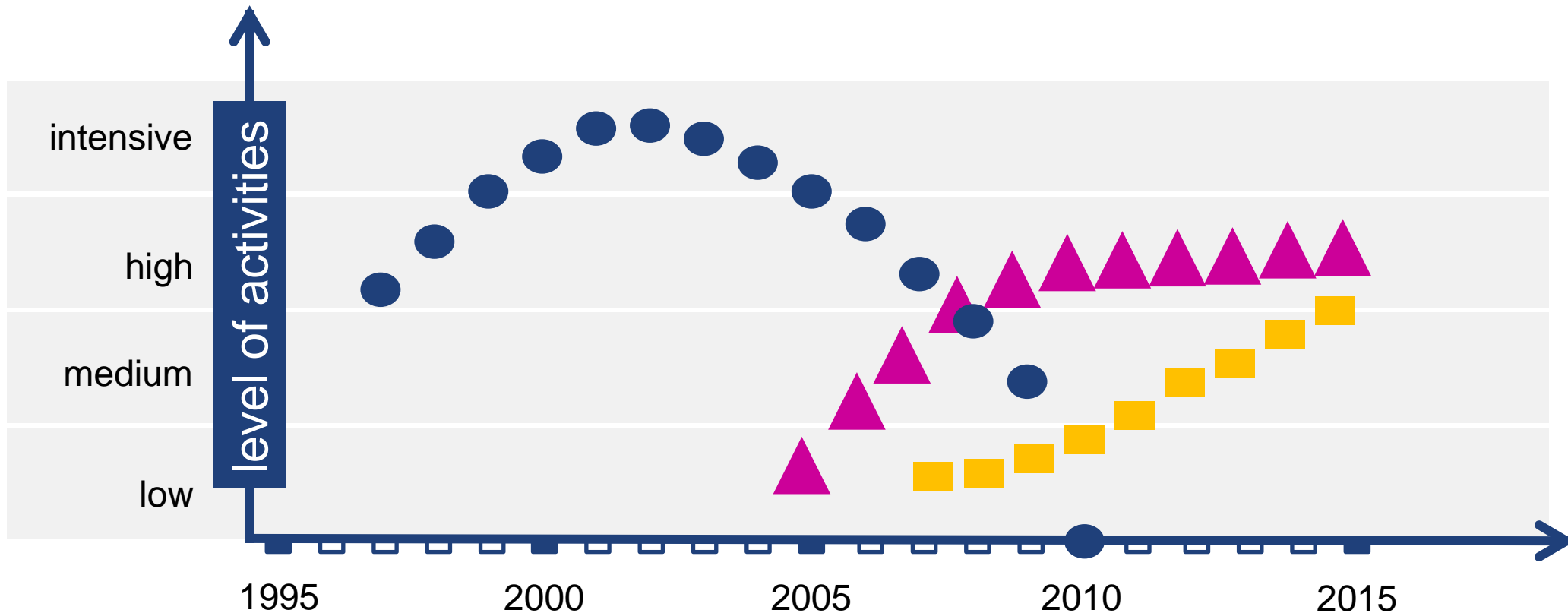




# Key Elements of Successful International Networks: Experiences of ETH Zurich

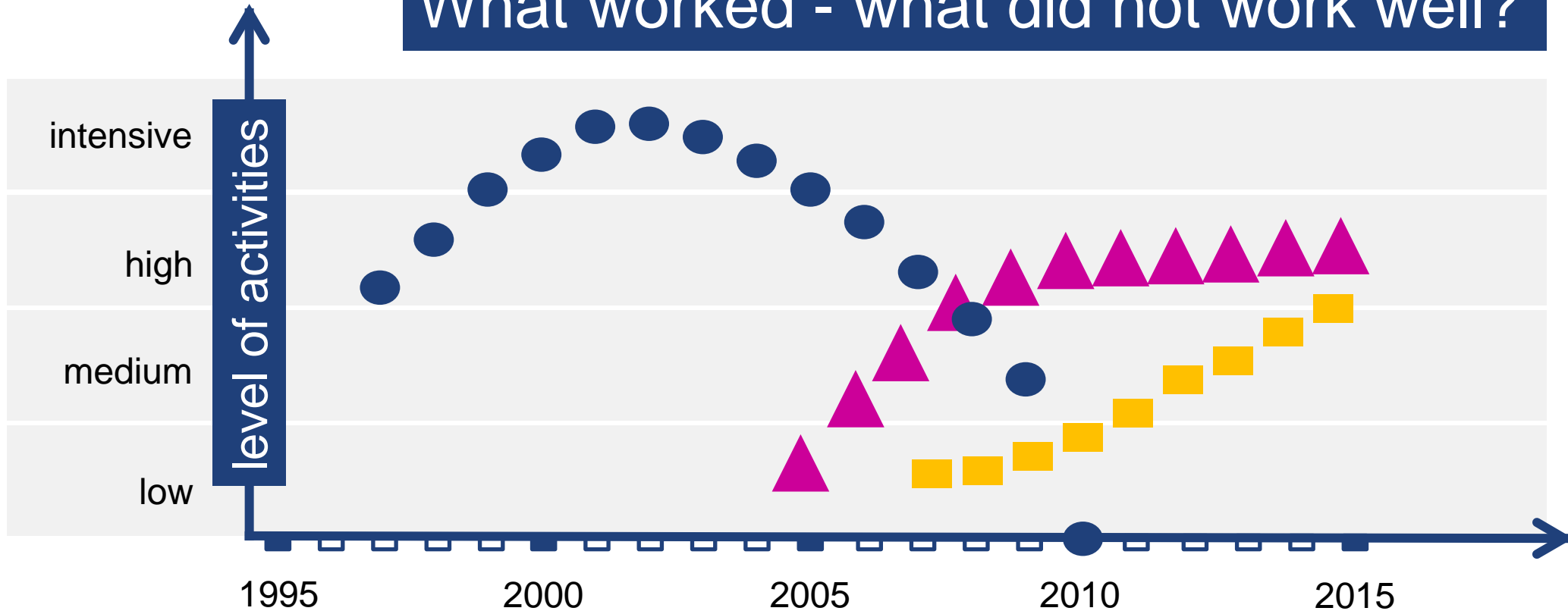
Dr. Christine Bratrach, ETH Sustainability  
The 5th UNICA Green Academic Footprint Workshop / FU Berlin  
March 2015

