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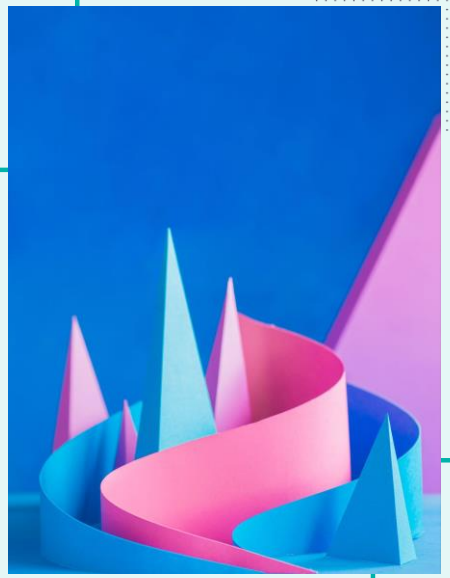
Three Steps to Operationalize AI Projects at Speed & Scale

CDAO Malaysia



Alex Aung

Director Sales Engineering,
Dataiku

Alex has more than a decade of experience in the field of AI and Automation. He is one of the founding team members of Dataiku Singapore and has seen through multiple clients in their journey towards enterprise AI.

Interesting Fact: He recently developed a price optimization model for his own purchase of a property in Singapore using multiple sources of data and market consensus. He is his own real estate agent!

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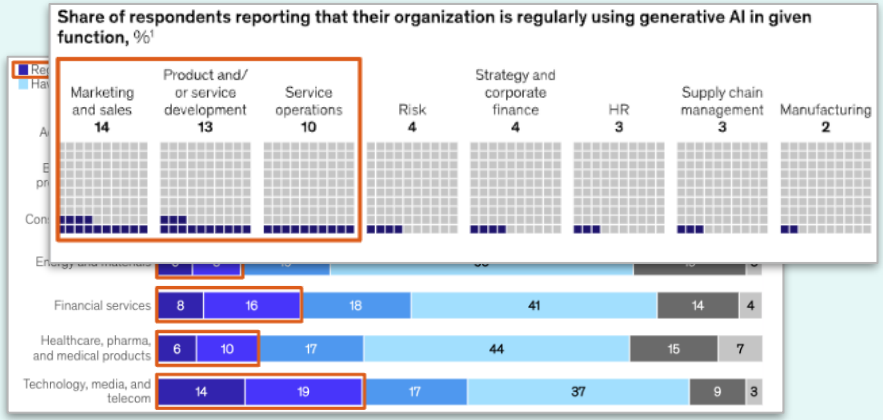
AGENDA

1. State of AI & Lesson Learns
2. Challenges
3. 3 Steps To Operationalise

Comparing the traditional and new innovation speed

Past Few months

Progress in Generative AI.



Past 10 Years

Progress.

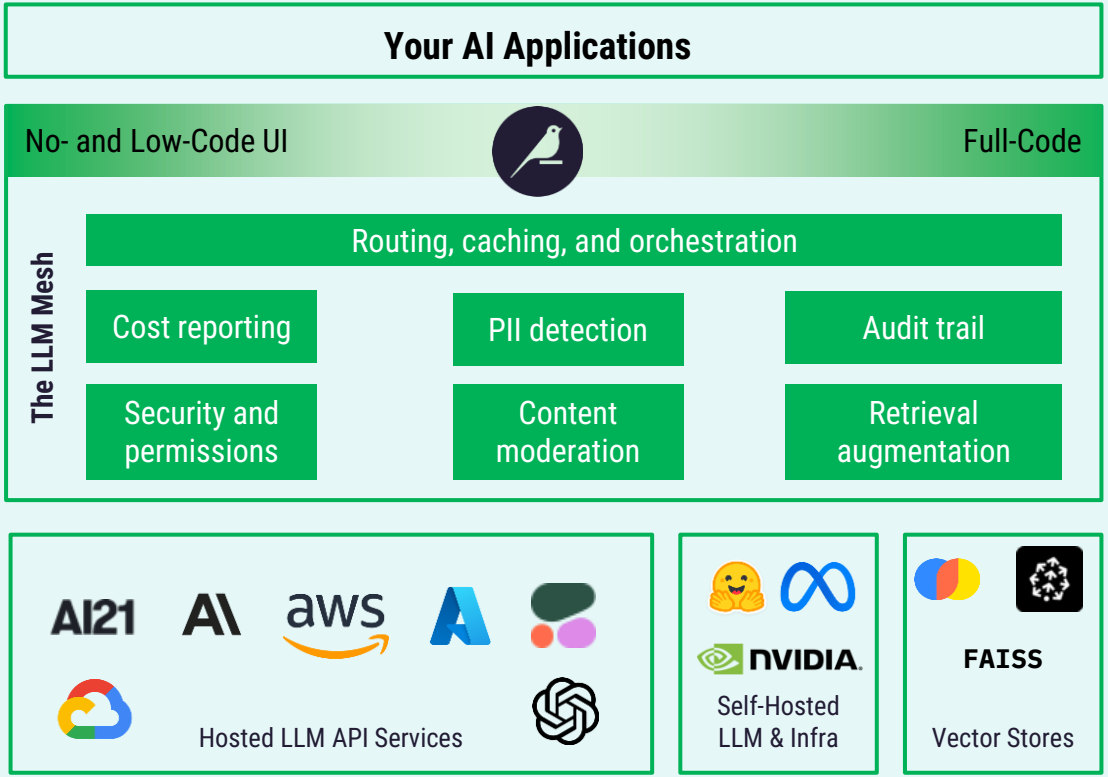
Year 2023 marks the explosive growth of Generative AI

ChatGPT is not the only leading companies today

Many more…..

