

# TSC Meeting 4

## Development Updates

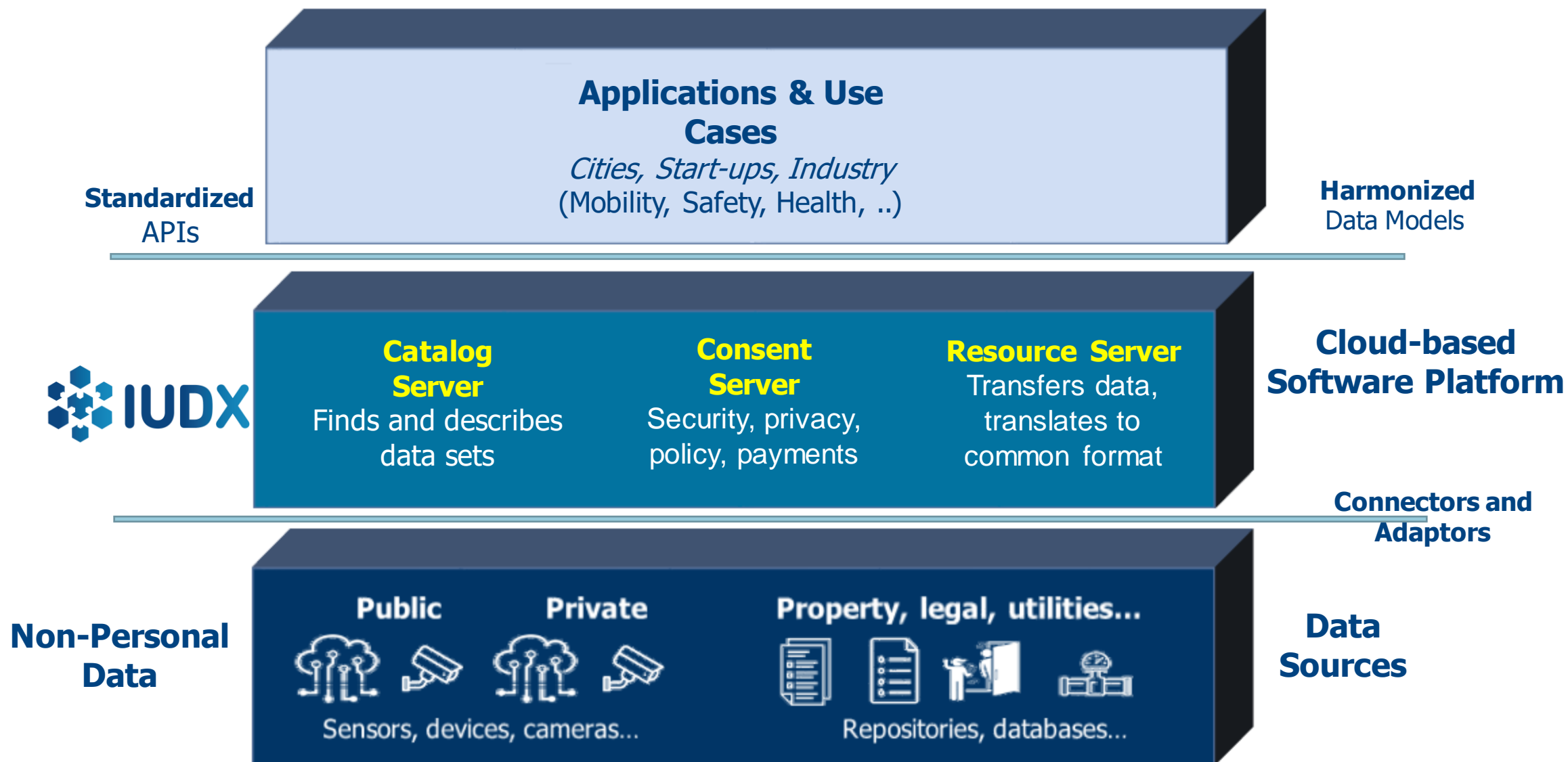
August 19, 2021



# IUDX platform

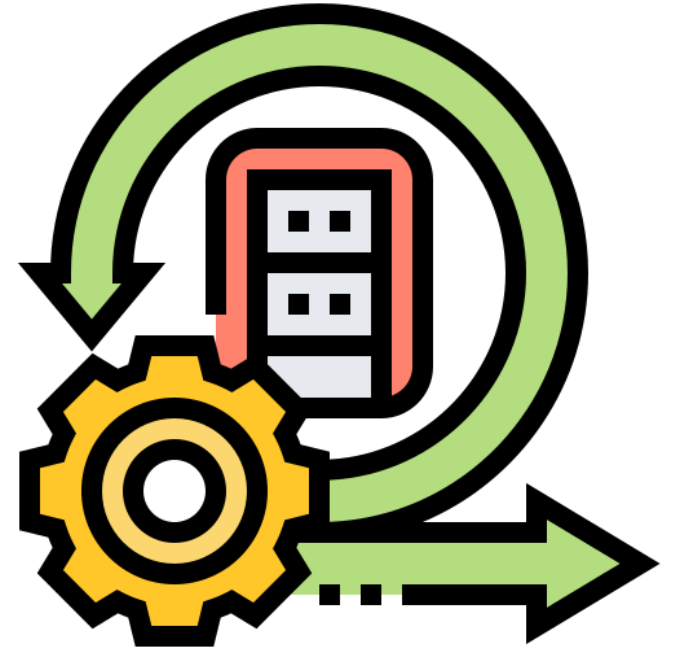
Production deployment in 10 cities.

Numerous use-cases: Mobility, safety, traffic, flood, waste management,...



# Release Updates

- Production Release 2.0 done (End-September 2020)
- Production Release 2.5 done (End-March 2021)
  - Core component enhancements
    - File server, Role delegations, Latest data cache etc.
  - DevOps framework
    - CI framework, Kubernetes 1.0 (Broker, API server)
  - New scalable adaptor framework
  - Enhanced UI
  - Additional Testing: Load/performance, Enhanced parameter validation
  - Usage Toolbox
  - Release Notes
    - <https://iudx.org.in/wp-content/uploads/2021/04/March2021-ReleaseNotesV2.5.pdf>



# Other Updates

- STQC Assessment
  - Functional Validation - **Completed**
  - Security Testing Phase – Ongoing
- BIS Standardization
  - IS 18003 Part 2 (Data Exchange) - **Published**
- Smart Data Models
  - Joint activity with FiWare
  - Contribution to data model harmonization

