



## Higher education remade by COVID-19

Scenarios for resilient leaders | 3 - 5 years

May 2020

---

**Humanity is facing the greatest crisis of our generation. People on the front lines are courageously fighting COVID-19 and educational leaders are providing critical services throughout the pandemic**

This document intends to provide institutional leaders with potential longer-term implications for the higher education sector

---

*In the wake of COVID-19, Deloitte and Salesforce hosted a dialogue among some of the world's best-known scenario thinkers to consider the societal and business impact of the pandemic. The results of this collaboration can be found in *The World Remade: Scenarios for Resilient Leaders*.*



**1** | **An industry remade**

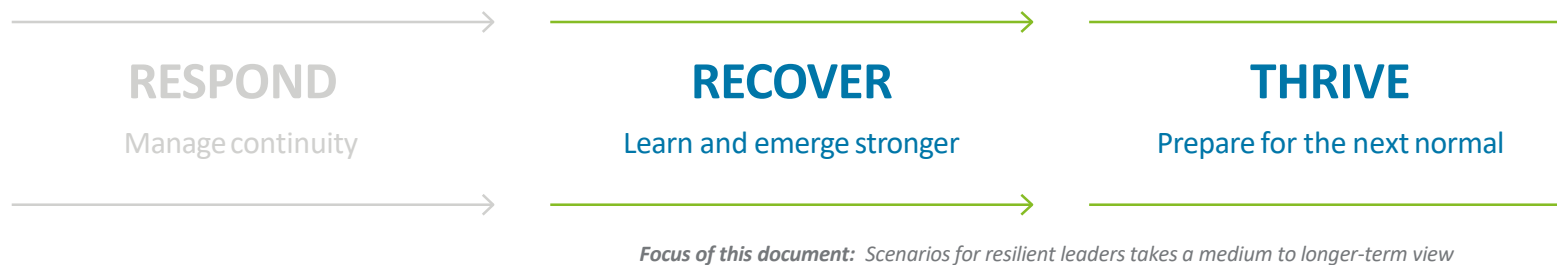
**2** | Making sense of the future

**3** | A closer look at the scenarios

**4** | Team and acknowledgements

# We are in uncharted waters, yet higher education leaders must take decisive action to help ensure their organizations are resilient

Deloitte's Resilient Leadership framework defines three time frames of the crisis



This document shares scenarios for how the higher education landscape may develop over the next 3-5 years and is intended to help leaders explore some of the potential medium-term implications resulting from the COVID-19 crisis.

These scenarios outline potential futures and were created to identify future opportunities.

*As Peter Drucker famously observed, "The greatest danger in times of turbulence is not turbulence itself, but to act with yesterday's logic."*

## Objectives of this document

Share scenarios for how the higher education sector might evolve in 3-5 years to help leaders:

- 1 Explore how trends we see during the pandemic could shape what higher education in may look like in the next 3-5 years
- 2 Foster productive conversations around the lasting implications and impacts of the crisis
- 3 Identify decisions and actions that can improve higher education institutions' resilience to the rapidly changing landscape
- 4 Move beyond "responding" to the crisis, and towards "recovering" in the medium-term

# Scenario thinking can help us better inform our decisions in an uncertain future

This document explores various scenarios about how the COVID-19 pandemic could accelerate or redirect the higher education industry over the next 3-5 years. Building on several trends already in motion, the scenarios are built on important higher education sector uncertainties, both already evident and others potentially plausible based on the severity of the pandemic, on government actions, and on the individual and collective actions of higher education institutions.

We chose to focus on the next 3-5 years because this time frame is long enough that change is possible, but close enough that it matters to institutional leaders today.

As you read this document, challenge yourself to imagine how things you were sure would happen could now be on a different course. Avoid the temptation to conclude that the crisis will accelerate the changes you already expected or that the scenarios are truths or future forecasts.

We hope this document will help to spark several questions and discussions relating to the next steps for your institution.

## What are scenarios?

Scenarios are stories about what the future may be like, created through a structured process to stretch thinking, challenge conventional wisdom, and drive better decisions today. They are not predictions about what will happen. They are hypotheses about what could happen, designed to open our eyes to new opportunities or hidden risks.