Systemizing Generative AI for Enterprises

LLM Mesh will give innovation agility, flexibility, and ROI in any businesses



Decouple the application and AI service layers

Enforce a secure gateway to approved LLM services and maintain an audit trail

Ensure safe use by defining which datasets can be used with which LLM

Control costs and avoid unnecessary re-generation with caching

Enrich queries and responses with built-in retrieval augmentation

More about LLM Mesh at our booth


Alex


Luke


Aeris


JH


SK

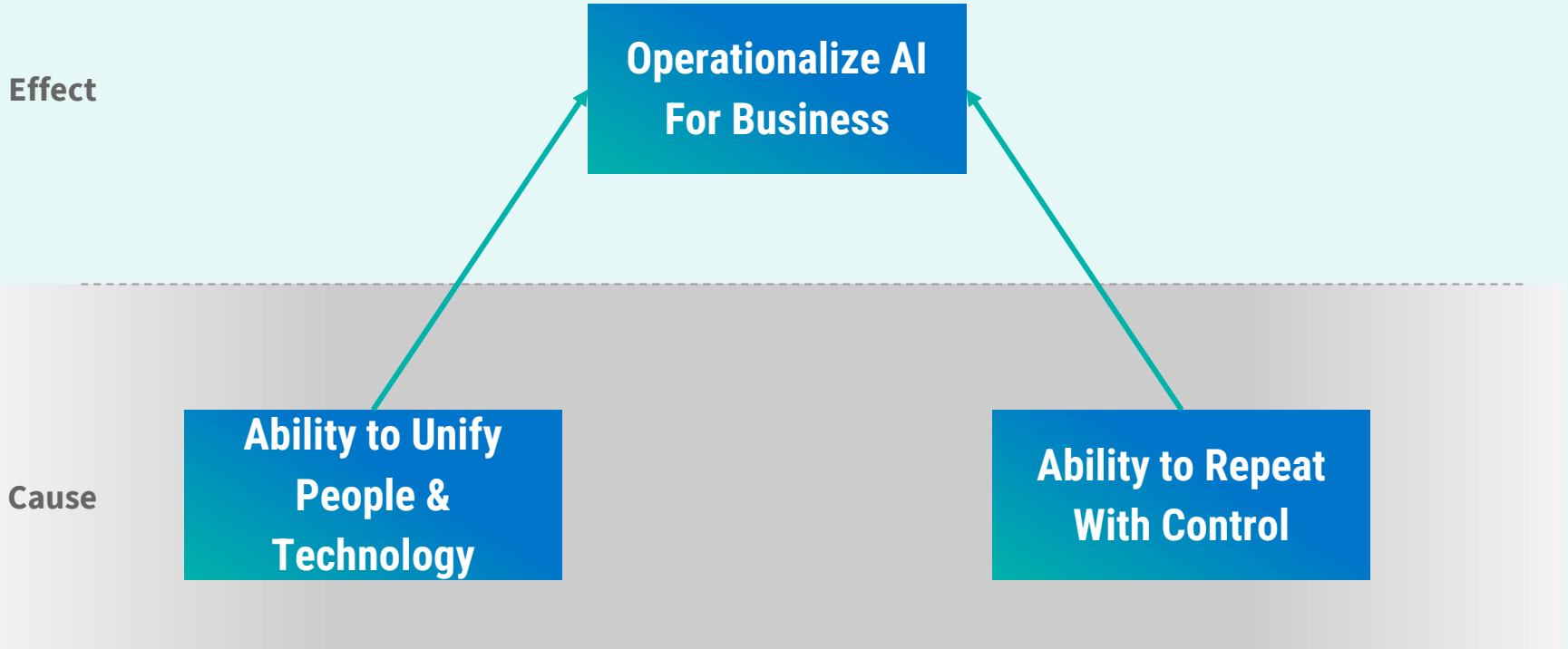

Carol


Asyeeq


Rongrong

Learning In The Success Of Generative AI

The key to success is in the basics.



How to create the success like
Generative AI products in the businesses?

AGENDA

1. State of AI & Lesson Learns

2. Challenges

3. 3 Steps To Operationalise

What we see from our interactions: critical gaps and persistent friction hamper scale

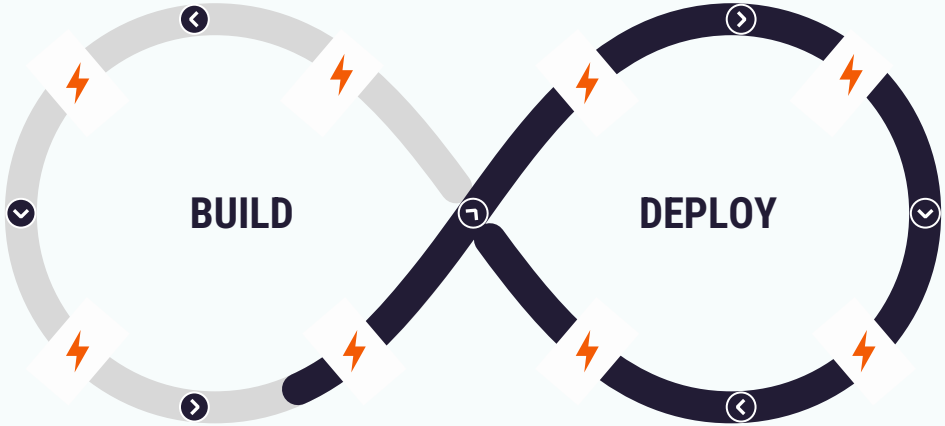
Tools and model complexity, lack of automated workflows, and a monolithic approach hinders ability to scale and deliver value at speed

Business SME
We need to qualify content & expectations

IT Operations
How and where do I deploy?

