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DATA SHARING FOR AI

Towards an industrial lab

amsterdam economic board

AMdEX THE DATA HYPERMARKET

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R&D department.

Presentation NMT Oct. 19th 2020

Research Projects

CIMPLO

ReMAP

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Research

UNIVERSITEIT VAN AMSTERDAM

SURF

ESnet ENERGY SCIENCES NETWORK

Industry

EQUINIX

DELL Technologies

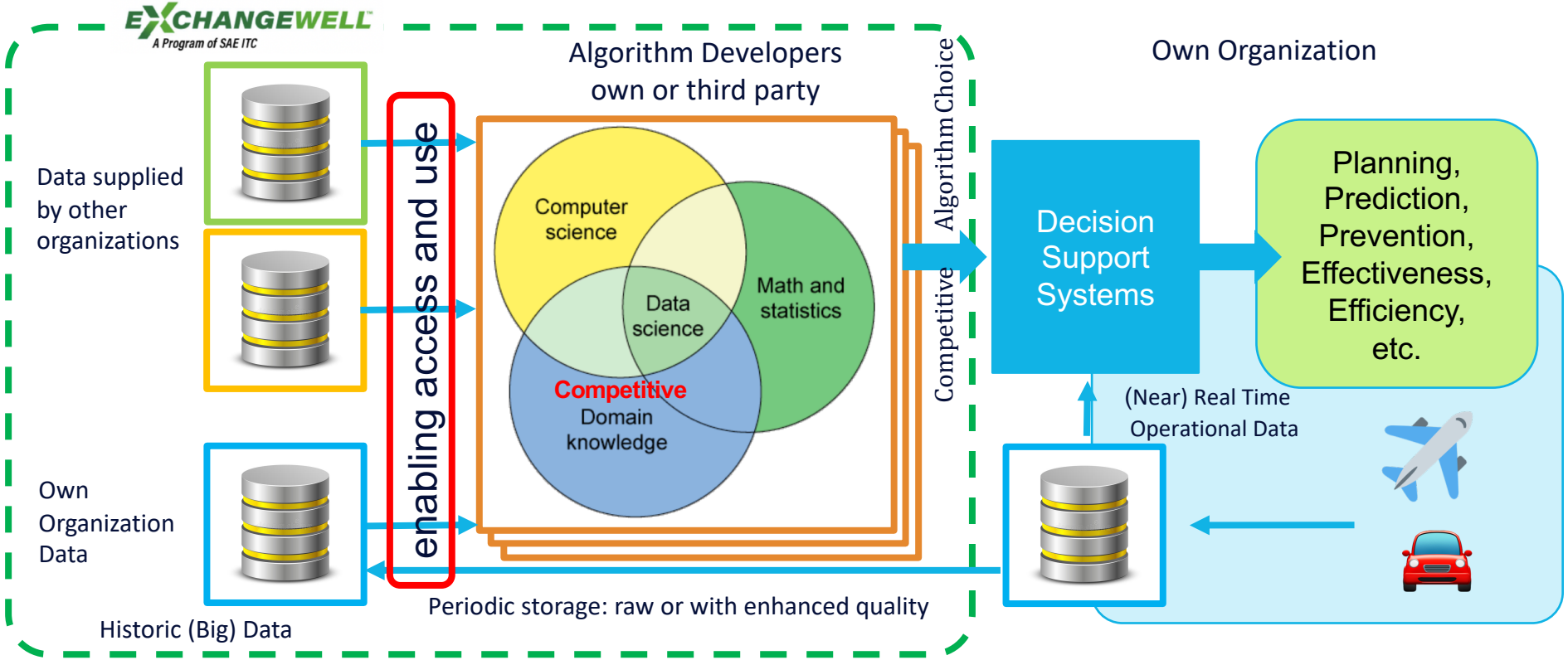
NOKIA

ciena

EXCHANGEWELL A Program of SAE ITC

DATA SHARING SOLUTION

DIGITAL DATA MARKETPLACE GOVERNED BY A MEMBERSHIP CONSORTIUM



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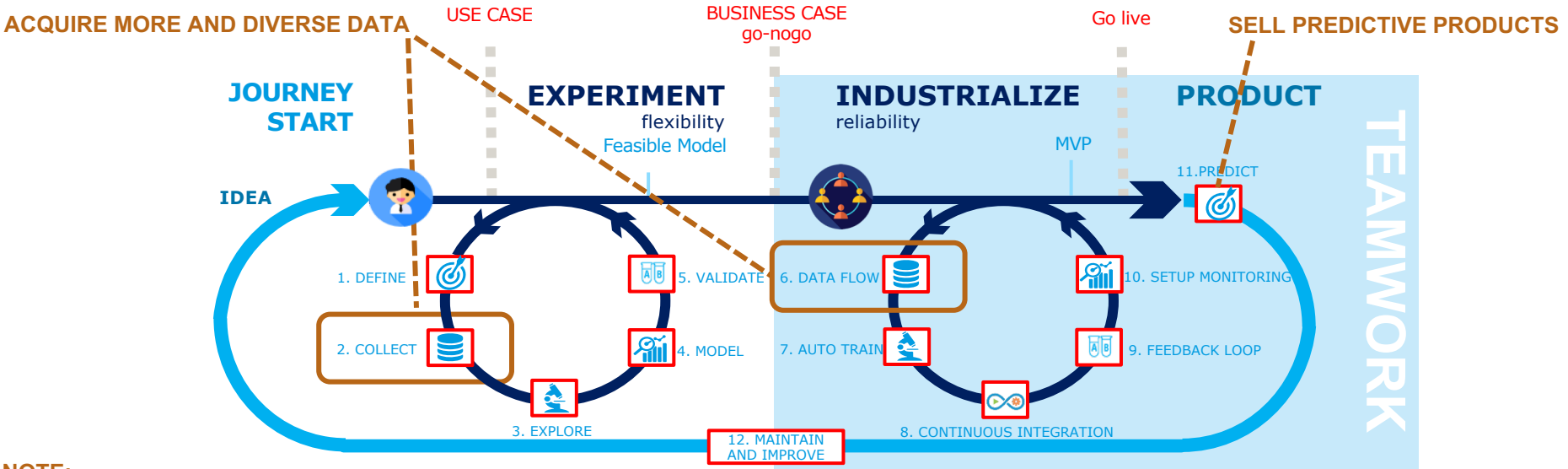
JOURNEY OF THE DATA SCIENTIST / ENGINEER

