

# Discussion Paper: Management Skills in the Manufacturing Sector – Qualifications development and learner supports

Prepared for: The Department of Education and Early  
Childhood Development

November 2013

## **Contents**

1. Introduction.....	1
2. What do managers in manufacturing need to know and be able to do? .....	2
3. Current management training options.....	4
4. How can managers in manufacturing best acquire the skills they need?.....	6
5. The bigger picture.....	7
6. Questions for discussion.....	9

# 1. Introduction

This paper seeks the views of business managers involved in manufacturing about ways to strengthen management skills in the industry. In particular, the paper seeks to identify what sort of training, and what sort of learner supports, would be of most benefit to staff moving from the shop-floor/technical roles into management roles.

## Purpose

The paper has been commissioned by the Department of Education and Early Childhood Development as part of a project to design a qualification or a suite of qualifications with appropriate learner supports to assist the 'shop floor/technical to new manager' cohort. The work is being undertaken by Precision Consultancy, in collaboration with the Australian Industry Group.

At the end of the paper, a number of questions are posed to explore what sort of training options would best meet the needs of new managers in manufacturing in Victoria. The consultants are interested in hearing from you in relation to these issues. You can email Mitch Cleary at [mitch@precisionconsultancy.com.au](mailto:mitch@precisionconsultancy.com.au) with your responses to the questions at the end of the paper, or alternatively with a request for a time for a telephone interview/conversation around the issues raised in the paper.

Email: [mitch@precisionconsultancy.com.au](mailto:mitch@precisionconsultancy.com.au)

Fax: 03 9606 0118

Alternatively you can complete the questions online at:

[https://www.surveymonkey.com/s/management\\_skills\\_questionnaire](https://www.surveymonkey.com/s/management_skills_questionnaire)

Responses are requested to be sent by **31 January 2014**.

## Background

Australian manufacturing over the past two decades has experienced rapid change and re-structure. Increasingly production is off-shored to cheaper labour. The automation of many processes in manufacturing has seen a decline in the need for low-skilled workers and an increase in demand for technical skills.

Global forces have resulted in a strong Australian dollar, meaning that the challenge of making Australian manufactured goods competitive is even greater.

Companies that are agile and can respond quickly to changes in consumer demand and even drive consumer demand through the creation of new and useful products are more likely to be successful.

Research about high and low performing workplaces, in terms of their productivity, indicates that high productivity will be underpinned by innovation<sup>i</sup>. This includes technological innovation such as new machinery and new products. It also includes new ways of organising work, such as different management techniques and adoption of new business models.

Discussion Paper: Management Skills in the Manufacturing Sector – Qualifications development and learner supports

## What does good management look like?

According to an Australian report, *Leadership, Culture and Management Practices of High Performing Workplaces<sup>ii</sup> in Australia*, high performing workplaces have:

1. Higher levels of responsiveness to changes in stakeholder and customer networks
2. Higher levels of employee participation in decision making processes
3. Higher levels of behavioural and skills flexibility in employees
4. Good use and quality of information, communications and technology
5. Excellence in attracting and retaining high quality people

The research shows that engaged employees are productive employees.

Managers need to create a work environment that can boost productivity by improving employees’:

- job satisfaction
- motivation
- skills utilisation
- access to training and
- capacity to control how they achieve their work outcomes.

Finally, and most importantly, managers need to foster a culture of innovation within their business.

## 2. What do managers in manufacturing need to know and be able to do?

This section explores the skills and attributes needed for managers to maximise productivity. It is organised in terms of broad areas which could ultimately be included in a new qualification for managers in manufacturing.

### ***Self management***

Self management includes skills such as resilience, perception and insight into own and hence others’ behaviour, self regulation, emotional intelligence, reflection and self criticism, integrity and ethics.

Research conducted by Daniel Goleman<sup>iii</sup> found that when comparing technical and cognitive skills (e.g. big picture thinking and long-term vision) against emotional intelligence as factors contributing to performance excellence, emotional intelligence was twice as important as the other factors for all jobs across and up and down the organisation.