*Note that these scenarios stand as of mid-April 2020. They are based on our best understanding of the health trajectory, economic impacts, and government actions in response to the COVID-19 pandemic.*



1

| An industry remade

2

| **Making sense of the future**

3

| A closer look at the scenarios

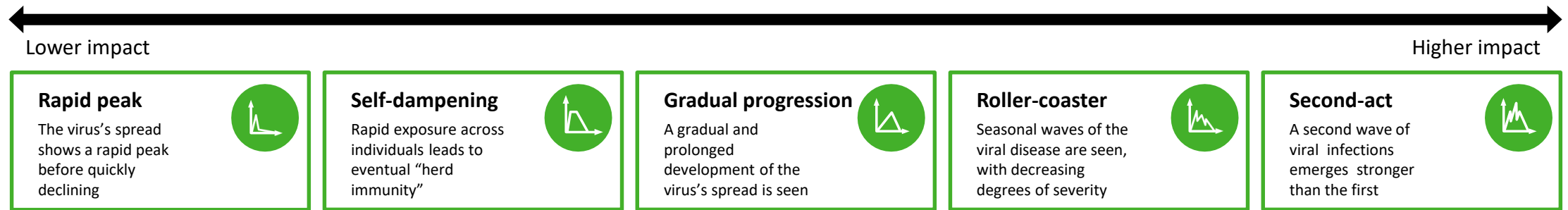
4

| Team and acknowledgements

# Two critical uncertainties will drive the overall impact of COVID-19

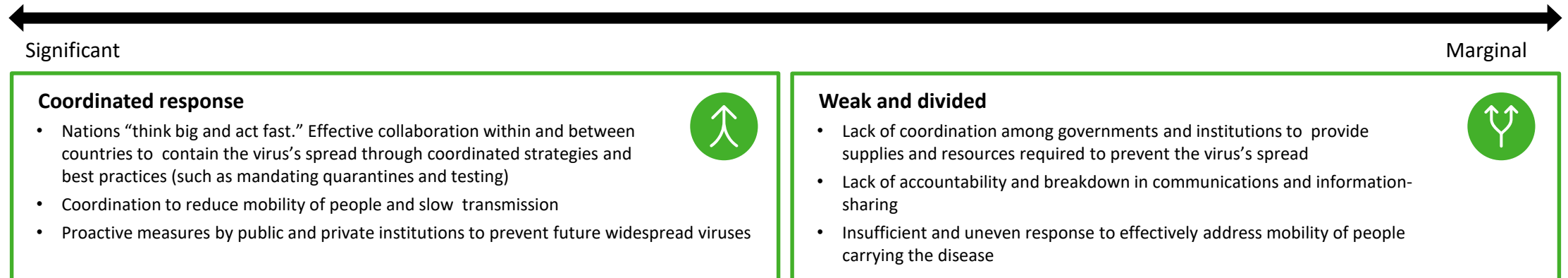
1

What is the overall **severity of the pandemic** and pattern of disease progression?




2

What is the **level of collaboration** within and between countries?




# Four scenarios to serve as thought starters



## The passing storm

The pandemic is managed effectively resulting from responses by governments to contain the virus. However, not without lasting repercussions, which **exacerbate socioeconomic inequality**.

- Relatively constrained disease dynamic
- Effective health system and policy response



## Lone wolves

A prolonged pandemic period, spurs governments to **adopt isolationist policies**, shorten supply chains, and increase surveillance.


- Severe, rolling pandemics
- Insufficient global coordination and weak policy response



## Good company

Governments around the world struggle to handle the crisis alone, with **large companies stepping up as a key part of the solution**. This accelerates the trend towards “stakeholder capitalism.”

