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Movements in collaborative tools. Evolutionary dynamics of civil security's artifact ecologies.

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PILOT Project

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Introduction

In **civil security** services' populations (*i.e.* firefighters, EMS, prefects, police, etc.): (Elmasllari, 2019)

- **45%** of implemented tools are deemed **unnecessary** by the users,
- **39%** of their needs are **unfulfilled**, needing a new tool to be introduced.

The notion of **Ecology of Artifacts (EoA)** allows the articulation of evolutionary, organizational and personal dimensions of a collection of tools. (*i.e.* Bødker, Lyle & Saad-Sulonen, 2017; Furniss *et al.*, 2011; Rossitto *et al.*, 2014).

Objectives

Provide empirically grounded cases of collaborative tools use

Apprehend and prepare future digital collaborative tools introduction

Support scientific understanding of interservice long-term collaboration

Participants and Methods



1 inter-service practical **training session observation**

27 **semi-directive explanatory interviews** with professionals in the 57's department

Practice-based computing CSCW approach (Wulf *et al.*, 2018; Ley *et al.*, 2012) and **thematic analysis** (Braun & Clark, 2021)

Early results

Civil security's EoA are **dense** (see Figure 1), partially **redundant** and **inter-connected**, **differentiated** between departments and constantly **changing**.

7 movements inside civil security's EoA **evolution dynamic**, grounded on observed and reported cases (see Figure 2):

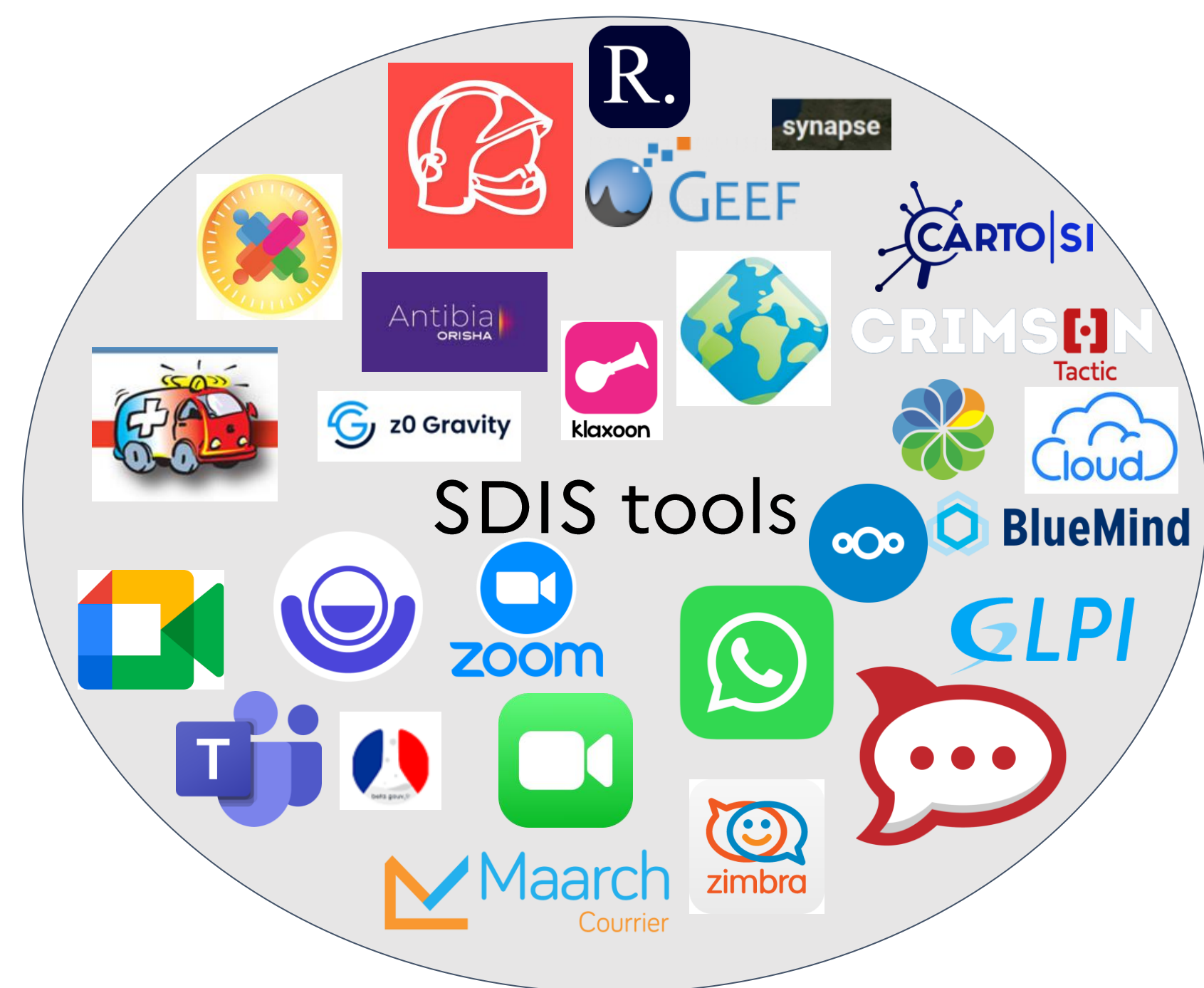


Figure 1. Schematic representation of civil security's non-exhaustive digital collaborative tools

