

LEONARDO ON INNOVATION



MICHAEL STRAUB

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LEONARDO ON INNOVATION

LEONARDO
On
INNOVATION



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Leonardo on Innovation

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This book is a work of creative and historical interpretation. While inspired by historical figures, events, and writings, it reflects the author's perspective and synthesis.

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LEONARDO ON INNOVATION

Advanced Reader Sample
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PROLOGUE

The Adapting Mind

*Leonardo da Vinci, Neuroplasticity, and
Innovation*

We live in a world that celebrates specialization. Mastery is measured by how narrowly we focus. Yet five centuries ago, Leonardo da Vinci proved that true innovation thrives on the opposite principle: diversity and breadth of thought. Long before neuroscience named it, he embodied what we now call neuroplasticity: the brain's capacity to rewire itself through curiosity, learning, and experience.

Leonardo's genius was not a fixed trait. It was a skill he cultivated by constantly expanding the boundaries of his understanding. His mind never settled into one discipline or perspective. He dissected the human body to understand its mechanical structure, studied birds to unravel the principles of flight, and painted subjects with an acuity that seemed to reveal their inner thoughts. Each new intellectual pursuit rewired his perception, blending art and science, geometry and beauty, engineering and *fantasia*,

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the Renaissance concept of imaginative play and creative freedom.

Modern neuroscience confirms what Leonardo practiced instinctively: the more varied our experiences, the stronger and more flexible our minds become. Learning across disciplines activates new neural pathways, enhancing creativity, adaptability, and resilience. Leonardo lived this process daily. His notebooks, filled with sketches and unfinished questions, are evidence of a mind in constant transformation. They are a living map of curiosity at work.

To Leonardo, knowledge was not a collection of facts; it was a network of relationships. He believed in the classical old-world concept, “as above, so below,” meaning that the same principles that shaped the body also shaped the natural world, and the same proportions that governed architecture could be found in a leaf or a hand. He found unity in the disparate, discerning a pattern running through everything.

That integrative way of thinking is the foundation of innovation. Creativity rarely emerges from isolated expertise; it flourishes at the intersections, where ideas from different fields collide and recombine. Leonardo’s greatest strength was not that he mastered many domains, but that he connected them. His mind was a bridge: between art and engineering, logic and meaning, structure and playfulness.

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Today, this mindset is more relevant than ever. In an age defined by rapid change, the ability to adapt, learn, and synthesize new ideas is the ultimate advantage. Specialists may perfect existing systems, but innovators like Leonardo reinvent them. Neuroplasticity is no longer just a scientific term; it is the blueprint for creative evolution.

Leonardo understood that curiosity is not a distraction from mastery but its source. “Learning never exhausts the mind,” he wrote. Modern science agrees: learning rejuvenates it. Each new skill, challenge, or perspective strengthens the brain’s architecture, expanding what it’s capable of seeing and creating.

To think like Leonardo is to cultivate a mind that never hardens, one open enough to connect disciplines, challenge assumptions, and find meaning across boundaries. It is to see learning not as a task, but as a way of growing.

Five hundred years later, neuroscience gives us the language to describe what Leonardo lived. Innovation is not the product of genius; it is the practice of expansion.

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PREFACE

For more than two decades, I have studied the life and work of Leonardo da Vinci. Along the way, I have encountered a persistent myth: that Leonardo was a flawless genius, effortlessly brilliant in all he touched. The truth is far more human and far more inspiring.

His notebooks were not archives of perfection; they were working rooms of the mind. In their pages we find extraordinary insights alongside false starts, abandoned ideas, and experiments that failed. Leonardo stumbled often, but he continued. Failure became information, curiosity became momentum, and each question opened a new door.

Leonardo also reveals that the borders we place around knowledge are human constructs, not realities. We separate art from science and imagination from logic, yet these divisions exist largely in our thinking. He saw relationships rather than specialties and followed curiosity as a single, continuous thread.

That understanding shapes the structure of this book.

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Leonardo on Innovation examines Leonardo's approach to creativity and problem-solving through *the lives and work of innovators across disciplines, including artists, engineers, inventors, designers, entrepreneurs, and leaders*. The book began with business leaders in mind. In the process, I realized its lessons extend far beyond commerce. They apply to anyone navigating complex creative projects, leadership challenges, or periods of uncertainty and change. You may notice that some of the approaches explored here do not align neatly with one another. The tension is intentional. Leonardo himself was complex, evolving, and at times contradictory. He experimented constantly, revised his thinking, abandoned ideas, and pursued competing paths simultaneously. His creative process was not a fixed methodology, but a living inquiry. In honoring that reality, this book does not present a prescribed formula for innovation; instead, it offers a way of seeing — one that adapts to the circumstances, questions, and constraints of each individual. In an era obsessed with specialization, speed, and flawless execution, Leonardo offers a different perspective: mastery is not born from perfection, but from curiosity and persistence. His legacy reminds us that progress emerges through exploration, contradiction, and sustained attention rather than certainty.

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This book is an invitation to return to that way of seeing, to rediscover what the world looked like before we divided it. Fluid. Interconnected. Alive. Leonardo did not work across boundaries. He worked before them.

How to Use This Book

Leonardo on Innovation is meant to be lived, not consumed. Move through it as a forty-day journey — one chapter per day — and return to chapters as your work evolves.

Each chapter ends with a Reflection section. These prompts are not tasks to complete, but invitations to explore: slowly, thoughtfully, and imperfectly, just as Leonardo worked in layers and revisions.

Keep a notebook nearby. Record insights, questions, sketches, and observations. Let patterns emerge over time. The goal is not precision, but presence; not speed, but awareness.

Ultimately, innovation is not about adding knowledge — it is about removing the veil of separation that narrows our view. When we see as Leonardo saw, we rediscover a continuous field of possibility, waiting to be engaged.

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GENIUS

Across history, the most original thinkers were not simply skilled. They were curious in a particular way. They followed the questions that stirred them most deeply.

In the Renaissance, philosophers believed every person possessed a *genius*. The word did not mean extraordinary intelligence as it does today. It referred to an inner inclination, a guiding spirit pointing toward the work one is naturally drawn to explore.

Leonardo da Vinci lived this principle long before it had a name. He followed curiosity wherever it led: painting, anatomy, engineering, geometry, flight, and countless other fields. His notebooks reveal a mind guided less by obligation than by fascination.

