

A Book Review by Rob Carlson

Great By Choice

By Jim Collins Morten T. Hansen

Chapter 1: Thriving in Uncertainty

- 1 "We simply do not know what the future holds." - Peter L. Bernstein
 - We cannot predict the future. But we can create it.
 - We began a 9 year project behind the book in 2002, when America awoke from its false sense of stability, safety, and wealth entitlement. The long-running bull market crashed. The government budget surplus flipped back to deficits. The terrorist attacks of September 11, 2001, horrified and enraged people everywhere; and war followed. Meanwhile, throughout the world, technological change and global competition continued their relentless, disruptive march.
 - *Why do some companies thrive in uncertainty, even chaos, and others do not?*
- 2 When buffeted by tumultuous events, when hit by big, fast-moving forces that we can neither predict nor control, what distinguishes those who perform exceptionally well from those who underperform or worse?
 - This study question grabbed us because of our own persistent angst and gnawing sense of vulnerability in a world that feels increasingly disordered.
 - We do not believe that chaos, uncertainty, and instability are good; companies, leaders, organizations, and societies do not thrive *on* chaos. But they can thrive *in* chaos.
 - To get at the question of how to thrive in chaos, we set out to find companies that started from a position of vulnerability, rose to become great companies with spectacular performance, and did so in unstable environments characterized by big forces, out of their control, fast moving, uncertain, and potentially harmful.
 - We labeled our high-performing study cases with the moniker "10X" because they didn't merely get by or just become successful. They truly thrived.
 - Every 10X case beat its industry by at least 10 times.
- 3 Southwest Airlines
 - If you'd invested \$10,000 in the airlines in December of 1972, when it was tiny, your \$10,000 would have grown to nearly \$12 million by the end of 2002 and return 63 times better than the general stock market.
- 4 We've been asked by many of our students and readers, "How is this study different from your previous research into great companies, especially *Built to Last* and *Good to Great?*"
 - The method is similar and the question of greatness is constant. But in this study, we selected cases not just on performance or stature but also on the extremity of the environment.
 - Imagine being on a leisurely hike, wandering along warm, sunlit meadows, and your companion is a great mountaineer who has led expeditions up the most treacherous peaks in the world.
 - You'd probably notice that he's a little different from others, perhaps more watchful of the trail or more careful in packing his small day pack.
 - Overall, given the safe predictability of a glorious spring day, it would be hard to see what really makes this leader so exceptional.

- In contrast, envision yourself on the side of Mt. Everest with this same climber, racing a murderous storm. In that environment, you'd see much more clearly what makes him different and what makes him great.

- Studying leaders in an extreme environment is like conducting a behavioral-science experiment or using a laboratory centrifuge: throw leaders into an extreme environment, and it will separate the stark differences between the greatness and mediocrity. Our study looks at how the truly great differed from the merely good in environments that exposed and amplified those differences.

5 We spent the first year of our efforts identifying the primary study set of 10X cases, searching for historical cases that met three basic tests:

1. The enterprise sustained truly spectacular results for an era of 15+ years relative to the general stock market and relative to its industry.
2. The enterprise achieved these results in a particularly turbulent environment, full of events that were uncontrollable, fast moving, uncertain, and potentially harmful.
3. The enterprise began its rise to greatness from a position of vulnerability, being young and/or small at the start of its 10X journey.

7 The question is not what did the great companies share in common? The question is what did they share in common that distinguished them from their direct comparisons?

8 What explains the difference?

9 Myths undermined by the research:

- Entrenched myth: Successful leaders in a turbulent world are bold, risk seeking visionaries.
- Contrary finding: The best leaders we studied did not have a visionary ability to predict the future. They observed what worked, figured out why it worked, and built upon proven foundations. They were not more risk taking, more bold, more visionary, and more creative than the comparisons. They were more disciplined, more empirical, and more paranoid.
- Entrenched myth: Innovation distinguishes 10X companies in a fast moving, uncertain, and chaotic world.
- Contrary finding: To our surprise, no. Yes, the 10X cases innovated, a lot. But the evidence does not support the premise that 10X companies will necessarily be more innovative than their less successful comparisons; and in some surprise cases, the 10X cases were less innovative. Innovation by itself turns out not to be the trump card we expected; more important is the ability to scale innovation, to blend creativity with discipline.

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- Entrenched myth: A threat-filled world favors the speedy; you're either the quick or the dead.
- Contrary finding: The idea that leading in a "fast world" always requires "fast decisions" and "fast action" – and that we should embrace an overall ethos of "Fast! Fast! Fast!" – is a good way to get killed. 10X leaders figure out *when* to go fast, and when *not* to.
- Entrenched myth: Radical change on the outside requires radical change on the inside.
- Contrary finding: the 10X cases changed less in reaction to their changing world than the comparison cases. Just because your environment is rocked by dramatic change doesn't mean that you should inflict radical change upon yourself.
- Entrenched myth: Great enterprises with 10X success have a lot more good luck.

- Contrary finding: The 10X companies did not generally have more luck than the comparisons. Both sets had luck – lots of luck, both good and bad – in comparable amounts. The critical question is not whether you'll have luck, but what you do with the luck that you get.
- 11 Level 5 leadership
- Hedgehog Concept, First Who (the right people on the bus), core values, BHAGs (Big Hairy Audacious Goals), cult-like cultures, the Stockdale Paradox, clock building, the five stages of decline, the flywheel.
 - We did test all these principles and found that they do apply in a chaotic and uncertain world.
 - Now that we have completed the research journey we feel a greater sense of calm.
 - Not because we believe life will magically become stable and predictable; if anything, the forces of complexity, globalization, and technology are accelerating change and increasing volatility. We feel calm because we have increased understanding of what it takes to survive, navigate, and prevail.
 - We are much better prepared for what we can't predict.
- 12 Greatness is not just a business quest; it's a human quest.
- As the influential management thinker Peter Drucker taught, the best – perhaps even the only – way to predict the future is to create it.

Chapter 2: 10Xers

- 13 "Victory awaits him who has everything in order – luck people call it. Defeat is certain for him who has neglected to take the necessary precautions in time; this is called bad luck." - Roald Amundsen, *The South Pole*
- In October 1911, two teams of adventurers made their final preparations in their quest to be the first people in modern history to reach the South Pole. For one team, it would be a race to victory and a safe return home. For members of the second team, it would be a devastating defeat, reaching the Pole only to find the wind-whipped flags of their rivals planted 34 days earlier, followed by a race for their lives – a race that they lost in the end, as advancing winter swallowed them up. All five members of the second Pole team perished, staggering from exhaustion, suffering the dead-black pain of frostbite and then freezing to death as some wrote in their final journal entries and notes to loved ones back home.
 - It's a near-perfect matched pair. Here we have two expedition leaders – Roald Amundsen, the winner, and Robert Falcon Scott, the loser – of similar ages (39 and 43) and with comparable experience.
- 15 Amundsen's philosophy: You don't wait until you're in an unexpected storm to discover that you need more strength and endurance. You don't wait until you're shipwrecked to determine if you can eat raw dolphin. You don't wait until you're on the Antarctic journey to become a superb skier and dog handler. You prepare with intensity, all the time, so that when conditions turn against you, you can draw from the deep reservoir of strength. And equally, you prepare so that when conditions turn in your favor, you can strike hard.
- 16 Crucial detail and planning
- Unlike Scott, Amundsen systematically built enormous buffers for unforeseen events. When setting supply depots, Amundsen not only flagged a primary depot, he placed 20 black pennants (easy to see against the white snow) in precise increments for miles on either side, giving himself a target more than ten kilometers wide in case he got slightly off course coming back in a storm. To accelerate segments of his return journey, he marked every quarter of a mile with packing-case remnants and every eight miles with black flags hoisted upon bamboo poles. Scott, in contrast put a single flag on his

primary depot and left no markings on his path, leaving him exposed to catastrophe if he went even a bit off course. Amundsen stored three tons of supplies for 5 men starting out vs. Scott's one ton for 17 men. In his final push for the South Pole from 82 degrees, Amundsen carried enough extra supplies to miss every single depot and still have enough left over to go another hundred miles. Scott ran everything dangerously close to his calculations, so that missing even one supply depot would bring disaster. A single detail aptly highlights the difference in their approaches: Scott brought one thermometer for a key altitude-measurement device, and he exploded in "an outburst of wrath and consequence when it broke"; Amundsen brought four such thermometers to cover for accidents.

- Amundsen presumed bad events might strike his team somewhere along the journey and he prepared for them; even developing contingency plans so that the team could go on should something unfortunate happen to him along the way.

18 They had divergent outcomes principally because they displayed very *different behaviors*.

- What we did not find about the 10Xers relative to their less successful comparisons:

- They're not more creative
- They're not more visionary
- They're not more charismatic
- They're not more ambitious
- They're not more blessed by luck
- They're not more risk seeking
- They're not more heroic
- They're not more prone to making big, bold moves

19 So how did the 10Xers distinguish themselves?

- 10Xers embrace a paradox of control and non-control.

- On the one hand, 10Xers understand that they face continuous uncertainty and that they cannot control, and cannot accurately predict, significant aspects of the world around them. On the other hand, 10Xers reject the idea that forces outside their control or chance events will determine their results; they accept full responsibility for their own fate.

20 Fanatic discipline keeps 10X enterprises on track, empirical creativity keeps them vibrant, productive paranoia keeps them alive, and Level 5 ambition provides inspired motivation.

21 Discipline

- Discipline, in essence, is the consistency of action – consistency with values, consistency with long-term goals, consistency with performance standards, consistency with method, consistency over time.

- Discipline is not the same as measurement. It is not the same as hierarchical obedience or adherence to bureaucratic rules.

- True discipline requires the independence of mind to reject pressures to conform in ways incompatible with values, performance standards, and long-term aspirations.

- For a 10Xer, the only legitimate form of discipline is self-discipline, having the inner will to do whatever it takes to create a great outcome, no matter how difficult.

- 10Xers are utterly relentless, monomaniacal even, unbending in their focus on their quests. They don't overreact to events, succumb to the herd, or leap for alluring – but irrelevant – opportunities.

- They're capable of immense perseverance, unyielding in their standards yet disciplined enough not to overreach.

- 22 Most business CEOs have some level of discipline, but the 10Xers operated on an entirely different level. The 10Xers, we concluded, weren't just disciplined; they were fanatics.
- Lewis's decisions to issue monthly financial reports is akin to Amundsen's riding his bicycle from Norway to Spain and eating raw dolphin meat; their behavior fits nowhere on a normal curve.
 - Herb Kelleher of Southwest Airlines believed passionately in sustaining a high-spirit, fun-loving, and iconoclastic culture full of passionate people infused with a rebellious "Warrior Spirit."
- 23 Kelleher was like Muhammad Ali, combining a deadly serious intensity with a blustery, comical exterior.
- Both Kelleher and Lewis, like all the 10Xers we studied, were nonconformists in the best sense. They started with values, purpose, long-term goals, and severe performance standards; and they had the fanatic discipline to adhere to them. If that required them to diverge from normal behavior, then so be it. They didn't let external pressures, or even social norms, knock them off course. In an uncertain and unforgiving environment, following the madness of crowds is a good way to get killed.
- 25 Social psychology research indicates that at times of uncertainty, most people look to other people – authority figures, peers, groups norms – for their primary cues about how to proceed. 10Xers, in contrast, do not look to conventional wisdom to set their course during times of uncertainty, nor do they primarily look to what other people do, or what pundits and experts say they should do. They look primarily to empirical evidence.
- By "empirical," we mean relying upon direct observation, conducting practical experiments, and/or engaging directly with evidence rather than relying upon opinion, whim, conventional wisdom, authority, or untested ideas. Having an empirical foundation enables 10Xers to make bold, creative moves and bound their risk.
- 26 Amundsen concluded that this particular part of the barrier was in fact a stable location.
- "Amundsen was the first to draw the obvious conclusion because he was the first to study the sources...(He) was that rare creature, an intellectual Polar explorer; with the capacity to examine evidence and make logical decisions." - Huntford
 - The 10Xers did not generally make bolder moves than their less successful comparisons; both groups made big bets and, when needed, took dramatic action. Nor did the 10Xers exude more raw confidence than the comparison leaders; indeed, the comparison leaders were often brazenly self-confident. But the 10Xers had a much deeper empirical foundation for their decisions and actions, which gave them well-founded confidence and bounded their risk.
- 27 The 10Xers don't favor analysis over action; they favor empiricism as the foundation for decisive action.
- Steve Ballmer became the Commissar of Concern under tutelage from the Grand Master of Productive Paranoia himself, Bill Gates.
- 28 "Fear should guide you, but it should be latent. I consider failure on a regular basis."
- Bill Gates
- Anyone who understood Gates would have known that the memo didn't signal a change; he'd always lived in fear, always felt vulnerable, and he would continue to do so.
 - "If I really believed this stuff about our invincibility, I suppose I would take more vacations." - Bill Gates
- 29 Our point is to draw a contrast with the productive paranoia Gates demonstrated all the time, no matter how successful Microsoft became.

