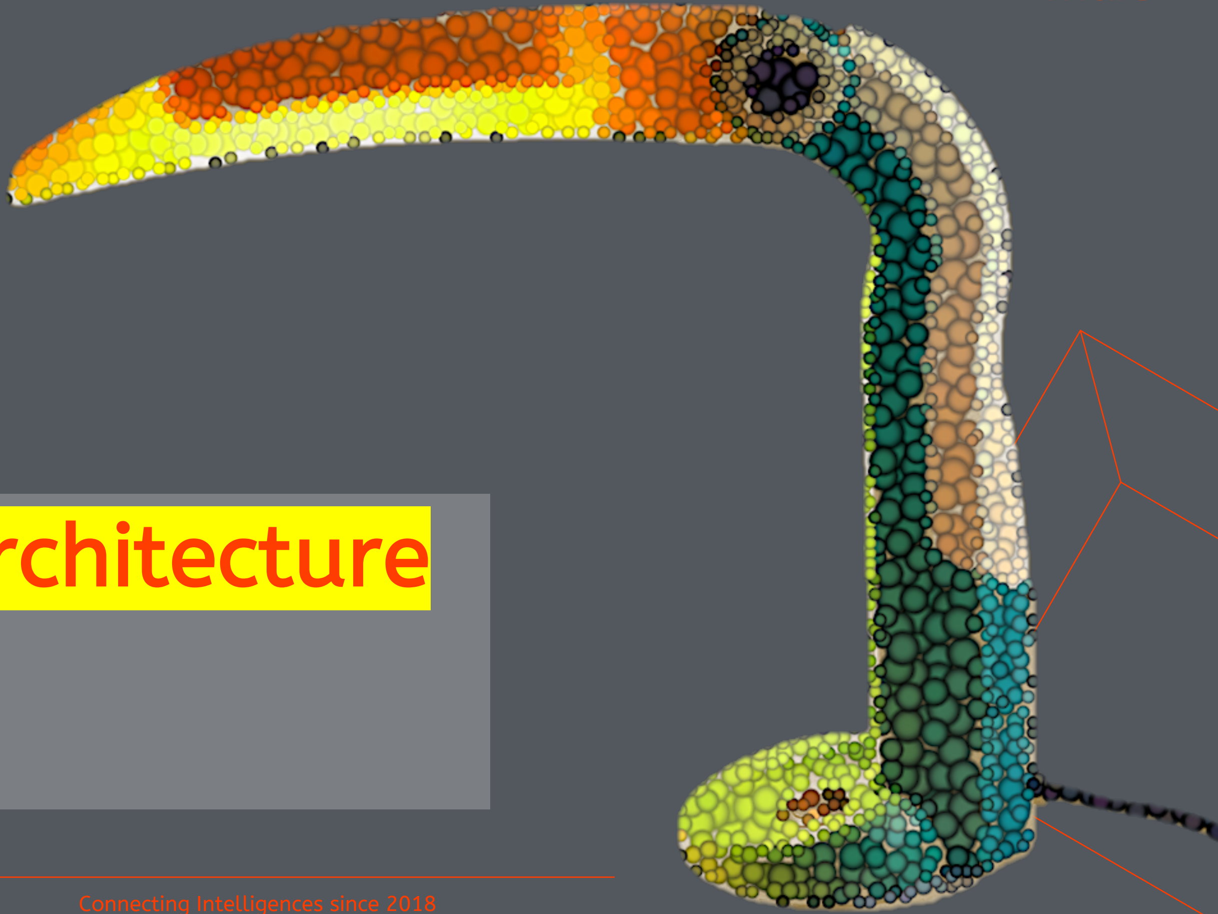
birds on mars



Intelligence Architecture

BERLIN. EARTH. AND BEYOND.

www.birdsonmars.com

birds on mars

birds on mars

work birds clients aix sol merch take me to mars!

