



**Is there a better approach for university rankings?
U-Multirank as an alternative to league tables**



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Agenda

1. The failure of league tables
2. Multidimensional rankings as alternative approach
3. The U-Multirank concept
4. Examples for U-Multirank outcomes

1

The failure of league tables

- Only one university profile rewarded: comprehensive university with highest reputation focusing on world-class basic research
- Regional engagement, community service, teaching and learning, knowledge transfer: important missions neglected
- „number seven in the world“ mainly based on research, ignores diversity, and most people don't know
- Effect: Threatening a good, diversified HE system

League table rankings are a threat to the diversity of university missions

League table rankings mislead their users

- Artificial differences (small difference could make many places)
- Students don't know that a top university maybe doesn't care about teaching
- HE leaders make decisions that only make sense to climb up the ranking (examples: agricultural faculty, entrepreneurial university)
- Universities invest more in marketing than in quality (e.g. to be able to reject students), there is a whole industry of „brand management“



League table rankings hide relevant information behind aggregate scores

- Bias towards natural sciences/medicine because of bibliometrics (publication cultures)
- Bias towards English language
- Bias towards basic research (not applied research)

- Dominance of reputation (self-reproduction of rankings)
- Weights influence outcomes, but have no rationale
- Intransparent methods
- Methodological flaws: e.g. estimate for missing values

League table rankings are methodologically biased and flawed

Global rankings could have a problematic impact on

- Mergers of universities (e.g. France, Denmark, Finland)
- Concentration of public funding (Russia)
- Student exchange policies (e.g. India)
- Recognition of foreign degrees (Russia)
- National immigration policy (Netherlands)

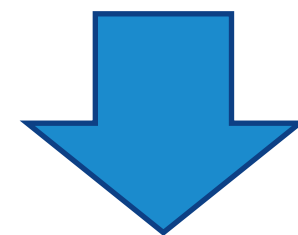
Unfair to many countries and universities!

**League table
rankings have an
impact on
decisions they
were not made
for**

Fight against rankings

or

Look for better approaches



Multi-dimensional rankings

**However,
rankings are
here to stay**

2

Multidimensional Rankings as alternative approach

Help students to find a place to study

Support universities in strategy development and quality management through benchmarking

Show policy-makers the strengths and weaknesses of a national HE system

Multidimensional rankings intend to serve the stakeholders

The new ranking approach

Not only ranking of whole institutions...

Universities are heterogeneous units; faculties differ in their performance

Ranking of whole institutions gives misleading averages

students are interested in specific subjects



... but also subject specific rankings

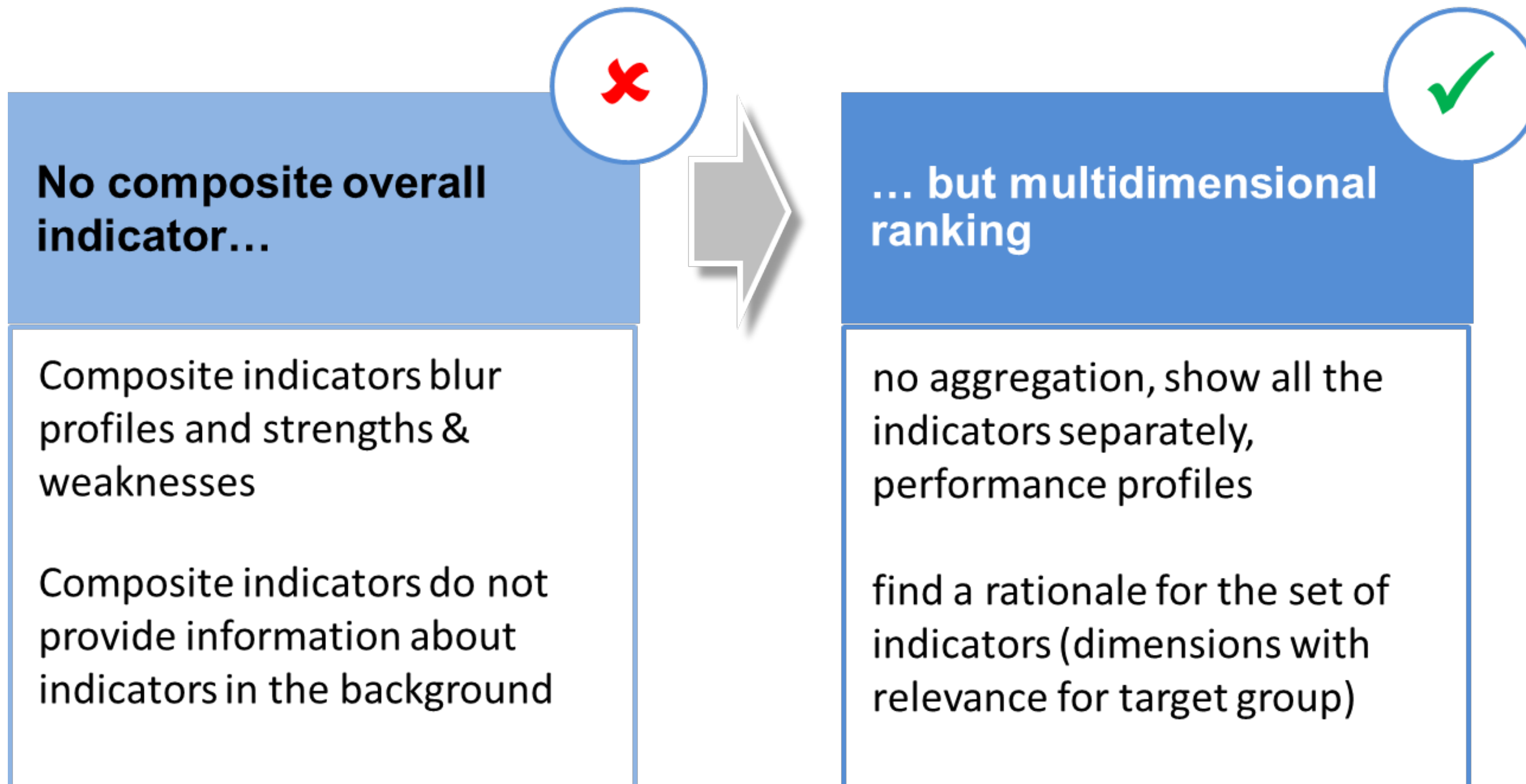
support student choice on the relevant information level

show heterogeneous performance levels of different subjects within one university


subject-specific indicators



The new ranking approach



The new ranking approach


**No assessment of
relevance of indicators by
ranking provider...**

There are neither theoretical
nor empirical arguments for
specific weights for single
indicators

