The Campus as a Living Laboratory

Lisa Belyea (Geography) / Sustainability Committee, 25/10/2021
The Living Lab concept – What?

The campus as lab

- Education, research, operations, outreach
- Examples from other universities:
  - Cambridge: ‘Living Laboratory for Sustainability’
  - Manchester: ‘University Living Lab’
  - Princeton: ‘Campus as Lab’
  - UBC: ‘Campus as a Living Lab’
  - TU Delft: ‘The Green Village’
  - MIT/Tsinghua: ‘China Future City Lab’
The Living Lab concept – Example

Manchester University

- Student projects with external organisations
  - Real-world problems linked to UN SDGs
- Academics contribute projects as part of module assessment
  - Dissertation, essay, assignment

Source: https://www.universitylivinglab.org/
The Living Lab concept – Example

Harvard University

- Campus Sustainability Innovation Fund
  - Faculty + student + PS staff
  - USD 10,000-50,000

- Climate Solutions Living Lab Course and Research Project
  - Interdisciplinary course
  - Problem-based learning

- Student grants
  - USD 100-5000

Source: https://green.harvard.edu/series/living-lab
The Living Lab concept – Why?

• Outcomes for institution
  - Students: enriching education and experience
  - Academics: opportunities for impactful and innovative teaching, research
  - Professional Services staff: improvement of physical and administrative operations
  - External stakeholders: meaningful and mutually beneficial engagement

The Living Lab concept – Who?

• **Stakeholders** – pool resources, solve common problems
  - Students
  - Academics
  - Professional Services staff
  - External stakeholders

The Living Lab concept – Who?

Wider networks

- **EAUC Living Lab Community of Practice**
  - Strategic alignment, advocacy, research and knowledge exchange

- **European Network of Living Labs**
  - 475+ members
  - Knowledge exchange, joint actions, project partnerships
The Living Lab concept – How?

• Core principle: Real-world sustainability challenges
  - Any area of sustainable development
  - E.g., UN SDGs
  - Real-world challenges and opportunities put forward by PS staff and/or external actors
  - Link theoretical knowledge to real-world applications

Source: EAUC How do Living Labs Work?
https://www.eauc.org.uk/launch_of_eauc_living_lab_programme

Source: UN 2030 Agenda for Sustainable Development
The Living Lab concept – How?

• **Core principle: Formal participation**
  - Students: part of curricular or formal extra-curricular programmes
    • E.g., dissertation, coursework, internship, summer school, job placement
  - Academics: part of teaching and research activity
  - PS staff: through formal responsibilities
  - External actors: relevant; through paid work, if possible

Source: EAUC How do Living Labs Work?  
https://www.eauc.org.uk/launch_of_eauc_living_lab_programme
The Living Lab concept – How?

- Core principle: Stakeholder partnerships
  - Create valued experiences and outcomes for all participants

Source: EAUC How do Living Labs Work?
https://www.eauc.org.uk/launch_of_eauc_living_lab_programme
Queen Mary Living Lab – Green shoots

Westfield Fund for Enhancing the Student Experience

- Environmental sensor network to monitor weather variables, air quality
- Addresses inter-linked challenges of climate change, urban air quality
- Curricular & extra-curricular activities
- Academics (Geography, EECS), Estates & Facilities staff, Students’ Union rep

Source: https://sensor.community/en/sensors/airrohr/
Queen Mary Living Lab – Green shoots

Wider interest across QM

- All three Faculties
  - Humanities & Social Sciences
  - Science & Engineering
  - Medicine & Dentistry
- Estates & Facilities
- Library
- Centre for Public Engagement
Queen Mary Living Lab – Challenges

Top three challenges (according to EAUC):

• Resources
  - Funding (long-term/core and for specific projects)

• Communication and engagement
  - Internal & external

• Operational
  - Priorities, timescales, reporting

Source: EAUC How do Living Labs Work?
https://www.eauc.org.uk/launch_of_eauc_living_lab_programme
Queen Mary Living Lab – Next steps?

How to take it forward:

• University-level commitment
• Coordination
• Scaling up
  - Number and scope of projects
  - Range of internal and external stakeholders

Source: EAUC How do Living Labs Work?
https://www.eauc.org.uk/launch_of_eauc_living_lab_programme