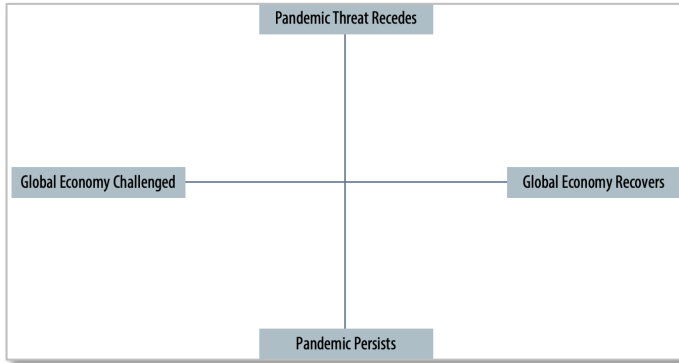
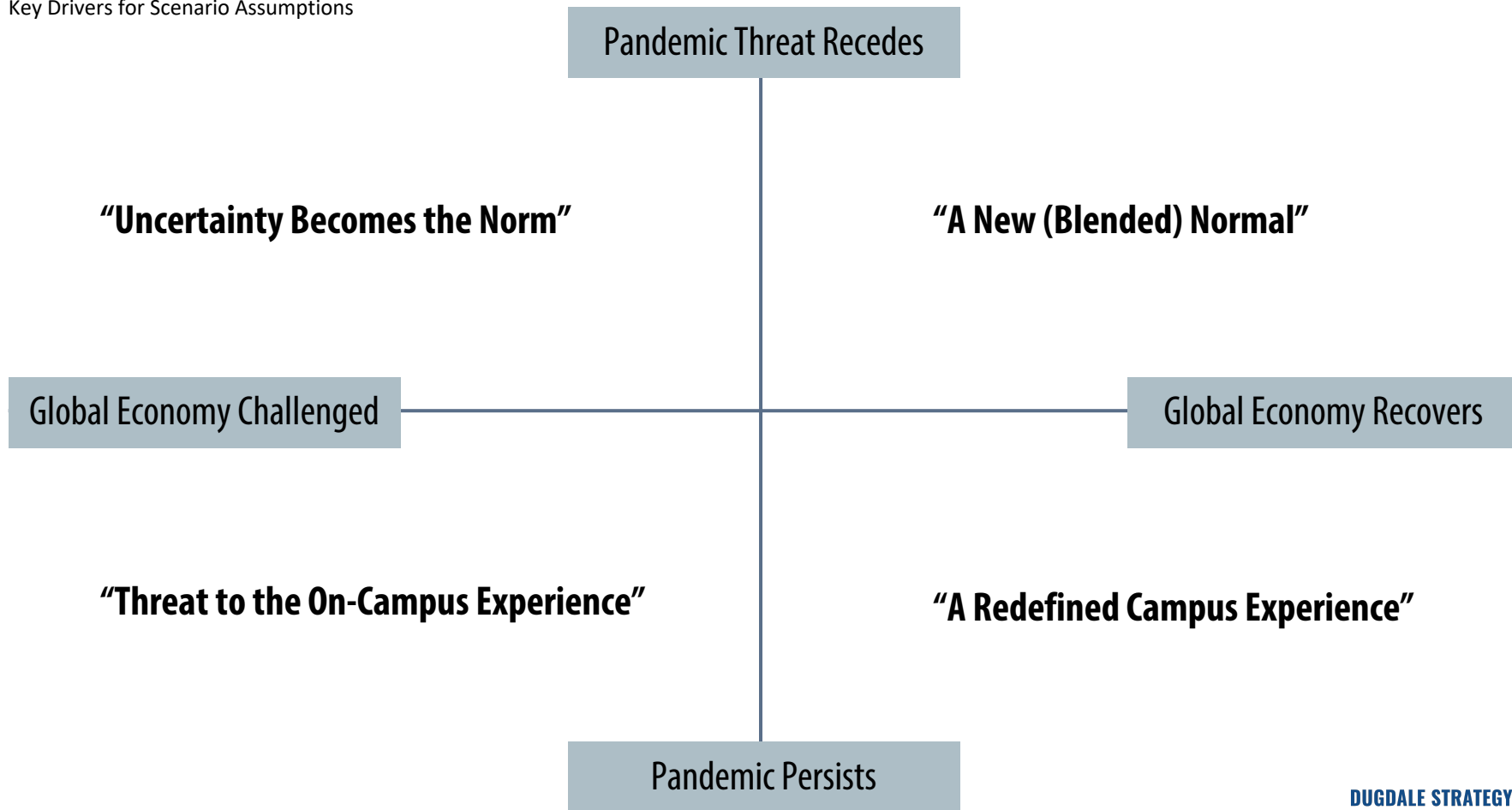


Alternative Scenarios for Post-COVID-19 Futures



These alternative future scenarios suggest a range of possible strategies and implications for more agile planning.