users are patronized by ranking
provider

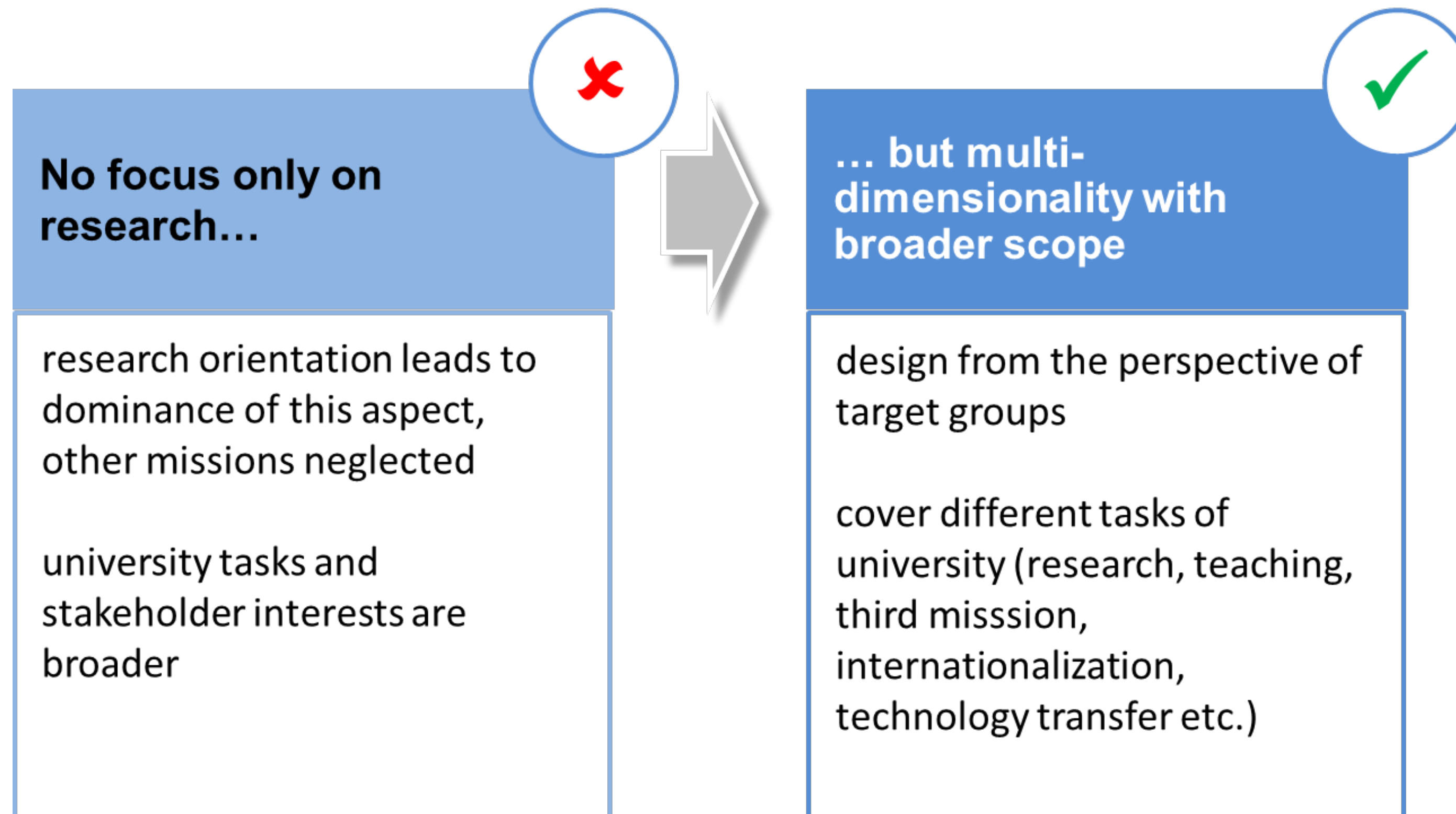



... but user-driven ranking

no defined weights necessary,
the user sets the weight by
choosing indicators

democratization of rankings

The new ranking approach



The new ranking approach

No league tables...

Small differences in the numerical value of an indicator lead to big differences in league table positions

League tables tend to exaggerate differences between HEIs

... but group approach (top, middle, bottom)

Rankings should refer to groups / clusters rather than to single league table positions

identify groups which are really distinctive in performance

No need for fine differentiations in a “top group”

3

The U-Multirank concept



Initiative of the European Commission – realized by consortium of think tanks and HE research institutes (CHE, CHEPS, CWTS, Fundacion CYD) – today funded by EU, Banco Santander and Bertelsmann Foundation

2014

850 universities covered

70 countries included

4 subject areas covered

>1,000 departments

> 5,000 study programmes

>60,000 students responses

2019

1,711 universities covered

96 countries included

24 subject areas covered

>5,000 departments

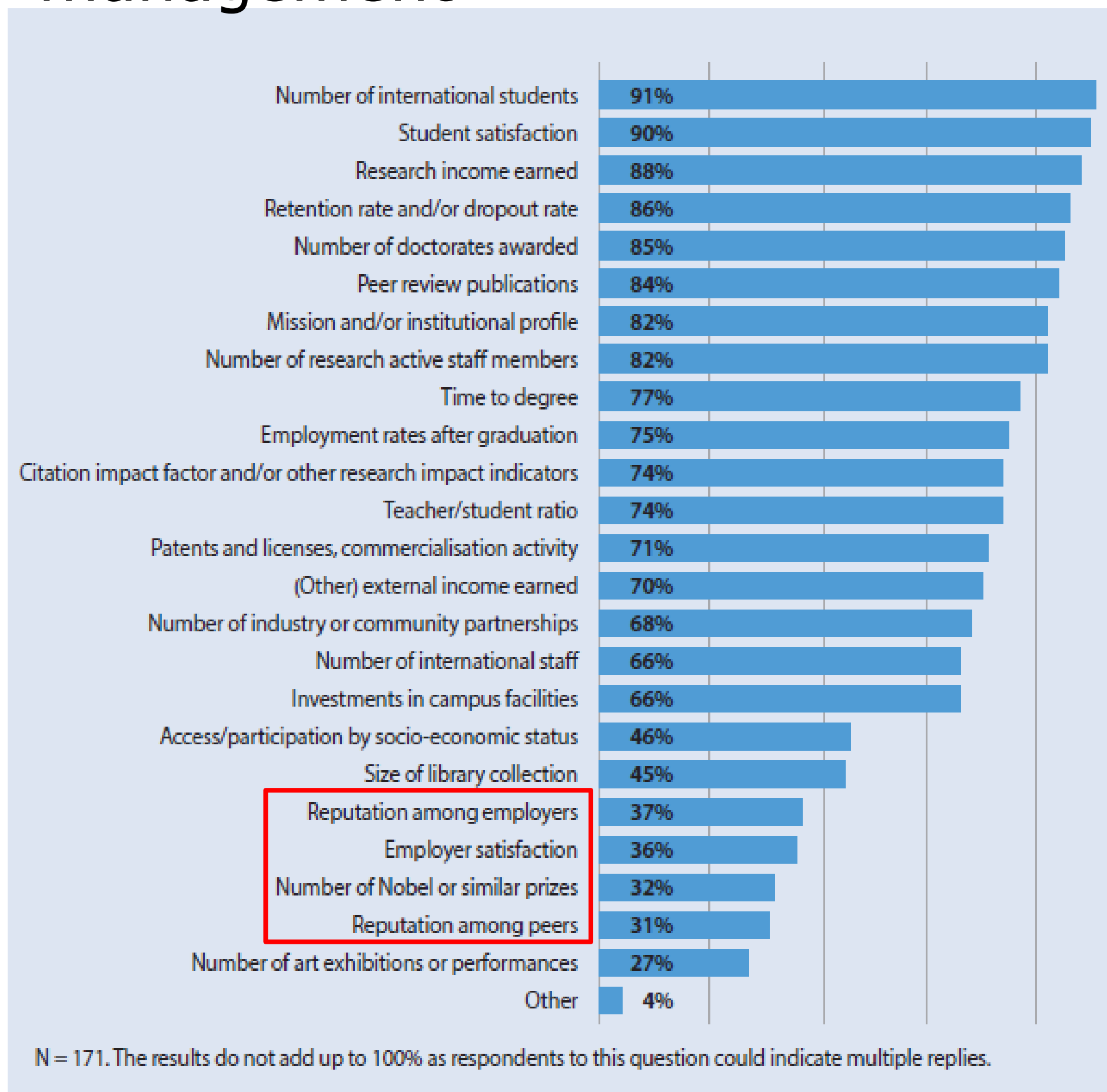
>12,500 study programmes

>100,000 students responses

Facts & Figures:

