

The logo for ORDINA, featuring a stylized orange circle with a white dot inside, followed by the word "ORDINA" in white uppercase letters on an orange rectangular background.

ORDINA

Ahead of change

A background image showing a woman and a man in a modern office setting, smiling and looking at a laptop. The image is partially obscured by white geometric lines and an orange dot. The woman has blonde hair and is wearing a white top. The man has a beard and is wearing a white shirt.

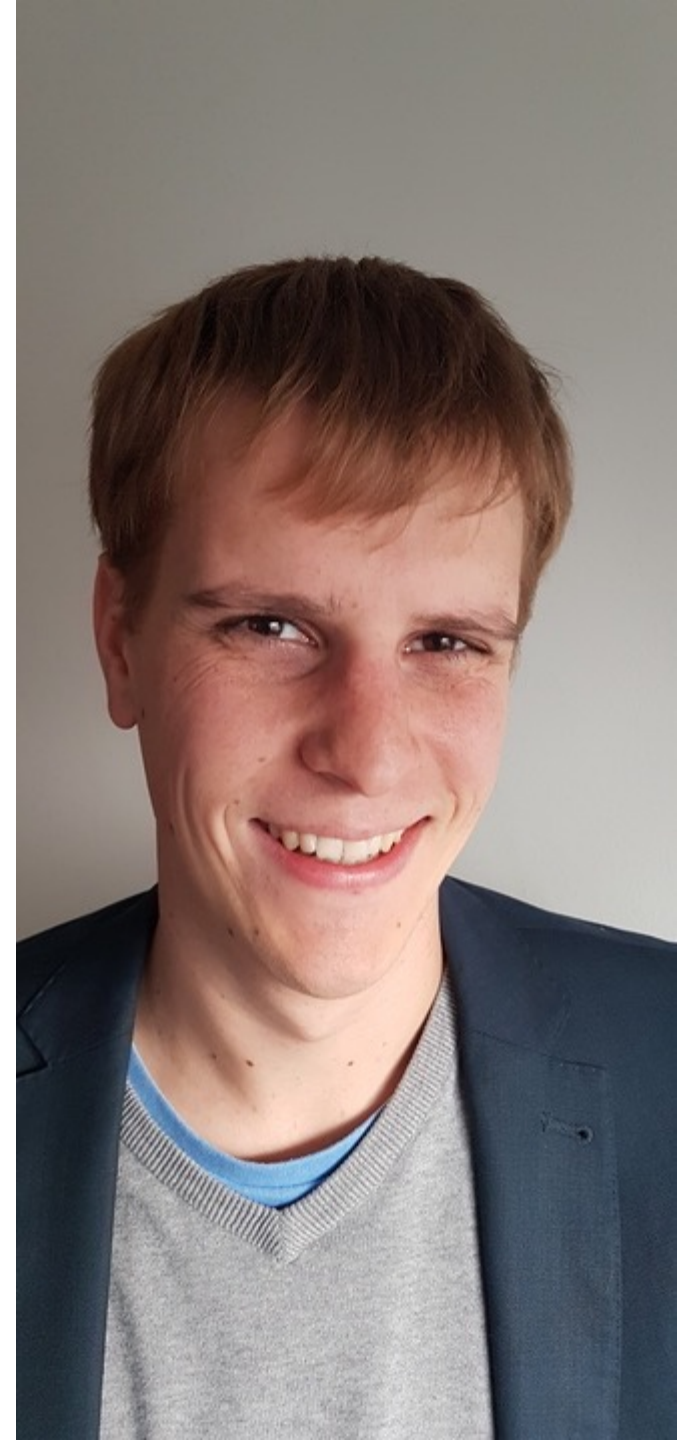
PATCHING 3RD PARTY SOFTWARE **LIKE A BOSS**

Using Renovate, Tekton and ArgoCD

04/10/2022

WHO AM I?

- Consultant at Ordina
- Software architect & developer background
- Interested in: [Automation](#), public cloud in enterprises, hyperscale software
- [Company blog](#) & [LinkedIn](#)