It is intended as a preliminary framework for discussion: a work in progress to help us generate ideas to inform the planning of future learning spaces.



Pandemic Threat Recedes

“Uncertainty Becomes the Norm”

- Slow cautious return of students to live on campus
- More students from region who might have gone abroad
- Alternative enrollment strategies to provide more flexibility
- Hy-Flex courses, supported by dynamic room scheduling
- Hosting/travel by scholars to campus resumes but limited
- Moderate but slow restoration of supply chains

“A New (Blended) Normal”

- Residential life returns to campus, with restrictions on gatherings; planned increase in residential capacity proceeds
- More blended courses; online experience encourages instructors to “flip” courses so more active learning on-campus
- International research & scholarship collaboration resumes
- Manufacturing gears up again; improved product availability

Global Economy Challenged

“Threat to the On-Campus Experience”

- Fewer students want to risk living on campus or commute
- Travel restrictions/uncertainties erode international demand
- On-line educational programs become most popular, with limited F2F cohort gatherings & intermittent campus events
- Remote presence improves via new 360video/holograms
- More reliance on experiential learning through xR/VR
- Supply chain and manufacturing problems cause havoc with procurement reliability

Global Economy Recovers

“A Redefined Campus Experience”

- Social distancing impacts class dynamics, social life, sports
- Excellence in blended learning becomes a brand focus
- Hy-Flex model provides choice on whether to come to campus
- Curated on-campus experiences with smaller cohorts
- Demand for digital scholarship increases, digitized collections
- Field work limited; experiential learning turns to xR/VR
- Products scarce but available, subject to delays

Pandemic Persists

Fully
on-campus

Deferral or Delay

- A Late Start
- Moving Fall to Spring

Curriculum Changes to Lower Density

- First Year Intensive
- Graduate Students Only
- Structured Gap Year
- Targeted Curriculum
- Split Curriculum
- A Block Plan
- Modularity
- Students in Residence, but Learning Virtually

Options with Space Management Impact

- Short Residency Model
- Modified Tutorial Model
- HyFlex Model

Fully
remote/
online

Adapted from “15 Fall Scenarios”, by Edward J. Maloney and Joshua Kim, April 22, 2020
<https://www.insidehighered.com/digital-learning/blogs/learning-innovation/15-fall-scenarios>

Short-Residency Model

- Similar to executive programs, cohorts of students come to campus for intensive face-to-face experiences, then return home to complete rest of the semester remotely.
- Students would be scheduled to come in waves to allow density control.
- Developing relationships with peers on-campus briefly may enable better distributed virtual interaction later
- Better experiences learning F2F with peers and faculty – but potentially compromised by social distancing restrictions

A Modified Tutorial Model

- Students view online lecture session or required readings, then instructors/TAs meet with small groups in tutorials, which can enable more effective social distancing and response to individual students' learning needs
- Does not require additional in-class support to manage synchronous technology, however, it requires more instructor/TA time for meeting with small groups of students and potentially more complex space assignment

Hy-Flex Model

- Courses are taught synchronously both F2F and virtually by same instructor
- Students decide each week whether to come to campus or stay home and participate remotely
- Designed to provide equivalent learning experience
- Often requires in-class help (e.g. TA or assistant to manage online students)
- Attendance may fluctuate so a responsive space management system may be desirable for flexibility in space assignment each week, matching anticipated group size to appropriate classroom space

Four Principles of the Hy-Flex Model (developed by Dr. Brian Beatty, SFSU)

Principle 1 – Learner Choice: Provide meaningful alternative participation modes and enable students to choose between participation modes weekly (or topically).

Principle 2 – Equivalency: Provide equivalent learning activities in all participation modes.

Principle 3 – Reusability: Utilize artifacts from learning activities in each participation mode as learning resources (“learning objects”) for all students.

Principle 4 – Accessibility: Equip students with technology skills and enable full access to instructional resources and activities in all participation modes.

