

FASCINATING NEXT GENERATION CONTAINER PLATFORM

DAVID BRUPBACHER
HEAD OF IT GLOBAL OPERATIONS

HAKA



SIX

A close-up photograph of a human eye. The iris is light blue and contains a clear reflection of a city skyline, likely New York City, with prominent skyscrapers. The eye is looking slightly to the left. The skin around the eye is fair and has a natural texture.

TRADING

2000

TIMES FASTER THAN THE BLINK OF AN EYE



POST TRADING

THE STRONGHOLD FOR SECURITIES

FINANCIAL INFORMATION

7'000'000'000

PRICE UPDATES PER DAY

A nighttime photograph of a city skyline, likely New York City, with numerous skyscrapers illuminated by lights. The Empire State Building is prominent on the left. The lights reflect on the water in the foreground.

PAYMENT PROCESSING

99.998%

APPLICATION UP-TIME

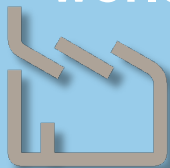
THE IT THAT NEVER SLEEPS



32

ongoing DGI projects during 2016 with strong focus on IT infrastructure.

We operate worldwide



24

data center



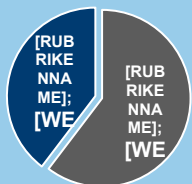
5232

electronic workplace clients (desktop/laptop) are managed for the whole SIX worldwide

550

changes per month

are tracked, scheduled, monitored and executed



total of

5'800

inquiries to global service desk per month

Global IT employs more than

950 experts in 6 different countries



448



employees in 6 different countries

only **44%**

of total 2'700 server in the global zone are virtualized

2'700^{TB}

storage capacity

and **6'600^{TB}** backup capacity

7

business continuity tests are executed per year with our major business units and applications



FASCINATING NEXT GENERATION CONTAINER PLATFORM

HOW IT STARTED

INCREASE EFFICIENCY

TIME TO MARKET

**NUMBER
OF ENVIRONMENTS**

**NUMBER
OF DEPLOYMENTS**

DIGITALIZATION LESS OVERHEAD

**MORE CONSOLIDATION
MORE AGILITY**

2015

WE STARTED A DEVOPS MOVEMENT

WE STARTED A MOVEMENT TO CONVERT
ALL 700 ENGINEERS AND OPERATORS INTO
A DEVOPS ORGANIZATION.

WE CREATED A VISION

**WE LOVE TO DELIVER
YESTERDAY WHAT IMPRESSES
OUR CUSTOMERS TOMORROW.**

WE WEAR OUR SHIRTS



IT'S ALL ABOUT MINDSET AND ATTITUDE!

WE DEFINED OUR PRINCIPLES

**We collaborate in cross functional
teams and help each other to improve**

**Teams take ownership for their
products over the whole lifecycle**

**We automate repetitive tasks wherever
possible**

**We have working software on every
stage any time, incl. monitoring**

We do software-architecture

We use one repository

**We won't stop until we don't do
anything anymore that we don't have to**

We inspire and motivate our colleagues

We employ scalable infrastructure



THE 5+1 DIMENSIONS OF DEVOPS AT SIX

SKILLS

SPECIALIST



SPECIALISED GENERALIST



ORGANIZATION

FUNCTIONAL TEAMS



X-FUNCTIONAL TEAMS



ARCHITECTURE

MONOLITHIC/PACKAGED



SERVICES/API'S



MINDSET & ATTITUDE

INFRASTRUCTURE

MANUAL PROVISIONING



AUTOMATED PROVISIONING



PROCESS

MANUAL HAND-OFFS



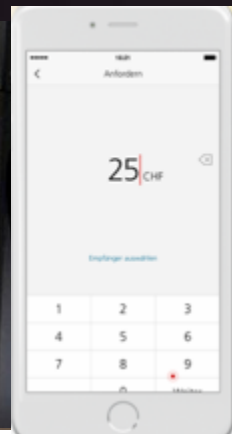
CONTINUOUS DELIVERY



THE FUN
PART

Three white wavy lines are positioned in the upper half of the image, creating a sense of movement and depth against the solid orange background.

