Miles & More

RED HAT SUMMIT

FROM LEGACY TO MICROSERVICES

Lessons learned on the road to success by Miles & More

Matthias Krohnen - Miles & More
Manager IT, Lead Innovation Lab

Torben Jäger - Red Hat
Specialist Solution Architect Middleware & PaaS

Serge Pagop - Red Hat
Sales Specialist Middleware & PaaS

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AGENDA

- ➔ MILES & MORE INTRODUCTION
- ➔ PROJECT SCOPE AND SETUP
- ➔ TECHNICAL AND ARCHITECTURAL CHALLENGES
- ➔ COLLABORATION
- ➔ LESSONS LEARNED AND OUTLOOK MILES & MORE IT ARCHITECTURE

EXPERTS FOR CUSTOMER LOYALTY – WORLDWIDE

Miles & More Introduction

more than
20 years
experience

every month
150 k new
members register for the Miles & More program

more than
300
Non-Air partners

in 1 hour
5.9 million
Air-Miles get earned – 84% will be redeemed

every **2 minutes**
a brand product is shipped

more than
1.4 million
Miles & More creditcards

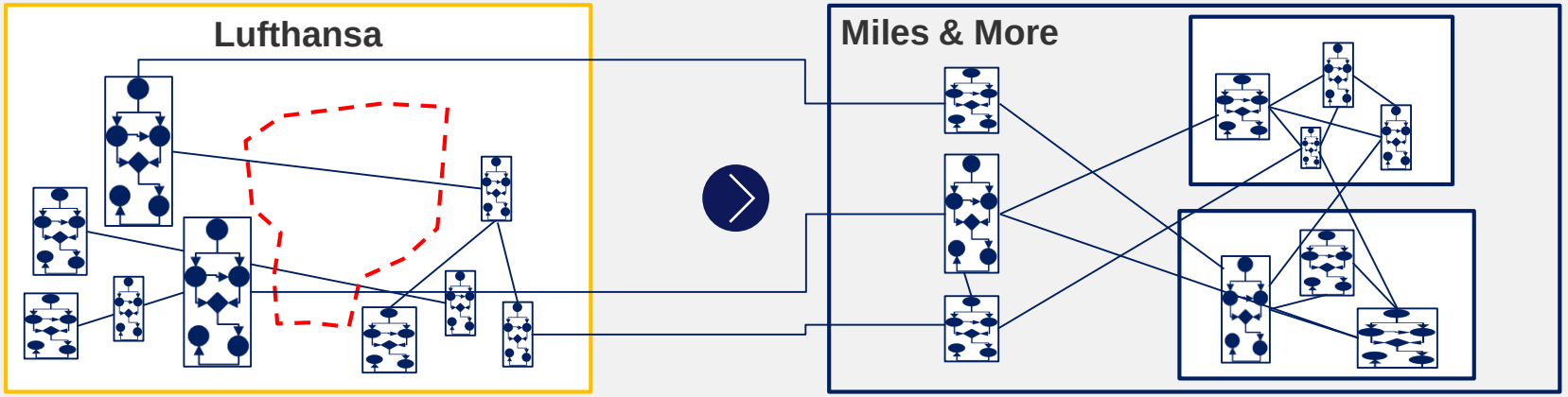
FREQUENT FLYER PROGRAM TO MULTI-PARTNER-PROGRAM

Carve Out Miles & More from Lufthansa in 2015

Miles & More

IT FACING CHALLENGES AFTER MILES & MORE CARVE OUT

Miles & More highlevel IT architecture



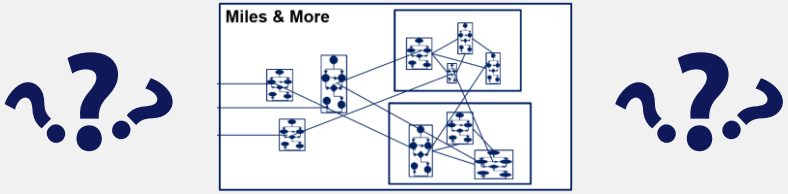
Many technical and operational interfaces

Heterogeneous platform

Heavy-duty and complex systems

IT FACING CHALLENGES AFTER MILES & MORE CARVE OUT

Miles & More 2-Speed-IT approach



„Do nothing“

1 LOW RISK – MAXIMISE CONTINUITY

- Low risk
- No support for new strategy
- Long time-to-market
- Hard to maintain and improve

