



Looking under the hood: fundamental PIC capabilities

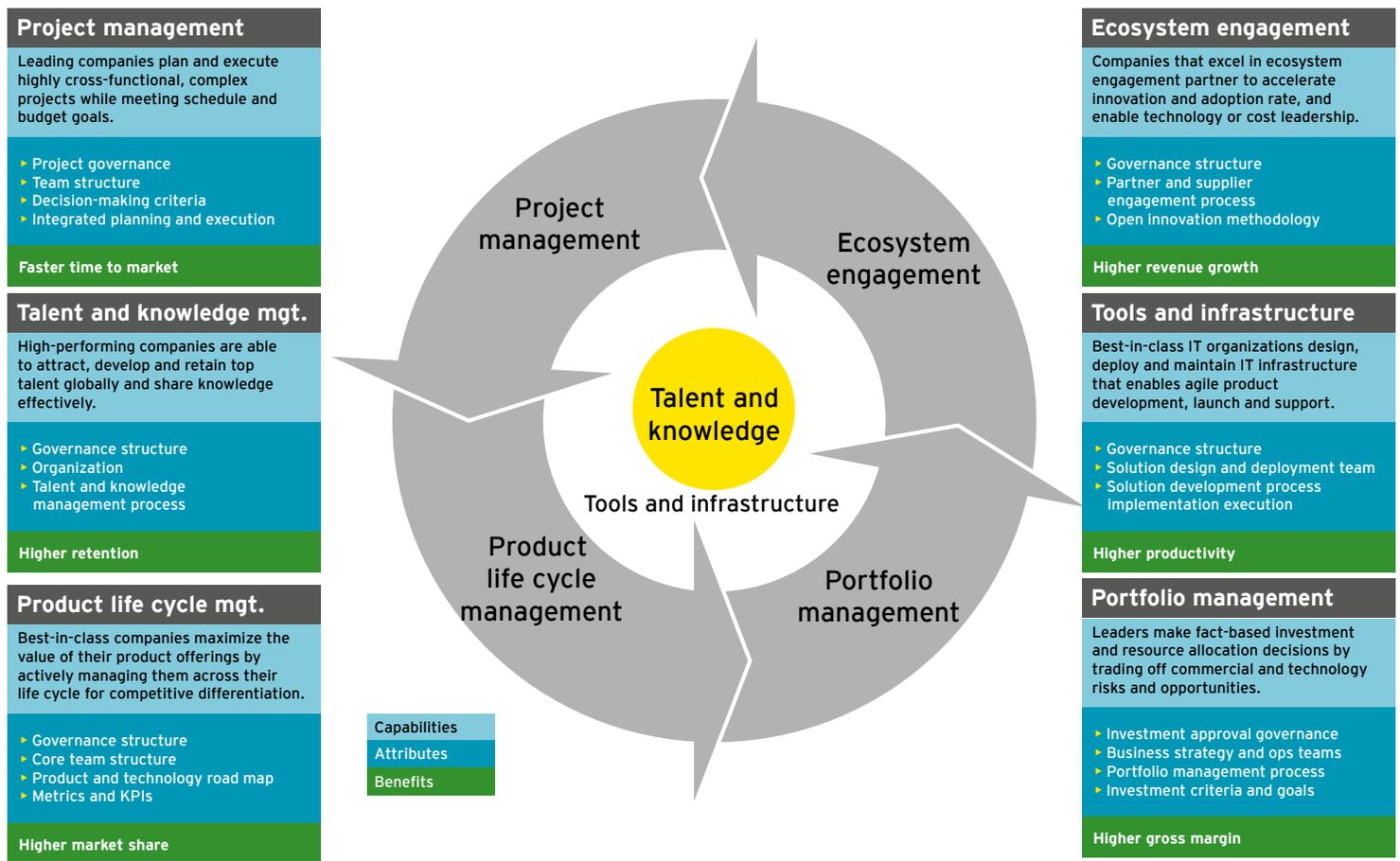
In our experience, product development excellence depends on mastering six core capabilities, which often cut across the formal lines of the product, technology and engineering organizations:

- ▶ **Product life cycle management:** Plan and manage complex road maps and product pipelines from concept to end of life, in order to maximize the value of products and solutions and enable companies to drive or adapt to technology and market changes. Life cycle management capability typically leads to improved and sustainable **market share** by capturing and protecting account positions.
- ▶ **Portfolio management:** Enable executives to establish and maintain product portfolios to realize business strategy, make investment decisions among product lines across all life cycle stages and prioritize the allocation of resources to respond to changes in market and competitive conditions. Portfolio management excellence often manifests itself in superior **gross margins**, as businesses judiciously target high-return opportunities and exit less-attractive positions.
- ▶ **Ecosystem management:** Identify, select and manage the relationship with partners along the value chain to accelerate the development of new products and services, reach new market segments, achieve economic scale or reduce risks. Ecosystem engagement typically enables above-market **revenue growth** through identification of new solutions and monetization opportunities.
- ▶ **Project management:** Consistently plan and execute cross-functional projects following robust processes under a governance that enables flexible, fact-based decision-making and rapid learning cycles. World-class project management capability typically manifests itself in faster and more predictable **time to market**.
- ▶ **Tools and infrastructure:** Deploy and manage infrastructure and applications for product modeling, development and deployment; technology development, test and demonstrations; internal and external collaboration; knowledge and intellectual property (IP) reuse; and development process governance and analytics. Tools and infrastructure capabilities are critical to driving **productivity**, guiding the business for optimal development, deployment and utilization of assets.
- ▶ **Talent and knowledge management:** Attract, develop and retain talent across projects, programs and key geographic locations; rapidly capture, share and leverage new insights and technical and commercial IP; and disseminate knowledge to partners and customers. Talent and knowledge management capabilities are critical for driving talent **retention**, the lifeblood of any product organization.



Each capability consists of multiple attributes: for example, world-class project management capability requires excellence in project governance, team structure, decision-making criteria, and integrated planning and execution.

Figure 1: Core capabilities of the product innovation and commercialization (PIC) organizations



Developing clear metrics: the PIC Maturity Assessment Toolkit

Important interplays often exist among PIC capabilities. For example, tools and talent management maturity are critical enablers for all other capabilities; therefore, they are visually marked at the core of the product development capability system in Figure 1. Technology organizations often exhibit a predictable pattern of evolution of capability maturity – namely, project management excellence, followed by ecosystem management excellence, followed by product life cycle management excellence, leading to portfolio management excellence. It is not unusual to find an organization that is advanced in its project management capability but still evolving its portfolio management skills.

Assessing the maturity of PIC capabilities can bring focus to any transformation effort. While inherent complexity, divergent terminology and internal political forces may confound many transformation programs, a common fact base can help to streamline communication, minimize resorting to gut feelings and intuition, and prioritize initiatives in a transparent approach.

The **PIC Maturity Assessment Toolkit** allows decision-makers to rate PIC organizational capabilities through qualitative assessment of current practices against industry-leading practices, mapped against key attributes of each of the critical capabilities. Assessments could be embedded in a variety of situations, including transaction due diligence, integration/separation planning or baseline for business process improvement initiatives (in functional areas such as technology development, product development or supply chain).

As part of the assessment process, interviews and analyses are used to evaluate the organization's capabilities by rating its level of performance against a wide range of relevant practices (see illustration in Figure 2), that are associated with each of the attributes and capabilities critical for product, technology and engineering excellence (as outlined in Figure 1). These leading practices embed learnings that EY has developed through repeated application of this tool.

Where possible, PIC and deal leaders can enhance the assessment via benchmarks of relevant peer groups. In an M&A situation, one would typically compare the two parties, and at times analyze and contrast suborganizations, to the extent that size and complexity warrant it. In other situations, competitive benchmarking may be used.

Figure 2: Developing the Maturity Assessment Scorecard

Product life cycle management	Survey response (sample)				
	Agree	Somewhat agree	Neutral	Somewhat disagree	Disagree
<i>Attribute</i> Management of customer and product requirements Practice					
Development processes incorporate customer input in all development stages	▲				
Engineering and marketing teams work together to capture customer requirements and translate them to product requirements and specs	▲				
Changes in product specs are reviewed and tied to market and financial metrics to ensure no change in business case	▲				
Product specs are stored centrally and are updated using robust change control processes	▲				

Purposeful disruption: driving focused change

Once the detailed evaluation of the current state is completed, PIC and deal leaders can compare it with benchmarks or a to-be vision, to visualize the magnitude of the opportunities and challenges. The Maturity Assessment Report can provide a clear view of capability gaps between acquirer and target and against the future state. This can help in prioritizing the set of transformation initiatives: areas where incremental investment is required to develop capabilities. For example, as illustrated in Figure 3, product life cycle management and portfolio management are identified as potential focus areas (as noted previously, this is typical in many technology transactions).

