



MASTER IN ENTREPRENEURSHIP  
INNOVATION MANAGEMENT  
IN COLLABORATION WITH **MIT SLOAN**

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**MIT MANAGEMENT**  
SLOAN SCHOOL



UNIVERSITÀ DEGLI STUDI DI NAPOLI  
**PARTHENOPE**

# Strategy disruption and realignment

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Napoli, January 19th 2024

[www.meim.uniparthenope.it](http://www.meim.uniparthenope.it)

# Professor profile



- Senior professional with 30 years of experience.
- Has worked in large organizations such as Deloitte, Trenitalia - Italian railways, small start-ups, and family owned businesses.
- Has worked in different industries: hospitality, tourism, spa & wellness, travel, air and rail transport, ICT, management consulting.
- Skilled in strategic management and business planning, service marketing, business development, sustainability, organizational design, capacity building, asset management, corporate governance.
- Lectures at Sapienza University in Rome and other postgraduate educational institutions.
- Geographical areas of work: Italy, West Europe, Africa, Asia.

## *Education*

- Senior Managers Program - HEC, Paris.
- Master of Science in Tourism & Hotel Management, diploma with Distinction - School of Management - University of Surrey, UK.
- Full degree in Economics and Business (with honours)

## Contacts:

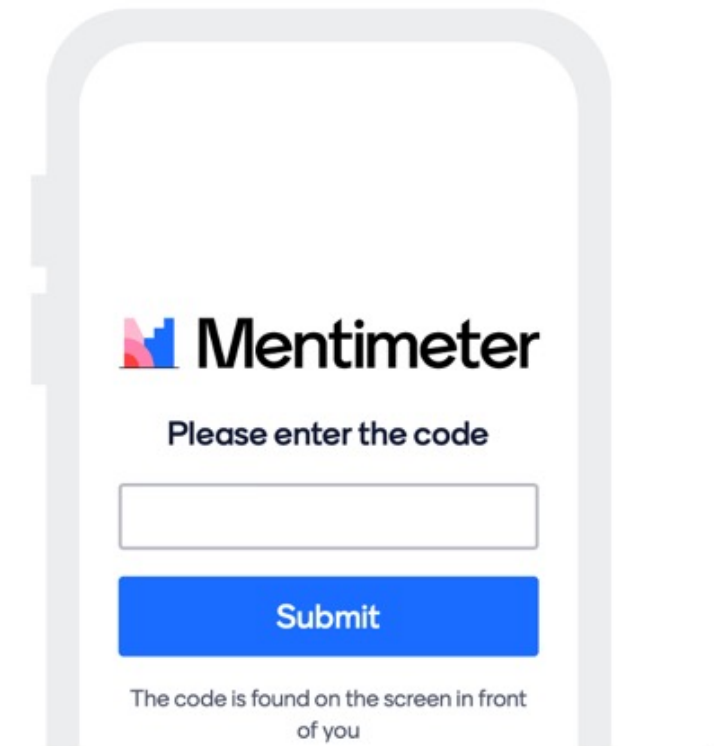
- fiorentinoale@gmail.com
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# Class Presentation

## Questions

Why did I choose this master course and what are my future objectives?

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# Solve this problem

Task: how to fix and light a candle on a wall (or a cork board) in a way so the candle wax won't drip onto the table below. To do so, one may only use the following along with the candle:

- 1) a book of matches
- 2) a box of thumbtacks



# Empty page

# Solve this problem

Solution for the he candle problem or candle task, also known as Duncker's candle problem.

The most efficient solution is to empty the box of thumbtacks, use the thumbtacks to nail the box to the wall, put the candle into the box, and light the candle with the match.

## Duncker's candle problem



# Walmart case: international successes and failures

The biggest retailer in the world has found that internationalisation is considerably more challenging than expansion at home.

Walmart began its international operations 1991 and today the UK, Brazil and China are their largest markets outside the USA. Walmart International is the company's fastest growing unit with sales of \$141bn (£85bn, €106bn) in 2015, accounting for about 30 per cent of Walmart's overall sales. It included close to 800,000 employees in over 6,200 stores and 11 e-commerce websites in 28 countries. Internationalisation results have, however, been mixed as Walmart has struggled to understand local buying patterns, culture, competitors and regulations, not the least in emerging markets.

Walmart first entered the Americas and has since expanded into ever more distant geographic markets. The early entry into Canada and Mexico was successful, but South America's largest market, Brazil, has been considerably more challenging. After two decades they are still losing money there. Their challenges include regulatory problems, strong competition from the French supermarket chain Carrefour and being unable to convince shoppers about Walmart's 'everyday low prices' model. In 2016, they restructured the Brazil operations and closed 60 outlets, accounting for 5 per cent of its sales.

European expansion results have similarly been mixed. The acquisition of the ASDA Group in the UK was relative successful while Walmart experienced eight years of struggle in Germany that ended in a market exit. First, they did not have enough scale economies compared to local competitors, like Aldi, with strong relationships with German suppliers and already catering to price-conscious consumers. Second, cultural mistakes were made as customers did not approve of American service practices. A third challenge was Germany's then strict regulations on location and opening hours. German workers also resisted Walmart workplace customs, resulting in labour union conflicts.

Walmart's first Asian expansion into South Korea was similar to the German story with strong local competition and failures to meet local customer needs. It ended in exit after eight years. China has been more of a mixed picture. On the one hand, sales have steadily increased, over 400 stores have been established and they make a profit. On the other hand, the distance, both geographically and culturally, was considerably larger than first anticipated. An early discovery was that Chinese consumers prefer frequent shopping trips in contrast to Walmart's home-based experience where customers drive to out-of-town stores and fill their cars with large multi-packs. While they encountered a completely different international market, they also faced large regional variations in this vast and multi-ethnic country. They also struggled with local regulations and food safety issues and tough competition from Carrefour.

In a 2014 interview with the Wall Street Journal, Walmart International President and CEO David Cheesewright, former CEO of Walmart's UK supermarket chain Asda, admits to the struggles, but explained they would still be the Walmart growth engine. He emphasised four initiatives:

'First, create a platform for sustainable growth in China. . . . Second, turn around our operation in Brazil. . . . Third, we have to rejuvenate Mexico. . . . And, fourth we have to drive e-commerce.'

Walmart Retail Units: Walmart U.S.: 4,616 stores; Sam's Club U.S.: 599; Walmart International: 5,294; Total Retail Units at 10/31/2023: 10,509

Sources: Dudely, R., 'Wal-Mart's everyday low prices fail to stir Brazilians', Bloomberg Business, 23 April 2014; S. Banjo, 'Wal-Mart's strategy to jump start growth in China', Wall Street Journal, 5 August 2014; A. Felsted, 'China set to remain at head of line for grocery sales', Financial Times, 23 August 2015; Thomson Reuters Street Events, 'Wal Mart Stores Inc. 22nd Annual Meeting for the Investment Community', edited transcript, 14 October 2015; L. Whipp, 'Walmart to close 269 stores as it revamps online presence', Financial Times, 15 January 2016.

# Walmart case

## Questions

1. What are the internationalisation drivers Walmart International has struggled with?
2. What might be the dangers for a large Western retailer in staying out of emerging markets?

Please go on [www.menti.com](http://www.menti.com) and enter code 3643 1912

 **Mentimeter**

Please enter the code

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The code is found on the screen in front  
of you

