Implementing End-to-End agile Portfolio Management

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My Reference
Implementing End-to-End Portfolio Management

Implementation of agile portfolio management end-to-end for developing IPTV at a Swiss telecoms provider using Rally.

1. **The Challenge.**
   large organisation with many traditions

2. **Guiding Principles.**
   five levels of planning to steer release trains

3. **The Implementation.**
   top down, big bang, tool driven

4. **Conclusion.**
   big step forward – many steps ahead

**Bonus Track**

- **Lean** · perfection along the value stream
- **Agile** · ability to respond to change
- **Scaled lean/agile** · alignment, execution, transparency, code quality
IPTV Product Landscape
IPTV Product – many disciplines in involved

- Product Features
  - Live TV
  - TV Guide
  - Timeshift TV (Pause, rewind, forward)
  - Recording of shows
  - Pay per view (e.g. sport events)
  - Video on demand
  - Multiple simultaneous streams over IP (Internet)

- Supported Platforms
  - Set-top box
  - Web browser (Silverlight)
  - Smartphones (Android, Windows)
  - iPhone and iPad (iOS)

- Many Competences Required
  - Product management
  - User Experience design
  - Software development
  - Industrial design
  - Hardware development
  - Data Center design & operation
  - Video streaming (encoding, decoding)
  - Wide area networking
  - Logistics
  - User and tech support
  - Content acquisition (movies, sport events)
  - Marketing and Sales
  - Billing
IPTV Corporate Landscape

Corporate Strategy

Product Strategy

Product Roadmap

Marketing
Sales
Customer Services
Billing

IPTV

Other Product Departments

Logistics / CRM / Business Support Systems / IP network services
Guiding Principles

1. Rolling planning on appropriate management levels (from company strategy to daily planning)
2. Full transparency within the portfolio (All information freely available to all project members)
3. One single electronic tool to support the process (the tool enforces adoption of the process across all teams)
4. Mix of process models and methods (plan-driven waterfall, Scrum, Software Kanban)
5. Delivery on cadence (fix deadline and quality – change of scope)

Out of Scope

- Budgeting and detailed allocation of funds to products or “projects”
- Allocation of resources
Levels of Planning

Executive Board: 2 years
- Strictly defined and fixed

TV Portfolio Manager: 18 months
- Roughly defined and flexible

Product Manager: 3 months
- Feature Plan

Team: 2 weeks
- Iterations Sprints

Team Member: 1 day
- Daily Planning
# Portfolio Process: Feature Pipeline

Deliver on Cadence – Release on Demand

<table>
<thead>
<tr>
<th>Business Case</th>
<th>Solution Design</th>
<th>Detailed Design</th>
<th>Realisation</th>
<th>Trial Rollout</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Identify user or business benefits</td>
<td>- Identify key requirements</td>
<td>- Define key requirements in detail</td>
<td>- Implement the feature</td>
<td>- Integrate features into products</td>
</tr>
<tr>
<td>- Outline the feature</td>
<td>- Sketch solution design</td>
<td>- Identify most of the requirements</td>
<td>- Validate user needs and requirements</td>
<td>- Field trial features or product</td>
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<tr>
<td>- Guesstimate size</td>
<td>- Identify key factors</td>
<td>- Design solution and interfaces</td>
<td>- Integrate and test</td>
<td>- Roll out to customers</td>
</tr>
<tr>
<td>- Have stakeholders aligned</td>
<td>- Identify open issues and risks</td>
<td>- Define key test cases</td>
<td>- Build valuable features</td>
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<td>- Convince the board in 3 minutes</td>
<td>- Estimate size</td>
<td>- Estimate effort and refine size</td>
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<tr>
<td></td>
<td>- Convince stakeholders</td>
<td>- Eliminate critical issues and risks</td>
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<tr>
<td></td>
<td>- Convince the board in 10 minutes</td>
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<td>- Deliver valuable products</td>
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</tbody>
</table>

- 1 month
- 1-2 months
- 1 month
- 1-6 months

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Implementation: Portfolio in Rally

