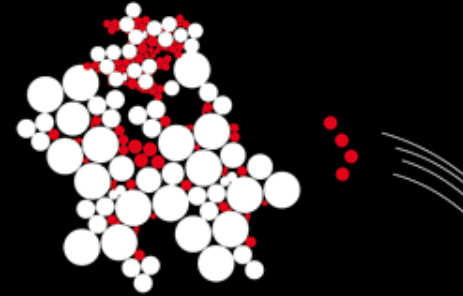


# Higher Education Financing

## Trends and simulating internal allocation



Workshop for Nazarbayev University leaders  
Astana, Kazakhstan  
9 September 2016

Hans Vossensteyn



# HANS VOSSENSTEYN

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- Professor / programme leader at MBA Higher Education and Science Management, University of Applied Sciences Osnabrück, Germany
- Board member and Professor in Erasmus Mundus programme:

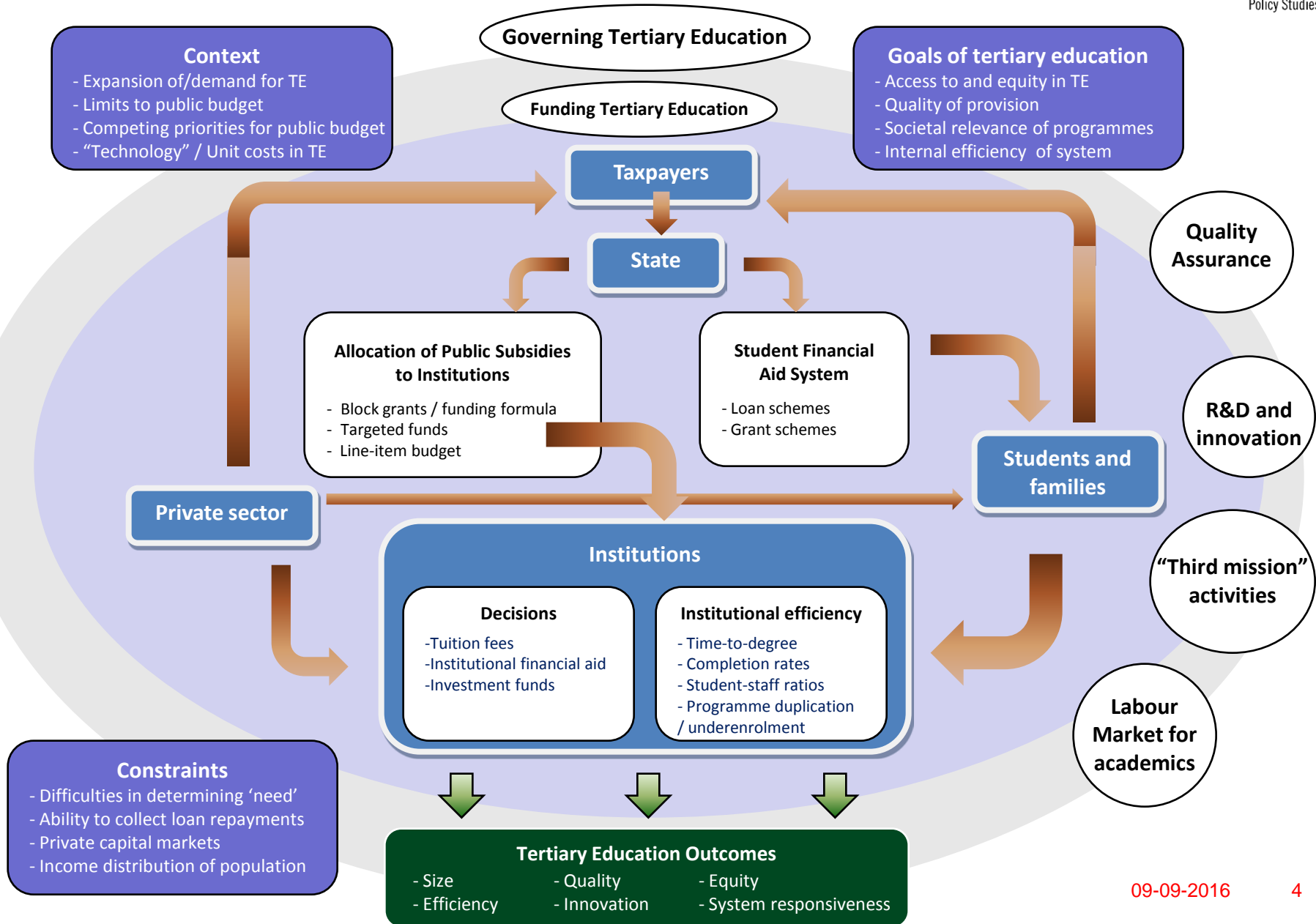


# OUTLINE

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- International trends in HE financing:
  - EU expectations
  - Performance orientation: PBF and performance agreements
  
- Internal resource allocation
  - Financial management in universities
  - Assignment: develop a internal allocation model for Central Valley University in Isaura, Imaginalia

# Framework to analyse HE financing



# INTERNATIONAL DEVELOPMENTS

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- Towards performance based funding and performance contracts/agreements

