cozy.io

Cozy Cloud anatomy

A PERSONAL CLOUD PLATFORM TO CONNECT YOUR DATA

Cozy in a nutshell

KEY FIGURES

2012
Creation

5,2 M€
Funds raised

20
Team members

MANAGEMENT TEAM

- **Benjamin ANDRÉ**, CEO, experienced entrepreneur
- **Tristan NITOT**, CPO, founder of Mozilla Europe + former member of French Gov't Digital Advisory Board.

CLIENTS

STRATEGIC PARTNERS

INCUBATED AT

ASSUMPTIONS

1. we want **more smart services**

2. **digital services relevance comes from :**

- **frictionless** user experience

- **data mashups**, data mixing

BARRIERS :

1. Data are walled gardened into the big internet platforms &
   our vendors

2. This fluidity requires trust. Without, it will be un-sustainable.

CONSEQUENCE : :

- We want more fluidity four our data,

- but with some strong guaranties to enforce our trust.

TWO POSSIBILITIES :

1. Interoperability and consent management. keywords : APIs, protocols, agreements, regulation… : the technical challenge is huge and in the end, every body will progressively require access to all your data, like apps on your phone…

2. Personal Cloud :
   - a personnal data storage connected to all your digital third parties (devices, IoT, online services, energy provider, telco, insurance, bank…)
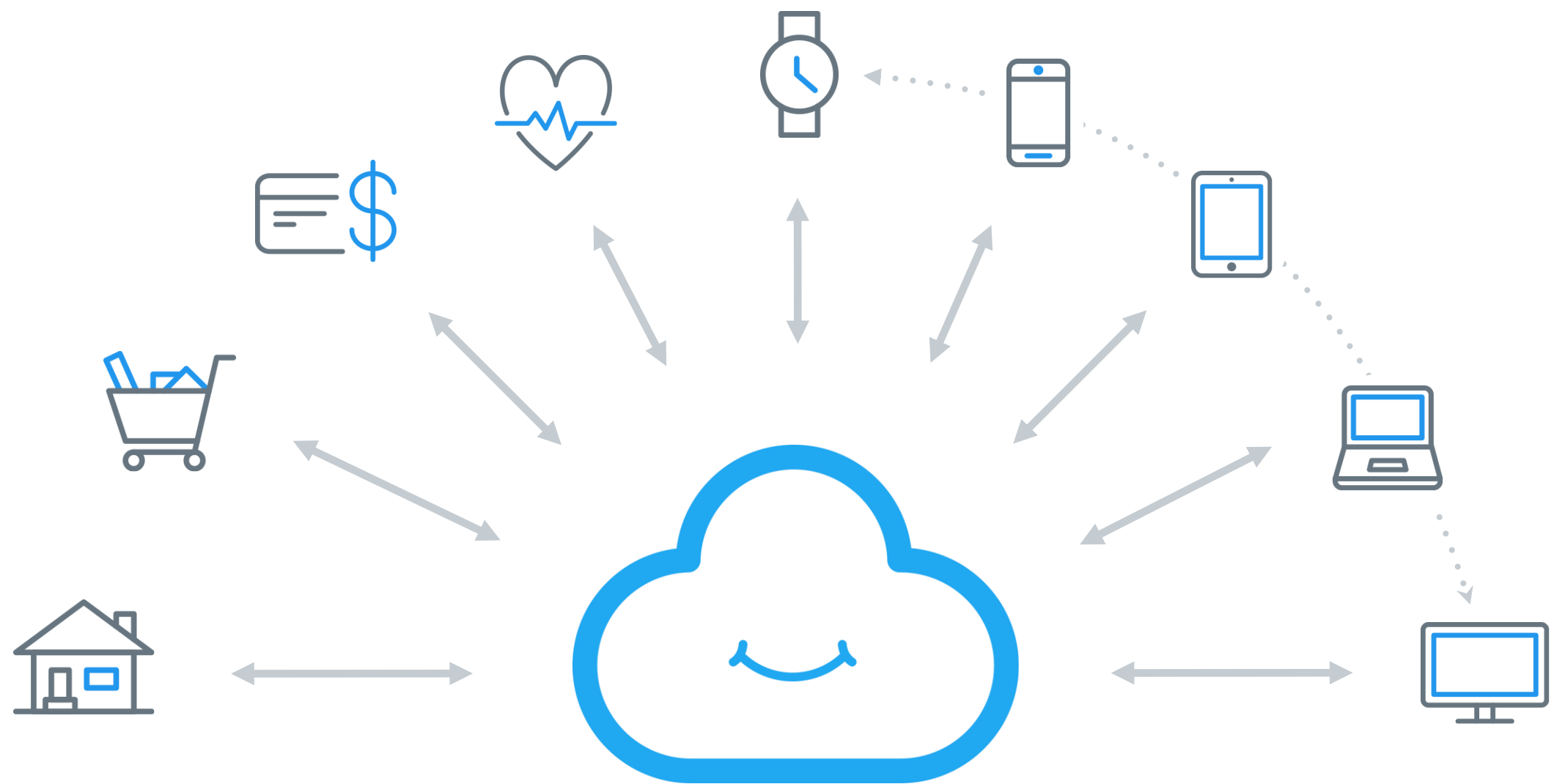   - an ecosystem of personal apps you can choose to run on your personnal cloud

