



FEATURE
ARTICLE

Recognize that “disrupting your business model” is a marathon, not a sprint.

It’s Officially Time to Self-Disrupt

For those who are not actively considering the disruptive technological forces that are at play and gaining traction in the marketplace, consider this your wake-up call. If you learn nothing more by reading this, know that if you don’t actively embrace revolutionary technology disruption soon, you are choosing to lose. Lose what, you ask? Your profitability, your revenue, your business’s very existence. In the pages that follow, we will:

1. Outline why traditional approaches to change analysis and strategic planning will fail you.
2. Introduce a few of the disruptors you should be actively learning about.
3. Provide an example of why people and organizations misread what is happening and make bad strategic choices as a result.
4. Suggest how to start on this exciting and terrifying journey.



88% of the companies that were in the Fortune 500 in 1955 no longer exist,¹ mostly for reasons other than being acquired. They went bankrupt, closed, sold off assets, or otherwise ceased as an ongoing operation. They were diverse in their industries, geographies, customers served, pricing strategies, employees, ownerships, partnerships, cultures, and visions for the future.



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**WE HAVE CONFRONTED
DIGITAL DISRUPTION.
WE HAVE LEARNED IT.
WE HAVE DEBATED IT.
WE HAVE ACCEPTED IT.
WE ARE THRIVING IN IT.**

But what did they have in common? There may have been a few outliers, but you can bet that they all did strategic planning, performed strategic analysis, and hired some of the best and brightest consulting firms, investment banks, advisors, board members, and employees. Did they all plan to go out of business, to close their doors, to cease operations? Of course not! What does this tell you?

Standard approaches to strategic planning and investment analysis are insufficient to plan for significant, transformative, and disruptive change.

From the 1990s through the early 2000s, companies had to respond to the growing age of the internet. New business models emerge, and many established companies stagnated or declined because they were unable or unwilling to adapt. During this time, a plethora of new thinking about business models and strategy in this environment was published.

We have been reading about technology revolution and digital disruption for decades. Industries, companies, employees, and customers have adjusted well to the internet.

A whole generation of people have grown up never knowing a time when there was no internet.

While new digital features and capabilities pop up regularly, from the outside it appears that many industries have settled into a new status quo, a new competitive balance. Sure, there are new tech companies at the top of the valuation indexes—the FAANG companies, for example (Facebook, Apple, Amazon, Netflix and Alphabet’s Google).

But companies have learned to adapt their marketing, their organizations, their supply chains, etc., and coexist with the behemoths. Times are good. The trends are good.

The primary weaknesses of traditional approaches to strategic planning and business model evaluation include:

UNDERESTIMATION OF MARKET VELOCITY

They constantly underestimate the speed of change in either how customers perceive value, how incubating and growing substitute business models deliver value, or both.

OVERCONFIDENCE IN PROCESS

An overly quantitative and academic process is intimidating for people who have to live and breathe the business model in between planning periods. “Our people can’t do strategy; we have to hire strategists.”

STALENESS

Static, point-in-time analyses start to go stale the day the work is completed.

IMPLIED FINALITY

Organizations focus on “big bets” and big decisions rather than enabling their teams to organically experiment, learn through doing, and quickly invest in ideas and paths that gain traction.

EXCLUSIVITY

Organizations fail to build their capacity to identify, quantify, and counteract risks as they are identified through the company’s constant market interaction.

HOMOGENEITY OF THOUGHT

They institutionalize homogeneity of strategy by adopting tools such as net present value and balanced scorecards, creating a culture that is enabled through promotion criteria (don’t fail), etc. According to Gartner, “Scorecards typically designed based on historical successes yield ideas more similar than different.”²

Across most industries, there are record revenues and record profits. Many countries are experiencing record low unemployment, low inflation, and an ability to withstand economic shocks that might have tilted countries or even continents into recession (think Brexit, for example).

We have confronted digital disruption. We have learned it. We have debated it. We have accepted it. We are thriving in it.

Against this backdrop of record profits and revenues in the age of technology disruption, companies are not doing nearly enough to vaccinate their business models against the real digital disruption. Many companies are not looking far enough back in history to understand the cyclical nature of technology disruption. We may be over the hump of the internet era, but we are on the verge of several new advancements that are going to dramatically shift the status quo.

The disruption of the last 20 years is just the beginning. Technology innovation never sleeps and can quickly make your business—or even your industry—obsolete while your organization rests.

If we could measure the pace of disruption at any given time, we would find that we are at an inflection point caused by the convergence of technologies that is occurring even as we speak. Signs and signals of increasing disruption are everywhere. If your organization is not actively engaged in the process of business model disruption, it may be because it is too focused on the here and now and not sensing and reading the market carefully enough.

