

# DEcentralised Citizens Owned Data Ecosystem



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ThoughtWorks®



✖ City of  
✖ Amsterdam

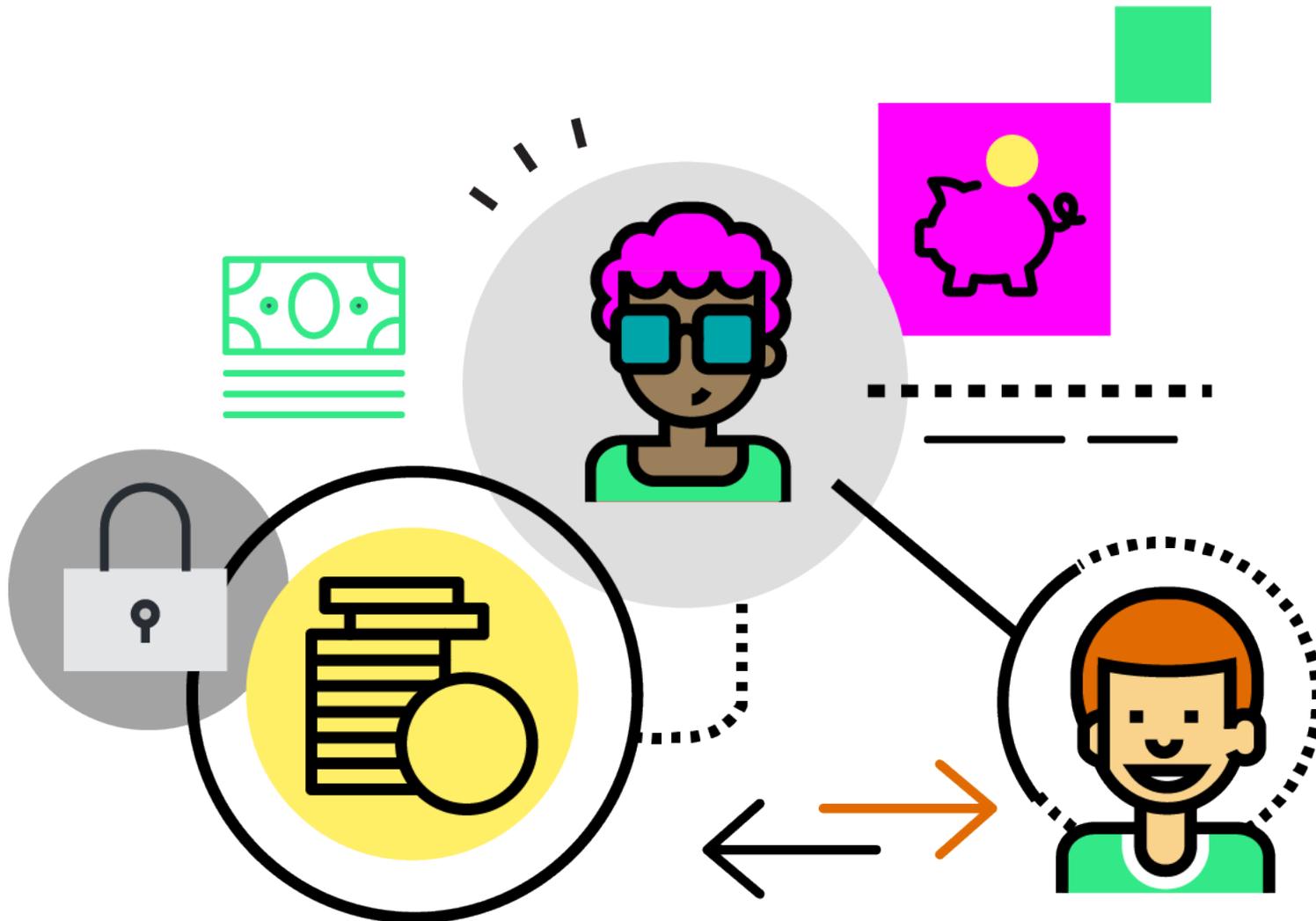


**Nexa Center for Internet & Society**  
*Politecnico di Torino*



Sharing Economies... ?!  
but with whom  
are we really sharing  
our needs and desires?

