

TRANSFORMING UNIVERSITY EDUCATION IN THE FACE OF SUSTAINABILITY ISSUES

Ellen Vandenplas | Future Forward Summit | Brussels, 17 October 2018

in collaboration with Katrien Van Poeck, Maarten Deleye, Brent Bleys, Michel Depaepe & An Cliquet

CONTENT

“Transforming university education in the face of sustainability issues.
Enablers and constraints for curriculum reform and didactic innovation”

International Journal of Sustainability in Higher Education

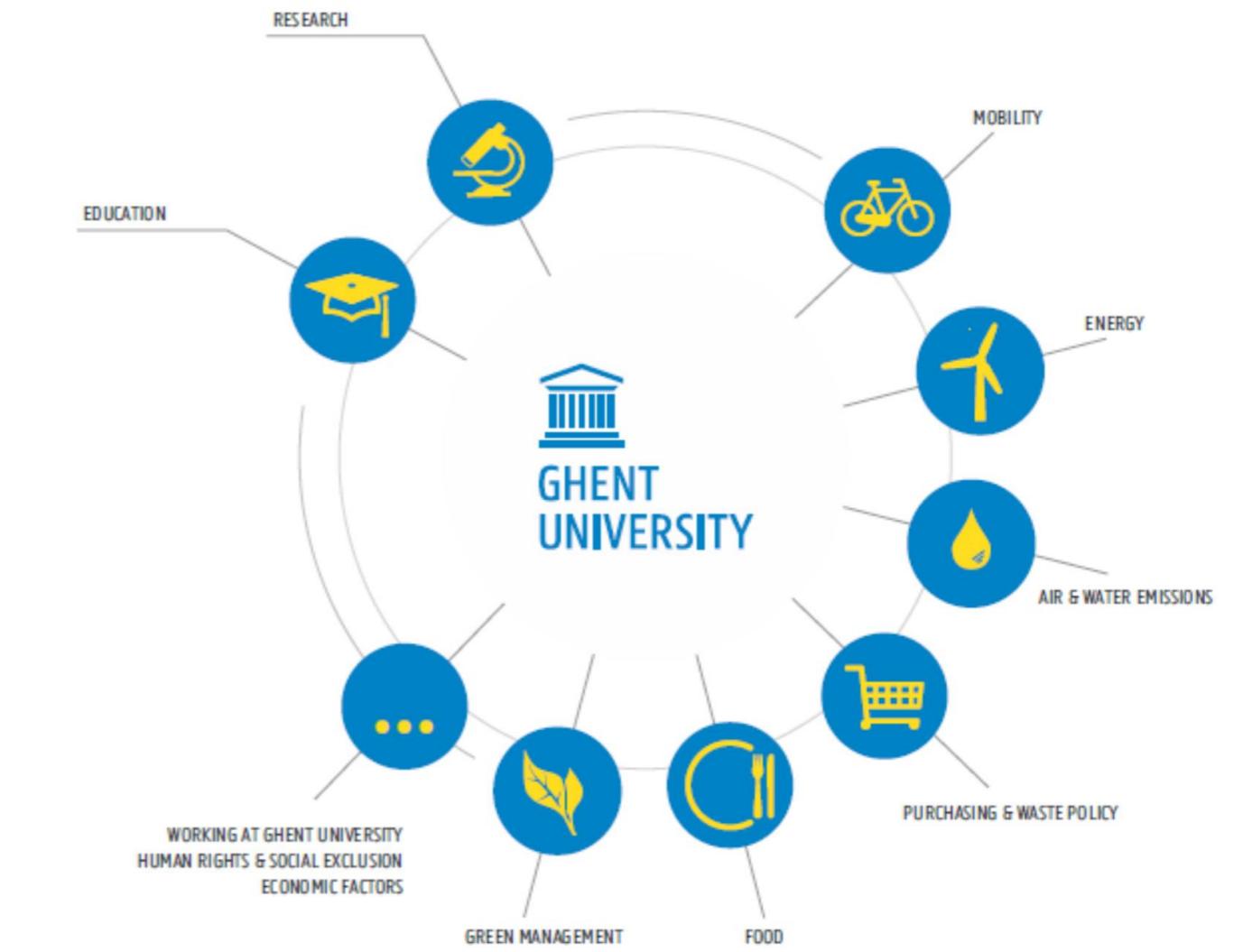
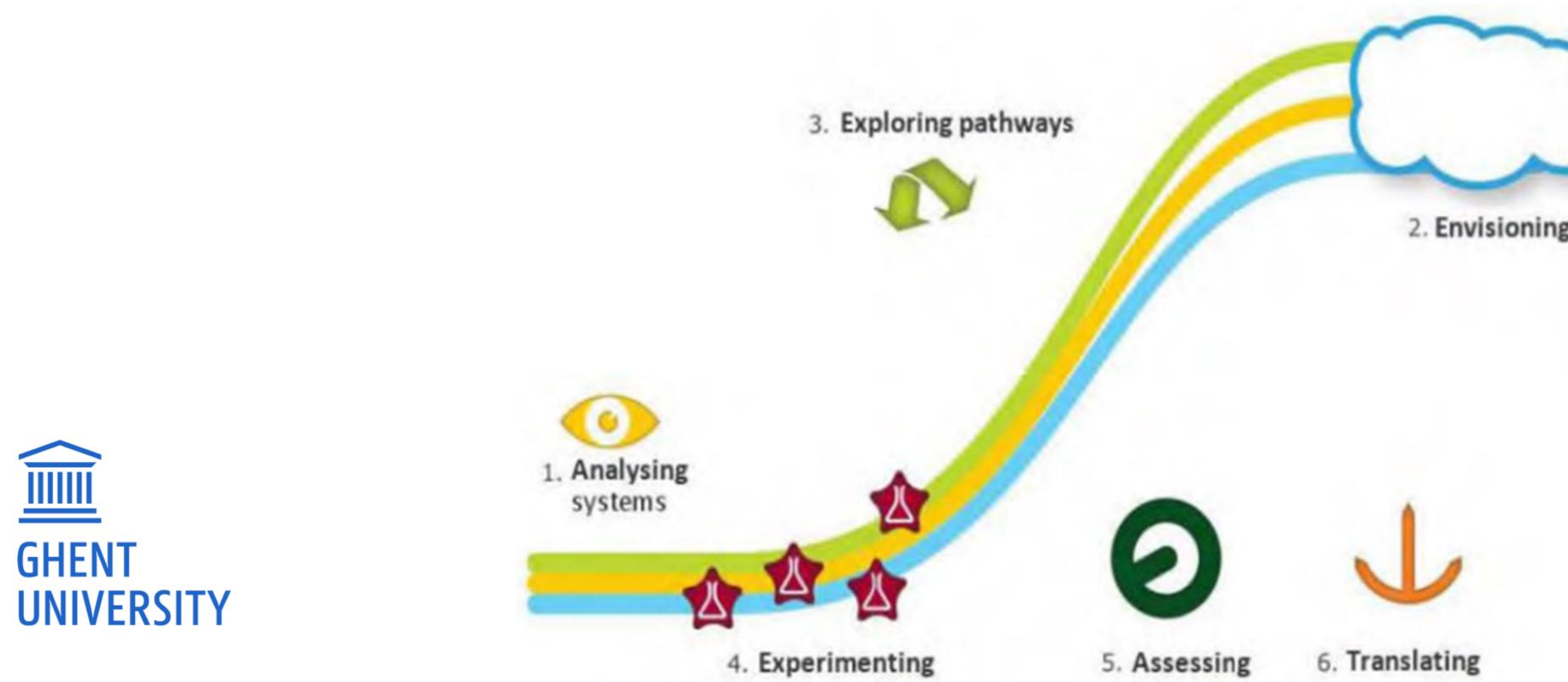
(*Katrien Van Poeck, Ellen Vandenplas, Maarten Deleye, Brent Bleys, Michel Depaepe & An Cliquet*)

- **3 case studies** at Ghent University: Business Administration – Electro-mechanical Engineering – Law
- **Enablers and constraints** for integrating sustainability in university education programmes
- **Transition toward sustainable higher education?**