# EUROPEAN AMBITIONS AND DEVELOPMENTS IN HE FINANCING

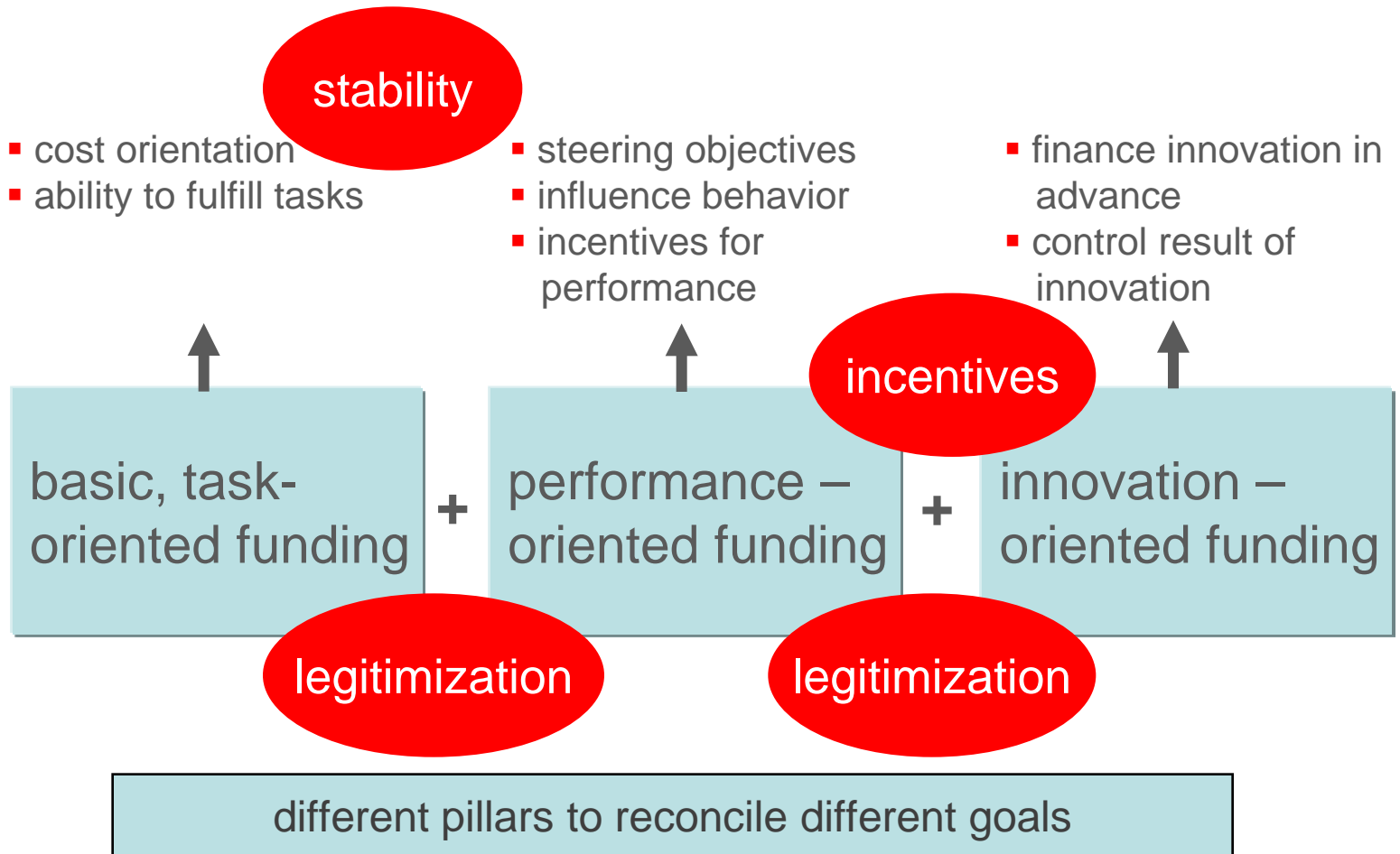
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## **Europe's Modernisation Agenda for HE (2006 & 2011): Funding**

1. Ensure financial autonomy for HEIs
2. Encourage partnerships with business
3. Spend 2% of GDP on higher education to reduce the funding gap
4. Raise student fees and revise student support towards loans
5. Base funding more on outputs (performance) than on inputs
6. Examine the balance of core, competitive and outcome-based funding
7. Ensure portability of student support



