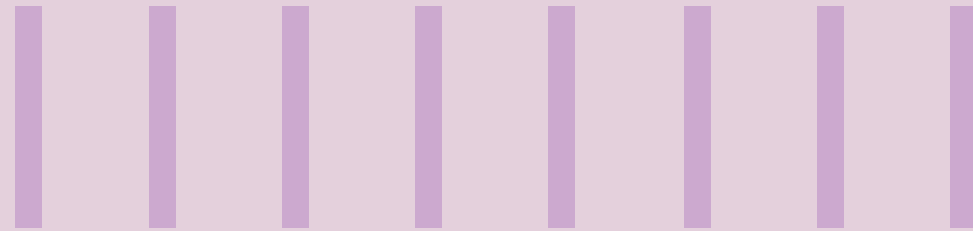# BUILDING DIGITAL STARTUP PLATFORMS

Key learnings & Areas to focus

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Abstract

In this ever-changing digital ecosystem, building a digital startup platform need to consider multiple diverse and conflicting needs, and balancing these to be successful is a top challenge. On one side, Business would want to build a platform in a rapid, fail fast approach and to quickly adapt & make disruptive changes to the platform's core product capability itself. On the other side, the Business and IT want to have a highly scalable, reliable & secure product which can abstract all the best practices of a proven digital platform. For a digital startup platform to be successful, a balanced model encompassing key integrated product oriented approaches from strategy to operations is required. This paper summarizes learnings from building a digital startup platform and the key areas of focus to be successful in this approach

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Introduction

Innovative new digital technologies and models are impacting the value of existing products and services in every industry. Many companies are embracing this digital disruption to create further growth and new opportunities for their business. Established companies as well as digital startups enlist new digital technologies and platforms even to redefine entire industry and business activities.

Building a digital platform successfully, meeting all the disruptive needs, at an aggressive speed and scale expectation is one the top challenges in this digital era. It becomes even more challenging when the platform is disrupting its core function itself and intends to redefine the product/services in an iterative manner. Of late, many organizations are adopting a startup mode of digital platform build

& operations to embrace this situation. Building a platform with product oriented startup mindset for scale & speed to result in success is now becoming a routine situation to be addressed for.

Scale & Speed – while it looks perfectly fine on paper, it is a tricky one to adopt for any digital startup platforms. Many successful startup founders give a bold advice to young entrepreneurs to do things that don't scale - which may be spot-on for any aspiring digital startups. However, for most of the platform engineers, this concept is very hard to digest at first. No one would like to build a throw away code or platform and always the quest for perfection would make them believe in 'build your platform right the first time'. One would also argue that you don't need to go through a painful journey to rebuild

again and again along with an emotional roller coaster of embarrassing situations in front of prospective clients. At the same time, speed is also very important. You may not have an opportunity "to build later", if the product takes too long to get build. It is hence very key to understand the 'window of opportunity' for any digital platform's build. Most of the digital startups adopt a fail fast approach to test the idea and to generate the new ideas to redefine a superior product. It is also very important to balance various elements of the entire life cycle of the platform build to become successful in creating a platform of 'Scale & Speed'.

This paper summarizes on our learnings of building disruptive digital platforms in two different dimensions.

