

# Industrial Design

## Industry Overview 2005

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**A collection of discussion papers  
outlining trends and conditions in  
the Industrial Design profession.**



**Design**  
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## Industrial design consulting in Australia

So you want to be an industrial design consultant? Just how much room is there for another design business in Australia? And will it be sustainable?

Reading the economic tealeaves to predict the future of industrial design consulting is a complex business. Despite a general perception in the community that manufacturing is declining in Australia, in real terms manufacturing *output* has increased by four hundred percent in the last fifty years. Manufacturing accounts for 57% of the value of Australian merchandise exports by industry of origin. However as a proportion of the national gross domestic product (GDP) it has dropped from around twenty five percent to around eleven percent. And is projected to continue to drop for the next several years.

Despite what designers may wish, economists now conclude that there is strong evidence to demonstrate that a large manufacturing sector is not a necessary component for a healthy post-industrial economy. Indeed they go further than that and actually present the decline in manufacturing and the growth of the service sector as an indicator that our economy is on the right track. In addition manufacturing plays an increasingly smaller role in economic growth (despite a dramatic turnaround since its recent low in the nineteen eighties) further diminishing the attention it is likely to attract in national policy.

### Manufacturing sector employment

In terms of employment the manufacturing industry directly occupies 1.1 million Australians, around twelve percent of the workforce. Forty years ago it employed twenty five percent of the workforce, around 1.3 million people. So the actual loss of jobs from the manufacturing sector is small and the same number of people is producing four times as much. Politicians like the manufacturing sector because it has a very high proportion of full time jobs (88%). For comparison, however, the services sector has grown from employing 3.2 million to 7.6 million in the same period.

The economic definition of the manufacturing sector and the part that directly employs industrial designers are two different things. The

economic definition takes in all those activities that are involved with the physical and chemical transformation of materials into new products. This includes things like the processing of food, the milling of wood and the production of steel as well as the making of consumer goods, machinery and cars. For analysis, the manufacturing sector is often divided into nine subdivisions. The subdivisions of interest to industrial designers are 'Machinery and Equipment Manufacturing', 'Other Manufacturing' and a portion of 'Metal Product Manufacturing'. It's rare for consulting industrial designers to get work from manufacturers producing, say, rolls of paper or tanned animal skins. Although the three manufacturing subdivisions that industrial designers serve have been making headway in export sales they are all under intense pressure from imports in the Australian market.

### Size of the industrial design market

While published ABS figures don't make it easy to determine the size of the available industrial design market in terms that make sense to a small business owner, by extrapolating from available employment figures we arrive at the following estimate. Of the 1.1 million employed in manufacturing around 350,000 work in subdivisions of interest to industrial designers. Using ABS business size distribution figures this equates to 57,000 or 4.75% of Australia's 1.2 million private sector (non-agriculture) businesses. For comparison consider that a graphic designer offers services potentially relevant to 100% of businesses.

Using the Yellow Pages we find that there are 350 businesses listed under Designers – Product & Industrial around Australia. While there are likely to be some businesses listed that are not directly involved in industrial design there will also be designers currently providing consulting services who don't choose to list. 57,000 businesses shared amongst 350 businesses equals 163 potential clients each. For comparison the same sum for graphic design businesses yields 267 potential client businesses each.

Additionally, looking at the distribution of these businesses we discover that half of them are categorised as non-employing and consist on average of 1.2 self-employed people. So perhaps

it's fair to say that each industrial design business has only 81 potential clients. 51.7 of these are micro-businesses below five people, 23.7 of these are small businesses up to twenty people, 5 are medium business between twenty and 99 people, 0.5 have one to two hundred people and 0.3 have two hundred or more employees.

An additional constraint that design consultants are painfully aware of is the amount of money required to develop, tool and commercialise the average new product. While most Australian design consultancies see their share of inventors (possibly a 'non-employing' business from above) and small business start-ups based around inventions (see micro-businesses above), these rarely have the capital to sustain substantive product development. Add to this the unrelenting penetration of product development departments in the larger manufacturing businesses over the last twenty five years by industrial design graduates. Add also the time between product redevelopment or replacement for many small manufacturers. The sum of these is a reasonable explanation for the difficulty that many practitioners experience in sustaining a business.

