

HEINEKEN | Innovation and testing

- Introduction
- Innovation
- Testing
- Transport simulation

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PLATFORM
OMGEVINGSTECHNOLOGIE



HEINEKEN | Proud, Independent, Responsible Global Brewer

The world's most international brewer

- No 1 in Europe and No 3 in the world
- Operations in 71 countries globally

Brewing great beers, building great brands

Committed to surprising and exciting consumers everywhere

Long and proud history and heritage



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HEINEKEN | Brewing Great Beers, Building Great Brands

Heineken®, our flagship brand, is the world's leading international premium beer

Amstel, Desperados, Sol and Strongbow Gold complement our global brand portfolio

Altogether, we have over 200 international, regional, local and specialty beers and ciders in our portfolio

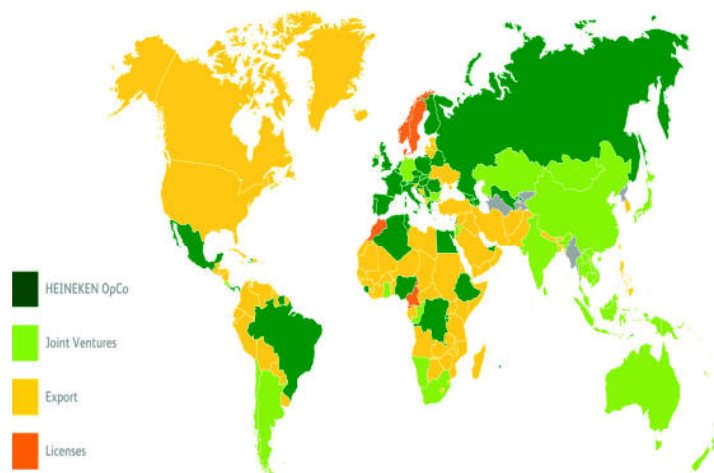
Passion for quality and Innovation are at the heart of how we build great brands and delight our consumers



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HEINEKEN | Truly Global Presence



>140 breweries in
71 countries

70,000 employees

Group Beer Volume
in 2011: 214
million hl

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Delighting Our Consumers with Innovations

Innovation is at the heart of our Company strategy to deliver top-line growth

We work to continually surprise and excite our consumers and meet changing consumer preferences

We are committed to double our Innovation Rate by 2020 to 6%



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Successful Innovation across HEINEKEN

By the end of 2011, HEINEKEN has achieved an Innovation Rate of 4.1%

This is a combined result of successful local innovations launched across our HEINEKEN markets and roll-out of innovations with global approach



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Draught Experiences for Home | PET DraughtKeg

Next generation DraughtKeg

- A fun and exciting way to share top quality draught beer with your friends
- Lightweight and convenient to use
- Roll-out began in spring 2012



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Draught Experiences for On-trade | David GREEN

The world's 1st GREEN draught system

- Uses 50 to 70% less energy than regular beer coolers
- Easy to use for outlet staff
- No cleaning cost, no beer losses
- Profitable
- Mobile and built-in versions
- Guaranteed fresh beer for 30 days



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Draught Experiences for On-trade | Orion

Draught beer as fresh as from the brewery

- 500L branded beer tanks visible in an outlet
- Unique consumer experience and highest freshness
- Convenience for outlet staff
- Available in 5 markets



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Radler Roll-out across Central & Eastern Europe

A major contributor to increased Innovation Rate

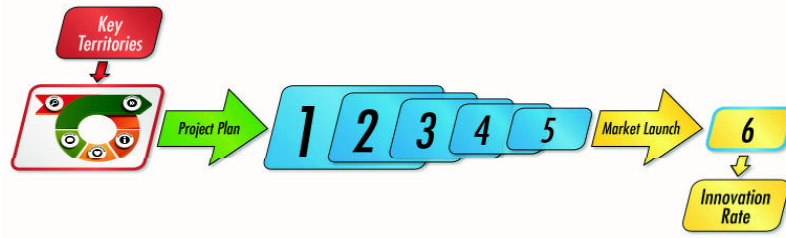
- A refreshing mix of beer and natural lemonade
- Attracts new drinkers into the beer category
- Strong profitability
- Strengthens brand equity
- Launched in 12 markets in Central and Eastern Europe



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Innovation Process within HEINEKEN