This book invites you to cultivate that same spirit.

Not to imitate Leonardo, but to practice the kind of curiosity that made his work possible.

Joseph Campbell later expressed the same idea in a simple phrase: *follow your bliss*.

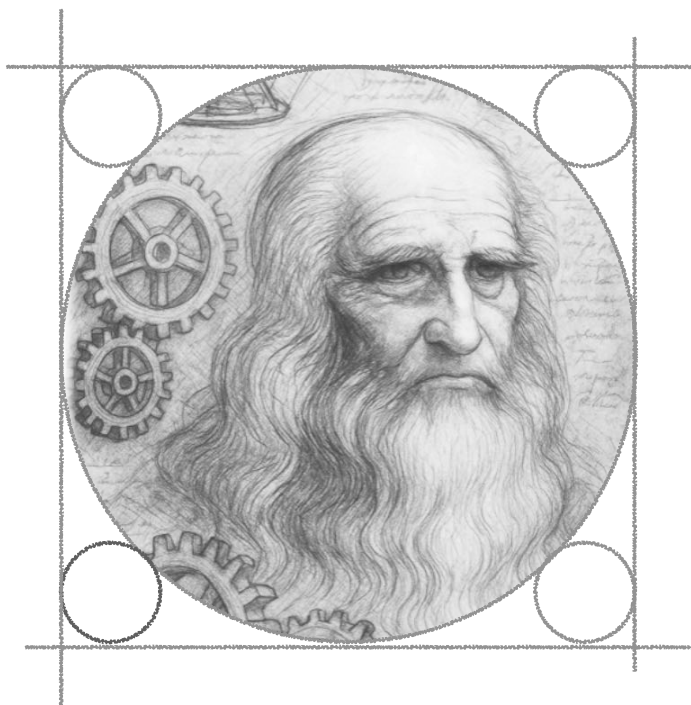


Day 1: Beginnings Are Not Destiny

Visionaries often begin outside the system. Innovation emerges when curiosity outweighs certainty, and when questioning the status quo becomes more powerful than accepting what everyone else assumes is true.

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LEONARDO DA VINCI



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Leonardo da Vinci's story begins far from the grand halls of power or privilege. Born in 1452 as an illegitimate child in the small Tuscan town of Vinci, he had no access to formal education in Latin or the classical curriculum of his peers. Yet from these humble beginnings emerged one of the most extraordinary minds in history: a man whose expertise would span anatomy, engineering, painting, architecture, and beyond.

Recognizing his son's gift for drawing, Leonardo's father introduced him to Andrea del Verrocchio, Florence's most respected artist and sculptor. Verrocchio's *bottega*, a bustling workshop of collaboration and experimentation, became Leonardo's first classroom. There, the young apprentice absorbed everything: the precision of draftsmanship, the mixing of pigments, the mechanics of anatomy, and the grace of human form.

This environment revealed something essential about Leonardo's genius: he was taught no separation between art and science, or craft and intellect. Every discipline illuminated the other. Anatomy deepened his painting; engineering informed his sculptures; geometry refined his sense of balance and composition. Knowledge, in Leonardo's view, was a living web of interconnection.

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Throughout his life, he sought out masters, including engineers, mathematicians, anatomists, and philosophers, and absorbed their wisdom through apprenticeship, friendship, and study. His brilliance lay not only in talent, but in his relentless drive to learn. Each new subject expanded his imagination and deepened his skillset. He thought in analogies and relationships, seeing anatomy as Nature's mechanical ingenuity and applying its principles to his engineering drawings. His study of paint and color led to his mastery of light and form, eventually establishing him as one of the greatest artists of his time. Each discipline strengthened the others, and that was the foundation of his immense genius.

Today, Leonardo's way of thinking offers a blueprint for innovation. His curiosity, cross-disciplinary mindset, and courage to experiment embody the same principles that drive progress in modern business, science, and technology. Leonardo on Innovation explores how those timeless habits of mind — seeing connections, embracing curiosity, and learning through experimentation — can help us think more creatively, lead more effectively, and build the future with imagination and purpose.

Takeaway: Leonardo's path shows that extraordinary capability grows from curiosity, practice, and the courage to learn without

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waiting for permission. He unified subjects, observed deeply, and treated experimentation as a way of life. Innovation does not rely on circumstance, but with the level of boldness we explore and refine our abilities.

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Studio Reflection

What skill or subject feels “outside your lane”? How might exploring it expand your perspective?

Where could slowing down and observing sharpen your craft?

What small, low-risk experiment could begin this week?

Who might become your modern “Verrocchio”? How could you learn from them?



Day 10: Vision Drives Value

Leonardo's unfinished inventions paved the way for future breakthroughs. Innovators must imagine beyond the present and pursue visionary goals that outlast their era.

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JOHN F. KENNEDY AND THE MOONSHOT



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In 1961, President John F. Kennedy stood before Congress and declared that the United States would land a man on the moon and return him safely to Earth before the decade's end. At the time, America had achieved only a brief, 15-minute suborbital flight. The goal was audacious, the timeline unrealistic, and the cost staggering. Kennedy was not asking whether it could be done. He was challenging the nation to imagine a future worth striving for.

Kennedy's moonshot sparked far more than a space program. It united an entire ecosystem of thinkers, builders, and dreamers across every discipline. NASA became the nucleus of a massive collaboration among government agencies, private industry, and universities. Engineers who once built airplanes began designing rockets. Mathematicians evolved into mission planners. Chemists and computer scientists developed technologies that did not yet exist. The moon became a shared metaphor, an emblem of human possibility, and a destination big enough to pull millions of individual contributions toward a common cause.

The brilliance of Kennedy's leadership was not simply in setting a goal; it was in creating alignment. He framed the mission not as a geopolitical contest, but as a defining test of human ingenuity and courage. The challenge reframed meaning for millions of people.

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Riveters, machinists, programmers, test pilots, and analysts could see their work reflected in a cosmic mirror. Every calculation, every weld, every simulation became part of something larger, something sacred. The value of the moonshot was not limited to touching the lunar surface. It was found in everything the mission awakened along the way.

