

# CIO Vantage Point



Source: Unsplash

## I . D . E . A .

### **Riding Digital Disruption**

Digital disruption transforms how products and services are offered. Fighting disruption is futile and embracing new technology is the only way forward.

### **Winners for the 21st Century**

To position for a changing world, gain exposure to cutting-edge industries like Blockchain, EVs, Cloud Computing, Big Data, and Space Exploration.

### **I.D.E.A. Framework**

Adopt the I.D.E.A. framework for bottom-up stock picking. Seek out the Innovators, Disruptors, Enablers, and Adapters in 20 identified industries.

### **Scaling Multiple S-Curves**

Favour high performance companies possessing the ability to scale one S-Curve after another.

## INTRODUCTION

# This is only the beginning

Dear valued clients,

There is an old saying that fortune favours the bold who dared to innovate, disrupt, enable, and adapt. This is true now more than ever when new technologies constantly redefine the way we live, work, and play.

We can all agree Apple fits the bill – a company that constantly innovates and pushes the boundaries. On the flip side, we also have the likes of Kodak and Nokia that failed to adapt to digital disruptions.

The DBS Chief Investment Office strives to be on top of such trends. Today, simply looking for traditional, large companies can no longer be the winning formula to investing. As much as financial ratios and market share are applicable factors to consider, the future asks of us to put on new lenses in order to separate the winners from the laggards.

In this latest edition of CIO Vantage Point, we introduce I.D.E.A., an acronym which stands for Innovators, Disruptors, Enablers, and Adapters – companies that challenge the status quo, embrace a digital world, transform, and thrive.

We also identify 20 industries we believe will be dominant in the coming decade, the likes of Blockchain, Big Data, and e-Sports to name a few. Our goal is indeed to seek out such industries and I.D.E.A. stocks as growth boosters to complement income-generating investments in the construction of portfolios that employ our Barbell Strategy.

I hope you enjoy the read.



**Hou Wey Fook, CFA**  
Chief Investment Officer



# Power Up with I.D.E.A.



# I.D.E.A. Snapshot

## Introduction

We live in a world where change is a constant and today, we are on the cusp of another transformation as global digitalisation takes hold. Digital disruption is transforming the way products and services are being offered and history has shown that fighting disruption waves is futile. Embracing new technology is the only way forward. To position for an everchanging world, investors should gain exposure to cutting-edge industries, such as Blockchain, EVs, Life Sciences, and Cloud Computing. Within these industries, we identify the high performance companies by utilising an I.D.E.A. framework and focusing, in particular, on those that have the capabilities to scale multiple S-Curves.

### Riding Digital Disruption

Digital disruption transforms how products and services are offered. Fighting disruption is futile and embracing new technology is the only way forward.

### Why Innovation Matters

Innovation translates to strong equity market performance. Since 2000, the NYSE R&D Innovation Index has substantially outperformed.

### Winners for the 21st Century

To position for a changing world, gain exposure to cutting-edge industries like Blockchain, EVs, Cloud Computing, Big Data, and Space Exploration.

### Today's Winner Tomorrow's Loser

Times are changing, and changing fast. What is deemed as "blue chip" today could fade into obsolescence tomorrow as disruption takes hold.

### I.D.E.A. Framework

Adopt the I.D.E.A. framework for bottom-up stock picking. Seek out the Innovators, Disruptors, Enablers, and Adapters in cutting-edge industries.

### Scaling Multiple S-Curves

Favour high performance companies possessing the ability to scale one S-Curve after another.



# Stay on the right side of digital disruption.

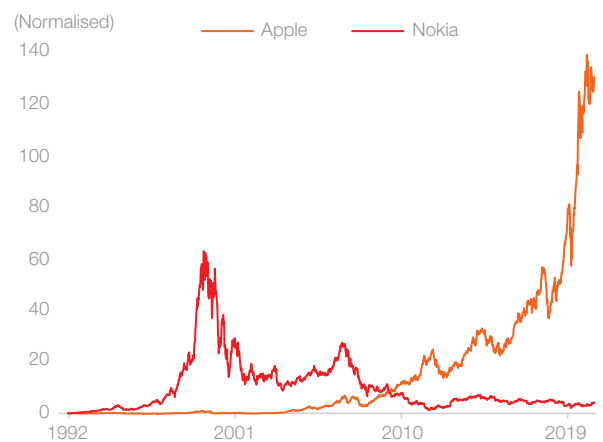
DBS Chief  
Investment Office

We live in a world where change is a constant. Over the past century, mankind has witnessed a series of revolutions – from the rise of American hegemony after the Second World War to the rapid emergence of China as a superpower in the globalisation age. Today, we are yet again on the cusp of another transformation as the digitalisation of the world takes hold. Global digital disruption has already brought seismic changes to how humans live and how global businesses operate, and yet, this is only the beginning.

By definition, “digital disruption” is a process by which innovative technologies transform the way products and services are being offered. History has shown that fighting digital disruption is futile and embracing new technology is the only way forward; even if you cannot direct the wind, you can still adjust your sails. The failure of Kodak in transitioning to digital photography is a case in point. More recently, the failure to rise up against the challenge of Apple Inc’s iPhone has also led to the demise of former mobile handset giants like Nokia Corporation and Motorola Inc.

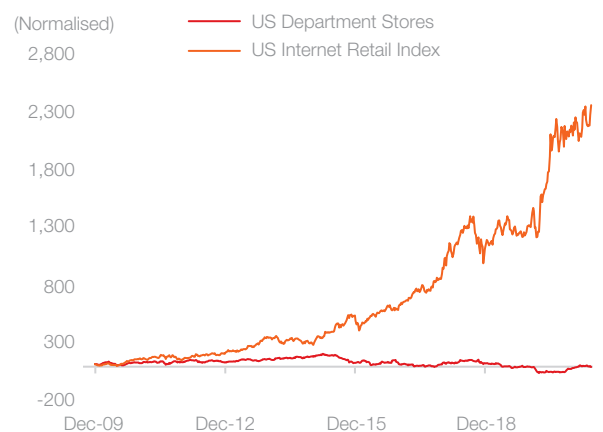
Without question, the biggest technological innovations in the last decade are mobile Internet connectivity and the rise of e-Commerce. Operating in a “borderless” world, e-Commerce has transformed how traditional businesses, spanning from retail to banking and education, are conducted. That said, with e-Commerce becoming commonplace in our everyday lives, the time has come to ride the next wave of advanced technological innovation.

