INNOVATION RESEARCH INTERCHANGE

Accelerating Value Creation

The Innovation Challenge to Advantage Series

How Milliken Connects Portfolio Strategy and Project Execution

Summary

Innovation leaders today face the dual challenge of delivering strong near-term results while nurturing a pipeline of longer-term, higher-uncertainty opportunities. This balance plays out at the intersection of project execution, portfolio decision-making, and innovation culture, where thoughtfully designed processes support meaningful impact.

Milliken & Company has approached this challenge by connecting disciplined project management with portfolio-level insight. By doing so, Milliken has made portfolio management a strategic, decision-shaping capability that informs priorities, resource allocation, and leadership dialogue across the innovation system, while maintaining its entrepreneurial core.

At the heart of this shift is a simple but powerful question:



“Is our NPD pipeline adequate enough to meet our growth goal six years from now?”

— Drew Child, Ph.D., PMP, Vice President of R&D, Milliken & Company

Milliken’s experience demonstrates that innovation performance improves when structure is intentionally designed to serve creativity.

Lessons Learned

- Define **enterprise-wide standards** for what progress means while allowing teams' autonomy in how they get there.
- Use **flexible, configurable systems** that work for both project teams and leadership.
- Ensure new NPD processes consider and **enhance the way R&D teams operate**.
- Shift portfolio conversations from short-term financial pressure to **longer-term sufficiency and growth readiness.**
- Treat innovation processes as a **living system**, continuously refined through data, feedback, and shared learning.

The Challenge

Milliken manages more than 10,000 unique products across six strategic divisions, dozens of business units, and multiple shared resource pools. Prior to its transformation, Milliken's innovation pipelines varied widely across the organization. "We found it increasingly difficult to understand how the innovation pipeline translates to future revenue growth," Drew noted. "We had so many different systems and processes, but we didn't have the shared data or even the vocabulary." Some teams worked within highly structured development processes, while others operated with more freedom and flexibility. Individual R&D teams continually recalibrated their own balance between creativity, speed, and structure, often shifting back and forth from year-to-year.

This system was inefficient even though the company remained highly innovative. Teams produced successful products, but the organization lacked data integrations and a shared framework to understand trade-offs, compare opportunities, or consistently prioritize resources across the enterprise. Leadership had difficulty seeing the full innovation portfolio, comparing projects, and understanding how R&D efforts were contributing to long-term growth.

Leadership struggled to answer fundamental questions:

- How does the innovation pipeline translate into future revenue growth?
- Are we investing in the right mix of short- and long-term projects?
- Is our pipeline sufficient to meet growth goals several years out?

Turning Point

Under the directive of senior business leadership, Milliken launched a strategic transformation initiative to strengthen portfolio management processes, integrate data across divisions, and improve enterprise-level decision-making.
“We were determined to strike the balance between structure and creativity,” Drew explained. The goal was not to impose uniformity, but to create a common foundation that would enable meaningful enterprise-wide insight.

The transformation centered on three core elements:

1. Development of a harmonized NPD framework with common phase and gate definitions.
2. Integrating project data into a centralized, configurable platform.
3. Introduction of portfolio-level metrics designed to balance near-term performance with long-term growth sufficiency.

The Process

In response to increasing portfolio complexity and limited enterprise visibility, senior R&D leadership led a structured evaluation. Traditional linear project management methods provided discipline but lacked flexibility in high-uncertainty environments. Conversely, purely Agile approaches offered speed and adaptability but did not always provide the governance and cross-functional alignment required at scale.

R&D leaders and project teams were engaged throughout the process, providing input on pain points and practical constraints. Teams understood that the goal was not increased control, but reduced friction across departments, improved transparency in decision-making, and clearer linkage between daily project work and long-term growth objectives.

Ultimately, leadership decided to blend elements of both Agile and StageGate™ in a hybrid model. The adapted framework retained clear phase definitions and gate criteria to support enterprise-level decision-making, while incorporating Agile sprint execution within phases to enable rapid learning and iterative development.

The Result

A Harmonized NPD Framework

For their adapted Agile StageGate™ model, Milliken did not adopt a traditional five-stage process, but rather simplified and modified the approach to better reflect how innovation occurs across its diverse businesses. The resulting framework includes four core phases and gates, each with shared meaning across the organization:

1. Opportunity identification and sizing
2. Feasibility and risk–reward assessment
3. Solution iteration and development
4. Commercialization and scale-up

At each gate, teams address a common set of questions that signal readiness to move forward, such as if production-scale equipment can be used or whether a prototype meets defined performance criteria. This shift established a common understanding of each stage's meaning and the readiness criteria expected at each point. "When someone says my project is ready for gate two, that means the same thing across the organization," Drew highlighted.

