



***openETCS ITEA* final Review**

WP7 – Toolchain Development

supported by:



Federal Ministry
of Education
and Research



Région de
Bruxelles-
Capitale



GOBIERNO
DE ESPAÑA

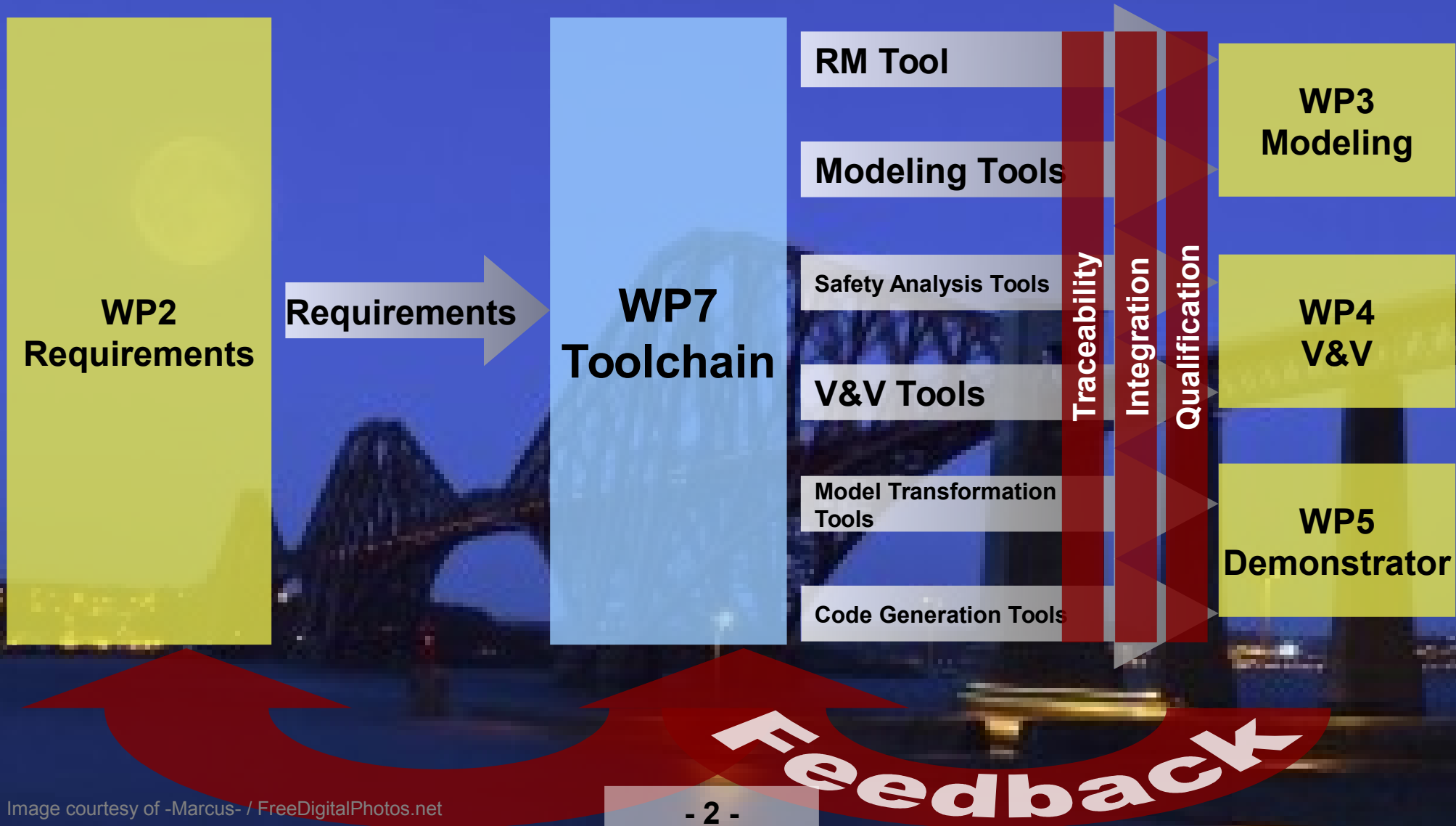
MINISTERIO
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E INNOVACIÓN