## The fall of Nokia and the rise of Apple – a cautionary tale



Source: Bloomberg, DBS

## e-Commerce: The biggest technological innovation in the last decade



Source: Bloomberg, DBS

## Why does innovation matter?

In the 21st century, the pursuit of innovation is paramount to a company's survival. According to McKinsey, 80% of business executives believe that existing business models are at risk, and 84% believe that innovation is important for future growth. The old adage of "Innovate or Perish" has never been more poignant as digital transformation takes hold.

A separate report from Boston Consulting Group (BCG) shows that innovation translates to stronger top-line performance. BCG research separates innovators into three categories: (a) Committed innovators, (b) Sceptical innovators, and (c) Confused innovators. Among "committed innovators", 60% reported rising proportion of sales from products/services launched in recent years, compared to only 30% for "sceptical innovators" and 47% for "confused innovators" which saw rising sales.

BCG findings tie in broadly with the strong performance of the NYSE R&D Innovation Index over the years. This index is a representation of the most innovative companies in the US, and the "Research Quotient" score assigned to each company determines how "innovation investment" is translated to "innovation performance". Since 2000, the NYSE R&D Innovation Index has rallied 449%, outperforming the Nasdaq.

According to BCG, the top 10 most innovative companies in the world for 2021 are:

| S/No | Most innovative companies |
|------|---------------------------|
| 1    | Apple                     |
| 2    | Alphabet                  |
| 3    | Amazon                    |
| 4    | Microsoft                 |
| 5    | Tesla                     |
| 6    | Samsung                   |
| 7    | IBM                       |
| 8    | Huawei                    |
| 9    | Sony                      |
| 10   | Pfizer                    |

Source: Boston Consulting Group

## Strong performance from innovative companies



Source: Bloomberg DBS

history  
has  
shown  
that  
fighting  
disruption  
is  
futile



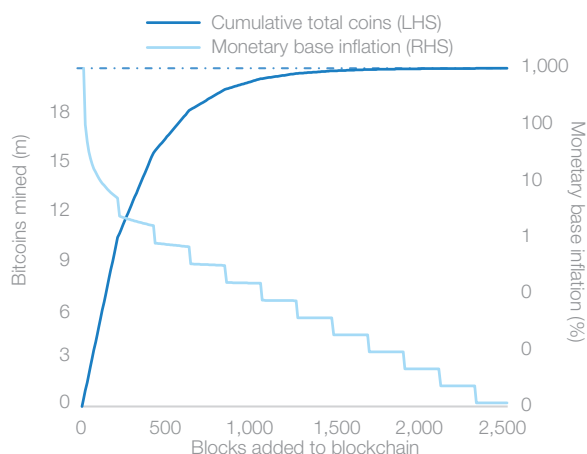
Source: Unsplash

## 20 Winners for the 21st Century – Where your portfolio exposure should be

To position for an ever-changing world dominated by digital disruption and evolving demographics, listed below are 20 industries that we believe will outperform in the coming decade:

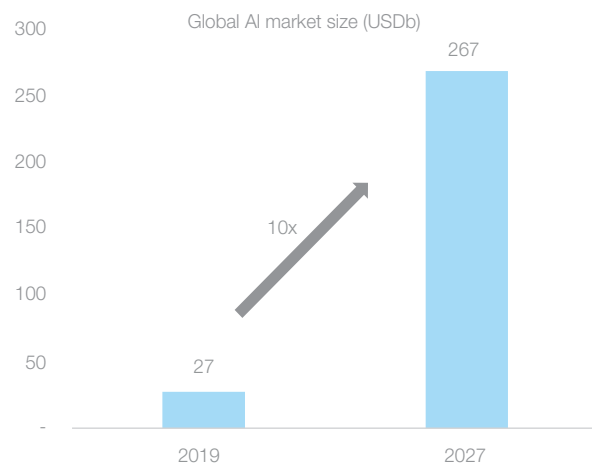
1. **Blockchain:** Blockchain is a decentralised, distributed ledger that holds a record of transactions in a peer-to-peer (P2P) network. Instead of a centralised authority acting as a trusted intermediary like in other payment systems, transactions in a decentralised network function without a trusted third party, relying on cryptographic proof that is mathematically verifiable by participants of the network to authenticate transactions. Blockchain technology is anticipated to be

### Blockchain technology – Revolutionary



Source: DBS

## AI – Massive growth ahead



Source: Fortune Business Insights, DBS

widely adopted, with use cases spanning across sectors including capital markets, health care, and intellectual property.

2. **Big Data/Artificial Intelligence (AI):** Data is the new air, and data management is key for corporates to stay on top of their game. Businesses are using big data analytics to gain valuable insights on future trends and improve their decision making processes. A comprehensive big data platform, with the backing of AI, can massively increase the effectiveness and reliability of outcomes. In the new digital economy, service providers and platform operators are able to process enormous amount of machine-readable data to aid their decision making process.

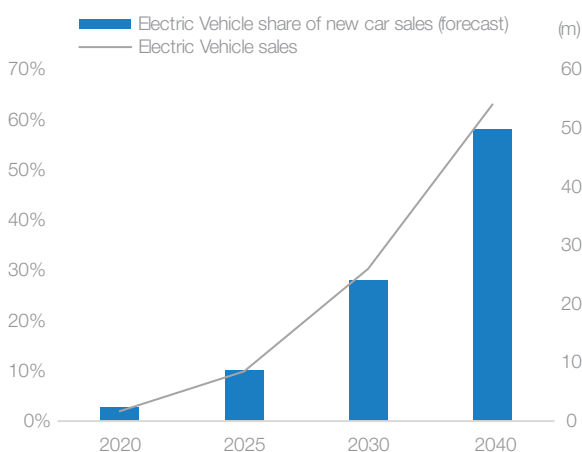


### 3. Autonomous Vehicles (AVs) /Electric Vehicles (EVs):

The electrification of the transportation industry is underpinned by (a) Technological advancements leading to lower pricing, (b) Changing regulatory landscape, and (c) Shifting consumer sentiments. EVs are expected to reach cost parity with internal combustion engine vehicles (ICEVs) by the end of the decade, with EV sales accounting for 58% of new car sales by 2040 (up from 2.7% in 2020). The transition of the transportation industry to EVs and AVs will benefit automakers, battery manufacturers, charging infrastructure providers, and chipset manufactures.