Take some time and start searching the internet. Look for technology change and disruptors; you will find clues everywhere. Take Forbes.com's Michael Gale and his analysis of the impact of McDonald's April 2019 purchase of artificial intelligence company Dynamic Yield.

*"[T]he inter-connected world we live in...is the most complex and possibly most exciting state of change it has experienced since the first industrial revolution and certainly since Ray Kroc first brought the brand to life. There is nothing digital about eating a burger. But that does not mean that the experience of ordering, receiving, and going back for a burger should not be dominated by digital knowledge markers. This type of deal is going to be commonplace for companies looking to leapfrog old and potentially new competitors."*³

Because McDonald's is buying an artificial intelligence company, should you? Or maybe there are other disruptors you need to be assimilating, accumulating, or at least understanding. What is the takeaway for your company from this?

So, you adapted to the internet. Congratulations! Meet the internet's brothers, sisters, cousins, children, nieces, and nephews:

- Edge computing
- Augmented reality/virtual reality
- 3-D printing
- Artificial intelligence (machine learning, deep learning)
- Internet of things
- Blockchain
- 5G

Edge computing

Driven by a need for real-time decision making, edge computing is the movement of pushing processing and storage from the cloud closer to where the local data is needed. This shift removes the cloud's latency and enhances the use cases for many new technologies.

MILITARY DRONES: Real-time information processed on the drone allows constant connectivity with the command center and ground troops, decreasing milliseconds of latency that could be the difference in successful missions.

AUTONOMOUS VEHICLES: Edge computing enhances transportation safety by enabling better vehicle performance and better understanding of road conditions (e.g., weather, debris, detours, accidents).

WEARABLE HEALTH DEVICES: Edge computing improves rural medicine by gathering, storing, generating, and analyzing critical patient data in areas with limited connectivity to network infrastructure.

Augmented reality

AR is an interactive experience that superimposes real-world scenes with digital information. Unlike virtual reality, augmented reality does not create artificial environments.

EDUCATION: AR can create interactive models for learning and training across most academic disciplines.

TOURISM: AR can augment sightseeing information and data about destinations.

ART: AR can provide real-time information about art pieces anywhere.

3-D printing

This process joins material, typically layer by layer, under computer control to create a three-dimensional object.

AEROSPACE: The technology can create structures with high strength-to-weight ratios and the possibility to combine multiple components into a single part.

AUTOMOTIVE: Professionals use 3-D printing to create custom jigs and fixtures more quickly and cheaper than traditional computer numeric control machines.

ENTERTAINMENT: Filmmakers today use 3-D printing to bring to life objects of their imagination as props.

Artificial intelligence

AI is the simulation of human intelligence through machines by combining significant amounts of data with rapid, repetitive processing and logical algorithms.

GPS NAVIGATION: AI enhances applications to determine the optimal route to take in the current and changing conditions.

Internet of things

IoT expands internet connectivity into physical devices and everyday objects to enable them to send and receive data to and from each other.

SMART EQUIPMENT: IoT provides machine operators an instant view into key indicators of their equipment, including when replacement is required.

Blockchain

A time-stamped series of unchangeable data records that are linked using cryptography.

VOTING: Blockchain technology can create secure, transparent voting systems that reduce opportunities for voter fraud.

5G

The latest generation of cellular technology aims to increase data communication speeds by up to three times current capability.

POINT-OF-SALE SYSTEMS: 5G technology can enhance connectivity for retailers in any location to point-of-sale systems and back-office devices.

These technologies by themselves are complex, disruptive, and transformative. Each one challenges you to ascertain how far they will go (will they have “legs”), what their impact will be, and how much time you have before the impact happens.

Even more challenging is how these technologies will interrelate, complicating the opportunity for value creation and the disruption that accompanies it.

One popular watercooler discussion centers on the concept of the self-driving car. The self-driving car is enabled by the combination of many disruptive technologies, including, but not limited to AI, IoT, and 5G. As this application of technology evolves, industry-level considerations extend far beyond the obvious.

Imagine a scenario where the winning business model includes three to four national fleets of cars that sell subscriptions to vehicles rather than selling ownership of the car. Much as you schedule a meeting in your calendar today, you might simply schedule a commute to work, say at 7:30 in the morning, and a return trip by 6 p.m.

Or perhaps you use the service much like you use Uber today. You would have already entered your travel preferences, such as a preferred carpool partner versus a willingness to ride with a stranger. The subscription service (most likely owned by Uber, Google, Apple, Tesla, or GM) will likely have several levels of service, and will likely have different pricing based upon the time of day and the subsequent demand, etc.

