Security oriented OpenShift within regulated environments

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9th May 2018

Why?

X86 VM

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IBM LPAR

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Technology obsolescence

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A lot of manual work

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Compliance and security are pain in the ...

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Compliance and security are pain in the ...

Changes are required in many places

Docker Swarm Architecture PoC

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FE 2.0 Project

- Docker Swarm Architecture PoC
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- Docker Swarm Infra PoC

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We all go together!

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Docker Swarm issues

Docker Swarm Architecture PoC

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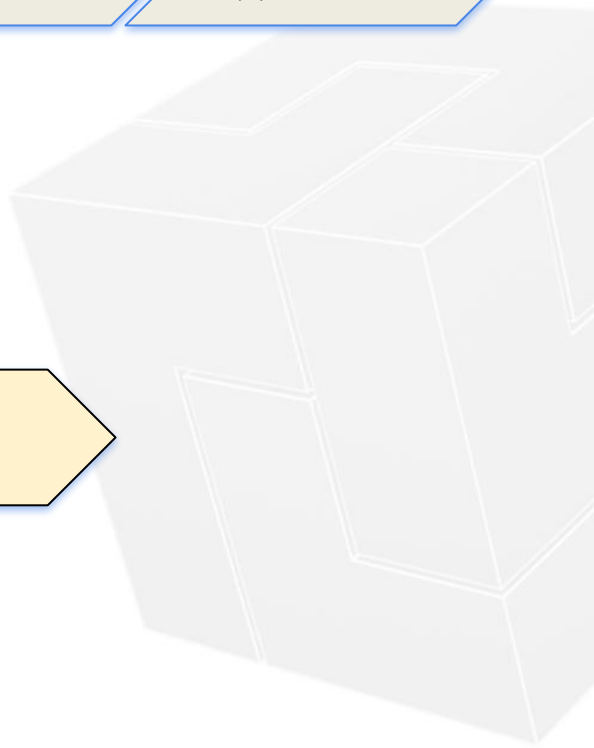
Docker Swarm issues

RFI
RFP



Docker Swarm Architecture PoC

FE 2.0 Project

Docker Swarm Infra PoC

BZWBK24 Docker in Production

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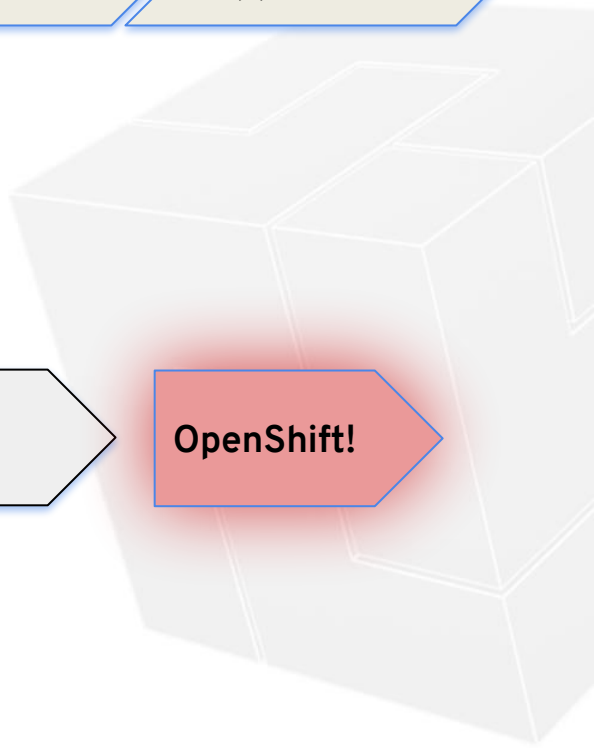
Docker Swarm issues

RFI RFP

OpenShift!



Service Serving Certificate Secrets!

Use internal registry and external if needed!

