



## Distinct or Extinct?

**True innovation needs technology**

Melbourne, November 25, 2004  
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 www.nizo.com



Technology Drives Continuous Innovation

## The Dairy Worry:

(in this conference)

- **NUTRIMARKETING**
- How to Market Science Findings that are Work in Progress?
- **DAIRY MARKETING**
- Innovation – Creating and Maintaining Value
- Innovate or the Competitors Will?
- Can Innovation Hold Back the Tide?



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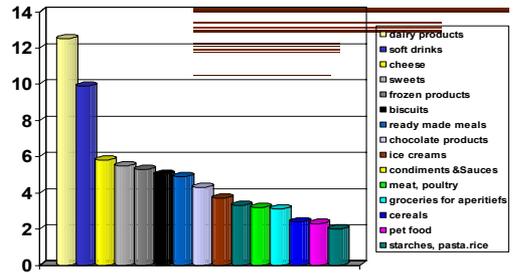
## Innovation in a Knowledge Economy

- IDF melbourne:  
 Can innovation hold
- the time (*no*)
  - the tide (**maybe yes!**)



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## Facts: Innovation in foods (% of new product launches / year)



Dairy: the most innovative food sector

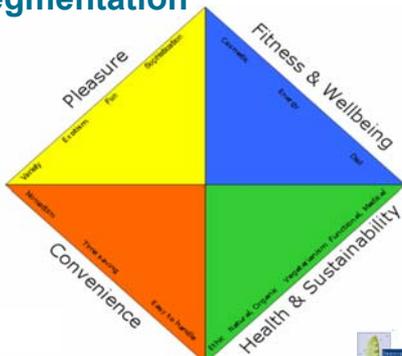


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## Market Segmentation

e.g. by:  
**Product**  
 (e.g. young or mature cheese)  
**Consumer**  
 (e.g. demographic, behaviour)

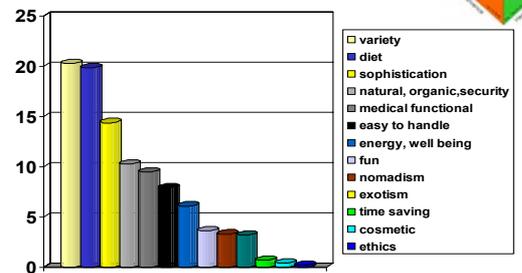
**Benefit!**



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## Facts: Type of benefit in dairy NPD



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## Technology Content in Dairy Innovation



<b>New market</b>	10% mainly snacks & convenience	1% mainly Medical & Functional
<b>Existing market</b>	84% mainly Pleasure, Variety & Sophistication	5% mainly Diet, Variety and Functional
	Existing technology	New technology

The explanation for our dairy worry?



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## Innovation is expensive and risky...

80% of new products fail within 3 years

Joe Willke, President of ACNielsen BASES

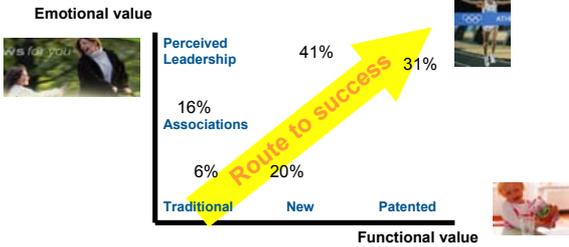
So we need to get it right...



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## Food Innovation:

Success rates; one year after launch\*



\* Van trijp 2003

True innovation needs technology



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## Science for industry:



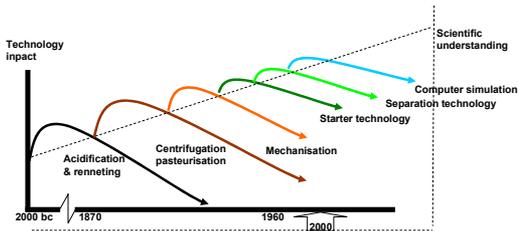
- Tangible product benefits, ever faster
- Balancing Emotional and Functional benefits
- Patented innovations
- Safety of products
- Availability of raw materials
- New business systems



