

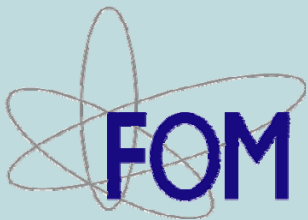
# Research Policy in a Programme Organisation: Indicators and Accountability

*Mark Brocken*

*Head Financial Department*

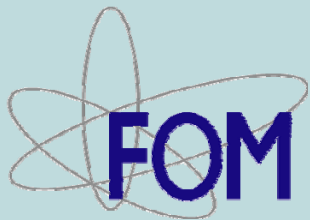
*Foundation for Fundamental Research on Matter (FOM)*

*The Netherlands*



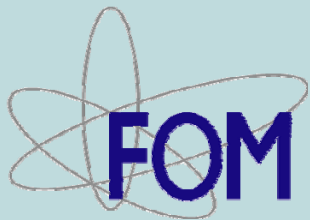
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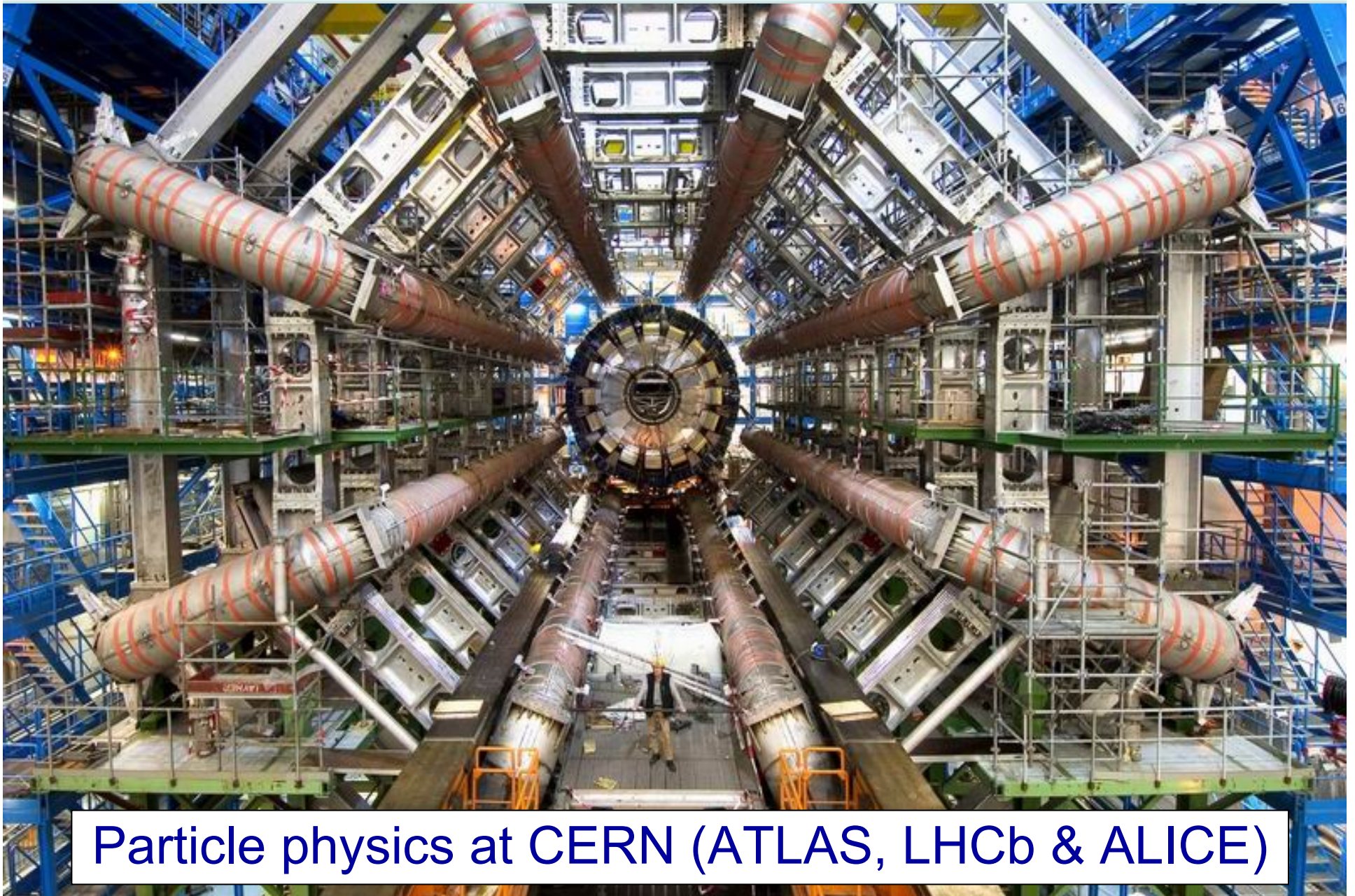


# FOM: introduction

- FOM was established in 1946
- Mission:
  - ▶ to perform and coordinate fundamental physics research
  - ▶ to generate new knowledge
  - ▶ to train PhD students and technicians
- for the benefit of Dutch society, and in particular higher education and industry
- FOM is combination of
  - organisation of research institutes
  - research council



**FOM: research**



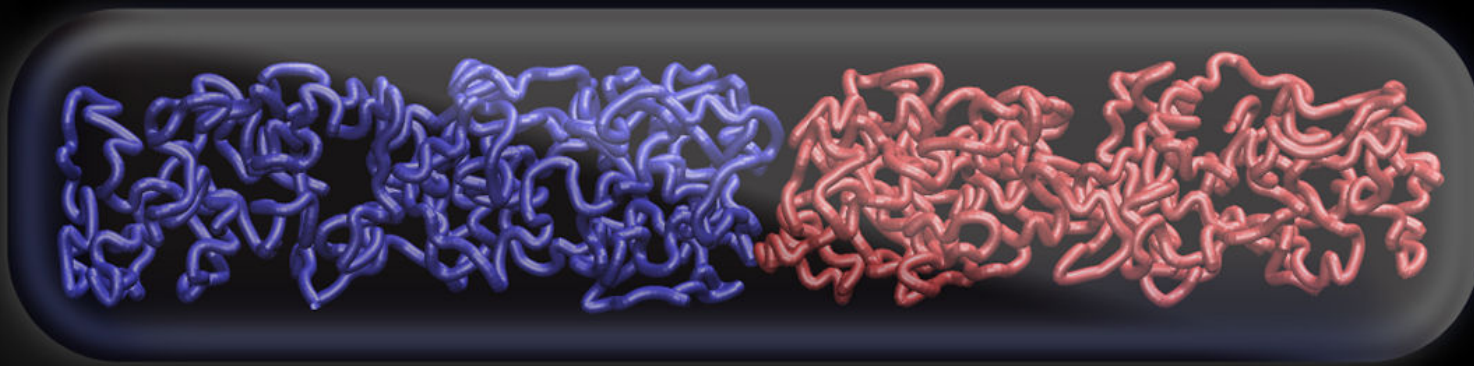
**Particle physics at CERN (ATLAS, LHCb & ALICE)**

