Administrative Data and the Individual

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A Vision for Tomorrow's Applied Data Systems

Technical Advances in Administrative Data

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The Individual in the Administration

Personal Online Data Stores (PODs)

### The Individual as the Data User

- **Support the Public –** first and foremost
- Partnership with individuals for their empowerment
- So that individuals have the option to better engage
- Through a data store under the individual's control

Individuals First as the Data Users

- Individuals data is made accessible within a POD
- The only location for all their data – financial, health, personal, …
- Multiple Administrative Data Sources ingested into PODs
- Supplemented by other personally collected data

Source: https://solidproject.org/

It's Just a Data Store – An App Ecosystem for Innovation

- Innovators can quickly deliver new apps – data in PODs not centrally
- Apps to add innovative value to our personal Administrative Data
- Trusted data stores to improve lives with trusted local apps/agents for my interests
  - Taxation Apps to advise on compliance from all my data = Admin + Personal data
  - Personal Health Apps supporing individual and health professionals
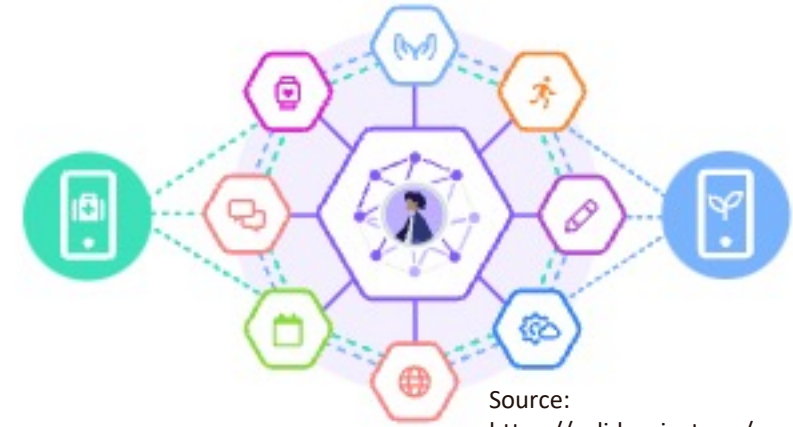
Solid Personal Online Data Stores (PODs)

**Infrastructure Supporting PODs**

- Eventually, after slow small steps from 2015 and many years with little fruits – SOLID is here

- **SOLID** (**So**cial-**Li**nked **D**ata) Specification of Server API including **authentication** and **authorisation**

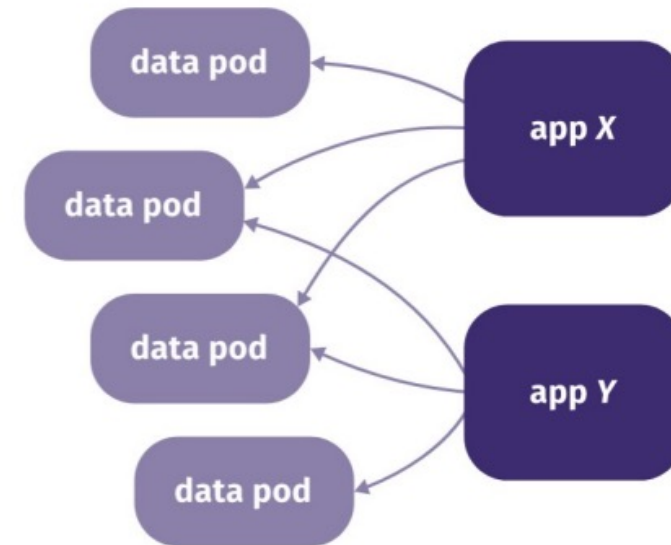- Community Solid Server or Nextcloud Plugin https://solidproject.org/self-hosting/css

Apps Supporting the Individual through PODs

- Open-Source ecosystem to drive adoption

- Open-Source Community Solid Server

- Centralised versus Decentralised - Trust
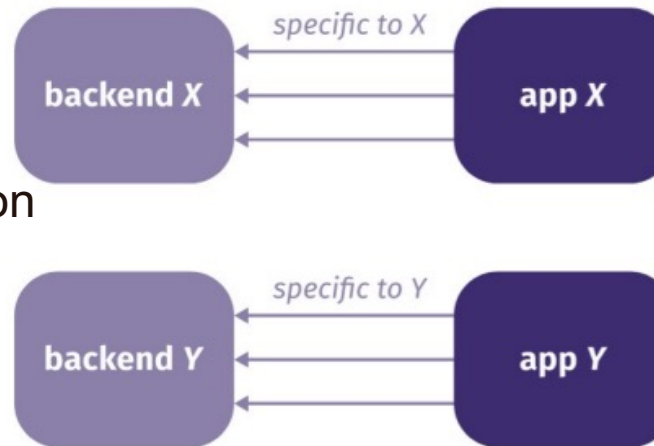
Ruben Verborgh FOSDEM 2019

