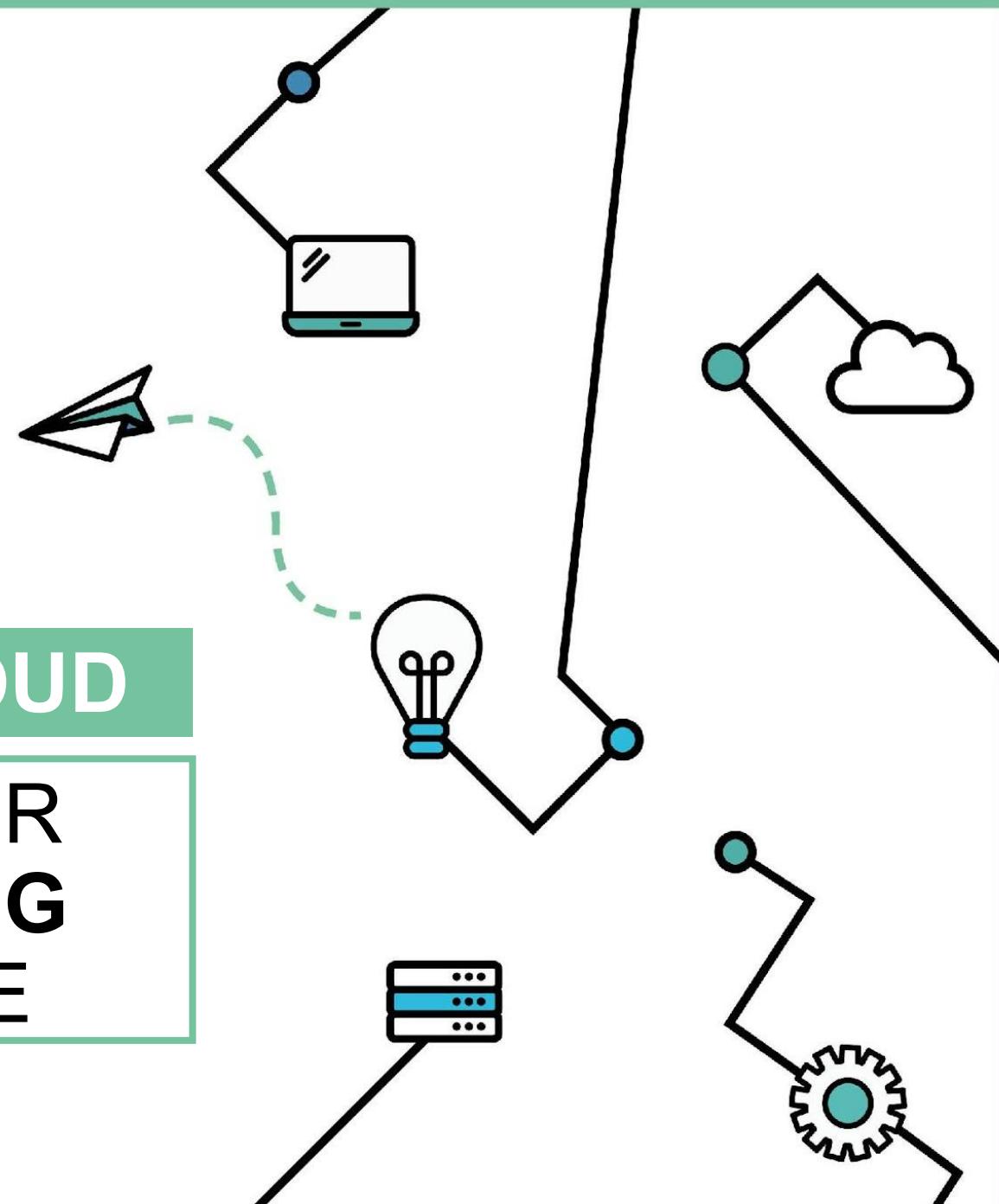


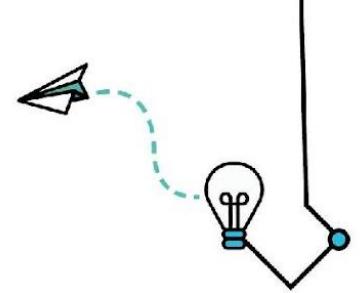


LINKIT
BUILDING IT TOGETHER

JOURNEY TO THE CLOUD

BEST PRACTICES FOR
DATA AND AI SCALING
WITHIN ENTERPRISE





AGENDA

1. Introduction

2. **Short-haul flight:**

from Basic Analytics

to Predictive Maintenance at KLM Cityhopper

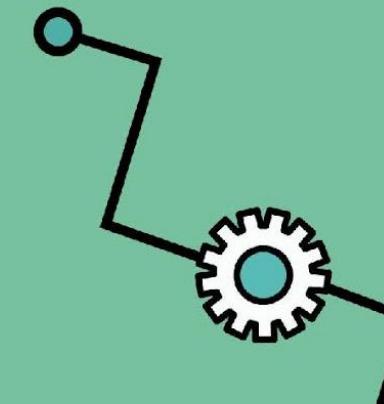
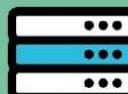
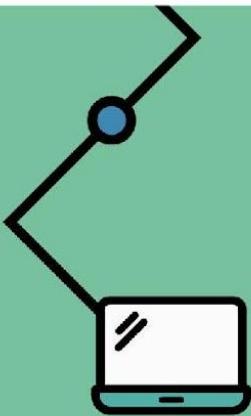
3. **Long-haul flight:**

from Basic Advanced Analytics

to Boosting Operational Decision Making at KLM Royal Dutch Airlines



INTRODUCTION



WHO WE ARE



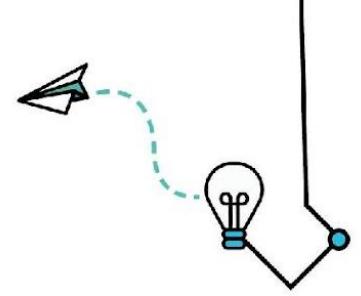
Alyona Galyeva
AI and Data Engineering
