



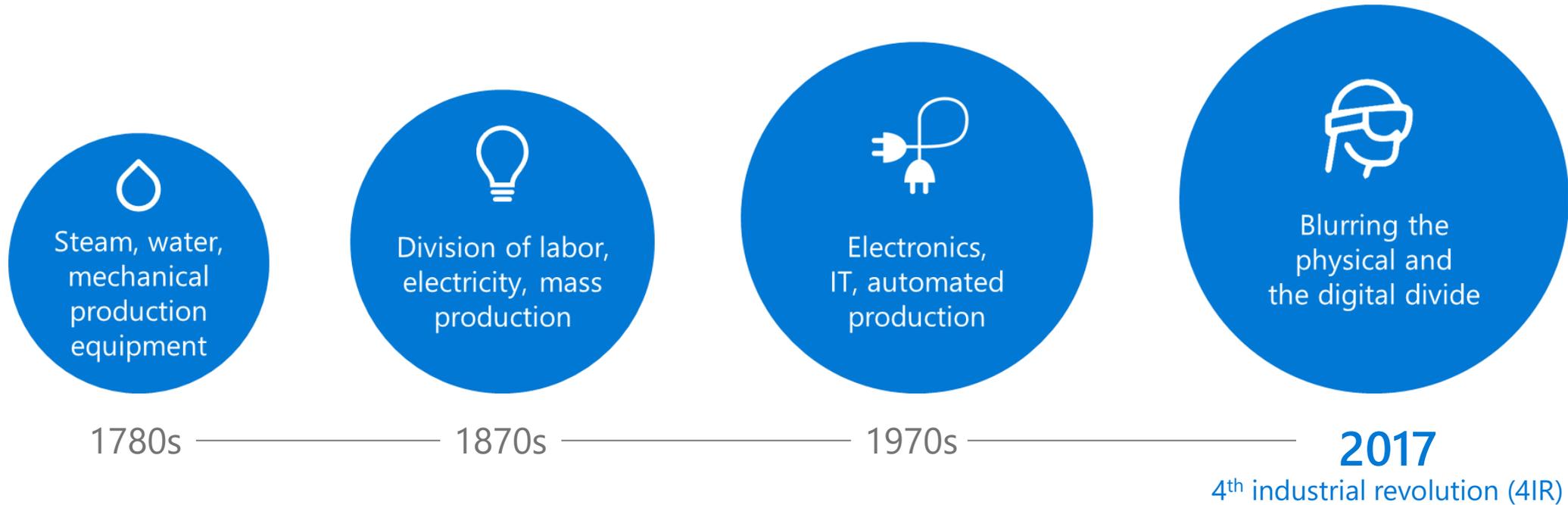
Helping Customers Reimagine HiED
in an age of
AI & the
4th
Industrial
Revolution (4IR)

Begins here...

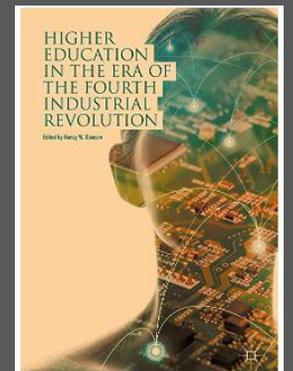
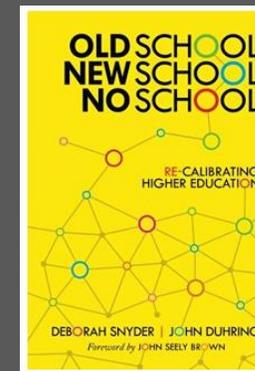
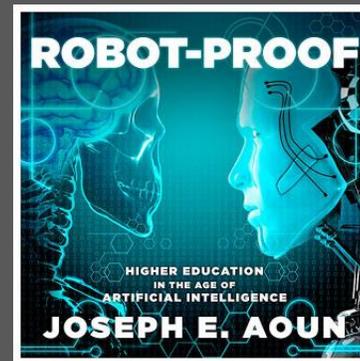
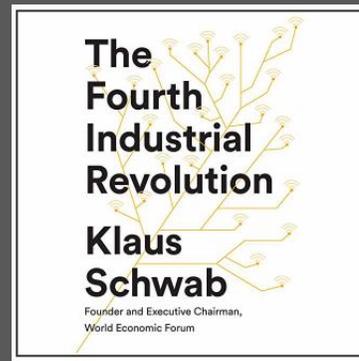
Curtis B. Charles, Ph.D., MSPA, S.M.Arch.S., B.Arch.
Data Scientist & Solutions Architect
EDU Artificial Intelligence Ambassador Lead