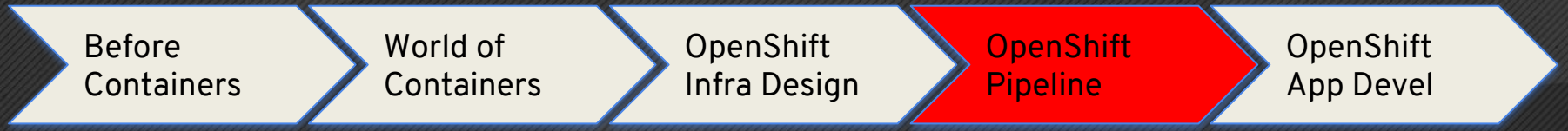
2 Clusters

1 Prod / 1 Test

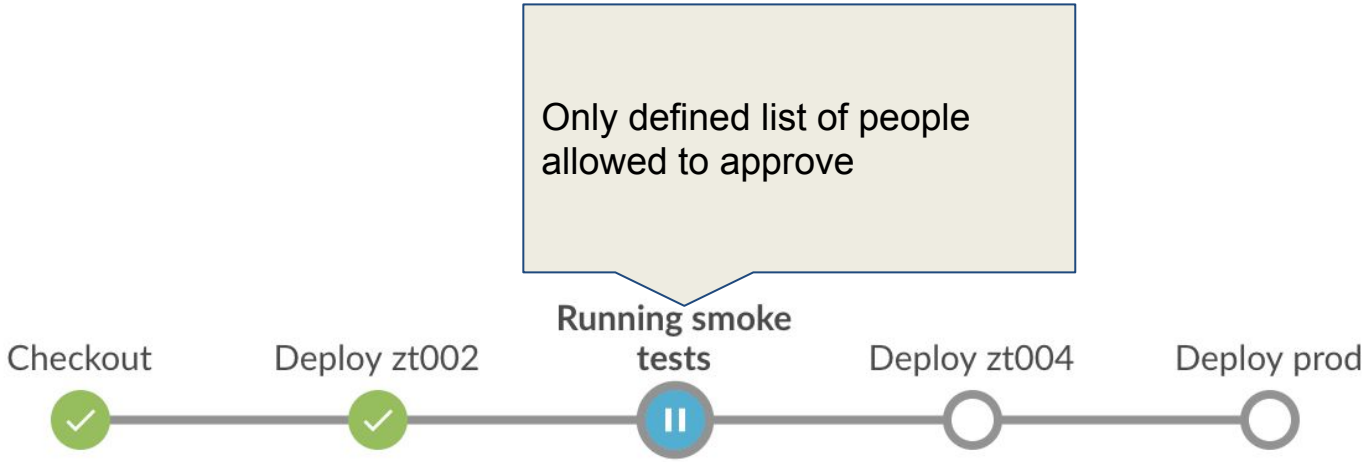
Adjusting deployments to new cloud native reality

