Business Transformation: PwC Makes DevOps a Reality With Center of Excellence and Innovative Service Virtualization Factory

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Abstract

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PwC's Service Virtualization Factory is part of our DevOps CoE that enables our clients to deliver high quality applications on time by transforming the development teams from silos into collaborative and agile groups. We will present how we practically help accelerate the implementation of SV through our Factory model.

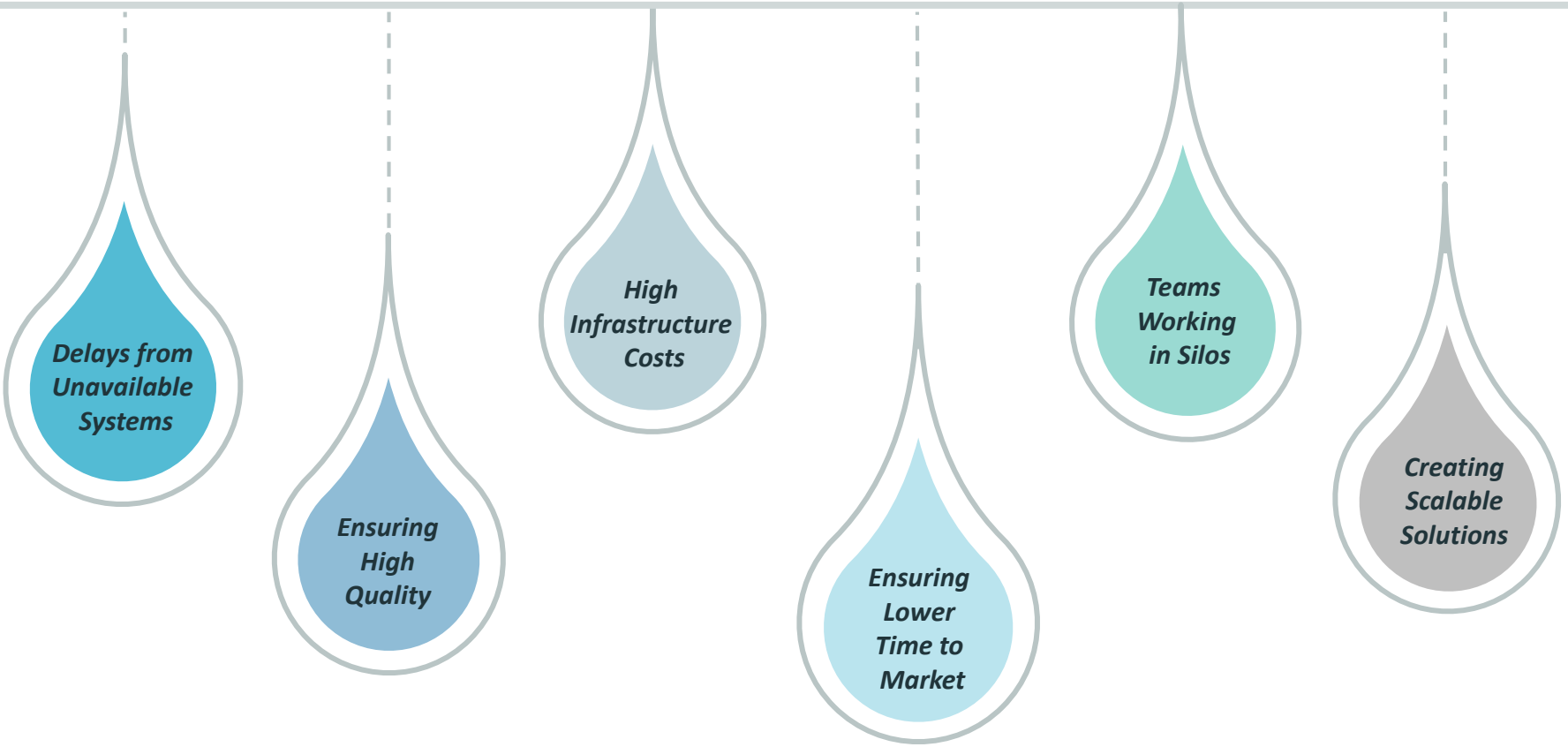
Agenda

1. TYPICAL CHALLENGES AND OVERCOMING THEM
2. DEVOPS AND ITS SIGNIFICANCE
3. A STARTING POINT - SERVICE VIRTUALIZATION (SV)
4. SERVICE VIRTUALIZATION FACTORY
5. CREATING AN EFFECTIVE SV SOLUTION
6. ROAD AHEAD TO DEVOPS

