

Fortitude Collapse Preparedness (FCP)



Preparing for Black Swan Events and Your Company's Survival

Nassim Taleb's *The Black Swan: the Impact of the Highly Improbable*, is probably the most important, valuable book a businessman or investor can read. Companies die and some flourish when a Black Swan strikes. A Black Swan event is "an outlier, something outside the realm of regular expectations" that "has an extreme impact." Smart investors like Taleb who keep watch for them and position themselves to avoid the damage and profit from the vast changes they drive can make a fortune and keep their companies alive.

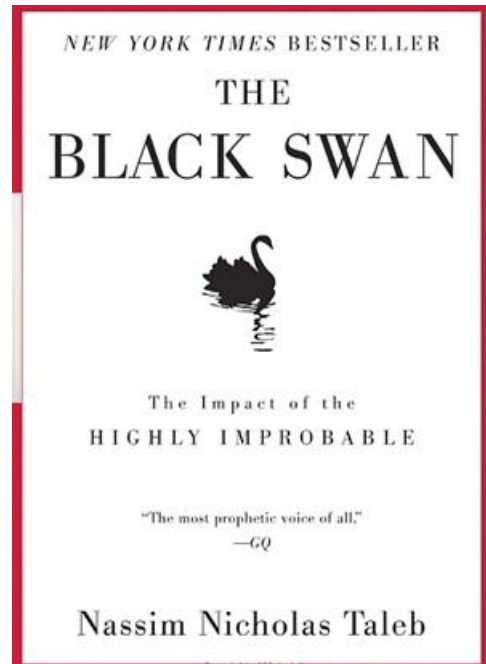
Warren Buffett insists that "The CEO should regard his position #1 as the Chief Risk Officer. Now you have a lot of other functions too, but you should wake up every morning and think about 'is this place built to take everything'?" Very few organizations address the full range of feasible threats to operations, ignoring disasters that some experts say are "inevitable" though unpredictable. When the grid goes down from a nuclear EMP attack or major solar flare, it will take at least a year to repair it. New technologies, including bioengineering, nanotechnology, artificial intelligence, are generating new means for a disaster that could halt economic activity for months, and lead to widespread, long lasting loss of law and order. A bioengineered virus could cause a pandemic that kills hundreds of millions and permanently destroys most companies. Most businesses will not survive a bad collapse, with key people dead, plant and property that is not guarded looted and destroyed. Some people used to doubt that there would be widespread looting during a collapse when police are overwhelmed, but with "organized retail crime" by marauding bands of looters now common place in normal times, it is no longer hard to understand.

None of the above is covered in business risk management or continuity of operations plans. They deal with "normal," historic disasters that have triggered relatively minor disruptions and losses. Our future is increasingly one of major Black Swan disasters that could lead to a collapse lasting from weeks to years. Fortitude Collapse Preparedness defines a "collapse" as an economy that is no longer functioning and widespread loss of law and order. CEOs, as chief Risk Officer, responsible for the survival of the firm, need to have plans for big collapse disasters that could completely destroy the firm.

The belief that nothing can be done is irresponsible and wrong. It is very feasible for most organizations to protect their key people and facilities.

There are investment strategies and standby lines of business that an organization can switch to when a collapse occurs. Taleb uses the term “antifragile” for investments or businesses that are not just able to survive a Black Swan event, but actually benefit from them.¹

The standard corporate risk management practice of classifying risks by severity and probability is very unwise, and potentially disastrous for the firm. You cannot know the probability of a Black Swan event like a nuclear EMP strike on our electric grid or a highly lethal pandemic from a bioengineered virus. You cannot estimate the probability of extremely rare or has never happened before events, so people wrongly assume the likelihood is low. The probability of many new types of disasters coming is high, “inevitable” according to many experts.



In a *Harvard Business Review* article, Nassim Taleb warned that the worst mistake businesses make is to think you can manage risk by predicting extreme events. What Taleb recommends is to identify the full range of feasible disasters and “focus on the consequences—that is, to evaluate the possible impact of extreme events.”²

We don’t recommend you list every possible disaster and design risk mitigation plans for each one. Instead, our methodology involves identifying a broad range of feasible threats and their consequences, grouping the common impacts and effects they’d likely have on your operations and personnel, and then look for risk mitigation measures that can prepare you to deal with a wide range of threats and impacts most effectively. Our risk assessment consulting expertise, methodology, and software makes this comprehensive analysis feasible.

