

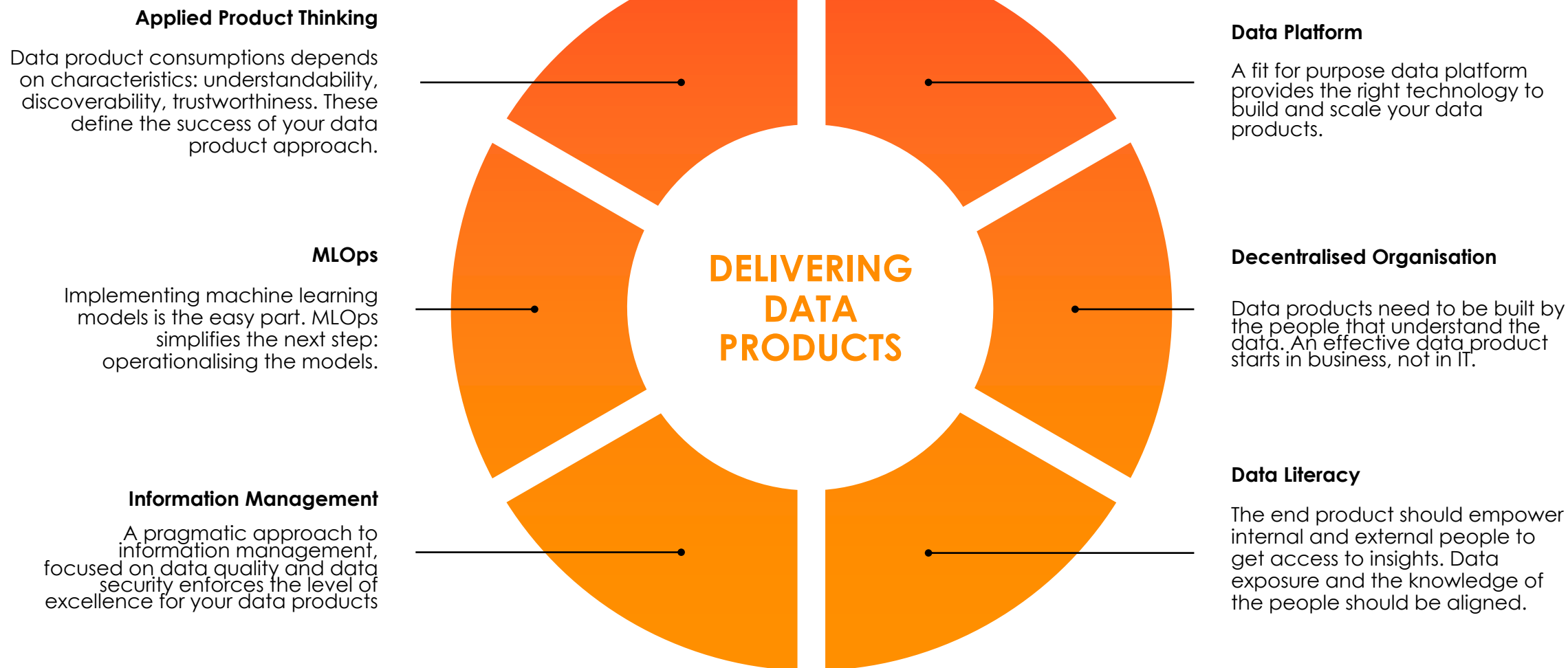
Industrializing your Machine Learning models

We enable your data products



Data & AI Hive

Key enablers for creating and delivering data products.



