



## Fortitude Collapse Preparedness



### Preparing for Black Swan Events and Your Company's Survival

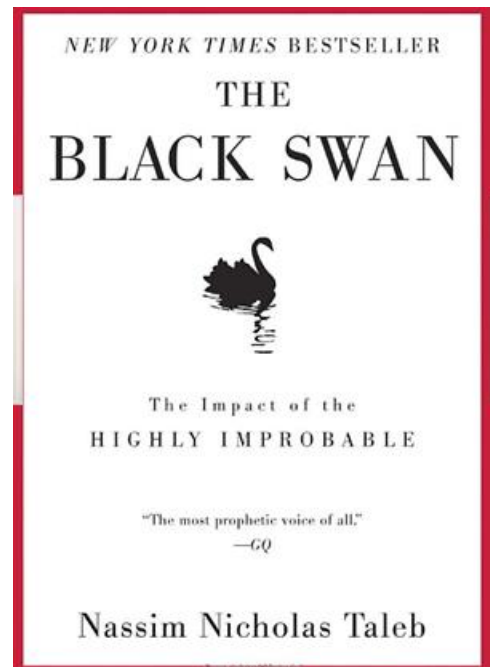
Warren Buffett insists that “The CEO should regard his position #1 as the Chief Risk Officer. Now you have a lot of other functions too, but you should wake up every morning and think about ‘is this place built to take everything?’” Very few organizations address the full range of feasible threats, ignoring disasters that some experts say are “inevitable” though unpredictable.

Our electric grid is highly vulnerable to destruction by cyber-attacks, solar flares, EMP from a nuclear detonation, or physical attacks that a dedicated terrorist group, or nation state as weak as North Korea can execute. When the grid goes down it will take at least a year to repair it. New technologies, including bioengineering, nanotechnology, artificial intelligence, are generating new means for devastation 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.

None of the above is covered in business risk management or continuity of operations plans. They deal with “normal,” historic disasters with relatively minor disruptions and losses. They assume there is law and order—but in a major disaster there will be massive looting and marauding, police overwhelmed and unable to assist. Our future is one of major disasters that could lead to a collapse lasting from months to years. Fortitude Collapse Preparedness defines a “collapse” as an economy that is no longer functioning and widespread loss of law and order. CEOs and COOs, 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 key resources, even if operations cease. There are investment strategies and standby lines of business that a well prepared organization can switch to when a collapse occurs.

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. 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.<sup>1</sup>

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 have 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.”<sup>2</sup>

The vast majority of companies, from small to the largest, will not survive a severe collapse like the coming, inevitable H5N1 pandemic. When the economy is not operating and looting breaks out, escalating into marauders attacking homes and businesses, law and order will vanish. The loss of our electric system, a bad pandemic, a growing number of bad disasters could yield a collapse that lasts for months to over a year, killing most of a company’s personnel, with facilities looted and destroyed. 99% of firms ignore Buffet’s and Taleb’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 Fortitude Collapse Preparedness has developed**

For many companies, a carefully analyzed and selected set of low cost risk mitigation and collapse preparedness measures, implemented in advance, can ensure that key human, physical, and digital assets survive so your business can later recover.

- Developed plan to quickly save information and key resources by moving them into a secure facility, 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.
- Added a new data backup service at a facility that can survive the worst collapse (most data backup centers, cloud storage facilities will be destroyed in a bad collapse)

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<sup>1</sup> Nassim Taleb, *Antifragile: Things That Gain from Disorder*, Random House, 2012

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

- 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 local supply in a collapse.
- Company sponsored shooting club membership for employees and holds periodic private discussions about security plans for facilities and staff in the event of a big disaster.
- Added several hidden gun, ammunition, and food storage vaults, radiation detectors and other survival equipment, with 10 trusted associates selected to implement survival plans developed during engagement (will turn into a private survival facility).
- 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.
- With existing staff, set up a technology and threat watch program to forewarn of industry developments and Black Swan threats.
- Implemented plan to work and ally with neighboring businesses, with plans for putting up connecting walls and all agreeing to stockpile key survival items.
- Hire associates who can do normal work but also have skills for 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 of 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 stipend for attending periodic weekend training exercises 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 is largest employer in town, set up a community survival plan that company runs and helps fund that will include most of town and all their plant and local employees in a protected survival community.
- 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.
- R&D Department added 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 expenses but should yield both higher profit (from reduced loss of sales when major disruptions occur) and increase ability to keep company operating, 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 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 projects.

