

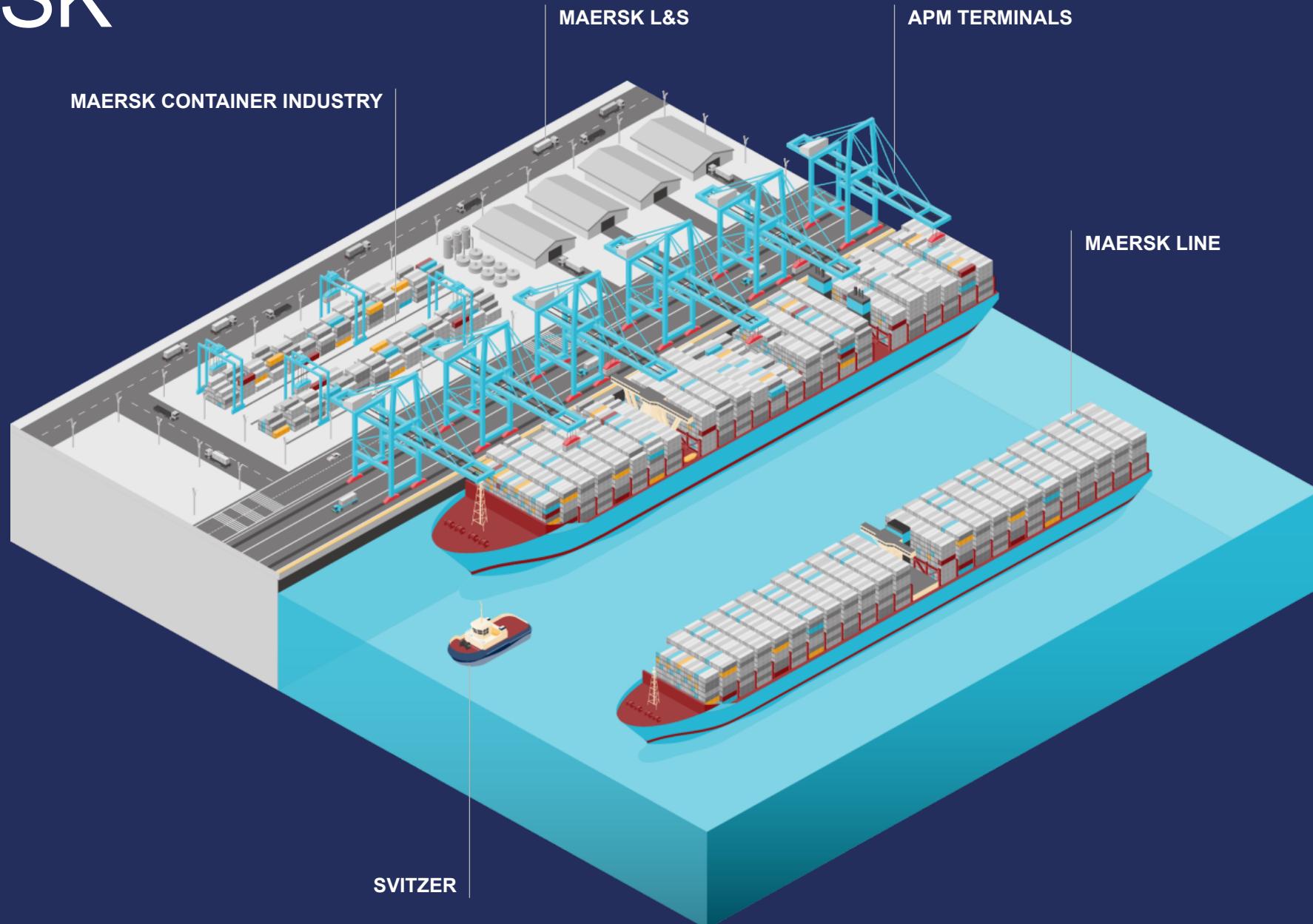
Succeeding with Cloud in the Enterprise



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MAERSK



Succeeding with Cloud in the Enterprise

Agenda

- Cloud Drivers
- Self-Service
- The Guardrails
- Cloud Finance
- Scaling the cloud journey

