AGILE GURGAON 2016

27-28 May 2016
The Leela Ambience Hotel, Gurgaon
www.agilegurgaon.com

Continuous Agile Testing @ Naukri

Meetu Arora
Sr V.P. Quality Assurance
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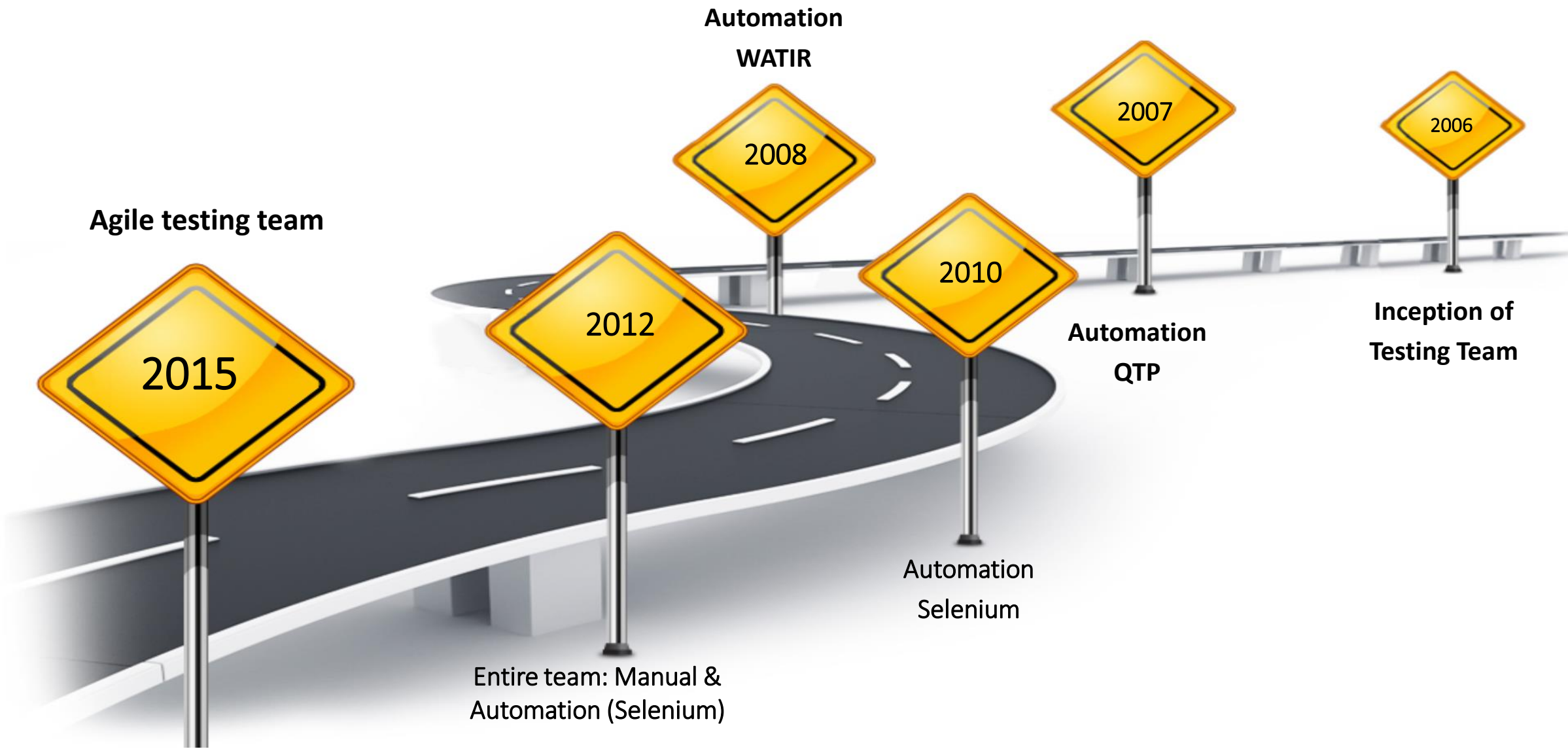
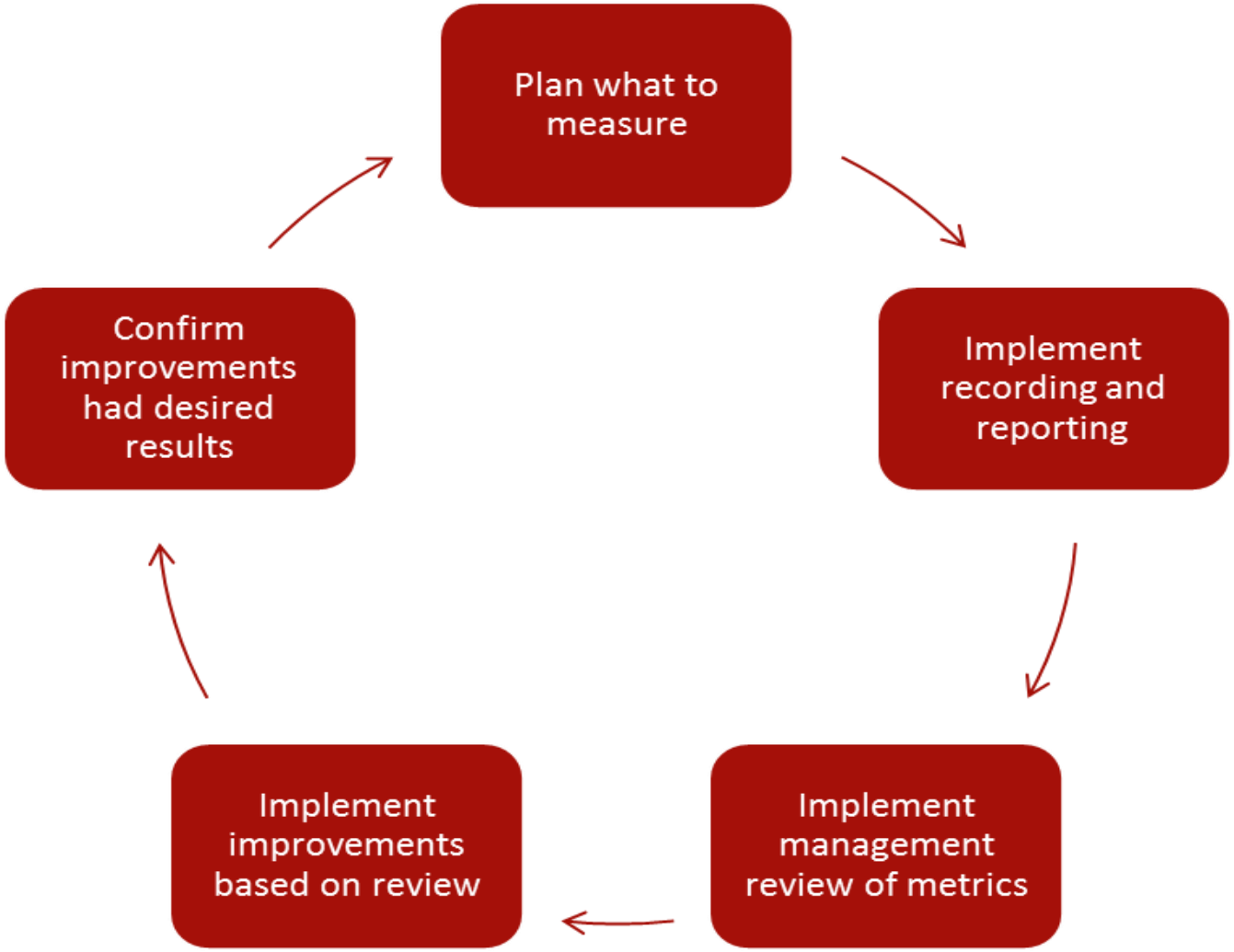
Testing Team Journey @Naukri.com