MLOPS

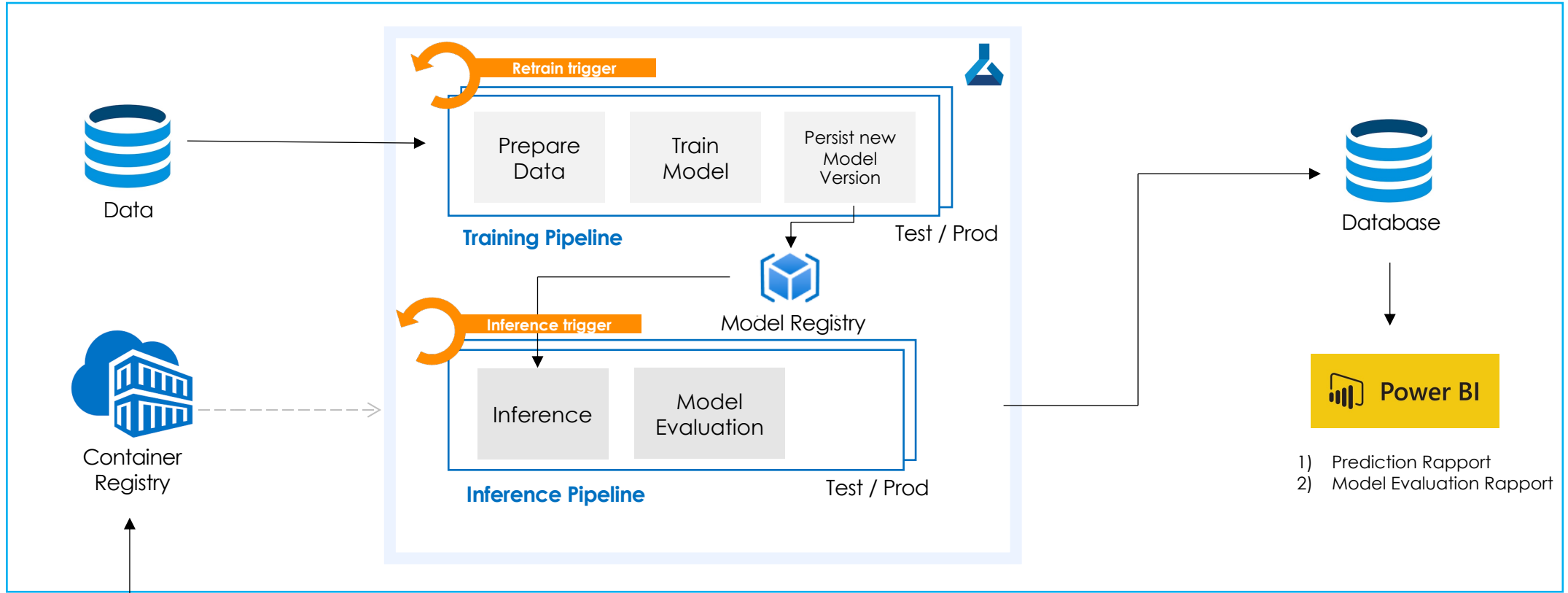
WHY

- You want to **automate** your ML models and integrate them into your decision processes.
- The predictions are as **accurate** as possible and **reproducible**.
- The model **accuracy** is **stable** throughout time.

