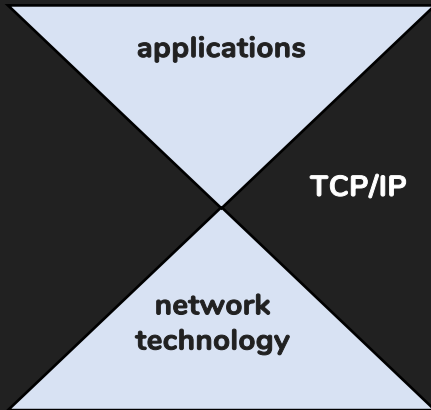


# FAIR Digital Objects

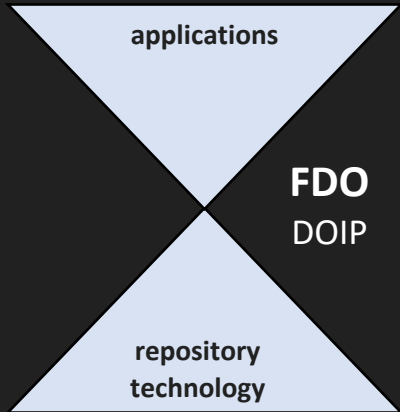
How they contribute to meaningfully interconnected knowledge?

# Internet Example



- **Connecting networks and computers**  
*Solving computer interoperability*
- **Internet is just a small protocol but**
  - we use every second
  - researchers are not interested in it
  - It does not deal with rights on the data, but offers secure mechanisms
  - everyone can hook up his device!!!
  - kicked off a new boost of developments and a new type of applications such as the Web

# Datanet Example



- **Connecting data objects and repositories**  
*Can support data interoperability*
- **FDO is just a simple concept and DOIP a simple protocol but**
  - we will need something simple to be used by everyone
  - researchers are not interested in it
  - It does not deal with rights on the data, but offers secure mechanisms
  - Everyone can hook up their data and repository
  - It will kick off a new boost of developments and a new type of applications

**Data useful, *when***  
**Data in context**

What is it?

How was it created?

Where is it stored?

How persistent is it?

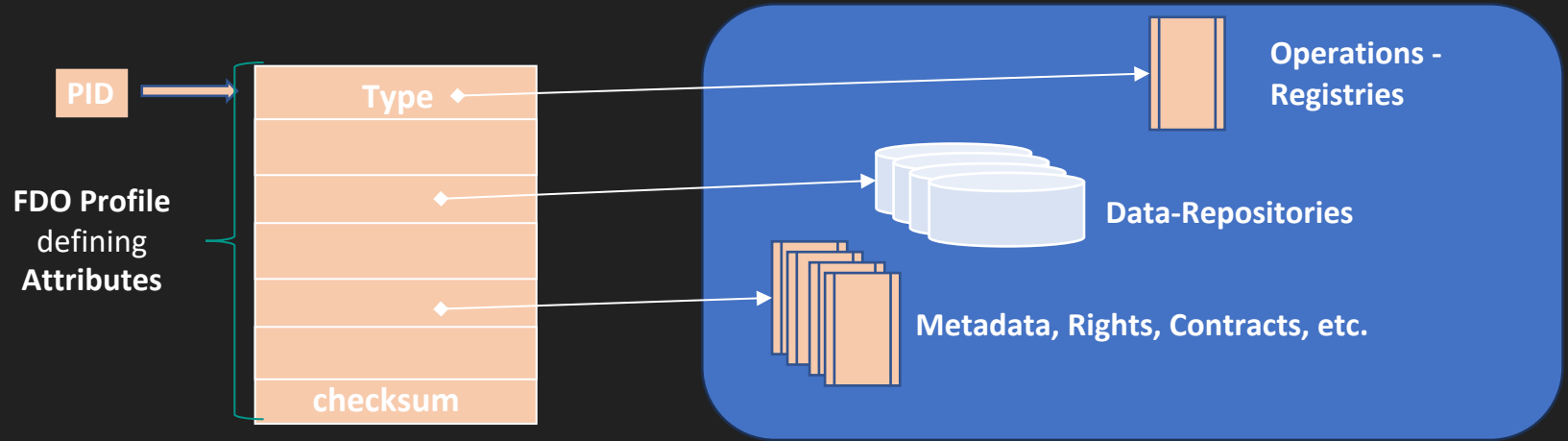
Who is allowed to access it?

How to reuse it?

How to interpret it?

With which operation can we process it?

# FDO – a simple model for persistent objects



- All FDOs have a PID (handle (e.g. DOI))
- all information, which are required for FAIR processing, is persistently bundled together
- possibility of linking with certified operations for automatic processing

The FAIR Digital Objects Architecture would provide a foundational framework for data interoperability by:

- **Creating a Universal Data Language**

Standardising how data and metadata are structured and accessed, much like how TCP/IP standardised network communication

- **Enabling Seamless Data Exchange**

Allowing disparate repositories to share and interpret data without bespoke integration efforts

- **Promoting a Robust Data Ecosystem**

Facilitating interoperability by making data more (machine) accessible, understandable, and usable

currently

- Protocols and Specifications in place by FDO Forum
- Existing configurations such as **RO-Crates & Digital Twins**

moving forward

- Provide all registries that are required and offer them as services
  - FDO Profile registry
  - FDO Kernel Attribute registry
  - Repository registry
  - PID registry (based on Handles)
  - Operation Registry
- Work towards an international FDO Testbed