



**KRAKEN**

**Brokerage and market platform  
for personal data**

## **KRAKEN Overview**

### **Data Platform Projects (ICT-13): Workshop 1**

Juan Carlos Pérez Baún, Atos

(23<sup>rd</sup> November 2021)

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 871473



[www.krakenh2020.eu](http://www.krakenh2020.eu)



1. **General Overview**
2. **Status & Achievements**
3. **Relevant topics**
4. **Lessons learnt**
5. **BDVForum 29<sup>th</sup> November 2021**

# KRAKEN OVERVIEW



EU Horizon 2020 R & I programme under grant agreement No 871473



KRAKEN is an Innovation Action part of the Big Data Value Public-Private Partnership (PPP)

36 months from December 2019 to November 2022

Atos coordination

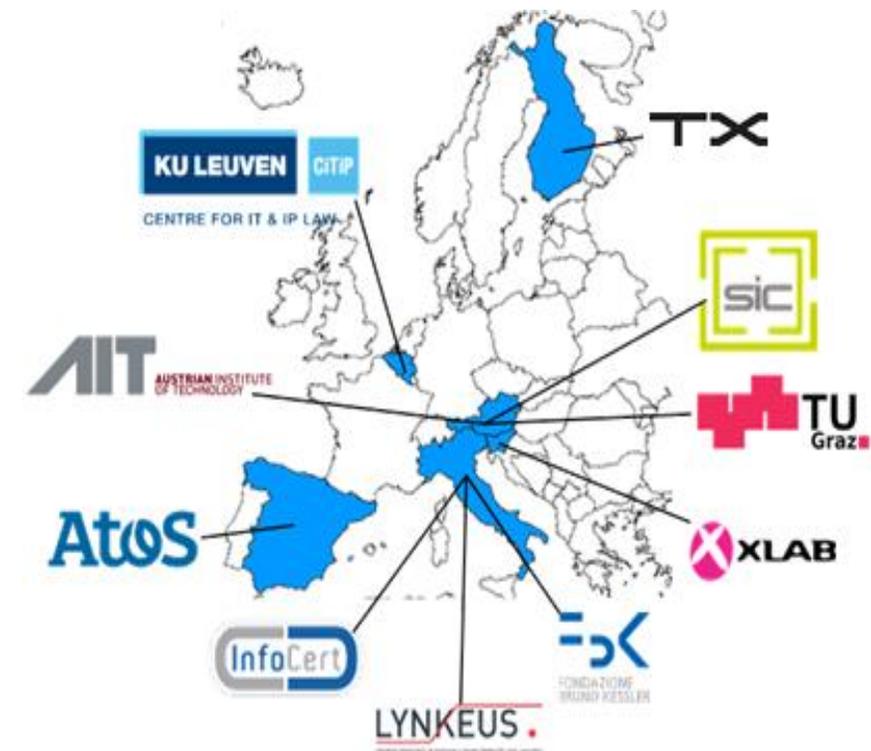


## 6 Countries

Spain  
Italy  
Austria  
Slovenia  
Belgium  
Finland

5M €

10 Partners



# Overcoming Challenges

Removing obstacles which prevent citizen's controlling and widely sharing their personal data by implementing a highly trusted and secure yet scalable and efficient personal data sharing and analysis platform adapting state-of-the-art technologies

