

# Safety Management at NRG

(ORS-41)

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**Safe Management and Effective Utilisation**

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<http://www.nrg-nl.com>

# Content

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- NRG's integrated management system
- NRG's organization improvement program
- Conclusions



<b>Established</b>		<b>1998</b>
<b>Share holder</b>		<b>ECN</b>
<b>Turnover:</b>	<b>R&amp;D</b>	<b>14 M€</b>
	<b>Consultancy</b>	<b>17 M€</b>
	<b>Isotope prod.</b>	<b>23M€</b>
<b>Staff</b>		<b>~340</b>
<b>Locations</b>		<b>Petten &amp; Arnhem</b>

# Nuclear installations at Petten



50 MW  
HFR

HCL &  
MPF

DWT

WSF

30 kW  
LFR

Labs

**ie**  
Institute for Energy

180 FTE

**tyco**  
Healthcare

**MALLINCKRODT**

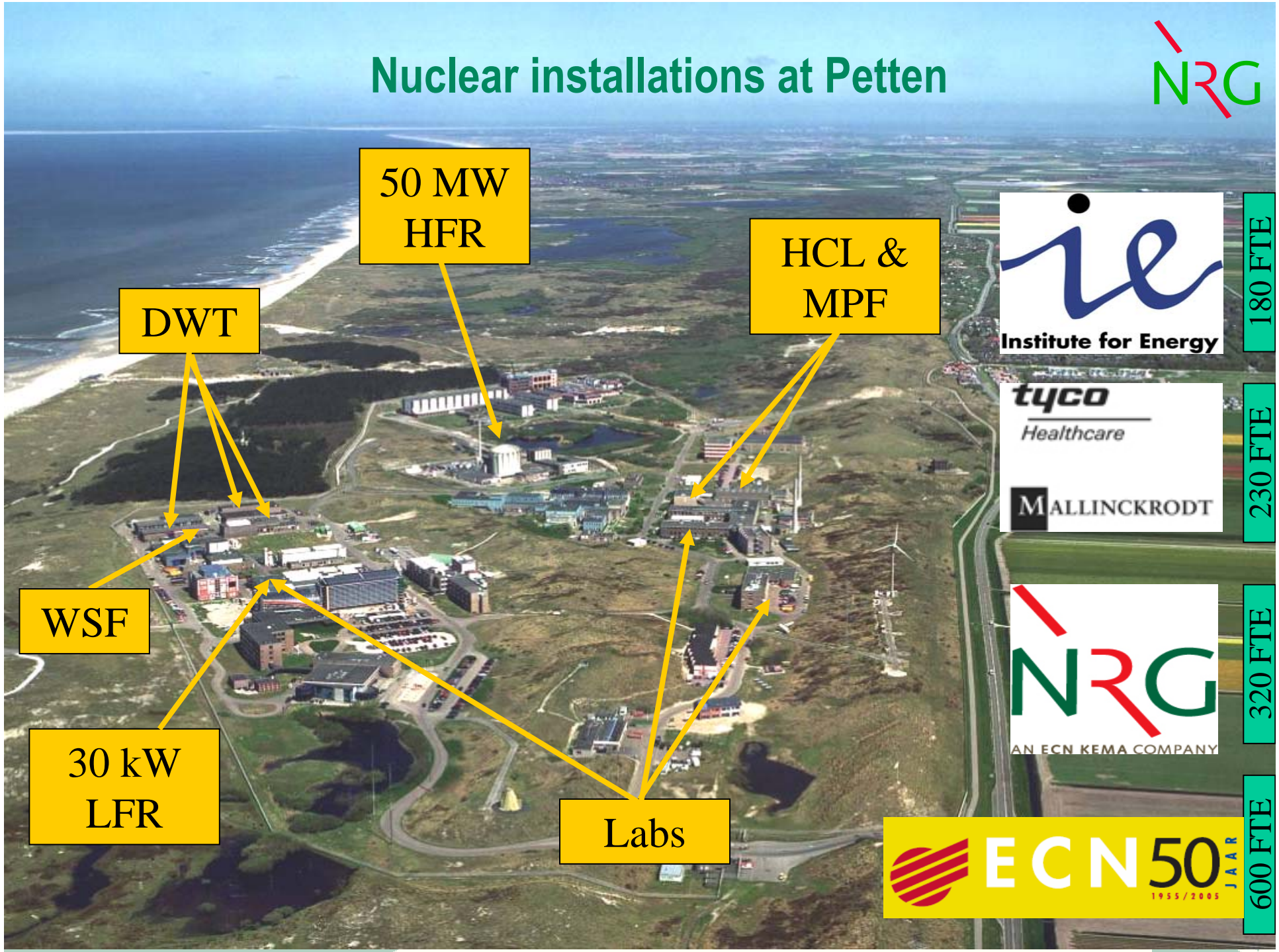
230 FTE

**NRG**  
AN ECN KEMA COMPANY

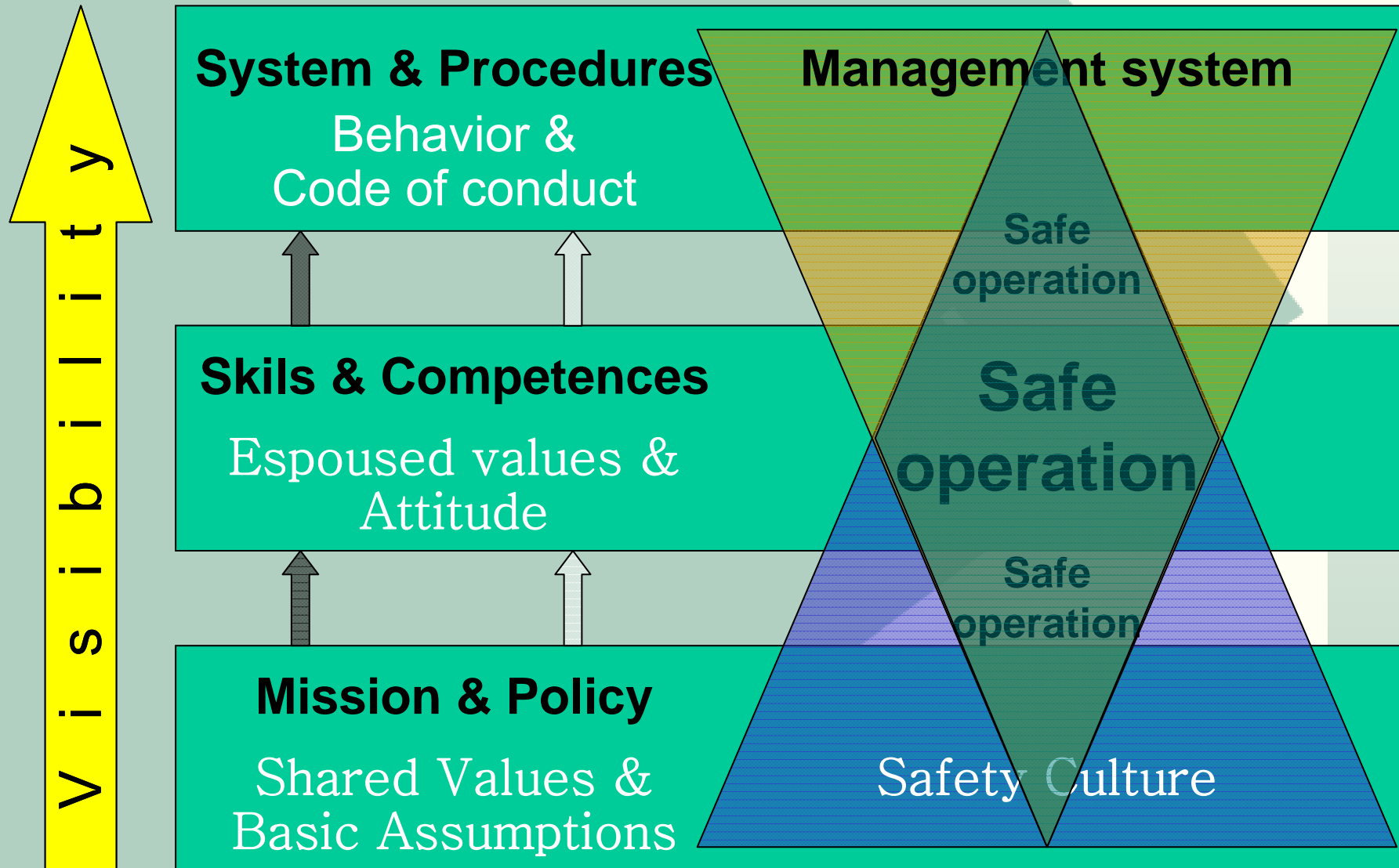
320 FTE

**ECN 50** JAAR  
1955/2005

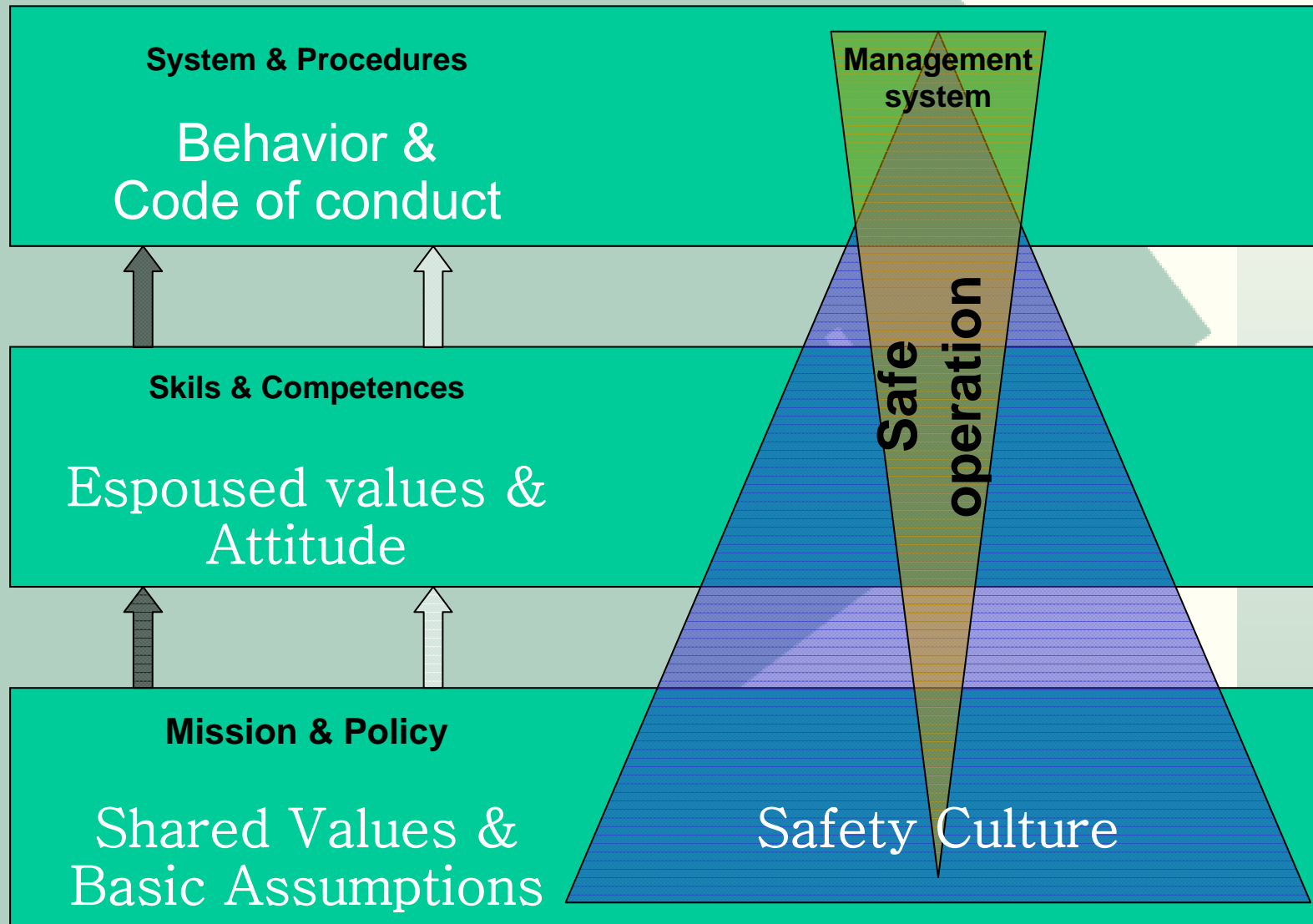
600 FTE



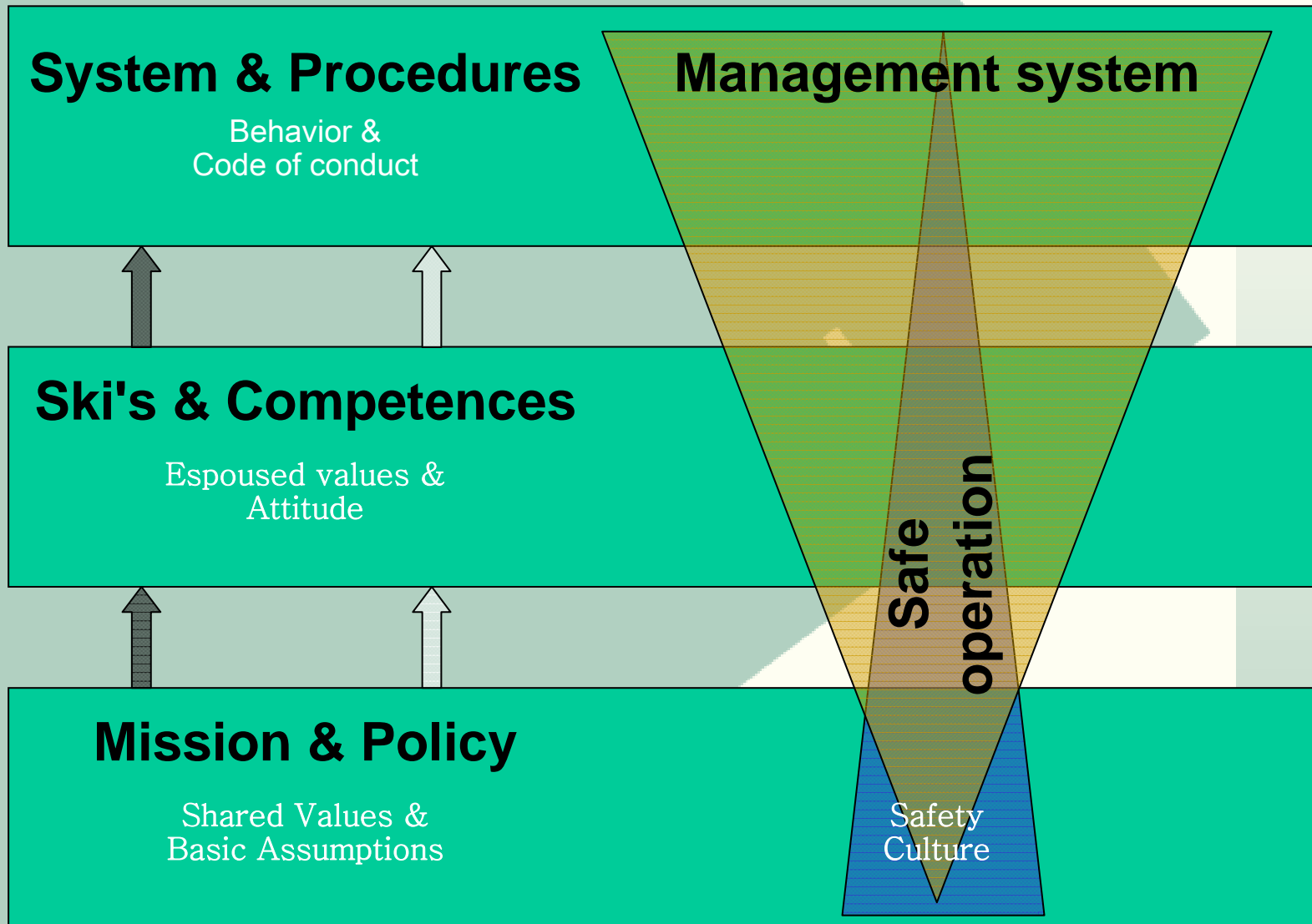
# Safety management



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# NRG's Integrated Management System

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Satisfies ISO-9001; ISO-17025; Safety Certificate for Contractors and is based on ISO 14001 but also Security management system is incorporated too Expanded to comply with the relevant parts of the Dutch Nuclear Safety Regulations which are based on IAEA safety requirements en safety guides

