

Agile Methods

**Ship Happens! - using our practical approach
to developing great software**

Dr. Till Bay
Geschäftsleiter

Dr. Michela Pedroni
Projektmanager

co
merge

CONTENT

who we are

Company Profile.

what we do

Software Systems.

how we work

Our Process.

GOALS: you will learn...

what agile methods are

how they can be put to practice

that agile methods \neq no process

About Comerge AG



HISTORY

In 2008

Founded by Till Bay and Bernd Schoeller.

- > Official ETH Spin-Off
- > Constant growth in the last 3 years
- > Currently 12 employees

About Comerge AG



PEOPLE

- > 8 software engineers (ETH Zürich, FH)
- > 1 Art Director / Designer
- > 1 Administrative Staff
- > 1 Apprentice
- > 1 Advisor

About Comerge AG



SOFTWARE

Software you like

- > **Business Software:** Eclipse Rich Client Platform
- > **Mobile:** iOS & Android
- > **Web:** Google Web Toolkit, J2SE, Drupal

Why? We believe in code.



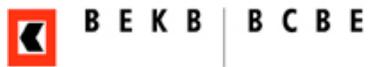
CODE

We believe in code, not in doc

We want to see IT.

- > Meaningful systems are too complex to specify
- > We will always forget something, so we make sure we're fit to add stuff and change stuff anytime
- > Great challenges require great tools and great people

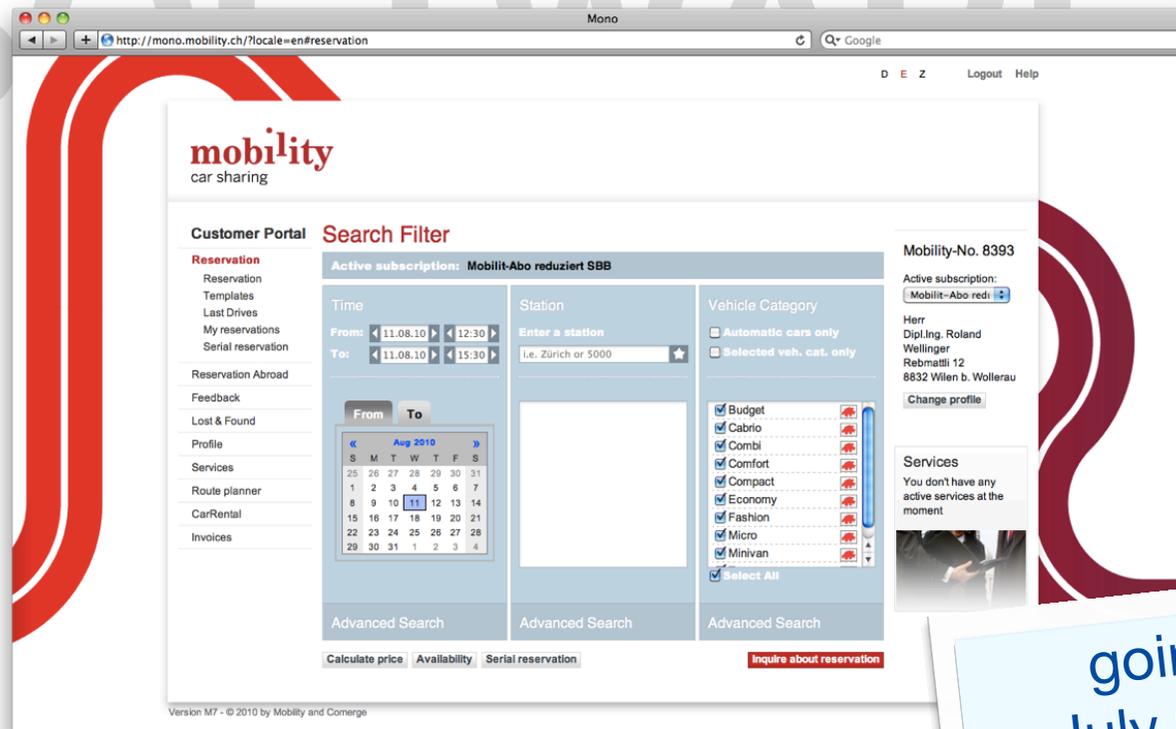
Our Customers



What we do.

Mobility

Responsible for the complete rebuild of the car sharing platform.



going live:
July 25 2011!





What we do.

BUSINESS MADE

Eclipse RCP

Use of proven robust technologies.

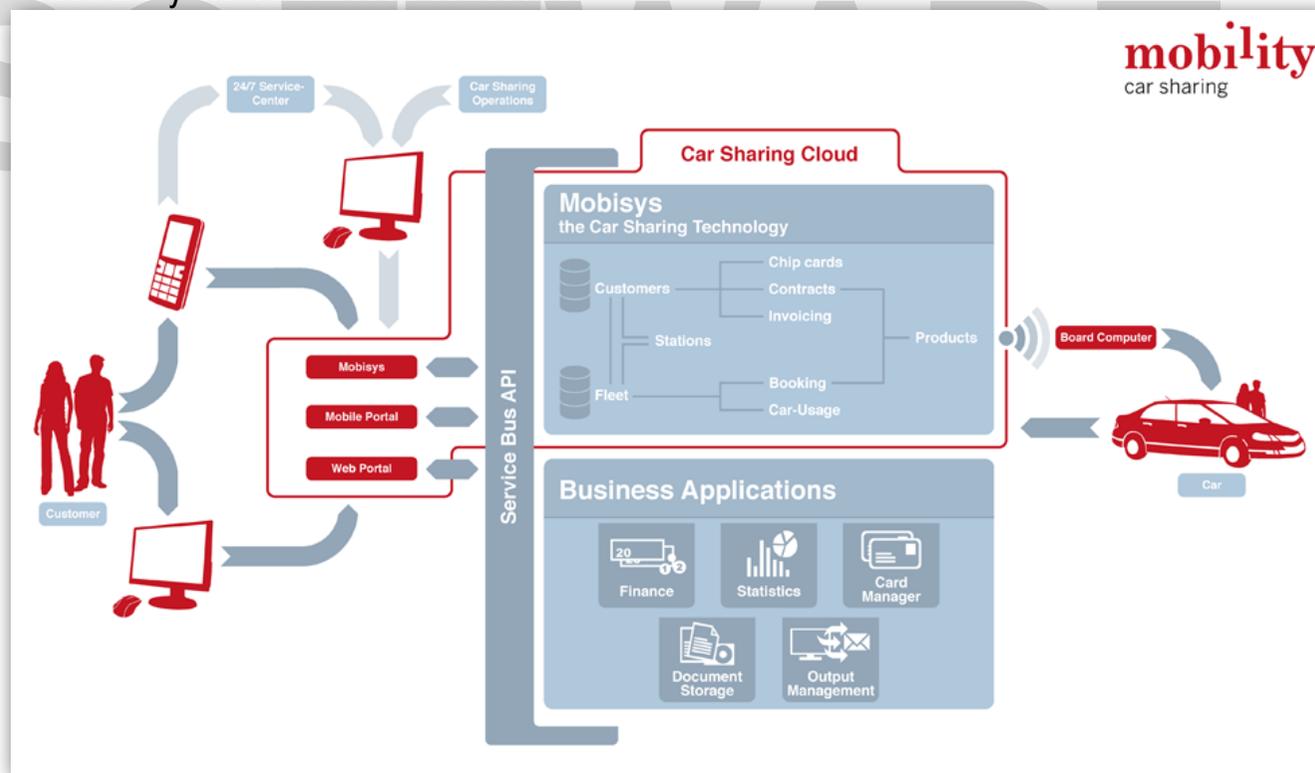
The screenshot displays the Mobisys 2.0 Eclipse RCP application. The interface is organized into several functional areas:

- Left Sidebar:** Contains navigation menus for various management functions: **Personenverwaltung** (Person, Firma, Systembenutzer), **Briefschaften** (Report/Brief Senden, Brief/Report), **Mietobjektverwaltung** (Mietobjektgruppe, Standort, Mietobjektträger, Mietobjektweiterung, Marke, Mietobjektgruppenart, Mietobjektgruppenklasse, Mietobjektart), **Abo-Vertragsverwaltung** (Abovorlage, Digipassvorlage, Vertragvorlage, Abokategorie, Fremdorganisation), and **Mandantenverwaltung** (Code-tabelle).
- Details Pane:** Shows information for '106455 - Bay Till Gaston'. Fields include 'Sprache' (Deutsch), 'Anrede' (Herr), 'Titel' (Dr.), 'Briefadresse' (Sehr geehrter Herr), 'Präferenzierter Korrespondenzweg' (Postweg), 'Adressart für Journal', 'Adressart für E-Mails', 'Betreuer', and 'Betreute Personen'.
- Main Map Area:** Displays a map of Luzern, Switzerland, with a location marker for '1091 Luzern Bahnhof SBB (Standort)'. The map includes street names like 'Kantonsspital Luzern' and 'Löhrendenkmal Luzern'. Navigation controls like 'Karte', 'Satellit', and 'Gelände' are visible.
- Right Pane:** Titled 'Ausweich Gruppen', it lists reservation groups with columns for 'Nummer', 'Name', 'Art', and 'Priorität'. The table contains 17 entries, such as '2075 Luzern Murbacherstrasse' and '1911 Luzern Sternmatt / Geissenstein'. Below the table is an 'Adressen' section with a table for reservation details.

What we do.

Architecture

Scalability for Seamless Processes.



What we do.

Origo

Cloud-based Agile Software development platform (more than 17'000 users)

The screenshot shows the Origo project management interface. At the top, there is a navigation bar with icons for Home, Issues, Project, Download, Doc, Forum, and Blog. Below this is an 'Admin Menu' with options like 'Create Project', 'Remove Project', 'Change Project', 'Mass Mail', and 'System Status'. The main content area is titled 'Origo' and includes a 'Project information' section with a description: 'Origo is an open source software development and collaboration platform - use it to host your open- and your closed-source projects! For free of course!'. There is also a 'News' section with dates and release information, and a 'Specifications' table. The table lists: CATEGORY: software development, project management; PROGRAMMING LANGUAGE: Eiffel, PHP; OPERATING SYSTEM: Linux; PROJECT DESCRIPTION: DOAP; LICENSE: MIT license. At the bottom, there are sections for 'What is Origo' and 'How to use Origo'.