Our future is one of far worse disasters that will yield collapse events that most businesses will not survive. Despite Buffet and Taleb’s advice, the overwhelming majority of organizations continue to ignore collapse level threats or get prepared for survival.

If you institute a technology and threat watch program, you may also find actionable threat information that lets you make some low cost (and strictly limited) hedge investment bets. 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 hits.

Most clients keep all or most of their adopted plans confidential, including not disclosing to most associates. Fortitude Collapse Preparedness offers complete confidentiality, destroying all files and notes after the engagement, we never share a client’s plans or identity with anyone.

## The annual Probability of a Collapse is estimated at 16-57%

We have entered “The Age of Collapse,” an era where mankind will suffer severe disasters that kill off millions or billions of people because of new technologies and threats, our fragile, interdependent economic system, irresponsible government, and a population that is increasingly dependent and unable to survive without long distance water and food shipments. When the first collapse hits, most businesses are likely to be destroyed as well as a large part of humanity.

Artificial Intelligence has raised the likelihood and severity of existing collapse threats, and will invent new ones. AI is being used to develop new medicines and will be misused by bad people to develop deadly new viruses, easier means to enrich uranium for nuclear weapons, new poisons and novel new ways to kill people we never thought of before.

The briefing below explains the “Probability of Collapse” model that now estimates the annual likelihood of a collapse at 16 to 57%. The probabilities are highly uncertain, but not low.

<https://www.youtube.com/watch?v=icOoPNvGKg4>



## We have entered “The Age of Collapse”

### Definition of “collapse”

1. Economic and normal activity largely ceases
  2. Widespread loss of law and order
  3. For prolonged period of time (months to years)
  4. Very high fatalities (millions, over 10% of the population)
- Rapidly growing number of new ways to exterminate people
  - Small groups or individuals now have capability to kill billions
  - AI increases the likelihood and severity of all weapons of mass destruction —and will be used to invent new means
  - Vulnerable electric grid, fragile/interdependent economic system, just in time deliveries (no inventories)
  - Long distance sourcing of food and water
  - Irresponsible “Nanny State” in charge of dependent populace
  - Societal divisions, millions of bad people who will loot, maraud, kill when police overwhelmed, starving to death

Link to “Age of Collapse” study by Dr Drew Miller:

<https://www.ida.org/-/media/feature/publications/t/th/the-age-of-bioengineered-viral-pandemics-and-collapse/d-5335.ashx>

**IDA**

INSTITUTE FOR DEFENSE ANALYSES

NSD-5335

The Age of Bioengineered Viral Pandemics and Collapse

Drew Miller

Even North Korea, with an inaccurate, small nuclear force, has the means to destroy the United States of America. A Congressional EMP Commission warned back in 2008 that our electric grid was highly vulnerable, and that an EMP attack could kill 90% of Americans. Congress did absolutely nothing then, or in the decades since, to require utilities to harden the grid, or to warn American citizens of this fatal vulnerability our enemies are very well aware of. North Korea got help from Russia to design their nuclear weapons to be optimized for EMP effect. North Korea could take out the U.S., and Iran will likely have this capability soon. With AI, our future is one of small terrorist groups even individuals figuring out new ways to develop weapons of mass destruction.

Our military does not have its own electric system, it is also dependent on our fragile electric grid. If China wants to invade Taiwan, they can take it without U.S. interference by simply taking out our electric grid. Our military becomes low tech and largely powerless at this point. It is the obvious Achille's heel of the United States, an absolutely fatal flaw, and it will be surprising if this weakness is not used to knock us out. Indeed, even if we made the decision today to harden the grid, in the years it would take to do so we must expect that Russia, China, North Korea, Iran, or a dedicated terrorist group will execute an attack to take it down rather than lose this fantastic opportunity to easily destroy the United States.