In this scenario, what changes, and for whom? Search the internet for “implications of driverless or self-driving cars” and you will see many examples of disruption that will occur in the next 10 years. Consider some quick examples that illustrate the depth and breadth of disruption that will impact all levels of business and society in the table on page 53.

Self-driving cars are just one example of multiple technologies organized as a system to disrupt a major portion of the economy. The impacts are widespread and massive.

Can you see your company or industry being affected by these disruptors? Does your company have a plan for how to benefit from or survive this coming change? Knowing that these capabilities are being tested throughout the country every day, governments are passing laws to enable it, and venture capital is streaming into the sector. Are you doing enough to be prepared?

Or, like many, has your company taken a wait-and-see or curiosity approach? One reason many companies might be behind in preparing for this change is that the assessment of technologies and their impact is often surface level and insufficient.

To illustrate, we will continue with the example of self-driving cars. One of the popular conversations happening on a seemingly daily basis is the apparent ethical dilemma presented by this evolving technology. There are many derivations of the dilemma, but here is one that was on the radio recently.

The impact of disruption from self-driving cars:

| WHO IS AFFECTED? | WHAT CHANGED? | IMPLICATION |
|-------------------------------------|---|---|
| CONSUMER | Decreased car ownership. No car insurance. More time to work, do chores, or enjoy entertainment. | Benefits to consumers are substantial, leading to confidence that this disruption is real and limited only by technology and laws. |
| VEHICLE MANUFACTURER | No longer selling vehicles to millions of people. The limited number of buyers shifts power from the manufacturer to the buyer. Cars become commodities. Significant reduction in the number of vehicles manufactured annually due to a reduction in accidents and efficiency gains within transportation networks. | Car manufacturers that don't become part of the subscription service risk being disintermediated out of business. |
| AUTOMOTIVE INDUSTRY SUPPLIER | Reduction in number of cars and parts manufactured due to reasons cited above. | Depression within the industry leads to major consolidation. |
| CAR DEALER | No need for car dealers. | Car dealers go out of business or become "repair and refurbishment" networks for the subscription companies. |
| INSURANCE COMPANY | Subscription networks most likely self-insure. At a minimum, the insurance markets drastically change. | Insurance companies potentially lose billions of revenue and profits |
| BANK | Subscription networks own the cars, eliminating or drastically reducing the car financing business. | Banks potentially lose billions of revenue and profits. |
| POLICE AND COURTS | Dramatic reduction in traffic tickets, parking tickets, and other crimes. Dramatic reduction in revenue to the state. | Refocus resources to other areas/needs or dramatic reduction in government workforce. |
| HEALTH CARE | Most organ donations come from victims of traffic accidents. The reduction in serious accidents seriously limits the availability of organs. | Illnesses currently cured by organ transplant need to be cured through new medicines or solutions. |
| REPAIR SHOPS | Subscription networks repair their own cars or contract out the work. | Repair shops either consolidate dramatically or cease to exist. |
| REAL ESTATE | Consumers no longer need garages. Less parking is required in city centers and most other places. | In expensive cities such as San Francisco, you could imagine a healthy garage apartment movement developing. Parking garages are converted to other uses. |
| GOVERNMENT | Taxes (sales tax), license revenue, property tax shift from consumers to businesses who traditionally are more adept at tax avoidance. | Governments must adapt their tax strategies while simultaneously learning how to engage technologies for "smart cities," IoT management of public utilities, and other technology disruptions. They must adapt while keeping the lights on. |



“Say you are in a self-driving car on a winding road heading up a mountain. There is a cliff and a nonexistent shoulder on the side of the road. All of a sudden, the car senses it is going to hit a school bus at high speed. In this situation, do you want the car to drive you off the cliff, certainly killing you, or do you want the car to hit the school bus, possibly killing children?”

While this interesting topic recently generated more than 30 minutes of calls to a radio talk show, the scenario has several factual errors. It includes assumption biases that dilute the quality of the discussion while also undermining discussion about the truly difficult trade-offs serious people must make.

