



Open Source BPM Middleware

GET STARTED

Mgr. Ivo Bek, Associate Product Manager

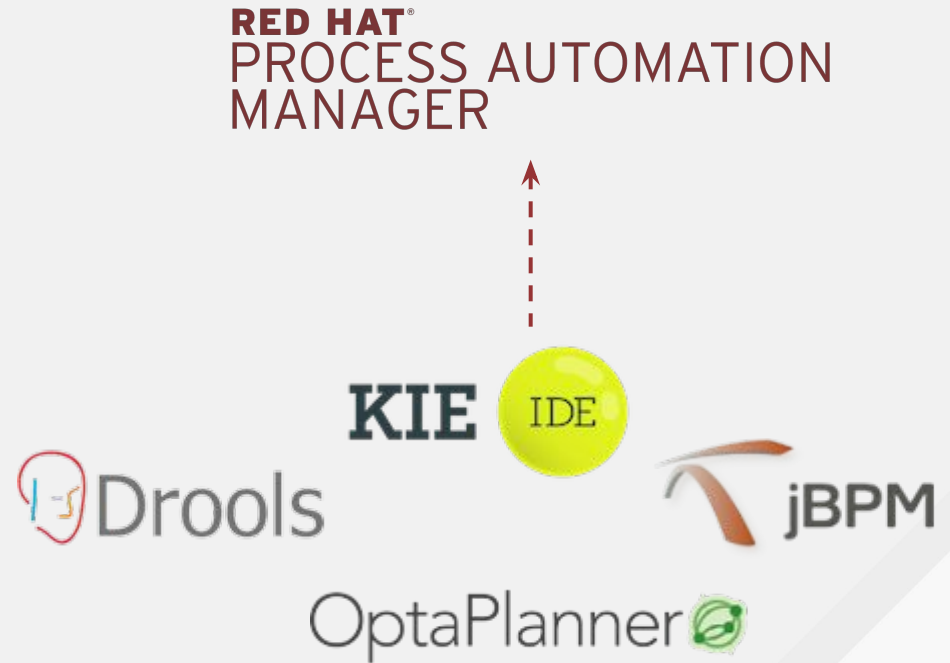
Mgr. Marian Macik, Quality Engineer

April 2018

CONTENT

Open Source BPM Middleware

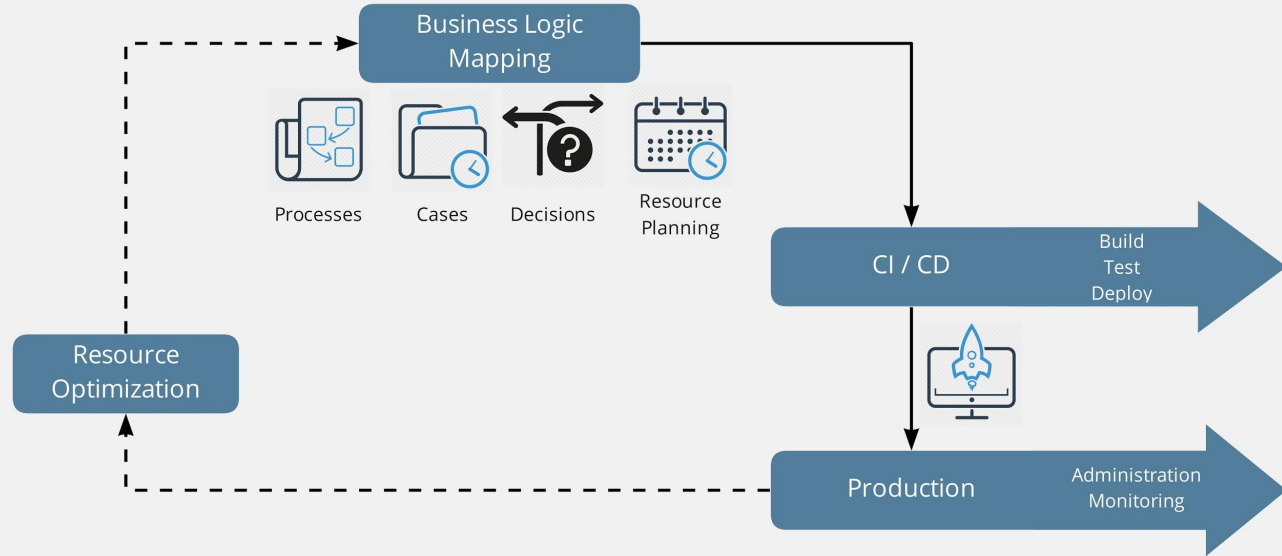
- ❑ Business automation
- ❑ Architecture and its elements
- ❑ New project in Business Central
- ❑ Business assets
 - ❑ Data objects
 - ❑ Business processes
 - ❑ Forms
 - ❑ Decision tables
- ❑ Research areas
- ❑ Labs



