Campus as a Living Lab

At the University of Utah

From UofU's *Educational Futures* report (2020)

Campus as a Living Lab **integrates academics with facilities operations and other administrative units** to provide students with direct experiences that build campus engagement and student ownership and strengthen the University's intellectual and cultural profile. CLL creates **transdisciplinary educational communities** that have an important impact in **embedding sustainability** at the institutional level. CLL is a **model for integrating best practices, relevant data, transparency, flexibility and engaging methods of decision making to better support facilities and infrastructure needed for campus growth.**

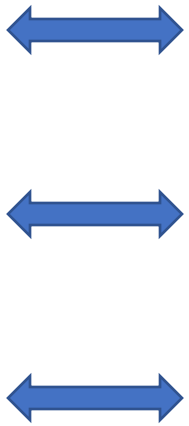
CLL is both a practice and a philosophy that combines learning with doing in the real world of the university campus. In practice, it involves building working partnerships between the "behind-the-scenes" operations of the university (planning, facilities, and administration, e.g.) and the "center stage" roles of research and teaching. As a philosophy, CLL perceives the collective energy and brainpower of faculty and students as one of our greatest assets and an opportunity to improve the functioning of the university while generating new knowledge and rich educational experiences. It seeks opportunities within campus processes and operations to learn and innovate by engaging the academic community of the university with the professional expertise of campus staff and administrators. CLL also presents opportunities to work with local communities, companies, or other partners to test out novel solutions through the power of shared ideas and applied research.

Step 1: bridging existing activities

ACADEMICS

- Coursework
- Independent study & undergraduate research
- Graduate studies
- Faculty research

CLL



PLANNING, FACILITIES, ADMINISTRATION

- Carbon neutrality goals
- EDI goals
- One U goals
- Other sustainability goals
- Planning for growth

What that could look like

- Campus data dashboard, maintained
- Opportunities for courses/students to contribute to data collection
- Coordination and matchmaking between campus projects/initiatives and courses/researchers
- CLL course designation
- Trained CLL TA's, and other support for CLL courses
- Internal grants program for campus research priorities

2022 Faculty Survey

- 107 responses across all colleges (except Dentistry)
- **40-50%** collaborate with staff/facilities to do research or obtain data
- 35% incorporate research ideas, experiments, performance monitoring or other research activities into campus facilities, property, processes or operations (Med School does this a lot)
- 28% teach courses with a significant CLL component and/or use campus-based data in teaching

2022 Faculty Survey

Potential Interest in CLL (somewhat likely or very likely to participate)

- 67% would collaborate with campus staff to conduct research
- 61% would incorporate research ideas, experiments, performance monitoring or other research activities into campus facilities, property, processes or operations
- 56% would participate in an internal grants program to fund CLL research
- 50% would teach courses with a significant CLL component such as a CLL project or CEL(Community Engaged Learning) designation.
- 50% would like access to campus datasets for either teaching or research (ex. energy use, transportation modes, etc.)
- 42% would like to help collect campus-based data as part of instructional activities (ex. participation rates in recycling programs, effectiveness of technologies, etc.)

