

# Jira as Test Management Tool



João Mendonça  
Head of Product  
Channels



We share 99% of our  
DNA with chimps



Monkey testing is past...

Is “chimp testing” the  
future?

# Today's needs

- Release anytime
- Avoid regressions
- Multiple target environments
- Limited resources
- All sorts of testing

What is the relation to SW?

On average 15..50 errors per  
1000 LOC

Code Complete, Steve McConnell, 2004

“The product that’s twice as large is likely to have more than twice as many errors”

Internal factors

External factors



Buggy Software



Dormant  
(useless -> customer lost)

Die  
(no new leads)

Divide endlessly  
(viral bad reputation,  
lawsuits)

Errors are there

*Consequences*

*They can be mitigated or  
even avoided*

Frequent and better software  
releases

—

# Enemies?

Not really.

Let these help you out:

- ✓ Agile
- ✓ DevOps
- ✓ Continuous Integration
- ✓ Automated Testing
- ✓ Continuous Testing
- ✓ Continuous Delivery



# Why is Test Management so important?

Software is everywhere, including in critical systems from health, finance, transports, space, IoT, just to name a few...

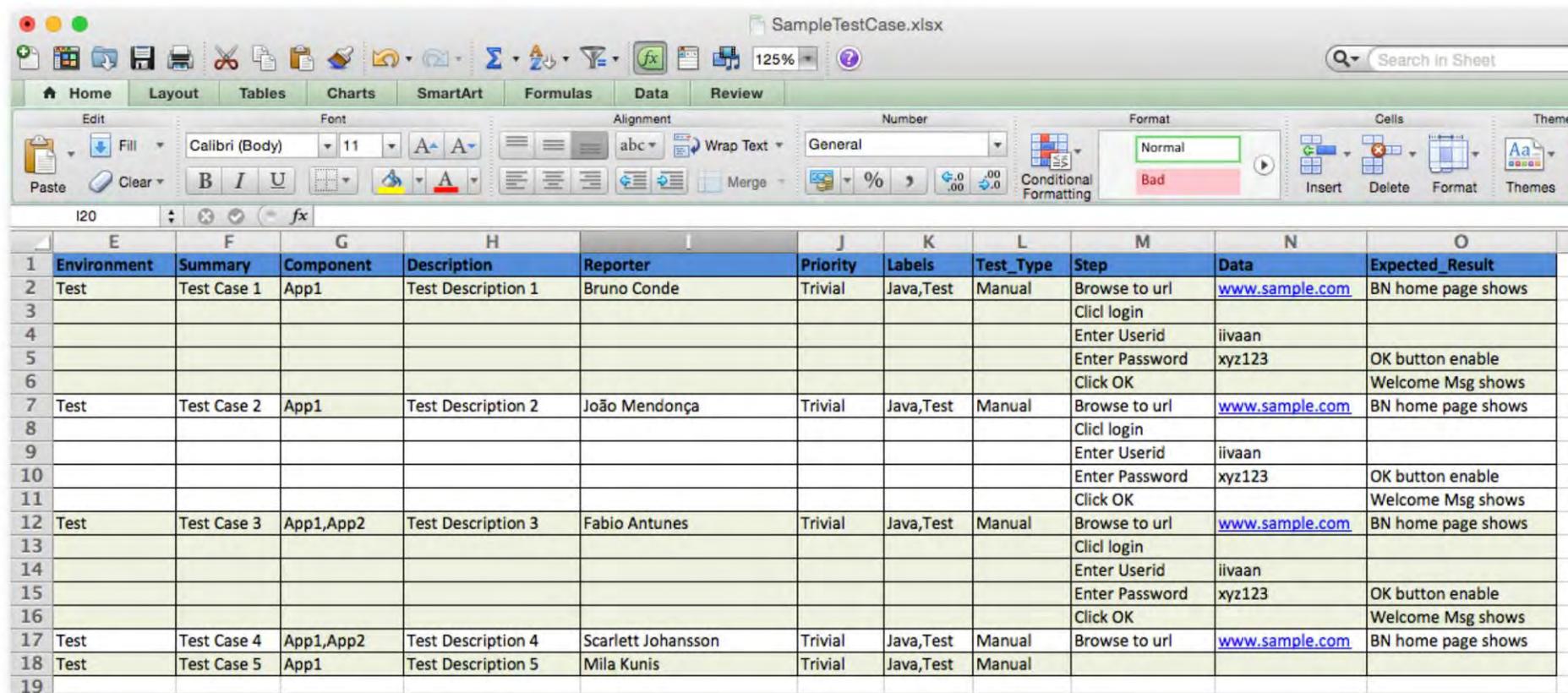


# Why Jira for Quality Assurance?



# In the "dark ages"....

... there was Excel... or even other "legacy Test Management tools" ☺



	E	F	G	H	I	J	K	L	M	N	O
1	Environment	Summary	Component	Description	Reporter	Priority	Labels	Test_Type	Step	Data	Expected_Result
2	Test	Test Case 1	App1	Test Description 1	Bruno Conde	Trivial	Java,Test	Manual	Browse to url	<a href="http://www.sample.com">www.sample.com</a>	BN home page shows
3									Clicl login		
4									Enter Userid	iivaan	
5									Enter Password	xyz123	OK button enable
