

Luiss

Department of Business and Management

Dalla rappresentazione del problema allo sviluppo di soluzioni

Come far convergere obiettivi di ricerca e trasferimento tecnologico?

Prof. Paolo Spagnoletti

LUISS





Paolo Spagnoletti

<http://www.linkedin.com/in/pspagnoletti>
LinkedIn

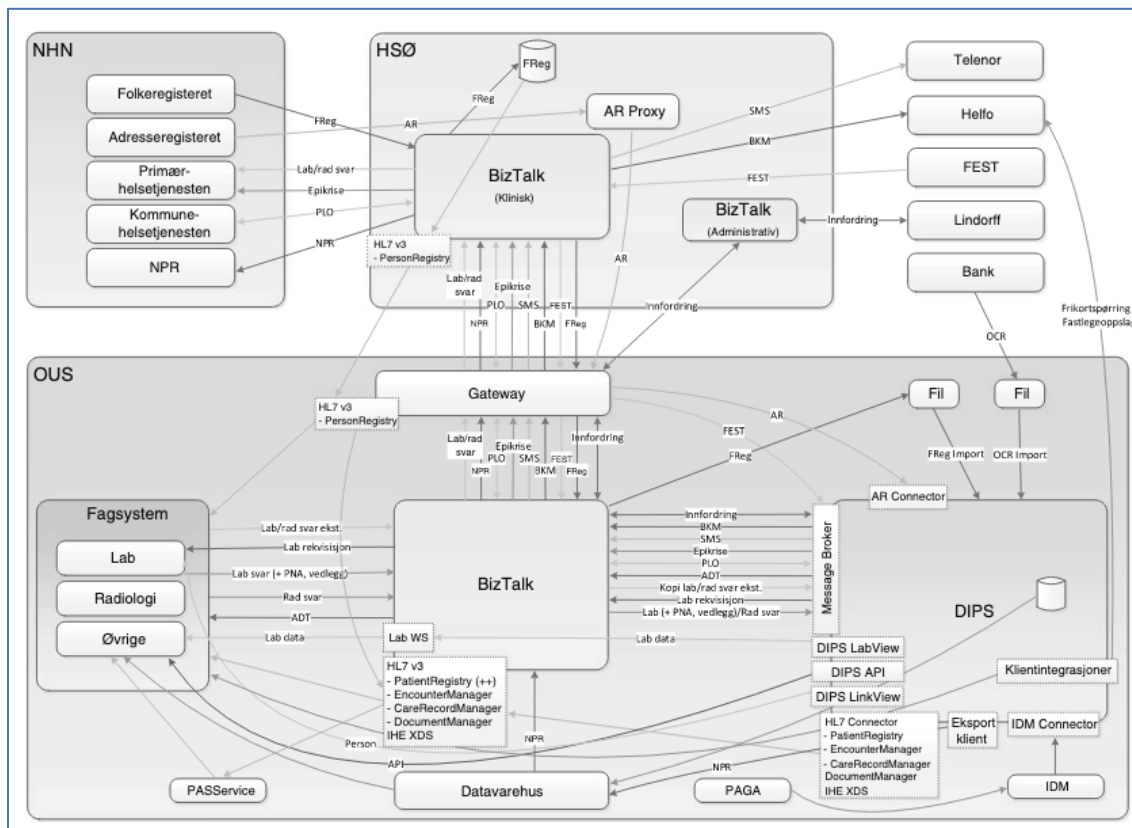
- Associate Professor of *Digital Business and Workplace Technology, Data Privacy and Security* at Luiss
- Board member of the national Competence Center Cyber 4.0
- Member of the Research *Center on Leadership Innovation and Organization* at Luiss
- Member of the *Center for Integrated Emergency Management* at University of Agder (Norway), European Research Center in Information Systems (Germany)
- Visiting Professor in Norway (UiA), France (PSL, Skema), UK (WBS), Switzerland (UniL), United States (GSU)
- PhD Information Systems Luiss (2007), MSc Degree Electronic Eng. Sapienza (2001)

Agenda

- Trasferire tecnologia tra *Lightweight* e *Heavyweight IT*
- Action Design Research
- Esperienze Luiss: DPsOC, OA, DIM
- Opportunità per il futuro

