# A MEASURE OF SUCCESS

Celebrating Ten Years of Original Product Development





Published by Locus Research 2012 www.locusresearch.com © 2012 Locus Research All rights reserved. No part of this publication may be reproduced or transmitted in any form without prior permission in writing from the publisher. ISBN 978-0-473-22948-1 Printed by Kale Print, Tauranga Bound by Bookbinding Press, Auckland Layout and cover design by Robin Lyttle & Timothy Allan To celebrate our tenth anniversary we have created this book to index the people, selected projects, and ideas explored and realised over this period and to thank those who have supported us, collaborated with us, worked with us and for us.

## A Measure of Success

The year 2012 marks ten years since Locus Research was formed. We have enjoyed a diverse range of projects and learned a lot from the challenges, successes, and failures over the decade, whilst working with some fantastic people and companies along the way.

#### Ten

The logic, importance, and synchronicity of the number ten are obvious. It is at once a number, but also a symbol of both humanity and our evolution. It is a simple platform for larger ideas (like money), but has enough resolution to imply and form its own meaning.

It is the number of fingers on both of your hands, and the number of your toes. Hands provide us the dexterity to be designers and crafts people and to think and communicate quickly and easily through a variety of both drawn and three dimensional forms.

Our ten fingers are the basis for modern numbers with the early Proto-Indo-European numerals containing the root word for finger or digit. The definition of digit means a finger but also is one of the elements that collectively form the system of numeration (0-9).

Through this drives the metric decimal system, where all multiples and divisions of the decimal units are factors of the power of 10; it was first proposed by Simon Stevin in 1586. Greek Mathematician Pythagoras and Roman General Agrippa even considered ten to be the symbol of the universe, a thought nicely expanded on through the prescient film *Powers of Ten* created by the legendary designers Charles and Ray Eames. It depicts the relative scale of the universe in factors of 10 from molecular to astrological scale. And perhaps uncannily the Palomar Observatory discovered in 2005 there were not just nine planets, but ten.

The number ten is deeply rooted in our psyche; it was not five or six commandments that came down from Sinai with Moses but ten. Perhaps savvy religious leaders had already worked out it might be easier to remember ten (counting on your fingers) than trying to laboriously write out a more complete set of don'ts when most of the population could not write.

In sport the number 10 has quizzically found a central role in both soccer and rugby; the playmaker often wears the number 10 as a mid fielder, or a first five eight. The fastest men in the world have to run under the mystical ten second barrier, whilst the most demanding event, the Decathalon, tests athletes over ten track and field events.

Ten even found its way onto the British Prime Minister's door at Downing Street, *Ten* is arguably the best album of Pearl Jam, and every time you reach into your pocket to pay for something you are paying in a denomination of ten.

Wherever you look, ten finds its way into our lives like a piece of invisible infrastructure. Ten is a dimension, a measure. For us, reaching ten years is a measure of success.

#### Tree

The concept that caught our eye early on as the perfect analogy for the celebration of ten years was the tree. Through analysing the growth rings of a tree you can define its life-span, and in many cases a ring is almost exactly a calendar year. It visually charts a tree's growth through the good years and the bad.

Like the number ten, trees are pervasive. They are often planted in honour of an accomplishment, an important rite of passage or for the life of a loved one. Trees are symbols of life and their ability to enrich the air we breathe accentuates this as they process the most common greenhouse gas (carbon dioxide) into oxygen.

In New Zealand, Tane Mahuta (Lord of the Forest) is a



majestic Kauri tree metaphorically tied to the creation myth where Tane, son of the Sky Father Ranginui and the Earth Mother Papatuanuku, separates his parents from their embrace to give us the world as we know it. Tane Mahuta was linked in 2009 to another deeply aged tree in Japan called Jomon Sugi in Yakushima which is staggeringly dated between 2,170 and 7,200 years old; an age sufficient to see almost the entire civilised period of humanity.

We used the concept of a tree's rings to create a graphic that charts our ten years and all of the interesting events along our timeline. It captures the idea of growth, change, and evolution without necessarily setting an end point.

#### Us

All ideas start somewhere, from an origin, a position, a place, a point – a locus. With time and attention, a seedling can grow, develop, and influence its surroundings.

In 2002, we sought to create a company that could become a world leader in product development and to do it in a certain way; with ethics, integrity and originality. Our approach to design was founded with the idea of creating products as a total work of art; a holistic consideration of all elements that influence a product's life cycle, like an ecologist studies an entire ecosystem.

The word research reflects the systematic way in which we carry out our work. Product development requires deep research to generate the genuine understanding that can drive the insights needed to create products with a lasting point of difference.

Being in New Zealand has provided a sense of place and also an important source of inspiration through both the environment and the people. We have drawn inspiration from the resourcefulness, independence, creativity, and mana of people as diverse as artist Len Lye, sailor and environmentalist Peter Blake, coach Arthur Lydiard, climber and philanthropist Edmund Hillary, engineer and entrepreneur Bill Hamilton, designer and director Mark Pennington, and potter and teacher Doreen Blumhardt. New Zealand has inspired and enabled us to think differently about what we do and to do it the right way.

As a company, we modelled ourselves off businesses like Design Mobel and Macpac. Each business was founded by a visionary person (Dave Macfarlane and Bruce MacIntyre, respectively). Under their stewardship they were both highly innovative and strove for excellence in all facets of their business, whilst being about more than just the money. They cared about their environment, people and the community in a genuine way.

We have worked assiduously to constantly improve and evolve how we work to learn from each program. Incrementally we have created a unified approach to developing products which is fully integrated, a process that has literally taken ten years to settle out. Every project, client, and collaborator is a part of this important output.

We have enjoyed the ten years, and hope we can build on this to create a durable and lasting impression in product development, design, innovation, and sustainability.

Kind Regards,

Timothy Allan













#### Aotearoa

## Long White Cloud

Aotearoa.

Each time I return, your touch underfoot is easy, it confirms what I know.

> Green, dark, solitude, A promise.

Sitting in a deep ocean, like a small jewel, embedded in rock.

Rough cut, mountains hewn and lifted, drawn from the ocean floor to a dizzy height, piercing sky cloud cover.

Moving constantly to balance the low slung, dense olive fingers which disappear into an overhead mist.

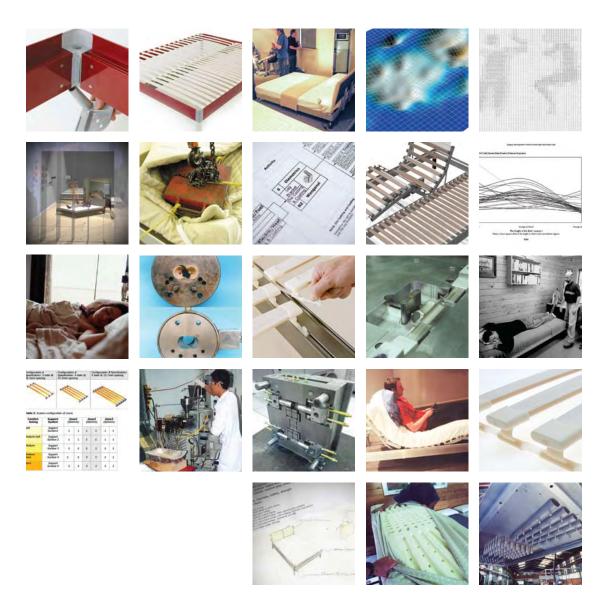
Aotearoa, you are often concealed, subtle, to be discovered, found, not displayed.

Your air drawn in, salty, earth-like.

Sand underfoot, foam lapping to the sound of each morning, as sun beam fragments scatter on the long shoreline.

You are my home.

Aotearoa.



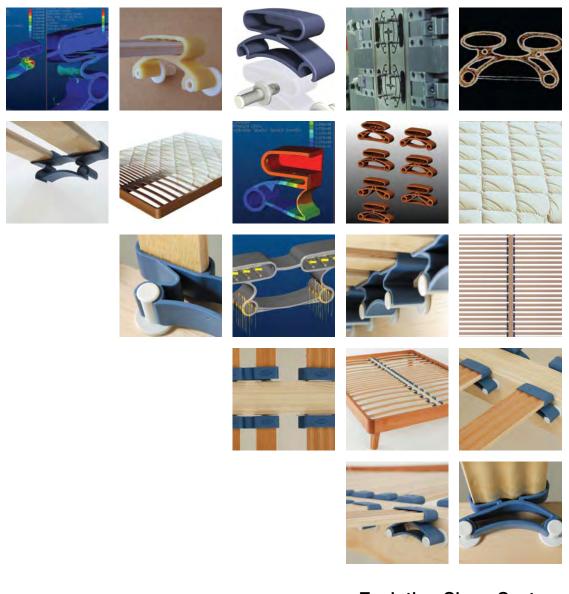
## **Circadian Sleep System**

Right: Track and Socket, 2002

The 'Circadian System' originally began at Design Mobel and effectively gave us our start in life. The project sought to redefine sleep and sleep systems to create a new generation sleep surface, capable of competing on an international level.

It was a diverse and multidisciplinary project combining ergonomics, materials science, mechanical engineering, sleep science, manufacturing, sales, and marketing. It even investigated the potential of establishing a small format retail store as the ideal way of selling the product.



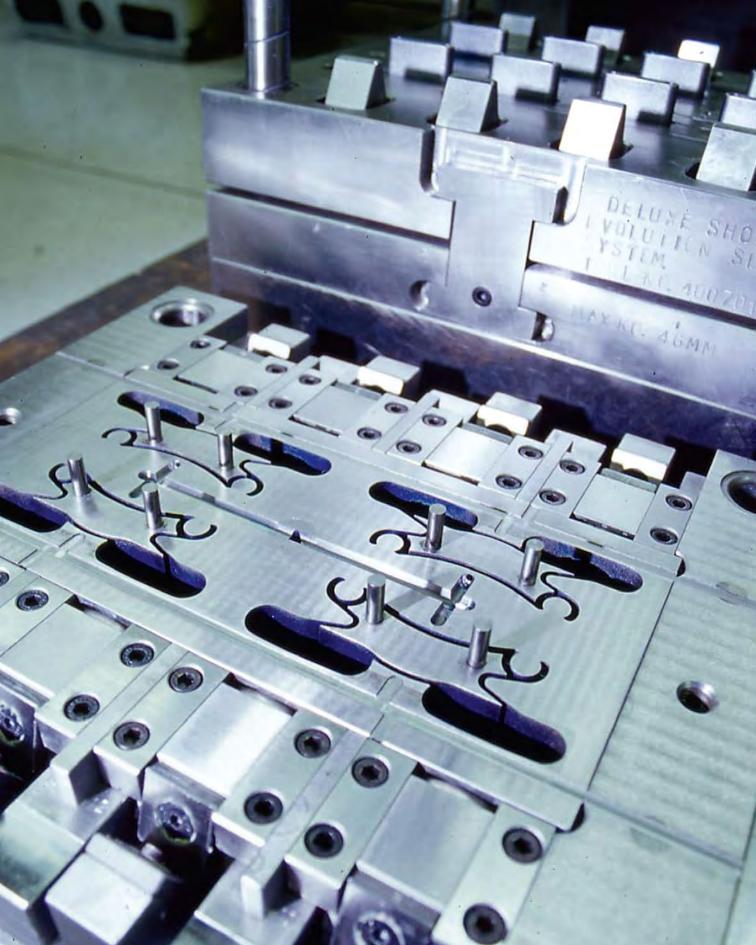


## **Evolution Sleep System**

Right: Evolution Tooling, 2002

Design Mobel's sleep system had a huge loyal customer base, but over time, tooling had become tired, the production cost remained static, and there were some production constraints with the existing design. A quick analysis illustrated that a material change and tooling evolution would provide some immediate advantages.

This project annexed the fundamental sleep research from the Circadian System to implement a new threezone two-sided system that supported differential body types. It also delivered great cost savings, improved production, and reduced the environmental footprint.

