

# ***Developing a Framework for Managing Change Requests through Stand-Alone Workflows***

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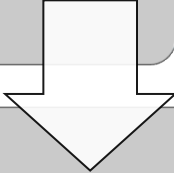
1. Motivation
2. Approach
3. Basic Principles
4. Framework Development
5. Pratical Example
6. Evaluation & Conclusion

- Personal experience in workflow management
  - Experienced lack of proper change request management for small IT projects
- Model CRM through workflows for small software projects with strong customer focus

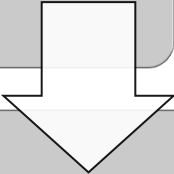
## Partner:

- Robert Bosch Singapore
- Product Manager Workflow Management
- WorkON – 200,000 users, 300 applications

Change request management including  
traditional & agile approaches  
Workflow management



Development of a framework to handle  
change request management through  
workflows



Evaluate the framework through its  
application on a sample project

## Change Request Management – Reasons for Change Requests

<b>Dependent for Requirements Engineering</b>	<b>Independent from Requirements Engineering</b>
<ul style="list-style-type: none"><li>• Implementation Problems</li><li>• Incorrect Requirements</li><li>• Ambiguous Requirements</li></ul>	<ul style="list-style-type: none"><li>• Costs / Budget</li><li>• Scheduling</li><li>• Strategy (Marketing / Sales)</li><li>• Technical Changes</li><li>• Changes in Business Environment</li><li>• Changes in Laws / Governmental Regulations</li><li>• New Requirements concerning Security</li></ul>

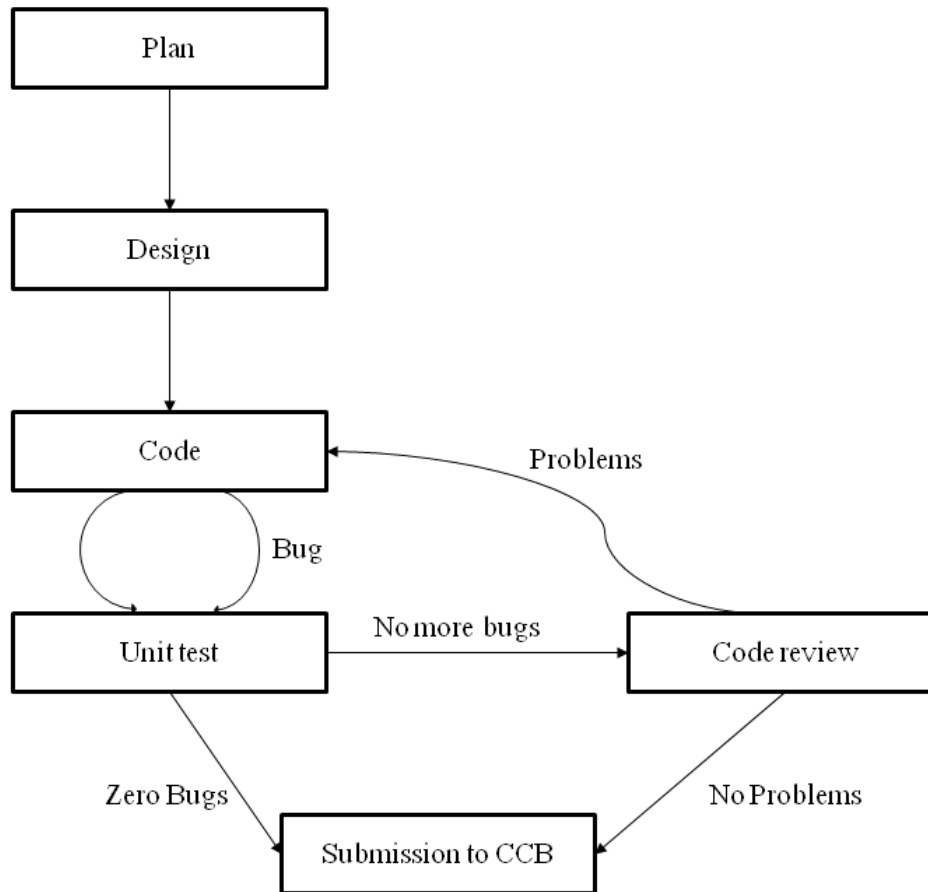
## Change Request Management – Change Request Form

Change request number: _____	Request date: _____
Requestor name: _____	Request status
Requestor priority: <i>high medium low</i>	Accepted date: _____
	Rejected date: _____
	Processing start date: _____
	Completion date: _____
Brief change request description: _____	
_____	
_____	
_____	
Areas impacted by the change request: _____	<b>Traditional vs. Agile</b>
_____	
_____	
Estimated effort: _____	Inclusion in _____

As a <role>  
I can <activity>  
So that <business value>

Source: Tsui and Karam (2011), Leffingwell (2011)