- 10Xers differ from their less successful comparisons in how they maintain hypervigilance in good times as well as bad. Even when in calm, clear, positive conditions, 10Xers constantly consider the possibility that events could turn against them at any moment. Indeed, they believe that conditions will – absolutely, with 100% certainty – turn against them without warning, at some unpredictable point in time, at some highly inconvenient moment. And they'd better be prepared.
 - Whether it be Herb Kelleher at Southwest Airlines predicting 11 of the last 13 recessions, Andy Grove of Intel "looking for the black cloud in the silver lining," Kevin Sharer of Amgen putting a portrait of General George A. Custer (who led the troops to calamity at Little Big Horn) in his office to remind himself that overconfidence leads to doom, or Bill Gates issuing nightmare memos at Microsoft, the 10Xers have a consistent pattern. By embracing the myriad of possible dangers, they put themselves in a superior position to overcome danger.
- 30 10Xers distinguish themselves not by paranoia, but by how they take effective action as a result.
- Paranoid behavior is enormously functional if fear is channeled into extensive preparation and calm, clearheaded, action, hence our term "productive paranoia."
 - Gates didn't just sit around writing up nightmare memos; he channeled fear into action by keeping workspace inexpensive; hiring better people; building cash reserves; and working on the next software release to stay a step ahead, then the next one, and the next one after that.
 - Like Amundsen with his huge supply buffers, 10Xers maintain a conservative financial position, squirreling away cash to protect against unforeseen disruptions.
 - Productive paranoia isn't just about avoiding danger, trying to find the safest and most enjoyable path throughout life; 10Xers seek to accomplish a great objective, be it a goal, a company, a noble ambition to change the world, or a desire to be useful in the extreme.
 - As an overall life approach, they worry not about protecting what they have, but creating and building something truly great, bigger than themselves, which brings us to the motivating force behind the three core 10Xers behaviors.
- 31 Why did people follow them?
- A deeply attractive form of ambition.
 - 10Xers channel their ego and intensity into something larger and more enduring than themselves.
 - Their ambitions, to be sure, but for a purpose beyond themselves, be it building a great company, changing the world, or achieving some great object that's ultimately not about them.
 - In *Good to Great*, we wrote about Level 5 leaders, those who lead with a powerful mixture of personal humility plus professional will.
- 32 Every good-to-great transition in that research began with the emergence of a Level 5 leader who deflected attention from himself, maintained a low profile, and led with inspired standards rather than inspiring personality.
- Ambition
 - The 10Xers share Level 5 leaders' most important trait: they're incredibly ambitious, but their ambition is first and foremost for the cause, for the company, for the work, not themselves.
 - *Good to Great* focused heavily on the humility aspect of Level 5 leaders, this work highlights their sheer ferocity of will.

- 33 To focus on Gordon Moore's understated personality, or Lewis's and Kelleher's outsized personalities, would miss the point. The central question is, "What are you in it for?"
- 10X leaders can be bland or colorful, uncharismatic or magnetic, understated or flamboyant, normal to the point of dull or just flat-out weird – none of this really matters, as long as they're passionately driven for a cause beyond themselves.
 - Every 10Xer we studied aimed for much more than just "becoming successful."
 - They didn't define themselves by fame or power.
 - They defined themselves by impact and contribution and purpose.
 - One of Bill Gates' friends commented, "All Bill's ego goes into Microsoft. It's his firstborn child."
 - After working tirelessly for a quarter of a century to make Microsoft a great company, creating powerful software and contributing to the vision of a computer on every desk, Gates turned to the question, "How can we do the most good for the greatest number with the resources we have?"
 - As a result, he and his wife set forth an audacious aim, among other goals, to eradicate malaria from the face of the Earth.
- 35 Our guidance is simple: get to work learning and applying the practical lessons of how 10Xers lead, building a truly great organization that delivers superior results, makes a distinctive impact, and achieves lasting endurance. There are lots of individually successful people but very few truly great companies that make a 10X impact.

36 10xers

- Key Points

- We named the winning protagonists in our research "10xers" because they built enterprises that beat their industry's averages by at least 10 times.
- The contrast between Amundsen and Scott in their epic race to the South Pole is an ideal analogy for our research question, and a remarkably good illustration of the differences between 10Xers and their comparison companies.
- Clear-eyed and stoic, 10Xers accept, without complaint, that they face forces beyond their control, that they cannot accurately predict events, and that nothing is certain; yet they utterly reject the idea that luck, chaos, or any other external factor will determine whether they succeed or fail.
- 10Xers display three core behaviors that, in combination, distinguish them from the leaders of the less successful comparison companies:
 1. Fanatic discipline: 10Xers display extreme consistency of action – consistency with values, goals, performance standards, and methods. They are utterly relentless, monomaniacal, unbending in their focus on their quests.
 2. Empirical creativity: When faced with uncertainty, 10Xers do not look primarily to other people, conventional wisdom, authority figures, or peers for direction; they look primarily to empirical evidence. They rely upon direct observation, practical experimentation, and direct engagement with tangible evidence. They make their bold, creative moves from a sound empirical base.
 3. Productive paranoia: 10xers maintain hypervigilance, staying highly attuned to threats and changes in their environment, even when – especially when – all's going well. They assume conditions will turn against them, at perhaps the worst possible moment. They channel their fear and worry into action, preparing, developing contingency plans, building buffers, and maintaining large margins of safety.

- Underlying the three core 10Xer behaviors is a motivating force: passion and ambition for a cause or company larger than themselves. They have egos, but their egos are channeled into their companies and their purposes, not personal aggrandizement.
- 37 Unexpected Findings
- Fanatic discipline is not the same as regimentation, measurement, obedience to authority, adherence to social stricture, or compliance with bureaucratic rules. True discipline requires mental independence, and an ability to remain consistent in the face of herd instinct and social pressures. Fanatic discipline often means being a nonconformist.
 - Empirical creativity gives 10xers a level of confidence that, to outsiders, can look like foolhardy boldness; in fact, empirical validation allows them to simultaneously make bold moves and bound their risk. Being empirical doesn't mean being indecisive. 10Xers don't favor analysis over action; they favor empiricism as the foundation for decisive action.
 - Productive paranoia enables creative action. By presuming worst-case scenarios and preparing for them, 10Xers minimize the chances that a disruptive event or huge piece of bad luck will stop them from their creative work.
- 38 Key Question
- Rank-order the core 10Xer behaviors – fanatic discipline, empirical creativity, and productive paranoia – from your strongest to weakest. What can you do to turn your weakest into your strongest?

Chapter 3: 20 Mile March

- 39 "Freely chosen, discipline is absolute freedom." - Ron Serino
- 40 Company A – Stryker
Company B – USSC
- 42 Think of Stryker as a 20 Mile March company.
- When John Brown became CEO of Stryker in 1977, he deliberately set a performance benchmark to drive consistent progress: Stryker would achieve 20% net income growth every year.
- This was more than a mere target, or a wish, or a hope, or a dream, or a vision.
- It was, in Brown's words, "the law."
- He ingrained "the law" into the company's culture, making it a way of life.
- "Snorkel Award" – given to those who lagged behind.
- 43 If your division fell behind for two years in a row, Brown would insert himself to "help," working around the clock to "help" you get back on track.
- Brown consciously chose to maintain the 20 Mile March regardless of criticism to grow Stryker at a faster pace in boom years.
- 44 John Brown understood that if you want to achieve performance, you need both parts of a 20 Mile March: a lower bound and an upper bound, a hurdle that you jump over and a ceiling that you will not rise above, the ambition to achieve and the self-control to hold back.
- 45 When we began this study, we thought we might see 10X winners respond to a volatile, fast-changing world full of new opportunities by pursuing aggressive growth and making radical, big leaps, catching and riding the Next Big Wave, time and again.
- And yes, they did grow, and they did pursue spectacular opportunities as they grew. But the less successful comparison cases pursued much more aggressive growth and undertook big-leap, radical-change adventures to a much greater degree than the 10x winners.

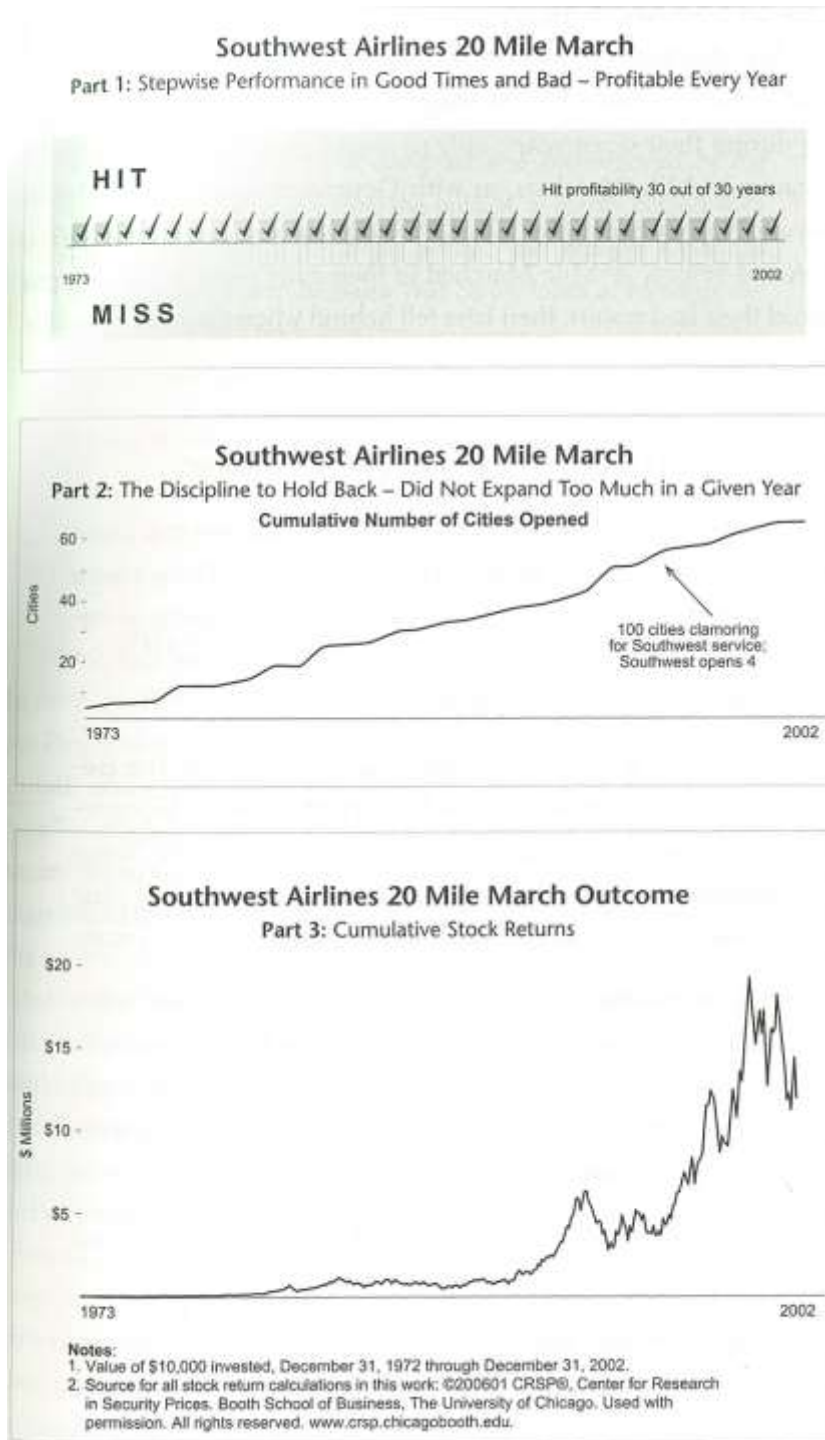
- The 10X cases exemplified what we came to call the 20 Mile March concept, hitting stepwise performance markers with great consistency over a long period of time, and the comparison cases did not.