# ETH Zurich's experiences with three international networks for sustainability



# ETH Zurich's experiences with three international networks for sustainability

What worked - what did not work well?



- ETH Zurich
- Integration of sustainability
- Attributes of the three selected networks
- Key elements for a successful partnership

# Variety of People

- > 18'000 students
- > 500 professors
- > 10'000 staff members
- 21 Nobel Laurites
- > 100 nationalities







# Research & Education in 16 Departments

- engineering sciences
- architecture
- system-oriented sciences
- mathematics & natural sciences
- management & social sciences



# Core Values

- living culture of empowerment
- supporting scientific diversity
- linking research and teaching
- integrating sustainability



## Core Values

- living culture of empowerment
- supporting scientific diversity
- linking research and teaching
- integrating sustainability



# Sustainability at ETH Zurich



- Priority at the highest level of decision making
- Focus on four strategic fields of activity



# Four strategic fields of activity

**research & knowledge transfer**



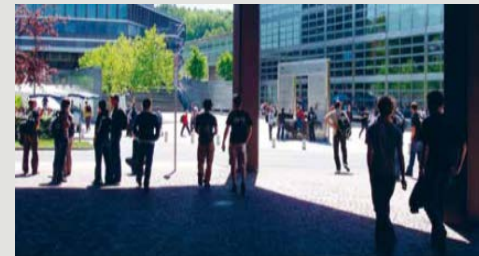
**education**



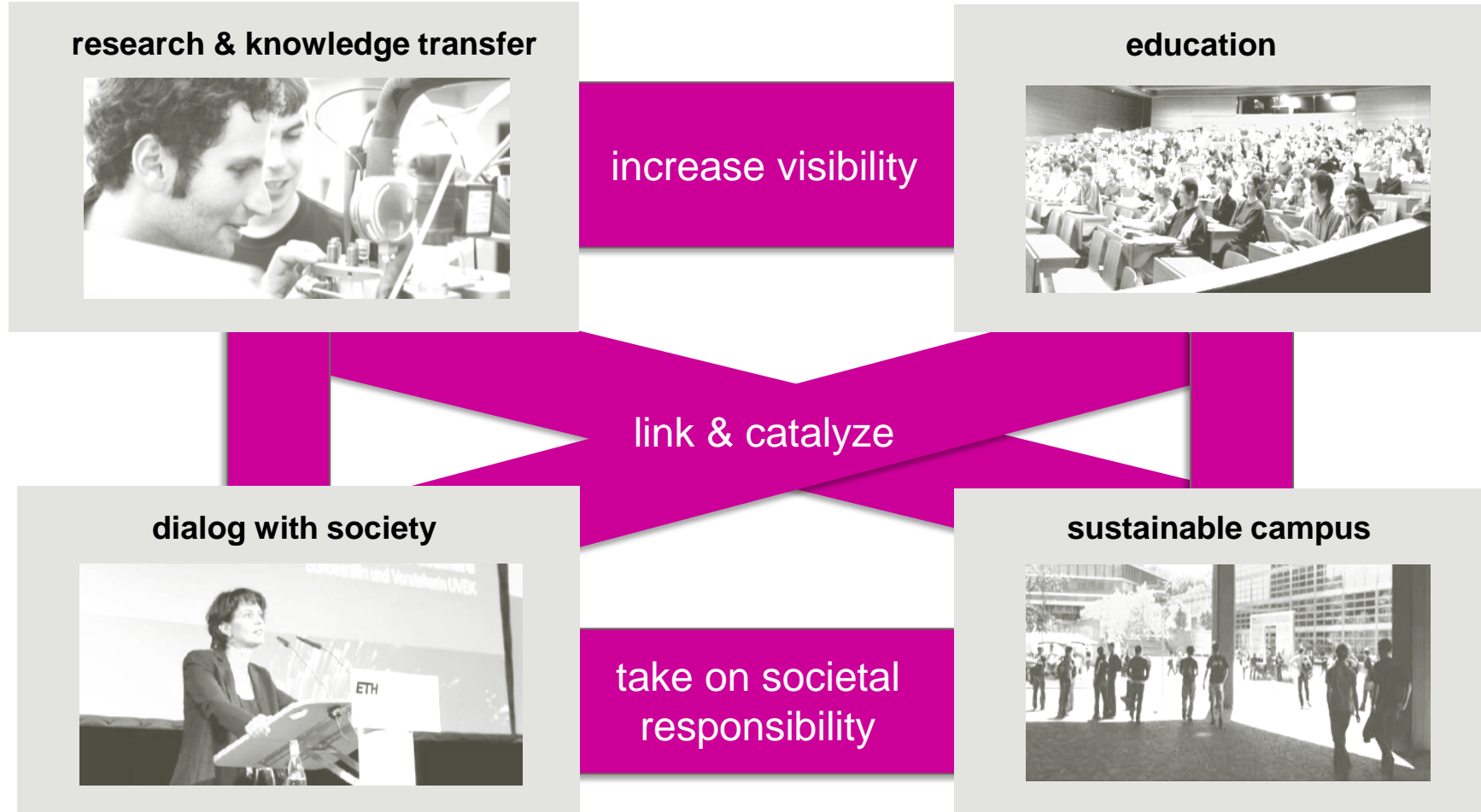
**dialog with society**



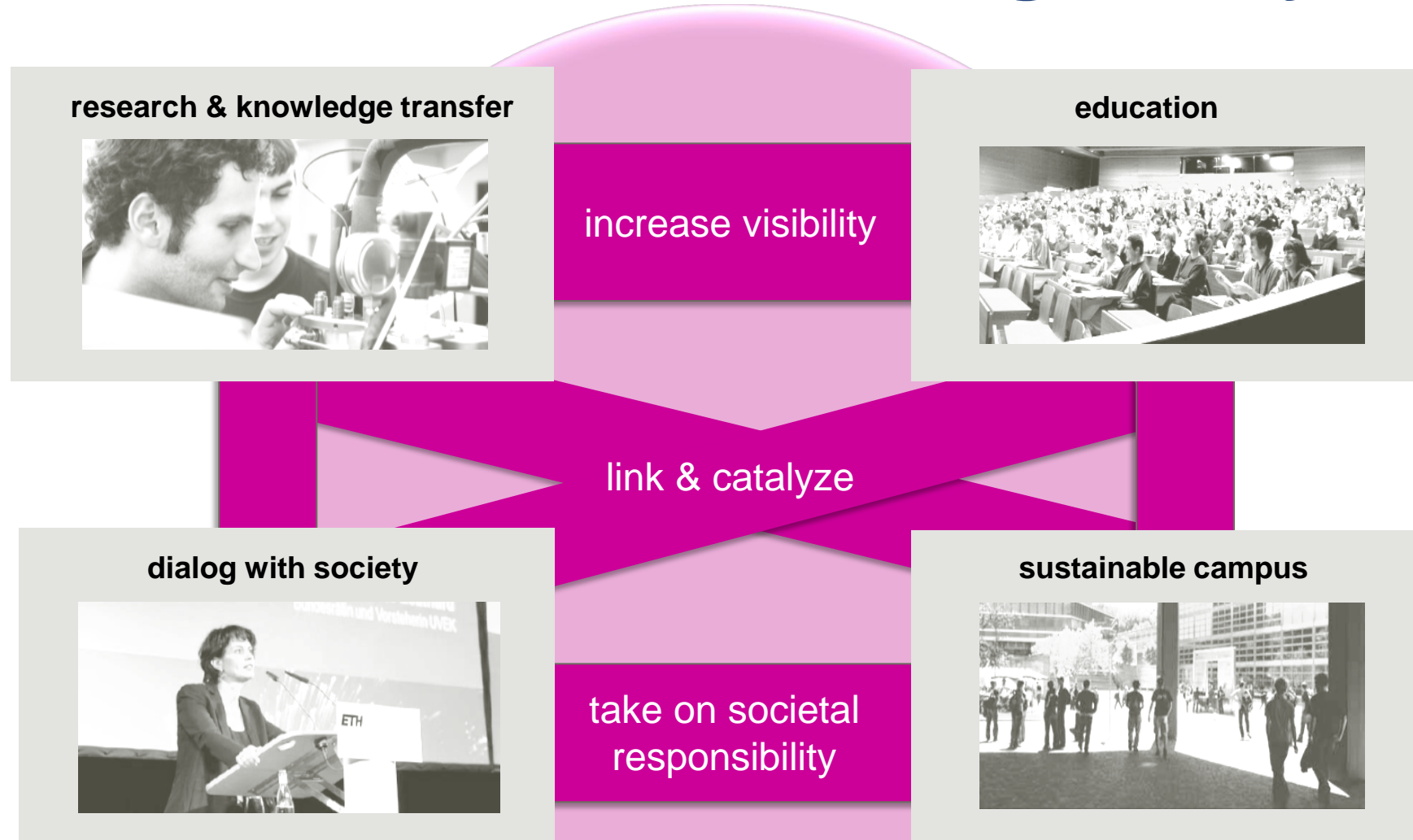
**sustainable campus**



# Mandate of ETH Sustainability



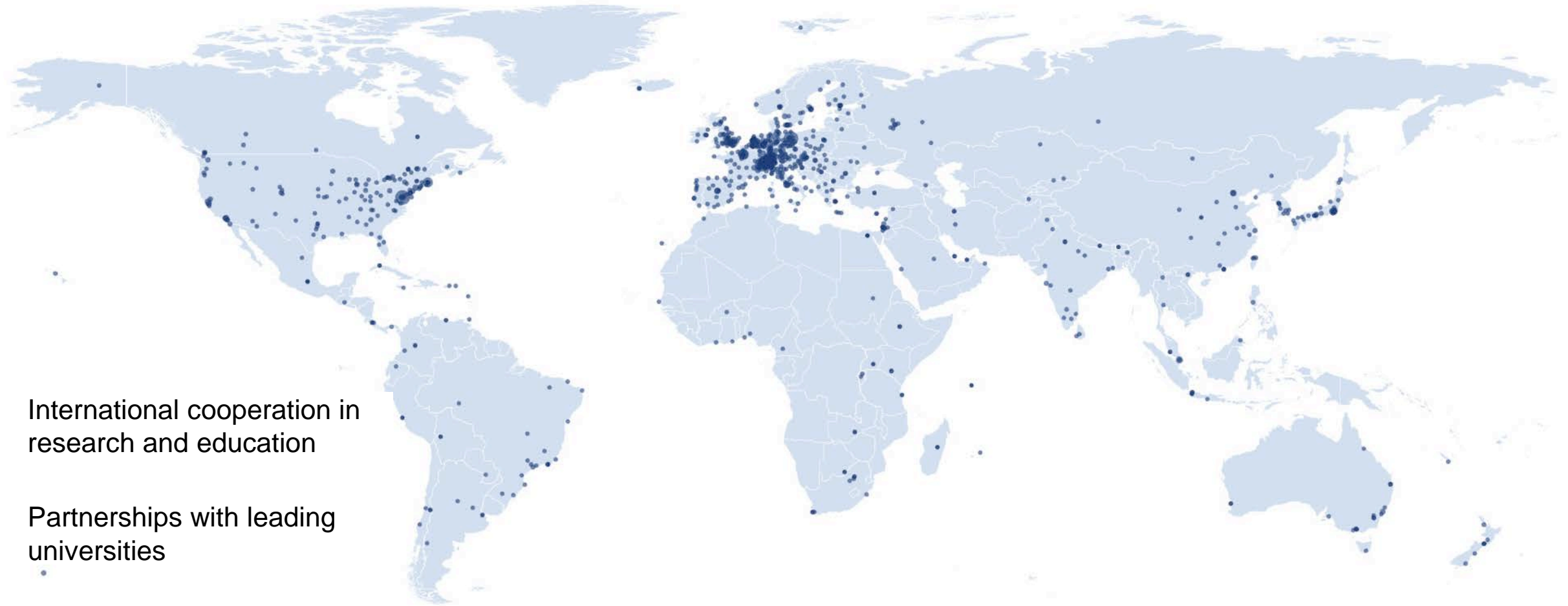
# Mandate at ETH Zurich – and globally



Our exchange within international networks for sustainability is based on our four strategic fields of activity.



## Connected with leading universities around the globe



- International cooperation in research and education
- Partnerships with leading universities

# Critical analysis of selected sustainability networks



INTERNATIONAL ALLIANCE OF  
RESEARCH UNIVERSITIES



**ISCN**  
International Sustainable Campus Network

**Global University Leaders  
Forum (GULF)**

# Critical analysis of selected sustainability networks



## 4 universities

- MIT
- Tokyo University
- Chalmers University
- ETH Zurich



INTERNATIONAL ALLIANCE OF  
RESEARCH UNIVERSITIES

## 10 universities

- Australian National University
- National University of Singapore
- Peking University
- University of California, Berkeley
- University of Cambridge
- University of Copenhagen
- University of Oxford
- University of Tokyo
- Yale University



**ISCN**  
International Sustainable Campus Network

**Global University Leaders  
Forum (GULF)**

## > 70 universities

- > 20 countries
- 25 GULF members
- Steering Committee
  - EPFL Lausanne
  - ETH Zurich
  - Nanyang Technological University
  - National University of Singapore
  - The University of Hong Kong

