



The Making Of Sustainable Dredging Equipment

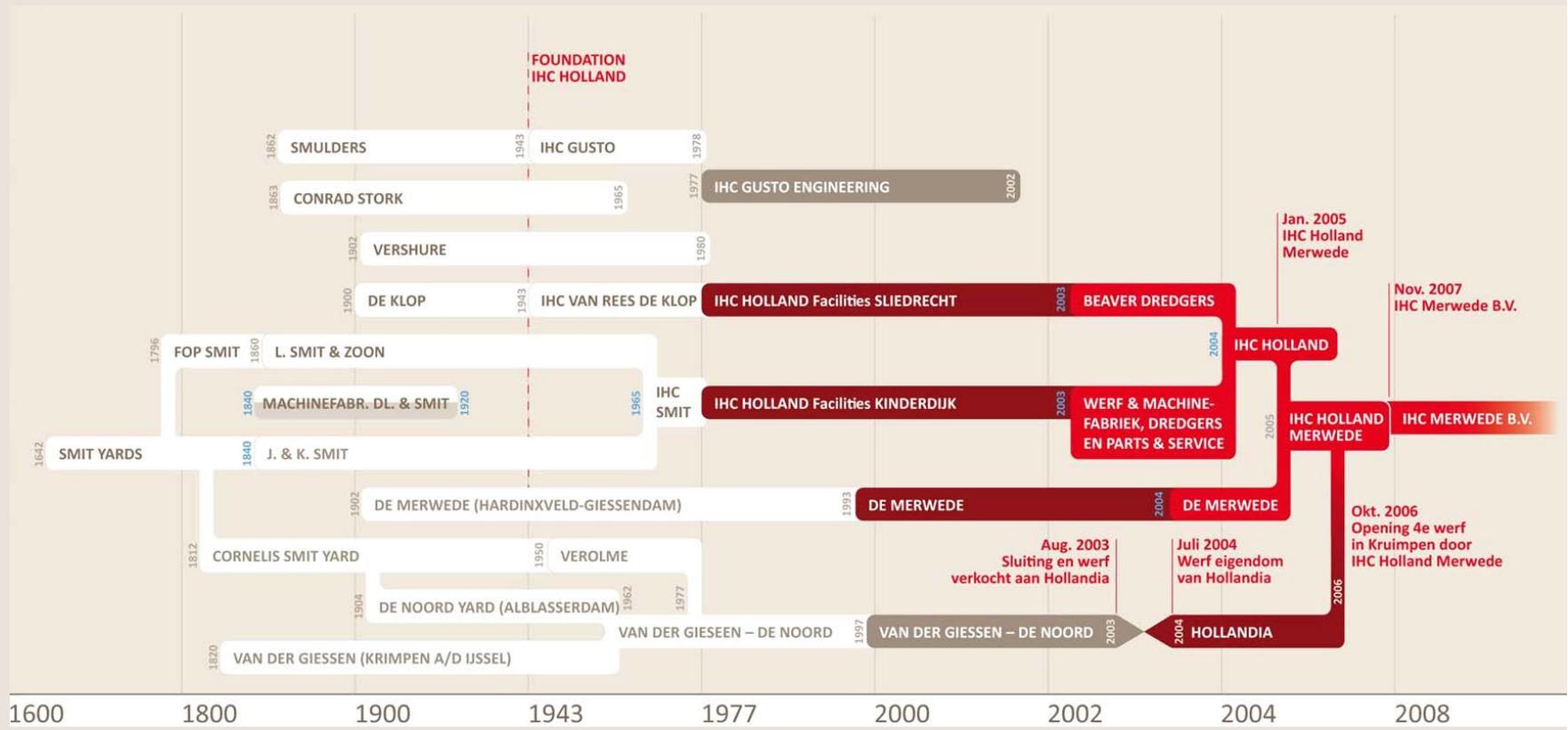
Eco-friendly Dredging in the Modern World
13 - 14 October 2009
P.M. Vercuijsse



De technische innovator.

