

Through the Eyes of Generation Z

5 Emerging Tech Trends & Integrated Planning for the Next-Gen Campus



ASU Charter

ASU is a comprehensive public research university, measured not by whom we exclude, but rather by whom we **include** and how they **succeed**; advancing **research** and discovery of **public value**; and assuming **fundamental responsibility** for the **economic, social, cultural and overall health** of the communities it serves.

newamericanuniversity.asu.edu

Where I'm Coming From:

UTO embraces its role as both an enabler and catalyst for advancing the vision and work of the New American University.

uto.asu.edu

Millennials

Born 1981 - 1996

- idealistic
- values-driven
- experiential



Gen Z

A silhouette of a person's head and shoulders in profile, facing left. The person's hair is blowing in the wind, creating a sense of movement. The background is dark and out of focus, suggesting an outdoor setting at dusk or dawn.

Born 1997 - 2015

- **pragmatic**
- **authentic**
- **frugal**
- **value immediacy**

26%
of the
population

Move Over, Millennials: How Generation Z Is Disrupting Work As We Know It

TIME

“The old systems we used to rely on aren’t working anymore, but new systems haven’t necessarily been put in place.”

49%
**identify as
non-white**



GEN Z | MILLENNIALS

Spotify Seeks To Understand Gen Z Habits In New Culture Report

“Acknowledging that Gen Z and millennials comprise the most racially and ethnically diverse generation to date can help brands connect with them through genre-based targeting”

50%
connected
to the
internet for
10+
hours/day

Online Marketing As We Know It Is Changing With The Rise Of Generation Z



Jia Wertz Contributor @
ForbesWomen

"Make it easy for the younger audience to engage. On average, Gen Z spends between six and nine hours per day consuming media. And they use an average of five screens."

54%
would pay
\$3-5 per
delivery



“I’d rather be doing other things while I’m eating, than just eating.”

Rethinking Workplace Design for Millennials and Gen Z

69%
want their
own
workspace

“Collaboration zones is more millennial-friendly; it’s time to add in a dash of privacy in office for the new generation. Workplace can be reimaged in a way that allows both generations to function in harmony.”

77%

**Expect to
work harder
than
previous
generations**



Generation Z Says They Work the Hardest,
But Only When They Want To

"They saw parents lose jobs, friends lose their houses, grandparents ...return to work."

"~1/3 demand a say over their work schedule."

"Gen Z won't put up with our corporate BS."

78%

Say a 4-yr
degree
doesn't
make
economic
sense

Move Over, Millennials: How Generation Z Is Disrupting Work As We Know It

TIME

“Hundreds of programs, from apprenticeships to boot camps, have cropped up to offer an alternative path.”

“...Ages 13 to 22 say they are doing some form of freelancing.”

80%

feel
distressed
when
separated
from their
devices



“Since this generation is constantly connected, they are actually interacting more with friends than generations before them.”

*60% believe online friendships are as powerful as IRL.



QUIZ

Community

Which "Game Of Thrones" Character Are You Actually?



The background of the slide features two Earths in space, one slightly behind and to the right of the other, set against a dark, starry background. The Earths are shown in shades of blue and white, representing the planet's oceans and clouds. The word "Intergenerational" is prominently displayed in a yellow box across the middle of the image.

Intergenerational

Our approaches must acknowledge these trends while shaping a world that serves all generations.

The background of the slide features two Earths in space, one slightly behind and to the right of the other, set against a dark, starry background. The Earths are shown from a perspective that highlights their blue oceans and white clouds.

Universal Learning

“being of service to all learners, at all stages of work + learning, from all socioeconomic backgrounds, through educational, training, and skill-building opportunities.”

The background of the slide features two Earths in space, one on the left and one on the right, set against a dark, starry background. The Earths are shown from a perspective that highlights their blue oceans and white cloud patterns. A bright yellow rectangular box is centered horizontally across the middle of the image, containing the text 'Physical + Digital' in a bold, black, sans-serif font.

Physical + Digital

Next-gen integrated campus planning calls for hybrid strategies that blend the best of both worlds to create an even better one.

Top 5

Emerging Tech Trends



1

Next-Gen Spaces



We see you, Gen Z

- highly values boundaries + personal space
- wants a mix of collaborative + private spaces
- prefers “office workspace that is easy to orient within, understand, and use.”