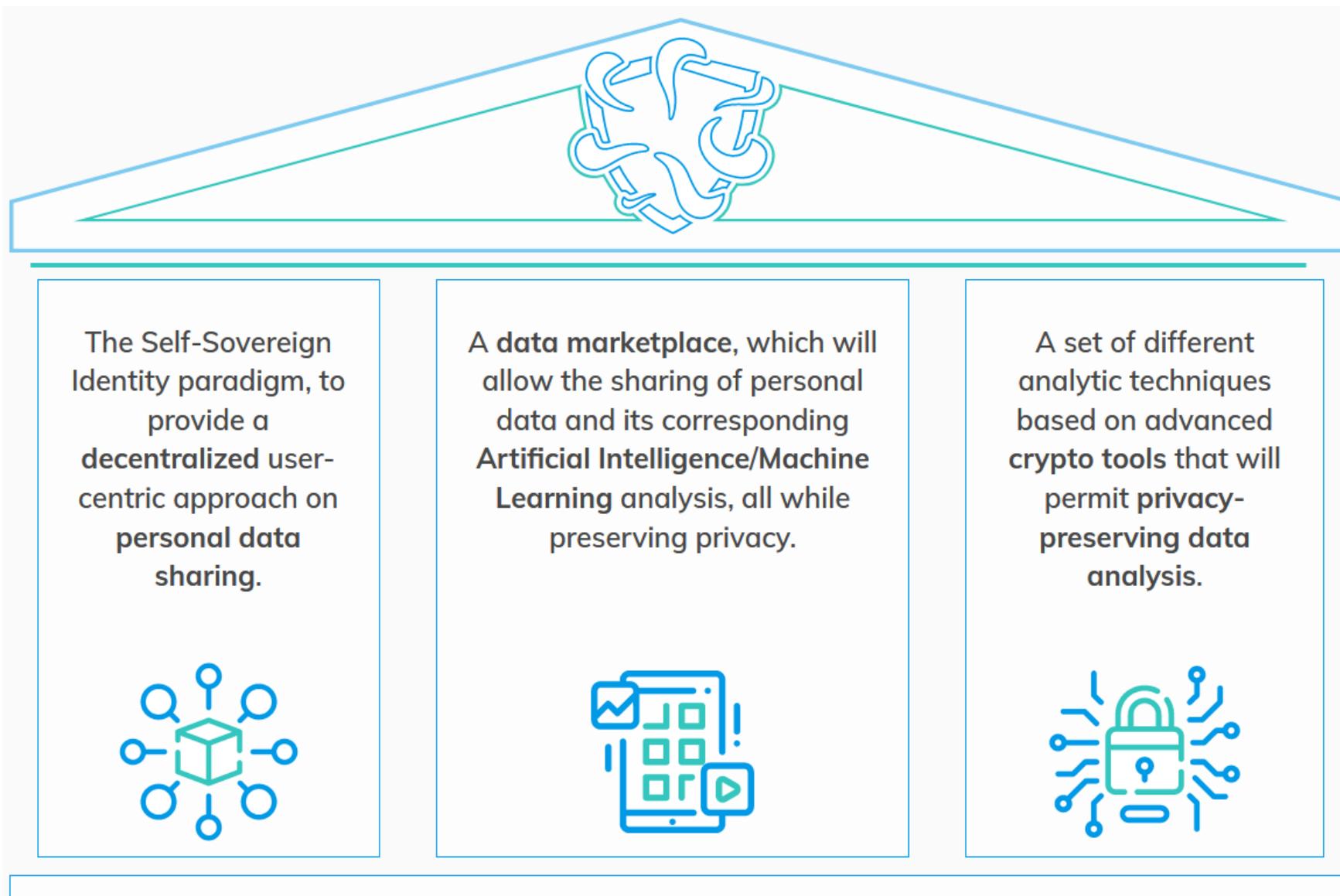
Promoting fair-trading protocols and incentive models

Demonstration in in two high-impact pilots –**Health and Education**- consolidating lessons learned for generalizing adoption in further economic sectors

Complying with regulatory and technical constraints such as data protection laws, authentication frameworks

