HERE Study Visit

Learning and teaching : innovation, digitalisation and international collaboration

15-16 June 2023

The Continuum of the learning space

Prof. Olivier Masson, professor of Architecture

UCLouvain

0. Foreword

Éditeur de carte du monde par couleur avec légende (regtool.net)

A particular cultural point of view

0. Foreword

Learning and teaching:

innovation, digitalisation, and international collaboration

Means, not ends.

0. Foreword

Auditoire, Pierre de Coubertin, Louvain-la-Neuve

An architectural perspective (through spaces)

0. Foreword

1. Higher Education	2. Cha(lle)nges	3. Impacts + ?
- Intention - Composition	Ecological Transition	- New intentions - New compositions
Historical Spaces Generic Teaching Spaces Generic Teaching & Learning Spaces Generic Learning Spaces Disciplinary Teaching & Learning Spaces	Skills : - Ecological sensibility - Complex Problem Solving - Communication - Creativity - Critical thinking - Collaboration	*Other Spaces* Teaching Center Learning Center Disciplinary Teaching & Learning Spaces Spaces for living and socialising
Related Topics - Accessibility - Animation - Production	Digital Revolution Components : - Spaces - Devices - Network - Apps	*Related Topics* - Accessibility - Animation - Production

Plan

1. Higher Education : - Intention - Composition

Intention :
Higher Education takes its place between general education (the humanities) and professional life (+ lifelong learning).
But it is a time in itself. It's a time for discovery, understanding, assimilation, experimentation and mastery, all of which require repeated efforts to ensure that the brain is shaped by a discipline, so that cerebral connections are exercised and easily found when faced with a new problem.

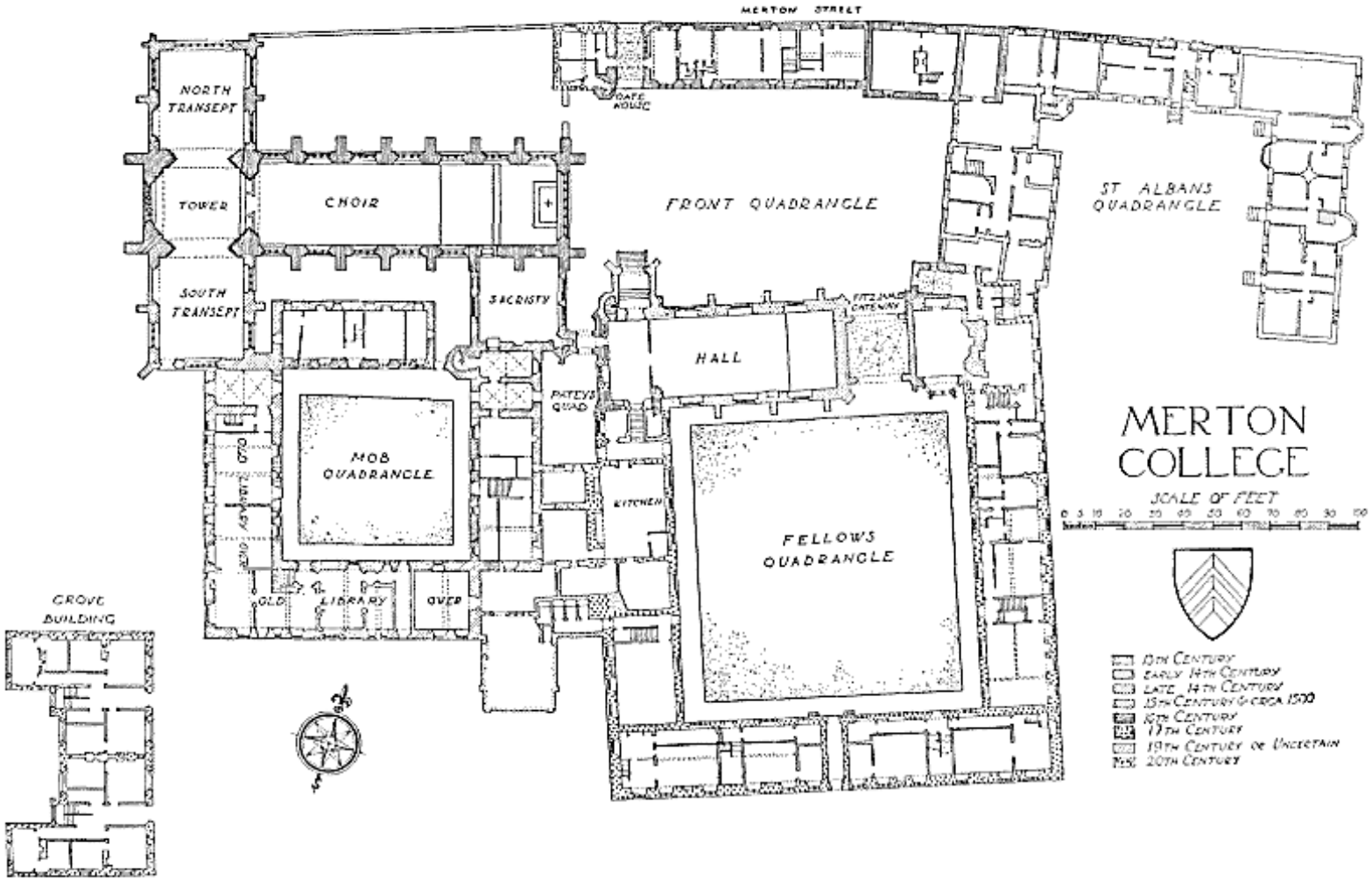
Composition :
To achieve this, institutions provide spatial and temporal settings where students are protected from the hustle and bustle of the world, to help them come to terms with the things they need to learn and the skills they need to acquire.
Higher Education offers spatial limits for concentrated work.