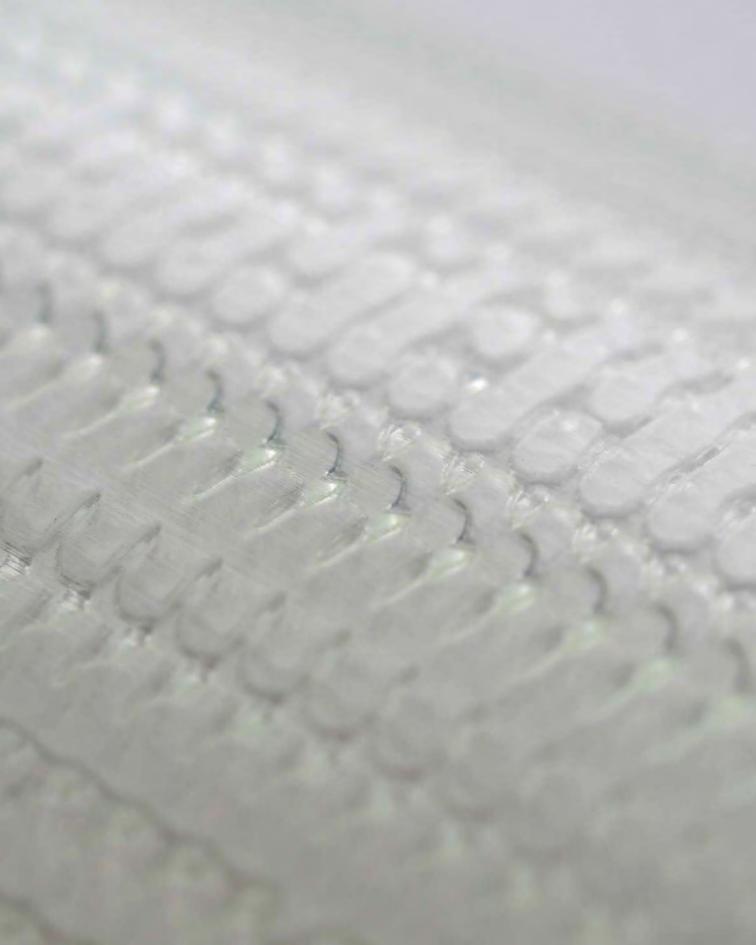


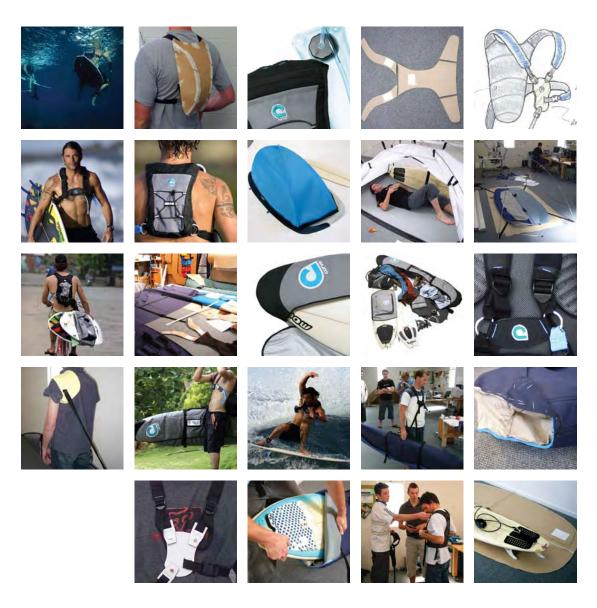


## Cubro Rehab

Right: Gutter Moulding, 2002

We first started working for Cubro Rehab in 2002. Cubro are a leading New Zealand manufacturer and supplier of high quality medical and rehabilitation equipment. Our work has ranged from the design of walking frames and accessories to gutter pads, walking tips, and rubbish bins. A quick walk through any hospital in New Zealand will give you an impression of their coverage; the little Cubro sticker is on just about everything.





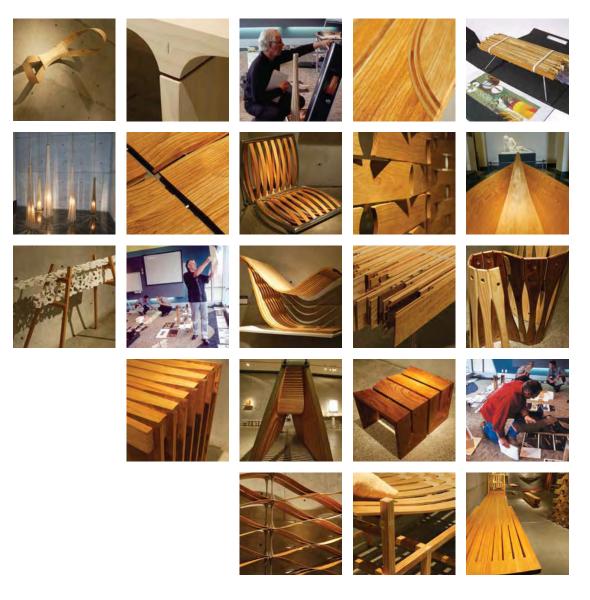
#### **Curve Surf Travel System**

#### Right: Waterman Fatboy Backpack, 2003

Through a design school friend Dana, Simon Winter and his business partner Al Rhodes approached us to work with them on the development of a surf board travel system. This was a dream project as most of us had done sports equipment for our major design school projects.

The project involved development of a range of innovative accessories for surf travel that revolved around a completely redesigned board bag (The Burrito). Simon has continued on with the business, working through all of the challenges involved with tackling the big name surf brands to carve out a niche in New Zealand and further afield.





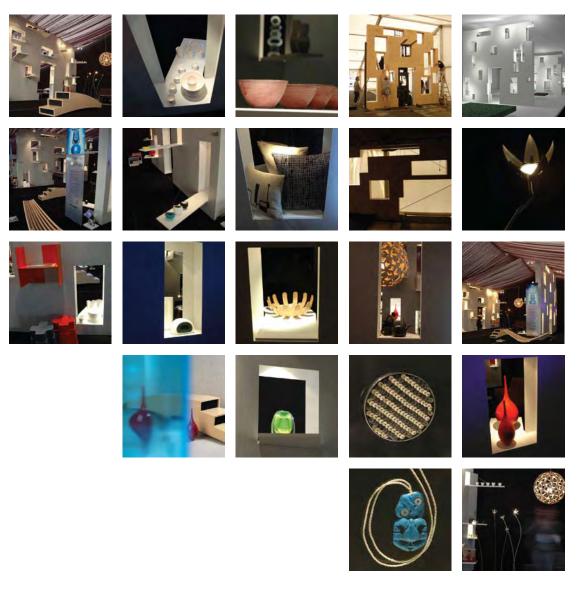
#### Metaform

Right: James Whitta's Logge, 2003

It took a conversation in 2002 with forward thinking Fibre-Gen (Carter Holt Harvey) CEO Mark Smith to bring the idea of Metaform together. CHH had recently acquired a shareholding in Pacific Hardwood, who had licensed Scion's innovative Indurite technology for impregnating pine with cellulose. The Metaform competition would ask students to create something innovative from this great NZ developed material technology.

With the concept partially formed we went to AGM Publishing and Robin Beckett took a punt and joined the team. With the three key partners in we then got the three major design schools of Massey, Victoria, and Unitec on board. It was then up to the students, and they did not disappoint, with 38 stunning full-size works drawn from over 90 submissions exhibited at the Auckland Museum thanks to John Hadyn.





## Bombay Sapphire Design Room

Right: Looking Through, 2004

Paul Blomfield (who was working with NZTE at the time) had seen Metaform, and with his fashion-world experience came up with the idea for an exhibition of design within New Zealand Fashion Week. After being asked to be a part of the team, we pulled together Ange Roper from Eon Design Centre, Claire Regnault from the Dowse, architect John Hadyn, and Robin Beckett from AGM Publishing.

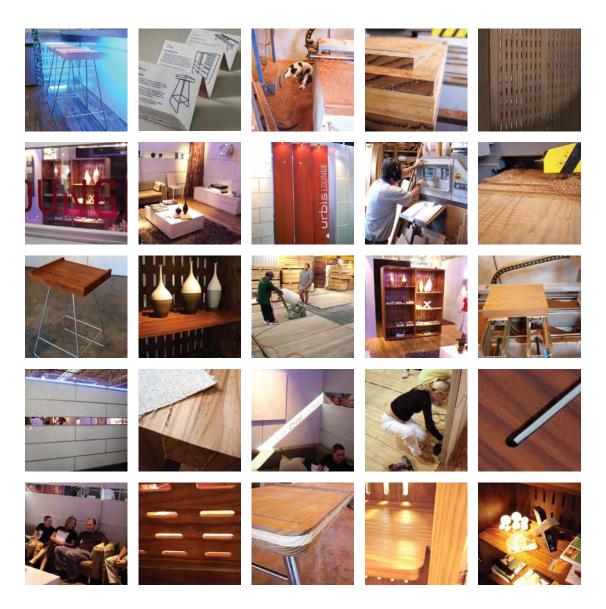
In an intense three months we selected and curated over 100 works, photographed them, created a catalogue, designed and built a huge display, and took it to the international media present at Fashion Week. The exhibited works spoke clearly about the creativity and skill of New Zealand's home grown designers and crafts people.











## Thermowood and DesignEX

#### Right: Stoe Cabinet, 2004

Fibre-Gen R&D had been working on the application of the Finnish 'Thermowood' technology to New Zealand Pinus Radiata for exterior usage. After working together on Metaform, CEO Mark Smith asked us to set our minds to creating some designs that would exemplify the materials. A large vertical divider (Stoe), a bench seat (Fernlief), and a high stool (Blane) were designed and manufactured.

Concurrently Robin Beckett from AGM had put the idea together for a group of NZ companies to take a combined display to DesignEX in Australia. The new works fitted neatly into this, along with a new Indurite floor from Pacific Hardwood. The Urbis Design Lounge proved to be one of the best on show and the awards for both furniture and flooring capped a successful project.



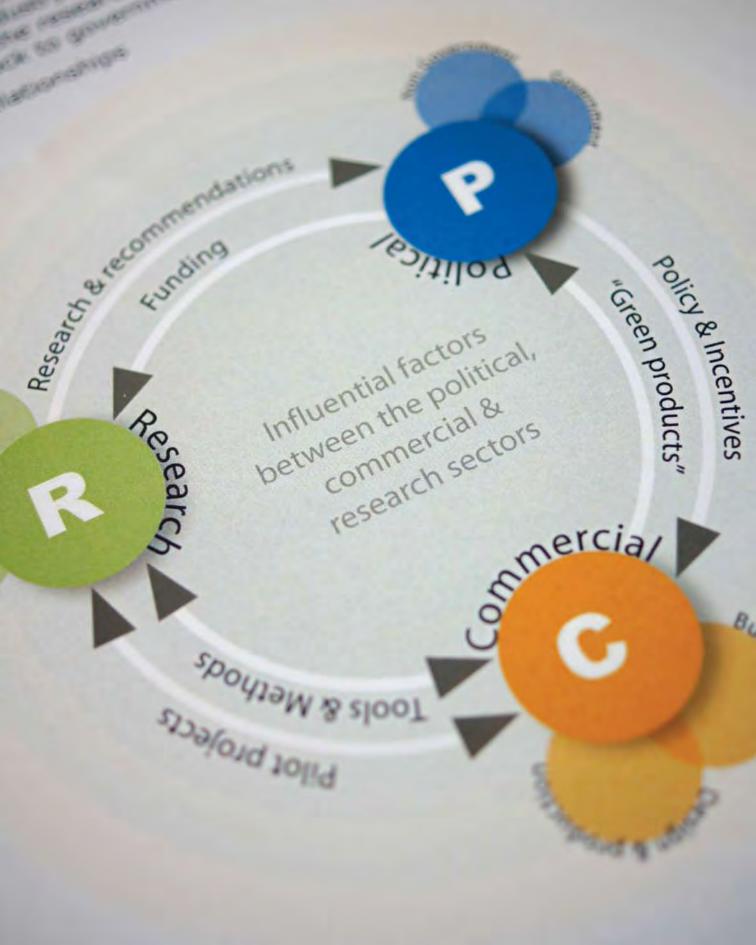


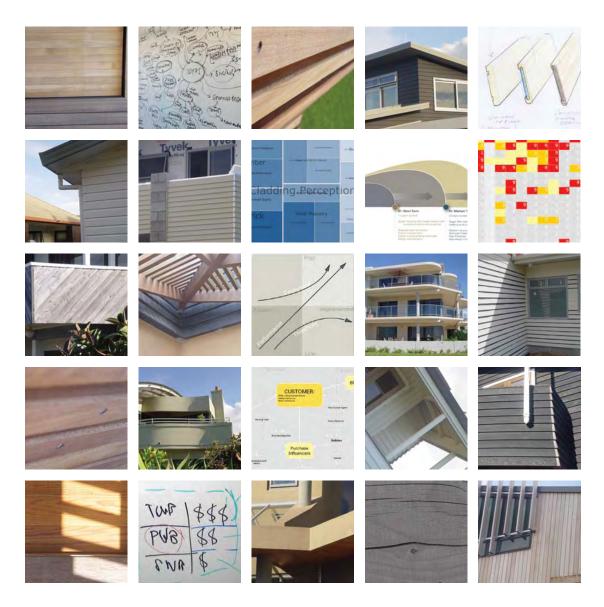
## Recircle, Europe & New Zealand

Right: Influential Factors in Sustainable Design, 2005

The Recircle project was an ambitious attempt to build a greater understanding of sustainable product development within New Zealand.