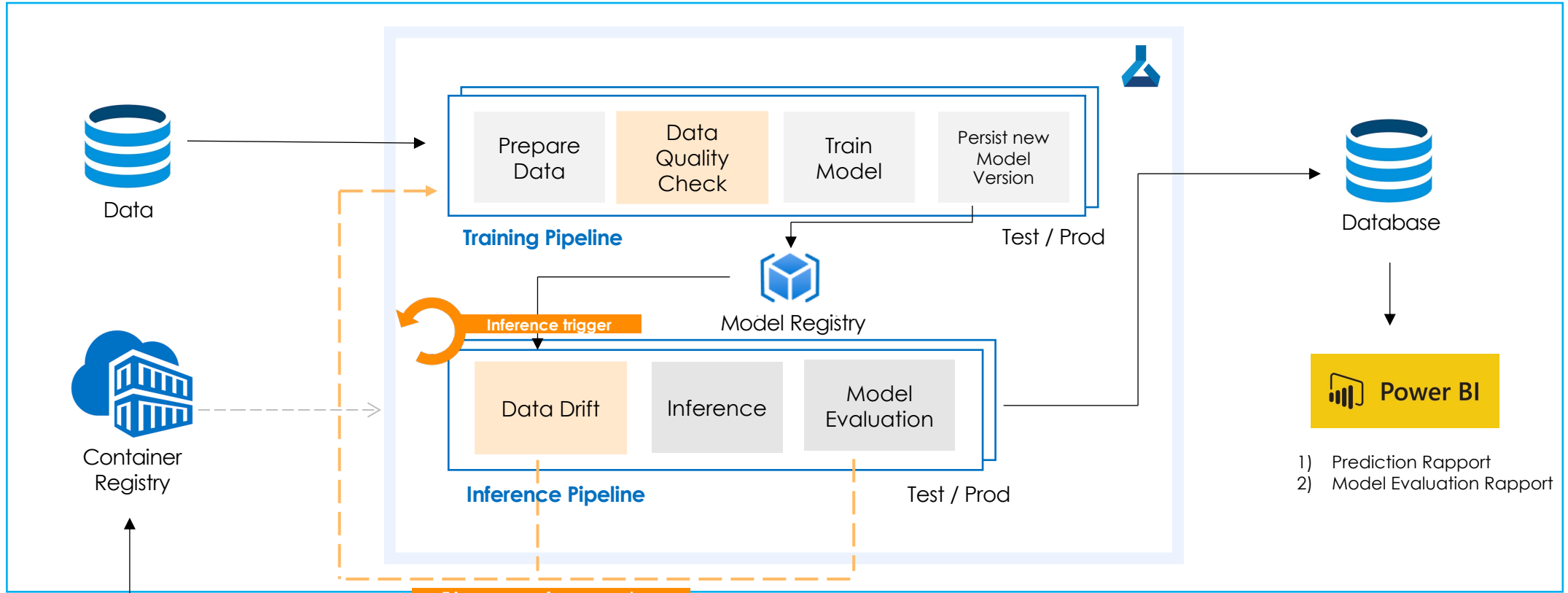
WHAT

- Through **automated retraining** we improve the model by using the latest data.
- Every prediction is compared to **reality** to estimate the **accuracy** throughout time.
- The **predictions** are generated and saved on a chosen schedule and are visualized in a **dashboard**.

Proposed architecture



Proposed architecture + add-ons



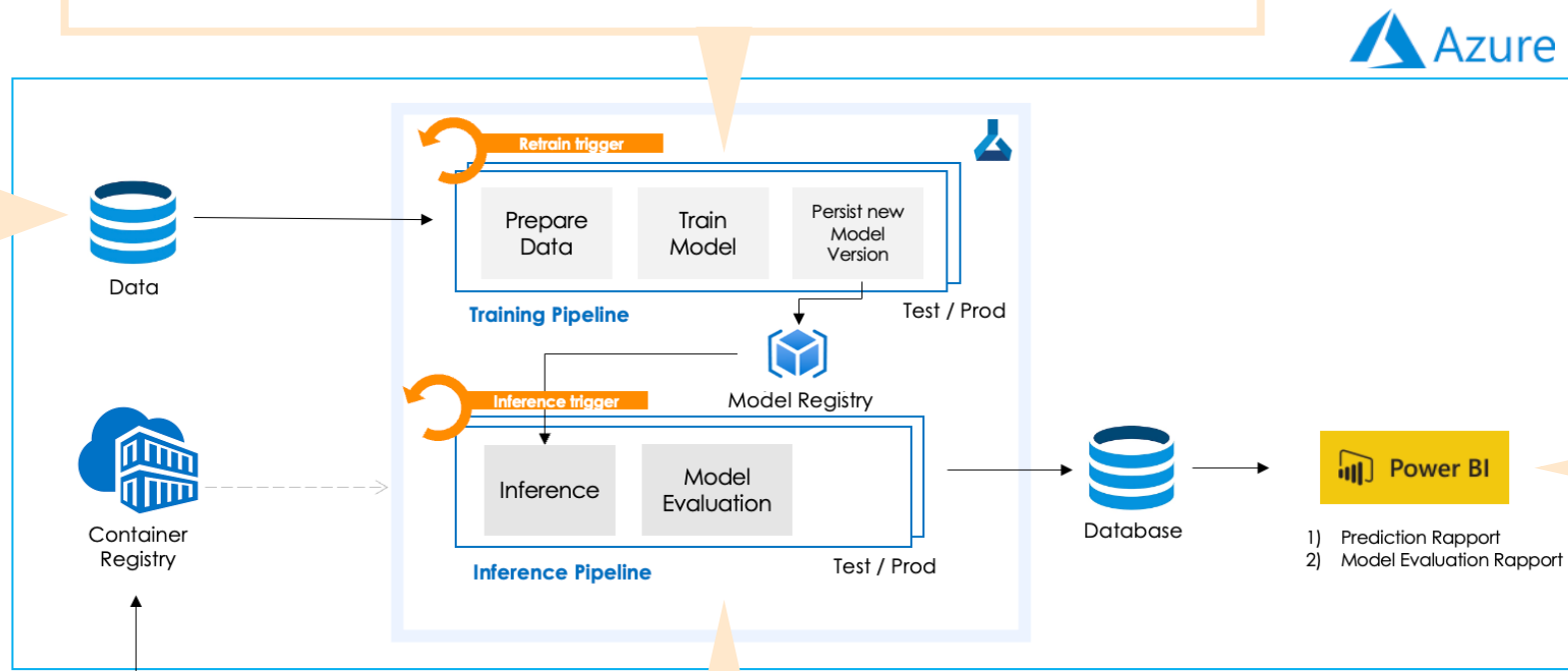
- 1) Prediction Rapport
- 2) Model Evaluation Rapport