BUSINESS AUTOMATION

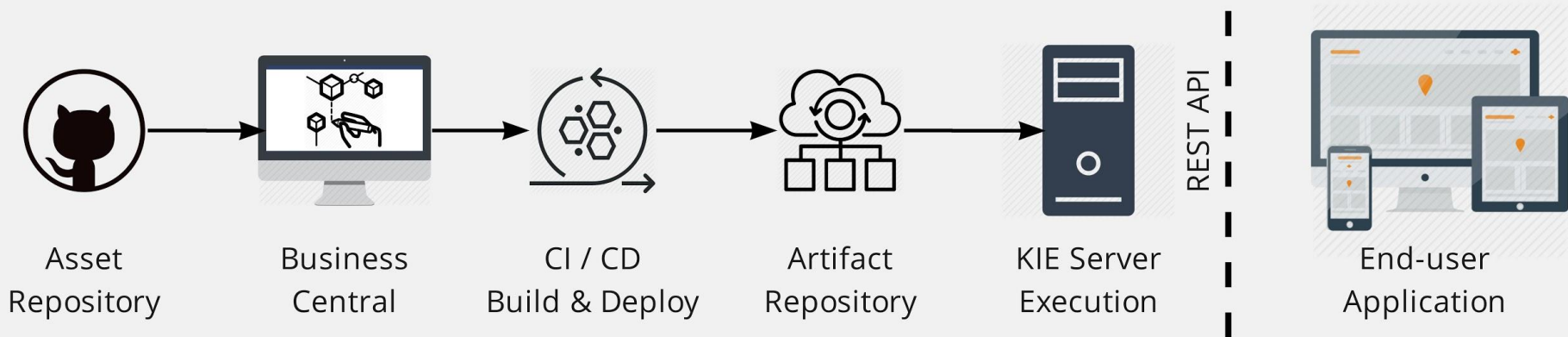
more than BPM

- ❑ BPM
- ❑ Case Management
- ❑ Decisions
- ❑ Resource Planning
- ❑ Robotic Process Automation (RPA)
- ❑ AI and Machine Learning



