Standardization need in today's service reliability engineering implementations

Bhavesh Sampath, bhavesh.sampath@capgemini.com, Anand Sunder, anand.sunder@capgemini.com

Abstract:

Reliability of an application has become an increasing challenge to retain client interest. Systems are growing in complexity (Kang Harbinder,2020). There is a need to optimize consumption and scale simultaneously. Thus, we present here a novel consultative approach for Service Reliability Engineering that could be applied across a wide variety of implementations. Our lifecycle is limited to the length of the lifecycle of services being brought under the reliability radar.

Introduction:

There are the following key drivers behind the need for a standardized approach (Cohen Hannah,2019):

i)   68% - more than 2/3rd - of organizations in PMI's annual survey said that they used outsourced or contract project managers in 2018
32% could be inhouse project managers

ii)   *Only 23% of organizations use standardized project management practices* across the entire organization.
77% use non standardized project management practices.

iii) 33% use standardized practices, but not across all departments
67% use non-standardized practices across some departments

iv)   While a small portion - 7% - of organizations don't use any standard practices at all
93% could be using standard practices
This implies most implementations are in a state of confusion about their need to standardize, in a mixed state.
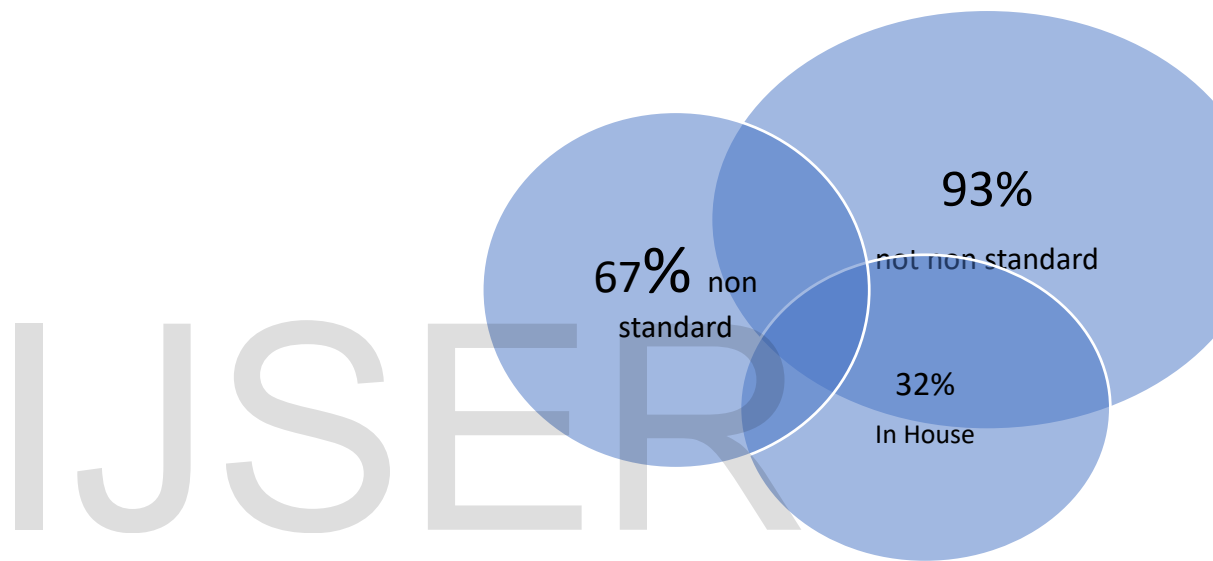

Figure a: Illustration of implementation styles in usual scenarios (Cohen Hannah,2019)

Reliability Engineering is supported in organization styles that include (Franco & Brown e.t al,2019):

i)   Kitchen Sink, a.k.a. "Everything SRE
ii)   Infrastructure
iii) Tools
iv)   Product/Application
v)   Embedded
vi)   Consulting

An ideal starting point in maturity journey would require following evaluations (Hellman, Rafael 2020):

i)   List all core attributes you want to assess
ii)   Evaluate your assessment
iii) Rate your compliance with each requirement for the current assessment scope and period
iv)   Communicate your results wisely to become an actionable architect