Trasferire tecnologia al confine tra *Lightweight* e *Heavyweight IT*

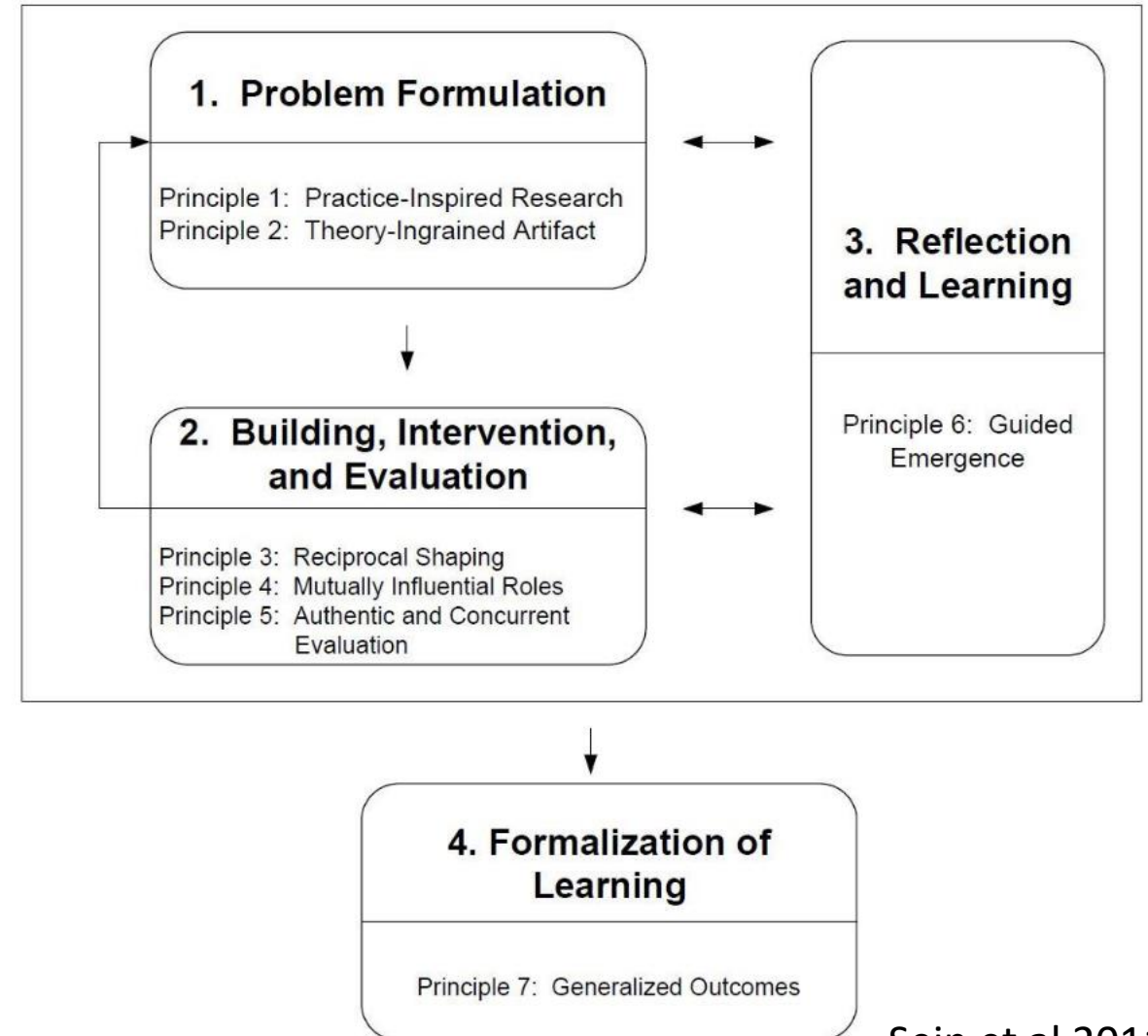
- integration and consumerization trends
- IT-based innovation based on two different knowledge regimes: network of technology, designers and users
- lightweight IT: innovation to deploy cheap and easy-to-use solutions
- heavyweight IT: engineering to systematically deploy fully integrated and reliable solutions
- Generativity arise from interactions between heavyweight and lightweight IT