Young NZ designer Josh Astill spent six months at TU Delft, the recognised leader in the field of sustainable product development internationally, and six months in New Zealand looking at the NZ context. This research provided a clear picture of the academic, political, and industrial history and position of sustainable product design within the EU. It illustrated that, rather than re-inventing the wheel in NZ, we should learn from other leading countries and then synthesize our own direction. A research report was commissioned for the Ministry for the Environment who, along with support from TU Delft and Scion, made this project possible.





## **Guardian Research Project**

Right: Product Environmental Map (PEM), 2005

The GM of the Sustainable Consumer Products group at Scion, John Gifford, was looking to take a different approach through collaboration. We developed a 'Product Oriented Research' structure for the project and pulled together a cross functional team covering design, environmental science, engineering, and chemistry. Focussing on the opportunity to create a new timber weatherboard product, it provided a clear picture for industry, and enabled the creation of several major research projects including Compass and Cortex.

This project critically helped us to evolve our Product Development Specification (PDS) structure and strengthened our collaboration with Scion.



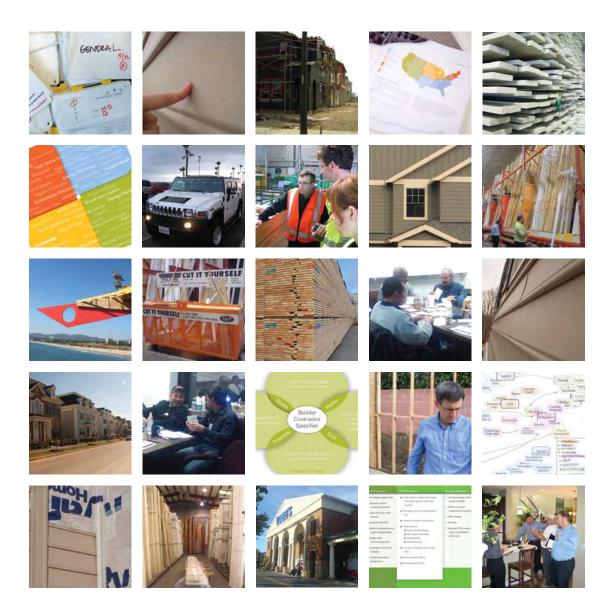


## Littl' Juey Weed Cutter

Right: Reloads, 2006

I remember hearing the story of Frank Walker's Littl' Juey weed cutting head selling so well at the National Fieldays that he exhausted the North Island supply of a certain diameter of alloy rod. This is the kind of product that inspires enthusiastic testimonials from the hardest of customers. A simple product that created a new space in the market. We initially helped Frank with some design and productionisation, and have evolved into an ongoing relationship covering a wide range of work from product to packaging to web and anything we can help with.





## **Compass Research Project**

#### Right: Report Detail, 2006

Compass was initially conceived as a scaled up version of Guardian for the US market. It was a partnership between us, Scion, Pacific Wood Products (PWP), and Tenon with seed funding from the Forestry Industry Development Agenda (FIDA). It sought to create a better understanding of the US exterior cladding, siding, and trim market. This was a technically and geographically demanding study. It involved researching the context and developing an in-depth understanding of the customer experience and behaviour to identify insights for downstream product development. The findings were condensed into a succinct publication that key executives at Tenon and PWP could understand and apply within their businesses. We also created a summary presentation that PWP CEO Tony Clifford delivered for the wider industry.

Requirements User Groups Product System Figure 12 Annaux Stakeholders Product Life Cycle Requirements The Customer The customer is made up of different sub groups The customer is more up or dimerent sub-which have competing requirements that group ha halanced. These requirements that need which have competing requirements that need to be balanced. These requirements that need interature research diversion been to be baranced, more requirements have been formed through literature research, discussions, and surveys with sharifun and formed integration of osearch, discussion workshops and surveys with specific groups Breaking down and describing the special Breaking down and becausing the special characteristics of the different types of customer NAHB research indicates that it is the 'Users' sub groups such as users and end consumers (particularly builders and contractors) that have enables evaluation of the key elements that the most direct influence on the selection and isea of exterior ending theories and the selection and the most direct influence of the selection and t influence each group the most under multiple on the selection and use of exterior siding, fascia and trim broducts. It is therefore critical to address their needs Deconstructing the Customer and requirements directly to drive uptake of the The customer provins for science basics and him product. End consumers play an obvious role The commence of the contract o but this group is more interested in appearance and does not exert a strong influence in material Adarker solection Technical products which exhibit little The Uners' Market that was the product variation in their appearance such as trim appear to be primarily drives by Nub contractor and builder's declarion making Mattern the identifiable coatomer groups 



## **Transform Initiative**

#### Right: Brochure Detail, 2007

Sean McElroy, CEO of Textiles New Zealand, approached us with the conundrum of having over a million dollars of MED funding for R&D within the Textiles sector, but no one to allocate it to. This gave birth to the Transform Initiative.

Transform provided a structure to generate interest from a wide range of companies, assess those companies and select the best projects, and then help those selected to generate a robust development plan. From over a hundred registrations, 66 detailed proposals were reviewed and then whittled down to six projects covering: noninvasive compression therapy; chainsaw protection; woven felted bedding throws; a new night-wear textile; and an integrated bioharness.





## Life Cycle Thinking Series

Right: Stickers and Worksheet, 2008

After being engaged with Life Cycle Thinking, Management, and Assessment, we felt there was a real need to empower designers and businesses by showing them the great ideas and frameworks they could use to improve the sustainability of their businesses. Working with collaborators Dr. Cris de Groot (Unitec), Jake McLaren (Formway), and Barbara Nebel (Scion), we created a three part workshop series that progressively taught people the ideas, from concept to practical implementation.

It was an action learning program with worksheets and presentations that workshopped the key ideas to amplify learning. It was complemented by three articles published monthly in AGM's *Prodesign* magazine: *Life Cycle Thinking*; *Life Cycle Management*; and *Life Cycle Tools and Approaches*.



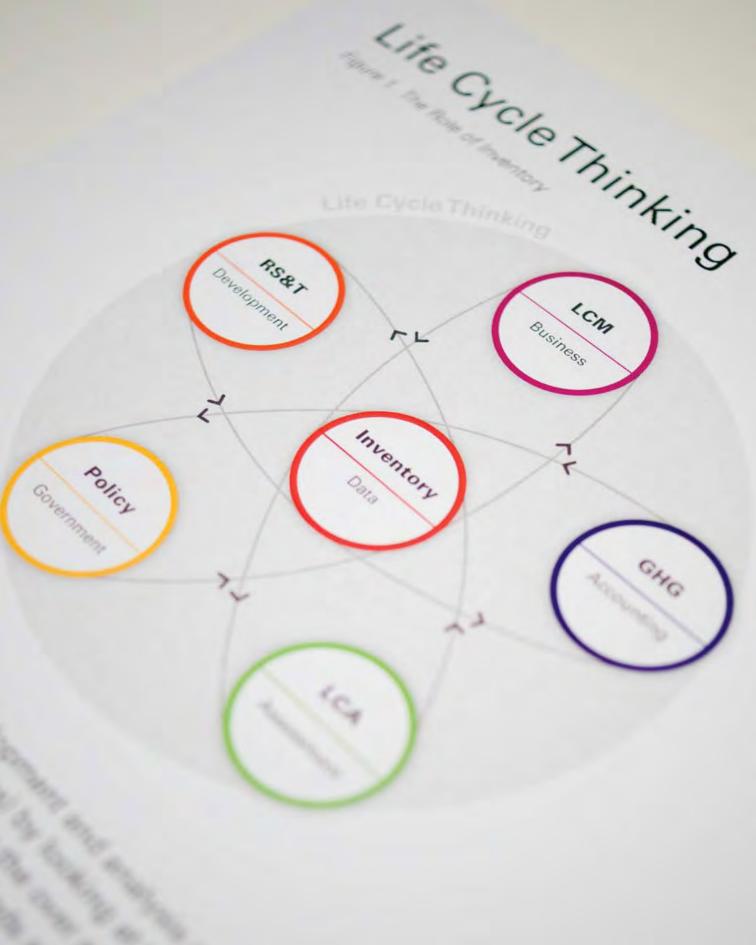


## The Role of Life Cycle Inventory

#### Right: Report Detail, 2008

The Ministry of Economic Development (MED) and the Ministry of Research, Science and Technology (MoRST) wanted to more clearly understand the role of Life Cycle Inventory to inform policy and better support New Zealand's key industry sectors. We worked with top practitioners to form a complete and objective view of Life Cycle Assessment and the role of Life Cycle Inventory in their work.

A significant finding of the report was the importance of education within the LCT sector. The Ministry of Agriculture and Forestry (MAF) subsequently funded the establishment of a professorship and the Centre for Life Cycle Management at Massey. Also, MED seed funded the establishment of the Life Cycle Association of New Zealand (LCANZ).



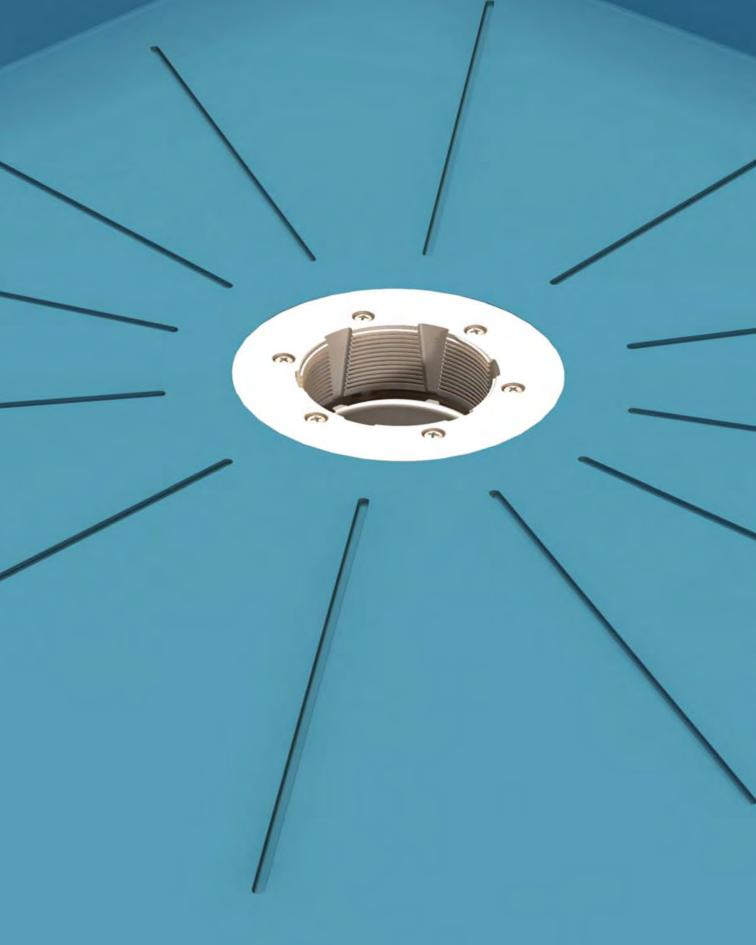


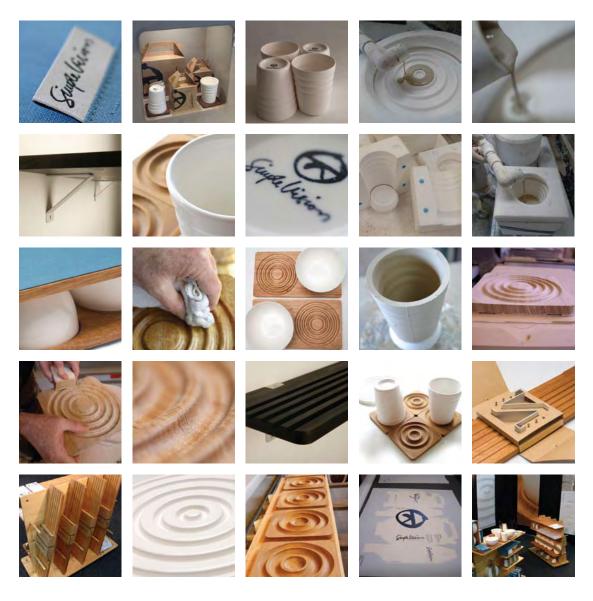
## **Drybase Tiled Shower System**

Right: RIM Moulded Base, 2008

We were fortunate to meet entrepreneur Murray Goodhue early on in our development as a company. He brought us an interesting project to collaborate on: to develop a new tiled shower system for the Australian market.

