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# A Plan for the Future of Australian Manufacturers: Developing Management, Leadership and Innovation

**Mark Bunyan**

2014 MSA Rilda Mossop Innovation Study Award Fellowship

**An ISS Institute Fellowship sponsored by**

Manufacturing Skills Australia



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# I. EXECUTIVE SUMMARY

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Australian manufacturers, especially small to medium sized enterprises (SMEs), cannot compete with low-cost manufacturing countries. The high cost Mittelstand companies in Germany, recognised as world leaders in engineering, practice many of the skills required for a successful manufacturing industry of the future. Research has identified that Australian manufacturing SMEs would benefit from better management and leadership skills and this report discusses the potential to use Mittelstand management practices as a benchmark to improve these skills.

The aims of this Fellowship included the following:

- Develop better management and leadership skills through the design of a training program based on lessons learned from a sample of Mittelstand companies.
- Determine the potential for alliances between Australian manufacturing SME's and German Mittelstand manufacturers based on 'open innovation' and the ability to transfer advanced skills between the participating companies.
- Understand the critical success factors that make Mittelstand a world leader in manufacturing.

The Fellow undertook a four week trip to Germany and interviewed a selection of stakeholders that included:

- Eight Mittelstand companies in manufacturing in Darmstadt, Heinsberg, Lohne, Rheine, Oelde, Crailsheim, Biberach An Riz and Rodental.
- The Director of Vocational Training and Further Training, Handelskammer Bremen.
- Two representatives from the German Association for Small and Medium Sized Businesses (BVMW) in Berlin and Frankfurt.
- A representative for the Offensive Mittelstand group in Bielefeld.
- A management training consultant in Frankfurt.
- The Australian Business in Europe group based in Munich.
- Attendance at the 2014 Austrade Business and Technology Forum.

Lessons learned from this overseas research were considerable and contain important implications for Australian small to medium sized enterprises (SME's). Three of the lessons learned included the following:

- Mittelstand management and leadership skills are well developed with regards to strategic vision, industry knowledge and employee relations. These skills are essential to maintain not only global market dominance but also, a well functioning business. Australian managers can utilize many of the German leadership characteristics to achieve similar results in their businesses.
- There are definite opportunities for Australian manufacturing SME's to develop alliances with German Mittelstand companies based on innovation. Germany is currently looking for new geographic markets to serve as well as the potential to partner in the development of innovative products and services. Australia is considered by Germany as an attractive market to invest in.
- The two main functions considered by Mittelstand managers to be critical for business success include the successful management of customer services and the planning and monitoring of continuous improvement.

## I. EXECUTIVE SUMMARY

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Full details of the above and other important findings can be found in the main body of the report.

As a result of this Fellowship research a number of recommendations for the Australian Manufacturing Industry can be shared. A total of twelve recommendations are explained in the body of the report, but the two major recommendations considered to be essential to fostering the enhancement of skills in Australian Manufacturing SME's include:

- The development of a customised Management and Leadership skills package in preference to 'generalised' management courses currently on offer. A framework of these skills are not only detailed in the report , but also linked to the Australian nationally recognized training framework.
- Using the Offensive Mittelstand model as a framework, develop a 'business assessment tool' suitable for Australian manufacturing SME's. Promotion and distribution of the assessment tool can be linked to the new Industry Growth Centre Initiative. SME's can also decide to self-assess and should be able to access the instrument through any professional associations. Results of this assessment tool can be used to not only develop strategic direction for the SME, but also initiate a workforce development plan.

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## II. ABBREVIATIONS/ACRONYMS

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<b>AMMA</b>	Australian Mines and Metals Association
<b>ABIE</b>	German Australian Business Council
<b>AHK</b>	German-Australian Chamber of Industry and Commerce
<b>AIM</b>	Australian Institute of Management
<b>AusAID</b>	Australian Agency for International Development
<b>BDI</b>	Federation of German Industries
<b>BDO</b>	International Business Compass
<b>BMZ</b>	Federal Ministry for Economic Cooperation and Development
<b>BMW</b>	Bavarian Motor Works
<b>BVMi</b>	Federal Ministry for Economic Affairs and Energy
<b>BVMW</b>	The German Association for Small and Medium Sized Businesses
<b>BWA</b>	The German Federal Association for Economic Development and Foreign Trade
<b>CAD</b>	Computer Aided Design
<b>CCMC</b>	Central Coast Manufacturing Connect
<b>CEO</b>	Chief Executive Officer
<b>CFC</b>	Ceramic Fuel Cells
<b>CRM</b>	Customer Relationship Management
<b>CSIRO</b>	Commonwealth Scientific and Industrial Research Organisation
<b>3D</b>	Three dimensional
<b>DNA</b>	Deoxyribonucleic acid
<b>FHM</b>	Fachhochschule des Mittelstands
<b>FIAL</b>	Food Innovation Australia
<b>FMCG</b>	Fast Moving Consumer Goods
<b>GDP</b>	Gross Domestic Product
<b>GFC</b>	Global Financial Crisis
<b>GIZ</b>	German Federal Enterprise for International Cooperation
<b>HR</b>	Human Resources
<b>IBWF</b>	The umbrella organisation for lawyers and consultants
<b>IHK</b>	Chamber of Industry and Commerce
<b>IP</b>	Intellectual Property
<b>ISO</b>	International Organization for Standardization

## II. ABBREVIATIONS / ACRONYMS

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<b>KPI</b>	Key Productivity Indicator
<b>kW</b>	Kilowatt
<b>LNG</b>	Liquid Natural Gas
<b>MBA</b>	Master of Business Administration
<b>MEIA</b>	Manufacturing and Engineering Institute of Australia
<b>MSA</b>	Manufacturing Skills Australia
<b>NSW TAFE</b>	New South Wales Technical and Further Education
<b>OECD</b>	Organization for Economic Cooperation and Development
<b>OM</b>	Offensive Mittelstand
<b>PDF</b>	Portable Document File
<b>PhD</b>	Doctorate
<b>PLC</b>	Programmable Logic Controller
<b>R&amp;D</b>	Research and Development
<b>RTO</b>	Registered Training Organisation
<b>SEO</b>	Search Engine Optimisation
<b>SME</b>	Small Medium Enterprise
<b>SOFC</b>	Solid Oxide Fuel Cell
<b>SWOT</b>	Strengths, Weaknesses, Opportunities and Threats
<b>TAFE</b>	Technical and Further Education
<b>USA</b>	United States of America
<b>USP</b>	Unique Selling Point
<b>VET</b>	Vocational Education and Training
<b>WH&amp;S</b>	Work Health and Safety
<b>ZVEI</b>	The Association of Electrical Manufacturers in Germany

# 1. ACKNOWLEDGEMENTS

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The Fellow sincerely thanks the following organisations and individuals that gave generously of their time and expertise to assist, advise and guide him throughout the Fellowship.

**Awarding Body – International Specialised Skills Institute (ISS Institute)**, is an independent, national organisation that for over two decades has worked with Australian governments, industry and education institutions to enable individuals to gain enhanced skills and experience in traditional trades, professions and leading edge technologies.

At the heart of the ISS Institute are our Fellows. Under the Overseas Applied Research Fellowship Program the Fellows travel overseas. Upon their return, they are required to pass on what they have learnt by:

1. Preparing a detailed report for distribution to government departments, industry and educational institutions
2. Recommending improvements to accredited educational courses
3. Delivering training activities including workshops, conferences and forums.

Over 300 Australians have received Fellowships, across many industry sectors. In addition, recognised experts from overseas conduct training activities and events. To date, 25 leaders in their field have shared their expertise in Australia.

According to Skills Australia's 'Australian Workforce Futures: A National Workforce Development Strategy 2010':

Australia requires a highly skilled population to maintain and improve our economic position in the face of increasing global competition, and to have the skills to adapt to the introduction of new technology and rapid change.

International and Australian research indicates we need a deeper level of skills than currently exists in the Australian labour market to lift productivity. We need a workforce in which more people have skills, but also multiple and higher level skills and qualifications. Deepening skills across all occupations is crucial to achieving long-term productivity growth. It also reflects the recent trend for jobs to become more complex and the consequent increased demand for higher level skills. This trend is projected to continue regardless of whether we experience strong or weak economic growth in the future. Future environmental challenges will also create demand for more sustainability related skills across a range of industries and occupations.

In this context, the ISS Institute works with Fellows, industry and government to identify specific skills in Australia that requires enhancing, where accredited courses are not available through Australian higher education institutions or other Registered Training Organisations. The Fellows' overseas experience sees them broadening and deepening their own professional practice, which they then share with their peers, industry and government upon their return. This is the focus of the ISS Institute's work.

For further information on the ISS Institute and Fellows' work see <http://www.issinstitute.org.au>.

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## 1. ACKNOWLEDGEMENTS

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- Adrian Price, Regional Manager, Australian Industry Group (Ai Group)
- Dr Anton Kriz, Senior Lecturer and Business Consultant, University of Newcastle, Australia
- Frank Sammut, Executive Officer, Central Coast Manufacturing Connect, (CCMC)
- Martin Tanti, Director, Avoca Engineering

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- Phillip Cox, Institute Director, Newcastle Campus
- Jason Darney, Faculty Director, Newcastle Campus
- Peter Beach, Head Teacher, Gosford Campus.

### Organisations Impacted by the Fellowship

#### Government

- Federal level such as the department of industry and State level such as the department of trade and investment.
- Local government level involving communities in the Central Coast and Hunter regions.

#### Industry

- Manufacturing industry especially in food, metal products, machinery and equipment and mining.

#### Manufacturing groups

- **Australian Industry Group (Ai Group):** A peak industry association that represents small, medium and large businesses across all industries. The main focus is to build sustainable industries through global integration, skills development, productive workplaces and innovation
- **Central Coast Manufacturing Connect (CCMC):** A Central Coast organisation that collaborates with industry bodies throughout NSW as well as local manufacturing and engineering companies. CCMC's aim is to facilitate local manufacturers and seek opportunities for growth, learning and innovation

## 1. ACKNOWLEDGEMENTS

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- **Innovate Central:** Innov8Central is an umbrella organisation that aims to improve the quality of life for Central Coast residents through sustainability of the regional economy. The organisation is responsible for the Implementation of a regional innovation plan that is based on educating local business, contributing to the development of regional clusters and the provision of qualitative and quantitative research
- **HunterNet:** HunterNet is one of the more successful industry clusters in Australia and represents small and medium-sized manufacturers located in the Hunter and Central Coast regions. Incorporating over 200 companies, HunterNet is active in national and international markets in the areas of defence, power generation, mineral processing, transportation and major resource projects.
- Business Chamber of Commerce

### Professional Associations

- **Engineers Australia:** A professional body with over 100,000 members playing an active role in making their position known on policies, inquiries and other government initiatives. Engineers Australia contributes regularly via policy statements, government submissions, media statements and the generation of advocacy resources.
- **Food Innovation Australia Ltd (FIAL):** A commercially driven collaborative and innovation organisation in the Australian food and beverage industry. Launched as part of the government's Industry and Innovation Statement: A Plan for Australian Jobs, they are an industry-led network and take a collective approach, ensuring the greatest productivity, profitability and resilience for the food and beverage sector.
- **Manufacturing Skills Australia (MSA):** MSA is the national body responsible for ensuring that manufacturing enterprises have the workforce skills they need to be globally competitive now and into the future. Working with enterprises, employer and industry associations, trade unions and industry advisory bodies, MSA identifies what skills are needed and how these can most effectively be implemented in industry.
- **Australian Mines and Metals Association (AMMA):** AMMA is a network of likeminded companies and resource industry experts. The organisation has the ability to lobby political developments, provide workforce consultancy, deliver training and development and provide industry information and networking events.
- **Manufacturing and Engineering Institute of Australia (MEIA):** MEIA aims to bridge the gap between larger industry associations and small metal manufacturers, provide information to lobbyists and act as a forum for SME's in manufacturing to improve their business operations and technologies.

### Education and Training

- TAFE New South Wales.
- Newcastle University.

### Community

- Various social enterprises that would include local council groups, welfare agencies and employment agencies.

## 2. ABOUT THE FELLOW

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**Name:** Mark Bunyan

**Employment:** Teacher / Trainer, Business and Computing Faculty, Hunter Institute of TAFE

**Qualifications:**

- TAE 40110 Certificate IV Training and Assessment, Hunter Institute of TAFE, 2011
- Post Graduate Diploma in Adult Education, University of Technology, Sydney, 1994
- Bachelor of Science, Major in Applied Mathematics and Business Statistics, University of New South Wales, 1979

**Biography:**

Mark Bunyan has had extensive experience in a variety of industries such as building, oil exploration, market research, management consultancy and training and education. He has also worked extensively for state government in education and commercial training for NSW TAFE.

Having resided and worked in Indonesia and Singapore for five years in oil exploration and sales, Bunyan returned to Australia to work in management consultancy for the Alexander Proudfoot Company of Australia. Consulting with some of Australia's largest companies, the Fellow gained experience in the mining, food, finance and pharmaceutical industries. Bunyan has also worked for AC Nielsen in consumer market research producing reports that tracked consumer buying behaviour for clients in retail and food manufacturing.

Joining NSW TAFE in 1995 as a teacher/ head teacher, the Fellow was responsible for marketing, sales, small business and management courses (Certificate IV to Advanced Diploma) at Gosford and Wyong Campuses, Hunter Institute, Central Coast. Bunyan was also involved in a number of commercial ventures for TAFE that included the sale and delivery of the Workplace Training and Assessment training package (now TAE40110 CIV in training and assessment) and Certificate IV in Frontline Management.

In a joint venture with the Western Institute of TAFE and AusAID, Bunyan also worked in the Solomon Islands as a training advisor and was responsible for strengthening the capacity of the Department of Indigenous Business Development to plan and manage training provision to enhance the marketing and management of small businesses. Particular facets of the project included training needs analysis for public and private trainers, development of materials for training, finalising the Small Business Development Policy for government, expansion of the Women in Business initiative and draft a proposed National Training Strategy.

With the implementation of the federal government training reform agenda, the business and computing faculty director at the Hunter Institute of TAFE hired the Fellow to research the new VET environment and develop strategies and actions to prepare the institute for a new, competitive future.

Bunyan also manages a small consultancy business and has worked with a number of small businesses (SMEs) on the Central Coast and Newcastle in manufacturing, clothing, babywear, communications and the beverage industry. This usually involves research of a particular industry and its macro environment, competitor analysis, customer research, an internal audit of current marketing strategies and development of an appropriate marketing plan.

More recently, the Fellow now also consults and facilitates for the Australian Institute of Management (AIM), Sydney, developing training manuals, facilitator guides, assessments and marking guides in the disciplines of management and marketing.

# 3. AIMS OF THE FELLOWSHIP PROGRAM

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This Fellowship provided the opportunity to build on the research already conducted on the Mittelstand philosophy of business in German manufacturing. Lessons learned from this research will contribute towards recommending customised training for small to medium sized Australian manufacturing companies. In particular, the following underpins the purpose of this Fellowship:

- Develop strategies to improve on management and leadership skills, especially in the following areas:
  - » Strategic planning
  - » Management and leadership capabilities
  - » Innovation, research and development
  - » Business-to-business marketing and developing points of differentiation through value adding (transitioning from a price competitive mindset to one of quality and innovation)
  - » Identifying export opportunities
  - » Managing knowledge and information
  - » Creating corporate cultures and community relationships
  - » Developing workplace learning environments.
- Seek and promote alliances between German and Australian manufacturing companies to champion the concept of 'open innovation' and the transfer of necessary skills between the two countries.
- Identification of critical factors that contribute to Mittelstand success:
  - » Support networks (government and non-government) for Mittelstand companies
  - » Education and training.

## 4. THE AUSTRALIAN CONTEXT

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The growth and decline of the Australian manufacturing industry over the decades has been well documented. As an important contributor to the economy and a major source of employment, the industry has faced difficult conditions over the last ten years. Manufacturing has faced the GFC, a global competitive market, a requirement for leaner, more agile operations, a demand for innovative and customised products and a continually high Australian dollar. In addition to this challenging outlook, the announcements in 2013/ 2014 that the major manufacturers such as Ford, Holden, Electrolux, Boeing, Phillip Morris and Caterpillar would be closing their Australian operations, will have long lasting and devastating impacts on the economy and manufacturing industry in general.

According to the Manufacturing Skills Australia 2014 Environmental Scan report, manufacturing in Australia has now reached a crossroads. The future direction taken will have major consequences for the industry's future.

Despite the difficult outlook, new opportunities for Australian manufacturing do exist. Currently there is growth in international markets that require quality, customised and value-added products and services. Manufacturers need to build not only capacity, but also higher skill levels to compete in these markets. To achieve this transition, committed leadership and a long-term strategic outlook are required.

Australian manufacturers (especially SMEs) cannot compete with low-cost manufacturing countries and therefore, must supply global markets with the products and services not catered for in mass production.<sup>1</sup> The high cost Mittelstand companies in Germany, recognised as world leaders in engineering, practice many of the skills required for a successful manufacturing industry of the future. The Ai Group's Hunter Industry Leaders Council, toured Germany in 2013 and observed just some of the characteristics that underpinned German success and longevity: operating in niche markets, financial stability, a long term strategic outlook, high levels of R&D, competition based on points of differentiation rather than price, brand reputation and productivity. It is these skills that that are regarded as essential for SME management and their workforces in Australian manufacturing to move forward from the crossroads now faced.

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<sup>1</sup> Manufacturing Skills Australia, 2014 Environmental Scan

## 4. THE AUSTRALIAN CONTEXT

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### SWOT Analysis

#### Strengths

- The skills identified have a proven track record of success.
- The skills are regarded as the business foundations for the second biggest exporter in the world (Germany).
- These skills provide long term direction for the organisation.
- The skills are aimed primarily at enhancing SME management capabilities.
- The skills increase the capacity of the SME to understand the external market as well as their workforce and innovation capabilities.

#### Weaknesses

- The Mittelstand philosophy of business is German in nature. There may be difficulties in applying the principles to an Australian business culture.

#### Opportunities

- The skills are aimed at increasing an SME's capacity to take advantage of the new global opportunities in the manufacturing industry:
  - » The trend for mass customized products and services
  - » Growth of markets in Asian regions
  - » Increasing demand for value-added products and services
  - » Customer requirements for innovation.

#### Threats

- Reluctance by SMEs in Australian manufacturing to embrace and implement the skills.
- Increasing intensity of world competition.

# 5. IDENTIFYING THE SKILLS AND KNOWLEDGE ENHANCEMENTS REQUIRED

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Manufacturing Skills Australia (MSA) has stated that Australian manufacturing SMEs need to be targeted for management and leadership development if they are to capitalise on future opportunities.<sup>1</sup> Compared to other countries such as the United States, Sweden, Japan and Germany, Australia has a relatively poor performance record when it comes to management skills especially in smaller, family owned companies. Even more significant is the fact that, “Managers in the manufacturing sector have one of the lowest proportions of tertiary qualifications across surveyed countries, hampering Australia’s ability to participate effectively as a ‘high cost’ economy in global markets and supply chains”.<sup>2</sup>

Innovation and Business Skills Australia have stated that future management must demonstrate strong leadership in relation to modeling behaviour, motivating and leading teams and communication capabilities. Just as important is the ability to review and identify workforce skills required to maintain a competitive position in a dynamic manufacturing environment.

Goran Roos, a management consultant in Adelaide, Australia, stated that although Australia has a large number of business schools, many are based on the Harvard model meaning graduates are only suited to large multinational firms. The majority of Australian managers work in SMEs and family businesses and there may be a mismatch between what is needed and what is being actually taught. Areas of weakness include the following:

- Managers not understanding what a skilled employee can do for the business. Their mindset is around low cost employees
- A reluctance to invest in educating employees
- The ability to innovate in a long term, strategic manner needs improvement
- A lack of strong, long term relationships based on mutual trust with organisations such as universities and the CSIRO.

Manufacturing SME managers should identify their skill needs and involve staff to apply their knowledge in areas such as strategic planning, innovation, marketing, competitive advantages and even succession planning. To help achieve higher skills, customised training programs need to be developed.<sup>3</sup>

Apart from the fact that Mittelstand companies are global leaders in their industries and always seek future business opportunities to maintain growth, there is a real threat from low-cost economies that are not only rapidly developing their own innovations but also gaining momentum in quality control. As such, German businesses are increasingly coming to the realisation that to maintain the technological and quality advantages that enable them to sell their products at a premium, they need to rapidly accelerate their pace of innovation.<sup>4</sup>

With the new, dynamic markets of Asia, Germany is now looking to other developed countries such as Australia, to create alliances on new ideas, sharing knowledge and collaborating on open approaches to innovation. Mittelstand companies however, are risk averse and are concerned about intellectual property protection, the business culture, security and other similar risk factors within Asian countries. Australia has a more secure environment and familiar culture and therefore, is the preferred choice to engage the Asian market.

The German Mittelstand will be looking for the right quantity and quality of skill sets in Australian managers and their workforce. Importance will be placed on personal relationships, strategic outlook, customer focus, collaboration with employees and ongoing workplace learning.

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1 Manufacturing Skills Australia, 2013, Environmental Scan: A new era for manufacturing

2 Australian Workforce and Productivity Agency: Manufacturing Workforce Issues Paper , 2013

3 Manufacturing Workforce Issues Paper: Australian Workforce and Productivity Agency, 2013

4 Why Germany?: Global Engagement Paper for the Victorian Government, 2011, Australia

# 6. THE INTERNATIONAL EXPERIENCE

## Company Interviews

In-depth interviews were conducted with eight Mittelstand companies, as follows:

Table 1: Companies interviewed

Company	Manager	Co. size	Company description
Schenk Process	<b>Phil Morris</b> Chief Engineer	M to L	A market leader in solutions for measuring and process technologies in industrial weighing, feeding, conveying, screening and automation as well as air filtration technology.
Ceramic Fuel Cells (CFC)	<b>Frank Obernitz</b> Managing Director	S	An Australian/ European company and a world leader in providing clean, on-site electricity using fuel cells.
Stuete	<b>Andreas Schenk</b> Product Manager	M	Developers and manufacturers of high-quality switchgear, sensors and control units for industrial automation, medical equipment and building automation.
Haver & Boecker	<b>Dr Reinhold Festge</b> Manager / Partner	M	Specialists in developing and producing packing and screening machines for the raw material processing industry.
Windhoff	<b>Wolfgang Klein-Katthofer</b> Senior Sales Manager	M	Windhoff designs, manufactures and supplies a broad range of high-tech products from rail vehicles to railway construction, railway depots and shunting technologies.
Gerhard Schubert	<b>Hartmut Siegel</b> Director of Sales	M	Development and construction of packaging machinery worldwide.
Liebherr	<b>David Griffin</b> Head of Sales	L	Production of high performance cranes, refrigeration and freezing, construction machines, mining equipment, material handling technology, aerospace and transportation systems, gear cutting technology and automation and components.
Wohner	<b>Mirko Kaiser</b> Marketing Manager and Sales International	M	The Wohner group is involved in power distribution and control engineering. The company developed the busbar system of power and also provides fuse technology.

Key: S=Small, M=Medium, L=Large

## 6. THE INTERNATIONAL EXPERIENCE

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Attachments 1 and 2 list the questions that formed the basis of each interview. A detailed transcription of each interview is provided in Attachments 3 to 10. Information in attachments 11, 12, 13 and 15 was also used and details responses provided by representatives from Fachhochschule des Mittelstands (FHM), the German Association for Small and Medium Sized Businesses (BVMW) and Boning-Consult, The Coaching Company.

### Strategic planning

Mittelstand companies are mostly family owned and not publicly listed companies. This ownership style has a community and social orientation that includes not only the people that work for the company and their supply chains, but also the region the company operates in. Planning for the future (anywhere from a three to ten year period) is common and possible without the pressures of shareholders. In medium to large organisations, strategic plans are formally documented.

In small organisations, planning was not as formal but there was a strong ability to think strategically and plan for the future. Uwe Boning from Boning-Consult stated that many small companies had a strong sense of what they wanted to achieve. Managers of these companies had a vision, dominant personalities and an assertiveness to apply their strengths to compete in a market.

Vision was an important part of future planning. The following findings were common in all the companies interviewed:

- There is a history and awareness of how the company first started. Stories that relate to the origins of the company and the person that had the foresight to start the company were common and proudly discussed. There was value placed on the number of years that the company had been in business
- There is a long term objective to be leaders in their fields. German Mittelstand companies always think globally and don't restrict themselves to just the domestic market
- Staff embrace their company's vision and strategic direction. They are aware of why the company makes certain decisions and develop particular strategies
- Core values underpin company philosophies on conducting business, the treatment of staff and what the company wants to achieve.

Increasing competition from both China and India has had its impact on German SMEs. All of the companies interviewed were concerned about price competitiveness and the infringement of IP rights. This threat of market share decline has increased the need for a constant requirement to innovate and pay even closer attention to their customers' needs. Mirko Kaiser from Wohner stated that he felt Chinese companies only focused on the product and low production costs and didn't have the knowledge or capability yet to analyse the market and develop a solution. Wohner has now invested in the 185Power system (the next innovative stage of power distribution) to maintain their competitive edge.

Except for Schenk Process that had a matrix styled organisational structure, all the companies interviewed described their organisations as having 'flat management structures'. Chief Executive Officers (CEO) and top managers had direct communication with all their staff and there were no strict delineation between functions in the company. Production, sales, marketing, R&D and finance worked together seamlessly.

## 6. THE INTERNATIONAL EXPERIENCE

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*“Mittelstand companies pick something they know about, they learn everything about it and do it best in the world. Companies view themselves as global from day one. They don't want to be just best in Germany or best in Europe, they want to be best in the world and will start their businesses with this view.”*

*Phil Morris, Schenk Process*

### Research, development and innovation

Many of the managers interviewed spoke of the ingenuity of Germany and its ability to innovate with minimum resources. Other major contributors to this innovative capability were the country's 'dual education system', high levels of internships and the culture of German managers who give their employees freedom to innovate and develop products. Dr Volz from the German Association for Small and Medium Sized Businesses (BVMW) stated that there were no differences in the management skills being used in Mittelstand companies compared to the rest of the world. Mittelstand success was based on a 'social partnership' between employees, training organisations, unions and industry bodies.

Medium to large companies tended to maintain a structured approach to research and development (R&D) and innovation. Processes and systems were employed to gather ideas and screen them for commercial viability. A typical system for a major innovation would include the following steps:

- Market research is conducted on the need for new products and services and identification of potential new markets
- Innovation ideas are presented and reviewed in terms of cost benefit analysis and suitability to core business
- Documentation of why the innovation should be undertaken is submitted
- Submission of costs, tasks and time breakdown for the development and commercialisation stages
- Undertake a review top-down (fits the company's strategic direction) and bottom-up (product management issues and feedback).

In Germany, inventors of ideas and products are legally protected. The inventor always owns the IP, not necessarily the company. If an employee obtains a patent, that person is rewarded by the company through a share in profit. The patent stops when that person leaves the organisation but the IP is still retained.

