wise

Apache Airflow at Wise.

Money without borders.

Wise today

10 million

customers around the world

£4.5 billion

processed for customers every month

£1 billion

saved for our customers every year

2,200 staff

from 70+ nationalities

Alexandra Abbas

Machine Learning Engineer

@alexandraabbas

What do we use Airflow for?

- **Treasury team**
  Monitor liquidity and cash buffer in our system

- **Finance team**
  Generate Google Sheets reports to BI stakeholders

- **Fraud team**
  Fraud detection for different payment methods

Our data stack

Kubernetes
Custom HTTP service for serving predictions

Amazon Sagemaker
Data science experiments and model training

Amazon EMR
Data processing and model training

Snowflake
Data warehouse and SQL data analysis

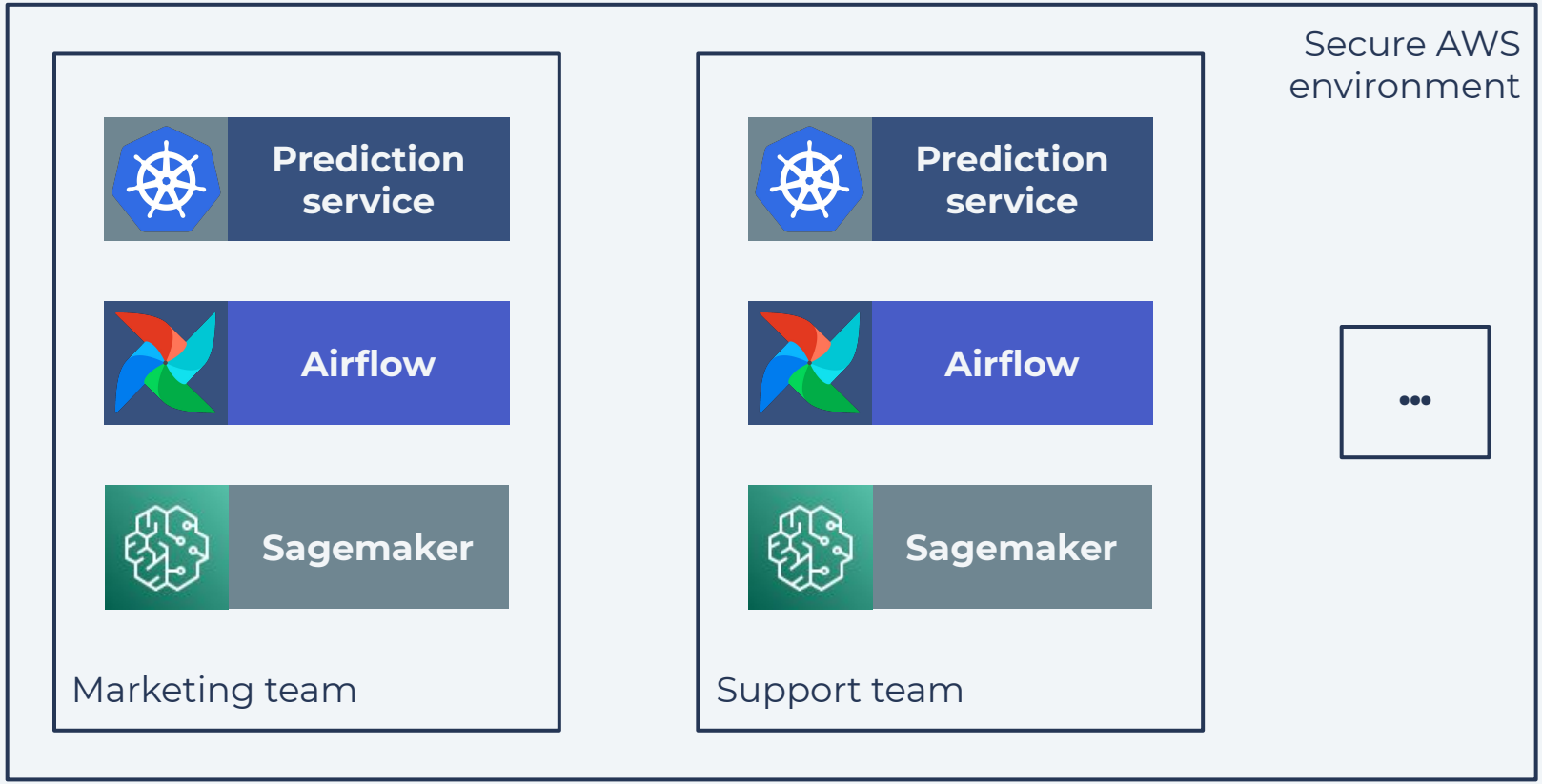
Requirements for Machine Learning Platform