ROLE OF THE DIGITAL DATA MARKETPLACE: FOCUS IS ON INDUSTRIALIZE PHASE



NOTE:
KNOWLEDGE SHARING IN OTHER PHASES (4,7,9,10) MAY ALSO BE A GOALS OF COLLABORATION IN A MARKETPLACE COMMUNITY.

DEFINE (1-3)	EXPERIMENT (4-5)	INDUSTRIALIZE (6-10)	IMPROVE (11-12)	SHARE
What is the end purpose? How will it add value? Use case, data scope and stakeholders identification	**Collect and explore data, research data science model** Prototype, go/nogo to production	**Deliver the solution in production environment** Product GO live	**Feedback analysis, A/B testing, and performance monitoring** New product releases, business insights	

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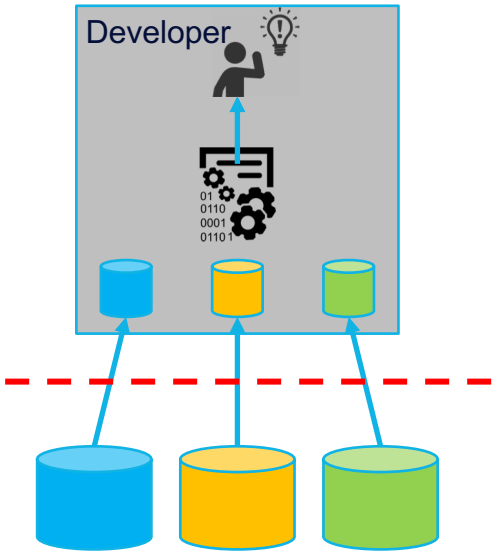
ESSENTIAL INFRASTRUCTURE ARCHETYPES

