UNIVERSITY OF TORONTO SCARBOROUGH

Mainstreaming Sustainability *at UTSC*

Presentation to: Campus Council

April 21st 2021

Maclellan\Miller (2021)

OUTLINE: Mainstreaming Sustainability at UTSC

1. *OLD SCHOOL* AGENCY
2. UTSC STRATEGIC PLAN
3. FUNCTIONAL CONSIDERATIONS
   - Research
   - Teaching
   - Knowledge Events
   - Knowledge Application
4. FOUNDATIONAL CASE STUDIES
5. CONCLUSION
   - Our Niche?
   - Transparency and a Functional Language

Internal operating environment;
within the control of the organization:

- *Labour*
- *Materials*
- *Facilities*
- *Financial Capital*
- *Management*

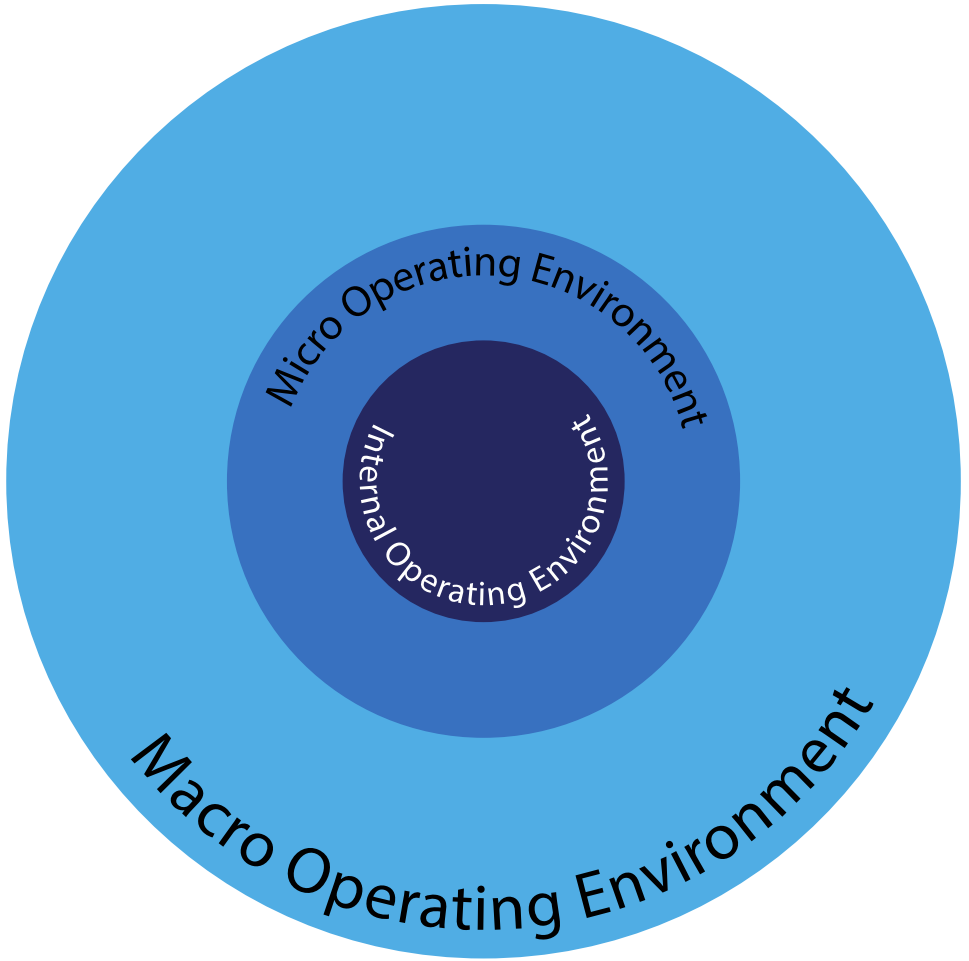
(Simon Mitchell, Gebreal Shifferaw, Karen Cheung, Duhyun Cha, Kirushanthi Ratnasabapathy, Jeanny Yao, and Melissa Szopaa, MacLellan UTSC 2016)

External *micro* operating environment; outside the control of the organization:

- *Partners*
- *Future Students, Faculty and Staff*
- *Sector Peers*
- *Vendors, partners and support*
- *Local Public/community*

External *macro* operating environment; outside the control of the organization:

- Political Environment
- Cultural environment
- Technological environment
- *Natural environment*
- Demographic environment
- International environment



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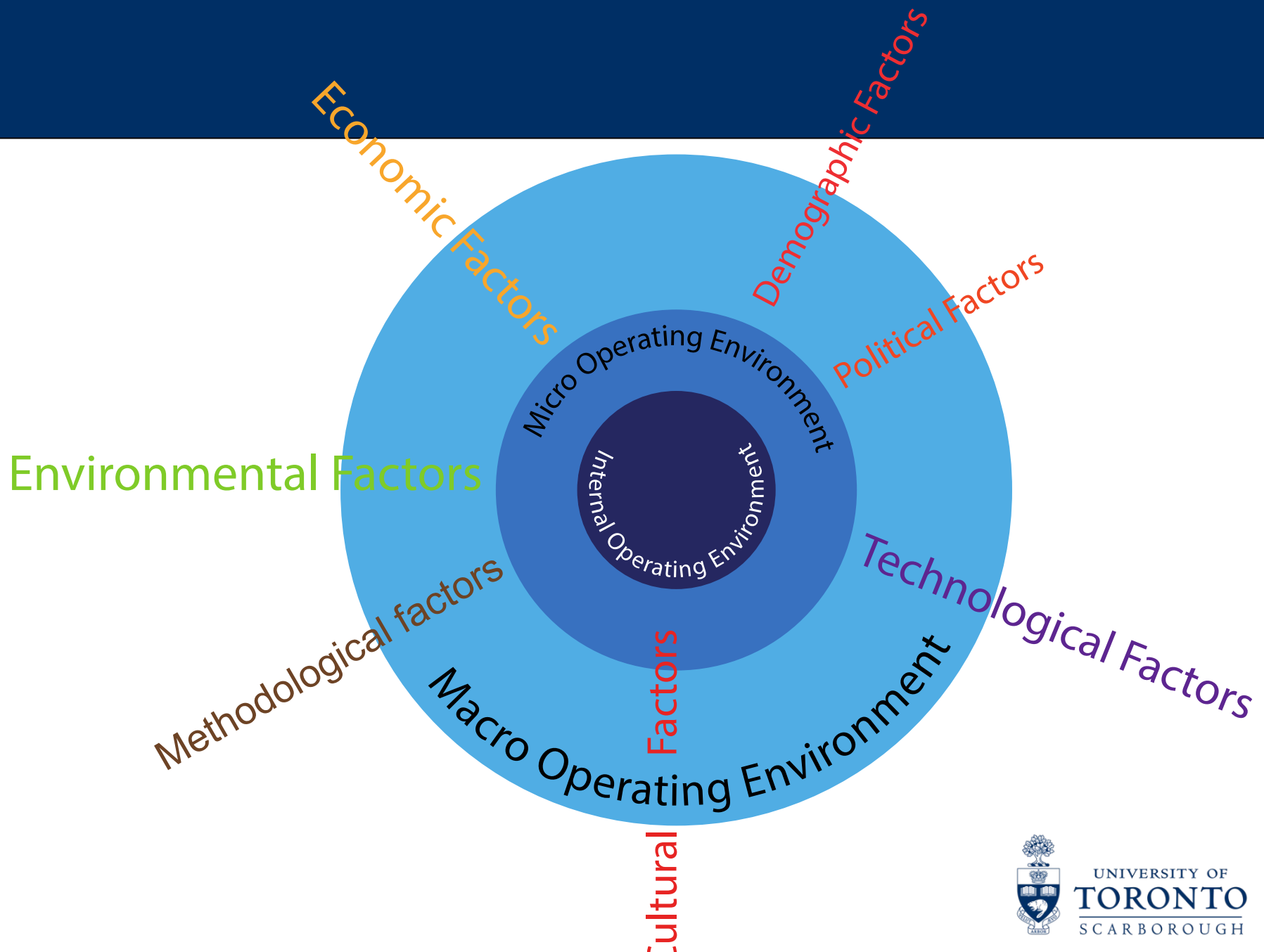
An '*old school*' approach passively interprets external *change* as beyond its' control[i]. Alternatively, the institutional actor can rely upon the expertise of others to '*keep it in the game.*'



