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How to Improve R&D Portfolio Decision Quality

R&D leaders often face pressure from stakeholders to accelerate portfolio decisions and prioritize short-term profitability. This research identifies five markers of high-quality portfolio decisions to help rebalance portfolios when scrutiny and pressure make decision making complex.

Overview

R&D leaders responsible for portfolio decision making often face high levels of stakeholder scrutiny, along with pressure to accelerate decisions and prioritize short-term profitability over long-term investments. This "perfect storm" erodes portfolio decision quality and, consequently, R&D leaders' confidence in the health of their portfolios. Few feel their portfolios are positioned for future growth, and most leaders report their portfolios underperform on key indicators of portfolio health.

This research will help R&D leaders:

- Identify the key drivers of high-quality portfolio decision making.
- Use tools and techniques to ensure portfolio decisions drive long-term value in the face of increased stakeholder pressure, constrained timelines and limited access to information.

Key findings

- Pressure on R&D leaders to deliver accelerated decisions and short-term profitability creates a "perfect storm" for decreased portfolio decision quality.
- High-quality portfolio decisions have three primary components: they drive long-term value for the organization and customers, represent the best option among alternatives, and are implementable from a resource and capabilities perspective.
- The five markers of high-quality portfolio decision making are: strategic clarity, assessment rigor, information quality, process quality and stakeholder coaching. R&D organizations that excel at most or all of these markers significantly outperform their peers on portfolio decision quality.
- Organizations that outperform on decision quality have significantly healthier portfolios and are more effective at prioritizing transformational innovation.

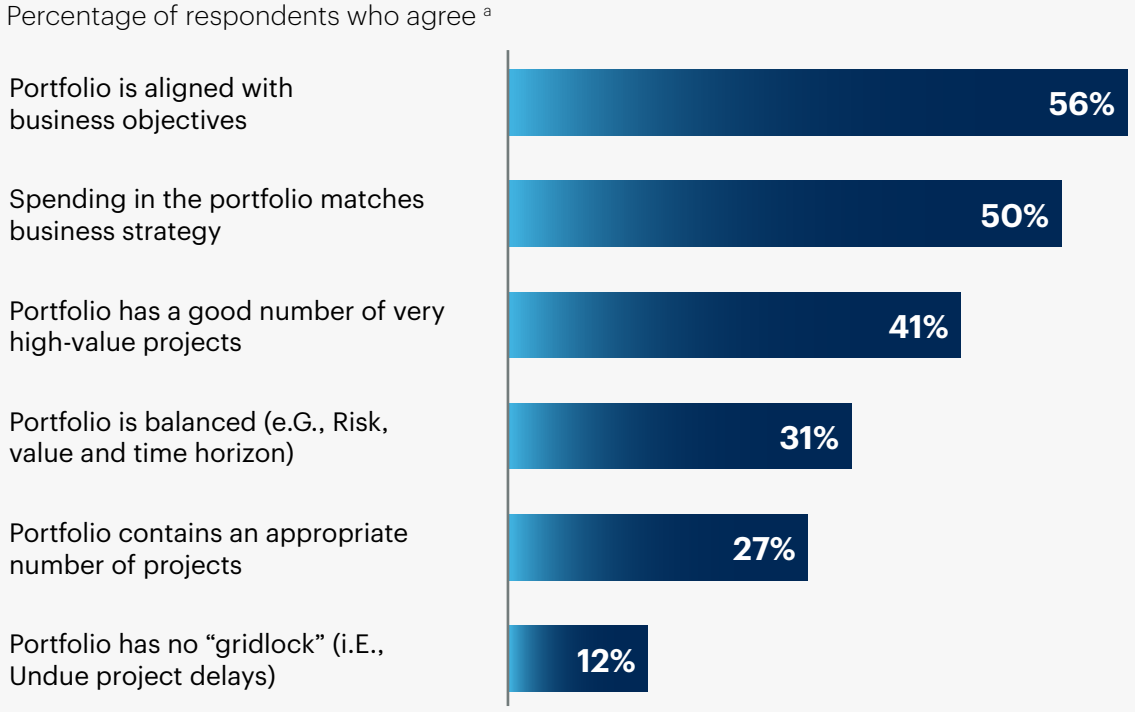
Challenges to portfolio health

R&D leaders are under high levels of pressure to prioritize short-term profitability over longer-term investments and make faster portfolio decisions. Over the next three to five years, 59% of R&D leaders expect their R&D portfolios to have a growing proportion of smaller, surer bets in comparison to larger, less certain investments. Combining that pressure to perform with accelerated decision making raises the risk of overinvestment in the short term, circumvention of process and an overreliance on gut instincts. This creates a "perfect storm" for generating low-quality decisions.