U-Multirank is more than just the ‘Top 100-200’ research universities

According to an EUA Survey among its member universities, 2014: indicator relevance for strategic management



12 out of 15 items most relevant to universities are covered by U-Multirank

Least important items not covered by U-Multirank (but play a major role in other rankings)

Indicators were chosen based on relevance for users

Teaching & Learning Select all

- Student-staff ratio
- Graduating on time (bachelors)
- Graduating on time (masters)
- Academic staff with doctorates
- Contact with work environment (masters)
- Hospital beds available for teaching
- Innovative forms of assessment

Teaching & Learning (Students' views) Select all

- Overall learning experience
- Quality of courses & teaching
- Organisation of program
- Contact with teachers
- Library facilities
- IT provision
- Room facilities
- Inclusion of practical experience/clerkships
- Bedside teaching
- Linking clinical/preclinical teaching
- Skills Labs

Regional Engagement Select all

- Regional joint publications

Research Select all

- External research income
- Doctorate productivity
- Research publications (absolute numbers)
- Citation rate
- Top cited publications
- Interdisciplinary publications
- Research orientation of teaching
- Post-doc positions

Knowledge Transfer Select all

- Income from private sources
- Co-publications with industrial partners
- Patents awarded (absolute numbers)
- Publications cited in patents

International Orientation Select all

- International orientation of master programmes
- Opportunities to study abroad
- International doctorate degrees
- International joint publications
- International research grants

On the subject level, the U-Multirank indicator set has a strong focus on students' interests



- Publicly available global data sources (bibliometrics, patents)
- If possible: „pre-filling“ from available national sources (US, UK, Sweden, Ontario, potential pilot in Sao Paulo)
- Data delivery by universities: institutional, subjects
- Student survey

**U-Multirank
uses a
multitude of
data sources**

Interactive webtool: Users could choose a subject, countries and indicators

This leads to a personal multidimensional table to check for „best matches“

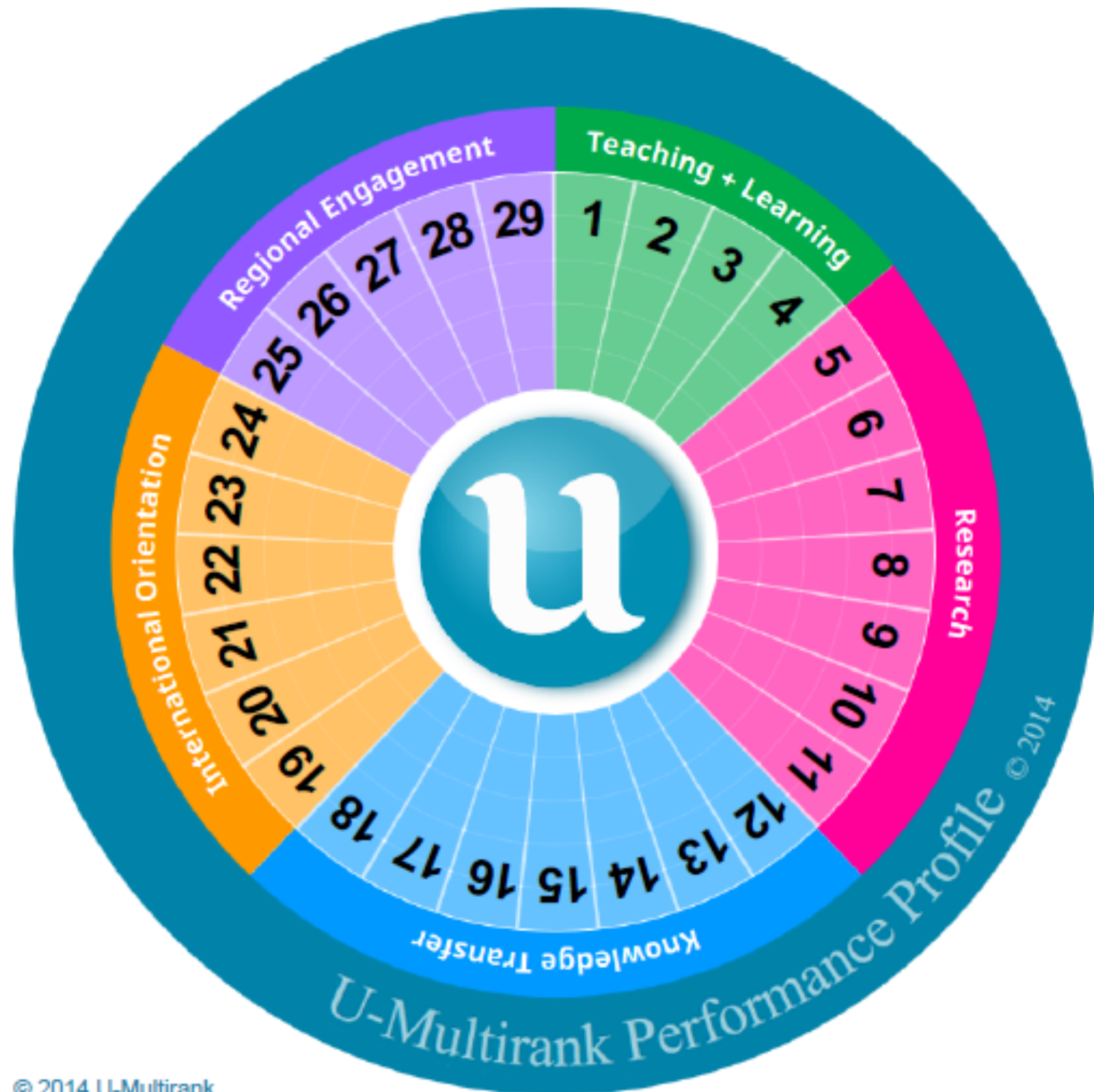
Computer Science comparison Your selection: 28 universities

Change measures
Personalise this ranking
Show symbols
Show the whole table

		Teaching & Learning		Teaching & Learning (Students' views)		Research		International Orientation		Regional Engagement	
		Student-staff ratio	Contact with work environment (bachelors)	Overall learning experience	Contact with teachers	Research publications (absolute numbers)	Research orientation of teaching	International orientation of bachelor programmes		Student internships in the region	
Otto-von-Guericke-Universität Magdeburg	DE	C	A	B	B	B	C	B		-	
Aalen University of Applied Sciences	DE	B	A	B	B	-	-	B		-	
Karlsruhe Institute of Technology	DE	C	D	B	C	A	B	B		-	
RWTH Aachen University	DE	D	-	B	B	A	B	C		-	
Pforzheim University	DE	-	A	B	B	D	-	B		E	
University of Applied Sciences Würzburg-Schweinfurt	DE	C	A	B	B	D	-	C		-	
Technical University of Munich	DE	-	-	B	C	A	B	-		-	
Universität Stuttgart	DE	C	E	C	C	A	C	B		-	
TU Ilmenau	DE	B	D	B	B	C	C	B		C	
Technische Hochschule Brandenburg	DE	C	B	B	B	D	-	B		C	