openETCS@ITEA2 Project

Michael Jastram

Munich, December 12th, 2015

The Big Picture



Workpackage Structure



WP7 Toolchain

Michael Jastram / Formal Mind

T7.1 Primary Toolchain

Marielle Petit-Doche / Systere

T7.2 Secondary Toolchain

Marielle Petit-Doche / Systere

T7.3 Toolchain Development

Michael Jastram / Formal Mind

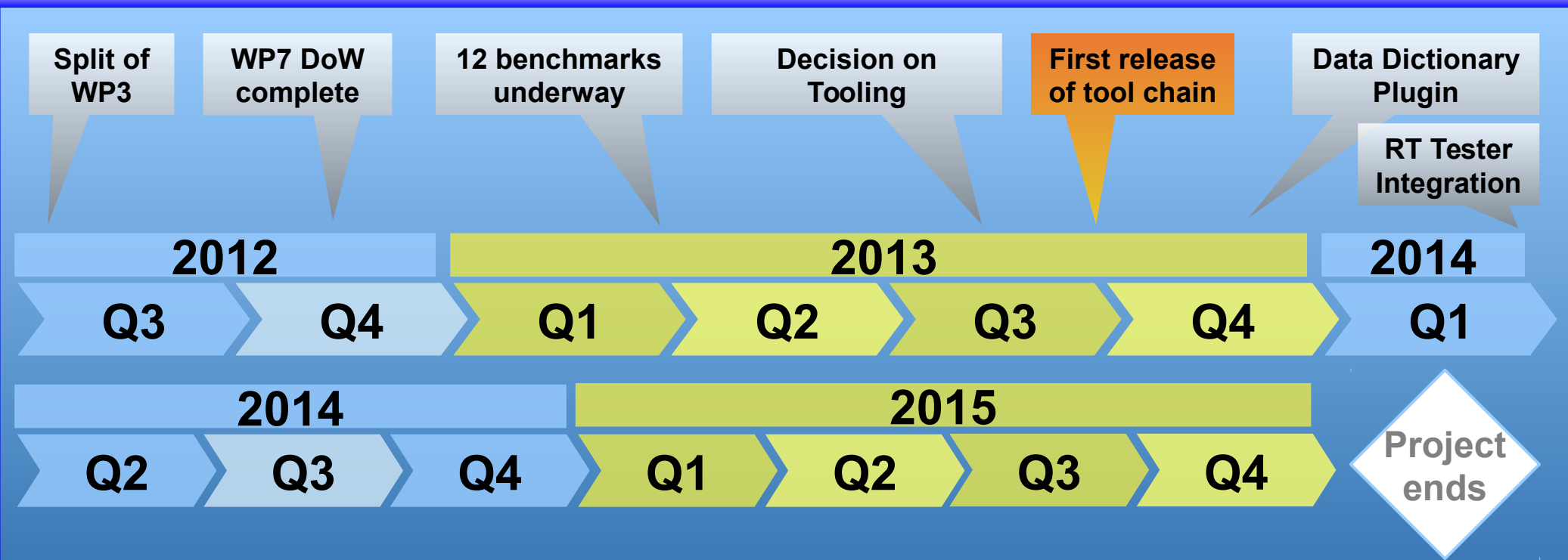
