



Data Valuation

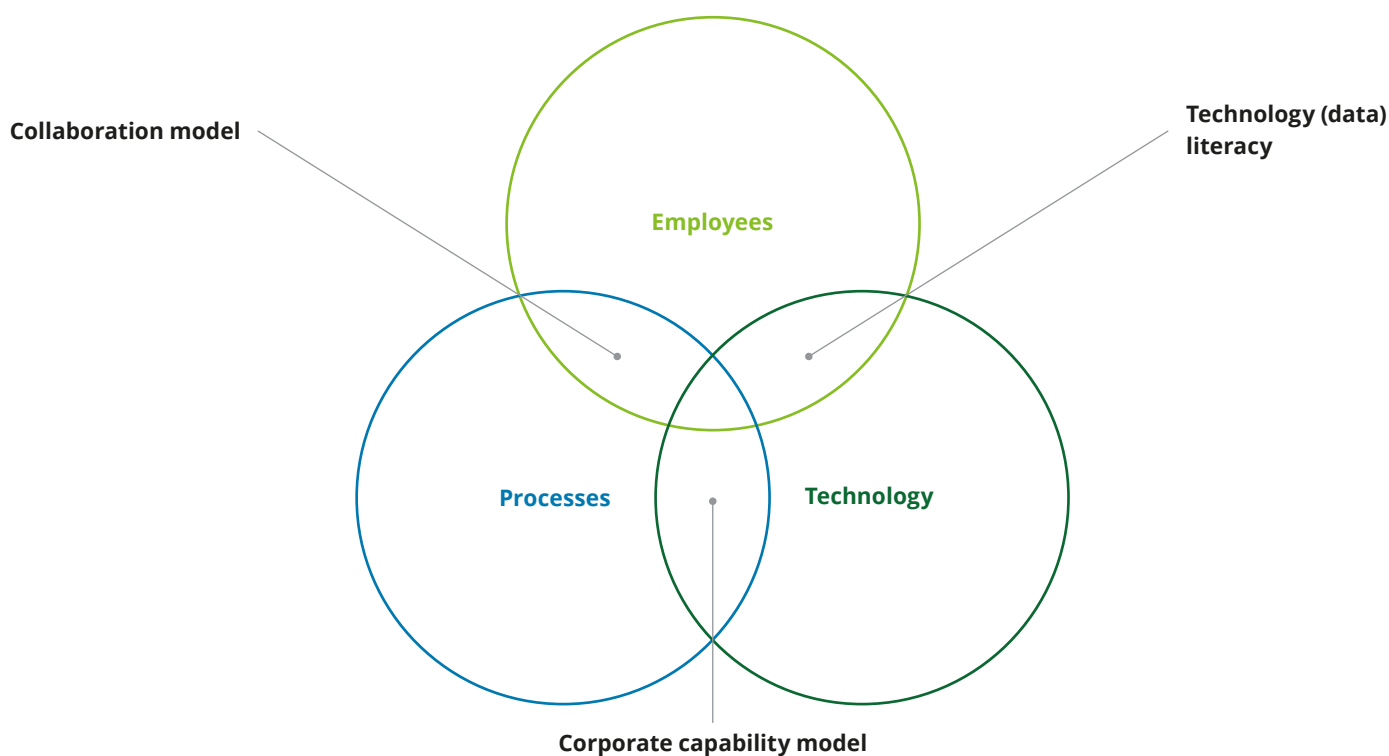
The Game Changer for
Achieving Business Impact

July 2023

Introduction

Modern enterprises leverage data and AI to keep up with the high dynamic of an ever-changing business world. On the way to achieve that goal almost all of our clients face the same challenge: To transform their strategy, operating model and way of doing business such that data is used to drive the corporate capabilities used in processes that generate value.

One of the recent concepts of achieving this is the data mesh, that shifts responsibilities towards the business to produce data products that are standardized in their creation as well as in their access. The data mesh paradigm, however, is not a purely technological invention, but rather a socio-technological endeavor that brings together technology, employees, and corporate processes. The classical Venn diagram of these three is given below. We have added the usually omitted descriptions of the links between the adjacent pairs: Employees possessing an intuition for the capabilities and limitations of technology ("technology literacy"), the enterprise being able to use technology in processes ("capability model") and the employees working together along the process landscape ("collaboration model").