Small to medium organisations rely more on the owner for ideas or work in collaboration with a research organisation. Major points relating to the success of Mittelstand innovative capabilities include the following:

- German Mittelstand is of the view that innovation is the company's future and investment in R&D should always be a priority, even during downturns in business. Innovation is part of a company's competitive advantage and budgets for R&D are above the European average
- Innovations are screened according to return on investment and its fit to strategic direction. Ideas are regarded as investments in the future
- Market research plays a role in determining the viability of an innovation
- Ideas for innovation are generated through:
  - » Discussion with customers and applying the company's knowledge and capabilities to develop a solution

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- » Maintaining communication with the end user of the product
  - » Sales team reports and input
  - » Production staff input
  - » Consulting with supply chain members
  - » Brainstorming sessions involving management
  - » Alliances with research organisations – Universities and Fraunhoffs (industry centres for research). Seventy per cent of companies with less than 20 employees engage in research with several partners.
- Many managers stated that their innovative concepts came from the company's owner. Owners are very active in their organisation and travel worldwide to visit customers to be exposed to customer requests and competitor activity. Owners are also active in their networks and often develop ideas based on discussions with other companies.
  - R&D is kept separate from other functions in the organisation to protect it from the pressures of projects and everyday business. Innovative products are developed completely before starting a project in preference to undertaking innovation during a project
  - Many companies and their supply chains within industries have the attitude that they should work together, collaborate with each other and share information. Open days are held where business groups give presentations about what their companies do and the specialised knowledge they have. There is a strong culture of IP but also a willingness to be part of the industry and seek ideas for possible development from each other
  - Process innovation is also a major part of R&D. The company Stuetz for example takes the approach of sourcing product components that have already been developed (and purchased 'off the shelf'). These products are then used in innovative designs as components in new products. This strategy allows the company to bypass the costly process of initial development. Stuetz relies on its high level of technology and knowledge and although their products can be easily copied, it takes time to gain the knowledge to understand how the product works (for example, wireless technology)
  - Gerhard Schubert uses standard componentry (70 to 80 per cent) in their packaging machinery and then assembles the components in a unique way ensuring every machine is different. The final 20 per cent is customised according to customer design
  - New products developed also need innovative methods of distribution, access to market and different sales models. Ceramic Fuel Cells lobbies for subsidies based on government policy such as carbon reduction programs. Alliances are also formed with other companies in the same industry to approach government for support. Sales models such as 'selling by contract' involves the end user not paying for the product but rather, signing a long term contract with the energy utility to not only provide power to the home but also guarantee a reduction in power costs
  - Attendances at trade shows and exhibitions are part of business life for Mittelstand small to medium enterprises (SME). New ideas are demonstrated and networks are established
  - The company Liebherr specifically employs 'wirtschaftsingenieurs' who are industrial engineers with disciplines in both engineering and economics. These combined skills allow the organisation to not only produce innovative ideas but also rate its commercial viability and potential in the market
  - There is strong government support for innovative projects, especially in the small to medium sized companies. Companies with five to 200 people have easier access to government funds (relative to large companies). The German government also provides tax exemptions for R&D in SMEs creating a greater incentive to innovate and less effort for the government to distribute public funding for specific projects.

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Boning from Boning-Consult discussed the importance of managers reducing the 'level of anxiety' in their workers to make them more creative. Reducing anxiety involves concentrating on the person, not the activity they are performing. Managers should interact with workers and display concern and genuine interest in peoples' needs. Workers need a role model as well as being able to trust their leaders.

*"Stuete manufactures industrial foot switches. The medical field was seen as an opportunity based on an idea by our general manager. Operation rooms in hospitals use foot switches connected by cables and we saw the potential to use wireless connectivity to replace physical cabling to improve floor space and hygiene."*

Andreas Schenk, Stuete

*"In Germany there doesn't seem to be any insecurities and information is meant to be shared around. If a company has a weakness, they ask 'who do we need to talk to?' Spending long periods of time trying to develop something is poor productivity if another organisation (such as a research centre) already has the answer. Growth of new development can be stymied because companies feel they need to figure something out rather than seeking information elsewhere."*

Phil Morris, Schenk Process

### Australian / German alliances based on 'open innovation'

Opinions on forming alliances with Australian companies based on innovation varied in the eight companies interviewed. The views expressed ranged from 'definitely not interested' to a 'strong interest' in cooperating with suitable organisations.

#### Reasons for not being a part of an Australian/ German alliance included:

- Australia is regarded as an expensive location due to high labour costs
- There is a large geographic distance (and time difference) between Germany and Australia
- Some Australian products (for example, electrical components) weren't considered innovative and lacked the technical features that customers required
- Partners in product development may become future competitors
- Partners aren't always needed in order to expand overseas and German companies are too protective of their acquired knowledge and expertise.

#### Reasons for considering an Australian / German alliance included:

- Australians have a unique approach to innovation and their engineers are highly skilled at what they do. Australians are able to innovate when the need arises
- Mittelstand are protective of their IP and Australia was a definite consideration (due to a good political and legal system) as a base to do business with Southeast Asia and China
- German companies considering investment overseas refer to the BDO – International Business Compass. This organisation analyses location characteristics that affect business success. In 2014, Australia is currently listed as fourth in the world for choice of business investment. In contrast, Germany is ranked nineteenth.<sup>1</sup> There is high level technology in Australia and it has the skills required for an R&D centre. Due to the country's high cost structure though, some of the managers interviewed would consider R&D in Australia but move production facilities overseas.

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<sup>1</sup> BDO International Business Compass 2014, Hamburgisches Weltwirtschafts Institut, Germany, viewed 2 October 2014, <<http://www.bdo-ibc.com>>

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### **German management opinions on Australian managers and workforce culture included:**

- Hard working with a unique approach to innovation
- Professional and market orientated
- Australian engineers are highly skilled
- Straight forward thinkers open to discussion about solutions
- Australian managers seemed more focused on ways to get to a result compared to Germans who are more focused on the actual result itself
- Germans come to a meeting with a solution in mind, Australians come to a meeting stating the problem and asking what can be done
- Documentation of standard procedures to perform activities was not as well developed in Australia as in Germany
- Documentation of the product range (technical aspects) and application required more effort.

Overall, there was caution regarding partnering on innovation but managers were very open to setting up sales and distribution pipelines as well as service centres for customers in Australia and surrounding regions.

Experts at the Austrade Business and Technology Forum discussed the funding problems Australian companies faced when innovative products reached the commercialization stage. There was agreement that opportunities existed for German companies to invest in Australian innovations, further refine the concept and introduce the final product to market.

Joerg von Netzer stated that his organisation, the German Association for Small and Medium Sized Businesses (BVMW), would be a good starting point for Australian companies interested in pursuing business opportunities with German companies. Kristian Schnack, Director, State of Victoria Europe Office, is a representative from Australia who works closely (and is a member) with BVMW and would be an excellent contact.

The BVMW organisation holds events to promote alliances but their success depends on the level of interest from both German and Australian companies. The biggest challenge is contacting the right companies that would have a mutual interest in forming such an alliance. Joerg von Netzer (BVMW) explained that targeted communication with the relevant companies (German and Australian) that may want to form an alliance was not very efficient. Databases weren't up to date, seminars and advertising often didn't reach interested parties and limited resources hampered development of a better sales approach.

If an Australian company wished to initiate an alliance with a German organisation, von Netzer suggested that due to the sheer number of companies and Murphy's law, the company that should be contacted is not contacted. "It would be better to investigate a number of avenues of contact". Von Netzer warned against the information overload phenomenon (the overwhelming number of submissions from countries looking for investment opportunities with Germany) and contacting potential leads through email addresses such as 'info@'. Any approach for an alliance would need to be supported with relevant contact points such as BVMW or the German-Australian Chamber of Commerce.

Austrade (refer to Attachment 16) is currently promoting Australia as an investment and innovative location for German companies. Under the slogan 'Australia, the innovation nation', there are efforts underway to create awareness of these investment opportunities. With over 500 German companies already operating in Australia, there was an underutilised potential for more investment in the country.

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David Kruger, Partner, Transaction Services, Deloitte, identified market opportunities in Australia and discussed future global trends:

- Winning sectors of the future would be gas as a clean energy technology, agribusiness, tourism, health, education and wealth management
- Niche sectors that would benefit from these winning sectors included clean coal, gas transportation, food processing, next generation solar energy, medical research, services around aged care, private schooling, retirement and leisure.

Jeff Connolly, CEO of Siemens Australia stated that research commissioned by the German government indicated that the world is moving into a new industrial revolution that has been labeled 'Industry 4.0'. This next phase would encompass new trends that will have a major influence on Australian manufacturing and the country's ability to attract investment:

- Customised mass production and 3D printing
- A manufacturing world of simulation, negating the need for prototypes
- Contribution to someone else's manufacturing concept – collaboration between engineers
- Machine learning and self-correction and the emergence of the 'cyber physical world'
- 3D digitisation and 'virtual worlds' of manufacturing plants
- Increased innovation and high level skill requirements of engineers.

Connolly regarded Australia's infrastructure as a major area of opportunity for German investment. With a growing population, the infrastructure is not only aged, but inadequate for current demands. Defense spending also represented further opportunities especially in the design and production of submarines. Any government spending in these areas must involve a technology enhancement and up-skilling of the nation's manufacturing capabilities.

*"The most significant drivers for manufacturing competitiveness are innovation and talent and Australia's engineers are not being well utilised. Areas of competitive advantage in Australia will require support from German technology."*

*Jeff Connolly, CEO, Siemens Australia*

### Marketing

There was a consistent result in relation to marketing (business to business) strategies that was evident in the eight companies interviewed. There were seven main areas that Mittelstand companies concentrated on when developing effective marketing strategies (in order of priority).

#### Customer relationships

Closeness to customer was by far the most important aspect of any of the company's marketing efforts. Building relationships with the customer was the main influencing factor in sustaining long term business. There were a number of advantages associated with this tactic that included:

- Closeness to customer equates with understanding customer needs
- Customers are a major source of innovation
- Acts as an effective barrier to entry for competition.

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The frequency of contact with customers was a high priority. Andreas Schenk at Stuetz stated that their sales team would phone or visit key customers at least once per week.

Comprehensive customer relationship management (CRM) systems were common in all the companies interviewed. These systems were consistently relied on to not only generate sales but also record customer requests relating to product improvements or problems requiring solutions.

Dealing with multiple customers worldwide in different time zones had its challenges. Companies such as Windhoff used agents in foreign countries to maintain relationships since it was impossible to contact all their customers directly. Wolfgang Klein-Katthofer however, still visits projects in Australia and New Zealand four times a year and ensures that there are direct face-to-face meetings with their customers to discuss current issues and the potential for future work. Klein-Katthofer stated that it was essential to have some cultural/ sporting knowledge and language phrases of the host country being visited to ensure a more favorable business relationship.

Sharing a company's specialist knowledge was a main factor in fostering strong customer relationships. Offering in-depth knowledge, options and a range of solutions was an advantage that Mittelstand companies used regardless of whether the company had the customer's business or not. A strong sense of providing quality products and services as well as maintaining honesty, transparency in costings and direction on potential future project problems was an integral part of their business philosophy.

### **Focus strategy**

Concentrating on narrow markets and "doing one thing well"<sup>2</sup> is a foundation of Mittelstand success. For example, Schenk Process is known for feeding and screening equipment, Ceramic Fuel Cells develop fuel cell technology and efficient energy, Gerhard Schubert produce packaging machinery.

A focus strategy also allows the organisation to build a brand around its core business, specialise in technologies used to deliver products and services, dramatically increase the company's knowledge and capabilities in relation to its market and target specific customers.

This strategy was also a major factor in attaining global expansion.

### **Market research**

Many of the companies interviewed engaged in market research. The main areas included:

- Customer needs for new products and services
- Identification of market opportunities and export potential
- Competitor strategies and product profiles
- Market intelligence through the sales force
- Customer perceptions on service levels, quality and brand
- Internal employee surveys.

### **Brand building and positioning (points of differentiation)**

All companies interviewed in the sample had a global presence and recognised the necessity for a unique brand and point of differentiation.

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<sup>2</sup> Phil Morris, 2014, Schenk Process

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Schenk Process had a strong brand and well developed strategies to support its position in the market. The company advertises itself as the global market leader in solutions for measuring and process technologies in industrial weighing, feeding, conveying, screening and automation as well as air filtration technology.

Ceramic Fuel Cells, as a new company, realised that brand building was essential but didn't have the budget for a campaign. There was however, a strong sense of where their company was positioned in the market and what the benefits and features of their product could provide to the end user. CFC advertises itself as a world leader in the commercialisation of Solid Oxide Fuel Cell (SOFC) technology to generate efficient, low-emission electricity from widely available natural gas and renewable fuels for homes and businesses.

Stuete manufactures high-quality switchgear, sensors and control units for industrial automation, medical equipment and building automation. Their focus is on four business fields, all of which have their own particular demands – wireless, automation, extreme and meditec. The company has a developed brand but has embarked on an online campaign to create higher recognition of the name 'Stuete' and a more defined position in the market.

Haver and Boecker rely on a team of qualified engineers and specialists to develop and produce packing and screening machines for the raw material processing industry. The company offers innovative solutions for packing, storing, logistics and processing technology. Haver and Boecker build the original machinery with a name that is known worldwide.

Windhoff has a brand that has lasted 125 years in the industry. This company focuses on the design, manufacture and supply of a broad range of high-tech products, from rail vehicles to railway construction, railway depots and shunting technologies. Windhoff position themselves as diligent and analytic planners and producers of quality products and dedicated services. Customers enjoy first-rate attention - from initial consultations to a range of comprehensive services.

Gerhard Schubert states that, "We can pack your product". The company brands itself as providers of quality, flexibility and innovation in the packaging equipment industry. Schubert was active in further developing the brand through the use of an independent consultant to conduct research with both customers and their employees to understand how their brand was perceived.

Leibherr, as a true market leader, brands its range of products and services as broad and sophisticated. The company promotes its capabilities in design and technology and their practical deployment throughout the world. Leibherr highlights its growing innovative strength, commitment to quality and highest level of service to the customer in all product areas.

Wohner has recently become brand orientated and is implementing the first steps to build the Wohner brand. The company is coordinating a consistent image and position in the market that will not only involve product design, but also distinct building architecture and a brand symbol. Wohner's identity is defined as 'enabling business users through fascinating and pioneering solutions, to safely use electrical energy'.

Both Mirko Kaiser (Wohner) and Hartmut Siegel (Gerhard Schubert) stated that market research and brand building were new concepts for Mittelstand companies and that there were advantages in pursuing the strategy of brand building. There was the opinion that technical people didn't place importance on marketing brands and had difficulty in determining the effect on sales. Frank Wohner (CEO of Wohner) however, came from a marketing background and had experienced business success through well designed marketing strategies and branding.

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### **Trade shows and exhibitions**

Trade shows were a major part of each company's efforts to achieve the following:

- Source new customers and export opportunities
- Expose the company to worldwide attention
- Investigate innovative ideas
- Monitor the competition
- Maintain the company image through participation in trade shows that had a high profile.
- Documentation of products and services

Phil Morris from Schenk Process stated that German companies developed comprehensive documentation of not only their product range and procedures, but also the products' technical capabilities. This characteristic was particularly important in the sales role especially when exporting and entering a foreign market.

Detailed marketing material enables the engineer/ expert to spend less time with the customer (especially when overseas). The information also aids in development of the customer's personnel when using the company's products and services. Supported by properly organised information, the customer understands what is required and the tools needed to become more self-sufficient. The main benefit of marketing material was that overseas locations, "Grow without spending large amounts of resources and wearing out expert personnel".<sup>3</sup>

### **Websites and online marketing**

All the companies interviewed maintained a website and were involved in online marketing to a certain degree. Companies such as CFC (a start-up company) relied on their online marketing strategies to generate sales as well as using modern media techniques such as YouTube to communicate with their customers.

Stuete supported digital catalogues and PDF brochures for, "The younger engineer that preferred digital formats".<sup>4</sup> Search engine optimisation was also considered important and Stuete developed a specific company image through their website.

Gerhard Schubert is becoming involved in social media (Facebook, YouTube, Twitter and LinkedIn) as well as conducting online surveys with their customers.

### **Community involvement**

All of the companies interviewed had strong links with their local communities and regarded this relationship as not only high priority, but a corporate social responsibility. Mittelstand companies are mostly established in regional areas and rely on sourcing staff from the local area. Companies such as Schenk Process, Stuete, Gerard Schubert and Liebherr maintain strong relationships with surrounding schools and universities (especially through internships) to ensure a skill base for the future. Strategies used to connect with community include:

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<sup>3</sup> Phil Morris, 2014, Schenk Process

<sup>4</sup> Andreas Schenk, 2014, Stuete

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- Holding company open days specifically for six to 12 year old children and their parents. Companies want people to understand how 'things work' and to think about what they would like to do as a career
- Ceramic Fuel Cells views community involvement as a coordinated effort between CFC, the mayor, the energy utility supplier, local installers and banks. Establishing companies with cutting edge technology in regional areas adds profile and recognition to the area and directly benefits the community
- Maintaining a company profile through direct involvement in community events such as sporting and cultural days using funding, sponsorship and staff contribution
- Contributing towards capital-intensive projects. Liebherr's recent expansion into India has included building a community school that will not only provide education to the local area but also indicate to the community that the company is intent on staying long term and will require staff sourced from the area.

*"Many small to medium sized companies involve themselves in their communities. This is valued more than printed advertising."*

*Professor Dr Oliver Kruse, Fachhochschule des Mittelstand (FHM)*

*"Organisations survive in the regional areas because they engage the local community. Family and friends work at the company, everyone knows each other and therefore, the company supports community through fetes, fairs and events and providing scholarships to schools."*

*Phil Morris, Schenk Process*

### Information

The sample of companies interviewed invested in methods of gathering relevant information and software to store the acquired information. Examples include:

- CFC competed in the dynamic business environment of sustainable energy and needed to stay up to date with regulatory developments. Integrated management systems were installed to not only monitor quality but also to maintain certification
- Stuetz maintains a comprehensive customer relationship management system that is always used by the sales team to generate sales from a variety of industries
- Windhoff collects ideas from the sales staff dealing directly with customers. Information gathered from monitoring competitor strategies are also documented and discussed at regular meetings
- Haver and Boeker collects and stores information on export opportunities that they gather from trade shows, fact-finding tours, publications and their industry's professional association
- Gerhard Schubert monitors overseas markets and uses the information to gauge the demand potential for their packaging machinery. The company also gathers market research on the perception of their brand from customers and employees. The information is used to define future strategic directions of the organisation
- Liebherr conducted extensive research to aid in a final decision on whether to enter either the Chinese or Indian market. Important information gathered to help with the decision included the growth rates of home buildings, rate of construction of power stations, government policies and economic indicators.

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### Employees, Management and Workplace Learning Environments

#### Employees

An important point relating to the hiring of staff is that not only does the new staff member need to fit the company culture, he/ she would also need to be compatible with the team they work with. Probationary periods of employment are common (due to Germany's stringent labour laws) and team members can contribute to the final decision whether the new staff member progresses to full time employment. Sourcing qualified staff can be difficult in regional areas and companies begin attracting future employees through their open days and support of local schools and universities.

Staff is mostly sourced from the immediate area that a company operates in. Essential qualities and criteria when hiring includes:

- Commitment and belief in what the organisation does
- Ability to share the company's vision
- Applicants must have a recognised qualification for the position
- It is common to ask existing staff to recommend people (through social networks) who may be interested in working for the company.

Support and motivation for employees is provided through:

- The belief by staff that management is fighting for their jobs and the company's future. Employees understand the history of the organisation and how it has achieved its current position in the market
- Employees enjoy working in a family company environment. There is a close relationship between the employees and management and people don't feel pressured in their jobs. Unlike large companies that undergo regular restructuring affecting job security, small to medium sized companies are more predictable and staff therefore feel less anxious
- Companies provide interesting work, modern premises and fair salaries
- Building a social and relaxed atmosphere within the workplace
- Employees have direct access to managers (open door policy) and the CEO is often seen 'managing by walking around'
- Employees are encouraged to express opinions and present ideas.

Employment policies of Mittelstand companies reflect sustainability rather than an attitude of 'hire and fire'. Companies feel connected to their region and act responsibly within the community.

*"Everybody here knows that money comes into the company through the customer and therefore, they have to do a good job. If everyone works together, the company is successful. We understand that the company could easily be closed and moved to China. Mr Wohner however, chooses to produce in Rodental, Germany and has promised to never move out."*

*Mirko Kaiser, Wohner*

### **Management**

Management style in the sample of Mittelstand companies interviewed, tended to be democratic. Decisions were usually made after key people with expertise are consulted. Autocratic management also had its place in an organisation especially when a company was experiencing growth and management needed to set more aggressive targets and control outcomes. The general opinion was that effectiveness of leadership increased with defined plans and stated directions for the company.

Boning of Boning-Consult stated that there had been a change over the last 20 years in regard to management style in German companies. A new generation of managers had evolved that were more people-orientated and less autocratic than their predecessors. Leadership had also become more emotionally orientated (as opposed to task orientated) and there was more concern that employees attained a level of satisfaction from their work and had the freedom to make independent decisions in their work environment.

Mittelstand managers possessed a number of strengths that contributed to the company's success:

- A responsibility for the final outcome
- They take ownership of problems and contribute to solutions
- They have a high level of focus on their work
- Implement continuous improvement
- Regard work as an 'attitude' rather than as a 'task to do'
- Empathy for staff.

Boning also commented on the fact that many companies are now showing concern for the employee's family and marketing campaigns are reflecting this theme. In a global environment, companies with a social conscience are valued in certain cultures such as Asia.

Working with competent people meant that managers could lead teams rather than having to manage individuals. Competency is increased through Mittelstand managers encouraging all staff to be part of on-going training to ensure knowledge and skill levels provide the organisation with a competitive edge.

Managers also need skill upgrades such as learning to deal with a variety of cultures not only with their customers but also an increasing multicultural workforce. Managers who were interviewed used the following means to maintain relevant skills:

- Updates from Alumni
- Membership of professional associations. Discussions with other managers that were facing similar challenges were considered a practical way to learn. Making friendships within professional organisations also led to a strong mentoring network that promoted the discussion of management strategies
- Attending training courses through external providers (chamber of commerce, vocational education or universities). Language training was a popular choice
- External training consultants that have a history with the company and understand what the company does
- Attending seminars.

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Klein-Katthofer from Windhoff stated that many medium sized Mittelstand companies were beginning to hire managers from outside the organisation to not only manage technical and sales staff but also the overall company. These new managers were degree and/ or MBA qualified with a global perspective on business.

Managers in the companies visited enjoyed close working relationships with their staff and maintained a culture of equality. Liebherr management believed in demonstrating their company core values and leading by example. Displays of wealth, superiority or elite status were not encouraged and managers, "Drove ordinary cars to work and stayed at economical hotels when travelling on business".<sup>5</sup>

Qualifications of the managers interviewed can be summarised as follows:

- Seven managers had degrees in engineering
- Four of the managers also had MBAs
- One manager had a degree in medicine and a degree in economics.

### **Workplace learning environments**

Mittelstand companies recognise the importance of knowledge and maintaining a high level of skills in an increasingly technical industry. Internal training in medium sized companies was common and covered a range of topics from technical training, management skills, product knowledge, leadership and coaching to company procedures. Companies such as Schenk Process, CFC and Windhoff had well developed human resource systems that reviewed staff performance and recommended future development plans.

Staff members could also recommend to their manager or supervisor (through application) a particular course they felt would benefit their understanding of a job. New knowledge gained through external courses or seminars would be shared with the rest of the organisation through presentations.

Gerhard Schubert budgeted for a dedicated, internal training facility within the production department. Apprentices attended the national dual education system two days a week as well as undergoing further coaching under the supervision of a full time trainer in a simulated work environment. Apprentices were not employed on the production line until two years of training had been completed.

### **Management function survey results**

Managers interviewed completed a management function survey (refer to Attachment 15). Managers were asked to indicate which management functions were performed the most in their position within the company. From a sample of eight managers, five surveys were completed. Caution should be used in interpreting these results due to the small sample size and variety of different management positions.

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<sup>5</sup> David Griffin, 2014, Liebherr

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Table 2: Results of most commonly performed management functions

Management Functions	Scale *				
	1 %	2 %	3 %	4 %	5 %
Manage quality customer service				20	80
Manage budgets and financial plans		60	20		20
Manage information and knowledge systems	20	20	20		40
Develop workplace learning environment		20	20	40	20
Plan and monitor continuous improvement		20	20	40	20
Manage people performance	20		40	20	20
Ensure a safe workplace	60		20	20	
Undertake project work	20	40	20		20
Manage risk		40	20	20	20
Manage work priorities / professional development		20		40	40
Ensure team effectiveness				20	80
Manage cultural diversity	20	20	60	20	
Recruitment and selection of staff		20		60	20
Manage innovation (includes IP protection)	20	20		40	20
Manage employee relations		40		40	20

\*Scale: 1 - Not a major part of my management job  
5 - A major part of my management job

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The top management functions performed the most (scored greater than 60 per cent and above three on the scale) in order:

Table 3: Order of most commonly performed management functions.

Order	Management Function	Score %
1.	» Manage quality customer service » Ensure team effectiveness	100
2.	» Develop workplace learning environments » Plan and monitor continuous improvement » Manage people performance » Manage work priorities and professional development » Manage cultural diversity » Recruitment and selection of staff	80
3.	» Manage risk » Manage information and knowledge systems » Manage innovation » Manage employee relations	60

The top seven management functions that were considered essential to the success of Mittelstand companies have been outlined in Chart 1 below.

Customer service, continuous improvement and innovation (total of 62 per cent) were considered as the main contributing management functions for success. Financial plans, people performance, risk and team effectiveness (total of 38 per cent) were considered important to success but to a lesser degree.

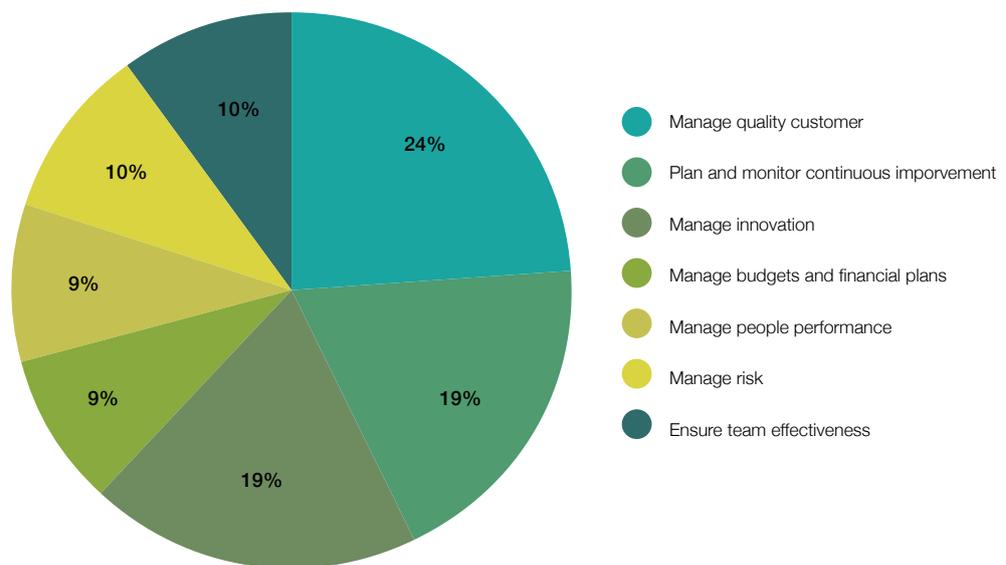


Chart 1: Top 7 management functions essential for Mittelstand success

### Critical factors that contribute to Mittelstand success

#### Support for Mittelstand companies

Refer to attachments 11, 12 and 13 for transcriptions of interviews relating to this topic.

The German government recognises the contribution that small to medium sized businesses make to the country's economy:

- SMEs represent up to 99 per cent of all businesses in Germany that pay tax
- These companies create 70 per cent of jobs in Germany
- They provide 80 per cent of the job training opportunities available
- Develop 75 per cent of all patents and innovations.

The government therefore, offers a large amount of support for SMEs on federal, state and local levels. The following organisations are some of the main bodies that assist in supporting Mittelstand success:

#### The Offensive Mittelstand

The Offensive Mittelstand, Gut für Deutschland, is a society that is free to join and was created to bring company managers together with the intention of improving organisational performance. One of the society's main functions is to assess a company's performance in eleven essential areas. These areas are summarised in Table 4.