## Change Request Management – Process



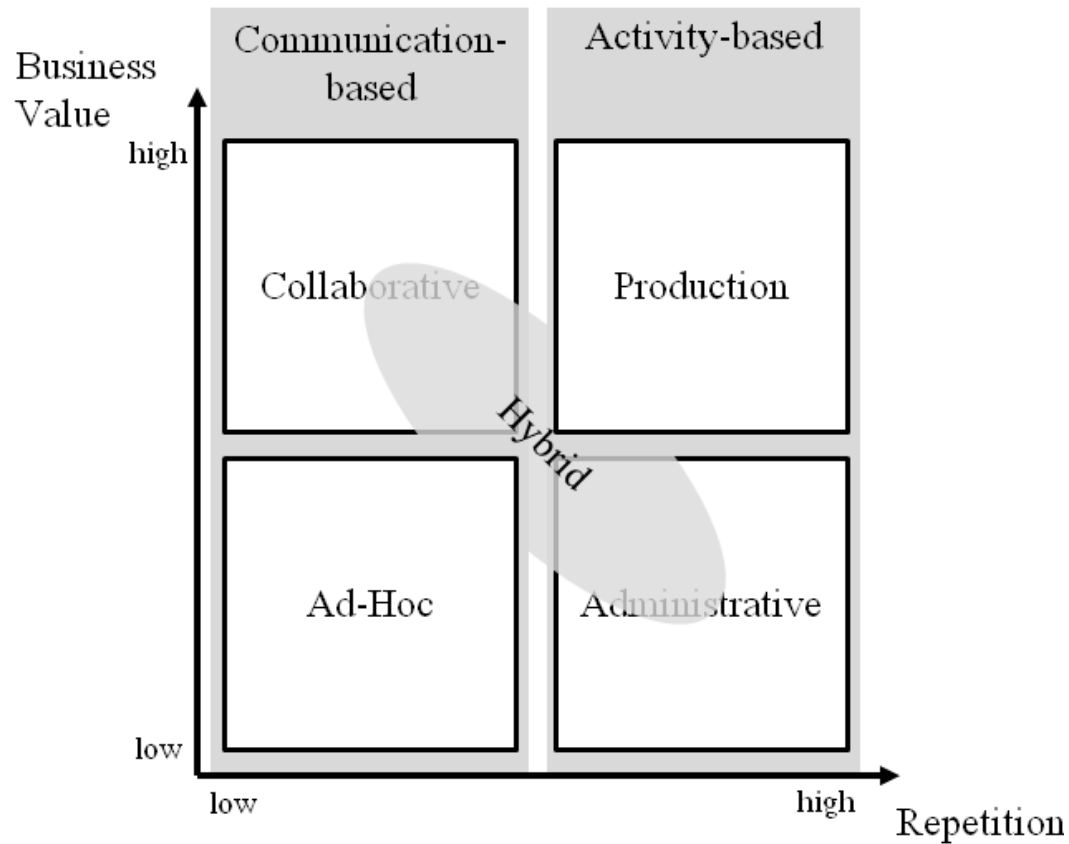
Source: Vliet (2008)

## Workflow Management – Characteristics of a Workflow

1. Task-Based
2. Follow a certain order
3. Clear beginning / ending
4. Defined resources
5. Case-Based
6. Make-to-Order



## Workflow Management – Workflow Types



Source: Allen (no date), Müller (2005), Zur Mühlen & Hansmann (2005), Mentzas et al. (2001)

# 3. Basic Principles

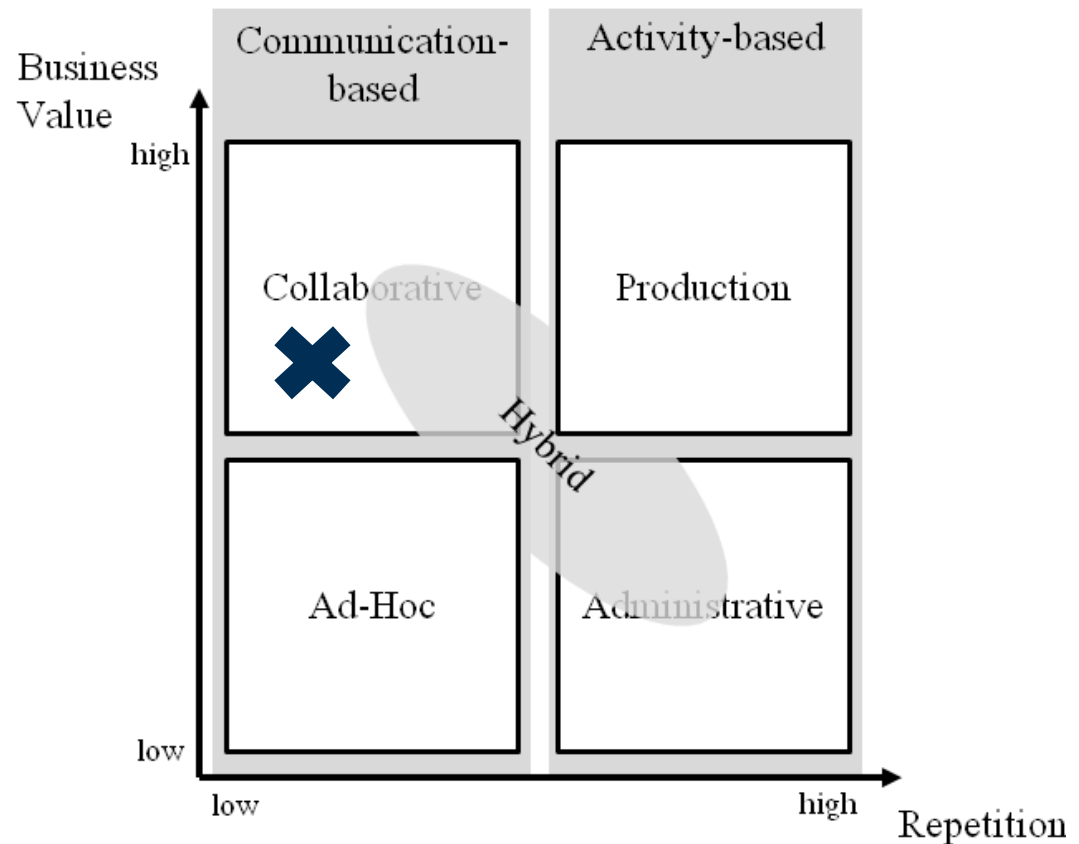
## Reasons for Change Request Management through Stand-Alone Workflows