### **Potential for growth**

As an extension from these calculations it should be obvious that the growth of industrial design consulting is not going to change by general promotion of the services and skills offered by the design sector. It does, however, justify the international trade promotion of Australian manufactures and the targeted promotion to manufacturers within Australia of the way to use industrial design to best competitive advantage. Real growth in design consulting is dependent on the scale of the manufacturing industry in Australia and, in particular, that portion of the industry that has scope for industrial design. It's also worth considering that the same 28,500 *employing* business previously referred to (together with the 350 consultancies) represent the available targets for industrial designer graduates looking for a job. This years Art & Design Education Guide lists twelve industrial design university courses and eight others from TAFE and private providers. Most of the university courses have existed for around 25 years.

A quick look at the growth of the industrial design consulting sector over the last eight years or so reveals that it has apparently been stagnant (350 businesses in 1996, 350 businesses in 2002, 350 businesses in 2003). What these figures may reveal is the relative difficulty of getting sufficient work to maintain new consulting businesses in the sector given the number of existing participants. For most it is much easier to find employment in a manufacturing company. They are likely to be paid better than a start-up consulting firm will be able to and by mid career they will probably earn more than someone running their own small consulting business.

### **Design - a small business activity**

The industrial design consulting industry is primarily a small business activity. Research from the Design Institute of Australia (DIA) annual Fees & Salary Survey indicates that the median business size is 3 people. 52% of industrial design businesses are this size or smaller. 37% are between 4 and 10 people and 9.3% are between 11 and 20 people. There are around 350 industrial design businesses in Australia with an average staff level of 4.5 people making total participants in the region of 1575 designers. The average business size in industrial design is higher than the average design business size of all design businesses of 3.1 people.

In general the income earned by self-employed industrial design consultants and owners of small consultancies is low but the best of the design disciplines the DIA surveys. The median figure in 2003 for industrial design was \$75,000 (compared with a median for all design businesses of \$60,000). The relatively low income generated by self employment in this sector can in part be attributed to the level of competition that exists and the relative availability of work. The factors are a good deal more complex than this and relate to aspects like average level of competency, historic attitudes in the manufacturing sector, the growing pool of in-house designers, the changing skills of competing disciplines and shifts in the services offered by others in the manufacturing supply chain. Industrial designers should consider that they are often displacing previous workers in industry such as engineers, tradesmen and

draftspersons rather than occupying newly created positions.

A paradox for design consulting is that it serves the threatened manufacturing sector on one hand but is a participant in the ballooning service sector. It's relevant to note that some of the loss of employment in the manufacturing sector relates to the transfer of jobs into the service sector. Manufacturing companies have shed non-core activities and are using out-sourcing in many areas. The education designers are going to need to cope with changes in the manufacturing environment and the worsening opportunities for appropriate post tertiary mentoring are yet to be addressed.

If you're thinking of hanging out your industrial design shingle don't be put off. As history demonstrates a determined newcomer can carve market share out of a competitive market. A key ingredient is being informed and realistic about the market you're entering and tailoring strategies that match the realities.

## **The way forward for industrial design**

In the thirty years that industrial design education has been broadly available in the Australian tertiary sector a strong industry has built up around consulting industrial design. The top six concerns of industrial designers are practice standards, recognition, client education, tertiary education (both standards and graduate volume), insurance and competition. The Design Institute of Australia (DIA) survey that these concerns were drawn from was weighted toward designers in consulting practices. This article focuses on the way forward for industrial design as a consulting service sector but is also relevant to the fortunes of designers employed in industry.

### **Design promotion - the sirens' song**

In discussions about the improvement of the working lives of industrial designers there is often a lack of understanding about the effects of promotion of design in general and those activities that will provide immediate gains for current practitioners. Designers' concerns about tertiary education output and the level of competition are stark indicators that the general promotion of design drives the supply side of the industry much faster than the customer demand side.

What's happening in industry and in Australian society and what are the trends that will affect industrial designers? What are the strategies that industrial design businesses will need to survive? What focus should design education take to ensure students' viability in the future market?