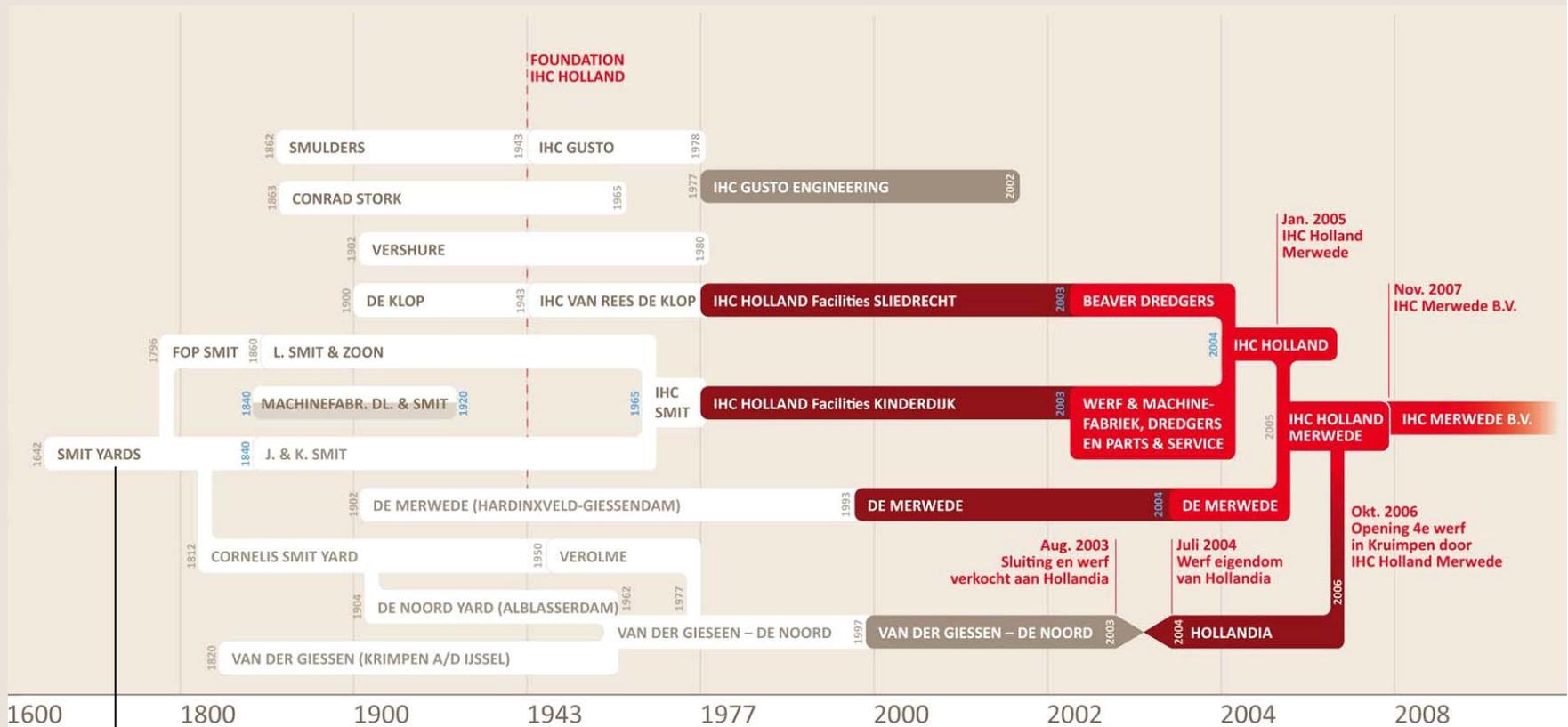


Historic Timeline IHC Merwede (1642 – present)





Historic Timeline IHC Merwede (1642 – present)



1697 Peter the Great in Zaandam & Amsterdam

Contents

- **Introducing Sustainability**
Our background, definition & approach
- **Two Questions**
Is it new?
Conflicts or opportunities?
- **Our Focus Today**
- **Conclusions**



Background

- **Growing Awareness**
regarding the effects of human activities in the ecosystems
- **Increasingly Demanding Legislation**
 - Materials Used in Production
 - Energy Use and Emissions
 - Dredging Operations (turbidity, lubrications, precision, noise)
- **IHC Merwede's Responsibility**
The Sustainable Design and Manufacturing
of Dredging Equipment.
This as a Basis for Sustainable Dredging.