By 1969, Kennedy's impossible vision became reality when Apollo 11 touched down at Tranquility Base. But the true legacy of the moonshot extended far beyond that single moment. The program catalyzed advancements in microelectronics, guidance systems, aerospace materials, satellite communications, and computer science. Today's GPS navigation, weather forecasting, medical imaging, and smartphones trace their origins back to the innovations accelerated by the Apollo program.

Most importantly, the moonshot permanently changed how organizations approach big goals. It demonstrated that vision can mobilize progress faster and more cohesively than policy, budget, or competition. It proved that when people believe deeply in *why* they are building something, their capacity to innovate expands dramatically. Purpose becomes power.

Leonardo da Vinci understood this truth centuries earlier. Many of his most ambitious designs, such as flying machines, armored

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vehicles, hydraulic systems, and mechanical automata, remained unrealized in his lifetime. Yet these imaginative prototypes seeded future invention. His sketches were not failures; they were invitations to future generations. He should not be measured solely by what he completed, but by the worlds he opened. His vision expanded humanity's imagination long before technology caught up.

As with Kennedy, Leonardo's work reveals how vision functions as a force multiplier. It clarifies direction, fuels curiosity, and endures beyond the individual. His notebooks reveal a horizon-seeking mind, one that sketched the outlines of eras yet to come.

For leaders today, this lesson remains unchanged: clarity of vision is among the most powerful tools you possess. A compelling horizon transforms work into meaning, aligns teams without coercion, and gives innovation a direction to travel. When imagination becomes shared purpose, ambition becomes achievement.

Takeaway: Great leaders don't merely solve problems. They articulate visions so bold that they unify talent, inspire invention, and create value that lasts for generations. Kennedy's moonshot proved that vision isn't fantasy; it's fuel. When imagination becomes shared purpose, the impossible becomes inevitable.

Studio Reflection

How clearly do you communicate not just what you're building, but why it matters?

How do you balance ambition with realism, ensuring your goals inspire without overwhelming?

Write your own "moonshot" statement. One sentence that captures the highest version of your potential.



Day 11: Design for Delight

Leonardo did not create for utility alone. He created delight. He understood that true progress blends usefulness with beauty, surprise, and joy. Innovators create work that sparks a genuine “wow.”

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TARGET'S "EXPECT MORE, PAY LESS"



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In the crowded world of discount retail, most companies compete on price alone. Walmart built an empire by being the cheapest. But in a market obsessed with cost-cutting and efficiency, Target asked a radical question: *What if affordability could also feel aspirational?*

That question became the foundation of Target's defining promise: "Expect More. Pay Less." Rather than chasing the lowest price margin, Target redefined value as a fusion of accessibility, design, and joy. The brand did not simply sell products. It crafted experiences. Stores featured wider aisles, curated endcaps, color-coordinated displays, and lighting that made a routine shopping trip feel closer to a boutique visit than a bargain hunt. Even its iconic red bullseye logo was engineered with intentional simplicity: bold, warm, optimistic. It became an emotional shorthand for everyday uplift.

Target's advertising reinforced this philosophy. Its commercials leaned bright, graphic, humorous, and confident, an unusual approach for a big-box retailer. While competitors focused on savings claims and inventory breadth, Target spoke with personality. It didn't lecture customers about deals; it invited them to enjoy the moment. In an industry of sameness, Target became distinctive. It elevated shopping from errand to experience.

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Then came the brand-defining leap: designer collaborations. In 2003, Isaac Mizrahi partnered with Target to create an exclusive collection that brought runway sensibilities into mass retail. The impact was immediate and extraordinary. Crowds flooded stores. Fashion editors took notice. A new playbook was written.

Future collaborations followed: Missoni, Alexander McQueen, Jason Wu, Phillip Lim, and Lilly Pulitzer. These capsule collections generated lines stretching outside the building and media attention typically reserved for Paris Fashion Week. Target democratized luxury, letting customers experience high design at accessible prices. Scarcity became excitement. Affordability became aspiration. Target was not just selling items. It was selling the feeling of being stylish, clever, and included.

This cultural resonance even birthed a nickname: “Tar-zhay.” It was affectionate and slightly satirical, yet fundamentally admiring. The term hinted at something subtle but powerful: people *felt good* shopping there. In a category defined by utility, Target made the mundane memorable. It proved that joy could differentiate as effectively as price. Sometimes more.

This philosophy mirrors Leonardo da Vinci’s approach to creation. Leonardo infused wonder into everything he touched, from mechanical

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sketches to sacred compositions. He believed beauty emerged when form and purpose were perfectly aligned. His flying machines, bridges, and anatomical drawings were not merely functional. They were elegant.

Like Leonardo, Target understood a timeless principle: when you design with intention and empathy, beauty becomes an outcome, not an accessory. Delight emerges naturally when human experience is placed at the center of creation.

For modern builders, leaders, and creators, the message is clear. People do not only remember what worked. They remember what felt good. Value isn't just price or efficiency; it is emotion, meaning, and resonance. When organizations design with delight, they elevate the everyday into something worth anticipating. They build not just loyalty, but love.

Takeaway: Wonder can be a business strategy. When companies infuse beauty and delight into ordinary experiences, they elevate utility into emotion. Target did not win by competing on price. It won by competing on joy. Delight created not just customers, but enthusiasts.

Studio Reflection

Where could a small, thoughtful touch bring beauty or a moment of surprise into an otherwise ordinary part of your work or daily life?

Where has function overshadowed experience, and how can you restore balance?

What small, intentional detail could turn an ordinary customer interaction into one that feels personal and memorable?

How might your next product, message, or space evoke delight, not just satisfaction?

List three touchpoints where people encounter your work. How could each become more human?