In the last issue I wrote about the relative size of the market available to industrial design businesses. I concluded by saying that a key ingredient for new-comers is to be informed and realistic about the growth potential of the market they're entering and to select business strategies that match these realities. I offered the figure of 81 potential clients per industrial design business and the static number of industrial design consultancies as evidence that the consulting market has reached saturation. Further, in the ten years between the 1991 census and the 2001 census the number of Australians listing their occupation as industrial designer only rose from 1375 to 1927, an increase of 552. Compare this with an estimate of around 3000 industrial design graduates from the twelve university courses and

eight TAFE and other providers in the same time period.

### **Fortune linked to manufacturing**

It's a sobering lesson for industrial designers to consider the fortunes of textile designers in Australia. Their dwindling numbers and opportunities can be directly related to the fate of the textile and clothing industry. The dismantling of protective tariffs for the textile manufacturing sector (and others), and the opening up of Australia to free trade illustrated dramatically, and in a very short time frame, the way in which employment opportunities in product design are linked with manufacturing activity and the realities of a global business environment. The Australian Standard Classification of Occupations (ASCO), last updated in 1996, fails to mention textile designers at all. Interestingly economists euphemistically refer to this loss of opportunities and employment in a sector as 'adjustment difficulties'; bureaucracy's way of saying 'It's done, get over it'!

Another useful example to consider is architecture. As a mature design sector, the pattern of employment, the scales of businesses possible and the business strategies viable in a finite market provide plenty of clues about the emerging structure of a mature industrial design industry in a post industrial society. Consider too the prominence of architectural promotion and the media exposure it gets; this is a direct illustration that broad community promotion will not produce changes in the supply/demand balance that will make a difference to current practitioners' working lives. However individual consulting businesses can and do develop promotional stories that give them commercial advantage in a very crowded market.

### **Adjusting to a global economy**

The economic wisdom of the last decade has centred around the realisation that industries can not be artificially propped up, that supporting industries that don't have an intrinsic competitive advantage ultimately costs the community more than their preservation earns. Government's role should be to create an environment that facilitates business and provides the best environment (stability, infrastructure, national reputation,

economic framework) from which to compete rather than directly interfering in market forces.

The manufacturing sector in Australia is adjusting to this reality and to the competitive forces of a globalised economy. Additionally it is adjusting to the changing needs of a developed western economy. Forty years ago consumers spent 50% of their money on manufactured goods. Today it's more like 34%. Australian consumers, like their US and European counterparts are spending more money on services. Manufacturing now only accounts for eleven percent of our gross domestic product (GDP) and is projected to decrease in the foreseeable future.

In terms of volume of manufacturing activity and relative success in exporting, Australia's manufacturing is coming back from a low. And while it is under intense pressure, both in domestic markets and from the level of international competition, the toughening up it has undergone from its free market beating is paying dividends. The message to industrial designers is that there is no magic formula that will suddenly grow the size of Australian manufacturing and create significant new demand for product development. Any gains will be slow and may well be offset by other structural changes in global manufacturing activity.

### **Lost opportunities**

For example the transfer of manufacturing activities out of Australia is a particular challenge for industrial design professionals. This transfer is not just the shift of tooling and contract manufacturing offshore but the rationalisation of product ranges produced by Australian subsidiaries of overseas companies and Australian companies purchased by international firms. So design opportunities are lost as companies replace local designs with their international product lines and opportunities are lost as companies outsource manufacturing as 'design and supply' contracts. Industrial designers should be prepared for 'adjustment difficulties'.

Growing export sales of Australian manufactured goods is an area of great potential to provide demand for industrial design services. While designers have always seen their role as enhancing

the sales prospects of these exports a serious issue looms. Where will our future designers get the training and experience necessary to produce competitive products when domestic opportunities for exposure to high volume, leading technology manufacture are diminishing? Established industrial design consultancies will have a knowledge advantage in dealing with this environment, as will businesses set up by experienced staff leaving established consultancies and returning expatriates.

