

A woman and a man are wearing VR headsets and looking at a model of a city skyline. The woman is on the left, resting her chin on her hand. The man is on the right, pointing at the model. The background is a blurred office setting with large windows.

Disruptive forces and new technologies

How do you decide?

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Agenda

- 1 Pervasive and unprecedented disruption
- 2 Innovative technologies – how they can help
- 3 Deciding how and when to embrace innovative technologies
- 4 Recommendations

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Disruption is happening all around us



TURN DATA
INTO A SHOE



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ROBOTS DO
BACKFLIPS
AND
BECOME CITIZENS

SUPPLY CHAINS ARE CHANGING WITH
**AUTONOMOUS
FLEETS**



A man in a white shirt and dark jacket stands in a modern office, gesturing towards a large monitor displaying a complex data chart. Three other people are seated at a table in the foreground, looking at the presentation. The scene is lit with warm, ambient light from large windows.

NO INDUSTRY IS IMMUNE

Category shift • Product personalization • Profound efficiency

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The primordial soup....



Globalisation

New business models

Increased collaboration
across boundaries

International recruitment

Joint degrees



New Education Standards

Focus on improved
outcomes & performance

Student mobility

Rise of qualification
frameworks

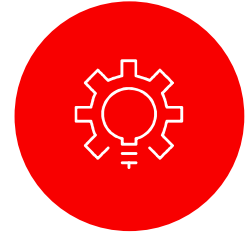


Changing Expectations

Pressure to find new
students and retain
existing ones

Younger generations
expect to see ROI

Life-long learners expect
flexibility and
convenience



Accelerating Technology Innovations

More engagement

Increased efficiencies

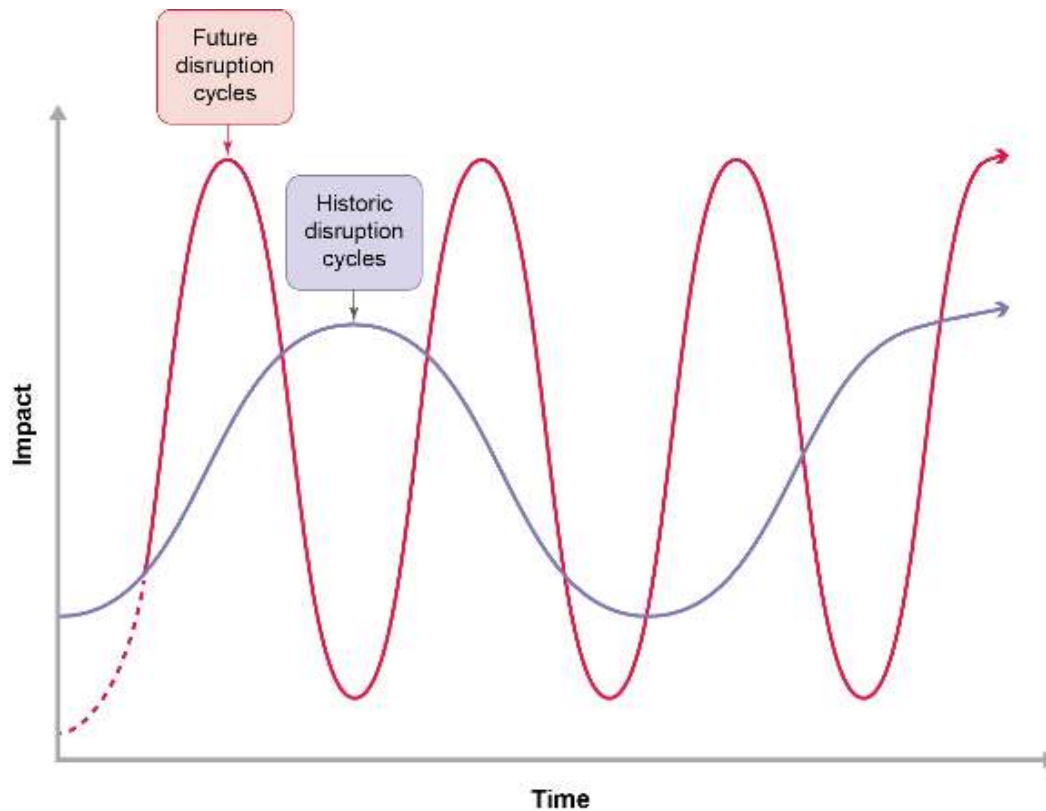
New educational
delivery models

...Leads to an **evolution** of the higher education model

From Institutional focus to Consumer focus

Traditional: <u>Institution</u> Centered	Next Generation: <u>Consumer</u> Centered
Course	Person
Classroom	Anywhere
Age 18-23	Age 16-99+
Weekdays	Anytime, 24x7
Term-Based Progress	Flexible Time Period
Diploma & Degree	Badges & Certificates
Major & Minor	Competency
Knowledge Tested	Outcome Proven

Shifting from an institutional to a consumer-centric industry



***A new recovery model
or
a new model entirely?***

Ovum, Digital Economy 2025: A view from the industry perspective



ARE YOU READY?

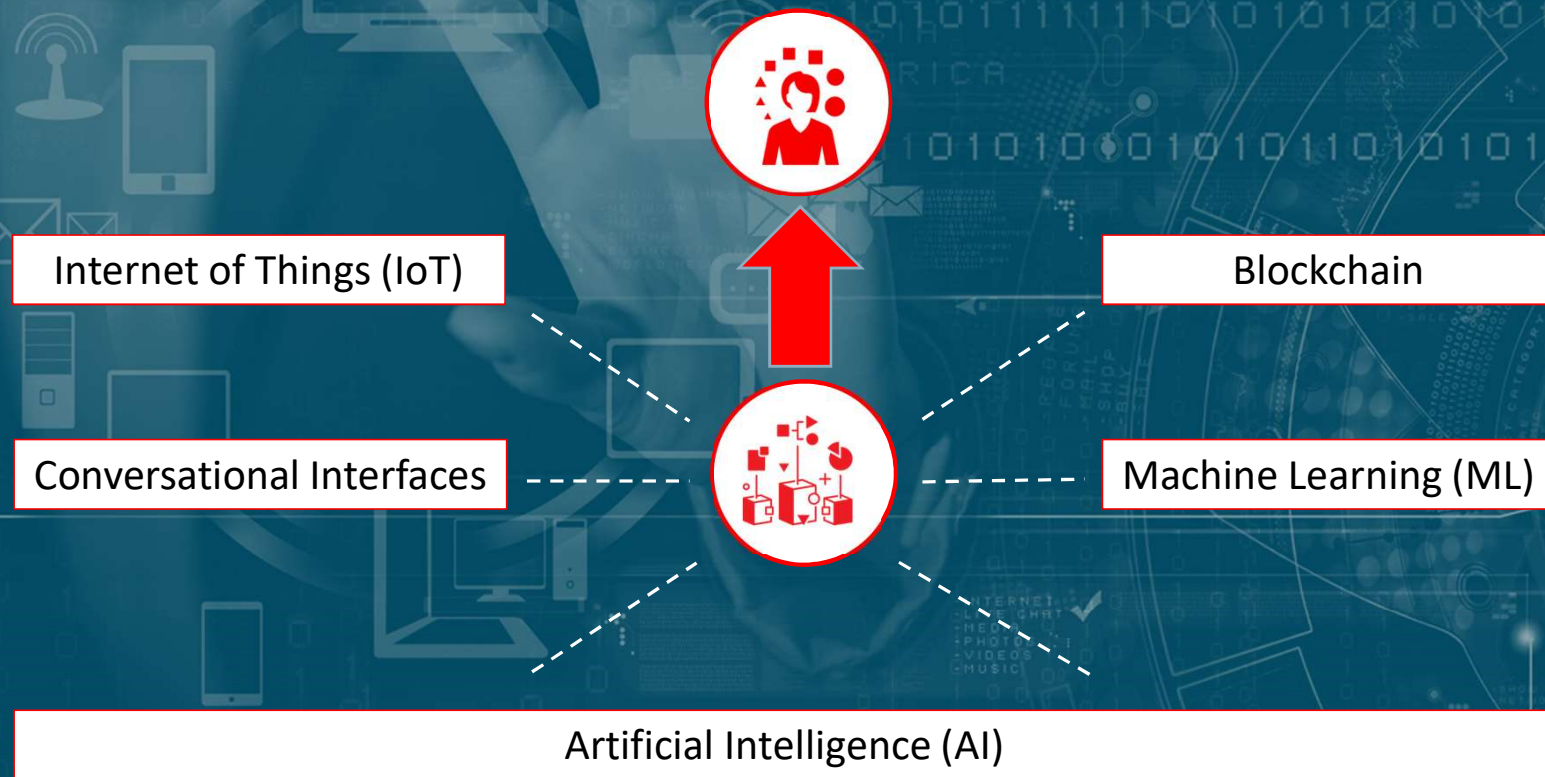
ASK YOURSELF...