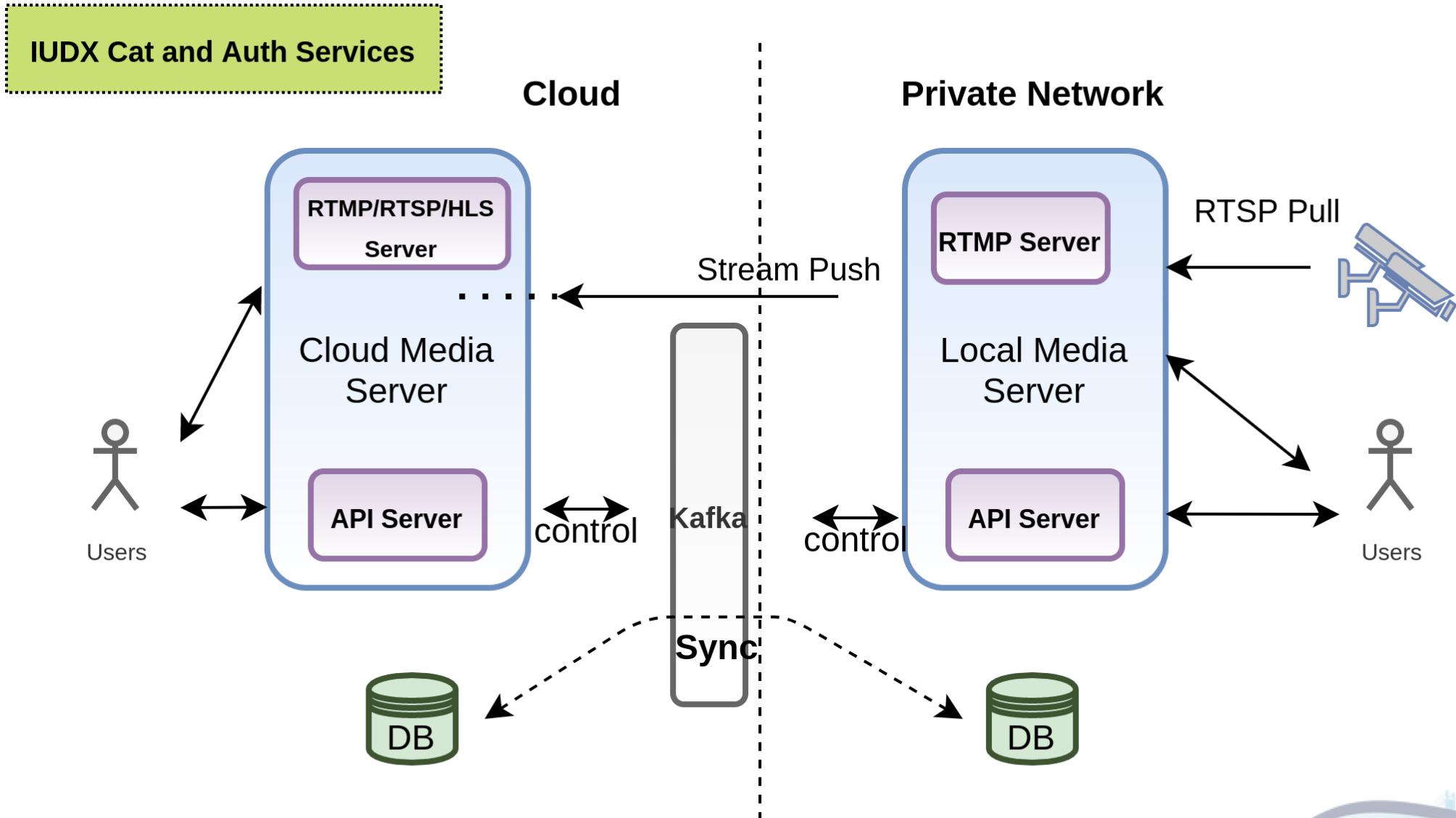


# Upcoming Release 3.0: Highlights

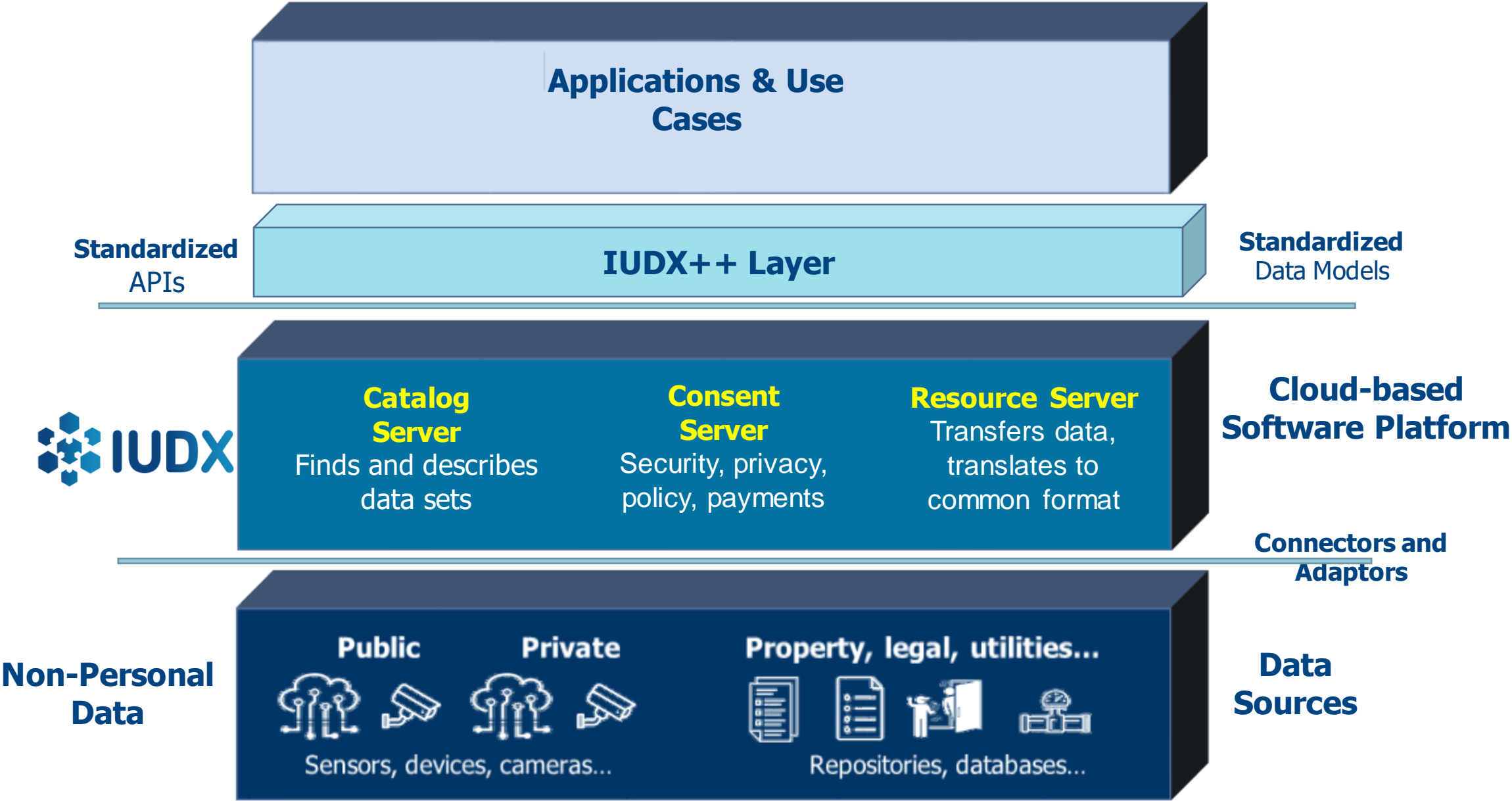
- Platform Feature Enhancements
  - Resource Server: Metering APIs, External RS integrations, FS upgrades
  - Video Server
    - Live local video serving
    - Archived files based on live cameras
  - Authorization Server 2.0: External IdP integrations, move to VertX etc.
  - Kubernetes: K8S based Highly Available, auto-scalable deployments
  - IUDX Usage Toolbox
  - Continuous improvement: Testing (penetration, volumetric), STQC feedback



