



U-Multirank

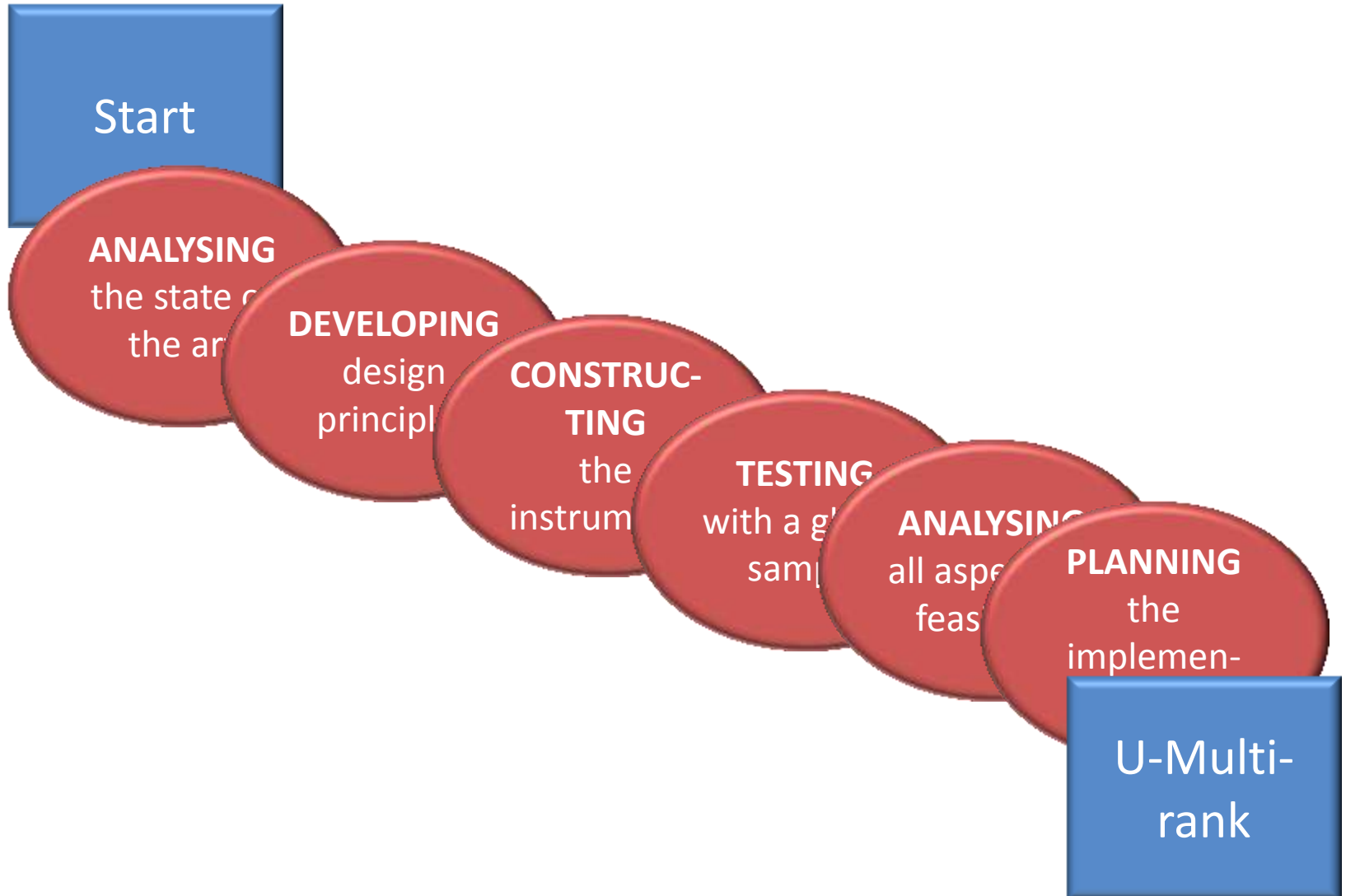
## The Making of....