We estimate that the majority of companies, from small to the largest, will not survive a collapse. When the economy is not operating and looting breaks out, escalating into marauders attacking homes and businesses, law and order will disappear. The loss of our electric system, a bad pandemic, could yield a collapse that lasts for over a year; but even months long collapses could kill most of a company’s personnel with facilities looted and destroyed. With no utilities operating, people will be tearing down walls and stealing wood and anything they can burn in wood stoves. Employees who do survive, may be dislocated and unable to contact the company.

¹ Nassim Taleb, *Antifragile: Things That Gain from Disorder*, Random House, 2012

² Nassim N. Taleb, Daniel G. Goldstein, and Mark W. Spitznagel. “The Six Mistakes Executives Make in Risk Management,” *Harvard Business Review*, October 2009

99% of firms ignore Buffet's advice to prepare companies to survive any disaster, and the vast majority will be worth nothing, dead, post collapse. Most could recover and resume operations with a little preparation and spending on collapse survival.

Examples of Black Swan risk mitigation, company survival strategies DP has developed

For many companies, a carefully analyzed and selected set of low cost risk mitigation measures, implemented in advance, can likely keep all or key parts of your organization operational, or at least not permanently destroyed, from even big disasters.

- Developed plan to quickly save information and key resources by moving into a , with specific lists of items that must be saved, where they are, who is responsible for securing them, what they need to do, where to take, etc.
- If sourcing from overseas suppliers, find local suppliers you can also source from and give them steady business, even at higher cost, to ensure a relationship and source of supply in a collapse.
- With existing staff, set up a technology and threat watch program to forewarn of industry developments and Black Swan threats.
- Company sponsored shooting club membership for employees and holds periodic private discussions about security plans for facilities and staff in event of a big disaster.
- Added several hidden gun, ammunition, and food storage vaults, radiation detectors and other survival equipment and selected 10 trusted associates to implement survival plans developed during engagement.
- Strategy of shifting to full time operations with reduced staff in a collapse of a product line that will be in demand, opening sleeping facilities, modifying building (prepositioned materials and plans, no construction until collapse), to keep facility and personnel safe.
- Vastly increased company cafeteria food inventory to serve as collapse food stockpile, with contracted food service provider paid small amount to ensure food inventories on hand.
- In new construction and major renovation projects, include small additions/modifications to add collapse measures like guard posts, hidden vaults, storage rooms.
- Implemented plan to work and ally with neighboring businesses, with tentative plans for putting up connecting walls and all agreeing to stockpile key survival items, keep plans confidential.
- Hire associates who can do the normal work but also have skills to do collapse time survival tasks.
- Purchased survival community memberships for key personnel.

- Client in a major food production area purchased old, very low cost, obsolete food canning machinery, stockpiled cans and lids and sealers needed, trained a few personnel on how to set up and operate, made video and training instructions, and stored the equipment. Identified POCs at several leading farm operations nearby with verbal agreements that in collapse they will can their food on a barter basis (keeping a percent of canned food as payment).
- Instituted veteran hiring preference, with veterans briefed on confidential collapse plan to protect facilities, paid a small salary stipend for attending an annual weekend training exercise and agreeing to lead security in a collapse.
- Client decided to abandon all facilities in a collapse, securing just key documents and backup files and developing a collapse communication plan briefed to key personnel to allow reconnecting and rebuilding post collapse.
- Negotiated deal with trusted, local private gun store to buy all their inventory in a collapse in exchange for a small annual payment and company-paid employee discount pricing program at the store.
- Contracted with Fortitude Collapse Preparedness to get threat and Black Swan warnings
- Since company a large employer in town, set up a community survival plan that company runs and helps fund that will include most of the town and all their plant and local employees in a protected survival community. Associates living further out will stay in company facility.
- Formed voluntary group of associates who plan, advise COO, and train on how to keep staff and facility protected in a collapse.
- Negotiated plan with major customer to get higher price in exchange for maintaining larger inventory, diesel generators and tank buy, and guaranteed ability to deliver product for 3 months post major supply interruption or collapse.
- Plan to shift some staff and resources to one facility that will remain open while others shut down in a collapse, with all records, designated equipment, backup tapes transferred to protected facility.
- Negotiated and reached agreement with neighboring company to jointly fund a big solar system with large bank of lithium batteries, integrated propane generators and 10,000 gallons of fuel, for shared use in good times (primarily just the solar power) and collapse.
- Leveraged their R&D Department to add a “Technology Threat Watch Program” at insignificant time/expense, to foresee potential Black Swan events and investment opportunities.
- Offered discounted survival community membership for all personnel (half paid by company) as a new company employee benefit option.
- Purchased big inventory of canned foods stored in unused underground basement space, sealed off with simple wall to conceal and keep cooler.
- Analyzed and changed just in time delivery to include both some inventory for most vulnerable inputs and added purchasing from closer, more reliable suppliers. Investors