### **Surviving the creativity fad**

At any time in economics and government there are books that become the focus of attention as a result of the redirection of views they propose. One such book is 'The Rise of the Creative Class' by Richard Florida. This book argues that economic advantage grows from the clustering of creative people in areas where they aspire to live. It argues that government focus should be on developing environments desirable to the 'creative class' rather than concentrating on the attraction of businesses to a region. Looking around it is clear that this focus on fostering innovation and creativity has taken hold in Australian governments. What does this mean for practising industrial designers?

Designers should be clear that there is both an upside and a substantial downside in this new focus. Like most economic fads there is an element of reporting what has happened rather than predicting what will happen. Florida talks of the trend in contemporary employment for people to choose jobs that they perceive will have scope for self expression. He uses the example of young people given the choice of being a hairdresser or a machinist. Overwhelmingly he reports that people choose hairdressing over operating a lathe or mill. In our society, where the relative wealth means that most are not anxious about meeting basic income needs (at least while young), people choose occupations that fit with society's aspirations. Hence, in part, the reason that Australia's total designer population has grown by more than 1000% between 1976 and 2001. And is still growing at a superheated rate.

### **Tough times ahead**

There are tough times (in terms of income and job availability) still to come for designers. There is strong support in international and national economic debate for the need to foster an educated creative community to provide stimulus for future business generation. This supply side talking-up of the creative industries will continue the trend of the last thirty years and fuel the on-going demand for design courses. The flow of designers coming out of universities and TAFEs is not going to diminish in the foreseeable future. Designers (all disciplines) already report competition as the number one concern of professional practice. It is a key factor depressing the average income potential of designers.

It is pertinent to note that both Richard Florida and the influential Michael Porter ('The Competitive Advantage of Nations') before him have noted that members of the creative class are not solely motivated by money. The message here is that oversupply in the design sector will not quickly adjust as a result of poor pay. However the education sector should consider that disillusionment about the value and job prospects of a design education balanced against the cost may well become a factor.

### **The way forward for industrial designers**

The way forward for industrial designers as an industry is skills development and business practices not sector promotion. To survive, consulting design businesses will need to set aside any lingering arts mentality of waiting for others to grow the market or hoping for government intervention. Industrial design businesses must take responsibility for their own business to business promotion and sales, improve process certainty for clients, improve process quality and documentation both for client satisfaction and risk management (insurance issues), improve scope and depth of technical knowledge, improve business knowledge and practices, improve understanding of the manufacturing sector and the viable niche markets, learn how to use off-shore suppliers and act as a conduit for Australian manufacturing customers, and take increased responsibility for design sector support and development mechanisms such as the DIA.

### **Assistance from tertiary education**

In tertiary education the top industrial design courses will train management/business/marketing savvy designers with significantly better grounding in technology, world manufacturing, the design process and the all important control of design data, specification and documentation. The Australian industrial design graduate has significantly different needs than those educated in the US or Europe. Additionally the health and respect of the design industry is greatly affected by the standard of graduate produced. To give graduates a chance in a job environment lacking in opportunities for high quality post graduation mentoring tertiary institutions need to pack more substance into industrial design courses. Graduates need increased exposure to business and administration skills, exposure to manufacturing industry knowledge, exposure to methods of international outsourcing, significantly more knowledge of technical inputs to the manufacturing process such as electronics, software and materials, and significantly more knowledge of the skills and roles of others in the manufacturing supply chain.

### **Supporting manufacturing**

On an industry wide level the industrial design sector needs to turn its attention to the promotion of its clients' interests, the support of Australian manufacturing and supporting export promotion mechanisms, rather than the broad promotion of design. It needs to channel information to industry about the design techniques, processes and strategies required for international competitiveness. It needs to act as a knowledgeable conduit to the international manufacturing environment to enable entrepreneurial activity in Australia to result in world competitive products. It needs to build industry confidence in the competence and maturity of industrial design through mechanisms such as the support of Continuous Professional Development (CPD) programs and support of standards of practice promoted through the Design Institute of Australia.

The way forward is a little rocky but the good news is that industrial design has a substantial base camp in the rallying Australian manufacturing sector and shows no sign of retreat.

