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GALA: Opportunities & Expectations in Technology

11. Opportunities and Expectations in Technology. You have one or several of the following:

		Response Percent	Response Total
Workflow system		60.9%	39
Corporate accounting system		65.6%	42
Machine Translation technology		20.3%	13
CRM system		25%	16
Authoring system		7.8%	5
Proper terminology management		51.6%	33
CMS system		6.2%	4
Knowledge Management system		25%	16
Content optimization		7.8%	5
Controlled language technology		1.6%	1
Unified procurement system		15.6%	10
Defect tracking system		23.4%	15
Portal submission technology	15762-1000	14.1%	9
View Other (please specify)		4.7%	3
Total Respondents			64
(skipped this question)			3

Source: GALA Operations Round Table Survey 2005

We are planning to Deploy one or Several of the Following

12. Opportunities and Expectations in Technology. We are planning to deploy one or several of the following:

		Response Percent	Response Total
Workflow system		47.6%	20
Corporate accounting system		14.3%	6
Machine Translation technology		28.6%	12
CRM system		14.3%	6
Authoring system		7.1%	3
Proper terminology management		26.2%	11
CMS system	5000000	19%	8
Knowledge Management system		19%	8
Content optimization		21.4%	9
Controlled language technology		4.8%	2
Unified procurement system		16.7%	7
View Other (please specify)		7.1%	3
Total Respondents		42	
	(skipped this o	luestion)	25

Source: GALA Operations Round Table Survey 2005

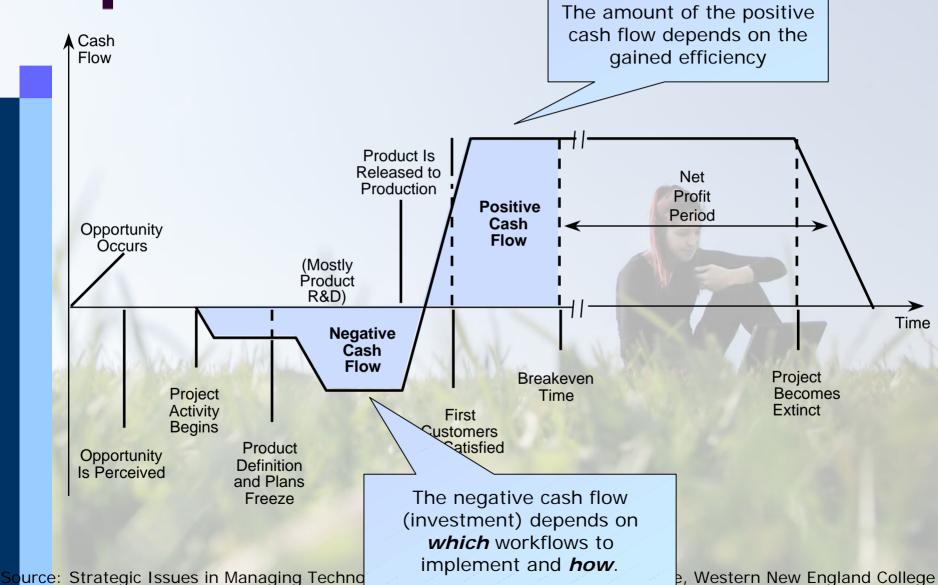


The Key Benefits of Workflow

- Improved efficiency: Automation of many business processes results in the elimination of many unnecessary steps
- Better process control:
 Improved management of business processes achieved through standardizing working methods and the availability of audit trails
- Improved customer service:
 Consistency in the processes leads to greater predictability in levels of response to customers
- Flexibility:
 Software control over processes enables their re-design in line with changing business needs
- Business process improvement:
 Focus on business processes leads to their streamlining and simplification
- Improved support for iterative development:
 Start simple, get more sophisticated later, reduce initial analysis
 & overhead

