NBN Impact on Enterprises: Foresight Report into Printing and Insurance Broking Industries

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Research project purpose

Innovation and Business Skills Australia (IBSA) is working with the Printing and Insurance Broking industries to determine how the National Broadband Network will impact enterprises and, as a result, any specific skill needs.

To receive direct insight from those working an investigation has been completed though three national foresighting focus groups (x2 in broking, x 1 in printing) and 15 follow-up case studies completed with enterprises from each industry.

This presentation summarises the Final Report including the project findings from the research and the consultative process.
Industry partners

Three peak bodies coordinated the consultation process:


• **Austbrokers** Network ([austbrokers](http://www.austbrokers.com.au)): Austbrokers gives individual general insurance brokers the opportunity to enjoy the benefits of a larger group, yet still maintain that all important feel of independence.

• The Printing and Graphic Art industry representative body was **Printing Industries Association of Australia** (PIAA, [http://www.printnet.com.au](http://www.printnet.com.au)). PIAA is the advocate and support organisation for businesses in the Print, Packaging and Visual Communication industry in Australia.
Foresighting

What?
Foresighting is a participative approach to creating shared long-term visions to inform short-term decision-making processes. Such an approach can support long range forecasting by providing more tangible deliverables that generate immediate wins or ‘stepping stones’ to the desired future state under the NBN.

Why?
Foresighting allows action to be based on tangible goals no further than 36 months in to the future. It makes future possibilities attainable by making sure early wins delineate progress towards a vision that may be 10 or more years distant. Attainment of goals should orient policy planning, enable transformation, build critical mass and generate real socio-economic growth for those involved.

Who?
Groups of 4 to 8 Australia-wide industry participants (large and small; rural, regional and city located) in each of three focus groups for industry members conducted on premises of NIBA (North Sydney), austbrokers (IBSA offices, Melbourne) and PIAA (Auburn in Sydney).
Stage 1: Foresighting Focus Group process and model for this project

**DRIVERS:**
Identify up to five major external environment, macro-level factors influencing the future of the industry and any decisions on the NBN.

**eSkills & eReadiness**
ICT access and capacity to adopt and use broadband and emerging technologies.

**eReadiness**

**Digital Future**
Targets that represent audacious outcomes or vision statements able to inspire action. They may typically support:
- Business growth
- Sustained competitiveness
- Agility
- CapEx/OpEx, cost reduction
- Customer Experience

**ENABLERS:**
Identify up to 5 internal (to a business) factors that overcome barriers to NBN adoption or access and must be in place to improve operations.
Stage 2: Case studies

Adoption of the NBN and a sustainable digital future relies on a long term, systematic view of ICT development. In order to determine levels of readiness and ability to adopt the NBN case studies were undertaken to confirm the current ICT maturity of enterprises, and thence the comparative maturity of each industry. Two factors were audited:

- **eReadiness** refers to the available capacity including:
  - Existing broadband and advanced infrastructure
  - Intensity of existing demand by the businesses
  - Ability to access infrastructure and connect to broadband

- **eSkills** the subset of broader occupational competencies that govern how well the business or industry can effectively use ICTs. This underpins both eReadiness and ICT adoption. The eSkills analysis covers both business (supply) and customer (demand) skills.
IBSA ICT Development Model and determining ICT readiness and ICT skills to adopt and use the NBN

Source: Bowles 2011
ICT Maturity is a mix of current access and ability to adopt
FINDINGS IN SUMMARY
We see the NBN positively impacting how we achieve........

1. **Closer proximity to the customer** on demand, anywhere, anytime. This also encompasses where businesses used the internet to move down the value chain from manufacturing or marketing to provide sales and service.

2. **‘High touch’ services** where customers can transact in real time and seek, secure and track products or services.

3. **Process efficiencies** through automation, integration, streamlining and real-time processing.

4. **Opening new markets**, local and global, through improving the connection between the business and their customers and visa-a-versa.

5. **Improved internal communication and training** capabilities.

6. **Flexibility in terms of worker location** and decisions on office facilities (telecommuting and decentralisation).

7. **Faster and more efficient data processing and sharing**.

8. **Reduced capital expenditure** and more rapid transformation though use of cloud-based and virtual infrastructure (e.g. software or platform as a service).
We see the NBN potentially adversely impacting ......