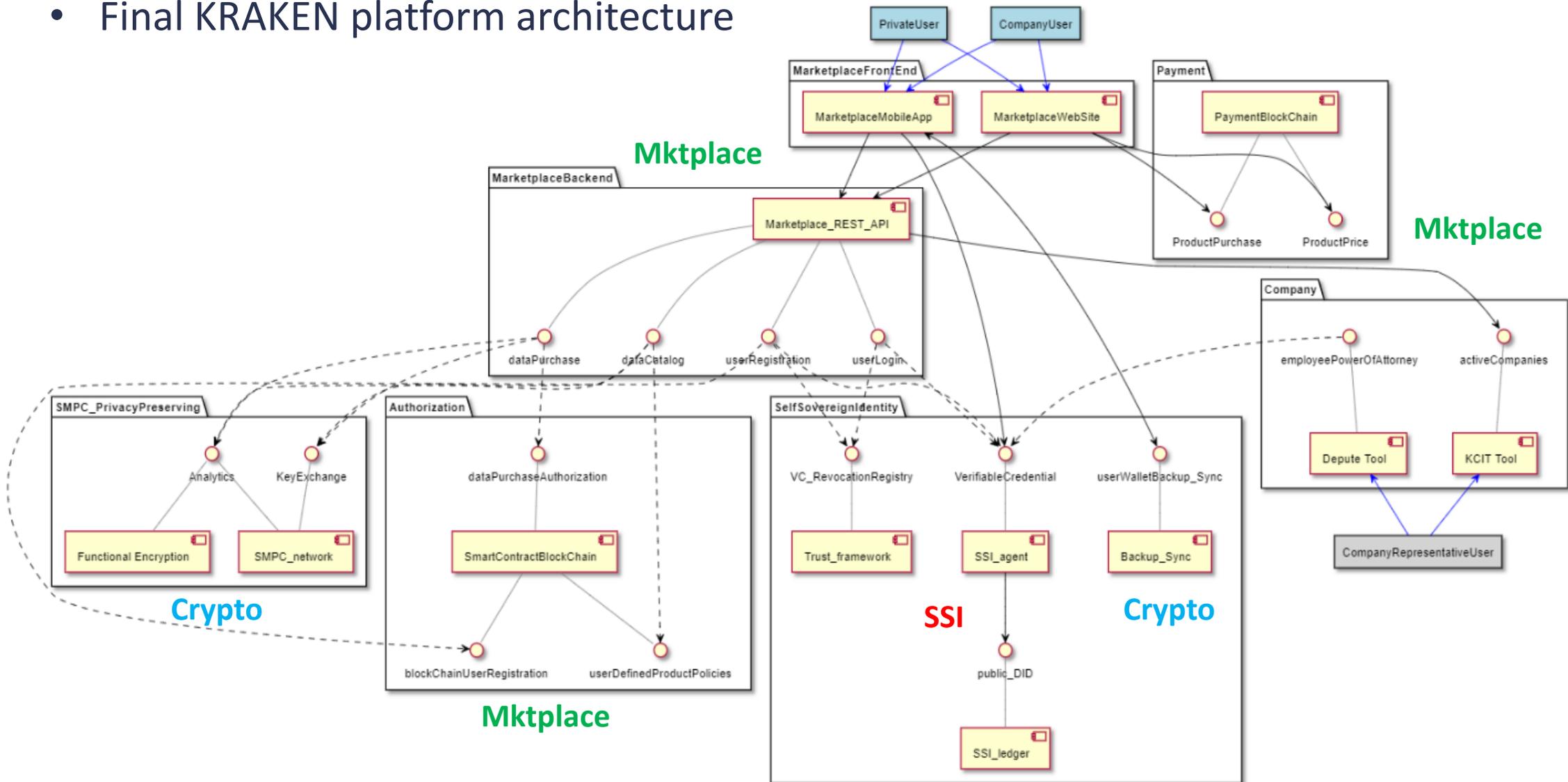
Avoid Loss of control over data enabling decentralized, open standards-based and self-sovereign identity management and user centric access control to personal data in support

Developing easy-to-understand privacy metrics and usable interfaces for end users and data Subjects metrics & Usability