# Local Video Server: High level architecture



# IUDX++ Layer



# IUDX++: Key Components

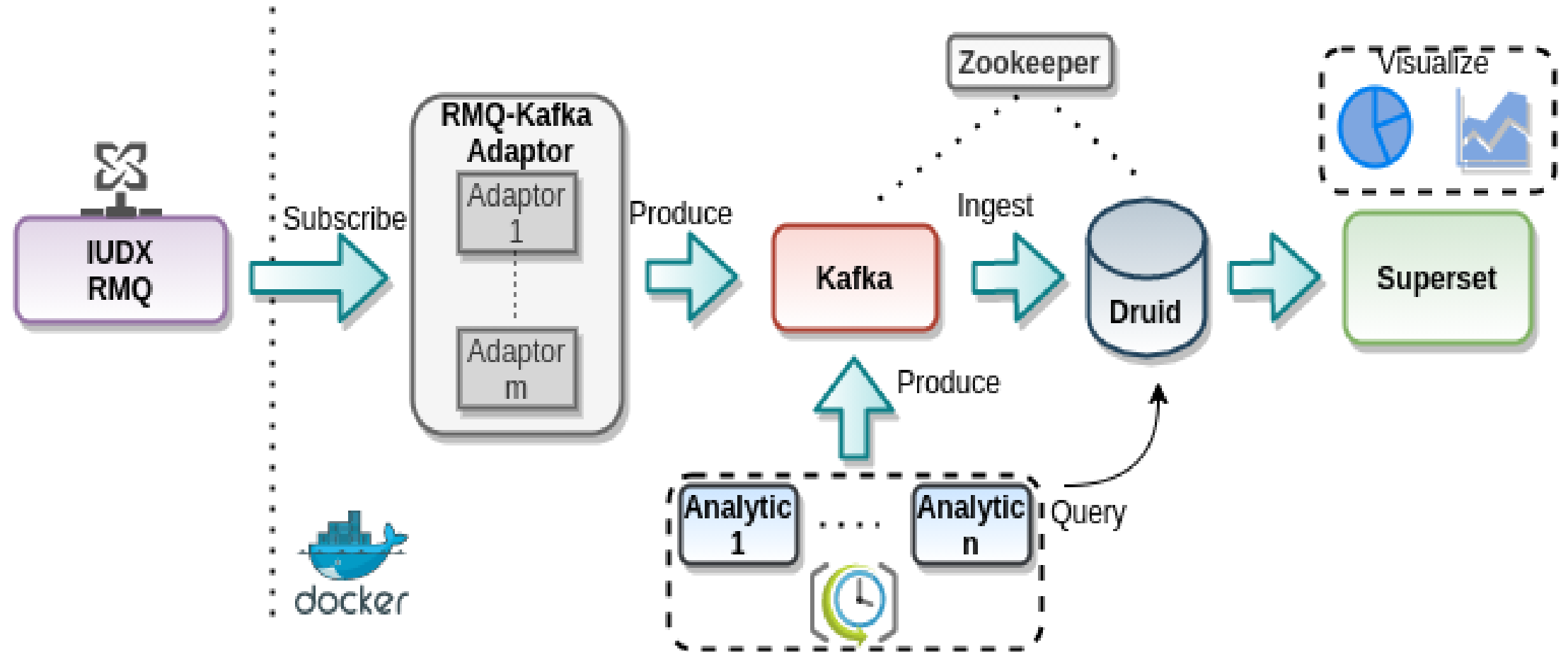
- Key components
  - Tools to ease interactions with IUDX
    - SDKs, Sample SW components
  - AI/ML Layer to integrate various ML algorithms in applications
    - Analytics Framework
  - Privacy and Security tools (As a part of project with NSC)
    - Differential-privacy Tools
    - Privacy preserving learning models
      - Secure Enclaves
      - Secure Multiparty compute
  - IUDX live-sandbox for application developers
    - Enables prototyping and experimental use of live data (not a canned version)



