Staffing Scrum Roles

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Scrum is the most commonly adopted Agile approach in the industry today. However, many organizations are not seeing the benefits they expected from moving to Scrum. This white paper discusses the Scrum roles, critical attributes needed to be successful in the roles, best practices for staffing the roles, and how some of the traditional organizational roles are impacted by a move to Scrum.

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Introduction

Scrum defines three roles: the Product Owner, the Scrum Master, and Team Members. Each of these roles has a unique set of defined responsibilities that complement the other roles and, in combination, act as a system of checks and balances to create an environment that forces evolutionary improvement through the exposing and subsequent resolution of limitations that impede team efficiency and effectiveness.

Scrum organizes personnel into Scrum teams composed of a Development team with team members, a Scrum Master, and a Product Owner.

In Scrum, the Product Owner is responsible for 'doing the right thing,'—delivering an output that meets the customer's needs. The Scrum Master is responsible for ensuring that Scrum team members 'do the thing right,'—planning, executing, and managing the project effectively and efficiently.

The separation and clear delineation of roles and responsibilities is a very powerful attribute of Scrum.

Scrum Roles

Product Owner

The Product Owner understands users' needs, prioritizes work in the product backlog according to business value, ensures the backlog is understood by and ready for the Development Team prior to the start of each sprint, and accepts or rejects the outcome of the sprint.

The Product Owner, as the interface to the business side, works with the business stakeholders and subject matter experts to create user stories, define acceptance criteria (both functional and non-functional), and clarify stories through discussions with the Development Team.

The Product Owner collaborates with team members to ensure a shared understanding of the deliverables and their requirements through backlog refinement and the resultant elaboration of user stories and associated acceptance criteria.

The Product Owner role is defined from the Scrum team perspective to be the person who can give daily guidance on what the user is seeking to accomplish and clarify details of user stories. Light documentation in the form of user stories is predicated on a Product Owner continually interacting with the team throughout Sprint development to expand the details. A Scrum team that develops from single sentence User Stories without substantial engagement of the Product Owner is essentially developing without requirements.

The successful Product Owner has the ability to understand business priorities as well as user/customer needs and is able to simply and effectively communicate these in a manner that facilitates product development with minimal delays. The Product Owner represents the larger business to the team and the team to the business. He or she must have skills and knowledge necessary to clearly and succinctly define and communicate requirements.

Here is what we teach in our Scrum Boot Camp class about the Product Owner:

Table 1 *Attributes of an effective and an ineffective Product Owner*

An Effective Product Owner	An Ineffective Product Owner
Knowledgeable about the product and the market	Wants to control how the team works
Able to clearly define product requirements	Doesn't understand enough about software development to be able to evaluate the tradeoffs
More concerned with 'what' than 'how'	Is rarely available to the team due to other obligations (travel, multiple responsibilities, etc.)
Always available to the team to resolve ambiguity on backlog items	Ignores Scrum processes and rules if they seem to hinder "firefighting"
Willing to listen to the team's technical guidance	Doesn't know much about Scrum and doubts it will work
Unwilling to compromise on acceptance criteria issues, including quality or completeness	Lacks trust in the team's ability or maturity
Able to put project success over personal ego gratification, doing the right thing over being right	

Our experience is that it is useful to create a set of criteria for being a Product Owner. Below is a recommended set of base criteria for the Product Owner Role.

Table 2 *Product Owner Role Criteria*

Criteria
Easily accessible by, and preferably co-located with, the Scrum Team
Available for backlog refinement, team discussions, requirements clarification, and as-needed reviews and support throughout the sprint (preferably face-to-face)
Actively engages with team throughout sprints to clarify requirements and guide implementation
Respected by team, business sponsors, Product Management, stakeholders
Team player – works well with Scrum team and collaborates with sponsors and stakeholders
Has the ability to obtain a deep understanding of product functionality
Skilled in requirements analysis and documentation best practices (User Stories, Acceptance Criteria, and supplemental requirements techniques, such as developing non-functional requirements, scenarios, use cases, etc.)
Has the ability and initiative to actively manage the Product backlog and keep it organized and ready for refinement and sprint planning
Cares deeply about the quality of what is delivered—both technical quality and user value

As you move to Scrum you should develop your own criteria. Using a set of criteria helps decision makers to better align on who should fill the role.

