

# the AFRDI bulletin

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## Standards shape all aspects of AFRDI's work

*by Bob Panitzki, CEO Furntech-AFRDI*

**The range of services offered by AFRDI continues to diversify, but the heart of everything we do revolves around standards – testing to standards and, where new ground needs to be broken, the researching and publication of new standards.**



In all walks of life, standards set down the guidelines which improve our quality of living, and for furniture, lay down guidelines that ensure products have adequate strength, durability, stability, ergonomic qualities and resistance to ignition, as well as respecting the environment and making considerate use of resources during manufacture.

At AFRDI, we have developed numerous technical standards with a furniture industry focus in recent years, notably our Sustainability Standard, along with a suite of Rated Load standards, reflecting the relatively recent phenomenon of increases in human weight and sizing.

Now, in association with Standards Australia, we are working to update a number of older standards. One of the reviews is into plastic monobloc chairs, AS/NZS 3813, and tackles a number of points not addressed in the original standard, published in 1998. These include the question of weathering, and associated with that, the effects of UV exposure on plastic. Weathering and UV exposure are both suspected as factors which prematurely weaken plastic chairs. We are also looking at bringing some of the elements of rated load practice to bear, with a proposal that plastic monoblocs will be tested for people up to 135kg as a practical approach to their use in the real world, a place where nobody restricts use of chairs by large and heavy people.

It's a similar story for workstations and desks, covered by AS/NZS 4442/4443, where office layouts have changed markedly, and where – in many offices – a workstation may no longer be dedicated to an individual worker. As with office chairs, there's an assumption that a desk or workstation that is 'public property' may not receive the same degree of care as it might if it were 'owned' by an individual. Desks also need easy adjustment to accommodate different sized users.

We are also reviewing AS/NZS 4610.3, dealing with school and education desks, tables and storage furniture.

Who finances all this research work? It's almost entirely covered by members' subscriptions, as we're a not for profit company. It's why we continue to ask all our clients to become AFRDI members: it's a way of financing research and development which we know will benefit the industry as a whole. It underpins the value proposition behind the AFRDI promise – that products which have been **tested and certified** are at the very least a known quantity, and frequently, the very best available. And of course, don't forget that AFRDI membership attracts substantial discounts on full testing.



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# 'Fresh bread' case has broad implications for furniture industry

**We note that the ACCC has won a case against a supermarket's claims about its specialty bread, centred on allegations of misleading advertising.**

The success of the action must surely ring warning bells within sectors of our own industry, where a culture of 'anything goes' seems to characterise a great deal of online product advertising.

We get a strong feeling that to some people, no amount of warnings about the possibility of prosecution for misleading advertising or unsustainable claims will have any effect until legal action is taken against them.

For its part, AFRDI tries to make clear what it expects users of its intellectual property to do in terms of use of AFRDI logos and trademarks and, most importantly, the question of so-called 'user weight rating' for chairs. (see the *Use of Furntech-AFRDI Trademarks* document [here](#) on our Website).

**In a number of cases since our last bulletin, chairs tested and certified under AS/NZS 4438, which suggests a user weight of around 110kg maximum, have been advertised against our AFRDI Blue Tick logo as suitable for use by people weighing up to 150kg, and in one case, 200kg.**

The ACCC chairman Rod Sims said the Coles decision served as a reminder to retailers to accurately describe their goods. "We're trying to send signals on these sort of claims," he said. "If you're making claims about where a good is from or how it's made, get them right."

Australian Consumer Law is clear cut in its descriptions of what is reasonable advertising. Much as we feel a sense of annoyance that AFRDI wastes a good deal of time in tapping people on the shoulder about advertising, we sincerely hope that we don't find the name of an Australian furniture company listed as being under prosecution by the ACCC.

**Yet a small voice of doubt at the back of our minds says that surely, such an unfortunate event can't be all that far off.**



Image by Creative Fuel

While we in the 'real world' concentrate on how to make dollars from production furniture, the world's design students each year spend time designing chairs that are sometimes as much objects of desire as practical furniture.

