I

WHAT IS GREENFIELD SCHOOLING?

GREENFIELD IS A TERM OF ART typically used by investors, engineers, or builders to refer to an area where there are unobstructed, wide-open opportunities to invent or build. It is not a term one hears much in K–12 education. This is no surprise. For all their virtues, schools in the United States are not noted for their embrace of creative problem solvers. Indeed, most educators labor in bureaucratic, rule-driven school systems that owe more credit to the practices of early 20th century factory management than to any notion of how to foster great teaching and learning in the 21st century.

It may be easiest to understand greenfield as a venue that provides rich opportunities for new ventures. In real estate, *greenfield* refers to a piece of previously undeveloped land, one that is in its natural state or used for agriculture. In the jargon of software engineering, a *greenfield project* is a new application that operates without any constraints imposed by prior versions. A *greenfield labor agreement* is the first deal struck between a company and its employees.

In schooling, creating greenfield requires scrubbing away our assumptions about districts, schoolhouses, teacher training, and other familiar arrangements so that we might use resources, talent, and technology to support teaching and learning in smarter, better ways. For example, while locally governed school districts made sense in an earlier era, advances in transportation and communication mean it is no longer obvious that managing 20 schools with varying missions in one community is easier than managing a network of more similar schools across several communities. The ability to deliver instruction across

thousands of miles means that students may receive more individualized, interactive, and rigorous instruction from tutors halfway around the world than they can in a local classroom. Open source technology means that districts need not spend billions procuring textbooks that will rapidly become outdated.

Schools and districts struggle to adapt to the larger changes taking place, but this may be an ill-fated pursuit. The pressures of existing rules, routines, contracts, and culture can make it difficult for new practices to stick. Our familiar schools and districts may be, by design, ill-suited to seize upon these changes, just as established newspapers were when it came to the new tools and opportunities presented by online publishing.

Today, dynamic educators push through frustrations, do end runs around bureaucracies, and operate with a wink and a nod to get the staff they require or the resources they need. Far too many educators can relate to stories like that of Larry Rosenstock, who worked in the Cambridge, Massachusetts, schools for 11 years before being driven—by sheer frustration—to launch what would become the acclaimed High Tech High charter school in San Diego. Rosenstock's tales from Cambridge often sound like fodder for an episode of *The Office*. He recalls battling to update his school's scheduling software, which was "pre-Copernican" in its class rotation. "We had MIT kids who wanted to volunteer in science classes," he says, "but under that schedule, if they came every Tuesday afternoon, they'd only be working with the same kids every seventh week." Rosenstock and his crew tried to change the schedule, but in a meeting of teachers, one said, "We can't change the schedule, the schedule won't let us." Rosenstock sighs. "It's a 353-year-old public high school, and every time somebody did something stupid, [the administration] added new rules. They don't take away rules, they just add new rules, so it gets to a point where there's no oxygen left."

When Rosenstock left Cambridge to found High Tech High in 2000, he knew that building a new school would require addressing real estate financing, authorization, fundraising, regulations, and dozens of other stepping stones. Still, Rosenstock says, "I spent 20 years doing turnaround artistry, and I spent the past decade doing new school creation. There might be some complications and risks to new school creation, but as complicated and challenging as it may be, it is way easier than trying to turn around a pre-existing school." In fact, he argues, "Because pre-existing schools are ossified by culture,

employment agreements, expectations, and so on, building on greenfield is actually far easier."

Today, educators who are eager to pioneer new strategies or take advantage of new technologies find themselves stymied by contracts, wrangling with cautious administrators, and forced to negotiate rafts of rules, stacks of paperwork, and resistance from skeptical veterans. Young educators learn early on that keeping their heads down is often the safest path to professional advancement, and that closing their classroom doors is the simplest way to shut out the constant swelter of new reforms. The best educators have come to accept the struggle with bureaucracy as their due and to compensate for ineffective colleagues. Greenfield schooling seeks to create a world more welcoming to Larry Rosenstock and his kin. It seeks school systems open to reinvention and dynamic problem solving, and a sector welcoming to promising new ventures that extends the same opportunities to talented, hard-working professionals in education that enliven professional lives and fuel success in other realms.

Greenfield schooling presumes that the greatest challenge for improving teaching and learning is the creaky, rule-bound system in which they unfold. While we routinely point to a need for new instructional, curricular, and pedagogical strategies or debate the mixed results of those in place, greenfielders deem school systems so hobbled that even sensible efforts will fall short. They worry that today's regulations, organizations, and routines make it nearly impossible to implement any of these innovative strategies with fidelity, at scale, for a sustained period. This means that the key problems facing K–12 education are ultimately systemic, rather than instructional, and that great teaching and curricula will only work if we first address these larger burdens. This is precisely the greenfield reform strategy: Create an environment that invites new solutions to surface and provides the infrastructure necessary for such ventures to succeed.

Greenfield can be created inside or outside traditional districts. Dynamic public school leaders in districts like Chicago, New York, and Washington, DC, have created opportunities and scaffolding that promote entrepreneurial successes. For example, when Joel Klein became chancellor of the New York City Department of Education, he declared his intention to make the system the "Silicon Valley of the charter school movement," recruiting the nation's best charter schools to New York, making it easier for charters to obtain

buildings, and providing charters with funding levels more on par with traditional district schools.[1] Dacia Toll, president of Achievement First, a network of more than a dozen college-prep charter schools for urban students, notes, "Providing facilities on equal terms and letting dollars largely follow the child has allowed Achievement First to be bigger after four years in New York than after 10 in Connecticut." The new landscape has prompted Achievement First to largely abandon its original growth plans in Connecticut and to concentrate instead on opening its heralded schools in New York.

What Exactly *Is* Entrepreneurship?

