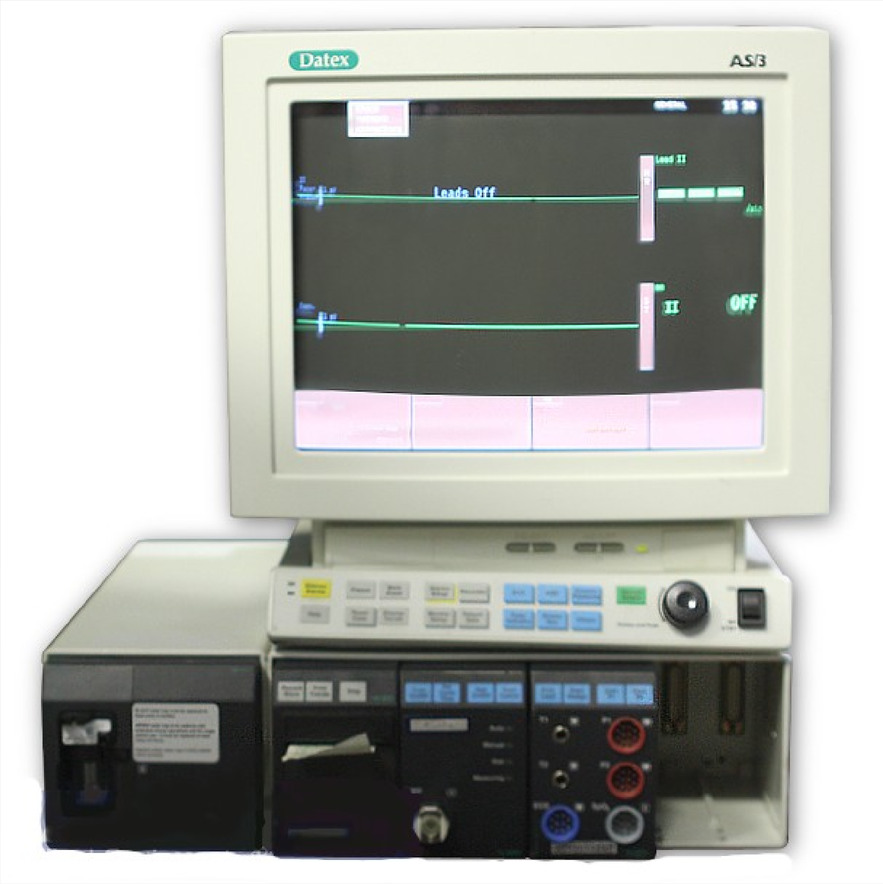
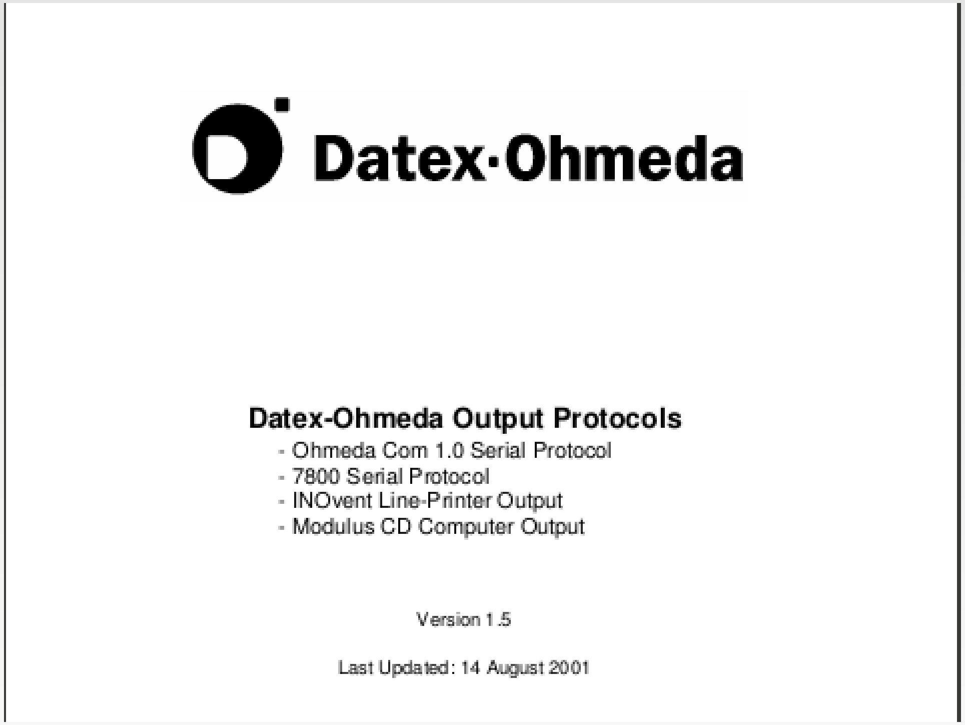
Lessons Learned from Automated Acceptance Testing

Rannicon

SQA DAYS#10

Точка роста твоей карьеры





Datex·Ohmeda

Datex-Ohmeda Output Protocols

- Ohmeda Com 1.0 Serial Protocol
- 7800 Serial Protocol
- INOvent Line-Printer Output
- Modulus CD Computer Output

