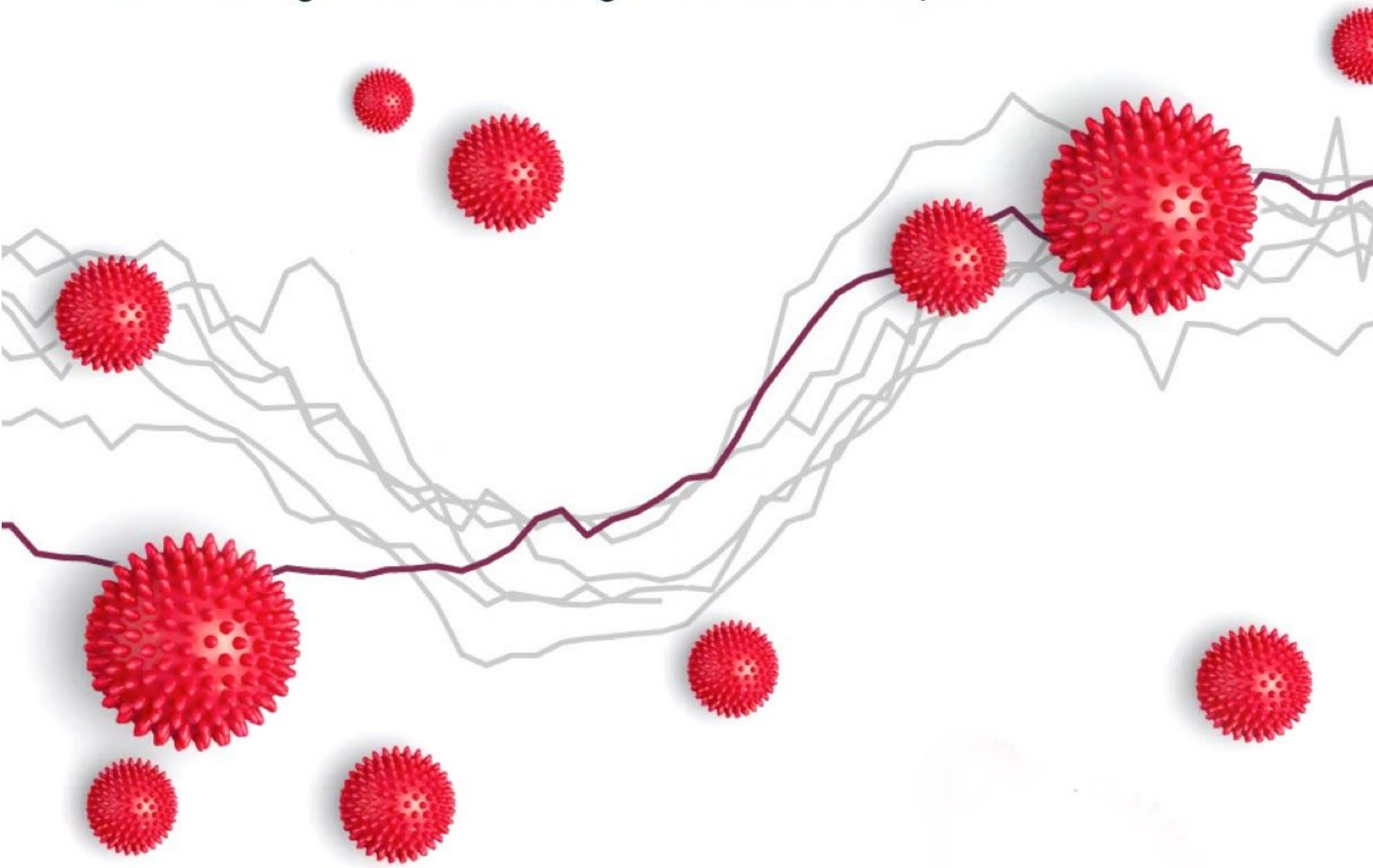


●●● Thrive in AI disruption

The AI Business Continuity Action Plan

Critical Insights for Surviving Pandemic Disruption



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Research | Strategy | Competitive Intelligence

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The COVID-19 pandemic has been a massively disruptive force across industries, leaving many isolated in their homes and grinding some sectors of the economy to a halt. At Emerj, our work is about responding to the business needs of our enterprise clients and subscribers. We have identified a number of key priorities from our surveys, which we address in this concise report. Our goal is to answer the following questions:

- What AI applications will be most important for businesses to survive the COVID crisis?
- How are some companies using AI to pull ahead of the competition during the pandemic and its economic fallout?
- How do leaders need to reconsider AI investments in the face of the pandemic?