Data Engineer
I struggle to help the team rely on better data

Business Analyst
It takes time to put the models into users' hands



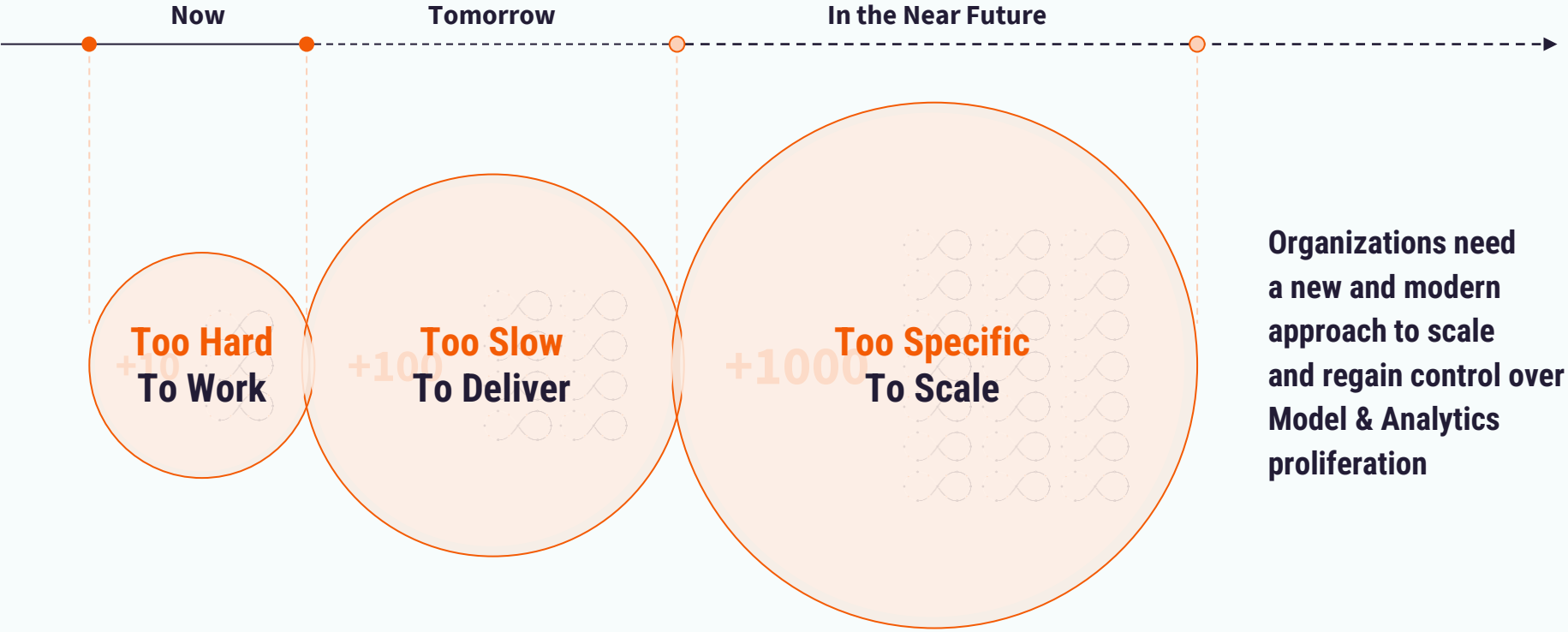
ML Engineer
Is the model performant & robust?

Risk Manager
Does the model still fit our requirements?

Risk Manager
Is the model compliant to our policies?

IT Operations
How to monitor the model?

With Blockers From the Get Go,
the More You Scale, the Worse It Is

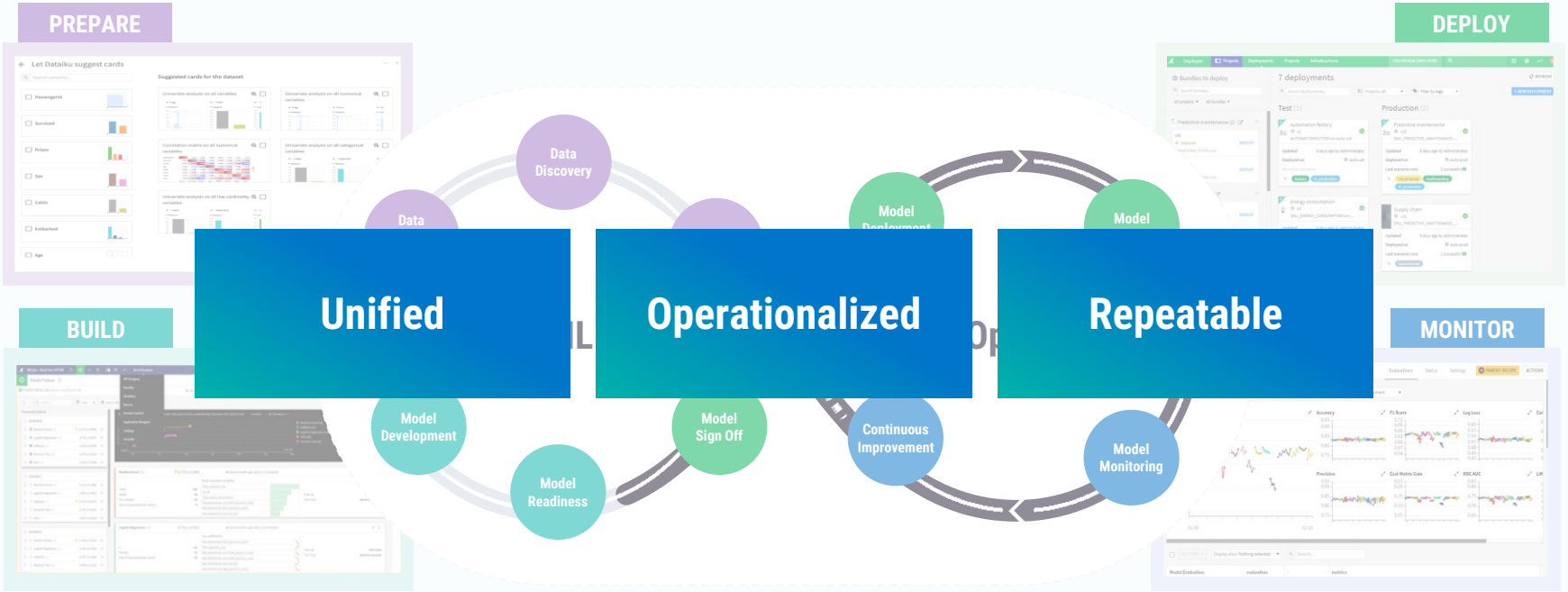


Organizations need a new and modern approach to scale and regain control over Model & Analytics proliferation