**Why shouldn't every space
be a maker space?**



Classroom of the Future

No walls (connected 24/7)

Flexible / Customizable

Active

Interactive / Collaborative

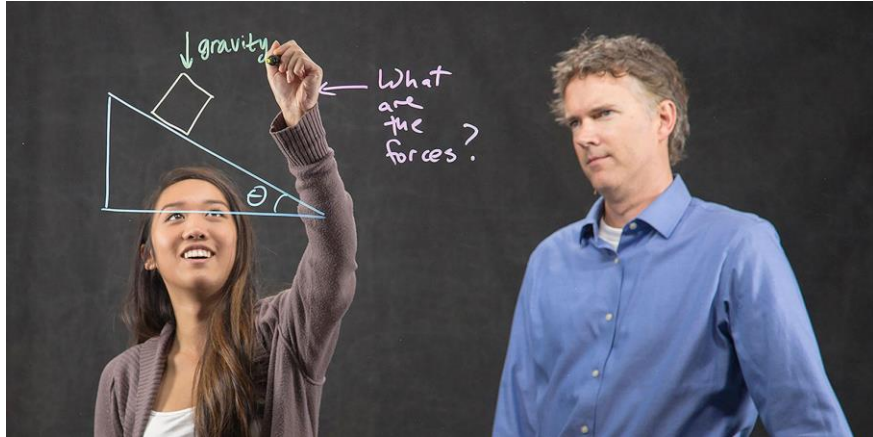
Smart



Art of the Possible



Art of the Possible



Where IoT is Going

Intel predicts that by 2020 there will be **50 billion connected IoT devices**, that will be creating 44 zettabytes of data annually.

That is **1.3 TB of data per second**.

[KAHUNA] **68.5% average**
PUSH NOTIFICATION
OPT-IN RATE

[CISCO] **5.2 billion**
MOBILE USERS
by 2019

[MOBILE FUTURE] BY 2020,
100 million
LIGHTBULBS & LAMPS
connected

[WIPRO] GLOBAL SPENDING
ON THE CLOUD WILL REACH
\$207 billion in 2016

[WIPRO] **\$10 billion in**
revenue
FROM WEARABLES

[MOBILE FUTURE] **500**
SMART DEVICES
IN EACH HOME
by 2022

Smarter campuses mean a smarter humanity.



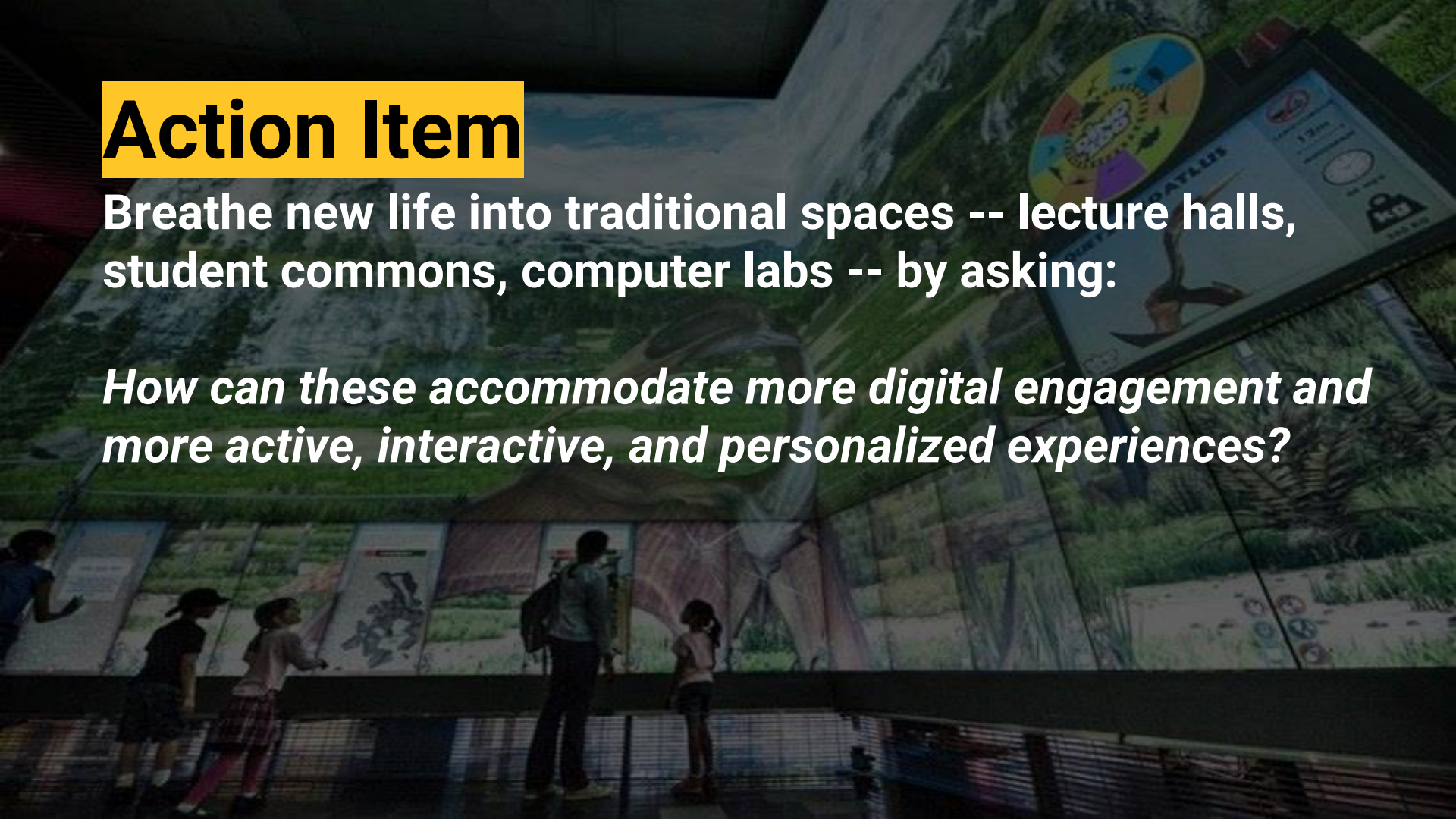
A nighttime photograph of a city skyline with illuminated skyscrapers in the background. In the foreground, a multi-lane highway is shown with long-exposure light trails from cars, creating streaks of red, white, and green light. The scene is lit with warm streetlights and cool green traffic lights.