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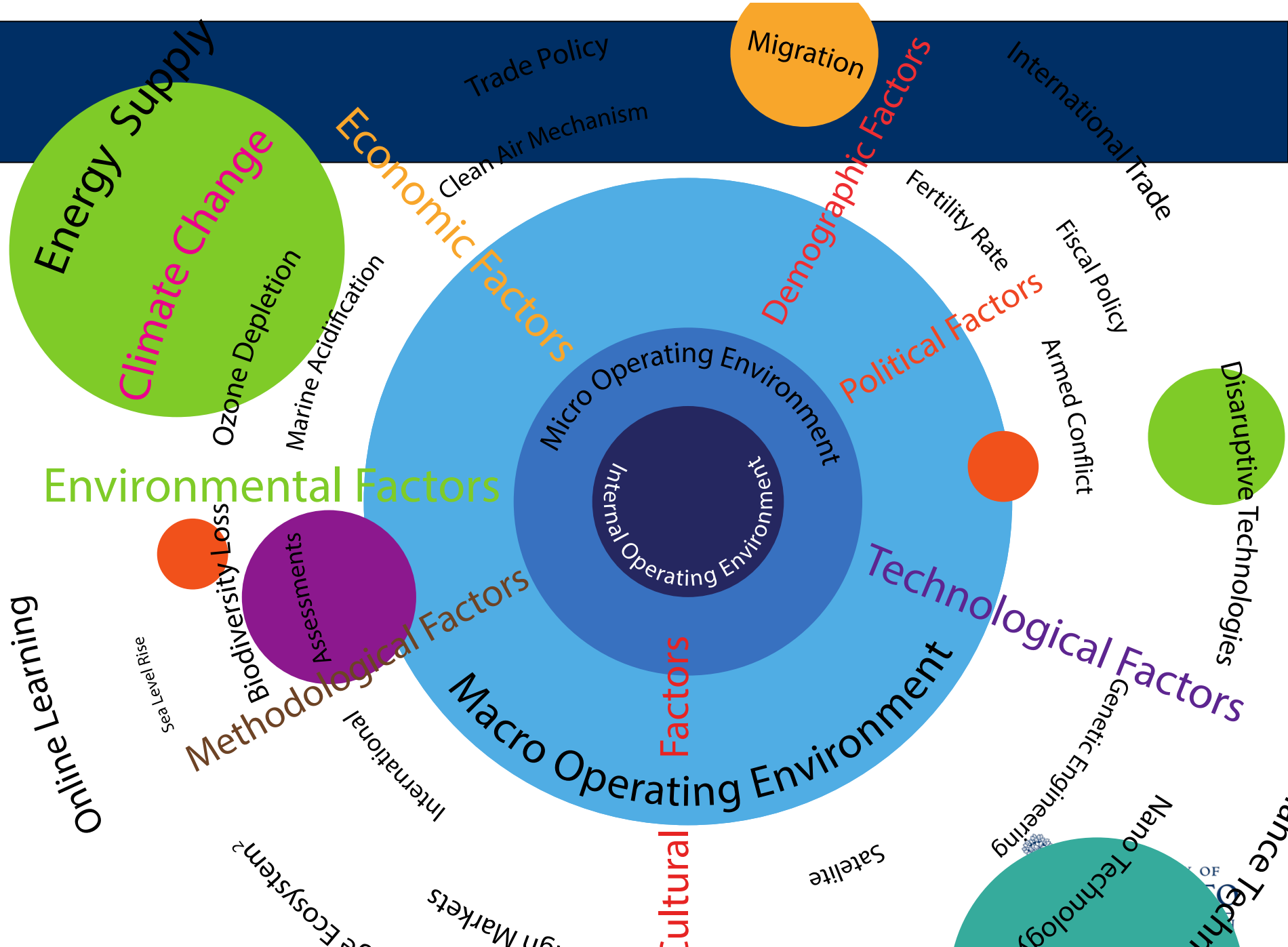
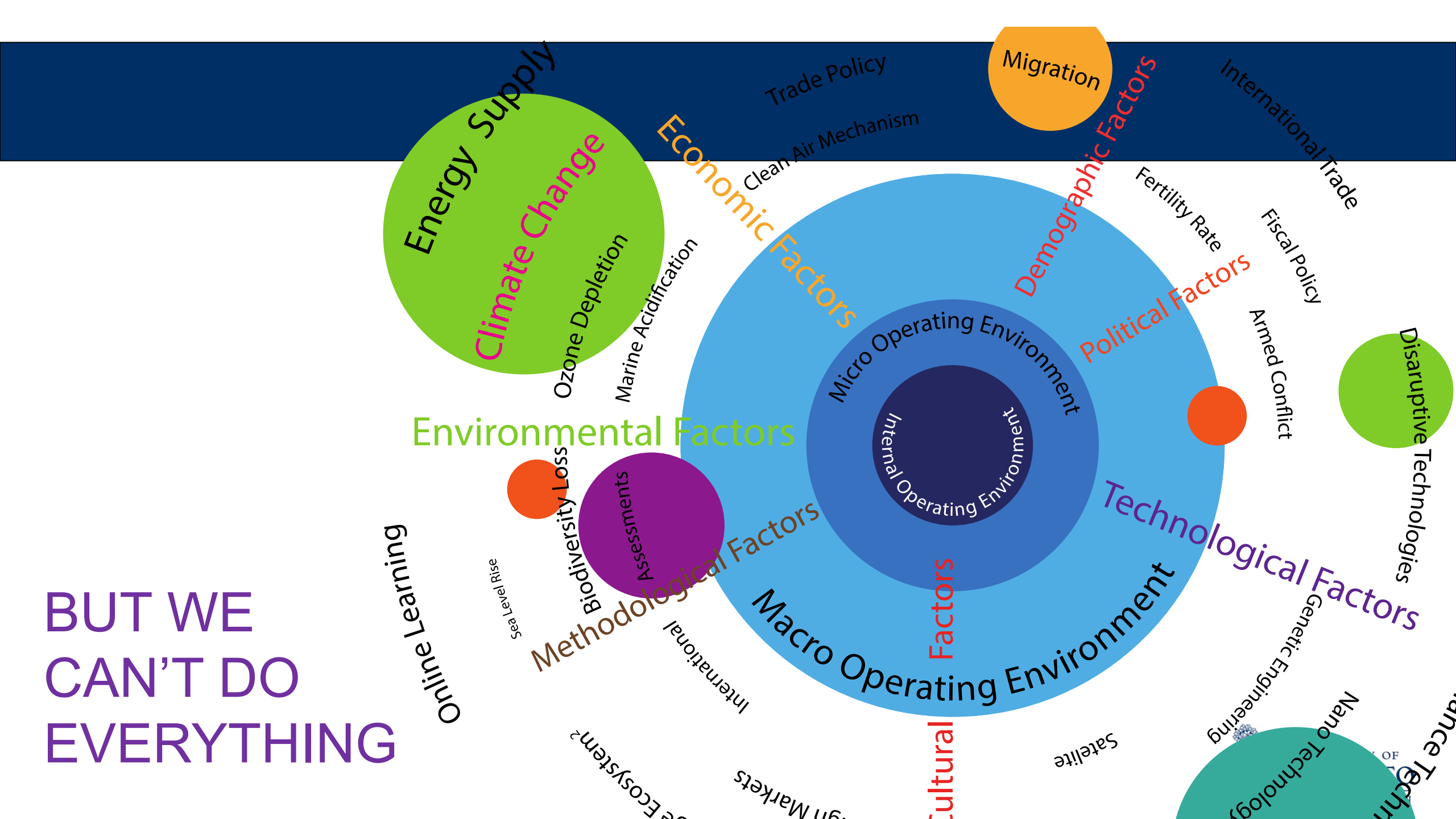
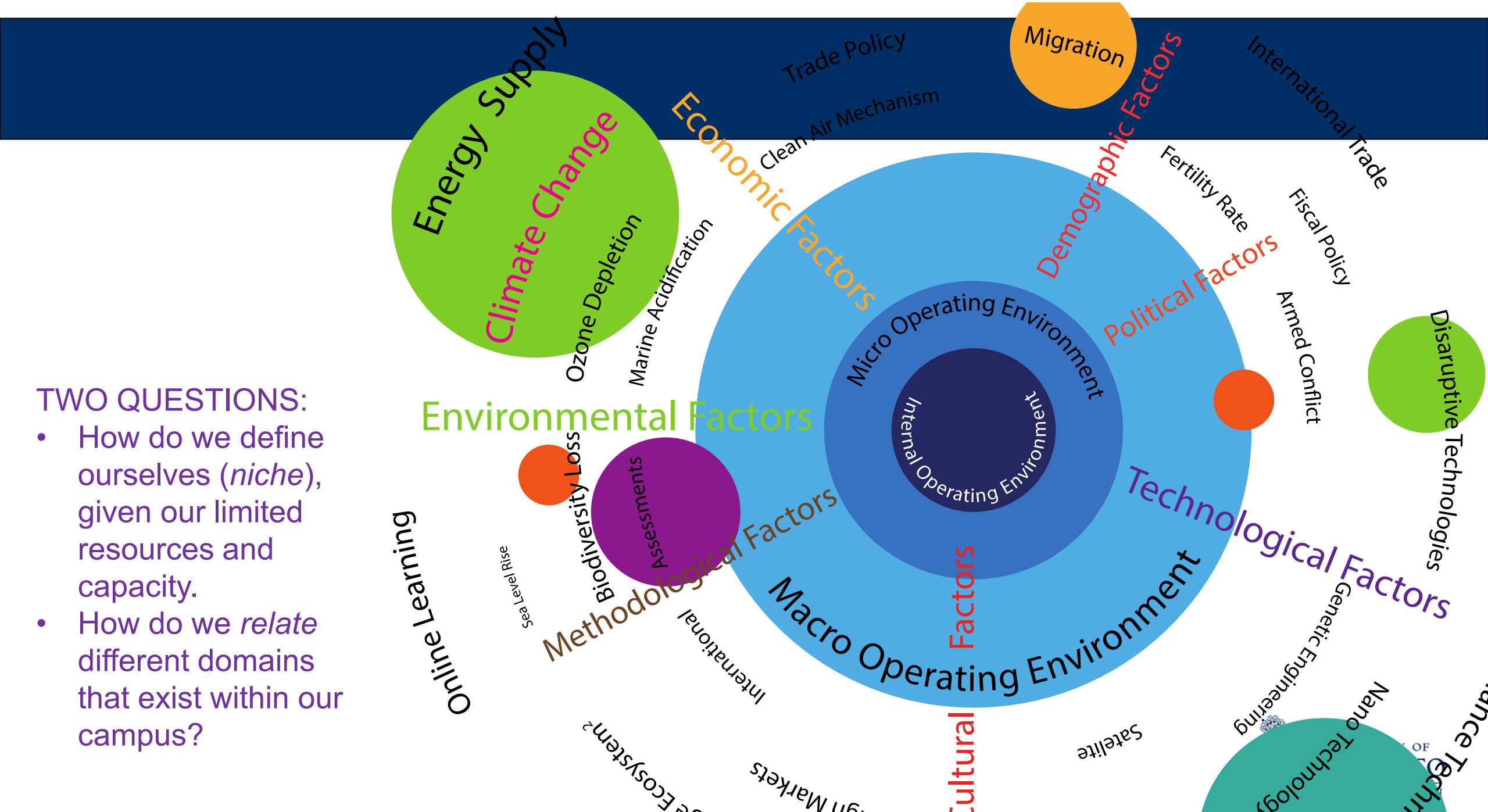
What makes universities special though, is that while we can access the various knowledge domains as they pertain to our *sustainability* needs, we also actively participate in developing these external knowledge domains.