**FOM: research**

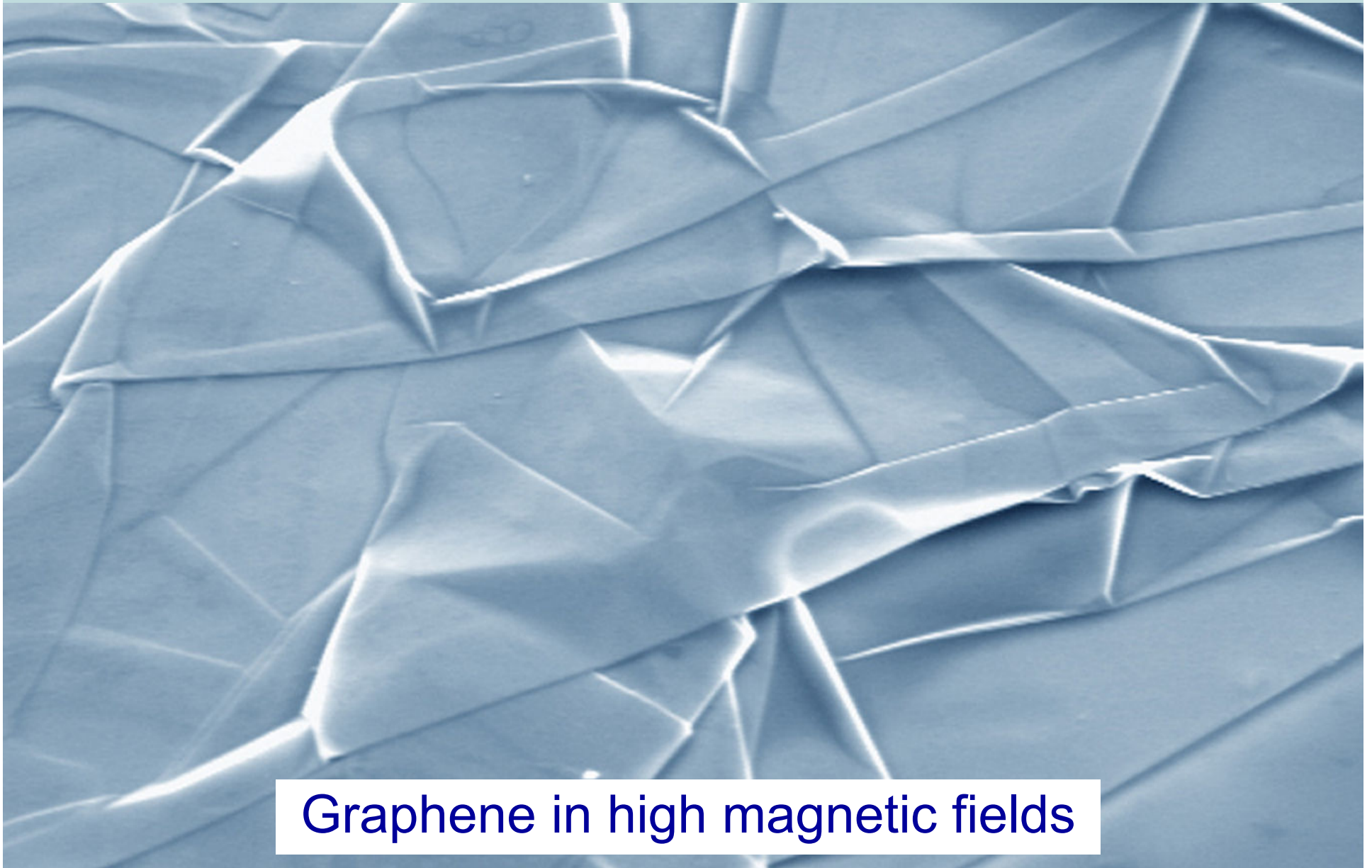


**Reflective mirrors for EUV radiation (wafer steppers)**

## Splitting up and separation of DNA in cells



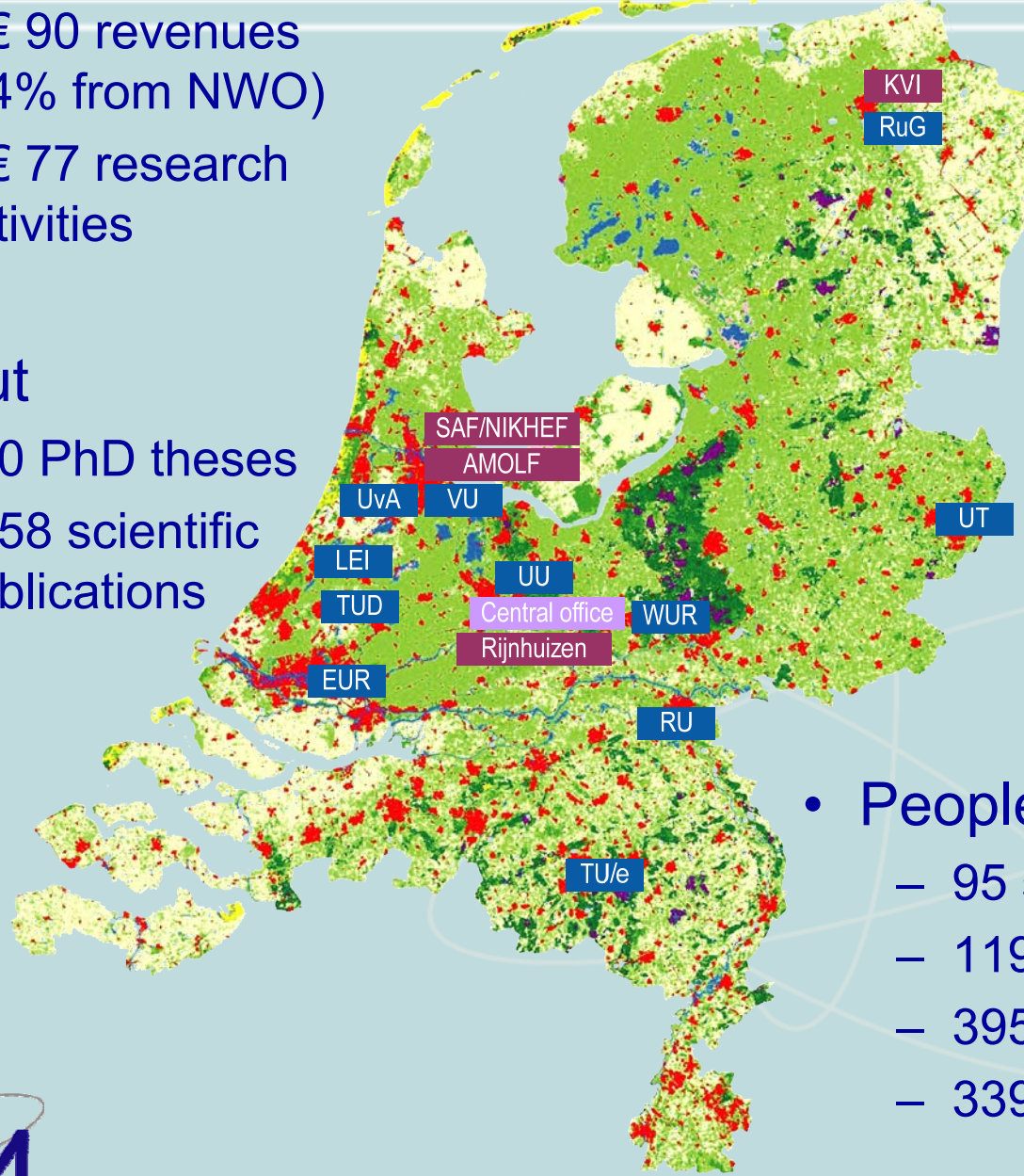
**FOM: research**



**Graphene in high magnetic fields**

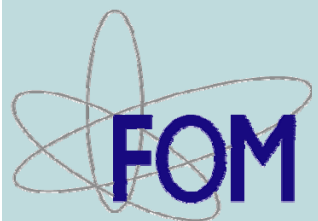
# FOM: characteristics 2006

- Budget
