



OneHealth DataSpace: **more than data**

Marta Castiñeira Reis



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NextGenerationEU



Plan de Recuperación,
Transformación
y Resiliencia



Xacobeo
2027

The concept

One Health recognizes the **interconnection** between human, animal, and environmental health.

An integrated approach aimed at optimizing the health of people, animals, and the environment (WHO)

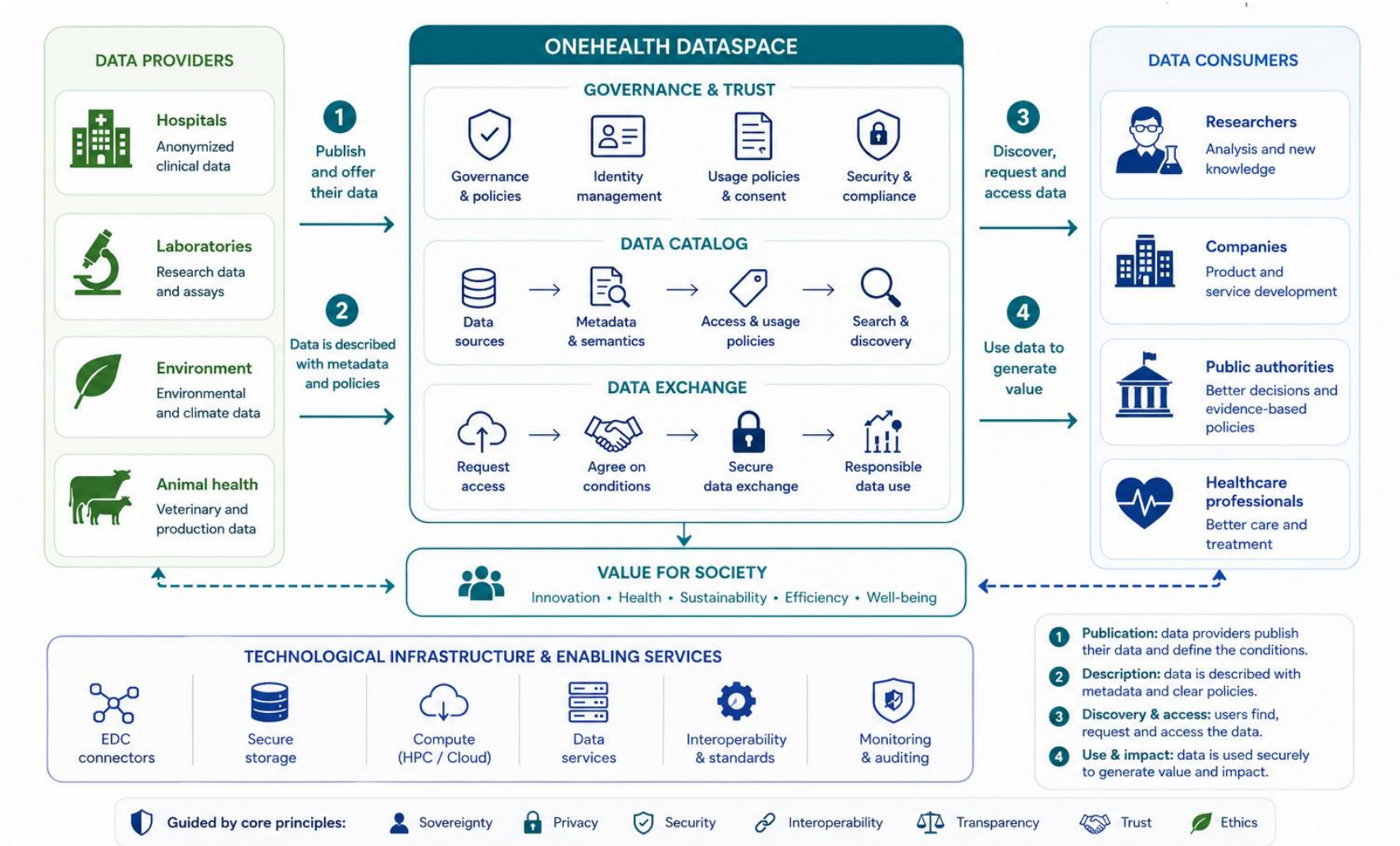


The integration of artificial intelligence across these domains enables comprehensive analysis and solutions to complex health challenges that go beyond species and ecosystems.

