

jBPM Explained with Simple Use Cases

Tom Baeyens
Founder and lead of jBPM, JBoss
Sept 2nd 2009

Agenda

Business Process Management

jBPM Introduction

Developer Value

Business Value

Train ticket system

Roadmap

BPM Business Value

BPM as a management discipline

Not an IT concept

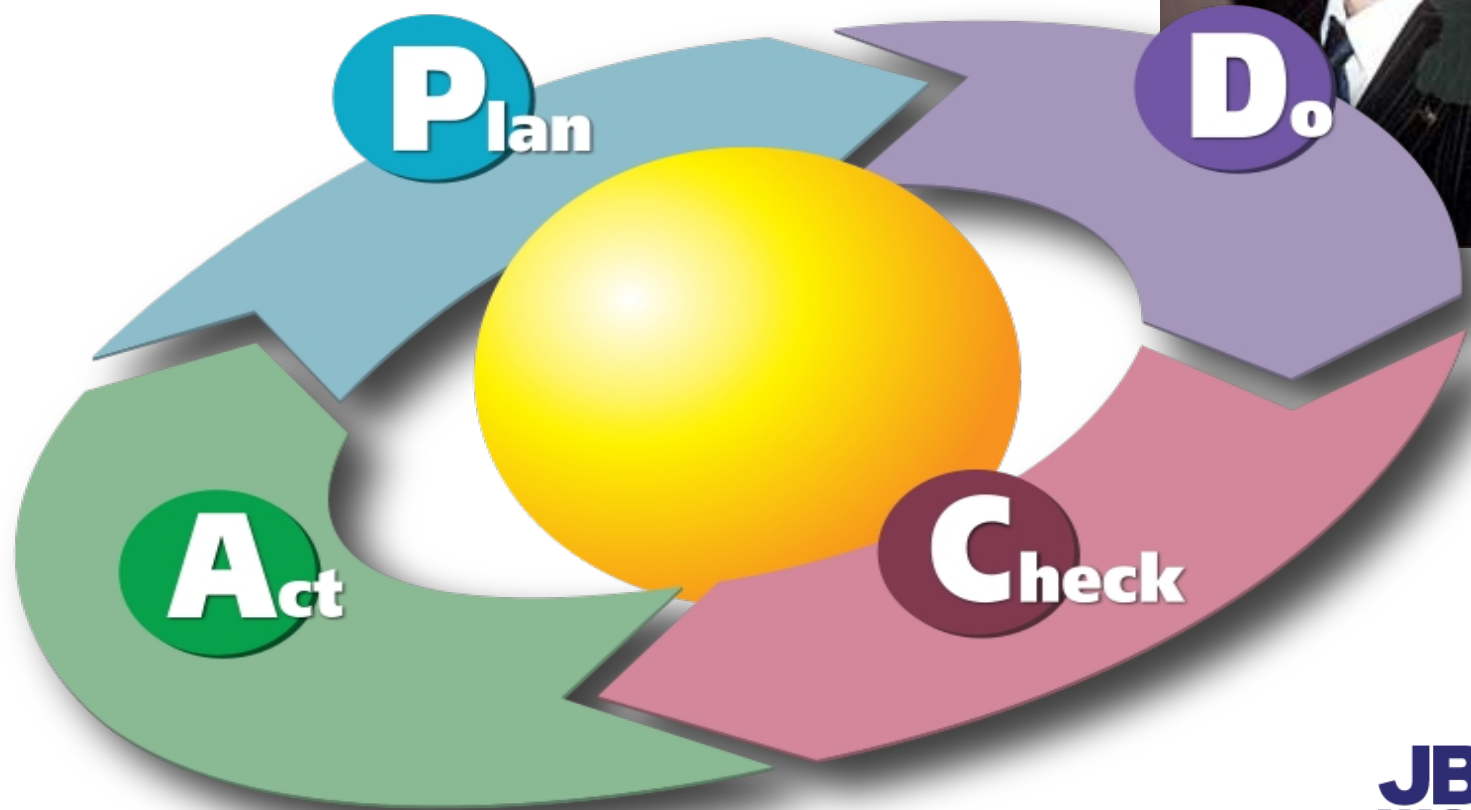
William Edwards Deming

Plan

Do

Check

Act



Assembly Lines

1723-1790, Adam Smith: The pin factory

1863-1947, Henry Ford: mass production



Government Tax Collection



Library Lending A Book



Selling A Ticket To A Concert



GOOD MORNING

IS A
CONTRADICTION
IN TERMS



Business Processes Need To Be Managed

Doesn't mean that

People are aware

They are controlled or guided

Everyone is using the same process

Managing processes

Discipline

Organizational change needed

Know, understand and follow the business process

Thinking in processes, intra- and interbusiness

Control mechanisms

IT can help there

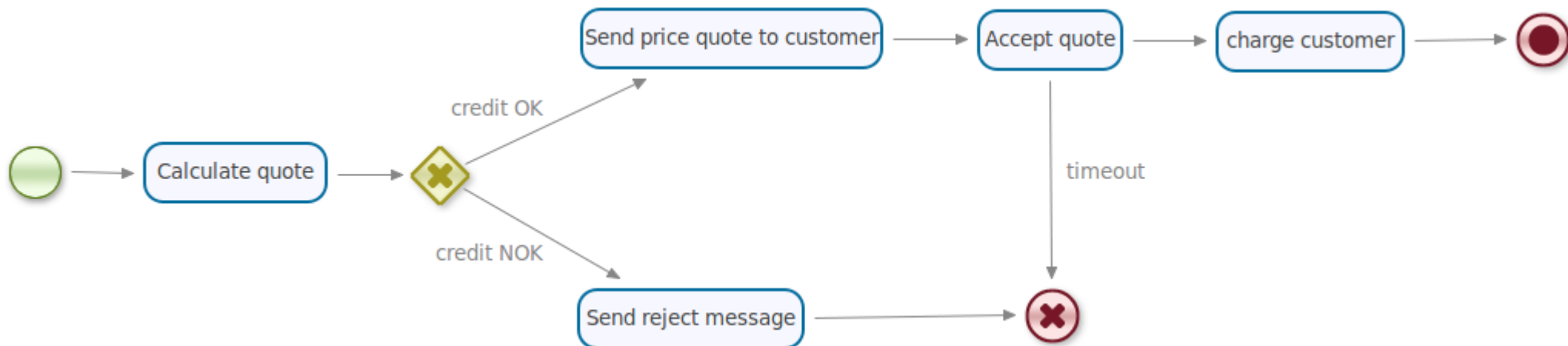
Business Process Management

jBPM Introduction

Workflow & BPM engine

Graphical diagram

Execution flow



jBPM Business Value

Improve business – IT communication

Agile

Conformance

Governance

Audit

Business Insight

jBPM Technical Perspective

State machine

Control flow including wait states

Current execution state persisted in DB

Transactionally move from one state to next

Include automated steps in transactions

jBPM Technical Value

Embeds into your application

Integrates with **your** transaction

Integrates with **your** database

Integrates with **your** domain model

Deploy as simple library or standalone server

Simplest way to implement asynchronous architectures

Human tasks

Asynchronous communication between systems

jBPM 4

Split normal usage
from bleeding edge

API

Configuration

Process Virtual Machine

Rock solid

Leverages feedback of jBPM 3's
huge production usage

QA in our own lab

CI of {environments} * {functionalities}

Support !

S	W	Job ↓
		<u>jbpm4-base</u>
		<u>jbpm4-cfg</u>
		<u>jbpm4-db</u>
		<u>jbpm4-jboss</u>
		<u>jbpm4-tomcat</u>

jPDL

jBPM's original process language

Clean Java integration

Task management

Developers like it

Transactional control flow

Compact, readable XML

Non technical business analysts like it

Diagram decoupled from execution semantics

Boxes and arrows

BPMN 2.0

New process language next to jPDL

Standard

Vendor neutral

Interoperability ?