1. Higher Education : - Intention - Composition

Merton College, Oxford

Spatial limits for concentrated work.

1. Higher Education : - Intention - Composition



Merton College, Oxford

Spatial limits for concentrated work.

1. Higher Education : *Historical Spaces*

Auditoire Saint-Louis, Bruxelles

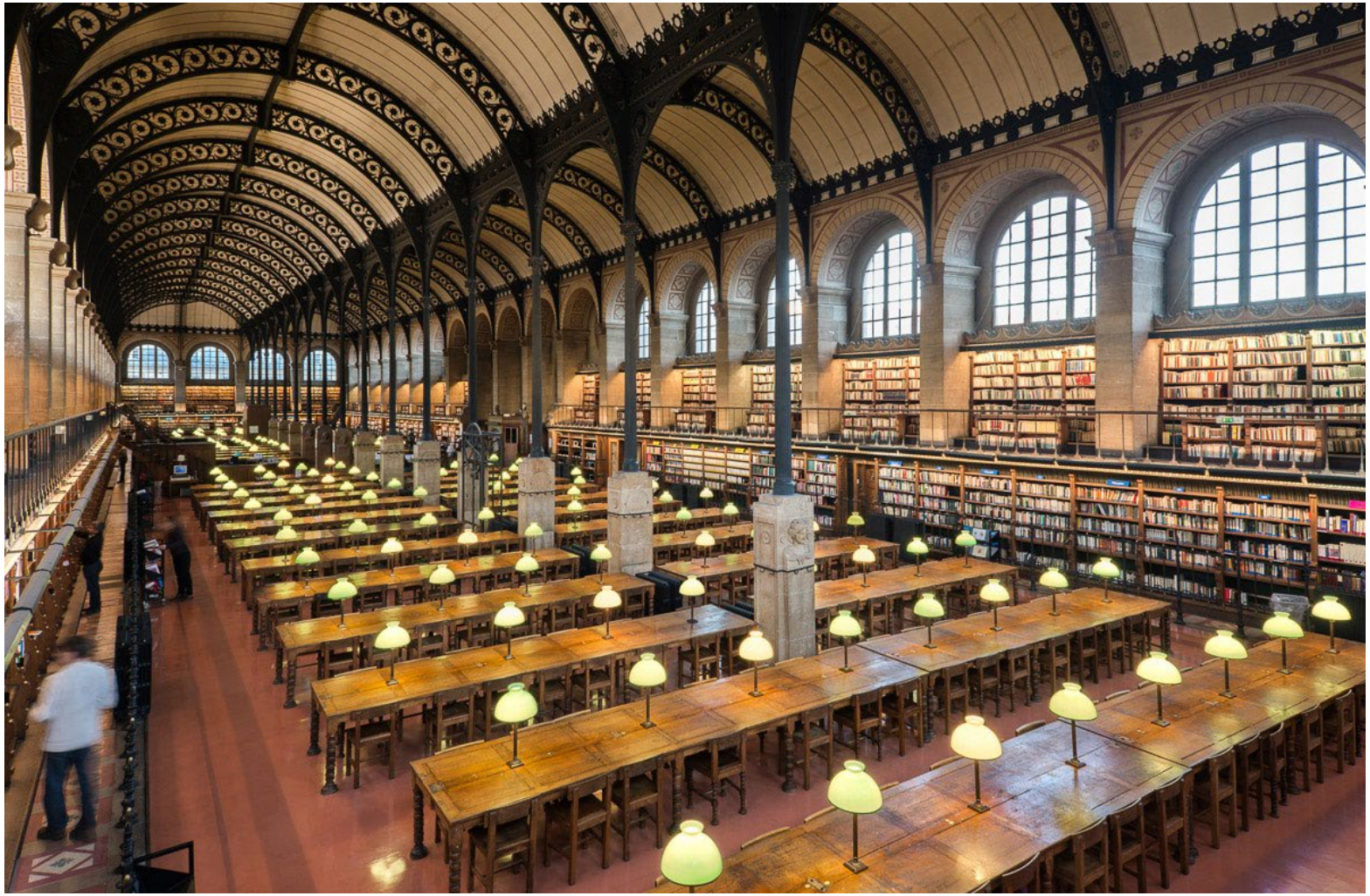
The Lecture Theater. A Generic Teaching Space. A place for Transmission.