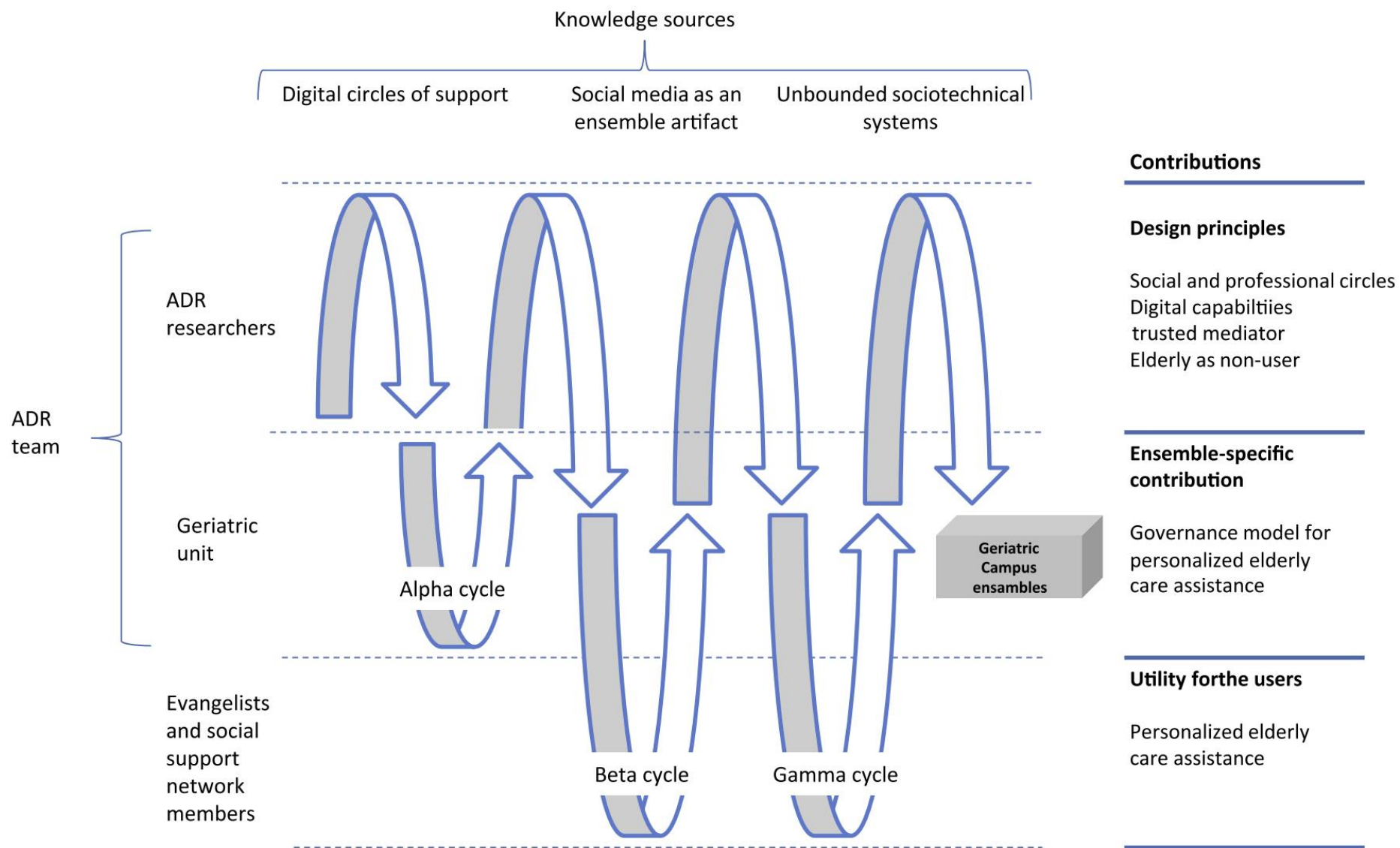


Action Design Research

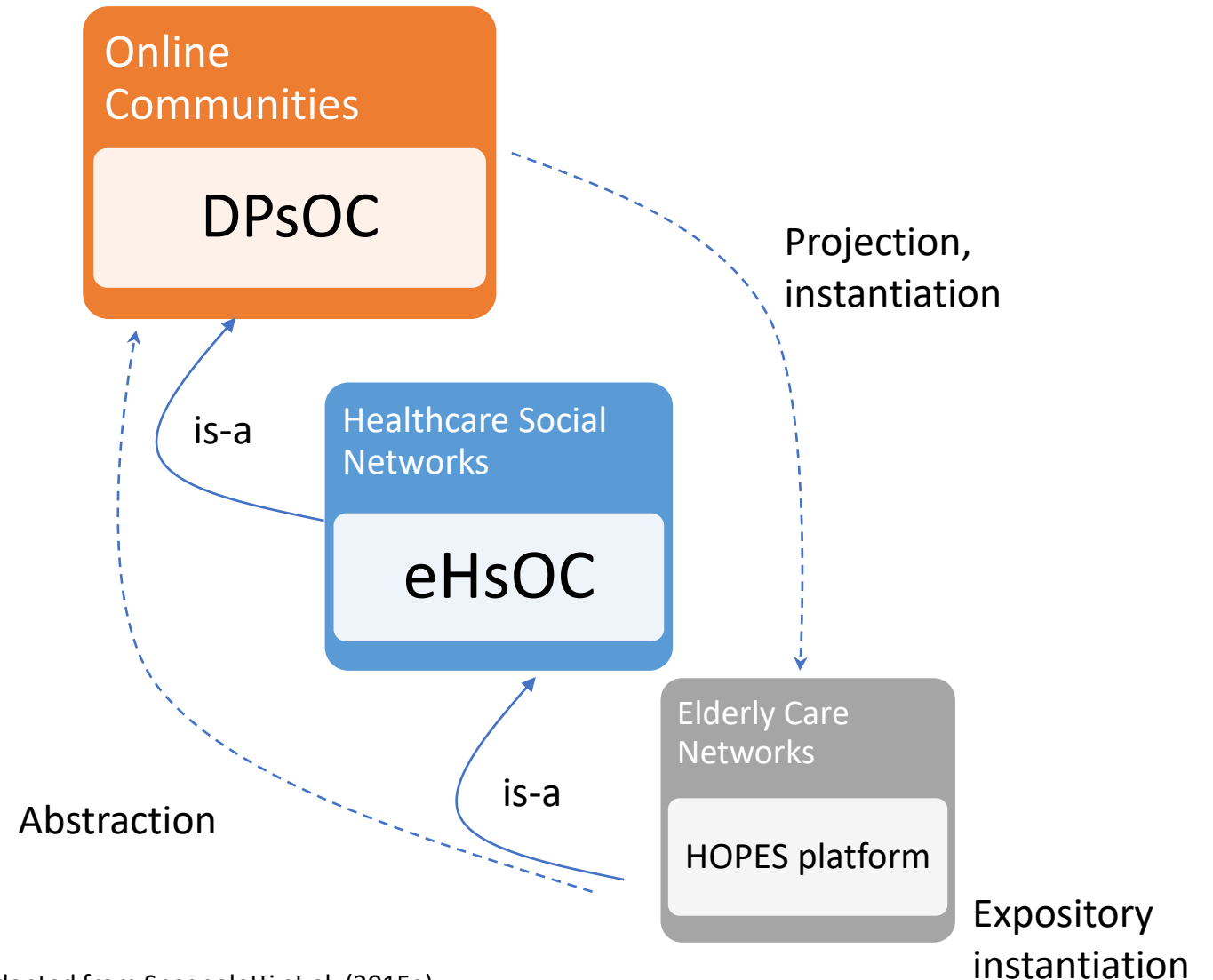
Un metodo per sviluppare teorie resolvendo importanti problemi di business

1. identificare un problema e ricondurlo a una classe più generale di problemi
2. sviluppare un artefatto e sperimentarne l'utilizzo di uno o più contesti
3. Generalizzare la conoscenza acquisita rispetto alla classe di problemi
4. Formalizzare la conoscenza con contributi a teorie precedenti