Infrastructure for Partnership

A Common Server for All

Individual: https://solid.ecosysl.net/
Community: https://yarrabah.net
Government: https://bit.ly/3y4FlBu (Flanders)
Commercial: https://start.inrupt.com/

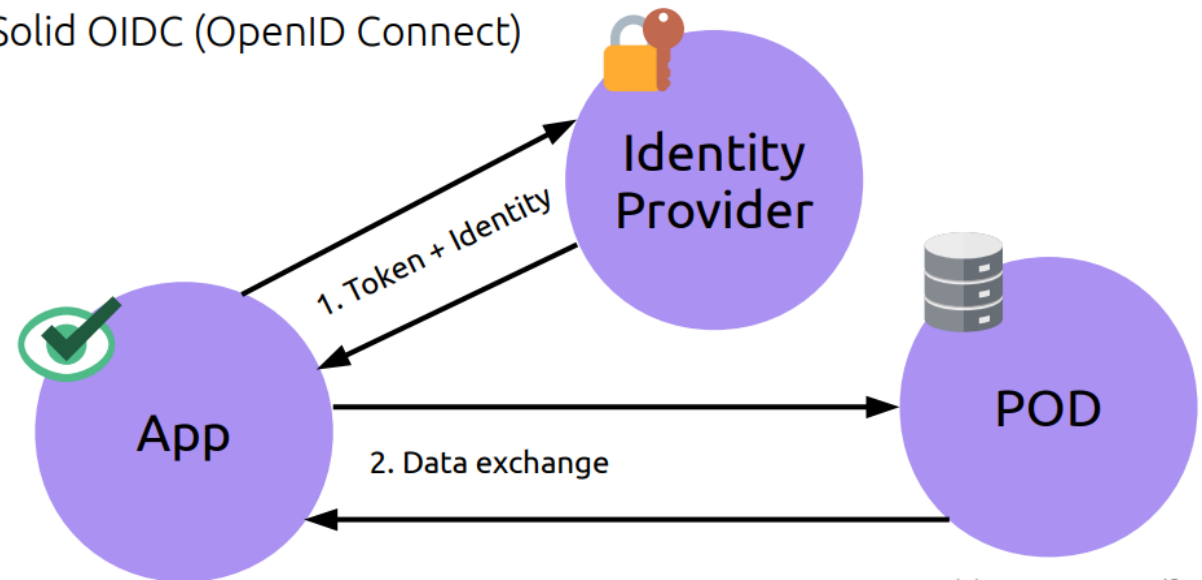Solid OIDC (OpenID Connect)

Noel De Martin FOSDEM 2023

Development

- Trust No One: POD data is **encrypted on the server**
- Standards: Data is stored in common data structures for **interoperability**
- No Lock In: PODs can **migrate** between SOLID servers
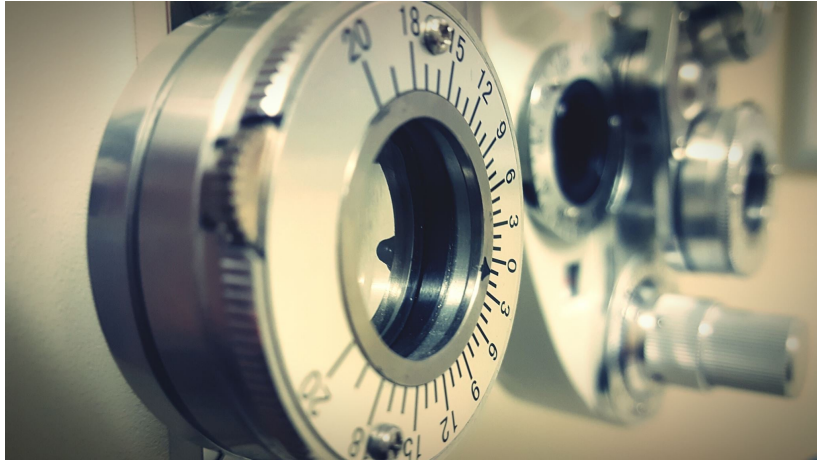
Research

- Data is only decrypted on-device and so susceptible to **back doors**
- Once shared we can stop sharing but data already shared cannot be reliably unshared - **trust**

Apps and PODs Data Access Control

- Solid provides each POD owner with granular control
- Data can be shared and permission can be revoked
- Sharing constraints protect highly sensitive or secret data
- Transparent metadata for records and terms of access
- Providence of data.

Examples of sharing consent include:

1. Read access to a file for purpose of medical consultation
2. Read but not store to a file for purpose of identification
3. Read access to a file for purpose of care for Country
4. Read access to a file for purpose of research

Thank you!

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