

2021 Insights

State of IoT Asset Tracking



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Summary

Asset tracking continues to be one of the most popular IoT use cases, with the global IoT-supported asset tracking market expected to account for [over 90 percent](#) of all connected enterprise and industrial solutions by 2030.

Helium has continued to see the demand for asset tracking grow since 2019 based on inbound inquiries and outbound efforts, yet many asset tracking solutions continue to be expensive and difficult to implement. Tracking assets requires the following:

LOW POWER CONSUMPTION

Tracking assets on long journeys becomes very difficult when the tracking battery keeps dying. Cellular solutions in particular shorten battery life and consume large amounts of power.

LONG RANGE/ DENSE COVERAGE

For assets moving across state lines or going into rural areas, Wi-Fi and Bluetooth don't provide the range or coverage needed to track location.

VIABLE ECONOMIC MODEL

The cost of running sensors and devices on private networks proves too costly for the majority of asset tracking use cases.

Helium conducted primary research in 2019 and 2020 to better understand customer asset tracking use cases.

This year, with Digital Matter we completed a similar initiative, and with nearly 2600 respondents, gained even more valuable

insights into asset tracking demand and major barriers to implementation.

The findings from the 2021 survey, along with key takeaways, trends, and comparisons from previous years' data, are included in this report.

Key Takeaways & Comparisons

In October 2021, we gathered data from nearly 2600 respondents regarding their asset tracking needs and situations. In addition to key takeaways listed below and the detailed data section, we also provide a comparison with previous years' findings for those responses where we saw the biggest changes.

Takeaways

MOST-TRACKED ASSETS

For the 2021 survey, we added a new question to identify the primary type of asset respondents are currently tracking. According to the data, the top-3 most-tracked assets are:

- Vehicles at 45 percent
- On-Site Equipment at 37 percent
- Personal Property at 24.5 percent

MOTIVATING FACTORS

The main motivation for respondents in tracking assets is to prevent loss/theft at 40 percent, with enhancing operational efficiency close behind at 30 percent.

ROOM TO GROW

40 percent of respondents are using some type of connectivity to track assets in 2021, while the other 60 percent are not currently engaging in asset tracking.

- For those 40 percent using connectivity technology, cellular 2G/3G and Wi-Fi were the most popular.

- Of the 60 percent of respondents not currently using any connectivity technology to track assets, over half of them are currently researching which technology would best suit their use cases. This highlights the growing demand for asset tracking solutions.

URGENCY FOR SOLUTIONS

29 percent of respondents said their timeline to address asset tracking solutions was "immediately", with another 24 percent reporting they wanted to find a solution within the next 3 months.

COST REMAINS A BARRIER

Once again, cost remained the largest barrier to not having a current solution at 26 percent.

TECH REMAINS ON TOP

While tech was again the most represented vertical in need of asset tracking solutions at 33 percent, telecomms, transportation and distribution, and retail all came in at or around 10 percent, marking growth in the non-tech industries from 2020.

Comparison

We've included some highlights of comparisons to the 2019 and 2020 data. See appendix for additional comparisons and takeaways.

INCREASING GLOBAL REPRESENTATION

The percentage of respondents from Europe jumped from 8 percent in 2019 to 21 percent in 2020 to 32 percent in 2021, while the number of U.S.-based respondents dropped from 71 percent in 2019 and 55 percent in 2020 to 40 percent in 2021.

SMALLER COMPANIES = BIG NUMBERS

Similar to 2020, the majority of respondents work in companies with 10 or fewer employees (55 percent in 2021 versus 57 percent in 2020 and 48 percent in 2019). One possibility could be that smaller companies are less likely to have already-established technologies or systems for asset tracking in place when compared to larger enterprises.

CHANGING TECHNOLOGIES

In 2019 and 2020, cellular was the clear choice of technology for respondents who were tracking assets at 40 percent. In 2021, respondents using cellular dropped to 29 percent, with Wi-Fi jumping from 13 percent in 2020 to 23 percent in 2021.

Notably, LPWAN usage dropped from 29 percent in 2020 to 17 percent in 2021, with Bluetooth and satellite making 5 percentage point leaps up to 7 and 6 percent, respectively.

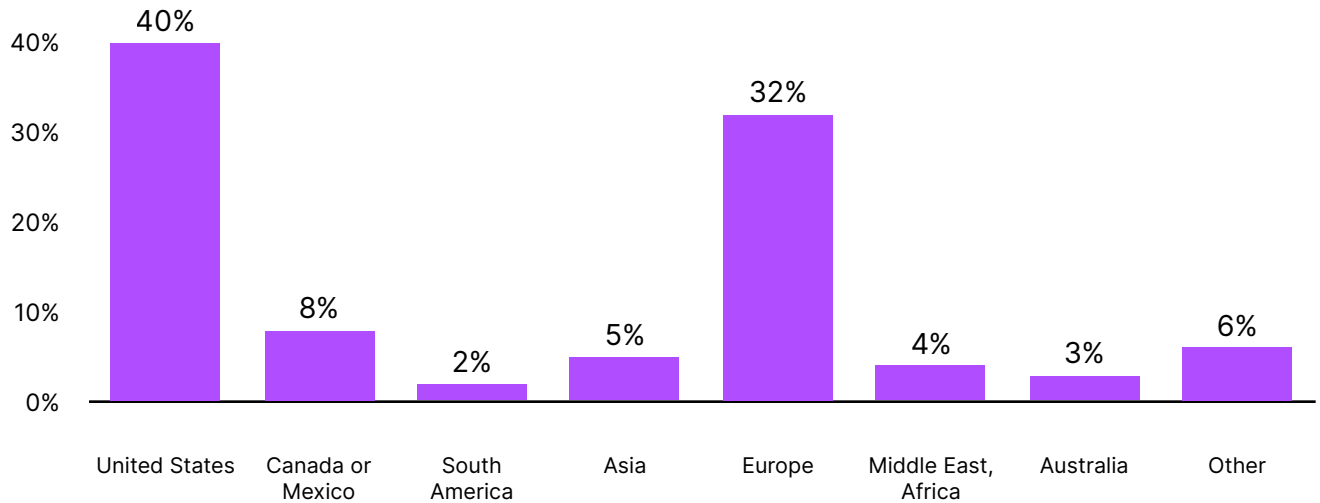
UPPER MANAGEMENT SPEAKS UP

In 2019 and 2020's data, CEO/Founder was selected 12 and 13 percent of the time, compared to 55 percent in 2021.

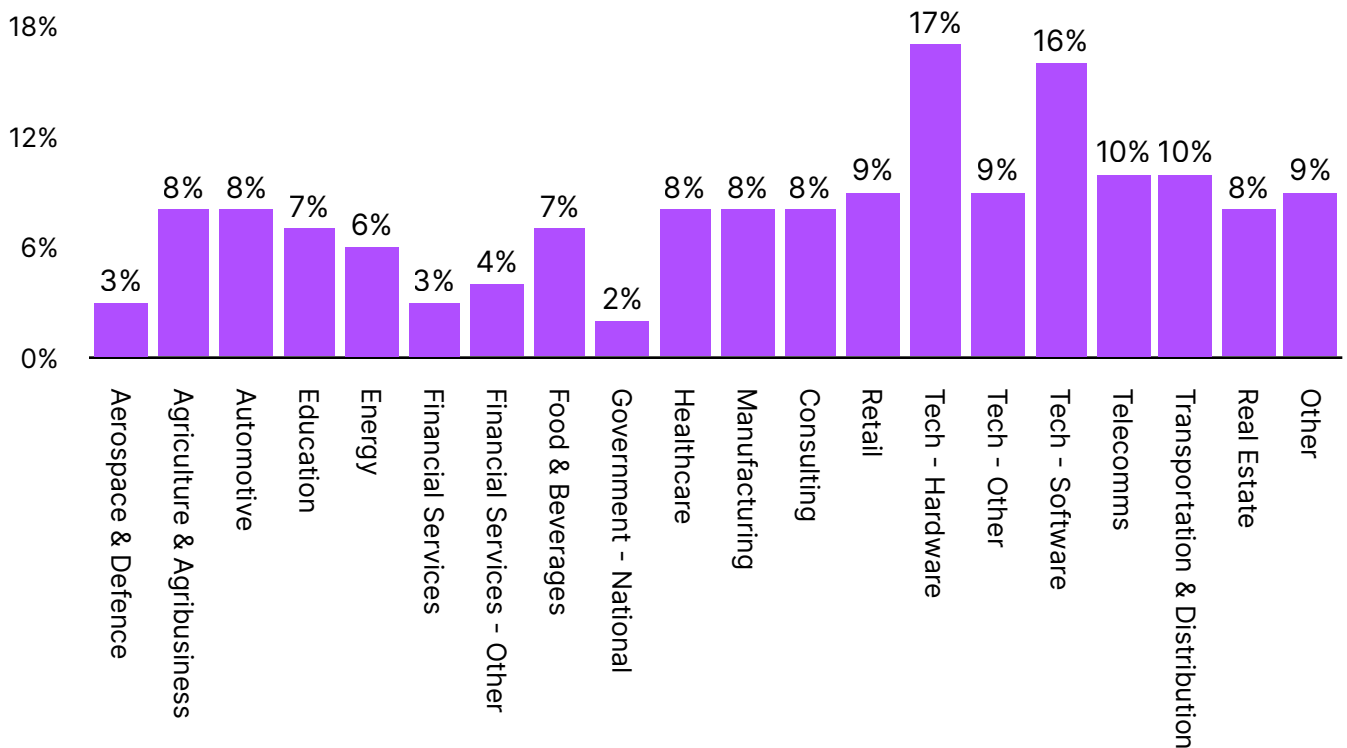
Detailed Data

Certain questions allowed choosing multiple answers so total percentages may exceed 100%.