A (Very good)
 B (Good)
 C (Average)
 D (Below average)
 E (Weak)
 - Data unavailable
 x Not applicable

U-Multirank Sunburst: Performance Indicators



Teaching + Learning	
1	Bachelor graduation rate
2	Masters graduation rate
3	Graduating on time (bachelors)
4	Graduating on time (masters)
Research	
5	External research income
6	Research publications (size-normalised)
7	Art related output
8	Citation rate
9	Topcited publications
10	Interdisciplinary publications
11	Post-doc positions
Knowledge Transfer	
12	Income from private sources
13	Co-publications with industrial partners
14	Patents awarded (size-normalised)
15	Industry co-patents
16	Spin-offs
17	Publications cited in patents
18	Income from continuous professional development
International Orientation	
19	Foreign language bachelor programmes
20	Foreign language master programmes
21	Student mobility
22	International academic staff
23	International doctorate degrees
24	International joint publications
Regional Engagement	
25	Bachelor graduates working in the region
26	Student internships in the region
27	Regional joint publications
28	Income from regional sources
29	Master graduates working in the region

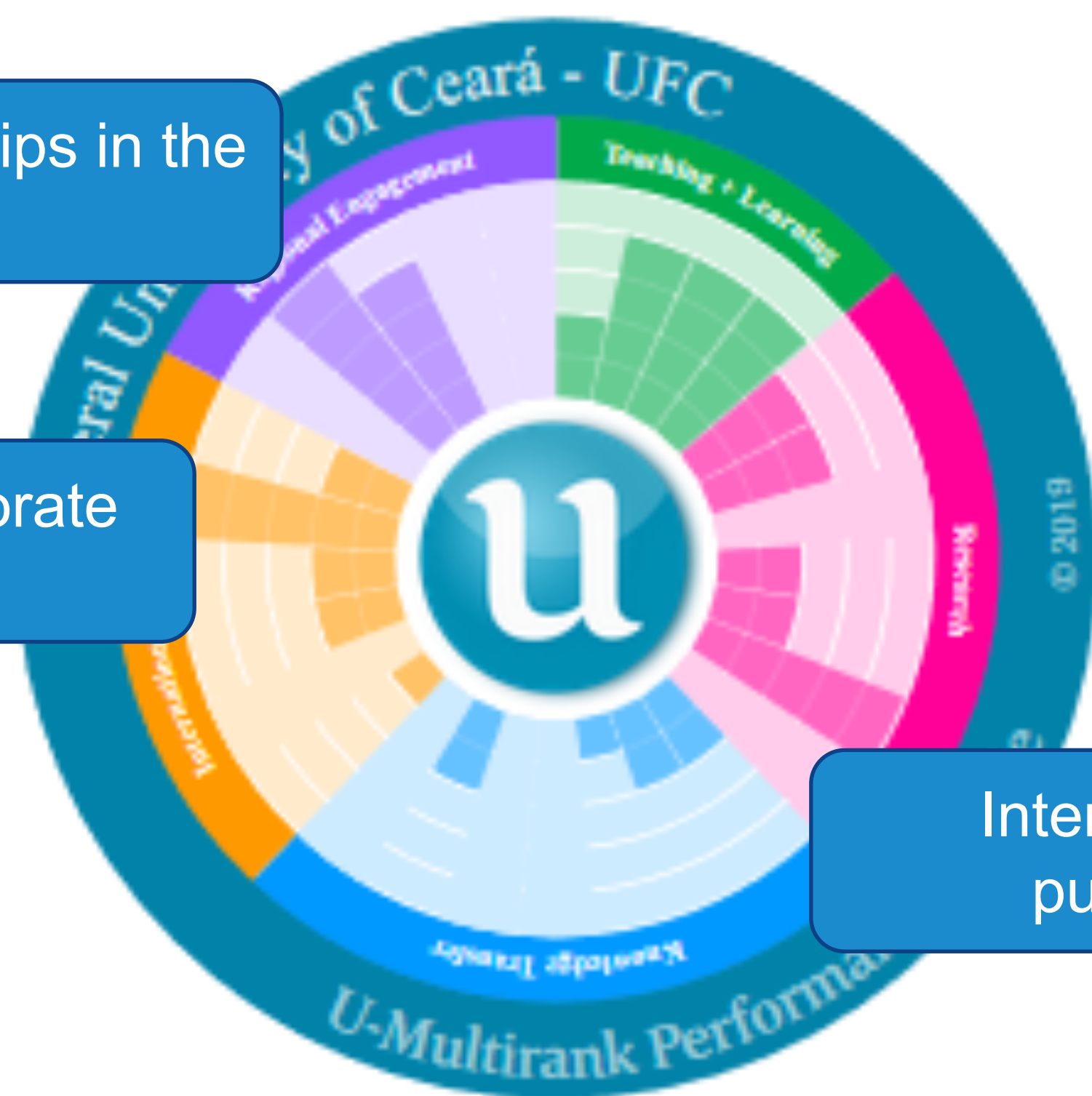
For the university as a whole, U-Multirank balances the 5 dimensions and creates „sunburst charts“ to show the university profile