It's part of a discipline in which students are challenged to understand fabrication, human scale and aesthetics through building an everyday object.

This chair was designed by Elisabeth Vapenstad Holm-Tilde, of Norway's Bergen Design Institute.

# Two chairs achieve certification under AFRDI Standard 151

**Two fixed height chairs, tested within days of one another, are the first to have successfully achieved certification under AFRDI Standard 151 at 135 kg.**

The chairs are the Equip Veroli chair with arms, the first to qualify, and submitted for testing by BFX HO Pty Ltd, and the Madeline chair, submitted by RNI Imports.

BFX describes the Equip Veroli chair as being very versatile and slightly larger than normal, and sees its target market as the health care sector, hospital waiting rooms, and general corporate fitouts.

RNI says its chair is intended for use in cafes and restaurants, and features a one-piece 13mm plywood shell and a stronger than normal frame.

**In fact, the loading on both chairs ranged from 136kg to 330kg, and was applied for approximately 300-thousand cycles.**

Furntech-AFRDI CEO Bob Pantizki says it is encouraging that manufacturers and distributors of fine chairs are responding to the challenges thrown down by the AFRDI 151 standard.

“One of the standard’s key points is that it recognises that when fixed height chairs are provided in a public setting, there is no control over whether people of average weight or heavy people sit on the chair.



**LEFT: The Equip Veroli chair.**

**RIGHT: The Madeline chair.**



“In present times, where litigation is becoming more common, it is a sensible move by anyone providing public seating to ensure that the product is tested for potential severe use, to minimise the risk of a chair failing when occupied, and any subsequent injuries.”

## A nudge for your health’s sake



*from jsacs.com*

The Darma cushion monitors health and the user’s behavior to record how long they have been in the one position. The cushion simply needs the user to sit on it to monitor their health and behaviour.

Darma is a smart cushion that is placed on office or work seats and measures the user’s heart rate, respiration, posture, and even their stress levels. It also records how long the user has been seated and nudges the user to get up and stand or walk around.

The smart cushion has a 1mm high-sensitivity sensor that can record the body’s micro movements. Optic fibres are also embedded into the cushion to monitor the user’s movements, and to record correct posture.

## US using certification program similar to the Australian Made logo to boost sales of goods manufactured locally.

The rise since 2008 in production and job creation in the United States is heading in the right direction but many breadwinners are still struggling to find work, according to the news organisation PRWEB.

Backing this, the Boston Consulting Group has published a report that names the U.S. a 'rising star' in global manufacturing competitiveness. News broadcasts across the country lauded the findings and confirmed what many members of the media are calling the "Manufacturing Renaissance" of America.

But the creator of the Economic Impact Rating, Anthony Comito, feels more can be done to reshore manufacturing to the United States.

The Economic Impact Rating, a patent-pending third-party certification program that evaluates a product's contribution to state, region or the US economy, is one of those things that can be done. The EIR mark is placed on a product's packaging or advertising so consumers are able to see which purchases have the highest economic impact.

"People are worried about jobs, unemployment and the economy," declares Comito. "Companies that display an Economic Impact Rating Certification Mark are showing consumers that they support jobs and economic growth in their area—giving consumers something concrete that they can do about the problem."

According to the press release from Boston Consulting Group, the report utilized a new tool, called the Global Manufacturing Cost – Competitiveness Index, to track changes in production costs over the last decade in the world's 25 largest goods-exporting nations. The index is based on four direct economic indicators of manufacturing competitiveness: wages, productivity growth, energy costs, and currency exchange rates.

BCG found that the U.S. has significantly improved relative to other leading exporters across the globe due to reduced energy costs. There has also been a 50 percent reduction in the price of natural gas since large-scale production of U.S. shale gas began in 2005.

Scientists from the Lausanne (Switzerland) based Biorobotics Laboratory (BIOROB) have developed small robotic modules that can change their shape to create reconfigurable furniture.

Like Lego bricks, Roombots pieces can be stacked upon each other to create various structures. Each 22 cm-long piece, which looks like two large dice joined together, has a wireless connection. Inside are a battery and three motors that allow the module to pivot with three degrees of freedom. The modules have retractable "claws" that they use to attach to other pieces and form larger structures. With a series of rotations and connections, the modules can change shape and become any of a variety of objects and pieces of furniture.

