Project TDU0516

Upskilling e-business in the Supply Chain in the Nursery and Garden Industry

Establishing the Needs

Research Report

by Gerard McEvilly

Horticulture Supply Chain Services

Horticulture Supply Chain Services

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Gerard McEvilly

Horticulture Supply Chain Services

29 Bingara Road   Beecroft   NSW   2119

T: 02 9876 1627   M: 0409 047 117

E: gmcevilly@gmail.com

About the Author

Gerard McEvilly is experienced in the development of market-focussed strategy and R&D programs in horticulture. He applies supply chain thinking to problem solving and applies technical and marketing perspectives to reveal fresh insights. These are also informed through outstanding networks in all aspects of rural R&D built over 20 years.

Gerard works independently as Horticulture Supply Chain Services and in association with several teams of specialist consultants, mainly in supply chain management, carbon response strategy and R&D management. He previously spent over a decade managing strategic planning and R&D programs for multiple horticultural industries with Horticulture Australia Limited (HAL).

Gerard is currently vice-president of the Australian Society of Horticultural Science and has a strong professional interest in the development of young people in horticulture. He lectures part-time at the University of Sydney and initiated a careers and courses guide for horticulture, published with Rural Press. He has also been an invited conference speaker and facilitator as well as contributing to industry journals.

Acknowledgments

Abbreviations

EPG	Electronic Price Guide
ERP	Enterprise Resource Planning
ICT	Information and Communication Technology
NGI	Nursery and Garden Industry
NGIA	Nursery and Garden Industry Association (National)
NGINA	Nursery & Garden Industry of NSW & ACT
PSC	Project Steering Committee

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Executive Summary

A 2009 industry supply chain review, NY08006 commissioned by NGIA (McEvilly & Rafferty 2009) confirmed that up-skilling of all Nursery and Garden Industry (NGI) sectors was urgently needed to: improve efficiency; reverse declining profit margins; capture market opportunities and improve business sustainability. Importantly, adoption levels of Information & Communication Technology (ICT) in the industry were very low and a significant impediment to development of strong supply chains.

To address the low levels of adoption of e-business in the NSW/ACT NGI the project, TDU0516 was initiated by NGINA and has been enabled by funding from the NSW Government Skills Enhancement Program – Developing Skills for Success. The project aims to establish an integrated industry approach to e-business as a key contributor to efficient supply chain management and improved business sustainability.
- NGINA is the peak body for the NGI in NSW and the ACT which has sales of around $2 billion per annum and employs over 16,000 people.[1]
- The project is also highly relevant to the NGI nationally.

This report, directed at the Project Manager and the Project Steering Committee (PSC) summarises the findings of the key elements of Stage 1of TDU0516. It involved desk research and interviews with thirty industry members. The aim was to assist the PSC to identify the key areas of focus for e-business skills development in the industry. These were identified in terms of **potential e-business training topics** as well as the **target audience**. The report also recommends ongoing engagement by NGINA with the industry in relation to e-business issues**.**

- The focus for this research was on consulting with people representing as many as possible of the multitude of industry sectors, including input suppliers (or "allied traders"), plant producers, transport, landscape and retail participants. Meetings were held with some providers of software-based product tracking and identification systems. A review of related information was undertaken, covering existing project reports as well as internet searches focussed on information about nursery production management software

Summary of findings

Key e-business issues vary between the main industry marketing channels
These are: Landscaping; Large Format Chainstores; Independent Garden Centres; and Direct Market. This must be taken into account in designing training programs.
"Monday Mayhem" is an example of a business management issue that affects efficiency throughout the supply chain "Monday Mayhem" is the process of restocking greenlife in retail outlets after the weekend's trading -. A range of alternative e-business tools could be used to streamline this.
A wide range of e-business competency, and levels of interest exist.
A simplified framework was developed to identify the target audience for e-business

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[1] "Our Industry" at NGINA website http://www.ngina.com.au

training to make the best use of the resources available and to maximise the uptake of this training. Some enterprises at the "Advanced" level of e-business competency were interested in acting as a mentors/facilitators to their "Intermediate" level suppliers and/or customers.

A range of potential training topics arose from the consultation.
This is not an exhaustive list, but can act as a basis for discussion and development by the PSC:
- o Costs & benefits of barcoding
- o Implementing bar coding systems
- o Meeting the e-business requirements of trading partners
- o Developing cost-effective websites
- o Step-wise development of e-business
- o Software protocols
- o Online sales
- o Smarter inventory management
- o Effective communication between producer and retailer

Several important e-business issues that were not training-focussed were identified
These may be seen as outside the project scope, but need a coordinated approach by industry.

Recommendations

1. The potential training topics are to be reviewed, further developed and prioritised by a Sub Committee of the PSC, before being finalised. This should take into account additional input from the online survey as well as the total budget available for the development and delivery of training materials

2. A comprehensive e-business communications program should be developed, directed at owners and managers of enterprises. This should aim to raise **awareness** of what e-business covers, **belief** that e-business capabilities are essential for business viability and **commitment** to developing these capabilities.

3. The training program should focus on the "Intermediate" level of e-business competency.

4. One or more e-business improvement projects could be based on enterprises at the "Advanced" level of e-business competency willing to act as a mentor/facilitator to some of their suppliers and/or customers

5. A clear Terms of Reference for the project steering committee should be drafted. The NGINA Training & Education Committee should develop strategies to continue building e-business competency beyond the term of TDU0516. This could include responsibility for addressing the issues identified in 4(c) that are not directly related to training courses as well as guiding the e-business training options above.

Introduction

A 2009 industry supply chain review, NY08006 commissioned by NGIA (McEvilly & Rafferty 2009) confirmed that up-skilling of all NGI sectors was urgently needed to: improve efficiency; reverse declining profit margins; capture market opportunities and improve business sustainability. Importantly, adoption levels of Information & Communication Technology (ICT) in the industry were very low and a significant impediment to development of strong supply chains.

To address the low levels of adoption of e-business in the NSW/ACT NGI the project, TDU0516 was initiated by NGINA and has been enabled by funding from the NSW Government Skills Enhancement Program – Developing Skills for Success. The project aims to establish an integrated industry approach to e-business as a key contributor to efficient supply chain management and improved business sustainability. NGINA Business Skills Development Officer, Bob Wynyard, is Project Manager with the help of a steering committee which aims to maximise the benefits gained from this opportunity.

NGINA is the peak body for the NGI in NSW and the ACT which has sales of around $2 billion per annum and employs over 16,000 people.[2]

The project is also highly relevant to the NGI nationally.

The following definition of e-business was developed to describe the possible scope of skills improvement in this area:

"E-business refers to those events undertaken electronically in business. It includes all activities such as marketing, customer support, research, communications, order processing, supply chain management and partner collaboration.[3]"

This report explores the problems, opportunities and remedies as part of Stage 1of TDU0516, as well as helping to identify the key areas of focus for e-business skills development in the industry.

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[2] ibid

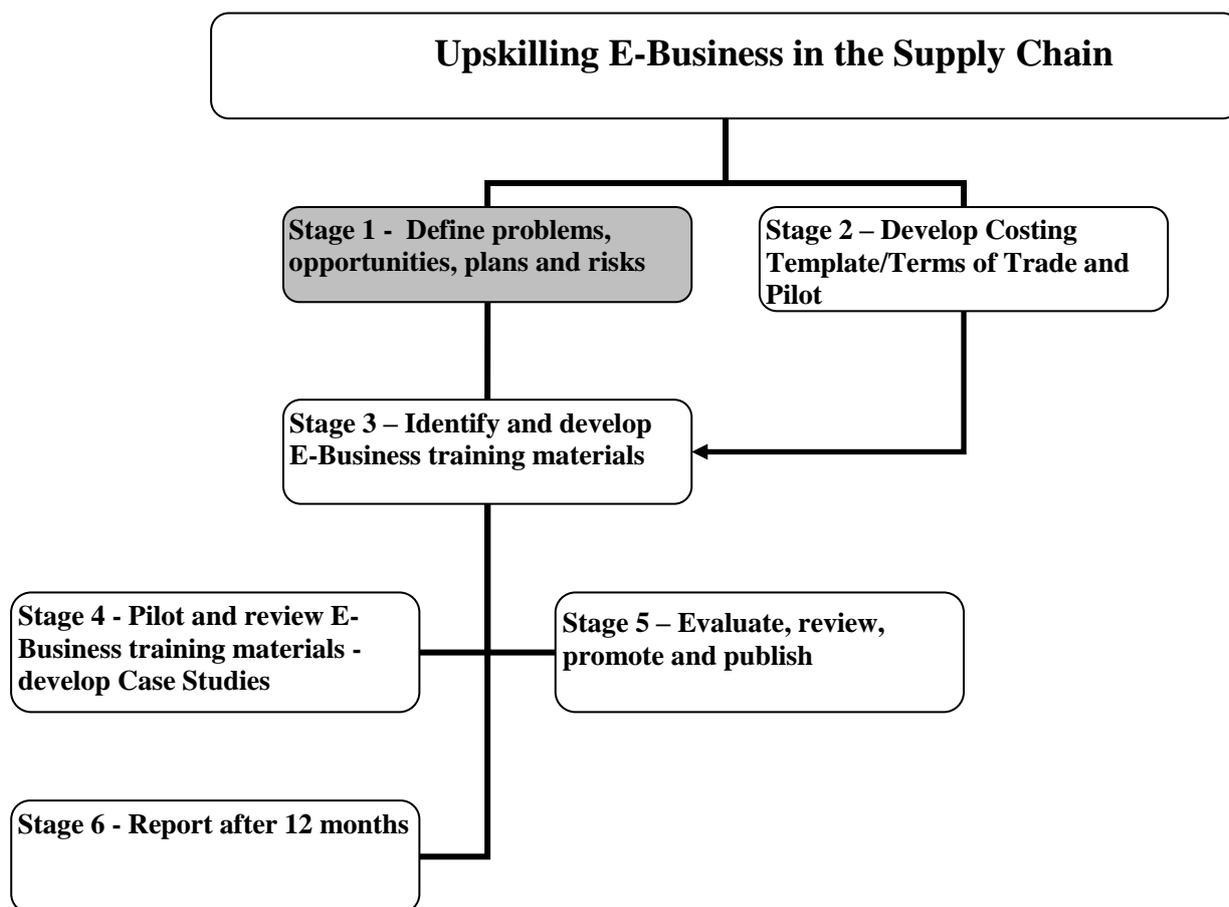[3] NSW Government, Industry & Investment www.business.nsw.gov.au

Objectives

The overall project TDU0516 aims to establish an integrated industry approach to e-business as a key contributor to efficient supply chain management and improved business sustainability. This will enrich the flow of quality information along the supply chain, improve collaboration and better meet consumer needs and expectations.