BUT WE CAN'T DO EVERYTHING

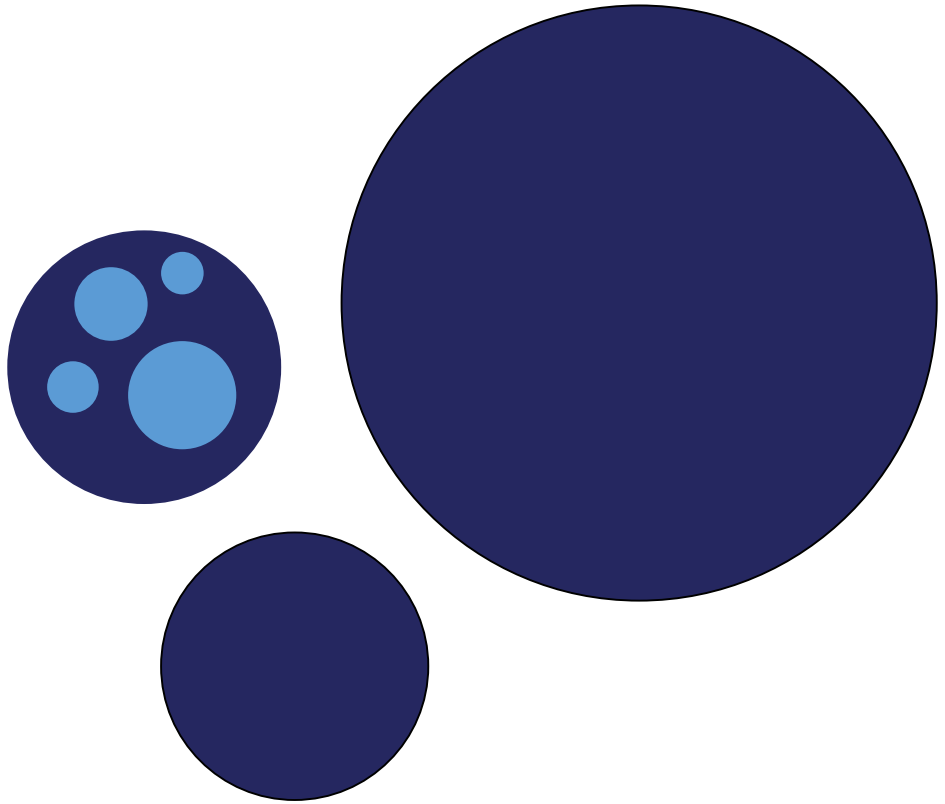


TWO QUESTIONS:

- How do we define ourselves (*niche*), given our limited resources and capacity.
- How do we *relate* different domains that exist within our campus?

But let's not get ahead of ourselves →

- Do we actually have control over our internal operating environment? What does it look like?
- And what about our relationship with St George Campus …? Mississauga Campus?



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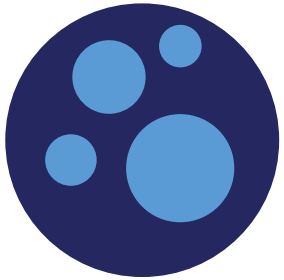
INNER OPERATING ENVIRONMENT?

The UTSC Strategic Plan has been developed as a dynamic vehicle to proactively incorporate consultation, inclusion and implementation … towards the attainment of agreed upon, institutional goals.



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UTSC STRATEGIC PLAN

The plan commits to: "*evolve our processes and planning to enable the talented members of our community to develop their fullest potential. These actions are to be rooted in a comprehensive and intentional set of commitments, as follows (UTSC 2020)*:

- *to embed our values of equity, diversity, inclusion and accountable stewardship into our teaching, learning, scholarship, daily routines and structures;*
- *to give pride of place to Indigenous initiatives that reflect our values and are intrinsically embedded in those practices and systems; and*
- *to ensure that we champion sustainable livelihoods, cultures, and ecosystems that have local and global relevance and resonance.*

Values of the UTSC Strategic Plan

INTENTIONAL INCLUSION

Only by genuinely embracing and understanding different experiences, backgrounds, perspectives, and identities can we sustain our vibrant intellectual community and address our global challenges. We take pride in the diversity of our community, but it is only meaningful in a culture of equity and inclusion that flows from active and intentional action to ensure that every voice is heard and everyone feels a strong sense of belonging.

