State of Dapr

2025

PRESENTED BY

V1.1 – 03/14/2025

Foreword

We are delighted to share the *2025 State of Dapr Report*, the second in this series. As you will discover in the following pages, Dapr is a thriving and rapidly evolving say, and we are as excited as ever for its future direction.

Here are some key highlights that stood out to us:

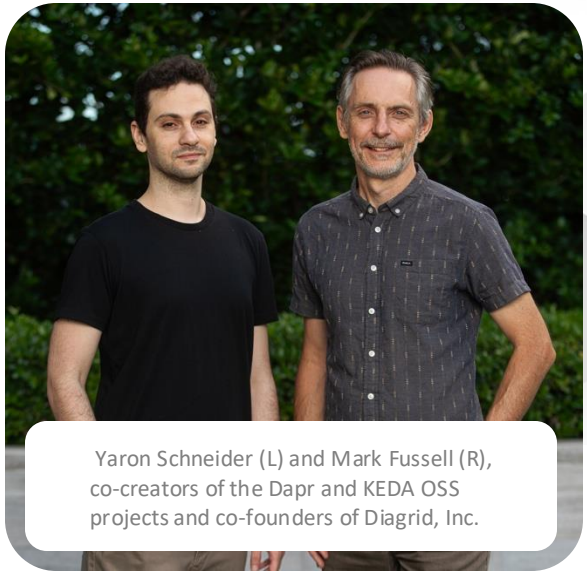
- **Dapr continues to save developers time**, with 6 out of 10 developers reporting time savings of 30% or more in productivity which increased from our 2023 findings. As we like to say, "Why reinvent the pattern?"
- **The Dapr community is thriving and continues to grow**, with application development teams and, increasingly since the last report, platform engineering teams adopting Dapr in all types of organizations.
- **Dapr has truly become polyglot in nature**, with rapid growth in the Java and Python communities as well as the continued strong usage in .NET and JavaScript.
- **The Workflow and Jobs APIs have become core to application development** and combine well with the existing pub/sub, service invocation, state, and secrets APIs.

With the rapid adoption of Workflow in the v1.15 release, alongside the introduction of the LLM Conversation API and the recent launch of Dapr Agents, Dapr has firmly positioned itself in the AI space. Built for distributed systems, Dapr aligns perfectly with the needs of AI agentic applications. The future looks bright for Dapr.

We hope the insights found in this year's report will help you discover and benchmark how your organization can benefit from Dapr and its rapidly evolving capabilities. They certainly provided us with compelling insights as we continue to evolve Dapr to lower the bar for distributed application development.

Finally, we encourage you to engage with the Dapr community and the Diagrid team. We are keen to hear how you are using Dapr, and how we can help you on your journey.

- Mark & Yaron



Yaron Schneider (L) and Mark Fussell (R), co-creators of the Dapr and KEDA OSS projects and co-founders of Diagrid, Inc.

Introduction

Dapr (Distributed Application Runtime) is an open-source project under the Cloud Native Computing Foundation (CNCF). Dapr provides developers with a set of APIs to handle common challenges in building distributed applications. These are known as "building blocks."

9 out of 10 survey participants are now aware of Dapr's membership of the CNCF, and with good reason; Dapr is one of the most popular developer projects in the CNCF, ranked 14th out of 173. In 2024, Dapr reached the highest "Graduated" status in the CNCF, joining the 30 top-tier projects including Kubernetes, Istio, Argo, Prometheus, and CoreDNS.

CNCF graduation comes after an intensive review of the project's maturity and industry support; Dapr has seen exponential growth since its inception in late 2019, boasting an active Discord community with over 8k members, 4.3k contributors and 25k Github stars, 1M+ image pulls/month and 300k docs views/month.

Enterprise adoption of Dapr also continues to grow, with over 40k companies showing Dapr early engagement or ongoing usage according to Scarf metrics as of March 2025.

With this second biennial survey of the Dapr landscape, we will once again explore the current state and trajectory of Dapr, comparing against 2023 responses.

By sharing this data with the Dapr community and beyond, our goal is to provide insight into how your peers are using Dapr, share the realized benefits of Dapr with those considering adopting it, and provide feedback to the project and ecosystem that can influence the roadmap, contributions, and resources.

About Diagrid

The State of Dapr Report 2025 is brought to you by Diagrid, a company dedicated to the development of Dapr through contributions to the open-source project and tooling to help organizations build on, deploy, run and manage Dapr at scale.

Diagrid is the main sponsor and maintainer of the Dapr project.

Diagrid Website

Diagrid offers four solutions to accelerate your organizations' work:

