



KDI ● **Knowledge and Data Integration**

Developing a KG of Personal Educational Events

KDI 2020 Project Proposal

Contents

- 1 Personal Educational Events**
- 2 Competency Queries**
- 3 Standards**
- 4 Knowledge Resources**
- 5 Data Resources**
- 6 Outcomes**

Contents

- 1 Personal Educational Events**
- 2 Competency Queries
- 3 Standards
- 4 Knowledge Resources
- 5 Data Resources
- 6 Outcomes

Personal Educational Events

- Smartphones are powerful data-centric gadgetry facilitators to understand their user's personal life patterns. In case of a student, for example, it can help to pin-point where a student goes, what are her/his mundane activities, and to exploit this knowledge to support her/him in everyday life.
- Personal educational events are focused along four macro cardinals: **Spatial** (location patterns); **Temporal** (time patterns); **Personal** (behavioral patterns), and **Social** (interaction patterns).
- The aim of the project is to create a modularized Knowledge Graph (KG) for integrating data on personal educational events, using the iTelos Methodology.

Contents

- 1 Personal Educational Events
- 2 Competency Queries**
- 3 Standards
- 4 Knowledge Resources
- 5 Data Resources
- 6 Outcomes

Competency Queries

To provide a glimpse, competency queries which inform the inception of the development of the KG on personal educational events can be like:

- Which are the most frequented campus spots by the master's students of DISI, UniTn?
- Which are the most popular daily time-slots for bachelor degree lectures at DISI, UniTn, as observed over a specific period of time (a week/a month etc.)?
-

Contents

- 1 Personal Educational Events
- 2 Competency Queries
- 3 Standards**
- 4 Knowledge Resources
- 5 Data Resources
- 6 Outcomes

Standards

To follow the standards adopted in the datasets collected:

- INSPIRE
- GTFS
- iCal
-

Contents

- 1 Personal Educational Events
- 2 Competency Queries
- 3 Standards
- 4 Knowledge Resources**
- 5 Data Resources
- 6 Outcomes

Knowledge Resources

The reference knowledge resources for the task are:

- The Geo-eTypes Ontological Model
- The GTFS Ontology
- The W3C Time Ontology
-

Also take a look at:- [Linked Open Vocabularies \(LOV\): Subset on Events](#), [schema.org](#) and [Semantic Sensor Network Ontology](#).

Contents

- 1 Personal Educational Events
- 2 Competency Queries
- 3 Standards
- 4 Knowledge Resources
- 5 Data Resources**
- 6 Outcomes

Data Resources

- [European Data Portal](#)
- Data gathered from smartphones or other sensor-points (IoT)
- Also by web scraping from relevant websites (if needed)
-

It is to be noted that features of the dataset(s) exhibiting personal identification markers need to be compulsorily anonymized.

Contents

- 1 Personal Educational Events
- 2 Competency Queries
- 3 Standards
- 4 Knowledge Resources
- 5 Data Resources
- 6 Outcomes**

Outcomes

- Extended set of standard and terminologies supported with respect to personal educational events, and event patterns in general
- A generic KG and a set of localised KGs defined to support and integrate diverse data on personal educational events
- Datasets on personal educational events, cleaned and well formatted, aligned with the knowledge used to integrate them
-



KDI : Knowledge and Data Integration



KDI 2020 Project Proposal



Developing a KG of Personal Educational Events