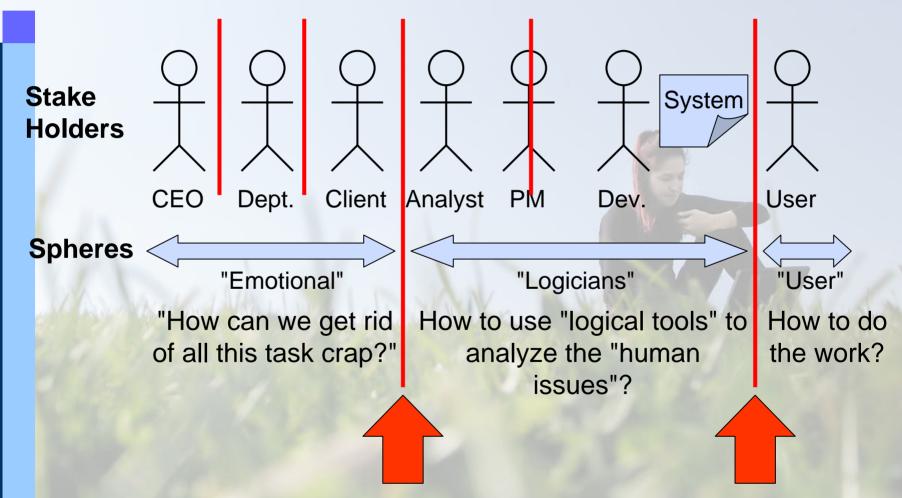
Source: http://www.wfmc.org/about.htm

Improve ROI



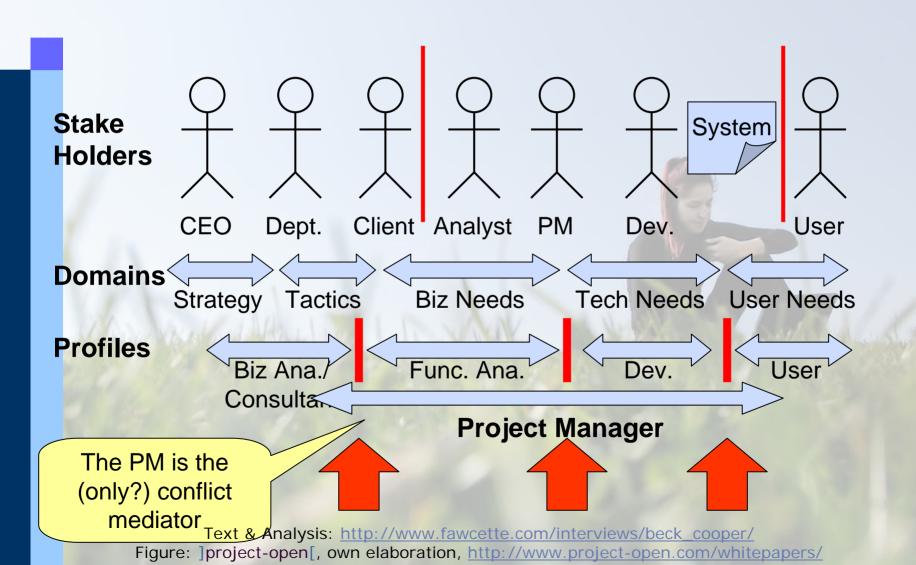


Improve Communication



Text & Analysis: http://www.fawcette.com/interviews/beck_cooper/
Figure: project-open, own elaboration, http://www.project-open.com/whitepapers/

Improve Communication (2)



What is a "Workflow"? => Examples

Interface

Interface 2

Workflow

Client Application

What's a Workflow?

- The automation of a business process, in whole or part.
- Information or tasks are passed from one participant to another for action, according to a set of procedural rules.
- A number of logical steps, each of which is known as an activity.

Workflow Engine(s)

Other Workflow
Enactment Services

Administration & Monitoring Tools Workflow Engine(s)