STUDENTS AS PARTNERS

Students are active participants and partners in the educational process. From curriculum development to cutting-edge scholar- ship to community service that produces global leaders to shaping our values, our students play a critical role as valued partners in enriching our academic and community activities.

RECIPROCITY

We are defined by collaborative, fair, and reciprocal partnerships for the mutual benefit of colleagues, students, alumni, Indigenous communities, neighbours, and global networks. As an anchor institution in the eastern GTA, we are committed to shared leadership and will work with our local partners to ensure that we remain responsive, relevant, accountable, and accessible to our communities in the pursuit of our common goals while engaging the world.

ACCOUNTABLE STEWARDSHIP

We continually challenge the status quo in order to be more effective stewards of our resources and to exemplify individual and collective accountability. We make efficient use of our fiscal resources, promote transparent and participatory decision-making, and facilitate effective administrative processes that ensure continuous improvement in all that we provide to the internal and external communities that we serve.

We commit to respecting Indigenous traditions, lands, and ways of knowing; and to protecting the ecosystems that sustain us and which we hold in trust for future generations.

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TRANSACTIONAL → TRANSFORMATIONAL

Using a classic, hierarchical, structure (*old school*) is hard enough … but we will require something much more to *transform*.

The most obvious requirement is to identify: '*Who these people are, and what they do.*'

We can start by asking: '*What' are the minimum requirements to implement this vision?*'

And … '*How do we communicate between these varied knowledge domains\ functional processes?*'

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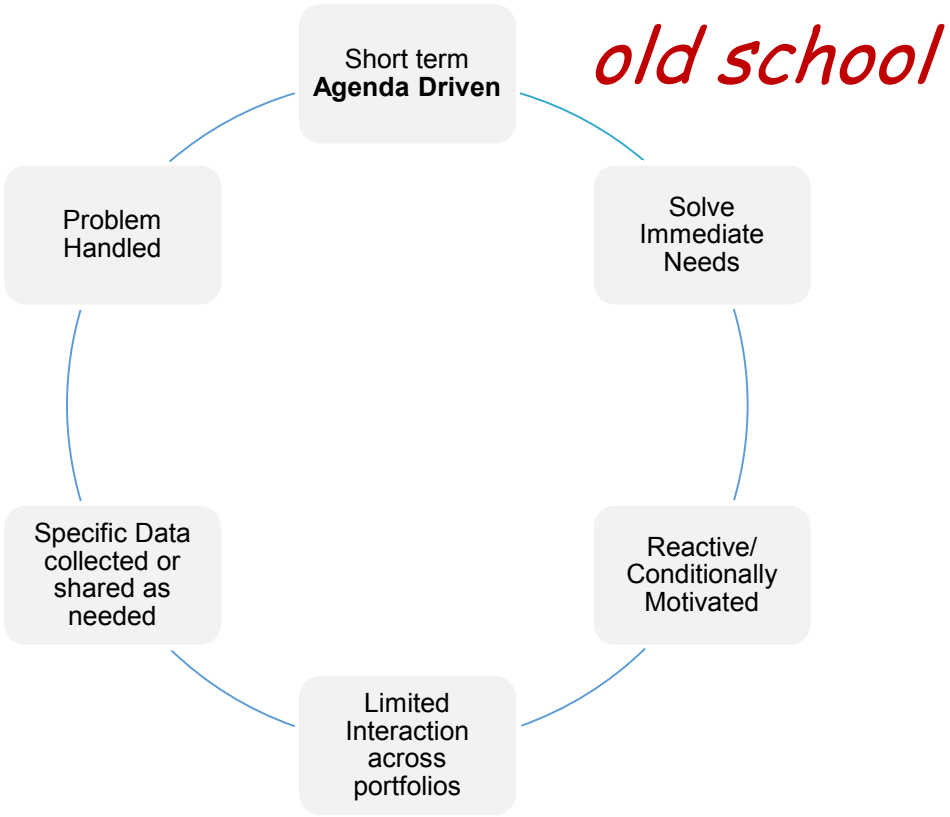
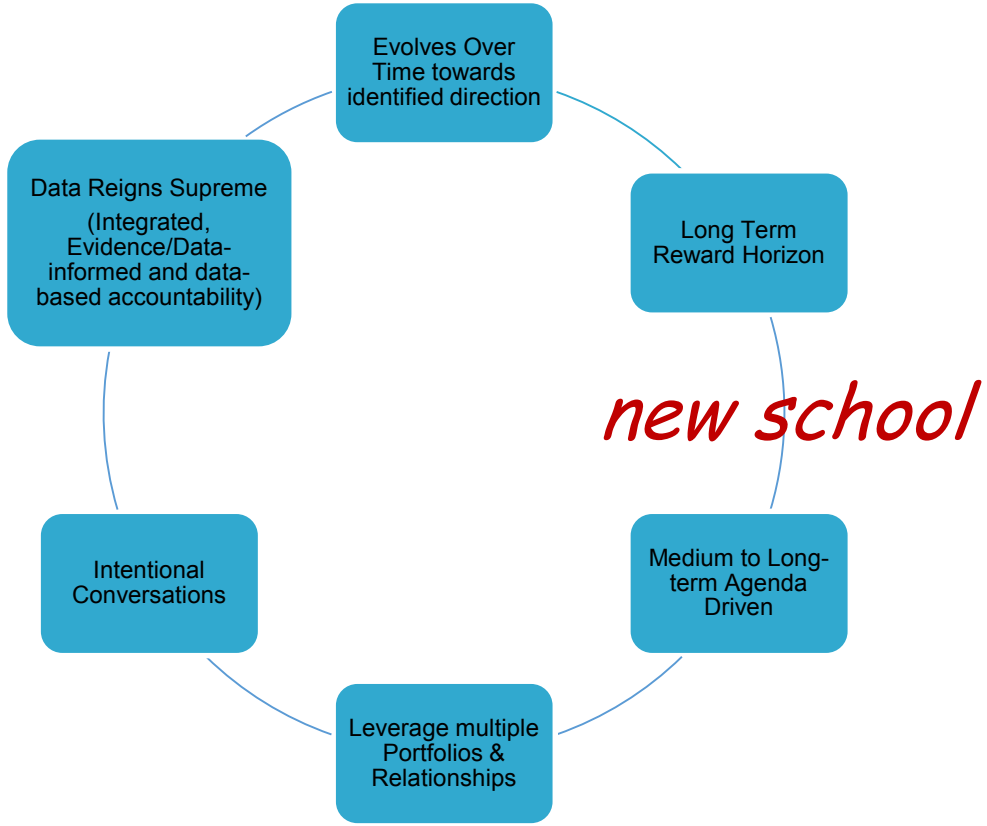
TRANSACTIONAL → TRANSFORMATIONAL



old school



new school

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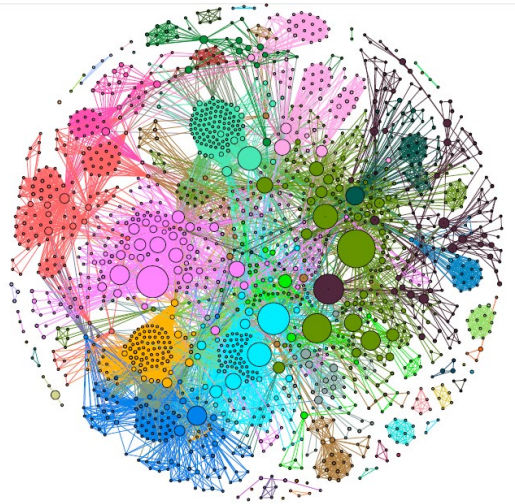
SIMPLE TRANSPARENCY …

1. RESEARCH
   - UTSC Bibliometric analysis (2015).
   - DPES external review … research
   - RIISQ Author Network gap analysis
   - NRCAN National Assessment(s)
   - *ICIMOD, A Gendered Perspective* …



