



Quick Guide: Selecting ICT Tools for your Business

This Quick Guide is one of a series of information products targeted at small to medium sized businesses. It is designed to help businesses better understand, and take advantage of, new information technologies.

The focus of this Guide is on how information technology can be used to drive business efficiency, improved productivity and innovation.

Context: The Digital Economy

The digital economy IS the economy. Information and communications technology is now an everyday tool for most things we do: business transactions, information retrieval, communications, service delivery and service access, information analysis, market intelligence, access to customers etc.

Active participation in the digital economy is essential to Australia's continued productivity, global competitiveness and improved social wellbeing.

Modern technologies can improve health outcomes, enable improved educational services, provide new opportunities to support rural and remote communities, facilitate an environmentally sustainable environment, enable government services to be more accessible, support increased collaboration, enable businesses to compete globally, improve our export capabilities . . . the list goes on.

The digital economy is not simply doing more of what we do now online. This is only part of the equation. More importantly, it is about doing things differently and doing some things we never envisaged because new technologies make them possible.

Opportunities for Business

Digital technologies and access to high-speed broadband positively impacts the operations and profitability of all businesses across just about every industry and business type. Using the broad range of technology available businesses can:

- Reduce costs for businesses through:
 - 'just in time' business operations and production processes
 - new work models such as teleworking
 - lower IT infrastructure costs through the use of cloud computing
 - reduced travel expenses through tools such as video conferencing, Skype, teleconferencing with remote presentation delivery via the Internet
 - paper reduction and related savings
 - online training tools
- Increase efficiencies and productivity through:
 - reduced manual processing
 - reduced double entry of data and duplication of resource efforts
 - automation of processes
 - electronic workflow management and scheduling systems
 - improved, fast tracked 'go to market' approaches
 - ability to undertake real time capacity forecasting



- ability to track and measure the cost of production
- the ability to deal with customers remotely
- the ability to communicate with suppliers and customers online
- Improve business performance through:
 - real time access to information (and business 'dashboards') that enable risks to be identified and managed and the health of a business to be reported dynamically
 - The capture and analysis of financial, production, service, customer information to inform rapid decision making
 - improved market intelligence relating to competitors, market trends, customer requirements
 - access to remote markets
- Improve customer service by:
 - providing services and support to customers in real time
 - enabling customer access to services and information from anywhere, at any time
 - measuring and guaranteeing service quality
- Improve brand recognition using a range of online and social media tools
- Collaborate more effectively with business partners and internal and external stakeholders
- Access, consolidate, manipulate and retrieve large sets of data
- Increase revenue opportunities through extended market reach, including increased export capability
- Attract investment from anywhere around the world.

Information Technologies that can assist Business

Outlined below is a sample of the types of technologies/technology tools that can be used by businesses to improve productivity, efficiency and overall business effectiveness.

Enterprise Resource Planning (ERP) System

An ERP system is business management software that manages the flow of information between all parts of a business. Products differ but functionality typically includes: financial management/accounting functions; payroll; human resource management; supplier management; inventory management; production management; planning and scheduling; supply chain management; project management; sales management; point of sale capability and customer relationship management. Some ERP packages are generic and can be used across a range of industry types; others are developed for specific industries (e.g. manufacturing, professional services, construction).

Key Benefits

- Improved business efficiency and cost savings due to: elimination of manual processing; reduced double entry of data into different systems; improved accuracy of information; and real time access to financial and business information relating to the overall performance and health of the business.



Materials Requirement Planning (MRP) System

A MRP system is a production planning and inventory control system used to manage manufacturing processes. It uses bill of materials data, inventory data and scheduling information to project what material is required when and in what quantities. It can incorporate the impact of variables such as changes in capacities, shortages and delays in suppliers and feeds information into the accounting system.

Key Benefits

- Improved production productivity due to the improved accuracy of materials planning processes.

Customer Relationship Management (CRM) System

CRM software is used to: manage a business' interactions with customers and clients; identify and monitor sales prospects; support marketing activities; and provide customer support and services.