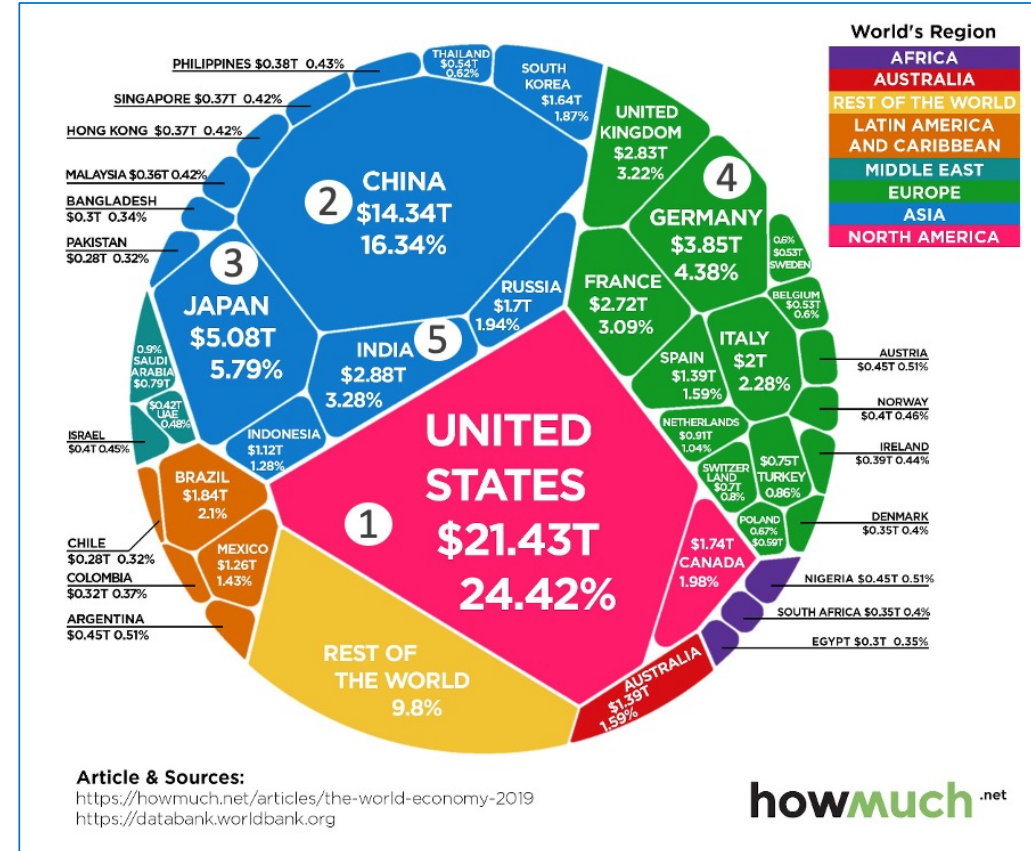
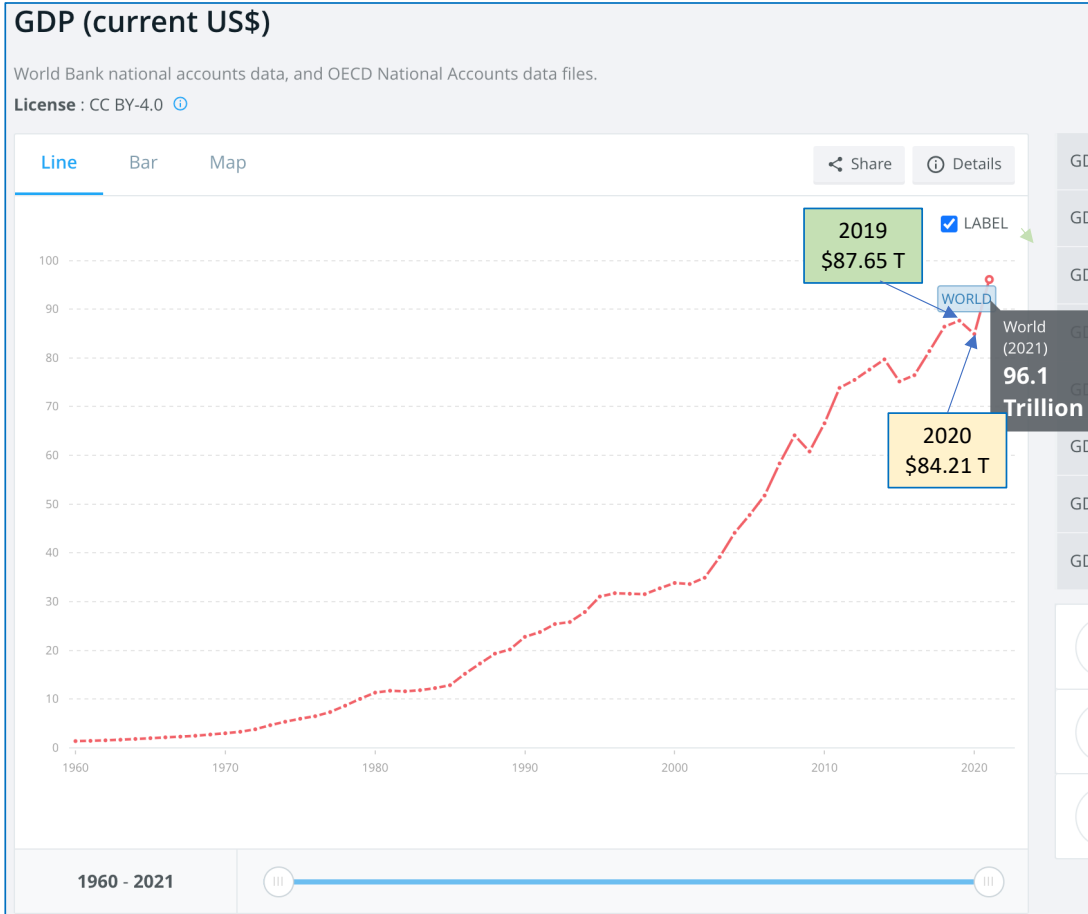


# Starbucks case



Video: <https://www.youtube.com/watch?v= FGUkxn5kZQ>

# Top Countries by GDP



# World Economic Outlook, October 2023

The global economy  
is...



Video link: <https://www.youtube.com/watch?v=MVPy7Q0gEdA>

**What's disrupting the global recovery?**



# Where is disruption happening?

## Any example?



# Analysis of the business environment

## PESTLE Analysis

### POLITICS

- Bureaucracy
- Corruption
- Freedom of the Press
- Government Type
- Government Stability
- Social/Employment Legislation
- Trade Restrictions

### ECONOMICS

- Interest rates
- Taxes
- Exchange rate
- Economic growth – GDP, FDI
- Employment rate
- Likely Economic Change
- Big Mac Index

### SOCIAL

- Health
- Population Growth Rate
- Age Distribution
- Career Attitudes
- Educational Infrastructure
- Social Mobility
- Employment Patterns
- Cultural Taboos
- Core Ethics

### TECHNOLOGICAL

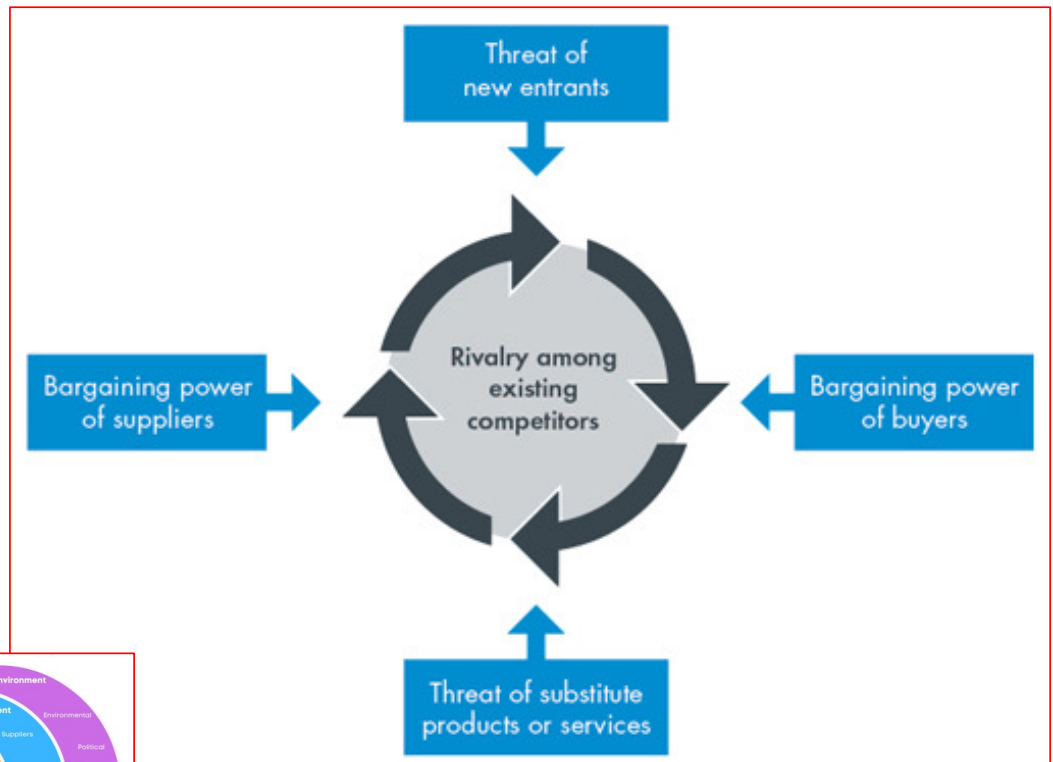
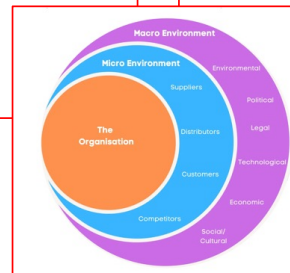
- Degree of Automation
- Emerging Technologies
- Rate of Technological Change
- R&D Activity

### LEGAL

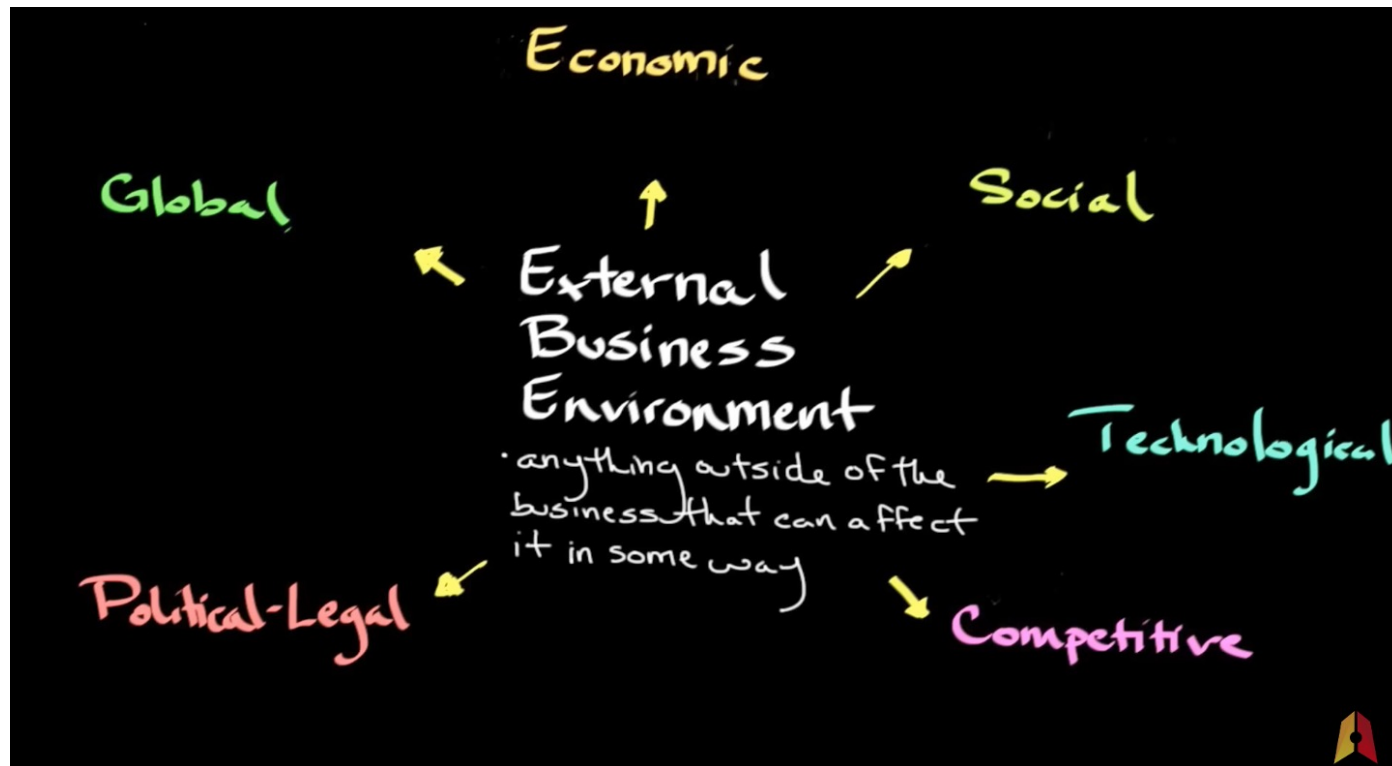
- Antitrust Law
- Consumer Law
- Discrimination Law
- Employment Law
- Health and Safety Laws