A. **Labour supply and cost**: Difficulty attracting or up-skilling existing staff with the appropriate ICT skills.

B. **Infrastructure cost**: Securing the capital or not knowing what budget would be required to transition to the technology and infrastructure required to leverage the NBN connection.

C. **Competition from large incumbents in other industries**: Fear over larger, better funded competitors or new entrants moving into the market and using online offerings to ‘cherry pick’ high volume, low return products or services that often represent the backbone for smaller, regional businesses.

D. **Competition from overseas**: Unknown threat from new entrants from countries with low labour cost, limited compliance requirements, and/or protected markets using the new broadband channels to reach regional or niche markets previously not accessible due to poor connectivity.

E. **Uncertainty of NBN integration with mobile broadband**: Many progressive businesses, especially those deploying ICT to enhance services to rural and regional customers, rely more heavily on mobile cellular network connections.

F. **Red tape and regulations**: To enable the efficiencies possible under the NBN regulations affecting occupational health and safety (e.g. at home workers), employment conditions (hours of work), digital transactions and even compliance standards (e.g. use of a digital signature) need to be addressed to prevent costs being passed onto businesses.
Comparative eReadiness scorecards and industry ICT maturity

- Printing industry scorecards received in this round of research
- Insurance industry scorecards received in this round of research
- Green diamond is printing industry average for scorecards received in this round of research
- Purple diamond is broking industry average for scorecards received in this round of research
As with the presence of ICT across the workforce, eSkills (ICT skills) exist at different levels of deployment. The absence of eskills underpin both digital literacy and the digital divide. These aren’t just about foundation skills to use information technology and the internet. It is also about people competent in an existing role extending their occupational competence through the adoption and use of technology, and higher-level skills that enable businesses to competently adopt and deploy technology.

(Bowles, 2010)
The Top 5 priority skill needs across both industries are Level 3 eSkills

17. We need to know how to build a more sustainable business using digital technologies
At AQF Level: 6-7 (expert practitioner, senior manager/leader).

20. We need skills to set up and manage out-sourced ICT services (e.g. cloud, Platform/Software as a Service (SaaS) or similar)
At AQF Level: 7 (industry expert, senior leader).

18. We need to know how to build a business case justifying any investment in an e-business capability
At AQF Level: 6-7 (expert practitioner, senior manager/leader).

19. We need to know how to build a more effective online transaction engine (buy and sell ecommerce capability)
At AQF Level: 7 (industry expert, senior leader).

10. We need skills to be confident we have robust systems security and data protection in place
At AQF Level: 5-6 (expert practitioner/middle manager).
Case study feedback in summary

- There remains a **general lack of awareness** as to when the NBN may connect a business or the type of connection (fibre, fixed wireless, satellite).
- **Few businesses are pro-actively planning to deliberately leverage the NBN** in a manner that could stimulate business growth or competitiveness.
- The **highest ranked companies had plans** perhaps because they already had superior levels in adoption and/or access to the NBN or equivalent speeds. Early adoption and access threatened those unable to connect to the NBN as early as competitors.
- The “jury” is out **as to the extent of adoption by the public and the time lag** between connection and changed consumer patterns.
- **No business doubted the change will occur** and that consumer patterns are changing now; especially towards mobile and high-speed enabled channels to market.
- **Low margins and existing price pressure will make transformation hard** until the NBN stimulated proven market opportunities (i.e. many will be late movers/adopters).
- Many companies noted **regulatory and restrictive practices for employing staff** off site will be a more significant barriers to adoption than the technology itself.
- For regional and outer metropolitan businesses **the lack of satisfaction with the cellular mobile network** coverage was as much a concern as the lack of high speed broadband.
- Even early adopters of high speed broadband in printing or broking enterprises still considered **access to ICT skills** as a critical factor in how fast they could exploit the NBN/high-speed broadband.
Insurance Broking
Industry Findings
NIBA foresighting group

Drivers

1. Search for internal efficiencies
2. Threat from online insurance broking
3. Must separate B2B and B2C
4. Regulation
5. Community expectations and attitudes
6. Changing competition landscape

Enablers

A. Improved client interaction and engagement
B. Planning investment in technology adoption
C. Build the business case
D. Ability to skill people and improve attitudes
E. Remove red tape

Digital Future

eReadiness

F. Community education

- Client readiness
- Company readiness
- Client real time
- Marketing
- Virtual training
- Internal efficiencies
- Real time digital processing

IBSA Innovation & Business Skills Australia
NIBA
Austbrokers
Austbrokers foresighting group

