SENSEable on Senseable

An ethnographic study of MIT SENSEable City Lab's organizational culture

Luca Simeone, Nashid Nabian
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Research group that studies the interface between cities, people and technologies and investigates how the ubiquity of digital devices and the telecommunications networks that augment our cities are impacting urban living.
SCL’s transdisciplinarity

- 7+ years
- 50+ projects
- 350 collaborators
- More than 60 different disciplines represented
  (e.g. Theology, game programming, Russian studies, medieval studies, sport, music, space science, Asian arts, economic of culture…)
Mapping SCL’s **organizational culture behind transdisciplinarity** in order to identify key components and best practices.
Components of transdisciplinarity

**Physical dimension**
Spatial and temporal relationships between physical elements and SCL: its building, geographic location, …

**Organizational dimension**
Relationships among stakeholders
Rules, policies, processes and practices
Management system

**Cultural dimension**
Cultural narratives, values and assumptions behind the organization
Personal biographies

People sharing virtual and physical spaces
People interacting according to processes and practices
People’s visions, desires, expectations
Organizational patterns behind transdisciplinarity
A door constantly open

Boundaries

senseable city lab:::

A door constantly open
Boundary objects are “objects which are both plastic enough to adapt to local needs and constraints of the several parties employing them, yet robust enough to maintain a common identity across sites” (Star and Griesemer 1989, 393).
No seats assigned, no fixed personal spaces. Adjacency and permeability among a density of objects.
Gifts left on the table and not directed to specific people. **Physical exchanges as a symbolic gate towards group transculturation.**
“Do you want to know a good thing about the lab? If you need an office, you just grab an office. Initially, I was a little bit shy. Now, when I need an office, I just go there and occupy it!”
Teams as key units of a new organizational order, supplanting the bureaucratic pyramid as the archetypal workgroup.
“Hey, I’m collecting biographies from all the members of the lab. Did you send me your bio?”

“Should I? Am I part of the lab? I’ve only been working here for a few weeks!”

**Fluid membership**: short, part-time engagements, combination of academics and professionals from industry, flexible roles over time, extended geographic distribution
Processes instead of organizational charts

Same lab, different project management styles

Mechanistic  Organic
An hybrid organizational structure

SCL positioned as an organic, adaptive, self-organizing structure, but keeping some mechanistic components.

### Mechanistic structures

High horizontal and vertical differentiation - a hierarchical structure of authority and control

High formalization – the definition of rules, responsibilities, instructions and job methods is stable

Centralization – decision made at the top of the hierarchy

Standardization through written rules, procedures

Close supervision with authority and prestige based on position

Vertical (superior-subordinates) communication in the form of instructions

### Organic structures (flexibility, adaptability, innovation)

High/complex horizontal and vertical integration - a network of authority and control based on knowledge on the task

Low formalization – tasks and responsibilities are redefined depending on the situation

Decentralization – decisions made by those with knowledge

Mutual adjustment and redefinition of tasks and methods through joint problem-solving and interaction

Personal expertise and creativity without supervision. Prestige attached to expertise

Frequent lateral communication, often in the form of consultation between people from different departments
Management practice composed of coordination mechanisms

Quick feedback loops to control self-organizing teams and emergent behaviors (meetings, pecha-kucha presentations, updates via email...).
Results

• Do you have a clear idea of your role in the projects? 84% YES

• Do the way the projects are managed value your competencies and the support skills you offer the project? 73% YES

• Can you communicate and share your ideas effectively? 85% YES

• Are you happy with the relationships you have with your colleagues at the lab? 80% YES
• Are you happy with the way the lab is structured and organized?

• Do you think your staying at the lab is fulfilling your expectations?
Open-ended questions

"A little more structure and communication could be helpful but the generally relaxed approach is also important"

"The lab desperately needs a hierarchical system!"

"As for the space it could be organized into noisier and quieter environments, not in engineers' room, etc"

"The potentials of transdisciplinarity are huge, if there is a strong aspect about the lab, it is the fact that it brings together people from diverse backgrounds. This is also its greatest weakness, as it is quite challenging to coordinate efforts in such an environment."

"Potential cross-pollination = potential misunderstanding!"
A grammar of understated transdisciplinarity
Organizational culture elements favoring transdisciplinarity

- Flexible and permeable boundaries
- Independent and autonomous teams
- A network of authority and control based on knowledge on the task
- Decentralized and low formalized management processes
- Inquiry- and discovery-based learning
- Experiential learning

References
thank you
m: me@luca.simeone.name