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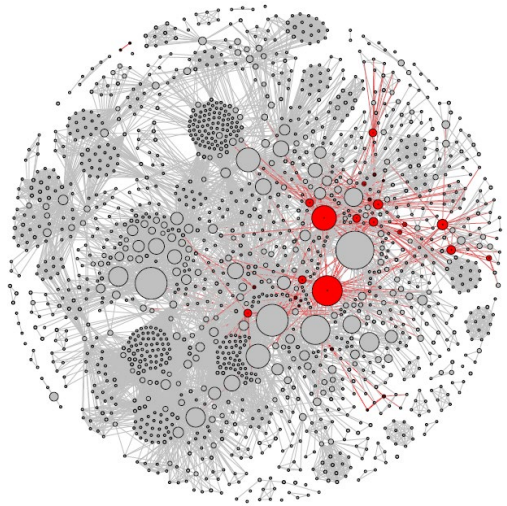

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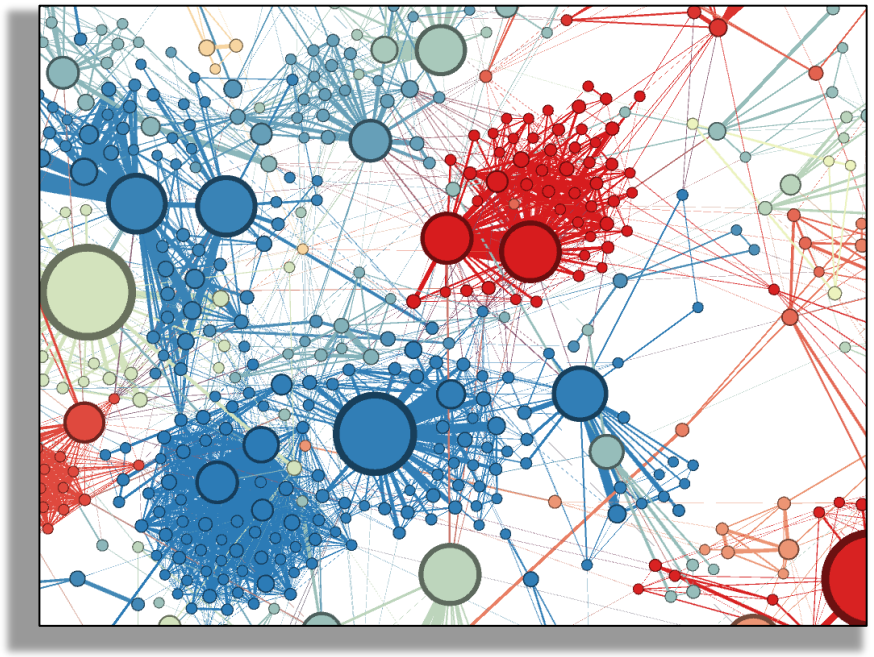
There are major caveats in using this sort of data, but if we augment such analysis … we can start to pull together a broader perspective.

UTSC



	KW1	KW2	KW3	KW4	KW5	KW6	KW7	KW8	KW9	KW10	KW11	
RUN1	sustai	clim	environ	socio	water	ecosystem	conserv	glaci		fish	gender	TEST
RUN2	sustai	water	lake	river	watershed	ecosystem	downstream	ocean		sea	groundwater	WATER
RUN3	sustai	assessment	clim	temp	atmosph	weather	co2	airshed	extreme	thunder	hurrica	CLIMATE
RUN4	sustai	impact	assessment	choice	risk	threat	future	case	manage	scenarios	practition	SUS-DEV-SYSTEMS
RUN5	sustai	conserv	COSEWIC	squirrel	exploit	fish	bird	spider	biodiver	salmon	bees	BIODIVERSITY\CONSERV
RUN6	sustai	pollut	emission	waste	contamin an	treatment	toxi	ozone	mercury	phosphor	PAH	POLLUTION
RUN7	sustai	agri	food	farm	crop	forestry	wheat	corn	rice	fruit	bean	AGRICUL\FOOD\FORESTry
RUN8	sustai	urban	city	infrastruc	road	place	transport	municipa	bridge	toronto	scarbor	BUILT ENVIRONMENT
RUN9	sustai	people	community	public	societ	health	culture	neighbo	govern	rights	gender	SOCIO-ECO-CUL-POL
	LEFT to RIGHT >> start with the high level descriptors and move towards specifics >>>>>>>>>											

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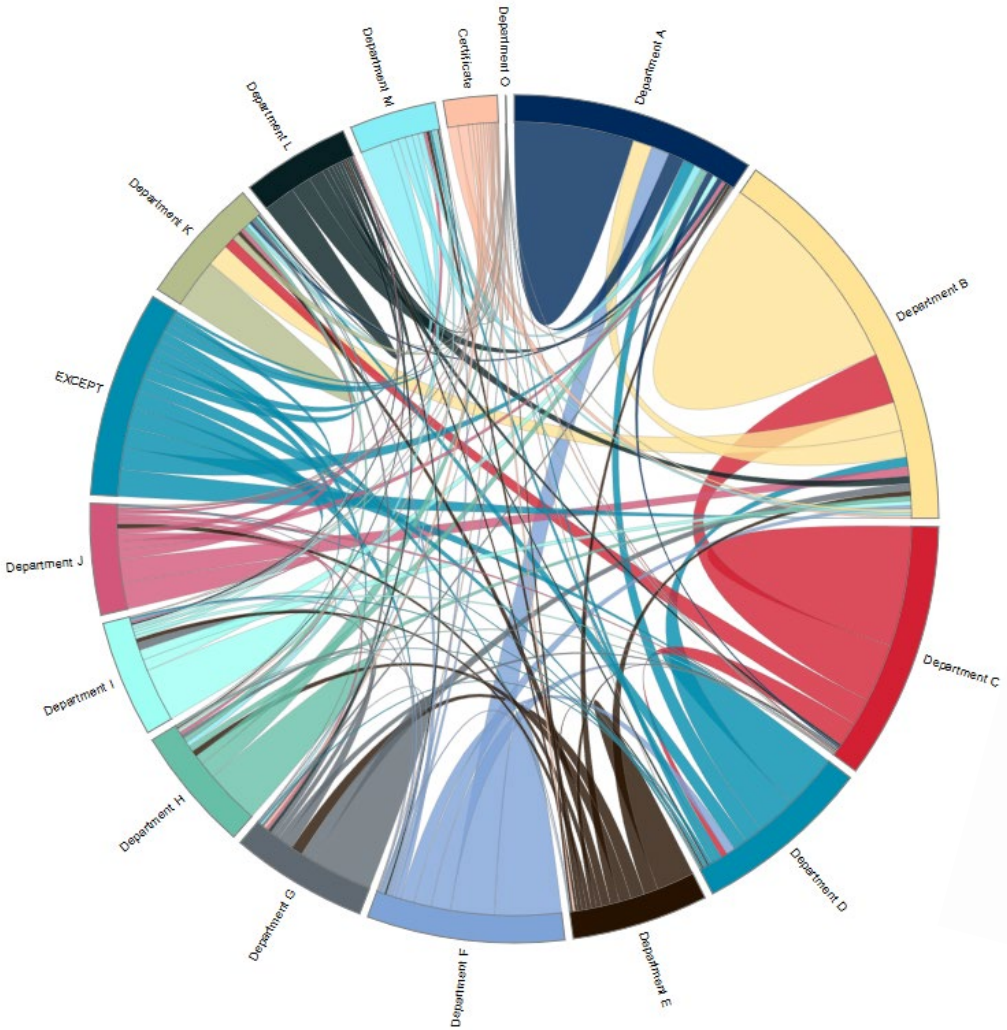
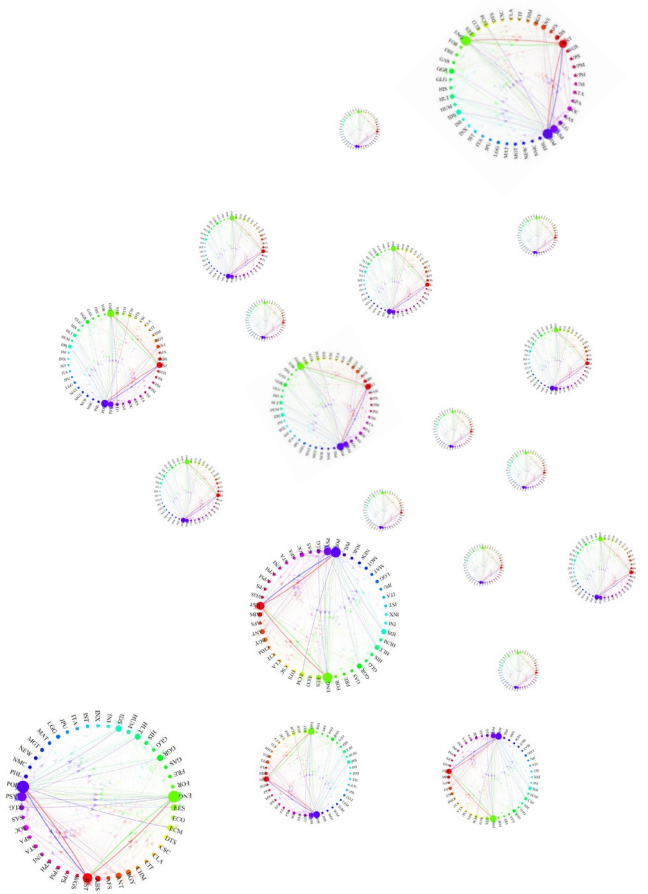
SIMPLE TRANSPARENCY …

