

Luiss

MSc Law, Digital Innovation and Sustainability

Enquiry-Based Protocol: R&I Lab, xLabs and more

24 novembre 2021

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LDIS ATTRACTIVENESS

Why Law, Digital Innovation & Sustainability

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Why Digital Innovation?

89% of CIOs say their digital transformation has accelerated

93% of CIOs think AI-assistance will be critical to cope with new challenges

52% of companies on the Fortune 500 list have become obsolete, since 2000.

Dynatrace survey of 700 CIOs,
2021

Why Sustainability?

24.000.000

new **green jobs**
globally by 2030

87%

of executives said they were
experiencing **skill gaps** in the
workforce or expected them within
a few years

World Skills, 2021

Why Law, Digital Innovation & Sustainability

World Economic Forum

“New technologies are set to drive future growth across industries, as well as to increase the demand for new job roles and skill sets. Such positive effects may be counter-balanced by workforce disruptions. A substantial amount of literature has indicated that technological adoption will impact workers’ jobs by displacing some tasks [...] that is why future workers will have to acquire new skills”



97.000.000

"number of new roles that may emerge as more adapted to the new division of labor between humans, machines and algorithms, across the 15 industries and 26 economies" covered by the WEF, Future of Jobs 2020 report

55%

percentage of companies that will transform the composition of their value chain for the digital transition by 2025

41%

increase of the task-specialized workforce that companies will introduce by 2025

Data source: The Future of Jobs Report,
World Economic Forum, 2020

Why Law, Digital Innovation & Sustainability

OECD



"To succeed in the digital world of work, people need sound cognitive skills including digital skills, social and emotional skills, job-specific skills and importantly the ability and motivation to cope with change and keep learning"



66.000.000

workers affected by digitalization
towards sustainable development



32%

workers face major changes in the tasks
required in their job and, consequently, the
skills they would need to do their job
(Nedelkoska and Quintini, 2018)

14%

workers face a high risk
that their tasks will be
automated

Why Law, Digital Innovation & Sustainability: the jobs of tomorrow



Increasing demand by 2025

- 1 Data Analysts and Scientists
- 2 AI and Machine Learning Specialists
- 3 Big Data Specialists
- 4 Digital Marketing and Strategy Specialists
- 5 Process Automation Specialists
- 6 Business Development Professionals
- 7 Digital Transformation Specialists
- 8 Information Security Analysts
- 9 Software and Applications Developers
- 10 Internet of Things Specialists
- 11 Project Managers
- 12 Business Services and Administration Managers
- 13 Database and Network Professionals
- 14 Robotics Engineers
- 15 Strategic Advisors
- 16 Management and Organization Analysts
- 17 FinTech Engineers
- 18 Mechanics and Machinery Repairers
- 19 Organizational Development Specialists
- 20 Risk Management Specialists

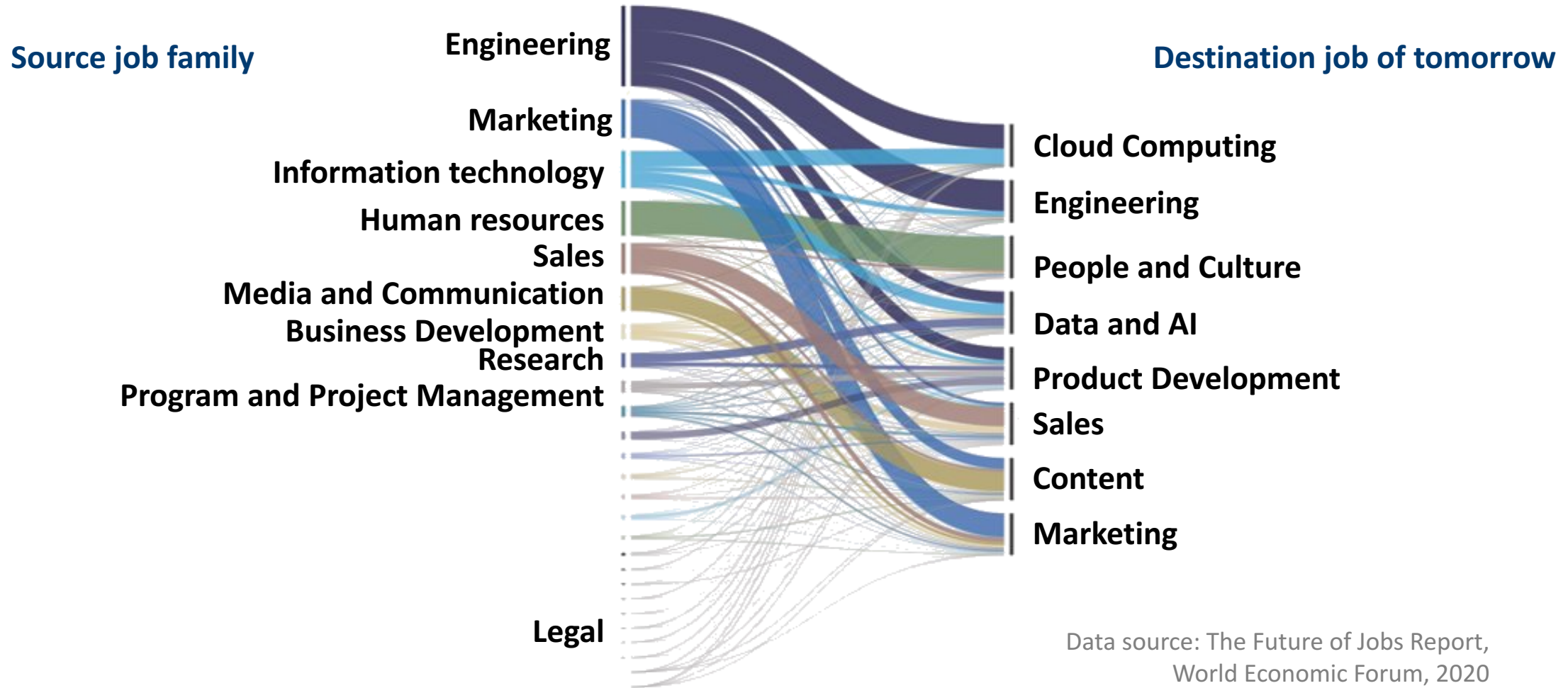


Decreasing demand by 2025

- 1 Data Entry Clerks
- 2 Administrative and Executive Secretaries
- 3 Accounting, Bookkeeping and Payroll Clerks
- 4 Accountants and Auditors
- 5 Assembly and Factory Workers
- 6 Business Services and Administration Managers
- 7 Client Information and Customer Service Workers
- 8 General and Operations Managers
- 9 Mechanics and Machinery Repairers
- 10 Material-Recording and Stock-Keeping Clerks
- 11 Financial Analysts
- 12 Postal Service Clerks
- 13 Sales Rep., Wholesale and Manuf.
- 14 Relationship Managers
- 15 Bank Tellers and Related Clerks
- 16 Door-To-Door Sales, News and Street Vendors
- 17 Electronics and Telecoms Installers and Repairers
- 18 Human Resources Specialists
- 19 Training and Development Specialists
- 20 Construction Laborers