briefed on these changes that will raise short term expenses but long term should yield both higher profit (from reduced loss of sales when major disruptions) and increase the ability to the company to keep operating, and thus employees and facilities protected, during a collapse.

- Engaged a small hedge fund investor to partner with, making small hedge bets based on company's threat and technology watch program.

Our collapse survival plans to date have all included some very innovative, unique features tailored to client's specific situation. We propose reasonable, practical options for clients, not proposals to change the core business or unaffordable big spending obligations.

Our future is one of far worse disasters that will yield collapse events that many, perhaps most businesses will not survive. Despite Taleb's advice, the overwhelming majority of organizations continue to ignore new developing threats that are very foreseeable, and with some simple advance preparations, you can avoid falling victim to them and possibly profit from.

While monitoring for threats to your business, it is wise to also look for Black Swan investment opportunities (as Nassim Talib does). Most disasters are not "bolt from the blue" attacks, but emerging threats that are usually reported on, but ignored by 99%+ of the population. If you are prepared to make some hedge investments, puts and calls, on public companies that are poised for great or disastrous change, you may be able to make a quick profit before the calamity that harms everyone hits. Companies can make hedge bets against some of the big public company losers, firms that will profit from the disaster you can invest in, and a very few antifragile investments that will do well against a wide range of pending Black Swan events. DP does not make financial trades for clients, but can provide threat warnings and updates. If you institute a technology and threat watch program, you may also find actionable threat information that lets you make some low (and strictly limited) cost hedge investment bets.

Most clients keep all or most of their adopted plans confidential, including not disclosing to most associates. Fortitude Collapse Preparedness offers complete confidentiality of our consulting work, including destroying all files and notes after the engagement, no risk of unintentional disclosure or discovery.

An example of an "inevitable," pending Black Swan disaster that few are prepared for

A great example of a very foreseeable pending Black Swan threat is a bioengineered viral pandemic released by a terrorist group or nation state like Iran.

Dr. Kurzweil, quoted below, is one of the most brilliant scientists of our era. He was on a U.S. Army Science Advisory Group when he issued this warning of bioterrorism and served as the Director of Engineering for Google.

Black Swans are usually quite foreseeable Case Study on Bioengineered Viral Pandemic

“We have an existential threat now in the form of the possibility of a bioengineered malevolent biological virus. With all the talk of bioterrorism, the possibility of a bioengineer bioterrorism agent gets little and inadequate attention. The tools and knowledge to create a bioengineered pathogen are more widespread than the tools and knowledge to create an atomic weapon, yet it could be far more destructive.”

- Dr. Ray Kurzweil, leading scientist, member of Army Science Advisory Group

We have studied this threat and can provide a list and summary of a dozen experts who describe natural, accidental lab release, or deliberately spread viral pandemics as “inevitable” and “overdue.”³ Through bioengineering a lone terrorist or a Revolutionary Guards lab in Iran can create a human-to-human transmissible version of avian flu, which is 60% lethal. Dr. Tara O’Toole, former director of Johns Hopkins University Center for Civilian Biodefense Strategies, warned in Congressional testimony: “We are in the midst of a bioscientific revolution that will make building and using biological weapons even more deadly and increasingly easy.”⁴ Dr. Miller published an article on the coming “age of bioengineered pandemics and collapse” in *The American Interest*, a leading public policy journal.⁵

<https://www.the-american-interest.com/2016/09/20/the-age-of-designer-plagues/>

³ Contact manager@fortituderanch.com to request this information if interested in learning more details of the bioengineered viral pandemic threat

⁴ Dr. Tara O’Toole, April 2006 testimony to Congress, “Project Bioshield Reauthorization Issues”

⁵ Dr. Drew Miller, “The Age of Designer Plagues,” *The American Interest*, Dec 2016, <https://www.the-american-interest.com/2016/09/20/the-age-of-designer-plagues/>



BIOENGINEERING

The Age of Designer Plagues

DREW MILLER

The
AMERICAN
INTEREST

The growing ease of genetically modifying bacteria and viruses presages real trouble ahead.