Key Benefits

- Improved customer/client service facilitated by a central, accurate source of customer/client/supplier information that can be shared across the business
- Improved business analytics: ability to access and analyse sales/prospect lead dates; business win/loss conversion information; sales pipeline details; sales performance data.

Collaboration Software

Collaboration Software is used by dispersed teams to collaboratively author products/papers; develop and execute project plans; and share ideas in real time.

Key Benefits

- Productivity and efficiency improvements through real time development and editing of documents; product information; and project monitoring.

E-Commerce tools

Electronic commerce is the buying and selling of products or services over the Internet. It draws on other technologies such as electronic funds transfer; online transaction processing; electronic data exchange (EDI) and inventory management systems. Some ERP systems include e-commerce capability. Others can be integrated with these systems.

Key Benefits

- Expands customer reach and market potential to help drive revenue and profitability improvements; can link with back end systems to update customer details and orders and manage inventory.

Estimating Software

Estimating software is typically used by builders and construction professionals to help estimate the cost of a construction project.

Key Benefits

- Delivers accurate bid quotes to ensure profitability of jobs or projects.



Enterprise Asset Management (EAM) Software

EAM Software enables businesses to manage their assets (e.g. plants, facilities, equipment). They record and track information about an asset including: use, scheduling and frequency of use; location; repair and maintenance history; warranty information; and compliance information. They also automate requests for upgrades, regular maintenance and decommissioning or replacement of assets.

Key Benefits

- Ensures efficient and optimal use of the assets invested in by a business
- Reduces risk of disruption/production downtime where assets are a production dependency.

Content Management Software

A content management system is used to upload, edit and manage content displayed on a website. It assists regulate when content is displayed and manages how content connects or interacts with other parts of the website.

Key Benefits

- Does not require extensive coding expertise therefore management of web content does not have to rely on the skills of technical staff.

Fleet Management Software

Fleet Management Software manages a business' transportation fleet (commercial cars, trucks, vans). Functionality typically includes: vehicle financing, vehicle maintenance, tracking of vehicles, driver management, speed management, fuel management and health and safety management.

Key Benefits

- Improved efficiency and productivity of fleet through better scheduling, vehicle management and maintenance
- Ability to demonstrate compliance with relevant government regulatory requirements.

Document Management System

A Document Management System stores and tracks electronic and paper based documents and images. They support a variety of document formats and provide extensive access control and searching and retrieval capabilities.

Key Benefits

- Improved efficiency from centralised management of documents and timely document retrieval
- Ability to control and audit access to documents.

Cloud Services

Cloud Computing is the use of third-party software, storage or infrastructure that can be accessed by multiple users over the Internet. Cloud Computing is characterised by the following key features:

- Computing resources are accessed as services
- Rapid ability to scale computing resources to match fluctuations in business demand



- Utility-based pricing. Users only pay for computing resources they use.
- Key Benefits:
- Reduced up-front costs
- Access to enterprise strength IT resources (including security infrastructure)
- Business flexibility and agility.

Social Media

Social Media refers to web-based technologies that are used to turn communications into interactive dialogue between individuals, communities and organisations. They allow the creation and exchange of user generated content. Examples include: Facebook, Twitter, LinkedIn, Pinterest, YouTube, Flickr, Wikis, and Blogs.

Key Benefits

- Ability to gauge customer opinions, demands in real time
- Brand awareness
- Dynamic customer engagement and relationship development.

Internet-based communication skills - VoIP, Video Conferencing, Web Conferencing

These tools enable virtual meetings with colleagues located in different geographical locations rather than speaking with them on the telephone or meeting face-to-face.

VoIP applications and services are similar to a regular telephone call, with the key difference being that the call is transmitted over the internet (rather than over telecommunication networks). This can result in lower call costs when VoIP is used through existing broadband, and is particularly useful for international calls. VoIP is also cheaper and easier to maintain than traditional circuit-switched telephone systems.

VoIP applications (e.g. Skype) can be downloaded to a computer or networked handheld device or provided as a service via an ISP service provider.

Videoconferencing facilities enable participants to conduct 'virtual' meetings in which colleagues can see and talk to each other when they are geographically located in different sites. In addition to installing a videoconferencing application, participants require a high-speed broadband connection to ensure a smooth, real-time streaming video experience.

