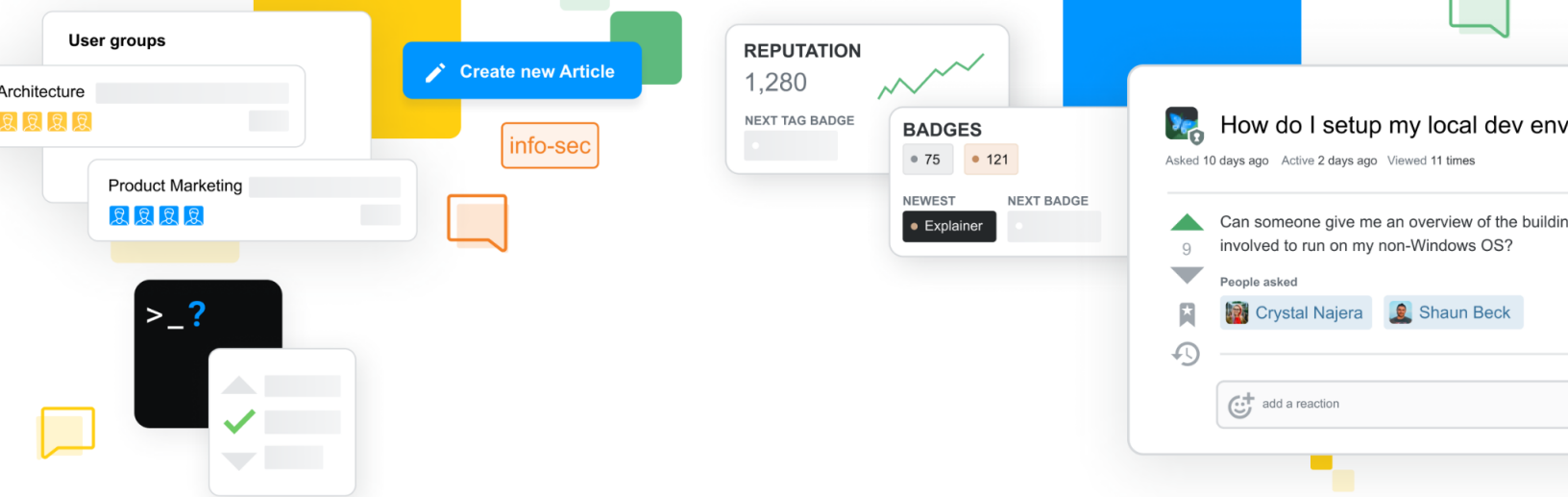
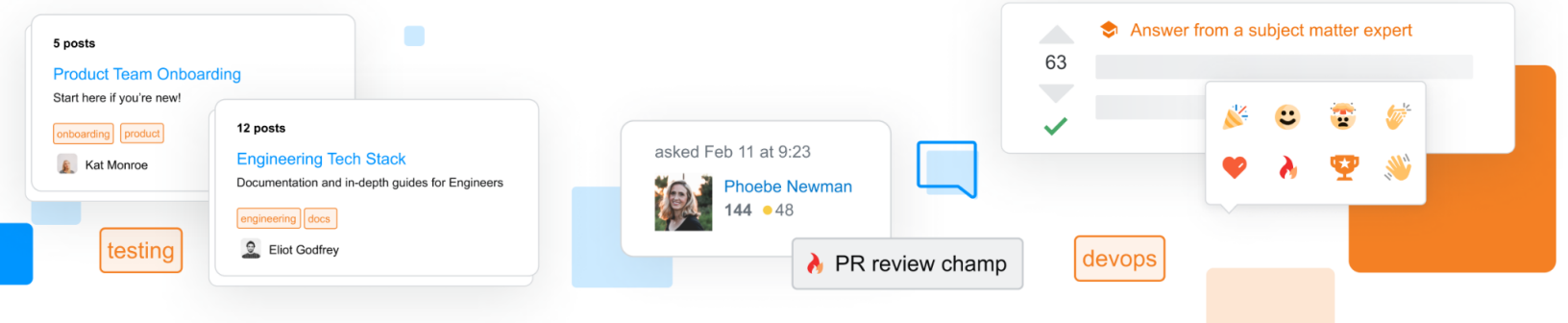


stack overflow FOR TEAMS

Learn from peers:
13 stories of knowledge sharing and collaboration in action

We've collected stories from **13 clients** on how their business and teams were transformed after bringing in the knowledge sharing and collaboration platform, *Stack Overflow for Teams*.



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Microsoft

Microsoft's team of over 50,000 developers leverages Teams to share knowledge across the team, increase efficiency, and ultimately deliver a better user experience to customers.

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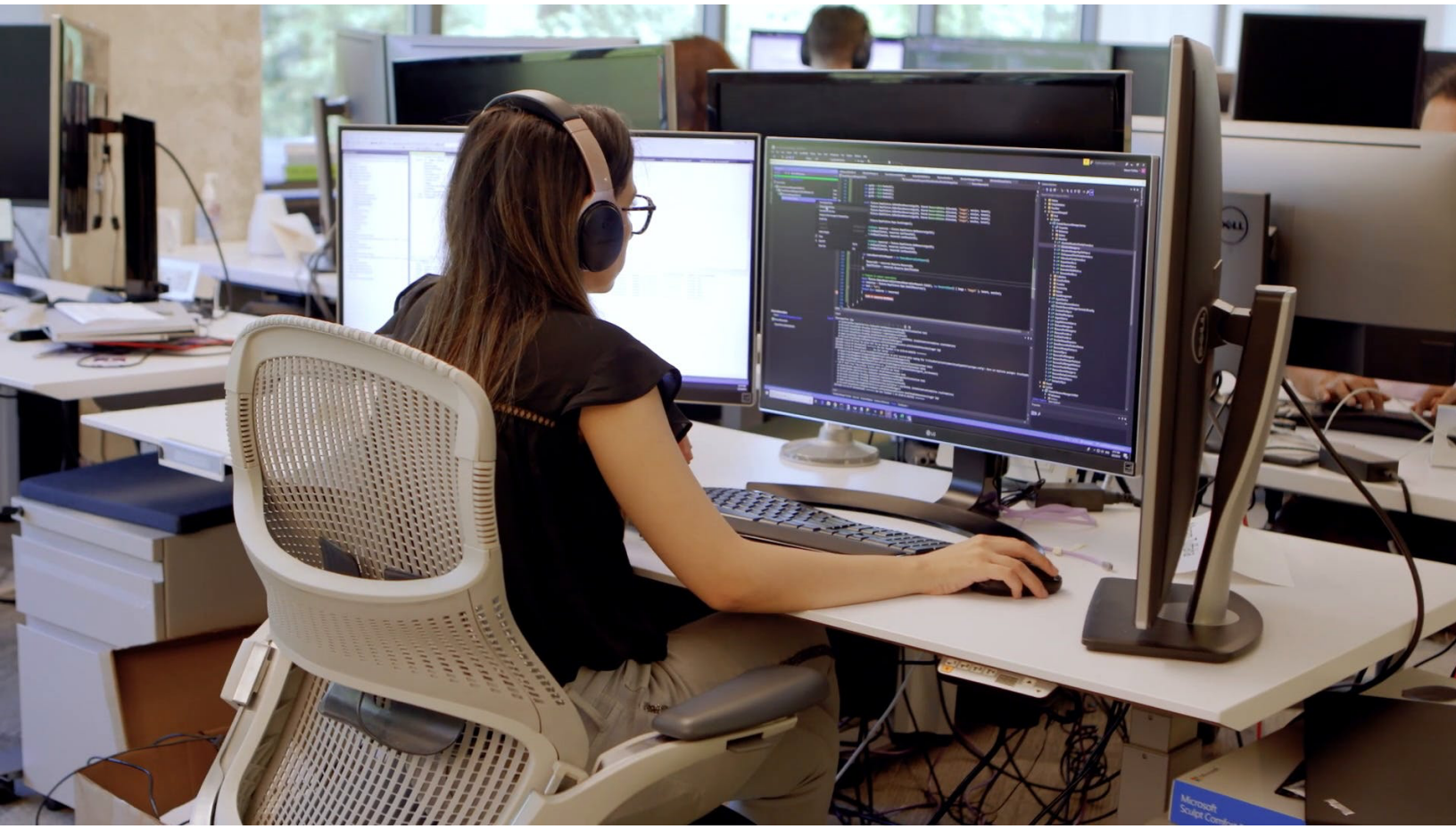

Microsoft is one of the world's largest and most well respected technology companies. But even after four decades in business, the firm continues to evolve. "Microsoft in 2014 began a cultural transformation, really one from a culture of knowing to one of learning," says Ryan J Salva, a director of product management for the company's developer services division. "How are we collaborating internally? How are we facilitating better conversations among our developers, product teams, and sales field?"

There are more than 50,000 developers working at Microsoft. Until recently, conversations and questions about products and services happened over email or group chat. "Any email that was sent to a discussion group or a distribution list would get archived in this one place," says Laura MacLeod, a program manager in

the developer services division. “The challenge with that was that it wasn't discoverable. It wasn't easy for users to find that existing information.”

Because it was difficult to know if a great answer already existed, support teams were often left putting out the same fires over and over again. “We struggled for the longest time with our internal knowledge management,” said Daniel Stefaniak, a program manager with an Azure ready product group. “People kept falling back to email and direct messages.” When the team analyzed the data, they were shocked. “The same question was being asked three times a month and about 70% of questions were left unanswered.”

“When Microsoft as a whole was looking in the mirror and self-evaluating, one of the things that we found was that communication itself was pretty inefficient,” says Salva. “We did have an internal Q&A system, but it only had about 900 users.”

So starting in 2016, his team began searching for a different solution. “We set about the job of trying to better understand how developers and product teams would like to communicate. There were three key points that teams needed," says Salva. "First, we needed easy onboarding. We also needed well structured content. Last but not least, we needed a really low friction way to create the content.”

Escaping the email trap

What Microsoft discovered was that many of their developers were using the same tool to manage knowledge around code, just not internally. “While Microsoft oftens creates tools for problems that we see unsolved, we saw that this was a problem that has already been solved, and solved well with Stack Overflow,” says Salva. “We approached Stack Overflow to have a conversation about how we could create an enterprise organizational community of questions and answers that could service our internal teams. Just two and a half years later, we have over 70,000 users asking 80,000 questions.”

MacLeod was one of the internal stakeholders charged with trying to build an engaged community around Stack Overflow inside of Microsoft. Luckily, the software developers who made up the bulk of early users were very familiar with Stack Overflow, as most used the public site on a regular basis. “When new users join, they come in, and from day one they know how to use this tool,” says MacLeod. “When we launched our internal Stack Overflow instance at Microsoft, it took off like wildfire.”

These changes resulted in a major boost to productivity. “Historically, people are used to finding distribution lists and sending questions to these distribution lists. They would end up getting answered by other people, but there is not historical storage of this data and reuse of data, which means that when somebody in the team makes an investment in answering a question, it does not get reused at all,” says Suraj Gupta, a program manager with the Cloud Test Team. “When these questions are on Stack Overflow, I get to be more productive because I don't have to answer the same question twice.”

The impact has quickly rippled out from internal questions to customer facing support. “Our colleagues at Microsoft are some of the early adopters of our identity technology,” says Barbara Seldon, who works on

knowledge management for the Microsoft Identity team. “By answering their questions, we get a heads up on the needs of our customers around the world, and we're able to take the output from their questions, analyze the root cause, and then update our external facing documentation or create new documentation. And by doing that, working with our internal colleagues and answering their questions actually benefits all of the users of Identity around the world.”

Stefaniak sees the change in the support work he does every day. “It feels like repeat questions do not happen anymore,” and a much smaller percentage of questions go unanswered. “Collectively, there has been a great sigh of relief.”

Useful to more than just developers

Initially, Stack Overflow was used internally at Microsoft only by employees working directly on creating software or supporting clients using that software. But as word spread about this new tool, it quickly became clear that this kind of Q&A wasn’t just for helping programmers resolve an error message.