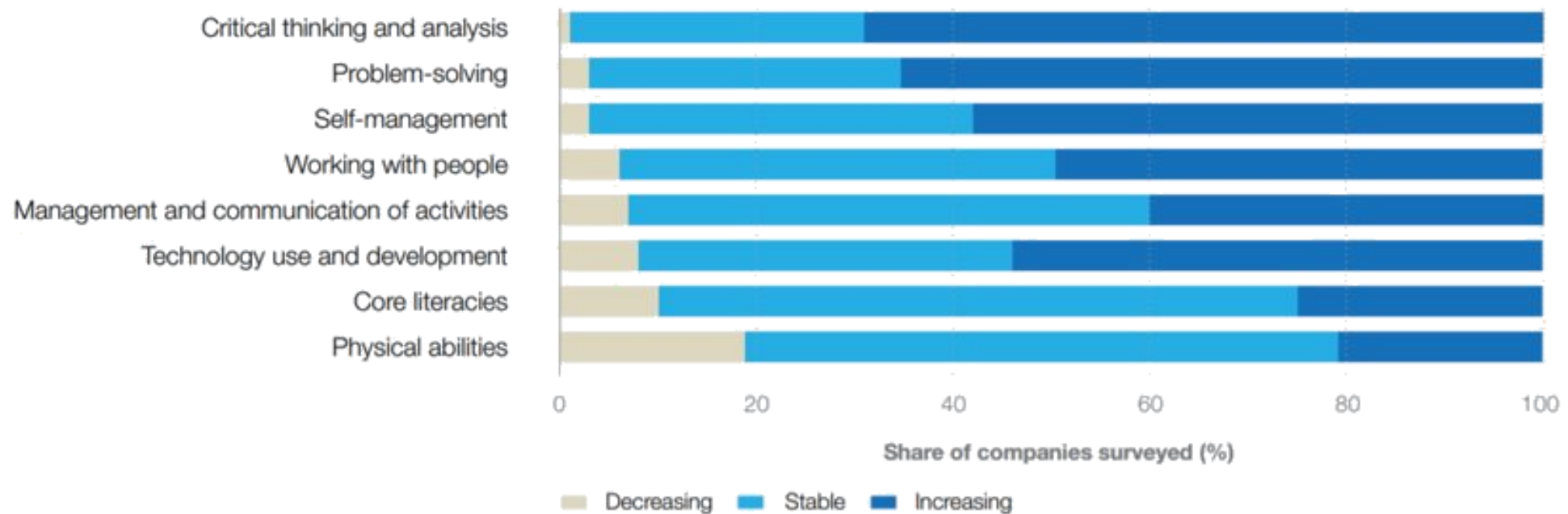
Source: The Future of Jobs Report,
World Economic Forum, 2020

Why Law, Digital Innovation & Sustainability: the jobs of tomorrow



Why Law, Digital Innovation & Sustainability: a matter of skills

World Economic Forum has shown that future workers should be focused on skills that are currently in demand as well as efforts underway to fill that demand through appropriate reskilling and upskilling, as follows:



World Economic Forum, The
Future of Jobs, 2020

Why Law?



Do Lawyers Make Better CEOs Than MBAs?

“We found that **CEOs with legal training** were associated with higher firm value, but only in a subset of firms, specifically, in high-growth firms and firms with large amounts of litigation”

**Harvard Business Review,
M. Todd Henderson**



The Future of Lawyers

“Some legal work can now be done by machines ...We also see systems that can predict the outcome of disputes. We're beginning to see machines take on many tasks that we used to think were the exclusive role of lawyers”

Forbes, Bernard Marr

Jobs opportunities: Managers of the Digital and Ecological Transition

Chief sustainability officer

Executive position within a corporation that oversees the corporation's "environmental" programs

Chief risk/compliance officer

Corporate executive responsible for identifying, analyzing and mitigating internal

Chief operating officer

Member of an organization's executive team, who helps grow the company and assures its financial strength and operating efficiency.

Chief innovation officer

Responsible for managing the process of innovation and change management within a company, being the person who "originates new innovative ideas".



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The LDIS structure

Every class is a (building) block

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Explaining the building blocks

Digital Transformation & Emerging Technologies



Governance of Innovation & Climate Change

Economics of Innovation & Climate Change



Crime Prevention & Compliance

Law & Ethics of Innovation & Sustainability



Intellectual Property Law & Economics

Law & Policy of Innovation & Climate Change



Law & Organization of Labor

Choosing a path

Emerging Technologies



Management of innovation and emerging technologies



Fintech



Data protection law

I
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Climate Change



Management of circular economy



Green & sustainable finance



Regulation of Innovation & Sustainable development

Exploring the **social sciences** – the electives

- ESG & Impact investing
- Cybersecurity & Cybercrimes
- Competition and markets of innovation
- Climate Justice
- Managing and financing the energy transition
- Regulating Heritage Markets
- Open & Social Innovation
- Smart Cities
- Legal Tech

Connecting with the **hard sciences** – the electives

- Emerging tech (AI, Blockchain, Machine learning, IoT, 5g)
- Healthcare 4.0
- Earth and Space science
- Robotics, Mechatronics & Biotech
- Food tech, Agriculture 4.0, Sustainable Tourism
- Data science, Big Data Analytics, Biostatistical analysis