6									Click OK		Welcome Msg shows
7	Test	Test Case 2	App1	Test Description 2	João Mendonça	Trivial	Java,Test	Manual	Browse to url	<a href="http://www.sample.com">www.sample.com</a>	BN home page shows
8									Clicl login		
9									Enter Userid	iivaan	
10									Enter Password	xyz123	OK button enable
11									Click OK		Welcome Msg shows
12	Test	Test Case 3	App1,App2	Test Description 3	Fabio Antunes	Trivial	Java,Test	Manual	Browse to url	<a href="http://www.sample.com">www.sample.com</a>	BN home page shows
13									Clicl login		
14									Enter Userid	iivaan	
15									Enter Password	xyz123	OK button enable
16									Click OK		Welcome Msg shows
17	Test	Test Case 4	App1,App2	Test Description 4	Scarlett Johansson	Trivial	Java,Test	Manual	Browse to url	<a href="http://www.sample.com">www.sample.com</a>	BN home page shows
18	Test	Test Case 5	App1	Test Description 5	Mila Kunis	Trivial	Java,Test	Manual			
19											

# Welcome to “modern ages” with Jira

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## Built-in features

- Focus on teams
- Collaboration / Comments
- Agile project management & waterfall
- Workflow control
- Customizable and adaptable
- Searching
- Assignment
- Track changes
- Linking between issues
- Importing issues from CSV



# Jira as a Test Management tool

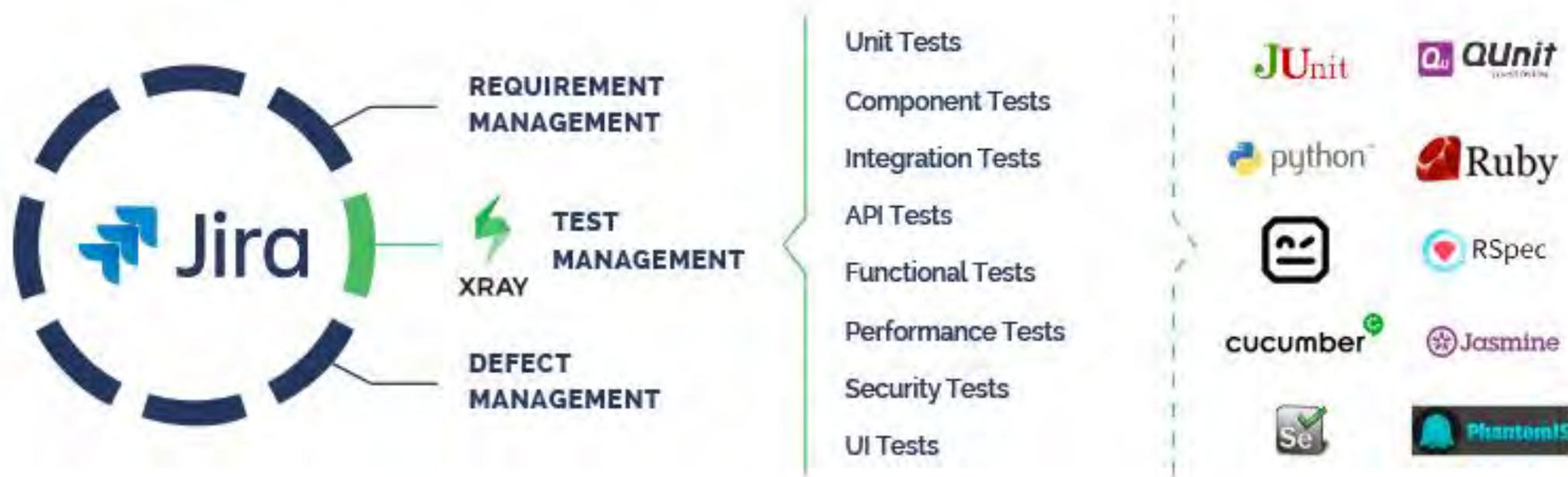
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## What is missing?

1. Test related artifacts (tests, executions, plans)
2. Visibility of testing results and progress in Agile boards
3. In-context information about tests for requirements
4. Advanced reporting for generating documents and drill-down on data