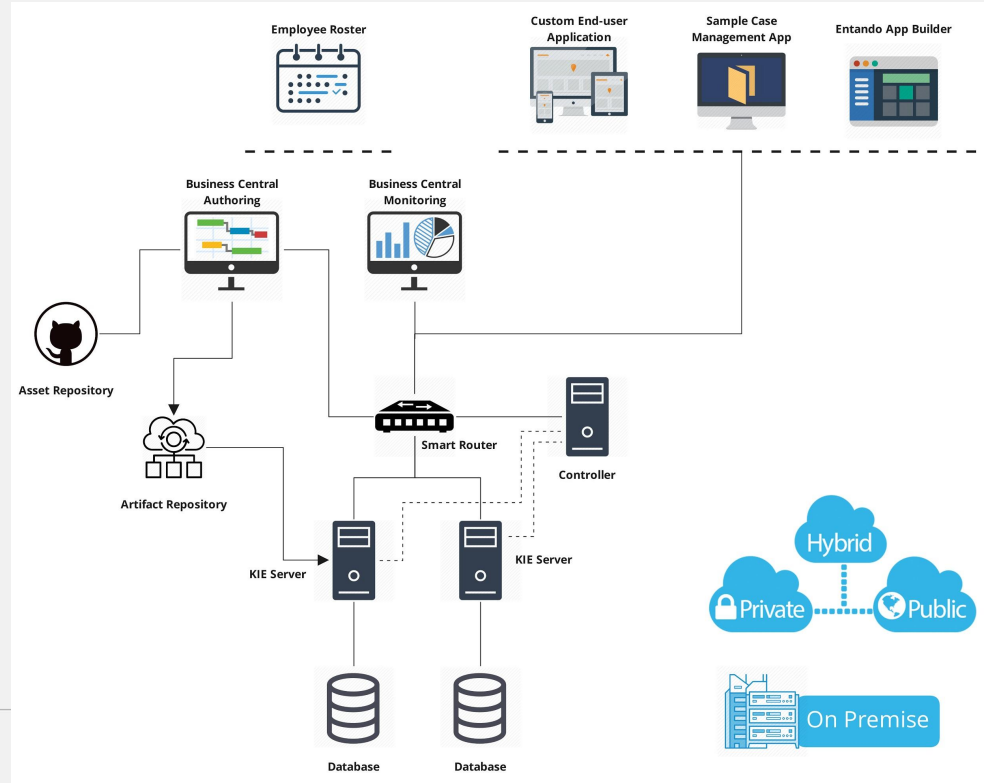
See BPM in context

FROM A MODEL TO PRODUCTION

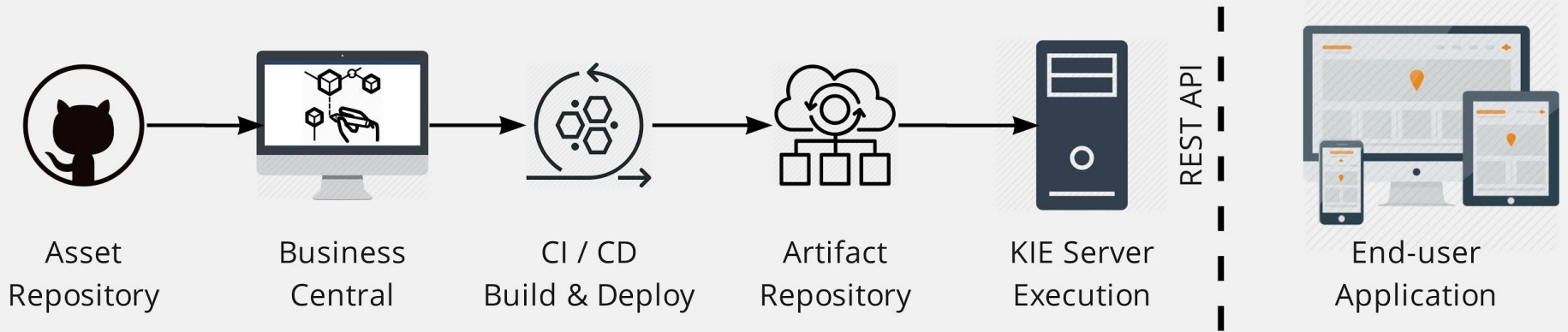


FLEXIBLE AND SCALABLE ARCHITECTURE

and its elements



FROM A MODEL TO PRODUCTION



NEW PROJECT IN BUSINESS CENTRAL

the first steps

- ❑ Based on Maven and stored in Asset repository (GIT)
- ❑ Try Samples
- ❑ Contributors
- ❑ Add assets
 - ❑ Data Object
 - ❑ Business Process (Preview)
 - ❑ Form
 - ❑ Decision Table
- ❑ Build => Deploy

The screenshot shows the 'Add Project' dialog box in Business Central. The dialog has a title bar with a close button (x). It contains a 'Name' field with the text 'MyFirstProject', a 'Description' field, and a 'Show Advanced Options' link. At the bottom right are 'Cancel' and 'Add' buttons. The background shows a dimmed view of the Business Central interface with a 'Nothing Here' message and buttons for 'Add Project', 'Try Samples', and 'Import Project'.