### ENVIRONMENTAL

- Weather
- Climate
- Geography
- Disaster Quotient
- Infrastructure
- Legal



# Analysis of the business environment



Video: <https://www.youtube.com/watch?v=rFUs1wYKtKI> first 5 minutes

# What we know about the global outlook

Martin Wolf Economics

From demography to technology, it is crucial to pay attention to the forces that will certainly shape our future



What is going to happen to the world economy? We will never know the answer to this question. In one decade after another, something big and largely unexpected has occurred: the great inflation and oil shocks in the 1970s, the disinflation of the early 1980s, the fall of the Soviet Union and the rise of China in the 1990s, the financial crises in the high-income economies in the 2000s and the pandemic, post-pandemic inflation and wars in Ukraine and the Middle East in the 2020s. We live in a world of conceivable and obviously consequential risks. Some – war among nuclear great powers – could be devastating. The difficulty is that low-probability, high-impact events are nearly impossible to forecast.

Yet we also know of some big features of our global economy that are not really uncertain. These must also stay in our minds. Here are five of them.

The first is *demography*. The people who will be adults two decades hence have all been born. The people who will be over 60 years old four decades from now are already adults. Mortality could jump, perhaps because of a terrible pandemic or a world war. But, barring such a catastrophe, we have a good idea of who will be living decades from now.

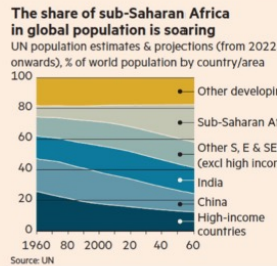
Several features of our demography are quite clear. One is that fertility rates – the number of children born per woman – have been falling just about everywhere. In many countries, notably

China, fertility rates are far below replacement levels. Meanwhile, the highest fertility rates are in Sub-Saharan Africa. As a result, its share in global population might jump by 10 percentage points by 2060. (See charts.)

These demographic changes are the result of rising longevity, the transformation in the economic, social and political roles of women, urbanisation, the high costs of parenthood, improvements in contraception and changes in how people judge what is worthwhile in their lives. Only huge shocks could conceivably change any of this.

A second feature is *climate change*. Maybe current trends will be turned around in time. But emissions of greenhouse gases have barely stabilised, while the world continues to get hotter as stocks of these gases in the atmosphere continue to rise. It is a good bet that it will continue to do so for a long time. If so, temperatures are sure to rise by far more than 1.5C above pre-industrial levels, which, we have been told, is the upper limit of reasonable safety. We will have to work harder to mitigate emissions. But we will also have to invest heavily in adaptation.

A third feature is *technological advance*. Progress in renewable energy, especially the falling cost of solar, is one example. Advances in life sciences are another. But, in our age, the revolution in information and communications technologies is the centre of such progress. In *The Rise and Fall of American Growth*, Robert Gordon of Northwestern University has



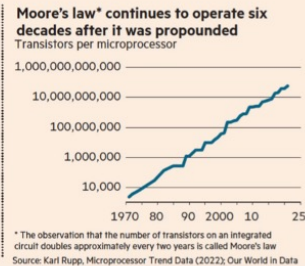
persuasively argued that the breadth and depth of technological transformation has slowed, almost inevitably, since the second industrial revolution of the late 19th and early 20th centuries. Transport technology, for example, has changed rather little in half a century.

Nevertheless, the transformation in information processing and communication has been astounding. In 1965, Gordon Moore, who went on to found Intel, argued that “with unit cost falling as the number of components per circuit

Short-term shocks can be overwhelming. But the urgent must not overwhelm the important

risks, by 1975 economics may dictate squeezing as many as 65,000 components on a single silicon chip”. That was right. But astoundingly, Moore’s eponymous law continues to be true almost half a century later. In 2021, the number of such components was 58.2bn. This permits marvels of data processing. Moreover, 60 per cent of the world’s population used the internet in 2020. Further transformation of how we live and work must follow from this. The development and use of artificial intelligence is the latest example.

A fourth feature is the *spread of knowhow* across the world. The developing regions that have proved most adept at absorbing, using and furthering such knowledge are in east, south-east and south Asia, which contain roughly half of the world’s population. Developing



Asia also continues to be the world’s fastest-growing region. Given the ability – and the opportunity – to catch up, it is a safe bet that this will continue. The centre of gravity of the world economy will continue to shift in the direction of these regions. That will inevitably create political shifts. Indeed, it already has. China’s rapid economic rise is the big geopolitical fact of our era. In the long term, India’s rise is likely to have large global consequences, too.

A fifth feature is *growth itself*. According to the updated work of the late Angus Maddison, as well as the IMF, the world economy has grown in every year since 1950, except 2009 and 2020. Growth is an inherent feature of our economy. The World Bank’s recent Global Economic Prospects notes that what looms ahead in 2024 is



“a wretched milestone: the weakest global growth performance of any half-decade since the 1990s, with people in one out of every four developing economies poorer than they were before the pandemic”. Nevertheless, even in this shock-affected period, the world economy has grown, even if unequally across countries and people, and unevenly over time. We are not moving into an era of global economic stagnation.

It is easy to be overwhelmed by short-term shocks. But the urgent must not be allowed to overwhelm our awareness of the important. In the background, the big forces described above will reshape our world. While improving our capacity to respond to shocks, we must pay them very careful attention.

[martin.wolf@ft.com](mailto:martin.wolf@ft.com)

Source: Financial Times, 17Jan2024



A dramatic sky with dark, heavy clouds over a body of water at sunset or sunrise. The text "DISRUPTION IS UNAVOIDABLE" is overlaid in blue, bold, sans-serif font.

**DISRUPTION  
IS UNAVOIDABLE**

# Definition

- **Disruption:** is the act or process of disrupting something, a break or interruption in the normal course or continuation of some activity, process, etc.
- Two **examples of new-market disruption** outlined in Disruptive Strategy are the emergence of personal computers and, later, smartphones. Together, they illustrate how disruptors become incumbents that can then be disrupted by a new innovation.
- **Business disruption** is the process in which a product becomes popular enough to replace a traditional or common product or service. These kinds of disruptions can impact entire industries and understanding them can help you manage or create one for your own business.

Disruption video: <https://www.youtube.com/watch?v=eL7THeyYjOw>

# Disruption is possible in many areas

Here are some categories to consider for potential disruptive events:

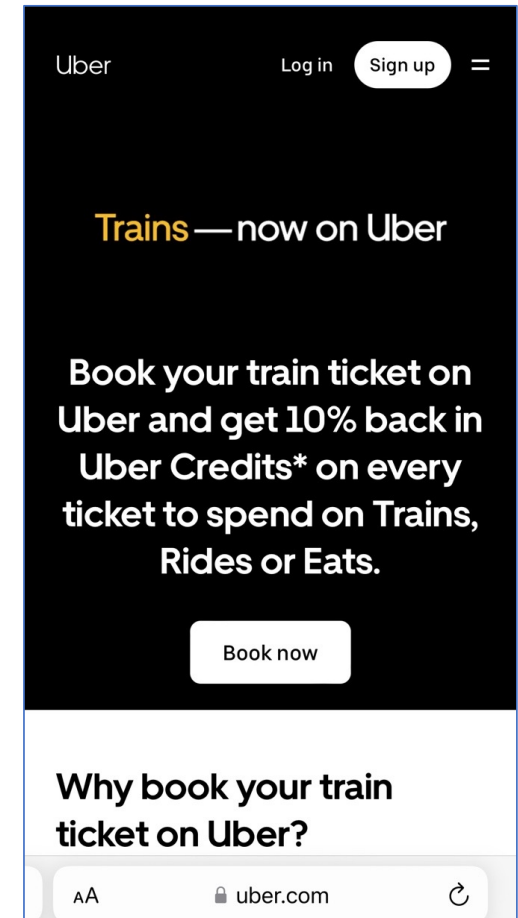
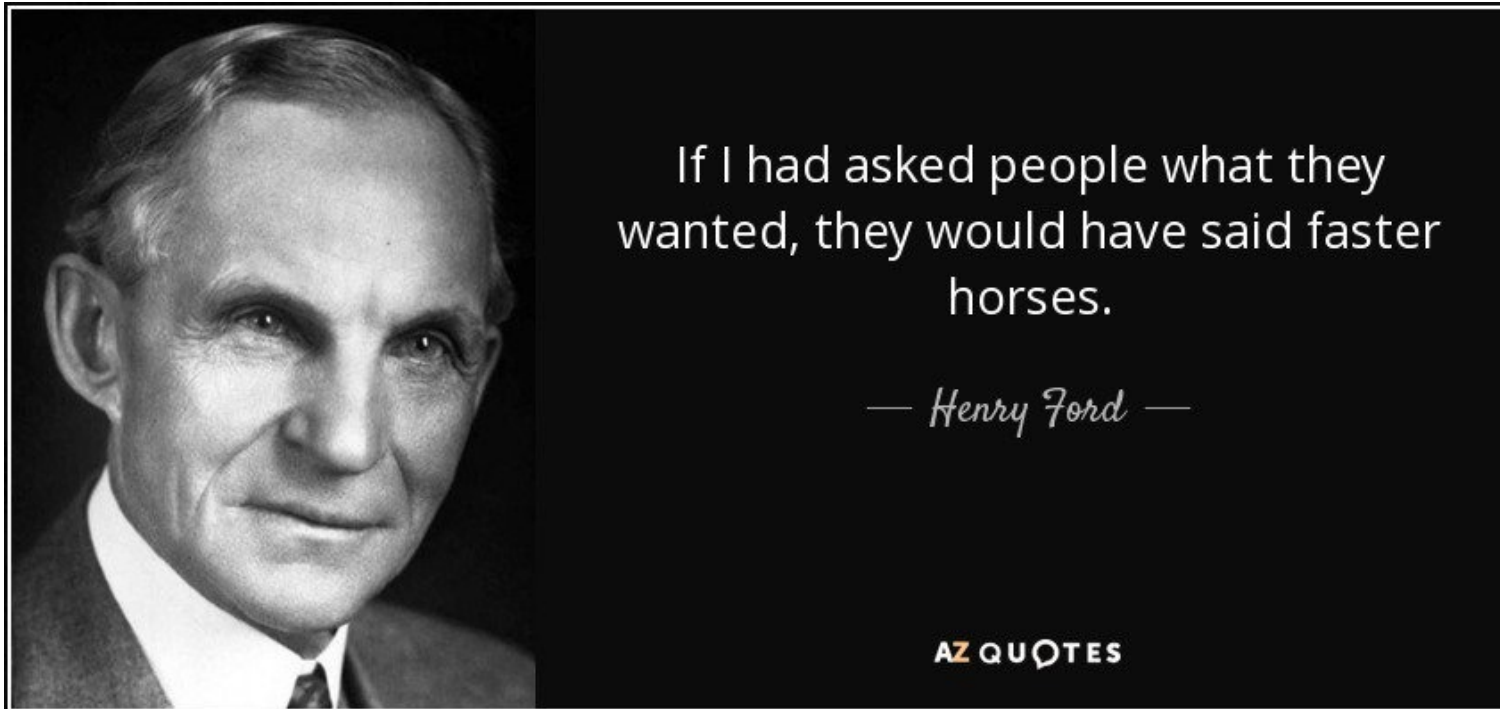
- Extreme Weather and Natural Disasters
- Manmade Disaster or Disruptions
- Human Health & Social Factors
- Significant Economic Events
- Disruptive Governmental or Political Changes
- International Geo-Political Changes
- New Technology – Technological Development
- Industry or Market Changes or Disruptions
- Legal & Regulatory Changes



# Disruption from technology

- Technology has long been a disruptive force, radically changing the nature of work and society. In the 19th century, the Industrial Revolution altered our world profoundly and permanently. Electrification, the automobile and mass production, just to name a few massive technological changes, reshaped the 20th century. Today, powerful digital technologies and ubiquitous connectivity have created a knowledge economy that promises to spark the greatest changes in human history.
- Each period of technology-driven disruption has seen business models go extinct and be replaced by ones never before considered. Some companies couldn't evolve and went out of business, while others adapted, seized opportunities and continued to thrive by taking advantage of the new environment. What's different today is that technology is advancing at a pace we have never experienced before in human history – and the pace of change will only increase.





European Defence Agency video: [https://www.youtube.com/watch?v=JU\\_fHqXbAq8](https://www.youtube.com/watch?v=JU_fHqXbAq8)



# THE WORLD IS TRANSFORMING



Video: [https://www.youtube.com/watch?v=mw9\\_m39fokM](https://www.youtube.com/watch?v=mw9_m39fokM)

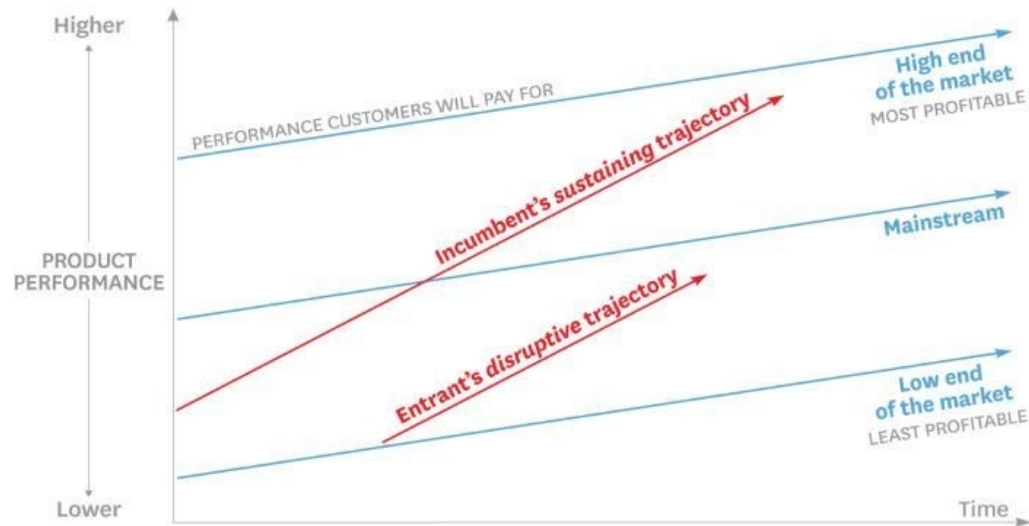
# Disruption from technology

- Consider this: In 20 years, we've gone from early electronic mail, hand-coded HTML pages and PCs running DOS to social media, the mobile web and incredibly powerful smartphones, tablets and wearables, the metaverse, AI, AR/VR. How we interact with each other, and our world, has evolved in ways we couldn't have imagined a few years ago. These same technologies are changing the nature of work as well, forcing companies and workers alike to rethink where, when and how work gets done.
- A vast range of ever-improving advanced technologies are driving the disruptive innovation that will soon change our world and define the century to come. "Disruptive innovation", a term coined by Harvard professor Clayton Christensen in his book, describes "a process by which a product or service takes root initially in simple applications at the bottom of a market and then relentlessly moves up market, eventually displacing established competitors."

"Disruptive Innovation," Clayton Christensen, [www.claytonchristensen.com/keyconcepts/](http://www.claytonchristensen.com/keyconcepts/).

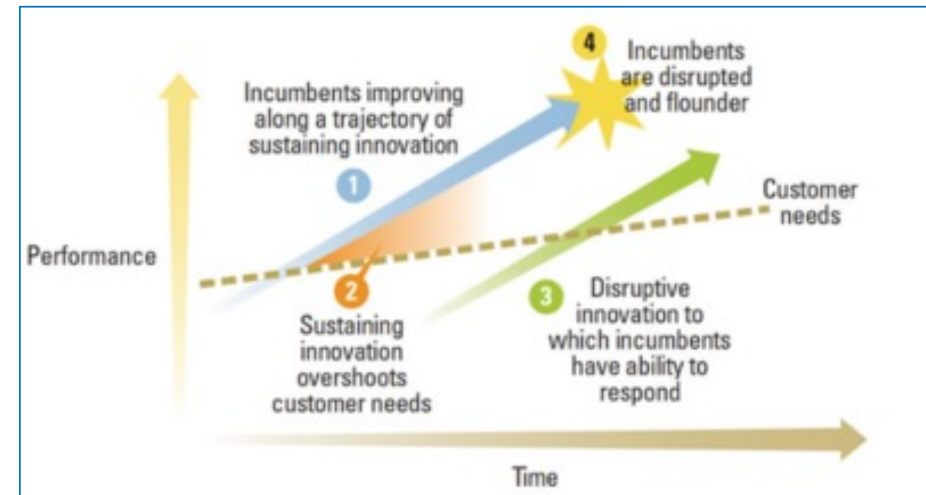
### The Disruptive Innovation Model

This diagram contrasts *product performance trajectories* (the red lines showing how products or services improve over time) with *customer demand trajectories* (the blue lines showing customers' willingness to pay for performance). As incumbent companies introduce higher-quality products or services (upper red line) to satisfy the high end of the market (where profitability is highest), they overshoot the needs of low-end customers and many mainstream customers. This leaves an opening for entrants to find footholds in the less-profitable segments that incumbents are neglecting. Entrants on a disruptive trajectory (lower red line) improve the performance of their offerings and move upmarket (where profitability is highest for them, too) and challenge the dominance of the incumbents.



