



The importance of separating threats from opportunities: it can take some time to appreciate the true benefits

by Bob Panitzki, CEO Furtech-AFRDI

Last issue, AFRDI was in the throes of rolling out the final drafts of AFRDI Standard 142, Height Adjustable Swivel Chairs for Heavy People, collectively known as the Rated Loads project. This standard deals with special needs for people whose relatively high body mass places them outside the mainstream.

In late April, we outlined Rated Load standards to suppliers and manufacturers at seminars in Sydney and Melbourne. Concern was expressed that the new standards would potentially become Blue Tick Level 7 and 8, because of the all too common human habit of going for the highest specification, whether or not it's actually needed or is appropriate.

AFRDI says very clearly that testing and certification to Level 6 remains the most appropriate testing regime for better than 90 per cent of chairs we assess. The new tests provide a proper scientific assessment for chairs to suit statistical outliers, that is, the approximately 7.5 per cent of adults with a body mass of more than 110kg, and for whom abnormally heavy duty chairs will be required.

Let's step back for a moment from a situation that has the potential to generate a good deal of heat and not much light. At times like this, we like to turn back to basic business tools, and to carry out a form of SWOT analysis (**S**trengths, **W**eaknesses, **O**pportunities and **T**hreats).

First, a **strength**. AFRDI developed the new standards at the request of industry, in part to meet identified market needs for special purpose seating. It's a fact that in police forces, fire, ambulance and other emergency services in particular, that if workers gain too much weight for in-the-field operational efficiency, they move instead to desk or call centre work. Then there's the effect of the general trend towards population obesity, meaning that a greater proportion of the workforce in future will fall outside what are currently accepted as normal weight limits (AFRDI until now has tested chairs for people up to a nominal 110 kilos under Level 6, severe loading).

A **weakness** is that we possibly should have tried harder to introduce these standards sooner, as a protection against inappropriate chairs being placed on the market on the one hand, and as a safeguard against possible litigation should a chair collapse, leading to injury.

Opportunities exist in manufacturing chairs complying with the new standards. The fact is, there are a lot of chairs imported to Australia with extravagant claims about their ability to withstand heavy loadings. AFRDI would stake its reputation on the fact that the majority are not independently tested, and may or may not live up to the claims made on their behalf. In the new standards exists a tool for architects, facility managers, interior outfitters and government specifiers to **confidently specify chairs for heavy people, chairs which have been scientifically assessed.**

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An opportunity exists for Australian manufacturers, with the flexibility inherent in the relatively small Australasian marketplace, to build chairs which genuinely meet these standards.

A further opportunity exists in the ability of manufacturers to claim premium prices for a premium product, while being able to command additional respect and a competitive advantage in the market through being able to confidently offer extended warranties.

The **threat** in this brief analysis is that industry will not pick up the new bat and ball, and will try to stick with what it already knows and understands.

In a way, that's not inappropriate, because as I have already said, the new standards apply to the extremes of the market, not the mainstream. But there is a potential to exploit a new niche market, and I hope industry rises positively to the challenge.

Rated Loads and Weight Rating: a clarification

There is still confusion over the concept of rated load and weight ratings for chairs, says AFRDI technical manager, Ian Burton.

"When we rate a chair at 135 kg, we apply over 400 kg to it in testing. People keep on confusing this point.

"They find we put 2000 N on Level 6 chairs, and the next thing is, they're claiming the chair is rated at 200 kg.

"It simply does not follow, and in fact is a false and misleading claim."

"If you want an example of impact loading, jump on some scales. Someone who only weighs 70 kg can wreck them!"

Furntech-AFRDI announces price increases, better service

AFRDI increased its fees by approximately **three per cent** effective 1 October 2010, in keeping with CPI movements. But with the increases come new services, and the promise of a faster turn-around, as new machines come on line.

Increased cost to test leather

Testing of leather under the AFRDI Leather Standard 146 program increased from October 1st.

AFRDI's leather program coordinator, Dr Paul Semmens, said considerable pricing increases had been imposed on the company. As an act of good will, he said, Furntech-AFRDI would absorb some of the increases, but an overall increase of 10% was unavoidable.

Remember to get your AFRDI testing discount

A reminder that AFRDI continues to offer discounts on **full product testing** (on most testing) for AFRDI members.

