RETRANSFORM BEYOND AGILE FOR FASTER, INTEGRATED IT SERVICE DELIVERY

Abstract

Building a sustainable IT system is critical for organizations looking to enable digitization and agility. While IT service management (ITSM) tools such as ServiceNow are a key component of enterprise IT architecture, many business stakeholders are unaware of their importance. Conversely, equipping IT teams with a business-centric mindset that focuses on customer experience, ROI and sustainability is challenging too. This paper considers how ServiceNow ITSM can be used by CIOs to migrate their workloads onto cloud. It also examines how companies can transform their ITSM digitization journey using the modern agile release train (ART) methodology, thereby accelerating business growth.

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Introduction

The vision of building sustainable IT cannot be relegated to mere quarterly goals. It is often an enterprise journey that requires the support of all business stakeholders. Without the right approach, any IT modernization journey will be met with skepticism about new ideas and their impact on individual employees as well as the entire organization.

Challenges of aligning business with IT

IT service management (ITSM) is an essential component in any enterprise IT architecture as all large modern IT systems, irrespective of technology, leverage ITSM tools such as ServiceNow through CIs, catalogues, etc. This makes it imperative to align business and IT seamlessly whereby IT teams are mindful of business goals. Thus, IT systems should not only enable technical outcomes such as scalability, upgradability and measurability but business outcomes as well such as enriched customer experience, ease of interacting with other systems, maximum return on investment, and sustainability. In fact, this is an underlying goal for enterprises across industries that seek to migrate from current ITSM systems to ServiceNow.

For example, many business teams feel that the time-to-market for out-of-the-box (OOTB) solutions is rather lengthy. This is mainly because they interpret OOTB to mean ready-for-use as soon as it is deployed on-premises or on cloud. This lack of transparency between business and IT teams must be addressed if companies are to develop IT systems that deliver business outcomes rather than technical

output. Therefore, organizations need a new delivery technique that forces IT to think at a program level. This is where the agile release train (ART) model comes in.

Setting up an ART model

For the purpose of explanation, let us imagine adopting an ART model for a program that delivers a customizable solution across various industries such as retail, banking and telecom. The objective of the ART model is to enable faster delivery, continuous testing and incremental releases for the enterprise. While it is recommended that all integrated and complex programs use ART, it involves transforming not only the methodology but the mindset of IT and business teams as well. Therefore, it is essential to consider the following four aspects:

1. Architectural governance

Large enterprises are expected to strictly follow the enterprise architectural blueprint and strategy such as choosing the right technology, following license guidelines and meeting mandates or constraints on customization of the OOTB solution. Recently, we came across a large enterprise that had decided to build a solution that was 95% OOTB. They

also initiated a subsidiary program to 'go back to the box', which created several uncertainties and arguments among IT teams regarding the shift in focus from standardizing technology to advocating cost-effective customer-driven capabilities. Therefore, it is essential that the architectural governance board monitors adherence to the enterprise blueprint.

