Living in an Agile World:

The Strategic Role of Product Management When Development Goes Agile

By Steve Johnson, Luke Hohmann and Rich Mironov

> **...the best job to date of describing the yin and yang of APO (Agile Product Owner) and APM (Agile Product Manager). Moreover, the authors are experts in the field of software product management so they speak with knowledge and credibility from the PM role.**
>
> **Dean Leffingwell / Scaling Software Agility**

About the Authors

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Manifesto for
Agile Software Development

We are uncovering better ways of developing software by doing it
and helping others do it. Through this work we have come to value:

Individuals and interactions over **processes and tools**

Working software over **comprehensive documentation**

Customer collaboration over **contract negotiation**

Responding to change over **following a plan**

That is,
while there is value
in the items on the **right,**
we value the items
on the **left** more.

agilemanifesto.org

While software development teams have been moving toward agile methods for years, many product managers are only now becoming aware of it. An agile approach applies collaborative and continuous improvement concepts to software development. It emphasizes close collaboration between development teams and customers; frequent delivery of deployable code (in sprints); face-to-face communication with customers; tight, self-organizing teams; managing backlogs of user stories to reduce requirements churn; and identification of self-improvement opportunities.

There is no single, definitive "agile method." Agile teams tune practices and processes for themselves to create a method that is unique to their environment. Broadly, agile methods function as both an organizational philosophy and a set of development methodologies.

When you adopt agile development methods, you encounter new concepts, new artifacts, new planning methods, and new roles and relationships. It seems that agile teams do everything in a new way. And, as you attempt to integrate agile into your existing systems, you'll also attempt to map these new concepts to your old, familiar concepts. Requirements are now stories; iterations are now sprints.

And a product manager is now called a *Product Owner…* right?

Wrong!

Companies adopting agile methods know that product teams need a voice representing the customer. Developers need personas, market problems, and most of all, a prioritized list of requirements. Agile methods advocate a role called product owner to support the product team with customer and market information. Since the closest equivalent to product owner in most companies is the product manager, it seems natural to equate the two.

But product owner and product manager are not the same. In fact, a product owner's responsibilities are just a small subset of product management.

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What is a product owner?

The product owner is a new role, created and defined by the Scrum Alliance (*www.scrumalliance.org*). Product owners live full-time with development teams—elaborating users' stories, managing sprint-level backlogs, expanding specifications, and interpreting product vision.

Most product companies already have staff members with similar skills, such as a requirements analyst or business analyst (titles and job descriptions have shifted over time, but product companies have always needed to provide developers with detailed, feature-level information and UI guidance; someone with intimate customer experience is always necessary to build great software).

The product owner addresses the agile development teams' intense need for real-time input on user stories, user experience/user interface, and requirements.

In Scrum, a single person must have final authority representing the customer's interest in backlog prioritization and requirements questions. This person must be available to the team at any time, but especially during the sprint planning meeting and the sprint review meeting. Challenges of being a product owner:

• Resisting the temptation to "manage" the team. The team may not self-organize in the way you would expect. This is especially challenging if some team members request your intervention with issues the team should sort out for itself.

• Resisting the temptation to add more important work after a Sprint is already in progress.

• Being willing to make hard choices during the sprint planning meeting.

• Balancing the interests of competing stakeholders.

Spotting fundamental flaws

Product owners can close the gap between a product manager's inbound role (that is, understanding the needs of the marketplace) and the development team's need for product direction (that is, understanding the detail of personas and their problems).

There are, however, a few fundamentally flawed assumptions built into the product owner role that experienced product managers immediately spot. These flaws become abundantly clear when the product owner role is aligned against pre-existing functions (e.g., requirements analyst), which we would not expect to drive strategy:

1. **The top determinant of a product's revenue success is whether it meets real customer needs**

2. **Product owners can't rank backlog based on ROI**

3. **Real revenue is driven by pricing and packaging**

4. **Creating successful benefits and feature descriptions that truly sell products, requires a detailed understanding of the technology and a detailed appreciation of the customer's problem**

1. **The top determinant of a product's revenue success is whether it meets real customer needs.** Regardless of what the development team builds, a product without interested customers is a failure. It's the agile product manager's primary job to meet existing customers and potential prospects face-to-face and deeply understand what they want.

