

KDI - FHIR

Deliverable 1

Shaun McNaughton

Jacopo Mocellin

Sander Martins Gonçalves

Zuhairia Ibnat

Purpose

FHIR - Fast Health Interoperability Resources

Integration of health data based on a EU Commission action plan to increase interoperability

Benefits:

- Healthcare professionals
- Patients
- Healthcare facilities
- Researchers



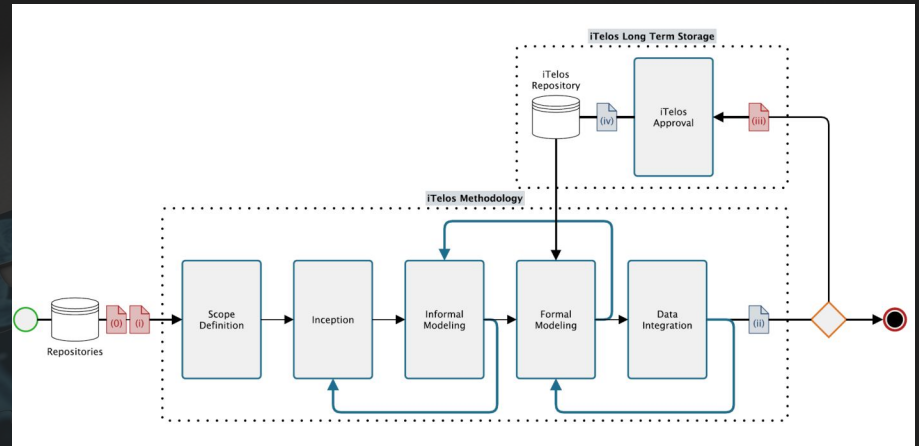
iTelos approach

Using a set of

- Personas
- Scenarios

We create a set of competence queries that we can apply to the dataset

We use that to create a high quality DKG



Personas

Giannantonio



Rita



Pedro



Jean



Scenarios

Giannantonio has had a heart attack while travelling within Greece. The medical team need to find his past medical history to determine what treatments might respond well

Query - hospital name, patient name, diagnostic tests, prevalent conditions, previous surgeries, medications taken (in Greek)

Return - hospital details, patient details, tests history, treatment history, treatment results in Greek



Scenarios



Rita has a serious fall and breaks an arm. She is treated another country, but when she returns home for follow-up treatment. The physician looking after her needs access to her treatment in Italian

Query - patient name, age, date of accident, diagnosis and treatment

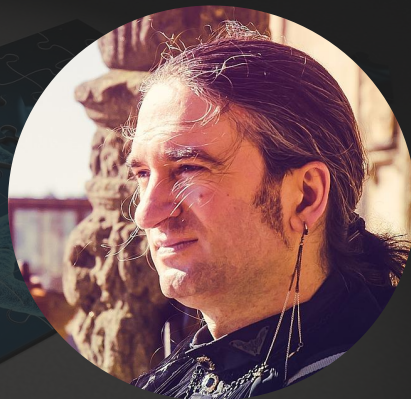
Return - patient information, results of diagnosis, treatment history and doctor recommendations, medical information translated to Italian

Scenarios

Pedro has a history of medical conditions and travels between countries to receive specialised treatment. The medical teams need to communicate to each other the treatment and effects.

Query - patient name, prevalent diseases and conditions and treatment history

Return - patient details, list of diseases, list of treatments and effects with translations



Scenarios



Jean is a doctor in France who has a consultation with an Italian patient for the first time

Query - recent patient history

Return - recent patient history, medical info translated into French

Additional - Travel history warning

Datasets

Privacy is a big issue!

1. EMRBots
2. Synthea Patient Generator
3. Smart on FHIR



Dataset metadata

EMRBots	Synthea	Smart on FHIR
Admission ID	Patient ID	Patient ID
Admission Start Date	Diagnostic	Name
Admission End Date	Treatment	Diagnostic
Primary Diagnosis code	Dosage	Treatment
Primary Diagnosis	Period	Period
Description	Vaccine	
Lab Name	+282!	
Lab Value		
Lab Units		
Lab Date		