The world is likely entering the age of bioengineered viral pandemics and collapse—BVPC for short. New technologies like bioengineering enable terrorist groups, or even one dedicated individual, to modify and release new

The knowledge a terrorist needs to make highly lethal avian (bird) flu human-to-human transmissible, and a deadly pandemic worse than anything mankind has experienced, has been published. For nation states like Iran or Korea, more advanced DNA manipulation technology can be used to make a deadly, highly contagious virus—and a vaccine that only they have. Unlike a conventional or nuclear attack where we could know the attacker and retaliate, we may never be able to identify or prove who released the virus. It is thus the more powerful, perfect weapon to bring down a superpower. You can't compute the likelihood of a natural, accidental, or bioengineered viral pandemic happening this year, but you can be confident it will happen, possibly soon.⁶

⁶ To watch Dr. Drew Miller's presentation on this threat at the national Business Continuity, Disaster Response conference, you can paste in this link, email us to get the link, or go to the advanaapp.com website. http://production.smedia.lvp.llnw.net/e22a085e789441179940e4c3308d7ad2/UQ/LxGEq6s15_hTLKKlBBubejOqjjVZi-oJ1-2oVDh3A/360313-gs-7.mp4?x=0&h=e39882d4cece24ae902a4ff25fc723c

Dr. Nancy Kass, a professor at the Johns Hopkins Institute of Bioethics, warned that “the secondary consequences of severe pandemic influenza could be greater than deaths and illness from influenza itself.”⁷ Few will report to work in a collapse, the economy will quickly shut down, food will not be produced or delivered, looting and marauding will explode. When a pandemic hits, law and order will probably vanish quickly. Food truck drivers will realize that it’s too dangerous for them to drive food into cities or on long trips; too much risk of either catching the virus, or getting attacked by marauders after food. Even in Katrina, which should have been a low risk disaster, the violence scared truck drivers, many refusing to go into New Orleans without military escort.

Our “Just in Time Delivery” economy is extremely vulnerable to even short term disruptions. Taleb and a host of experts have warned that we have built a very fragile economic system. We’ve had world trade for centuries—but for spices and silk and trivial things. The exhibit below summarizes the fragility of our economy and society with just in time daily deliveries of inventory and food traveling long distances, and all our other dependencies. We also have a populace that is dependent and anything but resilient.

Your Enterprise Risk Management plan needs to deal with a collapse in economic activity and loss of law and order, which could be triggered by a pandemic, widespread loss of power, massive earthquake, or just a breakdown in civil society. Ray Dalio, Founder and CEO of the largest hedge fund Bridgewater, recently estimated a 30% chance of civil war in the U.S. over the next decade.⁸ In 2011, the United Kingdom suffered four nights of widespread looting, murders, and crime that could not be controlled, and kept spreading. There was no underlying “trigger” event, it just started up and spread.⁹

The six trends listed in the exhibit below explain why the risks of a collapse in economic activity and loss of law and order is likely. These trends are getting worse. The number of gang members in the world is estimated at several million. Every country has them, especially the U.S. While very difficult to estimate, reports suggest at least 30,000 gangs and 800,000 gang members active across the U.S.

⁷ Nancy Kass, Jean Otto, Daniel O’Brien, and Matthew Minson, “Ethics and Severe Pandemic Influenza: Maintaining Essential Functions Through a Fair and Considered Response,” *Biosecurity and Bioterrorism: Biodefense Strategy, Practice and Science*, Vol 6, #3, 2008, p. 227

⁸ Ray Dalio, quoted in Business Insider, “Ray Dalio predicts there’s a 30% chance the US will break into civil war in the next 10 years,” Dec 1, 2021

⁹ This is described in the briefing noted in footnote 3, or you can email drmiller@advanaapp.com for a copy of the slides that describe this 2011 breakdown in law and order in the UK that is a case study in how a collapse can spread.