Example integration

- **Preprocess** data
- Store processed data version for tracking
- Model is **trained** on a **scheduled** basis on latest data
- When **accuracy increases, new model version** is persisted

- Input data (e.g. **SQL Database**)

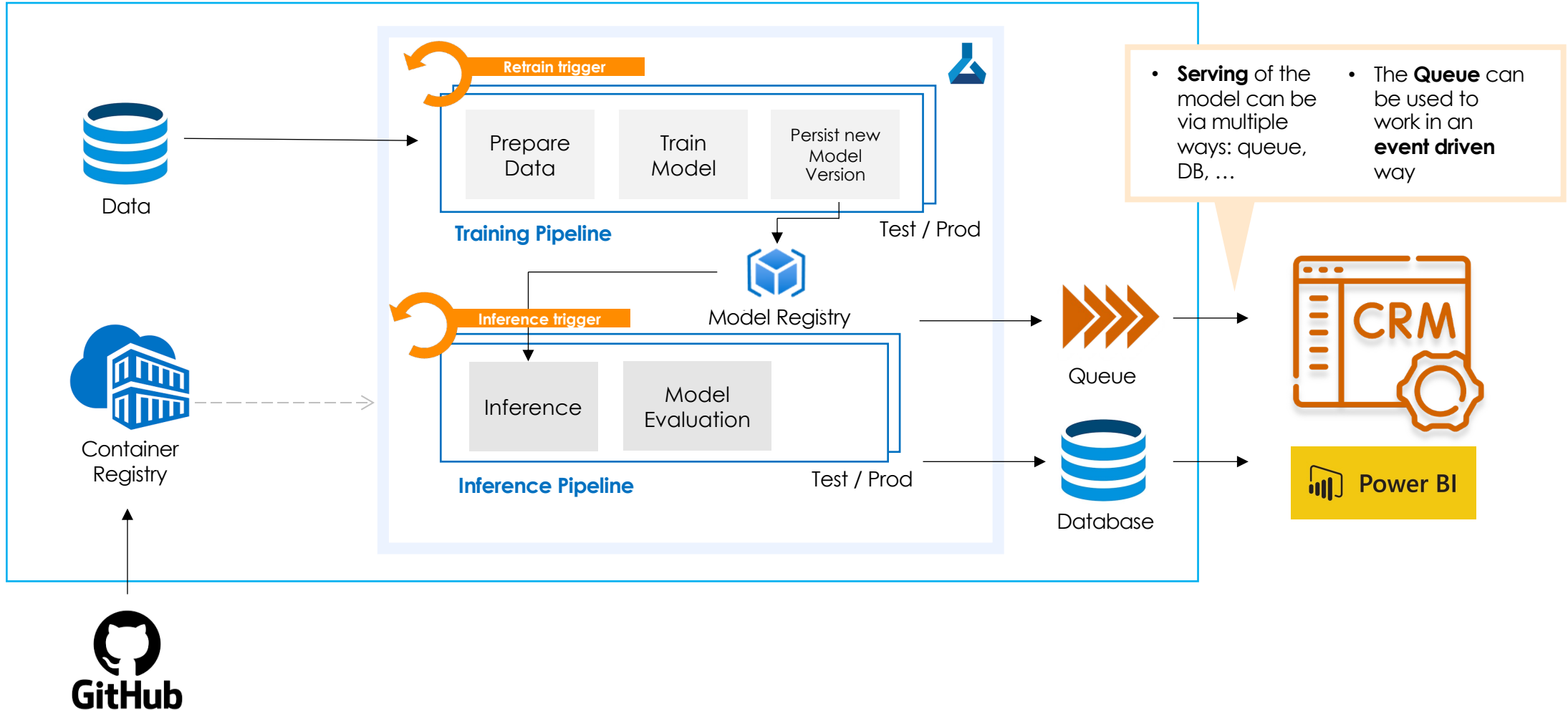


- **Predictions** are easily **accessible** in a **Report**