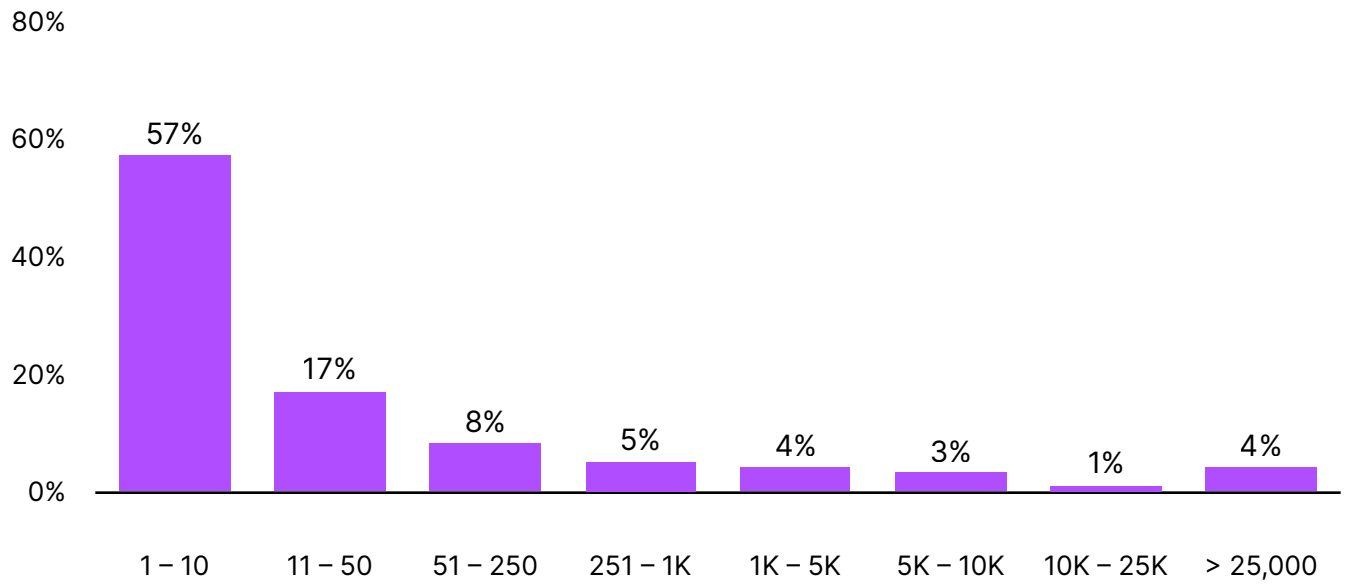
Where's your company based?



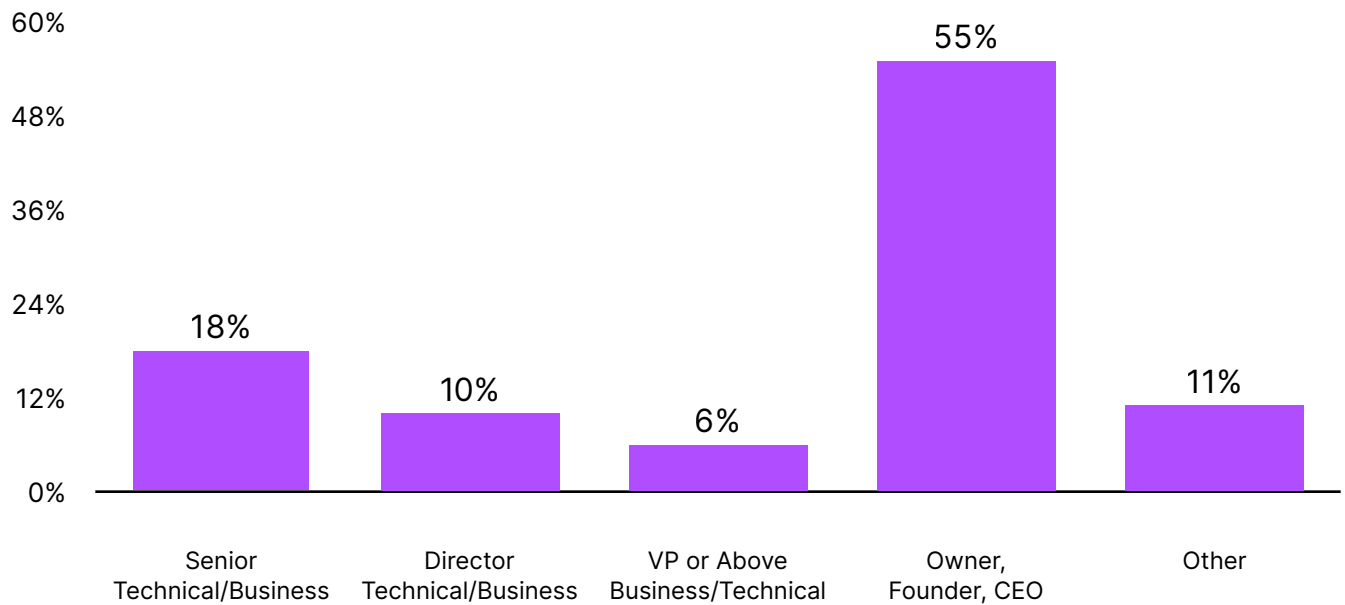
What vertical industry does your Company belong to?



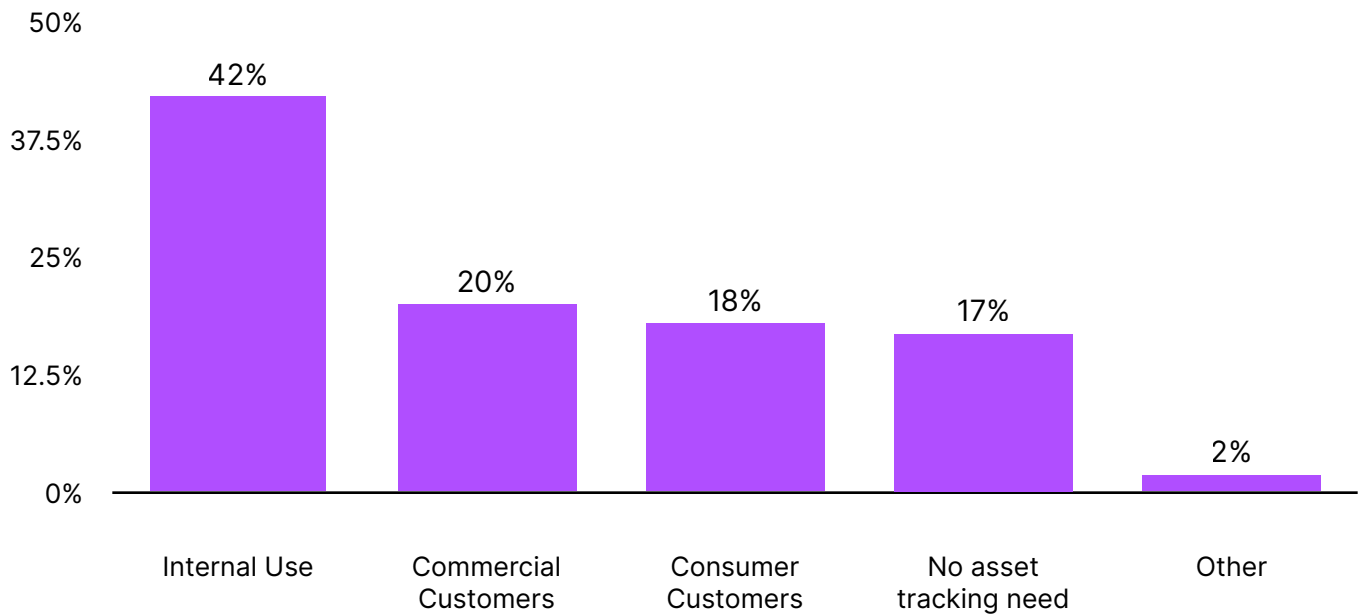
What's the size of your organization (employee number)?