Workflow Enactment Service

Process

Definition

Interface 1

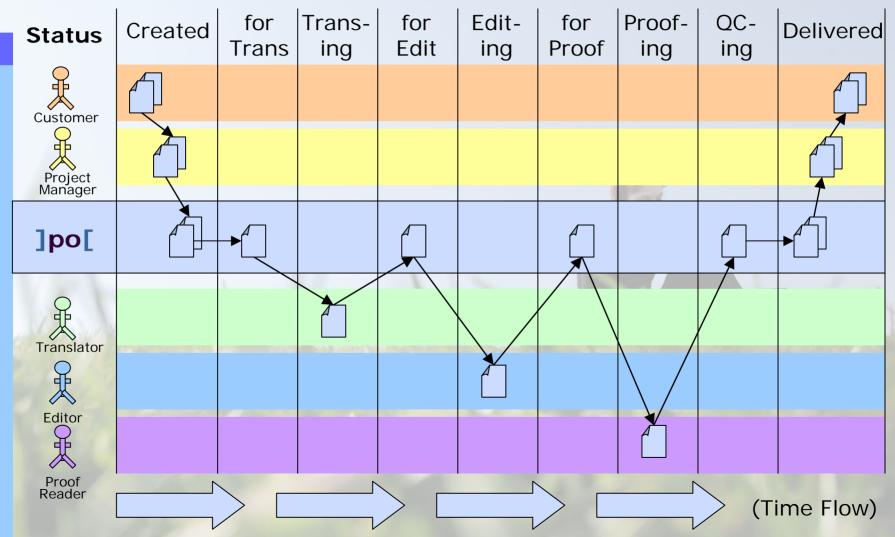
Invoked Applications

Interface 3

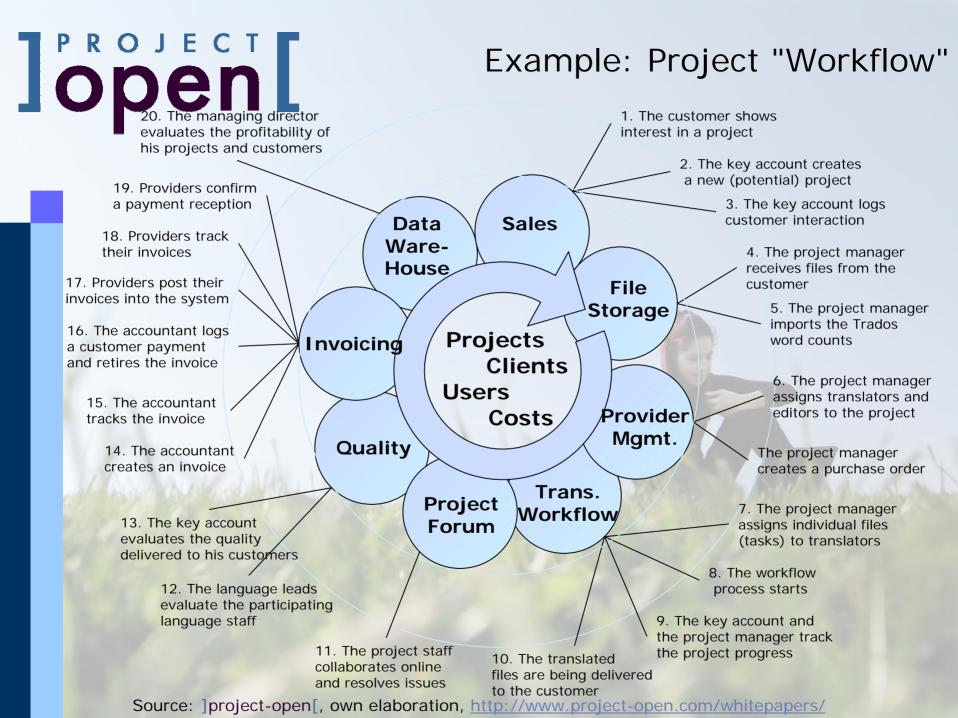
Yi Wang

Source: Workflow Reference Model, The Workflow Management Coalition: http://www.wfmc.org/

PROJECT [Example:]project-open[File Workflow

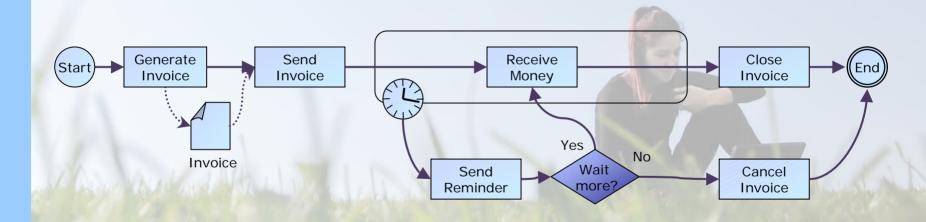


Source:]project-open[, own elaboration, http://www.project-open.com/whitepapers/



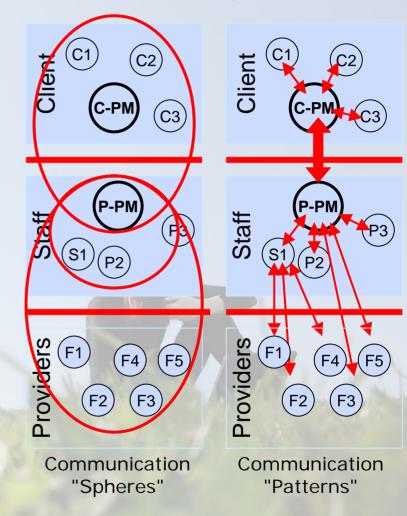


Example: Invoicing Workflow



Example: Query Workflow

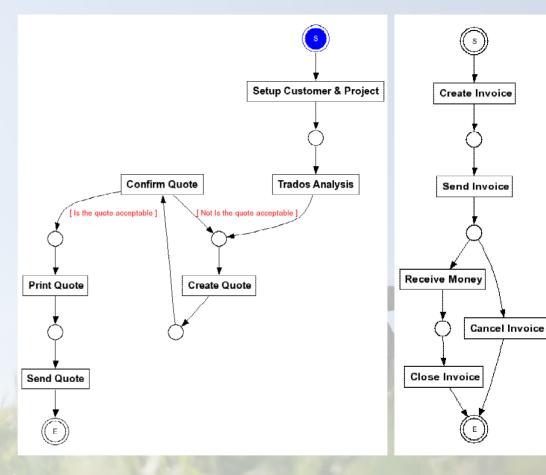
- Client, your company and providers are separated by trust barriers that hinder communication
- Efficient query management requires cross-barrier communication
- The easies way of collaboration would be an online forum
- However, the trust relationships need to be managed, requiring a specific workflow application