As per studies or surveys conducted the maturity levels of DevOps in organizations are considerably low (IDG Communications,2019):
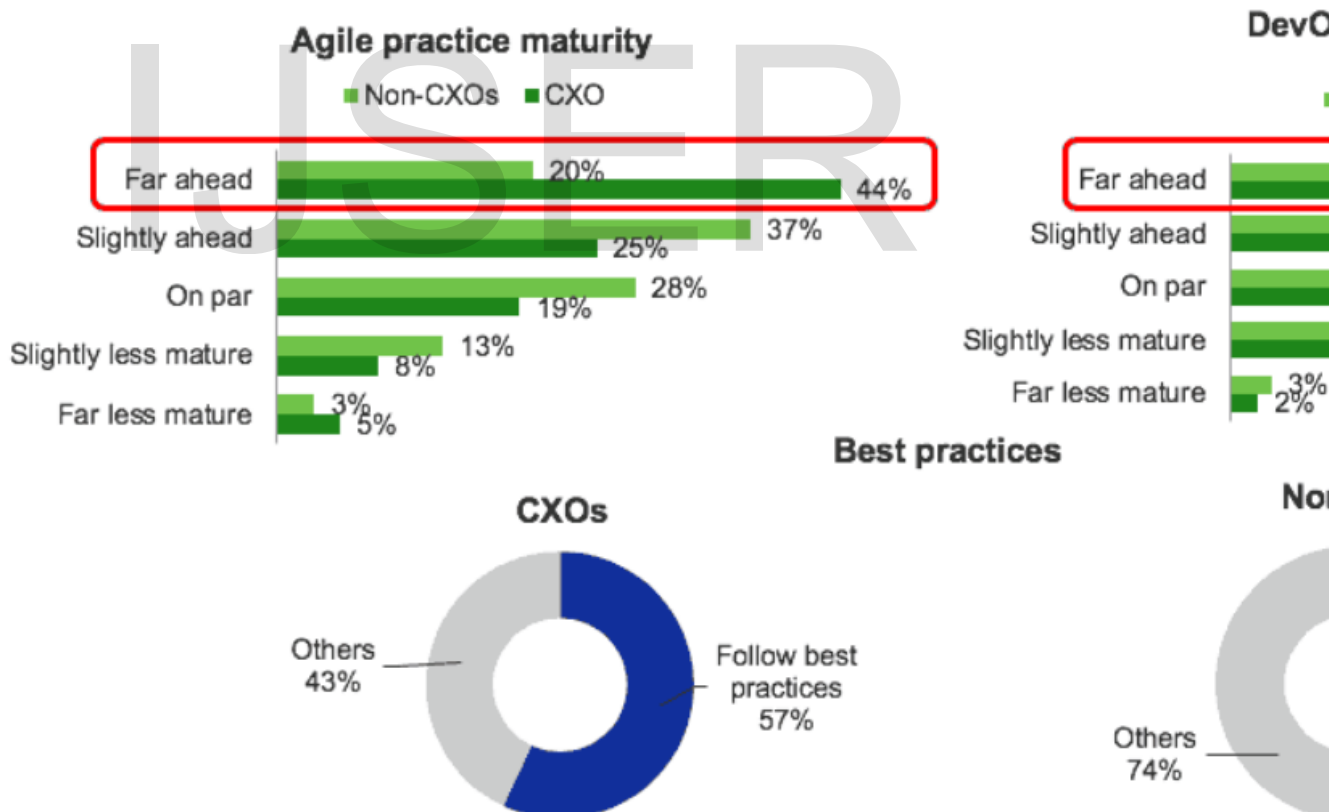

Figure b: DevOps Maturity as per Customer Experience Officers (IDG Communications,2019)

