HOLISTIC BUILDING PERFORMANCE MODEL WITH SEMANTIC WEB TECHNOLOGIES

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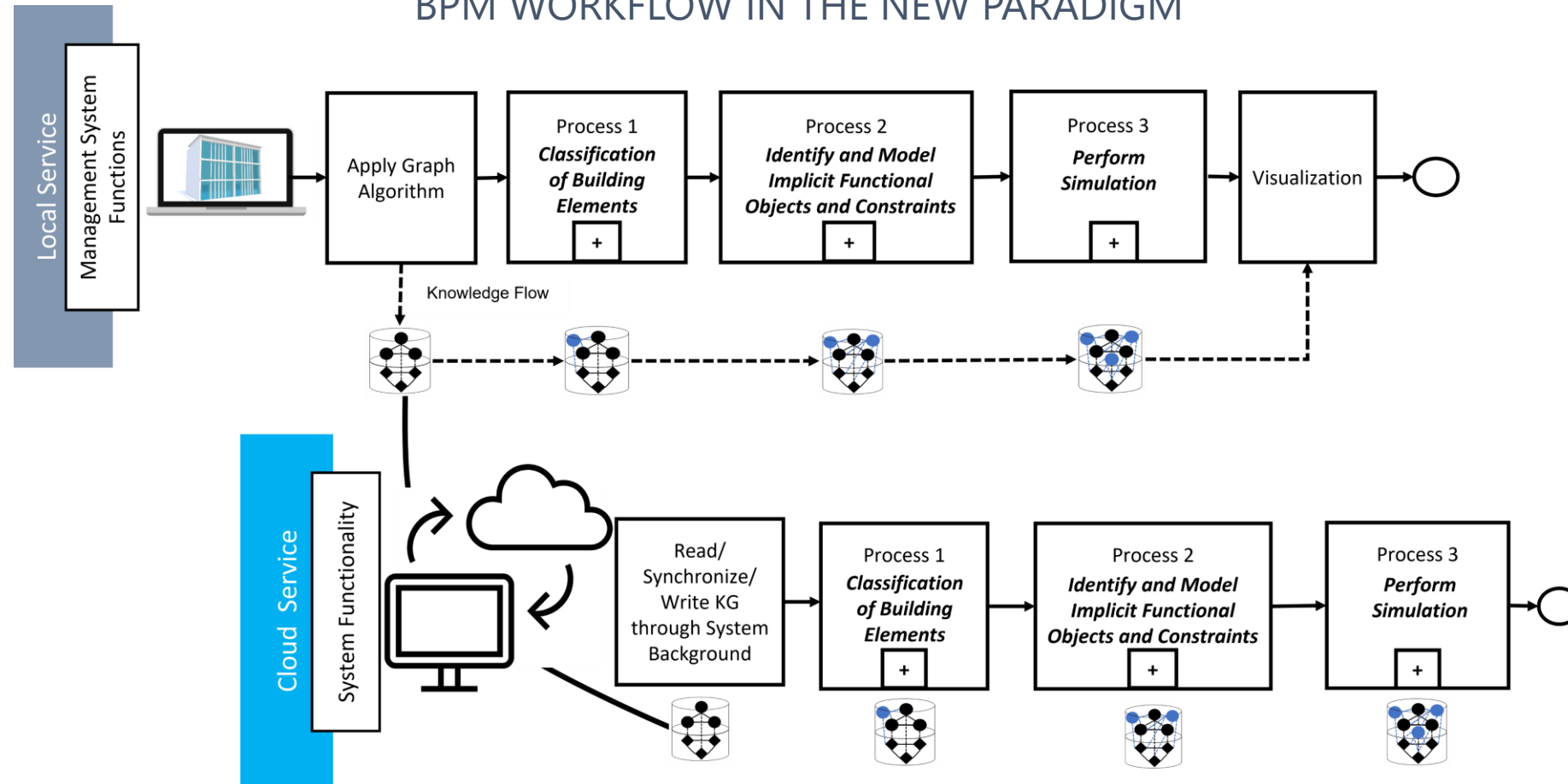TECHNION Israel Institute of Technology