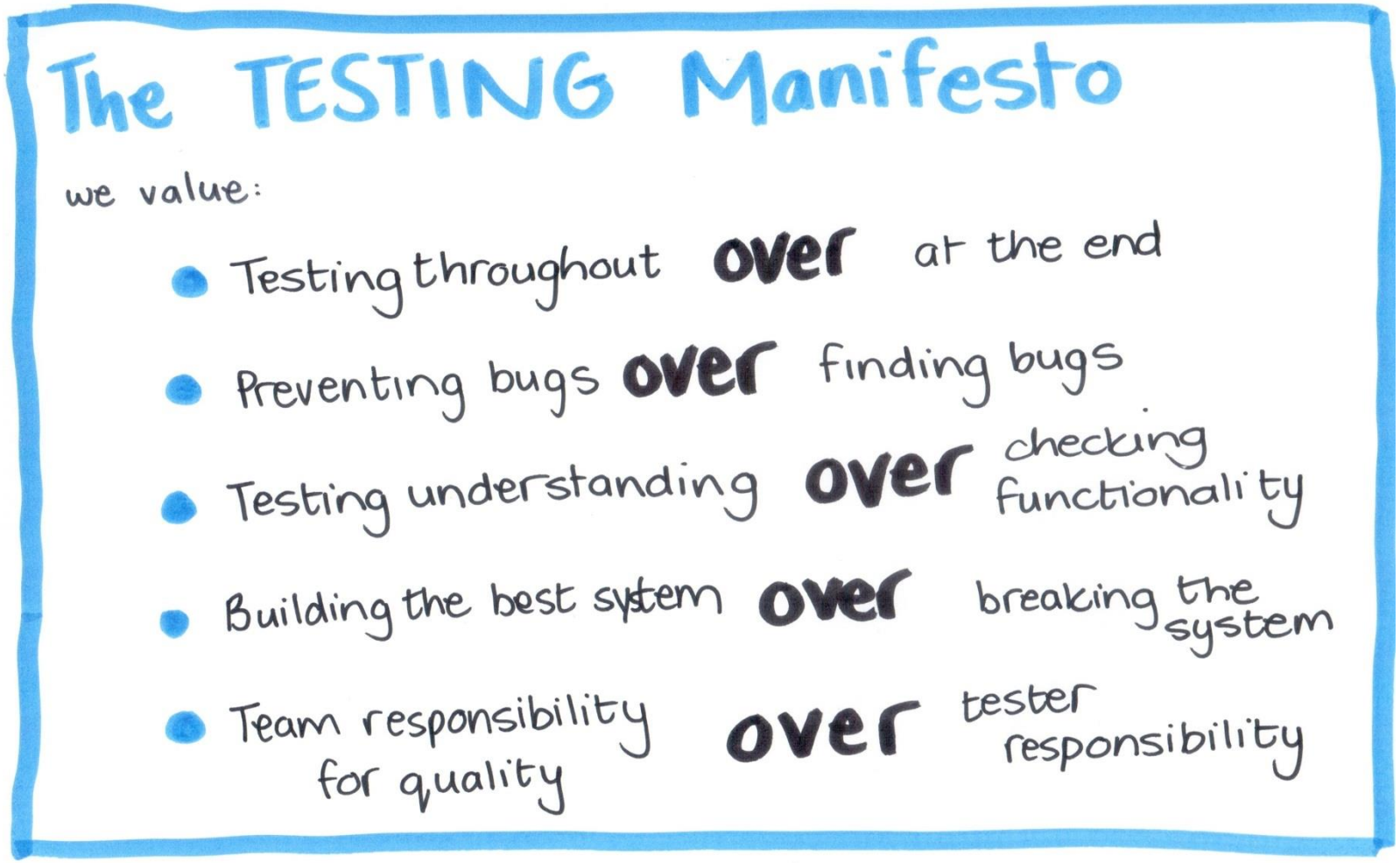
- Identify Need
- Identify Metrics/What
- Identify Path/How
- Prerequisites
- Implementation
- Our Measurements
- Results