- Model's **accuracies** are captured in a **report** to **monitor performance**

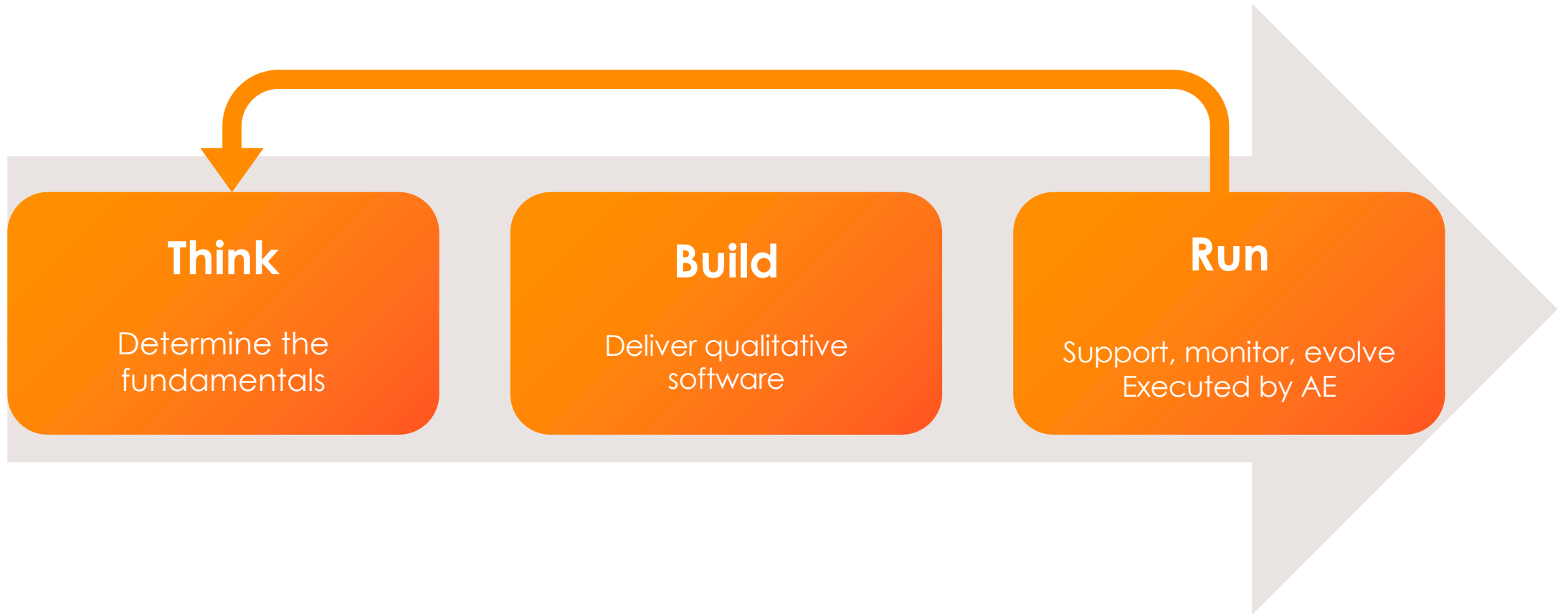
- **Latest** Model is used to make new predictions
- Predictions are persisted to a database
- Model's **accuracy** on new data is **monitored** (if actuals are present)
- Accuracy is persisted to a database