- The 20 Mile March is more than a philosophy. It's about having concrete, clear, intelligent, and rigorously pursued performance mechanisms that keep you on track. The 20 Mile March creates two types of self-imposed discomfort: (1) the discomfort of unwavering commitment to high performance in difficult conditions, and (2) the discomfort of holding back in good conditions.

- Despite an almost chronic epidemic of airline troubles, including high-profile bankruptcies of some major carriers, Southwest generated a profit every year for 30 consecutive years.

- They had the discipline to hold back in good times so as not to extend beyond its ability to preserve profitability and the Southwest culture.

46 Some people believe that a world characterized by radical change and disruptive forces no longer favors those who engage in consistent 20 Mile Marching. Yet the great irony is that when we examine just this type of out-of-control, fast-paced environment, we found that every 10X company exemplified the 20 Mile March principle during the era we studied.



48 Elements of a Good 20 Mile March

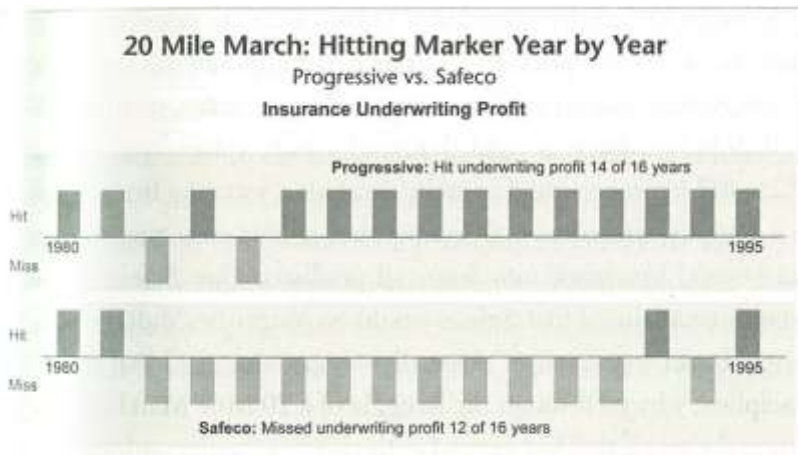
- A good 20 Mile March uses performance markers that delineate a lower bound of acceptable achievement. These create productive discomfort, much like hard physical training or rigorous mental development, and must be challenging (but not impossible) to achieve in difficult times.
- A good 20 Mile March has self-imposed constraints. This creates an upper bound for how far you'll march when facing robust opportunity and exceptionally good conditions. These constraints should also produce discomfort in the face of pressures and fears that you should be going faster and doing more.

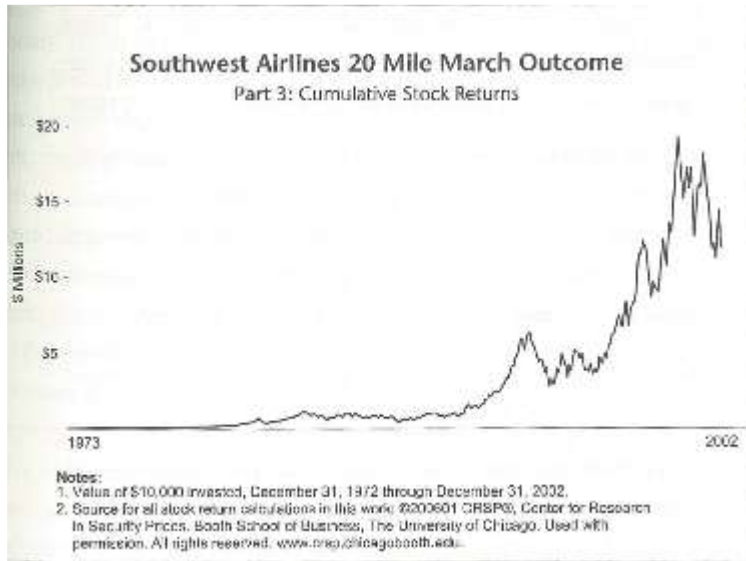
- A good 20 Mile March is tailored to the enterprise and its environment. There's no all-purpose 20 Mile March for all enterprises. Southwest's march wouldn't apply to Intel. A sports team's march wouldn't apply to an Army platoon leader. An Army platoon leader's march wouldn't apply to a school.
- A good 20 Mile March lies largely within your control to achieve. You shouldn't need luck to achieve your march.
- A good 20 Mile March has a Goldilocks time frame, not too short and not too long but just right. Make the timeline march too short and you'll be more exposed to uncontrollable variability; make the timeline too long, and it loses power.
- A good 20 Mile March is designed and self-imposed by the enterprise, not imposed from the outside or blindly copied from others. For instance, to simply accept "earnings per share" as the focus of a march because Wall Street looks at earnings per share would lack rigor, reflecting no clarity about the underlying performance drivers in a specific enterprise.
- A good 20 Mile March must be achieved with great consistency. Good intentions do not count.

49 Peter Lewis articulated a stringent performance metric: Progressive Insurance should grow only at a rate which it could still sustain exemplary customer service and achieve a profitable "combined ratio" averaging 96%.

50 It means we say that we'd rather be consistently growing...than be hot for one year and then gone the next.

51 The 20 Mile March imposes order amidst disorder, consistency amidst swirling inconsistency. But it works only if you actually achieve your march year after year. If you set a 20 Mile March and then fail to achieve it – or worse, abandon fanatic discipline altogether – you may well get crushed by events.



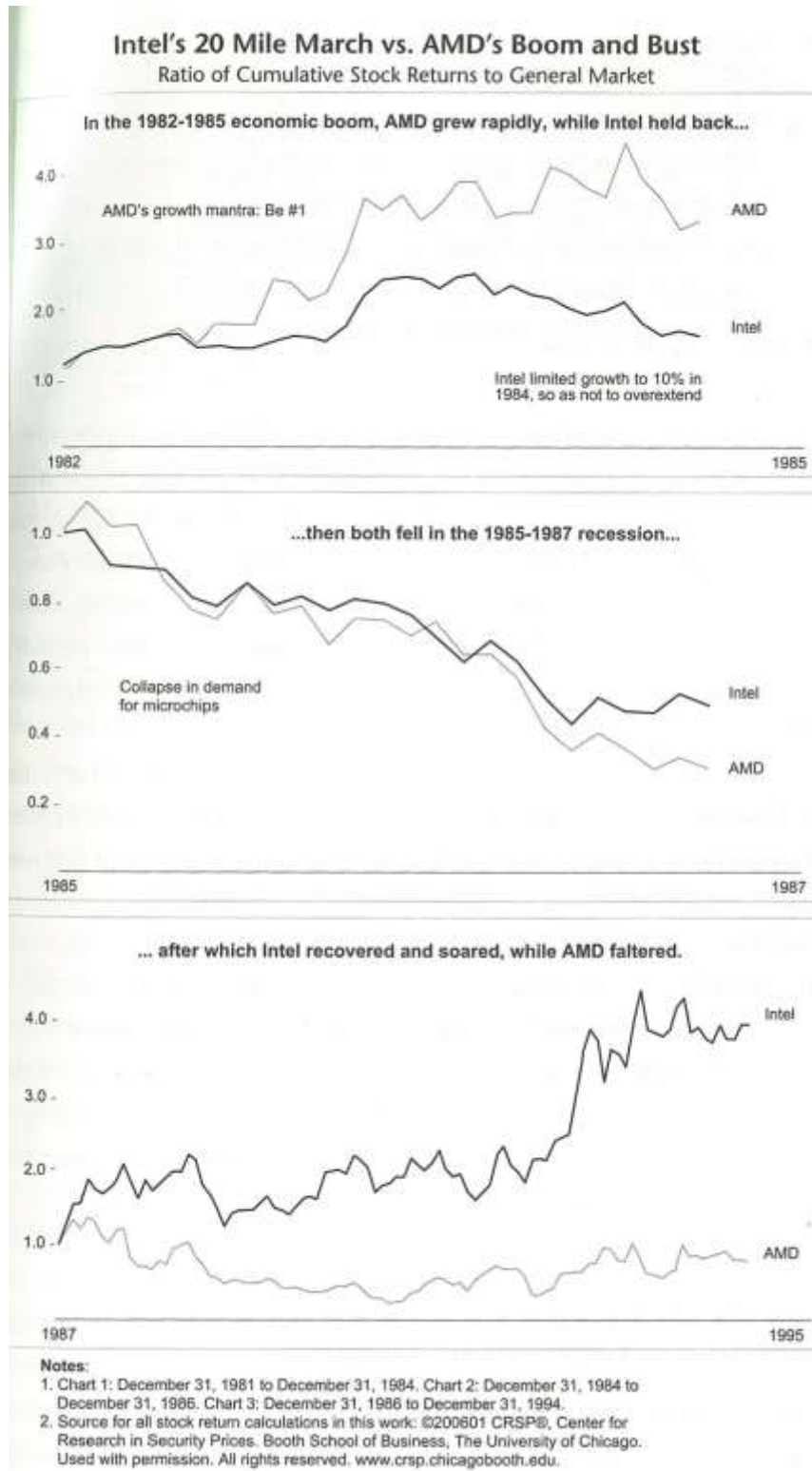


- 53 While Stryker’s 20 percent earnings growth, Southwest’s profit every year, and Progressive’s 96% combined ratio – are financial, we want to be clear that you can also have a non-financial march.
- A hospital might have a patient-safety march. A church might have a number-of-converts march. A government agency might have a continuous-improvement march. A homeless center might have a getting-people-housed march. A police department might have a crime-rate march. Corporations, too, can choose a non-financial march, such as an innovation march.

10X Case	Comparison Case
<p><u>Stryker</u></p> <p>Achieved 20% annual earnings’ growth. Also practiced 20 Mile March innovation via lots of product iterations and extensions. Held back on growth in good times, which enabled it to weather difficult industry events from 1992 to 1994.</p>	<p><u>USSC</u></p> <p>Experienced erratic earnings’ growth. Sought big breakthrough innovation rather than 20 Mile March innovation. Overextended in difficult times, especially from 1992 to 1994; sold out in 1998.</p>
<p><u>Southwest Airlines</u></p> <p>Achieved profitably for 30 consecutive years. Unlike the other major airlines, turned a profit in 2002 in the aftermath of 9/11. Constrained growth to ensure profitably and preserve culture.</p>	<p><u>PSA</u></p> <p>Had a 20 Mile March philosophy with consistent profitability in its early history but abandoned it in the 1970s. Capitulated to a takeover by US Air in 1986.</p>
<p><u>Progressive Insurance</u></p> <p>Kept combined ratio below 100% every year, averaging 96% growth across time. Achieved profitable combined ratio in 27 out of 30 years. Limited growth to ensure that it maintained underwriting standards and hit combined-ratio objective.</p>	<p><u>Safeco Insurance</u></p> <p>Focused on combined ratio in its early history. From 1980 on, became inconsistent, then went for big growth via huge acquisition of American States in the 1990s. Attained profitable combined ratio in only 10 of 27 years.</p>

