

Data Spaces for (industrial) Healthcare

SPHIN-X AND HEALTHTRACK-X

CHALLENGES IN (INDUSTRIAL) HEALTHCARE



Healthcare data exchange remains **inefficient**, relying heavily on **fragmented systems** and **bilateral** communication.

The absence of implemented (process-) standards, interoperability and trust hinder effective collaboration.



STRONG INITIATIVES IN HEALTHCARE



24 founding members expanded to 26 members by March 2025



sphin:

The association was founded in November 2024 by 24 founding members in Berlin.

HTX

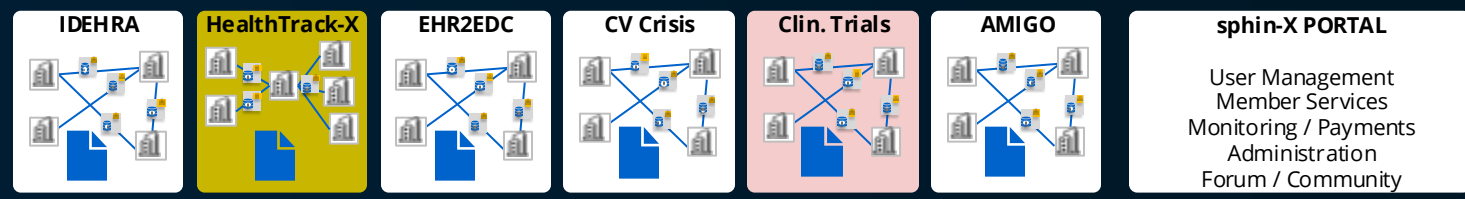
The idea behind sphin-X originated outside of formal project structures, with a consortium of around 50 organizations. A core use case was later spun off into the research project HealthTrack-X.

SPHIN-X VISION (MOVING TARGET)



Use Cases & Integration

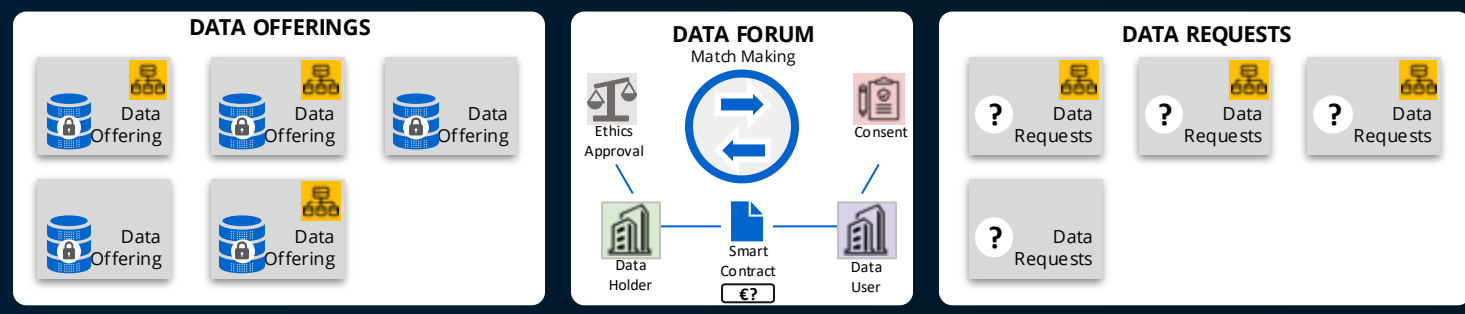
sphin-X ideated Use Cases build on Data Space and common services