Today's Fast Paced Industry

The software industry is undergoing a rapid change by transforming into a business enabler. Today's market is highly competitive and driven by a more demanding customer. To stay in the competition, organizations need to adopt these changes by becoming lean and flexible. ***This means delivering fast, exceeding customer expectations while ensuring high quality.***

Typical Challenges for Our Customers

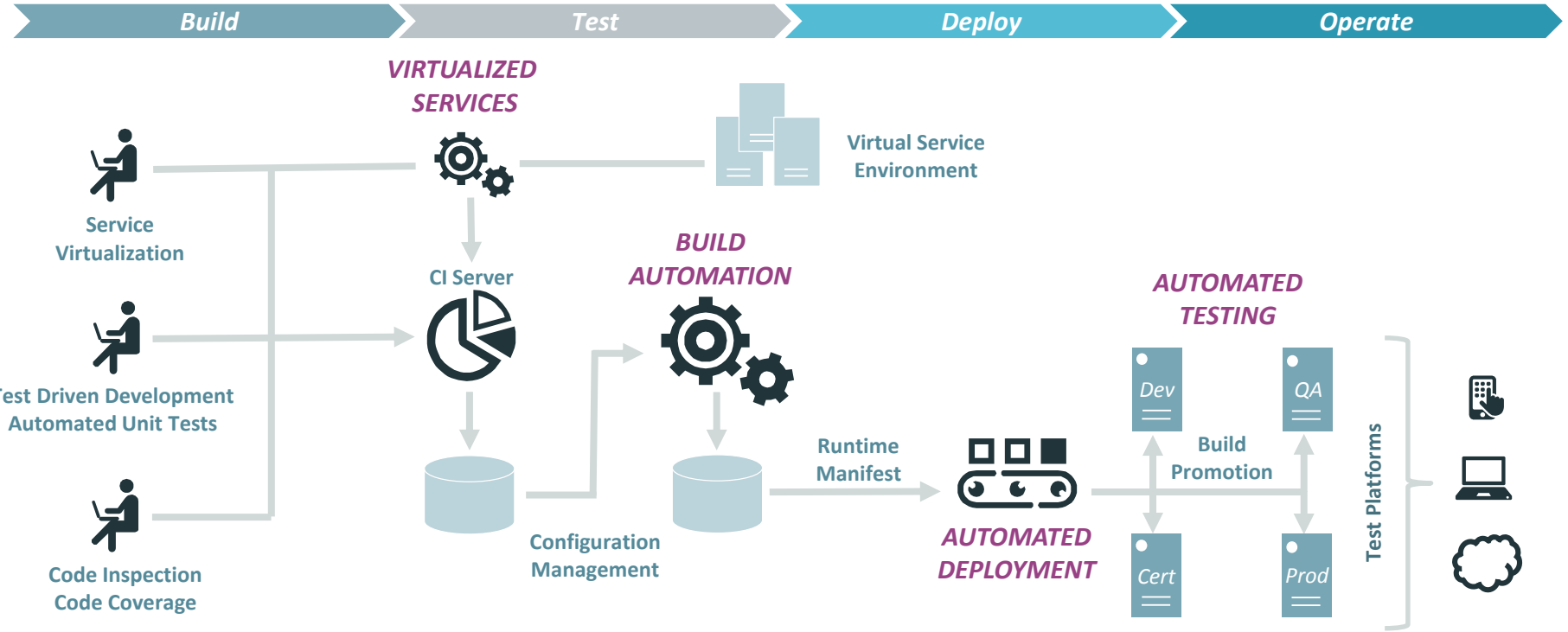


Overcoming Challenges

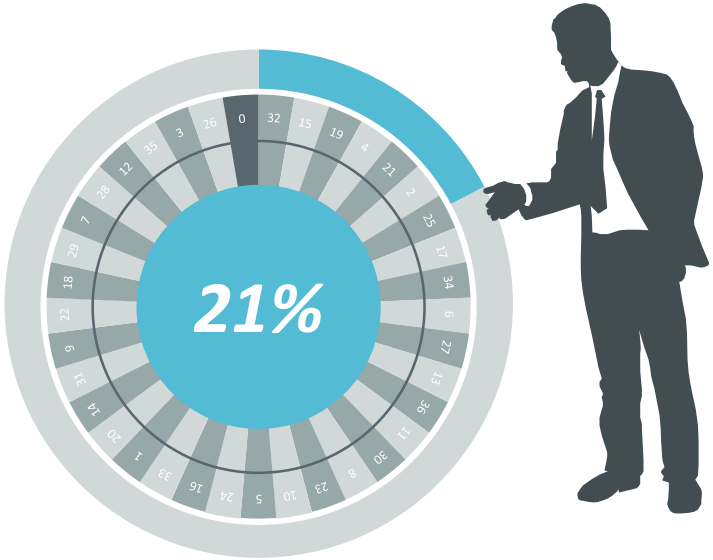
- Becoming Lean
- Making the System Modular
- Becoming Flexible
- Increasing Collaboration
- Bringing in Automation
- Enabling Constant Feedback
- Using Virtualization Techniques
- Standardizing the Processes

DevOps – Our Perspective

"DevOps is a set of practices and cultural changes — supported by the right tools — that creates an automated software delivery pipeline, enabling organizations to win, serve, and retain customers."



DevOps Market Trends



Market for DevOps toolsets is expected to reach $2.3 billion in 2015, up by 21% as compared to $1.9 billion in 2014

By 2016, DevOps will evolve from a niche to a mainstream strategy employed by 25 percent of Global 2000 organizations

- Gartner report "Market Trends: DevOps — Not a Market, but a Tool-Centric Philosophy That Supports a Continuous Delivery Value Chain."

In other similar surveys conducted, it is reported that DevOps adoption will increase at least 50-70% in 2015 as compared to the numbers from 2014

Where Do You Start?

DevOps Adoption and Enterprise Transformations can be overwhelming for most of us

1. **Start Small – Explore a single capability such as Service Virtualization (SV)**
2. **Service Virtualization has minimal impact to the existing application delivery landscape**
3. **Customers see value in SV: how it can address some of their day-to-day challenges**

How Does Service Virtualization Help?