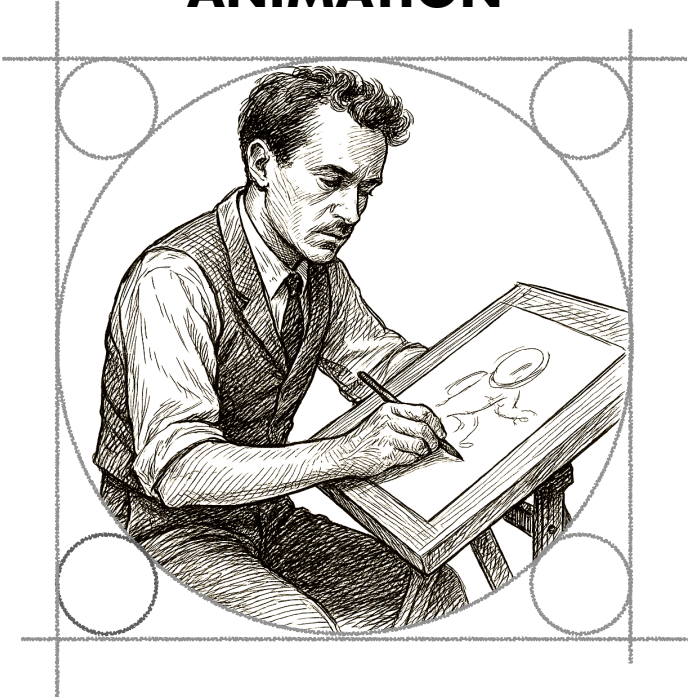


Day 12: Imagination Fuels Invention

Leonardo imagined flying machines centuries before flight was possible. Innovators make room for bold, impractical ideas—the kind that ultimately reshape industries.

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UB IWERKS AND THE BIRTH OF MODERN ANIMATION



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Behind Walt Disney's bold public visions stood Ub Iwerks (pronounced *Uhb EYE-werks*), one of the most inventive minds in the history of animation. A lifelong friend and collaborator of Disney, Iwerks fused artistic brilliance with mechanical genius, helping shape the foundation of modern animation and immersive storytelling. While Disney became the charismatic face of the empire, Iwerks was the quiet engine whose relentless creativity turned ideas into innovation.

In 1928, Disney lost the rights to Oswald the Lucky Rabbit, his most successful character at the time, and the studio seemed doomed. But Iwerks responded with a surge of creative force. Working tirelessly in a small room, sometimes producing dozens of drawings per hour, he generated hundreds of sketches that ultimately evolved into a cheerful, round-eared character named Mickey Mouse. His reinvention did not merely save the company. It reshaped popular culture. Mickey became an emblem of optimism during the Great Depression and a symbol of animation as an emerging art form.

But Iwerks's genius extended far beyond character design. He was a natural-born experimenter, obsessed with understanding the mechanics behind visual magic. Throughout the 1930s and 1940s, he pioneered groundbreaking special-effects techniques that gave Disney films

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their signature depth and visual richness. His most influential invention, the multi-plane camera, allowed animators to layer backgrounds, creating the illusion of three-dimensional movement. This single innovation transformed the emotional power of animation. Snow White and the Seven Dwarfs, Pinocchio, Bambi, and countless classics owe much of their cinematic realism to Iwerks's mechanical imagination.

His curiosity continued evolving throughout his life. In the 1960s, Iwerks invented Circle-Vision 360°, a revolutionary camera system that surrounded viewers with panoramic imagery. It immersed audiences in scenes that unfolded in every direction at once. Long before virtual reality became a technological frontier, Iwerks envisioned fully immersive storytelling—inviting viewers not just to watch a world, but to step inside it. This innovation influenced future entertainment formats, from IMAX theaters to VR experiences.

At Disneyland and later Disney World, Iwerks continued blending engineering with wonder. He developed projection technologies, ride illusions, and optical effects that defined the immersive theme park experience. His work stands at the roots of modern imagineering, a discipline where creative storytelling and mechanical precision fuse to build entire worlds.

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Like Leonardo da Vinci, Iwerks embodied a rare synthesis: the capacity to dream boldly and build meticulously. His imagination was also tethered to technical discipline. Iwerks carried that lineage forward, merging fantasy and physics, whimsy and machinery. Both men possessed a gift for seeing structures inside stories and stories inside structures.

Their shared lesson is clear: innovation rarely comes from imagination *alone*. It emerges when imagination is paired with the tools, skills, and discipline needed to make the impossible tangible. Creativity becomes invention for those who explore. Experimentation, building, and refinement naturally follow.

For modern creators, builders, and leaders, Iwerks offers a powerful model. The future favors those who can speak multiple creative languages, those who design with artistic intuition and implement with engineering clarity. When organizations empower such hybrid thinkers, they unlock breakthroughs that endure long after trends fade.

Takeaway: Organizations that champion visionaries like Ub Iwerks cultivate breakthroughs that last for generations. His legacy, from Mickey Mouse to 360° storytelling, proves that the future belongs to those bold enough to imagine it and disciplined enough to make it real.

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Studio Reflection

What idea have you dismissed because it seemed too whimsical or too technical to pursue?

How can artistry and engineering coexist more fluidly in your creative process?

When was the last time you solved a creative problem through invention rather than compromise?

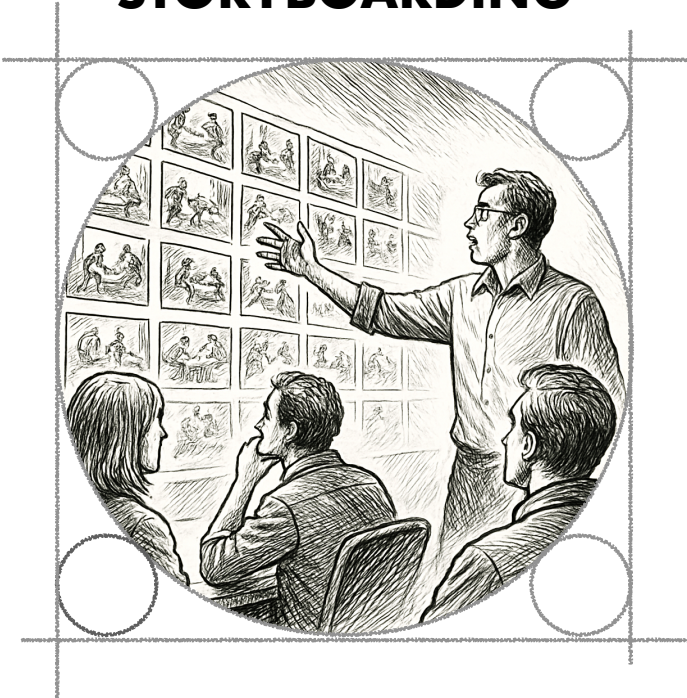


Day 13: Draw It First

Leonardo sketched every idea before building it. Innovators visualize ideas early, surfacing challenges, aligning teams, and refining plans before errors grow expensive.