Specifications:	
CATEGORY: software development, project management	PROGRAMMING LANGUAGE: Eiffel, PHP
OPERATING SYSTEM: Linux	PROJECT DESCRIPTION: DOAP
LICENSE: MIT license	

The screenshot shows the Origo website landing page. The header features the Origo logo and navigation links for 'Home', 'Blog', 'About Us', and 'Contact'. The main content area is titled 'Origo do for you?' and includes a promotional banner for 'Origo' with a 'from 5€' price tag. Below the banner, there are sections for 'Who is it for?' and 'How to get started?'. The 'Who is it for?' section states: 'Whether you're a professional developer, project leader or manager, Origo saves you the hassle of having to maintain and update the orchestra of development and monitoring tools you use everyday and makes working collaboratively easy for your entire team.' The 'How to get started?' section states: 'Origo is the one stop solution for your software development that makes it easy to setup, browse, and manage your projects. Getting started with collaborative software development was never easier.'

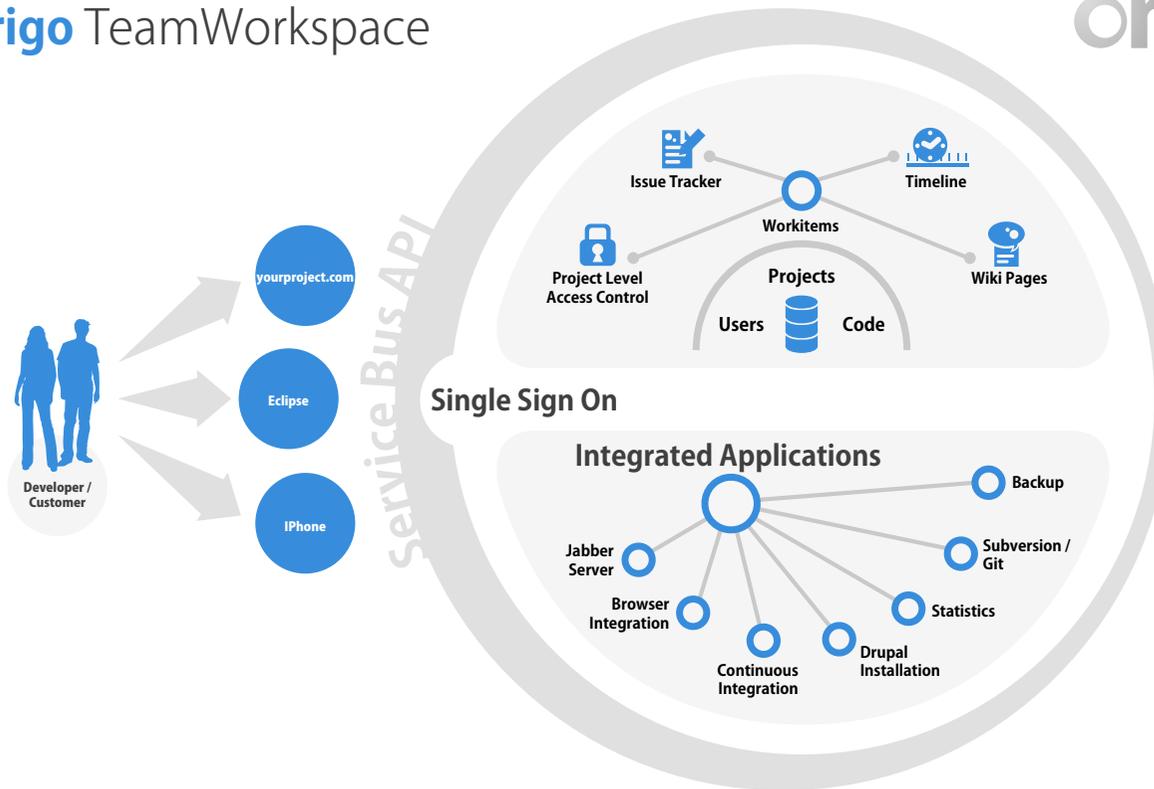
What we do.

ORIGO

Architecture

All the tools you need

Origo TeamWorkspace



GOALS: you will learn...

→ what agile methods are

how they can be put to practice

that agile methods ≠ no process

Origins



- **Erich Gamma**
IBM Research /Ubilab
(former IT lab of UBS)
- **Kent Beck**
<http://agilemanifesto.org>



A screenshot of a web browser window displaying the Agile Manifesto website. The browser's address bar shows the URL "http://agilemanifesto.org/". The page features a background image of a group of people in a meeting. Overlaid on this image is the text of the Agile Manifesto. The text is centered and reads: "Manifesto for Agile Software Development", "We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:", a list of four values (Individuals and interactions, Working software, Customer collaboration, Responding to change), and a concluding sentence: "That is, while there is value in the items on the right, we value the items on the left more." The browser window has standard navigation buttons (back, forward, refresh, home, star) and a scroll bar on the right side.

Manifesto for Agile Software Development

<http://agilemanifesto.org/>

Manifesto for Agile Software Development

We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:

- Individuals and interactions** over processes and tools
- Working software** over comprehensive documentation
- Customer collaboration** over contract negotiation
- Responding to change** over following a plan

That is, while there is value in the items on the right, we value the items on the left more.

The ingredients

- **get customer involved**
- **build constantly**
- **deliver tested quality**
- **talk face-to-face**
- **everybody should be able to keep the pace**
- **embrace change**
- **automate technical excellence**
- **maximize the amount of work not done (simplicity!)**
- **self-organizing teams**
- **reflect on the way you work**

The ingredients

- get customer involved
- build constantly
- deliver tested quality
- talk face-to-face
- everybody should be able to keep the pace
- embrace change
- automate technical excellence
- maximize the amount of work not done (simplicity!)
- self-organizing teams
- reflect on the way you work

→ Agile Software Development!

GOALS: you will learn...

what agile methods are

→ how they can be put to practice

that agile methods ≠ no process

In practice

- › timeboxed iterations
- › user stories
- › self organizing teams
- › daily scrum
- › test driven development
- › continuous integration
- › shipping process
- › peer reviews
- › retrospectives
- › parties and lifestyle

In practice

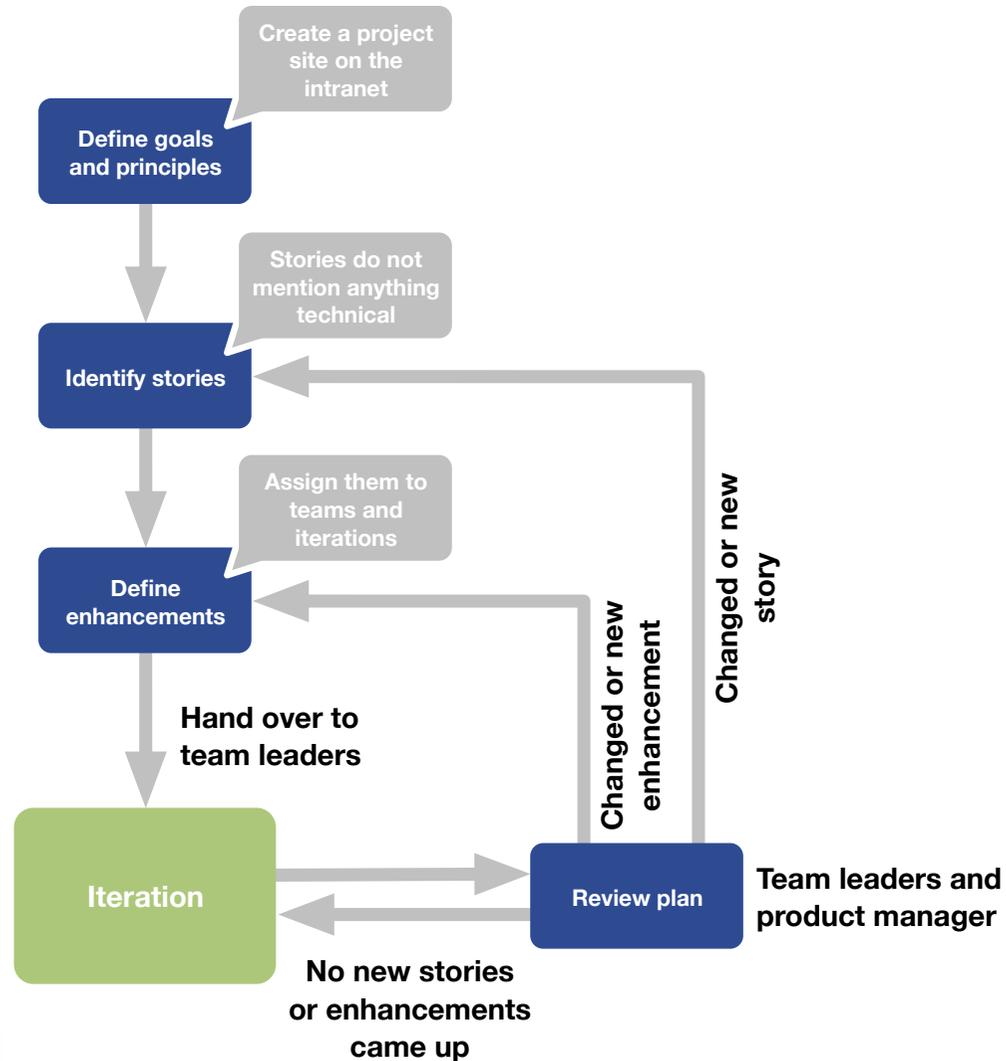
- › timeboxed iterations
- › user stories
- › self organizing teams
- › daily scrum
- › test driven development
- › continuous integration
- › shipping process
- › peer reviews
- › retrospectives
- › parties and lifestyle

Tools, tools,
tools!

