource supplier to reduce the number of applications and to bring them onto supported platforms. Good progress has been made, but this has predominantly been technology led - identifying the age of servers and operating systems, and updating them, while retiring any obviously unused applications. Further activity is now required to review the applications as part of the transformation approach.

Root Causes

Over recent years, the technology approach for the FSA has been consistent with other Government and non-Government strategies to outsource the design and delivery of IT solutions in the form of long running and end-to-end contracts: it is fair to say that the contract with Capita was **'of its time'** and this report is not critical of that per se. However, **such an arrangement is no longer appropriate** for a forward thinking department in the process of fundamentally changing its operating model through the implementation of the FSA Strategy.

There have been **recent improvements** (over the last 2 years) and **service levels are good**, however these Service Level Agreements **(SLAs) are no longer reflective** of the service required by FSA. The ongoing work to reprioritize the SLAs is expected to achieve additional improvement.

The fundamental root cause of the current issues is the sub optimal letting of the contract with Capita which did not encourage continuous development and improvement in FSA's IT: it was **static not dynamic**. Emphasis was placed on managing the existing estate rather than developing it and improving it in line with user and business needs. There tends to be a tight coupling between the application and the hosting arrangements leaving little flexibility to change suppliers and take

advantage of better pricing. As a function of siloed application commissioning and **a lack of an overall strategy** there is little awareness of how the application fits into wider FSA needs and IT architecture. It is typical for data in these applications not to be shared and for functionality to be duplicated. These disparate applications are then handed to IT who support the application, again in isolation.

As a result, when changes have been requested, both the cost and timeframe has been prohibitive and the estate has stagnated and proliferated through shadow IT.

Additionally, too much of the key thinking was outsourced and insufficient knowledge was left in-house. FSA's role has been largely focused on defining and managing the performance of suppliers to deliver services to the business **to the detriment of technical knowledge and control**. As a result of the loss of technical knowledge, the FSA has surrendered the ability to both understand user needs and design solutions that can be delivered quickly and iteratively and there has been a lack of IT Strategy and governance.

The **business has gradually lost confidence** and trust in IT and this has given rise to **locally sourced applications** and infrastructures that neither provide cost effective solutions nor facilitates efforts to create a joined-up FSA or FSA join-up with partner organisations.

With this proliferation of IT has come a **dilution of control** and confusion over roles and responsibilities, leading to inflated costs (in some areas), **ageing/obsolete systems** and platforms, a **lack of collaboration** and lack of standardisation between business units, inflexibility and duplication.

Future IT Strategy

A modern IT Strategy does not describe in fine detail the plan for the next 3-5 year period. Such an IT Strategy would not be fit for purpose for any organisation, let alone one in the process of fundamentally transforming its operating model. Instead, an effective IT Strategy outlines how to set up to benefit from evolving technology and how to adapt to changing business priorities. It is not a static document - it needs to be dynamic and adapt to changing circumstances.

There are four key conclusions:

1. A new IT operating model is required
2. A new delivery approach is required
3. There are opportunities for savings through disaggregation
4. Insight from quality data is crucial to future effectiveness

A new IT operating model is required

The current market is characterised by significant innovation and pace of change with new tools/services being launched on a regular basis and existing tools/services benefitting from improvement regularly. This is expected to continue and consequently FSA requires an IT Strategy and architecture that best enables them to benefit from this. Current arrangements do not support the adoption of innovative tools, a need which is likely to increase through the implementation of the FSA Strategy.

Having considered the FSA current state issues, the latest guidance and evaluated the approaches being undertaken by other public sector organisations, a clear recommendation of this report is for

FSA to move towards an **in-House Led approach**. In this approach, key design and overall solution ownership is retained in house. From that point, the **outsourcing/out-tasking of mature commodity services is encouraged** with in-house specification and design of services recommended for the 'new and novel' based on value chain mapping. Given the starting point for FSA (where a significant amount of ICT knowledge and experience has been outsourced to Capita), **a phased approach is recommended**, enabling the Agency to 'learn as they go'.

Recommendation:
Move towards an in house led approach through a phased set of projects delivering demonstrable value and facilitating an increase in capability over time

A new delivery approach is required

Key challenges with the existing approach include lack of understanding of user needs, inflexible IT which is slow and expensive to change and a loss of trust between the business and IT.