Which of the following best describes your job function?

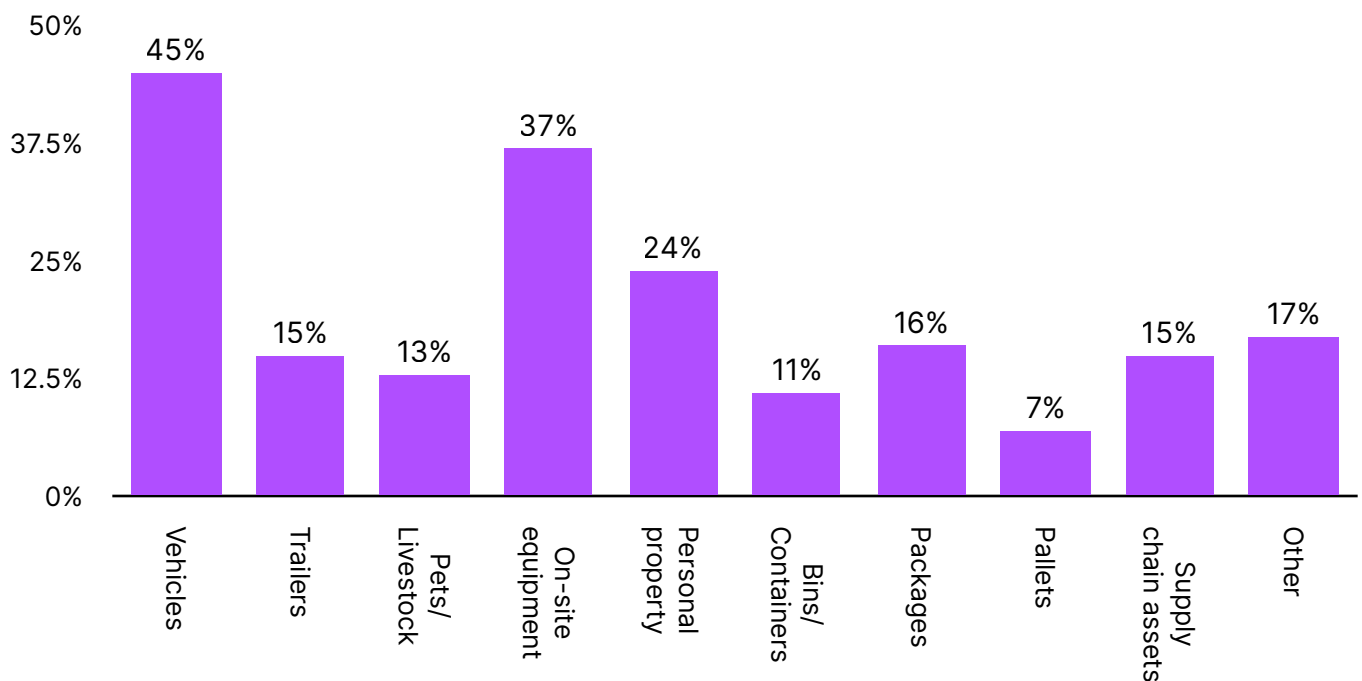


Who is the primary target for your asset tracking need?

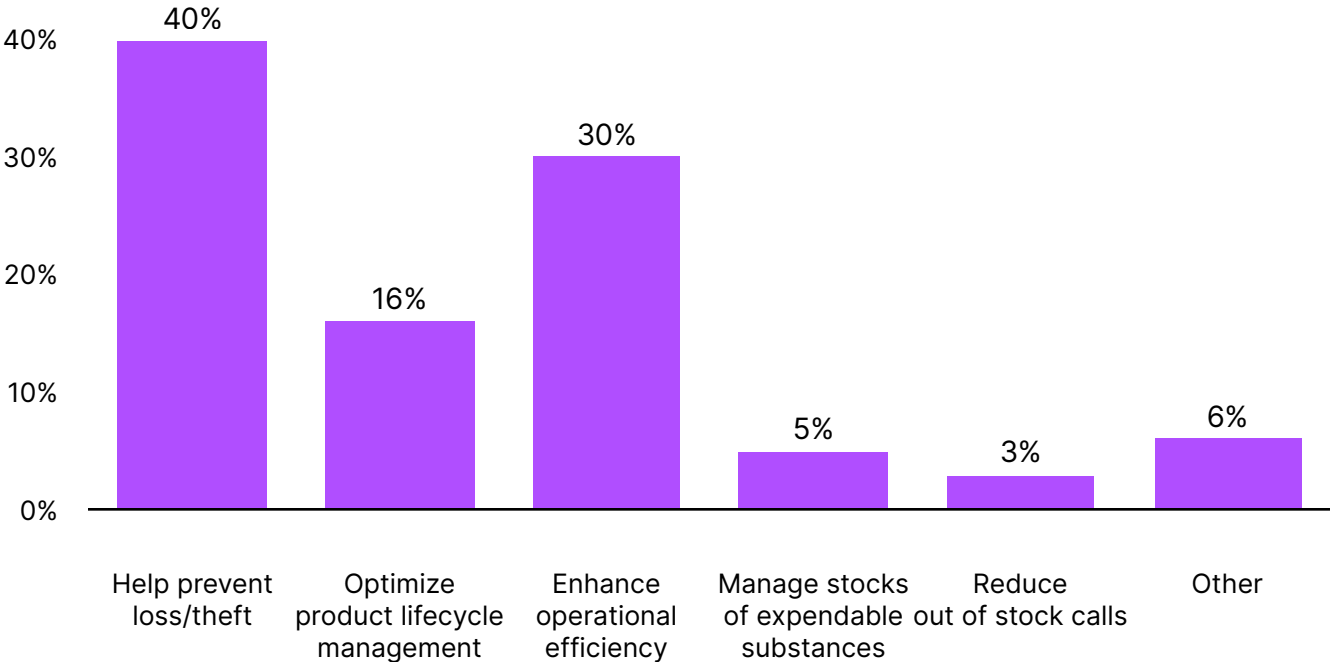


What is the Main Type of Asset That You are Currently Tracking?

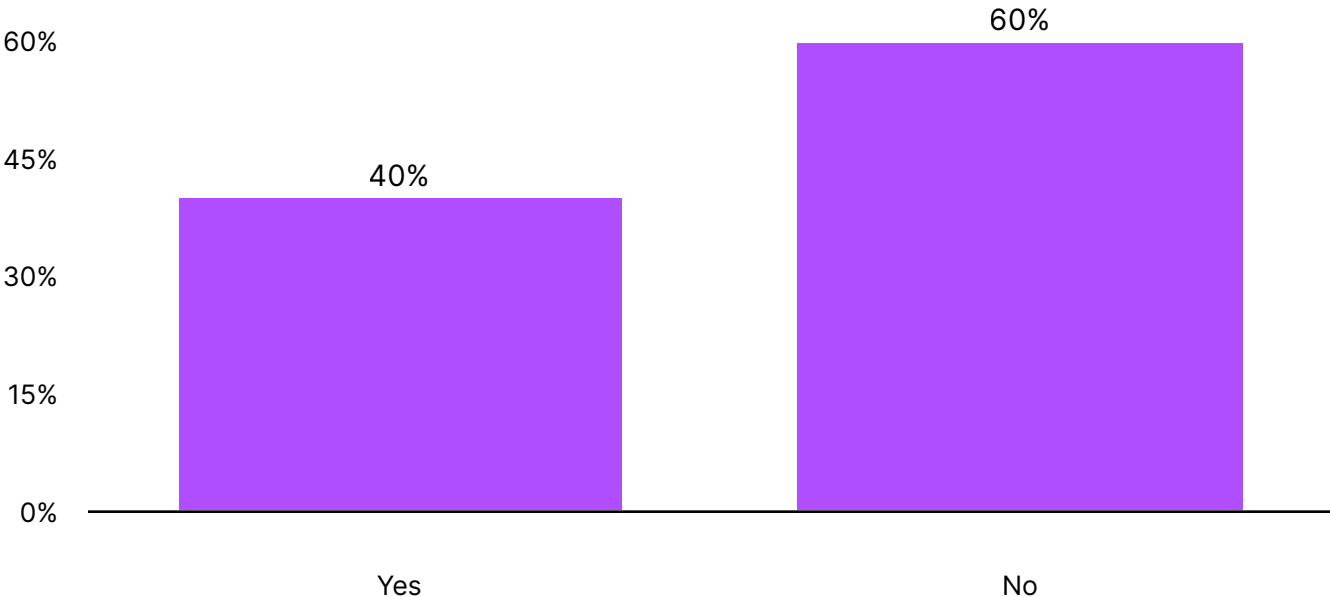
Answered Yes: Are you currently using any connectivity technologies to track assets?