Entrepreneurship is a slippery notion. In the United States, it is often a catchall label for launching a business. A more useful definition is offered by economist Joseph Schumpeter, who explained that entrepreneurship serves to introduce new goods and services, tools, or strategies. He argued that human progress is primarily driven not by the gradual improvement of familiar organizations but by new ventures displacing yesterday's titans in a vigorous, dynamic cycle of "creative destruction."[2]

Peter Drucker famously described entrepreneurship as a process of purposeful innovation intended to improve productivity, efficiency, or quality. In other words, entrepreneurship is not simply about *change*; it is about using untapped tools, knowledge, talent pools, or management approaches to solve problems more effectively. Today, the entrepreneurial presumption is that the path to improvement is necessarily messy. Management scholars have estimated that 60 percent of all new product development efforts are abandoned before the product ever reaches the market, and nearly half of the products that do make it to market ultimately fail.[3]

Entrepreneurship is *not* about blindly celebrating innovation or every nifty-sounding idea. If anything, we have had too much educational innovation over the years. A decade ago, in a book titled *Spinning Wheels*, I reported that the typical urban school district had launched at least 13 major reforms in a three-year span during the 1990s[4]—a new reform every three months! That is like trying to build on quicksand. It means that nothing has time to work, employees get worn out, and systems are left fragmented and dotted with orphaned programs.

Today, an array of charter school ventures like the KIPP Academies, YES Prep, Aspire Public Charter Schools, and Achievement First are addressing

stubborn challenges by pursuing familiar notions of good teaching and effective schooling in impressively coherent, disciplined, and strategic ways. Other ventures, such as Citizen Schools, EdisonLearning, The New Teacher Project, K12 Inc., Wireless Generation, and New Leaders for New Schools, have devised dramatically new approaches to tackle important challenges. (Don't worry if these names are unfamiliar; you'll learn more about them in the pages ahead.)

Even these marquee entrepreneurs, however, struggle just as district leaders do to sidestep entrenched practices, raise funds, find talent, and secure support. Moreover, today's most successful ventures often pale when viewed beside the larger enterprise. The 70-odd KIPP schools, 150 principals trained annually by New Leaders for New Schools, and 4,800 teachers recruited each year by The New Teacher Project are dwarfed by the United States' 15,000 school districts, nearly 100,000 schools, and 3.3 million teachers. The questions are whether these creative problem solvers will ultimately make a real, lasting difference for millions of kids, and whether there are policies or practices that might increase the odds they will do so.

The Limits of the "Best Practices" Approach

For decades, the dominant approach to school improvement has emphasized what can be loosely termed "best practices." Advocates champion laws and instructional standards that promote familiar themes like curricular alignment, formative assessment, and professional development. The presumption is that improving schools and systems is primarily a matter of additional spending, measuring achievement, coaching educators, and applying additional expertise.[5] Best practice advocates presume that the right mix of remedies is already known—or will soon be identified—and that the challenge is primarily a technical one of program design, professional development, and implementation. At one level, this all makes good sense.

More telling, though, is that these well-intentioned efforts have consistently disappointed. Del Stover told this disheartening but familiar tale in the *American School Board Journal*:

> Five years ago, in a bid to boost achievement at Glades Central Community High School in Palm Beach County, Fla., officials promised smaller classes, more professional development for teachers, and curriculum changes. Two years ago, with student achievement still lagging, officials

> promised even more support and greater oversight, and again assured the community that they knew how to fix Glades Central's problems. But saying you know what it takes to fix the problem and actually doing so are very different things.[6]

Indeed, Heather Driscoll, the founder of Revolutionary Schools, a New Hampshire–based firm that helps New England schools align curricula, resources, and policy, wearily notes, "We often find ourselves working to counteract a pervasive 'silver bullet' culture. The cycle is predictable. Schools attempt to rise to increasing expectations by employing innumerable silver bullet solutions. . . . Unfortunately, this tinkering occurs with little to no coordination between teachers, grades, and schools." Driscoll explains the problem is that best practices are repeatedly adopted with little or no coordination, and "systemic change is not something you can just photocopy and cheer on."

Several years ago, I headed up a yearlong effort to study the impact of Superintendent Alan Bersin's extended effort to radically reform the San Diego City Schools. At the end of the exercise, I was forced to grimly conclude the following:

> Perhaps the most important lesson from San Diego is how limited the possibilities are for radical improvement short of structural change to personnel systems, technology, accountability, leadership, and compensation. For all their sweat and struggle, Bersin and his team found their efforts to build a 21st century workforce checked by state law and contract language governing teacher hiring, school assignment, compensation, and work rules. An outdated information technology system meant that the district has been scrambling to develop the tools required for serious accountability, human resources, and budgeting improvements. Bersin began his tenure with considerable advantages, including his dazzling local and national contacts. . . . If the legacy of his seven-year run is in doubt, [it] illustrates, above all, the gauntlet that today awaits even the boldest school reformers.[7]

Pilot Lights That Keep Going Out

Schools and systems have tried to emulate the best practices of one heralded pilot site after another, and yet the hoped-for outcomes never seem to materialize at scale. It's a lot like repeatedly sparking a pilot light without ever getting the furnace to ignite. Disappointing results are inevitably chalked up to flawed implementation. In truth, the failure of most such efforts is due to

barnacles that encumber today's school systems, including inefficient human resource departments, intrusive collective bargaining agreements, outdated technology, poorly designed management information systems, and other structural impediments. Greenfielders do not reject the utility of sensible best practices, but they question the assumption that the best practice mind-set will be enough to overcome these obstacles—and express doubt that best practices can prove fully effective, given the shape of today's school systems, colleges of education, and educational ecosystem.