Version 1.5

Last Updated: 14 August 2001

Common to All Cases

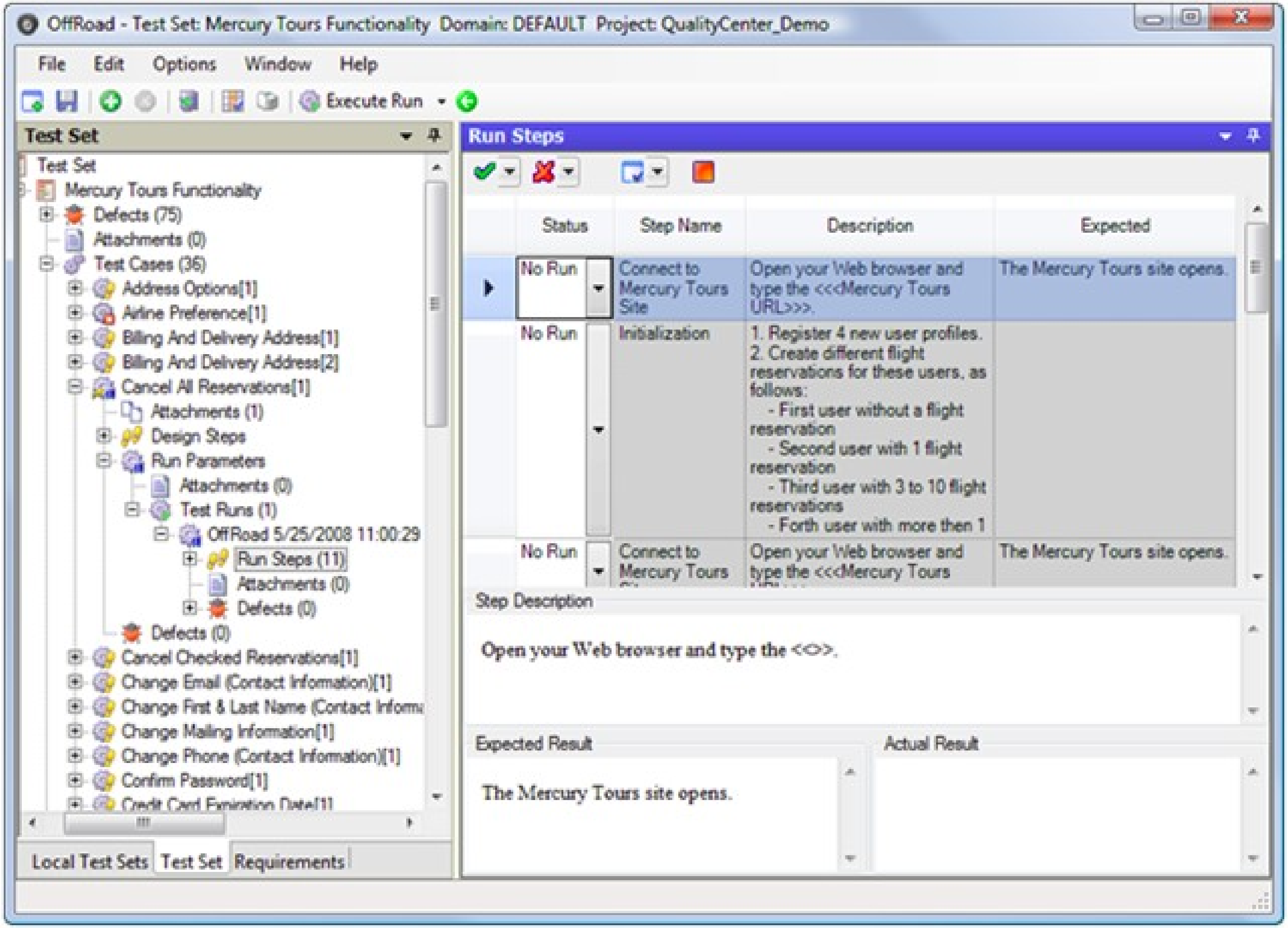
Scrum

Performance

Big products 100 – 1000 people involved

Case 1: Browsing Gateway 2004

Weekly manual build and manual testing



OffRoad - Test Set: Mercury Tours Functionality Domain: DEFAULT Project: QualityCenter_Demo

File
Edit
Options
Window
Help
Execute Run
Test Set
Test Set
Mercury Tours Functionality
Defects (75)
Attachments (0)
Test Cases (36)
Address Options[1]
Airline Preference[1]
Billing And Delivery Address[1]
Billing And Delivery Address[2]
Cancel All Reservations[1]
Attachments (1)
Design Steps
Run Parameters
Attachments (0)
Test Runs (1)
OffRoad 5/25/2008 11:00:29
Run Steps (11)
Attachments (0)
Defects (0)
Defects (0)
Cancel Checked Reservations[1]
Change Email (Contact Information)[1]
Change First & Last Name (Contact Informa
Change Mailing Information[1]
Change Phone (Contact Information)[1]
Confirm Password[1]
Credit Card Expiration Date[1]
Local Test Sets
Test Set
Requirements
Run Steps

	Status	Step Name	Description	Expected
▶	No Run	Connect to Mercury Tours Site	Open your Web browser and type the <<<Mercury Tours URL>>>.	The Mercury Tours site opens.
	No Run	Initialization	1. Register 4 new user profiles. 2. Create different flight reservations for these users, as follows: - First user without a flight reservation - Second user with 1 flight reservation - Third user with 3 to 10 flight reservations - Forth user with more then 1	
	No Run	Connect to Mercury Tours	Open your Web browser and type the <<<Mercury Tours	The Mercury Tours site opens.