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DISNEY STUDIOS AND THE BIRTH OF STORYBOARDING



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In the 1930s, Walt Disney Studios faced an unprecedented creative and logistical challenge: how to coordinate the first full-length animated feature film, *Snow White and the Seven Dwarfs*. Animation required an entirely new storytelling vocabulary: one that balanced pacing, movement, rhythm, emotion, and music frame by frame. Traditional scripts couldn't capture the fluidity or nuance needed to make drawings feel alive. Out of necessity, Disney's artists invented a tool that would transform animation and eventually global storytelling: the storyboard.

Early storyboards were simple. Rough sketches were pinned to cork boards and arranged sequentially like a giant comic strip. Yet this humble method unlocked a breakthrough. The team could *see* the film before a single cel was painted. Scenes could be rearranged, comedic beats tightened, emotional arcs improved, and visual pacing adjusted collaboratively. Suddenly, filmmaking became a living, iterative process. It was not static, but tactile. The storyboard acted as a visual prototype of the movie.

For *Snow White*, this innovation was indispensable. Disney's team mapped emotional beats, choreographed musical transitions, previewed complex animation sequences, and refined character moments with precision. Storyboards minimized risk by revealing what

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worked and what did not, long before costly production began. More importantly, they united hundreds of artists around a single shared vision. Storyboarding became not just a tool, but a new language for collective creativity.

The influence spread quickly. Hollywood directors soon embraced the practice to pre-visualize elaborate scenes. Alfred Hitchcock famously storyboarded the shower sequence in *Psycho* shot by shot, using visuals to control pacing and tension. Decades later, George Lucas relied heavily on storyboards to orchestrate the expansive battles and kinetic energy of *Star Wars*. Across industries, the method became a bridge between imagination and execution.

Advertising agencies adopted storyboards to pitch commercial concepts. Video game studios began using them to map narrative flow and gameplay sequences. Theme park designers used them to choreograph attractions from the first queue line to the final reveal. Even corporate strategy workshops now use storyboarding to communicate ideas, align teams, and build consensus visually.

Like Leonardo da Vinci sketching flying machines centuries before aviation, Disney's artists demonstrated a timeless truth: drawing is thinking. Leonardo used sketches as a cognitive tool: externalizing thought to explore possibility. Whether he was mapping urban spaces,

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sketching studies of plants, or refining a composition through repeated drawings, his efforts turned curiosity into clarity. Storyboards function the same way: they pull ideas out of abstraction, give them shape, expose gaps early, spark collaboration, and invite refinement.

Today, storyboarding extends far beyond film. Startups storyboard user journeys. Architects storyboard neighborhoods. Educators storyboard curriculum. Product designers storyboard features and flows. In every field, visualization provides what words alone cannot: a shared frame of reference.

What began as a scrappy studio invention became one of the most influential visualization tools in modern history. It democratized insight. It turned creativity into a process others could participate in. It proved that alignment does not begin with explanation. It begins with something people can see.

Takeaway: Visualization is transformation. When teams draw ideas before building them, they uncover insights early, align faster, and reduce risk. Disney's storyboards turned imagination into a management tool—proof that every ambitious endeavor begins with a sketch.

Studio Reflection

How can you create environments, physical or cultural, that allow creativity to flourish collectively?

What tools or steps do you use to turn a vague idea into a sketch, diagram, or storyboard others can see, discuss, and act on?

How can storytelling function not as decoration but as the organizing principle for innovation?

Where in your work could prototypes or storyboards bring vision closer to reality?

Identify one project that would benefit from a clearer narrative. What story does it tell, and for whom?

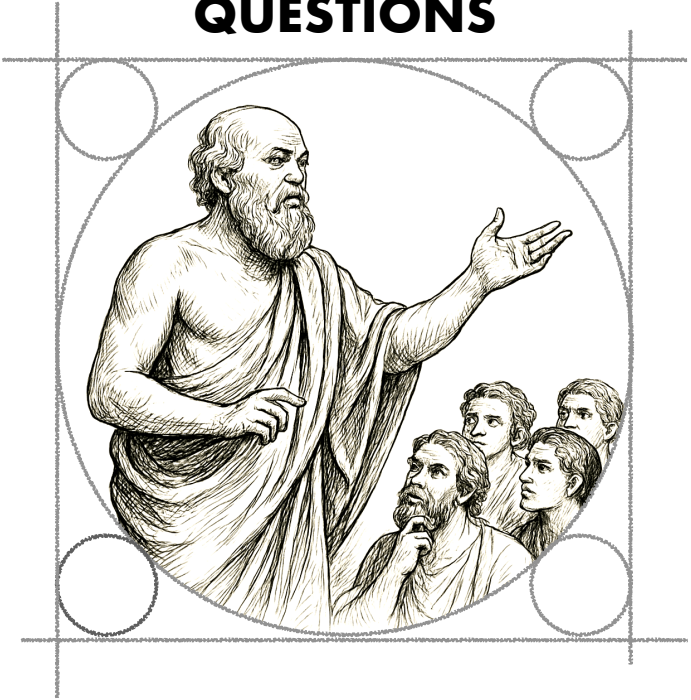


Day 18: Start with Questions

Leonardo's discoveries began with better questions. Innovators lead with curiosity, not assumptions, opening doors to new opportunities.

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SOCRATES AND THE POWER OF QUESTIONS



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In ancient Athens, a city that celebrated polished rhetoric and confident opinion, Socrates was an anomaly. While others spoke to impress, he spoke to uncover. Rather than lecturing from authority, he approached philosophy as a dialogue, one built entirely on questions. His method was simple yet subversive: probe, examine, reveal. What do you believe? Why do you believe it? What evidence supports your view? What contradictions undermine it?

This practice, later named the Socratic method, was a disciplined form of curiosity. Socrates did not seek to win arguments; he sought to illuminate truth by exposing faulty assumptions. Questions such as *What is justice?* or *What makes a good life?* were not rhetorical; they were invitations into deeper thinking. By patiently peeling back layers of certainty, he revealed how much of human belief rests on untested assumptions. As he famously declared, “The only true wisdom is in knowing you know nothing.”