The pre-incubation path

Every lab and activity is a node in the LDIS (block) chain

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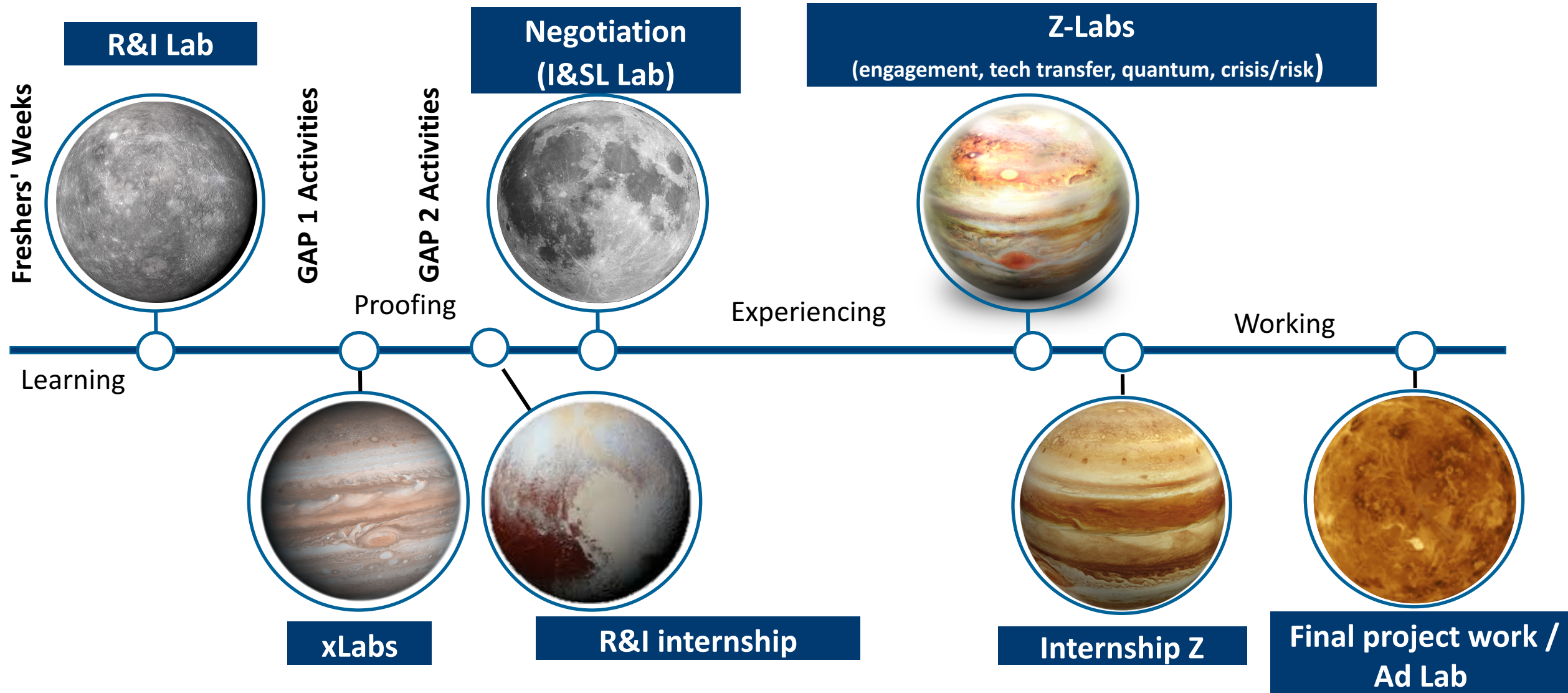
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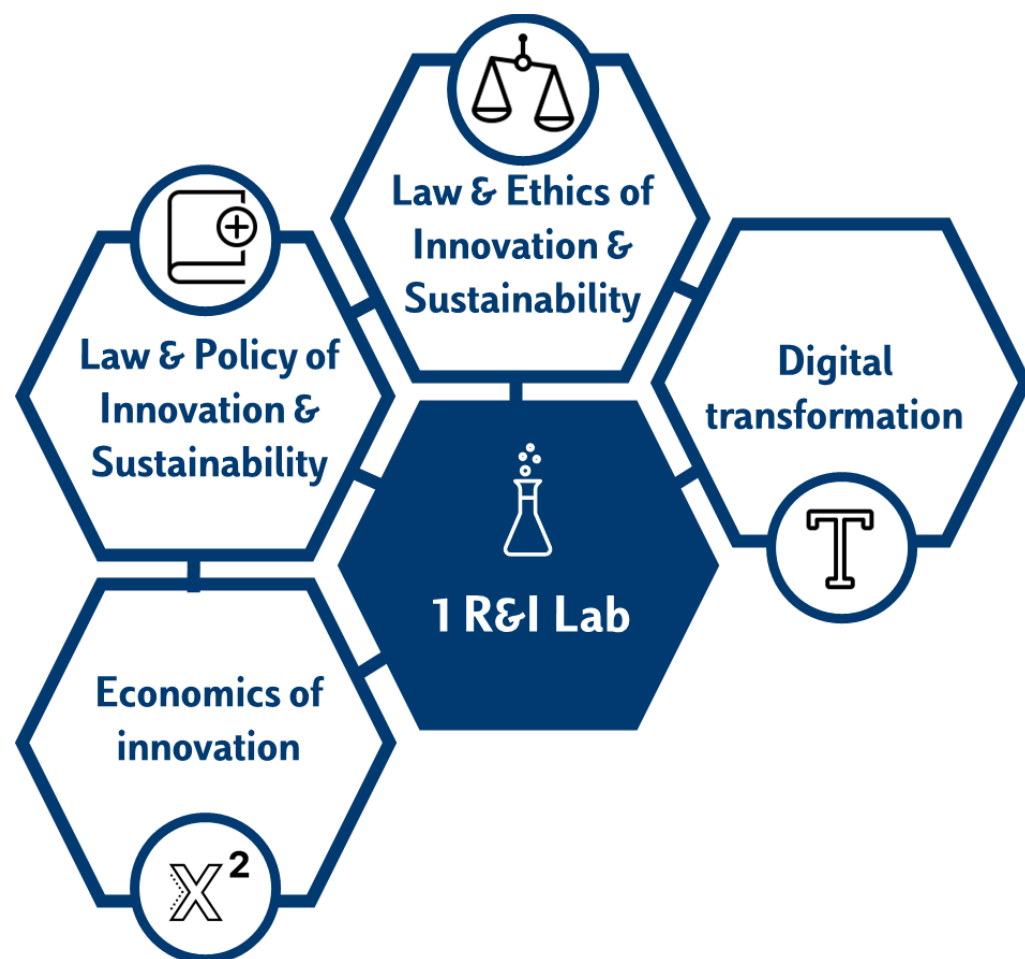
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The Pre-Incubation process



1st semester: bridging different courses



Main elements:

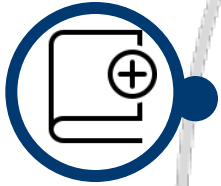
- Co-management and coordination (timing and contents)
- Sharing programs and projects
- Evaluation methods
- Incremental process

The four pillars of the First Semester:



Ethical reasoning / Ethics course

Being able to see problems and solutions from a different angle taking in consideration also fragile and marginalized people



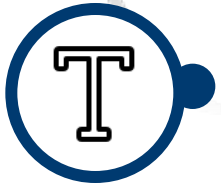
Academic skills / Policy course

Being able to collect data and insights on a specific topic in order to support and present their ideas



Quantitative analysis / Economics course

Being able to collect quantitative information from different sources, e.g. accessing the databases, and analyse them to support their hypothesis



Qualitative analysis / Digital Transformation

Being able to develop interviews, focus groups and collect qualitative information

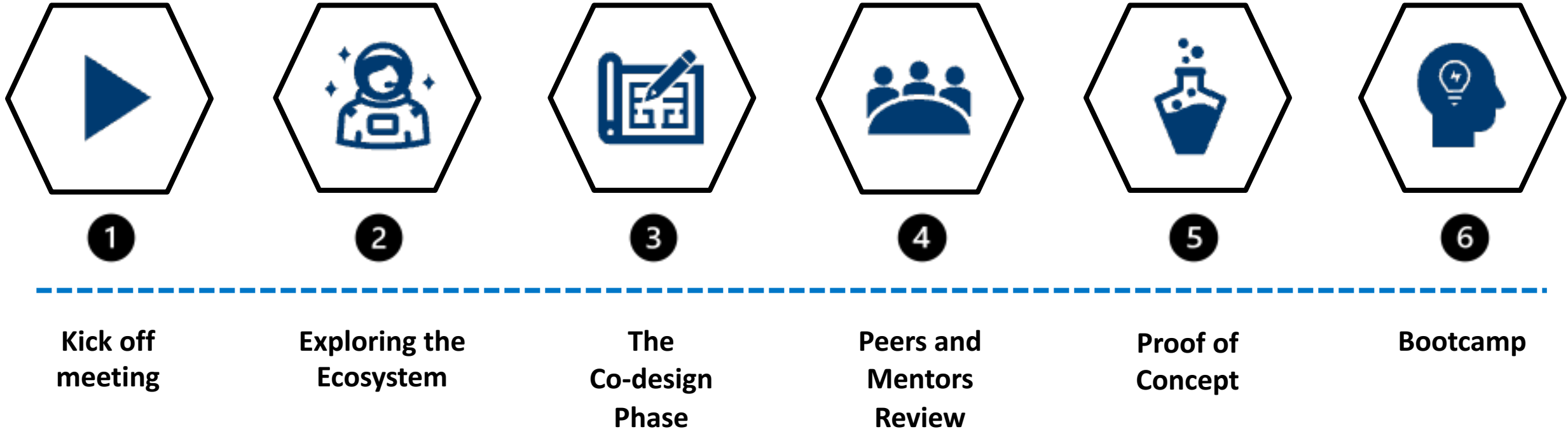
2nd semester: bridging different courses



Main elements:

- Application of the knowledge and tools
- Experimentation of innovative solutions
- Pre-incubation

xLabs: open and collaborative ecosystem



xLabs: open and collaborative ecosystem



The future of automotive:

How do you imagine the charging station and the highway of the future?