End User Agreement

Data Forum Offerings / Requests

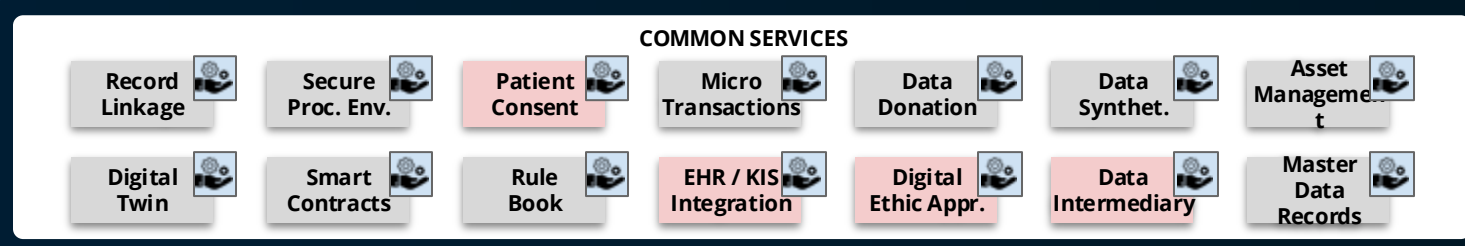
Populated by Federated Catalogues commercialisation by data provider



