JUDCon

JBoss Users & Developers Conference

2012:Boston

Web-based BPM with jBPM 5

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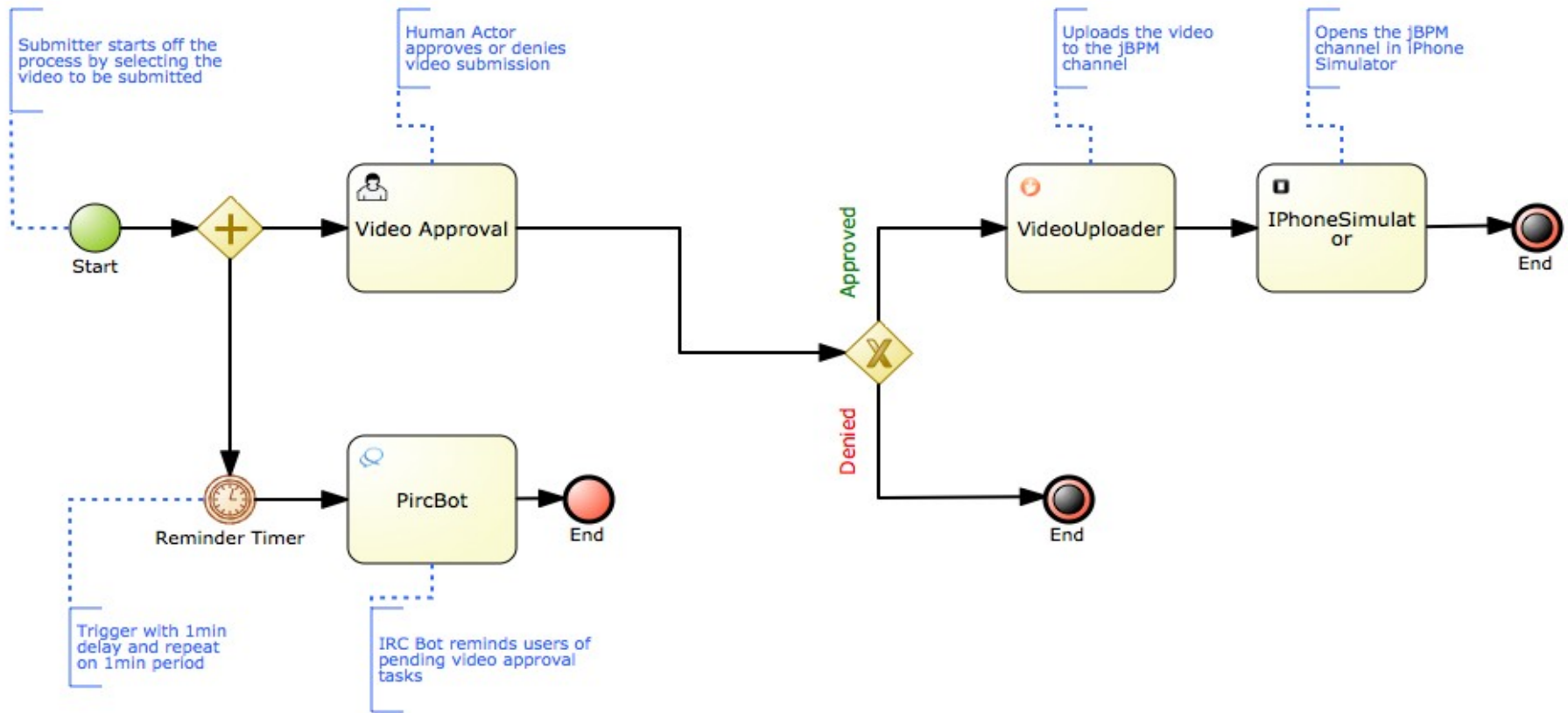JBPM Core Developer

Jun 2012

Agenda

- Introduction
    - BPM / Web-based BPM
    - jBPM 5
    - jBPM 5 Web-based Tooling
- Demo
- Roadmap

Introduction

Business Process Management (BPM)

Business Process: *describes a series of logically related work activities which need to be executed to accomplish a business goal. Depicted using a flow chart.*

Business Process Management (Cont.)

- **BPM Goals:**
  - Unified methodology for **creating**, **improving**, **understanding**, and **controlling the execution** of business processes.

  - **Abstract** business processes from their existing technology infrastructure (code, various metadata, etc).