1. RESEARCH

2. CURRICULUM
   - Synoptic Campus mapping exercise (Register's Office, 2015)
   - Course Network Analysis
   - Retention Course analysis
   - Etc etc ….

SIMPLE TRANSPARENCY …





Maclellan, J; Motrich, M.; Adam, S.; Xiong, W.; Nizam, N.
Estrada, P., & Huge Laurence (2015, 2020)

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SIMPLE TRANSPARENCY …

1. RESEARCH
2. CURRICULUM

3. KNOWLEDGE EVENTS
   - Conferences
   - Workshops
   - Seminars
   - ADAMS Sustainability Celebrations (CECCS)

Three typical functional categories for universities[1].

[1]Reflexive Analytics as a Precondition for Climate Services. (2016) 50th CMOS Congress & joint CGU Annual Meeting, Fredericton, NB.

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CATALYST

Adams Sustainability Celebration is a tribute to the growing community of sustainability-minded students, faculty, and staff at the University of Toronto (U of T). The purpose of the event series is to celebrate successes, inspire new activities, build relationships, and collaboratively deepen campus engagement ar
would like to acknowledge our
future, and celebrate sustainab
event was made possible by the
Wendy Adams.

Events are not trivial, they are opportunities to nurture social capital, as well as exchange, interpret, integrate, knowledge across domains.

SIMPLE TRANSPARENCY …

1. RESEARCH
2. CURRICULUM
3. KNOWLEDGE EVENTS

4. KNOWLEDGE APPLICATION
   - UTSC COOP Program
   - CECCS: Living Lab
   - UTSC Sustainability Office
   - UTSC Experiential Learning

Three typical functional categories for universities. There is also a fourth applied functional element that holds a special place in any environmental mandate[1].

[1]Reflexive Analytics as a Precondition for Climate Services. (2016) 50th CMOS Congress & joint CGU Annual Meeting, Fredericton, NB.

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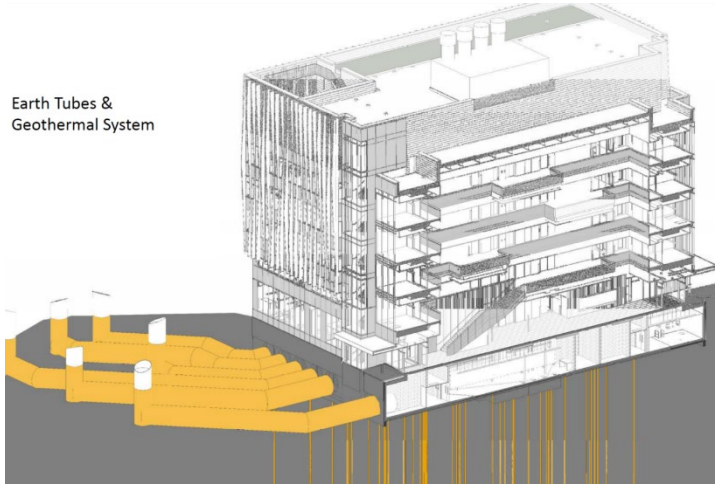
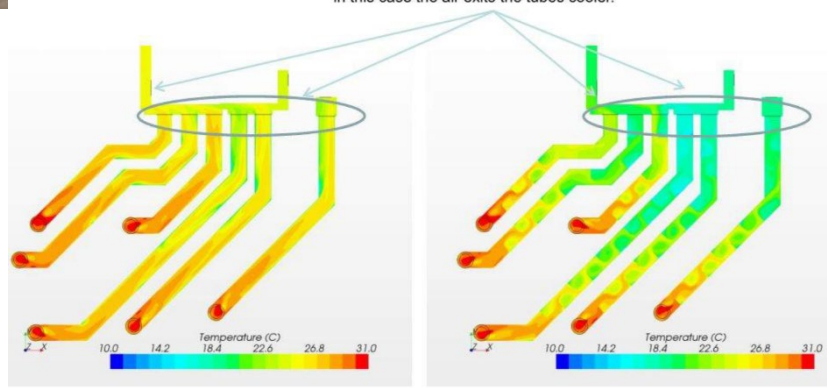
Case Study: Environmental Science and Chemistry Building



Baffles increase heat transfer effectiveness –
in this case the air exits the tubes cooler.



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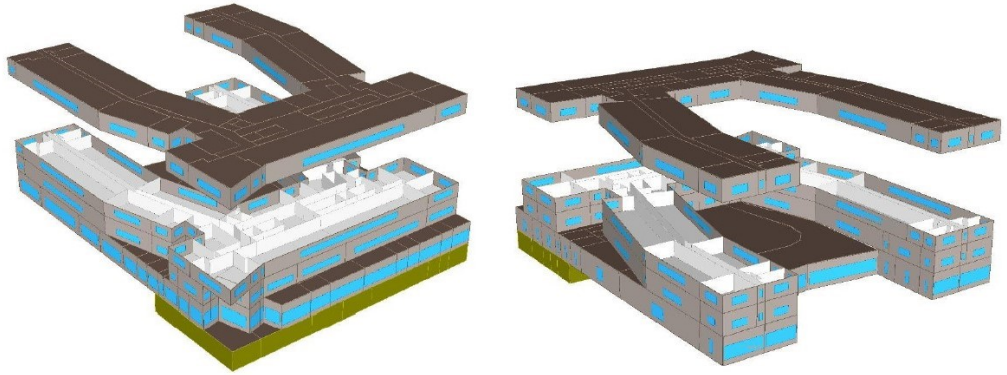
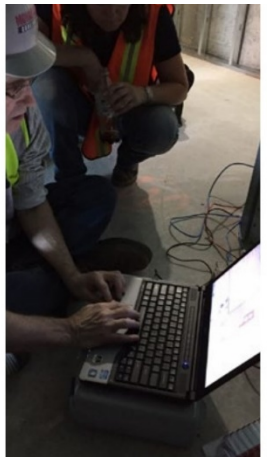
Case Study: Passive House