Achieving literacy, data capabilities and collaboration are at the core of a successful transformation. Here, Deloitte presents a series of papers that explain key aspects how to achieve these three along the transformation towards becoming a data driven enterprise. The series is structured into strategic, tactical and operational aspects of data driven work.

Beginning with the strategy framework we are working along, we introduce our orchestrator for the data transformation journey. As the major tactical pillars of the transformation we focus on the required governance as well as the data-centric process landscape in two further articles.

These concepts are underpinned by operational tools such as data catalogs, data quality and IT platforms which we are also covering in an article. Since these developments need to be sustained by specialized change management, a separate article is dedicated to this topic.

The journey to a data-centric enterprise is a complex transformation that continues to bring new challenges and insights. We will continue to expand and add to our series of articles.

What to take home

- Maximizing the impact of AI and data on your enterprise's business performance hinges upon the precise valuation of your AI and data assets and the effective management of their value-driven nature.
- A profound comprehension of the complicated dynamics among data use cases, asset quality, and interdependencies with other assets is paramount for accurate data asset valuation and the achievement of successful data monetization.
- A data valuation cockpit assumes a pivotal role as a foundational tool for strategic, tactical, and operational decision-making within your data practice, empowering you to make informed choices at every level of your enterprise.

Monetizing AI and data is business-critical, yet the payoff keeps falling short

Unlocking the full potential of AI and data holds the key to thriving in the fiercely competitive landscape of the modern enterprise. While enterprises worldwide recognize this, their efforts to capitalize on these investments often fall short of expectations. The transformation of data, along with its assets of data products and AI models, into tangible business value with a positive return-on-investment (ROI) remains an elusive goal. Failing to master the monetization AI and data places enterprises at grave risk, as the absence of this capability threatens their very existence in the marketplace that is based on a competitive digital edge, especially as we march towards an increasingly digital future.

Many enterprises find themselves adrift in the vast expanse of AI and data transformation, burdened by the weighty anchor of sunk costs and grappling with the formidable challenges of complexity. Despite establishing efficient data management practices, **enterprises encounter profound difficulties in effectively harnessing their AI and data assets.** These enterprises commonly lack the essential expertise required to address fundamental questions concerning the efficacy of their AI and data endeavors:

- **Which AI and data assets are pivotal to business performance?**
- **Which AI and data initiatives, together with their corresponding investments, promise the most substantial return-on-investment (ROI)?**
- **How can enterprises credibly demonstrate the tangible impact of AI and data on business performance over time?**

The absence of satisfactory answers to these pivotal questions renders an enterprise's AI and data portfolio to an opaque "black box" that inadequately augments predictive capabilities necessary for optimizing business performance. Consequently, substantial investments in AI and data are made with insufficient insights, leading to a persistently negative business performance and, inevitably, a failure to differentiate oneself from the competition.

How to unveil the “black box”

The valuation of AI and data assets – from here on only data assets – holds the key to unveil the business mechanics locked within the enigmatic “black box”, offering a singular numerical depiction of data’s impact on business performance. Precisely evaluating the worth of such assets demands a holistic comprehension of the underlying value drivers and their intricate interdependencies. Deloitte’s experience reveals that the value of a data asset is influenced by three critical elements: the **value of a data use case**, the **interdependency** between data assets contributing to the realization of selected data use cases, and the **quality** of a data asset.

