Open Source Process Automation

GETTING STARTED

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AGENDA

❏ What is jBPM?
❏ BPM Labs Intro
❏ Business automation
❏ Architecture
❏ New project in Business Central
❏ Business assets
  ❏ Data objects
  ❏ Business processes
  ❏ Forms
❏ Process administration
❏ Team collaboration
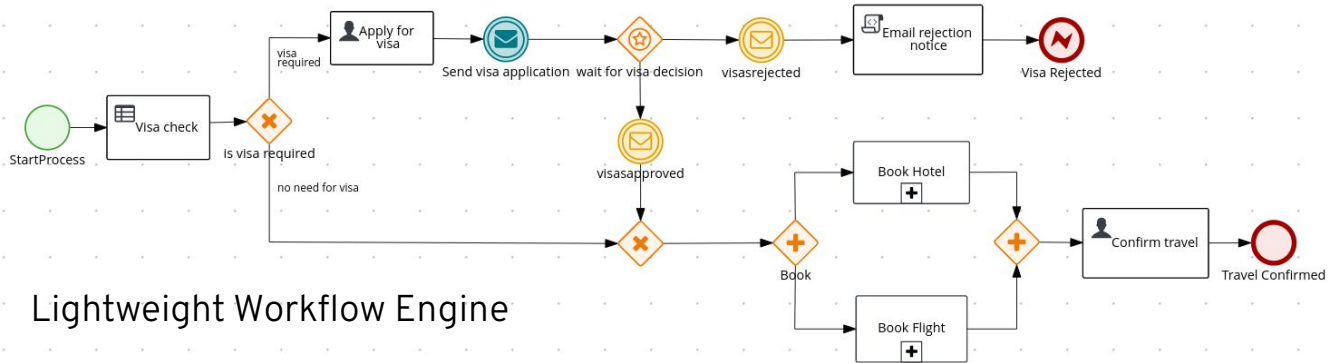
Process Automation Manager

Business Central

WHAT IS jBPM?

Lightweight Workflow Engine

Modeling

Monitoring

Execution

Management

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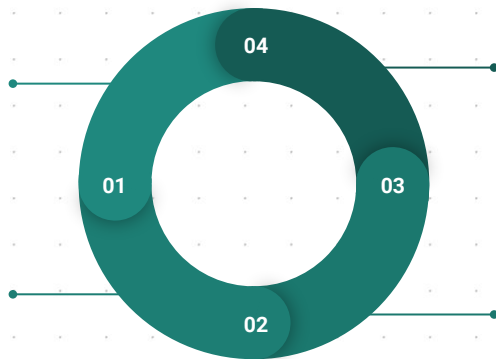
Properties