OUR SOLUTION : a personal cloud
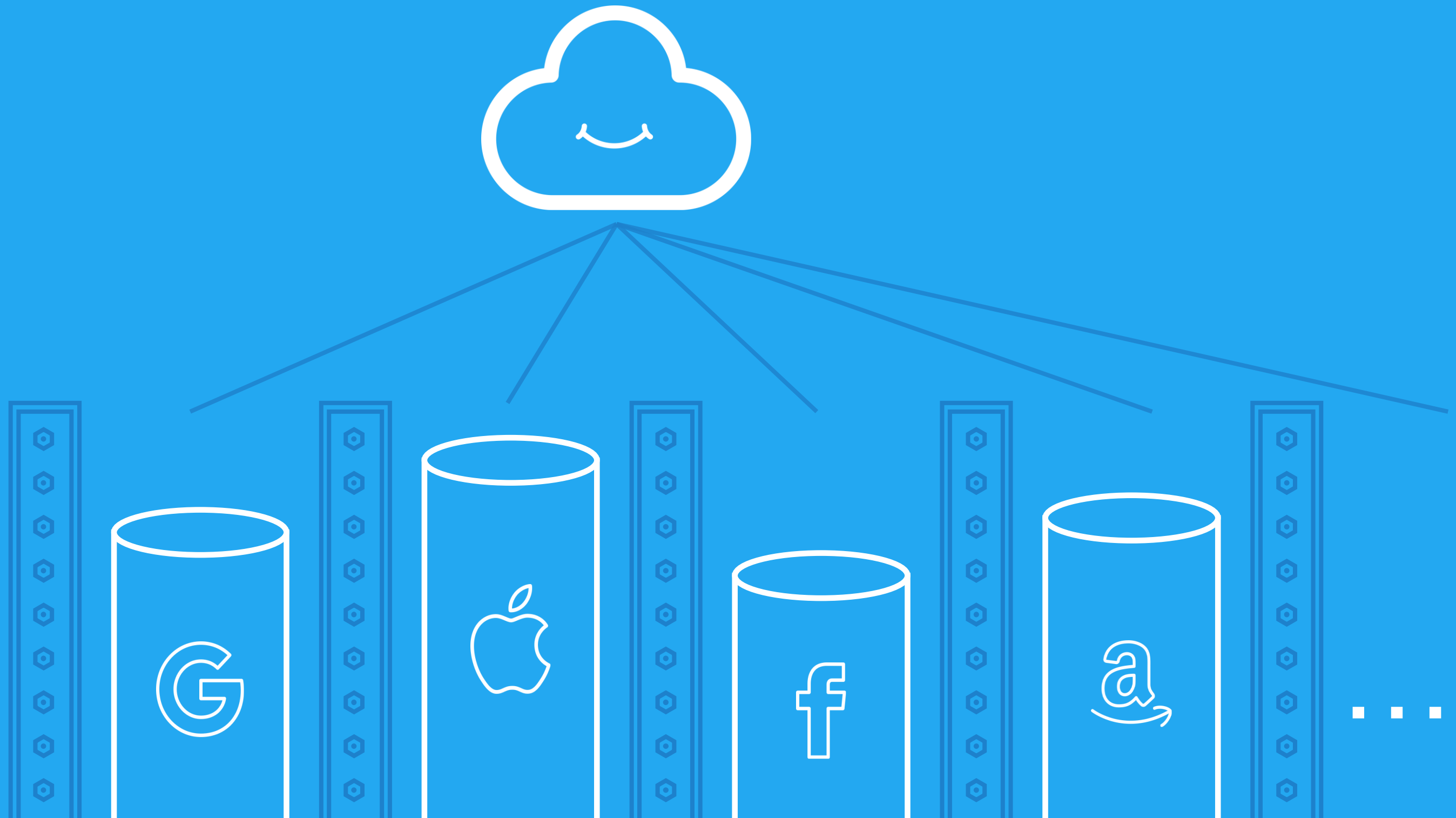
Cozy Cloud's approach