An instructive case in the limits of best practice reform is Deborah Meier's disheartening experience with the famed Central Park East Secondary School in New York City. Featuring a challenging and coherent best-practice vision of a personalized, inquiry-driven school, Central Park East enjoyed notable success with a disadvantaged population and received national acclaim. A decade later, Meier left to launch a second school in Boston. Before long, Central Park East lost many of her handpicked staff and saw its distinctive approach diluted. By 2005, Meier noted, "I stopped visiting. It was too painful."[8] Absent the constant, hands-on attention of a remarkable leader like Meier, "model" schools and districts can quickly backslide. The result is a stylized dance, with dynamic reformers enjoying some success tackling troubled schools in this or that community only to see the problems re-emerge when attention, resources, and energy shift elsewhere.

The sad truth is that while individual schools have successfully produced superior results (at least for a while), best practice reform has never delivered an example of successfully transforming a mediocre school system into a high-performing one. There are a number of highly respected suburban districts we can point to, such as Montgomery County, Maryland, or Fairfax County, Virginia, but these systems inevitably start with the advantages conferred by educated, relatively affluent, and education-conscious parents and community members. Meanwhile, touted examples of urban reform such as those in Charlotte, Boston, and Austin deserve their due, but Stanford professor emeritus Larry Cuban has sardonically wondered whether these efforts are "as good as it gets."[9] The reality is that these acclaimed districts are impressive only relative to their peers. In terms of student learning, achievement, or attainment, even proponents concede that these districts have a long way to go. If we are to deliver transformative improvement, it is not enough to wedge new practices into familiar schools and districts; we must re-imagine the system itself.

Of Technology and Silver Bullets

The troubled record of best practice reform is often accompanied by a false faith in "silver bullets." The history of education technology provides an excellent illustration of this phenomenon. Decade after decade, fanciful new best practices have often advanced in tandem with the promise that buying televisions or computers, linking to the Internet, providing students with laptops, or incorporating whiteboards will finally be *the thing* that delivers dramatic improvement in teaching and learning. It has long been noticed, as Cuban observed in *Oversold and Underused*, that the potential of technology has persistently gone unfulfilled, with film projectors, televisions, computers, and the Internet simply a series of expensive baubles shoveled into otherwise unchanged schools and classrooms.[10]

In their recent book, *Liberating Learning*, EdisonLearning executive John Chubb and Stanford University professor Terry Moe make the case that new technologies have the potential to transform the politics of education and rewrite the rules governing system routines. They argue that new technologies are marked by characteristics—including geographic dispersion, individualization, transparency, the expansion of choices, and organic evolution—that will alter traditional power relationships and weaken or break through political and organizational barriers.[11] Harvard Business School professor Clayton Christensen has sounded similar notes in his buzzed-about volume *Disrupting Class*, arguing that the cost-efficiency and flexibility of Web-based instruction will cause it to increasingly displace, and not merely augment, the traditional classroom experience.[12] Whatever the response to these particular analyses, the larger point is that harnessing the transformative power of technology demands a profoundly different approach from the "supplement, not supplant" tack that has long held sway.

Whereas best practice reformers believe the solution lies in new instructional strategies and improved coaching, a greenfielder believes the practices, rules, and routines that have proven so resistant to change must first be peeled away. Yet, while it is foolhardy to expect new programs or extra training to overcome the hurdles posed by the existing system, the failure of technology to revolutionize teaching and learning has been frequently (and mistakenly) understood not as an indictment of our system of schooling but as evidence that the transformative power of technology somehow stops at the schoolhouse door.

Best practice advocates have regularly imported a variety of advances from outside K–12 education. But by the time these have been pasteurized to suit the political and organizational realities of schooling, they typically emerge as fads rather than meaningful new initiatives. The four steps of this process are familiar. First, reformers seize upon simple, powerful intuitions from the world of management—notions like decentralization or talent competition. Second, they wrap these ideas in trendy jargon that makes them sound new, renders them safe for educational consumption, and obscures their harsh edges. Thus, we get excited talk of "site-based management" or "human capital development," with little attention to why these strategies are effective or what it takes to make them work. Third, these proposals are partially and often incoherently pursued in a manner that does not unduly disturb existing practices. Finally, when the results inevitably disappoint, we decide the notion itself was flawed and set off in search of a new silver bullet.

How Greenfield Differs from Best Practices

The greenfield perspective is profoundly different from the best practice mind-set. It questions whether the right mix of approaches is as self-evident, straightforward, or universally applicable as imagined. Even when the familiar recipes are the right ones, or when other promising strategies are identified, greenfielders question whether existing systems are capable of using them effectively or for a sustained period and fear that best practice proponents underestimate the difficulty of overhauling troubled organizations.

Whereas public districts require officials to force change through resistant bureaucracies, or expect individual teachers and principals to freelance within indifferent organizations, greenfielders create room for entrepreneurs to build new organizations focused on addressing clearly articulated problems, for example, The New Teacher Project helping districts recruit talented candidates in areas of critical need or Catapult Learning delivering tutoring to underperforming students. When freed from encumbrances, such ventures can rapidly extend successful services to vast numbers of students, teachers, schools, or districts in multiple jurisdictions. In other words, in lieu of efforts to reform each of the country's 15,000 school districts, a single entrepreneurial venture might dramatically improve instruction, teacher recruitment, data analysis, or school management across hundreds or thousands of districts.

Greenfielders trust in the ingenuity of talented, motivated individuals—*if, and only if,* those individuals are in an environment conducive to success, are responsible for the quality of their work, and are able to tap into crucial capital, talent, and support. This means the key work for policymakers is not only to clear away impediments but also to create the conditions for entrepreneurial success. The key work for researchers is to develop the ideas that entrepreneurs will harness. The key work for those with intriguing ideas or boutique programs is to demonstrate that their vision and products can serve thousands and then millions. This is, needless to say, a much less exalted role than the best practice approach typically accords to policymakers and researchers or that best practice gurus typically see themselves playing.

