



4 Strategies to Improve R&D Portfolio Management

Introduction

Effective portfolio management helps R&D organizations deliver the right initiatives at the right time while balancing risk, value and growth objectives. Yet many leaders struggle to maintain that balance in practice.

Only 46% of R&D leaders are confident their organizations will improve portfolio balance across value, risk and time horizon over the next 12 to 18 months. At the same time, 69% report pressure to prioritize short-term investments over long-term innovation, while 66% cite budget and resource constraints as a top challenge.

With these challenges in mind, R&D needs to adopt targeted best practices to drive portfolio management effectiveness. This research provides best practices and real examples from R&D organizations to help R&D leaders improve their portfolio management practices and build a healthy R&D portfolio.



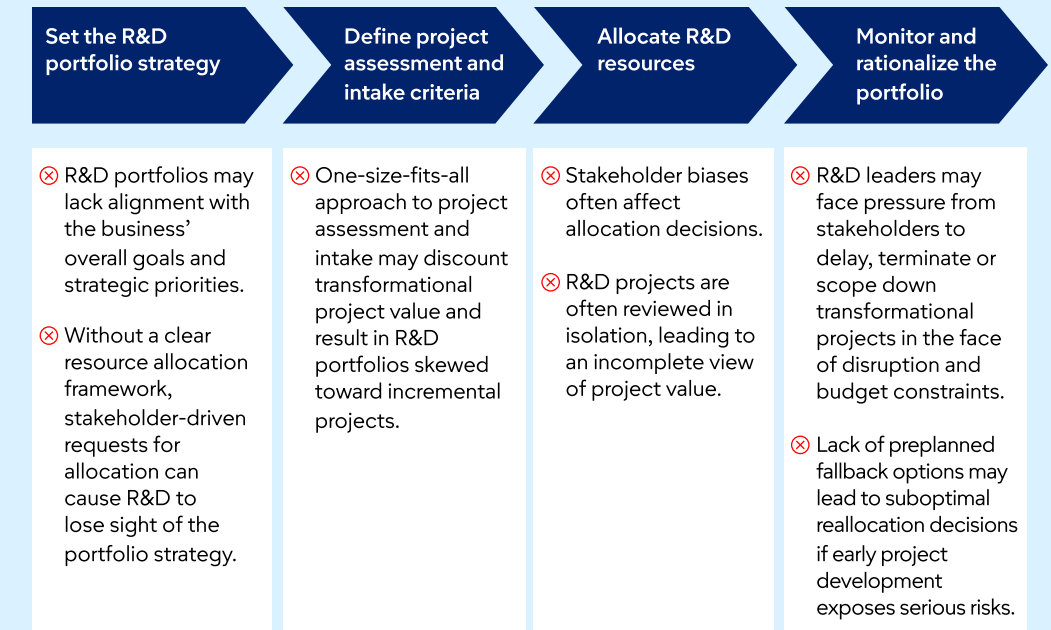
4 activities that drive portfolio management success

Fundamentally, effective portfolio management depends on four interconnected activities:

1. **Set the R&D portfolio strategy** to translate strategic objectives into a balanced R&D portfolio that meets business needs and enables growth.
2. **Define project assessment** and intake criteria to ensure the R&D portfolio's alignment with strategic priorities and to combat incrementalism.
3. **Allocate R&D resources** to align with portfolio strategy and be free from stakeholder biases.
4. **Monitor and rationalize the portfolio** to maintain balance across risk, value and time horizon as business conditions evolve.

Organizations that excel across these activities are better positioned to balance risk and return, protect long-term innovation investments and ensure resources are directed toward initiatives with the greatest strategic impact.