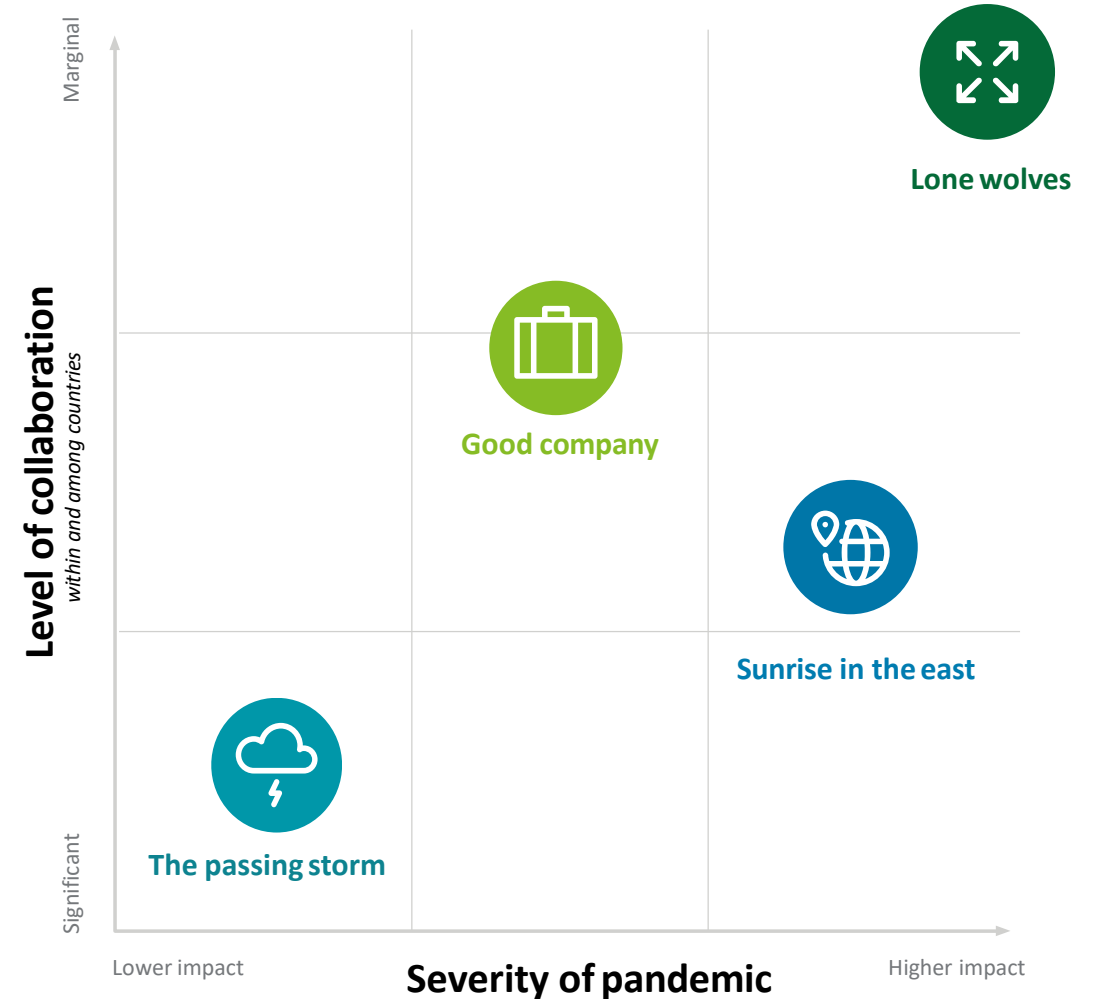
- More prolonged pandemic
- Collaboration to control the pandemic led by large companies



## Sunrise in the east

**China and other East Asian nations** are more effective in managing the virus and take the reins as **primary powers on the world stage**.

- Severe pandemic
- Collaborative health response led by East Asian countries





# Potential higher education opportunities, independent of the pandemic's impact:

## *Plan for enterprise risk and resiliency*

Institutions stand to gain from a stress-tested risk and resiliency plan – including a strong leadership team and change management approach. They revisit the “supply chain” implications of third-party relationships.

## *Curate the student experience*

The in-person, residential modality of many higher education institutions is unique. Assess how to preserve – or adapt – the student experience or “sense of belonging” that often drives enrollment and student success.

## *Interrogate orthodoxies*

Institutions may need to rethink the priorities underlying the conventional business model and academic structures, including evaluating athletic and research investments and the traditional academic calendar.

## *Invest in academic digitization*

The quick shift to virtual course delivery will impact the educational experience. There is an opportunity for institutions to set or raise the bar on what a high-quality blended or online model can look like.