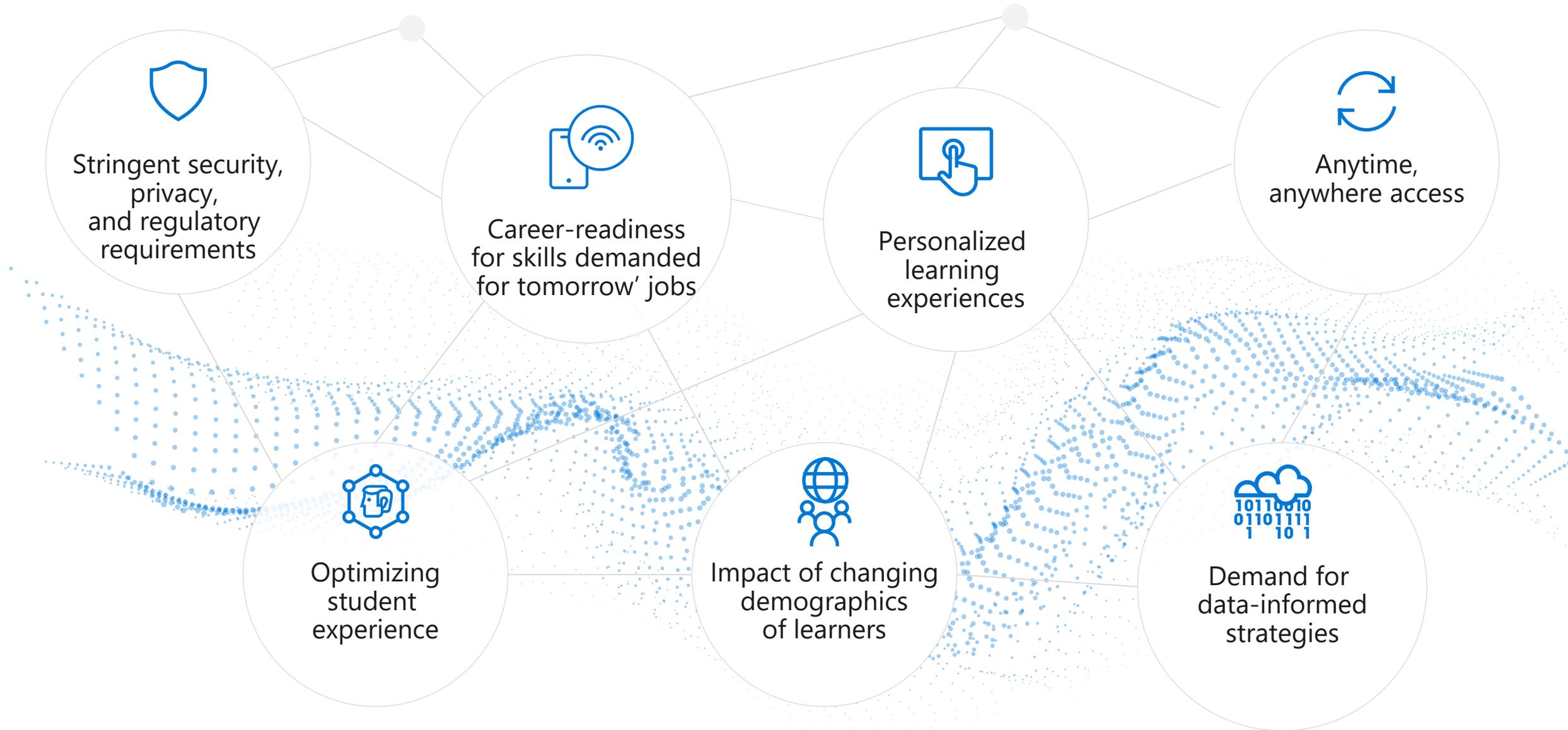
The world of education has changed drastically...