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Example: Workflow Diagrams in]po[

- These WF diagrams are based on the]po[workflow module.
- The WFs are implemented using the "Petri Net" formalism



"Call to Quote" WF

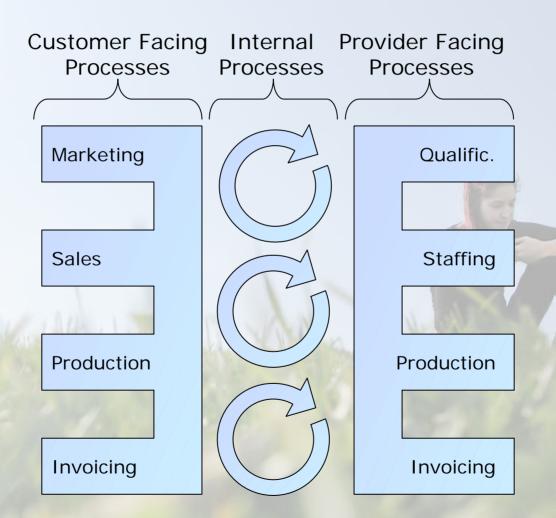
"Invoice" WF



Workflow Environment



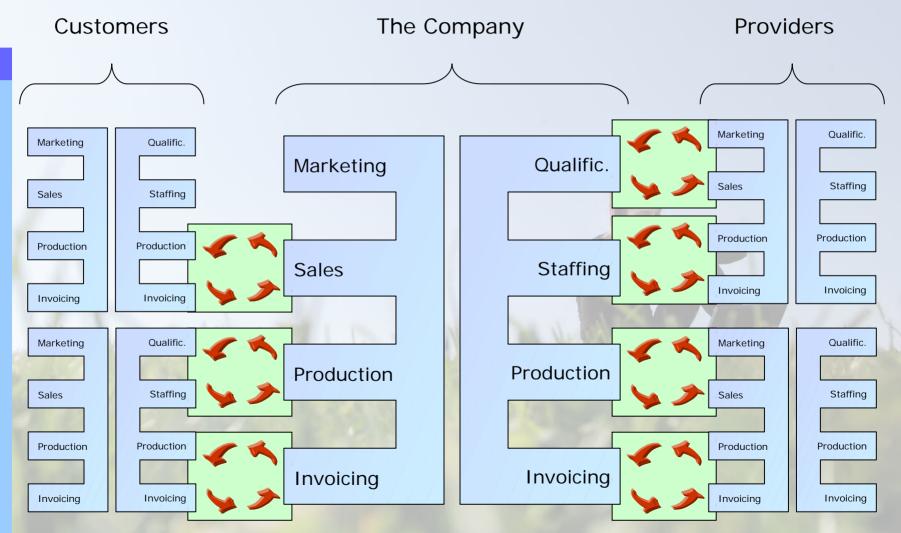
Value Chain Model: The Company



Source:]project-open[, own elaboration, http://www.project-open.com/whitepapers/



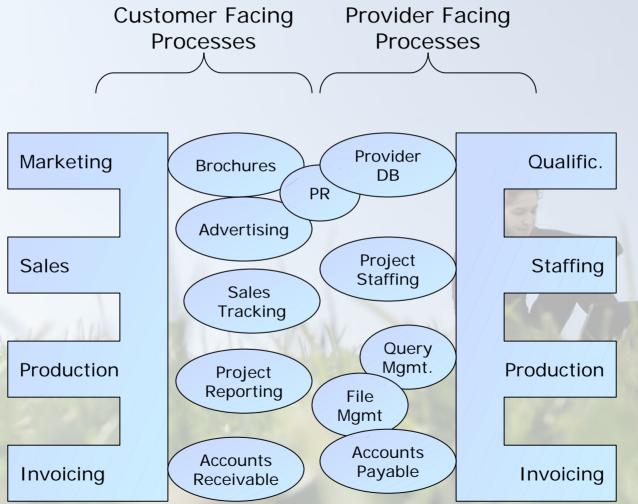
Value Chain Model: Workflows in the Value Chain

