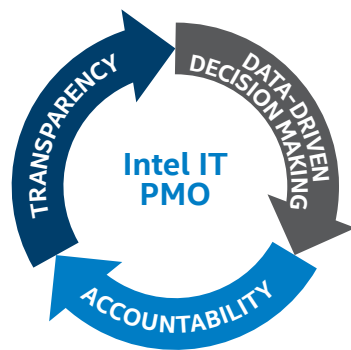intel®

IT@Intel: Modernize IT Portfolio Management with an Agile PMO

Intel IT's Program Management Office (PMO) is advancing Intel's transformation through focused investing and smarter project prioritization

Executive Summary

As a part of Intel IT's transformation and modernization, we have embraced a scaled agile framework to deliver ongoing value to our customers. Instead of long release cycles with massive changes and enhancements, we have organized ourselves into small, focused Agile Persistent Teams (APTs) that are self-directed in prioritization and decision making. APTs work in close, daily partnership with representatives from the business to align on priorities. Additionally, we have taken an "investment portfolio" approach to the work that emphasizes cost/benefit-focused decision making and viewing the IT portfolio as a whole. This allows for trade-off decisions, evaluation of systemic risks, and a comprehensive understanding of the strategic value the portfolio is intended to deliver.

We recently implemented an Agile IT Program Management Office (Agile PMO) to provide enterprise-wide support that enables the following:

- **Data-driven decision making.** Through standard tools and metrics, we provide real-time insights into all programs across IT, enabling us to more efficiently make "once and done" decisions that affect our entire portfolio rather than assessing each program or project in isolation. Cross-capability roadmaps help us make decisions based on impact and timing.

- **Accountability.** Through right-sized governance, we provide support to PMO segments and APTs to help ensure on-scope, on-schedule, on-budget delivery.

- **Transparency.** We use a standardized dashboard to provide at-a-glance project/program execution health, team capacity, risk mapping, and progress reports.

Armed with accurate, complete, and consistent information, APTs can make informed decisions about the priorities and value they provide to their customers. However, when their decisions impact systems or teams beyond their immediate area, the IT PMO takes advantage of systems of record to present "one version of truth" across the entire IT portfolio.

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The Changing Role of Project Management

To accelerate our growth in best-in-class IT solutions and services, Intel IT embraced an agile model that allows us to focus on a more productive workforce, engage customers, optimize decision making and operations, and develop new products and services. But even as a single IT organization with tightly managed programs and stringent budgets within each segment (such as enterprise applications, infrastructure, and security), we still encountered challenges with prioritizing and budgeting across all segments—IT-wide. To address these challenges, we embraced a scaled agile approach, which takes advantage of Agile Persistent Teams (APTs) and Agile Release Trains (ARTs). This decision positively impacted how we govern programs and projects in IT.

With the introduction of these new APTs and ARTs, which work differently from traditional development teams, the discipline of project management needed to evolve beyond project-based language, systems, and processes. We needed to prioritize and manage the work based on capabilities, business needs, and value delivery. To that end, we implemented a new, centralized, Agile Program Management Office (Agile PMO) that streamlines our approach toward a Lean Portfolio Management methodology, whereby the governance aligns more closely to the execution of the work. While this model supports the scaled agile framework, it also uses the best of traditional project management practices to gain a holistic view of IT's portfolio—forming a hybrid Agile approach. We call this method Lean Portfolio Management.

Implementing an Agile PMO

Intel IT's Agile PMO is actually a collection of Segment PMOs, as well as a centralized PMO, working closely together. The partnership focuses on the following areas:

- **Support data-driven decision making.** While Segment PMOs are responsible for determining the priority and projects they work on in their own segments, the Central IT PMO supports cross-capability impact analysis and mapping.
- **Enforce accountability.** The Central IT PMO establishes standards to ensure clear line-of-sight from strategy to execution and governs the portfolio with a transparent view of program/project health. The Central IT PMO uses segment roadmaps to coordinate cross-capability timing, prioritization, and health.

- **Assure transparency.** The Central IT PMO provides status transparency and helps uncover and address systemic risks across the portfolio.

