

IoT & Edge Commercial Adoption Survey Report 2022



Agenda

- 01** Executive Summary
- 02** Introduction
- 03** Key Findings
- 04** Recommendations
- 05** Demographics

Executive Summary

1

In 2022, IoT technologies are being adopted at an accelerated rate.

53% of respondents currently deploy IoT solutions and an additional 24% plan to deploy within the next 12 to 24 months, while 18% are currently evaluating deployments.

2

Edge computing technology adoption is also on the rise. 53% of organizations are either utilizing or planning to utilize edge computing technologies within 12 months. Another 20% are currently evaluating edge deployments.

3

There is a shift towards higher investments into IoT & edge. 23% of respondents project spending between \$100K - \$1M in 2022, growing to 33% in 2023. 10% anticipate spending over \$10M and growing to 12% in 2023.

4

There is a trend towards a larger number of IoT & edge assets managed per deployment.

Deployments of fewer than 1K managed assets will remain steady or decline, while larger deployments are on the rise. **In terms of asset implementation, 52% are a mix of both greenfield and brownfield.**

5

With spending decisions being driven at the executive level 38% of the time, **organizations in 2022 continue to see the use of IoT & edge technologies as strategic.**

Executive Summary

6

Open Source plays a major role, as 73% of organizations factor open source into their deployment plans. This suggests that the dominant IoT & edge platforms will either be open source or based on open source.

7

The top three benefits of open source according to respondents include: the ability to customize or influence code in projects (30%); flexibility (22%); as well as cost advantages (16%).

8

The most common operational challenges for the IoT & edge are: 1) connectivity; 2) security; and 3) data collection & analytics.

9

There is an increased tendency towards a Hybrid cloud strategy. 42% of respondents suggest that IoT deployments are using, or will use a hybrid cloud (i.e. composed of two or more distinct cloud infrastructures such as private and public).

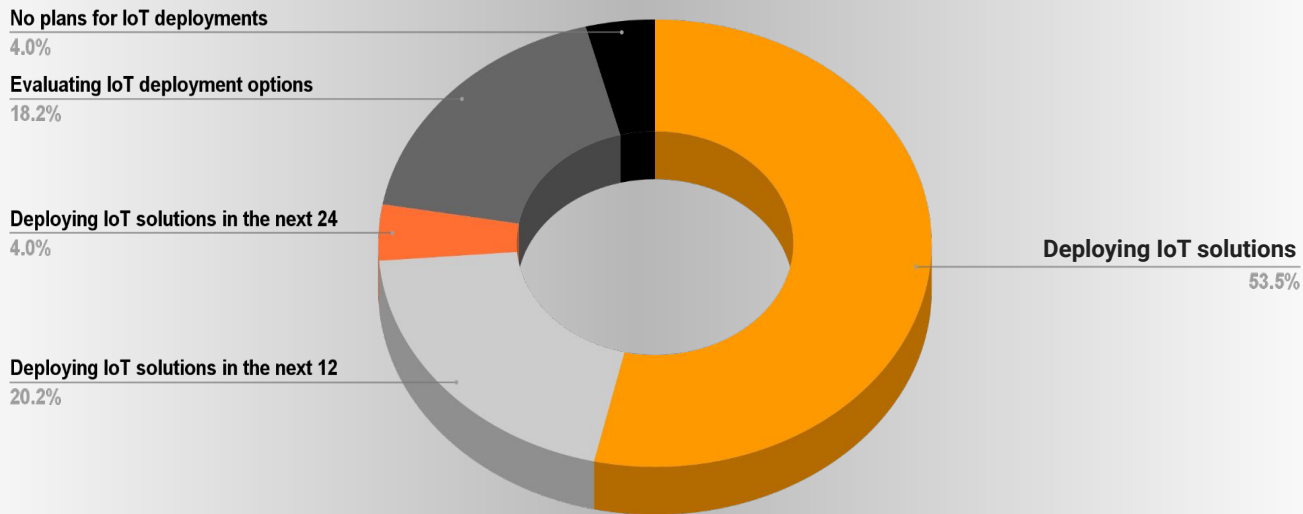
Introduction

Our objective in fielding the 2022 IoT & Edge Commercial Adoption Survey was to **gain a better understanding of the IoT & edge industry landscapes** by identifying the requirements, priorities, and challenges faced by **organizations that are deploying and using commercial IoT & edge solutions.**

The online survey was conducted starting April 1, 2022 and ending June 15, 2022, with **261 individuals participating.**

The survey was promoted on social media and on iot.eclipse.org, edgenative.eclipse.org, sparkplug.eclipse.org