These will be addressed through the following stages of the project.

a. Stakeholder consultation

b. Review of existing resources

c. Assessment of existing training resources and channels

d. Drafting and finalizing report summarizing review and consultation

This will assist the PSC to identify the key training needs for the NSW/ACT NGI

Figure 1 Summary of the 6 stages in project TDU0516

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        ┌─────────────────────────────────────────────────┐
        │     Upskilling E-Business in the Supply Chain    │
        └─────────────────────────────────────────────────┘

   ┌──────────────────────────┐    ┌──────────────────────────┐
   │ Stage 1 -  Define problems,│    │ Stage 2 – Develop Costing │
   │ opportunities, plans and   │    │ Template/Terms of Trade and│
   │ risks                      │    │ Pilot                      │
   └──────────────────────────┘    └──────────────────────────┘

   ┌──────────────────────────┐
   │ Stage 3 – Identify and    │
   │ develop E-Business        │
   │ training materials        │
   └──────────────────────────┘

   ┌──────────────────────────┐    ┌──────────────────────────┐
   │ Stage 4 - Pilot and review│    │ Stage 5 – Evaluate, review,│
   │ E-Business training        │    │ promote and publish        │
   │ materials - develop Case   │    │                            │
   │ Studies                    │    │                            │
   └──────────────────────────┘    └──────────────────────────┘

   ┌──────────────────────────┐
   │ Stage 6 - Report after 12 │
   │ months                    │
   │                           │
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Methodology

Given the limited resources available, the intent was to gather advice from a broadly representative cross section of the industry. This was not designed to gather comprehensive data to enable scientifically-valid modelling of the NGI in NSW and ACT.

Instead, the focus was on consulting with people representing industry sectors, including input suppliers (or "allied traders"), plant producers, transport, landscape and retail participants. Meetings were also held with some providers of software-based product tracking and identification systems.

The targeted participants were selected from a list compiled from NGINA sources and updated along the way. Participation also depended on location, scheduling and availability. The majority of participants were from the Sydney Basin, although some interviews took place in Canberra and Northern NSW.

Interviews took place between mid-February and mid-April, with two by telephone and the remainder being face-to-face. The participants are listed in Appendix 1 .The numbers interviewed from each sector do not necessarily reflect that sector's number of enterprises, nor its contribution to the overall value of the industry.

The interviews were carried out informally, since the low participant numbers and their diversity precluded any quantitative analysis of the responses. However, the discussion was based on the questions in Appendix 2.

To enable input from a wider section of the industry, NGINA developed an online questionnaire, for delivery through SurveyMonkey. A desktop review of relevant existing project reports as well as internet searches focussed on information about nursery production management software. Information was also gathered about Point-of-Sale (POS), Customer Relationship Management (CRM) and Enterprise Resource Planning (ERP) software.

Findings

1. E-business covers a wide range of activities

In order to avoid pre-empting the areas that will form the focus for training, a broad definition of e-business was adopted, as in the introduction. This covers virtually everything that can be computerised within a business, with or without the internet. It is inclusive of the various interpretations of the term "e-business" that emerged during the consultation.

This broad definition of e-business would include the following, at least some of which are in use in the Australian NGI:

Business management systems
- Accounting and finance
- Procurement
- Inventory management
- Human Resource Management (HRM)/ payroll
- Customer Relationship Management (CRM)
- Production nursery management software
- Irrigation monitoring and control
- Enterprise Resource Planning (ERP)– may cover some or all of above
- Retail Point-of-Sale (POS) systems
- Product tracking and traceability during and post-production
- Word processing, presentations

Email communication
- General correspondence
- Product lists
- Orders, invoices, delivery advice etc
- Newsletters

Websites managed by the enterprise
- Product information
- Availability lists- Enterprise information
- Registration (loyalty programs)
- Restricted access (user login)

Websites accessed by the enterprise
- Sources of technical information
- Sources of industry information
- Sources of supply (eg product availability)
- Search engines, portals or directories

Other internet-based products
- Blogs (web-based commentaries)
- Wikis
- Photosharing
- Podcasting
- Survey tools
- Content Management Systems
- Google pages
- Verbal communication tools (such as skype, -- VOIP, web conferencing)

Social media
- Facebook
- Twitter

Some past overviews of elements of e-business are available as follows:

- McSweeney P and Bailey N 2000 Nursery Computer Software Evaluation HAL Final Report NY 99042 (see also NGIA 2001 Computer software for the nursery industry 2001_3. Nursery Paper derived from this report)
    - a valuable starting point, but now well out of date and requiring review

- NGIA 2008 A taster of innovative technologies for the nursery & garden industry Nursery Paper 2008_06
    - a valuable summary of many of the web-based technologies available, but there have been many more developments since publication

The Bibliography also contains a number of references to aspects of e-business that have arisen during discussions or from the desktop research

In conclusion, this broad approach to e-business provides important context, as a glimpse of this bewildering list of e-business functions and tools. However, this also indicates that the limited resources available to project TDU0516 need to be targeted very carefully in order to achieve the project aims, as follows:

> Establish an integrated industry approach to e-business as a key contributor to more efficient supply chain management and improved business sustainability. This will enrich the flow of quality information along the supply chain, improve collaboration and better meet consumer needs and expectations.

> Provide, in particular, managers and employees of the many industry SME's with improved ICT skills, adding to their skill-sets and future employability.

> Identify and prevent the existing waste of resources occurring in NSW through manual, largely paper-based systems of stock ordering, invoicing, delivery, sales and payment processes among SMEs.

> Develop skill-sets based on e-business and supply chain units of competency to match the needs of production nurseries and garden retailers. Workshops will be conducted for owner/managers and employees from SMEs across the sector (including suppliers, growers, transporters, retailers and wholesalers) to provide participants with skills and resources to implement e-business processes in their businesses.

In this respect, it is worth noting that many of these e-business functions and tools simply offer alternative options which enhance the efficiency of these **basic business functions**:

- Production
- Order and dispatch
- Inwards Goods
- Marketing
- Inventory
- Sales
- Payroll
- Accounting.

These may be applied progressively, as follows:

1. A single enterprise may use e-business tools for none, one or several of these functions separately.

2. A single enterprise may use e-business tools that integrate two or more of these functions.

3. Two or more enterprises may transact with each other using a combination of e-business tools.

2. Key e-business issues vary between channels

Before deciding on the focus of training material to be developed it is important to recognise the disparity between the main NGI marketing channels (see Appendix 1). Of necessity, these have been generalised as follows:

Landscaping

The Industry and Supply Chain Review NY08006, McEvilly and Rafferty 2009) identified landscape as a "champion channel" with growth of 50% between 2003 and 2008.

Generally, it appears that many landscape contractors are comfortable using basic e-business tools such as ordering plants by email, using their laptop computers as a mobile office.

A number of production nurseries specialise in supplying the landscaping channel, through producing advanced plants themselves and acting as plant brokers to obtain stock from elsewhere, as necessary. This raises two key issues with potential e-business solutions:

1. Landscape contractors must be able to quote their clients for the greenlife as specified, in terms of variety, size and other quality parameters. Typically, a contractor will ask several nurseries to quote for a particular job, sometimes well in advance of the stock being required. Each of the nurseries involved will then seek any shortfall in stock from other nurseries to enable a full quotation to be provided. Other contractors may also be bidding for the same job and so will also seek quotes for a similar plant list.

   Sourcing plants can be an onerous task, given the enormous range of plant species and possible size/quality combinations.

   There was some suggestion that efficiencies could be delivered through an online system that identified the location, specifications and price of greenlife and although this is not a universal view it warrants further examination by NGINA.

2. It is not uncommon for nurseries to grow stock to order for particular landscaping projects. Since the landscaping works are generally undertaken at the end of a construction project, they are vulnerable to delays. This means the nursery incurs additional costs in holding the stock and can also face major challenges in maintaining the stock to the required specification, when delays are extensive. Lack of communication about delays invariably leads to tension between the contractor and the nursery. One suggestion during the consultation was that a Code of Practice be developed between the two parties to address this issue. This may result in some integration of computer systems to enable the contractors and suppliers to collaborate in meeting the client's needs, even in the face of delays.

Large Format Chainstores

It is well-recognised that sales growth of plants in this channel has exceeded that of other retail channels. This is in part due to the rapid expansion of store sites – the 200th Bunnings store in Australia opened in April 2012[4]. This trend is now poised to accelerate with the launch of the Masters Hardware store concept by a joint venture between Woolworths and American giant retailer Lowes. Twenty new Masters stores are due to be operating by August 2012 with an overall national target of

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[4] Anon (2012) Bunnings' plan for 6000 new jobs. Sydney Morning Herald 30 March 2012. http://www.smh.com.au/business/bunnings-plan-for-6000-new-jobs-20120330-1w1wm.html accessed 8th April 2012

150[5] stores. The launch of Masters has ensured continuing expansion by Bunnings who have announced plans for a further 85 stores over the next five years. Other hardware chains such as Mitre 10, Big W and John Danks (Thrifty-Link and Home Hardware) also contribute to plant sales.

This channel has tended to drive adoption of e-business processes by the production nursery sector. In fact, an important earlier project (Thawley 2006) was largely prompted by the needs of the chainstores. During the McEvilly & Rafferty study of 2009 it was clear that Bunnings were gradually firming up their requirements of suppliers, in terms of product identification.

Bunnings have now made Electronic Data Interchange (EDI) available for greenlife suppliers. This requires the supplier to link their own e-businerss system to Bunnings' Oracle system or to use a data interpretation module available with some business management systems. EDI enables merchandisers employed by a supplier to place orders directly, using a wireless scanning device as they check stock at the shelf location.

To date Masters have been running a series of vendor information sessions, which include setting the e-business standards required of plant suppliers. (Bob Wynyard and David Foster of NGINA have attended a session to gain information for this project). This involves the use of Webforms to document the transaction online. While there may be some flexibility as the new Masters' systems bed down, it appears that e-business will be central to doing business with Masters.

It seems likely that most producers would now be aware of the requirement to barcode all stock for Bunnings, Masters and most other chainstores. Some production nurseries interviewed saw this solely as a cost impost and therefore a service that they were reluctant to provide to other customers. Others had fully implemented bar-coding and appreciated the monthly sales reports. These are generated by Point-of-Sale scan data and enable sales through the various stores to be monitored.

Surprisingly, there were reports of some Bunnings and Big W buyers requesting plant availability listings by fax rather than email.