3

Examples for U-Multirank outcomes

Student internships in the region

International doctorate degrees



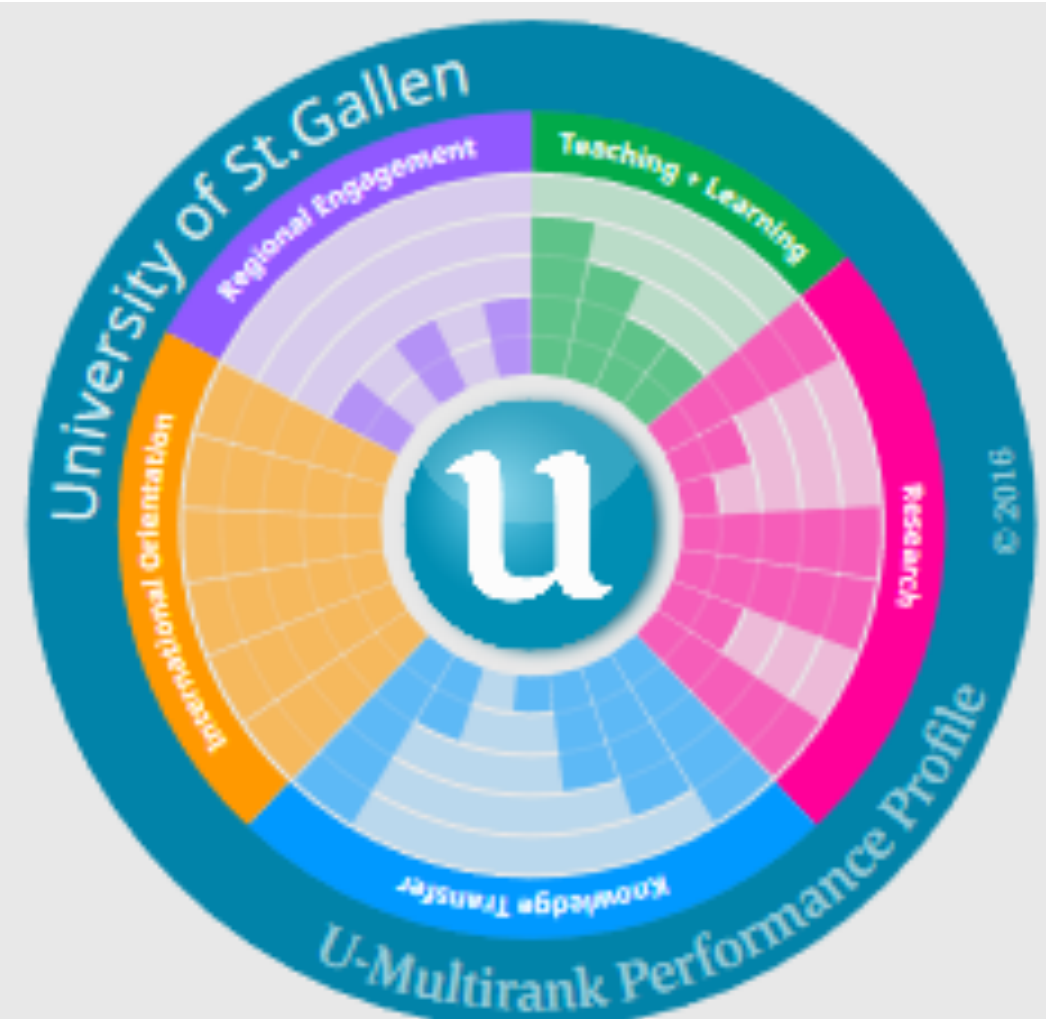
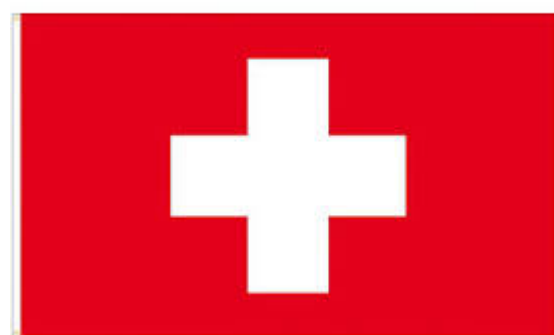
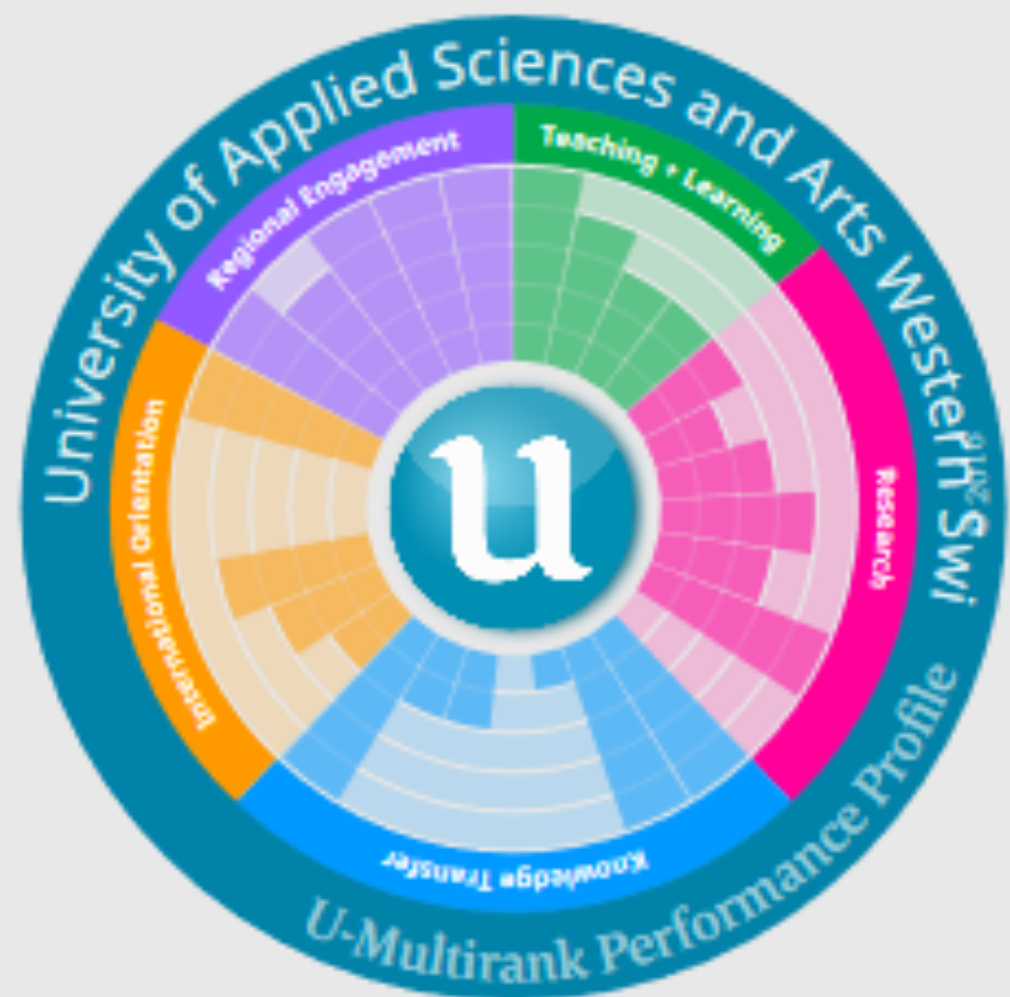
Interdisciplinary publications

Profiles become transparent, universities could identify weaknesses and market their strengths

Indicator	Global Top 3 Performers
Top Cited Publications	Rockefeller U, MIT, Institute of Cancer Research London
Interdisciplinary Publications	UAS Bingen, Hogeschool Leiden, Athlone IoT
Co-Publications with Industrial Partners	LUISS Guido Carli, China University of Petroleum, UAS Mannheim
Student Mobility	Varna University of Management, AGROSUP Dijon, Rennes School of Business
Income from CPD	Försvvarshögskolan, Ersta Sköndal Högskola, Frankfurt School of Finance and Management

