Early Warning System Transport

Sensor Service Architecture and Early Warning?

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Overview

- Project introduction
  - Partners
  - Main Tasks of Early Warning System
- Description of problem

Project – EWS Transport

Development of an Early Warning System for Transport Lines

GEOTECHNOLOGIEN

Improvements of Early Warning Methods

Geophysical Institute (GPI)
University of Karlsruhe

Development of Strategies for Risk Minimization

Department of Railway Systems (ISEE)
University of Karlsruhe

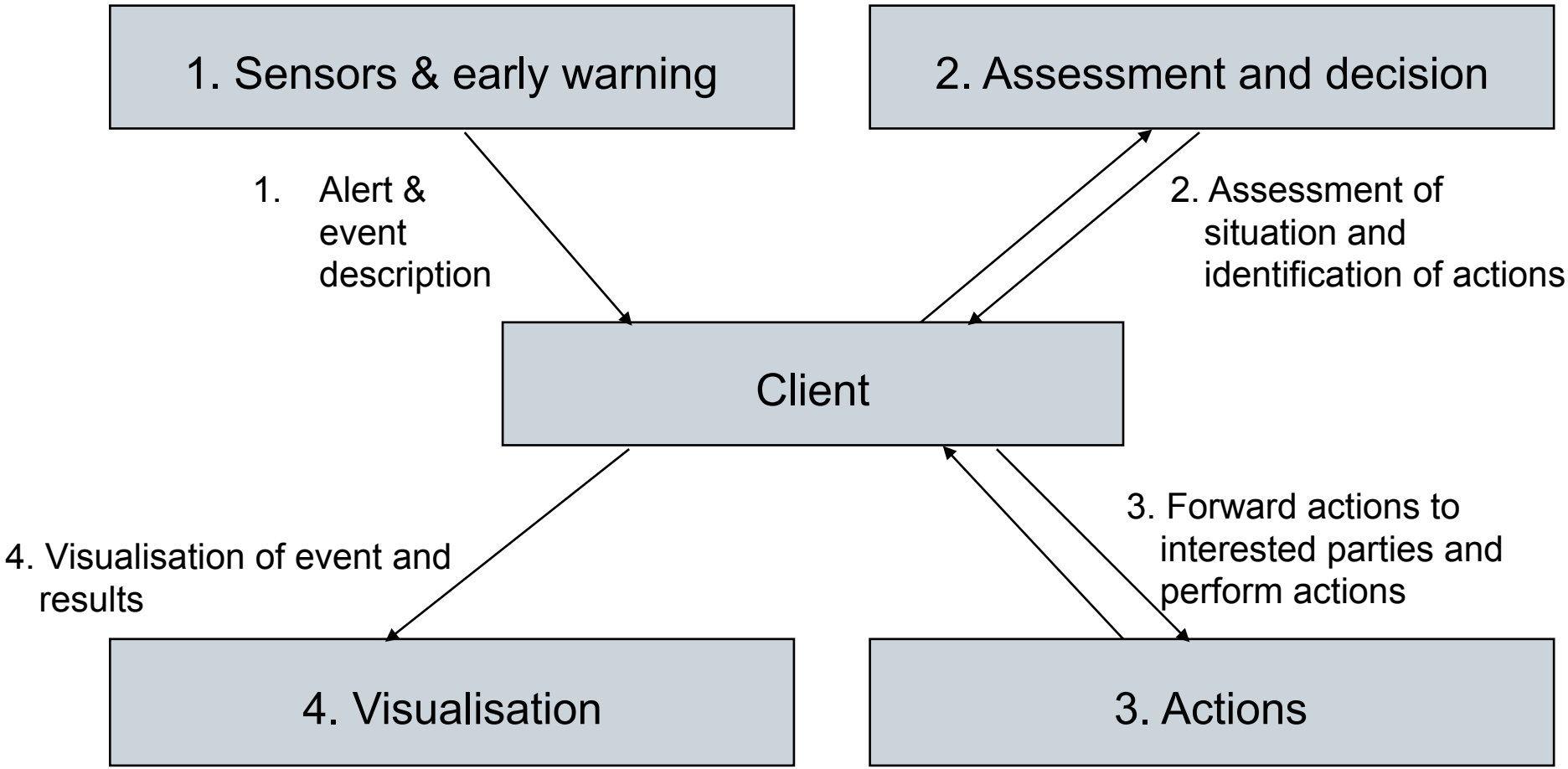
Integration of Efficient Information- and Communication Technologies