Timeboxed Iterations

- **Planning: 2-3 days**
- **Implementing: ~4 weeks**
- **Testing: 1 week**
- **Always the same length**
- **No asynchronous requests**
- **Ship happens at the end of the iteration**

Planning Iterations



Gathering User Stories

➤ **As a [Describe Role of Person], I want to [describe activity], so that [add a context and a reason why this is of value]**

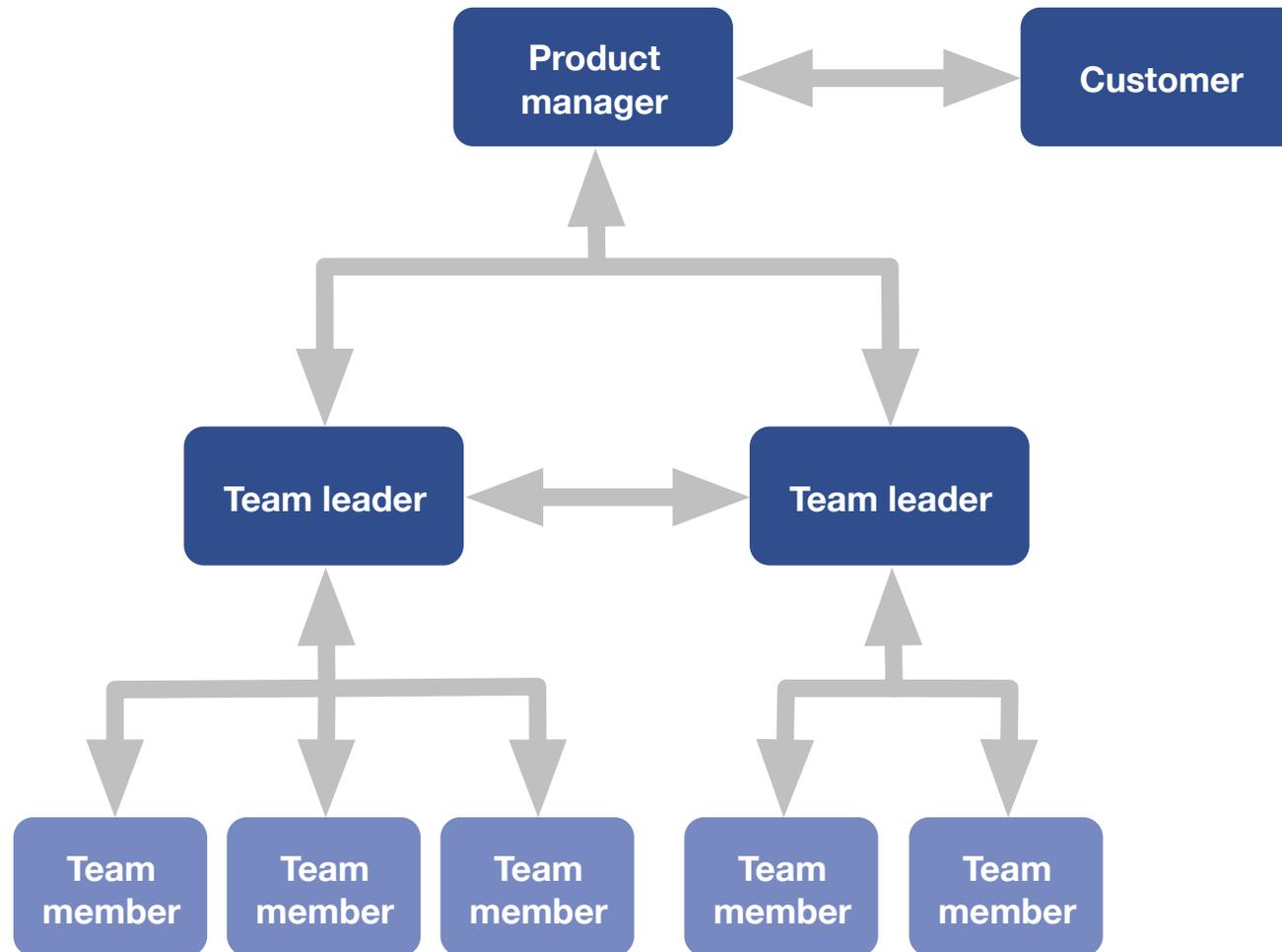
➤ **Example:**

As a Mobility customer, I want to be able to use my smartphone to extend my current reservation, while being in a meeting.

Gathering User Stories



Self organizing Teams



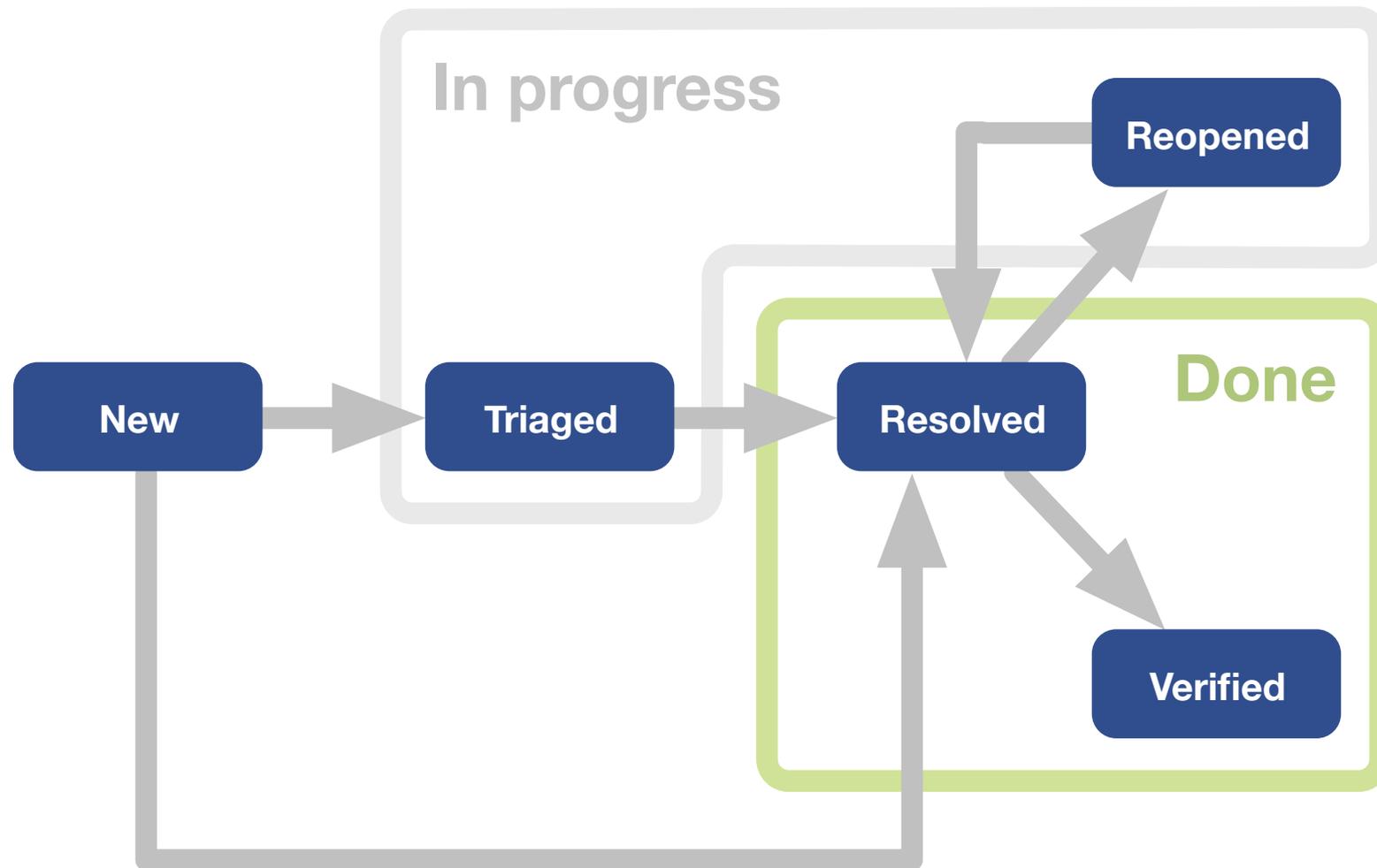
Working with Issues

- Team Leader triages issues and assigns to team members
- Issues are owned by teams together
- For everything we do, we create an Issue