DATA MODELING

Spaces > myteam > MyFirstProject > Person

> **Person.java - Data Objects** Save Delete Rename Copy Validate Latest Version ▾ View Alerts ↕ ✕

Model Overview Source

Person + add field

Identifier	Label	Type	
name	Name	String	Delete
age	Age	Integer	Delete

'age'- general properties

Identifier

Label

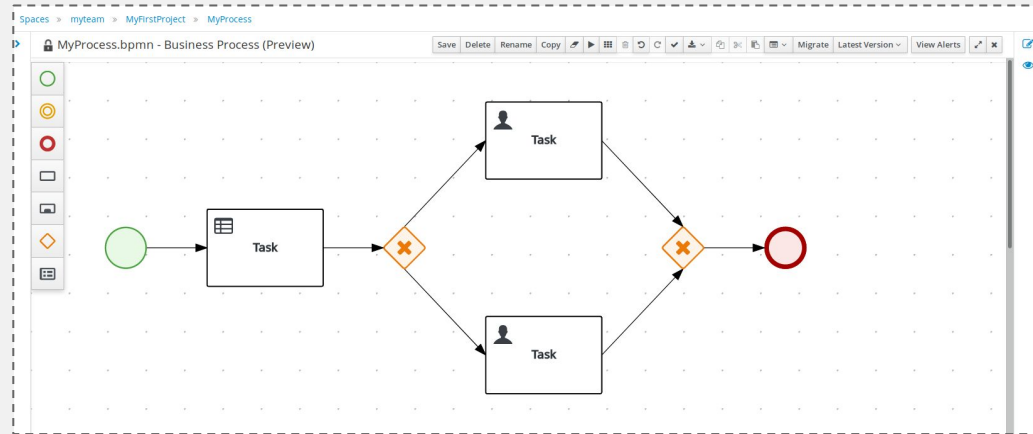
Description

Type

List

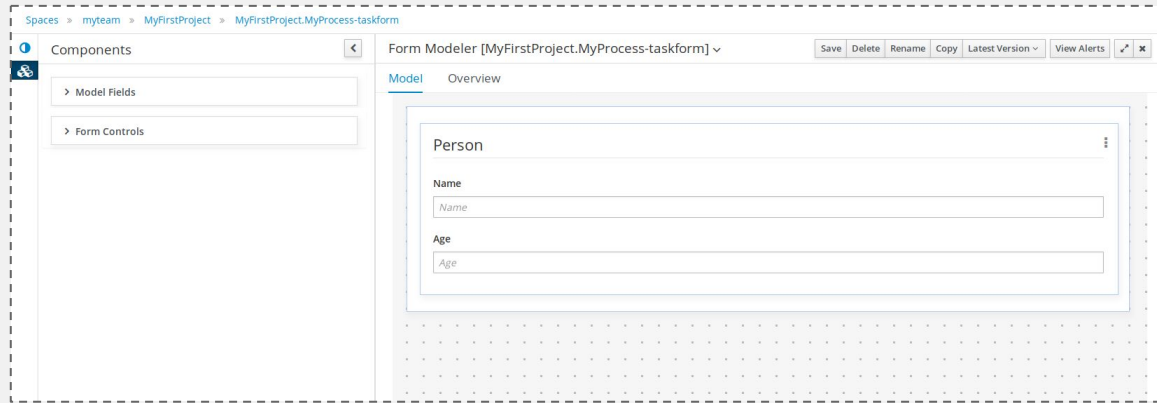
PROCESS MODELING

- ❏ Subset of BPMN2 elements
- ❏ Form generating
- ❏ Export to PNG, PDF, SVG, BPMN2
- ❏ Early alpha version