Bank Zachodni WBK
Grupa Santander

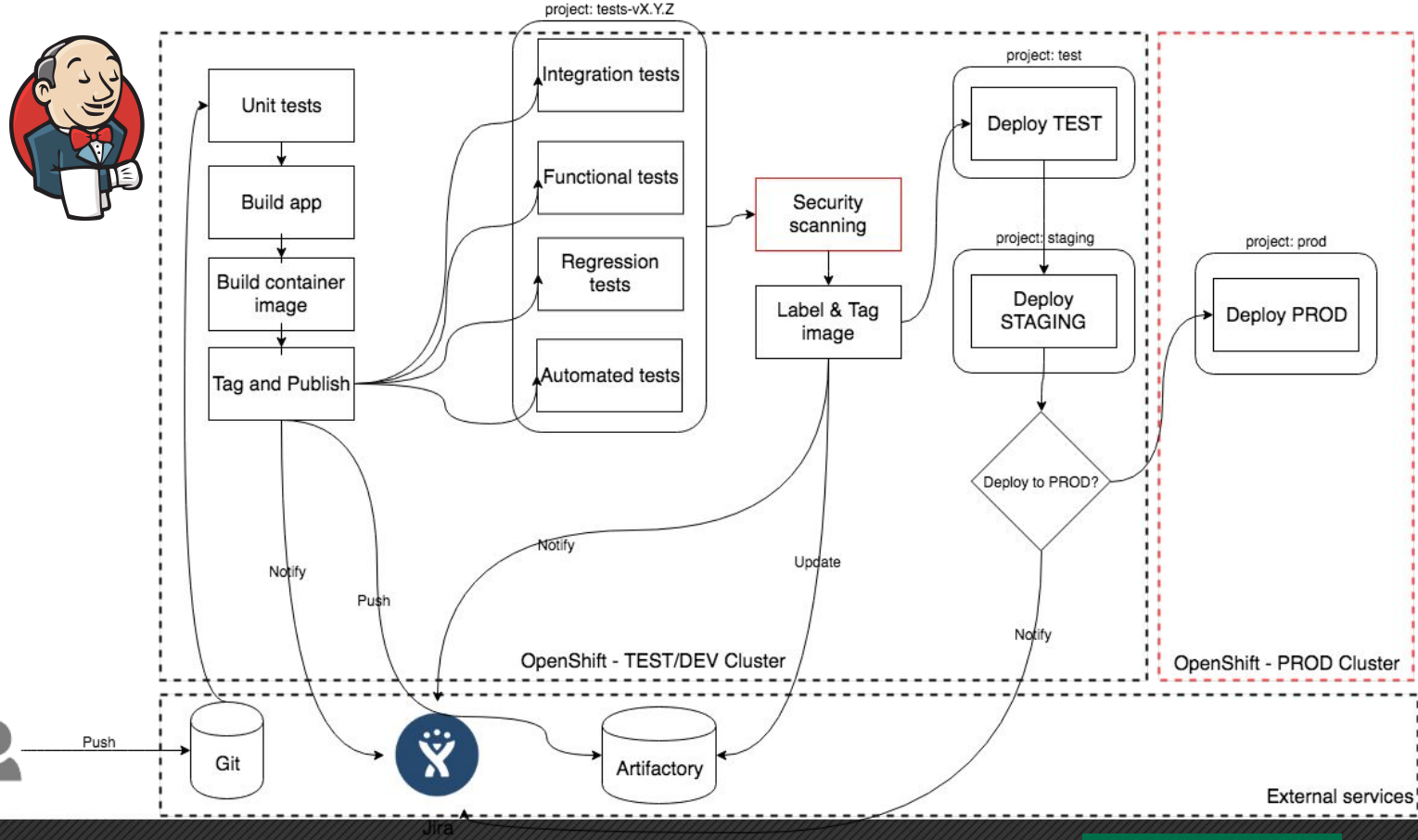
mindbox



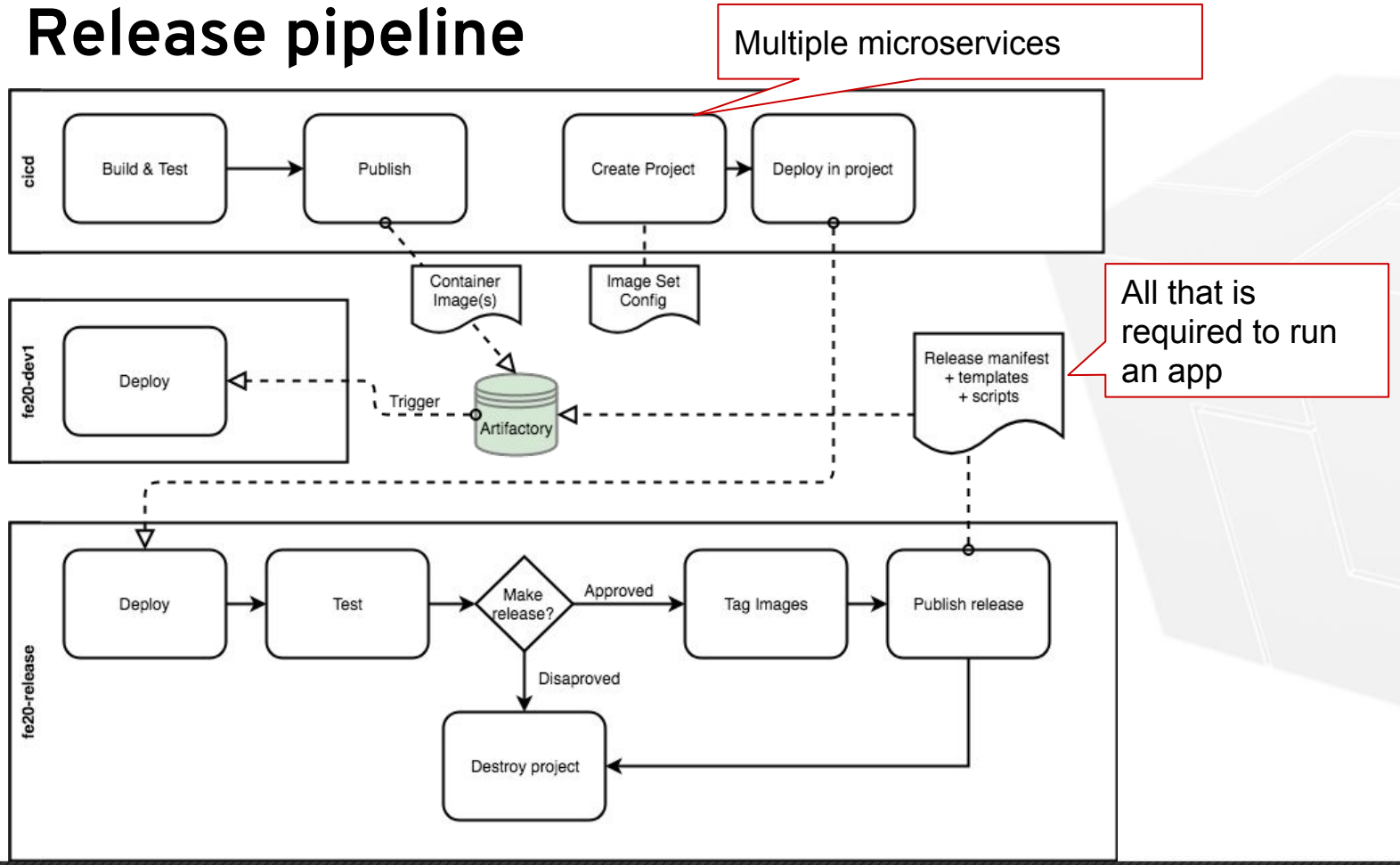
Continuous Deployment pipeline



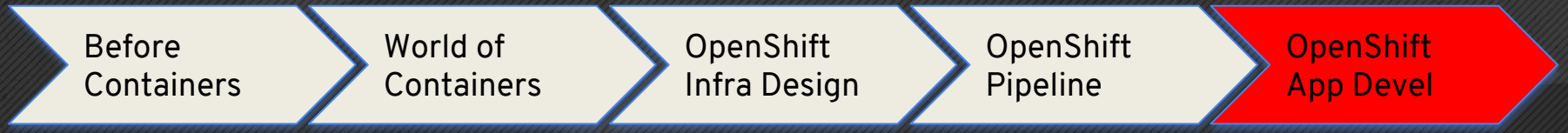
Speeding up deployment with CD pipelines



Release pipeline



Release pipeline



Creating secure and compliant container images

Use github.com to fork/clone images sources

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Need all images to be RHEL based

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Before Containers | World of Containers | OpenShift Infra Design | OpenShift Pipeline | OpenShift App Devel

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Internal non-public Certificate Authority