## **Manufacturing - the foundation of Australia's future**

In the last two issues I have been discussing the nature and direction of the industrial design profession in Australia. In my last piece, 'The Way Forward for Industrial Design', I concluded by saying:

'On an industry wide level the industrial design sector needs to turn its attention to the promotion of its clients' interests, the support of Australian manufacturing and supporting export promotion mechanisms, rather than the broad promotion of design. It needs to channel information to industry about the design techniques, processes and strategies required for international competitiveness. It needs to act as a knowledgeable conduit to the international manufacturing environment to enable entrepreneurial activity in Australia to result in world competitive products.

The first of these is the most fundamental. The profession must turn its attention away from the preoccupation of the last fifty years, the promotion of design, and concern itself with the survival and revitalisation of the manufacturing sector. Industrial design's future in Australia is firmly linked to the manufacturing sector's fortunes. The challenges are formidable. The industrialisation of Asia, the shift to a service economy in the Western world, first world societal attitudes to work; large scale trends that seem overwhelming. The industrial design profession has a vested interest in supporting the manufacturing sector and helping it find a path through these global trends.

### **Why should manufacturing be nurtured?**

The fundamental question for Australia is whether manufacturing is required at all. Some economists maintain that there is strong evidence to demonstrate that a large manufacturing sector is not a necessary component for a healthy post-industrial economy. They present the decline in manufacturing and the growth of the service sector as an indicator that our economy is on the right track. As manufacturing plays a smaller role in economic growth (now only 11% of GDP and falling) this point of view gains strength.

However there is considerable support (and evidence) for the position that manufacturing is an essential component of the economy, that

it provides a foundation role that enables the existence and success of many other sectors. Manufacturing is a driver of knowledge and innovation, it contributes over half of private sector R&D. Manufacturing companies are more likely to be involved in technological innovation than companies in other sectors. Manufacturers engage in higher levels of vocational training spreading new knowledge both within their sector and in the service sectors that interact with them. Manufacturers acquire new technologies that both channel technical knowledge into the community and produce productivity gains that exceed those of the service sector. Manufacturers drive the desire and uptake of new technological knowledge to fuel their competitive position which supports employment in the sciences, engineering and design disciplines. In short manufacturers are significant catalysts for innovation, research and technical change.

In public debate Australia desires to be a 'Knowledge Nation' and takes great pride in the quality and international success of its education sector in passing on knowledge. Manufacturing, as a sector, is a significant driver of the development of new knowledge.

### **Manufacturing and the service economy**

An important consideration in the economic debate is the degree to which the health of our growing service economy is linked to the health of the manufacturing sector. This linkage is graphically illustrated by the fate of economies in regional centres when a major manufacturing employer fails. Many service jobs are directly linked to manufacturing and many jobs once performed by in-house employees of manufacturers have become outsourced service jobs.

The nature and scope of our manufacturing sector directly affects the type and quality of services required. This in turn either enables or limits the ease with which businesses can innovate and develop new products in Australia. Services also benefit from the export activities of manufacturers. The export of goods stimulates the export of services required to support them.

### **The most linked sector**

The manufacturing sector has high levels of linkage with other sectors of the economy, it uses the outputs of the other sectors to produce goods at a far greater ratio than any other sector. Manufacturing is involved in the production of capital goods and inputs for other industries. This means that increases in technology and efficiencies in manufacturing magnify the efficiencies of other industries. Expanding the output of manufacturing increases economic activity and jobs faster than expanding the output of other sectors.

So manufacturing is a foundation to economic activity and an enabler of a range of other industries. As a sector it has stronger linkages with other sectors, is best at transferring new technologies to the economy, and is central to transferring support skills (management and technology skills) to other sectors of the community including the services sector.

World growth in exports is in the high technology manufacturing area. Australia is not well positioned to compete for export growth in this area. Too much of our manufacturing is in the low and medium technology area. This is one of the major challenges to growing the strength of the manufacturing sector in Australia. Australia's trade deficit is directly affected by our desire to import products in the high technology area and our inability to generate import replacements.

### **Free market or Government intervention?**

The obvious question that arises in these times of economic rationalism is why should Government get involved? After all government's role is to provide services and facilities to the community which Australians desire or need as a community and are not able to be provided through free enterprise.

The justification for Government involvement is that free enterprise, and in particular global commerce, doesn't account for the value to Australia of the foundation and linkage role that manufacturing plays in the economy. Commercial decisions taken in one industry don't consider the flow on effects that they will have in other industries and other parts of the

economy. Considering these things is the role of Government.

