



MM Agile: SCRUM + Automotive SPICE

Electronics – Infotainment & Telematics

- 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, whit 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.

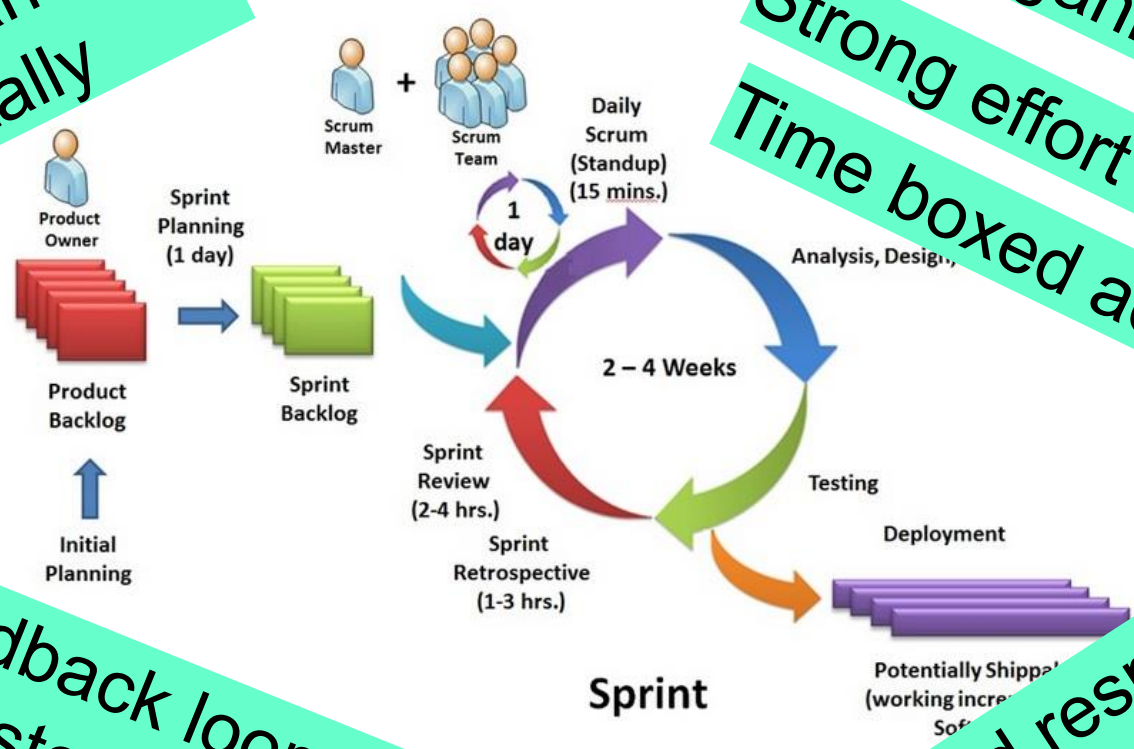
- What we have always have in mind and it is important to clarify is that:
 - Process Maturity Models like Automotive Spice, CMMI and others reside at the **WHAT** level (the goals) while Agile approaches like SCRUM, Kanban rather are at the **HOW** level (the way to the goals).

WHY MM AGILE APPROACH?

Releases delivery iteratively and incrementally

It was just part of our working days!

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

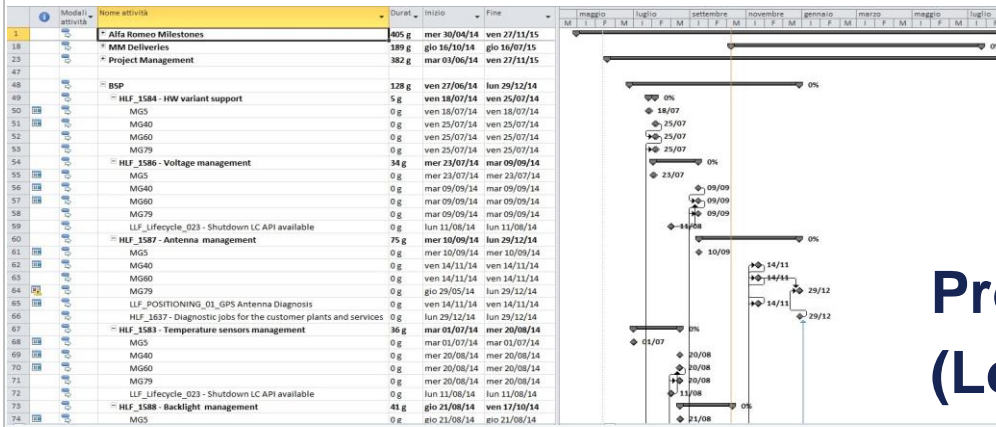
Scrum Master (Methodology Engineer & Domain Leader)

- 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?



