

Efficiently use limited capital to future-proof your business

Applied Value Knowledge
Capital Efficiency

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Introduction: The declining trend of company tenures

The average tenure of companies on the S&P 500 list has decreased from 33 years in 1965 to 20 years in 2019; this decline is expected to continue for another decade. The drivers behind this development are globalization, increased M&A activities, accelerated growth of disruptive start-ups, digitalization and the launch of new major technology. These factors create a complex, dynamic and unpredictable business environment where, to remain relevant, companies are required to develop capabilities around responsiveness and adaptability.

Rigid companies that are more unwilling to change and that continue to deploy conservative business models have a lower priority to innovate and typically fail in exploring new revenue streams. These companies often find themselves being surpassed by their more innovative and bold competitors.

Seizing growth opportunities through investments

A common misconception is that cutting costs would be sufficient in safeguarding against the repercussions of economic downturns. By doing this businesses miss out on opportunities for growth by acting defensively and downsizing while awaiting an economic rebound. Therefore, companies that cut costs faster and deeper than their competitors don't necessarily come out on top.

Market constraints are enablers of innovation and investment; companies bold and solvent enough to invest and innovate where peers would cut and burrow will not only survive a market downturn but will also profit from seizing opportunities inaccessible to their opposed peers. There are four traditional forms of corporate investment: (1) stock buybacks, (2) M&A, (3) dividend pay-outs or (4) re-investments in organic growth.

- › **Stock buy-backs** are an easy way to increase earnings per share (and therefore share prices), however, they do not solve business model-related challenges nor hedge risks from future crises.
- › **Dividends** are beneficial for companies not part of any governmental support programs and are good way of strengthening credibility in the stock market. On the other hand, they reduces company buffers against escalating recession impacts.
- › **M&A** volumes were at their lowest weekly value in Q1 2020 since the 2008 financial crisis, as most ongoing deals has been put on hold due to the current situation. Most (but not all) PE firms are also focusing on managing the portfolio rather than new deals.
- › **Organic growth** investments are the more challenging, but also the most sustainable way to achieve growth. The target with this approach is to diversify revenue streams by entering new markets, creating new offerings, innovating through R&D and/or CAPEX investments.

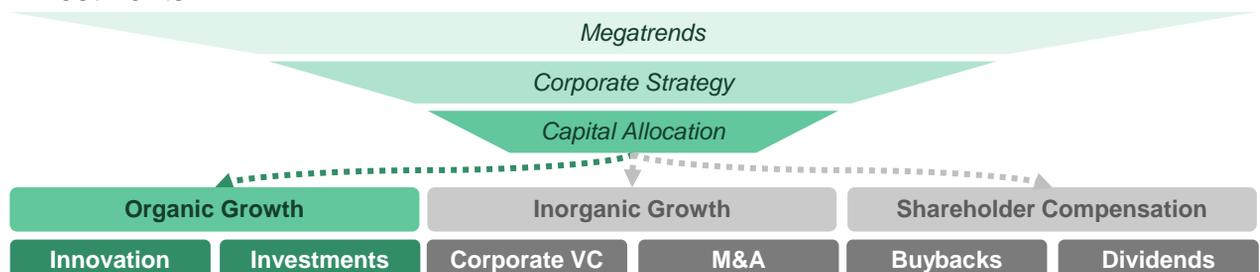


Figure 1: Successful companies must strike a balance across growth levers to meet corporate strategy objectives.



Investing in Organic Growth

Organic growth is seldom prioritized by managers as a means for growth, who are often under the misconception that their primary way of generating additional growth is inorganic (e.g. through M&As and corporate capital ventures); they typically quickly rule out transformative organic growth initiatives. The difficulty lies in seizing and building organic growth, since it has proved to be one of the most elusive aspects of building a business.

Choosing to invest in organic or inorganic growth can become a trade-off between implementational speed and longevity of impact. Because most managers are graded on shorter longevity cycles, M&A typically gets the first look, even though it is widely recognized that most large acquisitions fail.