Additional discounts also apply for three or more similar items tested at the same time. **Please note however that with the winding-up of the CFIAA, the 10% discount previously offered no longer applies.**

Tumbling televisions and other large furniture continue to maim children

Despite considerable evidence identifying the dangers to children from large unsupported items of furniture, a new report has again identified the need for safety improvements.

The report was prepared by researchers at the Sydney Children's Hospital at Randwick, Kidsafe New South Wales and the Children's Hospital at Westmead.

It concluded that furniture-related injuries represent a cause of serious trauma and death in Australian children, and that there remains a need for the stability and security of televisions and other large furniture items to be improved.

During the four year survey period, 35% of the sample group suffered scarring or long-term limitations as a result of their injuries.

Not only falling televisions are implicated in serious injury – in one case a two year old boy was jumping on a couch when he knocked an adjoining cabinet on which was resting an unplugged microwave oven. The cabinet fell, with the microwave oven toppling off and striking him on the head. The child died a day later.

Discouragingly, the study predicts an increasing incidence of injury caused by falling televisions, with the trend towards flat screen sets with a narrow supporting footprint, and an elevated centre of gravity.

The report recommends that the toppling risk of televisions and other large items of furniture should be highlighted at the point of sale and on packaging.

We believe strong consideration should also be given to mandating the secure mounting of flat screen televisions or the inclusion of an appropriate stand to reduce the risk of injury. Other items of heavy furniture should be securely tethered or bracketed to walls, as outlined in AS/NZS 4935:2009 which covers stability in chests of drawers, wardrobes and bookcases.

And in another report from the Queensland Injury Surveillance Unit, it is estimated that furniture and appliance related injuries in children under five account for 180 emergency presentations each year.

The National Coroners Information System shows that from 2000 until 2009, there were 12 cases reported nationally relating to the death of children under the age of five from furniture tip-over, and that two other children died after being caught in furniture.

In the United States, the Consumer Product Safety Commission (CPSC) has again pointed to the dangers of drop-side cribs, recording 32 fatalities over the past nine years. In addition, it has reported another 14 fatalities which could have been due to entrapment issues.

The CPSC said some of the incidents could be sheeted home to consumers incorrectly assembling cribs, as a result of confusing directions.

Due to a new voluntary industry standard in the US, many manufacturers have already stopped selling drop-side cribs.

Minister visits AFRDI: impressed at ‘quiet achiever’

The Tasmanian Deputy Premier and then Attorney General, Lara Giddings, visited AFRDI in Launceston recently, to inspect new work being done under a joint State-Commonwealth regional industry assistance package.

AFRDI is using the funding to further develop its new Rated Loads standards, and to extend aspects of the Sustainability standard, launched last year.

Significantly, the funding makes it possible to increase staffing, including a designer who is tasked with upgrading existing test rigs and designing new ones for local manufacture.



Minister Giddings, Bob Panitzki and Derek LeMarchant (Department of Economic Development) inspect a rig testing office drawers for durability.

Minister Giddings said she was surprised at the very positive outcome of the Tasmanian Regional Assistance Program, which she said was giving small business confidence to expand and to explore new directions.

She said she was particularly impressed at the number of such operations in northern and north-west Tasmania – small companies which normally had low visibility in the community.

AFRDI gained funding under the first of three funding rounds offered.



AFRDI CEO Bob Panitzki details chair testing protocols to Lara Giddings MHA.



A rare opportunity for the media to see behind the normally closed doors of AFRDI. Left: Artificial buttocks and back in the process of working a chair through 240-thousand full load cycles.

Perhaps they're on to something!

Major North American furniture manufacturer Knoll Inc. has reported considerable production line savings, largely through reducing its use of compressed air. The findings are contained in the company's latest environmental health and safety (EHS) report.

Laurence Bouchard, Knoll Toronto's EHS manager, is reported as saying: "Compressed air is a very inefficient and expensive way to use electrical resources. It uses six times more electricity than an electrical tool to do the same job.

"By replacing air guns with electric screw guns we can accomplish the same task with one-sixth the amount of energy."

In further steps to cut energy losses, Knoll divisions have installed isolation valves in compressed air systems to minimise losses during production downtimes, and in some areas are now using vacuum cleaners instead of compressed air to blow off surfaces. As well, the company is replacing air-driven hand assembly tools with battery powered hand tools.