## *Drive decisions using data and analytics*

There is likely to be an increased emphasis on decision-making based on accurate and comprehensive data as the value of an education, especially in the liberal arts, becomes more quantifiable.

## *Revisit the academic portfolio*

The perceived value of a degree will likely shift. Advanced technical and agrarian skills may become more favorable than liberal arts as the vocational outcomes of education take center stage. Academic portfolios will likely shift to support this demand.

## *Rethink administration and operations*

Institutions should evaluate the administrative apparatus of the institution (core vs. context) to determine what is mission-critical and seek opportunities for operational efficiency.

## *Prioritize diversity and inclusion*

The shift to virtual learning has highlighted inequalities in access to education. Institutions should gather insights into how heightened barriers to access and affordability may shape their target markets.

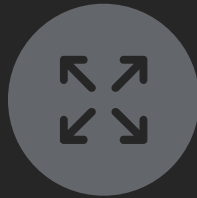
## *Assess financial health*

Accelerate discussions regarding medium-to-longer term financial health. If institutional mergers are likely/eventual, preparations should begin.

## *Bolster relationships with private sector*

Align expectations of workforce skills, roles, and responsibilities with the evolving needs of students and society.

# The passing storm



## Signals + Signposts:

- Governments effectively collaborate to share best practices and resources
- No indications of a second wave of the virus are identified
- Mechanisms to combat the virus (e.g., immunization) are mobilized
- Economic activity rebounds in late 2020. Recovery initially slow, but speeds up in Q2 2021 as consumers become more confident

## Contextual environment

The COVID-19 pandemic shakes the globe, but after a slow start is met with an increasingly **effective health system and political response**. The virus is eradicated earlier than anticipated due to coordinated measures by global players to spread awareness and share best practices. Economic growth takes a hit in the immediate aftermath of the crisis, but stimulus funding limits the shock and bolsters consumer confidence, returning the world economy to growth in 2021. Although short lived, the pandemic exacerbates the challenges of **socioeconomic inequality**, as peoples' uneven ability to weather the storm becomes highly evident. In response to short-lived quarantine measures, development in communications and collaboration tools sees massive acceleration, particularly in remote conferencing and VR.

## Higher education

- “The passing storm” scenario describes the impact on higher education and the overall impact is similar to recessions past
- The downturn increases the divide between the “haves and have nots” in higher education – the number of closures or mergers increases, but the top institutions escape relatively unscathed
- While there was much talk of 2020 being a tipping point for online higher education, the pace of change continues to be incremental, with the overall industry structure and pedagogical model largely unchanged

# The passing storm

<p><b>Ecosystem</b></p>	<ul style="list-style-type: none"> <li>Thousands of universities are <b>forced to close or merge</b>, based on an exacerbation of financial circumstances that pre-dated COVID-19.</li> <li>“Mega universities”— institutions that are large, national, and mostly online—see <b>some enrollment increases</b> as the result of students being stranded by closures or disenchanted with their residential university’s experiment with online learning.</li> <li>In the urgency to “figure out online,” some institutions pursue <b>relationships with mega universities</b> to set up white-label online programs or enable direct articulation agreements.</li> <li>The rush to “go remote” almost overnight by most residential institutions negatively impacts overall perceptions of online learning. This acts as a <b>headwind to new entrants into the “virtual learning”</b> arena.</li> <li>The resulting global economic recession acts as a tailwind for the four-year traditional bachelor’s degree programs that remain, as the <b>desire for increased higher education grows</b>.</li> <li><b>2-year colleges and smaller regional institutions may see growth</b> in enrollment as students seek to reduce cost and/or stay closer to home, pursuing 2+2 degrees in many cases. Institutions also admit students without test scores as a prerequisite and admit more regular decision applicants in order to fill their classes.</li> </ul>
<p><b>Students</b></p>	<ul style="list-style-type: none"> <li>Most students who have experienced digitally delivered, synchronous replicas of in-person courses, express <b>negative sentiment toward online education</b>.</li> <li>With <b>residential experiences largely intact</b> (with restrictions) for the fall of 2020, most matriculants “stay the course” except in circumstances where finances are severely impacted by the recession.</li> <li>Recently unemployed workers turn to 2-year colleges for <b>rapid re-skilling</b> (obtaining micro-credentials) to meet specific employer needs and to re-enter the workforce quickly.</li> </ul>
<p><b>Employers</b></p>	<ul style="list-style-type: none"> <li>Employers that recruit from top-tier institutions <b>slow or defer hiring in 2020</b> but ramp back up in 2021.</li> <li>Employers have their pick of talent given massive unemployment, and use the <b>degree as a screen for jobs</b>, whether they require a post-secondary degree or not (repeating the patterns of 2008-2012).</li> <li>Some incremental progress is made, especially in technology fields, for <b>micro-credentials and certifications</b> as the signal for hiring.</li> <li>Education benefits (<b>i.e. employer-funded continuing education</b>) are <b>largely cut</b> as a cost-saving mechanism; employers rely even more heavily on the public sector for workforce development and training.</li> </ul>
<p><b>Funding mechanisms</b></p>	<ul style="list-style-type: none"> <li>With fewer resources available for lower- and middle-income families, pressure to keep tuition flat, and a reduced tax base, institutions will be forced to give <b>out greater levels of financial aid</b>, paid for through more aggressive cost-cutting and borrowing.</li> <li><b>Government funding drops significantly</b>, impacting institutional budgets.</li> <li>Colleges and large philanthropic organizations emphasize the <b>role of education in fighting socioeconomic inequality</b>, driving partnership with both 2-year colleges and mega institutions offering lower cost online degrees.</li> <li><b>Endowments experience negative returns</b>, but with other funding sources drying up, institutions are forced in some cases to draw down principal from shrinking endowments.</li> </ul>

