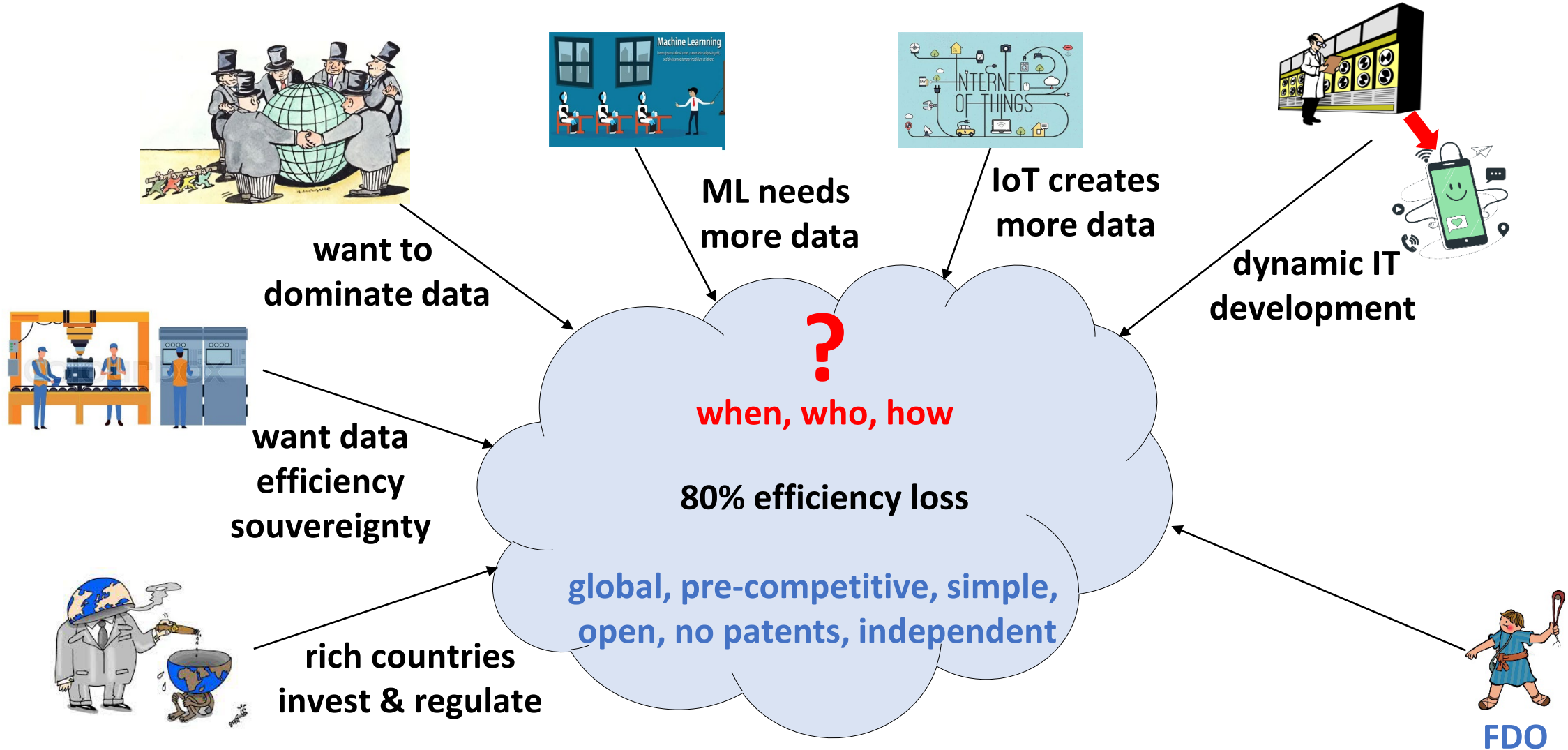


FAIR DIGITAL OBJECTS  FORUM

Shaping
the
Global Integrated Data Space

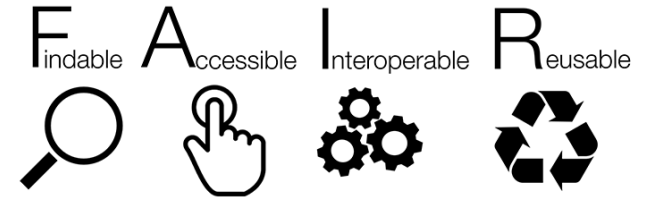
Peter Wittenburg
International FDO Forum

The **global integrated data space** will come, but...