Recommended Books



And requires more from educational institutions



Context and constraints for educating 4IR Digital Learners at Scale



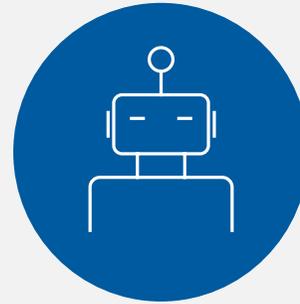
Algorithms

Mining troves of data, and then applying the information to your functions for data driven data-decision-making.



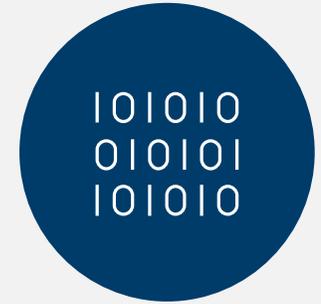
AI Platforms

New AI algorithmic platforms are tearing through the financial industry.



Robots

Robots now analyze stocks; write in depth and informative reports; and interact with customers; semi-autonomous machines are joining soldiers on the battlefield.



4IR Machines

Any predictable or near predictable jobs are now in the purview of Machines!

The Fourth Industrial Revolution demands that higher education institutions educate everyone to scale

65% of students in grade school will perform jobs that have not been invented yet!

47% of current jobs are expected to be taken over by machines during the next two decades

6.5 million new IT jobs by 2022, most in cloud-related technology fields

Only **33%** of the world's demand for employees with technology skills is being met

Percentage of jobs requiring technology skills will **increase to 77%** in less than a decade



“The pathway to new technologies requires a parallel investment in skills development – making sure people have the requisite skills to participate in an increasingly digital society.”

SATYA NADELLA, “HIT REFRESH”

Equipping Digital Learners with...

New Literacies:

- Technological Literacy - Knowledge of mathematics, coding and basic engineering principles
- Data - The capacity to understand and utilize Big Data through analysis.
- Human - Liberal arts education plus digital communication

New Cognitive Capacities:

- Systems Thinking, Entrepreneurship, Cultural Agility, Critical Thinking





But resources are not scaling to meet the demands

Institutions are turning to Data & AI to unlock new capacity & Reimagine HiED practices as the 4th Industrial Revolution unfolds



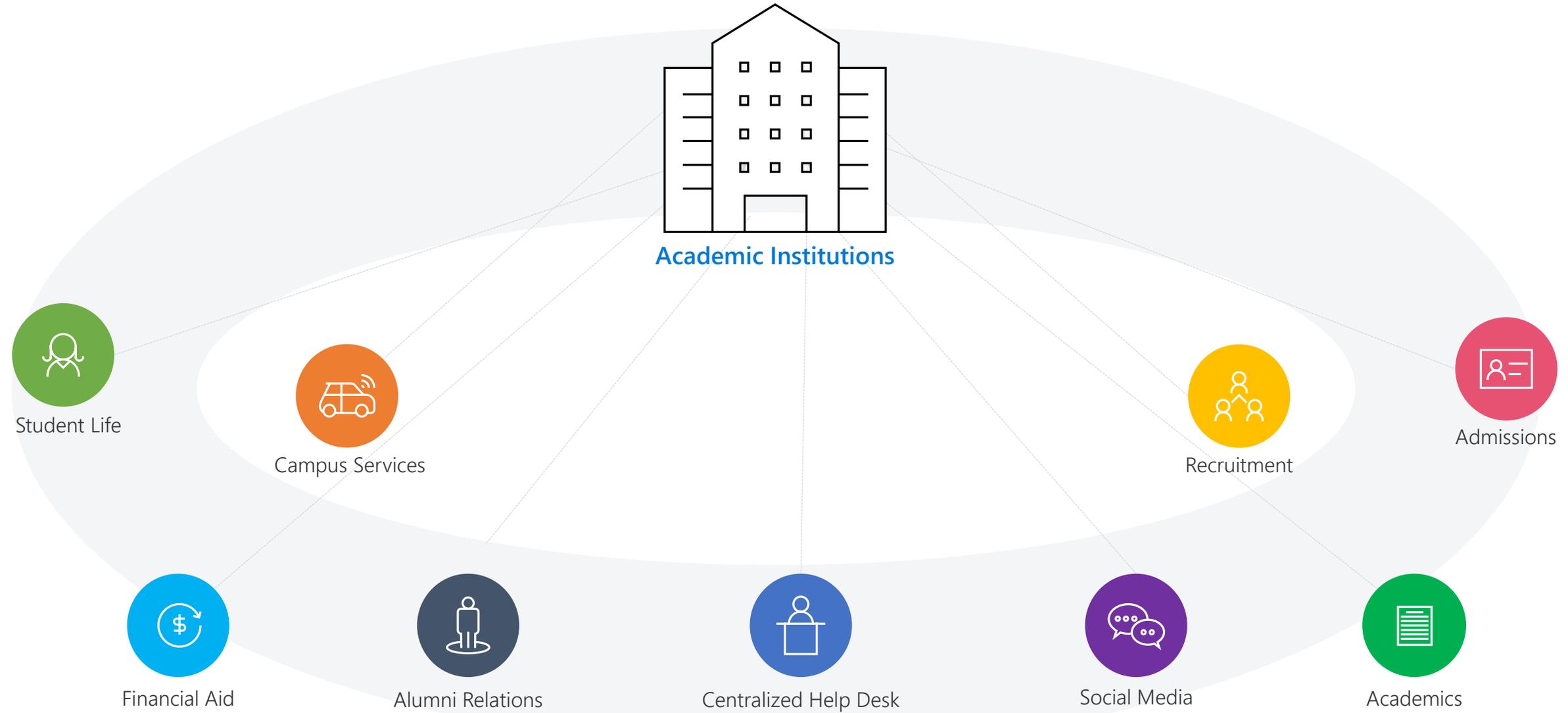
Addressing the data estate first...