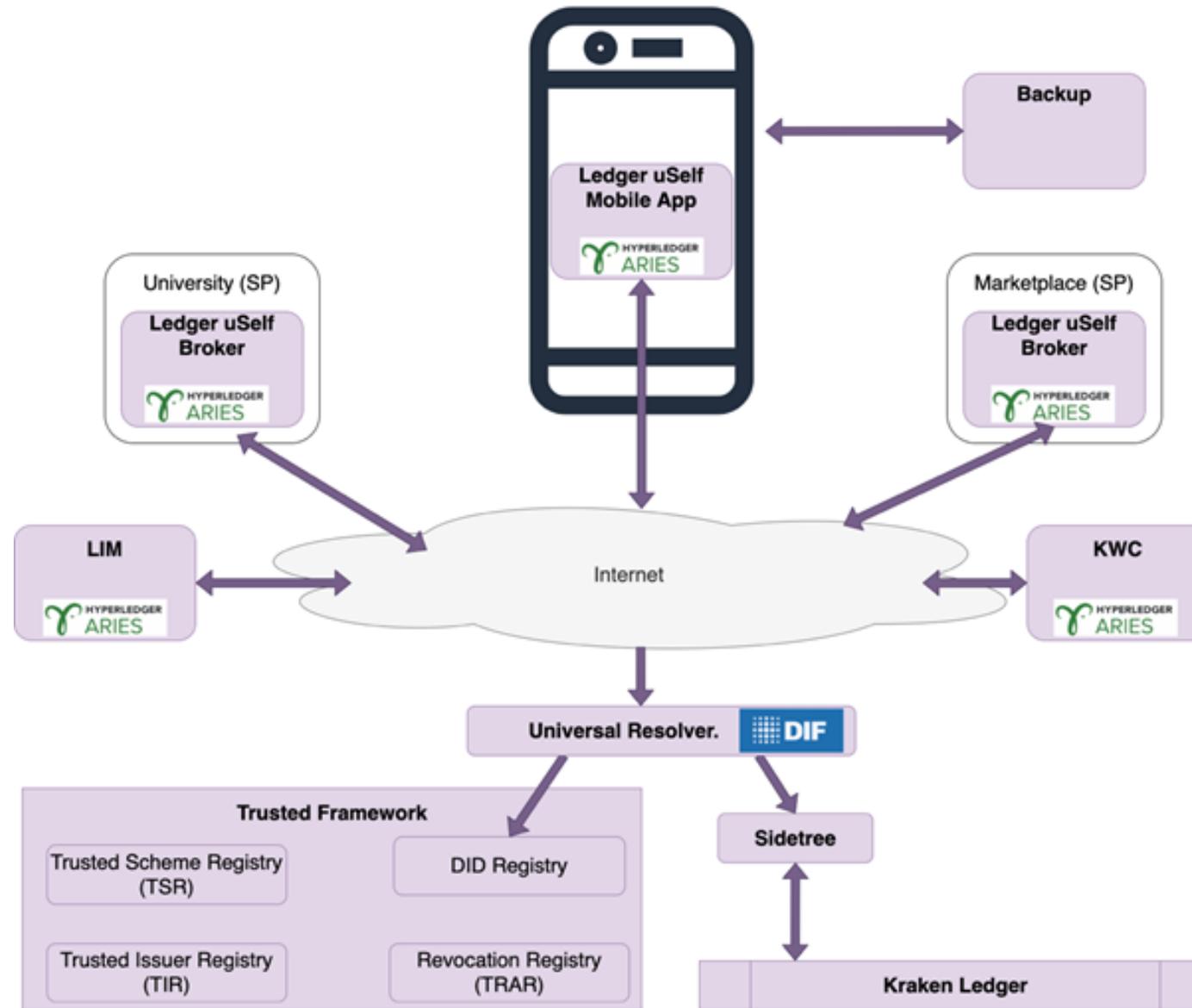
# Main achievements M1-M24

- Final KRAKEN platform architecture



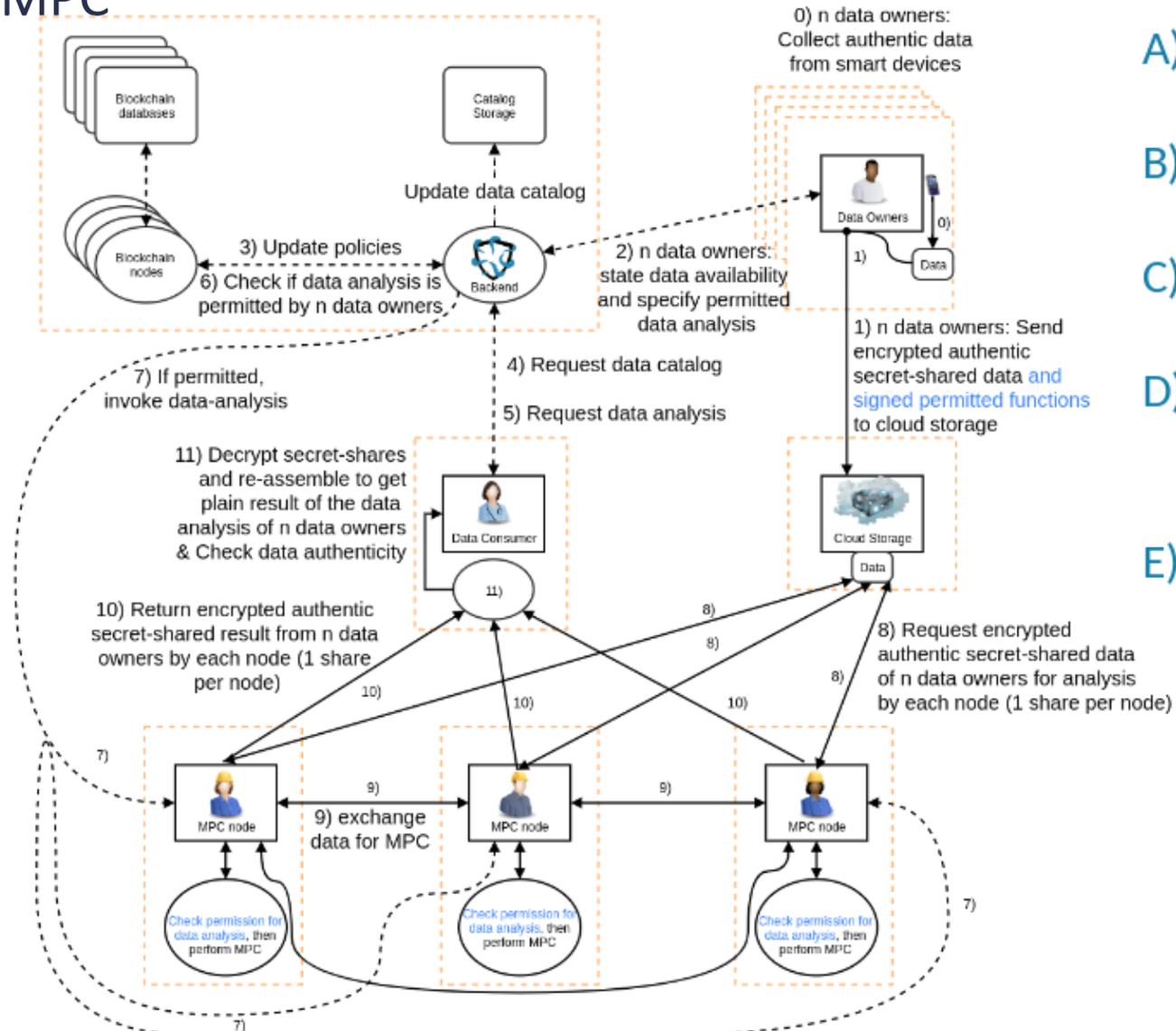
# Main achievements M1-M24 SSI solution

- SSI components



# Main achievements M1-M23 Crypto solution

- Data analytics using SMPC



- A) Data Owner uploads data
- B) Data Owner makes data available
- C) Data Consumer requests analysis
- D) MPC Nodes perform analysis (privacy-preserving!)
- E) Data Consumer gets (only!) result