  - M€ 90 revenues (84% from NWO)
  - M€ 77 research activities
- Output
  - 100 PhD theses
  - 1158 scientific publications



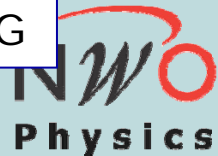
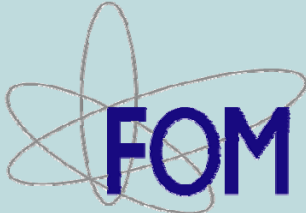
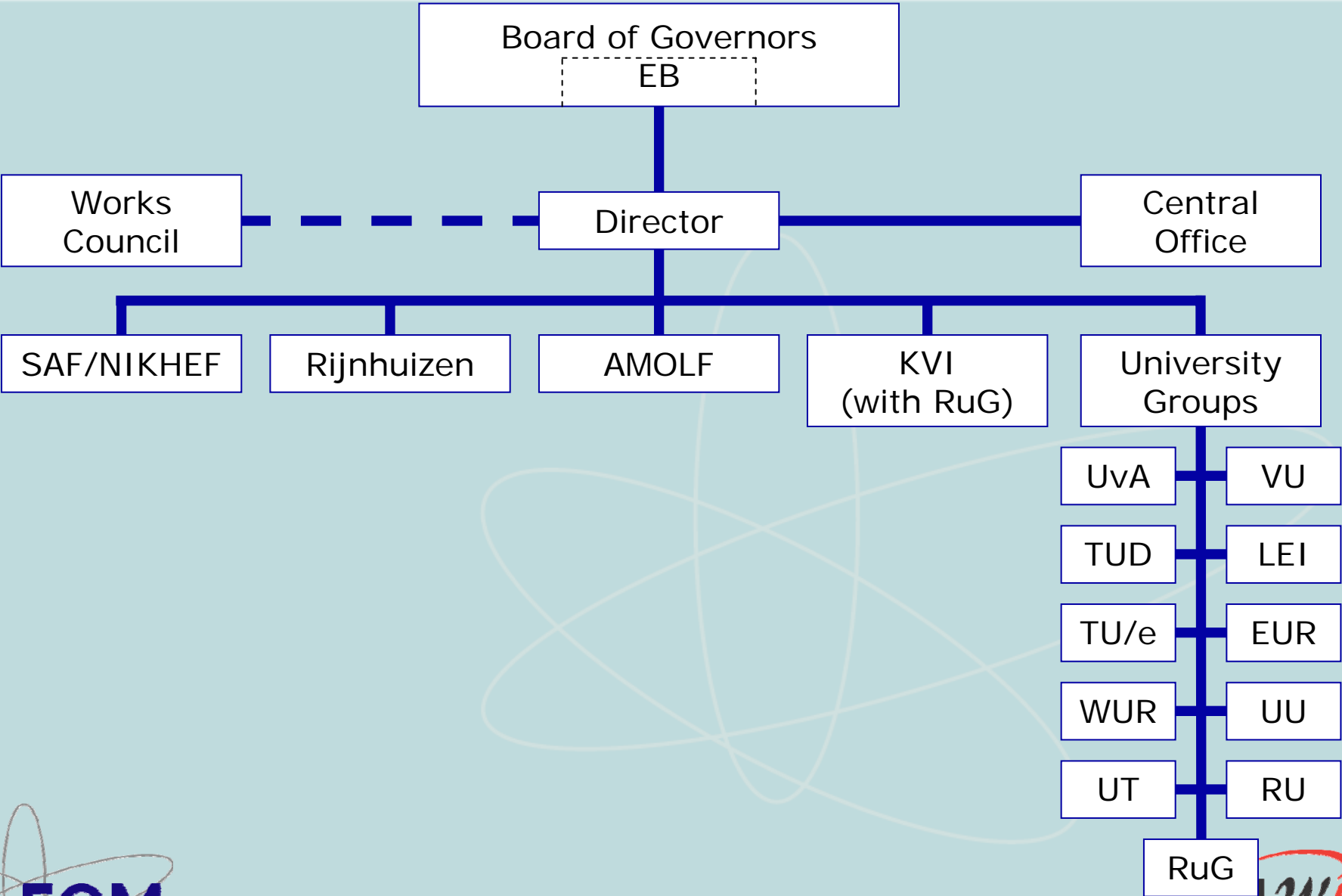
- Organisation
  - 4 institutes (531 FTE)
  - 173 research groups at universities (370 FTE)
  - central office (47 FTE)