1. Is our institution immersed in the digital age?
2. Do we have the tools for digital transformation?
3. Are we agile enough for the next wave of disruption?

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Innovative technologies enhance your ecosystem





50 Billion devices
by 2018

8 Zettabytes
of data today

\$3 Trillion market
by 2020

IMPACTFUL, SMART, INTEGRATED
INTERNET OF THINGS

Internet of Things (IoT) – higher education use cases

- **Facilities management:**

Bialystok in Poland recently opened a new campus with Smart Buildings - Modern command center with integrated video surveillance, sensor-based, computer-operated heating and air conditioning

- **Personalized student experience:**

Location awareness services to suggest nearby activities/events based on student profiles and past behaviors

- **Student security:**

Improving campus security by proving access to buildings, events, activities, etc. through use of wearable technology



CHATBOTS CONVERSATIONAL INTERFACES

Conversational interfaces will replace the most common interfaces on connected devices

Source: Gartner 2018

"Conversational AI-first" will supersede "cloud-first, mobile-first" as the most important, high-level imperative for the next 10 years



Artificial Intelligence market

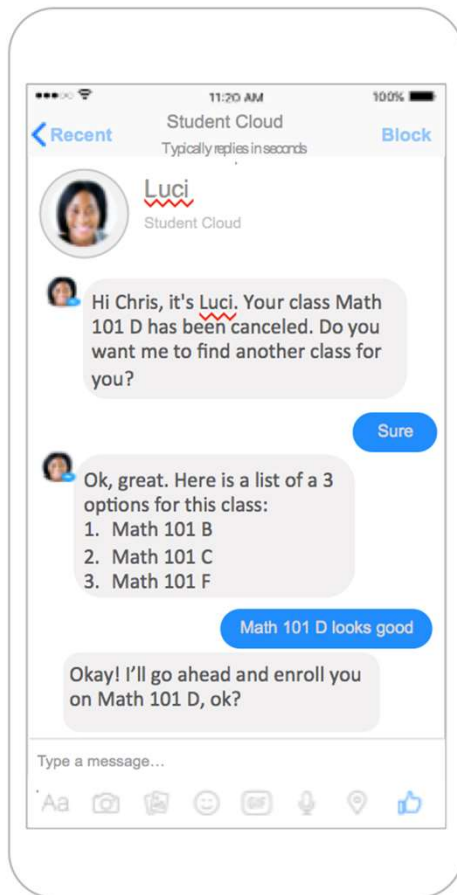
Conversational Interfaces – higher education use cases

- **Frequently Asked Questions (FAQs):**
 - Any student, staff member or external visitor
- **Administration:**
 - Scheduling rooms, booking parking, booking sports facilities, reset password, etc.
- **Student record management:**
 - Selecting courses, checking grades, paying fees, appointment with advisor, etc.