1. Higher Education : *Historical Spaces*

Classe, de Hemtinne, Louvain-la-Neuve

The Classroom. A Generic Teaching & Learning Space. A place for Appropriation.

1. Higher Education : *Historical Spaces*



Bibliothèque Ste-Geneviève, Paris

The Library. A Generic Learning Space. A place to Study.

1. Higher Education : *Historical Spaces*

Laboratoire, Birmingham City University

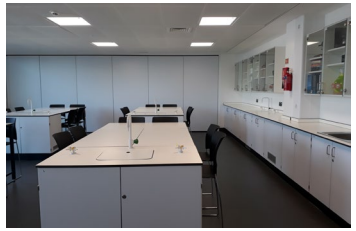
The Laboratory. A Disciplinary Learning & Teaching Space. A place to Practice.

1. Higher Education : *Historical Spaces*

Generic Teaching Space. A place for Transmission.

Generic Teaching & Learning Space. A place for Appropriation.

Generic Learning Space. A place to Study.



Disciplinary Learning & Teaching Space. A place to Practice.

Different spaces that direct you towards a certain type of teaching and learning.

1. Higher Education

1. **Higher Education** - Intention - Composition *Historical Spaces* ☐ Generic Teaching Spaces ☐ Generic Teaching & Learning Spaces ☐ Generic Learning Spaces ☐ Disciplinary Teaching & Learning Spaces *Related Topics* - Accessibility - Animation - Production		

Plan

2. Cha(lle)nges

1. **Higher Education** - Intention - Composition *Historical Spaces* Generic Teaching Spaces Generic Teaching & Learning Spaces Generic Learning Spaces Disciplinary Teaching & Learning Spaces *Related Topics* - Accessibility - Animation - Production	**2.** **Cha(lle)nges** Ecological Transition Skills : - Ecological sensibility - Complex Problem Solving - Communication - Creativity - Critical thinking - Collaboration Digital Revolution Components : - Spaces - Devices - Network - Apps	

Plan

UCLouvain

2. Cha(lle)nges : Ecological transition

Ecological transition refers to the present time.

It is marked by multiple crises, an uncertain future, accelerating change and increasingly complex situations.

The ecological transition also heralds a reduction in the extraction of materials and the availability of energy.

It also opens up new opportunities.

2. Cha(lle)nges : Ecological transition

The ecological transition requires enhanced soft skills.

We need to develop an ecological awareness and an ability to solve complex problems while developing skills in
- Collaboration
- Communication
- Creativity
- Critical thinking.

It is changing the pedagogical intentions and spaces of Higher Education.

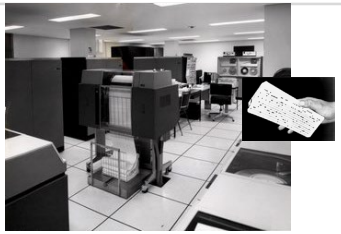
2. Cha(lle)nges : Digital Revolution

Digital Revolution comes from the separation between information and one material.

Information can be transported much more quickly, without having to bear the weight of its medium.

