



## TECHNOLOGY MODERNIZATION – DRIVERS & IMPERATIVES FOR BUILDING THE RIGHT BUSINESS CASE

### Abstract

Technology modernization is often the most challenging, complex business decision for any organization. It is even more challenging for organizations which have been traditionally offering a business service to several clients (B2B or D2C), basis an underlying technology platform. Examples of such modernization initiatives could be an insurance firm wanting to modernize its core record keeping policy administration system, a business process company wanting to modernize their hosted business services platform servicing other customers or a retailer wanting to modernize their eCommerce or sourcing platform. Modernization involves not just defining the end state architecture vision on what needs to be done, but also objectively finding and aligning the right reasons to modernize an existing revenue impacting offering. It involves not just technology change, but also organization and business change management, often involving alignment with diverse stakeholders both internal and external. Generally, it is difficult for technical, business and financial stakeholders to get on the same table and meaningfully agree on the needs and imperatives of modernization and build a business case. This paper tries to put together a structured framework for connecting the technology imperatives with business and financial outcomes to enable the management to take informed decisions and layout a roadmap which is understood and internalized by business, finance, operations and technology.

Change often triggers defensive mechanisms within organizations. It triggers anxiety and generates a lot of confusing chatter. This in turn causes confusion within the management on the business case or drivers for change, leading to long stretched conversations with existing teams on how their current technology platform can also meet the new world challenges. This is especially the case if the organization in question has a market leading platform offering or a platform which has enabled them to be market leaders in their business segment. Even though history is replete with instances of several market leaders having fallen to such hubris, it is difficult to recognize it when you are in the moment.

Generally, conversations of technology modernization are triggered internally from the top management (where there is a visionary business leader) or based on persistent market feedback (either existing customers through operations feedback or sales team's through market feedback). However, it is difficult to establish a concrete business case basis evidence and objective analysis, given the diverse set of stakeholders and viewpoints. Some of the common organizational reactions to modernization initiatives are as below.

1. *Best in industry:* This is often the case when the business in question is a market leader in its own segment or region. Even though the voices from customers and prospects point in a different direction, there is a hubris that customers don't have a choice as we are the best on offer in the market.
2. *Too complex to change:* This is especially true in business platforms where there is a complex ecosystem and integration involved.
3. *Lack of resources with domain knowledge:* Systems would have been built over decades and the people who built them may not be around. Lack of documentation poses another such challenge to modernization.
4. *Too risky to message to existing clients:* How do we communicate to our existing clients about our current platform while the modern platform is being built? How do we continue to sell our current platform in the interim? Will our current clients be willing to migrate? These are some of the questions which keep coming up during the conversation.
5. *Migrate to cloud:* If we just host our current platform to cloud, all our challenges will be resolved.
6. *Invest in us, we don't need a new one:* If the management invests the same amount of money on the current platform, we wouldn't need the new technology modernization initiative.

The last argument is especially too good for senior management to ignore as it takes away all the other challenges. Except for the one fact – If it is too good to be true, it usually isn't. The case for technology modernization is generally because of the below factors

1. The current technology does not scale in a cost-effective manner to new growth aspirations. The cost of adding new clients or increasing transaction volumes for existing clients increases with volume.
2. Evolving expectations and declining tolerance from business and customers related to cost of change, velocity of change and stability of change.
3. Lack of available resources in the market with skills to work on old technology,
4. Existing code has incurred a lot of technical debt which is equally risky and time consuming to mitigate, leading to stability issues.
5. Continued risk of technology obsolescence. This is similar to the "Catching a falling knife" in investor parlance.

The choices before a management faced with such conflicting views are difficult ones, and there is a need for having clarity in decision making using objective analysis. Going back to business basics might provide some guiding light in such scenarios. It is essential to get the macro factors and alignment right, before we delve into the micro drivers. There are generally 2 key business dimensions on which any business should base its modernization decisions.

