



KDI ● **Knowledge and Data Integration**

Integrate data across Europe

KDI 2020 Project Proposal

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- 2 Competency Queries**
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Medical Domain

- This project aims to collect and manage medical data. The medical data domain is composed by a large number of aspects involving persons, structures, medicines, treatments and not only those.
- For this project the focus selected is the collection of data relative to persons, or Patients. Retrieving medical data on different aspects regarding patients, is possible to generate a set of Electronic Health Record (EHR) describing the medical situation of a set of patients.
- In the European context, the project has to consider the differences between the different countries health systems, involving different data standards and format adopted to represent the data.

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Competency Queries

In order to understand which kind of data have to be considered in this project, the competency queries which drive the inception phase can be like:

- Which aspects of the patient and of her/his medical situation have to be included in the EHR ?
- How those aspects are represented by the data ?
- Which countries are involved in the project ?
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Standards

The standards to be considered in the project are all those that are used to represent the EHR data, in the different European countries involved. Here some of them are reported :

- ICD-9 & ICD-10
- LOINC
- SNOMED CT
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Knowledge Resources

For this project a specific set of knowledge resources is adopted to represent the data collected. Thanks to its interoperability, the FHIR data standard provides an efficient solution to represent the medical data.

- FHIR data standard
- All the medical standards needed to manage the data
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Data Resources

The data resources needed for this project are medical datasets that have to be collected from different sources, coming from the different countries involved in the project.

These datasets have to include all the aspect which have to be represented in the project.

The datasets can be retrieved online through reliable sources.

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Outcomes

- The objective of this medical domain project is to collect and manage medical data coming from different countries and sources, in a Knowledge Graph (KG) which is able to maintain patients EHRs.
- The project aims to collect data coming from different sources, in order to integrate them together generating a KG which cover an heterogeneous context in which different medical systems are used to represent the data.
- The project aims to improve the already available set of Knowledge and Language resources need to manage the medical data.



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