IoT Technology Adoption Is Accelerating In 2022

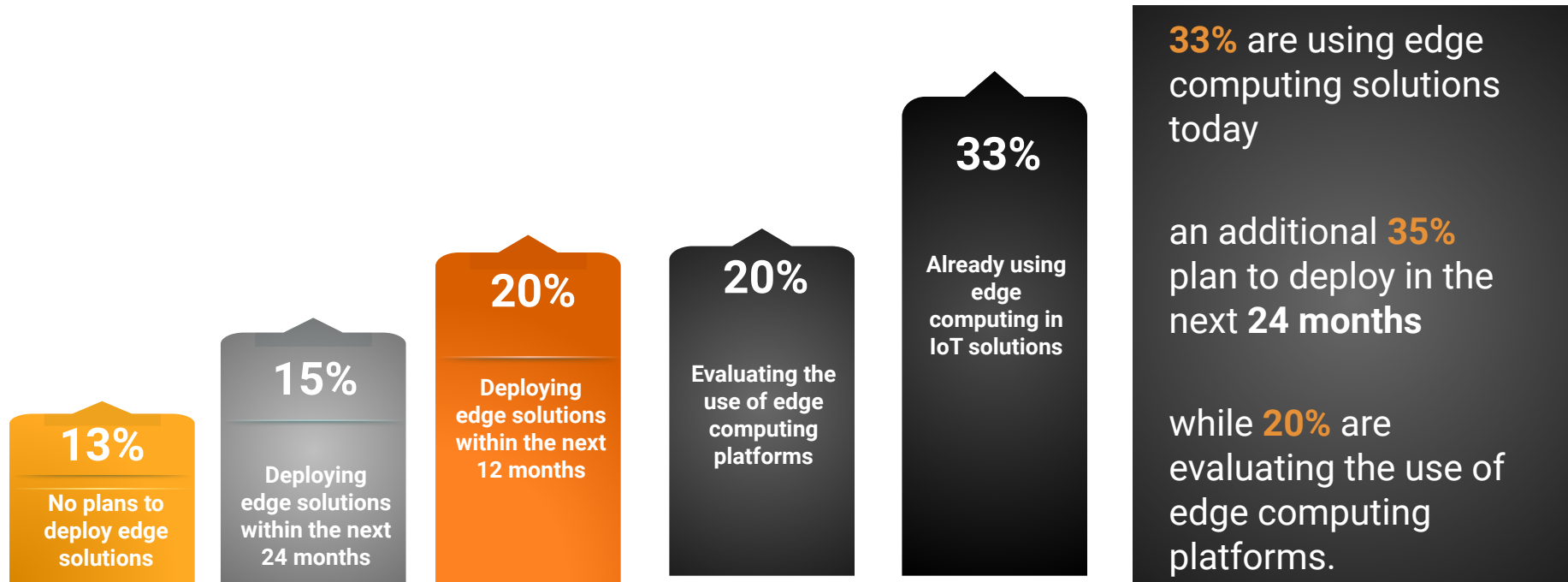


53% are deploying IoT solutions today

20% plan to deploy in the next 12 months

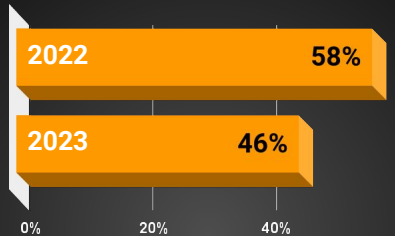
another **18%** are evaluating IoT deployment options.

Edge Computing Adoption Is Also Picking Up Pace



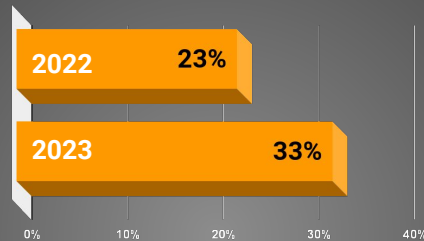
There is a Shift Towards Higher Investments Into IoT & Edge

< \$100K



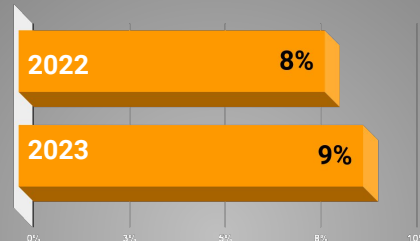
58% of organizations will spend **<\$100K** on IoT / edge projects in 2022, compared to a forecasted **46%** in 2023 as larger investments are made.

\$100K-\$1M



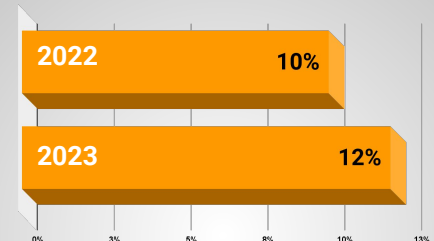
23% of respondents project to spend between **\$100K - \$1M** in 2022, forecasted to grow to **33%** in 2023

\$1.01M-\$10M



8% project to spend between **\$1M & \$10M** in 2022, with slight growth to **9%** in 2023

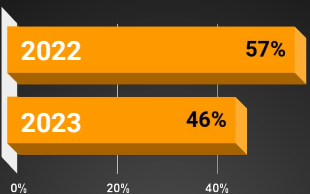
>\$10M



10% project to spend over **\$10M**, growing to **12%** in 2023

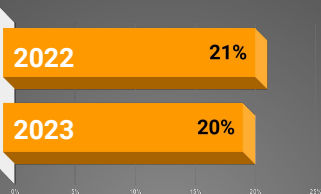
There is a Trend Towards a Larger Number of IoT & Edge Assets Managed per Deployment

< 99



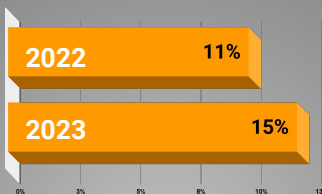
57% of IoT & edge deployments manage fewer than **99** assets in 2022, which is forecasted to be **46%** in 2023, as deployments grow

100-999



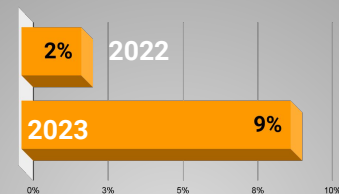
21% of deployments will contain between **100-999** assets and forecasted to be **20%** in 2023

1k-10k



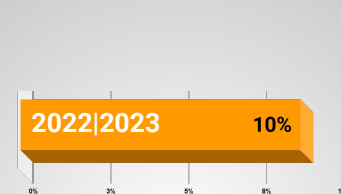
11% of deployments will manage between **1k & 10k** assets in 2022, growing to **15%** in 2023