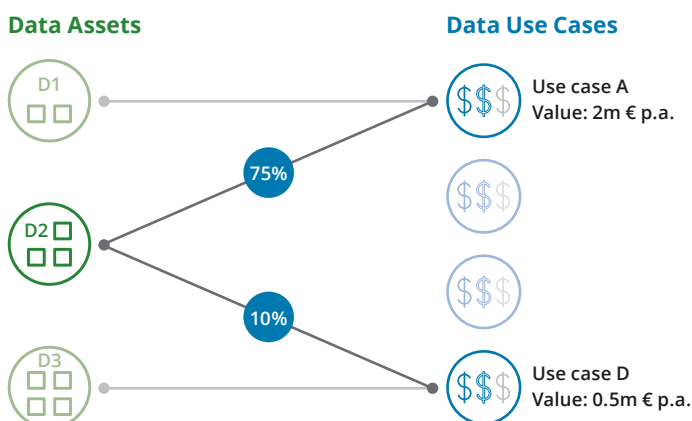
- (1) A **data use case** encompasses a distinct scenario wherein data is meticulously collected, processed, and analyzed to accomplish specific objectives or tackle prevailing challenges. The valuation of such use cases necessitates a comprehensive assessment of various factors, including the potential for revenue generation, cost savings, realization costs, and alignment with the overarching goals of the enterprise.
- (2) Enterprises rely on an array of diverse data assets procured from both internal and external channels. To navigate the labyrinthine interdependencies among these assets and their associated use cases, the utilization of a **data asset interdependency** matrix assumes paramount importance in the valuation process. This matrix facilitates a systematic evaluation of the value proposition offered by each data asset in relation to specific use cases, thereby illuminating their potential business impact through discernible and interconnected linkages.

- (3) The **Data asset quality** describes the extent to which a given data asset meets the necessary requirements of a particular use case or a set of use cases. Factors such as completeness, data validity, and timeliness exert substantial influence on the overall data quality and its efficacy in bolstering the performance of relevant use cases. Insufficient data quality can significantly undermine the effectiveness of use cases, thereby compromising the overall business case and potentially resulting in considerable financial losses.

By taking these three essential value drivers into account, the enigmatic “black box” can be unraveled and transformed into an illuminating “white box”. This transition sheds light on the intricate interplay between data assets and use cases, clarifying their collective contribution to the overall performance of the business.

In addition to comprehending the fundamental factors that exert influence, the attainment of successful data monetization hinges upon conducting data valuation with a diligent focus on both the broader context and the individual data assets. Deloitte presents three relevant distinct perspectives for the effective management of data value, each centered around a crucial business concern.

Harnessing the capabilities of the three components within a data valuation cockpit presents a formidable mechanism for proficiently overseeing the evolution of data value. These components offer a structured approach to address inquiries, thereby supporting data monetization endeavors significantly. Moreover, they allow for tailored content delivery that caters specifically to the unique requirements of the intended audience, from a strategically oriented CDO to an operative Data Steward.

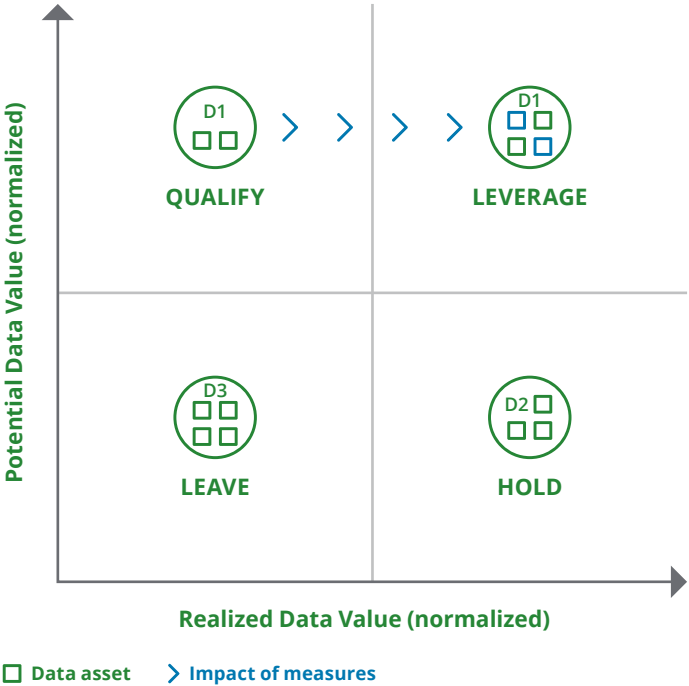


What is the value proposition of each of my data asset to my selected use cases?

Value Contribution Plot

Through a meticulous evaluation of the value contribution rendered by each data asset in driving the attainment of use case objectives, the ability to quantify the overall impact on business performance emerges. The value encompasses the cumulative and proportionate contributions to the value derived from the chosen use cases.

