Australian Web Presence: How the Internet Transforms Australian Business, Education and Healthcare

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1. Introduction: digital dailiness

When the Internet first entered our daily lives, an average person could not make realistic predictions about the extent to which it would change the ways we communicate, collaborate and do business. At the beginning, even some major organisations failed to assess its potential and adjust their processes to people's increasing digital dependency.

Even today, many organisations are trying to resist the change and remain loyal to traditional resources for doing business, or providing educational, medical and other types of services. This is the case with many small businesses around the globe that still do not recognise the value of having an online presence. Moreover, there are still many education professionals who refuse to implement technology into classrooms and provide their students with real-life knowledge.

Certainly, however, many regions of the world lack financial resources or organisational knowledge necessary for implementing recent technological inventions. Yet those that see the Internet as a new information delivery platform and make it a focus of their development strategies, are likely to make significant progress in all relevant fields.

> The age we live in is the age when astonishing portions of our daily activities take place online. From the most trivial ones such as checking a weather forecast and making a shopping list, to making academic plans and achieving professional advancements, almost everything is or can be done via the Web.

Such a behavior naturally led to some major transformations not only in business, but also in industries such as education and healthcare.

Once it has become clear that the 21st century economy would rely on the Internet, different industries started moving their activities online. Nowadays, most traditional IT infrastructures are fully or partly replaced by cloud-based resources, while collaboration and communication processes frequently involve mobile devices and cloud collaboration tools. Besides this, even some conservative industries embraced new business models and started offering a wide variety of services or information online.

In Australia, all the major internet trends have already demonstrated their innovation potential. Some notable examples are cloud adoption rates and mobile policies that seem to have taken Australian businesses, education and healthcare institutions by storm. Thus, both end-users and service providers now have a variety of possibilities

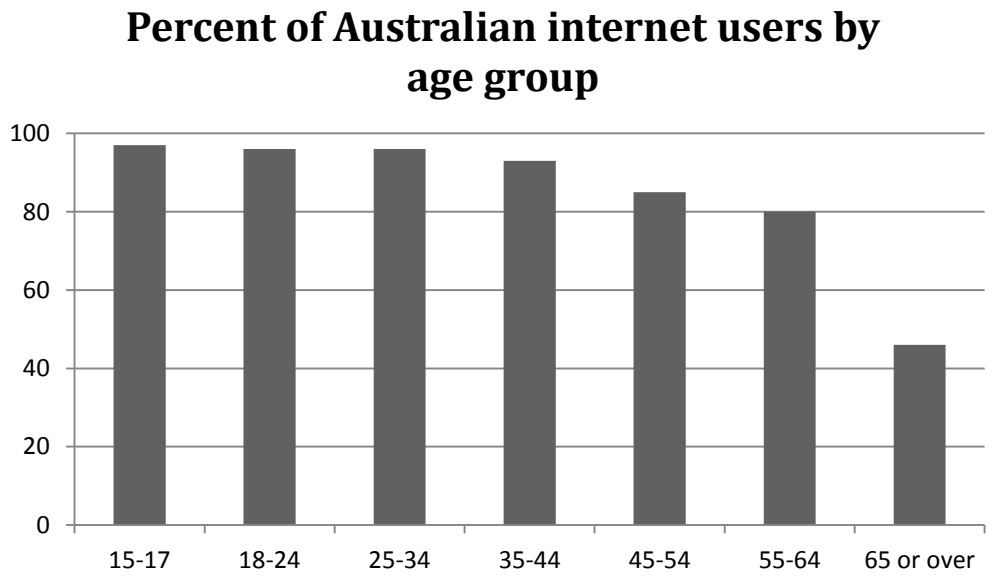
that are created not only by the expansion of the web, but also by the Governments efforts to enhance Australia's digital economy and innovation.

Among the measures introduced to pave the way to innovation in Australian institutions are the Government's *Digital First* and *Cloud First* strategies, which enabled easier adoption of digital tools in different industries. There are now sets of reference materials for both novice internet users and enterprise adopters, the goal of which is to ensure Australian organisations would make the best of the tools available online.

Therefore, it is unsurprising that Australian organisations are seeing important benefits from such incentives, which help them gradually replace some outdated methods with advanced tools and efficient strategies.

2. Australians online

The Internet has become a household item in Australia years ago. In 2012-2013, **83% of persons were active internet users, with up to 97% of persons aged 15 to 17 accessing the Internet.** However, it is not only teenagers who use the Internet – 46% of persons aged 65 and over also actively participate in cyber space.