# Good company



## Signals + Signposts:

- Banks and other businesses take initiative to combat the virus spread and support recovery
- A shift towards greater corporate responsibility is seen with new long-term outlooks leading to greater emphasis on investing in workers and communities
- Economic recovery begins late 2021. Recovery slows in early 2022 and speeds up by the second half of 2022

## Contextual environment

The pandemic persists past initial projections, placing a growing burden on governments across the globe who struggle to handle the crisis. **Financial institutions and other large corporations step up to fill the void** left by the insufficient and uncoordinated response among governments. The economic recovery begins late 2021. The recovery starts slow in early 2022 and speeds up by the second half of the year. Interest rates stay near-zero through the end of 2022. **Large companies respond quickly** and figure out how to configure and restructure their supply chains, observing a rapid growth in output after the crisis.

## Higher education

- Explosion in industry-specific degree and credential partnerships, as employers become more directive in defining the skills they expect higher education to provide
- The aggregate level of employer-funded tuition increases, but with more restrictions on how it is used (i.e. must contribute directly to increased productivity at work)
- With shrinkage of the sector overall, and of the public higher education sector in particular, high growth of “B2B” higher education providers occurs. Additionally, the corporate acquisition of education providers as captive training assets occurs

# Good company

<p><b>Ecosystem</b></p>	<ul style="list-style-type: none"> <li>• <b>Mega universities thrive and research institutions grow</b> at the expense of other institutions (with <b>closures and mergers</b> exceeding a thousand institutions), creating a dramatic shift to a smaller number of much larger and more stable institutions.</li> <li>• <b>2-year institutions see an uptick</b> in enrollment as demand increases for stacked credentials and certificates, and the traditional four-year degree becomes less sought-after.</li> <li>• As a result of government funding dropping, consolidation occurs <b>into regional “centers”</b> that are more aligned to population centers and linked to regional employers.</li> <li>• Research-intensive institutions <b>shift research focus</b> to medicine, population health, supply chain management, and chase funding sources from private enterprise and foundations.</li> <li>• Alliances between employers and regional institutions—largely 2-year institutions—flourish, with employers underwriting specific programs of study and workforce development. Higher education brands are more co-mingled with corporate brands, building greater trust and affinity with the public.</li> </ul>
<p><b>Students</b></p>	<ul style="list-style-type: none"> <li>• Higher education <b>enrollments generally stay the same</b> overall in this scenario, with a decline in the number of degree-seeking students offset by high growth in certificates and alternate credentials.</li> <li>• Corporate influence acts to <b>lower restrictions on international students over time</b>, as demand for skills and “local” talent outstrips the risks.</li> <li>• Vast numbers of individuals reconsider their college choice, and a third to a half of all <b>furloughed/laid off workers seek learning/upskilling opportunities</b> mostly through online options.</li> <li>• The “<b>residential experience</b>” becomes increasingly perceived as a luxury good.</li> <li>• <b>Price sensitivity increases</b> even more as students and families more clearly delineate between the cost of education and the cost of the college experience.</li> <li>• After giving institutions the benefit of the doubt for 1-2 semesters, students take to social media en masse with ongoing, “<b>show me the value</b>” critiques.</li> </ul>