## Common attributes



INTERNATIONAL ALLIANCE OF  
RESEARCH UNIVERSITIES



**ISCN**  
International Sustainable Campus Network

**Global University Leaders  
Forum (GULF)**

- Networks are based on a regulatory framework (MoU, charter)
- Network goals are in line with our strategy
- Involvement of highest decision makers (presidential meetings)

## Distinctive attributes



INTERNATIONAL ALLIANCE OF  
RESEARCH UNIVERSITIES



**ISCN**  
International Sustainable Campus Network

**Global University Leaders  
Forum (GULF)**

- **Funding:** major donor
- **Focus:** research
- **Collaboration:**  
scientific teams
- **Students:**  
independent groups



## Distinctive attributes



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- **Students:** independent groups
- **Funding:** equal contribution of members
- **Focus:** research, education and campus
- **Collaboration:** institutional joint working groups
- **Students:** global education initiatives

## Distinctive attributes



INTERNATIONAL ALLIANCE OF  
RESEARCH UNIVERSITIES

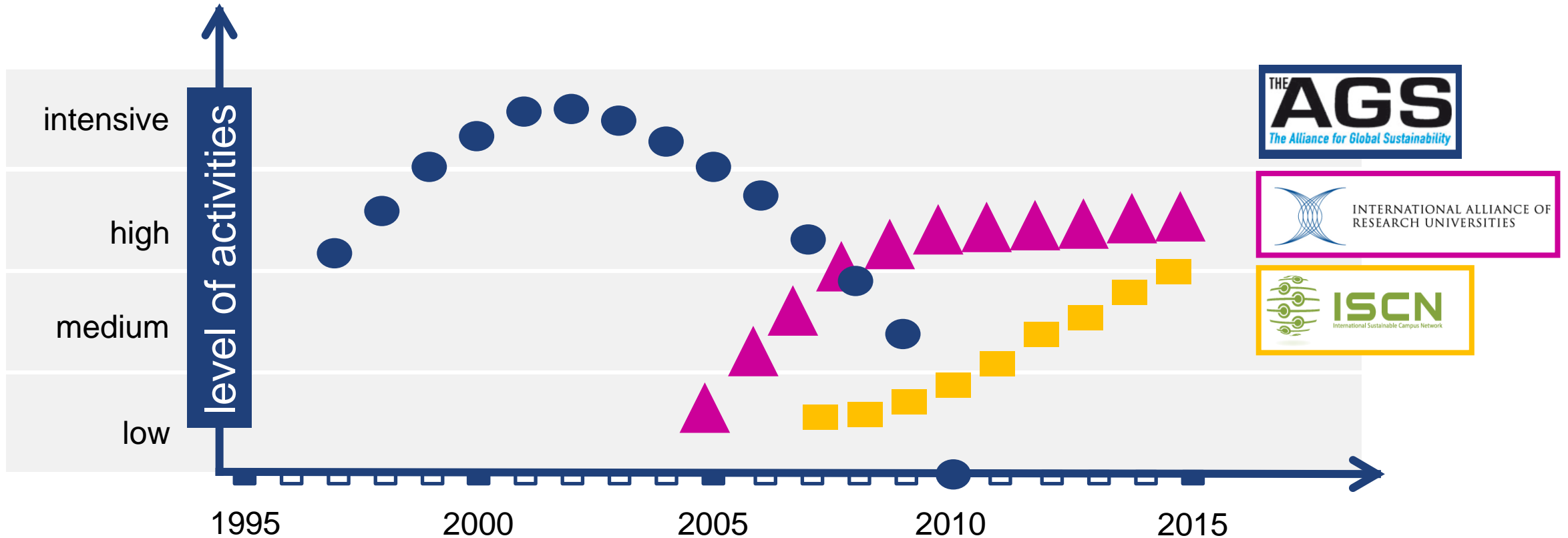


**ISCN**  
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- **Students:** independent groups
- **Funding:** equal contribution of members
- **Focus:** research, education and campus
- **Collaboration:** institutional joint working groups
- **Students:** global education initiatives
- **Funding:** member fee
- **Focus:** campus, education
- **Collaboration:** charter related working groups, conferences
- **Students:** student leadership award