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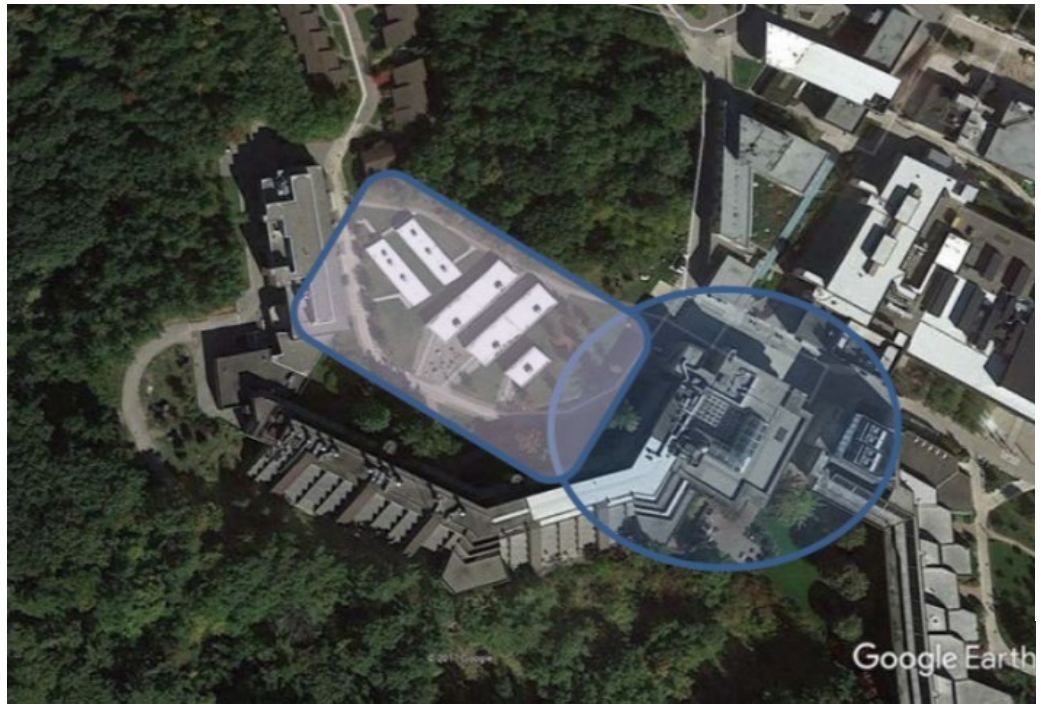
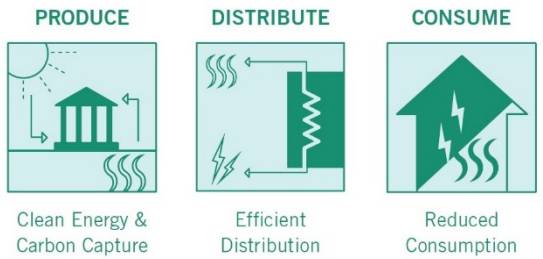
Case Study: Renewal for Carbon Reduction



The University of Toronto Scarborough is continuing to convert campus building heating systems from steam to hot water. Building on renovations on the original Science Wing building, UTSC will continue to convert heating systems in the Humanities Wing, including the installation of high-efficiency boilers and ground source heat pumps. Combined with improved delivery and controls, the new system will result in better comfort and substantially lower GHG emissions.

UTSC Science Wing, Credit: Ken Jones



Distribute: Efficient Distribution

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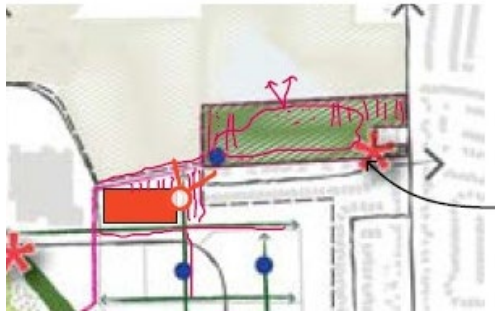
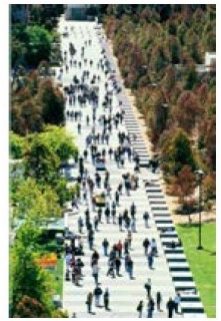
Case Study: Landscape, Urban Farming and Public and Green Space





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ARRIVAL: VIEW EAST TOWARD ENTRANCE

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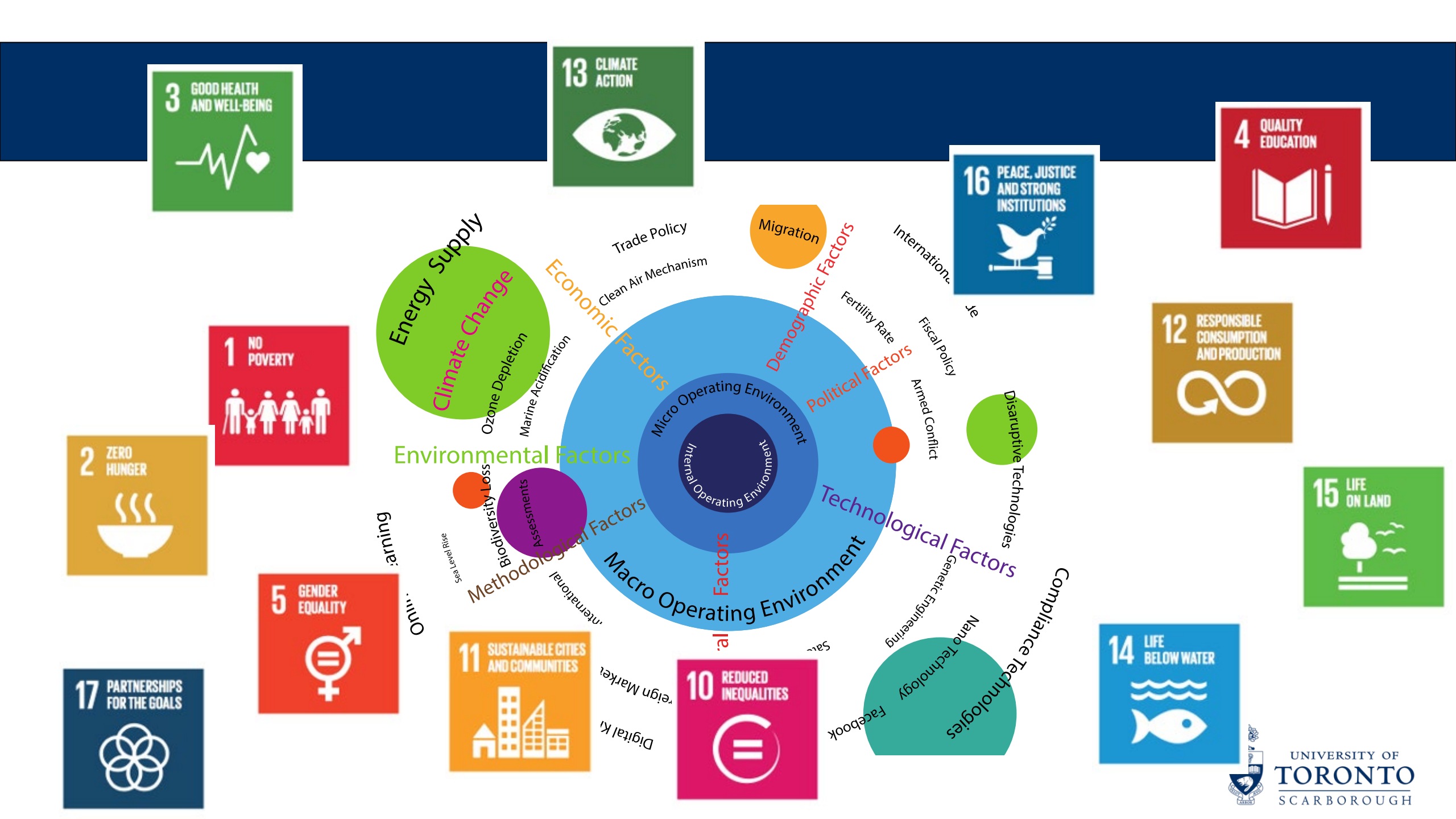
3 GOOD HEALTH AND WELL-BEING
13 CLIMATE ACTION
16 PEACE, JUSTICE AND STRONG INSTITUTIONS
4 QUALITY EDUCATION
1 NO POVERTY
12 RESPONSIBLE CONSUMPTION AND PRODUCTION
2 ZERO HUNGER
15 LIFE ON LAND
5 GENDER EQUALITY
14 LIFE BELOW WATER
11 SUSTAINABLE CITIES AND COMMUNITIES
10 REDUCED INEQUALITIES
17 PARTNERSHIPS FOR THE GOALS
Energy Supply
Climate Change
Ozone Depletion
Marine Acidification
Economic Factors
Trade Policy
Clean Air Mechanism
Migration
Demographic Factors
Fertility Rate
Fiscal Policy
Political Factors
Armed Conflict
Disruptive Technologies
Technological Factors
Genetic Engineering
Nano Technology
Facebook
Compliance Technologies
Environmental Factors
Biodiversity Loss
Assessments
Methodological Factors
Micro Operating Environment
Internal Operating Environment
Macro Operating Environment
Factors
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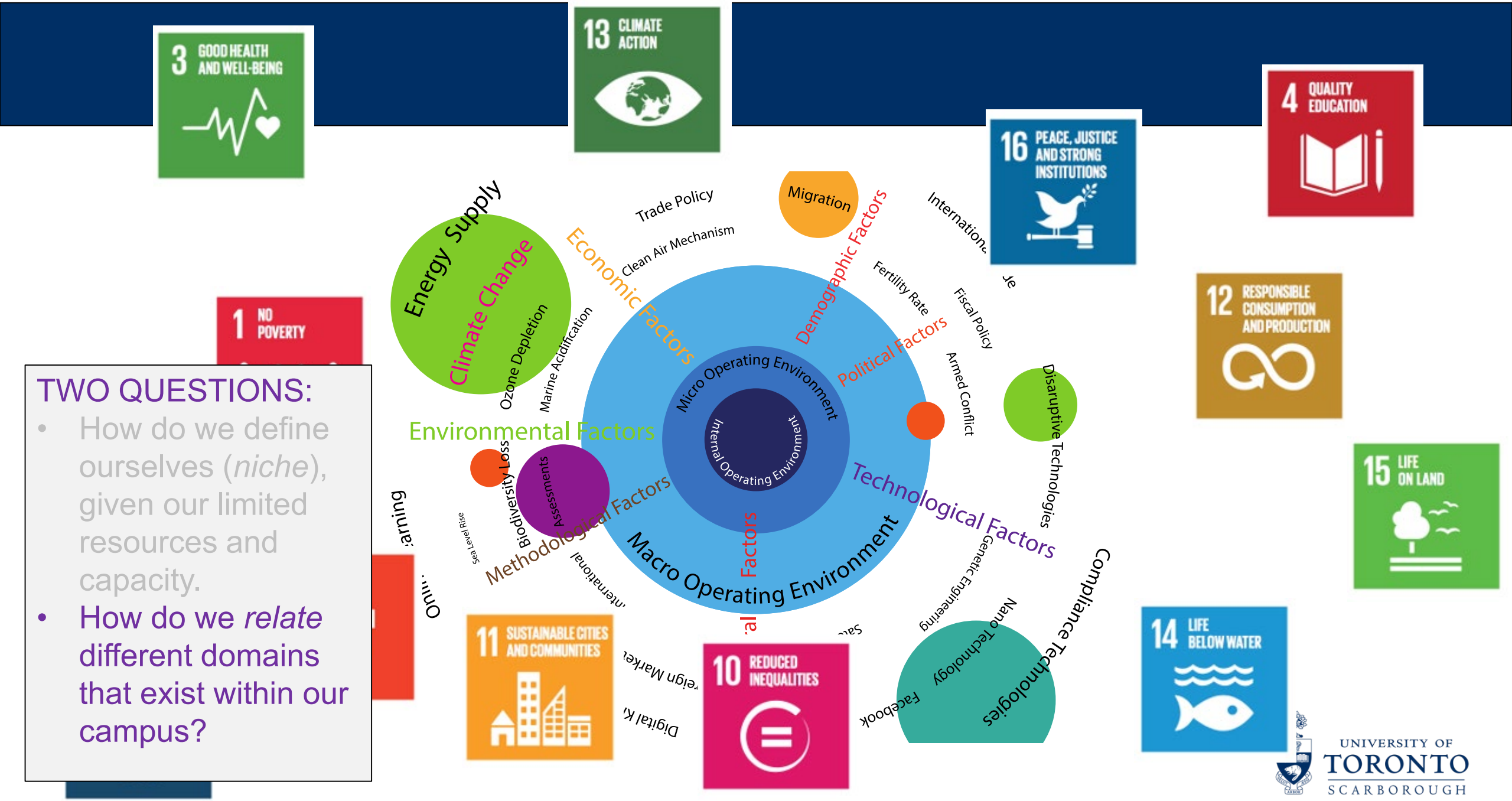