Beatty, B. J. (2019). *Hybrid-Flexible Course Design: Implementing student-directed hybrid classes* (1st ed.). EdTech Books. <https://edtechbooks.org/hyflex>

Goal: Supporting excellence in distributed learning...

- This blended learning approach seeks to enable distributed participants in multiple sites to interact synchronously and to provide an equivalent learning experience for remote learners.
- The approach offers learners choice on whether to participate on campus or remotely, enabling both institution and learners more flexibility in response to unpredictable conditions.
- It needs to offer an improved experience—tailored to distinct educational programs and pedagogies—to encourage students to enroll in this risky time.
- This will require a carefully designed environment and technologies in both physical and virtual spaces—beyond just a video cam of classroom activities plus online resources.

Reducing Classroom Density

- Reduce classroom seating to respond to social distancing—but how to address the dysfunctionality caused by distancing requirements?
- Reduce campus population by alternating weeks of in-person instruction with remote learning
- Convert on-campus classes to smaller sizes, lower course enrollments
- Consider block schedules so a smaller cohort stays together for shorter period concentrating on one subject
- Develop rolling admissions strategies to offer shorter more concentrated courses with on-demand enrollment not limited by semesters, in order to provide greater institutional agility to respond to changing conditions
- Those on campus could be assigned certain class slots when F2F is an option, allowing greater control of social distancing in classrooms
- Doing teamwork activities and active learning methods in F2F class may become more challenging with social distancing; greater need to support class teamwork with cloud-based collaborative software tools, virtual canvases
- Invest in furniture systems that support easy mobility and enable extras to stack out of the way until they need to be used again
- Shift large lectures to online, repurpose lecture halls
- Convert to virtual office hours for instructors or teaching assistants by video, reducing traffic through departmental areas

Classroom Technologies

- Move to touchless interfaces and controls, voice activation systems (e.g. used at [Utah State](#))
- Increased reliance on personal devices; BYOD at instructor podiums – no keyboards, mice
- Smart classrooms in which technology recognizes the instructor and sets up automatically (e.g. being studied at Indiana U. for their new sandbox space)
- Improve mics/sound systems and acoustics for better blended learning experience
- Cameras to capture learner discussion in the classroom as well as instructor movement and whiteboard work, tracking mechanisms
- Easy to use lecture and discussion capture
- BYO markers – students as well as instructors!
- One-button studios for faculty to record advance lectures or students to prepare presentations
- Visualization walls – for multiple purposes, e.g. to make visible the participants in a distributed class session, to visualize data or to compare information
- Increase support for faculty development and more instructional designers to develop courses for a blended model
- Increase use of immersive technology experiences or simulations which can be accessed remotely
- Robotic presence - consider engaging students to test tablets on simple [robots](#) to enable remote students to be present to participate in on-campus activities

Library and Learning Commons

- Restrict number of simultaneous library users
- Develop furnishings that can be adjusted to respond to social distancing with reduced density as needed
- Accelerate BYOD strategies – to avoid risks in multiple users of keyboards, mice, touch screens
- Enable easy connection of personal devices to large monitors or projection screens for study or group collaboration
- Investigate and test emerging touchless interfaces, voice activation software and gesture-controlled systems – also becomes an assistive technology for those who need it
- Furnishings and materials that are easily cleanable
- Provide temporary holding space to quarantine returned print materials on book trucks
- Enable staff control of returned laptops or other loaned equipment to be cleaned before reloading into self-serve vending machines, adjust service area space to accommodate new procedures and equipment handling
- Design consultation points which can be responsive to social distancing as needed, open rather than enclosed
- Rethink spaces with many workstations (e.g. library instruction rooms and multimedia center) for new approaches and solutions

General Facilities Design Issues

- Upgraded air filtration systems
- Materials and finishes choices drawn from health care experience, antimicrobial technologies
- New cleaning protocols and frequent scheduling
- Voice activated or gesture-controlled devices
- More automatic doors, e.g. toilet rooms
- Alternatives to touch displays, e.g. for orientation, room occupancy signage
- Develop an agile facilities management system to enable assignment of meeting spaces in response to fluctuating demand and cleaning schedules
- Explore technologies to learn from data analytics: e.g. from sensors, beacon technologies, tracking software, etc.
- Showcase health and wellness related initiatives, such as outdoor classrooms, to enhance the value of the on-campus experience