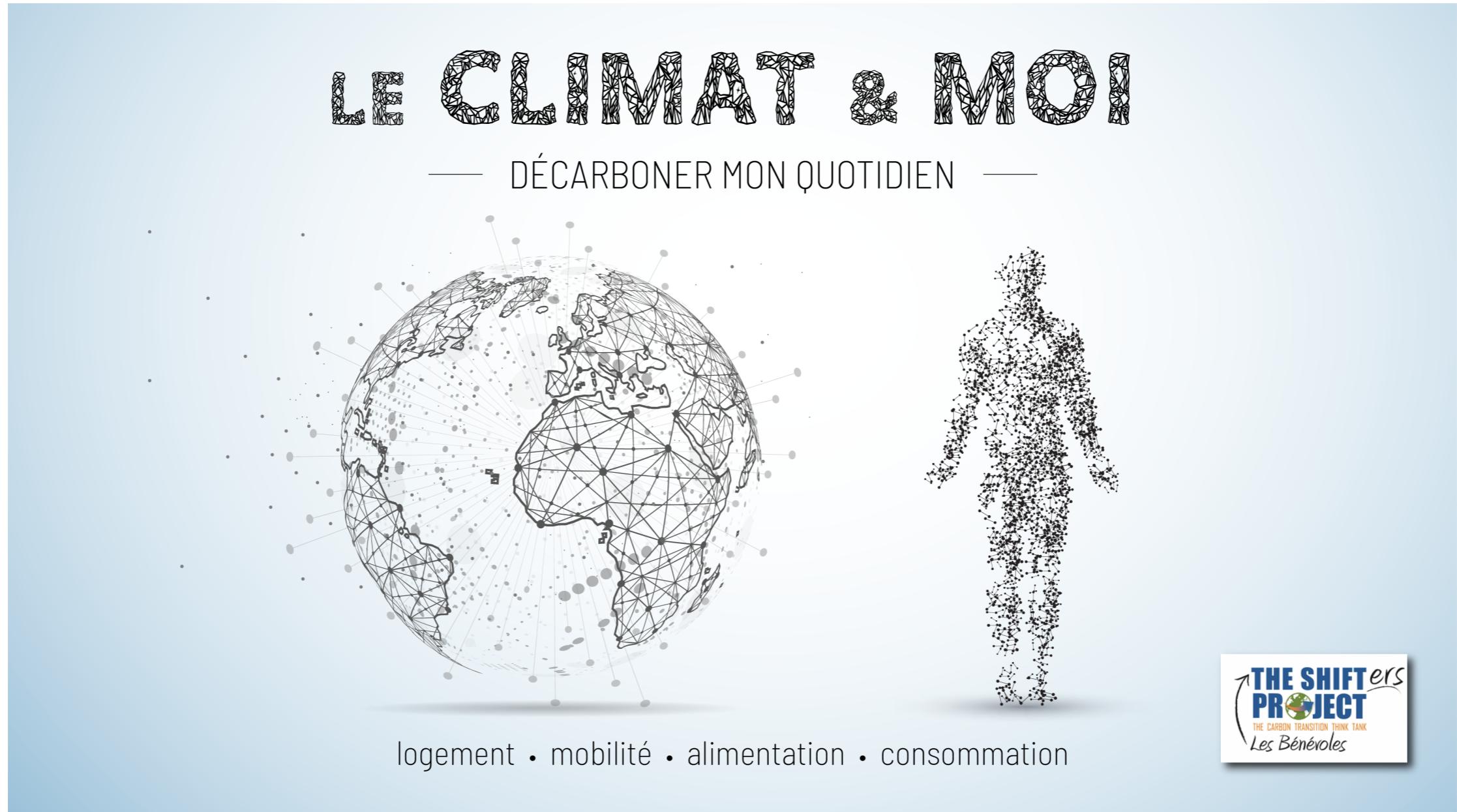