Target Audience: Data Product Teams, Business Division Leads, Data Stewards



What is the potential and realized value of my data asset portfolio?

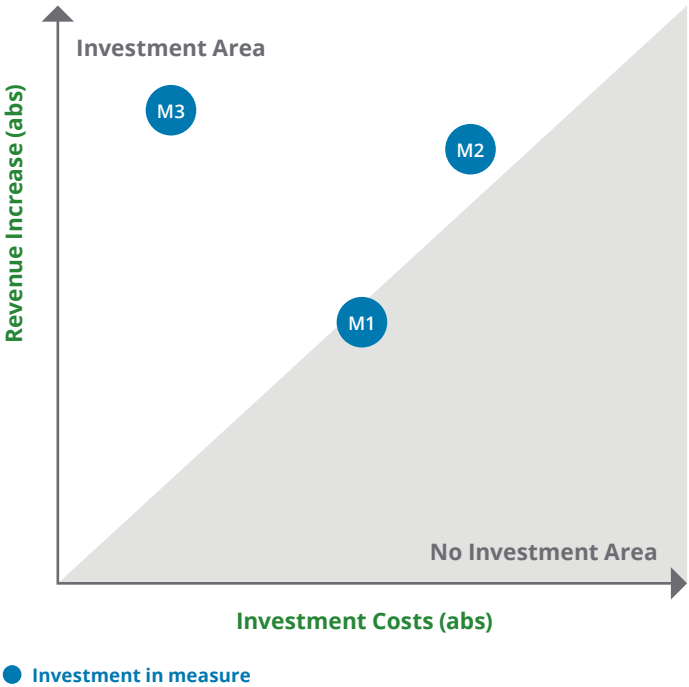
What data assets do I focus for in-depth analysis?

Portfolio Plot

The portfolio plot serves as depiction of the inherent value potential of data assets in relation to their actualized value. It considers the present situation as well as potential future scenarios, including variations in asset quality.

This plot supports the identification of suitable management options for each data asset, enabling prompt decision-making regarding actions such as qualifying or retaining the asset. Moreover, it facilitates a clear visualization of the specific transformations that can arise from individual or collective data investments, ultimately elucidating the subsequent impact on the overall value of the portfolio.

Target Audience: CAIO/CDO/CIO, Data Practice Lead



What investment should I prefer across all data assets?

Investment Decision Plot

Implementing measures to improve a particular data asset not only benefits that specific asset but can also trigger cascading effects on multiple data assets and their overall quality. To make well-informed investment decisions, it is imperative to adopt a comprehensive perspective that encompasses the anticipated impact on both revenue and costs. This consolidated outlook allows for a holistic evaluation of the potential benefits and expenses associated with data asset enhancement initiatives.