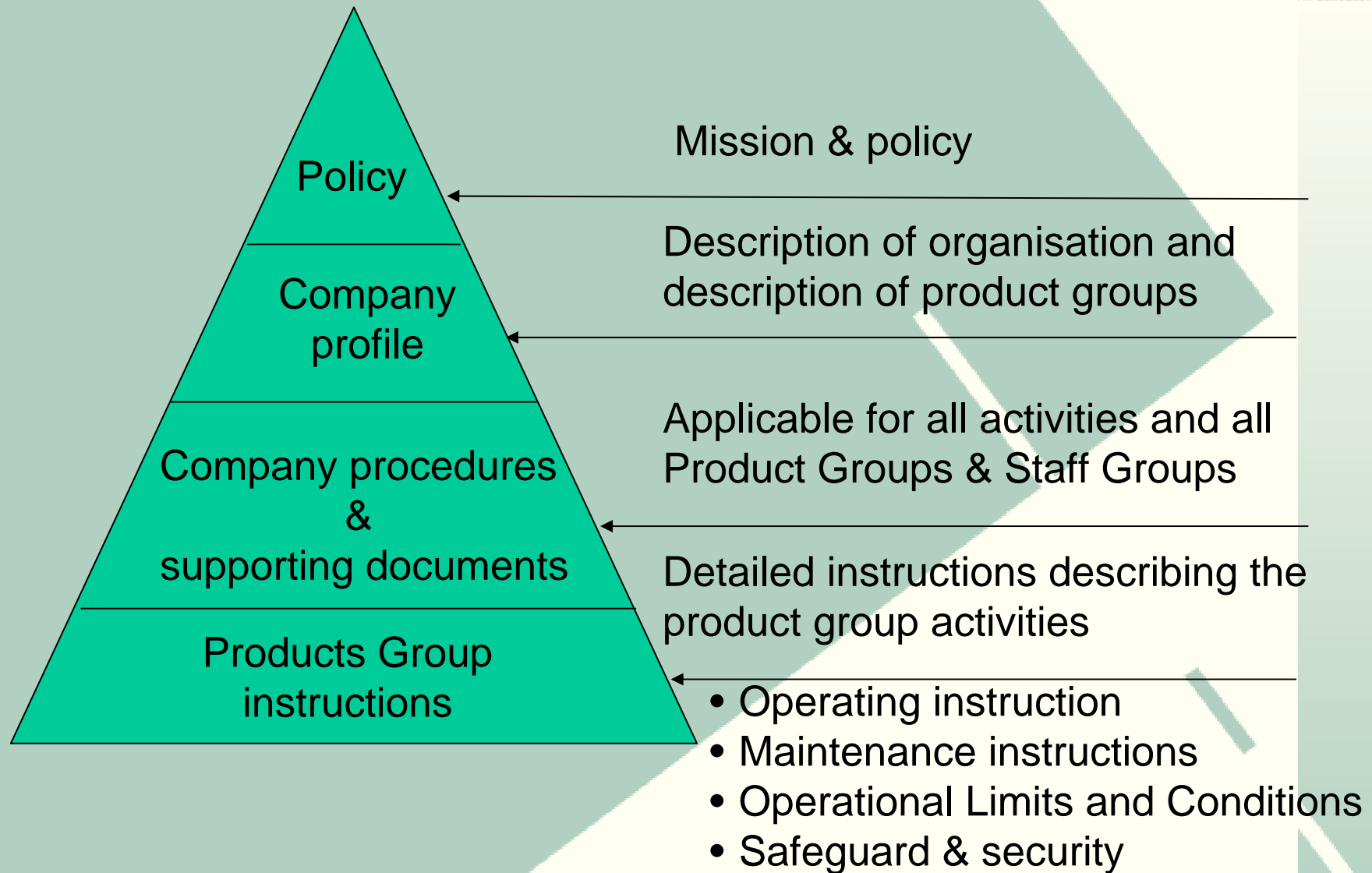
Adaptation of ISO 9001 concerns mostly:

- Management review
- Control of modifications
- Operation & maintenance
- Utilization
- Independent control or review
- Quality registrations

Based on skills and competence's of employees



# NRG's Integrated Management System





MANAGEMENT  
SYSTEEM

MAIN INDEX

CORPORATE  
PROCEDURES (NL)

CORPORATE  
PROCEDURES (E)

CORPORATE  
PROCEDURES (D)