- **Security**
  Minimise vulnerabilities and the chance of breach

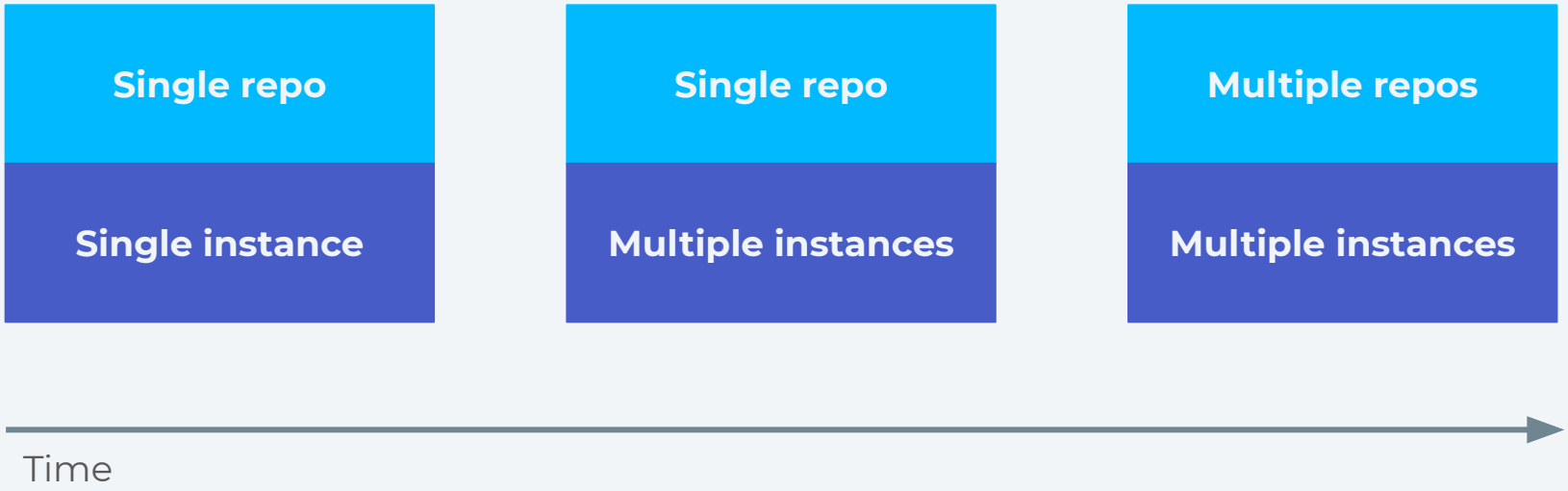
- **Segregation of data**
  GDPR, partner requirements, restricted access