# Using Jira for software development

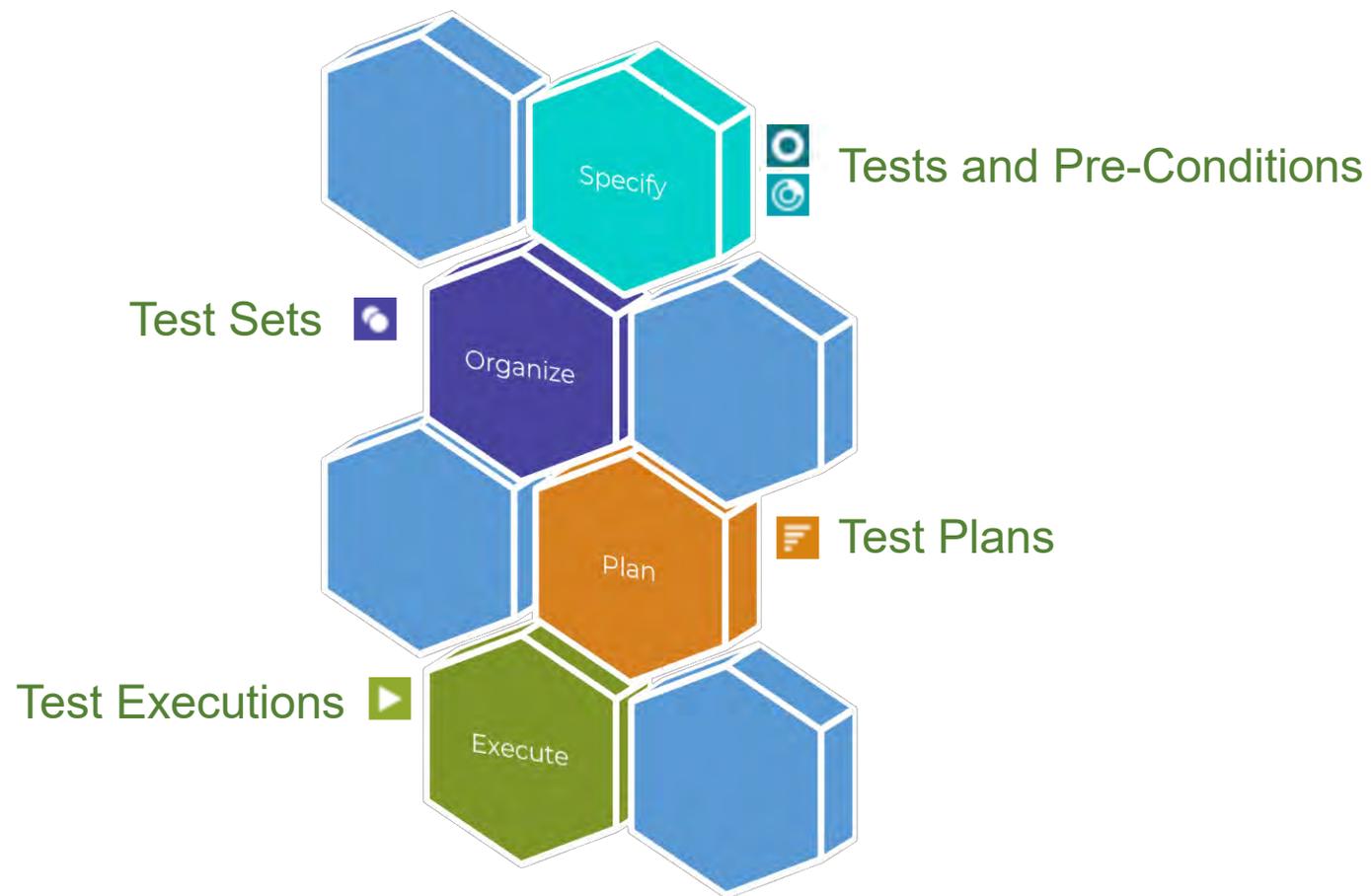


Manual and Automated

# 3. Leverage Jira for testing with XRAY



# Issue types for different testing phases



# The benefits of using Jira issue types

1. Leverages Jira's built-in features
2. Permission control
3. Implementation of Workflows
4. Custom fields
5. Screens customization
6. Assignment, Changes tracking
7. Collaboration
8. And much more...

The screenshot displays the Jira Test Execution interface for issue CALC-1093. The interface is divided into several sections:

- Details:** Shows the issue type as 'Test Execution', status as 'RESOLVED', and resolution as 'Fixed'. It also lists affected versions, components, labels, test environments, and the test plan 'CALC-1093'.
- Description:** A section for adding a description, currently empty.
- Tests:** A section for adding new tests, with a '+ Add +' button.
- Overall Execution Status:** A progress bar showing 1 PASS and 1 FAIL.
- Attachments:** A section for attaching files, with a 'Drop files to attach, or browse.' prompt and an attached file 'BambooTasks (1).PNG'.
- Activity:** A section for viewing activity, including comments, work log, history, and activity. It shows that the administrator created the issue and made changes on 23/Mar/17 10:13 AM.

The 'Create Issue' sidebar on the left shows the project 'Calculator (CALC)', issue type 'Test', and test type 'Manual'. It also includes a table for test steps:

Step	Data	Expected Result
1	press 1	1
2	press key	

# Sneak Peak



Hands On:  
<http://bit.ly/celixxray>

Recap

# Tests

1. Manual or Automated
2. May use reusable Pre-Conditions
3. Facilitate BDD with built-in Cucumber tests
4. Export specification and execute it during CI/CD

Calculator / CALC-2804  
Cucumber Test As a user, I can calculate the sum of two numbers

Test Details  
Type: Cucumber Scenario Type: Scenario Outline

Scenario:

```
1 Given I have entered <input_1> into the calculator
2 And I ha
3 When I have entered <input_2> into the calculator
4 Then I have a dish with bananas
5 I have entered <input_1> into the calculator
6 Examples:
7 | input_1 | input_2 | button | output |
8 | 20     | 30     | add    | 50     |
9 | 2      | 5      | add    | 7      |
10 | 0      | 40     | add    | 40     |
11 | 4      | 50     | add    | 54     |
12 | 5      | 50     | add    | 55     |
```

Autocompletes based on labels... Filter Labels

Press **Ctrl** + **Space** to get step suggestions.