SOURCE CLAYTON M. CHRISTENSEN, MICHAEL RAYNOR, AND RORY MCDONALD  
FROM "WHAT IS DISRUPTIVE INNOVATION?" DECEMBER 2015

© HBR.ORG







# TABLE OF DISRUPTIVE TECHNOLOGIES

A dashboard of 100 wonderful, weird (and possibly worrying) ways the world might change in the foreseeable future

POTENTIAL FOR SOCIO-ECONOMIC DISRUPTION	De	Ps	Ht	Hc	Da	Sp	El	Vr	Co	Qt	
	91	92	93	94	95	96	97	98	99	100	
	Ci	Le	Sa	Br	Ad	Ab	Is	Ph	Th	Te	
	81	82	83	84	85	86	87	88	89	90	
	Ss	Ip	He	Mp	Dn	Gv	Qs	Cp	Ud	Rd	
	71	72	73	74	75	76	77	78	79	80	
	Gh	Ak	Rs	Em	Xx	Bh	Me	Tc	Dr	Wh	
	61	62	63	64	65	66	67	68	69	70	
	Md	Sw	Mm	Pb	Et	La	Sd	Lc	Pc	Sh	
	51	52	53	54	55	56	57	58	59	60	
Mc	Sf	Dt	Se	Bf	Op	Bs	Nm	Fu	Mr		
41	42	43	44	45	46	47	48	49	50		
DI	Pa	Av	Id	Df	Ap	Fp	Sr	Fd	Ze		
31	32	33	34	35	36	37	38	39	40		
Rc	Sc	Cm	Ro	As	Rg	Wa	Eb	Bp	Be		
21	22	23	24	25	26	27	28	29	30		
Cr	So	Pp	Eh	Wt	Ac	Mh	Sg	Pe	Ff		
11	12	13	14	15	16	17	18	19	20		
Sn	Dw	Va	We	Bi	Px	Cc	Vt	Sj	Am		
1	2	3	4	5	6	7	8	9	10		
SOONER	TIME*										LATER

### Example of organizations active in each area

- 1 Miro (South Korea), Abena Nova (Denmark), Sierpre Secos (Spain)
- 2 Statoil (Norway), Siemens (Germany), Voltum (US), UMaIne (US)
- 3 Green Skies Vertical Farms (US), Aero Farms (US), Neo Farms (Germany), Urban Crop Solutions (Belgium)
- 4 Witricity (US), Powermat (Israel), Apple/Power By Proxi (US), Qualcomm (US), Mojo Mobility (US), Mopar (US), Fulton Innovation (US)
- 5 Google/Alphabet (US)
- 6 ReWalk (US), Rex Bionics (US), SuitX/US Bionics (US), Exko Bionics (US), Lockheed Martin (US)
- 7 Google/Alphabet (US), Samsung (Korea), Heoskin (Canada), Oatit (US), Komodo Tech (Canada), Shiftwear (US), Lechal (Brazil), OM Signal (Canada)
- 8 The Boeing Company/Elon Musk (US), China Aerospace Science and Industry Corporation (China)
- 9 Reaction Engines (UK), NASA (US), Boeing (US), Lockheed Martin (US), Airbus (France)
- 10 Deep Space Industries (US), Planetary Resources (US), Made in Space (US)
- 11 Bitcoin (Japan), Ripple (US), Litecoin (US)
- 12 Solarreserve (US), Abengoa (Spain), North China Power Engineering (China), Shanghai Electric (China), Zhejiang Supcon Solar (China), NWEPPD (China)
- 13 PredPol (US), ECM Universe (US)
- 14 Pavegen (UK), ECEEN (China)
- 15 Google/Alphabet (US), Joby Energy (US), Altaeros (US), Kitegen (Italy), Enerkit (Germany)
- 16 Polistring (US), Amazon (US), Alphabet/Google (US), Nantendo (Japan), Invisible Girlfriend/Boyfriend (US)
- 17 NASA (US)
- 18 Alphabet/Verily (US), Amazon (US), Vuzix (US), Everylight (Israel)
- 19 Elegant Embellishments (Germany), News (Spain), Studio Roosegaarde (Netherlands), Prosolve 370e (Germany)
- 20 Dull (UK), Boeing (US)
- 21 Softbank (Japan), AIST (Japan), Blue Frog Robotics (France), Care-o-bot (Germany), Riker/Suntomo RAO (Japan), Mayfield Robotics (US)
- 22 Amazon (US), Google/Alphabet (US), Philips (Netherlands), Samsung (South Korea), Dyson (UK), Mele (Germany), iRobot (US)
- 23 Impossible Foods (US), Memphis Meats (US), Super Meat (Israel), Finless Foods (US), New Harvest (US)
- 24 Wing/Alphabet (US), Starship Technologies (UK), Volocopter (Germany), eHang (China), Piaggio (Italy)
- 25 Laidos (US), Boeing (US), Rolls Royce (UK)
- 26 Joulebug (US), Waterpebble (UK)
- 27 Pharmaceutical (US), Sun to Water (US)
- 28 Powercast (US)
- 29 NatureWorks (US), Gruppo MAIP (Italy), Genomatics (US), Green Dot Bioplastics (US)
- 30 NASA (US)
- 31 Everledger (UK), Stampery (Spain), Brickblock (Germany), Slack-it (Germany)
- 32 Blue River Technology (US), Hortau (Canada)
- 33 Google/Waymo (US), Voyage (US), Nvidia Automotive (US), most major auto-makers
- 34 Amazon (US), Google/Alphabet (US), Philips (Netherlands), Samsung (South Korea), Dyson (UK), Mele (Germany), iRobot (US)
- 35 Google/Alphabet (US), Amazon (US), Flarley (US)
- 36 Airbus (France), Boeing (US)
- 37 FabCafe (Japan), NASA (US)
- 38 SRI International (US)
- 39 Strataysy (US), Autodesk (US)
- 40 NASA (US)
- 41 Basal Leaf Technologies (US), Dynamical Biomarkers Group (US/Japan), Scanadu (US)
- 42 Starwood Hotels (US), MarCare (Finland), Scanalytics (US), FutureShape (Germany)
- 43 Flowxy (Japan), Scanadu (US)
- 44 Testa (US), ABB (Switzerland), Siemens (Germany), IBM (US), Iron (US)
- 45 Synthetic Genomics/ExxonMobil (US), Global Algae Innovations (US), Algenol (US)
- 46 Organave (US), Envision TEC (Germany), RegenHU (Switzerland), Cellink (Sweden), Seraph Robotics (US)
- 47 H2O2 Therapeutics (South Africa), Biospace (US)
- 48 For example Vantablack by Surrey NanoSystems (UK)
- 49 ITER (EU/France), Tokamak Energy (UK), Alphabet/Google/In Alpha Energy (US), General Fusion (Canada), Helion Energy (US), Lockheed Martin (US)
- 50 Festo (Germany)
- 51 Israeli Desalination Enterprises Technologies (Israel), Acciona (Spain), Fluence Corporation (US)
- 52 Microsoft (US), Google/Alphabet (US), Open AI (US)
- 53 Open Utility/Essent (UK/Netherlands), Knowlata (China)
- 54 Ginkgo Bioworks (US), US Naval Research Laboratory (US), US Army Research Lab (US), Darpa (US)
- 55 Open Utility (UK/Netherlands), Power Ledger (Australia), LO3 energy (US), Energy Web Foundation (Switzerland)
- 56 Konami Corp (Japan), Mitsuku (UK)
- 57 MDOG (US), Darpa (US)
- 58 Space X/Elon Musk (US), Blue Origin (US), Virgin Galactic (UK), Rocket Lab (US), Anson Space (US), SpaceIL (Israel), Firefly Aerospace (US)
- 59 Space X (US), UAE Mars Mission (UAE), NASA (US)
- 60 Intel (US)
- 61 Kite Pharma/Olead Sciences (US), ZlandMe (US), Phemgen Sciences (US), Regeneron (US), Veritas Genetics (US)
- 62 IBM (US)
- 63 Intuitive Surgical (US), Verb Surgical/Alphabet/Johnson & Johnson (US), Da Vinci Surgery (US)
- 64 IBM (US), Toyota (Japan), Mimosys (Japan), Persado (US), Jay AI (US)
- 65 Realbotix (US), True Companion (US)
- 66 BitIQ (UK), Grindhouse Witeaser (US), Dangerous Things (US), see also: The Eyegor Project and the Cyborg Foundation
- 67 Alphabet/Google Genomics (US), Amazon (US), Illumina (US), Oxford Nanopore Technologies/Metricor (UK)
- 68 CTRL-Labs (US), Emotiv (US), Neuralink (US), maybe Facebook (US)
- 69 No example found
- 70 Improbable (UK)
- 71 European Organization for Astronomical Research in the Southern Hemisphere (European consortium of 14 countries)
- 72 No example found
- 73 Epcenter (Sweden) and Three Square Market 32M (US) are close
- 74 No example found
- 75 Twist Bioscience (US)
- 76 Vaccinogen (US), EpVax (US), IBM (US), Juno Therapeutics (US)
- 77 Alphabet/Google (US), KETS (UK), IDQ (Switzerland), Isara (Canada)
- 78 Darpa (US)
- 79 Kernel (US), Neuralink/Elon Musk (US), 2045 Initiative (Russia), Darga (US), General Electric/Brangate (US), possibly Facebook (US)
- 80 NASA (US), Carnaa (US)
- 81 Apple (US), Amazon (US), Alphabet/Google (US), Microsoft (US)
- 82 No example found
- 83 CIA (US)
- 84 Lockheed Martin (US), OpenHQ (UK), Boston Dynamics/Softbank (US/Japan)
- 85 Woobot (US), Pelin (US), LY (UK)
- 86 Deep Knowledge Ventures (Hong Kong), Tieto (Finland)
- 87 BAE Systems (UK), Toyota (Japan), NB: Big difference between optical camouflage and bending light to make things disappear
- 88 Breakthrough Energy (US), RIPE (US), Jonti Centre for Artificial Photosynthesis (US)
- 89 SENS Research Foundation (US), Methuselah Foundation/Peter Thiel (US)
- 90 Facebook (US), Neuralink/Elon Musk (US)
- 91 Suicide Machine (Netherlands), Just Delete Me (US)
- 92 No example found
- 93 Turin Advanced Neuromodulation Group (Italy)
- 94 Soom (South Korea), Revive and Restore (US)
- 95 No example found
- 96 Rebeam (US), Solaren Corp (US)
- 97 Theth Technology (Canada)
- 98 Improbable (UK), HelloVR (US), Magic Leap (US), Microsoft (US), See also: Mind Maze (US), Focallion (US) and possibly Apple (US)
- 99 Possibly Alphabet/Google (US)
- 100 As it says, we can't say



## What are disruptive technologies? Use the Table of Disruptive Technologies!

Video: <https://www.youtube.com/watch?v=S86mAHwii4> created at the Imperial College London.

