

Matching the right projects with the right resources

By assessing their project portfolio from both rules-based and strategic perspectives, organizations can ensure appropriate project prioritization and resource allocation, thereby substantially improving margin.

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Traditionally, product development organizations have conducted portfolio management as an annual or semi-annual process in which they determine the optimal portfolio strategy and match their limited investment resources to the selected projects. Leading organizations are moving beyond this annual exercise to conduct a more regular, objective, rules-based prioritization of their projects, which they augment with a subjective assessment based on strategic goals. By mapping resources to their prioritized projects, these companies identify gaps relating to capacity and capabilities and can develop an action plan for improving resource allocation.

The rewards for optimizing portfolio management and resource allocation are significant. Recent cases suggest that companies can increase growth-related spending, cut costs, and improve margins, as well as reduce overall business complexity.

Increase growth-related spending. Creating a better match between investments and business priorities allowed a high-tech company to redirect 20 percent of its development budget to new areas of innovation that have greater growth potential.

Cut costs and redirect the savings. A specialty-chemicals company reduced the number of development projects by 40 percent by cutting the “long tail” of small projects. It allocated the resulting surplus to its development budget, which was cut by only 16 percent, to the remaining priority projects to help ensure their success.

Increase margins. A food and beverage company applied approaches to project selection and redesign to focus its investments on projects with higher profitability. This initiative is forecast to result in a 15 percent increase in profits.

An optimized process helps to improve financial performance by facilitating trade-off decisions in resource allocation and resolving conflicts between projects competing for the same resource. Below, we discuss the steps entailed in an optimized process for portfolio management and how to put the process into practice on an ongoing basis.

A multistep approach

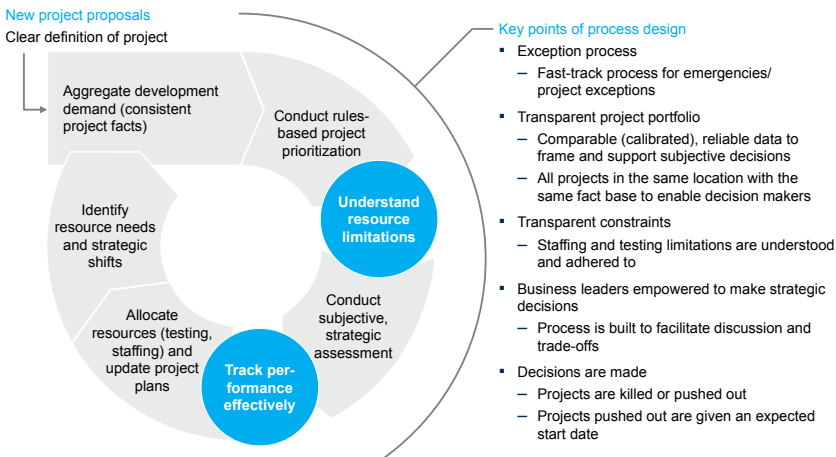
An optimized process for portfolio management entails multiple steps (Exhibit 1).

Aggregate development demand and gather data. Managers should consider a wide range of demands on development resources beyond new product development—including growth, cost reduction, innovation, and maintenance (for example, application engineering and minor changes to existing designs). However, the process should exclude certain types of demand, such as side projects to support engineering, urgent quality issues, and business development. To ensure adequate capacity to fulfill these excluded needs, the company should set aside a specific percentage of resources, whether part time or full time. Managers should assess the necessity of all excluded projects regularly, and ensure that fulfilling them does not require more than 20 to 30 percent of resources, except in unusual cases or unique industries.

To obtain the critical inputs for the prioritization process, the company should gather a standardized set of project data relating to development demand. This fact base is required to assess project priority in a standardized way, regardless of the project type (for example, cost reduction or new product development).

The end-to-end prioritization process leverages a strong fact base to empower organizational decision making.