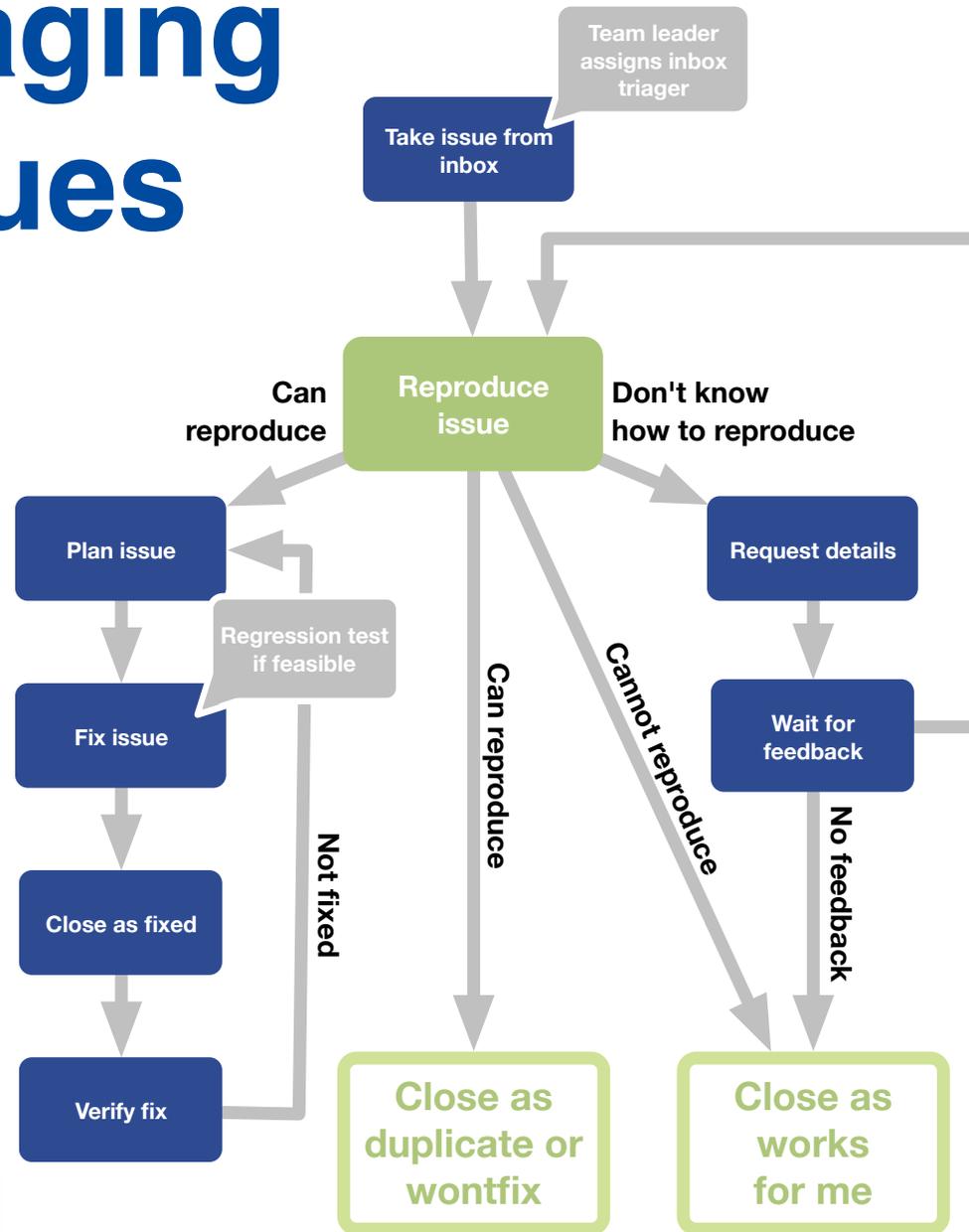
The screenshot shows a web browser window with the URL <https://origo.comerge.net/projects/mono/issues>. The page title is "Issues". At the top, there are links for "Create new issue report" and "Go to issue #". Below this, there are two status bars: "open (431)" in red and "closed (4278)" in green. The main content area is titled "MyM14" and "OpenM14". There is a "Filter" section with several dropdown menus: Status (open, closed), Reporter (avonrotz, bayt, benno, bherlig, bioern), Assigned (bayt, benno, bherlig, bioern, danni), Resolution (fixed, wontfix, duplicate, workforme), Verifier (dennis, dennisri, etienne), Reviewer (bayt, benno, danni, dennis, dennisri), Version (M10RC1, M10RC2, M11RC1, M11RC2, M12RC1), and Owned (ac, all, bt, com, mrs). Below the filters are "Issue Search" and "Save current filter selection" fields with "Search", "Reset", "Reset All", "Save", and "Cancel" buttons. At the bottom, there is a table of issues with columns for ID, Title, Reporter, and Updated. The table shows several issues, including #4703, #4702, #4700, #4699, #4697, #4691, and #4690.

ID	Title	Reporter	Updated
#4703	Provide mandatory optional SysAppID parameter to GASGet service	dennisri	1 day 21 hours ago
#4702	Support Sofortrechnung for SCred	benno	1 day 21 hours ago
#4700	Cannot perform consecutive address change in rcp	dennisri	2 days 29 min ago
#4699	Invoke versiegelungs service in hand made bills	benno	2 days 2 hours ago
#4697	AboCreation error feedback not enough detailed	pedronim	2 days 4 hours ago
#4691	E-Mail confirmation message not shown	jutzeler	2 days 23 hours ago
#4690	open person finds more than 1000 values but just shows 1?	tstein	2 days 23 hours ago

Issue States



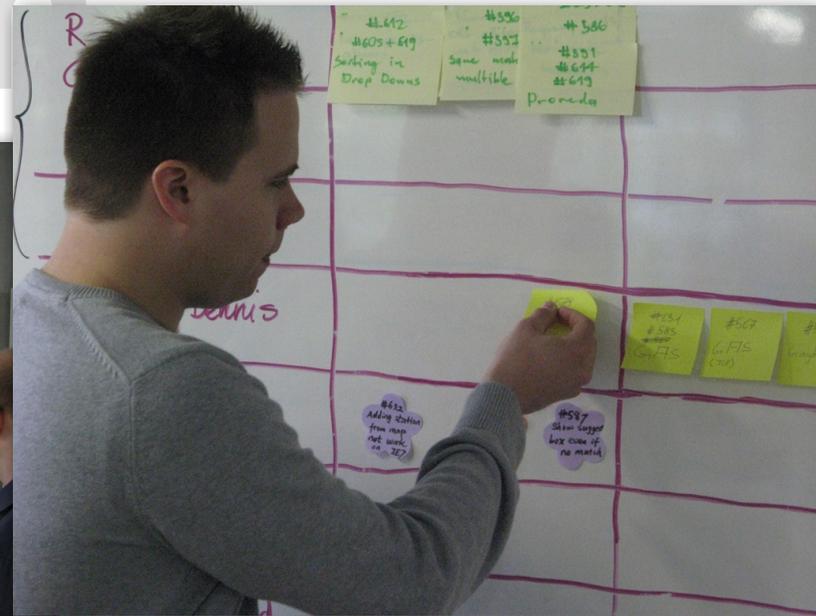
Triaging Issues



Daily Scrum

Everybody keeps pace
keep the meeting short!