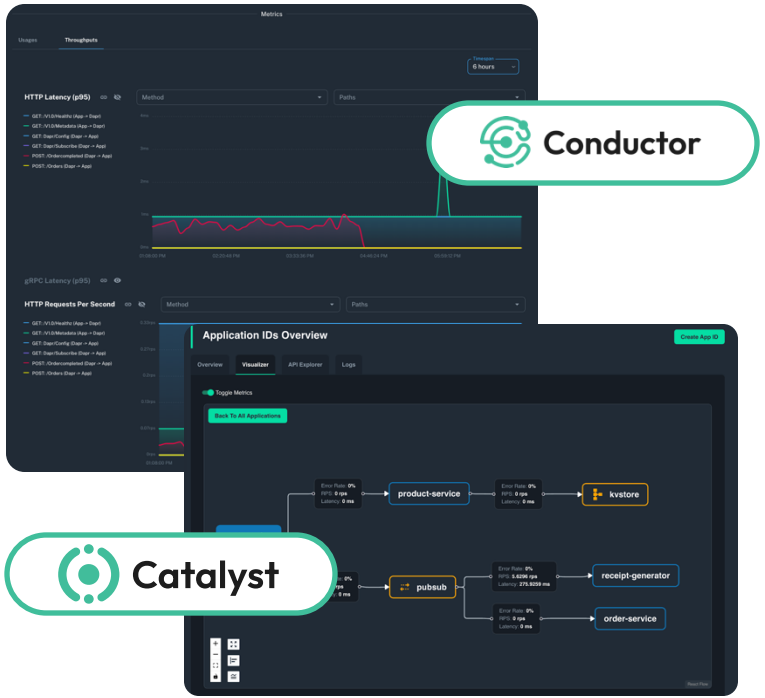
Enterprise support for Dapr: Run Dapr in production with full peace of mind. Includes 24/7 production support, CVE Resolution, Expert Guidance, and Architectural Reviews & Training.

D3E: An enterprise distribution of Dapr that improves security and extends Dapr's capabilities.

Conductor: Tooling to fully automate & monitor Dapr across your Kubernetes clusters.

Catalyst: Enjoy all the benefits of Dapr APIs without the hassle of managing the underlying infrastructure.

Diagrid



Demographics

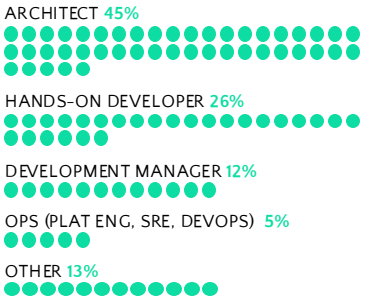
Our study surveyed active Dapr developers, architects, ops roles, and managers across organizations of different sizes. Diagrid commissioned Dimensional Research to conduct the study to understand the experiences and attitudes of the individuals responsible for adoption and use of Dapr in each organization. For 2025, survey participation grew by 30% to a total of 202 individuals, each of whom has a role that involves daily use of Dapr.

A majority (53%) of those surveyed consider themselves very knowledgeable or expert in Dapr. A slightly larger proportion (56%) served as the final decision maker when choosing the technology.

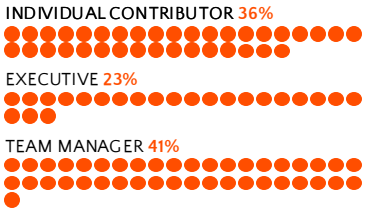
This research covers a wide range of industries including technology companies (33%) and financial services companies (14%). All major sectors are represented, including transportation (5%), retail (3%), healthcare (7%), Government (4%), and energy and utilities (3%).

Geographies represented are EMEA (42%), North America (33%), APAC (21%), and Central/South America (5%).

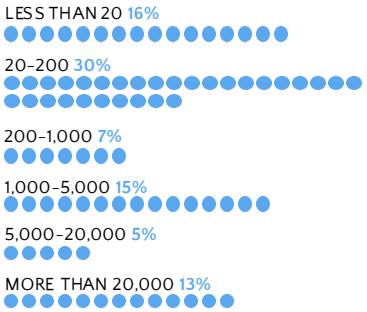
ROLE



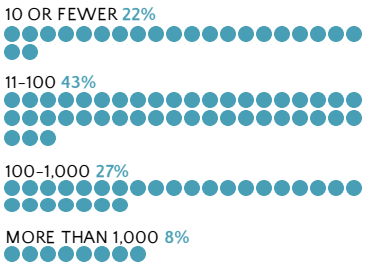
JOB LEVEL



COMPANY SIZE



OF DEVELOPERS



1. Dapr in Action

Three-quarters (72%) of development teams are using Dapr for mission-critical applications.

Almost half (49%) of those surveyed are now running Dapr applications in production, a dramatic increase from 2023 (37%).

In 2025, the most common use cases for Dapr remains microservices (93%), with a decline in event-driven (69%, -10pts), and the emergence of workflow (32%). SaaS apps were steady at 25% while multi-cloud apps almost doubled to 20%.

The cloud portability of Dapr applications is getting a lot of attention, as Multi-Cloud applications grew to 20% from 12% in 2023. Portability also shows through in cloud choice; Azure continues to be the most popular cloud choice (70%) , but growth in AWS (22% -> 38%) and on-premises (21%->28%) demonstrate how Dapr is enabling companies' multi-cloud and hybrid-cloud roll-out.

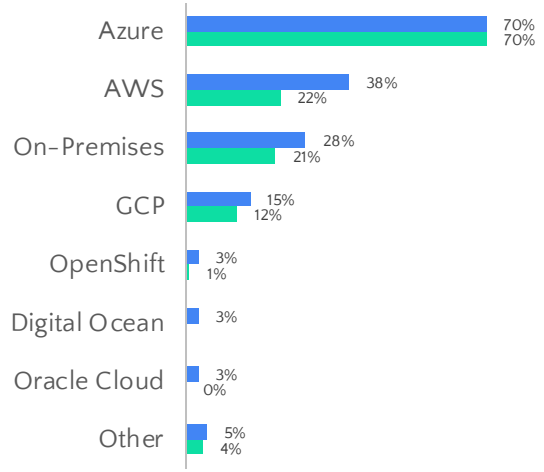
Kubernetes continues to dominate as the most popular compute on which to deploy Dapr (78%), with 22% of the remainder using the Dapr support provided in Azure Container Apps.