The platform also began to spread to employees who didn’t work directly on building software. “It’s been a resource for our entire company,” says Salva. “Not only for developers to solve problems, it’s also enabled ours sales field to answer technical questions that help them close deals. It’s permeated the company in every way,”

Salva believes that the internal changes driven by Stack Overflow ultimately have a positive impact on public consumers. “A lot of what I do is help those teams think about how they can collaborate more effectively, how they can bring their teams together and sharing information and sharing processes, systems, and methodologies,” says Salva. “Stack Overflow is not only a means to an end for users who are eager to find a quick answer to accomplish some task, but it’s also a way for our product managers and engineering teams to suss out where we can do more to solve problems in an intuitive way and ultimately deliver a better user experience.”

Box

Box noticed Q&A was becoming a bottleneck for engineering support. They found a solution that increased collaboration and boosted productivity.

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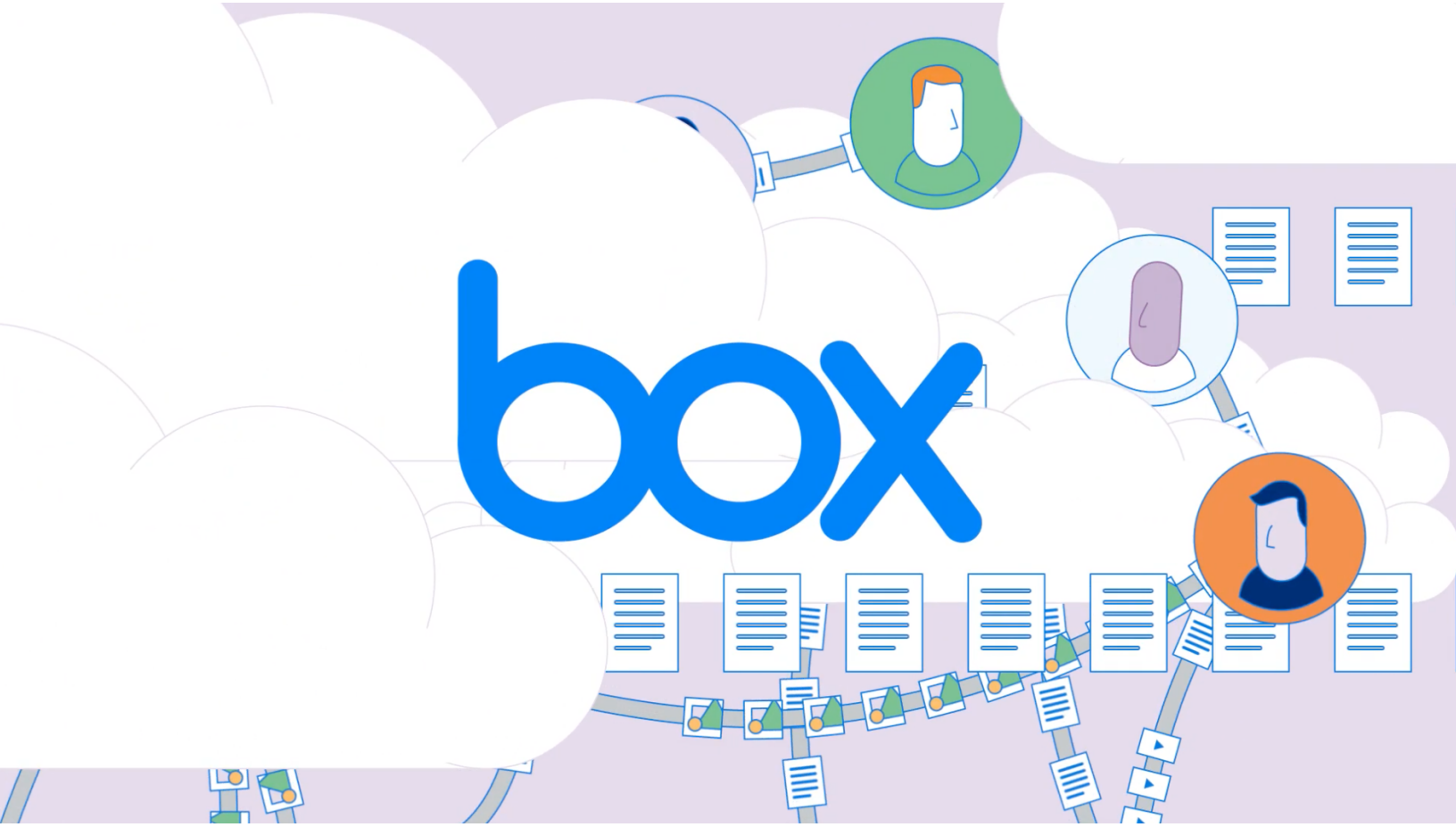
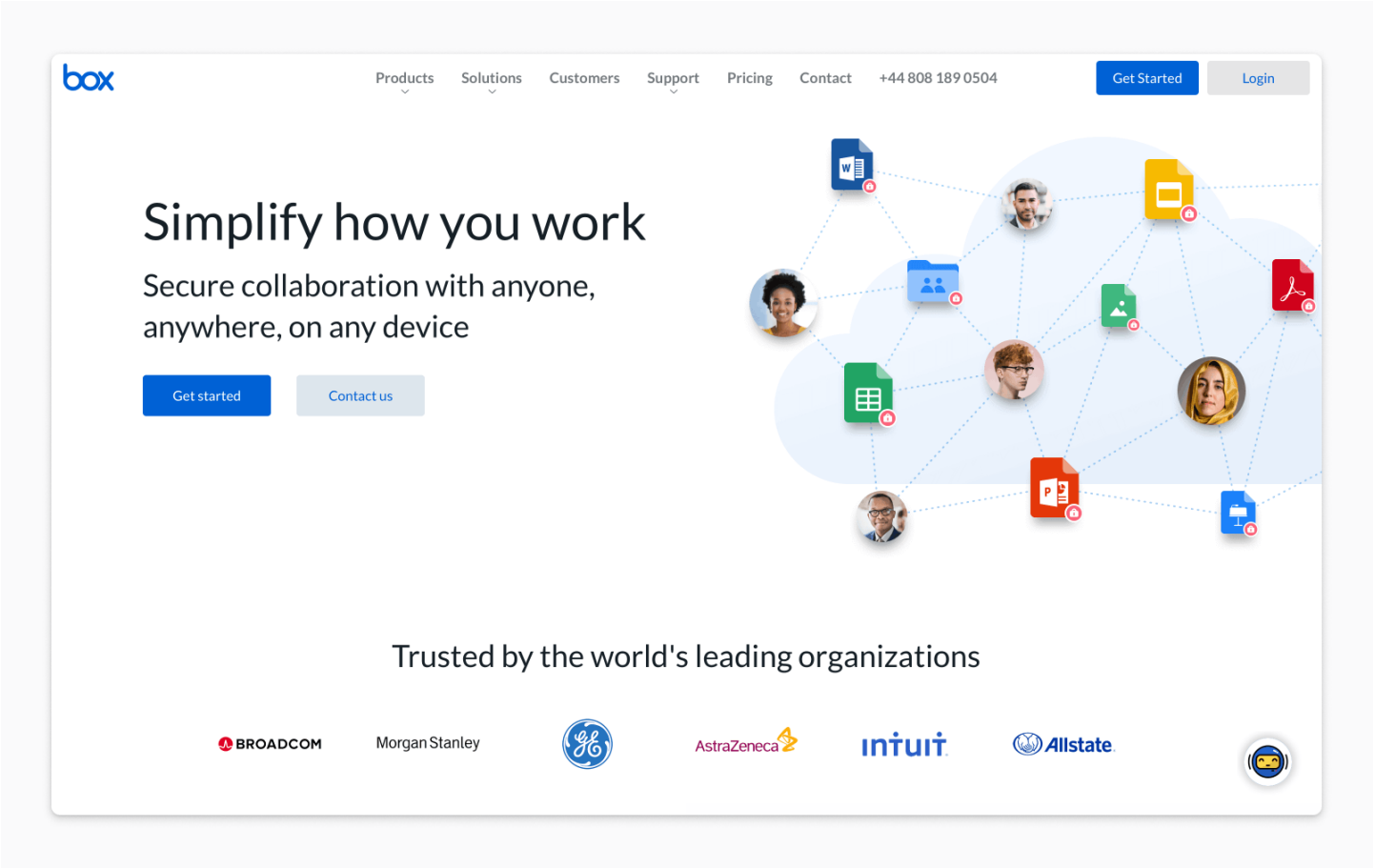


Box went public in 2015 and has around 2000 employees and several hundred engineers. It provides modern cloud capabilities with enterprise grade security and compliance to companies like AstraZeneca, Nationwide Insurance, Morgan Stanley, and GE.

In 2019, Eddie Flaisler, the company's head of enterprise engineering, decided there was a challenge Box needed to address. "The biggest issue we had as an engineering organization was knowledge transfer and searchability of knowledge. I think it is very common in engineering organizations that you find people have a lot of institutional knowledge, a lot of things that they keep in their head. Either it is not documented anywhere, or it is in a collection of Box notes, Google docs, Confluence pages, just all over the place."



Over the last year and a half, 650 users at Box have provided over 900 answers which have been searched over 4,000 times on their Teams instance. “Stack Overflow is heavily used at Box as the interface for engineering teams, in terms of how other teams, be it support, product, or marketing, can communicate with them,” explains Flaisler.

It was important that employees be able to get answers to technical questions, but engineers also needed time for focused work. Avoiding context switching was key. “If you have a question, if you have some clarification that you need, instead of overwhelming everyone on Slack or an email, there's a queue. Questions are created, somebody is monitoring the questions and responding, and this has improved productivity across the board.”

Avoiding bottlenecks

Aiko Krishna is a product manager on the File System team at Box, a role that works with teams across web, mobile, and desktop applications, as well as a variety of add on products, APIs, and the core platform layer. Like Flaisler, her team was struggling to share knowledge across different parts of the organization. “All these product areas depend on the file system, so we have a lot of internal customers. Part of my job is

understanding what internal customers are trying to build and how we can help them, how we can empower these different teams to deliver."

Because the file system group is a backend team that owns a lot of the core product functionality, many colleagues come to them with issues to fix. The group has an on-call engineer dedicated to dealing with whatever comes up. "A lot of teams will reach out to the on-call engineer for these ad hoc questions they have, but oftentimes our on-call engineers are too busy working on something, fixing something," says Krishna. "We were becoming a little bit of a bottleneck."

To alleviate the problem, the team tried implementing a ticketing system with Jira. "But at the end of the day, It's very hard to search through Jira to get answers to questions. We weren't really building a knowledge base," says Krishna. "We were trying to put together FAQ's on Confluence, for example, so that we can direct people to a page with frequently answered questions, but it just was taking a lot of effort on our end."

> We were trying to put together FAQ's on Confluence, for example, so that we can direct people to a page with frequently answered questions, but it just was taking a lot of effort on our end.

Aiko Krishna, Product Manager at Box

A colleague noticed other departments adopting Stack Overflow for Teams and brought the idea up. "Because our ownership and scope is so broad, we do get a lot of very detailed, nitty-gritty questions about how a certain API works, how a certain part of our product works. Fundamentally, I think that is the biggest challenge for our team, that we have such a broad scope," says Krishna. "A lot of our teams depend on us. It's hard to keep track of all of the different bits of information, making sure that everyone has the answers they need and enabling those teams to do the work they need to do."

When technical questions arrived, Krishna's team began directing colleagues to Stack Overflow for Teams. They used the Slack integration and created tags specific to their team and expertise. "It's great because in our team Slack channel, we'll see when someone posts a question. If someone is able to answer the question off the top of their head, great, they'll go ahead and answer it. But if not, during our stand-ups, we'll all look at the questions together and someone will volunteer to answer the questions. So we have a process in place now."

Adapting public learnings for private use

As a veteran software engineer, Flaisler was familiar with Stack Overflow's public Q&A websites. "Oh god, Stack Overflow is the reason I still have a job," he joked with a laugh. "I cannot recall a single project in my life that I worked on in my career as a software engineer that did not extensively use Stack Overflow. I'm very careful not to do the awful copy paste, because that is dangerous, but it helps me understand so much, the answers there are wonderful."

Flaisler was familiar with Stack Overflow's approach to tagging content so that questions can be organized by language, framework, or technology. He encouraged Box staffers to use them when onboarding new departments and asking questions about different tech stacks. "As we onboarded different teams, tags was something we used very heavily." This allowed them to distinguish between different parts of the organization and different types of questions. "It was always useful to me in the public instance and it's useful to us as a company."