### ***Leadership***

Leadership is about how people use their self management skills to influence other people; by modelling behaviours, motivating and leading a group, leading a project team, and using highly developed communication skills via a number of mediums. It could also encompass strategic and long term vision, and the capacity to understand global markets and thinking and relate this back to the business. Leadership could be about understanding and

recognising technical versus adaptive problems in the workplace and practical strategies to deal with both.

### ***People management***

Research has found that many Australian manufacturing enterprises are strong in operations management but not so strong in people management.<sup>iv</sup> While they are able to link employee performance with defined accountability and rewards, they struggle with more advanced human resources capabilities. People management includes attracting, developing and retaining talent, and practising adaptive leadership in order to mobilise team to tackle tough challenges and thrive in a globally competitive environment.

Managers need skills in:

- effective communication including dialogue and good questioning skills
- encouraging collaboration between staff and teams
- performance management and managing poor performance
- talent management
- working with culturally diverse work groups
- providing feedback and having difficult conversations
- celebrating success
- prioritising and dealing with what is critical to the business.

### ***Planning and Performance***

Managers need to be able to set targets and measure and assess performance and productivity. They need skills in financial management; developing budgets, monitoring and reporting on income and expenditure. This would equip managers with methods and metrics to measure and report on outputs. It also means being able to use a range of performance metrics to evaluate the effectiveness of various process improvements.

### ***Innovation***

Innovation is about generating ideas, taking calculated risks, questioning how to do things better, facilitating change, turning ideas into products, processes and services, and encouraging others to innovate.

It encompasses strategies to ensure new technologies are assessed and used where appropriate, and bench-marking of competitors.

It also includes knowing how to embed innovation in the workplace culture, processes and overall business strategy. Innovation will require leaders that are capable of adapting to, and understanding change processes. This is critical to innovation but also in any environment required to constantly adapt to change.

### ***Diversity***

Today's and tomorrow's managers will need cultural competence, that is, the capacity to work with people from different backgrounds; be able to lead intergenerational teams; and be inclusive.

In addition, the manufacturing workforce, compared with other industries, has relatively low levels of literacy and numeracy skills, which can present its own set of complex challenges for managers.

## Managing in a manufacturing business

The above skills and knowledge are general management/leadership skills which could equally apply to almost any work setting from retail to manufacturing. However, there are knowledge and skills that are possibly unique to managers working in manufacturing.

### **Manufacturing**

Manufacturing encompasses a whole range of processes, from research and development, production, market testing, logistics, to global supply chain management. New managers might benefit from having a broad overview of the manufacturing process, including LEAN manufacturing techniques and an understanding of the broader context of global markets.

### **Compliance**

Managers need to ensure that systems are in place to make the workplace safe. Managers will need to have an understanding of relevant industrial awards to ensure agreed staff employment conditions are met. In addition, there may be regulations around the manufacturing of a product, such as, for example, food regulations for a food manufacturer, which managers need to be aware of in order to ensure the business is acting within legal boundaries. Another example is quality control systems and processes that need to be adhered to in order to meet industry and customer requirements.

## 3. Current management training options

There are a wide range of products available for people to develop their management skills. Some are accredited, meaning they are recognised by government, meet certain quality standards, and award a qualification within the Australian Qualifications Framework.

### **VET qualifications**

VET qualifications are nationally recognised qualifications designed specifically for industry. The most popular vocational education and training (VET) sector qualification in the management area is the Certificate IV in Frontline Management this qualification has been designed to support staff moving from the shop-floor/technical roles into management. VET qualifications are usually tied to a specific job outcome, and hence focus on developing competency to do the job. Some examples are below:

Type	Length	Content	Delivery
Certificate IV in Frontline Management	6-12 months	10 units, such as 'Promote team effectiveness' and 'implement an operational plan'.	Online; a day a week; part-time in evenings; can incorporate a project from work
Diploma in Management	6-12 months	8 units, such as 'Manage people performance' and 'Manage an operational plan'	Online; a day a week; part-time in evenings; can incorporate a project from work
Advanced Diploma in Management	6-12 months	8 units, such as 'Provide leadership across the organisation' and 'Manage organisational change'	Online; a day a week; part-time in evenings; can incorporate a project from work

VET qualifications in management also exist at higher levels including Graduate Certificate and Graduate Diploma level. The Certificate IV in Frontline Management is the most commonly delivered qualification in Australia for new managers. Although the context of the program is set nationally the modes of delivery vary greatly.