Center for Smart Cities and Regions

Action Item

Breathe new life into traditional spaces -- lecture halls, student commons, computer labs -- by asking:

How can these accommodate more digital engagement and more active, interactive, and personalized experiences?



2

**Machine
Learning +
Artificial
Intelligence**



We see you, Gen Z



- Wants AI-based personalized support
- Entering industries rapidly undergoing micro automation changes -- first jobs will be impacted by AI
- ~50% of workers 16–24 at risk of losing their jobs to AI



Artificial Intelligence



Engineering of making Intelligent Machines and Programs

Machine Learning



Ability to learn without being explicitly programmed

Deep Learning



Learning based on Deep Neural Network

1950's

1960's

1970's

1980's

1990's

2000's

2006's

2010's

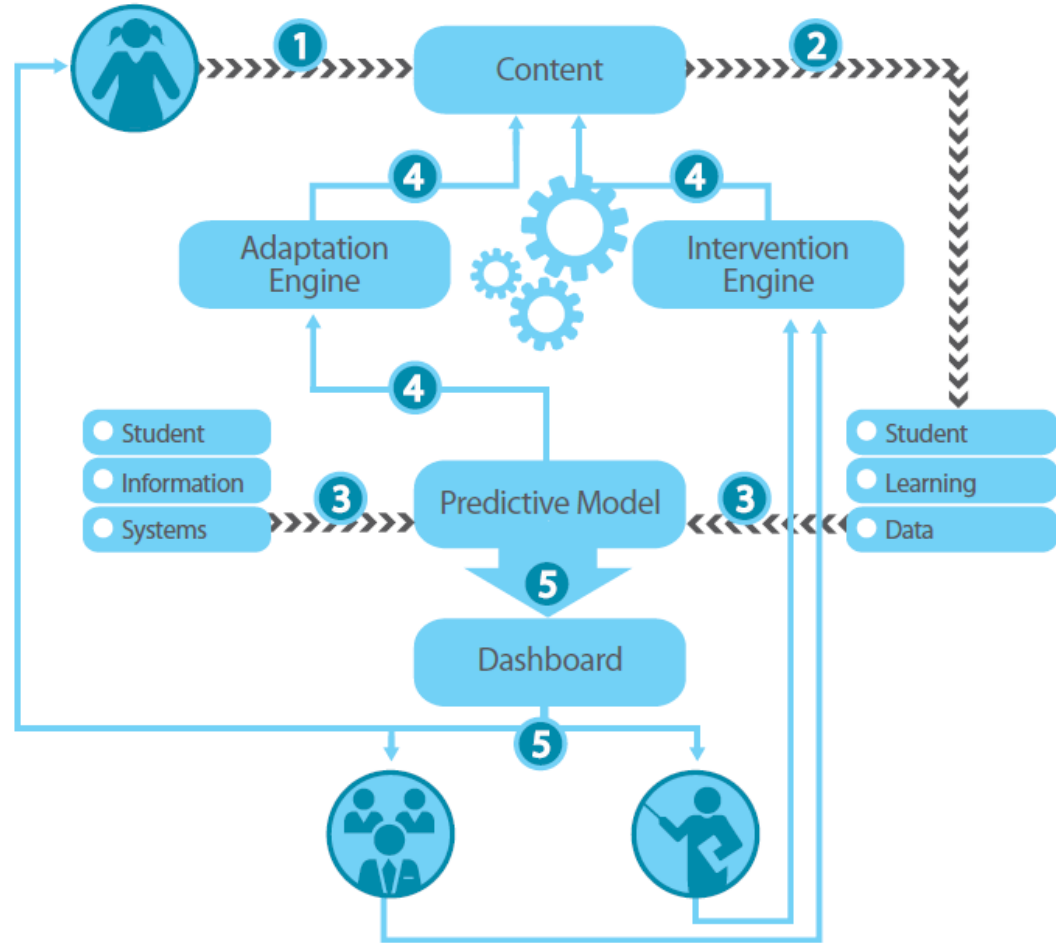
2012's

2017's

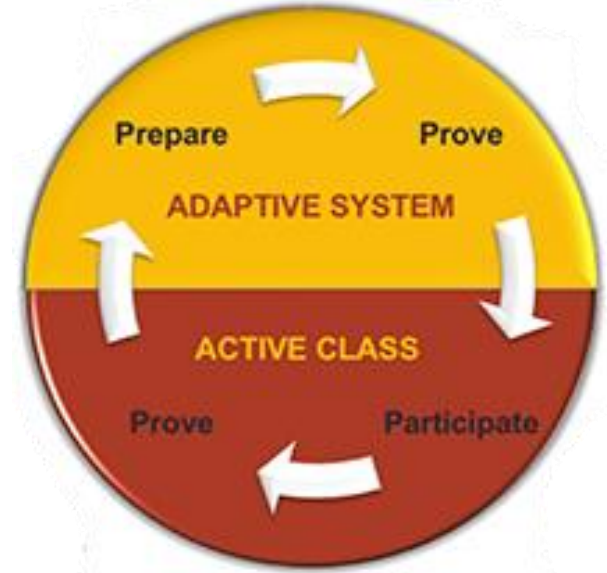
Adaptive Tech

Predicts + customizes learning based on student behavior/response.

Not yet Deep Learning.



ASU's Adaptive-Active Model



Axio AI Companion

Devised by an ASU interdisciplinary student team:

The screenshot displays the Axio AI Companion interface for user Gracie Smith. The top navigation bar includes the 'axio' logo, a search bar with the placeholder 'Let's talk...', and icons for search, email, home, and profile. The main dashboard is organized into several sections:

- Calendar:** Shows 'Sat 24 Feb' at '7:31 PM'. A message states 'No calendar events for Saturday, February 24' with a '+ NEW CALENDAR EVENT' button.