Data Usage Policies

Common Services

sphin-X e.v. specified & certified



Service Usage Agreements

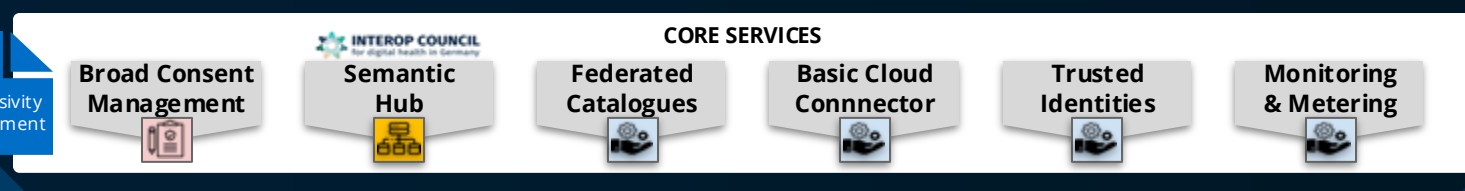
Basic Data Space

sphin-X e.v. guaranteed



Data Space Authority

Exclusivity Agreement

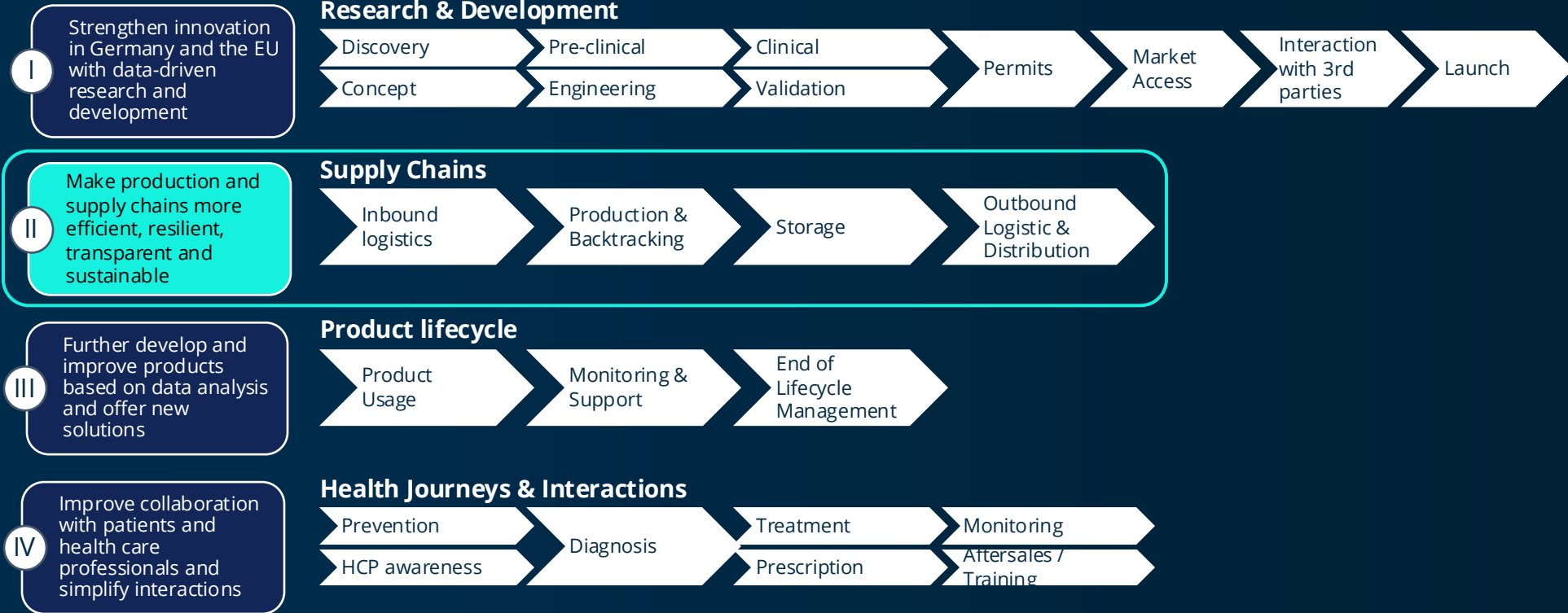


Data Space Agreement

SPHIN-X GOALS AND USE CASES



Goals & associated value chains of the industrial healthcare industry



HEALTHTRACK-X CONNECTS PARTICIPANTS



Collaborative Use of Data

Bringing together data providers and consumers in a supply chain to support the industrial healthcare industry in various use cases.



Data Sovereignty and Security

Data space technology as the key to collaborative use of data while maintaining sovereignty and security.



Traceability and Transparency

Increasing the visibility of a supply chain and access to relevant data of the parties involved enable new processes and opportunities.



Interoperability in Data Exchange

Holistic view of the interoperability stack (technical, semantic, organisational, legal) lowers hurdles at all levels of cooperation.



HEALTHTRACK-X USE CASES



1

Digitalization of the production and supply chain

for pharmaceuticals and medical devices by transforming accompanying documents into a standardized, fully electronic format.



2

Standardized data delivery against supply shortages

Complex supply chains are prone to disruption. Their resilience can be increased through better data exchange and the early detection of bottlenecks.



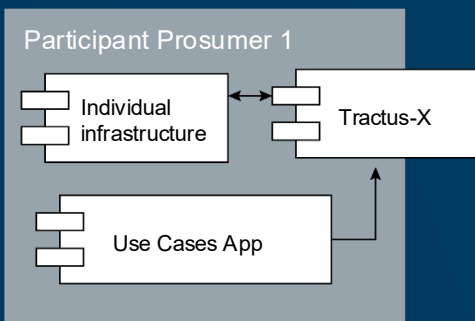
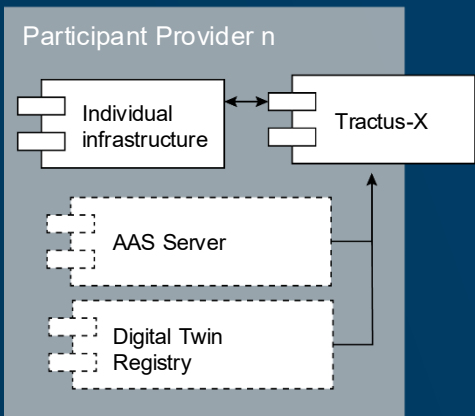
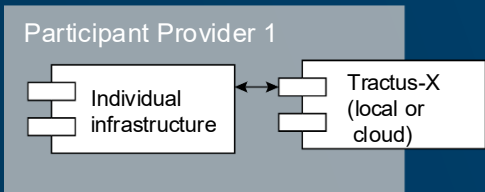
3

Standardized CO2 footprint management

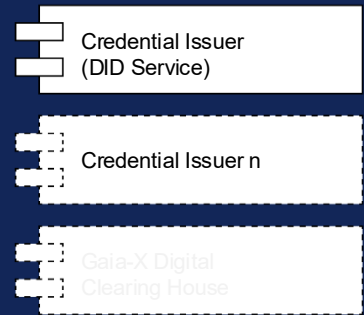
The standardized carbon footprint management is intended to enable data exchange for the sustainability assessment of products along their production and supply chain.

