



Innovation Insight

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COVID-19: Disruptor par excellence

Learning lessons from disruptions past





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COVID-19 - Disruptor par excellence



Learning lessons from disruptions past

Calie Pistorius

In just a few months, the COVID-19 pandemic has created havoc on a global scale. Millions of people have contracted the disease and hundreds of thousands have died - so far. The world is reeling from the deadly virus' devastating impact and desperately searching for solutions. Amidst the chaos, there are also new opportunities for growth. Lessons learnt from technological disruptions may be helpful in finding a way forward to ride the "wave of creative destruction".

The coronavirus pandemic has stretched public health services to the limit, in some cases (at least temporarily) losing the ability and capacity to tend to other diseases. There was a surge in telehealth. Many children had to forego vaccinations, undoubtedly something for which a heavy price will be paid in the future. The world's economy was put on hold, resulting in a sharp depression from which it will take a long time to recover. The World Bank is talking about "lasting scars" in the developing world.

Domestic and international travel ground to a halt and international borders were closed. The education of students and schoolchildren was abruptly interrupted. A significant part of the world's population was confined to their homes for months during lockdowns and curfews, compounding the tremendous suffering and stress. Understandably, all of this caused anxiety, not only about the hardships endured during the emergency itself, but also about what to expect during the abnormal transitioning to a "new normal" and what the future will hold. All against the backdrop of what may become an existential threat in many respects.

Many of the characteristics of the COVID-19 world resonate with what is known in business and innovation terms as a "disruption". Following this analogy, the COVID-19 pandemic is a disruptor par excellence.



It is common cause that all technologies continuously change and develop - some at a leisurely and incremental pace and others swiftly and radically. When new technologies emerge, they are typically uneconomical and expensive, under-developed, far from technically optimised and not in the mainstream. As such, they are often disregarded as a threat to the current dominant technology, or for that matter as sources of opportunity. In retrospect, however, one often finds that the initial weak signals were visible for some time and were in fact detected by those who were interested and actively searching for them. It is also not uncommon for the disruptive technology to emerge from a seemingly unexpected source or industry. As emerging technologies "grow up" and benefit from learning curve effects, they gather strength, become more economical and technologically advanced, gain a dedicated following and are increasingly adopted.

Technological disruption occurs when an emerging technology, very often based on new scientific principles, eventually addresses not only new markets but also overtakes markets previously served by mature technologies. The mature technologies in effect then become obsolete and are substituted by the newer (emerging) technologies.

The leitmotif of disruption is “everything changes”, and is manifested as paradigm shifts in a multitude of connected domains, including:

- New basis of value creation, business models and competitive environment.
- New culture of “how things are done around here”.
- New methods of production, delivery and distribution.
- New industry dynamics, timing and cycles.
- New skills, training and education requirements.

disruption

One of the major impacts of disruption is usually an inevitable change in the hierarchy of the disrupted industry. Superiority, market dominance, competence and competitiveness under the old regime do not provide any guarantee of the same or even survival in the new world. In fact, very often those market leaders who fail to transform, embrace and adapt to the new order follow their obsolete technologies and business models into obsolescence. New market leaders emerge, with businesses based on new business models underpinned by the disruptive technologies.

The analogy of technological disruption with the devastating COVID-19 pandemic is useful in that it provides us with a framework to make more sense of the impact of coronavirus disruption and beyond. There are many lessons to be learned from disruptive technological innovation which can help us to navigate and rebuild a new and safer post-COVID world.

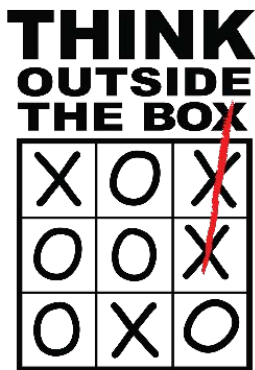
The COVID-19 pandemic has disrupted (and at the time of writing continues to disrupt) not just an industry sector but the entire world - hardly a country, company or individual has not been touched in some way or another. The pandemic has already forced a change in a number of behaviour patterns across the board in the personal, public and business spheres for individuals, families, groups, crowds and even nations. The ways in which we socialise, entertain, communicate, travel and work have changed radically. There is great emphasis on personal and public hygiene, and “staying safe”. Social distancing has become a way of life, as has the wearing of face masks and gloves, and being tracked by tracing apps.

Much of “life as we know it” has shifted to the internet and mobile devices. Increasingly people shop online and prefer contactless payment. Those students who have access to the internet continue their education online, even though it is a very different experience from the residential contact education they enrolled for earlier in the academic year. Those that graduate, do so in virtual ceremonies.

Economically, the world is in a crisis. Many companies, including those in the hospitality and retail industries, are experiencing severe financial distress. A number of governments have or plan to offer stimulus packages to business. The airline industry is in dire straits and many have looked towards governments for bail-outs. A large number of businesses across the globe were closed temporarily, but it is evident that many will not open again. Several large companies have already gone bankrupt or into administration. Unemployment is rampant and millions of people have lost their jobs.

Business conferences and sporting events were cancelled, and in some cases national cabinets and legislators debated via video conference. Many people work-from-home (WFH) in hastily configured home offices, conducting their business via teleconferences. Predictably, cybercrime has targeted these home offices, many of which are not well protected against cyber-attacks and became weak links in companies’ cyber defences.