Succeeding with Cloud in the Enterprise

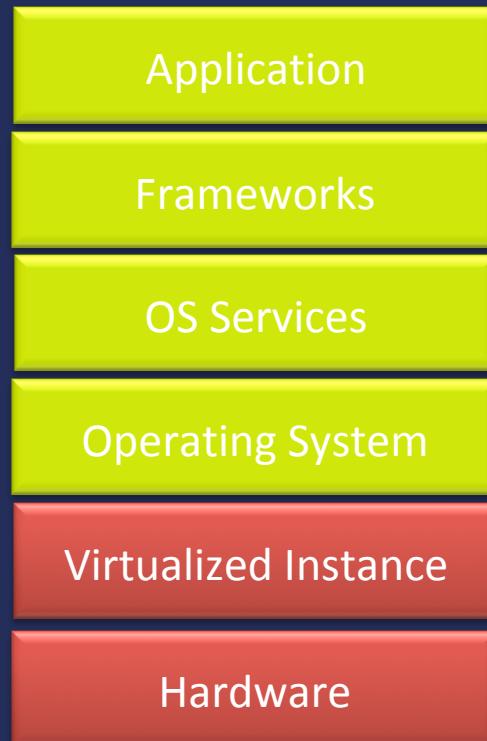
Cloud Drivers

*Cloud-first
strategy should
also be a SaaS-
first strategy*

Cloud Drivers

Why we are seeing a move to the cloud

1. PaaS gives a higher abstraction



IaaS



PaaS

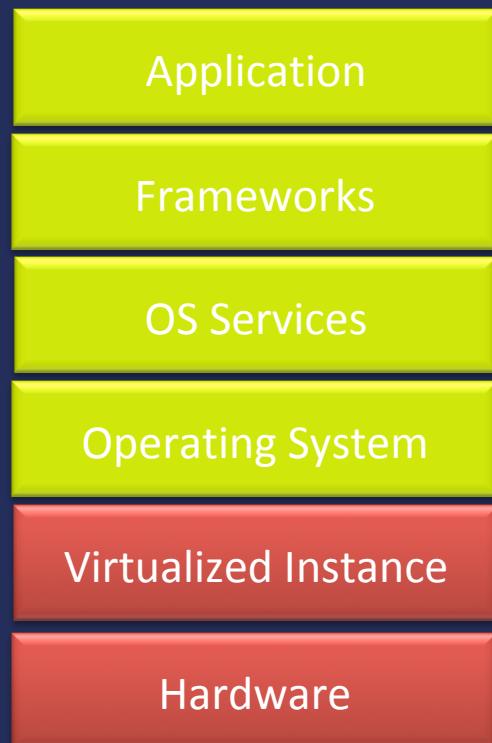


SaaS

Cloud Drivers

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IaaS



PaaS

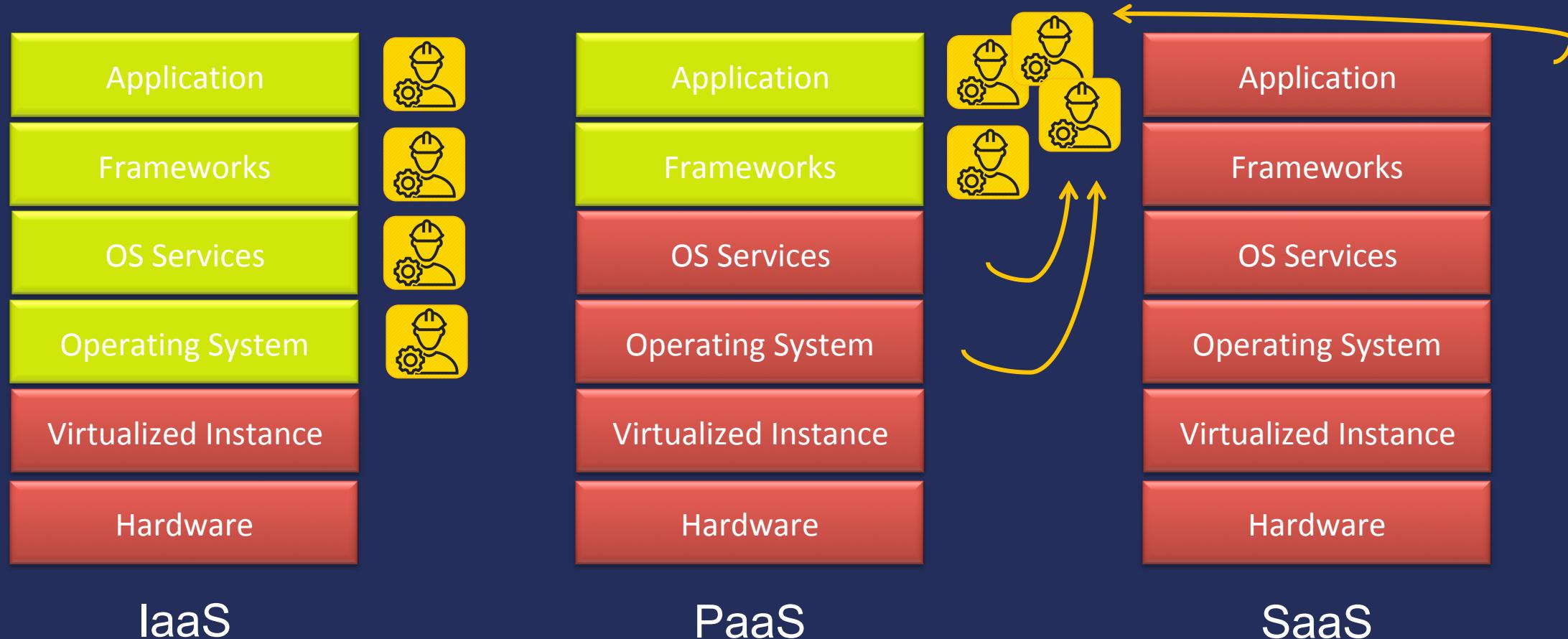


SaaS

Cloud Drivers

Why we are seeing a move to the cloud

1. PaaS gives a higher abstraction



PaaS over IaaS

Platform as a Service (PaaS)

- category of cloud computing services
- provides a platform to develop, run, and manage applications
- without the complexity of building and maintaining the infrastructure

Infrastructure as a service (IaaS)

- online services
- provide high-level APIs
- dereference physical computing resources, location, data partitioning, scaling, security, backup etc.

PaaS over IaaS

PaaS advantages

- Cut coding time.
- Transaction based consumption model
- Add development capabilities without adding staff.
- Use business intelligence and analytics tools affordably.
- Support geographically distributed development teams.
- Efficiently manage the application lifecycle.