1. StartOPs – an integrated product oriented approach towards Digital startup platform build

It is extremely important to have an integrated product oriented approach from strategy to operations to create a successful, scalable platform at rapid speed. More often than not, disparate functions in an organization is hinderance to any rapid digital transformation. A fully aligned organization with a clear sponsor and executor of the program is very critical to any critical platform build out. The decision-making process need to be as lean as possible for providing critical decision in a rapid and iterative mode. This could be decisions on any functions, could be on the strategy on the user centric experience, any 3rd party software/vendor selection, technology decisions, security or deployment options etc. However, it is extremely important to have a quick decision across the board.
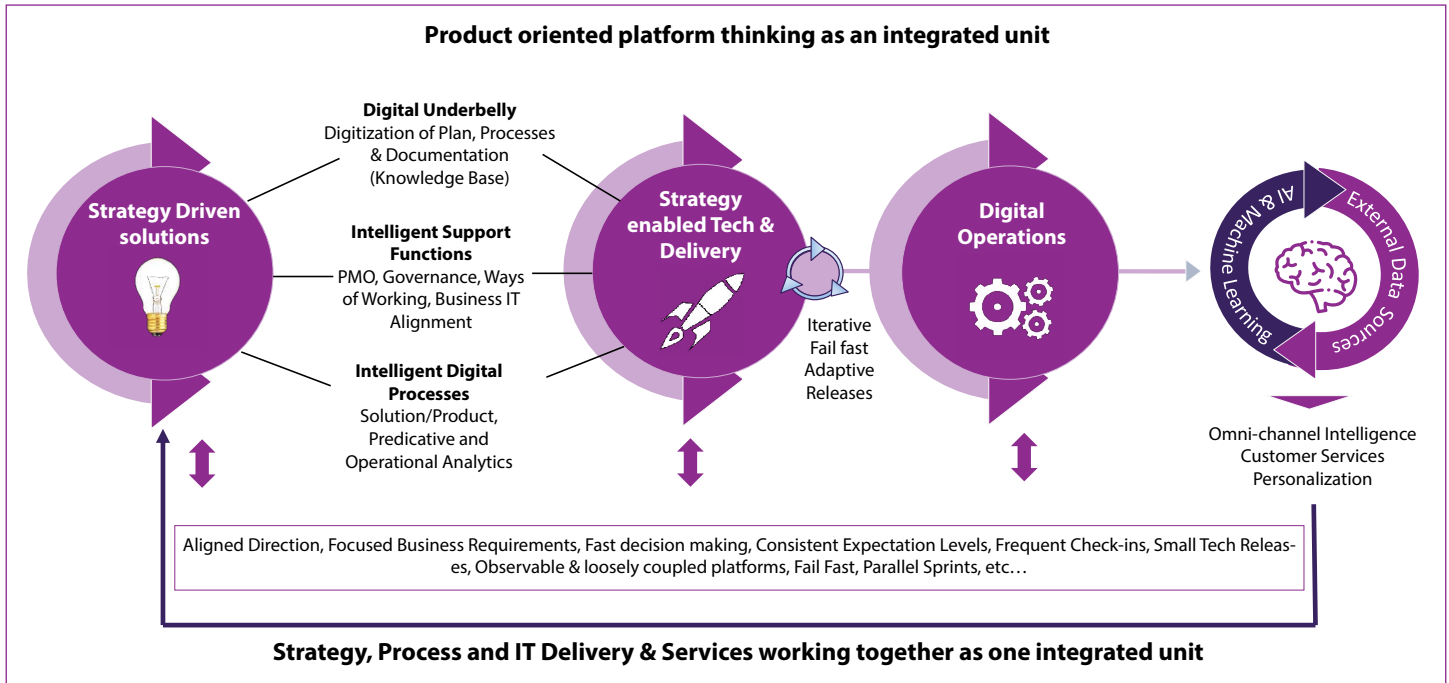

Product oriented platform thinking as an integrated unit

Strategy Driven solutions

Digital Underbelly
Digitization of Plan, Processes & Documentation (Knowledge Base)

Intelligent Support Functions
PMO, Governance, Ways of Working, Business IT Alignment

Intelligent Digital Processes
Solution/Product, Predicative and Operational Analytics

Strategy enabled Tech & Delivery

Iterative Fail fast Adaptive Releases

Digital Operations

AI & Machine Learning
External Data Sources

Omni-channel Intelligence Customer Services Personalization

Aligned Direction, Focused Business Requirements, Fast decision making, Consistent Expectation Levels, Frequent Check-ins, Small Tech Releases, Observable & loosely coupled platforms, Fail Fast, Parallel Sprints, etc…

Strategy, Process and IT Delivery & Services working together as one integrated unit

Figure 1 *StartOPs - Integrated Platform Build Approach*

As summarized in the Figure 1, for the successful platform build, functions such as strategy, marketing, process, IT delivery and Services team need to work together as one integrated unit. This helps to create a healthy feedback loop between the critical functions to enable flexible and rapid build / changes of the digital platform. This also help to build three key characteristics of a high performing digital platform build team – patience, persistence and resilience.