Krishna also sees it as instrumental to helping a growing company scale. "It's a very exciting time for our team where we're onboarding quite a few new team members. As they're ramping up, it's also become more critical that we leave a knowledge base so that they're able to reference those questions and answers. We're not just putting in all this effort answering people's questions and, you know, letting it kind of disappear into the data, the universe."

A flexible tool

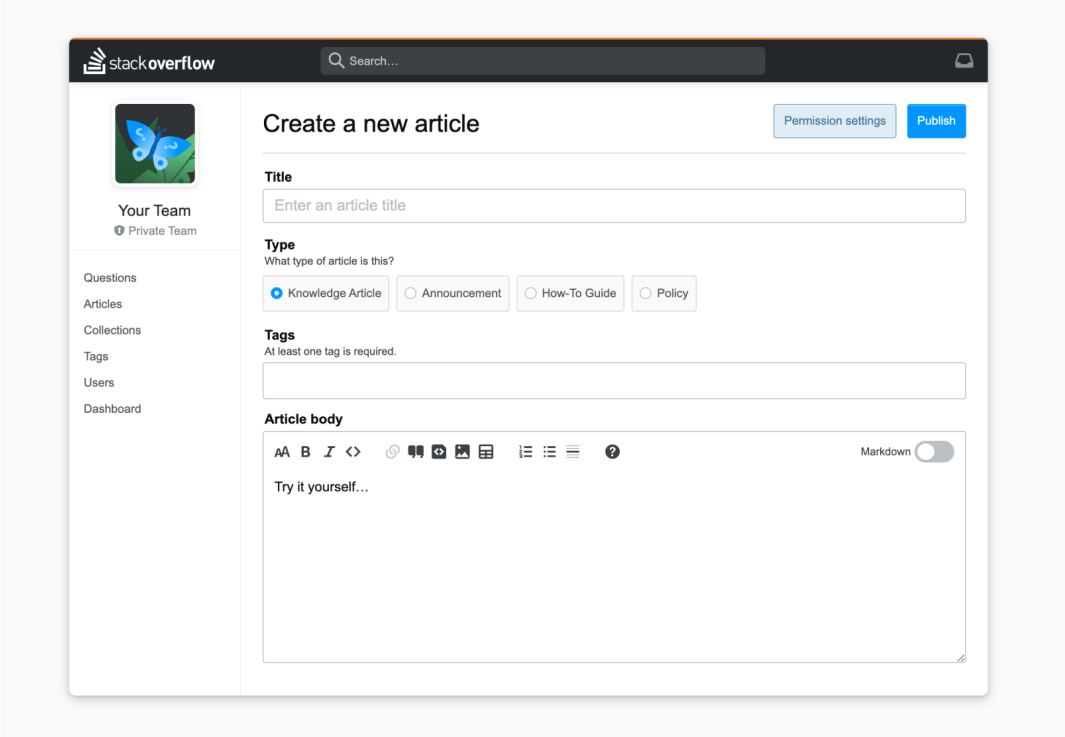
While Stack Overflow for Teams began as a tool used principally by engineers, it has since spread to other parts of the company. "Initially I thought this is going to be an engineer-to-engineer Q&A tool, but actually it turns out a lot of people ask questions that are more product behavior related," says Krishna. "So I do find myself actually answering a lot of the questions, which gets me very excited because it's also a learning process for me. A lot of the questions they ask, I'm able to test and figure it out myself without actually having to look at the code."

While the initial idea was to create a knowledge base of internal information, Stack Overflow has also become useful for teams interacting with clients. Box has a consulting team that helps large customers with implementations and deployments. They will often build their own scripts and also utilize APIs. "It turns out that it's actually become a very good tool for our Box consulting team as well," says Krishna.

Customers often ask how they should structure their folders or configure their security given the existing systems and architecture they have in-house. Some of the learnings stored on Box's Stack Overflow are now related not to technical questions, but to best practices. "It's been great for me because I think the questions they asked tend to sit in between product and engineering. Sometimes they are technical, but sometimes

they're more about how we should approach an issue with a customer, what should we recommend to the customer?”

Krishna is excited about the possibility of expanding beyond Q&A to use Stack Overflow for Teams for longer-form writing with features like Articles and Collections. “Documentation is a little bit of a loaded term. It implies formatting things correctly, thinking about the most frequently asked questions, something that requires a lot more planning and energy. It's hard to find that dedicated time. We were looking for a tool that would just allow us to record these questions that come in ad-hoc and Stack Overflow for Teams was a natural fit for that.”



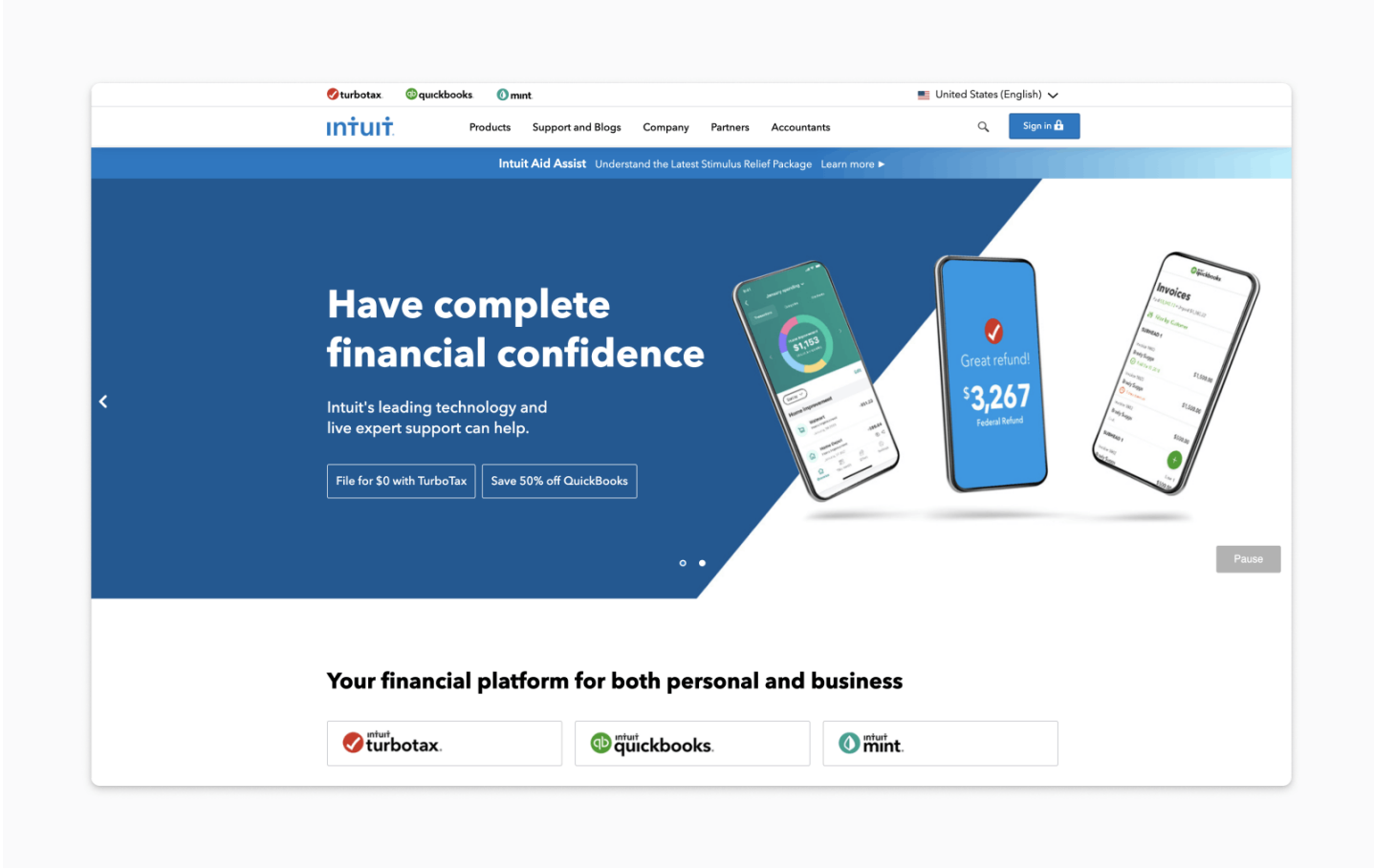
Articles are useful when you need to share information and details in longer form.

You can think of this as “just-in-time” documentation that grows organically from daily demand but coalesces over time into something with lasting value. “Being able to consolidate a lot of these questions in a way that makes sense for our team as well as everyone else in the organization I think is the next big, next step for us.”

Box’s is a place where engineers and product managers can work on innovative technologies, and it’s investing in new tools that allow for remote, asynchronous collaboration, a critical ability in the current work environment. “What we love about Stack Overflow for Teams is that it's a very dynamic tool,” says Flaisler. “I'm not even sure it was intended when you built it, but there's just so many ways to use this as a liaison between different teams and different knowledge bases.”

Intuit

Intuit wanted to help its developers and technologists break down silos between departments and improve communication across global offices.



In 2021, companies' adoption of outsourcing is oft-discussed. But there is less familiarity with InnerSourcing, which aims to bring principles from the open source software movement and apply them to software being built inside an organization. Coined by Tim O'Reilly in 2000, InnerSource asks organizations to embrace a culture where everyone feels empowered to contribute, opening up internal development to a wider range of employees.

The concept is one that has been embraced by engineers at Intuit, a global financial software company that develops and sells financial, accounting, and tax preparation software for small businesses, accountants, and individuals. It's headquartered in Mountain View, California, but like so many organizations this year, has shifted to a remote workforce during the COVID-19 pandemic. In that environment, improving communication and collaboration is paramount.

Matt Madson, Senior Software Engineer with Intuit

Matt Madson is a Senior Software Engineer with Intuit, which he joined in the summer of 2017. He has a wide range of experience in the world of tech, everything from embedded systems at Northrop Grumman to crash reporting systems at Sony Playstation. As part of Intuit's Tech Culture team, Matt works on initiatives like InnerSource that create an environment where developers are empowered, can deliver with speed, work in a unified way and have fun. While working on these initiatives, Matt noticed a trend that he was familiar with from more than a decade in the world of programming. "I would see people asking the same question time and again. Often they would get an answer, but it wasn't stored in a durable way that made it easy for others to access later. That meant a ton of time and energy wasted."

The problem was particularly acute for engineers on the support team. "Our support staff was expressing frustration that they couldn't focus on their core tasks," says Madson. "They were getting constant interrupts in Slack, people were always pinging them with issues they consider urgent, and they didn't have time left to actually work on addressing the underlying problem areas that these questions and issues arose from."

Intuit has seen questions in some Slack support channels decrease by 20-30%

“This couldn’t have come at a better time for our team,” said an engineer who manages technical help requests.

In June of 2019, Intuit began using Stack Overflow for Teams to try and organize information. Instead of posting a query in email or chat, employees were encouraged to add them to Stack Overflow for Teams, where content is organized and searchable by tags. That would allow anyone to quickly search for the solution to their issue before turning to support staff for help. Madson saw fewer repeat questions and a noticeable improvement in productivity for support engineers. But the bigger picture was how this tied into a cultural evolution towards InnerSource.

“Let’s say someone comes to you with an idea or an issue. It involves one of our products, but not one they work on directly. It would be great if they could actually find out where that code lives and look at the code base. Maybe they can start being productive in that code base and in theory, actually fix that problem directly for the customer,” says Madson. “That to me was the big kind of selling point of InnerSource. What's stopping us from just fixing problems that customers have?”

Pre COVID-19, Rocio (second from left) with the Intuit CTO, Marianna Tessel (third from left), and fellow colleagues at an event.

Connecting Offices Around the Globe

Intuit took a phased approach to introducing Stack Overflow to its ~5,000 engineers, taking time to be thoughtful about the product's use, piloting it with small groups of users and seeding relevant questions. By summer of 2020, Stack Overflow had rolled out to the full technical community at Intuit. The community has contributed over 7,000 questions and is adding more than 100 questions and answers per month.

Stack Overflow for Teams has a metric, Knowledge Reuse, that measures the people who come to Stack Overflow for Teams, but don't ask a question - in other words, that user reused existing information from the knowledge base to answer their question. Intuit is seeing knowledge being reused by engineers almost 120 times a day since they launched widely.