However, organic growth can become the most resourceful growth lever for both large and small companies by leaving more deep-rooted and lasting improvements that are better at helping businesses hedge against future crises. The best way to utilize a downturn is to turn challenges into opportunities. Companies need to constantly experiment, adapt, and learn – rather than analyze, optimize and plan. We recommend the following:

- › **Focus your investments.** First, understand your role in the market ecosystem. Assess the maturity of your business, the market and your customers, partners and competitors; deep-dive the market dynamics to pinpoint challenges & opportunities and map your R&D internal capabilities with where you most efficiently can leverage them. Then allocate capital and focus your investments to improve and develop the functions and initiatives that best would serve these opportunities and isolate the top-scoring initiatives into a condensed portfolio.
- › **Iterate, Test and Learn.** Encourage innovation by stepping up the support of your R&D organization; adopt processes for quickly identifying, developing and implementing initiatives to drive the innovation of products & services and explore ways to reshape your business model to reap profits from new market opportunities and megatrends. Fail fast: incubate ideas in a low-risk environment with a direct focus towards delivering tangible results such as prototypes, not PowerPoints.
- › **Optimize the cost structure.** While focusing on investments maximizes the programs' efficiency, it is also possible to maximize the amount of undertaken initiatives by leveraging the right teams for the right tasks while maintaining cost efficiency. Conduct R&D site footprint assessments to determine optimal resourcing and cost structure. Implement cost, innovation and efficiency KPI tracking and monitoring. Set a clear governance model for measuring KPIs and following up on progress, while still accounting for the specificities of an innovation.

Excelling in these areas requires a well-architected R&D organization with access to tools and processes to facilitate the entrepreneurial capabilities required to efficiently and effectively adapt. This skillset is typically found naturally in all small business establishments since they lack the resources to control their environment and the brawn to buffer change. However, Applied Value's previous engagements show that this skillset is not exclusive to small firms, given the right approach.



Achieving R&D Effectiveness and Efficiency

Industry macro trends have always shaped businesses by forming constraints and opportunities, which must be safeguarded against or seized – and continuously adapting to ever-changing macro trends requires an efficient R&D organization. To aid that organization, a clearly defined process for developing and managing R&D initiatives must be outlined to achieve operational effectiveness and efficiency.

Applied Value's model covers three essential R&D organizational pillars: (1) Portfolio Management, (2) Development Speed and (3) Delivery Model & Organization.

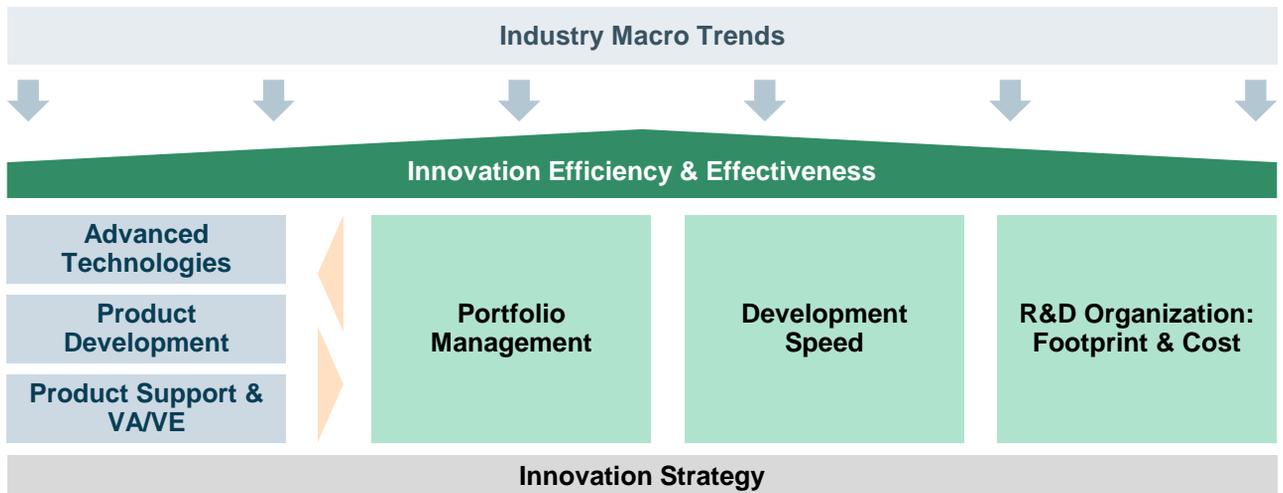


Figure 2: Applied Value's framework for responding to industry macro trends through managing company R&D.