10k-50k



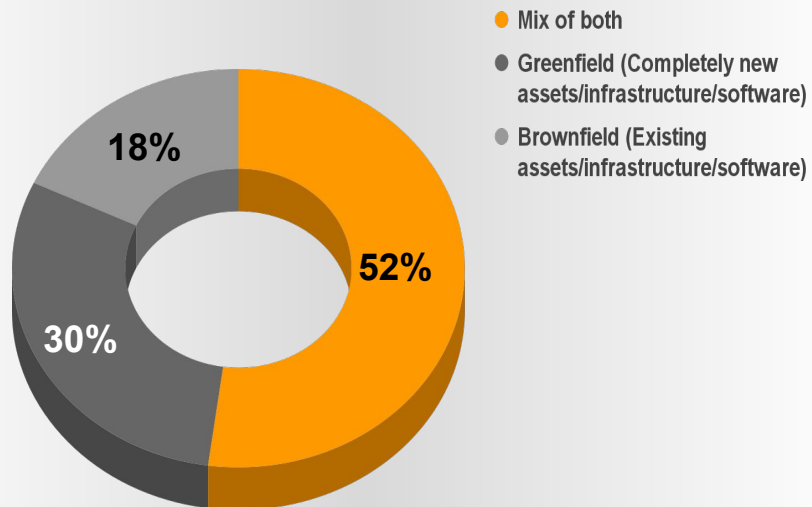
2% of solutions will manage **10k-50k**, assets in 2022, and forecasted to grow significantly to **9%** in 2023

>50k



10% of solutions will contain over **50k** assets in 2022, and remain steady for 2023

More Than Half Of Implementations Are A Mix Of Greenfield & Brownfield

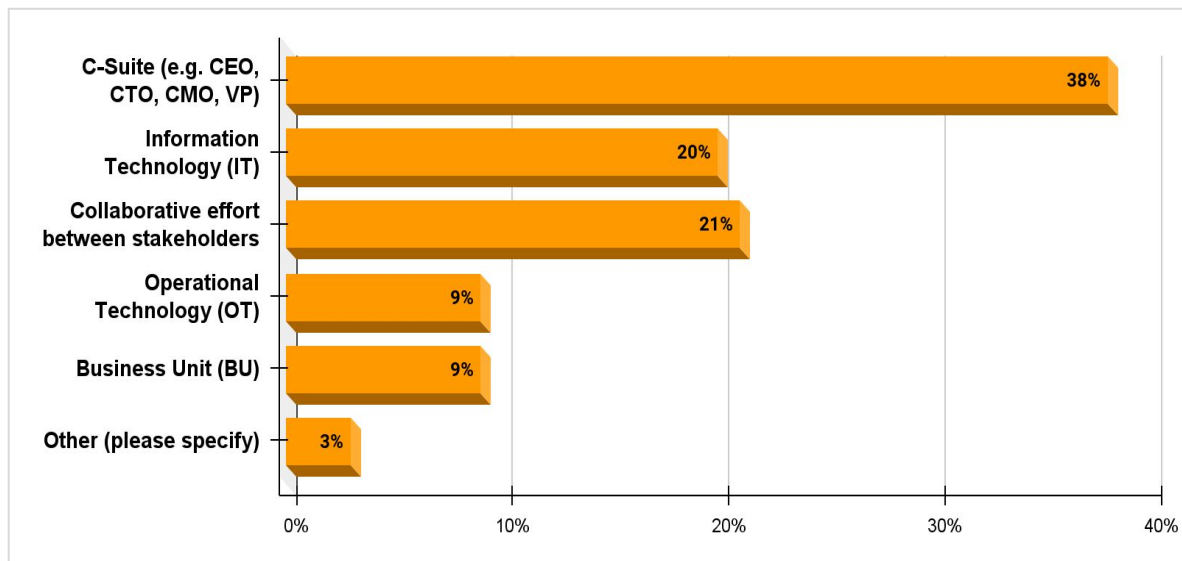


52% of implementations are a mix of both greenfield & brownfield (new & existing assets/infrastructure)

30% are greenfield Implementations

18% represents brownfield Implementations

IoT & Edge Investment is Seen as Strategic, with the C-Suite Calling the Shots

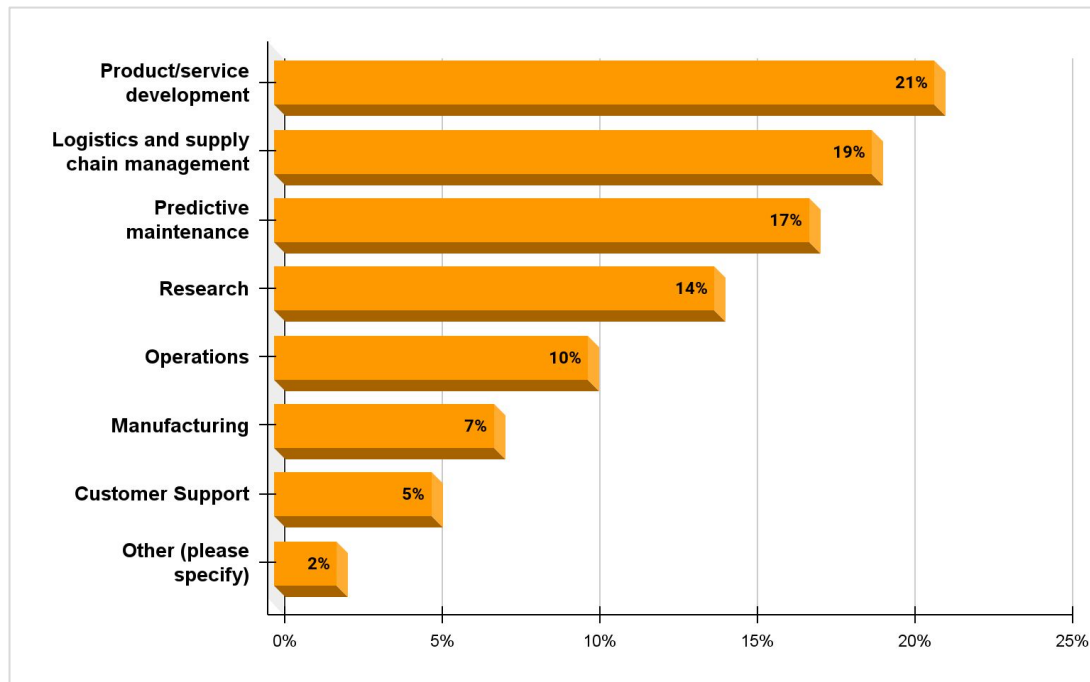


Who are the IoT and edge spending decision makers?