Over a period of several years the product was iteratively developed from research through to concept, prototyping, and finally to production. It was initially launched in Australia through Showerco, and has subsequently been launched in New Zealand by Murray and Jason Goodhue.





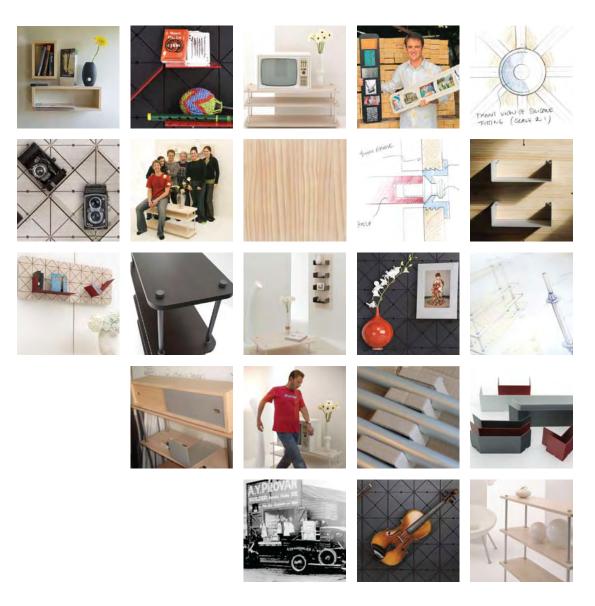
# **Simple Vision**

#### Right: Milky Sweet Cup and Saucer, 2008

The Simple Vision range was an internal project that started the first year we were in business and gradually evolved to a full product and brand over time. It was built on the marriage of ceramics, timber, and fabric.

Conceptually it was strongly influenced by Japanese ceramics from the production through to the packaging. Our aim was to deliver an elegant and complete experience for the customer from purchase through to use in home. The range started with furniture and then was extended and found its footing in homeware, especially for those that love the creation and preparation of food.

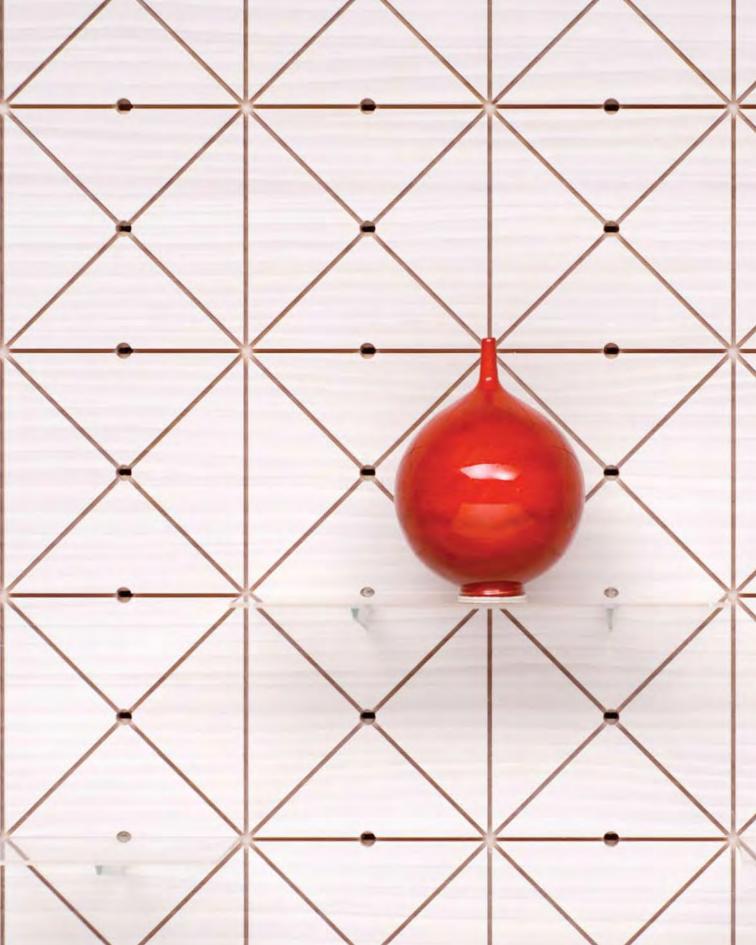


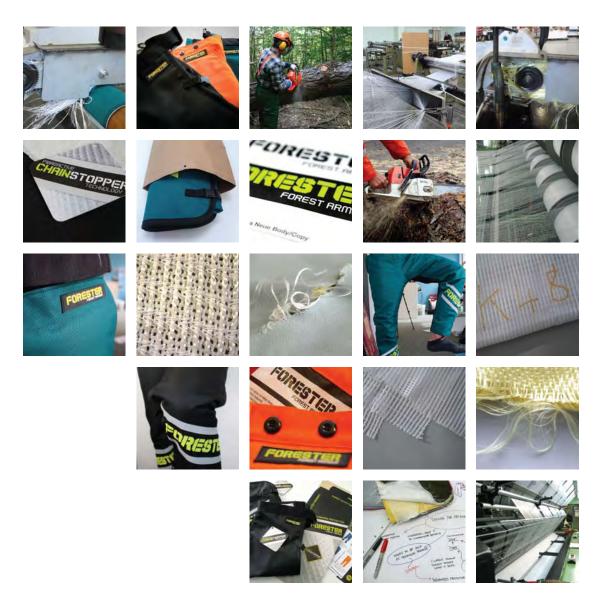


# Taapa by Hold

Right: Taapa Wall, 2008

Legacy Timber had a proud history as a leader in the value-added wood products sector led by Ross Provan and his sons Callum and Hagan. They were looking to transition their business into a different area through developing some proprietary products. We worked in partnership with their team to create a number of different products including a shelving system, a simple DIY box system, and the Taapa wall. The project provided a design insight into the unfulfilled potential of edge glued panels.



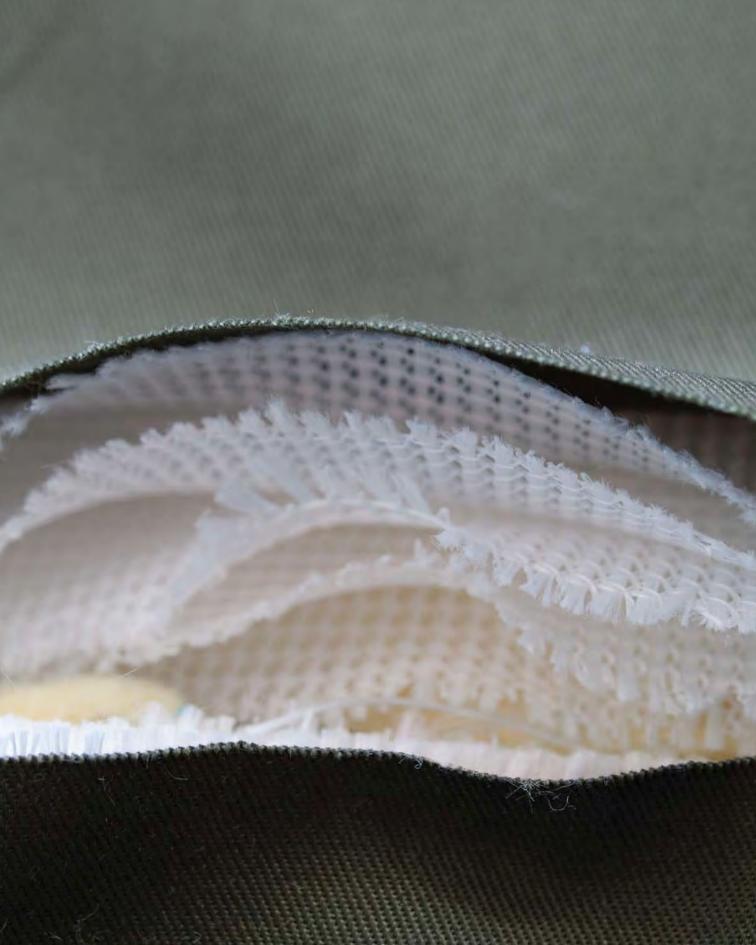


# **Forester Chainsaw Protection**

Right: Fabric Layers, 2008

Jaedon Enterprises, the leader in forestry protection and safety clothing, wanted to develop the next generation protection. It was developed out of, and the R&D co-funded by, the Transform Initiative.

In this project we worked to develop a new internal fabric structure capable of stopping a chainsaw quickly and preventing injury. Testing over 359 layers with 102 drop tests provided a library of alternative compositions and test results. A critical insight was that the outer layer of material plays a crucial role in stalling the chainsaw, though industry knowledge had suggested otherwise. As well as developing the product, the team created the 'Forester' brand and devices used in support of the product marketing and launch. The new product was picked up by RD1, Husqvarna, and other global brands.





# Reform 08, Ireland

#### Right: Biological Cycle Display at Nutec, 2008

I travelled to Cork, Ireland, to present at the design conference Reform 08 on Life Cycle Thinking at the request of Muireann McMahon. The event was held to reinforce the inclusion of sustainability into design practice and to build the level of sustainable design in Ireland.

The trip revolved around sustainability and I visited JC Diehl at TU Delft Design for Sustainability Department with Josh Astill, in part to thank them for their help and assistance for the Recircle research project. We then went on to Michael Braungart's Nutec Conference in Frankfurt and then visited Ezio Manzini at Milano Polytechnic, Milan, courtesy of Tom Sutton at Frog. The final leg was in San Francisco talking to sustainability veteran Bob Stewart and The Designers Accord's Valerie Casey, both at IDEO.































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# Sustainable Design

Right: Workbook Cover, 2009

Over the years we have worked consistently with both The Designers Institute and the Sustainable Business Network to improve the uptake and understanding of sustainable design. This has included the creation of the Sustainable Design Working Group (SDWG) and the subsequent creation of the Sustainable Design Resource, with case studies from great local companies, and also the Guide to a Sustainable Design Project. Our belief was that we could share some of the interesting work that was being done in New Zealand, collectively learning to create a community of like-minded individuals.







