



# The Need for New Agile Roles in Government

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## **Abstract**

This article aims to provide insight into the challenges faced by government organizations when managing agile projects. Agile development requires collaboration, adaptability, and continuous improvement, necessitating a team of individuals with diverse skills and roles. Several new agile roles are required in government to execute agile acquisitions successfully. Furthermore, it is crucial to provide training to support staff in transitioning into these new roles and responsibilities. The article addresses questions related to the necessary roles and responsibilities for successfully implementing agile principles and practices in government projects and the available competency frameworks and career pathways for these roles.

For government agencies, implementing agile methodologies is crucial for effectively managing products and cyber-physical systems to benefit citizens and with a highly engaged federal workforce. This strategy involves breaking down large-scale projects into manageable components, delivering value quickly, and promoting communication, continuous improvement, and innovation through collaboration. Adopting this approach allows agencies to maintain flexibility and adaptability, respond to emerging technologies, and achieve their long-term objectives through Agile Product Management. Although transitioning to this approach can be challenging, success depends on developing new processes, roles and career paths for federal workforce roles.

## **New Ways of Working**

The White House released the Federal Workforce Priority Report in 2022 to help organizations manage their workforce efficiently. The report highlights the importance of having the right people with the necessary skills in appropriate positions to achieve organizational goals. To prioritize the workforce, agencies must assess current and future needs, identify skill gaps, create talent acquisition and retention strategies, and align workforce planning with organizational objectives. This paper focuses on two significant initiatives the government should prioritize: Fostering an Agile Organization and Growth Mindset and Enhancing the Customer Experience. These initiatives require innovative approaches incorporating industry best practices to achieve mission agility.

Waterfall project management has been prevalent in government projects for several decades, which involves a sequential and linear process for executing projects. Its predictable and structured nature makes it a popular choice for government agencies. The approach completes each phase before moving on to the next, aligning with traditional procurement and governance processes.

Previously, the Waterfall methodology was customary for government projects, providing a clear framework for planning, budgeting, and managing risks. It emphasized detailed upfront requirements gathering, extensive documentation, and a linear project schedule. However, in recent years, government projects have shifted towards more agile and iterative approaches.

Agile Product Management emphasizes team accountability for delivering functional capabilities rather than individual responsibility for specific tasks.

This can be challenging for government agencies accustomed to individual accountability, as it may create a risk-averse culture for staff who fear experimenting with different ways of working. However, setting and achieving goals at the team and individual levels dramatically increase value delivery and realization velocity. However, teams must embrace an open mindset, welcome feedback, and collaborate to achieve success. It is important to unlearn old habits to lead change with a growth mindset. Clear and comprehensive training is essential for understanding roles and responsibilities in an agile environment.

To fully embrace agile practices, the government should create new roles with specific skills and responsibilities and offer employee training and practice development opportunities.

#### **VMO in Industry**

PNC Bank, a major US financial institution, recently switched from a traditional project management office to a value management office. This change was made to align with the bank's overall business goals and objectives by prioritizing projects that have high potential for value creation and strategic impact. By doing so, the VMO enables the bank to optimize resource allocation and risk management, while promoting a value-driven mindset, innovation, and continuous improvement. This transition reflects PNC Bank's commitment to delivering value to customers and stakeholders while aligning with strategic objectives. The move to a VMO was driven by the need to become more agile and adaptable to changing business needs, allowing the bank to prioritize projects that will deliver the most value to the organization and stay competitive in a dynamic market.

## **New Agile Roles and Responsibilities in Government**

This section will discuss the critical roles and skills required to manage an agile acquisition successfully.

### **COMPETENCY FRAMEWORKS**

Several competency frameworks are available for government staff to develop new roles and establish competency levels. Some popular ones are Scrum Alliance, which offers CSM certification to verify an individual's proficiency in applying Scrum principles in real-life situations, and Agile Alliance, which provides guidance and best practices for Scrum Master's and agile teams through their Agile Coaching Competency Framework. Meanwhile, PMI's ACP certification covers various agile methodologies, including Scrum, and verifies an individual's understanding of agile principles and practices.