This guide provides representative use-cases and strategic considerations for leaders who are rebuilding their technology and business strategy and want to find a strong fit for a successful AI project.



1. COVID-19 Trends in Business

The immediate consequences of COVID-19 are dire for companies and clients alike, but there is a silver lining for businesses that search for it. In this chapter, we explore that silver lining, as well as the negative implications coronavirus has for businesses. We also discuss ways businesses may be permanently changed as the economy recovers.

1.1 Negative implications

The global supply chain for goods and materials has slowed significantly as the coronavirus causes greater limitations on travel and transportation. According to [Deloitte](#), over 200 of the Fortune Global 500 firms have a presence in Wuhan, where the outbreak originated.

Business leaders are now forced to find new suppliers for some of their products or materials or make new agreements with their customers in order to determine when they can deliver. Many of these business leaders will find themselves in an impossible position where they don't know when they will be able to provide their products or procure resources to produce them.

This lack of clarity and certainty has also been troubling for companies without a robust supply chain, such as financial services and insurance. These companies are impacted because their customers still face uncertainty and are hurting in ways they haven't for over ten years.

Following this lack of resources is a significant pause in sales cycles due to the questionable collection of receivables within nearly every market. In certain industries, this causes more complications in that salespeople cannot physically visit potential customers.

Almost all buy cycles will be pushed back to later dates, and many strategies will need to be redrawn. This will create more disruption for existing vendors and technologies and more opportunities for roadblocks. AI vendors that want to sell their product will need to position their application as part of the solution to this crisis. Similarly, innovation and strategy leaders will need to defend their budgets and jobs by ensuring that they focus on opportunity areas most relevant to solving this problem.



The COVID-19 crisis has also prompted an unprecedented rise in remote work that will undoubtedly have lasting impacts on the industries it affects. Most countries have encouraged people not to leave their homes or attend large social gatherings, and many share sentiments that some companies should transition to remote work. This has forced some industries to work entirely remotely where they otherwise would have never attempted it.

Industries such as higher education, investment banking, and mortgage lending must all now find digital solutions to business problems they once solved in person. This will incentivize them to find new processes and procedures to keep business moving forward in an entirely new environment.

1.2 Silver Lining

The nature of this crisis affects business in such a way that many key improvements for succeeding in the future are encouraged even sooner. This is the silver lining.

The dependence on remote work and digital processes will encourage some industries to build a more resilient technology stack. A greater focus on digital marketing will also be a source of pressure on businesses to upgrade their current technologies. They will need solutions that can nurture their existing ad campaigns and iterate on them effectively in areas such as lead generation and campaign design.

Some businesses will also see a greater need for improving their protocols for remote work in both large scale emergencies and unexpected issues with individual workers. Here they will likely realize that remote work is viable for jobs that they would not have expected in the past.

Business leaders who understand this will want a technology system that is more reliable and resistant to large disruptions in the job market. While new revenue will be necessary during this crisis, there will also be strong pressure to push forward on digital transformation projects and modernize the company's technology stack.

Many companies will also be challenged to find new ways to serve their customers amid the crisis. Business leaders must now change how they operate to fit the needs of their customers, which have changed radically within a short period of time. At the same time, they must balance the capabilities of their own company and how the crisis



affects them. Because they cannot respond based on past assumptions, leaders will need to ask themselves questions such as:

- Will our customers still have the same needs?
- Will our customers be able to afford the same prices?
- Do our customers want to be served in a new way?

Pricing and packaging will have to change drastically across industries based on the price sensitivity of the customer base. In other instances, businesses may need to alter their services entirely in order to serve customers. They will have to further capitalize on areas where they are exceptionally strong, or change their service altogether.

This will hopefully yield numerous interesting business models and present some firms with an ability to improve beyond their original ability to serve customers.

