ABERDEEN CITY COUNCIL

COMMITTEE	Finance Policy & Resources
DATE	23rd April 2015
DIRECTOR	Ewan Sutherland (Acting)
TITLE OF REPORT	Data Centre Provision
REPORT NUMBER	CG/15/24
CHECKLIST COMPLETED	Yes

1. PURPOSE OF REPORT

This report seeks to request committee approval regarding the provision of Data Centre facilities to ensure continuity of ICT Services at the end of the current Managed Data Centre contract in January 2016.

2. RECOMMENDATION(S)

It is recommended that Committee

(i) approve the intention to enter into an arrangement with Aberdeenshire Council for the provision of joint data centre services.

(ii) approve tendering through appropriate frameworks for datacentre facilities and related infrastructure hardware and management software.

(iii) note that expenditure will be contained within the Capital Budget approved for this project by Council on 5 February 2015.

3. FINANCIAL IMPLICATIONS

The capital funding agreed by Aberdeen City Council to facilitate data centre requirements is £2.5M for financial year 2015/16 and £0.5M for financial year 2016/17. Expenditure will be contained within these capitals budgets approved by Council on 5 February for this project. Revenue of £1.7M is committed within the ICT supplies and services budget for the funding for the current managed service contract. This revenue will continue to be available for the provision of the hardware

maintenance and support and software licensing required to manage the data centre facility.

The estimated total 5 year costs associated with Option 3, the preferred option, amount to £7.2M.The costs of the preferred option compare favourably with those relating to the current managed service arrangement. The contract with Atos was signed on 30th September 2010 with total payments made to date amounting to £10.9M, consisting of £7.2M revenue and £3.7M capital costs. If we continued with an Atos type arrangements costs would be likely to see further uplifts to make it commercially viable.

4. OTHER IMPLICATIONS

Property implications

If the recommended option (Option 3) is pursued there are no long term property implications. There may be short term property implications if the transition from our current supplier to a new provider requires some time limited data centre facilities. These could potentially be provided from the ground floor of the Council's Frederick Street building. It is likely that the main communications room in Marischal College would be included as part of the solution.

If an option to use council premises were supported (i.e. Option 1 or Option 2), there would be significant property implications, both in terms of works and maintenance.

Staffing Implications

For the recommended option noted in this report there are implications for staffing. A shared data centre facility would require additional staff to manage the operation of the data centre. There will be TUPE implications for the transfer of staff from the current supplier, which will be finalised during the formal transition period.

Cloud Computing

Principle 3 of the national Data Centre Strategy states that cloud computing is considered and a shift to the cloud takes place when this is the most cost-effective option. The use of cloud should be considered first as organisations address the need to provide greater continuity and disaster recovery capabilities.
While we are not yet in a position to move all of our systems completely to the cloud the intended solution will allow for flexibility to move applications and services to the cloud as and when appropriate to do so.

Cloud services will therefore be adopted where at all possible as and when they become available, subject to assessment and mitigation of risks.

Procurement Implications

A procurement strategy has been developed with the joint procurement unit which entails the use of a framework agreement. A framework agreement is an 'umbrella agreement' that sets out the terms relating to price, quality and quantity under which individual contracts can be made throughout the period of the agreement.

A framework agreement for the provision of data centre hosting services is currently being prepared by the Scottish Government with an intended live date of April 2015. Contractors on the framework will provide Cloud Services including Private Cloud, Public Cloud and Co-location services. This framework is intended to facilitate the proposed joint Aberdeen City/Aberdeenshire contract with a 3rd party facility where selected elements of ICT provision are located within a partly hosted data centre, with a specified disaster recovery arrangement. The framework agreement will facilitate the differing implementation timescale requirements of both councils.

5. BACKGROUND/MAIN ISSUES

Aberdeen City Council currently has a managed data centre contract with a third party which expires in January 2016. There is a need to refresh and upgrade the infrastructure within data centre facilities beyond this date.

National ICT Strategy

In January 2013 the Improvement Service issued the "Local Government ICT Strategy – Delivering Better Services for Communities". This strategy states that Local Government should share future developments and operations and that data centres and associated services should be aggregated and managed by fewer organisations, all with the aim of delivering better services.

In addition, the 'Data Hosting and Data Centre Strategy for the Scottish Public Sector' was issued by the Scottish Government in April 2014. The strategy sets direction and describes how the public sector will adopt approaches for achieving significant efficiency and energy savings using cloud computing, virtualisation and co-location. The strategy makes it clear that individual public sector bodies should not build any new data centres.