9.45 am

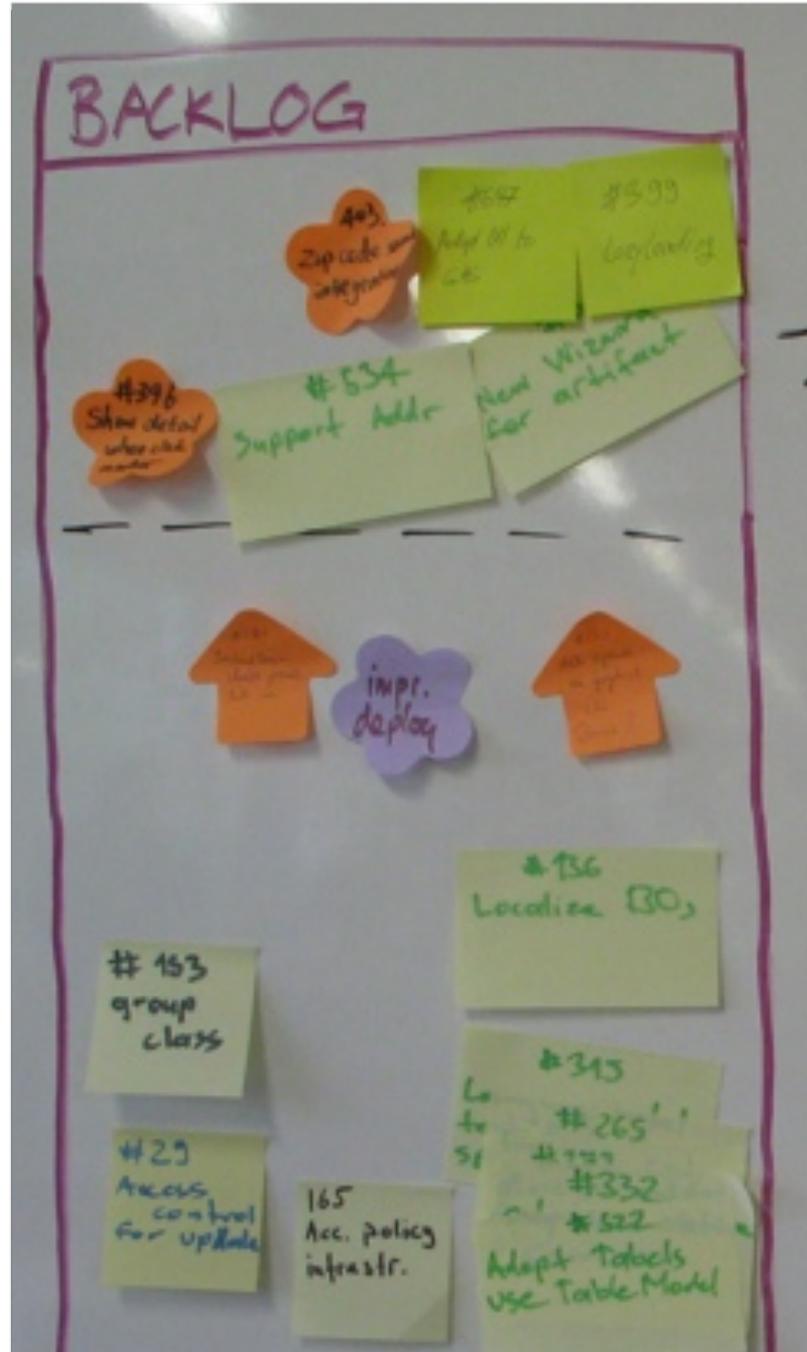


The Scrum Board

Taskboard MONO

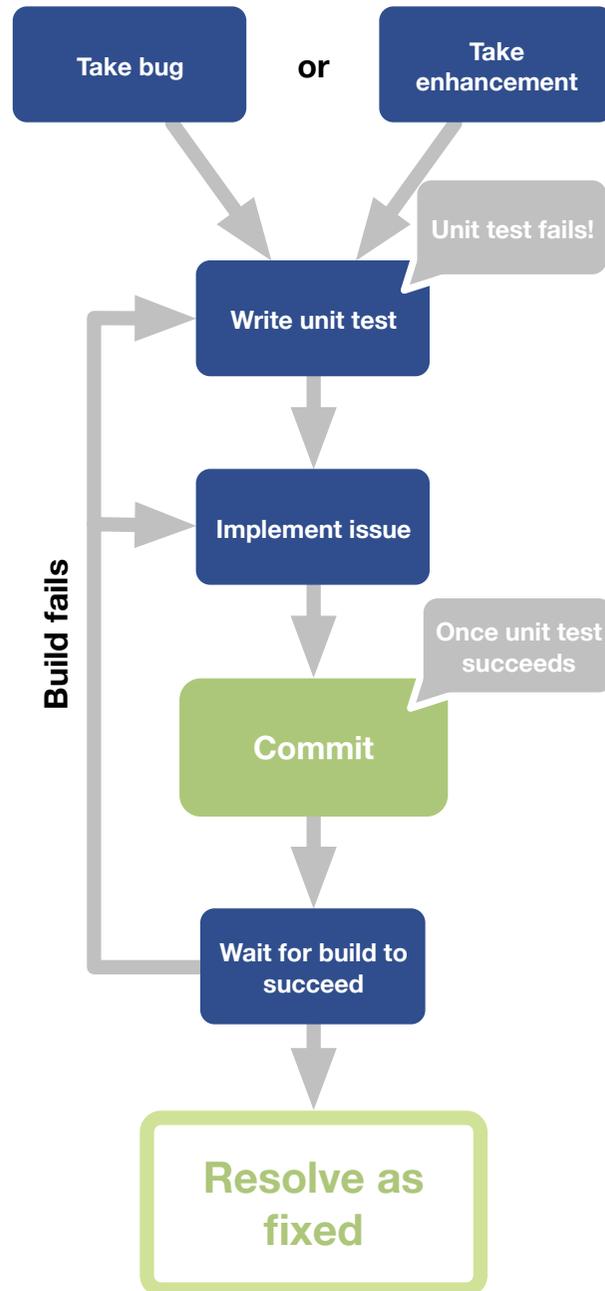
		To Do	In Progress	DONE
S	RCP	Benno #627 #642 #609 + #19 Surfing in Drop Downs	#554 #556 #552 Some needs multiple #551 #644 #649 Promote	#546 GR Walter Remove attributes from cancel in AD Games
		Etienne		Setup the environment
	ACN	Bernd		#501 Create V/Meta Update general code
WEB	Dennis	#59 C20 Prod Zoo	#554 #545 C/FIS C/FIS C/FIS	#553 #554 #555 #556 #557 #558 #559 #560 #561 #562 #563 #564 #565 #566 #567 #568 #569 #570 #571 #572 #573 #574 #575 #576 #577 #578 #579 #580 #581 #582 #583 #584 #585 #586 #587 #588 #589 #590 #591 #592 #593 #594 #595 #596 #597 #598 #599 #600
	Danni	#611 Adding status from map not work in 207	#555 Status with no Geo Cord cannot be shown	#557 Show larger box color no match
MNG	Till			#551 #552 #553 #554 #555 #556 #557 #558 #559 #560 #561 #562 #563 #564 #565 #566 #567 #568 #569 #570 #571 #572 #573 #574 #575 #576 #577 #578 #579 #580 #581 #582 #583 #584 #585 #586 #587 #588 #589 #590 #591 #592 #593 #594 #595 #596 #597 #598 #599 #600
	Bernd			#551 #552 #553 #554 #555 #556 #557 #558 #559 #560 #561 #562 #563 #564 #565 #566 #567 #568 #569 #570 #571 #572 #573 #574 #575 #576 #577 #578 #579 #580 #581 #582 #583 #584 #585 #586 #587 #588 #589 #590 #591 #592 #593 #594 #595 #596 #597 #598 #599 #600

The



TDD

Test Driven Development



Example Stats:

- > Web: 243
- > RCP: 423
- > DB: 278
- > Test Total: 944

Continuous Integration

The screenshot shows the Hudson web interface for the project 'MonoRC Ptycho'. The browser address bar shows 'code.comerge.net/hudson/job/MonoRC Ptycho/'. The page title is 'Hudson' and the breadcrumb is 'Hudson » MonoRC Ptycho'. The main content area is titled 'Project MonoRC Ptycho' and includes a description 'Building the MonoRCP with Tycho'. A 'Test Result Trend' chart shows a count of test results over time, with a peak around 350. Below the chart, there is a message: 'Chuck Norris doesn't need an OS.' The left sidebar contains navigation links: 'Back to Dashboard', 'Status', 'Changes', 'Workspace', 'Build Now', 'Delete Project', 'Configure', 'Plots', and 'Subversion Polling Log'. The 'Build History' section shows a list of builds with their IDs, dates, and times. The 'Last Successful Artifacts' section lists various files like 'ch.mobility.mono.releag-0.14.0-SNAPSHOT-win32.win32.x86.zip'. The 'Recent Changes' and 'Latest Test Result' sections are also visible.

Build History

Build ID	Date	Time
#1213	Apr 15, 2011	5:55:28 PM
#1212	Apr 15, 2011	4:47:13 PM
#1211	Apr 15, 2011	4:03:57 PM
#1210	Apr 15, 2011	3:20:48 PM
#1209	Apr 15, 2011	2:31:30 PM
#1208	Apr 15, 2011	1:50:48 PM
#1207	Apr 15, 2011	12:06:45 PM
#1206	Apr 15, 2011	11:26:44 AM
#1205	Apr 15, 2011	10:45:49 AM
#1204	Apr 15, 2011	9:59:17 AM
#1203	Apr 15, 2011	9:11:06 AM

