From Silos to Synergy

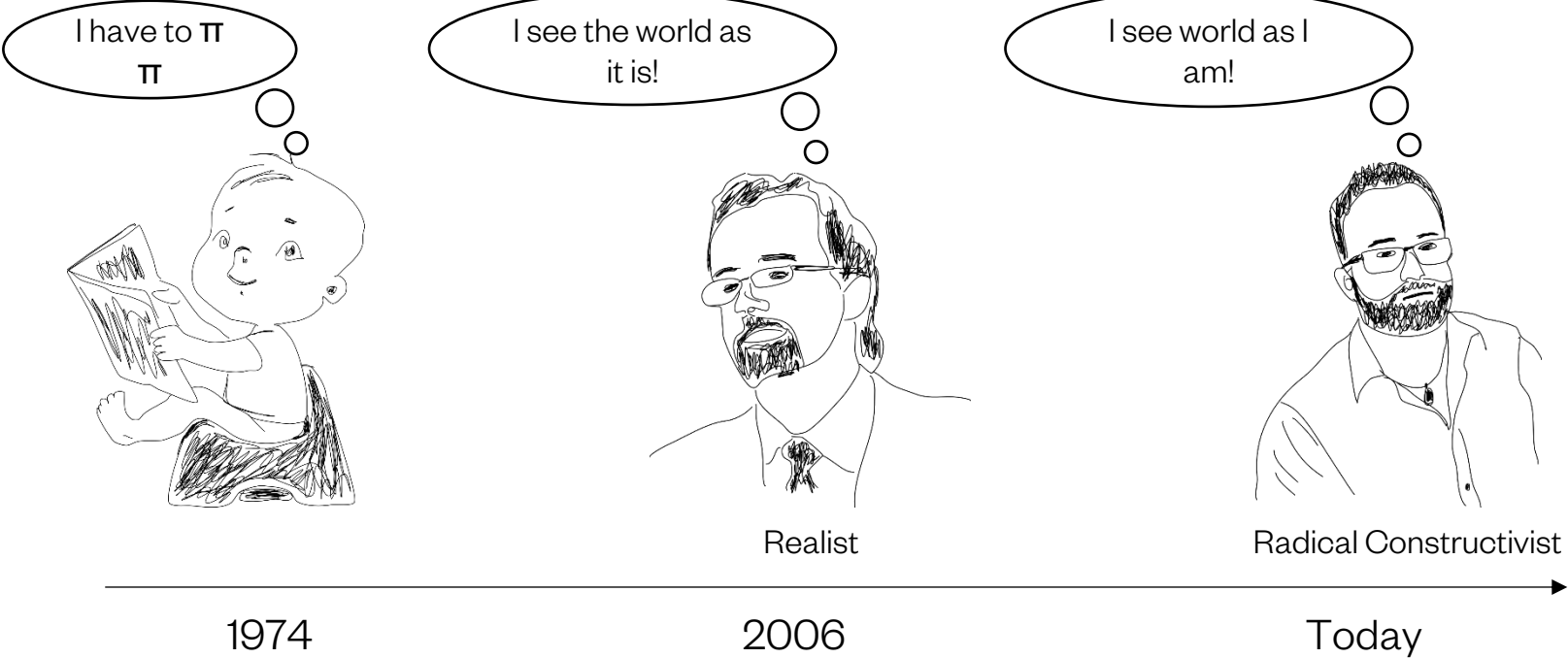## Data, AI and Collaboration as disruptive keys to a successful future?

Bremen, June 13th, 2024

Conny Dethloff, Organisationsdesigner

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Conny Dethloff – My Journey of Understanding

I have to π π

I see the world as it is!

I see world as I am!

Realist

Radical Constructivist

1974

2006

Today

Logbook of my journey of understanding: https://blog-conny-dethloff.de/

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What questions am I answering today?

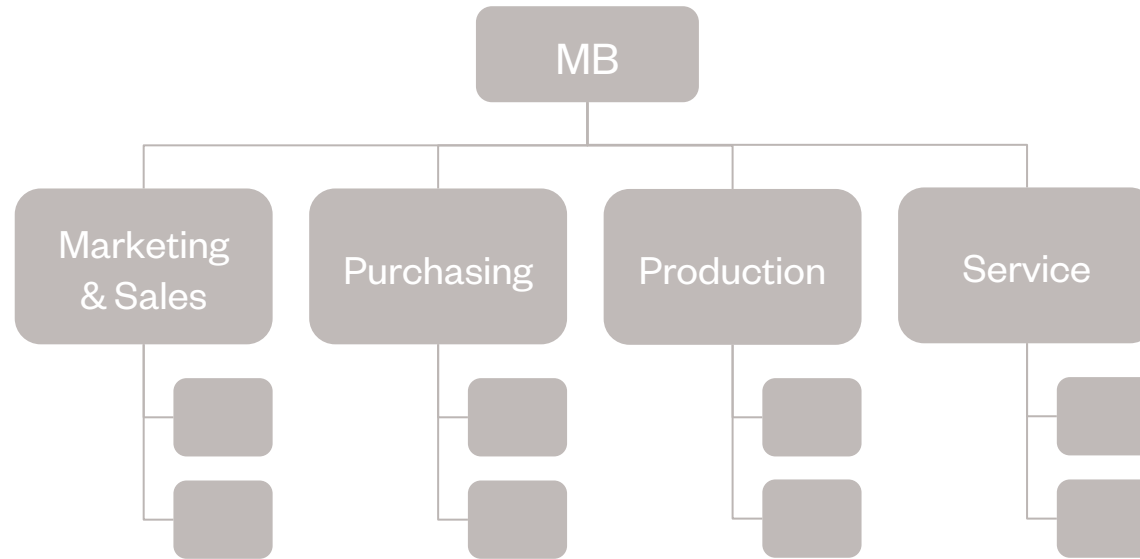|	
1	Why are many organisations organised in functional silos?
2	Which type of organisation is more suitable for today's markets?
3	How can data be used to play markets better?