Reduce Data Inefficiencies

..... 24 23 22 20 18 16 14 14 16 18 20 22 23 25



question	traditional
what is it?	researcher
where is it?	system manager
how persistent is it?	system manager
who is allowed to access it?	operating system
how to reuse it?	university
how to interpret it?	researcher
which procedure to process it?	researcher

Urgent now

- to handle data in a FAIR way
- to persistently combine all information necessary to exchange and reuse meaningful entities

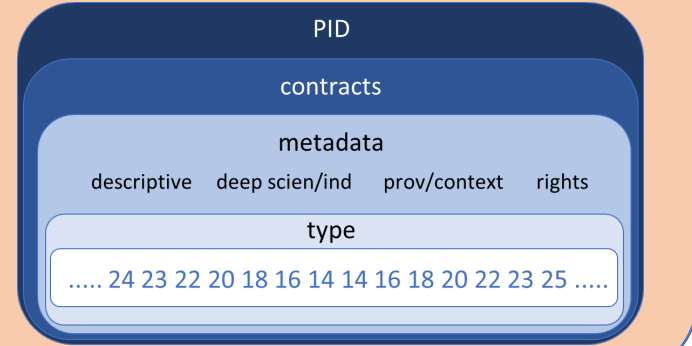
Stack of Challenges



Overcoming the chaos of digital objects



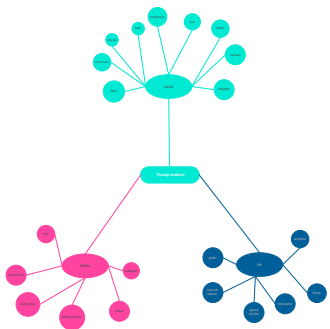
Persistent Bundling using the concept of Digital Objects



Harmonising structures but dynamics



Open schema registries etc.



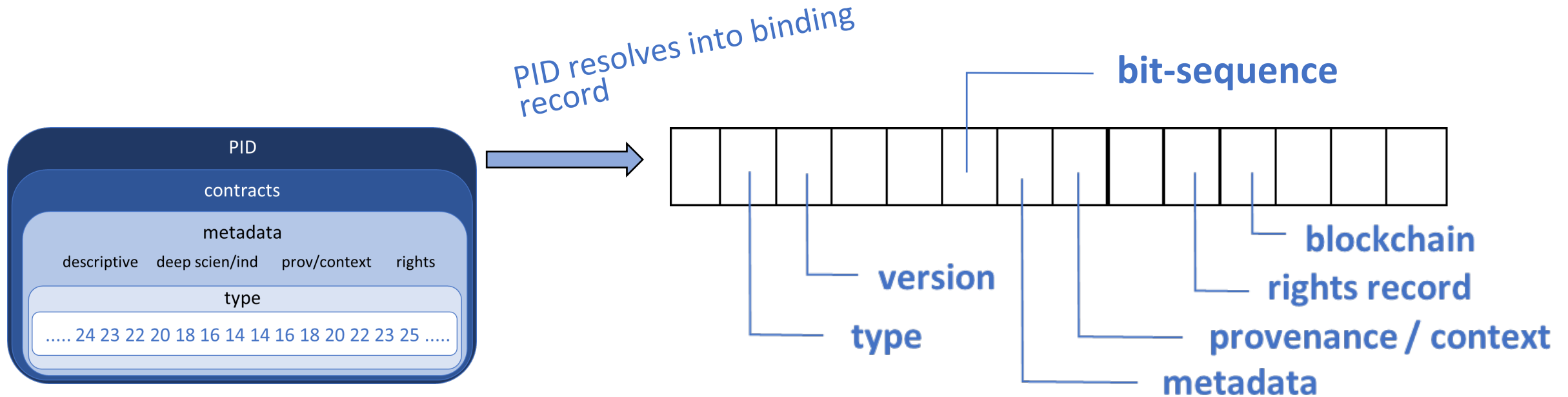
Enabling semantic Crosswalks – pragmatic, ontological, ...



many ideas, will keep us busy



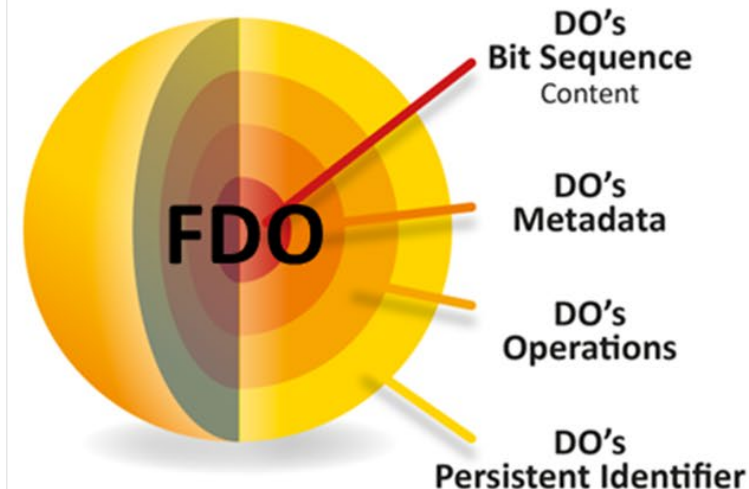
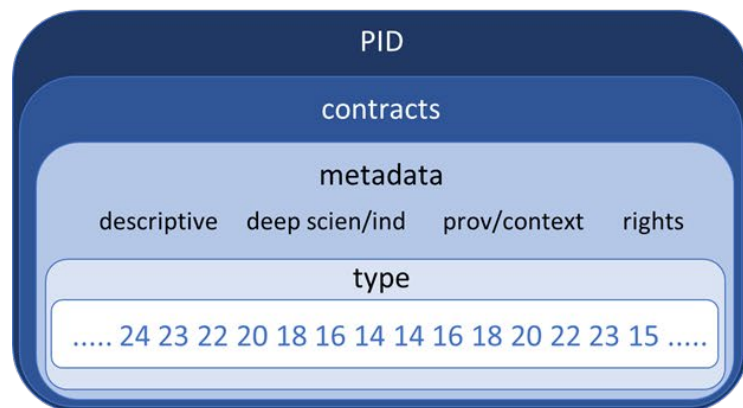
Digital Objects to Bundle Information