2022 Faculty Survey

Barriers to Participation in CLL

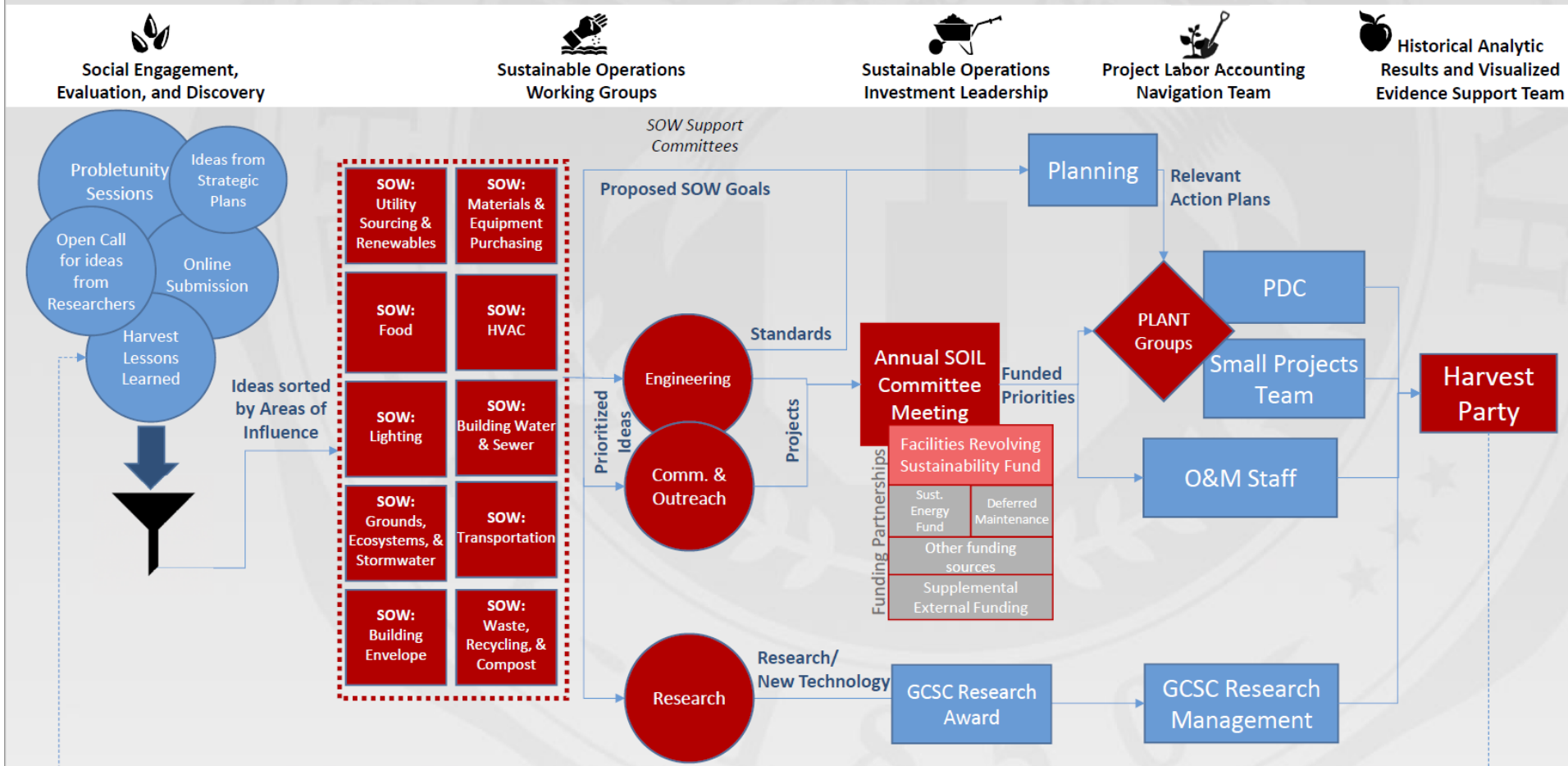
- 69% Lack of time/capacity
- 62% Unsure how to engage/ what the opportunities are
- 40% It's just not relevant to what I do
- 24% Lack of recognition in review and RPT processes

Other write-in answers:

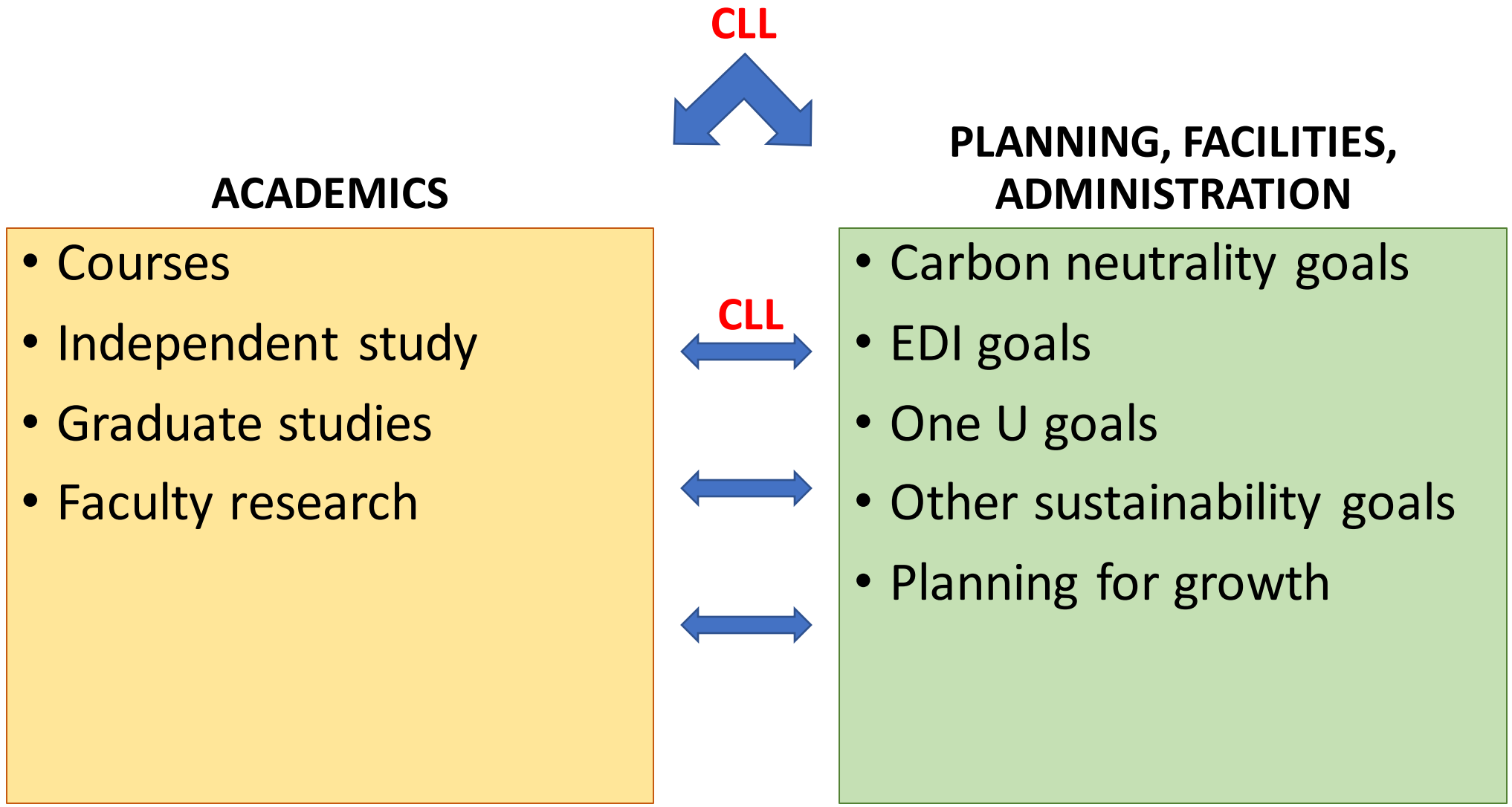
- No funding to support it
- lack of access to technical expertise; lack of coordinated, long-term data collection and archive
- Expensive to do meaningful research covering the cost of graduate students
- I love the sustainability goals but have no idea how I can help!
- silo effect in big system and college, busy people