# Main achievements M1-M23 Marketplace solution

## 1. Definitions

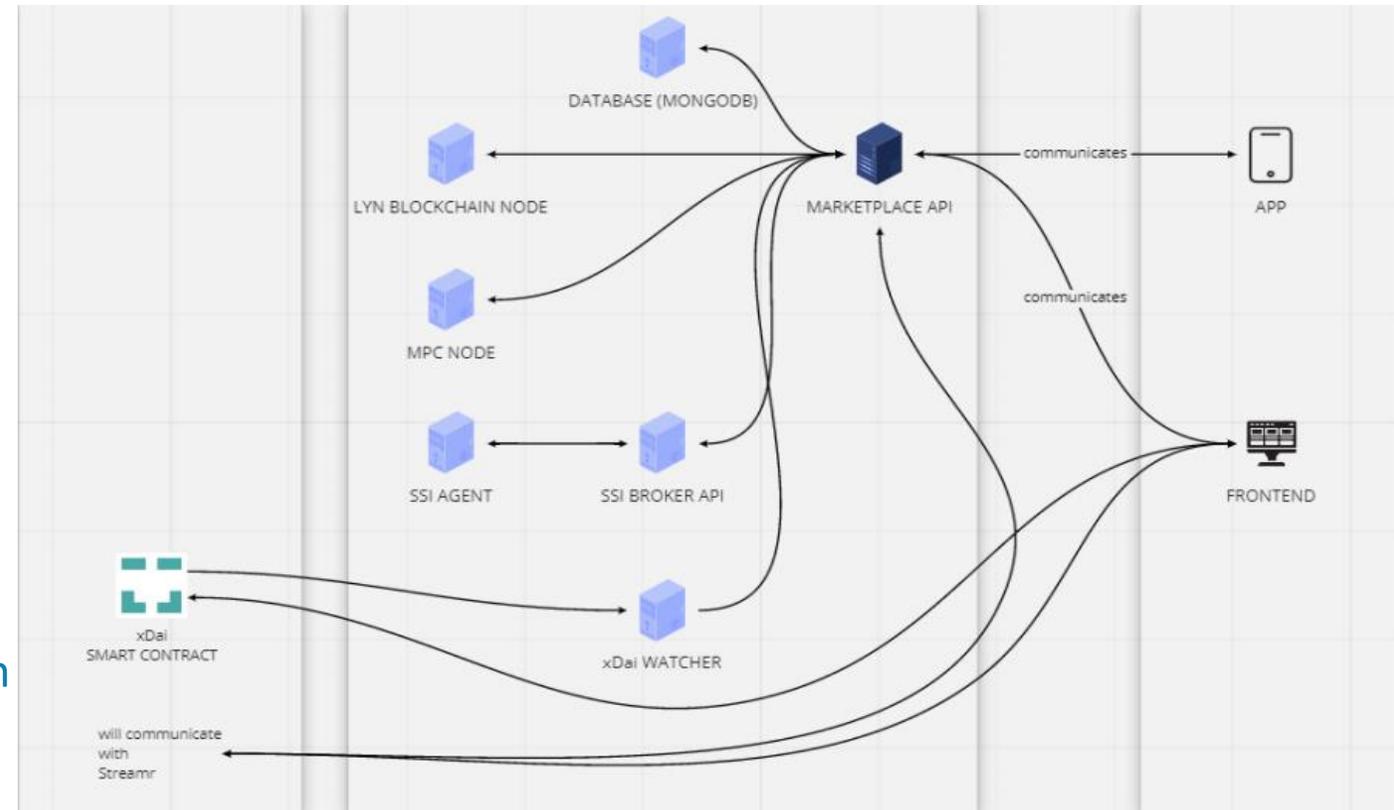
1. Legal framework implemented in architecture and front-ends
2. KRAKEN network topology and policies