> Process

Name

travels

Documentation

ID

travels

Package

org.acme.travels

ProcessType

Public

Version

1.0

☐ Ad-Hoc

Process Instance Description

Imports

No imports

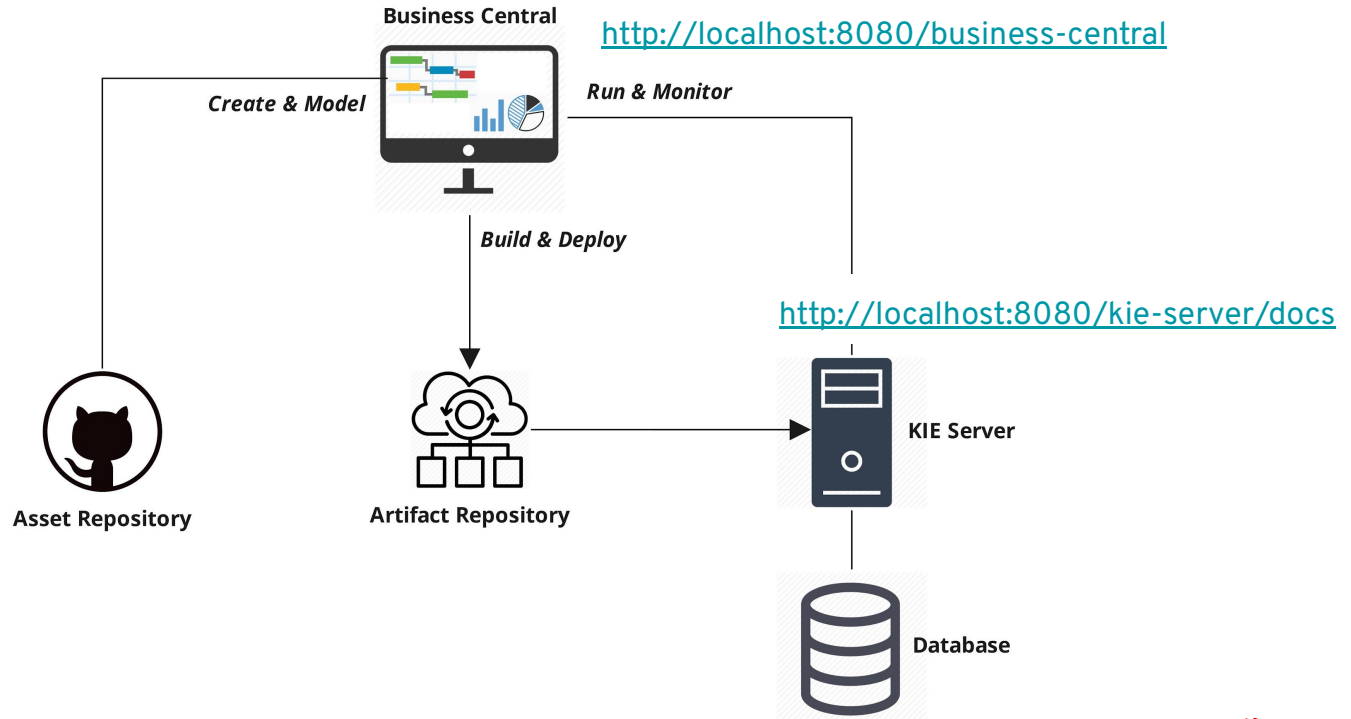☑ Executable

SLA Due Date

> Process Data

> Advanced

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jBPM LABS

Getting started with jBPM

The latest business automation trends (presentation)

Implementing advanced BPMN2 constructs in jBPM

Project consulting

24 Feb

Apr

19 May - 9 Jun

17 Feb

Mar/Apr

28 Apr - 5 May

Building your first process automation project (homework)

DMN decisions and testing Kogito services

Project defense

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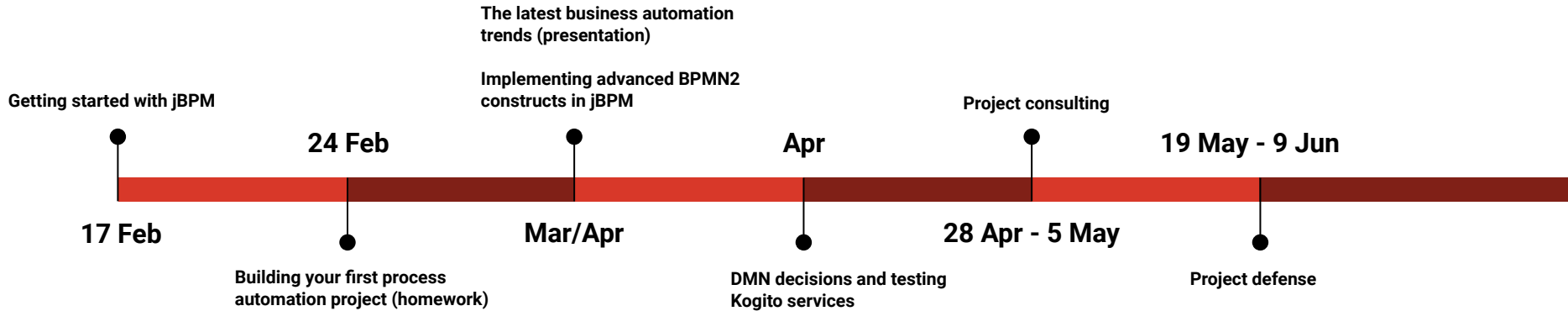
FROM A MODEL TO PRODUCTION