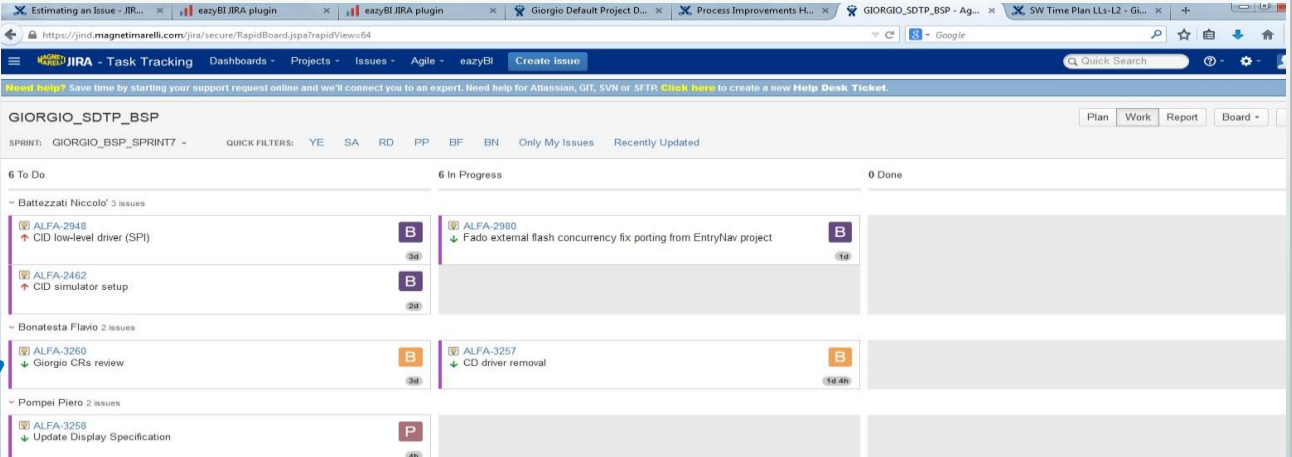
Project SW Time Plan (High Level)