  - Increase **visibility** into and **access** to business processes

  - Establish a **common language** for business-IT alignment

BPM Life Cycle

- BPM is not a one-time exercise

- BPM enforces collaboration of multiple participants

- Life Cycle promotes continuous improvements

Business Analysts

Model

BPM

Sys-Admins   Monitor   Deploy   Developers

Execute

End Users
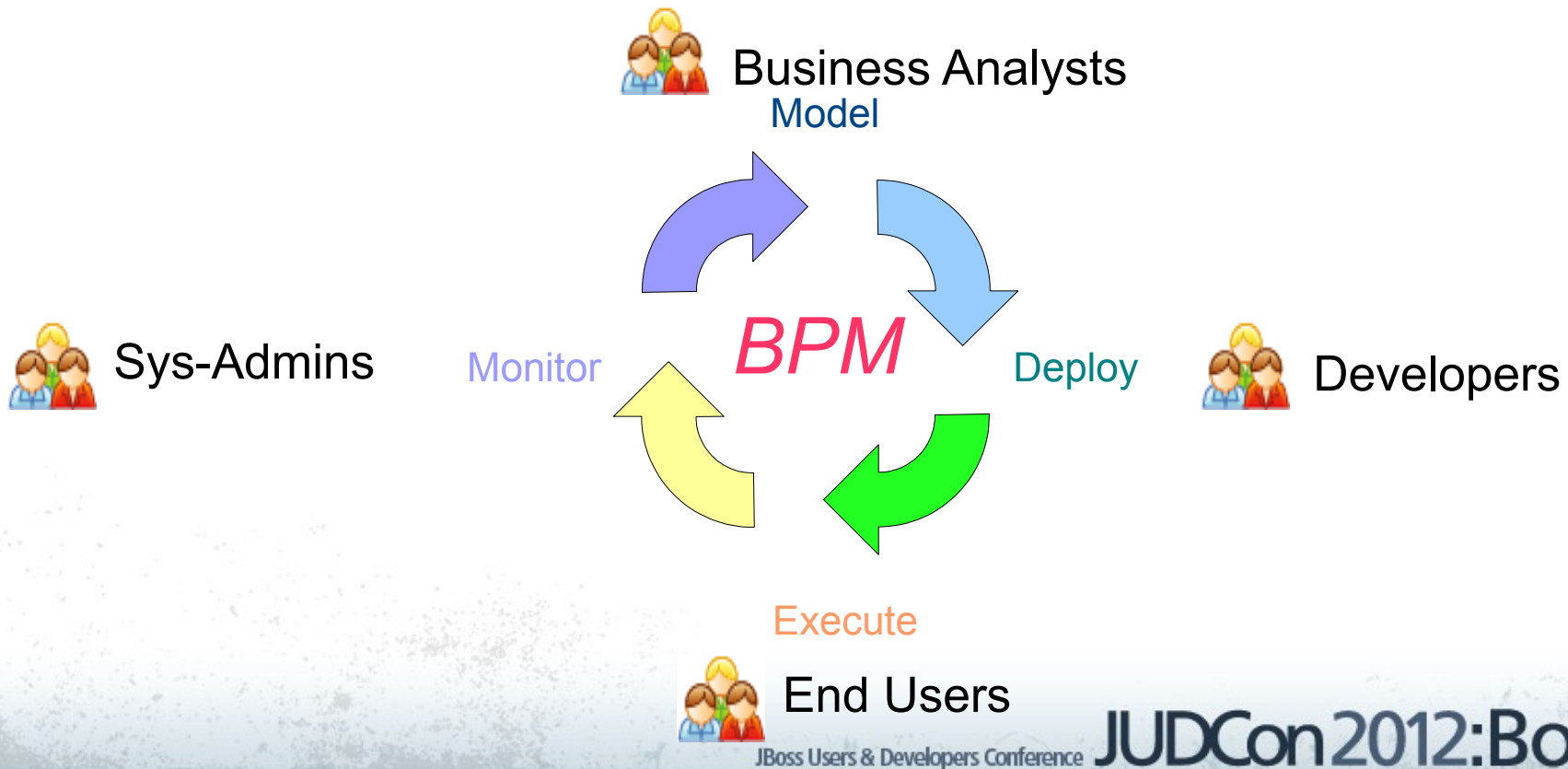
Web-based BPM

- Traditional BPM systems are IT centric, monolithic, difficult for business users.

- Converge BPM and Web to reach **highly modular**, **reusable**, and **reconfigurable** systems ("plug-and-play" instead of "programming")

Building blocks of different complexity levels:
- components (Human Task, Persistence, etc)
- services (REST, JS, Twitter, etc)
- reusable subprocesses
- constructs (Approval, Error Handling, etc)
- task forms
- ...
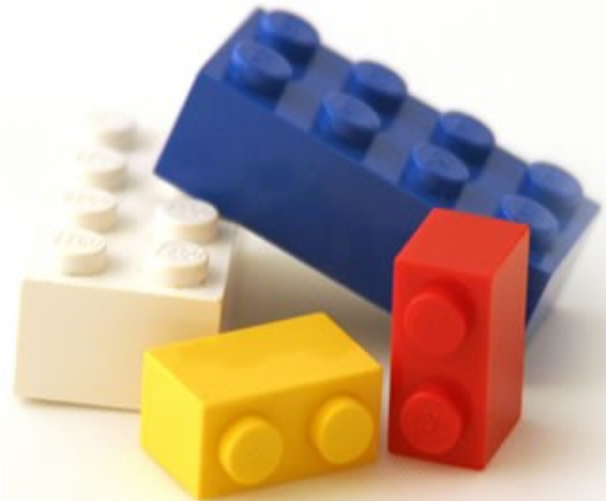
Web characteristics relevant for BPM

