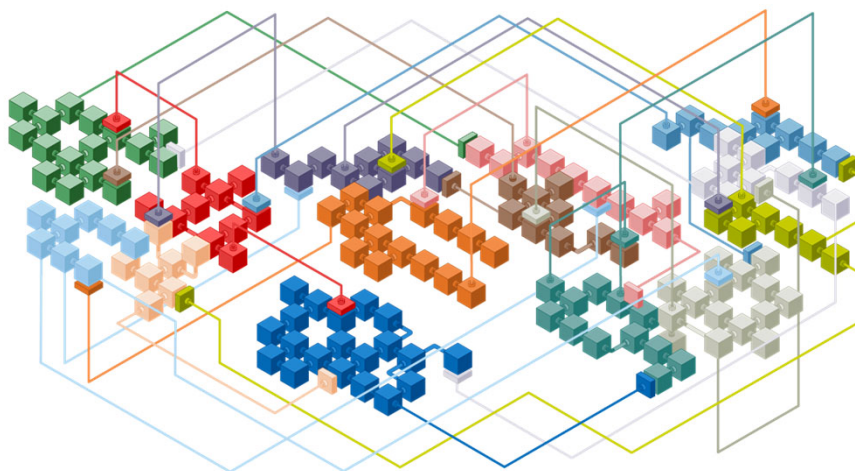


Connecting ...

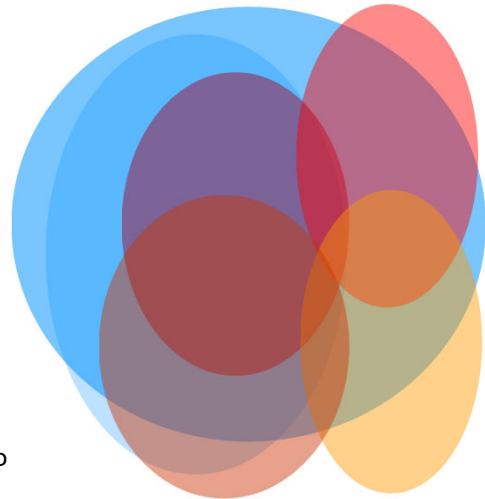


From Twente Thoughts

- ✓ Joint vision
- ✓ Agreed context
- ✓ Agreed educational goals (however from a high flight level)
- ? **How to implement, obstacles?**

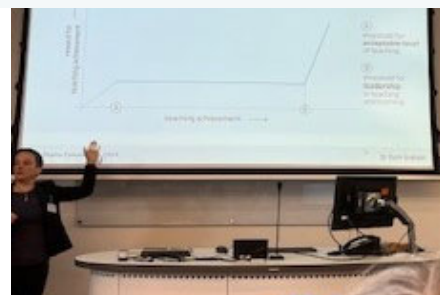
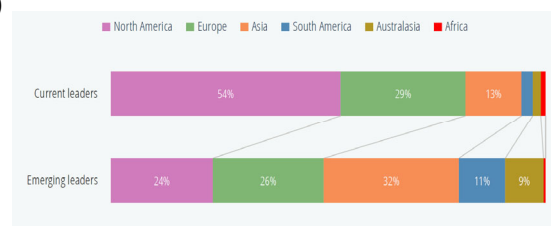
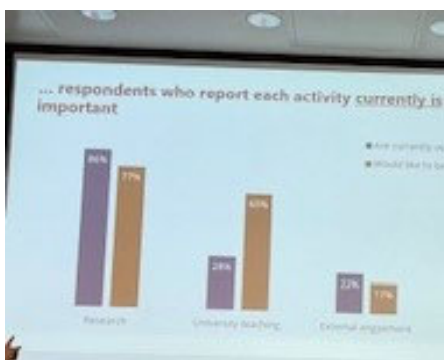
To Sheffield Surgery

- ? **Is Higher Education still fit for purpose?**
 - ? **Structural:** Traditional hierarchies/silos vs. innovation and inter/multi/trans disciplinary approaches to education? Academic freedom?
 - ? **Technological:** Inertia vs. agility, digital advances?
 - ? **Change:** Context and constructs empower or present a barrier to the roadmap to institutional change?