What are your primary business drivers for tracking assets?

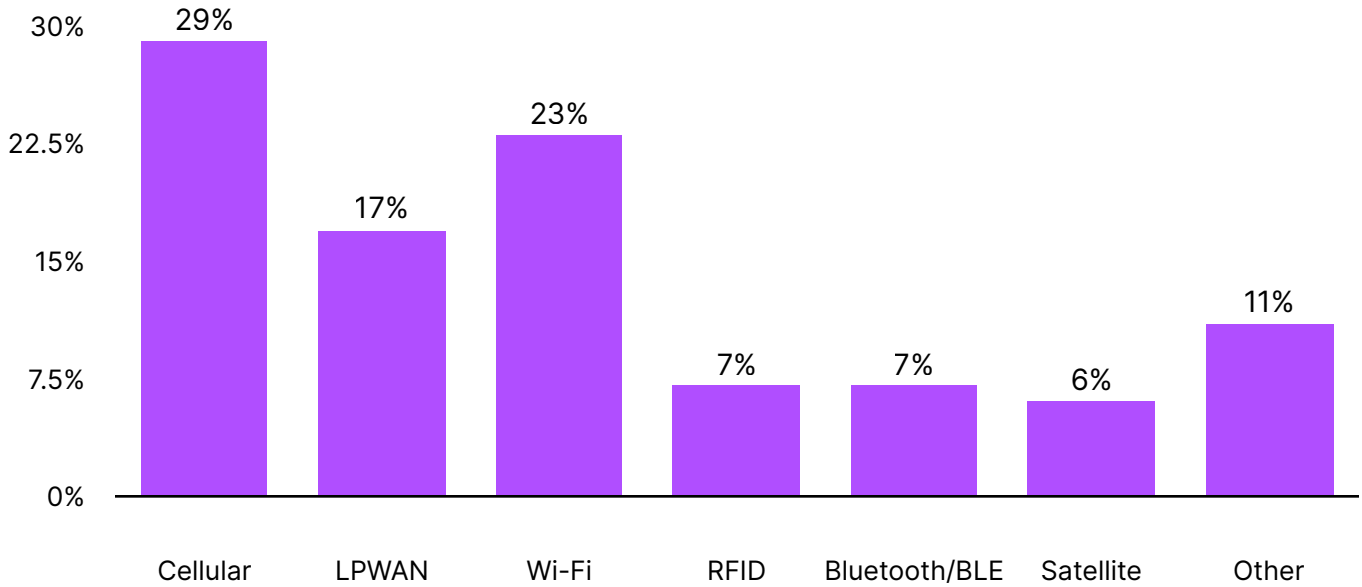


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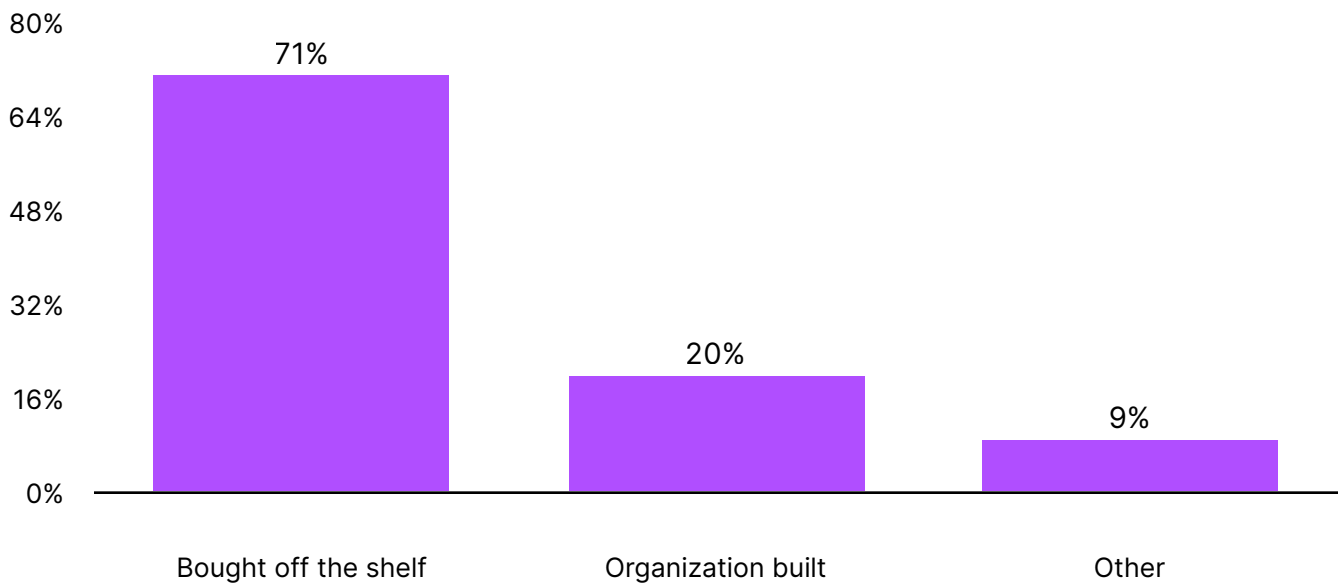
What connectivity technologies are you primarily using?

Answered Yes: Are you currently using any connectivity technologies to track assets?



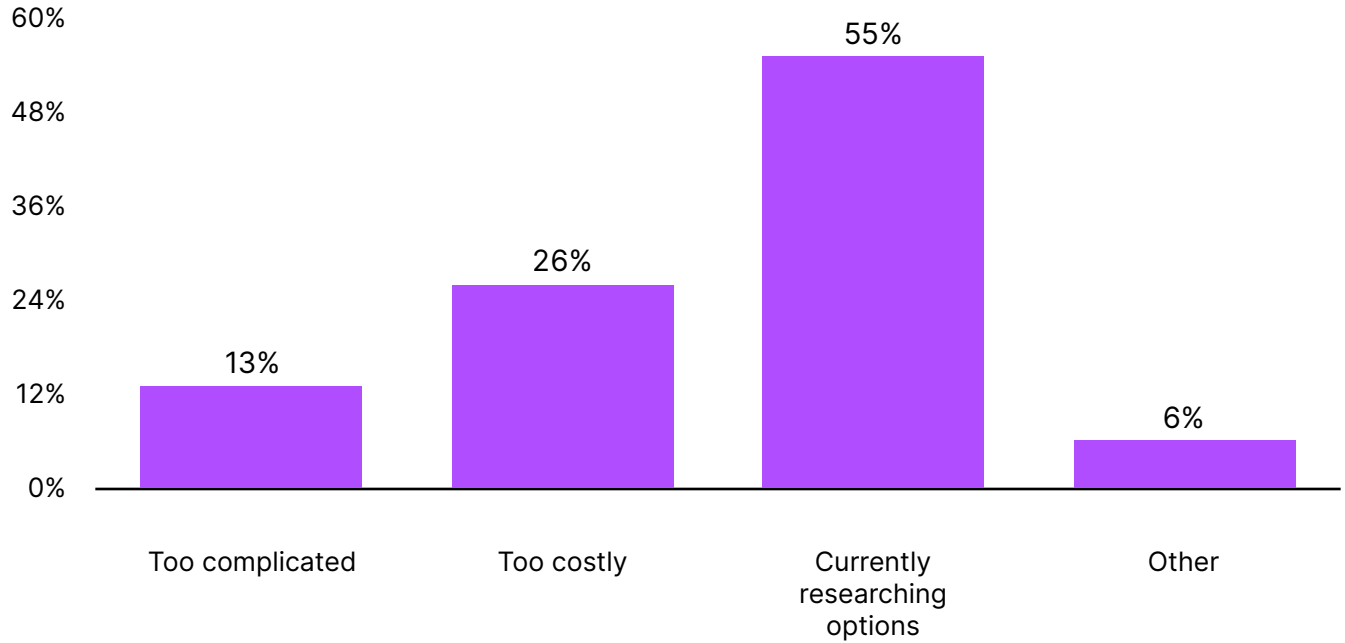
Please share details about your tracking sensor, is it:

Answered Yes: Are you currently using any connectivity technologies to track assets?