Throughout the development process, the product manager represents customers against short-term trade-offs. If there is a product owner, he or she needs to channel the product manager throughout the day, avoiding short-term thinking that can come from living with Development every day and answering only to the technical team. *Remember: You can't understand customers without getting out of the office.*

2.

Product owners can't rank backlog based on ROI. In fact, this task is impossible for anyone to do, since real business metrics and financial projections don't exist at the feature/backlog/item level. Researchers tell us that the only way to assign revenue at the feature level is to perform conjoint analysis on every feature. Will any company perform this type of research for each product project? Probably not.

A broader and more rigorous backlog ranking approach, "prioritizing for profit," considers market opportunity and corporate strategic fit at the product level. Most important to this process is someone who can prioritize the issues of all stakeholders, considering the needs of buyer and user personas, key new markets, and issues of internal stakeholders in Sales, Marketing, Support, Development, and others.

Every release must have at least one feature (story, improvement) requested by each major stakeholder group. Figuring out the features for a release is an organizational challenge, not a technical challenge. The market-driven product manager should determine what goes into the final product; a product owner cannot.

3.

Real revenue is driven by pricing and packaging. Product managers typically own pricing; product owners rarely do. And unless you have a seasoned product manager driving software pricing and packaging, you could be leaving revenue on the table.

4.

Creating successful benefits and feature descriptions that truly sell products, requires a detailed understanding of the technology and a detailed appreciation of the customers' problem. This takes lots of practice, hands-on field experience, and a clear view from both sides. In our experience, internally promoted technical staff members almost never get this right. Marketing materials created under this approach are often feature-heavy, too technical, and fail to motivate the exchange of money.
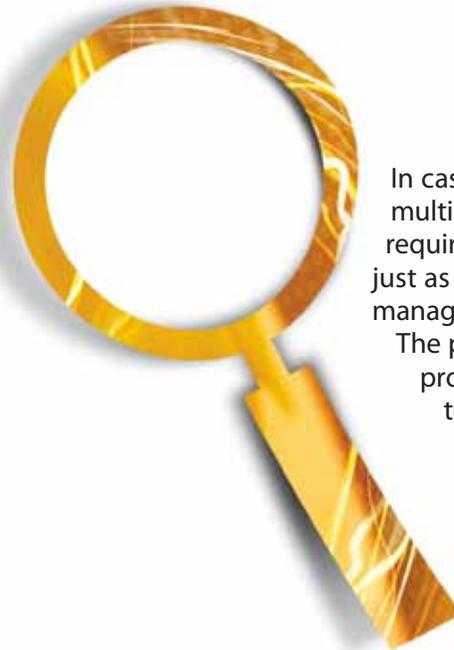
In cases where large projects (products) are divided into multiple teams, it makes good sense to have a product owner (or requirements analyst or business analyst) assigned to each team—just as we would have a development manager and program manager (scrum master) and QA manager assigned to each team. The point of integration for these teams, though, is a single product manager. When the executives demand "one throat to choke," it's the product manager who is responsible for overall success of the result.

Failure modes

Over the short term, we can easily see product owners operating without close alignment with a product manager. Over the course of a release—or a half-dozen sprints—we repeatedly see a few failure modes:

- **Trading off company-wide strategic product fit in favor of product-level features.** Good product managers look across the product line for ways to make the overall collection more valuable. Hermetically-sealed product teams tend toward local optimization: what's best for my release plan—without regard to portfolio-level needs. Yet Sales and Marketing are constantly trying to cross-sell existing products into the current customer base. Without some strategic thinking sneaking into every sprint-level prioritization, the company loses many chances to make money through product bundling, cross-selling, integrated features, and old-fashioned customer opportunities.

- **Assuming a few showcase customers represent the broader market.** Experienced product managers know that one customer is not a market—unless you are a custom development shop or internal IT group. It's easiest to believe that three customers previewing your product represent the entire market. Product managers have had this awareness beaten into their heads after thousands of similar customer meetings and presentations. First-time product owners tend to be naïve (or hopeful) that the input they get is both true and universal.

- **Adding new features without pricing them.** Product owners worry about completing the sprint; product managers worry about making money. Every new feature is an opportunity to re-bundle, re-price, or encourage customers to upgrade in order to capture more revenue.

- **Starving the product architecture in favor of customer-visible features.** Product managers and product owners alike often neglect the architectural element—forgetting to incorporate system improvements into the backlog. To ensure that system internals, architecture, "technical debt," and other technical issues are kept in the priority, we add the architecture itself as a stakeholder. That is how you keep the architecture healthy—both now and four releases from now.