MANY VARIANTS: FOCUS ON CONSORTIUM DRIVEN APPROACH TO ORGANIZE TRUST

Centralized

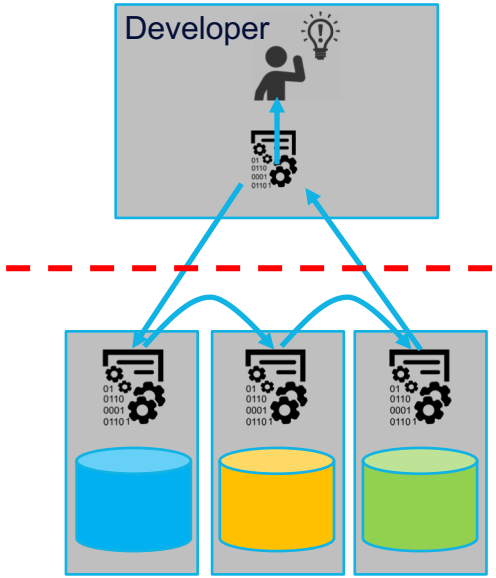
Bring data to the algorithm



Data owners

Distributed

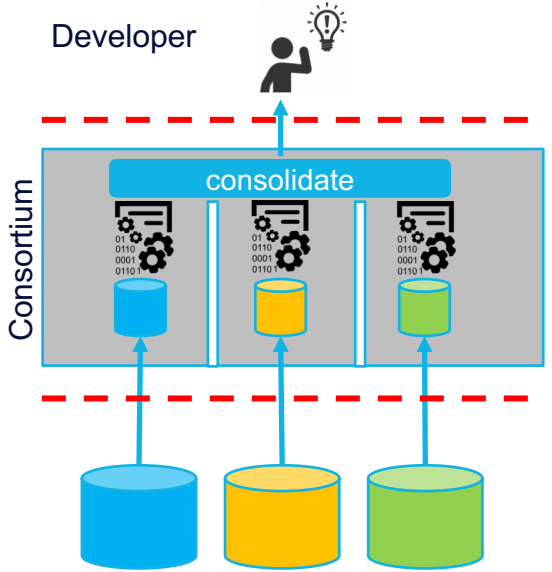
Bring algorithm to the data



Data owners

Federated

Using trusted infrastructure



Data owners

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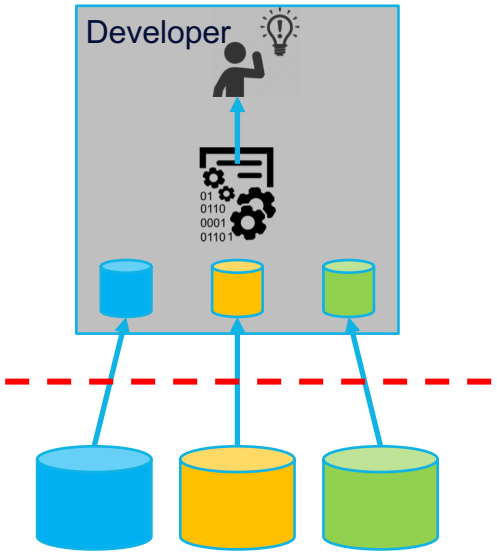
ESSENTIAL INFRASTRUCTURE ARCHETYPES

CONSORTIUM DRIVING SECURITY & INFRASTRUCTURE ARCHITECTURE

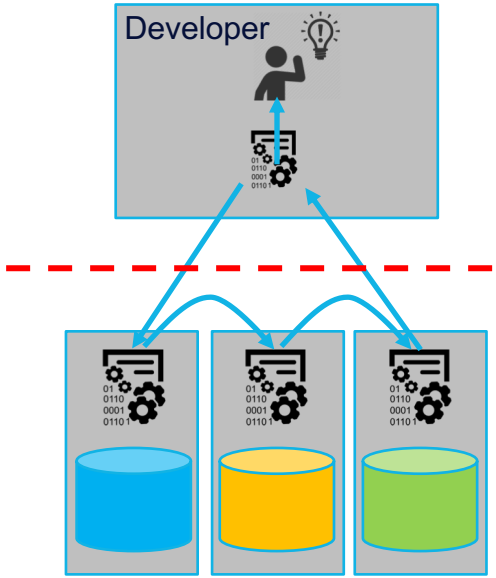
Centralized

Bring data to the algorithm



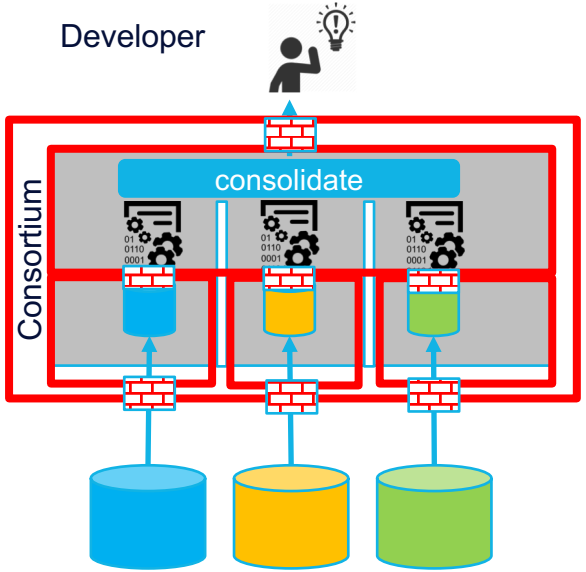
Distributed

Bring algorithm to the data



Federated

Using trusted infrastructure



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DIGITAL DATA MARKETPLACE GOVERNANCE

A FOUR STEP APPROACH:

SAE ITC ExchangeWell

Equinix/Dell/
Nokia/Ciena

COMMON BENEFIT

Define and agree common benefit no single organization can achieve on its own.

