Product Development Pulse Check 2022

Insights and priorities from 90+ engineering leaders

COLAB

Intro

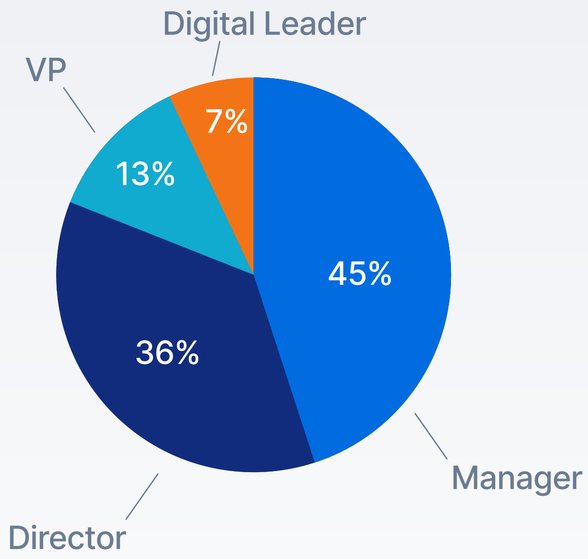
In early 2022, more than 90 engineering leaders completed a survey sharing their perspectives and priorities for the year. The goal of this report is to summarize the information gathered in that survey and to deliver useful insights based on analysis of the responses.

Product development is more complex, multi-disciplinary, and globally-distributed than ever. Engineering and manufacturing businesses have had to be resilient and adaptive, particularly over the past two years as the COVID-19 pandemic accelerated digital transformation needs. This report lets engineering leaders get a sense of what their peers are focused on this year and offers a couple simple steps you can take to put these insights into action.

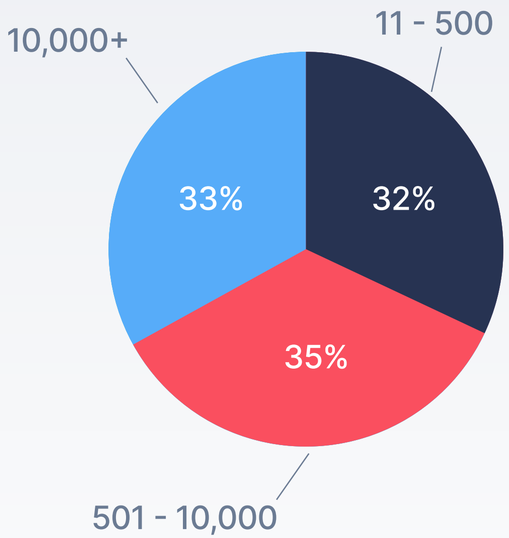
Report demographics

93 engineering leaders participated between January 13th and February 22nd, 2022

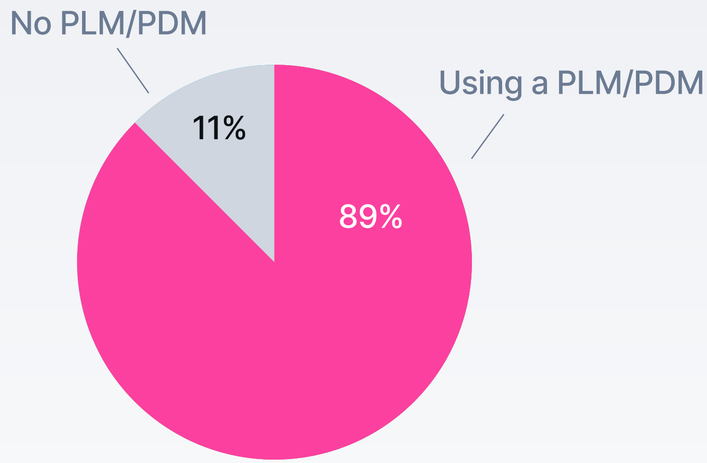
Role



Company size



PLM/PDM system



Top 5 takeaways

1. Speed and quality are top priority.

More than anything else, engineering leaders are primarily focused on delivering quality products on-time. However not all leaders have clear, robust sets of KPIs to help them know specifically where to make adjustments and improvements. Leaders that can find better ways to collect metrics around day-to-day design work, and then map those metrics back to high-level KPIs, will be well-equipped to develop high-performing engineering teams that hit their targets.