However, these frameworks focus on Scrum and do not include competencies and bodies of knowledge for agile roles needed to support large complex systems, such as those in large enterprises and the government. The Scaled Agile Framework (SAFe) outlines the skills and capabilities expected for various positions, including Agile leaders, Product Owners, Product Managers, Systems Architects, Release Train Engineers, Scrum Masters, and Agile teams. In addition, the body of knowledge is continuously being revised to reflect the changing needs for large enterprises, including tactical guidance on emerging technologies, such as AI, big data and cloud. By establishing baseline competencies for all agile roles, these industry standards and certifications can be used to develop new labor categories.

## THE CHANGING ROLE OF PMO TO VMO

VMOs are an important strategic function within organizations, focusing on maximizing value creation and optimizing the return on investment for projects and initiatives. They use a comprehensive approach called Value Stream Management (VSM) to enhance operational efficiency, optimize value delivery, and foster continuous organizational improvement. VSM involves visualizing, analyzing, and enhancing the entire flow of value through an organization's processes and systems.

To gain insights into value streams across different business functions, departments, or product lines, VMOs leverage VSM. They map out the entire value stream, including all the steps, activities, handoffs, and dependencies involved in delivering value to customers. This mapping helps identify bottlenecks, waste, and inefficiencies in the value stream.

Using value stream analysis, VMOs can optimize processes and allocate resources for greater value. This data-driven decision-making approach prioritizes improvement initiatives and aligns them with strategic objectives, guiding process improvement efforts.

## Current State of Agile in Government

Incorporating agile practices in government projects can be difficult due to the specific regulations and rules that private entities do not face. To achieve success utilizing agile best practices, government leadership must lead a cultural change and provide a clear vision of why the agency will work differently by embracing these agile principles. This can be a significant challenge. However, agile has succeeded in various agencies, significantly reducing development time. The Department of Homeland Security (DHS) and the Department of Veterans Affairs (VA) have implemented agile methodologies with good outcomes. The VA has also made significant progress in expanding telehealth services and prioritizing long-term goals. The General Services Administration (GSA) boasts a remarkable 72% utilization rate of Agile Product Management for their software development needs.

## TRAINING AND CERTIFICATION

Government employees should invest in agile training and renew IT certifications annually. Many agencies recognize the importance of this practice, and specific projects may require certain certifications. The government provides training and education opportunities to help employees acquire and maintain IT certifications. Staying informed of new technologies and best practices through online learning tools and a community of users can benefit those new to their agile positions. Prioritizing the upkeep of IT certifications ensures citizens receive advanced technologies and all IT requirements are met.

Government agencies need to establish new roles and responsibilities to transition from project management to Agile Product Management effectively. These roles are essential for ensuring that the agency's and

stakeholders' needs are met and that Agile Product Management initiatives are successful. Creating these positions will promote a culture of continuous improvement and enable government agencies to deliver products that meet stakeholders' needs. These positions require distinct skills and responsibilities compared to traditional project management roles, and investing in employee training and education is crucial to their development.

## New Roles to Support Agile Delivery

The following roles are needed to support agile products and services. These roles do not exist within OPM's "Handbook of Occupational Groups and Families," and it is recommended that new roles and associated competencies be created.

### SCRUM MASTER/TEAM COACH

The Scrum Master is vital in directing and facilitating the agile process. It's imperative to note that their responsibilities differ significantly from those of legacy project management roles. Scrum Master is the appropriate term for Agile teams, specifically adopting Scrum as their overall agile model at the team level. However, as Kanban adoption is growing rapidly and will soon overtake Scrum, the term Team Coach is more appropriate for the Kanban environment.

These are the competencies:

- Facilitation: Ability to facilitate meetings, events, and decision-making processes for the Scrum team.
- Coaching: Ability to coach the team and the organization in the principles of Agile and Scrum, as well as help team members and stakeholders adopt and apply Scrum practices.
- Servant Leadership: Ability to serve the team and facilitate its self-organization while supporting its Agile practices and continuous improvement efforts.
- Lean-Agile Leadership: Ability to lead and manage the Scrum team in a Lean-Agile manner, promoting the Agile mindset and values across the organization.
- Agile Foundations: Understanding of Agile, Scrum and Kanban principles, values, practices, and ceremonies, as well as the ability to apply them to the Scrum team's work.
- Agile Anti-Patterns: Knowledge of common Agile and Scrum anti-patterns and the ability to identify and mitigate them.

