THE LEAP OF FAITH ONTO SAP@AGILE

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Introduction

Digital transformation has divided the enterprise landscape more than ever. The Systems of Engagement have jumped on to the DevOps, cloud, containerization and micro-services bandwagon inspired by the likes of LinkedIn, Spotify, Amazon and Google. Enterprises are adopting product-oriented structures and scaled agile at a rapid pace to eliminate silos between business, development and operations.

The Systems of Records, however, continue to languish in antiquated delivery models with their siloed approach. These systems typically developed over decades lack flexibility and are tightly coupled across functions. The IT leadership is hence wary of change to these systems, believing that speed of delivery could compromise quality and disrupt business.

How can the IT function foster enterprise agility when the landscape is in a 2-speed IT mode with some systems substantially out of sync with others? Should we give up on Systems of Records like SAP backbones as being fundamentally rigid? Should SAP be replaced as a technology platform?

SAP – the great monolith

SAP enables end-to-end processes with out-of-the-box functions seamlessly and better than other products, despite a trade-off with speed and user experience. While SAP S/4HANA has transformed SAP into a more simplified product with superior user experience, the tightly coupled characteristic remains.

Businesses hanker for a globally unified single instance on which standardized processes across the enterprise value chain can run. They attempt to create harmonized processes across business lines and regions, creating a "template." Is such an all-in-one template worth the effort invested?

Death by pilots and rollouts

Consequently, pilots used to enrich the template to fit local needs better but remain inadequate. Efforts pumped into the pilot project causes new features to be delayed, and the first user starts to work on the system only two or three years after the project kick-off. Ultimately, businesses must deal with a ten-year program to cover 100 sites globally. In such cases, the company cannot be confident of the relevance of the template after five years. The apprehension of slow time-to-value resides foremost on the minds of CIOs and they quite often struggle to find a way out.

Time for a rethink

A business needs standard processes and integration, but it also needs speed. The traditional approach of SAP based transformations compromises on speed and time to value.

Conversely, an approach that prioritizes speed and dynamically improves standardization and integration over time can be a gamechanger. Such a method has been validated with recent success stories.

Perfect is the enemy of good

Traveling from point A to point B can be achieved with a skateboard first and later with a car. It's time to carve out Minimum Viable Products (MVPs) and move away from big template concepts.

In the context of an SAP transformation for a company with global operations, a site may have user personas of a receivables clerk, production planner, sourcing professional, warehouse supervisor, salesperson and shop floor quality manager. A sourcing professional can create an RfX (request for something) without considering if a production planner can work on the same system. On the other hand, a sales manager may reconcile his 180 days outstanding with a receivables clerk, and both depend on each other. An MVP should comprise functions for target personas that are reasonably independent to go live.

The business and the project team should reorient their mindsets on these aspects -

- Template builds or blueprint phases are not needed
- Multiple MVPs are possible even in a single pilot site
- If an MVP goes live, it is acceptable that only users with targeted personas in one or multiple sites will go live
- It is reasonable not to have a big bang pilot go live in a single site

Product-centric structures

A product in SAP can be defined as object or entity (e.g. Sales Order, Stock, RFQ) which can be used by a target user persona to derive value. A cross-functional team of business, IT experts, architects, UX designers and security consultants own the lifecycle from concept to delivery, innovation, enrichment and support of the product. The product owners, as leaders of the product teams, bring together people from various functions towards a shared product vision.

Independent from other teams, the product teams drive MVP definition, user persona creation, the solution architecture, deployment roadmap and hence development velocity. They are also loosely coupled with other teams to accommodate dependencies.

Self-driven and self-organized product teams determine the speed of deployments and rollouts.

The cloud mindset

The SAP line of business cloud products like Spend management (Ariba Fieldglass), Concur, SuccessFactors and IBP have convincingly shown that standardization facilitates time to value. This experience was enhanced with SAP S/4HANA Cloud (ES, EX) products as businesses got pilot go-lives and multi-country rollouts accomplished under two to three years. The new features allowed quarterly updates on the S/4 stack for the live countries.

There are important lessons for the on-premise and AnyDB world of SAP transformations if the transformations utilize assets like SAP Model Company or an equivalent partner based tool such as Infosys Catalyst to drive out-of-the-box standardization and adhere to the customization guidelines provided in the cloud. Adopting SAP Cloud Platform based RICEF enhancements Adopting SAP Cloud Platform based RICEF enhancements, breaks the monolith, improves reuse and distributed development while future-proofing solution architecture.

Accelerate the shift to Agile

True Agile driven projects are likely to succeed during the pandemic as distributed product teams collaborate with team members who work from home across the globe.

Many SAP projects follow iterative development models with a mix of planned waterfall approaches and Agile flavors. However, they falter in embracing Agile thinking, accepting change and creating boundaryless collaboration.

True Agile implies breaking the product vision into MVPs, MVPs into epics, epics into user stories and delivering them within two to three weeks sprints. This approach creates visible and measurable product progress while providing flexibility to adjust and prioritize. Such discipline applied over 100 sprints can truly transform feature delivery and user adoption.

Agile@SAP is not about the technology or its limitations but about the mindset and team structure.

Deliver and deploy continuously

Agile development by itself is not enough. A two weeks sprint development but a six monthly deployment, clogs the transport queue, makes integration testing complex, does little to improve user adoption and increases risk.