Common portfolio management challenges



Source: Gartner

Activity No. 1: Set the R&D portfolio strategy

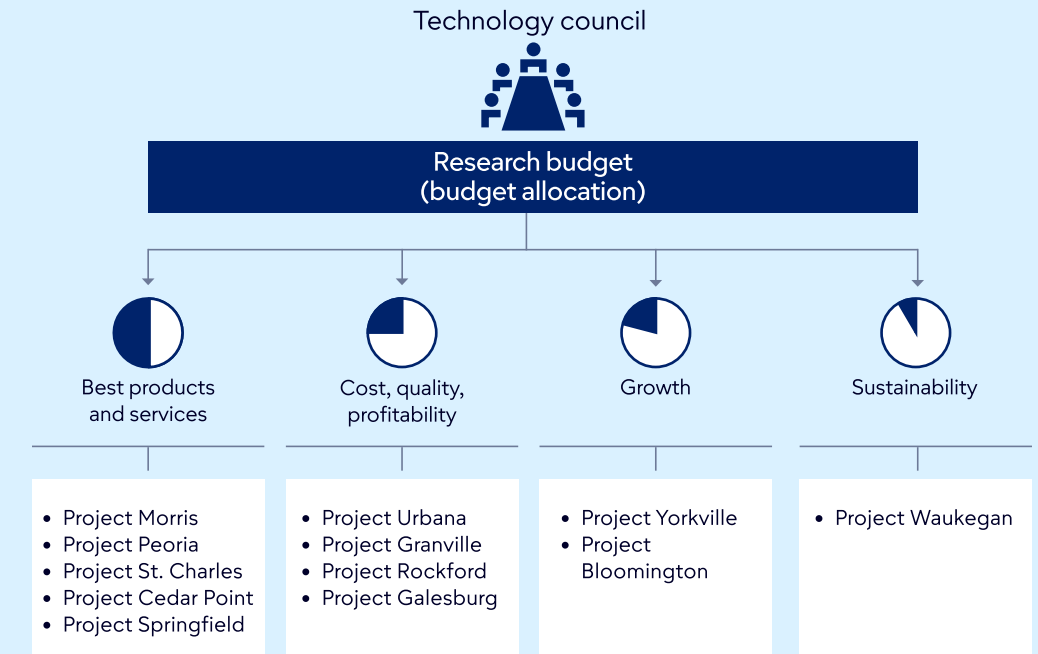
A well-defined portfolio strategy connects business objectives to R&D investments and provides a framework for resource allocation decisions. Effective strategies incorporate corporate priorities, technology and product roadmaps, and a balanced mix of innovation investments.

Leading organizations evaluate investments across four categories: sustaining projects that support existing offerings, incremental innovations that improve current products, next-generation initiatives that extend capabilities into adjacent opportunities and transformational innovations that create new markets or business models. Each serves a distinct purpose and contributes differently to growth.

Caterpillar provides an example of this approach by aligning R&D funding decisions to four strategic objectives, allowing investments to be prioritized based on their contribution to enterprise goals rather than individual project preferences.

Caterpillar's enterprise objective-based funding model

Illustrative



Source: Gartner

Activity No. 2: Define project assessment criteria

Many organizations rely on a single evaluation process for all projects. While this approach creates consistency, it often favors lower-risk incremental initiatives and unintentionally limits transformational innovation.

For incremental and next-generation opportunities, leaders can use structured scorecards that evaluate factors such as financial impact, strategic fit, technology readiness and resource requirements. These measures work well when outcomes can be reasonably forecasted.

Transformational opportunities require a different approach. Traditional return-based metrics often underestimate their potential value. Organizations should instead consider factors such as disruption potential, learning opportunities, strategic importance, technology maturity and the cost of inaction.

Using differentiated evaluation methods helps leaders avoid portfolio incrementalism and ensure high-potential opportunities receive appropriate consideration.

Gerber Scientific's flexible project criteria weighting

Illustrative

Business unit strategy
and characteristics

Business A

- High-growth BU
- Lead innovator
- Focus on capturing competitive advantage

Business B

- Mature BU
- Fast follower
- Cash constrained
- Focus on quick wins

Project criteria	Business A weighting	Business B weighting
1. Technical risk	1	4
2. R&D costs for completion	2	4
3. Strategic importance	4	2
4. Time to market	1	5
5. Durability of competitive advantage	5	2
6. Market expansion opportunity	5	1
7. NPV estimate (five-year)	3	3
Total (must equal 21)	21	21

1 = Lowest possible weighting • BUs must weight each criterion with a score of at least 1.
5 = Highest possible weighting • With a scoring scale of 1 to 5, the highest possible project score is 105.