Cloud Drivers

Why we are seeing a move to the cloud

1. PaaS gives a higher abstraction
2. Co-innovation in Cloud

Containers
as a Service

Cognitive
Services

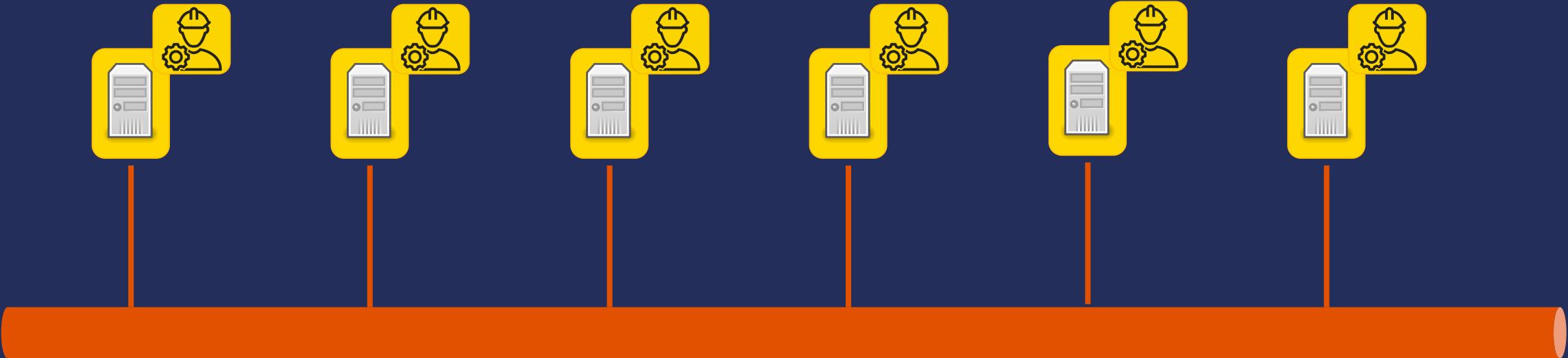
IoT
Stack

Data
Warehou
se

Cloud Drivers

Why we are seeing a move to the cloud

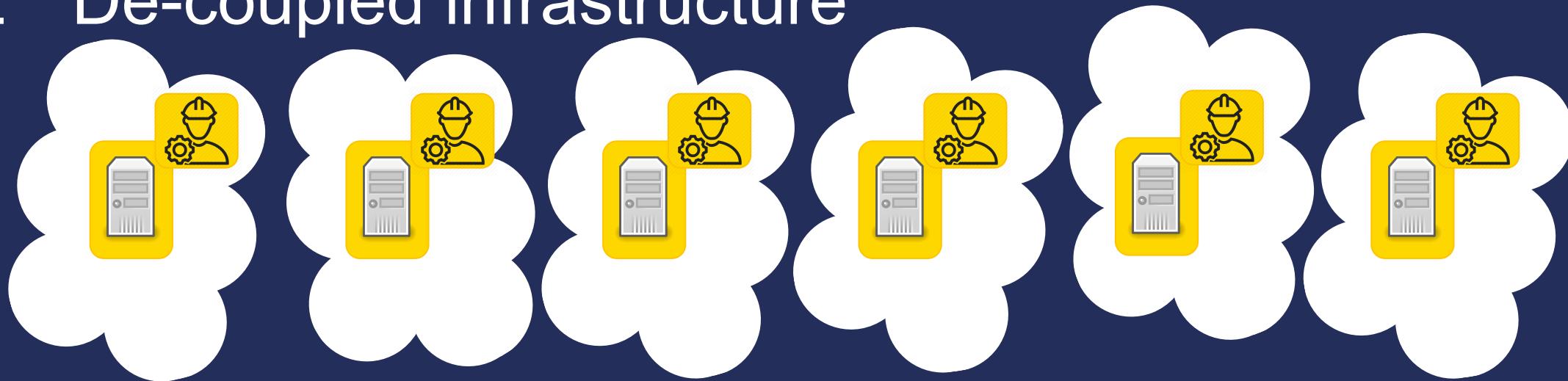
1. PaaS gives a higher abstraction
2. Co-innovation in Cloud
3. ...Move away from **Monolithic Infrastructure**



Cloud Drivers

Why we are seeing a move to the cloud

1. PaaS gives a higher abstraction
2. Co-innovation in Cloud
3. De-coupled infrastructure



Cloud Drivers

Why we are seeing a move to the cloud

1. PaaS gives a higher abstraction
2. Co-innovation in Cloud
3. De-coupled infrastructure
4. Self-Service brings higher agility
5. Instant prototyping environment
6. Consumption based & elastic infrastructure
7. Enables direct cost model