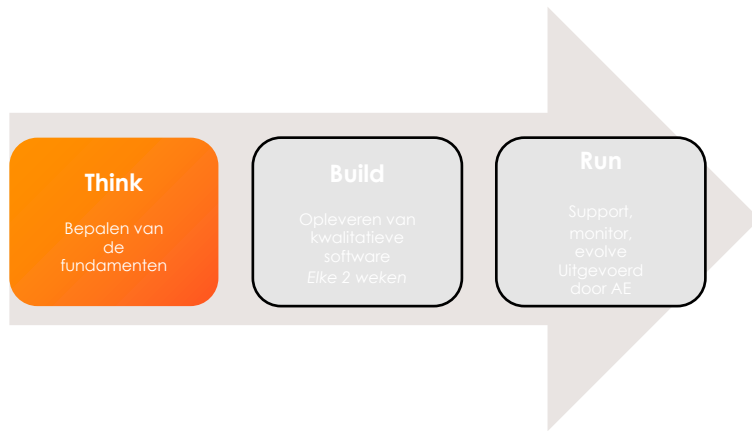
Example integration



A phased approach



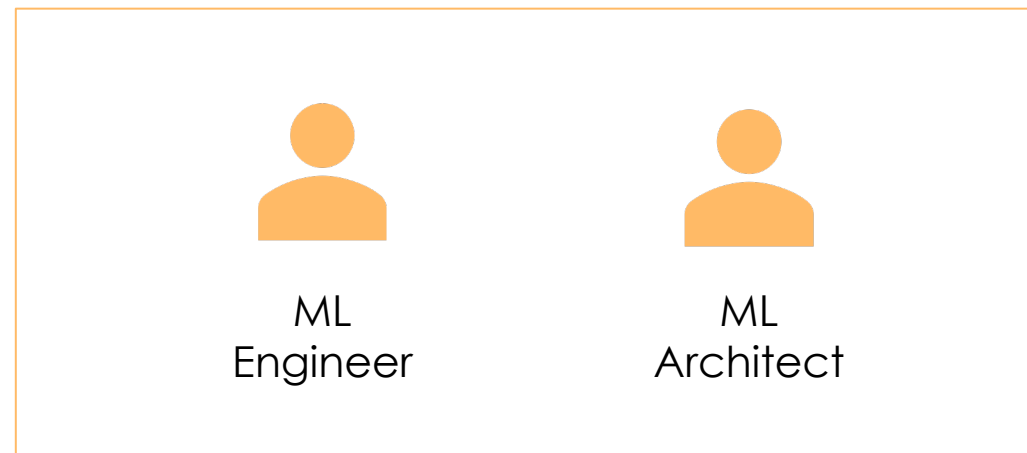
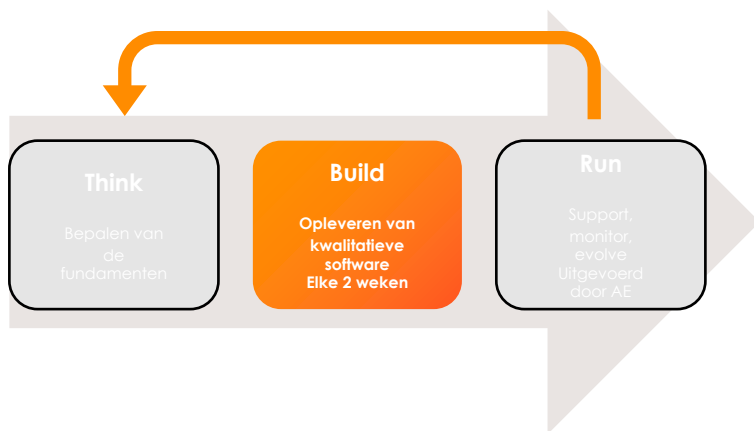
The Think phase