Asset
Repository

Business
Central

CI / CD
Build & Deploy

Artifact
Repository

KIE Server
Execution

REST API

End-user
Application
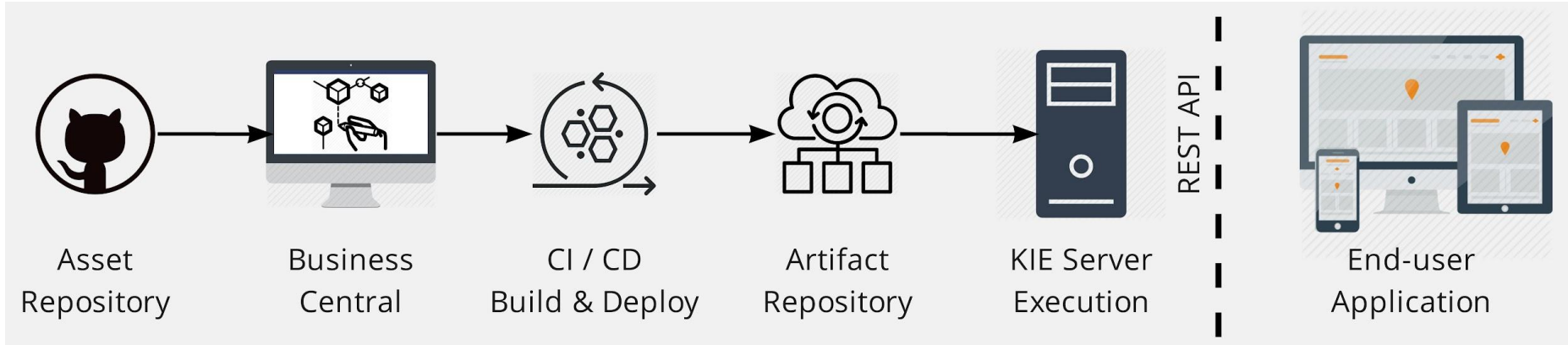
MINIMAL VANILLA ARCHITECTURE

SETUP - THE FIRST STEPS

❏ Download and install OpenJDK 11 (*Oracle JDK 8 and 11 will work too if you have already installed them before*)
❏ Configure JAVA_HOME environment variable
❏ Download and unzip the single zip distribution
❏ Run:

jbpm-server/bin/standalone.sh   (Unix / Linux)
jbpm-server/bin/standalone.bat   (Windows)

❏ Add users and groups
❏ Use H2/MySQL/PostgreSQL database (optional)
❏ More info in Getting Started Guide

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NEW PROJECT IN BUSINESS CENTRAL

- ❏ Based on Maven and stored in Asset repository (GIT)
- ❏ Try Samples
- ❏ SNAPSHOT development version
- ❏ Add assets
  - ❏ Data Object
  - ❏ Business Process
  - ❏ Form
  - ❏ DMN Model
  - ❏ Test Scenarios
- ❏ Build and Deploy