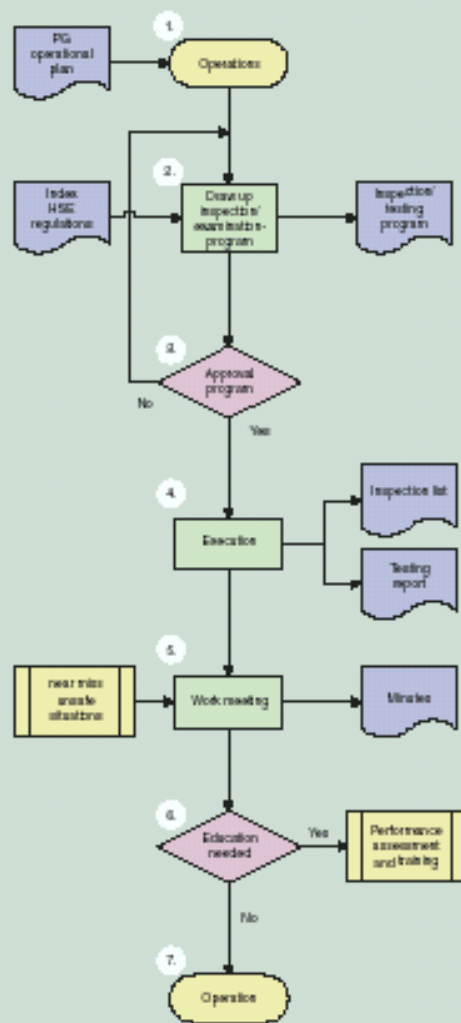
ORGANISATION  
SHEET

HSE  
LICENSES

ALFABETIC  
SEARCH

## 2.7 HEALTH, SAFETY AND ENVIRONMENT AT OPERATION

Revision date: March 17, 2003



1. Product Group Manager
  - determines extent of required HSE inspections/tests
  - appoints Task Manager as daily responsible for HSE care

2. Task Manager
  - draws up inspection/testing programme
  - appoints responsible for inspections/tests

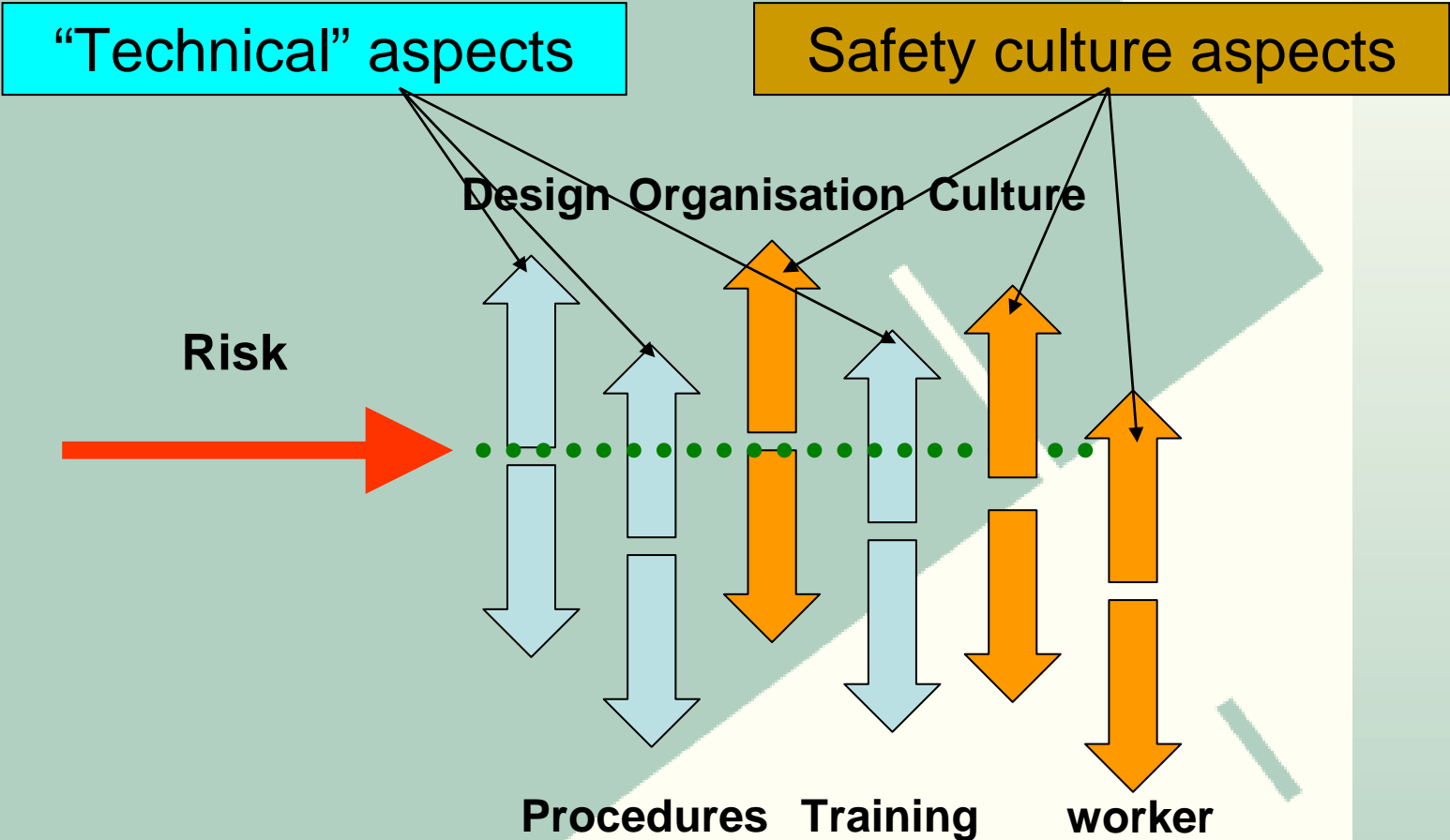
3. Product Group Manager
  - obtains advice from QSE representative/ Manager QSE if necessary
  - approves inspection/testing programme

