MIT SMR CONNECTIONS





Todd Heimes worldwide director and general manager of Amazon Business

As a legacy function, procurement probably isn't the first thing that springs to mind when discussing digital transformation. But now that's changing with the growing recognition that procurement, when digitally optimized, has the potential to help organizations innovate, increase sustainability, and achieve their business objectives.

In this Q&A, Todd Heimes, worldwide director and general manager of Amazon Business, talks about today's procurement trends, opportunities, and challenges. He shares insights about how various technologies — including artificial intelligence (AI), machine learning (ML), big data analytics, blockchain, and automation — are being used to vastly increase procurement efficiency and innovate supplier relationships. He discusses procurement's role in helping organizations achieve their business objectives, including their environmental, social, and governance (ESG) goals. He also touches on the importance of finding tech-savvy procurement talent and provides a peek into the function's future.

This interview has been condensed and edited for clarity and editorial style.

"We see procurement as a place of innovation in many customer organizations. It might involve using AI, big data analytics, machine learning, or even blockchain integration into the supply chains." MIT SMR Connections: Please set the stage for our discussion. Where does procurement stand today, and who's in charge of it?

Heimes: Every organization, from the smallest business to the largest corporation, has some form of procurement function. They need office supplies; they need break room supplies, cleaning supplies, and depending on the organization, they need to have certain products to deliver on their core mission. Over the last few years, that function has become an increasingly major area of focus. As a result, we are seeing the resources available to the procurement function growing every day: the available data, the available technology, the systems, the tools, and even the people and the talent available to work in procurement.

All those factors are improving procurement. Most recently, AI and machine learning and being able to bring that type of data and technology to bear on the procurement function are all going to have a huge impact.

As for who oversees procurement overall — that varies by organization, of course. But increasingly, we see that chief procurement officers are heavily involved in defining the procurement strategy, and the decisions about what systems, what tools, and what rules to put in place do tend to fall on the person in that role.

MIT SMR Connections: How are organizations using procurement to further their business objectives? Traditionally, procurement hasn't been considered strategic.

Heimes: Historically, the procurement function was probably viewed more as a cost center than anything else. But today, we see procurement moving to a place where it can help to achieve an organization's broader business goals.

For instance, many organizations are oriented toward ESG. So you can make sure you're buying from suppliers that help you meet your ESG goals. At the same time, all the efficiencies of moving toward a digital e-procurement function can greatly reduce costs. Suddenly you can change procurement's storyline

within the organization from just being a cost center to being a tailwind for the organization.

There's also a huge opportunity to innovate here. We see procurement as a place of innovation in many customer organizations. It might involve using AI, big data analytics, machine learning, or even blockchain integration into the supply chains.

MIT SMR Connections: What are some of the biggest challenges associated with procurement right now?

Heimes: Many of our customers, as well as procurement professionals, have a shared list of pain points from before and since companies moved to e-procurement. Manual processes are a big one. We continue to hear customers and procurement pros talk about tedious processes, lots of paperwork, lots of data entry, and how all that can slow things down. We also hear about the lack of visibility. There are limited insights into many procurement pipelines, especially if the organization hasn't gone through digital transformation.

Supplier management is another area. Without digital transformation, it's hard to identify the right suppliers and manage those relationships, and as a result, it's hard to control costs. To do that, you need access to data, and you need visibility into your supply chain. We hear these things consistently from our customers.

These complaints vary depending on the organization's size. Larger organizations have more complex environments in terms of the systems they use and the types of integrations they need to transform their procurement functions. The larger the organization, the more pain points we find.

Amazon is only a 25-year-old company, and we've been pushing on the digital transformation front since Day One. We have our own complexities, no question, but when we go out and talk to customers, especially the larger and sometimes the more mature ones, they're facing even bigger challenges. That's why they're interested in talking about digital transformation of the procurement function.

MIT SMR Connections: Let's talk about the benefits of procurement transformation. Certainly, we can think about better supplier management, meaning a better cost profile, as well as greater visibility that would lead to better decision-making. What else is there?

Heimes: It starts with the efficiency of your supplier base. An e-procurement system is going to give you the ability to manage your suppliers much more effectively. You can start to ingest catalogs, e-catalogs, and different databases, which will help you become more efficient in the actual online requisition process.