This is not about propping up non-viable businesses in the Australian community, it is about acknowledging the foundation role that manufacturing plays in the economy and creating an environment in which innovation and entrepreneurship can take root and internationally competitive businesses can thrive.

The clear message is that the health of the manufacturing sector is not something that can be left to the fortunes of market forces. The government needs to be actively involved in adjusting the external factors that make growth in manufacturing possible.

### **Issues affecting the revitalisation of manufacturing**

The issues that need to be addressed in strengthening Australian manufacturing are complex and intertwined, but in general they are well understood. Low domestic demand both as a result of population size and buyer preference, no viable manufacturing capability in areas of buyer demand filled by imports, the resulting balance of payment economic restraints, too high a proportion of low to medium technology companies, low investment in R&D, low investment in plant and equipment, negative public attitude to both employment in manufacturing and Australian products, corresponding underdevelopment of support industries such as engineering, difficulty in obtaining venture capital, under-involvement in export and the rapidly increasing capabilities and numbers of competing manufacturers outside Australia.

### **Where does industrial design fit?**

On an immediate level the industrial design profession can concentrate on those issues that it can directly affect; the support of Australian manufacturing customers, paying particular attention to improved process certainty, process quality and documentation, improved scope and depth of technical knowledge, improved business knowledge and practices, improved understanding of the manufacturing sector and the factors that drive commercial success. That is

ensure that the core competencies provided by design provide the optimum competitive support for our clients. The Design Institute of Australia's developing Continuing Professional Development program is one industry driven move to encourage this process.

On an industry to industry basis industrial design needs to provide succinct information about the design techniques, processes and strategies required for international competitiveness and success in the domestic market. Equally designers need to become more informed about the services already provided by government to assist their manufacturing clients.

Dealing with the macroscopic issues affecting manufacturing previously listed is not easy and involves a two way dialogue between government and participants in the manufacturing sector. The Design Institute of Australia, as the designers' professional body, is active in this area on both a state and Federal level. While the issues affecting manufacturing extend well beyond the responsibilities of the design sector, designers are well positioned to comment on the issues faced by innovative manufacturers in Australia.

## **Industrial Design scorecard - 2004/05**

It's boom time for industrial designers. If you're running an industrial design consultancy or looking for an ID job, guys and gals, this is as good as it gets. Nationally business activity is up, confidence is up, unemployment is down.

The results are in from the latest (December 2004) Design Institute of Australia (DIA) Fees and Salary Survey and industrial designers are doing well in most areas. The DIA survey tracks fees, salaries and other industry information for all the major design disciplines in Australia annually.

### **Business growth**

The average industrial design business size has grown by two designers to six designers with the average overall industrial design business weighing in at seven and a half staff. This reflects the buoyant times and the relatively high availability of consulting work. It also reflects low levels of new business formation in Industrial Design with the overall level remaining static for some years. So, in general, the available work is going to established businesses.

Consequently owners are making more out of their businesses. An industrial design business owner employing six designers is likely to be earning \$100,000, up ten percent from the December 2003 survey. And well above the average for all employer/self employed designers in Australia of \$81,800.

### **Higher costs**

The cost of running a design consultancy has also escalated, with the salary of an experienced industrial designer (five years) up ten percent to an average figure of \$54,300 and a median of \$51,000. These figures are weighted toward businesses in the two largest states, New South Wales and Victoria, which jointly represent around two thirds of the design activity in the country. Salaries in NSW are slightly ahead of Victoria by three percent, but salaries in the other states lag considerably; Queensland by five percent, South Australia by eighteen percent, Western Australia by nine percent.

The DIA surveyed growth in salaries in industrial design, at around ten percent, exceeded the Average Weekly Ordinary Time Earnings (AWOTE) national growth for the same period of around

four percent. Graduate salaries for industrial designers are one area that has remained flat. The median graduate salary has remained static at \$30,000 this year. Possible factors are the high supply of graduates, concerns about their preparation for productive work, and the availability of experienced designers moving from industry into consultancy.