- People (FTE)
  - 95 scientific staff
  - 119 postdocs
  - 395 PhD students
  - 339 support staff



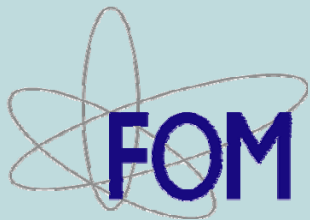
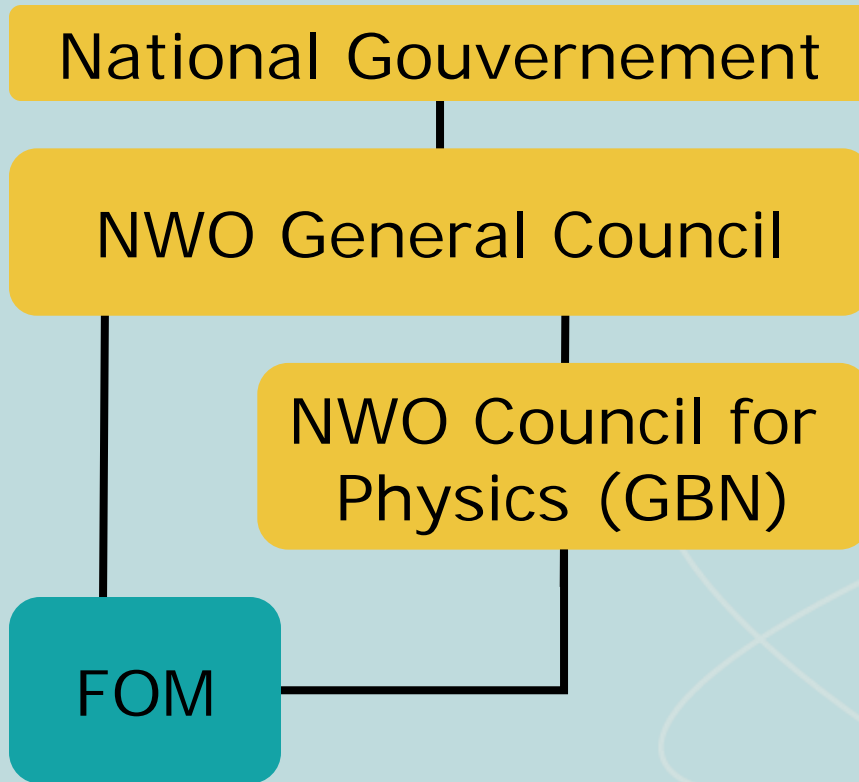


# FOM: organisational structure



## FOM: relation with NWO

- Agreement FOM-NWO (2003):
  - FOM is approved by NWO
  - FOM gets funds from NWO for institutes and for research grants
  - FOM integrates both funds
  - members Executive Board FOM and members NWO Council for Physics are identical
  - FOM is accountable to NWO

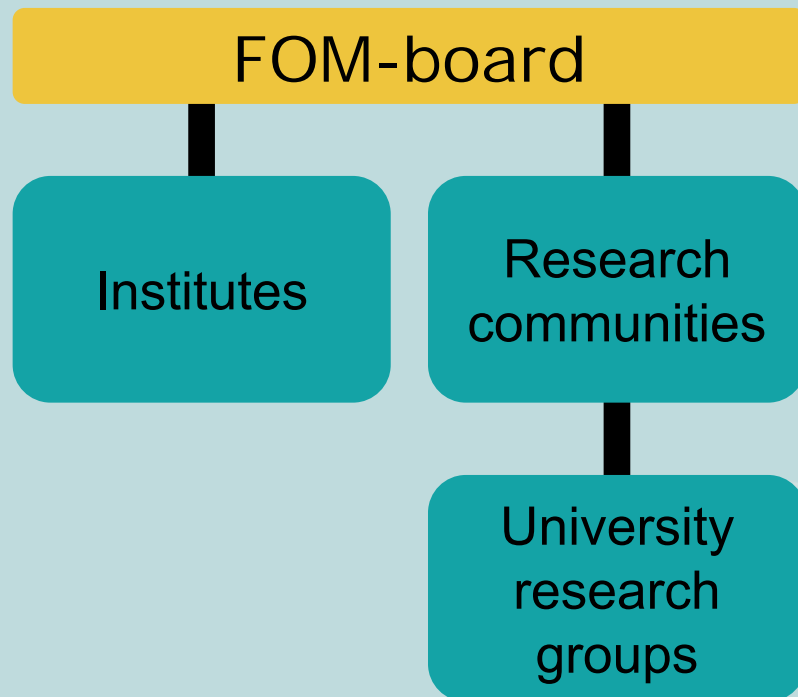


# Programme organisation: history

Three periods can be distinguished:

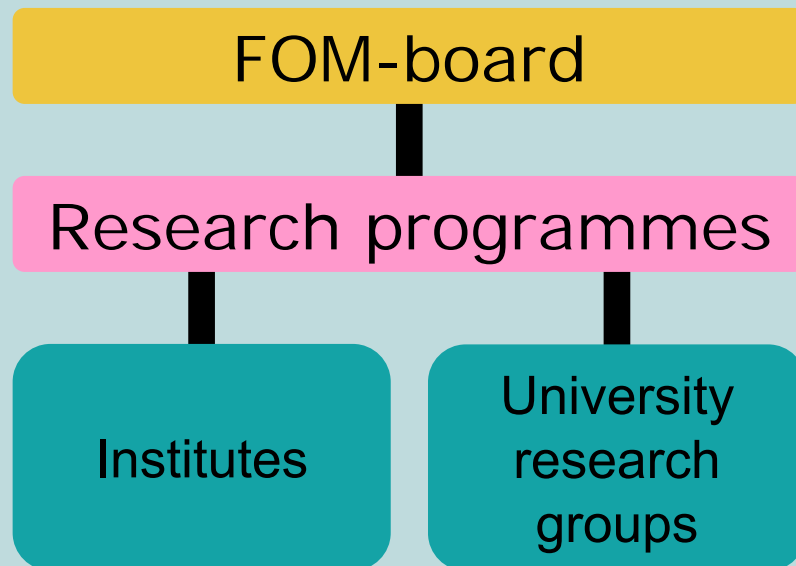
1. Institutional organisation: before 1998
  - budgets assigned to organisational units
2. Programme organisation: 1998-2004
  - budgets assigned to research programmes
  - organisational units financed by means of approved research programmes
3. Hybrid organisation: after 2004
  - FOM institutes receive mission budgets to finance the infrastructure
  - research is financed by means of approved research programmes

