# PodBox.

## Personal Data Management Tool for a Decentralized Web

**Gopika Kini**
Product Management & UX

**Tanay Mahindru**
Engineering (Back-End)

**Mia Schneider-Martin**
UX Research & Design

**Drake White**
Engineering (Front-End)

**Kay Ashaolu**
Advisor

# We have lost control over our personal data

Scattered all over the web

BBC

Home News Sport Business Innovation Culture Travel Earth Video Live

Your personal data all over the web - is there a better way?

7 March 2024

Share

By Sean McManus, Technology Reporter

Lack of control over how and what our data is used for

Business Markets Tech Media Calculators Videos

Meta accused of 'massive, illegal' data processing by European consumer groups

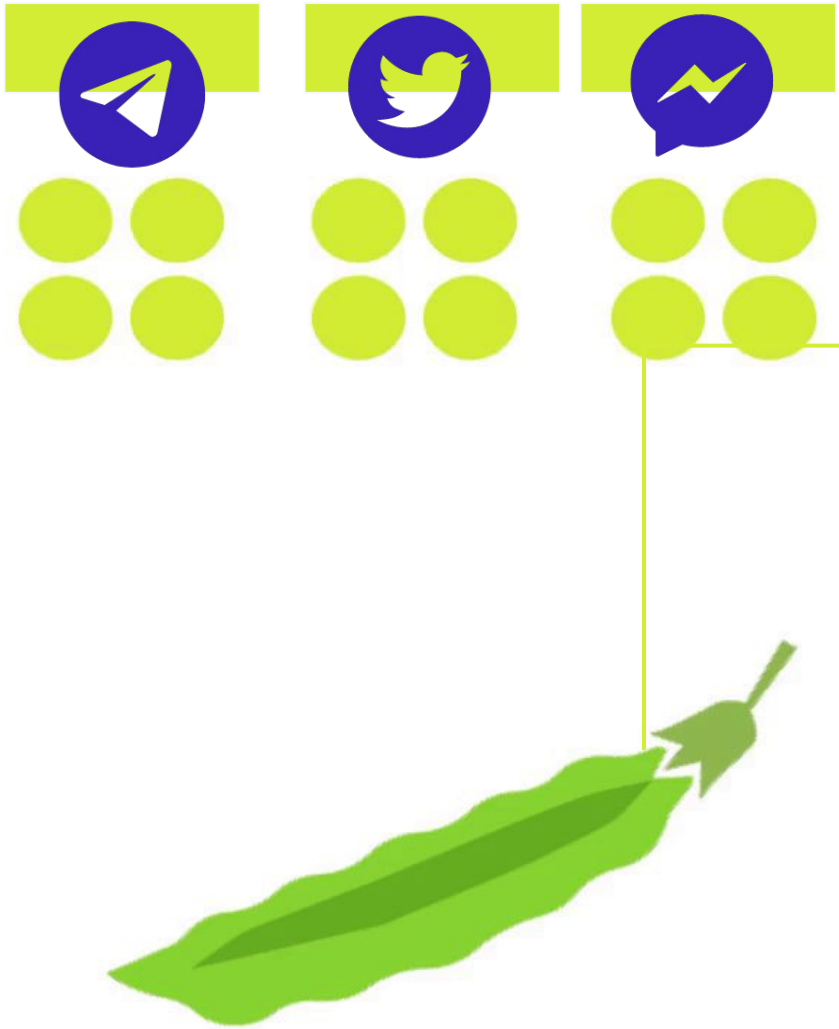
Data silos and lock-ins

Forbes

What A Potential TikTok Ban Means For Content Creators And Small Businesses

# “Solid has become the vital next layer of the web stack.”

Sir Tim Berners-Lee: Inventor of the World Wide Web,
Creator of the Solid platform, CTO & Co-Founder of Inrupt

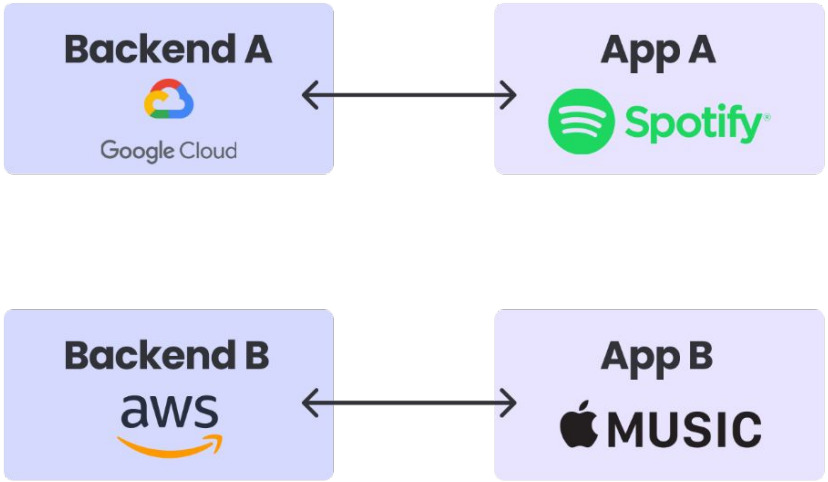


# Personal Online Datastores (PODs)

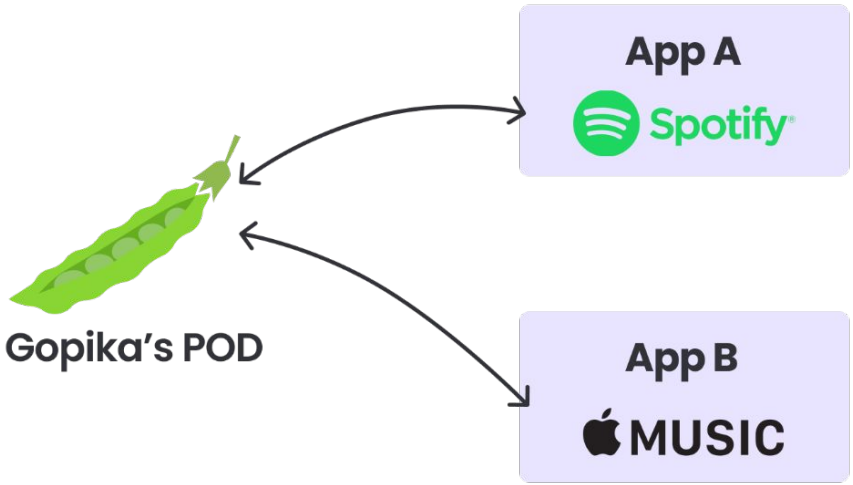
Stores **all kinds of data**

Multiple applications can **access same data** through POD

**Centralized:** single app and backend




**Decentralized:** multiple apps and backends

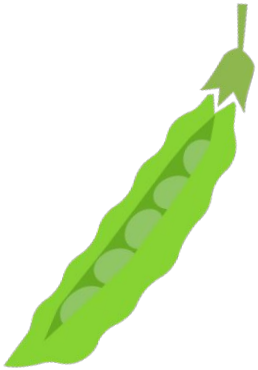


SLOW ADOPTION

POOR USABILITY

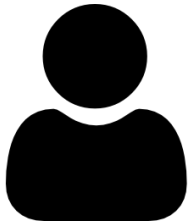
TECHNICAL AUDIENCE

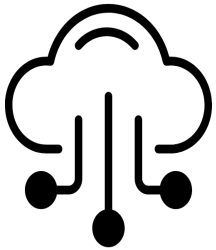
# Why PodBox?