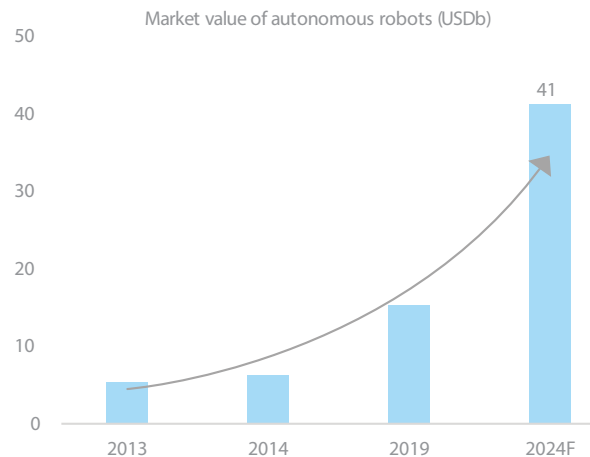
**4. Robotics/Automation:** Automation, along with “Industry 4.0” are causing a renaissance in global manufacturing as they bring about greater productivity and higher yield rates.

### EV: An electrifying future



Source: BloombergNEF, DBS

### Automation: manufacturing renaissance



Source: Siemens, Emerj, DBS

The pressing need to enhance production efficiency is constantly driving the shift towards “smart factories”, industrial automation, and collaborative robots. The global industrial automation market is expected to double its value between 2019 and 2027 to reach USD326b annually (CAGR of 8.9%).

**5. 3D Printing:** 3D printing (or additive manufacturing) is a process of making three dimensional solid objects by laying down successive thin layers of material from a digital file. 3D printing reduces the lead time and cost of developing prototypes for new parts or devices. Commercial applications for 3D printing include

## e-Commerce: Global scalability with no geographical boundaries



Source: Emarketer, Oberlo, DBS

usage in Medical and Dentistry, Aerospace and Defence, as well as Industrial goods. The industry is worth USD13b annually, in product sales with a growth rate of 26%.

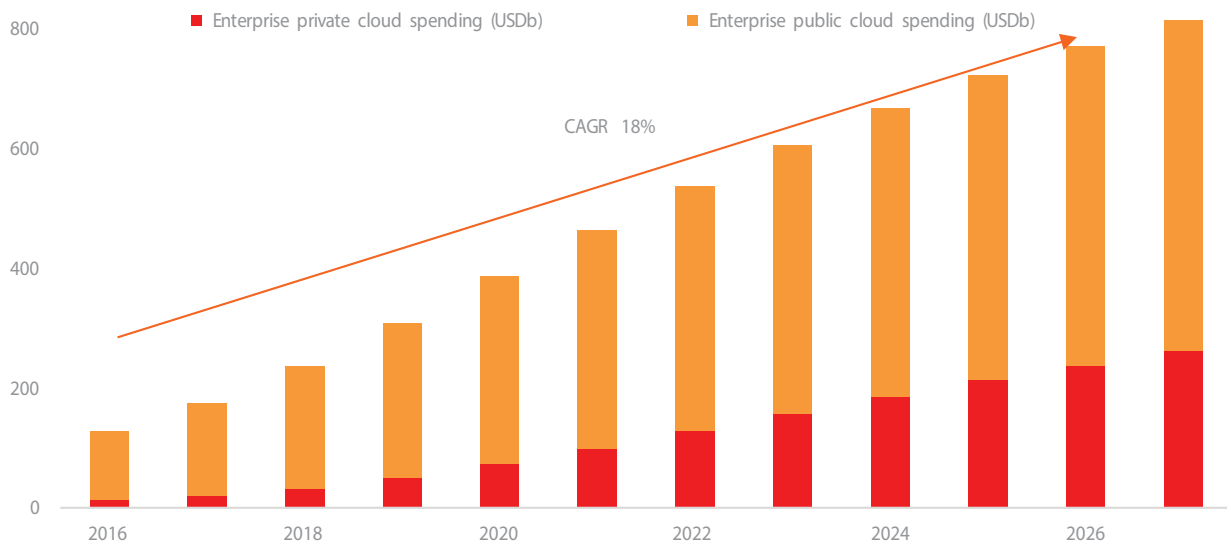
6. **e-Commerce:** e-Commerce is anchored at the core of digital transformation and knows no geographical boundaries. Rising global Internet penetration makes online access to everything under the sun possible. Online retail activities are expected to remain robust given rising Millennial spending and shift in demographics. The creation of marketplaces will be another tailwind boosting the acceptance of online retail. Third-party e-Commerce marketplaces are projected to make up 60% of e-Commerce volume by 2023, far outpacing proprietary platform sales.

7. **Space Exploration:** The end of the space race saw space exploration losing political support in the US and NASA's budget falling from a peak of over 4% of the US budget to 0.5% in 2011. However, it is now seeing a new renaissance as the commercialisation of space exploration continues to gain momentum with private companies offering services like space travel and asteroid mining. The global space industry is forecast to generate more than USD1t of revenue by 2040, driven predominantly by satellite broadband demand.

8. **Cloud Computing:** Online data traffic and storage usage are expected to see phenomenal growth globally and this leads to rising demand for reliable cloud services. "Infrastructure as a Service" (IaaS) and "Platform as a Service" (PaaS) are gaining prominence as more firms migrate their information and communication accesses towards cloud platforms. The trend will result in more data centres coming onstream as demand for storage capacity grows.