To meet these goals, we used the following three-pronged approach (see Figure 1):

- **Standardization.** We strive for "best-in-class" methodologies based on a scaled agile framework, including establishing systems of record that provide one "version of truth." Standardization helps us aim for easier prioritization, rapid course-correction, and risk anticipation and mitigation.
- **Planning.** We use a consolidated IT portfolio budget planning process that allows us to efficiently focus on value. This provides a transparent view of the IT investment strategy, which is then captured in our systems of record.
- **Governance.** Governance can be challenging in this model because, by design, the scaled agile approach provides for empowerment and ownership of decisions at the team level; each team is responsible for its own direction and priorities. However, using standard metrics for tracking the health of each team and its work helps us identify issues and opportunities early for greater success across all segments of the portfolio. It also provides teams with a clear understanding of what is happening overall rather than just the projects they are working on locally.
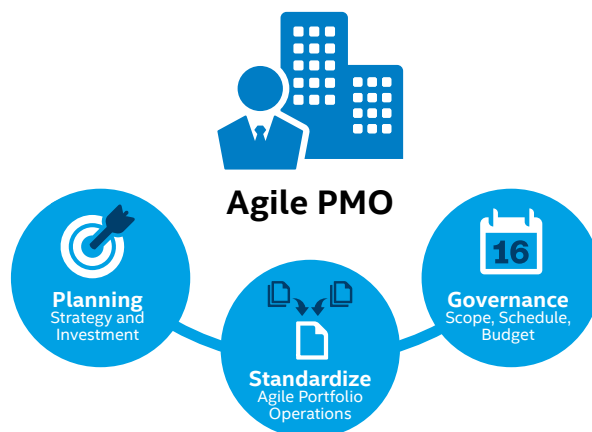

Figure 1. Our approach uses the scaled agile framework for Lean Portfolio Management to support data-driven decision making, enforce accountability, and assure transparency.

Assessing the Value of Portfolio Programs

Over the past year we have evolved significantly in accurately and consistently assessing the value of each team's work in terms of hard and soft benefits derived from improved efficiency, risk resolution, and/or revenue generation for Intel. Initially, Intel IT worked with an outside consulting firm to develop six investment categories, but then simplified our categories to just two: Grow/Transform (formerly called New Capability) and Run. These industry-standard categories allow us to view the work and drive prioritization decisions.

About APTs

Intel IT no longer forms new teams and then disbands them when a project is finished. Instead, we have implemented Agile Persistent Teams (APTs), which follow the scaled agile model. Individual APTs align to processes and capabilities that provide value across segments rather than specific programs. APT members determine what to work on based on the value the work brings to the business. APTs are typically assembled into two groups:

- **Epics.** These teams focus on the value stream to the customer and the business, engaging with Enabler teams for necessary components.[1]

- **Enablers.** These groups focus on internal and external capabilities that provide value to one or more Epic teams. For example, security enablers are standardized and modularized as much as possible to meet the enterprise needs across all solutions. Enabler groups include solution architects, program managers, capability group owners, domain architects, and data scientists.

Collaborating across roles and teams means listening to diverse perspectives and working together to establish capabilities, technologies, and processes.

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[1] The Value stream map is a representation of the flow of goods from supplier to customer through the organization. kanbanize.com/lean-management/value-waste/value-stream-mapping

Delivery Readiness Framework

To manage the portfolio effectively, we needed a consistent view into all the Grow/Transform work across IT. In partnership with the Segment PMOs and other groups, we developed a Value Management Office (VMO) dashboard based on standard tools and governance metrics. The VMO dashboard includes real-time, always-available, at-a-glance health assessments. It depicts the entire portfolio by work segment and business value in one place for clear insight into cross-capability impacts. The VMO dashboard includes the following (see Figure 2):

- **Progress reports.** Individual APTs can make faster, more informed decisions if they understand interdependencies and the work-in-progress, delivery health, and portfolio risks of each activity in the program in real time.

- **Cost/benefit analysis.** The overall framework and the VMO dashboard make it easier to assess execution costs and quantify benefits.

- **Team capacity.** Identifying available resources, as well as bottlenecks, gives segment program managers more control over the flow of work across IT.

- **Risk heat mapping.** Using traditional green, yellow, and red risk mapping provides intuitive information for segment program managers and APT members.

VMO Dashboard

Timely, Accurate Progress Reports

Cost/Benefit Variance Analysis

Team Capacity and Health

Risk Heat Mapping

Alignment on Capability and Milestone Commits

Figure 2. Our Delivery Readiness Framework includes a VMO dashboard for real-time assessment across the entire portfolio.

Measuring the Effectiveness of the PMO

In addition to measuring the value of our projects, we also needed to measure the value and maturity of the Agile PMO itself. The question we continually need to answer is: Are we facilitating well-informed decision making across the IT portfolio? To answer that, we identified the following metrics for evaluating our own performance and overall maturity, using the scaled agile framework (see Figure 3):

- **Portfolio execution.** These metrics encompass traditional on-scope, on-schedule, and on-budget aspects of project management.

- **Portfolio predictability.** These metrics include the actual value versus the planned value of the program and our evolution as a team. We aim to consistently predict the value of our programs and achieve proactive intervention before issues arise.