AGENDA

3 Steps To Operationalise

Dataiku's approach to MLOps




Data Scientist


Business Analyst


Business SME


Data Engineer

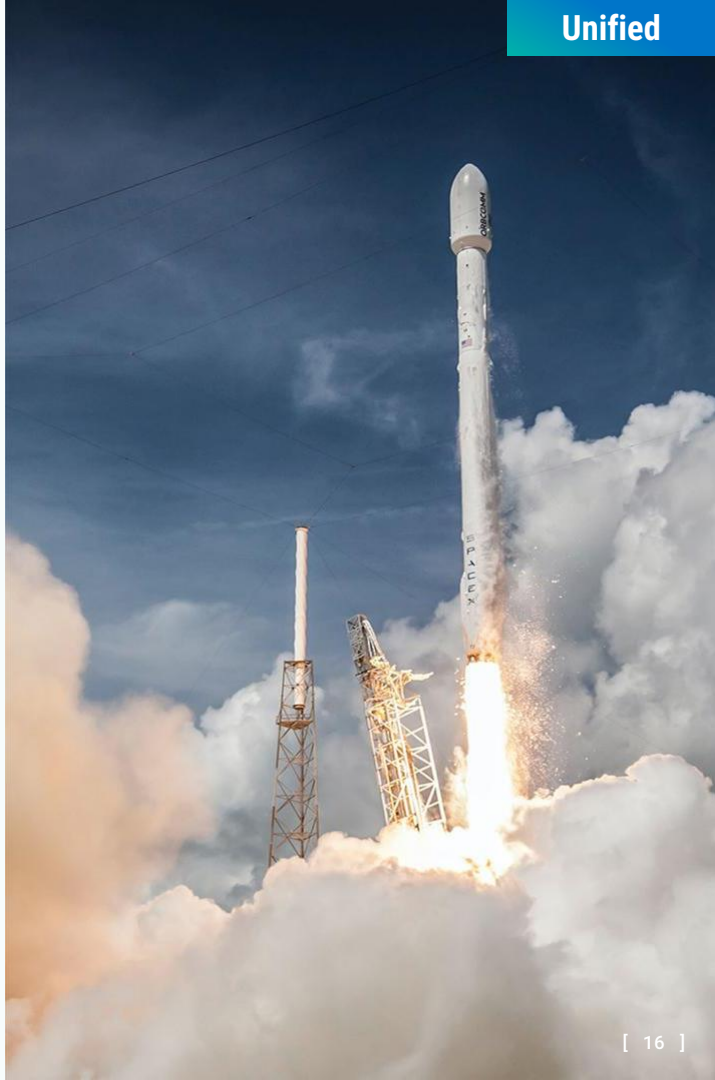

Control/Risk Manager


ML Engineer


IT Operations Manager

What we're hearing

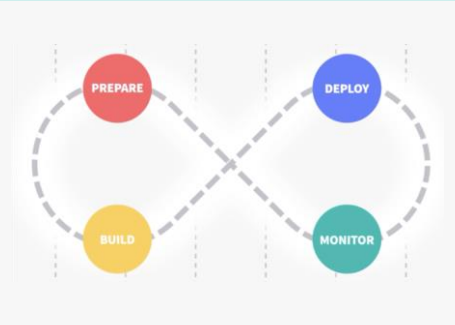
- How to **hand over** the project from one step to another **without** it being **time consuming**?
- How to **avoid tooling complexity** whilst working with many people on single projects?
- How to **innovate** without throwing away **already developed models**?



Building a Unified Loop

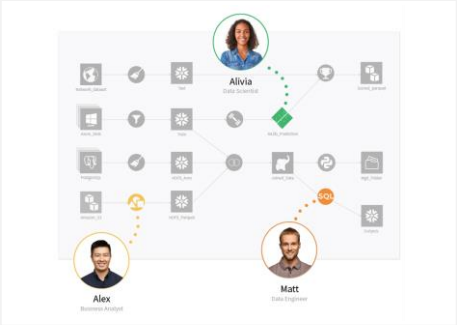
End-to-End Environment with No Gaps

From Data Discovery to Model Monitoring, a complete cycle



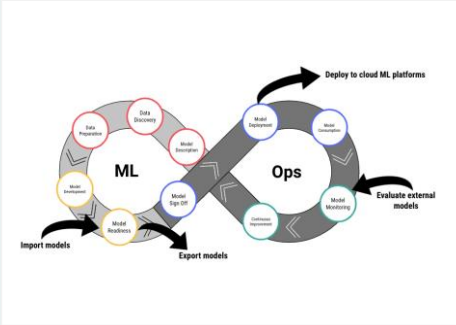
Bringing Technical and Business Teams together

A common grammar for technical coders, low & no-coders



Managing Any Model on a Unified but Open Loop

A central place for all models monitoring and dashboarding



ML-based Forecasting to Optimize Capacity Planning at Facilities

Challenge

- Process parcel demand in a timely manner
- Ever-increasing parcel volume with e-commerce growth
- Whilst controlling for cost

