

Gartner for R&D Leaders

# Stress-Testing R&D Portfolio Resilience Amidst Disruption



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Particularly in times of uncertainty, R&D leaders responsible for portfolio management can use scenario planning to pressure-test the resilience of the R&D portfolio, and develop suitable action plans to respond to possible changes in the business environment.

# Introduction

R&D leaders responsible for portfolio management must continuously manage risks and ensure business continuity in the face of uncertainty. The plans and decisions that leaders make today can soften the impacts of disruptive challenges and position their organizations for increased market competitiveness in the years to come.

Modeling the implications of various scenarios for both individual projects and the broader R&D portfolio is a critical activity that enables organizations to identify potential future risks as well as opportunities. Organizations can use scenario planning to tangibly test the resilience of the existing R&D portfolio and guide near- and long-term portfolio management decisions.

## Overview

### Key Findings

- Scenario planning is a useful tool for identifying future uncertainties, pressure-testing the resilience of the R&D portfolio and proactively developing action plans to respond to disruptive changes.
- If handled appropriately, disruptions can present organizations with potential upside opportunities despite downside risks.

### Recommendations

R&D leaders seeking to stress-test the resilience of their organization's R&D portfolio should:

- Work with stakeholders and business partners to outline potential future scenarios and understand key driving forces.
- Analyze the impact of a scenario on individual R&D projects and opportunities by estimating how the assumptions, value drivers and/or assessment criteria used to evaluate each opportunity's potential may shift under that scenario.
- Aggregate the foreseeable effects of a scenario on individual opportunities to assess the potential implications of that scenario for the broader R&D portfolio.

# Analysis

## Use Scenario Planning to Manage Uncertainty

The COVID-19 pandemic was a stark reminder that companies must continuously plan and prepare for a variety of potential disruptions. However, if handled appropriately, one-time and ongoing disruptions such as health pandemics, natural disasters, economic shocks and other uncontrollable events can present organizations with potential upside opportunities, despite the tremendous downside risks.

Regardless of the nature of the disruption, managing for a broad range of interconnected risks and designing resilience into the R&D portfolio is essential. R&D leaders can help ensure their organizations are prepared for potential disruptions through scenario planning.

Scenario planning is a strategic planning tool used for revealing the critical uncertainties, risks and opportunities of multiple, potential future states. It helps organizations build resilience by negotiating a path between the false certainty of a single possible outcome and paralysis by analysis. The objective of scenario planning is to secure the best immediate outcome while preparing suitable alternative action plans to enact, depending on how a situation unfolds. Proactively agreeing on both near-term operational decisions and long-term strategic plans will reduce the time it takes an organization to respond to emerging risks and opportunities. This can help the organization preempt, rather than reactively control the negative effects of a major disruption.

To position their organizations to act effectively when faced with the risks and opportunities that uncertainties can create, R&D leaders and their teams should collectively:

Outline potential future scenarios.



Assess the impact of each scenario on individual R&D projects and investment opportunities.



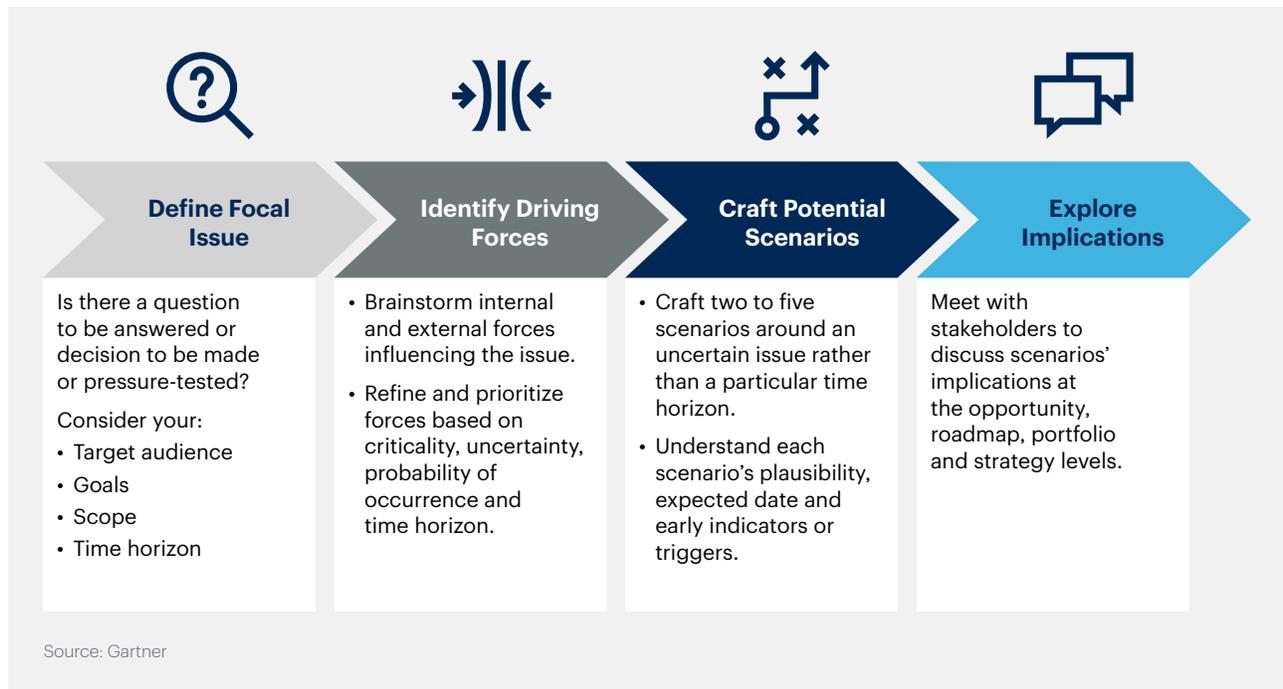
Assess the implications for the broader R&D portfolio.