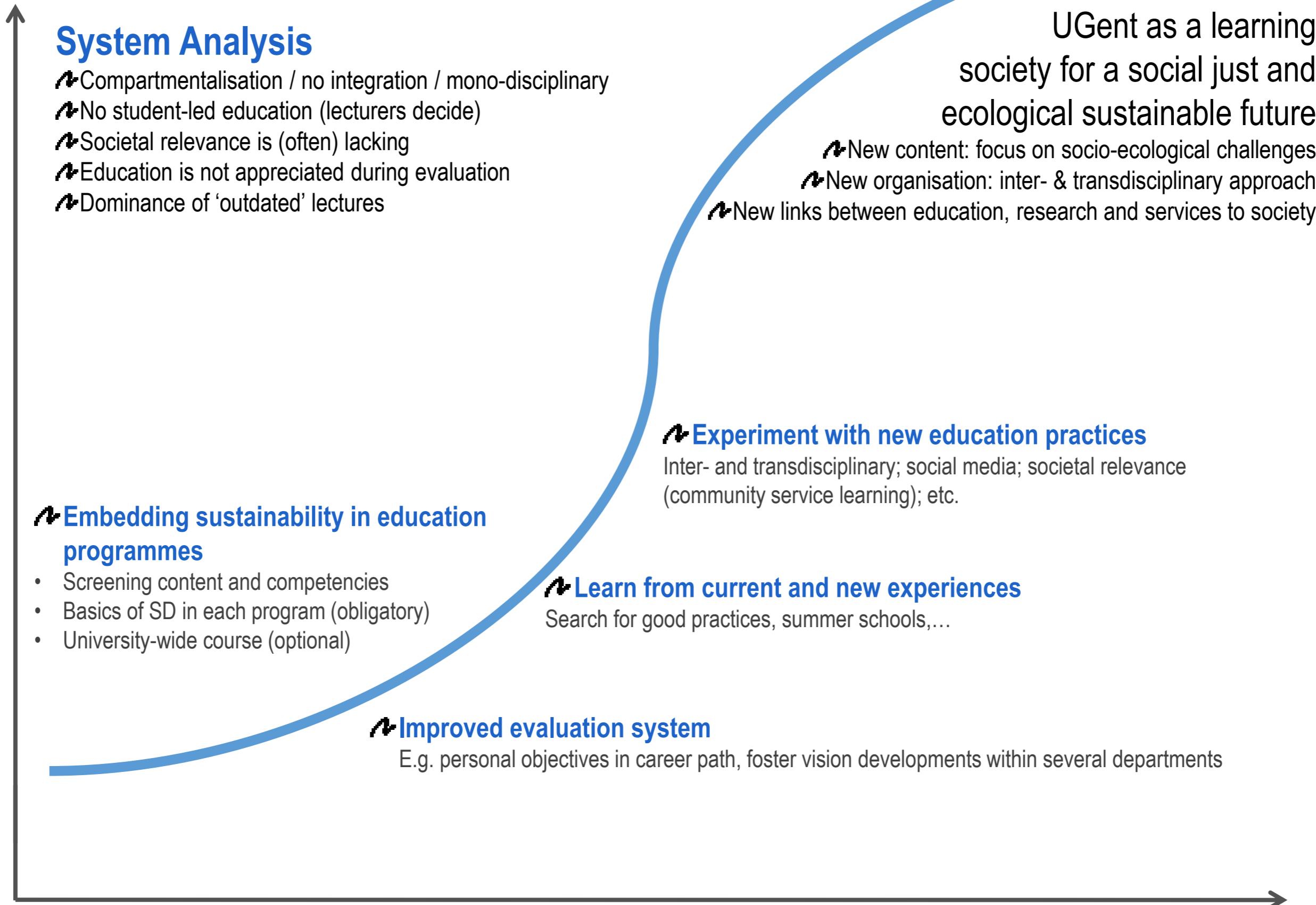
3 CASE STUDIES AT GHENT UNIVERSITY

CONTEXT

- Think-tank **Transition UGent** (° 2012)
- Open innovation network
- >200 participants: staff, students, experts, management,...
- Formulate ideas for a sustainable university
- Aim: developing a long-term vision for embedding sustainability in UGent
- Whole institution approach
- Transition management



CONTEXT



CONTEXT

Sustainability vision:

“Ghent University wants to be a **leading knowledge institute** for a future that is ecologically, socially and economically sustainable within a local and global context”

