Report on the ICT Benchmarking Survey
2011-12
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PART 1  OVERVIEW

1.1  About the Survey

The NSW Government ICT Benchmarking Survey provides comprehensive ICT expenditure data from across Government. The exercise enables:

- monitoring changes in expenditure over time;
- identification of areas of best practice and opportunities for improvement; and
- agency evaluation of their performance through transparent and comparable expenditure reporting.

The scope of this survey is limited to benchmarking expenditure. It does not assess the quality and effectiveness of services, or the underlying business environment.

In April 2012 the NSW Government endorsed the NSW Government ICT Strategy (ICT Strategy). The ICT Benchmarking Reference Group, consisting of a number of CIOs and other representatives, was established to develop a plan of actions to improve the value of the benchmarking exercise from 2012-13 onwards. The Reference Group’s key objectives were to:

- review the objectives of the benchmarking survey;
- minimise impacts on agencies by removing duplicate and unnecessary data collection;
- consider additional questions of strategic alignment; and
- improve the usability of the survey.

1.2  2011-12 Survey Details

The current survey covers the period 1 July 2011 to 30 June 2012. This report is based on the results of this survey and the data from the 2008-09, 2009-10 and 2010-11 financial years.

The survey collects both operational and capital expenditure data at an agency level. All ICT capital and operational expenditure across surveyed agencies is included. The survey excludes embedded technology (eg. radiology scanners).

In 2011-12, 61 agencies were surveyed across nine clusters. The number of agencies surveyed fluctuates year on year due to machinery of government changes, however the breadth of the survey (in terms of proportion of total agency expenditure captured) remains the same.

Data is provided by agencies, validated internally and approved by the agency CIO or nominated executive. External benchmarks contained in this report are provided by Gartner Inc.
PART 2    SURVEY FINDINGS

2.1    Total ICT Expenditure

In 2011-12 NSW Government total ICT expenditure of surveyed agencies was $2.063 billion, representing 3.3% of total surveyed agency expenditure of $63 billion\(^1\). The proportion of ICT expenditure to overall public sector expenditure is below the Gartner benchmarks for state and local governments (3.6%), and with that of all industries (4.4%). Overall the survey was consistent with that of the previous year.

A detailed breakdown of total ICT expenditure by service tower is provided in Table 1 below.

Table 1 - ICT Expenditure by Service Tower

<table>
<thead>
<tr>
<th></th>
<th>2008-09* ($m)</th>
<th>2009-10* ($m)</th>
<th>2010-11 ($m)</th>
<th>2011-12 ($m)</th>
<th>Change between 2010-11 and 2011-12</th>
<th>Change between 2008-09 and 2011-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Applications</td>
<td>802</td>
<td>862</td>
<td>831</td>
<td>920</td>
<td>11%</td>
<td>15%</td>
</tr>
<tr>
<td>End user infrastructure</td>
<td>291</td>
<td>335</td>
<td>307</td>
<td>298</td>
<td>-3%</td>
<td>2%</td>
</tr>
<tr>
<td>WAN</td>
<td>220</td>
<td>199</td>
<td>193</td>
<td>188</td>
<td>-3%</td>
<td>-15%</td>
</tr>
<tr>
<td>Voice services</td>
<td>226</td>
<td>195</td>
<td>191</td>
<td>206</td>
<td>8%</td>
<td>-9%</td>
</tr>
<tr>
<td>Midrange</td>
<td>146</td>
<td>134</td>
<td>137</td>
<td>127</td>
<td>-7%</td>
<td>-13%</td>
</tr>
<tr>
<td>ICT Management</td>
<td>128</td>
<td>121</td>
<td>132</td>
<td>123</td>
<td>-7%</td>
<td>-4%</td>
</tr>
<tr>
<td>Helpdesk</td>
<td>66</td>
<td>57</td>
<td>51</td>
<td>51</td>
<td>0%</td>
<td>-23%</td>
</tr>
<tr>
<td>Facilities</td>
<td>42</td>
<td>46</td>
<td>47</td>
<td>44</td>
<td>-6%</td>
<td>5%</td>
</tr>
<tr>
<td>Local Area Network and Remote Access Services</td>
<td>38</td>
<td>37</td>
<td>41</td>
<td>43</td>
<td>5%</td>
<td>13%</td>
</tr>
<tr>
<td>Storage</td>
<td>31</td>
<td>40</td>
<td>38</td>
<td>39</td>
<td>3%</td>
<td>26%</td>
</tr>
<tr>
<td>Mainframe</td>
<td>13</td>
<td>21</td>
<td>15</td>
<td>14</td>
<td>-7%</td>
<td>8%</td>
</tr>
<tr>
<td>Gateway</td>
<td>13</td>
<td>14</td>
<td>11</td>
<td>10</td>
<td>-9%</td>
<td>-23%</td>
</tr>
<tr>
<td>Total ICT expenditure**</td>
<td>2,016</td>
<td>2,061</td>
<td>1,994</td>
<td>2,063</td>
<td>3%</td>
<td>2%</td>
</tr>
</tbody>
</table>