- **Wandering from the roadmap.** Development teams (and their product owners) concentrate on the next release, but often lose sight of the 12- to 18-month roadmap and goals that achieve business results.

Real revenue is driven by pricing and packaging. Product managers typically own pricing; product owners rarely do.

Product management is outwardly focused

Developers and engineers tend to see product managers as internal technical resources, to be used as much for project management as product management. For some companies, agile development methods seem to have made the product management role even more internally focused—with product managers getting pulled into deeper tactical, technical activities.

But spending so much time with internal technical teams means less time spent outside the company in the market. As *Pragmatic Marketing-trained* product managers know, you don't learn anything about the market while sitting at your desk.

There's more to product management than supporting Development. Product managers also work with Sales, Marketing, Support, and other departments. Most of all, astute product managers work closely with the company's senior executives.

## The activity spectrum of product management

The activities of product management span the range from strategic to tactical. Some product management activities are focused on the business of the product, while others are centered more on the technical aspects of the product. Applying this concept to a grid looks like this:

BUSINESS

STRATEGIC ——————|—————— **TACTICAL**
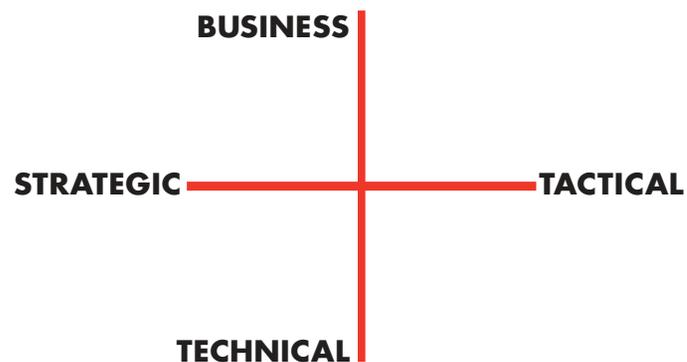
TECHNICAL

With this grid in mind, there are four ways people within the organization typically look at product managers:

The Pragmatic Marketing Framework
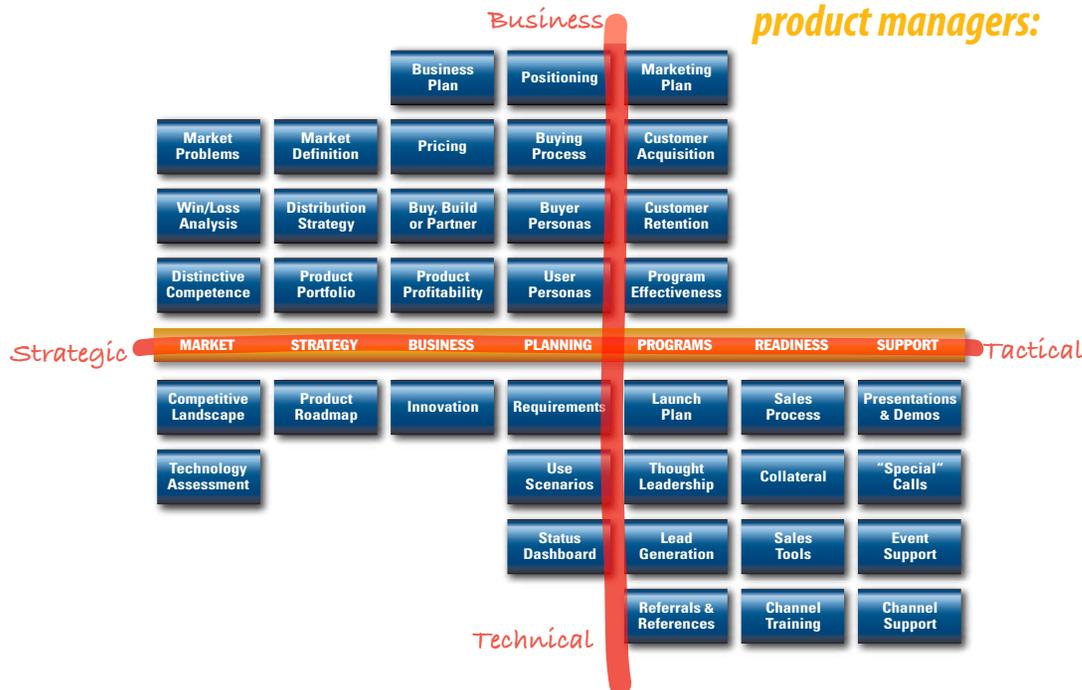
• **How Development sees product managers**
Technical/Strategic
Developers and other technical colleagues tend to see product managers (and therefore, the product owner role) as a strategic, technical resource. A developer's view of product management might include market requirements, technology assessment, definition of user personas, and other technical artifacts. In many cases, the team realizes the product manager is a market encyclopedia and so, product teams want a customer expert to be available all day, every day.