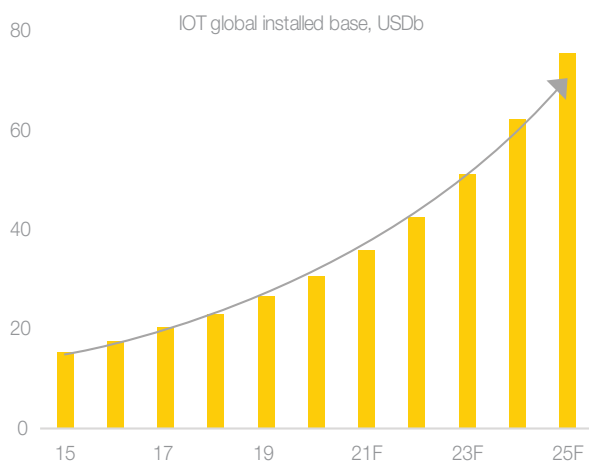
9. **Internet of Things (IOT):** Internet of Things (IOT) provides users with direct access to systems from anywhere in the world as the transmission of data happens via web browsers and computer operating systems in the IOT network. Given the versatility and convenience it provides, global spending on IOT has grown at an astounding pace, providing on-the-go access across all types of devices and networks. Additionally, IOT also provides additional data analytics capabilities arising from the rising inter-connection of smart devices.

## Cloud computing riding on rising demand for storage capacity



Source: Wikibon, DBS

## IOT is about versatility and convenience



Source: IHS-Markit, Forbes, DBS

**10. Social Media:** Social media started out as a new form of communication among Millennials. It has since evolved to penetrate every facet of society. Today, social media platforms come in many different forms, from social networks to online forums. The top five social media platforms in the world have a total of 8b monthly active users, making them an effective marketing channel for e-Commerce ecosystems. e-Commerce platforms are blending social media into their ecosystems to attract shoppers and expand their potential for monetisation.



CYBER SECURITY

INTERNET of THINGS (IOT)

BIG DATA & A.I.

DIGITAL MEDIA

3D PRINTING

SOCIAL MEDIA

ROBOTICS

PAYMENTS

FINTECH

In the era of digital disruption  
This is where we want to be

LOGISTICS

SEMICONDUCTORS

CONSUMERISM

E-SPORTS

LIFE SCIENCES

CLOUD COMPUTING

ELECTRIC VEHICLES

BLOCKCHAIN

SPACE EXPLORATION

ENERGY TRANSITION

E-COMMERCE

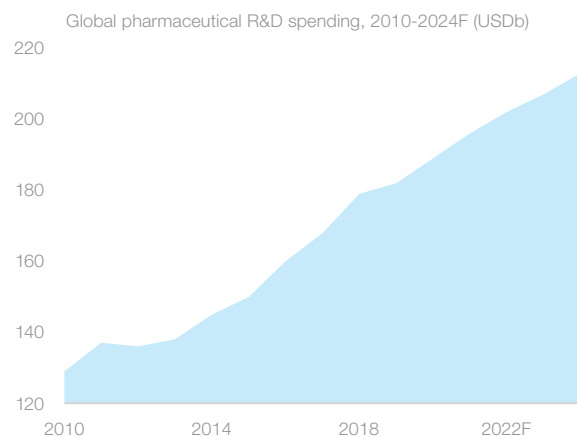
Source: Unsplash



**11. Life Sciences:** The life sciences industry consists of companies operating in biotechnology, pharmaceuticals, neuroscience, medical devices, and others. The Covid-19 pandemic and the subsequent search for a vaccine has clearly underlined the important role life sciences companies play in society. This will only be accentuated in the years ahead as scientific breakthroughs continue. Apart from addressing challenges posed by global aging, life sciences companies are also at the forefront of driving global economic growth.

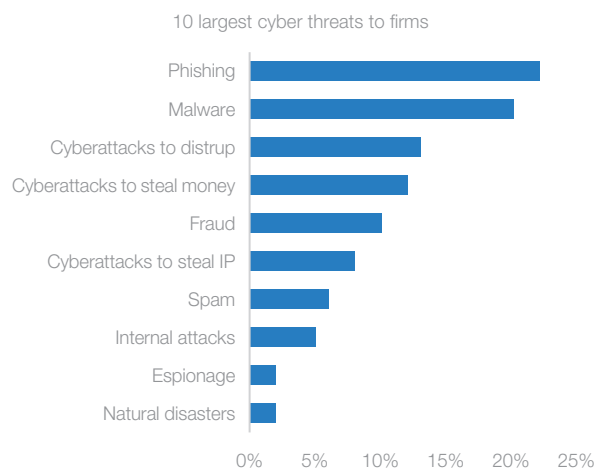
**12. Cyber Security:** Given the proliferation of digital transformation in all facets of life, the need to develop strong defences against cyber hacking is of paramount importance. There are rising needs for effective cyber security across industries, households, and even individual

## Global health care underpinned by an ageing population



Source: EvaluatePharma, DBS

## Cyber security: A necessity in the age of digital disruption

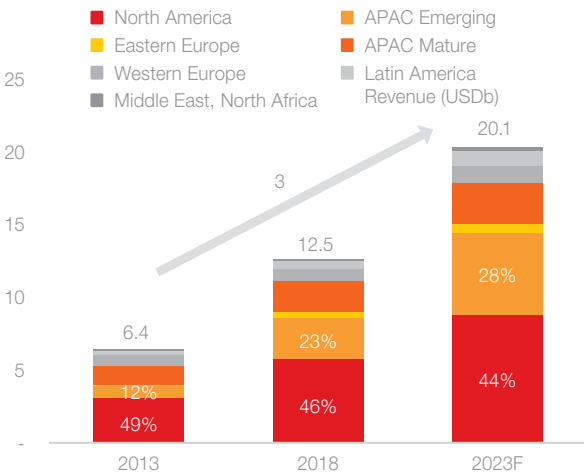


Source: EY, DBS

end users. Global annual expenditure on data security is projected to surpass USD200b over the next few years, creating interesting investment opportunities.

