The Agile PMO

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April 11, 2012

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Abstract. The development of "Agile" processes has introduced new ways of thinking about Project Management, which impact Project Management Organizations in various ways. This paper divides the range of practices commonly found in PMOs into Project Management, Program Management, and Portfolio Management, and identifies how the introduction of Agile processes such as Scrum impacts these areas. We find that Agile processes have strong effects on the conduct of Project Management, moderate effects on the conduct of Program Management, and weak effects on the conduct of Portfolio Management. Finally, we note that that Portfolio Management is more naturally aligned with Agile principles than are Program and Project Management and conclude that one effect of the growing adoption of Agile methods is to bring the perspective of Portfolio Management down to the project level.

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1 Introduction

What is an "Agile PMO?" This question invariably comes up in large enterprises that have existing PMOs and are adopting Agile project-management processes, such as Scrum.

This paper does not attempt to prescribe how a PMO operates, as this subject is large and already well-documented. Instead, it assumes that a functioning PMO exists, and addresses the specific question of how the introduction of Agile processes changes how the PMO carries out its responsibilities.

2 The Classic PMO

The acronym PMO may abbreviate *Project Management Office* or *Program Management Office*. This dual definition hints at one of the major challenges of defining what a PMO is and how it works, namely, the lack of consistency in responsibilities and practices across organizations called PMOs. Nevertheless, common themes and practices do exist, and we will address them here.

A "classic" PMO may have any combination of three major areas of responsibility: *Project Management*, *Program Management*, or *Project Portfolio Management*. Alternatively, an organization may create separate offices called the *Project Management Office* (PMO), *Program Management Office* (PgMO), and *Project Portfolio Management Office* (PPMO). We will use these more specific definitions in the following.

A Project Management Office focuses on making projects successful, while a Program Management Office focuses more on the success of programs, rather than projects. While a PMO and PgMO operate on different scales but have similar responsibilities, a Project Portfolio Management Office is distinctly different, as it focuses on optimizing portfolios of projects to achieve business goals.

Understanding what these different offices do requires an understanding the hierarchy of projects, programs, and portfolios. We will turn to three references from the Project Management Institute (PMI) for definitions of these and related concepts throughout this document:

> *A Guide to the Project Management Body of Knowledge (PMBOK® Guide)*, Fourth Edition (hereafter [PMBOK4][1])
>
> *The Standard for Program Management*, Second Edition (hereafter [SProgMan2][2])
>
> *The Standard for Portfolio Management*, Second Edition (hereafter [SPortMan2][3])

2.1 Projects, Programs, and Portfolios

Programs contain projects, while portfolios contain programs, projects, or a mix of both.

> A Project is a temporary endeavor undertaken to create a unique product, service, or result. [PMBOK4]
>
> A Program is comprised of multiple related projects that are initiated during the program's life cycle and are managed in a coordinated fashion. The program manager coordinates efforts between projects but does not directly manage the individual projects. [SProgMan2]

> A portfolio is a collection of projects or programs and other work that are grouped together to facilitate effective management of that work in order to meet strategic business objectives. The projects or programs of the portfolio may not necessarily be interdependent or directly related. [SPortMan2]

Given these definitions, the management of these entities can be defined as follows:

> Project Management is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements. [PMBOK4]

> Program Management is the centralized coordinated management of a program to achieve the program's strategic objectives and benefits. It involves aligning multiple projects to achieve the program goals and allows for optimized or integrated cost, schedule, and effort. [SProgMan2]

> Portfolio Management is the coordinated management of portfolio components to achieve specific organizational objectives. [SPortMan2]

Less formally, we might say that Project, Program, and Portfolio Management operate at tactical, strategic, and business levels, respectively. Project Management is about doing work correctly, while Portfolio Management is about selecting the correct work for the business to do. Program Management is the layer in between, which addresses the integration of tactical work (projects) into strategic (program-level) deliverables.

It should be noted that changes in business environment may result in the cancellation of projects or programs that no longer represent appropriate investments for the business. A well-functioning portfolio-management process can be expected to terminate programs or projects that are successful by their own objectives, but which have ceased to represent the best investment of the company's resources.