Test Result Trend

count

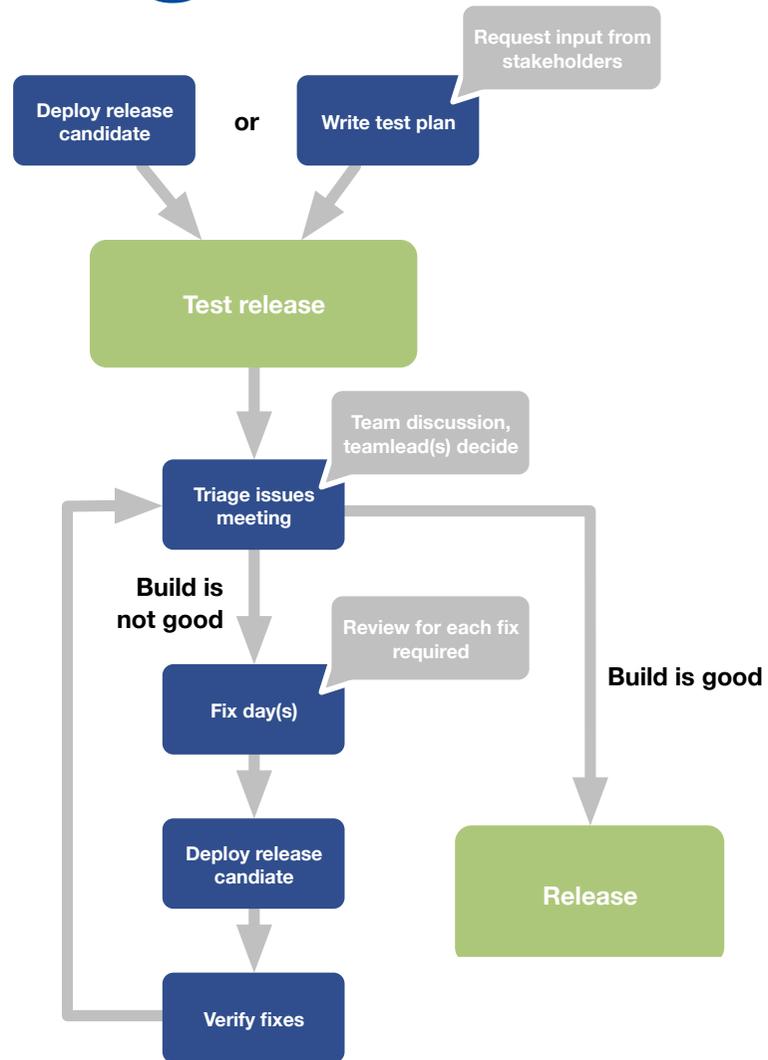
350
300
250
200
150
100
50
0

0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

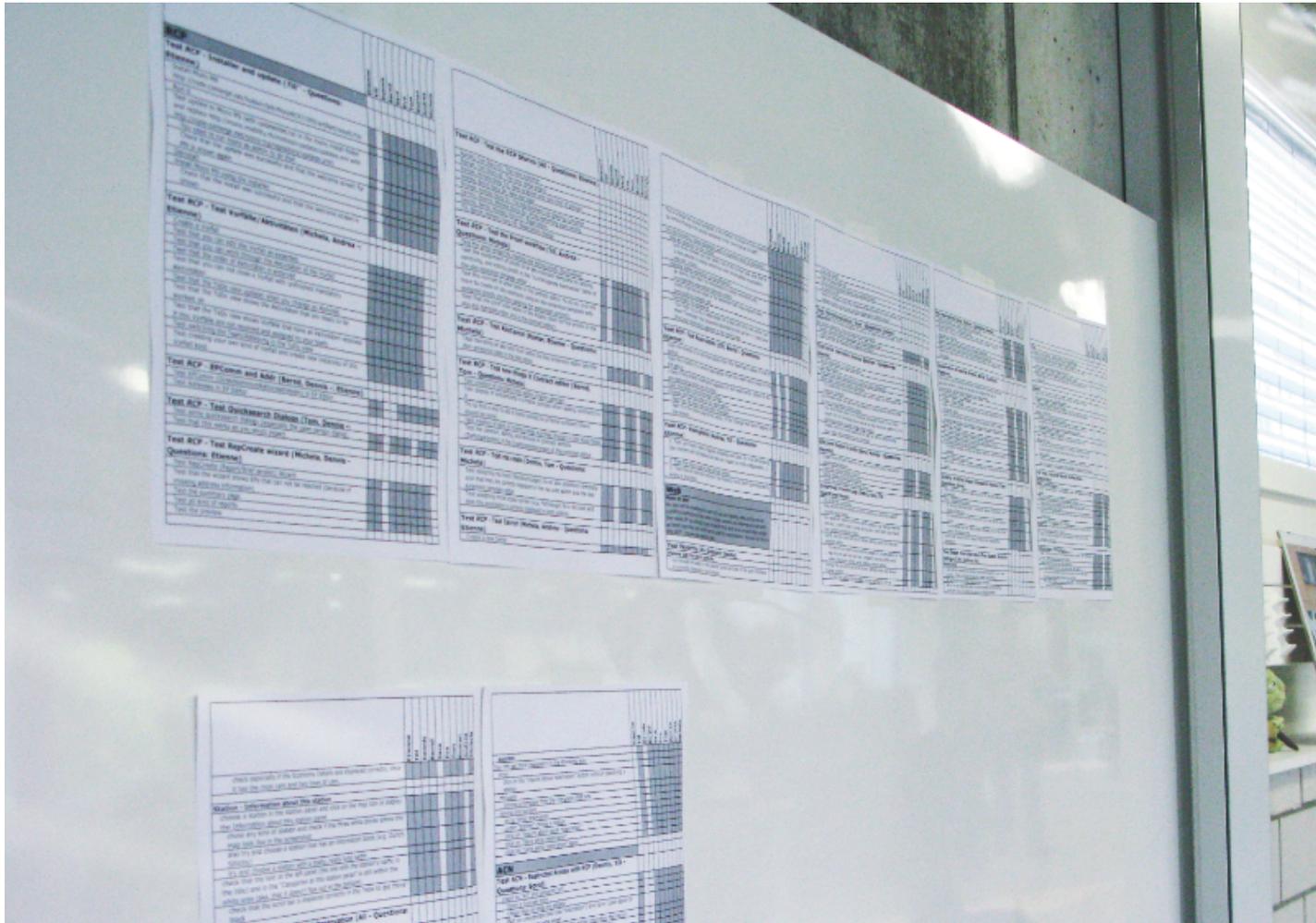
(just show failures) enlarge

Chuck Norris doesn't need an OS.

