Process-based project management and SPI

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Quality Improvement

- plan
- execute
- analyze
- improve
SPI

plan

execute

analyze

improve

Process Specification

Project Plan

Project Trace

Project Execution History
Motivation

The case of the autonomous Chilean branch of PowerData small software company ETL projects loss of - 23% of earnings - loyal customers (2013~2015)
PowerData SPI experimental strategy
process specification
<table>
<thead>
<tr>
<th>Presentation Name</th>
<th>Index</th>
<th>Pred..</th>
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process specification
manual project planning
## BACTH Activities

### Analysis
- Detailed Requirements Analysis
  - Analysis and Validation of Requirements
  - Business Rules Analysis (Source-Target)
  - Create Requirements Document
  - MILESTONE Requirements Approval

### Test Cases
- Develop Detailed Test Plans
- Review of Detailed Test Plans

### Design
- Implementation Design
- Review and Adjustment of the Proposed Solution
- Review by the Architecture Committee
- MILESTONE - Approval by BcoEstado of

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manual project trace recording
manually creating plans introduces inconsistencies in task names, structure and dependencies

manually recording traces also introduces inconsistencies

integrated tool support is scarce for coordinating processes, plans and traces

in this scenario SPI very difficult
process-based **approach**

to project management
approach
ongoing research & development

Process specification

Validate

Tailor

Generate

Project plan

Project execution history

Discover

Improve

Assist estimation

Analyze

Monitor

Orchestrate

Tailored process

Generate

Project trace

Integrated in CASPLE

Under development

Research prototypes
current tool support

- Process specification
  - Validate
  - Tailor
    - Tailored process
    - Generate
      - Project plan
      - Monitor
        - Orchestrate
      - Analyze
        - Discover
          - Improve
            - Assist estimation
              - Project execution history
              - Generate
                - Project trace
CASPLE

Process Specification

Publish process

Fetch process

Generate plan structure

Capture plan & progress

Analyze

Improve process

Define plan & execute plan
Is it a new project for a new client?

Requirements

yes

no

KickOff

Design

Implementation

Testing

Change Management

Deployment

Closure

process specification in EPFC
### PowerData process

#### Process

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<th>Used</th>
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**First Published**: 18/05/15 13:53
**Last Published**: 27/06/15 17:19

**1.0**: Most Used
**2.0**: Most Active

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project plan in Redmine
tracking process, plan & trace
case study
case study

companies
development process
tools for
planning and monitoring

four
already specified (some in EPF)
which are the perceived advantages and shortcomings of the approach and tool to apply them in practice?

which are the perceived limitations for adopting the approach and tool in practice?
**Data Collection**

- Structured questionnaire
- Tool demonstration
- Non-structured interview

**Target Audience**

CEO/COO & technical professional
integration of various SPI stages

approach

perceived value

tool integration instead of tool replacement

automatic plan generation

process, plan & trace history and comparison
demands additional effort from managers and developers which may not be practical for small enterprises. The full potential cannot be achieved as the tool does not yet support process tailoring, discovery and enhancement.
our approach offers consistent support for SPI

CASPLE already supports part of this activity

Industrial partners value the potential of both of them and may be willing to adopt them
Process-based project management and SPI