## Outline Potential Scenarios

While each organization should develop its own scenario planning process to fit its unique strategy and culture, the typical approach to scenario planning begins with defining a focal issue and identifying the key internal and external forces influencing that issue. Next, organizations must prioritize these driving forces based on their degree of influence and vulnerability, and analyze key trends and potential states for each driving force to determine likely truths and critical uncertainties. This information is then used to generate a range of possible future scenarios (see Figure 1). Scenarios are often more useful when they are organized around an issue with a high level of uncertainty, even in the short term, rather than when they attempt to predict a distant time horizon (e.g., “What will the world be like in 2050?”).

**Figure 1: A Typical Scenario Planning Process**



### **Example: “Return to Office” Scenario Planning**

In the early days of the COVID-19 pandemic, many organizations shuttered facilities and ordered employees to work from home if possible. Today, some companies have fully reopened and asked staff to return to the office, while others have determined that their workforce will remain permanently remote or hybrid. Other companies fall somewhere in between and remain uncertain about how and where work will be done, in the medium and long terms.

For such companies, a focal issue of scenario plans might be “whether to announce a return to full-time, in-person work.” This issue affects whether companies invest in digital collaboration tools or physical locations; how teams are structured; and how they recruit, hire and engage staff; among other concerns spanning the organization. Driving forces influencing the issue include the emergence of virus variants, local policies, and shifts in where people prefer to work and live.

To guide planning, organizations may wish to craft at least two narratives. In one scenario, R&D leaders and their teams see a critical need for in-person work and wish to return on-site; in another scenario, the organization must remain remote. Stakeholders should then consider the likelihood and implications of each scenario. For instance, would a “return to office” still be feasible in light of any changes to facilities, where staff are located or travel policies? Alternatively, has the organization made the necessary investments to ensure teams, particularly those who work in labs, can thrive working remotely in the long term?

After outlining a set of potential scenarios, the organization should focus on understanding the relative plausibility of each alternative. Identify measurable warning signs or thresholds that will alert the organization when each scenario might become a reality (and, in turn, prompt the organization to respond or reevaluate the R&D strategy and portfolio). Based on the uncertainty of the driving forces considered when building the scenarios, determine the cadence for tracking early signals and revising scenarios as circumstances change.

Scenario planning is generally conducted in a group setting where the diversity of participants is critical to contemplating the consequences of the multiple potential future scenarios. Participant diversity helps reveal interdependencies across the function or enterprise and ensure the complete set of conceivable implications is uncovered. As such, R&D should collaborate with stakeholders and business partners throughout the scenario planning process or, at a minimum, present scenarios to stakeholders for feedback once they are drafted.

Some organizations may conduct scenario planning to direct strategic decisions and operational plans at the enterprise level. However, corporate-level plans are commonly at a high altitude and may neglect to consider the implications for individual functions' strategies, risk exposure, demand and supplies. If available, R&D leaders can ensure preparedness by cascading enterprise-level scenarios and adapting their implications to the functional level.

### **Assess Scenarios' Impact on Individual Opportunities**

After outlining a set of potential future scenarios, organizations should determine the likely impact of each scenario on individual (current or proposed) opportunities within the R&D portfolio.

R&D can do this by dismantling the underlying assumptions, value drivers and/or assessment criteria used to evaluate each opportunity's potential and estimating how those dimensions would shift under each scenario. This can be done as part of a portfolio review meeting or a dedicated scenario-planning exercise.

Organizations should consider how those shifts would alter the anticipated value, strategic fit, and other relative strengths or weaknesses of each opportunity. Investments that look strongest in all scenarios should proceed, while organizations may wish to build contingency plans for, deprioritize or reconsider investment in projects that fail under some scenarios.

### **Assess Scenarios' Implications for the Broader Portfolio**

Finally, organizations should aggregate the foreseeable effects of potential scenarios on individual opportunities to consider each scenario's implications for the collective R&D portfolio. For some organizations, a relatively simple gap analysis may be sufficient to ensure the portfolio is poised to deliver on business and strategic objectives in a given scenario. Other organizations may wish to develop a more granular understanding of how each scenario may affect the balance, interdependencies and areas of vulnerability across the R&D portfolio. Another approach is to focus on deciphering scenarios' implications for R&D's product and technology roadmaps.

## **Conclusion**

Particularly during times of uncertainty, understanding the implications of potential events and scenarios enables organizations to pressure-test the resilience of their R&D portfolio and assess current and proposed opportunities under a variety of business conditions. Ultimately, organizations can use scenario planning to outline a set of scenario-independent strategic actions to take immediately, as well as plan a set of actions that are contingent on the emergence of each scenario. This will ensure the organization's ability to deliver on objectives at the individual project and overall portfolio levels, mitigate emerging risks, and rapidly capitalize on new opportunities in the event of a disruption.

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