2. PLM systems are for record-keeping, not collaborating.

PLM systems are great for a lot of things, but they weren't actually built for collaboration. So engineering teams are relying on their PLM as an important system of record but not as a communication tool for collaborating on design. Instead, only 12% of survey participants reported using PLM to review designs—compared to 85% who use meetings, and 65% who use generic tools like PowerPoints and/or PDFs.

3. Leaders are spending a full day per week in design review meetings.

If design review meetings are taking up roughly 20% of leaders' total work time, it's worth considering how that time could be spent more effectively. As teams become more and more globally distributed, there's a growing need for asynchronous ways to review designs. And to get even more value from the review process, leading teams will start adopting a hybrid approach that combines live meetings with asynchronous reviews.

Top 5 takeaways

4. Communication quality determines decision-making speed.

With the right information presented to the right people at the right time, a decision can be very quick to make. But for engineering leaders today, 87% of design decisions are happening primarily via meetings, calls, and chat messages. Information and communication silos keep day-to-day discussions from being easily accessible across stakeholders, which slows down critical decision-making and makes it harder to keep everyone on the same page.

5. Digitization needs to be strategic.

Digitization may be a priority for most leaders, but it's not more important than delivering new products or improving on existing ones. The COVID-19 pandemic proved that adopting new digital tools actually can happen quickly, even for large organizations—which has accelerated existing trends around the cloud and best-of-breed applications that easily integrate. While having a long-term digital strategy is still vital, the days of massive multi-year, single-vendor, do-it-all software suites are over.

The results

Survey response data from 90+ engineering leaders

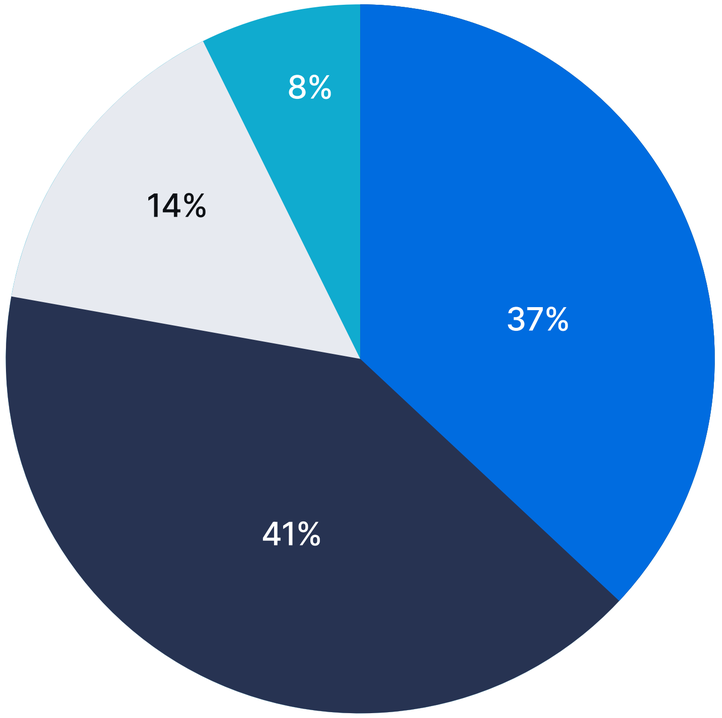
Where product development is focused

How would you describe your organization's product focus in 2022?

What KPIs are you responsible for in 2022?

"Continued support of recently-launched products, exploration of new product ideas for future."