Customer Milestones

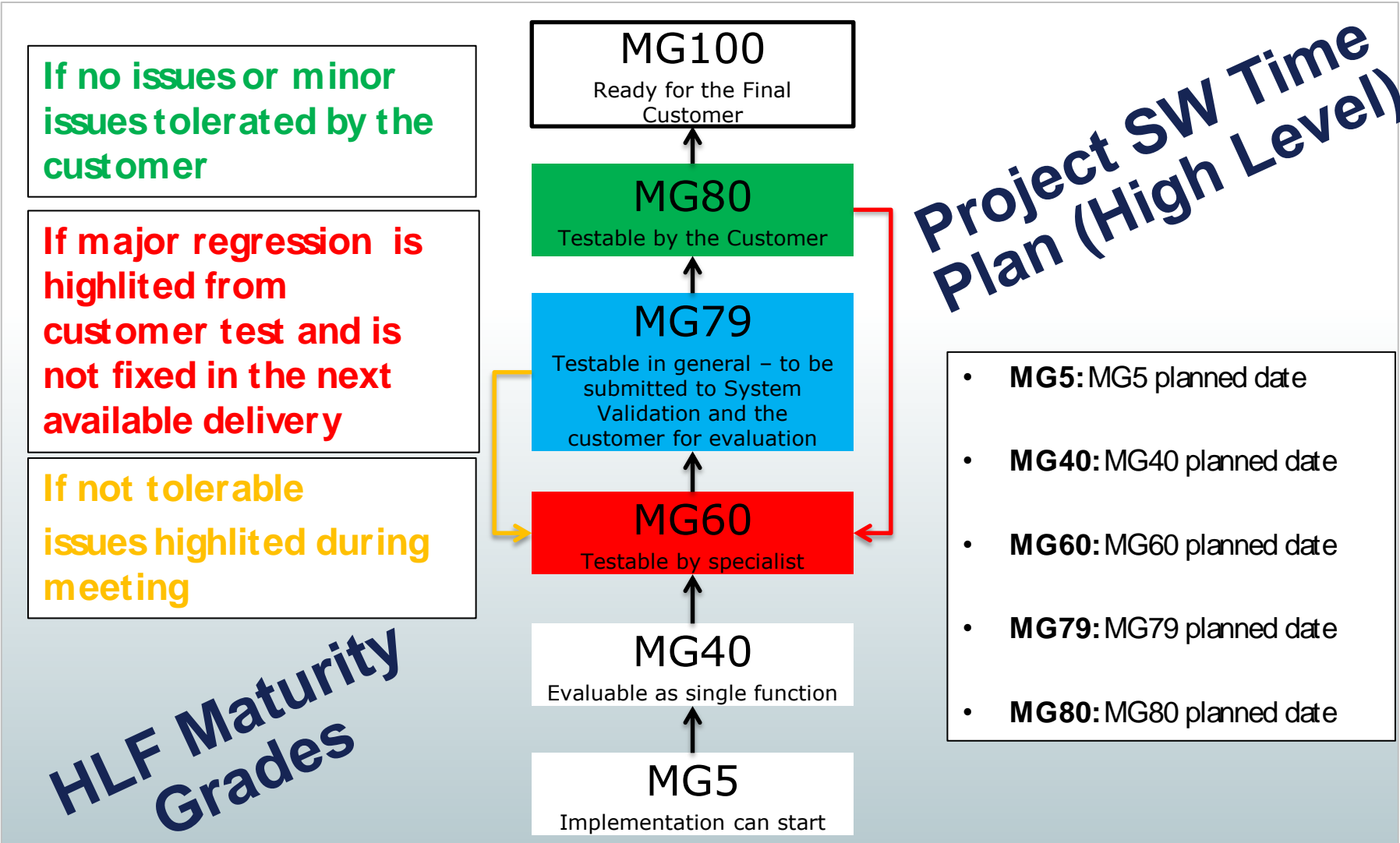
Project SW Time Plan SCRUM (Low Level)

HLF Maturity Grades



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

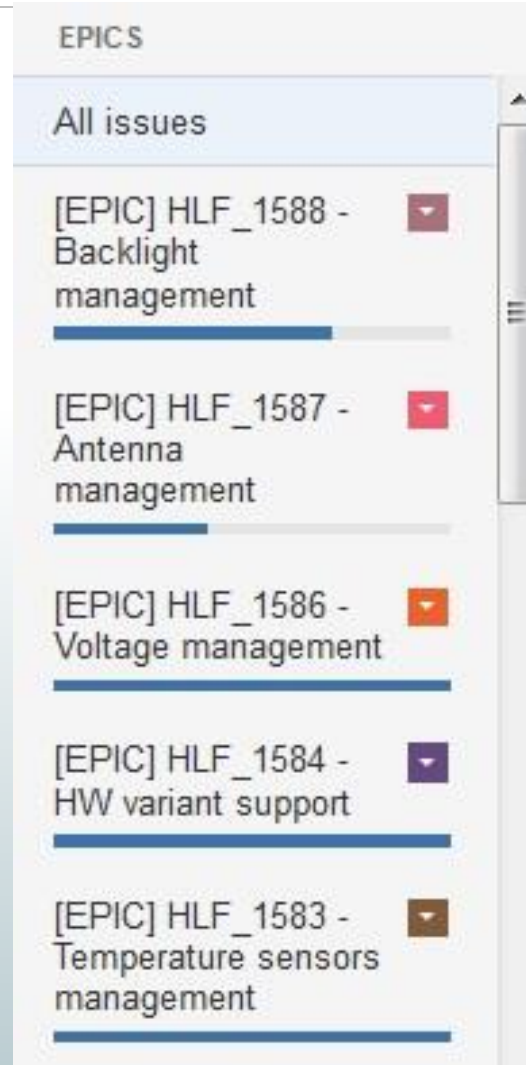
HOW DID WE ALIGN CLASSICAL AND AGILE APPROACH?



HOW DO WE IMPLEMENT SCRUM?



