WORKSHOP 4
The Path to GenAi: From Data to Intelligence

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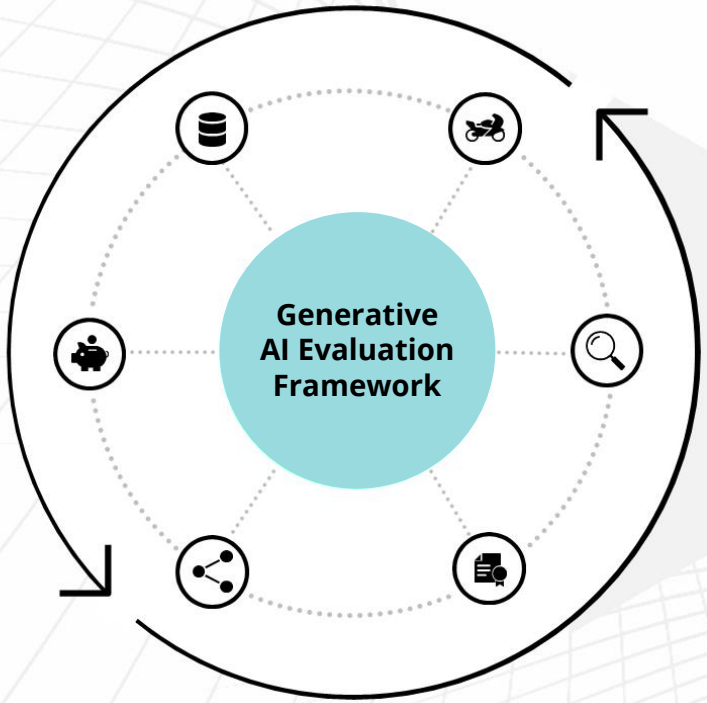
INTELLIGENT HEALTH 2023

Deloitte Feasibility and Risk Framework for GenAI



Dimension	Evaluation Factor	Considerations
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Better Health, Brighter Future

A closer look at Generative AI…

All applications of AI, whether a generative algorithm or a traditional machine learning model, produce outputs based on the inputs they are trained on. OpenAI's GPT-4 and GPT-3.5 models have made headlines in recent months for their widespread success; but what data have these models learned from?

ChatGPT+: GPT-4

Developer: OpenAI
Model Released: March 14, 2023
License: Proprietary
Training Set: Undisclosed, proprietary

ChatGPT: GPT-3.5

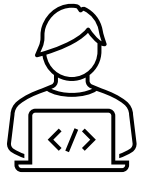
Developer: OpenAI
Model Released: November 30, 2022
License: Proprietary
Training Set: Undisclosed, proprietary

GPT-2

Developer: OpenAI
Released: February 14, 2019
License: MIT (Open Source)
Training Set: BookCorpus & WebText (Open Source)

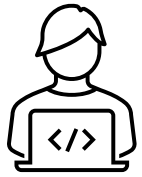
All of these OpenAI models are considered general knowledge; their outputs are limited by the relationships they have been taught during training.

A model is only as good as the data it is trained on.



Hey ChatGPT, can you tell me what tyres are made of?

Hello! Tyres are typically made of several layers of rubber, including natural rubber, synthetic rubber, and other materials such as carbon black, silica, and various chemicals.