Director of Engineering
Industrial Equipment Industry



Where product development is focused

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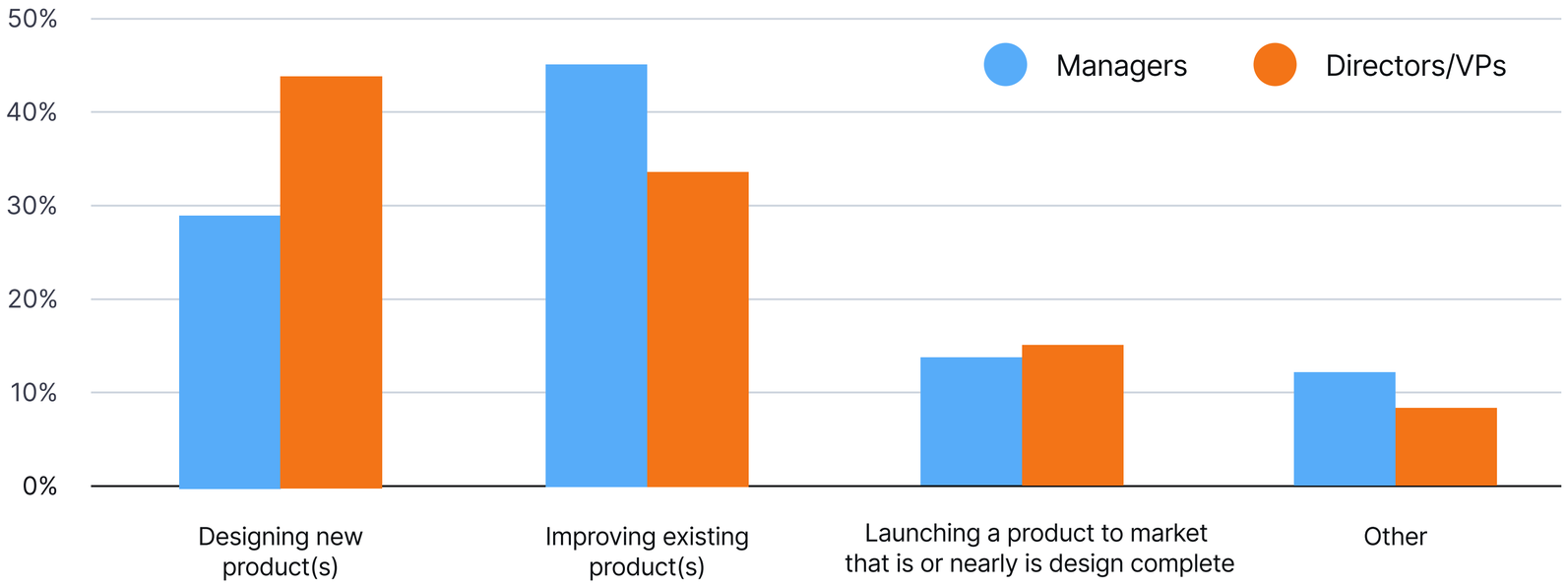
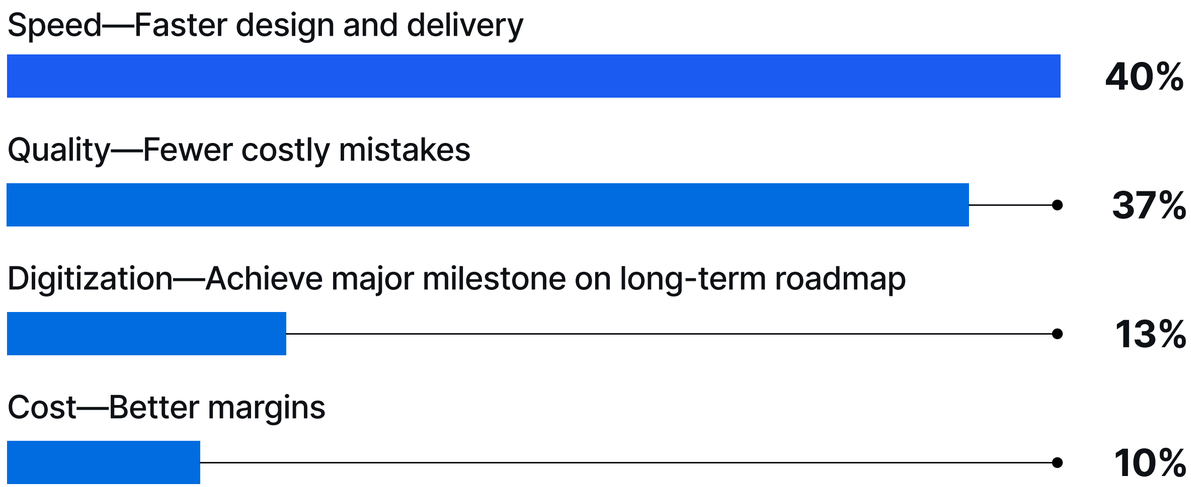


Leaders at the Director/VP level report that their organization is focused on new product development, with 44% reporting NPD as their top focus.