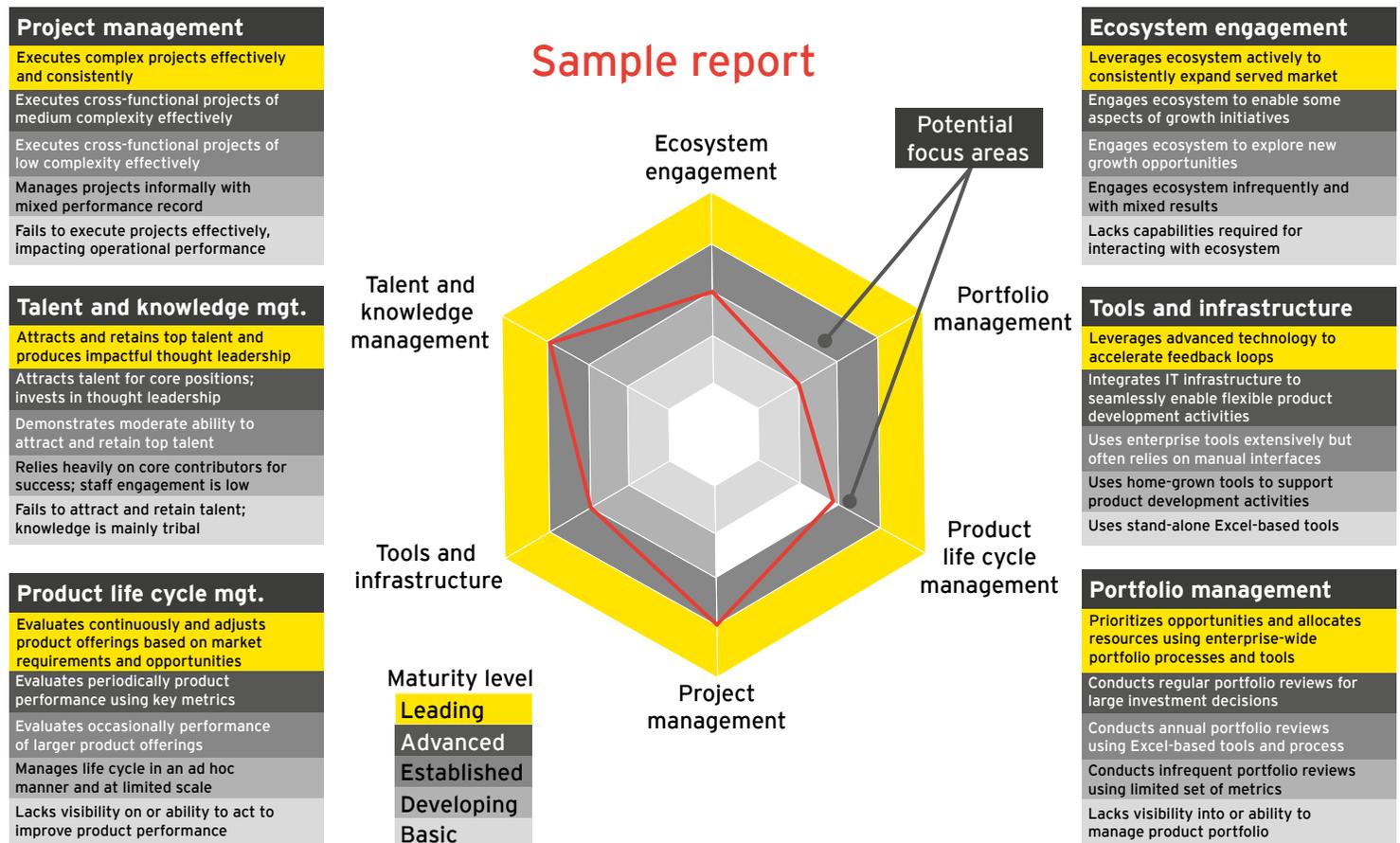
Maturity assessment can help to prioritize transformation efforts to address critical business needs first and support efficient use of integration resources. The following are a few recent examples:

- ▶ In leveraged buyouts, cash flow restrictions may limit integration focus to areas critical to realizing transaction value. Maturity analysis provides management with a framework for prioritizing integration of areas linked to realizing value creation with lower incremental investment; based on assessment, a private equity buyer decided to prioritize ecosystem management capability improvement.
- ▶ Transactions often provide an opportunity to execute long-sought changes in the buyer's engineering organization, which

may have become too insular or behind the times. A large acquirer used the integration as a catalyst to adopt new methodologies (e.g., agile development), where the target had an established experience base that could inform the change program.

- ▶ Rapidly growing technology companies often excel in project and product life cycle management; however, they are not equally sophisticated at managing complex portfolios. Acquisitions of other companies only exacerbate their deficiencies in portfolio management, resulting in imbalanced product or technology portfolios that carry excess risk or require excessive investment to maintain. The maturity assessment highlighted the need to implement robust portfolio management capabilities.

Figure 3: Maturity Assessment Report



In summary

Acquisitions often present buyers with opportunities to significantly advance in-house product and technology capabilities to cutting-edge levels, thereby facilitating capture of deal value. But, such aspirations could fail to materialize without sufficient focus and rigor. Maturity models, used in combination with assessment tools, can provide an objective way of calibrating current state against leading practices and guide the transformation program, identifying which capabilities are best suited for the future state organization and driving decisions to prioritize areas for improvement.

Additional insights

Integrating product technologies and the organizations that develop and commercialize them is increasingly central to the success of many M&A transactions. EY has developed a series of publications that addresses elements key to the success of capturing deal value through such transformation: understanding the baseline, defining the strategy, clarifying the operating model, building the organization and managing change.

Engineering the engineering org: How can companies design their engineering functions to strike the right balance between market responsiveness and operational efficiency?



The elephant in the room: Integrating the product innovation and commercialization organization





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