<p><u><i>Intel</i></u> Upheld Moore’s Law, doubling the complexity of components per integrated circuit at minimum cost every 18 months to two years. Pursued this relentlessly over the entire era of our analysis.</p>	<p><u><i>AMD</i></u> Repeatedly pursued big growth in good times (sometimes with significant debt), leaving the company unprepared for bad times (especially 1985-1986). No evidence of steady performance marker.</p>
<p><u><i>Microsoft</i></u> Practiced 20 Mile March innovation, consisting of continuous iterations of software products. Often began with imperfect products, then marched to improve year after year to achieve eventual industry dominance. Never overextended financially, so never needed to pause its march.</p>	<p><u><i>Apple</i></u> Didn’t 20 Mile March during its early history. Experienced inconsistent profit growth, and setbacks in the mid 1980s, early-1990s, and mid-1990s. Adopted the 20 Mile March innovation with return of Steve Jobs, a key factor in its resurgence in the 2000s.</p>
<p><u><i>Amgen</i></u> Undertook 20 Mile March innovation based on incremental product innovation and product development milestones. Continuously developed existing drugs for new indications. Resulted in strong revenue growth.</p>	<p><u><i>Genentech</i></u> Didn’t 20 Mile March from 1976 to 1995, following a bet-big mentality coupled with overpromises, resulting in a downfall. After 1995, followed a 20 Mile March strategy of breaking five-year goals into a series of one year targets.</p>
<p><u><i>Biomet</i></u> Focused on consistent profitable growth, achieved in 20 of 21 years. Also practiced 20 Mile March innovation, with rapid product development. Took care never to overextend.</p>	<p><u><i>Kirschner</i></u> Didn’t 20 Mile March. Embarked on a “grow fast through acquisition” approach, using debt. Resulted in crisis and sale of the company in 1994.</p>

- 55 20 Mile Marching helps turn the odds in your favor for three reasons:
1. It builds confidence in your ability to perform well in adverse circumstances.
 2. It reduces the likelihood of catastrophe when you’re hit by turbulent disruption.
 3. It helps you exert self-control in an out-of-control environment.
- John Brown of Stryker operated like a track coach who trains his runners to run strong at the end of the workout.
- Then if it’s windy, hot, rainy, or snowy on championship day, the runners feel confident because of their own actual experience: we can run strong because we’ve trained hard even when we felt bad, because we’ve practiced running hard in heinous conditions.
- Accomplishing a 20 Mile March, consistently, in good times and bad, builds confidence. Tangible achievement in the face of adversity reinforces the 10X perspective: we are ultimately responsible for improving performance. We never blame circumstance; we never blame the environment.
- 57 If you beat the odds, you gain confidence that you can beat the odds again, and again, and again.
- 58 Ferocious instability favors the 20 Mile Marchers. This is when they really shine.



60 Failure to 20 Mile March in an uncertain and unforgiving environment can set you up for catastrophe. Every comparison case had an episode in its history in which failing to 20 Mile March led to a devastating outcome. In contrast, only two 10X companies had episodes of failing to 20 Mile March, and neither of these episodes led to catastrophe because the 10X companies self-corrected before a storm could rise up and kill them.
 - Flywheel Vibe

- In a setting characterized by unpredictability, full of immense threat and opportunity, you cannot afford to leave yourself exposed to unforeseen events. If you're hiking in the warm, comfortable glow of a spring day on a nice, wide, wandering trail near your home, you can overextend yourself and you might need to take two Advil to soothe your sore muscles.
 - But if you're climbing in the Himalayas or journeying to the South Pole, going too far can have much more severe consequences from which you might never recover.
 - You can get away with failing to 20 Mile March in stable times for a while, but doing so leaves you weak and undisciplined, and therefore exposed when unstable times come. And they will always come.
- 61 Throughout the journey, Amundsen adhered to a regimen of consistent progress, never going too far in good weather, careful to stay far away from the red line of exhaustion that could leave his team exposed, yet pressing ahead in nasty weather to stay on pace.
- Amundsen throttled back his team to travel between 15 and 20 miles a day.
- 62 Like Amundsen and his team, the 10Xers and their companies use their 20 Mile Marchers as a way to exert self-control, even when afraid or tempted by opportunity. Having a clear 20 Mile March focuses the mind; because everyone on the team knows the markers and their importance, they can stay on track.
- When you 20 Mile March, you have a tangible point of focus that keeps you and your team moving forward, despite confusion, uncertainty, and even chaos.
- 64 The case of Genentech under Levinson highlights two points.
1. 20 Mile Marching can help you turn underachievement into superior achievement; so long as you stay alive and in the game, it's never too late to start the march.
 2. Searching for – and even finding – the Next Big Thing doesn't itself make a great company. Like a gifted but undisciplined athlete, Genentech had underperformed and disappointed, making good on its promise only once Levinson added fanatic discipline to the mix.
- The pursuit of the Next Big Thing can be dangerous if it becomes an excuse for failing to 20 Mile March.
 - If you always search for the Next Big Thing, that's largely what you'll end up doing – always searching for the Next Big Thing.
 - The Next Big thing just might be the Big Thing you already have.
- 65 20 Mile March
- The 20 Mile March was a distinguishing factor, to an overwhelming degree, between 10X companies and the comparison companies in our research.
 - To 20 Mile March requires hitting specified performance markers with great consistency over a long period of time. It requires two distinct types of discomfort, delivering high performance in difficult times and holding back in good times.
 - A good 20 Mile March has the following 7 characteristics:
 1. Clear performance markers
 2. Self-imposed constraints
 3. Appropriate to the specific enterprise
 4. Largely within the company's control to achieve
 5. A proper timeframe – long enough to manage, yet short enough to have teeth
 6. Imposed by the company upon itself
 7. Achieved with high consistency

- A 20 Mile March needn't be financial. You can have a creative march, a learning march, a service improvement march, or any other type of march, as long as it has the primary characteristics of a good 20 Mile March.
- The 20 Mile March builds confidence. By adhering to a 20 Mile March no matter what challenges and unexpected shocks you encounter, you prove to yourself and your enterprise that performance is not determined by your conditions but largely by your own actions.
- Failing to 20 Mile March leaves an organization more exposed to turbulent events. Every comparison case had at least one episode of slamming into a difficult time without having the discipline of a 20 Mile March in place, which resulted in a major setback or catastrophe.
- The 20 Mile March helps you exert self-control in an out-of-control environment.
- 10X winners set their own 20 Mile March, appropriate to their own enterprise; they don't let outside pressures define it for them.
- A company can always adopt 20 Mile March discipline even if it hasn't had such discipline earlier in its history, as Genentech did under Levinson.

66 Unexpected Findings

- 20 Mile Marchers have an edge in volatile environments; the more turbulent the world, the more you need to be a 20 Mile Marcher.
- There's an inverse correlation between pursuit of maximum growth and 10X success. Comparison-company leaders often pressed for maximum growth in robust times, thereby exposing their enterprises to calamity in an unexpected downturn. 10X winners left growth on the table, always assuming that something bad lurked just around the corner, thereby ensuring they wouldn't be caught overextended.
- 20 Mile Marching wasn't a luxury afforded to the 10X cases by their success; they had 20 Mile Marches in place long before they were big successes, which helped them to become successful in the first place.

67 Key Question

- What is your 20 Mile March, something that you commit to achieving for 15 to 30 years with as much consistency as Stryker, Southwest Airlines, Intel, and Progressive?

Chapter 4: Fire Bullets, Then Cannonballs

69 "You may not find what you were looking for, but you find something else equally important." - Robert Noyce

71 We anticipated that innovation might be a primary distinguishing factor for 10X success in unstable environments characterized by rapid change.
- Imagine our surprise to discover that the true innovator, PSA, no longer even exists as an independent brand, despite having created one of the most successful airline business models of the 20th century and that Southwest Airlines had hardly innovated anything at its founding.

73 The evidence from our research does not support the premise that 10X companies will necessarily be more innovative than their less successful comparisons.
- In some cases, the 10X companies were less innovative than the comparisons.
- John Brown at Stryker lived by the mantra that it's best to be "one fad behind," never first to market, but never last.

74 We're not the only researchers to have such findings. We came across a fascinating piece of work by Gerard J. Tellis and Peter N. Golder in their book *Will and Vision*. Tellis and Golder systematically examined the relationship between attaining long-term market leadership and being the innovative pioneer in 66 wide-ranging markets, from chewing

- gum to the internet. They found that only 9% of pioneers end up as the final winners in a market.
- We aren't saying innovation is bad or unimportant.
 - 10X winners innovated less than we expected relative to their industries to their comparison cases; they were innovative enough to be successful but generally not the most innovative.
- 75 We concluded that each environment has a level of "threshold innovation" that you need to meet to be a contender in the game; some industries, such as airlines, have a low threshold, whereas other industries, such as biotechnology, command a high threshold. Companies that fail even to meet the innovation threshold can't win. But once you're above the threshold, especially in a highly turbulent environment, being more innovative doesn't seem to matter very much.
- Once a company meets the threshold of innovation necessary for survival and success in a given environment, it needs a mixture of other elements to become a 10X company, in particular, the mixture of creativity and discipline.
- 77 "Intel Delivers" explains Intel's 10X success much better than "Intel Innovates." Even more accurate, "Intel innovates to a necessary threshold, and then blows everyone away – utterly, completely, fanatically, obsessively – with its ability to deliver on its innovations, at expected cost, with high reliability and great consistency." This is the essence of Intel's 10X journey.
- Intel's founders believed that innovation without discipline leads to disaster.
 - As Leslie Berlin wrote about the early days of Intel in her book, *The Man Behind the Microchip*, "What Intel needed going forward was not the courage to take great leaps ahead but the discipline to take orderly steps in a controlled fashion."
 - A quarter of a century after the 1103 success, Intel rearticulated its core values.
 - What did Intel leaders choose as the #1 core value?
 - Discipline
 - It's the combination of discipline and creativity that makes greatness.
- 78 The great task, rarely achieved, is to blend creative intensity with relentless discipline so as to amplify the creativity rather than destroy it. When you marry operating excellence with innovation, you multiply the value of your creativity. And that's what 10Xers do.
- If you just sit still and never do anything bold or new, the world will pass you by, and you'll die from that instead.
 - The solution to this dilemma lies in replacing the simplistic mantra "innovate or die" with a much more useful idea: fire bullets, then fire cannonballs.
 - Bullets then Cannonballs
 - Picture yourself at sea, a hostile ship bearing down on you. You have a limited amount of gunpowder. You take all your gunpowder and use it to fire a big cannonball. The cannonball flies out over the ocean...and misses the target, off by 40 degrees. You turn to your stockpile and discover that you're out of gunpowder. You die.
 - But suppose instead that when you see the ship bearing down, you take a little bit of gunpowder and fire a bullet. It misses by 40 degrees. You make another bullet and fire. It misses by 30 degrees. You make a third bullet and fire, missing by only 10 degrees. The next bullet hits – ping! – the hull of the oncoming ship. Now, you take all the remaining gunpowder and fire a big cannonball along the same line of sight, which sinks the enemy ship. You live.
- 80 Amgen's early days illustrate a key pattern we observed in this study: fire bullets, then fire cannonballs. First, you fire bullets to figure out what'll work. Then once you have empirical confidence based on the bullets, you concentrate your resources and fire a

- cannonball. After the cannonball hits, you keep 20 Mile Marching to make the most of your big success.
- 81 What makes a bullet?
- A bullet is an empirical test aimed at learning what works and that meets three criteria:
 1. A bullet is low cost. Note: the size of a bullet grows as the enterprise grows; a cannonball for a \$1 million enterprise might be a bullet for a \$1 billion enterprise.
 2. A bullet is low risk. Note: low risk doesn't mean high probability of success, low risk means that there are minimal consequences if the bullet goes awry or hits nothing.
 3. A bullet is low distraction. Note: this means low distraction for the overall enterprise; it might be very high distraction for one or a few individuals.
- 83 Embracing the "fire bullets, then cannonballs" principle requires a combination of activities:
- Fire bullets.
 - Assess: Did your bullets hit anything?
 - Consider: Do any of your successful bullets merit conversion to a big cannonball?
 - Convert: Concentrate resources and fire a cannonball once calibrated.
 - Don't fire uncalibrated cannonballs.
 - Terminate bullets that show no evidence of eventual success.
- Both the 10Xers and the comparison cases fired cannonballs.
 - The comparison companies, however, tended to fire cannonballs before they'd obtained a confirming calibration – empirical validation gained through actual experience – that the cannonball would likely reach its intended target.
 - The 10X cases were more likely to fire calibrated cannonballs, while the comparison cases had cannonballs flying all over the place.
- 87 Even 10Xers make mistakes, even sometimes the big mistake of firing an uncalibrated cannonball. But they view mistakes as expensive tuition: better get something out of it, learn everything you can, apply the learning, and don't repeat. Whereas comparison cases often try to recover from the calamity of firing an uncalibrated cannonball by firing yet another uncalibrated cannonball, 10Xers recover by returning to the discipline of firing cannonballs only when they have empirical validation.
- 88 Progressive's three strategic decisions – trucking insurance (uncalibrated cannonball), standard auto insurance (calibrated cannonball), and homeowners insurance (bullets followed by the decision not to fire a cannonball) – all underscore one very big lesson. In the face of instability, uncertainty, and rapid change, relying upon pure analysis will likely not work, and just might get you killed. Analytic skills still matter, but empirical validation matters much more.
- The underlying principle: *empirical validation*
 - More important than being the first or most creative is figuring out what works in practice, doing it better than anyone else, and then making the very most of it with a 20 Mile March.
- 90 10Xers do not have any particular genius for visionary prediction. If Bill Gates, one of the great business geniuses of the 20th century, couldn't accurately predict what was going to happen in his environment, there's little reason to expect that anyone can succeed with a "predict the future and then position yourself for what's coming" strategy.
- Instead of trying to predict the future ask questions like:
- 91
- How can we bullet our way to understanding?
 - How can we fire a bullet on this?