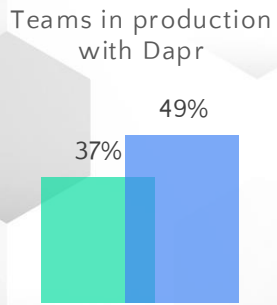
Cloud choice dictates Kubernetes distribution and trends the same way as cloud in 2025. Azure AKS (57%) leads the pack, but many use AWS EKS (33%) and GCP GKE (12%). Cloud-independent choices include SUSE Rancher (5%), RedHat OpenShift (6%), VMware Tanzu (3%), Oracle Kubernetes Engine (2%), and Others (10%) such as K3S, Talos, Docker Desktop, Hetner, NixOS, Ubuntu were called out.

"The fact that we could focus on the core logic and let Dapr deal with the underlying messaging systems allowed us to iterate much faster than we expected"

ENGINEERING MANAGER, FINANCIAL SERVICES SAAS CO.

Multi-cloud and Hybrid cloud usage boosts non-Azure infrastructure





More Dapr applications are now running in production

2. Developing with Dapr

As a polyglot, platform-independent technology, Dapr supports a wide range of options for developers. In a similar motion to that seen in Cloud choice, Dapr has grown from its original C#/.NET base (74%) to embrace the growth in Python (28%), JavaScript (26%), and Go (17%) as well as gaining fans in the established Java community (26%).

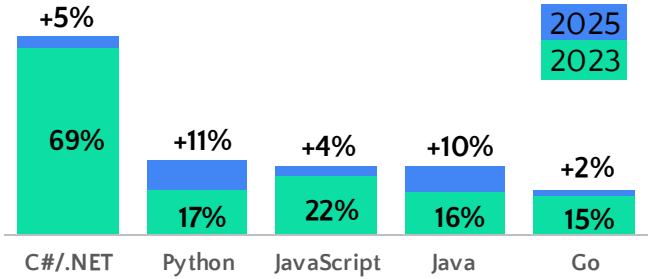
The mix of local development platforms is changing. MacOS (30%) and Unix-based (15%) Dapr development is growing, eating into the traditional share held by Windows (41% including WSL).

Most teams (95%) use a development framework with Dapr. ASP.NET (86%), Spring Boot (77%), and Quarkus (15%) held steady. JavaScript frameworks saw declines for Next.js (24%, -8 pts) and Express.js (24%, -28 pts). Python frameworks rebalanced with increases in Flask (29%, +16pts), Django (19%, +8pts) at the expense of the leader FastAPI (50%, -13pts). For Go programmers, Gin gained popularity (28%, +16pts).

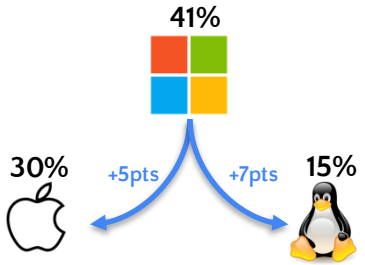
.NET Aspire—new in this year's survey—is very complimentary to Dapr and in use by 43% of Dapr developers.

Almost all Dapr development teams use an application framework

All Dapr languages see growth, Python and Java see biggest gains



Development accelerating beyond Windows



3. Popular Dapr Building Blocks

Dapr API building blocks are at the heart of the project. They are easily accessible via HTTP or gRPC calls without the overhead and complexity of building dedicated libraries into your application code. Dapr building blocks provide a range of common services for storing state and other data, communicating between microservices, and—more recently—for orchestrating application workflows.

Adoption of Dapr building blocks among survey participants roughly follows the order in which they were released: Asynchronous messaging using the Publish and Subscribe building block is the most popular, used by 86% of respondents. A close second, its synchronous cousin—Service-to-service Invocation—is used by 78% of respondents. Next up is State Management (74%) followed by Secrets (54%).

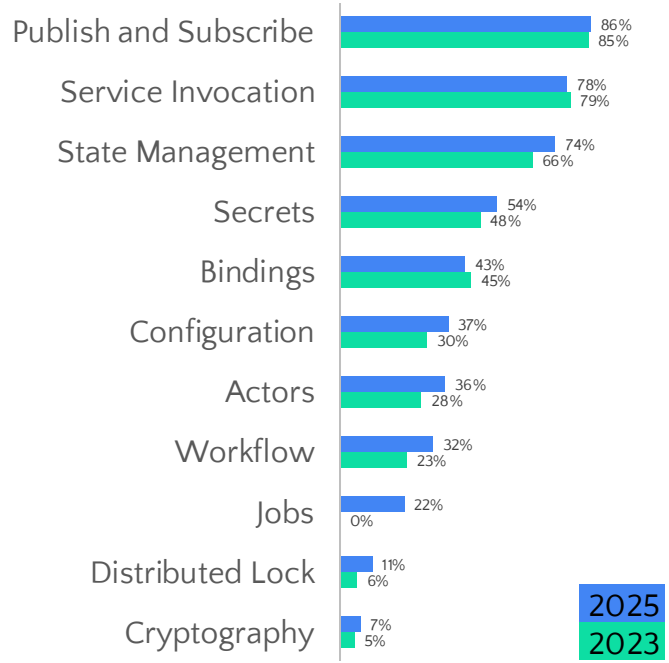
Workflow is currently used by 32% and continues to generate an enormous amount of attention now that it's stable, with an additional 39% planning to use it in the future. Similarly, the new Jobs API is already used by 22% with an additional 34% planning to use it.