# Institutional organisation (<1998)



- Characteristics:
  - budgets assigned to institutes and research communities
  - each research community divides budget between participating university research groups

# Programme organisation (1998-2004)



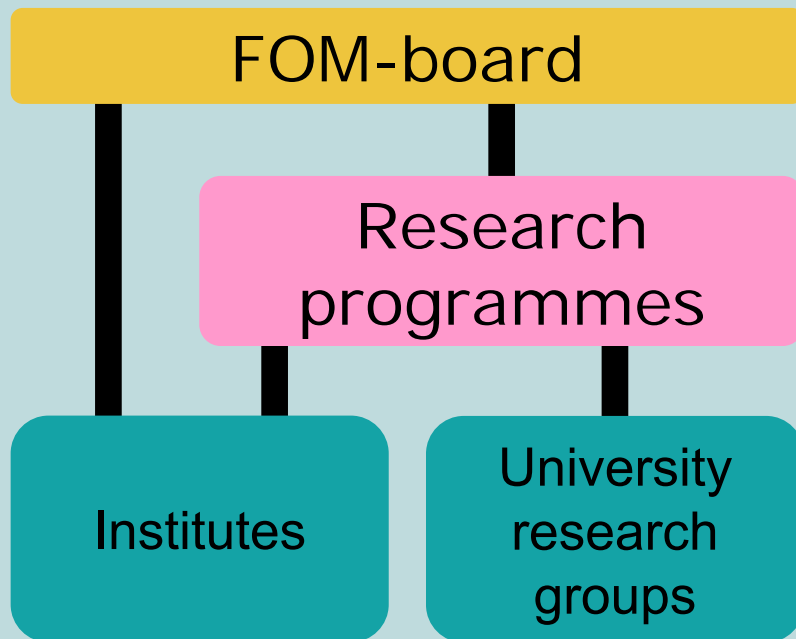
- Characteristics:

- budgets assigned to research programmes
  - ▶ budget: M€ 0.5 – M€ 84
  - ▶ duration: 5-19 years
- institutes and university groups financed by means of approved programmes
- institutes receive small discretionary budgets
- budgets programmes:
  - ▶ institutes: integral costing
  - ▶ university groups: marginal costing (universities have to provide infrastructure)

## Hybrid organisation (>2004)

- Characteristics:

- institutes receive mission budgets for infrastructure
- research at institutes and university groups financed by means of approved programmes
- budgets of programmes at institutes and at universities based upon marginal costs
- programmes are shorter (average 6 years) and smaller (average M€ 3) than in the programme organisation



# Programme organisation: comparison

Criterion	Institutional organisation	Programme organisation	Hybrid organisation
Continuity	++	-	+ (institutes) - (univ. groups)
Competition between institutes and university groups	-	+	+
Budget programmes at institutes and universities comparable	n/a	-	+
Openness to new research groups	-	+	+
Flexibility with respect to budget cuts	-	--	--
Evaluation burden researchers	+	-	-
Workload for central office	+	-	-

# Research policy: strategic plans

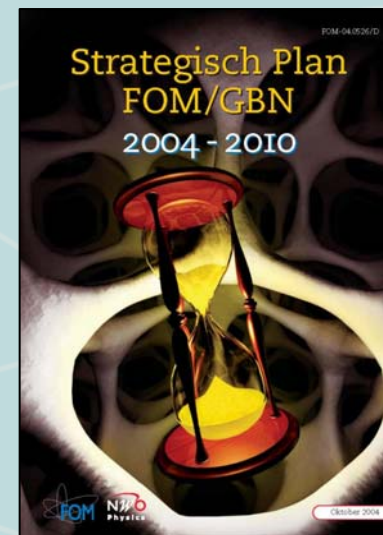
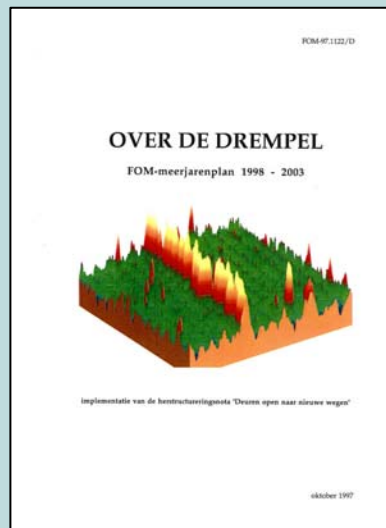
- Strategic plans:
  - 1991: FOM towards 2000
  - 1995: Physics for the future = a future for physics
  - 1998: Over the threshold
  - 2000: Research policy FOM 2001→2006
  - 2004: Strategic plan FOM/GBN 2004 → 2010





# Research policy: implementation

- Implementation Strategic Plan:
  - Institutional organisation: organizational measures
  - Programme organisation: new research programmes
  - Hybrid organisation: organizational measures and new research programmes