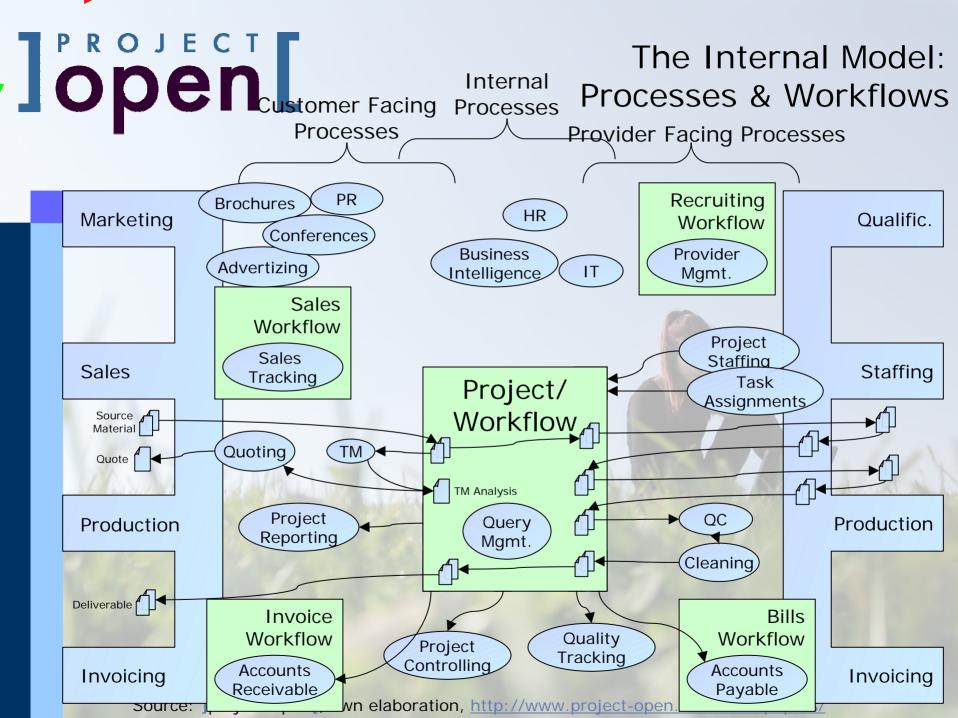


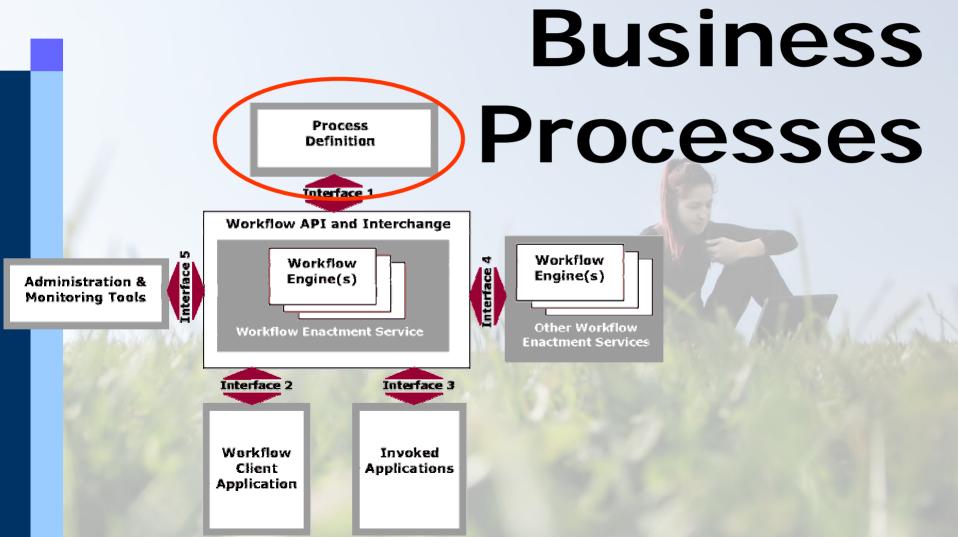
Source:]project-open[, own elaboration, http://www.project-open.com/whitepapers/



The Internal Model: Company Processes







Source: Workflow Reference Model, The Workflow Management Coalition: http://www.wfmc.org/

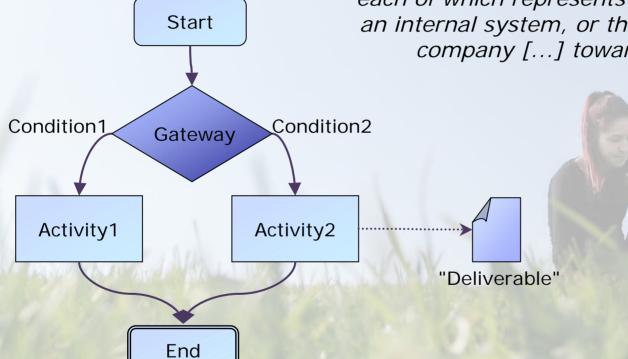


What's a Business Process?

A business process is the flow or progression of activities [...]

each of which represents the work of a person, an internal system, or the process of a partner company [...] toward some business goal.