# THE 3-PILLAR MODEL

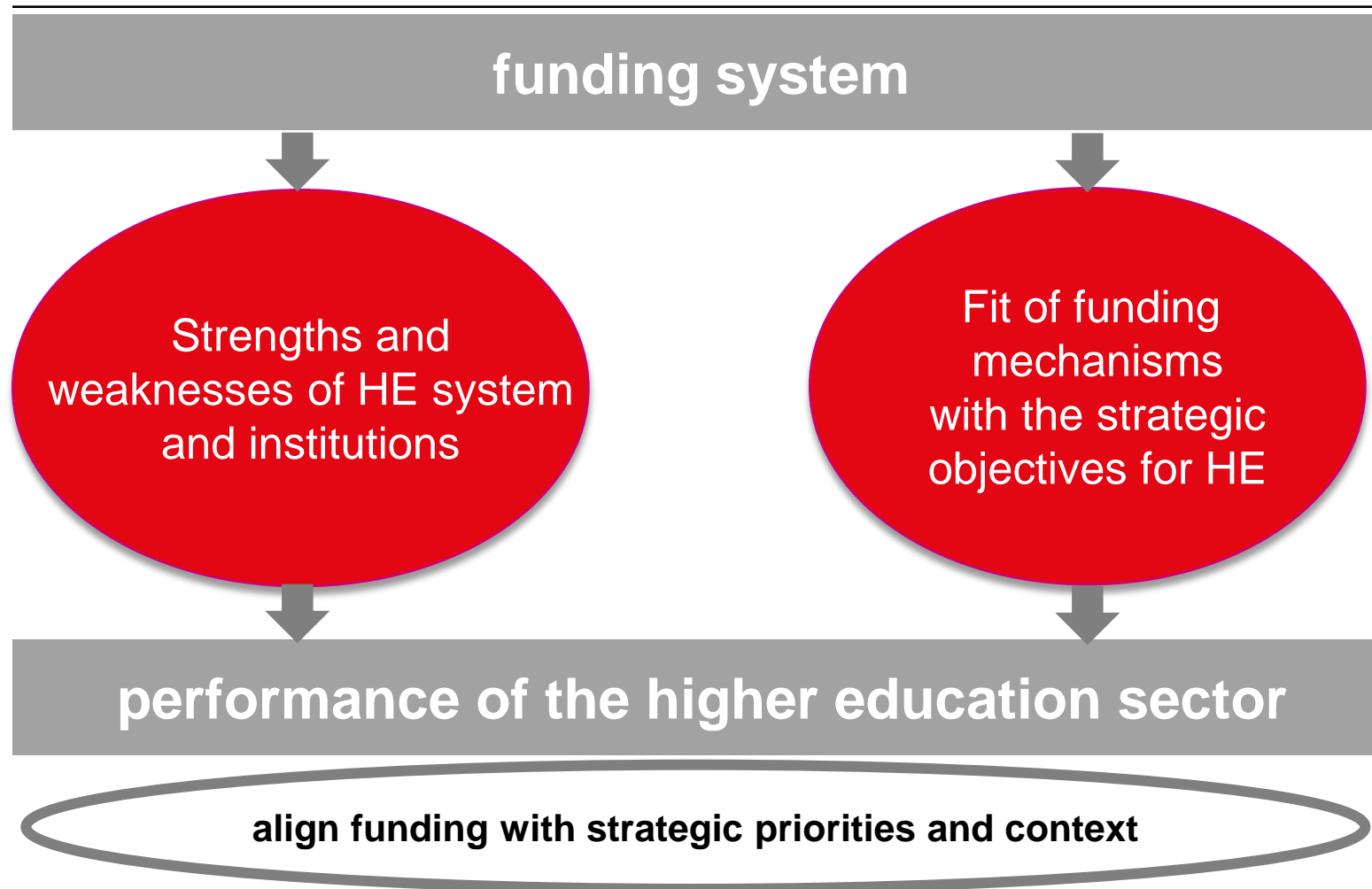


# INSTRUMENTS MAKE THE DIFFERENCE

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- Rationale behind differences in instruments:
  - priorities for objectives (e.g. incentives vs. stability)
  - cultural differences (e.g. market stimulation vs. negotiation)
  
- Major instruments for allocation:
  - formula – contract – lump-sum

# INSTRUMENTS MAKE THE DIFFERENCE



# AIMS of PERFORMANCE FUNDING and CONTRACTS

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- to encourage HEIs to strategically position themselves
- to improve the core activities – higher quality, securing minimum standards (weeding out underperformers)
- the pursuit of efficiency
- to align national and institutional policies and activities (institutions contributing to the national agenda)
- to be an accountability and transparency tool (informing policy makers and the public at large)
  
- *Aims are likely to have an impact on the design and implementation*
- *Multiple aims will complicate the design, implementation and evaluation (effectiveness)*

# EUROPEAN EXAMPLES: Performance orientation in formula funding

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1. DK: about one third of funding according to passed exams
2. NL: 30% of teaching part based on performances
3. Norway: 60% fixed, 25% credits + graduates, 15% Ph.D. capacity building + publications (publications: 50 Mio € distributed); calculation of “publication points” (weights per quality level and publication form)
4. Germany: size of the performance component less relevant; effect through transparency – dialogue – benchmarking induced by formula

# INTERNATIONAL COMPARATIVE STUDY: PBF / PA IN 14 HE SYSTEMS

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- Australia: Mission-based compacts (2011)
- Austria: Ziel- und Leistungsvereinbarungen (2002)
- Denmark: University Development Contracts (2007)
- Finland: Performance Contracts (1994)
- Germany: Ziel- und Leistungsvereinbarungen (NRW, Thüringen, late 1990s)
- Hong Kong: Performance and Role-related Funding Scheme (2005)
- Ireland: Structural system change (2012); Institutional Profiles
- Netherlands: Performance Contracts (2012)
- UK: Scotland: Outcome Agreements (2012);  
England: Research Evaluation Framework (2014) (replacing the RAE)
- United States: Louisiana, South Carolina, Tennessee: PBF (late 1970s)

See: <http://doc.utwente.nl/93619/>

## OBSERVATIONS: GREAT VARIETY IN FEATURES

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- **Time span:** PBF and PA vary from two-year to six-year contracts
- **Experience:** from the early 1980s (USA) and 1990s (Finland, Germany) to the present (Ireland, Scotland, the Netherlands)
- **Content and Comprehensiveness:** kind and number of topics addressed
- **Rewarding:** penalise under- and reward good performance
- **Level of detail:** (mainly broad) intentions or specifying activities / performance in detail
- **Size and balance:** % of funding; input-based and output-based funding
- **Number and weights of performance indicators used**
- **Orientation:** apply to the whole sector or differ from one institution to the other
- **Institutional contribution:** fixed set of targets and indicators for all or institutions picking targets and indicators (e.g. from a given set: 'menu-approach')
- **Stakeholder involvement:** developing templates and guidelines, priority setting, drafting contracts, data processing, reporting, evaluation of outcomes vary

# FINANCIAL IMPACT

	Share of Performance-based budget in total recurrent funding	Performance Agreement (PA) in place with direct impact on an institution's budget allocation?
Netherlands	27% - 32%	Yes
Austria	Almost 100%	Yes
Australia	20%	No (PA is condition for funding)
Denmark	60%	No
England	50%	No
Finland	75% - 100%	Yes
Hong Kong	23%	Yes
Ireland	0,8% (now) – 10% (future)	Yes
North-Rhine Westphalia	23%	Yes
Louisiana (USA)	25%	No
Scotland	85%	Yes
Tennessee (USA)	100%	No
Thuringia (Germany)	55%	Yes