Even if the disaster “trigger event” does not directly kill a lot of people, the collapse that follows will. 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.”<sup>3</sup> 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 big disaster hits, law and order will 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 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. 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. Our fragile economy and society with just in time daily deliveries, little to no inventory, food and water transported long distances, is easy to disrupt. We also have a populace that is dependent and not resilient.

The six trends listed in the exhibit below explain why a collapse in economic activity and loss of law and order are likely. These trends are all getting worse.

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<sup>3</sup> 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



## Risk of collapse rising rapidly, driven by 6 very bad trends

1. New Technologies: DNA manipulation and bioengineering, new means to manufacture nuclear materials, nanotechnology, cyber attacks, AI
2. Rising overpopulation
3. Increased economic interdependence, just in time inventories, overseas sourcing
4. Dangerous dependence on long-distance food shipments, inadequate local water, extremely vulnerable electric system
5. Less personal resilience
6. More bad people, gangs, with means to raise hell

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

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

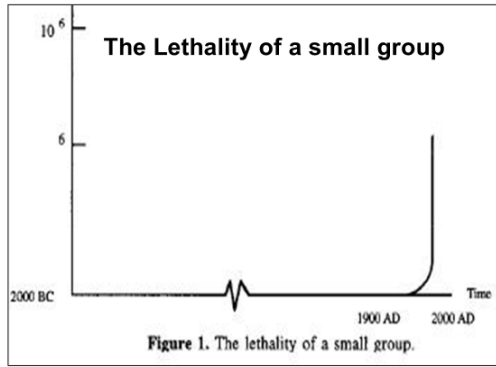
1. You should never assume continued operation of the economy and maintenance of law and order
2. You should assume that in a really bad disaster you'll be on your own for security and assistance.
3. Realize the trigger event starting the disaster—a hurricane, a pandemic, a riot, loss of electricity—is 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 don't deal with the increasingly likely reality of massive, uncontrolled looting and marauder violence. Almost no organization or first responders will be operating in a collapse.

When the grid goes down, a real pandemic hits, or other massive disaster strikes, millions of Americans will quickly start looting and worse, with police too 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 or escape—with little alternative to looting to survive. The Congressionally sponsored EMP study estimated that if the grid goes down 90% of the

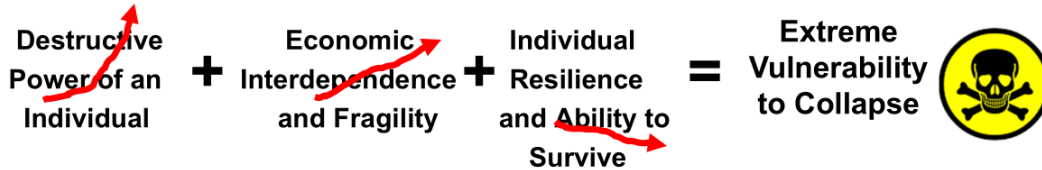
population could die.<sup>4</sup> There will be no production, no municipal water systems will function, and people without, the vast majority, will have to steal and often kill to survive.



**The Destructive power of Individuals and economic fragility is growing, while resilience of society and individuals is falling—yielding high likelihood of a disastrous collapse**



Relative Vulnerability to Disruptions		
	1800s	2010s
% population farming	>80%	<2%
Food travel distance	few miles	1,000s
Food on hand	months	days
Water supply	well	municipal
Electronic dependence	none	heavy
Production sourcing	local	int'l
Inventory levels	large	tiny (JIT)
resilience of people	Pioneers	Nanny State
<b>Overall vulnerability</b>	<b>low</b>	<b>high</b>



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. Almost no business continuity plans will work in a collapse. Your company needs to be prepared for collapse survival.

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

We help companies design business survival plans; not 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 key 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.

Taleb says the best use of our brain is to be on the lookout for Black Swans, think about how they might happen and the impacts they may have. Taleb’s book, *Antifragile: Things that Gain from*

<sup>4</sup> Paul Bedard, “New EMP warning: US will ‘cease to exist,’ 90 percent of population will die,” Washington Examiner, January 24, 2019



*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, while some companies may benefit. We also 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. By 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. 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. The impact of new technologies and the increasing vulnerability and fragility of our economic system and population, is that we're going to have a lot more Black Swan disasters.

With a technology watch program that can often be an easy add to R&D Dept work, and threat warnings and updates we can provide, 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, encouraging companies to focus on high likelihood and high impact risks. While it is the 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.