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Markets have changed from sellers' markets to buyers' markets.

Locally saturated markets

Globally unsaturated market

Globally saturated market

1900　　　　1970　　　　2012

Modified Taylor tub by Gerhard Wohland

Market complexity level

Company complexity level

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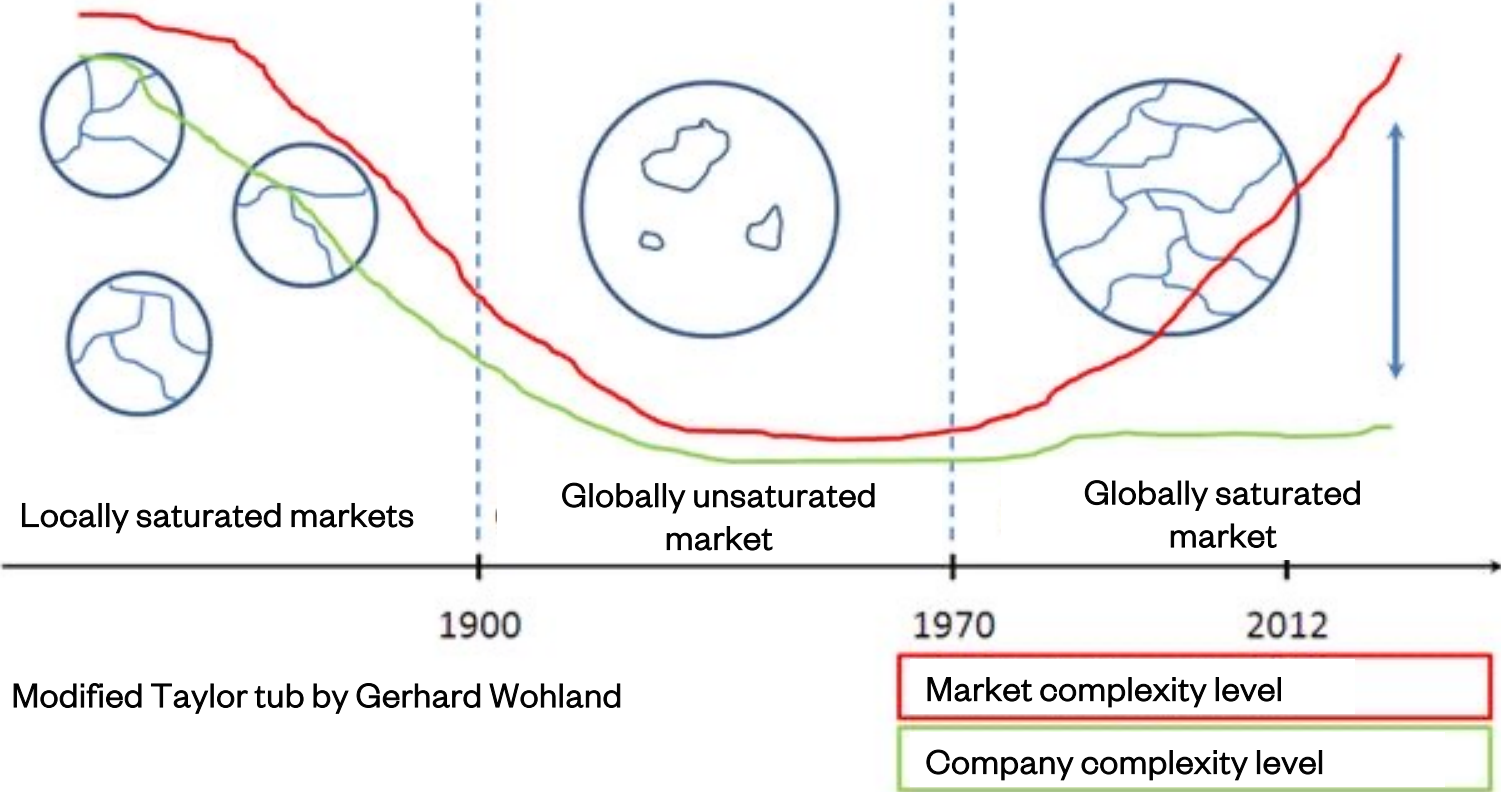
Seller's markets ➜ Companies are designed with local efficiency as a top priority, ...

Existing premise: If local optimisation is achieved in all functional areas, this is good for the company and for customers.

... what a consistent internal orientation promotes AWAY from the customer ➔ The „death" in buyers' markets

