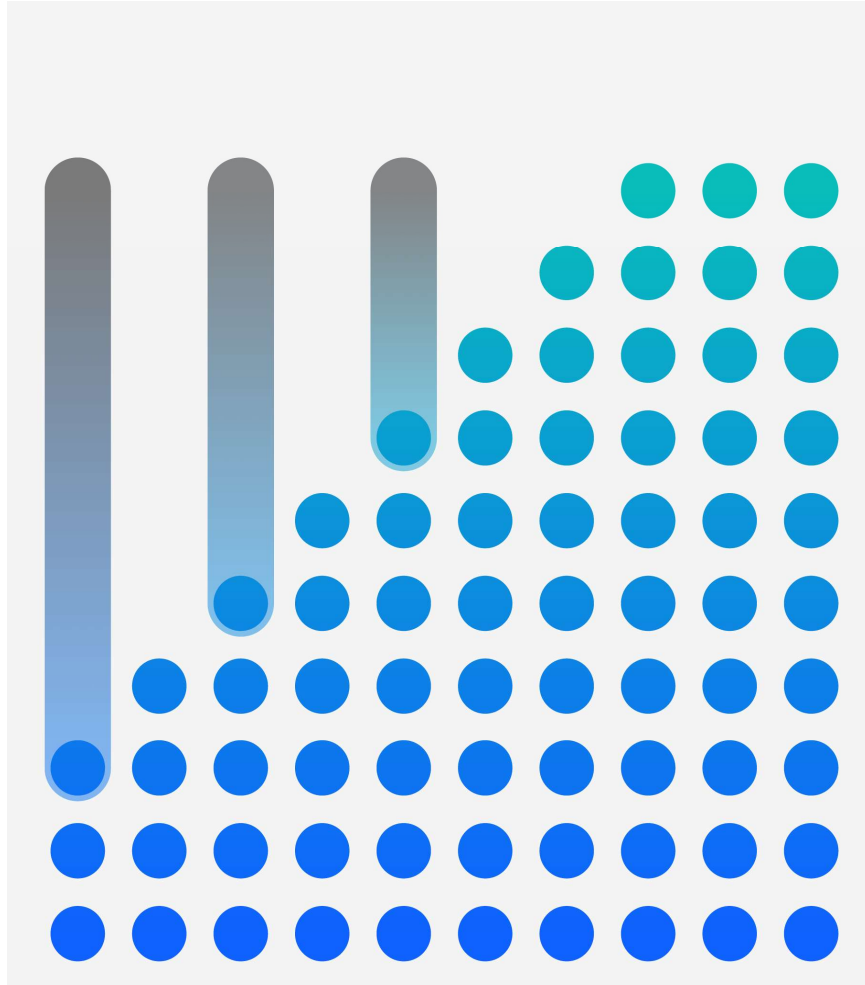


IBM complement to DDO project and white papers



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Introduction

As a project member of DDO “Data-driven organisation: Best practices for operationalizing AI in Sweden”, IBM has contributed in primarily three ways. First by installing and providing access to IBM’s resources; hardware, software and cloud. Secondly, by acting as a sounding board to project participants, contrasting and demonstrating alternative paths for the use-cases in the project. And thirdly, working directly with a few white papers and use-cases. The goal has been to provide a broader perspective that we believe can deepen the general understanding of the project content and scope.

This document contains links to documentation, white papers and various guides by IBM, aimed at providing further support and reference for each DDO use case. They should be read as a complement to each use-case and their respective white papers. Therefore, this paper can be considered more of a reference than a traditional white paper.

One of the use cases in this project, AI Application Operations: A Socio-Technical Framework for Data-driven Organizations, coins the phrase AIAppOps which we at IBM find very interesting. To complement this paper, we have included a deep dive specifically on this topic as well.

In a separate document, (found here, <https://www.ai.se/en/data-driven-organizations>), we have also described capabilities installed at AI Sweden’s AI Lab in Gothenburg, namely an IBM-supplied Fusion machine. The locally installed AI services in combination with public and private cloud services are mentioned on a high level, with more detailed information in supported appendixes.