- Capture relevant data
- Connect data from different silos
- Identify data relationships
- Simplify data management and integration
- Provide a "single source of the truth"
- Empower a culture of continuous improvement

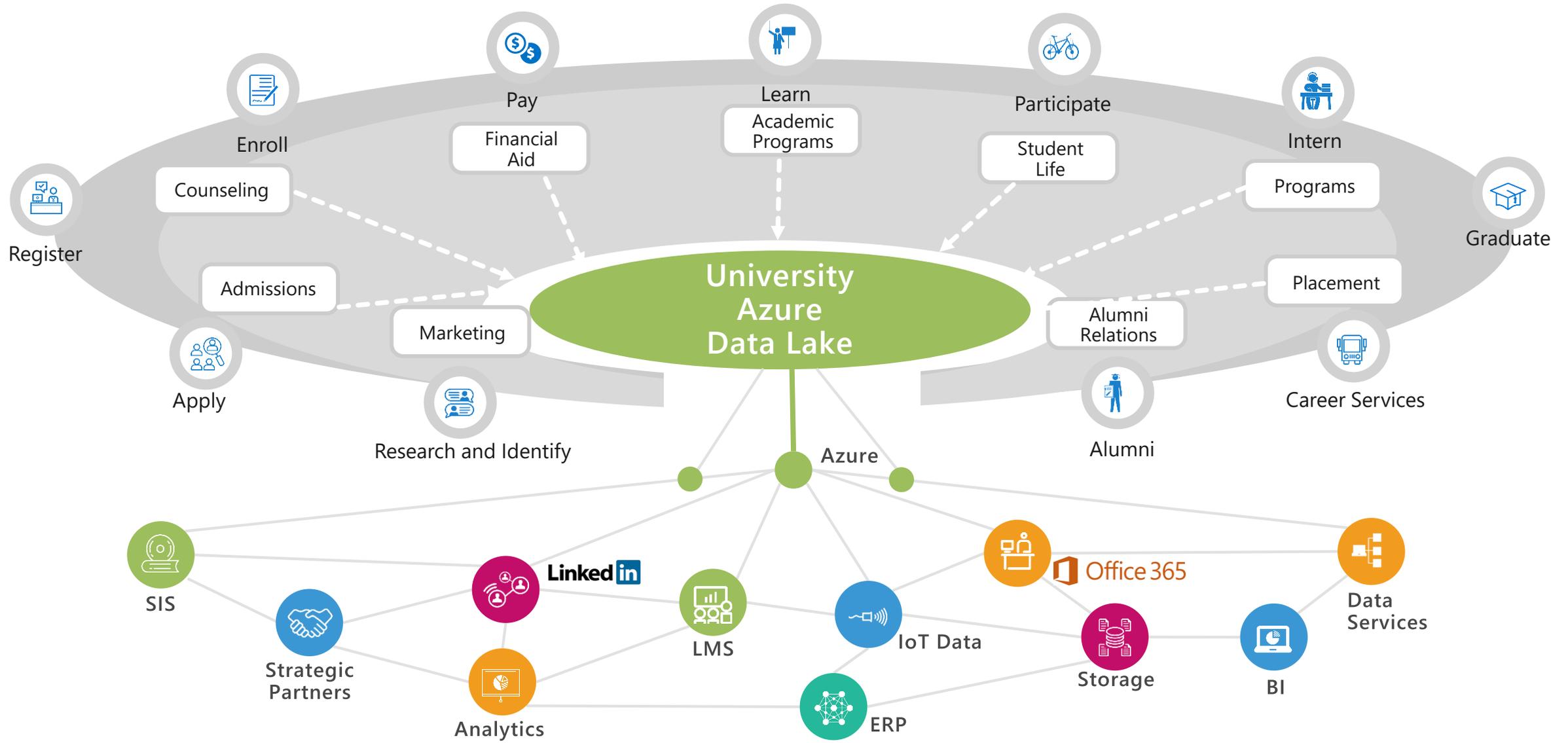


Challenge: Siloed Data is everywhere on Campuses

Opportunity: Campuses can leverage its sources of disparate data to gain actionable insight for improving **Institutional Outcomes.**

