jBoss Business Process Management Suite

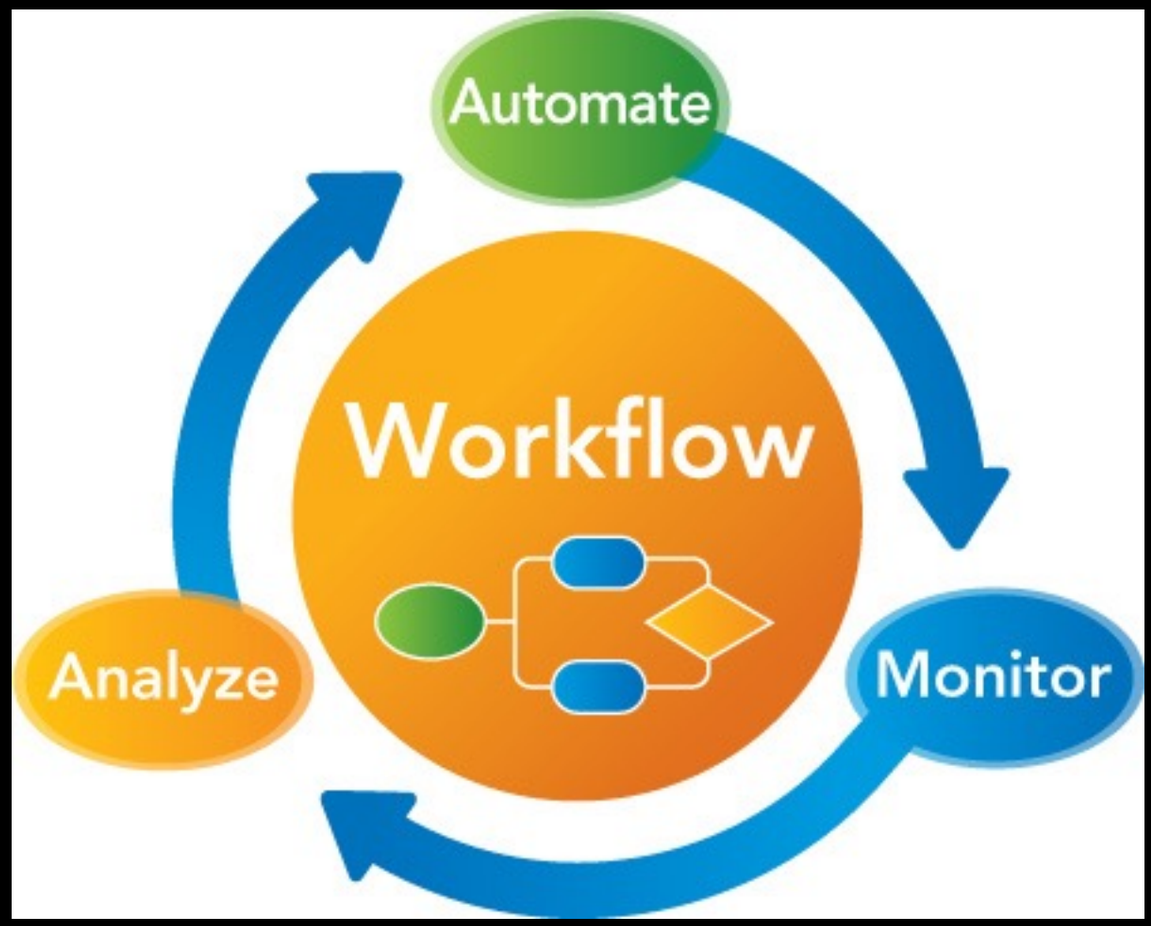
A bridge from Conventional Web Development to Business Development

Background Information

- Business Process Development is a term coined to the automation of business processes

- Example: Auto-account monitoring systems or any other processes that require human interactions along with system services

- Business Process Automation is widely used in banks through-out North America



Purpose of this Presentation

- Present my findings about BPM development
- Conventional Web-Dev vs. Business Web-Dev
- Demonstrate some of the applications of the findings