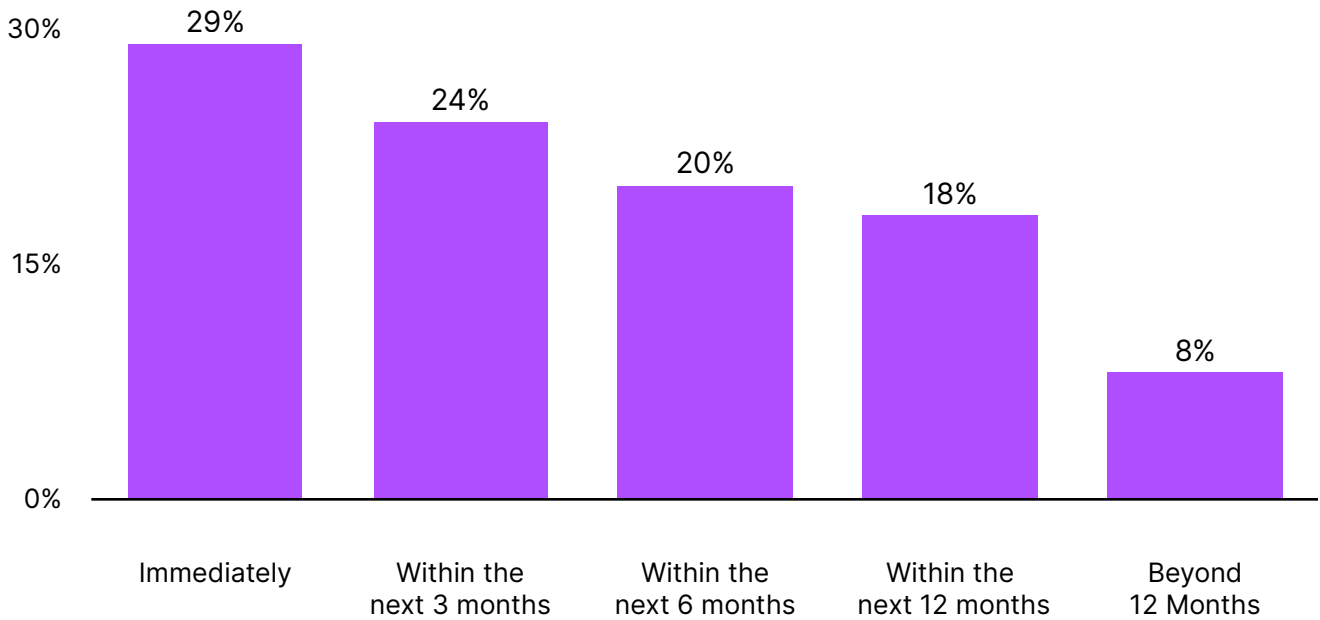


What's the primary reason you're not using any of these technologies?

Answered No: Are you currently using any connectivity technologies to track assets?



What's your timeline to address your asset tracking use cases?



Track Your Assets on the World's Largest Contiguous Wireless Network

Asset tracking solutions running on the Helium Network allow businesses to remotely track and trace assets, collect location data in real time, and cryptographically prove asset location using the Helium Blockchain.

REMOTELY TRACK AND TRACE ASSETS

With the largest contiguous wireless network in the world, businesses can accurately track and trace assets across large geographic regions with low-cost, commodity trackers that don't need replacing for years.

COLLECT LOCATION DATA IN REAL TIME

Collecting real time data for assets onsite or in transit on a network optimized for long range and battery life is now accessible to organizations at a fraction the connectivity costs of cellular.

HIGHLY-COMPETITIVE COSTS

Using the Helium Network to track assets costs less than \$1.05 per sensor per year (for a sensor sending data every 5 minutes), making Helium a much cheaper option than cellular or WiFi.

To get started with your asset tracking use case today, contact sales@helium.com.

About

The State of IoT Asset Tracking survey and report was an initiative conducted in partnership with Helium and Digital Matter.

With more than one company participating, we saw a larger number of responses and more international representation.

HELIUM

Co-founded by Shawn Fanning and Amir Haleem in 2013, Helium is building the world's first decentralized wireless network to simplify connecting devices to the Internet by rewarding anyone to become a network operator.

CEO Amir Haleem comes from an extensive background in triple-A video games. Helium is

backed by GV (formerly Google Ventures), Khosla Ventures, Union Square Ventures, Multicoon Capital, FirstMark, Marc Benioff, Shawn Fanning and other top VCs.

The network is live in more than 20,000 cities and counting around the world. Learn more at helium.com.

DIGITAL MATTER

Digital Matter is a leading global developer of low-power GPS and IoT hardware for asset tracking and management applications.

Engineered to outperform, we offer a versatile range of LPWAN asset tracking hardware with the largest portfolio of integration-ready battery-powered asset tracking devices across a range of connectivity technologies.

With over 20 years of telematics experience and over 500 channel partners across 120 countries, Digital Matter supplies and supports scalable, and secure devices for Telematics Businesses, IoT Solution Providers, Enterprises and Network Operators around the world. For more information, visit us at www.digitalmatter.com.

Appendix

3 YEARS OF DATA

The growing urgency for asset tracking solutions has resulted in over four times the number of survey respondents compared to 2020. With three years worth of data, we are now able to identify trends in the asset tracking market.

Global representation has increased, with the percentage of European respondents growing from 8 percent in 2019 to 32 percent in 2021. While tech is still the leading vertical, telecomms and transportation & distribution have surpassed healthcare as the next largest.

Preventing loss/theft is still the largest business driver for asset tracking solutions, but the gap between that and enhancing operational efficiency has widened to 40 percent versus 30 percent, compared to 38 percent versus 37 percent in 2020 and 36 percent versus 32 percent in 2019.

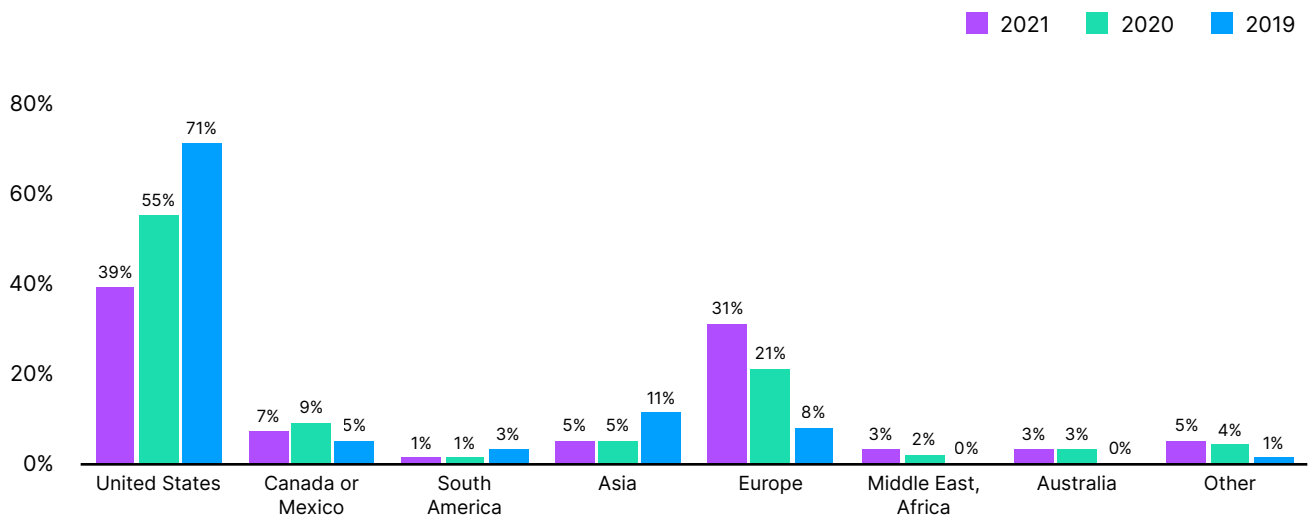
The number of respondents who are not currently tracking assets has grown since 2019 to 60 percent, but 55 percent of those respondents say they are currently

researching solutions, showing a growing sense of urgency for asset tracking.