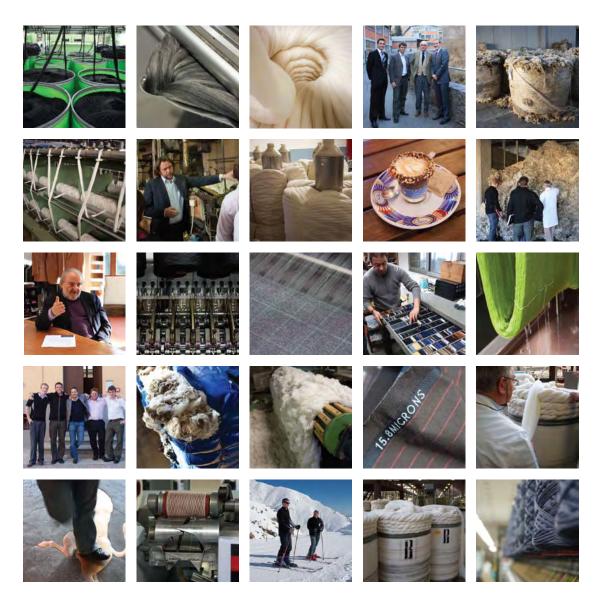
### **Cortex Weatherboard System**

#### Right: Weatherboard Installation, 2009

Initially called 'Watershed' this project directly leveraged the research from the Guardian project to create a new exterior cladding system with Pacific Wood Products (PWP). We worked in partnership with Scion and PWP to develop a complete product offer down to the technical manuals.

The decision to concentrate on low maintenance led us to deliver a factory finished weatherboard system with a concealed fixing system, the first of its kind to market in Australasia. This doubled the life-span and halved the maintenance for the system.





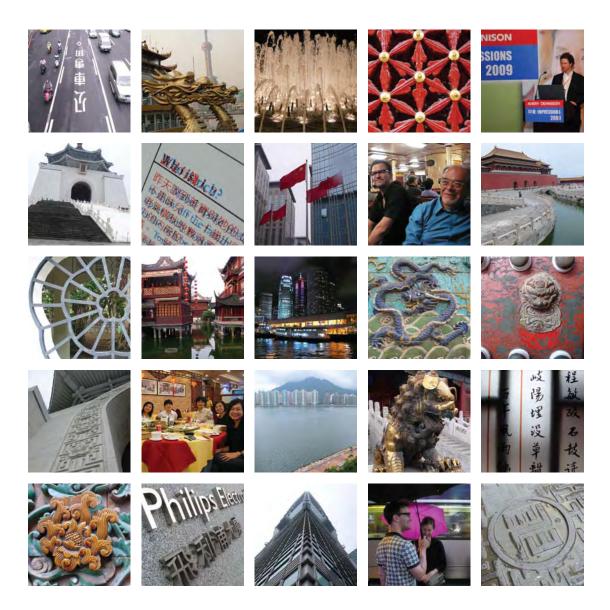
# Biella Merino Ambassador, Italy

Right: Merino Wool, 2009

Through Blythe's strong interest in wool and work for The Merino Company on the Encircle program and the Transform projects, Blythe was selected to travel to Italy as one of the Biella Merino Ambassadors. At the foot of the Italian Alps, many large fashion brands are based out of Biella or purchase their materials from the broader Biellese region.

The trip was made possible by the Biella Master of Noble Fibres Programme, which is sponsored by Meat & Wool NZ and Merino Inc and organized by Merino Inc and The New Zealand Merino Company. The Italian textiles initiative was set up to bring factories and artists together to foster the handing down of knowledge, skills and entrepreneurial ability for the prosperity of both New Zealand Merino and the Italian textiles industry.





# Impressions Symposium, China

Right: Street Sign, Hong Kong, China, 2009

The 'Impressions Symposium' organised by Avery Dennison in China proved to be a fascinating insight into the status of Sustainable Design in Asia. This included visits and presentations to Dell (Taiwan), Philips Electronics (Hong Kong) and then to a mixed audience of industrial designers and mechanical engineers from electrical and automotive industries including Hewlett Packard, Dell, Asus, Huawei, Ford, GM, Volkswagen, Nokia, and Lenovo in Shanghai and Beijing.

Being simultaneously translated into Mandarin focussed the mind on creating a message that was simple enough to survive changes in language and strongly influenced the format of the guide we developed called the Building Blocks of a Sustainable Design.

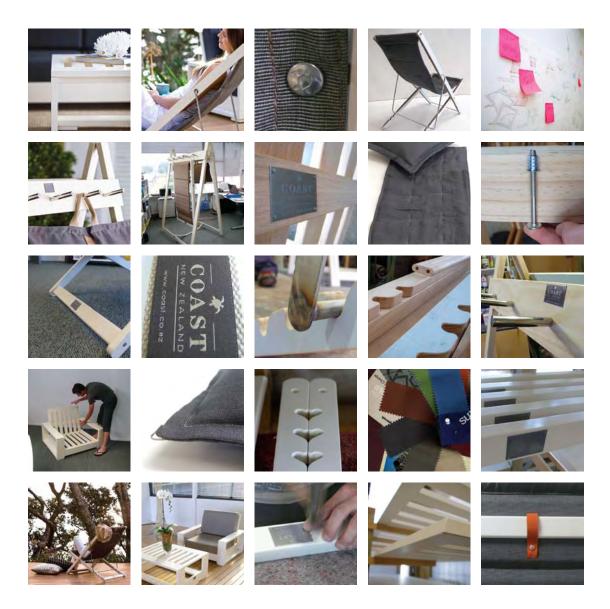
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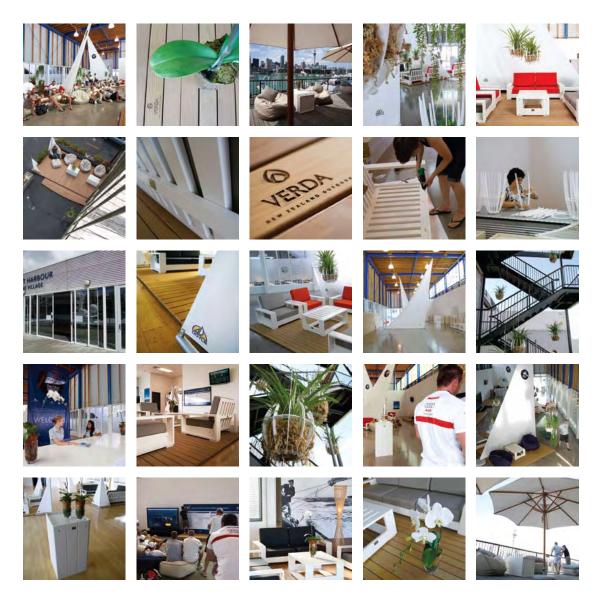
# **Coast Furniture**

#### Right: Chair Legs, 2010

Coast is a great brand that delivers a quality product through attention to detail and quality materials. When owner Alex Webster approached us to work with him to help redevelop their existing Cayo range and create some new concepts, we enthusiastically accepted.

We leveraged our existing work in the timber area with PWP to revive the idea of painted furniture by using a special enamel developed by Resene. This provided a longer life-span and a different appearance in the market. The new materials were applied to a redesigned Cayo range and new Off the Hook range that included a freestanding rack, a deluxe deck chair, a freestyle cushion, and a simple folding matt for beach and concert outings.





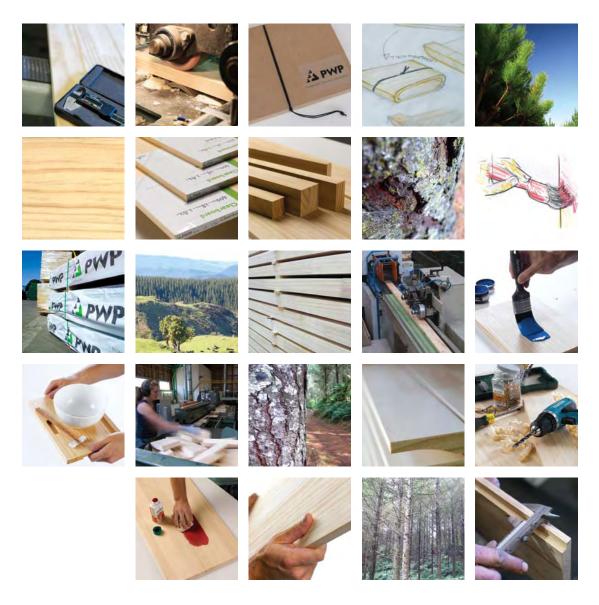
### Louis Vuitton Pacific Series VIP Room and Sailor's Lounge

Right: Sailor's Lounge, 2010

Coast's Alex Webster's love of sailing led to a request to help with the Louis Vuitton Pacific Series. We collaborated with Coast to produce designs for both the VIP area and Sailor's Lounge, which were accepted by Louis Vuitton.

These two spaces leveraged Coast's existing marine beans and the redeveloped Cayo range. We also created some special one-off items that fitted the nautical theme. It was all brought together by bringing Verda New Zealand on board to provide decking to create islands. The project even received a tick of approval from Bruno Trouble, Louis Vuitton's spokesperson for the series.





### Clearboard

Right: Edge Glued Panel, 2010

Clearboard is a finished panel and board product that is ideal for DIY applications and furniture manufacture. Defect free and available in lengths of up to 1.8 metres, Clearboard is the longest clear length of its kind in the market. The products are sold as ready-to-use sections for home improvement.

A unique story was tailored for Pacific Wood Products, narrating the story of 'Tree-Farming' and the benefits of coming from New Zealand. In addition, the team developed a gift, crafted from the Clearboard panel, which the sales manager could deliver to his customers to break the ice.





### GetSorted Storage System

Right: Wardrobe Installation, 2010

Distributor International Merchants (IML) was looking to develop their own range of home storage to enable them to export into other countries and improve their sales margin. We researched the feasibility of the program and whether the desired price points could be met prior to engaging in a full development program.

GetSorted was the first 'Cost Plus' revenue sharing program we entered into. We were engaged across the board from research, design of the product system and quality control to manufacturing, packaging, and POS, effectively providing IML with a complete design team. Our work enabled an evolution of the product in market and the further development of marketing for the program in New Zealand, Australia, and further afield.





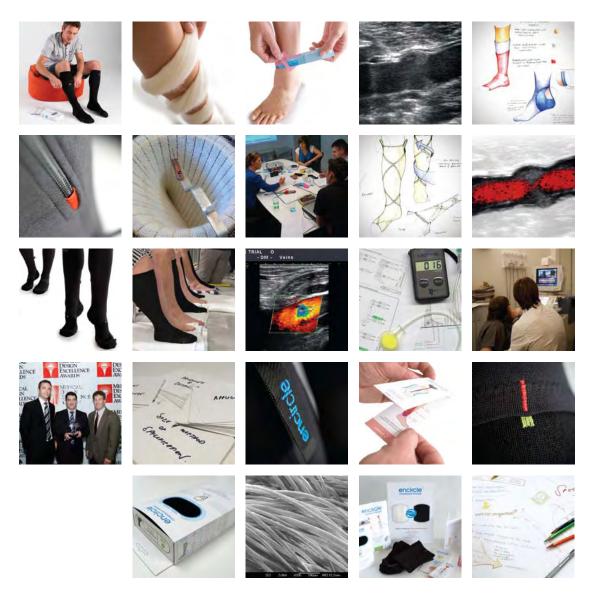
# **Prolan Lanolin Lubrication**

#### Right: Dye Tube Testing Setup, 2010

Murray Shaw had struggled to find anyone to help advance his innovative lanolin lubricant to solve issues they were having in extreme cold and heat. We helped Murray to prepare a government grant and put together a development team capable of creating a solution.

We collaborated with the team at AgResearch to enhance the lubricant by combining several natural oils with lanolin. This enabled a wider temperature performance range and removed the last synthetic component from the formulation. A new spray on protectant was also developed to repel water from metals. In addition, the odour from wool grease is now suppressed in both the lubricant and protectant. The developments have resulted in improved uptake in key Scandinavian markets.





# **Encircle Compression Therapy**

#### Right: Pressure Release Tag, 2010

Levana Textiles was looking at an opportunity in the medical market to create innovative next-to-skin applications for its specialist capability merino and performance textiles. The Transform Initiative provided the perfect catalyst for Encircle, a noninvasive compression therapy to treat chronic venous disease.

The team led by Blythe, in collaboration with AgResearch, developed an innovative two-layer system made from a new bicomponent textile that not only improved patient outcomes, but reduced clinical dependency, providing greater independence for the end user.







# Mokum Textiles NPD Review

Right: Textile Samples, 2010

Mokum's brand and design team were known for original textiles and products but their sales were dominated by just a few product lines. CEO Sean McElroy wanted to understand more clearly how his executive team could better use their product development capability to generate greater value.