In a business environment where the balance between continuity and change has shifted towards change, the importance of the R&D organization has emerged. An efficient R&D organization is focused, fast, and delivers value across areas through a flexible organization working with the right projects and the right delivery models.

- › **Portfolio Management.** The overall goal of portfolio planning & management is to improve the ROI from R&D projects through prioritized resourcing decisions. Develop tools for gathering data, increasing data transparency and enabling project prioritization. Evaluate initiatives by looking at financial- and strategical impact and risk, whilst also aligning with the technology and product roadmap.
- › **Development Speed.** Establish process improvements to ensure efficient ways of working, by decreasing process complexities and reducing lead times.
- › **R&D Organization.** Defining the organizational direction will help set down principles for an efficient delivery model. The optimal delivery model will depend on the current and desired links between Product, Core, & Engineering as well as streamlining of the R&D activity ecosystem. Evaluate your R&D organization, prototype suppliers' footprint and test setup to develop optimal resourcing and cost structure, while ensuring labor flexibility and maximization of key competencies at relevant sites.



Managing your R&D Portfolio

By leveraging the right initiatives within innovation, companies can seize organic growth opportunities by developing new products and services, identifying new markets, and reshaping their business models. Think about it as if it were your personal investment portfolio: You likely wouldn't want to be fully invested in low performing bonds. Similarly, you wouldn't want your R&D investment portfolio to include *only* low-risk projects.

Applied Value proposes a selection process for new R&D projects that condenses many ideas into a few developed projects.

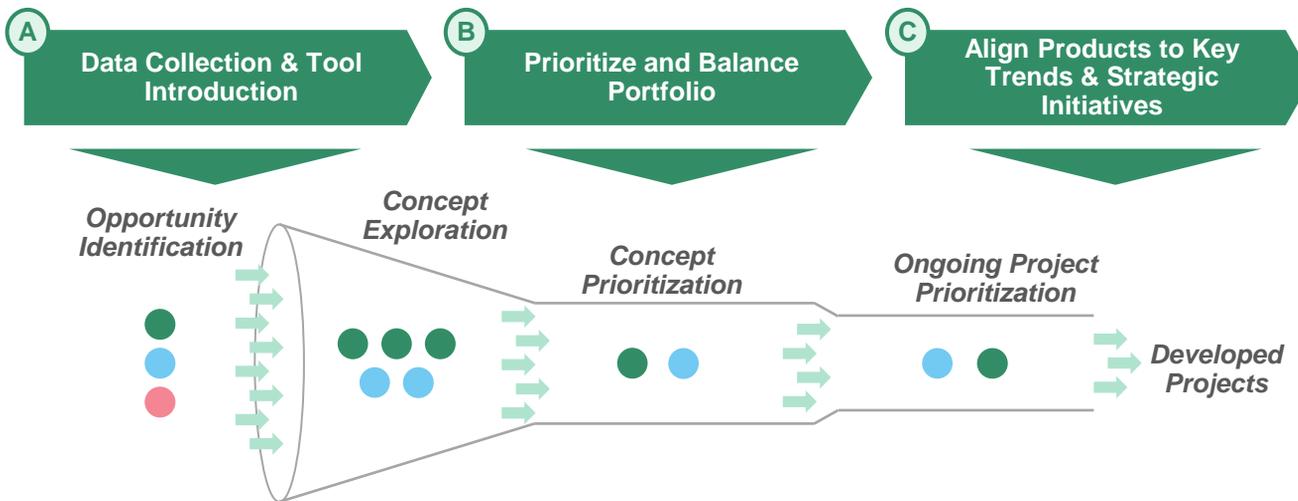


Figure 3: Process for identifying & prioritizing R&D initiatives.

It is equally important to have the right amount of projects as it is to have the right mix of projects. Keeping your portfolio diversified is key for achieving company longevity since one lone action cannot save and hedge a business against the impacts of an ever-changing environment.