The qualification must be delivered and assessed by a Registered Training Organisation (TAFE, private provider or enterprise RTO).

**Higher education qualifications**

Higher education qualifications are usually developed and accredited by individual universities.

Type	Length	Content	Delivery
Associate Degree	2 years full-time	Usually about 16 units covering management and business topics	Face to face and some online.
Bachelor Degree	3 years full-time	Usually about 24 units, some core, some electives, usually enabling a specialisation in an area such as HR management or Operations Management	Face to face, may involve a work-based project and some online delivery.
Graduate Certificate	6 months full-time	4 units, may include: Supply chain management, Risk Management, Leadership, Organisational Management among others.	Face to face and some online delivery
Graduate Diploma	1 year full-time	8 units, may include the above PLUS topics like Business analysis and risk	Face to face and some online delivery
Masters	1.5-2 years full-time	8-16 units, often incorporating a work related project	All online to a mix of online and face to face, on campus, 'intensives' and experiential units

### ***Non-accredited training***

Non-accredited training is training that does not lead to the issuing of a formal qualification. Some examples are listed below.

<b>Type</b>	<b>Length</b>	<b>Content</b>	<b>Delivery</b>
Short courses	1-3 days	Usually just one topic eg. 'Organising a team'	Often off-site, face to face
Vendor programs	Can be 1 or 2 days to short bursts over a year	Usually to develop skills and knowledge in a particular methodology	Often a mix of face-to-face, in the workplace and online
Mass open online courses	Usually 4-12 hours a week for 6-12 weeks	Single topic 'eg Planning in a Global Market'	Online, viewing podcasts, readings, assignments, group forums

## **4. How can managers in manufacturing best acquire the skills they need?**

Set out below are some commonly used methods of training delivery/skills development. Many high quality programs use a combination of these methods.

### ***Face to face/classroom learning***

Face to face learning involves participating in a learning program that is usually delivered at the training provider's facilities. Classroom based approaches can enable participants to learn from each other as well as the trainer, and to learn away from their workplace setting. Many short courses are delivered in this way, and they typically involve listening to information, talking with classmates about it and doing short simulations or exercises relating to the content.

### ***Online learning***

Online learning usually involves reading material, watching podcasts, participating in online class forums and submitting assessments electronically. It is often more flexible than other modes of delivery, in that learners can undertake learning at their own pace, to fit within their work and personal commitments.

### ***Experiential learning***

Experiential learning is about doing an activity, and then reflecting on and analysing what happened, as a way to learn. This kind of method, effectively 'learning by doing' can be highly effective. For example, it would be hard to learn to ride a bike just by taking notes about it from a whiteboard. It can be run with or without a facilitator and is often quite open-ended in terms of what exactly gets learnt.

For example, a business school hires actors who perform scenes from a work environment and learners watch the scenes, and can participate by either stopping the scene to discuss and reflect on what is happening, propose actors re-do the scene but take a different approach, or even joining the actors to offer a new solution to a problem.

### ***Action learning / Problem based learning***

Action learning involves a group of people who come together to solve a 'problem'. The problem may be broad – how to establish a global market – or narrow – how to effectively implement a new performance management system. Action learning groups can be established within a single enterprise or across several. They are usually facilitated by someone who manages time and task boundaries. This role includes managing the dynamics and the process but not participating. Integrating strategy and leader development projects connects participants to the real challenges of the business and is supplemented by support from management (perhaps through mentoring) and coaching support.

### ***Workplace training***

Often training providers deliver customised training that is delivered within a workplace setting. For example, a metal manufacturer identifies that its operational managers need to develop their skills in measuring performance effectiveness. The company decides to adopt the 6 Sigma methodology, which is a set of tools and strategies to support process improvement. The company wants to implement this throughout the production floor and engages a trainer who trains floor managers on site. Floor managers must complete a project as part of their training which identifies and quantifies a process improvement. As the project is delivered on-site and as part of the real work, other staff in the company are exposed to the learning first-hand.