Save Cancel

Step	Data	Expected Result	Attachments
1		The operation must appear selected.	+ [copy] [trash]
2	I1: 5 I2: 2		+ [copy] [trash] 371642.jpg
3		The result "3" should be displayed in the screen, on the right of the "=" sign.	+ [copy] [trash]

#3 - Expected Result  
The result "3" should be displayed in the screen, on the right of the "=" sign.

#4 - step

Style B I U A <sup>A</sup> [link] [table] [list] [list] [emojis] [plus]

press symbol key

Visual Text Done

# Organization

Create flat lists (Test Sets) or organize them hierarchically in folders (Test Repository).



Calculator / CALC-1614  
all my arithmetic related tests

Tests

Show 10 entries

Key	Summary
1 CALC-1612	Cucumber Test As a user, I can calculate the sum of two numbers
2 CALC-1613	Generic Test As a user, I can calculate the sum of two numbers
3 CALC-1609	Manual Test As a user, I can calculate the sum of two numbers

Showing 1 to 3 of 3 entries



Test Repository / arithmetic related tests

Filter ▾ Showing 3 of 3 entries

- 📁 All (797)
- 📁 Orphans (134)
- 📁 Test Repository (663)
  - 📁 components 7 (32)
    - 📁 UI 12 (12)
    - 📁 web 0 (0)
    - 📁 core 3 (3)
    - 📁 compA 2 (2)
    - 📁 compX 8 (8)
    - 📁 arithmetic related tests 3 (3)
  - 📁 backoffice 0 (0)

📁 CALC-1709	Cucumber Test As a user, I can calculate the sum of two numbers	CUCUMBER
📁 CALC-1710	Generic Test As a user, I can calculate the sum of two numbers	GENERIC
📁 CALC-1707	Manual Test As a user, I can calculate the sum of two numbers	MANUAL

- Move to Orphans
- View Issues
- Create Test Set
- Add to Test Set
- Create Test Plan
- Add to Test Plan
- Create Test Execution
- Add to Test Execution

# Plan, Schedule and Execute

1. Create a Test Plan per version or per Sprint, or more as needed
2. Schedule Test Executions for running Tests
3. Execute, leave comments, create defects

The screenshot displays a test execution interface. On the left, a test plan is shown with four steps:

- Step 1: press 6, Expected Result 3, Step State PASS.
- Step 2: press /, Expected Result -, Step State PASS.
- Step 3: press 2, Expected Result 2, Step State PASS.
- Step 4: press =, Expected Result 3, Step State FAIL.

On the right, a summary table shows the overall execution status:

Key	Summary	Test Type	#Req	#Def	Test Sets	Assignee	Status
1	CALC-738 Generic Test As a user, I can calculate the sum of 2 numbers	Generic	1	0	CALC-739	Administrator	PASS
2	CALC-737 Cucumber Test As a user, I can calculate the sum of 2 numbers	Cucumber	1	0	CALC-739	Administrator	PASS
3	CALC-736 Manual Test As a user, I can calculate the sum of 2 numbers	Manual	1	1	CALC-739	André Rodrigues	FAIL

Overall Execution Status: 2 PASS, 1 FAIL. TOTAL TESTS: 3.

Buttons: + Create Test Execution, + Add, All tests..., With status...

Showing 1 to 3 of 3 entries. Navigation: First, Previous, 1, Next, Last.

Dropdown menu: EXEC Execution Details, TODO, EXECUTING, FAIL, ABORTED, BLOCKED, PENDING.

# In-context information

Calculator / CALC-1178  
As a user, I can calculate the sum of 2 numbers

Comment Agile Board More Reopen Issue export Admin

**Details**

Type: Story Status: **CLOSED** (View Workflow)  
Priority: Major Resolution: Fixed  
Affects Version/s: None Fix Version/s: v3.0  
Component/s: None  
Labels: None  
Sprint: Sprint 1  
Requirement Status: **v3.0 - OK**