■ decode



Internet of Things... communicating on our behalf... but who are they speaking with and about what?

■ decode



Can we be in control of our data  
and the way it is managed and shared?  
Can it be an easy and Portable standard?  
Oh and... free and open source plz!

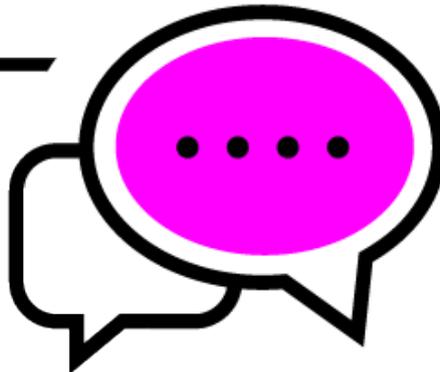


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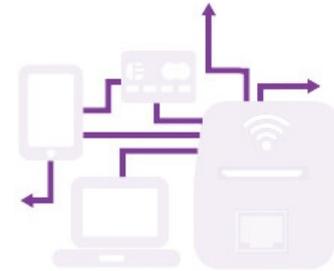
## Building blocks

- Attribute Based Crypto
- Certificate Transparency
- Distributed Ledger



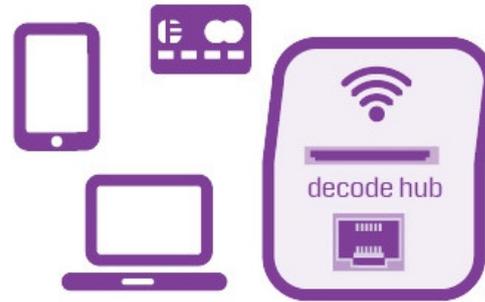
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## 2. Connectivity



Secure operating system with SOTA p2p networking and network awareness

## 1. Physical Devices



Open hardware specification for "maker" technology

DECODE  
HUB

Distributed nodes for logical computation running on:

- Virtual machines
- Desktop computers
- Bare-metal servers

And more than 20 embedded targets:

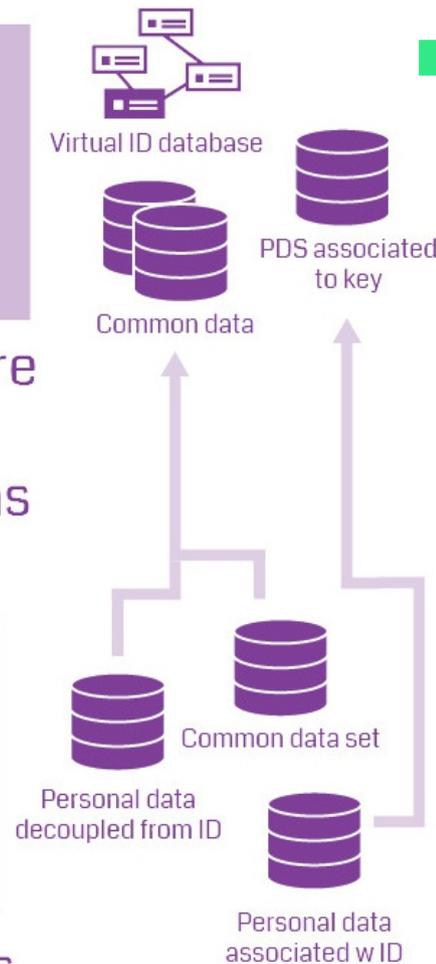
Rpi\*, Cubie\*, Allwinner\*, Orangepi\*, Chromebook and more...