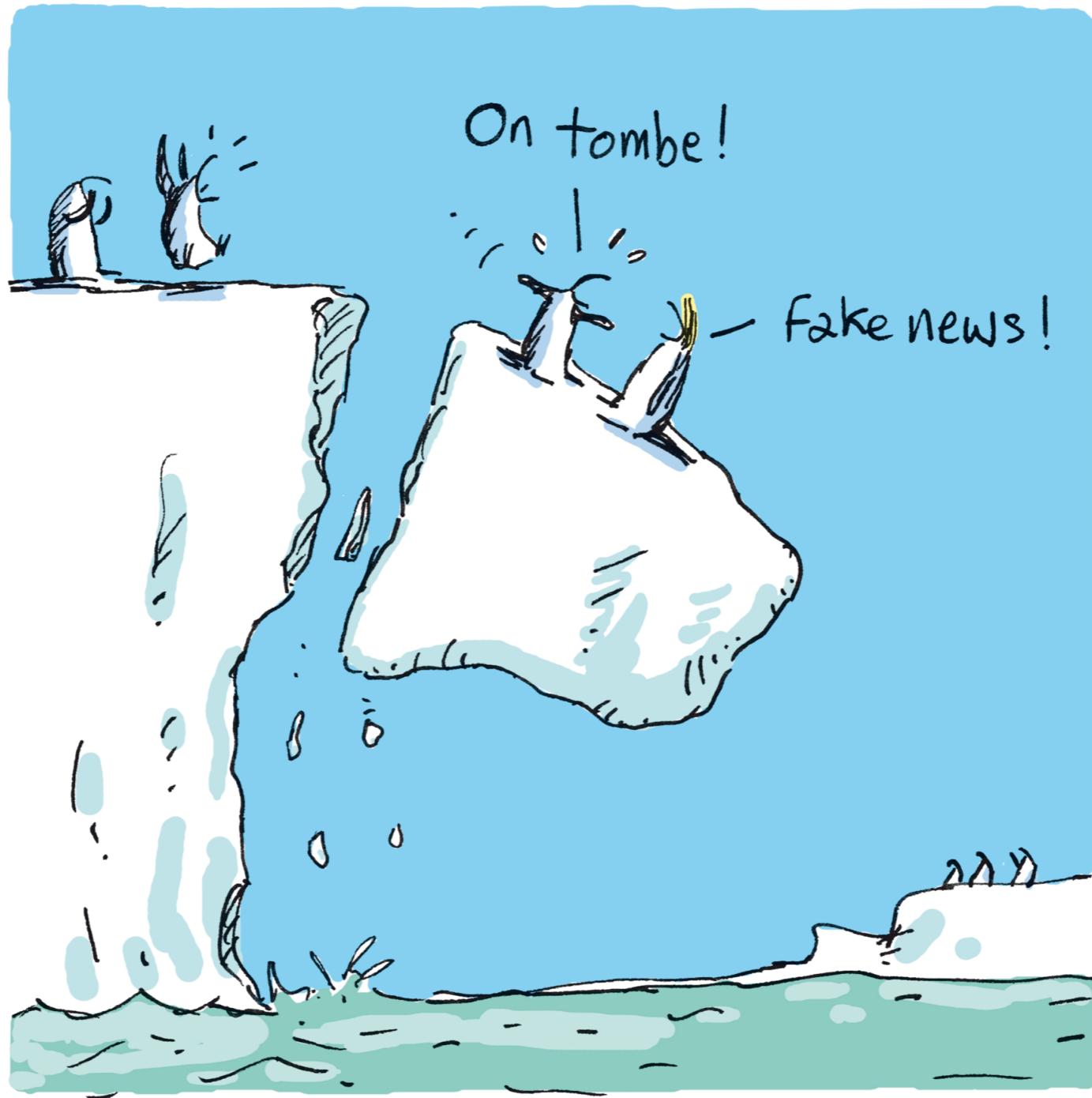