2.2 Project, Program, and Portfolio Management

Table 1 summarizes key areas of interest, and how their focus changes across projects, programs, and portfolios. [SportMan2]

Area	Projects	Programs	Portfolios
Scope	Projects have defined objectives. Scope is progressively elaborated throughout the project life cycle.	Programs have a larger scope and provide more significant benefits.	Portfolios have a business scope that changes with the strategic goals of the organization.
Change	Project managers expect change and implement processes to keep change managed and controlled.	The program manager must expect change from both inside and outside the program and be prepared to manage it.	Portfolio managers continually monitor changes in the broad environment.

Planning	Project managers progressively elaborate high-level information into detailed plans throughout the project life cycle.	Program managers develop the overall program plan and create high-level plans to guide detailed planning at the component level.	Portfolio managers create and maintain necessary processes and communication relative to the aggregate portfolio.
Management	Project managers manage the project team to meet the project objectives.	Program managers manage staff and the project managers; they provide vision and overall leadership.	Portfolio managers may manage or coordinate Portfolio Management staff.
Success	Success is measured by product and project quality, timeliness, budget compliance, and degree of customer satisfaction.	Success is measured by the degree to which the program satisfies the needs and benefits for which it was undertaken.	Success is measured in terms of aggregate performance of portfolio components.
Monitoring	Project managers monitor and control the work of producing the products, services or results that the project was undertaken to produce.	Program managers monitor the progress of program components to ensure the overall goals, schedules, budget, and benefits of the program will be met.	Portfolio managers monitor aggregate performance and value indicators.

Table 1 Comparison of Project, Program, and Portfolio Management

The following tables summarize the objectives and strategies of Project, Program, and Portfolio Management Offices.

Project Management	
Focus	Project success
Wants these things to happen	
	Timely execution (scope delivered on time, within budget, with intended quality)
	Adherence to standards throughout project definition and execution
Does the following to make the above things happen	
	Set standards to promote success and minimize confusion • Define metrics to measure progress, value, quality of project deliverables • Define standard processes, practices, artifacts to be used for projects • Provide training in project-management and associated skills • Assist projects through consulting and mentoring
	Manage projects directly • Supply Project Managers for projects

	• Track project status and report to stakeholders

Table 2 Objectives and Responsibilities for a Project Management Office (PMO)

PMOs typically define standards for Project Management, and provide training and supervision for project managers. Whether they manage projects directly varies across PMOs. Some organizations assign the management of projects to PMOs, while others assign it to other (often functional) organizations, and rely on PMOs primarily to set and promote standards.

Program Management	
Focus	Program success
Wants these things to happen	
	Deliverables from multiple projects aligned, projects collaborate effectively
	Resources are available to meet demand
Does the following to make the above things happen	
	Governance: Defining roles and responsibilities, and providing oversight
	Management: Planning and administering both projects and the overall program
	Financial Management: Implementation of specific fiscal practices and controls
	Infrastructure: The program office, technology, and other factors in the work environment supporting the program effort
	Planning: Activities that take place at multiple levels, with different goals

Table 3 Objectives and Responsibilities for a Program Management Office (PgMO)

A quick review of PgMO functions shows substantial overlap with PMO functions, but the focus is different. Project Management focuses on the needs of specific projects, while Program Management focuses on the needs of a collection of projects. We might also say that Project Management focuses on the tactics of planning and executing projects, while Program Management operates at a more strategic level, by

- Addressing issues and standards that affect all projects
- Managing interfaces and collaboration between linked projects
- Adjusting resource allocation across projects to maximize benefits to the program as a whole

Portfolio Management	
Focus	Business success
Wants these things to happen	
	Programs and projects selected to optimize business objectives (ROI, market share, etc.)
Does the following to make the above things happen	
	Portfolio Management: Evaluate, define, and manage portfolios comprised of programs and projects

Table 4 Objectives and Responsibilities for a Project Portfolio Management Office (PPMO)

Portfolio Management is quite distinct from project and Program Management, as it does not address how programs or projects are executed. Instead, Portfolio Management focuses on deciding which projects or programs to initiate, sustain, or terminate, based on their value to the business.