Risk of collapse rising rapidly, driven by 6 bad trends

1. New Technologies: DNA manipulation and bioengineering, new means to manufacture nuclear materials, nanotechnology, many others
2. Rising overpopulation
3. Increased economic interdependence, just in time inventories
4. Very high dependence on long-distance food shipments, inadequate local water
5. Less personal resilience
6. More bad people, gangs, with means to raise hell

Combined Effect: More lethal threats against increasingly unstable economy and vulnerable population

7 linked to MS-13 accused of Houston murders

DANE SCHILLER

HOUSTON CHRONICLE

Published 05:30 a.m. Thursday, August 11, 2011

Seven alleged members and associates of the MS-13 street gang are charged with three slayings and committing other mayhem as part of a racketeering operation that killed, robbed and dealt drugs in Houston, officials



Advanced | A³

When you consider the combined effects of these 6 trends; three big conclusions jump out:

1. You should never assume continued operation of the economy and maintenance of law and order
2. You should assume that in a really bad disaster you'll be on your own for security and assistance.
3. Realize the trigger event starting the disaster—a hurricane, a pandemic, a riot, loss of electricity—is not likely to be the biggest problem. It's the aftermath, how bad people exploit it, and turn it into a collapse situation—that's the real disaster and big impact. Business continuity plans almost never deal with the increasingly likely reality of massive, uncontrolled looting and marauder violence that preppers do consider and prepare for.

There are many examples of opportunistic lawlessness; like 1977 when New York City suffered a lightning strike (described in exhibit below), Katrina, the UK loss of law and order in 2011, Baltimore looting in 2016, small “flash mob” events and crime that rarely attracts attention any more, a year of looting, vandalism and arson in Portland in 2021, and the growing problem of marauding bands of retail store looters. When the grid goes down, a real pandemic hits, or other massive disaster strikes, millions of Americans will quickly go violent looting and worse, with police to overwhelmed to stop them. With the threat of catching a virus, or getting robbed or killed by looters and marauders, people won't come to work in a pandemic. Two million

Americans in jails, that can't be kept there without electricity or a guard force coming to work, will have to be released—with little alternative to looting to survive. The problem is real and fairly obvious—but politically incorrect to address, with no lobby group encouraging action, so it is never addressed by Government and rarely in the media. But the warnings are there. Dr. Nancy Kass, a professor at the Johns Hopkins Institute of Bioethics, warned that “the secondary consequences of severe pandemic influenza could be greater than deaths and illness from influenza itself.” The Congressionally sponsored EMP study estimated that if the grid goes down 90% of the population could die.¹⁰ There will be no production, no municipal water systems will function, and people without, the vast majority, will have to steal to survive.

Preparing your organization to survive, and possibly profit from a Black Swan disaster

When was the last time (if ever) your company compared the benefit of reduced investment in inventory to the costs of lost sales when out or losses if a supply chain disruption? Is your company saving a little on just in time delivery at a risk of huge losses from total business shut down due to supply disruption? Do you have plans to protect your associates at home as well as at work from a pandemic? From loss of law and order? Can you operate when the grid goes down, or there is no municipal water system functioning?

In our consulting engagements, we help clients analyze and answer these key questions. The ability to keep operating or recover faster than competitors can yield huge payoffs. In the event of a severe collapse the difference is life or death of the company and key personnel.

We've helped companies design business survival plans; not just business continuity plans. It's hard for some to accept, but in some scenarios you are better off shutting down, securing your plant with a program in place to safeguard your assets, and protect your people. We have helped clients quietly develop and test plans to improve capability to have a secure shut down and better provisions to protect key personnel. Throwing up your hands and saying “we can't prepare for such horrible disasters” is intellectually incorrect and irresponsible. There are sensible, low cost measures you can take to secure your facilities and personnel. Indeed it's generally easier than trying to maintain operations during a severe disruptive threat, easier than trying to keep complex IT systems safe from cyber-attack.