How, do you ask? Consumers tend to believe self-driving cars are less safe than today’s vehicles. Yet this perception is anecdotal at best and emotional at worst. Kartik Hosanagar’s new book, *A Human’s Guide to Machine Intelligence*, explores how algorithms affect the lives of millions of people. Here is what he found when assessing the reality of self-driving cars against consumer opinion:

“In more than 90 percent of conventional crashes, human error is to blame. According to some estimates, self-driving cars could save up to 1.5 million lives just in the United States and close to 50 million lives globally in

the next 50 years. Yet in an April 2018 poll, 50 percent of the respondents said they believed autonomous cars were less safe than human drivers.”⁴

Where is the disconnect? Perhaps we as a society or individuals are hard-wired to allow anecdotal evidence and emotion to drive our opinions and our decisions. Or perhaps we are all just too busy with the “trees” to step back and look at the “forest.”

In this case, understanding the “forest” is absolutely critical if you, as a business leader, are to evaluate the efficacy of driverless transportation and its impact. If we were to evaluate disruptive technologies and yes, predict how they will converge to deliver an effective and impactful driverless experience, we can then evaluate whether this solution has “legs” and needs to be considered for impact on our businesses.

Some misunderstandings about AI as it now exists are included in the table below.

The scenario presumes that:

AI-ENABLED SELF-DRIVING CARS WILL WORK LIKE HUMAN-DRIVEN CARS

In reality, the school bus and the car would have known they were on a dangerous trajectory long before the scenario develops. AI doesn’t need to “see” other cars like humans. With 5G communications, one level of AI will constantly analyze data from other vehicles in the vicinity. AI will also access data from existing traffic apps such as Waze. And it will also have IoT data from the car—radar and computer-vision constantly assessing the surroundings in ways humans cannot.⁵

AI LEARNS LIKE HUMANS LEARN

In a human example, each driver has the experience of driving the miles they have driven since they were 15 or 16 years old. So a typical 46-year-old could be said to have 30 years of driving experience. Assuming 10,000 miles a year, that driver has driven 300,000 miles. AI has the driving experience of every driver and every self-driving car that is connected to the network. So 100,000 self-driving cars in one year will gain the experience of 1 billion miles.

IF YOU HAVE NEVER DRIVEN THE ROAD, IT IS UNFAMILIAR TO AI

If you as a person drive to a new place—say, Atlanta to Hilton Head for a summer vacation—then you are driving potentially 300 miles of unfamiliar roads. You don’t know where water puddles on the highway are, where the dangerous intersections are, or where turns are sharper with hidden obstacles. But AI does. As soon as one car drives a road, AI starts learning. Most places we drive are covered by hundreds, if not thousands of cars per day, which means AI becomes an expert in one day.

WE COULDN’T HAVE ANTICIPATED A RISKY DRIVING SITUATION, SO NEITHER CAN AI

AI remembers history. It will know that the road is winding, with no shoulder. These are risk factors that will inform the model, increasing the probability of an issue. What can AI do to reduce the risk to zero? It can slow the car down. What else can AI do? AI will know a large vehicle (the school bus) is coming, and can predict where the vehicle and the school bus will pass. AI can predict the safest point for the passage to occur and can slow down or speed up to optimize the timing. Alternatively, a rule can be established that slows all cars around school buses. And AI will have volumes of history on safe and efficient driving. How does wind impact driving safety and efficiency? Light rain? Heavy rain? Fog? Clouds? On New Year’s? On a Wednesday?

We as business leaders cannot allow anecdotal analysis and emotional responses to limit our understanding of disruptive technologies and their potential impact on the businesses we have a fundamental responsibility to protect. Yes, these technologies are complex, and even more so when they are combined to supplement and augment each other.

How do you navigate and strategize with so much complex change around you, not to mention all of the other things you have to worry about when it comes to your company's strategy and business model? Many aspects of this question are addressed by related articles (culture, team building, traditional strategic planning, organization structure, etc., etc.) We focus on the analytical and strategic work of catching up and future-proofing your business model. The work needs to start now.

Of course, everyone on your team is overworked already, right? So how do you get it done?

Recognize the reality and inevitability of change.

Understand this is among the most important work you should be doing right now. Hundreds, perhaps thousands of large and small companies will either disappear or have their profitability deteriorated by these trends over the next 10-15 years.

If you have ever worked for a company that let a trend "happen to

it" instead of "making it happen," you know what you are signing up for if you do nothing.

Get your organization comfortable with the idea of reinvention.

Recognize that "disrupting your business model" is a marathon, not a sprint. You won't be implementing a perfect business model in 18 months. Instead, you are embarking on a series of hundreds, if not thousands of continuous improvements to the business. As you pursue evolution in your business model, an increasing percentage of your team will evolve as they gain comfort in the data-driven and analytical approaches to decision-making that the disruptions demand.

Start small, but start fast with a selected team approach outlined below. You don't need to staff tens or hundreds of people. Get a handful of folks together and get started. Where you go from there will become evident by what the team learns and by the results the team is able to achieve.