Overall, the chainstore channel appears to have helped to drive the adoption of certain aspects of e-business in the greenlife sector. There are three serious implications:

1. Growers may want to start supplying into this channel, but lack the skills or infrastructure.

2. Existing growers may lack the skills to move into more sophisticated aspects of e-business such as EDI.

3. Other retailers (see following) that lack the e-business systems used by the chainstores are missing out on the business efficiencies that such systems can offer.

Independent Garden Centres

This channel includes mainly single-site and multi-site garden retail outlets, which tend to be privately owned and operated. However, scale can be achieved through multiple outlets, such as with Flower Power, Swanes and Eden Gardens, Other independents achieve scale through garden centre marketing groups such as Plants Plus and Greengold.

For example, Plants Plus is part of the John Danks group (now owned by Woolworths) and so its members have the opportunity to use established buying systems and other e-business tools. However,

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[5] Bartholomeusz, S. (2012) Bunnings nails down a growth plan. Business Spectator 30 March 2012. http://www.businessspectator.com.au/bs.nsf/Article/Bunnings-expansion-Masters-Wesfarmers-hardware-ret-pd20120330-SV2LJ?OpenDocument&src=mp accessed 8th April 2012

because each member garden centre is an independent business, the level of adoption of these systems is variable. Also, while all members can access a wide range of hardware items through the Danks distribution centre, greenlife is ordered directly with suppliers, who are generally not yet operating within the Danks system.

As such, this channel is highly diverse, ranging from some very small single-site enterprises through to large-scale integrated enterprises. Whatever the scale, independent garden centres lack the economies of scale, marketing clout, extended opening hours and buying power enjoyed by the chainstores. As a result, it appears to be broadly recognised within the industry that this channel is finding it increasingly difficult to compete.

However, in other retail categories affected by chain store expansion such as bakery or fresh produce, the independent sector has maintained an important role through a range of strategies. This is also the case in overseas markets such as the UK, where hardware and garden chainstores are long-established. According to NGINA, independent garden centres account for an estimated 25% of the retail share of the Nursery and Garden sales in Australia. NGINA also report an increased adoption of electronic point of sale software, indicating improving levels of business expertise by independents.

Generally, the independents claim to offer superior levels of service and superior levels of plant and gardening knowledge than chainstores. However, these points of difference need to be supported by sound planning and efficient business practices to manage overhead costs. Otherwise, they risk having to charge a price premium beyond what consumers may see as fair value for these additional services. To help in ascertaining training needs, this channel could be divided into "adopters" and "non-adopters".

Generally, the feedback suggested that the majority of small independent garden centres are non-adopters. Many make little, if any, use of modern retail management tools, such as use of POS software and monitoring of sales trends through scan data analysis, or even the use of computers for research and communication through email. Where this is the case, it is important that the barriers to adoption of e-business by these enterprises are recognised. In many cases, making training available may be a futile exercise.

In contrast, potential adopters include some highly progressive independent enterprises, managed by people with high-level retail business management skills. These enterprises are sometimes also supported by excellent locations and long-established reputations. Some of these successful independents have also good use of e-business. This could be tested by further assessment of this group. This could also check whether they can manage their own learning pathway or whether they would, in fact, appreciate some industry-based training.

Direct Marketing (Mail order and online sales)

This channel is included because of its increasing impact on the retail environment generally, driven by internet shopping. However, its impact on greenlife sales is unclear at this stage.

There is a long tradition of mail ordering of some gardening lines, such as seeds, bulbs and rare plants, as well as dormant stock such as roses. (Interestingly, Swanes now direct-deliver potted roses all year round, rather than dormant stock – it appears that consumers are willing to pay the extra delivery costs to reap the benefits of an "instant plant".)

A basic internet search reveals a wide range of nurseries offering greenlife online order services.

3. A case for e-business – "Monday Mayhem"

As mentioned previously, during the consultation it was clear that the term "e-business" is open to different interpretations. The following is included as an example of a business management issue that:

- Appears to be widespread in the industry

- Affects people up and down the supply chain

- Diverts considerable resources away from the key functions of producing and selling

- Could be addressed through a range of alternative e-business options

- Some of these options are already used by many of the larger enterprises, thereby rendering smaller enterprises even less competitive

Monday Mayhem refers to the process involved in restocking greenlife by many garden retailers after busy trading periods, but notably after the weekend's trading. This process has been mapped in detail (McEvilly & Rafferty, 2008: 6.5.1 Producer Sales Order onwards). In summary, this involves interaction between numerous retail outlets and numerous production nurseries, to enable each retailer to answer these questions:

What have we sold that needs to be restocked?
What ideas do we have for lines to add to our stock?
What ideas do suppliers have (quantity x quality x price)?
What suppliers have the stock I require (quantity x quality x price)?

This interaction has, in the past, largely been through faxes. Suppliers fax plant lists to their actual or potential customers. Retailers place orders by faxing back their requirements to their selected suppliers. If a supplier runs out of stock, he/she may or may not contact the affected customers.

Suppliers then pick the required stock for each customer and consign to a freight provider. In general, this process must be undertaken urgently, in order to avoid delays to truck departures.

Some of the options for improving the efficiency of this process incorporate elements of e-business:

1. **Using POS data to inform restocking decisions:** The data collected from scanning barcodes at point of sale can inform the retailer about what items have been sold. In theory, reordering can be based on this data, although factors such as stock losses and seasonality would also be taken into account.

2. **Scanning product or shelf codes to create orders:** This uses a mobile scanner to create orders at the same time that stock is merchandised, without requiring additional transcription.

3. **Emailing plant lists instead of faxing:** During the recent consultation, it was reported that there has been some movement towards plant lists being emailed by suppliers. This can better inform the customer by including recent photographs to demonstrate plant quality (through close ups) and quantity/ uniformity (through shots of stock areas).

4. **Placing plant lists online:** In theory, inventory records maintained using production management systems can be transferred to the supplier's website as the stock reaches saleability. The available inventory can be modified as stock is sold, or when losses occur.

5. **Emailing orders instead of faxing:** If retailers also place their orders by email, suppliers can reduce the amount of time spent, and errors made, in transcribing faxed orders into invoices & picking slips.

4. Some e-business training options and issues

Some of these topics relate to the "Monday Mayhem" example, while others have been raised elsewhere in discussions. While based on limited consultation, it is expected that these will be developed further following feedback from the online survey, consideration by the appointed sub-committee and further discussion by the PSC.

a. Target Audience(s)

The NGI is highly diverse and e-business covers a wide array of topics. Therefore, the target audience should be considered carefully as training options are considered and prioritised. This means assessing (i) current levels of competency and (ii) likely levels of interest in improving competency.

i. At this stage, based on the interviews undertaken and on anecdotal comment about others in the industry, the various levels of e-business competency in the industry could be segmented as follows:

Advanced

Retail: Routine use of computer systems at least for accounting, analysis of POS data and communication via internet, including purchasing, website and customer database.
Production: Routine use of computer systems throughout the business, at least for accounting, nursery management including inventory control, processing orders including compliance with requirements of major retailers. Email and or website provide product information
Allied Supplies: Advanced use of computer systems throughout the business including availability of online ordering with automated order picking and consignment

Intermediate

Retail: Use of computer systems such as accounting, but little if any analysis of POS data. Limited use of internet for email or information gathering.
Production: Use of computer systems, such as accounting, label database, stock lists. Little integration of these systems and limited staff access. Limited internet use – sales mainly by phone or fax.
Allied Suppliers: Routine use of computer systems, accounting, and online ordering capability

Low-level

Retail: Have computer but limited use for emails or just used by service provider such as bookkeeper
Production: Have computer but limited use for emails or just used by service provider such as bookkeeper
Allied Suppliers: Have computer but limited use for emails or just used by service provider such as bookkeeper

ii. In terms of likely interest in training, discussions with the PSC have suggested the following:

Advanced

These businesses have already invested in systems and training to reach their current level and are likely to continue to do so. They are well-placed to identify whole-of-industry e-business issues where industry associations should assist (see below under Topics).

Their main interest in training is that their customers and suppliers become better-equipped to do business electronically, thereby reducing their transaction costs. This offers an important potential role as mentors/facilitators:

- To identify some key customers or suppliers that require (and would be amenable to) training;

- To encourage their involvement, identify specific training goals (such as understanding and streamlining their transaction process); and

- To work with them to build capability. (This might resemble a project more than a training course)

Intermediate

These businesses will include a number keen to develop their use of e-business, but facing barriers to doing so. It is possible that some may self-identify through the online survey. Others may be identified (as above) by their suppliers or customers. These offer potentially productive scope for training, if it is well-targeted and well-communicated, but likely numbers have yet to be determined.

Low-level

Generally, these businesses are likely to have little or no interest in developing e-business skills. There is unlikely to be a positive return from investing project resources in developing training for this segment. There are many entry-level public and commercial basic training courses already available for businesses at this stage. However, because it is likely to include new start-up businesses who may be keen to adopt e-business practices, this segment should not be ignored. Rather they should be addressed as part of an overall industry communication program about e-business.

Summary

Advanced	Intermediate	Low-level
Drivers of Adoption Identifiers of Issues	Includes targets for industry training	Lower priority targeted for industry training
⟵ **Broad communication and education program covers all levels** ⟶		

Figure 2: Prioritisation of target audience for training

b. Potential Training Topics arising from consultation

The following potential training topics have been identified for consideration, prioritisation and further development by the project steering committee (table 1). These topics are based on the feedback from industry participants during the interview phase. They also take into account the target audience, discussed above, and the desktop research undertaken.