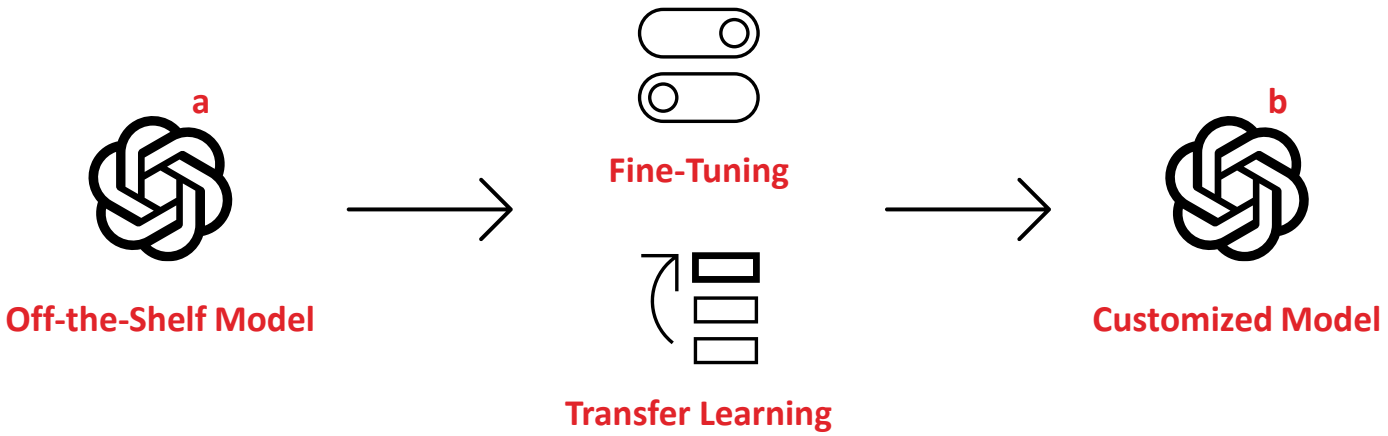


Hey ChatGPT, can you tell me the production yield of Pirelli C3 tyres produced in the EU over the past 3 months?

I'm sorry, but as an AI language model, I do not have access to up-to-date information on Pirelli’s manufacturing plans for its tyres.

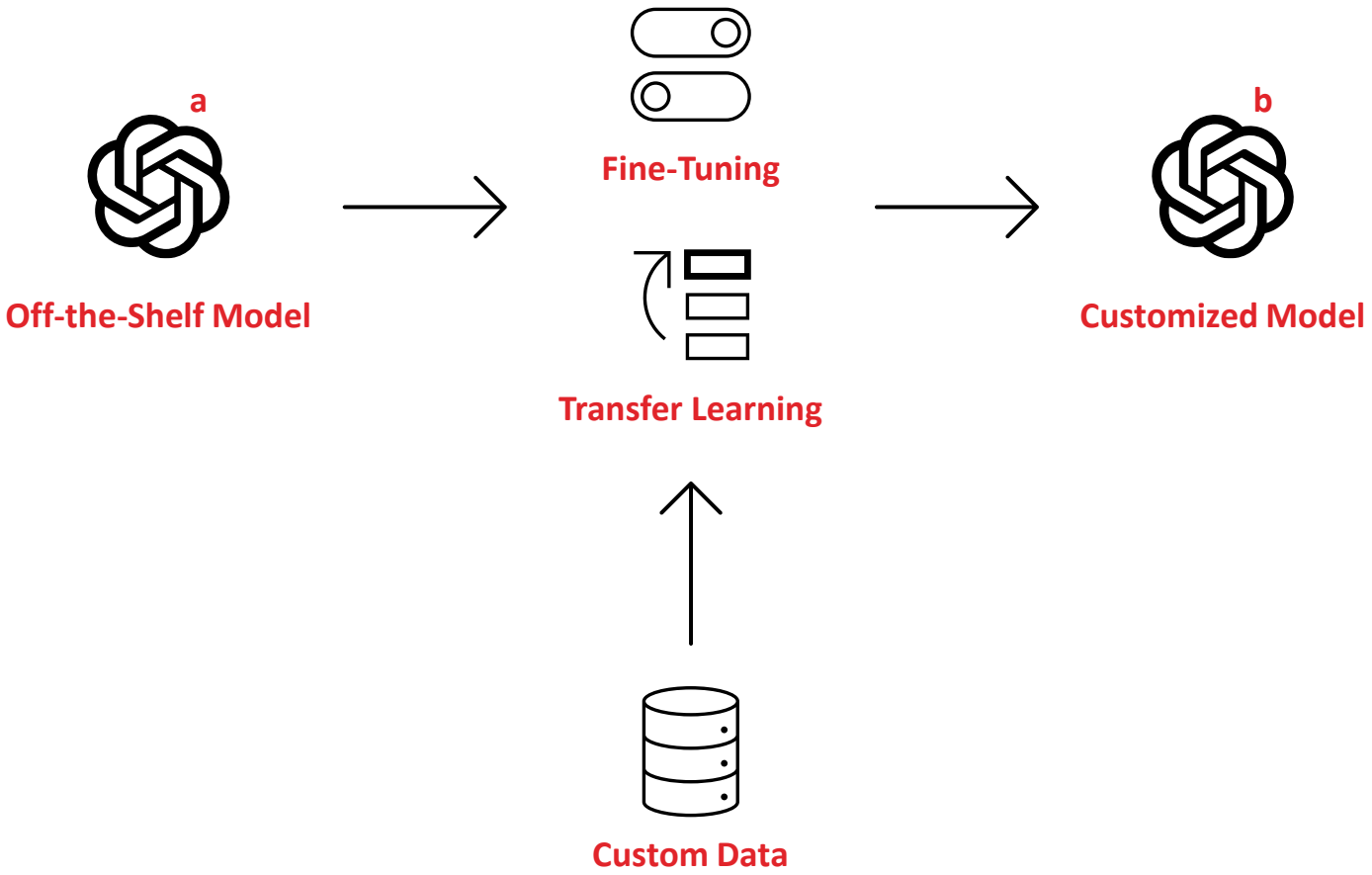
Can we customize?