GROUP RULES

Define consortium rules considering data use, access and benefit sharing

ORGANIZE TRUST

Organize power and trust as a **means to reduce risk** for participating members

IMPLEMENT INFRASTRUCTURE

Research operationalization of **Digital Data Marketplace** concepts

SAE G-34/
EuroCAE WG-114
Applied AI for Aviation
Systems

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Innopay T.R.U.S.T# framework applied to organizing collaborative governance approaches

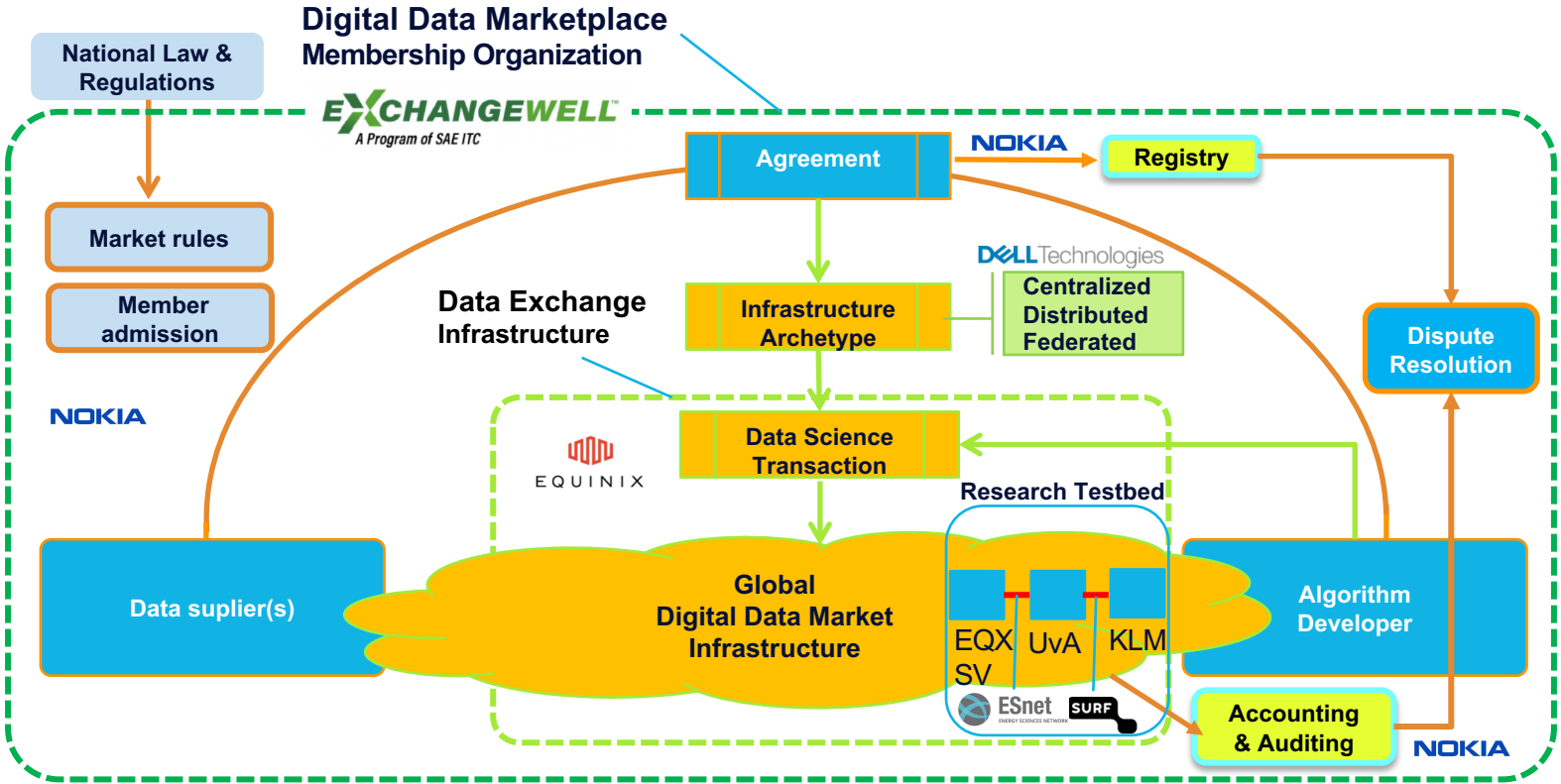
PLATFORM BRAND ORGANIZATION

TRADE	RULES	USE & STANDARDS	TECHNOLOGY
• Strategic decisions about the essence (why) of the platform • Value creation, Earning & Business models • Branding and communication • ..	• Stakeholder roles and responsibilities • Influence and decision taking • Rules of engagements • Operations & Governance • Liability, usage terms & conditions, privacy, ..	