No need to panic. In his new book, *From Gutenberg to Google*, former Federal Communications Commission Chair Tom Wheeler explains, "We shouldn't break our arms patting ourselves on the back and saying, 'Oh, there's never been change like this before.'"⁶

There has been change like this before—technological change. From the printing press to the telegraph, telephone, and railroad, we have dealt

with business and social upheaval many times throughout history. People and companies have survived it.

Separate the divergent workstream from your primary organizational planning processes and structures.

Get comfortable with having parallel trajectories for your company when it comes to strategic planning. Do you need a vision, a mission, values, culture, targets, KPIs, etc.? Of course you do! Keep a large portion of your organization focused on today, generating cash to pay for transformation.

But remember how we introduced this article: with the mortality rate among Fortune 500 companies that followed the traditional path. This work needs to be separate because it has objectives that cannot be achieved through traditional strategic planning processes—divergence and speed.

Understand that progress is not always clear or linear.

Some technologies lend themselves to linear thinking and traditional KPIs (revenue, gross margin, net income) without setting yourself up for failure. Implementing AI to combat fraud, for instance, is a well-established use case.

But for most of this effort, early goals need to be learning goals. Invest to learn. Allow divergent thinking. When the team identifies an opportunity that can drive near to mid-term

THE GOOD NEWS IS WE DON'T HAVE TO BE PERFECT AS WE TACKLE THE CHALLENGE. AND WE DON'T HAVE TO ACT WITH RECKLESS ABANDON. WE JUST HAVE TO GET STARTED.

profitability, set up a convergent team to lock it in. Keep the primary team divergent. This doesn't mean be wasteful. Your learning goals should be aggressive, quantifiable, measured, and rewarded.

Insist on a new level of speed.

What is the proper pace of change for your industry in the future? How do you know? How has Amazon seemingly maintained its speed even as its size has ballooned from insignificant to world-beater? How can your organization make the same high-quality decisions in the future, but do so at the speed of a disruptor?

As you think about designing the winning business model for your industry, think how you can take time out of your processes to deliver better, faster decisions through the use of technology. Jeff Bezos sums up this goal succinctly in his April 12, 2017, letter to shareholders:

"Day 2 companies make high-quality decisions, but they make high-quality decisions slowly. To keep the energy and dynamism of Day 1, you have to somehow make high-quality, high-velocity decisions. Easy for start-ups and very challenging for large organizations."

Start soon.

A lot of reasons may persuade you this can wait for tomorrow. Perhaps you've read a study that says the most

impactful technologies will take another 10 years to mature. Or perhaps you've read the analyst reports that indicate we are at the top of the "hype" curve.

Who wants to propose a large corporate investment only to have an analyst come out and proclaim that technology is now in the "trough of disillusionment"?

Over your decades in business, you have heard time and again, "This time it is different." It never seems to be the case, right? Well, this time it is different. You need to start sooner than you think. Whatever steps your company is taking down this path, it is time to step on the accelerator. Here's why:

LEARNING TAKES TIME FOR HUMANS. Don't assume these technologies are widgets you can buy off the shelf and apply to your business. You'll read about the "democratization of AI"—and yes, widget-ability is coming—but you cannot afford to wait.

LEARNING TAKES TIME FOR MACHINES. As you investigate AI, you'll read about machine learning and the need to "train the models." The faster you get started, the more learning your AI can do. Accumulating volumes of relevant data to train AI is one of the critical pieces for success. Give your models time to train before the battle becomes world class.

TECHNOLOGIES BUILD UPON EACH OTHER. These technologies are interconnected, and they will logarithmically affect each other. What will enhance IoT and edge computing? The ability to communicate with the systems and processes they need to be optimized. How will they communicate? 5G. Waiting adds risk. You have to get smart not only on three or more technologies at once, but also on how they converge and overlap.

Technology disruption is not only continuing. It's accelerating across the global economy. While it is exciting to think about a future that will be enabled by these technologies, those of us chartered with steering companies through waves of disruption—while continuing to deliver shareholder and stakeholder value—can at times be overwhelmed with the complexity and speed inherent in the disruptions that we face.

The good news is we don't have to be perfect as we tackle the challenge. And we don't have to act with reckless abandon. We just have to get started.

In addition to blogging about business model disruption, the Jabian team will be researching the potential effects of various disruptive technologies and publishing additional articles regularly. If you have ideas, insights, questions, or examples and you'd like to engage with Jabian, please email dan.sterling@jabian.com. We look forward to engaging in this journey together. 🚀

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