This provided our first board level product development review and a chance to analyse and understand another company's design and development capability and how to improve it.



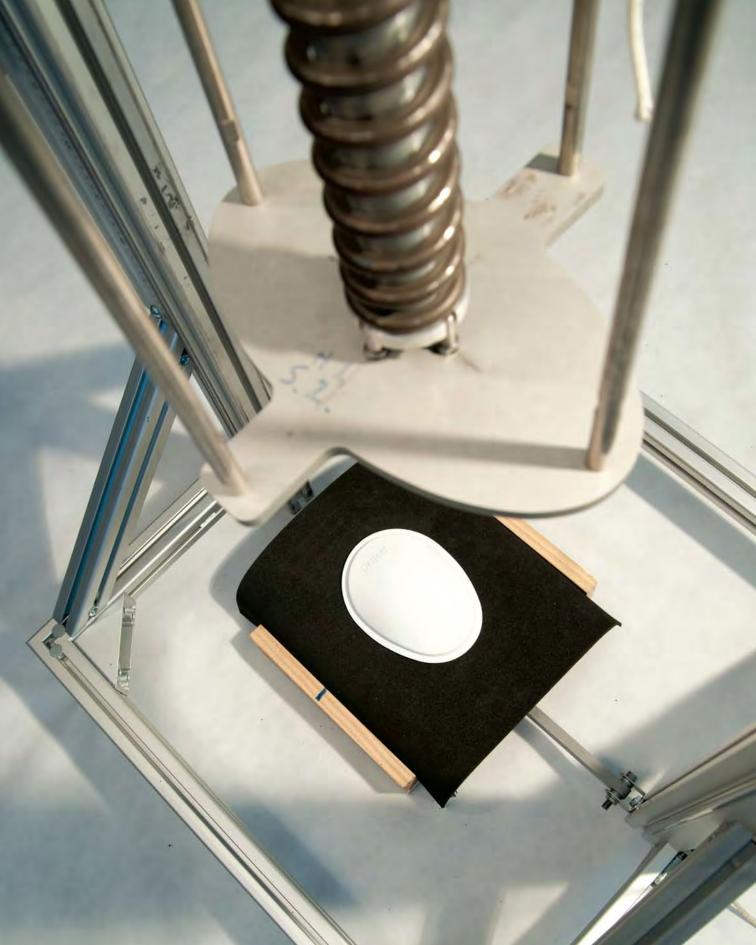


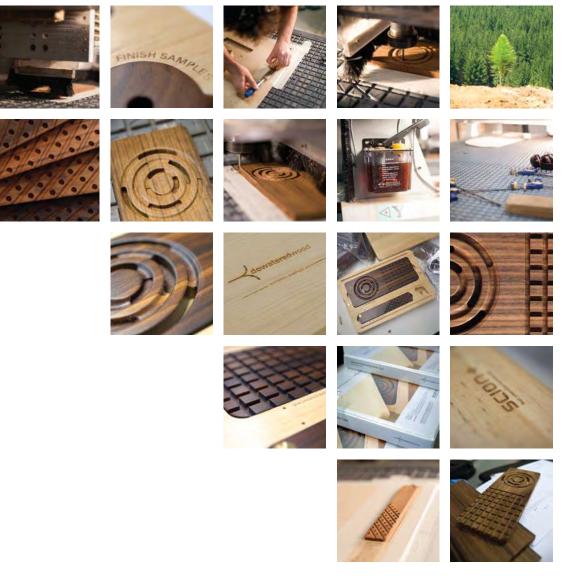
### **Delloch Hip Protector**

Right: Testing Rig, 2011

Ambulance officer Sean O'Connor had spent many years seeing first hand the damage that can occur from falls. He had developed a first generation prototype of an innovative alarmed hip protector when he came to us.

We first researched a wide range of ergonomic data, then designed and built a test rig. This enabled us to iteratively develop the highest attenuating pad whilst retaining comfort through a unique curvature. As a fully integrated project, the team has continued to develop the product and conduct further research modelling the hip physiology through a relationship with the biomedical faculty of Auckland University, whilst recently completing the release of an e-commerce website for the HipFit product.





### **Dewatered Wood**

Right: Sample Package, 2011

Scion have developed an innovative program that uses super critical CO<sub>2</sub> to create a new material that is capable of being used in a variety of potential market applications.

We have worked in an ongoing capacity in collaboration with Mark Smith to develop a commercialisation framework and business case to support the science program while the material is still being developed. Part of this used a small amount of lab scale material to investigate its properties and display them for both internal and external stakeholders. The sample helped to visualise the opportunity in a tactile way, which has proved invaluable to the team.



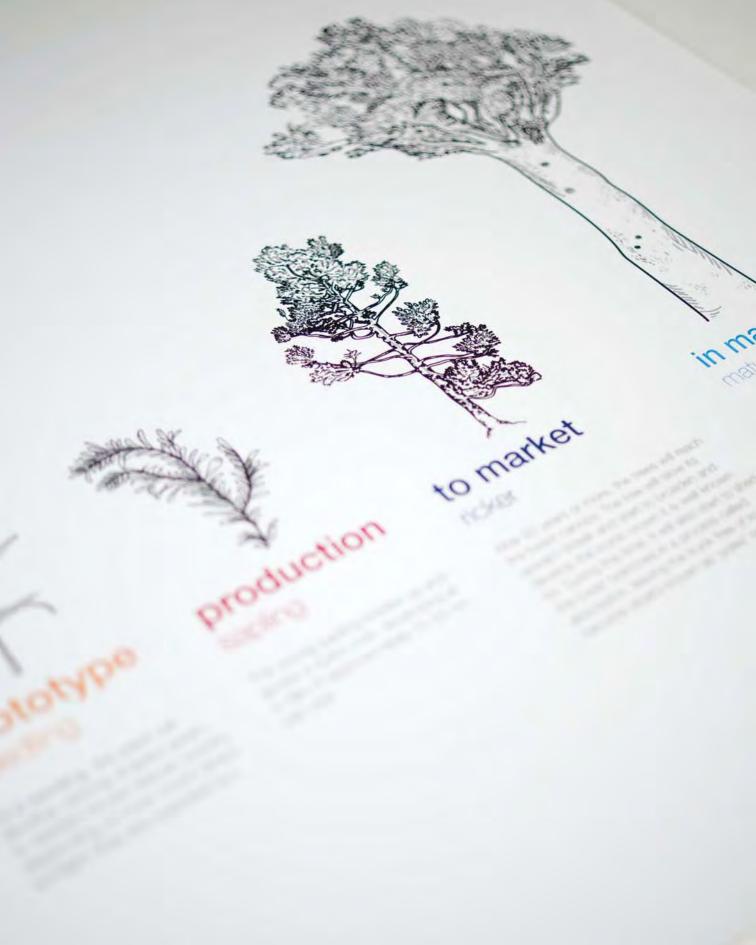


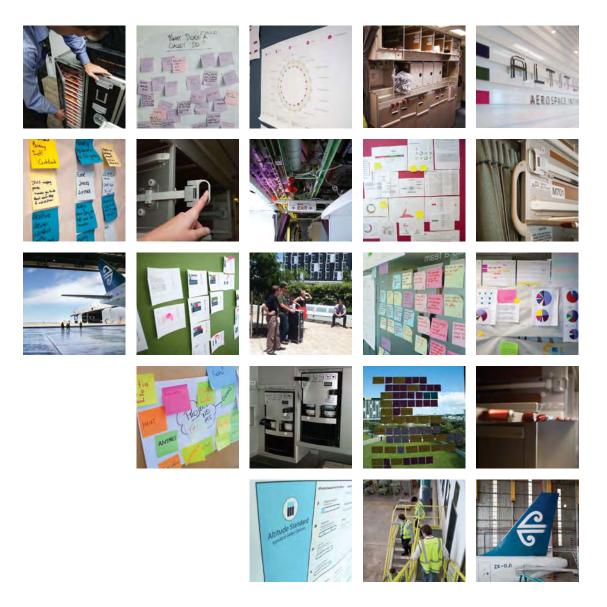
# Successful Product Development Seminars

Right: Product Development Process Diagram, 2011

We partnered with Motovated Design & Analysis and EveredgelP to introduce the informative Successful Product Development Seminars across New Zealand. The seminars address popular development topics including identifying winning products, protecting and leveraging ideas, and developing and engineering a vision.

This series has enabled our team to get out into the provincial regions from Invercargill to Westport. We have seen first hand the brilliant companies that are driving the innovation and export potential of New Zealand in many unexpected areas, from rapid prototyping and mineral testing to automotive and electronics.





## **Altitude Aerospace Interiors**

Right: Air New Zealand Hangar, 2012

Altitude Aerospace Interiors was born out of the Air New Zealand engineering group and is led by a team of innovative engineers. Baden Smith, Head of Commercial Airlines, recognised the potential to expand their offer to production galley systems for Boeing and its customers. They identified that this would mean bringing in a greater understanding of product development principals, structure, research, and disciplines, different to their current expertise. We have collaborated closely with the internal team over a period of time to deliver critical documents and milestones and bring our product development experience and framework to Altitude to help realise these opportunities.





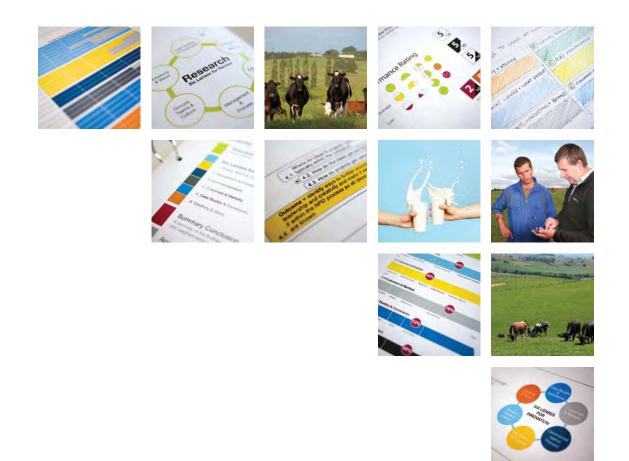
## Young Innovator Awards

Right: YIA T-shirt, 2012

The Young Innovator Awards (YIA) aims to inspire and encourage secondary school students to become true young innovators. It is an initiative led by Priority One's Instep programme, our team, Woods Creative, and the Ministry of Business, Innovation and Employment.

Woods and our team developed resources and worked hard with Priority One to get the message into schools to get students into the innovation mindset and to see it as a career pathway. YIA explores, through learning, the basics of investigating and spotting opportunities, developing ideas, and creating and realising a product or service.





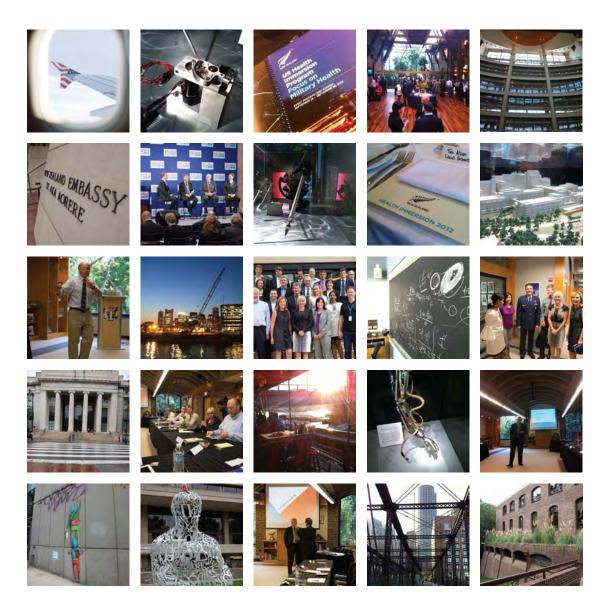
# Six Lenses for Innovation

Right: LIC Report Detail, 2012

We were approached in 2011 by Livestock Improvement Corporation (LIC), New Zealand's premiere dairy technology business, to look at undertaking a board level review of their new product development and innovation across the organisation. After undertaking several board reviews, the team decided it was time to develop a complete framework to enable a consistent approach to determine the key areas for improvement. This has become the 'Six Lenses for Innovation', a framework which looks at all the key aspects of a business that influence its ability to innovate successfully from groups, teams, and culture to management and process.