Taleb says the best use of our brain is to be on the lookout for Black Swans and think about how they might happen and the impacts they may have. Taleb's book, *Antifragile: Things that Gain from Disorder* makes a compelling case for anti-fragile investments--an investment that will benefit when something bad occurs. You can often identify companies that will suffer severely from a pandemic: international airlines will suffer huge losses in many Black Swan scenarios,

¹⁰ Paul Bedard, “New EMP warning: US will ‘cease to exist,’ 90 percent of population will die,” Washington Examiner, January 24, 2019

while some companies may benefit. We consult to help companies identify ways to profit from a collapse situation, either via investments, or changes to products and services or operations. Most think of a corporate risk department as an overhead expense, but we've shown clients how the risk management office can contribute to profits by providing investment recommendations for your organization: profiting on a Black Swan disaster or a White Swan opportunity. Identifying and monitoring pending Black Swan events, you can position your organization to survive and perhaps profit from them with preparations to stay operational when competitors can't operate, or switching to an emergency related line of business or investments that soar in value when the Black Swan event happens. When you have identified a pending major threat, you can also recommend investments to profit from the big economic impacts (as Taleb and some hedge funds do).

While 99+% of people are surprised by Black Swan threats, the intelligence community, hedge funds and those who are working to not be surprised can usually predict them and either avoid the damage or profit from them. The impact of new technologies and more people and more threats, plus our increasing vulnerability and the fragility of our economic system and technologies, is that we're going to have a lot more Black Swan disasters.

New Technologies are probably the leading source of Black Swan risks. Disruptive technologies that trigger sudden and unexpected effects are rarely a complete surprise. The effects may be cascading, nonlinear, and difficult to anticipate, but carefully analyzing new technologies, examining their enablers and assessing their likely impact, gives you both warnings of threats and ideas on how to profit from them.

With a technology watch program that can often be an easy add to R&D Dept work, and threat warnings and updates from DP, you can be prepared to either profit from investments, or adjust your operations to be prepared for pending changes, good or bad.

As Taleb and other risk assessment experts have pointed out, many standard risk management practices are very bad—setting you up for failure. All the major commercial business continuity software programs use the traditional risk probability/impact matrix to help companies focus on high likelihood and high impact risks. While it is a common practice, it is extremely unwise and we encourage our clients to reject this approach. It forces you to estimate the probability of Events when you usually cannot estimate their probability. People put in very low probability estimates for Black Swan events since they have not happened before, and then ignore them. Defining “critical risks” that the organization should deal with as those with high consequences and high annual likelihood of occurrence means ignoring Black Swans and being unprepared to survive the consequences when they occur.

The better approach for enterprise risk management is to identify all feasible threats, pay great attention to high impact risks, and don't waste time on the impossible quest of estimating probability of occurrence, which is statistically impossible for rare events. The lead risk

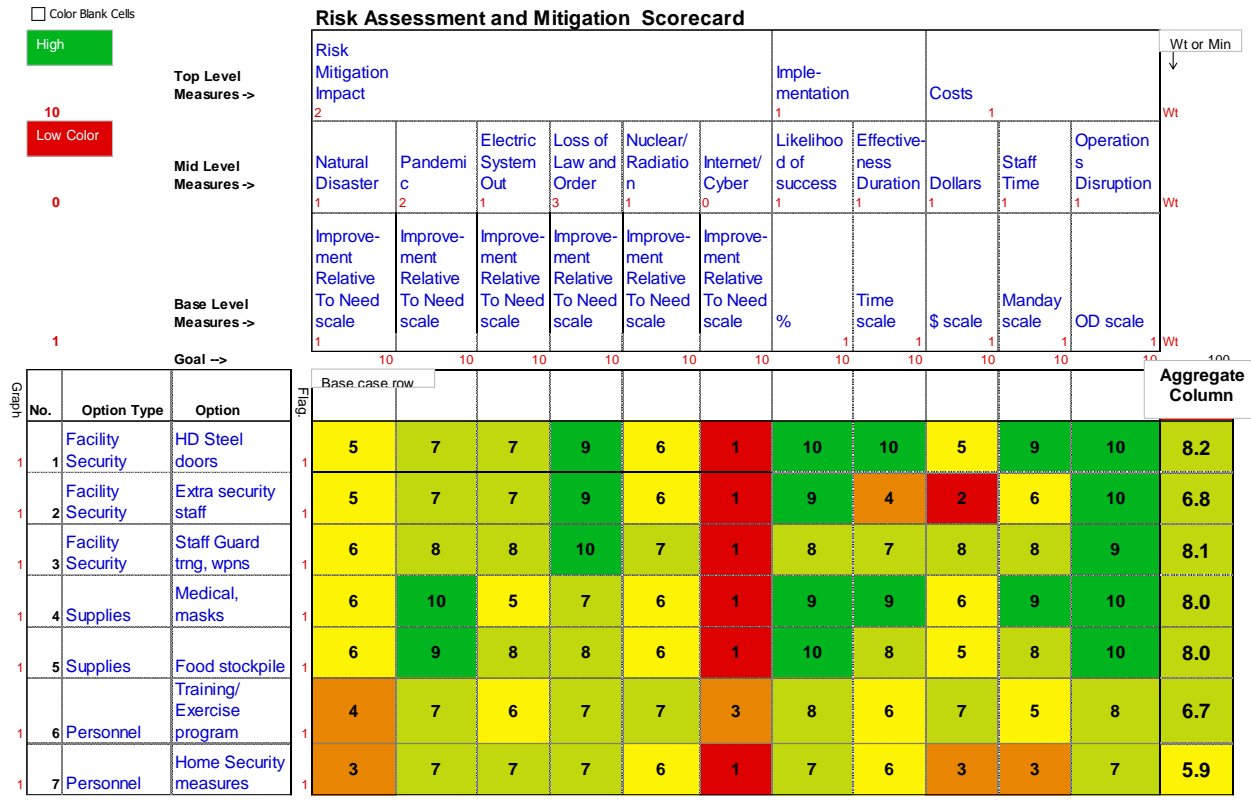
manager at Goldman Sachs, one of the few big Wall Street firms that did well during the 2007 economic collapse, said that he spent “98 percent of his time worrying about things with a 2 percent probability.” The 2% probability is a guess—he rightly focused on the big threats that could take down the firm, however unlikely they might seem.