The greenfield strategy is both more modest and more ambitious than the best practice approach. It is more modest in that it does not imagine that we will "fix" our schools in the next few years—or the next few decades—but instead regards school improvement as an uneven, ongoing project and embraces the Confucian adage that a journey of a thousand miles begins with a single step. It is more ambitious in that it does not merely seek to improve schools but envisions the continuous emergence of profoundly better ways to deliver and support teaching and learning.

Why Greenfield Reform Is Safer Than It May Seem

Today, our schools confront challenges that our education system was not designed and is not equipped to meet. Erected haphazardly over more than a century, it was configured to process large numbers of students in a 20th century industrial nation. These arrangements once sufficed, but they are no longer adequate given worldwide employment trends and the demands of a knowledge-based economy. Meanwhile, decades of attempted systemic reforms have yielded the frustrating results reflected by book titles like David Tyack and Larry Cuban's iconic *Tinkering Toward Utopia* or my own *Spinning Wheels*.[13]

Greenfield entails uncertainty—something we instinctively shrink from when discussing children. In weighing that concern, it is helpful to keep three things in mind. First, all risks are not created equal. Having a school abruptly close midyear may be an unacceptable risk, but more teacher turnover or

mediocre tutoring providers may be less problematic. Second, there are many ways to limit uncertainty and promote vigorous, smart quality control, which we will address later. Third, if "risk" refers to the likelihood that schools will leave children ill-served, thousands of today's schools are terribly risky; the question is whether we can find ways to do better without creating unnecessary new problems.

We routinely overlook the perils implicit in the status quo. Editorial Projects in Education has calculated that the U.S. national graduation rate today is only 73 percent.[14] In urban districts, the graduation rate is just 60 percent,[15] while major cities like Dallas, Denver, Indianapolis, Milwaukee, Detroit, Oakland, and Philadelphia fail to graduate even half of their students.[16] On average, black students graduate high school with math and reading scores that are four grade levels behind those of whites, and U.S. students generally lag on reputable international assessments, such as the Programme for International Student Assessment (PISA) and Trends in International Mathematics and Science Study (TIMMS).[17] Standing pat is hardly a comfortable option.

Nonetheless, today's educational leaders—enmeshed in bureaucracy, governed by elected representatives, and scrutinized by anxious parents and civic leaders—shy away from disruptive change. The University of Washington's Paul Hill has argued that overly restrictive provisions in collective bargaining agreements have meant that district and school leaders have "virtually lost the ability to choose teachers, make work assignments, fire ineffective teachers, and manage budgets."[18] The legal reform group Common Good has catalogued the statutes and regulations governing public high schools in New York City and identified more than 60 separate sources of rules and procedures with which administrators must comply, such as the 83 steps required to terminate an ineffective teacher.[19]

One tiny but powerful illustration of such challenges can be found in Washington, DC—specifically in District of Columbia Public Schools (DCPS) chancellor Michelle Rhee's experience promoting a pilot initiative to facilitate parental involvement. Part of her efforts involved making information on student performance, including attendance data, more readily accessible to parents. Rhee wanted teachers to begin taking attendance on computers, so that this data could be instantly downloaded and available online later the same day. The district's regular process would have meant a week or more before

data could be posted. A sticking point quickly emerged: the DCPS collective bargaining agreement specifically obligated teachers to take attendance but also prohibited the district leadership from requiring them to do data entry—and taking attendance on a laptop instead of on paper could be deemed to constitute data entry. Multiply that tiny incident by a thousand similar stumbling blocks, and one quickly understands how daunting it is to reengineer a district barnacled with contracts, protocols, ingrained norms, and veteran staff, who may be resistant to reinvention.

Entrepreneurship is necessary precisely because organizations are reluctant to upset established routines and because leaders who seek to do so are hampered by a wealth of obstacles, large and small. The remedy is Schumpeter's "creative destruction" and the opportunity for new ventures to emerge, challenge, and displace the old. A greenfielder believes that the risks of inaction far outweigh those posed by quality-conscious entrepreneurship.

Why Greenfield Schooling Is Necessary

When it comes to this whole notion of educational entrepreneurship, a natural instinct is to read the preceding discussion but still wonder, "Is all this really necessary? This sounds far removed from improving instruction and student engagement—can't we find a straightforward solution?" Experience suggests that the answer is no.

Progress is messy, in part because workable solutions change over time. What worked in the 1950s may not prove as effective in the 2010s. Indeed, in the 2006 volume *Economic Turbulence*, Clair Brown, John Haltiwanger, and Julia Lane observe that the average life span of a Fortune 500 company—from its conception to its disappearance—is only 50 years.[20] And these are the most successful firms in the world. Just think about that for a moment. Most Fortune 500 companies erected before 1950 are no longer with us. Meanwhile, almost every school system in the United States already existed in 1950, and most are the direct descendants of organizations that took shape more than a century ago.

Even more daunting is the idea that we must devise improvement strategies that can be imposed across more than 15,000 districts and in nearly 100,000 schools. Educators do not always realize what a staggering goal this represents. There is not a single sector where widespread efforts across hundreds

or thousands of organizations have resulted in dramatic gains in quality. Radical improvement is more commonly the product of new entrants solving a problem with a particular strategy, and then building an organization that can deliver the breakthrough to a vast population.