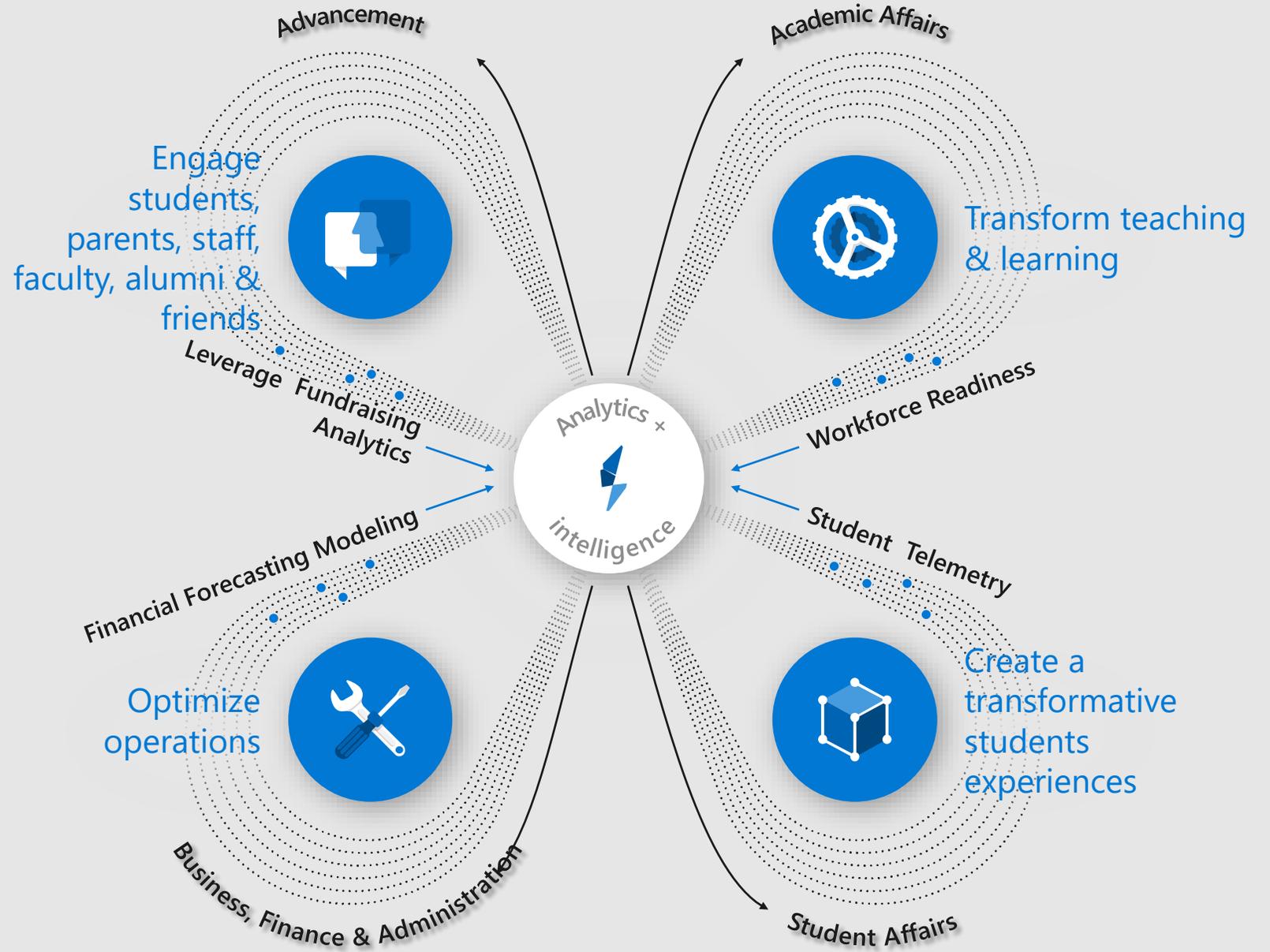


Modernizing the Data Estate to Gain Actionable Insights for Improving Institutional Outcomes





Benefits our Customers are realizing from AI



So, is your institution ready to reimagine HiED in an age of AI & the 4IR?

“Technology is increasingly seen as a crucial enabler for new strategic capabilities in higher education institutions, and CIOs are being asked to identify and implement game-changing technology. ”

-Gartner Report, 2017