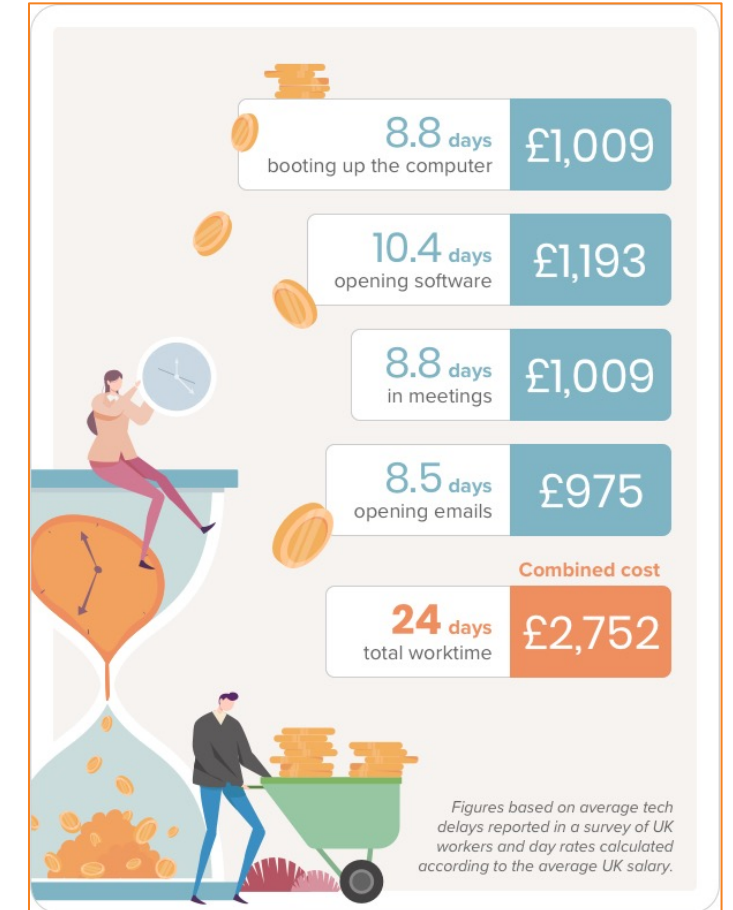
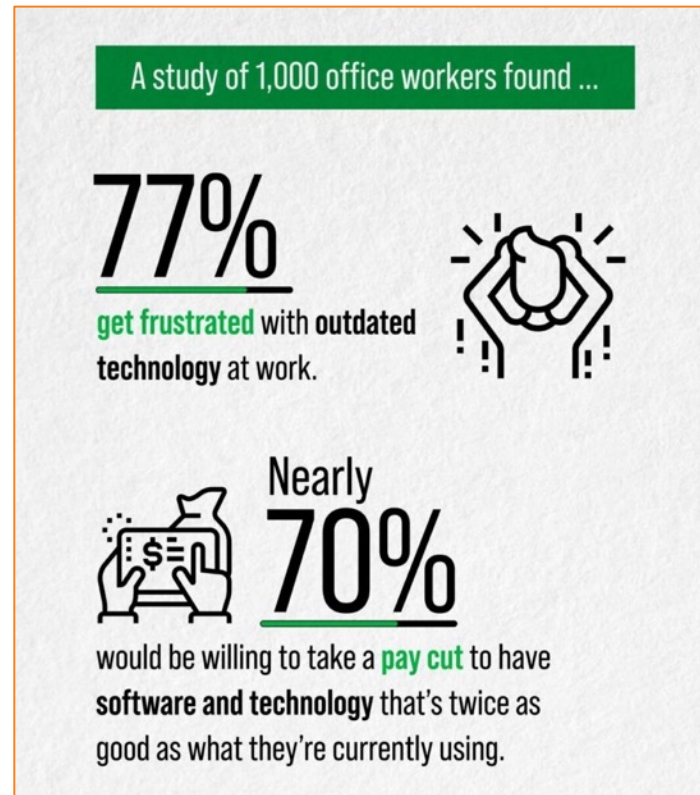
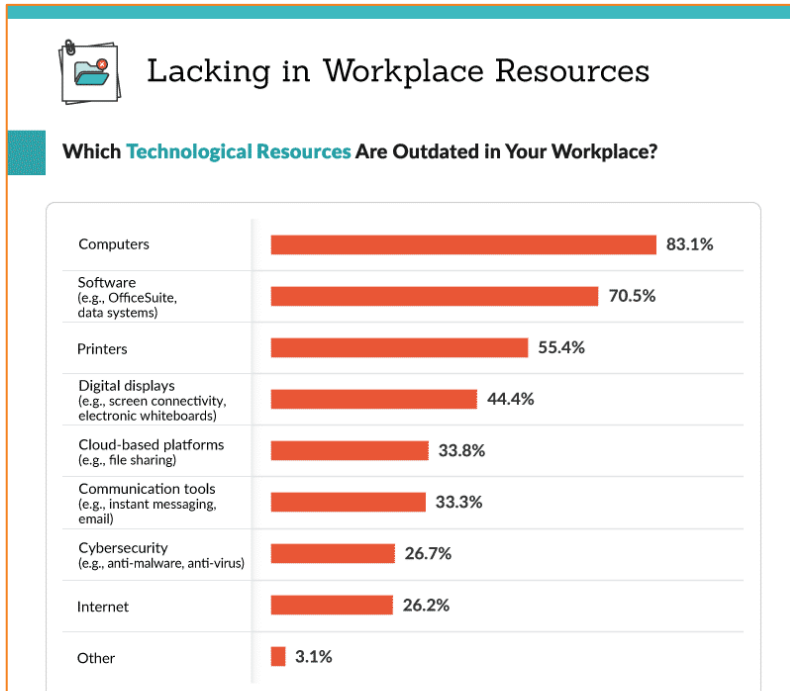
AGENDA

