



The Transform Initiative

The benefits & barriers

Presentation to: Textiles New Zealand Annual General Meeting

Presenter: Timothy Allan

Date: 03/09/07

Creating an Innovation System

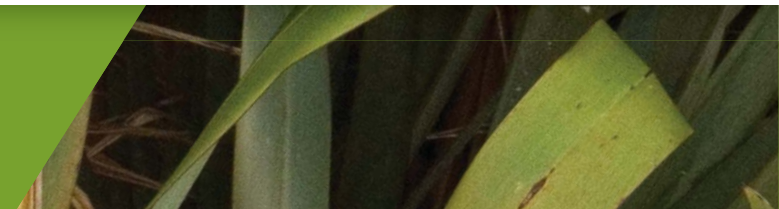
That builds the industries capability to successfully bring new products and technologies to market.

Channels to Market

Reducing the barriers to export by investigating and developing new supply chains.

Building Networks

Collaboration requires communication.





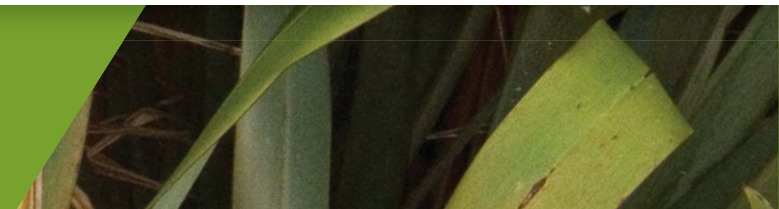
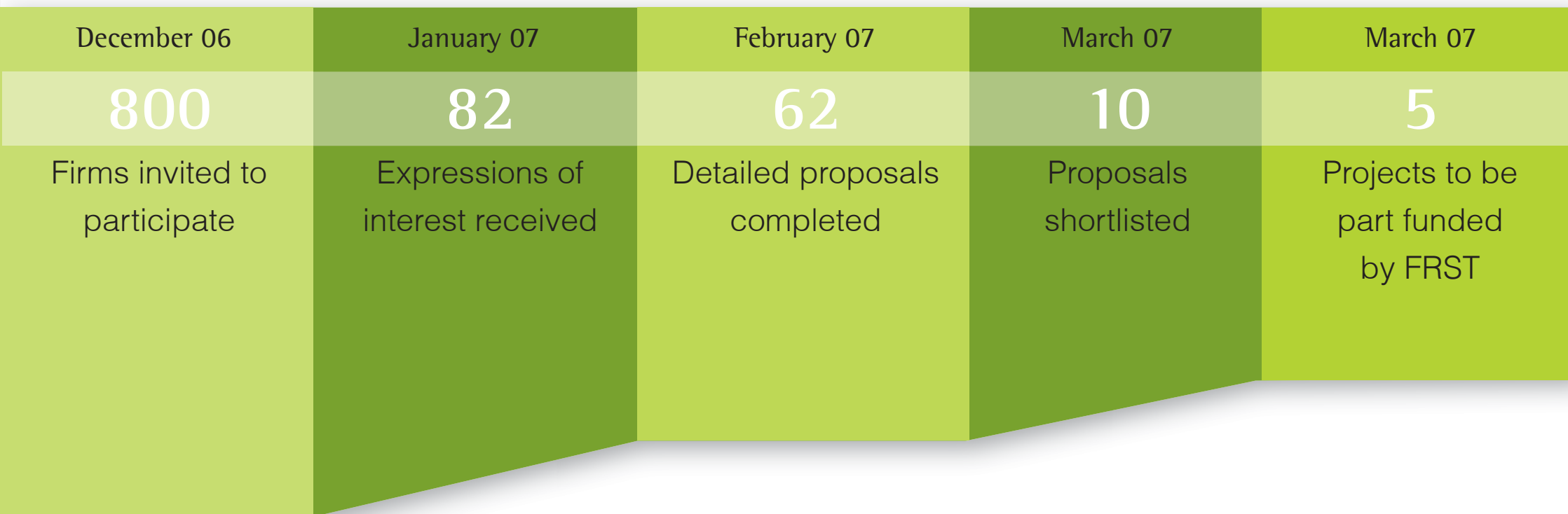
Creating an Innovation System