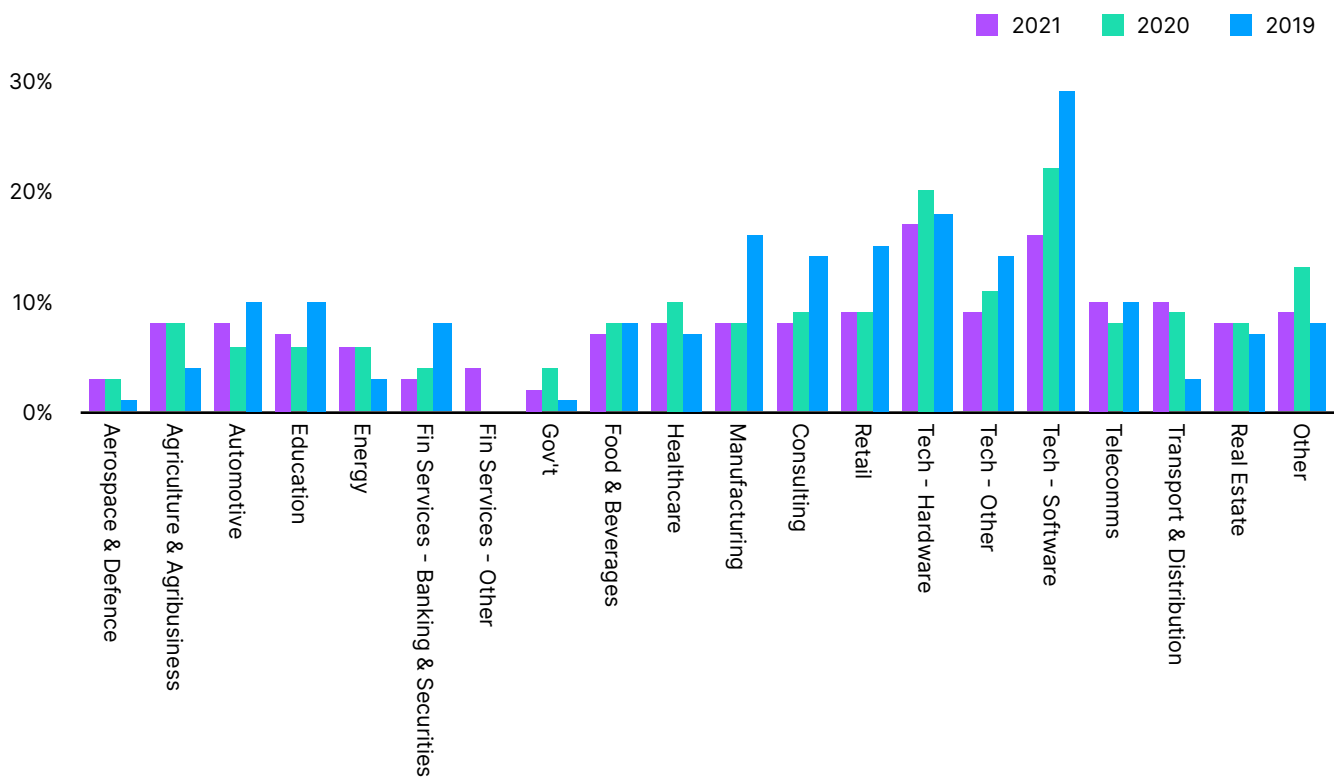
After 2 years of dominating the technology being used to track assets, cellular took a step back in 2021. While still the top choice at 29 percent in 2021, this is down from 40 percent in 2020 and 26 percent in 2019. WiFi, however, jumped from 12 and 13 percent in 2019 and 2020 to 23 percent in 2021. Frustration with cellular solutions seems to be driving respondents to alternatives that are less than ideal.

Additionally, the demand for asset tracking solutions is shown via respondent's timelines to address asset tracking use cases. In 2019, 24 percent of respondents said they were looking to find solutions immediately, with that number staying similar at 25 percent in 2020. However, in 2021, 29 percent of respondents said they were hoping to find a solution immediately, with 24 percent saying they hoped for one within the next 3 months. This all points to a growing need for reliable asset tracking solutions.