1. Decrease Developer and Tester Delays

2. Enable Virtualized Regression Tests

3. Speed up Release Cycles

4. Manage Infrastructure Costs

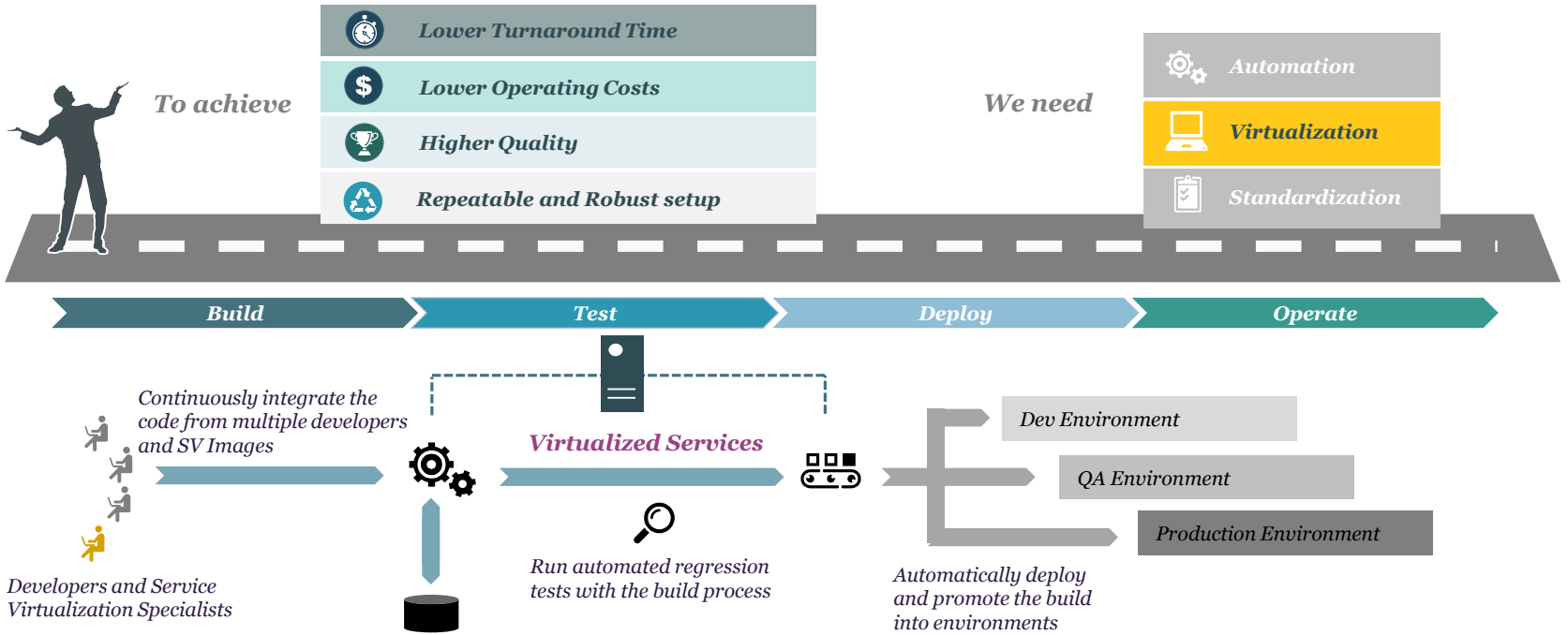