4. Responsible for inspection
  - performs a trimonthly inspection (inspection for offices annually)
  - records deviations
  - conducts biannual inspection programme
  - records deviations
  - analyses data from external (Fire Brigade) inspections
  - implements indicated preventive and corrective measures
  - organises filing with copy to Product Group manager and QSE representative
  - conducts tests
  - records findings

5. Task Manager
  - organises discussing the HSE subjects in progress meeting, including near misses, unsafe situations and toolbox meetings
  - discusses inspection/test findings and proposes measures to Product Group Manager
  - co-ordinates reporting with copy to Product Group Manager and QSE representative
  - establishes additional measures if necessary

6. Task Manager
  - establishes supplementary HSE training, information and instruction in consultation with Product Group Manager and QSE representative
  - co-ordinates recording of training, information and instruction
  - implements training, information and instruction

# Defense in depth



Challenge is:

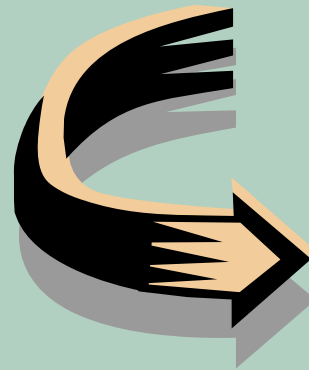
## OLD

Technical

Bureaucracy

Formal attitude

Control



## Desired

Human orientated

Learning organization

Open culture

Trust/Confidence

### Transforming the dilemma's

## Extended organization improvement program launched 2003

- Dedicated conscious management development for Senior management
- Followed by conscious management development 2<sup>nd</sup> management layer and young potentials
- Keywords are: open communication with mutual trust and respect; learning attitude for management and staff; positive engagement; individual responsibility and a blame free culture
- Personal coaching and training
- Code of conduct developed and implemented in close co-operation with all employees

## Organization improvement program 3/3



- A new long term business strategy has been developed with safety as a key business element
- Excellent production records require an excellent safety culture
- Clear vision for the future
  - 20 % business growth
  - Strive for an excellent safety culture
  - License application for Pallas as successor of the HFR
- Stake holder satisfaction
  - Customers
  - Public
  - Environment
  - Competent authorities

# Conclusions

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- To assure our mission statement “Safety has the highest priority” an outstanding safety management is of paramount importance
- The effectiveness of safety management is a combination of the implemented safety management system and the safety culture
- NRG’s integrated management system combines all ISO, nuclear safety, environmental and the occupational health requirements in one dedicated management system
- Safety culture is an essential part of our defense in depth philosophy to assure safe operation
- Conscious management development formed the key-stone for an extended organization improvement program launched in 2003 in order to improve the safety culture



# Pallas creating future for power and health



[www.nieuwereactor.nl](http://www.nieuwereactor.nl)

ORS-4; Safety Management at NRG  
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