Staff Software Engineer Rocio Montes has been with Intuit for seven and a half years and has gotten to know a broad swathe of the company's technical teams. In the summer of 2018, she became a Technical Lead in the Tech Culture Team, focusing on how to expand and improve adoption of open source and InnerSource principles across engineering teams at Intuit. She traveled from her home base in California to India, Canada, England, and France, meeting with technical teams at these regional offices.

> We listened to these engineers to try and figure out what their biggest blockers and problems were ... What we realized after numerous discussions was that communication to and from the center out to the spokes was really hard. They were looking for ways to improve collaboration.
>
> —
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> **Rocio Montes, Staff Software Engineer**

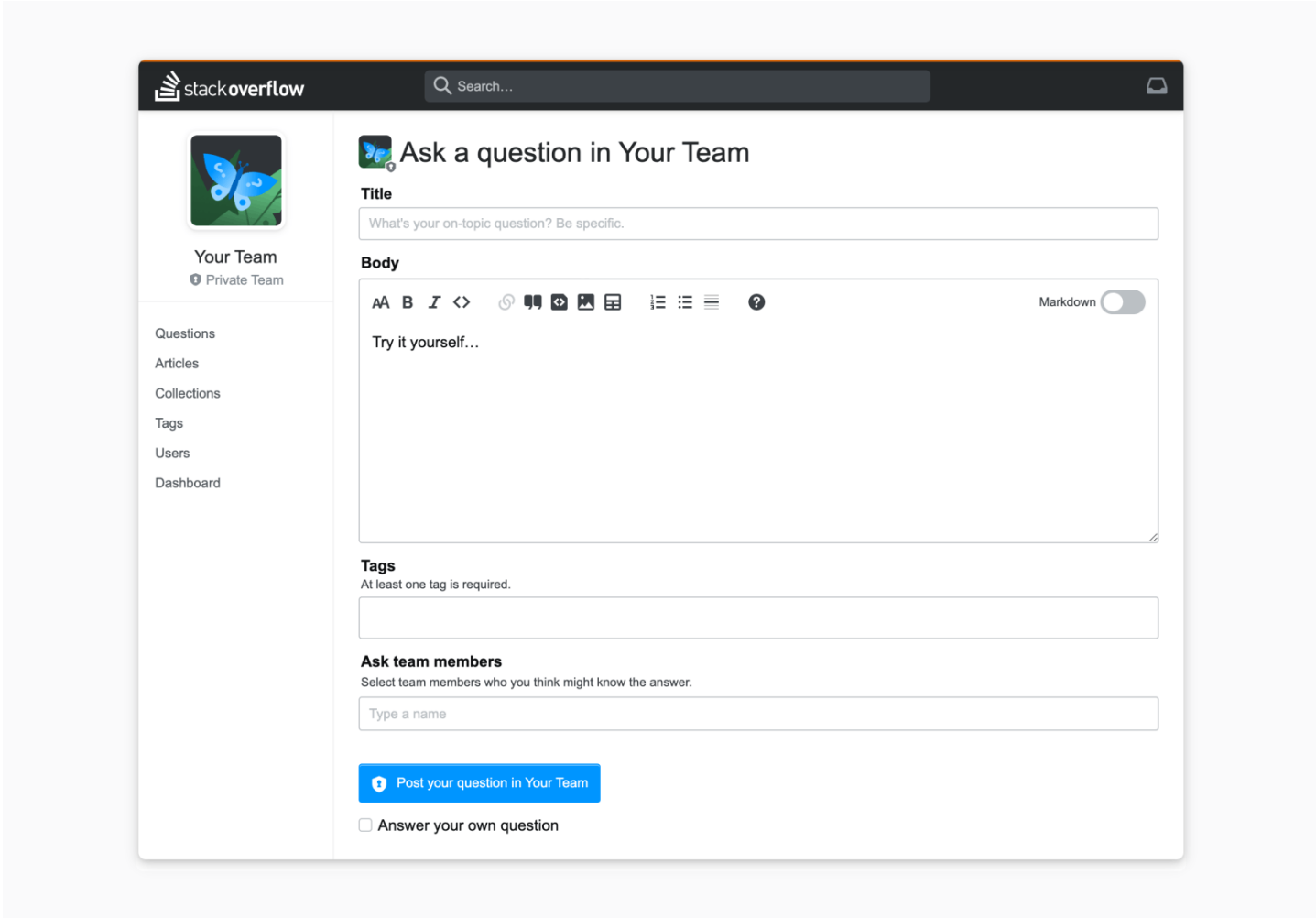
Another mantra repeated by the teams she met with was a desire to communicate through code, to allow the knowledge teams already possessed to be better leveraged by colleagues. "To me, that is the core of InnerSource, to find ways to tap into the resources your employees already have, and to find new channels for disseminating that information," says Montes. "We want to communicate through the work that we're doing and not create more meetings, more time spent figuring out where to look or who to ask. Stack Overflow plays a big role in InnerSource because it helps us document all these answers that are needed for engineers to move quicker."

One of Montes' big goals was to empower engineers from across the company to solve problems in areas they might not be directly assigned to, and to break down silos between departments so that expertise and ideas can more easily spread.

Stack Overflow plugs into both of those goals pretty nicely. You see areas where you might have the answer and you can find solutions from subject matter experts you have never met. You are able to move faster and collaborate on code that you hadn't worked on before.

—

Rocio Montes, Staff Software Engineer



Learn more about how Stack Overflow for Teams works by taking a tour.

Because questions and answers can receive votes and comments from any user, it reinforces a culture where contributions are welcome. “Every code review can be an opportunity for mentorship,” says Montes. As InnerSource and Stack Overflow have spread, “it actually makes it so that both contributor and maintainers are learning from each other.”

Intuit still has traditional documentation. “We are pretty big on having ADRs (Architecture Decision Records) documented on the repositories,” says Montes. But it has made Stack Overflow for Teams part of a small handful of products that will consolidate Intuit’s developer collaboration tools. It’s even adding a dedicated community manager to help improve and grow its internal Teams instance. The goal, says Montes, is to ensure documentation isn’t just for recording rules, but for solving problems. “Stack Overflow helps out on unblocking engineers, and that is a big thing we didn't use to have.”

Expensify

Engineers from Expensify are using Teams to improve collaboration and how it saves them hours of wasted time each week.

▶️ Watch video

A lot of companies talk about having a flat organization, but few take the approach as seriously as Expensify. The firm operates on two simple maxims:

Get st done**

Don't ruin it for anyone else

Engineers can come in and choose what they want to work on every day, which means there is a constant dialog between coworkers trying to understand one another's code. That involves lots of face to face

conversation, email chains, chat rooms, and direct messages. “People ask questions on GitHub and Slack, and those can get lost,” said Nikki Wines.

There aren’t a lot of titles or managers, which means developers need to rely on one another. To help onboard new hires, the team created a wealth of documentation, but it wasn’t easily accessible. “Our documentation at Expensify has been…fairly terrible in the past,” said software engineer John Lee. “People would rather talk to someone with more knowledge than to go search through all these pages of documentation we wrote.”

Over the last six months, the team has also begun using a new tool: a private version of Stack Overflow where they can exchange questions and answers and vote on the best information.

“Any programmer knows how to use Stack Overflow, so to have it applied to a single code base is just that much more valuable,” said Brandon Meeks. It’s been integrated with Slack, so that when a new question appears the whole team gets notified and people with the best answers can immediately respond.

Expensify wants programmers to feel empowered to work on any project, and Stack Overflow has made that easier. “Everyone has a certain amount of code base that they are familiar with, but sometimes you might know about an issue much more deeply than the so called subject matter expert,” said software engineer Ira Praharaj. “It gives an open opportunity to everyone who has the knowledge to share it, and there is no bias.”

“I don’t have to go through the hassle of finding someone who knows the answer, figuring out if they’re available or online, and then talking to them. That conversation has already happened on Stack Overflow,” said Meeks. Engineers across the company estimated they were saving between two and three hours a week that had previously been devoted to hunting down knowledge.

The tech team was the first division to adopt Stack Overflow, but it didn’t stay contained to them. “As we started to use it and see how nice it was to have a repository of information, we started to see it spread to other teams,” said David Drake. “Our customer support team started using it, our people success team started using it, next thing we knew, we had integrations all over the place.”

Elastic

Eastic's customer support function leverages Teams to share institutional knowledge and house answers they can find quickly at scale.

Elastic is a search company helping organizations of all sizes use the power of search to solve critical business challenges. Its technology is used : across application search, logging, APM, and security analytics. In the early days of Elastic, the core of what Elastic offered was its open source products — Elasticsearch, Logstash, and Kibana — where many answers to questions were available on the web and through the community.

"You can search the open web and find a wealth of information," said Marty Messer, vice president of customer care. "In order to support our early customers, we had to explain that they might find 50 answers, but that our support engineers could help them decide which one was best for their particular use case."

The products that Elastic offers has grown to include hosted and managed solutions. For organizations who want a turnkey product to manage their Elastic Stack environments, Elastic provides Elastic Cloud Enterprise, and for users who want to support their Kubernetes deployments, Elastic offers Elastic Cloud on Kubernetes.

This includes full paid subscription offerings like Elastic Cloud Enterprise (ECE). "Search for answers about ECE and you won't find much, because customers keep the details of their environments private, and each installation is relatively unique to the underlying architecture," says Messer. "While it is built using all of our open source products and based on our Elastic Cloud service, it is full of proprietary features common in enterprise software. So we have to build and curate all that knowledge in-house. It was a real shift for us."

Messer and others quickly realized that the organization's traditional approach to customer support and internal documentation would have to change. "You have knowledge stuck in very few people's heads, the people who built it. To extract it is very difficult," he explained. "So when we do extract it in that moment, we don't want to have to extract it again. So that's the real driver. That's really where it all started."

Let your team use the tools they already know

When Elastic was a relatively small organization and most of its products were open source, customer support could be handled through email and group chat. But over the last few years, it outgrew those methods. "When somebody has a question from a customer or is in the middle of an issue, we've gotten to a size where it's impossible just to go to chat and ask the question," says Messer. "You can do it, and everyone on the team will try to be super helpful to each other, but you miss it. It's just way too synchronous, and half

the time it scrolls away before you have a chance to read it. We wanted something more persistent, asynchronous, and global."

At first, the Elastic team turned to the internal tools it was familiar with. "We already use GitHub for our code," says Messer. "We also use it anytime that we need to escalate an issue to our dev teams from our customers. We figured we would try using that, because that's where our engineers spend their days." The support team began to put questions and answers into a GitHub repo created specifically to store this kind of knowledge.

Unfortunately, that solution made it difficult to search for answers later on, and there was no way to identify the best answer if multiple people had contributed ideas for possible solutions. Leaf Lin is a support engineer and cloud tech lead, a role that involves supporting both external customers and internal teams. "We used Github issue tracking, but the search wasn't very flexible. It also was not easy to find which answer is the best based on likes, you had to scrub through a ton of information to find the valuable stuff," says Lin. "We also tried using a Confluence wiki and Salesforce knowledge base articles. There was a voting system but people can't find stuff as easily or identify which answer was accepted as the best solution by our team."

In the end, the team tried exporting everything they had written across these three knowledge base platforms into Elasticsearch, where they built a huge database to act as a centralized wiki. "It worked, to a degree, but it was read-only, there was no good way to write," says Lin. "And even if you find an answer you like, you can't upvote it."

Eventually, the support team realized there was another tool all their engineers were familiar with and using on a day-to-day basis. "Stack Overflow is the site we visit most often for support related type questions, so it made obvious sense that we might have better luck internally with something built for exactly the thing we're trying to do," says Messer.

Helping support find answers quickly

Elastic Cloud customers have access to support as part of their subscription. The support team is the first line of defense, but when they can't handle something, they escalate it to the development team, which includes the core developers who author features for Elasticsearch, Kibana, Beats, and Logstash.

"When I came into Cloud, we were struggling with that, the process of escalating efficiently from support to development for our Cloud products," says Suyog Rao, Director of Engineering at Elastic Cloud. There was a lot of buzz around Cloud, and it was new and growing rapidly. "We were at a point where the same questions were being asked over and over, and it was not very structured. It was all on Slack, it was through email, through the wiki. There were multiple sources of information that we had to deal with."