### ***Mentor programs***

Mentors are experienced people who can provide guidance and support to less experienced staff. Usually a mentor is someone who is distant or separate from the employee's immediate colleagues. Also, usually, mentoring is a symbiotic relationship; both mentor and mentee benefit from the connection.

For example, a large multi-plant manufacturer sends one of its new managers to another plant for a couple days a month for 6 months to shadow the more experienced manager. The new manager benefits from observing how the mentor does his work, and the mentor can learn from the mentee about different processes and developments at the other plant.

### ***Coaching***

Coaching is usually skills based. The focus is on identifying a skill need and then appointing an individual coach with expertise in that skill, who works directly with the individual over a short or long period of time.

## **5. The bigger picture**

This discussion paper has focused on how best to strengthen the skills of new managers moving from technical/shop floor roles into management/supervisory roles. The underlying assumption, based on our research, is that this is essential in order to boost the productivity of manufacturing businesses.

But new managers may face other barriers, too, such as inadequate skills from the senior leadership team, or gaps in the literacy, numeracy and digital technology skills of their teams. (New managers may even have these gaps themselves).

Some leadership skills such as innovation and diversity for example, need to be considered in context of the organisation and existing processes and systems in place. Participants who gain new skills need to be able to practice them back in the organisation. This may require a review of the organisational constraints in place that may act as a barrier to innovation or diversity. Teaching these skills in isolation of any organisational context may inhibit that skill being practiced in the workplace.

## 6. Questions for discussion

1. *What are some of the key challenges that first time managers in manufacturing experience on the job?*

---

---

---

2. *What knowledge, skills and attributes should managers in the manufacturing sector possess?*

---

---

---

3. *What are the critical points in an employee's career when management training would be most useful?*

---

---

---

4. *What is your view about current management skills development offerings? What concerns do you have?*

---

---

---

5. Is a full qualification required for managers, or are smaller skill sets in specific areas preferred?

---

---

---

6. *Can you describe some education and training programs that have been effective in supporting new managers, either in your own organisation or others?*

---

---

---

---

7. *How do you believe that mentoring, coaching or networking could help staff transition to management roles?*

---

---

---

---

8. *How important is cost in making decisions about what training is best? How should cost be shared between the individual, employer and government?*

---

---

---

Name: \_\_\_\_\_

Position: \_\_\_\_\_

Company: \_\_\_\_\_

Contact Details: \_\_\_\_\_

Can you please provide some brief detail about your company, the industry sub sector(s) in which it operates and your geographic location?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Thank you for your time.

Please send responses by **31 January 2014** to:

Email: [mitch@precisionconsultancy.com.au](mailto:mitch@precisionconsultancy.com.au)

Fax: 03 9606 0119

or

Complete the questions online at:

[https://www.surveymonkey.com/s/management\\_skills\\_questionnaire](https://www.surveymonkey.com/s/management_skills_questionnaire)

If you would like to speak to one of the consultants working on the project, find out more about the project and/or provide your feedback in this way, please phone Mitch Cleary, Managing Director of Precision Consultancy on 03 9606 0118.

---

## References

<sup>i</sup> Green, R., 2013, *The Role of Management in Lifting Productivity*, Australian Workforce and Productivity Agency, Canberra, Australia

<sup>ii</sup> Boedker C., Vidgen R., Meagher K., Cogan J., Mouritsen J., and Runnalls J. M. Published October, 2011, *Leadership, Culture and Management Practices of High Performing Workplaces in Australia: The High Performing Workplaces Index*, Society for Knowledge Economics, Sydney, Australia

<sup>iii</sup> Goleman, Daniel, 2004, *What Makes a Leader?*, Harvard Business Review

<sup>iv</sup> Roy Green, 2009, *Management Matters in Australia: Just how productive are we?* Department of Innovation, Industry, Science and Research, Canberra, p. 7