With a skilled data scientist, we can improve many off-the-shelf models, or any model for that matter, by enriching them through fine-tuning and transfer learning.



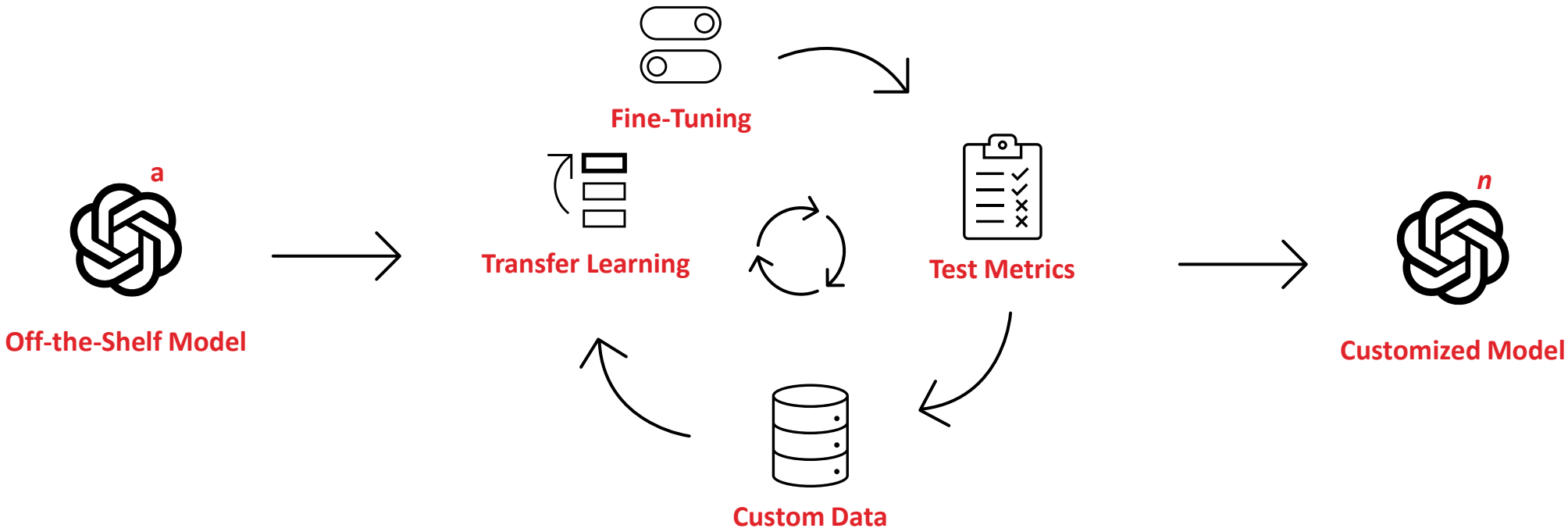
What are we customizing with?

The objective of enrichment is to teach a model about information that it hasn't seen in its original training. To make models suitable for a specific purpose, we need to supply our enrichment methodology with high quality data that is relevant for the model's application.



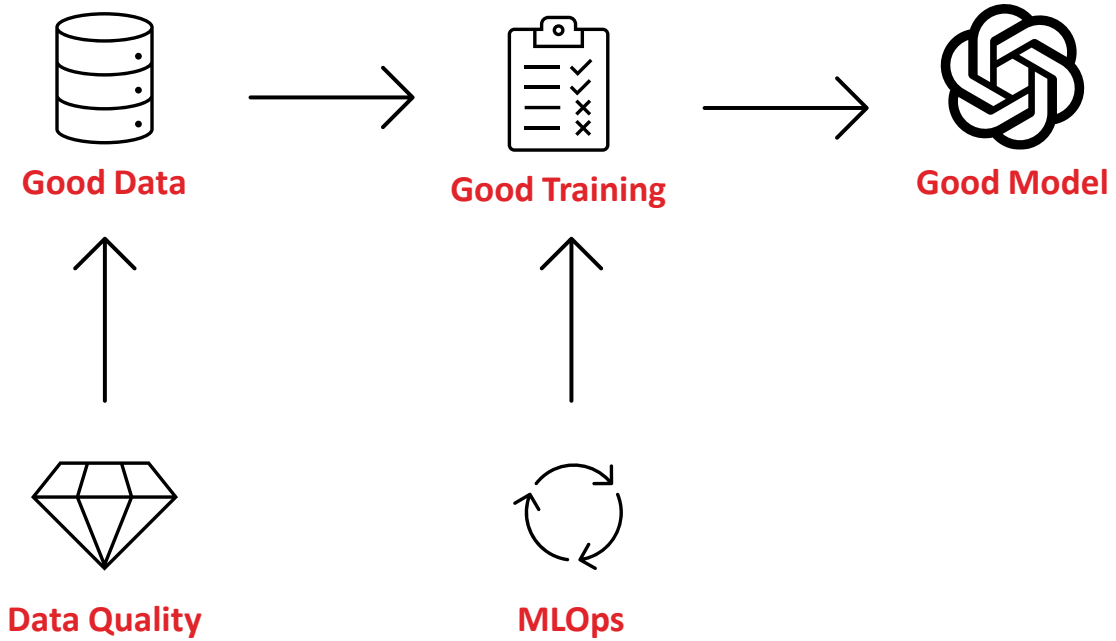
What if we could continuously customize?