When support staff couldn't find an answer, they would reach out to the developers who built the product. "Developers at Elastic love collaborating with support, but constant context switching because you're being

asked similar questions by multiple people across multiple sources was consuming a lot of time. That's what we were trying to solve," says Rao.

Rao stresses that this isn't some division being drawn between the two departments. "Development and Support should work hand in hand. It's not that developers are too busy to assist on support." But the only way engineering can help at scale is to have some kind of structure where they can capture some of the solutions to existing issues and common patterns. "Engineers should help solve the hardest questions, the unknowns, where being familiar with how the product was built is essential. But we don't want to keep answering solved problems over and over again. That's where Stack Overflow really helps,"says Rao.

For example, a common problem among customers who were scaling quickly was that they would underprovision their cluster. You start small, and then send a lot of data into that, and that would manifest into multiple problems: "I can't upgrade" - "I can't back up my data" - "I can't add any new visualization to my data." The crux of the problem is capacity, but it may not always be clear that customers with varied symptoms are suffering from the same illness.

With Stack Overflow, it was easier to find the answers to existing questions and to organize knowledge around certain topics using tags. "We found a way to show the support team, here's the base problem that is common across multiple customers, and here is the area where you can learn all about the various solutions we've implemented over the years," says Rao. "Once they know that, they don't even need to involve engineers."

At the same time, Rao has noticed that the work the support team does on Stack Overflow creates useful data the development team can tap into as they decide what to build next. Folks from across the development team, not just the support team, subscribe to an email digest that catalogs the top questions and answers. "Not everyone gets into the Stack Overflow system day to day, but when we receive the email updates, we channel that into our roadmap planning, creating a feedback loop."

A way to transfer soft skills - institutional knowledge about client relationships

Working with large enterprise clients requires a lot of finesse, especially when they will be relying on you for mission critical infrastructure. "We tend to work with customers on their architecture and how they scale, more consultative topics. That often means there's no simple answer," says Messer. "It's not so much, 'What does the setting do?' We already have good docs on that. It's really about, I've got a customer who wants to scale from 10 terabytes to 10 petabytes. How should I think about approaching that conversation with them?"

Despite this dynamic, Elastic has resisted the idea of siloing off certain engineers for different clients or topics. "We're not the kind of place where we have a team that comes in over top and says, 'We're here,

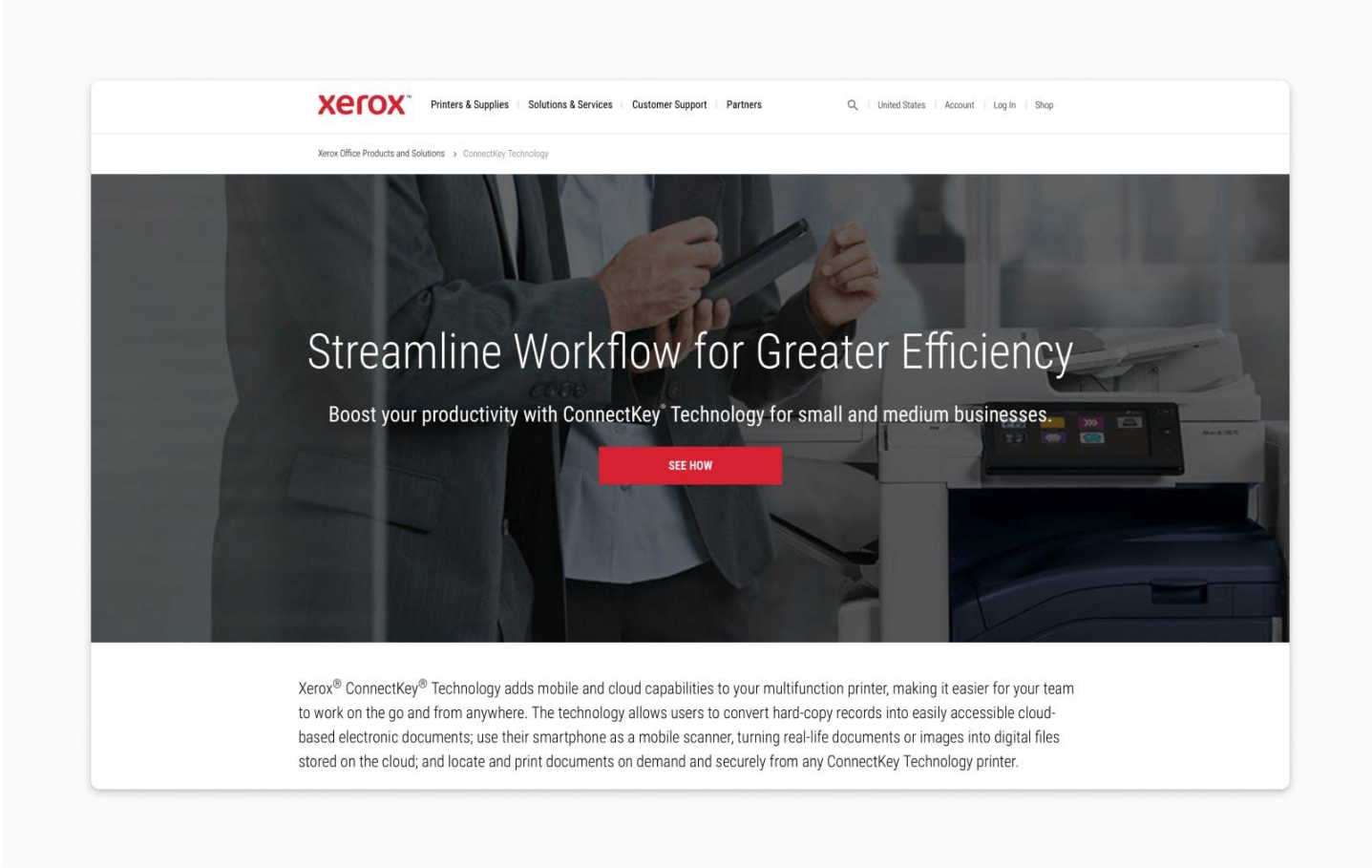
we're the scaling experts.' Every engineer's expected to have that conversation with a customer if they get asked."

The dynamic nature of Stack Overflow, where anyone can ask or answer a question, where anyone can vote, and where anyone can comment, helps to preserve a useful, well-organized version of these larger, more nuanced conversations. "The way one of our engineers needs to approach thinking about having that kind of conversation with a customer, that's one of the big pieces that gets bubbled up." To be able to tag and organize things, to make clear what answers are fresh and which ones are not, has been invaluable. "Sometimes our answer for a customer is locked and loaded, sometimes it's more experimental. To be able to get that disseminated across my team without having to do a synchronous video call each time, that's a big advantage."

Traditional documentation is great for explaining what all the features and functions of a product do and all the possibilities of a configuration. But it doesn't help you navigate the real world problems customers are having. "Docs are lots and lots of information. But only when you intersect it with what that customer's trying to do does it really become knowledge," says Messer. The ability to rank, edit, organize, and comment on questions and answers in Stack Overflow makes it far easier to organize, archive, and search through this kind of knowledge. "You need both, because it's the use case, it's the context that that information is put in, that's when it becomes really valuable."

Xerox

Hundreds of Xerox's third-party software developers use Stack Overflow for Teams to onboard and get to work.



Empowering software developers to build the future with Stack Overflow for Teams

When Xerox set out to build its Global Xerox Developer Program, one of the key goals was to forge disruptive, automated support pathways between two groups. The first is a group of Xerox engineers that design the application programming interfaces (APIs) and software development kits (SDKs). These power the industry leading Xerox® ConnectKey® Technology platform of smart Workplace Assistants. The second is a group of third-party developers, independent coders, who are building out the new Xerox ecosystem of integrated third-party applications.

Giving third-party developers the knowledge required to integrate with Xerox inspired a project called "New Tools." Xerox wanted to break through silos and disrupt the traditional process of third-party development where collaboration and knowledge-sharing were a challenge.

Reducing repetitive requests

“We had a legacy forum system that handled customer issues with bugs and error codes. We repeatedly received the same feedback and questions, which left us with less time to actually code,” explains David Whiting, software engineer, Xerox. “We needed to find an alternative solution so we could focus on helping customers design solutions to get the most out of our products.”

To make developers feel comfortable transferring knowledge and acclimating to a new tool, Xerox adopted leading solutions in the software development industry. This led them to Stack Overflow for Teams.

> We had a legacy forum system that handled customer issues with bugs and error codes. We repeatedly received the same feedback and questions, which left us with less time to actually code...
>
> —
>
> **David Whiting, software engineer, Xerox**

Tool transformation

In July 2020, Xerox began using Stack Overflow for Teams. Their approach was unique. Most clients use the tool to help internal development teams collaborate and build a knowledge base. For Xerox, the tool served as connective tissue between the Xerox SDK/API Engineers and its third-party developers. This allowed coders to utilize search and tags to understand why they were getting certain error codes and how to address them.

How it works

The Xerox Global Developer Program portal leverages a Stack Overflow for Teams instance for self-service Q&A. The goal is to allow third-party developers to help themselves and to support one another by accessing key knowledge on demand. The Xerox Stack Overflow for Teams instance is connected through a Slack integration in the Xerox Developer Portal. Content from the collaboration in Slack channels is propagated to Xerox's Stack Overflow for Teams instance as often as possible to enhance the Q&A algorithm capabilities. A custom bot also greets each newly onboarded developer and gets them up to speed on their “New Tools” in order to minimize downtime in accessing key content.

Since implementing Stack Overflow for Teams, Xerox has added more than 165 questions and 162 answers to its database. The knowledge there educates third-party developers, saving hours of time for them and their teams.

“The onboarding and training process for Stack Overflow for Teams is relatively simple,” says Whiting. “Like most developers, I have Stack Overflow open most days while I’m working, so I’m very familiar with its functions and formats. That made it easy to pick up Teams and start using it right away.”

Like most developers, I have Stack Overflow open most days while I’m working, so I’m very familiar with its functions and formats. That made it easy to pick up Stack Overflow for Teams and start using it right away.

—

David Whiting, software engineer, Xerox

Driving results

The launch of “New Tools” was driven by Xerox management with the goal of making the company easier to work with and more agile as a partner.

“We viewed this opportunity with a startup mentality and saw it as a chance to leverage our ‘One Boat, One Team’ approach here at Xerox,” said Terry Antinora, vice president and general manager, Workplace Solutions Offerings, Xerox. “Our third-party developer partners are a key part of the Xerox team and they expect us to deliver the collaboration tools necessary for optimum results.”

Xerox has seen several hundred new third-party software developers come to xerox.com/developers since the Xerox Developer Program launched “New Tools.” The program, including Slack and Stack Overflow for Teams, is showing solid results.

“Xerox now offers this same capability to collaborate with other ConnectKey App developers in our instance of Slack, and quickly find answers on their own in our instance of Stack Overflow for Teams based on the powerful integration with Slack,” said Chris Mazur, global developer program manager, Global Offerings Solutions, Xerox. “With this approach, we recently solved an issue for a major US defense contractor in just 24 hours. That kind of speed is how we are winning and what differentiates Xerox as a software development partner.”

Access to Xerox “New Tools” for all eligible Xerox third party developers can be found here.

Grandcentrix

After experimenting and researching, Grandcentrix landed on Teams to help them better communicate and document cross-functionally.

The thing developer Sascha Wolf appreciated most when joining Grandcentrix was the passion of his colleagues to do good work. He fondly remembers many conversations with Stephan Hochhaus, Grandcentrix Vice President, HR and Organizational Development. Wolf says they were both “very interested in communication, how to communicate better, and how we can share knowledge better.”

Hochhaus sums up the challenges at the time as the typical growing pains of a young company: “We’re transitioning a lot and changing and evolving. And we found that people need to have a certain forum where they can exchange questions and find out what’s going on currently.”

For Hochhaus, the introduction of Stack Overflow for Teams came just at the right time. “I got one of those emails that normally I would have just deleted”, Hochhaus laughs, “but it offered Stack Overflow for Teams.” He admits, “We were probably one of the first customers using Stack Overflow Teams.”

Sascha remembers some of the pain points that made the decision easy. “When Grandcentrix introduced Stack Overflow for Teams, it was this initiative to try to formalize on how we share knowledge.”