Value Stream

Predetermined breaking points
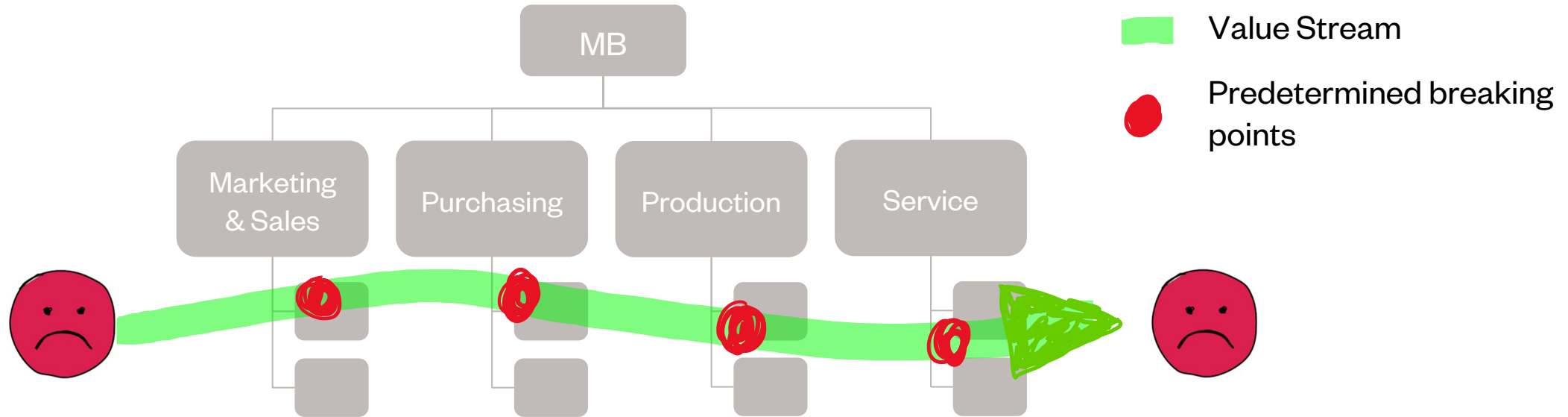
New premise: The closer all functional areas in the company operate to the local optimum, the less value the company delivers to markets.
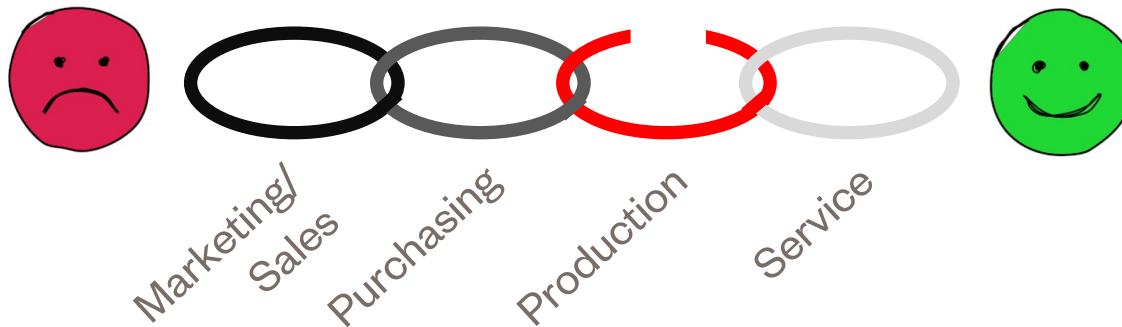
Companies are still in the „Cost World" and should embark on the journey to the „Throughput world".