Identify Need

Identify Metrics/What



Identify Path/How



Prerequisites

- Testing Team capable of doing automation
- Test case consolidation & management
- Dedicated scrum teams v/s shared resources
- Metric Baselines
  - ❑Post live defect seepage
    - ❑Test case coverage
    - ❑Automation coverage – UT, IT, FT
    - ❑Automation test flakiness
    - ❑Automation Execution time
  - ❑Velocity/Delivery
    - ❑Planning Efficiency
    - ❑Build Quality

Implementation

Transition to Automation

35 Manual testers & 3 Automation testers

TO

38 Manual + Automation = POWER testers

Transition to Automation - Challenges

- Skill mismatch
- Team dynamics
- Lack of inclination to move towards automation
- High investment in terms of time and effort

Transition to Automation - Path

- Perseverance
- Don’t fall back
- Very Small Steps
- Low hanging fruit first - ROI
- Tester empowerment through automation
- Focus on frameworks
  - We created Selenium POM code generator, which has been open sourced: https://github.com/naukri-engineering/SeleniumCodeGenerator
  - TestNG and XSLT for reporting
  - Generic Function library
- Coding Guidelines and Code Review Process
- Contests for motivation
- Provide migration channels

Test Case Consolidation and Management

Jenkins

git

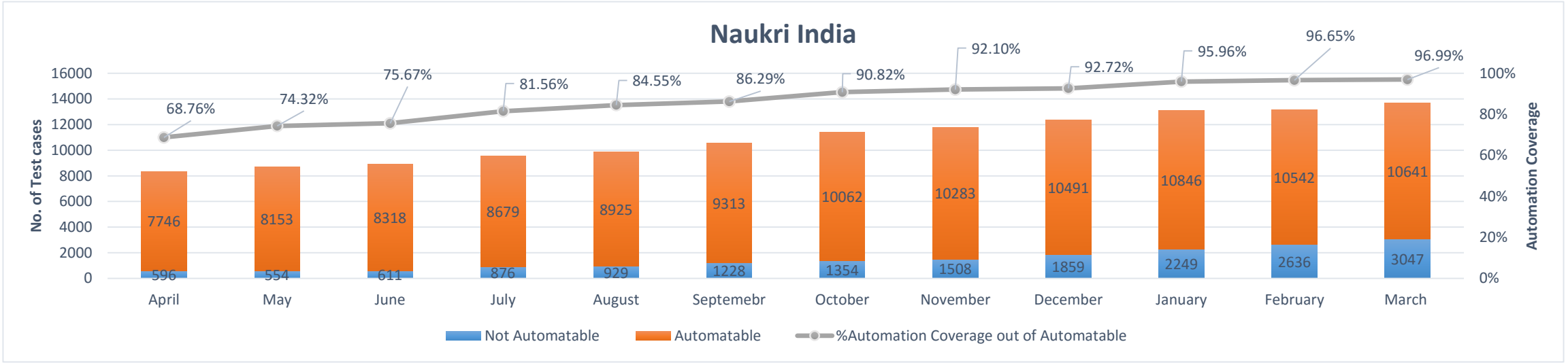
To know more about how to integrate automation scripts with Jenkins visit our blog:
http://engineering.naukri.com/2015/05/integrate-your-automation-with-jenkins/

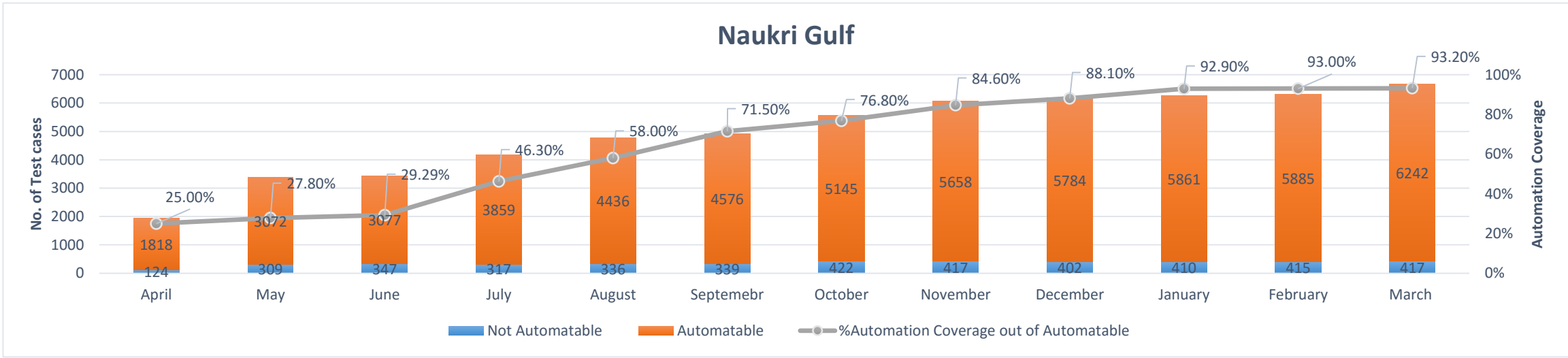
Testing Throughout

- Testing individual stories and Integration testing as you go along
  - Progressive/Parallel automation testing
  - Minimizing Automated Tests Flakiness
  - Reducing our automated tests execution time
  - Run automated regression suites periodically using Jenkins