With such a great number of users online, it is obvious how rapidly the information access changed our everyday habits. Today, Australians can easily access the web, communicate, do shopping, or even run a business. This is why more and more organisations also choose to offer their products, services or relevant information

online, as is the case with specialised companies, educational or healthcare institutions.

3. Business web presence and internet use

The Internet has transformed business in various ways. Employees see it as a means of achieving efficient professional communication and collaboration, while CTOs and CIOs use it to modernise IT infrastructure and introduce advanced productivity tools.

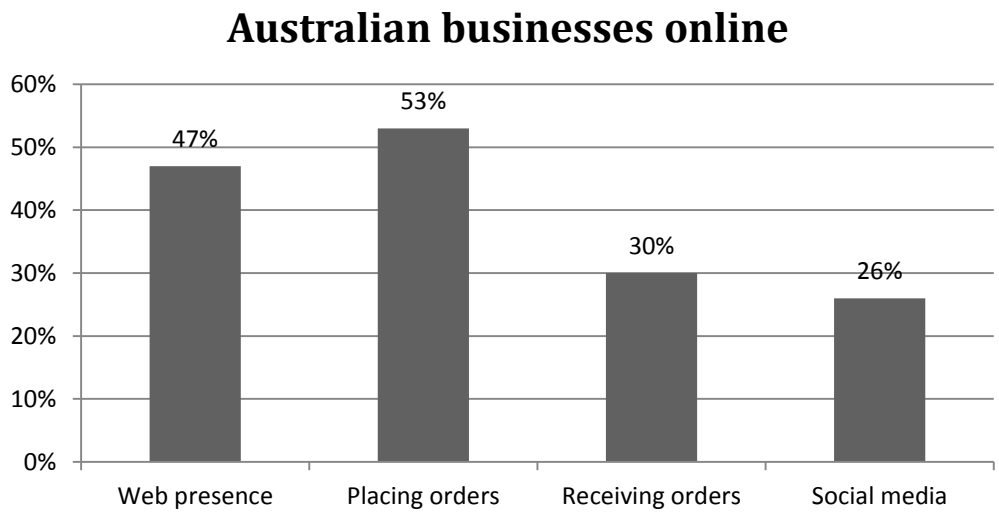
Most importantly, however, businesses see the Web as a potent means of attracting new customers and prospects. Namely, according to Australian Bureau of Statistics, **76% of Australians have used the internet to purchase or order goods and services, while the proportion of businesses with web presence grew from 43% in 2011-2012 to 47% in 2012-2013.**

3.1. Ecommerce and online transactions

Following people's increased usage of online transaction channels, the number of Australian businesses who introduced online payments increased by 2%, generating total a $246 billion income in 2012-2013. By comparison, the total income of online transactions in 2010 -2011 was a $189 billion.

3.2. Social Media

Another significant change businesses went through over the last several years is the way they market their products or services. Today, 26% of Australian business are present on one or more social media channels and actively engage in online communications with their fans and followers.



3.3. Mobile apps

With the mobile boom, smart devices have entered business ecosystem to reinvent communication and information flow. With most Australian businesses now allowing *BYOD* (*Bring Your Own Device*) or *COPE* (*Company Owned Personally Enabled*) policies, a greater variety of mobile applications is used for regular business processes.

A global IDC study that included responses from CIOs or IT managers from Sweden, Denmark, Norway, Poland, Germany, United Kingdom, Australia, United States and France outlined the most popular smartphone apps used in companies.

- **Customer relationship management CRM 31%**
- **Business intelligence BI – 13%**
- **Approvals and authorisations – 10%**

Therefore, it is clear how businesses are utilising mobile accessibility for improvement mission-critical processes. This trend is only likely to grow in future years, ensuring that mobile companies will have enough resources to prosper.

> *"Ensuring a competitive advantage and enabling an even more productive workforce that gets access to correct data, even when they are on the move, is a critical success factor in the future and a major focus for mobility solutions," IDC's Jason Andersson said.*

3.4. Cloud hosting and cloud applications

Cloud hosting has been a popular trend among Australian business over the last several years, especially in the realm of small businesses. Feature-rich software, powerful computing resources, and analytics tools are now available at affordable prices, which made the cloud an irreplaceable resource in small businesses whose increased internet activities require stable communication and service delivery solutions.

Australian SMBs have thus become important cloud consumers, with managed services and web applications being some of the most widely used cloud solutions.

Furthermore, Australian web hosting and data centers industries have seen some tremendous changes after the rise of the cloud, as an increased number of businesses started demanding third-party hosting, blogging and ecommerce tools.

