

DaPaaS – A Data- and Platform-as-a-Service Approach to Efficient Open Data Publication and Consumption

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This position paper introduces DaPaaS – A Data- and Platform-as-a-Service Approach to Efficient Open Data Publication and Consumption. Funded by the European Commission between 2013-2015, DaPaaS aims to simplify data publication for organizations with limited expertise in data publication, and to reduce the cost and complexity related to the data publication and hosting process. At the same time, DaPaaS targets the creation of an ecosystem for development and deployment of third party data-driven applications.

Why? While in recent years a large number of datasets has been published as Open (and often Linked) Data, applications utilizing these open and distributed datasets have been rather few. Reasons include, amongst others:

- the technical complexity and economical cost of publishing, interlinking and providing reliable access to the data
- insufficient monetization incentives on the data provider side
- lack of simplified and unified solutions for data consumption in a multi-platform way
- lack of an European Open Data “marketplace” where datasets and 3rd party components are available to application developers to reuse, combine and develop novel data applications

What? The DaPaaS project and approach will directly address such challenges by developing a methodology and an open software infrastructure providing Data-as-a-Service (DaaS) and Platform-as-a-Service (PaaS) capabilities for Open Data, with the aim of optimizing publication and consumption of Open Data as well as the development of data driven applications.

The DaPaaS platform will serve as an intermediary between:

- data publishers, such as government agencies, who need an easy and economically feasible way of publishing and hosting Open Data
- SMEs who need a reliable access to Open Data sets and services that can be integrated in various enterprise or consumer oriented scenarios
- Application developers, who need simple services and widgets for cross-platform data consumption
- End users data consumers such as citizens, interested in new services and insights into open data

At the same time, the feasibility and sustainability of the DaPaaS approach will be verified by several use cases in the hyperlocal domain, by utilizing and aggregating open data about local areas to offer new services to the public/locals.

How? The DaPaaS platform will provide an open stack of components, which provide capabilities covering different aspects of the data management lifecycle:

- A scalable Data-as-a-Service layer, where structured Open and Linked Data can be stored, interlinked, indexed and queried by 3rd party applications and services
- A Platform-as-a-Service layer where various infrastructure services for data cleanup, interlinking, search and data analysis will be available to application developers. The PaaS

layer will be open for 3rd party application developers who want to co-locate their data analysis and processing components together with the data hosted on the platform

- Data-driven portals and mobile interfaces, which will simplify the task of developing a web portal or a mobile application presenting some combination of datasets hosted on the platform
- A hosting environment on a public Cloud, where data providers and application developers can publish their datasets and services for free

Focus of the presentation at the workshop. The presentation at the workshop will go into the details of the why/what/how DaPaaS approach, introduce the overall architecture, discuss the technical choices for the Data-as-a-Service aspect, the Platform-as-a-Service aspect, and data visualization aspects, and will introduce examples of typical use cases in utilizing and aggregating open data about local areas to offer new services to the public/locals.

Further information about DaPaaS can be found at <http://dapaas.eu>.