DEMO
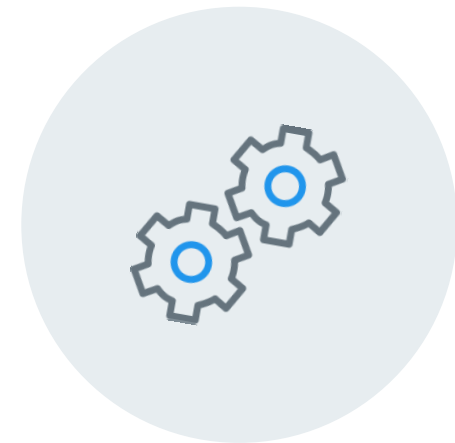
MY PERSONAL CLOUD

Cozy : connect all your data

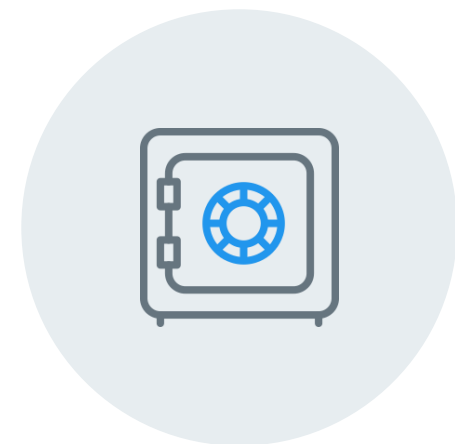# True added value for users

SINGLE SIGN-ON

GLOBAL SEARCH

**FRICTIONLESS
APPS INTEGRATION**
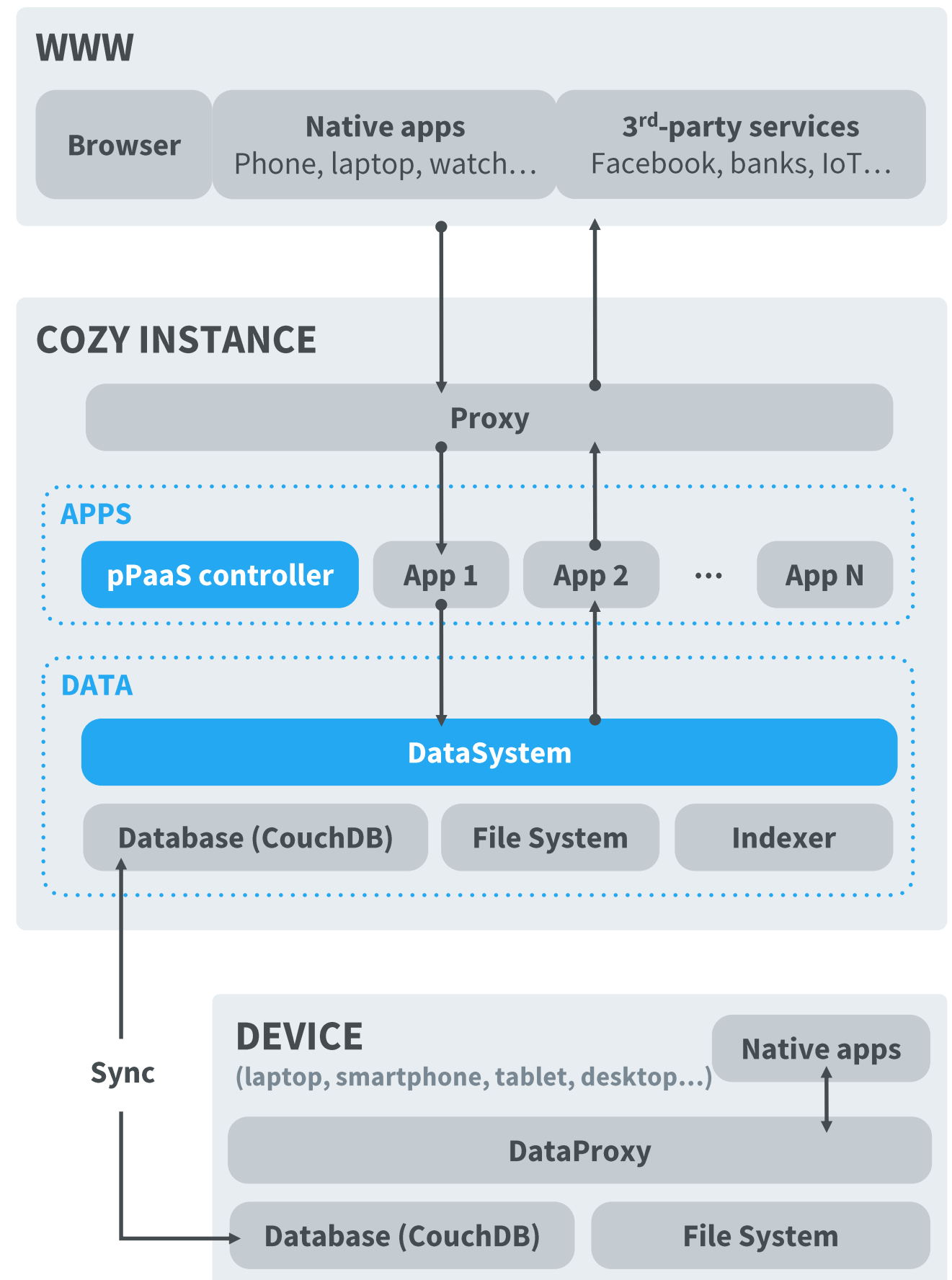
IoT HUB

PERSONAL BIG DATA

PRIVACY

TECHNOLOGY

Open source architecture

- **Modular → Adaptive**

- **Sandboxed → Safe**

- **Simple → Fast to learn (no SDK, REST, JSON)**

- **Data Centric → Sharing, notifications, sync…**

- **With 2 main technical concepts:**
  - **pPaas (personal Paas)**
  - **DataSystem (semantic storage)**

WWW

| Browser | Native apps
Phone, laptop, watch… | 3rd-party services
Facebook, banks, IoT… |

COZY INSTANCE

Proxy

APPS

| pPaaS controller | App 1 | App 2 | ... | App N |

DATA

DataSystem

| Database (CouchDB) | File System | Indexer |