If Apple, Amazon, eBay, or Pixar were to operate like today's K–12 districts, they would not deliver their products or services to millions of users. Instead, Amazon would serve the greater Seattle area, and imitators from across the country would flock to the Pacific Northwest, learn Amazon's secrets, and return home to emulate its practices. Expansion would be slow and uneven, many imitators would adopt "best practices" without the talent or focus to execute them properly, and reams of studies would seek to explain Amazon's secrets so that other communities could reliably order books online. Consider, though, that once Amazon devised a viable model, no one thought it necessary for policymakers to entice others to mimic its success; we simply trusted that opportunity and the prospect of rewards would spur an effort to deliver the service as widely as possible. Rather than our repeated efforts to reinvent the wheel in district after district, constantly seeking to bring the mountain to Mohammed, we may fare better by focusing on how we might allow and encourage problem solvers to take their services to a wealth of communities and kids.

The Turnaround Mirage

Some would-be reformers have responded to the disappointing track record of best practice reform by latching onto dramatic proposals for restructuring and "turnarounds." There is cause for caution in relying too heavily on such strategies, however. While "turnarounds" are relatively novel in schooling, they have been a staple of business management for decades. The hope and energy invested in turnaround efforts in other sectors have generally yielded only mixed results. Consulting firms Arthur D. Little and McKinsey & Company have studied implementation of Total Quality Management at hundreds of companies and have determined that about two-thirds fall short of their hoped-for results.[21] Despite the passion, money, and expertise thrown into organizational change, most turnaround initiatives fail to deliver. Leaders of the similarly dramatic "corporate reengineering movement" have reported that the success rate for Fortune 1000 companies is below 50 percent and possibly as low as 20 percent.[22]

Even in the private sector, where management enjoys many more degrees of freedom and where competition can lend a sense of urgency, turnarounds are an iffy proposition. Peter Senge, director of the Center for Organizational Learning at the MIT Sloan School of Management, has observed, "Failure to sustain significant change recurs again and again despite substantial resources committed to the change effort . . . talented and committed people 'driving the change,' and high stakes."[23] Even when everyone agrees change is essential, it is enormously difficult to upend established institutions.

Why It's Hard for Elephants to Dance

In sector after sector, solving new problems—or more effectively addressing old ones—has been the province of new entrants. There is a reason that IBM, for all its resources and muscle in the 1980s, was not able to provide access to personal computing in the way that its new competitors could. An IBM sales force built around selling giant machines to corporations with hands-on customer service was not positioned to compete with Michael Dell selling hand-assembled personal computers through the mail. Similarly, legacy airlines like Pan Am, with their pricey jets and top-heavy workforce, floundered as upstarts like Southwest and JetBlue emerged and prospered.

For all their resources, these corporate giants had to wrestle with the handicaps imposed by their success. Size, habit, and an established position left them lumbering and heavy footed. While young, they built processes, metrics, and hiring and compensation systems in accordance with their needs and the norms of the day. As they got larger, they were equipped to keep doing the same thing but stumbled when technologies, management practices, or consumer demands changed. The tendency of successful firms to become trapped by their own success is what Harvard Business School professor Clayton Christensen termed the "innovator's dilemma" more than a decade ago.[24] Established organizations do well by sticking to the models and practices that have gotten them where they are. This makes them lousy at addressing changing needs, tapping new pools of talent, or harnessing new technologies.

Meanwhile, new organizations—freed from a rigid mentality about how things should be done—crop up, take advantage of new opportunities, and more nimbly tackle looming challenges. Just 40 years ago, today's ubiquitous titans like Wal-Mart and McDonald's were hungry, young companies. Other

household names, like MTV and Starbucks, didn't even exist. Eventually, the nimble and successful organizations of one era become the hidebound institutions of the next, as the practices that made them successful become hardwired and difficult to change. Attuned to the human resources, technology, opportunities, and needs of a particular landscape, once-envied organizations eventually find themselves at a disadvantage as that landscape changes, and new entrants seize upon new tools, technologies, opportunities, and changes in the workforce. The price of success is that yesterday's entrepreneurs come to wrestle with the same sorts of problems that once made them necessary, in a continuous cycle of birth, growth, decay, and regeneration.

Best practice reformers turn a blind eye to a crucial challenge of innovation, which is often not surfacing a new solution but mustering the will and capacity to implement it faithfully. For instance, watching General Motors and Chrysler stumble into bankruptcy in 2008 and 2009, one might have thought their problems were new or unforeseen. In fact, these companies had recognized the need to unwind their onerous labor agreements, control exorbitant labor costs, escape unaffordable pension plans, and downsize dealer networks since at least the 1980s. However, the combination of strong unions, worker expectations, a lack of urgency, and a desire to avoid messy conflict led corporate leaders to repeatedly kick the can down the road, even as GM's and Chrysler's market shares continued to shrink. Only under the shadow of bankruptcy and direct pressure from the U.S. government did these firms find the gumption to attempt previously unthinkable changes.

Similarly, consider the fate of the newspaper industry. Starting in the 1990s, analysts observed that the Internet posed a death threat to the traditional newspaper business model and argued that companies had to exploit the new technology aggressively to reduce costs and rethink their routines. As columnist Michael Kinsley has wryly observed, "If you had told one of the great newspaper moguls of the past that someday it would be possible to publish a newspaper without paying anything for paper, printing, and delivery, he would not have predicted that this would mean catastrophe for the industry."[25] Newspapers largely dismissed critiques of their coverage and concerns about their viability, continuing to operate pretty much as they always had, while tacking on Web operations and giving away their content online. That approach worked fine—for a time. Then, entrepreneurial ventures like Daily

Kos, the Huffington Post, and the Drudge Report increasingly figured out how to seize the new opportunities presented by the Internet greenfield.