## 4. Data Gathering and Distribution

- +SOTA.1 Fully Distributed architecture for data management
- +SOTA.5b Recommendation systems

## 3. Edge Computing

- +SOTA.5a Decentralized data access
- +SOTA.6a Privacy-preserving, discrimination-aware data mining



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OS

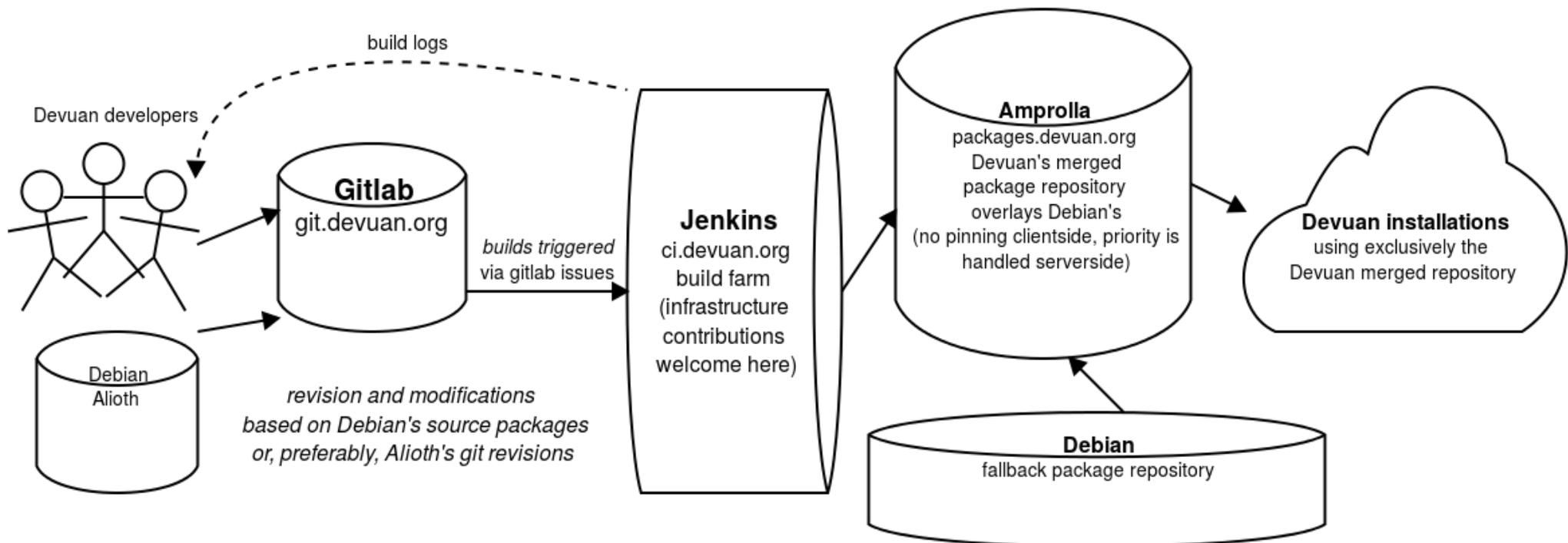


GNU/Linux Operating System  
for distributed logical computing  
of smart-rules for data entitlement



# DEVUAN

Continuous Integration for Devuan



## 7. Services and Applications; User Interactions and interfaces

+SOTA.4 Formal language for the management of data access and privacy (smart rules)

## 6. Data Application

+SOTA.3 Attribute-based cryptographic identification system based on blockchain technology

## 5. Data Abstraction

+SOTA.2 Salable Distributed Ledgers  
+SOTA.5b IoT semantic ontology

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NODE

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Need-to-know principles.