- **Industry benchmarks.** We defined our maturity benchmarks using industry metrics, which we measure with customer surveys.
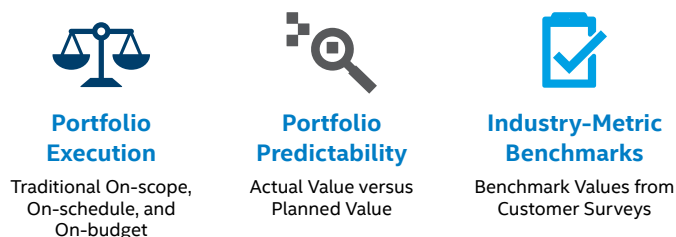
Portfolio Execution
Traditional On-scope, On-schedule, and On-budget

Portfolio Predictability
Actual Value versus Planned Value

Industry-Metric Benchmarks
Benchmark Values from Customer Surveys

Figure 3. Measuring the maturity of our Agile PMO includes execution, predictability, and industry benchmarks.

Results

We measure our PMO against industry-standard benchmarks to understand how far we have come toward our goals, but also to identify and incorporate best-in-class metrics for the future. In early 2020, we partnered with Gartner and surveyed IT leadership to identify opportunities to mature services and provide greater value. Participants included IT general managers, segment leads, principle program managers, Segment PMO leads, as well as members of IT Finance and Delivery Methods and Coaching. 19 participants completed the survey (40 percent) and four partially completed the survey. The feedback helped us identify where we made the most progress, what was most important to them, and our focus going forward (see Table 1).

We scored the highest on our ability to provide valuable metrics, specifically through the VMO dashboard. We nearly reached the benchmark in seven other areas; we also focused primarily on emerging capabilities in cost tracking, investment allocation, and managing risks and interdependencies. These results indicated that we were achieving transparency and standardization, two foundational capabilities necessary to a successful VMO dashboard.

Our focus for 2020 and beyond includes benefit realization metrics, improving prioritization decisions across the portfolio, and managing at-risk initiatives. We believe these results validate the direction we are going, which is both investment-focused and agile in execution.

Table 1. Our survey results validated our ability to provide valuable metrics and highlighted areas of focus moving forward

	2020 Maturity Target 2.3	2021 Maturity Target 3.x
STRATEGY AND INVESTMENT FUNDING		
Stewardship Investment Allocation	Medium: At Benchmark	Medium: At Benchmark
Facilities Prioritization within Portfolios	Low: Below Benchmark	Medium: At Benchmark
Measure and Manage Benefit Realizations	Low: Below Benchmark	Medium: At Benchmark
Track Costs of Initiatives	Medium: At Benchmark	Medium: At Benchmark
AGILE PORTFOLIO OPERATIONS		
Define a Stakeholder Management Approach	Low: Below Benchmark	Medium: At Benchmark
Select and Report Metrics of Initiative Performance	Medium: At Benchmark	Medium: At Benchmark
Manage Risks and Interdependencies	Medium: At Benchmark	Medium: At Benchmark
Manage Troubled Initiatives	Low: Below Benchmark	Medium: At Benchmark
LEAN GOVERNANCE		
Manage the Mandate of the PPM Function	Low: Below Benchmark	Medium: At Benchmark
Select and Report Portfolio Metrics	High: Above Benchmark	High: Above Benchmark
Leverage PPM Enabling Technology	Medium: At Benchmark	Medium: At Benchmark
Manage Resources	Medium: At Benchmark	Medium: At Benchmark
Measure and Communicate PPM Performance	Medium: At Benchmark	Medium: At Benchmark

2020 and Beyond

As we move into the future, our newly formed Agile PMO will enable lean principles that ensure clear line-of-sight from strategy to execution. We plan to continue our cross-capability road-mapping to enable the prioritization of new capabilities and innovation investments as a part of the business value we bring. Our goal is to establish and run a steering committee composed of IT leadership to ensure data-driven decision making across the entire IT portfolio of work. New investments will be mapped to Intel's strategic objectives and key initiatives, and the PMO will ensure overall portfolio health through the tenets of accountability and transparency.

Transitioning to a new process is often challenging, but establishing an Agile PMO is intended to steer Intel IT toward best-in-class solutions and to better execute on our vision and strategy across the portfolio.

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We connect IT professionals with their IT peers inside Intel. Our IT department solves some of today's most demanding and complex technology issues, and we want to share these lessons directly with our fellow IT professionals in an open peer-to-peer forum.

Our goal is simple: improve efficiency throughout the organization and enhance the business value of IT investments.

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