- Collaboration and info/ideas sharing
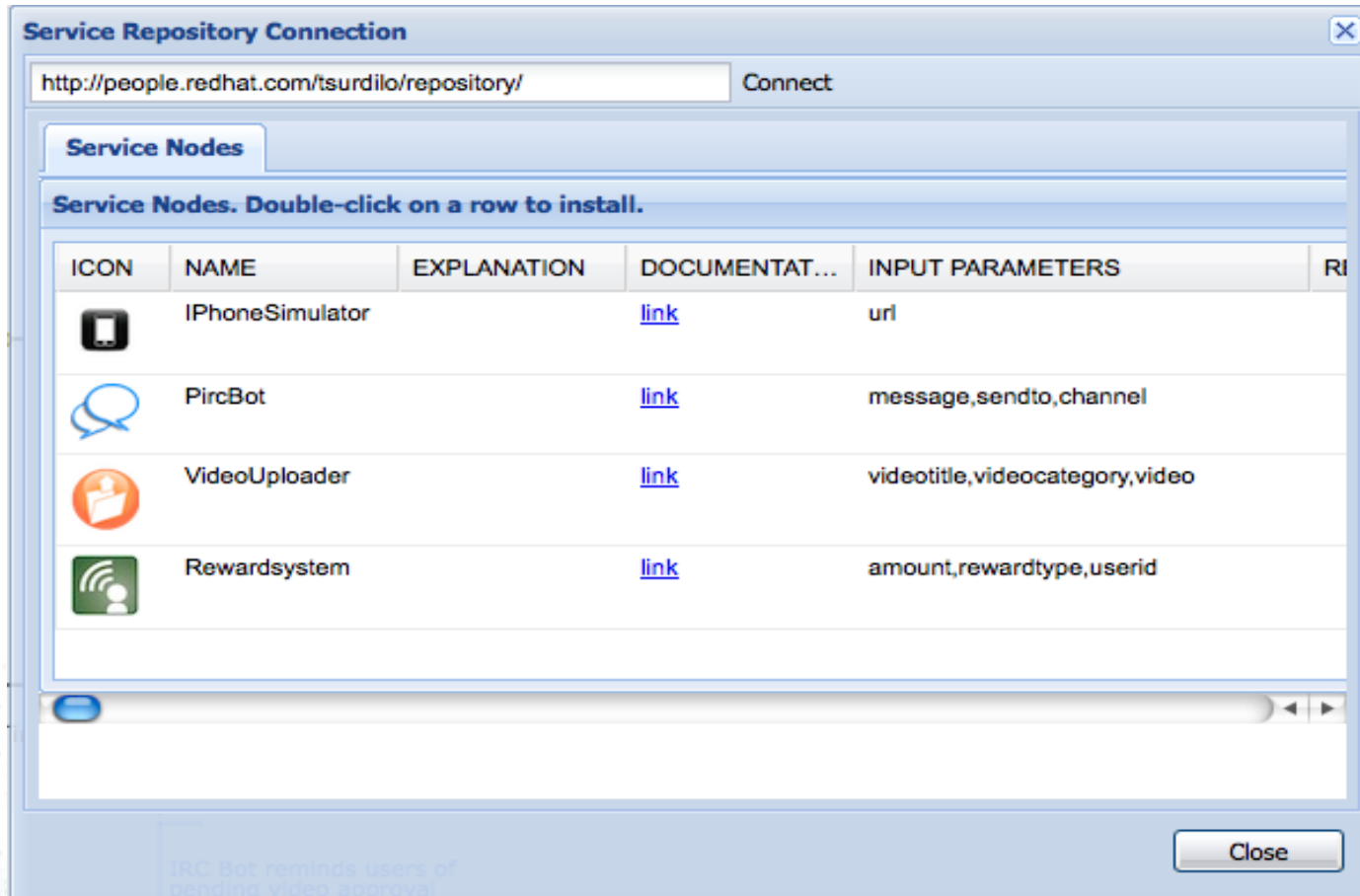   - Increased participation level and content sharing

Process Info Sharing

Discussion comments

Locking/Unlocking

Web characteristics relevant for BPM (2)

- Ability to put together information from various services (Meshups)
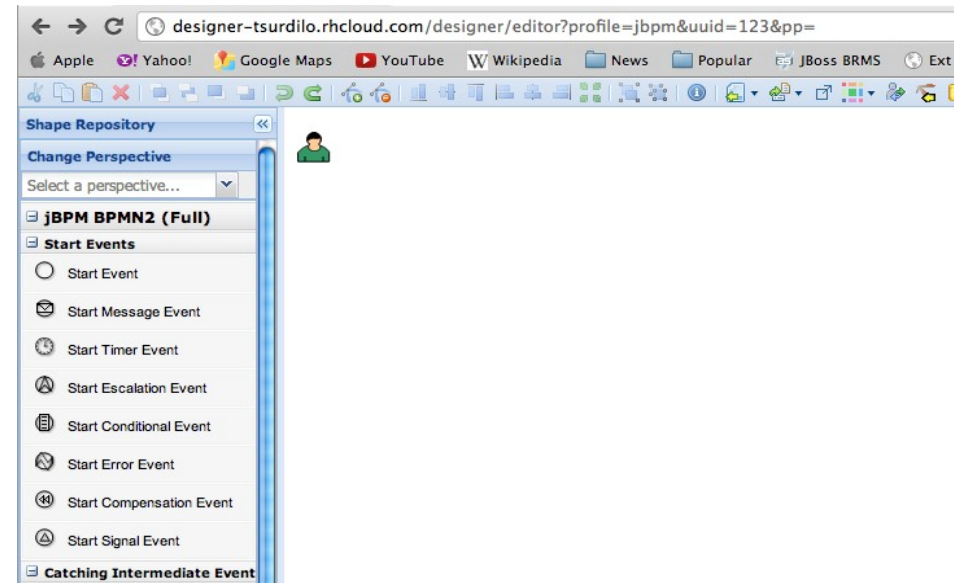

Service Repositories

Web characteristics relevant for BPM (3)

- Above the level of a single device
  - Mobile, Cloud
  - "Unlimited" scalability

Mobile

Cloud (OpenShift)