2.3 Asking the Right Questions

The variation in definition for PMOs, PgMOs, and PPMOs means that the question "What is an Agile PMO?" is not the right question after all. Instead, there are three questions that we need to address:

1. How is Agile Project Management done?
2. How is Agile Program Management done?
3. How is Agile Portfolio Management done?

We will address these questions below.

3 How is Agile Project Management Done?

Any process whose practices reflect the values of the Agile Manifesto[4] qualifies as an Agile process. The Agile Manifesto emphasizes collaboration, results, and adaptability over process, documentation, and adherence to plans. In principle, any process whose day-to-day execution reflects these principles is, by definition, an Agile process.

However, the term "Agile process" usually refers to processes that are designed to work well in contexts where requirements and effort are not well-understood, and frequent changes in priorities are common. Of these, some are tied to specific subject domains (such as XP, or "eXtreme Programming,"[5] which focuses specifically on software development), and will not be discussed further here.

Of greater interest are Agile processes that can be employed in multiple domains, such as Scrum[6]. These processes emphasize planning in detail for short time horizons, and re-planning at frequent intervals, based on continuous re-assessment of priorities and the value of potential deliverables. Iterative planning and associated execution require fine-grained tracking metrics that provide a wealth of value for the project-management perspective. Indeed, the remarkable visibility these Agile processes provide to project managers and other stakeholders is a major driver for their adoption, and a key to understanding how Agile Project Management works.

For our purposes, it is convenient to use PMI's language of *Knowledge Areas* and of *Process Groups* to provide a common way of thinking about Project Management. Agile processes that involve iterative planning and execution affect some of the processes and knowledge areas, but not all. Agile processes typically define or impact a subset of these items, particularly around requirements generation, planning, execution, and tracking.

3.1 Project-Management Process Groups and Knowledge Areas

The process groups are defined as follows [PMBOK4]:

Initiating Process Group: Those processes performed to define a new project or a new phase of an existing project, by obtaining authorization to start the project or phase.

Planning Process Group: Those processes required to establish the scope of the project, refine the objectives, and define the course of action required to attain the objectives that the project was undertaken to achieve

Executing Process Group: Those processes performed to complete the work defined in the Project Management plan to satisfy the process specifications.

Monitoring and Controlling Process Group: Those processes required to track, review, and regulate the progress and performance of the project; identify any areas in which changes to the plan are required; and initiate the corresponding changes.

Closing Process Group: Those processes performed to finalize all activities across all Process Groups to formally close the project or phase.

The knowledge areas and process groups, along with their associated activities, are shown below.

Knowledge Areas	Initiating	Planning	Executing	Monitoring & Controlling	Closing
Project Integration Management	● Develop Project Charter	● Develop Project Management Plan	● **Direct & Manage Project Execution**	● **Monitor & Control Project Work** ● **Perform Integrated Change Control**	● **Close Project or Phase**
Project Scope Management		● **Collect Requirements** ● **Define Scope** ● **Create WBS**		● **Verify Scope** ● **Control Scope**	
Project Time Management		● **Define Activities** ● **Sequence Activities** ● Estimate Activity Resources ● **Estimate Activity Durations** ● **Develop Schedule**		● **Control Schedule**	
Project Cost Management		● **Estimate Costs** ● Determine Budget		● Control Costs	
Project Quality Management		● **Plan Quality**	● Perform Quality Assurance	● **Perform Quality Control**	
Project Human Resource Management		● Develop Human Resource Plan	● Acquire Project Team ● **Develop Project Team** ● **Manage Project Team**		
Project Communication Management	● Identify Stakeholders	● **Plan Communications**	● **Distribute Information** ● Manage Stakeholder Expectations	● **Report Performance**	

Project Risk Management		● Plan Risk Management ● Identify Risks ● Perform Qualitative Risk Analysis ● Perform Quantitative Risk Analysis ● Plan Risk Responses		**● Monitor & Control Risks**	
Project Procurement Management		● Plan Procurements	● Conduct Procurements	● Administer Procurements	● Close Procurements

Table 5.

