

## Work Package 6.1



### Evaluation of Big Data by Semantic Analysis



#### Primary Objective

JoSemA helps investigators to jointly analyse mobile data spread via **different communication channels** (e.g. mail, messengers etc.) and including **different data modalities** (e.g. images, text, audio and video). Using prior knowledge it supports forensic **information retrieval** and **topic extraction** that can also be incorporated in the visualisation of the results in a communication network.

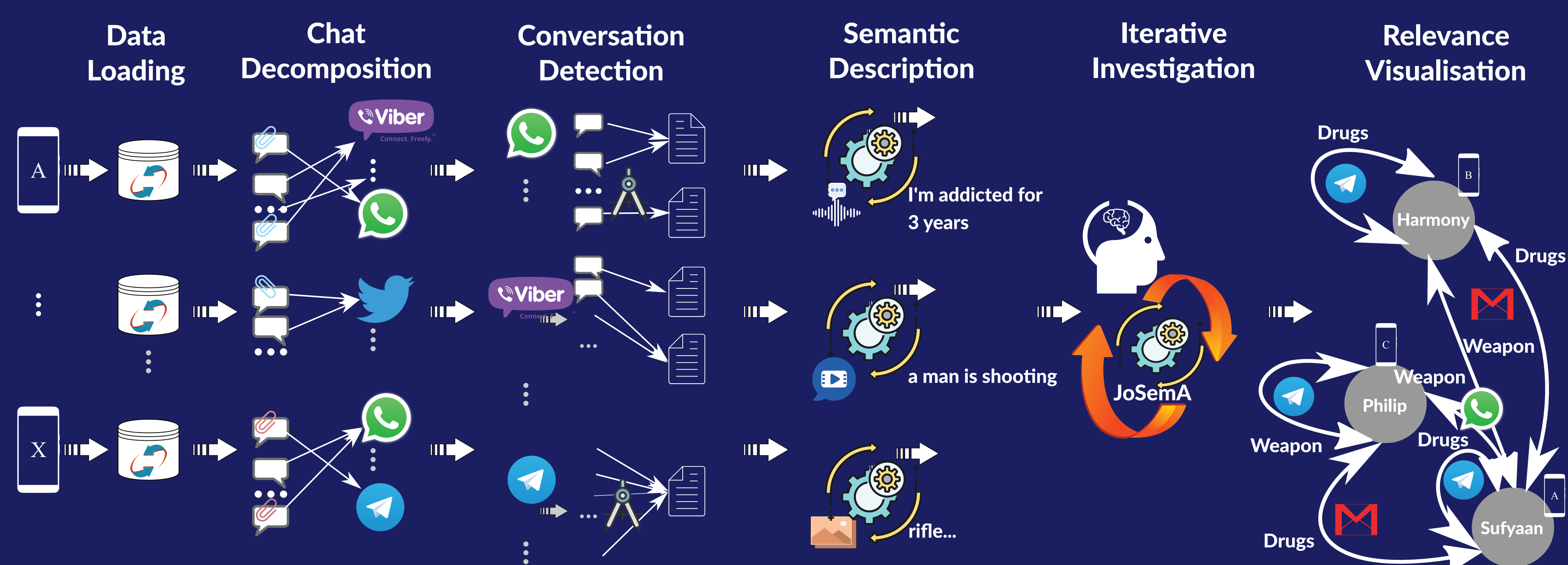
#### Main Tasks



- **Semantic understanding** of multimedia data to **query information** as well as **jointly analyse** the data.
- Including the investigator's **prior knowledge** in the **topic modelling process**.
- **Visualising** the communication over time based on the **semantic topics**.
- Supporting **several languages**.

DID YOU KNOW?

### FACTS & FIGURES



#### Key Outputs



- A Concept for a Comprehensive Understanding of Communication in Mobile Forensics, DATA ANALYTICS 2021.
- Towards a Joint Semantic Analysis in Mobile Forensics Environments, Int. Journal On Advances in Security 2022 (In preparation).
- Transformer-based End-to-End Automatic Speech Recognition Model, KONVENS 2022 (In preparation).
- Demonstrator for testing the new analytical functions.