Sometimes, within couple of days of product launch, one would realize that initial set of assumptions on which the platform was built are no longer valid and one should be ready to adapt to the changes required and ready to accept these to quickly change and align towards the common goal. i.e. Don't fall in love with your initial product, it may most probably change in the fast-changing digital space. We experienced a classic example of this tenet while building an industry leading next gen digital platform that was deployed with one of our clients in staffing industry. Our initial assumption was that in a new experience driven digital economy, the key actions would be driven around the workers, however within couple of weeks of deployment, we realized that there must be a balance and even the employers driven actions are critical for the success

of the platform. The platform was quickly adapted to these changes and in the next release itself, the required changes were applied. The ability to make fast decisions and changes and the willingness to adapt to the changing needs to try out things would be a key attribute to the success of the platform.

Of course, all the best in class practices and toolsets for a fail fast development approach is a prerequisite to make these quick and fast releases to the end customers. It is also important to note that most organizations are having multiple groups even within the development portfolio some at times to the extent that there would be separate mobile, web, API mgmt., backend dev, integration dev, security dev, common platform development groups within the organization. Having too many siloed groups with their own vested interests at times results in program not running in an aligned and focused manner with inconsistent expectations. While having separate modular groups has its own benefits, unless properly managed, these quite often would result in slower decision making, slower development, distracted focus and inconsistent quality & results. It is observed that till the program reaches a stable state, it is beneficial to have the end to end platform build approach to be tied

in an integrated manner across the tracks to make it fast, clearly focused and aligned to the directions set for the program. It is also to be noted that this integrated approach need to cut across the groups and not limited to the development teams alone. When we built a digital platform on zero touch onboarding use-case, we had faced a similar scenario. The marketing team wanted to adopt a gamification strategy to quickly onboard more users to the platform and change their strategies on the fly based on the various data insights that they received during the campaign, it is important that these teams work in tandem with development team and the full team is aligned to the common goal and quick decision making is put in place to adapt to the change in needs.

Once integrated, aligned approach with extreme collaborations across the group is in place, another key area to focus is the environment of continuous innovations. An end to end feedback loop with diligent design thinking approach is essential for the success of a digital platform build. It is super critical to have the three key pillars, DT, Lean Startup execution and Super Agile execution is streamlined in the platform organization. We also need to consider how we can put a parallel platform-scale track to adapt and plan.