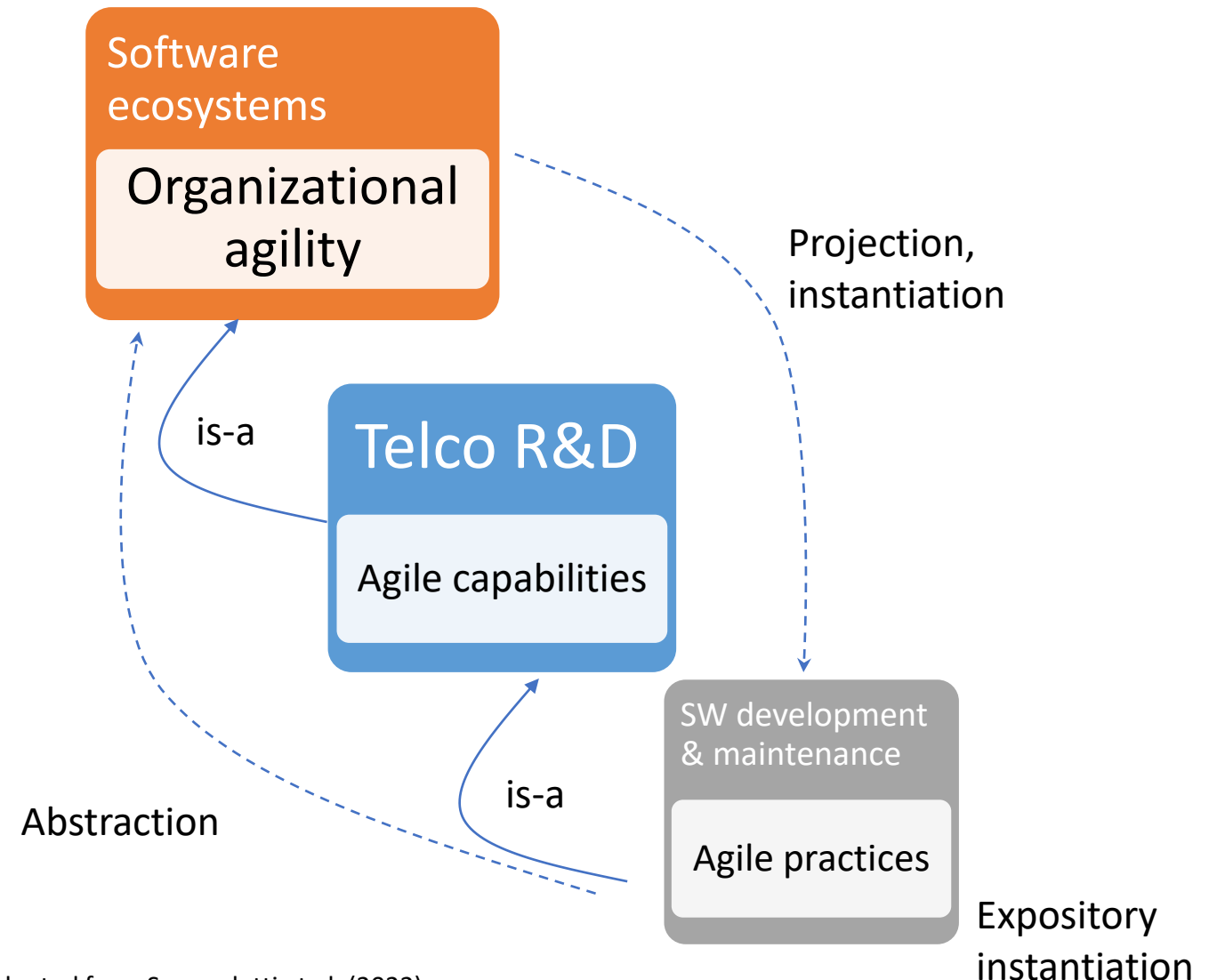
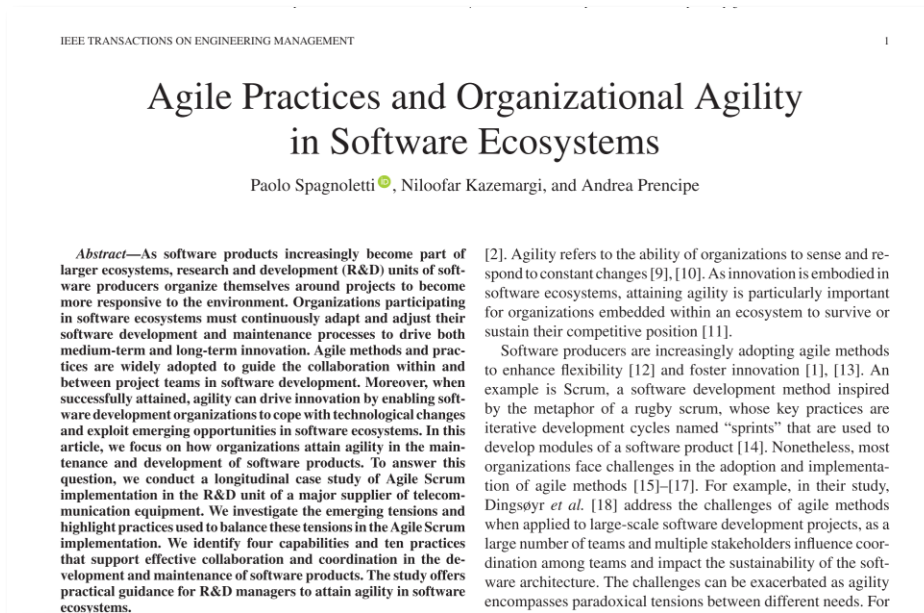