- › **Data Collection & Tool Introduction.** Collect data on the potential impacts of your candidate projects by understanding their opportunities and risk profiles, from both financial- and strategic perspectives. Assess the total numbers of projects, the respective project complexity and the number of products & variances. This allows you to estimate the required resources required and the implementation time horizons. Then develop tools and scoreboards to store the collected data, for easily presenting, comparing and keeping track of project details.
- › **Prioritize and Balance Portfolio.** Use scoreboards to view, compare and prioritize projects along different business-specific key value drivers. Ensure project diversity by avoiding focusing on only one type of project. Facilitate decision making on project go/kill and condense your project portfolio of projects into a more balanced and refined set.
- › **Align Products to Key Trends & Strategic Initiatives.** Work cross-functionally within product management, R&D and manufacturing to align on products/services, projects, and strategic initiatives to maximize return through prioritized resource allocation.



Ensuring Development Speed

With the company portfolio prioritized and balanced, next steps become to improve the development speed by means of reducing activity lead times and costs. This is done through reduction of complexities, overloading, waste and waiting time, and restructuring decision matrices while staying flexible. By reducing non-value adding activities, resources can be reallocated to core, high-value add activities supporting growth initiatives.

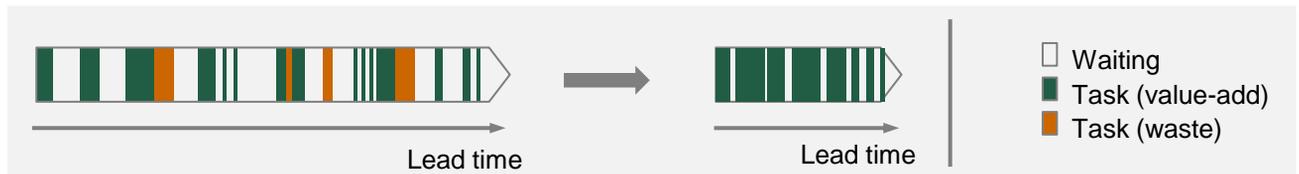


Figure 4: Lead time reduction through reduction of waste and waiting time.

Applied Value utilizes a seven-step process to achieve a learner state:

- › **Visibility into time-based KPIs.** Increase efficiency by aiming towards organizational transparency by not only settling with setting up time-based KPIs but also striving to create visibility into KPI development; this highlights progress & improvement potential throughout the organization.
- › **Reduce complexity.** Establish clear communication routines and decrease redundant complexity of processes while rationalizing product features and service dimensions.
- › **Separate value-add from waste.** Setup models to identify and evaluate activities to distinguish waste from value-add. Deploy initiatives to reduce/kill inferior activities.
- › **Optimize cross-functional processes.** Assess current communications and workflows between functions to identify sub-optimal processes. Evaluate if these processes are needed or redundant and proceed by either reallocating more resources to strengthening processes or eliminating / scaling down processes.
- › **Parallelize sequential tasks.** Processes tend to have waterfall-like tendencies with time since maintaining agility and flexibility when executing tasks takes effort. Utilize knowledge collected in previous steps to identify opportunities for parallelizing tasks or sets of tasks to cut waiting time.
- › **Automate.** Sometimes processes can not only be stripped from waste and be parallelized, but they can also be automated. Depending on the nature of process, a few to all process steps can be automated. Evaluate the trade-off between automating & maintaining manual processes in terms of cost, time and resources, both in the short- and long term; implement automation in instances where it drives superior value.
- › **Organizational accountability.** The organization's sense of responsibility and motivation tend to fluctuate and shift, especially in times of crisis, where uncertainties often arise. Deploy initiatives that motivate employees and establish clear governance models to follow-up and achieve completed tasks and excellent work. Establish a cultural sense of urgency and invest in activities that tightens the company culture.



A proven method for ensuring the seven aspects previously mentioned is Activity Value Analyses (AVA): analyses of time allocation and activity distribution. These are used to map current activities within an organization, identify efficiency improvement areas and help map the delivery process and points to the degree (or lack) of standardization.

AVA tries to answer how and where time and resources are spent by understanding time triggers, resource allocation, activity categorization and if they are value-add / non-value-add.