Web characteristics relevant for BPM (4)

- Zero-footprint Rich User Interfaces

JavaScript/Ajax/3rd party libs

Web characteristics relevant for BPM (5)

- Fast deployment / startup

```
Last login: Tue Jun 19 14:16:11 on console
tihomir@Tihomir-Surdilovics-MacBook-Pro ~ [] $ cd jbpm-demo-installer/
tihomir@Tihomir-Surdilovics-MacBook-Pro jbpm-demo-installer [] $ ant start.demo.noeclipse
Buildfile: /Users/tihomir/jbpm-demo-installer/build.xml

download.h2.check:
     [echo] Checking h2 download ...

download.h2:

start.h2:

start.jboss:

check.jboss.version:

start.jboss5:

check.jboss.version:

start.jboss7:

start.demo.noeclipse:

BUILD SUCCESSFUL
Total time: 22 seconds
```

AS7 – lightning fast

Keys to Web-based BPM

- Realm between the business users and developers

Process Dictionary

API Auto-Completion

Keys to Web-based BPM (2)

- "Zero code" from business model to executable business process

Dynamic BPMN2.0 Generation

Editor Widgets

Overview of jBPM 5

- Open-source BPM project

- Supports entire BPM Life Cycle

- Embeddable Process Engine (native BPMN2.0 support)

- Web-based and Eclipse-based tooling support

- Powerful Rules and Events Integration
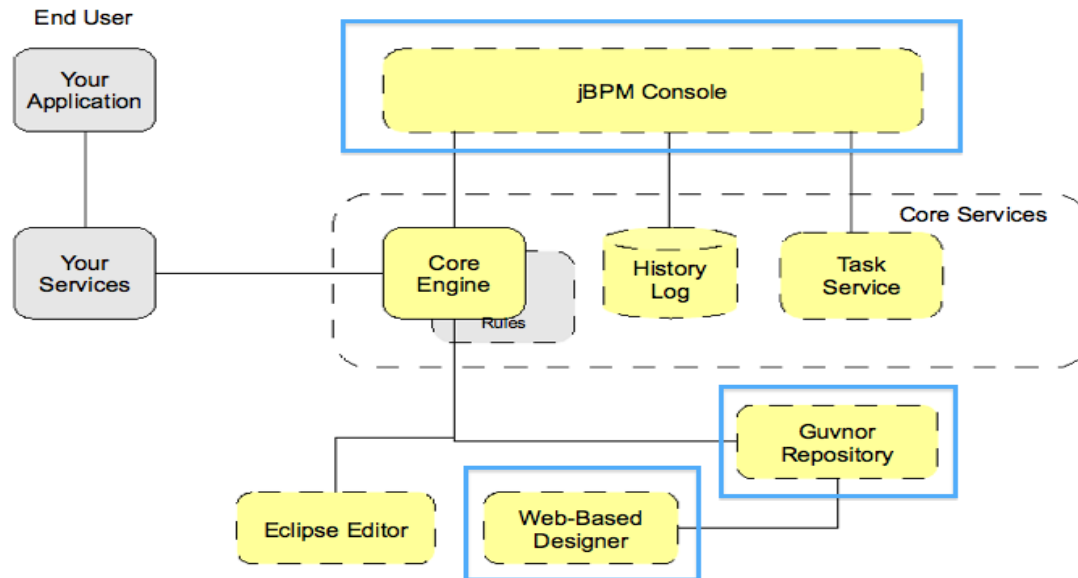
JBPM 5 Web-based tooling

🏛 Drools Guvnor

- Web-based knowledge-asset **management**
- Knowledge **repository**
- Asset **storage** and **versioning** support (JCR 2)
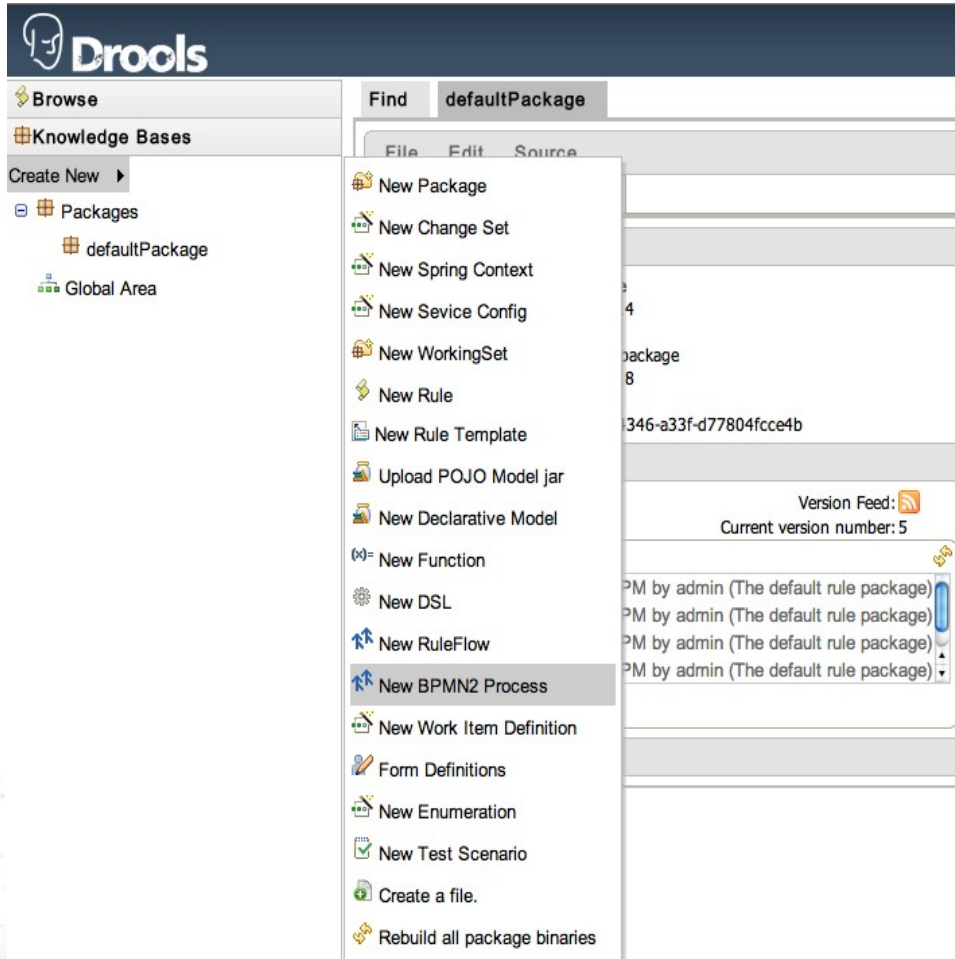- Asset **validation**, **testing**, and **deployment**
- Guided **widget editor** support for all knowledge asset types
- Multiple **access points** to stored knowledge data: REST/WebDAV
- **Authorization** and **authentication** support