*(Ghent University Board,
December 2013)*

Ambitious:

“Integrating sustainable development systematically and substantively
in the entire range of education”



CONTEXT

- Education Innovation Projects, UGent Dept. of Educational Policy
- 20% project coordinator (1 day/week), 2014-2016 – 2018-2020
- Pilot projects in e.g. business administration, electromechanical engineering, law
 - + up-scaling (faculty level) & downscaling (course level: learning network)
 - + interfaculty collaboration (Urban Academy – ‘De Stadsacademie’)
- Workshops: self-assessment, vision development and action plan
- Task force: 8-10 people
 - Teachers
 - Students – alumni
 - Field representatives
 - Education director



CONTEXT

Workshops:

- Task force + regular consultation of larger group of colleagues
- Self-evaluation:
 - Screening programme catalog (course specifications)
 - Questionnaire for students, teachers, (future) employers
- Vision:
 - Discussion: Why embedding SD in the curriculum?
 - Faculty training (task force) about sustainable development
- Action plans
 - Goals and actions
 - Transition pathways – short-term / long-term

CONTEXT

Self-assessment: Mapping the current situation:

- SD in policy documents of the faculty/programme?
- SD themes: Relevant for the programme? Addressed?
- Courses: SD-content? Didactic methods?
- Sustainability competences as explicit objectives? E.g. SD knowledge, critical reflection, systems thinking, multi-perspectivism...
- Why should SD be more strongly embedded?
- Strengths and opportunities?
- Weaknesses and threats?

CASE STUDY METHODOLOGY

- Action research: Authors collaborated in the pilot projects as practitioners and researchers
- Data collection:
 - Document analysis
 - Participatory observation
 - Questionnaires
 - Focus group
- Qualitative data analysis: identifying enabler and constraints
- Multi-Level Perspective: Connecting the empirical findings to an earlier conducted system analysis of sustainable higher education (Deleye et al. 2018)

CASE 1: BUSINESS ADMINISTRATION

Self-assessment:

- Marginal attention for SD: e.g. optional courses
- Many thematic opportunities: consumption and production, social marketing, green finance, fair trade, growth versus de-growth, corporate social responsibility (CSR), etc.
- No attention for sustainability in the education policy plan of the Faculty
- Explicit SD competencies at the level of the BA/MA programme ‘Business Administration’

CASE 1: BUSINESS ADMINISTRATION

Vision:

- Why?
 - Broad education (Bildung)
 - Preparing students for complex societal challenges
 - “Intellectual fairness”: SD goes to the core of economics (needs, choices...)
- How?
 - Disciplinary knowledge, insights, skills
 - Multi-perspectivism
 - Awareness-raising, arousing interest, critical reflection... rather than clear guidelines for well-defined behavior change

CASE 1: BUSINESS ADMINISTRATION

Action plan:

- Goal 1: Coherent, integrated attention for SD throughout the curriculum
 - No blind spots – no overlap
 - Clear and visible for students and teachers
- Goal 2: Education innovation
 - Faculty training
 - Disseminating didactic materials, tools and methods
- Goal 3: Structurally embedding SD in educational policy
 - Faculty's policy plan
 - Programme catalog – course specifications

CASE 2: ELECTROMECHANICAL ENGINEERING

Self-assessment:

- Broad support (e.g. 70% students and 100% employers want more ESD)
- Marginal attention in the curriculum today (in some courses)
- Mentioned in programme's vision text
- Sustainability in the faculty's research
- Industrial support: important for companies, regulation...
- Focus on sustainable/green technology – not on social, political, economic dimensions of SD
- ESD requires time and space in the curriculum
- Academic freedom

CASE 2: ELECTROMECHANICAL ENGINEERING

Vision:

- Why?
 - Good engineering
 - Societal relevance
 - Industrial relevance
 - Scientific relevance
 - Good education
 - Branding
- How?
 - Disciplinary knowledge, insights, skills
 - Multi-perspectivism
 - Awareness-raising, arousing interest, critical reflection... rather than clear guidelines for well-defined behavior change

CASE 2: ELECTROMECHANICAL ENGINEERING

Action plan:

- Goal 1: SD as a structural, connective thread in the curriculum
 - Mapping themes and relevant content
 - Connecting content to courses, didactic methods and competences
- Goal 2: Faculty training
 - On sustainable development (broad view – beyond “techno-fix”)
 - On sustainability education and didactics
- Goal 3: Education innovation
 - Follow-up project
 - Focus on course BA3: interdisciplinary engineering project

CASE 3: LAW

Self assessment:

- Many thematic opportunities – remain unutilised
- Limited knowledge about Sustainable Development (Goals) on the part of students and teachers
- Marginal attention for the links between law and sustainability in the curriculum today
- Marginal attention for a critical evaluation of law and for law as an instrument for societal change

CASE 3: LAW

Vision:

- By 2025, sustainability is structurally embedded in the curriculum
- The students gain insight in the relation between law and sustainable development and are able to mobilise law in the pursuit of sustainability / Sustainable Development Goals

CASE 3: LAW

Action plan:

- Track 1: A basic, compulsory curriculum thread on sustainability in the law programme, visible for students and teachers
- Track 2: A specialised, elective curriculum thread through which students learn to think creatively about law in relation to sustainability
- Track 3: Inter-/multi-/transdisciplinary supervision of mastertheses on sustainability
- + training for teachers

ENABLERS AND CONSTRAINTS

MULTILEVEL PERSPECTIEF

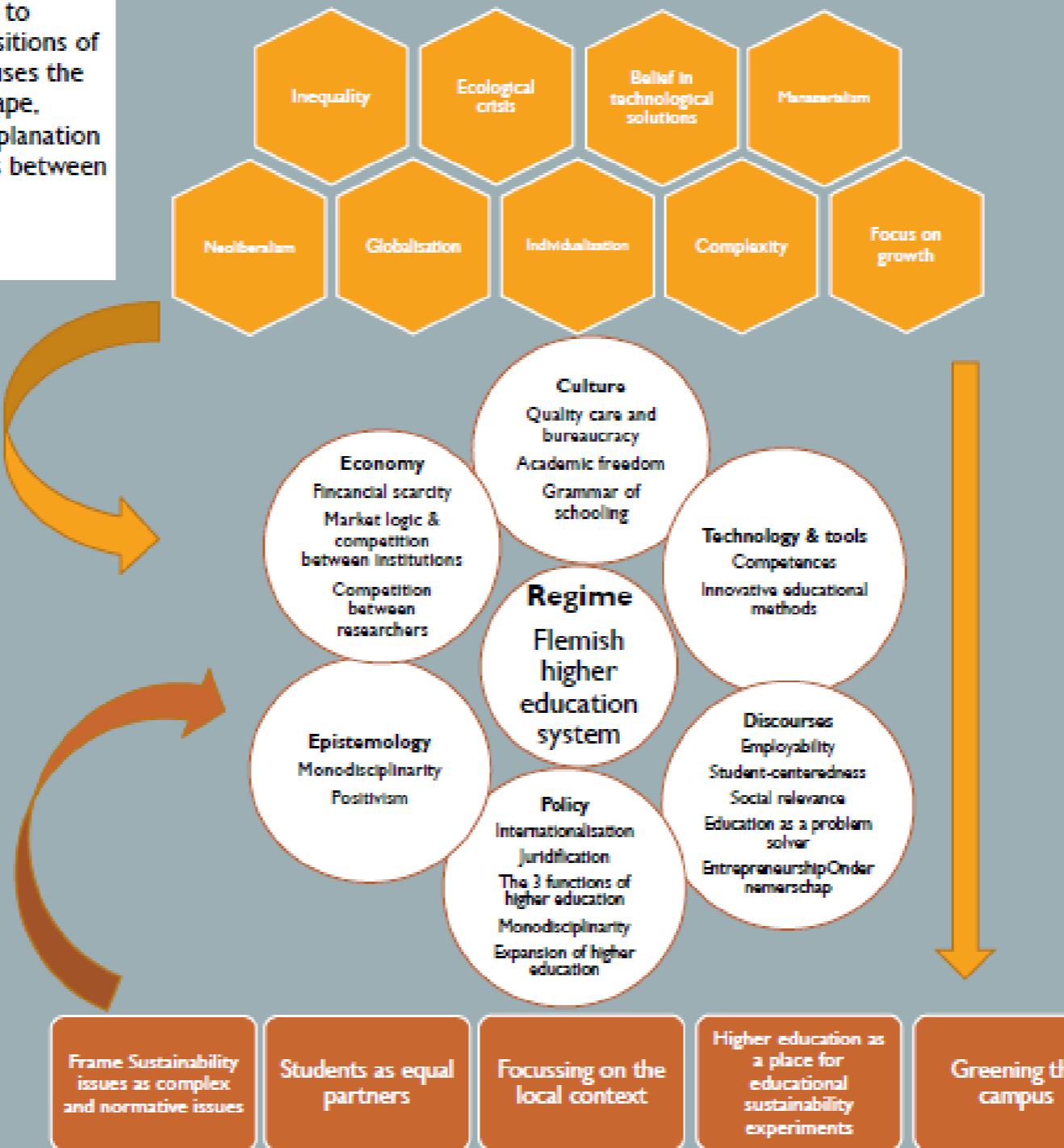
SUSTAINABILITY IN UNIVERSITIES AND UNIVERSITY COLLEGES A MULTI-LEVEL PERSPECTIVE ON THE FLEMISH HIGHER EDUCATION SYSTEM