The process of change request management is...

- Task-based
- Follow a certain order
- Case-based
- Make-to-order

Partly:

- Clear beginning /ending
- Defined resources



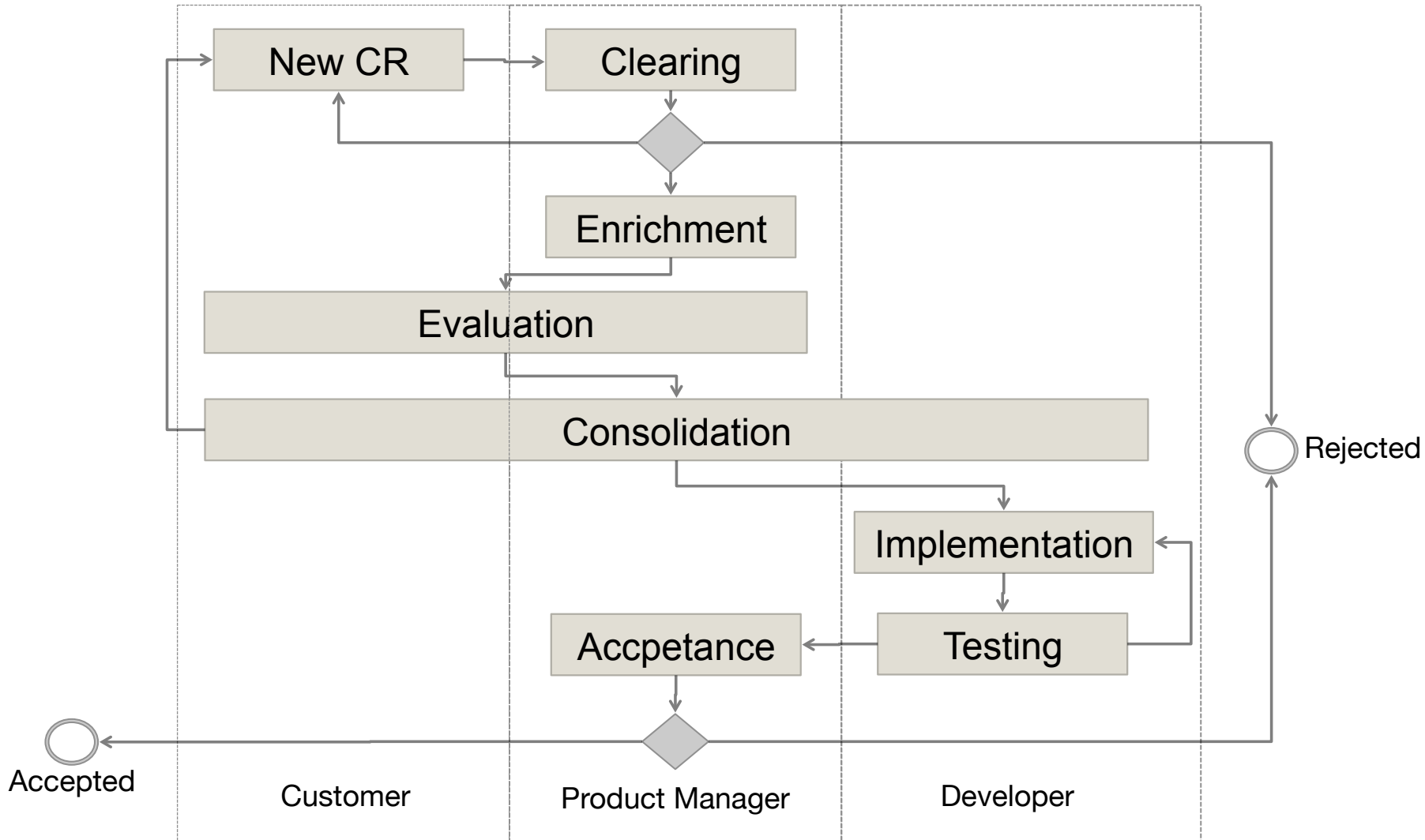
## Change Request Form

Change request no.:	_____	Request date:	_____
<b>As a</b>	_____	<b>I want</b>	_____ <b>so that</b> _____
Impact:	_____		
Effort:	_____		
Resources:	_____		
Risk:	_____		
<b>Evaluation Score:</b>	_____	<b>Release:</b>	_____
Acceptance Criteria:	_____	_____	_____
	_____	_____	_____
Acceptance given?	_____	Acceptance Date:	_____