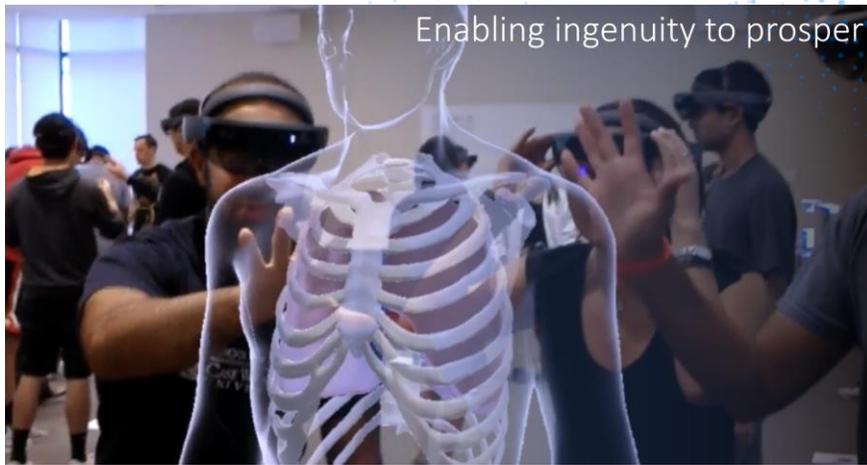


Evidence



Disrupting Students Experiences with Technology

Modernize the student

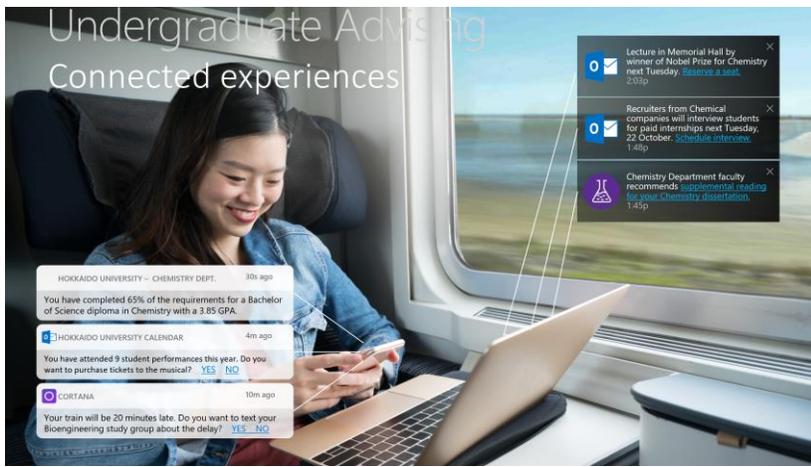


A core factor of student-led learning in higher education is that students are savvy digital consumers. They expect a network of connected, mobile experiences at their universities. They want campus apps for advising, finding roommates, accessing transportation services, booking faculty office hours, purchasing meals, rating courses, and more.