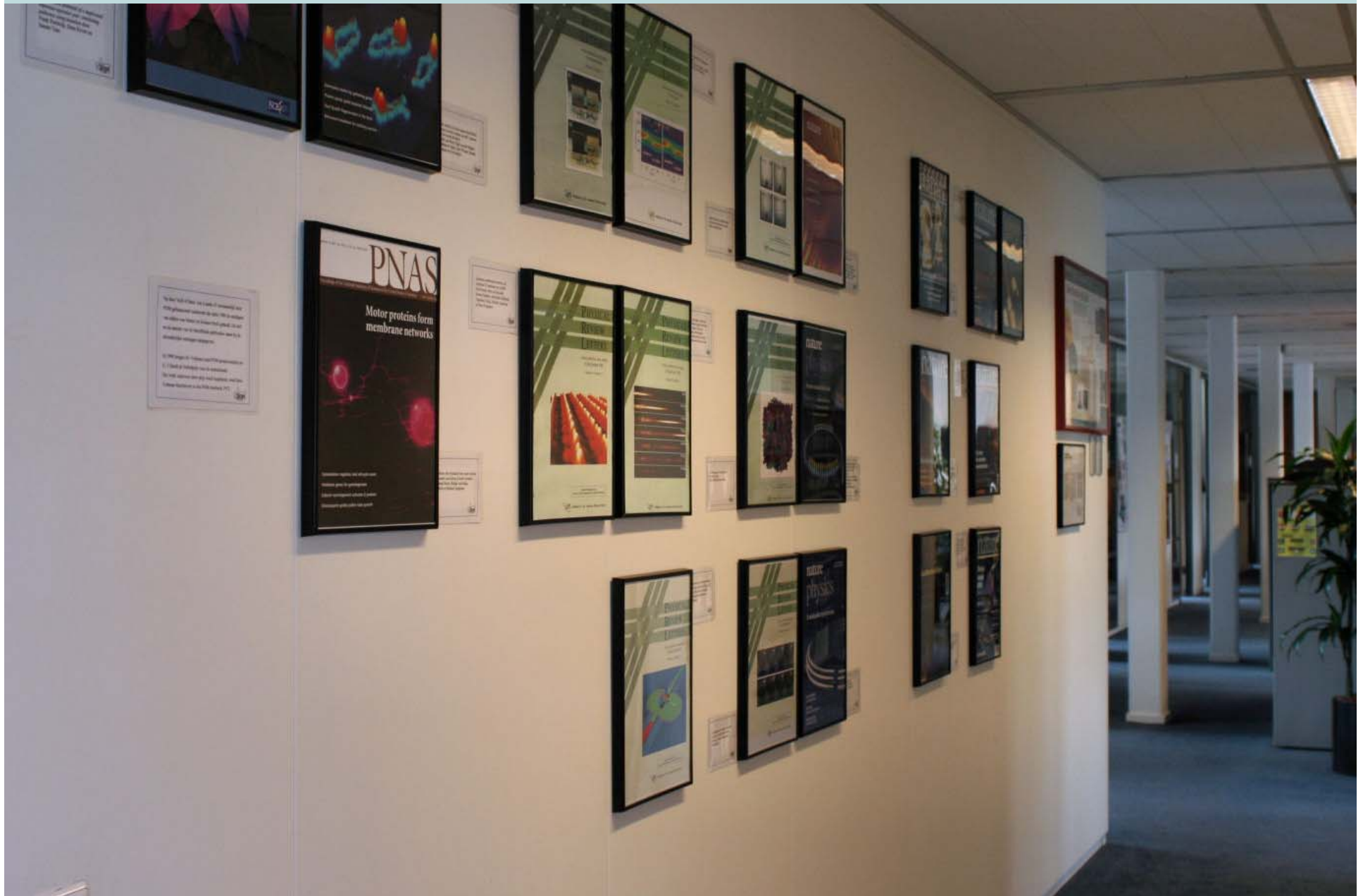
## Indicators: standard

- Indicators for NWO:
  - Input:
    - ▶ number of scientific personnel (permanent and temporary)
    - ▶ total expenses for each organisational unit
  - Output:
    - ▶ PhD theses
    - ▶ publications
- Indicators in Yearbook FOM