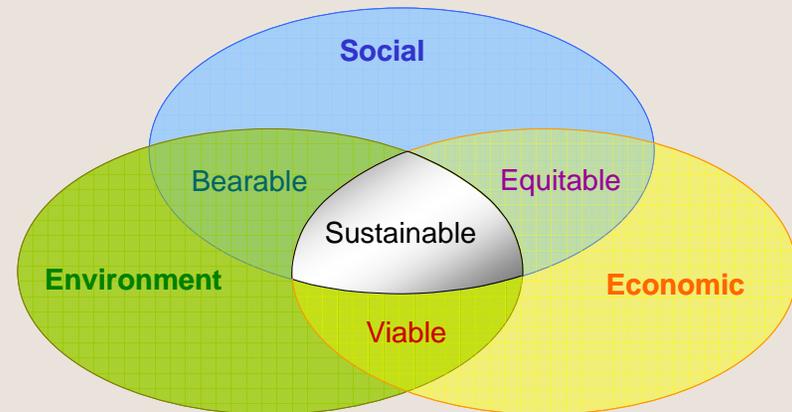
Definition & Approach

Definition: Brundtland

“provide the needs of the present generations without compromising the capability of the future generations to meet their needs”

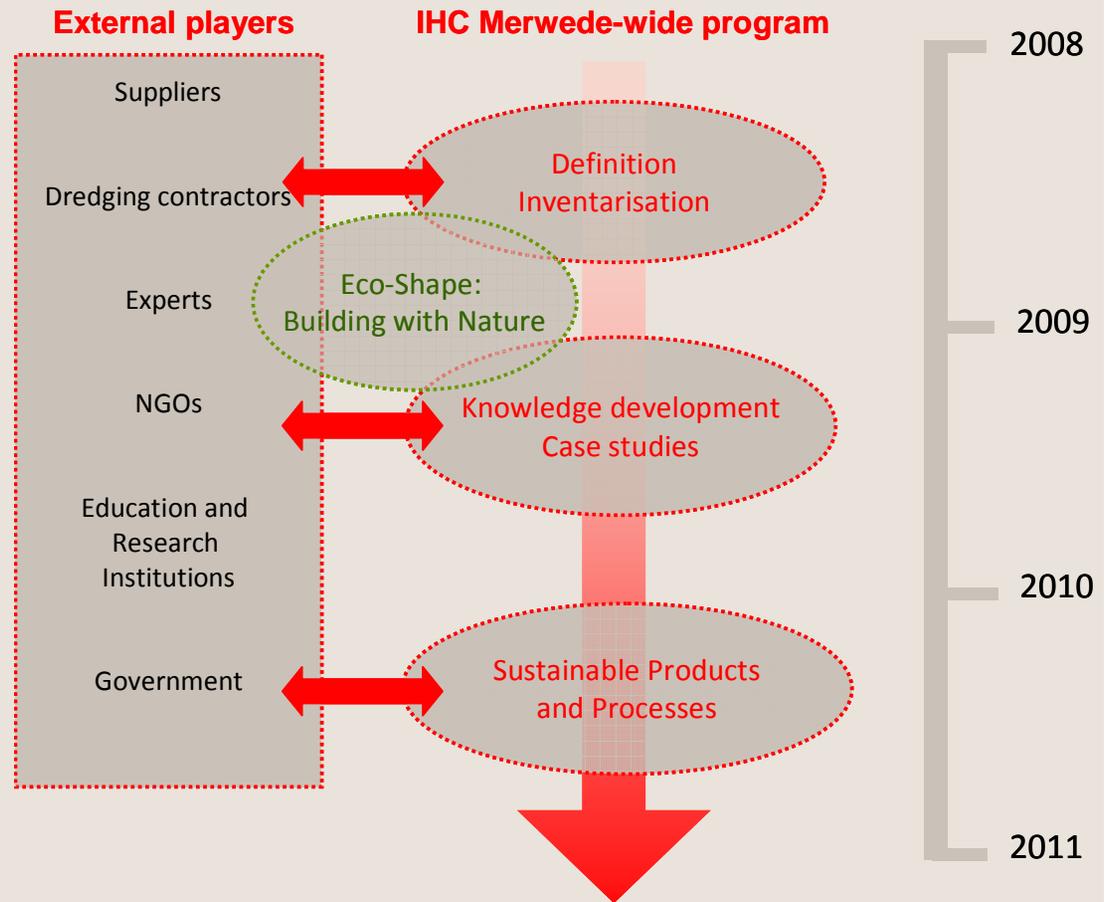
Approach (1): People, Planet & Profit

“we will do what has to be done plus actively seek mutual benefits”



Approach (2)