Target Audience: CAIO/CDO/CIO, CFO, Data Practice Lead

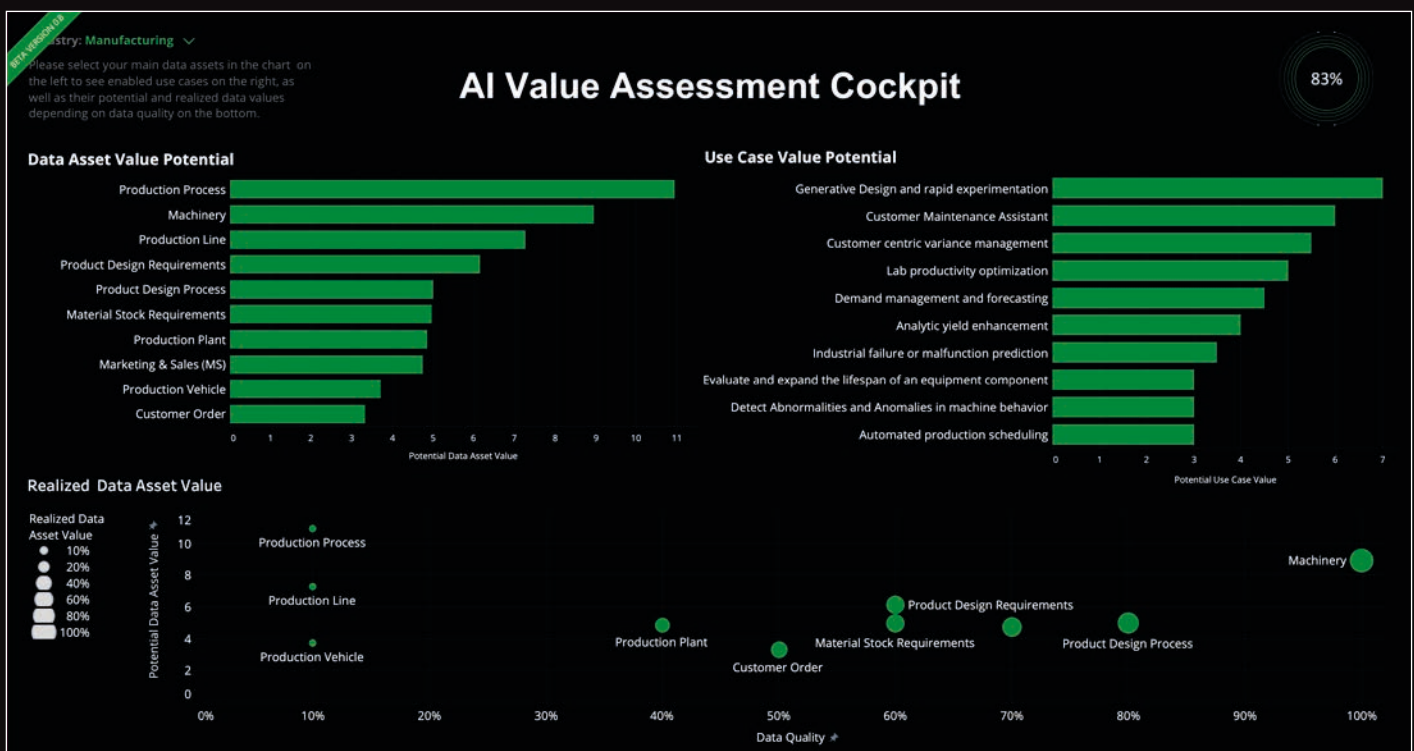
Unlocking Effective AI & Data Monetization with AIVA

To kick-start the data valuation process on the right foot, Deloitte offers the Artificial Intelligence and Data Valuation (AIVA) Framework, which encompasses a wide range of features, including:

- (1) A comprehensive and user-friendly data valuation cockpit dashboard that can be flexibly tailored to the enterprise's distinctive needs, while seamlessly incorporating the valuation logic and an extensive list of views.
- (2) An operating and governance model that facilitates the application of data valuation to the organization's data assets and the seamless integration of valuation outcomes into both business and data operations.

- (3) An industry-specific repository of pre-valued use cases and data assets meticulously curated based on Deloitte's industry expertise and extensive project experience. This resource expedites the valuation process, expediting the organization's journey.

When adeptly customized to align with the enterprise's specific requirements, the AIVA Framework delivers a clear and practical approach for operationalization, equipped with essential components to ensure the rigor and practicality of the valuation process. By leveraging Deloitte's AI and data Valuation Framework, clients gain the empowering ability to accurately assess the value of their data assets, thereby enabling informed decision-making regarding their strategic utilization.



Further references towards lifting the data value

Unveiling the black box through data valuation is a crucial step, but it alone does not accomplish the task of data monetization. Drawing from Deloitte's extensive experience, key considerations emerge for enterprises aiming to successfully monetize data and realize the intended financial impact:

- (1) Embrace a product-centric approach to data and AI: Treating data and AI as products requires a comprehensive approach that encompasses strategy, operations, business, and technology. This entails conducting meticulous business analysis to identify market demands, aligning service level agreements, and establishing dedicated budgets, all seamlessly integrated within the data valuation process. For more detailed information, please refer to the accompanying [paper](#).
- (2) Elevate business analysis and use case portfolio management: Effective data monetization necessitates the professionalization of business analysis, requirements engineering, and use case portfolio management. This entails developing clear business cases and prioritizing use cases based on their viability, desirability, and feasibility, as further explored in Deloitte's forthcoming whitepaper scheduled for release in 2023.