Scrum Masters

The Scrum Master is the "keeper of the process" in Scrum, enforcing tenets as well as ensuring adherence to policies and practices. The Scrum Master facilitates team events, encourages and supports cooperation between team members, helps the team reach decisions, surfaces dependencies, removes barriers, and protects the team from outside interference. The Scrum Master acts as the interface between the team and engineering/IT management and maintains team-level progress artifacts to provide transparency and visibility into progress.

The Scrum Master must be a leader, not a manger. Keys to success in this role include using facilitation and coaching rather than traditional command-and-control project-management practices. This is a role of influence, not authority.

The Scrum Master is responsible for fostering an environment that strongly encourages teamwork, collaboration, commitment, and excellence. Without these conditions, the team members will continue to act as independent contributors, rather than coming together into a fully functional Agile team.

Here is what we teach in our Scrum Boot Camp class about the Scrum Master:

Table 3 *Attributes of an effective and ineffective Scrum Master*

A Effective Scrum Master	An Ineffective Scrum Master
Understands Scrum	Has a cursory knowledge of Scrum
Has sufficient experience to know when the team is struggling, even if they won't admit it	Doesn't understand software development
Understands and follows the servant-leader philosophy	Believes projects and teams need to be driven
Is a good listener	Doesn't believe Scrum can be effective
Works with the team to identify and eliminate impediments	Avoids necessary confrontation
Has a high level of courage and integrity, combined with tact and sensitivity	

Scrum Masters can be developers, testers, project managers, etc. However, our experience is that having line managers or even technical leads as Scrum Masters is difficult, since Scrum Masters do not direct the day to day work of the team. They help the team to effectively apply Scrum throughout a project. Construx recommends that organizations staff the Scrum Master role with individuals who are excited about Scrum, have been trained, demonstrate an ability to learn and adapt, and have good facilitation skills.

During the process of ramping up a scrum team, or re-invigorating a team's scrum adoption, being a Scrum Master is typically a full time job. Once teams are running, Scrum Masters can often support two teams concurrently. Finding good Scrum Masters can be challenging. In fact, we recommend that when you find an individual who is interested in and capable of being a good Scrum Master, they become a Scrum Master for two teams. The other recommended approach is to be a half time Scrum Master for a separate team, i.e. a Scrum Master for Team A and a Development Team Member of Team B.

Development Team

A Scrum Development Team must have sufficient resources across all of the necessary functional roles to be able to take a sprint backlog item and implement it to the point of being 'Done,' or potentially shippable.

Development Teams are typically five to nine people, including all of the cross-functional staff. Adding in the Scrum Master and Product Owner, this means a Scrum team is at most eleven people. Most organizations find that Scrum Teams of six to eight are ideal.

The focus for the Development Team is establishing an empowered team whose members are accountable to each other. The team should consistently meet its sprint commitments and actively work with the Product Owner if issues arise that put their sprint commitments at risk.

The most effective Scrum teams work together to achieve the sprint goal and perform all of the necessary work. These teams will help each other, even outside of the functional discipline, to accomplish the work. The dynamic is that "we all work together to deliver functionality to our Definition of Done," rather than "my tasks are done, so I'm done," or "the development tasks are done, so we are done." Instead, developers might help test completed functionality from another developer; testers might help the Product Owner refine the backlog; testers might help the developers determine the test cases to execute; or developers might help a UX designer determine what is most technically feasible for user interface work in the next sprint.

Staffing Scrum Roles

Construx's experience is that Scrum roles should be filled by the staff best suited for each role. Blanket assignment of staff to the role (e.g., all project managers will be Scrum Masters) does not work well. Some project managers will be well suited for the facilitation and process guidance approach of a Scrum Master, while others will struggle with it.

It is important to note that the Scrum Master role and Product Owner role should not be filled by the same person. These two roles are meant to balance each other.

Table 4 summarizes considerations for common organization roles.

Table 4 *Staffing the Product Owner Role*

Current Role	Considerations
Product Manager	Can be a great fit if they have the time. Sometimes lack availability or interest and become a key stakeholder rather than a PO.
Business Analyst	Can be a good fit if they are empowered with decision making authority. Often become a member of the Development Team and support the PO.
Engineering Manager	Can be a good fit for technical teams but often has line management responsibility which may cause problems, especially if the Scrum Master reports to them. Works best if the Scrum Master is experienced, good at facilitation, and does not report to the Engineering Manager.
Technical Lead	Can be a good fit for technical teams.
Project Manager	Can be a good fit if they understand the business domain and are proficient in requirements elicitation, analysis, and decomposition practices.

The considerations for these roles are discussed in more detail in the next sections.