AFRDI's Sustainability Standard – separating myth from fact

by AFRDI board chairman, Peter McCutcheon

AFRDI launched its Sustainability Standard, the AFRDI Green Tick (AFRDI Standard 150, Sustainability for Commercial Furniture) last year, and since then – in June – the Green Building Council of Australia (GBCA) officially recognised AFRDI as an accredited third-party certifier.



For us within AFRDI, it means the culmination of a four-year research and development program to produce a standard that is:

- strongly scientifically-based,
- represents the current state of the art in the understanding of sustainability,
- provides an entry level for smaller companies,
- encourages tangible improvements in the quality and longevity of furniture, and its ultimate recycling,
- reduces the impact of the manufacturing process on the environment

In total, they are pretty big claims we are making for the AFRDI Green Tick, but we are confident in making them.

You can read about the Sustainability Standard on our website www.furntech.org.au and through the website you can also find out how to obtain the questionnaire which is a preliminary to the formal assessment and certification process.

Let's look at a few issues regarding the 150 Standard.

As mentioned, its creation has taken a number of years of research and development, not just within the Institute itself, but some of it out-sourced: we wanted a document that would stand the closest scrutiny – and we think \$150 is not much to pay for the Standard's purchase.

I won't be drawn into comparisons of our pricing model with other standards, but let me make this clear: AFRDI does not and will not be charging a licensing fee for the use of the Standard. As a customer, you will pay for initial assessment and certification and that is all. That means there is no royalty or fee based on turnover, and no licence fee.

There is no further payment until three years have passed and your item may be required to undergo further assessment to ensure that it complies with the qualities it displayed at the time of initial assessment. Also, should you as a customer decide to seek certification of your products at a higher level before the expiry of three years, that also will attract an additional fee.

We intend to offer the usual AFRDI incentive for multiple items submitted for assessment and certification – that is, if for example, three similar chairs are submitted at the one time, a reduced price per item will be offered because of certain commonalities in assessment.

Sustainability assessment too expensive?

The question is often raised about the supposed cost of sustainability assessment, specifically that all goods submitted for sustainability assessment must first be certified to AFRDI's Blue Tick testing for durability, therefore allegedly attracting double the cost of basic testing and certification.

This is not the case. There will be instances where chairs or other items will still have current certificates with AFRDI, and can therefore be submitted to assessment for the AFRDI Green Tick.

Similarly, goods imported from overseas and carrying current certification by a body recognised by AFRDI may be eligible for an examination of that certification at a lower or reduced price, instead of full cost.

I have also heard the question asked: what if my chair is already certified by GECA – will it automatically be certified by AFRDI too?

Our attitude is that our evaluators will examine each case on its merits, to determine whether other certification has an equivalence within the range of options offered by AFRDI 150. It is our intention to 'tick all the boxes' to ensure the integrity of AFRDI 150 is upheld.

At the end of the day, we want to make it as practical as possible for more businesses, distributors and manufacturers to submit items for AFRDI Green Tick product certification.

Certification is what governments are demanding, it is what the private sector is demanding, and increasingly, it is what consumers are demanding as they try to get better value for their discretionary spending dollar.

New machines to speed testing at AFRDI

For the past few months, AFRDI has been designing and having manufactured additional chair testing rigs. The rigs represent the culmination of years of in-the-field practical experience – for our clients, they represent the promise of a faster turn-around.

We work our machines hard – a typical chair may spend several weeks on a rig to rack up the required number of load cycles.

AFRDI Researching new Standard for Fixed Height Chairs

With the ink barely dry on AFRDI's newest standard, AFRDI Standard 142, Rated Loads for Height Adjustable Swivel Chairs, the company is extending the research, this time to include fixed height chairs.

The new standard will be known as AFRDI 151, but as AFRDI technical manager Ian Burton points out, it differs from the existing standards. The upper weight testing point for AFRDI 151 is for people up to 300 kg. (AFRDI 142 - for office chairs - has two testing points, at 135 kg and 160 kg).

Public space v. working space

The challenge for Burton has been not to simply produce a Mark Two version of the existing standard, but to reconsider the typical use of fixed height chairs. This has prompted the formulation of a concept of public space versus working space. Working space implies the provision of chairs within a defined environment, most likely an office, where a population of a known mass range will be using the chairs: in short, one user will occupy the same chair most of the time. Public space is taken to mean that a chair must be suitable – and indeed safe – for a significant proportion of the population at large to sit on.