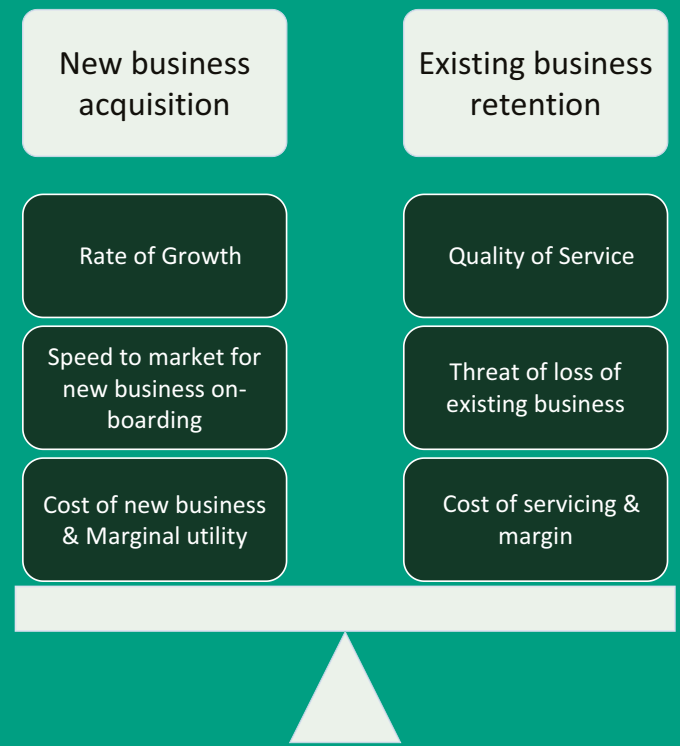


Figure 1: Macro Dimensions for Modernization

Let's look at each dimension for their drivers and impacts

## Macro Dimensions for Modernization

*New business acquisition*

New business acquisition is a dimension which allows the organization to measure their ability to attract new business at acceptable margins, within the timeframes expected by the clients. This dimension is generally influenced by inputs from sales and pre-sales teams on the ground.

- **Rate of growth** is generally influenced by the number of deals the organization gets shortlisted for as well as the deal conversion ratio in case of B2B kind of business. This is a direct metric of sales funnel, pipeline and win-loss ratios in terms of business TCV as well as number of deals. The number of deals along with the individual deal sizes (TCV) together give a sense on changing market segments. If the deal sizes and / or number of opportunities for the organization have been shrinking, it means that the market segment for the organization has been changing de facto. In case of D2C business, this metric would be the gross new customer additions & gross new business value generated which shows the strength of the offering in the market. The trends around trailing 12 month & 3 year average could generally be a good metric to look up to. Another direct metric could also be the contribution of direct gross new revenues (non-supplementary) to the top line revenue that the company has been reporting in their annual reports.
- **Speed to market for new business on-boarding** is a direct metric on the delivery side for the new business using estimates for new deals. This is an indicator of the lag / cost of scaling in the current system due to either technology challenges and / or the inability to find quality resources to support on-boarding new business.
- **Cost of new business & marginal utility:** This should be tracked separately as it indicates the impact of drivers influencing
  - o Rate of growth
    - Shrinking ticket sizes
    - Pricing pressure on Sales teams to acquire new customers at the cost of lower margins
  - o Speed to market
    - Time & cost of scaling infrastructure for new customers.
    - Time & cost of scaling team resources for new projects.
    - Time, cost & complexity of making changes to software for new customers
    - Time, cost & complexity of migration for new customers



This metric shows the incremental marginal utility of acquiring new business and is a good indicator of the organization's ability to scale for new business as is visible to the senior management.