PodBox.

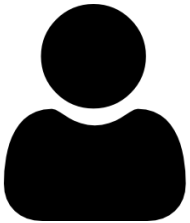
2024





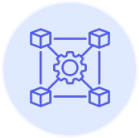
Dropbox

2007



# PodBox Demo

POD Interfacing



Interoperability

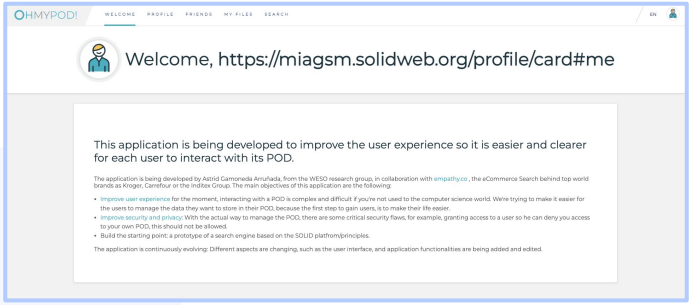
Access Controls

3 Idiots

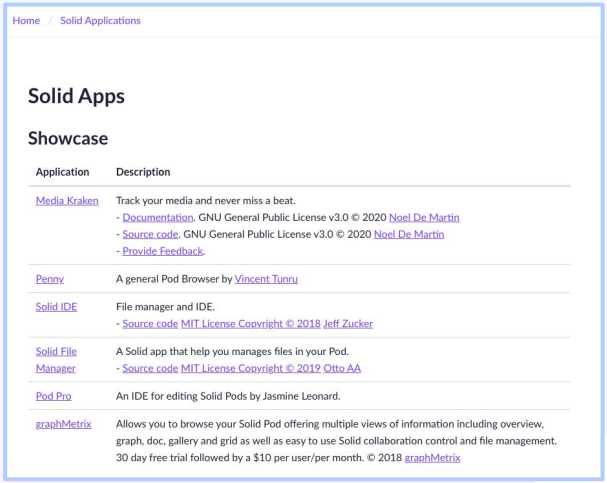
# Research & Design

Usability testing, expert interviews, desk research

# Before PodBox, managing data access controls with a POD manager required 3 platforms

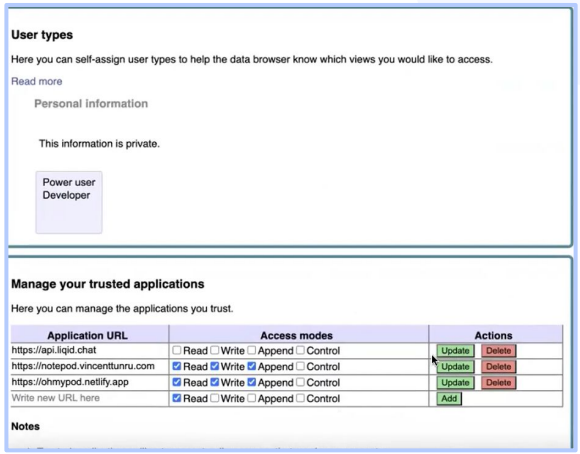



OhMyPod: POD manager




Solid apps catalogue






Solidcommunity.net POD Provider

# How might we improve the POD management experience?

**Process**

## Usability Testing

- 4 participants in MIMS
- Needfinding
- Complete user flow

## Expert Interviews

- Interviews with Solid W3C Community Group leaders and Solid app developers

## Desk Research

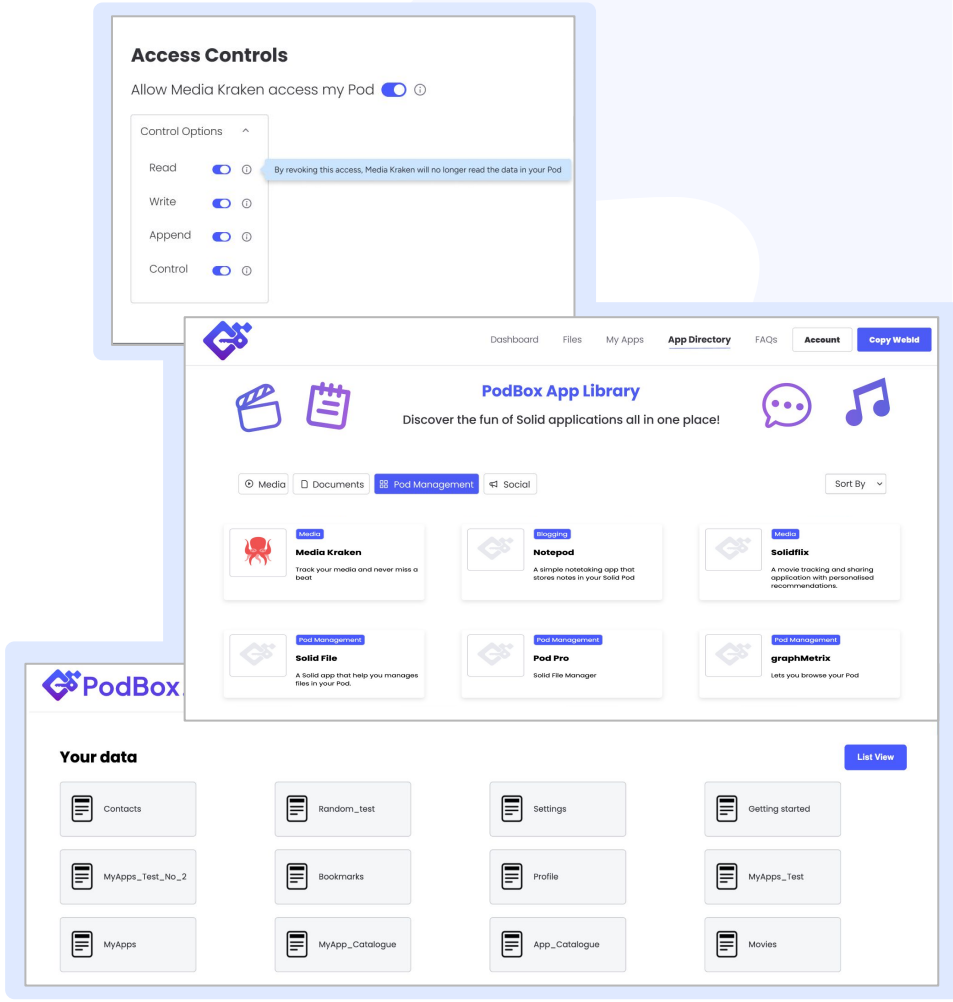
- Literature review, community forums

Design Goal 1

# Unified Functional Experience

Completing key tasks requires users to switch between multiple platforms, causing confusion