Rather than diminishing knowledge, this humility expanded it. Inquiry became a pathway to clarity, not through answers alone but through the process of uncovering what had been overlooked. The method reshaped philosophy and later influenced fields as varied as law, education, science, and design. Today, law

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schools use Socratic dialogue to teach students how to reason through opposing arguments. Educators employ inquiry-based learning to help students construct understanding rather than memorize information. And in business, the same principle drives innovation: asking better questions reveals opportunities and risks that certainty conceals.

History shows that many of humanity's greatest leaps began not with conclusions, but with questions. This mindset forms a direct bridge between Socrates and Leonardo da Vinci. Leonardo's notebooks are filled with questions. Thousands of them. Why is the sky blue? How does the heart work? What makes birds fly? He refused to accept appearances or inherited explanations. For Leonardo, questions were not obstacles. They were entry points into discovery. His art, anatomy studies, and mechanical inventions all emerged from a mind willing to dwell in uncertainty long enough to uncover truth.

Modern organizations often struggle with this. In a culture driven by speed and optimization, questions can feel inefficient. Past successes become formulas, and formulas become constraints. Companies that cling to quick answers or inherited assumptions eventually stagnate. But those that cultivate curiosity, encouraging teams to ask, challenge, test, and

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rethink, become fertile grounds for innovation. Inquiry becomes intelligence in motion.

Consider the most transformative breakthroughs of the last century, from scientific revolutions to technological marvels. Almost all began with a handful of bold questions: What if we could land on the moon? How can we communicate instantly across continents? What would it take to store entire libraries on a single chip? What problems are we overlooking because we assume they cannot be solved? The act of questioning turned impossibility into momentum.

The Socratic lesson endures because it is practical. Asking better questions sharpens thinking, exposes blind spots, and reveals pathways hidden behind assumption. Socrates himself left no written work; his legacy is a mindset, one that treats curiosity not as an indulgence but as a disciplined craft.

Takeaway: Don't seek quick answers. Seek better questions. Curiosity is the engine of progress, and leaders who embrace it transform uncertainty into insight. Every major leap, from philosophy to engineering, begins with the simple courage to ask, *Why?*

Studio Reflection

How often do you lead with questions rather than answers?

What assumption in your field deserves to be challenged?

Where might closer examination reveal patterns, gaps, or risks you're currently overlooking?

What cultural or organizational barriers discourage open questioning?

Write five powerful questions about your biggest current challenge, and sit with them before solving.

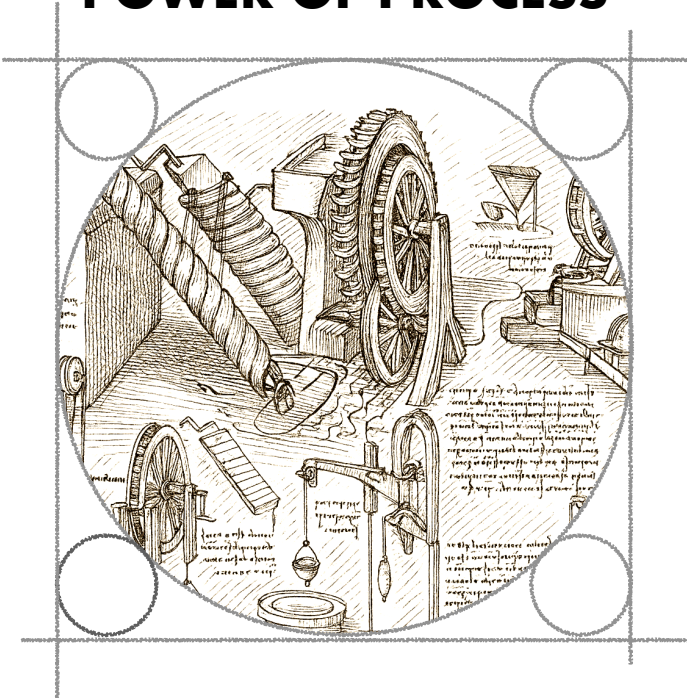


Day 21: Liminal Spaces

Many of Leonardo's most brilliant works began in the uncertain space between concept and creation. Innovators embrace ambiguity and discover new frontiers: industries, inventions, and art yet to take shape.

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LEONARDO'S NOTEBOOKS AND THE POWER OF PROCESS



LEONARDO ON INNOVATION

Leonardo da Vinci is remembered for timeless works like *The Mona Lisa* and *The Last Supper*, but just as revealing are the pages that remained unfinished. His surviving notebooks—thousands of sheets filled with sketches, diagrams, riddles, and scattered thoughts—offer a rare look into the creative engine behind genius. They show a mind in motion, not a mind at rest. They remind us that innovation is rarely linear. It unfolds in fragments, loops, and leaps, thriving in the uncertain space between vision and completion.

Open these notebooks and you encounter a universe of contradictions. Anatomical studies share space with mechanical sketches. Notes on hydraulics sit beside lists of expenses and household duties. Architectural plans overlap with observations about Nature and human emotion. Many ideas appear only once and never return; others evolve across decades. At first glance, this jumble can look like distraction. But step back and a profound pattern appears: Leonardo's incompleteness was intentional. He was not failing to finish—he was allowing himself to explore.

For Leonardo, his notebooks were not places to record ideas, but places to experiment with them. Ideas from one discipline fertilized ideas from another. His studies of geometry and proportion shaped both his engineering designs

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and his compositions on canvas. His observations of branching trees informed his anatomical drawings of arteries and lungs, revealing patterns that repeat across nature. That same structural discipline guided his studies of muscles and tendons, refining the realism of his paintings. Even inventions he never built, such as his armored vehicle, the aerial screw, and his self-propelled cart, were grounded in mathematical principles that foreshadowed technologies realized centuries later.

This willingness to dwell in ambiguity is what made Leonardo exceptional. Most people rush to resolve confusion. Leonardo lingered there, knowing that discomfort often precedes discovery. He treated uncertainty not as a threat, but as an invitation. His notebooks capture a truth rarely spoken aloud: the creative process is inherently chaotic. The false starts, revisions, abandoned experiments, and unfinished sketches were not signs of failure. They were evidence of movement, of ideas evolving through iteration and refinement.

Modern innovators face the same crossroads. Businesses that demand immediate clarity, polished proposals, or perfect plans often shut down the very exploration that leads to breakthroughs. When teams are pressured to “get it right” quickly, they rarely take the risks required to achieve something extraordinary. By

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contrast, organizations that embrace iteration through prototyping ideas, testing assumptions, and allowing messy collaboration create the psychological safety necessary for creativity to thrive.

