

Digital Business

From Chaos to Catalyst

Surf the pandemic shockwaves to
keep your business relevant.

By Paul Roehrig

Introduction

Thanks to a small bit of contagious RNA — what Nobel Prize-winning biologists poetically called “bad news wrapped in protein” — we are all now unwilling participants in a seismic disruption shaking the foundational pylons of society, technology, economics, healthcare and more. Welcome, one and all, to the new abnormal.

Based on the daily news, this may seem like one “event,” but it’s helpful to think about the pandemic not as a single Krakatoa-sized blast but as a series of **three shockwaves** — epidemiological, professional and socioeconomic — each of which needs to be managed differently.

Unknowns abound, yet **a path ahead for business leaders is clearing**. Indeed, some of the most essential business challenges that companies face today — including managing data, building software for consumers, unshackling from legacy applications, modernizing how employees work — are not so different from those that existed pre-pandemic; they just require faster thinking and immediate action. We’ve identified **eight of these shockwave problems — and solutions — that can help modernize business**.

First, let’s step back and see how we can frame our new business context.

Three pandemic shockwaves

It's easy to consider the COVID-19 crisis as one mega-supercell full of thunder and catastrophe, but there are actually three distinct shockwaves radiating from the pandemic (see Figure 1). Like a boulder dropped in a pond, each shockwave will ripple and refract and overlap for months or even years — but each must be managed with different tools targeting different outcomes.

- I The physical/epidemiological shock.** This is worrying if you are sick, protecting your family, getting well, ensuring the food supply, caring for COVID-19 patients, doing the most essential work. The health and emotional impact to tens of millions of people and their families cannot be overstated. The pandemic has unleashed a brand of carnage unwitnessed in our lifetimes. The necessary first step? Take care of yourselves. Take care of the ones you love. Be safe. It's natural to focus on the familiar — taking care of business like you always do — but [the real starting point](#) is making sure you and yours are as healthy as can be. Everything else can wait. It's not easy, and the recovery will ebb and flow over time (as will our blood pressures), but this shock *will* pass.
- I The professional shock.** Once we are safe, or safe enough, perhaps our thoughts can turn to our professional lives. Many millions are suddenly newly unemployed, and thousands of companies are facing existential crisis. We are already beginning to feel the cold chill of questions in the night: Will I have a job? Will my company survive? Can I get my job back? How can I help my team? What is my *personal* future of work? The pandemic shockwave will cull businesses large and small that are either unlucky or poorly set up to weather the storm. This shock will *accelerate* the requirement for businesses to apply new technology to conserve cash while simultaneously driving growth. Savvy business people will take deliberate steps to make the best possible decisions and identify the most effective tools, technologies and partners to help along the journey.
- I The social/economic shock.** The broader economic shock triggered (in part) by the pandemic will continue to radiate and refract for years as the health of the global economy returns. *We will* get back to work, but the impact on capital, industries and even society will be profound and long-lasting. The danger today is focusing on worst-case scenarios, long-term impacts and things most of us really can't influence. Now is the time to put more focus — time, investment, mind share — on the things we can shape in the near term.

The pandemic's rippling impact

Three acute shockwaves that will affect us all.