1. Why?
2. What?
3. How?
4. Demo Time!

USING THE LATEST **FEATURES**

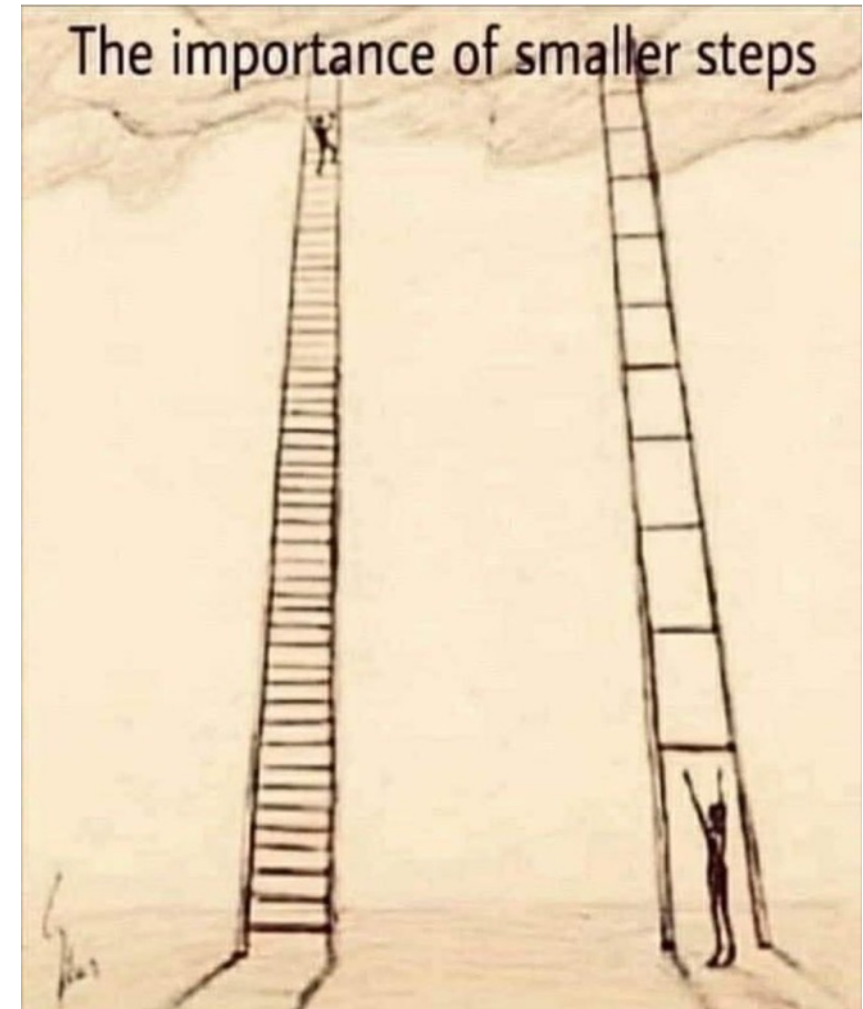
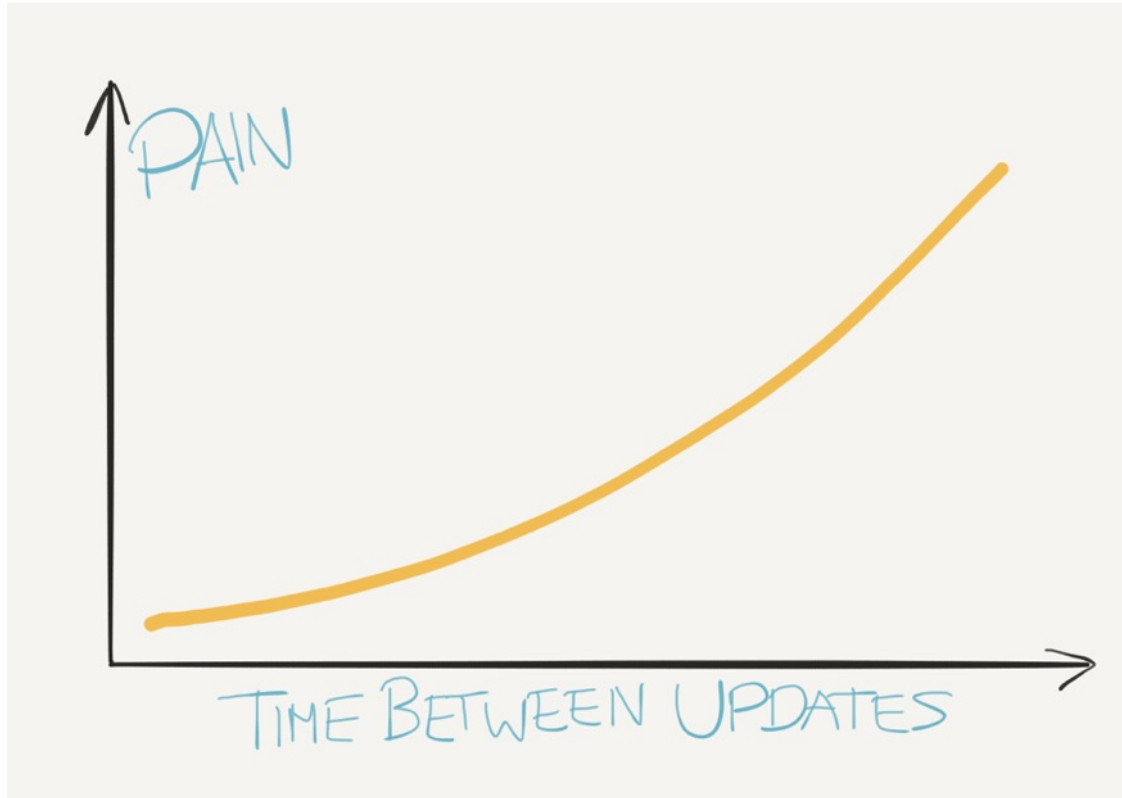
Why?