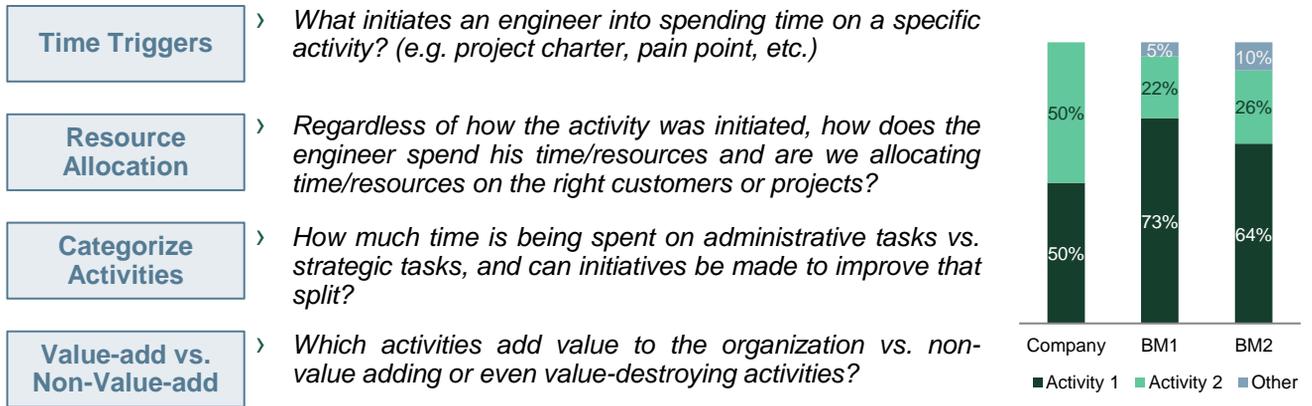


Figure 5: Four key areas for Activity Value Analyses.

The identified inefficiencies should be mapped to the organization’s processes to assess what steps to prioritize and direct attention to first.

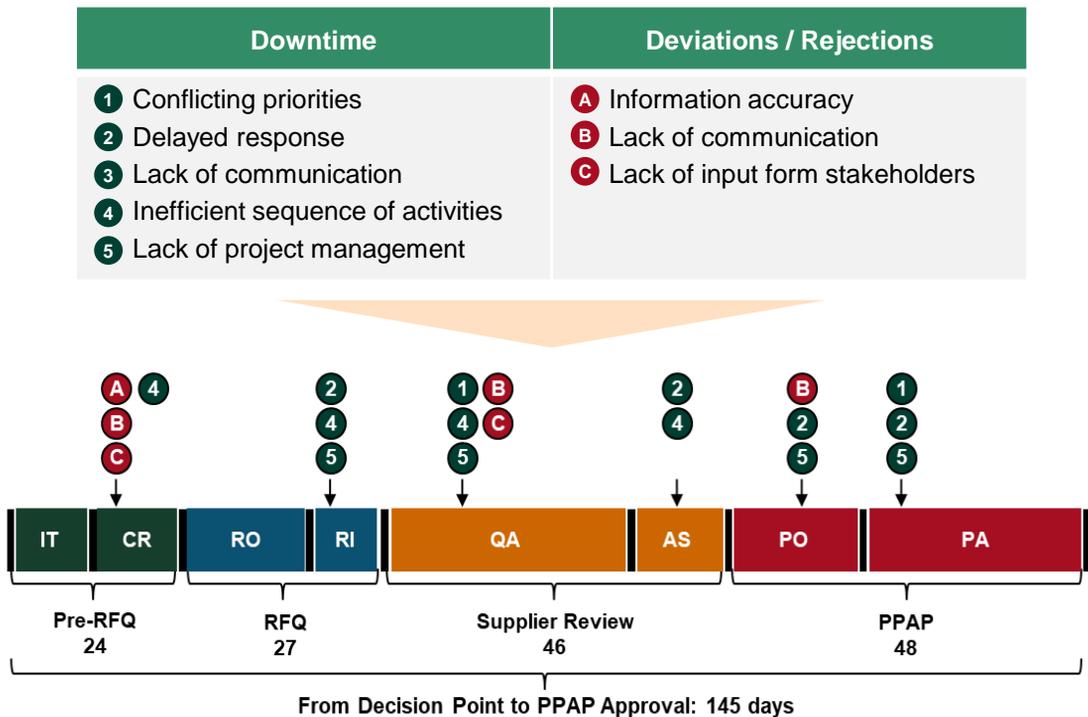


Figure 6: Example of inefficiencies mapping to the R&D organizational processes.