In order to metamorphose and to attach to passive elements, the Roombots need to anchor themselves to something, so the researchers have developed a special surface with holes adapted to the Roombots' mechanical claws. Fixed to the walls, floor, and already existing pieces of furniture, these surfaces act as interfaces between the modules and their environment. The little robots can then climb the walls of a room, or attach themselves to "passive" elements on the furniture to form mobile tables or lamps that follow users around the room.

from [www.techbriefs.com](http://www.techbriefs.com)

# Keeping a family business together, over generations

Several issues ago, the AFRDI Bulletin touched on the question of succession planning. It's a subject of universal application, as is the following, courtesy of the Harvard Business School Review, one of whose contributors, family business expert John A. Davis, has been looking at what is the 'secret ingredient' that sees some family businesses survive from generation to generation. John characterises the secret for ongoing success as having three main ingredients: growth, talent and unity.

The secret sauce of long-term business success can't be captured in numbers. As the operations manager of a leading and fast-growing Brazilian business recently explained, "There's a secret sauce in this business [but] it's almost impossible for a financial analyst to model." Agreed. But long-term success—even for a family company—can be explained in a rather simple, straightforward way. Here are some high points to consider.

## **GROW EVERY GENERATION**

In order to stay alive commercially as a family, you must grow your assets (what's left of your assets after taxes and inflation) faster than your family or business consumes them. Of course, growing families and businesses are both good at consuming assets. For many family companies we have researched, their sustainable real growth rate is 6 percent. That might seem easy to achieve but it isn't.

Returns on assets tend to wane over time as an industry matures and ultimately declines. To maintain high returns and keep your family company modern and competitive you need to make well-timed, significant bets in growth businesses. Some of these bets can regenerate your core business, but others might diversify your business activities, moving away from your original business. If you can't consider diversification and entrepreneurial efforts, you are probably not going to survive long-term.

## **IDENTIFY AND DEVELOP FAMILY WEALTH GENERATORS**

You need good family owners to support your company and good family board members to guide the company. You also need one or more members per generation who are wealth creators—who know how to make winning bets that produce the financial returns you need.

I'm studying family wealth creators around the world. The best often show an interest in business between the ages of 8-14. Develop these wealth generators by providing the right opportunities to learn about business, in your core business or outside. These wealth creators need to be stretched beyond their comfort zones in their understandings and capabilities. Give them real projects and don't protect them from failure.

## **BUILD FAMILY UNITY**

I can't overstate the importance of building family unity if you want to succeed over generations. Family feuds that result in ownership splits weaken a family and greatly reduce its assets and returns. You need a program to bring together the family behind the business, to strengthen trusting bonds and build family commitment to your company. A good shareholder agreement is very useful. I don't advocate keeping people together when there are fundamental disagreements over a company's direction. But even these, rifts must be managed in a respectful and careful way, ultimately with a commitment to preserve family unity and assets.

The secret sauce for surviving from generation to generation has three main ingredients: Growth, talent and unity. It should be your mantra if you want multigenerational success.

**LATE NEWS:** The Furnishing Industry Association of Australia Ltd (FIAA) will be attending AWISA, which is being held in Brisbane at the Brisbane Convention & Exhibition Centre between the 6th and 9th of August.

# The hidden costs of putting on a lot more weight

**At AFRDI, the problems arising from the so-called super sizing of some individuals is well appreciated, particularly through the research underpinning the Rated Load Standards.**

But a recent article in the **Canberra Times** outlined some hidden aspects of the obesity crisis, with headlines proclaiming that the ACT is continuing to lose its war on fat.

**Twenty-five per cent of Canberrans are now considered obese and a further 38 per cent considered overweight.**

One practical – and costly – manifestation of the crisis is found in the toilets at Canberra Hospital, which used to be tested to 170 kilograms before the patients started breaking them. They have since been replaced with models that can carry 400 kilograms, while huge motorised hoists hang from the ceilings above beds in some of the wards so that patients can be safely lifted and moved.