JBPM 5 Web-based tooling (2)

jBPM Designer

- Web-based **BPMN2.0** Editor
- **Create/Modify** executable business processes and Task Forms
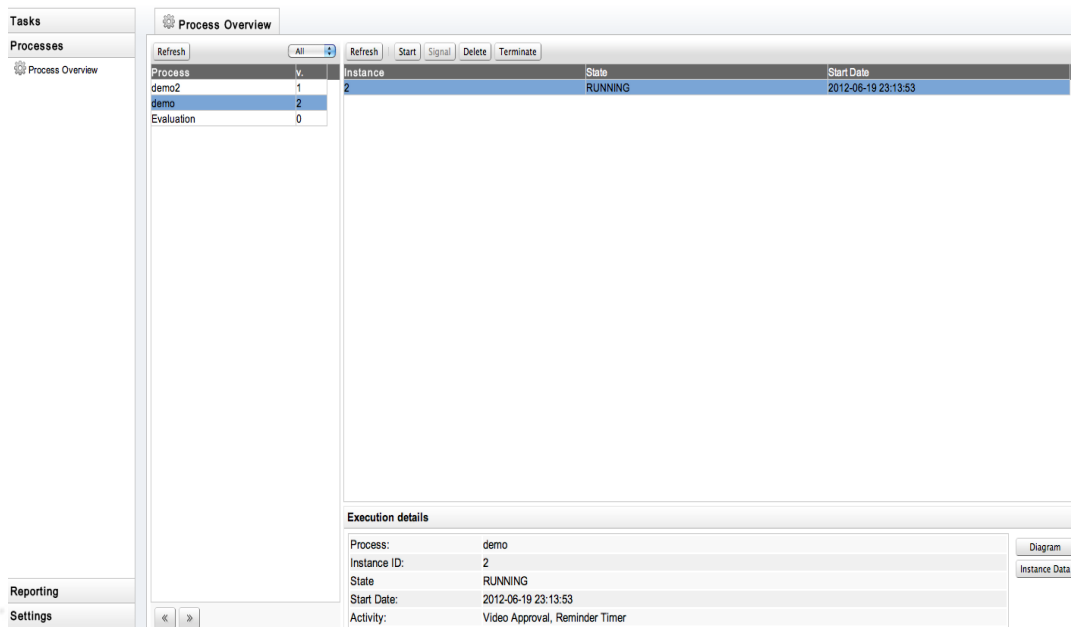- Public **JavaScript API**
- Support for **Service Nodes**, **Service Repository**, Process **Image/PDF**, Visual **Validation**, jBPM 3 process **migration**, Locking/Unlocking, In-line **Process/Task Forms** editing, custom Data Input **Editors**, **Auto-completion** for script, ...
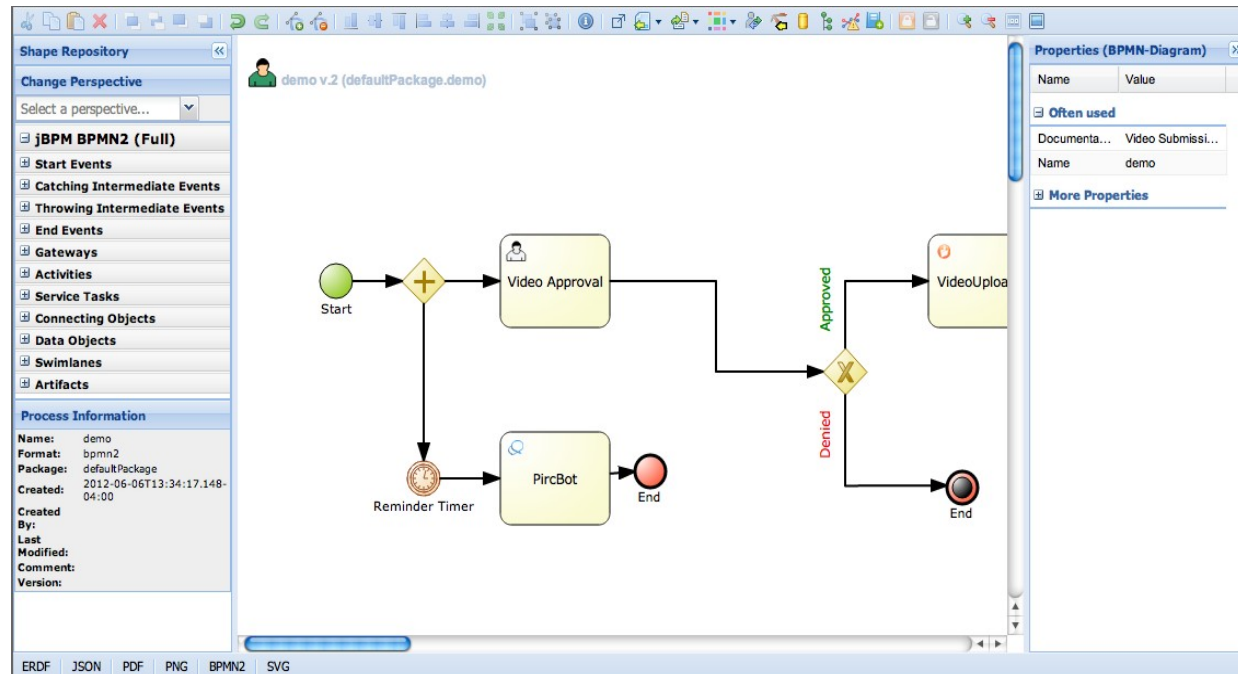
JBPM 5 Web-based tooling (3)