Step Description

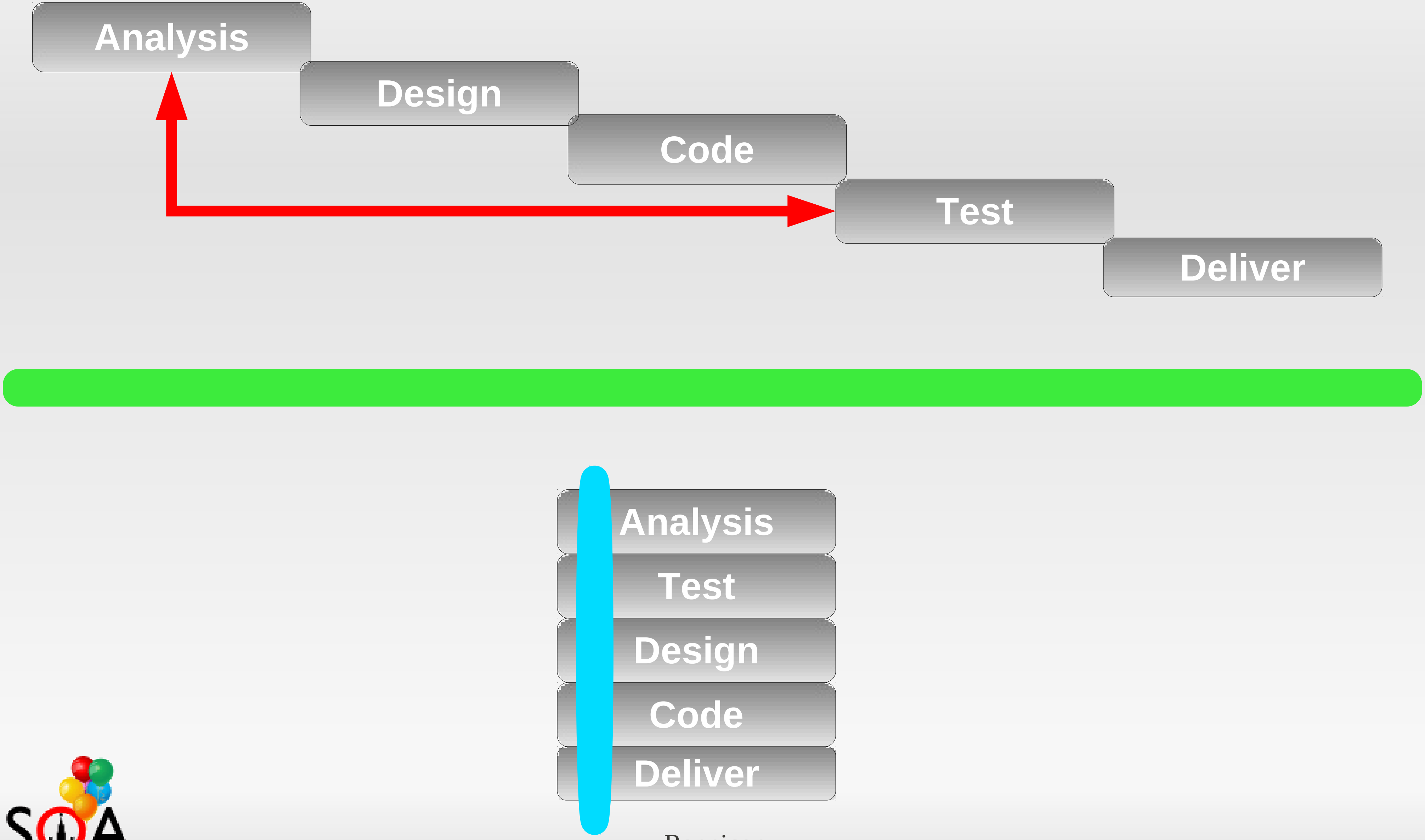
Open your Web browser and type the <<>>.

Expected Result

The Mercury Tours site opens.