### U-Multirank!

A new user-driven multi-dimensional  
and multilevel ranking tool in higher  
education and research  
*- and how we got there*

Frans van Vught/Frank Ziegele

# The making of U-Multirank



# The project

On the design and testing the feasibility of a new, multidimensional, global transparency instrument

*by:*

**CHERPA:** the Consortium for Higher Education and Research Performance Assessment



**CHEPS:** Center for Higher education policy Studies (*lead partner*)



**CHE:** Centre for Higher Education (*lead partner*)



**CWTS:** Center for Science and Technology Studies



**Incentim:** International Centre for Research on Entrepreneurship, Technology and Innovation Management



**OST:** Observatoire des Sciences et des Techniques



# The project

- Commissioned by the European Commission
- 2-year project, starting November 2009
- Ján Figel, the former European Commissioner for Education, Training, Culture and Youth:

*“- to allow stakeholders to make informed choices;  
- to help institutions to position themselves and improve their performance”*

- Two phases:
  - Design of new instrument
  - Testing the feasibility of new instrument

# Critique of existing worldwide rankings

## The diversity issue

- largely one-dimensional (research)
- triggering „reputation race“
- damage to system diversity
- increasing academic stratification

## The stakeholder issue

- not responsive to differing needs of different stakeholders
- neglecting the field level
- misinforming policy makers

## The methodological issue

- focusing on what is measurable instead of what is relevant
- triggering strategic behaviour by institutions
- methodological flaws and biases

# Our conclusions

- Need to address this critique by design principles
- Need to understand multiple performances of higher education and research institutions
- Need to be completely transparent about our own approach



## U-Multirank design principles

# U-Multirank design principles

- Basic *epistemological argument*: all observations of reality are conceptually driven, there is no objective ranking
- Rankings should be based on interests and priorities of its users: *the principle of user-drivenness*
- Higher education and research institutions are predominantly multi-purpose: *the principle of multi-dimensionality*
- Higher education and research institutions are generally combinations of different faculties, departments, and programs and show internal diversity: *the principle of multi-levelness*
- Rankings are only useful if institutions/ programs are compared that are sufficiently similar: *the principle of comparability*
- The instrument should refrain from methodological mistakes: *the principle of methodological soundness*

# Specification of U-Multirank

- ***A stakeholder approach***: consultation process to assess relevance of dimensions and indicators
- ***U-Map & U-Multirank***: comparability of institutions
- ***Methodological soundness***: validity (construct; face), reliability, data availability – each indicator tested
- ***Two levels***:
  - focused institutional rankings
  - field-based rankings