2. Cha(lle)nges : Digital Revolution, a (non-exhaustive) timeline

SPACES



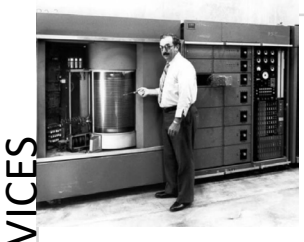
1970's

1990's

2004

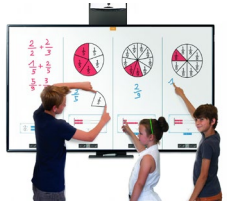
2019

DEVICES



1952

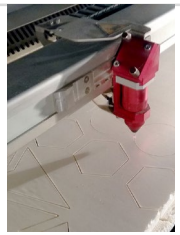
1977



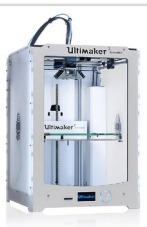
1991

1993

2007 & 2010



2008



2013

2015

2016

NETWORKS

1995 1999 2004 2006 2010

APPS+PF

2002 2008 2013 2015 2016 2022

3. Impacts : - New Intentions – New Compositions

SPACES

1970's

1990's

2004

2019

DEVICES

1952

1977

1991

1993

2007 & 2010

2008

2013

2015

2016

NETWORKS

1995

1999

2004

2006

2010

APPS

2002

2008

2013

2015

2016

2022

3. Impacts : - New Intentions – New Compositions

SPACES

1970's

1990's

2004

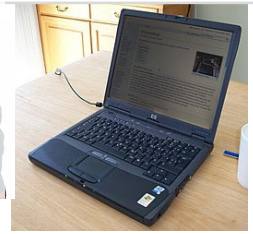
2019

DEVICES

1952

1977

1991



1993

2007 & 2010

2008

2013

2015

2016

NETWORKS

1995

1999

2004

2006

2010

APPS

2008 2013

2015

2016

2022

2. Cha(lle)nges : Digital Revolution

Digital Revolution comes from the separation between information and one material.

Information can be transported much more quickly, without having to bear the weight of its medium.

Information circulates at the speed of light and is available everywhere.

In short, less material and energy but more information.

3. Impacts

1.
Higher Education

- Intention
- Composition

Spaces

- Generic Teaching Spaces
- Generic Teaching & Learning Spaces
- Generic Learning Spaces
- Disciplinary Teaching & Learning Spaces

Related Topics

- Accessibility
- Animation
- Production

2.
Cha(lle)nges

Ecological Transition

Skills :

- Ecological sensibility
- Complex Problem Solving
- Communication
- Creativity
- Critical thinking
- Collaboration

Digital Revolution

Components :

- Spaces
- Devices
- Network
- Apps

3.
Impacts

- New intentions
- New compositions

Other Spaces

- Teaching Center
- Learning Center
- Disciplinary Teaching & Learning Spaces
- Spaces for living and socialising