Importantly, while the phases and gate definitions are consistent, execution is intentionally flexible. Business units tailor templates and checklists to reflect product complexity, regulatory requirements, and risk profiles. This design principle is described as common meaning with local adaptability. This concept proved critical to maintaining a vibrant innovation culture while improving consistency. As part of its adapted Agile StageGate™ approach, Milliken incorporated sprint-based execution within development phases. Rather than relying solely on long-range Gantt charts, teams plan work in focused sprints—typically spanning several weeks—where a defined set of experiments, design tasks, or deliverables are prioritized and executed.

> ***"When someone says my project is ready for gate two, that means the same thing across the organization."***

Only the immediate sprint is planned in detail, allowing teams to adjust scope and timing as learning unfolds. Progress is reviewed regularly, accountability is visible, and completed work is tracked in real time. As uncertainty decreases, estimates become more precise and timelines stabilize. This has reduced friction among departments, improved transparency, and strengthened enterprise visibility rather than increased control.

Enabling the System with Data and Tools

To enable the harmonized framework, Milliken invested in a configurable, enterprise-wide project and portfolio management system that integrates data across divisions. The platform balances flexibility for teams with consistency at the portfolio level, ensuring that innovation activity can be viewed, compared, and analyzed across the organization. By linking this data to business intelligence tools, leadership gains real-time visibility into portfolio composition, risk exposure, resource allocation, and projected value creation.

Through this integrated system, Milliken can visualize:

- Portfolio size and composition
- Risk profiles across projects
- Resource allocation
- Expected timing of revenue
- Progress and readiness at each stage

Just as importantly, the organization can now look both forward and backward and use historical project and portfolio data to refine assumptions, improve forecasting, and continuously strengthen how innovation is managed over time. “The information is all in one database,” Drew emphasized, “Everyone knows where it is. We can get history and look how the portfolio is changing over time and that’s helpful.”

Moving Beyond Traditional Financial Metrics

One of the most significant shifts in Milliken’s approach was moving away from over-reliance on traditional financial projections for early-stage R&D, like the risk-adjusted size of the portfolio. Long-range forecasts often proved inaccurate for high-uncertainty projects, leading to skepticism and disengagement.

The company introduced a **"sufficiency" metric** at the portfolio level—a long-term indicator that assesses whether the innovation pipeline is adequate to meet growth targets several years into the future. Viewed alongside short-term financial metrics, sufficiency enables leaders to make explicit trade-offs between immediate performance and long-term innovation health. "There's always a temptation to move resources to short-term projects." Drew noted, "So now looking at the short-term financials and the sufficiency at the same time helps us balance and understand what the effect is going to be. That has been a real game changer for us." This dual-metric approach has helped prevent decisions that improve near-term results at the expense of future growth-a concept that was previously difficult to assess.

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Future Direction

Milliken views its portfolio system as a living framework and an ongoing evolution, not a finished solution. As Drew put it, "Project portfolio management is a journey, not a destination. We are never going to be finished with this process. We are constantly changing, improving, and addressing pain points." To do that, A group of cross-functional leaders continues to refine metrics, share best practices, and address emerging challenges.

From the perspective of project teams, the harmonized framework has shifted perceptions of process from constraint to enabler. "There's something in it for management because now we can see the portfolios," Drew noted, "There's also something in it for the user. It makes their job easier because their information is centralized and they don't have to spend time making slideshows for update meetings." Teams retain creative freedom while benefiting from clearer expectations, shared language, and tools that reduce non–value-added work. Seeing sprint progress, tracking momentum, and understanding how individual efforts contribute to enterprise goals have strengthened engagement rather than diminished it. The company continues to refine its balance between discipline and creativity—ensuring that portfolio visibility supports innovation rather than suppresses it.

Additional IRI Resources for Innovation Leaders

For members interested in exploring these themes further, IRI offers research, tools, and peer-driven insights on strengthening portfolio decision-making and innovation execution, including:

- Strengthening the R&D Portfolio: Evaluating Projects with Non-Financial Metrics
- Strategies to Improve Portfolio Management of New Products
- Adopting AI for NPD: A Strategic Roadmap for Managers
- The Hybrid Model Matrix: Enhancing Stage-Gate with Design Thinking, Lean Startup and Agile