# Specification of U-Multirank

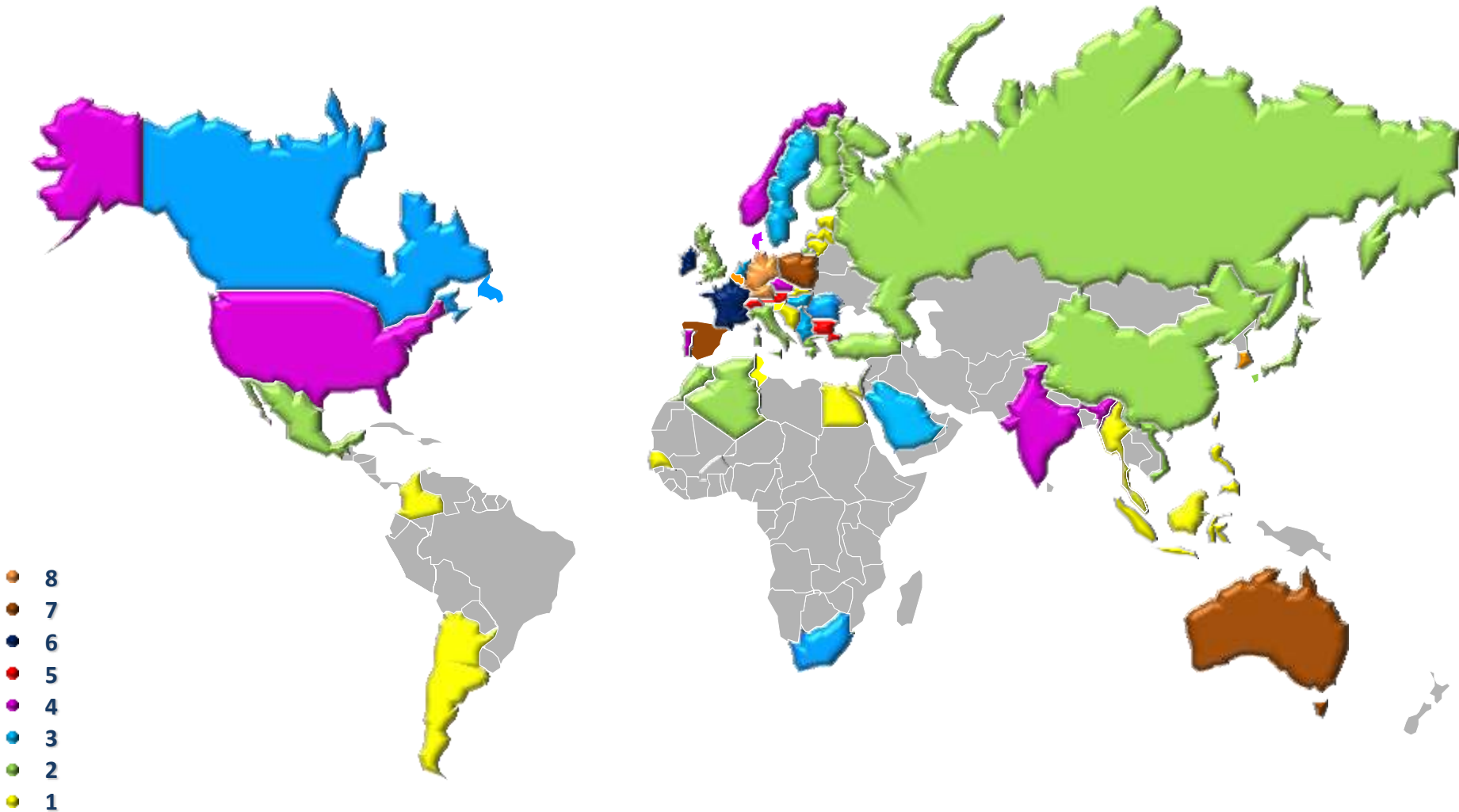
- ***Five dimensions:***
  - Teaching & learning
  - Research
  - Knowledge transfer
  - International orientation
  - Regional engagement
- Long list of ***indicators*** to be tested in pilot project
- Development of ***data collection tools and processes*** (questionnaires, definitions, FAQs, communication + feedback processes)
- Methods for building ***ranking groups*** instead of league tables

# Testing U-Multirank

- Two levels:
  - Institution (FIR)
  - Field (FBR)
- Global sample of higher education and research institutions: 159 (target: 150), 2/3 Europe, 109 completed institutional questionnaires
- Two fields:
  - Business studies
  - Engineering (electrical and mechanical)

# Sample across the globe

TESTING



# Testing U-Multirank

- Self-reported institutional data by means of four online questionnaires:
  - U-Map (Institutional)
  - U-Multirank (Institutional level)
  - U-Multirank (department level)
  - Student survey
- International databases
  - Bibliography
  - Patent data

# Aspects of feasibility

- Feasibility of the dimensions and indicators in terms of:
  - Data availability
  - Conceptual clarity
  - Data consistency
- Feasibility of data collection instruments
- Feasibility of “up-scaling” to a global-level instrument