Cécile Braunstein / University Bremen

T7.4 Ecosystem

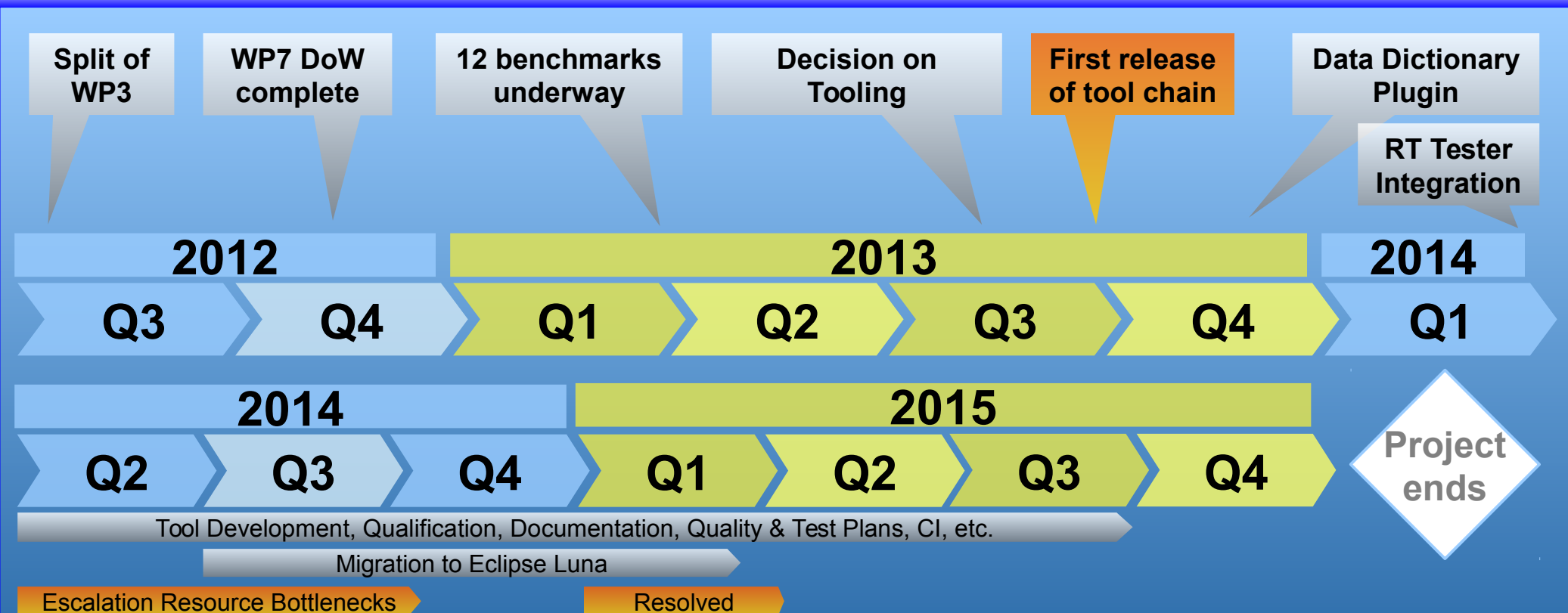
Michael Jastram / Formal Mind

Jonas Helming / EclipseSource

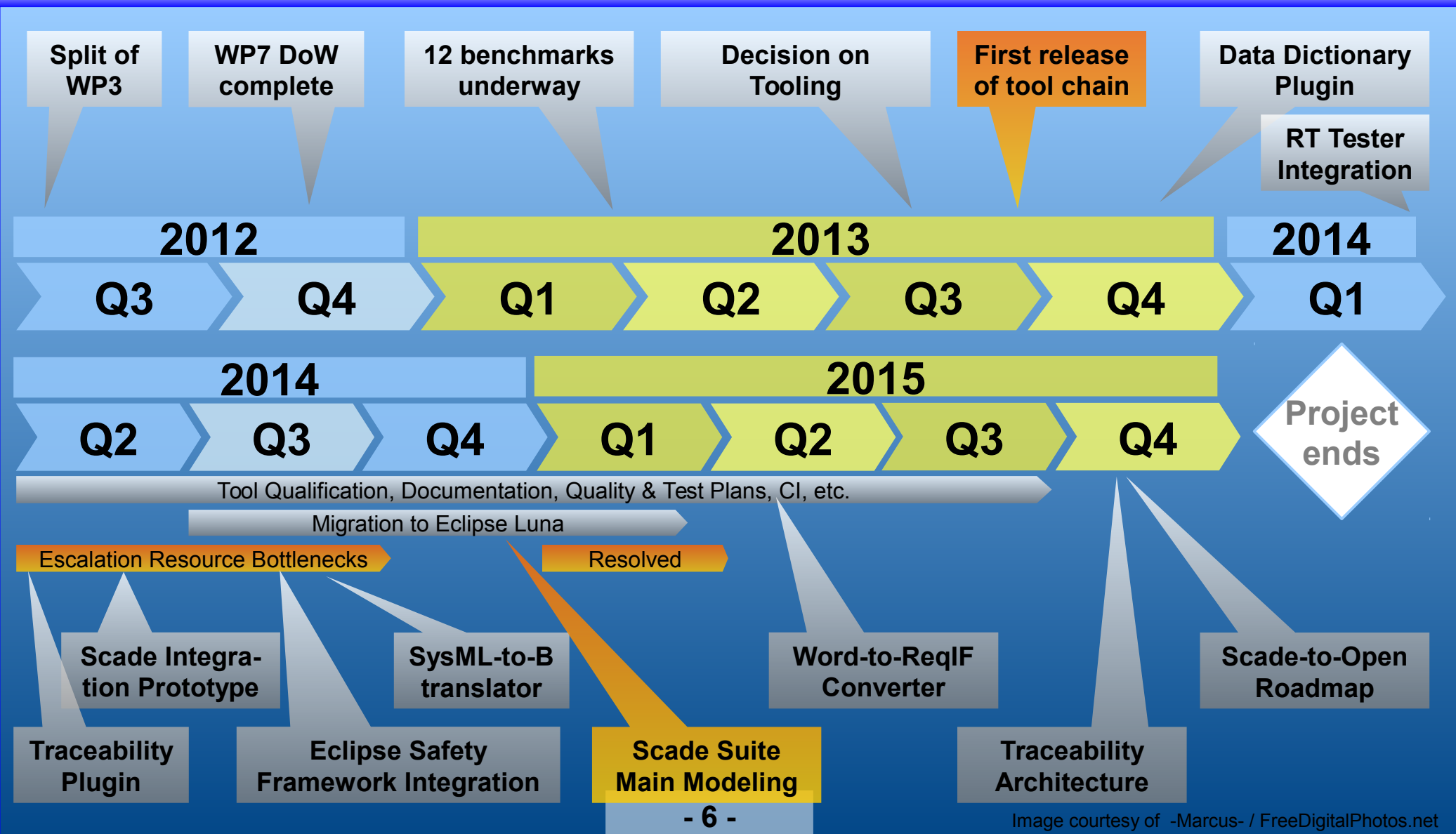
Timeline



Timeline



Timeline



Status Deliverables

D7.1: Evaluation Primary Tools: Delivered

D7.2: Evaluation Secondary Tools: Delivered

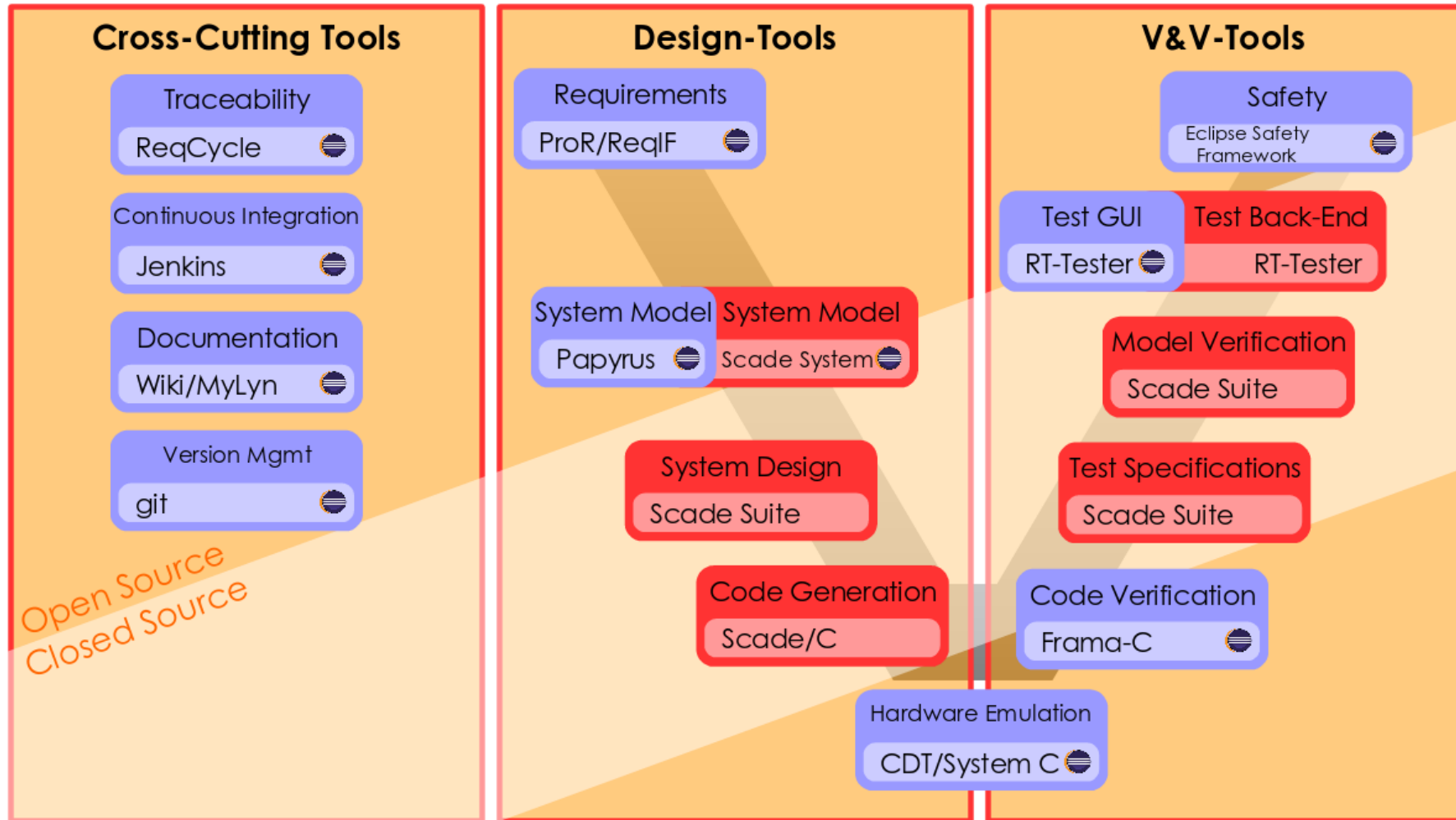
D7.3: Qualification Process: Delivered

D7.4: First Toolchain Release: Delivered

D7.5: Ecosystem Artefacts: Delivered

DELIVERED

Final Toolchain



Alternative Tool
ERTMS Formal Specs

● = Eclipse-based Tool

Achievements

Production Quality

- openETCS Tool (D7.3)
- openETCS Tool Build Infrastructure
- Tool Documentation Plugin
- ERTMSFormalSpecs
- Subset-openETCS-Translation
- CI for Modeling
- Eclipse Safety Framework Integration
- RT-Tester Integration
- Bitwalker Data Dictionary

Prototypes

- SysML Constraints Checks
- SysML-to-Scade
- SysML-to-B
- SysML-to-C/Frama-C
- SysML-to-System-C
- ReqCycle Integration

Documents/Studies

- Tooling Analysis (D7.1, D7.2)
- openETCS User Handbook
- Traceability Architecture Roadmap
- Migration Roadmap Scade2Open
- Test-Plan
- Qualification-Plan