**Test Coverage**

Create new Test Create new Sub Test Execution

Version: v3.0 All Environments **OK**

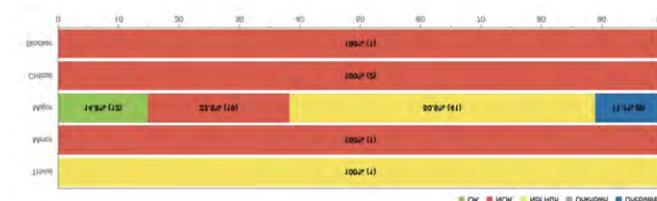
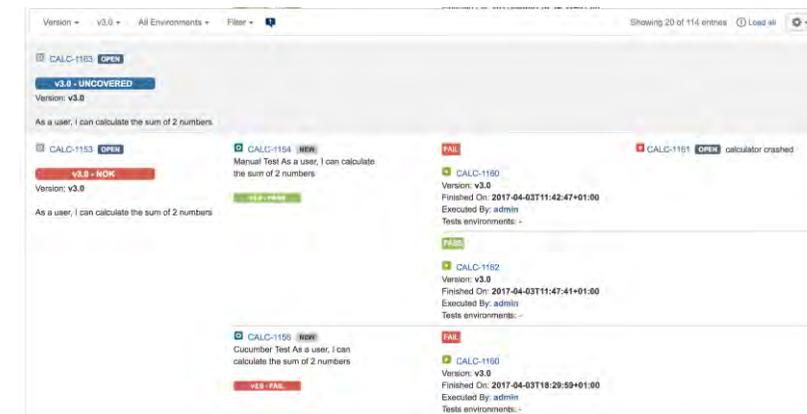
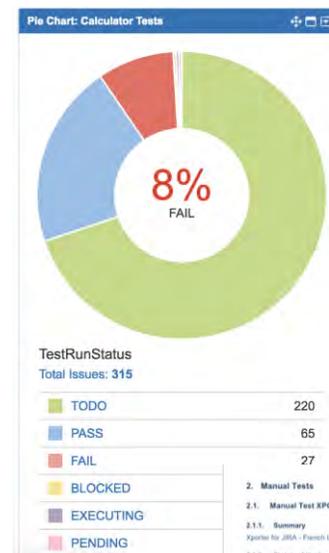
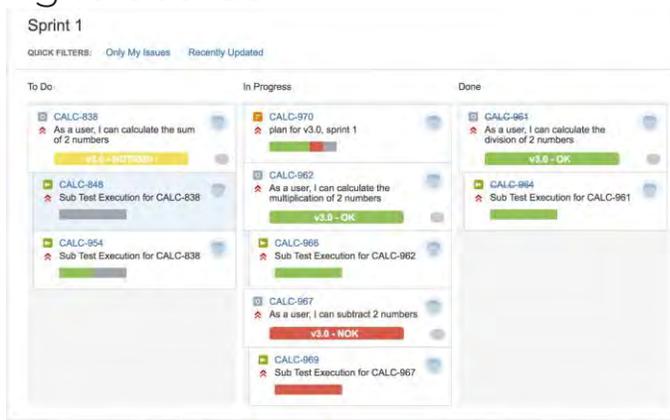
<b>OPEN</b>	Unresolved	CALC-1240	Test As a user, I can calculate the sum of 2 numbers	<b>PASS</b>
<b>OPEN</b>	Unresolved	CALC-1180	Cucumber Test As a user, I can calculate the sum of 2 numbers	<b>PASS</b>
<b>OPEN</b>	Unresolved	CALC-1181	Generic Test As a user, I can calculate the sum of 2 numbers	<b>PASS</b>
<b>OPEN</b>	Unresolved	CALC-1179	Manual Test As a user, I can calculate the sum of 2 numbers	<b>PASS</b>
<b>OPEN</b>	Unresolved	CALC-1202	CanAddNumbers	<b>PASS</b>

## Xray provides

- Real-time information about the coverage status of the requirement for a given version
- Real-time information about the associated test results, for a given version
- A "requirement" may be any issue type you may have; test coverage can be made in any issue type

# Multiple ways of reporting, the Jira way

1. Built-in reports
2. Jira gadgets in Jira dashboards
3. Agile boards



4. Through other top-notch



2. Manual Tests

2.1. Manual Test XPORTR-229

2.1.1. Summary  
Report for JIRA - French Language translation (simplified version)

2.1.2. Status of the Last Execution  
PASSED

2.1.3. Pre Conditions

2.1.4. Description  
This test purpose is to check if this feature is working as expected

2.1.5. Test Procedure

Step Number	Step	Date	Expected Result
1	On JIRA Navigation bar, select the user menu and click Profile		The View profile summary screen will be loaded
2	Click the edit icon right next to the Preference label.		The Update User Preferences dialog will be prompted
3	Click the selector right next to the "Language" label, choose Français (France) and click Update		The View profile summary screen will reload, and the contents language will be displayed in french
4	Go to the Administration		The contents under Xporter pour JIRA

# Reports as deliverable assets



Use Xporter to generate fully customizable Word, Excel or PDF files with your testing reports to give to your management, colleagues or to your customers (e.g. Test specification, Test Execution progress and respective results, Test Plan details).

## 1. Introduction

### 1.1. Document Overview

This Test Report provides a summary of a test execution. This document has been generated automatically from the test management platform.

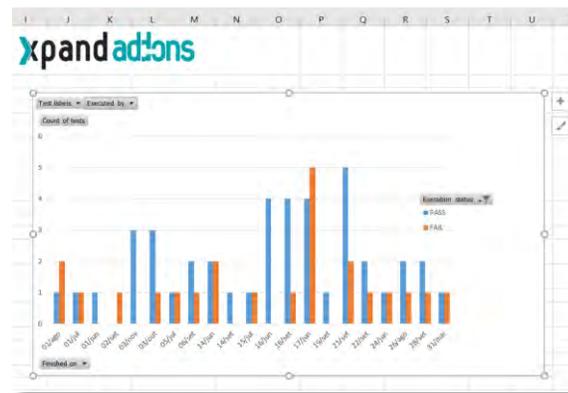
### 1.2. Test Execution XPORTER-198 Details

Description: This Test Execution purpose is to check if all the Xporter for JIRA features supported on the 3.1.0 release are working as expected on Internet Explorer  
 Begin Date  
 End Date  
 Revision

### 1.3. Overall Execution Status

Of the 12 Test Runs contained on XPORTER-198:

TODD 75.01 %  
 EXECUTING 0.11 %  
 PASS 0.0 %  
 FAIL 0.33 %  
 ABORTED 8.33 %



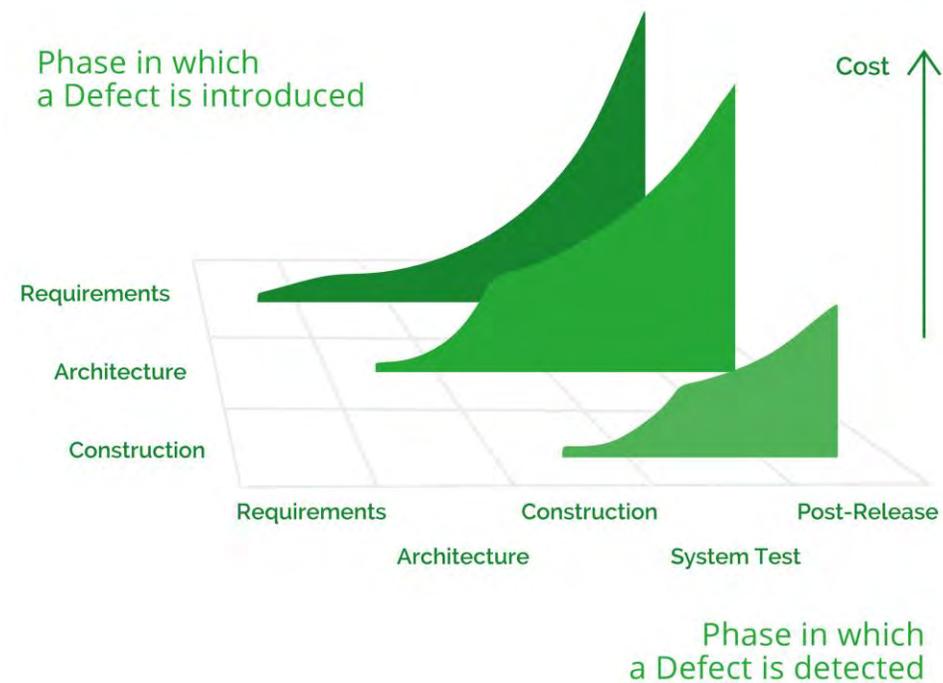
## 1.4. Test Runs

Key	Summary	Test Type	#Req	#Def	Test Sets	Assignee	Status
XPORTER-138	Xporter for JIRA - French Language translation	Manual	3	0		mibr	ABORTED
XPORTER-137	Xporter for JIRA Workflow Post Function	Manual	4	1	XPORTER-470	pamp	TODD
XPORTER-133	Xporter for JIRA License Management	Manual	4	0	XPORTER-370 XPORTER-470	mjbm	TODD
XPORTER-102	Xporter for JIRA Permission Schemes Test	Manual	8	0	XPORTER-370 XPORTER-470	lpsg	EXECUTING
XPORTER-99	Xporter for JIRA Manage Templates Test	Manual	7	1	XPORTER-470	pmmr	FAIL
XPORTER-95	Xporter for JIRA Global Settings - Global Permissions - Show Xporter Menu	Manual	5	0	XPORTER-370 XPORTER-470	mjbm	TODD
XPORTER-92	Xporter for JIRA Global Settings - Global Permissions - Allow anonymous requests	Manual	5	0	XPORTER-370 XPORTER-470	mjbm	TODD
XPORTER-91	Xporter for JIRA Global Settings - Global Permissions - Enable Xporter for JIRA for all projects and all users	Manual	7	0	XPORTER-370 XPORTER-470	mjbm	TODD
XPORTER-89	Xporter for JIRA Global Settings - Bulk Export - Requests limit	Manual	7	0	XPORTER-470	mjbm	TODD
XPORTER-86	Xporter for JIRA Global Settings - Bulk Export -	Manual	7	0	XPORTER-470	mjbm	TODD

# Test Automation

# The cost of bugs

- The cost of fixing bugs grows exponentially depending on the phase in which they are detected
- The fix cost also depends on the stage where bugs are initially introduced



=> Automated testing to the rescue!