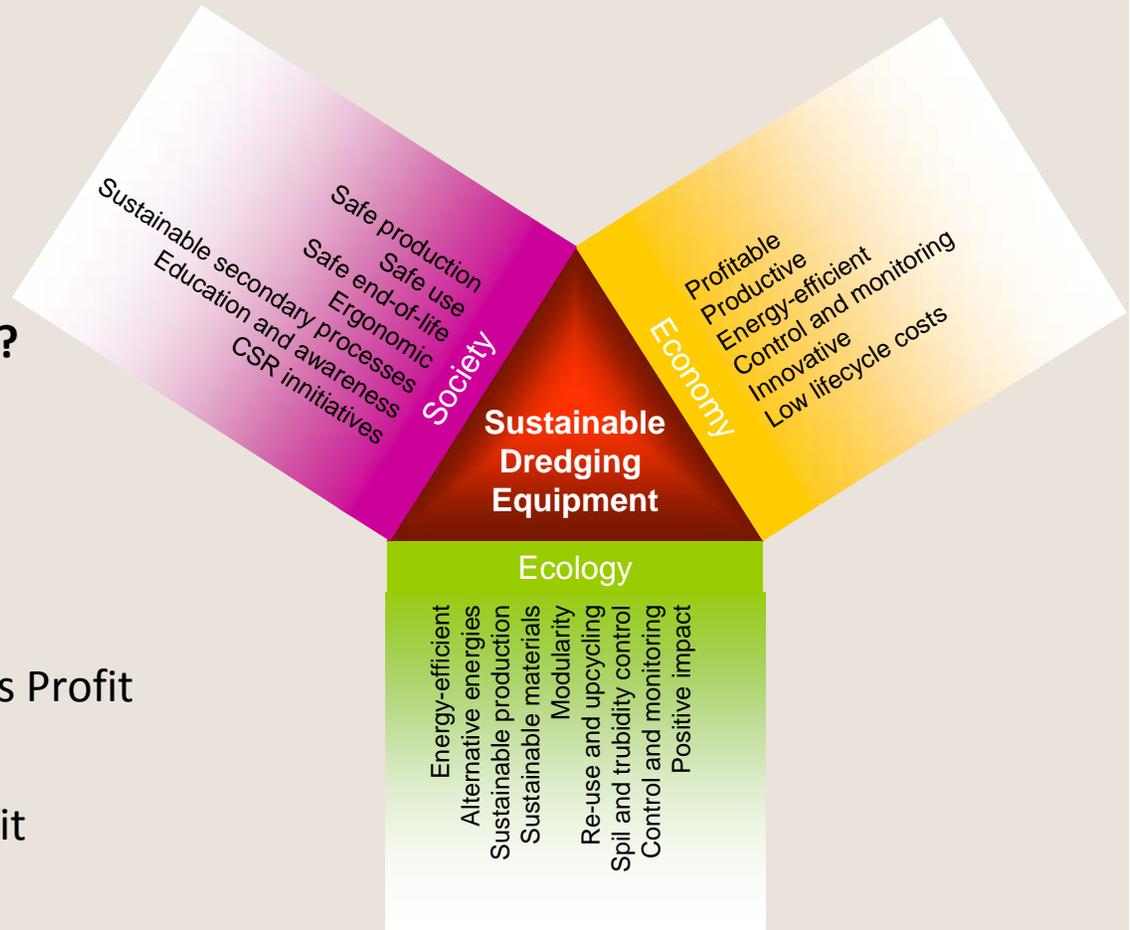
- Long term research program
- Cooperation with all stakeholders
- Multidisciplinary approach
- Consulting experts
- Participation in EcoShape's Building with Nature



Pilot projects / demo-models/ prototypes
Design guidelines / decision support tools