Category shift • Product personalization • Profound efficiency

Chatbot - Proactively handling cancelled classes



Chatbot	User Intent
(Hey there Hi <student first name>, it's Luci. Your class <scheduled course name and number> has been canceled. Do you want me to find another class for you?)	
	(Yes okay ok sure why not sure yeah)
Okay, great. (Here's a list of <# of options with max of 3> options for this course. Here's another option of the same course: <Scheduled Course # and Name 1> <Scheduled Course # and Name 2> <Scheduled Course # and Name 3> Do any of these look good?)	
	(<Course # and Name> <Course # and Name> looks good How about <Course # and Name>?)
(Great Sounds good Okay! I'll go ahead and enroll you in <Scheduled Course # and Name>, right okay correct? Shall I go ahead and enroll?)	
	(Yeah Yes Correct)
(I've enrolled you in <Scheduled Course # and Name> You are now enrolled in <Course # and Name>. Here's your new schedule.	

POWERING OUR EVERYDAY LIFE

ARTIFICIAL INTELLIGENCE & MACHINE LEARNING



Artificial Intelligence (AI) – higher education use cases

- **Student admissions and enrollment:**

Improving recruiting and admissions by matching students to the right programmes and degrees

- **Personalized learning paths:**

Virtual academic advisors and tutors, to improve student outcomes

- **Student success:**

Data-patterns that predict which students could become at-risk, enabling timely and personalised interventions

...a caveat about technology, data, and ethics

TECHNOLOGY CAN DRIVE
**NEW BUSINESS
MODELS**

A white icon representing a blockchain network, consisting of a central node connected to several other nodes in a decentralized manner.

BLOCKCHAIN

Blockchain – higher education use cases

- **Student records:**

Student-owned, authenticated learning records — badges, certificates, etc.

- **Secure publication and digital rights management:**

Digital libraries, journals, research data sets, and scholarly publications

- **Learning marketplaces:**

On-demand distributed learning ecosystem, earn/transact tokens in institution and employer-based learning

...can we deliver an insurance policy?

Remember, the evolution of the higher education model?

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Evolution of the higher education model

The technology impact

Technology Impact	Next Generation: Consumer Centered
Chatbots, ML & AI	Person
IoT, LMS, Video, AR/VR	Anywhere
Targeted Marketing, ML & AI	Age 16-99+
Mobile, Chatbots, Always On	Anytime, 24x7
Flexible & Termless systems	Flexible Time Period
Credentialing Systems (Blockchain)	Badges & Certificates
Standardized Competency Frameworks	Competency
New Types of Evaluation; Link to Employment	Outcome Proven

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As covered, the higher education industry is being disrupted