Actual Result

Case 1: Process Change



Analysis

Design

Code

Test

Deliver

Analysis

Test

Design

Code

Deliver

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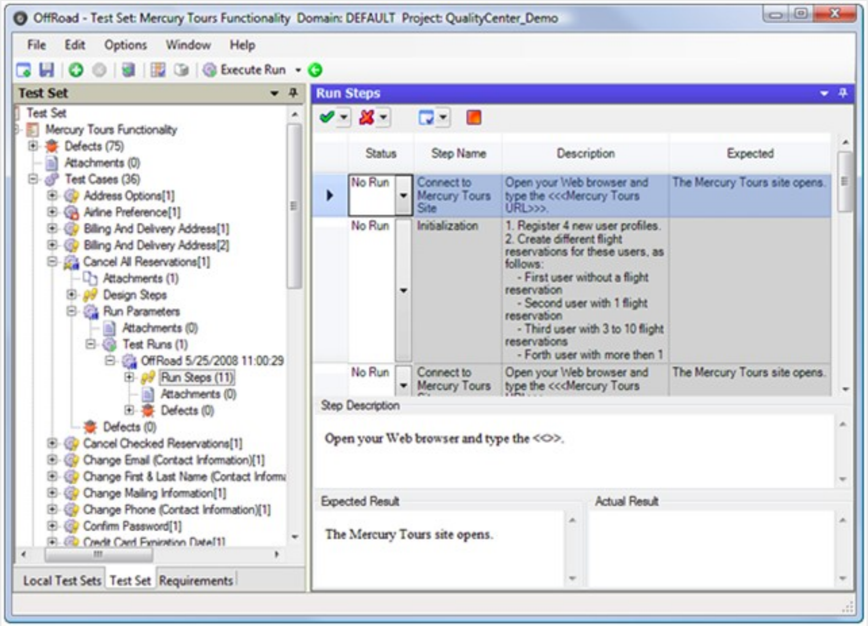
Case 1: Automation Approach



OffRoad - Test Set: Mercury Tours Functionality Domain: DEFAULT Project: QualityCenter_Demo

- Test Set
  - Mercury Tours Functionality
    - Defects (75)
    - Attachments (0)
    - Test Cases (36)
      - Address Options[1]
      - Airline Preference[1]
      - Billing And Delivery Address[1]
      - Billing And Delivery Address[2]
      - Cancel All Reservations[1]
        - Attachments (1)
        - Design Steps
        - Run Parameters
          - Attachments (0)
          - Test Runs (1)
            - OffRoad 5/25/2008 11:00:29
              - Run Steps (11)
              - Attachments (0)
              - Defects (0)
        - Defects (0)
      - Cancel Checked Reservations[1]
      - Change Email (Contact Information)[1]
      - Change First & Last Name (Contact Informa
      - Change Mailing Information[1]
      - Change Phone (Contact Information)[1]
      - Confirm Password[1]
      - Credit Card Expiration Date[1]

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No Run	Connect to Mercury Tours	Open your Web browser and type the <<<Mercury Tours	The Mercury Tours site opens.

Step Description

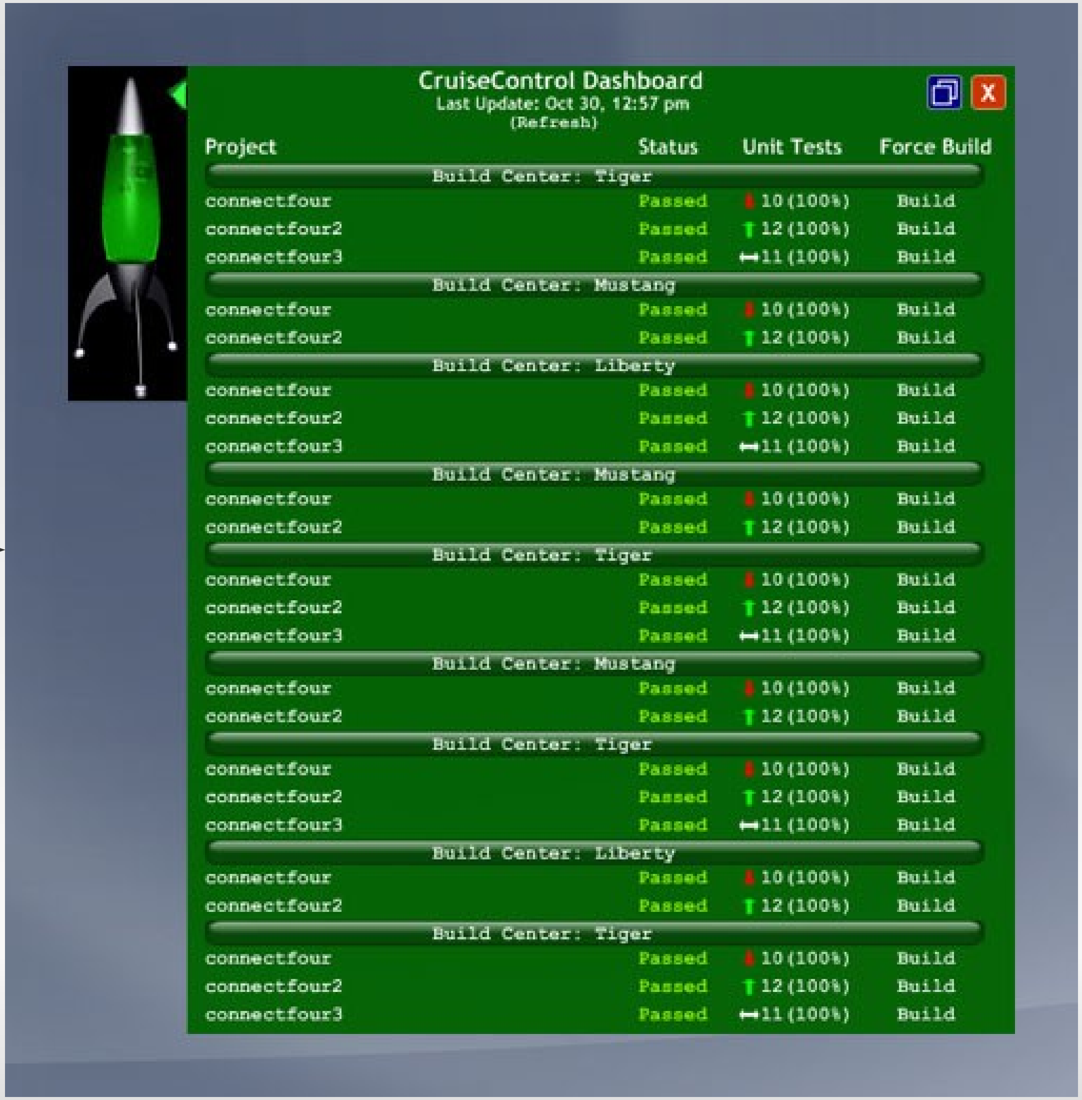
Open your Web browser and type the <<>>.