# OBSERVATION: GREAT DIVERSITY IN INDICATORS

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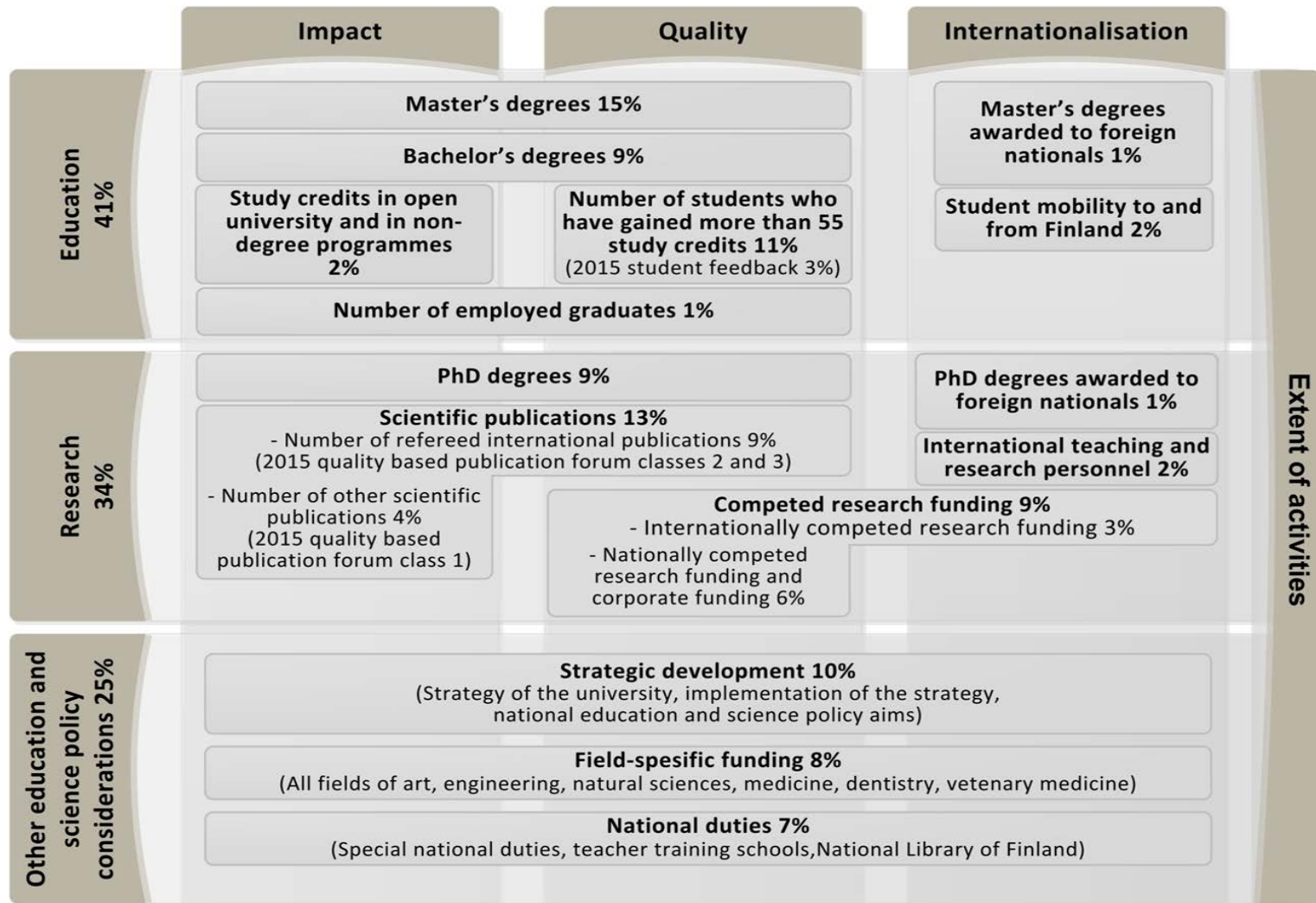
- Core indicators
  - # graduates / degrees (A, FI, NL, NRW, Th, Ten, ...)
  - # credits passed (A, DK, FI, Ten, Lui, SC, ...)
  - Underrepresented students (AU, IRL, Th, Ten, ..)
  - Duration of studies (A, DK, NL, Ten, ...)
  - # PhDs (AU, DK, FI, NL, Th, ...)
  - Research productivity (AU, DK, FI, UK, ...)
  - Research Council contracts (AU, FI, HK, IRL, Scotl, Ten, ...)
  - External income (A, AU, DK, FI, NRW, Th, HK, Scotl, ...)

# OBSERVATION: GREAT DIVERSITY IN INDICATORS

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- Less frequently used indicators
  - Knowledge transfer (A, AU, Scotl., ...)
  - Internationalization (FI, Ten, ...)
  - Student satisfaction (FI, Ten., NL, ...)
  - Graduate employment (FI, )
  - Research quality (HK, Engl., Scotl, ... )
  - ...

# EXAMPLE: The Finnish university funding model



# DUTCH PERFORMANCE AGREEMENTS

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- 7% of teaching budget (up to €310 mln. in 2015) assigned to 'quality and profile'
- 5% Education quality and Study success
- 2% Selective budget for profiling and concentration
- Review Committee assesses results in 2016



# DUTCH PERFORMANCE AGREEMENTS

Seven indicators in three categories:

## 1. Performances

- Dropout (1<sup>st</sup> yr), Switch, BA success rate (after 4 years)

## 2. Quality & excellence

- National Student Survey assessments, **OR**
- Students in programs with NVAO score Good / Excellent, **OR**
- Students in Excellence trajectories (e.g. honours, University Colleges)