• Customer journey & experience • Propositions to supply side • Risk perception & management • Messaging / API standards • Industry standards & frameworks • Data models & semantics • Payment standards,..	• Platform Architecture • Technology stack • Software components • Scaling & performance • Security • Sourcing • Software definability,..
			
COMMON BENEFIT	**GROUP RULES**	**ORGANIZE TRUST**	**IMPLEMENT INFRASTRUCTURE**
Define and agree common benefit no single organization can achieve on its own.	Define consortium rules considering data use, access and benefit sharing	Organize power and trust as a **means to reduce risk** for participating members	Research operationalization of **Digital Data Marketplace** concepts

T.R.U.S.T. as explained in “Everything Transaction” https://www.everythingtransaction.com/en

DIGITAL DATA MARKETPLACE ARCHITECTURE

RESEARCHING IMPLEMENTATION OF ESSENTIAL ELEMENTS



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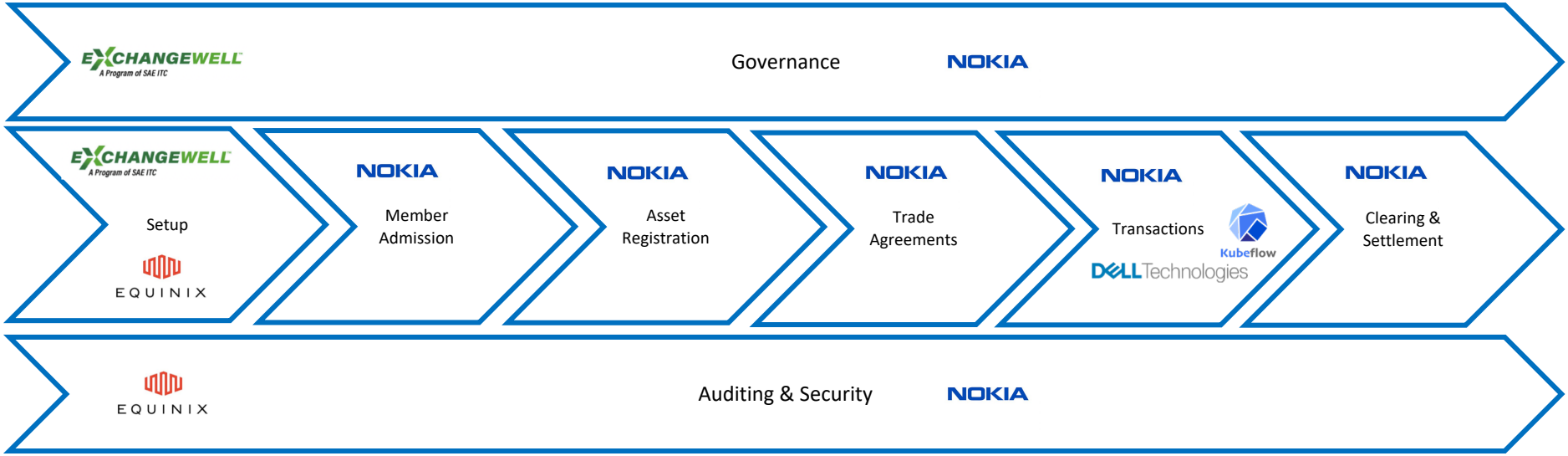
MARKETPLACE JOURNEY