In 2022, **38%** of organizations indicate that decisions are being driven by the **C-Suite**, a jump from **35% in 2021**

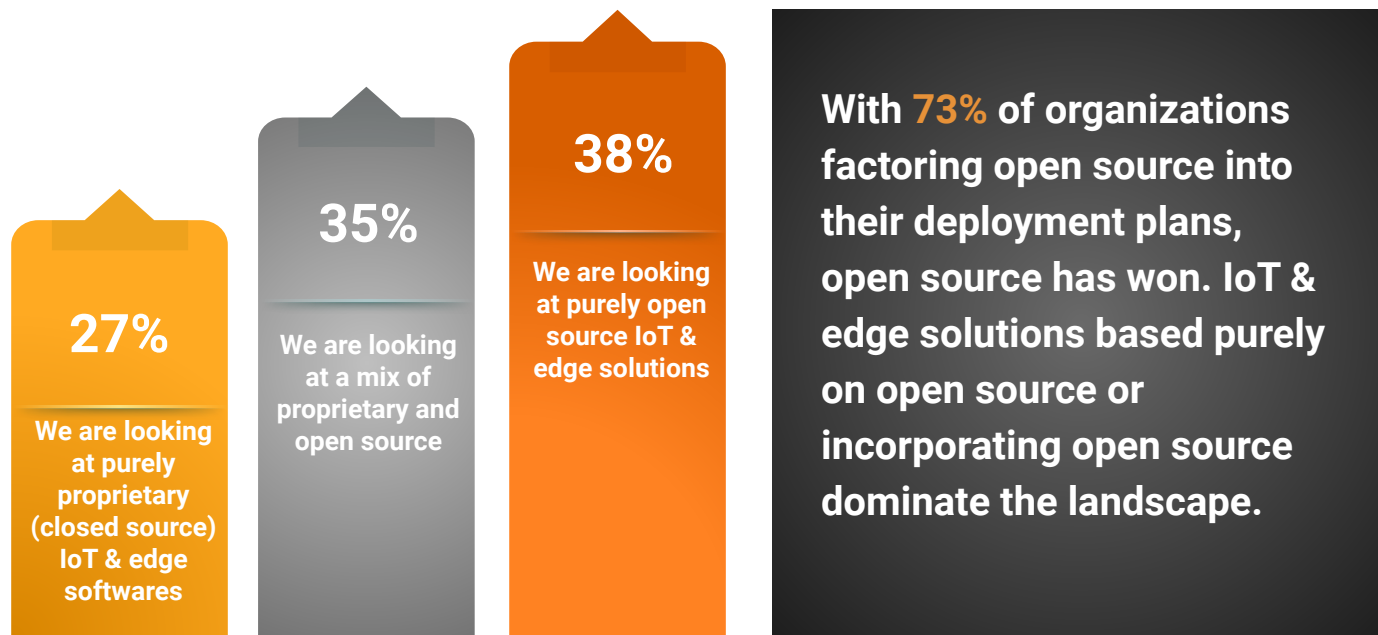
Followed by **IT personnel at 20% in 2021**, and **21%** collaborative effort

Multiple Organizational Functions are Impacted by IoT & Edge Solutions

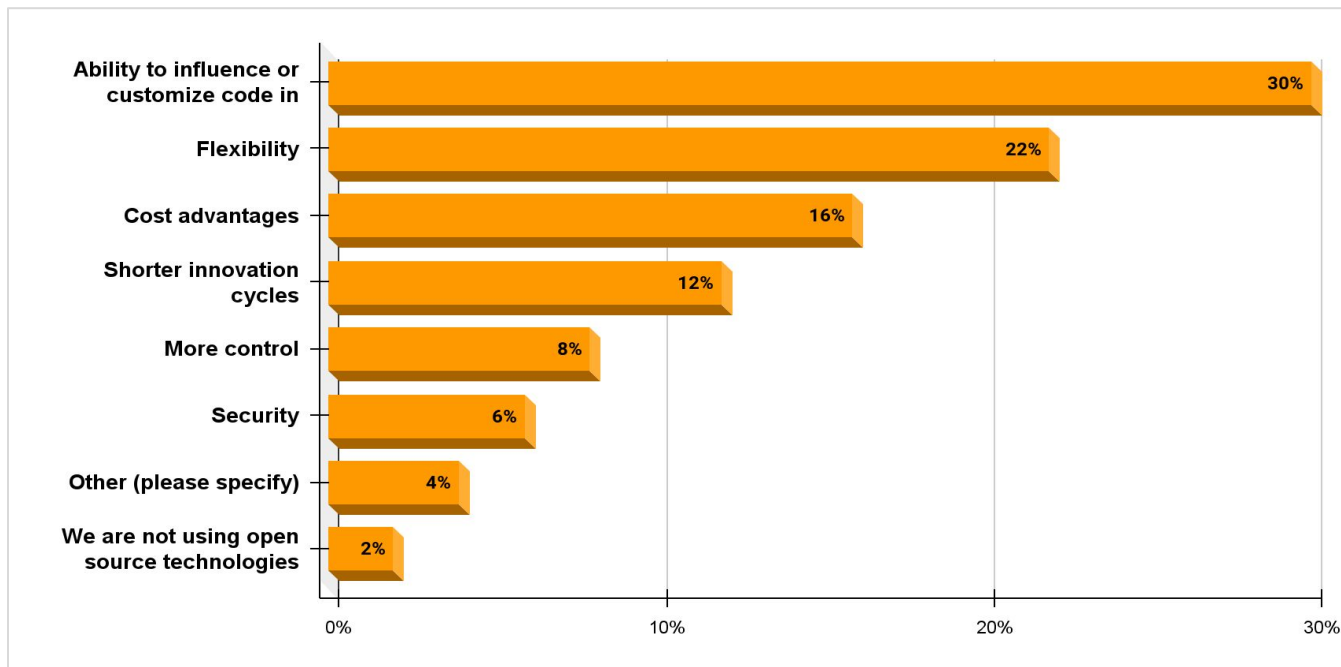


Product & services development (21%), logistics & SCM (19%), and predictive maintenance (17%) are expected to benefit most from IoT and edge technologies