• **How Sales sees product managers**
Technical/Tactical
Have you ever known a sales person who didn't see everyone in the company as an a resource for selling? Product managers are the preferred source for great product demos—they can explain the internals of existing features and they know the future plans for the product. Who wouldn't want to take them on a sales call? So salespeople often rely heavily on product managers as a technical, tactical resource.

• **How Marketing sees product managers**
Business/Tactical
In most vendor organizations, the Marketing department is staffed with experts in promotion rather than experts in technology. And this makes sense. But without some technical abilities, these promotions experts can't do a very good job of positioning and messaging. And technical product managers and product owners are usually terrible at it too. That's why so many companies recruit product managers (or product marketing managers) into the marketing department. Marketing people rely on product management for tactical, business-oriented information in support of their promotional, go-to-market plans.

• **How the executive team sees product managers**
Business/Strategic
Executive management relies on product management as a strategic resource—the source for strategy and business thinking at the product level. The executive team wants to see business plans and product roadmaps.

Rather than defining one role, product management actually spans four disciplines.

Mapping product management activities

Product management is often ill defined and poorly understood in technology companies; yet the role can be one that propels the company to the next level of performance. Rather than running the business like a hobby, effective product managers focus on both the business and the technical aspects of product management.

The *Pragmatic Marketing Framework* describes the activities, artifacts, and practices for defining technology products and delivering them to market. From market analysis to channel support, product management entails activities ranging from strategic to tactical and from less technical to quite technical. These activities align loosely with the expectations of the four groups: Development, Sales, Marketing, and corporate executives.

The most common organizational format is for one product manager to perform all of the activities of the entire framework. It's a big job, but a satisfying one. It is the president of the product (or perhaps a better metaphor is the parent of the product). In any case, it's also what the "agilists" call a "single, wringable neck." A single voice of priority.

With one product manager, everyone knows where to go for the definitive answer. But… as your business grows larger, the demands on this single person grow greater and greater, and soon exceed the number of hours available in a day.

As you can see, the role of product management includes the responsibilities of product owner— plus much more.
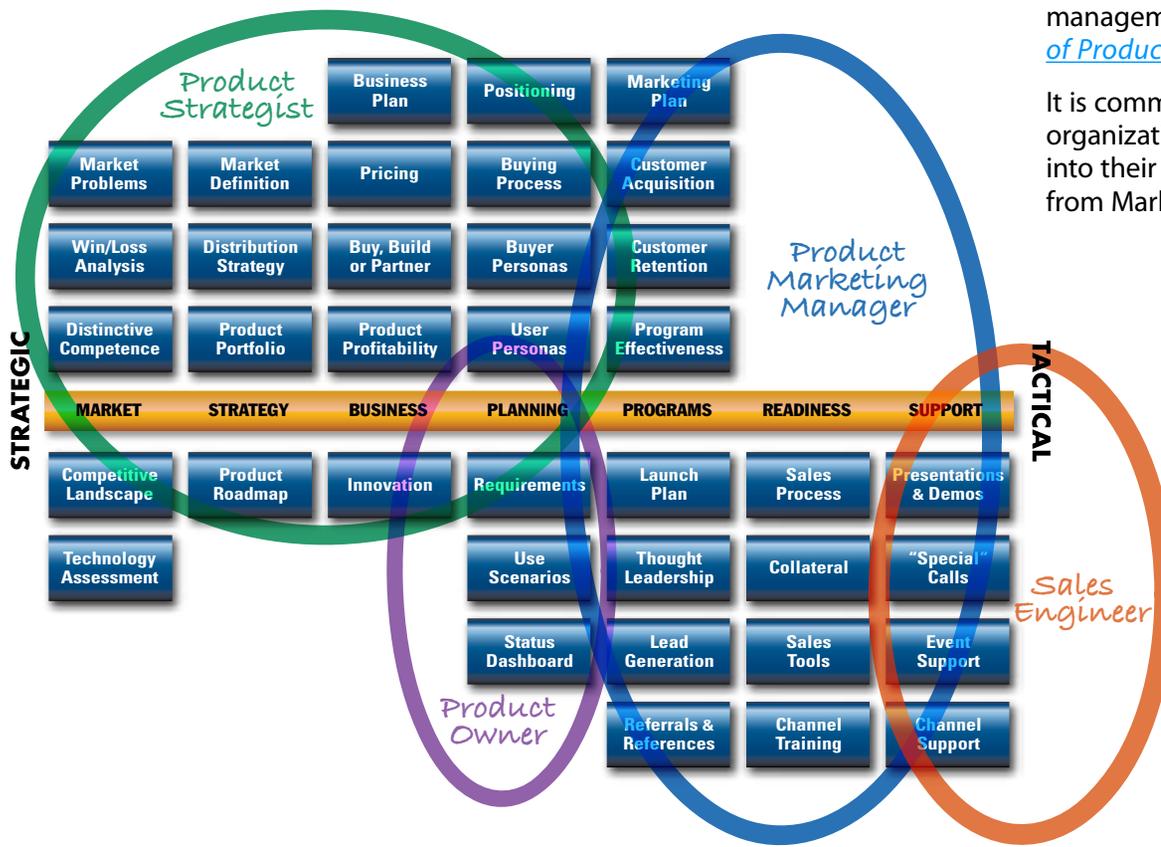
The four roles of a product manager