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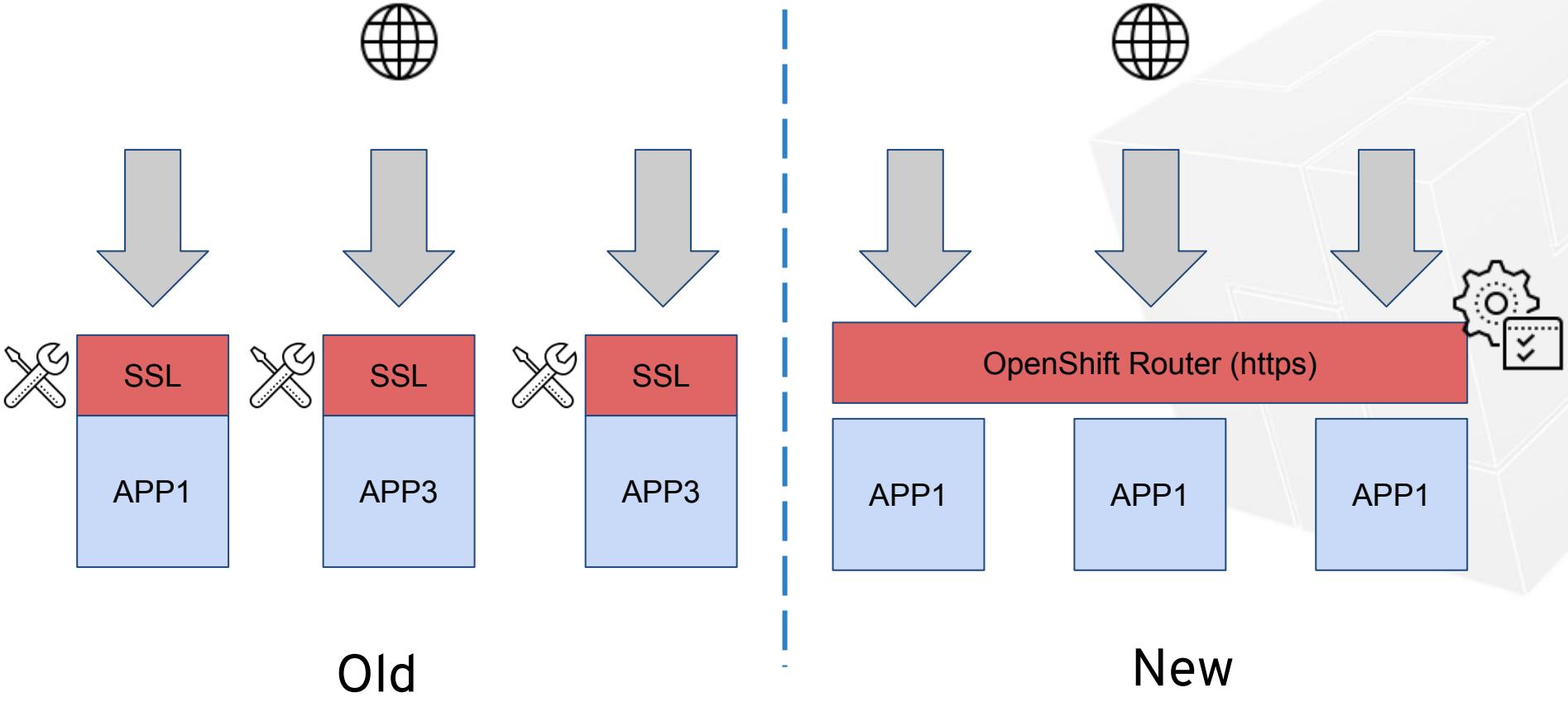
When you need adjustment you change it in one place

```
FROM registry.access.redhat.com/rhel7:latest

RUN ln -sf /usr/share/zoneinfo/Europe/Warsaw /etc/localtime
RUN cd /etc/pki/ca-trust/source/anchors/ && \
  curl -Awget -O "http://pki.bzwbk.pl/pki/CA1.crt" && \
  update-ca-trust extract
[...]
```

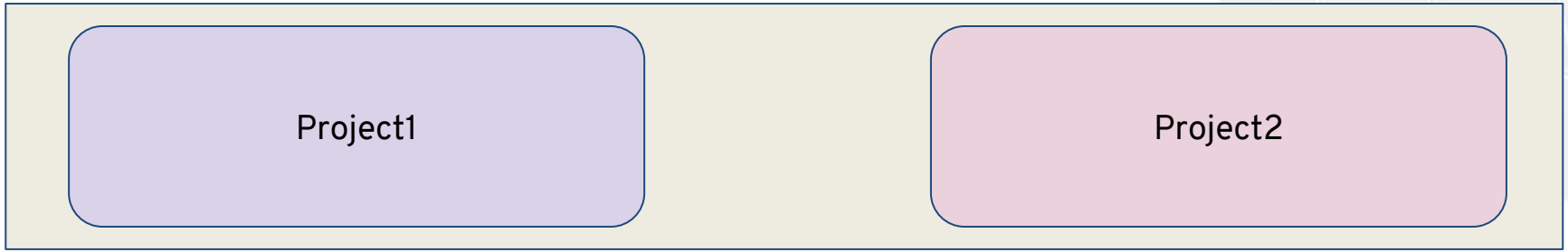
Dealing with security and compliance requirements