Managers, however, are more focused on improving existing products, with 46% citing product improvement as their primary focus.

Where improvement efforts are focused

If you could improve your organization in one way in 2022, which would you choose?



What is one thing you're trying to improve on and learn more about this year?

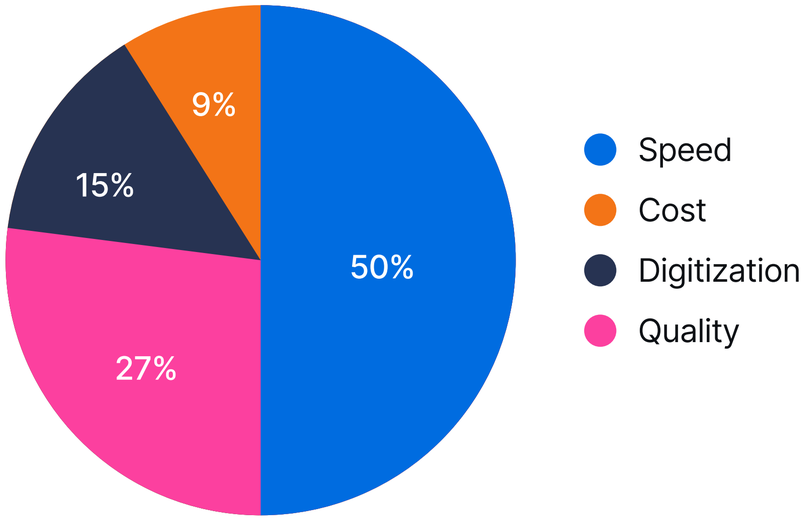
"Improving confidence in design before engaging other groups."

Director of Engineering
Automotive Industry

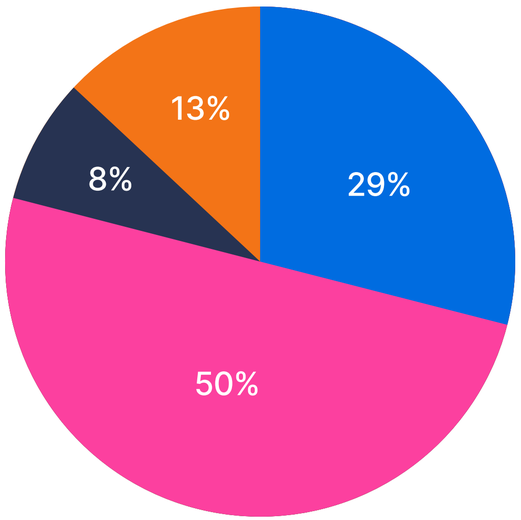
Where improvement efforts are focused

If you could improve your organization in one way in 2022, which would you choose?

