



DIGITAL TRANSFORMS PHYSICAL

# Agile-Waterfall Hybrid Template

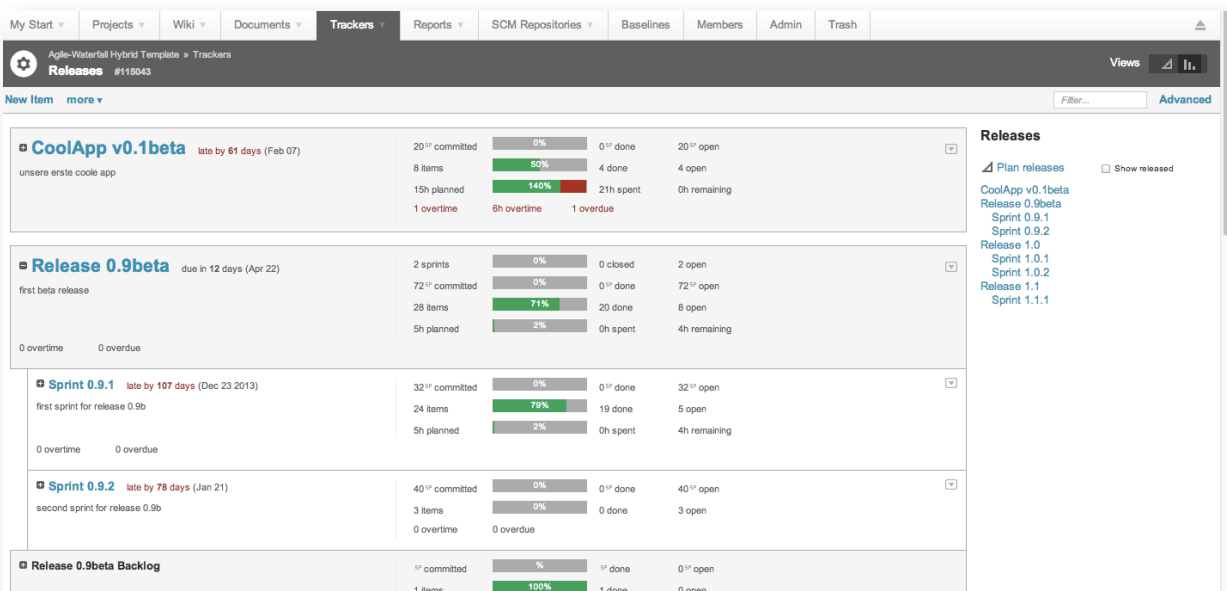


# Agile-Waterfall Hybrid Template

Agile (and Scrum), and the Waterfall/V-model seem to be fundamentally different methods. They may, however, be complementary in complex, n-tier architecture development. In the case of system of systems development for the Internet of Things, for example, (scaled) Agile/Scrum, Waterfall/V-model and Hybrid release streams may be combined during the development of hardware, software, and service components.