- (3) Foster transparency and accessibility of data products: Unlocking the full potential of data requires democratizing data products by making them transparent and accessible within the organization. This calls for a coordinated interplay between data platforms, data culture, and data processes, fostering effective communication and collaboration among all data stakeholders, including data strategists, data owners, data scientists, and data stewards. Additional insights and details can be found in the referenced [paper](#).

Deloitte's wealth of insights and expertise provides on-point guidance for enterprises striving to optimize their data monetization endeavors and achieve their desired business outcomes.

Note: This whitepaper draws its foundation from an in-depth, scholarly paper that offers comprehensive insights into the perspective and interdependencies of data valuation as the pivotal factor in unlocking the enigmatic black box of data value generation and monetization. The detailed scientific paper is slated for release in the fourth quarter of 2023, providing an extensive exploration of the subject matter.

Contributors

Mark Arndt
Consultant

Strategy, Analytics and M&A
+49 151 1917 5124
maarndt@deloitte.de

Dr. Max-Hendrik Böttcher
Manager

Cyber & Strategic Risk
+49 151 5448 3572
maboettcher@deloitte.de

Anica Buchholz
Manager

Human Capital
+49 151 5448 4563
abuchholz@deloitte.de

Thiemo Eberle
Senior Consultant

Enterprise Performance
+49 151 1829 5033
teberle@deloitte.de

Frank Eisenhauer
Director

Strategy, Analytics and M&A
+49 151 5448 3868
feisenhauer@deloitte.de

Dr. Christoph Euler
Senior Manager

Strategy, Analytics and M&A
+49 151 1268 3336
ceuler@deloitte.de

Markus Hafner
Senior Consultant

Strategy, Analytics and M&A
+49 151 5448 4069
mhafner@deloitte.de

Kai-Uwe Hess
Partner

Enterprise Performance
+49 151 1829 4406
kahess@deloitte.de

Margaretha Hirsch
Senior Consultant

Strategy, Analytics and M&A
+49 151 5448 4071
mhirsch@deloitte.de

Paul Holbein
Senior Consultant

Strategy, Analytics and M&A
+49 151 5807 6346
pholbein@deloitte.de

Martina Hornung
Partner

Human Capital
+49 151 5807 3900
mhornung@deloitte.de

Dr. Benjamin Klör
Manager

Enterprise Performance
+49 151 5448 4579
bkloer@deloitte.de

Dr. Sebastian Olbrich
Partner

Strategy, Analytics and M&A
+49 151 1488 0375
solbrich@deloitte.de

Ralf Pierson
Senior Consultant

Human Capital
+49 151 2103 3858
rpierson@deloitte.de

Christian Roes
Senior Specialist

Strategy, Analytics and M&A
+49 151 5807 6239
croese@deloitte.de

Marco Ruetten
Manager

Enterprise Performance
+49 151 5807 5861
maruetten@deloitte.de

Jan Scherpinski
Senior Manager

Strategy, Analytics and M&A
+49 151 5448 3411
jscherpinski@deloitte.de

Friedemann Schestag
Consultant

Strategy, Analytics and M&A
+49 151 1268 3791
fschestag@deloitte.de

Tim Staab
Consultant

Strategy, Analytics and M&A
+49 151 1488 1747
tistaab@deloitte.de

Julian Steiner
Senior Consultant

Human Capital
+49 151 5807 4575
julsteiner@deloitte.de

Aizhan Suleimenova
Consultant

Strategy, Analytics and M&A
+49 151 5448 3524
asuleimen@deloitte.de

Tobias Wätzig
Senior Manager

Strategy, Analytics and M&A
+49 151 5800 1565
twaetzig@deloitte.de

Marc Willemsen
Consultant

Strategy, Analytics and M&A
+49 151 1488 0730
mawillemsen@deloitte.de

Jan Wohde
Consultant

Human Capital
+49 151 5448 4643
jwohde@deloitte.de

Contacts



Jan Scherpinski

Senior Manager

Strategy, Analytics and M&A

+49 151 5448 3411

jscherpinski@deloitte.de

Jan is a proficient AI and data strategist with eight years of expertise in enabling enterprises to embrace a value-driven approach through effective design and transformation. He has a rich project background encompassing a diverse range of AI and Data Strategy initiatives, as well as Data Science projects at various maturity levels from early Proof of Concept (PoC) to marketable products.