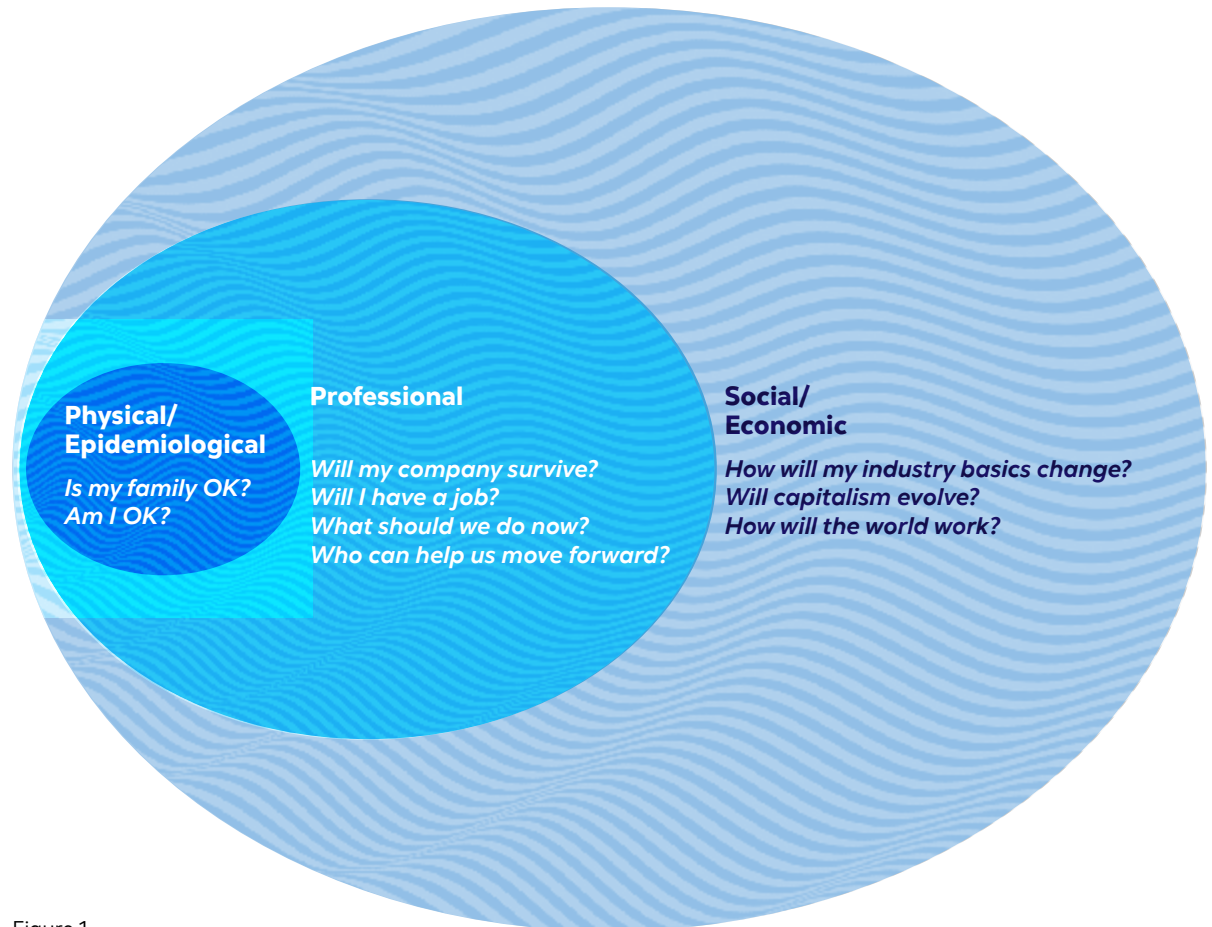


Figure 1

The path ahead for business leaders

Winston Churchill said, “Never let a good crisis go to waste.” Well, here’s our chance.

In the context of today’s chaos — including the inevitable business and economic implications — it’s already getting hard to remember that this plague will pass, just as they always have. How we conduct business will never be exactly the same, but it’s not time to give up on our commitment to an “after,” a next phase, a future state.

To thrive in that future, it’s time to focus on what you can control that matters most to business today and over the coming quarters. To make the best near-term, no-regret decisions, it may be helpful to envision the path ahead in four distinct phases:

1. **Stay safe.** In this phase, it’s time to think like a parent or head of household. Take care of yourself and others first. Find the on-switch for your business continuity plans, and if you don’t have those plans in place, now is not the time to worry because it’s too late. (Just do the best you can.) Business leaders should activate HR and talent management [to address employee health and safety](#). It is definitely time to start conserving cash, but *not* at the expense of keeping your people — the heart of every business — and the company as safe as possible.
2. **Envision your new “normal.”** Know from the outset that you will get some of the details wrong. What matters is considering the key variables likely to impact your specific business. On the demand side, make informed assumptions about your customers. What kinds of experiences will they require? What products will they jettison? On the supply side, focus on understanding the costs, risks and security [of your supply chain](#). The global pandemic has disrupted the end-to-end supply chain of nearly every good or service that comprises our global economy. Where things come from, how services are provided, how much things cost, every risk equation and more have all become less predictable. Here again, looking at a few key data points with applied logic based on *what you already know* will support useful decisions. These conclusions can help contain costs and risk while making smart investments in maintaining revenue. Don’t forget to provide visibility to investors on what you’re doing to future-proof the company.