BUSINESS CHALLENGES

Mobility Competencies

Consumer Expectations Life-long Learning

TECHNOLOGY CHANGE

AI/ ML Blockchain

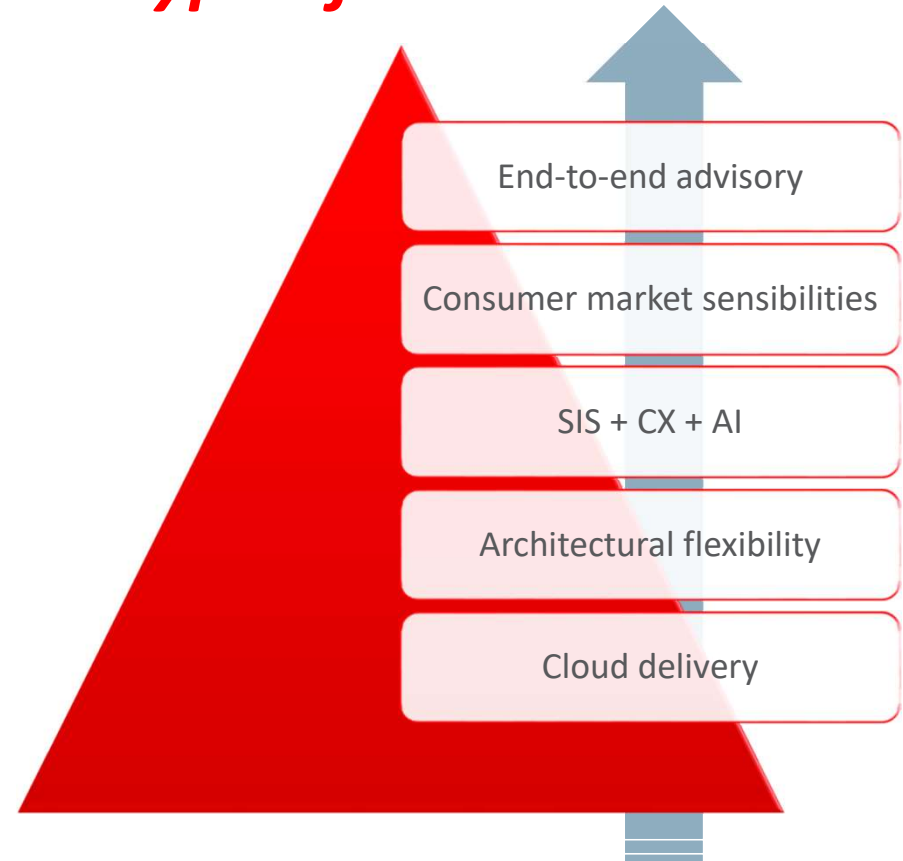
IoT Chatbots

NEW ENTRANTS & MODELS



Industry disruption requires a *new type of solution*

- Cloud delivery
 - Reduce resources for commodity functions
 - Increase access to innovation
- Architectural flexibility
 - Beyond the credit hour
- SIS + CX + AI
 - Transactions, interactions, and insight
 - Blurring solution boundaries
- Consumer market sensibilities
 - Automation of routine tasks
 - Proactive and responsive engagement
 - Intuitive and familiar
- End-to-end advisory
 - Lifecycle management



When and how to adopt innovative technologies, depends on your institution's...

- Strategic priorities
- Culture
- Size and resources
- Stakeholders
- Existing technology ecosystem



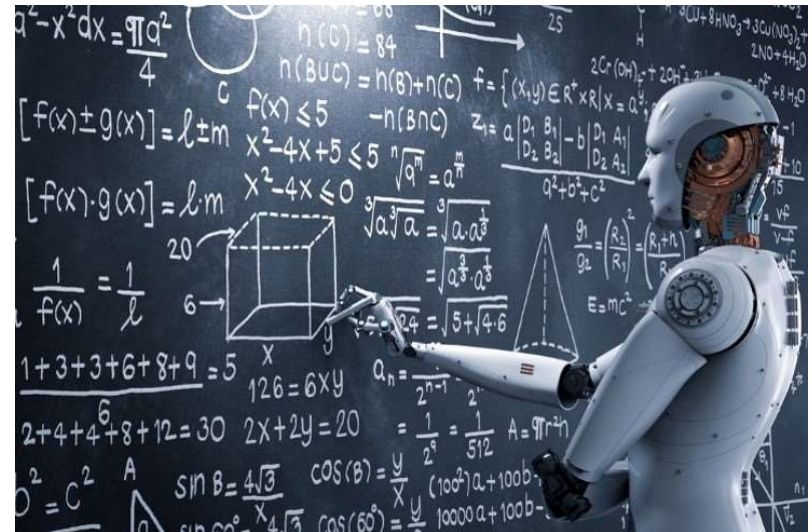
How to pick a strategic path to adoption?

- Where does your institution need to focus?
- How must processes evolve?
- What can be delivered with your existing ecosystem?
- What innovative technologies would advance these processes?
- When and how will you provision these technologies?



How to select the right solutions?

- Rethink your procurement process
- Focus on cloud solutions
 - A continuous journey - agility & future-proofing are key
- Match the strategy to your context
 - Replace legacy systems? Seek out embedded innovation
 - Extend your existing IT ecosystem?
Select platform-as-a-service innovation



But in all situations...

Have a plan...



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Recommendations

- Define your strategy first; then identify a solution
- Assess your institution's cloud readiness
- Move at a pace that suits your institution, but don't get left behind
- Cultivate a different type of relationship with your solution provider(s)

Integrated Cloud

Applications & Platform Services

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