**Jira type
<<EPIC>> is
linked to a
single HLF**



HOW DO WE IMPLEMENT SCRUM?



Giorgio Project / ALFA-822
[EPIC] HLF_1777-USB play/pause

- Edit
- Comment
- Assign
- More ▾
- Resolve Issue
- Close Issue

Details

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

Description

[Click to add description](#)

Issue Links

relates to ALFA-470 HLF_1777 - Media play/pause

HLF Object

Create Epic

Configure Fields ▾

Project* Giorgio Project ▾

Issue Type* Epic ▾

Epic Name*
Provide a short name to identify this epic in the JIRA Agile boards.

Summary*

Linked Issues ▾
 +
Begin typing to search for issues to link. If you leave it blank, no link will be made.

Domain ▾

Function ▾

Area ▾
(Radionav Area)

Security Level* ▾

Create another

HOW DO WE IMPLEMENT SCRUM?



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**.

Create Issue Configure Fields

Project*

Issue Type* ?

WBS*
SW Design
SW Construction
SW Function Integration
SW Function Verification

Summary*

Priority ?

Assignee
[Assign to me](#)

Original Estimate (eg. 3w 4d 12h) ?
The original estimate of how much work is involved in resolving this issue.

Remaining Estimate (eg. 3w 4d 12h) ?
An estimate of how much work remains until this issue will be resolved.

Epic Link
Choose an epic to assign this issue to.

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

- ▼ Deliverable Plan & Working Areas
 - Deliverable Plan - HOW TO
 - › Program Management
 - › Requirement and Architecture Management
 - › Product Development
 - › Software Development
 - › SIV & Delivery
 - ▼ SW Function Management
 - ▼ **BSP**
 - BSP Detail Software Module Design
 - BSP SW Function Progress Report
 - › BSP Retrospective
 - › BSP Working Area
 - › CONNECTIVITY
 - › HMI
 - › HOUSEKEEPING & DIAGNOSTIC
 - › MULTIMEDIA
 - › NAVIGATION & POSITIONING
 - › NETWORK & LIFECYCLE

BSP

Created by Rocio Cecilia Rojas, last modified by Zaniratti Eugenia on Oct 24, 2014

SW WBS	Official Deliverables	Acronym	Owner	Project Availability	Repository	Path
SW Function Planning and Scheduling	SW Function Development Plan	SFDP	Function Leader Feature Reference	NO	Confluence	Included in: Software Development Plan
	SW Function Time Plan L3	SDTP	Function Leader Feature Reference	YES	JIRA	GIORGIO SW Detail Time Plan L3 BSP SCRUM
	Sizing		Feature Reference Function Architect	YES	JIRA	GIORGIO SW Detail Time Plan L3 BSP SCRUM
	SW Function Workload Plan		Function Leader Feature Reference	YES	JIRA	GIORGIO SW Detail Time Plan L3 BSP SCRUM
	SW Function Verification & Testing Plan	SVTP	Function Leader Feature Reference			
SW Function Monitoring and Control	SW Function Progress Report		Function Leader Feature Reference	YES	Confluence	BSP SW Function Progress Report
	SW Function Time Tracking		Function Leader Feature Reference	YES	JIRA	GIORGIO SW Detail Time Plan L3 BSP SCRUM

HOW DO WE IMPLEMENT SCRUM?



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.

GIORGIO_HMI

Plan Work Report Board ⌵ ⌵

SPRINT: Sprint 1 ▾ QUICK FILTERS: Only My Issues Recently Updated

3 To Do 1 In Progress 0 Done

▼ HLF_1778 - Media seek + 2 issues

- SP-60 (Z) HLF_1778 - SW Design (2)
- SP-59 (R) HLF_1778-SW Technical Requirements (2)