See the section "Future Plans and Improvements" for details on planned future usage of building blocks.

"Dapr enabled us to scale services up and down, play with geolocation, optimize latency way earlier than we expected, accelerating the process and probably saved us a lot of money"

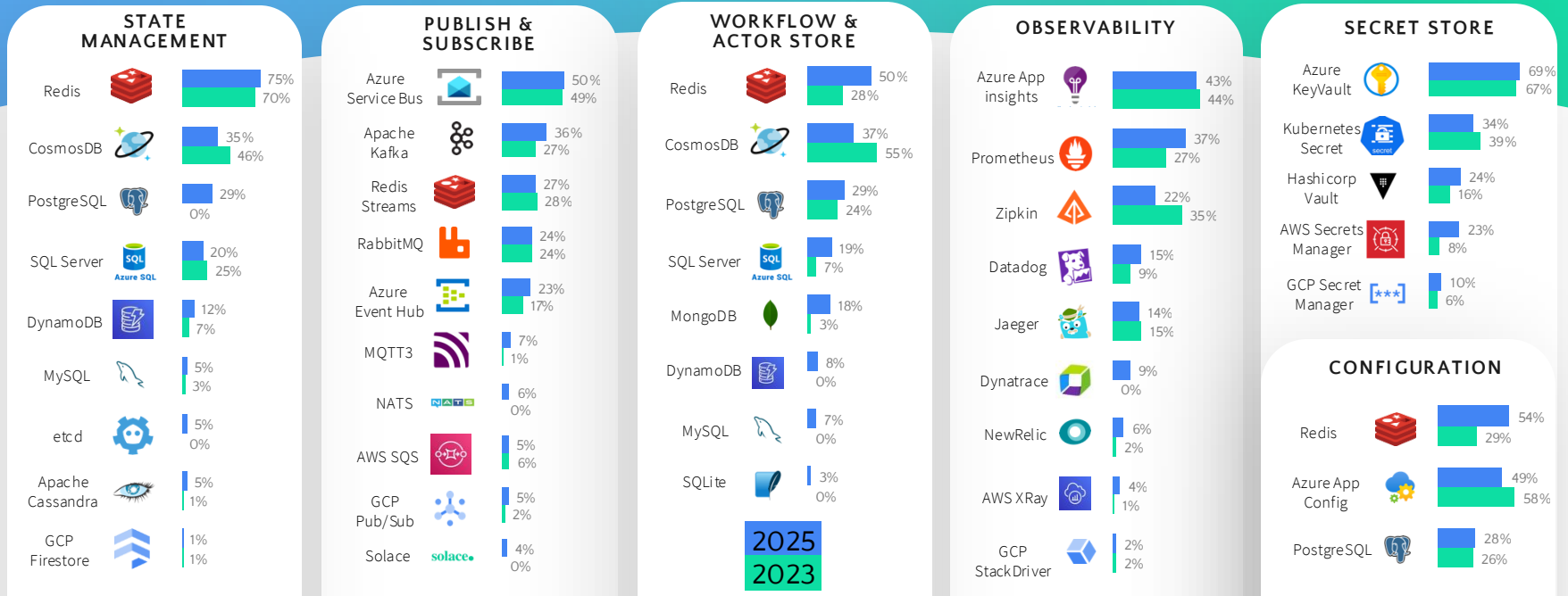
FOUNDER, DATA PRIVACY STARTUP.

Dapr API building block usage



4. Flexible Infrastructure Services

The beauty of Dapr building blocks is that they decouple applications from the underlying infrastructure and developers' code gets improved portability. Platform engineers can change the service used by a building block without requiring application code modifications, or a rebuild/redeploy. This graphic shows the most popular choices for each building block, and how their ranking has changed since 2023



"We are so pleased with Dapr that it will be the standard for us regarding async service communication with our messaging platform, integrating secret stores and caching."

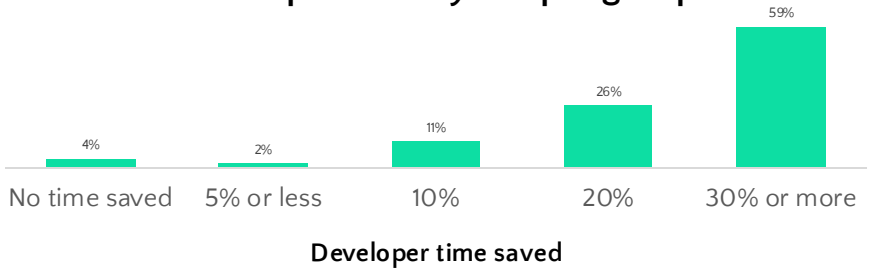
HEAD OF SOFTWARE FACTORY, EUROPEAN ENERGY CO.