WHY

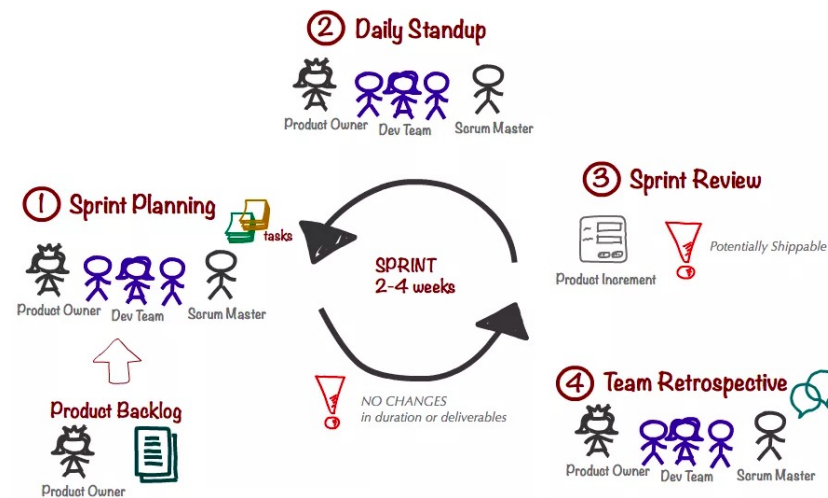
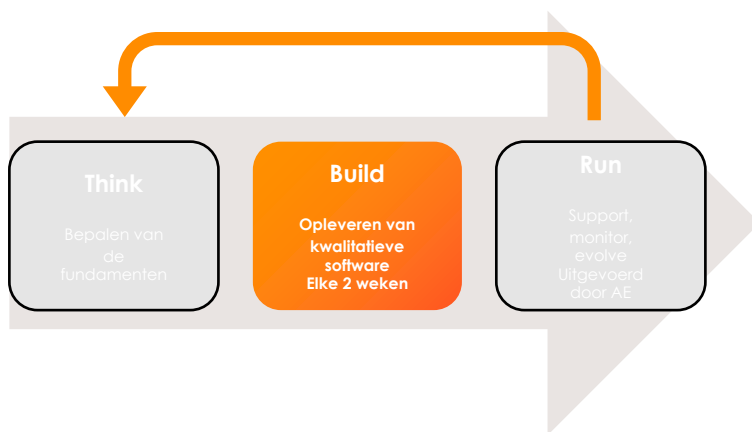
- Fine-tuning of the functional and non-functional requirements
 - Get insights in the source applications and corresponding data models.
 - Finalize technical architecture.

The **Build** phase



Composition of the team.

The Build phase



Co-think, co-act, co-deliver mindset. We adhere to the following principles

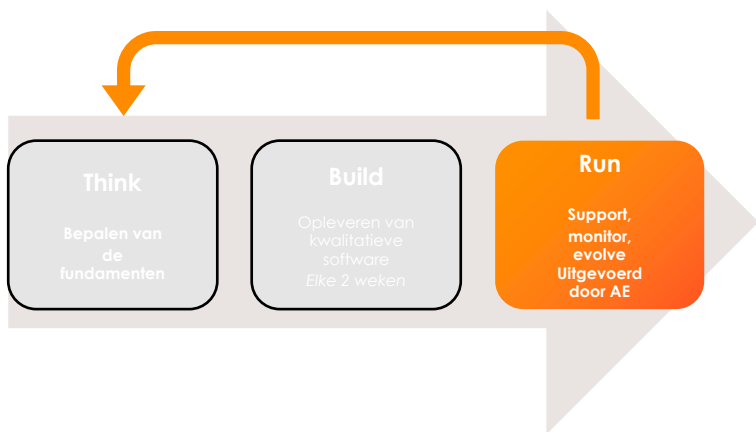
- 2-week sprints; priorities first.
- The sprint-based approach allows us to react to a changing context: new insights, feedback, unforeseen circumstances.
- The team retrospective stimulated evaluation and modification of the way-of-working.
- Clear view on the backlog (short term and long term)

Our approach:
agile delivery.