DEVICE
(laptop, smartphone, tablet, desktop…)

Native apps

DataProxy

| Database (CouchDB) | File System |

Sync

CONCLUSION :

- It's all about services and usages

- Privacy is a requirement, an enabler, not an end.

- Personal storage is not enough : personal apps ecosystem is key

- Open source : for trust and hackability (ecosystem)

- Come at 14:00 – workshop about business models

CRAZY?

1977

Ken Olsen, DEC's founder (Digital Equipment Corporation)

"There is no reason anyone would want
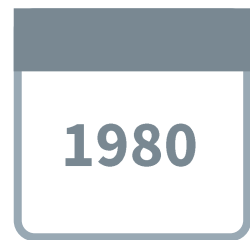
a computer in their home"

1977

Steve Jobs & Steve Wozniak launched the Apple I …

Change the paradigm to change the rules

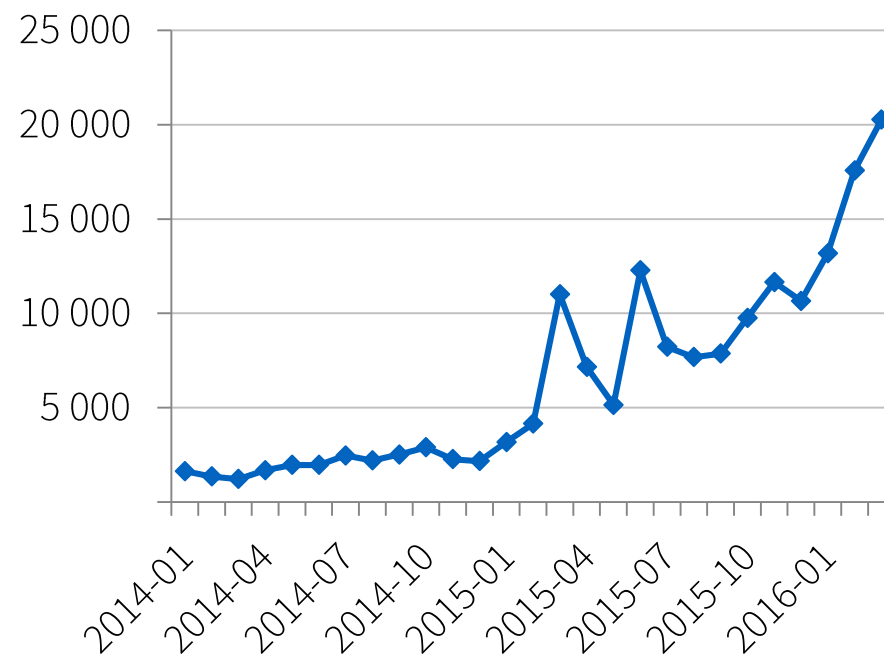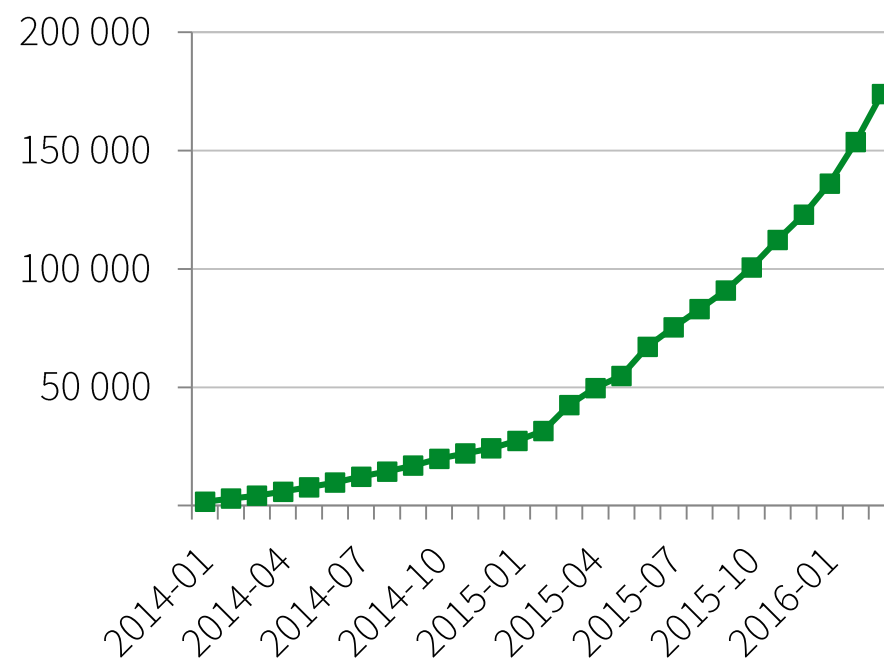|			
1980	Computer	⟶	**Personal Computer**
Today	Cloud	⟶	**Personal Cloud**