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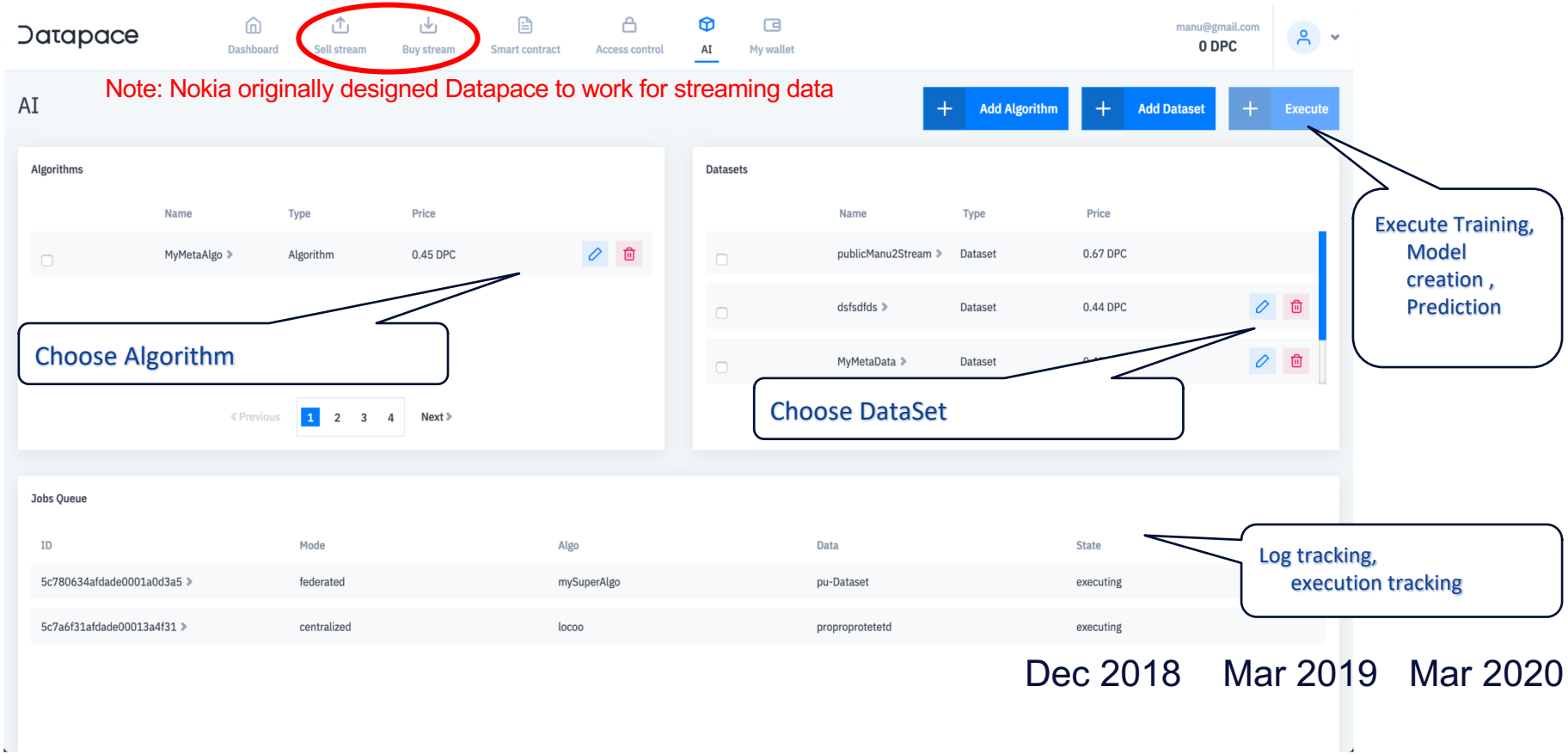
MEMBERS ALLOW EACH OTHER VISIBILITY

AI flow Data/Algorithm



Dec 2018 Mar 2019 Mar 2020

NEXT STEPS – CREATING LAB ENVIRONMENTS

SURF
FABRIC
ESnet ENERGY SCIENCES NETWORK
amsix
SAE INTERNATIONAL
DXC.technology
Xomnia
ORTEC
GO DATA DRIVEN

UNIVERSITEIT VAN AMSTERDAM

Research Track
Work on use-cases in research lab with AMdEX/UvA/Innopay
Governance, normative reasoning, secure container networking, data exchange archetypes

Industry Track
Work on use-cases in industrial lab with Equinix/Dell/Nokia/SAE-ITC
Sustainability, AI for Aviation Systems, data driven MRO, NLP log processing, multi-modal travel

Funding sources

EU
GAIA-X

National
DATA SHARING COALITION

Regional
amsterdam economic board
AMdEX THE DATA HYPERMARKET

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