Additionally, portfolio health reflects the cumulative quality of portfolio decisions. When asked about the health of their portfolios, R&D leaders rated their portfolios low across multiple health indicators (see Figure 1), such as having:

- A good number of very high-value projects
- Balance in terms of risk, value and time horizon
- An appropriate number of projects
- No gridlock (i.e., undue project delays)

Figure 1: Assessment of R&D's overall portfolio health

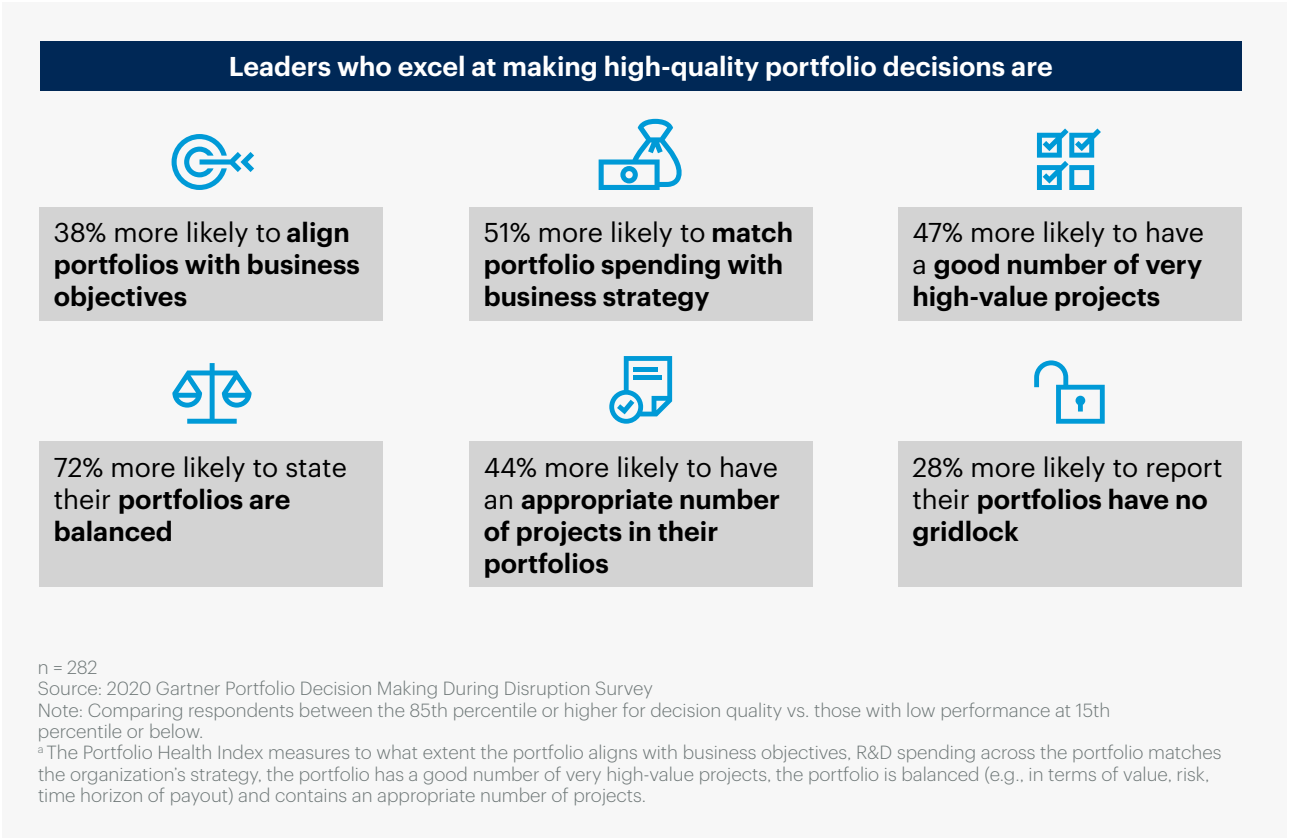


n = 282
Source: 2020 Gartner Portfolio Decision Making During Disruption Survey
[a] Defined by choosing 6 or 7 for Agreement on a 1-7 scale

It's a struggle that persists, particularly as increased pressure to prioritize short-term and middling portfolio health affects R&D leaders' confidence in their ability to ensure portfolio balance. In the 2025 Gartner R&D Leader Agenda Poll, 78% of R&D leaders report that improving R&D portfolio balance in terms of value, risk and time horizon of payout is a high or medium priority. However, only 53% of those leaders feel confident their R&D organization will successfully achieve this within the next 12 to 18 months.

Leaders who excel at making high-quality portfolio decisions increase portfolio health metrics and stand out from those making low-quality portfolio decisions. Even during the height of disruptions, the impact of high-quality portfolio decisions on portfolio health index components could be observed (see Figure 2).

Figure 2: Percent increase in portfolio health index[a] components



n = 282
Source: 2020 Gartner Portfolio Decision Making During Disruption Survey
Note: Comparing respondents between the 85th percentile or higher for decision quality vs. those with low performance at 15th percentile or below.
[a] The Portfolio Health Index measures to what extent the portfolio aligns with business objectives, R&D spending across the portfolio matches the organization's strategy, the portfolio has a good number of very high-value projects, the portfolio is balanced (e.g., in terms of value, risk, time horizon of payout) and contains an appropriate number of projects.

But how do R&D leaders make high-quality portfolio decisions? What drivers generate such positive outcomes? These are the questions R&D leaders must answer to produce good decision-making processes and habits that can withstand the increased pressure and uncertainty within their current environment.