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3. **Modernize (now!).** The pandemic shock is already starting to separate weak businesses from the herd. Darwinian capitalism will accelerate this over the coming quarters. Any company leader hoping to survive this shakeout **should not waste a moment**. Now is the time to modernize the consumer experience because every dollar, pound, euro or rupee of revenue will be that much harder to get. Now is the time **to automate as much work as possible**, and apply new technologies to raise employee productivity. If you've been managing your company well, now's the time to reallocate investment toward improving products and experiences to maintain — or even expand — growth in the new economy.
4. **Re-imagine your industry.** The global pandemic will certainly change individual companies, but industries will also be completely rewired over the coming years. Now is the time to seek non-intuitive partnerships. (For example, a telco we know is starting to work with a shipping giant and a big-box store to explore the future of healthcare.) As industries and work processes become more highly automated and distributed, strange bedfellows will emerge in healthcare, banking, insurance and more. Broader economic impacts will require debt and liquidity to be managed in innovative ways (depending in large part on decisions made by governments and banks). Companies doing this well could be entering a Renaissance era, while less savvy businesses could be caught up in a large-scale extinction event.

Navigating the chaos

Businesses can take a four-phased approach to managing during the crisis.

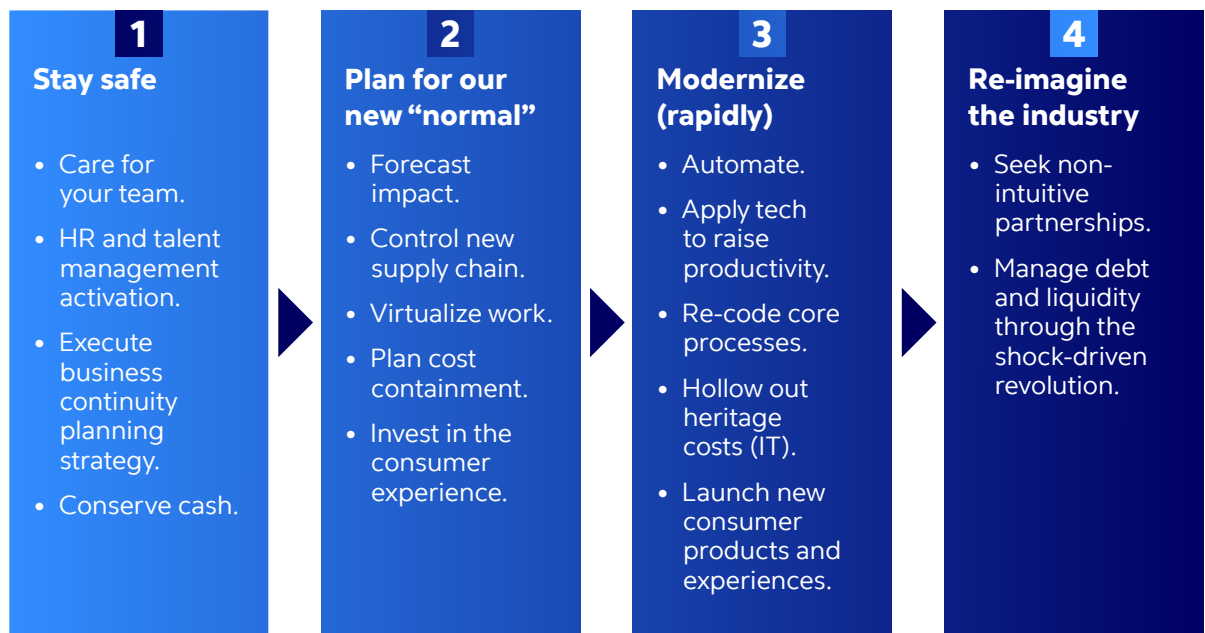


Figure 2

Eight ways to emerge strong from the crisis

The future of work you imagined five years out is now showing up next quarter. The pandemic has obviously triggered trillions of dollars of economic wreckage, and some business leaders may feel this will *stop* changes already under way, but instead, these shockwaves will *accelerate* the need to modernize. Even a few months ago, “becoming digital” was seen by many as a desirable elective, but now — in our new world — it’s mandatory.

