"L'evoluzione della Testing Factory: nuovi strumenti e tecnologie a supporto delle "moderne" Testing Factories per renderle più agili ed efficienti"

STF 2015
Paolo Garzone - Solution Account Director, Continuous Delivery
EMEA South CA Technologies

17 Giugno 2015
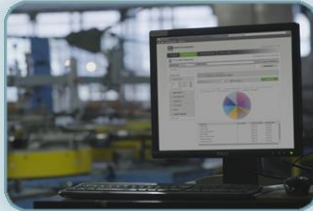
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2004

2014

FORTUNE
500

HOW Many
ARE STILL
52%
IN BUSINESS?

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> "Software is eating the world"
>
> **- Marc Andreeson**
>
> Wall Street Journal, Why Software is Eating the World, August 2011

$177B

Public cloud services market expected to grow 16% in 2015 to $177 billion[1]

welcome to the **Application Economy**

268B

By 2017, mobile apps will be downloaded more than 268 billion times[2]

50%

By 2018, more than 50% of B2B collaboration will take place through Web APIs[3]

[1] Gartner Forecast: Public Cloud Services, Worldwide, 2012-2018, 4Q14 Update, Ed Anderson, et al, 10 April 2015
[2] Gartner Hype Cycle for Application Development, 2014, Thomas E. Murphy, et al, 29 July 2014
[3] Gartner Press Release, "Gartner Says by 2017, Mobile Users Will Provide Personalized Data Streams to More Than 100 Apps and Services Every Day" January 22, 2014 http://www.gartner.com/newsroom/id/2654115

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Every Company is Becoming a Technology Company, Every Business a Digital Business

DIGITAL TRANSFORMATION

Re-thinking how the business operates to find new ways to create and deliver customer value

Eliminate constraints and critical dependencies

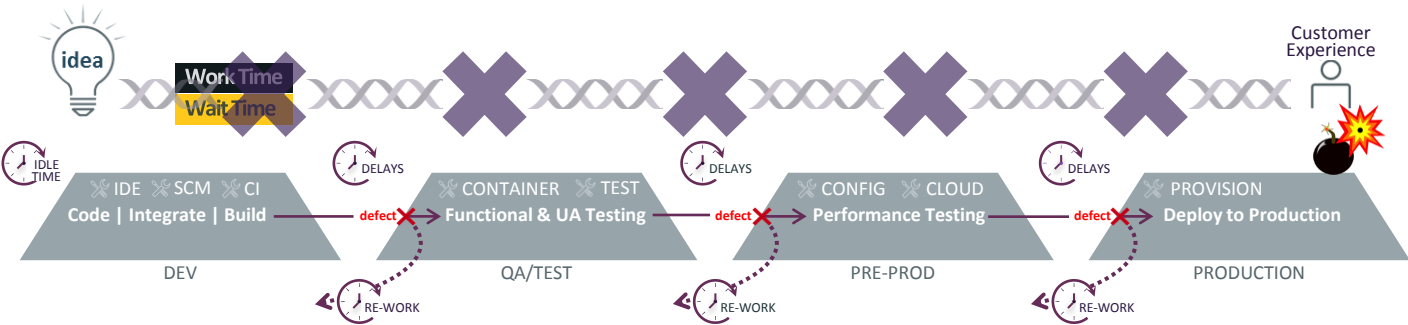**Rapidly deliver high-quality applications and services**

Create and deliver exceptional customer value

CONTINUOUS DELIVERY

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Traditional "software factory"

| Developers Deadlocked | Constrained Environments | Manual Testing | Too little testing, too late in the cycle | Too many disparate tools | Manual Scripting | Poor customer experience |

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Work Time
Wait Time

IDLE TIME

DELAYS

DELAYS

DELAYS

Customer Experience

⚒ IDE ⚒ SCM ⚒ CI
Code | Integrate | Build

defect ✕ →

⚒ CONTAINER ⚒ TEST
Functional & UA Testing

defect ✕ →

⚒ CONFIG ⚒ CLOUD
Performance Testing

defect ✕ →

⚒ PROVISION
Deploy to Production

DEV

RE-WORK

QA/TEST

RE-WORK

PRE-PROD

RE-WORK

PRODUCTION

SLOW AND INEFFICIENT - EXCESSIVE IDLE TIME, DELAYS AND RE-WORK

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Continuous Delivery

| Developers Deadlocked | Constrained Environments | Manual Testing | Too little testing, too late in the cycle | Too many disparate tools | Manual Scripting | Poor customer experience |