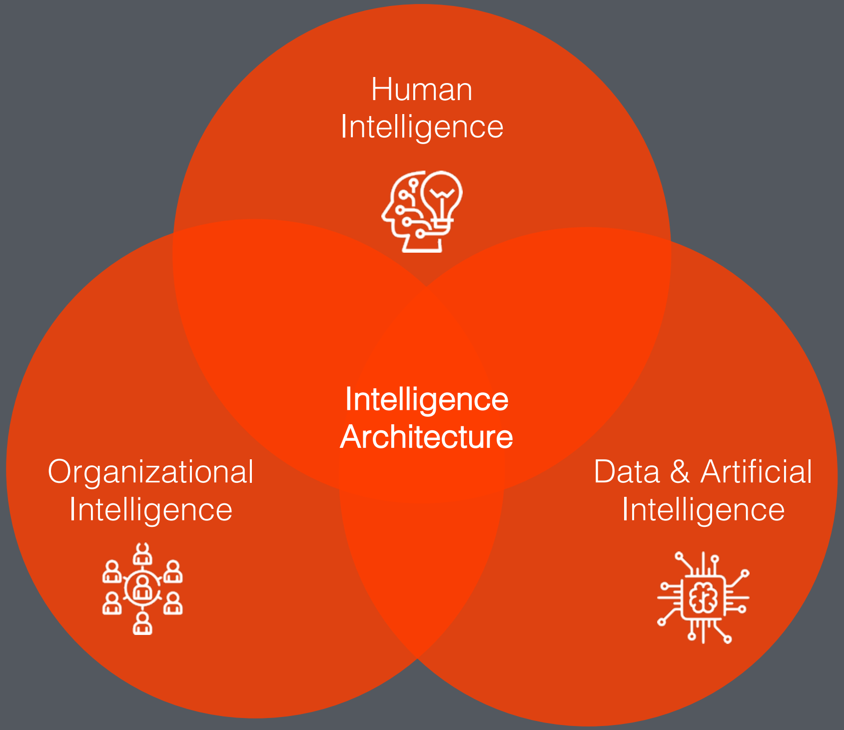
CONNECTING INTELLIGENCES

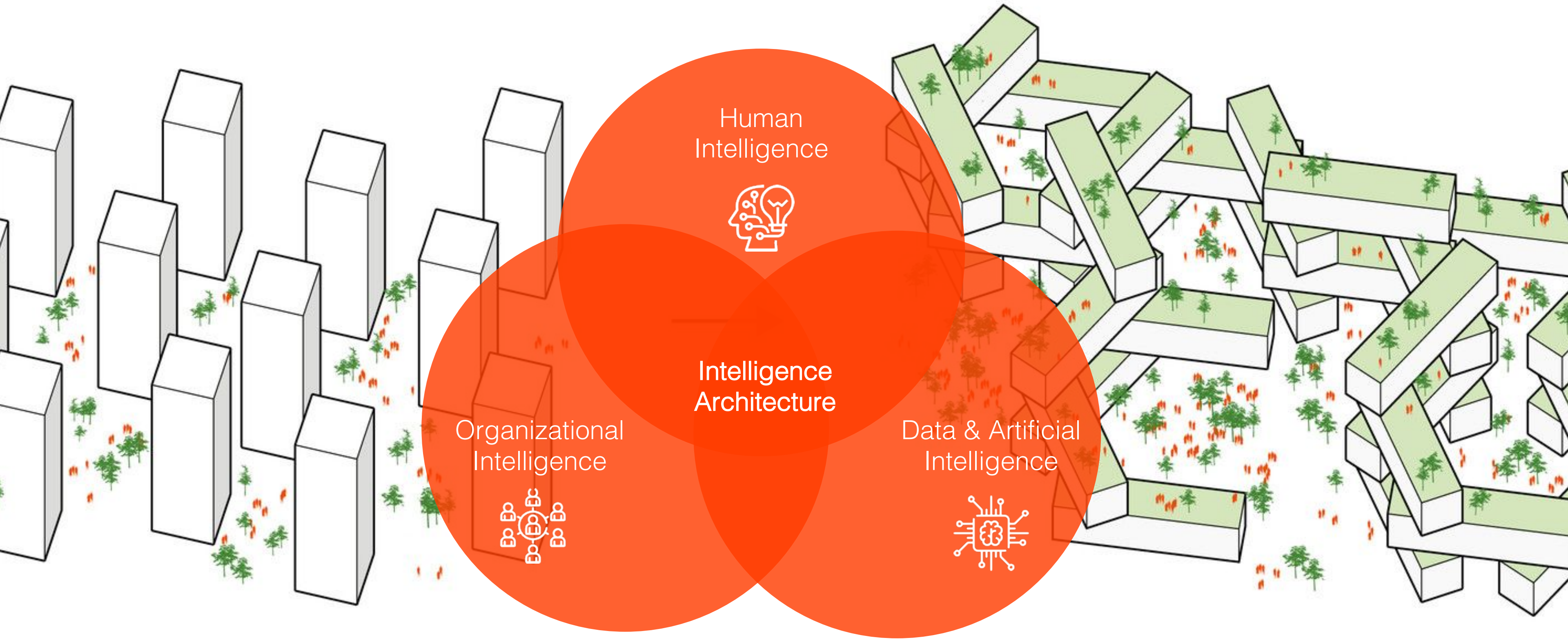
human + artificial + organizational

We are a new generation consulting company and AI agency highly specialized in data and artificial intelligence.

Every day, we build innovative enterprise solutions that combine human creativity, machine intelligence and organizational identity.

Everything we do happens somewhere here




Human
Intelligence
Intelligence
Architecture
Organizational
Intelligence
Data & Artificial
Intelligence

Of course we need to talk IT!

And new paradigms.

„One of the biggest mistakes leaders make is to view AI as a plug-and-play technology with immediate returns."

https://hbr.org/2019/07/building-the-ai-powered-organization

Microsoft's CEO, Satya Nadella, refers to *AI as the new "runtime"* of the firm.

…a kind of Operating System!

Most quoted paper!