Presentation to: Hon. Trevor Mallard, Minister of Economic Development

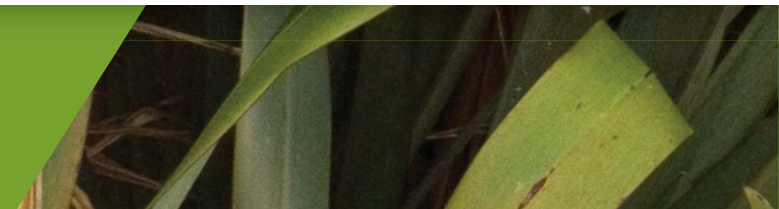
Presenter: Sean McElroy, CEO Textiles New Zealand

Date: 27/03/07

Working with FRST and MED, Textiles NZ has launched the Transform program to assist firms to improve the outcomes from their R&D efforts.



Ag Research Ltd Auckland University of Technology Bardell NZ Ltd Baytex Manufacturing Co Beverley Productions Ltd Biopolymer Network Bluseventy Ltd Bodyline Wetsuits Cactus Climbing Equipment Ltd Carpets & Wools of NZ Cavalier Bremworth Classic Sheepskins CRONZ Deane Apparel Designer Textiles Device Works IRL Doyles Sails NZ Ltd Dunedin Fashion Incubator Fabri-cell International Ltd FibreTech New Zealand Ltd Formway Furniture Godfrey Hurst Carpets Heated Fabric Applications Hybrinz Sports Apparel & Footwear Icebreaker NZ Ltd Industrial Research Inter-weave Ltd Jaedon Enterprises Ltd Kapatone Wool Scour Ltd Kumfs Levana Textiles Ltd Landventures Ltd MacPac Wilderness Equipment Manawatu Knitting Mills Massey University Maxwell Rodgers Mc Kinlays Footwear Ltd Merinox Ltd Miranda Brown Muka Ltd Naturally Handknit Yarns New Zealand Sock Co. Norsewear NZ Merchants Ltd NZO Marketing Orca Otago Polytechnic Possumdown Ltd Snowy Peak Quality Yarns South Canterbury Textiles Stansborough Fabrics Ltd Swazi Apparel Tailored Apparel Ltd Tapestry Knitwear The New Zealand Merino Company The Wetsuit Co Ltd University of Otago Voltatech NZ Ltd Walrus New Zealand Limited Yakka NZ Yaldhurst Wools Ltd Zephyr Technology



The 4-step Process

		IDENTIFICATION	SELECTION	PDS RESEARCH	R&D PROJECT
FUNDING	Textiles NZ	100%	100%		
	FRST				75%
	Your Company				25%
		<p>The first phase is focused on identifying potential projects, companies, and technologies that should be involved in the project. Industry partners are being encouraged to contact Textiles New Zealand and submit a proposal or register their interest using the application form provided.</p> <p>Textiles New Zealand is actively seeking a wide range of projects and may directly contact some companies to ensure the full breadth of the industry is being represented.</p>	<p>Proposals and registrations of interest would be investigated and evaluated by Textiles New Zealand and an External Advisory Panel (EAP). Projects would be assessed against a range of criteria and would also take into account the ability of each project to successfully deliver export growth.</p>	<p>The validation phase is an initial 2-3 month research phase which will investigate the product and the market context, along with developing a 'Product Development Specification' (PDS) for the selected projects. The PDS will define the framework and development strategy for each individual project, along with the key market, design, production, business, and budget requirements, to ensure that the risks are clearly outlined and understood.</p> <p>Projects would be assessed by the organisations involved along with Textiles New Zealand prior to proceeding to development.</p>	<p>Projects that are approved to proceed would then move into the action phase. Projects would be regularly reviewed to track progress against performance and planning targets.</p>
		TEXTILES NZ WILL FUND THIS STEP			
		STEP 1: Identification			
			TEXTILES NZ WILL FUND THIS STEP		
			STEP 2: Selection		
				YOUR COMPANY WILL FUND THIS STEP	
				STEP 3: Validation	
					FRST WILL CONTRIBUTE UP TO 75% FOR THIS STEP
					STEP 4: Action

The Identification, Selection and Validation Phases are critical to ensuring value for money at the R&D stage but are usually seen purely as a hurdle to overcome before the real work begins at the R&D stage. A systematic approach across the industry means that the expected return on investment is much higher.