Parallel Work Streams

Quality Acceleration

End-to-end Automation

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Work Time

Customer Experience

IDLE TIME

DELAYS

DELAYS

DELAYS

Code | Integrate | Build

Functional & UA Testing

Performance Testing

Deploy to Production

DEV

RE-WORK

QA/TEST

RE-WORK

PRE-PROD

RE-WORK

PRODUCTION
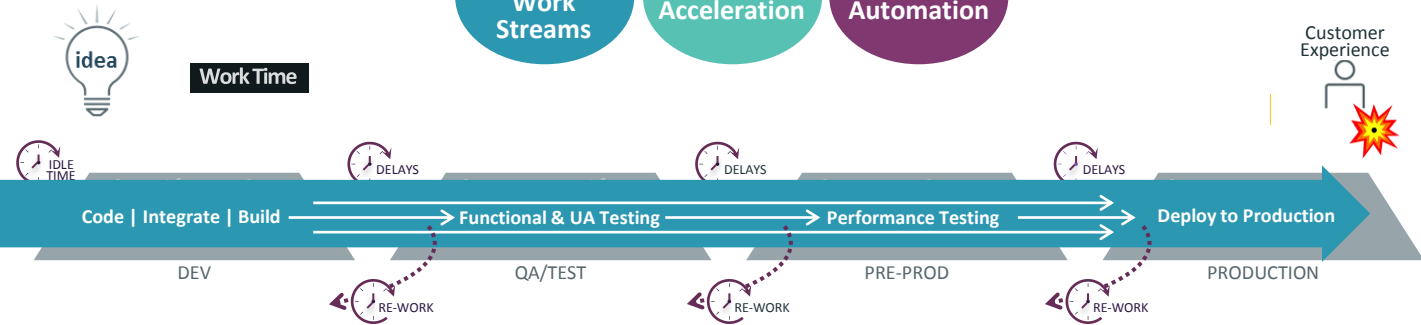
TOOLING FOR HIGHLY AUTOMATED, END-TO-END SOFTWARE PIPELINE

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Parallel Work Streams

| Accurately simulate constrained systems | Quickly create, edit and deploy virtual services | Virtualize APIs and manage access |

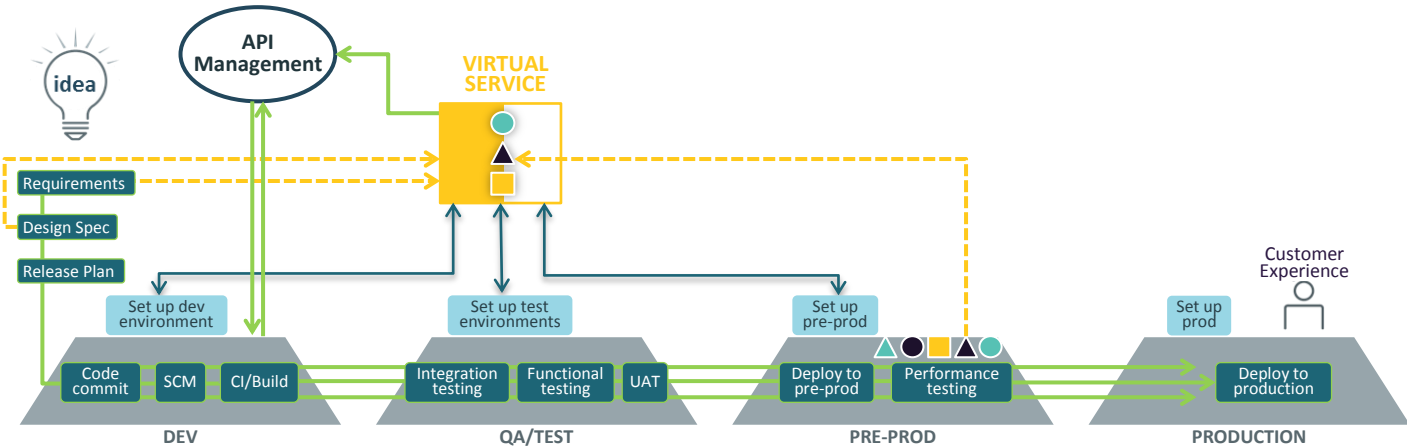idea

API Management

VIRTUAL SERVICE

Requirements

Design Spec

Release Plan

Set up dev environment

Set up test environments

Set up pre-prod

Set up prod

Customer Experience

| Code commit | SCM | CI/Build | | Integration testing | Functional testing | UAT | | Deploy to pre-prod | Performance testing | | Deploy to production |