Knowledge Areas	Initiating	Planning	Executing	Monitoring & Controlling	Closing
Project Integration Management	● Develop Project Charter	● Develop Project Management Plan	**● Direct & Manage Project Execution**	**● Monitor & Control Project Work** **● Perform Integrated Change Control**	**● Close Project or Phase**
Project Scope Management		**● Collect Requirements** **● Define Scope** **● Create WBS**		**● Verify Scope** **● Control Scope**	
Project Time Management		**● Define Activities** **● Sequence Activities** ● Estimate Activity Resources **● Estimate Activity Durations** **● Develop Schedule**		**● Control Schedule**	
Project Cost Management		**● Estimate Costs** ● Determine Budget		● Control Costs	
Project Quality Management		**● Plan Quality**	● Perform Quality Assurance	**● Perform Quality Control**	
Project Human Resource Management		● Develop Human Resource Plan	● Acquire Project Team **● Develop Project Team** **● Manage Project Team**		

Project Communication Management	● Identify Stakeholders	**● Plan Communications**	**● Distribute Information** ● Manage Stakeholder Expectations	**● Report Performance**	
Project Risk Management		● Plan Risk Management ● Identify Risks ● Perform Qualitative Risk Analysis ● Perform Quantitative Risk Analysis ● Plan Risk Responses		**● Monitor & Control Risks**	
Project Procurement Management		● Plan Procurements	● Conduct Procurements	● Administer Procurements	● Close Procurements

Table 5 Process Groups and Knowledge Areas for Project Management. Agile processes define specific practices for bold underlined activites, and affect bold activities primarily through the information provided as inputs to those activities. Activities in norrmal fonts are not significantly impacted by Agile processes.

How an Agile process impacts the indicated areas depends on the particular process (e.g., Scrum and other processes, such as XP, specify different practices). Table 6 and Table 7 show how the practices of a Scrum process define or affect relevant activities indicated below.

Knowledge Areas	Initiating	Planning	Executing	Monitoring & Controlling	Closing
Project Integration Management	● Develop Project Charter	● Develop Project Management Plan	**● Direct & Manage Project Execution**	**● Monitor & Control Project Work** **● Perform Integrated Change Control**	**● Close Project or Phase**
Project Scope Management		**● Collect Requirements** **● Define Scope** **● Create WBS**		**● Verify Scope** **● Control Scope**	
Project Time Management		**● Define Activities** **● Sequence Activities** ● Estimate Activity Resources **● Estimate Activity Durations** **● Develop Schedule**		**● Control Schedule**	
Project Cost Management		**● Estimate Costs** ● Determine Budget		● Control Costs	
Project Quality Management		**● Plan Quality**	● Perform Quality Assurance	**● Perform Quality Control**	

Project Human Resource Management		● Develop Human Resource Plan	● Acquire Project Team **● Develop Project Team** **● Manage Project Team**		
Project Communication Management	● Identify Stakeholders	**● Plan Communications**	**● Distribute Information** ● Manage Stakeholder Expectations	**● Report Performance**	
Project Risk Management		● Plan Risk Management ● Identify Risks ● Perform Qualitative Risk Analysis ● Perform Quantitative Risk Analysis ● Plan Risk Responses		**● Monitor & Control Risks**	
Project Procurement Management		● Plan Procurements	● Conduct Procurements	● Administer Procurements	● Close Procurements

Table 5.

Knowledge Areas	Activities	Scrum Tools & Techniques
Project Integration Management	Direct & Manage Project Execution	Execute Tasks
	Monitor & Control Project Work	Taskboard, Burnup & Burndown charts, and related tools
	Perform Integrated Change Control	Manage Product Backlog
Project Scope Management	Collect Requirements	Write Epics & Stories
	Define Scope	Sprint Planning Meeting
	Create WBS	Create Task Breakdowns
	Verify Scope	Sprint Review Meeting
	Control Scope	Manage Product Backlog
Project Time Management	Define Activities	Develop Task Breakdown
	Sequence Activities	Rank Product Backlog
	Estimate Activity Duration	Planning Poker, Analogous Estimation
	Develop Schedule	Sprint Planning Meeting
	Control Schedule	Daily Scrum Meeting
Project Quality Management	Plan Quality	Create Definition of Done
	Perform Quality Control	Validate to Definition of Done