<table>
<thead>
<tr>
<th>No Entry (50/∞)</th>
<th>Experience... (15/∞)</th>
<th>Go for Reali... (1/∞)</th>
<th>Solution De... (4/∞)</th>
<th>Go for Impl... (0/∞)</th>
<th>Development (6/∞)</th>
<th>Integration... (1/∞)</th>
<th>Friendly Te... (0/∞)</th>
<th>Rollout (0/∞)</th>
<th>Done (3/∞)</th>
</tr>
</thead>
<tbody>
<tr>
<td>F17S: Ktk upgrade</td>
<td>F63: Persistent Mobile Login</td>
<td>F28: LegacyTV Level Recording</td>
<td>F88: ngIPTV IT High Level Architecture Concept</td>
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<td>F130: Android UI Framework</td>
<td>F18B: TV online Channels Run 2</td>
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<tr>
<td>Parent: E143: Application Backend / Middleware</td>
<td>Parent: E68: TimeShift / NVR</td>
<td>Planned End Date: 2012-11-22</td>
<td>Planned End Date: 2013-02-12</td>
<td></td>
<td>Planned End Date: 2012-07-30</td>
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<td>F149: Secured Client Software Update</td>
<td>F65: R0.3</td>
<td>F10: NEEDS RANKING R0.4</td>
<td>F89: 8 weeks in this column</td>
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Implementation: Artefacts and Tools
Every Feature is pulled through the same Process

- **Goal Definition**
  - Rally

- **Feature Creation**
  - Prio
  - Called “No Entry” in Rally
  - Experience Creation
    - Factsheet Paper & Pencil

- **Portfolio Management**
  - Rally
  - Go for Realisation

- **Design & Build Features**
  - Rally
  - Solution Design
    - Factsheet Paper & Pencil
    - Rally
    - RE & Arch Tools
  - Go for Realisation
  - Go for Implementation
    - Development
      - Rally
    - Integration and Test
      - HPQC
    - Friendly Test
    - Market Trial

- **Roll-out**
  - Rally
  - Go for Rollout

- **Timeline**
  - 1 month
  - 1-2 months
  - 1-6 months
## Feature Prioritisation by Cost of Delay

<table>
<thead>
<tr>
<th>Feature</th>
<th>Benefit</th>
<th>Time Critical</th>
<th>De-Risk</th>
<th>Feature Size</th>
<th>ROI</th>
<th>Rank</th>
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<tr>
<td>Add. platform</td>
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<td>XL</td>
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<td>HUGE</td>
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<td>WebTV offline</td>
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Return (Cost of Delay) = Invest (Duration) \[\text{ROI (WSJF)}\]
Implementation:
Design & Build Features
Implementation: Planning and Reporting
The Implementation: Jump in at the deep end
The Implementation

**Approach**
- Jump in at the deep end

**Preparation**
- Upfront design of the portfolio process
- Trial with one lead platform and selected backend service
- Implementation of tool support (process manual, training material, templates, Rally, MS Sharepoint, HP Quality Center)

**Big Bang**
- Mandatory use of Rally after day 1
- Training in Scrum, Rally, and the portfolio process
- Knowledge sharing lunches (free pizza)
- Individual coaching facility
- Follow-up training in selected methods (e.g. Scrum Product Owner)
Paradigm Shift at IPTV

- Daily portfolio and program reports generated from facts
- Product roadmap based on (small) releasable features as opposed to (large) projects
- Short release-cycle (from 3 months down to 2 weeks)
- Stable teams
  stable teams are assigned to features – instead selecting people for projects
- Global costs
  One global budget for the whole portfolio – no costing on team or feature level
- Lead platform
  Implementation of new features with a lead platform first (together with backend services) – implementation or port to other platforms later
- One way
  Unified approach for planning, execution, and tracking of “projects”
Conclusion

😊 To Improve

- Continuous integration and automated testing is a must! Manual testing adds heavy release costs
- Unclear vision of features and/or ad-hoc changes increase work in progress and considerable rework
- Facts based, consolidated reports from Rally need to be interpreted and properly prepared for management reports (translation layer)
- Too many features in progress due to high pressure for rushing out a lot of functionality (fixed deadline and fixed scope – variable quality)

😊 Big Win

- Planning and reporting are inherently part of the process
- Consistent approach to planning across teams based on “user stories” and integration milestones
- Fast release cycles – two weeks down from three months
- Well prepared features experience less changes and scope creep during implementation
- Real-time, consolidated view over the work of 130 people (from individual’s tasks to midterm and long-term goals)
- Open Rally APIs for customized reports
INVENTIQUE enables individuals, teams, and organisations to continuously adapt and innovate

Immediate Action
- Interims management
- Turnarounds
- Project audits & reviews

Consulting
- Business models
- Product innovation
- Tailored processes & projects

Coaching & Training
- Team development
- Hands-on training
- Coaching of teams & individuals