## 2. Development:

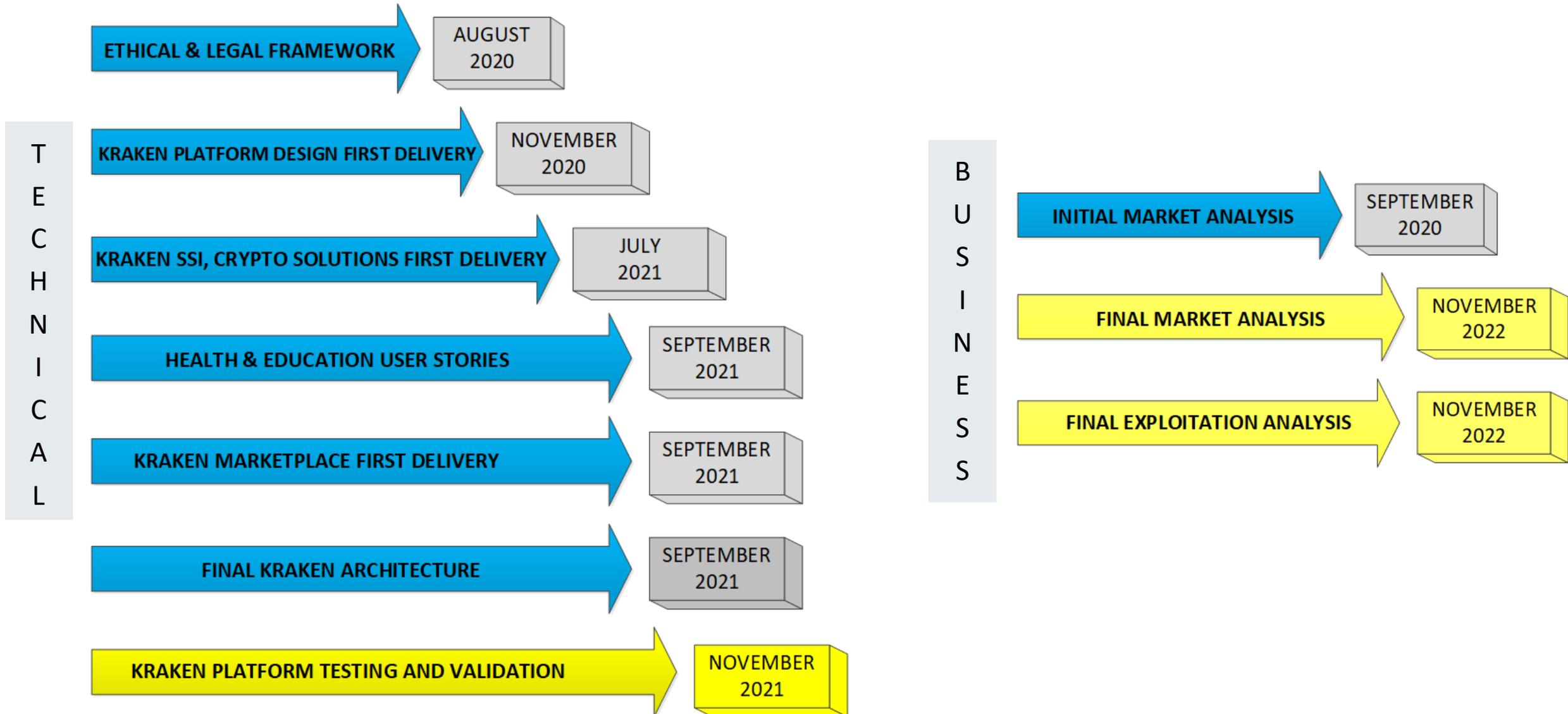
1. Back-end with integrated systems toward completion
2. User workflows for BIO batch data and EDU data exchange implemented
3. Preliminary legal validation

## 3. User and market requirements gathering:

- Multiple requirements gathering sessions with potential users
- Key business cases defined: batch data, Data Unions, SMPC
- FIAT payments system designed



# Main achievements M1-M23



- SSI standards and specifications are evolving quickly and not completely defined yet. Need to react actively (e.g. EBSI/ESSIF).
- Integration of different technologies implies effort and coordination: SSI-marketplace, SSI-Crypto, SMPC-Marketplace.
- Marketplace user malicious behaviour need to be considered in deep.

## EUROPEAN BIG DATA VALUE FORUM

**#EBDVF2021**

NOV 29th 14:00 - 15:00 PM

**'User engagement with privacy-preserving data sharing  
platforms: challenges and opportunities'**



**Organized by**



### EUROPEAN BIG DATA VALUE FORUM

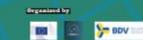
NOV 14:00  
29th 15:00  
CET



**SEBASTIAN RAMACHER**  
(ATT)  
Scientist of cryptography

### EUROPEAN BIG DATA VALUE FORUM

NOV 14:00  
29th 15:00  
CET



**DAVIDE ZACCAGNINI (Lynkeus)**  
Blockchain-based biomedical  
data exchange at scale

### EUROPEAN BIG DATA VALUE FORUM

NOV 14:00  
29th 15:00  
CET



**ÁNGEL PALOMARES (Atos):**  
Senior Cybersecurity  
and Privacy Expert



*Thank you for your attention !*

<< Juan Carlos Perez Baun >>

<< juan.perezba@atos.net >>



[www.krakenh2020.eu](http://www.krakenh2020.eu)

@KrakenH2020

Kraken H2020



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 871473