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### ► To cite this version:

Guilherme Alcantara Pinto, Isabelle Nicolai, Christian Michelot. Knowledge Management as a driver for prevention and performance trade offs.. XXXI International Symposium of the ISSA Construction Sector, Jun 2022, Berlin, Germany. hal-03734849

**HAL Id: hal-03734849**

**<https://hal.science/hal-03734849>**

Submitted on 21 Jul 2022

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# Knowledge Management as driver for prevention and performance trade-offs

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Research presented and published at



held at



International Conference on Information Management, 2022



ELSEVIER  
Scopus



## How to achieve safety and production goals together?

(OSHA, 2020; Pagell et al., 2014, 2015, 2020; Hu et al., 2020; Jeschke, 2022; Pinto, et al., 2021, 2022)

**Practitioners' difficulties:** How to place safety as a strategical concern? Safety is still a "sidecar" to workers that proposes extra tasks.

**Literature gap:** Safety and operations are two distinct worlds: how to achieve safety and production goals?

**Research objective:** Propose a management approach that bridges safety and production goals, placing safety as a strategic concern.

## A paradigmatic approach on safety management literature

(Hollnagel 2015, 2017; Baker & Nelson, 2005)

**Resilience Based-Safety:** The work-as-done (what we do) only exists because we adapted work-as-imagined (planning). Safety studies should investigate how workers adapt themselves, create knowledge.

**Bricolage:** Adaptations done convey workers' safety and productions notions. Project conception should incorporate adaptations that improve both together.

## Methods employed

(Chevalier & Buckles, 2013)

**Field query:** involving around 30 professionals from shopfloor to strategic levels

**Research diary:** Summing up to 20-000 words (around 52 pages) done closer to the visit-as possible, and the researcher's voice notes

**Key tool:** Time-line from Participatory Action Research approach

## Towards performance: creating the prevention effect

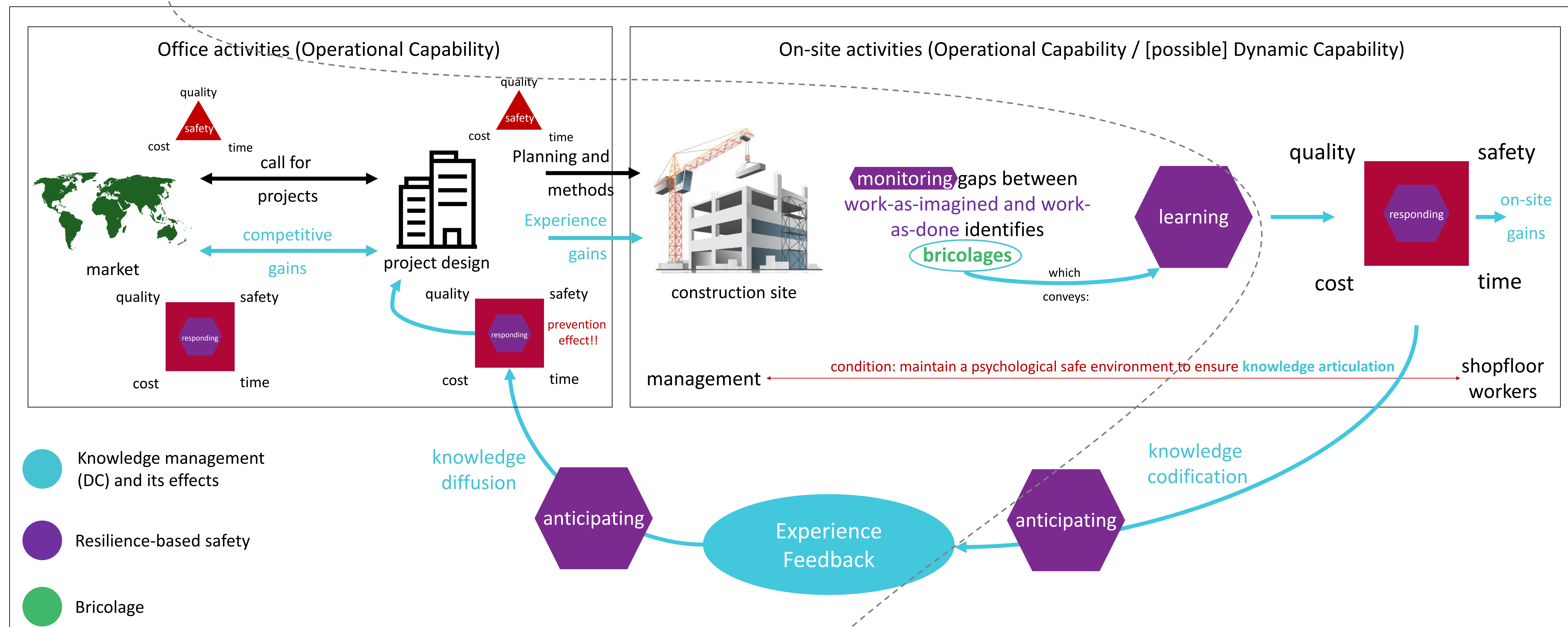
(Zollo & Winter, 1999; Felin, 2005, 2012, 2020)

Creating a knowledge management structure over the bricolages enables both prevention effect and performance gains.

The strategic management literature that suggests this is **Dynamic Capabilities (DC):**

**Dynamic Capabilities:** Organization is a box with knowledge; when we apply it, we produce merchandise; if we discover it, we gain market or adapt to pressures.

**Micro-foundations of DC:** The discovery of new knowledge comes from applying knowledge; the persons who are part of the organization are key.



## Final considerations and future research

The achievement of production and safety goals together is done bricolage (a big value leak in the organization).

We identified different types of gains: one related to the construction site and the other to the construction company.

Micro-foundations of Dynamic Capabilities and bricolages can provide a proper "theoretical nest" to place Resilience-based safety literature in strategic management.

Knowledge management is key to obtain performance from safety activities because it enables prevention effects.

Further investigation: how to conceive the knowledge management in this scheme? How should it work? Which indicators should we use to manage it?



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