Apps downloaded per month

Apps installed

Q & A

- P2P Big Data?
- Architecture?
- Mobile?
- Security, trust issues?
- Business model?
- Beyond geeks?
- What can we do together?
- Open source? …

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Benjamin André

CO-FOUNDER & CEO
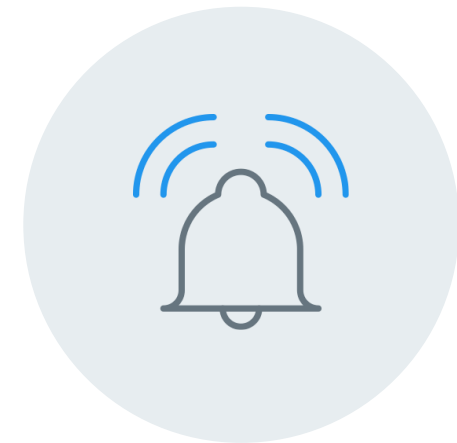
ben@cozycloud.cc | +33 6 12 34 56 78

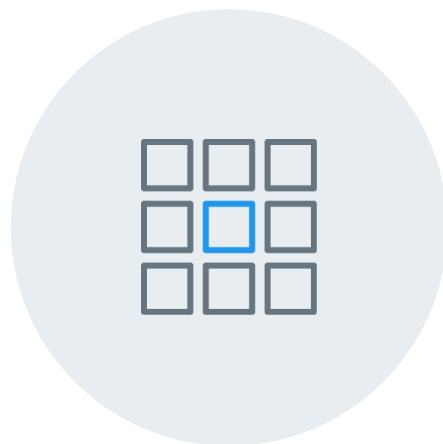# ANNEXES

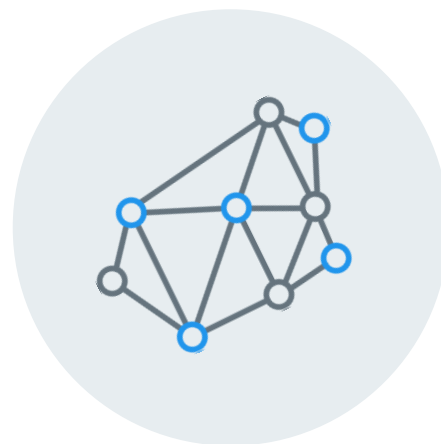# Why our platform is secure

OPEN SOURCE

APP AUDITING

SECURITY ALERTS

PARTITIONED ARCHITECTURE

DATA DISTRIBUTION

VIRTUOUS BUSINESS MODEL

ASSUMPTIONS

1. we want more smart services

2. digital services relevance comes from :

    - frictionless user experience

    - data mashups, data mixing

BARRIERS :

1. Data are walled gardened into the big internet platforms & our vendors

2. This fluidity requires trust, because in a world where our decisions are driven by data, people who access your data will have a great power on you.

CONSEQUENCE :   : we want more fluidity four our data, but with some strong guaranties to enforce our trust.