*“I didn't know where to look for things. I was lost and that sums up most of it.”*

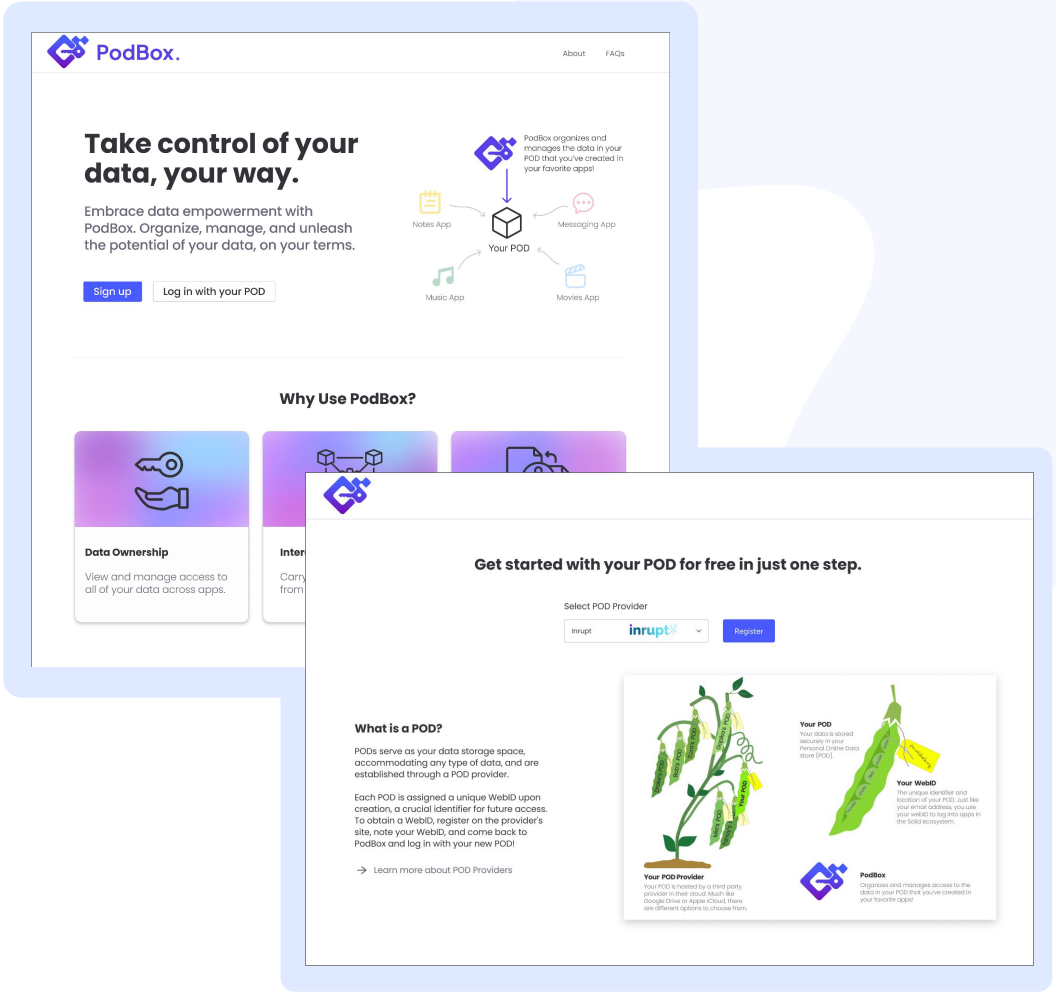


Design Goal 2

# Educational Onboarding

Users lack understanding of key terms, given that it is a novel technology

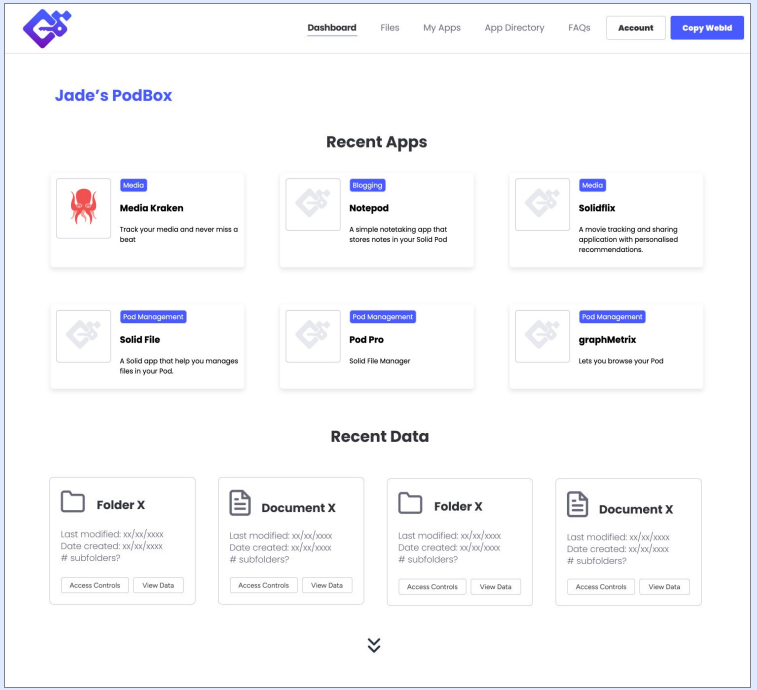
*"It's hard to understand when it uses big words, which makes me feel like a caveman."*