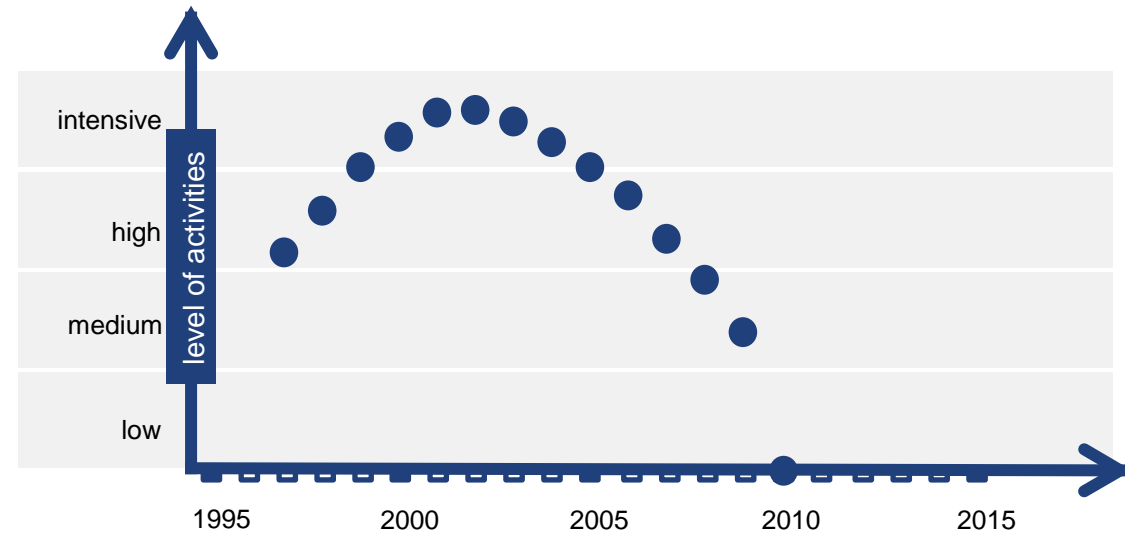
# What have we learned from AGS, IARU and ISCN networks?



## Lessons learned



- Successful research collaboration: Helpful but not sufficient.
- 4 universities: Below critical mass to ensure consistency
- Singular funding source: High risk, high potential



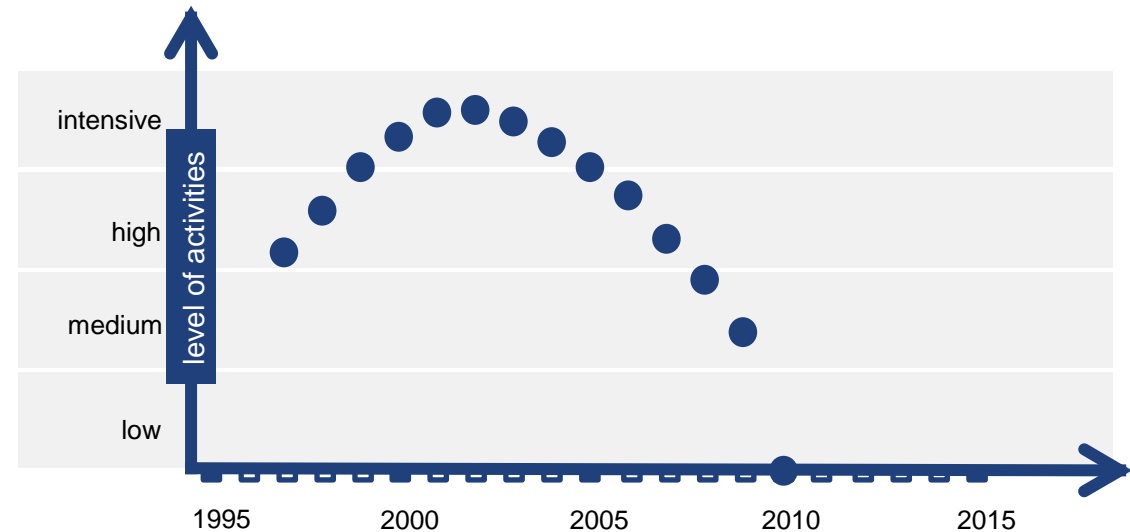
## Lessons learned



- Successful research collaboration: Helpful but not sufficient.
- 4 universities: Below critical mass to ensure consistency
- Singular funding source:  
High risk, high potential