5. Manage Test Data Across Releases

6. Provide Flexibility to Backend

7. Reduce Efforts and Associated Costs

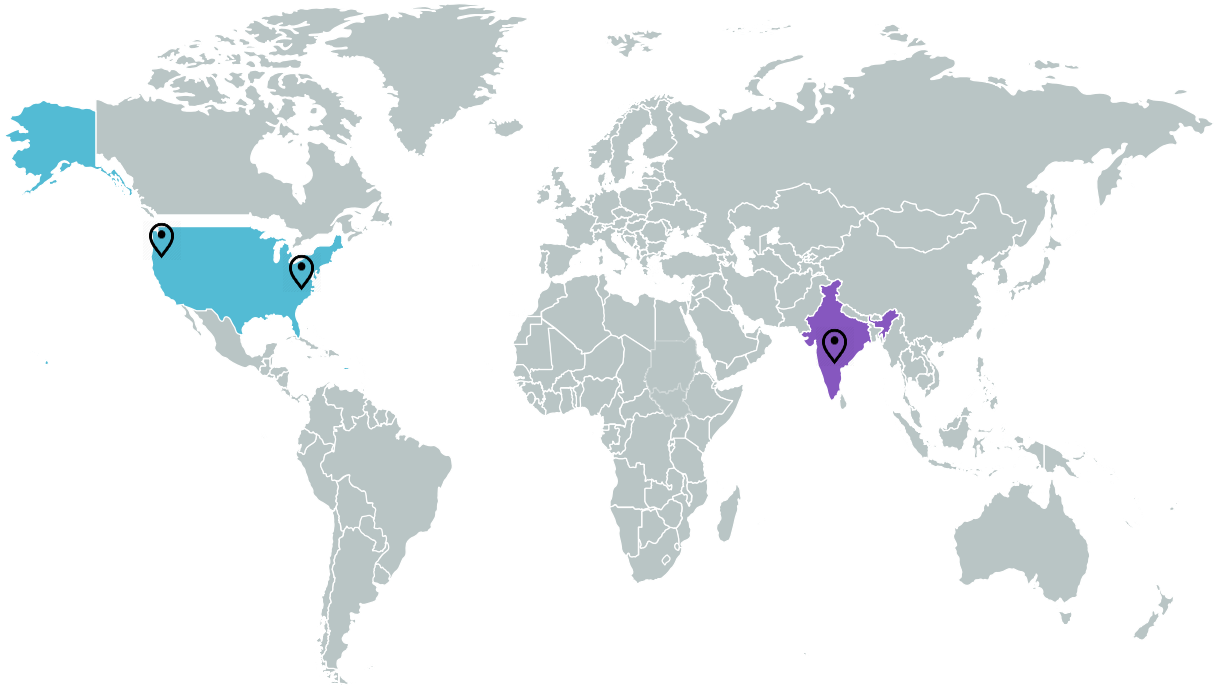
PwC's Service Virtualization (SV) Factory