Project criteria	Scoring guidelines
4. Time to market (TTM)	1: => 24 months 2: 19 - 24 months 3: 13 - 18 months 4: 6 - 12 months 5: < 6 months

Two projects with a 15-month cycle time can receive very different scores in different business units:

Business A		Business B	
Project score	3	Project score	3
Business weight	1	Business weight	5
Total TTM Score	3	Total TTM score	15

Source: Gartner

Activity No. 3: Allocate R&D resources

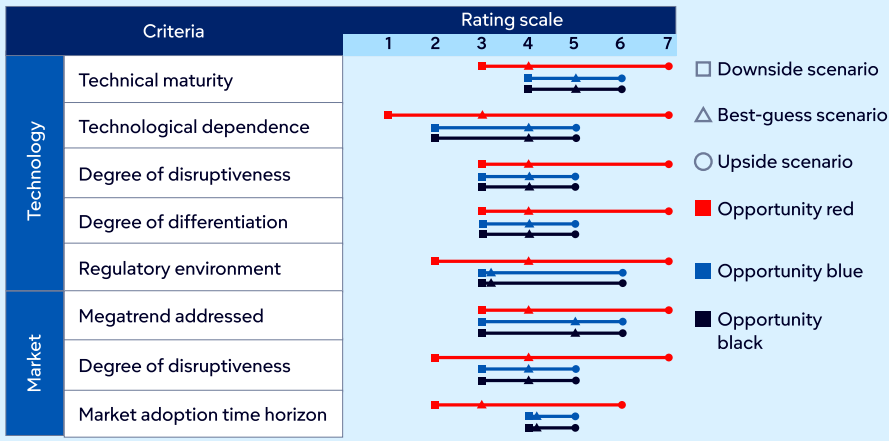
Resource allocation should be guided by portfolio strategy rather than individual stakeholder preferences or short-term business demands. After defining target allocations across innovation categories, leaders can classify projects, rank opportunities and fund initiatives according to strategic priorities.

Leading organizations also evaluate projects within the context of the broader portfolio. This portfolio-level view helps uncover dependencies, identify concentration risks and improve the overall balance of investments.

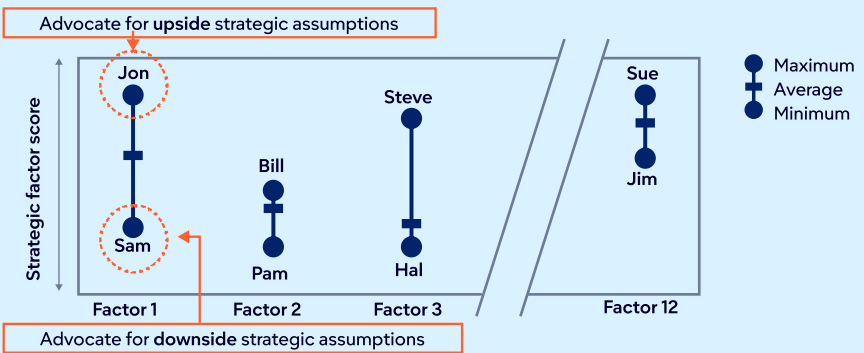
Several organizations use structured techniques to improve decision quality. Citrus Inc. evaluates projects using scenario-based scoring to account for uncertainty, while Danfoss uses independent project scoring and review processes to surface hidden assumptions and mitigate bias. These practices help ensure portfolio decisions are aligned with long-term objectives rather than individual opinions.

