

New Strategic Developments in Germany and our bilateral Cooperation with Japan

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- **Industrial Strategy 2030**
⇒ based on the proven principles of social market economy.
- **Goals:** prosperity & growth, sustainable jobs.
- **Three pillars / action items:**
 - 1) **Improve framework conditions**
 - 2) **Strengthen new technologies**
 - 3) **Maintain technological sovereignty**
- **And:** Building blocks of a European industrial policy.



2030 VISION FOR INDUSTRIE 4.0

Shaping Digital Ecosystems Globally

Autonomy

Scope for action delivers competitiveness and control of personal data in digital business models.

- Technology development
- Security
- Digital infrastructure

Interoperability

Cooperation and open ecosystems permit plurality and flexibility.

- Regulatory framework
- Standards and integration
- Decentralised systems and artificial intelligence

Sustainability

Modern industrial value creation ensures high standard of living.

- Decent work and education
- Climate change mitigation and the circular economy
- Social participation

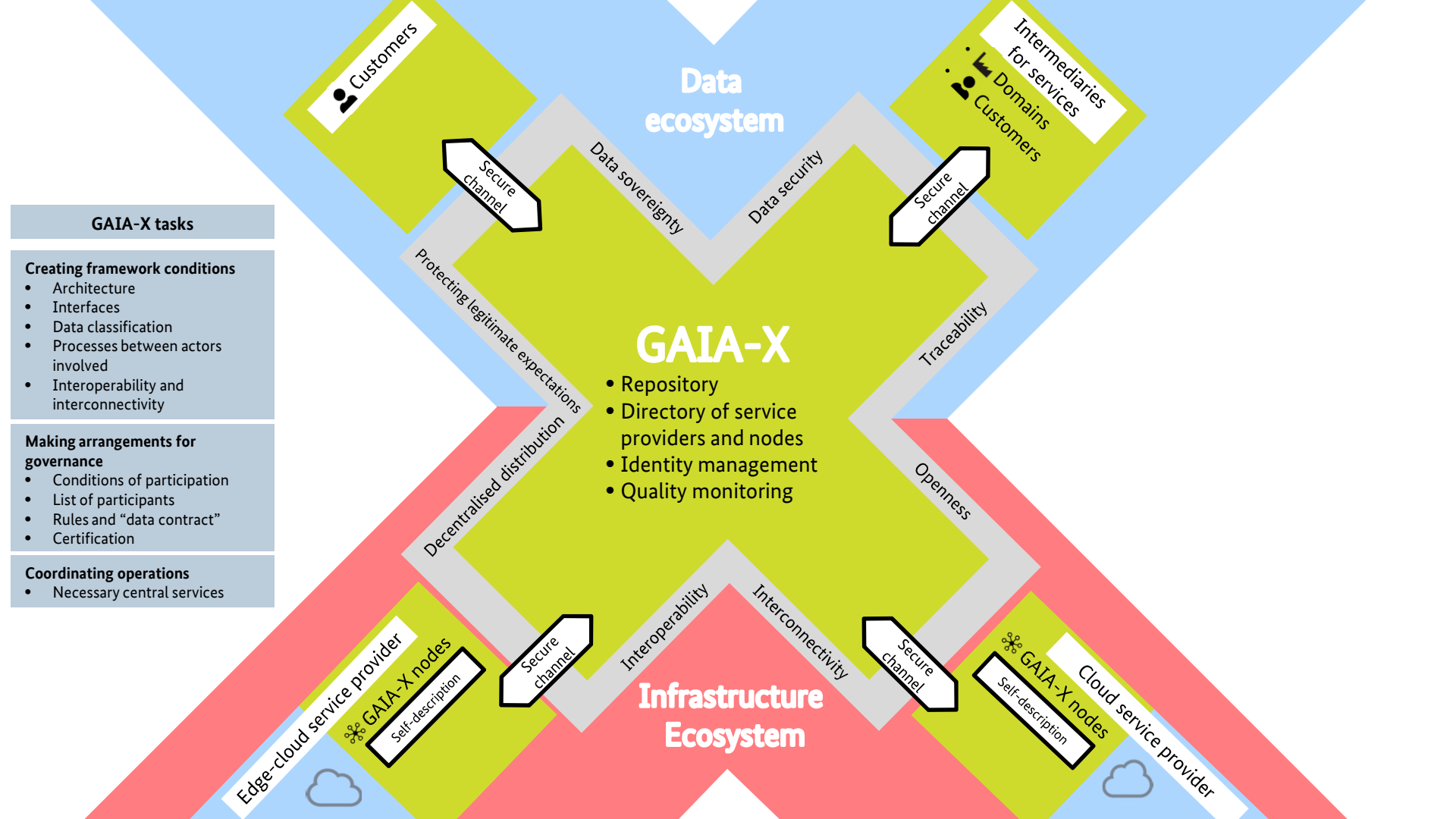




Federal Ministry
for Economic Affairs
and Energy

1. Autonomy / Sovereignty

Project GAIA-X: A Federated Data Infrastructure as the Cradle of a Vibrant European Ecosystem



Data ecosystem

Customers

Intermediaries for services
Domains
Customers

Secure channel

Secure channel

Data sovereignty