Frank Eisenhauer

Director

Strategy, Analytics and M&A

+49 151 5448 3868

feisenhauer@deloitte.de

Frank is a Director in Deloitte's AI & Data offering with a focus on Data-Strategy, Data-Transformation and Data-Management. He designs and implements data-driven-transformations with an objective on data-value-creation with a holistic and comprehensive approach. In his opinion, data transformation is a team sport.



Dr. Christoph Euler

Senior Manager

Strategy, Analytics and M&A

+49 151 1268 3336

ceuler@deloitte.de

Christoph is a data strategy consultant and data scientist, combining the two in his endeavor to help enterprises transform into data-ready organizations. He has a particular focus on the CEO and CDO organization's operating model design, data / machine learning governance, collaboration models and data literacy. In his opinion, data is a people business - technology is more readily available.



Felix Entrup

Consultant

Strategy, Analytics and M&A

+49 151 4067 8537

fentrup@deloitte.de

Felix is a consultant in Deloitte's AI & Data offering, focusing on AI and data strategy and value management. By combining his strategic skills with his experience in data science, Felix aims to help enterprises become holistically data-driven in a sustainable way.

Glossary

Data Mesh

The data mesh is a domain-driven socio-technological approach for creating decentralized data architectures. It is based on decentral governance structures as a foundation for generating sustainable business value using standardized and re-usable data products. It relies on a flexible collaboration model accross the entire enterprise.

Data Product

A data product is a set of data that is made available for the usage of employees or systems via a standardized API on a marketplace. Its purpose is to realize use cases and therefore to enable the implementation of data-driven services.

Data as a product

Synonymous to Data Product.

Use Case

A use case creates business value by fulfilling an explicit objective. Use cases are based on existing Data Products.

Data Catalog

A data catalog is the central inventory for all data assets within the company. It is made understandable via a glossary of frequently used terms and by highlighting the technical and business data lineage as well as transformation logic.

Data Governance

Data Governance is the discipline that connects data processes, and corresponding roles and responsibilities by formulating binding enterprise-wide policies.

Ontology

Ontologies are formalized descriptions that capture relations between business entities and their ab-stract realization as data.

Data Domain

A data domain takes ownership of data relevant to a common area of interest and implements roles that are responsible for expanding and maintaining the usability of this data.



Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited (“DTTL”), its global network of member firms, and their related entities (collectively, the “Deloitte organization”). DTTL (also referred to as “Deloitte Global”) and each of its member firms and related entities are legally separate and independent entities, which cannot obligate or bind each other in respect of third parties. DTTL and each DTTL member firm and related entity is liable only for its own acts and omissions, and not those of each other. DTTL does not provide services to clients. Please see www.deloitte.com/de/UeberUns to learn more.

Deloitte provides industry-leading audit and assurance, tax and legal, consulting, financial advisory, and risk advisory services to nearly 90% of the Fortune Global 500® and thousands of private companies. Legal advisory services in Germany are provided by Deloitte Legal. Our professionals deliver measurable and lasting results that help reinforce public trust in capital markets, enable clients to transform and thrive, and lead the way toward a stronger economy, a more equitable society and a sustainable world. Building on its 175-plus year history, Deloitte spans more than 150 countries and territories. Learn how Deloitte’s approximately 415,000 people worldwide make an impact that matters at www.deloitte.com/de.

This communication contains general information only, and none of Deloitte Consulting GmbH or Deloitte Touche Tohmatsu Limited (“DTTL”), its global network of member firms or their related entities (collectively, the “Deloitte organization”) is, by means of this communication, rendering professional advice or services. Before making any decision or taking any action that may affect your finances or your business, you should consult a qualified professional adviser.

No representations, warranties or undertakings (express or implied) are given as to the accuracy or completeness of the information in this communication, and none of DTTL, its member firms, related entities, employees or agents shall be liable or responsible for any loss or damage whatsoever arising directly or indirectly in connection with any person relying on this communication. DTTL and each of its member firms, and their related entities, are legally separate and independent entities.