Table 4: Overview of the Offensive Mittelstand 'assessment instrument'

Area	Criteria
Strategy	<ul style="list-style-type: none"><li>» Competitiveness</li><li>» Work organisation</li><li>» Information and communication</li><li>» Personnel planning</li><li>» Sales</li><li>» Regional community involvement</li></ul>
Liquidity	<ul style="list-style-type: none"><li>» Liquidity planning and control</li><li>» Methods of payment</li><li>» Risk assessment</li><li>» Securing debt</li></ul>

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Area	Criteria
Risk Assessment	<ul style="list-style-type: none"> <li>» Market and external developments</li> <li>» Products and services</li> <li>» Customers</li> <li>» Working conditions</li> <li>» Communication</li> <li>» Social responsibility</li> </ul>
Leadership	<ul style="list-style-type: none"> <li>» Work assignments and expectations</li> <li>» Model behaviour and appreciation</li> <li>» Employee inclusion</li> <li>» Employee feedback – communication, meetings, surveys</li> <li>» Monitoring and evaluation of results</li> <li>» Health of the leader – time and self-management, exercise, diet</li> </ul>
Customer care	<ul style="list-style-type: none"> <li>» Customer requirements</li> <li>» Strengths relative to the competition</li> <li>» Employee behaviour towards customers</li> <li>» Customer satisfaction</li> </ul>
Organisation	<ul style="list-style-type: none"> <li>» Decision making and responsibilities</li> <li>» Regulations and company guidelines</li> <li>» Information and communication in relation to work tasks</li> <li>» Workplace design and layout</li> <li>» Use of work equipment – testing and maintenance</li> <li>» Emergency preparedness</li> </ul>
Corporate culture	<ul style="list-style-type: none"> <li>» Work culture and values</li> <li>» Transparency and fairness – communication of decisions and fair dealings with employees</li> <li>» Information and culture of dialogue – working together without fear of sanctions</li> <li>» Learning from mistakes</li> <li>» Image and corporate identity</li> <li>» Fellowship and togetherness</li> </ul>

## 6. THE INTERNATIONAL EXPERIENCE

Area	Criteria
Staff development	<ul style="list-style-type: none"> <li>» Employee reviews and development opportunities</li> <li>» Operating conditions and resources provisions</li> <li>» Workplace learning, on-going education, family friendly organisation and performance based remuneration</li> <li>» Recruitment</li> <li>» Multi skilling and variety of work</li> <li>» Work and family</li> </ul>
Processes	<ul style="list-style-type: none"> <li>» Process documentation and responsibilities</li> <li>» Error prevention and mitigation strategies</li> <li>» Suitability of personnel for defined tasks</li> <li>» Cooperation and coordination – alliances with other companies and the use of resources</li> <li>» Process information – knowledge of processes and their relation to each other</li> <li>» Continuous improvement of processes</li> </ul>
Procurement	<ul style="list-style-type: none"> <li>» Criteria for the purchase of work equipment, materials and services</li> <li>» Specification requirements and employee responsibilities for procurement</li> <li>» Suppliers and subcontractors satisfying company criteria</li> <li>» Contractual requirements</li> <li>» Hazardous substances and the use of alternative products</li> <li>» Consideration of procurement experiences (in relation to management, employees and customers)</li> </ul>
Innovation	<ul style="list-style-type: none"> <li>» Motivation of employees to recognise opportunities and contribute ideas</li> <li>» Trend tracking – market, technology, work organisation, customer needs and the company</li> <li>» Innovation fit strategic direction</li> <li>» Use of experience – using employees to implement innovations</li> <li>» Innovation cooperation with other companies, universities, research institutes</li> </ul>

*Note: The original German language version of this assessment instrument is available. An English translation would be required.*

## 6. THE INTERNATIONAL EXPERIENCE

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This assessment instrument can be conducted in partnership with an 'Offensive Mittelstand consultant' or the company can self assess and then seek assistance in their area(s) of weakness. To ensure there is access to assistance, the organisation has developed a database of experienced consultants by region (accessed through the society's website). There are many benefits for a company from this support:

- The company can assess themselves and recognise areas of strengths and weaknesses
- The assessment instrument is not an audit, but rather a 'low level' performance analysis that acts as a starting point for further improvements
- Family businesses are involved with day-to-day operations and are time poor. A total analysis of the eleven business areas can be completed in 90 minutes
- Results of the assessment indicate the first step for improvement
- The business can decide in their own time when they want to start strengthening the identified areas of weakness
- Once the assessment has been completed, the company contacts Offensive Mittelstand for certification of completion and is then listed on the 'Offensive Mittelstand' website as a 'good Offensive Mittelstand company'.

The program is primarily aimed at small companies. Offensive Mittelstand recognises that small businesses have managers and leaders that are expert in a few fields of the business, but not all. For example, the small business manager could be a technical or innovation expert but lack the skills in finance or management.

Weaknesses identified may require training. The society receives subsidies from the federal government for training programs and the small business pays a nominal fee. This assessment is not only for underperforming companies; it is also used by high performing companies implementing a continuous improvement program.

*"From experience, those companies that complete the assessment instrument, admit to their weaknesses, seek help from an Offensive Mittelstand consultant or through further training and usually end up being 'the good companies'."*

*Professor Dr. Oliver Kruse, Fachhochschule des Mittelstands (FHM)*

### **BVMW: The German Association for Small and Medium Sized Businesses**

The BVMW represents more than 270,000 businesses with about nine million employees. The organisation coordinates a network of over 300 regional and local offices in Germany offering personal services to its members.

Each BVMW Area Manager seeks new business opportunities, supports new projects and intercedes on behalf of a member in dealings with administrative authorities, banks, insurances and other official bodies. There is also a central database of more than 1,000 qualified consultants with expertise in economic, financial and legal matters to assist a company in making business decisions.

BVMW is also responsible for about 26 offices around the world and cooperates with overseas partner associations, conducts business trips abroad to meet with foreign entrepreneurs and organises international conferences.

The organisation has the biggest voluntary membership in Germany and members are free to leave and rejoin as they wish. One of the organisation's primary role is to offer networking opportunities to small, medium and large companies from a range of industries and any type of business can join.

## 6. THE INTERNATIONAL EXPERIENCE

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BVMW has branches that represent regions in Germany and membership therefore will reflect the region's industry profile.

BVMW does not specialise in directly assisting companies that might be experiencing problems and instead will put that company in touch with an identity (usually within the nation's BVMW membership) that could help. The organisation is considered as a focal point for networking and offers a range of services to managers that include:

- Conferences and seminars (over 2000 per year) with many on management skills
- Forum Fuhrer workshops where member consultants of BVMW offer leadership programs.

Special presentations on topics such as:

- The digitisation of German enterprises and improving website effectiveness through search engine optimisation (SEO). This presentation was delivered a number of times by Telekom, the largest internet provider in Germany and is a win-win situation for the company presenting the workshop and the companies attending
- Management topics, knowledge, information and innovation through organisations such as IBWF ([www.ibwf.org](http://www.ibwf.org)), the umbrella organisation for lawyers and consultants
- Communication skills and direction on handling conflict are offered to Mittelstand family businesses to help with succession planning as businesses are inherited from one generation to the next
- Publications on education and marketing.

*There aren't different management skills used by German Mittelstand companies. In fact, management skills are the same the world over. What's important is the high use of internships to provide the practical experience necessary.*

*Dr. Hans-Jurgen Volz, BVMW*

### **GIZ: Deutsche Gesellschaft fur Internationale Zusammenarbeit (German Society for International Cooperation)**

GIZ is a part of the German Federal Ministry of Economics and Technology (BMZ) that provides a range of customised services internationally for sustainable development and promotes foreign trade and investment. One of the more successful programs currently endorsed is the Manager Training Program. The program (Fit for Partnership with Germany) prepares managers from foreign countries to do business and cooperate with German firms. A win-win situation for participating countries.

In total, over 9000 foreign companies from 16 countries have taken part in the program and on average, a group of 20 foreign managers will have contact with more than 60 German firms, most of them small or medium sized. The program is interactive and selects leading German education and training institutions as partners for the implementation of the program.

The following is an overview of the program's content:

- Familiarisation of the idiosyncrasies of German business culture and doing business with German firms
- Visits to companies from a variety of industry sectors

## 6. THE INTERNATIONAL EXPERIENCE

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- Exposure to state-of-the-art technology and equipment
- Establish contact with potential business partners
- Managers take part in the program implement their newly acquired expertise in their own company and can improve their business in the areas of products and services, use of resources, efficiency, procurement and international certification. These companies then become attractive and reliable partners for German firms
- Initial enquiries to be part of this program can be achieved through the contact <http://www.managerprogramm.de/en/contact/>.

*It was like a mini MBA for me. I learnt excellent business skills. The factory visits and group meetings at various forums helped me in widening my horizon. It will help me in increasing my business with Germany and Europe as a whole.*

*Rajat Bajaj, participant in Fit for Partnership with Germany. <sup>6</sup>*

### **BVMI: Federal Ministry for Economic Affairs and Energy**

The BVMI is the central body for economic policy and economic prosperity in Germany and supports business through:

- Energy policy and supply
- Developing pro-innovation policies and the promotion of research and development to help German companies face international competition
- Implementing policies aimed at creating a better international environment for German companies and to help businesses open up new markets abroad
- Recognising professionals are the key to innovation, growth and jobs and that securing a sufficient supply of skilled labour is essential to achieve this goal.

The BMWi works with both the BMZ and GIZ to support Mittelstand in sustainable business growth domestically and overseas.

### **Education and training in Germany**

Refer to Attachments 14 and 15 for a transcription of the interview relating to this topic.

- The Dual Education System

A major contributing factor to the success of Mittelstand can be attributed to Germany's Duale Berufsausbildung (dual education system). Many of the companies and professional associations interviewed highlighted Germany's education system as the reason for the country's economic success.

Karlheinz Heidemeyer, Director of Vocational Training and Further Training in Bremen, considered Germany's education system integral in training people and providing the necessary technical and soft skills that business requires.

Characteristics of the dual education system are outlined below.

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<sup>6</sup> Vijay C Roy, Indian SME's benefit from German training scheme, 2011, Business Standard, Chanigarh

## 6. THE INTERNATIONAL EXPERIENCE

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### **General overview:**

- Standards and rules for the education system were set up by self-governing bodies, mainly the Chambers of Industry and Commerce
- There are two components of the system – on the job training (learning by doing) and theoretical training
- The trainee learns to engage with a company, understand methods of work, absorb company culture, partake in social relationships and take pride and responsibility in their work
- There are approximately 350 professions taught throughout the system, 1.5 million trainees at any one time and about 500,000 new trainee contracts each year
- The concept of vocational training comprises initial training, further training and vocational retraining
- Employers have the freedom to train or not to train. Companies are expected to pay for training and the cost is regarded as an operating expense. Employers are responsible for setting up training plans in accordance with a syllabus and timetable
- The state recognises the necessity for skilled personnel and insists on using state examinations that are recognised all over Germany. Skills acquired are nationally recognised
- The curriculum set for all courses are discussed between:
  - » Companies that are training staff
  - » Representatives of companies (such as the Chamber of Industry and Commerce)
  - » Labour unions.
- The State does not set the curriculum or exams
- The system is supported by political parties, a dedicated administration system, companies, employee and labour group involvement. There is a general consensus within these groups that the dual education system works.

### **1.2. Stakeholders:**

- Developments in vocational educational and training is normally handled through three stakeholders that have a strong level of communication:
  - » Employer representatives
  - » Employee representatives
  - » Teachers.
- The Chambers of Industry and Commerce (IHK: Handelskammer) has a influencing role on training:
  - » Membership in the Chamber of Industry and Commerce is mandatory for all German companies. The organisation therefore has funding, large membership and representation resulting in a strong lobbying capability to influence directions in training
  - » The organisation develops compulsory state run examinations (for all trainees) through volunteer member companies. These exams cover theoretical (written and oral) and practical skills (samples of work, test work pieces). Examinations ensure a uniform vocational education
  - » Advises all training employers on problems connected with training as well as giving advice to trainees. All training contracts are kept in a vocational training register.

## 6. THE INTERNATIONAL EXPERIENCE

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### Further training:

- After passing all examinations (over a two to three year period), the trainee receives an examination certificate to show they have acquired the qualifications for a specific occupation. It is also the basis for professional progress and career advancement such as entry into Meister (Master), trades, industry and commerce.

Managers of small businesses that have been educated through Duale Berufsausbildung and attained further vocational training are considered to, "Have the necessary skills for the job".<sup>7</sup> Formal management qualifications aren't considered entirely necessary for micro businesses. Management and leadership skills are mostly instilled throughout trade courses and are learned on the job.

*"Business wants the freedom to make their own decisions without government telling them what they need. This is why business collaboration with unions and employee organisations is strong. It is up to business to determine what they should pay, who they work with and how they work. Education is needed by business and the government only needs to supply the teachers and schools."*

*Dr Reinhold Festge, Haver and Boecker*

### Management training in Germany

Uwe Boning from Boning-Consult commented that in Germany, management and leadership training was not that common in small companies unless there was funding support from an external source such as a government or a professional association. Boning also added that there was a large difference in perception between what researchers and academics thought small business needed and what small business themselves needed.

In larger organisations such as BMW (automotive industry), there are often departments that work with developing their suppliers. Many medium sized Mittelstand companies are supported this way to achieve higher quality and innovation. Training, process analysis, audits, financial and logistical control are examples of the type of support services offered. Companies such as BMW work on strong alliances with smaller companies to ensure their survival.

Boning-Consult recently conducted research with 50 successful German managers (from small, medium and large companies) and identified the following management training requirements:

- Managers are not interested in concepts and theories in training
- Managers require practical advice
- There was a preference for activity orientated training that related to performing their work tasks
- One-on-one coaching was the preferred training method rather than traditional methods such as lectures and seminars
- Managers preferred the 'four eyes' model of coaching – the coach and manager have two sets of eyes between them to assess a management situation. A second opinion was considered helpful to make a management decision
- Business and strategic questions proposed by managers should be discussed in simpler terms (as opposed to high level theory). 'Conversational' explanations had a higher rate of success
- Providing training in a few concepts, observing implementation of those concepts in the workplace and then providing direct feedback on management performance was well regarded as an efficient method to train in busy work environments.

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<sup>7</sup> Karlheinz Heidmeyer, 2014, Handelskammer Bremen

## 6. THE INTERNATIONAL EXPERIENCE

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Boning conceded that the above demands for training would be very expensive to implement. However, the design of specific management training courses should have a high level of customisation to suit the target audience.

Important facts to consider when training managers include:

- People that are entrepreneurs or business orientated want to discuss their management and leadership concerns with other entrepreneurs and business owners. Being part of a group of like-minded people is important for inspiration
- Trainers need to have practical experience in business rather than theoretical based knowledge to gain respect from their training group. If there are favorable impressions, attitudes and relationships between the trainer and group members, training is easier and more successful
- People from small businesses tend to be more financially and technically orientated and are more interested in management tools rather than understanding management behaviour
- The use of training games and analogies to explain management and leadership theory were often remembered by participants but there was a question mark over their impact on creating a better performing business or changing management behavior. The new approach to training was less dramatic but more practically orientated and resulted in a greater change in behavior.

Any management or leadership course that is developed first needs to consider the following:

- Consultation with target audience managers on what they require in management and leadership training
- Training sessions require customisation to suit the profile of the participants
- The target group receiving the training is source from similar industries
- Content of the training session is practical and can be implemented.

*“Managers that want training will need to be prepared to discuss their company problems and challenges. There needs to be a general change in their attitudes and behavior to be more open about their particular situation.”*

*Uwe Boning, Boning-Consult, The Coaching Company*

# 7. KNOWLEDGE TRANSFER: APPLYING THE OUTCOMES

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## Management and Leadership

The success of the German Mittelstand cannot be attributed to just one particular factor and there are a number of reasons why Mittelstand has achieved its dominant role in manufacturing today. Germany does not have anything different to an Australian manufacturer with respect to accessing training, a skilled workforce or the ability to produce innovative products. What the Mittelstand do well however, can be summarised in the following points:

### **Mittelstand management and leadership skills are well developed in the following areas:**

- An in-depth business and technical knowledge and relevant academic qualifications
- The ability to create a vision, strategically plan, set ambitious goals and think long term in preference to quick profits
- Continuous investment in the education of not only themselves, but also their workforce
- Employees identify with challenging goals and values set by management and do what they can to achieve them. They believe in the company
- Hire qualified employees and avoid employee redundancies to prevent the loss of specialist knowledge from the organisation
- Source employees from the company's immediate region that in turn, promotes loyalty
- An unwavering focus strategy.

### **Mittelstand companies maintain strong competitive positions through innovation:**

- Innovation is not only prevalent in product development, but it also encompasses processes, systems, sales and marketing
- Product improvement is continuous – the 'evolution' of a product is what makes Mittelstand strong
- There is a culture of systematic research and development as well as management involvement in providing stimuli for innovation
- Strong relationship between universities and research organisations.

### **Mittelstand companies have well developed business-to-business marketing capabilities:**

- The philosophy of marketing is embraced – market research, market definition, developing target audiences through segmentation, value-adding, growth strategies, positioning and points of differentiation, branding, competitive advantages, service levels and marketing strategies are an integral part of business
- Mittelstand companies understand their customers' needs and develop strong, lasting relationships
- Direct contact (through management) is maintained with customers
- Continuously seek access to global markets.

## 7. KNOWLEDGE TRANSFER: APPLYING THE OUTCOMES

### Alliances through 'Open Innovation'

There are definite opportunities for Australian manufacturing SMEs to develop alliances with German Mittelstand companies based on innovation. There are many benefits involved in relation to the transfer of necessary skills that would be developed from such a strategy. The following need to be applied:

- Seek interested German companies through the correct channels for introduction and negotiation
- Participate in German sponsored business development programs.

### Identification of critical factors that contribute to Mittelstand success

Critical success factors that contribute to Mittelstand success include the following:

- Mittelstand is supported by government at federal, state and regional levels
- German industry has a comprehensive training framework in place (Duale Berufsausbildung, Fachhochschule and Universities) that provides skilled apprentices, engineers and managers
- Chambers of Industry and Commerce (representing all companies in Germany) have strong lobbying powers to influence government on training, industry and economic issues.

Dissemination sessions to present the outcomes and recommendations of this report will be through the following channels in Table 5:

Table 5: Dissemination Sessions

Session	Aim of the Session	Target Audience	Date	Location
Journal Article	<ul style="list-style-type: none"> <li>» Combine existing knowledge of Mittelstand with the Fellowship research findings</li> <li>» Publish results</li> </ul>	Businesses on the Central Coast and Hunter regions. Focus will be on manufacturing	January to March, 2015	Business journal
Presentation 1	<ul style="list-style-type: none"> <li>» Create awareness of skills required in management and leadership courses</li> </ul>	Hunter TAFE: Institute and faculty managers	February, 2015	Newcastle campus
Presentation 2	<ul style="list-style-type: none"> <li>» Introduce Mittelstand philosophy</li> <li>» Present findings of the fellowship research</li> <li>» Presentation and discussion of report recommendations</li> </ul>	Central Coast Manufacturing Connect (CCMC) management and members  Australian Industry Group (Ai Group) management and members	June, 2015	Innovate Central, Ourimbah University

## 8. RECOMMENDATIONS

The following recommendations are listed and explained in order of priority:

### Recommendation 1

**Target audiences:** Industry  
Professional Associations  
Education and Training

Develop a management and leadership skills package customised specifically for the Australian manufacturing industry in preference to offering 'generalised' courses in management and leadership.

Target training to specific groups of managers that operate in the same or related industries.

SMEs that undergo training will be required to share information (with the trainer and other managers undergoing the same training) that may include strengths, weaknesses and problems faced by their company.

Management and leadership units that should be included in the customised skills package are outlined in Table 6.

Table 6: Customised Management and Leadership Skills Package.

Unit	Areas of emphasis
Lead the Organisation	<ul style="list-style-type: none"> <li>» Understanding the global manufacturing environment.</li> <li>» Understanding appropriate leadership styles (including emotional leadership).</li> <li>» Building trust and respect.</li> <li>» Empowering teams and assigning accountability.</li> <li>» Maintaining positive and social work environments and empathy for staff.</li> <li>» Developing personal and professional competence.</li> </ul>
Strategic Planning and Corporate Culture	<ul style="list-style-type: none"> <li>» Defining the advantages of long term planning.</li> <li>» Identifying, agreeing on and communicating core values, vision, mission and purpose for an organisation.</li> <li>» Analyse internal and external impacts on the strategic plan.</li> <li>» Consideration of community, alliances, partnerships and risks.</li> <li>» Develop objectives within the capabilities of the company.</li> <li>» Monitoring plans.</li> </ul>

## 8. RECOMMENDATIONS

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Unit	Areas of emphasis
Customer Service	<ul style="list-style-type: none"> <li>» Plans, policies or procedures for delivering quality customer service.</li> <li>» CRM systems.</li> <li>» Communication (oral and written) with customers.</li> <li>» Understanding customer needs.</li> <li>» Maintaining long-term relationships.</li> <li>» Understanding cultural diversity.</li> </ul>
Knowledge and Information Systems	<ul style="list-style-type: none"> <li>» Understanding and creating knowledge and information systems.</li> <li>» Knowledge and information inputs such as people, policies, procedures, processes and performance measurement.</li> <li>» Implementing knowledge and information systems.</li> </ul>
Continuous Improvement	<ul style="list-style-type: none"> <li>» Understanding processes of continuous improvement.</li> <li>» Ability to recognize and suggest improvements.</li> <li>» Error prevention.</li> <li>» Access to knowledge/ information systems for storing and reference.</li> <li>» Communication of improvements and processes to the team.</li> </ul>
Manage Innovation	<ul style="list-style-type: none"> <li>» The importance of innovation in an advanced manufacturing environment.</li> <li>» Innovation as a contributor to the company's strategic direction and future.</li> <li>» Sources of innovative ideas and the need for collaboration (employees, other companies and research centres) and sharing of information.</li> <li>» Leading and motivating teams to innovate.</li> <li>» Communication, negotiation, problem solving and collaboration skills needed to innovate.</li> <li>» Innovative processes.</li> <li>» Trend tracking.</li> </ul>

## 8. RECOMMENDATIONS

Unit	Areas of emphasis
Manage People	<ul style="list-style-type: none"> <li>» Defining the mission and cultural goals of the company. Understand the HR practices required to achieve those goals.</li> <li>» Understanding the need for a skilled workforce.</li> <li>» Sourcing, recruiting and retaining skilled labour.</li> <li>» Ensuring the company is an employer of choice.</li> <li>» Manage diverse and culturally different workforces.</li> <li>» Ability to gauge workforce satisfaction levels.</li> <li>» Employee empowerment.</li> <li>» Enterprise agreements.</li> </ul>
Develop People	<ul style="list-style-type: none"> <li>» Recruit, select and review staff</li> <li>» Developing learning cultures.</li> <li>» Identify learning needs (including self-assessment) and develop learning plans.</li> <li>» Engage with training providers.</li> <li>» Coaching and mentoring in the workplace.</li> <li>» Skill sharing through presentations.</li> </ul>
Risk Management	<ul style="list-style-type: none"> <li>» Establish the context of risk.</li> <li>» Involving stakeholders and staff in the identification of risks.</li> <li>» Identify risks, assess the likelihood of risks occurring and understand their impact on the company.</li> <li>» Develop mitigation strategies.</li> </ul>
Marketing (business-to-business)	<ul style="list-style-type: none"> <li>» Target audience profiling.</li> <li>» Customer closeness and understanding needs.</li> <li>» Competitive marketing strategies (especially focus strategies).</li> <li>» Market research and identifying market opportunities (domestic and export).</li> <li>» Branding, positioning and points of differentiation.</li> <li>» Personal selling, sales prospecting and sales presentations, trade shows.</li> <li>» Online marketing.</li> </ul>
Making Presentations	<ul style="list-style-type: none"> <li>» Prepare and deliver presentations.</li> <li>» Principles of effective communication (emphasis on persuasive communication).</li> </ul>

## 8. RECOMMENDATIONS

Nationally recognised training units that would contribute to developing the customised management skills package are detailed in Table 7.

Table 7: Nationally recognised leadership and management units

Unit	Code	Description
Lead the Organisation	BSBMGT605B	Provide leadership across the organisation
Strategic Planning and Corporate Culture	BSBATSIL511A	Lead the Organisation's Strategic Planning Cycle
Customer Service	BSBCUS501C	Manage Quality Customer Service
Knowledge and Information Systems	BSBINM501A	Manage an Information or knowledge management system
Continuous Improvement	BSBMGT406A	Plan and Monitor Continuous Improvement
	BSBMGT516C	Facilitate Continuous Improvement
Manage Innovation	BSBINN501A	Establish Systems that Support Innovation
	BSBINN502A	Build and Sustain and Innovative Work Environment
Manage People	BSBHRM513A	Manage Workforce Planning
	BSBMGT502B	Manage People Performance
	BSBDIV501A	Manage Diversity in the Workplace
Develop People	BSBHRM405A	Support the Recruitment, Selection and Induction of Staff
	BSBLED501A	Develop a Workplace Learning Environment
Risk Management	BSBRSK501B	Manage Risk
Marketing (Business to Business)	BSBMKT401B	Profile the Market
	BSBCUS402B	Address Customer Needs
	BSBRES401A	Analyse and Present Research Information
	BSBSLS407A	Identify and Plan Sales Prospects
	BSBSLS408A	Present, Secure and Support Sales Solutions
	BSBMKG501B	Identify and Evaluate Marketing Opportunities
Making Presentations	BSBCMM401A	Make a Presentation

## 8. RECOMMENDATIONS

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The type of training method used to deliver the management and leadership units will depend on company needs and budget available:

- Start-ups and small companies with restricted budgets and time will require access to online training facilities and face-to-face delivery in a group environment. Short training sessions, low theory content and a focus on application are recommended
- Larger organisations with larger budgets may prefer a coaching method (one-to-one) in preference to group training.

### Recommendation 2

**Target audiences:** Government – State  
Industry  
Professional Associations

Using the Offensive Mittelstand assessment instrument (outlined earlier in this report) as a framework, develop a similar version suitable for Australian manufacturing SMEs. Promotion and distribution of the assessment tool can be linked to the new Industry Growth Centre Initiative.<sup>1</sup>

SMEs can also decide to self-assess and should be able to access the instrument through any of the following organisations:

- Manufacturing Skills Australia (MSA)
- Australian Industry Group (Ai Group)
- Professional bodies such as HunterNet and Central Coast Manufacturing Connect
- Food Innovation Australia Ltd (FIAL)
- Australian Mines and Metals Association (AMMA)
- Manufacturing and Engineering Institute of Australia (MEIA).

SMEs that undertake the assessment can identify areas for improvement. Overcoming the identified weakness could be approached through a number of avenues:

- Completing a training unit in the particular area of concern (refer to Recommendation 1)
- Make an application for a government funded business adviser to assist through [www.business.gov.au](http://www.business.gov.au).

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<sup>1</sup> Australian Government, Department of the Prime Minister and Cabinet 2014, viewed 18 November 2014, <[http://www.dpmc.gov.au/publications/Industry\\_Innovation\\_and\\_Competitiveness\\_Agenda/industry\\_growth\\_centres.cfm](http://www.dpmc.gov.au/publications/Industry_Innovation_and_Competitiveness_Agenda/industry_growth_centres.cfm)>

## 8. RECOMMENDATIONS

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### Recommendation 3

**Target audiences:** Industry  
Professional Associations

Select a number of Australian manufacturing SMEs to make application for participation in the Manager Training Program (Fit for Partnership with Germany) conducted by the German Society for International Cooperation (GIZ). The advantages of this recommendation include:

- Familiarisation with German business culture
- Visits to German companies from a variety of industry sectors
- Exposure to state-of-the-art technology and equipment
- Establishing contact with potential business partners
- Australian companies can become attractive and reliable partners for German firms
- The program helps to establish new contacts and networks between small to medium sized companies and there is a strong focus on developing management and leadership skills.

### Recommendation 4

**Target audience:** Government – Federal, State, Local  
Industry  
Professional Associations

Actively seek and promote Australian and German alliances based on 'open innovation'.

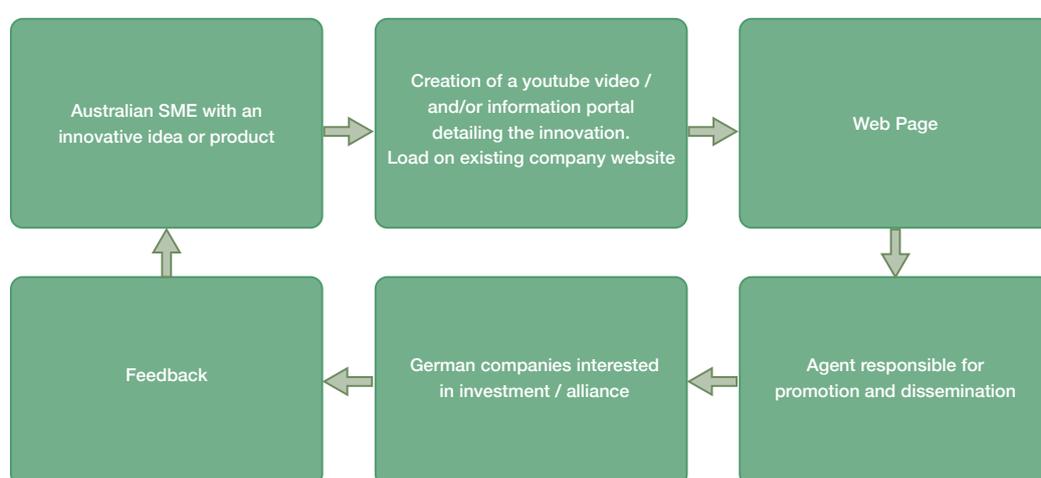
Experts at the Austrade Business and Technology Forum were supportive of investment in Australian innovation but challenges existed in contacting the right company for partnership. To overcome these challenges of information overload, outdated databases and promotional efforts that don't reach the correct target audience, a more direct approach is required.