Designing your R&D Organization: Footprint & Cost

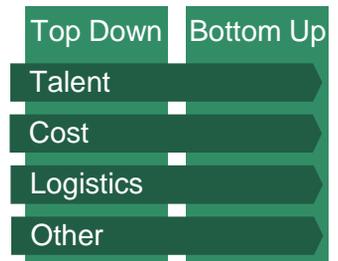
Removing inefficiencies in your R&D activities is a quick way of improving your innovational capabilities through speed. Outlining and implementing a new design of your R&D organization is a larger, more time-consuming commitment, but will establish standing, deep-rooted improvements by optimizing footprint and costs.

An analysis of current footprint can be conducted to evaluate potential relocation and/or refocus geo-strategical opportunities. A comprehensive approach to footprint optimization entails a top down and bottom up approach.

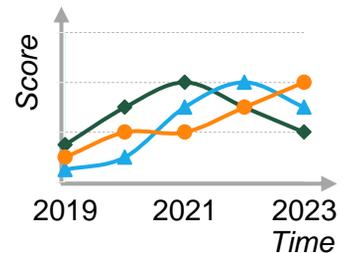


Figure 7: Approach to achieving footprint- & cost optimization of the R&D organization.

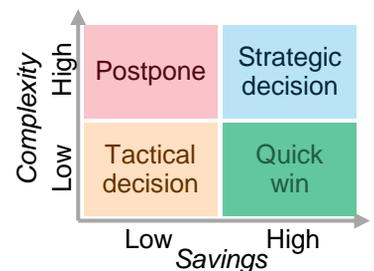
1 Where? Conduct data research across R&D critical categories e.g., talent, cost and logistics. Combine top-down and bottom-up approaches to provide both a holistic and more granular view. Setup a weighted scoring model to identify which countries or regions are recommended and consolidate into a ranked list. This is an efficient way to systematically evaluate different locations regarding specific objectives.



2 When? To determine the right time to move and if the ranking changes going forward, projections of key criteria should be analyzed to understand when a country will be ready for a potential transfer. This allows you formulate multi-horizon site recommendations based on the readiness assessment of countries.



3 What? By mapping the complexity of teams and evaluating the necessity of proximity to the main R&D site, one can identify what teams that can be moved. Other aspects, like site-specific capabilities, cultural differences and cost structure should provide additional information to evaluate decisions and make financial impact and dependencies more visible. Setup KPIs to track progress and identify improvement potentials.



Other actions that should be considered when optimizing footprint & costs:

- › Assess/potentially reconfigure PMO org based on optimal degree of centralization vs. spread
- › Outsource vs. In-house R&D: acquire external knowledge or develop deep organic knowledge
- › Centralized R&D in Corporate HQ vs. decentralized R&D in each division
- › Evaluation of prototype supplier's footprint and test setup (e.g. use of HCC v. LCC per process stage)
- › Categorize fungible / non-fungible resources and recommend org structure to support labor flexibility
- › Trade-offs between number of R&D sites, collaboration and inefficiencies
- › Balancing cultural differences and deviating knowledge between R&D sites



Next steps for managers

For companies to unlock their full R&D potential, four steps should be followed. Firstly, the R&D organization should closely monitor and understand how the current megatrend is impacting its industry, competitors and products/services to identify risks and opportunities the trend entails. This information will determine the next steps for how the company should react and guide the formulation of a R&D strategy, which should specify targets, tactics, and required resources.

Secondly, refocus the current portfolio of R&D projects and re-prioritize them based on the new budget constraints and strategic objectives. The re-prioritization should not only cut risky projects, but also streamline the portfolio to become as relevant and advantageous as possible given the current megatrend and available resources.