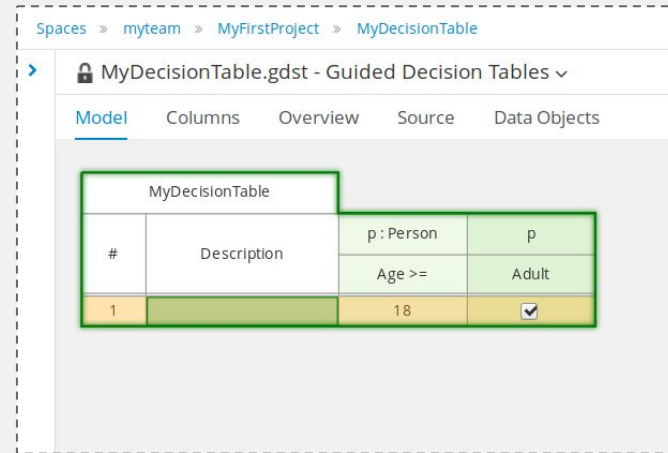
FORM MODELING

- ❑ Generate forms for
 - ❑ Data Objects
 - ❑ Process start form
 - ❑ Task form
- ❑ Widget library able to bind different types of data (TextBox, DatePickers, Checkboxes, ListBox, Nested Forms...)



DECISION TABLE

- ❑ Friendly to business analysts
- ❑ Rules in rows
- ❑ Condition column(s)
- ❑ Action column(s)
- ❑ Attributes
 - ❑ Ruleflow group
- ❑ DMN



The screenshot shows a web interface for a decision table. The breadcrumb path is "Spaces > myteam > MyFirstProject > MyDecisionTable". The main title is "MyDecisionTable.gdst - Guided Decision Tables". There are tabs for "Model", "Columns", "Overview", "Source", and "Data Objects". The "Model" tab is active, showing a table with the following structure:

MyDecisionTable			
#	Description	p : Person	p
		Age >=	Adult
1		18	<input checked="" type="checkbox"/>

PROCESS ADMINISTRATION

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

The screenshot displays the 'Manage Process Instances' interface. On the left, a 'Filters' sidebar includes sections for 'State' (Active, Aborted, Completed, Pending, Suspended), 'Errors' (With errors, Without errors), and 'Filter By' (Id, Name, Start Date, Last update). The main area shows a table of process instances with columns for Id, Name, Description, Version, Last update, Errors, and Actions. Two instances are visible: one with Id 2 (Evaluation) and one with Id 1 (Order for IT hardware). The interface also includes a 'New Process Instance' button, 'Save Filters', 'Clear All', and 'Bulk Actions' options.