OneHealth DataSpace: **the core concept**



OneHealth DataSpace: the core concept



OneHealth DataSpace: **use cases**

1



Genomics and biomolecular analysis

Accelerate insights from multi-omics data

2



Drug discovery and repositioning

Find new treatments, faster

3



Epidemiology and public health

Detect, predict and respond to threats

4



Environmental and climate-health modelling

Understand impacts and reduce risks

5



Animal health and veterinary analytics

Improve surveillance and animal well-being

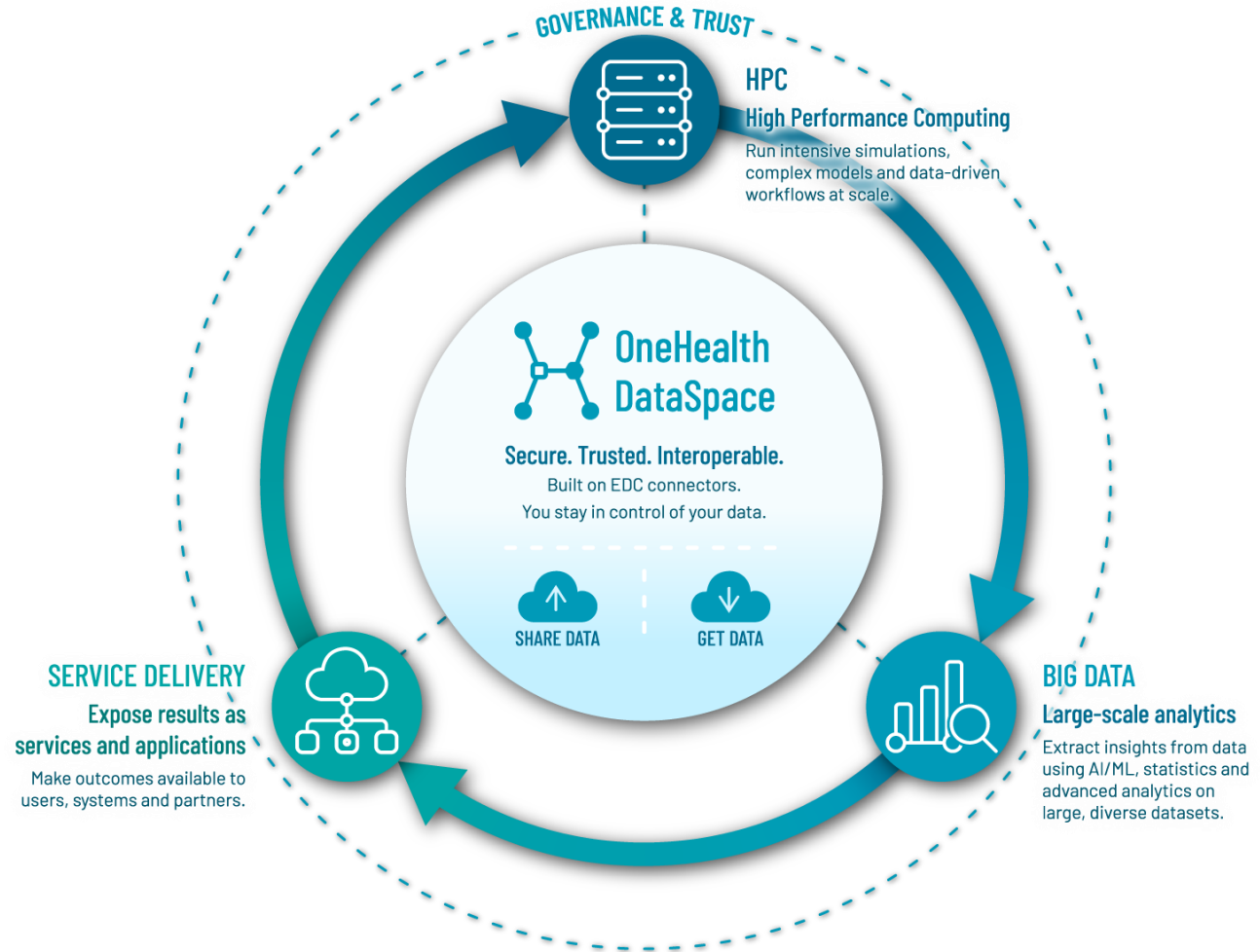
6



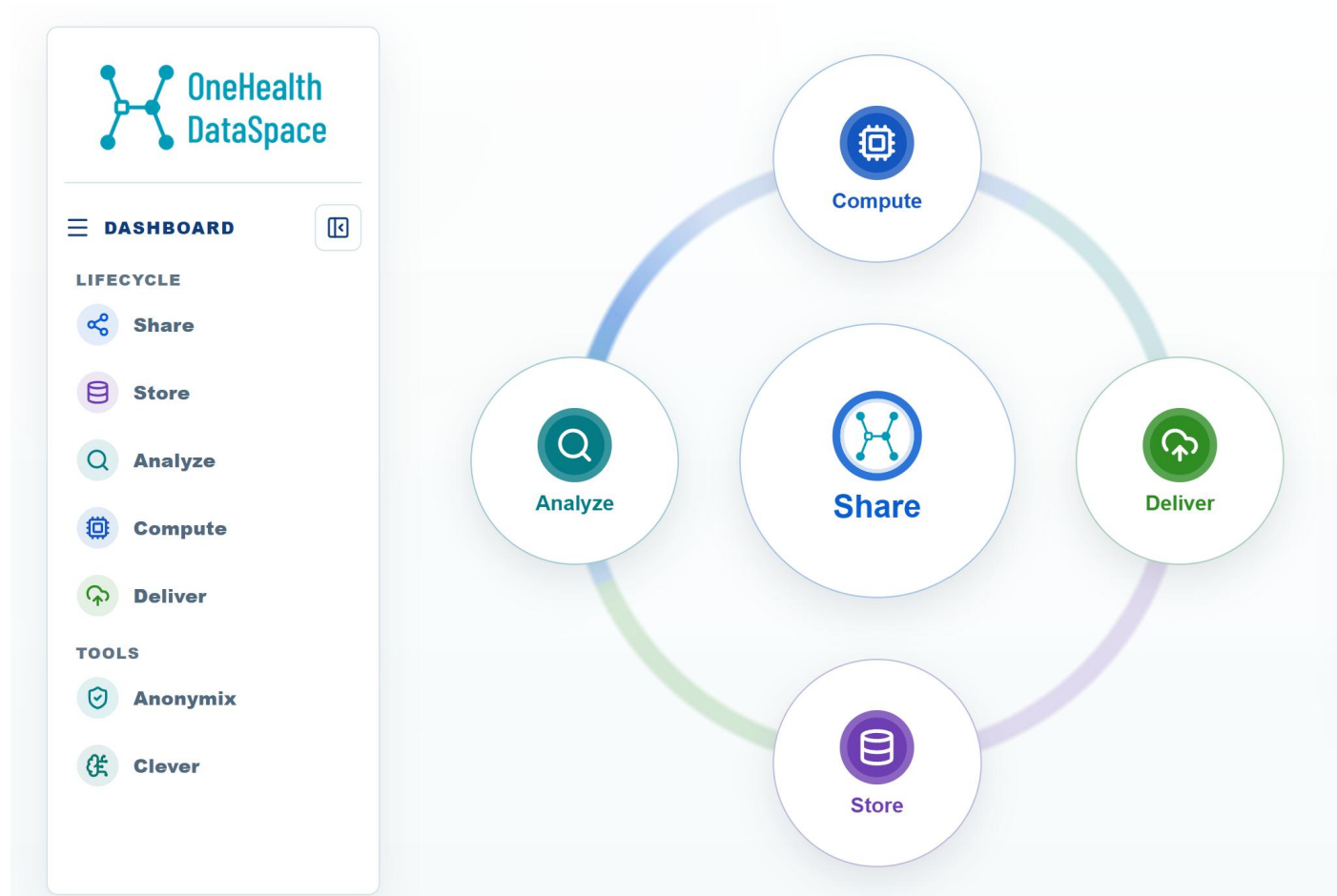
Trusted AI on sensitive data

Privacy-preserving AI you can trust

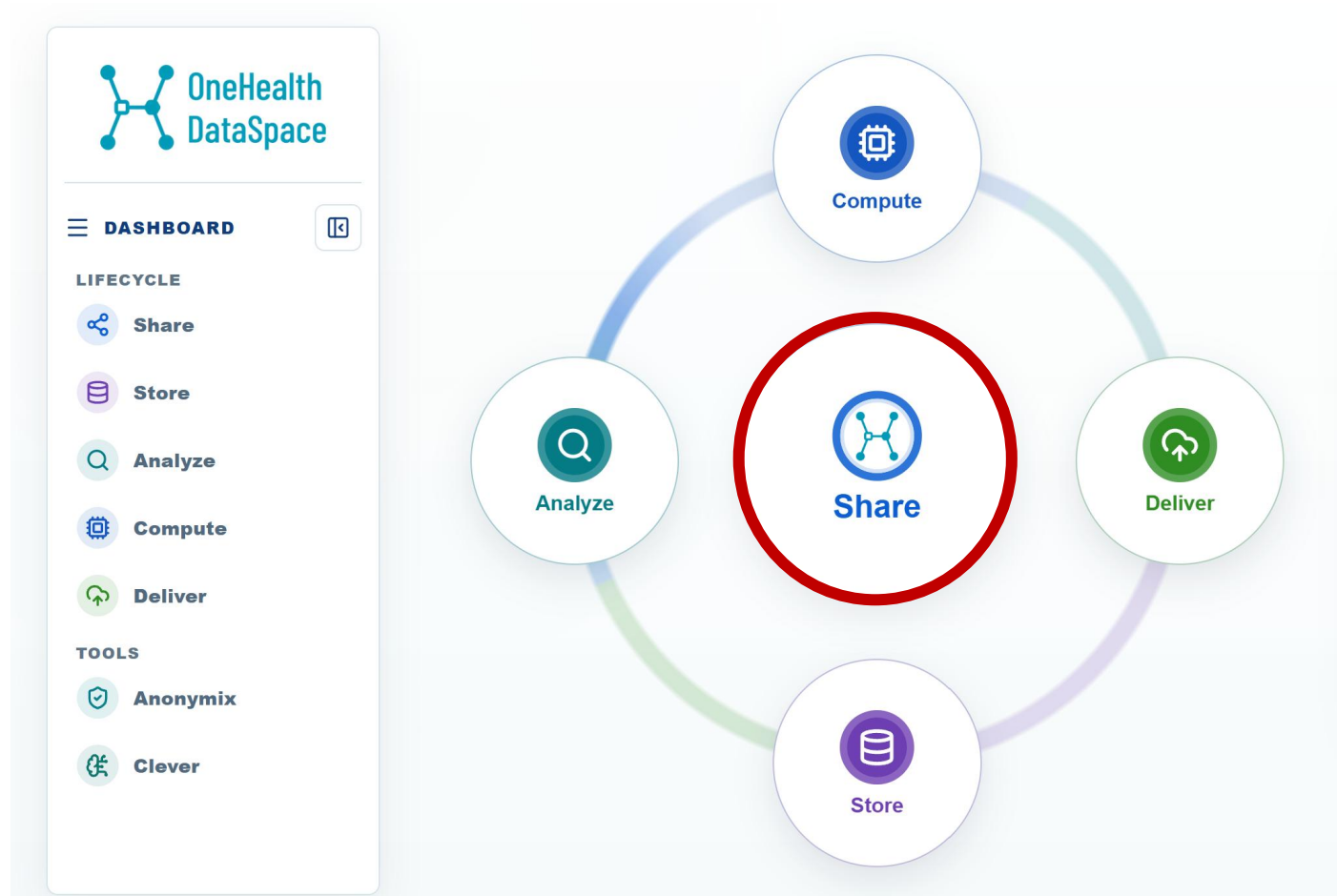
OneHealth DataSpace: the evolution



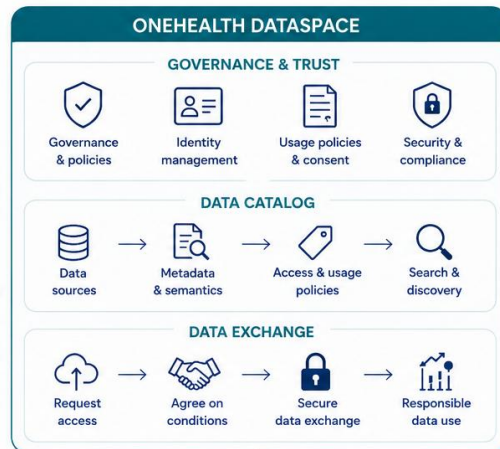
OneHealth DataSpace: the data cycle











OneHealth DataSpace: the data cycle



OneHealth DataSpace: XDataShare




 dsga

-  Catalog Browser
-  Contract negotiations
-  Transfer history
-  Assets
-  Contract definitions
-  Policies
-  Audit

farmaciaalameda 2 datasets

did:web:farmaciaalameda.srv.cesga.es:identityhub:did
Originator: https://farmaciaalameda.srv.cesga.es/controlplane/dsp/api/dsp

Vacunados-Acumulativo-Semana-1

 farmaciaalameda
https://farmaciaalameda.srv.cesga.es/controlplane/dsp/api/dsp