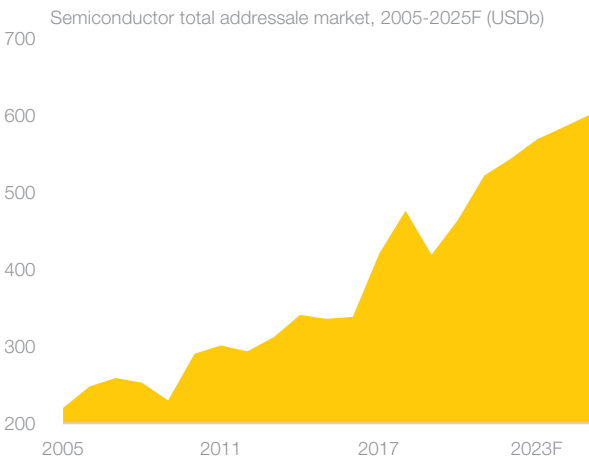
**13. Digital Media:** Digital media is any form of media that is distributed electronically. Driven by the rising availability of diverse content, the growth of digital media has gone from strength to strength. Today, as e-Commerce continues to disrupt traditional retail, digital media companies are increasingly incorporating e-Commerce into their platforms via e-Commerce related content. The three channels adopted by digital media companies are (a) Affiliate Marketing, (b) Social Commerce, and (c) Video Commerce.

Payments revenue on the rise



Source: Boston Consulting Group, DBS

Semiconductor sales on the rise



Source: Bloomberg, DBS

**14. Payments:** e-Commerce platforms and their end users enjoy seamless online shopping experience thanks to the efficiency of payment platforms, which allow customers to shop online with peace of mind, without having to worry about platform security. In 2020, the market value for global digital payments stand at USD5.2t. By 2025, the digital payment markets in China and the US are expected to reach USD4.2t and USD2.1t respectively (on an annual basis). As global e-Commerce continues to grow, so will “payment-as-a-service”.

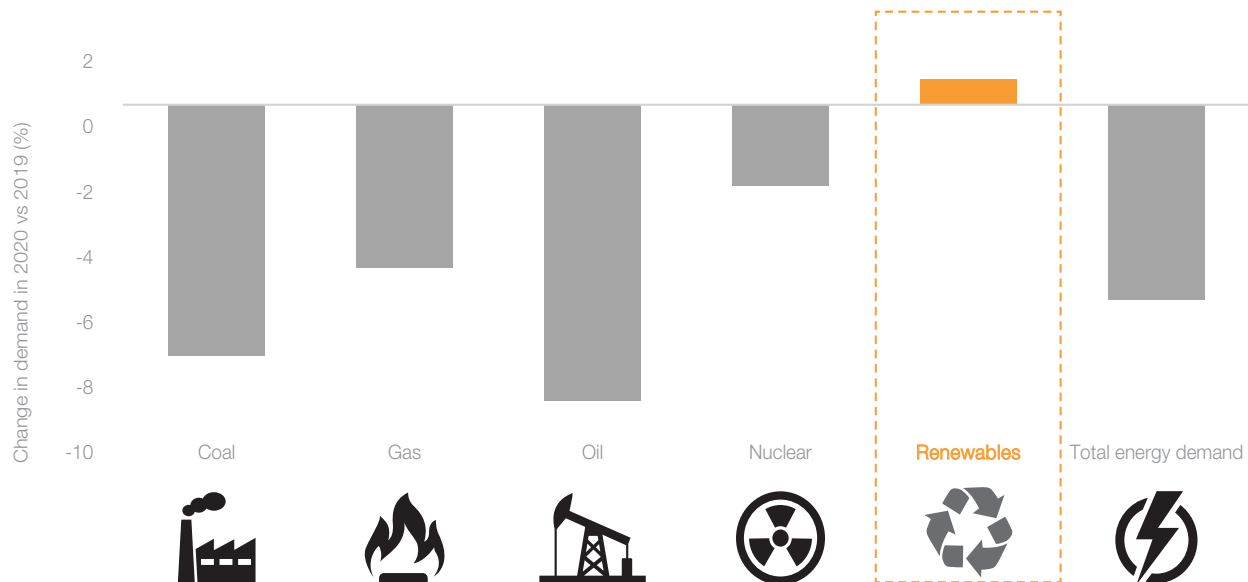
**15. Fintech:** Fintech (“Financial Technology”) refers to companies that recreate traditional financial services using modern technology. The global fintech market is valued at c.USD6t and is expected to grow at a CAGR of 24%. Fintech services like payments, insurance, investments, and third party lending are facilitated by technologies like AI, blockchain, and APIs. Initially viewed as a disruptive threat to traditional banking services, fintech is now emerging as an enabling partner for banks in upgrading their banking service offerings.

**16. Semiconductors:** Semiconductor chips form the foundation of digital transformation where devices, systems, network, and equipment are powered by them. The global semiconductor industry stands at USD440b in 2020 and is projected to increase by 20% this year. Annual semiconductor sales are projected to grow consistently through the decade, offering compelling investment opportunities for investors.

**17. Logistics:** Logistics is an integral part of e-Commerce as the need for speed in parcel delivery is an ever-growing necessity for online shoppers. The parcel delivery industry is expected to grow in tandem with the rise of e-Commerce and countries where inhabitants are scattered over vast areas would see stronger growth. The global e-Commerce logistics market rose 27% to USD368b in 2020 and it is projected to reach USD670b by 2025.

**18. Energy Transition:** Energy transition is a structural evolution of the system through which energy is produced and consumed. It encompasses the global energy sector's shift from fossil-based systems to more renewable sources such as wind and solar. Key pillars of transition include the rising adoption of renewable energy, progress on electrification, advancements in technology, as well as improvement in energy storage, transportation, and infrastructure. The integration of the various pillars above sees energy transition as a USD90t opportunity up till 2050.