<p><b>Employers</b></p>	<ul style="list-style-type: none"> <li>• <b>Corporations drive innovation</b> in higher education, getting more heavily involved in curriculum development and potentially building or acquiring their own universities.</li> <li>• Tech, manufacturing, and other <b>medium skill jobs recover faster</b> than others, driving employers to significantly shift their screening and signaling a shift from the 4-year degree to micro-credentials and certifications that allow for much more rapid skilling/reskilling to better meet their specific needs.</li> </ul>
<p><b>Funding mechanisms</b></p>	<ul style="list-style-type: none"> <li>• With the growth in corporate social responsibility, any <b>shortfalls in government appropriations are bolstered by corporations</b> funding innovation and research in partnership principally with large research institutions and technical colleges.</li> <li>• <b>Private sponsorship of research increases</b> as companies increase their investment in research through grants and contracts.</li> <li>• <b>Endowments experience a softer decline</b> as the growth of large corporations help markets rebound.</li> </ul>

# Sunrise in the east



## Signals + Signposts:

- East Asian countries emerge from the recovery period after experiencing less of an economic impact
- China significantly ramps up foreign direct investment efforts, bolstering its global reputation
- Economic recovery begins late 2021. Recovery speeds up by the second half of 2022, with quicker speeds of recovery in the East

## Contextual environment

Having stamped out the disease earlier, **China and other East Asian countries emerge stronger**, as Western nations struggle with deep and lasting human, social, and economic impacts. Economic power shifts east as they help other countries to recover. China's rapid mitigation of the pandemic both inside its borders and in friendly nations through its support providing resources and best practices results in a **shift of trade-flows away from the West**, reducing its importance. Western economies takes much longer to recover to pre-COVID levels, resulting in a weakening in currencies against the Yuan.

As significant shrinkage is seen in the economy, **staggeringly large and multiple government bailouts are needed** to keep major industries afloat. The pandemic creates a 'social levelling' across all classes. Increases in consumer data-sharing with governments and businesses advances the embedding of AI into everyday life, from health management to security. People accept government and institutional surveillance mechanisms as part of the public good.

## Higher education

- Higher education in the West goes into structural decline; increased emphasis on public order and shared sacrifice dampen intellectual debate on campuses in the West
- Rising Asian powers attract high performing students and faculty from across the globe, increasing brain drain from the West
- International student mobility patterns shift dramatically towards Asia, as the West becomes a student exporter
- As polarization increases and resentment mounts, higher education is caught in the crossfire of anti-globalist and nationalist movements, further eroding public trust in the academy, seen as liberal and globalist
- An increased focus on technology necessitates a marked growth in innovation in education