To maintain relevance, many models must periodically retrain on new information. We can automate the process of feeding new data to the training cycle. Further, we can use model metrics to test the quality of models built by our automation, and decide which to automatically promote for use.



The big picture…

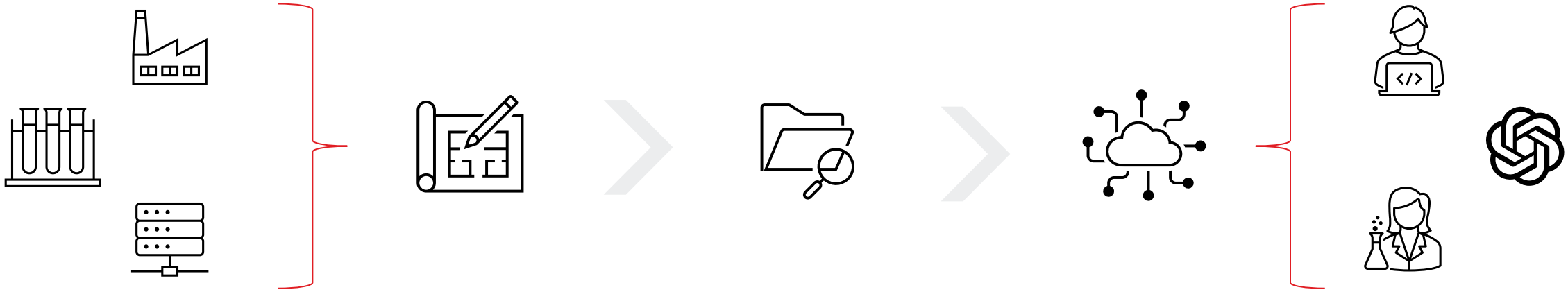
In short, to create a good quality model that is continuously fit for purpose, an organization must have two things: relevant data, and a means of ensuring the model can learn from it. We accomplish this through two principles: data quality, and machine learning operations.



Data is only as good as our ability to find, interpret, and utilize it.

Data Quality: Foundations for a robust model

Feeding our model with quality data is essential for producing a relevant model. Although many organizations have plenty of data, it must be curated it in a way that a model can learn from it.