Technical business analysts like it

Focus on modelling

Precise execution semantics

Directly coupled with diagram

Now in incubation

Productized in H2 2010

BPMN 2.0 Team

Joram Barrez

Lead

Signavio integration

Ronald van Kuijk

Implementation of control flow activities

Alejandro

Service aspects

Bernd Ruecker

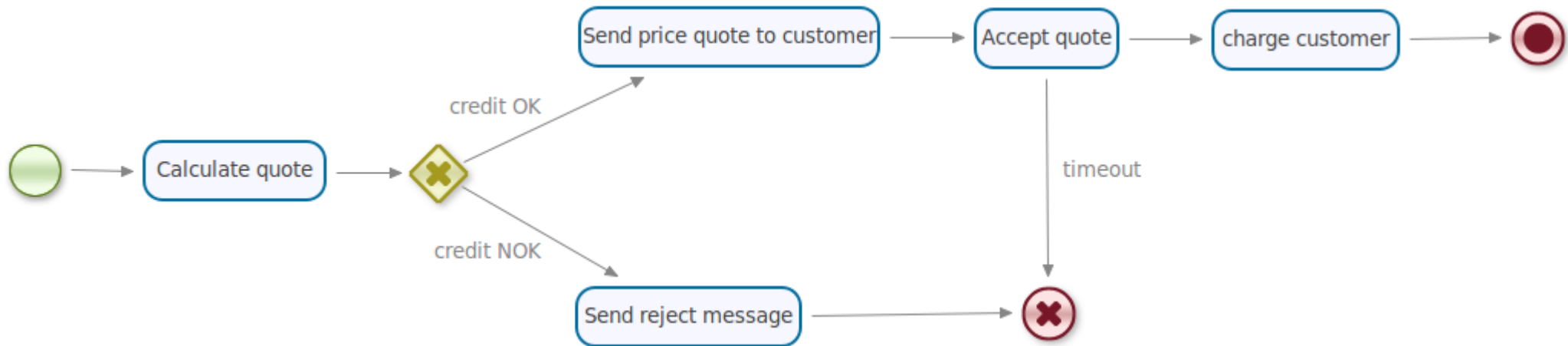
Initial code contribution

Mentor

Koen Aers

Tooling, activity implementations

Train Ticket jPDL Use Case

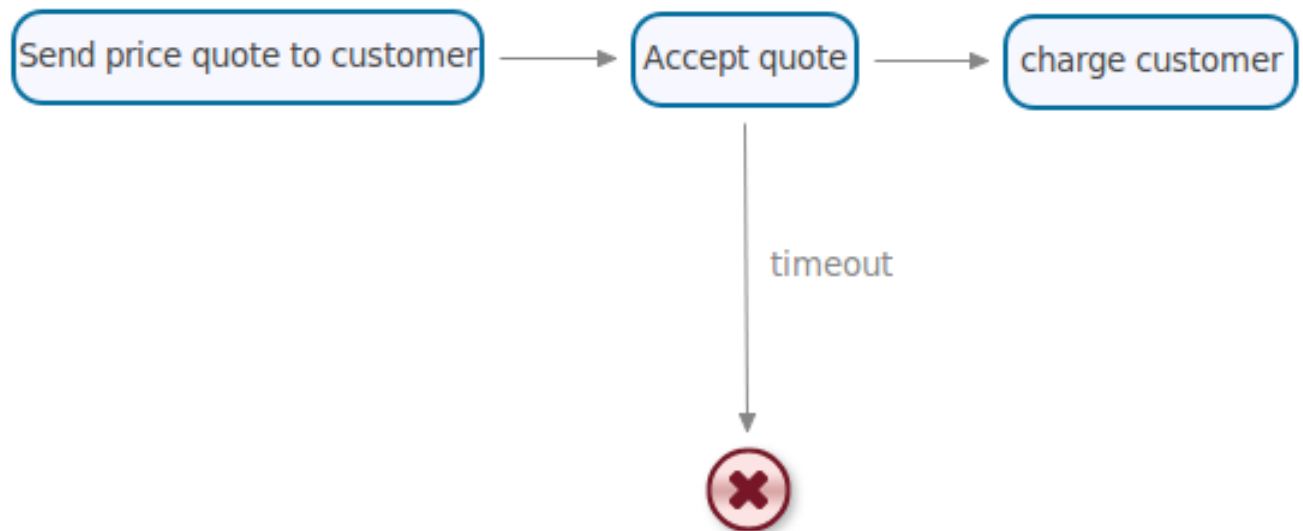


Human Task

```
<process name="ticketProcess">
...
<task name="Accept quote"
      assignee="#{ticketRequest.cellPhoneNr}" >

  <transition to="charge customer"/>
  <transition name="timeout" to="cancel">
    <timer dueDate="1 day"/>
  </transition>

</task>
...
</process>
```



jBPM API

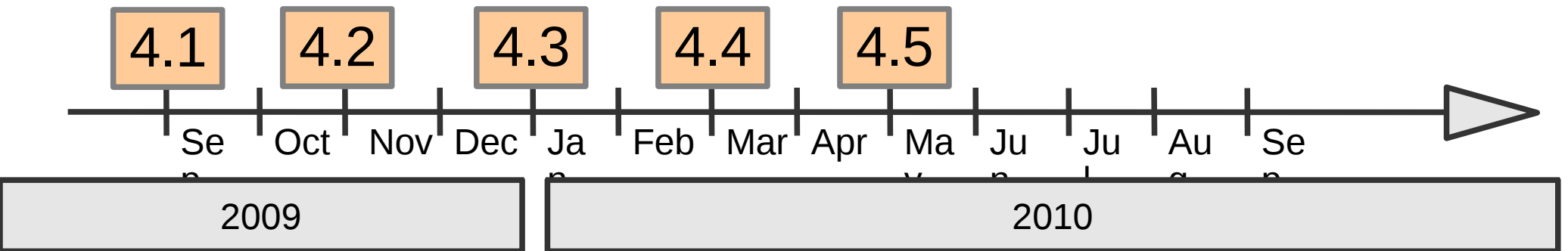
```
Configuration configuration = new Configuration();
```

```
ProcessEngine processEngine =  
    configuration.buildProcessEngine();
```

```
ExecutionService executionService =  
    processEngine.getExecutionService();
```

```
ProcessInstance processInstance =  
    executionService  
        .startProcessInstanceByKey("StateChoice");
```

Roadmap



jBPM 5

BPMN 2.0
jPDL

Questions ?

<http://jbpm.org>

<http://processdevelopments.blogspot.com>