#### Industry Demand

The 2020 State of Agile Report, which surveyed 3,451 respondents from various industries, indicated that 89% of industry reported using Scrum as their primary agile methodology.

Scrum Master was the most common role in agile organizations, with 82% of respondents reporting that they had Scrum Masters on their teams. The same report also found that 52% of respondents had Product Owners on their teams.

- Agile Facilitation: Ability to facilitate Agile ceremonies, including Sprint Planning, Daily Stand-ups, Sprint Reviews, and Sprint Retrospectives.
- Agile Coaching: Ability to provide coaching and guidance to the Scrum team and stakeholders on Agile practices, including Agile estimating and planning, Scrum ceremonies, and continuous improvement.
- Agile Product Management: Understanding of Agile Product Management principles, including creating and managing product backlogs, prioritizing and grooming backlog items, and developing and maintaining a product roadmap.
- Agile Technical Practices: Knowledge of Agile technical practices, including Test-Driven Development (TDD), Continuous Integration (CI), and Continuous Delivery (CD), as well as the ability to help the team apply them to their work.

Government employees may require additional training to meet the demands of this position. Moreover, some organizations may mandate certification, such as Certified Scrum Master (CSM) or SAFe Scrum Master (SSM). This certification process entails taking an exam and renewing it annually to keep skills up-to-date.

## **PRODUCT MANAGER**

The Product Manager is responsible for identifying customer needs, owning the overall family of product offerings, establishing the product roadmap and vision, and overseeing its development and distribution. They collaborate with engineering, design, and marketing teams to guarantee that the product satisfies customer needs and agency goals. The manager takes charge of the product roadmap, prioritizes features, and ensures timely and budgeted delivery. The Product Manager is instrumental in helping organizations create customer-focused products that align with mission objectives.

The competencies of a Product Manager include:

- Customer Centricity: The ability to focus on customer needs, empathize with customers, and use customer feedback to inform product decisions.
- Market Strategy: The ability to analyze market trends, identify opportunities and threats, and develop strategies that drive product success.
- Product Planning: The ability to define and prioritize features, create a roadmap, and develop a backlog that delivers value to the customer and the business.
- Stakeholder Management: Communicating effectively with stakeholders, building and maintaining relationships, and managing expectations.
- Product Development: The ability to collaborate with development teams, provide direction and guidance, and ensure that product development is aligned with business objectives.
- Product Launch: The ability to plan and execute a successful product launch, including marketing, sales, and customer support.

- Product Lifecycle Management: The ability to manage the entire product lifecycle, from ideation to retirement, and make decisions that optimize the product's value and impact.
- Financial Acumen: The ability to understand financial metrics, create business cases, and make data-driven decisions that maximize ROI.
- Technical Acumen: The ability to understand the technical aspects of the product, including architecture, design, and development practices, and use this knowledge to inform product decisions.
- Agile Methodology: The ability to work effectively in an agile environment, understand and apply agile principles and practices, and continuously improve product management processes.

Product Managers are not the same as project or program managers; this is truly a unique role. For this reason, it is ill-advised to relabel existing project managers in their current roles without training and support, or waterfall program manager actions and behavior will continue to cause communication issues.

## PRODUCT OWNER

For every product the Product Manager has in their portfolio, there is a designated Product Owner for each product offering. The Product Owner has a crucial role in defining that unique product vision, prioritizing the team's backlog, and ensuring that the team delivers value to the customer.

These are the competencies for the Product Owner:

- Customer Centricity: Focuses on understanding customer needs and delivering value to customers.
- Vision: Develops and communicates a compelling vision for the product.
- Backlog Management: Maintains a prioritized backlog of features and capabilities that align with the product vision.
- Agile and Lean Practices: Applies Agile and Lean principles to product management.
- Stakeholder Management: Effectively communicates with stakeholders, including customers, development teams, and other key stakeholders.
- Product Ownership: Takes ownership of the product and is accountable for the product's success.
- Business Acumen: Understands the business context and goals of the product.
- Technical Acumen: Understands the technical aspects of the product and collaborates with development teams to ensure technical feasibility and excellence.
- Team Collaboration: Collaborates with development teams to ensure they clearly understand product requirements and are empowered to deliver high-quality products.
- Continuous Improvement: Focuses on continuously improving the product, the development process, and the team's performance.