Investigating decision quality

Gartner defines a high-quality portfolio decision as a composite measure of three distinct characteristics:

- The decision's ability to drive long-term value for the organization and customers
- The extent to which the decision positively impacts overall R&D portfolio health is the best among alternative options and has an understandable impact
- How feasible the decision is to resource

Gartner deployed a regression model to identify which factors (or actions) are most likely to ensure a high-quality portfolio decision. In total, eight factors (i.e., composite measures) served as the drivers in this model, which are described in Table 1. The model also controlled for different industry types, revenue bands, business models, disruption levels and the level of organizational innovativeness.

Table 1: Potential drivers of high-quality portfolio decisions

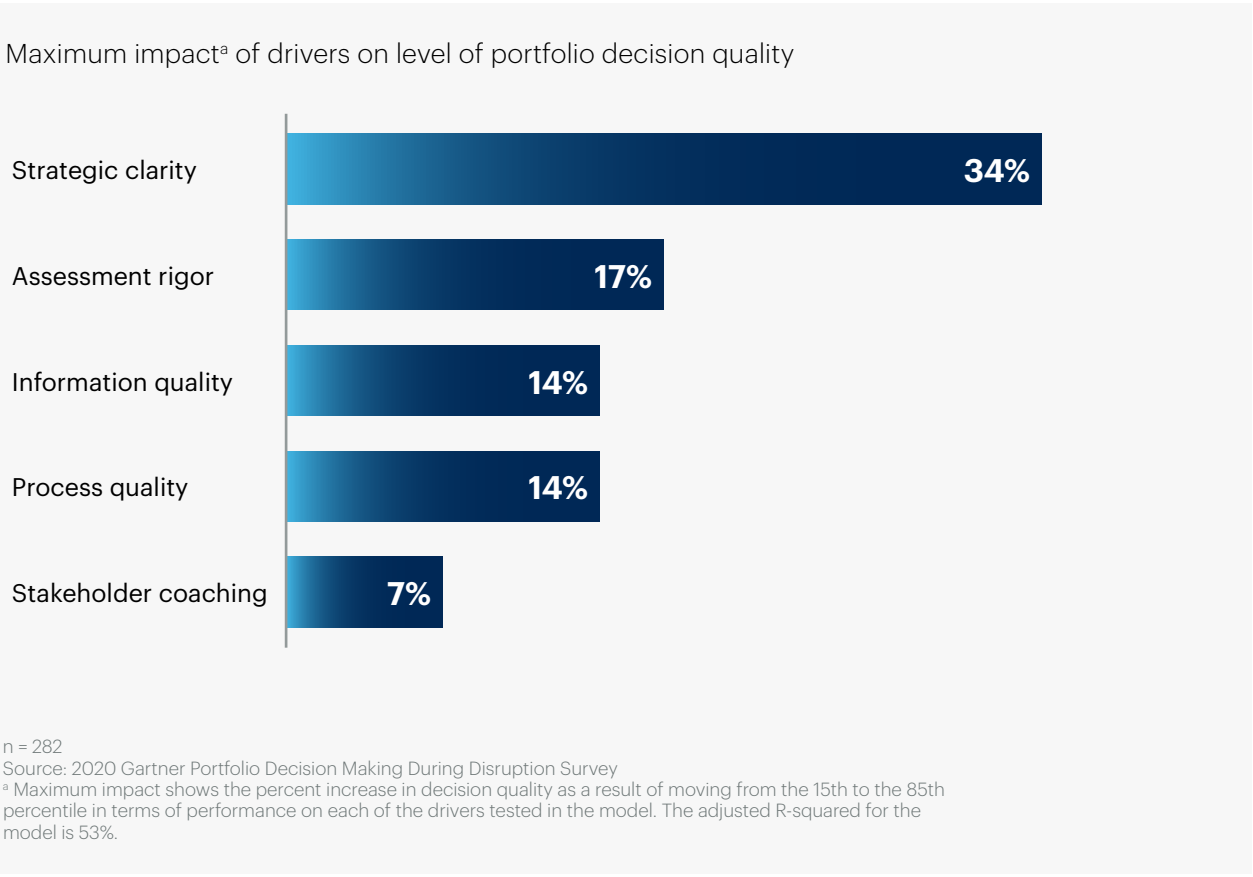
Driver	Description
Information quality	Availability, timeliness, accuracy and adequacy of information
Communication quality	Effective communication and sharing between decision makers and stakeholders
Process quality	Application of portfolio processes that incorporated formal tools, quality metrics and clear decision rules
Process constraints	Established limits for key components of the decision process
Dissent surfacing	Consistently surfacing, hearing and debating alternative or dissenting viewpoints
Stakeholder coaching	Coaching business partners to review, interpret and analyze information
Strategic clarity	Clear understanding of the goals and objectives of the R&D strategy
Assessment rigor	Stress-testing decisions, routinely considering alternatives and scenarios

Source: Gartner

Five markers of portfolio decision quality

Analysis revealed that five of the eight drivers significantly and positively impacted portfolio decision quality: strategic clarity, assessment rigor, information quality, process quality and stakeholder coaching (see Figure 3). These drivers became the five markers of high-quality portfolio decision making.