Demo

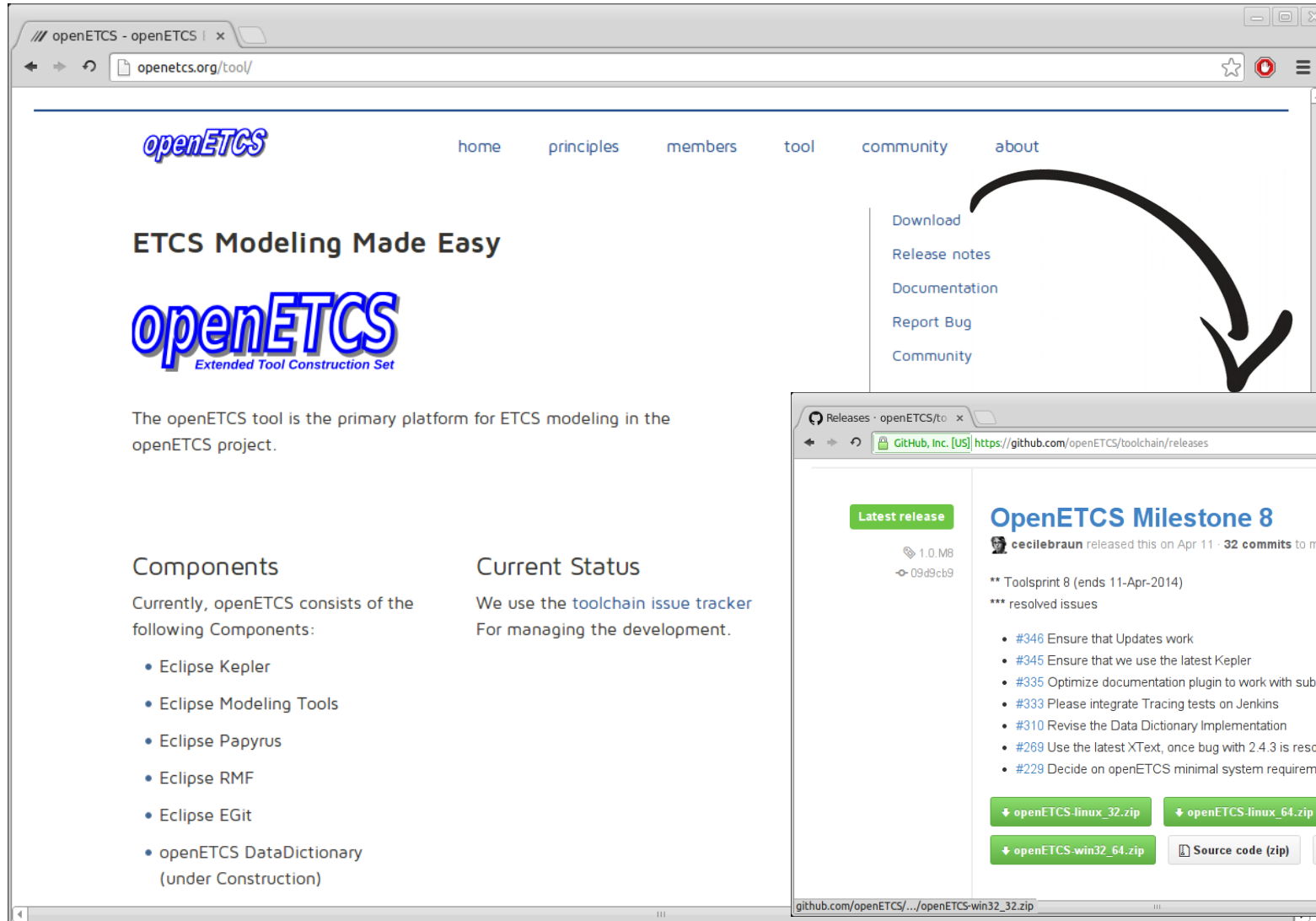




eclipse safety
framework

/home/jastram/git/toolchain/itea_Reviews/2015/OETCS-TestVideo.mp4

openETCS: open Extended Tool Construction Set



The image shows two overlapping browser windows. The top window displays the openETCS website at openetcs.org/tool/. The website features a navigation bar with links: home, principles, members, tool, community, and about. A large arrow points from the 'Download' link in the 'community' menu to the GitHub releases page shown in the bottom window. The bottom window displays the GitHub releases page for the openETCS toolchain at <https://github.com/openETCS/toolchain/releases>. The page highlights the 'Latest release' as 'OpenETCS Milestone 8', released on April 11, 2014, with 32 commits. It lists several resolved issues and provides download links for various operating systems and architectures.

openETCS
ETCS Modeling Made Easy

The openETCS tool is the primary platform for ETCS modeling in the openETCS project.

Components
Currently, openETCS consists of the following Components:

- Eclipse Kepler
- Eclipse Modeling Tools
- Eclipse Papyrus
- Eclipse RMF
- Eclipse EGit
- openETCS DataDictionary (under Construction)

Current Status
We use the [toolchain issue tracker](#) For managing the development.

Download
Release notes
Documentation
Report Bug
Community

Latest release
1.0. M8
09d9cb9

OpenETCS Milestone 8
cecilebraun released this on Apr 11 · 32 commits to master since this release

** Toolspint 8 (ends 11-Apr-2014)
*** resolved issues

- #346 Ensure that Updates work
- #345 Ensure that we use the latest Kepler
- #335 Optimize documentation plugin to work with subpages
- #333 Please integrate Tracing tests on Jenkins
- #310 Revise the Data Dictionary Implementation
- #269 Use the latest XText, once bug with 2.4.3 is resolved
- #229 Decide on openETCS minimal system requirements

openETCS-linux_32.zip openETCS-linux_64.zip openETCS-win32_32.zip
openETCS-win32_64.zip Source code (zip) Source code (tar.gz)

Outlook

Lessons Learned (WP7)

- Starting project without tool choice created challenges
- Required development effort greatly underestimated

Goals for future research project

- Provide Scade alternative
- Encourage tool use
- Improve on ease of use, scalability and integration



Thank you for your attention