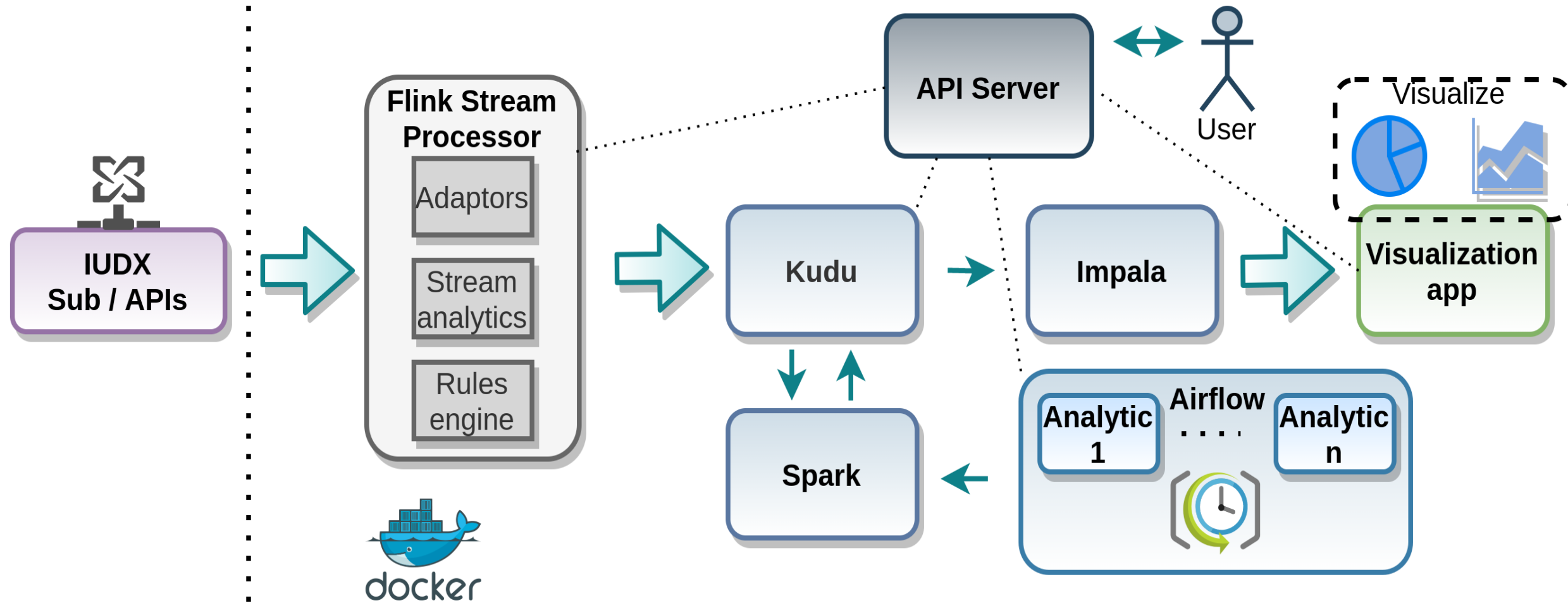
# IUDX++: Analytics Framework

- Key highlights
  - Jump start application development
  - Integrated IUDX process flows
  - Easy to add new custom analytics
- Sample Analytics: Visualization of an IUDX data resource
  - Showcasing a data resource
  - Get good idea about the data quality of a resource
  - Showcasing application applicability across similar data resources

# IUDX++: Application Framework Block Diagram



# IUDX++: Application Framework Block Diagram (1)



**Thank You**