jBPM Console

- Web-based Process Instance **Management Environment**
- **Start/stop/signal** your process instances
- **Inspect** process instance state
- Inspect your **human task** lists and execute those tasks
- **Generate** process execution Reports
- **Exposes** REST interface to clients

JBPM 5 Web-based tooling within the BPM Life Cycle

Designer

Guvnor

Model

BPM

Deploy

Guvnor

Console

Guvnor

Monitor

Execute

Console

Designer (Future)
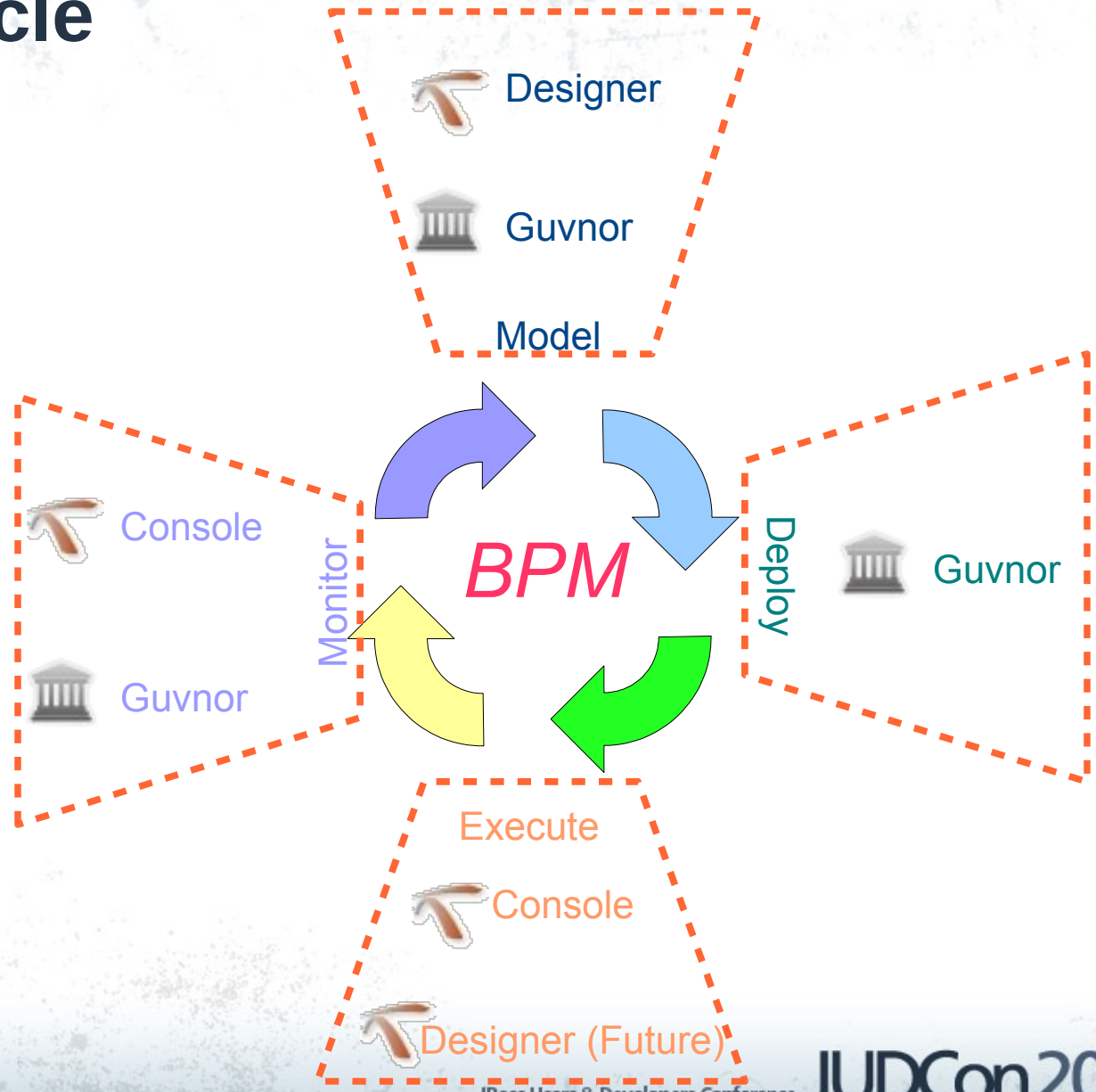