There is some potential overlap between some topics, but the general flow is as follows:

- understanding and managing the pathways to e-business
- improving information flow to assist sourcing and supply of stock
- barcoding and related systems: their role in efficient distribution and retail practices

1. Step-wise development of e-business capability	2. Developing e-business cost-effectively	3. Effective communication between producer and customer
4. Smarter inventory management	5. Online stock availability	6. E-business protocols
7. Costs & Benefits of barcoding	8. Meeting the e-business requirements of trading partners	
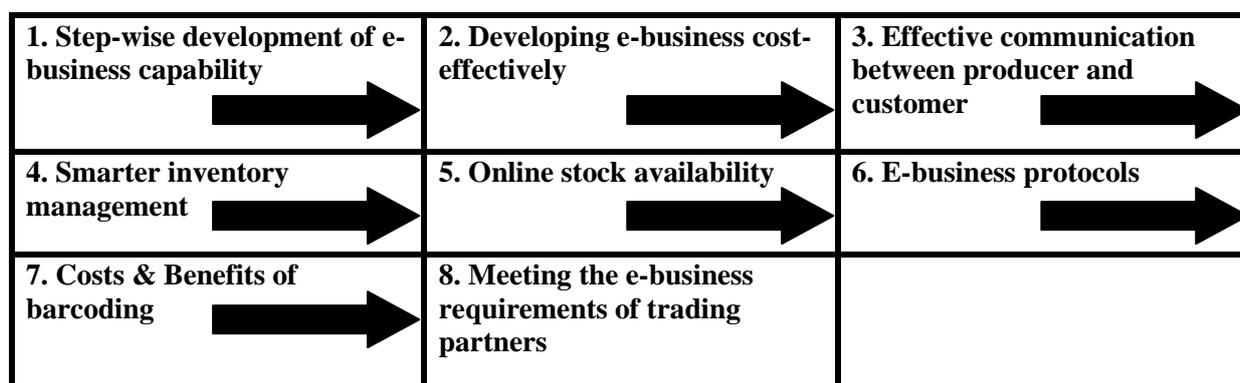
Table 1 Summary of potential Training Topics

Topic 1: Step-wise development of e-business capability

Rationale:
As stated in the report, e-business is multi-facetted and the technology and options are constantly developing. Even large-scale businesses can find this challenging, while for small businesses it can be difficult to know how to prioritise the various options. The course is not aimed at complete beginners but at intermediate e-business users.

Potential Content:
- understanding and prioritising the various avenues for e-business
- evaluating where your enterprise sits currently on the e-business spectrum
- developing a road map for moving from intermediate to advanced

Topic 2: Developing e-business skills cost-effectively

Rationale:
- the internet provides a crucial channel of communication with customers and suppliers
- smaller businesses with no website experience may be concerned about the costs of building and maintaining a website
- there is a wealth of information available on how to develop a website, such that it can be difficult to know where to start – an NGI-specific course could be helpful for complete beginners

Potential Content:
- Make as much use as possible of existing material online and from other training courses

Topic 3: Effective communication between producer and customer

Rationale:
- This is not just about the technology used, but also about the quality and effectiveness of the communication. This in turn may rely on the attitudes of the various participants in the supply chain and their willingness to see things from the perspective of their trading partners.

Potential Content:

Case studies could be particularly effective for this topic, as follows. Other potential case studies could cover ways that merchandising services enable improved communication, as well as the value of improving communication between landscapers and landscape-oriented nurseries.

counts for Retailer X is that Supplier Y takes the time and trouble to visit in person two or three times a year. This enables the supplier to see their stock in situ, compare it with other plants on offer and discuss any issues or opportunities. Supplier Y feels that there is no substitute for gaining a first-hand glimpse of how the market is performing.

Topic 4: Smarter inventory management

Rationale:
- There appear to be significant opportunities for more effective management of inventory at both production and retail levels of the industry. The need for accurate inventory systems is a necessity for mitigating the undesirable effects of Monday Mayhem. This also has the potential to improve working capital flows as well as enabling more efficient communication of stock availability

Potential Content:

A. Retailers
- Installation of electronic POS systems and accounting packages enables improvements in ordering stock, better stock management and improved cash flow management.

Case Study: The power of scan data

Effective analysis of scan data enables the retailer to assess the relative sales across all categories. This can identify trends such as, for example, increasing sales of vegetable seedlings, versus a decline in plant sales overall for a particular sales period.

B. Producers

Case Study: Knowing what's in stock

Plant producers vary greatly in the systems used to track the whereabouts, quantity and quality of stock. A study could be compiled based on a closer examination of some of these systems and the pros and cons of each.

Topic 5: Online stock availability

Rationale:
- The industry norm is for producers to compile stock availability lists and fax or email these weekly. i.e. each supplier communicates on a "one to many" basis.
- If a retailer or landscaper is seeking particular plant stock, they typically contact several potential suppliers in order to locate it and compare prices. i.e. each customer communicates on a "one to many" basis.
- If suppliers could maintain up-to-date stock lists online, then the information would be available on an "all to all" basis, without the need to make multiple enquiries. This is likely to produce efficiencies and is a necessary precursor to the introduction of an online ordering process.

Potential Content:
- costs & benefits of the current norm vs online listings
- linkage with inventory management systems
- system options

Case Study – plantlocator.com.au

This online site has developed steadily since 1993. Plantlocator enables greenlife producers to list available stock and potential purchasers to access these lists. Both sellers and buyers pay a subscription to access the site. Producers can directly access their listings in order to keep them updated or, in case of poor internet access, the site manager will update listings on their behalf.

Strict protocols apply regarding the naming of plants, while synonyms can be listed under a comments section. The listing can include price, as well as descriptors such as pot size and plant size, while photos can also be attached.

Plantlocator currently has about 200 plant producers and 200 potential purchasers as subscribers. At present, these are concentrated in SE Queensland and NSW.

Case Study: Greenlife Suppliers maintaining online listings

It would be possible to compile an illustrative study around a nursery such as Bushland Flora, which has been nominated as having an effective online listing. This could extend to describing the systems used to keep the information updated. This nursery has not been approached at this stage

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Topic 6: E-business protocols

Rationale:
- One of the goals of e-business is for trading partners to be able to undertake a transaction (e-commerce) with the minimum of duplicated effort (for example, re-keying the details of a quote, an order, a delivery advice or an invoice).
- A barrier to this goal can be the inability of different computer systems to communicate seamlessly.
- This can be complicated by the NGI-specific issues such as botanical nomenclature, variations in plant dimensions, quality attributes, pot sizes etc.
- Identifying and solving these protocol issues is a necessary precursor to completing sales online

Potential Content:
- what different types of software are available and how do we compare and select?
– what are the issues around different computer systems and programs sharing data?
- what is the role of product directories and how have these evolved in other industries?

Case Study: Lessons from the Hardware or Allied Products sector

The allied products sector of the NGI provides lessons that can provide useful case studies. For example, a retailer reported that the Yates/Amgrow electronic lists are not in the same format, thus complicating the process of doing online ordering.

Case Study: The costs of interrupted communication

A study could be developed based, for example, on the reported case of a major greenlife supplier who reportedly has 7 people handling incoming faxes

Topic 7: Costs & Benefits of barcoding

Rationale:
- A major factor in NGI supply chain inefficiency is that a significant proportion of producers have
not adopted barcoding and related systems and a significant proportion of retailers have not gained the
full benefits from POS scanning systems

Potential Content:
- some generic training is available via GS1 – may provide indicative costs/benefits
- could adapt/update presentation from previous e-commerce project NY05025 (Appendix 3)
- activity based costing could provide enterprise-specific example of costs/benefits
- could undertake a GS1 Health Check on some nursery businesses and include as a Case Study

Case study: Role of GS1 in e-business implementation for the Nursery and Garden Industry

GS1 is a global non-profit organisation. *"GS1 Australia is a not-for-profit organisation that
locally administers the global multi-industry system of identification and communication for
products, services, assets and locations - the GS1 System.*

*GS1 Australia was created to help Australian business enterprises become more efficient; our
fundamental role is to allocate GS1 numbers and barcodes, maintaining internationally accepted
trading standards. This, in turn, allows Australian organisations to adopt world's best practice supply
chain management techniques.*

*GS1 numbers and barcodes permit organisations of any size to order, track, trace, deliver and pay for
goods across the supply chain, anywhere in the world.(http://www.gs1au.org)"*

GS1 Australia has training centres in Sydney and Melbourne and has a Supply Chain Knowledge
Centre (GS1 Works) in Melbourne as well. The Knowledge Centre provides demonstrations of how
the information from barcoding is used to streamline supply chains and can be customised for
greenlife products (website: GS1 2012) and supply chain scenarios. GS1 Australia also provides a
"Health Check" service that assesses an organisation's e-business readiness. They run full and half
day training sessions in all major cities around Australia that cover off more technical aspects of
implementation. Specific sessions tailored for the Greenlife sector can be scheduled, as required.

 GS1 Australia provides advisory assistance to industries seeking to ensure the orderly adoption and
development of product identification systems. This occurs through Industry Working Groups (IWGs)
across the 24 Industry Sectors active in Australia. The nursery and garden industry is covered through
the Hardware IWG (Hardware GS1 Action Group (HGAG)). The HGAG has also set up a special
Task Group that looks at "difficult items" that could offer valuable lessons for the NGI sector.

 GS1 also have, or are introducing, more advanced product identification technologies such as:

- GS1 Databar: a smaller barcode, which can be used for small products and also provide more information, such as expiry dates, weights, batch numbers, serial numbers and more at point of sale.
- GoScan: an iPhone app which enables consumers to access a deeper bank of product information, such as allergen info, nutritional data and ingredient listings.
- Global Location Numbers (GLNs): A system of codes to identify specific locations such as a business, a section or a specific location. These codes can serve a number of functions, including identifying the "ship-to" points for deliveries.
- eCom: a set of business messaging/EDI standards that allow a direct link between the physical flow of goods or services, and information related to them.
- Global Data Synchronisation (GDSN): enables trading partners to house the same information in their systems, and when changes are made to one company's database, they can automatically be sent to all companies who do business with them.

Traceability is important for commercial reasons but in the NGI context may also be crucial in terms of biosecurity and/or provenance issues. Currently, the agribusiness sector is working with GS1 to develop traceability standards for different products and appropriate guidelines.

Topic 8: Meeting the e-business requirements of trading partners

Rationale:
- While the chains are setting the standards for the other sectors it is important that SMEs adopt e-business to remain competitive. This sector is setting the standard for the other sectors, which will need to adopt e-business to remain competitive
- Given the rate of expansion of this sector, an increasing number of producers are likely to either want to, or be obliged to, supply this sector to maintain turnover.
- Both producers and retailers with little or no e-business experience may appreciate training in the basics
- Note: not all large-format chainstores are using technology – Big W ordering by fax, some Bunnings buyers request plantlists by fax

Potential Content:
- some training is currently provided for new suppliers by major retailers
- major retailers may consider partnering, but there is no commitment at this stage
- content would need to be adapted as the commercial systems develop, eg Masters systems are in trial mode at present

Case study: Bunnings EDI

"Bunnings have now made Electronic Data Interchange (EDI) available for greenlife suppliers. This requires the supplier to link their own system to Bunnings' Oracle system or to use a data interpretation module available with some business management systems. EDI enables merchandisers employed by a supplier to place orders directly, using a wireless scanning device as they check stock at the shelf location."