2. An integrated Digital Journey to scale at rapid speed

A successful platform build approach & implementation would typically be characterized by a balanced thought process around strategy oriented direction setting, lean decision making and agile execution. While we focus on this to move at rapid speed, it is also essential that there is a focus on platform scale in parallel. It is not an easy task when on one side we focus on a continuous feedback loop followed by regular design thinking and innovations and experimental / incremental and at times even adhoc iterations and on other side attempt to scale the platform in parallel. At times, these two tracks would end in a conflicting path with one team undoing the work of the other and at times resulting in many last-minute surprises on the production release day. It is extremely important that both teams have a very good understanding of strategic direction of the product and both teams be equipped to make few strategic compromises for short term and plan for longer term. For the health of the program, it will help the team to be patient and persistent and also to avoid / minimize the frustrations of why one need to fix or rectify these scale/ feature issues over and over again. Figure 2 summarizes typical platform build journey
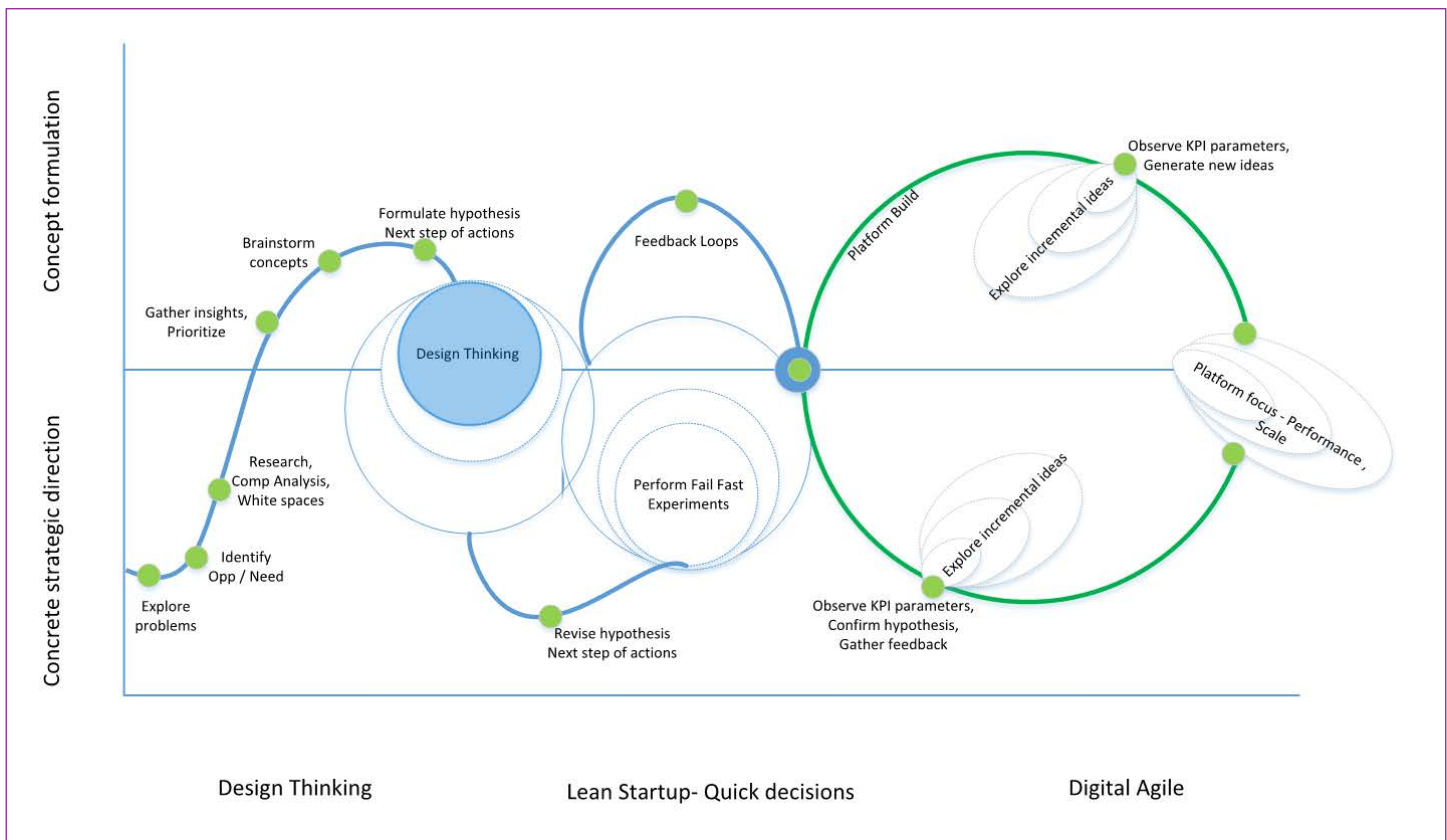
Depending on the maturity of the

Figure 2 *Digital Platform Build Approach*

concepts during the initial stages, the platform build approach might take a lean design approach in a startup mode. This typically helps to perform multiple fail fast experiments and hit the market fast and at the same time provide the flexibility to run parallel tracks on performance and non-functional areas. Most of the platform architects typically prefer a balanced approach such that the technical debts coming out of each of these experiments don't accumulate beyond a level which is completely unmanageable and could result in an unmaintainable platform. At times, there would be certain technical assumptions on performance parameters to be taken into considerations even though there would be many unknowns especially when the features are exploratory in nature. Some of these assumptions then need to be measured and validated during the platform run / operate stage to confirm functional as well as technical hypothesis and platform refinement need to be then planned as an ongoing activity.