The traditional media scrambled to catch up while struggling to slough off the burdensome costs imposed by established contracts, large staffs, printing facilities, and delivery trucks that once reflected their success but now weighed them down. Coverage on the collapse of the newspaper industry focused on the costs, but emerging organizations are not only recreating some of what is being lost but devising new ways to use the technology to create communities, solicit feedback, promote accountability, and boost the relevance and accessibility—and potentially the quality—of coverage. As Kinsley has noted, "If General Motors goes under, there will still be cars. And if the *New York Times* disappears, there will still be news."[26] Keep in mind that Schumpeter's "creative destruction" is as much about creation as about destruction. The disappearance of the old may elicit nostalgia, but it also frees up the resources and talent that can pave the way for new advances.

Schools occupy a more privileged place than the automakers or the newspapers. Providing a public good and funded by public taxes, they know their revenue stream is not going to dry up. For all the vague talk about how schools must change, and change now, automakers were able to hold off the tide for three decades, and newspapers for 15 years. How long can schools stave off change? The honest truth is they can probably sit fast for many years to come, but whose interests would it serve to do so? Retooling schools will doubtless be uncomfortable for many adults, but it is the right thing to do for the students. A greenfielder insists that we devote our energy not to holding the fort but to embracing transformation.

The Role of the Entrepreneur

Entrepreneurs devise better solutions and build organizations to deliver these solutions to thousands and then millions of people, upsetting the reigning titans. They are the men and women who launch the FedExes and Googles and make routine what was once deemed impossible, whether that's shipping a package anywhere on Earth in a day or tapping humanity's accumulated knowledge in a fraction of a second.

Today's school systems do not attract entrepreneurs. After all, educators and educational leaders are not selected for their ability to conceive of

radically new ideas or build new organizations. That is no surprise, as this is not the work they are asked to do; they are typically selected to serve as stewards of long-standing and relatively stable organizations.

When it comes to understanding just what skills and traits an entrepreneur requires, there is cause to be wary of sweeping generalizations. But successful entrepreneurs do generally exhibit a broad set of common traits. Bryan Hassel of Public Impact has identified six key traits that these individuals tend to share:

- *A Need for Achievement* and a tendency to set high goals and pursue them relentlessly, with clear metrics for success.
- *An Urgent Approach to Problem-Solving* in which they relentlessly seek out solutions, trying and discarding failed strategies.
- *An Internal Locus of Control* in which they deem themselves as responsible for the outcomes of their actions and are unwilling to make excuses for failure.
- *A Tolerance for Ambiguity* and a powerful ability to flexibly adapt as conditions warrant.
- *A Preference for Strategic Influencing*. Though they may have strong interpersonal skills, they focus less on cultivating long-term relationships and more on using personal relationships to address immediate organizational needs.
- *A Bias for Action through Organization-Building*. As Smith and Petersen have written, "[Entrepreneurs'] sense of urgency and drive to achieve leads them to take action by creating new organizations that will make their vision a reality."[27]

Entrepreneurs have the chutzpah and hubris to take on daunting projects, with the conviction that they have the determination and talent to succeed. As Wendy Kopp, who founded Teach For America in 1989 as a newly minted Princeton graduate, has noted, "Many people could not accept that a young woman with no real-world experience could possibly run such an ambitious, untested enterprise."[28]

Education Entrepreneurs Don't Just Start Schools

Educational entrepreneurs serve a variety of needs. They seek to teach children who have been ill-served, improve the quality of educators and school

leaders, provide more effective tools to educators, and deliver services in more useful and accessible ways. In short, they tackle the same problems as other educators; the difference is in how they go about it. These entrepreneurial types can be grouped into three broad categories.

The best-known entrepreneurs are those who launch new schools and networks of schools. These *school builders* include a variety of charter management organizations and "mom and pop" efforts and include such well-known ventures as the National Heritage Academies, High Tech High School, and the Green Dot Public Schools. Contrary to a common misperception, not all entrepreneurs are in the business of opening new schools. A second group of organizations are *talent providers*, focused on improving the quality of instruction and leadership by finding more promising ways to recruit, develop, and support teachers and school leaders. A third set of ventures is composed of *tool builders* and *service providers*—entrepreneurs who provide distance learning, instructional devices, data systems, curricula, educational programs, or other services that leverage technology or research.

Many Flavors of Education Entrepreneurs

In the 2009 report Stimulating Excellence, Public Impact analysts Bryan Hassel and Julie Kowal classify three general categories of entrepreneurs and offer several examples of each. They highlight entrepreneurs who open charter schools, those who attract or cultivate talent, and those who provide a variety of services to families or schools.

Charter schools. Aspire Public Schools operates charter schools in California, with an emphasis on serving low-income communities. In 2008, Aspire served more than 6,000 students in 21 schools throughout the state. The Knowledge Is Power Program (KIPP), the largest nonprofit charter school network, operates 66 schools based on the same fundamental model in 19 states and Washington, DC. Smaller clusters of schools are also emerging through charter management organizations (CMOs) such as Ascend Learning, based in New York City. Ascend opened its first college-preparatory elementary school in 2008 and plans to open a second school in 2009. The MATCH middle and high schools follow a rigorous college-preparatory focus and serve approximately 300 students in two schools located in the Boston area.

Human capital builders. New Leaders for New Schools (NLNS) recruits and trains individuals to become principals in both charter and district-run schools in high-need urban areas. Over 400 New Leaders currently lead schools in disadvantaged communities across the country. Teach For America (TFA) has mobilized 20,000 of the nation's most successful college graduates to close the achievement gap in underserved urban and rural schools across the United States. The New Teacher

Project (TNTP) partners with school districts to recruit, train, select, and hire high-quality teachers, often from non-traditional routes. TNTP also works with school districts to improve their human resources systems. New Schools for New Orleans, a nonprofit created to build the supply of high-quality schools in the aftermath of Hurricane Katrina, helps launch new charter schools; works with NLNS, TNTP, TFA, and other entrepreneurial organizations to attract and prepare teachers for New Orleans schools; and supports advocacy on behalf of public education in New Orleans.