# Sunrise in the east

<b>Ecosystem</b>	<ul style="list-style-type: none"><li>• <b>Western institutions start to lose ground</b> within the global lead tables.</li><li>• <b>Large research institutions suffer from declining quality</b> as their international students (and some domestic students) go to Asia for education. Research institutions are eclipsed by a growing capability for medical research in Asia; however, ethics oversight suffers, increasing the need for export controls.</li><li>• <b>Tuition dependent universities suffer</b> more because their students opt to go to the large research institutions that they couldn't have attended previously (but now there are open spots).</li><li>• <b>Several public university systems fail</b> and simultaneously, independent institutions join forces through deeper consortia to achieve economies of scale.</li><li>• <b>Mega universities pick up students</b> resulting from the contraction of tuition-dependent institutions.</li></ul>
<b>Students</b>	<ul style="list-style-type: none"><li>• For the first time, the <b>US and leading Western countries cannot capitalize on a net import of students</b>; US enrollments drop by 10-25 percent as international students come to the US less for education, seeking to be in markets with stronger economies, and some traditionally domestic students head to Asia for their education.</li><li>• Institutions with the <b>strongest global brands</b> that have satellite campuses in Asia and the Middle East <b>see a resurgence of interest</b> and become a destination for students.</li><li>• Students are now able to get into better institutions than they could have otherwise, which helps <b>stabilize demand</b> and draw students during a time of economic uncertainty.</li></ul>
<b>Employers</b>	<ul style="list-style-type: none"><li>• <b>Tech firms</b>, especially those with massive investments in AI, machine learning, and surveillance assets, <b>ramp up hiring</b> at a voracious pace – bypassing the degree and developing industry (and sometimes employer-specific) credentials that attract and lock-in talent.</li><li>• The Western response is an extended version of the current environment; the <b>West effectively cedes its dominant world position to Asia</b>.</li><li>• <b>Among employers, there is an increased focus on reskilling</b>; the new way of the world helps companies realize their organizations are missing certain skills in the movement toward a more resilient operating model; employers that can adapt to the new normal and embrace new technologies flourish.</li></ul>
<b>Funding mechanisms</b>	<ul style="list-style-type: none"><li>• <b>Higher education becomes largely a private enterprise</b>, with public support fading and funding redirected towards healthcare.</li><li>• The tax base contracts and, accordingly, <b>government support for higher education contracts</b> so students seek cheaper options but generally still enroll in higher education because they cannot easily find employment.</li></ul>

# Lone wolves



## Signals + Signposts:

- The COVID-19 virus continues to mutate and evolve, evading eradication
- Countries deemphasize working together and enforce isolationist policies
- Global economic recovery by mid-2022, with diverging rates of recovery across countries

## Contextual environment

The COVID-19 pandemic becomes a prolonged crisis as **waves of disease rock the globe** for longer than anyone was prepared for and no vaccine seems to be close. Global health systems are overwhelmed and societies are increasingly depressed. Witnessing mounting deaths and social unrest, **all countries grow isolationist** in the name of domestic safety, limiting trade flows and diverging from global regulations. **Government surveillance is commonplace** with tech monitors on people and their movements, collecting personal and social information not only to eradicate the pandemic, but also to put in place effective prevention methods. The economic downturn and investor uncertainty dramatically impact the capital markets; companies observe sharp falls in stock values across different industries.

## Higher education

- Institutional classifications breakdown, and time-based progression and calendar-driven scheduling are unworkable with rolling, unpredictable lockdowns
- Amidst a generally bleak economic backdrop, there are a few select high growth opportunities for education and training: advanced manufacturing, as massive tariffs and isolationism drive on-shoring of supply chains; and the performing arts are an unexpected winner, as streaming of all art forms become a key means of escape for isolated citizens
- The evolution of “elite” higher education becomes a lightning rod for controversy, protest, and demonstrations against the deepening class divide
- The shift of higher education offerings online exacerbates the ‘digital divide,’ limiting the options of students in poorer, rural communities who are not served by broadband access; the promise of higher education as a public good is further eroded