## SAFe numbers in Government

As of 2016, there are 8087 Federal staff that have taken the SAFe for Scrum Masters training, 8771 have taken the SAFe® Product Owner/Product Manager training, and 1544 have taken the SAFe RTE training.

It is essential to understand that the roles of a Product Owner and a Product Manager are distinct. The Product Owner is accountable for the team's contribution to the product, but only part of the solution, unless it is small and self-contained. On the other hand, the Product Manager oversees every aspect of the product's development and launch to ensure its success. The Product Owner aligns product development with the product vision and customer satisfaction. They prioritize the product backlog based on customer needs and mission goals, guide the development team, and determine the requirements.

### RELEASE TRAIN ENGINEER (RTE)

The Release Train Engineer (RTE) in the Scaled Agile Framework (SAFe) oversees the agile process at the program level. Their top priority is to ensure that the program delivers value to the customer and to remove any obstacles that may slow down progress. This involves working closely with Product Owners, Scrum Masters, and other stakeholders to align the program with the product vision and business goals.

A Release Train Engineer (RTE) is a role within the Scaled Agile Framework (SAFe) that focuses on facilitating the coordination and execution of Agile Release Trains (ARTs) and ensuring the smooth flow of value delivery. The core competencies for a Release Train Engineer typically include:

The core competencies for a Release Train Engineer (RTE) include:

- Agile and SAFe Knowledge: Deep understanding of Agile principles, values, and methodologies, as well as expertise in the SAFe framework and its implementation.
- Program and Release Management: Proficiency in program and release management practices, including planning, coordinating, and executing large-scale initiatives within the Agile Release Train (ART).
- Facilitation and Servant Leadership: Effective facilitation skills to guide and facilitate ART events, workshops, and meetings, fostering collaboration and enabling decision-making, and demonstrating servant leadership qualities by supporting and empowering teams.
- Agile Scaling: Knowledge of scaling Agile practices and frameworks, such as SAFe, and the ability to apply them to coordinate and align multiple teams and stakeholders.
- Lean Thinking: Understanding and applying Lean principles and practices to optimize processes, eliminate waste, and improve the flow of value within the ART.
- Continuous Improvement: Driving continuous improvement by identifying areas for enhancement, implementing Agile and Lean practices, and fostering a culture of learning and experimentation.

- Communication and Stakeholder Management: Excellent communication and interpersonal skills to effectively communicate with stakeholders at various levels, facilitate alignment, and manage expectations.
- Problem-solving and Conflict Resolution: Ability to identify and address challenges and conflicts within the ART, collaborating with teams and stakeholders to find practical solutions.
- Metrics and Data Analysis: Proficiency in using metrics and data analysis to track and measure the performance of the ART, identify bottlenecks, and drive data-driven decision-making.
- Systems Thinking: Applying systems thinking to understand the interdependencies and complexities within the ART, considering the broader organizational context.

The RTE's role is multifaceted, encompassing various responsibilities and stakeholder interactions, so a well-rounded skill set is essential for success.

## AGILE COACH

The Agile Coach leads the agency's transition from project management to Product Management. They must educate stakeholders on Agile principles and practices, facilitate adopting agile processes, and ensure that the team is actively working towards the agency's goals and objectives. The Agile Coach must also mentor and coach the team on Agile principles and practices, working closely with the Scrum Master to ensure continuous improvement. They are expected to guide and support the Product Manager and Product Owner on Agile practices without fail.

