

Personal data vaults: techno-economic analysis of pod providers within Flemish Solid ecosystem

Over the last years, our society has evolved into a data-driven economy, and that won't change anytime soon. Companies, start-ups, organizations, and governments all require some of our data to provide us with the services we want and need. This has led to an increased power for big platform players like Google, Facebook, etc.

An alternative solution could be based on a new ecosystem of personal data, in which every person has their own personal data vault, which we refer to as a data pod. Think of a data pod as a virtual drive to which you as an individual hold the keys. Your data pod can then store and safeguard the data that you produce as well as the data that companies and organizations produce about you. As the controller of your data pod, you can decide for every piece of data which parties you want to share it with. This way, companies can get access to specific data without writing or collecting it themselves, while respecting every individual's preferences. The Solid standard provides a very promising solution for the potential implementation of personal data pods and the ecosystem around it.

Opting for this set-up of the ecosystem can reshape the existing power relations, it can enable innovation by small players and it can provide an opportunity for the government to set some standards for the way this data is structured, stored and shared.

An individual or entity can store its data with a pod provider of choice, and as described in the specifications of Solid, is also empowered to switch between pod providers. An entity might even have data stored at different pods from different pod providers. However, different pod providers might introduce certain technical barriers and switching costs, thereby slowing down innovation. The goal of this thesis is to first understand the concept of Solid and understand different actors within the Solid ecosystem e.g. pod providers and pod infrastructure providers. Based on gathered knowledge, the student should perform a techno-economic analysis and identify how different pod providers can introduce barriers and how this affects the entire ecosystem. Different factors need to be taken into account, for instance, the difference between public and private actors.

Different steps:

- What is the MSP-representation of the SOLID ecosystem? Description of the SOLID solution as a multi-sided platform consisting of at least 3 user segments: citizens/customer, data pod providers (e.g. government, but potentially also private data providers), service providers in different application domains (mostly private).
- Clearly formulate where to position SOLID in relation to: platform versus ecosystem, innovation platforms, and open platforms
- What is the role the government can/should/will take up in this ecosystem? To what extent does it contribute to privacy protection and avoiding lock-in? Understand the impact of the different approaches the government can take toward implementing this solution.
- What are potential different potential scenarios for the role of the government and its expected evolution? Clearly describe the different roles the DNB is expected to take in relation to the data governance act e.g. (1) facilitator or re-use of protected government data by companies, (2) data intermediary, (3) data cooperative allowing to share personal data based on consent given by citizens to companies. Mapping of these roles in the SOLID value network.
- Understand the business model for the actor taking up the role of pod provider. Focus on the differences between a public actor (government) versus a private actor (commercial company). The same should be done for pod infrastructure providers.
- Understand the impact of the co-existence of different pod providers and pod infrastructure providers on the value network.