The multi-level perspective helps to better understand sustainability transitions of complex socio-technical systems. It uses the analytical distinction between landscape, regime and niches (see figure and explanation below) and approaches the dynamics between these levels as the key to achieving a transition.

Socio-technical landscape: Large overarching societal and natural evolutions put pressure on the regime and can stimulate niches. We identify 9 landscape trends.

Socio-technical regime: a semi-coherent set of dominant structures, practices and culture. In this study, it encompasses the Flemish higher education system, characterised by a cluster of 21 interrelated "regime characteristics".

Small networks of actors support and bring about innovations in so-called niches which function as incubation rooms. Once they are mature, these 5 types of niches can form an alternative and can, together with landscape pressure and internal problems in the regime, bring about a transition of the regime.



5 lock-ins

1. Matthew effect of accumulated advantage
2. Compartmentalisation of institutions
3. Focus on technological innovation
4. Competitions between institutions
5. Survival of the fittest (researcher)

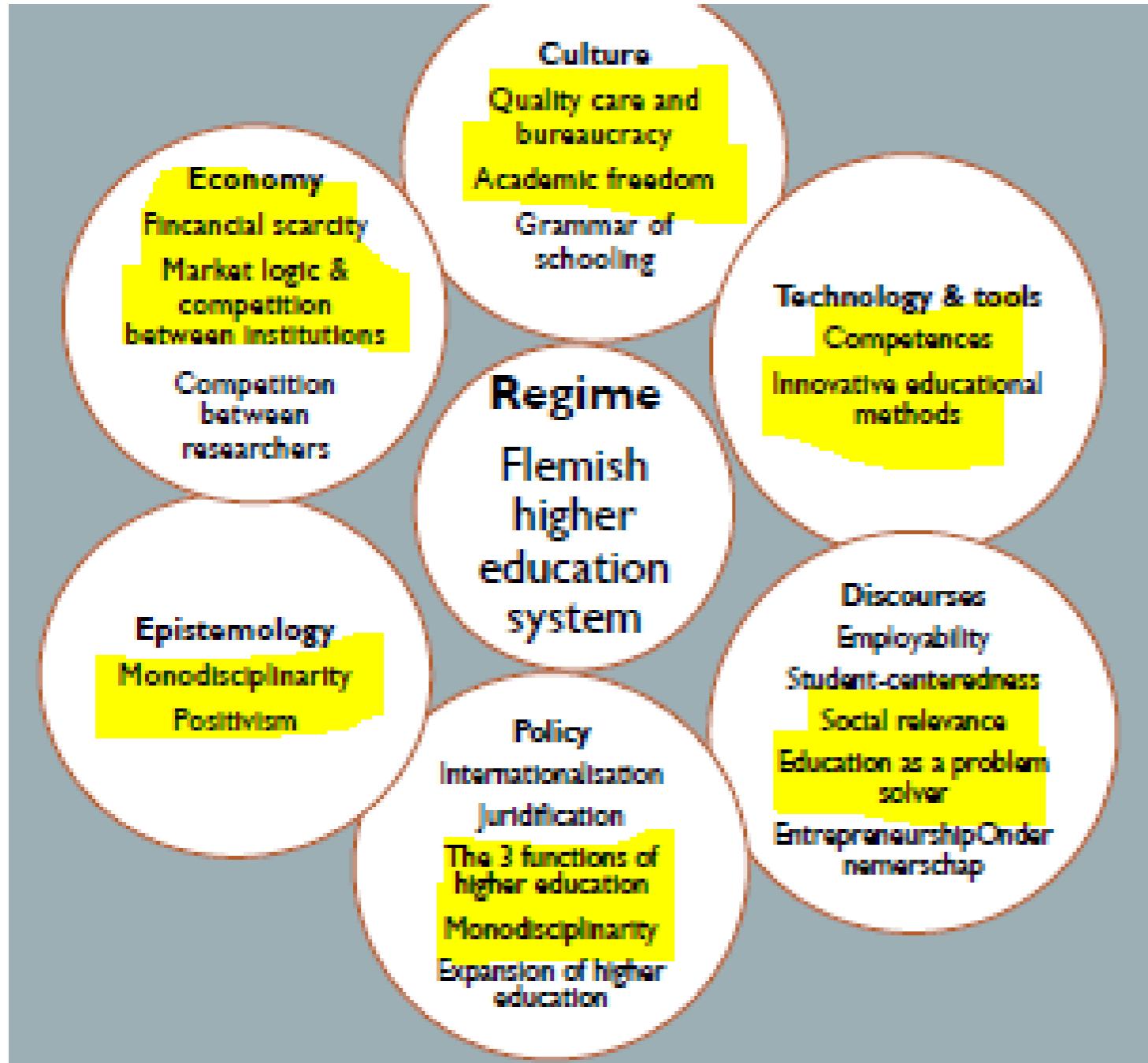
Internal problems & contradictions

1. Increasing student population vs. Limited investments
2. Quality care as a goal in itself
3. Monodisciplinary structures vs. Acknowledging complexity
4. Job preservation as job content
5. Tension between research & education

Most important opportunities for a transition (5 out of 17)

1. Playing the sustainability card in inter-institution competition
2. Sustainable Development Goals
3. Focusing on local challenges