2. Shift left testing

There is significant demand and pressure on development and testing teams to ensure cost-effective software delivery. ServiceNow is no exception. Many solution delivery teams grapple with client concerns over inadequate testing, high costs and high defect leakage when code moves from one environment to another. This makes it imperative to adopt an approach where code is tested earlier in the delivery lifecycle. This approach, known as shift-left testing accelerates delivery. Further, choosing the right tool to create an automation suite will amplify the benefits of shift-left testing. For instance, Selenium and TOSCA play a pivotal role in many large ServiceNow implementation projects.
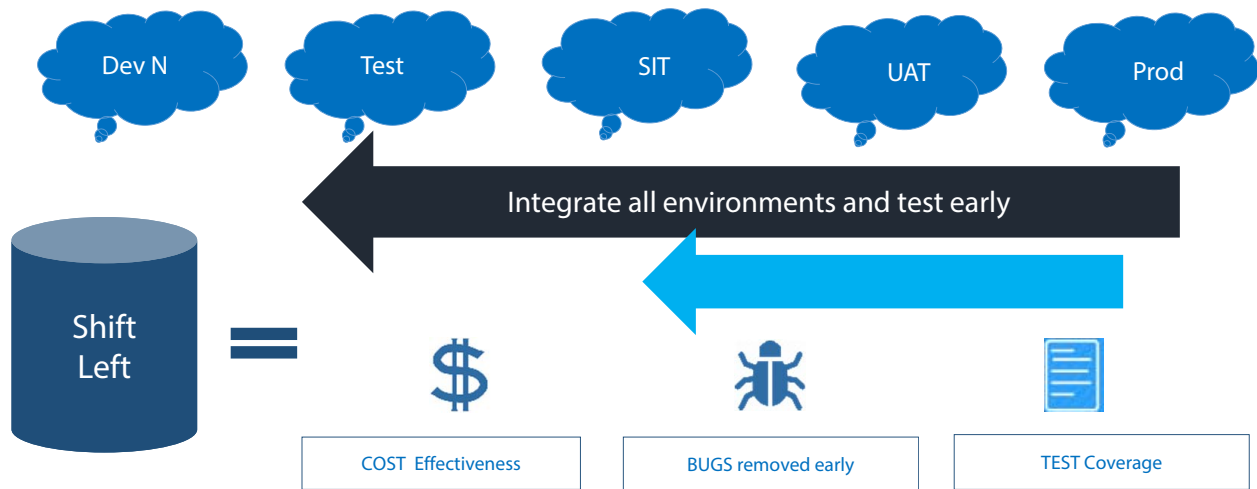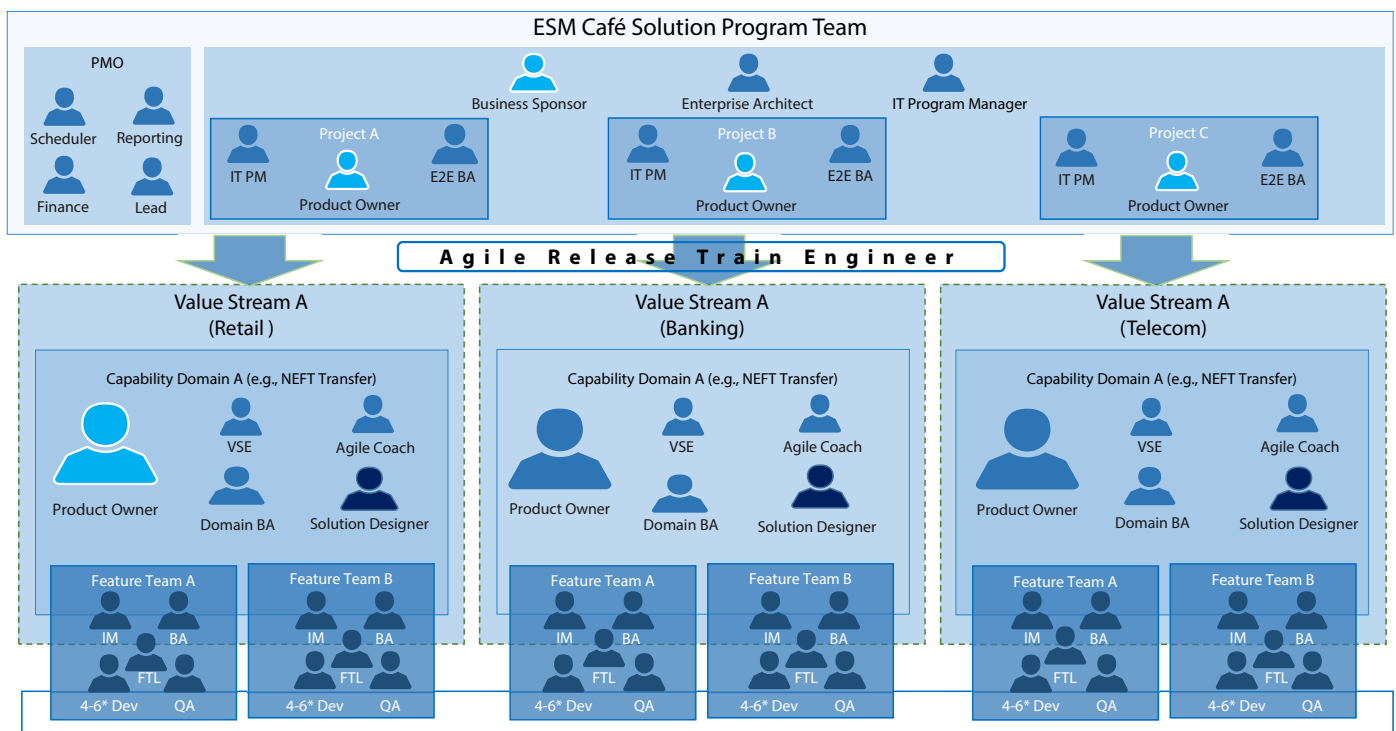
Dev N   Test   SIT   UAT   Prod

Integrate all environments and test early

Shift Left = $ COST Effectiveness | 🐛 BUGS removed early | 📄 TEST Coverage

Fig 1: Cross-industry solution team constructed under ART model using value streams and SAFe provided by Scaled Agile