„Everything from scratch“

2 MAXIMISE COMPLEXITY REDUCTION

- High risk
- Huge investment for rebuild whole infrastructure
- Remaining high complexity
- Timeline > 2 years

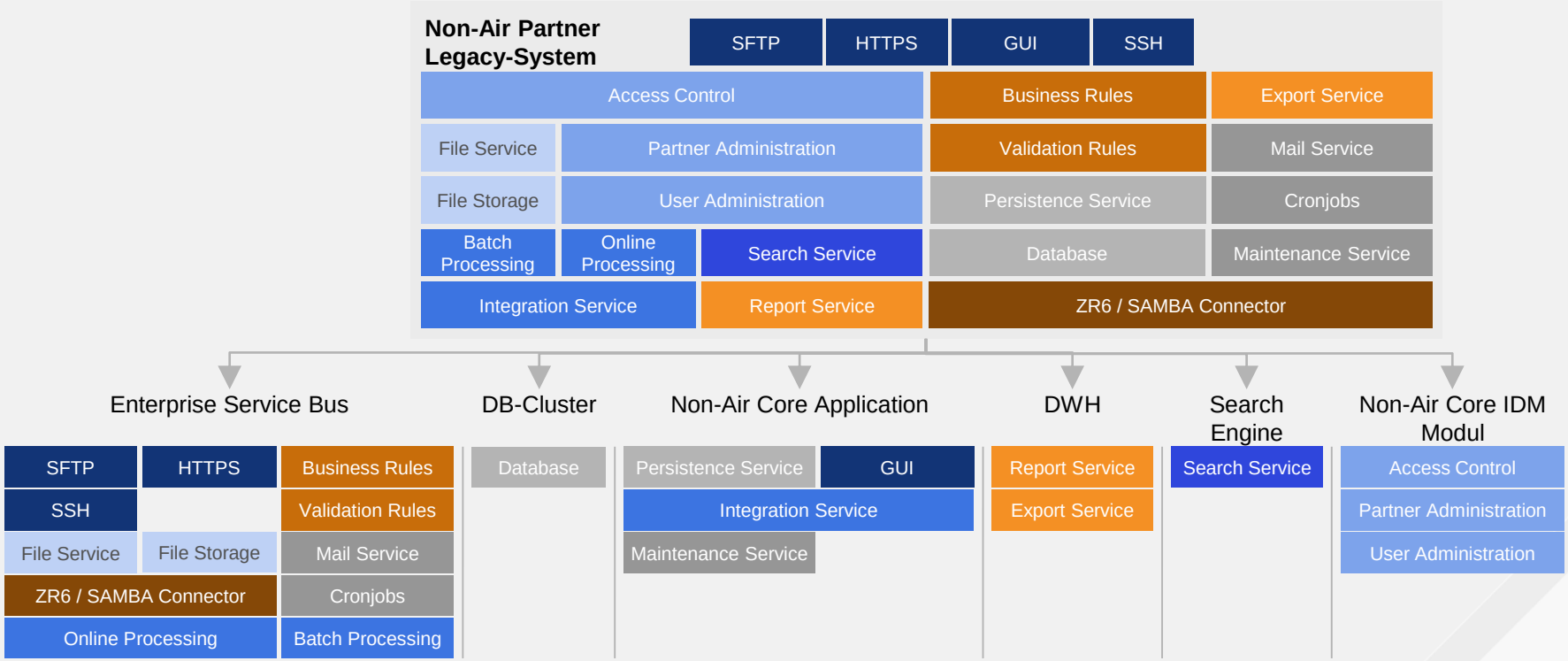
„2-Speed-IT“

3 GUARANTEE CONTINUITY & MAXIMISE AGILITY

- Manage complex systems and guarantee performance & stability
- (Re-)build systems in micro services, ensure a suitable time-to-market and support for innovations
- Encapsule main functions from complex systems in micro services