Organizations Recognize the Strategic Importance of Open Source Software

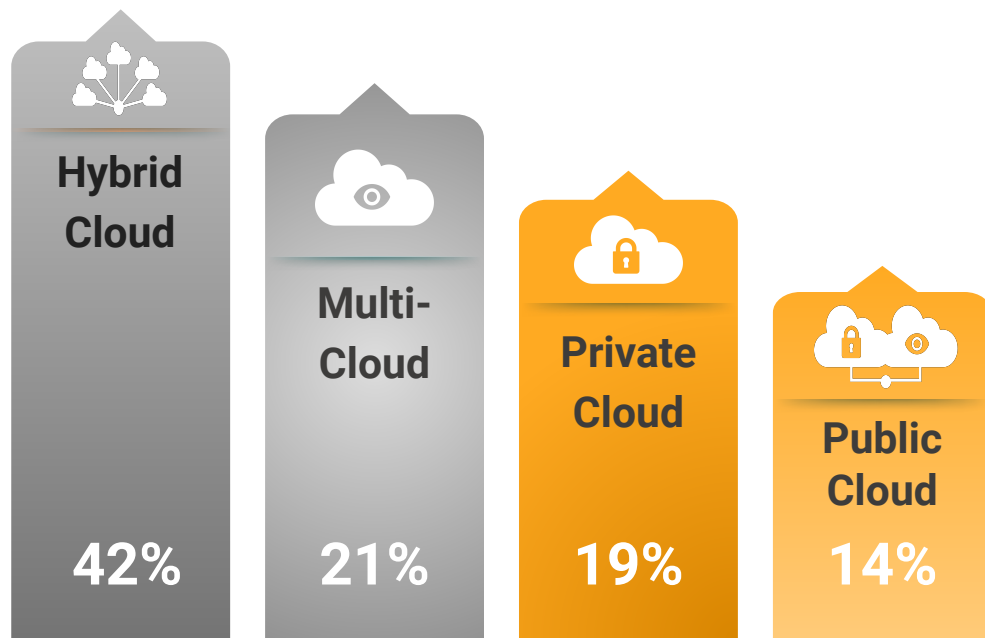


Utilizing Open Source Software Comes With Significant Benefits



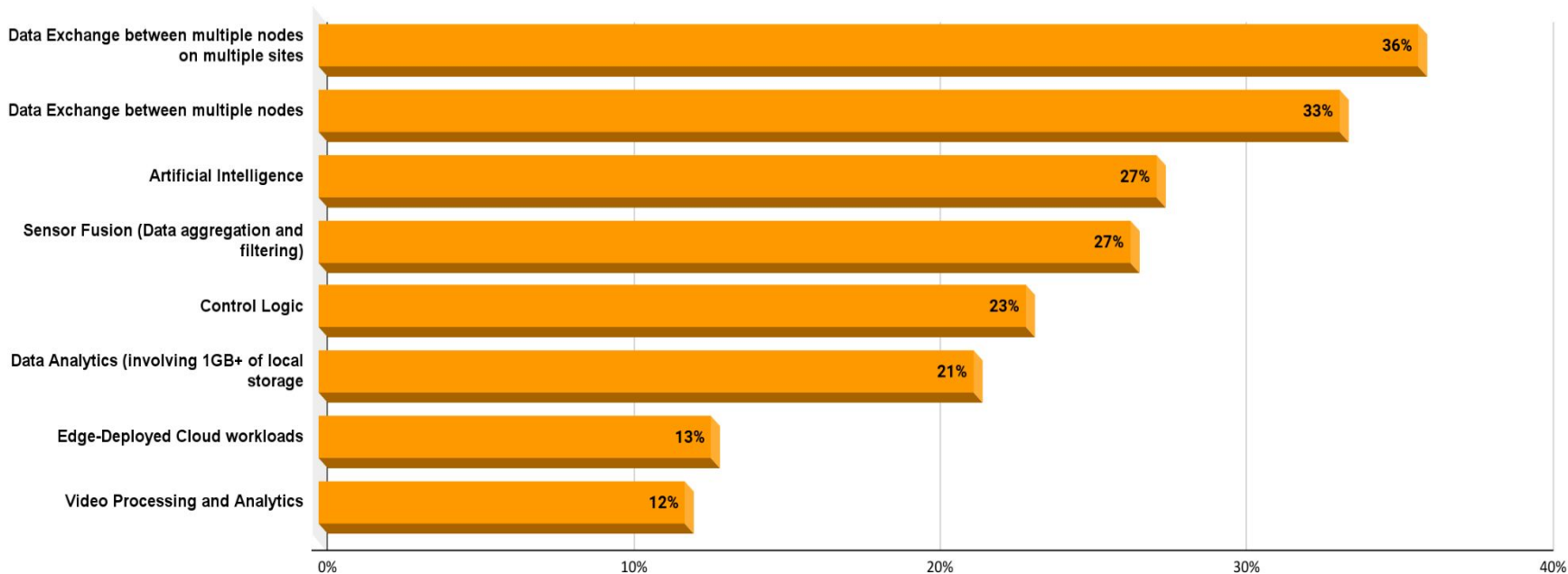
The greatest benefits of using open source technologies are the ability to influence or customize code in projects, cost advantages, and flexibility.

