MM Agile: SCRUM + Automotive SPICE

Electronics – Infotainment & Telematics
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- Introduction
- Why MM Agile Approach?
- How did we align classical and agile approach?
- How do we implement SCRUM?
- How do we take advantage?
Methodology team and SW Manager decided to find a different way for managing the current projects and the result was the application of SCRUM + Automotive Spice for SW Development.

The exposition will present how we applied the SCRUM Framework, with its roles, artifacts and events in our software development context and how we make possible the interaction between the classical approach of project management requested by our customers and the agile project management.
What we have always have in mind and it is important to clarify is that:

- Process Maturity Models like Automotive Spice, CMMI and others reside at the **WHAT** level (the goals) while Agile approaches like SCRUM, Kanban rather are at the **HOW** level (the way to the goals).
WHY MM AGILE APPROACH?

It was just part of our working days!

Releases delivery iteratively and incrementally

Self-organizing teams

Strong effort monitoring

Time boxed activities

Fast feedback loops for the customer and teams.

Rapid response to changes
WHY MM AGILE APPROACH?

Well alignment between MM Roles and SCRUM Roles

Product Owner (Software Project Leader)
- Clearly expresses Product Backlog items;
- Order the items in the Product Backlog to best achieve goals and missions;
- Ensures that the Product Backlog is clear to all;
- Ensures the Development Team understands items in the Product Backlog.

Development Team (Domain Team)
- Are structured and empowered to organize and manage their own work.
- Are cross-functional, with all of the skills necessary to create a product Increment
- Define how to turn Product Backlog items into Increments
- Are responsible for the Sprint Backlog

Scrum Master (Methodology Engineer & Domain Leader)
- Ensures that the Scrum Team adheres to Scrum theory, practices, and rules
- Helps the Development Team to create high-value products;
- Removes impediments to the Development Team’s progress;
- Facilitates Scrum events as requested or needed.
HOW DID WE ALIGN CLASSICAL AND AGILE APPROACH?

**Project SW Time Plan (High Level)**

**HLF Maturity Grades**

**Customer Milestones**

**Project SW Time Plan SCRUM (Low Level)**

HLF is a group of System Requirements that provides clear visibility of the product status implementation.
HOF Maturity Grades

**If no issues or minor issues tolerated by the customer**

**If major regression is highlighted from customer test and is not fixed in the next available delivery**

**If not tolerable issues highlighted during meeting**

**HOW DID WE ALIGN CLASSICAL AND AGILE APPROACH?**

- **MG5**: MG5 planned date
- **MG40**: MG40 planned date
- **MG60**: MG60 planned date
- **MG79**: MG79 planned date
- **MG80**: MG80 planned date

**Project SW Time Plan (High Level)**

- **MG100**: Ready for the Final Customer
- **MG80**: Testable by the Customer
- **MG79**: Testable in general – to be submitted to System Validation and the customer for evaluation
- **MG60**: Testable by specialist
- **MG40**: Evaluable as single function
- **MG5**: Implementation can start
HOW DO WE IMPLEMENT SCRUM?

Jira type <<EPIC>> is linked to a single HLF
**HOW DO WE IMPLEMENT SCRUM?**

[EPIC] HLF_1777-USB play/pause

**Details**
- **Type:** Epic
- **Priority:** Low
- **Affects Version/s:** None
- **Labels:** None
- **Epic Name:** [EPIC] HLF_1777-USB play/pause
- **Domain:** HMI
- **Function:** HMI
- **Area:** Application Software
- **Status:** Open (View Workflow)
- **Resolution:** Unresolved
- **Fix Version/s:** None
- **Security Level:** Private

**Description**
*Click to add description*

**Issue Links**
- relates to [ALFA-470 HLF_1777 - Media play/pause]

**HLF Object**
Product Backlog

- The HLF (EPIC) is composed of internal «touchable» products.
- The task to perform in the Story should be selected from the Standard SW WBS.

HOW DO WE IMPLEMENT SCRUM?
HOW DO WE IMPLEMENT SCRUM?

Task List (SW WBS):
- SW Technical Requirements
- SW Technical Requirements\ Review
- SW Design
- SW Design\ High Level
- SW Design\ Detail Level
- SW Design\ Review
- SW Construction
- SW Construction\ Unit Testing, Review, Automatic Review
- SW Integration

- SW Integration\ Review, SW Integration Testing
- SW Integration Testing\ Review, SW Integration Testing
- SW Testing\ Review, SW Testing
- Support\ Defect Management
- Support\ Change Management
- Support\ Project Training
- Support\ Configuration Management
- Support\ SYS-SW Quality Assurance
- SW Function Planning & Scheduling
- SW Function Monitoring & Control
- SW Function Supplier Management
**Sprint Backlog**

The Sprint Backlog is a forecast by the Development Team about what functionality will be in the next Increment and the work needed to deliver that functionality into a “Done” Increment. A new Sprint starts immediately after the conclusion of the previous Sprint. Sprints contain and consist of the Sprint Planning, Daily Scrums, the development work, the Sprint Review, and the Sprint Retrospective.
# HOW DO WE TAKE ADVANTAGE?

## Continuous and Timeboxed Monitoring/Control

### Burn down Chart

![Burn down Chart]

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<th>Date</th>
<th>Issue</th>
<th>Event Type</th>
<th>Event Detail</th>
<th>Time Spent</th>
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Continuous and Timeboxed Monitoring/Control

Velocity Chart

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<th>Sprint</th>
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<td>5w 2d 2h</td>
<td>6w 1d 2h</td>
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HOW DO WE TAKE ADVANTAGE?

Continuous and Timeboxed Monitoring/Control

Milestones Dashboard

FDR2 cutoff date
12 - December - 2014

Giorgio Project
FDR2 HLFs

FDR2_HLFs: 249

- Closed: 1 (0.4%)
- Approved: 12 (4.8%)

MG 90: 46 (18.5%)
MG 5: 57 (22.9%)
MG 75: 67 (26.9%)
MG 49: 17 (6.8%)
MG 60: 49 (19.7%)

Legend:
- Closed
- Approved
- MG 5
- MG 40
- MG 60
- MG 75
- MG 80
Continuous and Timeboxed Monitoring/Control

HLF Ramp-Up Actual Vs. Planned
Continuous and Timeboxed Monitoring/Control

How do we take advantage?

Baselined VS Re planned
Continuous and Timeboxed Monitoring/Control

Target Defect Convergence Curve
Phase Containment Effectiveness
THANKS!