# Automation ready

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REST API



cucumber

TestNG



JUnit



C/C++

Ruby

SoapUI

python



Perl



C#



## Supported formats

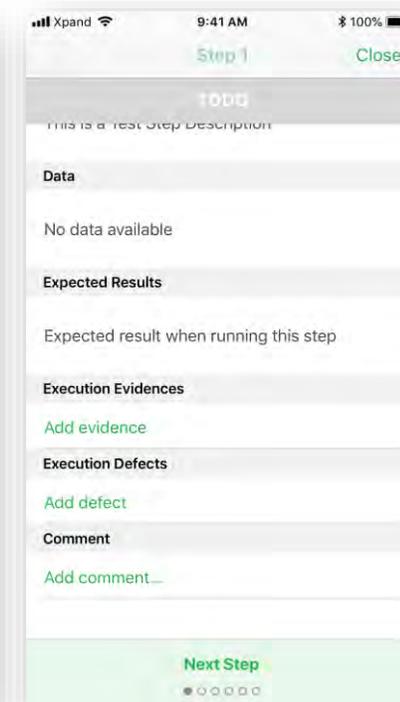
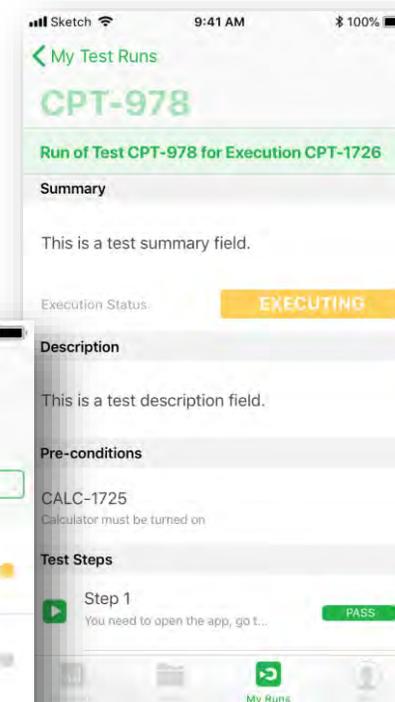
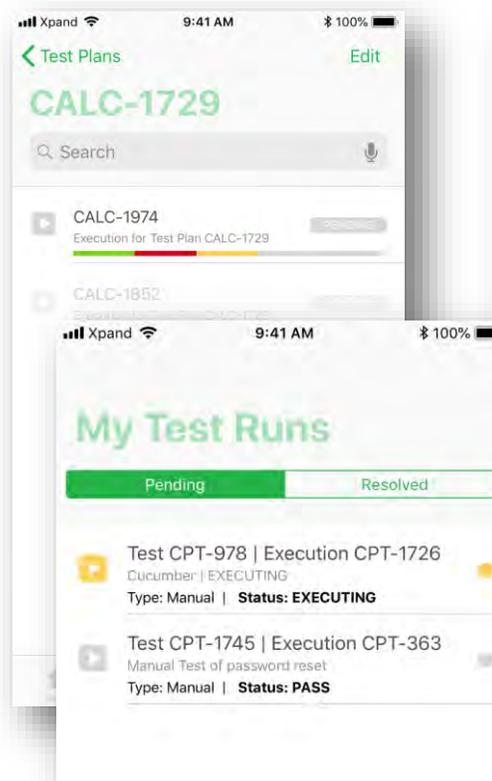
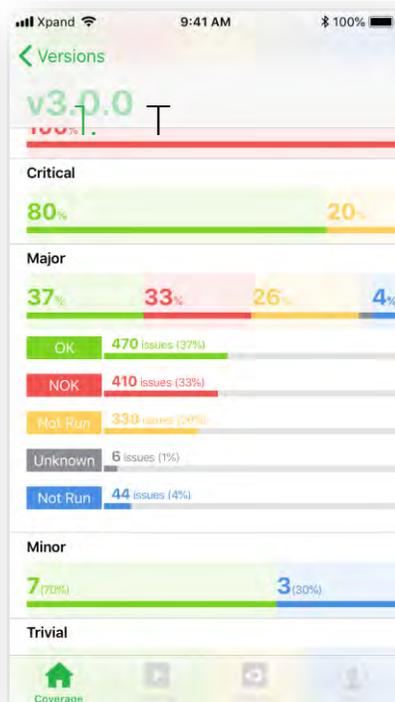
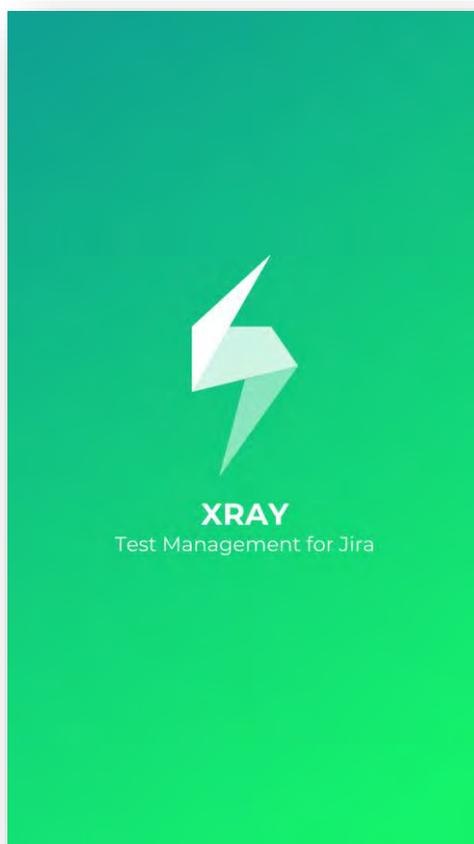
- Xray JSON
- Cucumber
- Behave
- JUnit
- Nunit
- TestNG
- Robot framework
- Calabash
- HP LeanFT (UFT Pro)\*
- ... more to come

Xray Mobile App

# Meet the “Xray Mobile app” (available for iOS and Android, Dec 2018)

**Out now for iOS / Android will be out very soon**

1. Track progress
2. Track your work
3. Execute Manual Tests



Using Jira for testing,  
today!