„Real-world production ML systems are large ecosystems of which the model is just a single part."

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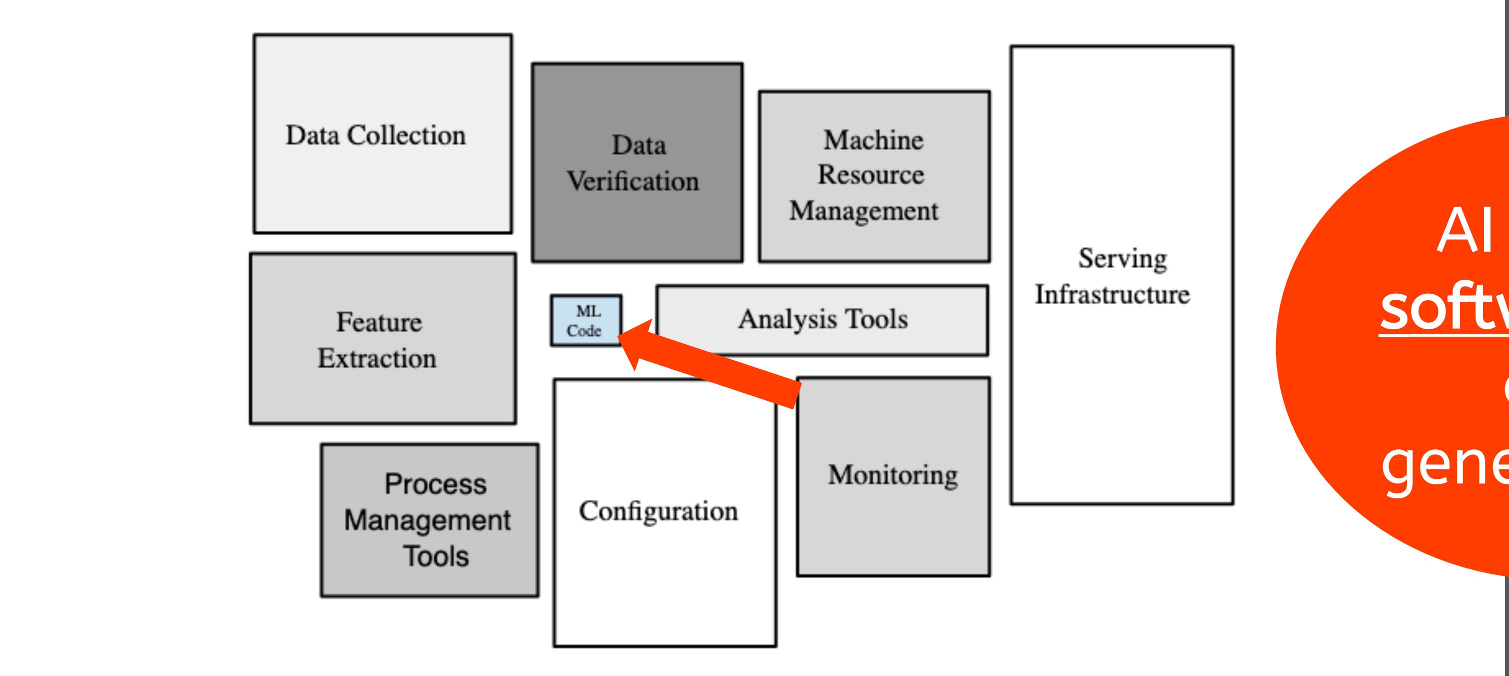
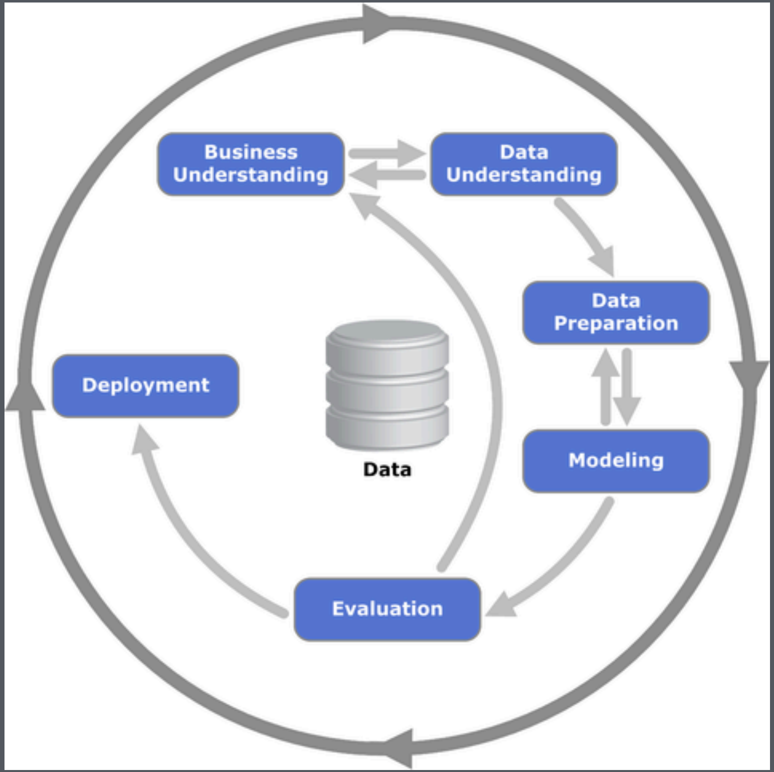


