

## What is SPECIAL about?

We are a 3-year (January 2017–December 2019) research and innovation project funded under the Horizon 2020 ICT-18-2016 Big Data PPP: privacy-preserving Big Data technologies. We address the conflict between Big Data innovation and privacy-aware data protection by proposing a technical solution that makes both of these goals realistic. It allows citizens and organisations to share more data, while guaranteeing data protection and transparency.

We develop technology that

- supports the acquisition of user consent at collection time and the recording of both data and meta-data (consent policies, event data, context) according to legal and user-specified policies;
- facilitates privacy-aware, secure workflows with usage/access control and auditability to enhance transparency and compliance verification;
- demonstrates robustness in terms of performance, scalability and security;
- provides a dashboard with feedback and control features that makes data collection and processing comprehensible and manageable for data subjects, controllers, and processors alike.

The features are deployed and tested with a number of use cases reflecting real-world business scenarios.

### The architecture

SPECIAL uses the Big Data Europe Integrator Platform of the EU-funded project *Big Data Europe*. BDE focuses on cross-community big data management and building innovative products or services with semantically interoperable, large-scale data assets.

The Integrator Platform enables deployment of common big data technologies with minimal effort and forms the basis of the SPECIAL platform. It does not impose any restrictions on the data processing components with respect to the data being processed, how it is processed and how it is being disseminated.

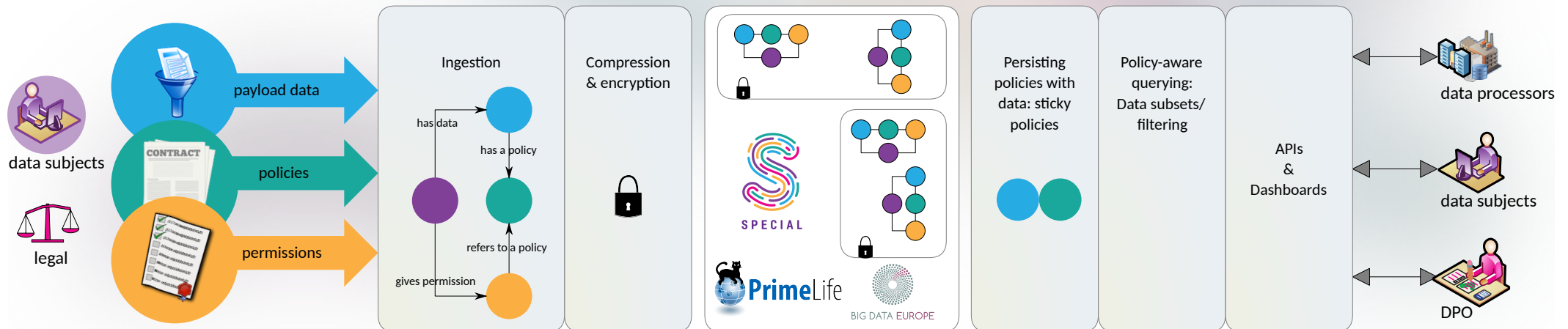
Within SPECIAL, this platform will be extended and adapted to create a system compliant with the European data protection framework, which encompasses, e.g., the protection of personal data by effective access control policies.

## The use cases

*Proximus* is a Belgian telecommunications provider offering telephony (landline and mobile), internet and Internet TV. Their use case foresees the creation of a tourist recommendation tool on the basis of customer interest profiles. The tool is aimed at visitors of the Belgian coast.

*Deutsche Telekom* is a leading European telecommunications provider and involved in the SPECIAL project with a focus at exploring various possible use cases. One of them is aimed at municipality road layout optimisation and traffic management. Furthermore, a use case includes traffic alert information for customers based on their commuting behaviour and other geolocation data.

The project partner *Thomson Reuters Limited* (TR) located in the United Kingdom is focused on supporting Know Your Customer requirements in the financial sector. To this end, TR provides end-to-end client identity and verification services that enable financial institutions to fulfil their compliance and due diligence obligations against financial crimes based e.g. on international and national anti-money laundering laws and regulations.



## The core features of SPECIAL

Our vision is to reconcile Big Data and personal data protection via an innovative **data handling solution** and a **transparency framework**. We develop this technology to ease industry's difficulties with GDPR compliance and to enable respectful treatment of personal information. This introduces new ways of user interaction on privacy and fosters trusted customer relationships. Thus, we

- build a big data architecture to handle **linked data** for privacy policies, as well as deploy **scalable, queryable encryption**

- develop advanced user (data subject) **interaction and control** features

- integrate the results of the *Big Data Europe* and the *PrimeLife* projects, while advancing the state of the art of **privacy-enhancing technologies**

- include ethical principles, the EU General Data Protection Regulation (**GDPR**) and the future **ePrivacy** Regulation.

## Use case realisation

The use cases within the SPECIAL project request voluntary, informed and unambiguous consent from the *data subjects* in an easy to use way, even on mobile devices. This involves a **Dashboard** that is at all times easily accessible to stay informed about data usage. Moreover, the data subjects can exercise control over their own personal information in a differentiated manner, e.g. for several processing purposes.

## The SPECIAL consortium

The consortium consists of project partners from **Austria, Belgium, France, Germany, Italy** and the **United Kingdom**.

They bring in expertise from various fields, such as **legal, business, security, privacy, usability, big data** and **semantics**.



Scalable Policy-aware  
linked data arChitecture for  
prlvacy, trAnsparency and  
compliance

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