This type of 'Innovation Consulting' has become more important to what we do, as increasingly companies have seen innovation as a vital part of their core business.





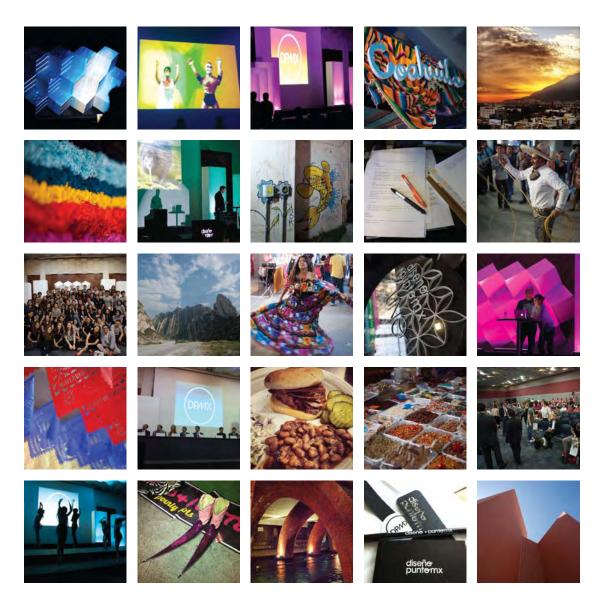
# US Health Immersion, Washington DC & Boston

Right: New Zealand Embassy, 2012

New Zealand Trade and Enterprise (NZTE) and the Medical Technology Association of New Zealand (MTANZ) organised this fascinating group of events covering US Military Healthcare at the New Zealand Embassy in Washington, DC, and Advamed in Boston. A range of innovative New Zealand companies took part, from newly listed cancer diagnostic company Pacific Edge to established companies like Orion Healthcare and Fisher and Paykel Healthcare.

It provided us with a very robust view of the medical device and technology sector in the US and some of the challenges and opportunities in this space in the coming years.





# Diseño Punto MX, Mexico

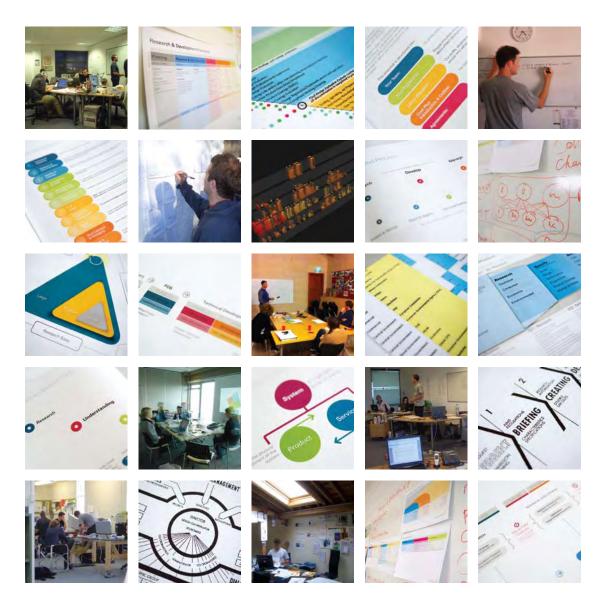
## Right: DPMX Stage, 2012

We were asked by a past student of Dr. Cris de Groot's, Nimbe Abrego, to present at DPMX 2012. This multidisciplinary event is organised each year by the final-year design students at the Tecnológico de Monterrey in Monterrey, Mexico. The speakers were truly diverse, ranging from László Bordos (Video Mapping) and Shohei Shigematsu (Architecture) to Joe Murray (Animation), Golpeavisa (Illustration) and Kiel Mead (Product).

The students did an incredible job of organising the event and it has become a rite of passage for them each year to better the year before them. Our talk provided a strong sense of context around why we work the way we do based in New Zealand and our framework and approach to developing products.







# **Product Development Process**

## Right: Developmental Tasks Diagram, 2012

Every project we have taken on has been both an opportunity to create something new and to learn more about what we do. This has enabled us to constantly evolve and improve our approach to developing products. Our collaborations with other disciplines like science have allowed us to cherry pick interesting ideas and cross fertilise them into a commercial setting. Writing, thinking, and presenting have provided a means to condense and consider theories, philosophies, and thoughts. We have experimented with different research, design, and development approaches, whilst learning more about commercialisation and finance, with the sole purpose of delivering products to market successfully.





Locus Research People Right: Valley Road, Mount Maunganui, 2003





Locus Research People Right: Team Building Ketetahi Hut, 2010





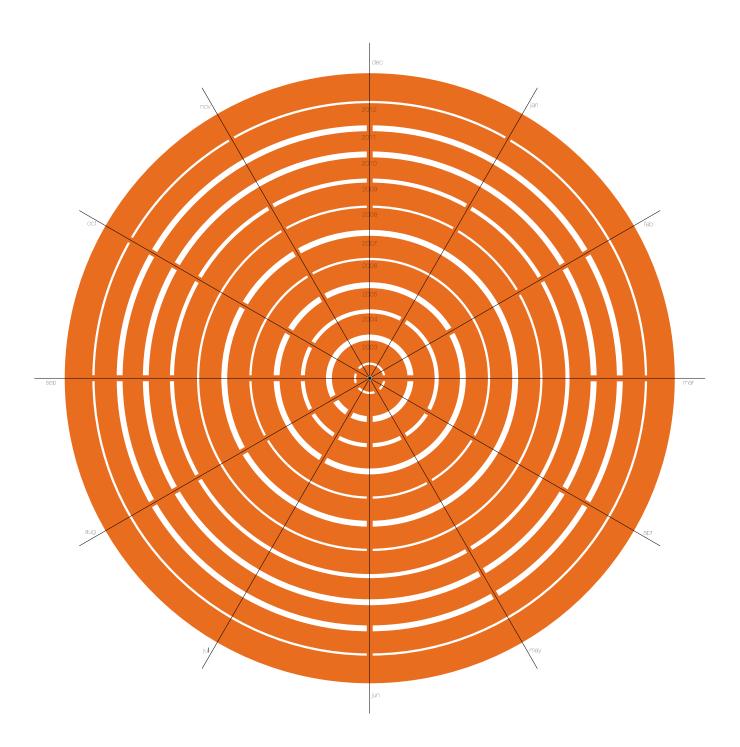
## **Ten Year Celebration**

Right: Brand Identity Collateral, 2012

To mark Locus Research's ten year milestone, the team created a brand identity to embody the approach, style, and journey of the last decade. Derived from the team's legacy of sustainable design and passion for the natural world, the propagating tree rings represent time and significance (weight of ring) starting from a centre point, a locus.

The identity creation was tackled like any client project. Research and experimentation of craft techniques and graphic styles evolved the rings from the organic tree cross section to a precise, technical identity assimilating the Locus style and approach. Like a product entering a market, the concept was stress tested across various print and digital applications while close collaboration with a print supplier ensured the perfect reproduction.





#### • 2012

#### Nov

Locus and friends celebrated the ten year anniversary of Locus Research's establishment.

#### Oct

Timothy Allan travelled to Monterrey, Mexico to present at Diseño Punto MX on sustainable design.

Delloch HipFit Hip Protectors (non-consumer) and GetSorted Storage System (best effect) each won bronze at the Best Awards.

Timothy Allan travelled to the NZ Embassy in Washington DC for the US Health Immersion Program and to Boston for AdvaMed 2012.

'Hip Device Aims to Cut Costs' article in the Bay of Plenty Times on Delloch HipFit Hip Protectors and becoming a finalist in the Best Awards.

#### Sep

An e-commerce platform for the Delloch HipFit website launched.

#### Jun

Kat Sutherland joined Locus as marketing and programme director.

#### Mar

Locus turned ten years old.

#### Jan

Graphic designer Robin Lyttle joined the Locus team.

## • 2011

#### Dec

Delloch HipFit Hip Protector launched.

#### Oct

'Success Grows on Woolly Backs' article in the Bay of Plenty Times featured Prolan Lanolin Lubricants.

#### Sep

Blythe Rees-Jones joined the board of the Designers Institute of New Zealand.

#### Aug

Blythe Rees-Jones judged the Best Awards' product section.

#### Jun

Dr. Wayne Mapp, Minister for Research Science and Technology, visited the Locus Studio.

## May

Locus teamed up with Motovated Design & Analysis for the first 'Successful Product Development Seminar'.

#### Apr

Locus featured on AMP – Growing Business on TVOne.

Encircle won silver at the Medical Design Excellence Awards (MDEA) in the US.

#### Mar

Encircle selected as a finalist in the DuPont Australasian Innovation Awards.

#### Feb

Jono Jones joined the Locus team on a design internship.

'Advances in Therapy' medical paper published on Encircle Compression Therapy.

#### • 2010

#### Dec

Engineer Chris Brown rejoined the Locus design team to work on the Delloch Hip Protector.

#### Oct

'Bay Innovators Pile up the Design Awards' article in the Bay of Plenty Times about the Locus design team.

'Making Products Better by Design' article in the NZ Business Herald by Yoh Kar Lee on Locus and how we work.

Encircle and Forester appeared on Campbell Live with Blythe Rees-Jones.

Encircle won silver at the Best Awards and Forester was awarded bronze, both in the non-consumer category.

#### Sep

Timothy Allan was made a Fellow of the Designers Institute of New Zealand (DINZ).

#### Aug

GetSorted Wardrobe & Storage System released nationwide in Australia.

#### May

Locus presented in the Sustainable 60 Seminar Series.

#### Apr

Zoe Sizemore, graphic designer, and Mark Bell, design engineer, joined Locus.

#### Mar

Locus sponsored the first Life Cycle Management Conference in New Zealand.

Young Innovator Awards launched in the Bay of Plenty, an initiative led by Priority One's Instep Programme, Locus Research, and Woods Creative.

## Feb

Vicky Teinaki attended 'IXD 10' in Georgia, US.

## • 2009

## Dec

Locus named Overall Small Business Exemplar in the Fairfax Media/PricewaterhouseCoopers Sustainable 60 Challenge.

#### Nov

Locus appointed to MFE Product Stewardship Assessors panel.

Principal Timothy Allan presented 'Design for a Sustainable World' at World Usability Day.

#### Oct

Encircle Medical Devices reached the semi-finals in the New Zealand 'Focus on Health' Challenge.

Locus completed the 'Building Blocks of Sustainable Design'.

#### Sep

Cortex Exterior Cladding System for Pacific Wood Products won silver (non-consumer) at the Best Awards and also won bronze in the sustainable product design category, one of only two finalists.

Drybase won bronze at the Best Awards in the nonconsumer category.

#### Aug

Cortex won the sustainable design and innovation category for central and southern areas in the NZI National Sustainable Business Network Awards.

Locus organised Tom Sutton, GM of Frog Milan, to speak at AUT on the development of medical devices.

Vicky Teinaki attended 'UX Australia'.

#### May

Timothy Allan travelled to Asia to speak on Life Cycle Thinking in Shanghai and Beijing at the Impressions Symposium for Fortune 500 Company Avery Dennison.

Timothy Allan spoke at Phillips Hong Kong Design Studio on Life Cycle Thinking and visited Dell in Taiwan.

## Feb

Blythe Rees-Jones travelled to Biella, Italy to research the Italian merino supply chain as Biella Merino Ambassador.

Rogier Simons joined the Locus team as senior designer.

#### Jan

Coast New Zealand and Locus created the Louis Vuitton Pacific Series lounge interiors with Verda, Pollen, and Essenze.

Locus opened Studio Sixbee in Ponsonby, Auckland.

Vicky Teinaki joined the Locus team as interaction designer.

## • 2008

#### Dec

Design leader Blythe Rees-Jones was selected to be the 2009 Biella Merino Ambassador.

#### Nov

Timothy Allan travelled to Ireland to present at 'Re-Form 08' on Life Cycle Thinking. He also attended and visited: Michael Braungart's Nutec conference; Delft University of Technology (Holland) Design for Sustainability department; Milano Polytech, Ezio Manzini; Frog Design, Milan; Therefore Design, London; Onzo, London; Lightweight Medical, Glasgow.