To know more about Continuous Testing @ Naukri read our blog:
http://engineering.naukri.com/2016/03/continuous-testing-naukri/

Automation Coverage





Automation Flakiness Reduction

- 15% to 5% in Naukri
- 45% to 7% in Mobile Apps
- 17% to 7% in NaukriGulf

To know more about how we were able to optimize our tests and reduce flakiness visit our blog: http://engineering.naukri.com/2016/03/reduce-test-automation-flakiness/

Automation Execution Time Reduction

By selenium grid implementation we were able to reduce our execution time to 1/5th – From 25Hrs to 5Hrs

To know more about Selenium Grid implementation visit our blog:
http://engineering.naukri.com/2015/10/parallel-testing-at-naukri/

Preventing Bugs

- Tester, developer, product owner, architect are all part of the backlog grooming
- Entire team focuses on defining what and how
- Product backlog grooming is done one iteration in advance
- Testers contribute test cases upfront during this period and add them to the user stories in form of acceptance criteria or alternate paths

Preventing Bugs

- Peer testing at developer end
- Automated Build verification tests have been created and are run before providing builds to testers
- Progressive Automation testing approach is used.

Testing Understanding

- Put yourself in the customer shoes
  - We encourage our scrum teams to have direct interaction with actual customers – proactive & reactive
- Effective feedback loops
  - Our tech support team regularly shares reports on issue patterns which are used by scrum teams as inputs to design/test/improve systems
- Measure the customer usage pattern and use it to design test cases
  - We regularly analyse user data patterns to come up with and refine our test strategy

Building the best system

- Build Implicit Requirements
- Focus more on building positive product scenarios
- Focus on Bug Causal Analysis
- Peripheral testing: Focus v/s Defocus

To know more about peripheral testing please visit our blog
http://engineering.naukri.com/2016/03/peripheral-testing/

Team responsibility for quality

- Everybody tests as and when needed
- Measure Quality at various levels
  - Build Quality Meter
  - Post Production Issue Seepage