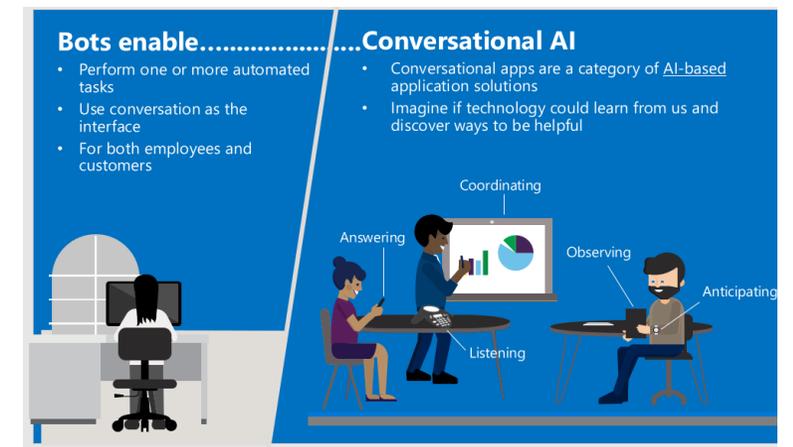
Blockchain Platform



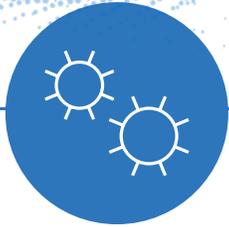
Undergraduate Advising



Conversational AI



HiED Reimagined requires a wholistic approach



Adaptive learning

Tailor the pace and format of instruction to each learner's needs



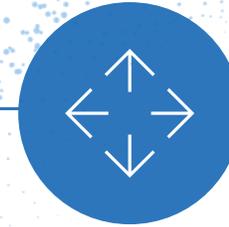
Data-driven decision making

Foster a culture of using data to fuel action – for both the student journey and administrative processes.



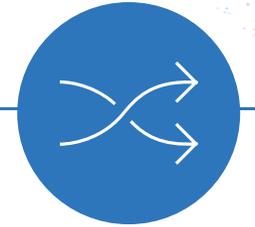
Learning environments

Optimize physical and virtual spaces to achieve learning goals and contribute to the student experience.



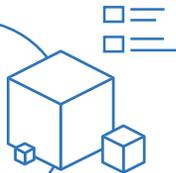
Open education resources

Curate content from diverse sources to meet student needs.



Mixed reality

Take learners outside their own experience to build new skills.



Modernize the student

LEARNING HAS
CHANGED





Flexible Learning Spaces Initiative

"The results so far speak for themselves. There's been between a one- or two-letter grade improvement from pre-test to post-test scores. Students at WCU-Los Angeles had a 10 percent improvement in test scores compared to last year when there was no AR"

- Segar Annamalai, WCU Chief Information Officer

Undergraduate Advising

Connected experiences

-  Lecture in Memorial Hall by winner of Nobel Prize for Chemistry next Tuesday. [Reserve a seat.](#) 2:03p
-  Recruiters from Chemical companies will interview students for paid internships next Tuesday, 22 October. [Schedule interview.](#) 1:48p
-  Chemistry Department faculty recommends [supplemental reading for your Chemistry dissertation.](#) 1:45p

HOKKAIDO UNIVERSITY – CHEMISTRY DEPT. 30s ago

You have completed 65% of the requirements for a Bachelor of Science diploma in Chemistry with a 3.85 GPA.