Figure 3: Five markers of portfolio decision quality



n = 282
Source: 2020 Gartner Portfolio Decision Making During Disruption Survey
[a] Maximum impact shows the percent increase in decision quality as a result of moving from the 15th to the 85th percentile in terms of performance on each of the drivers tested in the model. The adjusted R-squared for the model is 53%.

Strategic clarity shows outsized impact on portfolio decision quality

Strategic clarity is the most impactful driver. Having a clear understanding of the goals and objectives of the R&D strategy improves the alignment of portfolio decisions with R&D's strategy and business goals. Moving from low to high performance (from 15th to 85th percentile, respectively) on the strategic clarity marker alone is associated with an up to 34% increase in portfolio decision quality.

Additional markers for positive impact on portfolio decision quality

Four other markers had a significant and positive (albeit smaller) impact on portfolio decision quality:

- **Assessment rigor** is the extent to which R&D portfolio decision makers stress-test their portfolio decisions and consider alternatives and scenarios as part of their decision-making process. To excel at assessment rigor, R&D portfolio decision makers must reassess when assumptions change, pressure-test data quality, ask difficult questions as part of the decision-making process and consider different market and value-chain scenarios. R&D leaders who move from low to high performance on this marker stand to increase their portfolio decision quality by up to 17%.
- **Information quality** denotes the extent to which decision makers have data that is timely, accurate, relevant and sufficient to answer their most pressing questions. R&D leaders with access to such information make better decisions. Moving from low to high information quality can subsequently boost decision-making quality by up to 14%.
- **Process quality** excels when R&D leaders ensure that the portfolio decision-making process is well-defined and it is clear who has decision-making authority. Additionally, they use formal tools to aid the evaluation of portfolio projects, and metrics are used to measure the quality of decision making. Those who move from low to high performance in this marker can see an improvement in decision quality of up to 14%.
- **Stakeholder coaching** denotes the active role R&D leaders can play in building context for portfolio decision makers. Leaders who excel at stakeholder coaching help other portfolio decision makers understand the most likely outcomes of their decisions. They demonstrate how to consider the implications of portfolio trade-offs and apply an appropriate risk posture to project decisions. R&D leaders help decision makers interpret information and connect them to resources and people to navigate their decisions. Those who move from low to high performance in stakeholder coaching stand to increase portfolio decision quality by up to 7%.

Three drivers that should be present in any modern organization

The other three potential drivers — communication quality, dissent surfacing and process constraints — were found to be statistically insignificant in their impact on improving portfolio decision quality. However, that doesn't make them irrelevant. Instead, this suggests that they are basic standards that should be present in any modern organization.

R&D teams fall short in markers of portfolio decision quality

The Gartner Portfolio Decision Making During Disruption Survey showed that most R&D teams fell short on the five markers of decision quality. The results for strategic clarity were the most positive, with 62% of leaders involved in portfolio decisions excelling. Nonetheless, this means that 38% of R&D teams struggled to understand the goals and objectives of the R&D strategy and translate them into project assessment criteria.

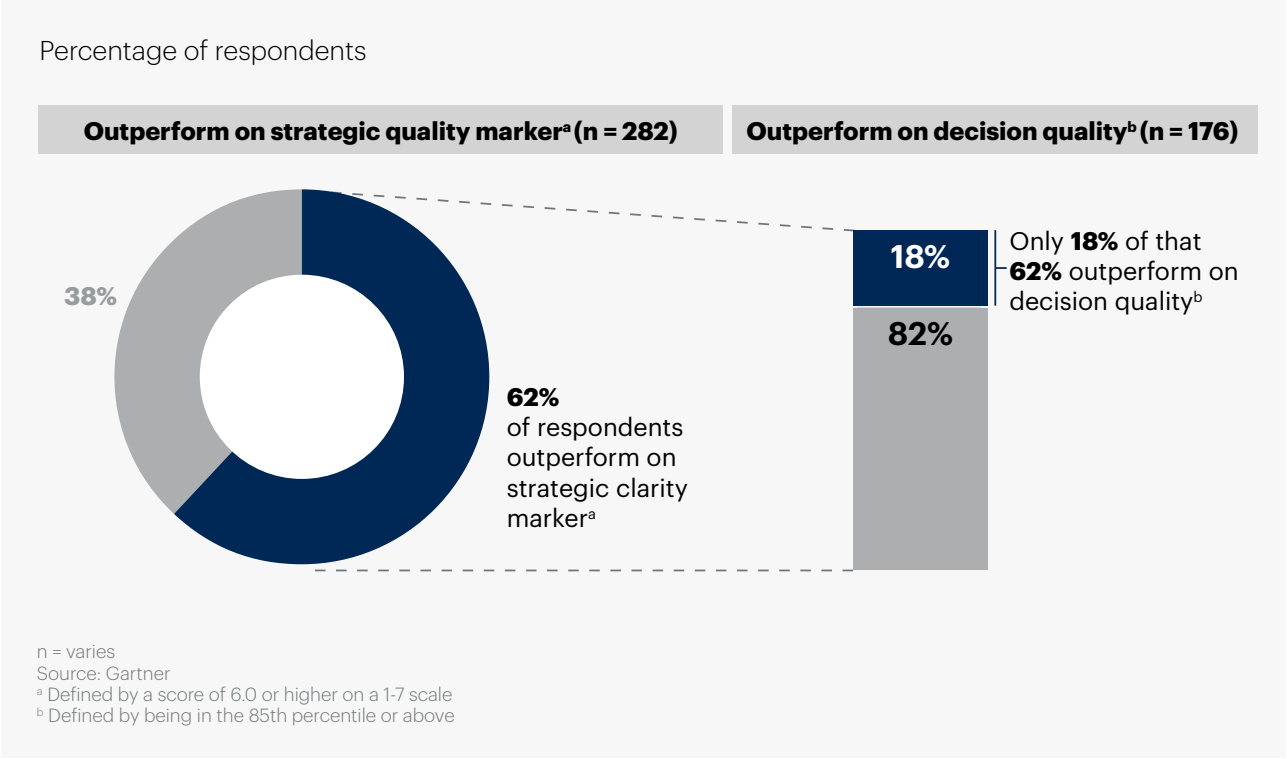
The numbers were even more stark for the other markers (see Figure 4). Only 29% of respondents indicated that they have adequate and relevant information for decision making, and fewer excelled at stakeholder coaching, process quality and assessment rigor.