Shipping Process



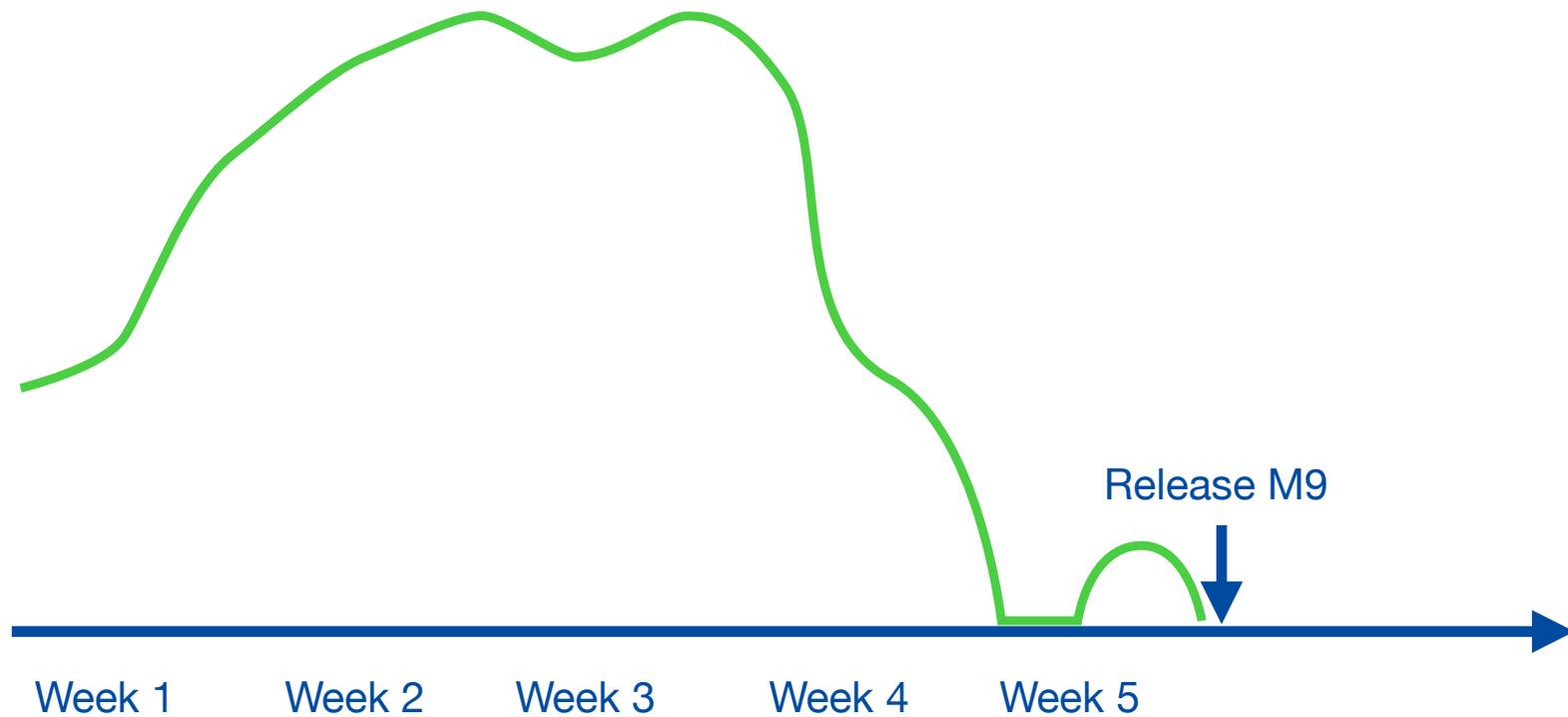
Test plan



Shipping Process

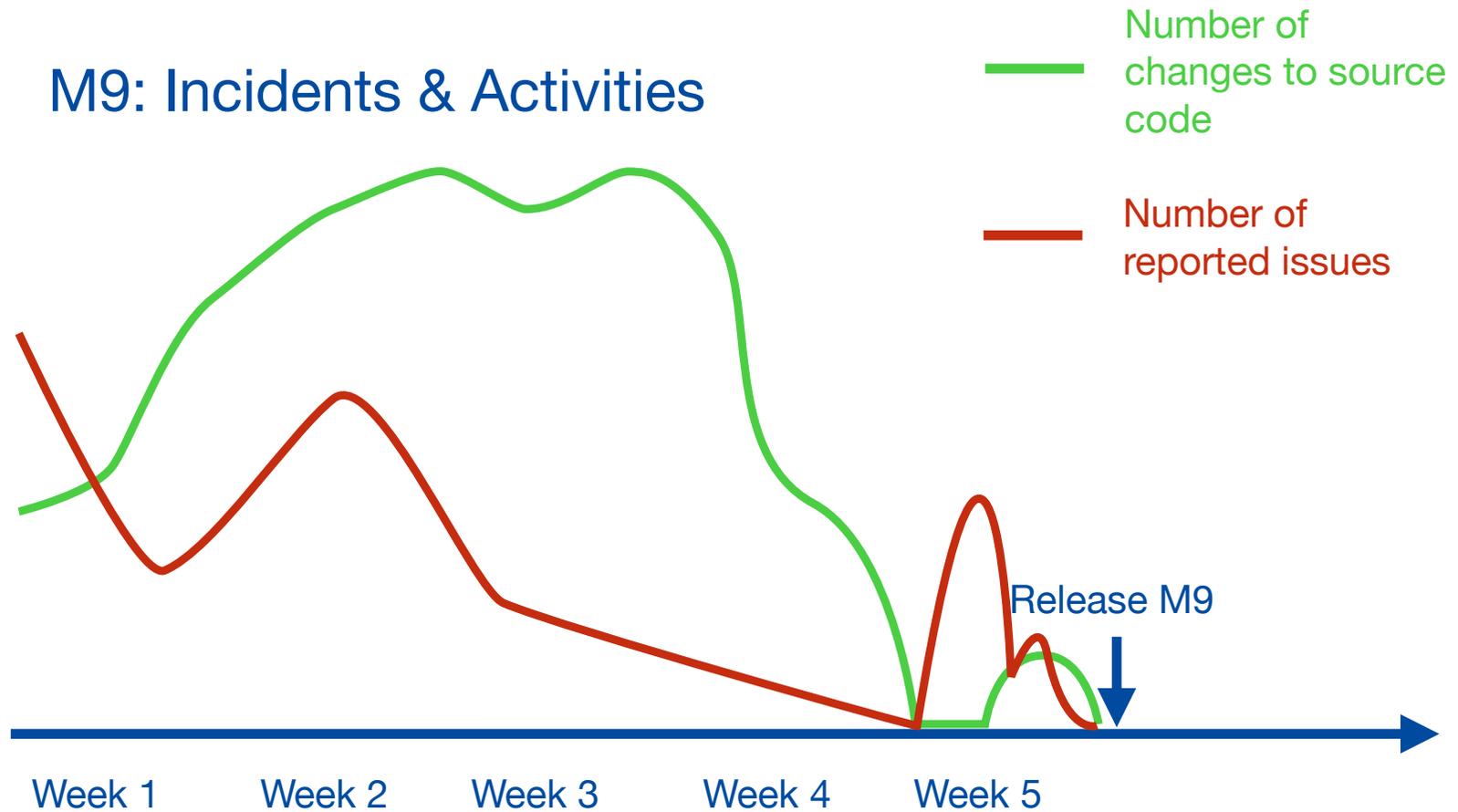
M9: Incidents & Activities

— Number of changes to source code



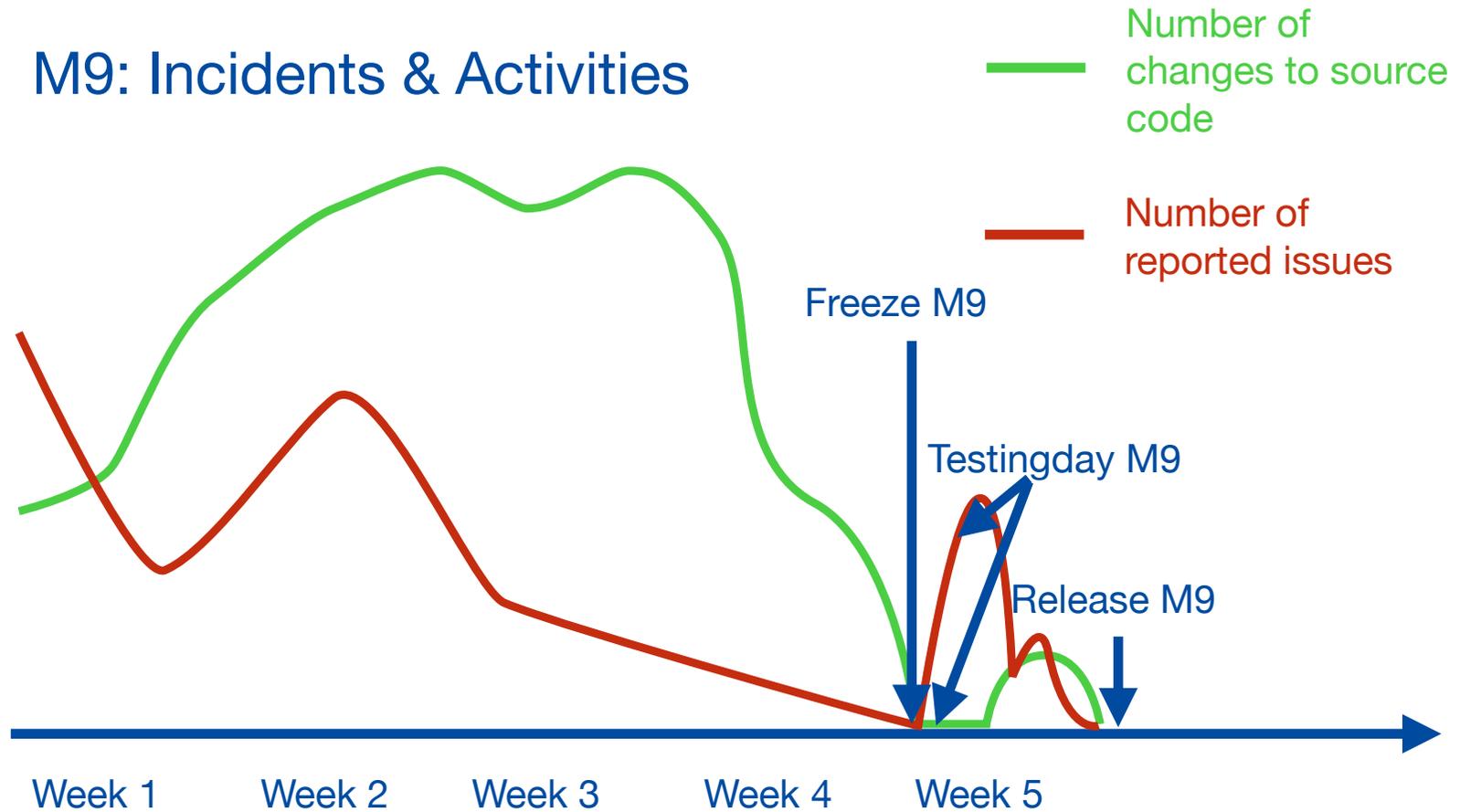
let's make ship happen

M9: Incidents & Activities

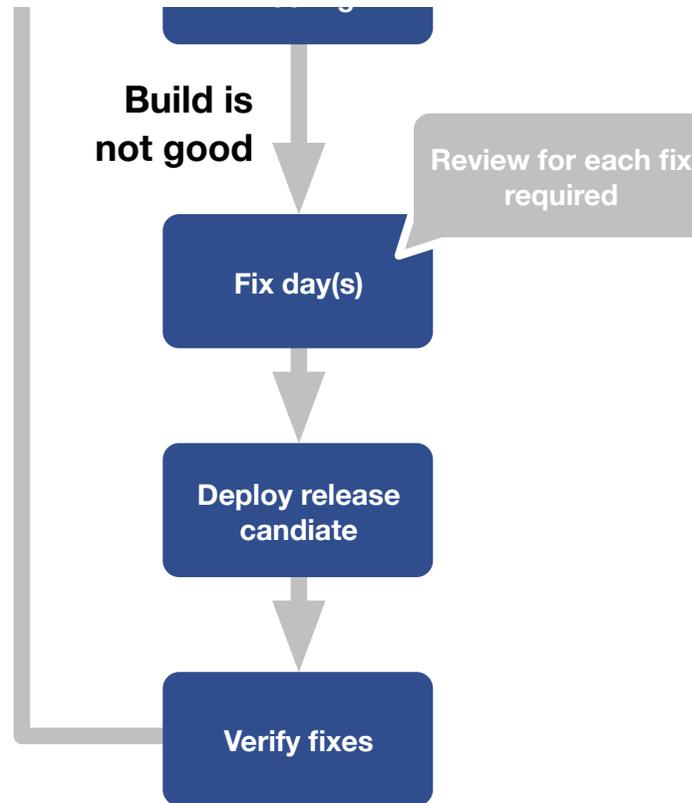


let's make ship happen

M9: Incidents & Activities



Peer Reviews



Peer Reviews

The screenshot displays a Git GUI interface for a repository named 'mobiapp (branch: master)'. The top bar shows the current branch as 'master' and a 'Create Branch' button. The main area is divided into two panes. The left pane shows a commit history with a list of subjects and their corresponding commit hashes. The right pane shows a detailed view of the selected commit, including its subject, parent hash, and a diff of the file 'Reservation.m'.

Commit History (Left Pane):

- Merge branch 'issue69'
- [origin/issue69] #69 - Crash while opening a reservation
- [origin/issue73] #73 - Show default text if no reservation could be found
- #73 - Show default text if no reservation could be found
- Merge branch 'issue52'
- [origin/issue52] #52 - Reload next drive shows 'Keine Reservation vorhanden'
- #52 - Reload next drive shows 'Keine Reservation vorhanden'
- Merge branch 'issue51'
- [origin/issue51] #51 - It is not immediately clear that a reservation is ongoing
- Merge branch 'issue41'
- [origin/issue41] #41 - Clicking on the reservation map reveals all stations
- #41 - Clicking on the reservation map reveals all stations removing schoelle config files
- Merge branch 'issue42'
- [origin/issue42] #42 - When changing time, buttons are over the time edit tool
- Merge branch 'foo'
- ignore
- Little checkin to see git branching
- Merge branch 'master' of https://origo.comerge.net/git/mobiapp/mobiapp
- added Evas phone

Commit Details (Right Pane):

Subject: #41 - Clicking on the reservation map reveals all stations
Refs: [origin/issue41]
Parent: a58ac8a06d53889d523a0e9a967276e4145466ce

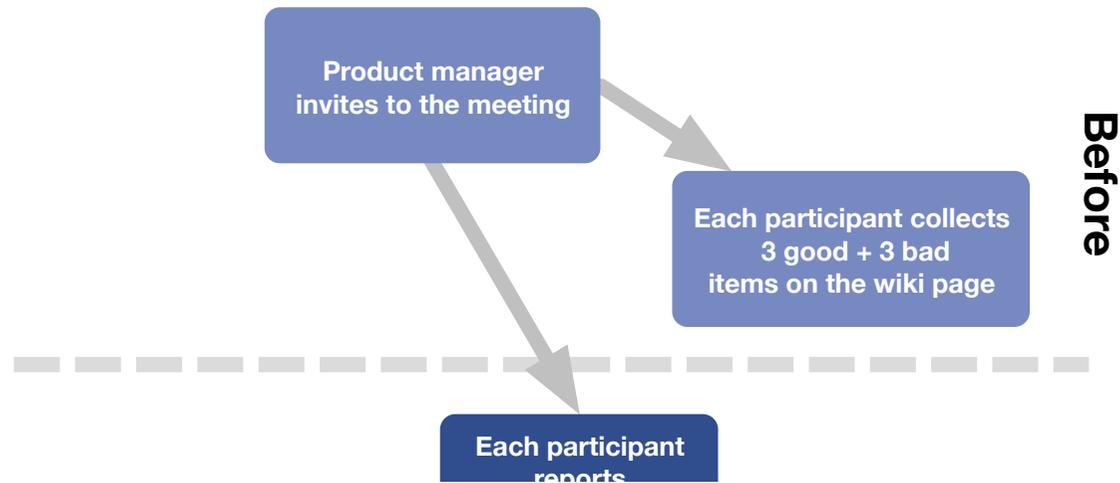
#41 - Clicking on the reservation map reveals all stations