Service providers. Citizen Schools operates a high-quality, hands-on after-school program and apprenticeships for 6th, 7th, and 8th grade students in seven states across the country. College Summit provides schools, districts, and colleges with strategies and tools to build their capacity to increase the number of students who go to college. K12 Inc. operates full-time virtual public schools in several states and provides a custom curriculum and learning tools for traditional and homeschool instruction. SchoolNet provides real-time data, reports, tools, and content to help teachers, schools, and districts assess students' reading progress and individualize instruction. Wireless Generation markets educational technology that allows teachers to monitor students' progress using handheld computers that enable them to analyze data and customize their instruction to students' needs. GreatSchools.net, an online database and Web community, provides parents and policymakers with data and reviews of every public school in the United States.[29]

How Entrepreneurs Serve the Larger System

As Smith and Petersen have noted, entrepreneurs are currently playing three key roles when it comes to school improvement.[30] The first is the role of change agent. Entrepreneurs can demonstrate what is possible when resources are used differently and point the way toward sensible changes in policy and practice. For example, Teach For America has directly touched more than 20,000 recruits and the millions of students whom those teachers have taught, but TFA's greater impact has been reshaping the perception of teaching and the strategies used to recruit and prepare teachers.

Second, entrepreneurs can attract other individuals with skills and mindsets that are often scarce in K–12 schooling. Entrepreneurial organizations appeal to achievement-oriented employees who might otherwise be repelled by the more bureaucratic workings of public education. These employees develop results-based cultures while sacrificing the security of employment guarantees and seniority-based progression. "I have all the agility in the world—and I have nobody to blame but myself if I don't succeed," explains

Larry Rosenstock, the former carpenter/lawyer/professor/principal-turned-entrepreneur whom we met earlier in the chapter.[31]

A third contribution of entrepreneurs is to create laboratories for experimentation. As problem solvers, entrepreneurs are constantly learning, reviewing progress and correcting course. While this is what we hope districts and schools will do, it is far easier for entrepreneurial organizations to develop new practices. For instance, Green Dot Public Schools, a charter school organization launched in Los Angeles in 1999 by novelist and political activist Steve Barr, has pioneered a "thin contract" that serves as a much more flexible, less bureaucratic alternative to the conventional labor agreement. This kind of experiment is far more difficult, if not impossible, to execute within the existing routines and machinery in most districts.

The Key Role of District and State Leaders

The discussion thus far might seem to imply that greenfield schooling happens outside the purview of traditional districts and thus has little to do with today's state and district leaders. Nothing could be farther from the truth. As Columbia University Teachers College professor Jeffrey Henig has explained, the dominance of laws and public funds over K–12 education means that public officials will always set the boundaries when it comes to reinventing schooling.[32] Creating greenfield depends crucially on the willingness of state and district officials to sow opportunities for new ventures to take root and thrive. Lack of interest or opposition will not entirely squelch these ventures but will surely stifle their emergence and retard their growth. Building a better mousetrap is irrelevant if states or districts won't permit it to be sold.

Ultimately, the promise of High Tech High School, Green Dot, Ascend Learning, and many other ventures like them rests on the actions of school, district, and state officials. Matt Candler, hired in 2001 as KIPP's first vice president of school development, offers a telling anecdote on this count.[33] Candler was charged with equipping school leaders to open up new campuses across the country. He recalls that local efforts to ensure funding, facilities, and school autonomy were the key to expansion. Candler explains, "It was easy to train blazers [KIPP staff tasked with "trailblazing" the way for new schools] on how to diagnose the fiscal and facilities landscape in a city, but teaching folks to have a good read on the freedom we needed was harder. We were

looking for congruence, especially between those folks who wanted us in town and those who were going to be our bosses—the state and district staffers or board members who authorized and oversaw charter schools. Our first all-blazer road trip illustrates how important diagnosing freedom was to KIPP."

He recalls, "In late 2001, the blazers all flew into Atlanta. . . . Our destination was Thomasville, Georgia." KIPP enthusiasts, including Georgia Governor Roy Barnes, had lobbied the superintendent, and KIPP was on the Thomasville school board agenda for that afternoon. Candler notes, "In Georgia, the local board had to approve any new school for it to receive full funding, and we wanted a unanimous affirmation of KIPP from the board. We walked the superintendent through our presentation, and he explained that we might meet some resistance in the school board."

Candler remembers that, at 5:00 p.m., "We filed into the board room behind Marni [Mohr, a member of the KIPP team]. She delivered a flawless explanation of KIPP and explained what the foundation would do to support a new KIPP school in Thomasville. She finished up and asked for questions. She got nothing. Not a question. Not a single comment. No 'Thank you,' no 'No thank you.' Marni would summarize the situation later: 'Crickets. I could hear crickets chirping outside.' "

KIPP did not open a school in Thomasville, Candler notes, but the organization learned a great lesson. He explains, "The authorizer—in this case, the district itself—had little interest in KIPP, much less in new schools as a vehicle for change in its system. . . . If leadership in a city really wanted KIPP to be a part of their reform agenda, they had to invest in making sure the people who would actually approve schools—the authorizers and those who run the system day-to-day—were on the same page and valued new high-quality school creation. That was not the case in Thomasville."

K–12 schooling is not like computer software or dry cleaning, where the central question is whether an entrepreneur can devise a good product, convince customers to buy it, and outmaneuver competitors. Instead, it is fused with thorny questions of public policy, the public weal, social justice, and public outlays. The ability of greenfield ventures to thrive therefore depends heavily on state officials, local school districts, and regulations. Why should those officials want to be helpful? What can they do to be helpful? Those are among the questions this book will tackle.

What About Democratic Education?