# App-First Design

User mental framework of data is tied to apps

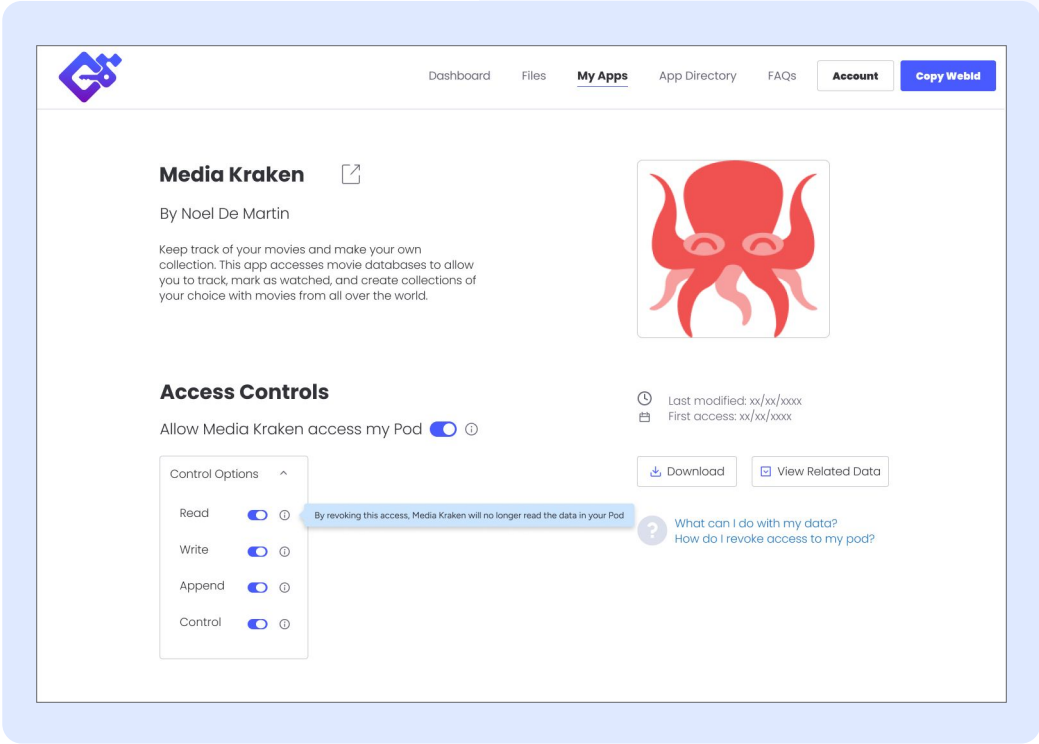
*“I know that the data from this app lives in this place. I would prefer that it's just presented to me upfront rather than just being so deep in there.”*



# Informational Nudges

Users don't understand access control implications or what information was important for a given task

*"I don't know what this means to me right now. I don't know what this part is gonna do, so I feel very lost right now."*

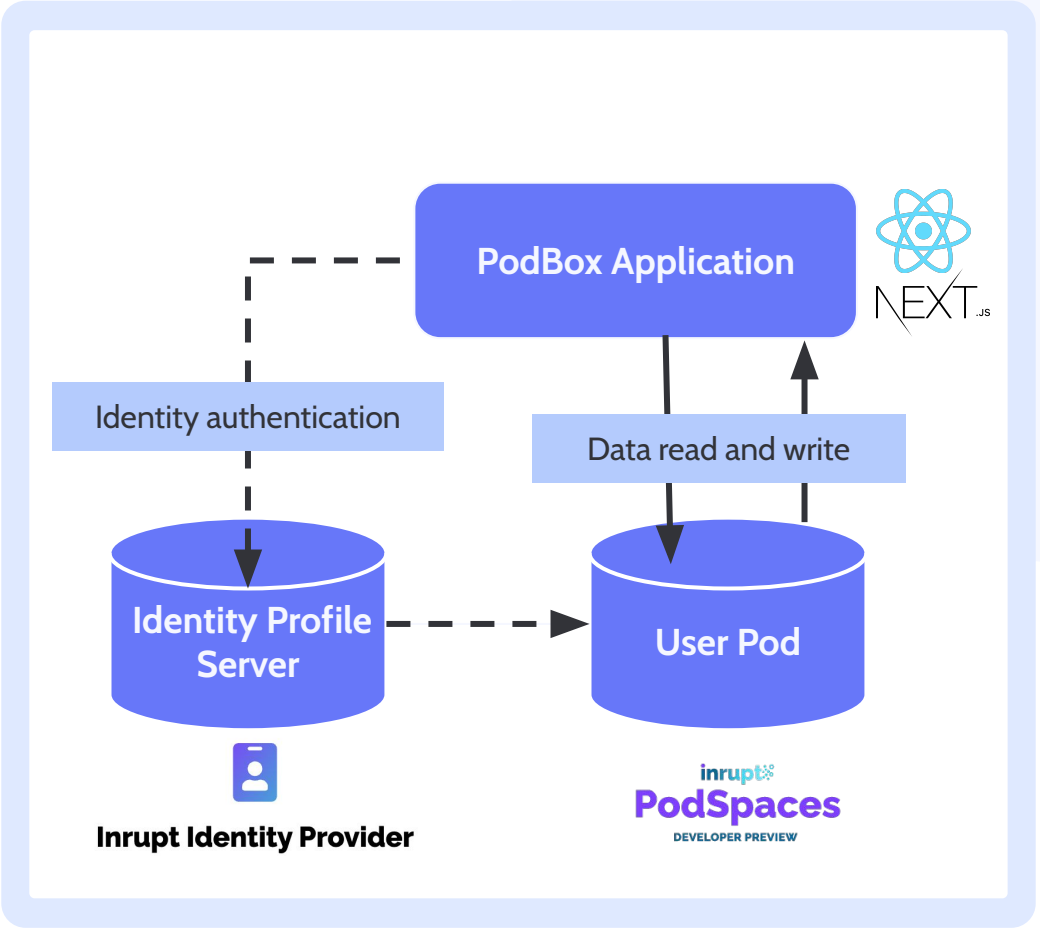


# Technical Architecture

Application architecture, Linked-Data

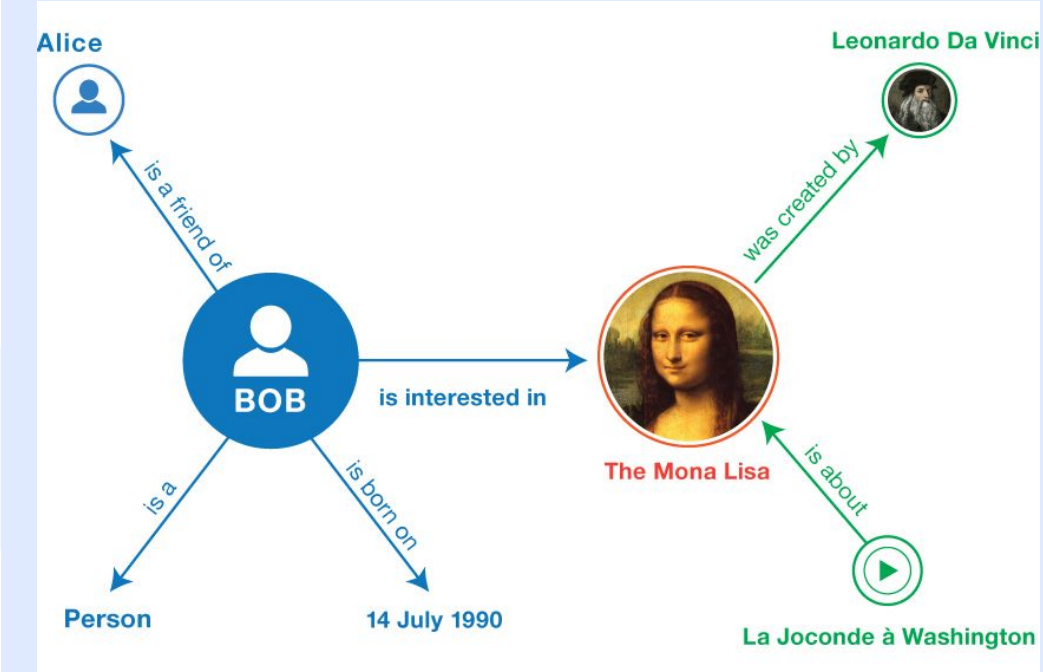
# Solid decouples identity, data, and the application