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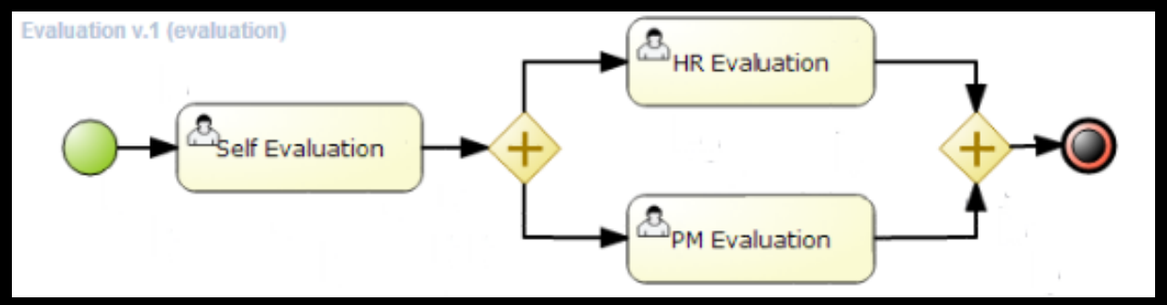
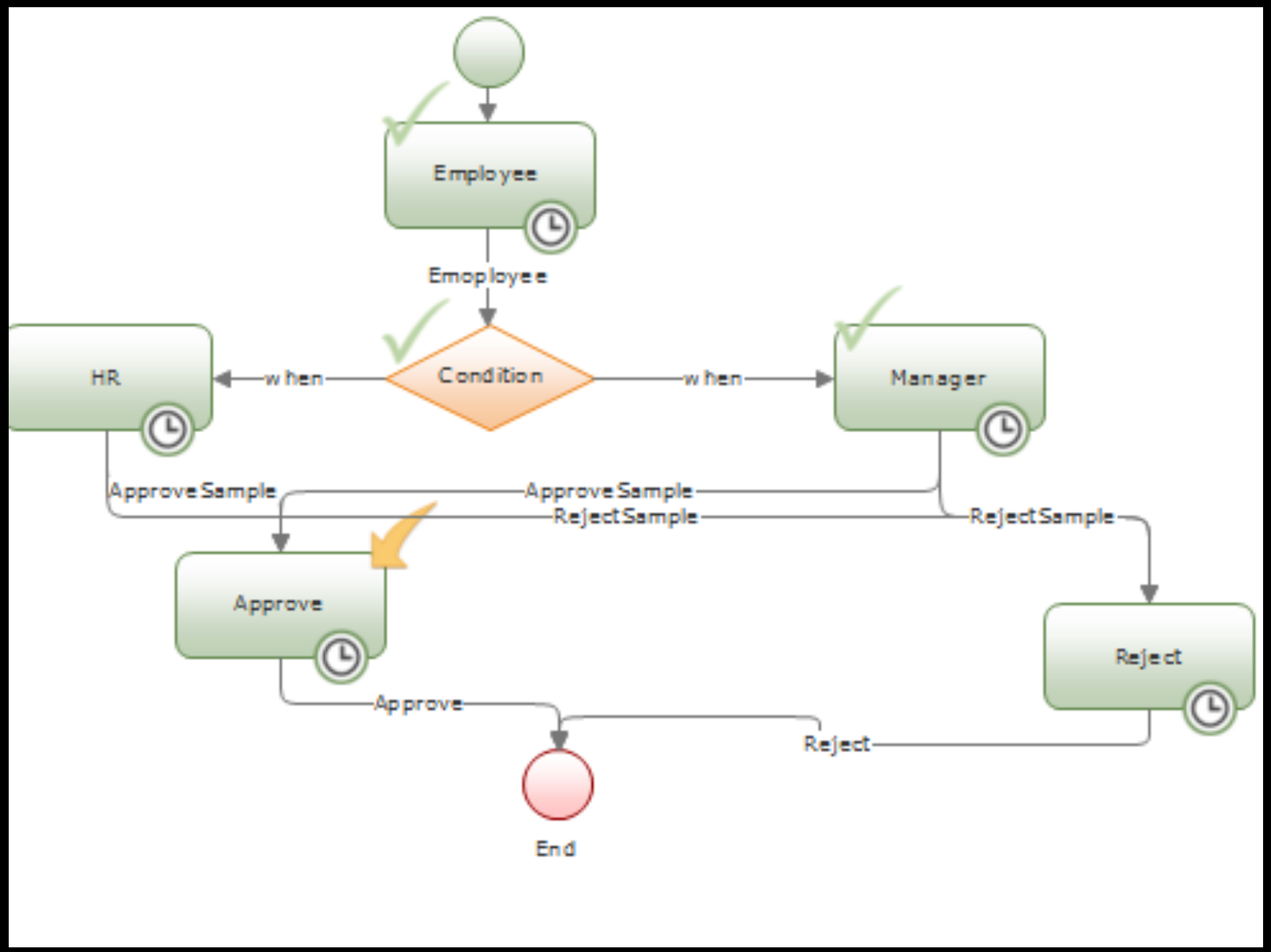
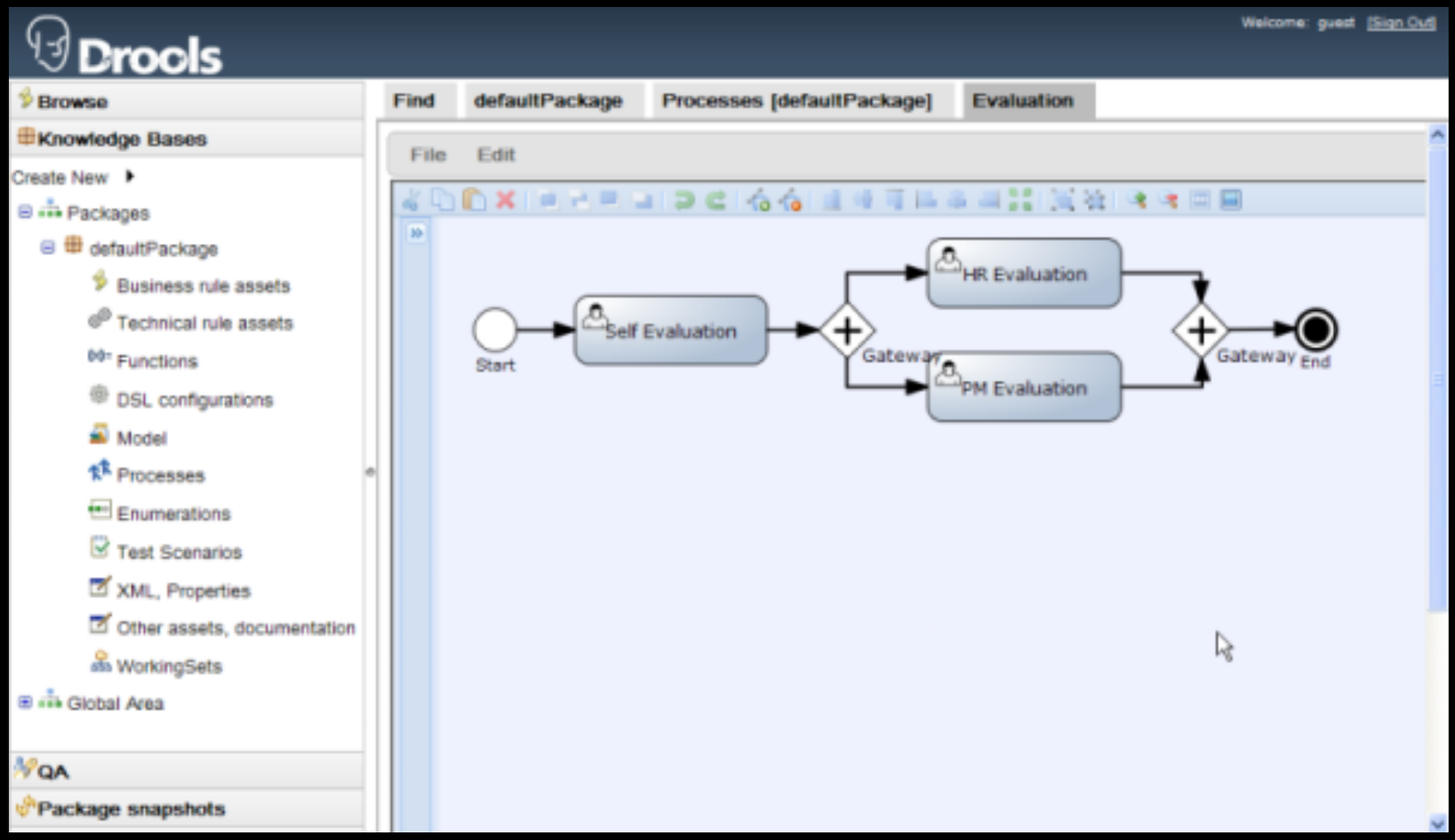