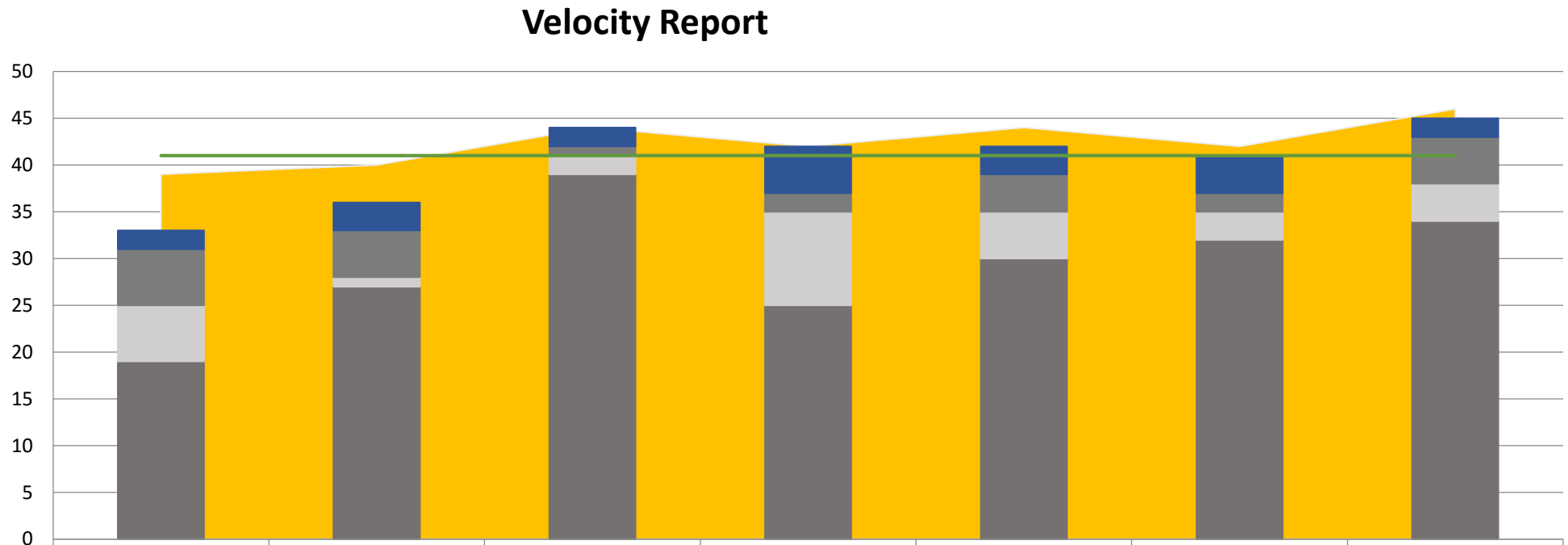
Build Quality Meter

Bug Severity

Bug Type: Functional, UI, product design, Implicit, Validation, Incomplete requirement, Insufficient impact analysis, Integration Environment, Configuration, Inadequate testing,DOA

Our Measurements

Indicative Data has been used for illustration purpose



	Sprint15-28Dec	Sprint29Dec-11Jan	Sprint12-25Jan	Sprint26Jan-8Feb	Sprint9-22Feb	Sprint23Feb-7March	Sprint8-21Mar
Commitment	39	40	44	42	44	42	46
Completed Unplanned P1/P2	2	3	2	5	3	4	2
Completed Unplanned	6	5	1	2	4	2	5
Planned Live/Staging	6	1	2	10	5	3	4
Completed Planned	19	27	39	25	30	32	34
Target	41	41	41	41	41	41	41

Our Measurements

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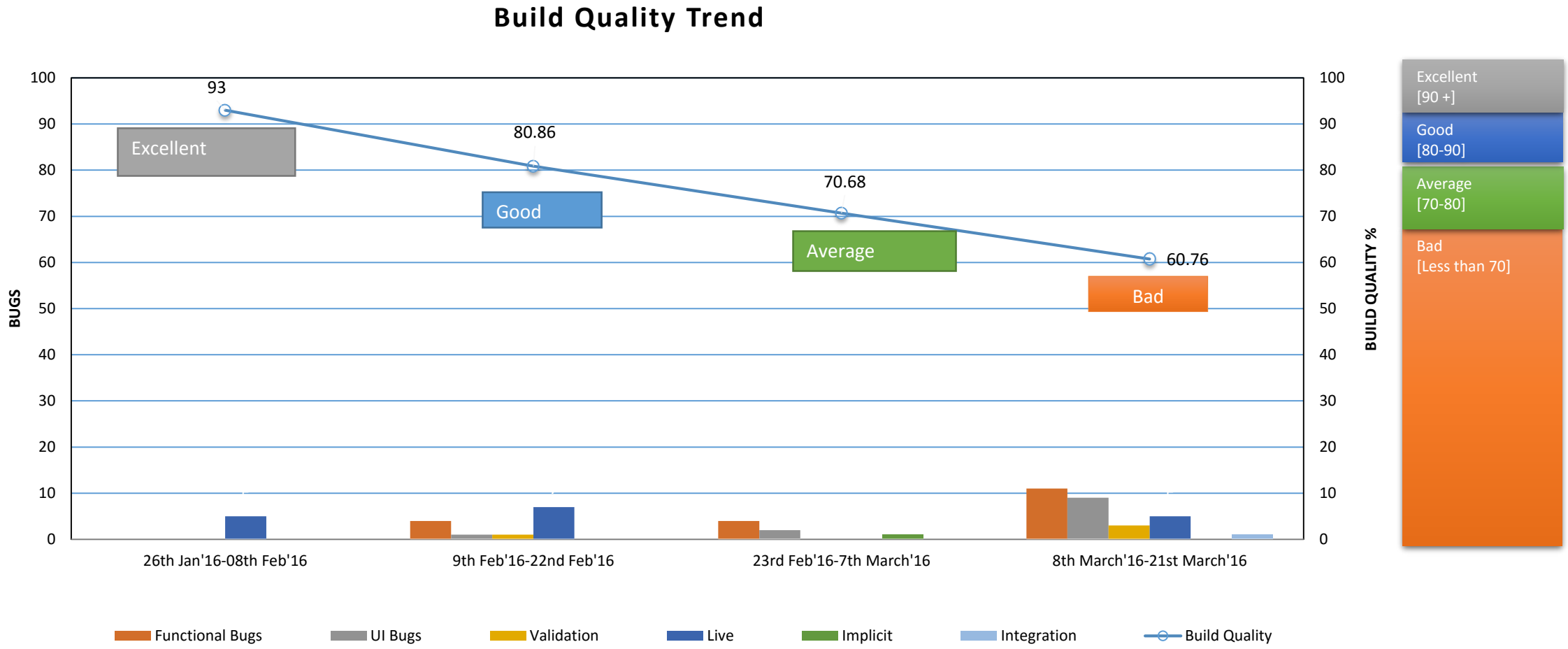