Figure 4: Decision quality marker performance

n = 282
Source: 2020 Gartner Portfolio Decision Making During Disruption Survey
[a] Defined by an average score of 6.0 or higher for each marker on a 1-7 scale

Given that two-thirds of R&D leaders said they have strategic clarity when it comes to portfolio decisions, it was imperative to understand what percentage of those also made high-quality decisions. The results showed that strategic clarity alone was insufficient for ensuring high-quality portfolio decision making, as only 18% of those who outperformed on strategic clarity also outperformed on decision quality (see Figure 5).

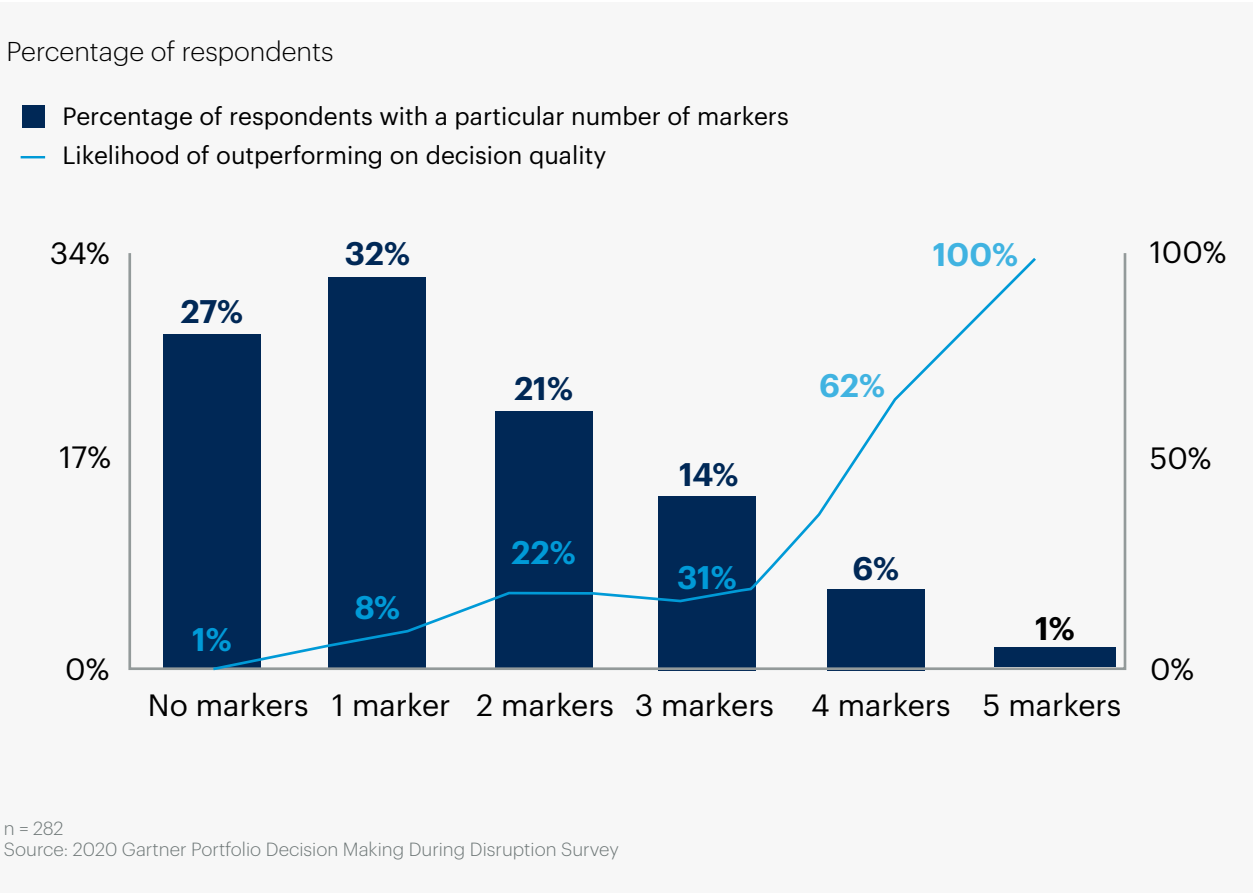
Figure 5: Outperformance on strategic clarity vs. decision quality