TWO POSSIBILITIES :

1. Interoperability and consent management. keywords : APIs, protocols, agreements, regulation... : the technical challenge is huge and in the end, every body will progressively require access to all your data, like apps on your phone...

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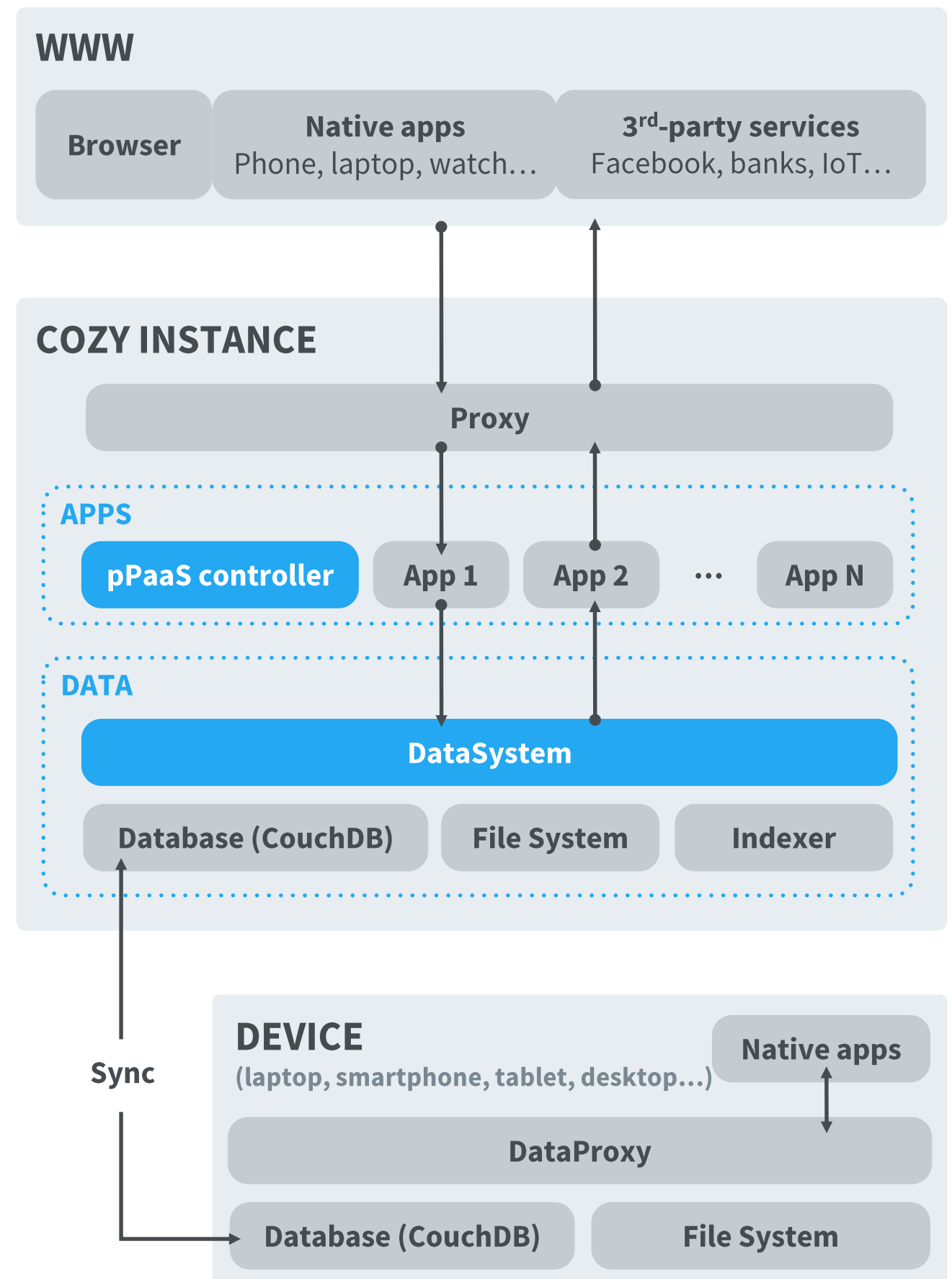**THE COZY ANATOMY** : demo & architecture

CONCLUSION :