Exhibit 1

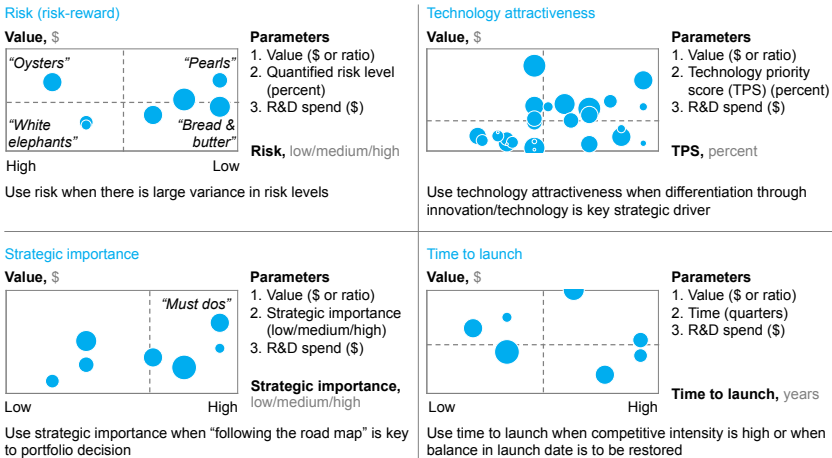


Conduct an objective, rules-based prioritization. Management should apply the fact base to conduct an objective, rules-based prioritization of projects. Companies can select from several metrics for the objective prioritization. The right metric to use depends on the company's strategic intent and what it seeks to accomplish during the coming years. While net present value (NPV) is the most common and accurate metric, it is not always useful for ongoing projects because the investment becomes a sunk cost. To overcome this shortcoming, companies often use return on investment, return on invested capital, payback, or simple margin, either in combination or as a hurdle that the finance function places on the project.

Companies typically evaluate projects based on a financial measure with one additional primary driver such as risk, technology attractiveness, time to launch, and strategic importance (Exhibit 2).

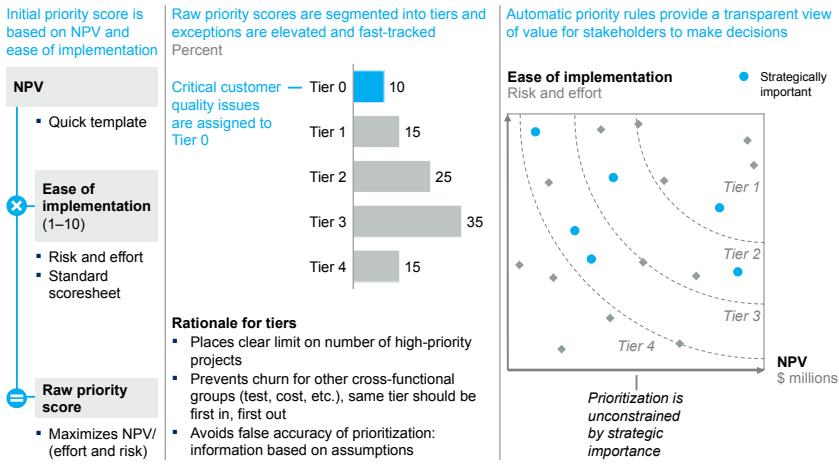
Ideally, some combination of financial return and implementation effort should be used to rank projects, at least as the first set of objective criteria. For example, an initial priority score can be developed based on NPV and ease of implementation in terms of risk and effort (Exhibit 3). Raw priority scores can be used to segment projects into tiers that clearly delineate the high-priority projects independent of

Exhibit 2 Companies often evaluate projects based on a financial measure with one additional primary driver.



Rules-based prioritization creates the initial project priority based on net present value (NPV) and ease of implementation.

Exhibit 3



strategic importance. A special class of “emergency” projects can also be identified for fast-track execution.

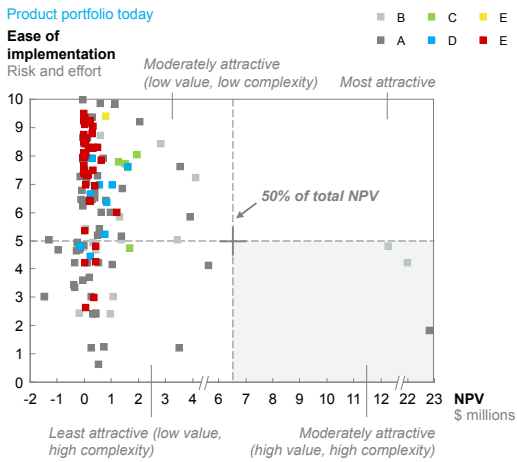
The objective ranking gives the company a transparent view of the current status of resource usage (Exhibit 4). The most attractive projects combine high value and low complexity. However, many companies will find that they are focusing on the least attractive projects (low value and high complexity) or those that are only moderately attractive (low value and low complexity or high value and high complexity). Often, companies find their current resource allocation does not match their strategic aspiration for the allocation. In the example below (Exhibit 4), the company strived to invest only 30% in the current business but actually allocated almost 70% to it.