↑ **Helpful as pioneer network and to shape an early agenda**

↓ **Difficult to keep the momentum**



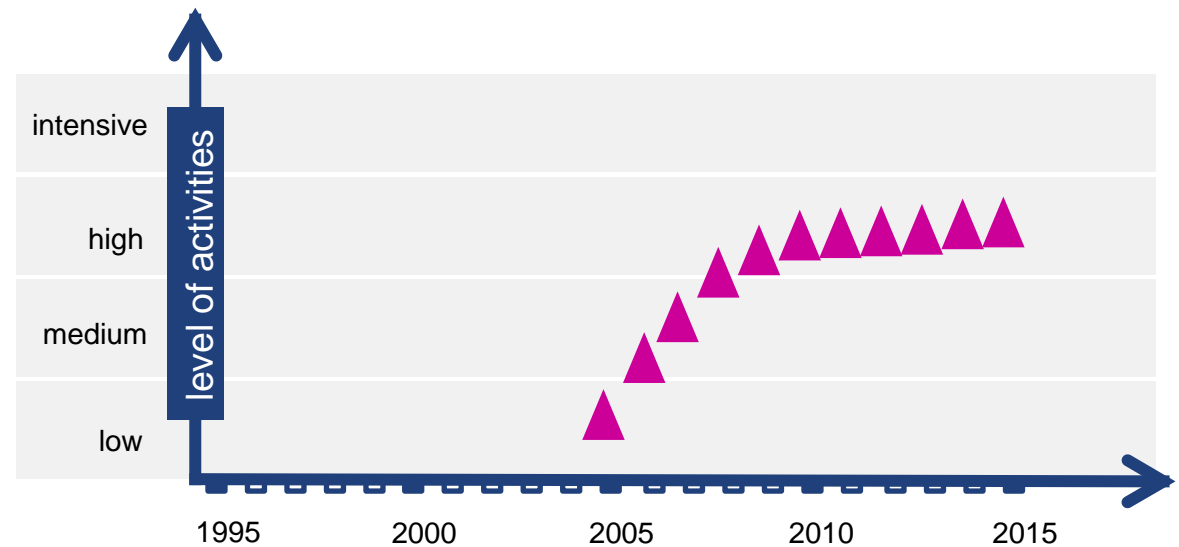


## Lessons learned



INTERNATIONAL ALLIANCE OF  
RESEARCH UNIVERSITIES

- Collaboration on various level of decision making: Presidents, senior officers, researchers
- Personal contacts: Efficient and effective working groups and projects
- Continuous funding: Long-term planning and independency



## Lessons learned

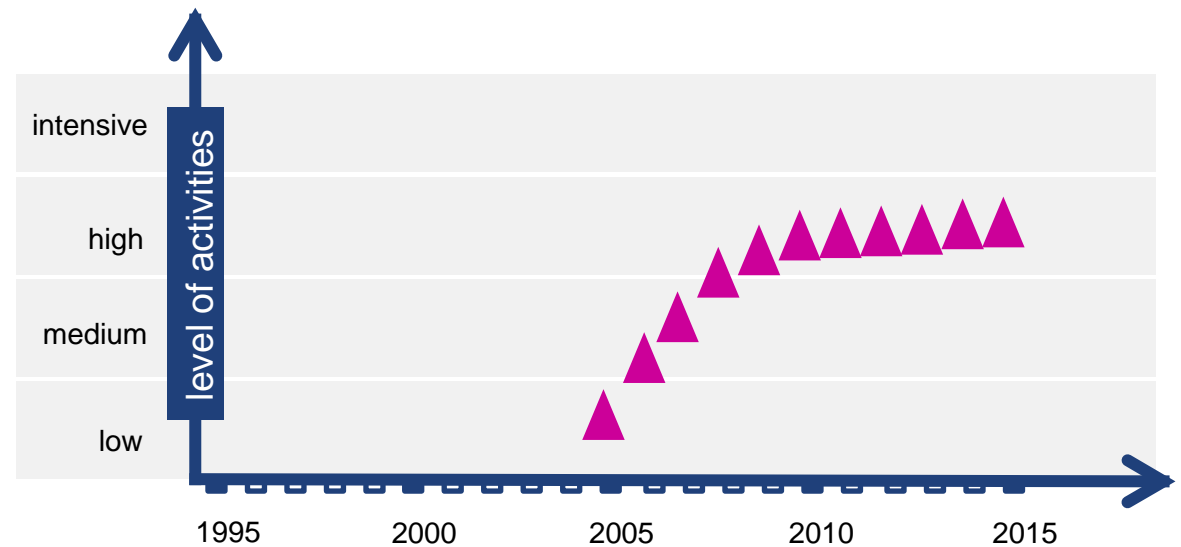


INTERNATIONAL ALLIANCE OF  
RESEARCH UNIVERSITIES

- Collaboration on various level of decision making: Presidents, senior officers, researchers
- Personal contacts: Efficient and effective working groups and projects
- Continuous funding: Long-term planning and independency

↑ **Helpful to develop new ideas,  
convince board members  
& establish long-term programs**

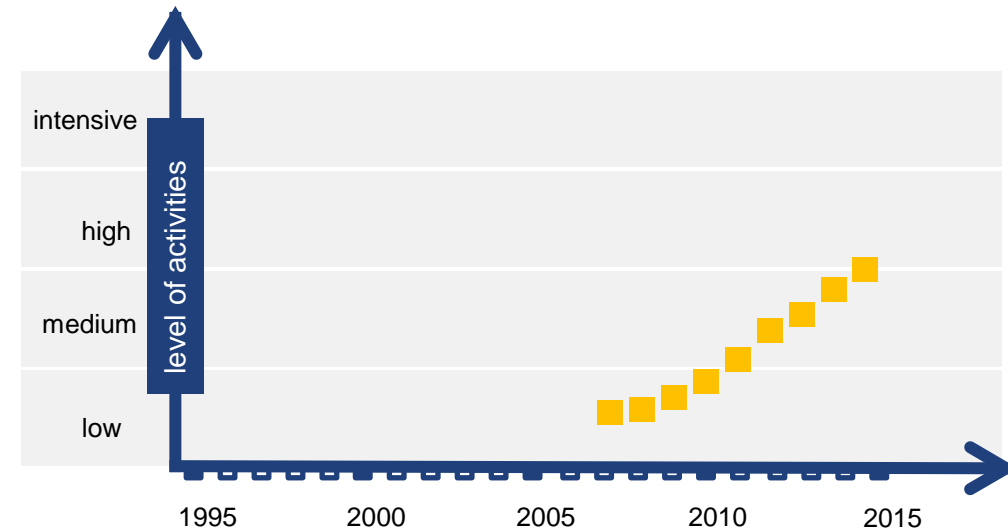
↓ **Difficult to magnify ideas**



## Lessons learned



- Peer to peer learning: Efficient exchange of know-how and best practice
- Award system: Integration of students, staff and faculty