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Self-Service

Self-Service

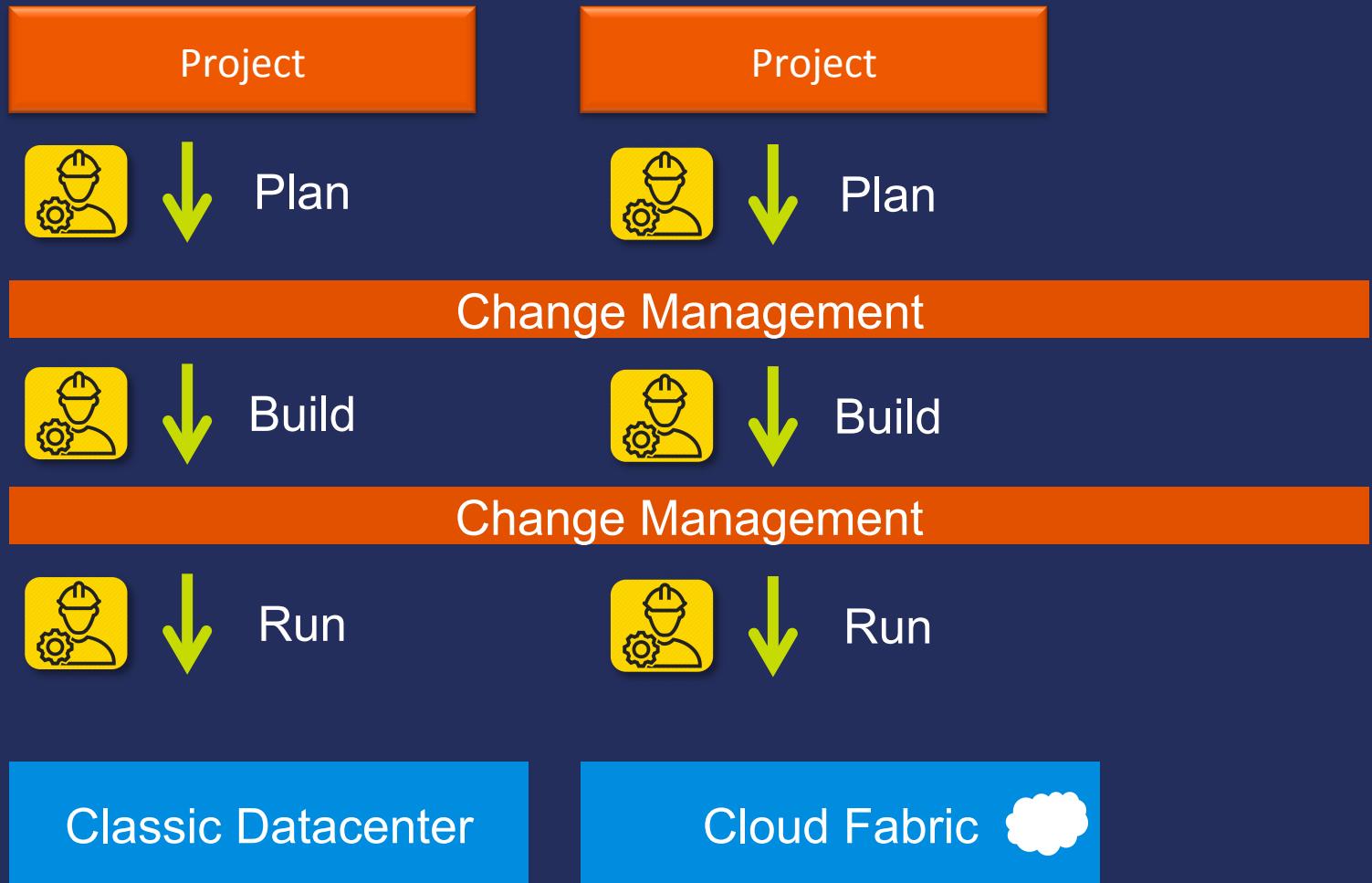
Using Self-service to reduce lead time

- Reduce the handover
- It's not (just) a tool
- It's also a way of working

*Often the most
urgent constraint
is getting access
to environments*

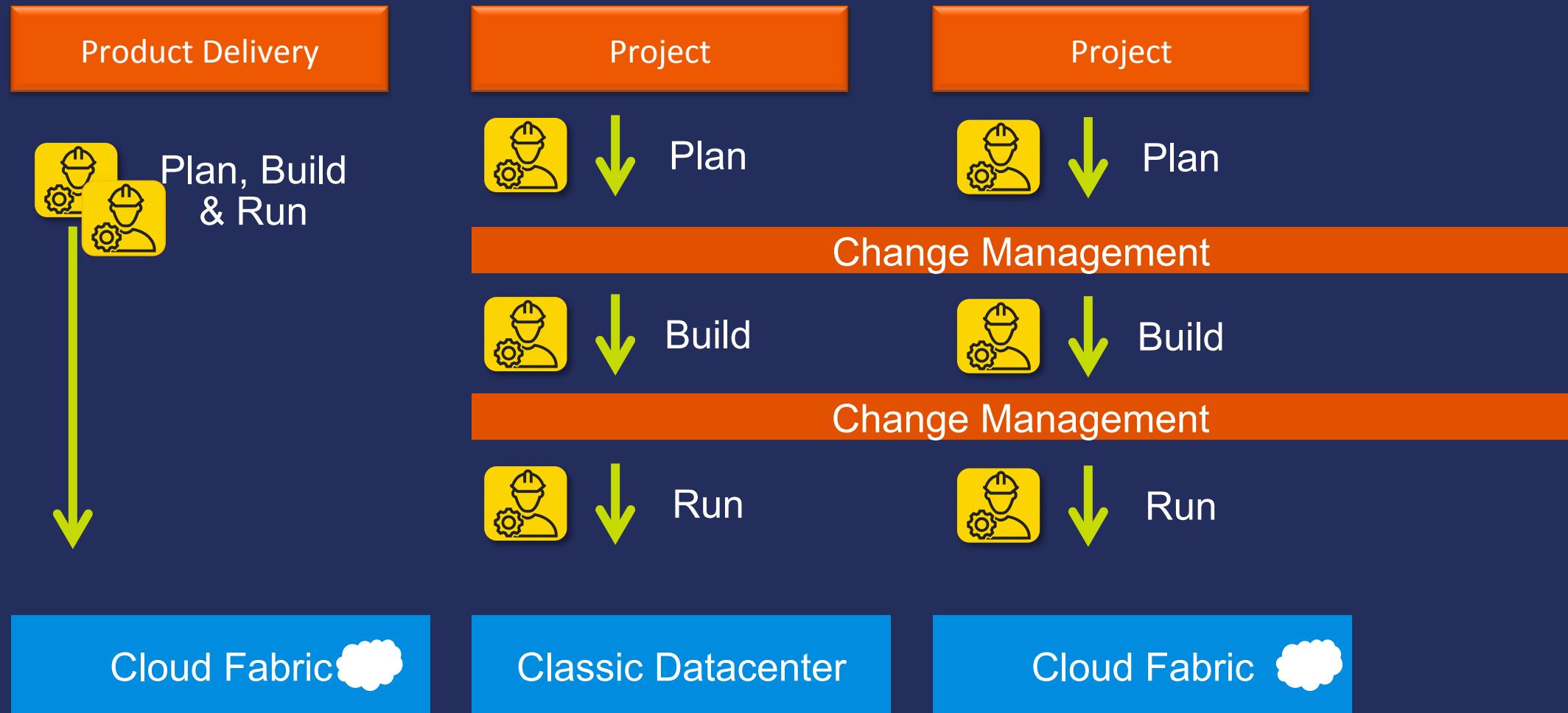
Self-Service – Classic

Delivery
Flow

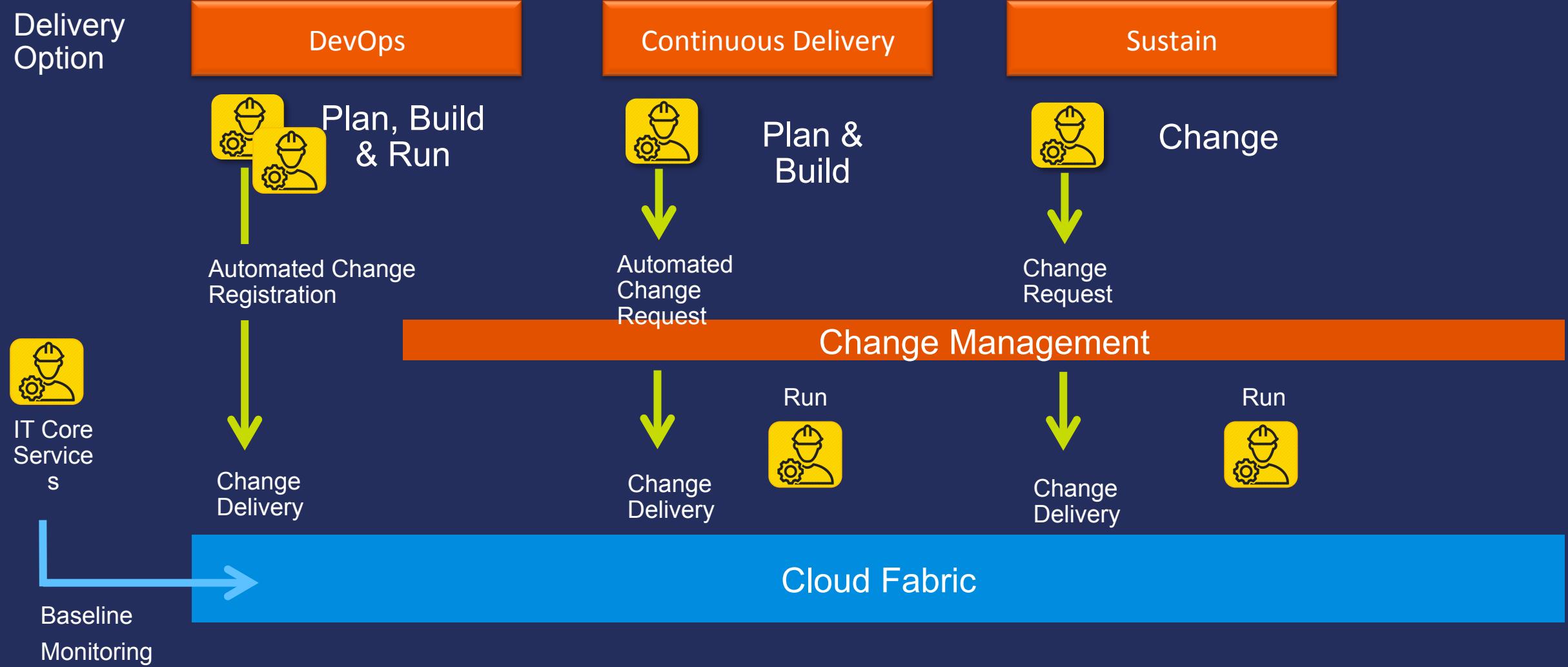


Self-Service – Bi-Modal

Delivery Flow



Self Service – Future model



Self-Service

Access governance

Build a strong RBAC model

Higher Level Environments

- No direct human changes (view only)
- Only access for pipelines

Lower Level Environments

- Full contributor access
- Add additional users

Higher Level
Environments



Production

Lower Level
Environments



Test



DEMO

Self-Service

Cloud

Management



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The Guardrails

Guardrails

Build solid guardrails