Roles typically all played by a single platform, which limit data portability and lock-in users to ecosystems that have access to data



# Interoperability and portability via data structure

PODs store data in ‘structured’ formats such as RDF, contrasting against the use of more typical table (relational database) structures




Source: RDF 1.1 Primer

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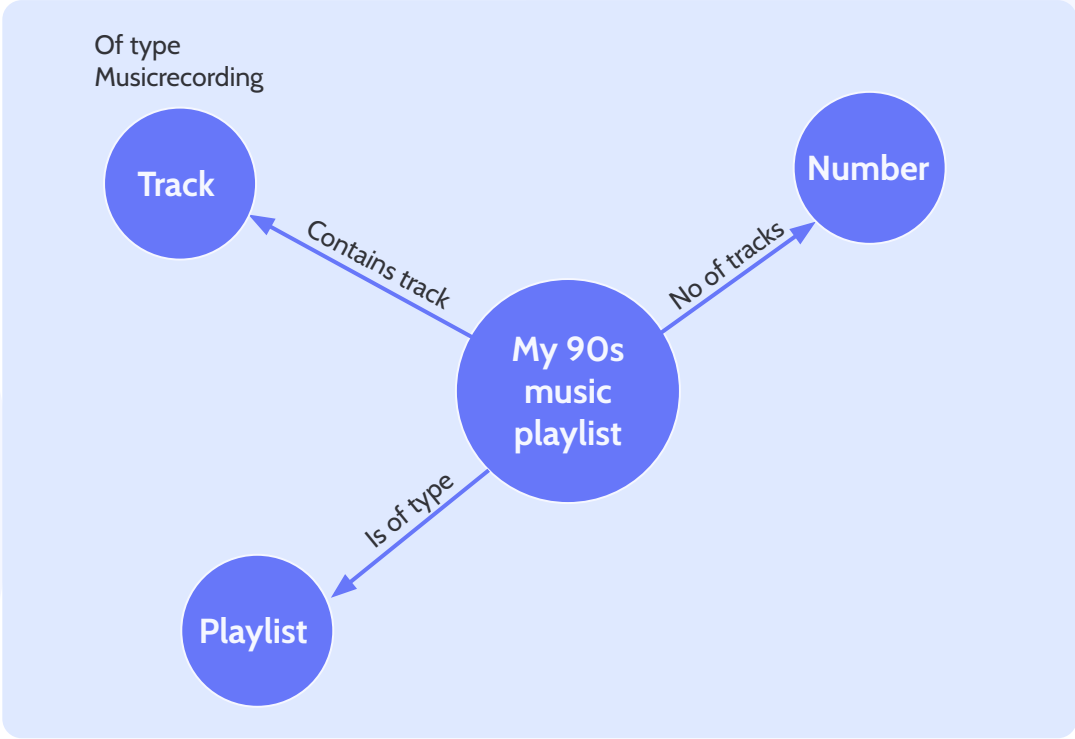
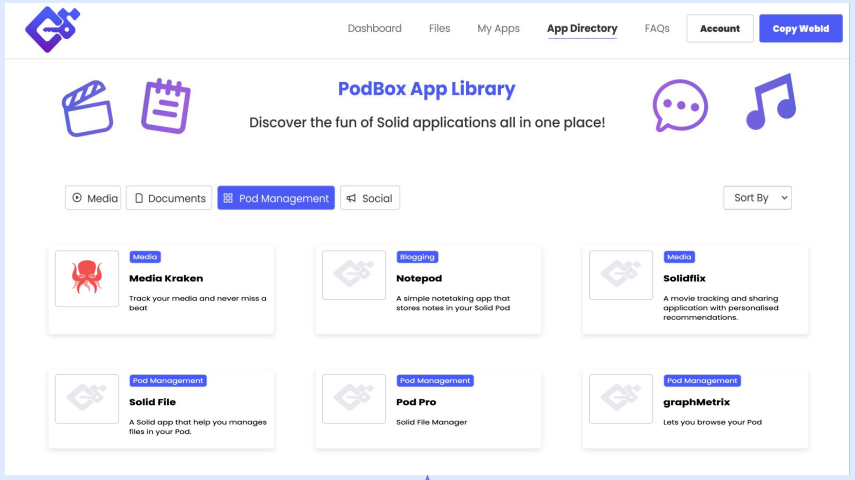


# Public RDF resource for Solid Apps in Podbox

Our App Library fetches it's app library information from a public RDF document hosted on my POD, with public read access.




Publicly available App Catalogue in RDF (hosted on my pod)

# So, what’s next?

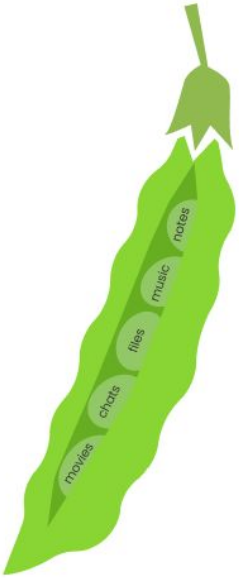
PodBox.

# Thank you!

# Appendix

**Your POD Provider**

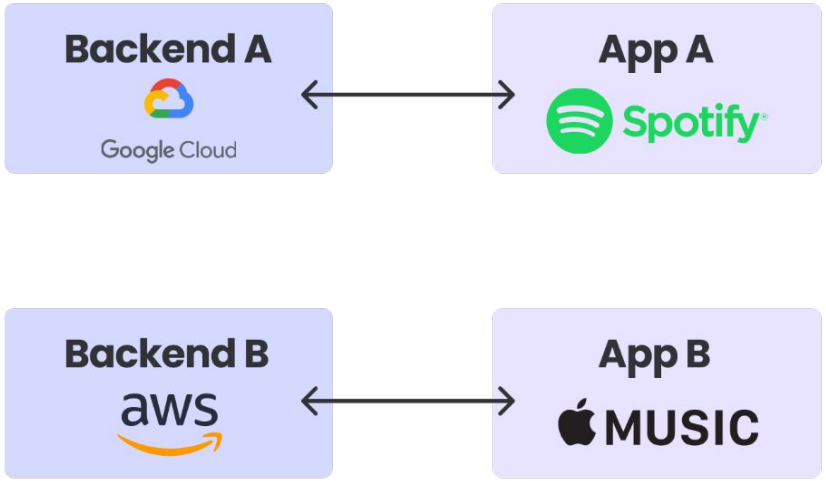
Your POD is hosted by a third party provider in their cloud. Much like Google Cloud Platform or Apple iCloud, there are different options to choose from.