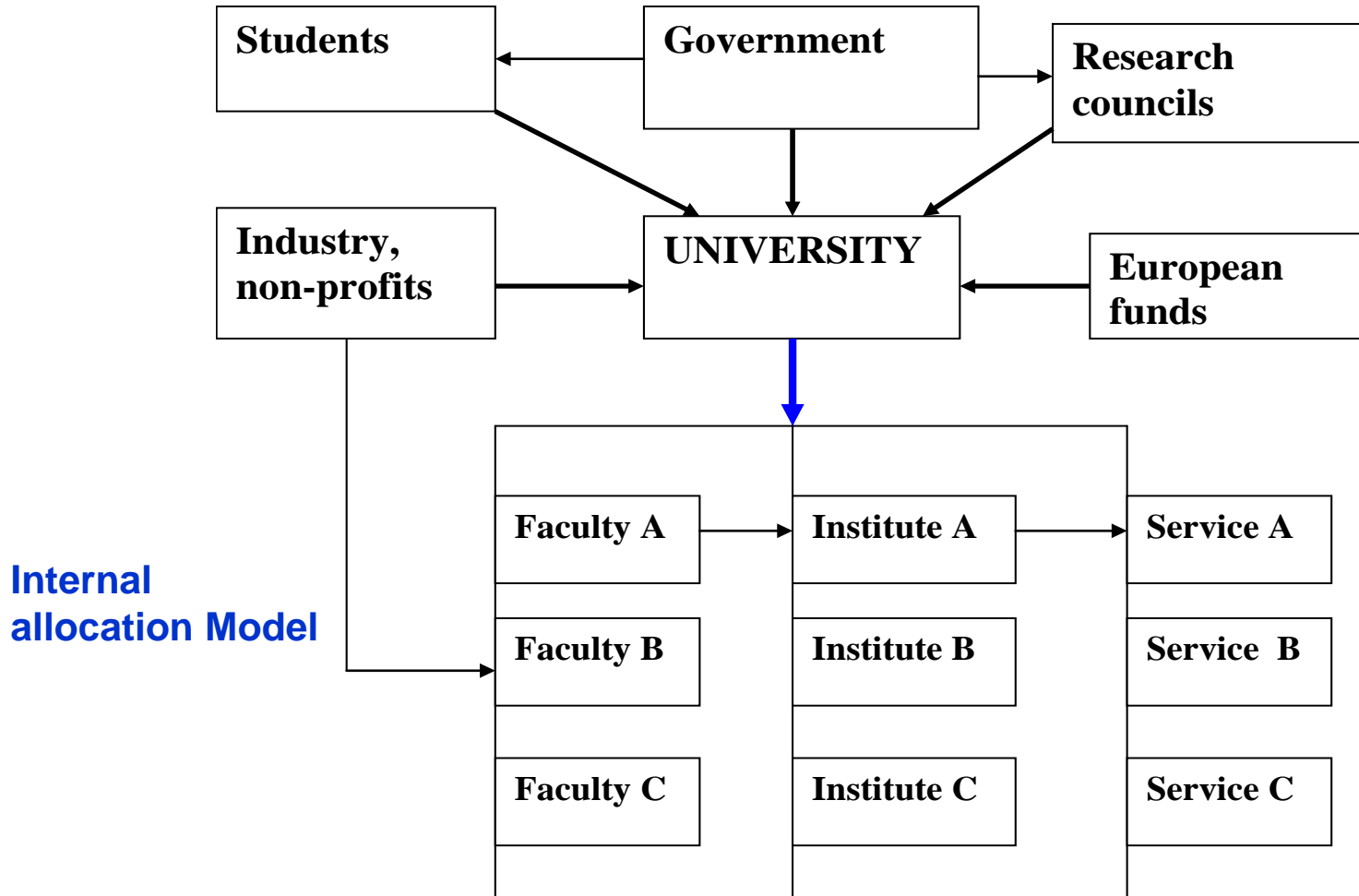
## 3. Actions / Action lines

- Education intensity (teaching hours), Teacher quality (# of certified teachers), Overheads
- Institutions allowed to use alternatives for the 7 indicators and invited to present additional indicators / information for research, valorisation, internationalisation, entrepreneurship education, etc.

# INTERNAL RESOURCE ALLOCATION

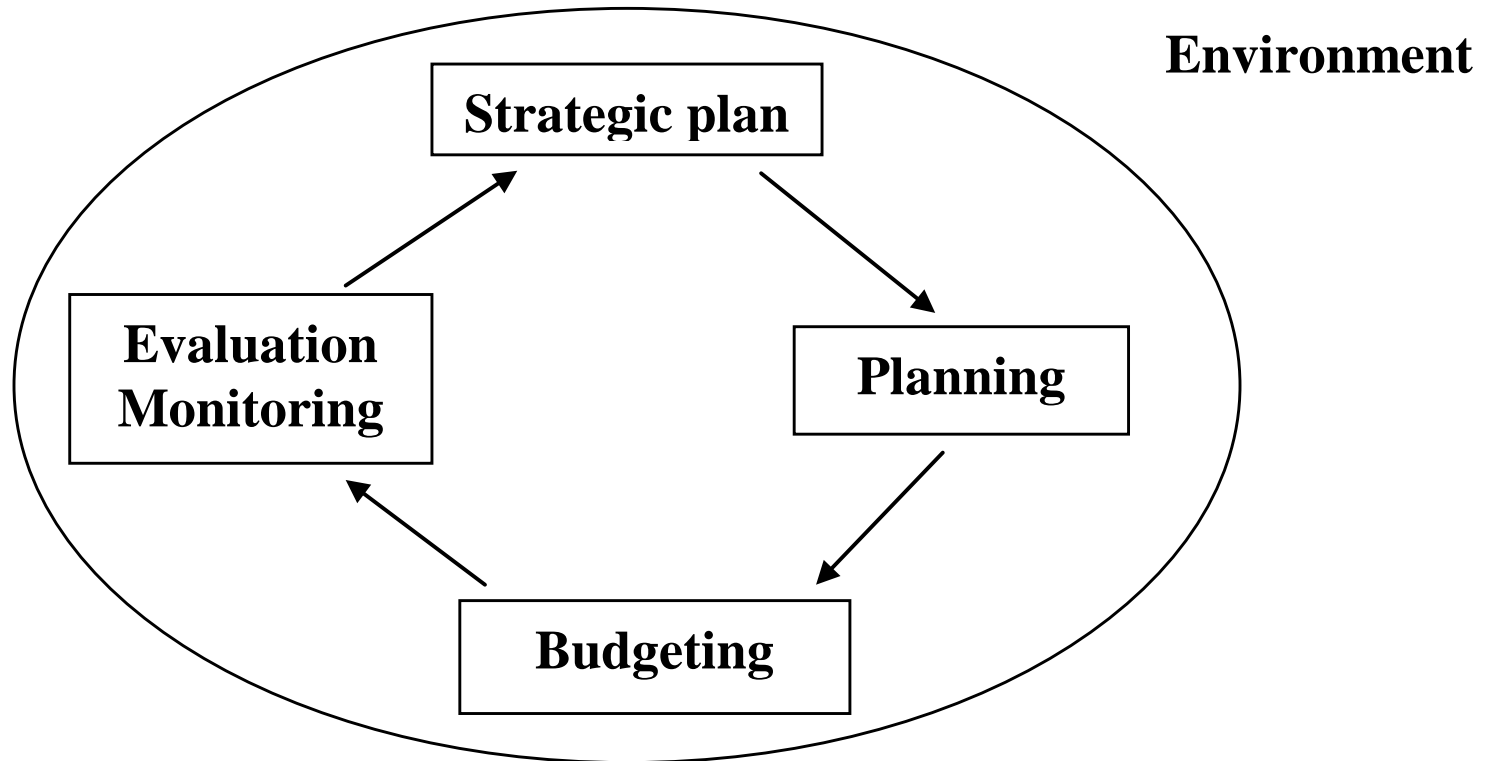
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# INTERNAL RESOURCE ALLOCATION