Web conferencing enables presentations and training to be delivered online regardless of where the audience is located. It refers to the combination of 'screen share' (in which both ends of the conferencing call can see the same screen) and voice. A presenter can talk to slides or screen images on their own computer and participants on the web conference can see and follow them. Examples of web conferencing solutions include Webex, Microsoft Office Live Meeting and Cisco Unified Meeting Place.

Key Benefits

- Cost savings
- Improved efficiency and cost reduction due to reduced travel.



Online Presentation Tools

A range of dynamic new presentation tools are available online to support the development of dynamic, quality presentations for customers/clients.

These include: Google Docs, Prezi, SlideShare, Zoho Show, 280Slides, authorStream, SlideRocket.

Key Benefits

- Ability to share and collaborate development and editing of presentations
- Ability to upload images and video, add text and create presentations easily and quickly
- Upload for sharing.

Computer Assisted Design (CAD) systems

CAD systems are used to assist in the creation and modification of a precision drawing or technical illustration. CAD software can be used to create two-dimensional and three-dimensional models. The output of a CAD system is typically an electronic file for print or machining operations.

Key Benefits

- Ability to develop precision designs that can be easily edited or modified
- Information from a CAD can be fed directly into manufacturing machining equipment to support accurate 'cutting', fabrication of product.

Information Technology and Business Innovation

While there is a temptation to 'box' the concept of innovation into something that is unique and scientific or technological in nature, in fact the concept has much broader application across a diverse range of industries, businesses sectors and businesses themselves.

In line with the OECD interpretation – '*Innovation is the implementation of a new or significantly improved product (good or service), process, new marketing method or a new organisational method in business practices, workplace organisation or external relations*'.

Essentially it is about making a change or doing something in a new way that achieves a better result or improved outcome. In the case of business, it is about deriving business success from the innovation.

For all businesses innovation is essential to retaining relevance and competitiveness. There are many ways in which a business can innovate but in a world in which technology is a part of just about everything we do, information technology is an increasingly important and recognised enabler of business innovation. It is fundamental to the new ways in which customers are engaged, services are delivered, products are designed and manufactured, information is shared, markets are accessed and communication is undertaken.

From a practical perspective, opportunities to innovate using information and digital technologies include:

Development of new business models

- Mobile and/or remote devices to capture data (images, photos, sound recordings, temperature, atmospheric conditions) onsite and remotely
- Smart analytic tools to capture, aggregate, manipulate and retrieve data to help identify potential market niches, opportunities, customer behaviour



- Use of online and mobile devices to deliver services or empower staff
- Leveraging cloud computing technologies to reengineer how ICT resources and applications are optimised and/or delivered within a business.

Development of new products and services

- Application of new digital technologies to support rapid prototyping, e.g. 3D printing
- Use of smart design programs to envision and create new products
- Development of consumer applications that enable easy access to your product/service, e.g. an iPhone or iPad application
- Development of personalised offerings to customers
- Use of user generated content to input into the design of new products and services.
- Development of new business processes
- Electronic collaboration tools that can be used to seed and develop new ideas, support research
- Implementation of workflow systems that automate processes and optimise an end to end business process.

Development of new marketing techniques

- Use of social media tools to raise brand awareness and monitor customer feedback
- Utilisation of online and CRM products to customise, personalise and disseminate marketing materials and measure the success of specific campaigns.

Interesting Facts and Figures

- In the last ten years alone the number of internet users world-wide has increased some 445% to almost 2 billion.
- In 2010, global internet traffic increased by some 14%
- To put this into perspective in 1993 there was less than 7 million internet users. Ten years later in 2003 it was 600 million. Looking to 2015 it is predicted that there will be more than 5 billion internet users and 15 trillion connected devices.
- At the end of last year, there were 255 million websites
- In the third quarter of 2010, over 81 million internet enabled smartphones were sold globally and over 5 billion mobile connections world wide
- There is currently over 2.4 billion people instant messaging with 200,00 texts sent every second
- 35 hours of video is uploaded to YouTube every minute
- 46% of internet users worldwide interact with social media on a daily basis.

Further information

Visit the business website at business.gov.au.