### **Fees are up**

Fees have increased with industrial design rising strongly above the average for all design businesses. The median fee for a 'Designer' rose fourteen percent to \$100 per hour (+GST) and the median for a 'Senior Designer' rose to \$120 per hour. Fees were strongest in New South Wales and weakest in South Australia.

Now before you all get complacent, the results across the board are still poor for the level of expertise, risk and investment in time and money that designers put in. The Average Weekly Ordinary Time Earnings (AWOTE) figure for the period corresponding to the survey was \$976.20 ( $\$976.20_{pw} \times 52 = \$50,762$ ). Compare this with the median 'Designer' salary of \$51,000 and you can see that the remuneration in comparison to other professions, operating considerably above AWOTE, continues to lag. Returns for the expertise and business risk of running a consultancy are similarly well below desirable levels. As previously reported this reflects poor time utilisation in the design professions, difficulties associated with passing on the full cost of product development in Australia's small business environment, and the relentless level of competition now in the market.

For those of you wanting more information, the Design Institute's Fees & Salary Practice Note is available for purchase from the National Office or supplied free to DIA members.

### **The national economy**

It's worth considering the national picture; Australia's economy is likely to be at its peak after a decade of growth. Gross Domestic Product (GDP) growth was down to 1.5% in 2004 after a healthy 4% in 2003. Manufacturing averaged around two percent growth over the last five years, but only grew 0.3% in 2004. Industrial

designers have been surfing this wave that started breaking in the late nineties, but it's getting near the beach. Manufacturing, industrial designers' symbiotic host, is currently around 10% of GDP and projected to drop slowly over the next few years. The volume of manufactured exports has slowed or stalled and no growth is expected in 2005.

### **Manufacturing outlook is tough**

The future outlook for manufacturing in Australia is tough. The immediate threats are: the strong Australian dollar, which discourages exports and boosts imports; the relative short supply of skilled workers, (currently getting a lot of Federal Government attention), boosting costs and holding back growth; rising interest rates, helped along by the Reserve Bank; dropping domestic demand for manufactured goods (and only 10% of our manufacturers are pursuing export growth); rising materials costs; manufacturing profitability under pressure discouraging reinvestment; and the tsunami flow of manufacturing activity (and ultimately design activity) to Asia and particularly China.

The outlook for the global economy is still good in 2005, which is good news for our exports. Unfortunately the manufacturing sectors that have the best growth profiles for the future (paper, printing, publishing, chemicals, petroleum, coal production, food, beverages) are not those that provide the bulk of work for industrial designers. Successful manufacturers of interest to industrial designers will find competitive niches where they can leverage unique intellectual property, strong design differentiation, local market knowledge, import barriers such as weight, bulk and time, and brand strength.

### **Look to diversification**

While there is a national skill shortage there is no shortage of industrial design graduates. Just as design consultancies have been staffing up so have manufacturer's product development departments. With the tightening of the economy the first to feel the pinch will be the consultants. It's fair to say that the consulting sector will find itself with an oversupply of production capacity and a need to reduce staff in the next couple of years. The alternate is for industrial design



## About the Author

consultancies to diversify into services outside the manufacturing sector.

While discussing the manufacturing sector in the last issue I outlined the ways in which industrial designers can assist the viability, competitiveness and survival of Australia's manufacturing sector. That is, by paying particular attention to improved process certainty, process quality and documentation, improved scope and depth of technical knowledge, improved business knowledge and practices, improved understanding of the manufacturing sector and the factors that drive commercial success. Industrial designers must ensure that our services and core competencies deliver the maximum competitive support for our manufacturing clients. Clearly this is also the way to be amongst the survivors in an inevitably tightening design market.

David Robertson is the National President (2000 - ) and a Fellow of the Design Institute of Australia. His focus as president has been the improvement of the strategic planning of the professional body through information collection and dissemination and the improvement of the business and marketing mechanisms of the organisation.

His tertiary training is in industrial design. Following graduation in 1980 he worked for an established industrial design consultancy prior to starting his own business. He owns and manages a consultancy in South Australia that provides design services and strategic advice in industrial, graphic, digital and web design. He is recognised by the professional body as both an industrial designer and graphic designer.

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