(from previous section) This could be expanded using the experience of a Bunnings greenlife supplier

c. Other e-business Issues arising from consultation

Pooled plant availability systems
- "See Plant Locator Case Study above under Topic 5: Online stock availability
- any such system needs agreed protocols for plant names/descriptions
- interest from some in landscape sector, where large plantlist quotes must be compiled
- potential for involvement of plant label companies, who already have standard plant name databases

Biosecurity compliance
- risk of $100,000 fines for the transporter
- what are the options for managing requirements for Plant Health Certification using computer systems?
- case study with Fruit & Vegetable exports and/or ICA

GS1 Health Checks
- are available from GS1 at a reduced rate
- provide a template of what to look for in assessing efficiency of business systems

Communication options

Landscape supply group
Grower & Supplier group
Next Gen
Regional Groups
Garden Inspiration Group
National/other states
Green Industries Group (Landscape/Nursery/ Turf)

Need to focus on growing the market
- some feel that greenlife promotion should be a higher priority than e-business training

Need to be aware of "Chain of Responsibility" risks regarding transport
- inefficient systems along the supply chain have the potential to lead to excessive waiting time for trucks. Any accidents linked to exceeding the legal limits for drivers can lead to prosecution of culpable parties along the chain.

5. The industry and commercial roles in e-business competence

E-business is a very large topic and much of it is commercially-driven. However, there is an important role for industry associations such as NGINA to identify those issues and topics where a coordinated approach would be helpful and to facilitate this.

In the case of training, there is a lot of support available through existing channels of adult education as well as from commercial computer support services and the marketers of software products, some of which are referenced in the bibliography. Therefore, any training materials developed through this project should be designed to fill any gaps in what is already available or to address industry-specific issues that are not covered elsewhere. The Topic list above suggests a number of ways this can be achieved.

A number of issues raised during consultation and listed in (c) above were not directly related to e-business training or competency, therefore falling outside the scope and resources of the project. In some cases, members of the steering group indicated that they would prefer a more active role in addressing these, rather than what was seen as a passive role in reviewing the progress of the project.

While the role of the PSC will conclude at the conclusion of the project, it is recommended that the NGINA Board directs the Training and Education committee to develop strategies to continue building e-business competency beyond the term of this project. This is also supported by the failure of the previous e-commerce project, NY05025 (Thawley 2007) to have an ongoing impact, due to lack of momentum.

Case Study: Previous e-business initiative in the greenlife industry (2005-2006)[6]

With funding support from Horticulture Australia Limited (HAL) and with the in-kind support of NGIA and GS1 Australia, the Greenlife Industry E-Commerce Group (GIEG) and a number of other industry participants initiated a project to assist organisations in the greenlife industry to further their understanding of B2B e-commerce.

The project was conducted in two phases:
• The aim of Phase 1 was to provide the project team with accurate information about the current status of the industry with respect to their awareness and implementation of electronic trading;
• The aim of Phase 2 was to develop and deliver a B2B awareness program to increase B2B knowledge in the industry.

Two workshops were run in each of Sydney and Melbourne, but the continuation of this initiative was not prioritised. Part of the workshop presentation is attached in Appendix 3.

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[6] Thawley, C 2007 Building B2B E-commerce awareness and competency in the greenlife industry HAL NY05025

Recommendations

1. The potential training topics should be reviewed, further developed and prioritised by the PSC. This should take into account additional input from the online survey as well as the total budget available for the development and delivery of training materials

2. The training program should focus on the "Intermediate" level of e-business competency.

3. One or more e-business improvement projects could be based on enterprises at the "Advanced" level of e-business competency willing to act as a mentor/facilitator to some of their suppliers and/or customers.

4. A comprehensive e-business communications program should be developed, directed at owners and managers of enterprises. This should aim to raise **awareness** of what e-business covers, **belief** that e-business capabilities are essential for business viability and **commitment** to developing these capabilities.

5. A clear Terms of Reference for the project steering committee should be drafted. The NGINA Board should direct the Training & Education Committee to develop strategies to continue building e-business competency beyond the term of TDU0516. This could include responsibility for addressing the issues identified in 4(c) that are not directly related to training courses as well as guiding the e-business training options above.

Appendices

Appendix 1: Participants in interviews

Category	Business	Name		Notes
Allied trader	Brunnings	Danny	Rawlings	
Allied trader	Garden City Plastics	Bob	Allison	Melbourne
Allied trader	Macbird	Antony	Dali	
Allied trader	Yates	Frank	Munda	
Plant transporters	Andrews Natures Workshop,	Gary	Andrew	
Production nursery	Bangalow Wholesale	Tracey	Nowland	Northern NSW
Production nursery	Colourwise	Malcolm	Thompson	Steering Committee member
Production nursery	Engalls Nursery	Mark	Engall	Steering Committee member
Production nursery	Oasis	Brett	Sidebottom	
Production nursery	Ramm Botanicals	Jeff	Cooke	Steering Committee member
Production nursery	Swanes	Noel	Deakin	Steering Committee member
Production nursery	The Green Gallery	Jeremy	Critchley	
Production nursery	Yarralumla Nursery	Farley	Heyward	Canberra
Production nursery - landscape oriented	Alpine Nurseries	Peter	Knox	Steering Committee member
Production nursery - landscape oriented	Andreasens Green	Tony	Green	
Retail Big Box Hardware	Bunnings	Craig	Joyner	Melbourne
Retail Big Box Hardware	Bunnings, NSW	Bruce	Stanley	
Retail Big Box Hardware	Mitre10	John and	Sam	Garden centre staff
Retail Nursery Alliance	Greengold	Murray	Bannigan	
Retail Big Box Hardware	Masters			NGINA attended seminar
Retail Nursery Alliance	Plants Plus (John Danks)	Adam	Pearce	
Retail Nursery Independent	Rodney's Plants Plus	Rodney	Toll	Canberra (Plants Plus member)
Retail Nursery Independent	Turramurra GC	Mike	Mehigan	Steering Committee member
Retail Nursery Group	Eden Nursery	Simon	Ainsworth	Steering Committee member
Retail Nursery Group	Flower Power	Paul	Sammut	
Software	GFAG	Graeme	Forsyth	
Software	MYOB EXO	Amanda	dAloisio	Phone
Software	Nursery Management Systems	Andy	Cameron	Steering Committee member
Software – Global Standards	GS1	Joseph	Taylor	Steering Committee member

Appendix 2: Interview framework

What are we trying to achieve through this consultation?

1. Gathering insights from a limited number of NGI businesses (growers and sellers of greenlife and other participants in the supply chain) who either are already, or want to be, users of e-business tools. E.g. existing practices, perceived barriers to adoption

Introduction

The term e-business refers to those events undertaken electronically in business and includes all activities like marketing, customer support, research, communications, order processing, supply chain management and partner collaboration.

Numerous studies have indicated that the Nursery & Garden Industry (NGI) lags behind other sectors in the adoption of e-business practices that could improve efficiency; reverse declining profit margins; capture market opportunities and improve business sustainability.

NGINA (Nursery & Garden Industry NSW & ACT) has received funding from the NSW Government Skills Enhancement Program to develop e-business training materials and pilot these with the industry. This will be guided by a reference committee and through direct consultation with a restricted number of NGI businesses along the supply chain with a particular interest in collaborating in this work.

The consultation will supplement information from an initial short online survey to determine the current use of e-business in the NGI and the barriers to its wider use.

1. Please indicate your role in the nursery & garden industry (multiple responses possible)

Business owner/manager	Grower organisation
Staff member	Industry Committee member/office holder
Plant producer	Input supplier
Retailer	Transport
Landscape	R&D organisation
Reveg/Local government	Advisor/extension/agronomist
Supplier to fruit/veg sector	Other (please specify)

2. Your state

3. Which category below includes your age?

17 or younger	40-49
18-20	50-59
21-29	60 or older
30-39	

4. Do you have a computer?

At work

At home

5. If you have a work computer, what are its main uses? (multiple responses possible)

Financial management   General email communication

    Program(s) Used....   Sourcing information via the internet

Nursery management   Other....

    Program(s) Used....

6. For plantlife, how do you place and/or receive orders? (multiple responses possible)

Fax   Sales van

Phone   Other.....

Email   What is the most important method for

Website
you?

7. For plantlife, what are the main barriers to placing and receiving orders online for you?

No computer   I lack the knowledge and/or systems

No/poor internet availability   I don't see any advantage in trading online

My customers/suppliers don't work that way   Other....

8. For non-plantlife, how do you place and/or receive orders? (multiple responses possible)

Fax   Website

Phone   Sales van

Email   Other.....

9. For non-plantlife, what are the main barriers to placing and receiving orders online for you?

No computer   I don't see any advantage in trading online

No/poor internet availability   Other....

My customers/suppliers don't work that way

I lack the knowledge and/or systems

10. Are you interested in learning more about the opportunities to improve efficiency and competitiveness through the use of e-business?
Yes

No

Comments....

Appendix 3: Presentation from NY05025 (page 1 only of 12)

B2B E-Commerce Awareness Workshop - for the Greenlife Industry

Focus: Product Identification

Cathy Thawley
HIWG/GIEG Facilitator
cathy.thawley@b2evolution.com.au
(03) 9576 2549

Tania Snioch
Member and Industry Support, GS1 Australia
tsnioch@gs1au.org
(03) 9558 9559

Welcome & Introductions

Presenters

Cathy Thawley
B2B E-Business Facilitator, HIWG & GIEG
03 9576 2549
www.hiwg.org.au

Tania Snioch
Senior Advisor, Industry Support, GS1 Australia
03 9558 9559; 1300 366 033
www.gs1au.org

Attendees

Purpose of the Workshop

- This workshop is an outcome of the GIEG-HAL Project (Phase 2), funded jointly by Horticulture Australia Limited, GIEG Members and additional project participants.
- GIEG Members (x10): Ball Australia, Debco, Envirogreen, NGIV, Oasis Australia, Plantmark, Proteaflora Nursery, Scotsburn Nurseries, United Nurseries and Yates
- Additional participants (x8): Bunnings, GS1 Australia, Kmart (Coles Group), NGIA, Plants Plus (Danks), Sunrise Growers, Syngenta Seeds and Waterwerks
- **The GIEG-HAL Project aims to build awareness of business to business (B2B) e-commerce in the greenlife industry.**

Agenda

½ day workshop, specifically for the greenlife industry – including seed and young plant suppliers, growers, wholesalers/distributors, nurseries, allied traders.

The workshop is delivered in 3 sessions:
- Session 1: Industry Overview & B2B Benefits Brief
- Session 2: Overview of Product Identification in an Electronic Environment
- Session 3: Scenario based Activity

B2B E-Commerce Awareness Workshop - for the Greenlife Industry

Session 1
Industry Overview & B2B Benefits Brief

Cathy Thawley
HIWG/GIEG Facilitator
cathy.thawley@b2evolution.com.au
(03) 9576 2549

Basic Terminology

- B2B = Business to Business; E-trading = electronic trading; E-Business, E-Commerce
- B2B E-Commerce = doing business electronically, eg. from a simple spreadsheet to complex transactions
- HIWG = Hardware Industry Working Group
- GIEG = Greenlife Industry E-Commerce Group (a sector group of the HIWG)
- GS1 = Global Supply Chain Standards Organisation (formerly EAN)
- GTIN = Global Trade Item Number = Bar code number
- HAL = Horticulture Australia Limited
- Supply Chain = The network used to deliver products and services from raw materials to end customers through an engineered flow of information, physical distribution, and payment.