4. e-Education: opportunities for young Australian professionals

> "*Information and communication technologies are not simply 'utilities,' like electricity and water, but a 'rapidly evolving, mission critical resource.' This makes digital communication the backbone of a university's knowledge management capability."* Educase, *The Tower and The Cloud.*

Education sector has seen similar transformations in Australia over the past few years. With more and more schools and universities building online platforms to provide students with immediate access to relevant information, Australian education sector has indeed proliferated. Certainly, there are multiple reasons for this change of focus: not only did the ways of accessing and using information change, they also set new standards in the job market that requires specific types of skills.

E-education thus emerged as a product of increased efforts of both the Government and educational institutions to break through traditional structures and provide high-quality education.

According to Australia.edu, **around 87% of universities in Australia have internet access for all of their students, while 70% offer access from off campus.** They also outline the ways universities encourage active online participation of students in e-education.

- **90% of universities have fully or partly digitised libraries**
- **Online course management (WebCT and Blackboard) is widely used in most institutions**
- **Online class registration represents an efficient way to facilitate administrative processes**
- **Online support for student inquiries**

Furthermore, there are many projects that are intended to increase engagement in education institutions through the uses of high-speed broadband and digital technologies. An important example is a Government-funded *3D Online Education Initiative,* for which the Australian Government will be providing up to $2.5 million over the next two years.

4.1. Cloud computing

Cloud computing is also a dominant trend in education that many institutions adopt to reduce IT costs and increase flexibility. The education industry in general has seen different benefits from using these technologies, especially because major providers such as Google and Microsoft offer free or very affordable resources to this particular sector.

5. e-Healthcare: quality medical resources at everyone's hands

The advent of technology also had a positive impact on the healthcare industry, which now can use innovative medical imaging technology, clinical laboratory diagnosis or surgical robots to support both patients and medical research. The use of the Internet, however, seems to have brought the greatest advantages; according to BinaryHealthcare, Asia Pacific healthcare facilities use the internet in the following areas:

- Healthcare research
- Education
- Delivery of healthcare via the Internet
- Financial and administrative transaction

Some of the emerging disciplines are tele-surgery, tele-pharmacies, tele-psychiatry, tele-consultation, tele-pathology, tele-radiology and others. Tele-radiology seems to be particularly popular in Australia primarily because of lowered costs and faster turnaround of services.

As the BinaryHealthcare research suggests, despite the various benefits, there are also certain barriers that prevent wider adoption of internet-based tools in the field. These are (quite expectedly):

- Security and Privacy Issues
- Physician's resistance to change

Security and privacy issues are mostly associated with the sensitivity of data these institutions work with. To fully automate communication processes between patients and physicians, healthcare institutions would need to comply with standards and regulations that ensure maximum security. Australian Commission on Safety and Quality in Health Care for this purpose released a set of protocols and systems that intended to enable safe use of the Internet in the sector.

Furthermore, the Government itself is investing in digital projects such as telehealth services. Namely, $3.76 million was provided by the Government to support Townswille Telehealth Diabetes Trial in the last few years, which is one of the major government-funded projects in the country.

5.1. The future implications for health professionals

Despite the existing resistance to change, there are ways for both physicians and patients to use the web safely and efficiently. After all, with all the possibilities internet-based tools and portals can bring, the healthcare industry cannot ignore the potential of the expanding trend.

In his *Using the Internet in Healthcare,* Stuart Tyrell summarises the future of the Internet in healthcare the following way:

"*The Internet and intranet should become the prime source of reference material for most healthcare professionals. They will allow the medical practitioner easy access to the latest information and advice regarding most medical conditions. The widespread availability of high-quality information will also aid the research into best practice and therefore raise the quality of healthcare. Distance learning will also provide wider opportunities, allowing medical practitioners and researchers to learn from the world's leading experts."*

6. Conclusions

Looking back at times when traditional technologies and paper-based offices ruled business, education and healthcare, it is easy to see why such systems are no longer viable. Modern employees, students and patients simply require different information and service delivery systems, which is why the Internet represents a way to innovation. Despite the fact that some sectors in Australia were slow to respond to global technology trends, there are indications that the country is ready for some large-scale changes. The willingness to embrace new technologies and participate in the online expansion is present in many institutions and this certainly can bring many benefits for Australians.

Considering all the aspects of digital innovation described above, Australian institutions seem well-equipped for functioning in the digital age. The path to success perhaps may not be as easy in practice, but it is logical to assume that with a variety of resources available, Australians are yet to enjoy the true benefits of innovation. At the moment, however, it is obvious that the Internet has demonstrated its revolutionary potential across industries, advantages of which are clear to anyone who actively uses some of the services offered.

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