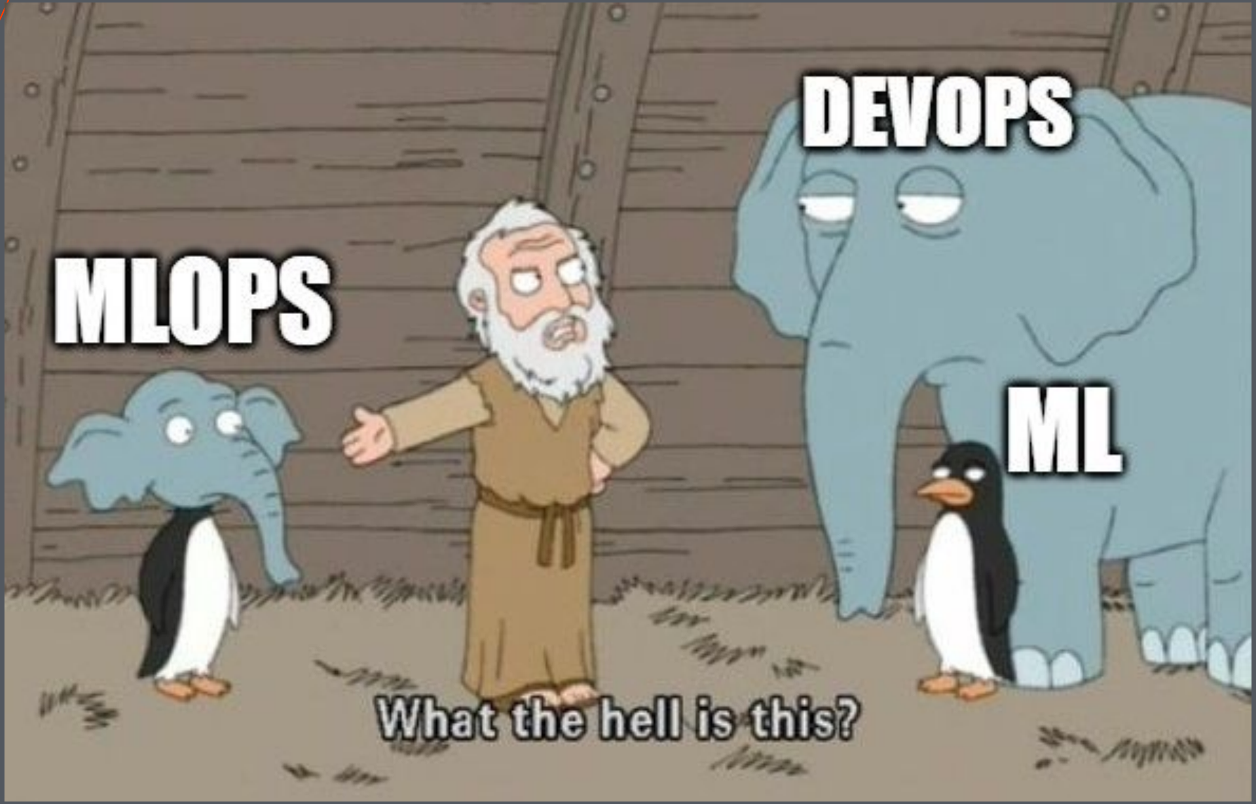
AI = the **software** of our generation!

https://developers.google.com/machine-learning/crash-course/production-ml-systems?hl=de

Our Data Science approaches today…



…fall short when it comes to ML/AI!


DEVOPS
MLOPS
ML
What the hell is this?