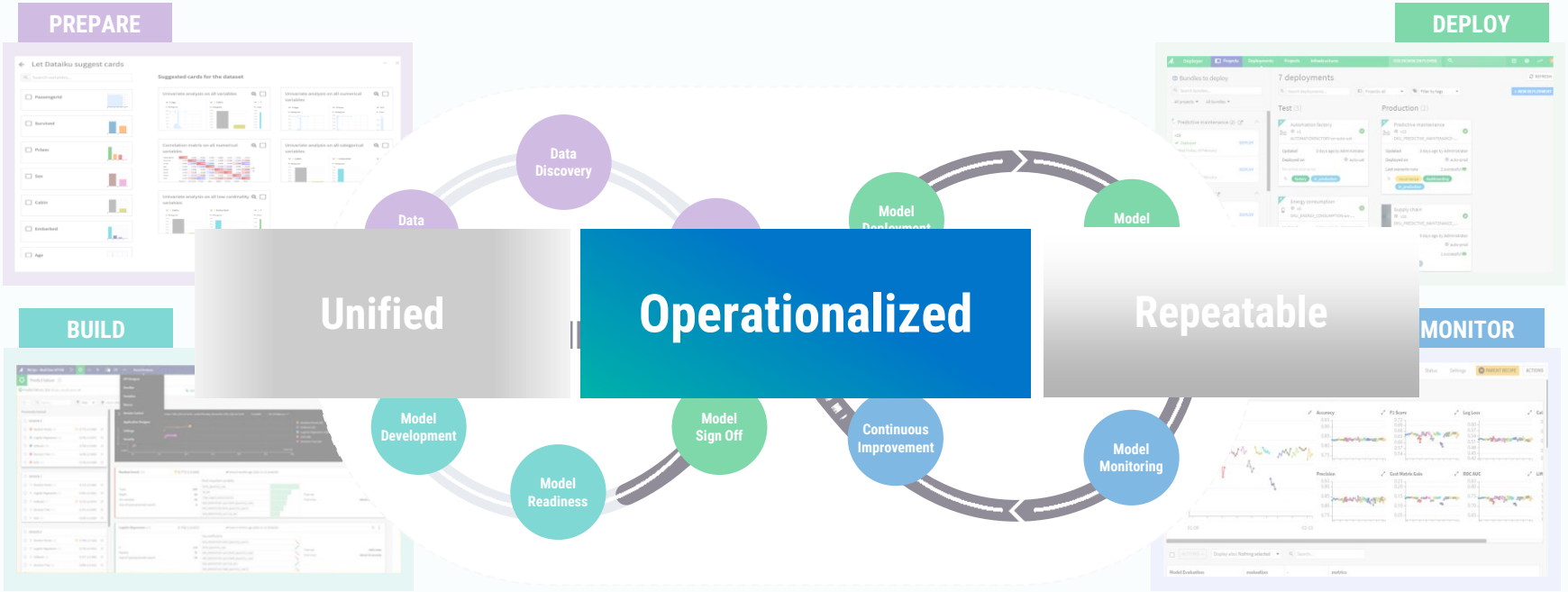
Solution

- Dataiku as end-to-end Data & Analytics platform
- Lineage tracking & model versioning across AI lifecycle
- Production processes are automated and handled by Dataiku
- Model Quality with metrics, checks, and testing capabilities

Benefits

- Better Operational Decision as required by daily cycle
- Better Teamwork: data scientists, data eng & developers
- Streamlined Forecast Generation Process
- Process Scalable nationally (10M $ savings expected)

Dataiku's approach to MLOps




Data Scientist


Business Analyst


Business SME


Data Engineer


Control/Risk Manager


ML Engineer


IT Operations Manager

What we're hearing

- How **not to recode the entire project** to put into production?
- How to **Control AI Quality** as I control Data Quality?
- How to **automate delivery and quality** of projects into production?

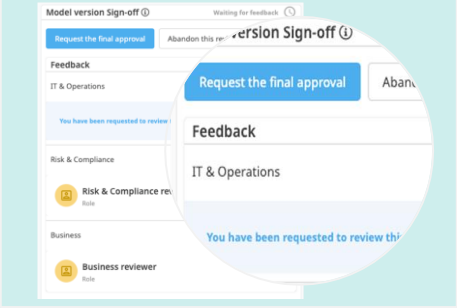
Operationalizing the Loop

What you Design is What You Operationalize

Seamless Automation with the Flow from prep to retraining

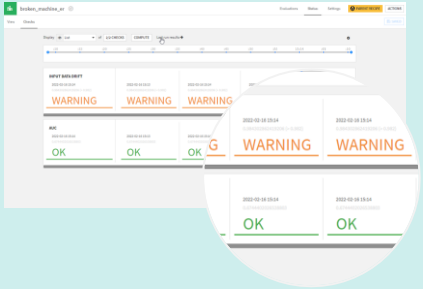
Safely Operationalize with Guardrails

Built-in model testing & signoff to enforce compliance



Supervise Production with Monitoring and Alerting

With a Model Evaluation Store and alerting framework



ML-based Forecasting to Optimize Capacity Planning at Facilities

Challenge

- Legacy infrastructure not compatible with real-time
- Spending too much time getting results
- Difficulty identifying and predicting problems