3. Value streams and scrum teams

ESM Café Solution Program Team

PMO — Scheduler, Reporting, Finance, Lead

Business Sponsor   Enterprise Architect   IT Program Manager

Project A — IT PM, Product Owner, E2E BA
Project B — IT PM, Product Owner, E2E BA
Project C — IT PM, Product Owner, E2E BA

A g i l e   R e l e a s e   T r a i n   E n g i n e e r

Value Stream A (Retail) | Value Stream A (Banking) | Value Stream A (Telecom)

Capability Domain A (e.g., NEFT Transfer)

Product Owner   VSE   Agile Coach   Domain BA   Solution Designer

Feature Team A — IM, BA, FTL, 4-6* Dev, QA
Feature Team B — IM, BA, FTL, 4-6* Dev, QA

Value streams play a key role in the integrated delivery model as these advocate sustainable, smaller and incremental releases to customers who want to realize faster business value. As shown in Fig 1 scrum teams are the delivery factory in the scaled agile framework that is driven by the release train engineer. In the figure, the 10-member are the delivery factory in the scaled agile framework that is driven by the release train engineer. In the figure, the 10-member IT team is led by an iteration manager who is sometimes referred to as scrum master in some organizations. Ideally, scrum teams should consist of a number of key members. For a ServiceNow implementation team, the right team comprises an iteration manager, a business/system analyst, a feature team/technical lead, a solution designer, engineers, testers, and automation testers. Each role has defined guidelines that are explained here.

4. Define a delivery model

Every team needs guidelines, rules and contracts for consistency. In cases where there are many small scrum teams under various value streams, it is necessary to define the delivery model such that the product owners and business teams continue to operate in sync to meet delivery commitments. There are two aspects of delivery commitments – 'ready' and 'done'. Both of these must be explicitly defined by the scrum teams and mutually agreed on by all stakeholders such as the business team and product owner.
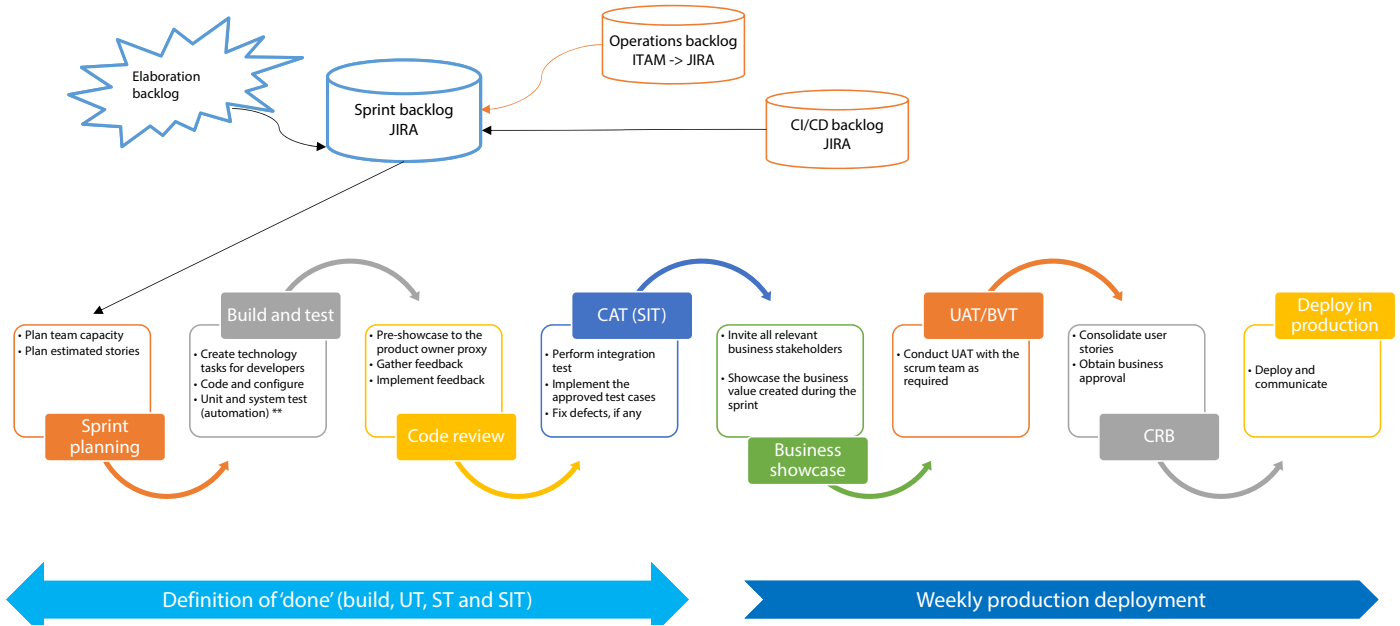

Fig 2: Key activities in the sprint lifecycle

a) Definition of 'ready' – To avoid ambiguity, it is important to define the readiness of the development team when initiating the process of coding as per the requirement. In some instances, business teams expect technical teams to be more agile and flexible in accepting requirements incrementally. While such expectations are reasonable, it may result in some ambiguity. Thus, the 'readiness' must be clearly defined as described in the following examples:

- User stories must follow the structure of **behaviour-driven development** as described below:

  As a [role] I want [feature] so that [benefit]

Given the complete business context, when an action takes place, then this should be the outcome

As an internet subscriber of telecom company XYZ, I want to log into the self-service portal and fix an appointment for a field engineer to diagnose the intermittent internet issue, so that I don't have to contact customer service.