4. Needs of employers and companies
5. Educational innovation projects

GRASPING THE OPPORTUNITIES – REGIME



Enablers:

Onderzoek - onderwijs - dienstverlening als drie-eenheid
Marktlogica en concurrentie tussen instellingen
Maatschappelijke relevantie
Vernieuwende onderwijsmethodieken

Constraints:

Financiële schaarste
Monodisciplinariteit
Positivistische kijk op onderzoek en onderwijs

Enablers/constraints:

Kwaliteitszorg en bureaucratisering
Onderwijs als probleemoplosser
Competentiegericht onderwijs
Vrijheden van lesgevers en onderzoekers

GRASPING THE OPPORTUNITIES

5 lock-ins

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Lock-in:

Vastgeroest in technologische innovatie

Interne problemen en contradicties:

Toenemende studentenpopulatie vs beperkte investeringen

Kwaliteitszorg als doel op zich

Monodisciplinairiteit vs complexiteit

Onderwijs of onderzoeksinstelling?

Opportuniteten - Enable

Duurzaamheid als troef voor competitiviteit

SDG

Inspelen op behoeften van werkveld en bedrijfsleven

Onderwijsinnovatie in functie van duurzaamheidseducatie

ENABLERS (1/3)

Vele bestaande aanknopingspunten

- In elke opleiding zijn er veel aanknopingspunten te vinden

Sustainable Development Goals

- SDG's tonen breedte van het concept DO

'Stap voor stap'-aanpak

- De vele aanknopingspunten met DO explicet kaderen in DO
- De vele aanknopingspunten coherenter samenbrengen in een leerlijn
- Opletten met te radicale communicatie
- Opletten om niet te grote veranderingen te willen doorvoeren
- Een aanbod voor de studenten die verder willen werken aan DO

ENABLERS (2/3)

Steun beleid

- Directeur onderwijs
- Duurzaamheidsvisie
- Onderwijsvisie ‘multiperspectivisme’