DATA MODELING
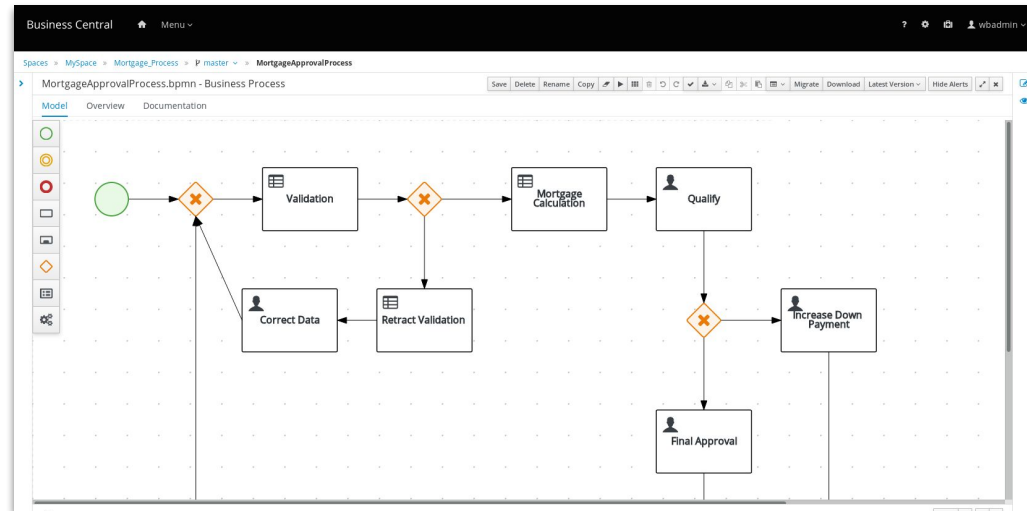
PROCESS MODELING

- ❏ BPMN2 support
- ❏ Focus on execution semantics
- ❏ Data I/Os
- ❏ Human tasks
- ❏ Decisions and calculations
- ❏ External calls
- ❏ Catching and triggering events
- ❏ Form generating
- ❏ Export to PNG, PDF, SVG, BPMN2

FORM MODELING

❏   Generate forms for
  ❏   Data objects (reusable)
  ❏   Process start form
  ❏   Task form
❏   Widget library able to bind different types of data (TextBox, DatePickers, Checkboxes, ListBox, Nested Forms...)
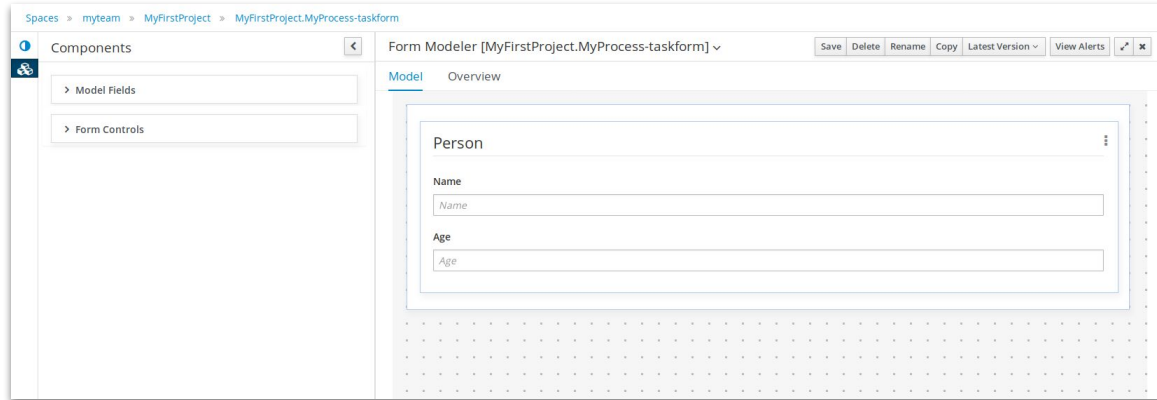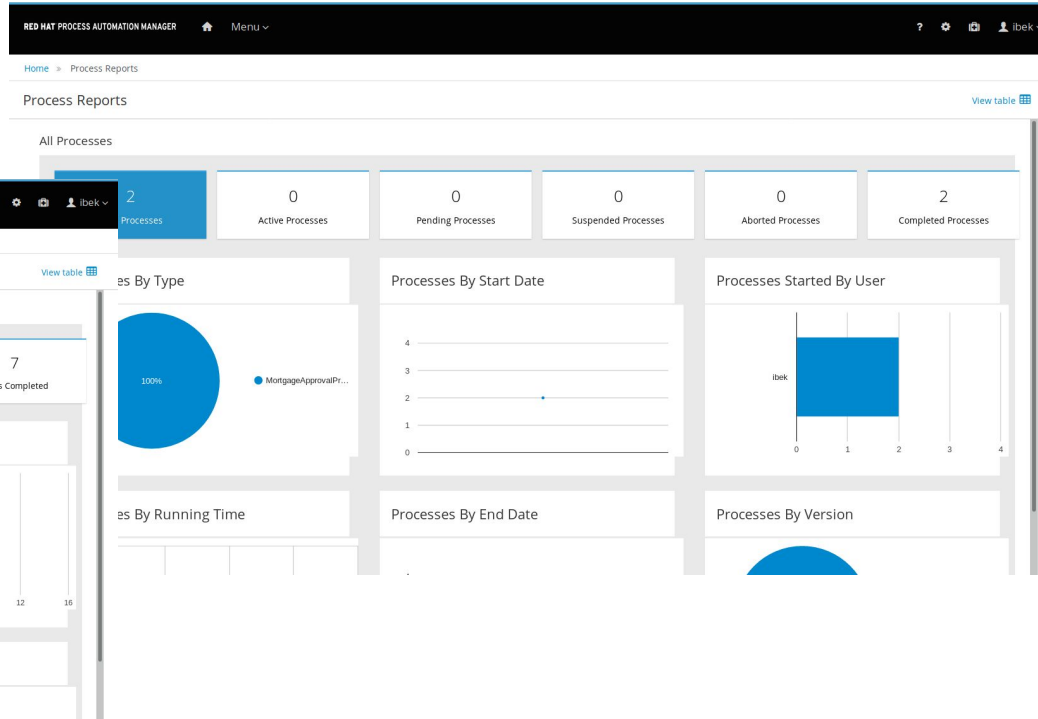
PROCESS ADMINISTRATION