Table 5 *Staffing the Scrum Master Role*

Current Role	Considerations
Project Manager	A great fit for more facilitative project managers. The shift from task assignment and project oversight/control to coaching and mentoring a team can be challenging for some project managers.
Engineering / Line Manager	Often challenging given the line management responsibility. Typically, a better fit as a line manager, PO, or a technical subject matter expert to multiple Scrum teams, but not having any direct reports as team members.
Quality/Test Engineering	Can be an excellent fit, if they have interest.
Scrum Master	More and more, people who specialize in being a Scrum Master can be found to fill this position. Assuming a high level of capability and competence, these people are a great fit for Scrum Master.
Technical Lead	Can be a good fit if they have sufficient time. If they are both a technical lead and a Scrum Master, it is best to be technical lead on team A and Scrum Master on team B. Separate the team on which they work from the team on which they are the servant-leader.

Scaling Product Owners

Industry experience is that Product Owners can typically support one or two teams. Large projects need to establish a Chief Product Owner (CPO) who works with the Product Owners. The Chief Product Owner sets the direction, provides overall prioritization criteria, and assists the Product Owners and Scrum teams as needed. The Product Owners report to the CPO, whether through direct or virtual reporting, and provide day-to-day guidance to individual teams. The CPO and Product Owners work together to refine the backlog, track the overall progress towards a Minimum Marketable Feature Set, lead release planning, and allocate product backlog items to Development Teams.

Role of Line Management

With Scrum, line management responsibility is typically staff focused (professional growth of staff, team motivation, support and assistance in removing organization-level impediments the team is encountering, etc.).

Line managers may also be responsible for resource, budget, and portfolio work. In some organizations, highly technical managers become technical SMEs who support Scrum teams. They provide architectural guidance, user experience guidance, or whatever their expertise is across teams. A rule of thumb is that a line manager can provide this experience to about three teams. Line managers are not members of the Scrum team; they don't attend retrospectives, but they are on-call to support the team.

Often line managers are concerned with Scrum adoption. They may perceive that their role is no longer valued or perhaps even necessary. This perception may lead to resistance and is an unnecessary impediment. Managers need to understand their role in a Scrum organization; it isn't to assign work or act as a taskmaster, it is to work on the organization, on process and practice improvements to increase the team's capability to deliver.

Role of Leads

Scrum does not have the concept of a development lead that directs the work of the team. The intent, rather, is a team of peers taking ownership together to do the work necessary to meet the sprint commitment. Appointing a development lead within each team reduces the likelihood of building a self-empowered team. If there is a need for someone with specific skills on the team, that person should be there. But they should not have a formal title within the Scrum team. Organizational titles remain (Senior Developer, Technical Lead, etc.), but within the Scrum team, everyone is called a Developer regardless of the type of work they are doing. Construx recommends that key leads focus on mentoring, knowledge transfer, providing subject matter expertise to one or more Scrum teams, and technical best practices.

Role of Product Managers

Which traditional organizational roles are candidates for Product Owner? Most businesses have a product management function that seems to be the natural candidate for Product Owner. A good product manager can be a great Product Owner, as long as they match the attributes and criteria established above. In some organizations, product managers cannot devote the time or effort necessary for effective team-level product ownership or the product managers may not be interested in the role.

In organizations where Product Managers do not have the bandwidth or interest to be Product Owners, Product Managers are major stakeholders and key Subject Matter Experts (SMEs) who provide long-range guidance to the teams. They continue to be responsible for understanding customer and market needs and creating high level roadmaps.

Typically, the Product Owner role is then staffed by someone from engineering/IT organization, who works closely with the Product Manager, so they can create an actionable product backlog for the Scrum team.

This approach does at all level of abstract between the team and the user needs. It is critical there is a good relationship between the Product Manager and Product Owner. The Product Manager should be available to talk to the team as needed, they may be asked to participate in refining meetings, and they should attend sprint reviews on a regular basis to stay engaged.

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About Construx

Construx Software is the market leader in software development best practices training and consulting. Construx was founded in 1996 by Steve McConnell, respected author and thought leader on software development best practices. Steve's books *Code Complete, Rapid Development,* and other titles are some of the most accessible books on software development with more than a million copies in print in 20 languages. Steve's passion for advancing the art and science of software engineering is shared by Construx's team of seasoned consultants. Their depth of knowledge and expertise has helped hundreds of companies solve their software challenges by identifying and adopting practices that have been proven to produce high quality software—faster, and with greater predictability. For more information about Construx's support for software development best practices, contact us at consulting@construx.com, or call us at +1(866) 296-6300.

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