1.3 New Normal

When industries return to business as usual, their sense of normalcy will be significantly different from before the pandemic. The rippling effects of the coronavirus outbreak will be felt for years to come. The following is a list of some of the trends to consider for the near future:

- **Remote work:** Many workers will still be quite nervous to reenter society and the economy. It can be expected that many jobs will be offered exclusively as remote positions, and more protocols to provide in-person employees with remote work will be a necessity.
- **Plan Bs:** Expect many new companies to have emergency, business continuity, and crisis plans in ways they never would have if they were founded in the last decade. Business leaders will be focusing on how they will keep their company alive if another outbreak happens and how they can better position themselves to respond. Additionally, they will consider which scenarios they are prepared for in terms of the market and workforce.
- **Focus on Lean:** There will be a stronger focus on reliable, automated operations wherever and however possible. That said, most companies that survive this economic crisis will be in great financial need. They will want to ensure they can stay afloat by reducing costs and considering exactly what is essential and what is not. Many repetitive processes will need to be replaced with technology instead of new employees.



2. AI Business Priorities - Pandemic Response

The consequences of the COVID-19 pandemic will be bad for businesses, and many will have an immediate need to slow the damage they sustain throughout it. Before we can explore the priorities for how businesses will recover, we must first address how AI will play a role in the immediate pandemic response.

AI applications will be able to help businesses by fitting into the current priorities of their leadership, and nearly all business leaders will be focusing on cutting as many losses as possible. That said, new expenses and lost revenues will incentivize them to focus on what is absolutely necessary for their business. It follows that AI will have less of a role in some business areas and more of a role in others.

The following sections explain how different AI approaches will be affected.

2.1 Less

- **“Toy” applications:** Businesses will attempt far fewer AI projects simply for their novelty. Many current applications that they may have been working on just for the sake of trying AI will be canceled, and few will move past the planning stage.
- **Novel business models:** Because most businesses will need to focus on handling risks as efficiently as possible, they will only seek to radically change their business model during recovery. Many AI applications that would normally help a business pivot toward new markets will no longer be a priority.
- **Projects lacking near-term benchmarks:** In developing our [AI Opportunity Landscapes](#), we focus on scoring AI applications across some of our own proprietary criteria. These include Evidence of ROI and Ease of Deployment. Until the pandemic, companies were testing many AI pilot projects without a clear sense of how to measure their own success. This will no longer be possible for many companies who previously could afford to take on greater risks. They may be willing to invest in applications such as payment fraud detection where the metrics for success are clearer. However, more visionary projects about transforming core processes have a much higher likelihood of being canceled.

2.2 More



- **Risk reduction:** Expect companies to be more receptive to AI projects intended to reduce near-term risk that could put them in greater financial danger during the pandemic. Any applications that can be marketed with that value proposition will resonate stronger with business leaders during this time. We will explore more examples of this kind of project in a later chapter where we discuss AI use-cases for recovery in industry.



3. AI in Business Priorities - Pandemic Recovery

As the pandemic fades and people go back to work, businesses will be less focused on responding to a crisis and more focused on rebuilding from the rubble, possibly in a new direction, and hopefully with more stable financial grounding.

The following sections explain how businesses will respond to different AI approaches while the world recovers from the pandemic.

3.1 Less

- **Unrealistic focus on ROI:** Difficult times will steer business leaders towards the simplest projects that deliver reliable ROI immediately. However, AI requires businesses to undergo challenging improvements to their data infrastructure, talent, and skills. Some early AI projects that are not well thought out will tend to have unrealistic expectations of ROI. By the time companies begin to recover, they will have more time to educate themselves on the realities of adopting AI. This will lead them to a more realistic understanding of what robust AI projects require and what to expect from them.

3.2 More

- **Efficiencies:** Based on our research, we believe that cost cutting and driving efficiencies will be the most powerful value propositions for AI solutions as the economy recovers. Many of the employees who lose their jobs amid the COVID-19 crisis will not be replaced by humans, but by technologies. Not all small businesses will be able to do this, but technology firms and service-based firms with a substantial technology budget are more likely to. Any AI application that can help a company stay lean and maintain its resilience and agility into the future will be in high demand. They will most likely do this by streamlining business processes and simplifying existing workflows.
- **New Business Models:** AI applications that can help a business unlock a new business model will be of particular value during this economic recovery. Some companies will emerge from the crisis with enough funds to make a strategic change in their business. Others will have no choice but to cut down many expenses and make bold changes in order to save the business. Whether out of inspiration or desperation, AI projects that bring formative changes to business



models will be in greater demand than they were when the crisis first hit. We will discuss examples of this type of application in the following chapter and list AI use-cases that can offer a lasting advantage into the future.