- ❏ Quick access to:
  - ❏ Process Definitions
  - ❏ Process Instances
  - ❏ Tasks
  - ❏ Execution errors
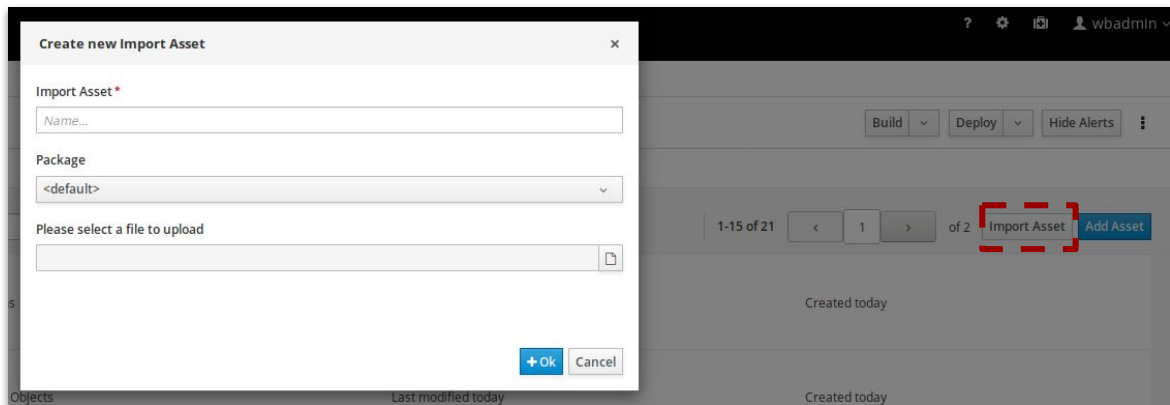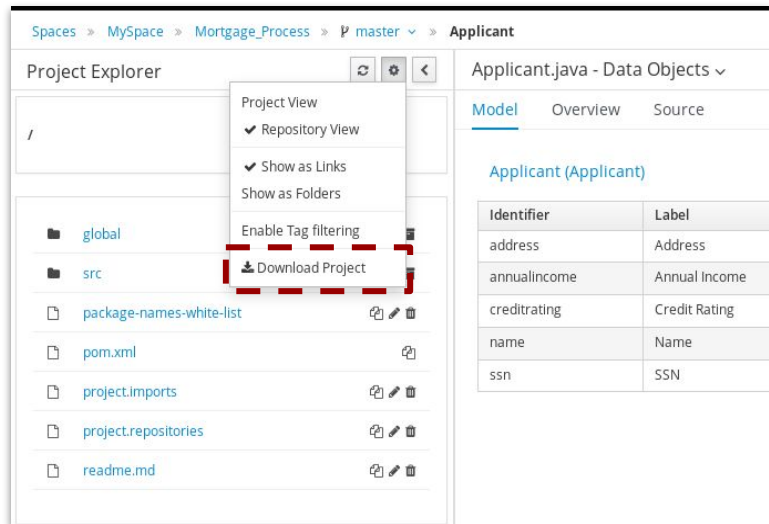 - ❏ Jobs
- ❏ Filtering