For teams focused on New Products



For teams focused on Existing Products

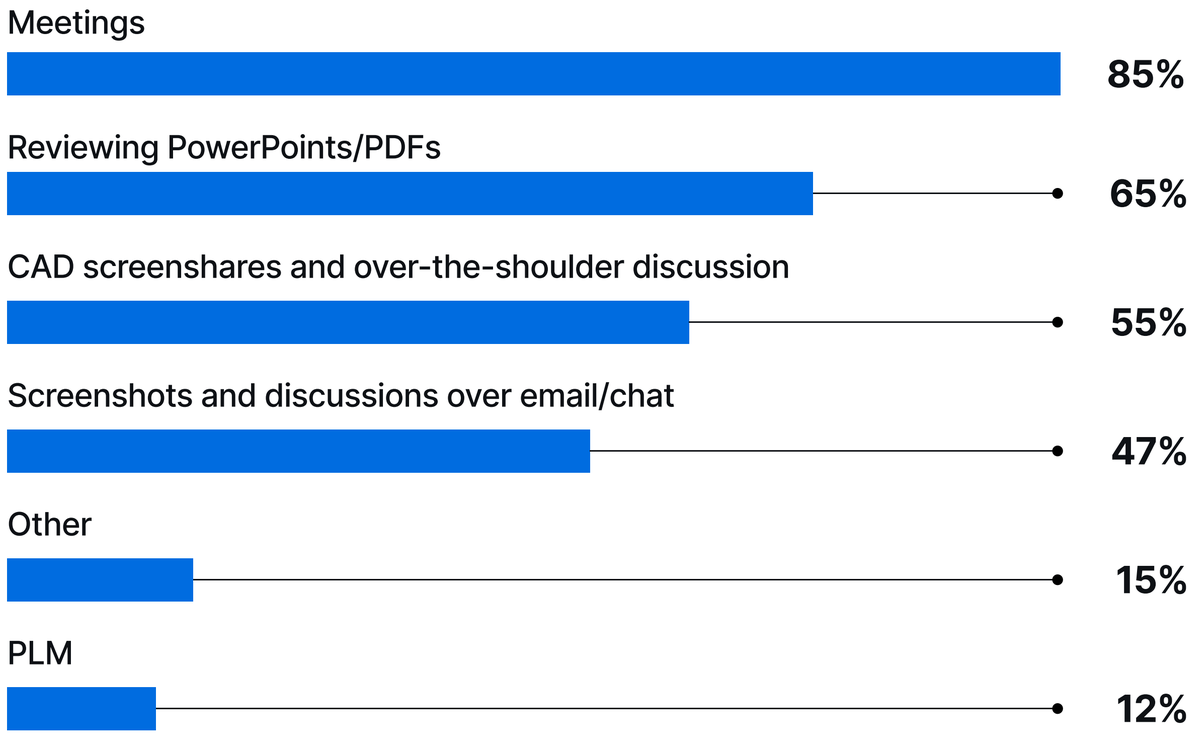


For teams focused on new product development, speed is the #1 priority.

For teams focused on existing products, quality is #1.

Design communication

How does your team conduct design reviews?