“We had lots and lots of information scattered across various systems”

Grandcentrix had been looking for a knowledge management tool for a while, but nothing really worked. Unfortunately, that meant they had multiple tools that didn’t really solve their problems. Hochhaus says, “We had lots and lots of information scattered across various systems.” They tried many tools, but they all came up short.

“Documenting [knowledge] in Jira was of no use, because once the ticket was closed, it was just gone. You couldn’t actually research it anymore.” For a while, Confluence Wiki seemed the most promising candidate, as Wolf remembers: “Grandcentrix used Confluence Wiki for everything, even project planning, budget, things we learned during writing code.” That wide array of different content ended up becoming an issue, because, when using search, “it was super hard to find anything. You were looking for a full answer and thousands of pages popped up and you had no idea which of these pages was the correct one.”

While good in theory, Hochhaus agrees there was a lack of proper adoption to make it work. Similarly, GitHub had its limits in search capability. Hochhaus says: “GitHub was also full of information. But nobody actually used it to research things. What they did was they Googled everything.”

The company, like most organizations these days, also tried to manage the problem through a chat app. “Like most companies, we’re using Slack. There was a lot of information on Slack. But even worse than with Jira and Confluence, you cannot find anything once it’s gone in Slack, once it scrolls up.”

After so many failed efforts to find the right solution, Hochhaus really appreciated being able to bring Stack Overflow search capabilities to his team. “Everything changed with Teams”, he says. “The nice thing about Stack Overflow for Teams is that it’s familiar to most users. So most of the people here, who are engineers, obviously, they know Stack Overflow. They know how to ask a question, they know how to get an answer. So this is a tremendous benefit.”

“Like an AMA on Reddit, just on Teams”

Hochhaus is especially fond of the tags: “The benefit of tags is great. You can see who asks a lot of questions about a specific topic, who answers a lot of specific questions on a topic.” Hochhaus describes how they previously had a directory on the wiki, which they called “Yellow pages for experts.” Stack Overflow for Teams now offers this insight on the go: “If you look at Stack Overflow and you see the tagged questions and you see somebody answered a well-accepted question on Bluetooth Low Energy, probably they’re a good starting point to talk to your colleagues.”

As a company experiencing constant change, Grandcentrix not only relied on a faster, better way to get answers on their team, they also found Stack Overflow for Teams really helpful for communicating across the company. Hochhaus says it's "like an AMA on Reddit, just on Teams, which is much better suited for us."

"People could upvote the questions, could show there's a lot of interest in this one being answered. So we could elaborate on this, could explain a little bit what we are planning. And this was very well-received."

And Wolf describes his experience, being one of the early adopters of Teams at Grandcentrix. "In programming, you basically go through the cycle of, 'Okay, I'm a genius, this works. Oh my God, I know nothing this doesn't work, I'm too stupid to do this job.' I think Stack Overflow builds this bridge in between I have a question, I don't know the answer and then, okay, this is all the information now at my hand to solve a problem."

IMC

Technology-driven trading firm IMC leveraged Teams to share knowledge across distributed, global offices.

IMC is a leading technology driven trading firm active on over 100 exchanges and trading platforms across the world. Across offices, teams of technologists and traders work together to design and develop the software, hardware, networks and algorithms that drive their strategies and make them one of the world's leading liquidity providers.

The search for a scalable knowledge sharing solution

At IMC, developers are split between three different offices — Chicago, Amsterdam and Sydney. For many years, the engineering team at IMC used a combination of internal and external tools for knowledge management. However, these different tools were disjointed. As a result, IMC's developers often had trouble knowing where to ask a question or find information about a problem that had previously been solved.

"We had been looking for a decent shared knowledge system for as long as I can remember. Just like most companies out there, we have quite a bit of tribal knowledge about our systems but it's spread across many different forms," explains Tyler McDougall, Development Team Lead at IMC.

Tyler and his colleagues were avid users of stackoverflow.com, so when they came across Stack Overflow for Enterprise, it seemed like the perfect fit.

"Stack Overflow speaks for itself. Everybody knows about it, everybody uses it, everybody wants it, and this is what we wanted."

Implementing Stack Overflow for Enterprise at IMC

Tyler, who spearheaded the implementation of Stack Overflow for Enterprise at IMC, used his involvement in the company's onboarding process as an opportunity for introducing the product to new developers. After selecting developer moderators and developing a baseline of questions and answers, he started to drive engagement on the platform by introducing it to people that just joined the organization.

"If I were to join an organization this [Stack Overflow for Enterprise] is exactly what I would want. It's intimidating when you first join a company - you don't want to feel stupid for asking what might feel like obvious questions. But if there was a place where you could vet them beforehand, that would be perfect.

You can improve the overall efficiency and the health of the people onboarding in the organization with something like this," explains Tyler.

With this in mind, Tyler would show all the new software engineers at the company how IMC uses Stack Overflow for Enterprise so they were actively using Stack Overflow to ask questions within the first couple of days on the job.

"Stack sells itself. People know what it is, so it's not a surprise. They already have opinions on it and how it could be used. You just need a catalyst there to start it and then remind people about it every once in a while," notes Tyler.

Tyler was that catalyst for IMC, and with his involvement in onboarding, learning and development, and engineering, he was able to lead an effective strategy for developers to start using the platform.

Driving Engagement and Integrating Stack Overflow for Enterprise into their Workflow

Engagement is the mark of a healthy community and ensures quality and quantity of content remains high. To help spark that engagement, Tyler's team started sending a weekly digest to their developers. The email digest listed the top users, top questions, reference tags, direct links, and calls to action. This gave developers visibility into what kinds of questions were being asked, what needed to be answered and reminded them to visit the platform on a regular basis.

Tyler's team began to track user engagement and leveraged Stack Overflow's API to develop an internal dashboard where they could see who from what office, region, and role was using Stack Overflow for Enterprise. Engagement became a metric that Tyler could set goals against and share with others at the company.

To give engagement even more of a boost, Tyler's team created an integration with their internal developer Slack channel. As soon as someone asked a question on the platform, all members of the Slack channel were notified. Since implementing this integration, 95% of all questions asked on Stack Overflow for Enterprise are answered within minutes.

"We don't have questions that are unanswered more than a couple minutes. It just doesn't happen. The user adoption and engagement with the platform has been very impressive."

One of the success stories that really convinced the team at IMC early on that Stack Overflow for Enterprise was really making their developer organization more successful was a question from a trader in Sydney. This

trader used Stack Overflow for Enterprise to ask a question about a particular API query that was slowing down his work, and he couldn't figure out why he was having this problem. After a couple back and forths with a developer in Chicago, he figured out that he was selecting a date range that was too wide and was able to resolve the issue to get the results under a second. Before Stack Overflow for Enterprise, there was no way to connect the two, and no way to know that someone in Chicago would have the answer to a question from someone in Sydney.

Looking to the future

Tyler and the team at IMC have already achieved their objectives with onboarding, developing integrations and measuring the effectiveness of the platform. Stack Overflow for Enterprise is becoming part of every developer's morning coffee routine at IMC. Whether it's going to Stack Overflow directly, or using it through one of their internal integrations, the seamless integration of the product into a developer's workflow is making the company more successful and efficient.

The Flex Company

Flex uses Teams to capture historical context and finally rid themselves of inconsistent and disorganized documentation.

In 2016, The Flex Company launched with eight employees that shared the common goal of creating life-changing period products for women. Since then, Flex has raised $3.5 million in funding and established itself as one of the leading innovators in the health and wellness space.

As Flex evolved over the last few years, the need for a more sophisticated and organized approach to software development became abundantly clear to its leadership team. Learn how Flex's engineering team leveraged Stack Overflow for Teams to capture internal knowledge and increase everyone's productivity.

The Challenge(s): Inconsistent and disorganized documentation

Morgan Jones joined Flex as its Director of Engineering in 2018. Even though the department was small, Morgan knew that one of her top priorities upon accepting the job was to improve team-wide collaboration.

"We relied on a few different products for document sharing," Morgan says. "But because there were so many different sources of truth, we didn't have a very coherent approach to documentation—and as a result, a lot of historical context was lost."

The challenge of finding an effective documentation platform has followed Morgan throughout her career. "As a manager, the concept of living documentation is something that has occupied me for quite some time," says Morgan. "For a long time, I didn't think there were many ways to do it even remotely well."

The Solution: A platform that Flex's developers were already familiar with

Because of her familiarity with Stack Overflow, Morgan says that she was immediately intrigued by the possibility of Teams.

"Because it's so interactive, a private version of Stack Overflow immediately felt like the best way to approach documentation," she says. "And because most developers are already comfortable with the platform, I figured it wouldn't be an uphill battle to convince them that Teams was the right solution."

After Flex implemented Stack Overflow for Teams, Morgan tells us that it paid immediate dividends. She tells us that information that had been considered lost was suddenly documented, organized, and easily

accessible. As a result of this initial success, Morgan says the next logical step was to make Teams an even bigger part of the software development process at Flex.

“Because we work with so many contractors, we’ve made it a requirement to answer relevant questions on Stack Overflow for Teams before marking a project as ‘complete’,” says Morgan. “This addition to our process enables us to capture all of the important details before we move on to something else.”

The Results: A new definition of the term “legacy code”

Morgan and the team at Flex have already seen short and long-term benefits of using Stack Overflow for Teams. “We recently had an engineer leave for an extended break during the holiday season, and Teams was instrumental in making sure we had proper coverage,” Morgan says. “Instead of peppering him with questions before he left, I was able to write them down and get his answers documented by him, which was really helpful for both of us.”

Morgan also feels that Stack Overflow will have a long-lasting effect on more than just Flex’s approach to documentation. “We're a startup, so I'm starting this now as something that hopefully will continue to pay dividends for a very long time,” she says.

“I've worked at places where so much information is locked up in people's heads or people who've left the company. Stack Overflow for Teams gives me confidence that we’ll have all the historical context we need to hit our future engineering goals.”

Adidas Runtastic

With Runtastic growing from 20 developers to an engineering team of 120, Teams became a central tool to enable collaboration across offices and department silos.

As part of the Adidas group, Runtastic develops a continuously evolving portfolio of apps and online services to track fitness and health data. Their product is used by 142 million fitness enthusiasts and those wanting to become more active. The team committed to an agile development philosophy, but as it grew from 20 developers to an engineering team of 120, the leadership team recognized there was a challenge in maintaining that culture. Stack Overflow for Teams became a central tool to enable collaboration across offices and department silos.

The challenge(s): Protect a culture of flowing communication in a growing tech department

Founded in 2009, Runtastic grew from a small team to a 250-person-strong organization spanning Salzburg, Pasching, and Vienna. With many of the core team members still around, they had to adjust from a place where everyone was catching up with everyone on a daily basis to one where information flows through static written sources. Here they faced the problem many development teams face: “The documentation ends up more then you needed.” David Österreicher Head of Engineering Premium describes one of the inherent problems of documentation.

“You sit down to write a piece of documentation in a wiki, in our case Atlassian Confluence, but the person writing documentation never knows how many details to include. You then need all these smaller clarifications around it, so you ping someone on Slack, and get more context.” This additional conversation would then be lost, not searchable, in the Slack timeline. With the result of the team answering the same question over and over again. “We were just repeating ourselves constantly.”

So Österreicher was instantly convinced when the Stack Overflow for Teams announcement came: “Someone suggested it in a chat room ‘Hey could this be useful?’ And the offer was instantly convincing: Only document the things your team wants to know at any given point. That benefit was obvious.”

The solution:

Runtastic saw the advantages of Teams filling in a gap between their Wiki and chat tools. Engineering still uses the wiki for things their system architect Roman Zavarnitsyn describes as “heavy documentation” with “lots of charts, lots of explanations, lots of mentions, lots of action points.” But as Stefan Damm, VP of

Engineering, agrees, the strong point of Teams has been to surface just the bite-sized information that people ask for. “We still write and update documentation in the wiki. But Teams works as an index.”

Establishing a standard during adoption

The roll-out initiated by Österreicher on the backend team was later adopted by all product development teams. Team members were required to add example questions to the Team. “We followed the onboarding recommendations from Stack Overflow. Finding example questions was easy, we just looked at the questions in chat for the last two weeks.” Leading by example quickly resulted in establishing a good standard for questions. Österreicher “I believe people experienced first hand if they put in the effort, format a question nicely, re-read it, then they get a better answer in return.”