- **Critical Capabilities:** This is a term we use at Emerj to refer to the specific digital transformation objectives that enable AI productively within an enterprise. Business leaders who have been working on their foundation will now have an opportunity to upgrade both their technology and business culture that will be critical to unlocking the benefits of AI in the future. They should be thinking about selecting AI projects that will help them build some of these capabilities, such as improving data structure and harmonization. The need to build cross functional teams that can collaborate on solutions from different departments is equally as important. AI vendors might ask how their solutions may help a company to build the talent, culture, and resources they will need to be even stronger in the future (read our full article titled: [Critical Capabilities - Prerequisites for AI Deployment](#)).

Firms should think about aligning near-term risk mitigation priorities with longer-term AI transformation goals.

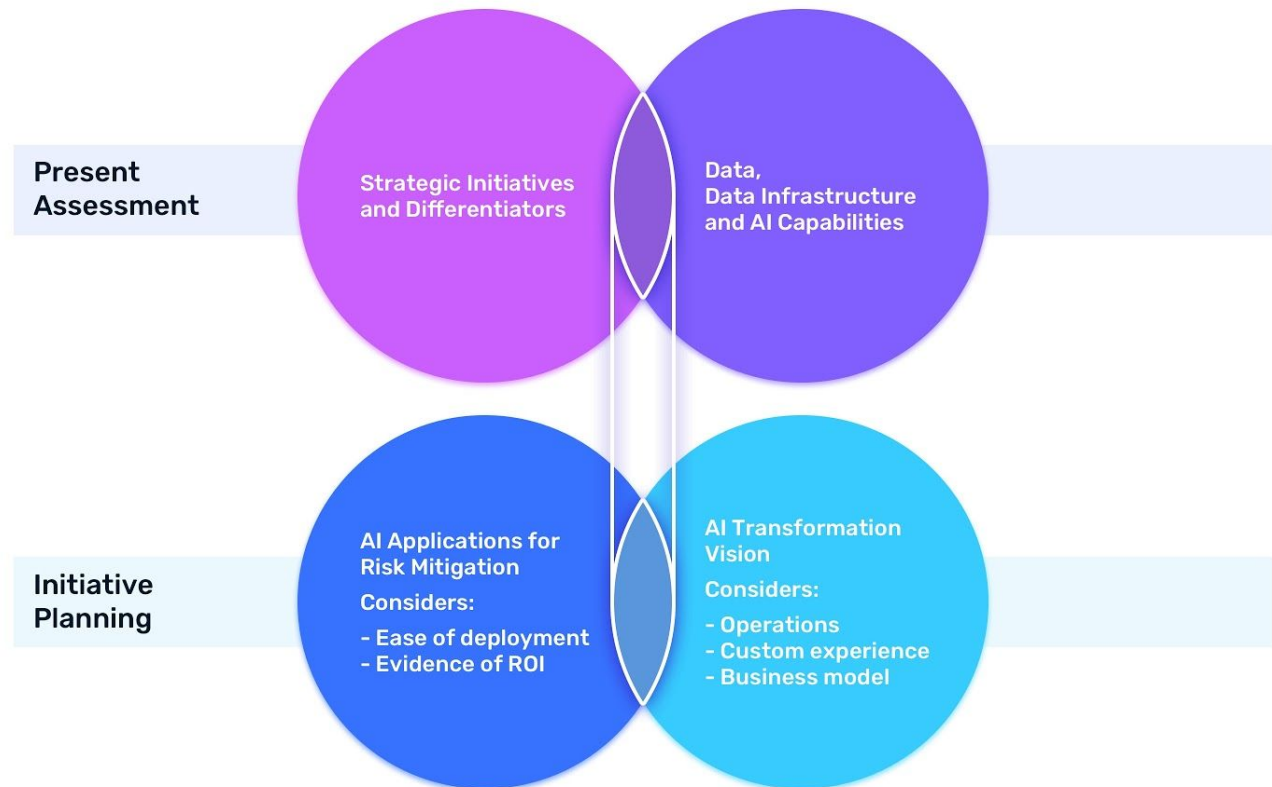
In assessing a risk mitigation AI application (say, claims fraud for insurance, or some back-end data entry process), ask:

- Will understanding and mastering this aspect of my company's data allow me to enable new business models and additional value, or will it's value be limited to this singular use-case?
- If my subject-matter experts, IT staff, and data scientists learned a lot more about this business process and working with this specific corpus of data - how else might they apply that knowledge? Could it bolster other processes in the business?

