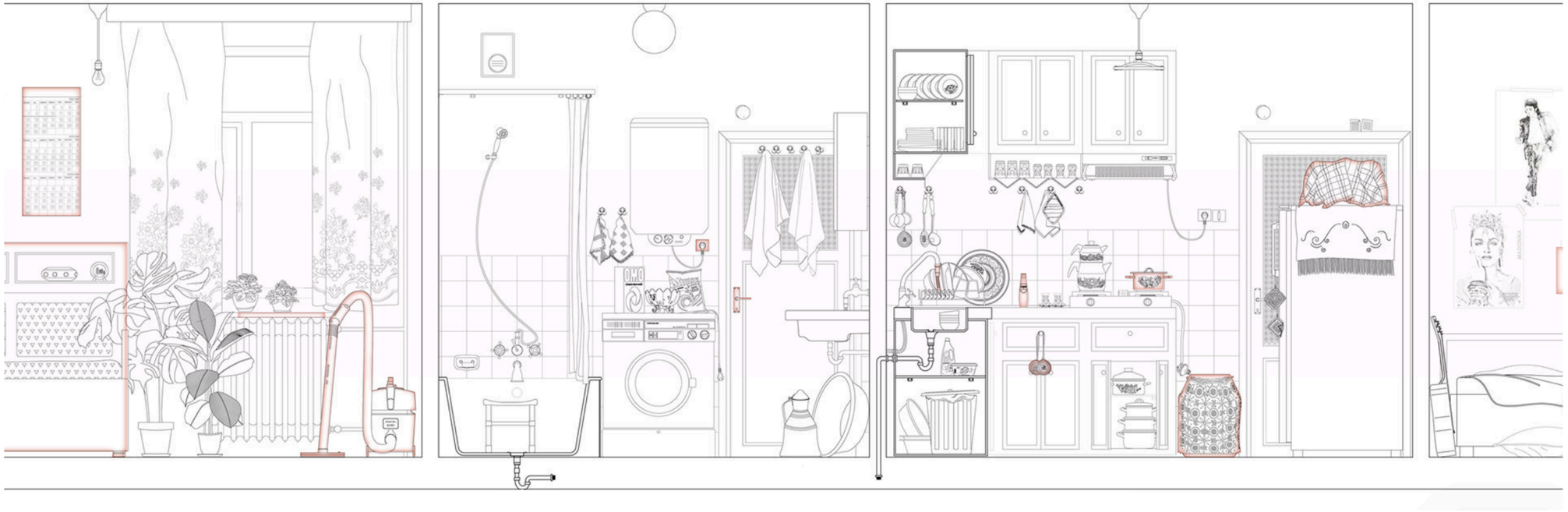
SERVICE DESIGN FOR PRO-ENVIRONMENTAL BEHAVIOUR IN THE BUILT ENVIRONMENT (KTH LIVE-IN-LAB CASE STUDY)



Elena Malakhatka - PhD Candidate | Per Lundqvist - Supervisor

A central problem of our minds is that we know so much in theory about how we should behave, but engage so little with our knowledge in our day-to-day conduct.

Akrasia - 'weakness of will' (Aristotle)