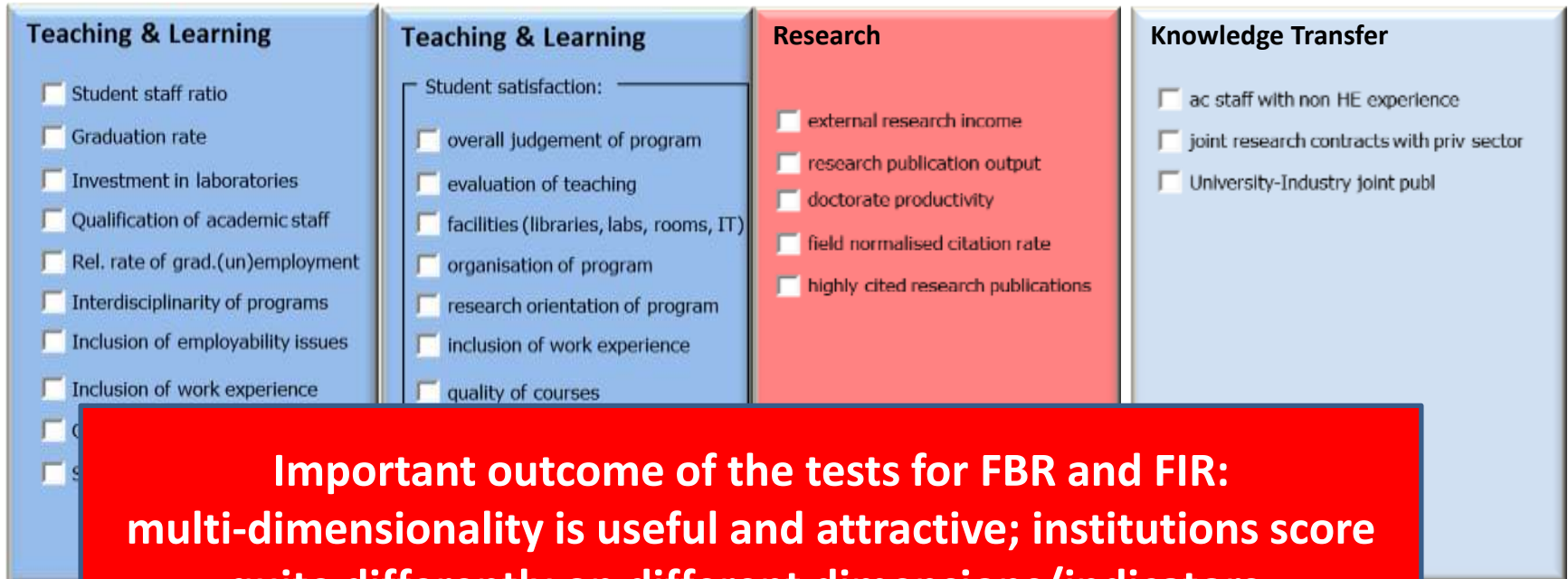
# Feasibility of dimensions and indicators

Dimension	Total # indicators	After pilot		
		A: need no/minor modification	B: need further work	C: discarded
<b>Teaching &amp; Learning</b>				
FIR	5	4	1	0
FBR	8	4	4	0
FBR (student survey)	13	13	0	0
<b>Research</b>				
FIR	9	3	5	1
FBR	7	6	1	0
<b>Knowledge transfer</b>				
FIR	8	3	5	0
FBR	7	1	2	4
<b>International orientation</b>				
FIR	8	6	2	0
FBR	9	6	3	0
<b>Regional engagement</b>				
FIR	4	1	3	0
FBR	5	1	4	0

# Revised set of indicators (FIR)



# Revised set of indicators (FBR)



**Important outcome of the tests for FBR and FIR:  
multi-dimensionality is useful and attractive; institutions score quite differently on different dimensions/indicators;  
performance profiles become transparent**

- international orientation of programs
- international academic staff
- international research grants
- international joint research publications
- % international students
- internat. doctorate graduation rate

- Degree theses with reg. enterprise
- Regional participation in continuing ed.
- Summer schools for sec. ed. students
- Student internships in region

# Feasibility of data collection

- Institutional self reporting: positive, but: some problems with data availability, solvable definition problems, workload
- Student surveys: no cultural/ country distortion
- quality of self-reported data: processes for plausibility checks, feedback loops, control questions etc. developed
- Bibliometrics: four new sophisticated indicators in different dimensions
- Patent analysis: only feasible at institutional level

# Up-scaling U-Multirank

No technical doubts about up-scaling

Feasibility as a global instrument:

- Large interest from European institutions
- Encouraging interest from beyond Europe
- Minor participation from China and USA
- Global “roll-out” possible, starting from Europe with “open approach”.

# Conclusion on feasibility

some gaps to close, some further work on a few indicators – but in general all instruments and processes are described, tested and feasible



VERSION 1.0 of U-Multirank exists and is ready for implementation

# Institutionalising U-Multirank

- Further project phase: refinement of indicators and tools, roll-out
- Independent, not-for-profit organisation
- Multiple sources of funding
- Strong stakeholders' involvement (advisory board)
- efficient data collection: coordination with EUMIDA/E3M/AHELO and national rankings (development of “pre-filling” opportunities)

## There is one more important aspect...

- user-drivenness: we need a flexible webtool with which users can create their own rankings (but still authoritative rankings by special groups are possible...)
- importance of presentation modes, user-friendliness, graphical illustration, guidance through complexity of indicators, link of U-Map and U-Multirank etc.
- we conceptualised the instrument, but did not yet implement it