Demo

Example: Video Submission Process

Submit

Upload

Video Submission Process

- **Requirements**
  - **Model**, **Deploy**, **Execute**, **Monitor** using jBPM Web-based tooling
  - **Live video feeds** from YouTube
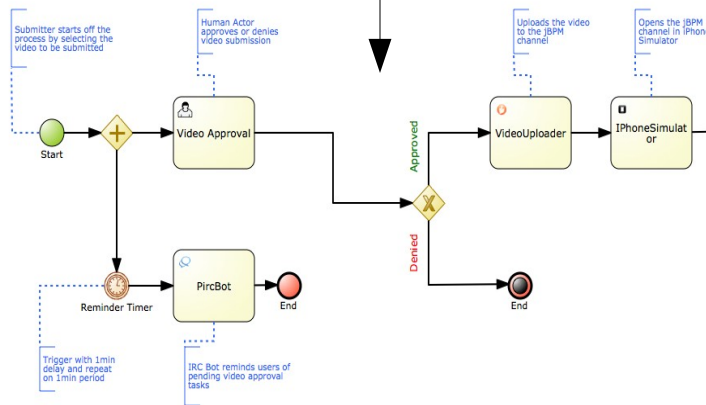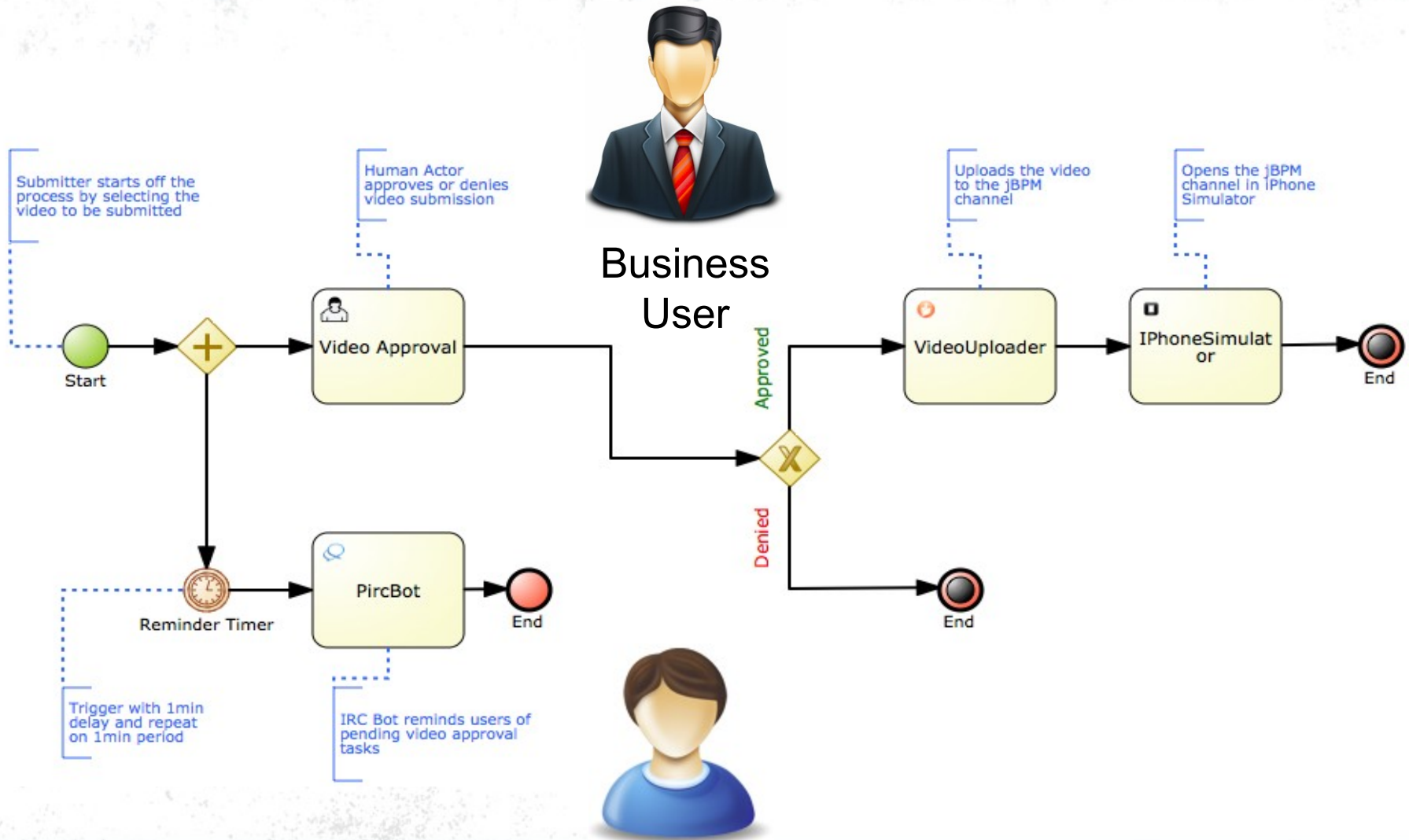 - IRC-based **notification** of pending tasks during process execution
  - Use **Form Widgets** for Process and Task Forms
  - **Live preview** of approved videos via Mobile Simulator

