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Gartner for R&D Leaders

Demonstrate the ROI of R&D With Compelling Value Stories

R&D leaders face intense pressure to demonstrate the return on R&D investment. They can do so by identifying R&D's key value drivers for the organization, and using aligned metrics and compelling value stories to communicate R&D's contribution to business objectives.

Overview

Key Findings

- In a recent Gartner survey, 35% of R&D organizations report they do not explicitly use metrics to measure the ROI of R&D, while 23% of respondents only track one such metric.
- R&D organizations often struggle to clearly quantify their contribution to business outcomes because of the intangible and lagging aspects of R&D's work and the many competing objectives coming from different areas of the business.
- Because new product development is a cross-functional activity, it can be difficult to isolate R&D's specific contribution to its success and other key business outcomes.

Recommendations

- Identify the corporate mandates R&D can impact the most by gathering "voice of the stakeholder" data to better understand stakeholders' expectations of R&D.
- Align R&D metrics to business imperatives by selecting metrics that track against short- and long-term corporate strategy goals, and reinforce R&D's critical value propositions for stakeholders and the business.
- Highlight R&D's contribution to business success by crafting value stories evidenced by relevant metrics.

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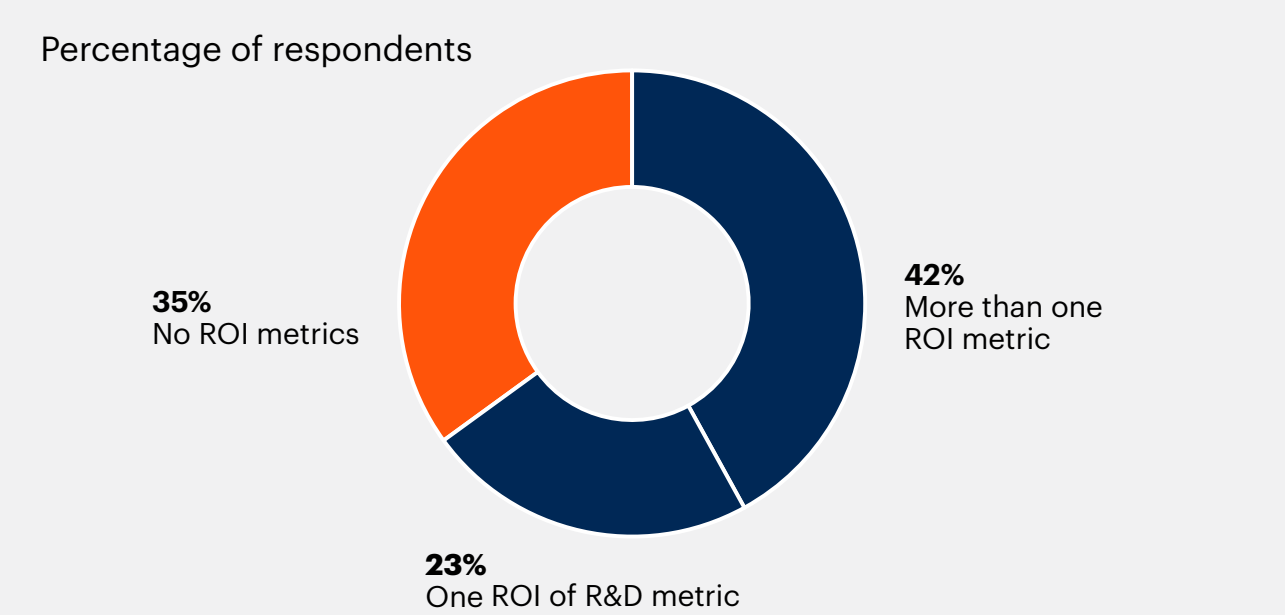
Figure 1: Use of Metrics to Measure the ROI of R&D



n = 58

Q. What metric(s) do you use to measure the value and/or return on investment of R&D?

Source: 2023 Gartner R&D Performance Metrics and Dashboards Survey

Quantifying the ROI of R&D is difficult for a number of reasons. For one, it is challenging to put a financial value on highly uncertain early-stage projects or intangible outcomes that R&D delivers (e.g., lessons learned for future projects). Additionally, R&D is often too far removed from commercial outcomes to directly tie their contribution to a product's success or failure. Moreover, R&D metrics cannot accurately or completely account for commercial outcomes that other partners are responsible for (e.g., manufacturing, marketing and other commercialization-focused teams).