Leonardo's notebooks remind us that genius is not a single moment of clarity but the accumulation of countless imperfect attempts. Progress is not a straight line; it is a landscape of drafts, experiments, doubts, and discoveries that eventually converge into insight. The messy middle—the uncertain stage between inspiration and final form—is not the obstacle to creativity. It is the source of it.

For anyone building something meaningful, this chapter offers permission: unfinished does not mean unsuccessful. In fact, most breakthroughs look chaotic in the moment and brilliant only in hindsight. What matters is not tidiness but movement, the ongoing dance of exploration through iteration, observation, and refinement.

Takeaway: Innovation is rarely tidy. The path to brilliance winds through uncertainty, drafts, and detours. By embracing the liminal space between idea and execution, creators and organizations unlock the depth of insight that fuels enduring breakthroughs. Leonardo's notebooks remind us that creation begins before clarity exists.

Studio Reflection

Where in your work do things still feel unfinished or unclear? How could that uncertainty indicate learning or forward motion?

How comfortable are you with ambiguity while creating something new?

When has imperfection led you to a breakthrough you didn't expect?

What might happen if you focused less on controlling outcomes and more on exploring possibilities?

How can you make peace with unfinished work as a natural, even necessary, state of creativity?



Day 24: Focus on Experience

Leonardo shaped machines, cities, and performances around human experience. The most widely embraced innovations elevate usability, clarity, and narrative above purely technical ambition.

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EXPERIENTIAL DESIGN & ESCAPISM



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Throughout human history, people have sought experiences that lift them out of the ordinary. Long before digital interfaces, our ancestors gathered around fire-lit rituals, where sound, movement, and story blended into early forms of immersive design. Cathedrals later amplified this impulse with soaring architecture, stained glass, incense, and sacred music, creating environments meant to transport the spirit. Books offered worlds with just words and story. Concerts layered light, sound, and collective emotion. Cinemas combined narrative, score, and spectacle to help audiences step into another reality.

Experiential design has always been at humanity's core.

Gaming is simply the latest chapter in this lineage, another portal into alternate worlds shaped not by stone or stained glass, but by pixels, controllers, and imagination. And like the pre-digital experiences that preceded it, the best games succeed not because of hardware specs, but because they understand the emotional architecture of escape, engagement, and connection.

Nintendo proved this in 2006 with the Wii. While competitors chased computing power, Nintendo asked a more fundamental question: *What makes play feel alive?* The answer led to motion controls that invited grandparents,

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children, and complete non-gamers to step into the experience. The Wii wasn't about performance. It was about belonging, laughter, and presence. With more than 100 million units sold, it redefined gaming as a shared cultural ritual.

Nintendo had already demonstrated this philosophy with the Game Boy, which prioritized simplicity and portability over visual fidelity. Sony did the same with the PlayStation in 1994, treating games as emotional storytelling rather than technical showcases. The combination of ergonomic design, cinematic sound, and narrative depth turned games like *Final Fantasy VII* and *Metal Gear Solid* into cultural touchstones. They proved that immersion, not graphics, was the real frontier.

Modern platforms embrace this lineage as well. Oculus and the Meta Quest focused early on comfort, simplicity, and ease of movement rather than dazzling visuals. *Pokémon GO* became a global phenomenon not because of technological complexity but because it blended the physical and digital worlds into a shared adventure. Even Apple's Vision Pro follows this human-first approach: natural hand and eye tracking, intuitive interactions, and environments designed to feel fluid rather than forced.

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Across all these innovations, one truth persists. People don't remember the specs. They remember how the experience made them feel.

This principle echoes Leonardo da Vinci's own creative process. Whether designing theater sets, machines, or monumental murals, Leonardo approached every idea as an experience. He considered how a viewer would feel standing before *The Last Supper*, how motion would translate through gears, how curvature and light could shape emotion. His genius lay not in isolated brilliance but in the immersive worlds he created, worlds built through observation, empathy, and imagination.

In every era, the most transformative innovators understand what Leonardo understood: Technology may enable experiences, but human feeling is the real canvas.

Takeaway: Great design doesn't begin with hardware or features. It begins with experience. From ancient rituals to modern gaming, the innovations that endure are the ones that transport us, elevate us, and immerse us in something larger than ourselves. Leonardo approached creation the same way: not as function, but as emotional reality. When creation begins with the human experience, what follows can endure for generations.

Studio Reflection

What world does your work invite people into? How does it make them feel?

Where could you move beyond function and toward immersion, meaning, or wonder?

Which elements of your craft deserve rethinking through the lens of experience rather than optimization?

Identify one moment in your current project where emotion, not capability, should lead the design.

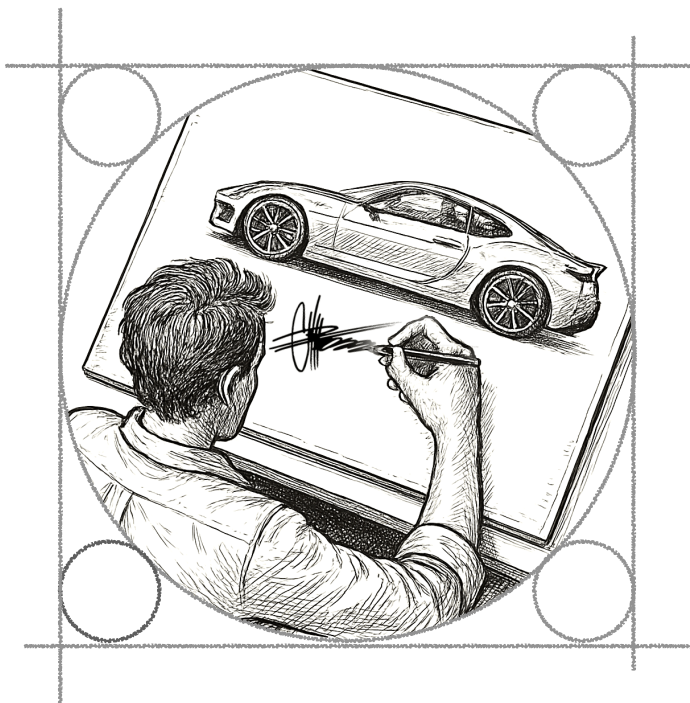


Day 25: Dream Big, Then Refine

Leonardo dreamed boldly on paper before shaping ideas into reality. Innovators should think expansively first. Refinement comes later.