- What bullets have others fired?
 - What does this bullet teach us?
 - Do we need to fire another bullet?
 - Do we have enough empirical validation to fire a cannonball?
 - Apple's Rebirth: Bullets, Cannonballs, And Disciplined Creativity
 - Bullet, calibrate, bullet, recalibrate, cannonball.
- 92 What did Jobs first do to get Apple back on track? Not the iPod, iTunes, the iPhone or iPad. He increased discipline.
- Without discipline there's no chance to do creative work.
 - Apple did all of this before the iPod, iTunes, or the iPhone.
 - Anything that didn't help the company get back to creating great products that people loved would be tossed, cut, slashed, and ruthlessly eliminated.
 - What products did Apple work on first?
 - It went back to resurrect the biggest thing that Steve Jobs helped create more than a decade earlier.
 - Apple launched PowerMacs, PowerBooks, and the iMac.
 - Jobs didn't go after the next big thing. He made the most of the big thing he already had.
- 94 The iPod story illustrates a crucial point: a big, successful venture can look in retrospect like a single-step creative breakthrough when, in fact, it came about as a multistep iterative process based more upon empirical validation than visionary genius. The marriage of fanatic discipline and empirical creativity better explains Apple's revival than breakthrough innovation per se.
- 95 In the 12 years away from Apple, Jobs had turned himself from a creative entrepreneur into a disciplined, creative company builder.
- He always knew how to build insanely great products, but he had to learn how to build an insanely great company.
 - If Apple had capitulated and been acquired, there'd likely have been no iMac, iPhone iPod, or iPad.
 - Greatness requires the Churchillian resolve to never give in, but also requires having the reserves to endure staggering defeats, bad luck, calamity, chaos, and disruption.
- 96 Fire Bullets then Cannonballs
- A "fire bullets, then cannonballs" approach better explain the success of 10X companies than big-leap innovations and predictive genius.
 - A bullet is a low-cost, low-risk, and low-distraction test of experiment. 10Xers use bullets to empirically validate what will actually work. Based on that empirical validation, they then concentrate their resources to fire a cannonball, enabling large returns from concentrated bets.
 - Our 10X cases fired a significant number of bullets that never hit anything. They didn't know ahead of time which bullets would hit or be successful.
 - There are two types of cannonballs, calibrated and uncalibrated. A calibrated cannonball has confirmation based on actual experience – empirical validation – that a big bet will likely prove successful. Launching an uncalibrated cannonball means placing a big bet without empirical validations.
 - Uncalibrated cannonballs can lead to calamity. The companies in our research paid a huge price when big, disruptive events coincided with their firing uncalibrated cannonballs, leaving them exposed. Comparison cases had a much greater tendency to fire uncalibrated cannonballs than the 10X cases.
 - 10Xers periodically made the mistake of firing uncalibrated cannonballs, but they tended to self-correct quickly. The comparison cases, in contrast, were more

likely to try to fix their mistakes by firing yet another uncalibrated cannonball, compounding their problems.

- Failure to fire cannonballs, once calibrated, leads to mediocre results. The idea is not to choose between bullets or cannonballs but to fire bullets first, then fire cannonballs.
- Acquisitions can be bullets, if they remain low risk, low cost, and relatively low distraction.
- The difficult task is to marry relentless discipline with creativity, neither letting discipline inhibit creativity nor letting creativity erode discipline.

97 Unexpected Findings

- The 10X winners were not always more innovative than the comparison cases. In some matched pairs, the 10X cases proved to be less innovative than their comparison cases.
- We concluded that each environment has a threshold level of innovation, defined as a minimum level of innovation required even to be a contender in the game. For some industries, the innovation threshold is low, whereas for other industries, the threshold is very high. However, once above the innovation threshold, being more innovative doesn't seem to matter very much.
- 10Xers appear to have no better ability to predict impending changes and events than the comparisons. They aren't visionary geniuses, they're empiricists.
- The combination of creativity and discipline, translated into the ability to scale innovation with great consistency, better explains some of the greatest success stories – from Intel to Southwest Airlines, from Amgen's early years to Apple's resurgence under Steve Jobs – than the mythology of big-hit, single-step breakthroughs.

98 Key Question

- Which of the following behaviors do you most likely need to increase?
 1. Finding enough bullets
 2. Resisting the temptation to fire uncalibrated cannonballs
 3. Committing, by converting bullets into cannonballs once you have empirical validation

Chapter 5: Leading above the Death Line

99 "As soon as there is life there is danger." - Ralph Waldo Emerson

- On the morning of May 8, 1996, David Breashears looked down from Camp III at 24,500 feet, high on the icy slopes of Mount Everest, preparing for the big move to the South Col and a bid to carry what he called "The Pig" to the summit. The Pig was a 42-pound IMAX camera, being used to create the first ever IMAX movie from the highest point on Earth.

- What Breashears saw three thousand feet below alarmed him. More than fifty people trekked out from Camp II, swarming across the glacier, climbing toward Breashears and his team. Some of the climbers were clients being led to the top of the world by experienced guides Rob Hall and Scott Fischer. Furthermore, Breashears and his team were already getting a late start, sleep deprived and on edge from hurricane-force winds that had battered their tents the night before.

100 Breashears paused to consider: What if his team had to delay for a day, due to continued wind storm, giving the swarm of climbers a chance to catch up? What if a bunch of people crowded the small tiptop of the mountain just as Breashears tried to film his summit shot? What if dozens of climbers stacked up at the bottleneck known as the Hillary Step, just before the summit, where only one climber at a time could pass up or down on fixed ropes? What if the combined weight of so many people weighing the

fixed ropes caused anchors to rip out of the ice? What if the previous night's severe wind presaged a change in weather? What if an unexpected storm swept up the mountain like some giant bear's maw, swiping climbers off the face and sending them hurling to their doom? What if he ran into a traffic jam of less experienced climbers – weakened, exhausted, disoriented – at the very moment when he needed to go down fast?

- Breashears had assembled the best film climbing team in the world, and he conferred with his trusted partners, Ed Viesturs and Robert Schauer. They all agreed, conditions just didn't feel right, and they came to a clear decision: Secure at Camp III. Go down, climb back up a few days later, after the mountain had cleared.

- On the way down, Breashears crossed paths with guide Rob Hall, tall and confident in a scarlet outfit, commanding his little army of guides and clients, moving up the mountain slowly but with almost military precision. Breashears felt a touch of chagrin, as the day had turned bright and calm, almost pleasant, and Hall looked surprised to see Breashears heading down in such great conditions. Hall looked the Master of Everest as he marched upward, while Breashears passed another guide, Scott Fischer, a charismatic force of energy with wild hair; a gigantic, kid-like grin; and a passionate love of the mountains. Fischer, like Hall, had questions about Breashear's decision to go down, and Breashears told Fischer about the wind and questionable weather, and that the mountain felt crowded. Fischer flashed a broad, reassuring smile and continued upward, exuding his trademark optimism and joy at being on the mountain in such glorious weather.

- The next time Breashears would see Hall and Fischer, 15 days later, en route to his successful IMAX film shot on the summit, both Hall and Fischer would be dead, frozen high on the mountain, victims of the greatest disaster in Everest history, in which eight people had died in 24 hours.

101 Productive Paranoia

- Many people know this 1996 Everest story through Jon Krakauer's book *Into Thin Air*.

- Also be sure to read David Breashears's book *High Exposure*.

- Like Amundsen and Scott, we have a comparison contrast: two sets of team leaders on the same mountain on the same day, both with burdens of responsibility and business pressures, both with tremendous experience – yet only one leads his team to 10X success, achieving the incredible goal of shooting an IMAX film on the top of Everest, and bringing himself and every member of his team safely home.

102 David Breashear's approach to Everest exemplifies the idea of how 10Xers lead their companies with productive paranoia.

- The 10X winners in our research always assumed that conditions can – and often do – unexpectedly change, violently and fast.

- They were hypersensitive to changing conditions, continually asking, "What if?"

- By preparing ahead of time, building reserves, maintaining "irrationally" large margins of safety, bounding their risk and honing their disciplines in good times and bad, they handled disruptions from a position of strength and flexibility.

- They understood that the only mistakes you can learn from are the ones you survive.

103 Three core practices:

1. Productive paranoia 1: Build cash reserves and buffers – oxygen canisters – to prepare for unexpected events and bad luck before they happen.

2. Productive paranoia 2: Bound risk – Death Line risk, asymmetric risk, and uncontrollable risk – and manage time-based risk.

3. Productive paranoia 3: Zoom out, then zoom in, remaining hyper vigilant to sense changing conditions and respond effectively.

104 **Productive Paranoia – Extra Oxygen Canisters – It’s What You Do Before The Storm Comes**

- By the late 1990s. Intel’s cash position had soared to more than \$10 billion, reaching 40% of annual revenues (whereas AMD’s cash to revenue ratio hovered at less than 25%).
- Having such a high level of cash might be irrational and inefficient 95% of the time, but Intel leadership worried about the 5% of the time when catastrophe might devastate the industry or when some other unexpected shock might batter the company.
- In those rare scenarios, which inevitably come, Intel would be able to continue its relentless 20 Mile March, to keep creating, to keep inventing, to keep on its quest to become an enduring great company.
- Financial theory says that leaders who hoard cash in their companies are irresponsible in their deployment of capital.
- In a stable, predictable, and safe world, the theory might hold; but the world is not stable, predictable, or safe. And it never will be.
- The 10X companies carried 3-10 times the ratio of cash to assets.
- When it comes to building financial buffers and shock absorbers, the 10X cases were paranoid, neurotic freaks!
- 80% of the time, the 10X cases carried a higher cash-to-assets ratio and a higher cash-to-liabilities ratio than their comparisons.

105 Like Breashears and Amundsen, the 10X leaders build buffers and shock absorbers as a habit early on, preparing to absorb the next “Black Swan” event.

- Black Swan – a low-probability disruption, an event that almost no one can foresee, a concept popularized by the writer and financier Nassim Nicholas Taleb.
- Almost no one can predict a particular Black Swan before it hits, not even 10Xers.
- But it is possible to predict that there will be some Black Swan, as yet unspecified.
- 10Xers remain productively paranoid in good times, recognizing that it’s what they do before the storm that matters most. Since it’s impossible to consistently predict specific disruptive events, they systematically build buffers and shock absorbers for dealing with unexpected events. They put in place their extra oxygen canisters long before they’re hit with a storm.

106 Southwest, in its 2001 annual report, said, “Our philosophy of managing in good times so as to do well in bad times proved a marvelous prophylactic.”

- On 9/11 they had \$1 billion in cash on hand and the highest credit rating in the industry.
- They also had the lowest cost-per-available-seat-mile, a position secured by 30 years of discipline that never waned during good times.

107 If you come at the world with the practices of building a great enterprise and you apply them with rigor all the time – good times and bad, stable times and unstable – you’ll have an enterprise that can pull ahead of others when turbulent times hit.

- When a calamitous event clobbers an industry or the overall economy, companies fall into one of three categories: those that pull ahead, those that fall behind, and those that die.
- The disruption itself doesn’t determine your category. You do.