Once the MVP is released, subsequent production releases can be deployed every one to three sprints. A robust testing framework, feature toggles and a DevOps toolchain enable such a fast-paced deployment.

Assured quality with test automation

Test automation has been used in SAP projects in fits and starts for regression testing and to minimize the impact of delta functionality going live. The breadth of such testing extends to a few end-to-end scenarios, while the depth is limited to uncomplicated cases without process variations. In SAP transformations running on agile, the pace and volume of change are so high that a simple regression test cannot assure quality.

The automation testers will be embedded in product teams, spearheading test-driven development or in-sprint test automation. Test automation developed over 50 sprints will create the necessary breadth and width to reduce acceptance test bugs discovered by end users significantly. The automation scripts run frequently on quality and integration systems and provide immediate feedback to developers.

As the coverage of test automation increases, more developers can substitute SAP functional experts, thus adding to team productivity.

DevOps toolchain

Fast deployments require that the release package of planned and developed user stories is moved across the SAP landscape. The user stories and the definition of release exist in ALM tools like Jira, while SAP changes exist within the SAP transport system or Solman ChaRM. The release package should be verified for code review, successful functional testing and, in some cases, even performance testing. The movement across the landscape should be touchless and automated.

While SAP has developed such a toolchain with SAP ALM and gCTS in S/4 2019 and 2020, it cannot orchestrate different tools and deployment scenarios. Azure DevOps or tools like Infosys DevOps platform can enable a business view on release packages as it gets deployed to production.

Lean principles

Lean is at the core of the Toyota Production System and can be useful in an SAP transformation too. The product teams need to obsessively focus on cycle times primarily, from the requirement to deployment to adoption. The Mean Time to Recover (MTTR) is a cycle time taken from error detection to resolution.

Any activity which reduces cycle time is productive while the rest is regarded as waste. The best practices garnered from projects using lean principles are:

- Focus on a product backlog for two or three sprints as it is a waste to refine user stories which will be developed after three months when contexts, people and priorities can change

- For longer-term planning - focus at epic level, continuously refine and estimate epics every quarter since product roadmap and priorities can change

- Eliminate phases like a business blueprint and maintain a balance between documentation needs and pace of change

- Reduce wait times by having dedicated product teams and ensure increased productivity

- Eliminate the distance between the business and developer, even if the developer is working remotely. Avoid multiple hand-offs and task handovers.

- Focus on First Time Right quality and eliminate rework

- Work in small batch sizes. Cut the user stories as small as possible, which can be developed, tested and demonstrated in one sprint, causing minimal regression impacts during testing and deployment

Own the full stack

Agile and DevOps owes its success in the bespoke development world to developers as they spawned containers in a self-service mode rather than depend upon disparate infrastructure teams. Infra-as-a-code (IaaC) and automation were a massive shift.

While containerization is still a while away, a significant shift is possible when Dev and Ops teams work in tandem with dedicated capacity owned by the project. Moving the SAP workload to a hyperscaler in an IaaS mode breaks the silos and harmonizes development and infra deployments for unprecedented agility and time to value.

Refactor all the way

When you think Agile and cloud, refactor and readapt also come to mind. At some point in the Agile journey, the balance between speed and process harmonization needs to be regained - changes to what has been developed so far become inevitable.

Combining process variants from various sites, extending business rules, improving performance and replacing deprecating APIs / routines are among various tasks that continuously need to be assessed and completed at regular intervals. With extensive test automation of scripts, the foundation is set to confidently upgrade or re-engineer developments without the need for extensive user testing.

Coexistence

Big bang SAP go lives involve massive investment in a single point of failure. To mitigate such a risk and avoid large-scale migrations, we can adopt a coexistence-based approach between the new SAP system and legacy applications. The approach allows working with the completeness of data and processes in legacy while exploring the new functions and rich UX of new SAP applications without the risk of data loss or process disruption.

The intensity of coexistence varies from loosely coupled integration primarily for data reconciliation to a tight integration where every master data or transaction data is replicated bi-directionally based on where it gets created. Coexistence demands investment at the start of an MVP or rollout while it pays off impressively with low risk, rapid user adoption strategy. However, the returns are low if there are multiple sources of truth, i.e., legacy apps in the landscape.

Fail fast and learn faster

Agile projects are a great source of learning. The agile mindset involves a sound understanding of target user groups and managing unforeseen changes and improvements from feedback and experience. The team learns incredibly fast and delivers productivity improvements, reduced cycle times and a high First Time Right ratio.

Surprisingly, high quality is possible at high speed despite a high degree of change.

Conclusion

Large scale transformations need to reach the users in time. Contrary to popular perception, technology does not play a significant part in establishing this value delivery. The commitment to an Agile based approach and openness for change largely determines the transformation speed and success.

An essential part of such a commitment is offered by your services partner for the journey. Infosys is highly invested in the ability of Agile to deliver unprecedented scale to transformations

Move forward with Infosys and take that leap of faith onto SAP@Agile.

About the Author

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Prateek leads the Enterprise Platforms practice for Infosys in Germany and leads many large-scale Agile ERP transformations for his clients. Apart from speaking at forums like SAPPHIRE NOW, Prateek is a keen advocate of cloud-based delivery constructs, DevOps and ERP based digital transformations.

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