Identification and Appraisal of Options

An options appraisal was carried out during 2013/14 with the objective of addressing the continued availability of a data centre to ensure the delivery of ICT services following the end of the current managed data centre contract in January 2016. Service options considered included (i) the Continuation of Managed Data Centre Services, (ii) Partnership working and (iii) Insource and host ACC Data Centre facilities.

Contact was made initially with other local authorities, including Highland and Edinburgh City to gather information regarding future intentions for data centre services. There were no indications at that time that an opportunity was available that would satisfy Aberdeen City Councils requirements.

Preliminary discussions were held with the University of Aberdeen, on behalf of the North East Scotland Shared Data Centre (NESSDC), a partnership comprising The University of Aberdeen, The Robert Gordon University and The North East Scotland College. It was established that there was not enough spare capacity within the NESSDC data centre to host all of Aberdeen City Council's infrastructure.

Meetings were also held with Aberdeenshire Council to discuss Aberdeen City Council's circumstances. Aberdeenshire responded positively and the outcome was to agree a joint investigation into the possibilities of shared working and/or procurement. A joint options review has subsequently been produced to identify all the options available in the provision of shared data centre services.
The options considered were:

Option 1 Fully owned on premise data centre for each Council
Option 2a Co-located data centre - Woodhill House or Frederick Street
Option 2b Co-located data centre with DR
Option 3 Co-located 3rd Party data centre (partially hosted) with DR
Option 4 3rd Party data centre (fully managed) with DR

Option1 - Fully owned on premise data centre for each Council.

For this option, both councils house their equipment at their own premises and manage the facility themselves. Aberdeenshire would continue to make use of Woodhill House , and Aberdeen City houses equipment at Frederick Street with the main communications room at Marischal College. The data centre is self-managed.

The estimated total 5 year cost associated with this option is £7.5M. Detailed costing information is provided in the table below.

There is no identified benefit with this arrangement .There is limited ability to improve the power usage effectiveness (PUE) and no disaster recovery facilities.

As a long term solution, this option is not viable from a strategic perspective and is not in line with current Government strategy and recommendations.

Option 2 - Co-located data centre, with or without disaster recovery.

For this option, extensive joint research was carried out with Aberdeenshire Council, to consider whether data centre services could be provided at Woodhill House for Aberdeen City Council, or Aberdeen City Council could provide data centre services at Frederick Street for Aberdeenshire Council, with each Council retaining control of its own ICT provision.

The estimated total 5 year cost associated with this option is £7.0M. Detailed costing information is provided in the table below.

While co-location begins to address Scottish Government requirements to achieve efficiency and energy savings, Frederick Street does not have the capacity to facilitate all the equipment necessary .

Aberdeenshire have determined that that they do not consider this option to be a viable option and is not compliant with their strategic preference.

Option 3 – Co-located 3rd Party data centre (partially hosted) with DR.

For this option, Aberdeen City and Aberdeenshire councils jointly procure rack space within 3rd party hosted data centre facilities. In a partially hosted arrangement the vendor hosts Aberdeen City / Aberdeenshire infrastructure, data and applications and selected elements of ICT provision located are within data centre, with a specified disaster recovery arrangement.

While the Councils are responsible for server infrastructure within the data centre and application customisation, the vendor has responsibility for data centre facilities including availability / security / cooling / power, and also provides a storage option.

This option addresses Scottish Government requirements to achieve efficiency and energy savings enabling the ability to measure the power usage effectiveness (PUE)

The 3rd party vendor provides an option to be responsible for disaster recovery for specific systems.

The estimated total 5 year cost associated with this option is £7.2M. Detailed costing information is provided in the table below.

There is also the potential to provide service on a usage basis with the option to expand to host further ICT provision for either Council as required. There is therefore flexibility to up and down scale as required to meet business demands. The facility needs to be within reasonable proximity to allow staff to attend site.

This option complies with the 'Data Hosting and Data Centre Strategy for the Scottish Public Sector' which was issued by the Scottish Government in April 2014. The strategy sets direction and describes how the public sector will adopt approaches for achieving significant efficiency and energy savings.

Option 4 - 3rd Party data centre (fully managed) with DR.

For this option, Aberdeen City and Aberdeenshire councils jointly procure rack space within 3rd party hosted data centre facilities. The vendor hosts all the data and applications belonging to both councils and is responsible for all server and network infrastructure as well as disaster recovery.

The vendor has responsibility for data centre facilities including availability / security / cooling / power and also provides a storage option. The management of applications is retained in-house.