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Credits: <https://theshiftproject.org/equipe/#benevoles>

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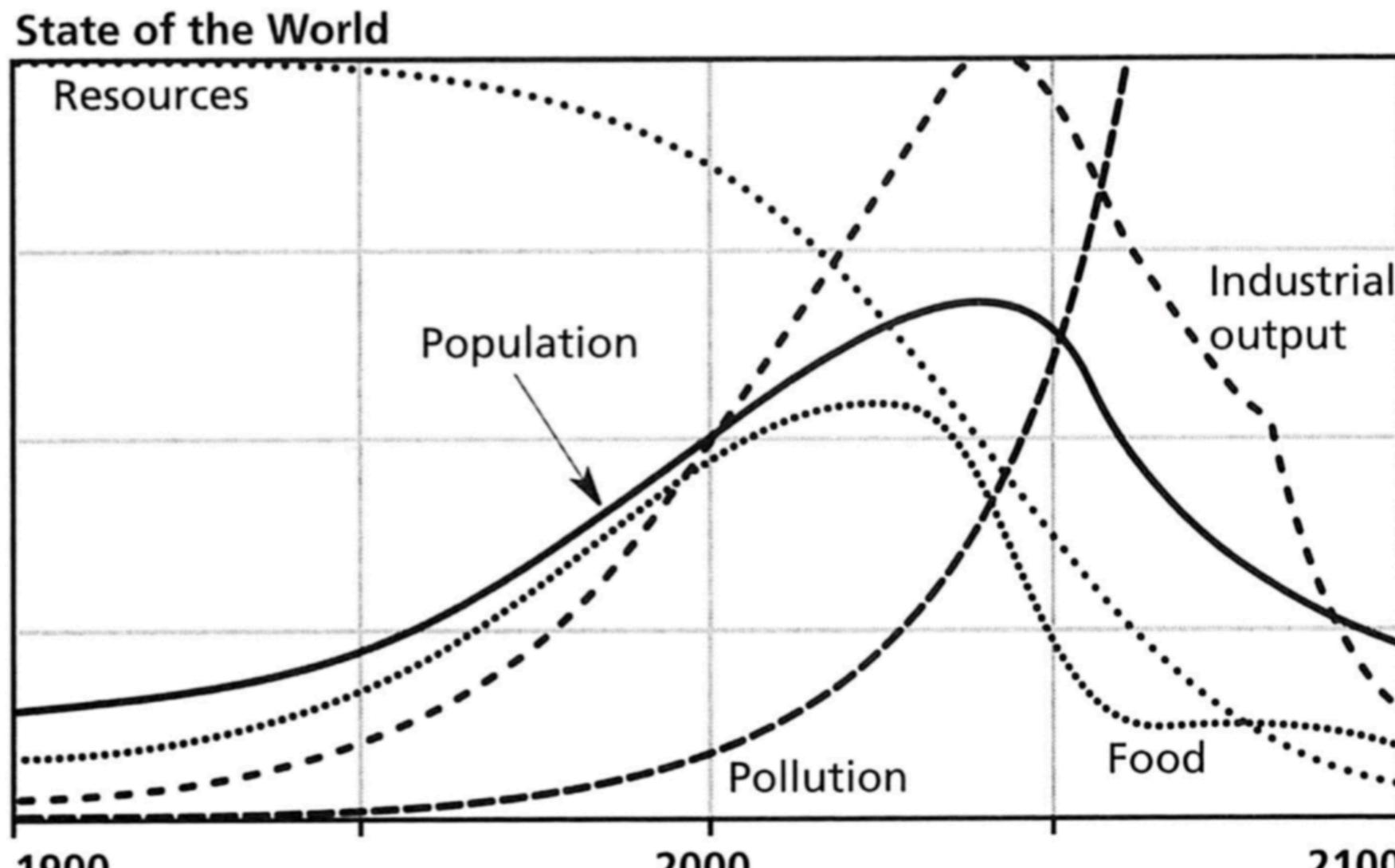
Whats is for you sustainability ?



TODO: <https://www.wooclap.com/fr/>

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Limits to growth: is it possible to achieve sustainability ?



Source: Limits to growth - The 30 year update

Credits: <https://www.clubofrome.org/publication/the-limits-to-growth/>

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Motivations

IPCC reports are more and more alarming -> **environmental** challenges.

Fossil energies are not endless -> **energy** challenge.

Raw materials are not unlimited -> **raw material** challenge.

There is an urgent need to act to **meet the sustainability challenges**.

Education is a powerful way to achieve this goal. We need engineers:

- aware of the complex challenges and capable of understanding, analyze and propose practical solutions
- capable of a systemic approach that combines several fields: climatology, energy, ICT, economy, mobility, psychology, etc.

ENVT3065 Sustainability challenges

Instructors & teaching assistant



Jonathan Dumas
Ph.D. candidate &
Teaching assistant
Microgrids & local energy
communities
Applied Science Faculty



Bertrand Cornélusse
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Xavier Fettweis
Research Associate F.R.S.-
FNRS
Climatologist
Science Faculty



Sylvain Quoilin
Research Associate F.R.S.-
FNRS.
Smart Energy System
Applied Science Faculty

