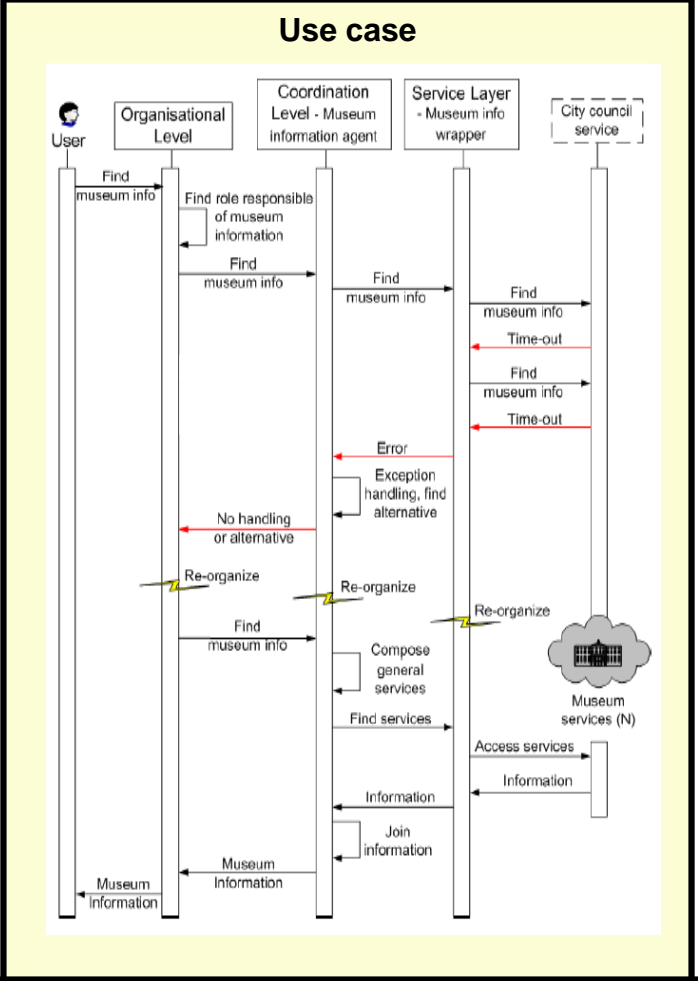
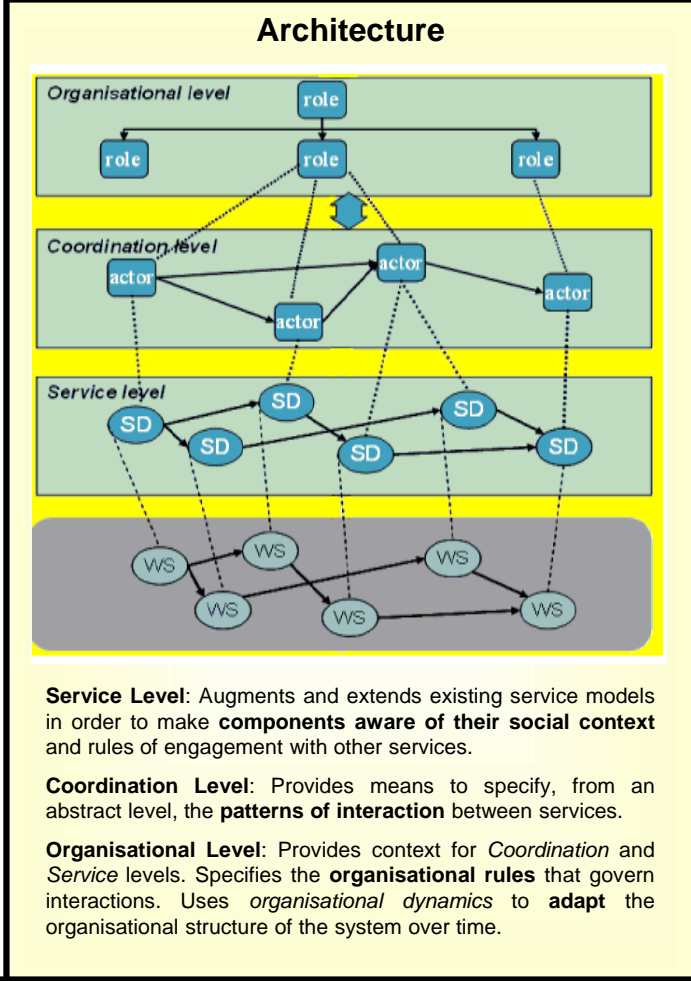


## Introduction

TMT Factory aims to provide a **personalized recommendation tool** that brings city services closer to residents and tourists, by **interconnecting service and content providers** with locations and people. This tool focuses on providing **ubiquitous access** to services in a **dynamic and changing environment**, offering recommendations adapted to the user preferences and context. Interconnected service providers in a dynamic environment represent a highly complex scenario that Multi-Agent system design methodologies have been trying to address for a long time. The European project **ALIVE presents a framework** (based on a Model Driven Design approach) that tackles this issue adapting **organisation and coordination techniques** to service-oriented architectures. ALIVE provides support for “live” (highly dynamic) and open systems of services providing **ease of maintenance** by reorganising and adapting services.



## Features

Typically, service composition is performed either via **pre-defined workflow** models (such as BPEL) or AI planning techniques (such as SHOP2). Workflows in ALIVE are **not predefined**, they are generated and maintained dynamically using organisational information. Existing planning methods tend to use centralized planning, where a single agent generates the plan based on its own perceptions. In ALIVE, **distributed planning**, based on the **TAEMS** framework is used, building partial plans that are shared later in order to generate a global plan.

ALIVE provides organisational context that can be used when selecting and invoicing services, providing **organisation awareness** to the most intelligent components, which can **guide decision making** aligning it with higher level organisational objectives.

Exceptions can be managed at service level, looking for services to substitute one that seems to be non-operational. This is common in other service-oriented approaches; however, in ALIVE **exceptions can also be managed at higher levels**, looking for alternative ways to fulfill a workflow or execute some tasks when certain states are reached.

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