*Figures Updated December 2012.
**Difference between totals in Table 1 and Table 2 is due to rounding

\(^1\) NSW Consolidated Statements of Comprehensive Income for the Year Ended 30 June 2012 reported total State sector expenses from transactions of $69.63 billion.
An alternative breakdown of total ICT expenditure by cost element is provided below.

### Table 2 - ICT Expenditure by Cost Element

<table>
<thead>
<tr>
<th></th>
<th>2008-09 (Sm)</th>
<th>2009-10 (Sm)</th>
<th>2010-11 (Sm)</th>
<th>2011-12 (Sm)</th>
<th>Change between 2010-11 and 2011-12</th>
<th>Change between 2008-09 and 2011-12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal personnel</td>
<td>469</td>
<td>520</td>
<td>525</td>
<td>533</td>
<td>2%</td>
<td>14%</td>
</tr>
<tr>
<td>Software</td>
<td>335</td>
<td>373</td>
<td>354</td>
<td>379</td>
<td>7%</td>
<td>13%</td>
</tr>
<tr>
<td>Outsourced (external)</td>
<td>320</td>
<td>301</td>
<td>321</td>
<td>296</td>
<td>-8%</td>
<td>-8%</td>
</tr>
<tr>
<td>Hardware</td>
<td>337</td>
<td>324</td>
<td>275</td>
<td>288</td>
<td>5%</td>
<td>-15%</td>
</tr>
<tr>
<td>Carriage</td>
<td>254</td>
<td>243</td>
<td>254</td>
<td>257</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td>External personnel</td>
<td>221</td>
<td>211</td>
<td>211</td>
<td>228</td>
<td>8%</td>
<td>3%</td>
</tr>
<tr>
<td>Other</td>
<td>81</td>
<td>89</td>
<td>55</td>
<td>83</td>
<td>51%</td>
<td>2%</td>
</tr>
<tr>
<td><strong>Total ICT Expenditure</strong></td>
<td><strong>2,017</strong></td>
<td><strong>2,061</strong></td>
<td><strong>1,995</strong></td>
<td><strong>2,064</strong></td>
<td><strong>3%</strong></td>
<td><strong>2%</strong></td>
</tr>
</tbody>
</table>

*Figures Updated December 2012
** Difference between totals in Table 1 and this table are due to rounding

### 2.2 ICT Investment

#### 2.2.1 Findings

ICT Capital expenditure has remained relatively stable over the four years of the survey ($609 million in 2011-12, $596 million in 2010-11, $661 million in 2009-10, $613 million in 2008-09).

This continues to represent approximately 30% of total ICT expenditure across government and compares to the State and Local Government benchmark of 23%. A shift to “as-a-service” solutions, as outlined in the NSW Government ICT Strategy, is likely to reduce this weighting towards capital expenditure in future years.
As outlined in the *NSW Government ICT Strategy*, the Infrastructure and Managed Services Plan aims to transform the way the public sector uses ICT and take advantage of industry trends including moving to a service orientation and leveraging the advantages of cloud technologies.

Unlike traditional ICT funding models which require considerable upfront one-off capital costs, “as-a-service” models involve recurring operating costs based on use. Accordingly, an increase in the proportion of ICT operational expenditure and greater alignment with industry benchmarks should begin to be reflected in future years, especially as any underlying barriers are removed.

Figure 2 illustrates how the proportion of capital versus operating expenditure varies across clusters. Detailed further investigation may indicate opportunities for reducing capital expenditure in a cluster context.
2.2.2 Comments

Key strategic actions that will facilitate the adoption of “as-a-service” solutions and impact the mix of ICT capital and operating expenditure in the future include:

- Cloud pilots, which are testing multiple cloud based systems across different environments to assess their cost-effectiveness, security and efficiency. These pilots will inform a cloud policy and agencies considering the uptake of cloud solutions.
- Work being undertaken by Treasury and DFS to ensure better value investment and address issues preventing adoption of ICT as-a-service models.
- Continued development of the Service Catalogue will allow for a greater number of offerings available “as-a-service”.