This option addresses Scottish Government requirements to achieve efficiency and energy savings enabling the ability to measure the power usage effectiveness (PUE)

The 3rd party vendor provides option to be responsible for disaster recovery for specific systems and has full responsibility for providing normal service for functions that are hosted .

The estimated total 5 year cost associated with this option is £7.1M, and this option has most uncertainties in terms of cost.
Detailed costing information is provided in the table below.

While this solution is potentially flexible in terms of service provision, there is a lack of control over upgrades and rollbacks. There is a risk associated with the availability of application and database maintenance and support and the control and management of the estate.
A framework agreement for the provision of Hosting Services prepared by the Scottish Government is in progress with an estimated live date of 10th April 2015. This could be utilised to procure the services required.

This option complies with the 'Data Hosting and Data Centre Strategy for the Scottish Public Sector' which was issued by the Scottish Government in April 2014. The strategy sets direction and describes

how the public sector will adopt approaches for achieving significant efficiency and energy savings.

Conclusion: The options appraisal points towards option 3 which indicates the forming of a joint Aberdeen City/Aberdeenshire contract with a 3rd party data centre facility, with a shared disaster recovery arrangement.

This option is a cost effective solution which satisfies the current operational requirements and strategic intentions of both Aberdeen City and Aberdeenshire Councils. It complies fully with the Scottish Governments Data Hosting and Data Centre Strategy.

Indicative costs for the four options considered have been provided on a comparative basis below:

Revenue	1. Hosted within existing City premises	2. Colocation Aberdeenshire Woodhill House	**3. Colocation - Private sector Facility**	4. Fully Managed Private sector Facility
5 year Service Charge	0	133000	**1300000**	3200000
5 year electricity charges	965000	965000	**0**	0
Network Connectivity - rental	0	41100	**130000**	130000
Hardware Support and Maintenance	310000	310000	**310000**	0
Software Licence, support and maintenance to manage backup/storage/virtualisation	535000	535000	**535000**	0
ACC Service Management Costs	886000	886000	**886000**	1108000
ACC Operational Service Costs	2488000	1772800	**1772800**	443000
Facilities Management Costs (Security/Generator /Air Con)	443000	0	**0**	0
Sub-total	5627000	4642900	**4933800**	4881000

Capital:

Hardware Refresh/Provision	1500000	2000000	**2000000**	2000000
Racks setup	0	0	**20000**	20000
Network Connectivity - install	0	10000	**10000**	10000
Transition Staffing Costs	225000	225000	**225000**	225000
Potential Building Works	150000	150000		
Sub-total	1875000	2385000	**2255000**	2255000
Total 5 year cost	7502000	7027900	**7188800**	7136000

Note: costs will not be static each year due to changing demands over time, both up and down.

6. IMPACT

Corporate - This report offers an opportunity for joint working with a partner organisations on projects /contracts.

Aberdeen – The Smarter City 2012 – 2017
Smarter Mobility (ICT)
We will maximise digital connectivity to ensure equal opportunity of access to services for all people.
We will maximise digital connectivity to promote and develop business growth in the city.

Aberdeen City Council's Five Year Business Plan 2013/14- 2017/18
Delivering our strategic priorities
We will make best use of the financial resources available to us, ensuring best value for the public purse

Corporate Governance Business Plan 2013/14- 2017/18
Citywide network improvements:
We will improve performance and resilience of the ICT network across the city to ensure that it aligns with the business requirements and expectations.
The objective is to respond to the demands of business. The data centre facility will be provide the to meet changing demands, moving to digital systems more quickly.

Public – no direct impact but potential for the end user experience of the general public to improve. eg Customer Services

7. MANAGEMENT OF RISK

There are two identified corporate risks with the potential to impact on the decision required of the Committee.

Business Risk CORP010: Risk that an adequate and consistent quality of service is not defined and delivered and keeps pace with changing customer expectations and technological change.

Technological Risk CORP012: Risk of major business systems failure.

Entering into a joint Aberdeen City/Aberdeenshire tendering arrangement through an appropriate framework with a 3rd Party data centre facility, with shared disaster recovery would mitigate both of these risks by providing on-going access to ICT systems for the Council's Services.

8. BACKGROUND PAPERS

ACC ICT Strategy 2011- 2015
Review of ICT Infrastructure in the Public Sector Scotland (2011)
Local Government ICT Strategy 2013
Scottish Government Data Hosting and Data Centre Strategy for the Public Sector April 2014
McLelland Report: Review of ICT Infrastructure in the Public Sector in Scotland. June 2011

9. REPORT AUTHOR DETAILS

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