# STEERING WITH BUDGETS PLANNING & CONTROL CYCLE

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# INTERNAL RESOURCE ALLOCATION

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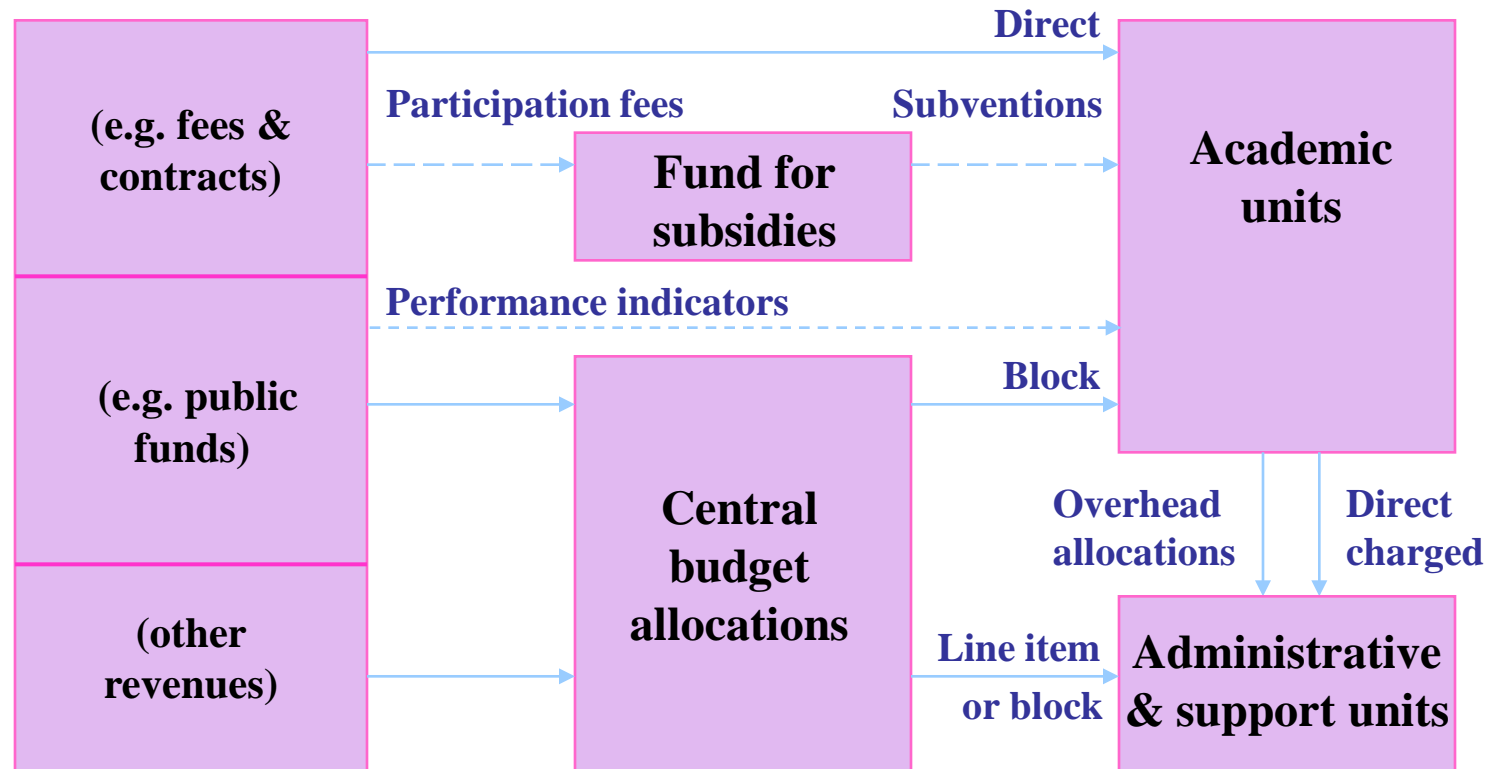
- Method for distributing limited resources among competing objectives
- Distributes resources across academic departments and support units
- Reflects choices made and incentives used
- Partly reflects incentives incorporated in national model (funding bases, tariffs, etc.)
- Integrates other sources of revenues (research councils, specific funds, earned income)
  
- Resources are:
  - Money and budget... but also
  - People, space, equipment ...