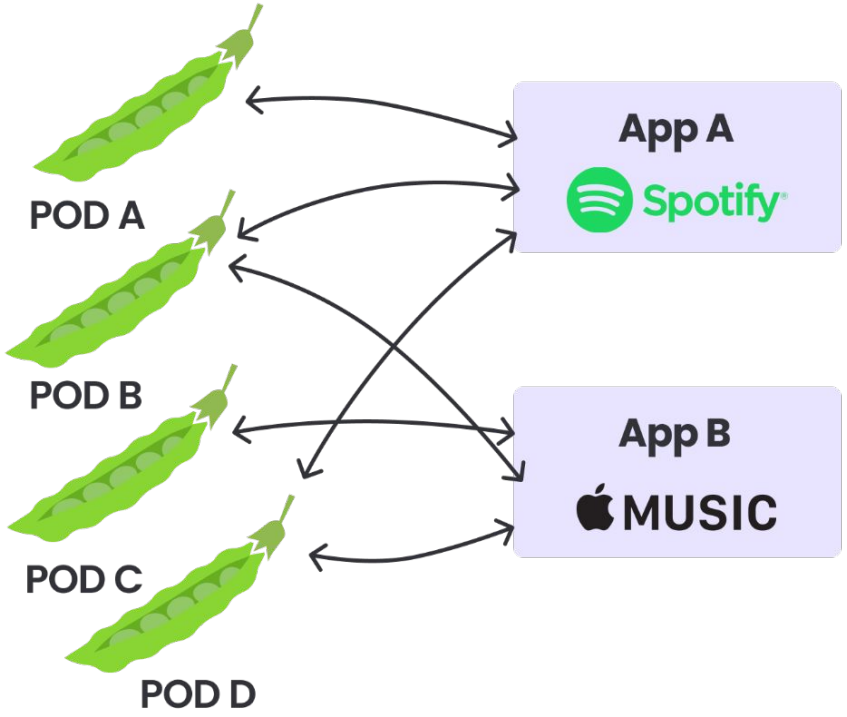

**Your POD**

Your data is stored securely in your Personal Online Data store (POD).