In order to resolve these issues a new delivery approach is required which:

- Begins with the users to inform the right solutions
- Allows data to drive key decisions (more on this later)
- Starts small, with minimum viable products, tests those solutions and iterates them based on user feedback and engagement

Such an approach will allow FSA to learn as they go and build capability over time. It will also begin to restore the relationship between business and IT.

The best way to launch this new approach is to start with an exemplar project in order to demonstrate effectiveness and restore confidence over time.

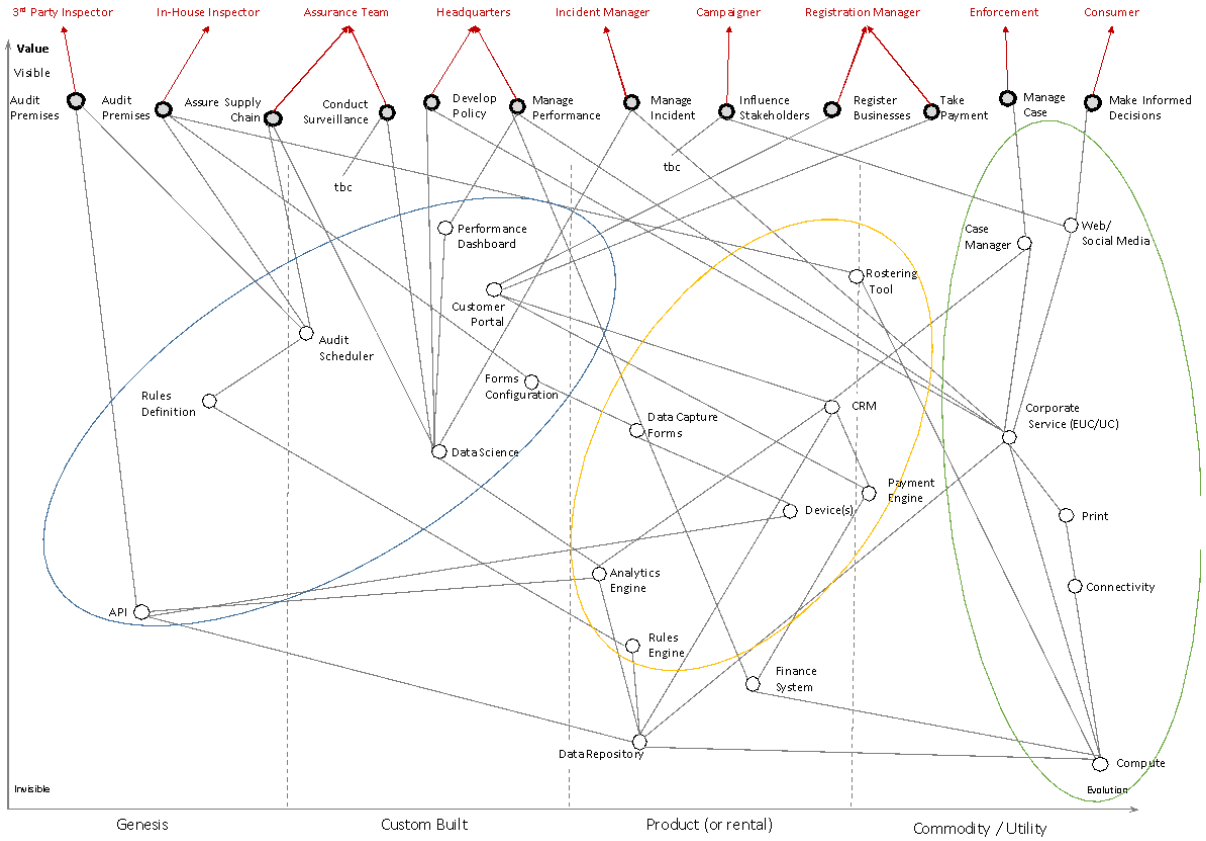
Recommendation:
Use the EUC project to act as an exemplar to launch a new delivery approach at FSA

Opportunities for savings through disaggregation

The costs paid by FSA for the provision of this service are commensurate with those paid by other Government departments (specifically MoJ, MoD, BIS) for comparable services (source: Cabinet Office Enabling Strategy: Common Technical Services Programme Business Case v1.0). However, this cost profile is no longer competitive in the current market and **there are real opportunities for savings to be made through disaggregation**. Our high level analysis suggests that **savings in excess of 20% are achievable**.

