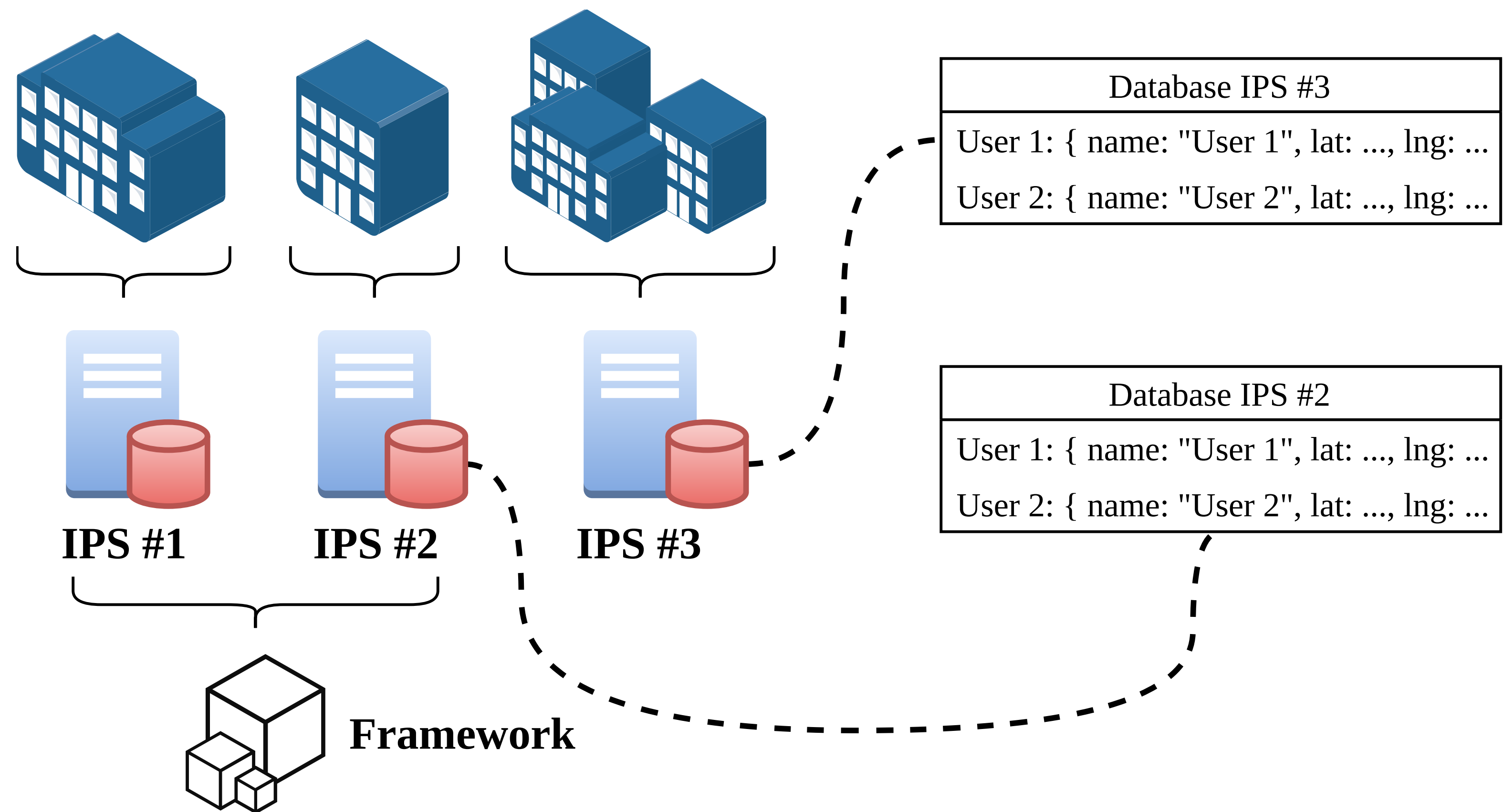# A Solid-based Architecture for Decentralised Interoperable Location Data