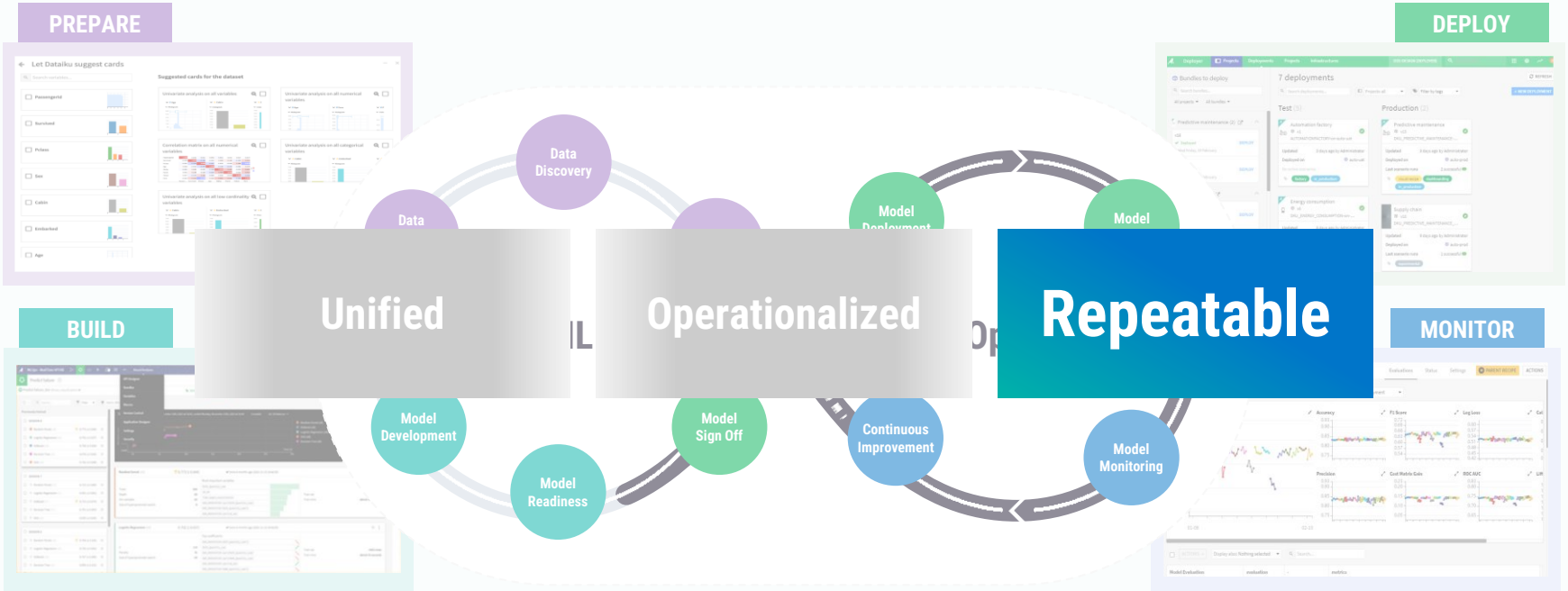
Solution

- Internal IT solution to manage score configurations
- +35 API designed, validated, deployed, monitored w. Dataiku
- End-to-End MLOps loop with Dataiku

Benefits

- Deliver Model Scoring twice as fast with error rate >0,02%
- Scalability: Response Time<400 ms on 15M+ Scoring Calls
- Higher Average Gain: higher acceptance, lower risk

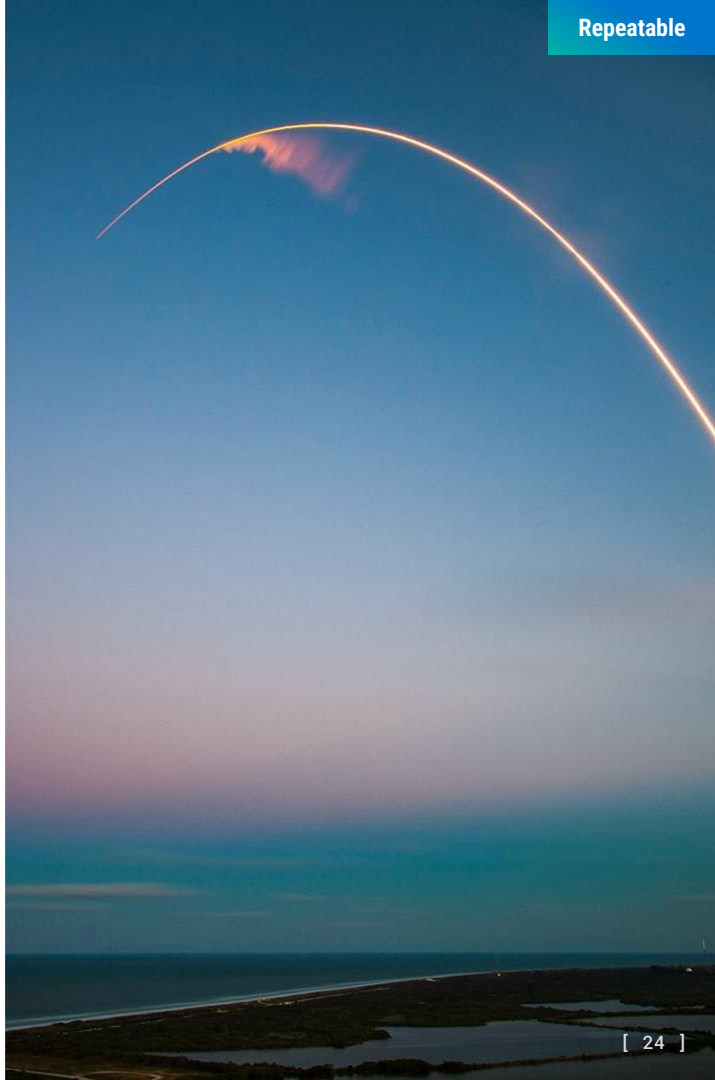
Dataiku's approach to MLOps



Data Scientist | Business Analyst | Business SME | Data Engineer | Control/Risk Manager | ML Engineer | IT Operations Manager

What we're hearing

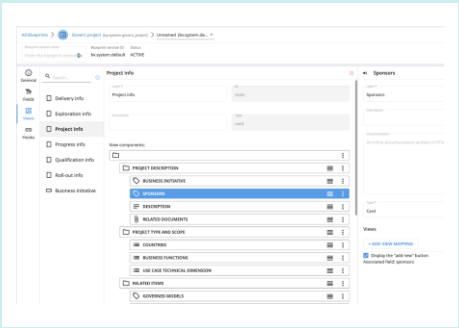
- How to **enforce compliance at scale** in regards to AI regulations & Policies?
- How to make sure our teams **find and reuse** the **elements we trust**?
- How to **keep the Big Pictures** of my Analytics & AI Models & Projects?