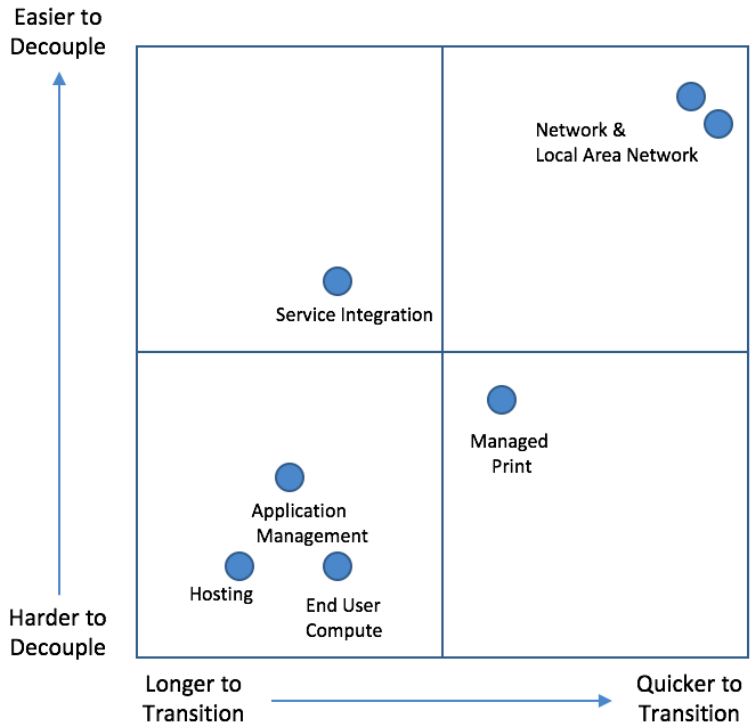
Our Wardley Mapping value chain analysis has identified 3 distinct categories of service:

1. existing services - commodity
2. new services - product / commodity
3. new services - genesis / custom



Existing services have been evaluated against the following criteria and mapped onto a simple matrix:

- **Time to Transition:** how quickly can the service be transitioned or rolled out
- **Ability to Decouple:** how easily can the technology can be decoupled from the wider Capita service



From this analysis the obvious candidates to commence disaggregation and support the 'learn as you go' approach are network and local area network: WAN and LAN.

However, given the complexities involved with network as a result of the merger with Meat Hygiene Service, the recommendation is to **utilise the existing contract vehicle to simplify this area in advance of disaggregation**. These remain strong candidates for early disaggregation for reasons of simplicity and financial benefit: benchmarking against other Government departments suggest that there are significant financial benefits associated with disaggregation of WAN and LAN.

Recommendation:
Commence early disaggregation from the Capita contract those services in the existing - commodity category.
For new services - product / commodity category, commence service development with new suppliers. These are the services deemed to be agnostic of changes to the FSA Future Delivery Model.

End User Compute is another strong candidate to commence the disaggregation path. Although more challenging to decouple, the duration to transition is a determining factor even with a potential 12month extension to the existing Capita contract. The **key first step here is to capture the user needs** in order to inform **a proof of concept** to evaluate different approaches, such as evaluating the implications of moving away from the existing Microsoft based infrastructure. This is also a good opportunity to establish clear dependencies between EUC and LAN.

Recommendation:

Network, local area network and EUC are the best candidate areas to commence the path to disaggregation

Insight from quality data is crucial to future effectiveness

As stated in the current state assessment section, there are a number of data issues at FSA and a number of steps that can be taken to improve this position to turn data into an asset that enables FSA to use science, evidence and information effectively and to become insight-led. Regaining control over the content, structure, and quality of data will support the FSA strategy of making data available to others through its open data policy.

There are already actions in place to undertake a data asset assessment and asset owners are being made responsible for confirming the value and need for data.

FSA must be strong here and make a clean break away from capturing information for the sake of it. Indeed, for the future design approach to work there must be steps taken to improve existing data quality.