Related Topics

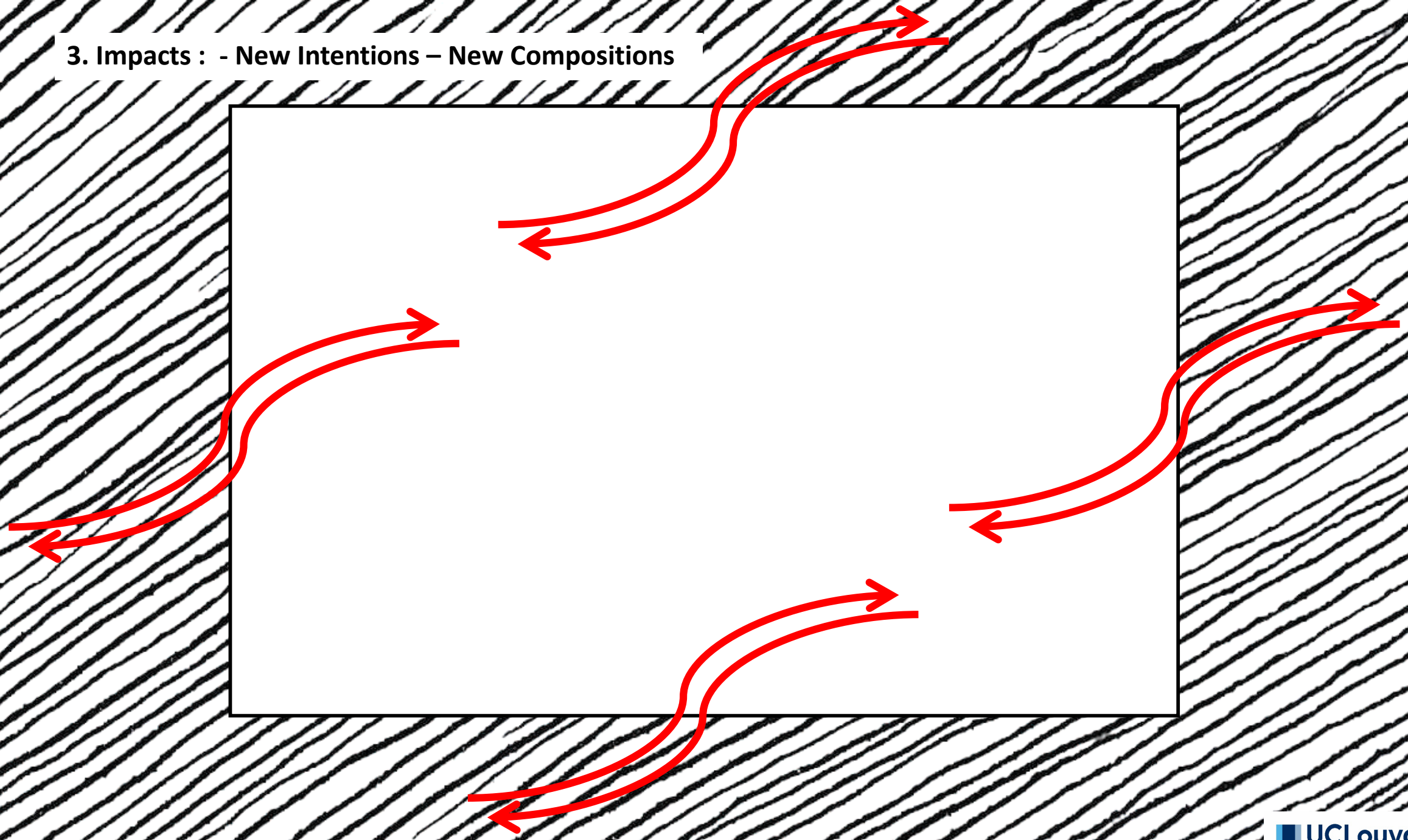
- Accessibility
- Animation
- Production

Plan

3. Impacts : - New Intentions – New Compositions

Higher Education no longer has a monopoly on the possession and transmission of knowledge.
There are more learning opportunities outside Higher Education.
And more distracting information is entering the education system.

3. Impacts : - New Intentions – New Compositions



UCLouvain

3. Impacts : - New Intentions – New Compositions

Higher Education no longer has a monopoly on the possession and transmission of knowledge.
There are more learning opportunities outside Higher Education.
And more distracting information is entering the education system.

The pandemic has shown the possibilities and limits of distance learning. Learning as a social fact has been reinforced.
But the pandemic has also shown that if a course is to be followed passively, it is quicker and easier for students to follow it from home.

1. Higher Education : - Intention - Composition

Intention :
Higher Education takes its place between general education (the humanities) and professional life (+ lifelong learning).
But it is a time in itself. It's a time for discovery, understanding, assimilation, experimentation and mastery, all of which require repeated efforts to ensure that the brain is shaped by a discipline, so that cerebral connections are exercised and easily found when faced with a new problem.

It is no longer reasonable to master a discipline without linking that learning to the state of the planet.
Soft skills need to be developed to enable complex problems to be solved in an interdisciplinary context.
Higher Education must offer a diversity of learning experiences in a holistic consideration of the individual.

1. Higher Education : - Intention - Composition

Composition :
To achieve this, institutions provide spatial and temporal settings where students are protected from the hustle and bustle of the world, to help them come to terms with the things they need to learn and the skills they need to acquire.
Higher Education offers spatial limits for concentrated work.

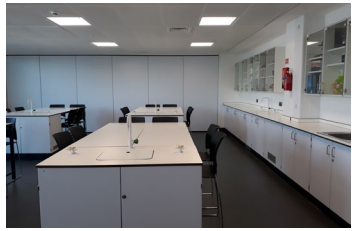
Within these limits, higher education must provide a greater variety of spaces, work spaces for students and more welcoming and stimulating spaces for students. Students must be able to come and find experiences that they cannot find elsewhere.

3. Impacts : *Other Spaces*

Generic Teaching Space. A place for Transmission.

Generic Teaching & Learning Space. A place for Appropriation.

Generic Learning Space. A place to study.



Disciplinary Learning & Teaching Space. A place to practice.