In this document we have also mapped the candidate AI Lab solution capabilities/services from IBM to each of the DDO use cases. The purpose is to inform how the AI Lab solution capabilities can fit and meet the requirements of each individual DDO use case.

IBM have also contributed directly to use cases. The following papers and chapters include IBM content (found here, <https://www.ai.se/en/data-driven-organizations>):

- Centralized AI Infrastructure with Kubernetes: Secure and Compliant
 - Chapter: Going one step further - full vertical integration with IBM
- IT Roadmap for enabling AI at Universities
 - Chapter: Alternative Paths: The "Build vs. Buy" Strategic Choice

Furthermore, both a general demonstration and an overview of the DDO project from an IBM perspective was made by Henrik Sjöstrand provides further context we recommend you review before continuing this read:

- [An overview of IBM’s data platform for the DDO project](#)
- [Demo: IBM data & AI-platform](#)

Use case mapping

The following DDO use cases are reviewed:

- AI Transformation Playbook
- Centralized AI Infrastructure with Kubernetes
- Sustainable AI infrastructure lifecycle
- 1000 models in production
- AI Application Operations

To various extent, we believe that these use cases can be mapped on IBM general offerings. The goal is to show the potential tool, infrastructure resource, AI capability etc. that targets each specific case. Below we have illustrated on a high level which IBM AI capabilities we believe could be a good fit for the different use cases.

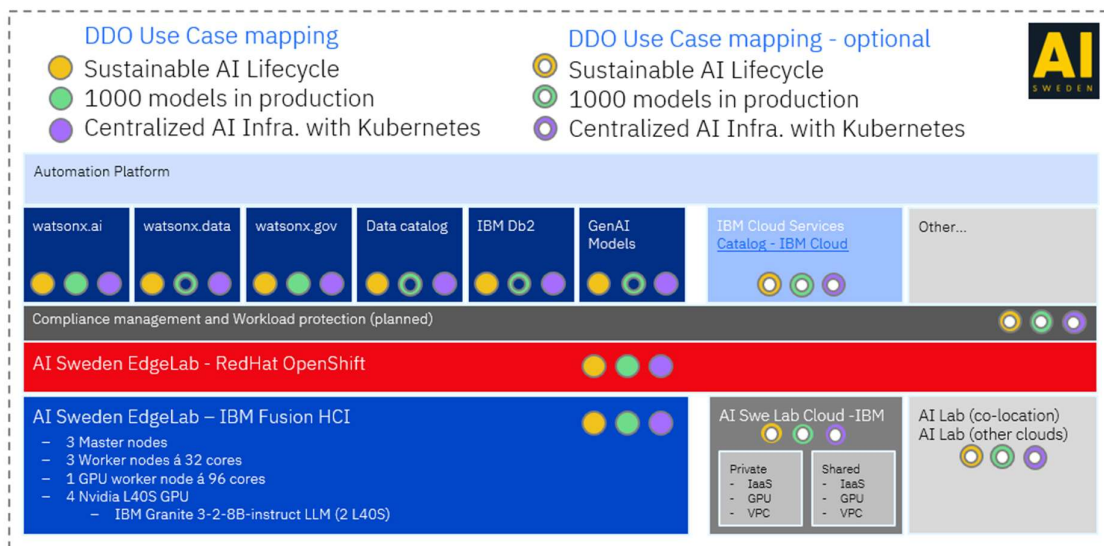


Figure 1 - IBM AI lab Fusion HCI platform with DDO use case mapping

In AI Sweden’s Gothenburg Lab, we have installed the components shown in figure 1. In a separate document (called IBM solution in AI Sweden lab.doc, found here, <https://www.ai.se/en/data-driven-organizations>), we further describe these

components and dive deeper into the capabilities made available for AI Sweden’s partners at the lab.