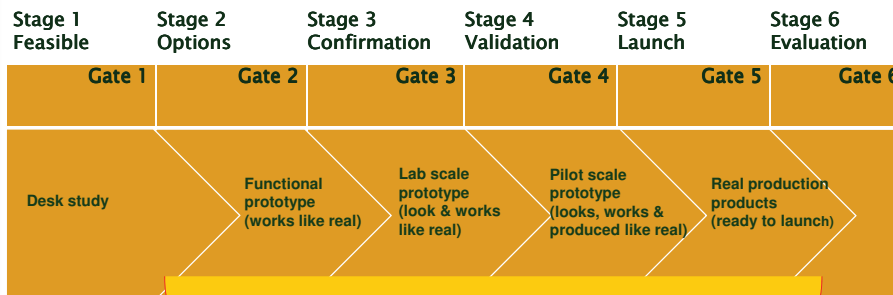


- Supports innovation **from simple to complex** including renovation
- **Checklist** to ensure key activities are not forgotten
- **Flexible** based on the project requirements
- **Clear decision making** at each Gate for what to do and what not to do
- **One Language** reduces confusion and helps sharing best practices

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Innovation Process within HEINEKEN



Testing & validation

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Innovation Process within HEINEKEN; testing & validation

- Beer quality
 - Tap performance
 - Shelf life
 - Material influences
 - Consumer handling
 - Safety requirements
 - Legal requirements
 - Transport conditions
- Pilot brewery
 - Pilot filling line
 - Packaging development centre (test facility)
 - Suppliers
 - External institutes

 **topa instituut**



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Consumer tests

- ◆ Easy usage: carry, tap part handling, tapping
- ◆ Tests in Heineken Experience in Amsterdam
- ◆ Market research in 4 countries



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Final design



Packaging development

Innovation projects:

- 70% products are Export related
- Secondary packaging development with suppliers
- Pallet stacking and container load customer related
- Transport to consumer → Analysis of transport circumstances

Transport circumstances



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Transport circumstances



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Transport circumstances



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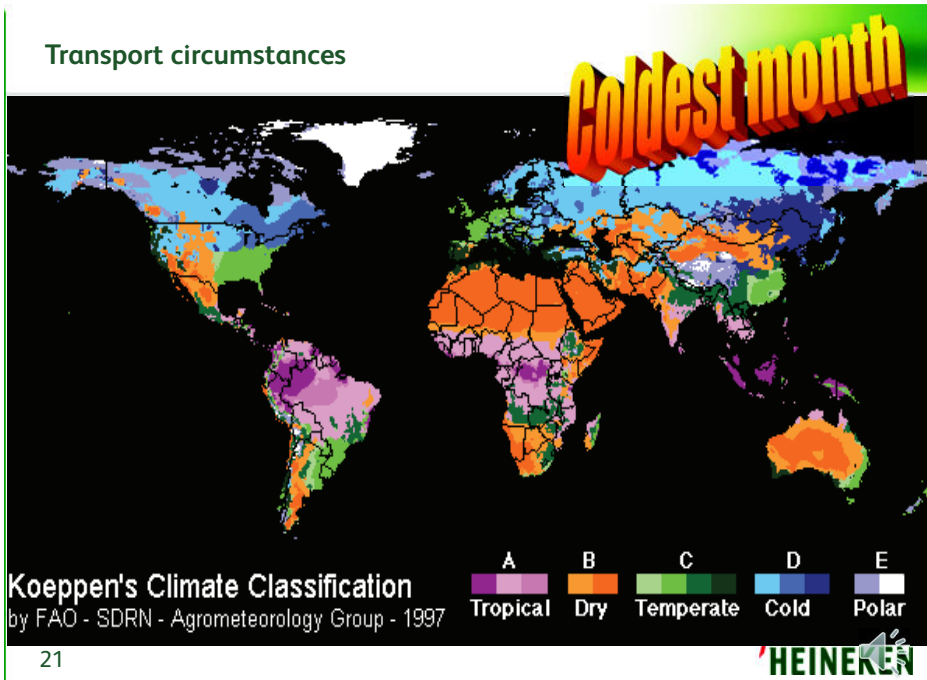
Transport circumstances



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Transport circumstances

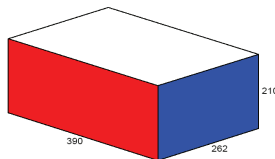
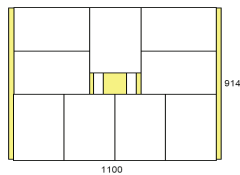
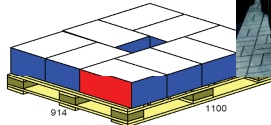
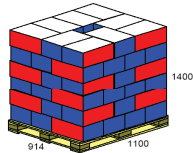