3. Impacts : *Other Spaces*

Salle Collaborative, Université de Sherbrooke, Québec

The Collaborative Room

UCLouvain

3. Impacts : *Other Spaces*

Lecture Theatre, University of Leeds

The Harvard Lecture Theater

3. Impacts : *Other Spaces*

Queen's University (document U. Sherbrooke)

The Hyperflexible Room

3. Impacts : *Other Spaces*

University of Leeds, Architects Burwell-Deakins

The Collaborative Theater

3. Impacts : *Other Spaces*

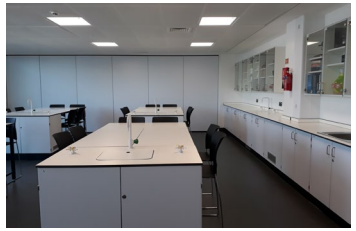
These types of additional spaces support active pedagogy and soft skills.

They broaden teaching opportunities.

They can be gathered in a Teaching Center.

3. Impacts : *Other Spaces*

Teaching Center

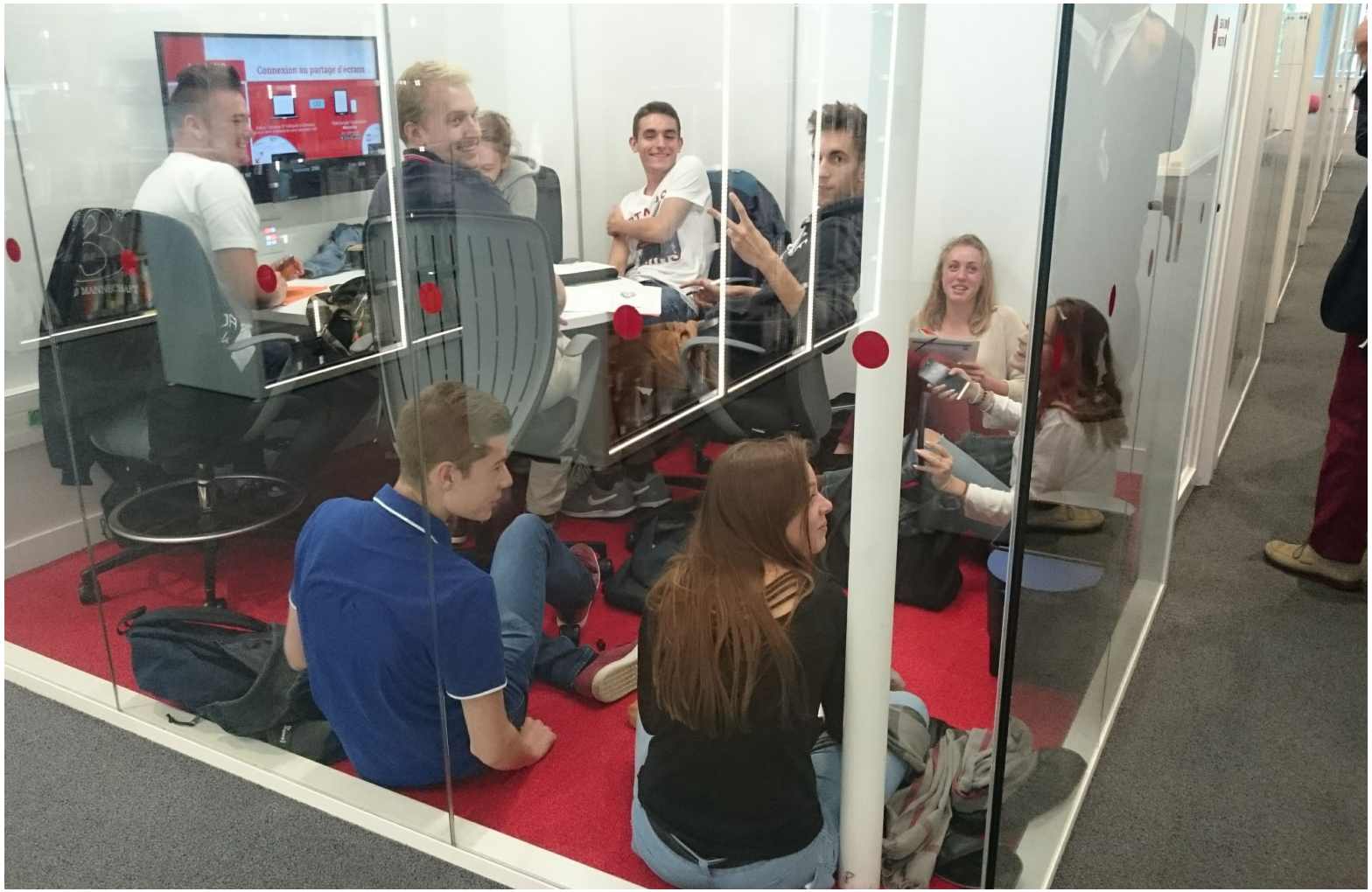


3. Impacts : *Other Spaces*

Bibliothèque, Faculté de Droit, Université de Sherbrooke, Québec

Space for group work and Study Room.