RESEARCH SCOPE

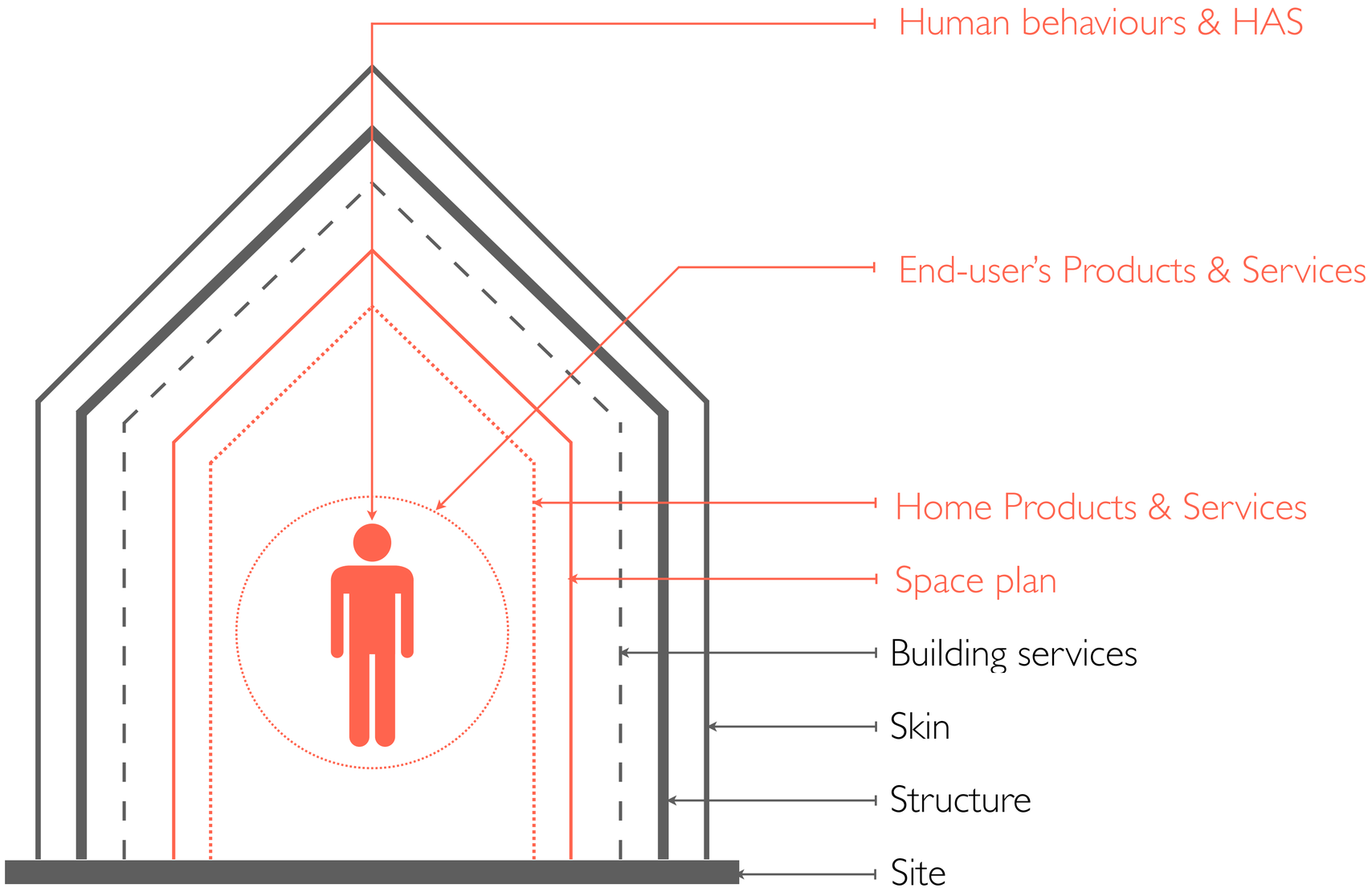
HYPOTHESIS:

End-user's oriented services, tailored with the pro-environmental behaviour modelling (PEB)
will systematically increase the motivation of the users to behave in the more pro-environmental way.

GOAL:

This research project aims to create an end-user oriented service design process for built environment context, which will include the end-users' needs, stakeholders' expectations and PEB integrated models.