These considerations come into account only after a company has a strong grounding in it's differentiators and strategy (much of which must be rethought and sometimes redrawn entirely after a massive crisis). Consider the the Venn diagram below as a visual guide for this discussion:



AI Initiative Prioritization in Crisis



4. AI Recovery: Industry Use-Cases

As the economy recovers, many AI investments will center around making a stable recovery and preventing further exposure to risk.

Logistics companies will need to focus on how they will optimize their services and plan for disruptions. Similarly, insurance companies will focus on catching and preventing fraud. In the case of the eCommerce and payments industries, businesses will need to prioritize reducing failed payments and chargebacks.

Below are examples of AI use-cases that businesses may look for during recovery.

4.1 Example: Logistics

Our AI Opportunity Landscape research shows that much of the immediate value of AI vendor products is that they require a company to think through its data flows and speed up digital transformation. This will be particularly true for the logistics industry, which will see significant pressure to drive digital transformation and data accessibility so they can even begin to use AI.

Logistics companies may use this new infrastructure for applications made to better estimate when shipments will arrive or how likely certain events are to disrupt flows.

Logistics companies may be able to find new opportunities by posing the following questions to themselves:

- Can we enter the economy again and expand our presence in lucrative markets in which we previously did not have significant market share?
- Can we service new markets that have new needs suited to our products or services?

This type of question may help businesses understand ways in which they can leverage a better data infrastructure to serve new and old customers more effectively.

One example of an AI vendor selling logistics solutions is [Flexport](#). They claim to use a data analytics platform to provide users at all points in the supply chain with accurate shipping updates and details using data regarding what goods are being shipped on their transportation route.

Suppliers, buyers, and shipping companies can check the status and estimated time of arrival of a package once the analytics platform is integrated within their existing supply chain interface.

This may help logistics companies drive some immediate revenue as they recover, but also prepare themselves and their clients for the kind of uncertainty they are experiencing during this time.

4.2 Example: Insurance



Insurance fraud tends to rise during recessions, and preventing it is a particularly strong use-case for AI. Fraud detection applications can help companies reduce risk and maintain capital during difficult times. This is much easier to deploy than more ambitious use-cases that require significant business transformation.

For example, an insurance firm might consider a use-case for listening to sales calls and identifying common success patterns within them. While it may be possible to adopt an application for this use case, the usefulness is much less understood, and it is harder to tangibly measure the results it may or may not yield. A fraud detection application would be simpler because it would only require data regarding historical instances of fraud coupled with real-time claims information. Additionally, a company could identify success metrics more easily, such as the number of false positives before and after implementing the application, and enable further improvements in the future.

[SAS](#) is one vendor that sells AI-enabled fraud detection solutions to insurance companies. The vendor claims to help insurers automatically catch fraud with an application trained using their client's historical fraud data.

The system then gradually improves as it comes into contact with claims in real-time. The result is a reduction in fraudulent claims and false positives that further complicate the fraud detection process.

Insurance companies that see success with this type of application may save money during a time where they may be desperate to recover.

4.3 Example: eCommerce and Payments

Economic recessions are also times in which chargebacks and payment fraud increase significantly. It will be important for online retailers and financial services companies to focus on mitigating this type of fraud. AI can help with this.

Projects such as these are relatively easy to deploy as opposed to a product recommendation system that could require more data than a company can organize in a reasonable time frame.



[Anodot](#) is a vendor that offers AI payment fraud detection to businesses. The company claims to help clients reduce their time to detection for cases of fraud using anomaly detection, a type of machine learning for recognizing deviations from a norm.

This requires their application to be integrated with the client's existing payment system so that the AI software can detect fraud in real time. This type of application will likely be helpful to companies that want to reduce the risk of ecommerce fraud as much as possible during this recession.