### Energy transition: The irreversible shift to renewables



Source: IEA, Projected change in primary energy demand by fuel in 2020 relative to 2019, IEA, Paris  
retrieved from <https://www.iea.org/data-and-statistics/charts/projected-change-in-primary-energy-demand-by-fuel-in-2020-relative-to-2019> on 10 June 2021, DBS

# Innovators Disruptors Enablers Adapters

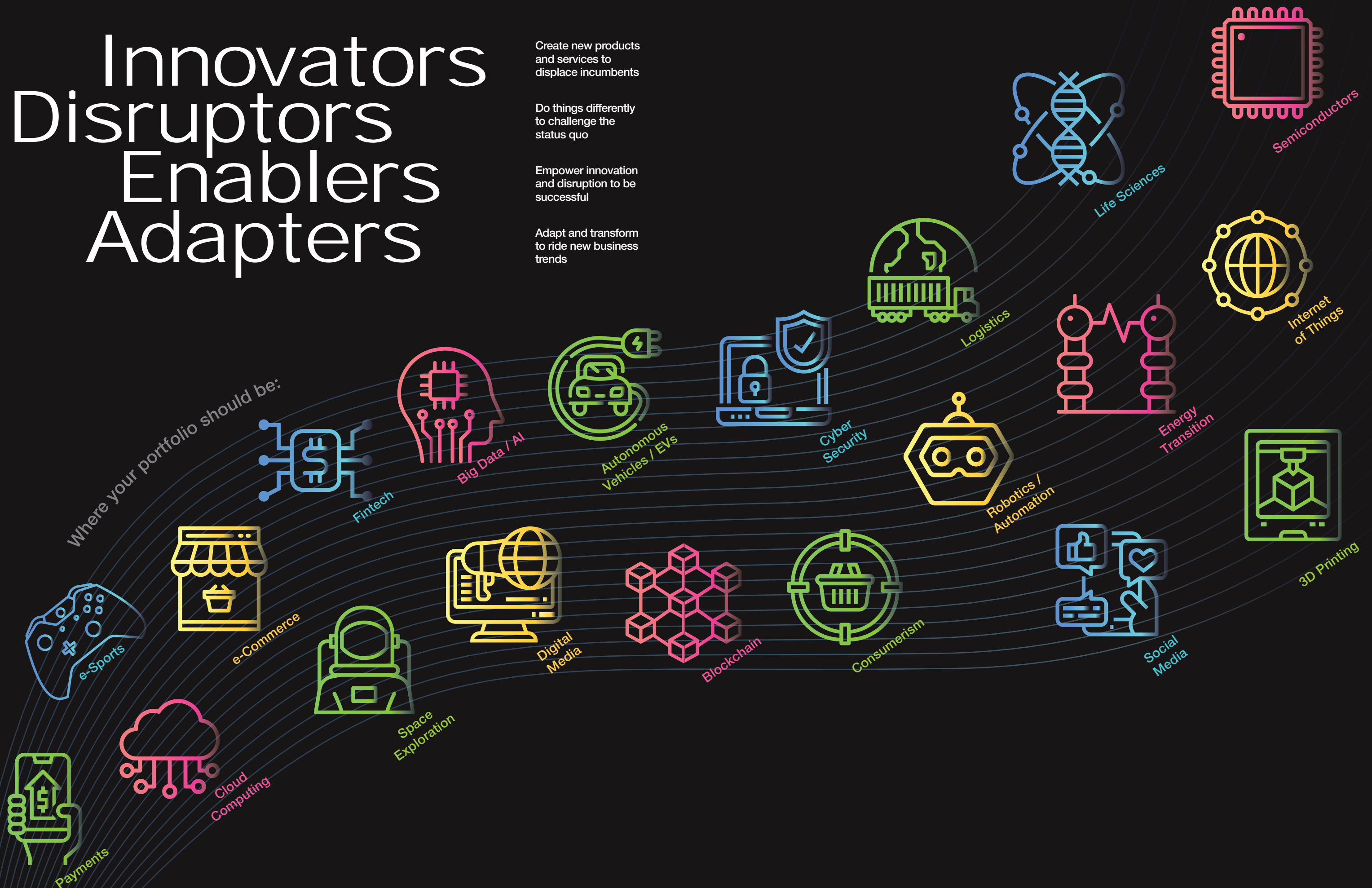
Create new products  
and services to  
displace incumbents

Do things differently  
to challenge the  
status quo

Empower innovation  
and disruption to be  
successful

Adapt and transform  
to ride new business  
trends

Where your portfolio should be:

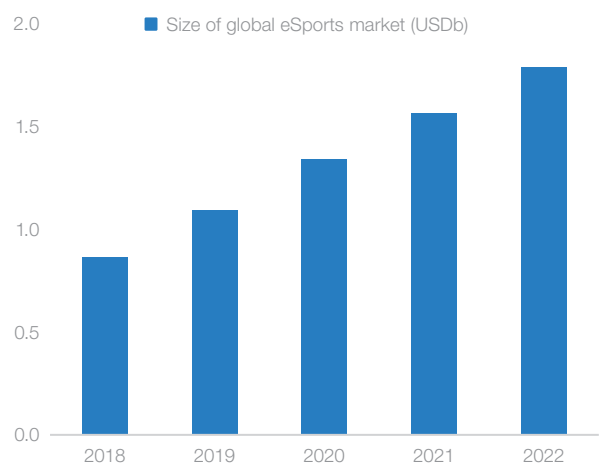




**19. e-Sports:** e-Sports, short for “Electronic Sports”, refers to multi-player video games played competitively by professional gamers. In recent years, e-Sports has become a global phenomenon generating massive interest from fans, professional players, and game developers. On track to overtake major traditional sports, the global e-Sports market is expected to reach USD6.8b by 2027. Major beneficiaries of this phenomenon would be game developers, content hosting platforms, and hardware manufacturers.