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Sync

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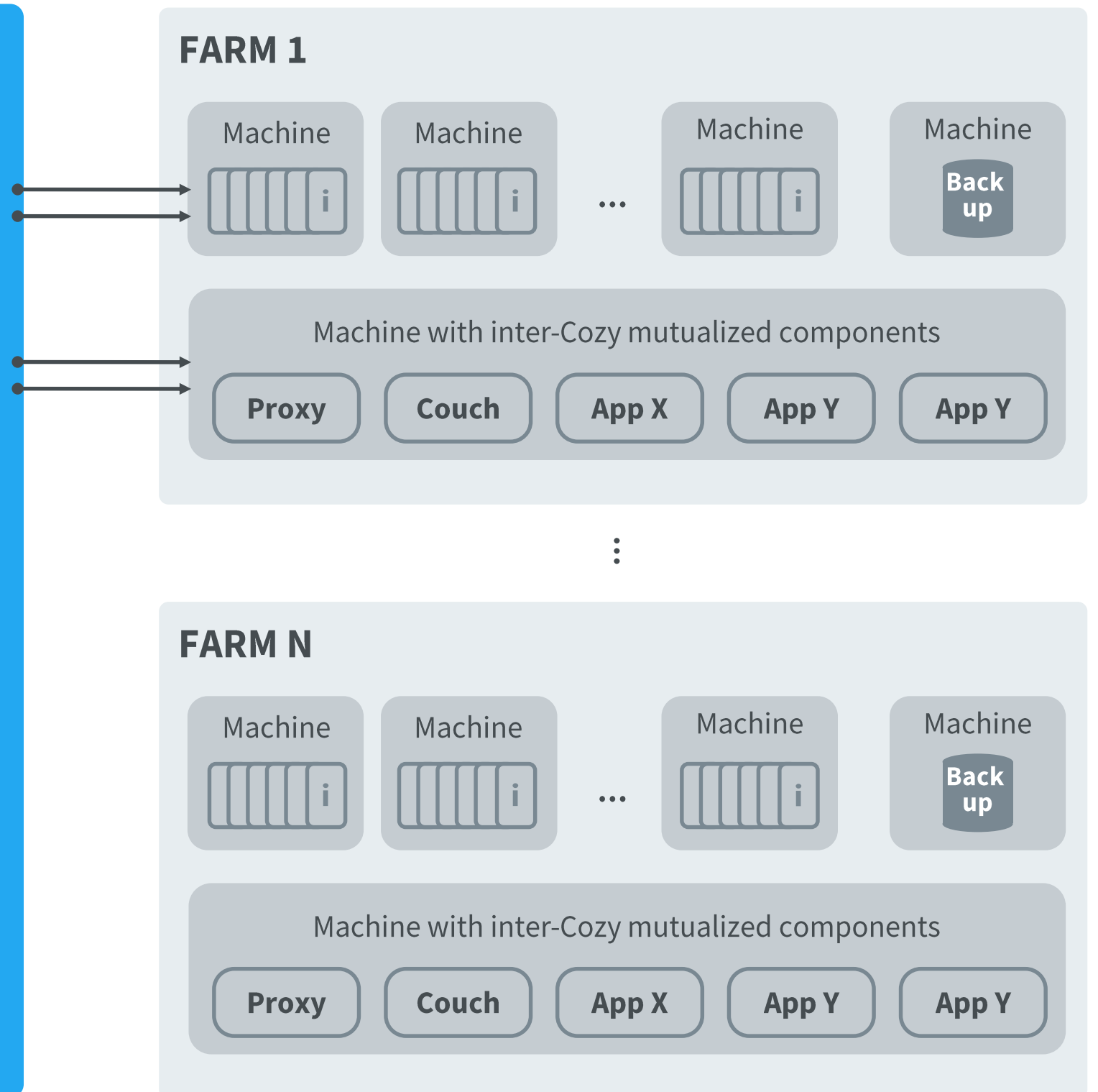| Database (CouchDB)	File System

Host-side architecture

CLUSTER CONTROLLER

- Distributed instance creation & routing
- Backup
- Monitoring
- Update
- Load balancing
- Default restoration
- Link with client base (invoicing, status…)

CHARACTERISTICS

- Not Open Source
- Top R&D to create a product which is:
  - **Robust** (less human interactions needed)
  - **Scalable** (less machine needs, Cozy addition is sub-linear)

FARM 1

Machine	Machine		Machine	Machine

...

Back up

Machine with inter-Cozy mutualized components

Proxy	Couch	App X	App Y	App Y

FARM N

Machine	Machine		Machine	Machine

...

Back up

Machine with inter-Cozy mutualized components

| Proxy	Couch	App X	App Y	App Y

Multi-platform apps

"Deploy once run everywhere" apps are:

- A set of static files on the server side (app.js on the scheme)

- Those files are uploaded in the browser or in native apps on the Cozy mobile client (Cordova) or the Cozy desktop client (NW.js)

- The developer interacts with the persistence with the ODM (Object Document Mapper) library.

- The ODM will use the DataProxy whether of the browser or of the Native Cozy app on the device.