TODAY



Evolution

(nur Tonspur)

1980s -

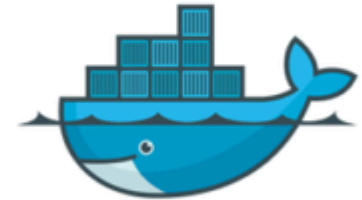
Brother
**HP NonStop
platform**



2014 - 2017



2016 -



docker

TODAY

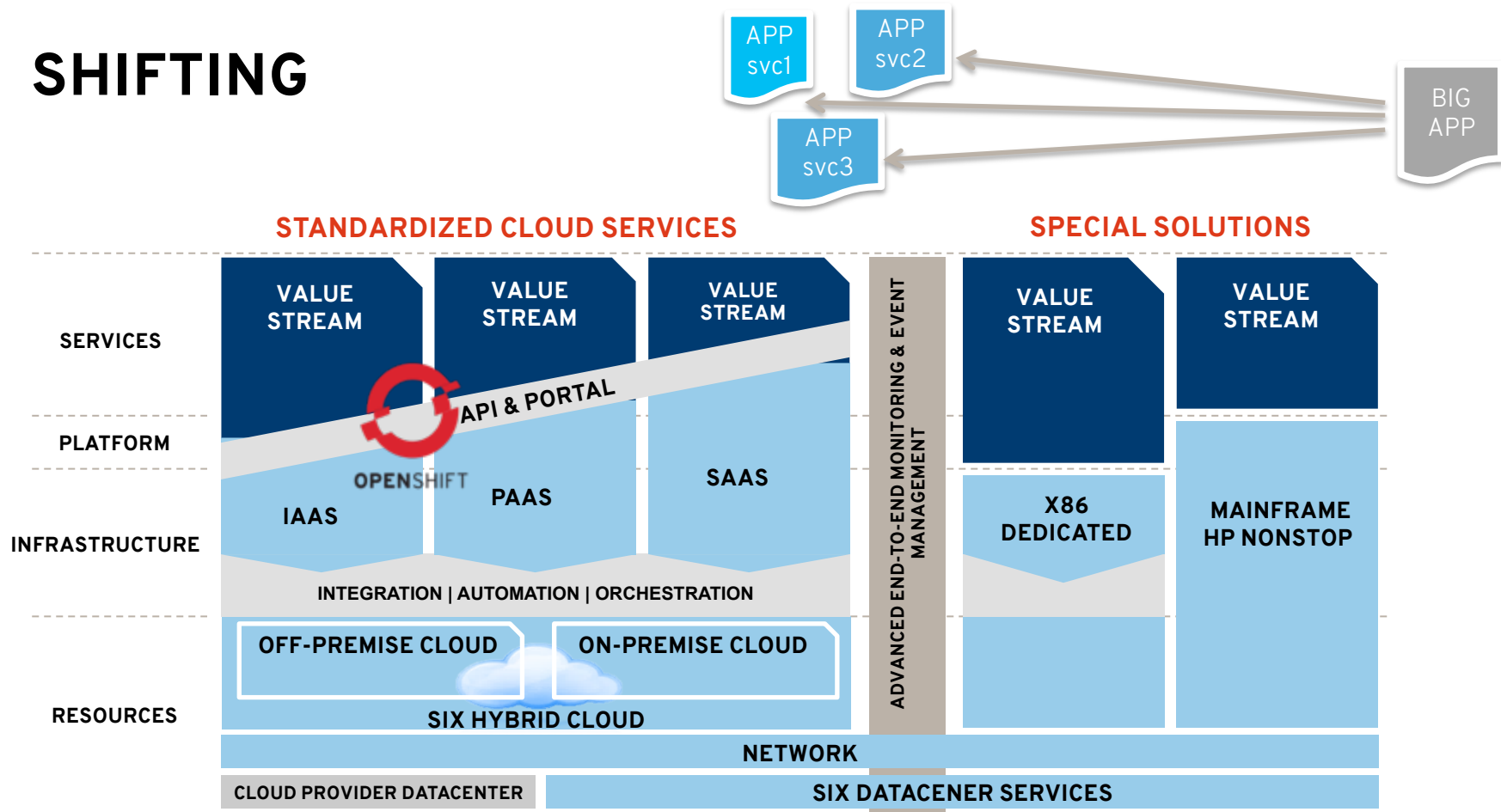


The background is a solid orange color. There are several white lines that create a sense of movement and depth. One line starts from the left edge, goes horizontally, then curves downwards and to the right. Another line starts from the left edge, goes horizontally, then curves upwards and to the right. A third line starts from the left edge, goes horizontally, then curves downwards and to the right, intersecting the other lines.