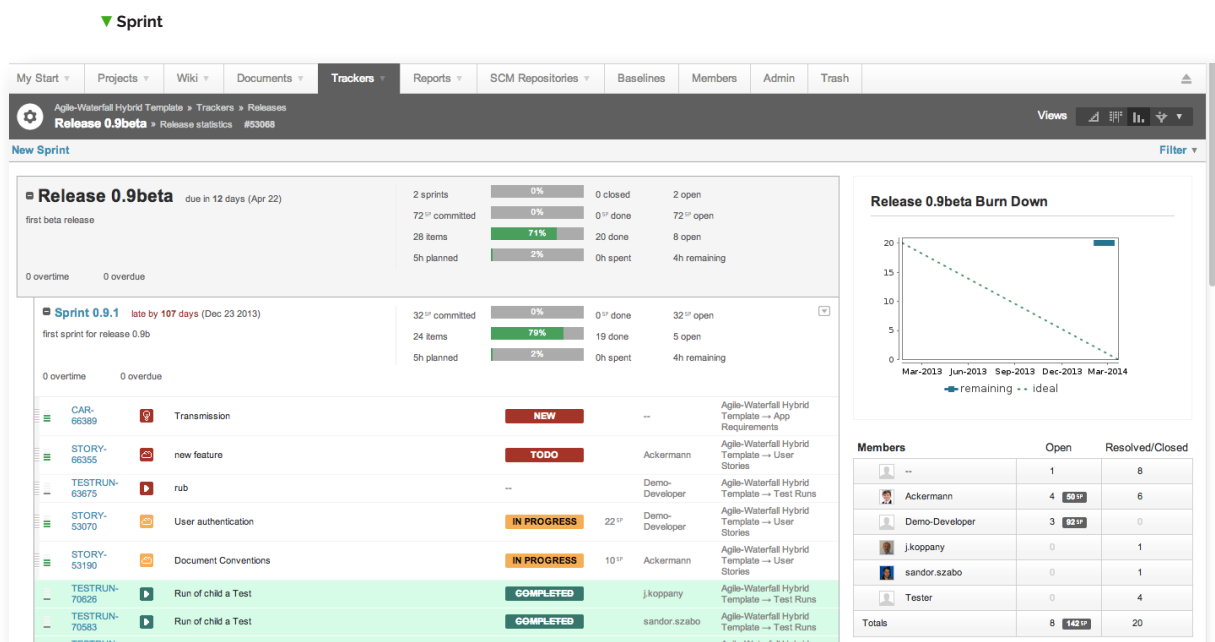


## ▼ Release



## The main elements of Codebeamer's Agile-Waterfall Hybrid Template

- **Software user stories** are used in Agile/Scrum to define the basic unit of work for the Agile development team. **Tasks** generated from user stories can be attached to sprints, and assigned to team members.
- **System requirements** (requirements of hardware & architecture, as well as software requirements) describe the basic system architecture and design, both hardware and software.
- **Change Request** and **Bugs** are requests coming from Product Owners or Users to fix bugs or change certain features. A user-friendly Service Desk option is available to help users conveniently submit issues.
- **Test Management** features cover requirements-based testing (traceability from requirements to test cases) and parametrized testing on multiple hardware and software configurations. **Test cases** may be saved and re-used, executed manually or automatically, and their results as well as the test coverage of all requirements analyzed.
- **Release and Sprint planning** is supported by the Agile Planning Board with release statistics and Gantt charts. The planner offers a convenient drag & drop feature to create and manage release hierarchies and to edit releases using the Gantt chart.

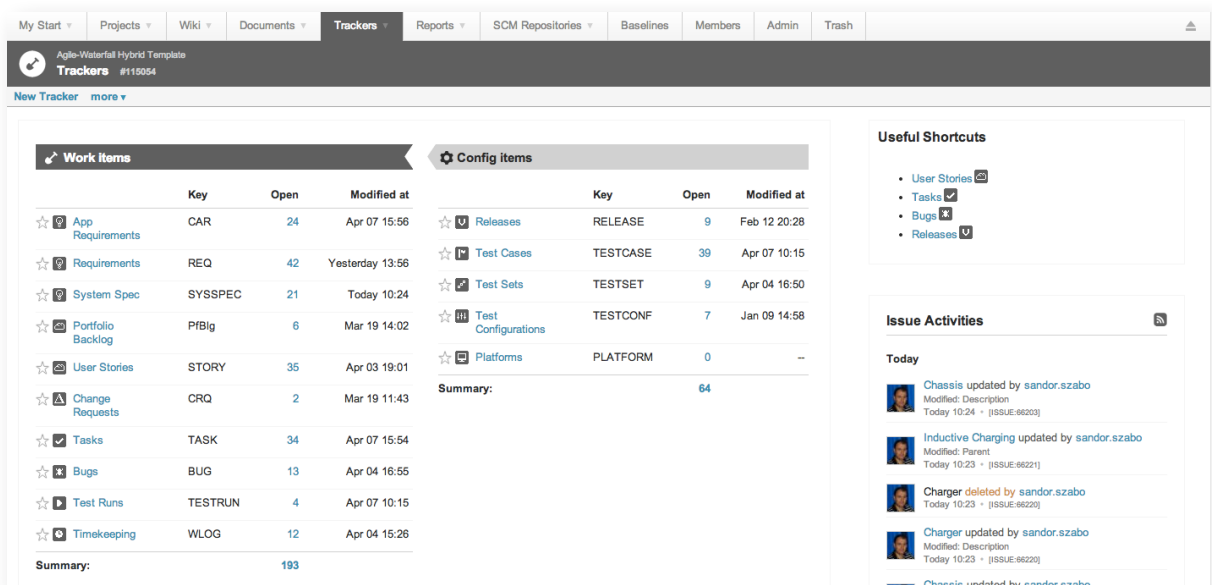


## Typical use cases for Agile-Waterfall Hybrid development

1. Product (system of systems) development for the Internet of Things = Hardware + Software + Service development lifecycles.
2. N-tier application development with legacy processes: software development is gradually modernized by adopting Agile, while collaboration with hardware teams (still using a Waterfall process) is important.