—

# Migrating tests to Jira

Xray provides:

1. A built-in Test Case Importer, that is able to import tests (including attachments and additional fields) from a friendly CSV
2. A built-in HP ALM 12.5x importer
3. An open REST API, that can be used to import Tests and also results

	A	B	C	D	E	F	G	H	I
1	TCID	Test Summary	Test Priority	Component	Component	Step	Data	Result	
2	1	Test 1 for user story WEB-1	high	User Interface	Business Layer	Go to login page			
3	1					Enter username	peter		
4	1					Enter password	pwr123		
5	1					Click login button		User successfully logged in	
6	2	Test 2 for user story WEB-1	very high	User Interface	Business Layer	Go to login page			
7	2					Enter username	peter		
8	2					Enter wrong password	abc123		
9	2					Click login button		User logged in fails with message	
10									

# Principles of XRAY

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We build XRAY so that it...

1. Gives you the tool, and don't dictate how you should do it
2. Gives you freedom, so you can adapt the tool to your team and your processes
3. Gives you the power, so you can have greater control over your process
4. Gives you possibilities, so you can leverage the power of other tools

# Some techniques for improving SW quality

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What you can do about it?

1. Clear quality goals and visibility
2. Well-defined testing strategy
3. Working as a team
4. Unit tests
5. Peer reviews / Pair programming / Pair testing
6. Static and dynamic code analysis
7. Much more...

# XRAY and your teams

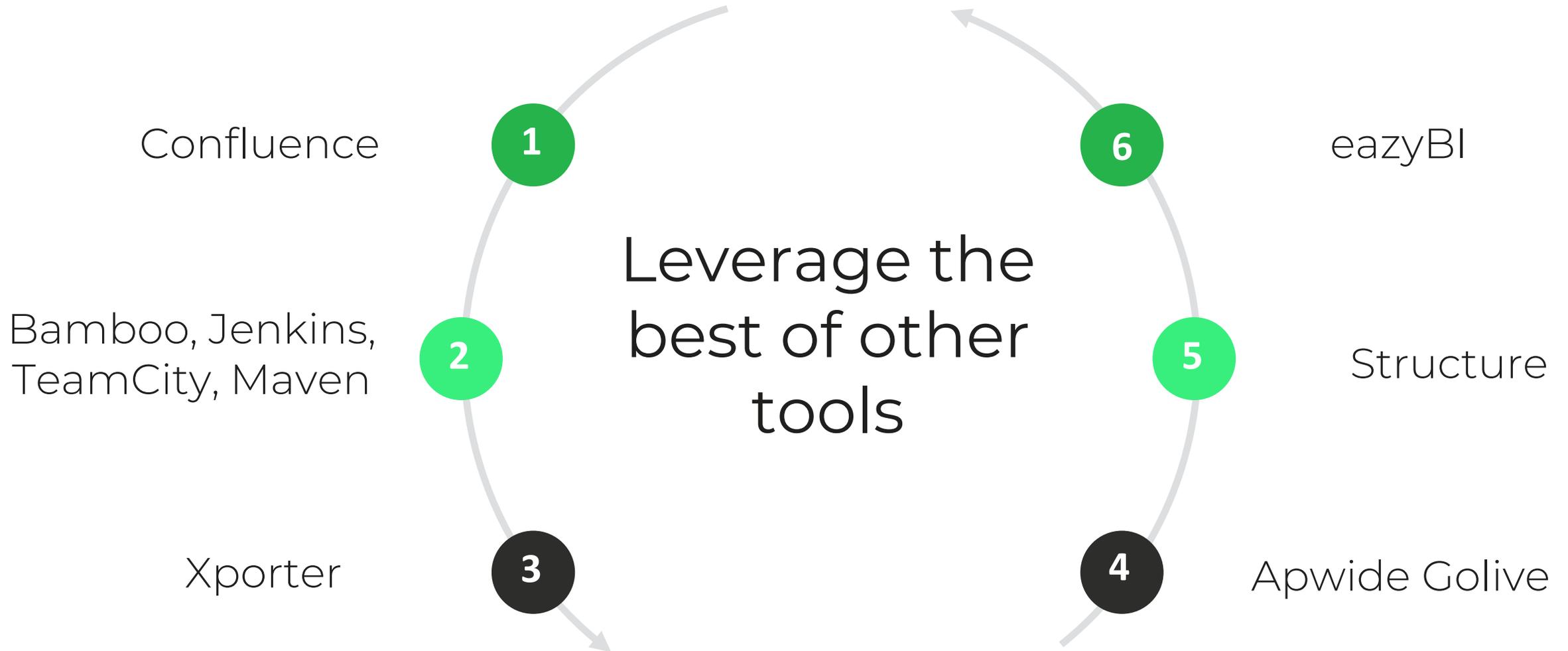
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We let you...

1. Focus on the work, while XRAY does the boring stuff
2. Improve collaboration, as developers and testers have more time
3. Get things done right the first time, so you deploy with confidence

# Integrations

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Happy Testing!

Thank you!

6. Xray vs competition?

# Xray vs Zephyr for Jira

		
	Xray	Zephyr
Native support for BDD with Cucumber	✓	-
Jira issues for all testing phases	✓	-
Data consistency	✓	-
JUnit, NUnit, Robot, Behave, TestNG	✓	-
Hierarchical, multi-level folder Tests organization at project level	✓	-
Hierarchical, multi-level folder Tests organization per each Test Plan	✓	-
REST API built-in	✓	-
Integration with Xporter for fully customized reports in Word, PDF, XLS	✓	-