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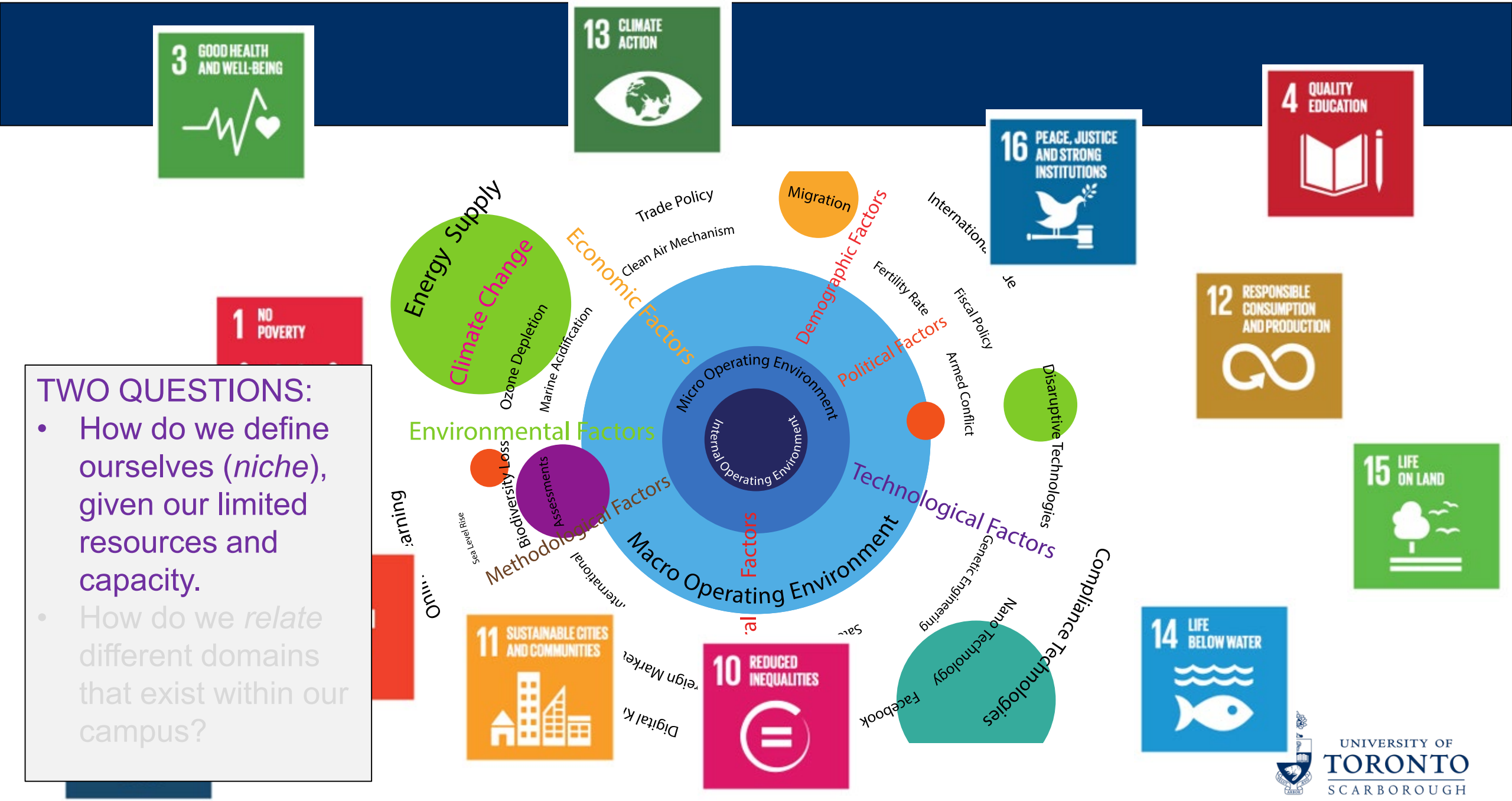

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