Mark Rutte deleted text messages from his old Nokia daily: VK



PREVENTATIVE **MAINTENANCE**

Upgrade from 6.8.21 to 8.0.1 or from 8.0.0 to 8.0.1



SECURITY VULNERABILITIES

Log4Shell ring a bell



WHAT IS **NEEDED**

- Knowing **when** there is an update
- Knowing **what** to update
- Knowing **how** to update



- **Validate** that the update works



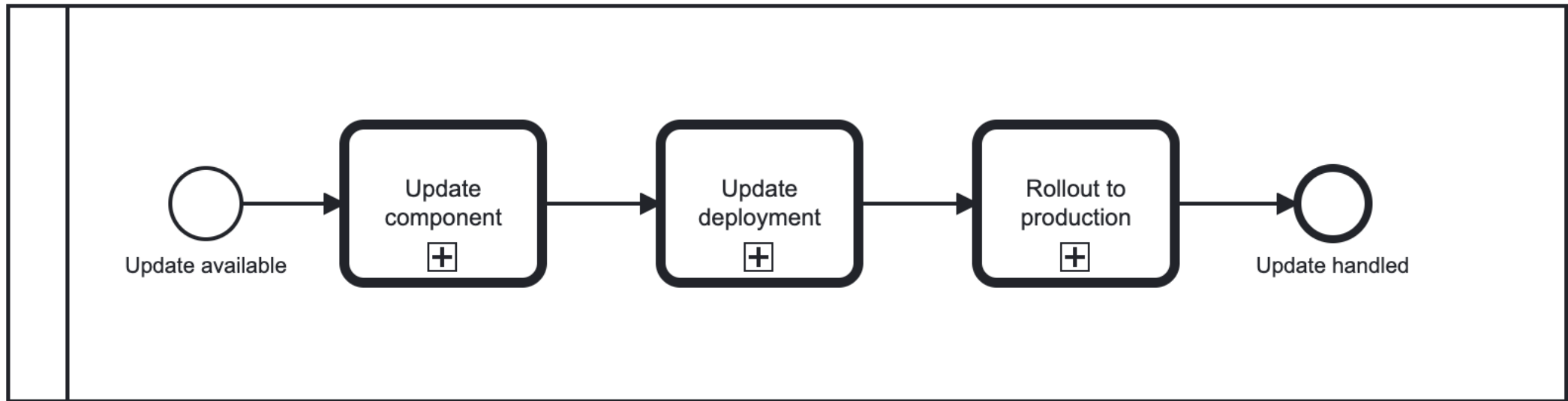
- Rollout to **production**



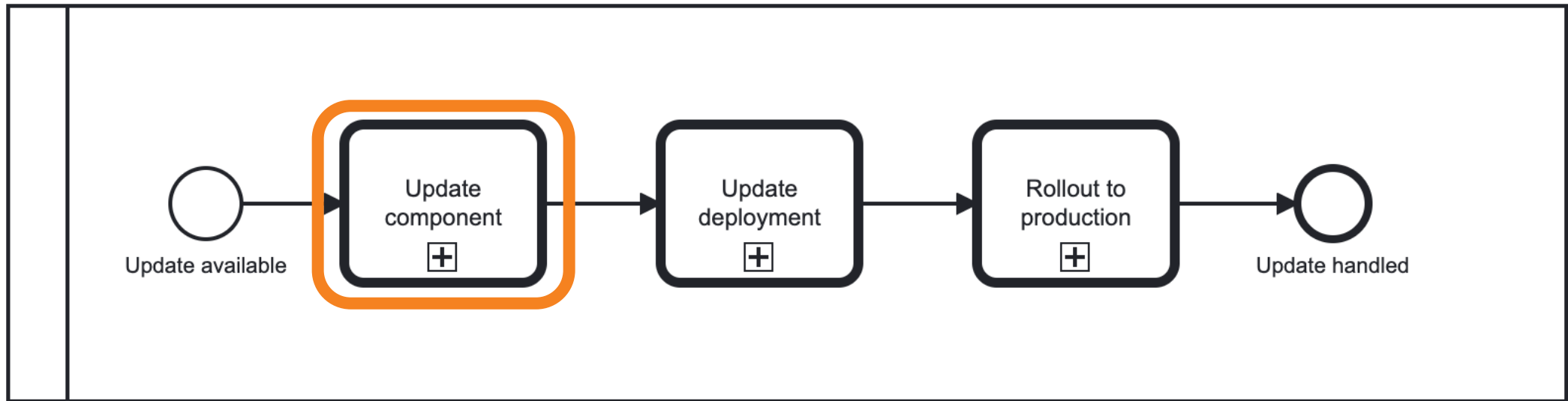


HOW DOES IT WORK

THE PROCESS



THE PROCESS



HOW DOES IT **WORK**

Java project



MEND
Renovate



GitHub

```
repo/  
├─ src/  
├─ Dockerfile  
└─ pom.xml
```

HOW DOES IT **WORK**

Java project



Docker: amazoncorretto:18.0.0

Maven: org.apache.logging.log4j:log4j-core:2.12.2

HOW DOES IT **WORK**

Java project



Docker: amazoncorretto:18.0.0

Maven: org.apache.logging.log4j:log4j-core:2.12.2

amazoncorretto:18.0.1

 The Central Repository

org.apache.logging.log4j:log4j-core:2.18.0

HOW DOES IT **WORK**

Java project



Docker: amazoncorretto:18.0.0 -> 18.0.1

Maven: org.apache.logging.log4j:log4j-core:2.12.2 -> 2.18.0

HOW DOES IT **WORK**

Java project



Docker: amazoncorretto:18.0.0 -> 18.0.1

Maven: org.apache.logging.log4j:log4j-core:2.12.2 -> 2.18.0

GitHub

PR: amazoncorretto: 18.0.1

PR: log4j: 2.18.0

HOW DOES IT **WORK**

Java project

GitHub



PR: amazoncorretto: 18.0.1

PR: log4j: 2.18.0

Build: amazoncorretto: 18.0.1

Build: log4j: 2.18.0



HOW DOES IT **WORK**

Java project

GitHub

PR: log4j: 2.18.0

Merge
PR

HOW DOES IT **WORK**

DONE!? Coffee time!