Develop a web page(s) that aggregates the information from all Australian manufacturing SMEs seeking capital investment or an alliance in proposed research and innovation. The following functions would be required:

- Available Australian manufacturing SMEs in the process of developing or has developed an innovative product or idea. The companies would be seeking investment, funding or a route to market
- Develop a dedicated web page that aggregates selected information (company web site links) from Australian manufacturing SMEs seeking funding or an alliance with a suitable overseas company in Germany (the principle of this concept can be demonstrated by the website [www.kickstarter.com](http://www.kickstarter.com)). Professional YouTube clips and information detailing the proposal would be uploaded onto the SME's website and linked to the aggregating web page
- Employ an independent agent to routinely promote the site and disseminate the innovation proposals to interested German companies. The information can also be distributed through organisations such as ABIE, BVMW, Australian German Chamber of Commerce and AusTrade and any of the contacts listed in Table 8

## 8. RECOMMENDATIONS

- Once feedback from interested German companies is received, contact would be made with any of the following bodies to ensure correct business procedures:
  - » BVMW
  - » ABIE - especially for legal representation and IP discussions
  - » Australian-German Chamber of Industry and Commerce.



Essential organisations and contacts for creating alliances with German companies are outlined in the following Table.

Table 8: Organisations and contacts for creating alliances and trade

Organisation	Description	Contact
AHK: German-Australian Chamber of Industry and Commerce	Encourages bilateral trade between Germany and Australia. One of the main objectives is to advise German and Australian companies on market development and to support them in the initiation of business relations.  <a href="http://australien.ahk.de/en/">http://australien.ahk.de/en/</a>	Birgit Tegethoff
BVMW: Bundesverband mittelstandische Wirtschaft	The German Association for Small and Medium Sized Businesses.  <a href="http://www.bvmw.de/">http://www.bvmw.de/</a>	Joerg von Netzer

## 8. RECOMMENDATIONS

Organisation	Description	Contact
German Australian Business Council (formerly known as ABIE)	A business networking organisation that provides a forum for the generation of business opportunities, contacts and information exchange. The organisation provides contacts for those interested in bilateral trade and investment between Germany and Australia.  <a href="http://www.abie-germany.de/">http://www.abie-germany.de/</a>	Board Members: Stefan Augustin Dr Robert Harrison Sabina Pittrof Elisabeth Opie
BVMi: Bundesministerium für Wirtschaft und Energie	Federal Ministry for Economic Affairs and Energy is the central government body for economic policy and economic prosperity in Germany. The ministry supports Mittelstand in sustainable business growth domestically and overseas.  <a href="http://www.bmwi.de">http://www.bmwi.de</a>	Dr Sven Halldorn
BWA: Bundesverband für Wirtschaftsförderung und Aussenwirtschaft	The German Federal Association for Economic Development and Foreign Trade has an exclusive network of entrepreneurs in Germany and around the world.  <a href="http://www.bwa-deutschland.com">www.bwa-deutschland.com</a>	Ludwig Erhard Haus
BDI: Bundesverband der Deutschen Industrie e.V.	The Federation of German Industries is the umbrella organisation of German industry and industry-related service providers.  <a href="http://www.bdi.eu">www.bdi.eu</a>	Dr. Jobst-Hinrich Wiskow
TOP 100 Mittelstand Companies	Each year, the TOP 100 'seal of approval' is awarded to the most innovative SMEs throughout the whole of Germany. Companies recognised are among the fastest growing firms in the country.  <a href="http://www.top100.de/">http://www.top100.de/</a>	Contacts for 100 Mittelstand companies are published on the website.
Advertising in the BVMW magazine Der Mittelstand	Der Mittelstand is one of the leading magazines of its kind in Germany. The magazine is published monthly covering topics such as economic policy, entrepreneurship, culture and organisational reporting.  <a href="http://www.bvmw.de/veroeffentlichungen/der-mittelstand-das-unternehmermagazin.html">http://www.bvmw.de/veroeffentlichungen/der-mittelstand-das-unternehmermagazin.html</a>	Eberhard Vogt Pressesprecher Press officer Chefredakteur Der Mittelstand. Editor in Chief

### Recommendation 5

**Target audiences:** Government – Federal, State  
Professional Associations  
ISS Institute

Offer yearly scholarships in Germany for Australian students interested in studying management and leadership and working in the Australian manufacturing industry.

The German Graduate School of Management and Law (GGS)<sup>2</sup> offer a Summer Academy for post-graduate university students to learn how Mittelstand companies operate and how they manage for success. The week-long course involves lectures, company visits and presentations by guest speakers. The course is structured in three parts:

1. Mittelstand companies and their economic and societal context
  - » Introduction to Germany's Mittelstand
  - » The role of Mittelstand companies in German society
  - » Doing business in Europe
  - » Legal framework of doing business in Germany.
  
2. The international workings of Mittelstand companies
  - » German vocational education: Developing talent for the Mittelstand
  - » Marketing in Mittelstand companies
  - » Strategic management in Mittelstand companies
  - » Human resource management in Mittelstand companies
  - » Succession management in Mittelstand companies
  - » Innovation management in Mittelstand companies.
  
3. Interacting with Mittelstand Companies as a foreign partner
  - » How to deal with German account managers
  - » Collaboration for sustained innovation
  - » Being an expat in Germany.

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<sup>2</sup> German Graduate School of Management and Law 2014, viewed 6 October 2104, <<http://www.ggs.de>>

## 8. RECOMMENDATIONS

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### Recommendation 6

**Target audiences:** Industry  
Professional Associations  
Education and Training

Large manufacturing organisations that work with small to medium sized companies in their supply chain need to share responsibility for training and assistance with functional areas of the SME. A greater responsibility towards ensuring smaller company survival would aid in a stronger manufacturing industry. Use of the Offensive Mittelstand assessment instrument would be a good starting point for offering training and assistance.

### Recommendation 7

**Target audiences:** Manufacturing Skills of Australia  
Industry  
Professional Associations  
Education and Training

Mittelstand companies maintained a high level of community involvement and employed strategies to connect with schools and families in their area. A similar approach could be adopted by Australian SMEs, especially in regional areas:

- Expand and promote the Manufacturing Work Inspiration Program<sup>3</sup> to more industry associations Australia wide. This MSA initiative brings industry associations, the Department of Education, SMEs and students together to demonstrate suitable pathways into the manufacturing industry. Currently, five industry groups are part of this initiative and more industry groups should be part of the program
- SMEs conduct at least one open day per year for schools in their local area targeting young school leavers considering a career.

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<sup>3</sup> MSA Manufacturing Skills Australia, Take a Reel Break, 2014, viewed 4 November 2014, <<http://www.mskills.com.au/media-centre/videos>>

### Recommendation 8

**Target audiences:** Education and Training  
Industry  
Professional Associations

Trainers that deliver on management and leadership programs require relevant industry experience. The Australian vocational training industry needs to fund mandatory professional development for all trainers to maintain currency within their industry. Frequency of professional development and areas of up-skilling would require discussion between the relevant stakeholders such as RTOs, trainers and business organisations. Typical professional development activities would include:

- Working in a commercial organisation for a period of time
- Further academic study
- Completion of practical short courses
- Attendance at seminars.

### Recommendation 9

**Target audiences:** Government – State  
Education and Training  
Professional Associations

Germany maintains consistency and direction in assessment for all vocational training through nationally recognised State-run exams. A similar strategy needs to be endorsed in Australia using a system of moderated assessments developed between educational institutes and industry partnership. There are a number of advantages for this recommendation:

- There is a quality assurance process that ensures appropriate standards of assessment
- Ensures grades are awarded consistently
- Training content is consistent throughout registered training organisations (RTO).

## 8. RECOMMENDATIONS

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### Recommendation 10

**Target audiences:** Government – Federal, State and Local  
Education and Training – Universities  
Industry  
Professional Associations

Pursue strategies that reduce the cost barriers of R&D and allow Australian manufacturing SMEs to innovate and develop research projects. Strategies will include:

- Stronger links between university and SMEs undertaking R&D
- Employ university personnel completing their Masters or PhD to assist with research and achieve a lower cost.
- Increase promotion to create higher awareness levels of government subsidies for innovation such as the R&D Tax Incentive (refer to [www.business.gov.au](http://www.business.gov.au)).

### Recommendation 11

**Target audiences:** Professional Associations  
Industry

Launch a strong, promotional campaign to increase membership in relevant professional associations within the Australian manufacturing industry to boost lobbying capabilities.

### Recommendation 12

**Target audiences:** Education and Training  
Industry

Include entrepreneurship and management training units in third and fourth year manufacturing apprenticeship courses.

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# 10. ATTACHMENTS

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## 10.1

### QUESTIONNAIRE TOPICS

**Interviewer:** Mark Bunyan  
ISS Institute and Manufacturing Skills Australia Fellow

#### Topic 1

##### **Strategic Planning and Management**

How does your company strategically plan for the future especially with the current threat of China and India's increased capability to produce at similar quality and at a lower price? Sub-topics to discuss will include:

- Do employees embrace the visions and goals of the strategic plan and how is the plan communicated to them?
- Are there examples / instances of how your strategic plans have provided direction and a pathway of success?
- How is your organization structured (for example, heirarchical Vs flat, the number of management levels and closeness to employees)?
- How often does your organization strategically plan?

#### Topic 2

##### **Research and Development / Innovation**

How do German managers involve their staff in research and development of existing and new products? Is there a system of innovation?

How do Mittelstand companies such as your own, collaborate and network in a business-to-business environment (especially in the supply chain)? Are there examples of how this approach has worked well for your organization?

Who else do you collaborate with to accelerate technology access and product development?

## 10. ATTACHMENTS

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### Topic 3

#### **Australian / German Alliances Based on “Open Innovation”**

Do you think there is potential for German and Australian manufacturing companies to enter into an alliance and collaborate on ‘innovative ideas’? For example, ideas generated by Australian companies could be shared and developed in partnership with German companies.

How do you think management of German companies feel about Australian management and workforce culture? Is there certain criteria that need to be met to ensure a productive alliance?

### Topic 4

#### **Marketing, Corporate Culture and Information**

##### **Marketing**

- What strategies are used to maintain customer relationships and/or find new customers?
- What level of interaction is there with customers regarding day-to-day business and involvement in innovation?
- How important is branding and positioning in your market and what do you do to ensure consistency in brand perception?
- How do you maintain points of differentiation in products and services and maintain competitiveness?
- How does your organization identify and exploit export opportunities?
- What other forms of marketing does your company use to promote itself?

##### **Community Involvement**

- How does your organization involve itself with the local community? Are there examples of these strategies (for example, sponsoring education, culture, sport or social projects)?
- What level of importance is placed on community and its impact on your company’s identity? Does it have a positive effect?

##### **Information**

- Does your organization manage and disseminate information in a strategic manner (MIS - Management Information Systems)? If so, is it important in making future decisions (such as exporting)?

### Topic 5

#### **Management, Employees and Workplace Learning Environments**

- How does management support and motivate innovative processes and products?
- What forms of motivation are used in your company to stimulate high performance work practices?
- Do you create opportunities for employees to contribute to the workplace? If so, how?
- How do you as a manager, increase employee knowledge, skills and abilities (training)?
- How would you describe the leadership style in your company?
- If your company offered management training to existing supervisors, what would be the best method to deliver the training – university, vocational education, coaching on the job, other.
- What are your current qualifications?
- Do you seek further / ongoing training for yourself?

### Topic 6

**Please complete the Management Function survey**

*THANKYOU FOR YOUR TIME*

## 10.2

## MANAGEMENT FUNCTION SURVEY

For each of the following management functions, indicate ( X ) on the scale of 1 (not a major part of my management job) and 5 (a major part of my management job). Then indicate ( X ) the top five (5) management functions that are essential to the success of a Mittelstand company.

Management functions	1	2	3	4	5	Essential to Mittelstand
<b>Manage quality customer service</b> Needs of customers, build relations, deliver products /services, identify customers						
<b>Manage budgets and financial plans</b> Analyse company budgets, perform within budget, monitor financial outcomes						
<b>Manage information or knowledge systems</b> Policies, procedures, market information, performance measures						
<b>Develop workplace learning environment</b> Manage staff to increase skills in job performance eg further training						
<b>Plan and monitor continuous improvement</b> Improve processes, encourage staff to participate and make recommendations for further improvement						
<b>Manage people performance</b> Allocate work efficiently, monitor outcomes, evaluate KPI's, mentor/coach, recommend performance improvements						
<b>Ensure a safe workplace</b> Maintain safety legislation in the workplace, control risks and hazards, record keeping, discussion with staff on safety						

## 10. ATTACHMENTS

Management functions	1	2	3	4	5	Essential to Mittelstand
<p><b>Undertake project work</b></p> <p>Undertake projects, use project management tools, support project members, arrange resources, finalise the project</p>						
<p><b>Manage risk</b></p> <p>Determine the scope of risk, identify and analyse risks, develop risk reduction strategies</p>						
<p><b>Manage work priorities and your own professional development</b></p> <p>Set personal work goals, set and meet your own work priorities (work-life balance), increase personal skills / knowledge</p>						
<p><b>Ensure team effectiveness</b></p> <p>Establish performance plans, support teams, provide feedback, communicate with the team, encourage participation</p>						
<p><b>Manage cultural diversity</b></p> <p>Establish policies on diversity, address prejudices, encourage collaboration, promote diversity</p>						
<p><b>Recruitment and selection of staff</b></p> <p>Set staff requirements, job descriptions, sourcing, selection process, inducting new employees</p>						
<p><b>Manage innovation (includes IP protection)</b></p> <p>Establish innovation in the workplace or with outside stakeholders, build innovative teams, promote innovation</p>						
<p><b>Manage employee relations</b></p> <p>Manage employee policies, grievances, conflict management, negotiations with employees</p>						

*Thank you*

# 10.3

## DESTINATION SUMMARIES

## 10.3.1

### Schenk Process GmbH

**Destination:** Darmstadt, Germany

**Contact:** Phil Morris, Chief Engineer, Schenk Process GmbH



*Photo 1: Schenk Process*

*Source: <http://www.directindustry.com/prod/schenck-process/loss-in-weight-dispensers-pellets-vibrating-chute-14361-425107.html>*

## 10. ATTACHMENTS

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Schenk process is located in multiple countries that include America, Europe, Australia, India, China and Brazil. The “German model” of business is successful but also has its weaknesses when entering different regions.

### **Strategic outlook, vision**

There is a “philosophical difference on how Germans approach a market” which is due to ownership structures – companies driven by “private equity or are public listed companies” tend to have a short range mentality. In Germany many Mittelstand are privately owned (family) and have a more “community, social orientated view which is a model that is more inclusive” and therefore creates a long term view for the company. Planning is often over a 5 to 10 year period. Morris compared this to Australia and America which in his experience planned only 1 to 3 years ahead and just “hit your targets.” This short term view causes “conflict with R&D which is usually on a 3 to 5 year timeframe.”

There is a clear vision in the company – this is what we do, this is what we are about. Morris stated that there is a tendency to be more focused than Australian businesses (that Morris has been associated with). “Mittelstand companies pick something they know about, they learn everything about it and do it best in the world.” Companies view themselves “as global from day one”. They don’t want to be just best in Germany or best in Europe, they want to be “the best in the world” and start their businesses with this view.

Every year strategic direction is reviewed. All the business units have clearly defined goals and operate in a “matrix organizational structure.” This is in preference to a hierarchical structure. The business units are collaborative and share administrative, marketing and operational resources to ensure efficiency. For each business unit there is an R&D person that help and guide strategies in relation to what needs to be developed.

### **R&D and innovation**

Innovations that are presented will be researched in terms of “payback and its fit to the company’s strategic direction, costs, time and reasons why the company should undertake it’s development. Key areas of success are identified and the process is reviewed “top down” (fit with the company’s strategic plan) and “bottom up” (product manager issues and feedback). Tasks (and costs) that are required to develop the new innovation are set against a timeline and a request to top management is submitted for permission to begin working on the project.

The same process is used when introducing current products into new markets. For example, a German range of products could be introduced into the Indian market – stakeholders in India would be consulted, costs may have to be reduced to penetrate the market, supply chain modifications may be required and discussions are conducted around IP critical components before a final plan is developed on entering that market. There are structured procedures that must be followed by both R&D and the business unit.

The business development group in Schenk Process gathers market research on the need for new products and services as well as identifying opportunities in new markets. This group supports the business unit to achieve a business case for a new product or product redesign, new process or new market.

The German view is “this is a long term thing we’re going to do and yes, we will continue to invest in R&D even when times get tough. We might cut back a little but we will not cut everything because it is our future.” It can be difficult for smaller companies to maintain R&D budgets but when “it gets tough, small companies will cut their future and focus on trying to survive. What happens is that the company survives, comes out the other side but has nothing. They then get attacked by a Chinese competitor

(say) and again, end up with nothing.” R&D and innovation should only be cut as a last resort. It should be viewed as “future business,” not as something to be cut just to make the numbers look good. It is better to take lower profitability until conditions improve.

If cuts involve letting staff go, Germany deals with different criteria on deciding who will leave the company. It’s not just a matter of who is the best person to keep. Decisions will be made based on criteria such as “who is married, do they have kids and do they have a mortgage.” This strategy has its drawbacks with many young people ending up leaving the company. Germans however feel that “they’re young people, they have more time to recover.”

Standard operating procedures are a major part of ensuring how activities are performed and the company managed. This is necessary for the highly technical field that the company operates in. Morris stated that this level of documentation did not exist in the Australian companies he had worked for.

“Application development” (doing development within a project – see a customer need and respond to a customer need) was a common and acceptable way of approaching innovation (in Australia and other countries). This method however has its disadvantages:

- The approach puts the company under higher time pressure
- The risk of not completing a project or failing to deliver a project, increases significantly.
- If anything goes wrong, the costs and damage to the organisation’s reputation is increased. Often the customer becomes “the proving ground for a new product or process” and this “guinea pig” approach may not have discussed with the customer during the project.
- It perpetuates the “short term view and instills the culture of reacting as you go.”

It is to the company’s advantage to separate R&D rather than “mix it with the engineering function.” In Germany, R&D is commonly a separate function that is not affected by the pressure from projects. Innovation has to be seen as a long term (and uninterrupted) investment that provides time to prove and test the idea before implementation. Germans “seem to be experts in what they do. They have taken the time to make sure their product is right. They like to be prepared for a project and have a big lead in to ensure everything is right.” Australians however, work well under the time pressures of managing a project and have the ability to innovate and handle problems as they occur. This can cause conflicting views on how to get jobs done when the two cultures work together.

Schenk Process works closely with research centres and universities. There seems to be “no ‘Us and Them’ in German industry. People in Germany will actively collaborate with others in their industry and share information.” There is a “philosophical attitude that everyone should work together.” There are around 60 Fraunhofer Institutes (research centres) throughout the country and Schenck Process works closely with this organization when researching fatigue and other assessments such as reliability.” There are also “open days” where business groups will give presentations about what they do and what knowledge they have. Schenk Process also does the same. This is opposite to the business culture in Australia where knowledge is guarded and not shared. Morris was of the opinion that this limits idea generation because there is no discussion with other people (outside the organization). In Germany “there is still protection of IP but they like to support each other as an industry.” Schenk Process will also give presentations on a monthly basis to share their information both internally and externally. Knowledge sharing is not strictly about the engineering industry – presentations also involve health, handling stress, travel, psychology or other topics that would interest staff. “There is a “strong view on continuous learning. Germans are a lot more collaborative in their management style and like to learn about new ideas or experiences.”

## 10. ATTACHMENTS

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### **Community involvement**

Open days are held by Schenk Process specifically for 6 to 12 year old children and their parents. Most companies in the area (Darmstadt) will “open their doors for anyone to come and have a look.” Parents also play a big role in explaining to their children what “things do” in an organization. The company wants these people to understand “how things work” and think about what they would like to do as a career. It is “an inclusive environment” and there will be “fun activities” and a program for the day. For smaller organisations (with lesser resources), they view this process as a “family – community thing” and even though it may not be on as big a scale, they take part in these activities. Organisations survive in the regional areas because they engage the local community – family and friends work at the company, everyone knows each other and therefore, the company supports community (fetes, fairs and events) and schools (providing scholarships).

Schenk Process’ involvement in community is often driven by the people in the company rather than directly from management. “If you want to have a team in an event, the company will sponsor you and actively support these community events.”

### **Procedures and regulations**

Morris stated that the regulations (such as work, health and safety, compliance and insurances) that now govern companies in both Australia and the UK is staggering compared to the attitude in Germany. Germans take the view that “what rules and regulations try to govern is just common sense. If I am technically competent, why do I need all this paperwork and documentation.” Even though their companies are accredited with the necessary certifications, there is not the same level of complexity we might see in Australia. Germans don’t work certain ways “because a rule dictates they have to. They work a certain way because it makes sense.” Morris’ customers in Australia “spend so much time on bureaucratic things (meetings, forms, accreditation), they don’t get enough time to do their jobs.”

### **Alliances between Australia and Germany**

Australia has a lot of resources that helps create a relationship with China and the “closeness” to the region has always been regarded as an advantage to Australia. Morris stated that he could fly from Frankfurt to Beijing as quickly as from Sydney to Beijing. “It may look close but in reality it’s not.”

From a personal view, Morris felt that “China is done. If a company is not in China now, it’s too late.” India is regarded as the next area of opportunity. Indonesia is coming along but doesn’t have the population compared to India. For mining interests, Brazil still has “more development potential (mining, steel and cement) but is a hard place to do business as is Chile.”

Morris felt food, pharmaceuticals and chemicals were the products for China. Industrial and infrastructure products had run their course. Scale is also a problem – “can Australian companies provide products in the volume that China requires?” Facilities also need to be established in China to produce the product or technology, and then there is the problem that “someone will come along and copy it.” This has happened numerous times to Schenk Process. India on the other hand had a lot more advantages including speaking English (good for communication and transparency of business relationships) and there is a cultural connection with Australia and India through the British.

There is still potential for an Australia – German alliance however, Australia is regarded as an expensive location cost-wise. Schenk Process has almost exited all supply from Australia because it is too expensive (especially in regards to labour costs). General wages in Germany (relative to Australia) are quite low. There are pressures on Germany to increase wages but the country “is competing in a global environment, not a European environment and will do what they have to do to remain competitive.” When Schenk Process considers Australia they think “yes, you have some good technology, we can use Australia as an R&D centre and develop products. Most of those products however, will not be

manufactured in Australia.” Mining technology (from Australia) for example, “is exported all over the world from Australia” if costs permit, otherwise the company finds somewhere else to do it from.

Australia is good at generating new ideas but needs to be prepared to move production / ideas somewhere else (offshore) unless the country produces something that customers are prepared to pay for. “The Australian market is quite small. To go global, Australia will have to be prepared to set up production facilities close to overseas customers.”

### **German opinions on Australian companies**

Opinions usually come down to a personal level. If an individual is competent at what they do, they will be treated with respect. Discussions between Australian and German companies need to be on a technical level and knowledge of their areas must be evident. The effort and work level has to be put in to develop products and understand the technology of your business.

“In Germany, engineers seemed to be trained to a much higher level.” Graduates from German universities in Morris’ opinion are more knowledgeable than most other countries he has had to deal with. There is a clear path of development of a person (on-the-job and academically) and good relationships with the company and the training institute (such as a hochschula – technical university) and universities. Programs are developed ensuring a trainee has a company and a university to study at. Every year that person will work at Schenk Process for experience. “This work is not paid for, it is just an opportunity to learn practical skills (part of the course). This happens over a 4 year period and the engineer gets a variety of projects and then usually their thesis is connected to the company.” Typically the trainee is rotated through a number of different departments to understand how the company works and senior people will be allocated to mentor and provide reference for the trainee’s thesis. This support also happens in the masters and doctorate levels of university. Often this trainee on finishing their studies will get a job with the host company as well as provide valuable research and development to the organization. Education is highly valued in Germany.

There are also opportunities for high school students to do an apprenticeship through similar training structures. These students will get the chance to work on the “shop floor and get a feel if they are more hands on or academic.” By the time these people are qualified, companies are not “scary things” and the person has options and focus with respect to job outlook.

The company is very training orientated. There is a strong culture of training, education and the need to understand and share information that is part of the company. There isn’t a situation where someone might say “I’m the boss, I know what I’m doing, I know everything and I’m the only fountain of knowledge.” In Germany there are “no insecurities and information is meant to be shared around.” If a company has weaknesses, they will ask “who do we need to talk to.” Morris was of the opinion that spending long periods of time trying to develop something was poor productivity if another organization (such as a research centre) already had the answer. Growth of new development can be stymied because companies “feel they need to figure something out” rather than seeking information elsewhere.

It doesn’t matter about the size of the company (Schenk Process deals with companies of only 6 people), it’s the knowledge and expertise they have that counts. Growth can be experienced by the small company if a larger organization such as Schenk Process adopts (or buys) its technology.

### **Marketing**

Using a focus strategy allows a company “to get known for what they do.” For example, Schenk Process has a whole range of products but “is fundamentally known for feeding and screening.” All other products are related to Schenk’s core capabilities.

## 10. ATTACHMENTS

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Schenk Process is “very strong when it comes to supporting its brand.” Colour schemes, logos, corporate vision and trademarks are consistently displayed and company representation at all the important trade shows is essential. Companies that have been acquired often pose another challenge when incorporating them into Schenk Process. They have their own brands and successful products and Schenk Process is mindful not to diminish their position in the market.

Selling is usually done through the relationship between the company’s sales and technical people. Getting the “customer to buy in and understand the solution requires comprehensive documentation of the product range that German companies are very good at.”

If a company has all their documentation on technical aspects of the product and procedures explained in printed material, “it is much easier to enter China and India with this information pack.” Morris felt this was a weakness in Australian companies – lack of development of marketing material and procedures makes their entrance into foreign markets so much more difficult. The expert “ends up having to spend large amounts of time with the customer” and the “lack of information” hinders development of the local personnel. The outcome is that the expert ends up spending too much time there and other areas of the business may suffer. The expert also suffers from being on planes too much and local business is affected. “If the information is organized and planned correctly, the customer knows what they need, tools required and what to do. Their people become a lot more self-sufficient.” The locations grow without spending large amounts of resources and “wearing out expert personnel crossing over the world’s time lines.”

Countries that don’t have the education level want to know as much as they can about the products and processes that the company is introducing. Documentation is required to help with that knowledge demand rather than relying on only the expert’s personal information. This is a major strength with German exporters – “they focus on certain things, they understand it and prepare to introduce the product with local workers systematically.”

### **Export opportunities**

Identifying export opportunities usually come from the following sources:

- Sales people attending trade shows, conferences and being in the market
- Research on growing markets
- Identification of customer needs and customized solutions

People are sourced to help develop solutions (internally and externally), ideas are screened and product developments are fast-tracked. Broad business cases are then developed and presented to management. Evaluations of potential market size and competitor offerings are also considered. Costs and time schedules are estimated and management makes the final decision.

Each year export “key topics” are discussed. There are usually no more than 10 to 15 per year (underway, evaluating and opportunities). Each business unit in the company presents 2 or 3 annually. A highly developed company information and SOP system ensures proper processes are followed and that resources aren’t wasted on unattractive export opportunities.

### **Company culture**

There is a strong work-life balance in Germany. There is 6 weeks holiday for all employees and the rule is “if you don’t take it, you lose it.” Holidays don’t accrue from year to year. This is a different mentality to taking holidays in Australia.

Companies are ready for staff leave and employees have to plan their holidays on a yearly basis. People tend to be “not as tired, burnt out or frustrated and productivity increases dramatically (from personal experience).”