Productive Paranoia 2: Bounding Risk

- Perhaps the 10X cases were just high risk, high reward winners, merely lucky that their big risks paid off.
- As we got further into the research, we noticed that the 10Xers appeared to lead their companies with a more conservative, risk-averse approach.

- They constrained growth in the 20 Mile March.
 - They fired bullets before firing cannonballs.
 - They displayed financial prudence, building a cache of extra oxygen canisters.
 - Did the 10X cases take more risk or less risk than comparison cases?
 - Three primary categories of risk relevant to leading an enterprise:
 1. Death line risk: those that could kill or severely damage the enterprise
 2. Asymmetric risk: those for which the potential downside is much bigger than the potential upside
 3. Uncontrollable risk: those that expose the enterprise to forces and events that it has little ability to manage or control
- 108 Any particular decision or situation could involve more than one form of risk; the categories of risk are not mutually exclusive.
- We conducted an extensive analysis across the history of 10X and comparison cases, and found that 10X cases behaved like David Breashears.
 - They took less Death Line risk, less asymmetric risk, and less uncontrollable risk.
- 109 We found that 10X companies took less risk than the comparison cases. The 10X leaders took risks, but relative to the comparisons in the same environments, they bounded, managed, and avoided risks. The 10X leaders abhorred Death Line risk, shunned asymmetric risk, and steered away from uncontrollable risk.
- 110 Time-based risk: when the degree of risk is tied to the pace of events, and the speed of decision and action.
- 111 Sometimes acting too fast increases risk. Sometimes acting too slow increases risk. The critical question is, "How much time before your risk profile changes?" Do you have seconds? Minutes? Hours? Days? Weeks? Months? Years? Decades? The primary difficulty lies not in answering the question but in having the presence of mind to ask the question.
- 113 As a productive paranoid, you want to be cognizant of lurking dangers and vigilant about possible disruptions, but this is very different from taking quick, immediate action because you want the anxiety and uncertainty to go away.
- Productive Paranoia 3: Zoom Out, Then Zoon In**
- 114 10X leaders don't miss the gorilla, especially if the gorilla poses a dangerous threat.
- Breashears was utterly focused on getting his IMAX camera to the summit of Everest, yet when he looked down the mountain on May 8, 1996, the swarm of humanity heading his way, he saw a huge gorilla.
 - We adopted the terms zoom in and zoom out to capture an essential manifestation of productive paranoia, a dual-lens capability. 10X leaders remain obsessively focused on their objectives and hyper vigilant about changes in their environment; they push for perfect execution and adjust to changing conditions; they count the passes and see the gorilla.
 - In practice it works like this:

Zoom Out

Sense a change in conditions

Assess the time frame: How much time before the risk profile changes?

Assess with rigor: Do the new conditions call
for disrupting plans? If so, how?

Then

Zoom In

Focus on supreme execution of plans and objectives

- 116 Despite being in a fast-moving, perilous, competitive situation, the Intel team took a very deliberate approach, formulating a smart and rigorous strategy. Intel initiated Operation CRUSH in just 7 days yet did so with fiercely disciplined thought. When facing fast-moving threats, 10X teams neither freeze up nor immediately react; they think first, even when they need to think fast.
- 117 The Amgen FDA application team turned themselves into the "Simi Valley Hostages."
- The Simi Valley Hostages understood that they were in a race to be first, but they didn't sacrifice their detailed, methodical approach for the sake of speed. By increasing their intensity to extreme levels for a time – nothing else matters until we get this done, and done right! – they went fast enough to win.
- 119 Not all time in life is equal
- We close this chapter with a twist to the Amundsen story that highlights the importance of being able to zoom out, and then zoom in. It turns out that Amundsen hadn't planned to go to the South Pole in 1911; he'd planned to go to the North Pole.
- That's right, the North Pole!
- He'd raised money to go to the North Pole, assembled a team for the North Pole, gained access to the ship Fram for a trip to the North Pole, and mapped a full plan for the North Pole.
- So then, how did he end up at the opposite end of the Earth, at the South Pole?
- While making his preparations for the North, Amundsen received crushing news. The North Pole had fallen. First Cook, then Peary, had reportedly reached 90 degrees North. So, Amundsen decided to redirect his expedition and channeled his energies into preparing for a new destination, the South Pole. He kept his decision secret, even from his crew, during the months while he prepared until he set sail. On September 9, 1910, at the port of Madeira, Portugal, Amundsen raised anchor three hours ahead of schedule, catching his crew off guard. He assembled his men on deck and calmly told them that they weren't going to the North Pole after all, that the expedition would veer to the South Pole instead. Earlier in the day, the crew had nothing but the North Pole on their minds; by 10pm they were already heading to the South Pole, fully committed to the new adventure, the North Pole fading from their dreams.
- We've portrayed Amundsen as anything but impulsive, the consummate, detail-oriented, super-prepared, monomaniacal, disciplined fanatic. Yet with the North Pole gone and the South in Scott's line of sight, he pivoted dramatically, changing direction from north to south. If Amundsen had said, "Well, my plan is to go north, so that's what I'm going to do," if he refused to reorient his focus, he would not have led his team to 10X achievement. Upon learning that the North Pole had fallen, he zoomed out to consider the changed conditions; then he zoomed in to execute a new plan to go south.
- 120 10Xers distinguish themselves by an ability to recognize defining moments that call for disrupting their plans, changing the focus of their intensity, and/or rearranging their agenda, because of opportunity or peril, or both.
- They sense change, zooming out to ask, "How much time before the risk profile changes?"
- They make rigorous rather than reactive decisions.
- Then they zoom in, obsessively focusing on superb execution in the defining moment, never compromising excellence for speed.
- The year 1911 was an unequal year for Amundsen, and he made the most of it.
- May 1996 on Everest was an unequal time for David Breashears, and he executed it brilliantly when the time came.

- September 11 was an unequal time for the airline industry, and Southwest came through with the most inspired and defiant performance.
- We will all face moments when the quality of our performance matters much more than other moments, moments that we can seize or squander.

121 Leading Above the Death Line

- Three key dimensions of productive paranoia:
 1. Build cash reserves and buffers – oxygen canisters – to prepare for unexpected events and bad luck before they happen.
 2. Bound risk – Death Line risk, asymmetric risk, and uncontrollable risk – and manage time-based risk.
 3. Zoom out, then zoom in, remaining hyper vigilant to sense changing conditions and respond effectively.
- 10Xers understand that they cannot reliably and consistently predict future events, so they prepare obsessively – ahead of time, all the time – for what they cannot possibly predict. They assume that a series of bad events can wallop them in quick succession, unexpectedly and at any time.
- It's what you do before the storm hits – the decision and disciplines and buffers and shock absorbers already in place – that matters most in determining whether your enterprise pulls ahead, falls behind or dies when the storm hits.
- 10Xers build buffers and shock absorbers far beyond the norm of what others do. The 10X companies we studied carried 3 to 10 times the ratio of cash to assets relative to the median of what most companies carry and maintained more conservative balance sheets than the comparison companies throughout their histories, even when they were small enterprises.
- 10X cases are extremely prudent in how they approach and manage risk, paying special attention to 3 categories of risk:
 1. Death Line risk (which can kill or severely damage the enterprise)
 2. Asymmetric risk (in which the downside dwarfs the upside)
 3. Uncontrollable risk (which cannot be controlled or managed)
- 10Xers zoom out, then zoom in. They focus on their objectives and sense changes in their environment; they push for perfect execution and adjust to changing conditions. When they sense danger, they immediately zoom out to consider how quickly a threat is approaching and whether it calls for a change in plans. Then they zoom in, refocusing their energies into executing objectives.
- Rapid change does not call for abandoning disciplined thought and disciplined action. Rather, it calls for upping the intensity to zoom out for fast yet rigorous decision making and zoom in for fast yet superb execution.

122 Unexpected Findings

- The 10X cases took less risk than the comparison cases yet produced vastly superior results.
- Contrary to the image of brazen, self-confident, risk-taking entrepreneurs who see only upside potential, 10X leaders exercise productive paranoia, obsessing about what can go wrong. They ask questions like: What is the worst-case scenario? What are the consequences of the worst-case scenario? Do we have contingencies in place for the worst-case scenario? What's the upside and what's the downside of this decision? What's the likelihood of the upside and the downside? What's out of our control? How can we minimize our exposure to forces we can't control? What if? What if? What if?
- The 10X cases didn't have a greater bias for speed than the comparison companies. Taking the time available before the risk profile changes, whether

short or long, to make a rigorous and deliberate decision produces a better outcome than rushing a decision.

123 Key Question

- Regarding the biggest threats and dangers facing your enterprise, how much time before the risk profile changes?

Chapter 6: SMaC

125 "Most men die of their remedies, and not of their illnesses." - Moliere

126 Putnam concluded that Southwest should continue to expand based on "the 'cookie cutter' approach."

1. Remain a short-haul carrier, under two-hour segments.
2. Utilize the 737 as our primary aircraft for 10-12 years.
3. Continued high aircraft utilization and quick turns, ten minutes in most cases.
4. The passenger is our #1 product. Do not carry air freight or mail, only small packages which have high profitability and low handling costs.
5. Continued low fares and high frequency of service.
6. Stay out of food services.
7. No interlining...costs in ticketing, tariffs and computers and our unique airports do not lend themselves to interlining.
8. Retain Texas as our #1 priority and only go interstate if high-density short-haul markets are available to us.
9. Keep the family and people feeling in our services and a fun atmosphere aloft. We're proud of our employees.
10. Keep it simple. Continue cash-register tickets, ten-minute cancellation of reservations at the gate in order to clear standbys, simplified computer system, free drinks in Executive service, free coffee and donuts in the boarding area, no seat selection on board, tape-recorded passenger manifest, bring airplanes and crews home to Dallas each night, only one domicile and maintenance facility.

127 His 10 points reflect insight, based upon empirical validation about what works.

- The amazing thing about Putnam's list is its consistency over time. In total, the elements on the Putnam list changed only about 20% in a quarter of a century.

- If Southwest had become a rigid, closed-minded, uncurious, never amending Putnam's points as needed, it would not have become a 10X case.

128 What most stands out is how much of the list Southwest kept intact.

-SMaC Recipe

- Putnam's 10 points form a SMaC recipe.

- SMaC recipe: a set of durable operating practices that create a replicable and consistent success formula.

- SMaC: Specific, Methodical, and Consistent.

- A solid SMaC recipe is the operating code for turning strategic concepts into reality, a set of practices more enduring than mere tactics.

- Tactics change from situation to situation, whereas SMaC practices can last for decades and apply across a wide range of circumstances.

- We on the research team used to believe in an inevitable tradeoff between specificity and durability: if you want to have durable precepts to live by, they need to be more general, like core values or high-level strategy; but if you want specific practices, they need to change frequently as conditions change, like tactics. Yet it is possible to develop practices that are both specific and durable – SmaC practices.

- A SMaC practice isn't the same as a strategy, culture, core values, purpose, or tactics.

130 Ingredients in David Breashears's SMaC Recipe

- Create a binder with individual tabs for all facets of the expedition, including backup plans (and sometimes even backup plans to the backup plans) for everything that can plausibly go wrong.
- Perform “Idiot Check” every time you move locations – 360 – degree spin to make sure you haven’t left anything behind.
- Thread the camera with bare hands, no matter how cold, to ensure a perfect shot every time.
- Be able to assemble the camera, mount it on the tripod, load and thread film, aim, and shoot in five minutes flat.
- Test equipment in real conditions, sub-zero-freezer and simulation trips before the actual expedition.
- Always optimize weight and functionality. Carry the least amount of mass without sacrificing function/safety.
- In selecting teammates, choose people to get stranded with.
- Always bring backups for critical gear and supplies: extra oxygen, extra mittens, and extra supplies. Be prepared to stay longer than planned.
- Never let a weak member attempt to summit. “A team is only as strong as its weakest member.”
- Have two separate teams, climbers and filmmakers, which work well together on the mountain.

131 Operating in a turbulent world without a SMaC recipe is like being lost in the wilderness in the middle of a storm without a compass.

134 Conventional wisdom says that change is hard. But if change is so difficult, why do we see more evidence of radical change in the less successful comparison cases? Because change is not the most difficult part. Far more difficult than implementing change is figuring out what works, understanding why it works, grasping when to change, and knowing when not to.

