Beyond Platforms.
Modern Data Sharing Architectures.

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Christoph F. Strnadl | Deputy CTO
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Software AG

Turning an organization into a «Truly Connected Enterprise»

**Design Time**

- Business transformation
  - Business Process Management
  - IT Portfolio Management
  - Enterprise Architecture Management

**APIs, integration & microservices**

- Application integration (ERP, CRM, SaaS, …)
- Hybrid Integration (on premise – cloud)
- API1 management

**Run Time**

**IoT & analytics**

- Internet of Things (IoT) & Industrial IoT (IIoT)
- Industrial Analytics

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1) application programming interface 2) software as a service
Technical Architectures

Data platforms, data spaces, and (data) ecosystems

lead concepts:

A **(product) platform** is a set of elements (components, roles, processes, relationships, and interfaces) with a uniform architecture serving an organization as the basis for products and services for different customers.

A **data space** is a coordinated set of (i) technical standards, (ii) organizational policies, and (iii) core services under a (iv) specified governance model to enable and facilitate data exchange between its participants.

An **ecosystem** is the alignment structure of the multilateral set of partners that need to interact in order for a focal value proposition to materialize.

**data warehouse (DWH)** • **data lake** • **data lake house** • **cloud data warehouse** • **data mesh** • **data hub** • **industry platform** • **one/two-sided platforms**

Source: Strnadl & Schöning (2023). Data platforms, Data Spaces, and (Date-) Ecosystems. in: Weber (Ed.), Data Governance. Springer
Organizational Architectures
Network economy dynamics through the lens of social systems theory

- Hybrid forms: Franchising • JV • quasi firms • matrix org’s
- Managed markets • EDI • loose partnerships
- Firm / company
- Keiretsu (?)
- Any capitalistic market
- High/direct
  - Coherence & coordination
  - Low/indirect
- Autonomy
- Data platform
- Data space
- (Data) ecosystem
- Network
- Market
- Web sites
- High
- Low

Coordination form key characteristics:
- Normative basis
- Lead difference
- Operating medium
- Relationships of actors
- Modus of variation
- Modus of interaction

- Firm:
  - Employment: Right to direct
  - Position
  - Power
  - One-sided dependency
  - Rational competition of programs
  - Indifference
  - Mistrust

- Network:
  - Complementing exchange
  - Relation
  - Knowledge
  - Mutual dependency
  - Temporal competition to be faster
  - Interest
  - Trust

- Market:
  - Contract property rights
  - Price
  - Money
  - Independent
  - Social competition regarding preferences
  - Indifference
  - Opportunism

Potential Strategies & Tactics

«Strategy without tactics is the slowest route to victory. Tactics without strategy is the noise before defeat»¹

Source: Strnadl & Schöning (2023). Data platforms, Data Spaces, and (Date-) Ecosystems. in: Weber (Ed.), Data Governance. Springer

¹) Sun Tzu. The Art of War.