THE MAASTRICHT UNIVERSITY SUSTAINABILITY CURVE

Alex Baker-Shelley
PhD Candidate; Organisational Transformation
Sustainability Intelligence Solutions; Action Research Entrepreneur
Ryderwilliam21@outlook.com
1. **Characteristics ‘Merkmalen’ of Transformative Sustainability**

2. **Context and Place:** Outlier in NL, Core in Euregio

3. **Timeline:** Quick History of Maastricht University

4. **The Current Situation:** State of Play now

5. **Take-Away Lessons** from UM’s Experience & **Open Discussion**
The world is a complex, interconnected, finite, ecological-social-psychological-economic system. We treat it as if it were not, as if it were divisible, separable, simple, and infinite. Our persistent, intractable global problems arise directly from this mismatch.
THE GREAT ACCELERATION

SOCIO-ECONOMIC TRENDS

- World Population
- Real GDP
- Foreign Direct Investment
- Urban Population
- Primary Energy Use
- Fertilizer Consumption
- Large Dams
- Water Use
- Paper Production
- Transportation
- Telecommunications
- International Tourism

EARTH SYSTEM TRENDS

- Carbon Dioxide
- Nitrous Oxide
- Methane
- Stratospheric Ozone
- Surface Temperature
- Ocean Acidification
- Marine Fish Capture
- Shrimp Aquaculture
- Coastal Nitrogen
- Tropical Forest Loss
- Domesticated Land
- Terrestrial Biodiversity Degradation


MAP & DESIGN: Felix Pham-Duchovna / Globics
WHAT DOES SUSTAINABILITY MEAN?

Planetary Boundaries
A safe operating space for humanity

- Climate change
- Biodiversity loss
- Freshwater use
- Land system change
- Ozone depletion
- Atmospheric aerosol loading
- Hydrologic cycle
- Biogeochemical flows
- Ocean acidification

The Imperative for Change, is Simply put

→ Radical human transformation of the environment **both necessitates** and **threatens** an equally radical transformation of human life

→ We must generate solutions through **active learning, experimentation and innovation**; it is necessary to go well beyond ideals

→ Nothing less than a transformation of our **social, organisational** and **economic** systems is needed for humanity to attain a fundamentally more **resilient, interdependent and harmonious** way of living, as part of the **ecologies it belongs to**.
“Educational institutions and governments should provide the institutional support, resources and legitimacy for youth-led change towards sustainability. This requires a combination of bottom-up initiatives and top-down steering. Mechanisms should include dedicated funding, institutional integration, working space, mandates, recognition, and training for youth-led sustainability initiatives.”

UNESCO Education for Sustainable Development Youth Statement, 2015
A RENEWED ROLE?
REDESIGNING UNIVERSITIES AS STEWARDS

- Universities as principal “change-agents” in society and the environment

- In order to move from the university to the regional environment, we first need to zoom into the university itself.

- Macro-level impact seems rooted in university actors learning to better effectuate and navigate their own organisation’s sustainability performance.
1) CHARACTERISTICS OF THE TRANSFORMATIVE SUSTAINABLE UNIVERSITY

"Merkmale" der transformativen Nachhaltigkeit

- Governance for Sustainability
- Effective Intrapreneurship
- Training Sustainability Competences
- Educational Innovation
- Fusing Academic Disciplines
- Scientific knowledge as a societal service
THE TRANSFORMATIVE ‘SUSTAINABLE’ UNIVERSITY

- Substantive **reconceptualisation** of the university institutional model, an old model, **centuries old**.

- Universities are **organisations of learning**, yet they struggle to set up structures to promote **their own organisational learning**

- However, many now realise they must **undergo transformations** themselves to be more **commensurate** to the **needs** of our society in the **twenty-first century**.
Helping transformations towards sustainability **around them** includes the **co-responsibility** for the **privilege** of learning and knowledge mastery that universities provide to students and researchers.

It behoves the university to **act as a steward for society**, in an academically **rigorous**, **pragmatic** yet **innovative** advocacy for transformational change towards sustainability, **nested within their regional environments**.
UNIVERSITIES AS CHANGE-AGENTS

• The capacity of universities to ‘redesign’ themselves so as to transform as organisations towards sustainability is interlinked and interdependent on their competencies of response to complex sustainability challenges.