5. Dapr Delivers a Significant ROI

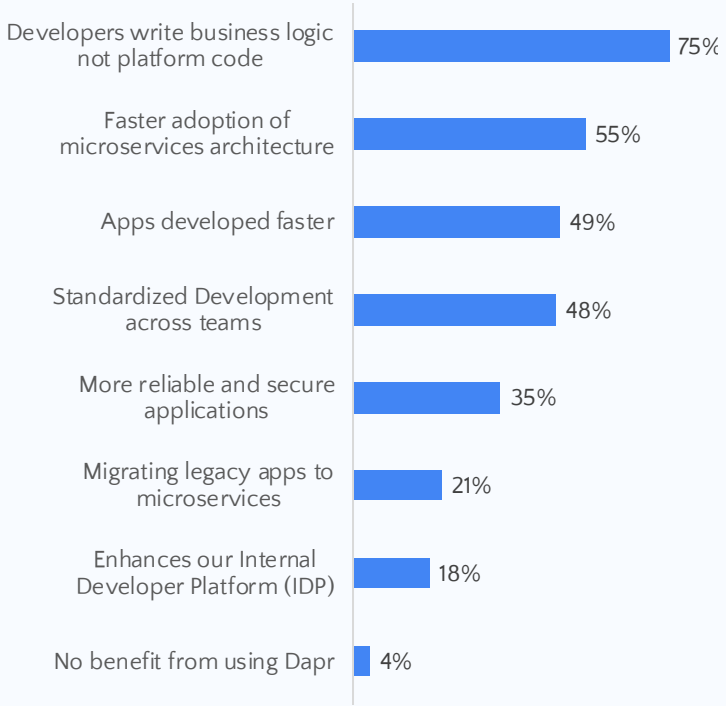
Almost all respondents (96%) say that Dapr saves developer time, and more than half (60%) reported seeing time savings of 30% or more when using Dapr, up from 55% in 2023. Savings come from a range of sources, with the elimination of platform code (75%) and faster adoption of microservices (55%) leading the pack.

Teams agree that incorporating Dapr into your development platform necessitates a certain level of investment for evaluation, training, and integration. However, this upfront work results in a significant return on investment (ROI), making it highly worthwhile.

Most organizations save more than 30% developer time by adopting Dapr



Dapr provides many benefits to organizations



6. Dapr Likes and Improvements

75% of participants agreed that Dapr means developers can focus on writing business logic rather than boilerplate code, and that's also shown in their top like – reducing microservices complexity – which grew 9 points. But a new contender for "favorite Dapr attribute" is the way Dapr provides cloud and vendor independence, up 10 points in this survey.

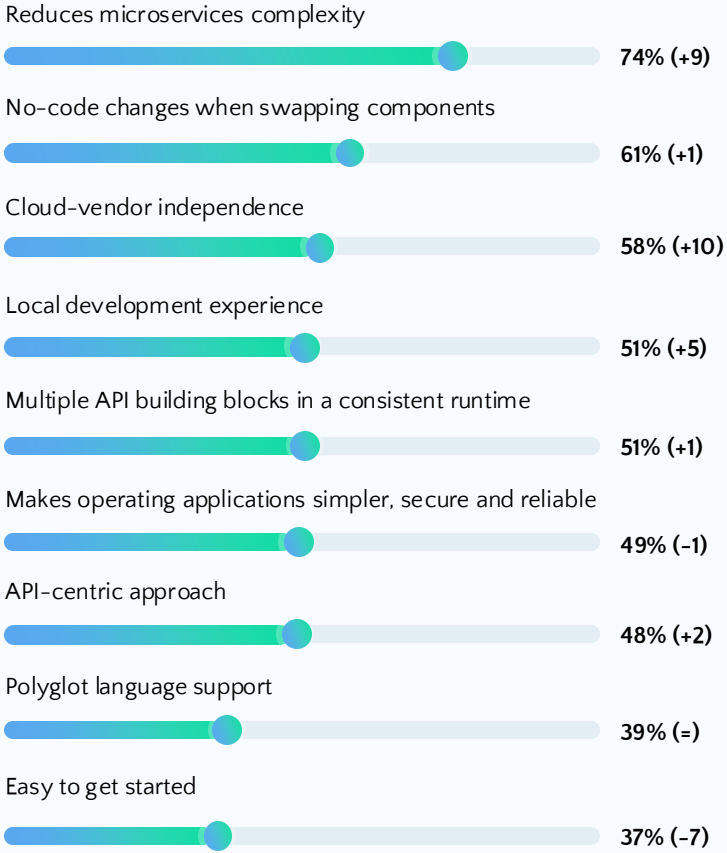
Participants aren't so positive about the Dapr getting started experience, but there's good news for everyone in that respect, with the newly launched Dapr University.

Dapr University

"Dapr has really simplified the creation of distributed application architectures in our company. With Dapr, even developers without previous knowledge of distributed applications have been able to do it."

LEAD ARCHITECT, GLOBAL MANUFACTURER.

What do you like about Dapr?



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6. Dapr Likes and Improvements

Nevertheless, there are areas of Dapr that can be improved.

50% still find that debugging/troubleshooting is hard, 48% say documentation could be improved, and over a third (38%) report that Dapr could improve online resources for problem solving. Once again, Dapr University will be a welcome resource for those wanting improvements in support for learning and getting started.

When it comes to Dapr documentation, participants showed less concern across all classes of documentation, perhaps because of the intelligent search assistance generative AI provides in summarizing documentation that could otherwise be difficult to locate and navigate around.

"Using the Dapr SDK to publish events, we could focus on what we wanted to do – the real things that matter – not how to implement them"

DEVELOPER, LARGE SERVICES CO.

"With Dapr, it was much easier to transition from our monolithic applications to a distributed environment"

ARCHITECT, GLOBAL FASHION BRAND.

7. A Thriving Ecosystem

For any developer runtime, the community and resources surrounding it are critically important, and by any measure, the Dapr community is thriving, as we discussed earlier.