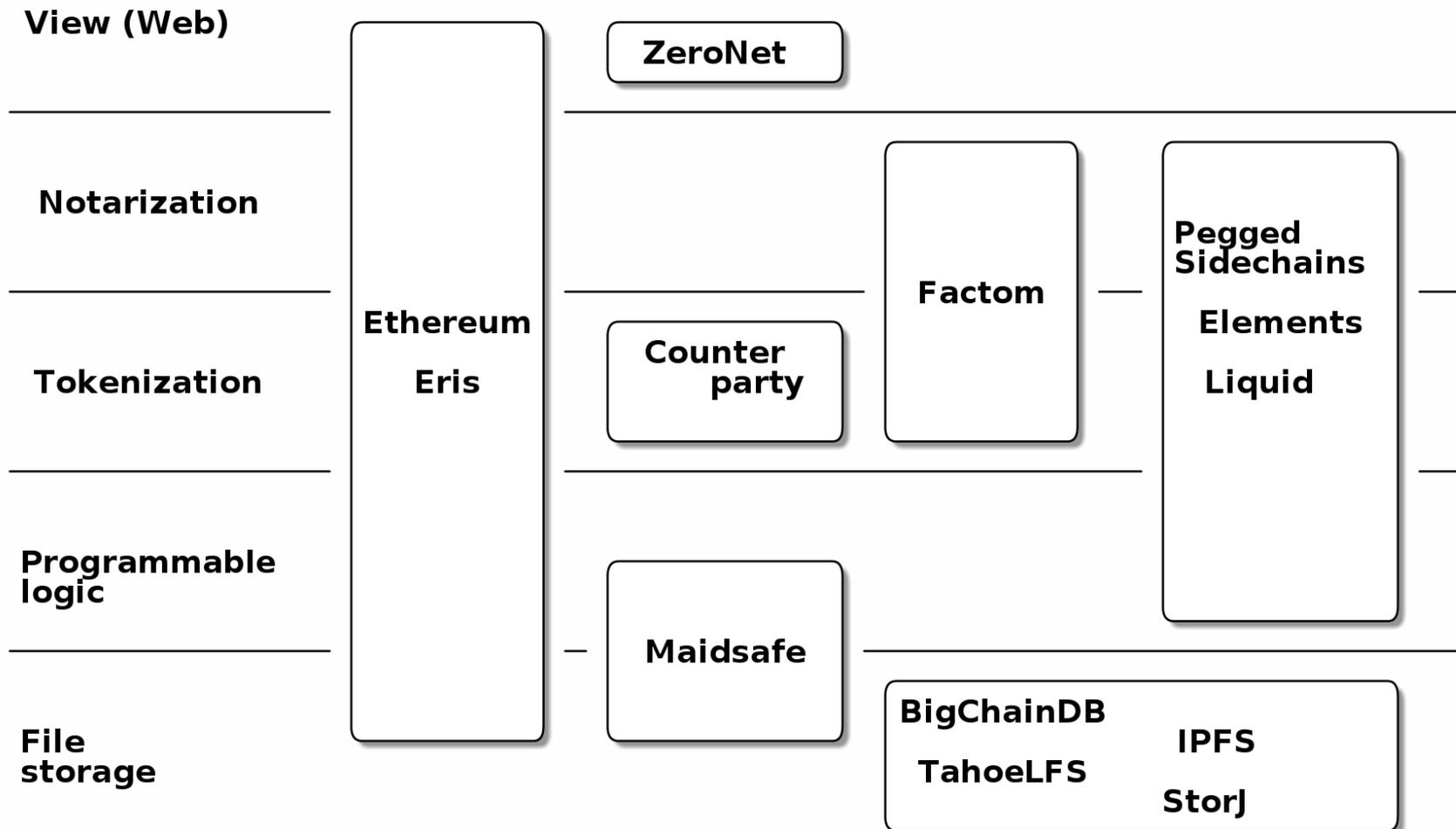
Easy to understand, visually representable smart-rules language.

Transparency on who are the operators.

Offloading a lot of responsibilities and computation to the network.

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## Blockchain based tech, functionality graph



Contact us! <[info@decodeproject.eu](mailto:info@decodeproject.eu)>

Visit <https://decodeproject.eu>



- Project started in january 2017, funded for 3 years (but will exist for more!)
- Pilots running in Barcelona and Amsterdam, with help from municipalities
- First DECODE OS release in September 2017
- First functional applications will emerge in early 2018
- Space to engage and build upon all this: it's all free and open source!

IRC channels: `#dyne` on `irc.dyne.org`  
`#devuan` on `freenode`

See you soon...  
on github ;^)