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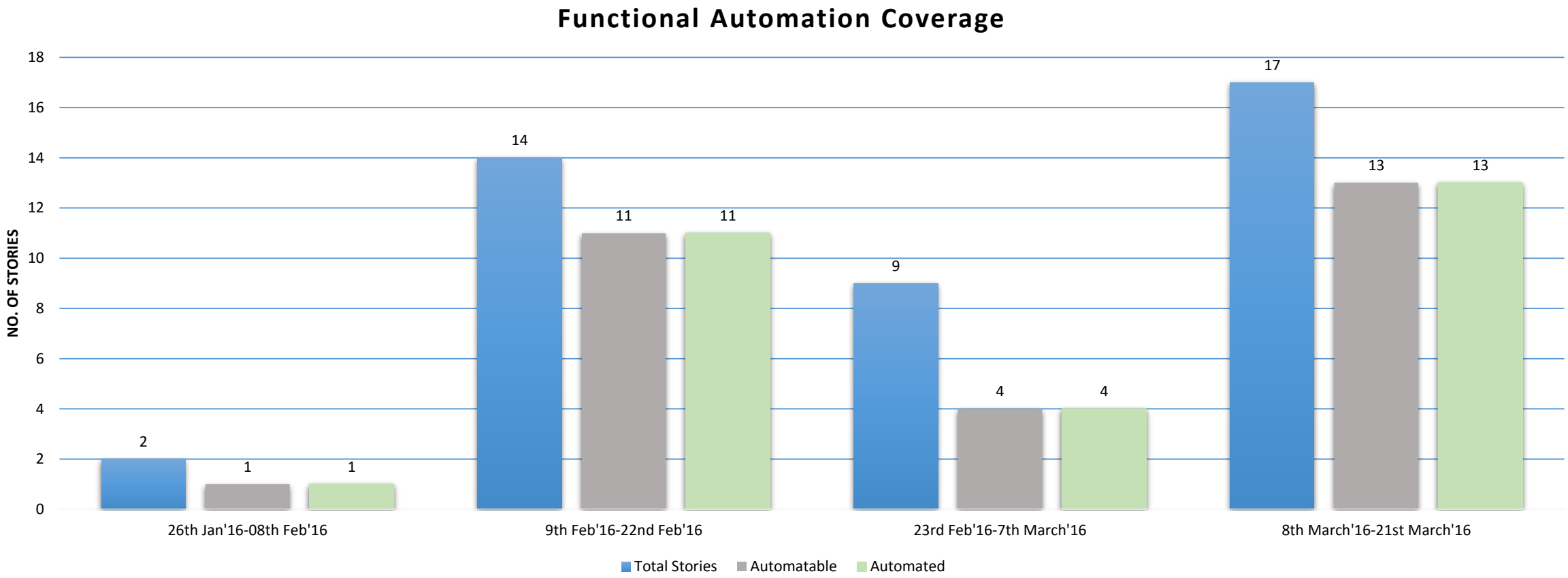
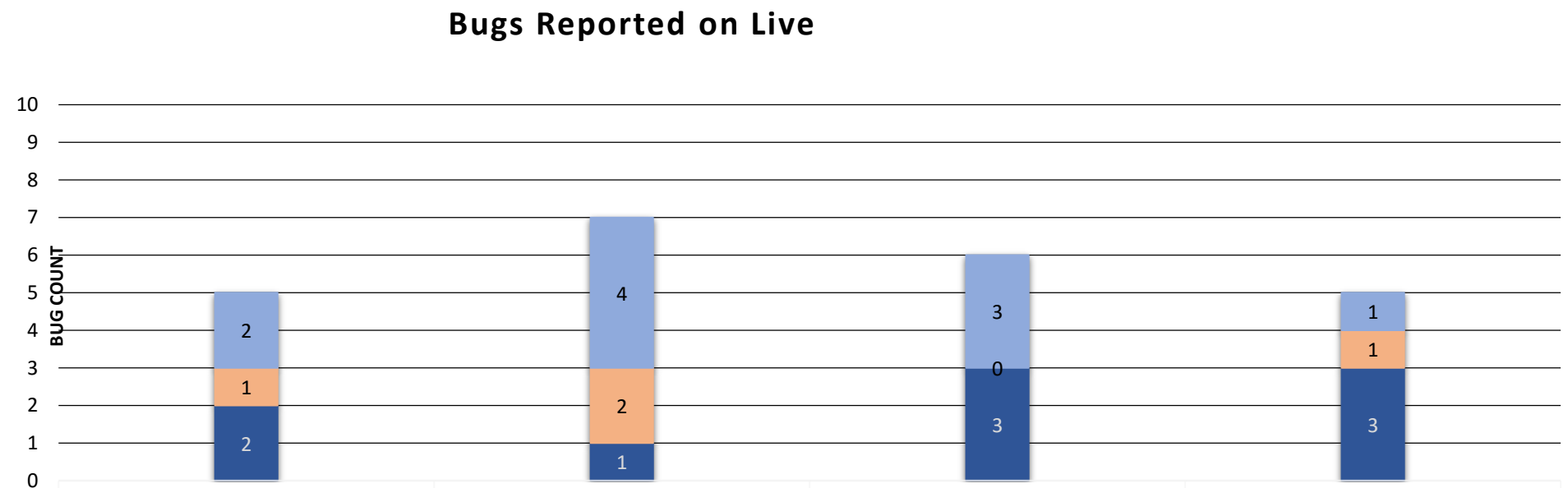