Collecting relevant data from source

Structuring and contextualizing data to optimize **utilization**

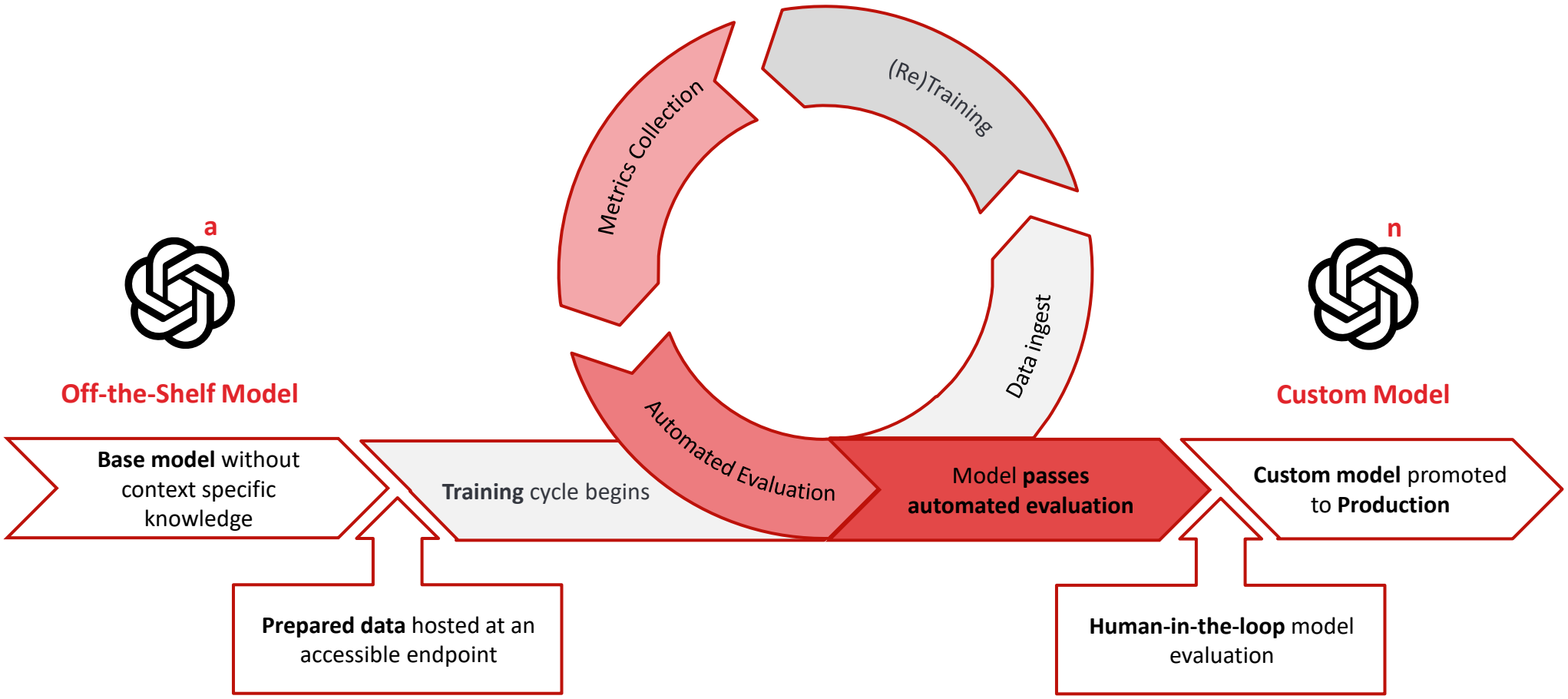
Cataloguing data to ensure it is **findable**

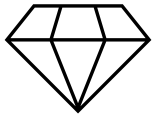
Hosting data such that it is **accessible** from multiple contexts

Consumption of data in ad-hoc or automated analysis

MLOps: Keeping our model relevant

Machine Learning Operations, or MLOps, is the process of automating the training, testing and deployment of a machine learning model. This process enables a given model to continuously update its knowledge base with new context-based data, and ensure long-term relevance.





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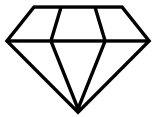

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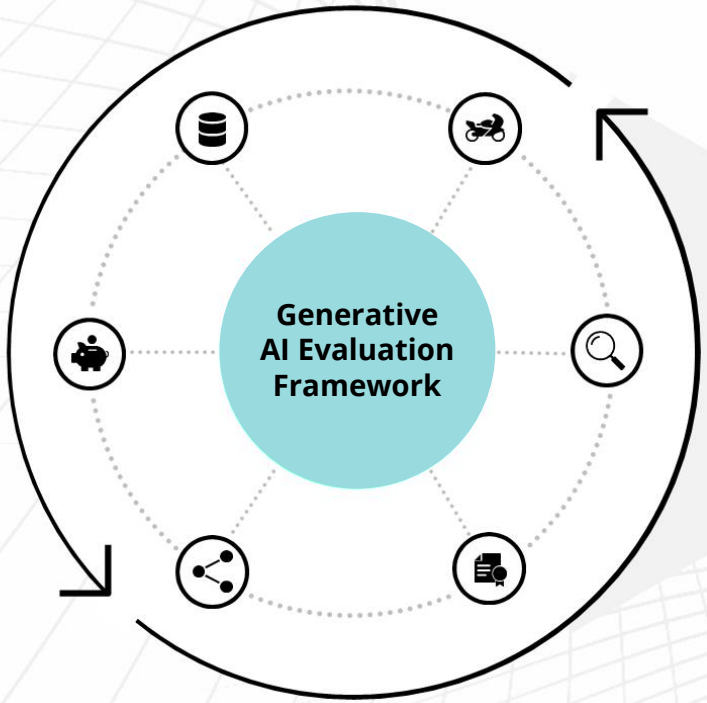
Thank You!

Better Health, Brighter Future

Introducing the Feasibility and Risk Framework



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What action will you and your organisation take?

Thank you!

https://mkto.deloitte.com/Intelligent-Health-booth.html