The most common questions from business leaders from every industry and region have been: “I get the theory, but where do I start? What specific steps can I take today to ensure a healthy tomorrow?” There are eight critical tactics that will help address shockwave problems. We think each has specific, no-regret, practical starting points to set up companies for tomorrow.

POST-SHOCK PROBLEMS

- I **“We have massive amounts of data, but can’t afford to keep it anymore!”**
- I **“Our data isn’t informing our customer experience (and we need the revenue now more than ever).”**

WHERE TO START

1

Modernize your data

Whether you think of data as fuel, air, oil or some other commodity that powers the modern businesses, it’s more important than ever to turn your data from a liability into an asset. Companies that haven’t gotten control of their data are already behind, and the new economy will make it harder to recover.

It’s no longer justifiable to pay to maintain terabytes (or more) of data and then not use it for business outcomes. Improving decisions and experiences (and growth) with applied intelligence is infinitely more difficult (or impossible) without data that is relevant, accessible, secure and used to improve decisions or customer experiences.

A data audit — figuring out what data is available, being accessed and for what purpose — was a no-regret decision six months ago. Now it’s a condition for survival.

POST-SHOCK PROBLEMS

- I “Our heritage software estate is breaking the bank.”
- I “We don’t know what software to turn off, improve, expand or leave alone.”
- I “We need new digital products and services to stay competitive.”

WHERE TO START

2

Unshackle from legacy applications

Recent estimates show that roughly **\$3 trillion of economic value per day** runs on COBOL. (Thank you, [Grace Hopper](#)!) This represents a staggering amount of our society reliant on a programming language with roots dating back to 1959.

Business pressures from the pandemic now make it unsustainable for leaders to be trapped by an expensive and brittle heritage software estate. Consumer relevance, faster time to market and cost savings have never been more important.

Many IT leaders feel trapped by their legacy software, but now there are new tools, processes, engineering methods and partners to help unlock value that is certainly trapped in data centers all over the world. The first step is a complete software audit to understand which applications make the most sense to modernize, which should be left alone and which can be turned off.





POST-SHOCK PROBLEMS

- I “How can we get work done when we can’t sit together in the office?”
- I “We need a modern employee experience to improve recruiting and retention.”
- I “Revenue declines mean enhancing productivity is a must!”

WHERE TO START

3 Modernize how your employees work

Remember going into an office? Getting on a train? The TSA pat-down? We’ll do all that again, but ideas and practices about how we work together will never be the same.

The pandemic shock accelerates the imperative to be able to work from an office, the home, the car, the ... well, anywhere! Assumptions about where work happens are upended. Virtualizing work, collaborating from across the street/block/state/globe, and creating a culture at a distance are now all core curricula for business and technology leaders.

The near-term starting point is to immediately enable a remote workforce in response to social distancing. Today’s employees seek the same high-quality experience as a consumer using the best software. Old, slow, difficult-to-use interfaces and systems hinder how employees interact, collaborate, store and exchange information (documents, designs, etc.) and get work done. Seamless, secure connections across web, mobile, voice, collaboration systems, platforms and processes are part of the workplace of today and tomorrow. We aren’t going backward, so the time is now to get ahead of the modern employee experience.

POST-SHOCK PROBLEMS

- I “Will our consumers ever return? What will they buy?”
- I “We’ve had e-commerce for years, but overnight it’s become the beating heart of our business!”
- I “How can we meet new expectations (which have now risen through the roof)?”

WHERE TO START

4

Modernize your consumer experiences

In just a few painful weeks, elegant, secure, scalable online content and commerce went from critical to essential for every consumer-facing industry. Sales and marketing in a recessionary economy need to be both more effective *and* efficient as the battle for market share heats up even more.

Content has *always* been important, but with more transactions online, the ability to orchestrate and deliver content to the right person, at the right time, in any place, via any device, via beautiful software is more than ever a business imperative.

For every company, what Mark Taylor (senior vice president at Cognizant) calls *industrialized intimacy* — linking digital and physical channels to identify, engage with and activate consumers — will be a necessary capability to avoid an extinction event.