Understand resource limitations. On the basis of the objective assessment, the company should conduct an initial matching of resources to prioritized projects. This allows it to gain an understanding of resource gaps and excesses, adherence to strategy, and a project’s ability to meet financial and customer expectations. An automated tool can be used to make the allocation.

Companies should assess and map resource constraints with respect to both capability and capacity (Exhibit 5). The extent to which the identified constraints will limit

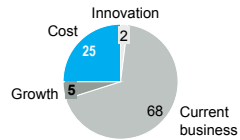
Exhibit 4 Objective ranking provides a transparent view of the state of resource usage.

EXAMPLES



Example portfolio adjustment

Current state
Focus of resources, percent



Aspirational state

Focus of resources, percent

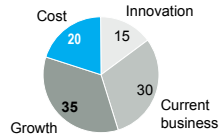


Exhibit 5 Leadership team will reallocate resources to meet the needs of the overall strategy.

EXAMPLE

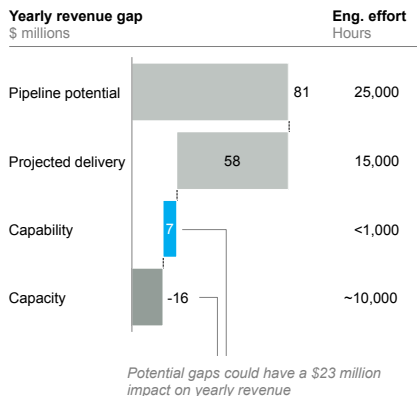
For each project effort, value and statement must be known

Project title	Tier	Parameters		Effort	
		NPV \$ m	Ease	Eng. hours	Test hours
A		10.7	7.3	1,400	600
B		8.8	7.6	280	80
C	1	9	7.4	120	40
D		3	8.1	200	2,000
E		2.5	7.7	20	1,500
F		1.3	9	30	5
G	2	2.1	7.8	250	10
H		0.7	9.4	40	10
I		2.9	5.4	500	12,000
J		0.4	9.3	90	100
K	3	0.9	7.1	400	60
L		11	5.6	870	2,160
M		0.4	7.4	550	250
N		0.5	6.6	320	605
O	4	0.7	5.6	140	1,980
P		0.1	5.4	125	80

- Capacity constraint
- Capacity constraint
- Project on hold

Effort needed is understood for each project and the portfolio

For the identified pipeline, capacity constraints limit revenue to 72% of yearly potential



revenue should be determined and communicated to management. Engineering and technical managers can provide an initial capacity “waterline” to help decision makers understand what can and cannot be done. The transparency provided by this gap assessment enables management to decide which projects will have the highest priority when allocating resources and where stop-gap measures (such as hiring temporary staff) are needed to honor contracts with customers.

Conduct a subjective, strategic assessment. Senior leaders from functional departments and regional organizations should use a subjective, strategic assessment to adjust the project prioritization derived from the objective assessment. For example, priorities could be shifted to achieve goals for long-term growth (for example, a low value but high priority for breaking into a new market could be moved up) or increased innovation, or due to financial concerns (for example, while the project may be viable, it could not meet certain payback hurdles and is therefore downgraded).

Allocate resources and update project plans. Based on this strategic overlay, managers should revisit the assessment of capacity and capability constraints and report back to senior leadership on the implications for resource planning. A planning tool that highlights capability and capacity constraints can be used for detailed resource planning. With these inputs, managers can finalize resource allocation and develop high-level project plans.

Putting it into practice

Implementing such a system (especially if none of the elements is currently in place) will require a concerted effort and full leadership support. The company should conduct a diagnostic to determine the gaps between the current system and best practices. It should also clearly set goals and expectations up front and appoint an overall leader for the portfolio prioritization system. A team comprising members from functional departments and regional organizations should collaborate to design the new system in workshops in order to promote buy-in and ensure that the system benefits from the full range of perspectives.

The typical impact of implementing this prioritization approach is substantial. For example, one company transitioned from having only a few projects with accurate data relating to issues such as financials and resources to having such data available for all projects. It reduced the proportion of projects ranked as top priority from 70 percent to a more reasonable level of 15 percent. And it developed a detailed

assessment of resource gaps for the first time. In addition, it yielded the insight that few people were using the tools correctly or understood how they were used, and that many were working on projects, but had little idea of the true objective value at stake.

Accurate resource data can be aggregated and used for optimized resource management on an ongoing basis. This includes information on long-term resource increases and decreases, load balancing, and outsourcing and offshoring strategies.

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