## Existing business retention

Existing business retention is the propensity of customers to stay put with the organization for the foreseeable future years for the given price and quality of service. The ideal timeframe we should have for measuring on this dimension is within 12 months and 3 years. Many times, the business retention propensity for a client (esp. in B2B) is fairly known for the next 1 year, however the risk classification of clients for next 3 years is something that should be done proactively, so corrective actions can be taken. This dimension is generally influenced by inputs from Customer operations and field support teams.



• **Quality of Service** is generally measured by the operations team both in terms of business service as well as technology quality of service. There are several metrics for Quality of service

- Technology platform stability
- Overall availability & cost of availability.
- Availability during critical business hours.
- Scalability & Performance.
- Cost of change.
- Velocity of change.
- People stability and talent run-off.
- Technology obsolescence and cost of support.
- Time & cost for on-boarding new product / offering.
- Frequency of manual exception handling & intervention.
- Users experience (Business operations users / customers).
- Speed to market.
- Process turn-around time (TAT) & SLA's adhered to.
- Business services ratings and feedback.
- Price of service

Each organization can have their own set of metrics depending on their line and nature of business. It is important to baseline the current Quality of service and have a target QoS as roadmap for improvement.

- **Threat of loss of existing business:** Threat of loss of existing business is the probability of a client to move away from the organization's services for various reasons. Threat of loss should constantly be evaluated basis the internal and external assessments. Operations support team & client account management teams can provide good insights into the client's perception and decision making process. Moreover direct feedback should be gathered from a variety of client stakeholders to get an understanding into the client's perception of the service. Feedback questionnaire should be directly tied to the Quality of service metrics so that specific insights (facts as well as individual perceptions / opinions) can be gained from the key stakeholders.
- **Cost of servicing & margin:** This metric measures the direct cost of operations and contribution to the gross margin of the client account. This is generally captured by the operations team as part of their report. The insights that need to be probed and gathered further are specific to the processes which add to the higher overall / per transaction costs and the qualitative reasons driving the costs.

## Re-configuration of revenue streams

One of the key things in transformation that businesses do not factor is the potential for accretive & reductive revenue models. What it means is that a part of the current revenue stream will get cannibalized in favour of a new revenue stream. E.g. When we go into a SaaS kind of business model from a license based model, the project implementation revenue stream declines in favour of transaction based revenue streams.

The rationale for transforming one type of revenue stream into another is generally 2 fold – Unlocking growth potential due to skilled resource constraints and improving margins. Both are

inherently tied to the “New business acquisition” and “Existing business retention” dimensions. However, this particular aspect has a more deeper impact on organizational change management and needs to be addressed proactively both at a financial as well as operational level. While developing a new platform strategy, this is a key factor which should be borne in mind and the delta impacts need to be factored from a business case perspective. As with any transformation initiative, aligning stakeholder viewpoints is crucial. However if the modernization initiative has this dimension as well, then aligning stakeholder viewpoints becomes absolutely critical.

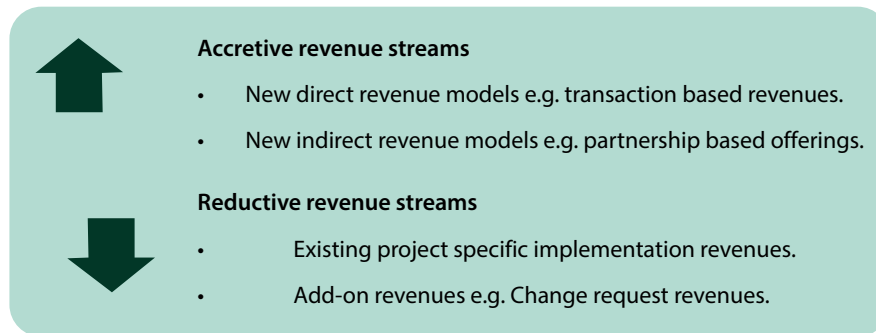


Figure 2: Re-configuration of revenue streams

## Aligning Stakeholder viewpoints

The above 2 dimensions will provide specific data points highlighting the drivers for modernizing and improving the quality of service. These help us create 4 types of viewpoints aligned to various stakeholders of business.