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## The dairy track record

### Tangible benefits, ever faster:



Technologists Apply what's there  
Technologists know what's coming



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## Track record

### Technology derived benefits\*

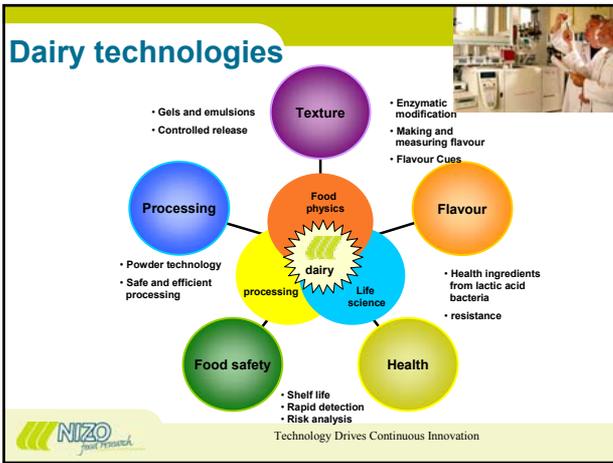


Consumer benefit	Product/functional benefit	Technology involved **
Pleasure (e.g. taste, variation)	e.g. Cheese varieties: Leerdammer, Parrano, Kernhemmer, flavoured soft drinks	Starter selection and culturing Processing technology Flavour analysis
Convenience (e.g. easy to handle, time saving, nomadic)	Meal replacers / Breakfast drink Cheese Schnitzel Premium Instant Powders	Protein structure and stability Microbial stability Powder technology/agglomeration
Fitness (balanced diet, anti stress, energy)	Reduced fat products Sports drinks (e.g. peptides) Mood foods (amino acids, peptides)	Flavour / texture formation / satiety Prevention / removal / masking of bitterness Enzyme hydrolysis Downstream processing
Health (functional foods, natural)	Baby food (e.g. allergy reduction) Probiotics (e.g. anti <i>Salmonella</i> ) Enriched foods (e.g. calcium, vitamins) Enzymes against hospital infection	In vitro / in vivo testing Physical stability Ingredient production/selection Flavour masking

\* from NIZO practice  
\*\* cost reduction, hygienic processing etc



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## Scope to Connecting Technology to Benefits:

Science for industry:

Benefit	Examples	Life sciences (genomics & microbiology)		Food physics (gels & emulsions)	Food processing (hygiene, optimisation, modeling)	
		Taste	Health	Texture	Food safety	Food processing
Fitness & wellbeing	Sport foods Low calory	Flavour release Low fat flavour	Pre & Pro biotics, Fortification Fat replacement	Encapsulation Emulsified food Low fat gels	Safety testing Risk assessment	Survival of actives New structure
Health & safety	Functional foods	Fermented flavour Prevention of off tastes	Health claims Genome & diet Nutraceuticals	Mixed foods (milk & fruit) Functional proteins & starches	Keep the good, kill the bad Survival microorganisms e.g. in process or probiotics in gut	
Pleasure	New / exciting tastes and textures	Improved & new taste!		Texture variations Controlled release Creamy products	Modeling taste texture interactions Modeling food safety	
Convenience	Long life Prepackaged	Keepability & shelf life Ambiant stable flavours		Shelf life, Barriers, Ready to cook	Shelf life extension	Cost reduction
Ethics	Organic, Vegan, Natural	Farm management, GMO, animal vs human studies,		New raw materials	Novel processing, Minimal processing, durability	

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Science for industry:

You all know fast moving consumer goods;

how about fast moving science areas?

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Science for industry:

## FMSA: fast moving science areas:

- Life sciences**  
From starter selection to designer ingredients
- Information technology**  
From best proven practice to best possible practice
- New business systems:**  
From Closed innovation to Open Innovation

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Innovation management

## The DAIRY worry:

Are we fast enough / smart enough?

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Innovation management

## Innovation: the traditional approach

Closed Innovation

**Advantages:**

- Total control: All expertise within company

**Disadvantages:**

- Speed, cost, "group think", few ideas

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Source: Henry Chesbrough (2003)

# Open Innovation

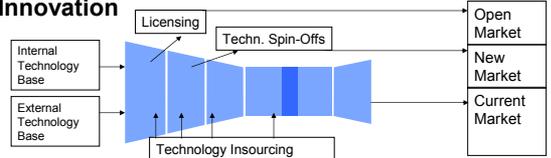
“If you think you can go alone in today’s global economy, you are highly mistaken” *Jack Welch*



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## Innovation: the new approach:

### Open Innovation

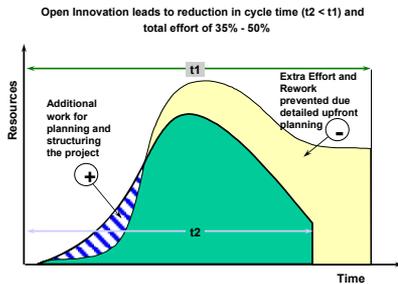


- **New Ideas**
- **Technology for Tangible Benefits**
- **Professional project management,**
- **Speed:** available expertise, immediate implementation through joint teams,
- **Sustainability:** confidentiality, Patents!
- **Low Cost:** tapping into existing (inter)national resources



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## Reduces time to profit



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Food has become a high-tech product!

## True Innovation needs Technology

Technologists know....  
what consumers (and marketers) *can* want



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