Repeating the Loop to Scale

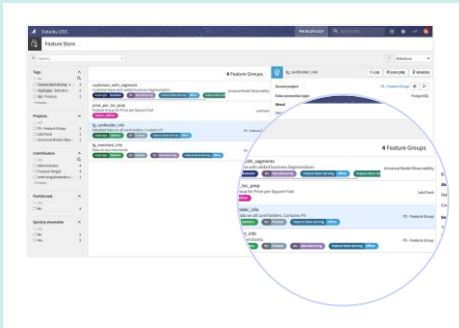
Adopt a Systematic Pattern to Amplify Scale

BluePrint ensures you follow the same workflow on similar projects



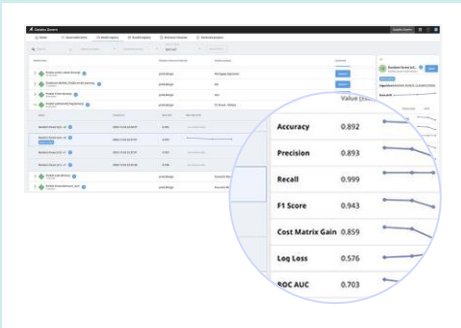
Leverage Reusability with Easy-to-find Trusted Components

Models, Datasets & Plugins centralized in a shared catalog



Oversee Value Across All Business Initiatives

Registry of Models and related Analytics Projects



Repeat & Streamline Anomaly Detection with Dataiku MLOps

Challenge

- Expensive Anomalies along the HD assembly Line
- Shopfloor Teams unable to detect & act on time
- No Insights to warn and act on when needed

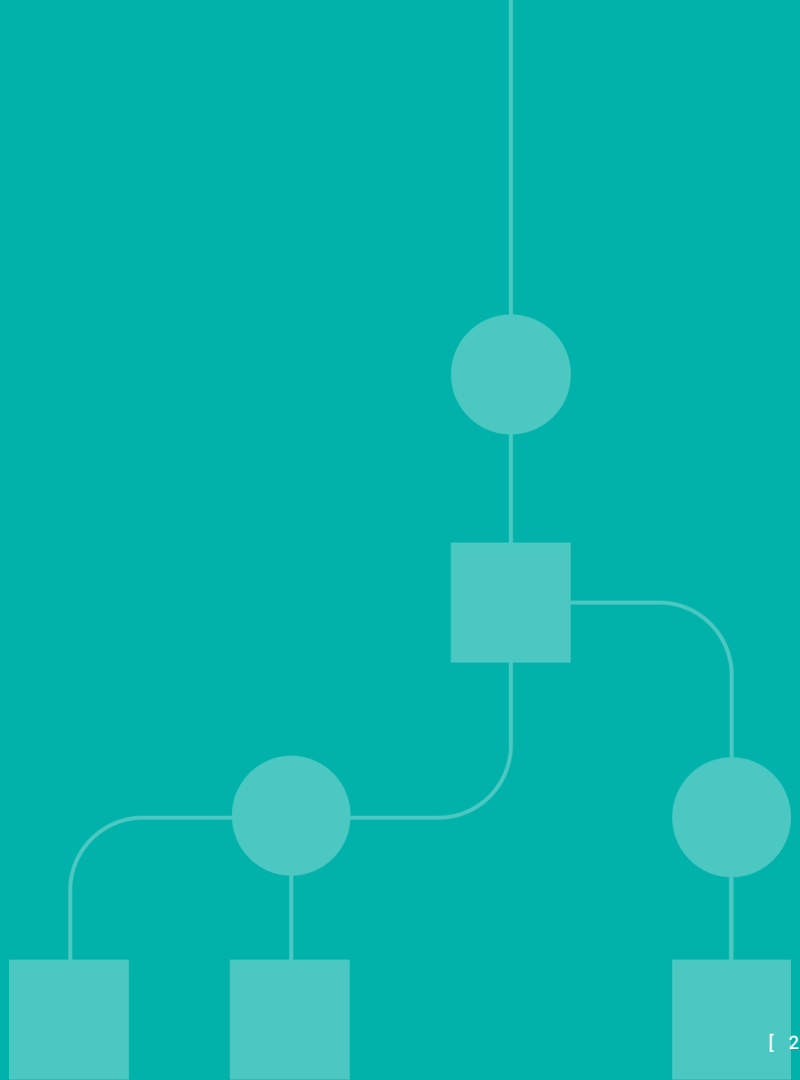
Solution

- MLOps supporting Model Validation, Observability and Monitoring
- Fully 24/7 Streaming Recipes & Automated Retraining Loop
- Health Check & Monitoring thru Alert, Email, Dashboard

Benefits

- Faster TTD: scalable Real time manufacturing issues detection
- Ease of deployment to production: from x10 to x100 models
- Significant savings with avoidable manufacturing excursions