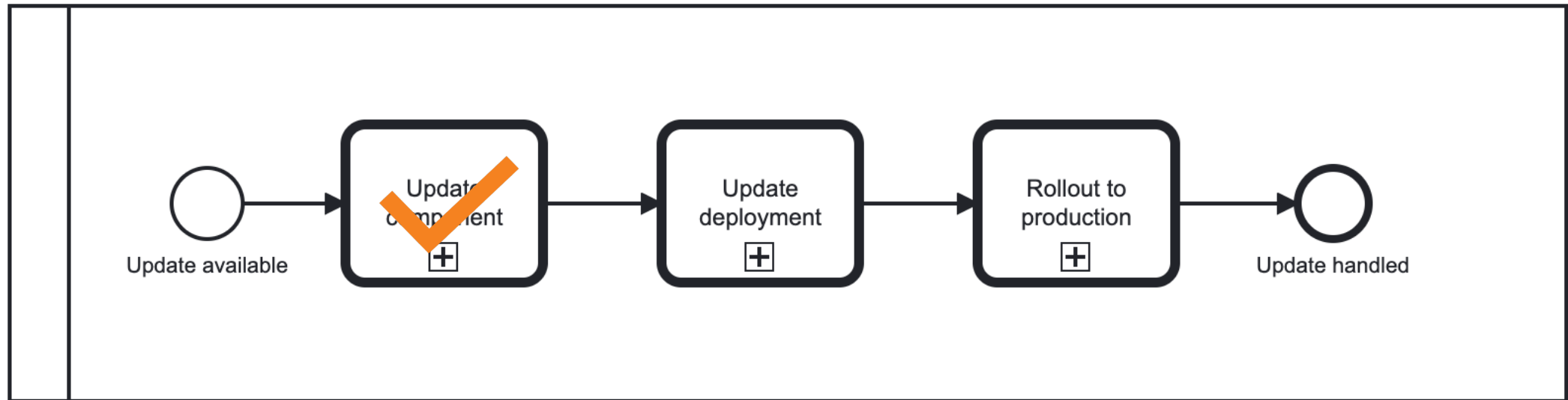


HOW DOES IT **WORK**

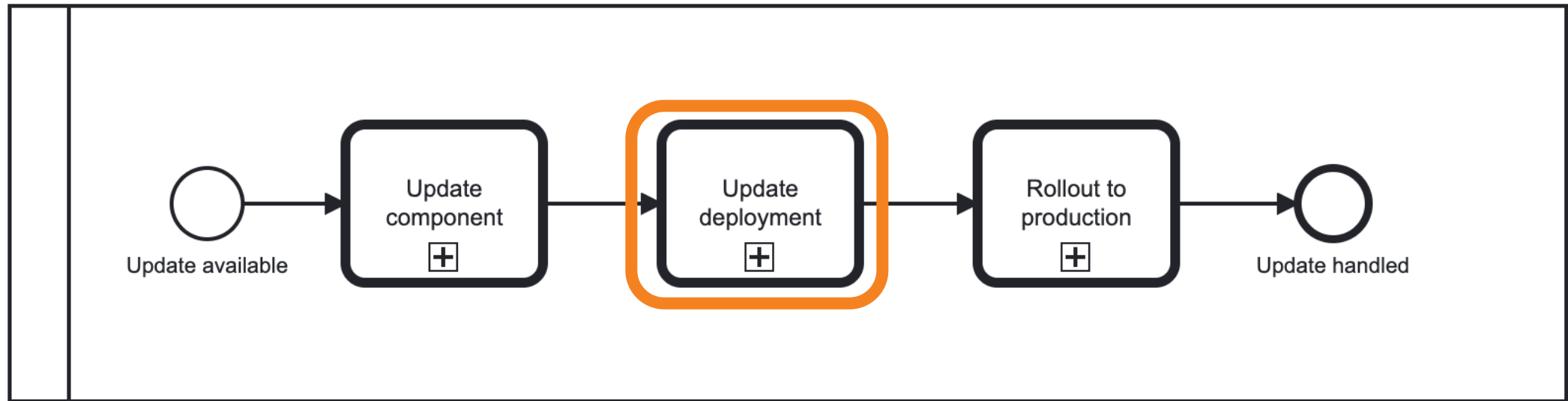
DONE!? Coffee time!