Resources

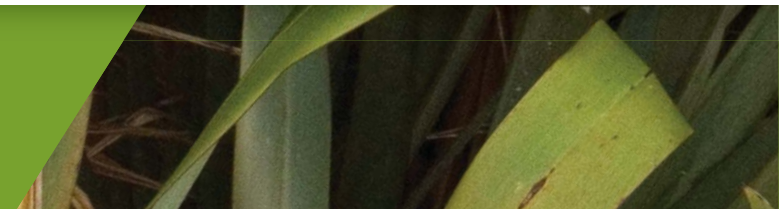
Firms do not have the resources to fill out complex forms or participate in a competitive bidding process against more experienced and better resourced Crown Research Institutes.

A Wide Range

A broad range of firms were invited to participate by completing a simple expression of interest document. Those that met the criteria were invited to complete a more detailed proposal document.

Effective Use of Time

The result was that a wide range of proposals were received and firms were not asked to commit increasingly higher levels of resources without a commensurate increasing likelihood of success.



Review

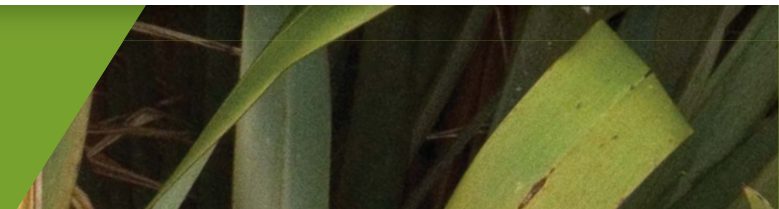
These 10 proposals were then evaluated to select the final five proposals proceeding to the Validation phase. The proposal documents were reviewed by an experienced panel and FRST to develop a shortlist of 10 promising proposals.

Top Proposals

The companies submitting the top five shortlisted proposals were required to complete a detailed Product Development Specification with funding assured unless the PDS exposed unforeseen issues.

The Wider Investment

Of the 57 detailed proposals that did not make the cut 50% are worthy of further investigation and private sector investment.