PID = global, unique, resolvable, persistent identifier

If PIDs are persistent, PID records can also be made persistent
(persistence is based on social agreements)

FAIR Digital Objects

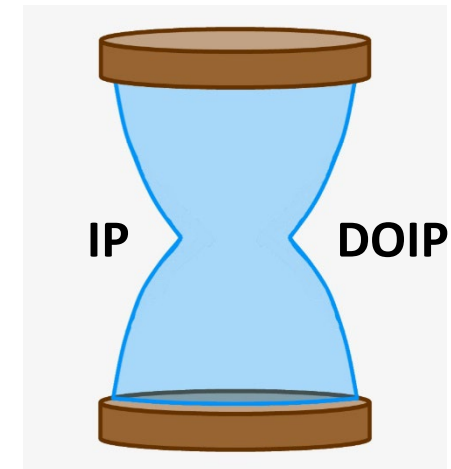
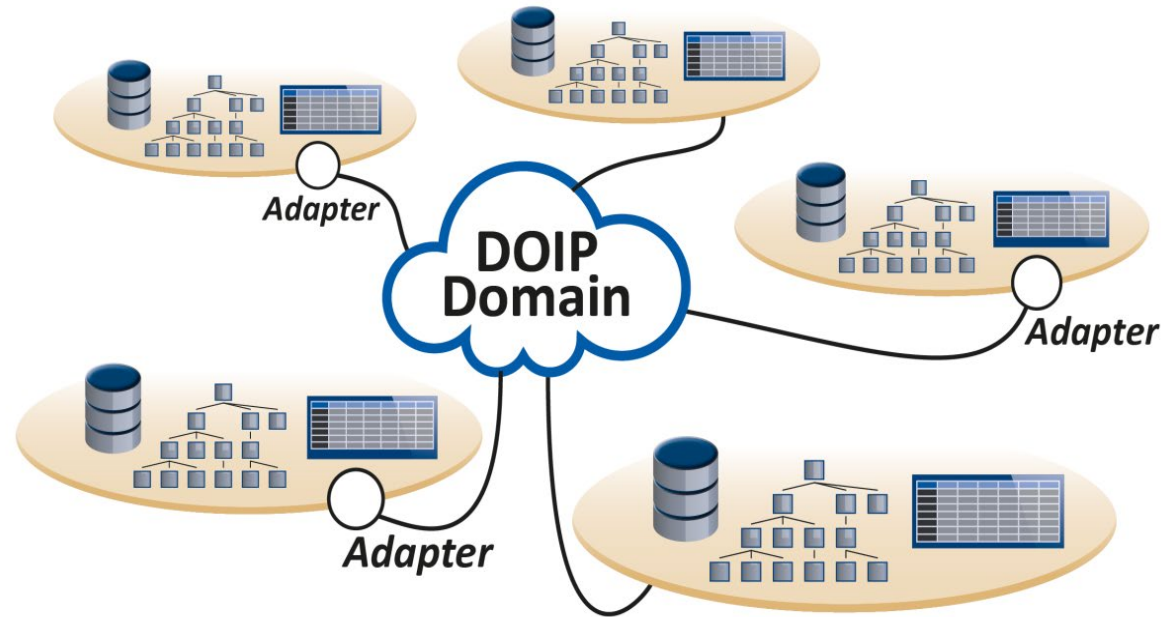


Merging the concepts of Digital Object and FAIR:

- make all information machine actionable
- define interoperable PID Profiles and PID kernel attributes
- define a typing system for FDOs to be able to relate them with operations (opening the path towards automatic procedures)
- built-in security for improving trust

DO Interfacing Protocol

when agreeing on a core data model we can develop a protocol



DOIP brings together repositories independent of their technology and independent of their choices in organising their data

State of the Art

DO Domain

Int. DONA Foundation
Geneva, independent, ITU umbrella
components in use for many years

- International Publishing Industry (DOI)
- International Media Industry (EIDR)
- ITU Int. Ship Tracking System
- Nat. Food Supply Chain Control System (China)
- Building Component System (UK)
- Int. Climate Modelling Community (CMIP)
- etc.

FDO Domain

Int. FDO Forum
independent, to become a LE in 2023
Full specification in 2022
Collaboration on Standards with DIN

- Int. Digital Specimen Twin Initiative (DiSSCo)
- Interdisciplinary physics community
- demonstrator cases in EU and US
- etc.

Thanks for the attention.

Join the FDO Conference 26-28. October 2022 Leiden

<https://www.fdo2022.org/>