Regardless of your industry, expectations for engagement have forever shifted. Grocery shopping will never go completely back to pre-pandemic ways. In retail, showrooming has evolved from “a problem” to a method to drive customer loyalty and share of wallet. That trend will likely accelerate. The necessity of “going to see the doctor” no longer means a physical trip. And so on.

The immediate reaction for many will be to throw cash at front-end consumer-facing apps. A better bet is to take a step back and try to understand how the lifecycle of demand could be changed longer-term. That starts with deeply understanding how human wants and needs are likely to unfold in line with your specific products and services.

POST-SHOCK PROBLEMS

- I **“Innovation is life, and we must build new products for new business.”**
- I **“Software is eating our world, and we want to bite back.”**
- I **“Revenue and growth now originate from beautiful software, but that’s not our main business.”**

WHERE TO START

5 Engineer software for the new economy

Companies are increasingly defined by experiences delivered through software. Every modern business needs software that can be built quickly and scaled effectively to deliver modern — human-first — experiences across the value chain for employees, partners and customers. It’s not necessary to be better at software engineering than Google or Microsoft, but it *is* necessary for every company to become more software-centric.

Modern tools and agile engineering methods and technologies already exist to help you be a better bank, a better insurer, a better retailer. This requires rethinking how core IT teams are structured, how they work, how they are incented and the partner ecosystem critical to your business.

Every major company is building software all the time. It’s time to explore new methods. Starting small can show near-term progress while mitigating risk. Deploying a [virtual pod](#) for a planned upgrade or new consumer-facing app is a great way to manage risk and get smart about new ways of building beautiful code. If it works (which is likely), this model is more easily flexed up or down than building out a massive long-term services contract.

POST-SHOCK PROBLEMS

- I **“We’ve been doing things the same way for decades, but now we can’t afford it (and our customers hate it).”**
- I **“Overnight, we’ve had to start doing work remotely. It’s mostly successful, but there is much more to do.”**

WHERE TO START

6

Virtualize core work

The total impact of the COVID-19 pandemic will take years to become clear. However, one irrefutable shift is the new requirement for companies to modernize core process work. “Mining your back office for gold” has been a strategy for many, but now this is a requirement for survival.

Middle- and back-office work that is slow, labor-intensive, expensive, opaque and done the same way for decades (at least) is no longer allowable. Seen as impossible even a few months ago, it’s no longer crazy to virtualize the work your company does. If business leaders are willing to admit their weaknesses, nearly every organization can improve supply chain management, HR, finance and industry-specific process work.

The pandemic has opened the doors to [virtualized medical care](#) as medical workers use technology to provide at-home solutions or even in-hospital solutions more safely and effectively. [Virtualized health insurance](#) is now accelerating as providers work to deliver a resilient, lower-cost, agile, modernized member experience that cuts across enrollment, claims processing, finance and more. In life sciences, virtualized drugs and devices help accelerate the clinical trial process, all the way through to marketing and patient outreach.

[Automation](#), [applied intelligence](#) and worker enhancement have all moved from “helpful” to “critical” in a matter of a few short, horrible months. Now is the time to begin exploring which points on your value chain make the most sense to modernize (today).



POST-SHOCK PROBLEMS

- I **“Our security team is great, but threat vectors are continuously expanding.”**
- I **“We keep funding more IT, but we can’t deliver at the Amazon/Google/Microsoft cost.”**
- I **“We feel like dinosaurs running through tar when we see how fast digital natives can adapt and innovate.”**

WHERE TO START

7

Modernize your cloud foundation

For years, IT leaders have been chipping away at costs, moving work to service providers, pushing centralized computer loads to the cloud, but that was really just Phase One (sorry).

The unprecedented economic downturn will shine a spotlight on how much more can be done. It will no longer be acceptable to throw out the traditional justifications for moving slowly. Threadbare arguments against reducing IT costs – more aggressively moving into the cloud, deploying cost-effective SaaS platforms, aggressively reducing operating costs of non-core work – must simply be overruled. Most important, overnight we are pivoting from, “What can we move into the cloud?” to, “What *can’t* we move to the cloud?”