Data security

GAIA-X tasks

Creating framework conditions

- Architecture
- Interfaces
- Data classification
- Processes between actors involved
- Interoperability and interconnectivity

Making arrangements for governance

- Conditions of participation
- List of participants
- Rules and "data contract"
- Certification

Coordinating operations

- Necessary central services

GAIA-X

- Repository
- Directory of service providers and nodes
- Identity management
- Quality monitoring

Protecting legitimate expectations
Decentralised distribution

Traceability
Openness

Edge-cloud service provider
GAIA-X nodes
Self-description

Cloud service provider
GAIA-X nodes
Self-description

Secure channel

Secure channel

Interoperability

Interconnectivity

Infrastructure Ecosystem

Added value of a European ecosystem: Use cases



Industry 4.0/SMEs, Smart Living and Financial Sector

Practical implementation of Industry 4.0? A genuine feature of strength!



Smart Manufacturing

Using synergies in supplier network

Collaboration in a Connected Industry

Smart Monitoring

On the path to Industry 4.0 – how companies can achieve trustworthy cooperation

Smart Living

Secure and multi-functional cloud environment for the housing industry, to generate Smart Living solutions with demanding latency requirements

Financial Big Data Cloud

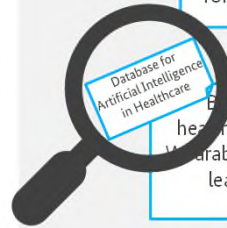
Financial Big Data Cloud strengthening the German and European financial marketplace