HOW DOES IT **WORK**



HOW DOES IT **WORK**



HOW DOES RENOVATE **WORK**

Deployment



MEND
Renovate

Scan
repository

GitHub

```
deploy-repo/  
├─ resources/  
│   └─ deployment.yaml  
├─ configs/  
│   └─ service.properties  
└─ kustomization.yaml
```

HOW DOES RENOVATE **WORK**

Deployment

```
apiVersion: apps/v1
kind: Deployment
metadata:
  name: my-awesome-service
spec:
  selector:
    matchLabels:
      app: my-awesome-service
  template:
    metadata:
      labels:
        app: my-awesome-service
    spec:
      containers:
        - name: my-awesome-service
          image: my-awesome-service:0.0.0
```


HOW DOES RENOVATE **WORK**

Deployment

```
apiVersion: kustomize.config.k8s.io/v1beta1
```

```
kind: Kustomization
```

```
resources:
```

- resources/deployment.yaml
- <https://github.com/pietervincken/my-other-service?ref=0.0.0>

HOW DOES RENOVATE **WORK**

Deployment



Kubernetes: image: pietervincken/my-java-service:0.0.0

Kustomize: resource: github.com/pietervincken/my-other-service:0.0.0

HOW DOES RENOVATE **WORK**

Deployment



Kubernetes: image: pietervincken/my-java-service:0.0.0

Kustomize: resource: github.com/pietervincken/my-other-service:0.0.0



GitHub

HOW DOES RENOVATE **WORK**

Deployment



Kubernetes: image: pietervincken/my-java-service:0.0.0 -> 0.0.1

Kustomize: resource: github.com/pietervincken/my-other-service:0.0.0 -> 0.1.0

HOW DOES RENOVATE **WORK**

Deployment



GitHub

my-java-service:0.0.0 -> 0.0.1
my-other-service:0.0.0 -> 0.1.0



PR: my-java-service: 0.0.1
PR: my-other-service: 0.1.0

HOW DOES RENOVATE **WORK**

Deployment

Merge
PR

GitHub

PR: my-java-service: 0.0.1

PR: my-other-service: 0.1.0

HOW DOES IT **WORK**

DONE!? Coffee time!

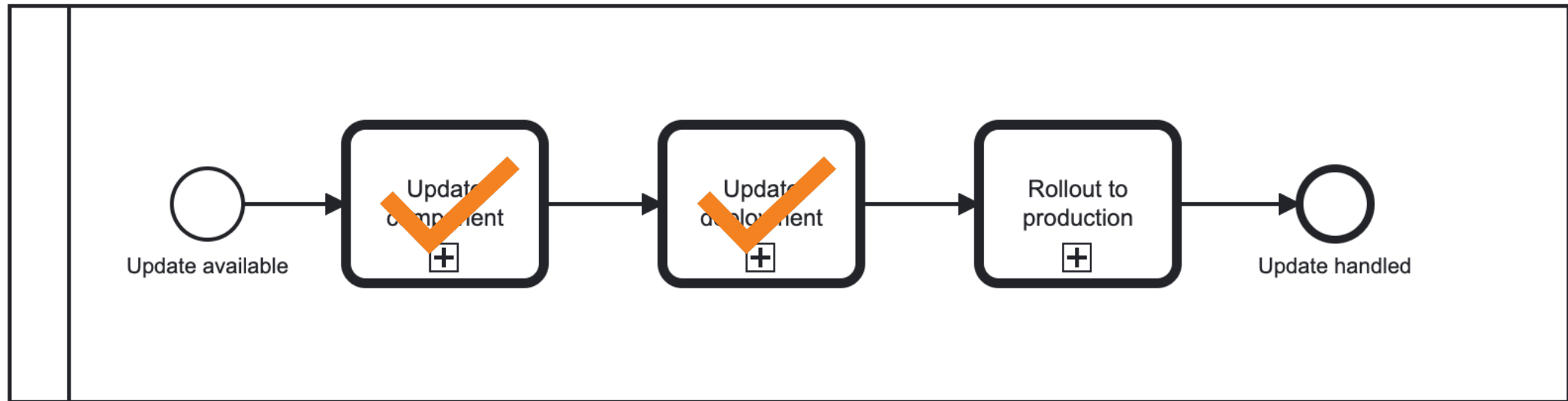


HOW DOES IT **WORK**

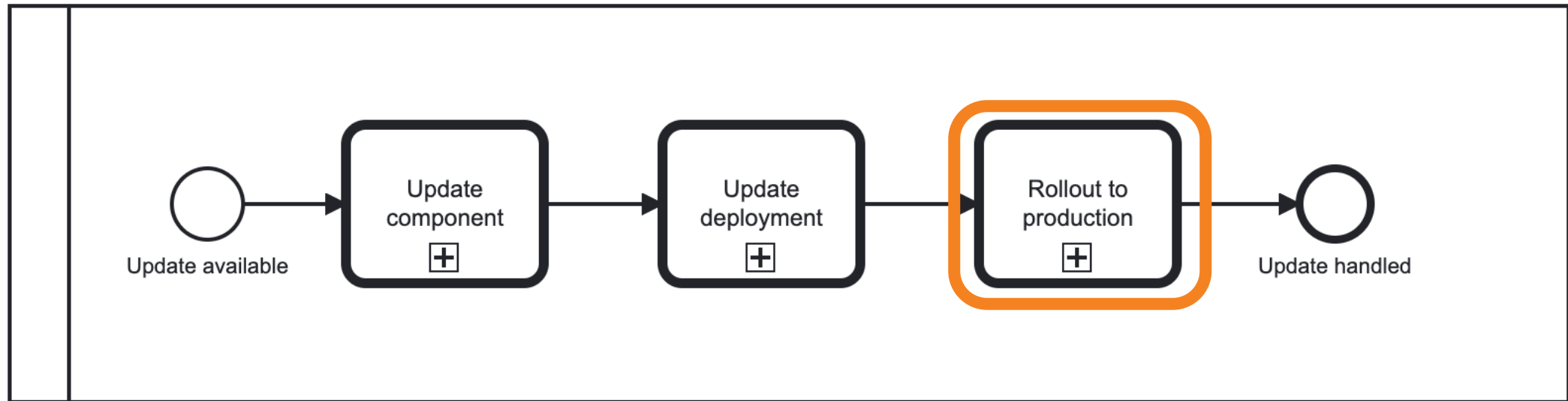
DONE!? Coffee time!