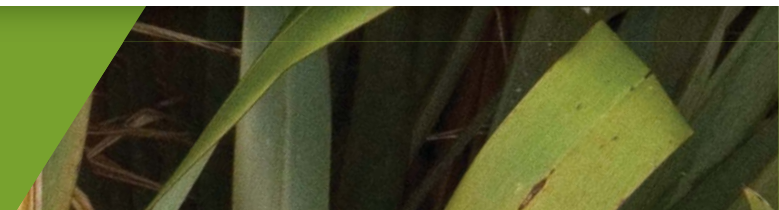


Company/Project Criteria

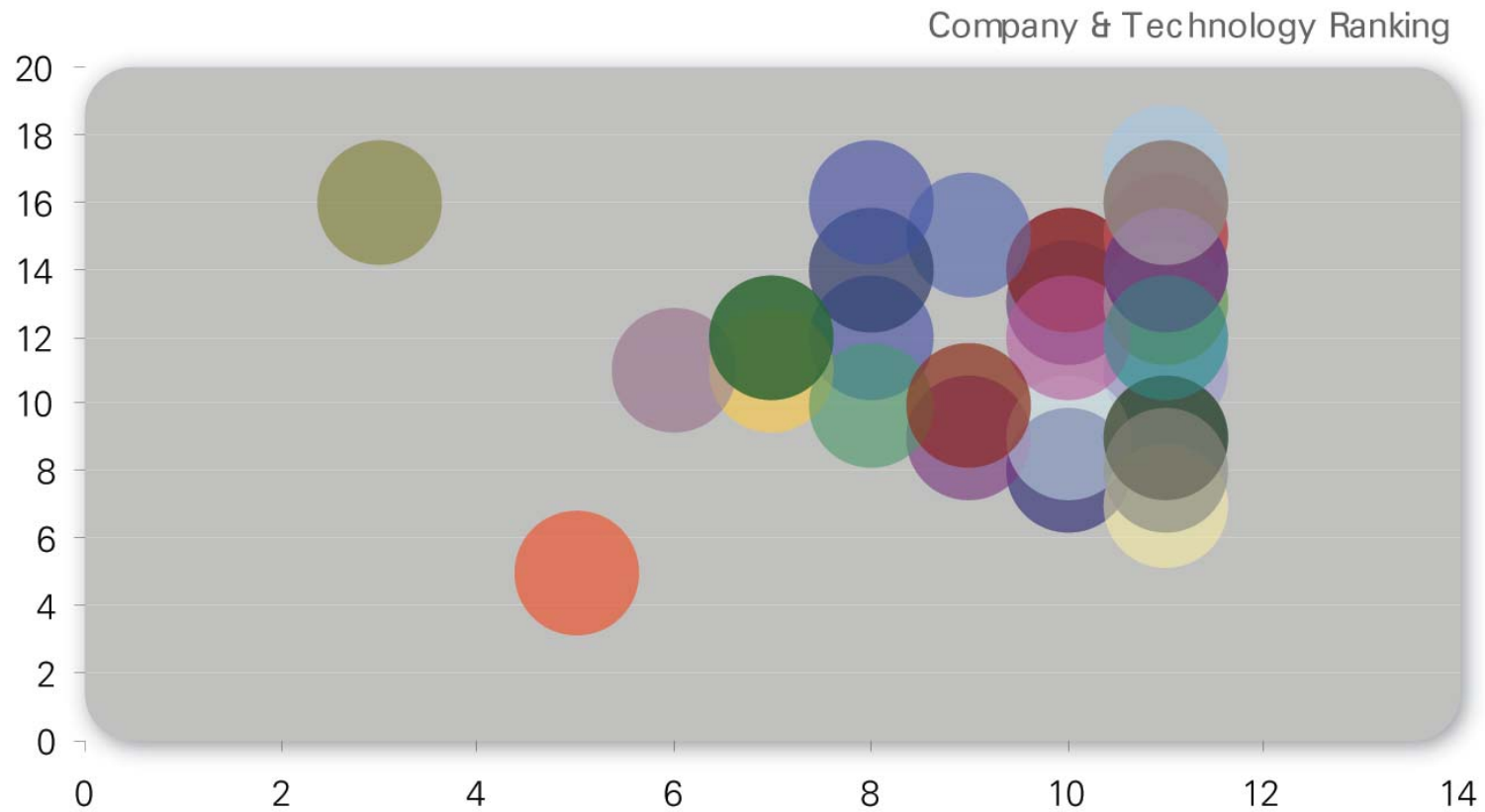
Category	Criteria	Yes/No
1. Capability	Ability to apply internal resource to a product development project (0.05-0.1 FTE)	
	Has access to capital funding over \$25-50,000 NZD	
	Capable of funding the PDS phase	
	Can start project in early 2007	
	Capable of technology uptake in the short to medium term horizon.	
	Medium to large factory/facilities with modern equipment	
	Has experience in bring new product to market	
3. Attitude	Existing or emerging interest in product development	
4. Exports	Existing or emerging interest in export markets	
5. Time in Operation	Has been in operation for more than three years	
6. Existing Distribution	Has a pre-existing distribution network in national and regional markets	
	Has a pre-existing distribution network in international markets	
7. NZ Made	60-100% of total product manufactured in NZ (in the case of certain parts or processing coming from offshore etc)	
Total:		
Total as a Percentage:		

Technology Criteria

Category	Criteria	Yes/No
1. Time	Less than 6-12 months required to complete the development and commercialisation of the technology.	
	Technology is available for inclusion into product development projects from February 2007	
2. Cost	Less than \$250K required cost to complete the development and commercialisation of the technology & product.	
	Median threshold to productionise the technology	
3. Application	Applicability to one or all of the four industry categories	
	Technology demonstrates a clear point of difference in market	
	Ability to be produced and manufactured into products by the short listed manufacturing companies (Post initial selection)	
	Applicability to be manufactured into product/s using available equipment/technology	
4. Legal Status of Technology	Technology is free of ownership and legal issues	
Total:		
Total as a Percentage:		