Expected Result

The Mercury Tours site opens.

Actual Result

Offshore subcontractor



CruiseControl Dashboard
Last Update: Oct 30, 12:57 pm
(Refresh)

Project	Status	Unit Tests	Force Build
Build Center: Tiger			
connectfour	Passed	↓ 10 (100%)	Build
connectfour2	Passed	↑ 12 (100%)	Build
connectfour3	Passed	↔ 11 (100%)	Build
Build Center: Mustang			
connectfour	Passed	↓ 10 (100%)	Build
connectfour2	Passed	↑ 12 (100%)	Build
Build Center: Liberty			
connectfour	Passed	↓ 10 (100%)	Build
connectfour2	Passed	↑ 12 (100%)	Build
connectfour3	Passed	↔ 11 (100%)	Build
Build Center: Mustang			
connectfour	Passed	↓ 10 (100%)	Build
connectfour2	Passed	↑ 12 (100%)	Build
Build Center: Tiger			
connectfour	Passed	↓ 10 (100%)	Build
connectfour2	Passed	↑ 12 (100%)	Build
connectfour3	Passed	↔ 11 (100%)	Build
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connectfour2	Passed	↑ 12 (100%)	Build
connectfour3	Passed	↔ 11 (100%)	Build
Build Center: Liberty			
connectfour	Passed	↓ 10 (100%)	Build
connectfour2	Passed	↑ 12 (100%)	Build
Build Center: Tiger			
connectfour	Passed	↓ 10 (100%)	Build
connectfour2	Passed	↑ 12 (100%)	Build
connectfour3	Passed	↔ 11 (100%)	Build