Datos de vacunación acumulativos de la semana 1. Estos datos únicamente pueden ser accedidos por las Health Authorities. El fichero esta compuesto por una columna fecha que indica la semana y una columna de vacunados...

Distribution:

AzureStorage-PUSH HttpData-PULL HttpData-PUSH AmazonS3-PUSH

View details Negotiate

Vacunados-Semana-1

 farmaciaalameda
https://farmaciaalameda.srv.cesga.es/controlplane/dsp/api/dsp

Datos detallados de vacunación de la semana 1. Estos datos únicamente pueden ser accedidos por las Health Authorities. El fichero esta compuesto por las siguientes columnas: idPaciente, nombrePaciente, fechaNascPaciente...

Distribution:

AzureStorage-PUSH HttpData-PULL HttpData-PUSH AmazonS3-PUSH

View details Negotiate

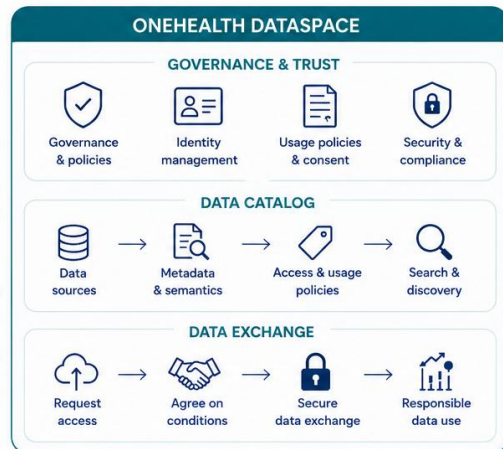
insati-ds-connector-1 3 datasets

did:web:insati-ds-connector-1.insati.com:identityhub:did
Originator: https://insati-ds-connector-1.insati.com/controlplane/dsp/api/dsp

ieo-ds-connector-1 5 datasets

did:web:ieo-ds-connector-1.srv.cesga.es:identityhub:did
Originator: https://ieo-ds-connector-1.srv.cesga.es/controlplane/dsp/api/dsp

OneHealth DataSpace: XDataShare



dsga
Contract negotiations
dsga
Activo
EN
AD

- Catalog Browser
- Contract negotiations**
- Transfer history
- Assets
- Contract definitions
- Policies
- Audit