1

Bibliography

Full Reference citation	URL	country or region	Theme	topic	Comments
activant	http://www.activant.com/lawn-garden/	USA	software	retail	Now Epicor. Today, Activant Eagle business management software solutions are helping hundreds of lawn and garden centers all across North America become more efficient and profitable, while providing exceptional customer service.
American Nursery & Landscape Association Knowledgecentre	http://www.anla.org/knowledgecenter/collections/index.cfm	USA	Business planning	Inventory management	From POS to Inventory Management: A Backward Look This content is only available to Registered site users
American Nursery & Landscape Association Knowledgecentre	http://www.anla.org/knowledgecenter/collections/index.cfm	USA	Business planning	Inventory management	Basic Principles Of Inventory Management This content is only available to Registered site users
American Nursery & Landscape Association Knowledgecentre	http://www.anla.org/knowledgecenter/collections/index.cfm	USA	Business planning	review	Coming to a business near you! This content is only available to Registered site users
American Nursery & Landscape Association Knowledgecentre	http://www.anla.org/knowledgecenter/collections/index.cfm	USA	software	review	Is it Web 2.0? Is it SaaS? It's Coming Like a Freight Train! This content is only available to Registered site users
American Nursery & Landscape Association Knowledgecentre	http://www.anla.org/knowledgecenter/collections/index.cfm	USA	software	review	Technology Is Your Friend This content is only available to Registered site users
American Nursery & Landscape Association Knowledgecentre	http://www.anla.org/knowledgecenter/collections/index.cfm	USA	software	review	Getting A Return On Your Technology Investment This content is only available to Registered site users
American Nursery & LandscapeAssociation	http://www.anla.org/knowledgecenter/index.cfm?ID=1872	USA	software	review	Need to register with site first....An audio session from the 2009 Management Clinic - Three Landscape Distribution owners discuss their experience in selecting, installing and utilizing new computer systems to maximize your ROI.
American Nursery & Landscapessociation	http://www.anla.org/knowledgecenter/index.cfm	USA	Business planning	greenlife industry	Members grow, distribute, and retail plants of all types, and design and install landscapes for residential and commercial customers. ANLA provides education, research, public relations, and representation services to members.
American Nurseryman	http://www.amerinursery.com/	USA	Business planning	production nursery management	Includes a bookshop. Business software
Amicus	http://www.neotechnology.com.au/amicus/nursery	australia	software	retail	Amicus POS for plant nurseries
Anon 2012 Online Resources to build your business online Passion to Profit - the magazine of New Rural Industries Australia Issue 9 April_May	http://issuu.com/newruralindustries australia	australia	software	Online sales	
Argos	http://www.argosoftware.com/solutions/agribusiness/index.html	USA	software	production nursery management	Includes EDI and ABC. Argos Software provides a proven software solution for nurseries and agribusinesses. ABECAS™ Insight has been designed and developed over 30 years specifically for this vertical market. For nurseries and greenhouses, it provides full production, sales, purchasing, and accounting management.
Argos n.d. ABC - Payroll_The_Key_to_Activity_Based_Coasting	http://www.argosoftware.com/resources/whitepapers/Payroll_The_Key_to_Activity_Based_Coasting.pdf	USA	software	production nursery management	Find out why activity based costing (ABC) is the best solution to define your costs, accounts and activities. In this paper, you will learn how a payroll oriented ABC will help you make more accurate managerial decisions.
Argos n.d. Big_Boxes_Shift_the_Risk_to_you	http://www.argosoftware.com/resources/whitepapers/Big_Boxes_Shift_the_Risk_to_you.pdf	USA	software	production nursery management	Partnering with big boxes may present some risks regarding the maintenance of your plants or your inventory control. In this paper you will learn what technologies you could use to better manage these risks and increase profitability.

Full Reference citation	URL	country or region	Theme	topic	Comments
Argos n.d. EDI - Cutting_out_costs_reducing_errors_and_improving_customer_service	http://www.argosoftware.com/resources/whitepapers/Cutting_out_costs_reducing_errors_and_improving_customer_service.pdf	USA	software	production nursery management	Explore the impact of Electronic Data Interchange (EDI) on supply chain management. EDI will remove data errors, prevent any loss of information flow, reduce your operating costs and better meet the needs of your clients. In this paper, you will learn to cut your labor costs via information automation!
Argos n.d. Transport - Frustrated_by_Your_Delivery_Processes.pdf	http://www.argosoftware.com/resources/whitepapers/Frustrated_by_Your_Delivery_Processes.pdf	USA	software	production nursery management	Delivery management plays a crucial role in reducing your freight costs and maintaining high customer satisfaction. This paper examines the technology tools that nurseries use to successfully meet their delivery challenges.
Australian Institute of Landscape Architects (AILA)	www.aila.org.au	australia	specifications	landscape	
Avent T 2003 So You Want to Start a Nursery		Global	Business planning	production nursery management	
Benara Nursery, WA	http://www.benaranurseries.com/products.asp	wa	Mail order	Online sales	
Betrock info systems	http://www.betrock.com/	USA	software	Information sourcing	A small privately-held company located in Hollywood, Florida, specializing in the compiling and publishing of pertinent data for the horticultural industry for almost forty years. The company has accomplished this goal via their most successful magazine to date, the PLANTFINDER® magazine. This publication has often been referred to as the "Bible of the Horticulture Industry."
Big W ebusiness page	http://www.bigw.com.au/help/ebusiness-content?FOLDER%3C%3Efolder_id=2534374302059691	australia	software	retail	
Bushland Flora	http://www.bushlandflora.com.au/	Vic	Greenlife sourcing	Online plantlists	
Coupa e-Procurement	http://www.coupa.com/solutions/e-procurement/	USA	software	e-procurement	It sounds like a contradiction, but it really is easy to connect Coupa with your ERP or accounting system. Coupa does it all – from exporting documents to Excel, to syncing with Quickbooks or all the way to integrating with SAP. Leveraging our flexible API, virtually any application can work with Coupa. In the cloud there is no hardware to buy, software to install or IT projects to manage. Companies of all sizes can take advantage of cloud applications – at a fraction of the cost of comparable solutions. With an average deployment cycle requires fewer than ten hours of time, including integration to financial and accounting applications, you can cut your first PO in less than 90 minutes. And because it's built in the cloud, Coupa is able to provide best in class usability and innovation.
Crofts IT	http://www.croftsit.com.au	australia	software	point-of-sale and inventory management	Croft's IT while offering POS solutions understands that your Retail Point-of-Sale (POS) system is more than simple cash collecting calculator. With over 10 years experience of providing Retail Point-of-Sale (POS) solutions to some of Australia's iconic brands right through to your local pub or supermarket, we know that your Retail POS Solution is critical to your success.
Davidson, H Mecklenburg R, Peterson C 1999 Nursery Management: Administration and Culture (4th Edition)		Global	Business planning	production nursery management	
El Arish Tropical Exotics	http://www.elarishtropicalexotics.com	Qld	mail order	Online sales	
Epicor software	http://www.epicor.com/australia/Pages/Default.aspx	USA	software	retail and ERP	Was Activant. With comprehensive POS systems and enterprise retail systems from Epicor, both regional Australian chains and multichannel global brands can inspire customer loyalty
Eureka nursery	http://plantsale.com.au/	Qld	mail order	Online sales	
formatta	http://www.formatta.com/page_Downloads/Videos.html	Global	software	traceability	
Garden Centres Canada 2010 Retail Survey Results	http://www.canadanursery.com/Storage/40/3304_2010_GCC_Survey.pdf	Canada	software	review	When asked about POS systems, • 25% reported that they do not use a POS system. • Half of the non-users intend to install a POS system in the near future

Full Reference citation	URL	country or region	Theme	topic	Comments
Garden Express	http://www.gardenexpress.com.au/	Australia	Mail order	Online sales	
Gartner e-procurement report	http://get.coupa.com/gartner-eprocurement-landscape-download.html	USA	software	e-procurement	
Graeme Forsyth & Associates	http://www.gfap.com.au	NSW	software	traceability	
Greenfield Software Ltd.	http://www.greenfieldsoftware.co.uk/	UK	software	production nursery management	Welcome to Greenfield Software Ltd. Label printers also Growmasster Nursery Management System (includes EDI) Every nursery wants to keep things as simple as possible - if you save time you save money. Growmaster has been designed so that you can do just that. With over 230 nurseries in the UK and Ireland already benefiting by using Growmaster it has become the industry standard.

Greenfield supplies labelling and nursery management systems to nurseries and garden centres. We are committed to helping you run your business, whether you need complete systems, printers, labels or consumables.

Our range of software products has been developed by us in the UK to ensure we only supply the best quality at the most competitive prices. |
Greenfield Software Ltd.	http://www.greenfieldsoftware.co.uk/pdfs/growmaster_data_sheet.pdf	UK	software	production nursery management	Data sheet about Growmasster Nursery Management System
GS1 2012 standards in transport and logistics		Australia	software		
GS1 2012 Supply Chain Knowledge Centres	http://www.gs1au.org/services/education_and_training/supplychain_knowledge/locations.asp	Australia	software	product identification	Fixed supply chain models have been built at our Melbourne and Sydney Offices, and there is also a portable version that travels from state to state.
Hortibench	http://www.hortibench.com/	USA	software	production	Production planning sofware HortiBench is great planning software which assists you, the nursery or greenhouse manager, with the production- space- and financial planning in your nursery or greenhouse. HortiBench can reduce costs through better allocation and management of resources, reduced waste and higher utilisation. HortiBench is in use by nurseries that grow pot plants, bedding plants, young plants, hardy stock, trees, shrubs, cut flowers and vegetables. Whether you propagate from seed, use cuttings, grow-on young plants, grow-on liners, harvest cut flowers or harvest fruit, HortiBench is an open software system which means that it integrates with other software applications like Word and Excel. Since we didn't want to reinvent the wheel and we don't like developing bookkeeping software, HortiBench also integrates with a range of existing accounts packages like Sage or Quickbooks. We can even link HortiBench to Epos, Barcoding or Time registration systems that you might have in place.
Horticultural Electronic Business Exchange	http://www.hebe.org.uk	UK	software	e-procurement	Developed for the HTA by Transalis, the HTA's technology partner, Hebe is a fast, convenient, reliable e-trading facility which is extremely easy to use.