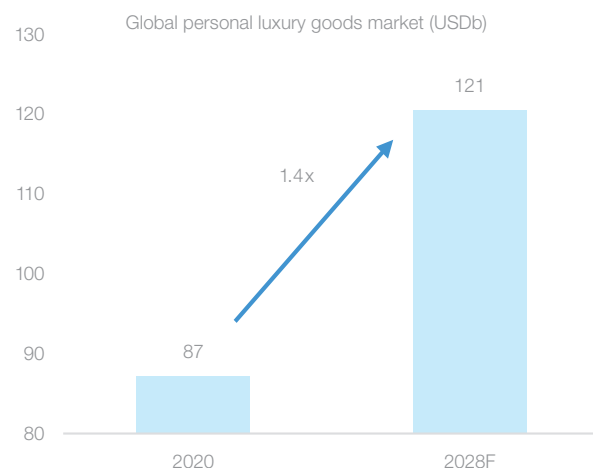
**20. Consumerism:** Consumerism is gaining momentum amid rising affluence in the world, particularly in Asia. High end consumer companies with brand stickiness are expected to benefit in this new normal. Leading companies possess the advantage of brand loyalty, strong pricing power, and resilient demand through economic cycles. The global luxury goods market is expected to grow 37% between 2020 and 2027.

### e-Sports gaining momentum worldwide



Source: Newzoo

### Global thirst for luxury goods on the rise



Source: Verifiedmarketresearch, DBS

### I.D.E.A.: A framework to identify winners in the digital world

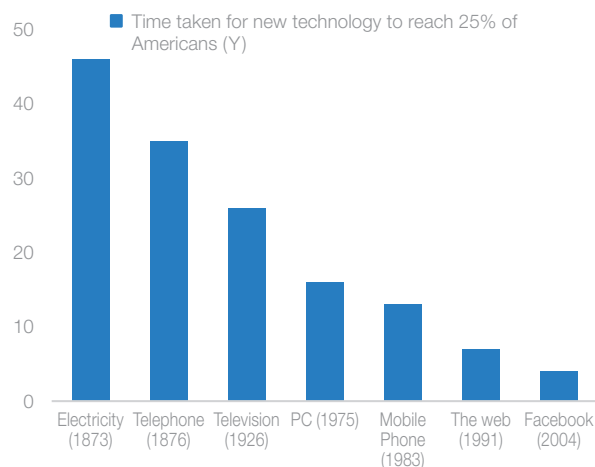
It is a common understanding that one would do well holding traditional “blue chips” because they exhibit among many factors, dominant market shares, well known brands, and consistent past profitability. But in today’s fast transforming economy, what are deemed to be “blue chips” could just possibly turn out to be laggard performers, worse still, disappear into obsolescence. The example below illustrates the rapid pace of change happening in our everyday lives.

Back in 1873, it took 46 years for electricity (as a “new technology” back then) to reach 25% of Americans. In 1876, it took 35 years for the telephone, and in 1926, 26 years for the television. Come the 20th century, the personal computer took 16 years from 1975 to reach 25% of Americans, while in 1983, the mobile phone took 13 years.

Then, things started to accelerate at an exponential pace. In 1991, the World Wide Web took only seven years, and in 2004, the usage of Facebook took merely four years to reach 25% of Americans.

Indeed, times are changing, and changing fast.

### The adaptation of new technology is speeding up



Source: Blackrock

Hence, while being mindful of the rapid changes happening around us, our approach to investing must also evolve. Instead of analysing a company through the static lenses of prevailing financial ratios and market positioning, we should look towards the future. The key questions to ask are:

- Is this company operating in a Growth industry and is it innovative enough to disrupt and gain further market share?
- For a company operating in a mature industry, how serious is the threat of disruption? Is the management forward thinking enough to reinvent itself?

With this in mind, we present to you our “I.D.E.A.” framework for identifying companies that can navigate and emerge stronger in an era of disruption. I.D.E.A. is an acronym for “Innovators, Disruptors, Enablers, and Adapters”:

|          |                   |   |
|----------|-------------------|---|
| <b>I</b> | <b>INNOVATORS</b> | Creating new products and services to displace incumbents                     |
| <b>D</b> | <b>DISRUPTORS</b> | Doing things differently to challenge the status quo                          |
| <b>E</b> | <b>ENABLERS</b>   | Empowering innovation and disruption to be successful                         |
| <b>A</b> | <b>ADAPTERS</b>   | Incumbents successfully adapting and transforming to ride new business trends |

### Innovators

Innovators are companies that create new ideas and methodologies in doing business. Innovators impact the way humans live, work, and play through inventions that lead to new trends. In the older era, prominent innovators include the Wright brothers who created the first airplane and Henry Ford, who invented the first car. In the modern era, the most impactful innovation in recent years has to be the smartphone. The introduction of Apple’s iPhone more than a decade ago created a new era for communication as mobile Internet connectivity became mainstream.

## Disruptors

Disruptors are companies that upend existing industry structures with new products or services, rendering conventional models obsolete. Today, disruption is happening at breakneck speed across several industries. e-Commerce platforms, for instance, are disruptors to physical retail stores. In consumer finance, traditional banks are challenged by the rise of Fintech. In the automobile space, rising adoption of EVs is eating into the market share of traditional gasoline vehicles. And, the list goes on.

## Enablers

Enablers are companies that facilitate effective digital and technological transformation. Companies which integrate technology, social media, data, and cloud give rise to next generation applications as well as new business opportunities. A key success factor is the ability to integrate a wide range of technology applications into interfaces that are agile, scalable, and robust enough to support sustained monetisation.

## Adapters

Adapters are companies that transform old business models to suit changing business trends. A company that is currently operating in an industry undergoing disruption can thrive as long as the management team is able to envision and successfully execute the strategic decisions of reinventing their operations to ride the new wave.

## The hunt for companies jumping multiple S-Curves

Apart from adopting an I.D.E.A. framework in stocks selection, we also keep a particular lookout for companies that display strong historical track record of jumping through multiple financial S-Curves through their years of operation. By definition, the S-Curve refers to a path whereby companies start operation and undergo sharp expansion, before peaking off and plateauing as the market matures. Unfortunately, most companies have failed in avoiding such ending by jumping on to a new S-Curve.

There are, however, exceptions.

Truly high performance companies have historically displayed the ability to scale one S-Curve before jumping off to the next – and this process repeats itself. A good case in point is Apple. Through its rich operating history, Apple has demonstrated the ability of scaling multiple S-curves successfully from its Apple II desktop, which revolutionised the computer industry to the iBook (the original MacBook), and then the iPhone in 2007. Today, Apple's business model has evolved with services (which includes advertising, AppleCare, and digital content) accounting for a significant proportion of its revenue.