Example: Green Infrastructure Pollinator Garden at ARCH bldg. (SCIF)

SEED2SOIL


Social Engagement, Evaluation, and Discovery
Sustainable Operations Working Groups
Sustainable Operations Investment Leadership
Project Labor Accounting Navigation Team
Historical Analytic Results and Visualized Evidence Support Team
Probletunity Sessions
Ideas from Strategic Plans
Open Call for ideas from Researchers
Online Submission
Harvest Lessons Learned
Ideas sorted by Areas of Influence
SOW Support Committees
SOW: Utility Sourcing & Renewables
SOW: Materials & Equipment Purchasing
SOW: Food
SOW: HVAC
SOW: Lighting
SOW: Building Water & Sewer
SOW: Grounds, Ecosystems, & Stormwater
SOW: Transportation
SOW: Building Envelope
SOW: Waste, Recycling, & Compost
Proposed SOW Goals
Prioritized Ideas
Engineering
Comm. & Outreach
Research
Standards
Projects
Research/ New Technology
Planning
Relevant Action Plans
Annual SOIL Committee Meeting
Funded Priorities
Facilities Revolving Sustainability Fund
Sust. Energy Fund
Deferred Maintenance
Other funding sources
Supplemental External Funding
Funding Partnerships
PLANT Groups
PDC
Small Projects Team
O&M Staff
GCSC Research Award
GCSC Research Management
Harvest Party

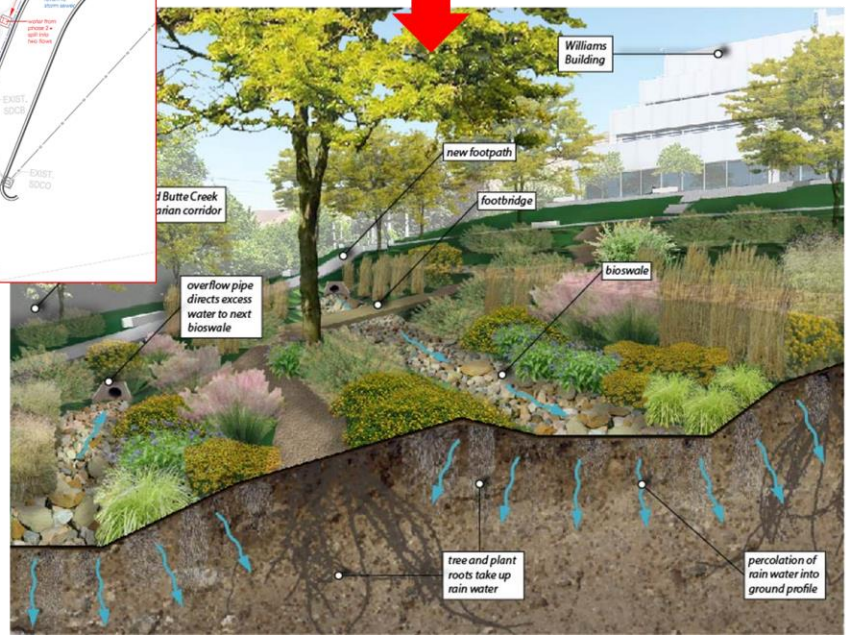
Step 2: collaborative innovation



What that could look like

- Ongoing involvement of faculty and students in big-picture planning
- Identify opportunities to embed research and educational programming into projects and initiatives – faculty involvement in design
- Dedicated CLL support to major capital projects, renovations, policy and program changes, and facilities investments
- Internal competitive grants program
- Cultivate opportunities to support large external research grants