3. Impacts : *Other Spaces*



Lilliad Bibliothèque, Université catholique de Lille

Space for group work.

3. Impacts : *Other Spaces*

Bibliothèque, Campus Arenberg, LEuven

Open Space for study.

3. Impacts : *Other Spaces*

Agora Learning Center, Leuven The Ultimate Guide To Virtual Reality for Businesses in 2022 (eventx.io)

Editing Room.

UCLouvain

3. Impacts : *Other Spaces*

Those other spaces support learning and soft skills.

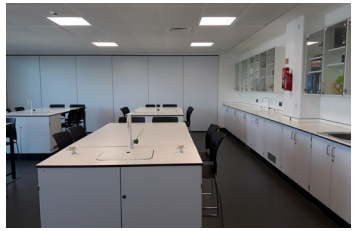
They increase the number of learning resources available to students.

All the learning resources available to students make up a Learning Centre.

3. Impacts : *Other Spaces*

Teaching Center

Learning Center

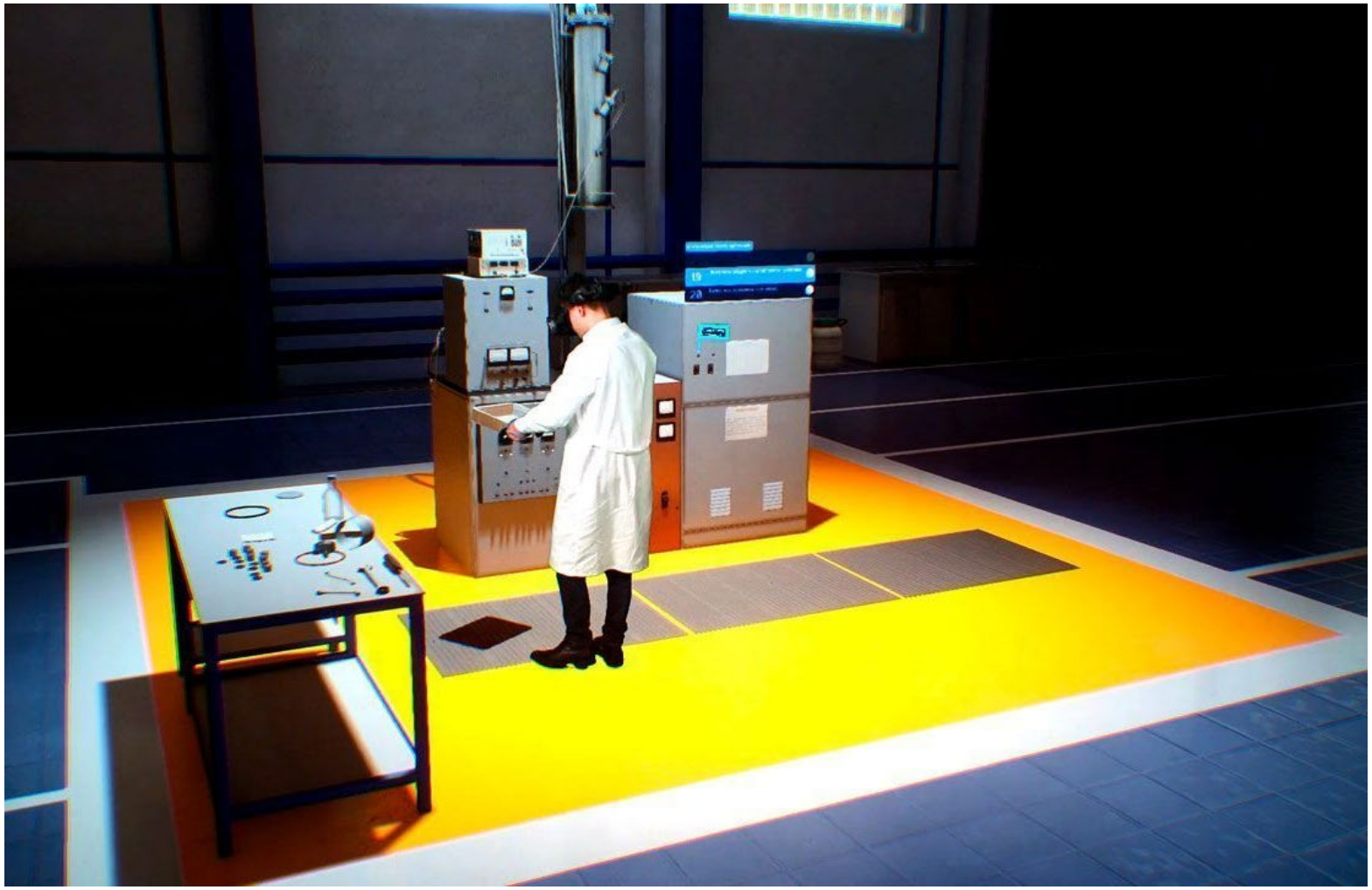


3. Impacts : *Other Spaces*

The Ultimate Guide To Virtual Reality for Businesses in 2022 (eventx.io)

Virtual Operating Theatre.

3. Impacts : *Other Spaces*



United 3D Labs: Industrial Virtual Reality Simulator (uni3dlabs.com)

Virtual Laboratory.

3. Impacts : *Other Spaces*

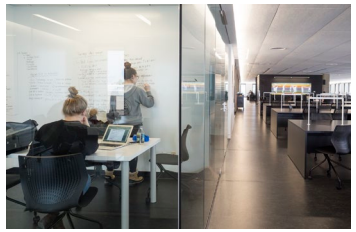
Virtual reality is not ready to replace physical learning spaces.

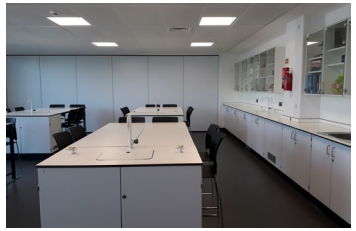
However, it does have the advantage of duplicating them to enable students to practise without any consequences.

3. Impacts : *Other Spaces*

Teaching Center

Learning Center





+ Virtual Disciplinary Teaching & Learning Spaces

3. Impacts : *Other Spaces*

ROLEX Learning Center, EPFL, Lausanne

Rest Room.

3. Impacts : *Other Spaces*

Lilliad Bibliothèque, Université catholique de Lille

Socialisation Room.

3. Impacts : *Other Spaces*