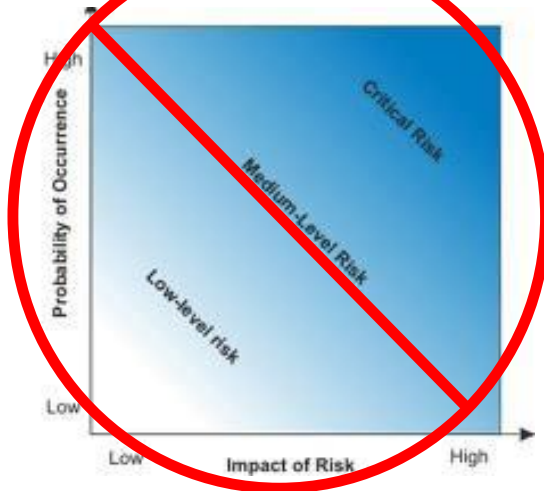
The better approach for enterprise risk management is to identify all feasible threats, pay great attention to high impact risks, and don't waste time on the impossible quest of estimating probability of occurrence, which is statistically impossible for rare events.



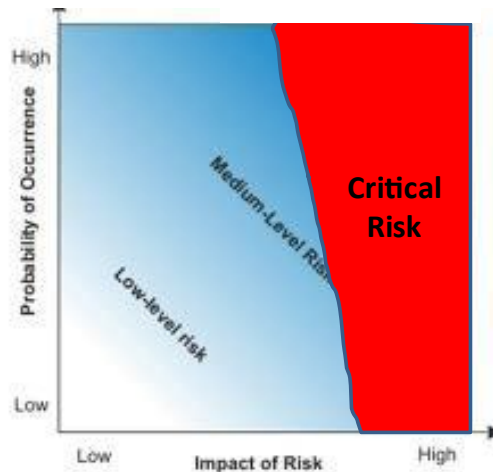
## Focus on the consequences of the risk, not likelihood of occurrence that you cannot reliably estimate

- Do not ignore high impact risks that you guesstimate have low probability when no reliable basis to estimate the likelihood and consequences are likely disastrous
- Pay most attention to high impact risks: less emphasis on probability of occurrence
- Look for protective measures that cover a broad range of disaster scenarios

Standard Risk/Probability Management Approach



Recommended Risk Management Approach



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.

### **Fortitude Collapse Preparedness can show you how to cost-effectively prepare your organization to survive Black Swan collapse disasters**

Dr. Miller and FCP consulting associates 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 has the best qualifications for this collapse survival consulting work. He served as an intelligence officer in the Air Force, retiring as a full Colonel. He was a consultant at the Institute for Defense Analysis, the top Dept of Defense FFRDC, think tank, and served in the Senior Executive Service in the Pentagon in their “Business Management Modernization Program.” A Certified Financial Planner, Drew was part of the team working with the CIA investigation of suspected 9/11 terrorist hedge investments to profit from attacks. As Founder and 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. 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. Drew is a Certified Management Accountant, with an Operations Research Masters Degree and PhD from Harvard University. With business experience from Corporate Planning and Development at ConAgra working with operating manufacturing companies, and decades of management consulting in his own firm, Advanced Analysis Applications, serving a variety of industries, Drew knows business operations and requirements. Other FCP consultants are all highly experienced business professionals---not recent college graduates, who do the bulk of the “big name” consulting firms work.

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

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

Dr. Miller wrote a series of articles on collapse preparedness featured in the Domestic Preparedness Journal, published by the Texas Division of Emergency Management, Texas A&M University:

<https://www.domesticpreparedness.com/wp-content/uploads/2023/04/Triggered-Collapse-Special-Issue-Nov-2020.pdf>

Fortitude Collapse Preparedness (FCP) consultants do on site interviews and tours of key facilities. If you have business continuity and disaster response plans we review these. We have checklists for comprehensive risk assessment, and work with your staff to identify industry and company specific threats. Most important, FCP consultants identify measures to increase the likelihood of your company and key resources surviving a collapse. After follow up questions and consultations, FCP develops a list of feasible options and recommends 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, and develop affordable company collapse survival program.

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

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