Pharmaceutical and biotech companies across the world are racing to find a vaccine for the deadly virus, and a number of companies pivoted from their normal business to manufacturing ventilators and personal protection equipment (PPE) such as face masks and gowns.



We do not yet know exactly how the new post-COVID world will unfold, and to what extent “emergency behaviours” will be adopted will stick. As the dust settles, it is unclear which things - either pre-COVID or adopted during the emergency - we will stop doing, which new things we will commence doing and which things we will continue doing, although perhaps differently.

What we do know, is that change has been swift and that many things will be different. If we are to learn from the disruption analogy, it is to recognise that despite the tremendous destruction and tragic human loss, new opportunities will also arise, as they always do.

Disruptions bring with them new opportunities, often fuelled by new and emerging technologies. One unintended positive consequence, for example, is that the COVID-induced pause of everyday hustle and bustle seems to have brought about a noticeable, albeit probably temporary, improvement in a number of environmental concerns, including pollution. It is a signal of what can be achieved, but at a cost.

The world is probably at a strategic inflection point. There is now literally a “once in a lifetime” opportunity to reset and set a new path. This will not happen by default. The new opportunities need to be proactively seized - and for this to happen we need visionary leaders, be they politicians, decision makers in business or just regular folks like the rest of us, who have a desire and ability to create and shape a new future. This is not the time to be complacent or just to react to a broken past. Fumbling the future is not an option.

“We are constantly faced by great opportunities brilliantly disguised as insoluble problems”
Lee Iococca

DeltaHedron provides its clients with technology intelligence and decision support to assess and manage the strategic business impact, opportunities, risks and threats presented by emerging technologies and the dynamics of technological change.

DeltaHedron recently launched an open access e-journal reporting on the impact of COVID-19 on a broad range of sectors.

Please click here to view:

DeltaHedron | COVID-19 Impact

or enter the text below into a browser

https://bit.ly/COVID19_DeltaHedron_Innovation





A selection of areas continuously monitored by DeltaHedron®

Emerging technologies	Applications	Industries
3D/4D Printing and scanning Artificial Intelligence (AI) Machine Learning, Deep Learning Artificial Reality (AR), Virtual Reality (VR) Mixed reality Automotive Autonomous, flying, hybrid, scooters Electric, petrol, diesel, hydrogen, battery Basic sciences Astronomy, biology, chemistry, physics Mathematics, statistics, geology Biotechnology Blockchain Cryptocurrencies Bots Robotics, automation, chatbots, cobots Biometrics, voice/facial recognition Computers and computing Quantum computing, edge computing Edge, High Performance Computing Memory storage Data Big data, analytics, business intelligence Cybersecurity, data protection Data science Digital and ICT Mobile, cloud, wireless, wifi, lifi Broadband, 5G, VOIP Software, SaaS, APIs, digital twinning Drones Electronics and photonics Antennas, radar, lidar, LoRa, sonar Energy Batteries, storage, renewables Electric, fossil, oil/gas, nuclear, hydro Hydrogen, solar, wind, tidal Imaging Holograms, photography, video Internet of Things (IoT) Industrial, sensors, RFID Materials Building, chemicals, bio, graphene, nano Metals, metallurgy, plastics, self-healing Wearables	Asset management Protection, tracking Anti-poaching Cities and communities Real estate Smart cities Smart home, office, factory Customer experience Consumers, UX Digital identity Authentication, identification e-Privacy, GDPR Environment Carbon emissions Climate change, conservation Water, marine, oceans Fraud prevention Anti-counterfeiting Games, toys Geolocation, mapping Navigation, GPS, tracking Health Dental Digital health Diseases/medical conditions Health and safety Hospitals, homecare Mental health, psychology Pharma, medicine ICT Data centres Enterprise systems Phones, tablets, apps Internet, online, web Search Engine Optimisation Management/governance Software development Telecommunications Legal, IP and patenting Maintenance Marketing, branding Packaging Workflow X-as-a-Service (XaaS)	Aerospace Agriculture, agritech, viticulture Food and beverage Animals, crops, plants, fisheries Arts and culture Built Environment, construction Constructechs, housing Facilities management Chemical, biochemical Defence Education (schools and higher) Edtech and Corporate learning Energy and utilities Engineering Entertainment, music Fashion, textiles Financial, banking, investment e-Payments Fintechs, insurtechs Insurance, actuarial Health, pharma, cosmetics ICT Logistics, procurement Supply chain Manufacturing Maritime, marine, oceans Shipping, ports Media, journalism, publishing Social media Mining and minerals Philanthropy, CSR Professions Accounting, Auditing Engineering, Health, Legal Public sector, digital government Retail, consumerism Security and policing Service industries Sport, exercise, leisure Telecommunications Tourism, travel, hospitality Transport, infrastructure Air travel and airports Public transport, rail, road

Business impact and cross-cutting themes

Trends and future thinking Digital transformation Disruption Dynamics of technological change Societies and communities Generational impact World of work and employment Freelance, gig economy HR management, recruitment, training	Risk management Innovation management Business models/platforms Corporate culture Incubators/accelerators Science and techno parks R&D, technology transfer Ventures, startups and entrepreneurship	Leadership and management Change management Decision-making/support Ethics and values National and regional interest Competitiveness Economic impact Fourth Industrial Revolution Innovation systems/policy
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