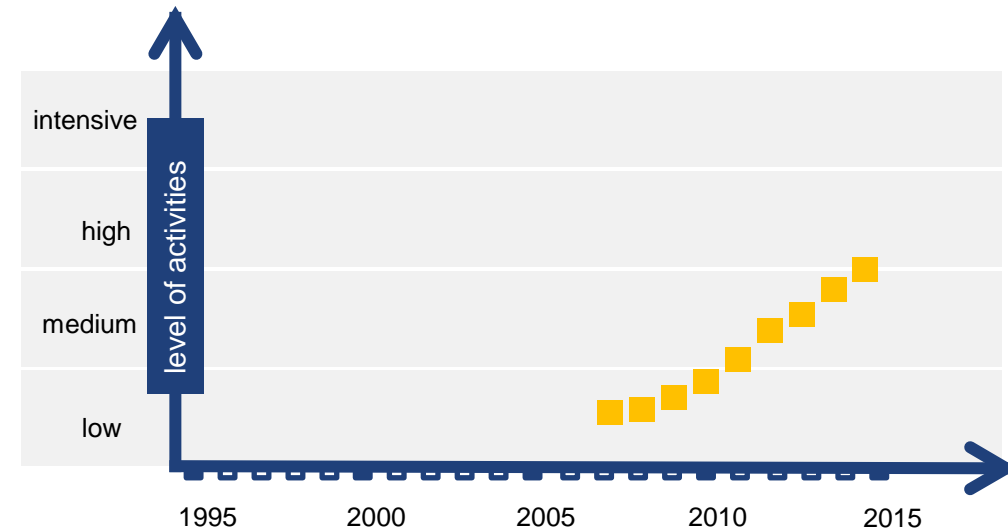
## Lessons learned



- Peer to peer learning: Efficient exchange of know-how and best practice
- Award system: Integration of students, staff and faculty

↑ **Helpful to spread ideas, share best practice examples and speak with a joint and powerful voice**

↓ **Difficult to work in long-term programs: ensuring relevant funding is crucial**



# Summary: Principles and key elements of successful international networks

## Two principles for successful sustainability networking

- «Less is more»
- «Choose complementary strategic networks»



# Key elements of successful networks







**Thank you for your attention.**



# Key Elements of successful networks

attract  
people



1. Keep member size small to allow personal contacts
2. Ensure regular working group meetings
3. Provide formats for intensive student exchange

magnify  
ideas



4. Support exchange of best practice
5. Enable collaboration in research, education & campus
6. Share living-lab experiences

create  
impact



7. Guarantee institutional commitment on highest level
8. Request transparent reporting of progress
9. Focus collaborative with one voice

# Less is more: Focus on international collaboration

Europe



North America



international



INTERNATIONAL ALLIANCE OF  
RESEARCH UNIVERSITIES



ISCN  
International Sustainable Campus Network



Global University  
Leaders Forum

global







## Top university in continental Europe

- # 13: THE Ranking (2014/15)
- # 12: QS Ranking (2014/15)
- # 19: Shanghai Jiao Tong (2014)

## Key statistics

	2000	2010	2013	Percentage women	Percentage international
<b>Students</b> (Headcount)	<b>10,693</b>	<b>16,343</b>	<b>18,178</b>	<b>31%</b>	<b>37%</b>
of which Bachelor students	n. a.	7,483	8,444	30%	19%
of which Master students	n. a.	4,233	4,778	30%	38%
of which Doctoral students	2,261	3,507	3,889	31%	68%
<b>Professors</b> (Headcount, includes dual professors)	<b>351</b>	<b>446</b>	<b>497</b>	<b>13%</b>	<b>68%</b>
Professors (full-time equivalents)	333	413	466	13%	69%
<b>Personnel</b> (full-time equivalents)	<b>5,464</b>	<b>7,284</b>	<b>7,914</b>	<b>32%</b>	<b>54%</b>
of which scientific staff	3,390	4,479	4,925	28%	69%
<b>Expenditure</b> (CHF million)	<b>1,059</b>	<b>1,359</b>	<b>1,512</b>		
of which federal financial contribution	915	1,082	1,147		
of which third-party funding	144	277	366		

# ETH Zurich at a glance



## Founded 1855

- Driving force of industrialisation in Switzerland

## ETH Zurich today

- One of the leading international universities for technology and the natural sciences
- Place of study, research and employment for approximately 25,000 people from over 100 different countries

## Reasons for success:

- Excellent education
- Ground-breaking fundamental research
- Putting new findings into practice