Drivers

- The connection (NBN promise)
- Sustainable business models required
- Understand the customer (changing customer demand)
- Data integration

eSkills

- Skills of staff
- Collaborative effort & team
- Financial & commercial viability

Digital Future

- eReadiness
- Cost reduction
- Internal productivity
- External productivity
- Growth opportunities

Enablers

- Leadership
Future made possible by NBN for the Insurance Broking Industry

1. Enable customers to access improved services
2. Allow real-time responsiveness to clients
3. Improve brokers’ service to customers
4. Extend brand reach and marketing channels
5. Accelerate data processing and sharing
6. More automated and streamlined processes
7. New markets and growth opportunities
Drivers influencing the industry’s digital future (Broking)

1. Need to reduce costs
2. Changing competition landscape and threat from online players
3. Regulatory pressures to comply and report
4. Community and consumer expectations and attitudes.
5. Need for more sustainable business models
6. Data security, sharing and digital audit trail is essential
7. Natural disasters and the need to be responsive
8. More business is mobile: NBN has to integrate
Enablers that should be used to enhance enterprise adoption (Broking)

- Full and improved client interaction and engagement
- Planning investment in technology adoption
- Build the business case
- Broker companies need to improve virtual training for skills and improve attitudes
- Personalisation and improved understanding of customer needs and personal preferences.
- Community education (digital literacy)
- Remove red tape to enable digital transactions and decentralised employment
- Leadership
- Improve team efficiencies and collaboration
Printing Industry Findings
PIAA foresighting group

Drivers

1. Economic volatility
2. Anti-paper sentiment
3. Emerging and alternative technologies
4. Capex and opex
5. Surplus capacity
6. Changing consumer behaviour

eReadiness

Digital Future

Enablers

A. Funding for transition
B. Build the business case
C. Printing industry plan
D. Better infrastructure
E. Improve competitiveness
F. Industry buy-in

- One to One
- Services online
- Customer benefits
- Communication (internal)
- Decentralisation
- Process efficiency
- Cloud
- Human resources
Future made possible by NBN for the Printing Industry

1. Improve proximity to the customer
2. Offer ‘high touch’ online services
3. Improve internal communication and training
4. Improve customer benefits
5. Foster decentralisation
6. Enable process efficiencies and automation
7. Innovate and improve (e.g. Cloud)
8. Attract staff and improve HR management
Drivers influencing the industry’s digital future (Printing)

1. Economic volatility
2. Anti-paper sentiment (digital & environmental push)
3. Emerging and alternative technologies (Web2Print)
4. Changing consumer behaviour, expectations and attitudes.
5. Diversification of channel and products/services
6. Costs: Lower revenue and margins but increasing Capex and opex
7. Surplus/Idle capacity
8. Skills requirements in new and traditional skills

Web2Print
**Enablers** that should be used to enhance enterprise adoption (Printing)

- Funding to enable transformation (skills, HR & infrastructure investment assistance)
- Improve managerial and business skills (Doing a business case)
- Industry plan to identify transformation stages and market opportunities (offshore, new digital markets)
- Sizing the competition landscape (NBN opportunities for export and threats from imports)
- Speed to consumer adoption of NBN versus mobile broadband adoption
- Printing Industry Plan for the Digital Age (Update Print21 and cover infrastructure and a coordinated approach to NBN adoption and price negotiations)
- Industry buy-in and engagement
General Industry Snapshots

Supplementary contextual information
## Foresight Analysis Summary: Future impact for industries

<table>
<thead>
<tr>
<th>Industry</th>
<th>General Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance broking</td>
<td>Further advances in online services and the ability to deliver services to customers on demand across multiple platforms. Improvements in security and connectivity through high speed broadband will accelerate personalisation of insurance broking service delivery; especially with respect to online face to face interaction and real time services to rural and remote customers.</td>
</tr>
<tr>
<td>Printing</td>
<td>Increased opportunities to transfer and produce print product from concept to actual production using virtual and cloud-based solutions. Integration of graphic design, printing and mail services by e-printing businesses in B2B processes that will increasingly harness web2print approaches. Continued trend away from manufacturing and large ‘plant investments’ down the value chain closer to the customer in more direct channels for sales, support and service relationships.</td>
</tr>
</tbody>
</table>
Underpinning discussion was a general set of assumptions about moving from existing Internet connections to the next generation high-speed Internet.