Supported
by:



The future of cities:

How can the “as-a-service” business model for sustainable mobility be improved?

Supported
by:



The future of manufacturing

How is it possible to rethink the core business of a fashion company?

Supported
by:



xLabs: open and collaborative ecosystem



The future of earth:

How can we reimagine the agri-food company of the future?

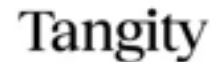
Supported
by:



The future of wellbeing:

How might digital technology and communication improve people wellbeing?

Supported
by:



The future of energy:

How to support the development of energy local, community-based ecosystems?

Supported
by:



Negotiation as a language

Learning how to negotiate

The negotiation lab challenges students in learning to negotiate. Students will learn to generate innovative options by gathering information and dovetailing interests. This program emphasizes an understanding of both interpersonal behaviors and analytical tools for dealing effectively with conflicts and innovative solutions to solve problems.



The Z-Labs

Refining the ideas through the pre-incubation process

The four Z-Labs (engagement, tech transfer, quantum, crisis/risk) support students to define their project ideas. The four labs will provide new skills and knowledge that allow students to evolve the ideas started in the xLabs. The Z-Labs will also create bridges among the LDIS and research and innovation projects such as Open Tech Lab and ENGAGE.EU.



Final project work...

...not just a Thesis

The Final project work enables students to dedicate their time to the development of real applied projects. Hence, students can structure and deliver a business idea, a policy, an evaluation, or any other concrete solution that can answer to well focused problems and needs. The Final project work can be developed by students autonomously or in collaboration with an organization on a specific project



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Co-design

Method, theory, lab & tools

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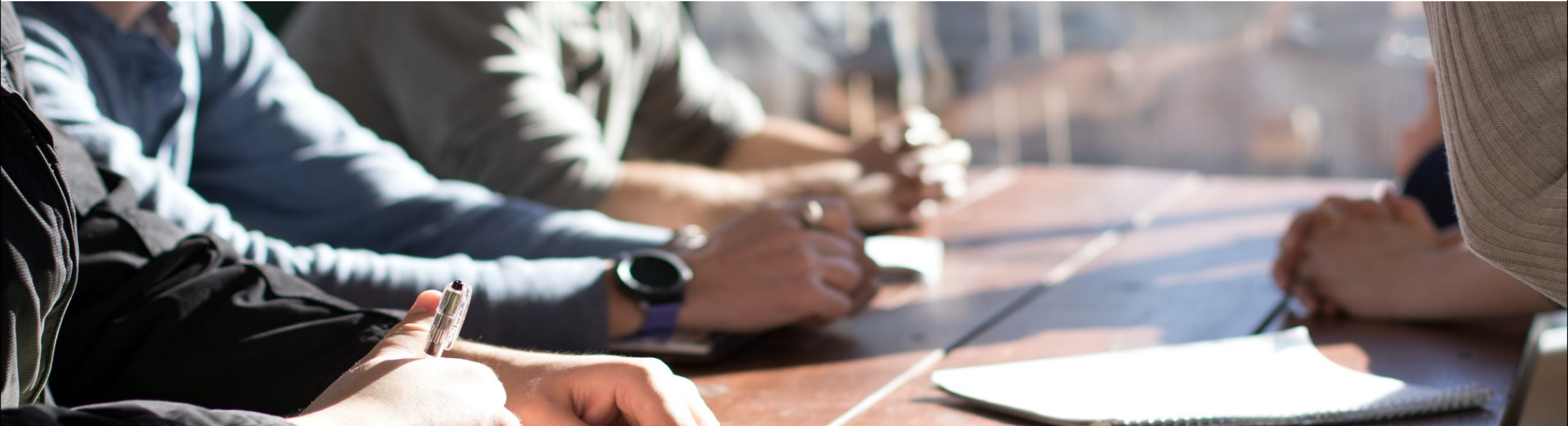


Designed together with...

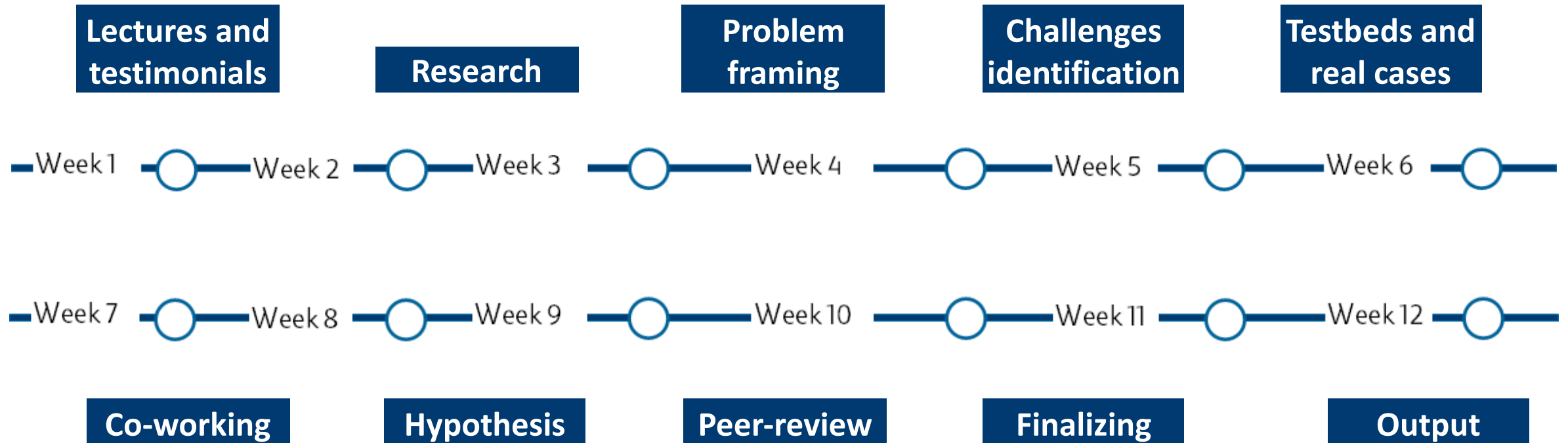


Co-design process

LDIS has been structured through a continuous collaborative process that includes interviews to firms, experts and students as beneficiaries of the programme