Doorways have had to be widened to accommodate reinforced wider beds designed to cope with bigger patients, and a small fortune has been invested in ambulances that are able to carry increasingly heavy passengers.

A subterranean storage room that houses specially made plus-size wheelchairs, slings and beds is necessary to help staff manage morbidly obese patients without hurting themselves. But they are more expensive: bariatric beds cost \$5000 more than a standard model.

Even the hospital building itself is struggling to cope with the larger patients. Theatre doors, lift capacities and floors are not able to cope with the larger equipment.

Rick Narayan - the hospital's manual handling trainer - said the largest patient admitted weighed 382 kilograms. That patient has since died, but his size prevented him from having MRIs as the machine's weight capacity was 150 kilograms.

"It's about safety for our staff. When we move an obese patient we need four to six staff to move patients. In some situations we've had eight," Mr Narayan said.

"In the new women's and children's hospitals, hoists are just part of the standard fixtures - we are preparing for an influx of large patients so the features are becoming standard." One pregnant woman weighing more than 250 kilograms had her caesarean section performed on a bariatric bed last year rather than a theatre bed due to her size.

**AFRDI's technical manager, Ian Burton, says there has been some pressure from industry to increase the upper limits for height adjustable office chairs addressed in AFRDI Standard 142. The upper limit is presently set at 160 kg, with testing for both 8-hour and continuous use.**

**"People actively engaged in the workforce are very rarely heavier than this," Ian says, "but there appears to be some demand for office chairs to be certified at even higher levels."**



# The future low-cost manual labour... could be a robot

**Industry trends in the United States may not have a direct or immediate impact on the smaller-scale Australian market, but they nevertheless give a fascinating insight into the way that some sectors of manufacturing may move in the near future. This glimpse of a possible future comes from *reshoringmfg.com***

Observers in the United States have watched over the process of moving much of the US manufacturing base to other countries, especially China. But in the last couple of years, the economic pendulum has swung back towards domestic manufacture. This is a result of inflating labor rates in China, coupled with high unemployment in the US and Europe due to the recession. Low US energy costs, a result of fracking, also are making their effects felt.

Long lead times, the need to order in larger than necessary blocks, and the resulting increase in risk and inventory costs are also strong factors. Add to this some sabre-rattling in Asia and a less than friendly climate for outside investment, and prudent mega-enterprises are hedging their bets.

A scurry to find the next “China” is unlikely. In fact, the whole Asia area has increased base costs to the point that there is no obvious strong candidate as a low-cost manufacturer.

Foxconn, maker of all things Apple, and employer of over one million workers, is taking this issue seriously. They are looking at a robotic future, where the repetitive assembly work is done by new generation robots. A plan to replace most of those workers is already under way.

Robots require people to run them, but these are engineers and technicians, not labourers. The cost of these people, though, is small when amortized over a lot of robots.

Couple this with the much shorter logistics chain that US manufacture enables, and the benefits of placing robots in domestic industry are strong. It’s worth noting that this is already happening, specifically in the automotive industry, where tax incentives are added to business prudence.

New technologies are potentiating the on-shore flow. “Just-in-time” has been a mantra in manufacturing for decades, though the rush to cheap assembly in China pushed it to the sidelines. 3D printing, plasma metal cutting, and even cooperative logistics all address this issue in the US arena, with the result that short, efficient production pipelines are possible again.

## Food for thought

As a standards and testing institute, we frequently stress the value equation arising from the work we do – that is, testing and certification may prevent product failure and the threat of litigation arising from personal injury. And so it possibly comes as no surprise when we find that the United States Consumer Product Safety Commission recently reported on the recall of Office Depot branded leather task chairs.

The commission says that at the time of its report, Office Depot had received 153 reports of a seat plate weld cracking or breaking. This in turn gave rise to 25 reports of contusions, abrasions and reports of injuries to the head, neck, and a fractured back and hip. The offending chairs were sold in retail stores and online from 2003 through to 2012, but only in the United States.