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Schedule & TEASER

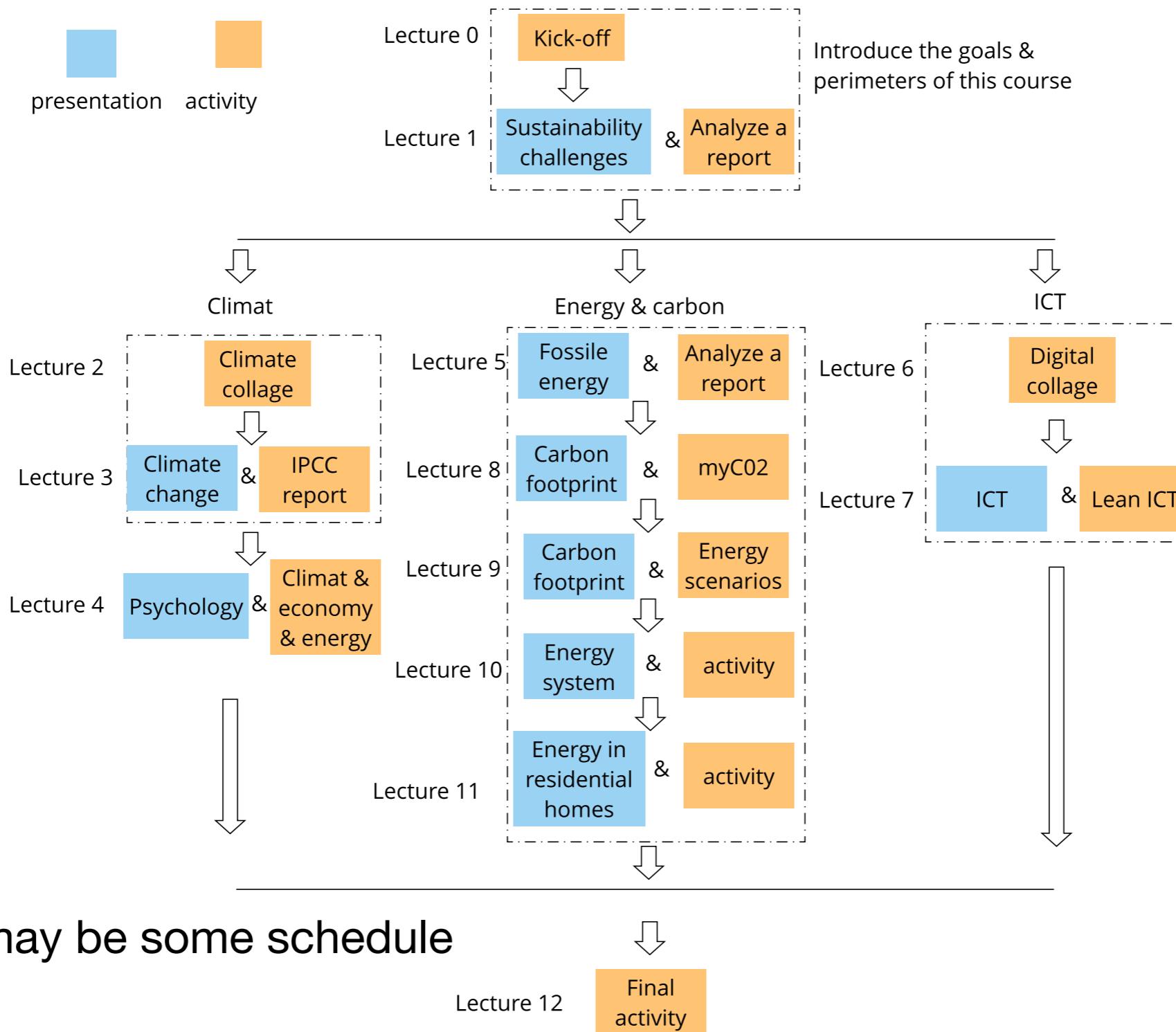
Schedule, materials, agenda, and evaluation criteria ***github!*** :

<https://github.com/jonathandumas/ENVT3065-sustainability-and-challenges>

TEASER!

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Course MAP



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Course learning outcomes

At the end of this course, students will have learned:

- to define the concept of sustainable development;
- to define the issues related to climate and energy problems
- identify the problem, by nature transverse, to be treated;
- Restate the current ecological and social context by objectifying it with factual data and relevant orders of magnitude;
- adopt a critical approach to compare energy sources via the EROI and the carbon footprint;
- take a critical look at the ICT;
- understand the issues and possible ways to save energy, materials, etc.

ENVT3065 Sustainability challenges

Climate & digital collages !



<https://climatecollage.org/>



<https://digitalcollage.org/>

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Climate collage

42 cards representing the different components of **climate change** & **collaboratively work** to identify cause and effect relationships based on **IPCC** (Intergovernmental Panel on Climate Change) reports.

In a 3-hour-long workshop, participants gather around a table in teams of 4 to 8.

TEASER

The 4 stages of the workshop

- 1** **1h - BUILD** : Discover and link the cards to create the collage.
- 2** **1h - CREATE** : Take ownership of the collage by adding illustrations and a title.
- 3** **15' - PRESENT** : Deliver a concise presentation to consolidate your knowledge.
- 4** **45' - DEBRIEF** : Share with other players your feelings, opinions, questions and solutions.



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Digital collage



The Digital Collage is a fun and collaborative 3-hour-long workshop centered on **collaboration and collective intelligence** (similar in format to The Climate Collage).

<https://digitalcollage.org/>

How the workshop operates



1st part :
Comprehension



2nd part :
Creativity !



3rd part :
Debriefing



4th part :
Solutions

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Questions ???