Source: Own figure

# 4. Framework Development

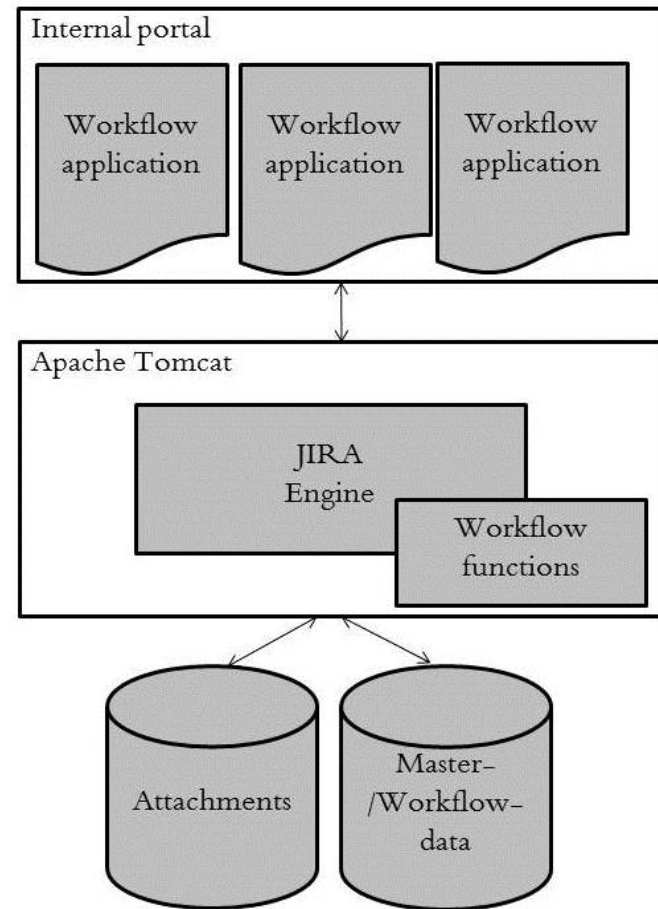
## Change Request Process



# 5. Practical Example

## The WorkON Project at Robert Bosch Singapore

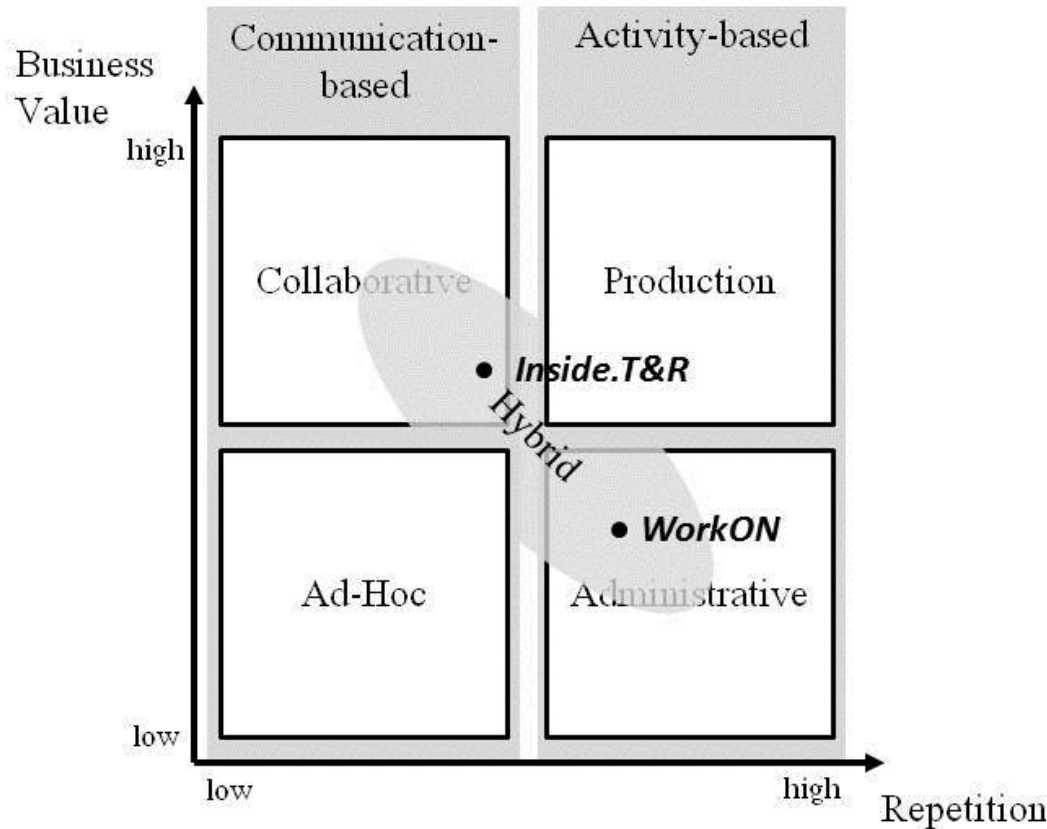
- 700 employees at Singapore site
- IT center and provision of Bosch-wide IT operations and services
- Stand-alone approval workflows
- ~ 200,000 users
- Migration of existing applications as well as development of new ones
- Great number of CR's
- Different approaches for CRM, currently through inside.Track & Release