An analysis along the 2 dimensions provides objective inputs to formulate the above 4 viewpoints, which in turn creates a consensus on the problem statements that need to be solved from a business perspective.

Once we have a clear objective view and problem statement definitions, aligned to various stakeholders viewpoints, one can formulate specific solution options. Not every problem statement or every stakeholders viewpoint will lead to a solution which warrants a full-fledged technology modernization initiative.

Neither does every problem statement need to have a utopian solution. Some problems can be solved via mere improvements to existing platforms / processes which will lead to a more acceptable Quality of service by bringing in some additional efficiency and reduce either the threat of loss or lead to improvement in margins. This process leads to finding an acceptable equilibrium state for the business and its customers. This solution brainstorming exercise should lead to 2 sets of initiatives.

1. A set of stabilization initiatives which lead to measurable improvements on existing platform as defined by a re-stated QoS charter as the agreed business goal.
2. A set of well-defined problem statements aligned to stakeholders which may need a full-fledged modernization exercise.

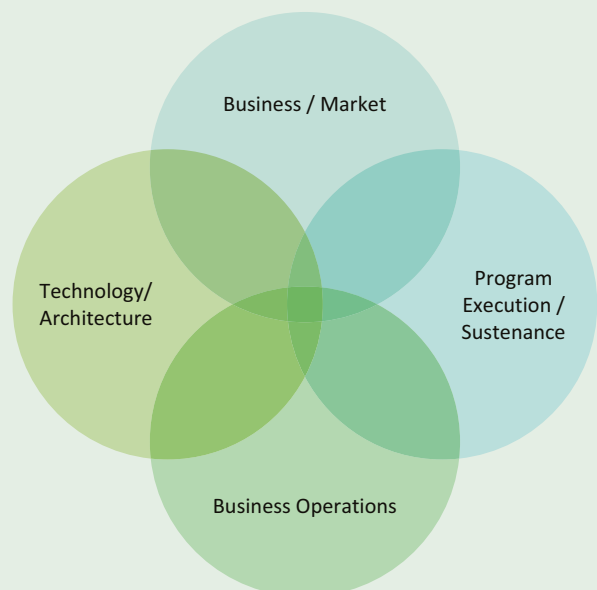


Figure 3: Stakeholder viewpoints

## Plotting the Cost of Experience Frontier (CoEF)

An organization is a collection of processes / functions performed by a set of people. Some processes are direct business facing, some are enabling. If we map each of the processes on a graph of Experience v/s cost, we can get a heat map view of where each of the processes lie vis a vis stakeholder expectations. The Experience axis is basis the quality of service metrics affecting the said process function. The organization can have a weighted average for each of the quality of service metrics. The cost axis is plotted along the measured costs which impacts the business margin or ability to grow.

Every business process / function is plotted on the graph. The size of the process shows the weight / importance the process carries in terms of business priorities. E.g. if rapid growth within a market is of primary importance to the business, then the new customer on-boarding or new product launch processes

will carry a significant weight and hence the size of the bubble. If the objective is new market expansions, then processes that are relevant to taking the offering to the new market carry more weight. Similarly, if in an e-Commerce site, cost and speed of fulfilment of orders is a priority, then the order fulfilment process carries more weight. By looking at the chart, business will get an objective view of the state of business processes as viewed by all stakeholders.

The utopian state for any organization is to have all business processes in the top right corner of the heatmap chart (Low cost / Awesome experience). A more realistic objective is to get the key priority processes beyond the Cost of Experience Frontier (CoEF), where the cost of the process is either acceptable or low while providing a stakeholder experience above the threshold of indifference between good and bad.