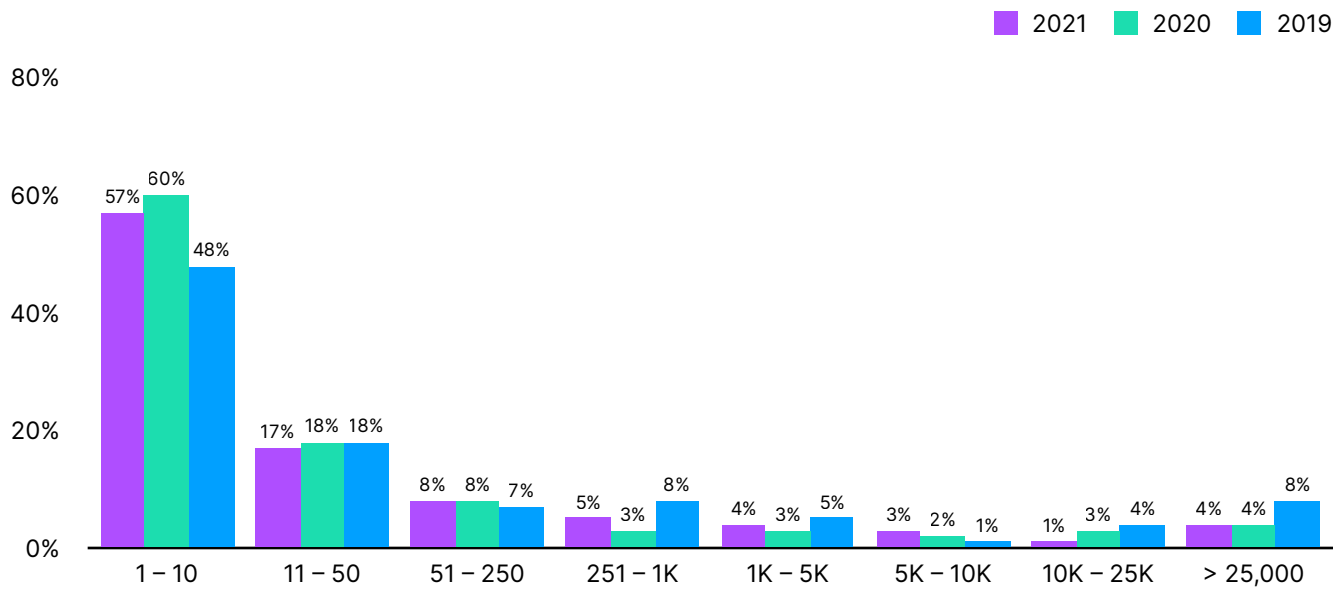
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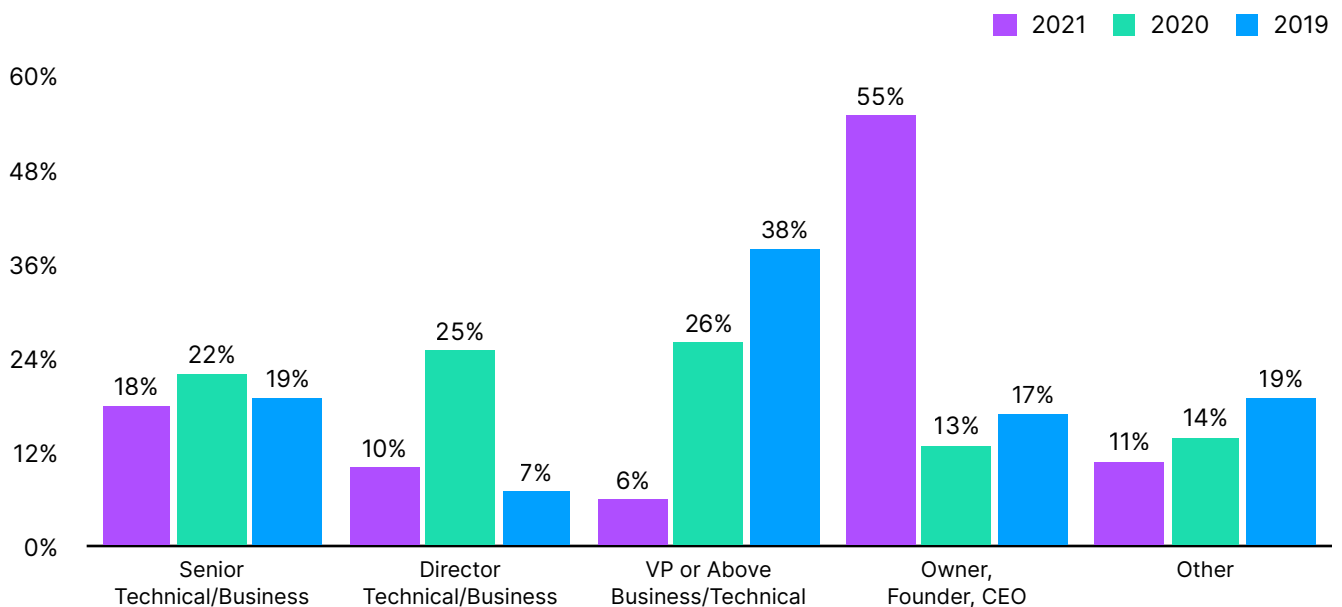
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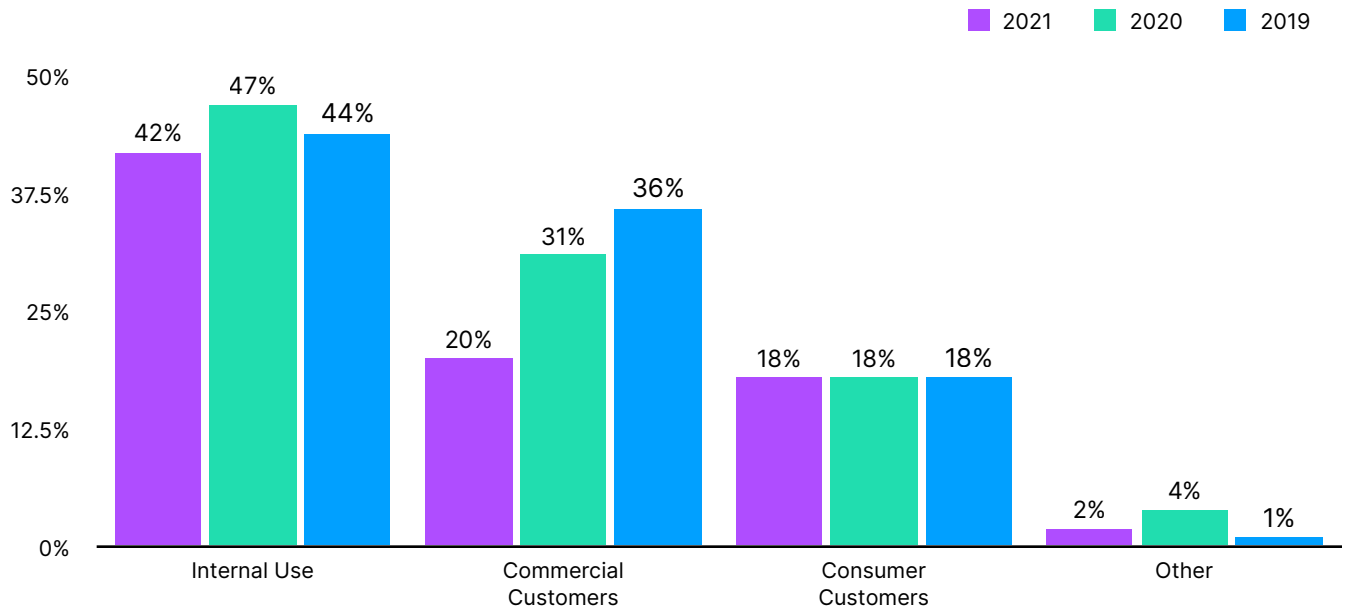
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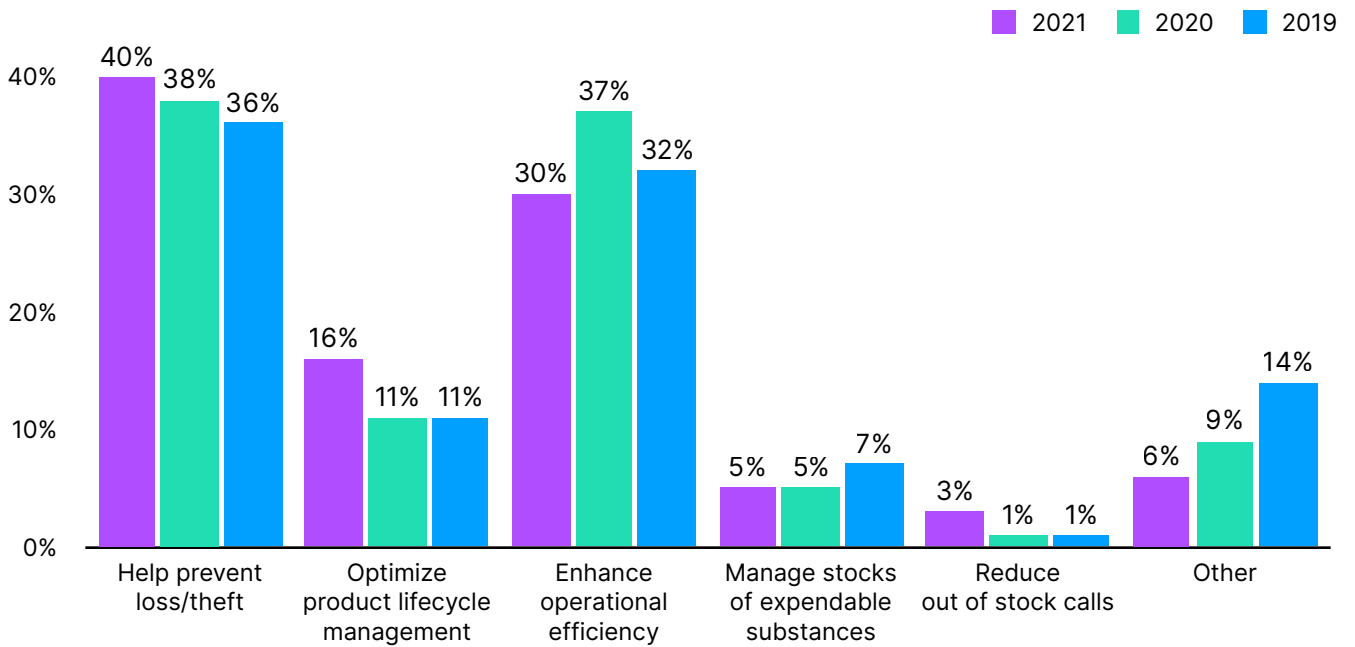
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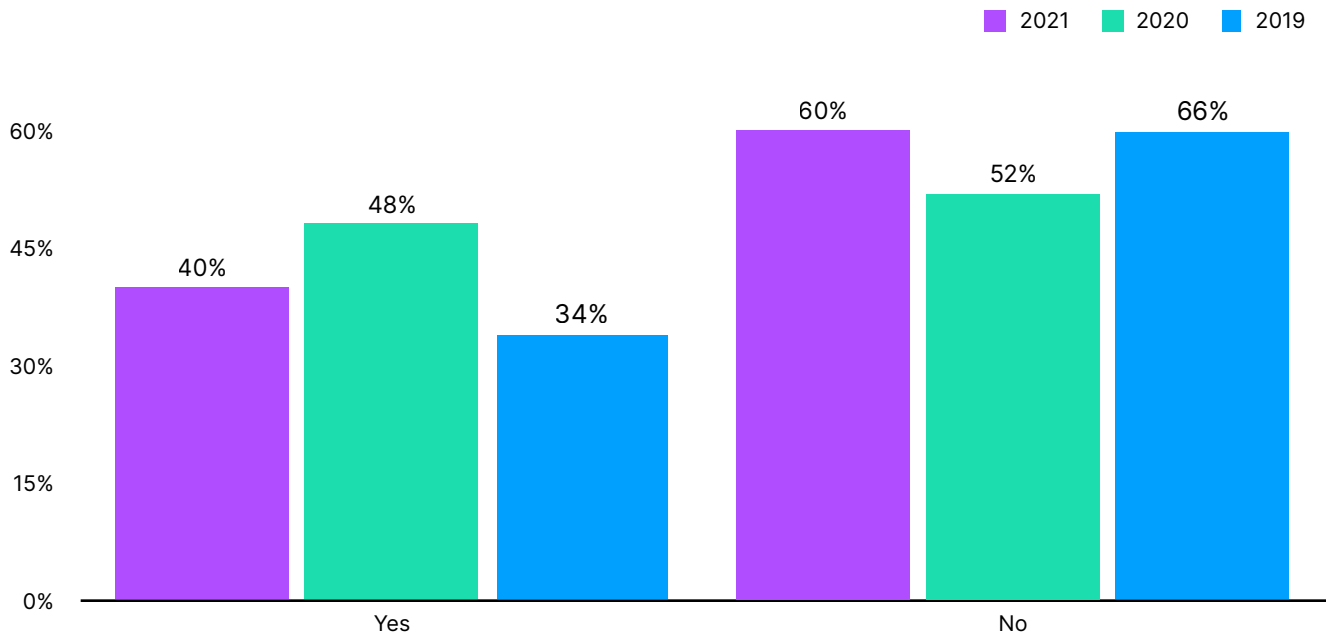