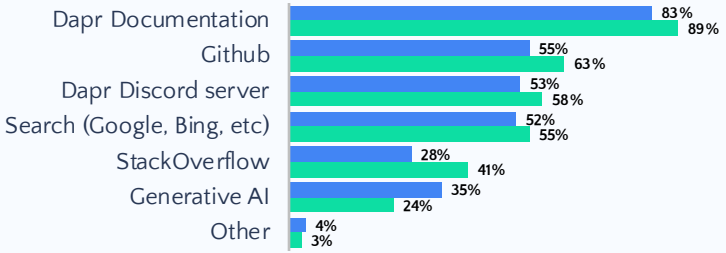
When troubleshooting a Dapr problem, we can see a shift away from traditional sources such as documentation (-6 pts), Github (-8pts), or Stack Overflow (-13pts) towards Generative AI (+11pts) with 35% of users turning to chatbots like ChatGPT and Claude for help.

When it comes to general information on technology, the landscape is changing as well. YouTube (64%, +10pts) is now the most popular source while developer communities such as the Dapr Discord server continue to be a popular choice. Dapr users also rely on social media for technology information, and once again the landscape is shifting away from staples such as Twitter/X (24% -10pts) and Reddit (23% -4pts) and towards LinkedIn (52%, +8pts) and InfoQ (24%, +10pts) with their highly regarded technical content.

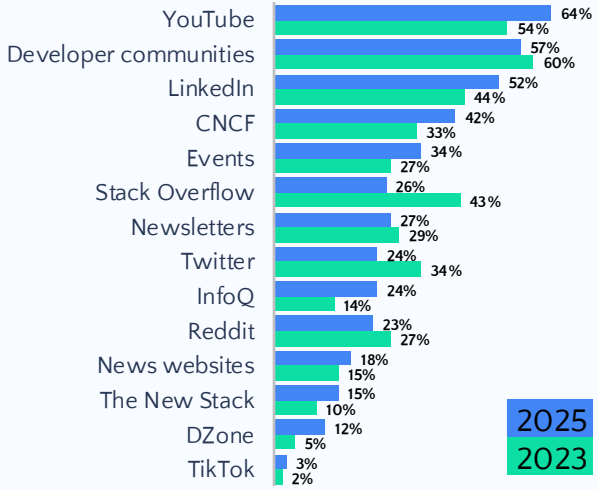
Participants also appreciate the role the CNCF plays as an umbrella for Dapr and other projects and – likely helped by Dapr's graduation – participants rated the CNCF highly (42%, +9pts) as a means for staying up to date with tech.

Dapr Community

Generative AI more popular for troubleshooting problems



YouTube, LinkedIn, InfoQ, Events more popular for keeping up to date with technology innovations



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7. A Thriving Ecosystem

Newsletters (27%) and Events (27%) also provide a rich source of technology information. Microsoft Build/Ignite, CNCF Conferences, KubeCon, AWS Re:Invent, NDC, and local meetups were often mentioned.

INFLUENCERS POPULAR AMONG DAPR USERS INCLUDE

Nick Chapsas
@nickchapsas

Bilgin Ibryam
@bibryam

The Primeagen
@theprimeagen

Marc Duiker
@marcduiker

The DevOps Toolkit
@devopstoolkit

Scott Hanselman
@shanselman

Yaron Schneider
@yaronschneider

Mark Russinovich
@markrussinovich

Mauricio Salatino
@salaboy

Milan Jovanović
@mjovanovictech

Jon Skeet
@jonskeet

Stephen Toub
@stephentoub

Cecil Phillip
@cecilphillip

Gergely Orosz
@GergelyOrosz

Techworld with Nana
@Njuchi_

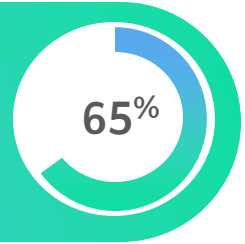
8. Future Plans and Improvements

With high levels of user satisfaction and a significant ROI, the future looks bright for Dapr.

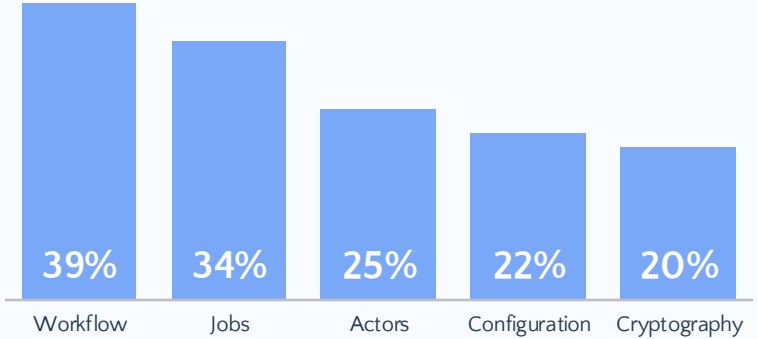
Most stakeholders (84%) expect to see their Dapr usage grow, with only 2% considering alternatives. Participants see the alternatives to using Dapr as a tough choice; 65% felt they would need to write their own distributed systems platform, 19% would integrate directly with components like Kafka and Redis, while only 9% felt they could find an alternate solution, quoting Akka, MassTransit, Orleans, Aspire, Temporal, and Azure Service Fabric as options.