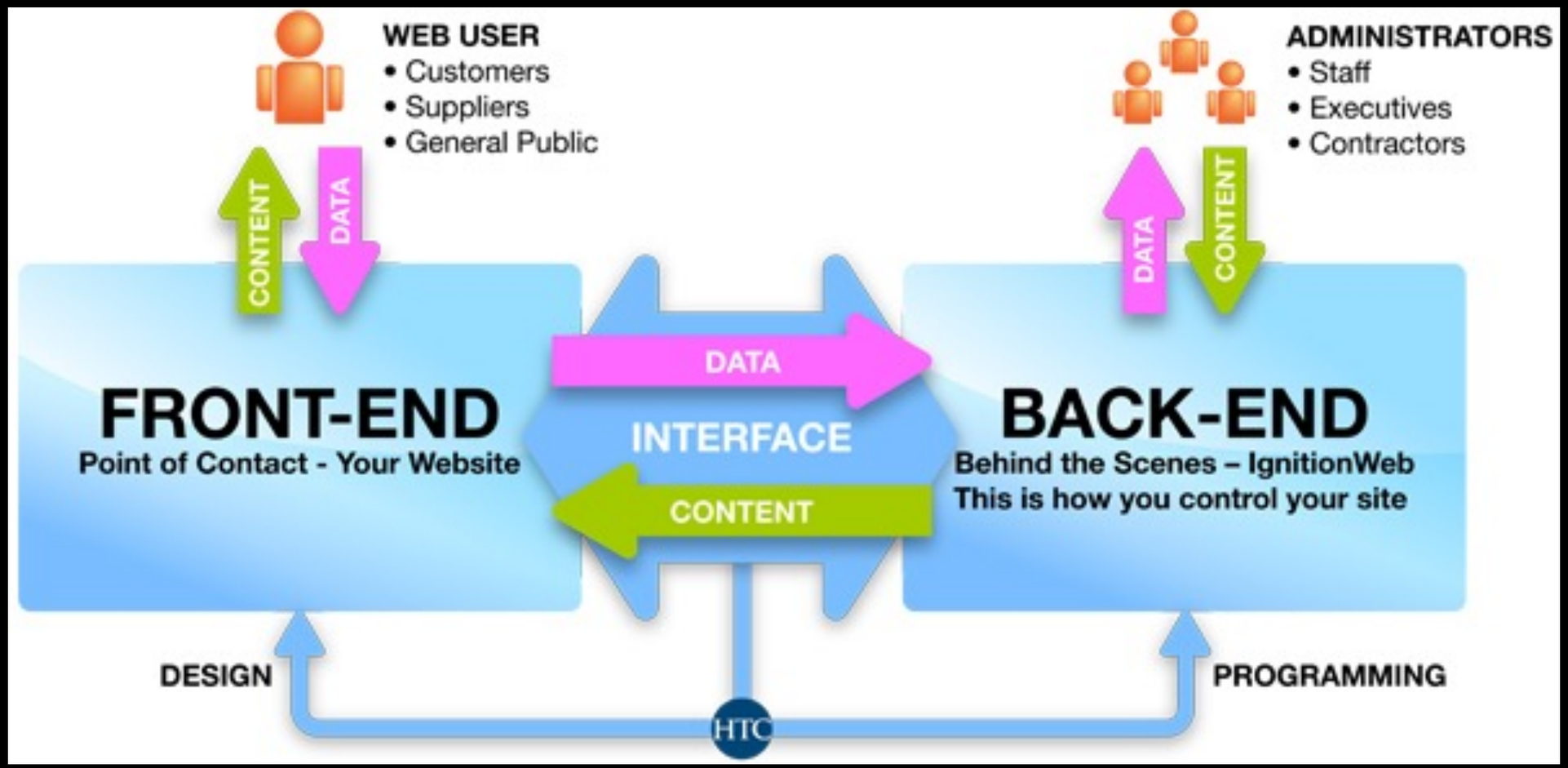
PEGA Rules Process Commander



jBPM Workflow Designer



Conventional Web Applications

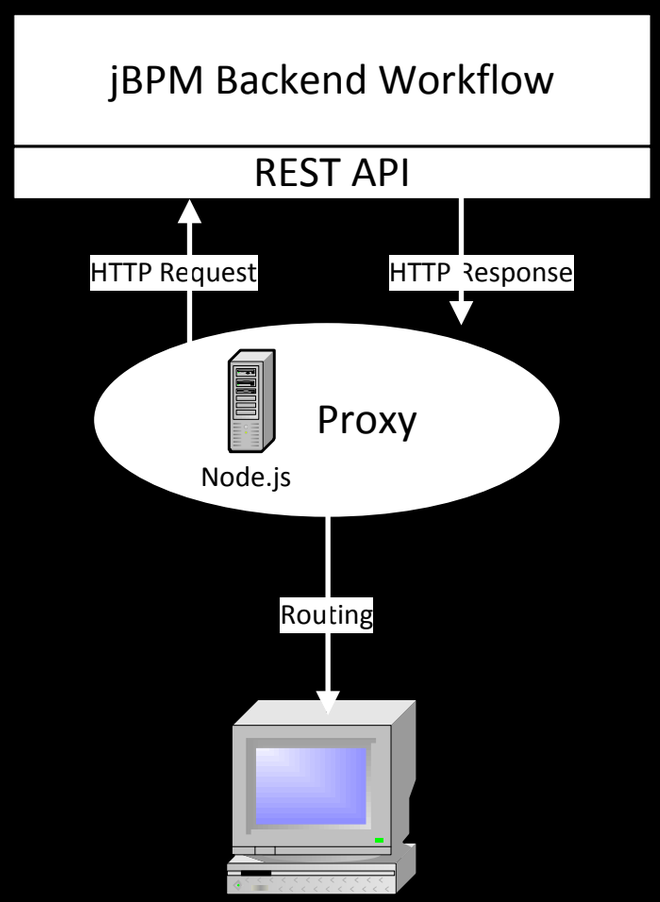