You can identify suppliers, you can qualify suppliers, and you can find diverse and sustainable suppliers. As mentioned earlier, many companies now look to the procurement function to help them achieve their ESG goals by enabling responsible purchasing. We're seeing this industrywide movement to automate and digitize much of the repeatable purchasing behavior.

We're also seeing a move toward enabling users to do their own procurement, letting them buy their own laptops or desk lamps, and so on. Off-loading that repeatable procurement activity to employees frees up procurement teams to focus on more strategic activities, such as finding new suppliers and negotiating with their most important suppliers. But it's hard to let your employees do their own procurement if you haven't automated that, digitized that, standardized that — in other words, if you haven't transformed the function.

MIT SMR Connections: When you talk about off-loading some of the procurement functions onto employees or users themselves, what does that look like? The idea would be to give them a universe within which to choose, right?

Heimes: That's correct. You want to make sure that if you have hundreds or thousands of users, they're not just buying whatever they want. They may buy a laptop or a printer or something that doesn't work in your environment, for instance. That's why most such marketplaces will let you embed your procurement rules into their systems. For example, Amazon Business has a tool called Guided Buying, a Business Prime feature, that allows you to say to your users "When you buy this type of item, we want you to pick from these suppliers," or "We want you to pick from

these brands," or "We want you to buy something within this price range."

Many different rules can be built into most e-procurement systems to allow the procurement team to set the rules of engagement. Then employees can operate within that rule set. Again, that frees up the procurement team while maintaining control over what your employee base buys.

MIT SMR Connections: Post-COVID, what does supply chain resiliency mean in the procurement space?

Heimes: Resiliency remains a growing concern. Executives are looking at the need to diversify their supplier bases and make sure they have fewer single points of failure. They do that by conducting different risk assessments and optimizing inventory. Using a marketplace really helps with supplier diversification. Marketplaces are growing in the procurement space as a way to provide a backstop with many different suppliers for most products.

Now, that's a challenge in the procurement industry, because the way we have traditionally operated is to negotiate with a smaller number of suppliers and get the best deal that we can on the most important products that we're going to buy. But there's no question that diversifying the supplier base is a tool for reducing risk.

MIT SMR Connections: You said you're seeing a greater emphasis on technical skills in procurement. How easy or difficult is it to find the right kind of person, and are there any best practices to bring to bear?

Heimes: Hiring a more tech-savvy procurement team is something we see happening in all the organizations we talk to, and it's important for the procurement industry as a whole to embrace these technological changes that we've been talking about, like blockchain, big data analytics, AI, and ML.

Procurement is moving toward a more digitized, more automated space, one that also has a lot of opportunity for innovation. And with the increased use of data, organizations increasingly need a more sophisticated technical footprint and more tech savvy team members to help with data analytics. In fact, one of the biggest

things we've realized over the last 10 years is the need for a more tech-savvy base of people working in procurement. That's across all organizations, including Amazon. But it can be hard to find the right talent.

So I encourage all procurement teams to focus on that and think about internal training opportunities to grow their own team members, because it's going to get more and more challenging to find the right skills.

MIT SMR Connections: When you talk about the e-procurement ecosystem, it seems integration is a large part of that story. What are the technical requirements or challenges of the integration that goes into that?

Heimes: Integration is definitely needed. As mentioned, most large organizations will have an ecosystem of different tools and environments that need to be understood when you're moving toward an e-procurement system. There's an ERP [enterprise resource planning] system, there's a finance system, there's a supplier management system, there's maybe a fulfillment and delivery network — many different systems in a larger organization. So you're going to need an internal stakeholder agreement that you're going to move in this direction. And, again, you're going to need the right talent.

You're going to have to integrate with all these systems through multiple APIs [application programming interfaces], multiple data standards, and multiple types of technical vendors that you're going to have to collaborate with. Having the right resources,

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the right talent pool, and the internal buy-in to move in a new direction are necessary as procurement moves toward digital transformation.

MIT SMR Connections: Electronic data interchange, or automated exchange of documents such as purchase orders or invoices, used to be state of the art for automated purchasing. Is EDI still a piece of the puzzle, or is that a legacy concept and system?