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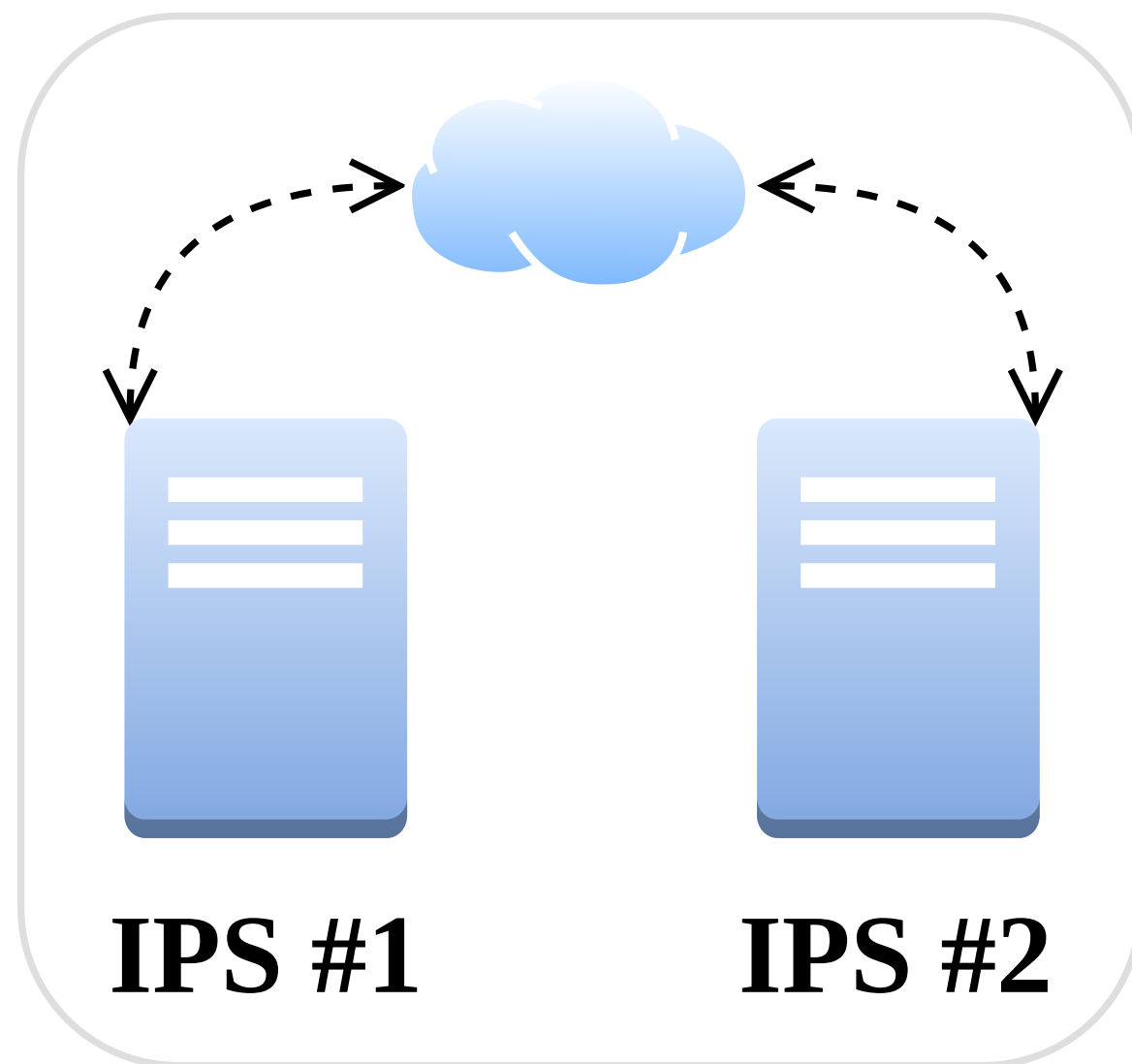*Vrije Universiteit Brussel*

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BRUSSEL

WISE WEB & INFORMATION
SYSTEMS ENGINEERING

Current indoor positioning systems (IPS)

Database IPS #3

User 1: { name: "User 1", lat: ..., lng: ...
User 2: { name: "User 2", lat: ..., lng: ...

Database IPS #2

User 1: { name: "User 1", lat: ..., lng: ...
User 2: { name: "User 2", lat: ..., lng: ...

IPS #1   IPS #2   IPS #3

Framework

Problems with current IPS'

1. Users not in **control** of their **data**
2. No **interoperability** between positioning **systems**
3. No **interoperability** between (navigation) **applications**

Interoperability of positioning systems

Accessibility

Readability

Understandability

What is Solid?

What is Solid?

PoC Demonstrator

Geolocation API (a)

APPEND .../position.ttl

APPEND .../orientation.ttl

APPEND .../velocity.ttl

QR-scanner IPS (b)

READ .../position.ttl

APPEND .../position.ttl

User Pod (c)

http://.../

profile/
 └ card

properties/
 ├ position.ttl
 ├ orientation.ttl
 └ velocity.ttl

READ .../position.ttl

READ .../orientation.ttl

READ .../velocity.ttl

NOTIFICATION .../position.ttl

NOTIFICATION .../orientation.ttl

NOTIFICATION .../velocity.ttl

Consumer Application (d)