PROCESS MONITORING
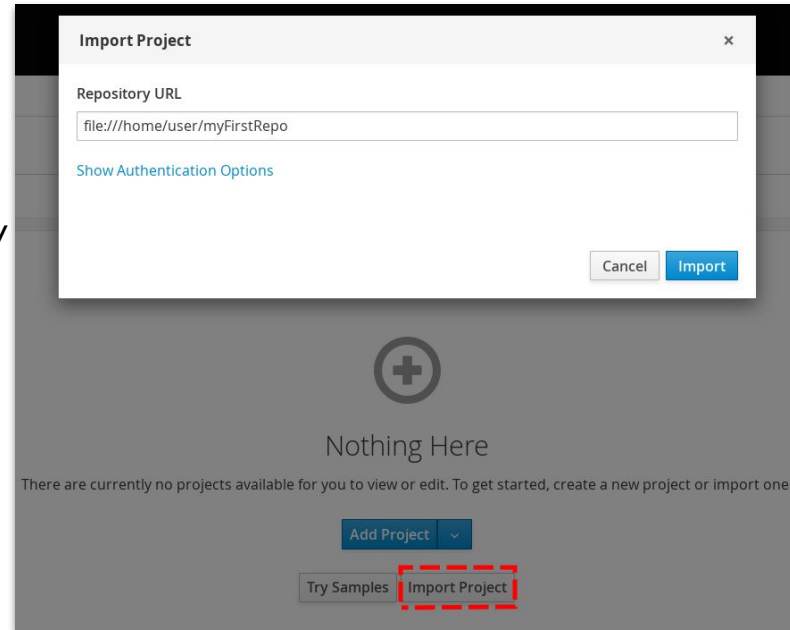
❏ Process reports
❏ Task reports

TEAM COLLABORATION

❏ How to work on a project as a team without any complex setup of the infrastructure (git hooks, central git repository, …)

1. Split the work between the team members
2. Export project
3. Share your assets with your team
4. Import assets to your local instance

TEAM COLLABORATION VIA GIT

- ❏ Requires only basic Git skills
- ❏ Pull your business assets from Business Central
  1. git remote add business-central ssh://wbadmin@localhost:8001/<spaceName>/<projectName>
  2. git pull business-central master
  3. password wbadmin
- ❏ Push your business assets for example to GitHub
  1. git push github master
- ❏ Import your business assets to another Business Central either by pushing to it or by cloning whole repository from UI

Import Project   ✕

Repository URL

`file:///home/user/myFirstRepo`

Show Authentication Options

Cancel   Import

⊕

Nothing Here

There are currently no projects available for you to view or edit. To get started, create a new project or import one.