Principal at LINKIT



SHORT-HAUL FLIGHT

KLM CITYHOPPER





DEPARTURE
basic analytics



DESTINATION
predictive maintenance



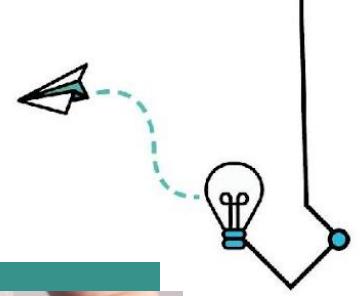
LEARNING JOURNEY



BUILDING IT TOGETHER

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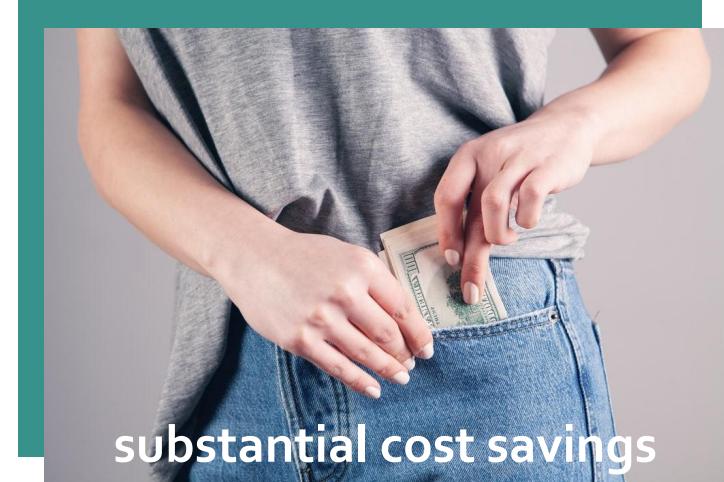


goal to prevent UGT

by providing
data analysts
with data to make
valuable dashboards

by supporting
data scientists
with necessary tools
**to amplify predictive
maintenance with AI**

results



substantial cost savings



happier teams



BUILDING IT TOGETHER

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BEST PRACTICES FOR DATA & AI SCALING