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FOOSE DESIGN



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In the automotive world, the boldest ideas often begin with sketches, lines that appear impossible, impractical, or extravagant. Chip Foose and his team at Foose Design Studio have built an entire creative philosophy around these early drawings. The studio's process begins not with computer modeling or engineering constraints, but with pure, unfiltered imagination.

Inside Foose Design, stylists, engineers, and craftspeople gather around sketchpads, filling pages with exaggerated proportions, sweeping forms, futuristic silhouettes, and ideas far beyond what current manufacturing methods can easily achieve. In this earliest stage, the team deliberately avoids restraint. There are no budgets, no timelines, and no feasibility concerns. Only vision. These sketches, wild as they may seem, help the team push past convention and explore possibilities that would never emerge in a tightly controlled environment.

Once hundreds of concepts fill the room, refinement begins. Foose and his collaborators scan for the artistic and functional DNA embedded in those initial drawings, shapes that evoke movement, surfaces that suggest aerodynamic flow, and interiors that emphasize driver focus and control. From there, engineers work to translate these raw ideas into physical

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form. What began as a provocative sketch becomes a clay model, then a structural study, then a drivable car. What felt impossible becomes tangible through disciplined iteration.

Many modern automotive innovations owe their origins to this “blue-sky first, constraints later” approach. User-centered dashboards, sculpted aerodynamics, flush surfaces, and composite body materials often began as artistic impressions rather than engineering requirements. Foose’s method ensures that creativity leads the process while engineering shapes and sharpens it. By separating the imaginative phase from the editing phase, he prevents practicality from suffocating possibility.

This practice shares deep resonance with Leonardo da Vinci’s creative approach. Leonardo’s notebooks are filled with bold drawings of machines that could not be built in his lifetime. He didn’t always sketch to document the world as it was, but to test the boundaries of what might be. He understood that even “impossible” designs carry the seeds of future breakthroughs.

Leonardo treated sketching as a discipline of exploration, a way to think with the hand. Foose uses sketching in a similar way. It becomes a conversation between imagination and reality, a process that moves freely from the intuitive to

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the technical. Both creators embody a single truth: innovation requires space to dream before it can be refined.

In an era dominated by digital tools, Foose Design's analog-first approach stands as a reminder that the human hand remains one of innovation's most powerful instruments. Sketching encourages spontaneity, encourages risk-taking, and allows ideas to evolve organically. The pencil becomes a permission slip to imagine without limitation.

For designers, leaders, and creators across industries, Foose's process is a lesson in sequencing creativity. Imagination comes first. Editing comes later. And the distance between the two shapes the quality of the final outcome. When imagination is allowed to lead without fear of constraint, breakthroughs follow.

Takeaway: Innovation thrives when imagination and refinement stay separate. Sketch boldly without restraint, then refine with discipline. The courage to explore impossible ideas can reveal the beginnings of breakthroughs. Every transformative design, whether a car, a product, or a system, begins with a daring line on paper.

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Studio Reflection

Where in your work do you need to sketch freely before evaluating feasibility?

How might visualizing your ideas unlock new patterns or possibilities?

What could you design if perfection wasn't allowed in the first draft?

Try sketching one idea today, literal or conceptual. What emerges?

EPILOGUE

The Legacy of Leonardo

Leonardo da Vinci's legacy should not be defined by a single invention or painting, but by a mindset: a way of seeing in which art and science, observation and imagination, curiosity and discipline were never separate pursuits, but different expressions of the same impulse—to understand life in all its dimensions. His genius was not the pursuit of perfection, but the pursuit of truth. He observed deeply, questioned boldly, sketched incessantly, and envisioned futures that did not yet exist. In doing so, he expanded the edges of what humanity believed possible.

The innovators we explored—Ford with the moving assembly line, Jobs with the fusion of technology and elegance, Dyson with relentless iteration, IDEO with human-centered creativity, Pixar with collaborative storytelling—carry forward this same spirit. They remind us that innovation does not begin with certainty, but with curiosity; that breakthroughs are not born from flawless execution, but from bold iteration; and that empathy and imagination are not luxuries of innovation—they are its engines.

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For us, the lesson is both practical and profound. Practically, we must ask better questions, seek knowledge across boundaries, think in systems, and design solutions that flex and evolve. More deeply, we are called to reclaim a way of seeing that predates specialization—to remember that reality is not divided; only our thinking is. Innovation thrives when we reunify what habit has separated: when logic and wonder, structure and creativity, intellect and intuition are allowed to coexist.

Innovation is not a destination. It is a posture: a way of moving through the world that says there is more to see, more to learn, more to become.

Leonardo's true gift is a calling. To look beyond the visible. To imagine boldly. To pursue ideas with courage, patience, and humility. To leave behind not just answers, but a trail of better questions.

Dare to dream. Dare to fail. Dare to rise above.

About the Author

Michael Straub is an artist and engineer who uses technology as a medium for creative exploration. A graduate of the School of Visual Arts in New York, he began his career in digital design and interactive media before moving into large-scale initiatives used by Fortune 500 companies. His work bridges technical expertise and human-centered design, translating complex systems into practical solutions people can understand and use.

Alongside his work in technology, he maintains an active studio practice influenced by the Italian Renaissance tradition of observation and experimentation that Leonardo da Vinci pursued. In that tradition, technology includes the tools, methods, and knowledge that enable discovery, whether through digital systems, engineering, or the painter's study of light, anatomy, form, and medium.

His long-standing interest in Leonardo led him to study the notebooks and working methods of Renaissance thinkers. He is particularly interested in how the Renaissance spirit of curiosity, experimentation, and interdisciplinary thinking can expand creativity and sharpen problem solving. This exploration forms the foundation of *Leonardo on Innovation*.

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He lives in rural New Jersey, where he continues to study, create, and explore the connections between art, technology, and discovery.

His work explores how Renaissance curiosity and experimentation continue to shape creativity, problem solving, and innovation today.

Explore Michael's work through the link below or by scanning the QR code.

michaelstraub.com/artwork