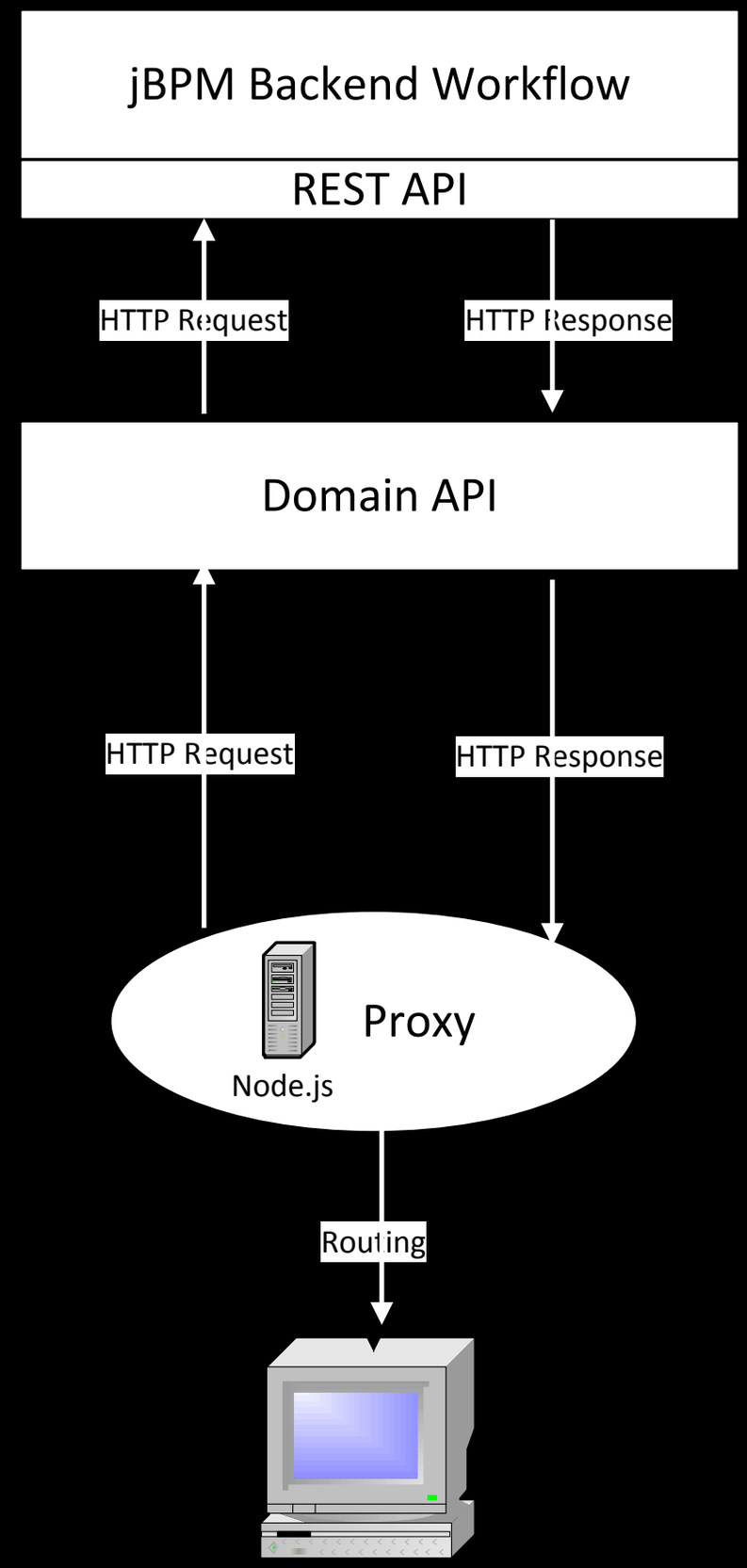
How can large business organizations catch up with recent technologies?

- By combining conventional web development with business process management
- Recent BPM technology: jBPM
- Recent web development technology: AngularJS, Node.js, MongoDB, etc.

How?