TO HARNESS THE POWER OF DATA



BUILDING IT TOGETHER



Way of Working



01

Stable Data Flows



02

MLOps Baseline



03

Cloud Migration



04

Knowledge Transfer



05

BEST PRACTICES

FOR DATA & AI SCALING

TO HARNESS THE POWER OF DATA



-  1
-  2

Define **PoC** (proof of concept), **MVP** (minimum viable product), **PRD** (production grade) for each data analytics and data science product

Split responsibilities between data analysts, data scientists & data engineers

Way of Working



01

BEST PRACTICES FOR DATA & AI SCALING

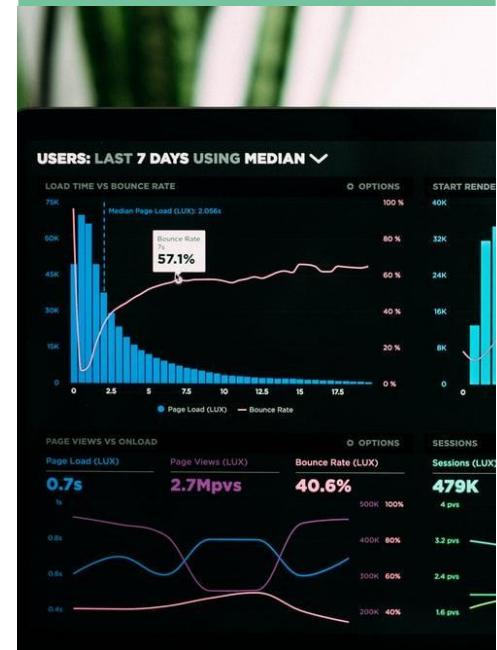
TO HARNESS THE POWER OF DATA

- 1 
- 2 

Set up basic monitoring for critical data flows first and add basic monitoring for the rest of data flows later

Extend basic monitoring with **data quality checks** for critical data flows

Stable Data Flows



02

BEST PRACTICES FOR DATA & AI SCALING

TO HARNESS THE POWER OF DATA

- 1 
- 2 
- 3 

Automation is key

Model training
experiment tracking, dataset versioning, model registry

Model serving
different serving flavors (batch, API, streaming app, edge), model monitoring and alerting

Model re-training
updated datasets, scheduled re-training

MLOps Baseline



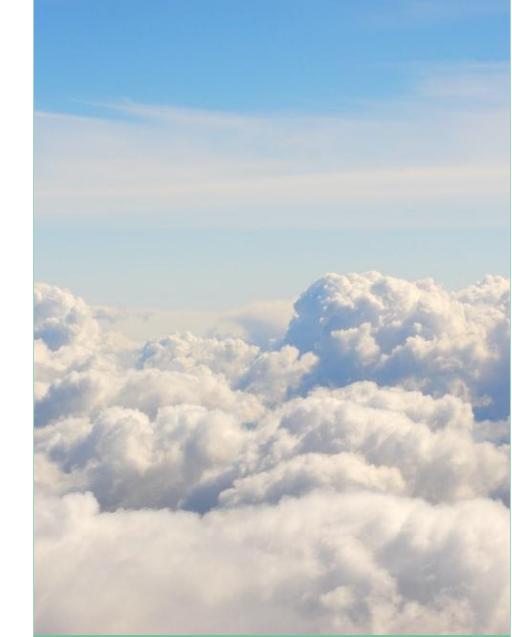
03

Cloud Migration

BEST PRACTICES FOR DATA & AI SCALING

TO HARNESS THE POWER OF DATA

- 1  Start with **roadmap** and possible dependencies
- 2  Define **first candidates** for migration
- 3  Run **PoCs** in the cloud with synthetic data
- 4  **Collaborate** with infra teams, use templates & automate