▼ HLF_1814 - Light Settings 2 issues

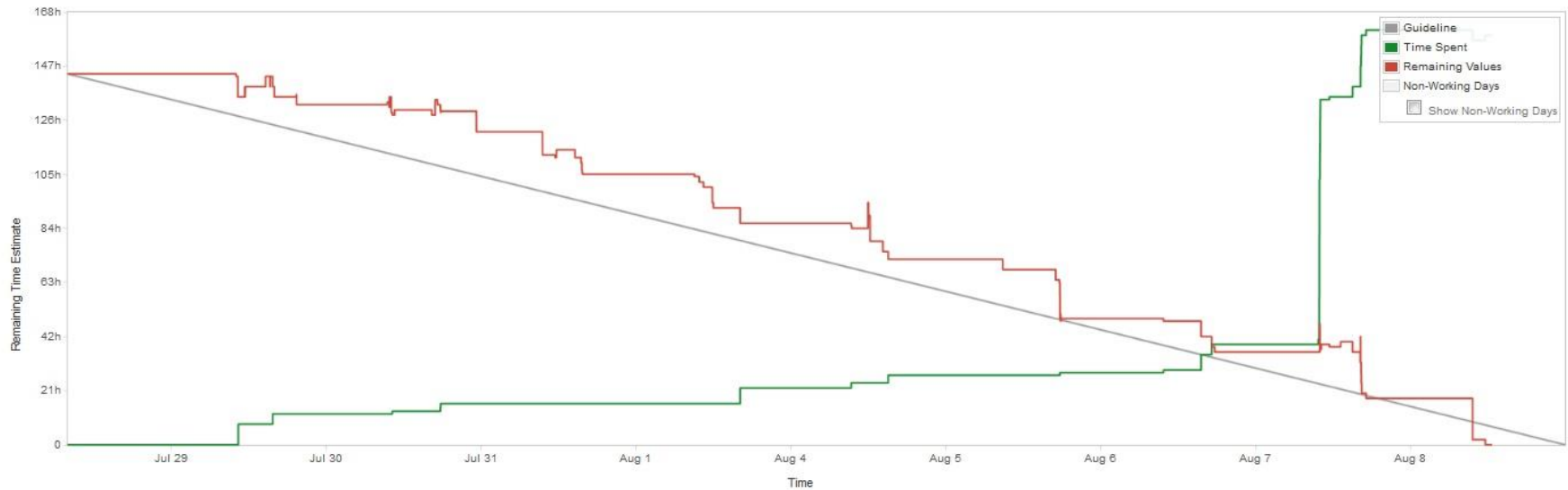
- SP-61 (R) HLF_1814- SW Technical Requirements (1)
- SP-62 (Z) HLF_1814 - SW Design (1)

HOW DO WE TAKE ADVANTAGE?



Continuous and Timeboxed Monitoring/Control

Burn down Chart



Date	Issue	Event Type	Event Detail	Time Spent			Remaining Time Estimate		
				Inc.	Dec.	Sum	Inc.	Dec.	Remaining
28/07/2014 08:00	ALFA-1442	Sprint start		-			4h		
	ALFA-1443			-			2h		
	ALFA-1444			-			6h		
	ALFA-1445			-			2h		
	ALFA-1446			-			6h		
	ALFA-1447			-			2h		
	ALFA-1448			-			3h		
	ALFA-1449			-			3h		
	ALFA-1450			-			6h		