HOW DOES IT **WORK**



HOW DOES IT **WORK**



HOW DOES IT **WORK**

Deployment

GitHub

Kubernetes: image: pietervincken/my-java-service:0.0.1

Kustomize: resource: github.com/pietervincken/my-other-service:0.1.0

HOW DOES IT **WORK**

Deployment

GitHub

Kubernetes: image: pietervincken/my-java-service:0.0.1

Kustomize: resource: github.com/pietervincken/my-other-service:0.1.0

Repository
changed



argo

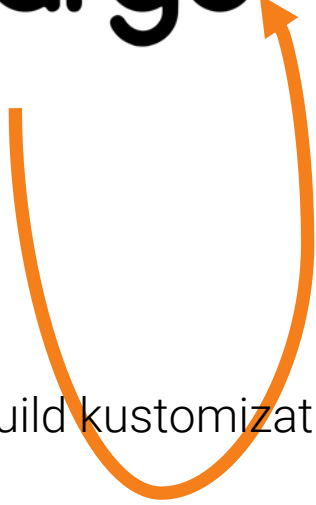
HOW DOES IT **WORK**

Deployment



argo

Build customization



HOW DOES IT **WORK**

Deployment



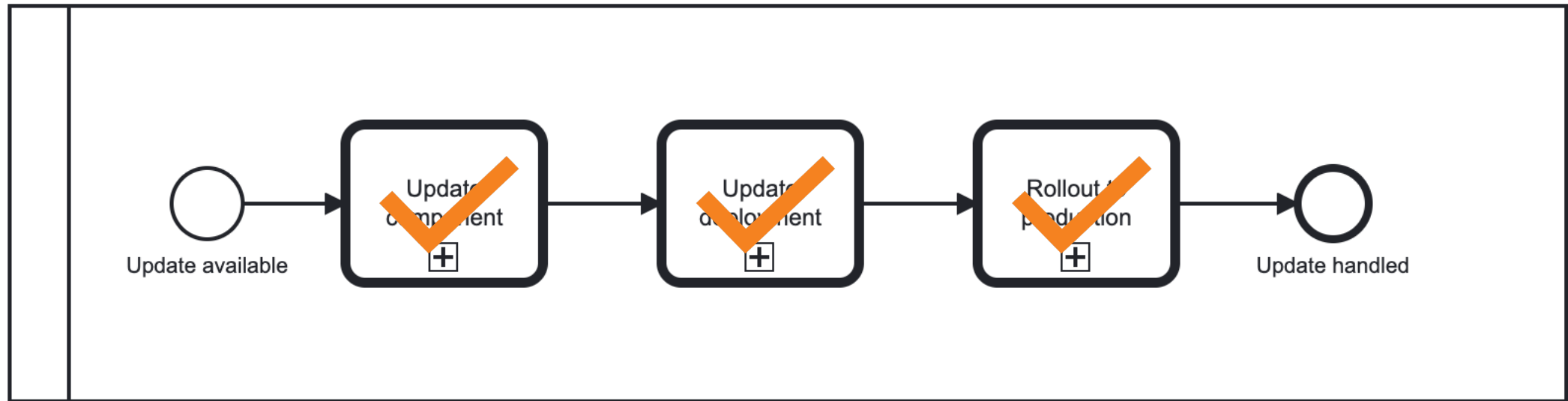
argo



Apply
changes



HOW DOES IT **WORK**

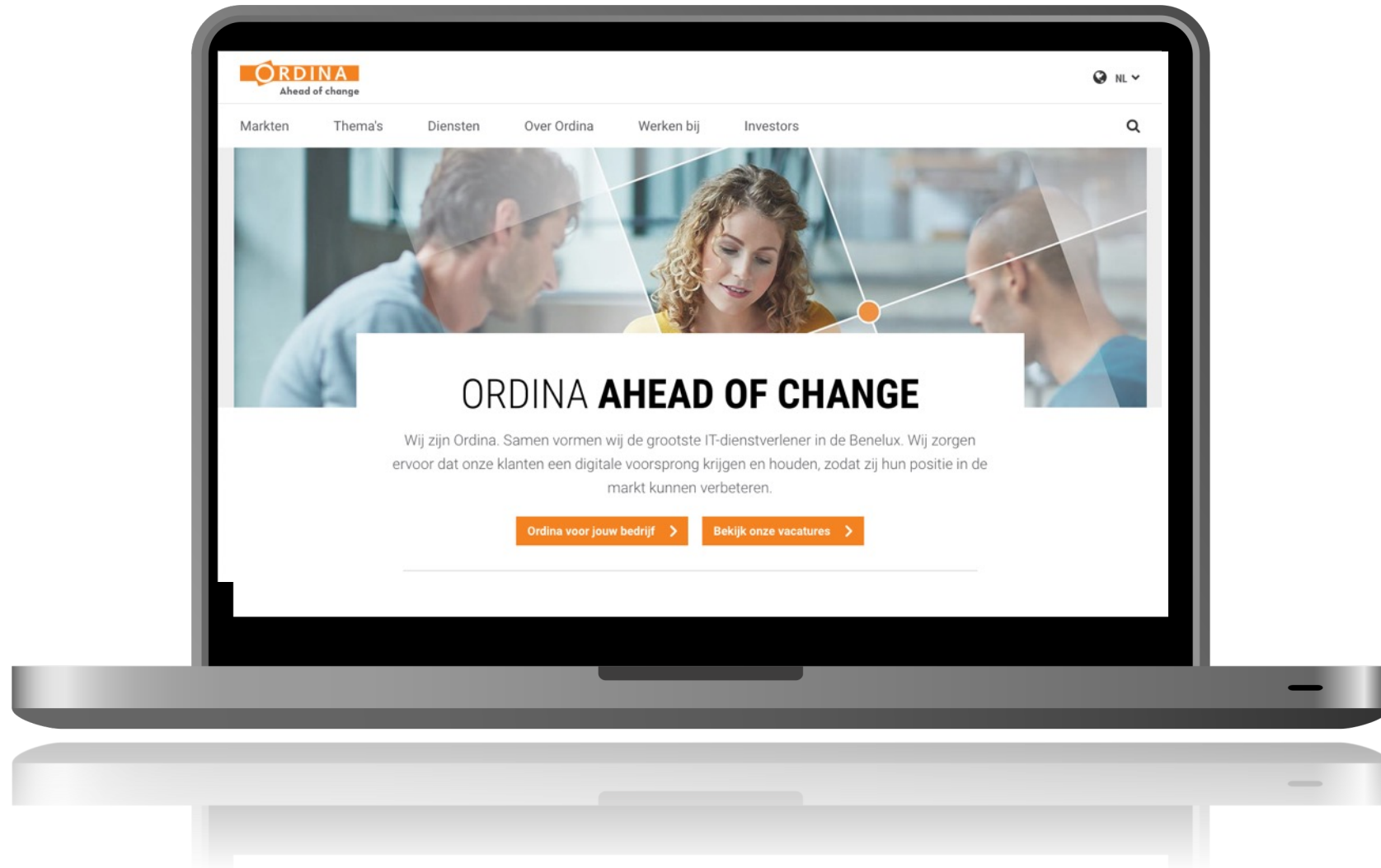


HOW DOES IT **WORK**

DONE! Succes!



DEMO TIME



CONVINCE THE **BRASS**

Baby steps

- Inform about the update
- Build confidence in update sources
 - Docker hub
 - Maven central
 - Internal sources
- Start with low impact
- Limit amount of concurrent updates

CUSTOMIZE IT

It's all just config

Wijzig Model | Motoren | Modelversies. | **Exterieur** | Interieur | Pakketten & uitvoeringen & Speciale uitrusting | Volgende stappen

Specifieke uitrusting kan (tijdelijk) niet beschikbaar zijn of zorgen voor langere levertijden. Meer informatie is verkrijgbaar bij uw BMW-partner.

STEP 03/06: Exterieur

KLEUREN.

Voor Basisversie | Voor andere Lines

UNILAK

METALLIC

Schwarz II
€ 0

VELGEN.

Configuratie opslaan | Samenvatting

Consumentenprijs € 55.550 | Bereken hier uw financiering

Wijzig Model | Motoren | Modelversies. | **Interieur** | Pakketten & uitvoeringen & Speciale uitrusting | Volgende stappen