We help our clients deliver high quality applications in less time by transforming the way development is done. The adoption path to these practices, with service virtualization at center of focus will enable a Continuous Delivery pipeline that ties in application development and testing.



Our Methodology

Our SV Factory follows the AnyShore methodology that helps improve outcomes through a proven process of having the onshore and offshore teams work closely with each other.



- ✓ New Opportunity Identified
- ✓ Estimation and Planning
- ✓ SV Implementation
- ✓ Validation and Sign-off

Benefits of SV Factory

SV Adoption Path

1. Conduct a Proof of Concept to demonstrate the capabilities of SV across the chosen use cases
2. Identify the bottlenecks and most common challenges faced by developers and testers frequently
3. Conduct an SV implementation to enable testers and developers
4. Establish a change management process and governance to implement an efficient SV process

Creating a Sustainable Solution

A key measure to the success of an SV implementation is to ensure continuity of the SV solution.
Consider how the solution is scalable and sustainable in the long run.

ESTABLISH A CHANGE MANAGEMENT PROCESS

Version control and tagging to live services

Update existing virtual service or create a new image

ESTABLISH A GOVERNANCE MODEL

Who takes the ownership of SV assets

How do I request for a virtual service?

Service Consumer's Perspective

The true success of an SV implementation depends on how the consumer leverages the virtual services.

How can the virtual services be consumed with minimal overhead or changes in code base?

MOBILE CONSUMER

Driver script to manage multiple device/platform types, and user accounts

Update the virtual service (APIs) endpoints in their tests

WEB-SERVICE DEVELOPER

Custom configuration to define the dependencies and their versions for the virtual service being accessed

Update the endpoints of the dependencies in the web application server, with virtual services

Our Success Story

Client: A leading healthcare payer and provider with more than 9.6 million plan members and 38 hospitals. They are the largest managed care organization in the United States.

Business Challenges:

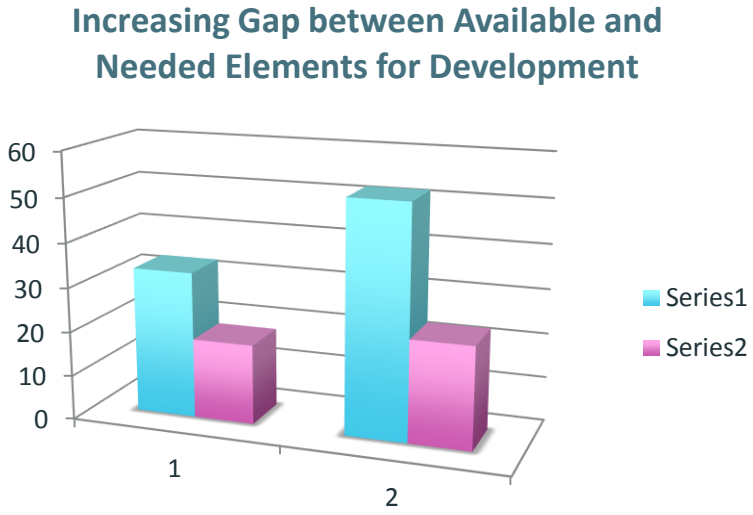
- Testing environment was shared among various teams and was also unstable.
- In order to aid the testing efforts our Client was looking to virtualize the backend dependencies to minimize loss of time waiting for the services to become available.
- Looking at a solution to enable the downstream development work without getting impacted by the service currently being built.
- Looking at a solution to support an upcoming Code-a-thon event with a back end that would meet their objectives without much investment in time and money.
- Evaluating an efficient means to set up test data across multiple regions for critical APIs