136 Steve Jobs didn’t so much revolutionize the company as he returned it to the principles he’d used to launch the company from garage to greatness two decades earlier.

- Apple fell behind during its dark days not because its original recipe no longer worked, but because it lacked the discipline to adhere to its original recipe.
- Jobs genius notwithstanding, Apple roared back because it returned, this time with fanatic discipline, to the essence of its original recipe.
- As John Sculley commented in a 2010 interview, reflecting upon the resurgence of Apple under the leadership of the very man he’d ousted 25 years earlier. “The same principles Steve is so rigorous about now are the identical ones he was using then.”
- When faced with declining results, 10Xers do not first assume that their principles and methods have become obsolete. Rather, they first consider whether the enterprise has perhaps strayed from its recipe, or has forgone discipline and rigor in adhering to the recipe. If so, they see the remedy in reconnecting with the underlying insights behind the recipe and reigniting passion for adhering to it. They ask, “Is our recipe no longer working because we’ve lost discipline? Or is it no longer working because our circumstances have fundamentally changed?”
- John Wooden, the great UCLA basketball coach who produced 10 NCAA championship teams in 12 years during the 1960s and 1970s, perfectly exemplified the power of consistency.

137 In the film documentary “The UCLA Dynasty”, one player recalled, “There was a way to do everything. You could have taken UCLA people who played in ‘55, ‘65, ‘70, and ‘75; put them on the same team; and they would have been able to play with each other, instantly.”

- Wooden ran his drills from the same set of 3x5 cards, with rare modifications, over the course of three decades.
 - Drills would start and end like clockwork, the same drills performed before the national championship as at the beginning of the season so that, in the words of a star player, "By the time the games came along, they just became memorized exhibitions of brilliance."
 - Wooden translated his "Pyramid of Success" (a philosophy of life and competition) into a detailed recipe, right down to how players should tie their shoes.
 - You ask one of the All-American seniors what that was about and he says, "Get a blister in a big game, and you're gonna suffer. Shoes come untied in a close game...well, that just never happens here."
- 138 As Lincoln said in the dark days of the American Civil War, "The dogmas of the quiet past are inadequate to the stormy present."
- In this stormy world, we need to think anew. And that means rejecting the idea that the only path to continued prosperity lies in continuous corporate revolution.
 - If you really want to become mediocre or get yourself killed in a turbulent environment, you want to be changing, morphing, leaping, and transforming yourself all the time and in reaction to everything that hits you.
 - We've found in all our research studies that the signature of mediocrity is not an unwillingness to change; the signature of mediocrity is chronic inconsistency.
- 141 The Intel case illustrates a powerful "Genius of the AND." On the one hand, a great company changes only a small fraction of its SMaC recipe at any given time, keeping the rest of it intact. On the other hand, this isn't just "incremental" change; a SMaC-recipe change is, almost by definition, a hugely significant change. By grasping this point, a 10X enterprise can achieve significant change and extraordinary continuity, both at the same time.
- 143 Gates set aside one week each year to read and reflect, his "Think Week."
- He wrote a memo entitled "The Internet Tidal Wave."
- 144 Internet Explorer
- The memo became the stuff of legend, the story of how a visionary founder revolutionized his company, turning the battleship 180 degrees overnight; and it makes for fascinating reading.
 - It was a huge change for Microsoft to embrace the Internet, and yet most of Microsoft's recipe remained intact.
 - Did Microsoft make a big change to its recipe? Yes.
 - Did Microsoft keep most of its recipe intact? Yes.
 - 10Xers reject the choice between consistency and change; they embrace consistency and change, both at the same time.
- 146 Changes to a solid and proven SMaC recipe are like amendments to the constitution: if you get the recipe right, based on practical insight and empirical validation, it should serve you well for a very long time; equally important, fundamental changes must be possible. Continually question and challenge your recipe, but change it rarely.
- Those who spend most of their energy "reacting to change" will do exactly that, expend most of their energy reacting to change.
 - In a great twist of irony, those who bring about the most significant change in the world are those who bring the consistent in their approach.
 - They aren't dogmatic or rigid; they're disciplined, they're creative, they're paranoid. They SMaC!
- 147 SMaC

- SMaC stands for Specific, Methodical, and Consistent. The more uncertain, fast-changing, and unforgiving your environment, the more SMaC you need to be.
- A SMaC recipe is a set of durable operating practices that create a replicable and consistent success formula; it is clear and concrete, enabling the entire enterprise to unify and organize its efforts, giving clear guidance regarding what to do and what not to do. A SMaC recipe reflects empirical validation and insight about what actually works and why. Howard Putnam's 10 points at Southwest Airlines perfectly illustrates the idea.
- Developing a SMaC recipe, adhering to it, and emending it (rarely) when conditions merit correlate with 10X success. This requires the three 10Xer behaviors: empirical creativity (for developing and evolving it), fanatic discipline (for sticking to it), and productive paranoia (for sensing necessary changes).
- All but one of the comparison cases also had solid recipes during their best years, yet they lacked the discipline to implement them with creative consistency, often making reactionary lurches in response to turbulent times.
- Amendments to a SMaC recipe can be made to one element or ingredient while leaving the rest of the recipe intact. Like making amendments to an enduring constitution, this approach allows you to facilitate dramatic change and maintain extraordinary consistency. Managing the tension between consistency and change is one of the great challenges for any human enterprise.
- There are two healthy approaches to amending the SMaC recipe: (1) exercising empirical creativity, which is more internally driven (fire bullets, then cannonballs), and (2) exercising productive paranoia (zoom out, then zoom in), which is more externally focused.

148 Unexpected Findings

- It is possible to develop specific, concrete practices that can endure for decades – SmaC practices.
- Once they had their SMaC recipes, the 10X cases changed them only by an average of 15% (compared to 60% for the comparison cases) over their respective eras of analysis, and any given element of a 10X recipe lasted on average that all the companies in the study, 10X cases and comparisons alike, faced rapid change and unrelenting uncertainty.
- Far more difficult than implementing change is figuring out what works, understanding why it works, grasping when to change, and knowing when not to.

Key Question

- What is your SMaC recipe and does it need amending?

Chapter 7: Return on Luck

149 "Look, if you had one shot, or one opportunity
To seize everything you ever wanted in one moment
Would you capture it? Or just let it slip?"

-Marshall Bruce Mathers III, "Lose Yourself"

- In May 1999, Malcolm Daly and Jim Donini stood three thousand feet up an unclimbed face on Thunder Mountain in Alaska, only a few hundred feet below the summit. Daley offered to let Donini go first on the rope to experience the joy of reaching the summit first, but Donini said, "No, you keep it, you are the one who deserves the gift."

- Less than an hour later, Daly would be dangling at the end of the rope, legs shattered, just beginning an epic fight for his life, a life that would forever be transformed by losing one of his feet.

- Daly climbed toward the summit, swinging his ice axe like a giant claw, kicking knife-like spikes attached to his boots (called crampons) into the ice, moving methodically up the near-vertical wall. He dragged the safety rope (knotted to his waist harness) along behind him, while Donini remained anchored to the wall, feeding the rope through a friction device that would snap tight if the rope suddenly jerked, like a car seatbelt that would seize tight in a crash. The plan: Daly would climb to the summit ridge, placing protection points along the way (mainly "ice screws" twisted into frozen solid sheets of ice); anchor himself to the top of the mountain; and then hold the safety rope while Donini climbed up to meet him.
- 150 With only about 15 feet of steep climbing to go, Daly reached a section of rock where he could place no protection. No problem, though, the final few feet of climbing looked easy. Daly placed his left hand on a big jut of rock, groping about with his right hand, looking for another hold, thinking to himself, "Gosh, this next move is it and there are no more moves on the route. We are essentially up."
- Something Gave way. He fell. Ten feet. Twenty feet. Ice screws ripped out. Forty feet. A hundred feet. Still falling! The rope whipped, the gear changed as Daly bounced and flew. He smashed into his partner, puncturing Donini's right thigh with the pointed teeth of his crampons.
- Daly hurtled past. Still falling. Sixty more feet. Something sharp sliced the rope. Ten of twelve core strands of rope severed right through. If the remaining two were to break...
- Daly cratered into the mountainside. The two remaining strands of cord, less than two millimeters thick, stretched but didn't break. Daly stopped, a crumpled lump.
- "Malcolm, Malcolm, are you ok? Are you alive?" yelled Donini, thinking that Daly must be dead. Daly didn't respond. Donini kept yelling. No response. Then finally, Daly regained consciousness. Blood dripped from his scalp. He looked at his lower legs and feet, shattered with compound fractures; feet flopping around, useless. Daly felt the ends of busted bones rubbing together.
- 151 Donini descended to Daly, and they tried to engineer a self-rescue but soon realized that any movement could worsen the compound fracture and Daly might bleed to death. Daly told Donini, "You have to go get a rescue." After anchoring Daly to the wall, Donini took off on a three-thousand-foot solo descent.
- Within minutes after Donini reached base camp at the bottom of the mountain, he heard something quite unexpected: his friend Paul Roderick of the Talkeetna Air Taxi (an expedition support service) just happened to be flying by that particular valley at that exact moment. Donini waved him down, and Roderick flew to Donini directly to the ranger station; a plan to rescue Daly began immediately, many hours sooner than if Donini had needed to hike out to the station. Those hours proved pivotal. By the time the rescue was organized, impending storms threatened to curtail the attempt. Racing the weather, a helicopter flew up to Daly's perch, and a rescue pilot hanging from a cable below the chopper swung into the mountainside and plucked Daly off the mountain.
- Four hours later, a huge storm enveloped the mountain and raged on for 12 days.
- 152 Ernest Shackleton and his mission to rescue himself and his men from Elephant Island, Antarctica, in 1916.
- Daly made a plan to live, what he later described as a decision to live.
- He had to stay warm, not go hypothermic. So, he set forth a regimen: do 100 windmills on one arm, swinging it around in full 360-degree circles; then 100 on the other arm; then 100 stomach crunches; then repeat without stopping, keeping his mind

- focused, counting precisely. He tired but kept a regimen, dropping the sets to 50, then eventually 20, but always with the regimen.
- Daly had the stamina and tenacity to keep this up for 44 hours is certainly not luck.
 - Donini was only one of a handful of people in the world with the skill to descend three thousand feet solo, without a single misstep, despite having a punctured thigh.
- 153 Luck clearly played a role in Daly's survival, but luck didn't save Daly in the end. People did.
- 154 We defined a luck event as one that meets 3 tests:
1. Some significant aspect of the event occurs largely or entirely independent of the actions of the key actors in the enterprise
 2. The event has a potentially significant consequence (good or bad)
 3. The event has some element of unpredictability
- 155 Analyzing luck is difficult, and perhaps novel. By applying a consistent methodology to both members of each matched pair, we were able to use evidence-based analysis to attack this elusive topic, focusing on the question, "Did the 10X company get more good luck, or less bad luck, than the comparison company?"
- 158 To our knowledge, no one had ever taken the topic of luck in this way, and we didn't know what the evidence would yield.
- 159 We considered whether the 10X cases got substantially more good luck than the comparison cases. As a general rule, the answer was no.
- The 10X cases averaged seven significant good-luck events and the comparison cases averaged eight significant good-luck events across the era of analysis, with no evidence that the 10X cases got substantially more good-luck events than the comparisons.
 - Did the comparison cases get more bad-luck than the 10X cases? As a general rule, the answer was no; the analysis showed similar levels of bad-luck, each group averaging about nine bad-luck events.
- 160 As a general finding, both the 10X cases and the comparisons each got some big good-luck events and some big bad-luck events; the evidence does not support the hypothesis that the 10X cases won because of one gigantic piece of luck that dwarfed everything else.
- Adding up all the evidence, we found that the 10X cases were not generally luckier than the comparison cases. The 10X cases and the comparisons both got luck, good and bad, in comparable amounts. The evidence leads us to conclude that luck does not cause 10X success. People do. The critical question is not "Are you lucky?" but "Do you get a high return on luck?"
- 161 Who is your best luck?
- One of the most significant forms of luck comes not as "what" but in the form of who.
 - This research project began with the premise that we live in an environment of chaos and uncertainty. But the environment doesn't determine why some companies thrive in chaos and why others don't.
 - People do. People are disciplined fanatics. People are empirical. People are creative. People are productively paranoid. People lead. People build teams. People build organizations. People build cultures. People exemplify values, pursue purpose, and achieve big hairy audacious goals.
 - Of all the luck we can get, people luck – the luck of finding the right mentor, partner, teammate, leader, friend – is one of the most important.
- 163 The difference between Bill Gates and similarly advantaged people is not luck. Yes, Gates was lucky to be born at the right time, but many others had this luck. And yes, Gates was lucky to have the chance to learn programming by 1975, but many others had this same luck. Gates did more with his luck, taking a confluence of lucky

