

Multi-Model Process Improvement

Fabiana Freitas Mendes and Juliano Lopes de Oliveira

`fabianamendes@unb.br` and `juliano@inf.ufg.br`



Agenda

- 1 Introduction
- 2 Taxonomy for Process Improvement Initiatives
- 3 Approaches for Process Improvement
- 4 Challenges for Process Improvement (mono and multi model)
- 5 Approach to deal with Multi Model Process Improvement Initiatives
- 6 Summary of Results



Introduction - Research Goals and Questions

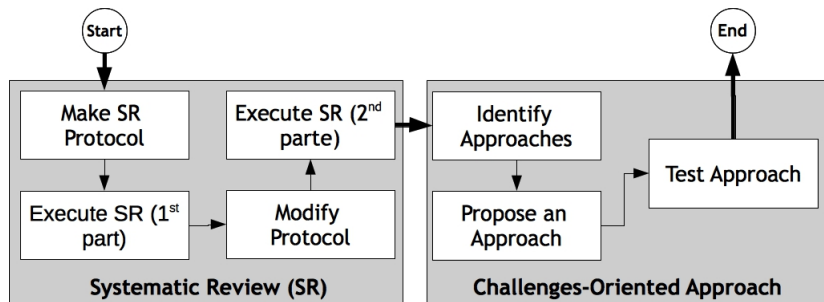
Goals:

- 1 Characterizing and classifying multi-model PI challenges
- 2 Analysing approaches to deal with PI multi-model challenges

Questions:

- 1 What are the main PI challenges?
- 2 Which of these challenges are specific of multi-model PI?
- 3 How previous works have dealt with these multi-model challenges?
- 4 What are the approaches to deal with multi-model PI initiatives?

Methodology



A Taxonomy for Process Improvement Initiatives

Type	Number of Models	Geographic Distribution	Improvement Areas	Number of Projects
Mono 1	one	local	one	one
Mono 2			many	
Mono 3		distributed	one	
Mono 4			many	
Multi 1	many	local	one	one
Multi 2				many
Multi 3			many	one
Multi 4				many
Multi 5		distributed	one	one
Multi 6				many
Multi 7			many	one
Multi 8				many

Approaches for Process Improvement

- Based on Integrator Models
- Based on Implantation Steps

Challenges Associated to the IDEAL Model's Phases

Phase	mono-model	multi-model
Initiating	18	7
Diagnosing	7	2
Establishing	20	21
Acting	60	13
Leveraging	1	0
Total	105	43

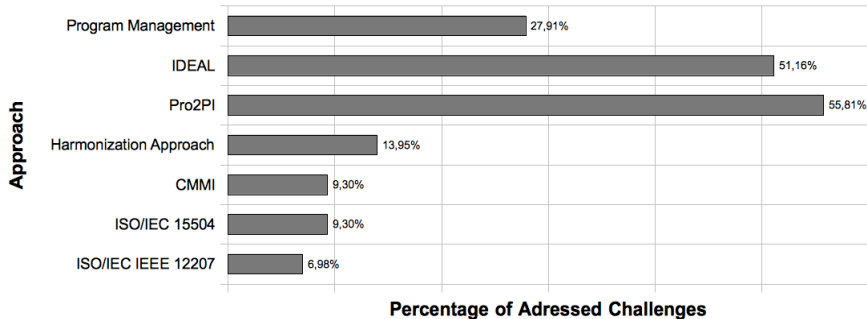
Most Cited Process Improvement Challenges

Challenge	Phase	# References
mono-model		
Get commitment and involvement of the organization's leadership	Initiating	19
Involve and obtain commitment of middle managers in improvement activities	Action	12
Establish clear, relevant and realistic improvement goals	Initiating	11
Select and/or form a team with appropriate knowledge and enough dedication to carry out the project	Initiating	8
Provide adequate training in the choose model	Establishing	7
Manage initiative changes	Action	7
multi-model		
Integrate PI initiatives	Establishing	5
Get commitment with senior managers	Initiating	4
Manage implementation resources	Establishing	4
Manage initiative changes	Action	4
Determine organization's strategy	Initiating	3

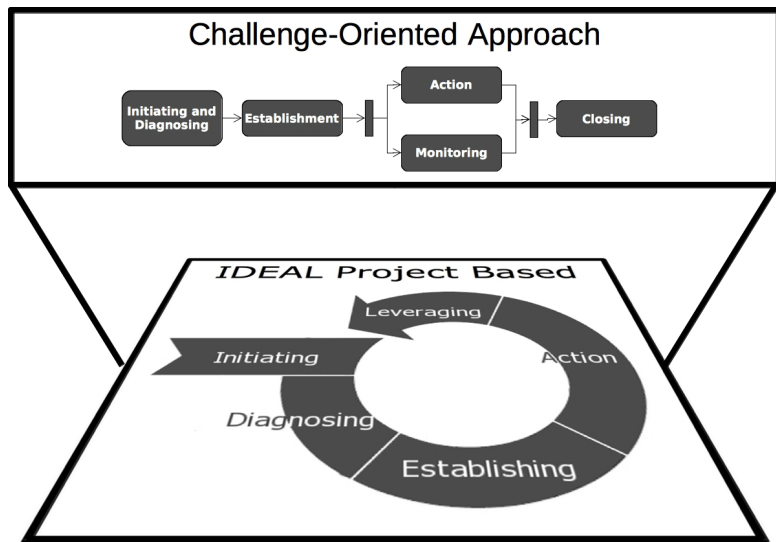
Challenges Analysis

- 1 Number of mono-model Process Improvement challenges is bigger than that of the multi-model
- 2 Relative number of establishing multi-model challenges is bigger than mono-model challenges
- 3 High number of establishing challenges
- 4 Same challenges in both mono and multi-model

Motivation to Create a New Approach



Overview of the Approach



Experimentation

The approach was applied in two organizations to answer the following questions:

- 1 The approach can be improved?
Yes! List of improvement opportunities.
- 2 How does priority challenges impact in the Approach execution?
It is crucial. Determine interruption of experimentation in both organization.
- 3 When is the best moment to execute the Approach?
As soon as possible in order to avoid some potential problems.

Top Ten Organizations challenges

#	Organization 1	Organization 2
1	Align organization and improvement goals	Use external consultancy to transfer knowledge
2	Get commitment of senior management	Integrate ITPI projects measures attempting they are not aimed to specific model
3	Demonstrate ITPI multi-model challenges to senior management to get support	Create an process improvement culture
4	Get senior management sponsored	Manage ITPI changes
5	Measure progress and benefits of ITPI projects	Use communication technicians to support information share
6	Get involvement of people who will be affected by changes	Manage organizational changes
7	Integrate ITPI projects	Show measurable results
8	Create an environment of open communication and mutual trust	Manage implementation resources
9	Show measurable results	Get involvement of people who will be affected by changes
10	Involve and get commitment of technical employees	Avoid resources duplication between ITPI initiatives

Results

- Multi-model PI was characterized based on its challenges
- A taxonomy of multi-model challenges was proposed
- The improvement initiatives were systematized and classified based on number of models, team distribution and improvement areas
- Multi-model PI approaches were identified and analysed
- An approach which can deal with all identified challenges was proposed

The actual model used to support process improvement is appropriated for multi-model initiatives?

Multi-Model Process Improvement

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Thank you =)