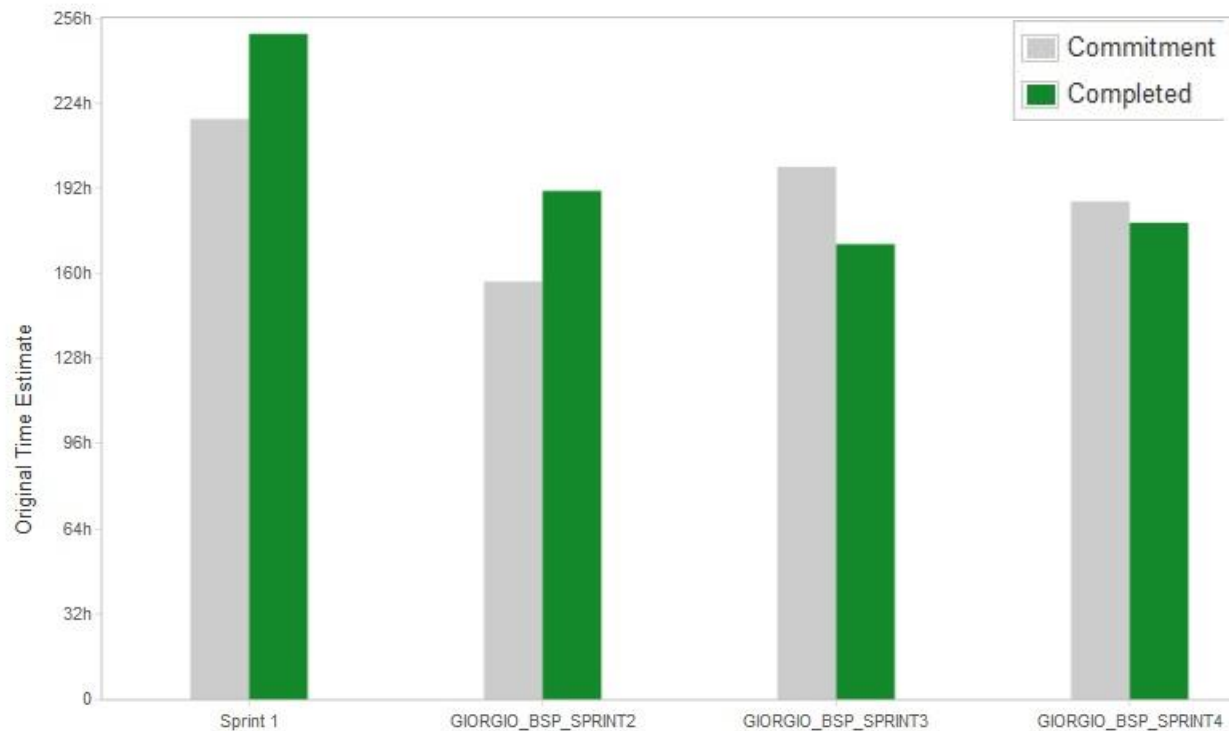
HOW DO WE TAKE ADVANTAGE?



Continuous and Timeboxed Monitoring/Control

Velocity Chart

Velocity Chart



Sprint **Commitment** **Completed**

Sprint 1 5w 2d 2h 6w 1d 2h

HOW DO WE TAKE ADVANTAGE?



Continuous and Timeboxed Monitoring/Control

Milestones Dashboard

FDR2 cutoff date

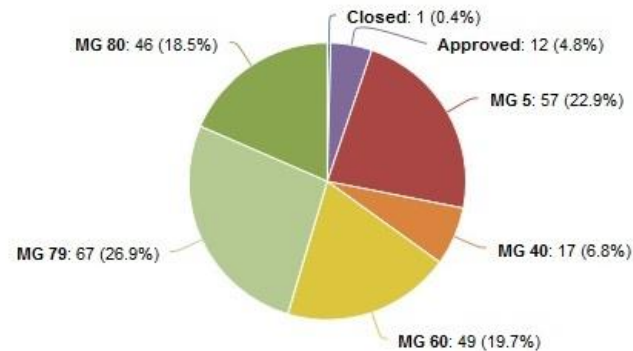
12 - December - 2014

Giorgio Project

FDR2 HLFs

HLF ▾

FDR2_HLFs: 249



■ Closed ■ Approved ■ MG 5 ■ MG 40 ■ MG 60 ■ MG 79 ■ MG 80

HOW DO WE TAKE ADVANTAGE?