Mike Havey



A sample Business Process in BPMN (Business Process Modelling Notation)

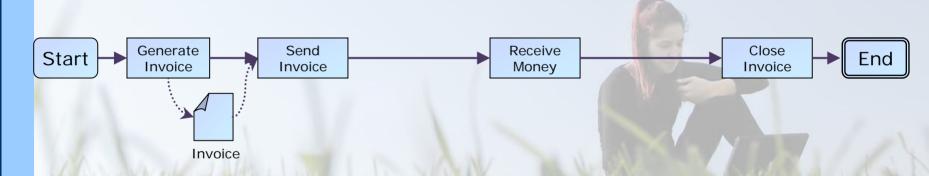


Business Process Elements





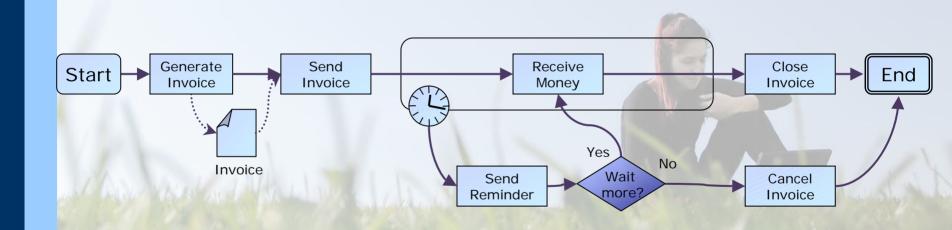
A Very Simple Invoice Example



- Business Process Modeling Notation (BPMN)
- Designed to be understood by business users



Invoice Example (2)



Source:]project-open[, own elaboration, http://www.project-open.com/whitepapers/



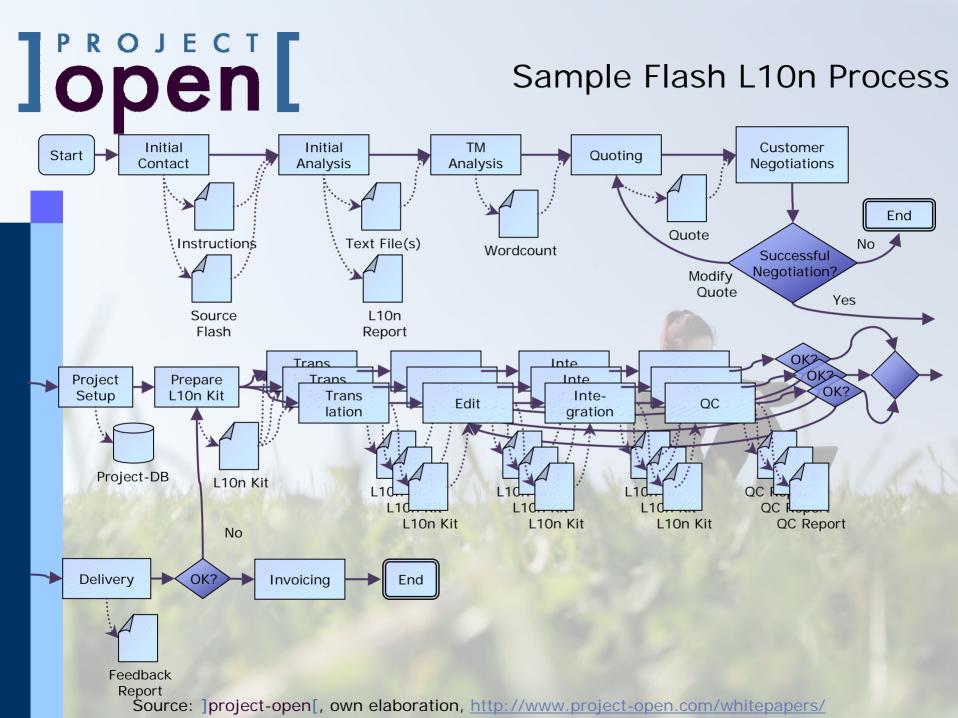
Company

Customer

Invoice Example (3)

Generate Send Wait for Receive Start End Money Invoice Invoice Money Invoice Send Yes Money Check Receive Start Correct? Invoice Invoice No Send Correction Invoice