There is an Enterprise Trend Towards Hybrid Cloud Usage To Drive IoT Solutions Support

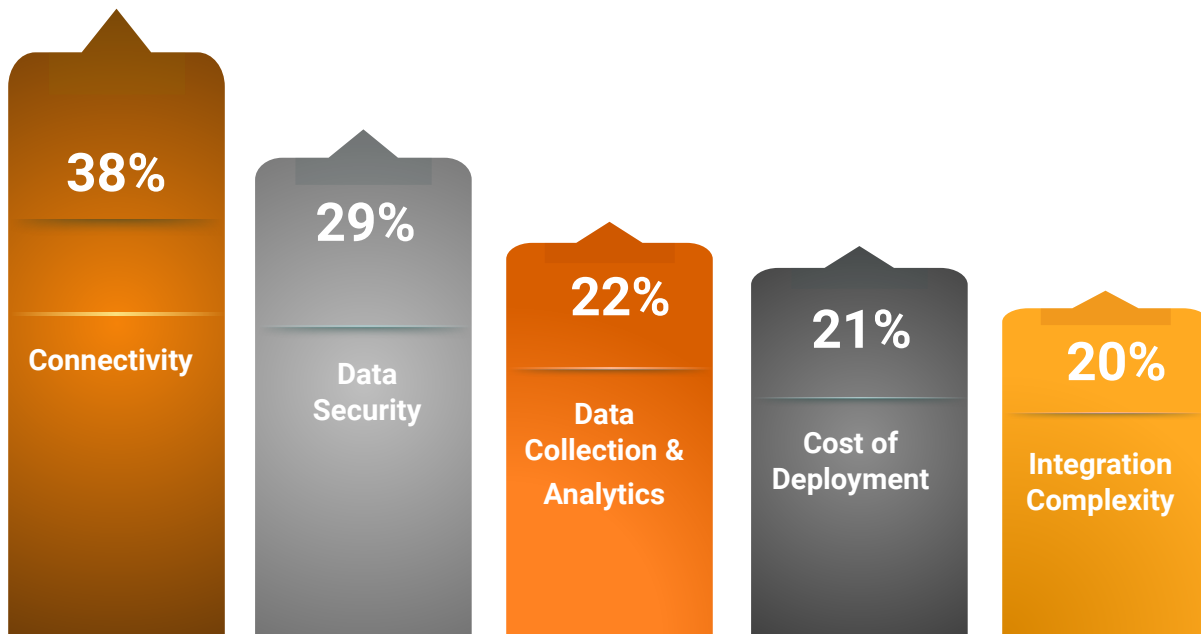


Hybrid IoT cloud strategies lead the way at 42%, with multi-cloud following at **21%**. Private/on-premises cloud infrastructure rank a close third at **19%**, with public cloud at **14%**.

Data Exchange With Multiple Nodes On Multiple Sites Is The Top Edge Computing Workload

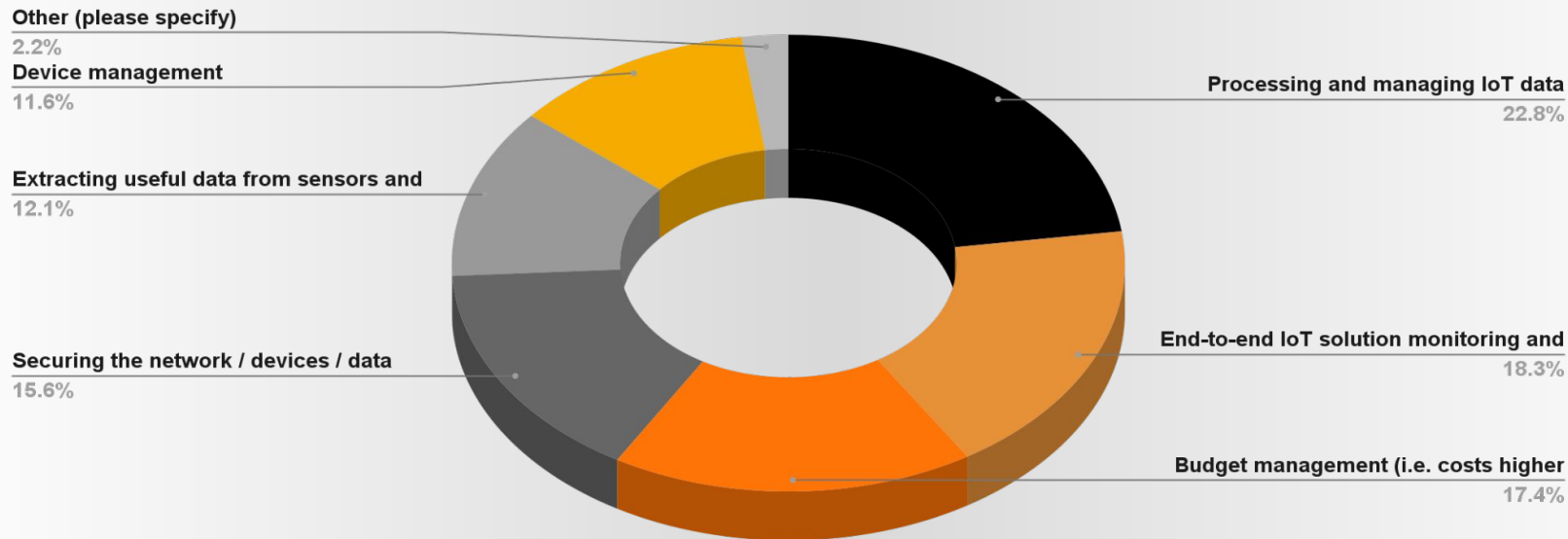


Connectivity is the Top Concern for IoT & Edge Deployments



38% see **connectivity** a primary design consideration when deploying IoT & edge solutions, followed by **security 29%**, and **data collection & analytics 22%**.