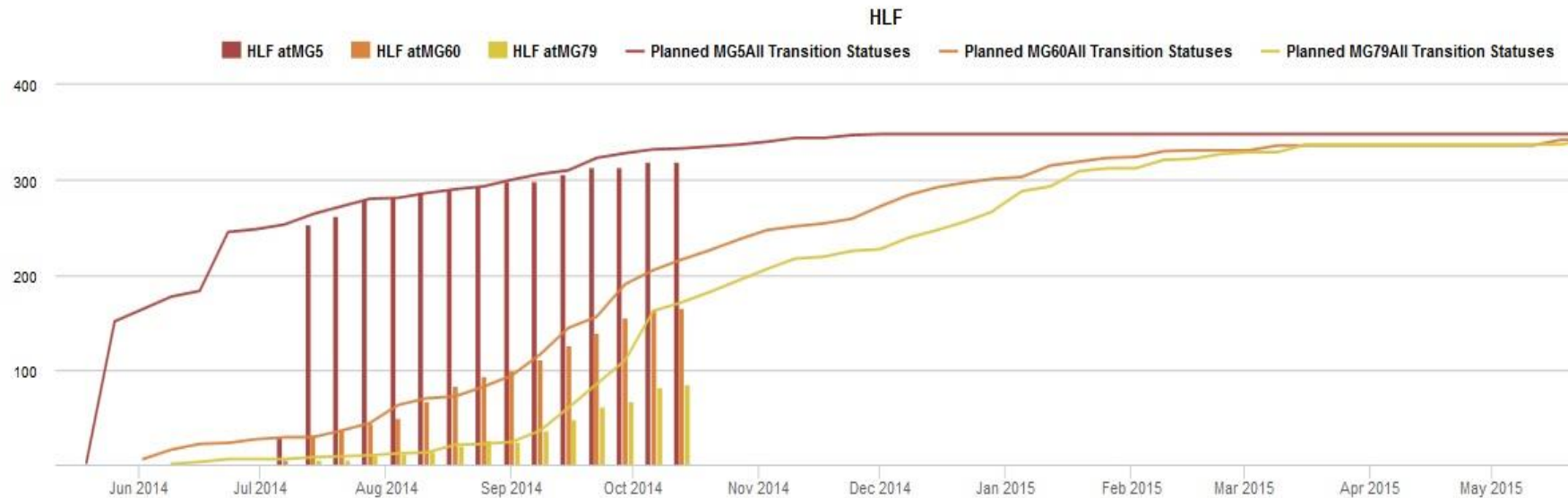
Continuous and Timeboxed Monitoring/Control