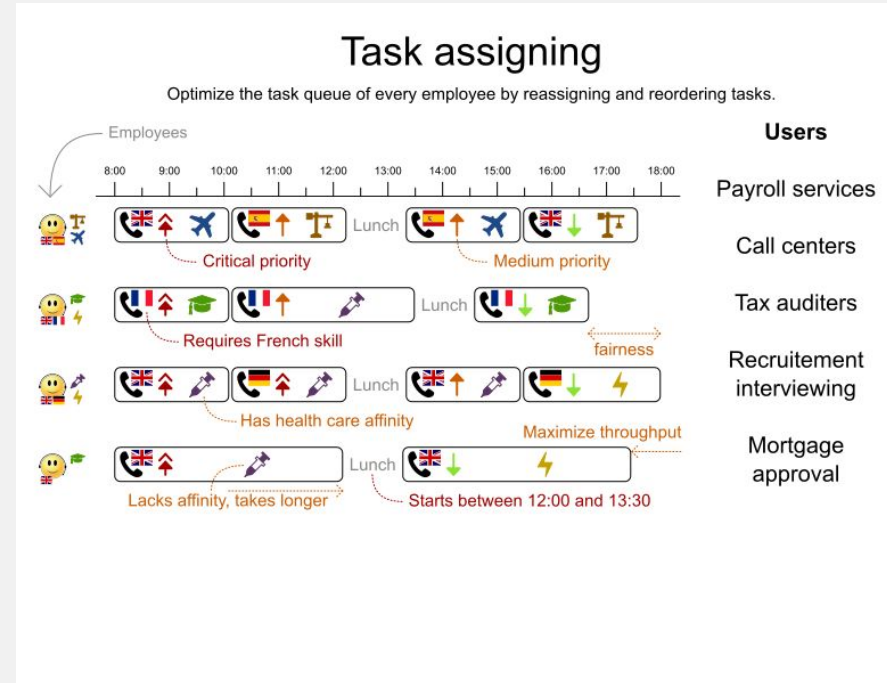
Id	Name	Description	Version	Last update	Errors	Actions
2	Evaluation	Evaluation	1	29-Mar-2018 12:58:57	0	⋮
1	Order for IT hardware	Order for IT hardware	1.0	29-Mar-2018 12:52:46	0	⋮

RESEARCH AREAS

- ❑ Automatic task assignment strategies
- ❑ Appformer = end-user app builder
- ❑ Cloud - OpenShift images and Ansible playbook bundles (APBs)
- ❑ Stunner - new Process Designer
- ❑ Case Modeler
- ❑ Robotic Process Automation (RPA)
- ❑ Employee rostering and vehicle routing solutions
- ❑ and many more

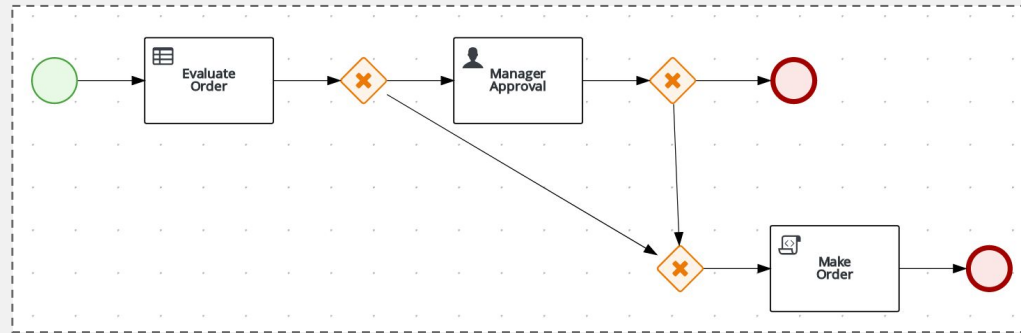
AUTOMATIC TASK ASSIGNMENT STRATEGIES

- ❑ Many processes/cases → many tasks
- ❑ Whom should I assigned a task to?
- ❑ Not scalable for humans
- ❑ OptaPlanner
 - ❑ Constraint satisfaction solver
 - ❑ NP-complete/NP-hard problems (TSP, resource allocation, knapsack problem...)
 - ❑ embedded/standalone



LABS

- ❑ Order Process
- ❑ Decision table - Evaluate Order
- ❑ Forms
 - ❑ Start process form
 - ❑ Manager approval form
- ❑ Service task
 - ❑ Dummy service to make the order



INSTALLATION STEPS

- ❑ Download Application Server
- ❑ Download App
- ❑ Deploy & Configure
- ❑ Run
- ❑ Pros & Cons
- ❑ ... or use our prepared repository :)



THANK YOU



plus.google.com/+RedHat



facebook.com/redhatinc



linkedin.com/company/red-hat



twitter.com/RedHatNews



youtube.com/user/RedHatVideos