n = varies
Source: Gartner
[a] Defined by a score of 6.0 or higher on a 1-7 scale
[b] Defined by being in the 85th percentile or above

The relationship between the number of markers respondents excelled at and their likelihood of outperforming on decision quality was not linear. Those who excelled at high-quality decision making typically outperformed on three or more of the markers. In fact, the likelihood of an R&D team outperforming on portfolio decision quality greatly increased once that team outperformed on at least three markers. Those rare teams that outperformed on four or five markers had the highest likelihood of excelling at decision quality (see Figure 6).

Figure 6: Likelihood of outperforming on decision quality by number of markers



n = 282
Source: 2020 Gartner Portfolio Decision Making During Disruption Survey

Pressure erodes decision quality

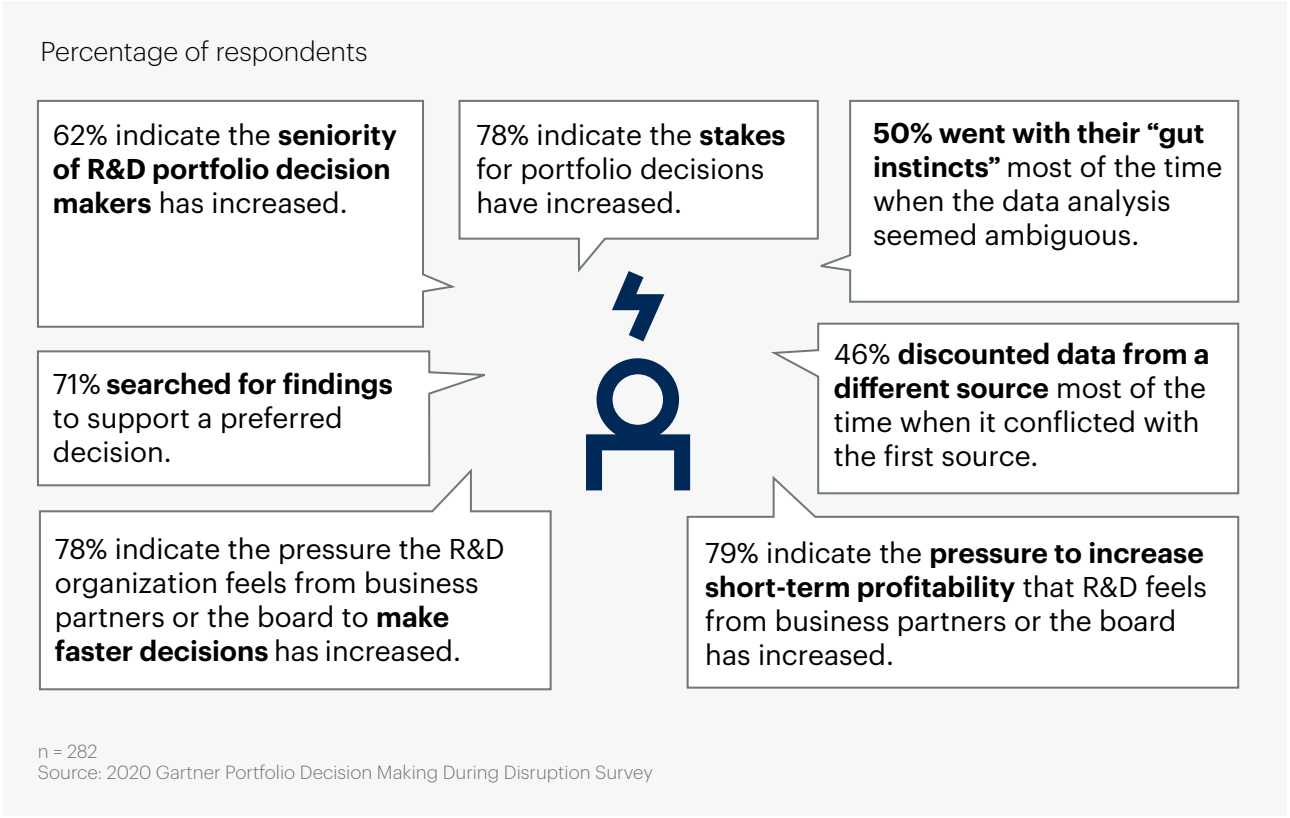
For years, complexity and uncertainty have resulted in pressure that erodes the kinds of behaviors that help drive high-quality decision making (see Figure 7). At the height of the pandemic, R&D leaders told us the stakes for portfolio decisions had increased, and they felt additional pressure from stakeholders to move quickly and prioritize the short term over the long term. Almost five years later, that pressure hasn't changed.