<table>
<thead>
<tr>
<th><strong>Today’s Internet</strong></th>
<th><strong>Next generation Internet</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Reactive</td>
<td>Pro-active</td>
</tr>
<tr>
<td>Mass information and data</td>
<td>Customised to personal preferences</td>
</tr>
<tr>
<td>Download to use (forms, data, documents, etc.)</td>
<td>Use or share in online environment</td>
</tr>
<tr>
<td>Applications and data stored on local network and computing device</td>
<td>Applications and data shared and distributed over the internet</td>
</tr>
<tr>
<td>Own resources and applications</td>
<td>Shared services and resources: distributed computing and workforce</td>
</tr>
<tr>
<td>Type of device determines, access to network, speed of connection and where user can connect</td>
<td>Any device, anywhere to multiple high speed network connections</td>
</tr>
<tr>
<td>Asynchronous – one to one, one to many communication and web cam connections</td>
<td>Synchronous – two-way, same time communication, many to many connections</td>
</tr>
<tr>
<td>Low quality, slow to download audio and video</td>
<td>High quality, high definition audio and video</td>
</tr>
<tr>
<td>Buy to own</td>
<td>Pay to access on demand, as required</td>
</tr>
<tr>
<td>Fixed</td>
<td>Mobile</td>
</tr>
</tbody>
</table>

Source: Bowles, 2004, updated 2011
The insurance broking industry is a sector of the Financial and insurance services industry, a major component of the Australian economy. The financial services and insurance in 2011-12 generates industry revenue of $230.7 billion that, despite the difficult global economic situation, continues to experience a median annual revenue growth of 4.1 percent and employ more than 427,200 people; some 3.72 percent of the total workforce. [1]

Insurance broking will generate revenues of $10.8b in 2011-12, employ more than 24,254 people (0.3%) in more than 2,967 firms and is set to enjoy a period of robust growth. [2]

Revenue and employment projections (extract from the report)

### Table: Select insurance sector activities revenue and annual growth, 2012

<table>
<thead>
<tr>
<th>Sector</th>
<th>Revenue (AUD$b)</th>
<th>Wages (AUD$m)</th>
<th>Number of Businesses</th>
<th>Annual revenue growth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2007-12</td>
</tr>
<tr>
<td>Insurance Broking</td>
<td>10.8</td>
<td>2.3</td>
<td>2,967</td>
<td>1.6</td>
</tr>
<tr>
<td>General Insurance</td>
<td>48.2</td>
<td>1.8</td>
<td>138</td>
<td>-0.5</td>
</tr>
<tr>
<td>Health Insurance</td>
<td>17.4</td>
<td>521</td>
<td>36</td>
<td>4.2</td>
</tr>
<tr>
<td>Life insurance</td>
<td>55.3</td>
<td>1.6</td>
<td>31</td>
<td>-8.0</td>
</tr>
</tbody>
</table>

Source: IBIS Reports 2011d & 2012i,j,k

### Table: Select insurance sector activities employment and trends 2011-17

<table>
<thead>
<tr>
<th>Sector employment</th>
<th>Employment 2011-12</th>
<th>Employment 2016-17</th>
<th>Employment change 2011/12–2017 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insurance Broking</td>
<td>24,254</td>
<td>24,430</td>
<td>0.7</td>
</tr>
<tr>
<td>General Insurance</td>
<td>21,540</td>
<td>22,580</td>
<td>4.8</td>
</tr>
<tr>
<td>Health Insurance</td>
<td>10,100</td>
<td>10,522</td>
<td>4.2</td>
</tr>
<tr>
<td>Life insurance</td>
<td>27,450</td>
<td>28,385</td>
<td>3.4</td>
</tr>
</tbody>
</table>

Source: IBIS Reports 2011d & 2012i,j,k
The Printing and Graphic Art Industry in Australia is a diverse industry with a number of industry sectors of activity all experiencing various levels of major transformation and resulting challenges. While the highly traditional areas of printing and newspaper sectors account for over 51% of total industry revenue, they face significant challenges and truncated growth rates for sectors such as newspaper printing or publishing (-1.2% for 2012-2017). \(^1\) other sectors, such as graphic design, enjoy buoyant growth (3.4% for 2012-2017)\(^2\) as a result of a shift from print to digital economic activity.