## DIFFERENT BUDGETARY UNITS

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- **Operational units** (academic departments): perform core activities (teaching, research, services to community)
- **Support units** (library, computer center, internationalisation office, etc): offer services to operational units or other support units
- **Central level** (University leadership) responsible for combined operation of all units

# DIFFERENT BUDGETARY UNITS



# Assignment

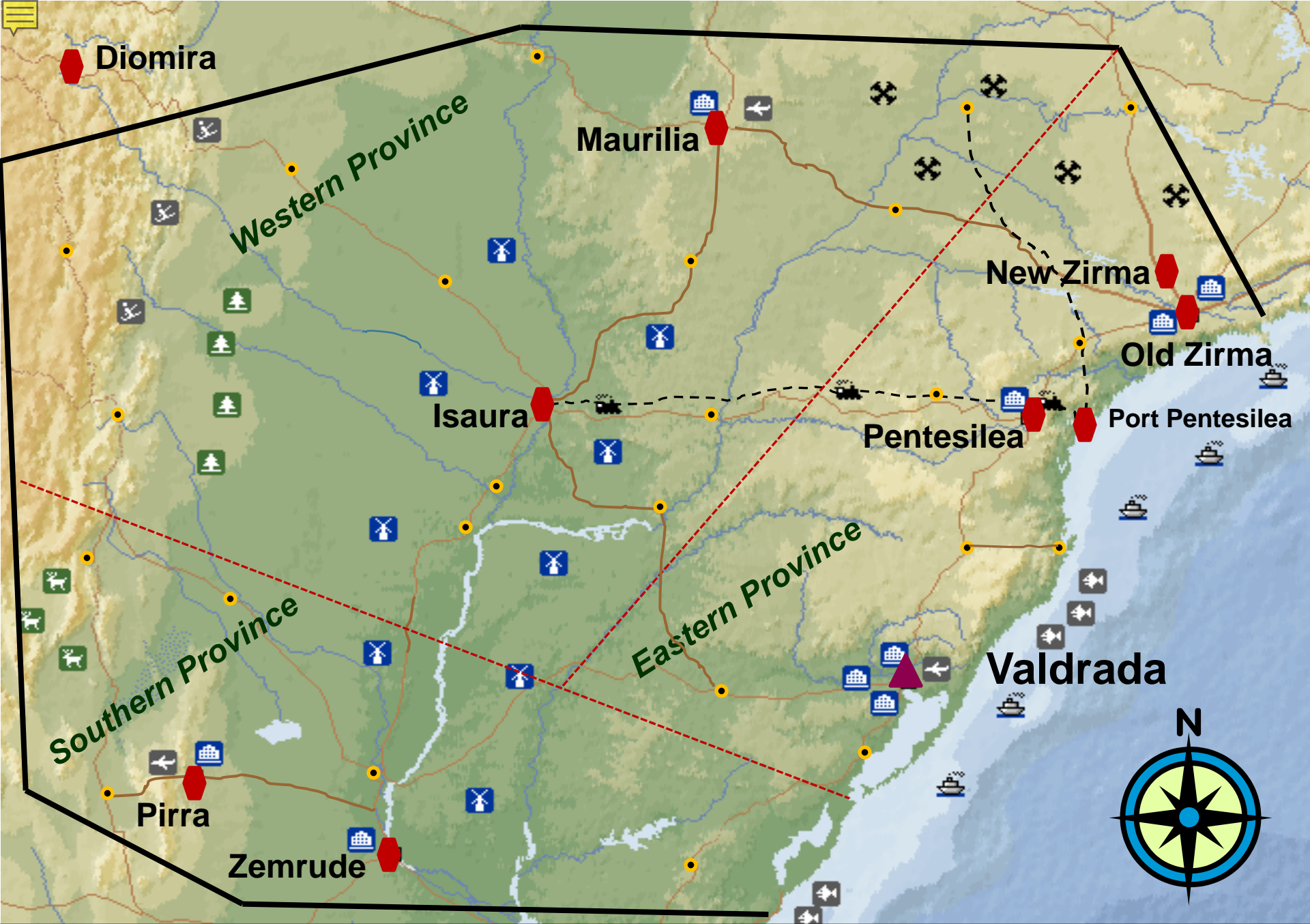
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**We have now left Nazarbayev University and will develop an internal allocation model for an entrepreneurial university in an imaginative tertiary education system!**



Welcome to *Imaginalia*

(please drive safely)



# Imaginalia

## Country Note

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- ❑ 90.253 sq km (1/30 of KZ), 3 million inhabitants, 80% in urban areas
- ❑ A democratic Republic
- ❑ Good economy, fertile land (in Central Valley), Mining, tourism, transport network, GDP/capita €25,000
- ❑ 25% of 17-25 yrs old enrolled in HE
- ❑ 2 other universities; traditional Aristotle University and Politechnic University (merged out of 4 colleges); in total 47.000 students
- ❑ 22 colleges (25.000 students)
- ❑ Entrepreneurial business environment interested in applied research and consultancy to stimulate international economic competitiveness