Our Measurements



	26 Jan - 8 Feb	9 -22 Feb	23 Feb-7 Mar	8-21 March'16
Client Reported Issues (Data Fixes)	2	4	3	1
Client Reported Issues (Code Fixes)	1	2	0	1
Live issues (Except client issues)	2	1	3	3

Indicative Data has been used for illustration purpose

Results

- Post live defect seepage: 50% reduction
  - Test Cases: 10K increase
  - Automation Coverage: 44% increase
  - Automation Scripts Execution time: 20% reduction
  - Automation flakiness: 20% reduction
- Velocity: 25% increase
  - 15% Build quality improvement
  - 30 % Planning Efficiency improvement

Key Take Away's

- Defining the "**Right Metric**"
- **Measure, Review, Improve** ….
- For Agile testing through out focus should be on **progressive/parallel automation testing** along with creating **reliable tests** that take **minimal time to execute**.
- **Defect Prevention** is the Key
- **Team v/s Individual** mind-set

TESTERS Vs THE REST

THE RELATIONSHIPS BETWEEN TESTERS AND EVERYONE ELSE IN THE PROJECT TEAM HAS BEEN REVOLUTIONALISED THROUGH AGILE

PRE-AGILE

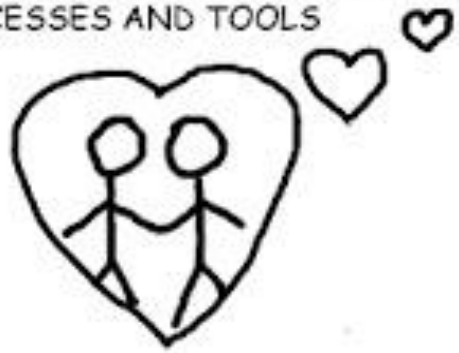
AGES AGO

WILD WEST

UNTIL RECENTLY

POST-AGILE

THEN AGILE CAME ALONG. NOW INDIVIDUALS AND INTERACTIONS ARE MORE IMPORTANT THAN PROCESSES AND TOOLS



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