## The benefits of using an Agile-Waterfall Hybrid approach in development

- Development units may keep using their tried and tested development methods while collaborating on a single product with other units that are adopting Agile.
- Easier adaptation to changes, with a focus on delivering quality products on time and on budget. The Waterfall/V-model component supports sticking to the predefined plan regarding the basic system architecture. The Agile component improves collaboration and enables teams to flexibly and efficiently adapt to changing requirements.
- Using the Hybrid methodology is greatly supported by our platform's Product Line Engineering functionality. This helps re-use and adapt software code to further variants of the same product, saving time and resources when dealing with a series of largely similar products.



The screenshot displays the Codebeamer interface for the Agile-Waterfall Hybrid Template. The top navigation bar includes links for My Start, Projects, Wiki, Documents, Trackers (active), Reports, SCM Repositories, Baselines, Members, Admin, and Trash. Below the navigation bar, the main content area is divided into two columns. The left column, titled 'Work items', contains a table of various work items with columns for Key, Open, and Modified at. The right column, titled 'Config items', contains a table of configuration items with columns for Key, Open, and Modified at. A 'Summary' row at the bottom of the Config items table shows a total of 64 items. On the far right, there is a 'Useful Shortcuts' section with links to User Stories, Tasks, Bugs, and Releases, and an 'Issue Activities' section showing a list of recent issue updates.

Work items	Key	Open	Modified at
App Requirements	CAR	24	Apr 07 15:56
Requirements	REQ	42	Yesterday 13:56
System Spec	SYSSPEC	21	Today 10:24
Portfolio Backlog	PIBig	6	Mar 19 14:02
User Stories	STORY	35	Apr 03 19:01
Change Requests	CRQ	2	Mar 19 11:43
Tasks	TASK	34	Apr 07 15:54
Bugs	BUG	13	Apr 04 16:55
Test Runs	TESTRUN	4	Apr 07 10:15
Timekeeping	WLOG	12	Apr 04 15:26
<b>Summary:</b>		<b>193</b>	

Config items	Key	Open	Modified at
Releases	RELEASE	9	Feb 12 20:28
Test Cases	TESTCASE	39	Apr 07 10:15
Test Sets	TESTSET	9	Apr 04 16:50
Test Configurations	TESTCONF	7	Jan 09 14:58
Platforms	PLATFORM	0	--
<b>Summary:</b>		<b>64</b>	

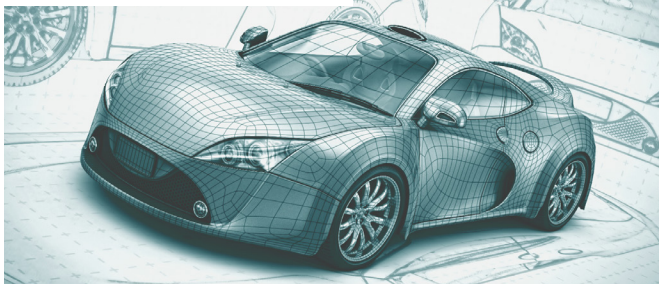
**Useful Shortcuts**

- User Stories
- Tasks
- Bugs
- Releases

**Issue Activities**

**Today**

- Chassis updated by sandor.szabo  
Modified: Description  
Today 10:24 • [ISSUE:66203]
- Inductive Charging updated by sandor.szabo  
Modified: Parent  
Today 10:23 • [ISSUE:66221]
- Charger deleted by sandor.szabo  
Today 10:23 • [ISSUE:66220]
- Charger updated by sandor.szabo  
Modified: Description  
Today 10:23 • [ISSUE:66220]
- Chassis updated by sandor.szabo



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