2.3 Applications

2.3.1 Findings

In 2011-12 applications expenditure of $920 million accounted for 45% of total ICT expenditure, compared to $831 million (42%) in 2010-11, $862 million (42%) in 2009-10, and $802 million (40%) in 2008-09. The increase on the previous year was primarily driven by increased expenditure on critical applications within the Health and Education clusters during the reporting period. The benchmarks for applications expenditure for State and Local Government, and all industries were 33% and 35%, respectively.

Applications expenditure comprised 36% of total ICT operating expenditure and 64% of total ICT capital expenditure.

Figure 3 – Applications operational expenditure by cost element

![Figure 3](image)

Figure 3 shows that the largest proportion of operational expenditure on applications was attributable to software (41%).
The largest proportion (see figure 4 above) of capital expenditure was on outsourcing to non-government third parties (29%), and external personnel (26%). These results reflect traditional government ICT capital investment programs involving a high proportion of staff contracted for the duration of an ICT project. Transition to “as-a-service” models is expected to impact the mix of capital and operating expenditure on applications as well as the breakdown between cost elements as revealed in Figure 4.

There are opportunities to consolidate and standardise applications across government. The NSW Government ICT Strategy has a strong focus on moving to a service orientation and includes a number of streams of work that will lead to applications rationalisation and more efficient spending in this area. Work already underway includes:

- implementation of the NSW Government Service Catalogue which will provide a mechanism for agencies to purchase off-the-shelf services; and
- development of whole-of-Government ICT procurement standards to drive better procurement practices (including in relation to applications purchases).

2.3.2 Comments

The Procurement and Technical Standards (PTS) Working Group has commenced work on identifying opportunities and options for improving the efficiency of applications expenditure.

Amendment of the Benchmarking survey questions will provide insights into applications expenditure and support the PTS Working Group scoping paper.

2.4 ICT Personnel

2.4.1 Findings

In 2011-12, NSW Government expenditure on ICT personnel was $761 million ($578 million in operational and $183 million in capital expenditure). This compares to $736 million in 2010-11 ($571 million in operational and $165 million in capital expenditure). The figure below illustrates the service tower breakdown for ICT personnel. As in previous years, a significant proportion of personnel expenditure is attributable to applications.
The State and Local Government benchmark for ICT Management expenditure as a proportion of total personnel expenditure was 19% versus the equivalent measure for NSW of 14%. These results are similar to the previous year, and indicate an opportunity to shift expenditure from within applications towards ICT management. This shift should result from the adoption of “as-a-service” solutions that require an increase in ICT management capabilities in areas such as enterprise architecture, and vendor and contract management, rather than traditional solutions requiring internal teams to design, build, customise, configure and operate them.

2.4.2 Comments

The NSW Government ICT Strategy supports building agency procurement capability, including contract and supplier management skills. Accordingly, DFS and the Public Service Commission (PSC) are developing an ICT Workforce Management Strategy for the NSW public sector. ICT and HR professionals, across the public, industry and research sectors have been consulted to:

- identify the capabilities required to deliver the future configuration of ICT functions; and
- analyse characteristics of the ICT labour market and its capacity to meet future capability requirements.

DFS is working with the PSC to ensure that changes planned for the 2012-13 benchmarking survey complement and enhance this analysis.

2.5 End User Devices

2.5.1 Findings

Over the past few years there have been increases in the number of laptops and mobile phones being used across government. In 2011-12 the number of laptops increased substantially. This was partially due to updated reporting tools, and a preference by schools for laptops over desktops under the continued rollout of the Technology for Learning Program within the Department of Education and Communities. The number of mobile phones increased by 13%, while fixed line users remained stable.
The *NSW Government ICT Strategy* acknowledges that Australia has one of the highest take-up rates of new devices in the world, including computers, smart phones, tablets and related applications. These high adoption rates and the recent benchmarking results for end user devices indicate an opportunity to investigate “bring-your-own-device” (BYOD) and the associated risks and benefits. It is expected that a shift towards BYOD arrangements will impact end user device results in future years.

### 2.5.2 Recommendation

It is recommended that the Procurement and Technical Standards Working Group builds into its work plan an analysis of the risks and benefits of BYOD arrangements in the context of shifting to “as-a-service” arrangements outlined in the *NSW Government ICT Strategy*. This analysis could inform the development of whole-of-government guidance for the implementation of BYOD arrangements.

The updated ICT Benchmarking Survey will continue to monitor end user devices and related expenditure to support this analysis.