Een juiste mix van trekkers

- Enthousiastelingen die zich creatief willen inzetten
- Aanwezige (onderzoeks)expertise
- Betrokkenheid van de OC
- Onderwijsondersteuner die het régime zeer goed kent

DO leeft bij studenten en werkveld

- **Vraag van studenten** (door enquête en studentenevaluaties) en werkveld (door enquête)

ENABLERS (3/3)

Intensieve begeleiding op maat

- Begeleiding piloottraject ‘DO in opleidingen’ (inhoudelijk, pedagogisch, administratief) door CDO
- Persoonlijk gesprek met de lesgevers die DO kunnen integreren
- Vorming

Discussie/debat binnen de opleiding over DO-integratie

- Nood om het gesprek er over aan te gaan

CONSTRAINTS (1/3)

DO is niet neutraal

- Weerstand student
- Weerstand docent
- Consensusvisie op DO niet mogelijk/wenselijk

Gebrek aan ervaring met DO-integratie

- Weinig ervaring met DO-integratie bij docenten: inhoudelijk en didactisch
- Moeilijkheid: bgl normatieve keuzes maken bij *wicked issues*

DO in een apart vak

Te weinig of eindige begeleiding

Tegenstrijdige discours in dezelfde opleiding

- Tegenstrijdig discours blijft bestaan/overheersen naast DO

CONSTRAINTS

Te weinig kritische massa

- Enkel enthousiastelingen zonder voldoende kritische massa die volgt
- Enthousiastelingen die opgebrand geraken

Overheersing technofix-idee

Bijkomende administratie

- De administratieve last als men voor een leerlijn kiest

Positivistische kijk op wetenschap

- Visie op wetenschap als kennisleverancier, leverancier van oplossingen

Financiële schaarste

Hervormingsdrang

- Vandaag DO, morgen ?

CONSTRAINTS

Organisatie onderwijs

- Niet alleen ‘wat’ onderwezen wordt maar ook ‘hoe’
- Doorgeslagen specialisatie
- Te weinig ruimte voor algemene vorming
- Organisatie service-onderwijs

Focus op mono-disciplinair

- Andere taal van disciplines (bv. interdisciplinaire masterproef)

Focus op onderzoek

- Waardering onderwijs (in evaluatiemodel)?

TRANSITION TOWARD SUSTAINABLE HIGHER EDUCATION?

'BUSINESS AS USUAL'

In alle opleidingen worden er DO-inhouden gevonden tijdens inventarisatie-oefening

'We moeten het meer structureren doorheen de opleiding en meer expliciet maken voor de studenten'

- Structureren = (officiële of officieuze) leerlijn.
- Expliciet maken = expliciet linken aan DO en het DO (of SDG) - kader toelichten.

Transition toward sustainable higher education or business as usual?

REFORM ORIENTED

Maar niet alle opleidingen gaan de discussie ten gronde aan

Bijvoorbeeld:

- Laat de opleiding (en bij uitbreiding het wetenschapsgebied) momenteel wel voldoende ruimte om **kritisch na te denken** of het eigen wetenschapsgebied wel zo goed bezig is in relatie tot DO en DO-vraagstukken?
- Laat de opleiding voldoende ruimte om **actie** te ondernemen in relatie tot DO en DO-vraagstukken?
-

En niet alle opleidingen hebben een ‘policy entrepreneur’

Kick-off: transition toward sustainable higher education?

IN DETAIL: PROGRAM OF LAW

“We kijken veel te veel naar het Recht als iets statisch waar we ze moeten introduceren en te weinig naar het recht als een instrument voor verandering”

“We bereiden onze studenten onvoldoende voor om kritisch na te denken of actie te ondernemen in relatie tot DO”

Kiem om verandering te bewerkstelligen in opleiding

Zeer ambitieus plan van aanpak

Nood aan structurele veranderingen in onderwijs regime

- 'drempels interdisciplinair en transdisciplinair werken'
- 'normativiteit'
- 'ruimte voor 'social ecological wicked issues'
- ...

QUESTIONS?

- Wie zijn jullie?
- En:
 - Wat neem je mee uit de workshop naar je eigen praktijk?
 - Welke uitspraak is blijven hangen?
 - Hoe inspireert het je om rond duurzaamheid te blijven werken?
 - Andere leerelementen? Inzichten?

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