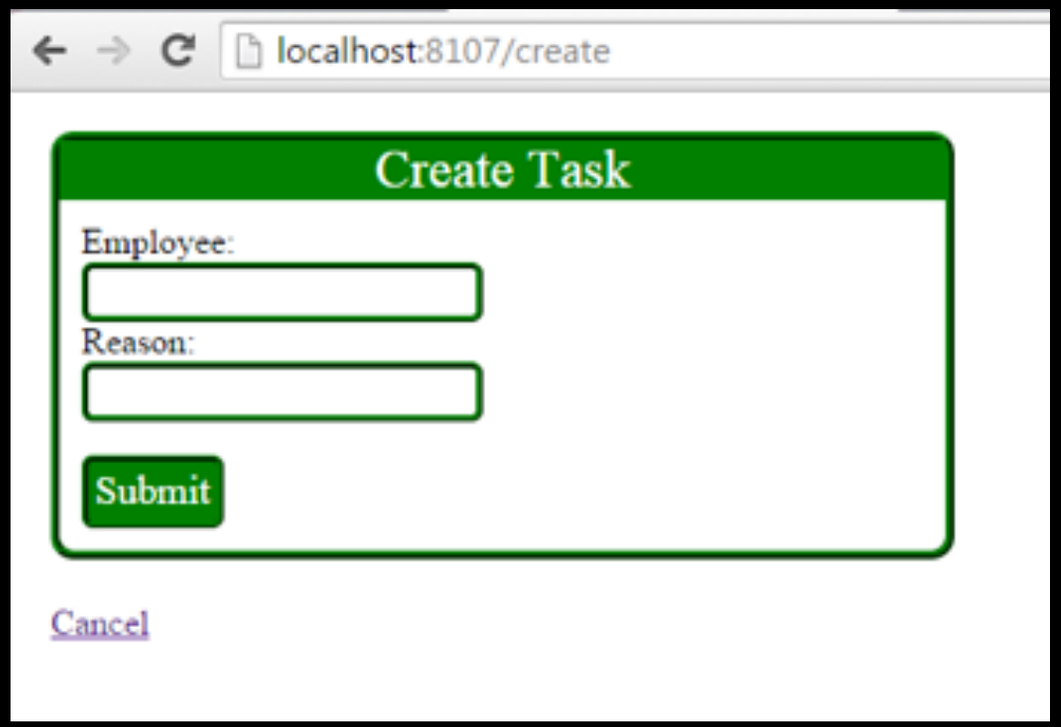
- Lets imagine Web Applications with backends that represent something much more than a data store (data base, data processing) - Workflows




jBPM Backend Workflow
REST API
HTTP Request
HTTP Response
Domain API
HTTP Request
HTTP Response
Proxy
Node.js
Routing

Connection Between the UI and the Backend

- Pressing submit
- API Communication
- Backend Workflow



localhost:8107

Task List

- Task 1 - santa2 (Status: InProgress) Start
- Task 2 - santa2 (Status: InProgress) Start
- Please perform a self-evalutation. - santa2 (Status: InProgress) Start
- Please perform a self-evalutation. - santa2 (Status: InProgress) Start
- Please perform a self-evalutation. - santa2 (Status: Reserved) Start
- Employee Eval - santa2 (Status: InProgress) Start
- Please perform a self-evalutation. - santa2 (Status: Reserved) Start
- Please perform a self-evalutation. - santa2 (Status: InProgress) Start
- Please perform a self-evalutation. - santa2 (Status: InProgress) Start
- Please perform a self-evalutation. - santa2 (Status: InProgress) Start

Create New Case

Logout

Routes

```
app.get('/create', function (req, res) {
    if (req.session.taskList) {
        res.render('create_task');
    } else {
        res.redirect('/login');
    }
});
```

http:<host>:<port>/<path>

Controlling the Workflow

```
exports.createTask = function (req, res) {
    // Authenticate username and password from the session store
    username = req.session.username;
    password = req.session.password;
    // Get the employee name and reason variables from the request view
    var employeeName = req.body.employee;
    var reqReason = req.body.reason;
    // Declare post parameters for POST request
    var postData = qstring.stringify({
        'map_reason': reqReason,
        'map_employee': employeeName
    });
    // API Path
    options.path = '/jbpm-console/rest/runtime/org.jbpm:Evaluation:1.0/withvars/process/evaluation/start';
    options.method = 'POST';
    options.headers = {
            // Basic HTTP Authentication to access the REST API
            'Authorization': 'Basic ' + new Buffer(username + ':' + password).toString('base64'),
            'Content-Type': 'application/x-www-form-urlencoded',
            'Content-Length': postData.length,
            'Accept': 'application/json'

        };
    // Create request
    var request = http.request(options, function (response) {
        response.setEncoding('utf8');
        if (response.statusCode == 200) {
            res.redirect('/');
        }
    });
    request.write(postData);
    request.end();
}
```

Crunching Some Numbers

	Pega	jBPM + OCA
$/request	1.80	0
licensing cost / month ($/month)	380,000	0
Environment Cost ($)	Un-disclosed	75,000
Total Cost of Ownership ($)	4.56 M	75,000

Thank-You!

Questions?

Better software can be reusable, it has first to be usable.

-Ralph Johnson