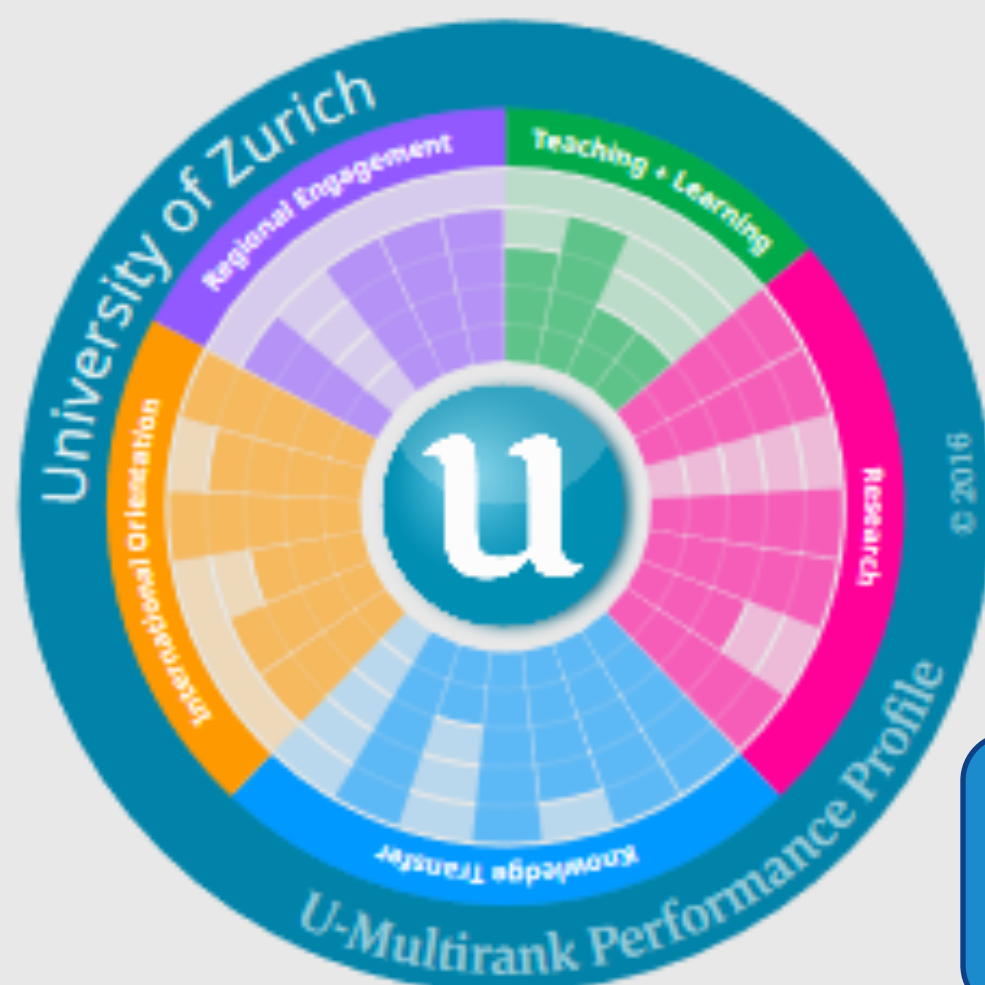
There is an enormous diversity in global top performance