Building block expansion will be led by the popular Workflow API (39% plan to implement it), followed by the new Jobs API (34%), Actors (25%), Configuration (22%), and Cryptography (24%) building blocks. With the growth in production deployments and applications, it's not surprising that the number of Kubernetes clusters has increased and is expected to further increase, making a fleet management solution such as Diagrid Conductor more valuable.

65% would divert engineering resources to write their own framework if they couldn't use Dapr. Only 9% felt they could find a ready-made alternative.

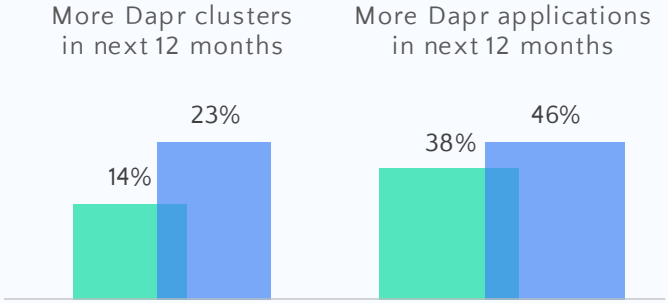


Workflow, Jobs, and Actors APIs lead in plans for building block adoption



What additional Dapr API building blocks are your team planning to use in the future?

Dapr clusters and application growth accelerating



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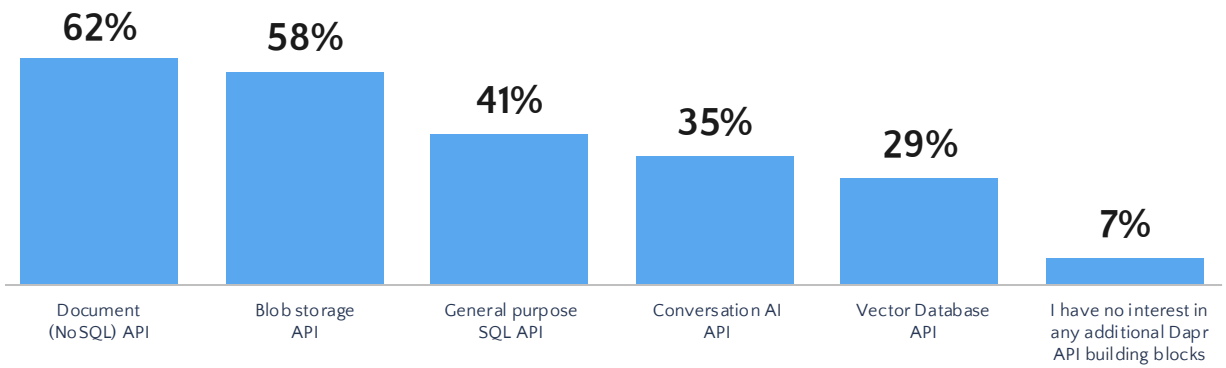
8. Future Plans and Improvements

Dapr users would love to see the range of building blocks continue to expand. Additional storage APIs dominate the popularity contest, but Conversational AI makes a strong first appearance ahead of its inclusion in Dapr 1.15.

More choice in data APIs and an AI Conversation API top the wish list



"Dapr has been a game-changer for us. Development is faster, our architecture is decoupled from infrastructure, and we're free to choose the best tool for each task. Our platform is more resilient and future-proof as a result."

PRINCIPAL ARCHITECT, LARGE FINANCIAL SERVICES CO.

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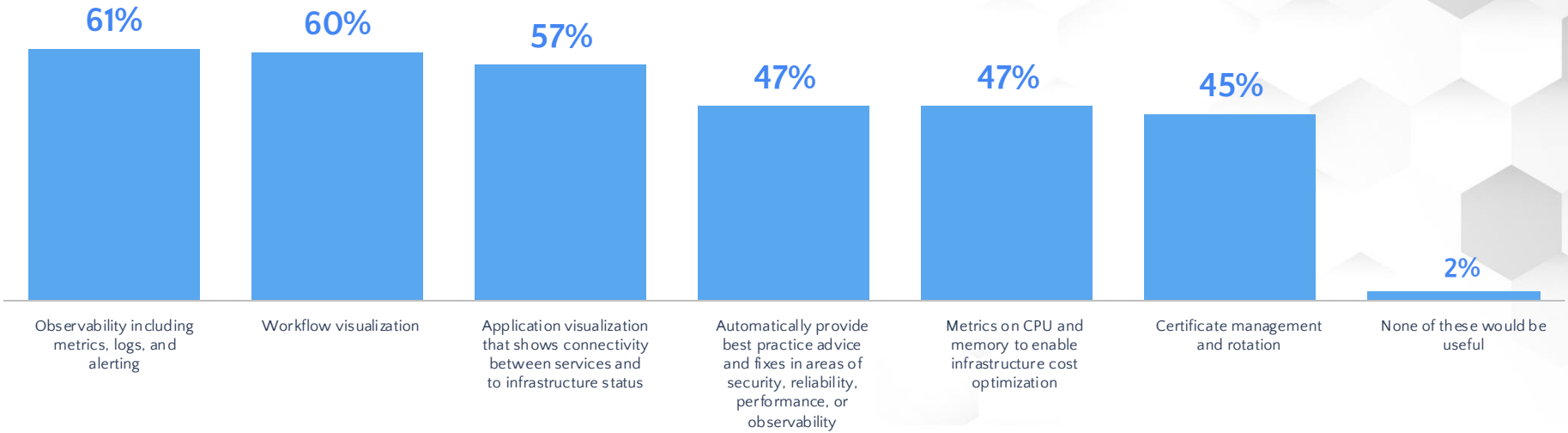
8. Future Plans and Improvements

When asked which additional features would be most beneficial for operating Dapr, observability was chosen by 61%, followed by workflow visualization (60%), app visualization (60%), and automated best practice analysis and guidance (47%).