4.4 Building on New Foundations

Artificial intelligence requires a wide range of new skills, new approaches to work, and new data infrastructure. For this reason, even short-term projects should only be invested in as a long-term investment in new skills, in the overhauling of new IT and data infrastructures, and in new ways of working.

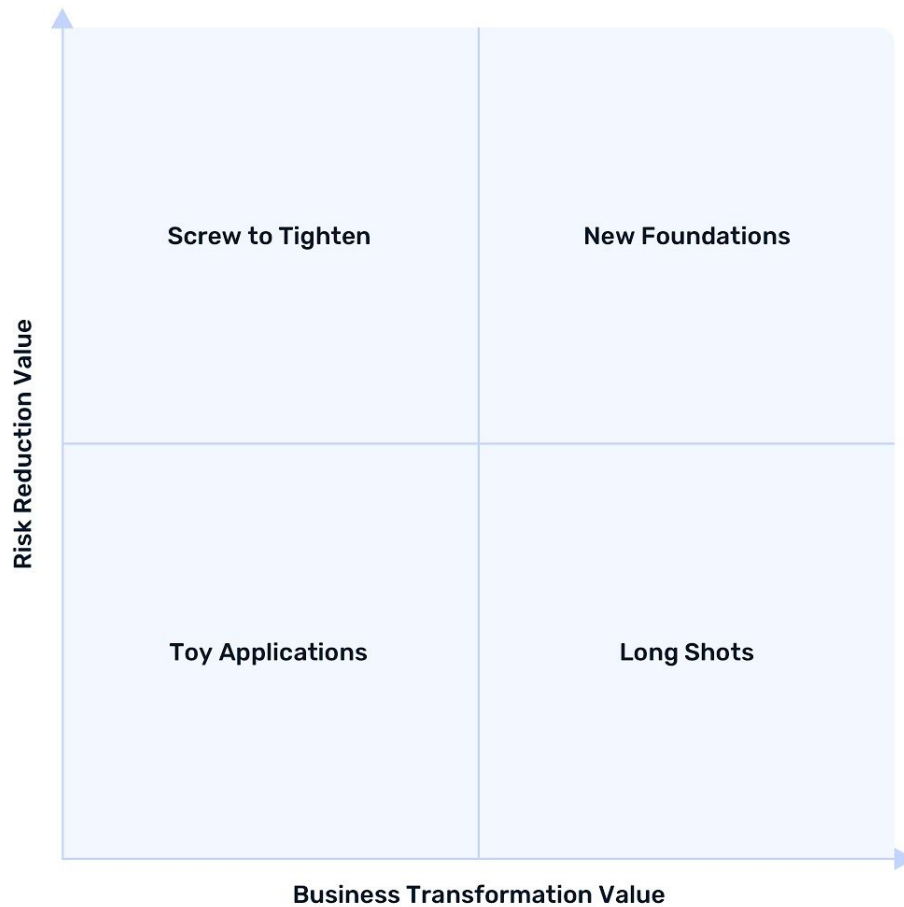
In other words, in what will become the new digital foundation for the company - the very changes to culture, skills and resources that will keep the company nimble into the future, and able to take advantage of future AI use-cases and emerging means of selling and servicing their clients.

As much as possible, companies should avoid applications whose applications are entirely limited to the near-term problem at hand, and consider how any risk-mitigation applications in response to the crisis could double as building blocks of a new foundation.

At the same time, in a period of cash pressures and crushing demands, only the best funded and AI-sassy companies should consider moonshot investments (and even these firms should only do so in light of newly assessed strategic priorities). Toy applications, as always, should be avoided entirely. See the diagram on the following page:



Balancing Risk Reduction and Transformation in AI Initiatives



5. AI Advantage: Industry Use-Cases

AI is changing the business landscape and affecting the way people buy, work, relate, and do business with one another. The damage from this crisis will be substantial, but so will new opportunities. This is particularly true for firms that can adjust to the new normal or quickly pivot their business to serve customers more adequately.

In our AI strategy report, [Generating AI ROI](#), we identify the theme of what we refer to as an “AI transformation vision.” This is a vision of how AI can enable a lasting industry advantage for a company. Developing this vision is a large part of our work with enterprise clients, but it is also critical for companies that want to take advantage of disruptive change.