You can download the table here: <https://bit.ly/31FJGvk>

# Disruption will hit every business

- Disruptive innovation has the potential to impact each and every business, no matter its size, sector or location. No business is immune.
- The development and application of advanced technology is accelerating at such an exponential rate that people have difficulty coming to grips with the pace of change.
- Among the key factors propelling these advanced technologies is the exponential growth in computer processing power – and the staggering drop in the price of computer chips. In 1992, you'd pay \$222 for a million transistors; today you'd pay \$0.06.

Some examples of disruptive innovation include:

<b>Disruptor</b>	<b>Disruptee</b>
Personal computers	Mainframe and mini computers
Mini mills	Integrated steel mills
Cellular phones	Fixed line telephony
Community colleges	Four-year colleges
Discount retailers	Full-service department stores
Retail medical clinics	Traditional doctor's offices

Source: [www.claytonchristensen.com/keyconcepts](http://www.claytonchristensen.com/keyconcepts)

## COMPANY EXAMPLES



Amazon has revolutionised the way that we shop by initially creating a website for purchasing books. This stole trade from the high street retailers. They then expanded into more products and disrupted almost the entire retail trade.



IBM created the first portable computer, which established a new mass market that was previously catered for by bulky, expensive mainframes.



Netflix completely switched away from its old business model - posting rental DVD's out to customers, to a new stream-only service, an unheard of move at the time.



Whether you love or hate Apple, the iPod changed the way we listened to music. It became one of the most popular media players and was instrumental in the growth of the MP3 format.

## INDUSTRY EXAMPLES

### Calculators

The first pocket calculators were pioneered by Busicom, which replaced desk calculators. Later there was then a move from mechanical to digital.

### Lights

The LED or 'Light-Emitting Diode' whilst originally significantly smaller and less powerful has now become significantly stronger and efficient and has pushed older more inefficient bulbs out of the market.

### Tablets

The innovation that bridged the gap between the Laptop and the Smartphone. Originally people were sceptical about the idea but the innovation created its own market and has been growing ever since.

### Airlines

No business better exemplifies the democratization of services than the airline industry. Low-cost carriers (LCCs) were at the forefront of that movement.

Article: An Economic Analysis of the Low-Cost Airline Industry  
<https://www.investopedia.com/articles/investing/022916/economic-analysis-lowcost-airline-industry-luvdal.asp>

# Apple outsells Samsung to take crown as world's biggest smartphone maker

TIM BRADSHAW — LONDON

Apple became the world's number-one smartphone maker by volume for the first time last year, ending Samsung's 12-year reign as consumers bought more expensive handsets.

The iPhone manufacturer was the only big handset maker to report annual unit growth in 2023, according to research group IDC, with shipments rising 3.7 per cent to 234.6mn — edging ahead of Samsung's 226.6mn.

Apple's boost was in contrast to the overall industry, which suffered its worst year in a decade as shipments fell 3.2 per cent to 1.17bn units, IDC added.

By revenue and profits, Apple has long been the top smartphone maker thanks to the iPhone's dominance at the high end of the market. But last year was the first in which it also led by volume.

Samsung, which is set to launch its flagship Galaxy S24 this week, reported a 13.6 per cent fall in shipments last year, as Huawei regained share in China and cheaper Android manufacturers raced ahead. Chinese group Transsion — whose brands Tecno, Infinix and itel have made it dominant in Africa — grew 30.8 per cent last year, putting it in the top five behind Xiaomi and Oppo.

"In 2023, Samsung focused on the mid to high-end segment for profitability but lost share in the low-end segment and also its leading position in the global market," said Amber Liu, a manager at research group Canalys.

Canalys said that smartphone shipments increased about 8 per cent year on year in the fourth quarter, reversing seven consecutive quarters of decline, as demand from shoppers improved.

Microsoft last week overtook rival

Apple as the most valuable public company, as Wall Street fretted over the outlook for iPhone sales in China. Apple is offering Chinese customers a discount on some of its latest models. The unusual move, following falling sales in the region, comes as local rivals gain share.

Globally, however, iPhone sales rebounded 11.6 per cent in the fourth quarter following the September launch of its new models, according to IDC.

Smartphone market rankings have changed beyond recognition since Samsung took top spot in 2011, when Nokia, LG and BlackBerry led the market.

As technology matures and new features become more incremental, consumers upgrade everyday devices less frequently. But when they do, more are choosing more expensive devices — largely benefiting Apple, which has raised iPhone prices in recent years.

Source: Financial Times, 17 January 2024

Retail & consumer. Sports goods

# Nike risks falling behind in the running arena

Chief tries to reposition brand as competitors gain ground in market for specialist footwear

SARA GERMANO — NEW YORK

When John Donahoe took over as chief executive of Nike four years ago, the company had a stranglehold on the sport of running, its largest category. Now, it is at risk of falling behind.

Seventeen Nike athletes won individual gold medals in running events at the World Athletics Championships in 2019, compared with just five representing all other brands combined. Its Vaporfly 4% running trainers were such a technological breakthrough that competing brands were giving their elite athletes permission to wear Nike shoes in races with the logo covered up.

Four years later, the rest of the running world has caught up. The breakthrough of the Vaporflys — a carbon-fibre plate inserted into the midsole — has since been adopted by the rest of the market. At the 2023 World Athletics Championships, athletes representing brands other than Nike won more individual running gold medals, 12, versus Nike's 10.

The changes in the running footwear market are the starkest examples of how much the sportswear industry has shifted during Donahoe's tenure. Today, Nike's competition goes beyond traditional rivals such as Adidas as newer, nimbler shoe companies take market share.

Athletes who drove sales at the start of the century, such as US golfer Tiger Woods, are now in the twilight of their careers. And macroeconomic effects, from the pandemic to inflation and supply chain disruptions, have not favoured a global behemoth such as Nike.

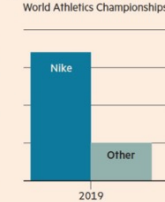
"We know we must be faster, increasing the pace of innovation, increasing the pace of market to consumer and increasing our agility and responsiveness," Donahoe told analysts on an earnings call last month, as he announced the second big restructuring of the company during his term in response to slowing demand for its products worldwide.

The "everyday running category", he added, "is the area where we have the most work."

Wall Street analysts are concerned about Nike's performance as its margins tighten and sales growth slows. Revenues for the most recent fiscal year, which ended in May 2023, rose 10 per cent year on year, but profits shrank 16 per cent. Excluding the nadir of the pandemic, Nike's margins on earnings before interest and tax are at 10-year lows. In December, it lowered its outlook for 2024, projecting sales growth of

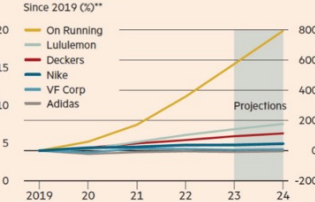


Gold medals by sponsor World Athletics Championships\*

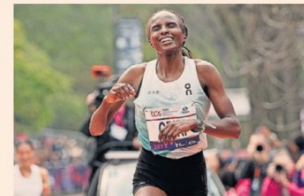


\* Results include individual running and hurdling events \*\* Fiscal years for Nike, Deckers and VF Corp correspond to the prior calendar years Sources: FT research; Google Finance; TD Cowen

Change in sales Since 2019 (CAGR)\*\*



Nike CEO John Donahoe plans \$2bn of cuts and reinvestment. Below, Kenya's Hellen Obiri — FT montages/AFPP/Getty Images; Elsa/Getty



just 1 per cent, down from expected mid-single-digit growth. The shortfall between the latest forecasts and earlier revenue projections, "is challenging CEO John Donahoe's credibility", wrote Jim Duffy, managing director of consumer and retail at Stifel. Donahoe has moved quickly to make

changes. A former chief executive of ServiceNow, eBay and Bain & Co, he hit the ground running after taking the helm. In the early months of the pandemic, he implemented one of the largest overhauls in the company's history, eschewing Nike's internal organisation by sport categories — such as running, basketball and football — in favour of silos for men, women and kids.

The changes were made in part to speed Nike's transition from relying mainly on selling its products through retail stores towards selling more directly to consumers, especially online. The latest restructuring, announced in December, is aimed at cutting \$2bn of costs in the next three years.

Nike said the savings from this round of cuts would be reinvested into its running, women and Jordan brand divisions. Its newest running shoes, the Alphafly3, were worn by Kelvin Kiptum

when he set a world record at the 2023 Chicago Marathon.

"We've proven in our labs that Nike racing shoes provide measurable benefits and we will continue to deliver breakthrough innovations for elite athletes and everyday runners alike," the company said, adding that it would roll out newer models in the lead-up to the Paris Olympics.

When Donahoe first came to Nike it was "a period of a lot of disruption in the industry and globally", said John Keran, managing director at TD Cowen — even for big players with global name recognition. Nike's primary rival, Adidas, has recently warned investors it could post its first annual loss in three decades, after cutting ties with Kanye West, the US rapper and designer of their Yeezy brand.

The age of social media has also allowed upstart brands to grow more effectively. Two newcomers in particular — Hoka and On Running — have benefited from stronger direct sales and strategic endorsements. They have also capitalised on the appetite for Nike retailers to reduce their reliance on Nike amid Donahoe's emphasis on direct sales.