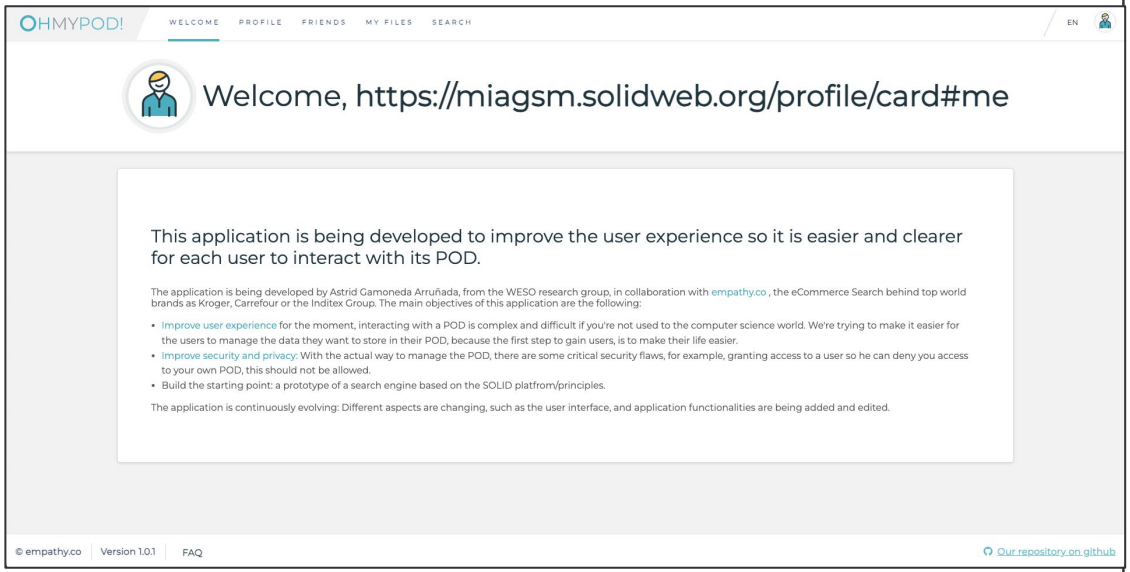
**Centralized:** single app and backend

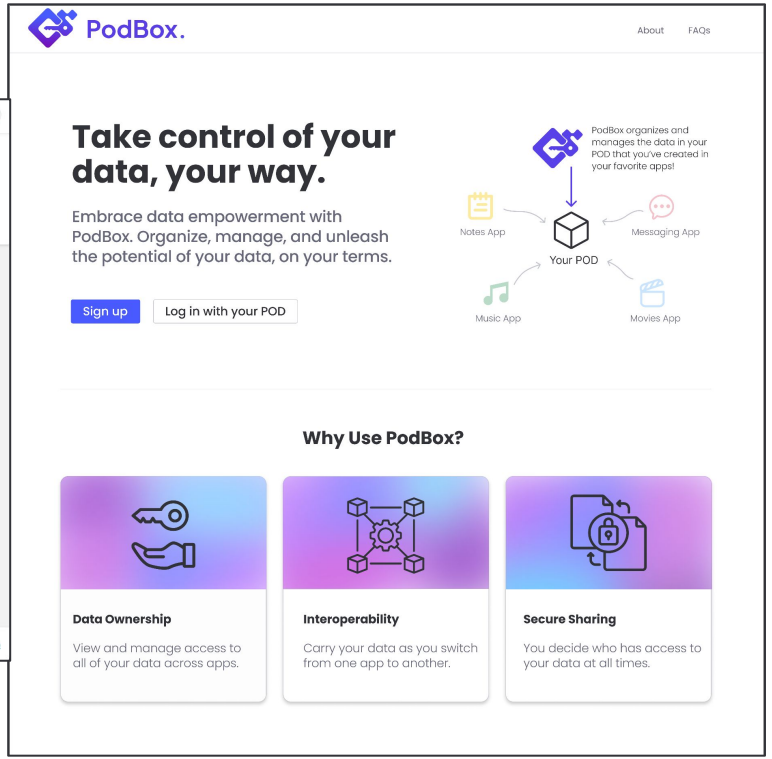



**Decentralized:** multiple apps and backends

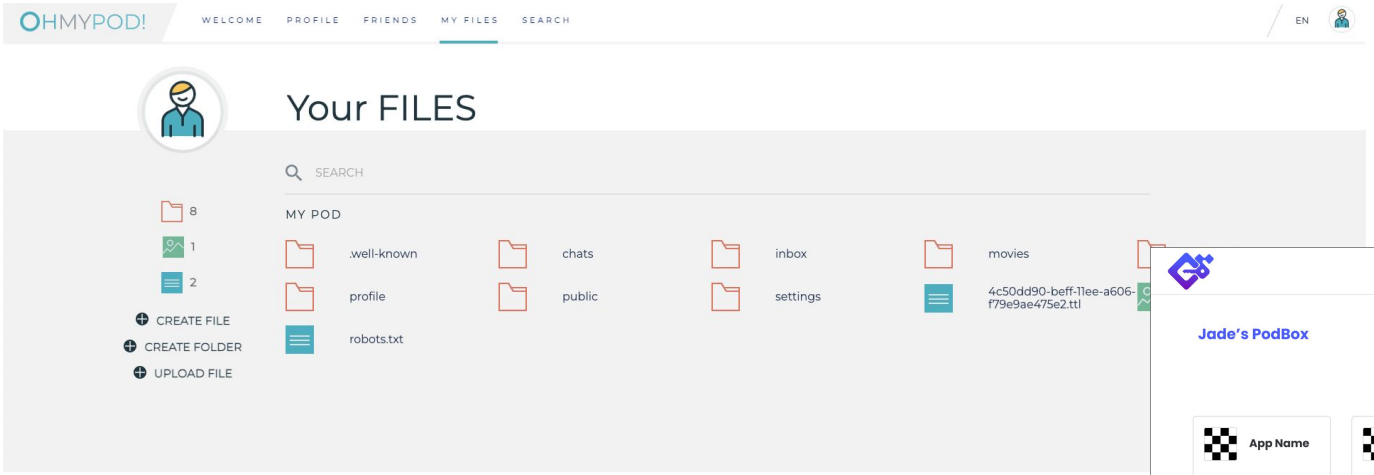


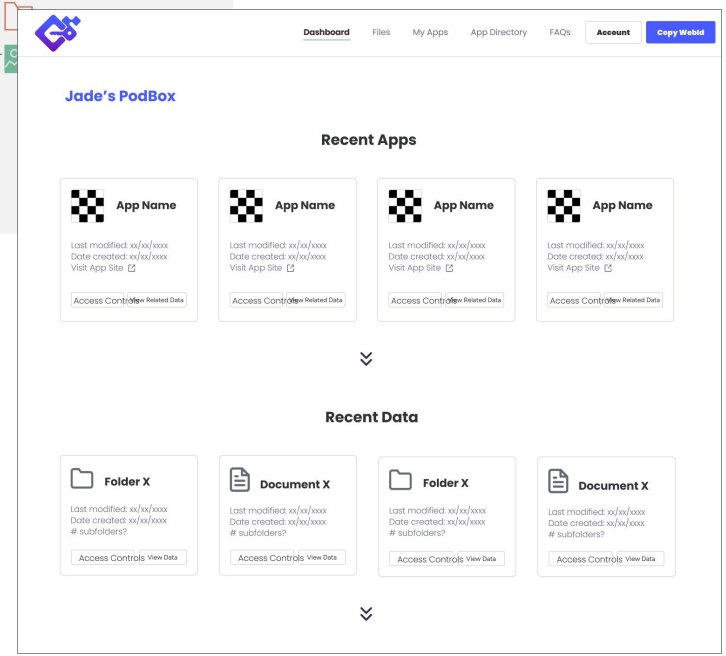
# Educational Onboarding vs OhMyPod



# App-First Design vs OhMyPod



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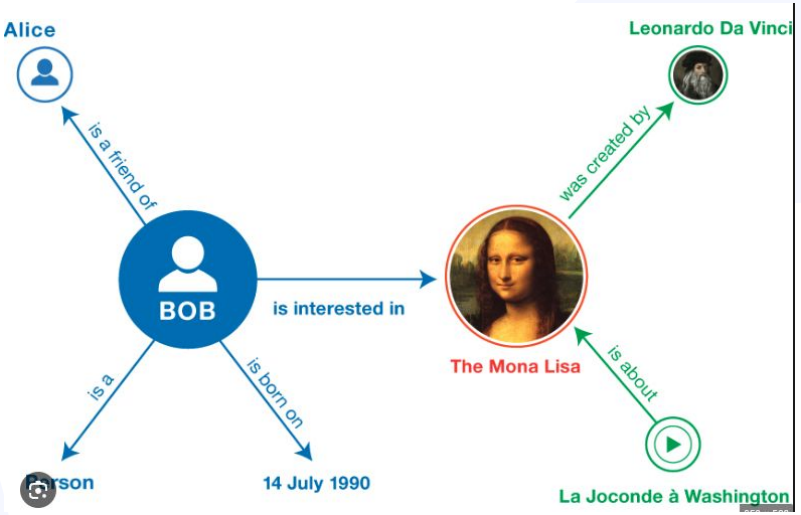
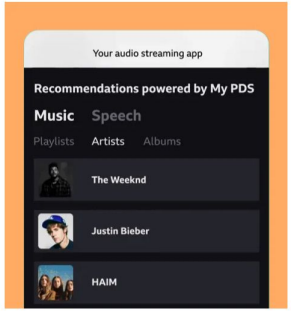



| Date of birth database | Friend database |
| --- | --- |
| 1. Bob | 1. Bob - Alice |

# Economic Benefits

- Cost effective development because of reusable backend
- No cloud cost, can still acquire transactional data, no data security burdens.
- All of user data at one place unlocks great benefits for insights




**Industry**
Media

**Challenge**
Improve streaming recommendations by creating a full view of a users' content preferences

**Solution**
Unlock greater user value through the power of interoperable Solid Pods

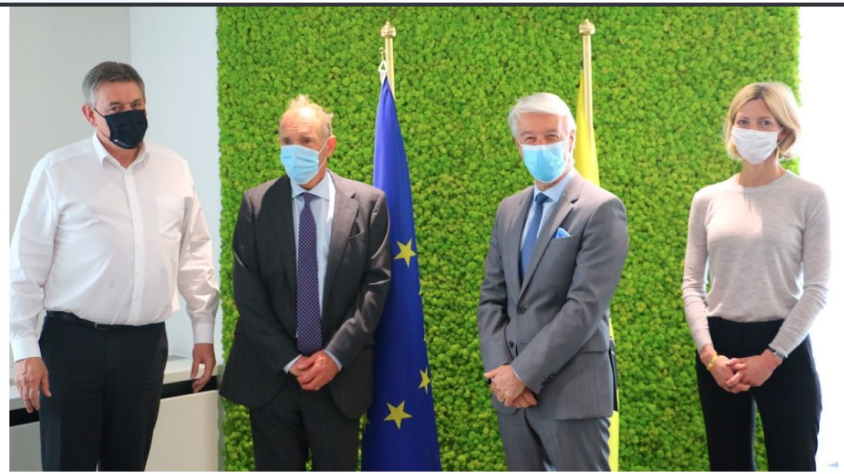
**Benefits**
Create a foundation for unlocking deeper data insights with Solid. Improve the quality of user data and foster trust with BBC users.

BBC

The BBC uses interoperable Solid Pods to prototype improved viewing experiences

5 minute reading

# Government adoption



ommitting to a digital innovation economy in Flanders, built on Solid

Inrupt and the Government of Flanders lay out a vision of a Flemish digital economy built on Solid.