The Run phase



Customer



In Scope	Support	<ul style="list-style-type: none"> • Functional and technical support (2nd and 3rd line) • incident management (incidents, questions, service requests) 	<ul style="list-style-type: none"> • First line support (contact center) • Registration of issues (AE service desk)
In Scope	Maintenance	<ul style="list-style-type: none"> • Planned releases for updates and non-blocking bugs • Software and framework updates, etc. 	<ul style="list-style-type: none"> • Decide together with AE when which releases will be done.
In Scope	Change control	<ul style="list-style-type: none"> • Change requests / new functionality 	<ul style="list-style-type: none"> • Decide together with AE when which interventions will be performed.
In Scope	Monitoring	<ul style="list-style-type: none"> • Technical monitoring of the platform • Status reporting 	

Overview of the service.



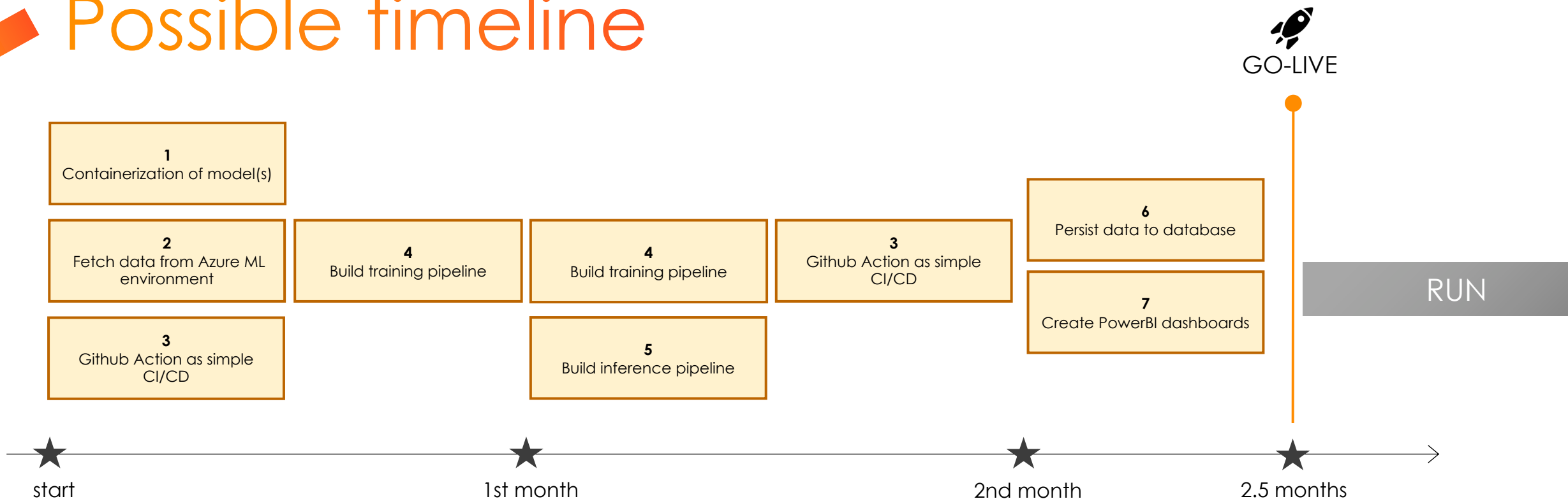
Sizing

1	Containerization of model	S
2	Fetch data from Azure ML environment	XS
3	Github Action as simple CI/CD	S
4	Build Training Pipeline	L
5	Build Inference Pipeline	M
6	Persist data to DB	XS
7	Create PowerBI dashboards	S

32 – 61 Days

Size	XS	S	M	L	XL	XXL
Estimate Range	1-2 days	3-5 days	1-2 weeks	2-4 weeks	1-2 months	Over 2 months

Possible timeline



Sprint - 2 week
 ★ Steering committee