Case 1: Results

100% test automation

In version 2.0 we learned the new method

Version 2.1 of product launched on schedule first time in products history

Automated tests keep the product in release shape during the development

Case 1: Learnings

Automated acceptance testing delivers

Sell to managers to avoid double work

Performance and stability tests; Essential

Do not outsource automating test cases

Do not write your own testing framework

Team level workshops work well

Test help troubleshoot customer problems

Case 2: Flexi Network Gateway

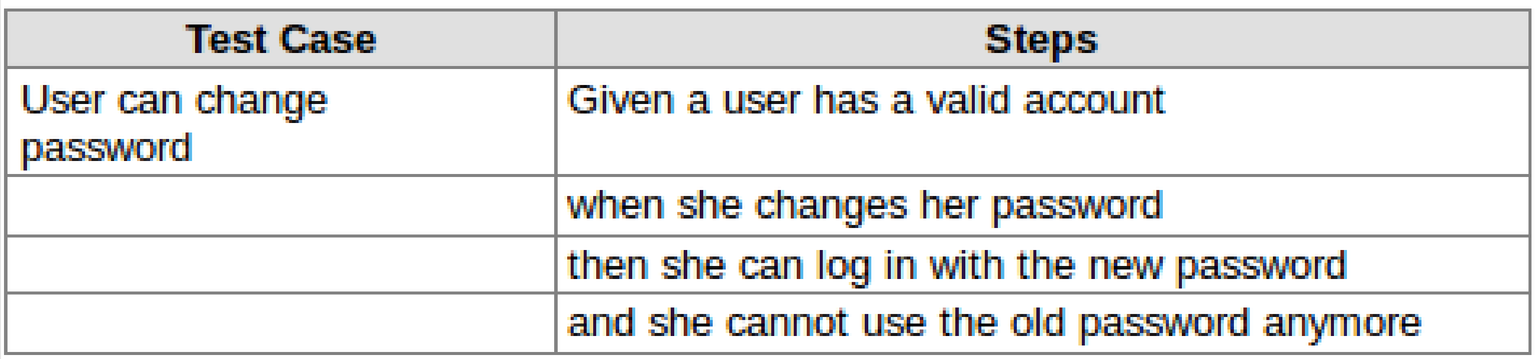
Greenfield product

From Day 1

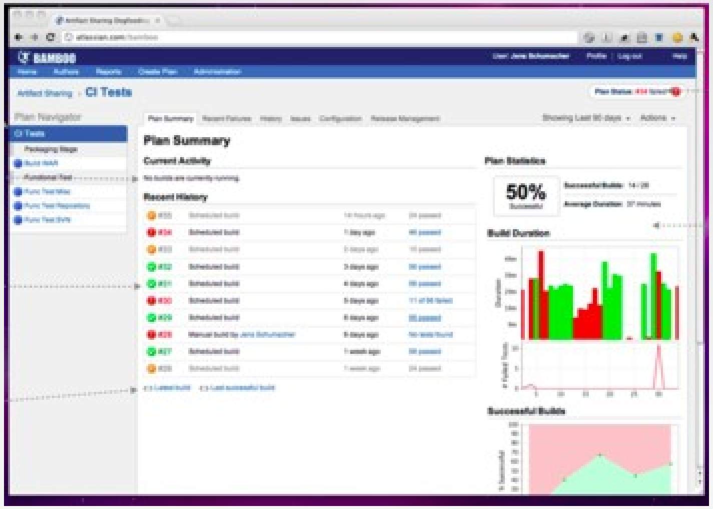
- Unit testing
- Continuous Integration
- Automated Acceptance Tests

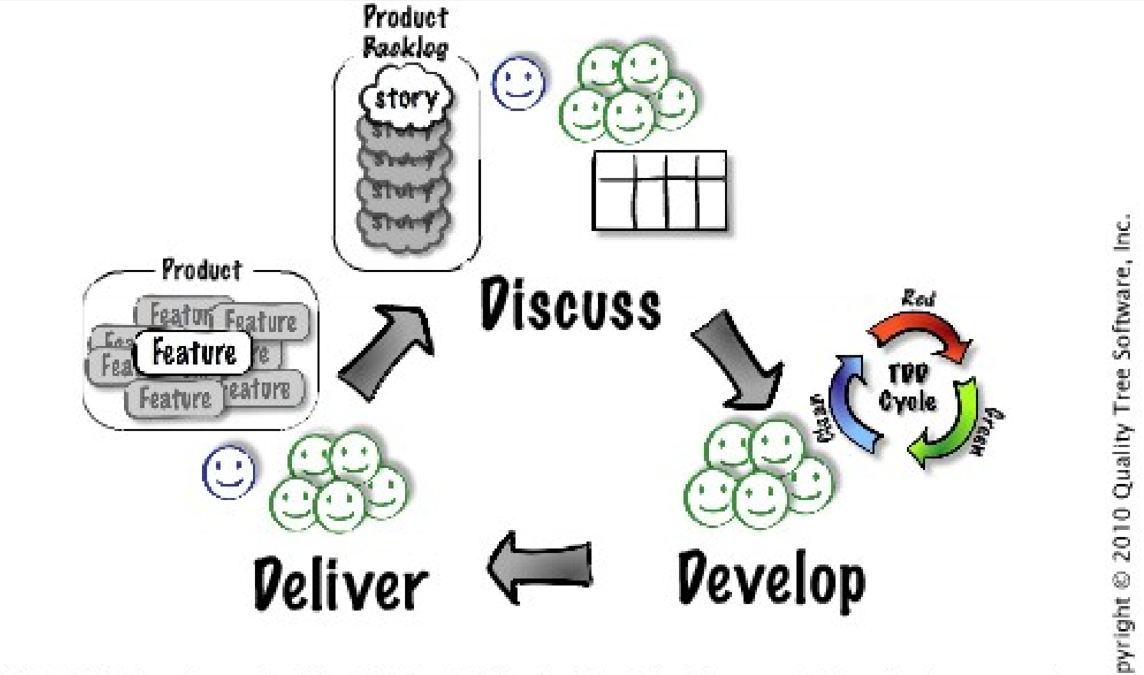
Case 2: Automation Approach

RobotFramework.org



Test Case	Steps
User can change password	Given a user has a valid account
	when she changes her password
	then she can log in with the new password
	and she cannot use the old password anymore





(Model developed with Pekka Klärck, Bas Vodde, and Craig Larman.)