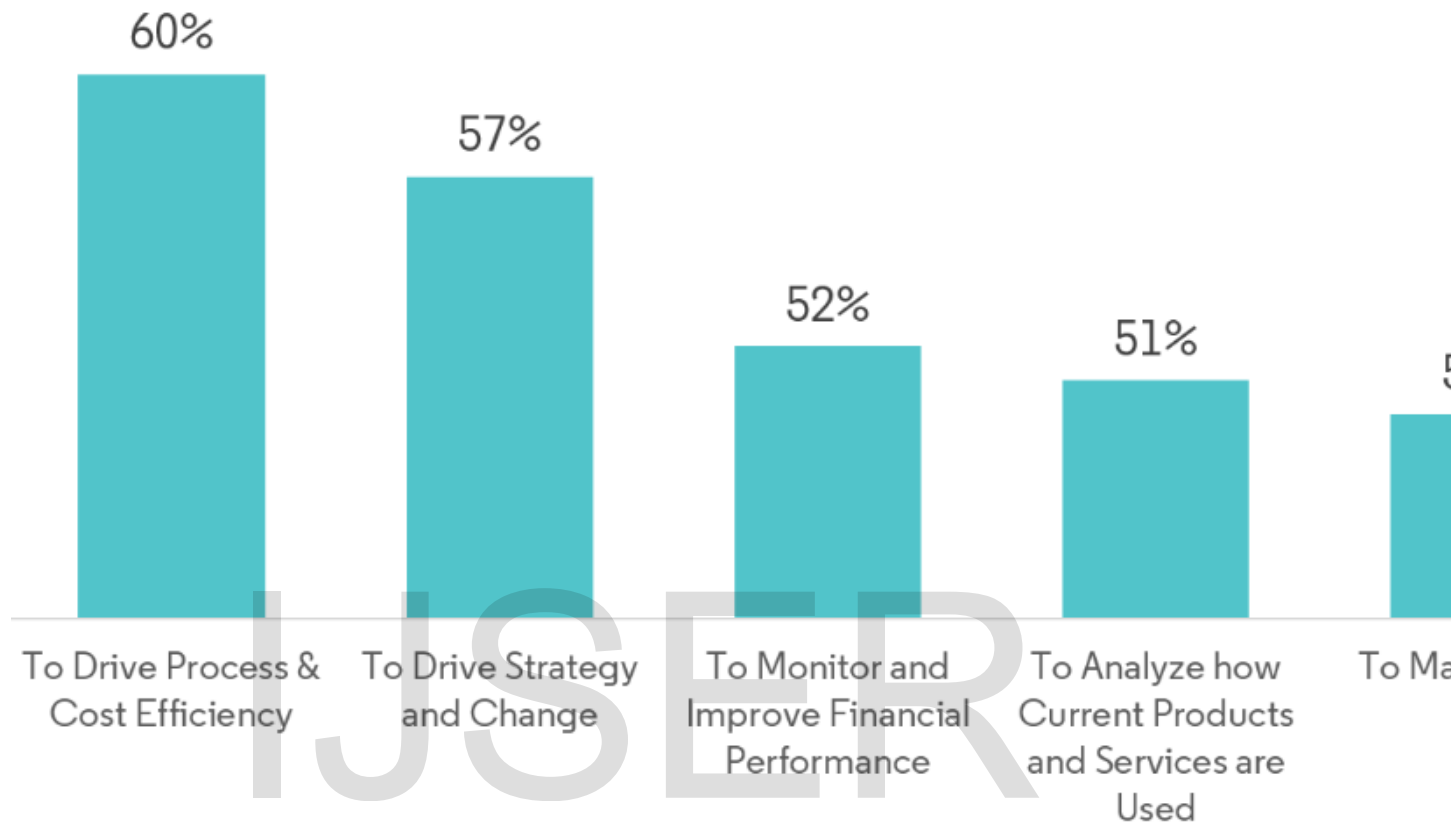As per market study (Mordor Intelligence,2021) following are the focus areas:

Figure c: Focus areas in financial services markets (Mordor Intelligence,2021)

The need to drive process and cost efficiency again brings the focus onto the reliability aspect, putting all these in perspective there is a need for service reliability engineering across

 clients spanning wide range of application lifecycles and patterns.

Conclusion:

We are in the phase of bringing up a standardized approach to address most of the aspects of service reliability engineering (as

we would call it in today's context), Site reliability being applied to 24x7 operations shops with applications which last a lifetime (Google, Inc 2017). The additional time constraint accelerates the need for a standard template.

References:

1) **Importance of Site Reliability Engineering:** https://dzone.com/articles/the-importance-of-site-reliability-engineering#:~:text=Today%2C%20companies%20are%20increasingly%20turning,scale%20presents%20a%20significant%20challenge.

2) **Project Management Statistics :45 Stats You Can't Ignore**: https://www.workamajig.com/blog/project-management-statistics

3) **How SRE teams are organized , and how to get started :https://cloud.google.com/blog/products/devops-sre/how-sre-teams-are-organized-and-how-to-get-started**

4) **Enterprise Architecture Maturity Assessment applied: A step by step approach to evaluate your organization**:https://www.linkedin.com/pulse/enterprise-architecture-maturity-assessment-applied-step-hellmann

5) **CIO's are overestimating Devops Maturity**: https://www.tricentis.com/resources/what-most-cios-overlook-when-trying-to-accelerate-innovation-2/

6) **Financial Services Application Market-Growth, Trends, Covid-19 Impact and Forecasts**

:https://www.mordorintelligence.com/industry-reports/global-financial-services-application-market-industry

7) **10 Challenges for the Financial services Industry** : https://technorely.com/financial-industry-challenges/

8) **Preface**: https://sre.google/sre-book/preface/