There is a growing trend of not emailing outside of work hours. Some companies already shut their services down after 6pm (for example BMW and VW). Staff cannot be forced to answer emails / texts after hours.

### **Staff**

Recruitment of staff: In Australia it was difficult to get competent, capable people (Morris' experience). The mining boom took a lot of the best tradespeople and engineers and organisations were left with “people they would not have normally employed.” The HR process of hiring someone always seemed to take an “inordinate amount of time.”

In Germany this is not the case. People are competent, do their job and require little management of individuals.” As a result, the HR department spends more time on the systems of the organization rather than the support performance management.”

One-on-one discussions between staff and management occur on a very regular basis in Schenk Process. This is a more informal / relaxed approach rather than the heavy structure format / paperwork for performance management in Australia.

It is also difficult finding qualified people in Germany also due to the aging population and retirement. Companies are losing knowledge through the retirement of older people that have had over 25 years with the one company. Succession planning is implemented but is not a perfect system.

People are respectful of the fact that work is important. New employees need to fit in with not only the company's culture but also with the team they work directly with.

### **Management style**

- Collaborative.
- Decisions don't usually get implemented unless there is a general consensus of agreement.
- Sharing of information. Managers actively seek people out who have the knowledge to help make informed decisions.
- Democratic in the sense that “everyone gets to have their say” but when “the boss says this is what we're doing,” agreement has been reached on what will happen.
- Key people with expertise are consulted before decisions are made.

### **Training employees, workplace learning**

“Anyone can recommend to their manager or supervisor that they would like to go on a course and very rarely is it refused if it is relevant to the business.” This is driven by both employees and management. This is often achieved through external courses or attendance at seminars. Knowledge (and contacts) gained from these sources and contacts will be reported to the rest of the organization.

There is also training within the organization (part of the HR function). This training can cover anything from technical training to soft skills and includes areas that are specific about particular products and core knowledge of the company. Examples include new products, presentations, working in teams, communications, leadership and coaching, time management, sales, purchasing, dealing with different cultures, management and IT. Certification is awarded and recorded on personnel files. A

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person is expected to be competent in the job (his/her responsibility) and the training courses (internal and external) are resources to aid in that competency. Training also covers non-work related topics such as health issues and nutrition to assist employees in maintaining a healthy lifestyle and productive working life.

All experts and managers in Schenk Process would be expected to present information on what they do and what their department means to the organization (this can happen every 2 to 3 years).

### **Motivating employees to innovate**

In Germany the 'inventor' is always legally protected. The inventor always owns the intellectual property (IP), not the company. "When a person gets a patent, that person is rewarded by the company which is usually a share in the profit." The patent stops when that person leaves the organization but the IP is still retained.

All ideas need to be presented to the company and management needs to decide whether to endorse the idea or not. If the company takes on the innovation, they are obliged to pay a certain amount of money for the innovation.

Incremental innovations to existing products or processes are rewarded through one-off financial payments. Recognition of a person's contribution to innovation is also a strong motivator in the company.

### **Leadership and management styles**

More of a coaching style and enjoys developing people and bringing out their best. Morris is also a "strong believer in systems, processes and strategies that the company endorses. Group decision making makes a lot of sense but an autocratic decision style has its place in the company. Management is more effective if it has a plan to follow and there is a direction for the organization.

Working with "competent people" means that one doesn't have to manage individual people. Working in teams and managing the team's progress is more productive and efficient – tasks are completed and they learn new processes much quicker.

In contrast to Australian office layouts (open plan), German managers "prefer to have their own space." They like "to be alone and think." Morris preferred this environment, he felt he "could get more things done" and that his productivity is now much higher (compared to when he worked in Australia). There is time to concentrate on the job at hand and not to be "constantly bombarded by people dropping in" – the protocol is to make appointments rather than an informal "drop in" approach.

Morris' qualifications include:

- Degree in Engineering
- MBA

Learning is continuous in Schenk Process and management encourages all staff to be part of that culture. Training is an integral part of the organization and an important strategy to keep ahead of the competition. "If you're not moving forward, you're basically going backwards because other people are moving past you." This way of thinking (especially in small business) "revolves around the person running the organization – do they just want to make money on their product or do they want to be the best at what they do. If it is the second choice, continuous learning is essential

### 10.3.2

#### Ceramic Fuel Cells GmbH

**Destination:** Heinsberg, Germany

**Contact:** Frank Obernitz, Managing Director, Ceramic Fuel Cells GmbH



*Photo 2: Ceramic Fuel Cells*  
Source: <http://www.cfcl.com.au/>

#### **Strategic planning and management**

The main challenges facing any new company fall in to the three areas of technology, costs, route to market (distribution) and regulations. These challenges need to be holistically considered and balanced – one area that is not ‘looked after’ could be the downfall of the venture.

The unique selling point (USP) is the most important factor to consider, especially in a technology driven market.

Strategic plans have been developed. One of the main objectives identified was to employ “fresh people” (managers) from outside that already had experience in commercializing new products. The company recognized that a new set of skills would be required to be successful. These new managers then developed a business plan strategy on how to best achieve the goal of commercialization.

Vision for CFC: Dr Karl Fruger was the founder of the company and held a position with CSIRO in Australia. He was a pioneer in Ceramic fuel cell development. In 1992, Dr Fruger stated “If we want to be successful with this technology, we need to think of the customer right from the beginning (the customer in this case was the ‘grid electricity utility operator’). We will not succeed if we are only a bit better than what is already out there. We need to get above 50% electrical efficiency.” This was a vision that has been achieved (and exceeded) 20 years later. This result is ‘in the DNA of the company’ and continues to be the philosophy of the company. From disbelief that such a target could be achieved,

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Ceramic Fuel Cells is now the global leader in this technology.

Employee commitment: R&D staff in Melbourne are world class engineers and most have stayed with the company for 10 to 20 years. Salaries paid to these engineers is below what they could have achieved in larger organisations but “they are believers and want to see the BlueGen product succeed in the market.” The challenge was then to find German production staff (manufacture the fuel cell) who would share in this vision. Even though there has been a small turnover in production employees, the core staff “has been infected.”

Organisational structure: two basic levels include:

- The executive management team - stakeholders from Australia, Germany and the United Kingdom
- Production staff

The strategic plan is always changing due to the dynamic nature of the technology, costings, distribution and regulation environments. This “baby industry” requires access to markets and development of a sales model. CFC has a complex supply chain with over one hundred suppliers all over the world. Many of the suppliers have also invested in the product and believe in its potential even though they are not making money. They view the product as a “game changer.”

### **‘Route to market’ (distribution) and target audiences**

Lobbying the government to do market introduction schemes – four German states (at the federal level) is providing customers a capital subsidy of 13,000 Euros to 20,000 Euros per product. This strategy also contributes to the government’s target of carbon reduction. Using CFC’s reduces a household’s carbon footprint by 50 to 80%. Germany is targeting 30% renewables in the grid using solar, wind energy and biomass (renewable power) and politicians are realizing that getting 100% renewables in the grid is not manageable. Add to this the closing down of nuclear plants and the use of coal fired plants back online as a consequence, the carbon footprint is not being reduced. Germany has reached a tipping point. CFC have lobbied government through the industry organisations they are a member of, to reduce carbon by tapping in to the efficiency potential in homes – replacing old gas and oil boilers with very efficient technology such as CFC’s.

In the mid to long term, the company will not be rely on subsidies and its efficiency rating will prove that the householder will save on energy bills. The company needs volume of sales to cover the costs and will rely, in the short term, on capital subsidies to achieve the critical mass in sales. The capital expenditure will gradually diminish with the increase in sales of CFC’s. Japan has already used this model successfully – their subsidies ended after 5 years and had achieved 100,000 installed units. This subsidy helps with the “sticker shock” (BluGen market price is 25,000 Euros per unit) however, when the subsidy is taken into account (13,000 Euros) the price of 12,000 Euros is more attractive. This equates to the amount Germans are paying for heat pumps (with less efficiency). As volume of sales increase, the pressure is on the supply chain and the original equipment manufacturers (OEM) to reduce costs.

Lobby federal government as an individual company as well as forming an alliance with other companies involved in the heating industry (for example, competitors such as Bosch and Eastmann). Also use the strength that CFC also is an employer in the area and the government should support their position.

The usual route to the heating market is through “installers” of which there are approximately 45,000 throughout Germany. Certification is required to install CFC’s and the company offers training to installers every week but it is difficult without an established brand such as Eastmann and Bosch who are the market leaders. CFC is also trying to establish new routes to market by selling on contract

(mobile phone analogy for example): The end customer doesn't pay for a BluGen. Instead, the supply company or utility, signs a contract with the householder to provide power for 10 years (say). To pay for the unit, the supplier requires from the householder the right to operate the product in the home and guarantee the user a 10% (as an example) saving in power.

Not only pitching to utilities but also industries such as smart home designers power stations for electric cars. For example Obernitz has approached BMW to sell their new i3 electric car with a BluGen CFC which they were receptive to. In America (California), the car is sold with a carport where the roof is constructed from solar panels.

Sales of the unit require a different 'pitch' compared to other heating systems and the company needed to find out what the customer thinks so a direct sales force was employed (another step in the value chain).

New products have to go through these expansion processes. Eventually the company needs to make decisions about the value and supply chains – how big does it need to be, who will be the preferred suppliers and how much can be managed? Many companies in the supply chain are partners in the project and are talked to almost every day making it highly integrated.

New business models are required for new technologies such as CFC's. The above are examples of this.

### **Research and development / innovation**

Innovation is still at the early stages. The company now has something that works but development and innovation will carry on for the next 20 years – new applications for the product will evolve and it is essential that the innovation centre in Melbourne will be in partnership for the foreseeable future. They will be needed.

Future development interfaces will be difficult to manage and rather than rely on large OEM's to integrate their product into other systems (which would be difficult to control the speed of future innovations and market introductions required), the company decided to not only produce the core module but also the system. A further investment was required for the assembly line to produce the fuel cell itself and the system. From this point, CFC could act as an original equipment manufacturer.

### **Australian / German alliances**

Obernitz stated that he had limited experience and was not competent to comment here and suggested contact with the German Chamber of industry and Commerce. An opinion was expressed that Germany needed to maintain their competitive edge against China who is investing heavily in R&D and buying up Mittelstand companies. The forces are enormous.

Opinion of Australian workforce:

- Hard working.
- Obernitz is often asked how a tiny Australian company can come up with the leading fuel cell technology.
- Australians are isolated and have a different approach and capability to solving problems, they think about the market first when commercializing products.
- Engineers are good at what they do and highly skilled. They are able to innovate when the need arises.

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### **Marketing and Corporate culture**

Brand building is secondary and everything is a trade-off. It all relies on resources. It is difficult to compete with the larger players in the industry who have budgets for branding campaigns.

CFC is trying to establish a brand using “guerilla marketing” strategies – marketing that a company does when marketing budgets are low. CFC has employed two marketing “kids” (meaning they are young but qualified). Marketing strategies currently used include:

- Web site design
- Direct online and telephone sales
- Brochures and marketing stationery
- Use of indirect sales through approximately 100 installers. These installers act as sales people.
- A marketing guide (document) has been established that standardizes how to use the brand, place items on the website and how to sell – education of the sales people. This is necessary because “installers are not usually very good at selling.” Education of the installer is imperative – often they recommend a new system based on what they like to install (many installers represent a number of brands) and which one gives the best rebate. The large competitors train 60 to 70,000 per year which includes 3 days accommodation in 5 star hotels. The rest of the year they sell the company’s heating products.
- Youtube is a good resource for the website and theme is happy customers with their first purchase of a BluGen.
- Reluctant to get involved with Facebook / social media at the moment. This marketing is not as big in Germany unlike Holland where it is absolutely necessary. Social media is also time and resource intensive (posts, tweets and blogs).

The positioning strategy is to create awareness that the householder can achieve the following:

- Independence from the utility provider
- Producing their own electricity rather than relying on a centralized coal fired power station
- Save the planet
- Save on power costs

The BluGen units can be monitored over the internet and by using an ‘app’ connected to CFC’s website, the householder will be able to monitor their power savings and show their neighbours. Suddenly there is tangibility of the service.

Taking the concept another step further, “virtual power plants” could be created: if 400,000 units are installed, that would represent 800,000 kW ( $400,000 \times 2\text{kW} = 800,000 \text{ kW}$ ), which produces the same electrical capacity of a centralized, gas fired power station. Unused electricity would feed back into the grid. It is manageable energy – blue, smart and intelligent electricity controlled through the internet and from a distance.

**Community involvement:** Creation of a brochure (Fuel Cell Initiative Heinsberg) that illustrates a coalition between community stakeholders such as the Mayor of Heinsberg, local utility (grid) operator, a local installer and a local bank (financier).

The fact that CFC established their company (cutting edge technology) in Heinsberg has added profile and recognition to the area. As a member of Chamber of Commerce and Technology Commission,

Frank arranges presentations in the factory by political parties, entrepreneurs from the region, Lions Clubs and Rotary Clubs.

The community aspect in Germany goes back hundreds of years.

**Information:** Through an established integrated management system overseen by a quality manager which is necessary for certification. This covers all areas such as R&D, production, sales and marketing. All the processes are in place.

In a dynamic environment that CFC exists in, communication is everything regarding what is happening in the market and discussions with other people in the industry – industry associations.

**Human resource management:** Criteria for staff hiring depends on what they are being hired for. Skill sets for R&D are different to those required for production.

- They must be qualified for the job.
- Let the applicant understand that CFC can't offer what "the big guys" offer but there is vision, a plan and that there is a very big future. It is necessary to see the "buy in" or the "fire in the eyes".
- It is difficult to join the company unless you are a "believer." It is difficult to work in the company due to the number of frustrations that occur. Can the applicant live with frustration?

**Employee contribution:** Staff is definitely involved in improvement. Information fed back from the market through sales people or the engineer on production is acted on by staff and suggestions made to formulate solutions. Frank discusses this with staff on an informal basis – management by walking around.

**Motivation:** Staff has to believe that the manager is fighting for their jobs and the future.

**Workplace learning and development:** Knowledge upgrades through training is part of the KPI system: development goals are specified by staff and management and reviews are conducted on a half yearly basis. Feedback is provided and long term plans (1 year, 2 year and 3 year) and what steps need to be taken to achieve the up-skill.

If the resources were available, Frank would send two of his high potential staff members to business school.

Obernitz's qualifications: Masters in Energy and Process Engineering. Didn't take the MBA route in management but chose to learn on the job and then attend an intensive course (2 months) – the International Executive Program – in Paris ("mini MBA"). The school is regarded as one of the top five in the world and maintains the philosophy that the school still educates on traditional business theory but more importantly, teaches how to manage across cultures since business now operates in a global world.

Managers today need to deal with the many cultures that make up today's business. In CFC, R&D is done in Australia, CEO and Chairman is English, the Managing Director (Obernitz) is German and the company deals with customers all over the world.

Ongoing training is planned when resources become available but in the meantime, Obernitz relies on updates from his Alumni and networking.

**Leadership style:** Not the traditional, German way (formal). Being disciplined and organized however is essential. Due to the German / Australian group influence, the attitudes are more relaxed. Obernitz believes in a mentor / coaching role with his staff and "tries to make them better." Obernitz also uses an autocratic style (when the pressure is on) but mostly a democratic style.

### 10.3.3

#### Stuete

**Destination:** Lohne, Germany

**Contact:** Andreas Schenk, Product Manager, Stuete



*Photo 3: Stuete*

*Source: <http://www.steutemeditech.com/us/meditech.html>*

#### **Strategic planning**

Strategic planning is over a 3 year period that regularly changes from year to year. Due to Stuete's worldwide presence there are a number of market factors that need to be taken into account such as the economic downturn in Italy and Spain. Planning in a strategic manner is useful especially when it comes to monitoring yearly turnover and forecasting the following year.

Over the past 3 years Stuete has experienced rapid growth and have had to employee over 100 new employees. Headquarters in Stuete now has over 300 employees and is regarded as a mid-sized Mittelstand company. The company also has production factories in China and Brazil as well as dedicated sales departments and independent sales agents throughout major world locations.

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Originally, Stuetete planned to produce components in China aimed directly at the Chinese market. Now components that are designed for European customers such as Siemens, have a proportion produced in China and other low-cost areas to keep production costs down. Research and development however, is only in headquarters in Lohne, Germany.

There is a company “dream” to be market leaders in foot switches within the medical industry and well as their wireless product range which is new and innovative. Stuetete is faced with very powerful competitors such as Schneider and Honeywell who have large resources. Stuetete are careful to avoid these companies by concentrating on niche products (such as the medical foot switch) that require specialist knowledge and customized designs. The company is very secretive about innovations and focus only on niche markets and “stay under the radar.”

Stuetete’s main point of differentiation is that they sell highly innovative products that require high levels of knowledge to not only produce, but also sell.

### **Innovation**

Stuetete manufactures industrial foot switches and sought other applications in new industries. The medical field was seen as an opportunity based on an idea by the general manager and a research team was set up to investigate its potential. Operation rooms in hospitals medical us foot switches connected by cables and Stuetete saw the opportunity to use wireless connectivity to replace physical cabling to improve floor space and hygiene (sterile environment).

Staff in general, are too busy to be regularly involved in innovation. Innovative ideas are usually discussed at in special “brainstorming meetings”. Mid-sized Mittelstand companies like Stuetete however, can’t afford to invest in full time research and development. More often than not, the ideas come from the customer (such as doctors and hospital staff) who is the “start point” for product development. It is the end user that product managers keep in touch with. Frequency of customer contact by the product manager is becoming more important especially due to the technical characteristics of the product and supporting the sales team.

In the past, the value chain has not played a large part in innovation. The management at Stuetete would like to change that and engage in more supply chain collaboration. Currently, Stuetete is more involved with universities (especially Fachhochschule – University of Applied Science) in product development. Stuetete defines for the university the scope on what has to be done, explains why the risk is too much to be done by the company alone and contribute anywhere between 30 to 50% of the funds. A product can then be developed with better resources and lower risk. There is government support for these innovative projects, especially for mid-sized Mittelstand companies. For companies with less than 300 people, there is easier access (relative to large companies) to these funds. This strategy promotes fast, quick thinking small companies with anywhere from 5 to 200 people.

The company now takes the approach of finding product components that have already been developed and gone to market and then find ways to use that component in new products. That way, Stuetete can do away with the costly process of initial development. This happens a lot in wireless chips. Every 4 years or so, there is a new one that is better than the old one. “We take that new chip, ask what it does, how much does it cost, determine if it is any good and what we can do with it then ‘whack’ it in a product. This becomes our new product.” <Andreas Schenk, Stuetete> The point of differentiation is the way Stuetete designs it for the customer – “the finished product can be added to the customer’s machinery without having to play around with any extra software or hardware. We do the lot. We add service to it.” <Andreas Schenk, Stuetete>

The design of products happens in head office (about 40 staff – 10% of the workforce) and production of the components that make the final product are produced overseas. Stuetete’s facility at Lohne is for assembly only.

### **Australian / German Alliances**

Stuete supplies NHP Australia and the mining industry with products for distribution and end use. This is not viewed as an alliance but rather a sales pipeline.

With respect to the possibility of Australia and Germany working together on innovative products, Schenk's personal opinion was that it wasn't likely due to the feeling that Australia's 'innovative' products (in the electronics industry) have been copied from European company designs. There was also the impression that components designed in Australia followed the American model of 'heavy duty' whereas German products tend to be more technical and functional that the customer is willing to pay for. In regards to American and Australian products, the customer pays 'for the weight.'

Schenk found Australian management and workforce very professional (in his dealings with NHP Australia) especially in dress and behavior, unlike Germany where people are more relaxed. The workers were regarded as having "very high knowledge" with respect to what they do, especially in the mining industry.

### **Marketing**

Accessing customers through the website is become more important and it has been recently redesigned to support that. There is another website update planned for the near future that will include features such as product instruction videos through Youtube, digital catalogues and pdf brochures. Schenk was of the opinion that the "older engineers" preferred printed materials but worldwide, there was a younger engineer that preferred digital formats such as in the United States.

Maintaining contact with the customer is a high priority when discussing sales. Frequency of contact depends on the how important the customer is. Key customers are phoned at least once per week.

Strategies for brand recognition and position are increasingly being supported through an online presence. Search engine optimization is also increased through the use of product application examples on the website and using SEO words (in the examples), Stuete is creating a particular image and increasing the possibility of being found online.

The company also maintains a comprehensive CRM system that is frequently used by the sales team to generate sales from specific industries that are targeted each period (in relation to the strategic plan).

Stuete's point of differentiation lies in its technology and knowledge of what they produce. The products could be copied but it takes time to gain the knowledge to understand how it works (for example, wireless technology) and continuously improve on the product based on customer needs. The company is also flexible and has the ability to quickly design and modify products at lower production quantities. Stuete will even produce foot switches in the desired colours specified by the customer. Major competitors rely on high volume production for profit.

### **Community involvement**

Staff that work at Stuete are sourced from a 50 kilometre radius. Relationships are maintained with schools to bring young people to the site and think about their career future. Stuete is focused on employing young people to ensure the skill base is maintained. There is also the opportunity at Stuete for university students to work for periods of time in areas such as innovation and gain practical knowledge.

### **Export**

Stuete already maintains a presence worldwide and independent sales people will often make contact through trade shows that Stuete attends. For example, the main trade show in Hannover is regarded

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as high image for companies that attend and it is an opportunity to present the company to worldwide interests. Research into an export opportunity is always conducted with an independent agent who knows the region. If factors such as turnover level and brand awareness are sufficient, Stuete will consider building a presence in the area.

### **Management and employees**

Stuete like to employ people based on a probationary period before offering work full time. Like all German companies, employees must have the right qualifications, especially people in higher roles within the company. If a person is a specialist and highly skilled, they would still find it difficult to enter a development department such as Stuete if they don't have a recognized qualification.

All employees have the opportunity to continue training. The usual procedure is for the employee to decide what they think would be useful, make an application describing why the training is necessary and elect a training institute to attend. Stuete does not have internal training courses, there are plenty of training organisations to choose from in Germany.

Staff is motivated through working in a family company environment. The relationship between management and staff is close and people aren't pressured in their jobs. Everyone works to their capabilities. There are no staff awards or instances of recognition. It is the history of the company, the relationship that exists between staff members, the type of interesting work, modern premises, a fair salary and management support that motivates the company. More than 50% of the staff has been with the company for over 10 years.

Leadership styles in Stuete are definitely democratic but since the growth of the organization, there have been some changes. As growth continues, targets are becoming more aggressive and management is exercising more control over outcomes and how the organization gets there.

Schenk's is a degree qualified electronics engineer. He is responsible for and works with a 5 person sales team and a development group.

The management heirachy in Stuete is flat. Top management had direct access to the front line staff.

Schenk continues his training in languages and is currently attending English classes.

# 10.3.4

## Windhoff

**Destination:** Oelde, Germany

**Contact:** Dr. Reinhold Festge, Managing Partner Haver and Boecker OHG and President of German Engineering Association



Photo 4: Windhoff

Source: <http://www.networkrailmediacentre.co.uk/Gallery/Cab-units-being-worked-on-at-the-Windhoff-plant-in-Germany-1bf8.aspx>

Wolfgang Klein-Katthofer is mainly responsible for exports to Australia, New Zealand, South Africa, North and South America.

With around 250 employees, Windhoff considers itself to be a small to medium Mittelstand company. Windhoff employs 248 staff with about 132 people working in administration and engineering alone.

The company stopped doing parts manufacturing in 2001 but still receives fabricated steel from around the local area and Europe. Windhoff manage their quality with suppliers by adhering to international standard ISO 9001. This standard in Klein-Katthofer's opinion only defines processes and not the "entire quality that the company requires." To rectify this, Windhoff is using higher, European standards that their suppliers must also adhere to. Quality levels are documented for all types of equipment

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especially public train carriages that have safety issues that need to be considered. These standards aren't higher than what the competitors offer due to high cost manufacturing levels in Germany.

There are 32 trainees at Windhoff that undergo a 3 year training program in areas such as mechanical installation, electrical installation and business administration. Companies in Germany are required to develop 5 to 6% of their employees as trainees. Companies that don't achieve this level have to "pay a fee to the government as compensation." <Wolfgang Klein-Katthofer, Windhoff> Windhoff trains and develops close to 10% of their workforce. Under union regulations, trainees have to be in the company for at least one year with relevant work experience and responsibilities.

Klein-Katthofer regards the German dual vocational education system as one of the biggest advantages the country has in the world. Mr Klein-Katthofer himself left school, did military service for 2 years and then went to Fachhochschule (University of Applied Science) to study mechanical design engineering at bachelor level which included 6 months of work experience. The sales role that he performs now was from learning on-the-job by getting involved in various projects. For new engineers that are employed today, the company uses a more formal, mentoring system with defined plans for development of employees. This system works very well.

Windhoff also faces the common problem of an aging workforce and the company is actively working towards replacing older staff with new graduates through the use of an in-house mentoring and training system to ensure human resource capability.

The company has also reviewed the contribution of business units and their profitability to the company. For example, the company is looking to grow business in the "depot side" (maintenance of trains), as well as maintain the design and construction of trains since it is more profitable, requires less manpower and has a reduced risk of failure during projects. The heavy load transport unit will be divested (due to high risk and low profit margins) in the future and the resources reinvested into existing business units. This strategy was in response to market trends and Windhoff wanting to become more specialized in the products and services they provide to customers.

### **Marketing**

Windhoff keeps in touch with their market at all times. The company is celebrating over 125 years in business and currently working all over the world. North America had been considered high risk in the past but Windhoff now has a representative there. America "is the biggest railroad market in the world" <Wolfgang Klein-Katthofer, Windhoff> but the risk of litigation is still high. Windhoff joined a holding of 50 companies to secure an insurance policy that would protect the company from legal proceedings in the America. The combined turnover of the holding allows a cheaper insurance cost and therefore, a reduced risk. Current liability is now over 120 million Euros for public, product and environmental insurance and this amount is enough to do business in America and guard against casualties.

Before actually entering the American market, Windhoff considered the strategy for about 7 years. The company attended trade shows, conducted research to gain information on potential sales volume and competitor analyses. This research was gathered from private sources and government departments. A cost effective strategy to gain this information was also through employing a PhD student at the local university to research the American market, identify opportunities and develop strategies to enter the market. This was relatively cheaper compared to research from professional research organisations.

The initial strategy was to employ a Windhoff staff member and set up a company in America. This was a costly strategy and so management decided to use a sales agent (on commission) that knew the market which was also expensive but it was worth the investment. Windhoff wasn't used to this sort of salary demanded by an agent - the rate was much higher compared to Germany. This sales person is a free agent and can also work for the competition but only in areas that Windhoff isn't involved in.

The problem with the American market is that all jobs that are publicly funded are restricted “by an American government requirement that 100% of work has to be made in the USA.” <Wolfgang Klein-Katthofer, Windhoff> This does put pressure on Windhoff that traditionally produces all products in Germany. There is a free trade agreement currently under negotiation between Europe and North America and Windhoff is hoping that “manufactured items from Europe in the future will be more accepted within government funded works.”

### **Maintaining customer relationships**

Relationships depend on the person and the market. It is the free agents that have direct contact with the customer since it is impossible for Windhoff to contact all the customers directly. Time differences are a major problem and it makes more sense to go through a sales representative. An example of a successful relationship is the one currently with Australia that has been strengthened two years ago through winning a contract in New Zealand. Klein-Katthofer visits Australia and New Zealand four times a year to project manage the contract. Working with the agent, local people were employed (engineers) that were focused on Windhoff products and have the time to further develop company products. The agent also arranged meetings with prospective customers that Klein-Katthofer deals with during his visits to Australia and New Zealand. Customers (especially in Australia) are not only interested in dealing with the local agent but they’re also “happy to see someone from the other end of the world (a Windhoff person), face-to-face.” <Wolfgang Klein-Katthofer, Windhoff> Discussions are around future projects and knowing something about the local culture (such as ‘Aussie Rules’) is a help when dealing with Australians.