Civil & Environmental Engineering

VClab

Seskin Virtual Construction Laboratory

CBIM

CBIM - European Training Network
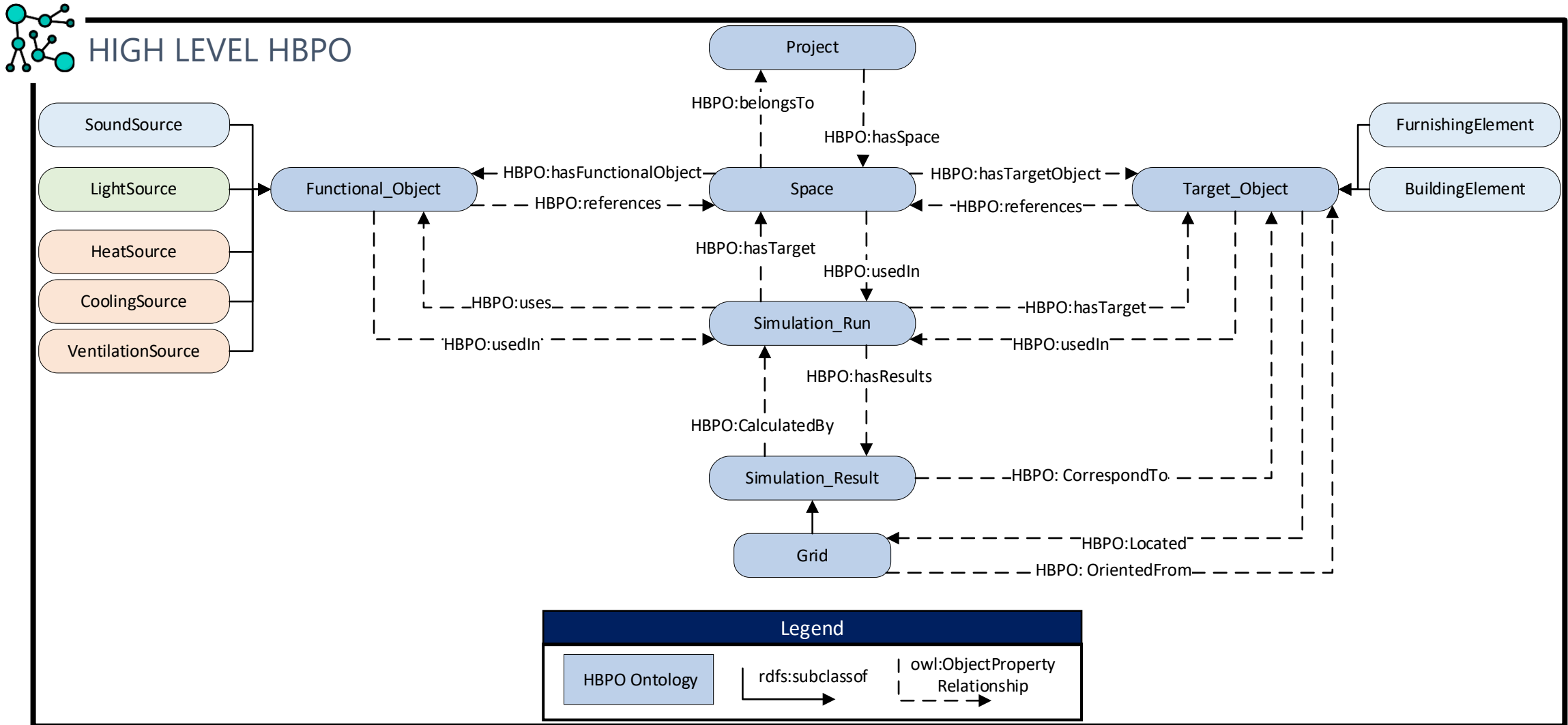
Cloud-based Building Information Modelling