“We saw a slightly different usage than on public Stack Overflow. People don’t just give a straight answer, they also add some context. Like ‘Oh we did a project just like it two years ago’ or something like that.”

Slack integration leads behavioral change

The staff and management saw it integrate into communication processes instantly. “The impulse still is to ask a question on Slack first, but with the notifications, it so easy to then prompt someone to as a second step create a question on Stack Overflow for Teams.” Here the integration with Slack has become daily use,” Österreicher says, with employees using the button to suggest to each other when something would be a good fit for a Stack Overflow for Teams question. “But for the not time-sensitive questions people will go straight to Stack Overflow, so we cut out a lot of the noise we would previously get through Slack.”

Together with a dedicated internal champion, each team at Runtastic has set up tags for specific teams, technologies, and platforms. Which Österreicher says sits well with the matrix model in which they are structured. So tags reflect not only the teams of engineers working together but cluster around fields of expertise.

Zavarnitsyn sees the benefits here of working across different teams and offices. Conversations that would have happened in a smaller group are now visible to the whole company. “I am in Linz, so it really helps to just post something under, say, the Android tag. And then we have a Slack channel set up for that, so everyone at the company will see that question.” As an active user of the public Stack Overflow site Zavarnitsyn enjoys the additional means to notify members in Runtastics private instance. “My favorite feature is that on the private instance you can mention a specific person who might know the answer.”

Adding context and history to formal onboarding documentation

Not only did the quality of answers improve massively to those previously shared hastily in an email or chat, but Österreicher also notices that because Stack Overflow for Teams isn’t full-blown documentation, the

kind of questions sometimes have a conversational aspect them. “I call this Runtastic lore: decisions and context that otherwise, only two people would mention over coffee.” He gives an example of a backend service called VEGAS, which is confusing to new starters. Initiated Runtastic members know it stands for Very Excellent Gamification Service While this is an example of an in-joke, Österreicher appreciates that Stack Overflow for Teams has become a place to ask for more context, especially during onboarding. “It adds a bit of history to the otherwise straight-forward documentation.” Österreicher says “We might see questions like ‘Why do we do backend development in Ruby?’ So I could have just answered that in Slack. But then the answer would have been gone forever. Even though it is quite an interesting answer.”

Surfacing tech discussions on the team

Not only does Teams improve collaboration between engineers, it also offers leadership insights into the technology question that move the team. “As a VP of Engineering leading over 100 people, it has brought me closer to the work again.” Says Damm. “I saw what the people are concerned about in the day to day work. What questions do they have that need to be answered? It gave a better picture of where to focus certain initiatives, how to improve the onboarding.”

One of the most useful questions in that regard are those that are no longer on Teams says Österreicher. “At some point, certain architecture discussions happen on Teams. Where we then knew these more fundamental questions need some space for opinionated exchange. So even though we closed the question, it had surfaced the need to address the discussion.”

Primer

Machine learning company Primer used Teams to fill knowledge gaps and scale institutional knowledge at pace with their growing team.

Primer is a machine learning company that helps clients quickly find critical information, separating the signal from the noise in vast amounts of documentation. Its system can identify key insights and automatically write reports across topics like law, retail, finance, and national security. The San Francisco based start-up has raised $54.7M and counts government agencies and Fortune 50 companies among its clientele. The team has a diversity of experience, with some coming from computer science, but others joining Primer from the worlds of biology and economics. Like many fast-growing companies, they have run into challenges trying to document their code base and collaborate across different product teams.

The challenge(s): A fast-growing company needs their knowledge sharing to scale with them

William Du, a data scientist at Primer, found that he and his colleagues were wasting a lot of time on repetitive tasks, especially when it came to helping new hires. "We needed to build a repository of the questions we ask because a lot of them were being asked over and over again."

Primer also needed to find a good way to identify subject matter experts and to get the knowledge in their heads written down in a manner that was easily accessible and simple to search. "As you scaled the team, information transfer gets trickier," says Amy Heineike, Primer's VP Product Engineering and founding team member. "There are things you learn, or rather, some of you learn. The question becomes: how do you get that information to the rest of the team?"

Team members talked a lot through Slack, but this didn't work too well as a knowledge base. "It's notoriously difficult to trudge through your Slack history to find one question," says Du. "GitHub didn't really make sense because we have individual products and they have their own repo so there's not really one place to put all your questions. And Confluence wasn't working as a way to organize and share knowledge."

Trevor Bossert, Primer's DevOps Manager, felt there was an opportunity to put structures in place that would allow the company to scale successfully. "When I first took on the DevOps role, there was not a lot of tooling, no great automation, and a lot of decentralized decisions. We have a lot of different teams working for different clients, but there wasn't the ability to easily share things that they learned, errors that they ran into."

The solution: A knowledge base that could reach across department silos

Bossert decided to try out Stack Overflow for Teams. “I've been a very avid user of Stack Overflow, the public site, for a long time. When I saw that you were doing a private version, thought that would be a really good way for our team to share tips and tricks, and for people to be able to answer questions and then refer back to that information later on.” By integrating Teams with Slack, Bossert could tap into the way developers already asked each other questions, and give them a little nudge to start building Primer’s knowledge base. The team immediately saw organic growth of this repository without needing to overthink or assign documentation.

Primer has product teams that work on different versions of the service specialized for clients in verticals like finance, retail, and national security. Bossert describes how developers often need to reach across product lines. “Sometimes you might need to pull information from our news database for an experiment. It’s not something you’re familiar with or do everyday. Our teams can be siloed, but if someone needs a bit of code, that’s where Stack Overflow for Teams really shines for us.”

Onboarding - time to coding - development velocity

When developers use a similar tech stack or are working, as in Primer’s case, on different versions of the same product, there is often a shared set of tools. But there are still small variations between teams that create gaps in the knowledge and turn into pain points that reduce productivity. “There’s a legacy that has built up over time, a series of decisions on how exactly the tools are used.” says Stanley Fich, a front end developer. “It’s essential that all the decisions we have made in the past - the little configurations, the answers to how and why we structured our processes - can finally be found in one place. You spend less time looking for these, and more time actually coding.”

"When you get to the point where you can succinctly describe your problem, somebody's been there with you, whether you know it or not,” says Fich with a laugh. He estimates that Teams has helped Primer employees save hundreds of hours by avoiding common questions from new hires. "Being able to build up that knowledge base over time has severely decreased the amount of time it takes to ramp somebody up."

Identifying trends and experts within the organization

The benefits are not just about ease of work and an always up-to-date repository. There are noticeable changes in the company’s culture as well. Junior employees have learned that all opinions are welcome and that they may have knowledge which is valuable to the larger organization. "Using Stack Overflow for Teams has made me more confident,” says Du. “Now, if I see a question that I know the answer to, I don’t hesitate to offer thoughts.”

When someone has a question, instead of just dropping it into chat and hoping the right person sees it, they can search by tags to see who has contributed most on specific topics. “Say someone has answered 27 questions for a specific tag, you know they are probably the right person to talk to,” says Du.

The activity in Stack Overflow for Teams also offers a roadmap for how to structure DevOps going forward. For example, Bossert believes it has allowed him to spot trends that he might otherwise have missed. "Tags are a great indicator of which tools are used in your organization at any given time. If I see a new language or framework is gaining traction, then I know that might be something we want to invest in." In this way, developers help to lead from the bottom up, orienting the company around the tools that come naturally to them. "We can see if more people are using a new technology at Primer,” says Bossert, “And we can address those trends in policies or conversations about how our tech stack should evolve.”

Doctolib

E-health service Doctolib applies its virtual mindset inward, making 100% remote onboarding a breeze.

▶️ Watch video

Founded in 2013, Doctolib is one of the fastest-growing e-health services in Europe. Its app is used by millions to book health appointments and conduct virtual consultations with doctors. This approach to medicine is more important today than ever, and Doctolib was recently chosen by the French government to assist users in scheduling their COVID-19 vaccinations.

Over the last two years, Doctolib has been on a tremendous growth trajectory. In 2019, it had 10 teams of software developers, each working on a feature of its app. Today that number is 22, with plans to grow to 40 by mid-2021. Its engineering department is split between Berlin and Paris, and with a headcount of more than 300 developers and tech workers, the company knew it needed to find a way to share knowledge effectively across the two offices.

When Fábio Guerreiro took a new job at Doctolib, he knew the process of joining would be different from anything he had experienced before. A global pandemic that began just a few months earlier meant offices were shuttered. Like so many companies, Doctolib had gone fully remote.

When starting a new job, setting up your development environment and learning the nuances of an entirely new codebase can be tricky. It's not always clear why something was built in a specific way, or who the best person to ask would be when you're confused by a line of code that is several years old.

As a new employee, the last thing you want to do is distract your colleagues with dozens of questions. The challenge for Guerreiro was figuring out how to bring himself up to speed and start contributing without having any of the usual face time around an office, introductions at a stand up, or casual conversation at lunch.

> The goal was to improve the knowledge transfer between co-workers and dev teams. Also, to offer a better onboarding for new hires.
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> **Thibault Boyer, Head of IT Products and Projects at Doctolib**

A map of colleagues and knowledge

Luckily for Guerreiro, there was a piece of the onboarding that was familiar to him. As a developer, he frequently visited Stack Overflow's public site to find answers to coding questions. Doctolib uses Stack Overflow for Teams to build its own internal instance of the Q&A platform.

Because Guerreiro could see who had asked and answered questions on various topics, he could identify subject matter experts and avoid wasting time—both his and his new colleagues—when searching for solutions to obstacles. "We can easily see which person usually answers which type of questions and create a mental map of which person we should go talk to."

By the time he jumped on his first video call with colleagues, he felt he already knew them. "It was really funny to finally assign a face to the name and speak to someone who already helped me three, four, or five times with questions that I posted on Stack Overflow for Teams. Someone that I already had debates with about the best answer. I think that's the new normal; first, we interact online and then we actually meet that person."

I joined right in the middle of the pandemic. Everyone was fully remote. Stack Overflow for Teams made the onboarding experience much easier.

—

Fábio Guerreiro, Full-stack Engineer at Doctolib

Asynchronous collaboration

Guerreiro's experience proved that Doctolib had achieved one of its core goals: getting knowledge out of the heads of their engineering team members and into an accessible format that everyone, even new hires, could easily search and understand.

"When I joined, I immediately had this huge sense of community. Everybody is super available to help." He describes Stack Overflow for Teams as Doctolib's own tech community. Team members collaborate on questions and answers to synthesize different viewpoints into the strongest answer. "We debate through it. Sometimes this means we split a question in two. Sometimes it means we combine several answers into one. We might chat in the comments, or via our Slack channel for Stack Overflow questions, and then always feed back the result into an answer."

How Doctorlib uses Stack Overflow for Teams

The simple format of questions and answers encouraged the team to write documentation on the fly. What was traditionally a slow and compartmentalized process transformed into a natural extension of daily conversation and collaboration. "You just get into the habit of it. If you think something is useful for the team to know and not on there yet, you ask and answer your own question. Most of the time, another person then adds to it."