As a first step in the development of Hebe as the industry-wide e-trading platform, the HTA is adopting Hebe as the e-trading channel for National Garden Gift Vouchers (NGGVs). |
| IBISWorld 2012 Garden Supplies Retailing in Australia: Market Research Report | http://www.ibisworld.com.au/industry/default.aspx?indid=425 | Australia | Business planning | Market research | IBISWorld's Garden Supplies Retailing market research report can be used to help you: understand market size and growth potential; major companies; draft business plans and pitch books; and conduct benchmarking and SWOT analysis. Our industry analysis highlights macro industry trends in the overall sector and micro trends faced by companies that do business in the industry. The industry report also provides key industry statistics and 5-year forecasts to anticipate future industry prospects so you can decide with confidence. |
| IBISWorld 2012 Hardware Retailing in Australia: Market Research Report | www.ibisworld.com.au/industry/default.aspx?indid=1877 | Australia | Business planning | Market research | Big-box competition: The industry is set for change as a new retailer steps into the ring

IBISWorld's Hardware Retailing market research report is a comprehensive guide to market size and growth prospects. Our industry reports offer strategic industry analysis of the factors influencing companies, including new product developments, economic, lifestyle and demographic influences, distribution and supply chain factors and pricing issues. Full analysis accompanies our data forecasts to illustrate how the market responds to emerging industry trends. |

Full Reference citation	URL	country or region	Theme	topic	Comments
knowledgetree	http://knowledgetree.flexiblelearning.net.au/edition06/download/ragus.pdf	australia	training	Flexible	2004, Australian Flexible Learning Framework, the Knowledge Tree flexiblelearning.net.au/knowledgetree Interview with Marcus Ragus, TAFE Tasmania Horticulture Team
Landscape Association of South Australia	http://www.landscapesa.com.au	SA	specifications	landscape	
Landscape Industries Association of Victoria (LIAV)	www.liav.com.au	Vic	specifications	landscape	
Landscape Industries Association of Western Australia Inc (LIAWA)	www.landscapewa.com.au	WA	specifications	landscape	
Landscape NSW & ACT	http://www.lcansw.com.au	nsw	specifications	landscape	
Landscaping Australia Inc	www.landscapingaustralia.com.au	australia	specifications	landscape	
McEvilly, G & Rafferty, T 2009 Improvements in Supply Chain Efficiencies and Logistics for the Nursery & Garden Industry - Stage 1 Industry Situation Analysis. Horticulture Australia Limited Final Report NY08006		Australia	Business planning	Supply Chain Management	
McSweeney, Bailey (2000) NY99042 Nursery Computer Software evaluation. Horticulture Australia Limited	http://www.ngia.com.au	Australia	software	review	
Mobile learning	http://mobilelearning.flexiblelearning.net.au/team/index.htm	australia	training	Flexible	date unknown Marcus Ragus.... Mobile Learning: handheld innovations in flexible learning Project description This project has been inspired by the ongoing advances of handheld mobile technology and the potential of this technology to provide a valuable addition to the flexibility of training delivery
Muddy Boots	http://en.muddyboots.com/	UK/Australia	software	traceability	Muddy Boots is a leading international expert in the provision of traceability and quality assurance solutions for food and farming. Our expertise in grower to retailer solutions has led to the development of a portfolio of software systems that operate at every level in the food supply network. These solutions help address fundamental questions for all businesses involved in food supply: 1. Are my suppliers safe and approved to supply? 2. Is my product fit for purpose i.e. 'good to go'? 3. Are my practices sustainable? Technology and its integration throughout the supply chain is a key driver for retailers and brandholders.
My nursery (Betrock)	http://www.hortworld.com/softwaredemo/startnursery.htm	USA	software	nursery software	MyNursery is a program designed for nurseries, small and large, wholesale and retail, and Tree Farms.
MYOB 2011 White paper: Agriculture business	http://myob.com.au/servlet/Satellite	Global	software	business management	From sustainability and climate change to limited land available and drought, agriculture has its challenges. For most primary producers and their suppliers in the industry however, just staying alive, finacially, is challenge enough.
MYOB 2011 White paper: Business Management Systems: What can you do better PART 2?	http://myob.com.au/servlet/Satellite	Global	software	business management	This second part of our series on implementing an ERP will focus on shortlisting contenders - for the ERP system and the vendor partner to implement it.
MYOB 2011 White paper: Business Management Systems: What can you do better?	http://myob.com.au/servlet/Satellite	Global	software	business management	Your business can benefit from a well-designed and well-implemented business management system(BMS), sometimes referred to as an ERP (enterprise resource planning) solution.
MYOB 2011 White paper: Defining the challenges to Food and Beverage businesses	http://myob.com.au/servlet/Satellite	Global	software	business management	An overview of the challenges that the businesses in the food and beverage industry are facing today... and some suggested solutions as well.

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MYOB 2011 White paper: Job and project costing	http://myob.com.au/servlet/Satellite	Global	software	business management	In any industry, knowing your costs is important. But for service-based businesses where time really does equal money, knowing or not knowing your costs is the difference between success and almost certain failure.
MYOB 2011 White paper: Manufacturing business	http://myob.com.au/servlet/Satellite	Global	software	business management	Manufacturing companies are feeling the economic pinch. Staying alive, financially, is a delicate balance of supply and demand at a time when customer loyalty is at an all time low.
MYOB 2011 White paper: Wholesale business	http://myob.com.au/servlet/Satellite	Global	software	business management	Like many businesses, wholesale companies are dependent on a balanced interaction of supply and demand. As a business grows in size and complexity, the interaction between the organisation, processes and systems of a business can become stressed by a number of growth-driving activities:
MYOB re food & bev stock management	http://myob.com.au/enterprise/enterprise-solutions/industry-solutions/food-beverage-1257829252813?utm_source=online&utm_medium=banner&utm_content=linkedin-300x250&utm_campaign=ED-food-and-beverage	Global	software	business management	
Natonal Tropicals	http://www.nationaltropicals.com.au/	Qld	Mail order	Online sales	$8 postage
NATSPEC workshop 2009, NGIQ	http://www.ngia.com.au/Event?Action=View&Event_id=198	australia	specifications	NATSPEC	
NGIA 1998 Garden centres – make better business decisions with betterinformation Nursery Paper 1998_01	http://www.ngia.com.au/files/nurserypapers/NP_1998_01.pdf	australia	Business planning	production nursery management	NGIA 1998 Garden centres – make better business decisions with better information Nursery Paper 1998_01
NGIA 2001 Computer software for the nursery industry. Nursery Paper 2001_3	http://www.ngia.com.au/files/nurserypapers/NP_2001_03.pdf	australia	software	review	There are many different computer options available to nursery retailers and growers; adapt off-the-shelf general business management programs or contract the services of a programmer? This Nursery Paper outlines some of the important points to consider when evaluating software options and also outlines the features of several grower/retailer nursery software packages.
NGIA 2002 Making the internet work for you Nursery Paper 2002_09	http://www.ngia.com.au	Australia	software	review	NGIA 2002 Making the internet work for you Nursery Paper 2002_09
NGIA 2005 Professional strategies for profitable products and businesses Nursery Paper 2005_03	http://www.ngia.com.au	Australia	Business planning	Marketing innovation	NGIA 2005 Professional strategies for profitable products and businesses Nursery Paper 2005_03
NGIA 2008 A taster of innovative technologies for the nursery & garden industry Nursery Paper 2008_06	http://www.ngia.com.au	Australia	software	review	Using innovative computer technologies creatively can provide a leading edge to your business, but currently how many in our industry can put their on hand on their heart and say they have exploited it to its full potential? These days the technology is more often than not being designed with the desire to keep it simple, user-friendly and often very cost effective. With society using these technologies as a ubiquitous part of their lives, why are we not exploiting these benefits and opportunties more for our industry? In this Nursery Paper, Marcus Ragus of the Natural Resources Department, TAFE Tasmania and Peter Bobbi, NGIT Industry Development Officer, provide examples of innovative technologies that are readily available and detail on what these can do for our industry
Nurseries Online	http://www.nurseriesonline.com.au/	australia	mail order	Online sales	Portal with links to online suppliers. Also NZ, UK and US versions
Nursery Management System	http://www.nurserymanagement.com.au/	australia	software	production nursery management	Nursery Management System (NMS) is an Australian Software package which has been developed, with the assistance of nursery owners and managers, specifically for the Wholesale Nursery Industry. NMS will help you manage your business by improving efficiencies within your nursery, utilising the many modules available in the software. Contact Andy Cameron on +61 2 9653 3992 or via email on andy@nurserymanagement.com.au
Nursery Sales & Inventory Management	http://www.nurserysoftware.com/	USA	software	production nursery management	In our software lease program, you have access to ALL applications in our extensive library with our on-going assistance in making them work for you. The lease fee is $150 per month. The $150 per month lease fee gets you. . . •

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					Unlimited use of any ACS application without purchase charge • All available services that we offer at a preferred rate of $60 per hour • Priority service ahead of all other work orders • All updates and new features to the software as soon as they are available • All operating system updates dictated by the changing winds at Microsoft Short questions, phone calls & support requests are not billed to lease clients. Our unique software leasing arrangement provides the best business management tool for the lowest cost. We become your "on-call"/"part-time" employees. We expect you to call for quick reminder questions, same day report changes, or any number of support or service requests. In this way, the cost of your software is spread over many years, the software tool is never outdated, and this "pay-as-you-go" system means your satisfaction is guaranteed
Nurseryman Listing of Nursery and Horticulture Management Software	http://www.nurseryman.com/equipment-new/software.html	USA	software	Listing of Nursery and Horticulture Management Software, of which 12 products appear to relate to nursery or garden centre management	Listing of Nursery and Horticulture Management Software of which about 12 appear to relate to wholesale or retail nursery operations
Ontario Min of ag	http://www.omafra.gov.on.ca/english/crops/facts/info_newgrower.htm	Canada	Business planning	production nursery management	Starting a Commercial Nursery in Ontario
Pacsoft	http://www.pacsoft.com.au/contactus.asp	USA	software	point-of-sale and inventory management	More than 2000 retailers currently use Optemizer which was designed specifically for serving the hardlines industries' hardware stores, rural stores and lumberyards alike. http://www.pacsoft.com/ Q-buster movie
passfield	http://www.passfield.co.uk/	uk	software	production nursery management	For nursery businesses worldwide, it's slashing costs and propelling its users to the vanguard of the competition. Why not take a look at how it could work for you! You can use this site to find out more about how the Passfield System works, download a full features list, take a look at who's using it and how and read the Latest Passfield News.
Plan to Profit software (ref by AK) Contact Mike Krause P: (08) 8346 6304 M: 0408 967 122 F: (08) 8342 6411 E: mike@AppES.com.au	http://www.plantoprofit.biz/download_p2p.html	australia	software	farm management	Plan to Profit (P2P) is a unique farm business planning program. The software and training helps users to assess the current financial position of a farming business, and more importantly, assess those 'what-if' strategies that underpin sound farm business planning. I will play around with the demo version myself and we can chat further in say a weeks time.
Plant Inspirations	http://www.plantinspirations.com.au	Vic	mail order	Online sales	Melbourne
Plantworld Nursery, Sydney	http://plantworld.com.au	nsw	Mail order	Online sales	All Sydney Metropolitan Orders incur a Flat Delivery Fee of $55.00