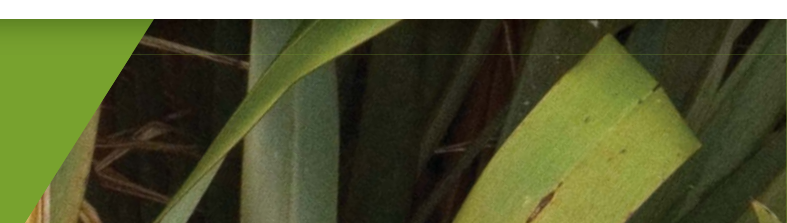


Phase Two: Selection



Industry Sector	Assessment against criteria			Grand Total
	No	Unsure	Yes	
Apparel	15	7	9	31
Carpet		3	1	4
Footwear	1		1	2
Textiles	3	14	8	25
Grand Total	19	24	19	62

Estimated Project Cost Category	Apparel	Carpet	Footwear	Textiles	Total
- \$50k	12			2	14
\$50k - \$150k	4	3		12	19
\$150k - \$250k	10	1	1	8	20
\$250k +	5			2	7
TBA			1		1
(blank)				1	1



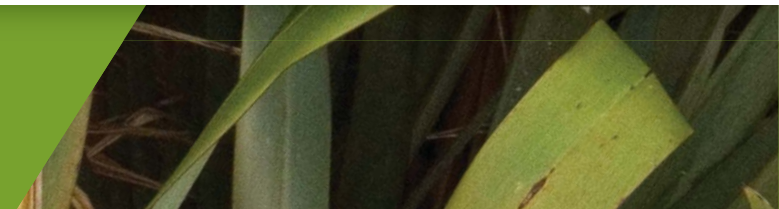
Phase Three : Validation

Project Development Specification (PDS) Elements



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- ▲ The projects that reach the action stage should be well scoped to succeed, recognising technical, market, and company constraints.
- ▲ A report back in 12 months may provide a clearer insight to the impact of the approach being taken.



Project Management Elements

01 Planning

Plan & Clarify

- + Analyse market and Company/Project Situation.
- + Formulate Project Development Specification (PDS) proposal.
- + Clarify the task with key stakeholders.

02 Research

Research & Generate

- + Research existing & competing product, document performance.
- + Undertake internet/patent search for new/emerging product, conflicting IP.
- + Review product environmentally (areas for improvement) Quick screen LCA.
- + Document Customer/Engineering/Economic/ Sustainability requirements list. (This may often involve the use of QFD to resolve the key technical priorities as they relate to Customer requirements).
- + Generate a wide variety of potential solutions.

03 Conceptual

Principal Concept

- + Isolate key concepts for development.
- + Identify essential problems.
- + Search for working principals & working structures.
- + Combine and firm up into concept variants.
- + Evaluate against customer, economic, technical criteria.

04 Embodiment

Preliminary

- + Develop the construction structure.
- + Preliminary form design, material selection & Calculation.
- + Select best Prelim layouts.
- + Refine and improve layouts.
- + Evaluate against economic and Technical criteria.
- + Method of Limits/Type User Trial

Definitive

- + Develop the construction structure.
- + Eliminate any weak spots.
- + Check errors, disturbing influences and minimum costs.
- + Prepare the preliminary parts lists, complete production, assembly documents.

05 Detail

Product Documentation

- + Prepare production and operating documents.
- + Elaborate detail drawings and parts lists.
- + Complete production drawings & parts lists.
- + Complete production, assembly, transport and operating instructions.
- + Check all documents.

Task Axis (With broad task categories listed)

Holistic Design Framework

Research
Design
Communicate
Document

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- ▲ Shortlisted proposals are now proceeding through the validation phase. FRST funding will be contracted by end of September 2007.
- ▲ All firms submitting expressions of interest will be contacted and invited to participate in a self funded second round of validation and offered assistance with project management and sourcing private and/or public sector funding.
- ▲ Areas of common interest emerging from this process will be discussed with Crown Research Institutes to help build research-industry connections.