NON-AIR PARTNER INTERFACE: LEGACY TO MICRO SERVICES

Project Scope and Setup



PROJECT KEY FACTS

Project Scope and Setup

approx.
50
involved project member
and stakeholder

implementation
project schedule
8
month

more than
50
micro services

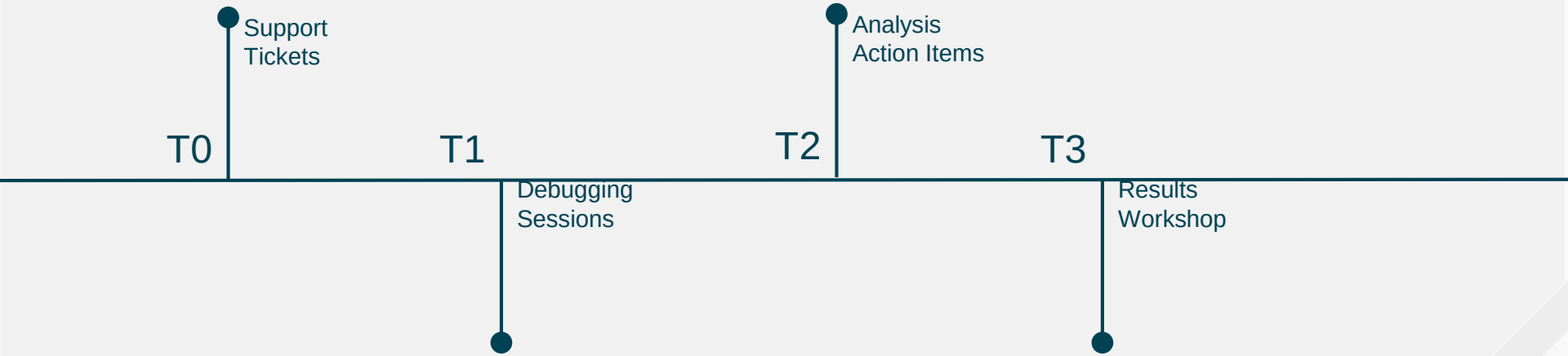
more than
90 %
of our non-air partners
are already migrated

less than
1%
above budget

25
virtual server

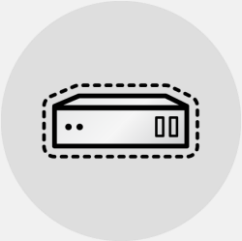
TECHNICAL AND ARCHITECTURAL CHALLENGES

HISTORY
Technical and Architectural Challenges



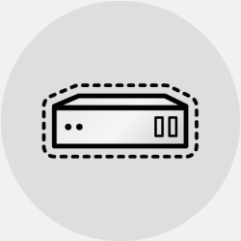
OPENSHIFT SYSTEM ARCHITECTURE

Technical and Architectural Challenges



1

Master
Infra
Worker



1

Master
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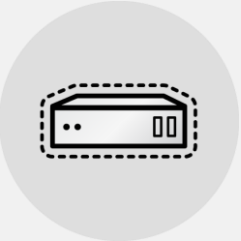
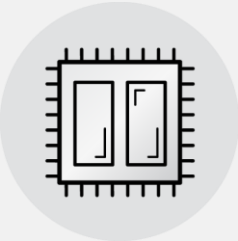