THE Ranking: 401-500



**Profiles
become
transparent,
world class HE
systems are
diverse**

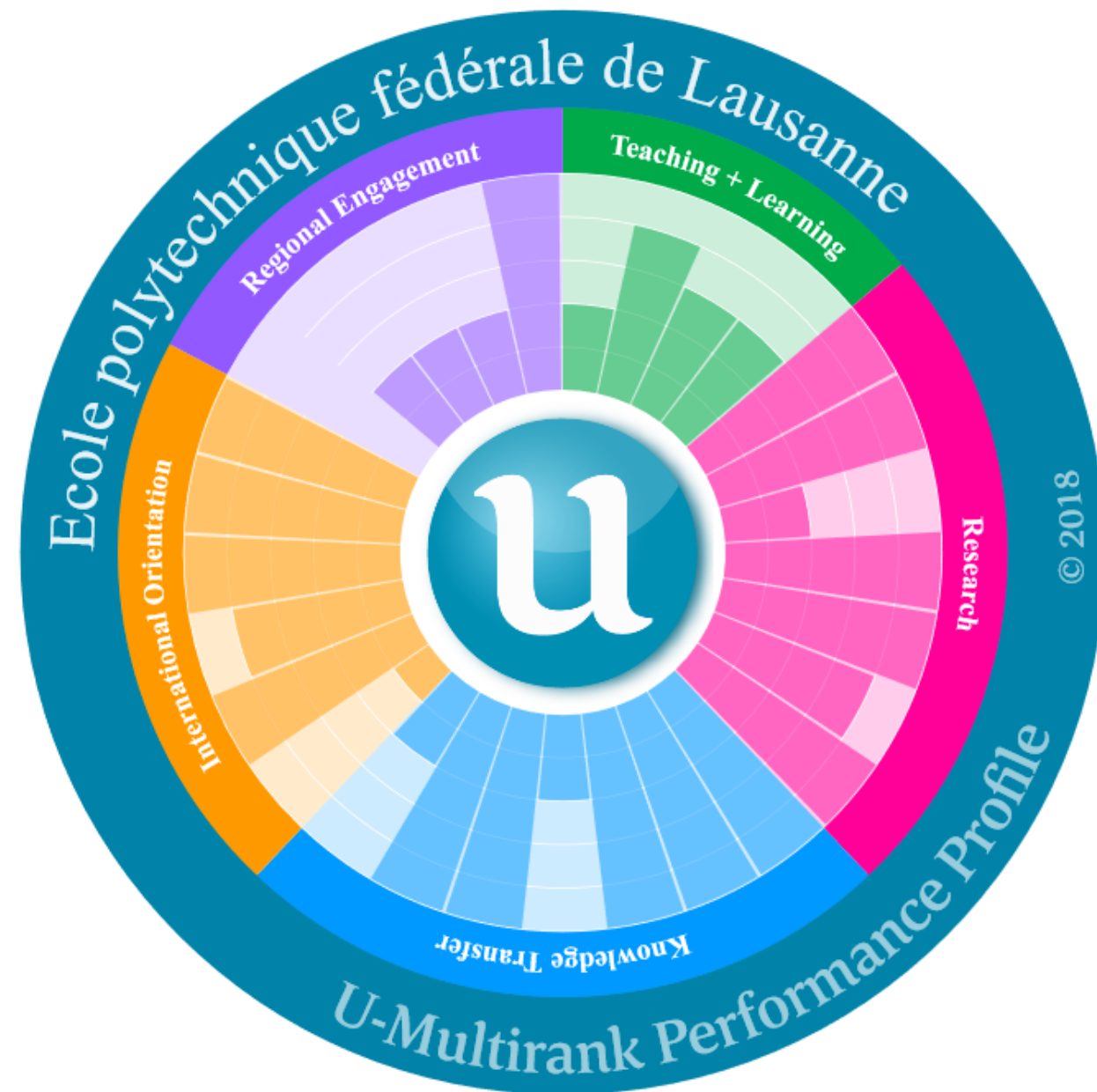
THE Ranking: no chance



THE Ranking: 136

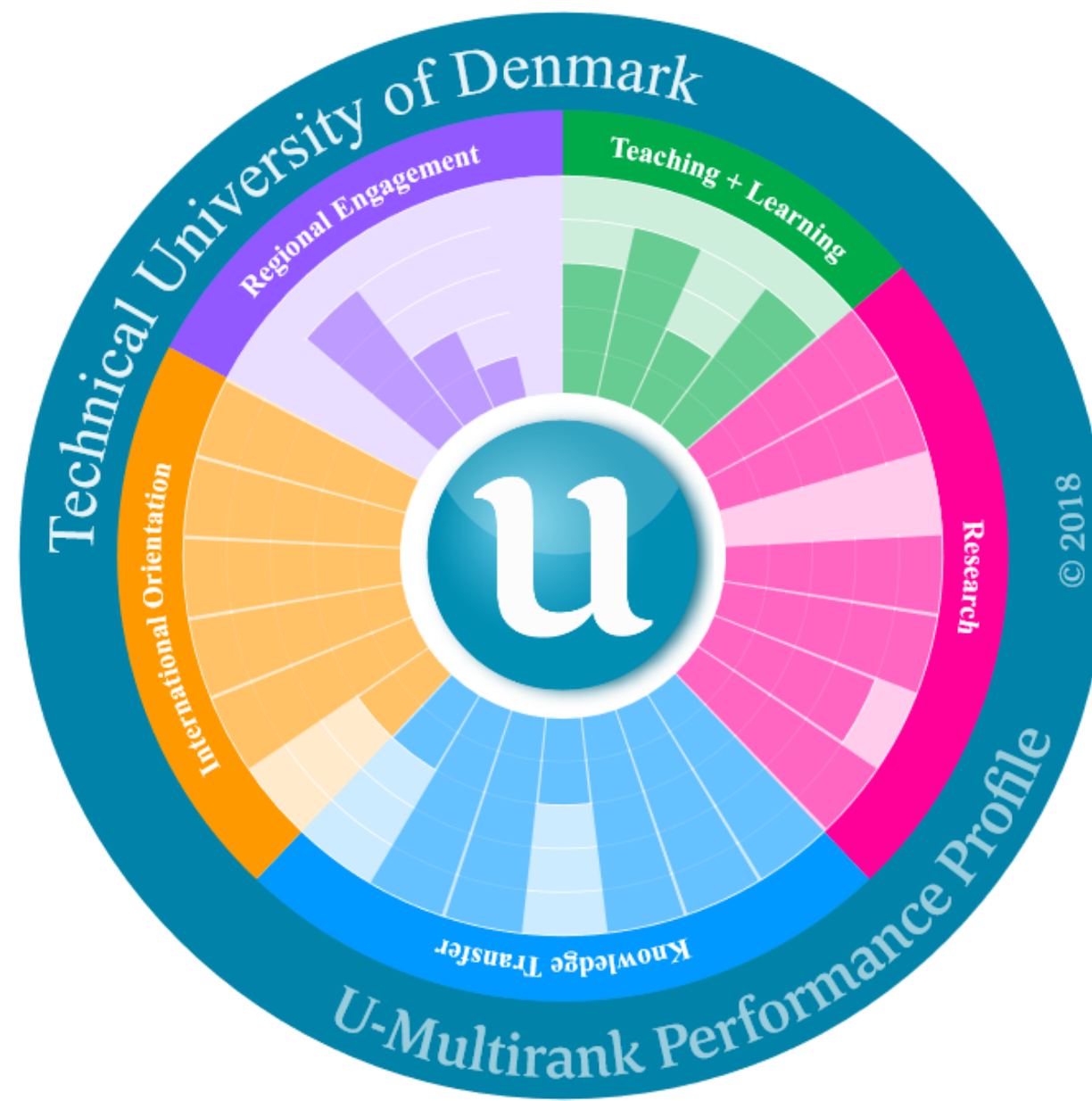
**(and there is
no such thing
as the best
university)**

Which university is better?



QS overall rank 22
THE overall rank 38

QS reputation score 72,8



QS overall rank 112
THE overall rank 153

QS reputation score 27,8

**The problems
of reputation
driven quality
assessments
become
obvious**

The data is useful to find benchmarking partners

(Case: computer sciences dean from Milano wants to improve industry relations, looks for adequate partners for benchmarking process)

Computer Science Which level of study are you interested in: bachelor, master

2.5.2016

www.umultirank.org

Show symbols

		Teaching & Learning			Knowledge Transfer			Regional Engagement		
		Contact with work environment (bachelors)	Contact with work environment (masters)	Inclusion of work/practical experience	Income from private sources	Co-publications with industrial partners	Patents awarded (absolute numbers)	Publications cited in patents	Student internships in the region	Regional joint publications
Pantheon-Sorbonne U	FR	B	A	A	A	A	E	E	-	A
Nagoya Inst. Tech	JP	E	D	C	A	A	A	A	x	A
Yokohama National U	JP	D	-	C	A	A	A	A	-	A
Tech U Berlin	DE	-	-	C	A	A	A	A	-	A
Nara Inst. Sci & Tech	JP	-	-	C	A	A	A	A	-	A
Yokohama National U	JP	-	D	D	A	A	A	A	-	A
U Erlangen-Nürnberg	DE	C	D	C	A	A	A	A	-	B
U Zagreb	HR	D	D	C	A	A	E	A	A	B
ENS Paris	FR	D	C	B	A	A	E	A	D	A
Polytech. U Milano	IT	C	D	C	D	A	A	A	C	A

4 Electrical Engineering comparison Your selection: 19 universities

Change measures
Personalise this ranking
Show symbols
Show the whole table
Show favourites only

		Teaching & Learning		Teaching & Learning (Students' views)		International Orientation	
		Student-staff ratio	Graduating on time (bachelors)	Organisation of program	Contact with teachers	Opportunities to study abroad	
♥	Tech U Darmstadt	DE	A	D	B	C	B
♥	Jacobs U Bremen	DE	B	B	B	C	C
♥	Karlsruhe Inst. Tech	DE	B	C	B	C	B
♥	UAS Ingolstadt	DE	D	-	B	B	B

Orientation of student: service, efficiency, international experience

Mobile students get help to find the „best matching“ place to study (matching promotes study success)

Mobile students get help to find the „best matching“ place to study (matching promotes study success)

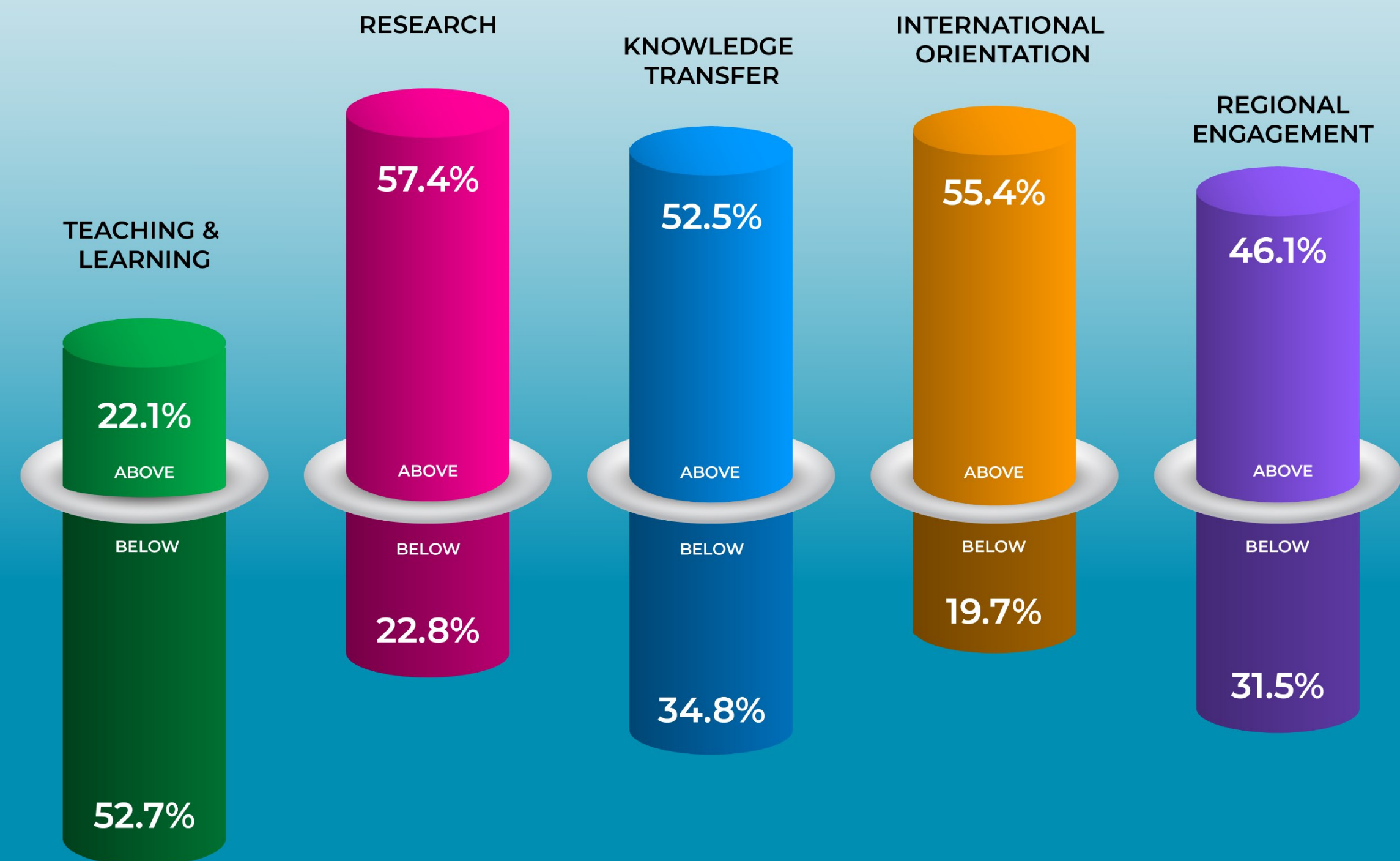
4 Electrical Engineering comparison Your selection: 19 universities