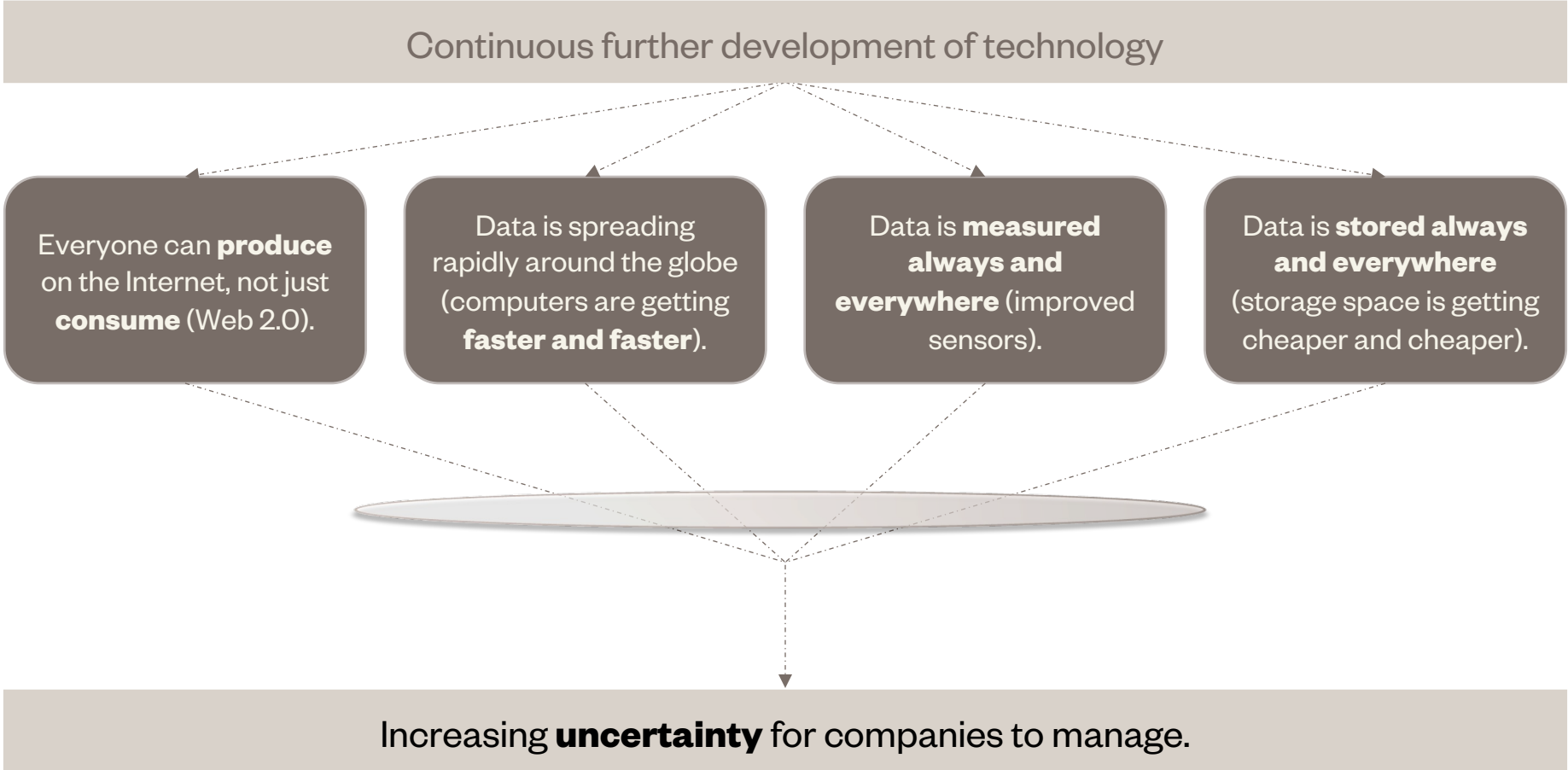
Cost World
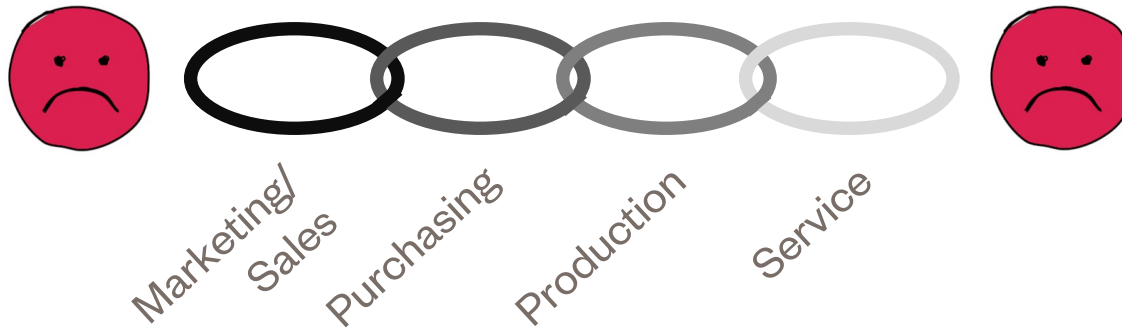
- Local efficiencies are key
- Focus on local optimisation of each link in the chain.
- Company performance is managed according to the weight of a chain.
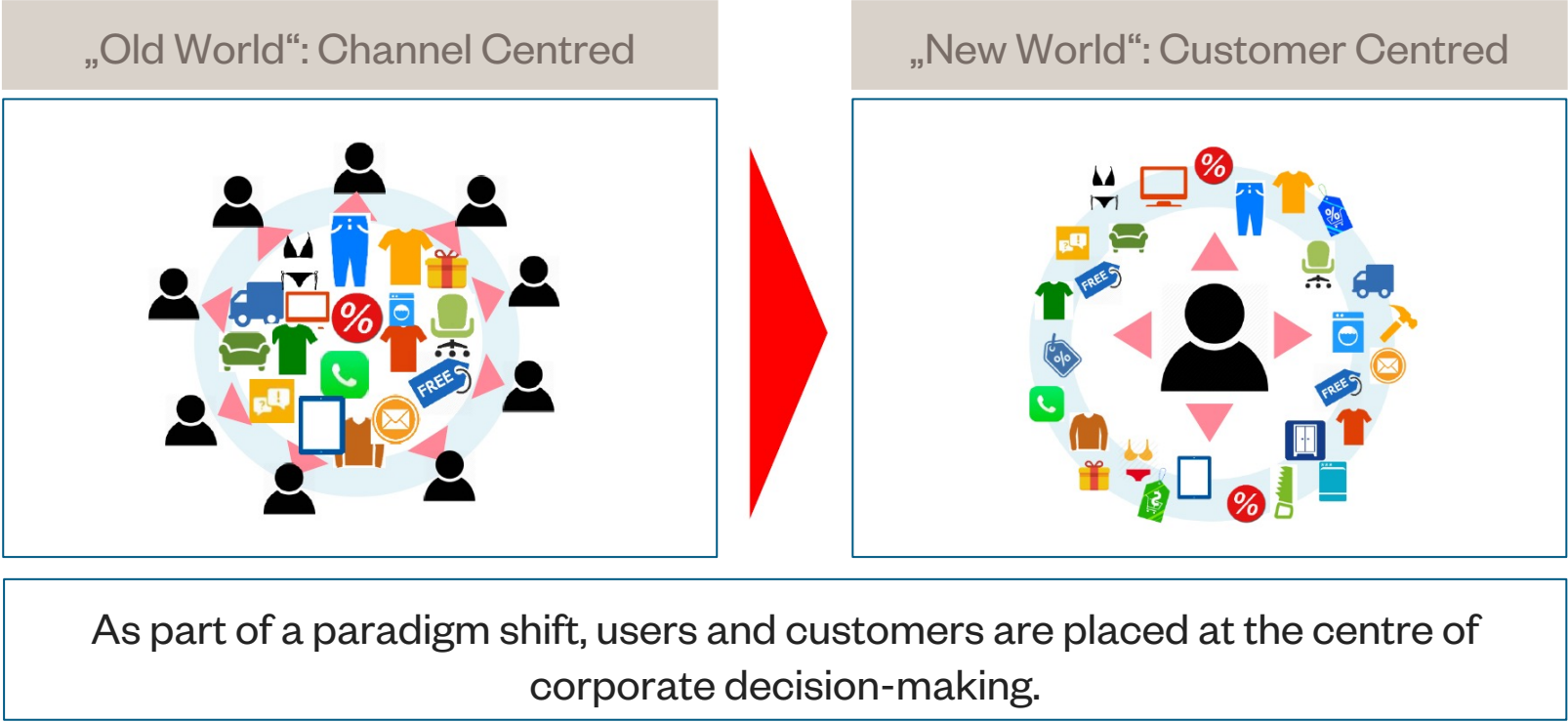
Throughput World