Table 6 Project-Management activities Defined by Scrum Practices

Knowledge Areas	Activities	Scrum Tools & Techniques

Project Integration Management	Close Project or Phase	Sprint Retrospective Meeting
Project Cost Management	Estimate Costs	Planning Poker, Analogous Estimation
Project Human Resource Management	Develop Project Team	Swarming
	Manage Project Team	Daily Scrum Meeting
Project Communication Management	Plan Communications	Taskboard and related tools
	Distribute Information	Taskboard and related tools
	Report Performance	Taskboard and related tools
Project Risk Management	Monitor & Control Risks	Daily Scrum Meeting

Table 7 Project-Management activities Affected by Scrum Practices

The tables show that Agile practices focus on the planning, execution, and monitoring of project work. Scrum, for example, defines no practices related to project initiation or closing.

4 How is Agile Program Management done?

Program Management provides value beyond that of Project Management in the form of:

- A centralized view of status and metrics for all projects, and for the program as a whole.
- A standard approach to planning and tracking work across project boundaries, when the work of some projects impacts or depends on other projects
- Resource management and load-balancing across projects, to better synchronize cross-project touch points
- Specific tools and practices for managing and reporting on programs (e.g., financial performance, risk, communication, etc.)

Much as for Project Management, Agile processes affect some aspects of Program Management, but not all. Their greatest impact is on planning, managing scope, scheduling, metrics, status reporting, and change management.

4.1 Program-Management Knowledge Areas and Process Groups

Table 8 lists Knowledge Areas and Process Groups defined by the Project Management Institute for Program Management [SProgMan2].

Knowledge Areas	Initiating	Planning	Executing	Monitoring & Controlling	Closing
Program Integration Management	● Initiate Program	● Develop Program Management Plan ● Develop Program Infrastructure	**● Direct & Manage Program Execution** ● Manage Program Resources	**● Monitor & Control Program Performance** ● Manage Program Issues	● Close Program

Program Time Management		**● Plan Program Scope** ● Define Program Goals & Objectives **● Develop Program Requirements** ● Develop Program Architecture **● Develop Program WBS**	● Manage Program Architecture **● Manage Component Interfaces**	**● Monitor & Control Program Scope**	
Program Communication Management		**● Plan Communications**	**● Distribute Information**	**● Report Program Performance**	
Program Risk Management		● Plan Program Risk Management ● Identify Program Risks ● Analyze Program Risks ● Plan Program Risk Responses		**● Monitor & Control Program Risks**	
Program Procurement Management		● Plan Program Procurements	● Conduct Program Procurements	● Administer Program Procurements	● Close Program Procurements
Program Financial Management	● Establish Program Financial Framework	● Develop Program Financial Plan **● Estimate Program Costs** ● Budget Program Costs		**● Monitor & Control Program Financials**	
Program Stakeholder Management		● Plan Stakeholder Management ● Identify Program Stakeholders	● Engage Program Stakeholders	● Manage Program Stakeholder Expectations	
Program Governance		● Plan & Establish Program Governance Structure ● Plan for Audits **● Plan Program Quality**	● Approve Component Initiation	● Provide Governance Oversight ● Manage Program Benefits **● Monitor & Control Program Changes**	● Approve Component Transition

Table 8 Process Groups and Knowledge Areas for Program Management. Agile processes define specific practices for bold underlined activites, and affect bold activities primarily through the information provided as inputs to those activities. Activities in norrmal fonts are not significantly impacted by Agile processes.

Again, how an Agile process impacts the indicated areas depends on the particular process. Table 9 and Table 10 show how the practices of a Scrum process define or affect relevant activities indicated in Table 8.