Security controlled with code

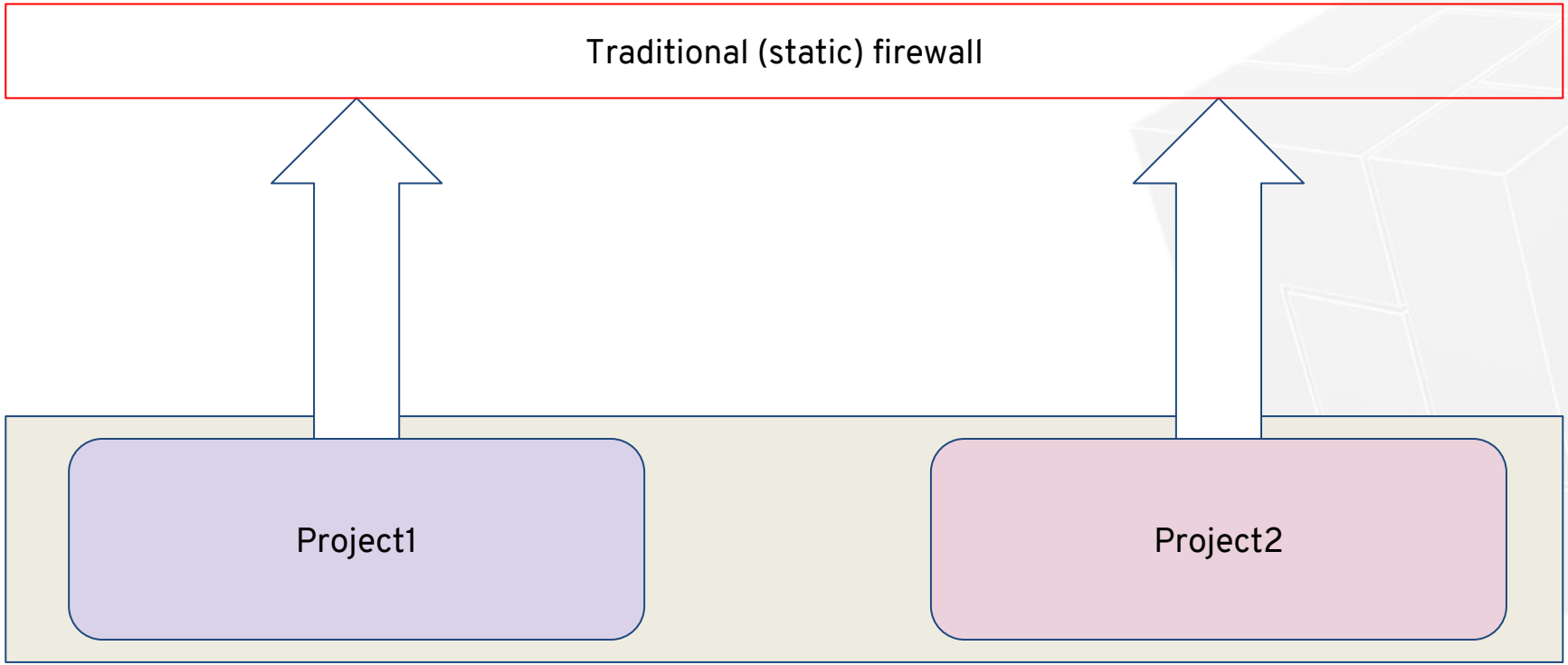


Traffic isolation between applications

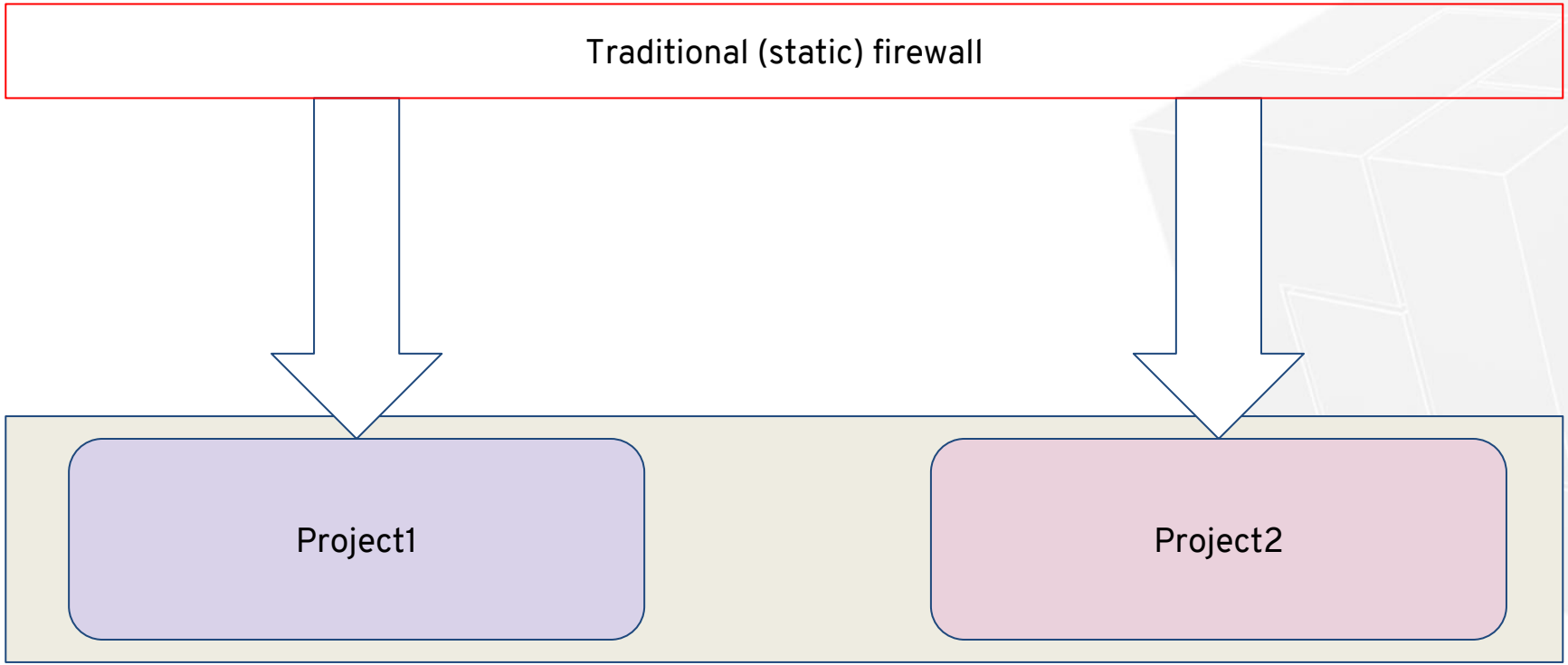
Traffic isolation



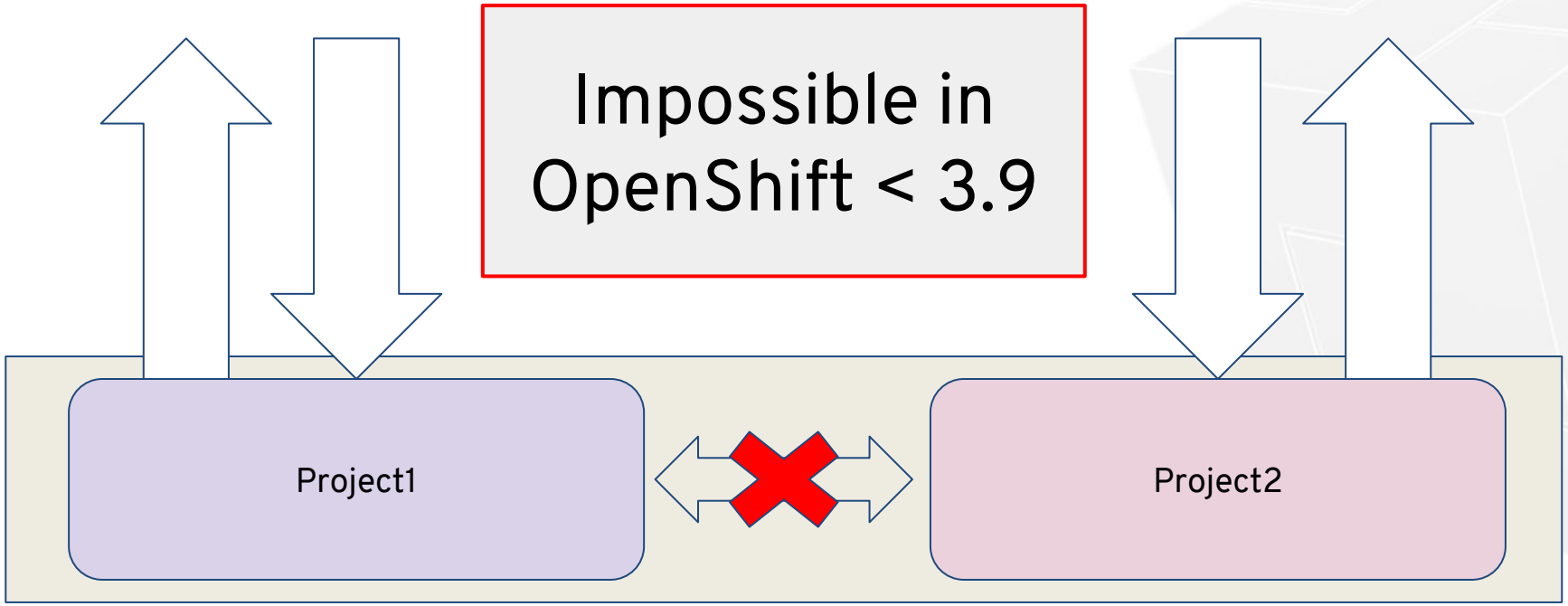
Outbound traffic



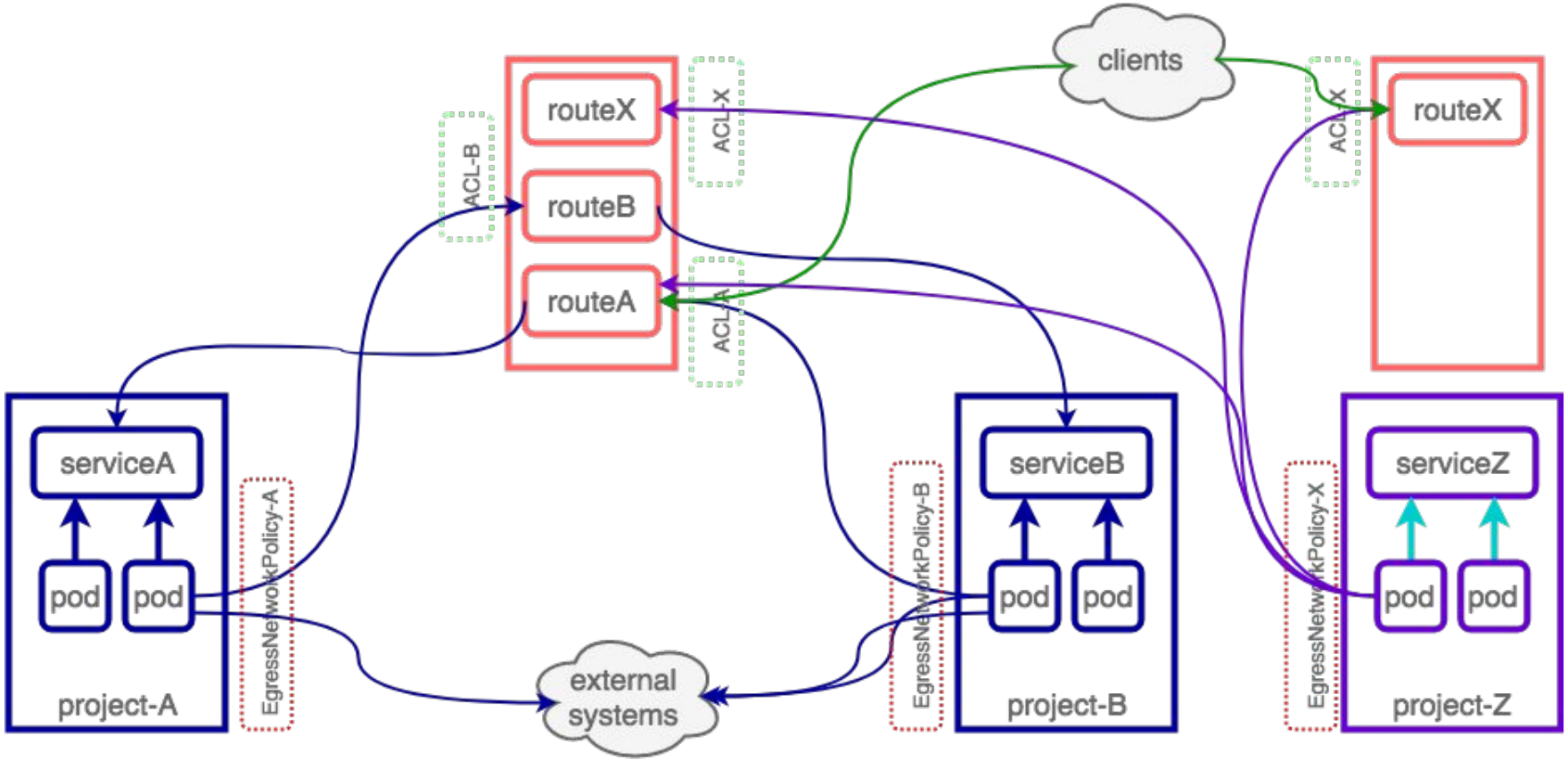