Lab within the courses



Assignment & Evaluation

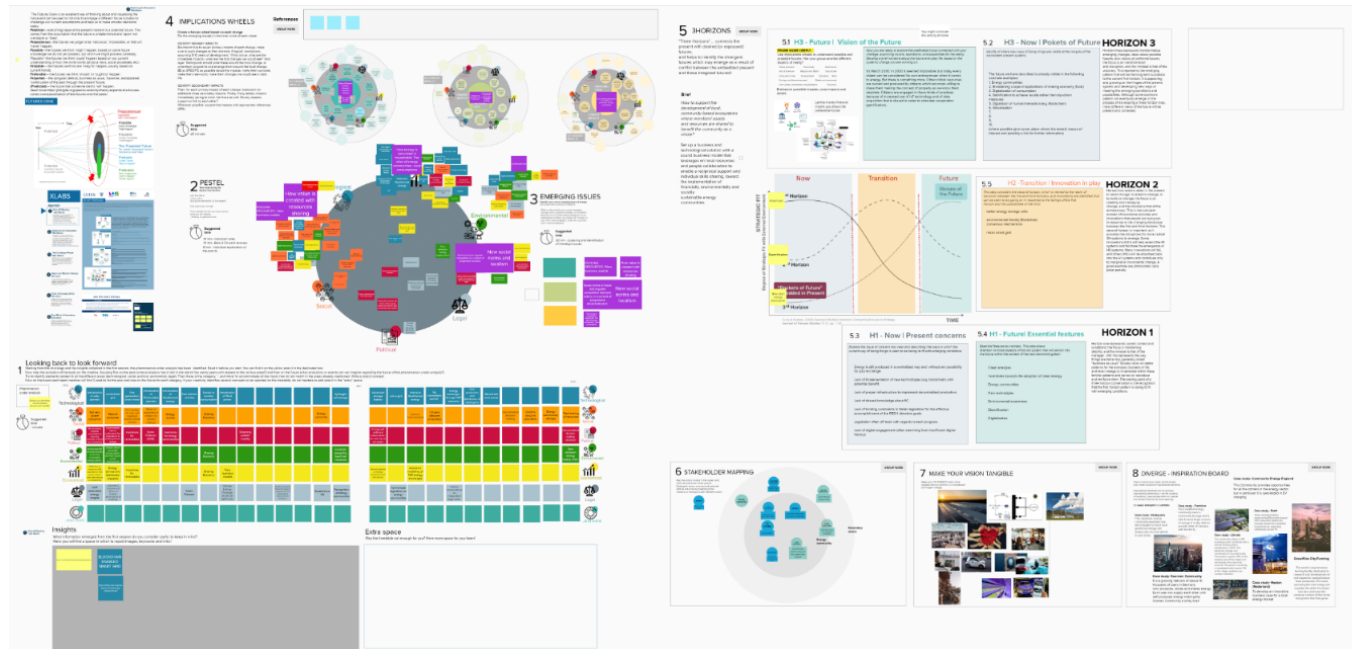
Continuous assessment is crucial to LDIS. It involves evaluations that consider multiple factors: **1) presence; 2) classroom engagement through presentations and reactions; 3) teamwork; 4) individual project work.**

Each course has been challenged to define its own evaluation mix:

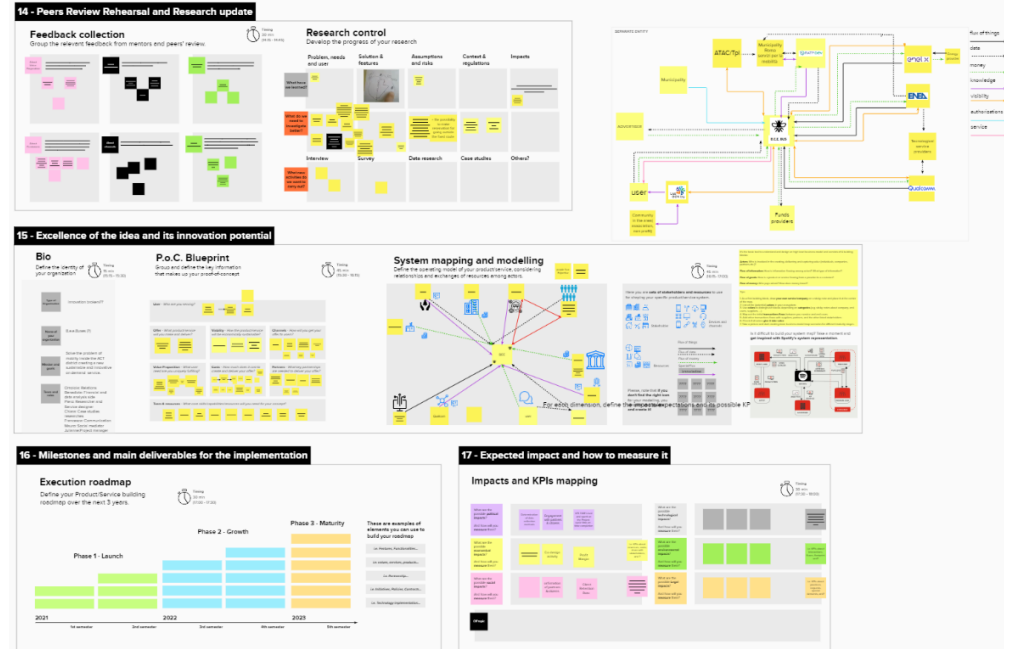
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Co-design tools

From understanding the future ...



To a proof a concept



Let students decide their field



Multisectoral choices

LDIS aims at strengthening each student diverse backgrounds, interests, talents and curiosities, thanks to tailored activities which support each of them to develop new skills. This mean even to give them the possibility to express and deepen their applied knowledge in crucial for digital and ecological transition: transport, agri-food, climate resilience, manufacturing, wellbeing, data, crisis management



Creating the groups



Teamwork and roles

LDIS innovation ecosystem counts on students' entrepreneurial attitude enhanced during teamwork activities. Students are stimulated to assume different roles within the group that resemble their individual skills or curiosity. The team is a complex and various unit.



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Working with the stakeholders

LDIShips, internships, final project work

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Not just global: region, cities and neighbourhoods



Urban experimentalism

Global challenges are addressed and driven by local contexts. The challenge-based learning is set cities through urban experimentalism encouraging multi-actor collaboration that could stimulate the involvement of local stakeholders to define tailored choices together with students



5 Helix

Quintuple helix and experimentalism

LDIS courses are the living labs in which the quintuple helix's actors take into account a **complex system of stakeholders**: both civil society organizations and the commons, public, private and knowledge sector co-design innovative solution in key fields within the main global challenges. Students, faculty members and partners Mentors, final beneficiaries and users will be the active ecosystem in experimentalism processes

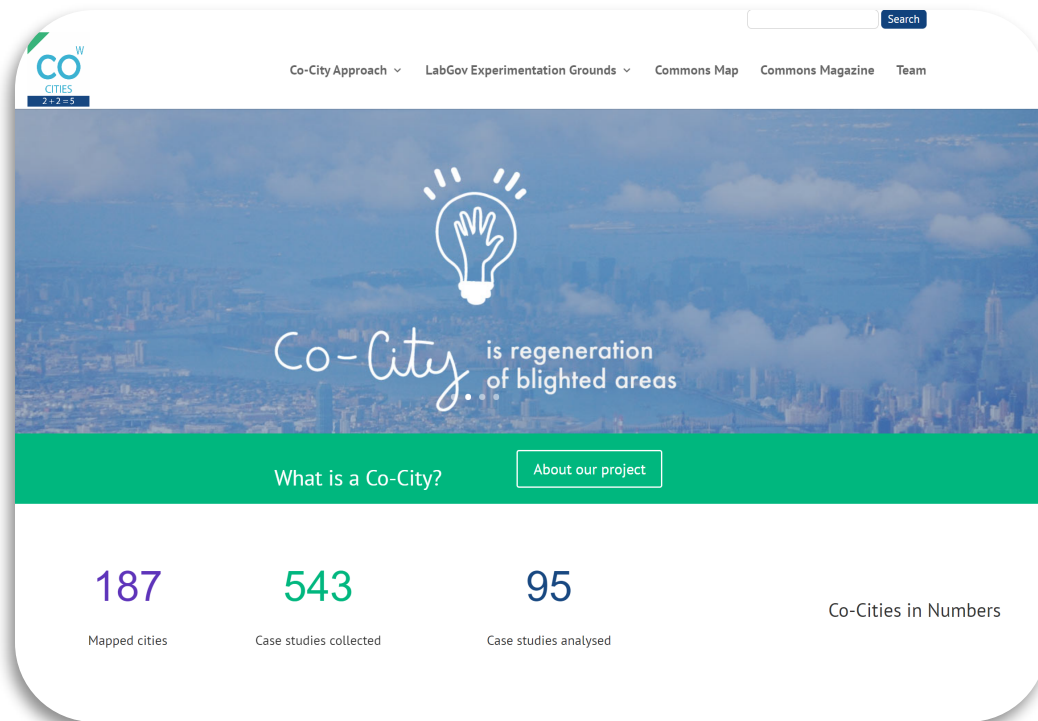


Not only companies: public, research, social and civic environment



From project to training & working experience

Being a multiactorial environment strengthens the opportunities for the students to be trained through both in-class activities and internships. This possibility is built in synergy with the Luiss Career Center. Projects hypothesis can be finalized together with firms and interested organizations, retro engineering the approach job on the training, finding physical and digital spaces for their acceleration