- Local efficiencies have a toxic effect.
- Focus on the 'weakest' link in the chain.
- Company performance is managed according to the strength of a chain.

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More data means that uncertainty in decision-making situations increases rapidly.

Continuous further development of technology

Everyone can **produce** on the Internet, not just **consume** (Web 2.0).

Data is spreading rapidly around the globe (computers are getting **faster and faster**).

Data is **measured always and everywhere** (improved sensors).

Data is **stored always and everywhere** (storage space is getting cheaper and cheaper).

Increasing **uncertainty** for companies to manage.

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Users and Customers at the centre of all decisions.

„Old World": Channel Centred	„New World": Customer Centred

As part of a paradigm shift, users and customers are placed at the centre of corporate decision-making.

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In order to utilise data for decision-making, a closed loop between markets and company must be established and practised.
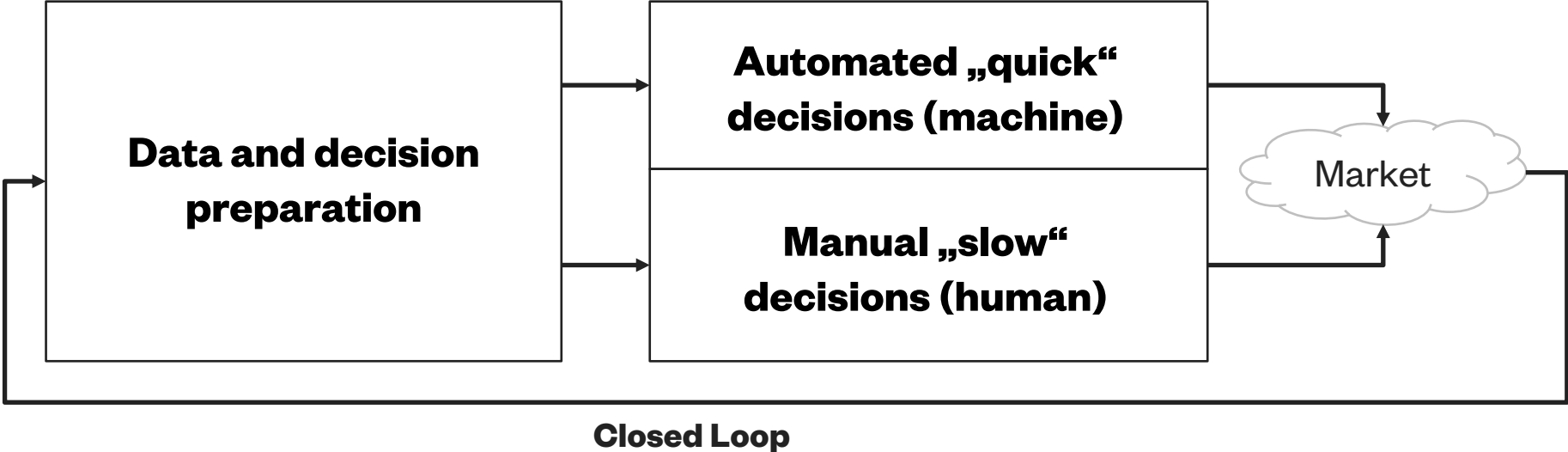
Markets