The Landscape Lab

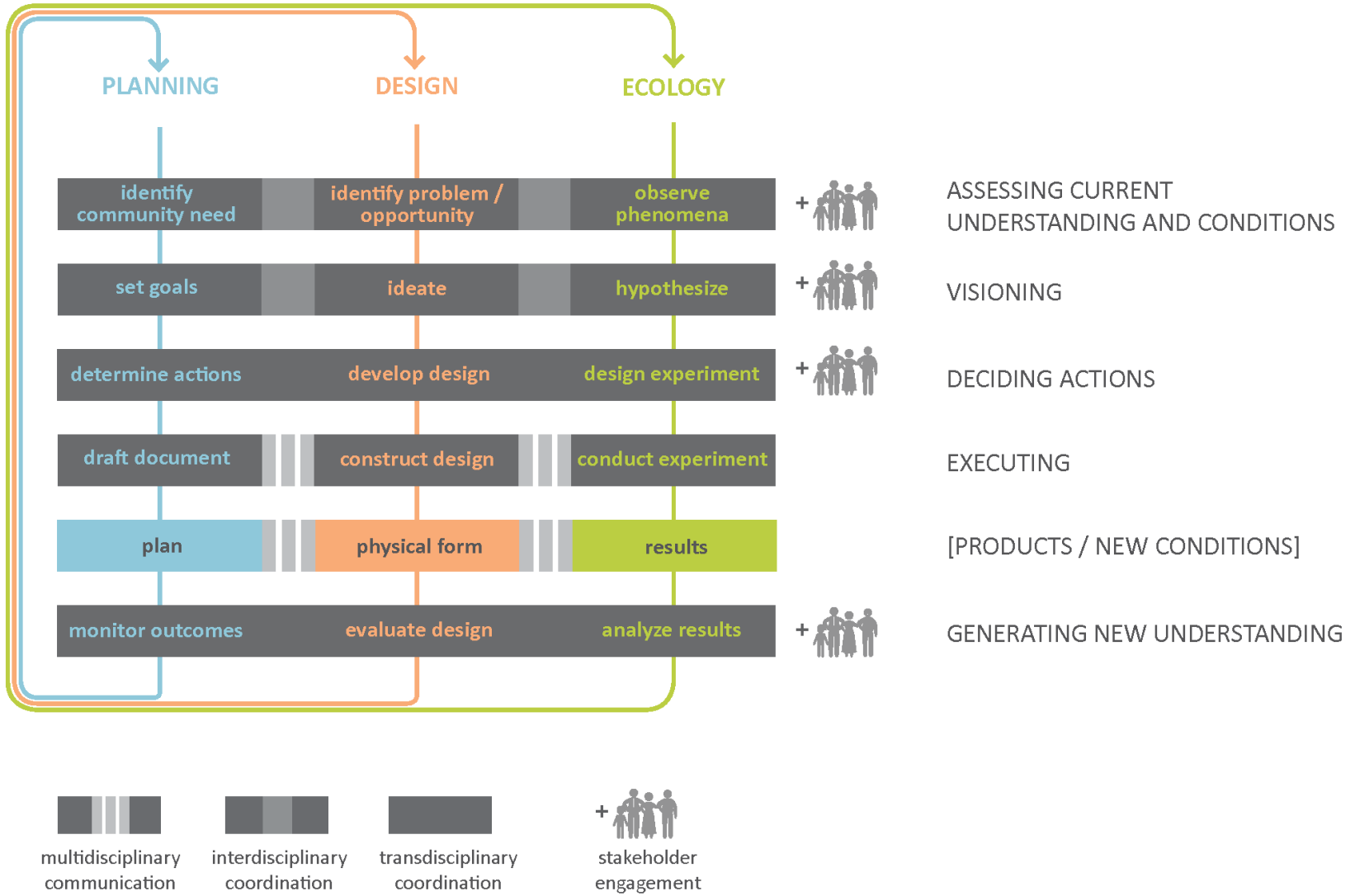


-Ecological Revitalization

-Demonstrate Stormwater Management Alternatives

-Embedded Experiments

Integrated Process Model



CLOSING THE LEARNING LOOP

- What are the avenues for us to learn, as individuals, as a community, as a socio-technical-ecological system working towards a sustainability transition??