TOMORROW

“SHIFT HAPPENS”

SHIFTING





**HIGH
AVAILABILITY**

HYBRID

HARDENING

**SDN Zone
SEGREGATION**

**PCI
APPLICATIONS**

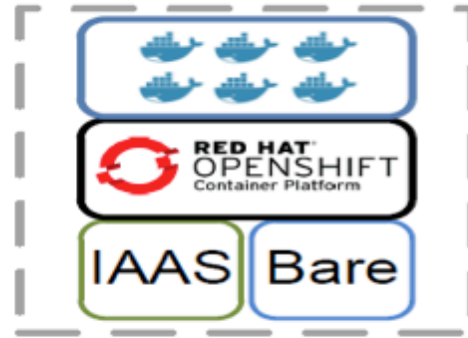
**ONE
CLUSTER**

**INTEGRATED
CI/CD
PIPELINE**

SCALABLE

ON-PREMISE SOLUTION

DataCenter #1



DataCenter #2



CLOUD



CLOUD



THE 5+1 DIMENSIONS OF DEVOPS AT SIX

ENGOPS

**MINDSET IS
CRUCIAL**

SKILLS

SPECIALIST



SPECIALISED GENERALIST



ORGANIZATION

FUNCTIONAL TEAMS



X-FUNCTIONAL TEAMS



**STAY OUT
OF THE WAY**

ARCHITECTURE

MONOLITHIC/PACKAGED



SERVICES / API'S



MINDSET & ATTITUDE

INFRASTRUCTURE

MANUAL PROVISIONING



AUTOMATED PROVISIONING



PROCESS

MANUAL HAND-OFFS



CONTINUOUS DELIVERY



**THE FUN
PART**

ENGOPS APPROACH

WE ADOPT THE DEVOPS APPROACH IN THE IT INFRASTRUCTURE LAYER



- **EngOps approach combines engineering (Eng) and operations (Ops)** within the same Competence Center
- **Agile principles and methods** (→ Self-organization, Kanban, Standups,...)
- **End-to-end responsibilities**
- **Foster automation** to reduce the manual OPS tasks