This has been a successful strategy in New Zealand and Australia. Windhoff has gone from doing nothing in 2011 to about E10million in projects today and more work in the pipeline. Once a presence is properly established in a region, more work naturally follows. Projects are usually tendered directly by Windhoff or dealt with as a second tier supplier through a general contractor. Windhoff attempts to influence the general contractor with their knowledge and experience since many are civil contractors and not specialists. Even if the project doesn’t require Windhoff equipment (such as building a railway depot), experience and advice is offered to the customer that they otherwise wouldn’t have. Offering knowledge on solutions, options, processes, and having a wide variety of products is a major competitive advantage. The depth of knowledge regarding solutions is a major strength.

The main criteria to win these sorts of projects is usually price competitiveness (not always the lowest), and knowledge about processes and advantages and disadvantages regarding different solutions. Windhoff can bring their experience to a project and intelligently discuss options and costs with the customer. Due to the fact that Windhoff manufacture everything themselves they can offer a variety of options, each with associated advantages and disadvantages for the customer. Windhoff like to become involved in the early stages of the tender process (in partnership with the civil contractor).

The main determining factors of success (and points of differentiation) include the following:

- Knowledge, range of products and choice of solutions for the customer.
- Windhoff have a reputation as one of the main big players in the railway business and many jobs are through referral.
- The company never “tries to rip off” <Wolfgang Klein-Katthofer, Windhoff> the customer. Solutions are offered for what is specified in the tender as well as suggestions on what other resources (extra costs) will be required to achieve the projects outcome (transparency of quoting). These extra costs haven’t been considered in the tender documentation. Klein-Katthofer’s experience was that some civil contractors who look at what is not in the tender to determine where claims can be made later on to make extra money.

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One of the main advantages of working in the Rheine area in Germany, is that there is not a large amount of industry and people who work with Windhoff tend to stay long term. This is an advantage in the fact that the company keeps their skilled engineers (over 75 in the organization) and workers. There is very little turnover of staff to the competition.

Windhoff's brand represents:

- 125 years of experience
- High quality (but not at a cheap price)

It is still relatively easy for Windhoff to compete in the Australian market (due to the high cost economy in Australia) but difficult to maintain a presence in Brazil where everyone there buys cheap. The Chinese also are becoming major competitors due to the fact that Windhoff has made them stronger through introducing new technology and knowledge transfer. China is now competing at nearly half the price.

### **Alliances with Australian manufacturing**

Windhoff is very open to cooperation with other companies throughout the world so long as the partners don't end up being direct competitors in the future. There have been bad experiences especially in India and China where Windhoff technology has been copied.

If a new technology or innovation is developed that affects their industry, Windhoff would be very much interested in partnering with that organization to develop the technology further. "What Windhoff requires is more after sales support through local companies to help in setting up and installing equipment and sales service. This often requires training and up-skilling of the local staff and is achieved through supporting Windhoff through installation over a period of months working on site." <Wolfgang Klein-Katthofer, Windhoff>There is additional training in trouble-shooting and equipment servicing as well as ensuring the customer is competent in using the equipment. The majority of training is done on-the-job working on the machines. Occasionally some training (such as PLC training) is done back in Germany.

**Australian managers:** Klein-Katthofer's opinion on Australian managers was that they now what they want, are very open to discussion about solutions and straight forward in their thinking. Germans seem to be more focused on the final result but Australian managers seemed more focused on ways to get to the result. Australians like to discuss various options to get to the main target. Germans come to meetings with a solution in mind. Australians come to a meeting stating the problem and asking what can be done. The result may end up the same but it takes longer to get there, but in a more relaxed way.

According to Klein-Katthofer, the future for the industry looks good over the next 20 years with the growing need for fast speed infrastructure projects in growing cities. Windhoff sees Australia (especially the east coast) as a big market for this growth.

### **Strategic planning and management**

The company strategically plans over 5 year intervals. This is broken down into 1 year forecasts based on previous sales. Meetings (once a year) are held between the sales directors, managing directors and purchasing managers to develop strategies around which product lines Windhoff would like to develop (or delete) in the future based on market demand.

Employees embrace the vision of the company (knowledge, 125 years of history and the ability to provide tailored solutions) and are exposed to this culture through the nature of their work – projects

are so big, work never gets boring. The work is interesting and an engineer very rarely (if at all) develops the same type of equipment twice. Processes and products are always being constantly improved to keep up with costs, standards and provide more suitable solutions to the customer.

### **Innovation**

There is no standard procedure to improve products and processes. There were trials on gate models to drive development but ended up being too complicated for what Windhoff specializes in. Often the equipment produced is for a one-off project and therefore, a one-off sale. Windhoff is not producing standardized products – for example, the company sells over 400 lifting jacks per year and 30% may be of the same design (held in stock). The rest are modified and customized according to customer requirements.

Innovation comes from listening to the customer and applying Windhoff's knowledge and capabilities. Many ideas come from the sales department who deal with customers and monitoring what the competitors are doing. Information from this interaction is discussed inside the company.

Not a lot has changed in the train industry with respect to maintenance and the products used to do the work compared to 30 years ago. Technology however, is playing a larger role especially in lifting equipment. There are always European standards to adhere to such as the use of PLC systems in level trains and ensuring lifts are synchronized during the process. PLC technology improves every 5 to 10 years and staff needs to be kept up to date with the new technology. Department managers are responsible for ensuring that training is provided for all staff. Training plans are developed every year within a budget specifying mandatory requirements as well as training that could be done if time allows. Training is provided in-house (safety and generic topics) as well as through an external provider (languages, PLC, 3D or CAD systems). Languages are an integral part of the company's training program. English is taught in German schools for a minimum of 9 years. Klein-Katthofer commented that in England, schools were focusing on French. His opinion was that the schools should focus on German as there are better business possibilities with Germany. Klein-Katthofer did add however, that it's better to study French than no foreign language at all. Greeting of customers in their language is important to business.

Management, employees and workplace learning environments

Three levels of school:

- High school
- Medium school (school certificate – trade based)
- General school (lowest level, mostly migrants)

Hiring staff is usually done through the following:

- Review qualifications from school
- Employee's child
- Advertising for applicants (one year in advance)

The dual vocational education system and mentoring are the main ways that staff is trained.

**Motivation:** Windhoff have a system that allows staff to submit proposals for improvements to the company, building or products and processes. Explanations need to be provided on how the

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improvement would help the company and cost-benefit analysis. These proposals would be reviewed and a decision made if they are real improvements and financial rewards are offered. Recognition of a person for their contribution is not done in Windhoff. Innovation is something everyone constantly works on as a team. All work is very project based, running multiple projects at one time.

The Windhoff philosophy is to always have two managing directors (a commercial and sales expert) – ‘the four eyes principle.’ All decisions are made between two people. This method reduces the risk of poor decision making. This principle is all through the company and all documents (quotes, offers and legal documents) therefore, must be signed by two people. This is a common practice in medium-sized German companies.

Management qualifications include:

- Managing director has an MBA in Business
- Technical managing director has an engineering degree
- These two managers have been hired by the owner of Windhoff and did not progress through the company. This policy is recent and the company feels it is effective to hire some managers from outside the organization to provide fresh outlooks on the business.

Klein-Katthofer felt that for medium sized Mittelstand companies, the hiring of MBA or degreed qualified managers is becoming much more common. The managing directors’ main function is to liaise with the technical and sales staff and manage the overall company.

Essential requirements for a manager and leader:

- Ability to drive technical innovations
- Must have an understanding of technical processes
- Ability to strategically plan at least one to two years in advance
- Manage people to follow the plan
- In depth understanding of legal, taxes and financial requirements

### 10.3.5

#### German Engineering Association

**Destination:** Oelde, Germany

**Contact:** Dr. Reinhold Festge, Managing Partner Haver and Boecker OHG and President of German Engineering Association



*Photo 5: Haver and Boecker*

*Source: <http://www.weavingarchitecture.com/en/applications/media-facade/>*

Not all small manufacturing businesses (<50 employees) in Germany produce their own product or even attempt to do research and development. Many are just second or third tier suppliers to larger organisations. Mittelstand companies are defined as having over 50 employees.

Small companies are run by the owner due to the lack of resources available to employ a manager. All management functions must be performed by the owner of the business. The owner needs to be a strong manager and have the following attributes:

- There must be a profitable idea.
- Decisions need to be made on whether to produce the product or just the service, or both.
- The owner must be able to lead his people
- Ability to plan and think strategically for the direction of the business

Success of Mittelstand companies can be attributed to Germany's education system. In Germany there are universities but there is also the dual vocational education system (an industry system). The "dual" system develops an apprentice (over about 3 years) to become an entrepreneur. There is also the opportunity to become a "meister" who is a specialist in their field. The meister has a right to have

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his/her own company and also to provide vocational training for others. The meister can also continue to study management theory and application through this system.

The IHK (Industry Handelskammer) or Chamber of Commerce, defines all training as directed by members' needs. All apprentices, meisters and anyone doing courses such as management (for example, operations manager), must sit the exams that are conducted by IHK. Managers need to understand the company's accounts, financial reports such as profit and loss, human resource regulations in relation to hiring and firing as well as methods of training staff. These topics are covered in the dual vocational education system as well as at university. There are three main systems that make up Germany's education:

- Basic level where people learn a trade (craftsman)
- Engineers and master level at the Fachhochschule (University of Applied Science) where one can also learn management
- University

All three levels have different access points – people straight from school that aren't good at theory continue with a hands-on trade. The practical engineer can then apply to attend the Fachhochschule and the "theoretical guys" go to university. There is continual support by the education system for people that wish to advance or not advance through their career. It is the examination process however, that determines what qualification a person can use and also, provides an indication to a company whether that person should be hired (with respect to having the right skills). The examinations (standardized for each course) cover practical and theoretical applications. The grading received from the exams is a big influence on whether or not the person is hired and what level of pay to offer.

Business wants the freedom to make their own choices without government telling them what they need. This is why collaboration with the unions and employees organisations is strong. Business wants to determine what they should pay, who they work with and how they work. Therefore, education is of interest to business and government only needs to supply the teachers and schools.

This model of education is now being exported to other countries such as China. Haver and Boeker are now exporting this system to Brazil where they have business interests. The company wants people that train with the organization to have higher knowledge levels, understand IT manufacturing and to stay and provide loyal service to the company over many years. The Brazilian education model wasn't providing all these requirements. Haver and Boeker have complimented the Brazilian education system for their requirements in their specific industry (mining).

Dr Festge wasn't a supporter of the "Fit for Partnership" program even though he wasn't familiar with the initiative. He felt that the participants wouldn't learn, "they just walk around looking at many things and don't actually manage." <Dr Reinhold Festge, Haver and Boker> Mr Festge was of the opinion that the program didn't have a practical application. He was also dubious of forming alliances: "German industry is not willing to give all their secrets to third parties without pay. Why should the country train somebody and develop them and have them as a competitor in the next two years? I don't want to form alliances." <Dr Reinhold Festge, Haver and Boker>

Dr Festge felt that alliances weren't necessary to find new markets overseas and stated that "I can go on my own. Past experiences with alliances and partnerships were always negative. German companies don't want to share." Haver and Boeker had a small start-up company in Australia (mining industry) and it was found that Australian companies were not interested in cooperating with them based on the fact that they were viewed as competition. Usually partnerships are driven by the other company "that wants something you have."

Haver and Boeker have been in Brazil since the 1970's and their specialist areas of packaging and screening for the mining industry have all been developed in that country. Dr Festge was adamant that he didn't need a Brazilian partner, he had his Brazilian employees. For example, big machines can do 4000 tonnes per hour, in Brazil, the machines do 20,000 tonnes per hour. "This cannot be developed in a place like Germany where your customer is thousands of miles away. I have to be close to the customer – the ideas they have, the difference in product and raw materials, the mentality is different, the climate and temperatures are different. One must adapt to different countries." <Dr Reinhold Festge, Haver and Boker>

Dr Festge is Managing Partner of Haver and Boeker but insists on travelling to countries to meet his customers. He stated "if I want to know what is going on, I have to be out there." Even though Dr Festge can't see every customer but he makes a point of doing overseas trips every year. There is also support from sales departments.

Export opportunities are often investigated through networks. For example, opportunities in Canada often have Australian companies already established in the market and Haver and Boeker's business unit in Australia would look into the opportunity and decide on companies to meet. Trade shows, fact finding tours, publications, mailing and internet strategies are also a large part of finding export opportunities. The industry's professional association may have some information but in general "it is our business, ideally we don't want anyone else to know about the project." <Dr Reinhold Festge, Haver and Boker> Dr Festge was not a believer in receiving help from government or consultants on how to improve his business. He stated "it's not our style and not our approach."

Haver and Boeker has a strong brand. Dr Festge stated that "we are specialists and everyone knows this. We sell installations and are known throughout the industry." Traditional methods of advertising are not relied upon but rather, the reputation of the organization. Marketing methods are totally different to what one might find in a consumer market. Social media (LinkedIn) is considered by Dr Festge as just an opportunity to be "approached by head hunters and to lose good people." He went on to say that "there are no advantages in social media. Haver and Boeker attend specialised industry shows that are attended by up to 500,000 people, of which I need 5000 of them." The company chooses to promote what they do at universities and industry seminars.

All employees are sourced from the town of Oelde and the surrounding areas "and we keep them and develop them." <Dr Reinhold Festge, Haver and Boker> The company has an excellent record in training (one of the top 10 in the region). It is not necessary to seek qualified people from other regions. This same principle is applied to other nationalities that work for Haver and Boeker.

Dr Festge's qualification includes a medical degree. He entered the business through marrying into the family that owns Haver and Boeker and also has an economics degree from university. He considers it his duty to ensure that the company stays in family hands.

### 10.3.6

#### Gerhard Schubert GmbH

**Destination:** Crailsheim, Germany

**Contact:** Hartmut Siegel (Director of Sales) and Heinz Schweitzer-Pullar (Area Sales Manager, Australia and New Zealand). Gerhard Schubert GmbH.



Photo 6: Gerhard Schubert  
Source: <http://www.gerhard-schubert.com/en/press/143>

Gerhard Schubert GmbH produces robotic packing machines. These machines will load, close, and label as well as perform the functions of palletizing, thermoforming and sleeving. The company is currently undergoing expansion with an extension to the existing factory (an extra 10,000 square metres) that will double turnover by 2020. Employing 700 staff, all components and final assembly is in Schubert's factory in Germany. The company does have manufacturing partners and they are within a 100 kilometre radius of head office. There is no manufacturing overseas, and customers value the fact that the machinery is produced locally under high quality standards. There is high manufacturing depth meaning everything is made by Schubert including all hardware and software. It is a more effective and more efficient competitive strategy.

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There are approximately 1000 employees worldwide with the Schubert group having a presence in the USA, United Kingdom, Canada and three other areas throughout Germany (apart from Crailsheim). All packaging machines are individually designed according to customer specifications, including colour. When customers require a customized, complete line of machinery (a turnkey project), it is not unusual for Schubert to seek help from their overseas subsidiaries to project manage their client's needs. This strategy helps Schubert to cover the majority of the market.

Standard componentry is used in the construction of the machines and then assembled together in a unique way so that every machine is different. Each machine will contain 70 to 80% standard components and assembled in a unique way. The final 20% is custom made according to the design.

Schubert is a family owned company and will be celebrating their 50th anniversary in 2016. Gerard Schubert (founder and owner) still works in the company and works from nine o'clock in the morning until six o'clock in the evening. His two sons have taken over the responsibility for sales and marketing, technology manufacturing and design. The grandchildren are also moving through the company and are currently completing apprenticeships in the production area. Siegel stated that the family styled company is the secret to Mittelstand success.

The company produces around 850 robots per year that are incorporated in about 520 framed machines. The company is aiming for over 600 framed machines to be produced each year in the future.

Companies that produce fast moving consumer goods (FMCG's) such as Arnotts biscuits, will purchase around 20 frames that will package 3500 biscuits per minute. For example Tim Tam biscuits are produced in volume, packed in volume and then found in a British Tesco supermarket which is very price sensitive. With Schubert technology, companies are able to ship their price sensitive product around the world to be sold in supermarkets.

Schubert packaging is predominantly in the confectionary, food, cosmetics, drink, chemicals and pharmaceutical industries.

The packaging machinery that Schubert produces is an automation process that replaces labour and manual work. Therefore, Schubert is only successful in countries where labour has a certain price or value or a shortage of people to do the packing. There are no machines in China or India and only very small machines in South America because labour is available and cheap. This will change in the future and Schubert is monitoring these markets to be there when the time is right. The main areas of sales are in Germany and Europe, North America, Australia and New Zealand.

### **Factory tour**

This part of the interview could not be recorded during the factory tour. The following transcription is based on the interviewer's notes.

Schubert has total control over the value chain from the initial order of the raw materials until dispatch to customer. Frames for the modular machines are welded (robotic), individually painted (in accordance with customer colour preferences) and assembled on an assembly line (similar to automobile assembly line concept). Machine modules are then joined together to form complete lines, set up to perform their intended packaging tasks and tested before dispatch.

Construction of the machinery is highly specialized and requires highly trained staff to develop and assemble it. Schubert has their own internal trainee workshop with two full time trainers. Trainees attend vocational education (dual system) two days a week and spend the other 3 days in the Schubert training room. The trainees don't work on the production line until year three of their apprenticeship.

There is also an onsite engineering department that produces three dimensional designs and works alongside the production facility.

The competitive advantage is in the modular structure of the machinery. When market preferences change and packaging may need a different design, robotics and transmodules (TML) can be resized quickly to handle these changes. Greater productivity can also be increased by adding additional modules to the line. Using standard system components allows the company to adapt to customer requirements.

There was a strong social atmosphere among the workers on the production floor. Most worked in teams and there was a relaxed atmosphere and time to greet each other during the tour. Siegel explained that it was the intention of the company to ensure “happy employees which mean productive employees.”

All raw materials and componentry are delivered through a just-in-time approach and the warehouse carries a wide variety of parts to ensure customers can find replacements with the least amount of downtime. Schubert will even offer to buy back older machines to ensure parts for certain customers.

A training service is also offered with each sale of packaging machines. Customer operators can come to head office and work on the training machine and perform maintenance functions until they are familiar with the machine.

### **Strategic planning**

Future capacity will be doubled with new factory completion and increase in sales teams.

### **Innovation**

Many of the improvements to innovation will come from the workers in the production process. There is a formalized innovation system that allows staff to submit proposals and there is a dedicated manager that handles these submissions. The ideas are screened and those that show promise are developed further. The decision on which development to pursue is mostly influenced by efficiency and cost saving concerns.

As a family business, the company owner, his sons and their grandsons are available on a daily basis to discuss customer needs. They are also present at exhibitions (trade shows). There is no formal way to deal with customer ideas other than through direct contact and communication is on a frequent basis where ideas are exchanged and discussion ensue about development.

Schubert does not deal very much with universities regarding innovation. Much of the innovation is driven in-house. The only contact with universities is through education of the company’s mechanical engineers that attend a 3 month on-the-job and then 3 months in an academic environment over 3 to 4 years. There is no product development however, with universities.

Siegel stated that the degree qualified person is valuable but “at the same time we need skilled workers to make the machines.”

### **Alliances with Australia**

The viewpoint on this topic was that Schubert already shares their technology by supplying Australian companies with equipment. There is no collaboration on innovation regarding products or processes, only in customizing machinery for client needs.

With regards to entering China through Australia, Siegel stated that “those thoughts are there.” There is the possibility to manufacture in Australia to service Indonesia rather than China.

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### **Marketing**

Schubert brands themselves as “quality, flexibility and innovation in the packaging equipment industry.” The company see themselves as a determining force and leader in the future of packaging machinery.

The main marketing strategies involve trade shows, the internet, social media (youtube, facebook, twitter and LinkedIn) and assorted printed material. The marketing department is driven by Gerald Schubert and his son Gerhard Schubert. They are the face of the organization. There are no specific functional departments where there are sales, manufacturing or other departments – this is a family company.

The company is about to launch a survey of their customers regarding the value of their brand. The survey will also include Schubert employees and managers. Results will be discussed in a management meeting and strategies will be put into place to correct any misconception about the Schubert brand - where does the company stand now, what do employees and customers think of the company and how will Schubert bridge the gap.

The culture of the organization has changed. Years ago, the management was autocratic but it has developed a much more open style with personnel and customers. The fact that the company is now asking for perceptions of the Schubert brand is in itself, a big development.

A key message in Schubert’s marketing campaign is “we can pack your product” and the company has the capability “to do everything.” The machines are so flexible, they can handle anything from bottles and chocolate bars to medical products.

### **Corporate cultures**

Schubert is involved in sporting and cultural community events. This may be a weekend in the city involving such things as theatre, music and culture and the company would sponsor a major part of these events. The main reasoning for this is to “maintain the profile of the company in the community, raise the profile of the city and attract people to move to Crailsheim.” <Hartmut Siegel, Gerhard Schubert> Schubert is in competition with other companies in the region for skilled labour and new apprentices and has a connection with local schools to attract the next wave of school leavers. Companies in the region will exhibit themselves and job possibilities, hold open days and guided tours for parents and children and compare what is available on the market.

The perception in the Carlsheim community is that working for Schubert is definitely high profile. Employees stay with the company for 30 years. There is a photo wall of all employees, the majority serving at least 20 years.

### **New market opportunities**

About 6 years ago Schubert started a packaging service company to take advantage of the growth in small beer brewing companies. A packaging service was offered to these smaller companies to package their beers for export. These companies don’t have the volume to afford an actual packing machine and so Schubert offers a contract packaging service to label bottles, package and export to over 140 countries.

## 10.3.7

### Liebherr-Werk Biberach GmbH

**Destination:** Biberach An Riz, Germany

**Contact:** David Griffin, Sales Director, Liebherr-Werk Biberach GmbH



Photo 7: Liebherr

Source: <http://www.aggman.com/investments-interest-in-liebherr-products-result-in-positive-conclusion-after-bauma-2013/>

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Due to confidentiality concerns, this interview was not allowed to be recorded. The following information is compiled from the interviewer's hand written notes.

The Liebherr Group is a group of more than 130 companies on every continent of the world. With a workforce of approximately 38,000 people, the organisation turns over E9 billion per year.

The company is 100% family owned. Liebherr's core values include:

- We are independent
- We are a trustworthy partner
- We are innovative
- Our employees are a key factor in our success
- Highest quality in everything we do
- We accept responsibility

Liebherr is a vertically integrated organization and is involved in producing the following products:

- Construction cranes
- Wheel loaders
- Hydraulic excavators and articulated trucks
- Concrete technology
- Mining excavators and trucks
- Mobile cranes
- Duty cycle crawler cranes and deep foundation equipment
- Crawler cranes
- Crawler tractors and loaders, telescopic handlers
- Port equipment
- Ship, floating and offshore cranes
- Machine tools
- Transportation technology
- Aviation systems (landing gear)
- Refrigerators and freezers
- Components

Started by Hans Liebherr, the company has a history and a culture of determination. Hans Liebherr was considered a tough and innovative person. His motto was "if you want quality, do it yourself."

The company has a flat hierarchical structure which allows for quick decisions.

Management has always attached high importance to in-house core competencies. Producing everything in-house has major advantages in controlling the capabilities and quality of the product range.

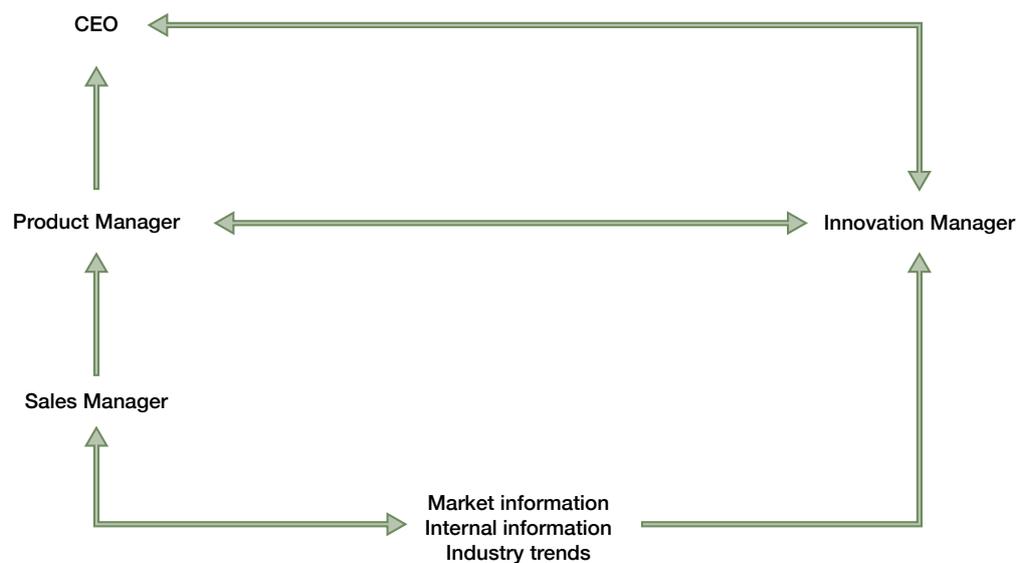
Strategic planning is ongoing. For example, extensive research was conducted on entering the China and Indian tower crane markets. The decision was to concentrate on India and not pursue China. Indications that influenced this decision were the growth in home buildings, construction of more power stations, a change to a progressive government and an upswing in the Indian economy. A business plan was developed and stakeholders engaged in Pune (India) to begin making cranes.

Profits are always reinvested back into the business. The majority of this reinvestment is into the production facilities (to maintain high technical standards and quality) the sales department and service network.

Liebherr's USP is the ability to produce components and systems for machines in-house. This provides the opportunity to offer customers customized and reliable solutions from a single source.

### Innovation

The innovative process is shared within a number of departments. The following diagram indicates the main stakeholders and their reporting structure:



All potential innovations need to be explained and justified. Liebherr employs ‘wirtschaftsingenieurs’ which are industrial engineers with disciplines in both engineering and economics. Their knowledge in these areas, as well as their skills in argumentation and decision-making enables them to build bridges between these disciplines. Their interdisciplinary expertise qualifies these people for executive positions in Liebherr.

Wirtschaftsingenieurs are important in innovation and are useful in determining the commercial viability of a new idea or market.

A comprehensive customer relationship management (CRM) system is also maintained and information is regularly contributed. Sales people enter a travel report of their activities with customers, business developed, enquiries and competitor activity. It is a knowledge based system that is used to generate ideas for future R&D.

### Corporate culture and community involvement

Liebherr maintains a close relationship with the local community in Biberach and relies on its core values as a guide to their social responsibility. Griffin stated that “Liebherr employees are looked after” and many employees have worked for the company over 40 years. There is a sense of permanency in the company and the family has stated that they are “not in the business of closing down factories.” The intention is to maintain head office and production facilities in Biberach.

Liebherr’s recent expansion into India is a good example of their support for the local community. The company has embarked on building a school to not only provide education but also indicate to the community that the company is intent on staying long term and will require trained staff sourced from the area.

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### **Management and leadership**

Liebherr staff who are responsible for a number of people (>25), attend training which is usually provided by an external consultant that has been associated with the company for some time (there is a relationship built up over the years). Due to the period of time that the consultants have been associated with the company, they have insights into the business and an understanding of how it operates. The training courses are mostly short term and will be delivered over a 3 day period.

The style of training is discussion based. Brainstorming ideas is common and there is an open culture when expressing opinions and views.

Management at the company want to demonstrate a leadership philosophy (again, based on the company's core values) and endeavor to demonstrate this commitment by living the company values. Displays of wealth, superiority and elite status are not encouraged and the Liebherr family prefer to "drive ordinary cars to work and stay at economical hotels when travelling on business." < David Griffin, Liebherr-Werk Biberach GmbH>

Everyone in the company is considered important – from the floor to top management.

Griffin (from Ireland) started with the company in Killarney, Ireland as a trainee sales engineer. He has also completed the Diploma in Industrial Engineering and Diploma in Business Studies. The company has also allowed and encouraged Griffin to complete a Masters in Technical Management which was also paid for by Liebherr.

The company is a strong believer in practical application of skills and encourages a practicum period during a person's study. Managers in Liebherr have come through the ranks.

### 10.3.8

#### Wohner GmbH

**Destination:** Rodental, Germany

**Contact:** Mirko Kaiser Marketing Manager, Sales International, Wohner GmbH



*Photo 8: Wohner*

*Source: <http://www.rumsey.23rd5th.com/product/2?name=Wöhner+60-mm+Busbar+System>*

Wohner is faced by the same problems as Australian manufacturers in regards to price pressures from the market. The company produces quality electrical components (at a higher price) but its international market, especially in India, demands a lower price. "Indian customers don't think about the fact that the product is produced in Germany, that high quality materials are used and that they will save on Wohner products in the long term."