There are four distinct roles played by the product manager, which is a much larger function than that defined by a product owner. The four most common titles are product strategist, product marketing manager, product owner, and sales engineer. The diagram below shows the four roles aligned with the Pragmatic Marketing Framework.

Each organization adapts these titles and the associated activities to the way it does business. If you're new to this product management framework, download the e-book *The Strategic Role of Product Management*.

It is common for product owners to report to the development organization, but product managers are increasingly reporting into their own department—separate from Development and from Marketing.

As you can see, the role of product management includes the responsibilities of product owner—plus much more. The practical product manager serves as a hub of market and product information, relies on business and technical savvy, and works closely with Development, Marketing, Sales, and other departments. Most of all, a product manager is the executive team's eyes and ears at the product level, making strategic decisions on the future of the product.

Do We Really Need a Product Owner? *By Rich Mironov*

Many agile development teams think they need a product owner for every project, but product owners address only a small portion of the agile product management challenge. The product owner role has been created by the agile development community to focus on the hour-by-hour demands of an agile team—even though software product companies typically have a product manager and other existing resources to meet those needs.

A product manager's focus is creating products that are delivered to a market full of customers, not one-time projects delivered to a single customer. And if we have agile product managers assigned to the product, do we *ever* need a product owner?

A thoughtful answer needs context, and must be based on the structure and talents of the team. Agile development is scaling beyond single co-located teams and now includes revenue-driven product organizations. So let's consider four situations:

1. **Single, co-located agile team**

2. **Large, co-located projects with multiple development teams**

3. **Geographically distributed development teams**

4. **My product manager isn't doing a good job and doesn't know agile development**

Do I Really Need a Product Owner?

1. Single, co-located agile team

One agile product manager can handle all of the demands from a product team that sits together. In fact, one agile product manager should be able to manage two product teams in the same building—even factoring in travel, customer visits, and demands from Marketing/Sales. We routinely (and confidently) allocate 50% of an experienced agile product manager to each development team. When everyone sits together, there's no need for a product owner (or requirements analyst or business analyst) on the team to supplement the agile product manager.

This situation is all about trust, skills, team-building, and managers being brave enough to say what they think.

2. Large, co-located projects with multiple development teams

As products and projects grow, Development has to create additional agile teams. This approach is sometimes called the "scrum of scrums" approach, where one backlog is split among three or more groups, each of which has a development manager, project manager (scrum master), QA group, etc. The experience level of the agile product manager matters here, as well as scale, team cohesiveness, and whether the groups have radically different technical challenges. It's critically important that one person (the agile product manager) continues to be fully responsible for the resulting product and its revenue success, but it may be time to provide some help.