# product evolution of Apple through the years

Macintosh  
LC



1995

iMac



1998

iPod



2001

iMac



2002

iBook G4



2003

iPod Nano



2005

Mac Book



2006

Apple TV



2007

iPhone



2007

Apple Watch



2015



The hallmarks of a typical high performance company scaling multiple S-Curves include (a) Great leadership, (b) Strong culture of innovation, and (c) Consistency in outperforming industry peers in both growth and profitability. These are the very traits and characteristics that we keep a look out for in our stock selection process.

## Investment Conclusion

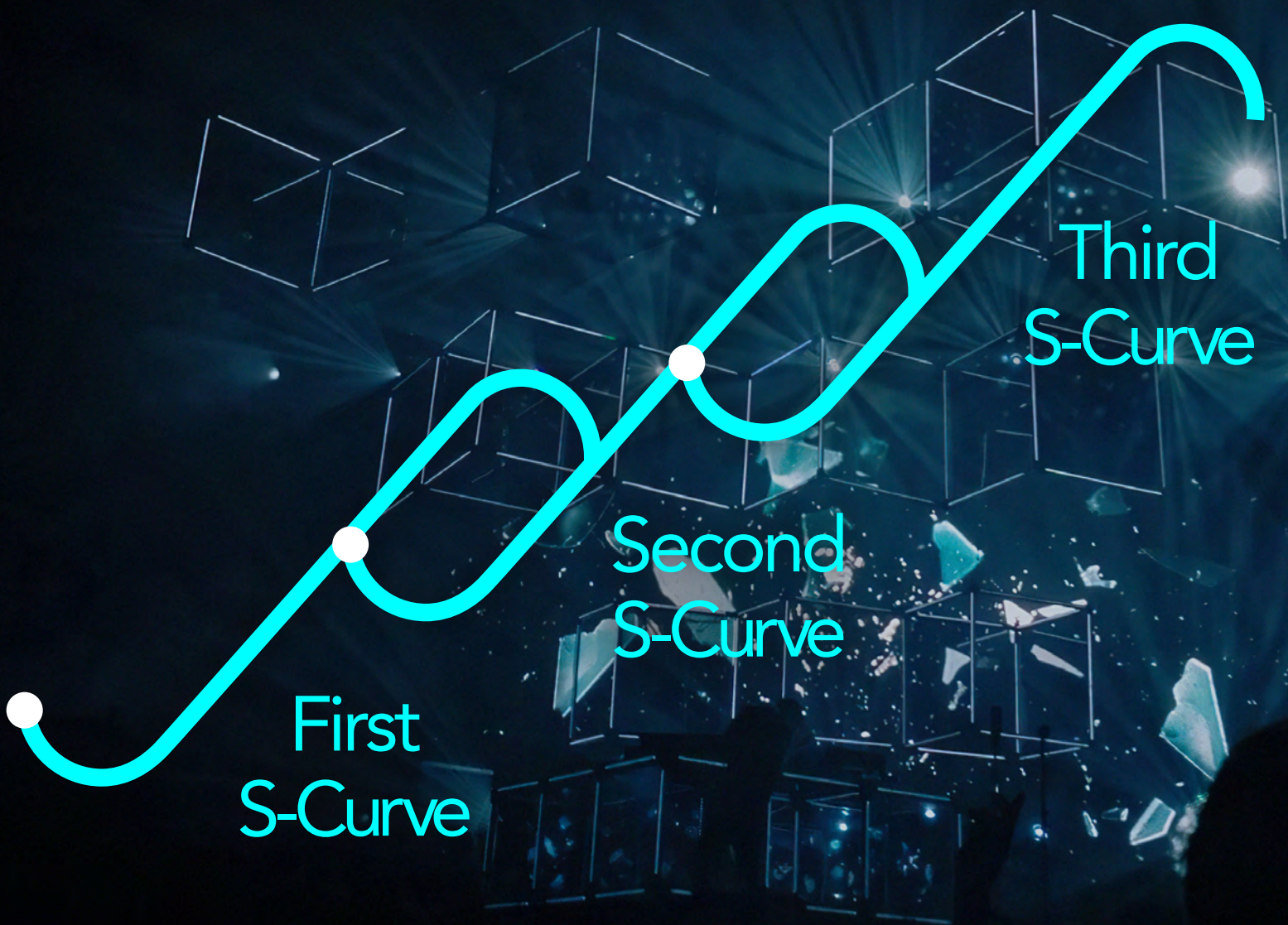
In a world undergoing through massive digital transformation – change is a constant. President John F. Kennedy once famously said that “Change is the law of life. And those who look only to the past or present are certain to miss the future”. In this rapidly evolving world of ever-growing technological advancements, companies need to change when they will, and not change when they must.

To navigate such an environment successfully, investment portfolios must:

1. Gain exposure to industries that will ride the disruption wave successfully.
2. Within these industries, gain exposure to companies with unique characteristics that allow them to stay ahead of the competition. In particular, focus on companies possessing strong track record of jumping across multiple S-Curves.

Our I.D.E.A. framework – focusing on Innovators, Disruptors, Enablers, and Adapters – is central to this winning strategy.

# high performance companies: scaling multiple S-Curves



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## Appendix: Stocks mentioned in this report

| Company             | Ticker    |
|---------------------|-----------|
| Alphabet Inc        | GOOGL US  |
| Amazon.com Inc      | AMZN US   |
| Apple Inc           | AAPL US   |
| Facebook            | FB US     |
| IBM Corp            | IBM US    |
| Kodak Co            | KODK US   |
| Microsoft Corp      | MSFT US   |
| Motorola Inc        | MSI US    |
| Nokia Corporation   | NOKIA FH  |
| Pfizer Inc          | PFE US    |
| Samsung Electronics | 005930 KS |
| Sony Group          | 6758 JP   |
| Tesla Inc           | TSLA US   |

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