„Continuous Intelligence“

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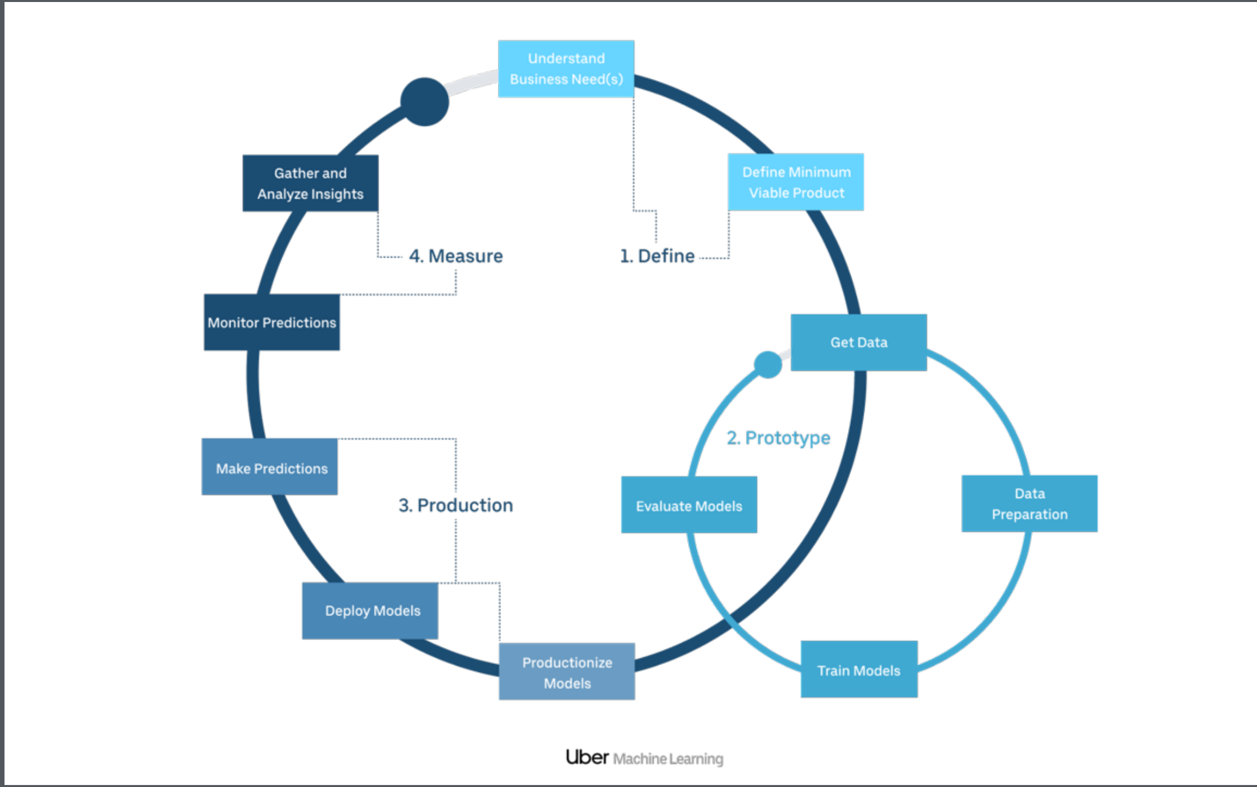

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We must continuously orchestrate data, models and code!

„New Architectures“

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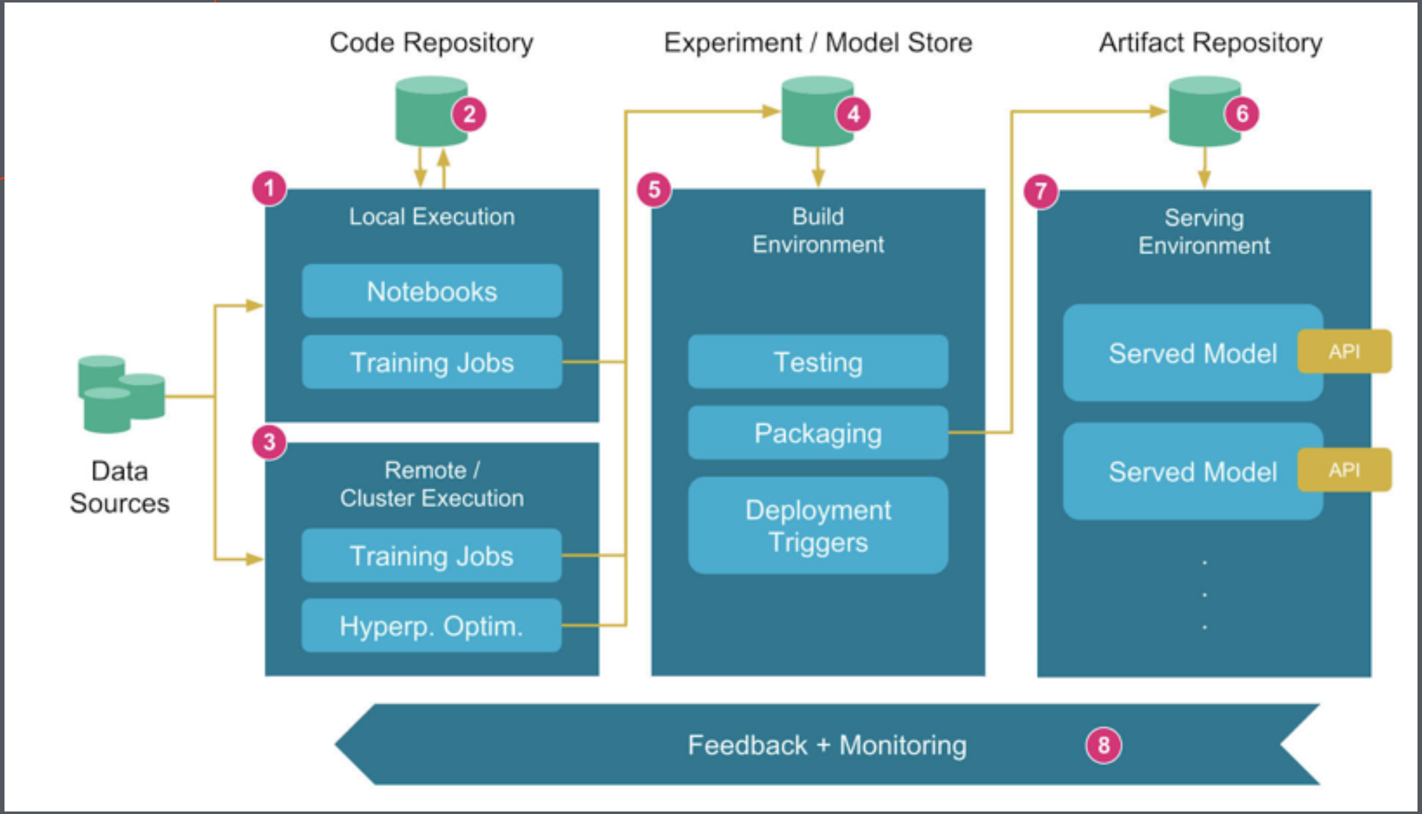