Complementary reading and resources

The following section presents IBM complementary and relevant reading for each white paper. DDO white papers found here, <https://www.ai.se/en/data-driven-organizations>

AI Transformation Playbook

Step-by-step guide: Generative AI for your business	https://www.ibm.com/think/insights/step-by-step-guide-generative-ai-for-your-business
CEO Study - 5 mindshifts to supercharge business growth	https://www.ibm.com/thought-leadership/institute-business-value/en-us/c-suite-study/ceo#conclusion
watsonx white paper	https://www.techresearchinfo.com/whitepaper/ibm-watsonx-a-differentiated-approach-to-ai-foundation-models.pdf

Centralized AI Infrastructure with Kubernetes

AI infrastructure solutions	https://www.ibm.com/solutions/ai-infrastructure
IBM Storage Fusion Product Guide	https://www.redbooks.ibm.com/abstracts/redp5688.html
Data Sovereignty with IBM Hyper Protect Services	107a02e95cc8f77f
Getting Started with Confidential Computing	Getting started with Confidential Computing IBM Cloud Docs
What is confidential computing?	https://www.ibm.com/think/topics/confidential-computing

Sustainable AI Infrastructure Lifecycle

For the planet and people: IBM’s focus on AI ethics in sustainability	https://www.ibm.com/think/insights/for-the-planet-and-people-ibms-focus-on-ai-ethics-in-sustainability
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Making Artificial Intelligence More Sustainable	https://www.linkedin.com/pulse/six-ways-ibm-making-artificial-intelligence-more-phillip-d-souza-t1nse/
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1000 Models in Production

What is MLOps?	https://www.ibm.com/think/topics/mlops
What are large language models (LLMs)?	https://www.ibm.com/think/topics/large-language-models
MLOps and Trustworthy AI 201.PDF (separate pdf)	true&mhp=25">https://developer.ibm.com/articles/trustworthy-ai-with-mlops-on-aws/?mhsrc=ibmsearch_a&mhq=topic&colon;pipeline%20org&colon;elyra-ai%20fork&colon>true&mhp=25

AI Application Operations

The CIO's playbook for managing multi-agent AI systems	https://www.ibm.com/think/insights/cio-playbook-multi-agent-ai-systems
Operationalize AI with confidence	https://www.ibm.com/downloads/documents/us-en/1443d5c92f402c58
Take application modernization and IT automation to the next level with generative AI	https://www.ibm.com/think/topics/ai-for-it-operations
How to choose the right AI foundation model	https://www.ibm.com/downloads/documents/us-en/10c31775a1d40392
Maximize the value of hybrid cloud in the generative AI era	Maximize the value of hybrid cloud in the generative AI era

AI Application Operations

The IBM Consulting organisation has assessed and complemented this paper. A Socio-Technical Framework for Data-driven Organizations coins the phrase AIAppOps which we at IBM find very interesting.

Trustworthy AI

IBM has published a comprehensive set of fairness metrics for datasets and machine learning models, explanations for these metrics, and algorithms to mitigate bias in datasets and models. It is an extensible open-source library containing techniques developed by the research community to help detect and mitigate bias in machine learning models throughout the AI application lifecycle. AI Fairness 360 package is available in both Python and R.

- <https://github.com/Trusted-AI/AIF360>

IBM Research has developed a toolkit, *AISteer360*, that provides algorithms that can be turned like dials to tweak an LLM's outputs at different stages in the generative process. It also provides a framework for combining these algorithms into steering 'pipelines' that can be systematically evaluated on a given task. *AISteer360* help software developers and researchers map, measure, and manage the risks associated with generative AI. Researchers included four methods in the toolkit: reward-augmented decoding (RAD), decoding-time alignment (DeAL), Thinking Intervention, which edits the model's "thoughts" mid-generation to produce safer or more aligned outputs, and IBM's own solution, self-disciplined autoregressive sampling (SASA), which steers the model's output, token-by-token, away from toxic language or other unwanted outputs).