Most product companies already have a range of resources and talents to apply, so they might have a junior product manager needing hands-on agile experience under the guidance of a seasoned agile product manager; business analysts and requirements analysts with intimate knowledge of the specific customer requirements; sales engineers on loan for individual product releases; or someone formally designated as a product owner. In all cases, the product manager is delegating specific authority and is responsible for overall execution, coordination, priorities, and customer satisfaction. The product owner (by any name) is assigned to remove roadblocks, research questions, elaborate, clarify, motivate, and assist—but also to raise issues of substance with the agile product manager. So, product owners are optional for complex, co-located projects. Product managers need to ask for help if they need it, and executives should provide it.

Do I Really Need a Product Owner?

3.

Geographically distributed development teams

When Development is split across time zones and continents, one product manager can't possibly provide the face-to-face daily input and leadership that agile development demands. Even if the sub-projects are part of one product's overall architecture—and one agile product manager's overall vision—you need leadership on the ground in each location to keep the work of agile moving. This usually includes a development manager, a project manager (scrum master), test/QA manager, and a product owner. Here, the company should provide some formal agile training to resources such as business analysts, since they'll be without much in-person guidance from their agile product manager.

Plane flights are too slow, phone calls too impersonal, and hour-by-hour task assignment changes posted to the walls of the War Room too complicated to manage at a distance. Having someone in each office responsible for keeping the team clear on user stories/backlogs seems essential. As above, this quickly spins out of control unless the product owner (or equivalent) is tightly aligned with the remote agile product manager, and quickly escalates issues to that person. So, a product owner seems necessary for each remotely located development team.

4. My product manager isn't doing a good job and doesn't know agile development

Ask most agile development managers in private, and this is what they *really* worry about. They are way ahead of their (non-agile) product managers and are used to slow, second-hand, poor-quality customer input. Hiring a product owner is one way of protecting the team from bad product management. The thinking goes, "We still won't have good market inputs or true customer-driven backlogs, but at least we'll manage our sprints well, and our developer-side collaboration will deliver something usable."

This situation is all about trust, skills, team-building, and managers being brave enough to say what they think. It should not be about creating another new title in order to cover for a failing product manager.

Coming back to our core beliefs as "agilists" (we value individuals and interactions over processes and tools; we value collaboration over contract negotiation), the leaders of Development and Product Management need to step up with honest discussions such as:

- "Our product managers don't have any agile training. Let's get them all to class this month so we can stop complaining about it."

- "We need more of a kick-start, especially since project timelines are at risk. Let's bring in an outside agile product manager for two or three iterations who can show us how it's done while getting everything back on track."

- "We all know that product manager X was barely competent doing waterfall, and is hopeless under agile. Let's replace him instead of spreading the load."

- "Development doesn't understand why product managers can't be here at Headquarters every single day. Let's give the development team a half-day tutorial on what (else) product managers do, and why sitting at their desks every single day leads to inevitable strategic failure."

- "Iteration Planning is always on Mondays and Retrospectives are always on Fridays. Can the agile product managers schedule more of their customer travel and sales briefings mid-week?"

- "Developers want to hear even more of what customers really say. If we promise not to say anything, can we sit in on your next few conference calls?"

Product management veterans have seen similar reactions from other functional groups faced with weak product management teams. Marketing suddenly creates product marketing managers for select products rather than identifying the one product manager who's unable to get his or her features/benefits straight. Finance invents a "pricing czar" to fill in for product managers who stumble through the pricing and packaging process without leadership or strategy. Developers freely interpret vague requirements and hope they build marketable software.

Said another way, product management is a very tough job, and we need to do it well. Creating product owners to cover our personal shortcomings or lack of agile training is treating the wrong disease. Let's make sure we're doing our best agile product management instead of meekly letting Development redefine our responsibilities. If we're short of trained, capable agile product managers, let's get busy recruiting and mentoring and training them to fill the real need.

So, do we really need a product owner?

Sometimes—in the right context and with distributed development teams that need real-time, local help. Never staff up a revenue-driven product without an agile product manager, but don't assume that every agile team needs a product owner.

"We hope you enjoyed this e-book and it gives you some food for thought. If you want to learn more, check out the following.

- Steve, Luke, Rich

Steve Johnson's *Product Marketing blog*

Luke Hohmann 's *Agile PM blog*

Rich Mironov's *Product Bytes*

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