Two Questions

1. Is it New?
2. Conflicts or Opportunities?



People versus Planet versus Profit

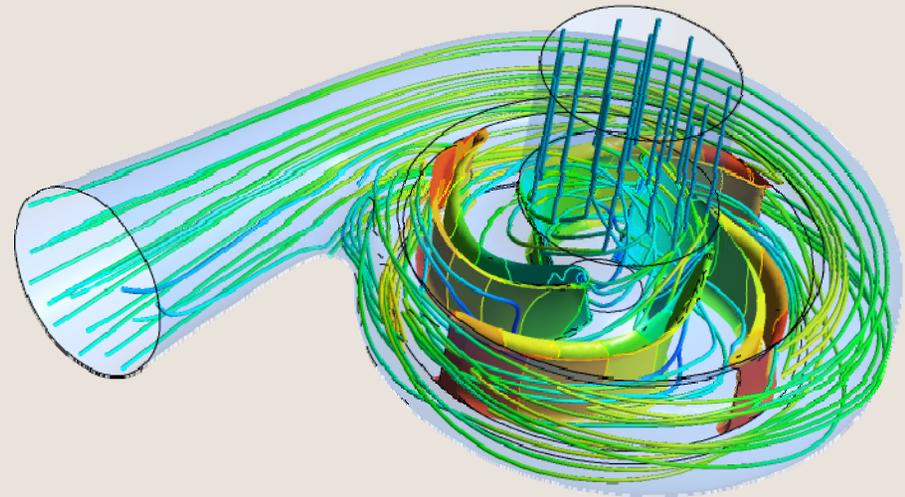
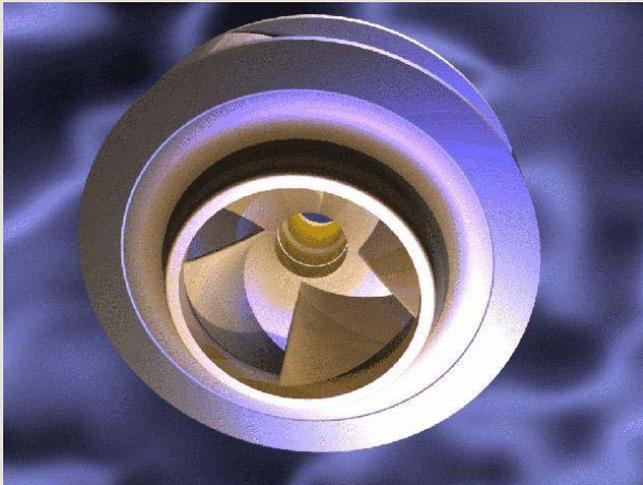
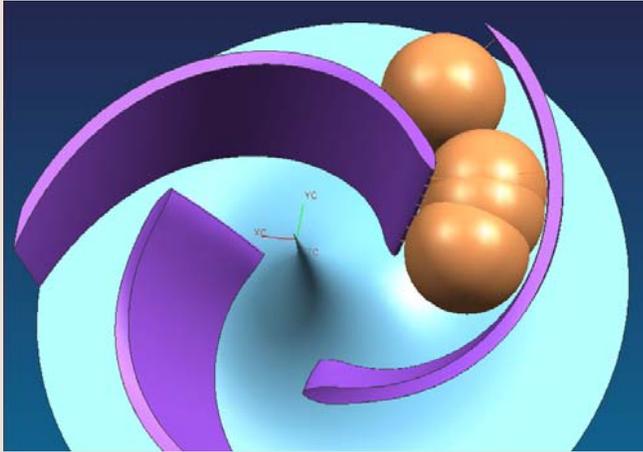
or

People, Planet & Profit

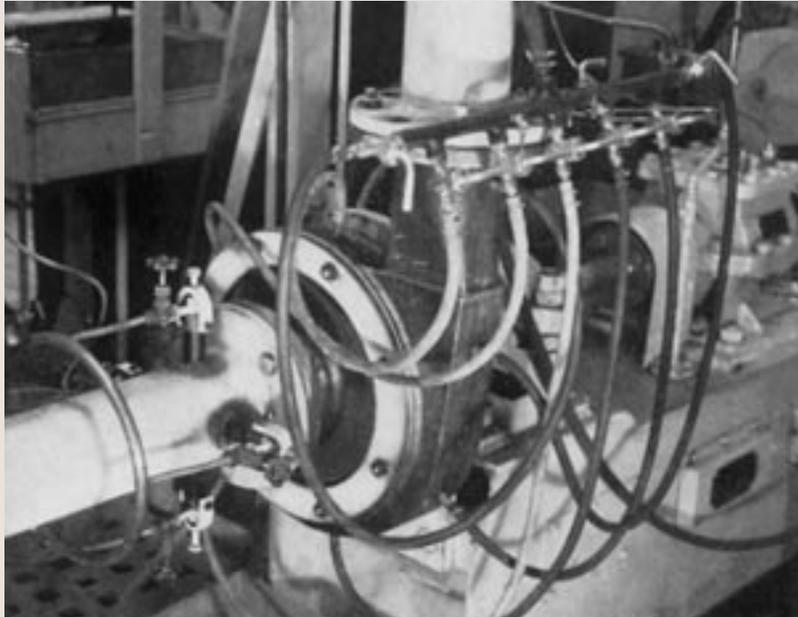
Is it new? & Conflicts or opportunities?