Company

Act & React
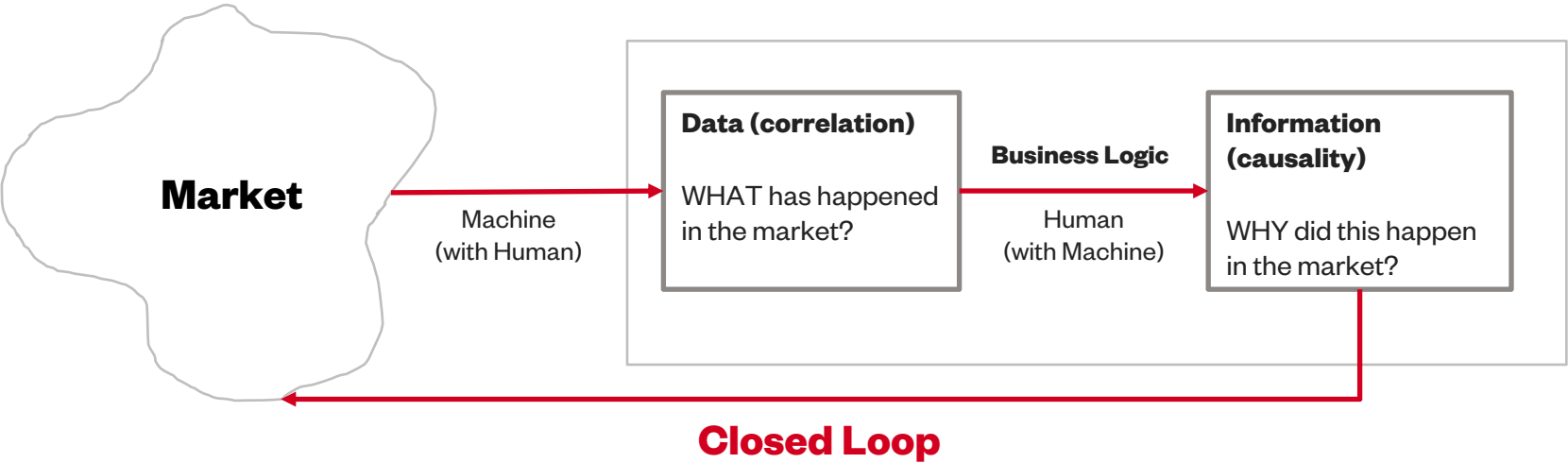
Observe & Reflect

Decide

Gain insights
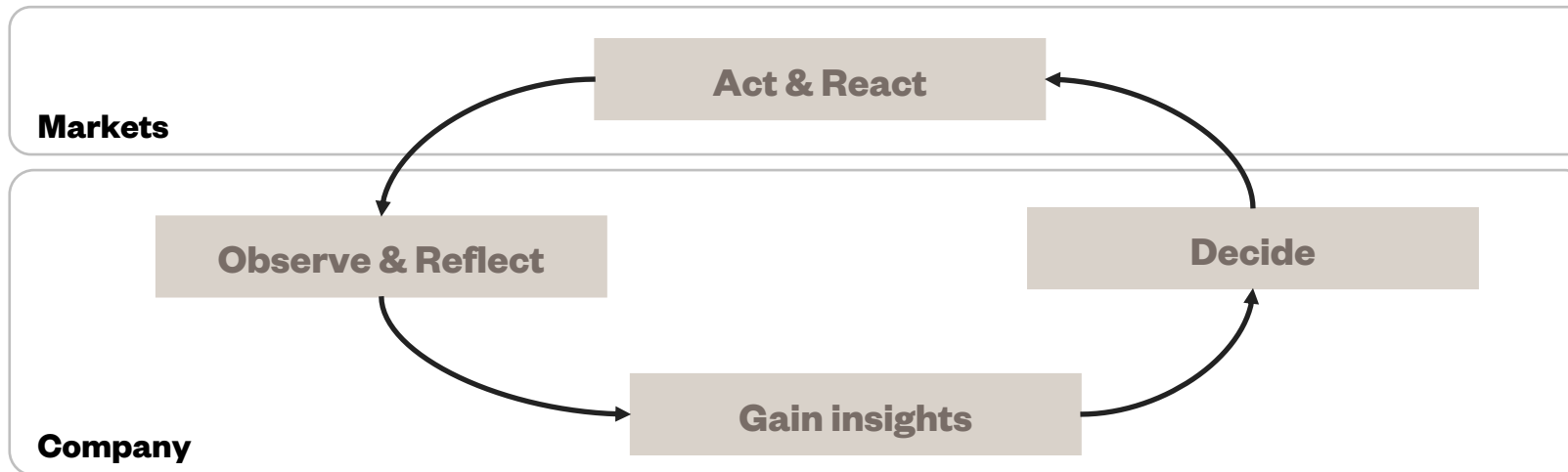
Companies must not only react to the market, they must also shape it. Only then will they remain viable.

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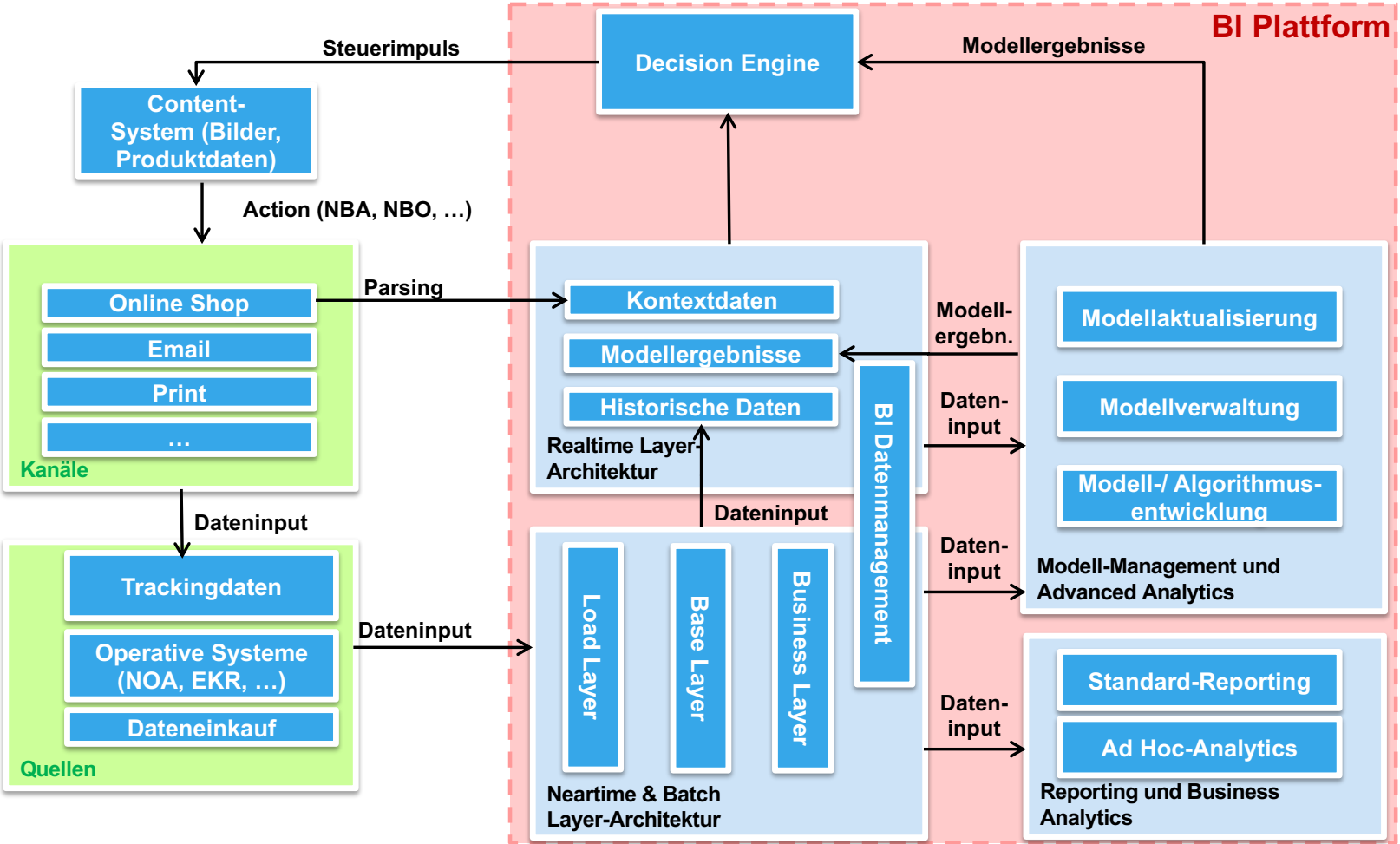# Companies need a holistic business intelligence system architecture to realise the closed loop.