In order to enable new forms of business and drive efficiencies with AI, both the C-suite and the functional business leaders within a company must share an understanding of the benefits. Below are three examples intended to encourage strategic thought from business leaders in different sectors.

5.1 Retail

Retailers that have some eCommerce presence might choose to focus on personalization and product recommendation in order to maximize customer lifetime value. For some businesses that target mainly offline markets, this could help build a closer relationship with customers than their competitors.

An example of a business that might choose this path could be a jewelry store with a limited ecommerce presence. Their leadership might consider investing in this area in order to find new ways to leverage digital advertising where their competitors are lacking. This could come in the form of targeted ads reminding customers of pandemic-related store hours and regulations.

Additionally, the jewelry store could use similar applications to corner the jewelry market for the segments they target, such as women over 40 or watch collectors.

Leadership may also consider how they may use ecommerce to better serve customers in their target segments. This is where AI recommendation and personalization



technology is most useful, and companies can use it to present users with offers they are more likely to purchase.

Recommendation engines such as this can also be used for email offers and take into account upsell and cross sell opportunities.

A company that chooses to emphasize their online presence with AI may be able to find reliable ROI from their ecommerce channels. They may be able to win business by offering a better digital experience during a time where people are relying on ecommerce for more products.

In addition to new revenue sources, success may also come in the form of higher customer lifetime value per buyer.

In our jewelry store example, this might turn into a broader change in direction for many other businesses as well. One chain of stores might want to shrink its physical footprint and primarily focus on ecommerce, while others may use it to drive customers back into stores as the crisis ends.

[Satisfi Labs](#) offers a chatbot application that they claim can offer product recommendations to customers based on their preferences. Data requirements include both linguistic data about how people refer to clothes and general product information based on the client's current selection.

Customers can purportedly fill their cart using the chatbot on a smartphone app and track the package. This offering could enable helpful tracking notifications during a time of pandemic response, as well as reliable ROI during recovery.

5.2 Chain restaurants and Food Services

Many chain restaurants and food services companies will turn to automation and self-serve kiosk technology when looking for a lasting AI advantage from pandemic recovery into the future. AI-powered kiosks such as these can handle product recommendations similarly to how they work for retail and eCommerce.

It is already evident that [McDonalds](#) and their competitors look to [invest in this technology](#) in response to minimum wage increases, and they are likely to take



advantage of this most recent disruption as well. Other restaurant chains may look to upgrade their services in other ways such as AI-powered cooking robots.

One fast food chain called [CaliBurger](#) has attempted to bring AI into the kitchen with technology from [Miso Robotics](#). The company uses a robotic arm outfitted with machine vision technology so that the AI software can recognize burgers on the grill and flip them after an approved amount of time. Additionally, the camera collects thermal data from the grill in order to further determine how much the food has cooked. This could prove valuable to many restaurants and chains concerned with keeping the kitchen environment clean for their staff and customers by filling in for employees who are sick.

5.3 Financial Services

Financial institutions will have opportunities to transform their lending process in a way that allows them to find success despite the pandemic. During recessions, lending becomes dangerous for financial institutions in that they need to ensure they pick the borrowers who are most likely to pay their loan back.

The pandemic will undoubtedly make previously solvent customers unable to make their loan payments on time. Some financial institutions will come to rely on AI to both calibrate risk more effectively and find common patterns among potentially reliable customers.

Older lending algorithms may have been based on a subset of traditional lending data, such as customer credit scores. However, financial institutions may be able to utilize new data sources and algorithms that can handle disparate types of data to help make the decision of whether to lend to a given customer.

This type of application may help lenders sell into markets they did not pursue previously such as those who lack credit scores or have had significant debts. While financial institutions may see lending as a volatile business area during the crisis, this type of AI transformation offers benefits for immediate response and offensive strategies for winning more business.

[Zest AI](#) is an AI vendor that offers an AI platform for developing predictive analytics applications which they claim helps clients decide which customers to lend to. Zest AI claims their solution can assess creditworthiness based on customer data and patterns



identified from financial behavior. Additionally, the software can utilize new data sources to determine customer responsibility such as information on what the loan is for. For example, an auto loan application may include the make, model, and year of the car the customer wants.



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Daniel helps organizations navigate the competitive landscape of AI capabilities, determine high-ROI applications that match and organization's strengths, and build AI strategies that win.

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