Add Project ⌄

Try Samples   Import Project

BONUS: EASY ACCESS TO BPMN EDITORS

❏ [Red Hat Business Automation Bundle](#) Visual Studio Code extension
❏ [bpmn.new](#) website

THANK YOU

linkedin.com/company/red-hat

youtube.com/user/RedHatVideos

facebook.com/redhatinc
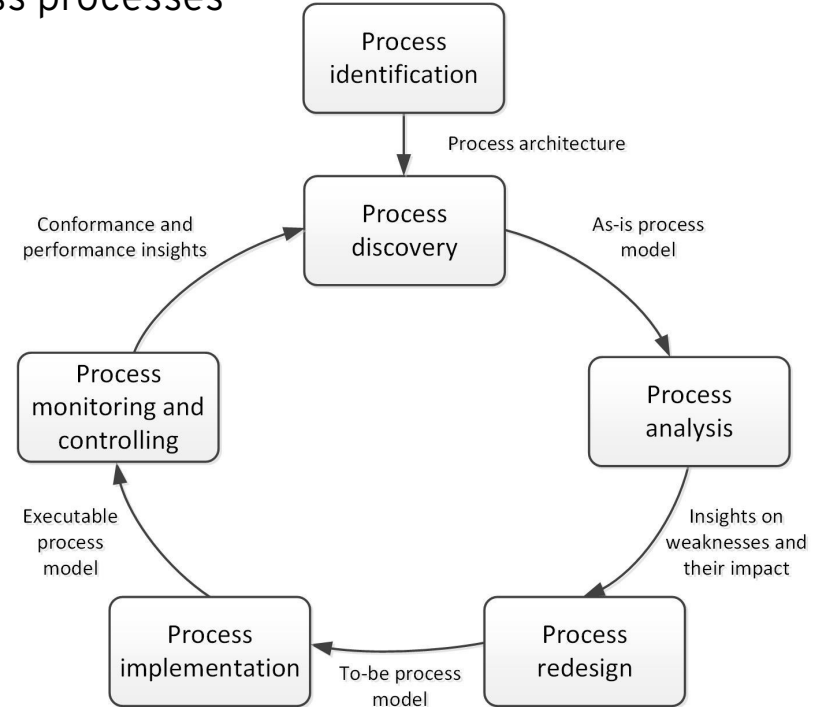
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BUSINESS PROCESS MANAGEMENT

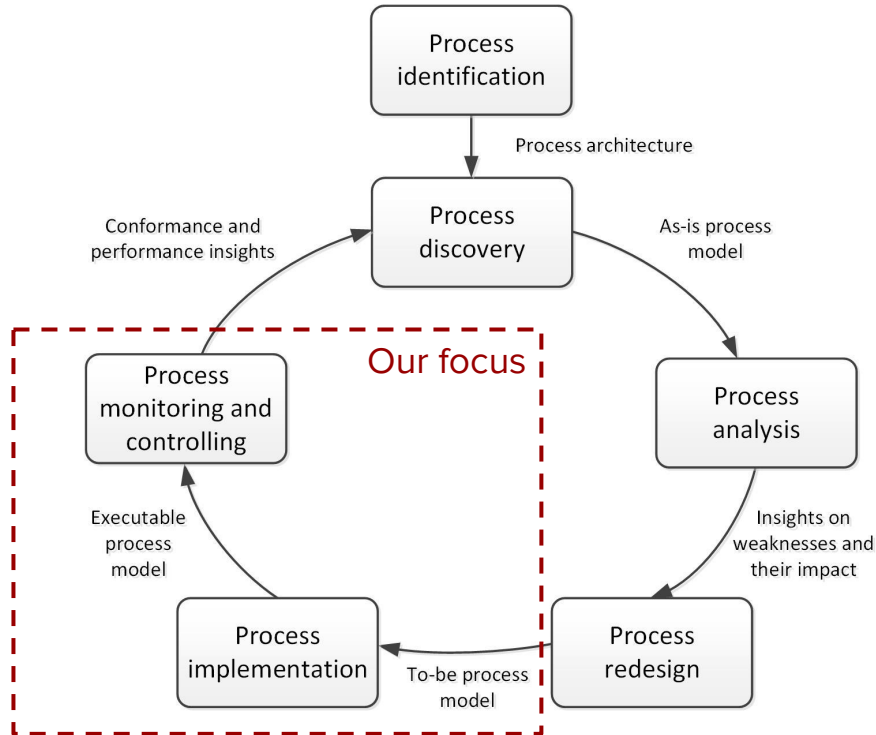the way a company manages and improves business processes

"A business process is a collection of activities that takes one or more kinds of input and creates an output that is of value to the customer. A business process has a goal and is affected by events occurring in the external world or in other processes."
Hammer, M. and Champy, J.