Problem Space = ML is not ML!

Example: Booking.com

"People building Machine Learning models do it in many very different ways. Some use a small data set and R, others a huge data set and a command line tool like Vowpal Wabbit. Some like to write their own optimization algorithm in Java, others use sklearn or H2O. Some build Deep Learning models in Pytorch, others in Tensorflow, and so on. We believe in such diversity and therefore encourage it and support it with tools, courses, infrastructure and more…"

https://booking.ai/https-booking-ai-machine-learning-production-3ee8fe943c70

Model Serving (selected)

Once a suitable model is found, we need to decide how it will be served and used in production. We have seen a few patterns to achieve that:

Embedded model: this is the simpler approach, where you treat the model artifact as a dependency that is built and packaged within the consuming application. From this point forward, you can treat the application artifact and version as being a combination of the application code and the chosen model.

Model deployed as a separate service: in this approach, the model is wrapped in a service that can be deployed independently of the consuming applications. This allows updates to the model to be released independently, but it can also introduce latency at inference time, as there will be some sort of remote invocation required for each prediction.

Model published as data: in this approach, the model is also treated and published independently, but the consuming application will ingest it as data at runtime. We have seen this used in streaming/real-time scenarios where the application can subscribe to events that are published whenever a new model version is released, and ingest them into memory while continuing to predict using the previous version.

https://martinfowler.com/articles/cd4ml.html

Elements of a solution space…

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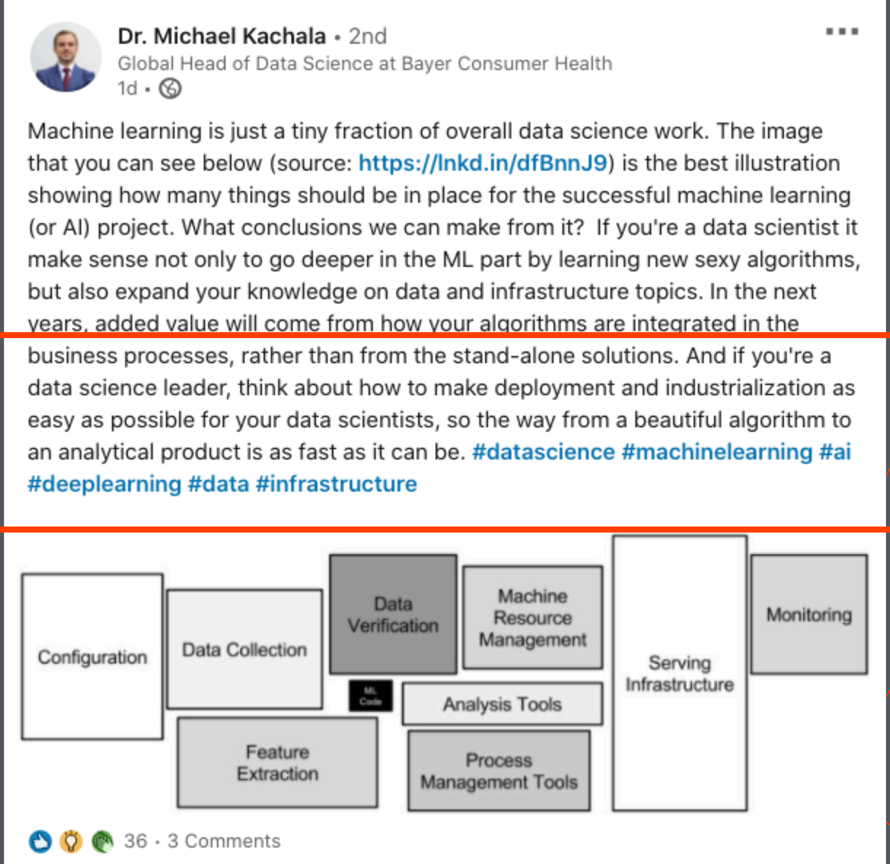
What are the „typical“ AI use-uses?
What do they require along the full lifecycle?
Where and how do they differ?
…

„Fingerprinting“ +
„Thinking backwards from production“

What is our status quo in tech, tools, processes?
Where are the gaps?
How can we start thinking in pipelines and flows?
…

If you´re a data science leader, think about how to make deployment and industrialization as easy as possible for your data scientists, so the way from a beautiful algorithm to an analytical product is as fast as it can be.