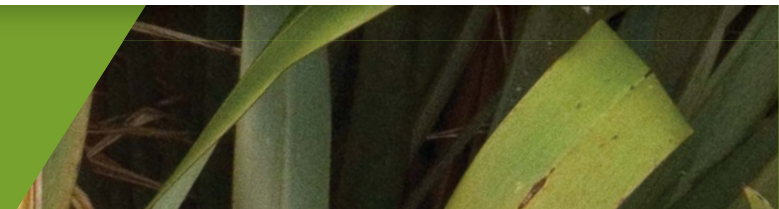
Summary

Presentation to: Hon. Trevor Mallard, Minister of Economic Development

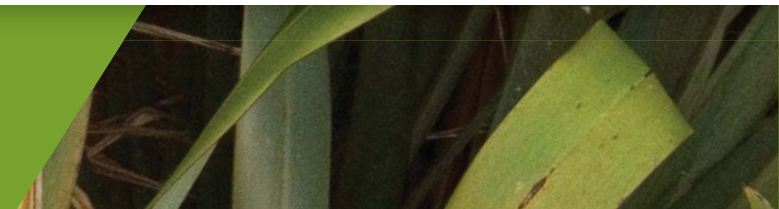
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- ▲ Enabled a Pan-Industry view of current **R&D projects and capability at an initial level.**
- ▲ Created the impetus for **informal and formal networking** between companies and research providers.
- ▲ Provided an **Industry driven funding model** from project identification through to selection.
- ▲ Provided **objective leadership on project development** and assessment through the validation phase.
- ▲ Validation phase proved worthwhile, as companies had to commit funding and time, which created a 'hard' evaluation step prior to funding.

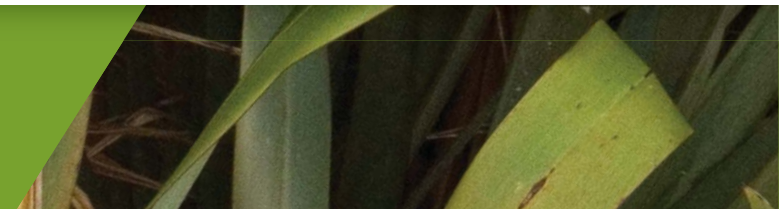


- ▲ Encouraged companies to take **a more research oriented approach** from the initiation of their project ideas.
- ▲ Promoted and provided **more structured project management** in the planning and development of the projects.
- ▲ A wider, **more inclusive public approach** to project identification led to a much broader range of companies registering their interest and putting proposals in.

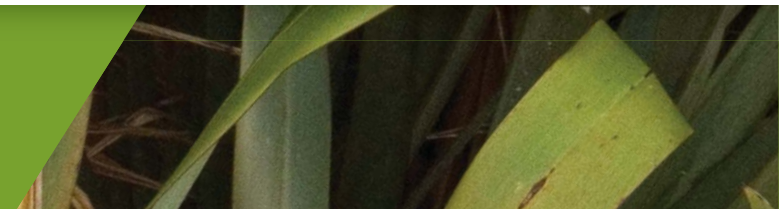


- ▲ A **semantic division** between what is considered 'Design' and 'Research and Development' created an impediment to successfully funding some projects.
- ▲ **Companies need support** to migrate from basic product development into paradigm changing research driven projects.
- ▲ **Lack of linkages** between research providers and industry.
- ▲ **Internal resourcing** was considered a major impediment to the development of cohesive and accurate projects.
- ▲ **Lack of transparency** within existing research providers about research initiatives that could benefit industry.
- ▲ **'Only if were funded'** approach existed amongst industry. Understanding about the value that research can add is not high.

- ▲ Increasing connections between industry and research providers would build relationships that can benefit both.
- ▲ **Aggregating common themes** would provide useful information to FRST & Research providers to enable their research to be more targeted to current and emerging trends.
- ▲ **Creating an Industry Research committee** within the context of TNZ would enable this to occur in a more structured and objective manner.
- ▲ **Providing an R&D portal** that would be a conduit and guide to industry on R&D to make initiating a project and finding the right resources/research providers would be an asset to industry. It could also reduce barriers to FRST funding.



- ▲ TNZ could facilitate **sector level research** that would determine new opportunities in major markets. This information can be used as the basis and business case for new R&D investment.
- ▲ **Project management** is a key skillset that industry could benefit from, providing managerial level training or regional workshops could have significant benefit for the industry as a whole.



- ▲ The MED funding provided a very good conduit to fund projects with an approach that was more specific to the Textiles industry.
- ▲ Capability building needs to occur moving companies from basic product improvement into research and development.
- ▲ Connections between industry and research providers needs to be strengthened.
- ▲ An industry driven approach 'enables' industry, and builds a greater understanding of R&D.
- ▲ A structured involvement at an industry wide level would provide ongoing connection and develop relationships further.