Around these teaching and learning spaces, institutions benefit from developing spaces for students.

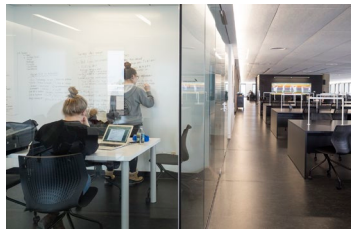
Spaces that give them confidence, spaces where they can talk to each other, spaces where they can socialise and relax, spaces that encourage them to be present.

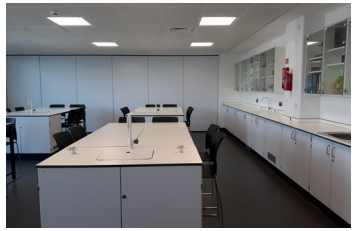
A continuum of spaces for a complete learning experience.

3. Impacts : *Other Spaces*

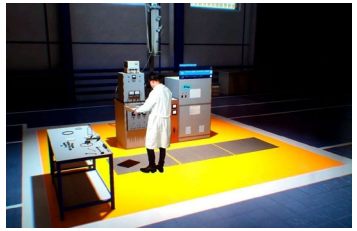
Teaching Center

Learning Center





+ Virtual Disciplinary Teaching & Learning Spaces



+ Spaces for living and socialising

UCLouvain

3. Impacts : Questions

3. Impacts - New intentions - New compositions	**What is the meaning of higher education in today's world?** **How can we preserve a protected environment for learning and at the same time bring it into closer contact with the changing world?**
Spaces ☐ Teaching Center ☐ Learning Center ☐ Disciplinary Teaching & Learning Spaces ☐ Spaces for living and socialising	**What diversity of spaces can be deployed to enrich teaching methods?** **What diversity of spaces and services can be deployed to support student learning?** **How can we broaden the range of disciplinary spaces?** **How can we create a stimulating learning environment?**
Uses (Moments) - Accessibility - Animation - Production	**How can we increase accessibility and inclusiveness?** **How can we support teachers in running their activities?** **How can we increase students' opportunities for production and action in order to make them citizens engaged in the ecological transition ?**