WHOLE-OF-GOVERNMENT DATA CENTRES STRATEGY. INDUSTRY BEST PRACTICE PRINCIPLES

AIIA Comments

29 May 2010

OBJECTIVES

AIIA recognises the Federal government has a need at a whole of government level for resilient, modern, energy efficient data centre capacity in fit for purpose facilities over the longer term. As an astute and demanding buyer, government has an opportunity to be instrumental in improving reliability, environmental efficiency and security of data centre design and infrastructure, while allowing for continuous improvement, innovation and advances in technology. To achieve this outcome will require clear and unambiguous indications to industry from government as to the objectives government has into the future including expected minimum requirements. It will also require a willingness to accommodate innovative solutions and changing business models over time to enable adaptation to the changing and expanding (or shrinking) needs of government.

Combining clarity with solution flexibility in procurement approaches (i.e. avoiding detail solution specification), will ensure government can achieve its objectives and attract the best innovative solutions from industry in a manner that reduces cost and provides optimal outcomes.

Background

In the context of the release in February of the Government's Data Centre Strategy, industry has welcomed the potential for whole-of-government efficiency, at the same time expressing areas of concern and omissions from the Strategy, including:

- No clear commercial commitment to enable industry investment to support future needs;
- Lack of recognition of the possibility of innovations to meet future growth needs over the longer term, and
- Lack of clearly specified future government objectives and certainty of government business delivery needs.

AIIA members' intent is to work closely with government to ensure it could meet its business outcomes in this rapidly emerging and advancing market.

Approach

AIIA has met with the government several times, expressing the desire of industry to work collaboratively on an approach to whole-of-government data centres that meets desired business outcomes. AIIA has provided written input regarding industry concerns to date.

AIIA recently proposed to AGIMO that members will provide a statement of higher-level principles as best practice guidance for the design and specification of data centre needs. AGIMO has requested this statement by end May 2010.

To achieve this outcome, AIIA hosted several forums with its Data Centre working group to ensure a collaborative approach. In addition, this group has considered several other references to develop principles. (See Bibliography attached). This input may be used to guide the upcoming RFT which will seek solutions to longer term requirements.

Given the need for vendor independence, this input does not comprise a statement of requirements or a specification. The principles spelled out herein are intended as a high order guide that align to a whole-of-industry direction, and enable inclusion of emerging trends and innovation. On this basis, AIIA members suggest these principles be considered as input to framing the RFT going forward.

Key Principles

Commercial Viability

The industry is committed and able to provide government with an outcome that meets requirements now and into the future. Due to the high investment capital requirements of data centres, to secure industry commitment and investment, government must make specific statements to the industry on intent (including long term commitment). Such commitment is required to secure capital from within an organisation, or from financial markets. This clarity, in conjunction with clear parameters by government will enable industry to attract value for money options, forward plan, and appropriately assess the commercial viability of any investment.

Required facilities

Higher level requirements such as configuration needs, access constraints, office/storage included, differing reliability and power density needs, best practice business continuity and disaster recovery needs, and site security should be made known early in the market process so that industry does not waste time and add cost by attempting to meet needs it may not be able to, or which are not required

Site Location

Early indication should be provided to industry if sites within a specific area are required, or whether consideration would be given to locations in other states/territories/regions. This will streamline responses to government and associated costs to industry and government, as some vendors may not have either facilities in the stated cites or plans/resources to commence establishment there. Regional locations could offer flow-on benefits from the point of view of SME industry/region development, localised/indigenous employment, possibly better energy advantages and more reliable power/communications facilities. Some of these advantages have potential to meet other government policies and should thus be considered in that light.

Green IT

Government should be clear on its commitment to ‘Green’ technologies and encourage innovation and commitment from industry in this area. Climate factors of a location that enable efficiency should be included in the consideration.

Continuous Improvement/ Efficiency

Optimal levels of efficiency, however defined, may lead to lower whole-of-life costs. Over time, improvements in efficiencies can be delivered through innovation/new technology and as such should be part of the initial requirement. This includes the concept of continuous improvement through innovation (including time of expansion of capacity), end of life/replacement of mechanical equipment, and during the life of the project as and when innovative ways of delivering the services arise. Government should encourage innovative responses from industry by challenging them to provide an understanding of how continuous improvement and efficiency across the full lifecycle of the facility shall be achieved.

Service levels

Service level agreements (SLA's) must align to the criticality of the service required. It should not only reflect business requirements, but technical risks. Consideration should therefore be given to matching service levels to the criticality of the data, agency or facility. For example, mission critical systems will require higher SLAs than heritage or less crucial data. Resilience may not be as important to agencies working with less critical systems, and this will assist industry to deliver more tailored solutions for less expenditure, enabling industry to provide solutions at lower prices for government.

Within a facility, risk profiles also need to be matched to the criticality of that facility proposed. It should be noted that not all risk elements will be relevant to every facility depending on the type of facility established and the mission critical nature of the data managed therein.