HEALTHTRACK-X HIGH LEVEL ARCHITECTURE

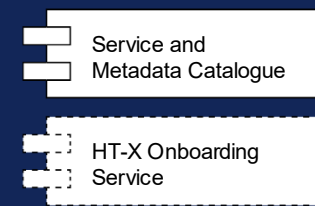
HT-X Rulebook



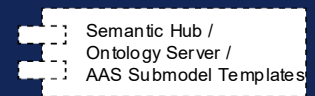
Identity Services



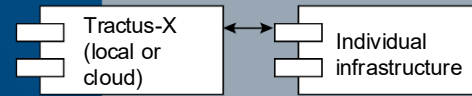
Portals



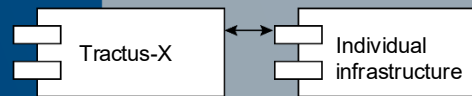
Common Ground



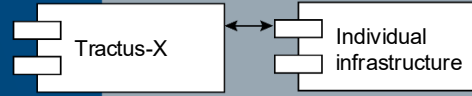
Participant Consumer 1



Participant Consumer m



Participant Prosumer p



HEALTHTRACK-X CONNECTOR



HT-X Rulebook

Identity Services

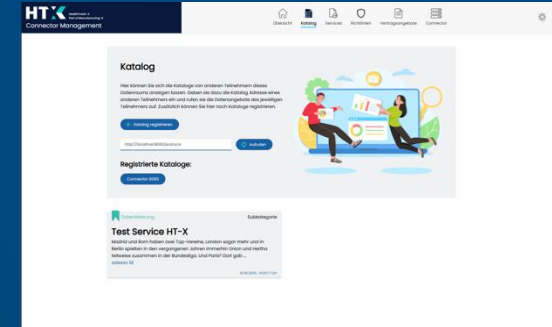
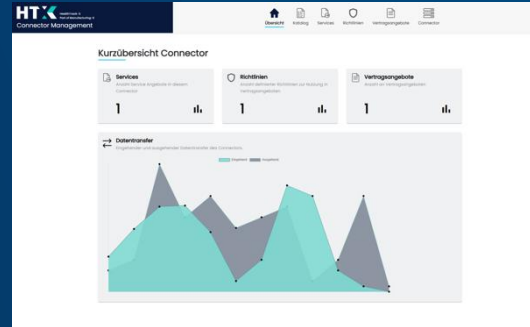
- Credential Issuer (DID Service)
- Credential Issuer n
- Gaia-X Digital Clearing House

Portals

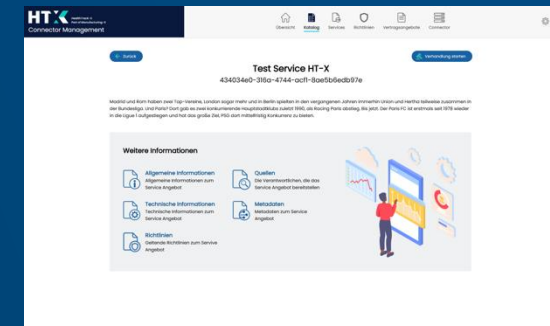
- Service and Metadata Catalogue
- HT-X Onboarding Service

Common Ground

- Semantic Hub / Ontology Server / AAS Sub model Templates



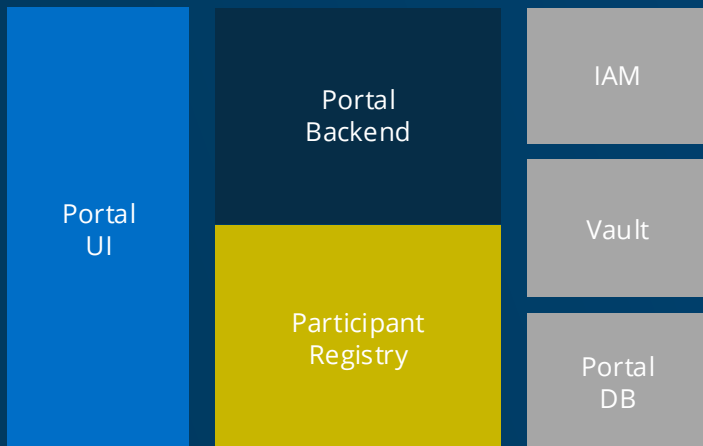
UI-Support
Custom Data
Integration APIs
Data Sources /
Data Sinks