Citrus Inc.'s portfolio-level view

Illustrative



Project scoring outlier identification



Source: Gartner

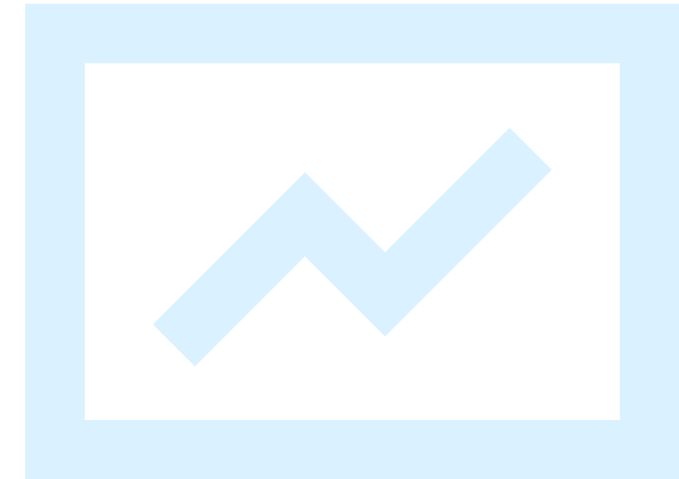
Activity No. 4: Monitor and rationalize investments in the R&D portfolio

Effective portfolio management continues long after projects receive funding. Regular portfolio reviews help leaders maintain alignment with strategy and respond to changing business conditions.

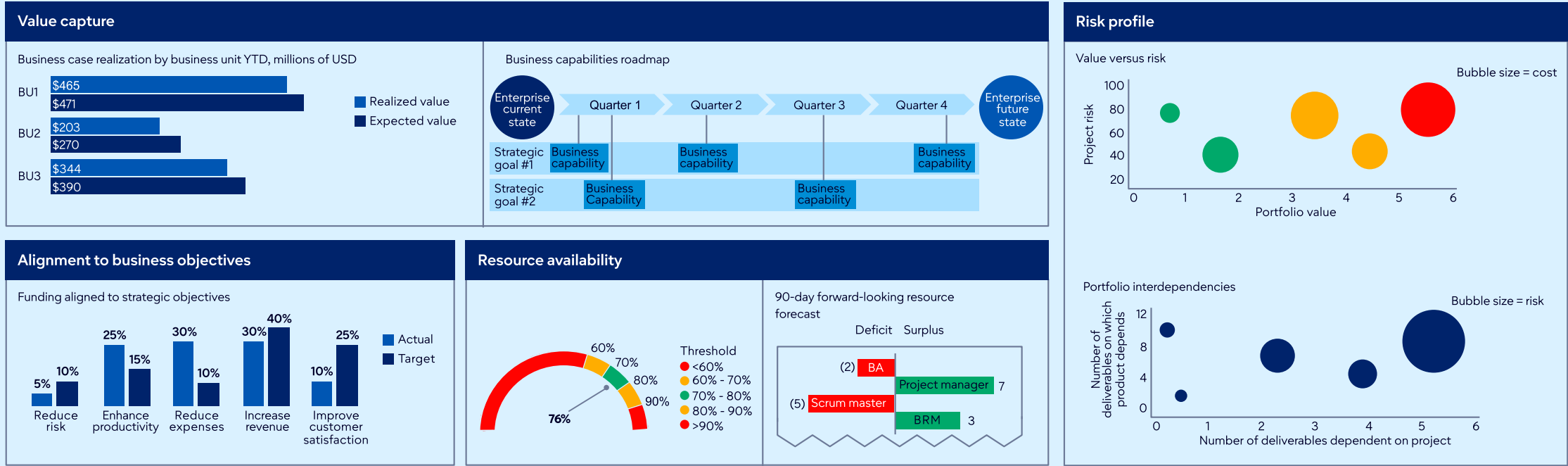
Portfolio dashboards can provide visibility into key indicators including value realization, project status, strategic alignment, resource availability and risk exposure. These insights support more informed discussions about trade-offs and resourcing decisions.

Organizations must also protect long-term innovation from short-term pressures. Amway uses portfolio impact models to demonstrate how proposed resource shifts affect broader business goals and portfolio balance. In addition, contingency planning and predefined fallback options give leaders flexibility to reallocate resources when priorities change.

Success should ultimately be measured through strategic alignment, portfolio balance, innovation output, commercialization performance and the overall value delivered by the R&D portfolio.



Example portfolio dashboard



Source: Gartner

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