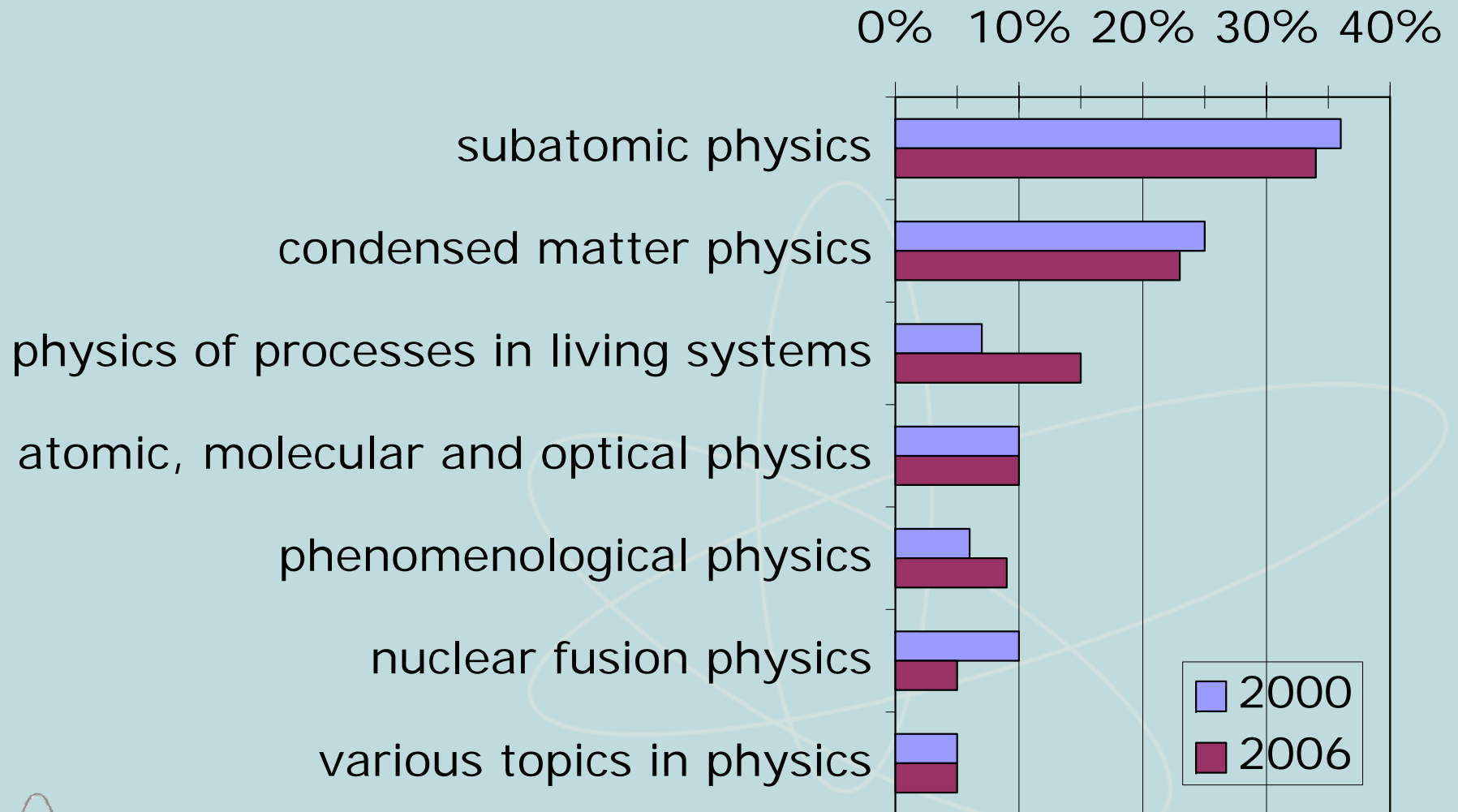


# Indicators: promo meter

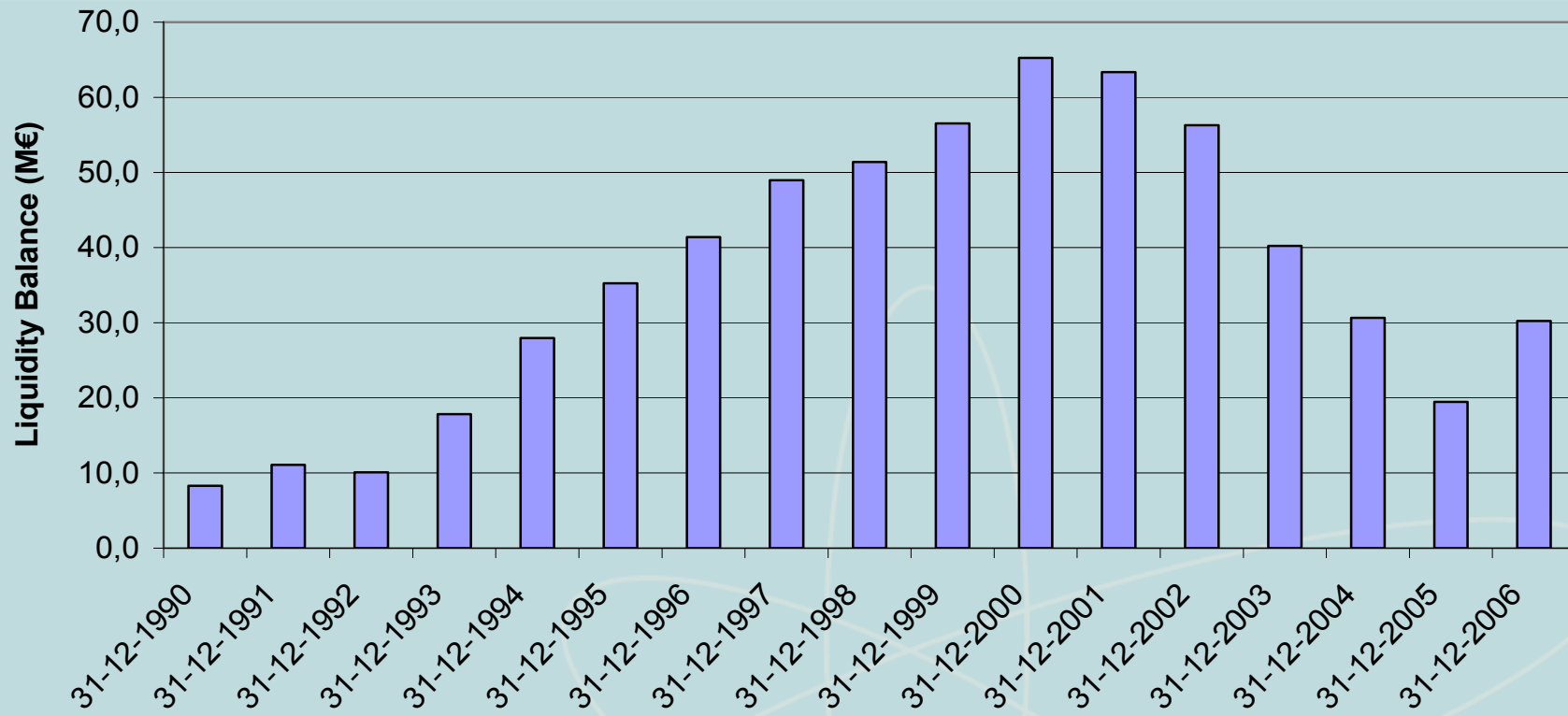
# Indicators: wall of fame



# Indicators: programme shares physics subfields

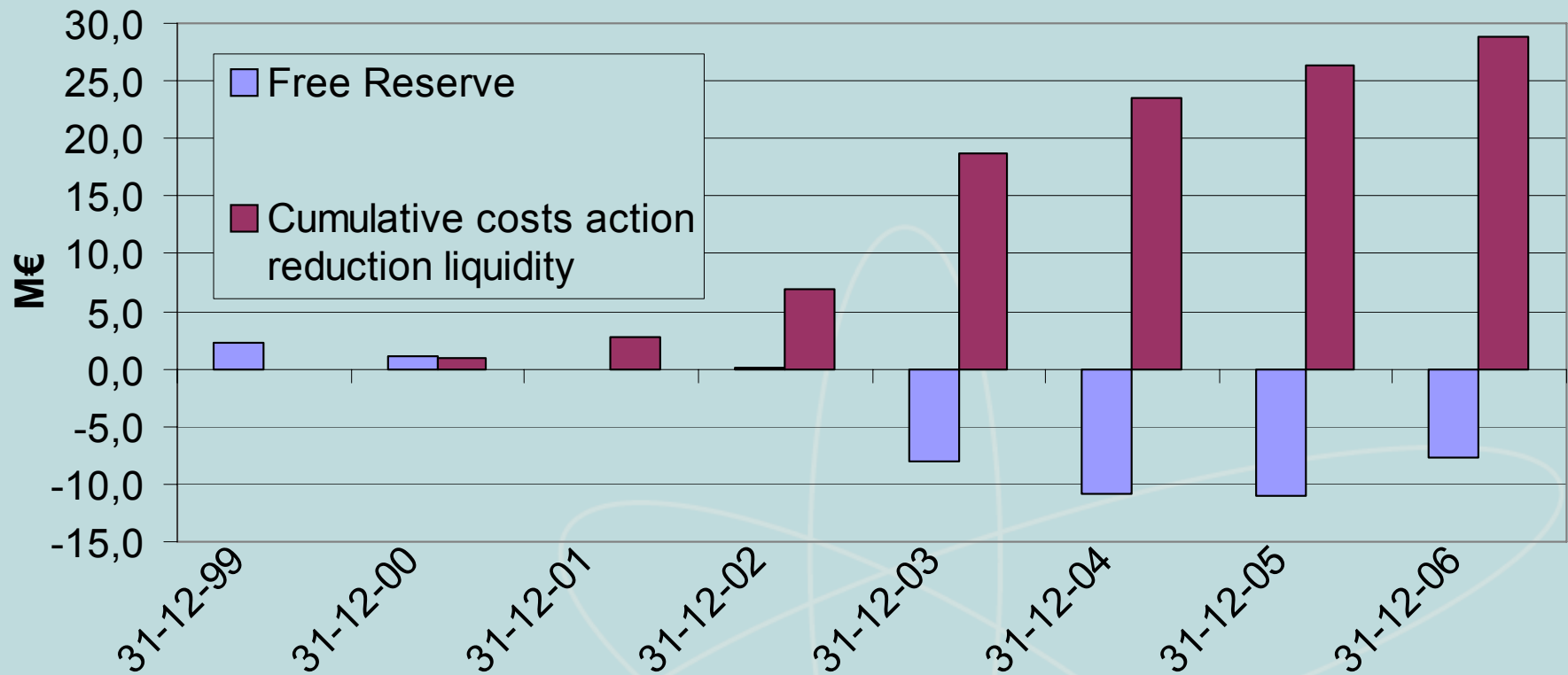


## Indicators: cash position



- Transformation to programme organisation leads to increase of liquidity balance:
  - it takes time to start up research programmes
  - insecurity leads to ‘saving behaviour’
- 2000: special action to reduce liquidity position