Esperienze Luiss: Piattaforme digitali (1/3)



Esperienze Luiss: Agilità organizzativa (2/3)



Adapted from Spagnoletti et al. (2022)

Esperienze Luiss: Digital Innovation (3/3)

IEEE TRANSACTIONS ON ENGINEERING MANAGEMENT

1

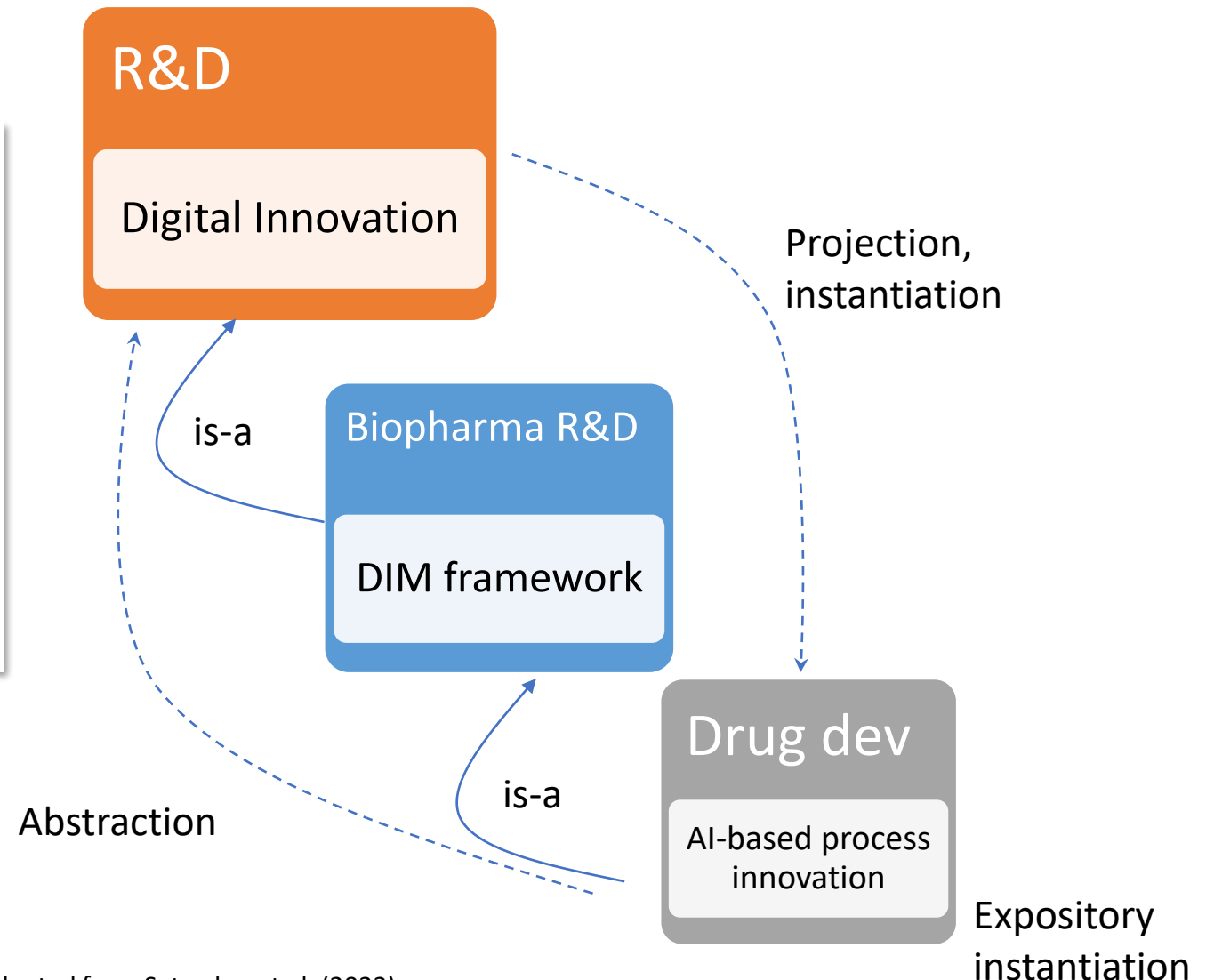
An Orchestration Framework for Digital Innovation: Lessons From the Healthcare Industry