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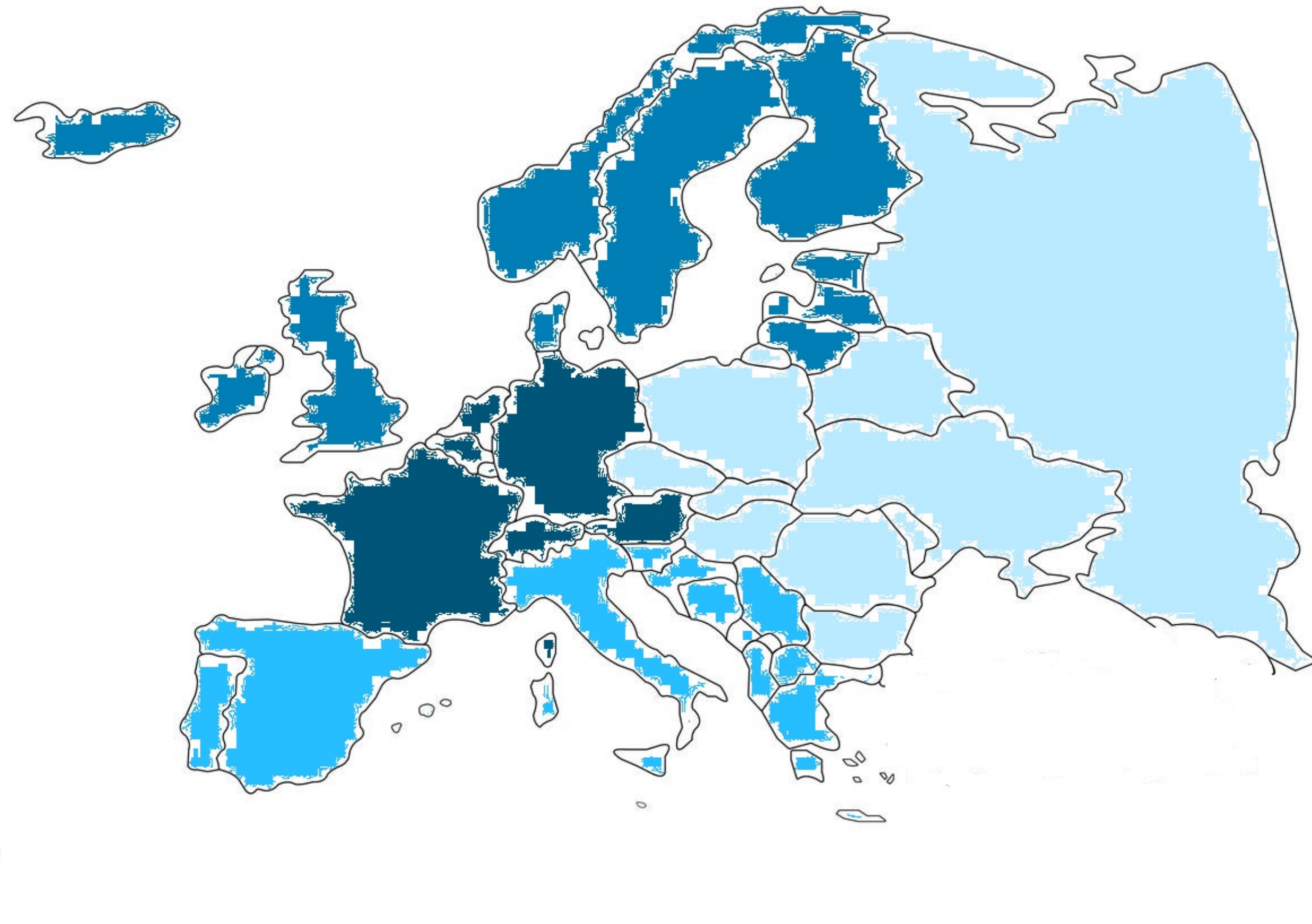
		Teaching & Learning		Research			International Orientation	
		+	+				+	
		Teaching & Learning (Students' views)						
		Academic staff with doctorates	Quality of courses & teaching	Doctorate productivity	Research publications (absolute numbers)	Research orientation of teaching	International orientation of master programmes	International doctorate degrees
♥ RWTH Aachen	DE	A	B	A	B	C	A	B
♥ U Erlangen-Nürnberg	DE	A	B	A	B	C	A	B
♥ U Duisburg-Essen	DE	A	C	A	C	B	A	B
♥ Kaiserslautern Tech U	DE	A	B	A	C	C	A	B

Orientation of student: academic career, high academic quality, internationalization at home

HOW DO GERMAN UNIVERSITIES PERFORM GLOBALLY?



**National policy
makers could
see and deal
with the
strengths and
weaknesses of
the country**



Percentage of good (A, B) performances in knowledge transfer:
patterns in Europe (light: low percentage, dark: high percentage)

**Transnational
policy-makers
could analyze
performance
patterns**

Achievements

- Acceptance of the idea, especially in Europe
- Developed and stable methodology
- Usefulness for stakeholders

Further development needed

- Indicators: social impact, labour market, study success
- Data availability for „new“ indicators
- Balance refinement+extension / work load for universities
- Balance complexity / user-friendliness
- Participation in some regions (incl. Latin America)
- Publicity (no simplistic message)

**U-Multirank
already
achieved a lot,
but still
develops
continuously
further**



Findings on the Agenda

1. League tables fail,
2. Multidimensional rankings are an alternative,
3. U-Multirank works...
4. ...and creates highly relevant outcomes.

Currently: 17 universities included, 12 only with bibliometric data, 5 full participants)

Options to move forward

Individual registration of universities

National pre-filling

National facilitator (the Chinese model)

Link to national ranking (the Spanish model)

Brazil as part of U-Multi-rank?



Thank you!

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