- App.js doesn't have to deal with being online or not, this is the role of the DataProxy.

- The DataProxy is powered by the synchronization capacities of CouchDB / PouchDB.

- This architecture is inspired by offline first approaches.

⇒ the only constraint for the developer is to develop a responsive app and to use the ODM for persistence !

⇒ Then his app can run in the browser or on a native app on desktops or mobiles

⇒ Users don't have to install the apps nor to sync them, it is automatic…
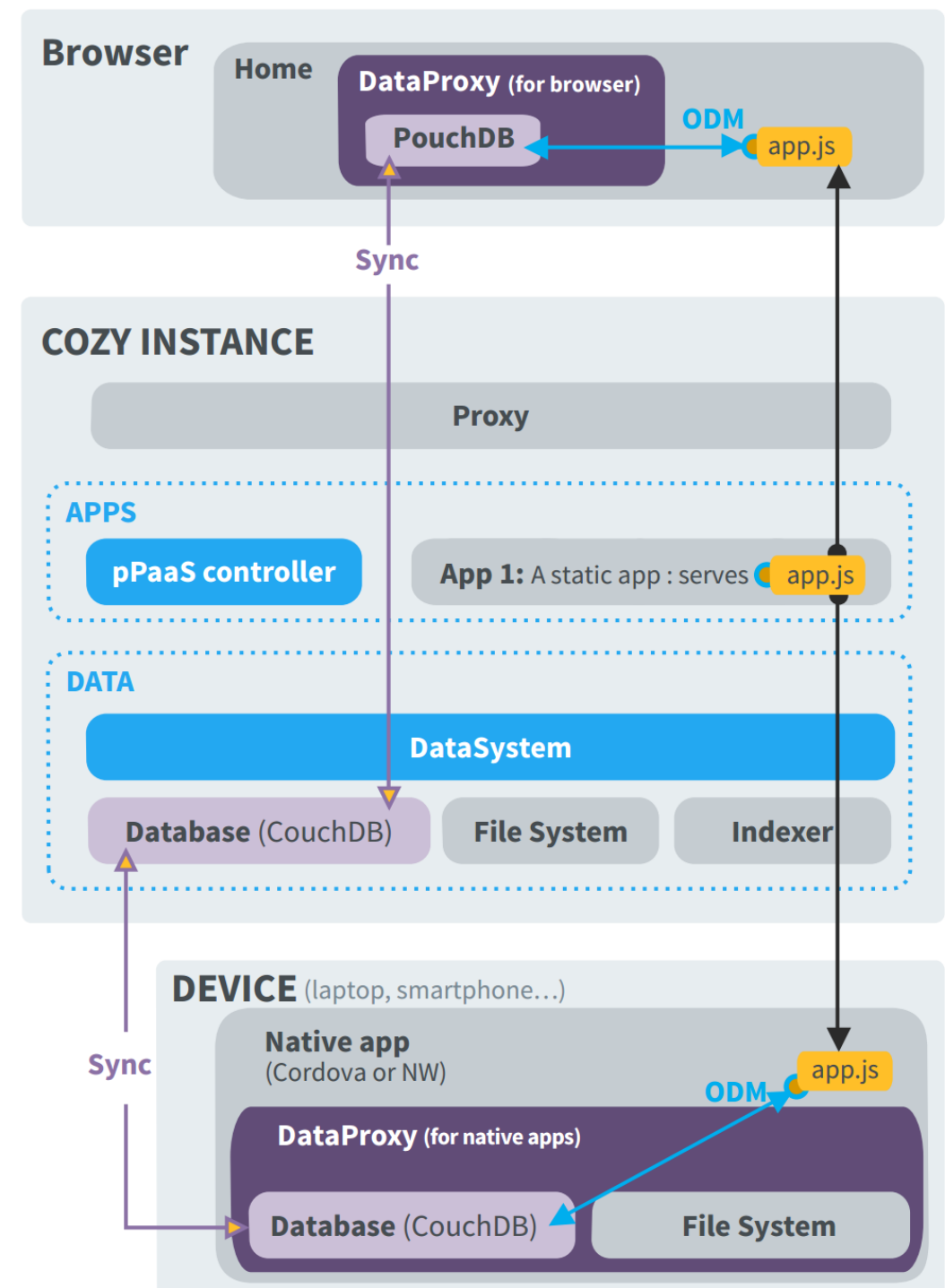
CONCLUSION

Cozy:

1. An **aggregator of aggregators**

2. Focused on **usages**, services, stockage

3. Join a deep **decentralization** movement (cf Blockchain)

4. Gives services an absolute and non intrusive **digital intimacy**

5. An **ecosystem** rather than isolated services.

=> Together, lets Uberize GAFAs!