Video Submission Process

Submitter starts off the process by selecting the video to be submitted

Human Actor approves or denies video submission

Uploads the video to the jBPM channel

Opens the jBPM channel in iPhone Simulator

Business User

Start

Video Approval

Approved

VideoUploader

IPhoneSimulator

End

Denied

End

Reminder Timer

PircBot

End

Trigger with 1min delay and repeat on 1min period

IRC Bot reminds users of pending video approval tasks

Developer

Video Submission
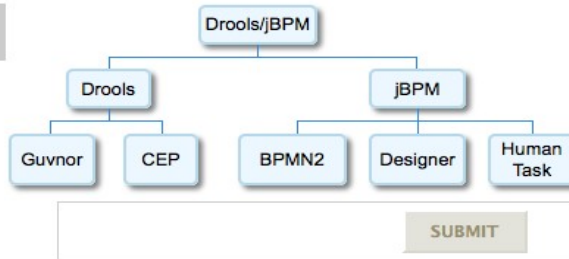
End User   Approver

JBoss Users

Video Submission

DemoBot	2:35
tsurdilovic: You have pending video approval tasks.	

tsurdilovic	2:35
DemoBot: show details	

DemoBot	2:35
tsurdilovic: Task[name=approve id=1 assignee=tsurdilovic taskId=1 processInstanceId=1 state=ASSIGNED priority=0]	

tsurdilovic	2:36
DemoBot: release all	

DemoBot	2:36
tsurdilovic: Released Task[id=1]	

Approver
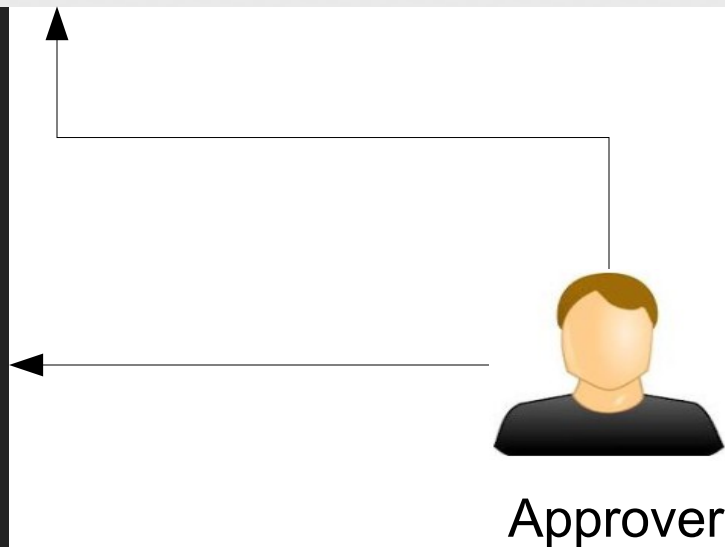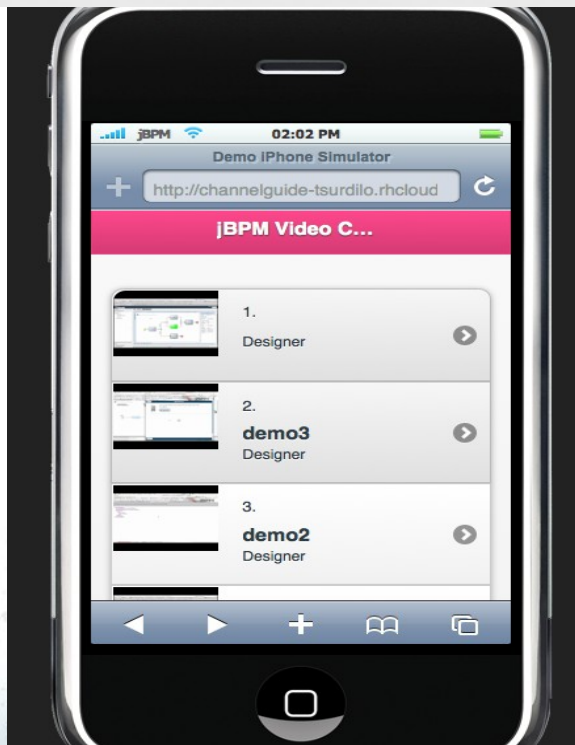
Demo

Web tooling Roadmap

- Overall enhancements of tooling functionality

- Enhance Process/Task Form creation (Form Widgets)

- User defined Data Input Editors

- Integration

- Test generation

- Simulation and Replay

- Cloud (OpenShift)

- Mobile

- Enhance Social modelling

- Extend BPMN 2.0 support
  - "Common Executable" subclasses

Thank you!

- **jBPM home page: http://www.jboss.org/jbpm**
- **Source: https://github.com/droolsjbpm/jbpm**
- **Hudson: http://hudson.jboss.org/hudson/job/jBPM**
- **Blog: http://kverlaen.blogspot.com, http://surdilovic.wordpress.com**
- **IRC: #jbpm on freenode**
- **Mailing list: jbpm-dev@jboss.org**
- **User forum: https://community.jboss.org/en/jbpm?view=discussions**