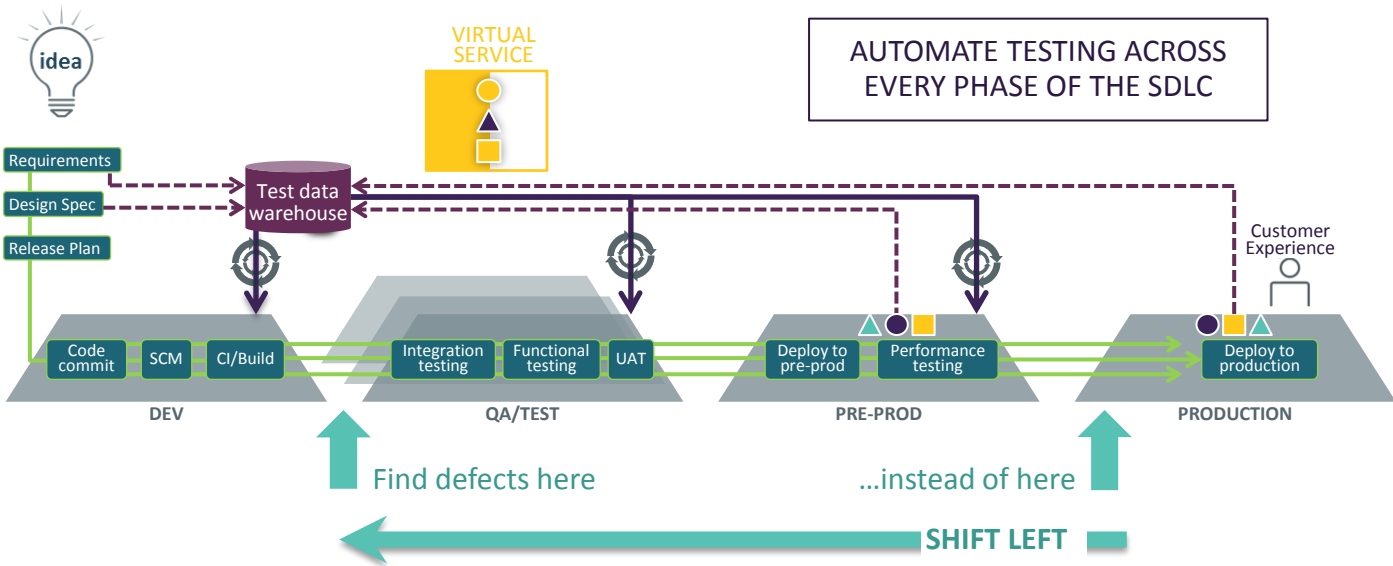**DEV**   **QA/TEST**   **PRE-PROD**   **PRODUCTION**

ELIMINATE DEPENDENCIES AND CONSTRAINTS
TO ENABLE PARALLEL WORK STREAMS

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Quality Acceleration

Capture, create, store and manage test data to re-use and share

Automatically generate test cases and virtual services

Test on any device or platform mobile-to-mainframe

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VIRTUAL SERVICE

AUTOMATE TESTING ACROSS EVERY PHASE OF THE SDLC

Requirements
Design Spec
Release Plan

Test data warehouse

Customer Experience

Code commit | SCM | CI/Build | Integration testing | Functional testing | UAT | Deploy to pre-prod | Performance testing | Deploy to production

DEV | **QA/TEST** | **PRE-PROD** | **PRODUCTION**

Find defects here   …instead of here
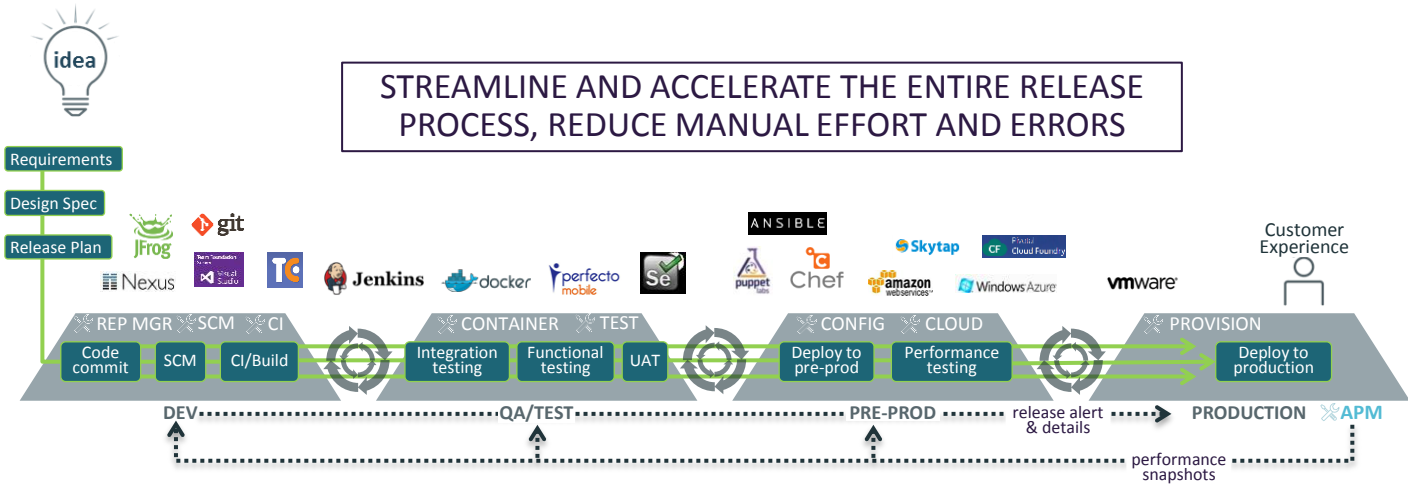
SHIFT LEFT