Inbound traffic



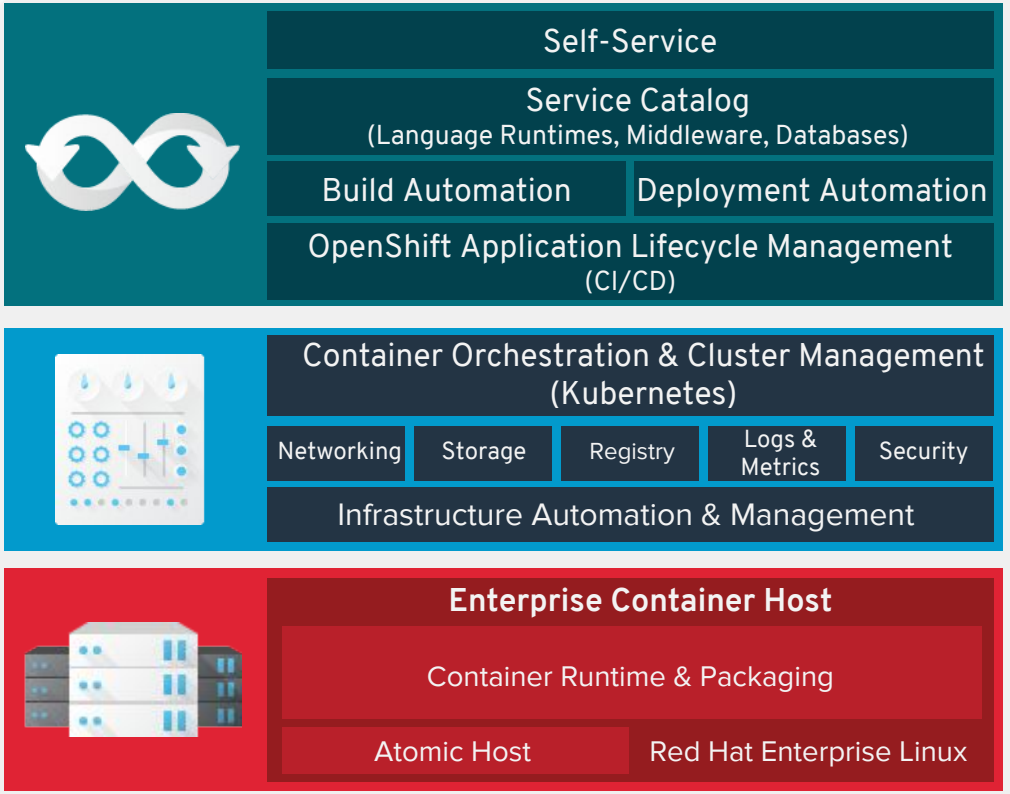
You can’t always get what you want



Overcoming OpenShift shortcomings



SECURITY ACROSS ALL LAYERS



CONTROL
Application Security

DEFEND
Infrastructure

EXTEND

AUTOMATED & INTEGRATED SECURITY

mindbox

CONTROL
Application Security