Certainly there are logical reasons to maintain the status quo, but those arguments [will be tested in the coming months and quarters](#). The first step is to turn those arguments around and see if they still hold water as strategic questions. Are these all true? “Our security team has defended us well, but the hardened infrastructure used by cloud vendors offers greater protection.” “Our centralized processing power has a lower cost point than Google and Amazon and Microsoft.” “We feel unconstrained by our legacy compute capability and are innovating faster than Netflix, Tesla or our industry-specific disruptors.”

If your company can answer “yes” to questions like these, congratulations! If not, don’t despair because you’re in the majority. There is still time to adapt, but there is no time to delay.

POST-SHOCK PROBLEMS

- I “Our employees are wondering: How can we ever work together again and stay healthy?”
- I “Our customers are worried they’ll get sick in our buildings.”
- I “We need instrumentation help to lower costs while providing better experiences.”

WHERE TO START

8

Make every space smart (and safe)

In *Code Halos*, we discussed how low-cost instrumentation and connectivity can benefit every person, place or thing through the generation of code — data and information — that can improve experiences and even create new business models.

The modern Internet of Things (IoT) is creating significant scale, a shift that will be accelerated by the pandemic. For years, sensor-enabling industrial equipment has improved productivity, reduced downtime and paved the way for more “as-a-service” business models. In the post-pandemic economy — as demand evolves and our expectations and concerns about staying safe in public spaces remain top of mind — nearly every company that operates in physical space will have to adopt the same philosophy.

This isn’t science fiction. Cameras and sensors of all types are already being piloted and deployed to assess occupant health, as well as help us maintain safe distances, clean surfaces (even the air around us), etc. This takes a coordinated solution linking sensors, analytics and software. Sensors on every element of a building — escalators, HVAC, elevators, doors and more — provide data that can improve safety, lower building maintenance costs and deliver a more comfortable occupant experience.

In order to get back to a familiar world in which we feel at ease in nearly every non-industrial space we enter — banks, stores, theme parks, theaters, restaurants and more — it’s time for business leaders to become proactive by applying instrumentation, analytics and software engineering to make every space intelligent, less expensive to manage, more comfortable and safer for us all.

Every business leader today is now truly an explorer, among the first to navigate the unique and formidable shockwaves now facing us all. With so many variables, we may not be able to predict the future accurately, but we *do* know there are steps we can take to maximize our business health.

It's up to each of us to hammer the surrounding chaos into a catalyst for positive change. We've introduced real-world steps every business leader can take to be fit for the inevitable recovery. This requires imagination, courage and agency to shape our businesses (and our own professional futures).

While some parts of the global economy are inarguably stalled, business is still happening (*and will continue to do so*). Just as "champions are made in the off-season" in the sporting world, *now* is the time to take steps to be stronger and more agile in every industry's upcoming season.

About the author



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Paul Roehrig is Head of Strategy and Growth for Cognizant Digital Business. He is the founder and former Global Managing Director of Cognizant's Center for The Future of Work. Along with Malcolm Frank and Ben Pring, he is a co-author of *What To Do When Machines Do Everything: How to Get Ahead in a World of AI, Algorithms, Bots, and Big Data* and *Code Halos: How the Digital Lives of People, Things, and Organizations are Changing the Rules of Business*. He can be reached at Paul.Roehrig@cognizant.com.

About Cognizant Digital Business

We help clients build digital businesses and innovate products that create new value — by using sensing, insights, software and experience to deliver on what customers demand in the digital age. Through IoT we connect the digital and physical worlds to make smart, efficient and safe products, operations and enterprises. Leveraging data, analytics and AI we drive intelligent decisions and anticipate where markets and customers are going next. Then we use those insights, combining design and software to deliver the experiences that consumers expect of their brands. Learn more about how we're engineering the modern enterprise at www.cognizant.com/digitalbusiness.

About Cognizant

Cognizant (Nasdaq-100: CTSH) is one of the world's leading professional services companies, transforming clients' business, operating and technology models for the digital era. Our unique industry-based, consultative approach helps clients envision, build and run more innovative and efficient businesses. Headquartered in the U.S., Cognizant is ranked 193 on the Fortune 500 and is consistently listed among the most admired companies in the world. Learn how Cognizant helps clients lead with digital at www.cognizant.com or follow us [@Cognizant](https://twitter.com/Cognizant).

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