- <https://research.ibm.com/blog/lightweight-AI-steering-tools>

IBM has achieved certification under ISO/IEC 42001:2023, the international standard for AI Management Systems (AIMS). This milestone applies to IBM Granite, our family of open-source language models designed for enterprise use. ISO/IEC 42001:2023 sets out a framework for managing AI responsibly, including governance, risk management, and continuous improvement. By meeting these requirements, Granite demonstrates how openness and transparency can align with structured, certified practices. For organizations, this provides a clear example of how standardized governance supports trustworthy AI adoption for complex and mission-critical workloads.

- <https://www.ibm.com/new/announcements/ibm-granite-iso-42001>

Consulting Offerings:

IBM Consulting's AIOps is an asset-based solution that applies AI, machine learning, and data science across IT operations to enhance resilience and efficiency. It detects anomalies, predicts potential outages, and evaluates business impact to enable proactive resolution. By leveraging pre-built assets and integrating data from diverse environments, it provides unified visibility and actionable insights for continuous improvement.

- <https://www.ibm.com/consulting/aiops>

IBM Consulting facilitates value realization and ensure responsible governance through a tailored AI implementation roadmap built on four offering pillars:

- **1) AI Strategy & Value:** Identifying and prioritizing AI use cases, developing transformation roadmaps and business cases, and enabling value realization
- **2) Responsible AI Governance:** Ensuring ethical, transparent, and compliant AI practices through comprehensive governance frameworks
- **3) M&A and Divestitures:** Accelerating transformation through strategic transactions, with a focus on technology integration and separation management
- **4) Risk & Compliance:** Navigating regulatory requirements and establishing robust risk management for AI at scale. This comprehensive framework accelerates and de-risks the AI transformation journey and drives sustainable growth and competitive advantage.
- <https://www.ibm.com/thought-leadership/institute-business-value/report/ceo-generative-ai/responsible-ai-ethics>

Client Cases:

Bouygues Telecom achieves rapid innovation by scaling AI

Bouygues Telecom, one of France's major telecommunications providers, operates a largescale IT environment supporting millions of mobile and broadband customers. Facing increasing demands for reliability and faster service response, Bouygues partnered with IBM Consulting to modernize and automate its IT operations. By implementing IBM's AI-driven automation solutions, the company gained realtime visibility into its infrastructure, enabling proactive management and faster decisionmaking. Through automation of routine processes and predictive identification of issues before they affected customers, Bouygues reduced incident

alerts by about half, accelerated problem resolution by nearly onethird, and improved overall network stability. This transformation delivered measurable business benefits—greater efficiency, lower operational costs, and higher customer satisfaction—strengthening Bouygues Telecom’s position as a leader in reliable, technologydriven service delivery.

- <https://www.ibm.com/case-studies/bouygues-telecom>

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The following people from IBM have been participating in the DDO project:

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DDO – Best practices for operationalization of AI in Sweden

This material has been produced as part of the Vinnova-funded project *Data-driven organizations – Best practices for operationalization of AI in Sweden* (DDO), a project lasting just under two years with twenty participants from private sector, public sector, and academia. Together, they tackled issues concerning large- and small-scale operation of AI solutions and how to enable and use AI broadly across an organization.

The work focused on three specific use cases: Local sustainable operation of AI, legal and technical prerequisites for effective infrastructure, and how to create the best conditions for keeping thousands of AI models in operation.

A compilation of all material produced within the framework of DDO is available on [AI Sweden's website](#).

The organizations that participated in DDO were [Aixia](#), [Hewlett Packard Enterprise](#), [Hopsworks](#), [IBM](#), [Linköping University](#), [NetApp](#), [Predli](#), [Proact](#), [RISE](#), [RedHat](#), [Region Halland](#), [Sahlgrenska University Hospital](#), [Statistics Sweden](#) (Statistiska Centralbyrån), [The Swedish Tax Agency](#) (Skatteverket), [Stormgrid](#), [The Swedish Transport Administration](#) (Trafikverket), [Volvo Parts](#), [Region Västra Götaland](#), [Santa Anna](#), and [AI Sweden](#).

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