Contracts Management

Manage EDC contractual negotiations

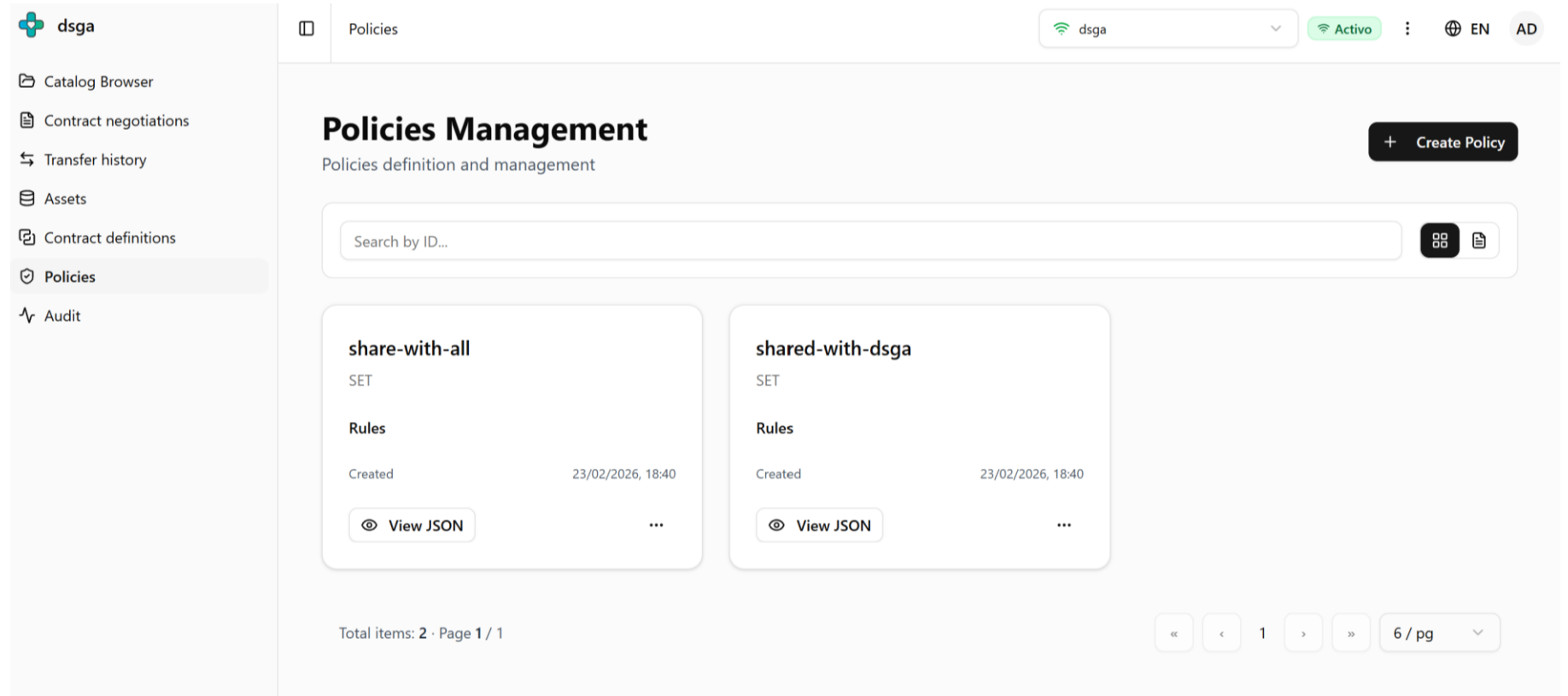
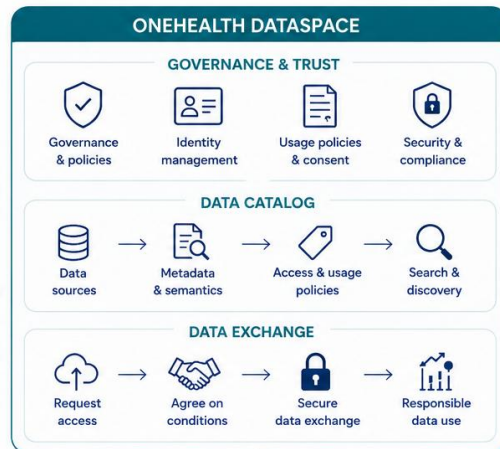
CONSUMER (87)
PROVIDER (0)

All states
View

agrolinera-ds-conector-1 3 negotiations

ID	Counterparty	Asset ID	State	Contract	D	Actions
5f1ee804-d922-4e67-b1fd-83c7da7e9980	did:web:agrolinera-ds-conector-1.agrolinera.com:identityhub:did	dataset-descargas-suero-mensual	Finalized	b9f9ddb43-15db-474a-8c64-2e7f7be422a79		View
510792a5-599f-4fe7-8e0e-05de44240831	did:web:agrolinera-ds-conector-1.agrolinera.com:identityhub:did	dataset-descargas-suero-mensual	Finalized	1c8ab726-0d69-4060-8a77-b8e5247591e9	24/03/2026, 09:25	View Prepare Transfer
93e09758-755a-4e1e-90a3-b0a4226ef0b1	did:web:agrolinera-ds-conector-1.agrolinera.com:identityhub:did	dataset-descargas-suero-mensual	Finalized	b1555f44-98a3-410e-856e-b455663e8f23	24/03/2026, 09:02	View Prepare Transfer

OneHealth DataSpace: XDataShare



dsga Policies

Search by ID...

Policies Management

Policies definition and management

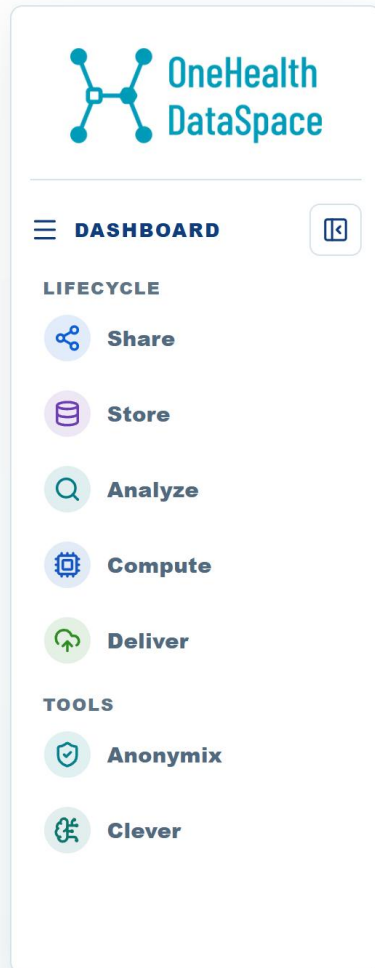
[+ Create Policy](#)

share-with-all	shared-with-dsga
SET	SET
Rules	Rules
Created 23/02/2026, 18:40	Created 23/02/2026, 18:40
View JSON ...	View JSON ...

Total items: 2 · Page 1 / 1

« < 1 > » 6 / pg

OneHealth DataSpace: **computation abilities**



OneHealth DataSpace

DASHBOARD

LIFECYCLE

- Share
- Store
- Analyze
- Compute**
- Deliver

TOOLS

- Anonymix
- Clever



Demo Gromacs

[Back to Projects](#)

Launchers ▼

Execute_Demo_Gromacs 📄

Launch Show

Edit Delete

Demo_Gromacs_2 📄

Launch Show

Edit Delete

[New Launcher](#)

Workflows ▼

[New Workflow](#)

Active Jobs

Completed Jobs

7035587 7057925 7059199 7059231 7060524

Project Directory: *jqvbybi*

/home/cesga/mcurty/Projects/Demo_Gromacs

Name	Size	Date
..		
..ondemand		2026-05-21 02:28:36 PM
png		2026-05-21 02:24:38 PM
resumen_iones.csv	386 B	2026-05-22 11:24:55 AM
slurm-7060524.out	474 kB	2026-05-22 11:24:56 AM
IEPKR.pdb	8 kB	2026-05-21 02:29:14 PM
HWMHS.pdb	7 kB	2026-05-21 02:29:14 PM
HVQIR.pdb	8 kB	2026-05-21 02:29:14 PM
GGGGG.pdb	15 kB	2026-05-21 02:29:14 PM
FEVDW.pdb	7 kB	2026-05-21 02:29:14 PM
EDPEN.pdb	6 kB	2026-05-21 02:29:14 PM
EAKIL.pdb	7 kB	2026-05-21 02:29:14 PM
DCILD.pdb	6 kB	2026-05-21 02:29:14 PM
CMPKD.pdb	6 kB	2026-05-21 02:29:14 PM
AGKLV.pdb	12 kB	2026-05-21 02:29:14 PM
run.sh	3 kB	2026-05-22 10:35:23 AM
dependencies.tar	932 kB	2026-05-21 02:29:14 PM
WKAGQ.pdb	6 kB	2026-05-21 02:29:14 PM
VIMCI.pdb	7 kB	2026-05-21 02:29:13 PM



Gromacs Test

[Back to Projects](#)

Launchers ▼

test-gromacs

Launch Show

Edit Delete

[New Launcher](#)

Workflows ▼

[New Workflow](#)