Thirdly, look at the R&D processes under crisis and institutionalize the fast decision-making processes that have either appeared already or are observable elsewhere. The adoption criteria of these processes is that they should be designed to quickly identify and shape new growth businesses. Develop supporting processes that ensure that the company becomes truly innovative and do not capitulate to the sucking sound of the core by becoming influenced by the company's core business model – avoid letting new ideas resemble what the organization has done before.

Lastly, deep-dive and analyze the structure of your current R&D organization to understand how the delivery model can be fully leveraged, by: (1) re-allocating low vs. high value staff between R&D sites, (2) redistributing assignments so that high-cost engineers are not doing low-value work and vice versa, (3) mapping R&D site-specific capabilities, cultural differences and cost structure to assess the design of the R&D organization's footprint. The R&D organization should be structured to support the incubation, development and acceleration of innovative initiatives while allocating and optimizing employee capabilities to match their individual skillsets to their job assignments and the specialization of the R&D site.



Case study from AV R&D engagement in 2020

Background

The client faces multiple challenges related to efficiency within product development, including size of project portfolio (i.e. workload on existing teams), speed of execution, allocation of resources, and excessive overhead. By addressing these challenges, it is estimated that the client could unlock between 6 – 10 MUSD in efficiencies or savings for the next fiscal year.

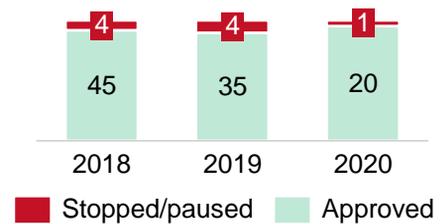
Project approach

These efficiencies come from four primary sources, which were used to outline a framework for approaching and driving the client engagement.



Analysis & Result

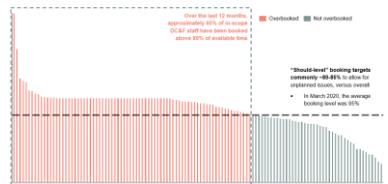
- 1 > Reviewed and rationalized existing project portfolio based on strategic direction, identified business cases and risks to form ‘Go’, ‘No-Go’ or ‘Accelerate’ decisions.
 - > Defined guidelines and expectations on portfolio balance (client had a ~20 p.p. lower “kill-rate” than peers).



- 2 > Reduced process overhead through fewer decision points, fewer decision-makers while refocusing project approval criteria.
 - > Reinforced project investment discipline on project business cases and risks and redefined stage gate duration targets towards benchmark levels.



- 3 > Drive resource optimization through prioritization and transparency.
 - > Redefine core team structure and establish end-to-end project manager roles by utilizing skills database to increase transparency and facilitate qualified staffing.



- 4 > Shift in mindset and behaviors across levels through accountability and empowerment.
 - > Implemented simplified KPI structures for reaching targets and visualizing performance.
 - > Designed training program and development plan for project managers.



Recent examples of AV turnaround engagements

1 Supported client with site selection and long-term strategies for development team

Project Approach



Outcome / Result:

- › Recommendations supporting a move of 25% of the hardware team to identified site
- › Savings of \$12M in first year alone, with 3-year projection of \$30M
- › Unlocked activities supporting top talent recruiting for low-cost countries

2 Supported client in efficiency assessments driving end-to-end development speed

Project Approach



Outcome / Result:

- › Created list of improvement initiatives with quantified operational and financial impact
- › Identified activities led to cumulative cost savings potentials of \$20 million
- › Developed detailed roadmap of next steps for all such activities

3 Supported client in creating aftermarket parts portfolio management process

Project Approach



Outcome / Result:

- › Implemented new portfolio management process
- › Designed organization to operate and govern with defined in-/outputs cross functionally
- › Improved aftermarket business Gross Margins by 3.5p.p. on average

4 Supported client with Portfolio Management and Optimization Strategy

Project Approach



Outcome / Result:

- › Consolidated view of current and planned projects and all corresponding support data
- › Supported budget process by identifying efficient use of resources
- › Resulted in ~40% increase in IRR vs. previously suggested plan



Applied Value can help companies respond to recent developments by outlining and driving best-practice initiatives to seize organic growth opportunities by focusing investments into R&D and innovation.

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