The core competencies for an Agile Coach in SAgile (Scaled Agile Framework) include:

- Agile and SAgile Knowledge: Deep understanding of Agile principles, values, and methodologies, as well as expertise in the SAgile framework.
- Coaching and Facilitation: Proficiency in coaching teams, individuals, and leaders in Agile practices, facilitating meetings, workshops, and ceremonies effectively.
- Change Management: Ability to navigate and facilitate organizational change, support Agile transformations, and address resistance.
- Lean-Agile Leadership: Demonstrating leadership qualities by promoting a culture of continuous improvement, empowerment, and collaboration.
- Agile Frameworks and Practices: Familiarity with various Agile frameworks (for example, Scrum, Kanban) and practices (for example, backlog refinement, sprint planning) to guide teams in their Agile journey.
- Lean Thinking: Understanding and applying Lean principles to optimize processes, eliminate waste, and drive value delivery.
- Systems Thinking: Considering the broader strategy and organizational dynamics when implementing Agile practices and identifying areas of improvement.

- Emotional Intelligence and Communication: Strong interpersonal skills, empathy, and effective communication to foster relationships, influence stakeholders, and navigate conflicts.
- Continuous Learning: A growth mindset and commitment to ongoing learning and development in Agile practices, coaching techniques, and emerging trends.
- Metrics and Data-Driven Decision Making: Utilizing Agile metrics and data to assess team and organizational performance, identify areas for improvement, and make data-driven decisions.

## SYSTEM ARCHITECT

A Systems Architect designs and manages technology systems, collaborating with agile teams to meet business and technical requirements. They provide guidance and ensure system security, efficiency, and scalability. The Architect works closely with Product Owners and development teams to align with product vision and business goals and with other architects to ensure consistency with enterprise architecture. The Architect is responsible for creating a system that supports agile principles and is easily maintained.

Core competencies include:

- Technical Architecture: Deep understanding of complex system architecture design and development
- System Integration: Proficiency in integrating systems and ensuring interoperability.
- Agile Development: Expertise in applying Agile practices to system architecture.
- Leadership: Strong leadership skills to guide and mentor teams.
- Business Acumen: Understanding of business goals and alignment of technical decisions.
- Communication: Effective communication with cross-functional teams and stakeholders.
- Continuous Learning: Willingness to stay updated with emerging technologies and trends.

## Career Progression

Career progression in Agile roles can vary depending on an individual's aspirations, organization structure, and available opportunities. While not comprehensive, the following are some common career pathways for critical roles:

Scrum Master:

- Senior Scrum Master: Take on more complex projects or larger teams, mentor junior Scrum Masters, and provide guidance on advanced Agile practices.
- Release Train Engineer: Lead and facilitate Agile Release Trains (ARTs) in coordination with multiple Agile teams, ensuring the smooth execution of product increments and value delivery.
- Agile Coach: Transition into a coaching role, supporting multiple Scrum teams or guiding organizations in their Agile transformation journeys.

- Agile Consultant or Trainer: Become a subject matter expert and provide consulting services or deliver Agile training programs throughout the agency.

#### Product Owner:

- Senior Product Owner: Gain expertise in product management and domain knowledge, handle more strategic product initiatives and collaborate with stakeholders at a higher level.
- Product Manager: Transition into a product management role with broader responsibilities, including market analysis, product strategy, and road mapping.
- Agile Portfolio Manager: Oversee a portfolio of Agile programs and initiatives, aligning with strategic goals and optimizing resource allocation and value delivery across the organization.