Active Jobs

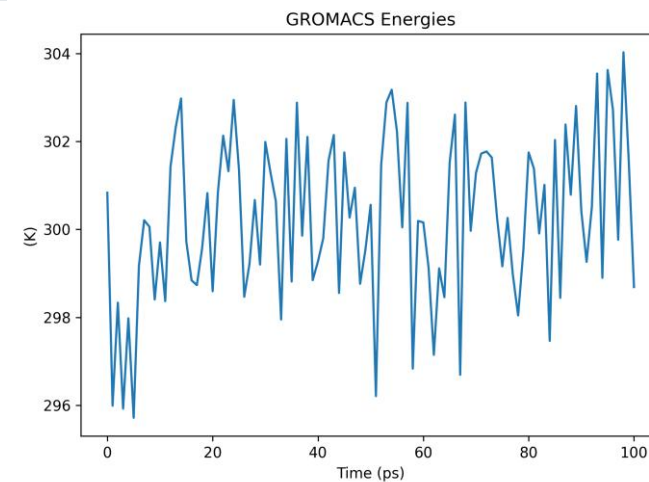
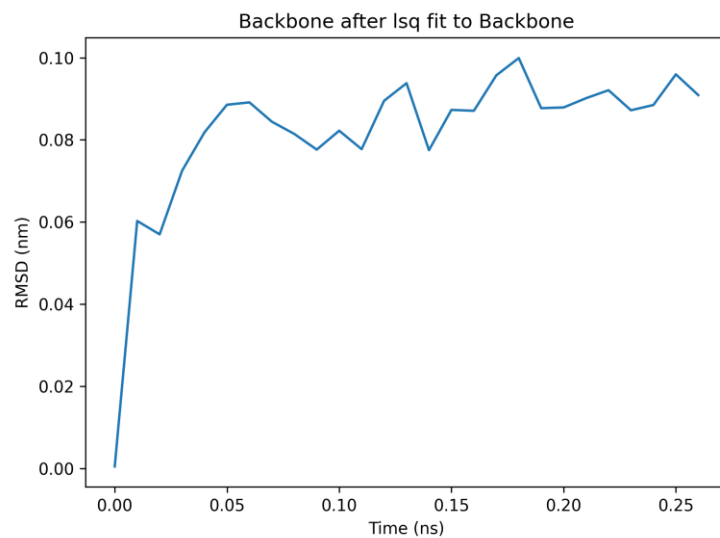
Completed Jobs

7471873 7471935

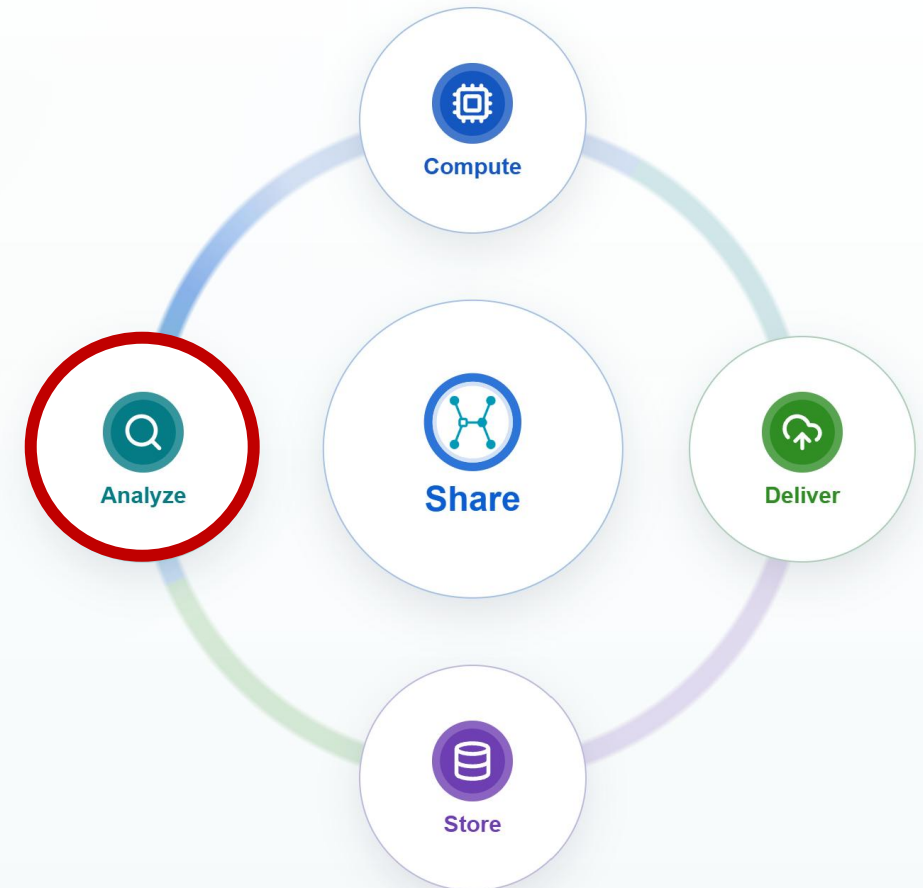
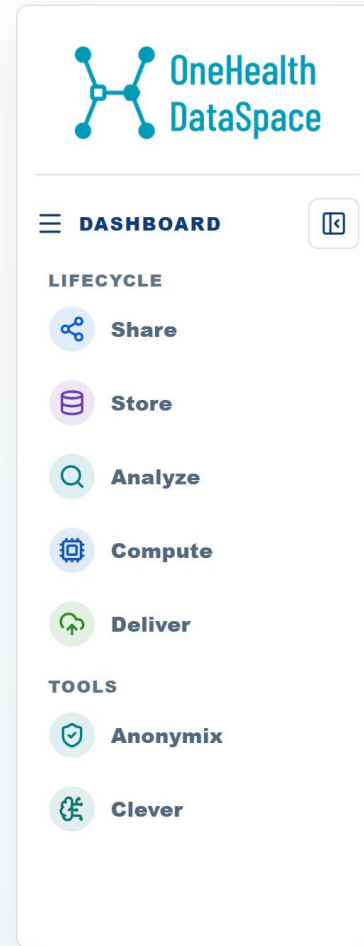
Project Directory: sqcti9hx