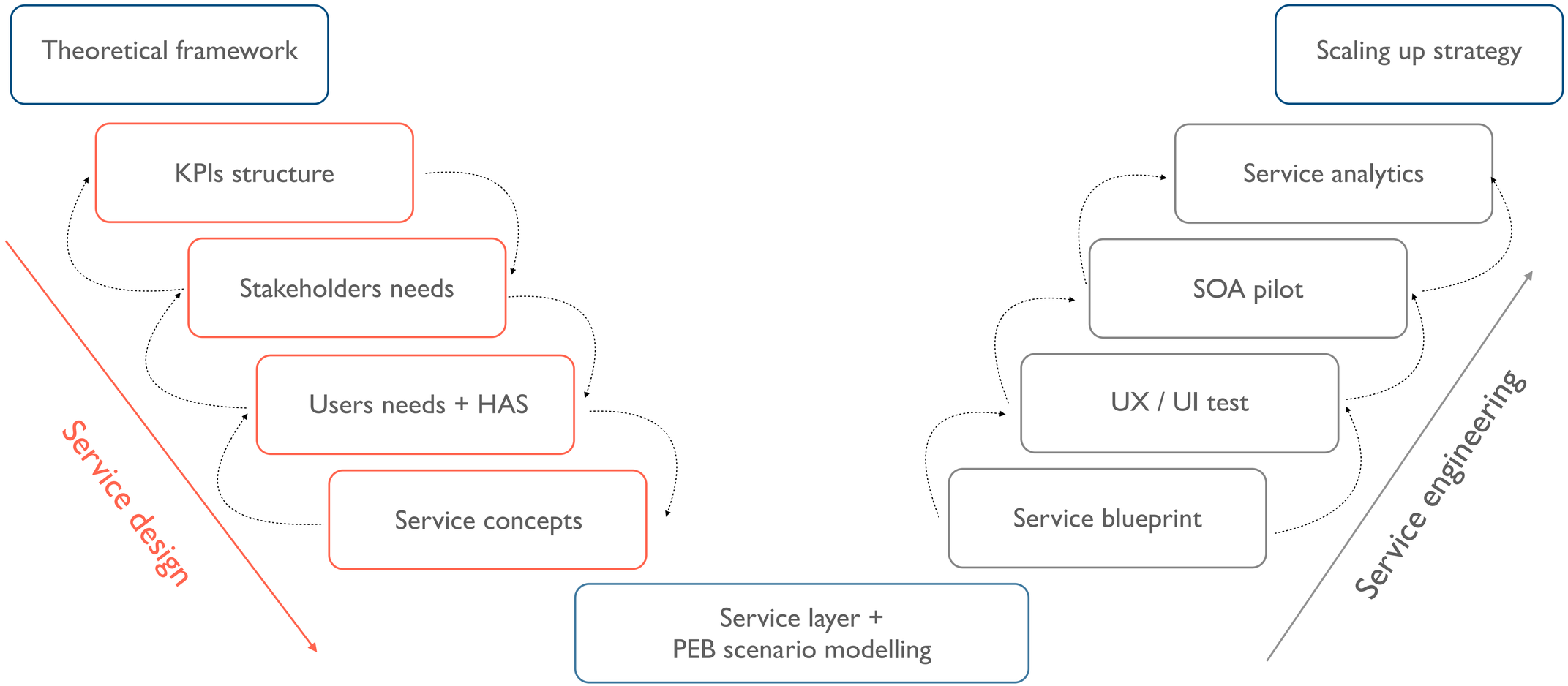
FRAMEWORK: SHARED LAYERS APPROACH



FRAMEWORK: ANALYTICAL STRUCTURE

TYPE OF THE LAYER	STAKEHOLDERS	TYPE OF INTERACTIONS	BEHAVIORAL PATTERNS	POTENTIAL ENERGY SAVINGS
Individual Products & Services				
Home Products & Services				
Space plan				
Building services				
Skin				
Structure				
Site				

METHODOLOGY: SERVICE DEVELOPMENT & PEB MODELLING



CASE STUDY

KTH LIVE-IN-LAB

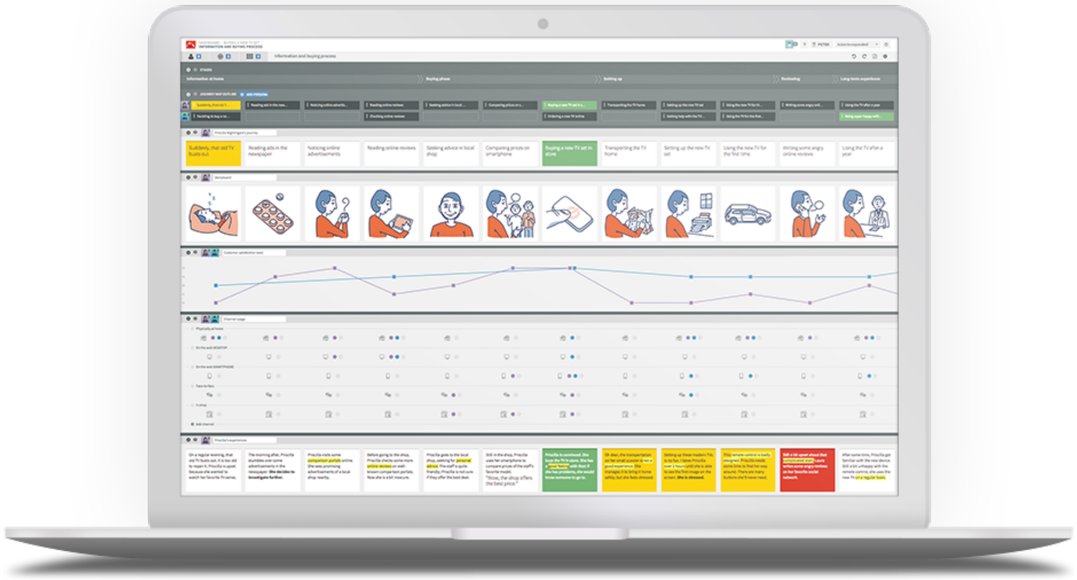
RESEARCH TESTBED

KTH Live-in Lab is a platform of multiple testbeds for accelerating innovation rates in the construction and real-estate sectors.