There is no universally optimal approach for measuring the ROI of R&D because organizations employ vastly different priorities and strategies to succeed in the marketplace and deliver stakeholder value.

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Instead of searching for the one perfect, all-encompassing ROI metric, R&D leaders must incorporate a more holistic set of quantitative and qualitative measures. These will enable them to show the full scope of R&D's contribution to the organization's success through well-crafted value stories.

> **Value stories are clear statements that use qualitative and qualitative evidence to demonstrate success to their relevant stakeholder audience.**

It is critical to track metrics at several altitudes to assess performance against business goals, diagnose function-level performance issues and correct any potential issues that affect different parts of R&D's work.

Introduction

Demonstrating the return on investment (ROI) of R&D plays an important role in informing strategic decision making, justifying resource allocation, demonstrating new product development (NPD) success, and ensuring accountability for R&D performance. However, 35% of R&D organizations report they do not explicitly use metrics to measure the ROI of R&D, while 23% of respondents only track one such metric (see Figure 1). [1]

Figure 2: Key Steps to Demonstrate the ROI of R&D

Source: Gartner

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Key No. 1
Identify the Corporate Mandates R&D Can Impact the Most

R&D leaders must understand R&D's role in delivering on salient aspects of their company's short-term and long-term strategy. To do so, R&D leaders need a clear understanding of the company's perception of what success looks like for their function.

It is essential that R&D leaders recast corporate mandates and targets into R&D-specific goals they can deliver on.

Examples of high-level corporate goals that are highly relevant for R&D functions include:

- Supporting top-line (i.e., revenue) or bottom-line (i.e., profit) growth
- Supporting cost savings initiatives
- Expanding business operations into new territories or markets
- Co-creating and executing on the company's technology roadmap
- Creating a culture of innovation within the organization
- Digitalizing products and/or processes
- Developing a closer connection to customers and their needs

Gather "Voice of the Stakeholder" Data to Uncover Their Needs

R&D leaders struggling to quantify the ROI of R&D should start by interviewing stakeholders to understand their stated (and unstated) goals, needs, expectations and success measures.

By engaging with business partners to understand their business strategy and objectives, you can identify key areas where R&D can deliver outsized value for the organization.

R&D leaders should work with their business partners to ensure R&D is delivering the support they need. Consider the time and effort involved and prioritize accordingly, focusing on R&D's key partners and stakeholders.

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Key No. 2
Align R&D Metrics to Business Imperatives

Demonstrating the ROI of R&D hinges almost entirely on your understanding of the company's strategy and R&D's perceived role in successfully executing on this vision. Only then can you identify the key metrics that focus activity on and provide evidence for R&D's performance against these goals.

Quantitative metrics often complement the qualitative assessments the business makes of R&D's contributions. For example, R&D metrics are often a crucial element in decision making for other functions within the organization. Most Gartner survey respondents cite at least three functions outside of R&D that use R&D metrics to inform their strategic and/or tactical decision making.[1]

R&D leaders must select metrics that demonstrate how R&D's performance aligns with senior leadership's expectations by tying its contributions to short- and long-term corporate strategy goals. Select metrics that demonstrate outcomes and allow you to test hypotheses about the factors driving improvements or causing problems. You can determine the metrics needed to measure R&D's external outcomes (e.g., on revenue, margin, market share, units sold) using a combination of:

- The company's strategy, which will inform your prioritization of metrics for R&D's different focus areas (e.g., NPD, technology incubation, capability development).
- The metrics used to create the business case for why a particular product should be chosen for development and launch within a product portfolio.

There is little consistency across R&D functions about the metrics they use. Some organizations track financial or commercial success metrics, regardless of their other strategic goals. These typically include measures like vitality index, new product margins, or other financial metrics to assess commercial success and R&D's role in that performance. Other metrics to demonstrate R&D's value will vary more widely based on the company's strategy and goals. However, they will typically include measures like time to market, adherence to budget and schedule, and other key operational metrics companies use to assess project and portfolio performance.

R&D leaders must be careful when selecting and defining the metrics they track and report. Include metrics that cover enterprise-, function- and project-level outcomes that matter to the different sets of stakeholders you serve. This ensures you demonstrate progress at the appropriate altitude for your stakeholders and allows you to monitor R&D's work more holistically.