## Indicators: free reserve



- Strict policy to add all unexpected profits to the free reserve is successful

# Accountability

- FOM follows the Dutch guidelines for non-profit organisations
- Executive Board: no need for further improvement
- Director: worried about work load board members
- Personal issues:
  - to create a financial committee
  - to improve the financial evaluation of research proposals
  - to relate costs to the progress of a research programme



## Conclusions

- The hybrid organisation is the most appropriate for FOM
- The liquidity balance and the free reserve are currently the main indicators for FOM
- Personal accountability challenge: to increase the involvement of the FOM-board in financial issues

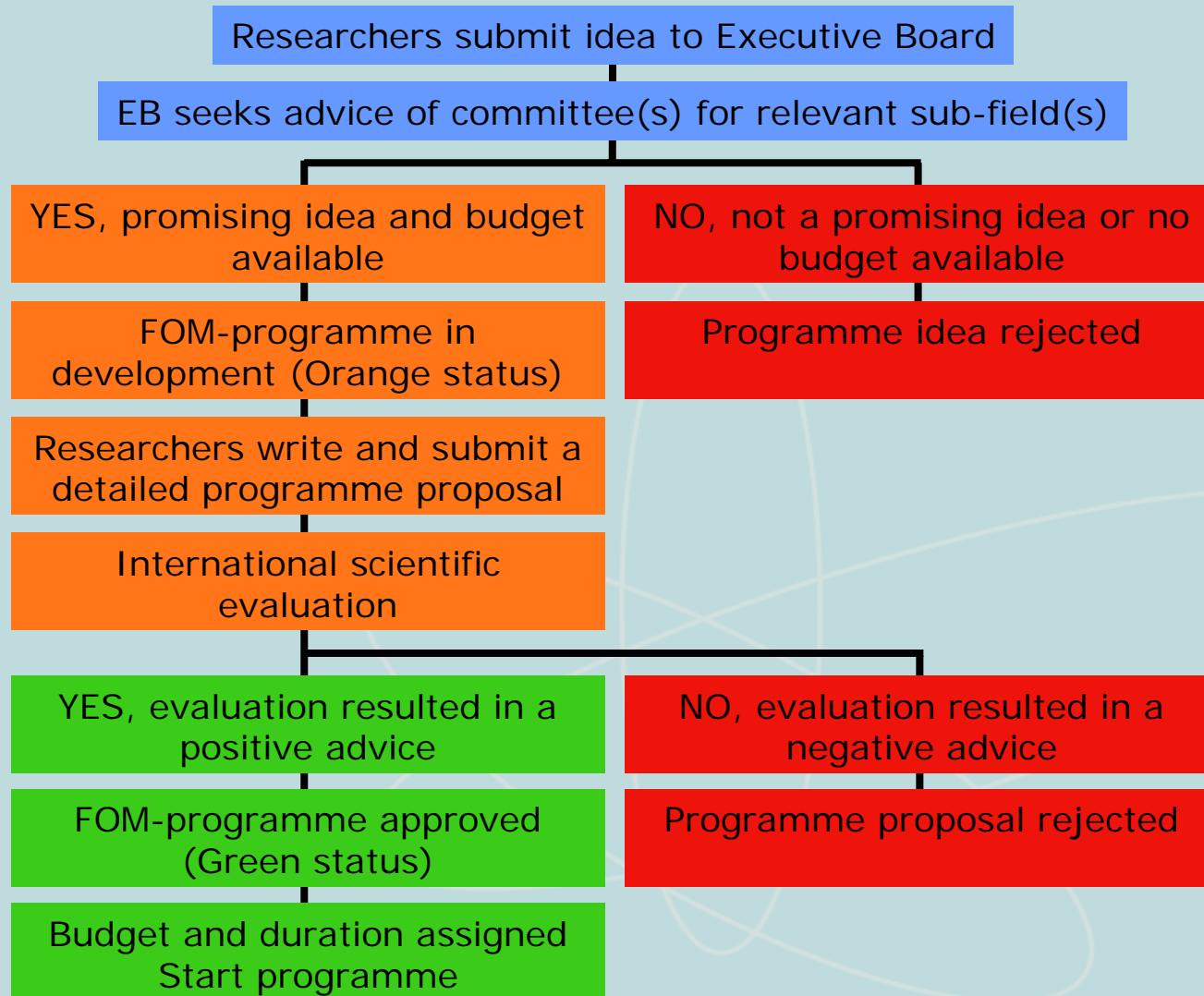
## Extra's: institutional → programme organisation

- From institutional to programme organisation (1997-1998):
  - ongoing research at institutes and in research communities is converted into research programmes
  - central budget for new research programmes is created at the expense of the budgets of the institutes and research communities
  - institutes and research communities receive small discretionary budgets
  - integral costing is introduced at the institutes
- 2000: introduction accounting by programme (over 1999)
- 2001: research communities converted into advisory committees to the Executive Board and their discretionary budgets abolished

## Extra's: programme → hybrid organisation

- From programme to hybrid organisation (2004-2005):
  - budgets of research programmes at the institutes are adjusted from integral costing to marginal costing
  - basic budgets of the institutes are determined based upon current infrastructural costs of the institutes (permanent personnel, workshops, housing)

# Extra's: evaluation programme proposal



# Extra's: evaluation criteria programme proposal

- Scientific criteria:
  - scientific quality proposed research
  - quality research group(s) involved
  - research method
  - availability required infrastructure
  - adequacy requested budget
- Programmatic criteria (new in 2007):
  - adequacy scale (critical mass)
  - focus and cohesion
  - added value programmatic cooperation
  - programme management
- Politico-scientific criteria:
  - contribution to policy objectives
  - architecture research landscape

# Extra's: budgets hybrid organisation (2007)