John Bruce, Inrupt CEO and Co-founder  Sir Tim Berners-Lee, Inrupt CTO and Co-founder

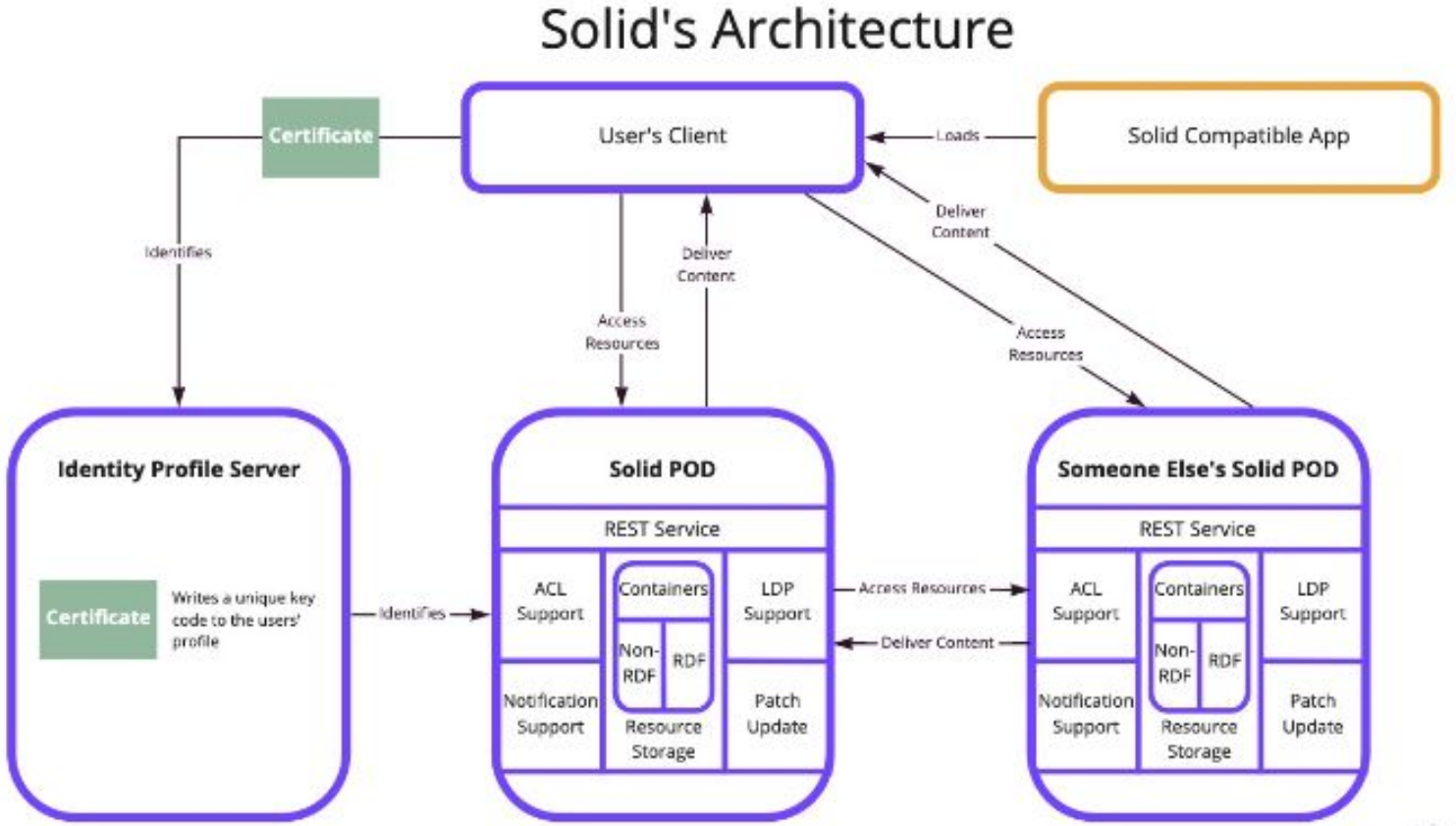
## NHS data: Can web creator Sir Tim Berners-Lee fix it?

9 November 2020

Share

**By Rory Cellan-Jones,** Technology correspondent

# Deblackboxing Solid



Dashboard | Files | My Apps | App Directory | FAQs | Account | Copy WebId

# Jade's PodBox

## Recent Apps

Media

**Media Kraken**

Track your media and never miss a beat

Blogging

**Notepod**

A simple notetaking app that stores notes in your Solid Pod

Media

**Solidflix**

A movie tracking and sharing application with personalised recommendations.

Pod Management

**Solid File**

A Solid app that help you manages files in your Pod.

Pod Management

**Pod Pro**

Solid File Manager

Pod Management

**graphMetrix**

Lets you browse your Pod

## Recent Data

**Folder X**

Last modified: xx/xx/xxxx
Date created: xx/xx/xxxx
# subfolders?

Access Controls | View Data

**Document X**

Last modified: xx/xx/xxxx
Date created: xx/xx/xxxx
# subfolders?

Access Controls | View Data

**Folder X**

Last modified: xx/xx/xxxx
Date created: xx/xx/xxxx
# subfolders?

Access Controls | View Data

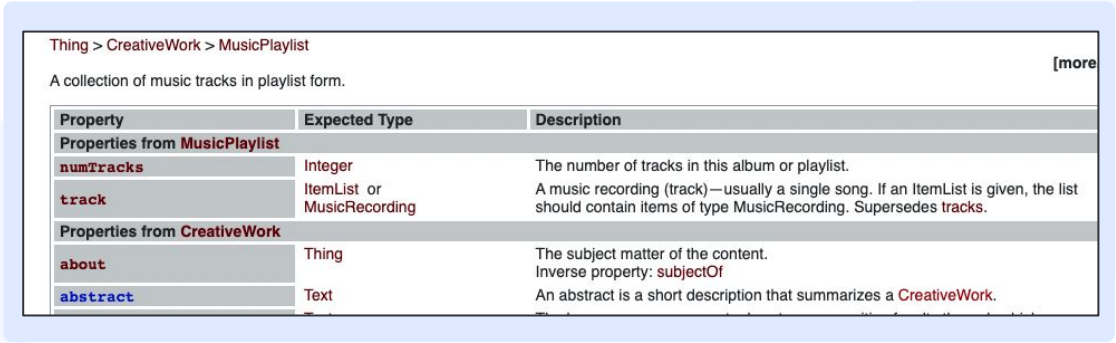
**Document X**

Last modified: xx/xx/xxxx
Date created: xx/xx/xxxx
# subfolders?

Access Controls | View Data

# We used existing vocabularies to create a new App resource

Apps are written and read as ‘CreativeWork’ such that other applications will also be able to read their properties.



Thing > CreativeWork > MusicPlaylist

[more

A collection of music tracks in playlist form.

| Property | Expected Type | Description |
|---|---|---|
| **Properties from MusicPlaylist** | | |
| numTracks | Integer | The number of tracks in this album or playlist. |
| track | ItemList or MusicRecording | A music recording (track)—usually a single song. If an ItemList is given, the list should contain items of type MusicRecording. Supersedes tracks. |
| **Properties from CreativeWork** | | |
| about | Thing | The subject matter of the content. Inverse property: subjectOf |
| abstract | Text | An abstract is a short description that summarizes a CreativeWork. |