Recommendation:
Continue efforts to assess the value and need for data; extending to improving data quality in readiness for an insight-led future

In parallel with the initiative to improve data quality, a more holistic approach to data is required to determine what should be collected, by whom, how, and who should access it. Tooling will also be required to enable that data to be analysed and interrogated in order for insight to be derived and decision-making to be improved. The following principles need to be applied in future:

- new services / systems / applications need to be designed with data in mind
- data needs will be dynamic in the future and the architecture should be flexible enough to incorporate this need
- data needs to be open (with appropriate security) and shared / accessible:
    - across FSA
    - with FSA partners
    - with other government departments
    - with industry
- FSA needs access to data but that doesn't necessarily mean that FSA needs to capture and store that data
- FSA needs the ability to explore / analyse / interrogate this data
- data needs to be current / recent so FSA can 'operate in the now'
- data needs to enable insight-lead decision-making: better data leads to better decisions

Recommendation:
Establish a clear data strategy and incorporate that strategy into future service design

Summary of recommendations

No.	Recommendation
1	Move towards an in house led approach through a phased set of projects delivering demonstrable value and facilitating an increase in capability over time

2	Use the EUC project to act as an exemplar to launch a new delivery approach at FSA
3	Commence early disaggregation from the Capita contract those services in the existing - commodity category. For new services - product / commodity category, commence service development with new suppliers. These are the services deemed to be agnostic of changes to the FSA Future Delivery Model.
4	Network, local area network and EUC are the best candidate areas to commence the path to disaggregation
5	Continue efforts to assess the value and need for data; extending to improving data quality in readiness for an insight-led future
6	Establish a clear data strategy and incorporate that strategy into future service design

A glimpse of the future

The vision outlined below is the target IT state over a five year period. It is not the intention that all these are achieved in the final year of the Capita contract. We envisage an IT estate in which:

- The number of mission systems has been **rationalised to remove duplication**. In place of monolithic systems, **services are developed from components**, each with open APIs enabling **rapid integration** and **functional iteration**.
- Corporate systems are **managed on a service basis**, with **clear responsibility boundaries between the components**. Where possible, services are obtained from the market as **commodities**.
- In terms of platforms / common components, where **commodity and shared services** provide sufficient functionality for the business needs, they should be used. Only where additional or non standard functionality is needed should bespoke solutions be investigated.
- Hosting is delivered by the most appropriate provider for the service in question. Consolidation where appropriate, but **applications designed to be agnostic** of the underlying provider to give **flexibility**.
- Combined directory, **federated** with hosting providers to give **access control** and **single sign on** across all applications and services.
- The EUC solution is selected according to the **user need** and iterated as those needs change over time
- **Single** central network with applications hosted according to **security needs**. Flexible access to and **flow of information** around the FSA, subject to access controls, not network limitations.
- Data is a **captured/accessed based on value** to the organisation and is considered a corporate asset. Data is accessible and capable of being interrogated with analytics tools to produce meaningful insight

Next Steps

There are a number of next steps which are required, specifically:

- Develop a Plan for the unbundling of the Capita contract
- Develop the Business Case for the extension of the contract and provision of the other IT services
- Identification of and development/sourcing of the future skills required to deliver the new IT services

- Prioritisation of the development new applications/services
- Identification of technology solutions through evaluation of the market generally, identification and enabling re-use opportunities from other Government Departments/GDS
- Leading and oversight of the rationalisation of the governance and management of all IT across the FSA
- Working through Capita and other suppliers, delivery of a range of technology refresh and network projects
- Technology architecture and design services for assurance of proposed technology solutions
- Iteration of the HL IT Strategy
- Maintenance of the Wardley Map
- Definition of the procurement approach to disaggregation
- Establishment of exemplar delivery: End User Compute
    - Capture user needs
    - Establishment of Proof of Concept for End User Compute (incorporating evaluation of alternatives to Microsoft based provision)
    - Identification of short term fixes that can be effected through the existing contract
- Lay foundations for disaggregation
    - Manage the delivery (by Capita) of the central network simplification project
    - Manage the delivery (by Capita) of the plant access network simplification project
    - Commencement of procurement for the disaggregation of WAN and LAN
- Data Discovery Phase
    - open data discovery
    - data needs & applications assessment discovery
- In parallel, other projects should be evaluated against the defined criteria, including:
    - OWOW support
    - website replacement / platform
    - Capita innovation projects

Outcome

This approach will begin to deliver a future where:

- ICT solutions are provided and maintained based on user and business needs
    - Requirements are user lead
    - development is iterative
- Internal capability is improved through an in-house lead approach
    - design decisions are made in house
    - the most effort is applied to areas of the greatest benefit to FSA
    - commodity solutions are used where they deliver the user needs and bespoke solutions fill in where those needs cannot be met by standard products
    - the business and IT work in partnership to define and design appropriate solutions
    - proactive management of the estate is de facto
- Data is sourced to support key business activity through the provision of insight
    - information is a corporate asset that is shared throughout FSA

There is a real need for change at FSA and the most appropriate route to delivery that change is contained herein.