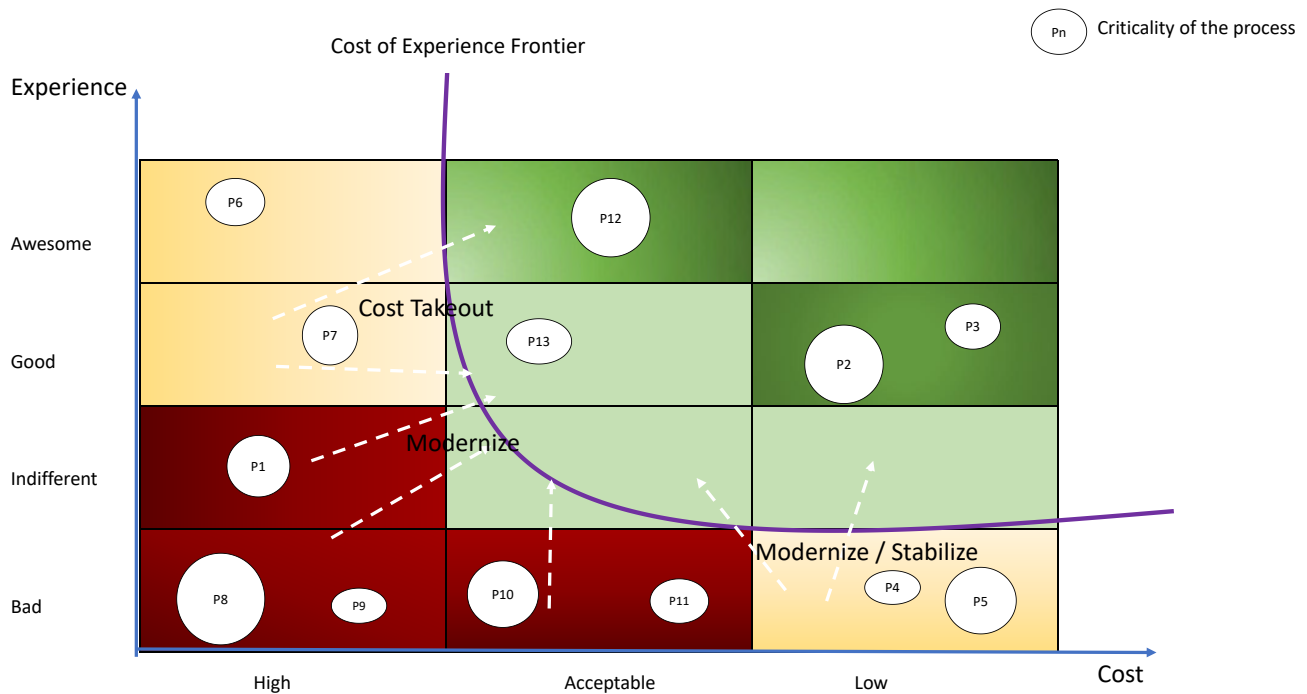


Figure 4 Experience v/s Cost

## Formulating the right strategies

Once we have clarity on the specific problem statements for which we want to modernize, the question remains on how we go about doing the same. Just as a good harvest needs a well-prepared ground to sow the seeds, the right environment and the right timing, technology modernization also needs a well-prepared ground as well as right environment & timing for introducing the change.

## Right place strategy

Modernization initiatives by nature carry an element of risk higher than BAU improvements. It is important to find a place where the risk of failure does not impact businesses significantly. Organizations need to evaluate different approaches basis their business context. Some of the strategies of finding the right place for transformation are listed below.