#### Jun

Locus co-hosted the Life Cycle Thinking Series held at Unitec, Auckland.

Locus and Scion cosponsored the Sustainable Design and Innovation award for the SBN Awards. Timothy Allan and Trevor Stuthridge judged finalists.

## Feb

Curve Surf exhibited as a finalist at the renowned sporting fair ISPO.

Locus committed to the establishment of a Life Cycle Thinking studio course at Unitec with Hothouse director Dr. Cris de Groot.

## Jan

Locus relocated to new premises at Studio Mauao at the base of Mount Maunganui, 100 meters from the beach.

## • 2007

## Nov

Transform Project was successfully concluded with all six finalist companies awarded funding.

## Oct

Tony Clifford, President of the New Zealand Pine Manufacturer's Association, presented Compass findings to the PMA delegates.

## Aug

The Locus-developed Curve surfboard travel system won silver at the Best Awards in the consumer product category and Legacy Hold Taapa product won bronze in the furniture category.

## Jun

Locus had three finalists selected for the Best Awards: Telecom5up by Kylie Baker (student), Taapa (furniture), and Curve Surf (consumer product).

## • 2006

## Nov

Locus Transform proposal accepted by the board of Textiles New Zealand.

## Sep

Blythe Rees-Jones awarded a professional membership to the Design Institute of New Zealand.

## Aug

Timothy Allan appointed as a judge for the sustainable product design category for the 2006 Best Awards.

## Jun

Karoline Jonsson, a design engineering intern from Chalmers University, and graphic designer Ailie Rundle joined the Locus team.

## May

Timothy Allan gave a lecture on Sustainable Product Design for Otago University and Otago Polytechnic.

## May

Locus started the collaborative project Compass investigating the US market for major forestry companies Panpac and Tenon.

## Apr

Report into the European context of Sustainable Product Design completed for the Ministry for the Environment.

#### • 2005

#### Nov

Simple Vision range was released into New Zealand stores nationwide with a great response from consumers.

#### Oct

Timothy delivered 'Life Cycle Thinking' paper at the Sustainable Business Conference for the Sustainable Business Network.

#### Sep

Josh Astill joined Locus to undertake research in Sustainable Product Design at TU Delft in Holland, co-funded by the Ministry for Environment.

#### Jul

Transition research investigation into the future direction of sports and equipment completed.

#### Feb

Blythe Rees-Jones visited ISPO international sports and equipment fair in Munich to further his research.

## • 2004

## Oct

Urbis magazine featured Locus and a design approach with new materials.

## Aug

Locus undertook the development and project management of the Bombay Sapphire Design Room at Air New Zealand Fashion Week with great success.

## Sep

Blythe Rees-Jones joined Lightweight Medical for a reciprocal internship in Glasgow and London for nine months.

## Aug

Timothy Allan appointed as the external design director of Legacy Timber Ltd to assist in the development of new product for market.

## Jul

Locus established a formal alliance with Tim Grant, associate director of the RMIT Centre for Sustainable Design and director of Life Cycle Strategies.

Locus gained a formal alliance with Lightweight Medical Ltd (UK) to undertake collaborative research and commercial work in the area of sustainable product development.

## Jun

Timothy Allan appointed as advisor to the London Sustainable Design Collective.

Simple Vision range launched at EON Design Centre.

## Мау

Circadian Living System selected as one of only 13 finalists in all categories in the DuPont Australasian Innovation Awards in Melbourne from more than 90 entries. Timothy Allan flew to Melbourne for the awards met Australian Minister for Science and DuPont Australasia managing director.

## Apr

Simple Vision awarded highly commended at Designex04 in Sydney.

Timothy Allan completed experimental Life Cycle Analysis for UK based Business Environment Partnership in collaboration with Lightweight Medical Devices (UK).

## Jan

Scion commissioned Locus to undertake research into exterior cladding, resulting in the successful Guardian exterior cladding study. This became the template for the first 'Product Development Specification' (PDS) that Locus produced.

#### • 2003

## Aug

Ryder Meggitt, graduate from Glasgow University Design Engineering course, joined Locus for a 9-month internship in sustainable product design.

## Jul

Neil Tierney, graduate from Glasgow University Design Engineering course, joined Locus for an internship in sustainable product design and completed the Circadian System Life Cycle Analysis.

## Jun

Metaform03 exhibition premiered at the Auckland Museum (Jun – Sep 03) with a follow-on exhibition at the Dowse (Nov 03 – Jan 04).

## Mar

Industrial design graduate Jared Mankelow joined Locus.

## • 2002

## Oct

Jeeves Table selected and exhibited at Interiuer02 in Kortrijk, Belgium, Design for Europe competition.

## Aug

Industrial design graduate Blythe Rees-Jones joined Locus as junior designer; Blythe was awarded Best Young Product Design at Best Awards 2001.

## May

Locus established the Metaform03 concept and developed the exhibition and competition format, including the procurement of major sponsors Carter Holt Harvey and Prodesign.

## Mar

Timothy Allan established Locus Research, a design company that would specialise in the area of sustainable product design.

## Acknowledgements

Circadian System – Timothy Allan, Dave Macfarlane, David Tappin, Mark Van Rij, Blythe Rees-Jones, Paul Buckley, Armando MacDonald, Alan Bowmar, Neil Tierney, Jared Mankelow, Ullrich, Acma, Vertex, Anglesea Sleep Clinic.

**Evolution System** – Paul Buckley, Timothy Allan, Doug Gaunt, Dave Macfarlane.

**Cubro Rehab** – Lincoln Currie, Jason Clare, Jamie Abercrombie, Blythe Rees-Jones, Timothy Allan, Glenn Laugessen, Chris Brown.

**Curve Surf** – Simon Winter, Alastair Rhodes, Blythe Rees-Jones, Timothy Allan, Jared Mankelow, Dana Winter.

Metaform – Mark Smith, Robin Becket, Timothy Allan, John Hadyn, Blythe Rees-Jones, Jared Mankelow, Simon Fraser, Lyn Garrett, Paula Buckley, and all the students.

Bombay Sapphire Design Room – Paul Blomfield, Timothy Allan, John Hadyn, Angela Roper, Claire Regnault, Robin Beckett, and all the craftspeople.

Thermowood & DesignEX – Mark Smith, Robin Becket, Jared Mankelow, Timothy Allan, Blythe Rees-Jones, and the entire Urbis Lounge Team.

**Recircle** – Josh Astill, Timothy Allan, JC Diehl, TU Delft, MFE, Scion, John Gifford.

Guardian – John Gifford, Timothy Allan, Barbara Nebel, Doug Gaunt, Jonathan Harrington, Bernie Dawson, Marcus Warren.

Littl' Juey – Frank Walker, Annalie Walker, Timothy Allan, Blythe Rees-Jones, Zoe Sizemore, Ailie Rundle, Rogier Simons, Vicky Teinaki.

**Compass** – Tony Clifford, Wayne Miller, John Gifford, Timothy Allan, Karoline Jonsson, Rick Williams, Ailie Rundle, Kylie Baker, Barbara Nebel, Karen Bayne, Blythe Rees-Jones.

Transform Initiative – Sean McElroy, Timothy Allan, Blythe Rees-Jones, Kylie Baker, Ailie Rundle, Karoline Jonsson, and all the submitting companies.

Life Cycle Thinking Series – Timothy Allan, Jake McLaren, Cris de Groot, Blythe Rees-Jones, Karoline Jonsson, Ailie Rundle, Sarah McLaren, Barbara Nebel, Libby Masterton, Vicky Teinaki.

#### The Role of Life Cycle Inventory – Andrew Huddart, Barbara Nebel,

– Andrew Huddart, Barbara Nebel, Timothy Allan, Jake McLaren.

Drybase – Murray Goodhue, Timothy Allan, Blythe Rees-Jones, Ryder Meggitt, Rogier Simons, Jason Goodhue, Andrew Goodhue, Vicky Teinaki.

Simple Vision – Timothy Allan, Blythe Rees-Jones, Jared Mankelow, Karoline Jonsson, Ailie Rundle, Kylie Baker.

**Hold** – Ross Provan, Hagan Provan, Callum Provan, Timothy Allan, Blythe Rees-Jones.

Forester – Mike May, Emily May, Blythe Rees-Jones, Kylie Baker, Stewart Collie, Timothy Allan, Maree Hamilton-Chisholm.

Reform 08 – Muireann McMahon, Timothy Allan, Josh Astill, Tom Sutton, Ryder Meggitt, Bernard Kerr.

Sustainable Design – Timothy Allan, Jake McLaren, Kylie Baker, Blythe Rees-Jones, Barbara Nebel, Rachel Brown, Cathy Veninga, Libby Masterton.

**Cortex** – Tony Clifford, Timothy Allan, Rick Williams, Karoline Jonsson, Rogier Simons, Doug Gaunt, Barbara Nebel, Bernie Dawson, Vicky Teinaki.

Biella Merino – Blythe Rees-Jones, Meat & Wool NZ, Merino Inc, The New Zealand Merino Company.

Impressions Symposium – Michael Held, Timothy Allan, Avery Dennison.

Coast – Alex Webster, Timothy Allan, Rogier Simons, Kylie Baker, Opco, PWP, Resene.

Louis Vuitton Pacific Series – Alex Webster, Timothy Allan, Vicky Teinaki, Adam Ellis, Blythe Rees-Jones, Kylie Baker, Louis Vuitton, Verda.

**Clearboard** – Tony Clifford, Robin Hogg, Vicky Teinaki, Timothy Allan.

**GetSorted** – Craig Nees, Rogier Simons, Zoe Sizemore, Mark Bell, Timothy Allan, Robin Lyttle, Kat Sutherland, James Mollinson, Blythe Rees-Jones.

Prolan – Murray Shaw, Blythe Rees-Jones, Stewart Collie, Peter Maxwell.

Encircle – Blythe Rees-Jones, Stewart Collie, Timothy Allan, Rogier Simons, Kylie Baker, Verne Atmore, John Baker, Andy Wynne, Marie Snell, Richard Beasley, Zoe Sizemore, Vicky Teinaki. **Mokum Textiles** – Sean McElroy, Timothy Allan.

Delloch – Sean O'Connor, Terry Vickers, Meari Vickers, Mark Smith, Jono Jones, Chris Brown, Timothy Allan, Zoe Sizemore, Blythe Rees-Jones, Rogier Simons.

Dewatered Wood – Timothy Allan, Doug Gaunt, Mark Watton, Elspeth McRae, Mark Smith, Elizabeth Dunningham, Robin Lyttle, Jono Jones, Blythe Rees-Jones, Ben Sparks.

Successful Product Development Seminars – Jonathan Prince,

Timothy Allan, Paul Davies, Melanie Opie, Robin Lyttle, Jono Jones, Kat Sutherland.

Altitude – Baden Smith, Timothy Allan, Matt Cooper, Tom Hills, Kate Cameron-Donald, Jono Jones, Rogier Simons, Scott Bent, Ange McIvor, the Altitude Team.

YIA – Lyn Parlane, Jill Beedie, Timothy Allan, Reuben Woods, Blythe Rees-Jones, Rogier Simons, Duncan McKenzie, Amanda Gilbertson, Stephen Finnegan, Kat Sutherland, Robin Lyttle, Priority One, and all the local schools.

Six Lenses for Innovation -

Timothy Allan, Blythe Rees-Jones, Jono Jones.

**US Health Immersion** – MTANZ, NZTE, Timothy Allan, Ryder Meggitt, and all the attending companies.

**Diseño PuntoMX** – Nimbe Abrego, DPMX crew, Adrian Lopez, Timothy Allan, and all the presenters.

Ten Year Celebration – Timothy Allan, Robin Lyttle, Blythe Rees-Jones, Kat Sutherland, Jono Jones, Teresa Edwards.

Our Team Past & Present -

Timothy Allan, Blythe Rees-Jones, Teresa Edwards, Jono Jones, Robin Lyttle, Kat Sutherland, Vicky Teinaki, Rogier Simons, Zoe Sizemore, Kylie Baker, Chris Brown, Karoline Jonsson, Ailie Rundle, Jared Mankelow, Ryder Meggitt, Neil Tierney, Nikki Yang, Josh Astill, Mark Bell.