# Central Valley University

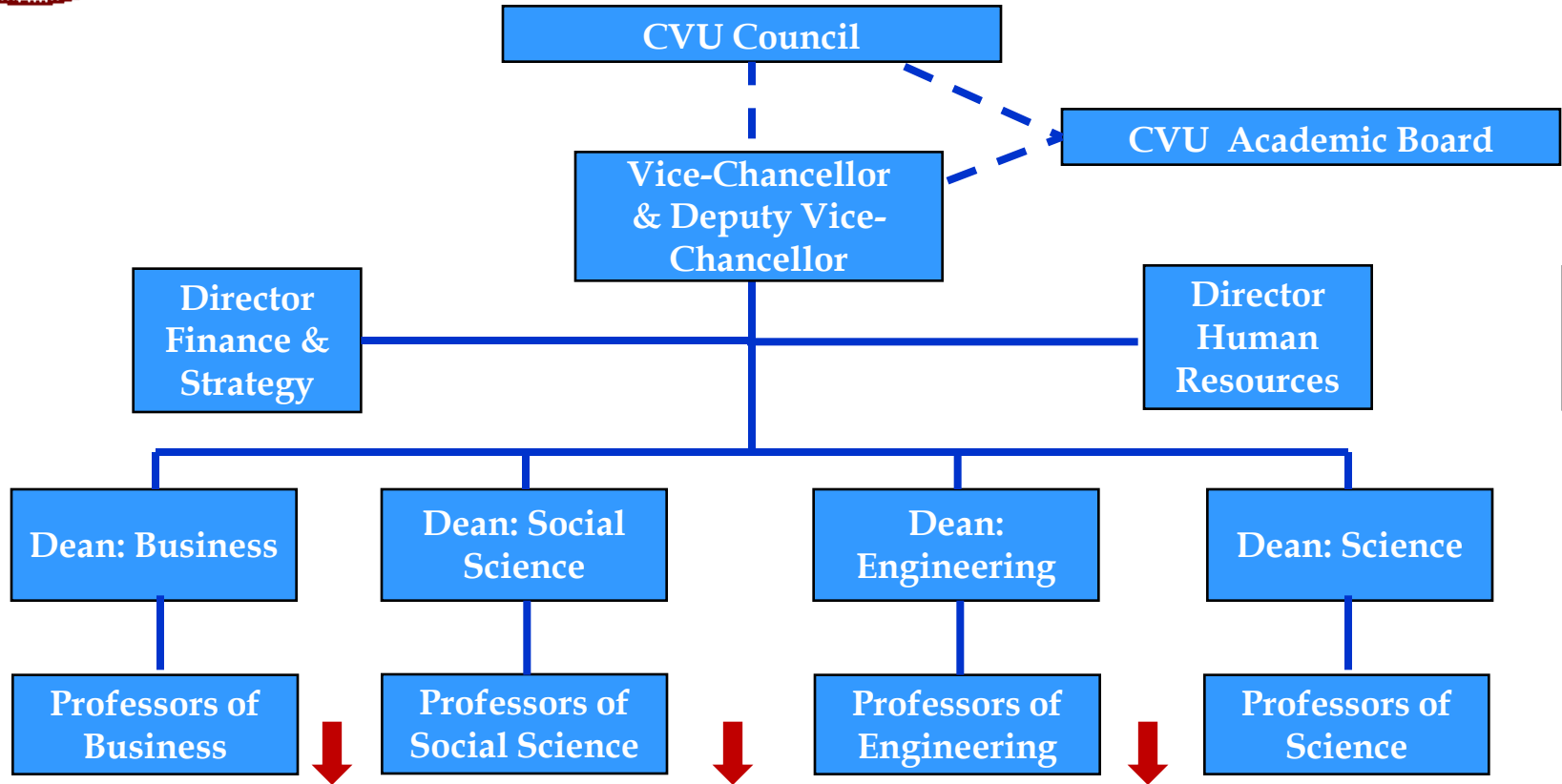
Established 1970 in Isaura, Western Province

Young multi-faculty university  
Innovative and dynamic  
8,000 students (2% foreign)  
400 academic staff



# Central Valley University

## Organisational Structure





# Central Valley University

## Key elements to the assignment

- ❑ The Ministry of Education of Imaginalia initiated a new university funding model
- ❑ The Vice-Chancellor takes the opportunity to strengthen academic research productivity, teaching quality and efficiency and asks the Director of Finance & Strategy to develop a new internal allocation model to replace the existing input oriented model along the new ambitions
- ❑ The Director of Finance & Strategy hires external consultants to prepare a draft internal funding model for teaching and research as an input for the university's process to come to a new internal allocation model to be passed by the University Council in the end
- ❑ Because the new model has to be accepted by the University Council, it has to reflect the interests of university leadership as well as faculties and ...

**It is your task as external consultants to develop  
a well balanced and argued allocation model**



# Imaginalia's new HE Funding model

## Key elements to the assignment

- ❑ **Teaching** (fixed annual budget; 2/3<sup>rd</sup> of the total HE budget)
  - ❑ A basic teaching allocation per institution based on the number of programmes offered (22% of total HE budget)
  - ❑ A premium per new entrant (3 funding tariffs: Med / Sc&Eng / Social Sc); (22% of total HE budget)
  - ❑ A premium per graduate (3 funding tariffs: Med / Sc&Eng / Social Sc); (22% of total HE budget)
  
- ❑ **Research** (fixed annual budget; 1/3<sup>rd</sup> of the total HE budget)
  - ❑ Competitive basic research funding through the Research Council for Imaginalia's Innovation (11% of total HE budget)
  - ❑ Basic research component for universities' own strategic development (11% of total HE budget)
  - ❑ Premium for each PhD conferred (2 funding tariffs: Med&Sc&Eng / Social Sc) (11% of total HE budget)
  
- ❑ Except for the research council funding, all funds are provided as a lump sum; the universities have full spending autonomy (freedom)



## Assignment: 5 groups

25 minutes

Groups discuss and develop the parameters of the new internal allocation model

15 minutes

Short report backs from the 5 groups

10 minutes

Reflection and discussion



# The 4-5 groups

## Each representing a faculty or Leadership

- ❑ **1. Business** (large faculty, many (international) students, moderate research quality and productivity)
- ❑ **2. Engineering** (small faculty, limited numbers of students, regional, focus on masters and PhD, research in collaboration with business)
- ❑ **3. Science** (large faculty, many students, high academic research quality, many international PhD students)
- ❑ **4. Social science** (medium sized faculty, moderate numbers of students, strongest at bachelor level, good research quality)
- ❑ **5. Leadership** (ambitions in area of internationalisation, relevance, valorisation, and international academic reputation)

# THANK YOU FOR YOUR ATTENTION !

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## QUESTIONS ?

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