BRINGING ENG AND OPS TOGETHER IS ABOUT MINDSET

the engineer

and

the operator



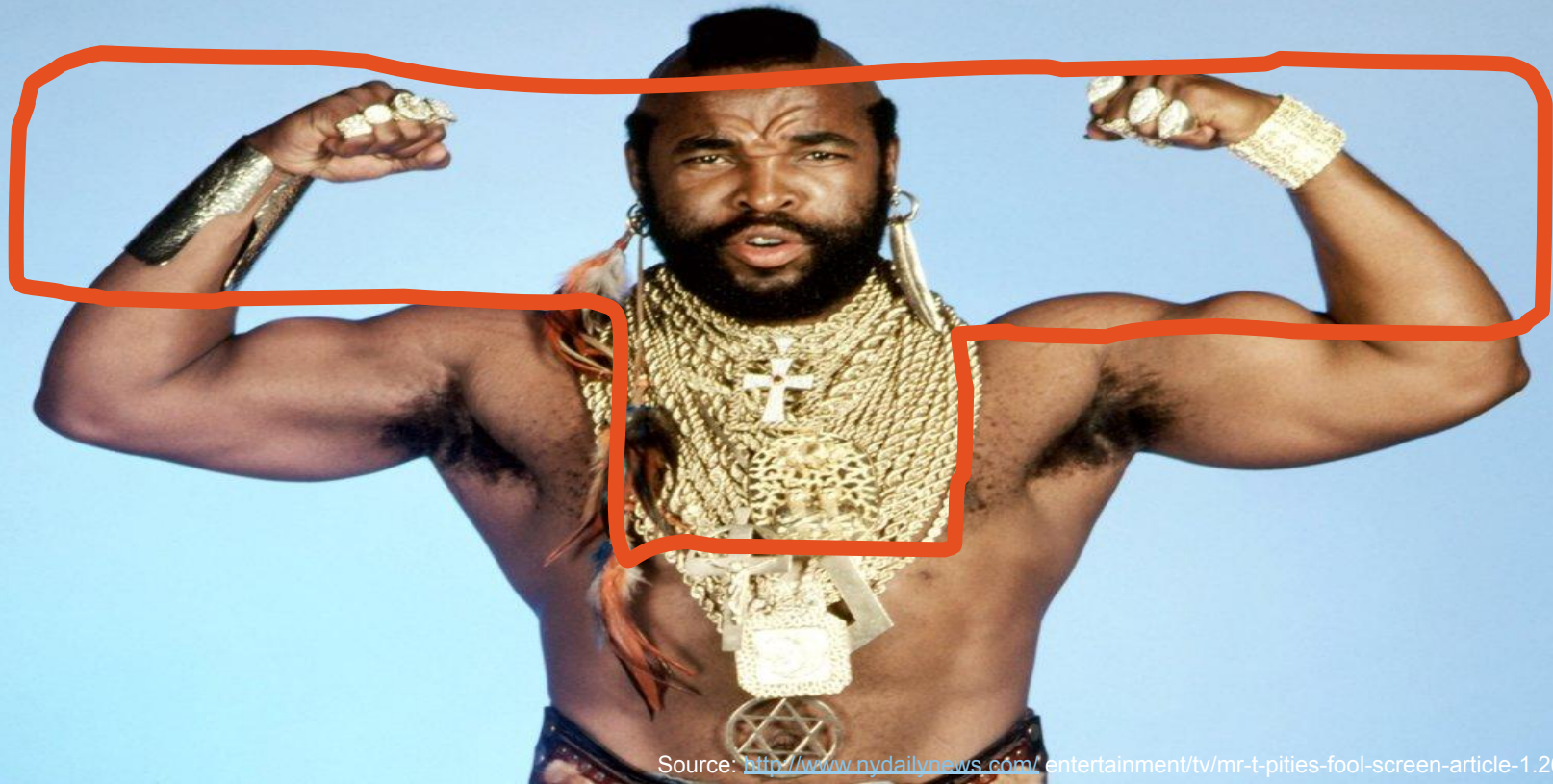
FASCINATING!

Little bit weird
Sits closer to the boss
Thinks too hard



Pulls levers & turns knobs
Easily excited
Yells a lot in emergencies

Source: John Allspaw and Paul Hammond



Source: <http://www.nydailynews.com/entertainment/tv/mr-t-pities-fool-screen-article-1.2642825>

SITE RELIABILITY ENGINEER

APPLICATION DEVELOPER	PLATFORM OPERATOR	PLATFORM DEVELOPER	TEST ENGINEER	APPLICATION OPERATOR
BROAD SOFTWARE DEVELOPMENT LIFECYCLE	MANAGE IAAS AND PAAS INFRASTRUCTURE	DESIGN IAAS AND PAAS INFRASTRUCTURE	TEST IMAGES AND INFRASTRUCTURES	MAINTAIN CI/CD PIPELINES
DEFINE APPLICATION REQUIREMENTS	SYSTEM AND NETWORK OPTIMIZATION	DEVELOP IMAGES (OS, DOCKER...)	RELIABILITY TESTING	CONFIGURATION AND CHANGE MANAGEMENT
DEVELOP PIPELINE AS CODE	PLATFORM MONITORING AND SUPPORT	INFRASTRUCTURE SCRIPTING AND AUTOMATION	AUTOMATE TESTS	CAPACITY PLANNING AND MONITORING
		DEEP		



**I'M A SYSTEM ENGINEER WHO CAN CODE!
GIVE DEV THE FREEDOM OF CHOICE BUT
LIMIT IT!**

**HOW I HANDLE PROBLEMS:
I SOLVE THEM, AUTOMATE THEM AND
SHARE THEM!**



ITE





THE JOURNEY HAS JUST STARTED



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