Dr. Michael Kachala • 2nd
Global Head of Data Science at Bayer Consumer Health
1d •

Machine learning is just a tiny fraction of overall data science work. The image that you can see below (source: https://lnkd.in/dfBnnJ9) is the best illustration showing how many things should be in place for the successful machine learning (or AI) project. What conclusions we can make from it? If you're a data scientist it make sense not only to go deeper in the ML part by learning new sexy algorithms, but also expand your knowledge on data and infrastructure topics. In the next years, added value will come from how your algorithms are integrated in the business processes, rather than from the stand-alone solutions. And if you're a data science leader, think about how to make deployment and industrialization as easy as possible for your data scientists, so the way from a beautiful algorithm to an analytical product is as fast as it can be. #datascience #machinelearning #ai #deeplearning #data #infrastructure

36 • 3 Comments

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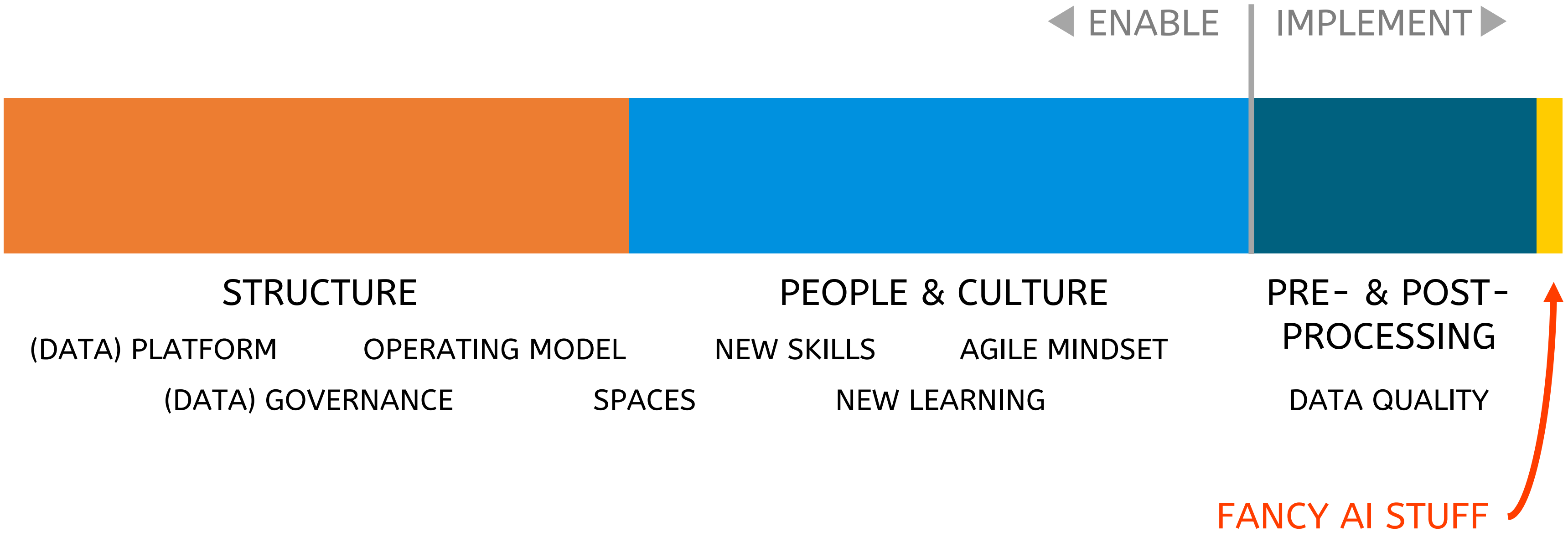