Healthcare

Artificial intelligence for clinical studies

KIKS



Database for Artificial Intelligence in Healthcare

Better preventive healthcare with 'Smart Wearables' – how we can learn from data

Smart Health Connect

AI-based e-triage in the emergency room



Public administration and science

Shaping sustainable cities, using Big Data from space

Space4Cities



Chatbot 24/7

Citizens' service around the clock: chatbot in public administration

Research Platform Genomics

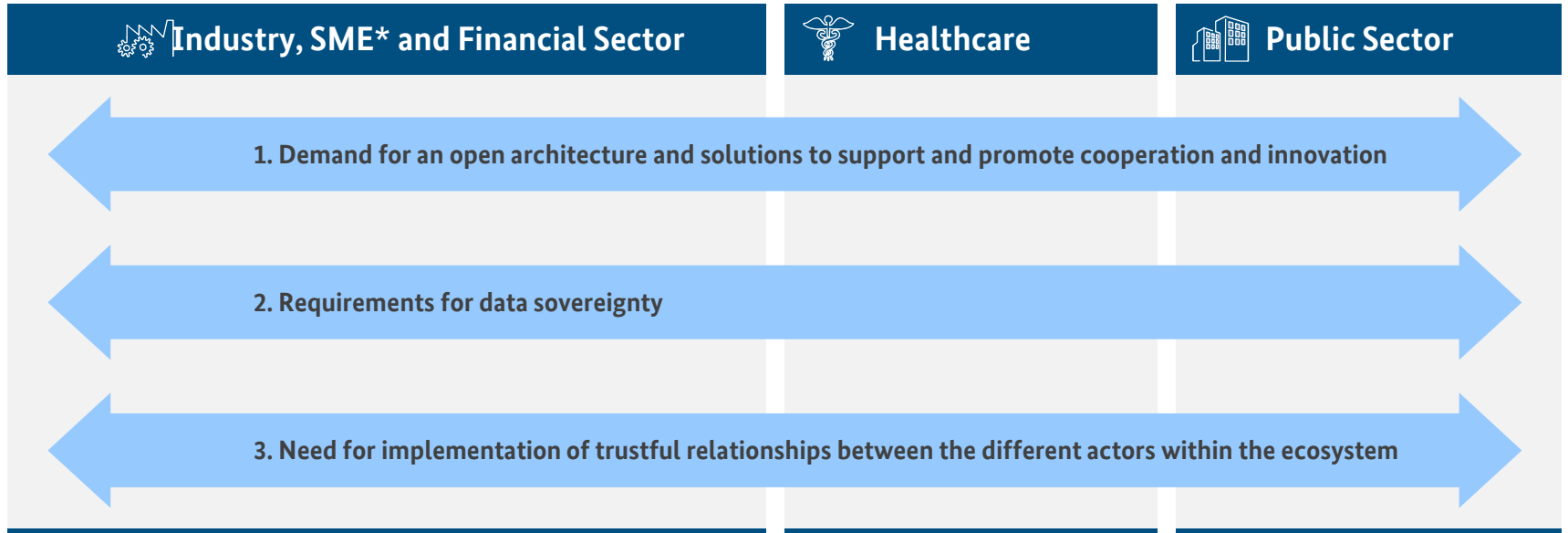
Defeating cancer – a research cloud for genome data

Quantum Computing „as a Service“

Innovation based on data: High Performance and Quantum Computing 'as a service'



Three aspects run like a thread through all 12 Use Cases

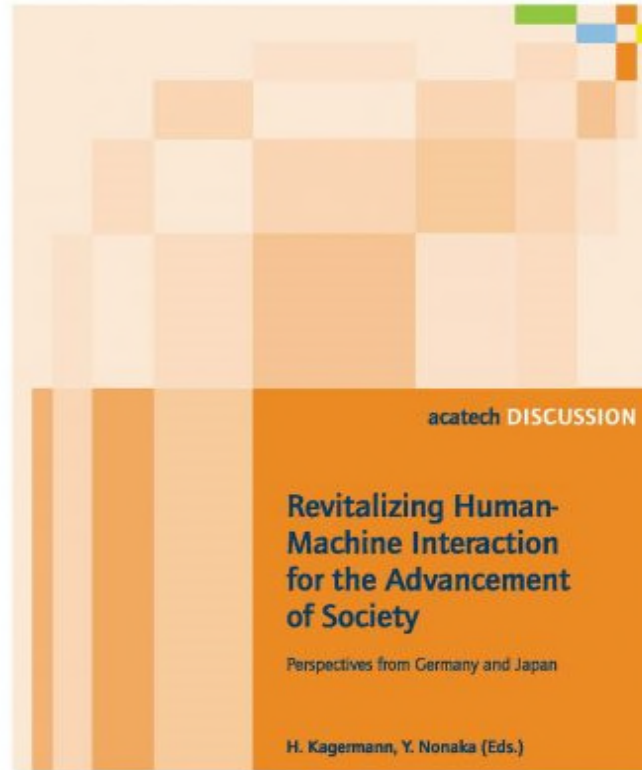


*small and medium-sized enterprises

2. Interoperability: Economic impact of B2B platforms in Germany

- Implementation of digital B2B platforms still in an early stage
 - 30% of industrial companies used at least one of two platform types (mainly transaction platform, then IoT platforms);
 - 9% use both platform types simultaneously
 - 15% plan to join platform activities by 2021
 - Platform business: 1.5% gross value added of manufacturing industry.
 - This share could rise to 2.3% by 2021 and even to 3.0% by 2024;
 - Vast majority of current platform users (who themselves are platform operators) barely integrate third-party offerings.
- ⇒ Minimal scaling possibilities
- ⇒ Interoperability absolutely necessary for scaling up

3. Sustainability – Example: A joint Japanese-German Project



Thank you very much for your attention.