HEALTHTRACK-X PORTAL



High Level Portal Architecture

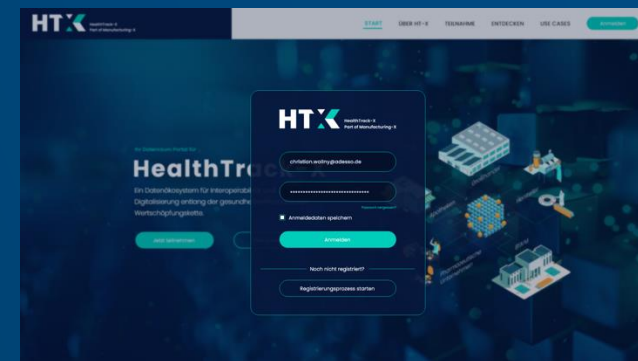
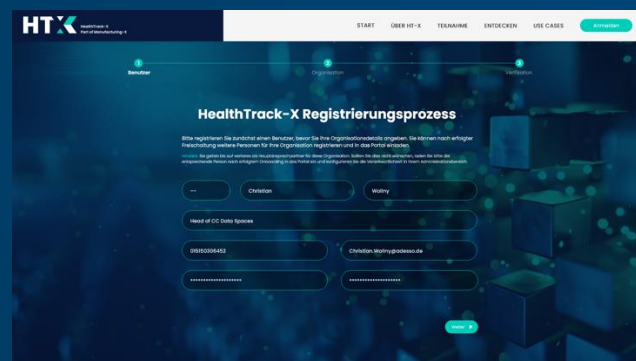
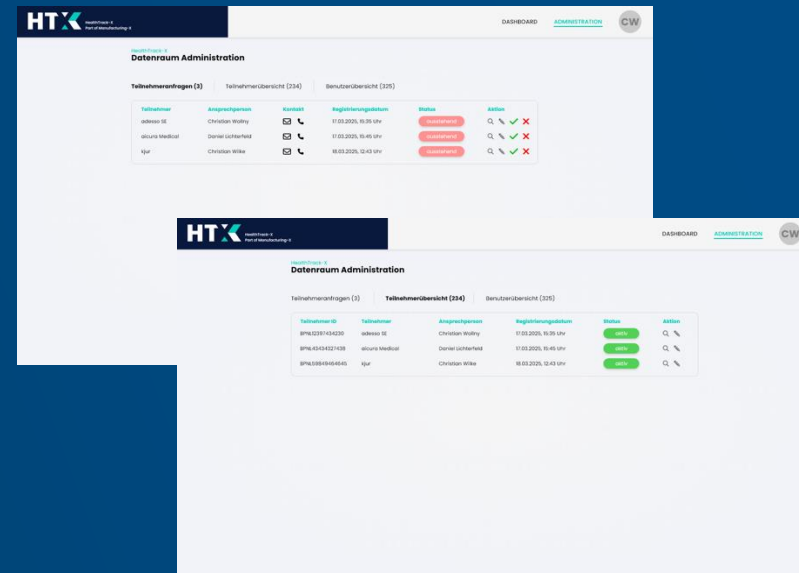


Actors:

- Data Space Authority
- Data Space Users
- Visitors

Processes:

- Onboarding
- Managing organisation
- Use Case participation
- Catalog integratoin
- ...



HEALTHTRACK-X ROADMAP



2024-2025

- Designing and defining technical requirements for each work package
- Discussions with relevant stakeholders



2025-2026

- Connection to the data space
- If resources permit: Explore additional use cases beyond the original scope of HealthTrack-X.

WE
ARE
READY.



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