# Lone wolves

<b>Ecosystem</b>	<ul style="list-style-type: none"><li>• To survive, <b>research institutions redefine their model</b>, with a small cohort of “traditional” immersive experience, which become the province of the rich, largely walled-off from society. Those with international cache and the ability to deliver a robust, online/remote student experience are able to attract more international students. This is supplemented with <b>high quality distance learning</b> (akin to mega universities), that is at a higher price point and trades on brand cache.</li><li>• <b>Mega universities and large research university online offerings will thrive</b> in this environment as the locus of safe and affordable education.</li><li>• <b>Tuition dependent universities are decimated.</b> The ones that survive are those that have developed strong online experiences and strong direct-to-employer links.</li><li>• Increased <b>demand for 2-year institutions</b> which retool to focus exclusively on skills that require hands-on training (move further towards competency and away from degrees).</li><li>• <b>New entrants include corporate training</b> programs and industry trade group developed training programs that take the place of higher education or these programs become accredited.</li></ul>
<b>Students</b>	<ul style="list-style-type: none"><li>• The <b>disparity in income</b> between those with a degree and those with only high school education equivalency shrinks for the first time in history.</li><li>• The few institutions that continue to offer <b>residential programs become sanctuary campuses</b>, protecting the students with opportunities and resources to study.</li><li>• <b>Overall student numbers drop markedly</b> – the student import/export imbalance (which currently favors the West) drops to zero as no one leaves their home country and people who are employable without college, do not seek post-secondary education.</li></ul>
<b>Employers</b>	<ul style="list-style-type: none"><li>• <b>Skills are valued</b> more highly than degrees.</li><li>• Employers form consortia that develop <b>loose standards for credentials</b> that begin to replace and erode the value of the 4-year bachelors degree.</li><li>• As there are fewer employers hiring, the <b>employer has a greater stake in the value of education</b> and thus is heavily involved in curriculum design and even school creation.</li></ul>
<b>Funding mechanisms</b>	<ul style="list-style-type: none"><li>• <b>Little to no public funding for higher education</b>, with the exception of government funding for research in manufacturing, health and defense which increases, strengthening the position of the elite research institutions.</li><li>• <b>Endowment income severely constrained</b> in a long-term bear market.</li><li>• <b>Few are capable and willing to pay for a true ivory tower</b> experience, while corporations bolster the mega universities, as well as 2-year institutions.</li></ul>

1

An industry remade

2

Making sense of the future

3

A closer look at the scenarios

4

**Team and acknowledgements**

## Team and acknowledgements

# Authors and project team

## Deloitte project team

### Cole Clark

Managing Director  
Deloitte Services LP

### Scott Friedman

Principal  
Deloitte Consulting LLP

### Allan Ludgate

Managing Director  
Monitor Institute by Deloitte  
Deloitte LLP

### Megan Cluver

Senior Manager  
Deloitte Consulting LLP

### Peter Fritz

Senior Manager  
Deloitte Consulting LLP

### Evelyn Galletti

Senior Manager  
Deloitte Consulting LLP

## Deloitte higher education leadership

### Louise Upton

Global Higher Education Leader  
Principal  
Deloitte Canada

## Additional thanks

The project team expresses gratitude to the following individuals for their contributions and support:

**Gopi Billa**, Principal, Deloitte Consulting LLP

**Andrew Blau**, Managing Director, Deloitte Consulting LLP

**Katie Menish**, Senior Manager, Deloitte Consulting LLP

**Madeline Pongor**, Senior Consultant, Deloitte Consulting LLP

**Katie MacFarlane**, Consultant, Deloitte Consulting LLP



#### **About the Deloitte Center for Higher Education Excellence**

Higher education institutions confront a number of challenges, from dramatic shifts in sources of funding resulting from broader structural changes in the economy, to demands for greater accountability at all levels, to the imperative to increase effectiveness and efficiency through the adoption of modern technology.

Deloitte's Center for Higher Education Excellence produces groundbreaking research to help colleges and universities navigate these challenges and reimagine how they achieve excellence in every aspect of the academy: teaching, learning, and research. Through forums and immersive lab sessions, we engage the higher education community collaboratively on a transformative journey, exploring critical topics, overcoming constraints, and expanding the limits of the art of the possible.

This presentation contains general information only and Deloitte is not, by means of this presentation, rendering accounting, business, financial, investment, legal, tax, or other professional advice or services. This presentation is not a substitute for such professional advice or services, nor should it be used as a basis for any decision or action that may affect your business. Before making any decision or taking any action that may affect your business, you should consult a qualified professional advisor.

Deloitte shall not be responsible for any loss sustained by any person who relies on this presentation.

#### **About Deloitte**

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"), its network of member firms, and their related entities. DTTL and each of its member firms are legally separate and independent entities. DTTL (also referred to as "Deloitte Global") does not provide services to clients. In the United States, Deloitte refers to one or more of the US member firms of DTTL, their related entities that operate using the "Deloitte" name in the United States and their respective affiliates. Certain services may not be available to attest clients under the rules and regulations of public accounting. Please see [www.deloitte.com/about](http://www.deloitte.com/about) to learn more about our global network of member firms.

Copyright © 2020 Deloitte Development LLC. All rights reserved.