Despite major challenges and ongoing industry restructuring the printing industry still generates industry revenue of $30.172 billion and has some 17,739 businesses that employ more than 98,165 people; some just under 1 percent of the total workforce in March 2012.\(^3\) \(^4\)

\(^1\) IBISWorld, March 2012e, Newspaper Printing or Publishing in Australia (C2421), IBIS: Melbourne
\(^2\) IBISWorld, March 2012c, Graphic Design Services in Australia (L7852).
\(^3\) IBISWorld, March 2012a, Printing in Australia (C2412), page 3.
Revenue and employment projections

(extract from the report)

### Table: Printing & Graphic Arts Industry revenue and annual growth

<table>
<thead>
<tr>
<th>Sector</th>
<th>Revenue (AUD$b)</th>
<th>Export earnings (AUD$m)</th>
<th>Number of Businesses</th>
<th>Annual revenue growth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printing</td>
<td>8.3</td>
<td>56.3</td>
<td>5,679</td>
<td>-4.2*</td>
</tr>
<tr>
<td>Newspaper Printing or Publishing</td>
<td>6.7</td>
<td>3.4</td>
<td>179</td>
<td>-5.2</td>
</tr>
<tr>
<td>Book &amp; Telephone Directory Publishing</td>
<td>3.9</td>
<td>185.1</td>
<td>1,753</td>
<td>-2.1</td>
</tr>
<tr>
<td>Graphic Design</td>
<td>4.2</td>
<td>nda</td>
<td>8,234</td>
<td>1.5</td>
</tr>
<tr>
<td>Corrugated Paperboard</td>
<td>3.0</td>
<td>4.1</td>
<td>72</td>
<td>-2.6</td>
</tr>
<tr>
<td>Magazine Publishing</td>
<td>1.8</td>
<td>48.5</td>
<td>276</td>
<td>-5.1</td>
</tr>
<tr>
<td>Services to Printing</td>
<td>0.734</td>
<td>nda</td>
<td>1,442</td>
<td>-4.0</td>
</tr>
<tr>
<td>Solid Paperboard</td>
<td>0.668</td>
<td>9.2</td>
<td>59</td>
<td>-3.7</td>
</tr>
<tr>
<td>Paper Bag &amp; Sack Manufacturing</td>
<td>0.495</td>
<td>10.9</td>
<td>32</td>
<td>-1.2</td>
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<tr>
<td>Ink Manufacturing</td>
<td>0.375</td>
<td>87</td>
<td>13</td>
<td>0.0</td>
</tr>
<tr>
<td>Mail House</td>
<td>nda</td>
<td>nda</td>
<td>nda</td>
<td>nda</td>
</tr>
</tbody>
</table>

Source: IBISWorld Industry Reports, 2011a,b, and 2012a-h * Forecasted  
nda = no data available

### Table: Printing & Graphic Arts Industry employment and trends 2011-17

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<tr>
<th>Sector employment</th>
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<th>Employment change 2011/12–2017 (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Printing</td>
<td>37,667</td>
<td>37,348</td>
<td>-0.8</td>
</tr>
<tr>
<td>Newspaper Printing or Publishing</td>
<td>20,904</td>
<td>20,448</td>
<td>-2.2</td>
</tr>
<tr>
<td>Book &amp; Telephone Directory Publishing</td>
<td>9,624</td>
<td>9,407</td>
<td>-2.3</td>
</tr>
<tr>
<td>Graphic Design</td>
<td>11,279</td>
<td>12,722</td>
<td>12.8</td>
</tr>
<tr>
<td>Corrugated Paperboard</td>
<td>5,101</td>
<td>4,953</td>
<td>-2.9</td>
</tr>
<tr>
<td>Magazine Publishing</td>
<td>5,355</td>
<td>5,323</td>
<td>-0.6</td>
</tr>
<tr>
<td>Services to Printing</td>
<td>4,161</td>
<td>4,124</td>
<td>-0.9</td>
</tr>
<tr>
<td>Solid Paperboard</td>
<td>2,019</td>
<td>1,925</td>
<td>-4.7</td>
</tr>
<tr>
<td>Paper Bag &amp; Sack Manufacturing</td>
<td>1,435</td>
<td>1,231</td>
<td>-14.2</td>
</tr>
<tr>
<td>Ink Manufacturing</td>
<td>620</td>
<td>590</td>
<td>-4.8</td>
</tr>
</tbody>
</table>

Source: IBISWorld Industry Reports, 2011a,b,c and 2012a-h for sectors in the printing and graphic art industry.
Project Contact

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