Knowledge Areas	Activities	Scrum Tools & Techniques
Program Time Management	Plan Program Scope	Planning Poker, Analogous Estimation, Release Planning
	Develop Program Requirements	Write Epics, Stories
	Develop Program WBS	Create Task Breakdowns
	Manage Component Interfaces	Scrum of Scrums meetings
	Monitor & Control Program Scope	Release Planning
Program Governance	Plan Program Quality	Create Definition of Done

Table 9 Program-Management practices Specified by a Scrum process

Knowledge Areas	Activities	Scrum Tools & Techniques
Program Integration Management	Direct & Manage Program Execution	Sprint Planning and Execution
	Monitor & Control Program Performance	Taskboard, Burnup & Burndown charts, and related tools
Program Communication Management	Plan Communications	Taskboard and related tools
	Distribute Information	Taskboard and related tools
	Report Program Performance	Taskboard and related tools
Program Risk Management	Monitor & Control Program Risks	Daily Scrum Meeting
Program Financial Management	Estimate Program Costs	Planning Poker, Analogous Estimation
	Monitor & Control Program Financials	Burnup Charts
Program Governance	Monitor & Control Program Changes	Product Backlog Management

Table 10 Program management practices Affected by a Scrum process

5 How is Agile Portfolio Management done?

Portfolio Management attempts to optimize Return-on-Investment by analyzing proposed and current projects and programs, to determine which of these to initiate, continue, or terminate.

Agile processes have less effect on the practices of Portfolio Management than for Project or Program Management. These effects are limited to the details of what information is gathered about current projects, and how that information is gathered, rather than prescriptions for how specific Portfolio Management practices are to be conducted.

Although specific practices of agile processes do not prescribe how the day-to-day work of a PPMO are performed, the concept of Portfolio Management is well aligned with the Agile Manifesto, and especially the core principle of valuing "responding to change over following a plan." Agile processes frequently re-assess the value provided by near-term deliverables, and optimize value delivery by selecting highest-value items for implementation.

Portfolio Analysis does essentially the same thing, but for longer time horizons (quarters to years), and on a project or program basis. Viewed in this light, **Portfolio Management is analogous to managing the**

"Product Backlog" of an agile project, with projects and programs taking the place of Stories[7] and Epics[8].

5.1 Portfolio-Management Knowledge Areas and Process Groups

Knowledge Areas	Aligning	Monitoring & Controlling
Portfolio Governance	● Identify Components ● Categorize Components ● Evaluate Components ● Select Components ● Prioritize Components ● Balance Components ● Authorize Components	**● Review & Report Portfolio Performance** ● Monitor Business Strategy Changes ● Communicate Portfolio Adjustment
Portfolio Risk Management	● Identify Portfolio Risks ● Analyze Portfolio Risks ● Develop Portfolio Risk Responses	**● Monitor & Control Portfolio Risks**

Table 11 lists Knowledge Areas and Process Groups defined by the Project Management Institute for Portfolio Management [SPortMan2].

Knowledge Areas	Aligning	Monitoring & Controlling
Portfolio Governance	● Identify Components ● Categorize Components ● Evaluate Components ● Select Components ● Prioritize Components ● Balance Components ● Authorize Components	**● Review & Report Portfolio Performance** ● Monitor Business Strategy Changes ● Communicate Portfolio Adjustment
Portfolio Risk Management	● Identify Portfolio Risks ● Analyze Portfolio Risks ● Develop Portfolio Risk Responses	**● Monitor & Control Portfolio Risks**

Table 11 Process Groups and Knowledge Areas for Portfolio Management. Agile processes affect bold activities primarily through the information provided as inputs to those activities. Activities in norrmal fonts are not significantly impacted by Agile processes.

Table 12 shows how the practices of a Scrum process define or affect relevant activities indicated in

Knowledge Areas	Aligning	Monitoring & Controlling

Portfolio Governance	● Identify Components ● Categorize Components ● Evaluate Components ● Select Components ● Prioritize Components ● Balance Components ● Authorize Components	**● Review & Report Portfolio Performance** ● Monitor Business Strategy Changes ● Communicate Portfolio Adjustment
Portfolio Risk Management	● Identify Portfolio Risks ● Analyze Portfolio Risks ● Develop Portfolio Risk Responses	**● Monitor & Control Portfolio Risks**

Table 11.

Knowledge Areas	Activities	Scrum Tools & Techniques
Portfolio Governance	Review & Report Portfolio Performance	Burnup charts, and related tools
Portfolio Risk Management	Monitor & Control Portfolio Risks	Burnup charts, and related tools

Table 12 Practices Affected by a Scrum process

6 Analysis

We can draw a few conclusions from the preceding sections.