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End-to-end Automation

Integrate 100+ open source and 3rd party tools

Automate application deployment & promotion

Create continuous feedback loops

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STREAMLINE AND ACCELERATE THE ENTIRE RELEASE PROCESS, REDUCE MANUAL EFFORT AND ERRORS

Requirements

Design Spec

Release Plan

Customer Experience

REP MGR — **SCM** — **CI**

| Code commit | SCM | CI/Build |

CONTAINER — **TEST**

| Integration testing | Functional testing | UAT |

CONFIG — **CLOUD**

| Deploy to pre-prod | Performance testing |

PROVISION

| Deploy to production |

DEV .... QA/TEST .... PRE-PROD .... release alert & details ......▶ PRODUCTION ✂ APM

performance snapshots

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Continuous Delivery **REDEFINED**

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Parallel Work Streams

Quality Acceleration

End-to-end Automation

Application Pipeline

Customer Experience

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Parallel Work Streams

Reduced infrastructure and outsourcing costs by as much as **$1 million**

Quality Acceleration

Autotrader

Saved an average of **576** man-hours per release

End-to-end Automation

ING

Reduced test data set up effort by **75%**
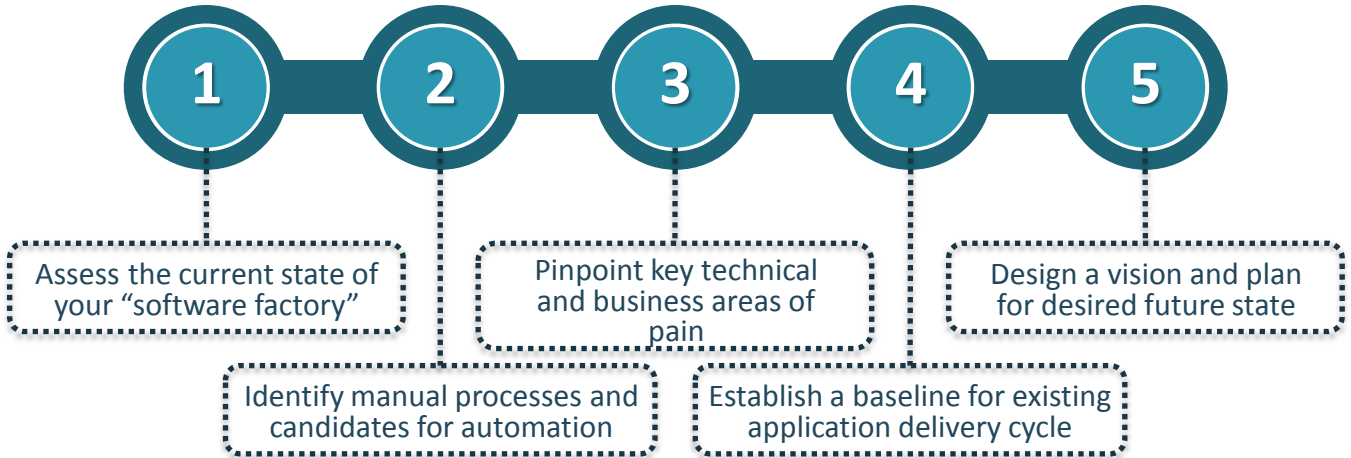
Increased test coverage from **30% → 80%**

UnionBank®

Reduced testing costs **85%**

Reduced application deployment time up to **94%**

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Where do You Start?

1 Assess the current state of your "software factory"

2 Identify manual processes and candidates for automation

3 Pinpoint key technical and business areas of pain

4 Establish a baseline for existing application delivery cycle

5 Design a vision and plan for desired future state

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R.I.P

DOMINANCE

Don't Become the
BLOCKBUSTER
of the Future

Bridge the gap to the **Application Economy**

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