Lean decision making, at its core, relies on taking calculated risks weighing the pros of iterative experiences with the cons of operational overheads and potentially also negative branding in the interim. When we launched our operations for the first time in the United States on the Marketplace Platform, we already knew that the US Candidate Onboarding Process was a huge

and complex piece with almost 30 different workflows for the different states having to be created, apart from cracking the key pain points of the traditional staffing industry wherein key processes like the I9, W4 and Background Checks were not automated. We got started however, by not creating as many workflows, but by making incremental adaptations to the Swiss Candidate Onboarding workflow to start with and refine in iterations bringing in measurable and definite improvements to the process over time, until today, when 90% of the process is indeed Zero Touch. There were specific technology decisions that were taken, some of which had to be rewritten for e.g. with the I9 process, W4 processes, BG Check Processes, Legal Documents to be E-Signed. At the start there were also considerable risks accepted with manual operations involved even in I9 and E-Verify, but our approach helped to deliver the product to market in an incrementally functional and increasingly stable manner. We may have a core team taking the critical technical or business decisions and at times to ensure a smooth running of the program organization, we may also empower the respective team to

take the certain decisions and calculated risks.

Platform tracks and its focus typically end up as the least prioritized over functional items and most often is a taken for granted track for any new digital platform initiatives. While the standard approach of building a loosely coupled, observable and modular platform is adopted typically from the initial build phases itself, parallel and on the fly performance track is one of the challenge that every new age digital startup program faces. Obviously, it adds additional burden to the architects and is sub-optimal in nature compared to build it right first approach. However, given the nature of most of the digital programs, this is an approach that is adopted in many large-scale programs. As we go through these parallel tracks, platform team and architects tend to create many learning, guidelines and directions to be followed, which must be taken into account during the subsequent phases. There will be still multiple instances where there is a need for deviations and the lean decision-making body need to take a call and move forward even if some of those may result in adding

additional technical debt to the program. Lot of times, the anticipated load or mix of use-cases / transactions might be not fully known to do a detailed performance or load test. In this case as well, a proactive planning need to be applied to vet out the initial technical assumptions and then data based insights and monitoring to be put in place to validate these from the real production deployment trends.

While it is extremely essential that the best practices in Agile and devOPs are followed to achieve seamless platform build & scale, an integral part of this journey and process is the teams involved. We must note that it might not always be necessarily that different set of teams on the ground get involved in various phases of the platform build - the Design Thinking, the Fail Fast Experiments and the Agile Iterations. Key to the success of digital platform build model is the ability to orient product teams to the continuous rigor and take forward learnings from one phase into the other as well as to adapt and deliver to the constraints of the specific activity – be it design thinking, experimental or agile feature delivery in nature.

Conclusion

In today's world of new digital trends and uberization of traditional services, the emerging message for all enterprises and business of old and new is the same – "be digital or die". Being digital is not a choice to be or not to be – even the great startup business concepts and ideas do not see the light of day, if they do not have the latest digital edge for their channels, data driven strategy decisioning or the core bots and AI and ML driven engines. At the same time, we see an increasing number of enterprises take a plunge into digital – almost as a leap of faith, only to achieve partial and suboptimal outcomes. Our experience and insights from building new age digital startup platforms, make us increasingly advocate that the secret sauce to success must have -

- An integrated or unified product oriented approach towards the platform build across all functions from strategy to operations – to ensure the momentum required to deploy the critical mass of the business platform.

- A well-balanced mix of design thinking approach, with lean design and decision-making followed by fail fast agile execution and on the fly performance scale approach - to ensure that the platform continues to evolve, adapt and sustain to sc

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