First, the introduction of Agile processes does not change the roles and responsibilities of Project, Program, and Portfolio Management. PMOs, PgMOs, and PPMOs continue to provide the same value to their organizations as they have in the past, and for the same reasons.

In particular, the value that an "Agile PMO" provides is essentially the same as the value any PMO can provide: consistent definition of processes across an organization, a means for providing expertise and promoting excellence in the planning and execution of projects, and a pool of trained resources on which to draw. The Agile PMO simply supports a different (Agile) process, or a broader array of processes, including classic "plan-driven" and new Agile processes, as appropriate.

Second, Agile processes *do* impact the day-to-day functioning of these organizations, by defining or affecting practices in the various Process Groups. Table 13 summarizes the impact of Agile processes with respect to the definition or effect on activities at the different levels of management:

Office	Defines	Affects	Total
PMO	15	8	23
PgMO	6	9	15
PPMO	0	2	2

Table 13 Number of activities impacted by Agile processes

We see that the greatest impact is at the PMO level, where Agile practices define how many of the Process Group practices are to be performed. Impact is less, but still significant, at the PgMO level, and is small at the PPMO level.

The reduction in impact as we go up from project to portfolio levels is not surprising, as Agile processes focus primarily on how work is planned, executed, and tracked. At the highest level, the details of planning and execution are irrelevant, and the only impact of Agile processes is due to the information (tracking) provided by practices operating at the lower levels.

Third, it is important to realize that the impact of an 'Agile mindset' goes beyond the definition of specific tactical practices. The development of Agile processes was driven by the need to manage projects that are plagued by rapid change in business needs, and the high and irreducible uncertainty around requirements and the effort required to implement them. These drivers have forced a shift away from efficiency and schedule minimization to adaptability and risk mitigation.

The key enabling behavior behind adaptability and risk mitigation is that of incremental development and delivery. Agile organizations perform detailed planning only for short time horizons, and re-plan frequently. They build "big pictures" out of an evolving set of "small pictures," rather than attempt to build the big picture all at once. This behavior can and arguably should be applied at all levels, whenever uncertainty is high enough that reliable long-term plans cannot be made.

7 Conclusion

The changes to a PMO, PgMO, or PPMO which is adopting an Agile process are experienced primarily in two ways:

1. The Agile process defines or affects tactical practices of PMOs and PgMOs, and changes the type and timeliness of information required for PPMOs to manage their portfolios.
2. When internalized, the Agile emphasis on collaboration, communication, and responding gracefully to change tends improve the ability of these organizations to function, especially in environments subject to rapid change.

It is an interesting irony that the Agile approach of frequent re-assessment, which often seems odd to classically-trained project managers, fits naturally with the perspective of Portfolio Management. The irony is strengthened when we consider that the practices specified by Agile processes focus on the conduct of work at the project level, not at the portfolio level. For this reason, we will conclude with the following observation:

> One of the benefits of the development of Agile processes is to provide a unifying theme for how to view and plan for the future, one which goes all the way from the portfolio level down to the project level.

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[1] *A Guide to the Project Management Body of Knowledge (PMBOK® Guide),* Fourth Edition. Project Management Institute, Inc. 2008.
[2] *The Standard for Program Management,* Second Edition. Project Management Institute, Inc. 2008.
[3] *The Standard for Portfolio Management,* Second Edition. Project Management Institute, Inc. 2008.
[4] *Manifesto for Agile Software Development*. www.agilemanifesto.org, 2001.

[5] *Extreme Programming Explained: Embrace Change* (2nd Edition), by Kent Beck and Cynthia Andres. Addison-Wesley Professional. 2004.
[6] *Scrum and XP from the Trenches*. Henrik Kniberg. C4Media Inc. 2007.
[7] In Scrum or XP, a *Story* is a specification for a deliverable which a team can implement in a short period of time (e.g., a few days).
[8] In Scrum or XP, an *Epic* is a specification for a deliverable that is too large to be a Story, and which must be decomposed into Stories for implementation.