Summary



3 key ingredients to operationalize the Any AI projects at Speed & Scale

Unify

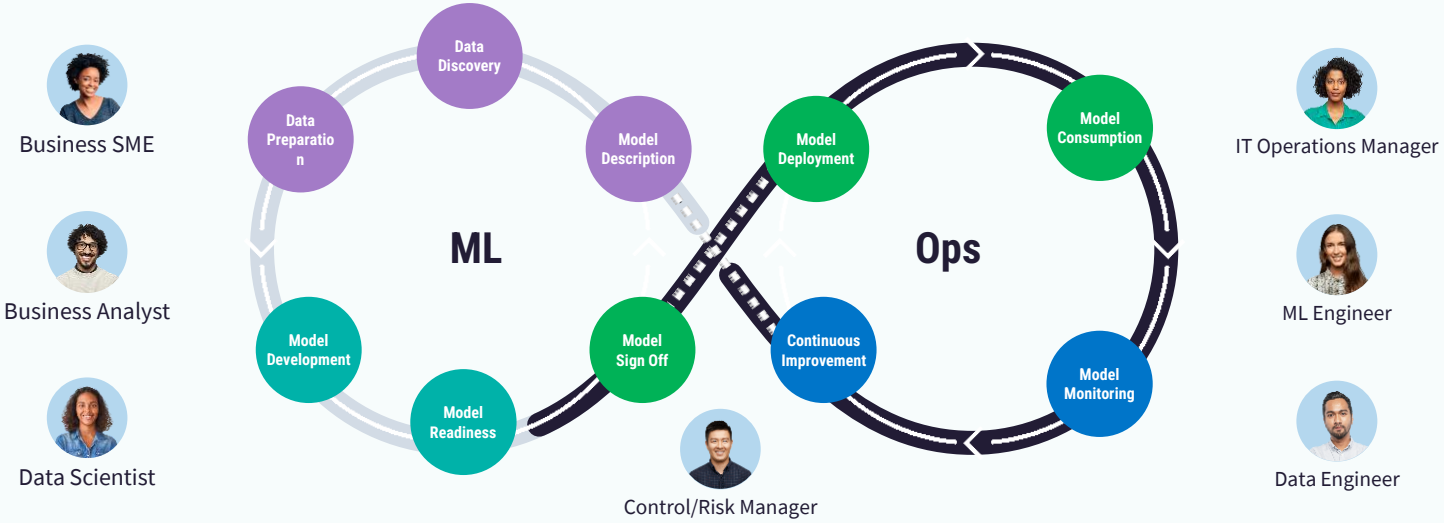
Covering a Full lifecycle to address multiple stakeholders with no airgaps

Operationalize

Remove Friction and accelerate with automation & simplified deployment

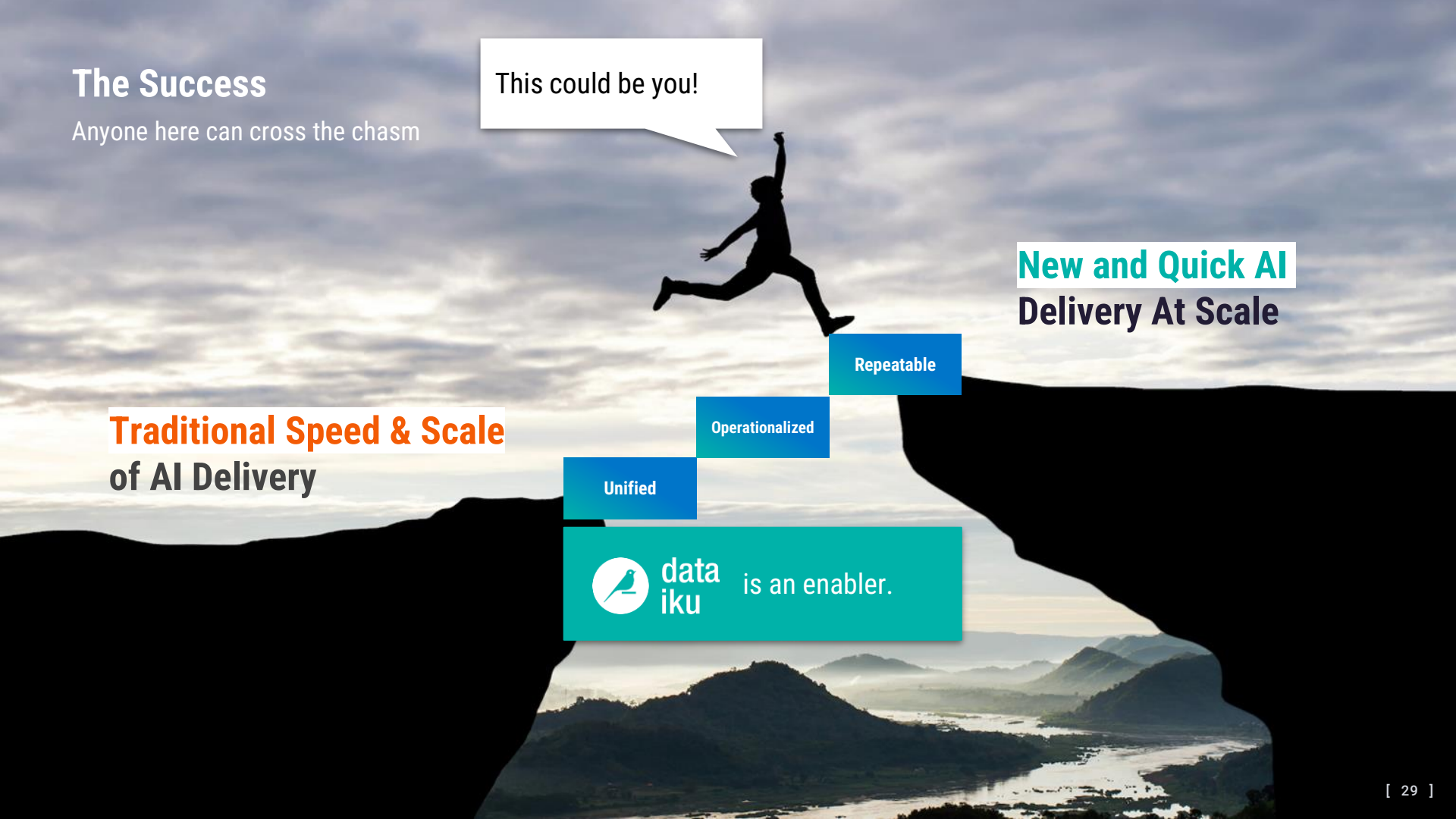
Repeat

From « One and Done » to a standardized approach to scale



The Success

Anyone here can cross the chasm



Thank you!

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