Processing & Managing Data Is The Top Operational Challenge



Recommendations



Enterprises

- **Select vendors and service providers** that embrace open standards and the use of customizable, production-ready open source building blocks. Open source enables scalability and flexibility in IoT and edge solutions, while avoiding the lock-in and cost issues associated with proprietary solutions.
- **Support vendor-neutral IoT and edge computing ecosystems** if they wish to actually benefit from open source over the long term. Contributing to relevant open source projects and communities will help their employees develop valuable skills, while ensuring the long-term viability of those projects and communities.

Recommendations

★ Solution Providers

- **Incorporate open source platforms** that are capable of running seamlessly across the whole edge-to-cloud continuum, with a focus around hybrid, multi-cloud and private cloud offerings that enable customers to avoid using a public cloud for their mission-critical data.
- **Add edge computing into their offerings.** Edge computing offers many benefits, including reduced latency, bandwidth savings, and system resiliency. To stay competitive, solution providers absolutely need an edge computing strategy.

Recommendations

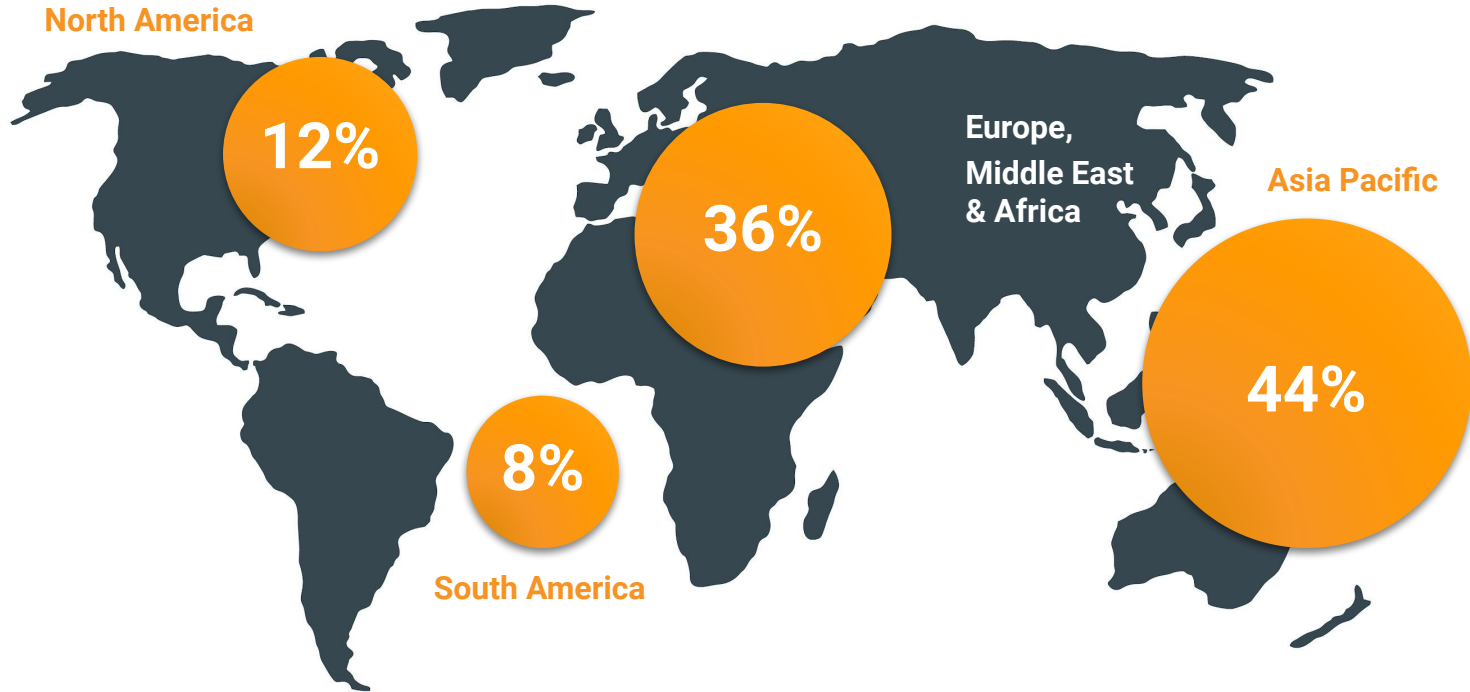
★ Platform and Software Vendors

- **Implement data security and sovereignty solutions across devices and applications.** Organizations must pay particular attention to their ability to retain control over data flow and storage, e.g. for data gathered from IoT sensors and devices. Moreover, they need to guarantee the privacy and integrity of customer data.
- **Create offerings that optimize certain workflows and/or mitigate specific challenges.** There is already a wealth of generic platforms and technologies available in the market. To achieve differentiation, organizations need to develop features and capabilities that set them apart.