- **Autonomy for teams**
  Teams manage their own code base

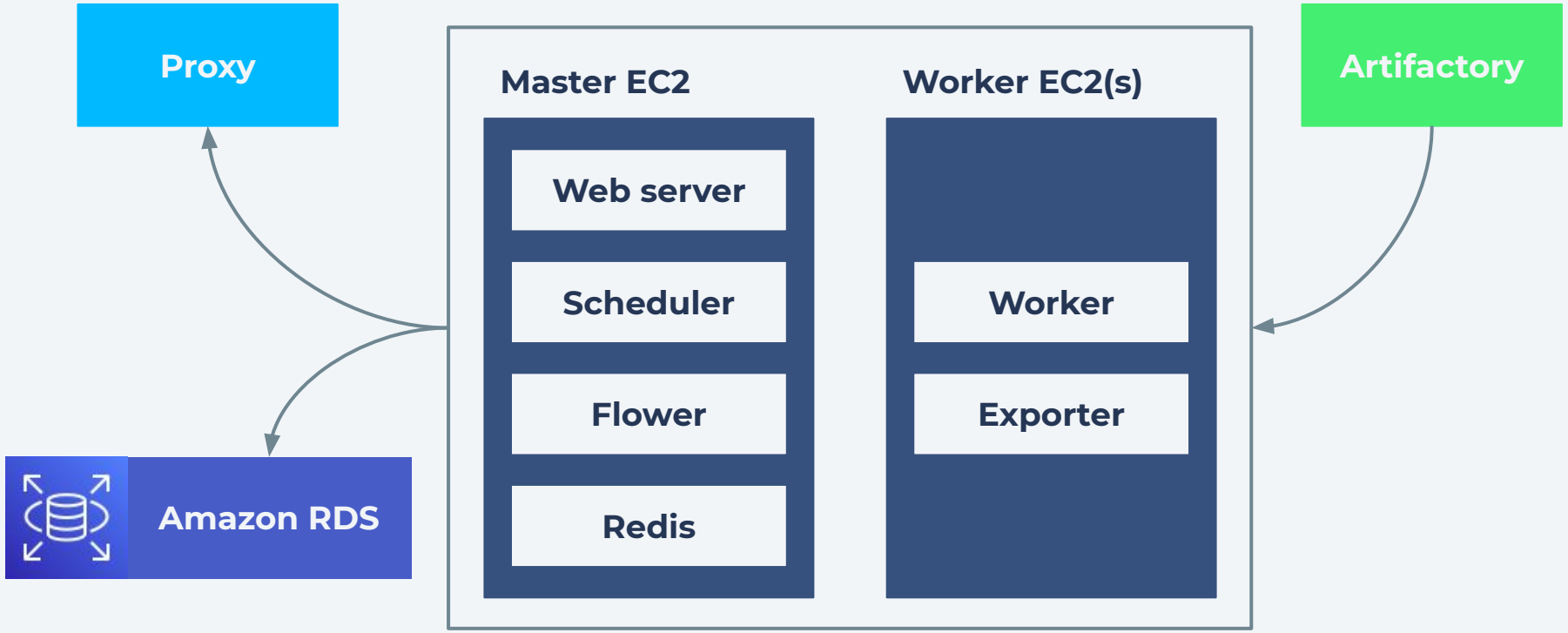
Our Machine Learning Platform



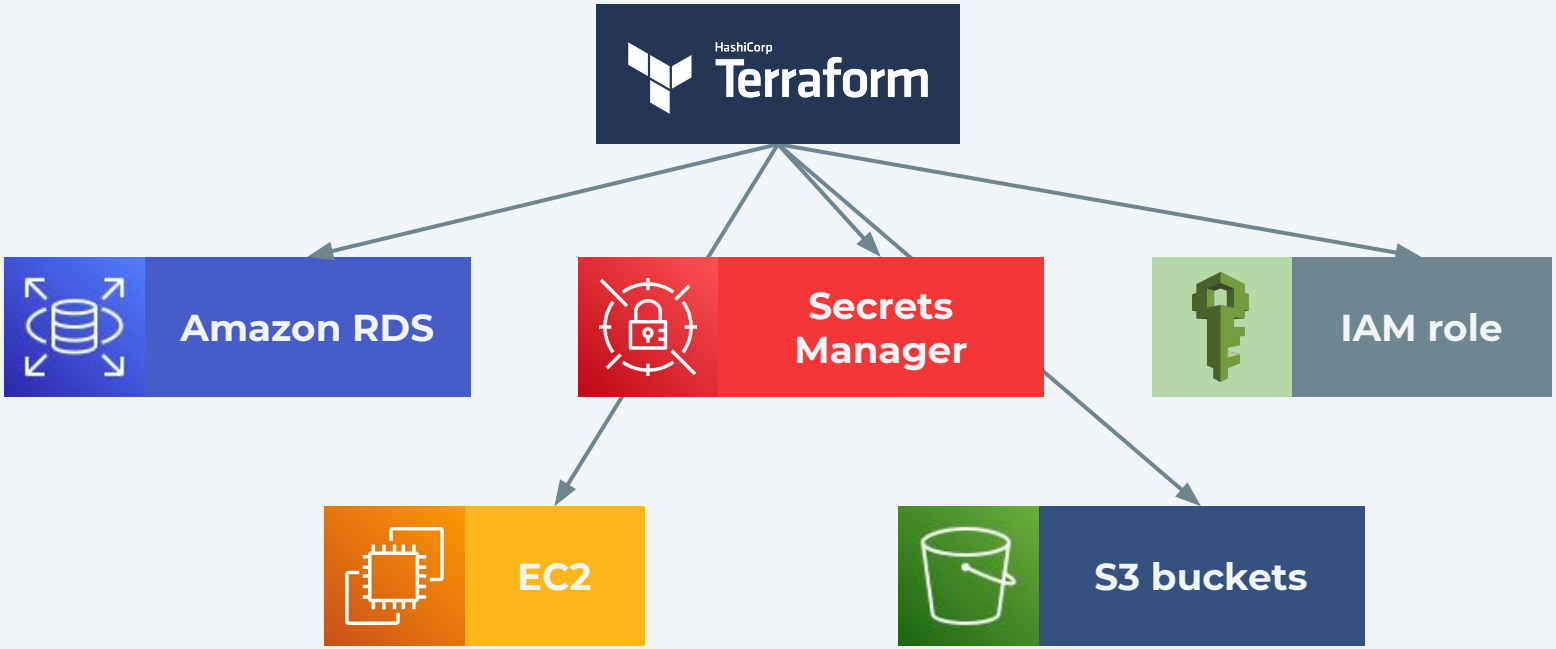
Evolution of Airflow at Wise



Our Airflow architecture