Mary Dillon, chief executive of shoe retailer Foot Locker, said Hoka and On Running were two of its fastest-growing brands. The retailer sold 36 per cent of sales in the most recent quarter came from brands other than Nike, up from 32 per cent the year before, and on track to reach Foot Locker's goal of 40 per cent by 2026.

Hoka, originally a niche brand known for "maximalist" shoes with thick soles, is the fastest-growing brand in the Deckers Outdoor Corporation portfolio, outpacing sibling brands Ugg boots and Teva sandals. In December, Hoka took over the sponsorship of a top US competition for high school cross-country running, improving its visibility with the target youth demographic.

On Running, a Swiss brand founded in 2010, received a global profile boost in 2019 when tennis champion Roger Federer invested in the company. Since then, the company has gone public, signing top-ranked tennis player Iga Świątek as well as Hellen Obiri, the 2023 winner of the New York City and Boston Marathons. Both athletes had previously been outfitted by Nike.

Federer's effect on On Running could be a template for Woods, who left Nike this month after 27 years. Both men spent decades of their pro careers in the swoosh while breaking records in their respective sports.

In the meantime, analysts think Nike should focus on its strengths. "It is still a great company, but the industry is much more challenging and there is only so much management can do," said Keran. "Brands cannot be all things to all people any more."

**'We know we must be faster, increasing the pace of innovation, increasing the pace of market to consumer'**

FIGURE 1

Cost of one million transistors from 1992 to 2012<sup>12</sup>

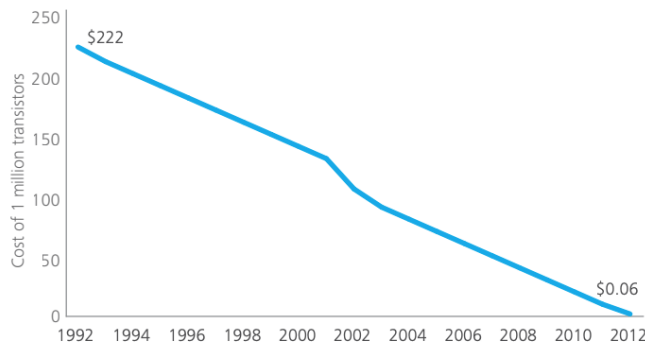


FIGURE 3

Average company lifespan on the S&P Index from 1960 to 2014<sup>14</sup>

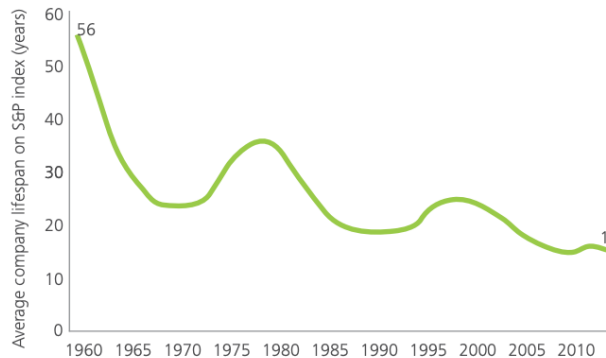


FIGURE 2

Number of years to reach \$1-billion valuation from date founded<sup>13</sup>

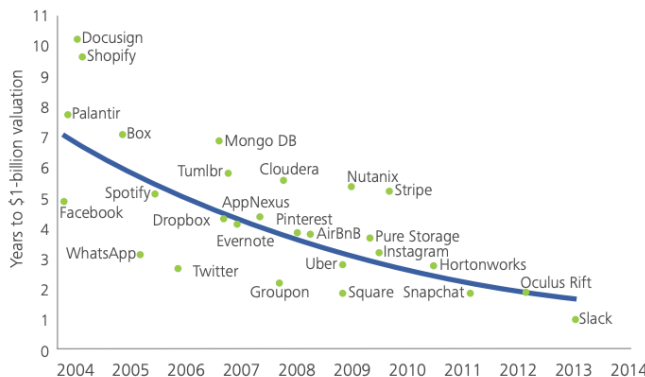
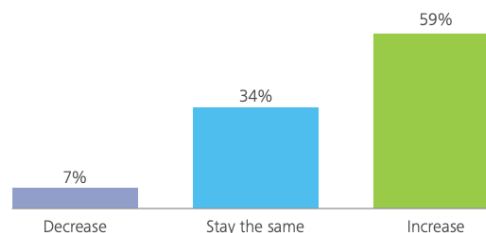


FIGURE 4

Thinking about things such as firm turnover, economic growth and new business models, do you think the pace of change in your industry will increase, decrease or stay the same when compared to the past five to 10 years?



To better put this in perspective, Apple sold 25 times more CPU transistors during the iPhone 6 launch weekend (September 19–21, 2014) than existed in all the PCs on Earth in 1995.

Advances in technology have also increased the rate of business growth – and business failure. Since 2003, a new company has reached a \$1-billion valuation every three months in the United States.<sup>8</sup> Yet the time it takes to reach that valuation has shrunk considerably: Shopify took nine years; Slack took one (see Figure 2).

If businesses are growing faster, they’re also exiting much more quickly. In 1960, the average lifespan of an S&P 500 company was around 56 years; by 2014, it had dropped to nearly 15 years (see Figure 3). Some even suggest that in just 10 years, 40% – nearly half – of today’s Fortune 500 companies will no longer exist.

Snapshot on Canada: this dramatic increase in the pace of change has not gone unnoticed by Canadian firms. In fact, nearly 60% of respondents to our survey think the pace of change will increase over the next five to 10 years (see Figure 4). As it does, the likelihood of technology-driven disruption will grow too – and Canada’s economic well-being will depend, more than ever, on how well our companies are prepared for what’s to come. However, the question remains: If the majority of firms admit that the pace of change is increasing, then why are so few doing anything to prepare for the new economy in which they’ll find themselves?

# Disruptive Innovation Explained



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

Website: <https://claytonchristensen.com/key-concepts/>

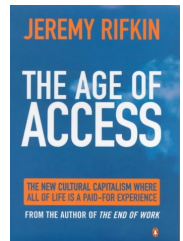


Video: <https://www.youtube.com/watch?v=yUAAtIQDllo8>

# Introducing disruption

- The business environment feels more threatening today than it did in the past.
- Business leaders increasingly find themselves at the mercy of disruptors that cast doubt on the stability of all firms, industries and economies.
- The Kodak and Blockbuster case studies clearly exemplify what may happen.
- Disruption seems to be amplified by the speed of technological change, the rapid adoption of new products and compressed product life cycles.
- Traditional barriers to entry are low and dropping; upfront investments are being replaced by purchases as a service and capital for other purchases is easier to find, while social media and cheap shipping are slashing the cost of operating globally.
- There's also the risk that a firm from outside the industry might turn it upside down, as Apple did for smartphones, or Tesla for cars, or Airbnb for distribution of accommodation.
- When we encounter disruption, our efforts to mitigate damage and maximise opportunity are hampered as we are unable to obtain key skills in time.

# Disruption is not a new phenomenon. It is, more explicitly, the accelerating frequency of disruption that poses a new challenge for organisations



- Disruption can be viewed at various levels of abstraction. At the highest level are the long-term shifts which are reshaping the nature of the economy. These disruptions are more endemic as they operate on the whole economy, rather than sectors or industries.
- The shift from knowledge stocks to flows, which we might pithily describe as “why remember what you can google?” is a prime example, with one consequence that the balance of power has tipped from merchant to consumer. In the past, merchants had the upper hand as they had all the information on product availability and pricing, while customers knew little. Now, with the consumer Internet, modern smartphones and so on, the consumer has the upper hand and often knows more than the merchant.
- The immediate effect of this disruption is the elimination of the mid-market as customers search the globe for the cheapest or the best (at the best price) rather than compromising based on what they can find from local merchants.

Source: Deloitte, Your next future



# Disruption is strongly linked to technology

- The First Industrial Revolution (1760-1840) used water and steam power to mechanize production.
- The Second used electric power to create mass production.
- The Third used electronics and information technology to automate production (in 1957 Olivetti and IBM introduced their first personal computers).
- Now a Fourth Industrial Revolution (4IR) is building on the Third, the digital revolution that has been occurring since the middle of the last century. It is characterized by a fusion of technologies that is blurring the lines between the physical, digital, and biological spheres.
- There are three reasons why today's transformations represent not merely a prolongation of the Third Industrial Revolution but rather the arrival of a Fourth and distinct one: velocity, scope, and systems impact.
- The speed of current breakthroughs has no historical precedent. When compared with previous industrial revolutions, the Fourth is evolving at an exponential rather than a linear pace. Moreover, it is disrupting almost every industry in every country. And the breadth and depth of these changes herald the transformation of entire systems of production, management, and governance.

# Disruption is strongly linked to technology

- The Fourth Industrial Revolution is a way of describing the blurring of boundaries between the physical, digital, and biological worlds. It's a fusion of advances in artificial intelligence (AI), robotics, the Internet of Things (IoT), 3D printing, genetic engineering, quantum computing, and other technologies.
- It's the collective force behind many products and services that are fast becoming indispensable to modern life. Think GPS systems that suggest the fastest route to a destination, voice-activated virtual assistants such as Apple's Siri, personalized Netflix or Amazon recommendations, and Facebook's ability to recognize your face and tag you in a friend's photo.
- As a result of this perfect storm of technologies, the Fourth Industrial Revolution is paving the way for transformative changes in the way we live and radically disrupting almost every business sector. It's all happening at an unprecedented, whirlwind pace.
- The 4IR brings a particularly pronounced shortage of IT talent\*. Bridging the skills gap is all about increasing capacity to solve problems by bringing in groups who previously would not have been able to contribute. Today the skills people require are different from the past.