Approach and Outcomes:

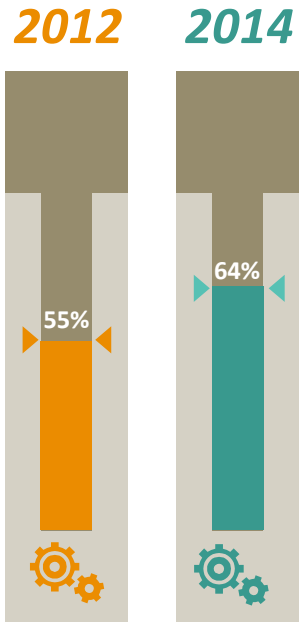
- Through Service Virtualization, we helped address the challenges the client team was facing
- Virtualized web services and their dependencies for several protocols including SOAP, REST, Java, JDBC, LDAP
- Created mocked back end for Code-a-thon event; a highly economic, flexible and efficient solution
- Created custom driver to manipulate test data for multiple regions while running against VS of one region
- Client team started looking at SV to address many of the day-to-day challenges the development and testing teams face, including issues such as unavailable services, setting up environments, test data manipulation, and data refreshes to name a few.

Facts and Figures on SV

With Service Oriented Architecture becoming the backbone of today's digital enterprise world and an increasingly demanding consumer base, it is not hard to see why Service Virtualization is fast becoming a key enabling technology.



Source: Market snapshot report by voke Research, Jan 2015



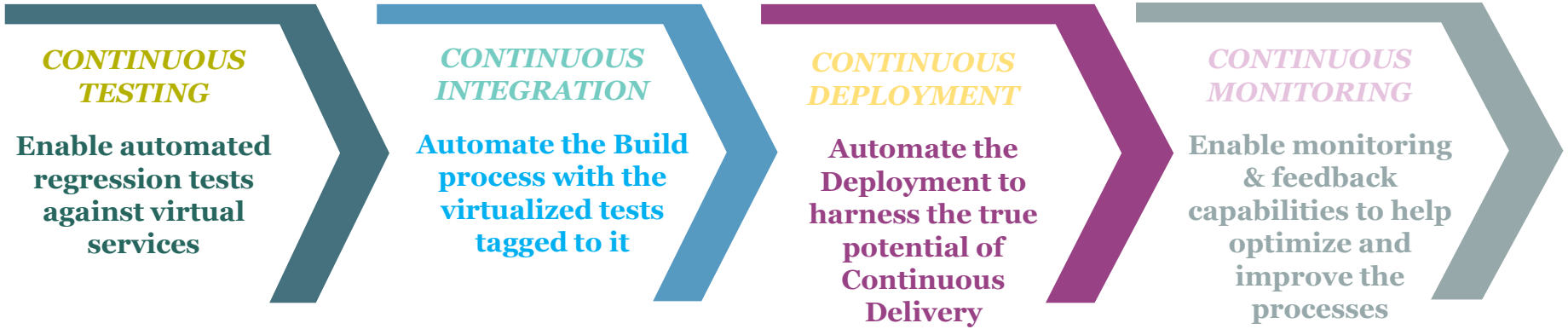
Number of participants using Service Virtualization based upon the survey conducted by voke Research