Commoning.city



Casa delle Tecnologie Emergenti

Working on real projects



ENGAGE.University
(Erasmus +)



Open Heritage
(Horizon 2020)



UIA Co-City
(now Urbact Co4cities)



Civic eState
(URBACT)



EUARENAS
(Horizon 2020)



Towards Savio 2030



Commoning.city



City Science Initiative
(JRC EU Commission)



City Science Office Reggio Emilia



ENGAGE.R&I
(Horizon 2020 – SWAFS)



Energy Communities



E-Harlem project

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The enquiry-based models

Starting from real challenges

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Framing the approach: the engagement drive

Entrepreneurial university

contributes and provides leadership for creating entrepreneurial thinking, actions, institutions and entrepreneurship capital (Audretsch & Keilbach, 2008) and society facilitating entrepreneurial behavior through research, teaching and knowledge exchange activities within the entrepreneurial domain.

Engaged university

actively involving researchers, faculty and students to share and use their expertise to find knowledge-based solutions to real-life problems, combining the latest academic insights with the highest professional standards > A good professional is first a good citizen (Von Humboldt, 2011)

Framing the approach: the applied work drive

Challenge-based learning

builds on problem-based learning models where students engage in self-directed work scenarios by giving them opportunity to focus on a significant challenge addressed to developing local solutions (Johnson, 2009)

Project-based learning

Project-based learning (PBL) will lead to wide variation in the quality of project design and classroom implementation challenging problems or questions with a sustained inquiry (Buck Institute for Education 2015) as "we learn from reflecting on experience" (Dewey, 1933)

Framing the approach: the EU drive

Open Science and Citizen Science

deepening the relationship between science and society and reinforcing public confidence in science, the EU has been favouring an informed engagement of citizens and civil society on research and innovation matters by promoting science education, by making scientific knowledge more accessible, by developing responsible research and innovation agendas that meet citizens' and civil society's concerns and expectations

Responsible Research and Innovation (RRI)

create a research and innovation friendly and open environment to stimulate students to simultaneously and sustainably start to tackle low economic growth, limited job creation and global challenges such as health, well-being, security, food, natural resources, climate and energy (European Commission, 2018). Responsible Research and Innovation (RRI) is a term used by the European Union's Framework Programmes to describe scientific research and technological development processes that take into account effects and potential impacts on the environment and society.

Mission-oriented innovation

knowledge engine of a missions-oriented public innovation unit that will change policies (Mazzucato, 2018) which has inspired a new approach to target social, economic and environmental issues.

Framing the approach: the research drive

Re-creating the innovation ecosystem

Building on the triple helix model of innovation, based on a relationship between university, industry, government and advanced the idea of a **quintuple helix** or pentahelix model of innovation for governance of the city as a commons (Etzkowitz and Leydesdorff, 2000; Carayannis & Campbell, 2010; Barth, 2011; Iaione, 2016)

Ostrom and the science of sustainability

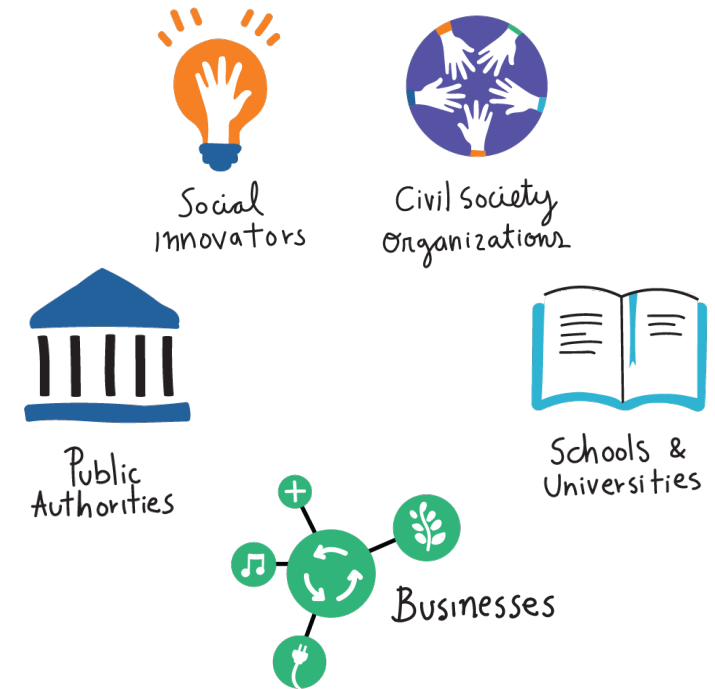
the design principles of governance of the commons enucleated by Nobel laureate in Economics **Elinor Ostrom (1990): cooperation and communities are key elements for long-endurability**

Co-City and 5-helix

The developed Project-based approach comes from the applied experience on the Co-City by which we mean a model of collaborative city, as an open resource shared by a multiplicity of actors, through the implementation of the design principles of governance of the commons enucleated by Nobel laureate in Economics **Elinor Ostrom**, adapted to the urban context, and the construction of a quintuple-helix institutional ecosystem that stimulates the construction of public-private-community partnerships, involving five actors:

- Civic (social innovators and active citizens)
- Social (third sector organizations)
- Cognitive (cultural institutions, schools and universities)
- Public (public institutions)
- Private (responsible businesses and industries that build on local vocations)

Quintuple helix



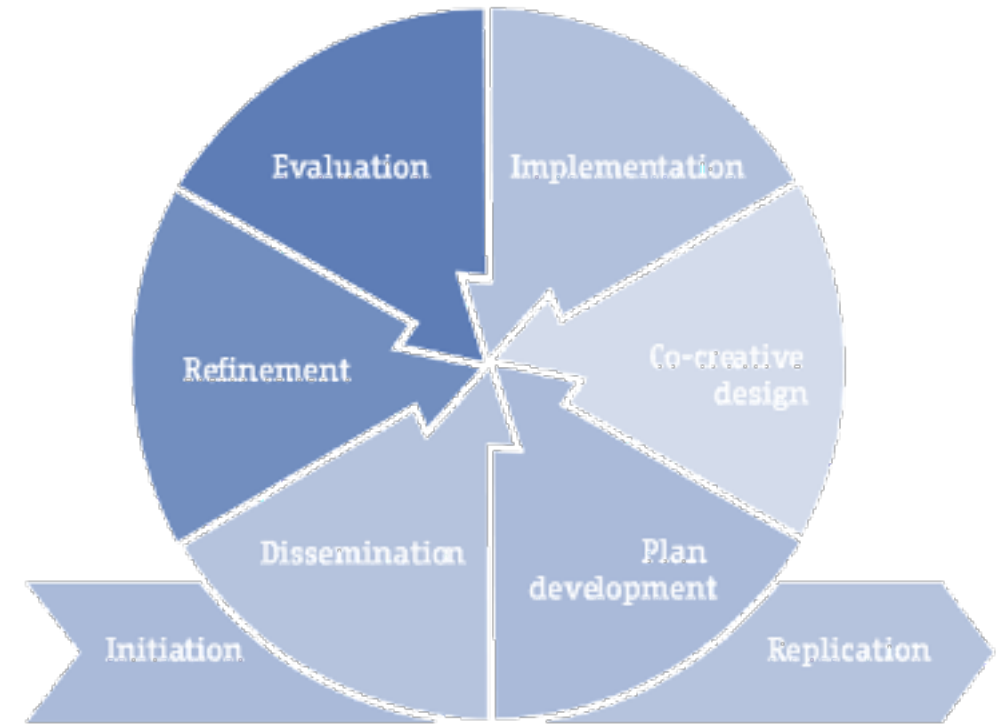
The LDIS enquiry-based model can also rely on the previous experience of the Soft skills course, urban clinic LabGov, which promotes:

-  **Intergenerational collaboration between students and researchers** (from students to coordinators)
-  **Solving concrete problems and challenges**
-  **Applying a collaborative and open approach**

Applying new theories

Living Labs promoted by the European Commission Joint Research Centre (JRC) are “user-centered, open innovation ecosystems based on a systematic **user co-creation approach** in public–private–people partnerships, integrating research and innovation processes in real life communities and settings” (ENOLL, 2013)

The classroom as a living lab applied-knowledge in relevant real contexts together with stakeholders and beneficiaries bringing users into the creative process and bridging the innovation gaps (Steen & cìvan Bueren, 2017)



Steen, Kris & van Bueren, Ellen. (2017).
Urban Living Labs: A Living Lab Way of Working

Classes as "Collaboratories"

Knowledge is an activity that is inherently collaborative (Finholt, 2002)

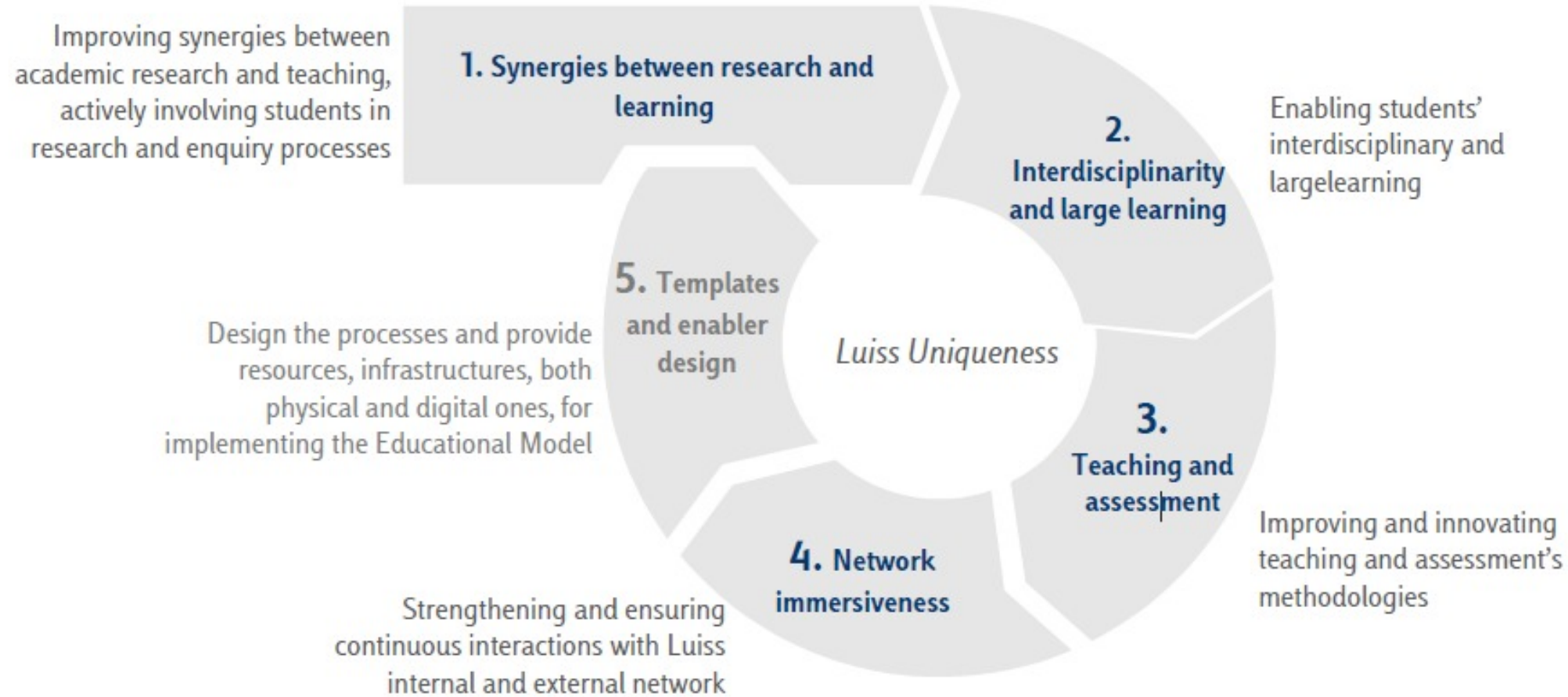
The methodological protocol known as “collaboratory,” in the urban commons context (Ostrom & Hess, 2010), takes the form of a physical or virtual setting where innovative and cultural forces of the city converge, share resources and knowledge and join efforts for generating new forms of shared resources (including knowledge).

In these spaces, collaboration teams can coordinate project planning steps in the city, trainings on innovative skills such as digital manufacturing, and more generally be a feeder into the process of generating and disseminating social innovation (Cossetta & Palumbo, 2014).