Fraunhofer IITB Institut Informations- und Datenverarbeitung

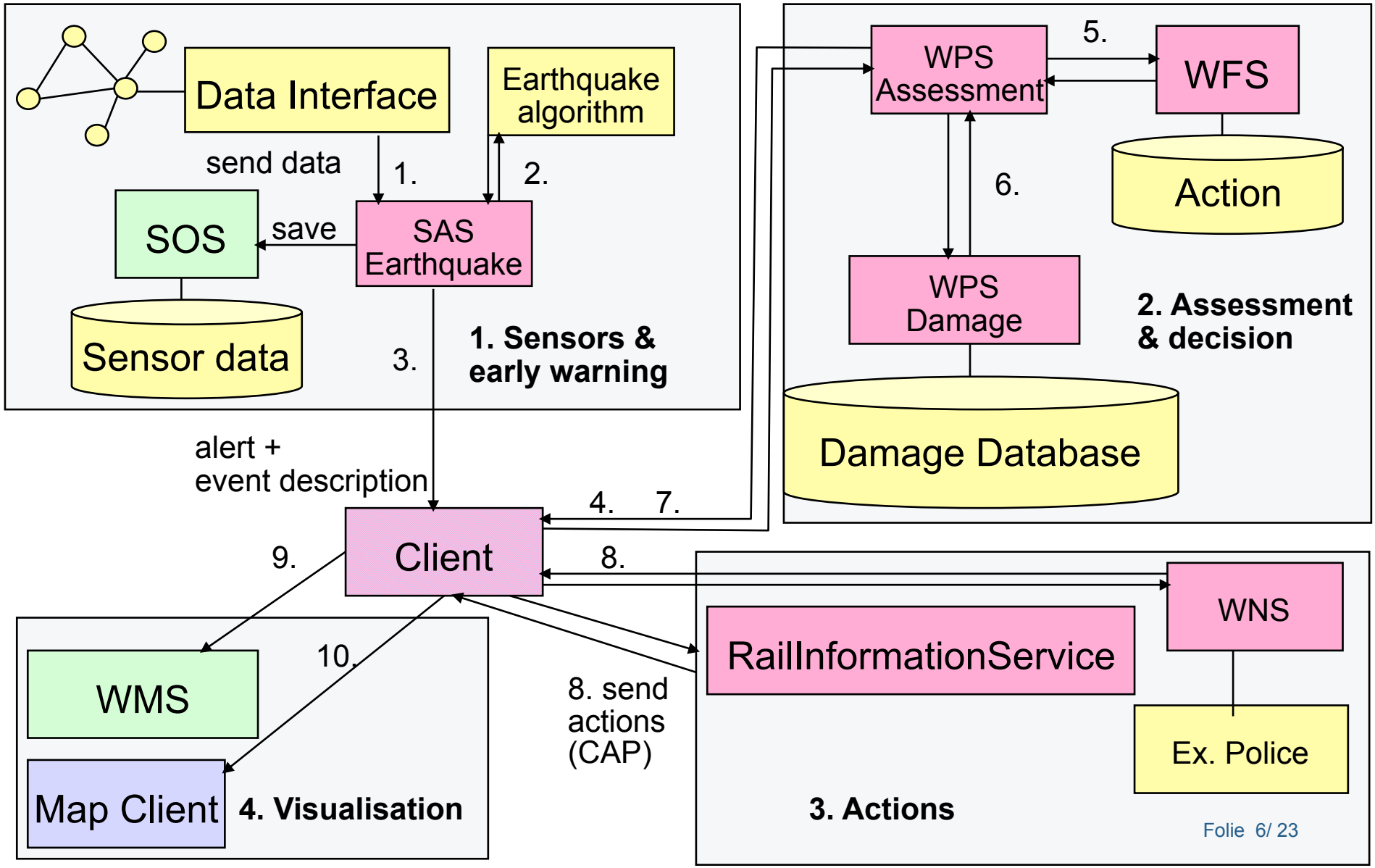
Main Tasks of Early Warning System

1. Early Warning
    - Quick an reliable detection of an earthquake
    - Automatic stopping of trains in endangered area
2. Information System
    - Simulation and analysis of earthquakes
    - Analysis of sensor observations
    - Damage prediction

Functional Building Blocks



Mögliche Realisierung in der realen Welt



Question

- Currently installed early warning systems for railways concentrate on the stopping of the train
  - Combination of seismometer with magnitude calculation in one machine with direct connection to power station or train control system
  - No combined information system
- Do you know examples of real time issues addressed in sensor service architectures?