DP’s risk mitigation analysis software can develop robust, cost-effective mitigation measures

The standard objection to considering all risks, including wrongly guesstimated low probability risks, is that you can’t afford to prepare for all threats. This is another example of a widespread, standard, bad enterprise risk management practice. Rather than ignoring rare or unpredictable severe threats (a formula for catastrophic failure), DP’s much better approach to risk management is to spend analysis effort on developing and selecting the most robust and cost effective set of risk mitigation measures that can broadly address all types of threats cost effectively.

We have a better approach for both assessing enterprise risks, covering major Black Swan events most ignore that can destroy a company. Our methodology includes a multi-criteria decision analysis tool to deal with all the threats and factors to consider to develop more robust, cost effective means of mitigating risks so your organization can survive disasters and stay operational or resume operations faster than competitors.

A simple, abbreviated example of this approach and our software is shown below:



Most threats or “trigger events” cause their damage and disruption to your organization through similar means. Careful analysis and critical thinking can identify what aspects of your operations are vulnerable and risk mitigation measures that can address a wide range of trigger events and impacts.

In our consulting engagements we compare different risk mitigation and collapse preparedness measures by their ability to deal with a variety of threats, their implementation feasibility, and their cost. This multi-criteria scorecard lets you consider a broad, full range of risks and disaster scenarios. Each option is evaluated by criteria using a consistent scale.

While we stress comprehensive threat assessment, this does not mean to come up with a list of every possible disaster and attempt to mitigate each one. Instead, DP shows you how to identify a broad range of feasible threats, including the major disasters most firms ignore, assess their consequences, group the common impacts and effects, then look for risk mitigation measures that can prepare you to deal with the full scope of threats and impacts most effectively. Our risk assessment methodology and expertise makes this comprehensive analysis feasible and affordable.

For choosing the best risk mitigation options to invest in, look for mitigation measures that fit a wide range of threats. In using this multi-criteria decision analysis tool we always find that new ideas come up for improving the risk mitigation options. For example, you are looking at two options that have some important differences, one better than the other in some areas. Often you

come up with an idea to modify one of these options to overcome its shortcoming—improving its capability to also address another criteria that it was previously weak in.

Keeping Your Business and Key Staff/Resources Alive During a Collapse, and ideally Operating to Produce a Vital Product or Service

The recent Covid Pandemic and Supply Chain disruptions have woken many up to the need to reconsider Just In Time Deliveries and minimal inventories. But far more advance preparations are needed to keep your company alive during a real pandemic like “inevitable”¹¹ human-to-human contagious Avian Flu or a new bioengineered virus. Our electric grid is highly vulnerable to long term (a year or several years) destruction by cyber or EMP or physical attack that a dedicated terrorist group, or nation state as weak as North Korea could execute. In these long term collapse situations, most businesses will likely not survive. Without advance planning and preparations that 99% of companies ignore, either their key people will be killed, or key facilities looted, burned and ruined.