Some critics worry that greenfield schooling is somehow at odds with the democratic values enshrined in public education or that it is a recipe for inequity. In truth, it is the existing industrial-age model of schooling that is most problematic for urban and rural students, and it is in these locales that abandoning the standardized, bureaucratic model holds the most promise for students and educators. Such a shift is entirely compatible with the traditions of American democracy. As University of Washington professor Paul Hill has argued, "A Jeffersonian version of democracy . . . expects arrangements to be temporary, and institutions to be re-thought fundamentally as times and needs change."[34] Greenfield proceeds from the premise that such a Jeffersonian vision is both true to democratic principles and suited to the challenges of our age.

Some greenfield skeptics have argued that increasing the role of private nonprofits or for-profits in schooling is a de facto retreat from public schooling. In fact, even champions of free markets like John Stuart Mill and Milton Friedman have recognized that education is a public good as well as a private one, and have argued for state funding. Mill even called for state testing to ensure that all children are adequately served. However, stipulating a public role in funding and overseeing quality should not dictate how teaching and learning are provided. Legislators routinely craft policies intended to address various public needs but rely upon both public agencies and private firms to execute them. In such cases, we generally accept that a public service is being rendered regardless of who provides it.

After all, in the United States, the Social Security Administration, the Environmental Protection Agency, the Department of Education, and just about every other government agency contracts with private firms to provide public services and pursue public goals. We are still comfortable asserting that these institutions are serving public ends because providers are paid with public dollars, monitored by public agencies, and directed by public designs. In education, for-profit firms have long provided school districts with everything from textbooks to facilities, and few have suggested that this practice is problematic. So it is unclear why allowing new school builders, tool builders, or talent providers to play a larger role is threatening, so long as the state is providing for the education of all students and providers are held accountable in sensible ways.

There are also critics who deem it morally problematic that some new ventures are for-profit. The logic behind this assertion is a bit murky. For one thing, we have a long tradition of for-profit ventures supplying pencils, desks, computers, professional development, and a host of other products and services to schools. For another, as scholars have noted, "It is almost a paradox of American culture that we applaud entrepreneurs who make their fortune with frivolous products, such as the 'Pet Rock,' but chastise those who would make the same profit . . . trying to make the world a better place."[35]

From an Industrial to an Entrepreneurial Society

Rather than wonder whether we can justify a greenfield approach to schooling, the real question is whether we can make the case for clinging to our industrial-era systems. Not only have traditional reform stratagems fallen short, but they are also increasingly ill-suited for a sector at the heart of a knowledge economy. The system of schooling that emerged from the Common School Movement and the Progressive Era, whatever its merits once were, is no longer equal to meeting contemporary demands.

At the same time, a sweeping technological and managerial revolution has reordered society, creating opportunities and unleashing tools simply unimaginable a half-century ago. Indeed, Obama administration economic guru and former Harvard University president Lawrence Summers has suggested that "the world is experiencing the third biggest economic revolution of the past millennium alongside the Renaissance and the Industrial Revolution."[36]

"At any given time," Carl Schramm, president of the Ewing Marion Kauffman Foundation, has observed, "15 percent of the [U.S.] population is running their own companies"; these entrepreneurs "now create more than half the new jobs in America," and "we now live in the most entrepreneurial time in history."[37] Today, nearly half a million new U.S. businesses are created each month; new firms are now launched more frequently than babies are born![38]

In the 1970s, the popular face of commercial success was provided by the veteran heads of America's unrivaled corporate giants like General Motors, TWA, and AT&T. In the 1990s, that changed. Today, a similar gallery of icons would feature those who built successful ventures from scratch—figures like Bill Gates, Michael Dell, and Steve Jobs.

Dramatic advances in technology, transportation, and data storage have created new possibilities for autonomy, decentralization, and customization. In 1993, the Internet as we know it did not exist, and the U.S. Census Bureau reported that just 23 percent of the nation's households owned a personal computer; by 2003, when these data were most recently collected, 62 percent did.[39] In 2008, 25 states had established a virtual school, and every state had established curricular standards

that included technology.[40] The iPod didn't exist in 2000; by the end of 2008, more than 173 million had been sold.[41] In short, a technological revolution has swept through U.S. homes and schools, creating new opportunities for communication, instruction, and operations.

The Book from Here

While it feels like a call for dramatic change (and it is), the defining characteristic of greenfield schooling is a profound humility deeply rooted in American traditions of pluralism, invention, and enterprise. A greenfielder does not presume that we know how to meet any of our pressing educational challenges—only that we should be skeptical of silver bullets and best practices, strip away formal and informal barriers that impede entrepreneurs, devise quality control and accountability systems, and find ways to provide the talent and resources that new ventures require.

Just as effective schools will not miraculously emerge without careful attention to instruction, curriculum, and leadership, so dynamic problem solvers will not serendipitously emerge in a risk-averse, bureaucratic sector or without attention to opportunity, accountability, talent, and resources. Chapter 2, "Tilling the Field," explains what it means to create greenfield and sketches the broad dimensions of what such efforts entail. Chapter 3, "Barriers," discusses the first, essential step of removing the formal and informal impediments that trip up entrepreneurs. Chapter 4, "Quality," addresses the need to focus on performance and to hold new and old providers accountable for the caliber and cost-effectiveness of their work, while ensuring that accountability enables, rather than stifles, creative problem solving. Chapter 5, "Talent," notes that the single most important resource for fertile greenfield is an abundance of human capital. Chapter 6, "Money," addresses the other key ingredient for new ventures: where entrepreneurs get capital and how support can fuel energetic problem solving. Finally, Chapter 7, "Getting Started," offers some guidance for educators, policymakers, philanthropists, and reformers, sketching principles that can help ensure that 21st century schooling becomes the creative, dynamic space that it can and should be. To begin, let us turn to the question of just what it means to cultivate greenfield.