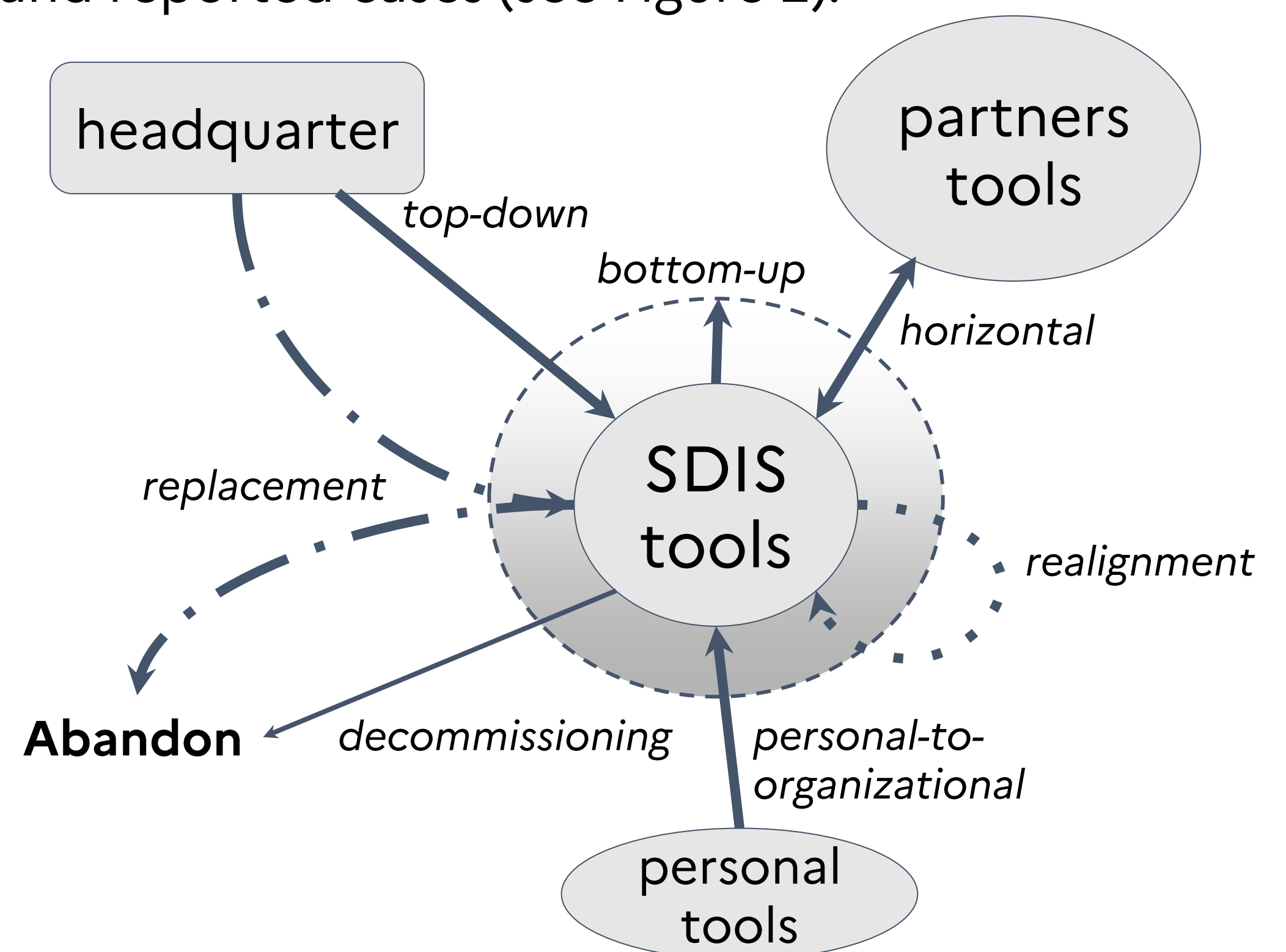


Figure 2. Schematic representation of the main movements in the evolution dynamics of civil security's EoAs. Round shapes represent organizational EoAs, oval shape represents personal EoA and square shapes represents non-EoAs. Each style of arrow represents a different kind of movement.