EU-Wide Legal Text Mining using Big Data Infrastructures

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Project Overview

Call Identifier: 2017-EU-IA-0179

Topic: Innovation and Networks Executive Agency CEF Telecom – Public Open Data

Start Date: 01/10/2018

Project Duration: 24 months

Project Coordination: University of the Aegean, Greece

Project Website: www.manylaws.eu

Total Budget: €1,952,964

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Consortium

Coordination
Big Data Management
Information Processing, Legal Text Mining

Greek Case
Greek legal data sources
Services Evaluation
Dissemination

Service Infrastructure Implementation
Integration with eJustice portal, NOMOS, European Open Data portal

Conceptual Framework, Requirements and Services Definition
Pilot and stakeholders engagement coordination
Training

Austrian Case
Austrian legal data sources
Services Evaluation
Dissemination

HPC Resources (ARIS supercomputing center)

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Challenges

Fragmented legal information

Absence of legal data in the European Data Portal

Better use of public data

Better services for citizens and public administrations

Demonstrate the use high-performance computing (HPC) to analyse and exploit large and complex public datasets

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Scope

ManyLaws aims to address the challenge of fragmented information in the legal domain:

- Integration of automated translation services and the utilization of HPC resources
- Mining national legal data portals and EU sources of legal information
- Aggregating the retrieved information with the data maintained by public administrations and law-making bodies

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Objectives

To build the **proper environment** and **vision** of **semantically annotated Big Open Legal Data (BOLD)**, easily searchable and exploitable with proper visualization techniques

To provide the **technical foundation** and the **tools** for making **legal information available to everybody**, in a customizable, structured and easy to handle way

To **deliver** a set of **key trans-European services** that facilitate **seamless and ubiquitous access to legal data** for citizens, businesses and administrations

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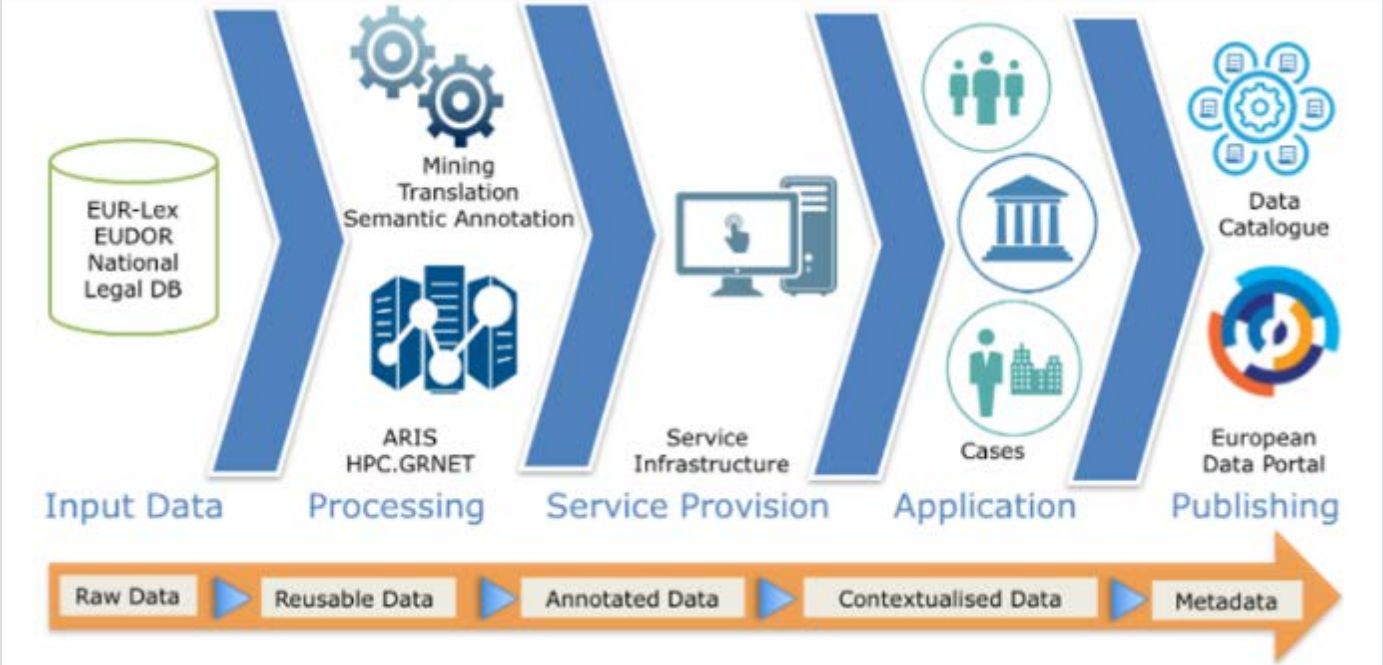
Conceptual Model