The new standard covers areas common to AFRDI 142 – testing for strength, durability, stability, flammability – and addresses many of the questions broadly covered under the question of safety. Extending beyond the nominal weight limit of 110 kg is not covered in existing standards. Standard 151 introduces four new testing points – at 135 kg, 160 kg, 185 kg and 300 kg.

The lower testing points assume that these chairs will be essentially more robust versions of 'standard' chairs, and that their dimensions will fall probably within the normal range or only a little beyond. At the proposed top end of the new standard – testing at 300 kg – there is an assumption that such a chair will necessarily be larger than normal, as well as considerably stronger.

Burton says it's been a difficult decision to decide where to 'draw the line' with the new standard. The three lower testing points essentially represent extensions of existing chair technology and design, the 300 kg point will provide manufacturers with the scientific wherewithal to digress from existing chair shapes and sizing if they feel this is desirable or necessary i.e. to produce a chair in the bariatric category.

Standard does not dictate the design process

Burton's view is that AFRDI 151 limits its scope to being a performance guide, rather than being a design guide, and that's the way it should be.

He adds that the new standard – as with its sister standard, AFRDI 142 – does not imply a wholesale upgrading of testing and certification. Rather, it is seen as a necessary progression to enable manufacturers and distributors to access chairs which are appropriate for larger people, and which at the same time minimizes exposure by suppliers and specifiers to liability claims should injuries arise.

Who really needs a 'super' chair?

Developing a Standard for so-called 'super' chairs is one thing, but who actually needs such a chair?

Ian Burton has been trawling the anthropometric tables, and the statistical answer is quite interesting i.e. a considerable number of people in the population are getting sufficiently large to warrant the need for specially strengthened chairs.

The stats suggest that in the United States, only approximately 50 adults in every 10,000 weigh more than 135 kg, and seven in 100,000 weigh more than 160 kg.

Ian Burton says AFRDI has adopted the attitude that if the marketplace considers there is a need for chairs with extreme load ratings, AFRDI will provide the scientific data to enable such chairs to be appropriately evaluated.

ACCC: prepare now for mandatory reporting

The Australian Competition and Consumer Commission (ACCC) warns that businesses in Australia must start preparing now for new mandatory product safety reporting requirements that take effect from January 1 2011.

From this date, businesses will be required to notify the ACCC when they become aware that a product they have supplied has caused, or may have caused, serious injury, illness or death.

Suppliers must notify the ACCC **within two days** of learning that a consumer good or product related service has caused a problem. More info: www.productsafety.gov.au/mandatoryreporting

Making educational furniture better, with a little help from AFRDI

Erick Buma of Bizfurn Express, sums up the value of third-party testing with these words: “Independent testing is the most truthful part of our design process.”

Why independent testing? A product which Bizfurn has painstakingly designed, engineered to its best ability, still requires, as part of the design process, further development in light of its testing with AFRDI.

It's not to say that the development work is insufficient. Rather, as Erick sees it, it is the fact that someone not involved with product development yet working to the rigid dictates of a scientific standard will frequently uncover points that were simply not considered at the factory level.

BizFurn Express currently has items of educational furniture Blue Tick certified by AFRDI, and has submitted a number for AFRDI Green Tick assessment for sustainability as well.

“We see Blue Tick and Green Tick as complementing one another,” Erick says. “For us, getting the best level of certification we can achieve is all about being sure of the integrity of what we produce. We put in the best in terms of materials and manufacturing techniques, but it's not the whole story.

“The company has found time and again that third-party testing by AFRDI reveals further ways in which the product can be improved before it reaches the marketplace, and the knowledge that we have been through this process is important to us.”

Bizfurn Express started 15 years ago in tiny premises of about 100 square metres. The company now has a factory of 11,000 square metres, with 150 on the payroll.

“We see ourselves as a ‘can do’ company,” Erick says, “meaning we can do it in Australia – using Australian steel, we bend it ourselves, we do our own upholstery from local materials, and we research and develop products for the local market. I'm convinced that if we get sufficient volume, the cost is competitive with importing from overseas, but with an important difference, and for us, that's the ability to control quality.”

An Australian owned company, Bizfurn Express is strongly vertically integrated, manufacturing, and selling product from its own showrooms from Southport to Cairns and supplying to schools, government and corporate clients throughout Queensland. Erick believes it's possible, both to ensure quality, and to be certain that the right product is being produced.