1

Master
Infra
Worker

JUST A FEW NUMBERS

Technical and Architectural Challenges



2

vCPUs

8

GB of RAM

21

Microservices

2

A-MQ
Fuse

10

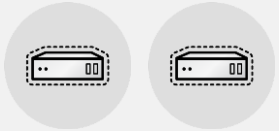
Infrastructure

OPENSHIFT SYSTEM ARCHITECTURE - NEXT GEN

Technical and Architectural Challenges

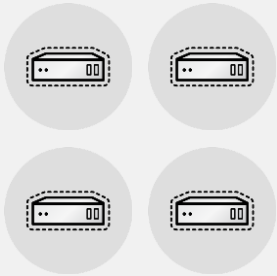
3

Master



2

Infra



4

Worker

LESSONS LEARNED

Technical and Architectural Challenges

automation

LESSONS LEARNED
Technical and Architectural Challenges

separation of concerns

LESSONS LEARNED
Technical and Architectural Challenges

monitoring

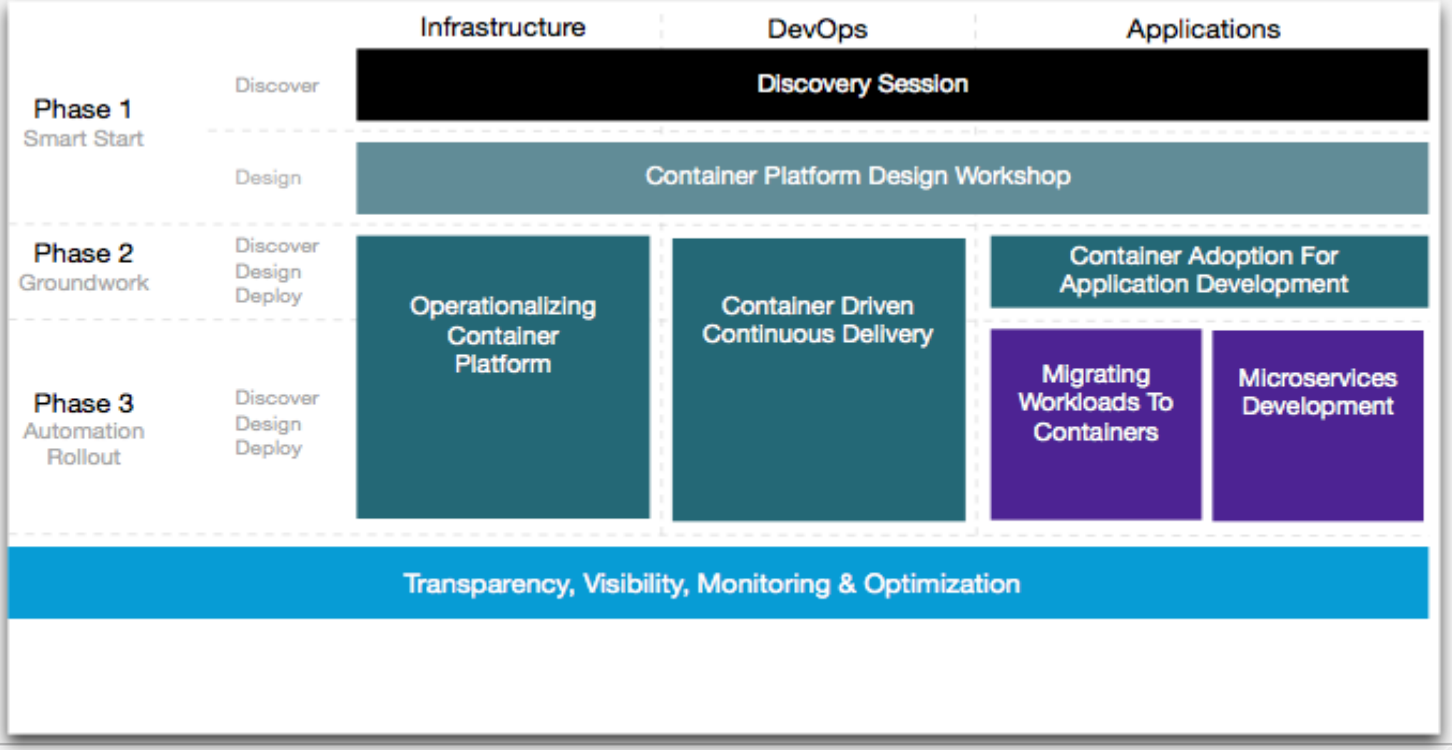
LESSONS LEARNED
Technical and Architectural Challenges

timing

LESSONS LEARNED
Technical and Architectural Challenges

education

RECOMMENDED WAY TO START
Collaboration



LESSONS LEARNED AND OUTLOOK MILES & MORE IT ARCHITECTURE

LESSONS LEARNED

- Micro service ≠ easy
  → The total of all micro services = still complex but easier manageable
- You need to know …
  - … what you to want do before you get started
  - … how you want to do it

  → We recommend pre-project planning
- Your implementation partner should have relevant knowledge about Openshift and micro services prior to the project → We lost 4 weeks because our implementation partner acquired knowledge in first project phase
- Don´t forget your staff – internal knowledge about Openshift is essential → Similar to our implementation partner we acquired knowledge during the project and not prior to it
- Red Hat consulting and technical account management is recommended early in the project for …
  - … system fine tuning and architecture review (sizing, best practices …)
  - … support in automation (ansible scripts) and IT operations ...

  → We contracted Red Hat in the middle of the project and might have avoided 4 weeks delay

HIGHLEVEL MILES & MORE TARGET IT ARCHITECTURE

(Partner) Channels

3scale by Red Hat — API Gateway

redhat — SSO

redhat — Rules Engine

KDI Services | Payment Services
MCE | WorldShop Discover
APP Services | ...
Integration Bus

RED HAT OPENSHIFT | JBoss Fuse | redhat | ANSIBLE

Digital Experience (Adobe AEM) | Adobe Campaign
Adobe Analytics
Content Management

Legacy Systeme

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THANK YOU

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OPEN SOURCE.

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redhat.