- User stories must have a succinct acceptance criteria that can help write test cases in all possible scenarios

b) Definition of 'done': Delivering outcomes is important but delivering 'as expected' is more important to the business because modern software delivery is all about transparency. Thus, it is important for the business to be clear about what the scrum team means when it is 'done'. Some examples of this meaning include:

- User stories have been developed following all suggested standards by ServiceNow
- Code has been unit tested and reviewed by the feature team lead
- Code has been system tested and the automation suite is updated with the appropriate scenarios
- Code is tested in the UAT environment

Benefits of the ART model

Incremental and faster delivery is a key requirement in today's modern software delivery landscape. Cloud-based products like ServiceNow are expected to deliver accelerated outcomes that are cost-effective, scalable and sustainable in the DevOps framework. Organizations that establish agile teams who leverage the ART model for cloud migration can reap significant benefits through various indicative outcomes as shown in Fig 3.
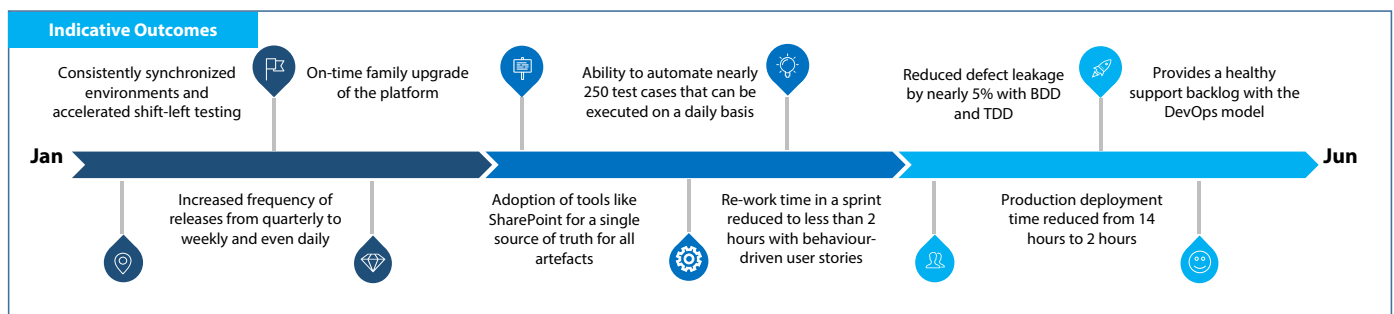

Indicative Outcomes

Consistently synchronized environments and accelerated shift-left testing

On-time family upgrade of the platform

Ability to automate nearly 250 test cases that can be executed on a daily basis

Reduced defect leakage by nearly 5% with BDD and TDD

Provides a healthy support backlog with the DevOps model

Jan **Jun**

Increased frequency of releases from quarterly to weekly and even daily

Adoption of tools like SharePoint for a single source of truth for all artefacts

Re-work time in a sprint reduced to less than 2 hours with behaviour-driven user stories

Production deployment time reduced from 14 hours to 2 hours

Fig 3: Indicative outcomes of adopting ServiceNow in the ART model

Conclusion

Ensuring seamless IT delivery not only requires the right tool but smooth communication between business and IT teams. Enterprises need to set the right expections, clearly define roles and align business outcomes with IT goals. The agile release train (ART) model is a useful method to achieve reliable, scalable, flexible, and cost-effective ITSM through ServiceNow. The model considers four aspects, namely, architectural governance, shift-left testing, value streams and scrum teams, and delivery model definition for a clear IT service delivery strategy. It helps enterprises empower IT to become a business enabler by supporting business goals such as user experience, sustainability and faster time-to-market.

About the author

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Mohanraj is a Lead Consultant, Cloud and Infrastructure Service, Infosys, with over a decade of experience in the IT Service Management consulting and delivery practices. A ServiceNow enthusiast and an agilist based out of Melbourne, he is part of the Service Experience Transformation frontline team in the ROW and APAC region and manages a large ServiceNow B2B transformation program for Telstra.

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