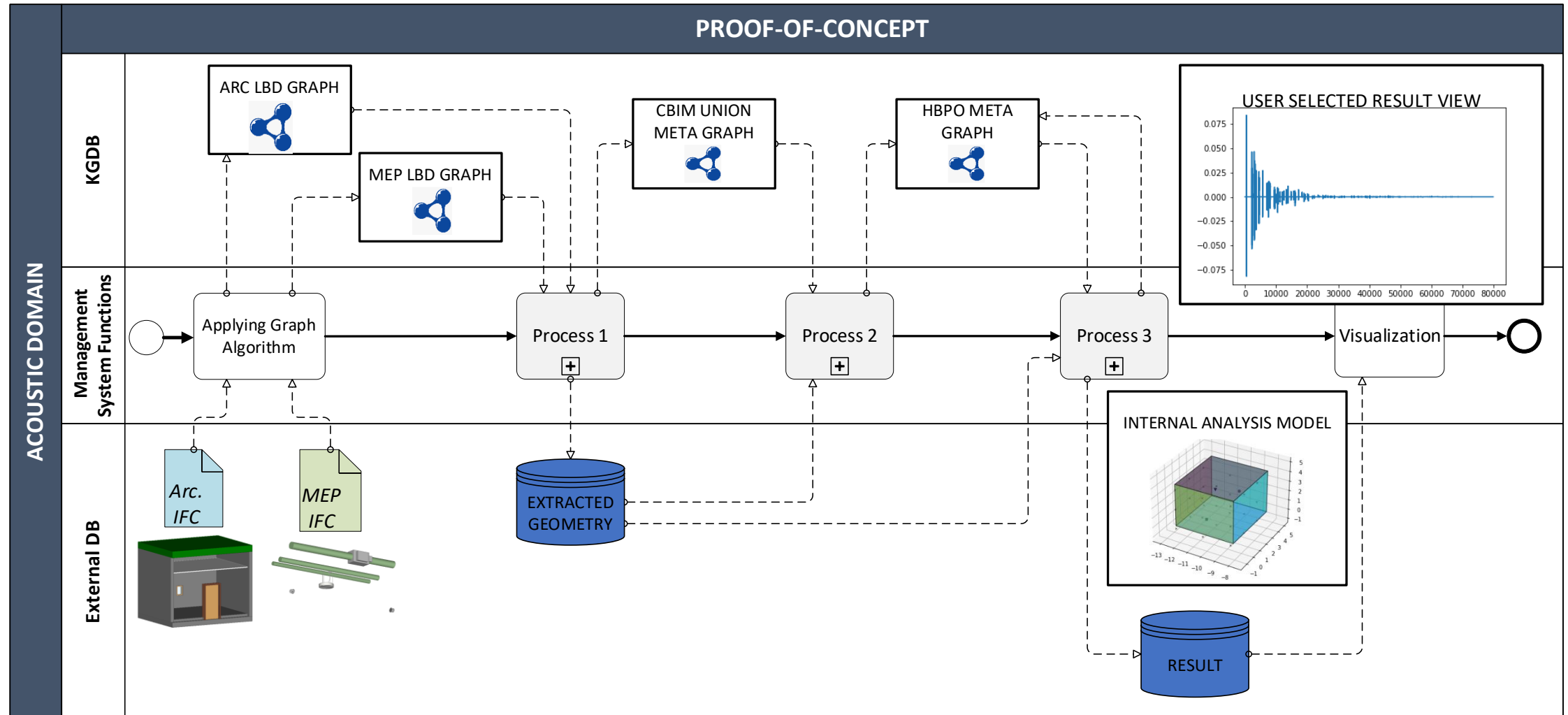# FINALIZED ACTIVITY

BPM WORKFLOW IN THE NEW PARADIGM

The BPM workflow in the novel paradigm suggests a holistic building performance ontology (HBPO) framework containing two semantic enrichment processes (Processes1-2) in cloud-based and knowledge graph-driven databases and management systems.
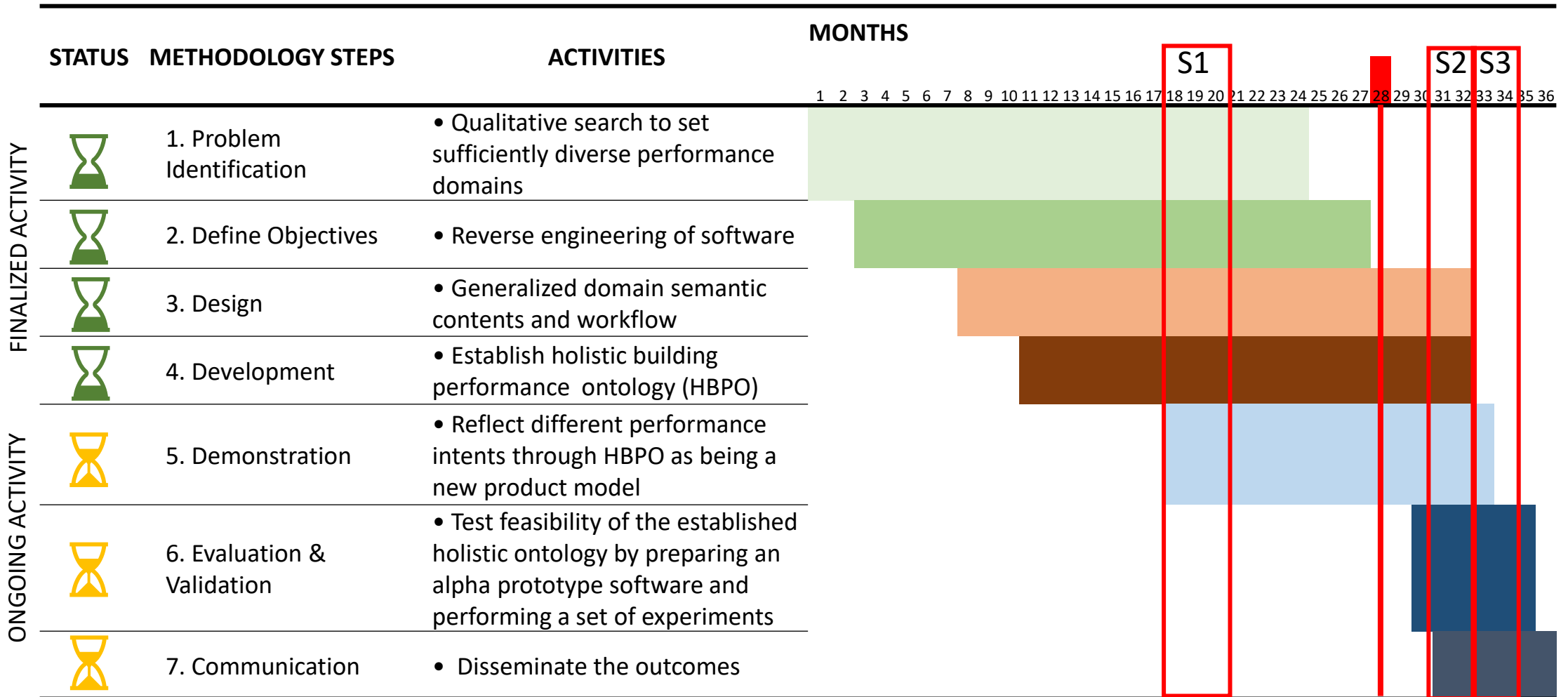
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RESEARCH PLAN & PROGRESS

STATUS	METHODOLOGY STEPS	ACTIVITIES	MONTHS

Months: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36

S1 (months ~18–20), S2 (months ~31–32), S3 (months ~33–34)

FINALIZED ACTIVITY

1. Problem Identification	• Qualitative search to set sufficiently diverse performance domains	
2. Define Objectives	• Reverse engineering of software	
3. Design	• Generalized domain semantic contents and workflow	
4. Development	• Establish holistic building performance ontology (HBPO)	

ONGOING ACTIVITY

5. Demonstration	• Reflect different performance intents through HBPO as being a new product model	
6. Evaluation & Validation	• Test feasibility of the established holistic ontology by preparing an alpha prototype software and performing a set of experiments	
7. Communication	• Disseminate the outcomes	

S* = Secondment
S1 at Cambridge, S2 at UCL, S3 at UCD

5