> *"If you have 10 servers there is no single place to go to monitor and see all 10 servers. If you have a cluster, there is no way to monitor the cluster. We had to build our own tools so production support could monitor things."*
>
> DEVOPS ENGR, LARGE FINANCIAL SERVICES CO.

Observability and visualization regarded as most beneficial additional operational capabilities



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8. Future Plans and Improvements

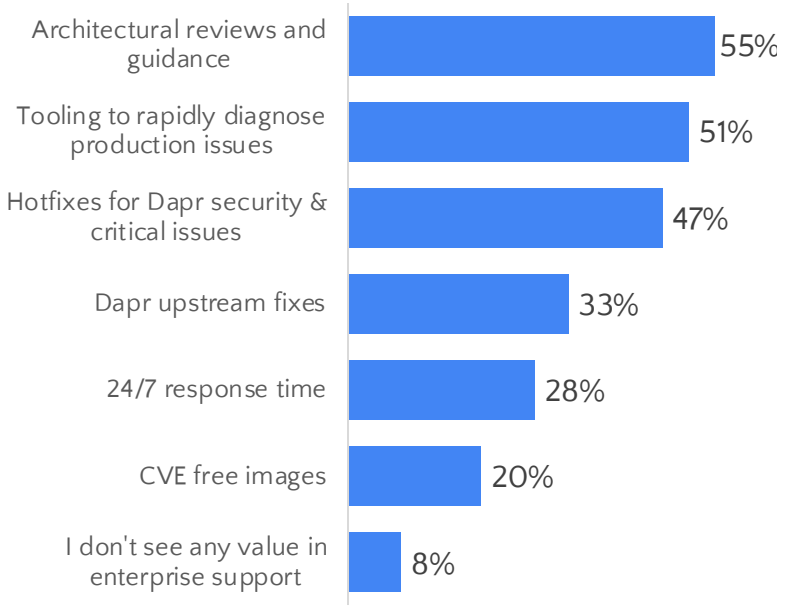
While open-source software offers cost advantages and innovation, many organizations are turning to commercial support options to enhance their deployments. This shift stems from the need for risk mitigation, dedicated technical expertise, and guaranteed service levels that internal teams may struggle to provide.

In Europe, many organizations are seeking out enterprise support to ensure compliance with new regulations like the Cyber Resiliency Act.

Commercial support transforms "free" software into enterprise-ready solutions with predictable costs and reduced operational risks. For mission-critical applications, having access to developers who deeply understand the codebase provides peace of mind and accountability that community support alone cannot. Organizations increasingly view this as an essential investment rather than an optional expense.

With this in mind, we asked survey participants to rank which aspects of enterprise support, if any, they would find most beneficial for their organizations.

What are the most valuable benefits of enterprise Dapr support for your organization?



92% **See value in Dapr enterprise support**

Summary and Recommendations

Dapr continues to deliver real-world benefits and see rapid adoption and growth as a result.

The spread of Dapr into the Java and Python ecosystems is a reality, as is its usage on AWS and on-prem, enabling multi-cloud and hybrid-cloud scenarios. A doubling in adoption of Redis also points to organizations positioning themselves for multi-cloud portability.

While Dapr provides a simple abstraction for decoupling apps from the services they use, both Workflow and Actors are unique capabilities from Dapr itself, and both are seeing high levels of interest and adoption. The new Jobs API (currently in Alpha) is also receiving a lot of interest.

Dapr developers are seeing the benefits of Generative AI to help with troubleshooting and any task that needs a shortcut to get answers from documentation quickly.

That's not all from AI; with the Conversation AI API in 1.15 developers will bring Dapr's productivity to incorporating agents into their applications

Visibility continues to be a key ask; whether observability of logs, visualizing app dependencies, or workflows, the Dapr community is keen to be able to see more of what's happening.

No matter where you are in your Dapr journey, its growing ecosystem, rich resources, and thriving community will help you take the next step in building distributed applications faster.

The Dapr Project **Diagrid Website** **Discord Community**

> *"My experience with Dapr has been incredibly positive, as it has streamlined my microservices architecture, making it more efficient and manageable"*
>
> DEVELOPER, MID-SIZE CO.

> *"Dapr solved some inherently complex problems that present themselves when building distributed systems. 320 million events per day. 3700 events per second, give or take a few. That's what Dapr can do"*
>
> SENIOR DEVELOPER, GAMING CO.

> *"The ease of use and the powerful capabilities Dapr offers have significantly enhanced my development process, allowing me to focus on delivering value rather than getting bogged down by complexities"*
>
> DEV TEAM MANAGER, MID-SIZE CO.

State of Dapr 2025

Diagrid boosts the productivity of application and platform development teams by providing tools and APIs for building and operating cloud-native applications

Diagrid.io

Dimensional Research® provides practical market research to help technology companies make their customers more successful. Our researchers are experts in the people, processes, and technology of corporate IT. We understand how technology organizations operate to meet the needs of their business stakeholders. We partner with our clients to deliver actionable information that reduces risks, increases customer satisfaction, and grows the business.

Dimensionalresearch.com