• Universities need to effectuate and navigate their own transformative change, “in order to provide the knowledge and critical abilities an educated citizenry needs as the foundation for the transition to a thriving, just, and sustainable society” (Cortese, 2016, pp. 1, 4)
UNIVERSITIES AS CHANGE-AGENTS

• External capacity for transformation is linked to internal capacity for systemic change.

• Some universities derive success and progression in their academic missions from the extent to which they generate positive societal impact via their education, research and practice.
The establishment was founded on “the spread of university education, compensation for the large-scale closure of mines in the province [of Limburg], and the need for a university in the German-French-Dutch cultural triangle.” Klijn, 2016. The Maastricht Experiment 1976-2016
Underdogs leading interdisciplinarity and educational innovation

“Maastricht University has successfully cultivated an *inferiority complex* for years, but it is time to let go of these feelings.”

- They were pioneering
- They sought a niche
- They leveraged their place
What Distinguishes UM?

• Student mobility & an international orientation
• Decentralised organisational structure; physically and socially
• Academic freedom; “Kings in their castles”
• Periphery of the Netherlands, but central in the Euregio
• UM has always been an outlier with regards to other Dutch universities; therefore it has mandate to innovate
Research shows that PBL teaches students to:

- really understand the subject matter, rather just learning by rote
- collaborate with partners and small teams
- think critically with a view to solving problems
- study and work independently
- feel comfortable with public speaking

Problem-based Learning formed foundation of differentiation from other Universities, in NL as well as DE, BE and others.
3) TIMELINE & HISTORY

How does one characterise UM and its Sustainability Trajectory?
2010: First Green Office gets formal internal approval as a ‘student-driven, staff-supported, sustainability department.

2012: Maastricht University wins ‘Sustainabul’ award as Dutch university with most transparent Sustainability efforts.

2013: Innovative ICIS-Green Office PhD project begins on organisational transformation for sustainability of universities.

2017: UM-wide Sustainability Policy.

2014: Communications Strategy Intervention: lack of strategic internal and external communications strategy between UM organisational units.

2015: Efforts focus on Governance and Organisational Sustainability Performance. Reporting Framework produced.

2016: External Arcadis consultant begins Sustainability Policy work. Rootability commissioned to Audit Green Office.

2017: ‘Sustainable UM 2030’ document approved based on external and internal consultation, from Arcadis and the UM environmental advisor at FS.

2018: Implementation of Taskforce roadshows across UM in education, research and operations.

- SDG’s are academic year theme
- UMGO SDG Living Lab.
- ICIS-GO PhD concludes, insider action research findings are shared in community.

2014: Decentralisation + Faculty Siloes.
THE GREEN OFFICE: STUDENT-DRIVEN, STAFF-SUPPORTED UNIVERSITY SUSTAINABILITY UNIT

A growing movement

https://www.greenofficemaastricht.nl/
International Centre for Integrated assessment and Sustainable development (ICIS)
Maastricht University’s scientific institute for sustainable development

Vision: research, education and learning for sustainable development provides a knowledge base for policymaking and innovation in the pursuit of sustainability.

Mission & Impact: ICIS contributes to the scientific debate about sustainable development, but also tries to achieve a constructive social impact towards sustainability in practice.
In February 2012, Maastricht University receives the Sustainable Award as Dutch university with the most transparent sustainability efforts.

Jeanine Gregersen – Director of Marketing and Communications - upon receiving the award in the name of UM: “We owe this award to the driving force of our students at the Green Office and we as management embrace this honour wholeheartedly.”

Andre Postema – Vice President of Maastricht University: “Looking back to 2011, it strikes me that the Maastricht University Green Office has achieved so much. Naturally, it faced numerous challenges, but to put it in a nutshell: The experiment works.”

Maastricht University Green Office
Dr. Judy Walton

“I place rootAbility at the forefront of the sustainability education transformation in Europe.”

Founding Executive Director of American Association for the Advancement of Sustainability in Higher Education (AASHE), USA

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“GREEN OFFICE SPIN-OFF

‘ROOTABILITY’

Social Enterprise for sustainability in Higher Education

Product + Service: Green Office Model

Now: European-level Network Impact
4) THE CURRENT SITUATION

The Impulse Now:
Sustainability needs to move from being seen as a worthy project involving a few change-agents, to a central feature of the university ethos, intrinsic to its values, character and strategy.

Analysis:
Unless everyone is intrinsically motivated, it is better to implement subtly not aggressively.