\* Salesforce <https://www.salesforce.com/news/stories/filling-the-skills-gap-in-the-fourth-industrial-revolution/>

# Disruption challenges and opportunities

- Like the revolutions that preceded it, the Fourth Industrial Revolution has the potential to raise global income levels and improve the quality of life for populations around the world.
- To date, those who have gained the most from it have been consumers able to afford and access the digital world at declining prices; technology has made possible new products and services that increase the efficiency and pleasure of our personal lives.
- Today many activities can be done remotely by anyone with a device: ordering a cab, booking a flight, buying a product, making a payment, listening to music, watching a film, get delivery, or playing a game.
- In the future, technological innovation will also lead to a supply-side miracle, with long-term gains in efficiency and productivity. Transportation and communication costs will drop, logistics and global supply chains will become more effective, and the cost of trade will diminish, all of which will open new markets and drive economic growth.
- Major shifts on the demand side are also occurring, as growing transparency, sustainability, consumer engagement, and new patterns of consumer behaviour (increasingly built upon access to mobile networks and data) force companies to adapt the way they design, market, and deliver products and services.

Source: Klaus Schwab, Founder and Executive Chairman, World Economic Forum

# Disruption and impact on people

- The Fourth Industrial Revolution, finally, will change not only what people do but also who we are. It will affect our identity and all the issues associated with it: our sense of privacy, our notions of ownership, our consumption patterns, the time we devote to work and leisure, and how we develop our careers, cultivate our skills, meet people, and nurture relationships. It is already changing our health and leading to a “quantified” self, and sooner than we think it may lead to human augmentation\*. The list is endless and it is bound only by our imagination.
- Enthusiasm about technology and the inexorable integration of technology in our lives could diminish some quintessential human capacities, such as compassion and cooperation.
- People’s relationship with smartphones is a case in point. Constant connection may deprive us of one of life’s most important assets: the time to pause, reflect, and engage in meaningful conversation. This has brought to apps for smartphone use monitoring.
- Privacy is one of the greatest individual challenges posed by new information technologies.

# Navigating a world of Disruption

**Global trends are creating ever-larger winners and losers.**

We live in an era of disruption in which powerful global forces are changing how we live and work. The rise of China, India, and other emerging economies; the rapid spread of digital technologies; the growing challenges to globalization; and, in some countries, the splintering of long-held social contracts are all roiling business, the economy, and society. These and other global trends offer considerable new opportunities to companies, sectors, countries, and individuals that embrace them successfully—but the downside for those who cannot keep up has also grown disproportionately. For business leaders, policy makers, and individuals, figuring out how to navigate these skewed times may require some radical rethinking.

This briefing note for the 2019 World Economic Forum in Davos draws on recent research by the McKinsey Global Institute (MGI). It focuses on both the value-creating opportunities and the intense competitive and societal challenges we all face in this era of technological ferment:

1. [The disruption is intensifying](#)
2. [The gulf between those embracing change and those falling behind is growing](#)
3. [Moving toward a more inclusive society](#)

Source: <https://www.mckinsey.com/featured-insights/innovation-and-growth/navigating-a-world-of-disruption>

# Disruption case

- You own a traditional bakery.
- Your business is declining due to many reasons: growing energy costs, inflation, declining demand, increasing competition from grocery stores, etc.
- You even considered closing down your business.
- Is there any disruptive innovation that may provide you an opportunity to stay in business?
- Is there any technology based solution you can adopt to strengthen your business model?
- Create groups and discuss what would be a possible solution to the above situation.

# Disruption case discussion

Source: Klaus Schwab, Founder and Executive Chairman, World Economic Forum.

\* mobile apps for health control; VR glasses and augmented reality



Video Joseph Bakery <https://www.youtube.com/watch?v=maKZ24qq-Ec>



# Innovation vs. Disruptive Innovation: What's the Difference?

The concept of innovation is heavily linked to the idea of business disruption, largely because the origins of disruptive products and services derives from an unconventional approach to business and market innovation. In “true” disruptive innovation, the unconventional product takes root at the bottom of the market and develops a poor reputation because of it. However, over time, and due to a number of factors such as lower costs or higher accessibility, the product actually becomes more appealing than its contemporaries within the industry.

This is not the same as the traditional approach to innovation, also referred to as “sustaining innovation”. Traditional innovation is when new inventions and modifications are introduced by businesses in an attempt to stay relevant with customers, and competitive in the job market. That is not to say these innovations are invaluable, but they do run a higher risk of becoming too sophisticated, too inaccessible, or too expensive to hold any lasting power on the market. As a result, when sustaining innovations are deemed too frivolous, customers begin to look to less expensive, sometimes radical alternatives to meet their business needs, spiking the success of those disruptive innovations.

# Business Disruption: Examples and Key Takeaways

The typical defining traits of disruptive innovations are lower gross margins, smaller target markets from the outset, and a product or service that is usually much simpler than their industry contemporaries.

However, organizations need to remain on guard when it comes to labelling any sort of industry-challenging innovation as disruptive. If the term is used too facetiously, it begins to undermine what *true* disruption actually is. It shines a spotlight on start-ups that have already garnered significant attention, while true market disruptors are climbing the industry ladder elsewhere, unnoticed by the giant competitors they're meant to replace.

In order to develop a thorough understanding of what true disruption actually is, it is helpful to look at real-world examples of business disruption, and recognize when the term was suitable, and when it was not.

# 3 Examples of what Business Disruption is

## 1. Netflix and Streaming Services

Netflix and all other streaming services are in the process of an ongoing disruption in the entertainment industry. They largely influenced the slow extinction of video rental stores and are now responsible for the ever-growing cancellation of cable subscriptions worldwide.

OTT options (over-the-top, in reference to devices that go over cable boxes to provide access to TV content) emerged seemingly out of nowhere several years ago and have since skyrocketed into the leading position in providing entertainment to customers. It was deemed a low-cost alternative to conventional subscriptions from the get-go, and once customers caught on to the rising popularity and innovation offered by streaming services, they began to think of their media consumption in an entirely different way.

## 2. Wikipedia

A lesser recognized form of true disruptive innovation is the international hub for easy-access research, Wikipedia. For centuries, it was encyclopedias that existed to provide important details on various subjects. That were written and published for profit, with hardcover volumes being released regularly due to the constant updates and changes to information that needed to be included. Wikipedia eradicated that necessity for expensive, unsustainable information access. It is constantly updated, available for free, and though it has an air of distrust surrounding the information it presents, it still was enough to drive Encyclopedia Britannica to publish their final volumes back in 2012, after 244 of circulation.

# 2 Examples of what Business Disruption isn't

## 1. Uber

Often cited as an example of disruption, the modern tech giant Uber is not an actual example of true business disruption. On the surface, it does have a few of the key indicators of a disruptive innovation. It has almost completely replaced the taxi industry for many travellers throughout the U.S. and internationally, with an annual revenue coming in at 65 billion USD last year alone. It offered a traditional service at a considerably lower price point and tore up the rule book of the taxi industry altogether.

But, Uber still cannot be classified as disruptive, since it *didn't open up a new market or capitalize on low gross margins*. The taxi industry was in no way suffering or seeking rapid innovation in fears of it going under. Uber simply took the typical, successful taxi service model, and upgraded it with tech to make it more convenient and comfortable, and less expensive for the consumer. While both extremely innovative, and wildly successful, Uber cannot be classified as a disruptor.

## 2. Google

Google as a branded corporation has evidently explored, and dominated, many areas of tech. While it could be considered a disruptor in some of those fields, its emergence as the dominant search engine is largely *mislabeled* as a business disruption. Google was one of the first online companies to prove the value and potential of online search, and the very first to make astronomical amounts of money from online advertising. This means it did play a critical role in helping to spawn an entirely new industry, if not several. However, it still cannot be classified as a disruptor, simply because it *wasn't the first search engine*. Similar to Uber, it took an existing model and improved upon it in way that pushed them to the top of the industry. While an extremely impressive feat, this doesn't qualify as a true disruptive innovation.

# Key takeaways

Evidently, all entrepreneurs are not likely to found corporations or products as internationally and historically successful as those listed above but garnering a true understanding of what innovation is involves distinguishing it amongst some of the top corporate performers that exist today. Some of the key takeaways from these distinctions about innovation include:

- **Not all innovation is disruptive, and it doesn't have to be.** Disruptive innovation is only one type of innovation. In order to be a true gamechanger in your industry, you don't necessarily have to be a "true" disruptor.
- **True disruption is risky.** Even with a good vision, there is no guarantee that a new technology or disruptive innovation will actually take hold in your industry. Some inventions require several phases of evolution before they reach their final, most effective form. That means several losses of inventions in the shuffle before you reach that final point, and losses from unsustainable practices, market shifts, or stagnation.
- **Disruption is oftentimes stealthy.** Understanding business disruption means understanding that it is far more than simply creating better ideas for an industry. A large part of it is staying on the defensive, keeping an eye out for new competition that might disrupt the industry in the future. If a start-up is labelled as disruptive, you should take notice, but the biggest threats are those you never see coming. Take all market threats seriously, and don't discount underperforming competitors with lower profit margins and a smaller target market.
- **Business disruption takes time.** While there are obviously some exceptions, no truly sustainable industry disruption happens overnight. Wikipedia's conception was in 2001, meaning it took them 11 years until they overthrew Encyclopedia Britannica. Uber was founded by two graduate school friends in 2009 and didn't expand outside their base city of San Francisco until 2 years later. True business disruptors don't change the market entirely right after they enter it – it can take years, and sometimes decades, for their innovative ideas to take hold.

*Thank you*

AND  
GOOD LUCK

IT'S BEEN A PLEASURE WORKING WITH YOU TODAY