- circumstances and creating a huge return on his luck. And this is the important difference.
- 165 It's the 10X ability to get a high return on luck at pivotal moments that distinguish them and this has a huge multiplication effect.
- 166 Everyone gets luck, good and bad, but 10X winners make more of the luck they get.
- The Bill Gates story illustrates the upper-right quadrant, getting a great return on good luck.
 - Getting a high return on luck requires throwing yourself at the luck event with ferocious intensity, disrupting your life, and not letting up.
 - Bill Gates didn't just get a lucky break and cash in his chips. He kept pushing, driving, working – staying on a 20 Mile March; firing bullets, then big calibrated cannonballs; exercising productive paranoia to avoid the Death Line; developing and amending a SMaC recipe; hiring great people; building a culture of discipline; never deviating from his monomaniacal focus – and sustained his efforts for more than two decades. That's not luck, that's return on luck.
- 167 The AMD story illustrates a common pattern we observed in the comparison companies during their respective eras of analysis, the squandering of good luck. When the time came to execute on their good fortune, they stumbled. They didn't fail for lack of good luck; they failed for lack of superb execution.
- 168 Digital Research had developed CP/M, the leading non-Apple operating system for personal computers, and IBM executives traveled to Digital Research's offices to discuss the possibility of working together.
- Digital Research's CEO, Gary Kildall, had a previously scheduled business meeting in the Bay Area, and piloting his own private plane, he flew up to San Francisco, leaving the first part of the IBM meeting in the hands of colleagues. By the time Kildall piloted himself back in the afternoon, the meeting had taken a negative turn. The IBM people left later that day, unimpressed, and Kildall departed for a vacation.
 - Accounts vary as to precisely why the talks disintegrated, but the result was that IBM turned to Microsoft in frustration.
 - Microsoft recognized the moment and committed itself to a brutal schedule to get an operating system ready for the launch of the IBM PC.
 - Digital Research had the incredibly good fortune to be in the right place at the right time when IBM came knocking, but it didn't get the great return on luck. Microsoft did.
- 169 Progressive and Peter Lewis illustrate how 10Xers shine when clobbered by setbacks and misfortune, turning bad luck into good results. 10Xers use difficulty as a catalyst to deepen purpose, recommit to values, increase discipline, respond with creativity, and heighten productive paranoia. Resilience, not luck, is the signature of greatness.
- 170 As we were working on this research, we read about an analysis of Canadian-born hockey players, wherein academic researchers identified a correlation between birth date and hockey success.
- Those born in the second half of the year had less success than those born in the first half of the year.
 - Being 10 ³/₄ versus 10 years old can make a difference in terms of size and speed. So with an age-class cutoff of January 1, the kids born at the beginning of the year have a physical advantage over those born at the end of the year, which then compounds as they have more early success and garner more attention from coaches.
 - Author Malcolm Gladwell popularized these findings, writing that this pattern eventually played out all the way to the National Hockey League, where the distribution of birth dates is skewed to the first half of the year by 70% to 30%.

- A closer look at the data leads to a very different conclusion for truly great hockey players, the 10Xers, those few who make it to the Hockey Hall of Fame. (Those who make it to the Hall of Fame are members of a much more elite group than those who only make it to the NHL. The Hall of Fame currently inducts no more than four players per year, and induction is based on a player's entire career.)
 - Half of the Canadian-born Hall of Famers had birth dates in the second half of the year.
 - If indeed a substantially lower percentage of the Canadian-born NHL players are born in the second half of the year than in the first half of the year, yet half of the Canadian-born Hall of Fame inductees have birth dates in the second half of the year, this leads to a very interesting inversion: Canadian NHL players with the "bad luck" of being born in the second half of the year have a higher likelihood of making it into the Hall of Fame than those with "good luck" of being born in the first half of the year!
 - Consider Ray Bourque, born in December, who came from a poor family, grew up in a working-class neighborhood, lived in an apartment with children "stacked from floor to ceiling in bunk beds," and thrilled at even having skates at all.
 - Bourque lived hockey, sleeping with his skates, creating a makeshift rink in the cellar of his apartment building, practicing thousands of shots, blasting the puck at the goal pinned to the wall so hard that it cracked the cement, water leaking in, his father repairing the dingy walls with crack filler.
 - He developed a crushing work ethic that endured; for most of his NHL career en route to the Hall of Fame, he played more than thirty minutes a game, at times double that of his teammates, reflecting his prodigious, self-imposed fitness regimen.
 - He played in 19 consecutive NHL All-Star games and retired as the most proficient scoring defenseman in NHL history.
 - Bourque was a gifted specimen, and he likely had superior skills even as a youngster.
 - There are far fewer, however, who prove themselves to be 10Xers across an entire career, like Ray Bourque.
 - "Goals live on the other side of obstacles and challenges," said Bourque. "Along the way, make no excuses and place no blame."
 - Bourque had luck in his journey, good and bad, but luck did not make him into one of the greatest hockey players of all time.
 - Nietzsche famously wrote, "What does not kill me, makes me stronger." We all get bad luck. The question is how to use that bad luck to make us stronger, to turn it into "one of the best things that ever happened," to not let it become a psychological prison. And that's precisely what 10Xers do.
- 172 There's an interesting asymmetry between good luck and bad luck. A single stroke of good luck, no matter how big the break, cannot by itself make a great company. But a single stroke of extremely bad luck that slams you on the Death Line, or an extended sequence of bad-luck events that creates a catastrophic outcome, can terminate the quest.
- 173 As we discussed in Chapter 5, 10Xers exercise productive paranoia, combined with empirical creativity and fanatic discipline, to create huge margins of safety. If you stay in the game, long enough, good luck tends to return, but if you get knocked out, you'll never have the chance to be lucky again. Luck favors the persistent, but you can persist only if you survive.
- 174 The essence of "managing luck"
1. Cultivating the ability to zoom out to recognize luck when it happens
 2. Developing the wisdom to see when, and when not, to let luck disrupt your plans
 3. Being sufficiently well-prepared to endure an inevitable spate of bad luck

4. Creating a positive return on luck – both good and bad – when it comes
-We could reframe the entire study around luck and how to get a great ROL.

- Let's review

- 10Xer behaviors: Leaders with fanatic discipline, empirical creativity, productive paranoia, and Level 5 ambition never relax when blessed with good luck. They never wallow in despair when hit with bad luck. They keep pushing, driving for the overall goal and cause.
- 20 Mile March: When 10Xers get a lucky break, they seize it and then build upon it, not just for days or weeks but for years or decades. A 10xer builds a culture that can achieve results whether it gets good luck or bad, engendering deep confidence that success, in the end, doesn't depend upon luck.
- Fire bullets, then cannonballs: While 10Xers don't "cause" their luck, they increase the chance of stumbling upon something that works by firing lots of bullets. By marrying creativity with empirical validation, 10Xers can fire big cannonballs that don't rely on luck for ultimate success. Uncalibrated cannonballs require luck for successful outcome; calibrated cannonballs do not.
- Leading above the Death Line: By having lots of extra oxygen canisters (building big buffers and margins of safety), 10Xers give themselves more options for responding to luck. By managing three types of risk – Death Line risk, asymmetric risk, and uncontrollable risk – they shrink the odds of catastrophe in the face of bad luck. The ability to zoom out, then zoom in helps them recognize luck and consider if it merits disrupting their plans.
- SMaC: SMaC behaviors minimize mistakes that can amplify bad-luck events. They also increase the odds of executing brilliantly when a good-luck moment arrives. Having a clear SMaC recipe can help you decide whether and how to let a luck event disrupt your plans.

-All the concepts contribute to getting a high ROL.

177 Return on Luck

- We defined a luck event as one that meets three tests: (1) some significant aspect of the event occurs largely or entirely independent of the actions of the key actors in the enterprise, (2) the event has a potentially significant consequence (good or bad), and (3) the event has some element of unpredictability.
- Luck happens, a lot, both good luck and bad luck. Every company in our research experienced significant luck events in our era of analysis. Yet the 10X cases were not generally luckier than the comparison cases.
 - The 10X companies did not generally get more good luck than the comparisons.
 - The 10X companies did not generally get less bad luck than the comparisons.
 - The 10X companies did not get their good luck any earlier than the comparisons.
 - The 10X companies cannot be explained by a single giant-luck spike.
- We've encountered two extreme views on the topic of luck. One extreme holds that luck is the primary cause of 10X success; the other extreme holds that luck plays no role in 10X success. Both views are not supported by the evidence from our research. The critical question is not "Are you lucky?" but "Do you get a high return on luck?"
- There are 4 possible ROL scenarios:
 1. Great return on good luck

2. Poor return on good luck
 3. Great return on bad luck
 4. Poor return on bad luck
- We observed an asymmetry between good luck and bad. A single stroke of good fortune, no matter how big, cannot by itself make a great company. But a single stroke of extremely bad luck, or an extended sequence of bad-luck events that create a catastrophic outcome, can terminate the quest. There's only one truly definitive form of luck, and that's the luck that ends the game. 10Xers assume they'll get a spate of bad luck and prepare ahead of time.
 - The leadership concepts in this book – fanatic discipline; empirical creativity; productive paranoia; Level 5 ambition; 20 Mile March; fire bullets, then cannonballs; leading above the Death Line; and SMaC – all contribute directly to earning a great ROL.
 - 10Xers credit good luck as a contributor to their success, despite the undeniable fact that others also experienced good luck, but they never blame bad luck for setbacks or failures.
- 178 Unexpected Findings
- Some of the comparison companies had extraordinarily good luck, better luck even than the 10X winners, yet failed because they squandered it.
 - 10X cases got a substantial amount of bad luck yet managed to get a great ROL. This is when 10Xers really shine, exemplifying the philosophy, "What does not kill me, makes me stronger."
 - ROL might be an even more important concept than return on assets (ROA), return on equity (ROE), return on sales (ROS), or return on investment (ROI).
 - "Who Luck" – the luck of finding the right mentor, partner, teammate, leader, friend – is one of the most important types of luck. The best way to find a strong current of good luck is to swim with great people, and to build deep and enduring relationships with people for whom you'd risk your life and who'd risk their lives for you.
- 179 Key Questions
- What significant luck events have you experienced in the last decade? Did you get a high return on luck? Why or why not? What can you do to increase your return on luck?
 - Who is your best luck?

Epilogue: Great By Choice

- 181 "One should...be able to see that things are hopeless and yet be determined to make them otherwise." - F. Scott Fitzgerald
- We sense a dangerous disease infecting our modern culture and eroding hope: an increasingly prevalent view that greatness owes more to circumstance, even luck, than to action and discipline – that what happens to us matters more than what we do.
- 182 If there's one overarching message arising from more than six thousand years of corporate history across all our research – studies that employ comparisons of great versus good in similar circumstances – it would be this: greatness is not primarily a matter of circumstance; greatness is first and foremost a matter of conscious choice and discipline. The factors that determine whether or not a company becomes truly great, even in a chaotic and uncertain world, lie largely within the hands of its people. It is not mainly a matter of what happens to them but a matter of what they create, what they do, and how well they do it.
- 183 We are not imprisoned by our circumstances.
- We are not imprisoned by the luck we get or the inherent unfairness of life.

A Book Review by Rob Carlson • Great by Choice

- We are not imprisoned by crushing setbacks, self-inflicted mistakes or our past success.
- We are not imprisoned by the times in which we live, by the number of hours in a day or even the number of hours we're granted in our very short lives.
- In the end, we can control only a tiny sliver of what happens to us. But even so, we are free to choose, free to become great by choice.