04



BUILDING IT TOGETHER

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BEST PRACTICES

FOR DATA & AI SCALING

TO HARNESS THE POWER OF DATA



Documentation is key
Production-grade code and automated workflows require little maintenance



Design for today, be ready for the scale of tomorrow

Knowledge Transfer



05



BUILDING IT TOGETHER

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BEST PRACTICES FOR DATA & AI SCALING

TO HARNESS THE POWER OF DATA



BUILDING IT TOGETHER



Way of Working



01

Stable Data Flows



02

MLOps Baseline



03

Cloud Migration



04

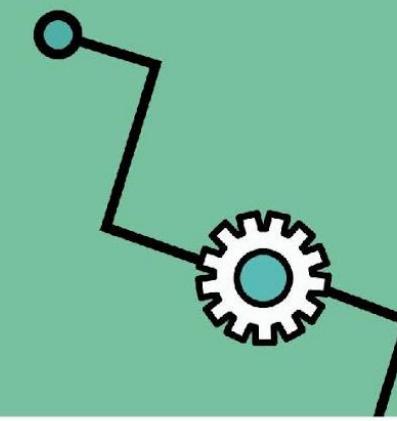
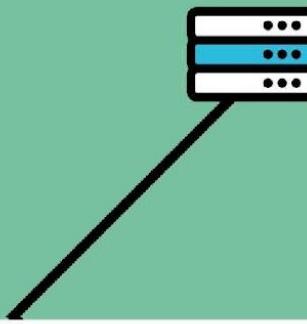
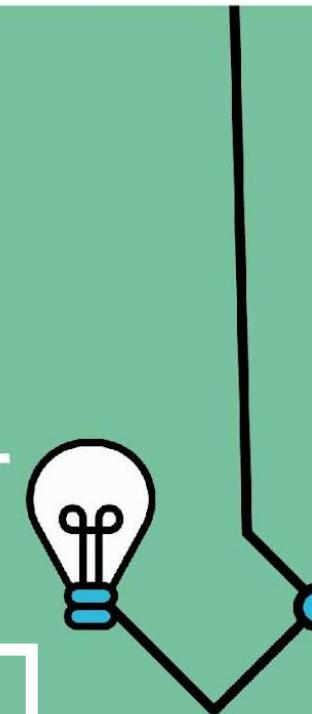
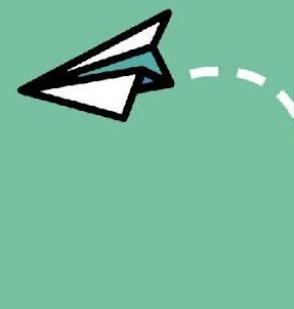
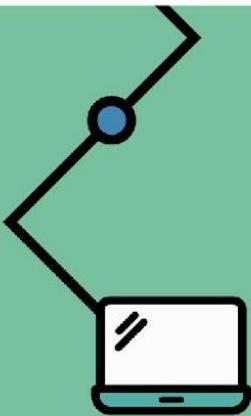
Knowledge Transfer