R&D leaders still make the same mistakes in response to the increased pressure to accelerate decision making and prioritize short-term investments, including:

- Making portfolio decisions that were in conflict with their longer-term strategies and circumvented processes to move more quickly
- Following their gut instincts and searching for data findings to support decisions they wanted to make
- Discounting data that conflicted with what the first source had said

The five markers of high-quality portfolio decision making provide the counterbalance to these natural tendencies.

Figure 7: Increased pressure and presence of biases in portfolio decision making



n = 282
Source: 2020 Gartner Portfolio Decision Making During Disruption Survey

The path forward

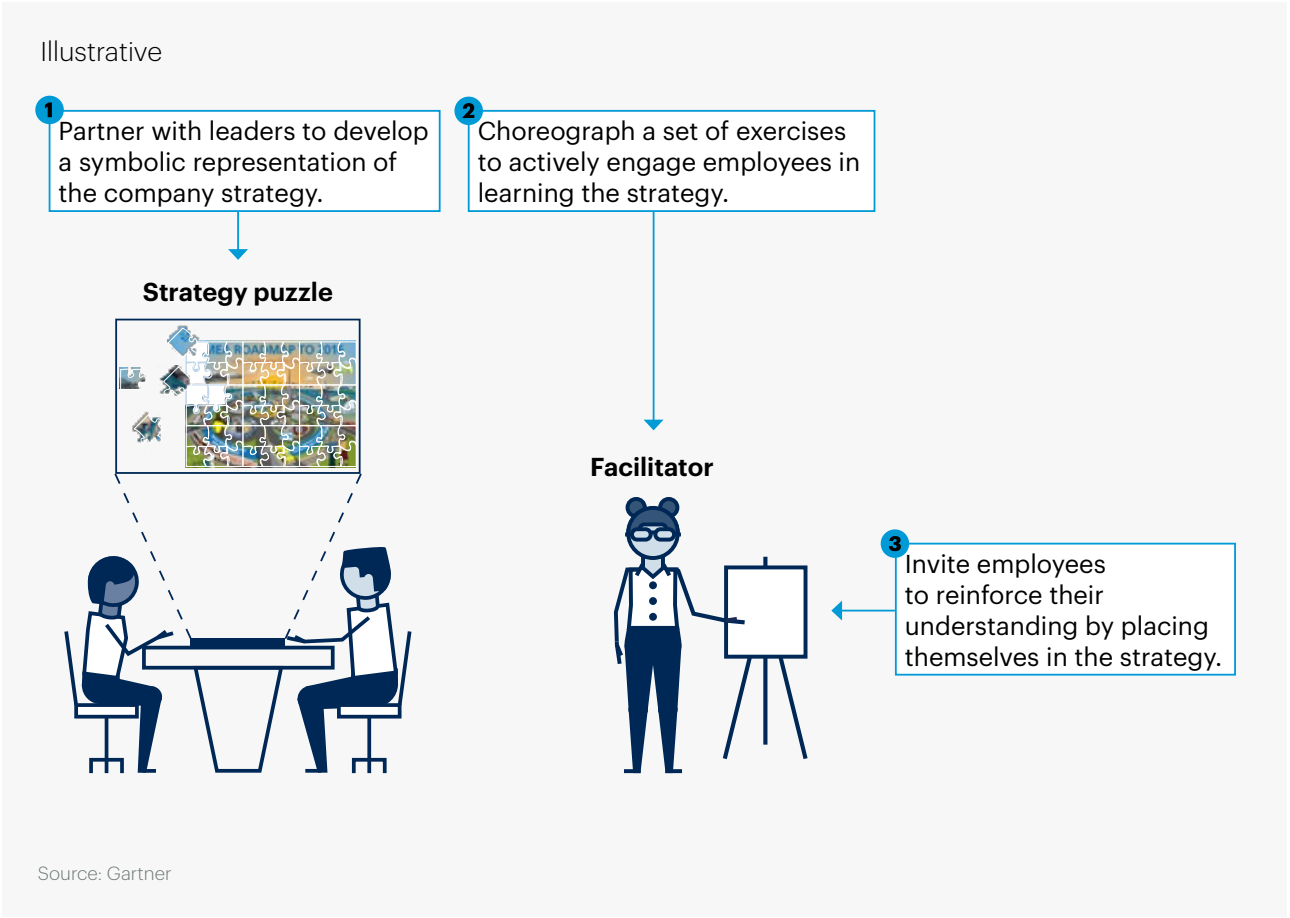
To ensure high-quality portfolio decision making, R&D leaders and their teams first need to assess their current state of performance against the five markers. This will help identify gaps in performance and prioritize improvement efforts. Next, R&D leaders should create and execute a plan of action for starting to outperform on portfolio decision quality.

This section tackles each of the five markers, one at a time, with a series of self-assessment questions and best-practice examples from leading R&D organizations.