HLF Ramp-Up Actual Vs. Planned

Giorgio Project

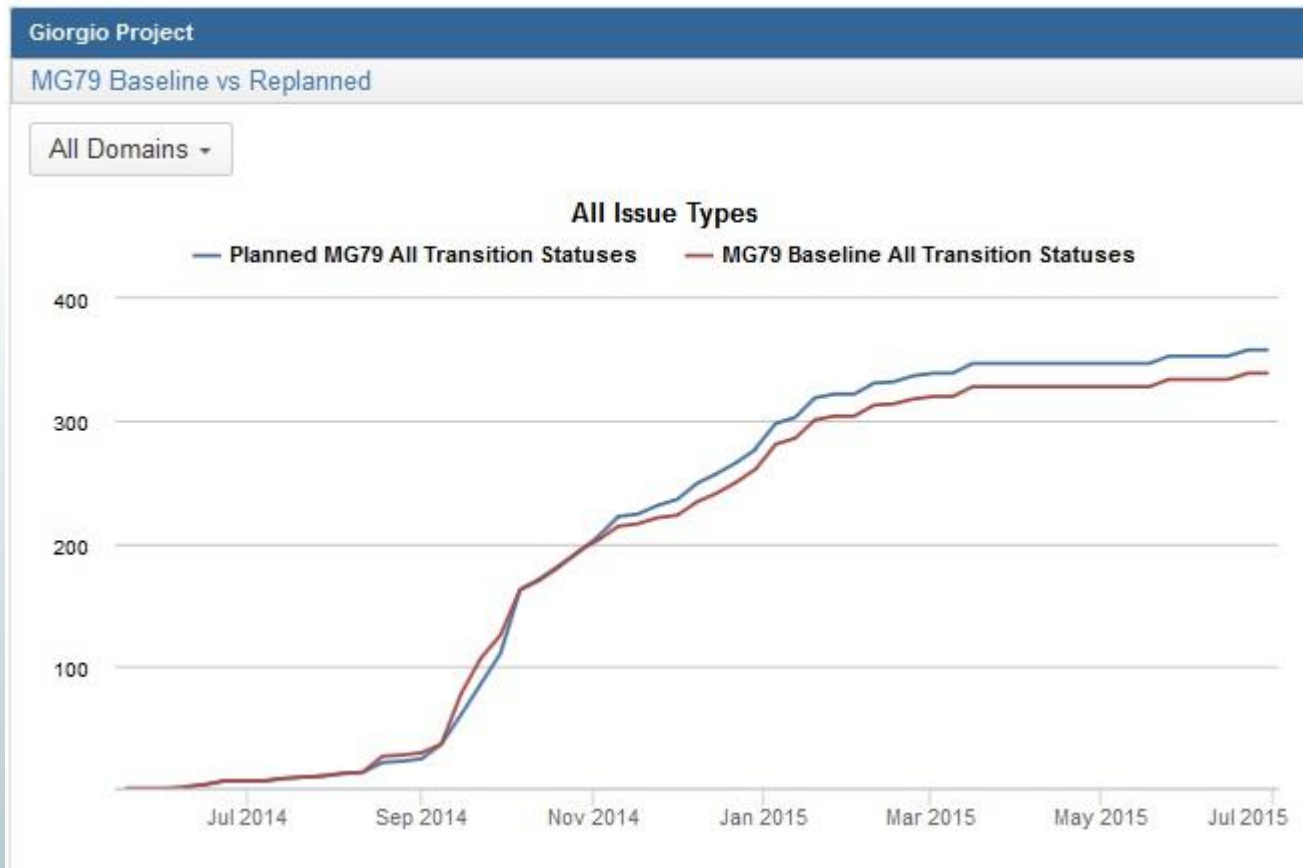
HLF Ramp-up Actual vs Planned

All Domains ▾



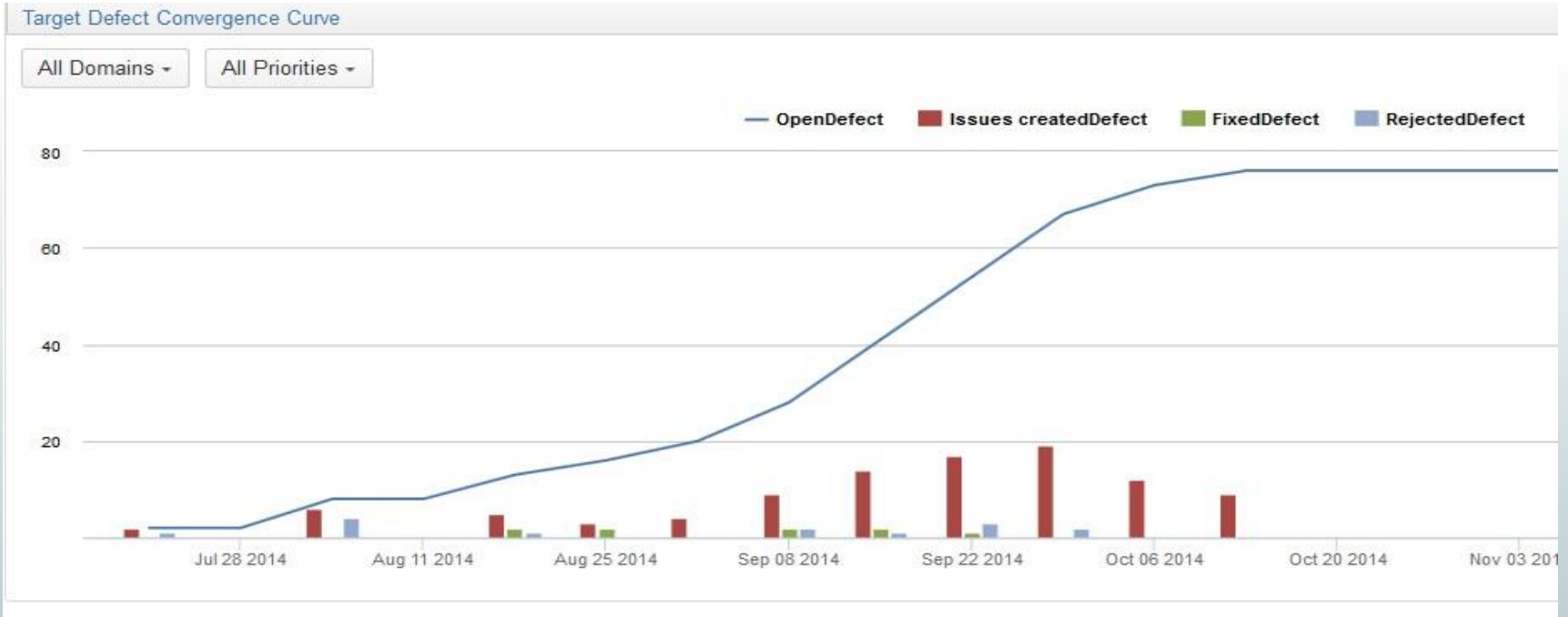
Continuous and Timeboxed Monitoring/Control

Baselined VS Re planned



Continuous and Timeboxed Monitoring/Control

**Target Defect Convergence Curve
Phase Containment Effectiveness**



THANKS!