Demographics

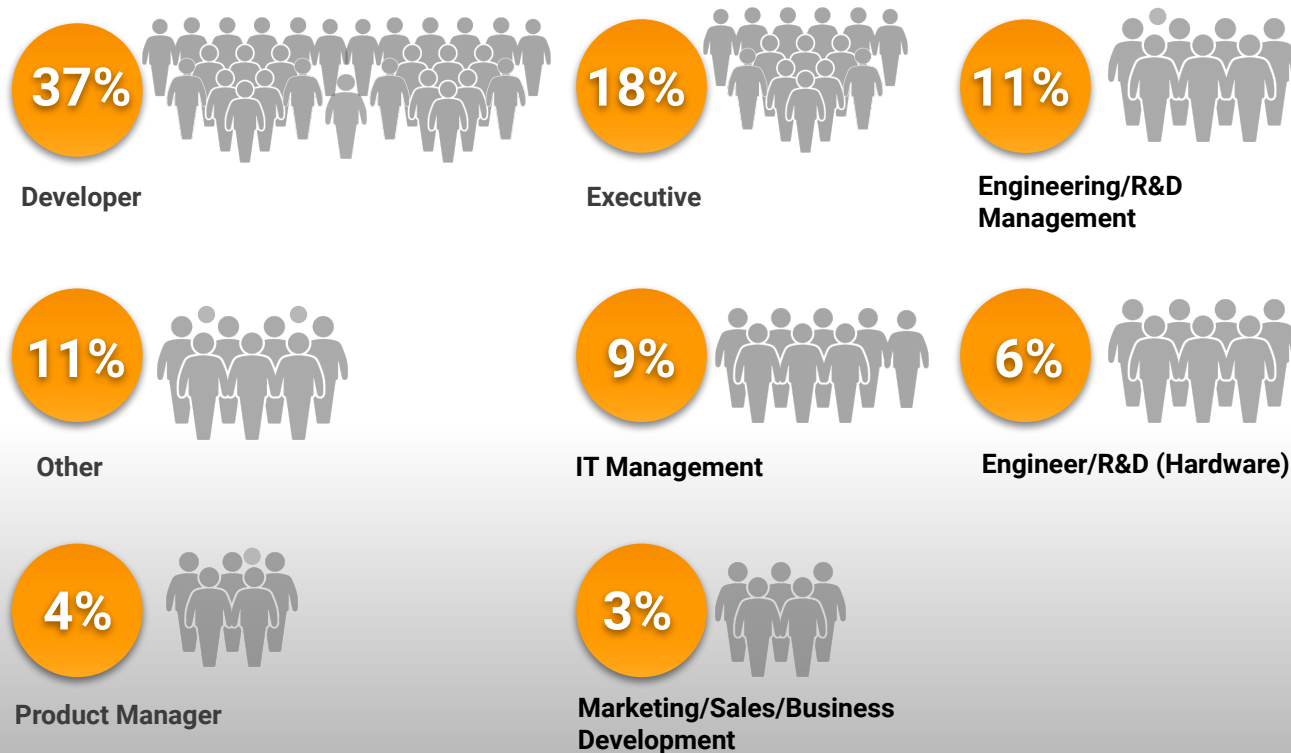
Regions

In Which Region Are You Located?

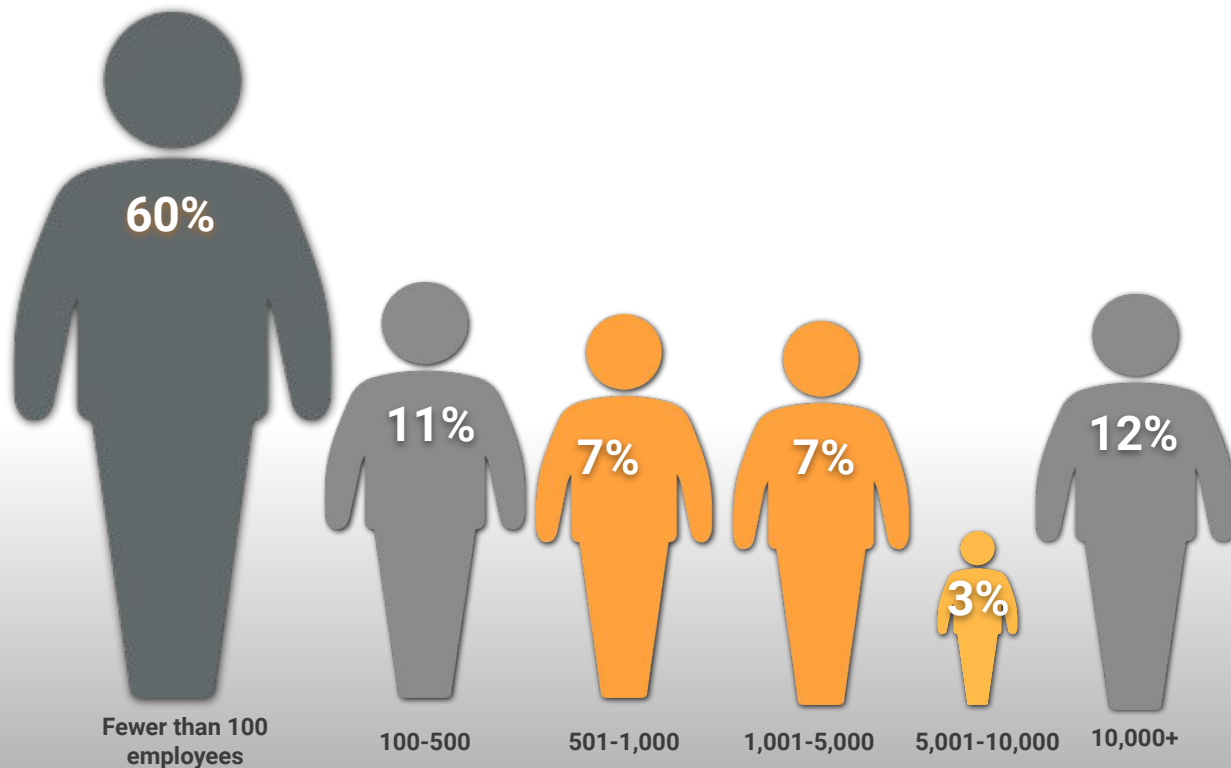


Roles

What Best Describes Your Role?



How Large is the Organization You Work For?



Participants by Industry



IT / Telecom / Software
30%



Agriculture
12%



Education
10%



Automotive
5%



Energy / Utilities
5%



Financial Services
4%



Government
4%



Manufacturing
4%



Professional Services
3%



Healthcare & Pharmaceutical
1%



Hospitality / Hotels & Leisure
1%



Retail & Consumer Services
1%



Transportation / Logistics
1%

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