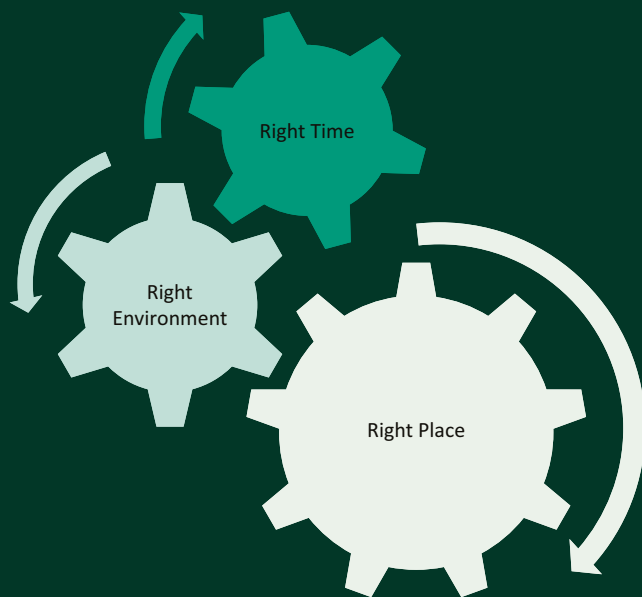


Figure 5: Formulating the right strategies

- **New market :** If an organization has an aspiration to launch outside of its primary cash generating market, it makes sense to try the modernization initiative in the new market. The initial business launch can be basis the existing platform, however the modernization initiative can be piloted on the new market.
- **New business segment:** Sometimes, an organization could launch into a completely new market segment and use it as the playground for modernization e.g. a recruitment management firm having presence in permanent staffing business can explore the temp staffing business segment for its modernization initiative. This gives a place for experimenting as well as scope for growth for the new initiative with minimal risk of disrupting existing mainline business.
- **Existing market / segment but with less influence on overall business:** Sometimes transformation can be piloted in the same market and segments, but for a limited scope. e.g. instead of having to migrate all existing customers and products on the new platform, one could pilot only targeted new product launches with limited scope on the new platform. This would help piloting the modernization with limited scope of business exposure in the main market. If the business pilot is successful, a full fledged migration initiative can be launched to move from the old platform to new platform. Alternately, some customer segments can be used as the basis for piloting the modernization initiative. This is a business co-existence strategy and can be used to de-risk the business from large scale disruption.

## Right environment strategy

Once we have found the right business place for piloting the modernization initiative, one should build the right environment for executing the strategy. Getting the right leadership teams, motivating and communicating to them on the imperatives for modernization, the objectives and goals, as well as incentivizing risk taking appetite is of paramount importance. Creating the right environment where teams are excited and motivated to challenge their boundaries and constraints is one of the most ignored, but most important aspect of modernization. Organization change management is a crucial aspect for modernization and appropriate strategies should be thought through and implemented along the journey.

## Right time strategy

As with any good farming practices, sowing the seeds of transformation at the right time is critical. Planning in advance is critical. Executing ahead of time, when there is still time to recover from failures than when times are desperate and urgent from a business perspective is a key to success. Modernization initiatives need time and money and hence ensuring that annual budgets bake in modernization activities and measurable outcomes every year is crucial. Technology modernization, like health improvement is a journey. It takes dedicated time and rigorous discipline to stay fit and healthy. Having said that, if an organization has not started its modernization journey, now is always a good time.

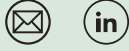
## Summary

Technology modernization is a complex subject involving not just technology, but also financial, operational and organizational implications. More often than not, this decision as well as the driving force is left to the IT & technology function of the organization. Articulating the rationale with driving forces for modernization, objectively in terms of business management metrics, helps in driving alignment amongst different cross functional stakeholders that are needed to make the transformation initiative successful. The process of plotting the cost of efficiency frontier brings clarity and objectivity in the thought process of the organization in terms of the initiatives to prioritize. It also helps bring clarity in the technology co-existence architecture as well as the business architecture over the duration of the program identifying the various business equilibrium states that the organization aspires to be in over the duration of transformation. It also helps lay out the transformation roadmap in stages with clear success metrics tied to each stage and aligned with the stakeholders. This further channelizes the organization's collective energies to finding the right strategies for executing the modernization program. By bringing together these aspects, it lays the foundation for a more successful execution of business transformation.

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