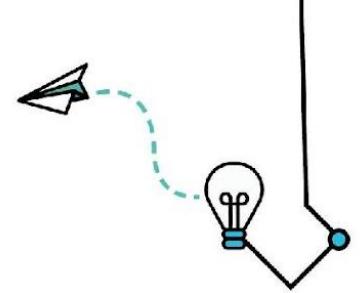


05

LONG-HAUL FLIGHT

KLM ROYAL DUTCH AIRLINES





DEPARTURE
basic advanced
analytics



DESTINATION
boosting operational
decision making



LEARNING JOURNEY

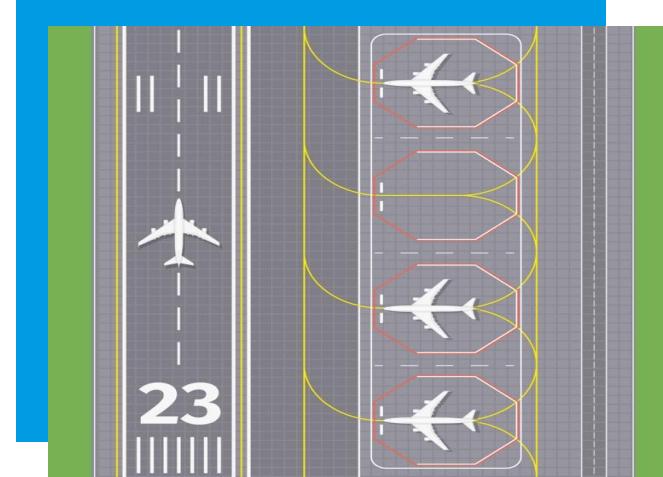
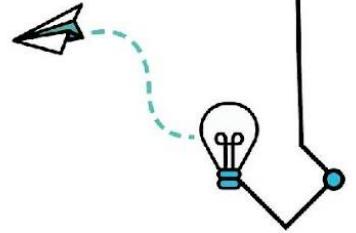


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HOW AI IS USED WITHIN KLM OPERATIONS



BEST PRACTICES FOR DATA & AI SCALING

TO START ADDING BUSINESS VALUE



BUILDING IT TOGETHER



How to
start IT in
an
enterprise



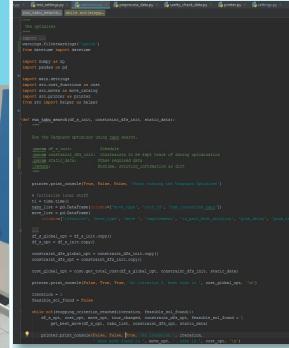
01

Understand
IT



02

How to
Build IT



03

How to
keep IT
going



04

Eventually
you need to
Scale IT



05

How to start IT in an enterprise



BEST PRACTICES FOR DATA & AI SCALING

TO START ADDING
BUSINESS VALUE

- 1 
- 2 

Law of **Failure**, most AI business cases fail in the real world

You need **breathing space**. In time and in budget to prove yourself, and build the capability

01



BUILDING IT TOGETHER

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Understand IT



02

BEST PRACTICES FOR DATA & AI SCALING

TO START ADDING
BUSINESS VALUE

-  1
-  2

Don't underestimate **product management**, building the right solutions. Prototype and close contact with the business

Pick the **right tool**, and trust the team to develop it. Don't make concessions

BEST PRACTICES FOR DATA & AI SCALING

TO START ADDING BUSINESS VALUE



Leverage craftsmanship, between data analysts, data scientists, machine learning engineers, data engineers; clearly define responsibilities and handovers

Hire the right people, and spend lots of time in **recruitment**

Organize your way of working and keep reviewing it. **Fail fast learn faster**



03



BUILDING IT TOGETHER



BEST PRACTICES FOR DATA & AI SCALING TO START ADDING BUSINESS VALUE

- 1 
- 2 
- 3 

Think big start small, fund the journey

Culture, talent/skill development and mentoring, **retention**

10-20-70. 70% is the real business transformation. (making the model is the easy part)

How to keep IT going



04

BEST PRACTICES FOR DATA & AI SCALING

TO START ADDING BUSINESS VALUE

Exponential growth



MLS ops, automation is key.
Monitoring, training, model serving.