Source: Market snapshot report by voke Research, Jan 2015

Road Ahead

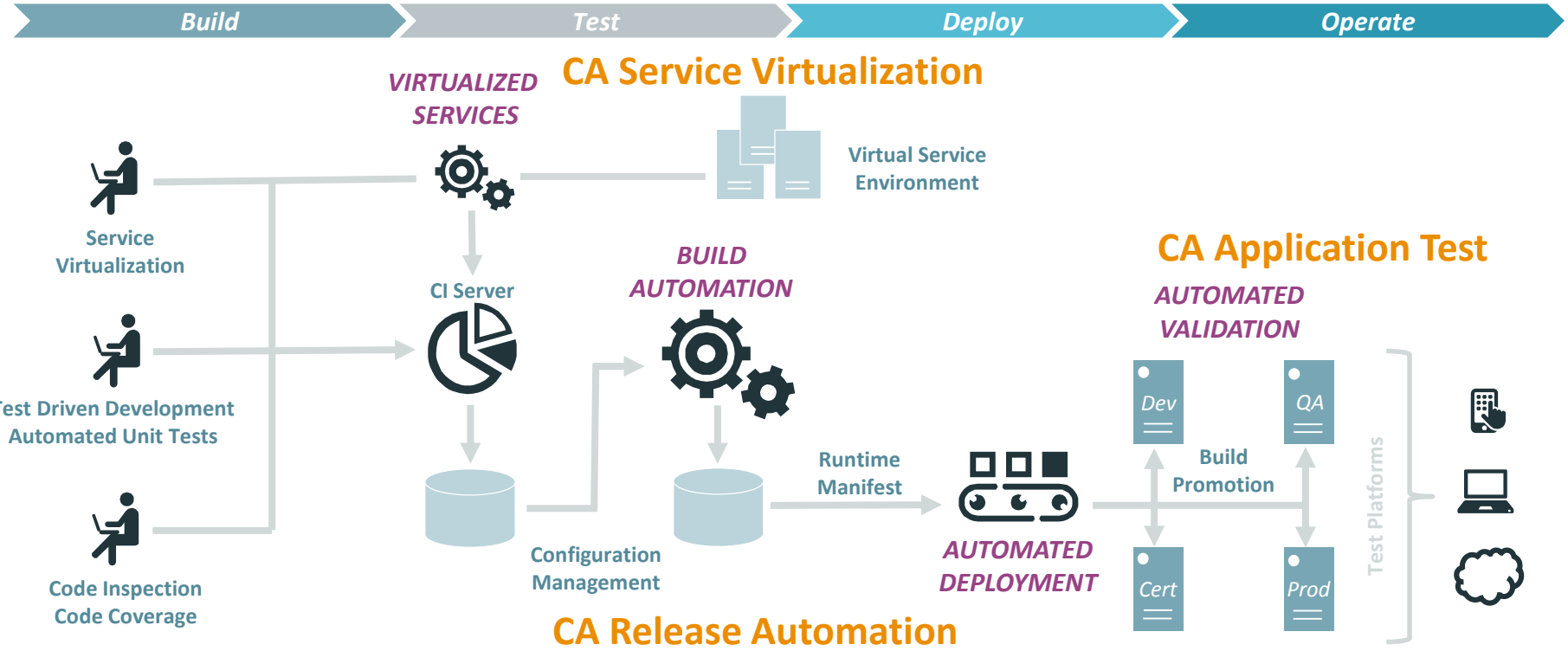
Once Customers realize the value from Service Virtualization, it is easier to help them walk through the next steps in their DevOps journey.

The focus lies in enabling the key capabilities and making the processes "Continuous".



Key DevOps Offerings by CA Technologies

CA Technologies has a deep footprint in DevOps through its wide array of tools. Some of these key tools are highlighted below.



Q & A

For More Information

To learn more, please visit:

http://cainc.to/Nv2VOe