“It’s easier to ask forgiveness afterwards than to ask permission before”.
• **Experimental approach to problem solving** observed at the GO - academic knowledge of relevance was ‘put into their hands’, **solution-oriented, small-scale interventions** that took place from 2014-2016, had positive outcomes, despite most failing! It captured leadership attention.

• **Resilient relationship** between the **academic research + teaching centres** of sustainability science and teams of **change-agents**

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**Prospects:**

1. **ICIS-UMGO SDG Living Lab. Intrapreneurial sustainability**. The **Mapping of Sustainable Development Goals (SDGs)** at Maastricht University (UM) aims to evaluate the activities of the University, through the areas of policy, research, education, innovation and societal engagement.

2. **City-level SDG planning**: Improving connections/collaboration between students, the municipality and external organizations to accomplish the SDGs.
Building on and implementing the Triple Helix of university-industry-government relations - UM sets up and guides regionally-based innovation hubs in the areas of materials and natural sciences.

- Focus on spurring start-up incubation
- Entrepreneurship & Knowledge Transfer
- Keeping graduate talent in the area
- Preventing Brain Drain and generating 21st-century ready jobs

“University research may function increasingly as a locus in the “laboratory” of ... knowledge-intensive network transitions” (Etzkowitz & Leydesdorff, 2000).
Researchers at the Maastricht UMC+ feel a strong public responsibility to contribute towards the health of the population and are continuously working so as to have a societal impact, both in the shorter and longer term. In the Quality Assurance process Societal Impact plays an important role. In the Standard Evaluation Protocol 2015-2021 ‘relevance to society’ is one of three assessment categories, next to ‘research quality’ and ‘viability’.

1) Development or improvement of new products, services and processes with an economic target (knowledge exploitation).

2) Application of research results in the public and social domain, such as education, care, and culture.

3) Communication about science, for example media presentations, interviews, expert panels and lectures.

**IMPACT COURSE: learning to utilise knowledge**

On 9 May, Maastricht University launched its first IMPACT COURSE: an exclusive course about societal impact of research and knowledge utilisation. The UM wants to create awareness among its researchers about social impact of research and the opportunities of knowledge utilisation through this course, and how to realise more impact with their research. The IMPACT COURSE is interdisciplinary, which means that participants come from all UM faculties, including from the MUMC+ and Zuyd Hogeschool. This stimulates collaboration between faculties and knowledge institutes. The approach is hands-on and the end result of the course is a concrete plan for the utilisation of the participants’ own research.
SCALING ACADEMIC AND LOCAL COMMUNITY ACTORS

KNOWLEDGE FOR SOCIETY

Research Lab for Sustainable Development and Innovation

Knowledge Sharing for Urban Sustainability and Catching up to a Circular Economy

A SITE4Society multi-stakeholder workshop at UNU-MERIT
Science, Innovation, Technology & Entrepreneurship for Societal Welfare
June 13-15, 2018

UNU-MERIT Boschstraat 24 6211 AX Maastricht The Netherlands

Venue: UNU-MERIT, Conference Room 0.16-0.17
Universities that undertake a transformative and open inquiry into their own workings as organisations trigger pathways to sustainability in their regional environments by leveraging the interdisciplinary knowledge they produce.

They develop transformative competencies, design thinking, and service logics that enable them to improve their surrounding communities and society, exactly because they have striven to attain a greater depth of sustainability intrinsically.

They, through learning and research on themselves, can better apply knowledge of structural transformations within and about their surrounding societies.

Being nested as a sub-system in society, their sustainability is also dependent on that of their social environment.
IF YOU WANT TO MAKE AN IMPACT, START FROM THE INSIDE, OUT!

- UM was an early adopter when it formally approved the establishment of the Green Office in 2010.
- In 2016, after years of inertia, UM lagged behind in sustainability performance of public research universities in the Netherlands.
- In 2018, promising signs of collaboration, innovation, and entrepreneurial spin-offs, are generating an ecosystem of small organisations externally, that are linked to UM’s own organisational learning internally.
- This organisational development leaves UM more in sync with its societal surroundings, adopting civic responsibility.
- Sustainability transformation and impacts extrinsically, appear driven by intrinsic logic.
- This long-term investment requires adaptive, iterative and self-reflexive organisational-societal learning.
“On the surface, there was always an impeccably realistic world, but underneath, behind the backdrop’s cracked canvas, lurked something different, something mysterious or abstract…”

“On the surface an unintelligible lie; Underneath, the unintelligible truth.”

Sabina in Milan Kundera’s The Unbearable Lightness of Being