PlantX	http://www.plantx.net/Nursery_Software	USA	software	production nursery management	Wholesale Edition - Inventory Order Entry Shipping Accounts Receivable Live Web Hosting Email Hosting $349 per month (Limited offer, see Pricing)
					PlantX.net is an Internet-hosted nursery solution for all of your information service needs. PlantX.net includes nursery software integrated with on-line services such as website, e-mail, security and backups. All for an affordable monthly membership.
					    Wholesale Nursery Software
					    Live website always shows current inventory availability

Full Reference citation	URL	country or region	Theme	topic	Comments
					Material library with pictures and plant facts Orders with allocations and confirmations Master order and multi-load shipping Build trucks from loads Invoices and Statements Export Invoices to QuickBooks
POSitive GEM	http://www.positivegem.com/	USA	software	retail	Retail-focussed POSitive GEM - Green Enterprise Management is sophisticated yet intuitive point-of-sale software designed specifically for the "green industry", which encompasses garden centers, nurseries and landscape suppliers. Robust and scalable, POSitive GEM has features that are currently unmatched in the industry:
posnation	http://posnation.com/nursery-pos	USA	software	retail	Our Landscape Point of Sale Systems can track inventory, gift cards, labor, customer loyalty plans, generate purchase orders, and even print weather-resistant barcode labels with the optional Barcode Express printing module. POS Nation's Nursery Software (Cash Register Express), with its intuitive screens and powerful tools, has just the functions you need to keep your business on track.
Possum IT	http://www.possumit.com.au	australia	software	retail	Redcat POS
Pronto	http://www.pronto.net/industry/manufacturing	Global	software	ERP	
Psion n.d.Case Study: A Wholesale Nursery Finds ROI With Rugged Mobile Handhelds	http://www.fieldtechnologiesonline.com/download.mvc/A-Wholesale-Nursery-Finds-ROI-With-Rugged-0001	USA	software	case study	Case Study: A Wholesale Nursery Finds ROI With Rugged Mobile Handhelds Herman Losely & Son is a quality wholesale nursery stock grower with a one-thousand acre nursery located in Northeast Ohio. The company provides trees and shrubs to landscapers, garden centers and re-wholesale yards from Southern Maine to Missouri, shipping 400,000 plants every year. Herman Losely & Son employs a total of 130 employees, with six dedicated to tracking and inventory.
Purdue Uni list of software	http://www.hort.purdue.edu/hort/ext/plant/old%20plant%20pages/computer_software.html	USA	software	review	Garden Center Software Irrigation Software Labeling Software and Equipment Landscape Design Software Landscape Contracting and Maintenance Software Nursery Software Plant Material Software
Quickbooks	http://home.quicken.com.au	Global	software	business management	Accounting software - can be integrated to overall business management (including POS via Reckon see below)
Reckon	http://home.quicken.com.au	Global	software	point-of-sale and inventory management	Retail Point of Sale Professional is retail intelligence at your fingertips. With comprehensive integration to QuickBooks accounting software, Retail Point of Sale provides more than point of purchase management, it also offers advanced features to manage sales, inventory, customers, accounting, loyalty programs, promotions and even label design and printing features.
Reference Publishing Company (Annual) The NSW Nursery Register.	www.ausreg.com.au	australia	Greenlife sourcing	Hardcopy directory	Pub. The Reference Publishing Company Ltd, Box 569 Mascot, NSW 2020 (Editions also available for other states and New Zealand)
RHS plantfinder (and Book)	http://apps.rhs.org.uk/rhsplantfinder/	UK	Greenlife sourcing	Online plantlists	The annual RHS Plant Finder puts gardeners in touch with growers and suppliers of more than 70,000 plants compiled from the catalogues of more than 560 nurseries. The latest edition lists 3,400 new plants. The book is available from RHS bookshops at a special price of £13.99 (publishers price £15.99).
Royal Tasmanian Botanic Gardens courses	http://www.rtbg.tas.gov.au/file.aspx?id=3006	australia	training	conventional	RTBG Horticulture Cert 1 – 2 transitional course
Sage AccPac	http://www.sageaccpac.com/	Global	software	business management	
SBI	http://www.sbinursery.com/	USA	software	production and retail	versions for grower/box store supplier/commercial nursery or for garden centres.........has multiple demo videos eg http://www.sbigrower.com/Videos/Order-Pulling/3/Creating-new-orders-on-handheld.html

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Slice technologies	http://www.sliceplus.com/	USA	software	production and retail	SLICE Technologies is the industry leader in providing software solutions to landscape, wholesale nursery, maintenance and retail garden center operations
Specifying Trees	http://www.natspec.com.au/Documents/Books/SpecTrees.pdf	australia	specifications	NATSPEC	Clark, R 2003 Specifying Trees 2nd ed. NATSPEC Construction Information Systems.pdf
Spend Matters	http://spendmatters.co.uk/procurement-technology-future-landscape-part-3-supplier-networks/	UK	software	e-procurement	Procurement Technology future landscape part 3 – Supplier networks
Stanley J 2002 The Complete Guide to Garden Center Management		Global	Business planning	production nursery management	
Swanes roses	http://www.swanes.com/	nsw	Mail order	Online sales	
Thawley, C 2007 Building B2B E-commerce awareness and competency in the greenlife industry HAL NY05025	http://www.ngia.com.au	australia	training	e-commerce	With funding support from Horticulture Australia Limited (HAL) and with the in-kind support of NGIA and GS1 Australia, the Greenlife Industry E-Commerce Group (GIEG) and a number of other industry participants initiated a project to assist organisations in the greenlife industry to further their understanding of B2B e-commerce. The project was conducted in two phases: • The aim of Phase 1 was to provide the project team with accurate information about the current status of the industry with respect to their awareness and implementation of electronic trading; • The aim of Phase 2 was to develop and deliver a B2B awareness program to increase B2B knowledge in the industry.
Thawley, C. & Snioch 2006 E-commerce workshop presentation from HAL NY05025		australia	training	e-commerce	
THE NEW LANDSCHEDULER By: BETROCK INFORMATION SYSTEMS	http://www.horticulturalbookstore.com/NewDetails.asp?BOOKID=SCHEDULER	USA	software	landscaping software	The LandScheduler is a program designed for landscape architects, designers, landscapers, and the landscape maintenance professionals. The two main features of this program are the scheduling and management of landscape jobs with billing features and report printing. The project management allows you to either prepare an estimate or a bid with reports ready for submission. The plant and supply availability offered in order to prepare an estimate comes directly from the availability published monthly in the well-known PlantFinder magazine. The price includes one year of listing updates (12 issues downloadable from www.hortworld.com).
The plant locator	http://www.plantlocator.com.au	australia	Greenlife sourcing	Online plantlists	Telephone: +61 (0)7 3870 9800 Facsimile: +61 (0)7 3870 1510 Mobile: David: +61 (0) 417 637 962 E-mail: david@plantindex.com.au Registered Office: 7 Harwood Street, RAINWORTH, Queensland, 4065, AUSTRALIA
Tower POS software	http://towerblog.towersystems.com.au/category/nursery-software/	Australia	software	retail	The Tower Systems nursery software includes a range of facilities and services developed specifically for nurseries including a new industrial strength and fast barcode printer. Easy access Help Desk. Nurseries using the Tower Systems software have access to customer service 24 hours a day 7 days a week. They also have access to training videos, 200 advice sheets and four live online training sessions each week … all free. User Training. The training facilities in the software and provided by Tower mean that all team members can be properly trained in the use of the software … ensuring that the business access the time saving and profitable benefits delivered through the use of the software.
Tower Systems		Global	software	retail	The Tower Systems nursery software includes a range of facilities and services developed specifically for nurseries including a new industrial strength and fast barcode printer. Easy access Help Desk. Nurseries using the Tower Systems software have access to customer service 24 hours a day 7 days a week. They also have access to training videos, 200 advice sheets and four live online training sessions each week … all free. User Training. The training facilities in the software and provided by Tower mean that all team members can be properly trained in the use of the software … ensuring that the business access the time saving and profitable benefits delivered through the use of the software.

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USDA Nursery Inventory Software	http://www.rma.usda.gov/tools/eplpps/	USA	software	inventory	The software lists all insurable nursery plants and their maximum insurable value. The software also specifies plant insurability requirements, including storage protection requirements for containerized plants and hardiness limitations for all plants. The print option provides a hardcopy listing of selected plants, along with insurability information for each plant and total valuations.
Wholesale Guide to Ornamental and Foliage Plants (Florida)	http://www.plantfinder.com/	USA	Greenlife sourcing	monthly magazine	Over 400 pages More than 31,000 listings and over 1,150 advertisers every month. For 29 years PLANTFINDER® has been the "Bible of the Industry" Serving Florida and the Gulf Coast (Zones 8B thru 11) Serving the west Coast with PlantFinder West® All available on CD as 'PlantFinderPlus®'
winplant	http://www.winplant.com/	USA	software	production nursery management	
WNLA New Ideas	http://www.anla.org/index.cfm?page=Content&categoryID=271	USA	Business planning	Technical innovation	WNGA New Ideas allows ANLA members to give presentations to their peers on real-life examples of successful ideas that have helped save them time, labor and money Created by ANLA Past President Dwight Hughes, Jr. of Hughes Nursery & Landscaping LLC, (IA) the WNGA New Ideas and Green Industry New Ideas session is considered by many in the industry to be one of the most valuable idea 'swaps' available all year!
WSU	http://gardencenternursery.wsu.edu/industry/index.html	USA	Business planning	production nursery management	Range of info about Pacific NW nursery industry and starting a nursery business
WSU	http://gardencenternursery.wsu.edu/fundamentals/PreparingBusinessPlans.htm	USA	Business planning	production nursery management	Guidance and useful references on business planning