Source:]project-open[, own elaboration, http://www.project-open.com/whitepapers/

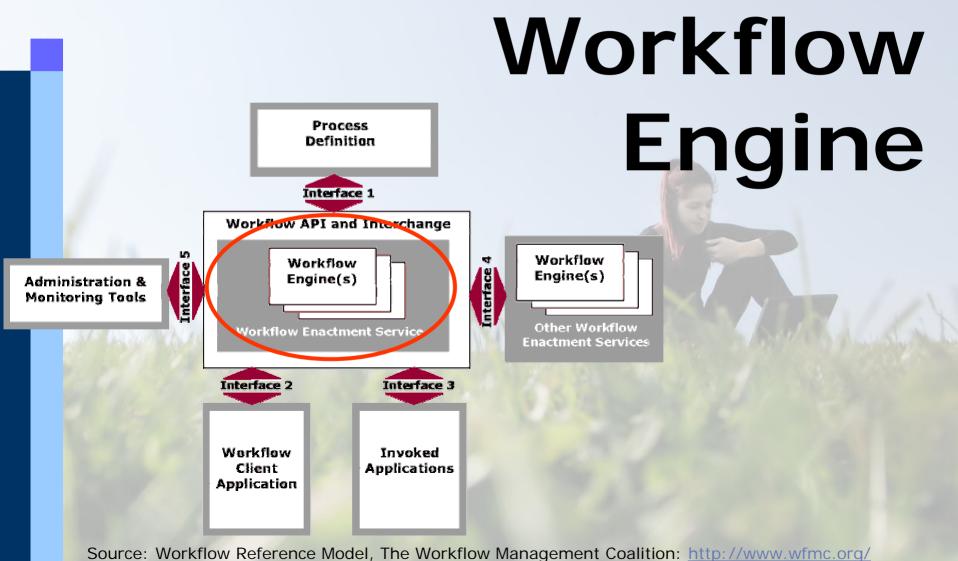




Business Process Description Languages

Standard	Organization	Туре
Business Process Execution Language (BPEL)	OASIS	Execution Language
Business Process Modeling Notation (BPMN)	Business Process Management Initiative (BPMI)	Notation language
Business Process Modeling Language (BPML)	ВРМІ	Execution language
Business Process Query Language (BPQL)	ВРМІ	Administration and monitoring interface
Business Process Semantic Model (BPSM)	ВРМІ	Process metamodel, in fashion of Object Management Group (OMG) Model-Driven Architecture (MDA)
Business Process Extension Layer (BPXL)	ВРМІ	BPEL extension for transactions, human workflow, business rules
UML Activity Diagrams	OMG	Notation language
Workflow Reference Model	Workflow Management Coalition (WfMC)	Architecture
XML Process Definition Language (XPDL)	WfMC	Execution language
Workflow API (WAPI)	WfMC	Administration and monitoring, human interaction, system interaction
Workflow XML (WfXML)	WfMC	Choreography (or similar to it)
Business Process Definition Metamodel (BPDM)	OMG	Execution language and/or notation language, as MDA metamodel
Business Process Runtime Interface (BPRI)	OMG	Administration and monitoring, human interaction, system interaction, as MDA metamodel

Source: Mike Havey, author of Essential Business Process Modeling



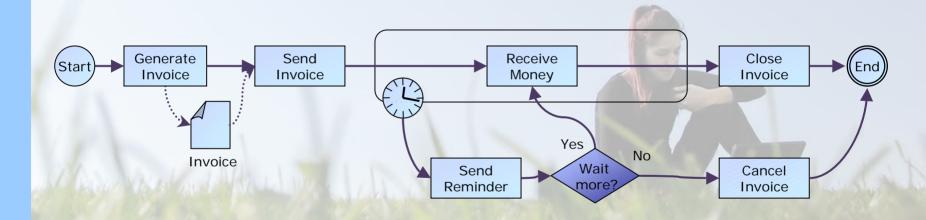


Workflow Process Elements



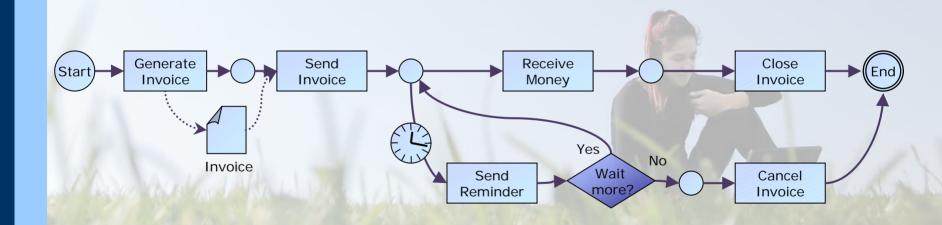


Invoice Example (2)





Invoice Example (2) With States State Diagram / Petri Net





What's the difference?

- The "State" concept allows your IT guys to put this description into a computer system (specification)
- "States" won't work in high-level process designs. It forces the business analyst to get down to "reality"

Jero Ject [Send Reminder Timeout Waiting for Money Invoice Unpaid Send Receive Invoice Money Money Received Invoice Generated Cancel Invoice Close **Invoice** Generate Invoice Start

Status Engine Example

The diagram shows a status engine according to the business process that we have defined before.

Jeroject Send Reminder Timeout Waiting for Money Invoice Unpaid Send Receive Invoice Money Money Received Invoice Generated Cancel Invoice Close Invoice Generate Invoice End Start

Question to the audience

 Let's imagine we really want to implement this workflow using a Workflow application:

Should we allow the Accountant to reset the invoice status to "generated"?

Should the accountant be able to skip the invoice? What will happen to the \$\$\$?