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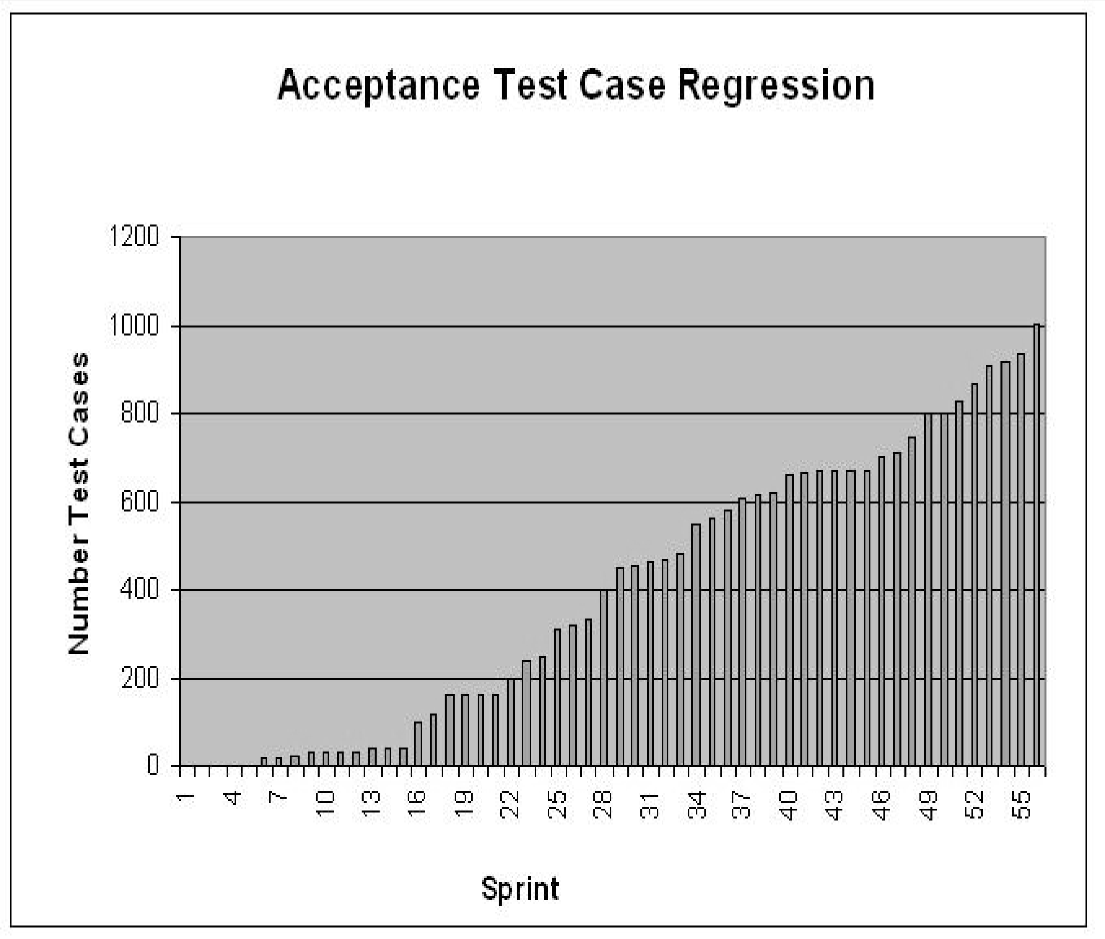
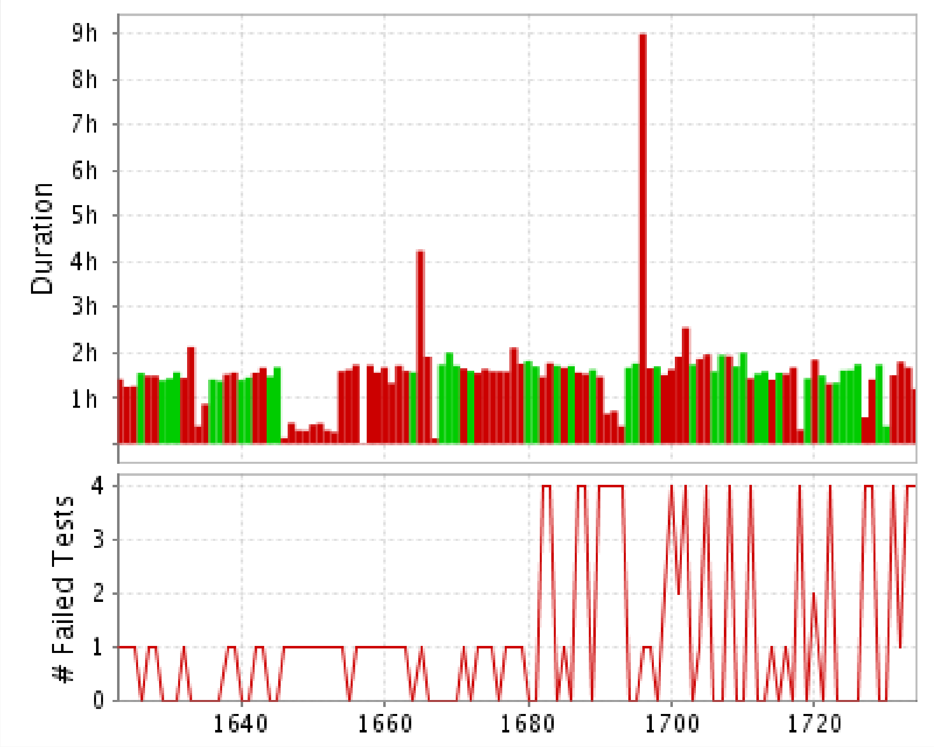
Case 2: Some Statistics





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Case 2: Results

100 % test automation from day one

Release capability after every sprint

Close customer collaboration

Only running tests as test documentation

Case 2: Learnings

Avoid making acceptance test too low level

Commercial driver lock in

Resistance to new tools and techniques should not be underestimated

Automated tests helps distributing work

- Still distribution slows down work

Case 3: Big UX project 2010

UX centric greenfield project

No common rules on test automation

Many tries to find right UX

DID I REMEMBER TO TELL YOU BEFORE YOU FINISHED THE CODING THAT THE USER'S SPECIFICATIONS CHANGED?
Dilbert.com DilbertCartoonist@gmail.com
AAAIII-YIIII-YIIII-YIIII-YIIIIII!!!!!!
5-16-11 ©2011 Scott Adams, Inc./Dist. by Universal Uclick
SO, NO-ISH?
BAM! BAM! BAM!