Source: Own figure

# 5. Practical Example

## Change Request Management for WorkON



Source: Own figure

- Inside.Track & Release matches categorization of CRM as workflow
- High configuration effort
- Additional costs

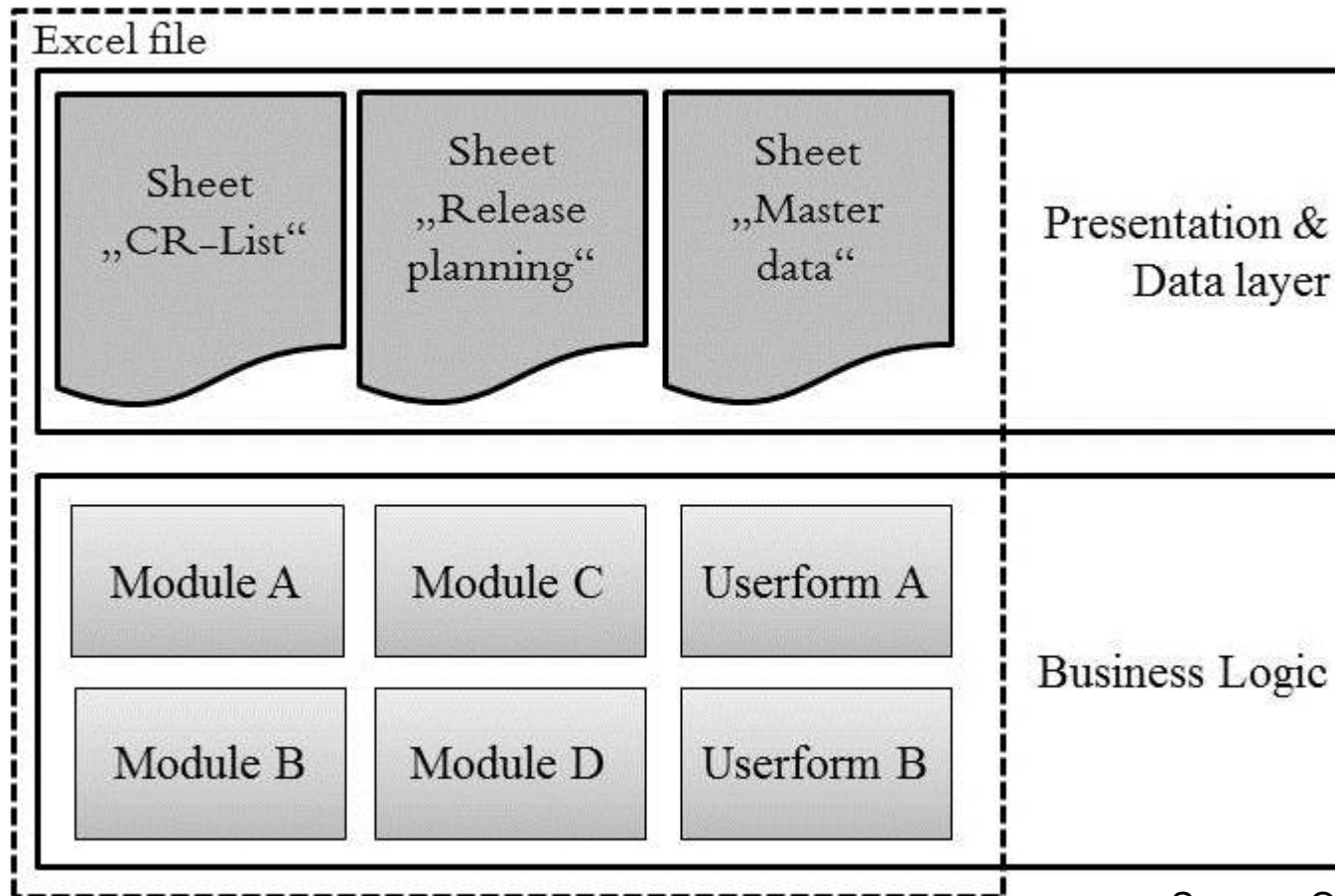
## Change Request Management for WorkON

### **Six Gaps**

1. Missing CR ranking
2. Missing information
3. Classification of changes
4. Project does not follow CR-process
5. Tool does not support every process step
6. Tool is not self-explaining / easy-to-use