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Start

Invoice Generated

Waiting for Money Invoice Unpaid

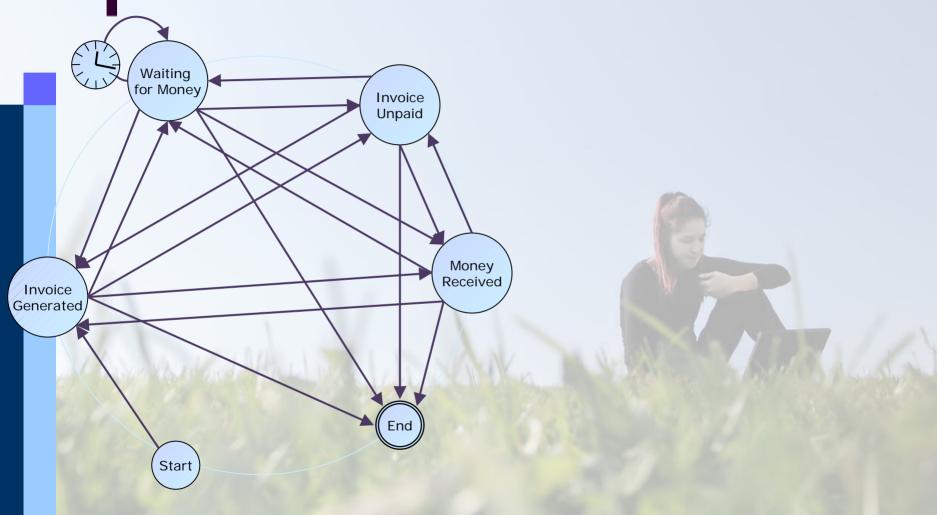
Further Questions

- Should everything be allowed ("collaboration style")?
- When?
- Why not?

Money Received



Group Work: Design the Status Engine





Workflow Design

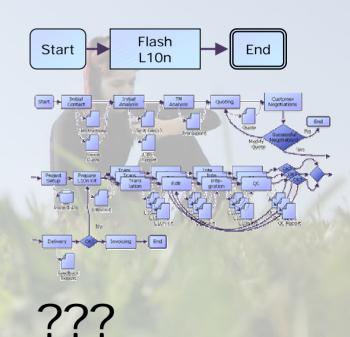


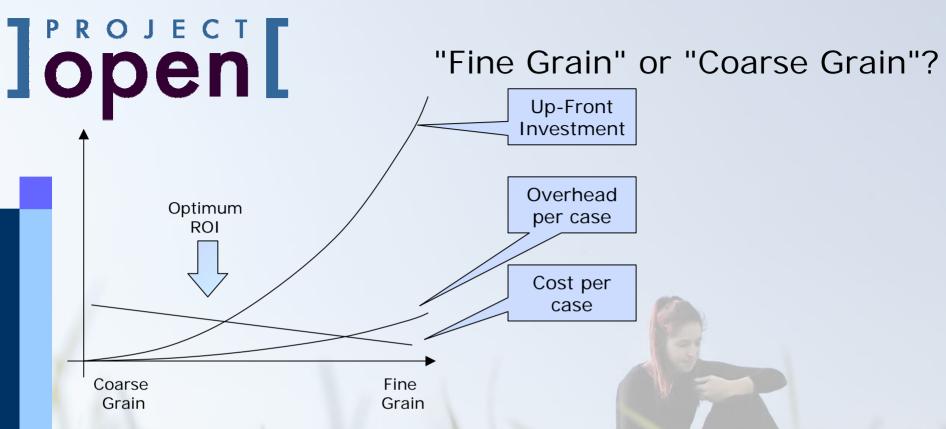
"Fine Grain" or "Coarse Grain"?

To what degree should a company enforce the order of steps and the assignment of tasks of a process?

- Small Company:
- Company specialized on Flash:

Your Company:





- Workflow implementations behave like other IT investments
- Fine grain workflows have higher initial and setup overhead costs
- The optimum granularity depends on many factors

Source:]project-open[, own elaboration, http://www.project-open.com/whitepapers/



Process Implementation Styles

- "Email" Style
 - No workflow at all, documents are sent around by email
 - Pros: Flexible, no investment, "ad hoc"
- "Collaboration" Style
 - Online Forums, common filestorage, ...
 - Pros: Flexible, low investment
- "Organizational" Style
 - Fixed process, but order is maintained informally.
- "Prescription" Style
 - Formal workflow
 - Pros: Formalized, Standardized,
 Reporting & Metrics, ...





Workflow Design Criteria

- Workflow design takes a Business Process and creates an IT application from it.
 - "Fine grain" or "coarse grain" implementation
 - Email, Collaboration or Prescription style implementation?
 - Short or long-lived processes?
 - Reporting & Workflow Metrics
 - Flexibility
 - Security & Permissions
 - "Trust Model"
 - "Water-tight" processes vs. Human Decisions?
 - Botton-Up or top-down design?



The main conclusion will be that selecting a workflow management system is the hardest task companies have to face.

Tom Baeyens http://www.jboss.org/products/jbpm/stateofworkflow

JopenL

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