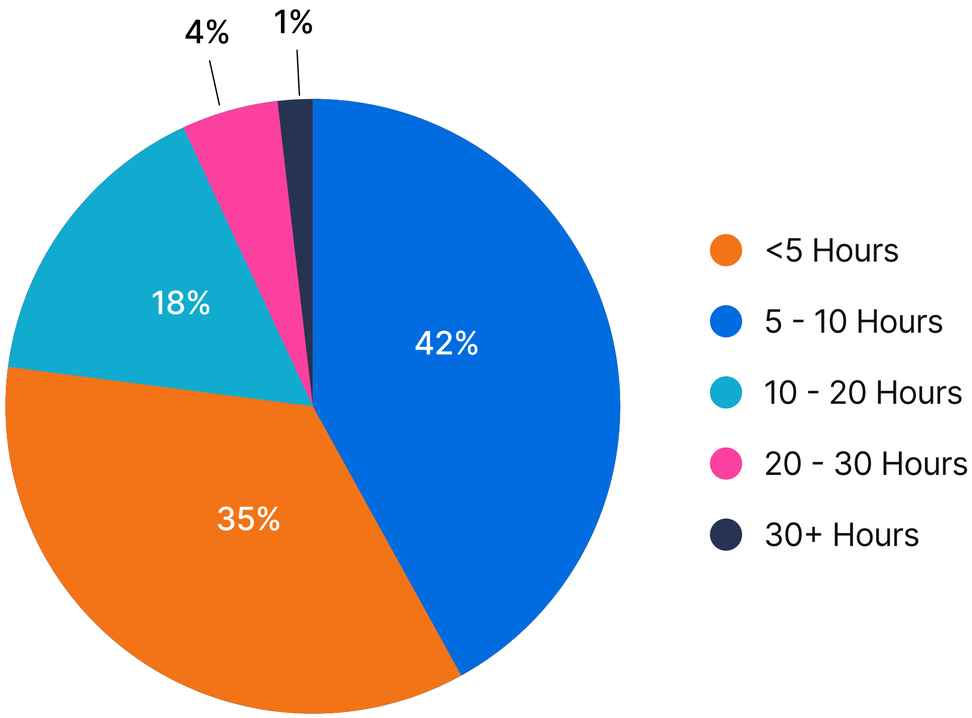


85% of teams are using meetings to conduct design reviews, while **55%** of teams are reviewing designs via CAD screenshares and over-the-shoulder discussion, and **47%** are sharing screenshots and discussion over email/chat. Although these methods do allow for real-time communication, they also make it more likely that things will slip through the cracks—leading to **product quality issues** and **delivery delays**. And either information ends up living solely inside engineers' heads, or a bunch of extra manual admin work is needed to effectively capture design conversations and decisions.

Also, while PLM systems do play an important role in the product development process, **only 12%** of teams are using their PLM system for design reviews.

Design communication

How many hours per week do you spend in design-related meetings?

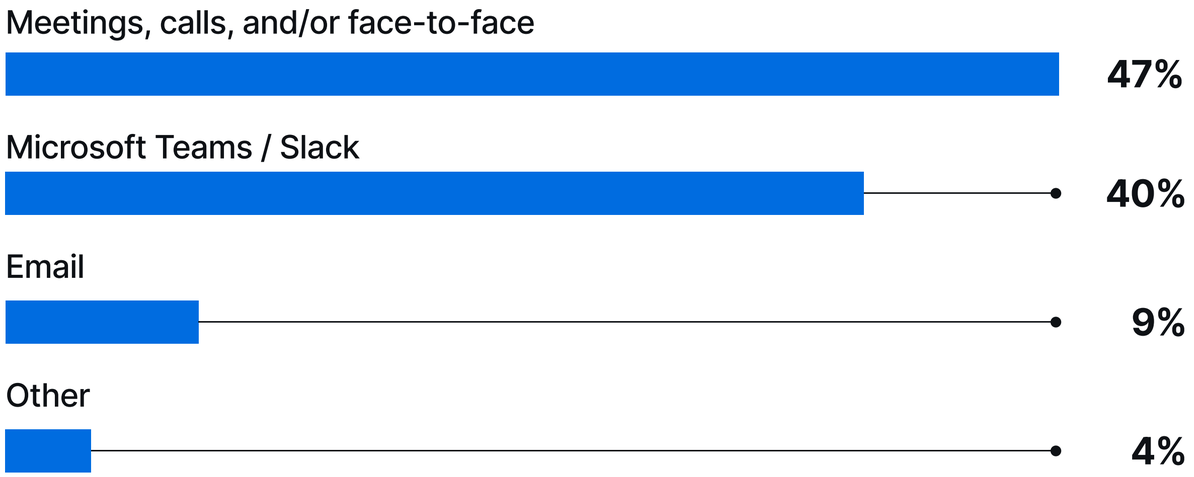


Roughly **two-thirds** of teams are using **PowerPoints** or **PDFs** for design review.

On average: Leaders spend **8.2 hours/week** in design-related meetings.

Communication channels for decisions and updates

What is your team's primary means of communication for making design decisions?