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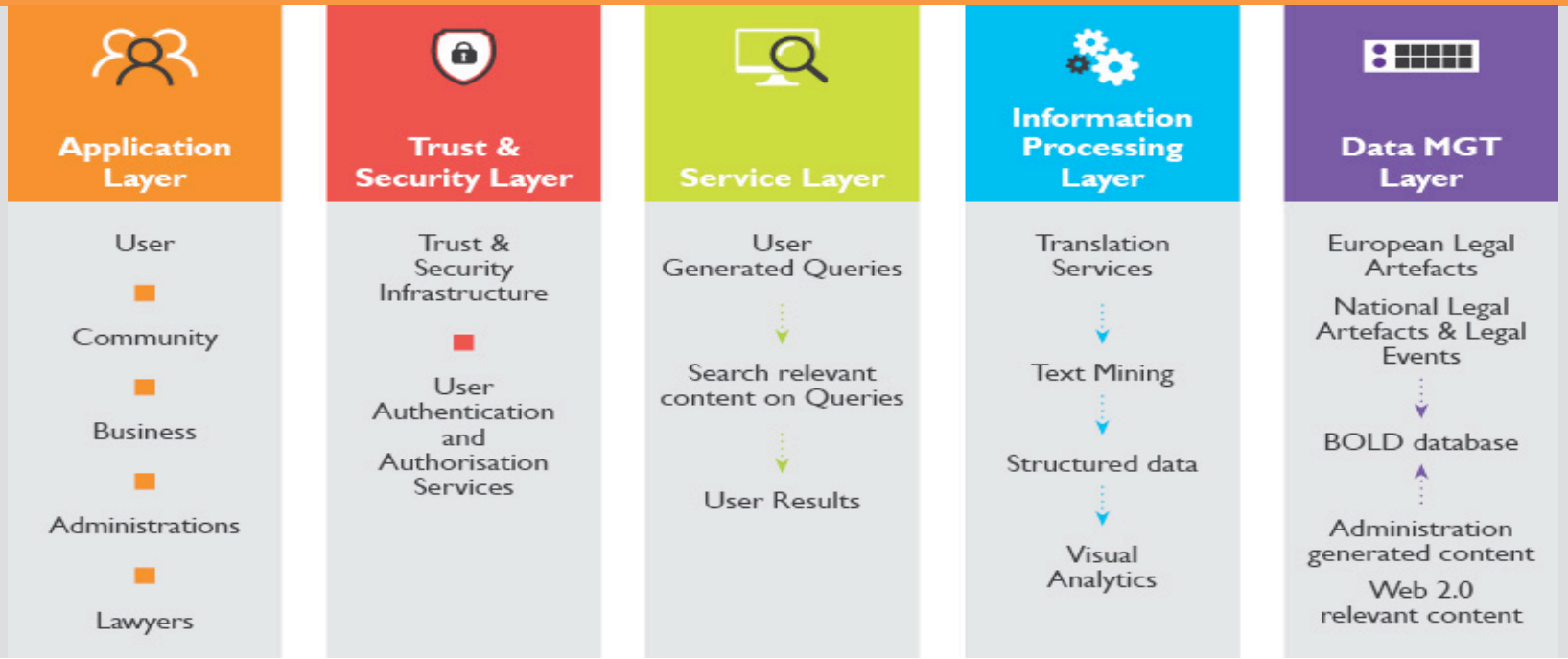
ManyLaws High Level Architecture



Proposed Services

Parallel search in many EU member-state legal frameworks (through parallel translation of search terms), using simple keywords

Comparative analysis of equivalent or relevant laws from different EU member states or connected laws from the same member state

Analysis of references to the European Legislation by National Laws

Assessment of the degree of **transposition** of an EU Directive in a National Legal Framework, indicating relevant national legislation and monitoring the status of transpositions

Proposed Services

Timeline analysis for all legal elements, visualising the progress and current status of a specific national or European legislation (after amendment/extensions) over time

Various **geo-related visualisations** (e.g. EU maps indicating different parameters) and **text-related visualisations** (e.g. wordle, sentiment graphs, interrelation maps, etc.) to illustrate correlations, dependencies and conflicts between different laws

Decision Support Services (e.g. Impact Assessment) within legal procedures

USE CASES: Hellenic Parliament, Austrian Parliament

ManyLaws KPIs

No of ManyLaws service portal users	400
No of integrated legal databases	5
No of produced datasets	1000
No of analysed legislations	8000
No of indexed terms	1000
No of public servants/policy makers involved during the applications	30
No of public administrations involved	10

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Target Users: Who Uses Legal Information?

Activities

A1 - Conceptual Framework Definition and User Requirements

A2 - Big Data Acquisition and Management

A3 - Information Processing Tools

A4 - Development of Services for Citizens, Businesses and Administrations

A5 - Stakeholders' Engagement and Pilot Application

A6 - Dissemination and Sustainability

A7 - Project Management and Coordination

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Thank you!