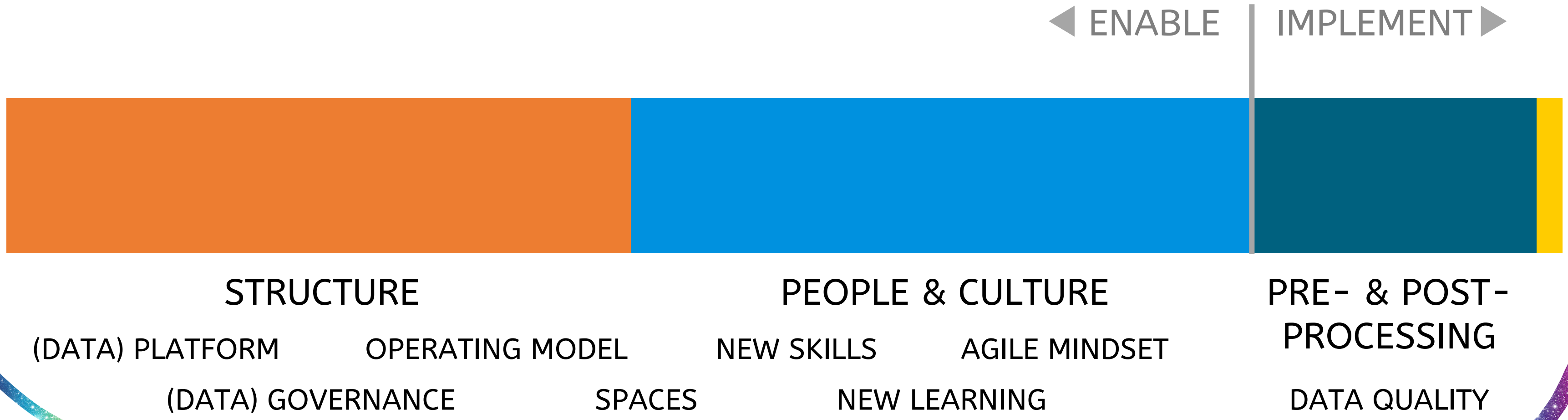

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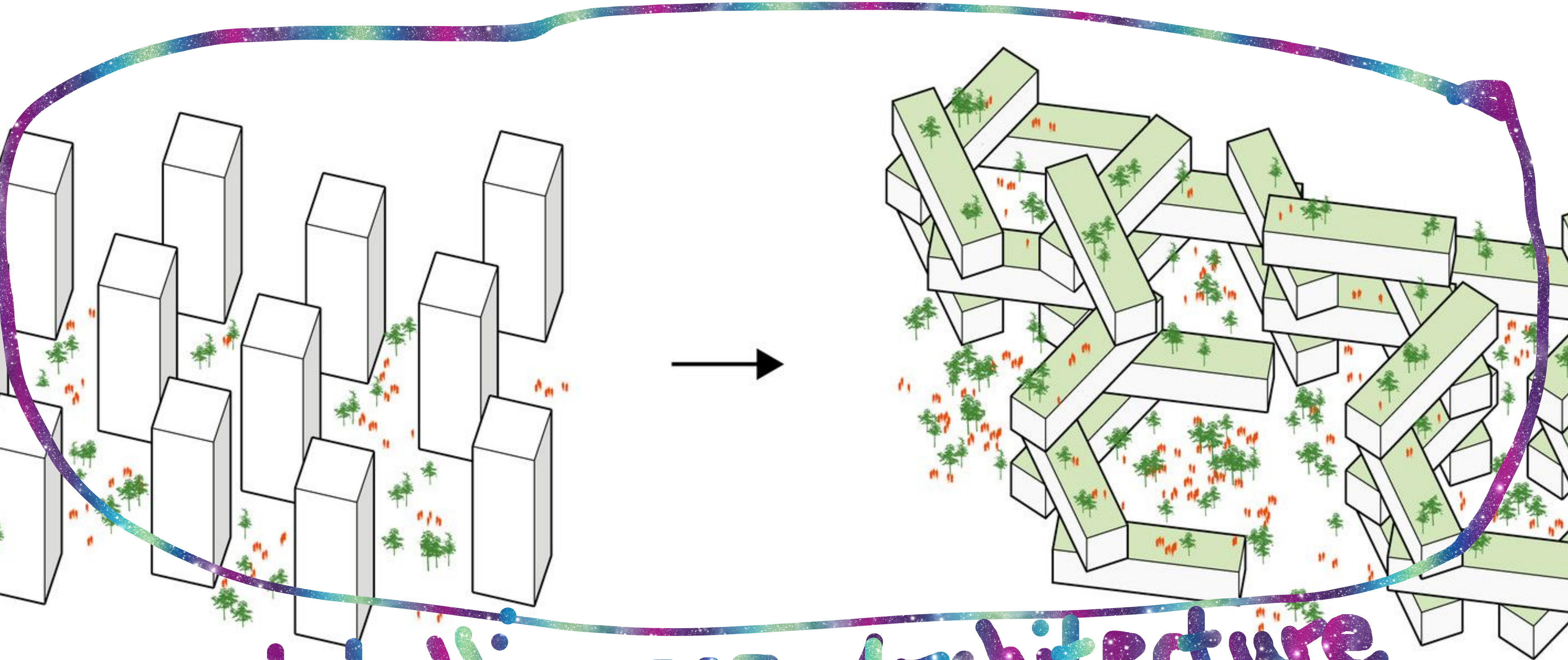

Intelligence Architecture

"The paradox is that the new is new.
In this sense, one cannot buy or sell something new.
You can only develop it..."

Prof. Dr. Sabine Fischer
Professor of Idea Economics in Digital Transformation and member of the Sounding Board of Birds on Mars

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