It's a process the company pursued in the development of two recent major educational furniture projects, the **Smartable**, a registered design table that adjusts to five working heights, and the **E-chair**, another registered design. Bizfurn design process was 'in-house'. They then took the product to AFRDI for testing, a process in which AFRDI was able to actively influence the final development.

Building on their experience with AFRDI on the Smartable, Bizfurn took its CAD drawings and renderings to clients for their input, built the product, and still found that there was room for improvement when it was submitted for testing.

Hence Erick's comment at the beginning of this article, an admission that in the real world, there is always the possibility of learning more, and in the case of furniture, making it better, stronger, and more fully suited to its intended users.

More US manufacturers recall dropside cribs

Seven manufacturers of dropside cribs in the United States have announced recalls to repair cribs to address entrapment, suffocation and fall hazards.

The voluntary recall involves more than two million cribs.

The cribs were manufactured or distributed between 2000 and 2009 by Child Craft, Delta Enterprise Corporation, Evenflo, Jardine Enterprises, LaJobi, Million Dollar Baby and Simmons Juvenile Products.

The recalls were announced by the US Consumer Product Safety Commission, which is working on a new mandatory standard for cribs, scheduled for completion by year's end.

Ethical sourcing of timber for the furniture industry is becoming commonplace and, in a sign of the times, so may traceability become a common factor in sourcing leather.

Leather International has reported that the Leather Working Group (LWG) has been working closely with Greenpeace and other NGOs to support their campaign to eliminate deforestation in Brazil caused by cattle ranching. The LWG has now included a section on hide traceability within its latest environmental stewardship documentation. The idea is that the origin of hides can be traced through the supply chain.

The move comes in the wake of a 'commit or cancel' policy by Greenpeace, which threatens cancellation of contracts by manufacturers sympathetic to the Greenpeace cause if suppliers of leather products cannot meet stated sourcing requirements.

The world's biggest furniture maker, Ikea of Sweden, continues to grow despite the world economic downturn, according to the company's chief executive officer, Mikael Ohlsson.

Ohlsson told the German Press Agency that while there continued to be growth, the rate was only about one and a half per cent. This he attributed to customers liking Ikea's policy of offering better quality, while lowering prices at the same time.

The Ikea group operates more than 300 stores in 37 countries, and employs close on 125-thousand people.

Furniture and Furnishing reports exports of furniture from China were up by more than 32 per cent in the first six months of this year, with the total value for the period reaching nearly \$US 16 billion.

Translating sustainability into competitive advantage

From the MIT Sloan Review: Sustainability is less a target than an approach, which is why it is continually being refined.

As companies ramp up understanding, they also push the envelope of what can be accomplished. In short, learning more about what they do has led them to change how they do it.

Though it takes investment and commitment, the rewards are measured in energy cost savings, new product design, customer engagement and employee commitment.

Together, all these attributes amount to the one thing any business understands: competitive advantage.

Last year was one of the worst on record for the German timber machinery and plant engineering sector.

One of the hardest hit by the GFC was woodworking machinery, with a 42 percent fall in sales compared with the previous year.

However, sources report that sales of solid furniture increased 5 per cent during the year

Editor's note: Having spent two months in Europe this year, the GFC and the economic downturn is uppermost in the minds of all too many residents, who frequently hold up Australia's government spending approach to tackling the GFC as a sort of talisman. It is fair to say that many people are looking over their shoulders, fearing double-dip recession, this in turn impacting negatively on consumer and business spending.

The impact of the GFC on Australia seems almost benign by comparison.

A timely reminder from the UK that recycling is moving from being an option to being compulsory for many manufacturers, with two British companies fined more than 200-thousand pounds for failing to meet their obligations in the management of packaging, and of packaging waste.

Under British and EC regulations, companies with a turnover greater than two million pounds, and handling more than 50 tonnes of packaging a year, need to demonstrate compliance, and register as a producer of packaging.

Key points of compliance include:

- Reduction of packaging to the minimum amount necessary to maintain safety, hygiene and consumer acceptance
- Manufacture to permit re-use or recovery
- Emission of noxious or hazardous substances to be minimised, and
- The sum of concentration levels of cadmium, mercury, lead and hexavalent chromium not to exceed 100 parts per million.