In addition to plans for survival, many companies could ready affordable means to switch to a new product or service that is helpful for collapse survival and can help achieve the objective of keeping the business intact during a collapse. Most manufacturing companies could cheaply and easily acquire used, obsolete canning and food processing equipment at very low cost to keep on hand as a new line of business to pursue when a collapse occurs. Service companies could also prepare for a new line of business that is ready to launch when collapse occurs. DP consultants can help you identify low cost means to keep your company and people alive.

With growing threats from new technologies and a high, increasingly likelihood of a “collapse” in a functioning economy and widespread loss of law and order, businesses should seek alternative modes of operation and even new lines of business that will enable them to at least survive the collapse, and ideally to continue operating, perhaps producing a different product that is producible and vital to have to survive a collapse. DP can help you identify these opportunities.

Companies need to be prepared to survive long term loss of the electric grid, highly lethal and contagious new bioengineered viruses, a long lasting, widespread loss of law and order, or have plans to safely shut down while gathering and protecting key resources and personnel.

¹¹ Many biologists, Congressional testimony, Studies warn that pandemics orders of magnitude worse than Covid-19 are “inevitable.” For an article, sources, quotes on this, email drmiller@advanaapp.com.

Fortitude Collapse Preparedness can show you how to cost-effectively prepare for Black Swan disasters and survive a collapse

Dr. Miller, and DP consulting associates he engages to assist, develop and recommend a strategy for your organization to at least survive, and possibly prosper when a Black Swan disaster event hits.

Col/Dr Miller's qualifications for this Black Swan, collapse survival consulting work:

1. Looking for Black Swan, pending threats and disasters, requires skills you learn and practice as an intelligence officer, which Drew was in the Air Force, primarily in reserve duty, retiring as a full Colonel.
2. Business experience from Corporate Planning and Development at ConAgra, also working with operating manufacturing companies.
3. Former consultant at Institute for Defense Analysis, the top Dept of Defense think tank
4. Decades of management consulting in his own firm, Advanced Analysis Applications, serving a variety of industries.
5. In business risk mitigation consulting, Drew has seen the failures of typical business continuity plans and helped companies develop innovative, cost-effective risk mitigation measures.
6. Drew is a Certified Management Accountant, with Operations Research Masters Degree and PhD from Harvard University.
7. Drew has studied the lessons and recommendations of brilliant people like Nassim Taleb, Ray Dalio, Warren Buffet, and others who think very smartly outside the box that traps most people into Black Swan vulnerability.
8. As CEO of Fortitude Ranch, a recreational and survival community, he developed a company designed to operate and save its members in the worst collapse conditions.
9. Certified Financial Planner, financial advisor, part of team working with CIA investigation of suspected 9/11 terrorist hedge investments to profit from attacks.

Drew made a presentation on predicting and assessing Black Swan risks at the 2016 national conference of Business Continuity and Disaster Response planners:

<https://www.youtube.com/watch?v=Gm15FUENHig>

Dr. Miller leads all business consulting engagements, and does the bulk of the analysis. Unlike big name consulting firms that send an experienced lead but then have recent college grads do the work, DP consultants are all highly experienced business professionals. We will do on site interviews and tours of key facilities. If you have business continuity and disaster response plans we review these with you (ideally before arrival); but we often assist clients with no written plans. We have checklists for comprehensive risk assessment, and work with your staff to identify industry and company specific threats. Most important, DP consultants can identify some measures to increase the likelihood of your company and key resources surviving a

collapse, including some feasible new crisis time lines of business. After follow up questions and consultations, DP will develop a list of feasible options and analysis them with our multi-criteria decision analysis methodology to recommend the best strategy for your firm and situation. We will meet with your staff to review our findings and recommendations, and help you select the most cost effective risk mitigation methods that cover a wide range of risks at lower cost.

To Engage Fortitude Collapse Preparedness LLC for Risk Assessment and Mitigation, Preparing your company to profit from Black Swan Events and survive a collapse

Dr. Drew Miller
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Our initial assignment includes assessment, development of risk mitigation, Black Swan investment, and collapse survival options, and presentation of recommendations, Q&A session and feedback. Fortitude Collapse Preparedness LLC can be retained for both threat warnings and updated information relevant to your industry/firm, and on-going consultation on your risk mitigation, collapse survival plans for \$25,000/year.