Transport circumstances



Packaging development; Pallet load

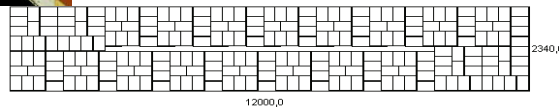
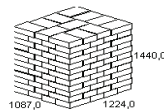
Product Name	35.5EB-05 bottle, carton 4x6 dividers					
Product Code	Japan pallet 1100x900 mm					
Datafile Name	0086008 (04-03-2008)					
Solution Ref.	10 T (Edited)					
Cube Used	88,2 %	9	Carton / Layer			
Area Used	92,9 %	6	Layer / Load			
Pallet type	JHEPM	54	Carton / Load			
	Length	Width	Height	Net	Gross	Volume
Carton (OD)	390,0	262,0	210,0 mm	8,520	13,400 Kg	21457 cm ³
Product	1048,0	914,0	1260,0 mm	460,080	723,600 Kg	1,21 m ³
Load	1100,0	914,0	1400,0 mm	723,600	756,600 Kg	1,41 m ³



Packaging development; Container load

Product Name	33 cl can, tray 4x6 pack				
Product Code	mech load 40ft container				
Datafile Name	50102004 (25-10-99)				
Solution Ref.	2 T (Edited)				
Volume Used	95,7 %	12	Tray / Layer		
Area Used	99,7 %	12	Layer / Load		
Pallet type		144	Tray / Load		
Truck Solution Ref.	5 S	2880	Tray / 40VOET		
		20	Load / 40VOET		

	Outside Dimension			Weight		Cube
	Length	Width	Height	Net	Gross	
Tray	408,0	271,0	120,0 mm	8,000	8,800 Kg	13268 cm ³
Load	1224,0	1087,0	1440,0 mm	1,152	1,267 t	1,92 m ³
40VOET	12000,0	2340,0	2260,0 mm	25,344	29,344 t	63,46 m ³



C. P. M. van Genk
Centrale Realiteitsdienst Emballage
Heineken Nederland B.V.

Transport simulation at TOPA Institute

- Quality assessment (visual, damage, breakage)
- Palletstability
- Temperature influences

Handling:

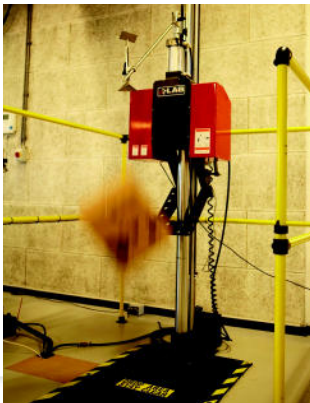
- Fork lift truck
- Stacking in warehouse
- Container transport
- Transport by truck
- Transport by train



Transport simulation tests



Well equipped test facility



Transport simulation



Vibration tests:

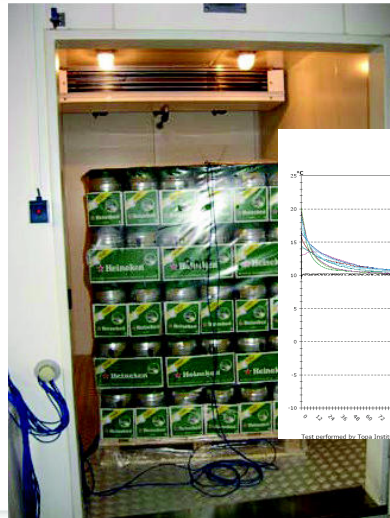
- Forklift truck
- Truck
- Train
- ASTM standards

Transport simulation

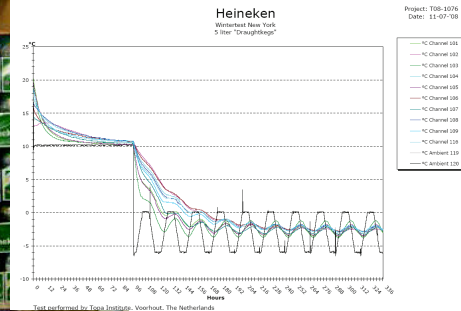
Impact test :



Transport simulation



Climate test:



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Transport simulation

Results:

- Good forecast of transport influences in development phase.

Leads to:

- Transport limitations (no train transport of shaped cans, usage of reefers during wintertime regarding DraughtKeg)
- Storage guidelines (warehouse)
- Temperature restrictions during transport (storage in harbour)
- Usage of partitions

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Packaging development; Transport



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THANK YOU FOR YOUR ATTENTION

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