Sheffield Surgery Leadership in Higher Engineering Education

- Asia is taking a dominant position (agility, steering)
... goals coincide, instruments differ
- Europe has room for improvement



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- Educational Roadmap
 - But: doesn't this interfere with Academic Freedom?
 - ❖ Perhaps we missed to specify what is Academic Freedom.
 - ❖ Teaching is a collaborative effort not a random product of anarchy, driven by a variety of perfectly understandable individual interests.
 - ❖ Evidence-informed practices, proved new educational technologies, constructive alignment ... rely on collegiality and co-creation.
 - ❖ Steering? Authority and resources allocated to Heads of Programs.
 - Students
 - ❖ Role and responsibility
 - ❖ Design, steer (transparent) selection processes, assessments
 - ❖ Competencies to judge trustworthiness

Sheffield Surgery Leadership in Higher Engineering Education

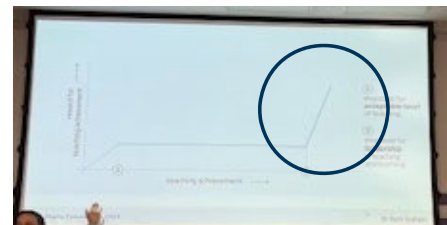
- Educational Roadmap
 - Time Scales
 - ❖ Systems are steered (framed, stuck...) by long-term systems' architectures ("constraints") with long time constants ...
 - ❖ The Generation 5 requirements are more recent, however,
 - expected changes (but possibly not adequately considered)
 - unexpected and recent changes (ecology, mistrust of science, war)
 - and European Universities permitting to learn from European partners (e.g. apprenticeship...)

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- Educational Roadmap
 - Systems are steered (framed, stuck...) by long-term system architectures ...
 - ❖ *It would be an enormous coincidence if the given constraints still served the purpose of preparing young talents in the best possible way.*
 - ❖ systematic approach for
 - „contradictory injunctions“ (focus, money, goals, speed...variety of criteria)
 - anticipating long-term trends
 - ❖ Have a mission at the institutional level...define values, corporate goals, processes for adhesion ...
 - Place education in this context:
E.g., rewards and structured ways to make the individual strengths and commitments of teachers visible ... in line with the University's mission.

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- Educational Roadmap
 - And what about the University Boards?
 - ❖ Mission requires commitment and obligation
 - ❖ Mission which is more than generic statements requires leadership for cohesion between strong individuals and trust
 - ❖ Let's proactively place teaching in the mission
 - ❖ Let's not be fooled by justifications via individual intrinsically motivated teaching heroes, let's rather talk about scaling and impact.
 - ❖ Best Practices and facilitators are known.



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- Educational Roadmap
 - And what about the University Boards and Ministries?
 - ❖ Sustainability in teaching does not work through projects, sustainability works through transformation.
 - ❖ Steering requires adequate visibility and evaluation of teaching and funding.
 - Design adequate metrics for measuring teaching impact and install them. Manage the discussion process with the „invisible“ group...hidden between thresholds.



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- Educational Roadmap
 - And what about the (external) stakeholders?
 - ❖ Professional analysis E4E at a European level –
 - Thinktank for new instruments, for degrees
 - Structure skills and competencies Entrepreneurship, Green, Digital Skills, Life Competencies, core engineering competencies and interlinking initiatives, no „Solve problems and shut up“...
 - Discuss the links to other educational stakeholders
 - Evaluate and moderate the roles of industry and academia in the future processes...
 - Who should be teaching?
 - Joint lobbying with politics? Even more so due to the European structure...

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- Educational Roadmap
 - And what about the (external) stakeholders?
 - ❖ Accreditation has to be controlled at the service of the Universitys mission.
 - ❖ Prepare to explain (not to defend), create a common basis for the argumentation
 - ❖ Make the questioning of the – apparent and hidden – constraints clearly visible „our graduates don´t live in a world bound by old constraints“.
 - ❖ Advocate for technologies to be unrolled (defibrillator problem), *reflect and prepare arguments ... reflect about the hidden elephants ... a bigger field, a better crop, or fewer farmers ...*

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- EU-USA (western) dimension
 - E4E – European University initiatives
 - Mechanisms – Cultivation – Shared values
 - Identify and name shared values
 - Understand the goals of various ecosystems, the instruments and the steering
 - Lobby for sorting research (Research Directorates) ... sorting shapes thinking