Is it new? & Conflicts or opportunities?



Is it new? & Conflicts or opportunities?



1950s



2009

Is it new? & Conflicts or opportunities?

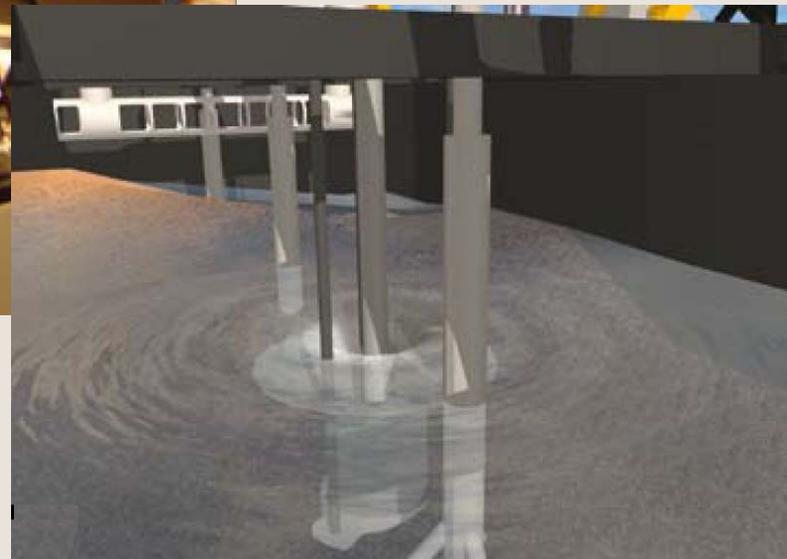


1980's



2009

Is it new? & Conflicts or opportunities?



Our Focus Today

- Developing Sustainable Equipment
- Reducing Turbidity
- Reducing Energy Use and Emissions
- Increasing Awareness





Developing Sustainable Equipment - 2009



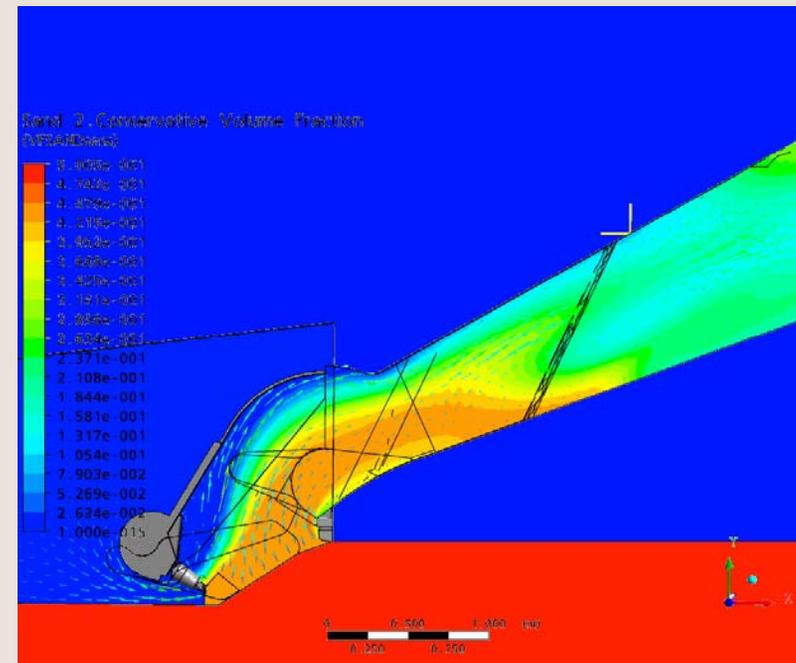


Developing Sustainable Equipment - 2009



Reducing Turbidity

- Precise dredging
- High density dredging
- Redesigning overflow systems
- Participation in EcoShape's programme Building with Nature



Reducing Energy Usage & Emissions

- Continue to reduce energy usage
- Alternative power generation
Wärtsilä: 500kW fuel cells by 2010
- Emissions are CO_x, SO_x, NO_x... & underwater noise





Increasing Awareness!



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Conclusions

- Long term programme/commitment – first steps made
- It is not new, it is another perspective!
- A pro-active attitude reveals many opportunities
- Main achievements so far follow from:
Knowledge,
Experience &
Awareness!