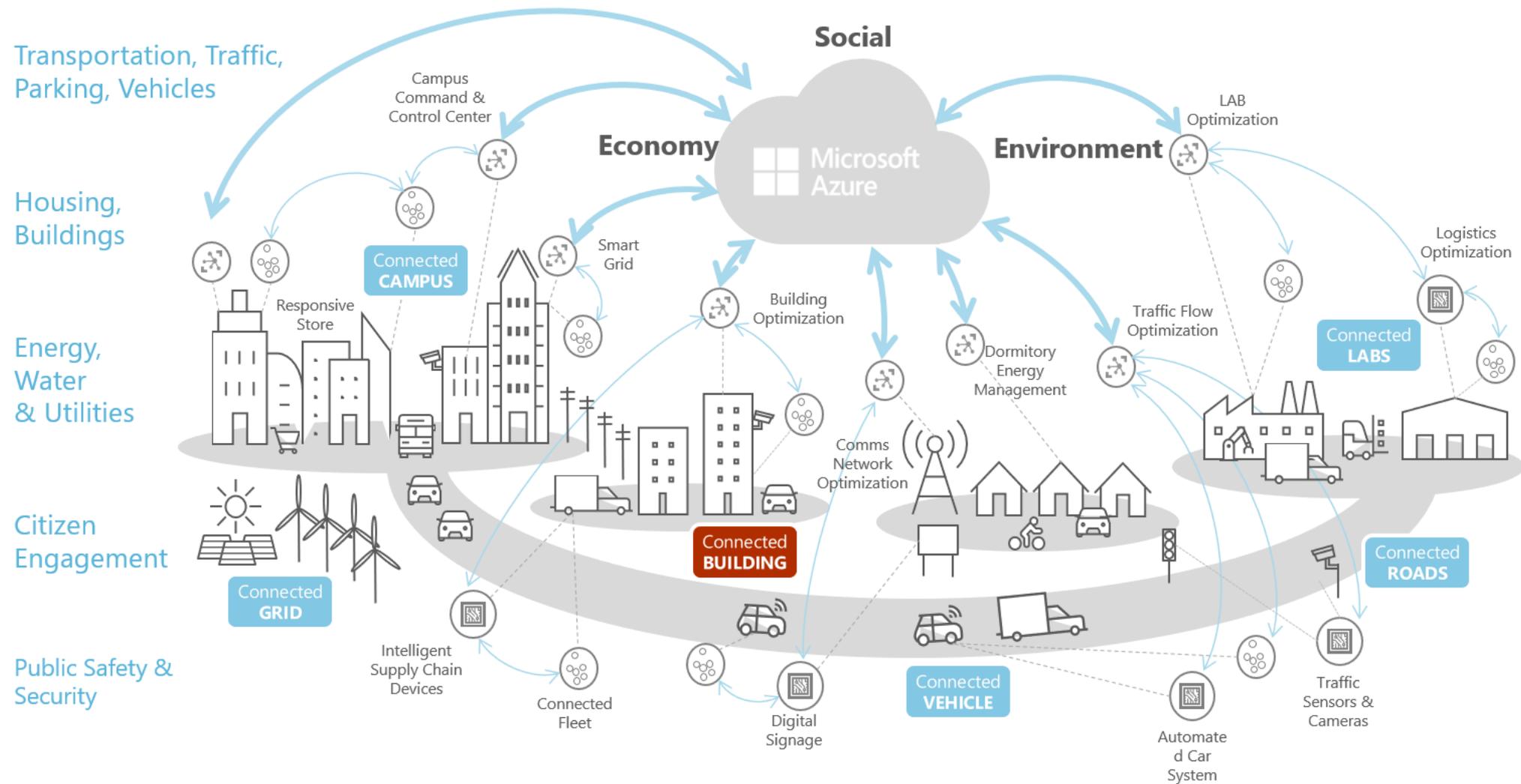
 HOKKAIDO UNIVERSITY CALENDAR 4m ago

You have attended 9 student performances this year. Do you want to purchase tickets to the musical? [YES](#) [NO](#)

 CORTANA 10m ago

Your train will be 20 minutes late. Do you want to text your Bioengineering study group about the delay? [YES](#) [NO](#)

Smart Buildings form part of a wider connected ecosystem



A group of people are seated around a table in a meeting room. In the foreground, a person is using a tablet computer. The tablet screen displays a diagram of the human brain with labels for 'Vision', 'Occipital Lobe', 'Cerebellum', and 'Spinal Cord'. The person is pointing at the diagram with a pen. Other people are visible in the background, some looking at the tablet and others looking away. The scene is brightly lit and appears to be a professional or educational setting.

Thank You

Curtis B. Charles, Ph.D., MSPA, S.M.Arch.S., B.Arch.

E-mail: cucharle@microsoft.com

Phone: 910-431-9718



What is the **ONE THING**
that if done well over the next,
4-YEARS will serve as a
FORCE-MULTIPLIER
to produce
Extraordinary
Outcomes
for **KSU?**