Abhijeet Satwekar , Tiziano Volpentesta , Paolo Spagnoletti , and Mara Rossi

Abstract—The healthcare industry is continuously evolving with innovative discoveries and therapies, and at the same time, there is a decline in the research and development productivity leading to an increased cost for payers, providers, and patients. Despite the benefits that digital technologies can have on healthcare innovation, such a highly regulated industry often relies on proven-established technologies and organizational procedures that can be at odds with the new logics of digital innovation. In this article, we will be introducing a digital innovation management (DIM) framework that guides the pursuit of digital innovations in a phase-appropriate and incremental setup (e.g., scale, costs, risks, value evaluations, policies, and resources). The framework is designed and validated through an iterative process of continuous adaptation with local practices in a biopharmaceutical company. DIM provides practical guidance to drive digital innovations that entail different logics compared to traditional innovations, by improving the visibility of the digital innovation process and increasing organizational confidence in pursuing digital innovations and enhancing decision-making effectiveness.

value creation for a multistakeholder audience, which involves patients, physicians, pharmacies, hospitals, regulatory agencies, pharmaceutical and biopharmaceutical companies, nongovernment bodies, insurance companies, and many more.

Pharmaceutical and biopharmaceutical companies are an integral part of the healthcare ecosystem and operate collectively with the multistakeholders of the healthcare sector with the responsibility to discover, develop, manufacture, and distribute medications and therapies toward the underlying health conditions of individuals and improve their quality of life. Pharmaceutical and biopharmaceutical products differ in complexity [9] leading to a wide gap in production costs [10]. Specifically for biopharmaceutical companies, there has been a decrease in research and development productivity, leading to increased costs within the past few decades [11], [12]. To bring a new biopharmaceutical drug to a patient, the costs have increased



Adapted from Satwekar et al. (2022)

Opportunità di collaborazione nel campo della *data governance*

- tesi di laurea magistrale in Data Science and Management
- sviluppo congiunto di teaching cases
- borse di dottorato: Cybersecurity, Management, Diritto e Impresa
- commesse di ricerca: Center for Leadership, Innovation and Organization, Cyber 4.0
- progetti Europei: ERCIS network

Riferimenti

Bygstad, B. (2016). Generative innovation: a comparison of lightweight and heavyweight IT. *Journal of Information Technology*, 1–14.

<https://doi.org/10.1057/jit.2016.15>

Salvi, A., Spagnoletti, P., & Noori, N. S. (2022). Cyber-resilience of Critical Cyber Infrastructures: integrating digital twins in the electric power ecosystem. *Computers & Security*, 102507. <https://doi.org/10.1016/j.cose.2021.102507>

Satwekar, A., Volpentesta, T., Spagnoletti, P., & Rossi, M. (2022). An Orchestration Framework for Digital Innovation: Lessons from the Healthcare Industry. *IEEE Transactions on Engineering Management*. <https://doi.org/10.1109/TEM.2022.3167259>

Sein, M. K., Henfridsson, O., Purao, S., Rossi, M., & Lindgren, R. (2011). Action design research. *MIS Quarterly*, 35(1), 37–56. <https://doi.org/10.2307/23043488>

Spagnoletti, P., Resca, A., & Lee, G. (2015a). A Design Theory for Digital Platforms Supporting Online Communities: A Multiple Case Study. *Journal of Information Technology*, 30, 364–380. <https://doi.org/10.1057/jit.2014.37>

Spagnoletti, P., Resca, A., & Sæbø, Ø. (2015b). Design for social media engagement: Insights from elderly care assistance. *Journal of Strategic Information Systems*, 24(2), 128–145. <https://doi.org/10.1016/j.jsis.2015.04.002>

Spagnoletti, P., Kazemargi, N., & Prencipe, A. (2022). Agile Practices and Organizational Agility in Software Ecosystems. *IEEE Transactions on Engineering Management*, 69(6), 3604–3617. <https://doi.org/10.1109/TEM.2021.3110105>

Grazie dell'attenzione

<http://www.linkedin.com/in/pspagnoletti>