/home/cesga/mcastineira/ondemand/data/sys/dashboard/projects/sqcti9hx

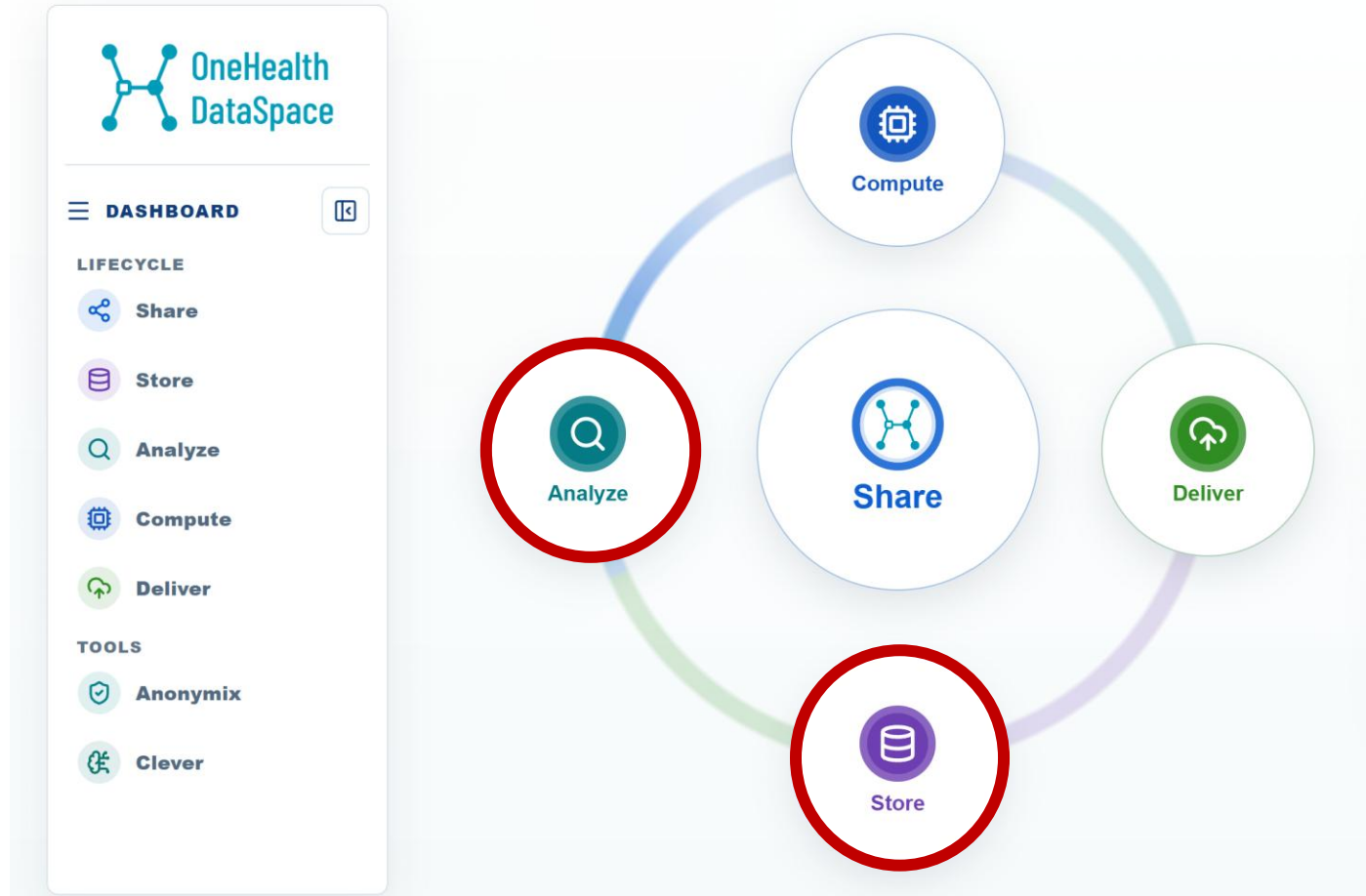
Name	Size	Date
..		
.ondemand		2026-06-09 10:14:13 AM
png		2026-05-21 02:24:38 PM
dependencies.tar	932 kB	2026-06-09 10:18:16 AM
EAKII.pdb	7 kB	2026-06-09 10:18:16 AM
EDPEN.pdb	6 kB	2026-06-09 10:18:16 AM
FEVDW.pdb	7 kB	2026-06-09 10:18:16 AM
GGGGG.pdb	15 kB	2026-06-09 10:18:16 AM
HVQIR.pdb	8 kB	2026-06-09 10:18:16 AM
HWMHS.pdb		