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Case 3: Automation Approach

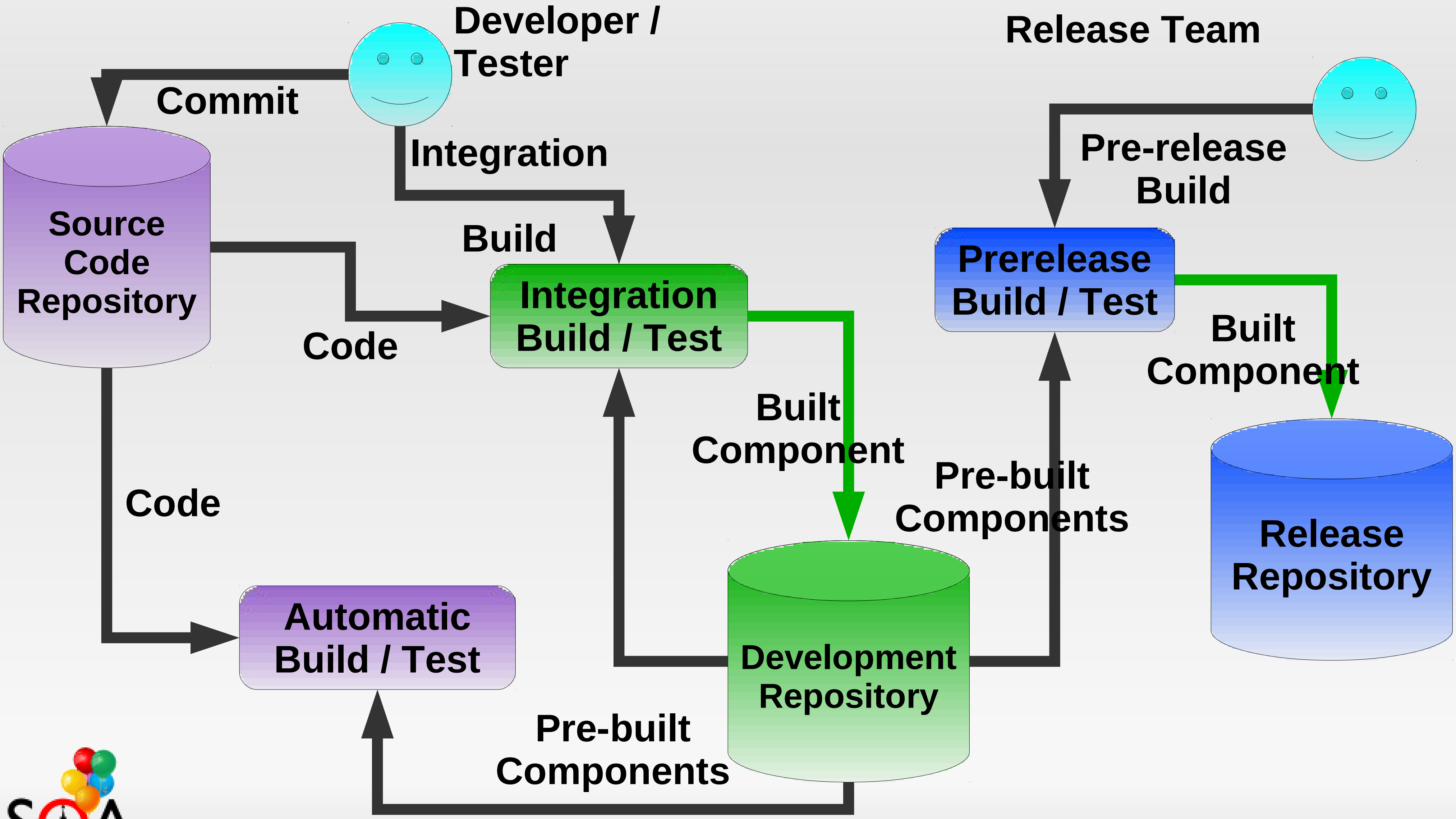
Building own test library to interact with applications UI

Test scripts written in scripting language

Cucumber integration possible but not used

Separate TA tools, Integration and Build organizations

Complex Integration



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Case 3: Results

Workshops with specification by example pay off

Daily product builds

Lot's of manual testing

Long feedback cycles

Case 3: Learnings

Automates tests with scripting language become unmaintainable

Common approach to test automation essential

Investment to simple CI

Do not underestimate organizational challenges

Automated as much as possible below UI

Summary of Learnings

Automated testing enables agility

Automated testing speeds learning

Automated testing is for whole product

Invest to automated CI system

Building automation tools is time wasted

Commercial tools lock you in

Automated testing is not all you need

Thank You

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