Closed Loop

Attention: AI and Data only know the WHAT, not the WHY.

Market

Machine
(with Human)

Data (correlation)

WHAT has happened
in the market?

Business Logic

Human
(with Machine)

**Information
(causality)**

WHY did this happen
in the market?

Closed Loop

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Example of a company-wide BI system architecture using the example of OTTO (as of 2014)

BI Plattform

Steuerimpuls → Decision Engine ← **Modellergebnisse**

Content-System (Bilder, Produktdaten)

Action (NBA, NBO, …)

Kanäle
- Online Shop
- Email
- Print
- …

Parsing →

Kontextdaten
Modellergebnisse
Historische Daten

Realtime Layer-Architektur

Modell-ergebn.

Modellaktualisierung
Modellverwaltung
Modell-/ Algorithmus-entwicklung

Modell-Management und Advanced Analytics

Dateninput

Quellen
- Trackingdaten
- Operative Systeme (NOA, EKR, …)
- Dateneinkauf

Dateninput →

Dateninput

Load Layer — Base Layer — Business Layer — BI Datenmanagement

Neartime & Batch Layer-Architektur

Daten-input

Daten-input

Standard-Reporting
Ad Hoc-Analytics

Reporting und Business Analytics

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The closed loop between companies and markets is realised with the BI system landscape.
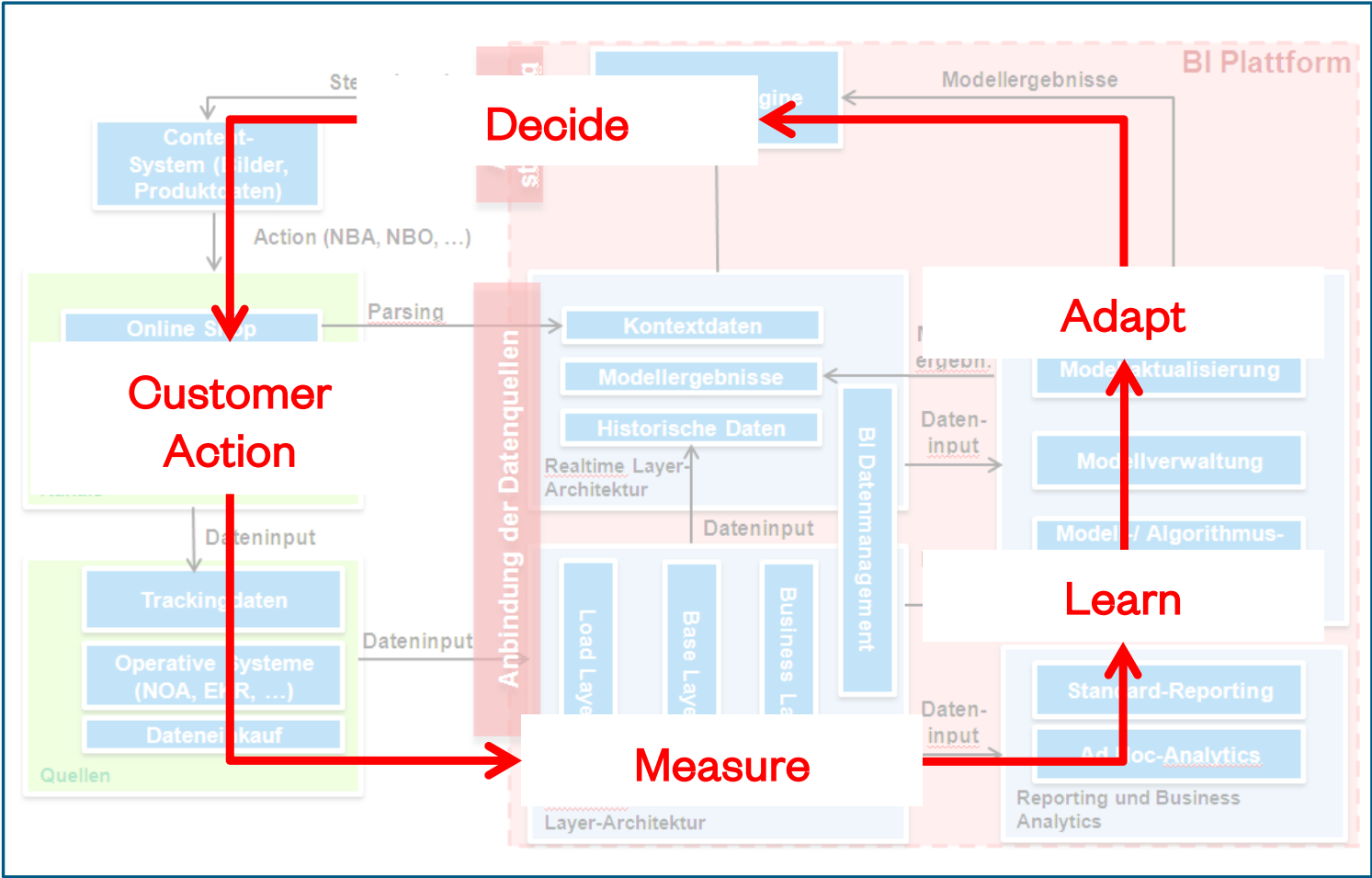
# An exemplary data use case from OTTO: Session typology (as of 2014)

Every Use Case is based on a Hypothesis

The motivation that a customer has for visiting our channels (Browsing, Direct Purchase,...) significantly influences possible offers to the customer on the part of OTTO, which then lead to more sales with the customer.