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Avoid using metrics that:

- Drive the wrong behaviors within the organization. This can lead to attempts at manipulating outputs without driving positive outcomes.
- Only tell part of the story. For example, rather than relying on staff turnover rate alone to measure R&D staff engagement, implement a more holistic approach that also accounts for factors like rewards and recognition, and manager quality.
- Do not directly drive or influence desired outcomes. For example, imagine your goal is to improve project manager (PM) effectiveness. While measuring the percentage of PMs with certification is easy to track, it may not actually correlate to your target end state. Instead, find ways to quantify PMs' management competencies, technical R&D skills and their ability to operate autonomously.

By tracking and reporting metrics that are salient to R&D's specific objectives, R&D can clearly establish itself as a critical stakeholder and thought partner in driving the company's long-term success.

Key No. 3
Craft Value Stories That Highlight R&D's Contribution to Business Success

Telling a compelling story backed by data is critical to capturing your stakeholders' attention, and value stories are a powerful framework for R&D leaders to highlight the value and focus of R&D's work. Using data-driven metrics to evidence R&D's value story paints a holistic picture of R&D's accomplishments that stakeholders will find credible.

Value stories help R&D leaders build connections between cross-functional projects and provide context beyond numbers in a spreadsheet or lines in a graph. As such, R&D leaders must identify the key value stories that will highlight R&D's contribution to the organization.

Tailor R&D Value Stories to Your Stakeholders' Priorities

Successful value stories reinforce R&D's credibility within the organization and align to stakeholder expectations. Table 1 highlights examples of corporate-level goals, related R&D value stories and sample metrics that evidence the ROI of R&D. Use this table as inspiration to develop your own value stories that resonate with the key stakeholders.

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Table 1: Tying Corporate Goals to R&D Value Stories With Supporting Metrics

Corporate goal	Sample R&D value story	Sample supporting metrics
Increase our revenue	R&D invests in strategic projects that drive top-line growth for the organization, as evidenced by the NPV of our portfolio. New product development success has led to an increase in our vitality index from 10% to 15%.	• Vitality index • Net present value (NPV) of R&D's portfolio • New product success rate (e.g., projects meeting commercial and technical targets)
Cut our costs, improve our profit margins or efficiency	R&D excels at driving efficiency throughout the product development process, improving our throughput yield across all products by 15%.	• Cost savings attributable to innovation • ·First-pass/throughput yield • Scrap rate • Number of design changes
Derisk our operations	R&D is resilient to disruption and has the talent needed to excel in our current business environment. By 2026, we are on track to acquire or develop talent to obtain the skills we need to deliver on our technology roadmap.	• Percentage of technologies or initiatives on roadmap with aligned talent skills/capabilities • Percentage of new products containing internally developed technologies • "Critical talent" metrics (e.g., voluntary attrition rate, retention rate)

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Corporate goal	Sample R&D value story	Sample supporting metrics
Become thought leaders in our industry	R&D consistently produces highly innovative, transformational products. Our ideation pipeline is healthy, and we derive a significant portion of our revenue from transformational innovation.	• ·Ideation pipeline funnel (e.g., percentage of ideas that pass gates from idea to concept to market) • Percentage of revenue derived from transformational innovation • R&D staff utilization by project type (e.g., incremental, next generation, transformational) • IP metrics (e.g., number of patents, trade secrets, research papers, and/or conference presentations)
Improve our customer understanding	R&D is highly customer-centric and aligns itself to customer needs, evidenced by our high customer satisfaction (CSAT) and Net Promoter Score (NPS) ratings.	• Customer satisfaction with new products or services · • Net Promoter Score · • Percentage of staff time interacting with customers

Evidence

[1] **2023 R&D Performance Metrics and Dashboards Survey.** This survey was designed to collect data on how R&D leaders measure their functional and project-level performance using metrics. The survey was conducted online from July through August 2023. We surveyed 58 R&D leaders across a variety of industries and corporate R&D roles, including titles ranging from functional head (e.g., CTO, CIO), senior vice president/vice president and senior director/director. We asked respondents 12 questions to assess the metrics they use to measure their performance against functionwide and project-level goals, their key challenges in using metrics, and methods for measuring the value and/or ROI for R&D activity. We also asked questions about metric reporting (e.g., cadence, audience, form factor). This research uses qualitative and quantitative analytic techniques to analyze and interpret the survey data.

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