Airflow infrastructure management



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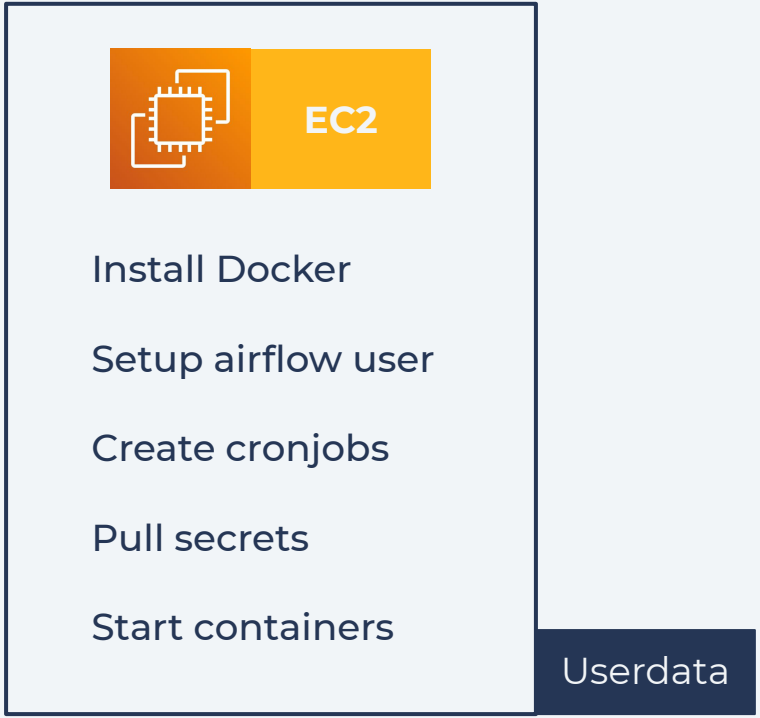

Pros

Easy to create a new instance

Segregated environments

Secure environment

Cons

Scalability

High availability

No SLAs

Questions.