- Self service introduces lots of choice.
- There are value in alignment
- Can help reduce risk

Guardrails helps us make better choices

- Guardrails provide a north start for our engineers
- A collection of best practices
- A baseline for configuration and security

Provide great tooling

- Provide open and guiding practice documentation
- Support with tools and audit

Guardrails

Example: Cloud Architecture Principles

Open sourced – Anyone can make a pull request

A continuous development – Used to capture learnings

Owned by a core team

Some principles are enforced

Other principles are reported

DEMO

Example

Guardrails



Guardrails

Example: Cloud Architecture Principles

- Promote SaaS over PaaS over IaaS
 - No VM's allowed!
 - Enforce encryption on disks
 - No direct human access to production
 - Enforce use of Pipelines
 - Enforce use of Infrastructure as Code
 - Isolated Architecture

Guardrails

Example: Cloud Architecture Principles

- Control use of Web Application Firewalls
- Identity & Authentication
- RBAC & Access Governance
- No secrets in code
 - Use secure vault for secrets

Important: Monitor the baseline!

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Finance

Finance

Local cost ownership

- To leverage the scalability of the cloud, it is crucial to have cost accountability associated with the delivery

Build cost transparency

- Provide solid tooling for cost transparency, analytics and optimization

Provide great tooling

- Build great self-service tooling for engineers and business stakeholders
- Consider Monitoring and alerting as critical components

DEMO

Cost Monitoring



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Scaling the cloud journey

Re-use and learnings

This is really hard!

Demo sessions

Internal Conferences

Newsletters

Cross-team hackathons

.... and build a Center of Excellence

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