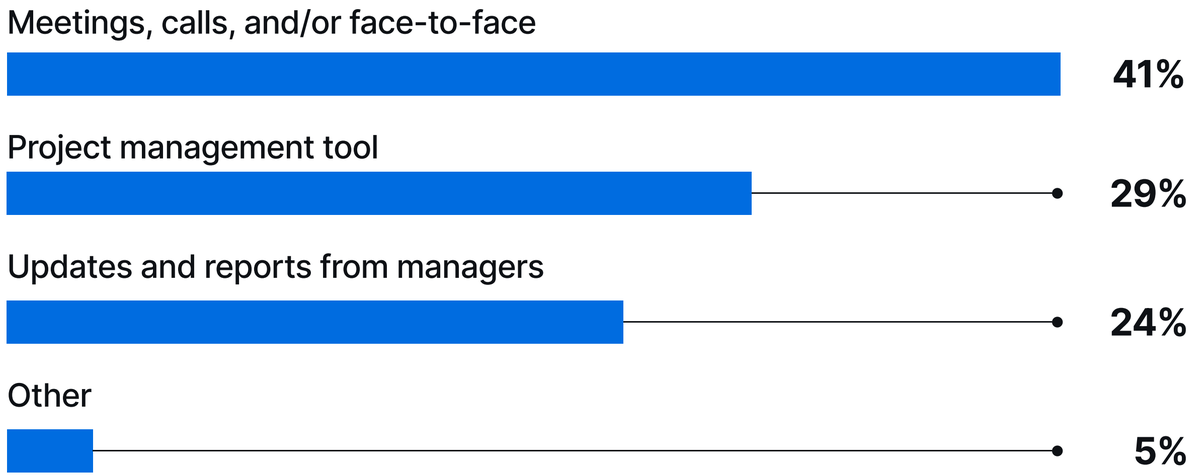


47% of teams report making design decisions primarily through **meetings, calls, and face-to-face conversations**. That means a large chunk of decision-making is happening in channels that are best suited for synchronous communication, even as work norms are shifting toward more hybrid teams and industry leaders are adopting powerful modern collaboration tools.

Teams that find ways to work together **effectively** and **asynchronously**—both internally and externally, keeping everyone on the same page from initial concept to final delivery—will find themselves pulling ahead of the pack.

Communication channels for decisions and updates

When you need to know where something stands, how do you primarily get insight into your team's progress?



65% of leaders rely on **meetings or updates from managers** to know where progress stands.

> "For me, communication and alignment with others is everything."

VP Engineering
Energy Industry

Priorities and measures of success

How will you know if you've been successful in your role in 2022?

"Our biggest challenges as a company are dealing with rising input cost (material/shipping), and navigating through the pandemic. Success in this environment comes down to staying in the black while *carefully choosing* what to invest in, so that we come out of the pandemic with some momentum."
Engineering Manager, Consumer Products Industry

"More *value* delivered to the customers, less money left on the table."
Digital Leader, Shipbuilding Industry

"*Customer satisfaction* through NPD and new product launches on time, on quality, on product cost."
Director of Engineering, Consumer Products Industry

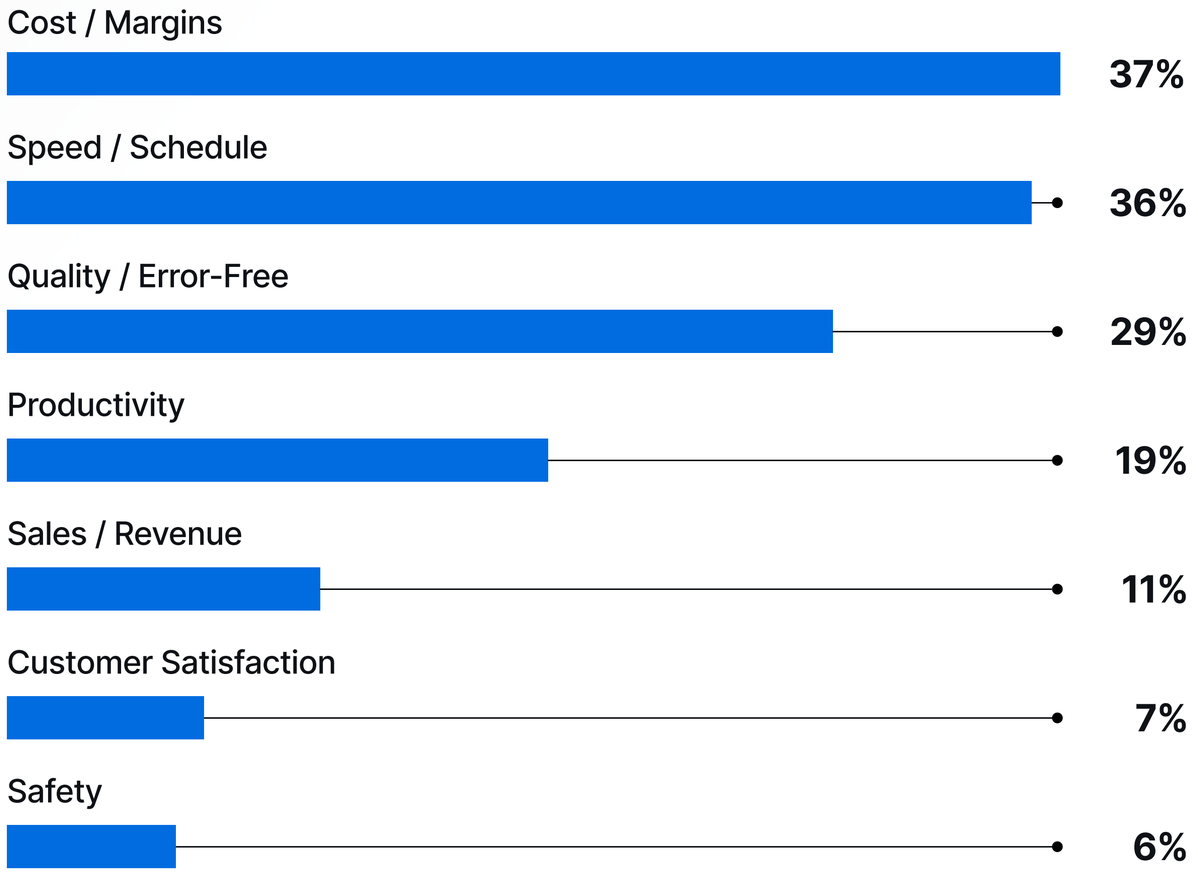
"I consider myself successful when my direct reports end the year with a *sense of accomplishment* and looking forward to achieve more, even better things the following year. My success lies on the environment that I create for them to be successful—and this, in return, helps the organization grow."
Engineering Manager, Automotive Industry