OneHealth DataSpace: **analysis abilities**



OneHealth DataSpace: an example



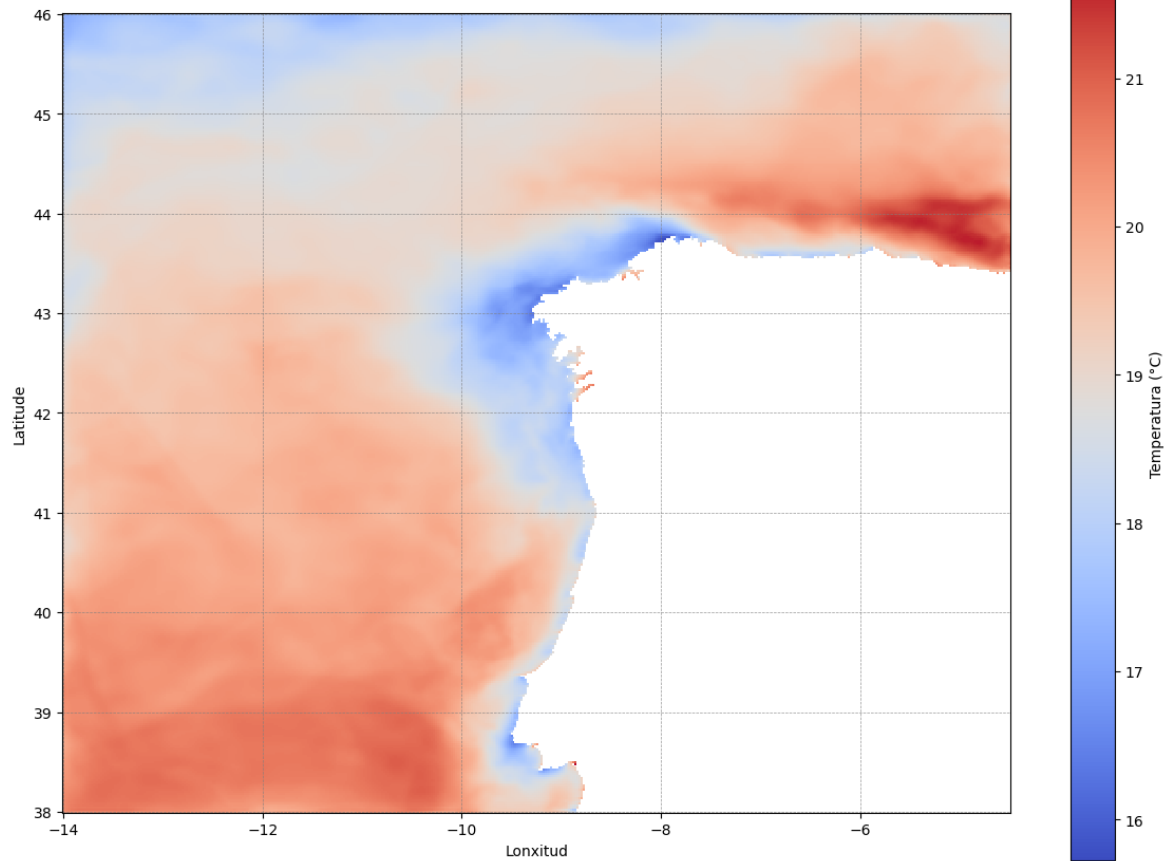


OneHealth DataSpace: an example

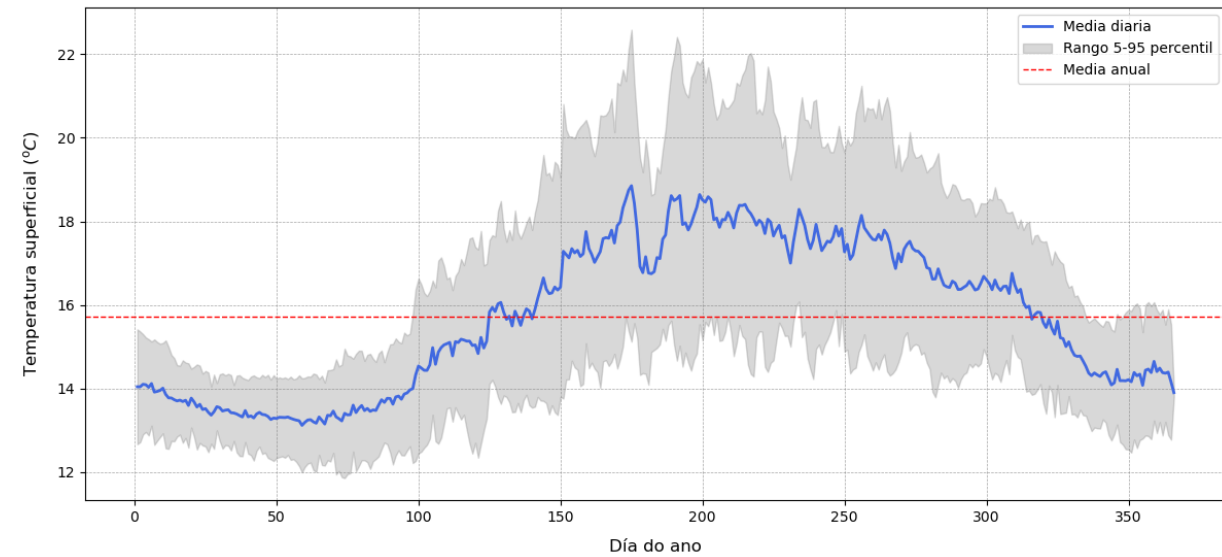
Dataset	Proveedor		Descripción	ID
boias/xunta_rede	Xunta de Galicia		Datos de boyas de la red Xunta de Galicia	664629119e787d70126d1c59
oceanografico/intecmar_hfrtemp	INTECMAR		Mapas da velocidade total da corrente superficial ao longo da costa galega	664621539e787d70126d1c4f
oceanografico/csic_glodap	CSIC	Un producto de datos de alta mar uniformemente calibrado de variables inorgánicas y relacionadas con el carbono		6646302d9e787d70126d1c64
oceanografico/socat_Coastal	CSIC		Datos SOCAT en la región SOCAT 'Coastal'	6662dc73f7e452764784d229
oceanografico/socat_NorthAtlantic	CSIC		SOCAT data in SOCAT region 'North Atlantic'	6662e7b4f7e452764784d22a
oceanografico/socat_qrtrdeg_gridded_coast_monthly	CSIC	SOCAT gridded v2023	Conjunto de datos mensuales gridded costeros de un cuarto de grado	6662ea63f7e452764784d22b
oceanografico/socat_tracks	CSIC		SOCAT gridded v2023 Monthly 1x1 degree gridded dataset	6662ec6af7e452764784d22c
modelos/wrf_1km	MeteoGalicia		Datos del modelo WRF de MeteoGalicia en resolución de 1km	664623db9e787d70126d1c53
modelos/meteogalicia_roms	MeteoGalicia		Datos del modelo ROMS de MeteoGalicia con una resolución espacial de 2 km	6646249f9e787d70126d1c54
modelos/ieo_roms	IEO		Datos del modelo ROMS de IEO con una resolución espacial de 4 km	6646259a9e787d70126d1c55
modelos/wrf_4km	MeteoGalicia		Datos del modelo WRF de MeteoGalicia en resolución de 4km	6662ecf8f7e452764784d22e
modelos/wrf_5km	MeteoGalicia		Datos del modelo WRF de MeteoGalicia en resolución de 5km	6662ed06f7e452764784d22f
estacions/meteogalicia_cies	MeteoGalicia		Datos de la temperatura superficial proporcionados por la estación 'Boia de Cíes'	6646219a9e787d70126d1c51
estacions/hidrofono_cortegada_cetmar	CETMAR		Datos proporcionados por el Hidrófono de Cortegada.	686390baea93d26286331f4b
especies/ieo_capturas	IEO/PESCASOST		Datos de abundancias y distribución de especies de las campañas DEMERSALES del IEO	664631049e787d70126d1c68
especies/ieo_fitoplancton_flowcam	IEO		Imágenes de fitoplancton obtenidas mediante Flowcam y procesadas en Ecotaxa.	6863828cea93d26286331f42
especies/genotipado_berberecho_genepop	UDC	Datos de genotipado de berberecho (Cerastoderma edule) en formato genepop, asociados a cuatro poblaciones reo referenciadas.		6863873fea93d26286331f44
especies/rnaseq_berberecho_sra	UDC	Datos de RNA-seq de berberecho (Cerastoderma edule) en formato SRA correspondientes a un subconjunto de individuos.		6863899cea93d26286331f49
plataformas_mobiles/ieo_lura	IEO		Datos y mediciones oceanográficas recopiladas durante las operaciones del buque o plataforma móvil Lura	66462a269e787d70126d1c5f
plataformas_mobiles/ieo_navaz	IEO		Datos y mediciones oceanográficas recopiladas durante las operaciones del buque o plataforma móvil Navaz	66462a639e787d70126d1c60
afloramento/intecmar_calculo	INTECMAR		Datos para el cálculo del índice de afloramiento	6645fe019e787d70126d1c45
afloramento/intecmar_hfrui	INTECMAR		Mapas del índice de afloramiento costero a lo largo de la costa del norte de Portugal y Galicia	6646210f9e787d70126d1c4d
afloramento/ieo_ui	IEO	Contiene datos relacionados con el índice de afloramiento costero, proporcionado por el Instituto Español de Oceanografía		664627589e787d70126d1c57
afloramento/csic_arios	CSIC		Una base de datos Oceánica sobre Acidificación para el Ecosistema de Afloramiento Gallego	66462be49e787d70126d1c62

OneHealth DataSpace: an example

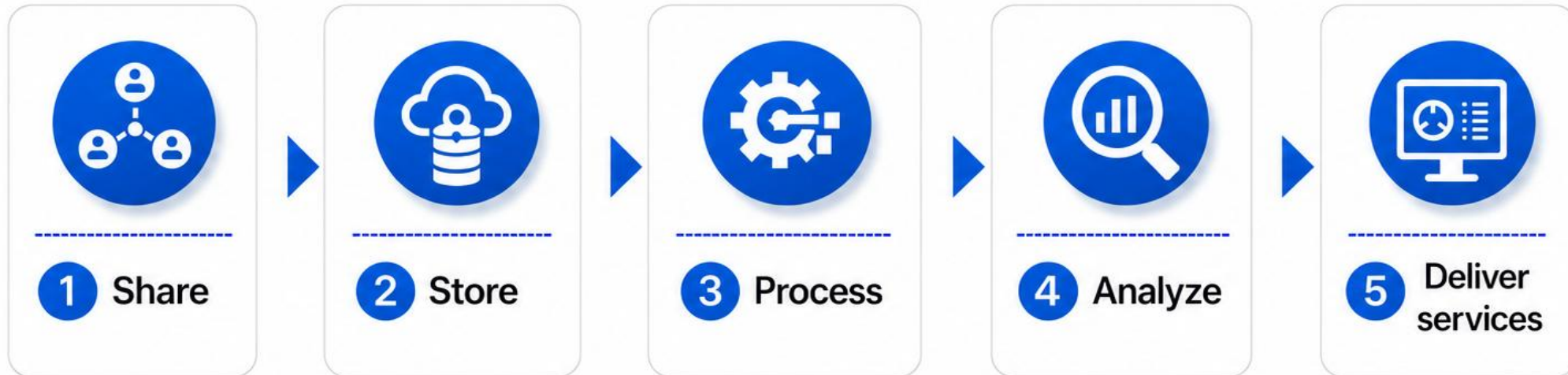
Mapa da Temperatura Promedio



Clima diario: Temperatura superficial



OneHealth DataSpace: **the complete data cycle**



From data exchange to real operational outcomes



Storage, cloud, Big Data, HPC in one platform



Participants keep control of their data

The use cases

1 WHEYDATA

Environmental health

Summary Controlled management of whey from artisan cheese dairies.