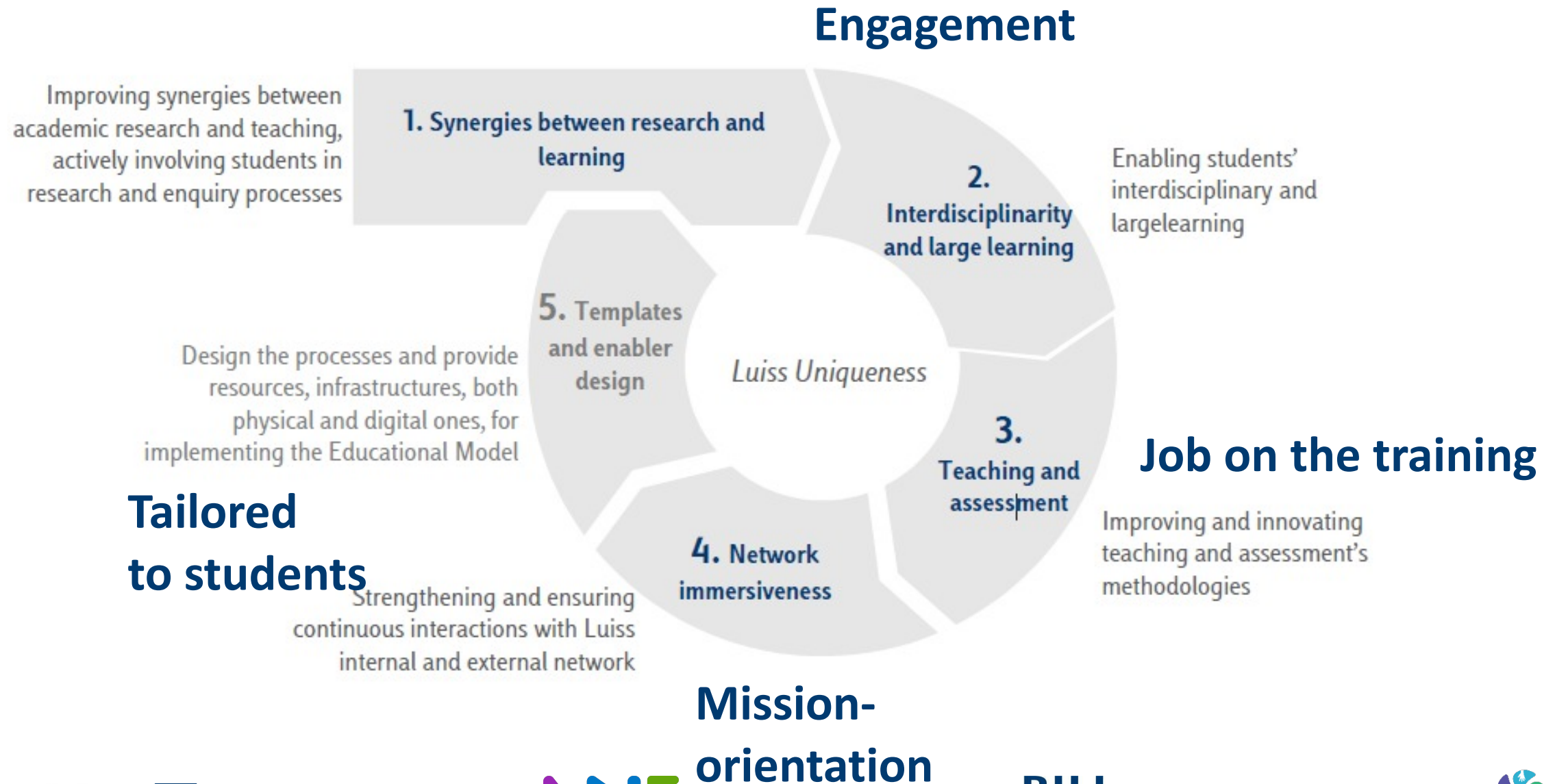
Reggio Emilia as the quintessential example: H2020 EURENAS + Co-Lab + City Science office > students as interns and phd students as backbone of the CSO

Rome and her house of Emerging Technologies and the Engage.EU project > collaboration spaces

Luiss Educational model



Luiss Educational model in LDIS



Defining enquiry-based model



Engagement

Students develop skills to design cutting-edge innovations
addressing real-world challenges with LDIS partners

Mission-orientation

Core courses and labs challenge students in working groups to prototype disruptive solutions for the digital and ecological transition

Job on the training

Students work as professionals in innovation units integrated with partners to develop solutions as part of their courses/labs evaluation, internships and final project

Tailored on students

○ Interdisciplinarity

The LDIS experience exposes students to different subjects (e.g. management, finance, law, policy, governance, economics, ethics, technology, etc.) enabling students to have 360 degree vision of problems

Harnessing students' diversity and singularities ○

aiming at strengthening each student diverse backgrounds, interests, talents and curiosities, thanks to tailored activities which support each of them to develop new skills

Sustainable innovation



Ethics & Sustainability as Drivers + Open & Collaborative Methodology

LDIS will involve different players and create the environment and mood to make them work together in developing and testing **mission-oriented and ethics-based innovation** through an **open and collaborative methodology** in **real testbeds**. Students, faculty members and partners Mentors will work in a collaborative mode for the development and testing of a human-centered, ethical, sustainable innovations using **design thinking, business experimentalism and future-proof legal design techniques**.



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LDIS AS A COMMUNITY: students as co-owners

LDIS Camp, XYZ talks & LDIS social

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XYZ camp

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Luiss XYZ Camp: The fastest way to discover our Master of Science on Digital Innovation & Sustainability

XYZ: What do these three letters put together mean?

Three letters, three generations: generation X (65-80), generation Y (1981-95/96) and generation Z (1995/96-2010) collaborating to address challenges and opportunities created by the ecological and digital transition and transformation and towards a sustainable development for future generations.

Learn from the X generation, act as Y generation and think like Z generation!

Check out the real value of XYZ Talks and Webinars



Next XYZ talks & Webinars

Law, Digital Innovation & Sustainability MSc & xLabs

What is the aim of LDIS MSc?

The Master of Science in Law, Digital Innovation and Sustainability equips experts in innovation – and in particular, students with a legal or managerial background – with the instruments necessary to interpret the current digital and ecological transitions in society and the economy, offering them a solid legal background with equally strong interdisciplinary, managerial and technical knowledge.

- New managerial, business and financial paradigms need to be carved out in order to face the challenges posed by industry automation and climate change
- Law is a fundamental tool to navigate the ever more complexity and uncertainty which business, social and institutional actors have to face
- Mastering emerging technologies and disruptive business models, enabling cooperation between multiple stakeholders and designing new forms of sustainable and inclusive partnerships are the required skills.
- The Next Generation EU funding scheme in addition to the pre-existing EU Research and Innovation Programs will significantly invest on this open and collaborative innovation approach

Fill out the form

Download the brochure of LDIS

Face the underlying challenges of digital and green transitions attending xLabs

The xLabs are capstone modules that will engage students in groups of 5 to 10 with real-world challenges. Public, private, social organizations and innovators need to handle increasing complexity, uncertainty and insecurity, which make digital and ecological transition more cumbersome to achieve than before.

The xLabs expose students to the ordinary work environment dynamics and social norms, retro-engineering the "training on the job" model into a "job on the training" approach:

- innovative and experimental problem-based teaching methodology
- facilitation and brokering role played by Luiss faculty members and partners' professional mentors
- students design and build a proof of concept and then pitch it to the xLabs jury composed by partners' top executives.
- Students work as professionals from the first day in order to develop innovative solutions

The xLabs program

The future of cities and regions	▼
The future of automotive & transportation	▼
The future of energy, telcos & networks	▼
The future of industry & manufacturing	▼
The future of wellbeing	▼
The future of Earth	▼

<https://landing.luiss.it/xyzcamp/>

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LDISHIPs (social justice)

LDIS studentships for students enrolled in LDIS

The LDIS Scholarships Program aims to award scholarships to learn on the job within the R&I and challenge-based activities characterizing the LDIS Program. The scholarships consist of a partial waiver of the University's tuition fee for the first year of the program, and can be renewed for the second year.



LDIS full scholarships for prospective students

Full scholarships funded by Luiss and LDIS partners will be awarded for prospective students



<https://www.luiss.edu/students/financial-aid/exemptions-and-scholarships/future-masters-degree-students>



LDISHIP KPIs: EMPOWERMENT

1

xLabs Tutoring

2

EU R&I Projects

3

LDIS engagement & community building program

LDIS media



ldis.community

99 post 365 follower 156 profili seguiti

Innovation & Sustainability

Istruzione

Digital Innovation & Sustainability

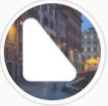
Co-managed by the students of the MSc LDIS @uniluiss

Ready to explore?

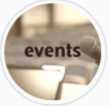
lnk.bio/Tq7n



Meet us!



Luiss Life



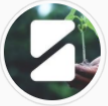
Events



Rome



Digital



Sustainability



Find your space in the future.

Luiss law, digital innovation & sustainability

Law, Digital Innovation and Sustainability

Shaping leaders for the digital and ecological transition

Istruzione superiore · Roma, Lazio · 253 follower

[Modifica pagina](#) [Condividi pagina](#)



Defining a co-governance

Students' involvement goes also further. They are members of the NGO that support the coordination and promotion of the Programme and they are launching a new benefit corporation which will be LDIS first spin off.



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Thank You!

ldis@luiss.it

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