"Launch of new product meets our timelines *company wide*, not just as a team."
Engineering Manager, Automotive Industry

"We complete a full year of planned R&D work on-cost with *no schedule deviations or quality escapes*."
Director of Engineering, Automotive Industry

Priorities and measures of success

When asked “What KPIs are you responsible for in 2022?”, these were the seven most common themes among responses.



Even though 37% of leaders have KPIs related to cost/margins, only 10% identified cost as their top priority area for improvement.

Priorities and measures of success

What is one thing you're trying to improve on and learn more about this year?

"Defining and implementing world-class engineering processes."
VP Engineering, Industrial Equipment Industry

"How to balance design for speed with design for quality."
Engineering Manager, Automotive Industry

"Bringing new digital and real-time automation tools to old manufacturing processes."
Engineering Manager, Aerospace & Defence Industry

Next steps

How you interpret and use the information in this report will, of course, be up to you. Every leader and every company has different internal and external factors that determine their goals, priorities, and constraints—but by choosing to read this report, you've armed yourself with insights that will help you make better decisions throughout the year ahead.

1. Book a single hour in your calendar and review how design communication happens within your team. Ask yourself:

- What are your 2022 goals, and what role does communication play in whether you achieve them?
- Who needs to be involved in product development (and how, and when)?
- Make a list of all the people who currently give input during the design process. Is anyone missing?
- How does your team communicate day-to-day? How does decision-making happen?
- Where is the biggest source of miscommunications, or poor communication, for your team?

Once you're done, identify 1-2 top priorities for this quarter and create an action plan to address them.

2. Listen to the Peer Check podcast to keep up with what your peers in the engineering world are doing to stay competitive.

Hosted by mechanical engineer and **CoLab CEO, Adam Keating,** Peer Check is a podcast for engineering leaders who want to challenge the status quo by finding better ways for design teams to work together.

Each biweekly episode features a conversation with an industry leader about how they're innovating and the concrete steps they took to do it. If you're looking to improve your team's communication, collaboration, and decision-making, this is the place for you.

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About CoLab

To deliver quality products on time in our rapidly-evolving world, you need to communicate effectively with your extended team and supply chain—every step of the way. CoLab is a collaboration tool for engineering teams that drives effective communication throughout the design process. Fast and simple workflows in CoLab make it easier for you and your team to deliver quality products, on time. Every time.

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