Heimes: EDI is still a method for automatically sending orders to suppliers. It's still happening, but the key thing here is to move to an automated e-procurement tool, and at larger organizations, that e-procurement tool has to integrate with many systems internally, right? So there's that big ecosystem within most large organizations. There's an ERP system, there are financial systems, there are cost centers. All those things have to be integrated with your e-procurement system. The benefit of doing that is you can then bring in e-catalogs with your supplier database, and you can now, in a much more automated way, find the products you need, find the suppliers you need, and outsource internally to your user base many of those repeatable tasks. Then, in the end, orders will go out to your suppliers, often using EDI.

MIT SMR Connections: How does machine learning come into play with procurement?

Heimes: Amazon Business has millions of items for sale, and we use ML to help present the best products available to our customers based on the rules they set within our Guided Buying functionality.

They set the rules, such as approval chains, spending limits, and types of products they want to buy from sustainable or diverse suppliers. And then, we use ML to continuously look at all the products we have in our database and then provide the best products in our search results to those customers.

And then, those customers continue to iterate on the rules they want to use within our Guided Buying tool. Prior to having access to ML, the process of defining which products to buy was much more manual. Now we can use search algorithms and use ML to help surface the best products available based on the rules the customer has provided.

MIT SMR Connections: What does the blockchain use case for procurement look like?

Heimes: Blockchain is used now in the coordination of the movement of goods in supply chains around the world. If you think about products moving through the container shipping process, blockchain is now used to help track the movement of goods worldwide.

This has had a huge impact on procurement because one issue that's been around for a long, long time is a lack of transparency and visibility into where things are in the supply chain. A customer places the order and then they wait and they hope. Now with the use of blockchain, they can see where the products are more readily than they could in the past.

MIT SMR Connections: Do you see any role for generative AI in procurement?

Heimes: Yes, I'm sure that there will be opportunities for generative AI. You can think about some of the early examples we're all reading about, ChatGPT-type examples. But yes, I do predict that there will be a use for that type of technology, for sure.

Procurement teams will hire some talented folks who will figure out how to bring generative AI and large language models to bear on the procurement industry. At Amazon Business, we certainly are looking for opportunities to use big data, AI, machine learning, and generative AI to improve the products we offer to our customers.

MIT SMR Connections: Complexity is increasing everywhere, just as data is proliferating and exploding constantly. What advice do you have for procurement executives about mastering and handling that complexity?

Heimes: My advice for procurement leaders is to embrace the concept of digital transformation of their procurement functions, hire tech-savvy procurement teams, and build internal stakeholder groups that can help them integrate e-procurement into the broader ecosystem at their organizations. And then they should begin to view or continue to view the procurement function as a place of innovation within their organization, and

to use all the technologies we've talked about here to drive innovations at their organization so the procurement function can be a tailwind for the organization.

MIT SMR Connections: How do you expect the e-procurement landscape to change in the near term? What trends are you seeing or anticipating?

Heimes: The big one is greater use of data and AI, along with further automation. I see this emphasized in all the organizations we talk to. Data will continue to drive the trend of optimizing the procurement processes, increasing efficiency, and improving decision-making within procurement.

I predict that we'll see a growing use of blockchain to improve the transparency and traceability of goods in supply chains. We'll continue to see an increased focus on sustainability and diversity, and on relying on procurement to help organizations achieve their ESG goals. We'll see a continued movement toward more predictive and prescriptive analytics and a better forecasting opportunity within procurement.

We'll be able to use these technologies and the data we have available to better forecast demand and to make our supply chains more resilient. If the last few years have taught us anything, it's that we need to have a more robust and resilient supply chain for both direct and indirect materials purchased by a procurement team.

And then the industry as a whole, the procurement function as a whole, is going to continue to see increased collaboration across the ecosystem within our organizations. Inside each organization, the procurement team has the opportunity to innovate and drive collaboration across these functions of operations and finance and different stakeholders.

Finally, we'll start to see a more personalized and tailored procurement function. If you take all the things we talked about and put them all together — the use of data, the use of technology, the ability to innovate — then you can start to see organizations having a much more tailored and organization-specific procurement function. That's how I see things evolving over the coming years.

Todd Heimes is the worldwide director and general manager for Amazon Business, with responsibility for small business customers, Business Prime, and the marketing and international expansion functions. In his nearly 25-year career with Amazon, he has held many previous management roles, including serving as director of Amazon Business International, director of Amazon Business Europe, director of EU Technical Advisor, director of international technology, and group program manager for category expansion, among others.

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