- Container Content
- CI/CD Pipeline
- Container Registry
- Deployment Policies

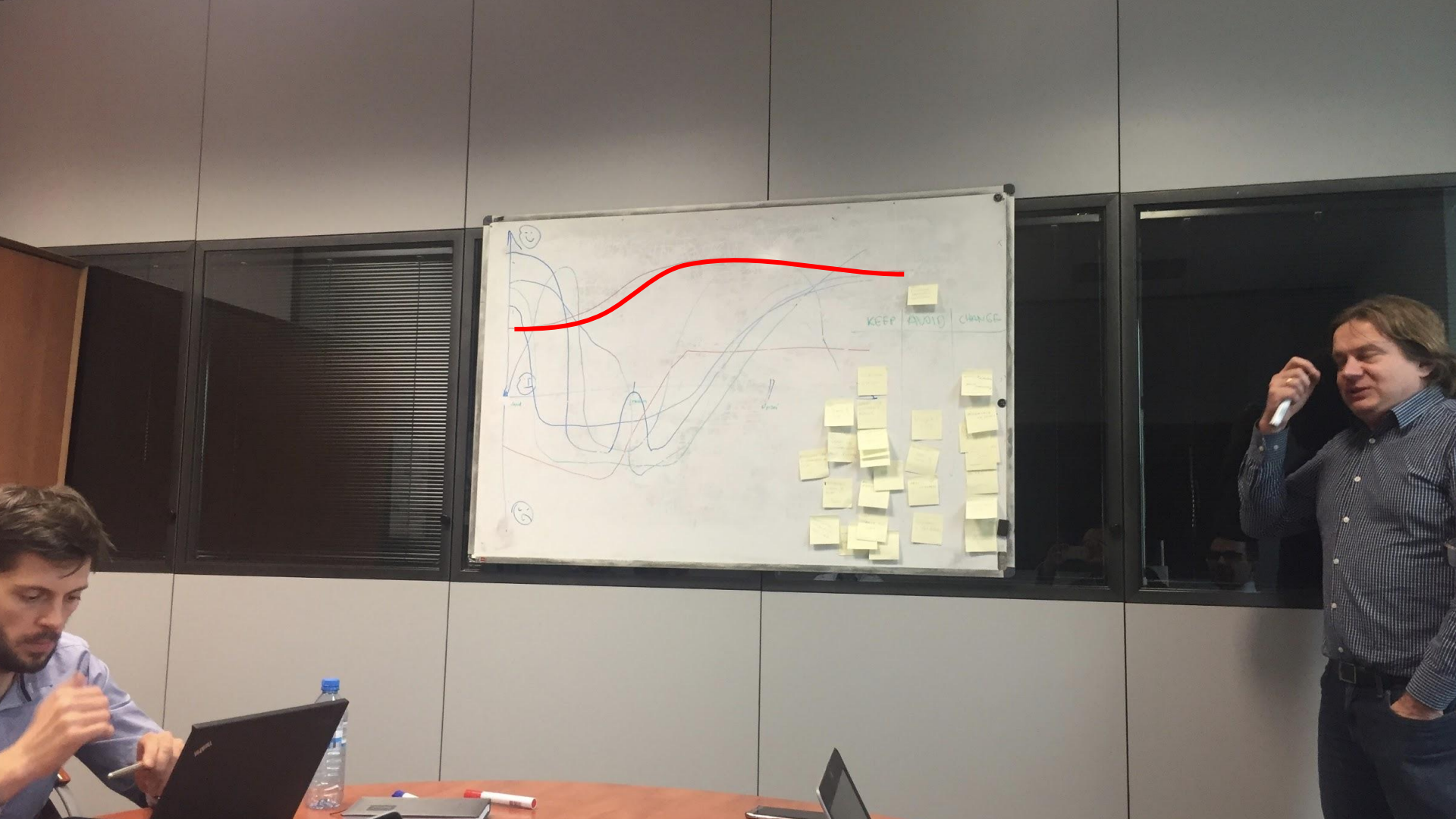
DEFEND
Infrastructure

- Container Platform
- Container Host Multi-tenancy
- Network Isolation
- Storage
- Audit & Logging
- API Management

EXTEND

- Security Ecosystem

https://www.redhat.com/en/resources/container-security-openshift-cloud-devops-whitepaper


KEEP
AVOID
CHANGE

And
this is what we call

DevOps

IN A BANK!

Bank Zachodni WBK
Grupa Santander

mindbox

Contact us

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