Cloud Migration, choose the right provider, run PoC's with synthetic data, collaborate with ops IT teams



Train your own developers,
(Pair programming,
codestandards)...potentially with a partner **LINK IT**



Data as a Product, reliable data,
data access

Eventually
you need to
Scale IT



05



BUILDING IT TOGETHER



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BEST PRACTICES FOR DATA & AI SCALING

TO START ADDING BUSINESS VALUE



BUILDING IT TOGETHER



How to start IT in an enterprise



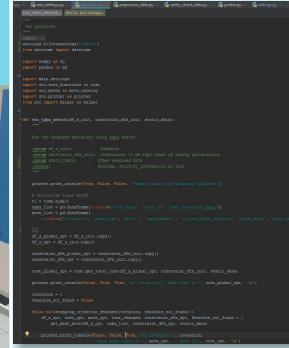
01

Understand IT



02

How to Build IT



03

How to keep IT going

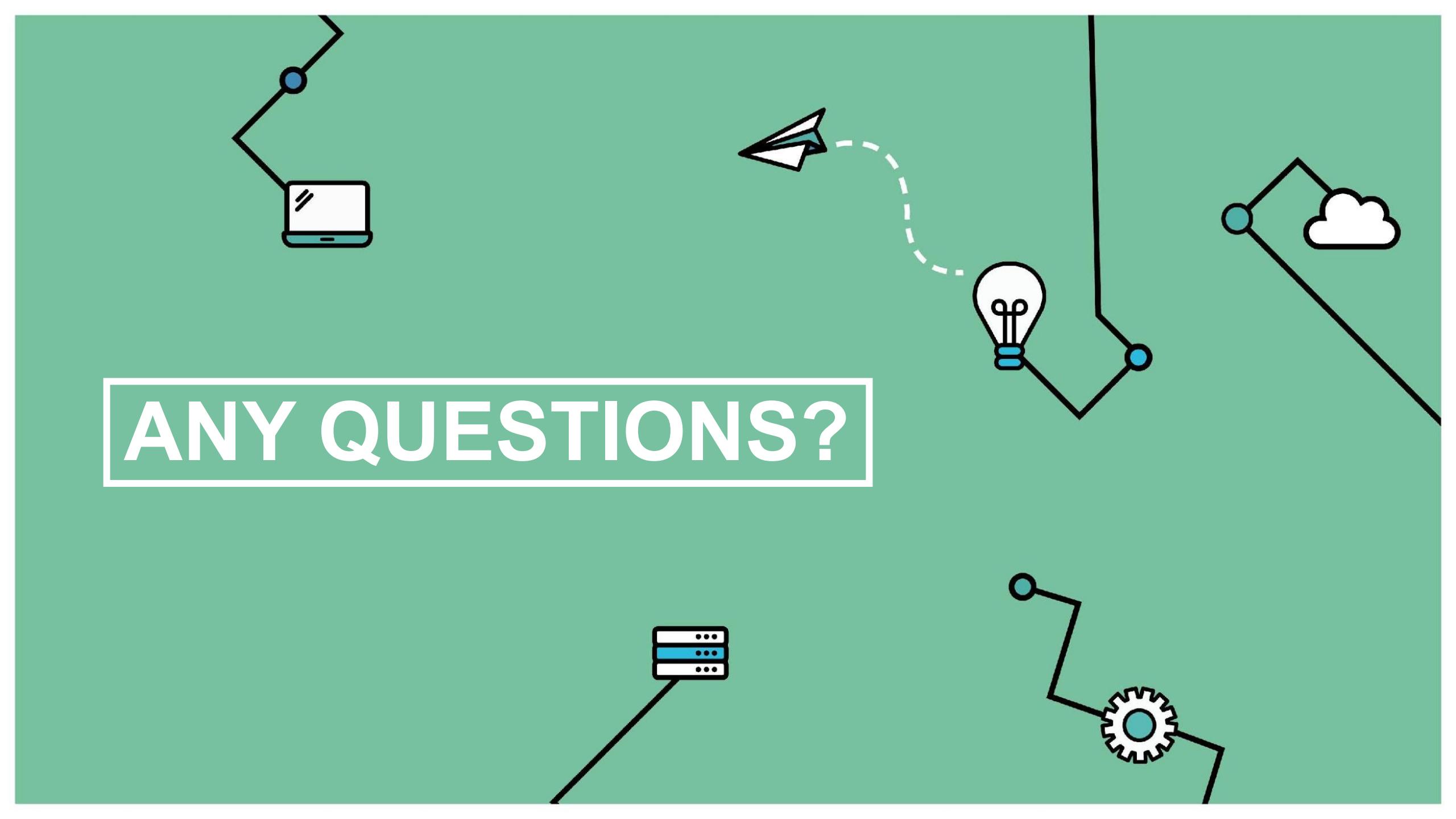


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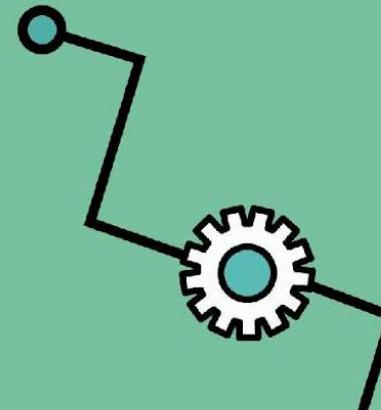
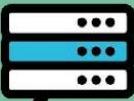
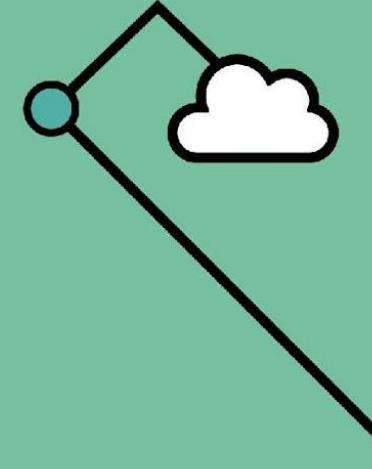
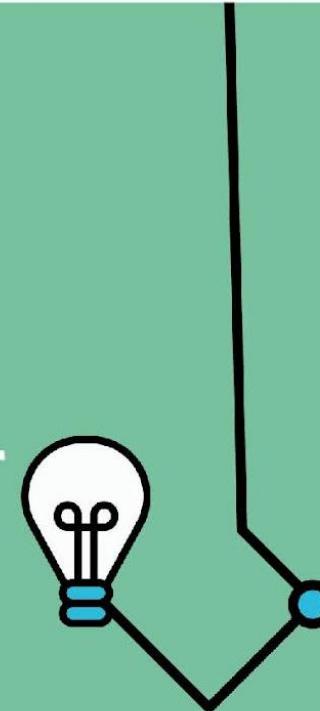
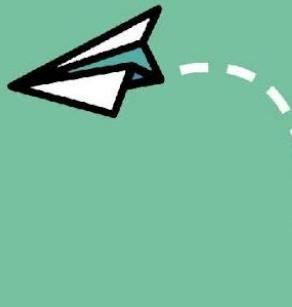
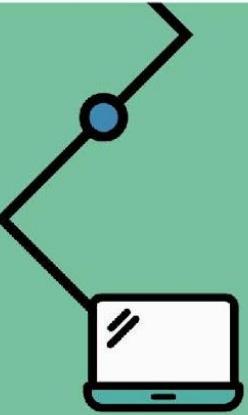
Eventually you need to Scale IT

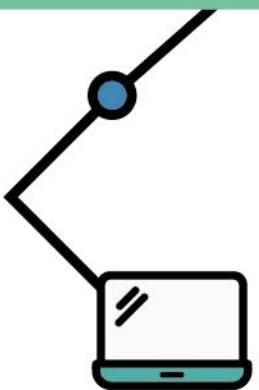


05



ANY QUESTIONS?





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