# 5. Practical Example

## Change Request Management for WorkON – Tool Setup

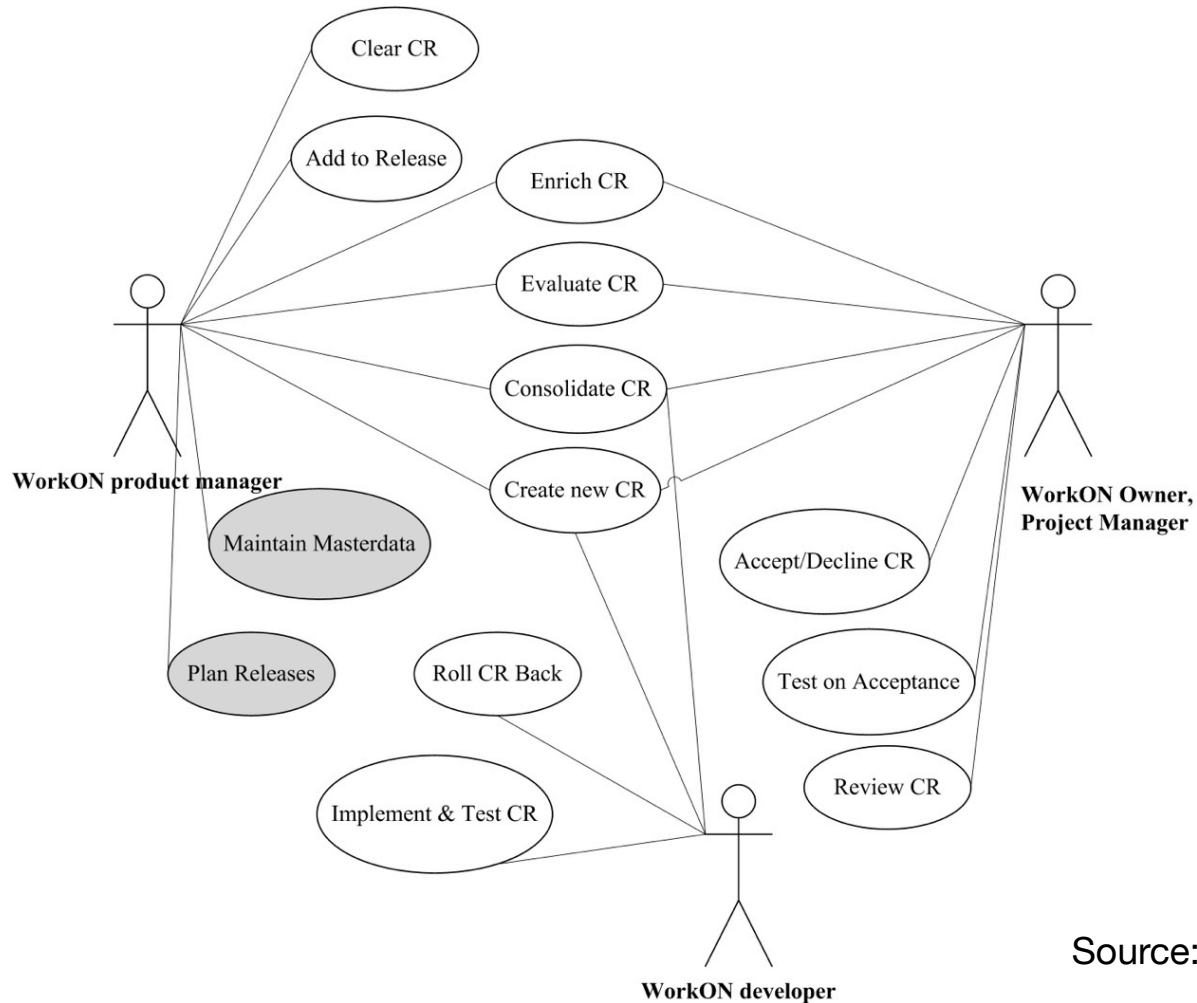


Source: Own figure



# 5. Practical Example

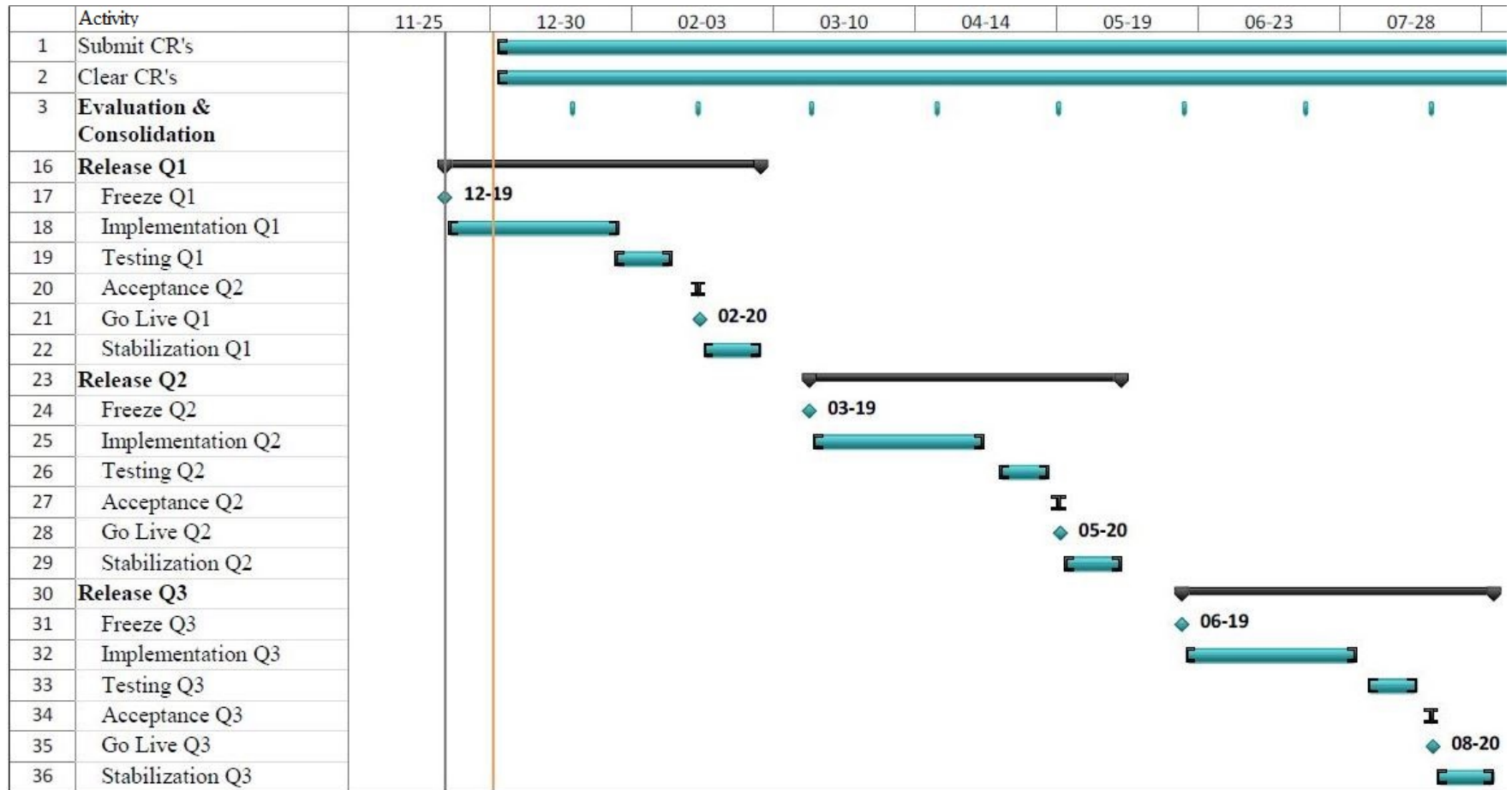
## Change Request Management for WorkON – Assignment of New Tasks



Source: Own figure

# 5. Practical Example

## Change Request Management for WorkON – New Project Schedule



## Benefits

1. Tool supports process
2. Easier decision-making
3. Ranking available
4. Improved reporting
5. Reduced processing time
6. Less user administration
7. Reduced costs
8. Better process documentation
9. Less familiarization time

## Six Gaps

1. Missing CR ranking
2. Missing information
3. Classification of changes
4. Project does not follow CR-process
5. Tool does not support every process step
6. Tool is not self-explaining / easy-to-use

- Framework proved applicableness
- Two additional use cases
  - Requirements Engineering
  - Bug-Fixing
- In future, implementation through different tool?

Thank you! Any Questions?



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# Back Up



## Clearing

101	Enrichment	2014-01-08	requestor	attachme	save time	Platform	> 0,	ue
101	Clearing	2014-01-08	user	to search every	have to open a			

CR-10

CR-10      2014-01-08                 

Evaluation Score:

User Story

As transfer new vendor masterdata directly to SAP ERP      I want to process owner of the WorkON masterdata request      so that      I don't have to copy +paste; no mistakes possibles,

Estimation

Impact      Effort

Resources



## Decline Request

Age	Evaluation Score	Role	Activity	Benefit	Impact	Effort	Resc
14-01-08			more than 5	I can			platf deve
14-01-08							
14-01-08							
14-01-08							
14-01-08							
14-01-08							
14-01-08							platf deve
14-01-08		approver	request back to	applicant don't			
14-01-08		applicant	the priority of	s see the urgency			

