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GREATEST COMPANIES · RESEARCH SHEET · The Innovation-System Moat

3M

The Company That Made a Moat of Inventing

NYSE: MMM · Diversified Industrials · Founded 1902 · Maplewood, Minnesota, USA

Public · v1.0 · July 2026

Most companies in this collection are built around a product, a founder, or a single brilliant idea. 3M is built around something rarer and more powerful: a culture of invention. For more than a century, 3M has been less a maker of any one thing than a machine for making new things, from sandpaper to Scotch tape to the Post-it note. But 3M is also a cautionary story: the very inventiveness that built the company also planted liabilities that took decades to surface, erupting in the 2010s and 2020s into some of the largest product and environmental lawsuits in corporate history. A company's greatest strength and its gravest weakness are often the very same trait, seen from different angles.

Key Facts

Origin	Five businessmen founded Minnesota Mining and Manufacturing in 1902 to mine corundum
Sector	Diversified industrials — adhesives, abrasives, safety, consumer products
Moat	Process power — a repeatable innovation system, plus trusted brands
Signature Practice	The 15% Rule (1948), letting employees pursue their own projects
Famous Inventions	Sandpaper, Scotch tape, Scotchgard, the Post-it note
Modern Crisis	Mass litigation over PFAS forever chemicals and military earplugs
Status	Public (NYSE: MMM)

By the Numbers

Began as a corundum mine that failed almost immediately, forcing a pivot to sandpaper

Has produced tens of thousands of products across its history

PFAS and earplug litigation led to settlements running into the billions of dollars

Spun off its health-care business as Solventum in 2024

The Post-it note (1980) grew from a failed, too-weak adhesive discovered years earlier

The 15% Rule was formalised in 1948 under leadership most notably William McKnight

The Moat

A System That Makes Innovation Routine

What sets 3M apart is that it turned innovation from a matter of luck into something close to a repeatable process. The 15% Rule encouraged employees to spend part of their working time on projects of their own choosing, on the theory that breakthroughs cannot be scheduled but the conditions for them can be deliberately engineered. It worked in the most unexpected ways: Scotchgard came from a lab accident when a researcher spilled a compound that beaded water, and the Post-it note was born when one scientist's failed attempt at a strong adhesive was paired years later by another employee with the idea of a repositionable bookmark. This was not luck alone; it was a culture designed to catch luck when it struck. 3M's real product is the innovation system itself, the culture and process that produce tens of thousands of products across countless fields, no single invention defines it; the machine that makes inventions does.

The Shadow of Its Own Chemistry

The Strength That Became the Liability

For most of the twentieth century, 3M's strategy of inventing constantly and spreading across tens of thousands of products seemed unambiguously brilliant, no single failure could sink it. But some of its most successful inventions, particularly a family of durable chemicals known as PFAS, were proving persistent in the environment and the human body, and 3M did not confront the emerging risks early or decisively enough. The result was an avalanche of litigation, billions in settlements over PFAS and separately over Combat Arms military earplugs, and a battered reputation. The inventiveness that creates value can also create hidden, slow-burning liabilities, and a culture brilliant at making things can be slow to confront the harm some of those things cause. In response 3M spun off its health-care business as Solventum in 2024, pledged to exit PFAS manufacturing, and brought in new leadership focused on operational discipline.

> ***" A company's greatest strength and its gravest weakness are often the very same trait, seen from different angles. "***

The Legendary Scorecard

Category	Score	Notes
Founder Vision	8	A failed mining venture pivoted into a culture built to survive on invention
Innovation	10	One of the greatest innovation cultures ever built, producing a century of breakthroughs
Execution	7	Brilliant at invention, slow to foresee and manage the liabilities its own products created
Moat	8	Process power, an innovation engine, reinforced by trusted household brands
Capital Allocation	6	Billions diverted to litigation settlements; the Solventum spinoff was restructuring under pressure
Wealth Creation	8	A century of compounding value, dented significantly by the litigation era

Durability	7	Battered by PFAS and earplug litigation, but restructuring and rebuilding
Historical Importance	8	A model innovation culture studied and imitated worldwide
Overall Legendary	**8.0 / 10**	**Genuine greatness whose story carries an essential warning about the shadow side of strength**

Scores are an editorial verdict on the standard eight-category Greatest Companies scale. The overall is a judgment, not a weighted average.

Timeline

1902	Five businessmen found Minnesota Mining and Manufacturing to mine corundum, a venture that fails
1900s–10s	The company pivots from mining to making sandpaper and abrasives
1920s–30s	3M invents masking tape and Scotch cellophane tape, establishing its inventive reputation
1948	3M adopts the 15% Rule, letting employees spend part of their time on their own projects
1980	The Post-it note, born from a failed adhesive, becomes a global hit
2024	3M spins off its health-care business as Solventum and settles major PFAS litigation
2025	3M works to move past its litigation era, exiting forever-chemical manufacturing and rebuilding

Lessons — What This Means for You

THE MOVE · Build a system that makes innovation repeatable

3M treats innovation not as a matter of chance but as a process: give curious people freedom and time, tolerate failure, spread bets across thousands of products, and build a culture that catches and develops happy accidents. Creativity can be systematised; the conditions for breakthroughs can be deliberately engineered even though the breakthroughs themselves cannot be scheduled.

THE MONEY · Spread your bets, but watch the tail risks

3M's financial model is diversification through invention, thousands of products across countless fields, so no single failure is fatal and the winners more than pay for the losers. But 3M also teaches the harder half: some risks are not diversified away, a class of products can carry a shared, hidden liability that surfaces all at once. Diversification protects against ordinary failure, not against a poison running through many products at the same time.

THE MIND · Your greatest strength casts your longest shadow

The freedom and inventiveness that made 3M great are bound up with the lack of caution that let it create lasting harm. Know your defining strength so well that you can see its shadow, and ask, at the very peak of what you do best, what hidden cost it might be accumulating. The trader who wins by boldness must watch for the blowup that boldness invites; the company that wins by invention must watch for what its inventions might one day cost.

Related Reading

A different repeatable system, built on operational improvement: Danaher: The Quiet Machine That Compounds

A durable advantage built on brands and distribution instead: Nestlé: The Company That Feeds a Billion Breakfasts

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Read the Full Story

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Sources & Further Reading

3M Company annual reports and SEC filings

Contemporary reporting on the PFAS and Combat Arms earplug litigation (2018–2024)

Greatest Companies (3M chapter), The Complete Trader's Edge

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