Affiliated entity AGROLINERA ASTUR SL / AGROLINERA

Representative(s) Juan Gutierrez Canseco

2 AID-G

Human health

Summary Anonymized Avatar Silver parameters for digital support and AI-based assistance for older adults.

Affiliated entity COGNITUS BIOTECH S.L. and Neurocare Home

Representative(s) Martín Sende Pombo

3 DatiaCare

Human health

Summary Monitoring, alerts, and intelligent algorithms to support care for older adults.

Affiliated entity i4life innovación y desarrollos SL; Seniordomo

Representative(s) Martín García Prieto

4 GrHeCo-Xen IA/HPC

Human health

Summary Medical LLMs, virtual EGFR screening, and GPU-accelerated digital pathology.

Affiliated entity Computational Hematology and Xenomics Group (GrHeCo-Xen)

Representative(s) Carlos Pérez; Davide Crucitti; Adrián Mosquera Orgueira

5 MatLabID

Three One Health domains

Summary CSV catalog of laboratory materials for interoperability and supply/demand analytics.

Affiliated entity ICIGA DATALAB SLU

Representative(s) Martín Sende Pombo

6 MicroBioToolDB

Human health

Summary Curated microbiome database for digestive health, personalized nutrition, and AI.

Affiliated entity MERCANTIA DESARROLLOS ALIMENTARIOS S.L.

Representative(s) Martín Sende Pombo

7 woah-disease

Animal + human health

Summary Structured classification of animal diseases based on WOAHO/OIE standards.

Affiliated entity CONSUVET

Representative(s) Manuel Angel Fernandez Sanchez

8 Heat Stress LATTIN

Human health + environment

Summary Lagrangian analysis of heat and humidity during high heat-stress events.

Affiliated entity EPhysLab - University of Vigo

Representative(s) Raquel Olalla Nieto Muñiz; Luis Gimeno Presa; María Corredoira Iglesias; Albenis Pérez Alarcón

9 Compound Drought-Heat

Human health + environment

Summary Compound drought and heatwave events in the Mediterranean region.

Affiliated entity Environmental Physics Laboratory (EPhysLab), University of Vigo

Representative(s) Luis Gimeno Presa; Raquel Olalla Nieto Muñiz; Lorena Tullé González; Albenis Pérez Alarcón

10 Extended Climate Database

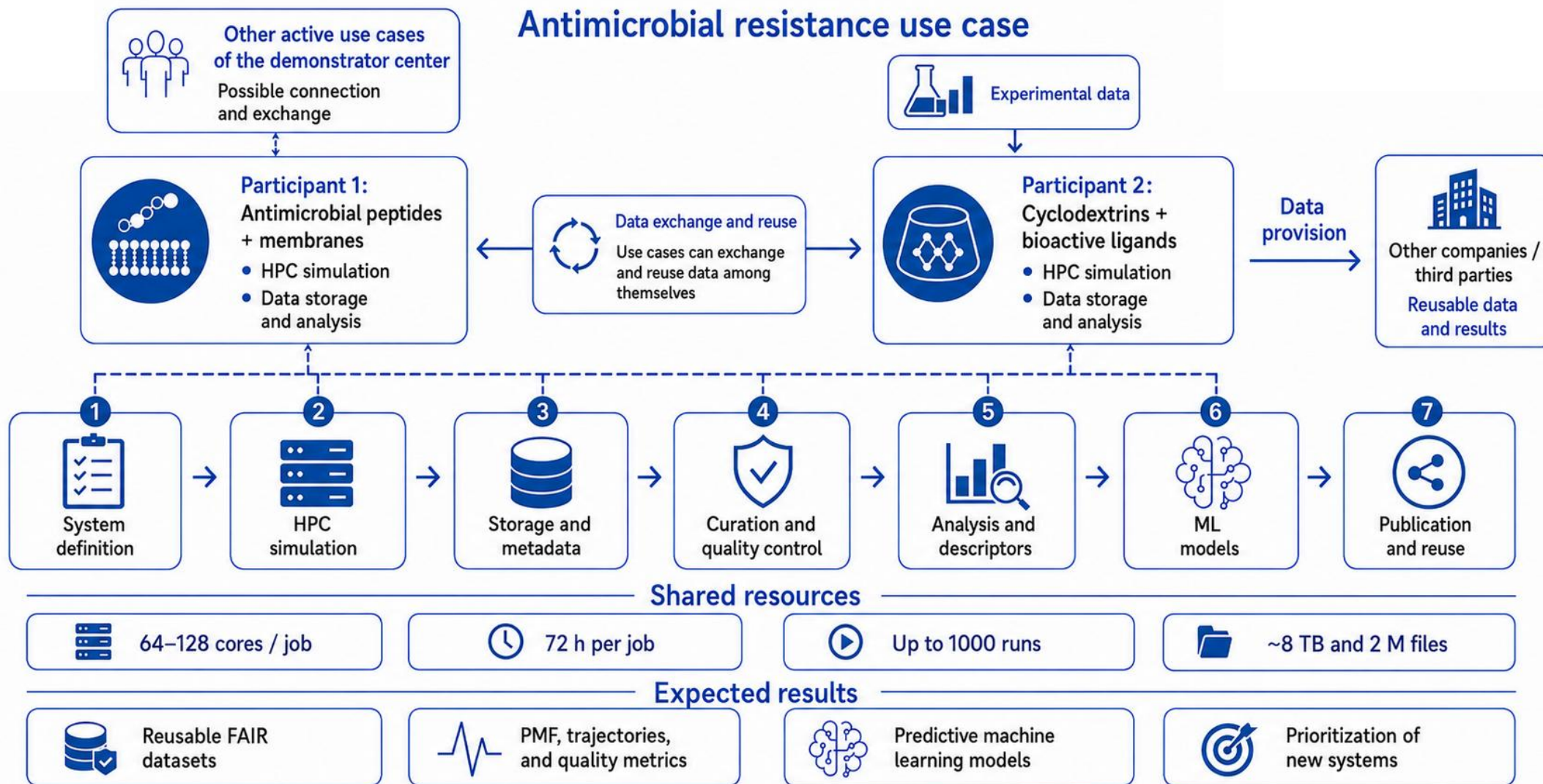
Human health + environment

Summary Extension of the global energy-contribution database for climate extremes to 1980–2025.

Affiliated entity EPhysLab - University of Vigo

Representative(s) Jorge Eiras Barca; Raquel Olalla Nieto Muñiz; Luis Gimeno Presa

OneHealth DataSpace: the complete data cycle



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Thank you!



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Plan de Recuperación,
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Xacobeo
2027