- approval process
- payment process
- employee onboarding
- loan/mortgage application
- Manufactoring / assembly line

- service requests
- rent car process
- vacation approval
- media publish process

Process identification

Process architecture

Conformance and performance insights

Process discovery

As-is process model

Process monitoring and controlling

Process analysis

Executable process model

Insights on weaknesses and their impact

Process implementation

To-be process model

Process redesign

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RETURN ON INVESTMENTS (ROI)

Process identification

Process architecture

Process discovery

As-is process model

Conformance and performance insights

Our focus

Process monitoring and controlling

Process analysis

Executable process model

Insights on weaknesses and their impact

Process implementation

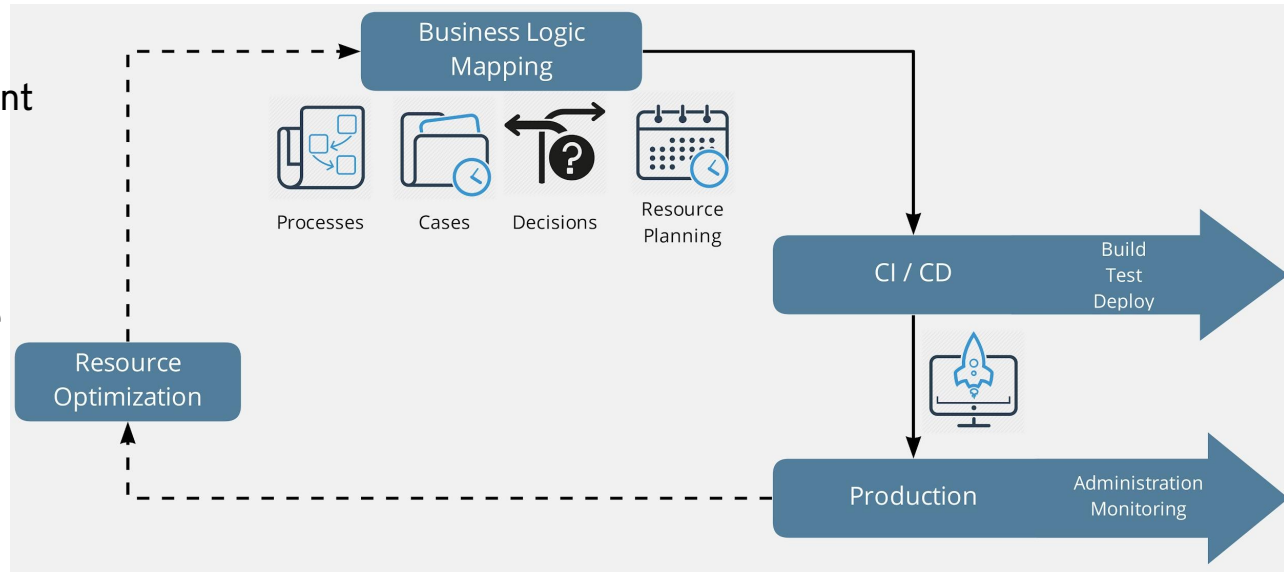To-be process model

Process redesign

Frequency
Size and complexity
Diversity (actors, systems, rules)
Speed (SLAs)

Time (spent on a single manual task) x
Frequency (of performing a task per month) x
Cost (per hour) x 12 (months) = **Yearly Savings**

BUSINESS AUTOMATION

- ❏ BPM
- ❏ Decision Management
- ❏ Case Management
- ❏ Resource Planning
- ❏ Robotic Process Automation (RPA)
- ❏ AI, XAI, and Machine Learning

See BPM in context