Specifieke uitrusting kan (tijdelijk) niet beschikbaar zijn of zorgen voor langere levertijden. Meer informatie is verkrijgbaar bij uw BMW-partner.

STEP 04/06: Interieur

INTERIEURLIJSTEN.

Voor M Sportpakket | Voor andere Lines

BMW Individual decoratieve lijsten in Pianolack schwarz
€ 520

U BENT HALVEREGE UW CONFIGURATIE.

Sla uw configuratie op voor later
€ 71.320

Bereken hier uw financiering

Link kopiëren

518d Touring
110 kW (150 PS) 9.2 s 5.41/100 km 140 g/km
Performance Acceleratie (0-100 km/h) Verbruik (gecombineerd) (WLTP) CO2-uitstoot (gecombineerd) (WLTP)

518d Touring
110 kW (150 PS) 9.2 s 5.11/100 km 134 g/km
Performance Acceleratie (0-100 km/h) Verbruik (gecombineerd) (WLTP) CO2-uitstoot (gecombineerd) (WLTP)

BEKLEDING.

Voor Basisversie | Voor andere Lines

LEDER

SENSATEC

Sensatec geperforeerd Conberrabeige
€ 0

INTERIEURLIJSTEN.

Configuratie opslaan | Samenvatting

Consumentenprijs € 55.550 | Bereken hier uw financiering

NOT REQUIRED, BUT GOOD TO HAVE

- Conventional commits
 - At least semver based tags
- Good automated testing
 - -> high level of confidence for auto-merge
- Clear deployment process to (pre-) production
 - Automation and configuration as code are key

RESOURCES

- [Renovate Github](#)
- [ArgoCD documentation](#)
- [Tekton documentation](#)
- [Tekline](#): Pipeline as code solution for tekton
- [Demo project](#)
- [Ordina JWorks](#)



In the new world,
it is not the big fish
which eats the
small fish, it's the
fast fish which
eats the slow fish

Klaus Schwab
Founder and Executive Chairman
World Economic Forum

PIETER VINCKEN

COMPETENCE LEAD CLOUD

T +32 (0)15 29 58 58

E pieter.vincken@ordina.be