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<Mirko Kaiser, Wohner GmbH> For some segments in the Indian market, aggressive pricing is the main competitive strategy. Wohner counteracts this with their unique '60mm busbar' system that is considered a world standard and has unique benefits in its application.

There is a constant need to innovate in the company and Wohner pays close attention to their customers. Kaiser also stated that the CEO and company owner, Frank Wohner, had "a really good feeling about market needs. Many innovative ideas are driven by Mr Wohner - he is the boss and he is the one that says we do it." Kaiser stated that this system of idea generation from the company owner was a good thing for Mittelstand – "if it is your own company, you don't have to ask anyone else to approve investment funding. Of course, the company board may be involved but if there is a really good idea, the opportunity is there to develop it in the company." The usual process is then followed once the idea has support:

- The sales department is consulted
- Market research would be conducted (through the sales department) within Germany and the international market
- Subsidiaries would be involved to gauge the potential in their markets

Innovation is Wohner's competitive advantage. Kaiser stated that "Chinese companies for example, just concentrate on the product and can produce at a low cost but they don't have the knowledge or capability yet to look at the market and develop a solution. It costs money to do R&D with the right people. If a company is copying products, they don't need an R&D department." In 2014, Wohner has launched the 185Power system which is a big investment for the company regarding R&D and marketing.

Frank Wohner (CEO) is hands-on and travels a lot throughout the world visiting customers and looking at the competition. When he sees something that he thinks would be a good idea, he introduces the concept to his own company.

### **The Wohner culture**

Management is close to their staff. Wohner is not a large company with only about 200 employees (in Germany). There is a large automated assembly line but a lot of components have to be assembled by hand. The company likes to employ women for this manual work because they are more flexible with their fingers than the men. All the workers are responsible for the quality of the product and there is a continuous sampling of components for quality and standards compliance.

Frank Wohner (CEO) comes to work every day, speaks with his staff about current production problems. Staff members are also encouraged to speak with Wohner when they feel it is necessary regarding work and personal situations they may be facing if they can't get a satisfactory response from their immediate supervisor. His office is always open.

Wohner has a vision and direction for the company. Sometimes the vision is hard to follow but he knows what he wants to do over the long term. Consideration of future expansion globally is a major aspect of this long term planning. Wohner constantly keeps himself updated on the industry, market opportunities and ways to provide systems and complete solutions for the customer. Wohner is also very receptive of ideas that the sales team bring back to the company and listens to their advice on product improvements for overseas markets.

There is a strong culture of reporting in Wohner. Observations, customer requests, competitor intelligence and idea documentation is presented to the IT and R&D department to help in the development of products.

A high level of technical capability is required to offer solutions to customers. Technical staff observe the application of Wohner products with the customer and are learning day by day. Solutions that are developed are customized according to the customer's way of thinking. German solutions developed for German situations are not forced on overseas customers. Wohner technology is adapted (as closely as possible and depending on cost) to suit individual situations in the market.

There are no physical departments within the company. For example, sales works seamlessly with production and R&D. Wohner is a one family company and all information and knowledge is constantly shared and made available. There are regular meetings (minimum one per month) between sales and product managers to discuss customer needs as well as the development of new products. These meetings are given very high priority. Frank Wohner (CEO) is unable to attend all these meetings but receives a report summarizing strategies and outcomes.

Staff is also motivated to present ideas. Production workers are free to express their opinion if something doesn't make sense. They are happy to speak with their supervisors and contribute opinions. Kaiser stated that "everybody here knows that money comes into the company through the customer and they have to do a good job. If everyone works together, the company is successful." Staff understands that the company could easily be closed and moved to China. Wohner (CEO) however, chooses to produce in Rodental, Germany and has promised to "never move out." To achieve this, the company needs to be innovative not only in production but also the whole organization.

If Wohner (CEO) is challenged on the viability of his idea, a common response is "it's my private money that I'm burning. Let me do this and you will see." Most of the time, Wohner (CEO) is right.

### **German-Australian alliance**

Australia is well regarded in Germany and the rest of Europe.

What is important for German companies is that "they manage to keep their technology in German hands." < Mirko Kaiser, Wohner GmbH> Wohner sometimes has to produce close to customers. Some countries (such as in Brazil) request that Wohner produce overseas to avoid taxes on imported products. This of course, requires training people from that country. In undeveloped nations there is always a threat of having German technology copied.

Kaiser stated that "Australia is an open country. It is however, far away." On the topic of Australia being high cost, Kaiser said that Wohner doesn't always place emphasis on cost but rather, the clients' needs. If there is a profitable market requirement for Wohner products in an industry in Australia, the company would establish a presence for logistical and close-to-customer reasons.

Wohner would be interested in Australian innovations. A partnership in further product development or distribution of a finished product to larger markets would be of interest.

### **Presentation on Wohner GmbH**

Mr Kaiser produced a powerpoint presentation on Wohner GmbH. The following information was discussed:

- The company has been operating for nearly 85 years in Rodental, Germany.

The founder (Frank Wohner's grandfather) developed a socket fitting for a light bulb on the kitchen table. He then used his bicycle to ride 85 kilometres to Siemens' office and present the innovation in 1929. The first order came from Siemens and this represented the start of the company Wohner. Initially there was also metal manufacturing, electroplating and plastic moulding. Frank Wohner regarded the metal manufacturing and electroplating "too dusty" and divested the business unit. The plastic mouldings unit was moved to another location (5 kilometres away). Wohner feels the future is in clean manufacturing.

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- The 60mm busbar system was developed in the 1980's and is now the industry standard.
- Current priorities for the future of Wohner:
- Continuous product development and improvement. Many products developed have been adopted by the competition which is an indication that demand exists and the product (or improvement) was a good concept.
- Branding is important for the future of Wohner. Resources are being directed to creating an identity. Wohner wants customers to view the company as innovative and with an ability to produce products ahead (in time) of market needs.
- Continue with international expansion.
- From 2000 there was a transition from a special components manufacturer to a system supplier. The emphasis is now on providing solutions and systems to the customer, not parts.
- Wohner is currently operating internationally in Germany, France, Great Britain, USA, Austria, Italy, Spain, Netherlands, Switzerland, Brazil, China and India. One important area of learning for Wohner is the differences in cultures, variety of power distribution methods and conducting business in foreign countries. Mexico is also a future market that the company is considering, "many German companies are operating in Mexico now that VW is producing there. Suppliers are required to provide components." < Mirko Kaiser, Wohner GmbH>
- About 300 people (including German domestic staff) worldwide turn over approximately \$80 million internationally - a good indication of the competency level of Wohner's staff. With a bigger presence internationally (especially China), innovation has also increased and Wohner has found it more difficult to protect IP. There are blatant copies not only of the product, but also marketing material. Protecting IP is a difficult task and uses large amounts of time and money. Wohner does not choose to pursue competitors that breach IP laws but rather, use the resources to innovate and develop better distribution channels.
- Wohner's customer focus "is on machine builders." The majority of Wohner's sales turnover (43%) comes from the domestic market (Germany). In just over 10 years, the company has grown from E35 million to E82.4 million in sales. A future goal is to reach E100 million in turnover. Wohner's business units include: control technology, energy distribution, key accounts (for example, Siemens) and renewable energy.
- Siemens and Wohner have 85 years of history and often partner on innovation. Confidentiality agreements are implemented, meetings are usually held outside of work hours and care is taken to keep ideas in the company. Patents are shared between the companies.
- Wohner has become marketing orientated and are currently implementing strategies to build the Wohner brand. The company has begun to think about what their brand means. Research had been conducted (by an independent organization) in the following areas:
- Determining customer perceptions of the Wohner brand (sample size of 300 customers). Objectives of the research determined awareness levels, image projected and what the brand meant. Wohner was ranked first, ahead of their main (and larger) competitors Rittal and Hager.
- A survey of employees to determine current brand image and strength, desired brand image, opinions on living environments and employee satisfaction.
- Workshops were conducted to analyse results and develop positioning strategies for the Wohner brand. Guiding principles relating to product design, architecture (company buildings) and corporate design were also decided on. Wohner's brand identity is summarized in the statement: 'Wohner enables business users, through fascinating and pioneering solutions, to safely use electrical energy.'
- The corporate identity of Wohner is now 'a cosmos' that defines who the company is and the market boundaries it operates in. Inspiration was drawn from other successful companies that Wohner

aspired to emulate (for example Audi, B&O, Dorn Bracht and Apple) and developed ideas based on these organisations to create an image in product style (colours: white for openness, blue for history of the company and orange to highlight), company buildings and position in the market. The company has an individual personality.

- Wohner's differentiation: quality, innovation and design. With Wohner's development of a recognized brand name to assist in differentiation, the market is still very price driven (especially India) and will often take the cheaper choice. Kaiser stated however, that brand recognition will contribute to supporting a higher price point. The sales team at Wohner have a difficult time of convincing price sensitive customers to pay a higher price and consider the long term benefits of Wohner products – longer lasting, save space, save on time for installation, save on cables, saving on power and time saving in regards to maintenance (up to 50%). Germany's advantage is "always thinking of the future. It is better to buy something more expensive with better capabilities (which may be needed in the future) than just rely on low price." < Mirko Kaiser, Wohner GmbH>
- Kaiser was of the opinion that market research and brand building was a recent strategy for Mittelstand companies and felt that it was a definite advantage to the organization. He felt that technical people didn't place importance on brand marketing and thought its effect on sales was hard to measure. Frank Wohner however, had come from a marketing background and had experienced business success based on marketing strategies. Feedback from customers regarding the branding was also very positive.

### **Management and staff**

Kaiser had worked previously for Siemens, a company much larger than Wohner. Although Siemens had strong management, they weren't as strong as Wohner. Because Siemens were large, their people were not as focused because it was not their company whereas Wohner had the advantage of doing business under their own name (meaning the manager's name, Wohner) and operating worldwide.

Staff on the floor are sourced from the area (Rodental) but the company does find it harder to employ quality managers – competition from other large companies (especially in car parts supply) are also offering management positions in the area. There is also the problem of young people seeking other positions in large cities such as Frankfurt and Munich. They are often employed early during their studies. Salaries are also less in the regional areas. Kaiser however, found advantages in working for a company like Wohner – he was born in the region, the internal company culture is like a family, it is exciting to be part of the branding of Wohner. It is a feeling of being comfortable. A big influence is the fact that Frank Wohner has no intention of moving elsewhere and this provides security for Kaiser unlike his time in Siemens when there was a restructure every year. Wohner is a mid-sized company (not too big or too small) and Kaiser has the advantage of direct contact with the company owner Frank Wohner (CEO). The speed of decision making is also a benefit of working at Wohner.

Kaiser also enjoys the autonomy of his job and that he works with a good team. There is a synergy between sales people and for most decisions, they don't have to go to the CEO. (Frank Wohner is also very open to the sales team's suggestions, research and opinions on existing and future business. Frank Wohner has very strong leadership skills and has a definite vision of where he wants to take the company. This strong mindset makes it easier for the rest of the company to follow. "Having a strategic understanding of where the company wants to be in 5 years makes it easier for staff to comprehend why certain decisions are made now." < Mirko Kaiser, Wohner GmbH>

Kaiser does not have a formal management qualification (he would like to complete an MBA but does not have the time) but has learnt on-the-job. As a member of the board at ZVEI (the Electrical Manufacturers in Germany association), Kaiser attends seminars twice a year to discuss developments in the industry around the world and to meet managers from other companies. He stated that "the association is also strong enough to influence politicians in Berlin." ZVEI is also involved in industry

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standards. Kaiser works in the international section of the association and helped form a management board that involves the Mittelstand companies from different industries to discuss opportunities in overseas markets as well as understand the current trends that are evolving in Germany and the European Union. For example, ZVEI is currently fighting the proposal to drop the 'Made in Germany' slogan for 'Made in the EU.' The association has its advantages by providing easier access to not only the country's politicians but also embassies from foreign countries that companies may be operating in.

There is a large network of support bodies for Mittelstand throughout Germany. Mittelstand companies that may be operating in the same market (overseas or domestic) don't view themselves as competitors but prefer to work together.

Kaiser suggested that being a member of ZVEI allows a business person access to a variety of sales and management people that offer advice and provide insights on how they are doing things. In comparison to the MBA which is just theoretical study, involvement in ZVEI provides more helpful and practical direction on how to manage. "When friendships are made, there can be plenty of helpful advice and a willingness to teach you something." <Mirko Kaiser, Wohner GmbH>

Kaiser also attends short courses at the Chamber of Commerce (2 days up to a week) on topics such as sales, customs regulations and manufacturing skills.

Frank Wohner (CEO) has worked in a number of positions with other organisations (marketing company) before taking over Wohner. He has a qualification in marketing.

# 10.3.9

## Fachhochschule des Mittelstands

**Destination:** Bielefeld, Germany

**Contact:** Prof. Dr. Oliver Kruse, Fachhochschule des Mittelstands (FHM) on the topic of Offensive Mittelstand: Corporate governance for SME's (partners with BVMW).

Offensive Mittelstand is a society (free to join) created to bring company managers together with the intention of improving the organizational performance and labour component of their company. Through the Ministry of Labour and Social Affairs, the society originated from a need to improve the labour conditions (WH&S) within companies.

The mandate for Offensive Mittelstand today has developed from improving labour conditions to improving the whole of the organization with respect to performance. Eleven areas for analysis are defined and determine the performance level of Mittelstand companies. These areas are documented in a 'self-assessment instrument' and include:

- Strategy
- Risk assessment
- Management
- Liquidity
- Customer care
- Organisation
- Corporate culture
- Human resource development
- Processes
- Procurement
- Innovation

Each company self-assesses itself (or with a consultant) on the above areas and determines where its weaknesses exist. Strategies are then put into place to rectify the poor performing area(s).

To ensure that these weaknesses are identified and corrective strategies formulated, 'transfer structures' are required. Dr Kruse defined these transfer structures as:

- A system of networking within a region and,
- Provision of experienced advisors (labelled Offensive Mittelstand consultants or, OM Consultants)

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OM consultants that wish to register with Offensive Mittelstand and offer advice to its members must first undergo a one-day training program. This program explains the following:

- How to work in the FHM society and use their 'instruments' of analysis in the defined eleven areas. OM Consultants are experienced, possess high knowledge levels in many of the eleven performance areas specified and are practicing consultants in their specialized field.
- It is not possible for one OM consultants to be an expert in all the eleven performance areas. OM consultants that identify a weakness in areas outside of their expertise will need to recommend the appropriate consultant with the relevant skills.

The benefits to a Mittelstand company (SME) include the following:

- The company can assess themselves and recognize areas of strengths and weaknesses.
- It is not an audit but rather a low level performance analysis and acts as a starting point for further improvements.
- Family businesses are involved with day to day operations and are time poor. A total analysis of the eleven areas can be completed in 90 minutes.
- Results of the assessment indicate the first direction for improvement.
- The business can decide in their own time when they want to start strengthening the identified areas of weakness.
- Once the assessment has been completed, the company contacts Offensive Mittelstand for certification of completion and is then listed on offensive Mittelstand's website as a 'Good Offensive Mittelstand company.'

The benefits to OM consultants include the following:

- Additional avenues of paid work for the consultant.
- The OM consultant is listed on the Offensive Mittelstand website as a recommended consultant for a particular geographic area.
- The OM consultant has free access to the assessment instruments to analyse a company's performance.
- The assessment instrument is supported and branded with the Office of the Mittelstand and Ministry of Labour insignias.
- Large companies and organisations such as the labour and employer parties, health, insurance and government agencies accept and recommend the assessment instruments. This recommendation makes it easier for the consultant to work with the client (and gain new clients) knowing that the process is backed by government.
- The assessments have a proven record of success.

If an SME's requires professional support in developing strategies for improving identified weak areas, they can access the Offensive Mittelstand website and search in their geographic area for an OM consultant.

Although this program is aimed at all SME's, it is especially targeted at small companies. Larger companies tend to have specialized departments (such as human resources) to help with the process,

whereas smaller companies lack this resource. Normally small businesses have managers and leaders that are expert in a few fields of the business, but not all. For example, they could be technical or innovation experts or even master trades men, but lack the skills in finance or management.

Skill enhancements may require training. The Offensive Mittelstand can offer options such as:

- University
- Training centres
- External training centres

Offensive Mittelstand channels money from the Federal Government in support of training for small businesses that have used the assessment instruments under the guidance of the Offensive Mittelstand organization. Payment for the training is mostly subsidized by the government but the small business also pays a nominal fee.

From experience, those companies that complete the assessment instrument, admit to their weaknesses, seek help from OM consultants or further training and usually end up being the good companies. Even if the company is performing well, it can still be part of this program and look for potentially weak areas and implement a continuous improvement strategy.

Promotion of this Offensive Mittelstand program is primarily through the OM Consultants who advertise in their regions and contact organisations to offer their services. The organization also has over 240 partners from various industries and these companies inform their clients or supply chain members of the program's availability.

Dr Kruse stated that the Offensive Mittelstand endeavors to maintain independence from the government to ensure sustainable development of their program. "It is important to demonstrate that the organization has developed a real track record of success and progress in this field of business improvement."

Characteristics of Mittelstand small companies in relation to the interview questions:

- Strategic planning

Very small companies don't think about strategies very often or consider a strategic perspective due to the following:

- Ongoing concerns with the day-to-day operation of the business and,
- Time constraints

Managers of these companies may have a plan in mind but nothing is ever documented on paper. If training in planning was required, it would more likely be short term planning, such as on a daily or weekly basis.

- R&D and innovation

Research and development depends on the type of company. Small trade companies (such as an electrician) would attend trade fairs in major cities to observe and stay up to date on innovative products that had been developed in their industry. Mostly however, innovation is driven by the customer who

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wants the latest developments for their needs. Customer demand and discussions with the small company drives incremental innovation and motivates a search for new products and processes. There is always a strong partnership between the customer and small company. This also highlights the advantage of being a small company – the ability to be flexible and understand what the customer needs (ongoing customer relationship building).

As in Australia, many small to medium sized businesses find the university business and management courses unsuitable for their needs. Currently Germany is developing a model to create more practically orientated organisations to overcome this situation. Dr Kruse stated that “they are considering creating institutions that are related to universities yet able to reach the small to mid-sized company and collaborate on innovation in a cost effective manner.”

- Training SME managers

In Germany, people are trained mostly through the following systems:

- The dual system
- Apprentices are employed by a company and attend classes twice a week.
- On completion of their apprenticeship, there is the opportunity to further train as a ‘meister.’
- The training is progressive and the worker is prepared when they face the situation of managing people and their own business.
- The university system
- There is a dual styled system as well where a student will attend university and during their holidays, work in a company applying what they have learnt.
- There are also additional courses offered in entrepreneurship.

Germany is currently experimenting with including management and business units in the apprenticeship programs to prepare the apprentice for an entrepreneurial career.

### **Australian – German alliances**

There is definitely a potential for alliances especially in this globalized world. Opportunities exist to work together in the area of distribution of products or provision of services to customers in Australia and/or Germany. Working on an innovation together although possible, is less likely.

In regards to using Australia as a base for business with Asia, Dr Kruse stated that German Mittelstand is “conservative and afraid of moving their knowledge to China. Eventually they entered China for two reasons, the size of the market and low production costs.” He further elaborated that “nobody goes to China now for their low wages, inflation is very high at 10% and it has become expensive to operate there.” Many companies still maintain a presence in China due to the domestic demand but production of goods and services is now centred in Bangladesh, Vietnam, Thailand and India.

Australia’s high labour cost is a big problem for an alliance. Australian companies should focus on products and services that countries around the world (including Germany) know that Australia is renowned for. The point of differentiation that these products are characterized by must satisfy the positive perceptions that customers have of Australia.

### **Marketing**

The term 'marketing' is not a word the Offensive Mittelstand uses very often when discussing business. 'Marketing' is perceived as an English word and the term 'customer relationship' is used in preference by mid-sized companies because that is what they are doing – building relationships.

Relationships between Mittelstand companies and customers are long lasting because there is a deep connection between the customer and the company. This connection is based on personal attributes of the company manager and the quality of the work performed and services provided. This results in a high level of client satisfaction. Studies in Germany have shown that high customer satisfaction levels equate to economic success and a competitive advantage.

Branding and positioning is only common in mid-sized companies that are world leaders (known as 'hidden champions') and their success is built on a narrow focus. Smaller companies in Germany do not have the resources or highly defined position in the market to build a brand, but they can maintain a market position in their geographic region. They also follow a focus strategy based on quality.

### **Community involvement**

Many small to medium sized companies involve themselves in corporate social responsibility. As an example, small enterprise commonly offer funding for a local sporting or school event in their immediate geographic area to create awareness within the community. This is valued more than printed advertising.

### **Human resources**

The final decision on whether to hire a person is always the responsibility of the manager. The main attributes that are sought after include:

- They have the necessary qualifications
- The candidate fits in the company. The requirement to fit socially is often more important than the skills they possess.

Hiring staff that do not fit the organization's culture creates problems due to the strong labour laws. There is a saying in Germany that states "it is easier to get rid of your wife than your employees." <Prof. Dr. Oliver Kruse, Fachhochschule des Mittelstands (FHM)>

Sourcing appropriate staff is predominantly done through a social network. Managers will often ask their employees if they know of someone who would be interested in working for the company. Recommendations are considered important methods to find staff.

Training of staff on important area such as technology is often provided by the supplier. Managers that recognize skills gaps with their employees (refer to the 'assessment instrument' previously discussed) will offer training through an external provider.

### **Qualifications of SME managers**

Historically the manager / leader had no qualifications and gained recognition for the position by working in the job. This is quickly changing now and companies are looking for managers that have qualifications (university or vocational education) and knowledge through experience.

In Germany, low skilled personnel are gradually being replaced by machines to increase productivity. In a high cost economy with a requirement for technology, innovation and value adding, education has become even more important.

### 10.3.10

#### **BVMW - The German Association for Small and Medium Sized Businesses**

**Destination:** Berlin, Germany

**Contact:** Dr. Hans-Jurgen Volz, BVMW The German Association for Small and Medium Sized Businesses

Small and medium-sized businesses make up over 99 per cent of all businesses in Germany, create 70 per cent of the jobs, provide 80 per cent of job-training opportunities and develop 75 per cent of all patents and innovations.

The German government is well aware of the contribution small to medium sized businesses make to the German economy. The role of the BVMW therefore is to:

- Represent more than 270,000 businesses with about 9 million employees to help influence political decisions affecting economic conditions. The BVMW works hard on a broad spectrum of political levels, starting with local, regional and national levels, and ending with the European Commission in Brussels.
- Coordinate a network of over 300 regional and local offices in Germany offering personal services to members. Each BVMW Area Manager seeks new business opportunities, supports new projects and intercedes on behalf of a member in dealings with administrative authorities, banks, insurances and other official bodies. There is also a central databases of more than 1,000 qualified consultants, with expertise in economic, financial and legal matters to assist you in business decisions.
- With more than 2000 conferences and seminars each year, the BVMW offers its members excellent opportunities to acquire information, as well as to establish and expand business contacts.
- With approximately 26 offices around the world, the BVMW co-operates with overseas partner associations and conducts business trips abroad to meet with foreign entrepreneurs and organises international conferences on various topics dealing with foreign affairs.

The BVMW has the biggest voluntary membership in Germany.

The skilled labour force that Germany has developed throughout history can partially be attributed to a military influence (speaking from personal experience), where German soldiers carried out orders and were given independence and freedom to make decisions. Soldiers identified with their task and could develop strategies to get things done. These strategies were carried out in a logical step-by-step sequence that ensured results were achieved using the right tools and information. Dr Hans-Jurgen Volz stated that Germans have the ability to „think and find a solution to given problems“. This phenomenon eventually became a work ethic over the decades.

There is a history of ingenuity and the ability to innovate with minimal resources. Dr Volz was of the opinion that not only was the dual vocation education system a contributing factor to germany's industrial success, it was their cultural background that helped them achieve the successes of today.

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The cultural history is an influence on managers who give their employees freedom to innovate and develop products.

Germany has a high cost economy but offsets this cost with high productivity and the social partnership between unions and employers works extremely well with few strikes, especially when compared to other European nations.

BVMW offer management advice to SME's and recommends personnel that are skilled in their field, industry or country (such as South America, Asia and especially Africa) to promote overseas expansion. Communication skills are also offered to Mittelstand family businesses to help with succession planning as the business is inherited from one generation to the next. There will always be conflict on how the company should be managed with each successive generation. BVMW offers direction in this area. There is also the added problem of some children not wanting the stress of running an organisation, preferring to take an inheritance (after selling the company). Further compounding this issue is the aging demographic in Germany and lack of young, skilled workers.

Dr Volz didn't feel that there were different management skills that were used by German Mittelstand companies. In fact, „management skills were the same all over the world.“ What was important was the high use of internships to provide the practical experience necessary.

Mittelstand companies (privately owned) are not driven by the demands of the stock market or the short-term gain requirements of shareholders. Family run companies are privately owned and therefore, not dependent on pressures from the stock market. Mittelstand can plan over the long term.

### **Australian / German alliances**

Dr Volz stated that collaboration was always a good idea. In a globalised world, German and Australian SME's are facing many of the same challenges. Both countries could benefit from such a partnership. Alliances can be arranged initially through the German-Australian Chamber of Commerce in Sydney. Also refer to the BVMW publication if an Australian company wanted to advertise for a partnership.

### **Strategic planning**

Due to the fact that 95% of German SME's are family owned, the concept of family also extends to relationships with clients, suppliers and the workforce. Therefore, all stakeholders will be taken in to consideration when making strategic decisions. This outlook also creates greater loyalty to the organisation.

The main strategic challenges that German SME's face today are caused by demographic changes - there is a growing shortage of skilled workers and a lack of successors to Mittelstand owners and CEO's.

### **R&D and innovation**

Between 2008 and 2010, 54% of German Mittelstand companies brought a product or process innovation to the market. The EU average was only 34%. Innovation is a result of commitment :

- An above average spend on R&D.
- Smaller companies spend twice as much as large companies on innovations.

BVMW supports partnerships between SME's and research facilities such as universities. Most SME's do not have the financial means to start their own R&D department. Instead, SME's can pay public or private research facilities for a specific project. This partnership is also a good source of funding for public research.

The German government also provides tax exemptions for R&D in SME's. This creates a greater incentive to innovate. For the government, this strategy means far less effort than having to distribute public funding for specific projects.

### **Marketing**

For German Mittelstand, marketing is mostly about convincing customers of the quality of their products. Customer relationships is also a major component of the marketing strategy.

Internationally, 'Made In Germany' still counts as a sign of quality. German cars for example, are more satisfying to own according to a survey among 15000 car owners. Although German car companies are mostly large corporations, they rely heavily on technology produced by German Mittelstand.

### 10.3.11

#### **BVMW - Federation of SME's and Entrepreneurs Association of Germany**

**Destination:** Frankfurt, Germany

**Contact:** Joerg von Netzer, Bundesverband mittelstandische Wirtschaft (BVMW). Federation of SME's and Entrepreneurs Association of Germany.

BVMW is a completely voluntary membership in contrast to the Chamber of Commerce (compulsory membership). Members are free to leave and rejoin as they wish. There is a turnover of membership but there are also many long term members as well. BVMW cannot guarantee companies that join the organisation will experience higher sales or profit. BVMW is more of a networking opportunity and includes small, medium and large companies from a range of industries. The variety of businesses can include anything from manufacturing, services (legal and finance), high quality chocolates to anti-mould control in buildings. BVMW has branches that represent regions in Germany and membership therefore, will reflect the region's industry profile.

BVMW doesn't specialise in helping companies that might be experiencing trouble but rather, they can put that company in touch with an identity (usually with the nation's BVMW membership) that could help. The organisation is a focal point for networking.

#### **Australian alliances with companies in Germany**

BVMW would be a good starting point for Australian companies that would be interested in pursuing business opportunities with German companies. Kristian Schnack, Director, State of Victoria Europe Office, is a representative from Australia that works closely (and is a member) with BVMW. The organisation holds events to promote such alliances but their success depends on interest levels from both German and Australian companies. The biggest challenge is contacting the right companies that would have a mutual interest in forming an alliance. This is often hampered by budget constraints and a hit-and-miss communication strategy.