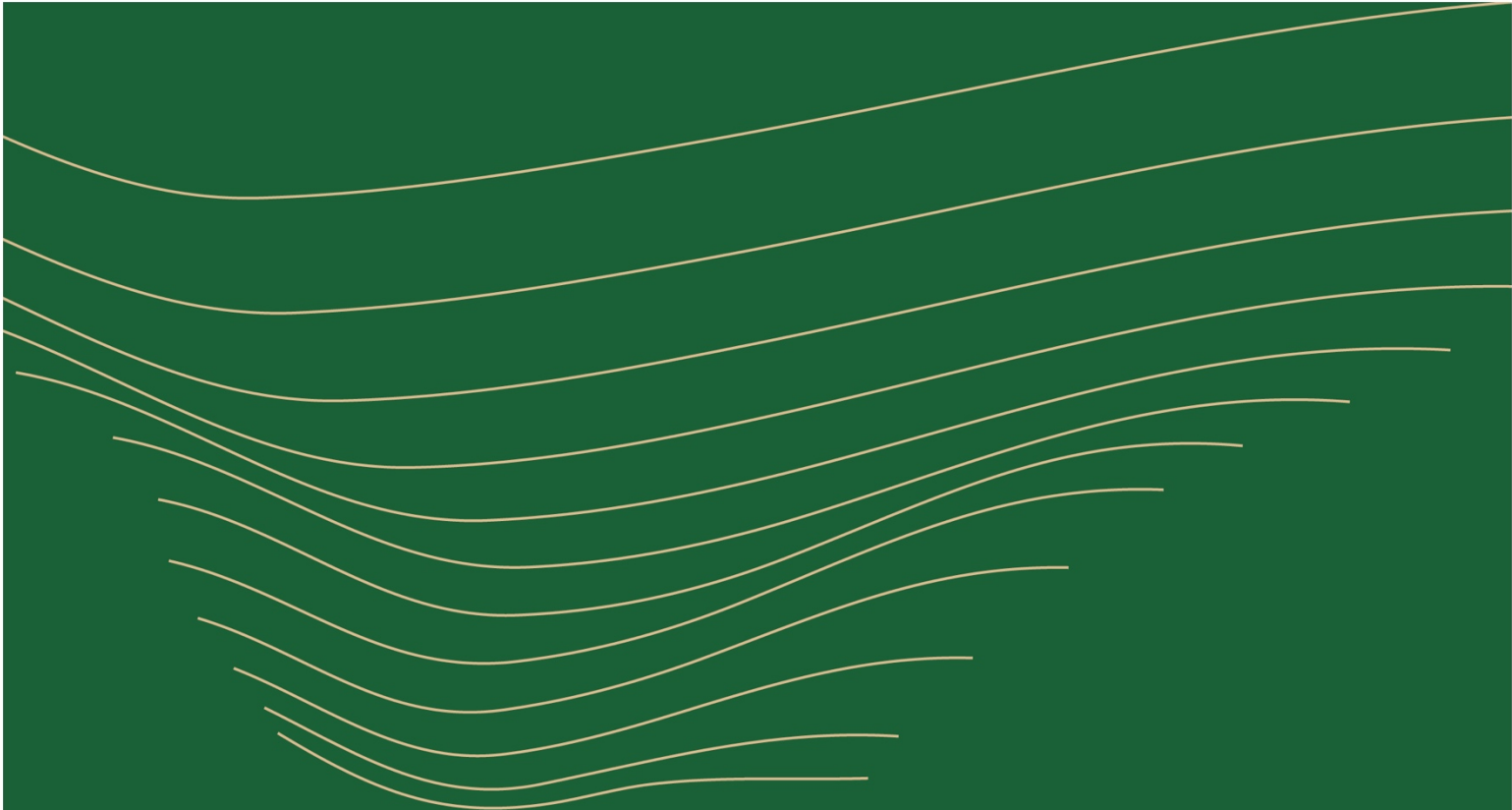
#### System Architect:

- Lead System Architect: Take on more complex architectural challenges, lead design decisions, and mentor junior architects.
- Principal Architect: Gain industry recognition and become a thought leader in system architecture, guiding multiple projects or product lines.
- Enterprise Architect: Move into an enterprise-level role, aligning technology strategy with business objectives and guiding architectural decisions at an organizational level.
- Enterprise Agile Coach: Transition into a coaching role, provide guidance and support in adopting Agile practices and principles at an enterprise level, focusing on technical aspects. They work closely with development teams, architects, and other technical stakeholders to help drive technical excellence, foster innovation, and enable the continuous delivery of high-quality products and solutions.
- Chief Technology Officer (CTO): Transition into a strategic leadership role, responsible for overall technology direction, innovation, and driving organizational growth.

#### Agile Coach:

- Senior Agile Coach: Gain experience working with diverse organizations, mentor junior coaches, and lead large-scale Agile transformations.
- Agile Transformation Lead: Take a leadership role in guiding and driving Agile transformations across an organization, working closely with senior executives and stakeholders.
- Organizational Development Consultant: Transition into a broader organizational development role, supporting cultural and process changes beyond Agile adoption.
- Agile Thought Leader: Recognized expert in Agile methodologies, contribute to the Agile community through speaking engagements, writing, or training.





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