Strategic clarity

R&D leaders who don't outperform in strategic clarity can positively impact their decision-making quality by focusing their efforts on improving this measure. Teams can assess their performance on this marker by asking their decision-making teams if they have a clear understanding of the goals and objectives of R&D's portfolio strategy. If not, this is an essential place to gain alignment.

Figure 8: Keys to a successful activation session



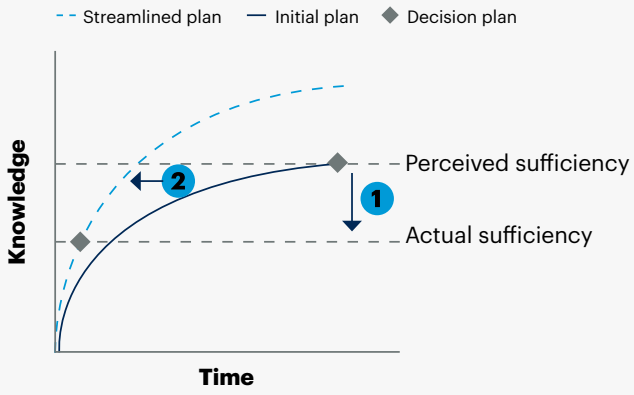
Information quality

The information quality marker indicates that decision makers have information to answer their most pressing questions that is adequate, accurate, relevant and timely. While moving from low to high performance on this marker has improved portfolio decision quality up to 14%, only 29% of respondents to our survey outperformed.

R&D leaders looking to assess and improve their level of information quality should assess its four aspects (information adequacy, accuracy, relevance and timeliness) when determining specifically where to focus improvement efforts. Specifically, they should ask whether decision makers:

- Have timely information to make portfolio decisions
- Feel they have adequate information to answer their most pressing questions
- Feel the information is accurate
- Have the relevant information they need to make portfolio decisions

Figure 9: Knowledge sufficiency point



Knowledge sufficiency checks

1. Reduce knowledge needed
   - 1a What would validate/invalidate this assumption?
   - 1b How much would this information boost our confidence?
2. Reduce time to gather information
   - 2a Who can we partner with to gather information?
   - 2b How much work is required to obtain this information (is the effort worth the benefit)?

Minimum viable knowledge plan

Assumption	1a Knowledge needed	1b Contribution to knowledge	2a Internal partner	2b Effort required	Priority
We can overcome social acceptability barriers of hearing aids.	Design and technology trade-off	High	Engineering and ID	Moderate	#2

Source: Gartner

Assessment rigor

Assessment rigor consists of six activities that are designed to enable thorough and deliberate decision making by helping decision makers assess and reassess the project's assumptions, risks and likelihood of success. R&D leaders can use the following activities to gauge their performance on this marker and identify areas for improvement:

- Routinely reassessing a project's likelihood for success when assumptions change
- Pressure-testing the quality of data that is used to make portfolio decisions
- Asking difficult questions when necessary
- Routinely stress-testing the R&D portfolio against market or value-chain scenarios
- Considering various alternatives as part of the decision-making process
- Considering different potential scenarios when making portfolio decisions

Process quality

Process quality includes a well-defined portfolio decision-making process, clear decision-making authority, measures to assess decision quality and formal tools to evaluate projects in the portfolio. While process quality has had a 14% impact on high-quality portfolio decisions in the past, only about one in five R&D teams excelled at this marker.

R&D leaders can use the following checklist to assess their own process quality performance and determine whether:

- The organization tracks metrics to measure the quality of decision making
- Decision makers use formal tools to aid in evaluating portfolio projects
- The portfolio decision-making process is well-defined
- It is clear who has decision-making authority

Stakeholder coaching

This marker is all about helping stakeholders understand and appreciate the subtleties of the technical and project-related trade-offs of the decisions they are helping to make. By moving from low to high performance on this marker, decision makers can improve decision quality up to 7%. Only one in five R&D teams excelled at this marker.

R&D leaders looking to improve their team's performance on this marker can use the following criteria as a self-assessment checklist. Does stakeholder coaching currently help decision makers:

- Understand the most likely outcomes
- Understand the implications of making trade-offs
- Assess risk associated with projects being evaluated
- Connect to resources and/or people to help them navigate decisions
- Receive guidance to help interpret information

Conclusion

Gartner research shows there are five markers of high-quality decision making: strategic clarity, information quality, assessment rigor, process quality and stakeholder coaching. To excel at decision quality, R&D teams should aim to outperform on at least three of the five markers. Although 62% of R&D teams outperformed on strategic clarity, outperformance in this one area is insufficient to ensure high-quality decision making. In fact, R&D teams that outperform on three or more markers stand the greatest chance of excelling at decision quality.

Pressure on R&D leaders creates a perfect storm for poor-quality decision making. It leads to rushed decisions, prioritization of the short term over the long term, focus on appeasing stakeholders and an overreliance on gut instincts. Consequently, the five markers of high-quality decision making act as a counterbalance to the natural tendencies that erode decision quality and ultimately portfolio health.

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