Future growth demand estimates

If a facility is expected to be in service for up to ten years, industry's ability to deliver targeted solutions at better costs will be facilitated if government can provide an estimate of future growth potential, such as space needs, power needs etc. Government should detail expected growth in either floor space or capacity terms over the period of the first term of any whole of government data centre engagement. Government should also invite industry to explain how it would accommodate changing requirements (power, cooling, hardware, technology) over time and how such an approach could be costed to Government.

Scalability

The ability to expand capacity must come at a cost. Unless some indication can be given of future expansion needs and why, industry will not be able to deliver true scalability at the right price since costs will be an unknown. Further, innovations and new technologies may meet expansion needs without consideration of extra space, but unless indications of these needs can be provided early in the life of the facility industry will not be able to plan to target these solutions towards expansions needs.

Standards

Government should be realistic in their requirement around standards, especially given the fact that there is no globally accepted standard for data centres and many of the current 'standards' are somewhat dated. Industry will commit to emerging standards that are subsequently ratified by government.

Access/security

Industry suggests government reconsider the confusing number of physical and IT security levels that currently exist across agencies. Both industry and government would benefit if government was able to simplify, streamline and describe their security requirements in terms of 2 or 3 easy to understand conventions in any future RFT.

Transition and General Service Providers

Government should detail how they propose to handle transitioning into and out of facilities over time as part of any RFT. Within the whole-of-government data centre strategy, consideration should be given to whether such services would be included in the upcoming RFT or whether it would be preferable to hold a separate RFT for such services in conjunction with the RFT.

Aggregated Demand

Industry encourages government to consider an appropriate demand model that does not discriminate against small agencies. Without such an approach, 'Aggregated Demand' is likely to become an operational issue that will not enable government to achieve its desired outcomes. For example, a large agency on its own may easily meet minimum capacity requirements of a commercial data centre provider to ensure commercial viability. Consideration should also be given to a model that enables small agency participation. In such a model, small agencies should not need to wait for an "aggregated" minimum capacity.

Capacity Pricing Models

Industry suggests that, in line with global trends, government encourages respondents to propose and price their solutions based on minimum capacity rather than, or as well as, minimum floor space based outcomes and commitments from government. Capacity pricing models offer far more flexibility to government and actually encourage efficiency and rationalisation of footprints – a key targeted outcome of the data centre strategy.

Procurement

The Ninth Management Advisory Committee's recent report on Barriers to Innovation in the APS notes that traditional models of procurement frequently stifle innovation. "The standard procurement approach in the public sector is to ask the market to respond to a specific set of requirements, on the basis of either internal knowledge or external scoping. While this simplifies assessment, it also

commonly locks out innovative solutions....Inflexible standard contracts and mandatory terms and conditions can also serve to discourage innovative solutions to public sector requirements." (page 38). The recommendations of the report, Advancing Public Sector Innovation, strongly advocate for a more outcomes-focused procurement process and earlier engagement with the market. The report acknowledges that industry can and will assist Government to deliver innovative outcomes if the engagement is approached in a spirit of collaboration. AIIA members have been advocating the need for Government to explore more innovative ways of engaging the market. Early engagement and less prescriptive requirements enable government to benefit from innovation in the private sector. Current procurement activities, which can be over-specified and inflexible, are costly for industry to respond to and costly for Government to administer.

AIIA strongly suggests the principles behind this report and its recommendations be included in the data centre RFT.

Innovation

The industry encourages government to enable respondents to include innovative solutions and enable future innovation that utilises the collective skill, knowledge, and local and global investments of industry participants to ensure future and emerging trends and technologies are built into directions in the context of the government's future data centre requirements. In this regard AIIA notes the recent developments in the United Kingdom which recognise the need to move towards innovations which exploit industry trends and thus deliver significant savings. One of these developments is the UK Government's intention to establish the Government Cloud (G-Cloud), enabled by the concurrent data centre strategy which "will be delivered in line with the approaches pioneered by industry for data centre design". (page 23, UK Government ICT Strategy. January 2010)

Conclusion

AIIA appreciates the opportunity to provide a collective viewpoint of principles that will enable government to achieve its business objective. We believe it is essential government provide industry the opportunity to propose the most innovative and flexible solutions to government. Members have expressed a desire to provide flexible offerings to government that reflect current trends and market developments, and are confident this will ensure government has a robust outcome for current and future needs. This approach will ensure the efficient use of government funds. It will facilitate effective and collaborative processes that enable industry to deliver optimum business outcomes to government which will adapt to the requirements of today and into the future.

Bibliography

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About AIIA

The Australian Information Industry Association (AIIA) is Australia's peak technology industry body. AIIA's role is to lead and represent the ICT industry in Australia to maximise the potential of the Australian economy and society. AIIA's membership encompasses all sectors of the ICT sector including hardware, software, services and telecommunications. It has almost 500 member companies, from individual consultants, small to medium enterprises to the world's leading multinational corporations.

AIIA member companies employ over 100,000 Australians, generate combined annual revenues of more than $40 billion (approximately 5% of GDP) and export more than $2 billion in goods and services each year.