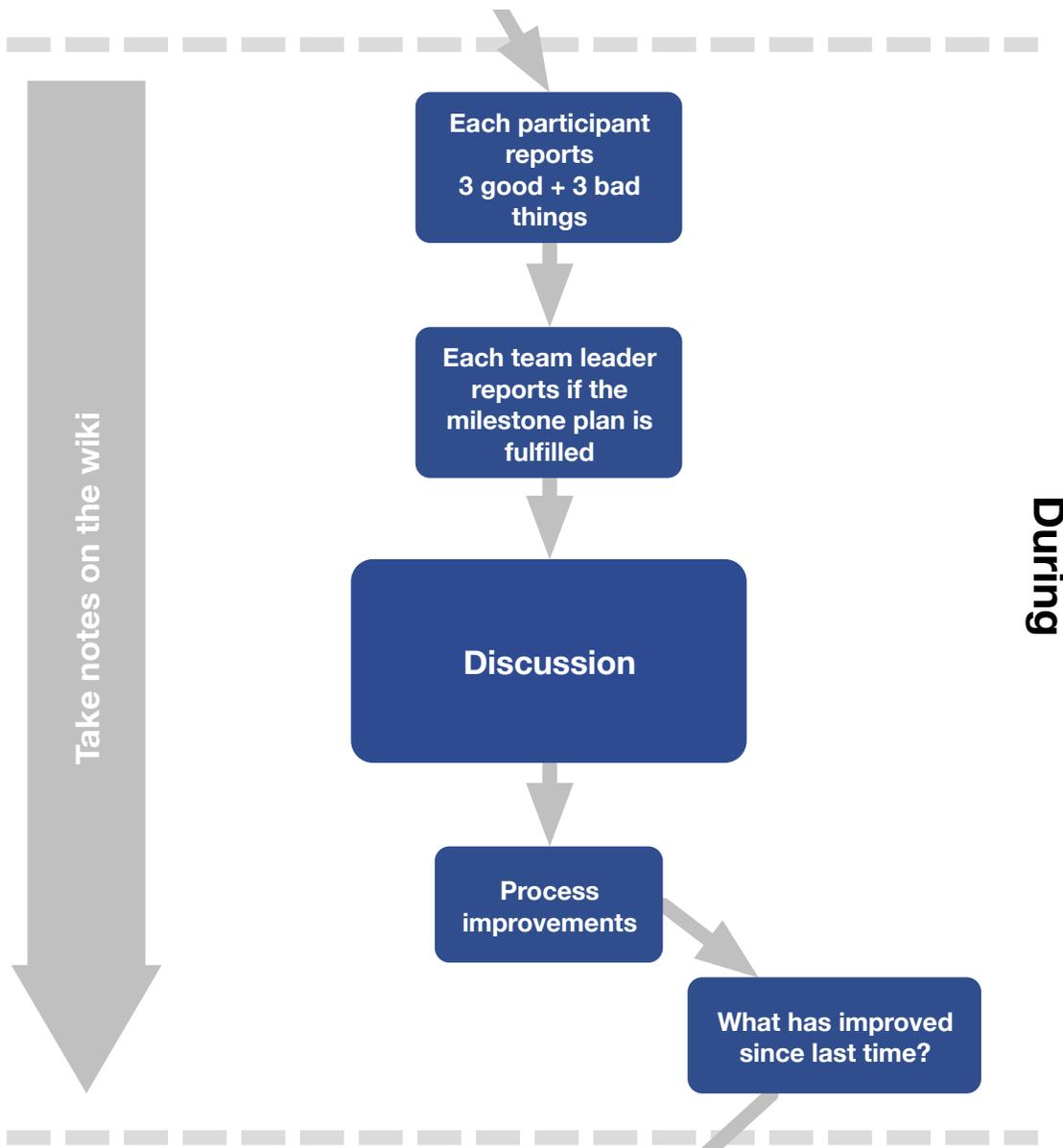
changed Reservation.m

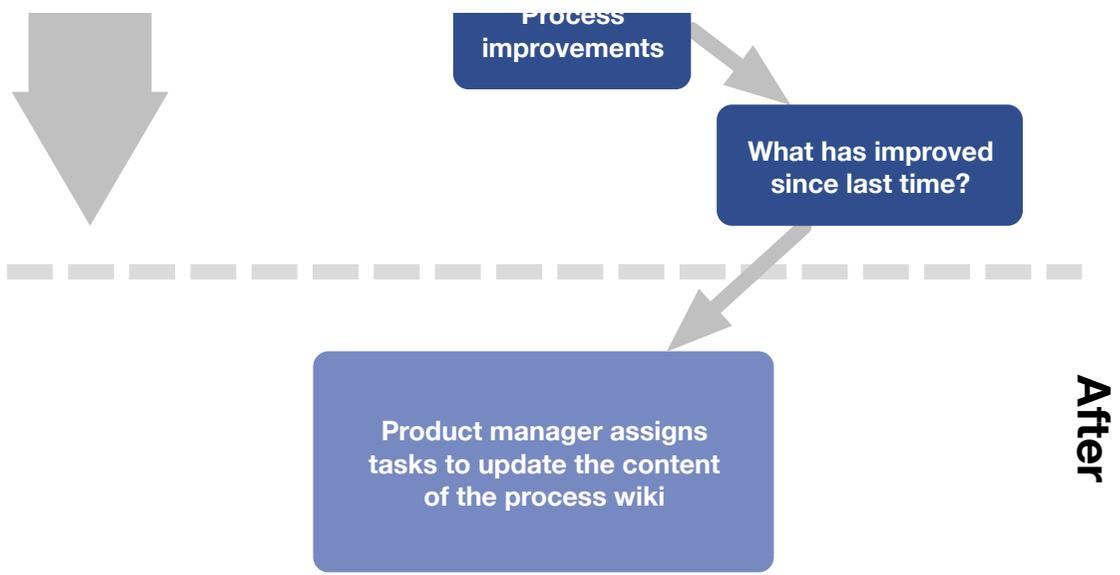
Diff View (Right Pane):

```
Reservation.m
... ..@@ -124,7 +124,7 @@
124 124
125 125     for (int i = 0; i < result.rowCount; i++) {
126 126
127 127     - CLLocationCoordinate2D coords = { [[result lookupValue:@"(Res.R0Grp_BoID.R0Group).R0GrpGeoX" row:i] doubleValue], [[result
127+ CLLocationCoordinate2D coords = { [[result lookupValue:@"(Res.ResDep1_R0Grp_BoID.R0Group).R0GrpGeoX" row:i] doubleValue],
128 128
129 129     Reservation *res = [[Reservation alloc] init] autorelease];
130 130     res.existingReservationBoID = [[result lookupValue:@"Res.BoID" row:i] intValue];
```

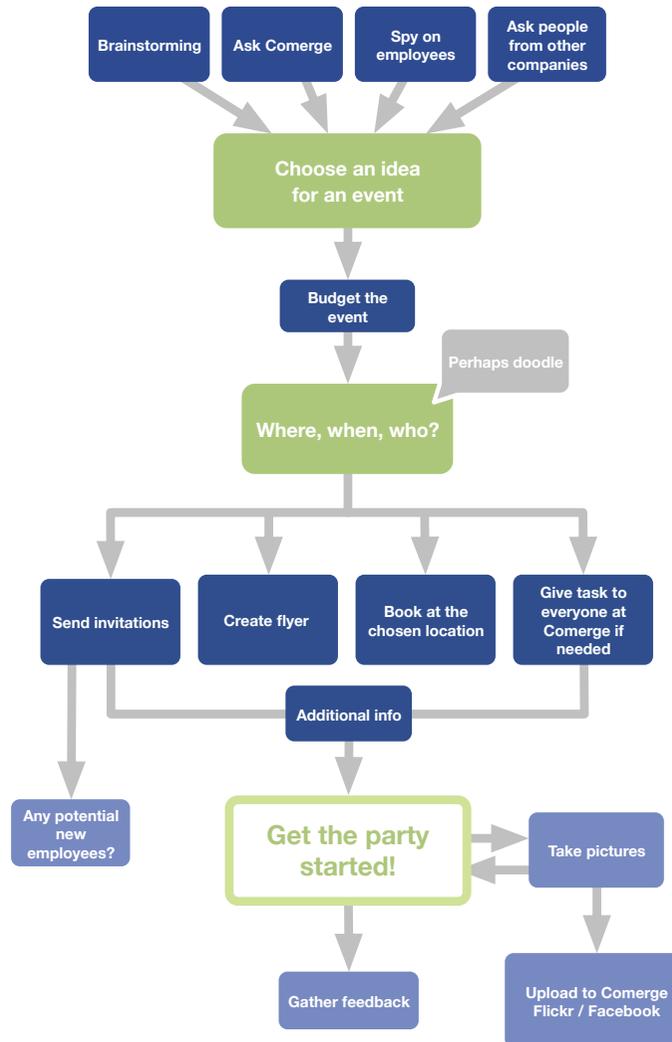
Retrospectives







Parties and lifestyle



Our Process

> **agile process**

(embrace change)

> **always a concrete product**

(a release is a feature your software must have)

> **iterations bring transparency**

(get used to working)

> **automated testing**

(build on your mistakes, lay the ground for change)

> **get things done**

(focus on the interesting things)

Troublemakers?

THE PROBLEMS

Shared resources

Last minute feature-requests

Bad testers

What are the solutions?

Troublemakers?

THE SOLUTIONS

Shared resources

- > Participation in Scrum-Meetings
- > Write down all management tasks as issues
- > Bring them to meeting
- > Earn respect

Troublemakers?

THE SOLUTIONS

Last minute feature requests

- > Trade for something else
- > Implement ways to avoid them, e.g. by having a constant flow of releases coming

Troublemakers?

THE SOLUTIONS

Bad Testers

- > Improve process
- > Automate more of the testing process

Our Process

THE FOUNDATION

- > **feature-richness**
- > **delivery on time**
- > **quality software**

Our Process

THE FOUNDATION

- > **feature-richness**
- > **delivery on time**
- > **quality software**

Pick two, manage with the third!

GOALS: you will learn...

what agile methods are

how they can be put to practice

→ that agile methods ≠ no process

Co-Pilot

What you get of the book:

- > Project management patterns
- > How to use tools to enable people
- > What to do when things go wrong



CONCLUSION

We showed how to use tools and process to deliver software on time with quality.

Without getting killed by the tools or the doc.

And without killing the people!

Please ask us about the details.

THANK YOU



Questions?

Need a job? Look for an internship?

> Contact us!

michela.pedroni@comerge.net

till.bay@comerge.net