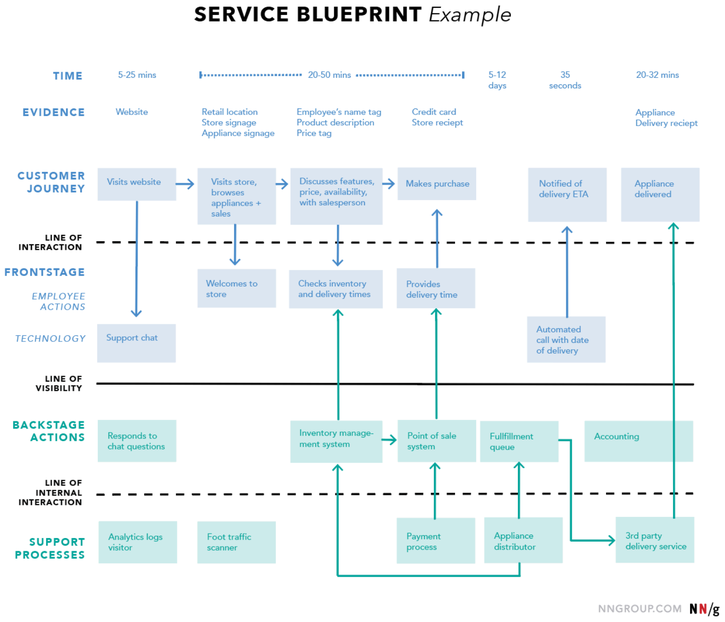
Students house
Einar Mattsson / KTH Campus

TOOLKIT: HAS MAP + SERVICE BLUEPRINT

Human Activity System (HAS) is used to model the daily activities of the end-users and personal interaction with Building System. The concept based on the Human-Activities Recognition (HAR) and Human-System Interaction theories.



The service blueprint is an applied process chart which shows the service delivery process from the customer's perspective. The service blueprint has become one of the most widely used tools to manage service operations, service design and service positioning.



END-USERS' vs STAKEHOLDERS' NEEDS

End-users' key needs:

1. Social spaces / more activity-based spaces
2. Diversified Working spaces (silent | groups)
3. Productivity enablers
4. Comfort enablers
5. Sustainability informativness

Stakeholder's key needs:

1. Space optimisation
2. Clear value proposition
3. Data availability for decision making
4. New business opportunities
5. Scaleability

END-USER SERVICES OFFERINGS

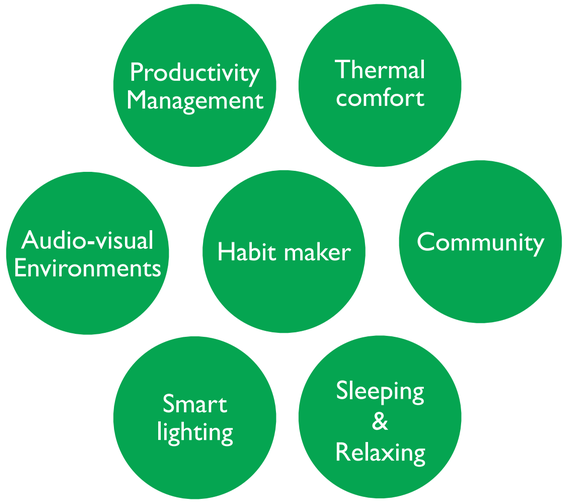
SUSTAINABLE EVERYDAY FOOD

Electrolux

7-10% electricity reduction

5-7% water usage reduction

PERSONAL WELLBEING



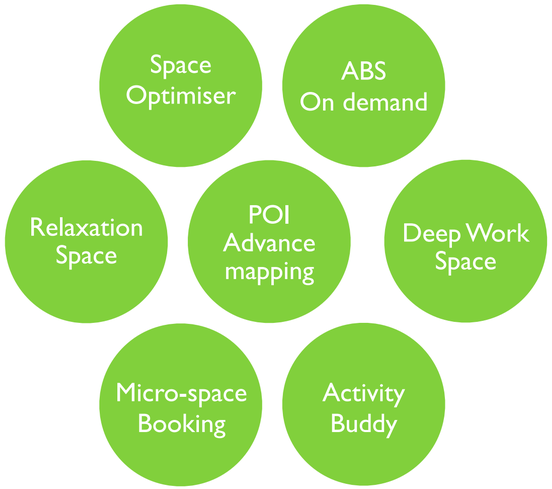
Schneider Electric

ŌURA

5-7% electricity reduction

10-15% UX increase

SPACE AS A SERVICE



AKADEMISKA HUS

VASAKRONAN

Ongoing evaluation

“We must design for the way people behave,
not for how we would wish them to behave.”

— Donald A. Norman | Living With Complexity