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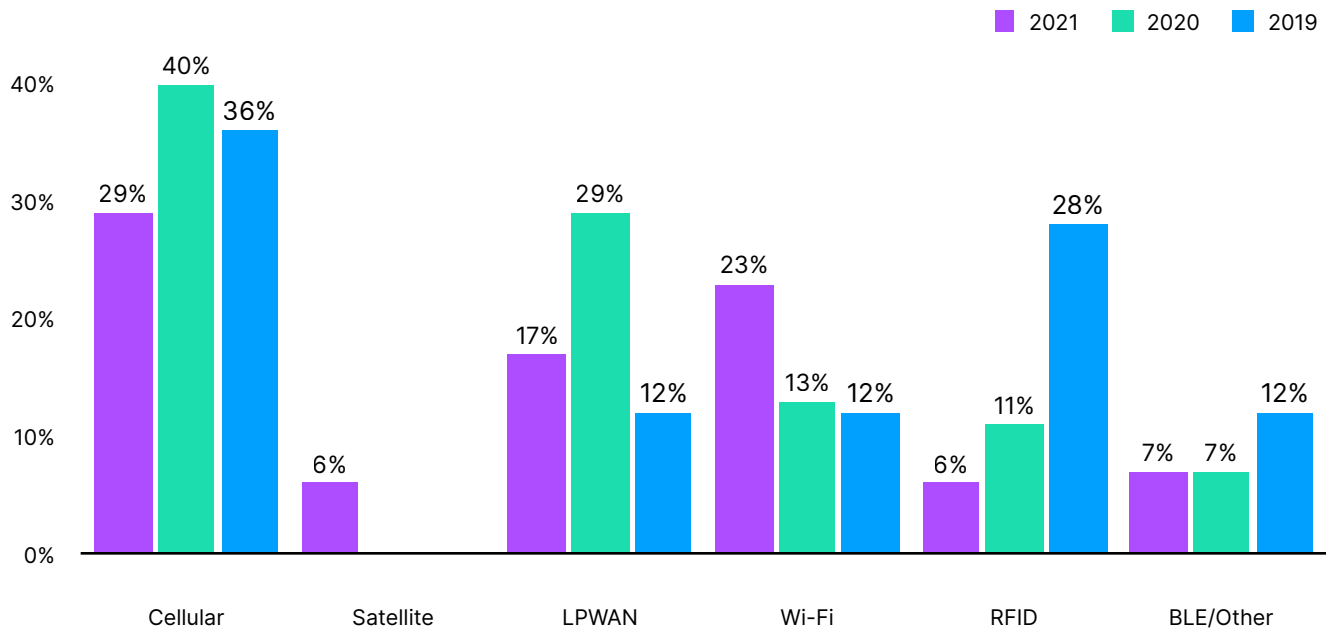
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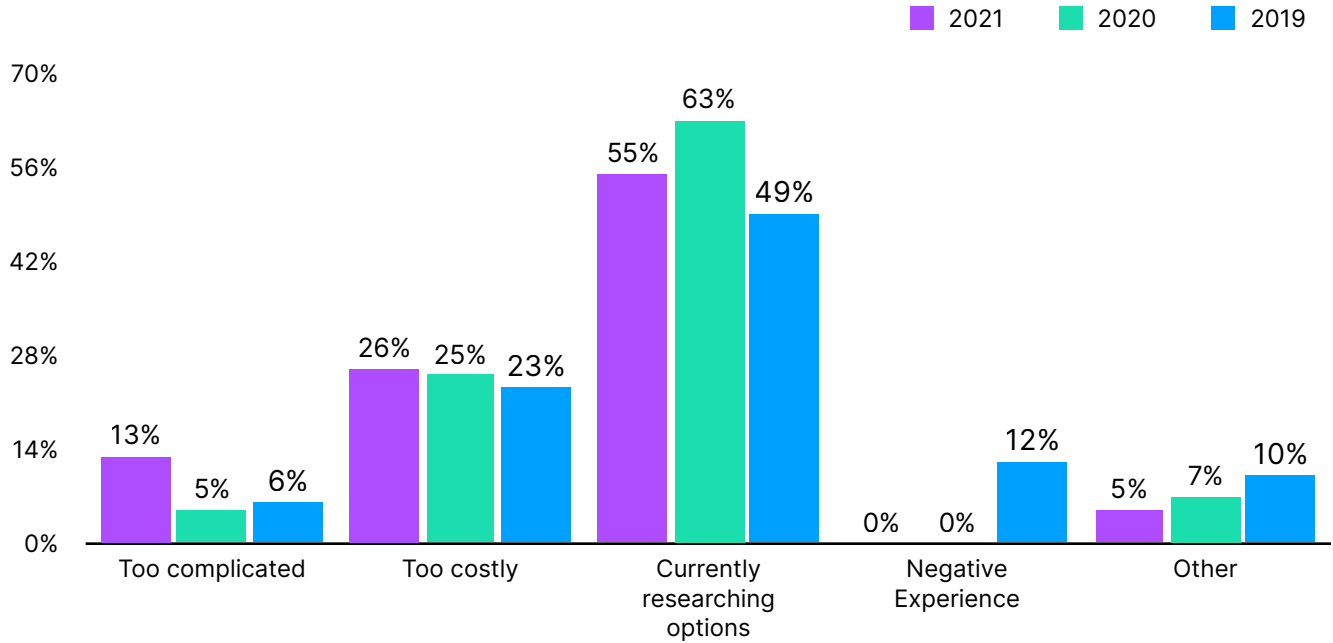
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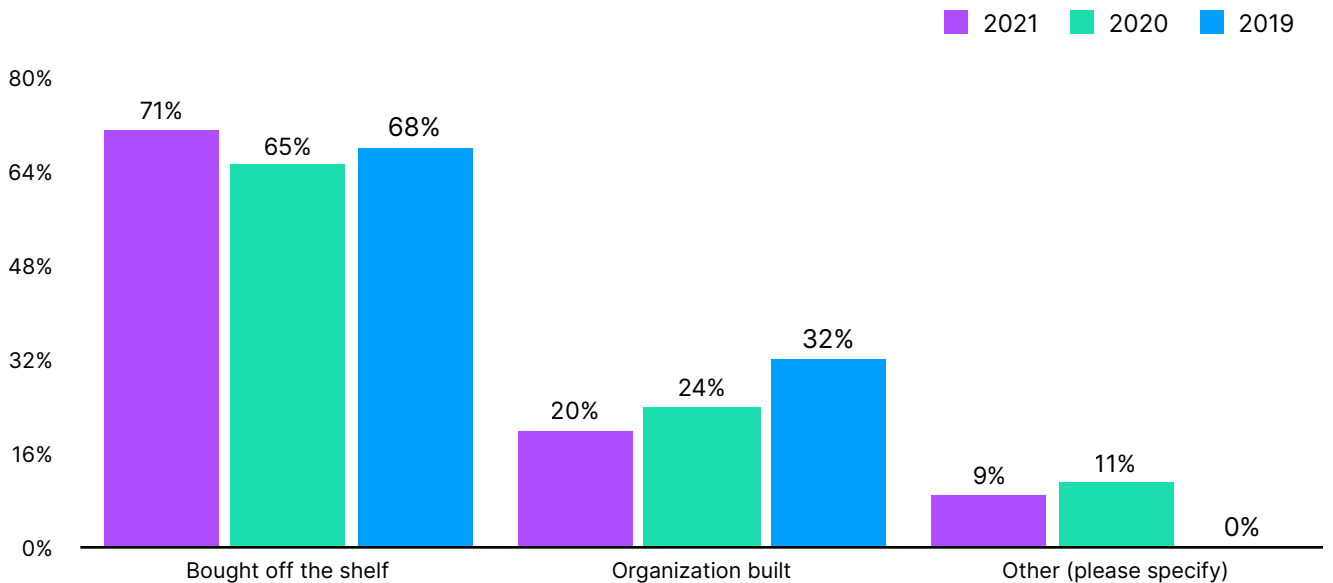
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