Schematic Data Flow

Description of the Data Flow

1 A table of customer click paths is provided from past tracking data and persisted in the Neartime & Batchlayer.

2 The click paths are clustered into session types as part of a model. The input for this is the previously agreed conventions on session types (e.g. Which click paths characterise a browsing session?) The output is a table of session types. This table is persisted in the real-time and near-time & batch layer.

3 When customers move around the online shop, content is displayed to the customer/user or actions are triggered depending on the current session type (comparison of context with the session table).
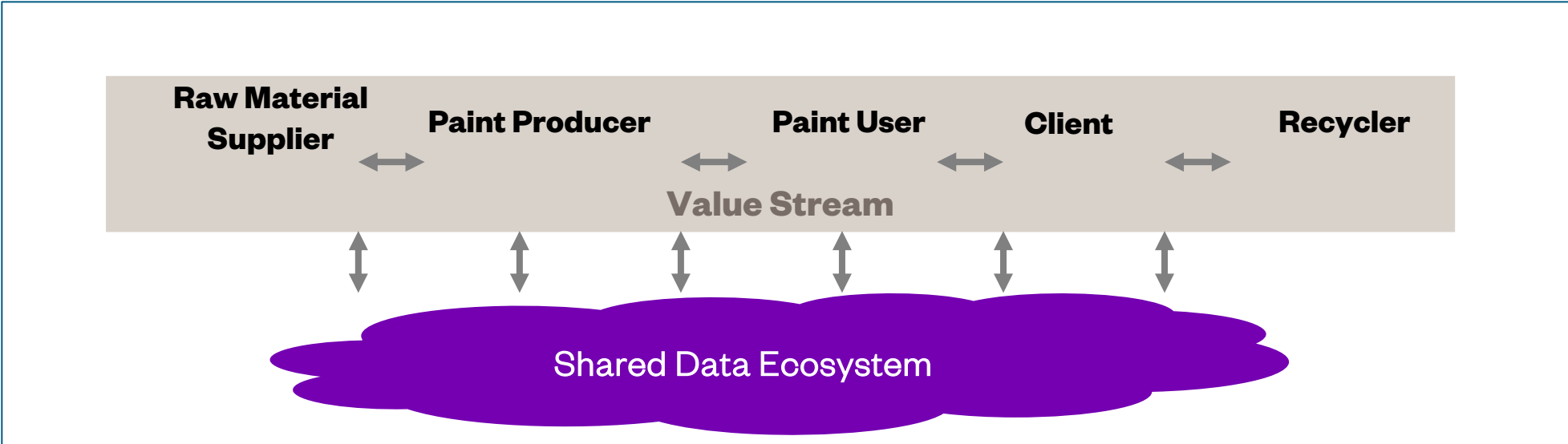
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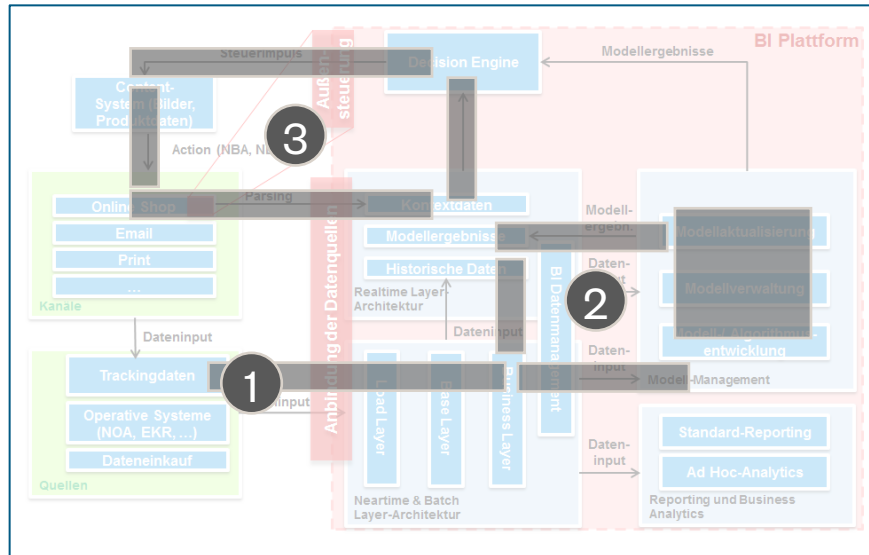
A possible data use case in the paint and coatings industry.

Customers do not want to calculate exactly how much colour they need of which type. They simply want to describe exactly what they want to do and then it will suggest how much of which colour they need.

Customers want to know what components make up the paint or varnish they buy, where it was produced and how it can be recycled.

Value Stream and Shared Data Ecosystem

Raw Material Supplier ↔ **Paint Producer** ↔ **Paint User** ↔ **Client** ↔ **Recycler**

Value Stream

Shared Data Ecosystem

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3 success-critical factors for data-driven business models

1 Value stream driven organisational design beyond company boundaries (partner networks)

2 Cross-company data exchange extablished by a holistic BI system architecture

3 Thinking in terms of data use cases in order to address and serve customers in a personalised and individualised way

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