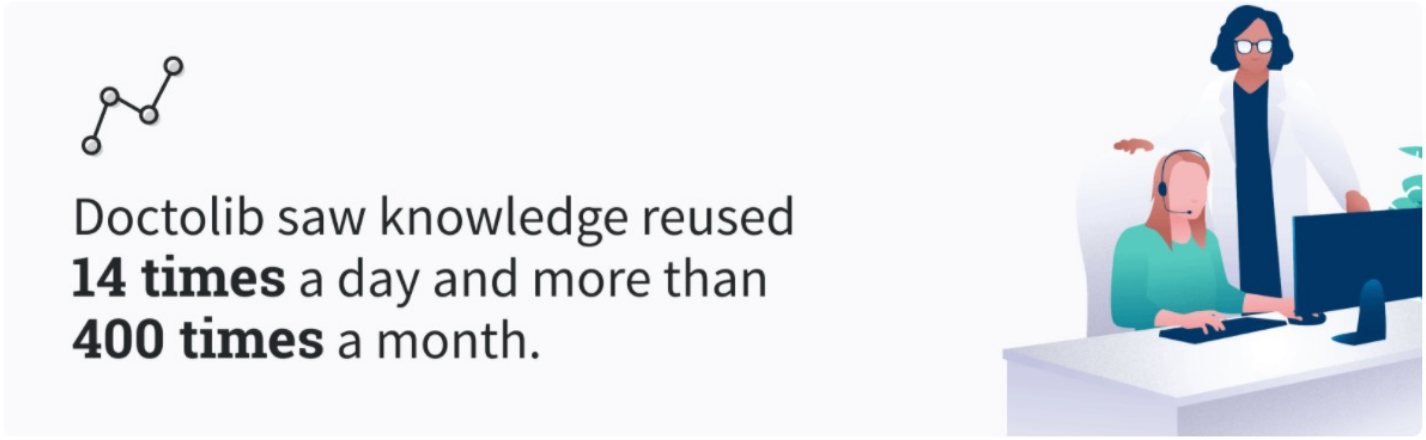
Even before the pandemic, Doctolib did a lot to create opportunities for intellectual exchange with monthly tech time breaks. People would stand in front of a crowd and present on topics. In a fully remote world, Stack Overflow for Teams has helped to facilitate something similar. After it went remote, the company began a new initiative. To create a place for internal thought leaders to share their expertise, and for the team to discuss new technology trends, developers at Doctolib began sharing bite-sized knowledge under tags like "hot tips" and engaging in friendly competition to see whose contributions would receive the most votes and comments.

- ✓ Create spaces for internal thought leaders to share their expertise
- ✓ Allow the whole dev team to discuss new technology trends
- ✓ Using tags and votes to 'gamify' and create friendly competitions

Within their knowledge-sharing tech stack, Stack Overflow for Teams has filled the gap for collaborative documentation, but also made existing knowledge more accessible. “We use Stack Overflow for Teams to index the knowledge we have sitting in Confluence. As a developer, I already use public Stack Overflow in my work, so having both next to each other on my start page and being able to find links to other documentation we have at Doctolib makes things so much easier.”

“Stack Overflow for Teams was the first product we introduced for this purpose,” says Thibault Boyer, the head of IT Products and Projects at Doctolib. “The goal was to improve the knowledge transfer between co-workers and dev teams. Also, to offer a better onboarding for new hires.” Doctolib began with 137 users in

2019 and has since expanded to 300 users. “With Stack Overflow for Teams, we have better cohesion and team spirit. Also, new joiners are quickly onboarded by themselves. We have improved the knowledge transfer and ensured our code logic is crystal clear for anyone.”

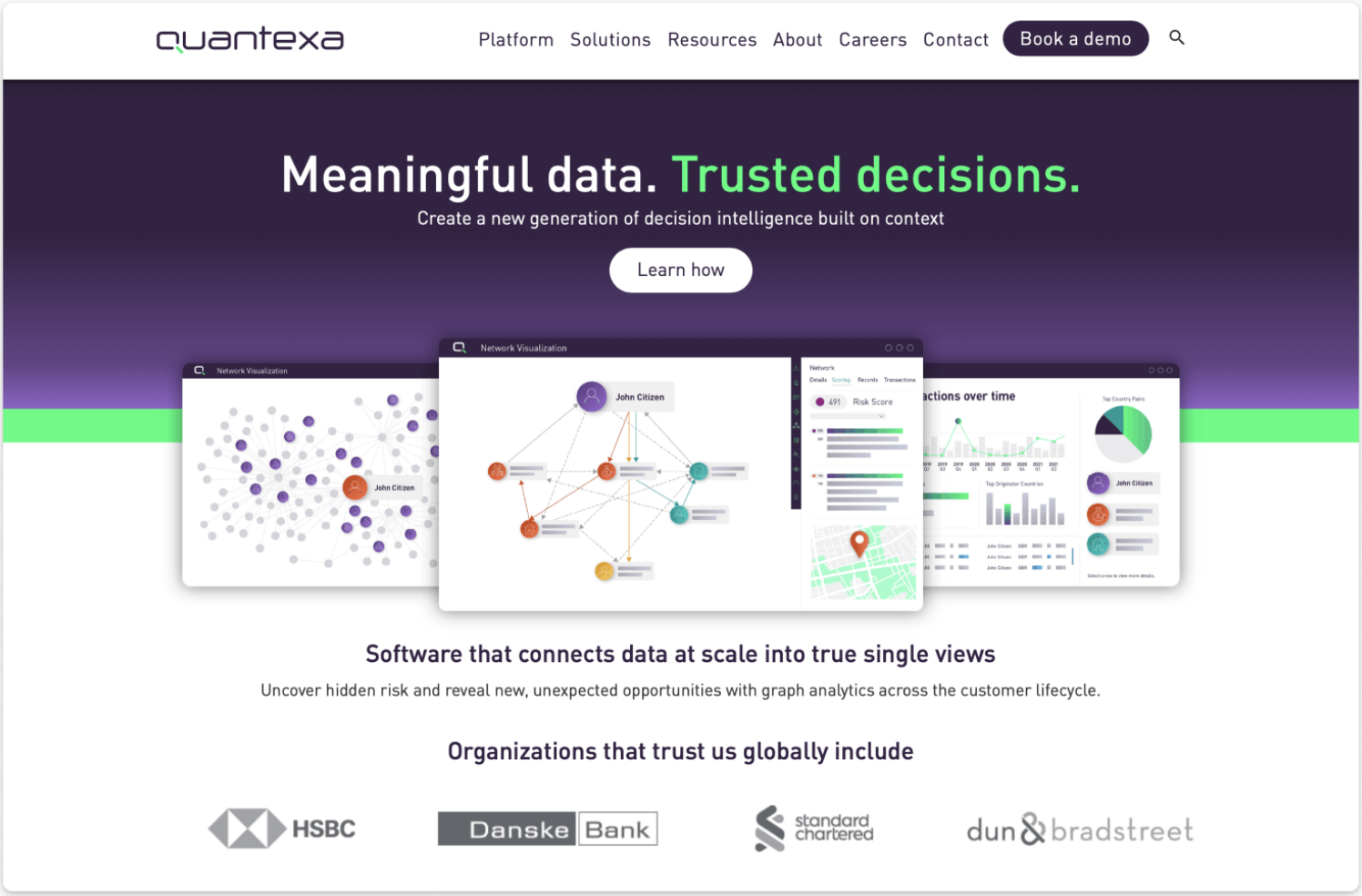


After starting out with half its developers, the company quickly expanded Stack Overflow for Teams to the entire engineering organization. For Guerreiro, it means he can get more done and distract his colleagues less. “You no longer need to break someone’s focus by asking them a question. And even if we did, then the knowledge would be stuck between me and them. This way we have it available for everyone else that might have the same question.”

Guerreiro says it has turned him into a contributor. “On the public Stack Overflow, I was just a reader, but on Doctolib’s instance, I began writing questions and answers right as I started.” What works for him and the others is the gamification. “Personally, what I would miss with a different solution is the points, achievements, and medals. As an engineer, you work towards targets, but you also work for recognition from your co-workers. This tool helps me get both.”

Quantexa

Quantexa optimizes deployment and customer solutions with Stack Overflow for Teams.



Quantexa is a software company that focuses on data-driven intelligence in finance and technology. For their customers, they provide fraud detection, data management, compliance, and anti-money laundering (AML) capabilities. Their customers tend to be large banks, government agencies, insurance companies, and other entities with an interest in preventing fraud or data mismanagement.

According to David Howes, Standard Chartered Bank's Global Co-Head of FinCime Compliance, a process that would have taken six or seven weeks was accomplished in a matter of hours with the help of Quantexa's platform.

In general, they're busy at work solving difficult data problems where complexity exists and scale is needed, with 160 engineers across nine countries.

The problem

The large enterprise clients Quantexa works with need new software to be well integrated with their existing systems. Quantexa's engineers are responsible for ensuring the client can deploy the product into their environments, and extend it to meet their needs quickly and easily.

Quantexa found that during the deployment of their product they would often be asked questions on how to use certain functionality or to help troubleshoot. This drew their team away from developing and improving the next iteration of their product. It also meant that customers needed to wait for a response from an engineer to resolve the challenges they were facing.

The team quickly realized that the questions raised by clients were often not new, and had been asked by other customers. There was a store of knowledge that would quickly solve these problems, but there was no easy way to connect the client's questions with existing answers.

> Before implementing Stack Overflow, we'd provided support in many ways, including email, instant messaging and phone calls. We would answer the same, or similar, questions from multiple clients across different communication channels, which is clearly inefficient.
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> **Nathan Grand, Principal Engineer**

Faced with these requirements and challenges, Quantexa sought to implement a system that is:

Sophisticated
Where developers could enter queries and receive responses at an appropriately technical level

Protected
Where proprietary company information would be secure

Scalable
As the client base grew, so would the platform capabilities

Dynamic
As more key information and useful answers are added, the platform becomes more of a useful resource hub

Communal
As newer partners enter the space, they have easy access to the collected wisdom of those with experience

The approach

Quantexa's engineers field all sorts of questions about implementing their software's different features. "The obvious place to turn when it comes to developer Q&A is Stack Overflow," said Ian Lees, head of R&D at Quantexa. "Everyone knows it, so when we direct partners to the platform, there's the implicit understanding that they already know it and 'get' it."

So, three and half years ago, Quantexa decided to implement Stack Overflow for Teams, producing a centralized knowledge base where both their employees and their clients could contribute to questions and answers that would be available, on demand, to those that needed them.

> We hypothesized that through Stack Overflow, our partners would get all of the benefits of community: shared processes, Q&As and technical discussions that people could find, even years later.
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> —
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> **Ian Lees, Head of R&D**

Quantexa required a truly secure information hub, both for themselves and for the partners putting trust in them. Said Lees: "We needed to use something with adequate privacy controls. We're very much a proprietary software solution and our clients include banks and governments, so if we told them to go talk to people on a public forum, that wouldn't be appreciated". Stack Overflow for Teams brings a SOC2 certification and numerous options for on-premise deployment to ensure the safety of customer data.

As Quantexa brought on more partners, they incorporated Stack Overflow for Teams into partner onboarding. They encouraged partners to check Stack Overflow for Teams any time they had a question. That way, partners wouldn't have to deal with the delay of sending an email or making a phone call, and then waiting for the response from Quantexa's engineers.

The results

- ✓ Customers are able to help each other out, without ever needing to contact Quantexa's teams
- ✓ Partners and customers enter the Stack Overflow for Teams space and immediately finding support from peers and equals
- ✓ The growing community of developers has access to shared knowledge that meets them at their own level

Quantexa has seen their partners and customers entering the Stack Overflow for Teams space and immediately finding support from peers and equals. Within a community of sophisticated developers working on similar issues, partners immediately access shared knowledge that meets them at their own level.

"The statistics from our Stack Overflow for Teams instance show just how often some questions and answers are useful to our community. Our most popular questions/answers have hundreds of views and tens of upvotes," said Grand. "We see far fewer direct requests for support through email and less repetition of the same questions, which boosts efficiency for us and our customers."

What's more, the system has had a snowballing effect. Over time, Lees noticed that customers will help each other out, without ever needing to contact Quantexa's teams.

"There's no better feeling than watching our customers help our other customers solve their problems," Lees told us. When that happens, Quantexa engineers avoid spending time on repeat problems and can devote more energy to solving new issues and building requested features. "It proves that the community is working and growing more valuable over time."

For Quantexa's Stack Overflow instance, the network and community effect is in full swing.

We get hours back, and problems solved, and higher degrees of customer satisfaction – basically for free. It's exactly the sort of investment that we want to make.

Lees has noticed several times that customers are solving their problems on their own, enabled by Quantexa's Stack Overflow for Teams hub. That means more speed for them, less overhead for Quantexa, and happier stakeholders all around.

"A big focus for Quantexa is on driving a community of Quantexa certified engineers who can build with Quantexa and support each other through this process. This is important to us as our builders are our lifeblood and it promotes the self-sufficiency of our clients and our partner base," says Chris Harris, Quantexa's VP of Customer Success and Enablement. "Stack Overflow allows us to point our customers and partners towards the community and they find like-minded people who can support them and help them to be successful with Quantexa. This is a key part of our solution, as we want Quantexa customers to be able to self-serve and ideate together."

To find out more about Quantexa, visit: quantexa.com