Feedback

Please explain why change request is declined

CR's requires too much implementation: calendar, team

Decline



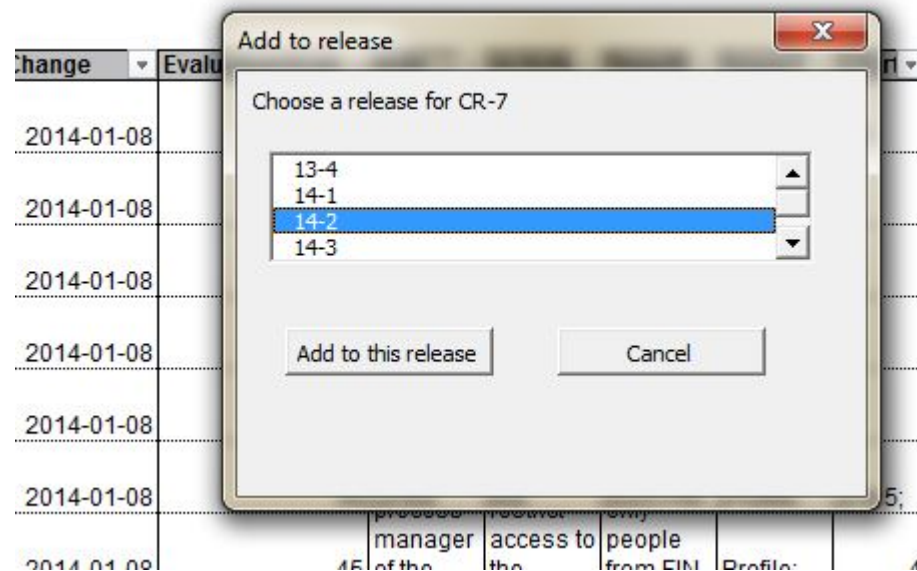
## Evaluation

The screenshot shows an Excel spreadsheet with an 'Evaluation' dialog box open. The dialog box has a text input field containing '23' and a 'Submit' button. A 'Warning' dialog box is overlaid on top, displaying the message: 'Score is less than minimum value. Minimum Score: 40'. The warning dialog has two buttons: 'Continue with this score' and 'Enter a new score'. The background spreadsheet has columns for 'Resources' and 'Risk'. The 'Resources' column contains 'platform developers' and 'platform developer'. The 'Risk' column contains 'medium' and 'low'. Other visible text in the spreadsheet includes 'valu', 'ri', 'approvers', 'by', 'request', and 'applicant'.

Resources	Risk
platform developers	medium
platform developer	low

## Release / Release Planning

	A	B	C	D	E
1	Release	Release date	Freeze date	Capacity in MD	Remaining Capacity
2	13-4	20-11-13	20-9-13	55	55
3	14-1	20-2-14	20-12-13	55	55
4	14-2	20-5-14	20-3-14	67	67
5	14-3	20-8-14	20-6-14	40	40
6	14-4	20-11-14	20-9-14	53	53
7					



## Master Data

	A	B	C	D	E	F	G
1	<b>Variable</b>	<b>Value (one value per cell)</b>					
2	<i>Impact</i>	Profile	Archive	Project-Specific	Platform		
3	<i>Effort</i>	< 2	2 to 5	6 to 10	> 10		
4	<i>Product manager</i>	ahoi					
5	<i>Column Names</i>	Nummer	Type	CreationDate	Submitter	Status	LastChange
6	<i>Notification New CR</i>	New Change Req	Dear all, There has been a new change request added. Please see corresponding excel file				
7	<i>Notification declined</i>	Change Request	Dear Customer the following change request has been declined				
8	<i>Notification send back</i>	Please review	Dear Customer, please review the following change request				
9	<i>Notification Release</i>	will be included in	The following change Request will be included in release				
10	<i>Status</i>	New CR	Clearing	Enrichment	Evaluation	Consolidation	Ready for implementation
11	<i>Minimum Evaluation Score</i>	40					
12	<i>Maximum Evaluation Score</i>	140					
13	<i>Resolution</i>	Declined	Declined > Roll back > Accepted > Implemented				
14	<i>Notification Test</i>	Your change request is ready for testing.					
15	<i>Notification resubmit</i>	Change Request	The following change request has been reviewed by the submitter:				
16	<i>Notification roll back</i>	Change Request	The following change request has been rolled back:				

## CR-List

Numme	CreationD	St	Status	LastChange	Eva	Role	Activity	Benefit	Impact	Effor	Resources
<a href="#">CR-1</a>	2014-01-08	ahoi	Enrichment	2014-01-08		requestor	more than 5 attachments at a time	I can save time	Platform;	> 6;	platform developers
<a href="#">CR-2</a>	2014-01-08	ahoi	Clearing	2014-01-08		user	application from one central point	I dont have to open a search per application			
<a href="#">CR-3</a>	2014-01-08	ahoi	Clearing	2014-01-08		user	have a mouse-over help on certain fields	it is easier to fill out the form			
<a href="#">CR-4</a>	2014-01-08	ahoi	Enrichment	2014-01-08		process owner	change drop down entries	the application can stay be up to date			
<a href="#">CR-5</a>	2014-01-08	ahoi	Clearing	2014-01-08		supervisor	absence request incl every team members holiday	I can see if I can approve a request holiday			
<a href="#">CR-6</a>	2014-01-08	ahoi	Consolidation	2014-01-08	66	process manager of the internal order form	restrict access to the application	only people from FIN can raise requests	Profile;	2 to 5;	java developer
<a href="#">CR-7</a>	2014-01-08	ahoi	Accepted > Implemented	2014-01-08	45	process manager of the internal order form	restrict access to the application	only people from FIN can raise requests	Profile;	4	java developer
<a href="#">CR-8</a>	2014-01-08	ahoi	Enrichment	2014-01-08		approver	send the request back to applicant for a review	start the workflow again from 1st position			
<a href="#">CR-9</a>	2014-01-08	ahoi	Clearing	2014-01-08		applicant	to raise the priority of a requets	urgency of my request and process is faster			
<a href="#">CR-10</a>	2014-01-08	ahoi	Consolidation	2014-01-08	100	process owner of the WorkON masterdata request	transfer new vendor masterdata directly to SAP ERP	copy+paste; no mistakes possibles, saves time	Project-Specific;	6 to 10;	WorkON vendor