Australia is considered (by Germany) as a country equal to other European nations and doesn't have „IP problems that are found in China and so on.“ Legal systems of both countries are similar, „it's just the distance that poses a challenge.“ <Joerg von Netzer, Bundesverband mittelstandische Wirtschaft (BVMW)>

Von Netzer stated that Australia was regarded as „a fantastic place to invest“ and referred to the BDO – International Business Compass of where to invest. Australia is ranked in fourth place, Germany is on a lower ranking of 19th. German companies refer to this chart when considering overseas opportunities.

As already mentioned, communicating with relevant organisations is a problem (outdated contact details, wrong organisation, didn't receive the information). Von Netzer explained the analogy with the ‚Uber phenomenon‘ in America where people could call private taxis through an app on their iPhone. He felt this technology would be useful to „close the communication gap“ between companies

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that wanted to form an alliance instead of relying on the traditional communication methods such as exhibitions and advertising which had dubious success. BVMW wants to contact German companies that are interested in going to Australia (and Australian companies going to Germany), not those that are already there. Databases of organisations are not complete or lack depth of information to develop more targeted approaches. A better sales approach would be more useful but this is hampered by limited resources.

There is also the problem of 'information overkill' that occurs. For example, when there are submissions from investment opportunities in India, Brazil or China all in the one week, attracting German interest is competitive. Many members are unsure of where these places are geographically or have a different perception about the countries themselves (for example India is 77th in the above BDO ranking) even though the investment opportunity may actually be very attractive.

Von Netzer stated that Germany was ranked 19th on the BDO investment index chart due to the fact that „it takes so long for legal actions and red tape to be resolved“ and China was ranked lower due to „it's IP security problems.“

Von Netzer stated that alliances with German companies are possible. German companies however, are reluctant to risk their IP being copied. The Mittelstand is very important to Germany and there is still scope for much more international expansion however, if it doesn't feel right, the company will not go there. BVMW will help with a bridge to new markets through liaising with the host country's representative offices. The program 'Fit for Partnership' is a good example of German companies testing the market before committing themselves to a new geographic area.

If an Australian company wished to initiate an alliance with a German organisation, von Netzer suggested that „the blunderbuss method of shooting at everything would be considered a reasonable approach. Due to the sheer number of companies and Murphy's law that the company who should be contacted is not contacted, it would be better to investigate a number of avenues of contact.“ Von Netzer warned against the information overload phenomenon and contacting potential leads through email addresses such as 'info@.' The approach would need to be supported with relevant contact points such as BVMW or the German-Australian Chamber of Commerce.

### **Support for Managers in Germany**

BVMW offer a range of services to managers that include seminars on management skills or they can offer interested parties 'Forum Fuhrer' where member consultants offer leadership workshops.

BVMW also offers publications on education and marketing for members and BVMW will offer presentations on such topics as 'digitisation of german enterprises' and improving website effectiveness through search engine optimisation (SEO). This presentation was delivered a number of times by Telekom, the largest internet provider in Germany. This is a win-win situation for the company presenting the workshop and the companies attending.

IBWF ([www.ibwf.org](http://www.ibwf.org)) is the umbrella organisation for lawyers and consultants (approximately 800) and offers training and seminars on management topics, knowledge and information and innovation. The large membership offers a wide range of disciplines.

### **Clarification of german organisations**

BVMi: Federal Ministry of Economics in Berlin.

GIZ is the Society for international Cooperation. 'Fit for Partnership' is part of the German Ministry for Foreign Aid and aimed at underdeveloped nations (foreign aid) but it does involve China which is not exactly an undeveloped nation. This may be suitable for Australia.

Von Netzer considered the suggestion that alliances could be forged through any of the following channels as having potential:

- BVMW (contact Mr Joerg von Netzer)
- BMWi (Mr Sven Halldorn)
- GIZ and the „Fit for Partnership“ program and BMZ (who control GIZ)
- German-Australian Chamber of Commerce (based in Sydney)
- Top 100 awards
- ABIE
- Austrade
- BWA ([www.bwa.de](http://www.bwa.de))
- BDI (for large organisations).

### 10.3.12

#### Handelskammer Bremen

**Destination:** Bremen, Germany

**Contact:** Karlheinz Heidemeyer, Director of Vocational Training and Further Training,  
Handelskammer Bremen

#### **Management planning**

Small Mittelstand businesses in general don't strategically plan in the academic sense. They most certainly plan but not in the detail required from a strategic approach. Small business owners (<20 staff, say) are too involved in running the company, getting the work done and reacting to market demands.

If the situation is a small company working for a mid to large sized company, it will then have to play its part in the customer's overall strategic plan. There are however, times when the small business will have to plan (daily or short term) to ensure they remain in the market. Managers of the small Mittelstand companies see themselves differently to larger organisations, they don't see themselves as strategists. They are workers, hands-on and work to create quality in products.

Most of the small company managers are qualified in their field, having come through Germany's dual vocational training system and perhaps even attained higher skills in further vocational education. When opportunities arise to manage these small businesses, the Handelskammer regard these people as highly qualified for the job. For small businesses employing low numbers of people, formal management qualifications aren't considered to be necessary to run a small business. The dual vocational education they completed is considered sufficient.

The vocational education system in Germany is integral in training people. No one works unless they have received training. "Everyone knows the rules. German people are quality driven. Quality is regarded as a cultural characteristic and with Germany being a technical nation, companies try to get the best results through high quality work skills. There is a strong link between this expectation at work and the education system." <Karlheinz Heidemeyer, Handelskammer Bremen>

#### **Germany's Dual Education System**

A person is trained on-the-job and at the same time, trained at a vocational education centre that provides the theoretical component of the job. It is not only trade and technical based skills that are taught; soft skills such as management and business are also included. The trainee also learns to engage in the spirit of the company, understand the methods of work, absorb the company culture, learn social interaction and take pride in what they do. Heidemeyer stated that "this is not something you will learn from a professional training school."

There are many managers in small to medium sized companies, even in big industrial companies, that never attended a university or did a management course. They came from the dual vocational education system.

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Management and leadership skills are often instilled throughout the trade courses and are learnt on the job. Throughout Germany there are approximately 350 professions that are taught through the system. At any one time there are around 1.5 million trainees and approximately 500,000 new trainee contracts each year. The duration of education is normally 3 years and can include applying management skills either in the company that person is employed, or in the vocational education school itself.

Hallmarks of the dual vocational education system include the following:

- The state recognizes the necessity for skilled personnel and insists on using state examinations that are recognized all over Germany. Skills acquired are nationally recognized.
- The curriculum set for these courses are a matter of discussion between:
  - » companies that are training their staff
  - » representatives of companies (such as the Chamber of Commerce)
  - » labour unions.
- The State does not set the curriculum.

Developments in education are always agreed upon by two organisations – the employers and the labour unions. There are three main competencies that form the basis of German vocational education and include:

- Personal and social competence which includes the ability to self-motivate, act as a team player and make decisions
- Competence in dealing with machines, equipment and work processes.
- Problem solving strategies and the capacity for abstract logical thought.

Examinations are developed (under high security) by volunteer company representatives from the Chamber of Commerce membership (over 160,000). Large memberships exist in Germany's Chamber of Commerce because it is legislated that all registered companies must be a member. This gives the organization strong lobbying power.

The core philosophy of examinations is to assess the competency to 'act in your profession.' Questions revolve around topics that ask the candidate to deal with a particular situation or to detail strategies if something goes wrong. Everyone that is trained through the dual vocational education system must sit a State examination. All exams, for all occupations, are held twice a year and at the same date and time.

The main benefits of Germany's dual vocational education system include:

- The system is driven by companies that understand the skills required and the market demand for skills.
- Training is paid for by companies. The system is funded.
- The labour union plays a major part in the overall strategy.
- Due to the availability of funding, large membership and representation, the Chamber of Commerce has an equal standing with government in the field of vocational education and training.

Vocational education is guided by the demands of companies and their need for skilled personnel. Companies state what they need and in what quantity.

Training is provided by both state and private training institutions. The cost to enroll a trainee varies from E500 to E1200 per month depending on the profession. Both the training costs and salary of the trainee are covered by the company.

Disadvantages of the dual education system include:

- It is a very complicated system.
- It's costly to run with respect to money and time. Current estimates are over 23 billion Euros per year.
- The development and logistics involved with examinations (written and oral) is an involved, time consuming task.

The Chamber of Commerce does not provide training, all training is left up to the market. The Chamber of Commerce is a member run organization and they do not want to compete against members who run training companies.

Heidemeyer stated that "Education through the dual system gives the trainee an identity, a pride in what they do and an appreciation of company culture. This socialisation of the trainee is not something you have in a professional training school."

The dual education system works because it is based on a constant – the state examination that all trainees undertake. Further support is given to the system through political parties, a dedicated administration system, companies, employee and labour group involvement. There is a consensus among these groups that the dual vocational education system works.

Many companies have been constantly involved in the examination process for over 25 years. They understand that this process is a very important part of German business and it is the interests of companies to perpetuate the system. Examination content is driven by company requirements and industry developments which in turn drives curriculum content. Teachers must in turn, adjust to changes in curriculum content.

"It's what we do in Germany and it works in Germany. It won't work somewhere else because other countries have a different framework, a different understanding and viewpoint (compared to Germany). It is hard to copy this system." <Karlheinz Heidemeyer, Handelskammer Bremen>

Heidemeyer recommended that anyone interested in the overall concept of the dual vocational education system should view the video (in English) developed by BIP, the research agency for the Federal Ministry of Economic Affairs and the Ministry of Education. This video can be found at the following address: [www.bibb.de](http://www.bibb.de) Click on the English translation.

The dual system starts from basic vocational education and training and builds up to further vocational education and training. This is the pathway through the qualification framework from certificate to diploma levels and each level requiring examinations run by Chambers of Commerce. Training institutes may have their own examinations if they wish but they are not recognized by the state.

Everything that is done in German vocational education and training is normally handled through discussion with three 'benches': the bench of employers, the bench of the employees and the bench of teachers. It is also stipulated in German law that these three 'benches' are stakeholders when it comes to vocational education and it is mandatory that they make the decisions.

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### 10.3.13

#### Boning-Consult The Coaching Company

**Destination:** Frankfurt, Germany

**Contact:** Uwe Boning, Management Consultant, Boning-Consult The Coaching Company

#### Reasons for the success of Mittelstand

A number of factors contribute to the success of Mittelstand in Germany:

- Larger SME's are very much orientated towards training in HR activities, leadership development and communication.
- Mittelstand companies also receive a lot of support not only from a national government level, but also at state and city level.
- A large number of the organisations operate on a global level.
- Support through the dual vocational education system. Small companies can source skilled employees. They accept the costs because it is important to have knowledge within the organisation.
- A strong development program for teachers.
- Post second world war, Germany needed to regain „lost esteem and confidence“ so there was a strong drive to succeed.
- Strong communication between stakeholder groups.

Within smaller companies (or entrepreneurs) there is a lack of long term strategy formulation. Boning stated that „there are many smaller companies however, that know exactly what they want. They have no written strategy but they have a vision, strong personalities They are dominant and assertive and able to bring these strengths to compete in markets.“ These personality profiles are major contributors to the success of small Mittelstand companies.

There has been a change over the last 20 years with regards to management style. A new generation has evolved that is more people and socially orientated. They are not as autocratic as their predecessors and have concern for their employees.

Leadership is also ‚emotionally orientated.‘ Managers are not just task orientated and are more concerned about employees attaining satisfaction from their work. This is demonstrated through concern for the employees family and marketing often reflects family values. This creates a perception that is valued by their customers. Mr Boning also commented that this strategy was not only successful in a business-to-consumer market, but is also becoming more prevalent in business-to-business. Companies that have a social conscience are valued in certain cultures (for example in Asia).

In larger organisations (such as BMW in the automotive industry), there is a specialised department that works with developing their suppliers. Many medium sized Mittelstand companies are supported in this way to achieve higher quality and innovation. Training, process analysis, turnover audits, control of the financial aspects of the business as well as areas such as logistics are the services offered to

for this support. Companies such as BMW work towards strong alliances with the smaller companies to ensure their survival.

Boning viewed the ‚Offensive Mittelstand self-assessment instrument‘ (refer to interview with Professor Oliver Kruse) and said this document was well known and was gaining a momentum of acceptance. He felt that this was a good starting point for a small business owner to begin analysing their company’s performance from a management point of view.

There is a culture within Mittelstand companies for ‚free thinking‘. Managers like to manage something and be able to make independent decisions. This same mentality is applied to their employees – freedom to make decisions in their work environment. This is a growing trend.

### **Management training for small companies**

Management and leadership training is not that common in small companies predominantly due to a lack of funding. If there is no support from an external system, they will direct available funds into surviving (in preference to management training). There is a big difference between what researchers and academics think small business needs and what small business themselves need.

Boning has written nine books on management and leadership and commented that his first book in 1997 would be totally different if it were written today. The latest book about to be published was based on fifty interviews with very successful managers and it was clear that these managers were not interested in concepts or theory. This includes managers from large, medium and smaller organisations. They were interested in only some practical advice. The detail of management theory or trying to understand the situation they were in was of no interest. Boning went on to say that „they were activity-orientated rather than self-reflecting and only interested in doing their tasks.“ A different style of training would be required that didn’t involve traditional methods such as seminars and lectures but rather, coaching in ‚narrow areas‘ of management concerns. This is done on the ‚four eyes‘ model – the coach and manager have two sets of eyes to assess a management situation. Daily business and strategic questions for example would be discussed in simpler terms (as opposed to high level theory). All topics of discussion must have an application. This principle can be applied to the whole organisation. It is expensive but very customised and individual. The manager is under no obligation to accept the coach’s comments but values the second opinion to make a final decision.

People that are entrepreneurially or business orientated don’t want to discuss management concerns with trainers that only have theoretical knowledge. They need to speak with other entrepreneurs. Being involved in the right network of similar, like minded people is important (refer to the Milieu control concept) – this creates inspiration.

People in smaller businesses tend to be more financially or technically orientated rather than an orientation towards corporate culture or management and leadership. They are interested in management tools but not management behaviour. They want to be able to use management tools that help them organise daily work and generate financial numbers.

Most of Boning-Consult’s management coaching is on an individual basis but there are small groups also. Small groups are difficult to work with though. What makes small group training easier is favourable impressions, attitudes and relationships between the trainer and members of the group. Boning stated in his experience, „group members accept authority but don’t accept knowledge. The authority comes from experience and personal behaviour.“

When Boning-Consult runs a training or coaching session, they need to think like a good philosopher but talk like a simple, but famous bierzeitung (a daily journal that uses simple language, sex, famous people, sports orientated articles and very politically orientated opinions). Trying to explain the complexities of life or business doesn’t resonate with a group. Using coaching (or ‚shadowing‘), drawing

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on past experiences and explaining in a conversational style is a much more successful outcome.

Recently a large company contracted Boning-Consult to train a small group of managers in team cooperation. The session had to be completed in three hours. Pre-interviews were conducted with each participant, the session was conducted, they were observed in the workplace (cooperating in teams) and feedback was provided. This was a different approach to asking them to do an assessment (or understand theory) but the approach was necessary for the time given and the person requiring the training. Evaluation on the actual team cooperation (real behaviour) in the workplace and focusing on a narrow area of team cooperation (its application) was essential for the program's success. The participants want to be able to leave a training session with only one or two, maximum three, concepts that they can implement this week and try it out.

Boning commented on the concept of 'training games' that reinforced emotionally, concepts about business theory (for example having a group display body language postures when discussing non verbal communication). He stated that these games were remembered by participants but he was not convinced they helped in a practical way to create a better performing business or change management behaviour. The new approach just discussed is less dramatic but more practical and the result is a larger change in behaviour.

There tends to be a misunderstanding between psychologists and entrepreneurs. The psychologist tries to explain a complex behaviour and reasoning for the nature of the situation. The language is difficult to understand and its application is not always clear. Coaching (normally one-to-one) can overcome these obstacles through using familiar terms and creating opportunities for application.

### **Management strengths in Mittelstand**

- Managers feel responsible for the final outcome.
- They take ownership of problems and contribute to solutions
- They try to be a model to their other managers and employees
- High level of focus on their work
- Always looking for ways to improve a certain situation (continuous improvement) or take advantage of an opportunity
- Work isn't regarded as a task to do, but rather an attitude.
- Managers take their position seriously as well as having empathy for their staff.

### **Developing a management and leadership course**

- Consult with target audience managers on what they require in management and leadership training.
- Develop a customised training session.
- Deliver the session with the target group sourced from similar industries.
- Ensure that the content is practical and can be implemented.

Target managers will need to be prepared to discuss their company problems and challenges - there needs to be a general change in their attitudes and behaviour to be more open about their particular situation.

### **Workplace learning environments**

Boning was of the opinion that SME's performed well in upgrading skills in the technical aspects of the business but needed more work in the area of team building and more modern aspects of management.

### **Motivation**

Experiences in this area have made it very clear that the financial rewards for motivation are not that important to people. Self-esteem is much higher. People tend to be more interested in their relationship with their work colleagues, self-esteem and seeking respect.

Promoting innovation in the company

Boning stated that „managers need to look at reducing the anxiety of their workers. If a manager wants to encourage people and make them creative, it is necessary to reduce anxieties they may bring to the workplace. German managers in small and medium companies are beginning to discuss the affects of anxiety, how to lessen it and encourage people on the emotional basis to find solutions.“ It is a new concept but it works.

To reduce anxiety it is necessary to concentrate on the person, not the activity they are performing. Understand the person, their history and emotional background. Managers need an inspiring contact with their people to promote innovation. Authenticity of the manager’s interest in the person is a must for this concept to succeed. If a worker can truly trust their leader, they will do things different. Workers need a role model.

Customer relationships can be considered in the same way – an extended family, providing authenticity, and interest in the customer’s business.

Authenticity of the manager is a key to relationship success. This attitude is a new development and not something that was seen twenty to thirty years ago.

Formally qualified managers (university qualified)

Graduates have learned management and leadership theory but they have gained more in personal development. There is a tendency in Germany today where younger people from university are interested in further development programs that involve personality, career, financial and technical issues and behaviour. They are interested in further education and training for themselves. Boning sees this as a positive development and that these graduates are applying what they have studied in the workplace to an extent.

What these graduates need to understand is the corporate culture of small sized companies. The new graduates are not aware of the culture, motivations and rules for working at a company. There is a term in Germany referred to as ‚praxis schock‘ that explains the feeling a new graduate has on entering a company that doesn’t relate to what they studied at university.

References suggested by Bonin-Consult

Professor Stephan at University of Marburg (north of Frankfurt). Chair for technology and Innovation Management.

Professor Fitz simon at University of Witten herdecke. Specialises in the organisation and advanced vocational trainer. Check their publications.

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### 10.3.14

#### Austrade Business and Technology Forum

**Destination:** Munich, Germany

**Contact:** Austrade Business and Technology Forum

The forum: an annual networking platform where business, academia, research and government people can meet to discuss current topics and joint activities. Promote Australia as an investment and innovation location for investment by German companies.

#### **“Australia, the innovation nation.”**

Main points from this forum included the following:

*H.E. David Ritchie, Australian Ambassador to Germany, Switzerland and Liechtenstein, Australian Embassy*

- Opportunities exist between Germany and Australia in the innovation and technology areas of business.
- Australia has experienced 23 years of uninterrupted growth. Highest growth rate in the OECD (3.4%), debt to GDP ratio is amongst the lowest in developed countries, a stable country and a reliable supplier of raw materials to the world.
- The country has huge infrastructure needs and a desire to work in cooperation with the world. Australia should be doing more than what they are currently doing with Germany.
- One of the world's best science innovation, research and education sectors and rank in the top 100 universities (same as Germany) despite only having 23 million people.
- Opportunities for Germany include:
  - Australia is embedded in the Asia Pacific region.
  - A strong economy and legal system. One of the best places to work and live in the world.
  - Over 500 German companies are already currently busy in Australia.
  - The balance of trade between Australia and Germany is heavily weighted in Germany's direction. The amount of trade is also small for two countries with economies ranked 4th (Australia) and 12th (Germany) in the world.
  - German companies have what Australia needs: expertise in design and technology but also the capability to invest in infrastructure.
  - Australia currently invests more in Germany than Germany invests in Australia.
  - 60% of Australian exports enter the Asia Pacific region with China as the largest trading partner.

There are many advantages for an Australian / German cooperative in Asia.

- There is a psychological hurdle that Australia is just too far away for German business. This needs to be eliminated and the opportunities demonstrated to foreign investors.

Australia has a lot to offer German business but the commercial trade and investment relationship is not matching expectations.

### **Positioning Australia for prosperity:**

*David Kruger, Partner, Transaction Services, Deloitte*

- The Australian business future involves a lot more than just the mining sector. There has been a number of 'booms' throughout the country's history: wool boom, gold rush and mining booms (1960's and 2000's).
- Current global opportunities include the increasing size of the middle class in Asia looking for an increase of protein in their diet. This population also wants to travel and increase their education. There is a stronger focus in climate technology to clean polluted cities and the Asian population is getting older, requiring wealth management services.
- Winning sectors in this global trend include: gas as a clean energy technology, agribusiness, tourism, health and wealth management. Sectors that will not perform as well include: manufacturing, media (propensity for free content), mining, oil, banking and construction.
- Australian advantages to compete in the global trends include: world class resources, land, minerals, energy, temperate climate, proximity to the fastest growing markets in the world and a strong business environment that includes a predictable tax regime, English speaking and a potentially depreciating Australian dollar in the coming years.
- The top 5 sectors that will prosper in 'the next wave' are agribusiness, gas, tourism, international education and wealth management. Niche sectors that will feed off the top 5 include clean coal (continuing on from the mining boom), gas transportation, food processing (from agribusiness), next generation solar energy, medical research, services around aged care, private schooling, retirement and leisure. For German companies wishing to invest in strong Australian sectors, the above predictions hold future growth and profit potential.

### **How Industry 4.0 can help transform Australian Industry – Smart Data and Digitalisation for a Smart Economy**

*Jeff Connolly, CEO, Siemens Australia and New Zealand.*

- Connolly is performing a role with Ritchie in developing more bilateral relationships between Australia and Germany.
- Australia in absolute terms is growing at 2.5% consistent and is in close proximity to the Asia Pacific region. Mining is flattening off but there is no slowdown in the need for commodities coming out of Australia. Siemens still has confidence in Australian mining.
- By 2020, Australia expects to be the largest exporter of LNG in the world.
- Manufacturing in Australia:
- Competitiveness of the industry has dropped over the last 10 years. Australia is the least competitive

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manufacturer in the world mostly due to energy cost increases and labor productivity.

- Rise in the Australian dollar has had an impact on the sector.
- The size of the Australian economy doesn't allow the country to be the best in every industry worldwide. The scale of manufacturing is too small. Australia needs to pick those industries where it has a comparative advantage and ensure enablers are put in place to allow those industries to flourish.
- The most significant drivers for manufacturing competitiveness are innovation and talent. Australia's engineers are not being well utilized.
- The areas of comparative advantage in Australia require support from German technology.
- There are no requirements for 'new builds' of power generation in Australia and the current grid system is adequate. Siemens will not be going back into nuclear. There are however, opportunities in the area of smart grids, distributed networks and how to manage the multi-directional flow of energy within cities.
- Australian manufacturing has to be more competitive and it is not manufacturing the country used to know. It is now the 'digital world.'
- Research (commissioned by Germany) has identified four industrial revolutions: the first was steam and mechanical, the second was the assembly line, the third was automation and now we are moving into the 'cyber physical world.' Data capture is increasing as is the intelligence of machines. Skills need to be relevant for the fourth revolution.
- The 4th industrial revolution is about personalized mass production or customized mass production. The product will tell the production line what it wants to be (as specified by the customer), which is the reverse order of today's manufacturing. It is a world of simulation that enables manufacturing to significantly reduce the amount of non-conformance cost by the amount of digitalisation. Using the application of consolidated IT tools, platforms and simulation tools negates the need to produce prototypes (for example, the Mars Rover and Joint Strike Fighter). Manufacturing will become more about the engineering contribution than the production line. Connelly stated that Australian manufacturing will eventually contribute to "somebody's manufacturing concept and where that product may or not be produced (not necessarily in Australia)." Laser printing will be able to produce parts and products on demand rather than produced and kept in storage for when they may be needed.
- Machine learning and self-correction is part of the 'cyber physical world' – evolution will be in whatever is manufactured and have the ability to be self-correcting and self-improving. Machines aren't that far behind having the raw computing power of the human brain. For example, a ten to the power of 12 bit costs \$50 and the human brain is ten to the power of 14.
- There will be increased use of 3D digitization of manufacturing plants that will use 'avatars' to move through plants inspecting safety, completing designs and upgrades, making the plant more efficient and changing certain aspects to see the effect on something else. Australia needs to be involved in the digitization of manufacturing to remain competitive.
- To do business in Australia, ensure there is a contribution to the Australian economy and changing skills sets (coaching of the workforce). There are a lot of opportunities in research areas.
- There are more opportunities in Australia's infrastructure due to the fact that it is aged and originally built for a population that was much smaller than what we have today. Government investment in this area must also involve a technology enhancement an up-skilling of the nation's manufacturing capability. There are also large opportunities in the defense spend regarding submarines and their design. Debate is needed around simply buying something turnkey (as in the submarines) into the country and missing the opportunity to develop skills in this area. The Chinese for example, are ruthless about building infrastructure and getting the technology transfer in the process of the

purchase. Australia needs to be more demanding when doing large infrastructure builds.

- In conclusion: It is the death of traditional manufacturing. The original definition of manufacturing was put together in the 1950's and manufacturing is not what this generation grew up to understand. This is the paradigm shift that needs to be communicated. Industry 4.0 is a concept to enable the industry to sell the skills required and participate in the new manufacturing world which is 'engineering.'

### **Healthy Aging: Opportunities in Australia from a longer, healthier life.**

*Panel discussion included Dr Wolfgang Babeck, Evangelos Kotsopoulos, Dr Norbert Windhab, Dr Mark Bucking and Dr Thomas Frischmuth.*

Relevant points from the discussion:

- With the introduction of new technologies and digitization of information, there is a requirement (in the health industry) for a new set of skills and qualifications that weren't thought of only a few years ago.
- There is excellent work being conducted in Australia on health technologies (such as the 'minimal invasion system' in Adelaide) but Dr Frischmuth stated that the Australians have difficulty in finding enough capital to develop the technology "to the next step." The work is excellent and scientifically sound but the prototyping and route to market is done in Europe.
- There is a problem in Australia especially with biotech and medtech companies that lose valuable research due to lack of funding. The venture capital and private equity industry feels the size of the country is underdeveloped relative to America and Europe. These new companies then choose to go to the public market and IPO much too early. They receive the first round of funding but lack commitment (funding) for the next big step of commercialization. There is an opportunity for Australian and overseas companies to come in as corporates and make that investment and bring the innovation to the market. The innovation could be further refined in Germany (say) and commercialized.
- In food production and food processing, there is a lack of R&D investment (when compared to other industries) especially in the area of price and cost reduction and more efficient ways of producing food. The approach is to communicate this need to food processors by developing solutions on a prototype demonstrator (such as a resource efficiency program). Budgets into R&D need to be increased within food processing SME's.
- In the health industry, companies and research centres from Germany are currently in Australia collaborating on how they can assist and form alliances on developing new drugs and the 'drug feeding systems' for patients. There is a 'culture of openness' between the two countries and there are constructive discussions on the use of the product as well as the IP implications for commercialization of individualized medication. Dr Windhab (Evonik Industries) commented on Australian researchers as being superior in their outlook, trust in partnership and cooperation. The TGA regulatory body was also open in their approach (unlike the USA) which Dr Windhab found motivating. Within the biomedical industry, Dr Windham felt that the "gold standard of research" in the world was between Cambridge in the UK and Adelaide in Australia.
- Kotsopoulos of Sonic Healthcare lives in Australia and regards the population as pragmatic and feels that when doing business, "things are made easy for you and they are open-minded." Sometimes the Australian way of doing business can "be scary" to Germans especially when it comes to formalized sign offs and paperwork and the use of verbal agreements to do work. This culture allows business to develop at speed and in a "creative fashion." In Kotsopoulos' view, this business culture was a competitive advantage when compared to other countries Germany may invest in around the world.