- Daily Objectives:** Features four progress indicators: 'Learning Modules' (2/5), 'Step Count' (950/3000), 'Daily Challenge' (1/1), and 'Cups of Water' (4/13).
- Buzz:** A list of news items including 'CPAC speaker jeered for calling out Roy Moore - CNN Video', 'Mexican president cancels trip to White House', 'Nunes vs. Schiff: Five key areas where they disagree', 'Former RNC chair responds to comment that he was only elected 'because he's a black guy'', 'Devin Nunes: We wanted Dem memo out - CNN Video', 'Read the Democratic memo here', 'What is Adam Schiff's next political move?', and 'White House agrees to release Schiff memo with...'
- Productivity:** A section with a '+ ' button, containing a table of 'Goals' and 'Tasks'.

Goals	Tasks
<input type="checkbox"/> Graduate from ASU	10/31/17
<input type="checkbox"/> Land my dream job	10/31/17
<input type="checkbox"/> Save money for a Europe trip this summer	10/31/17
<input type="checkbox"/> Get an average of 7 hours of sleep	10/31/17
<input type="checkbox"/> Complete a marathon	10/31/17

Virtual Assistants

Move over, Rover.

Your child has a new best friend, and her name is Alexa.



Alexa at ASU

Ask ASU...

Enable the skill.
Engage with your device.
Enhance your campus experience.

[Enable the ASU skill](#)

What sports events are
this weekend?



Tell me a fact.



What are the hours for
the bookstore?



uto.asu.edu/initiatives/ask-asu

Integrated AI Support for the Universal Learner

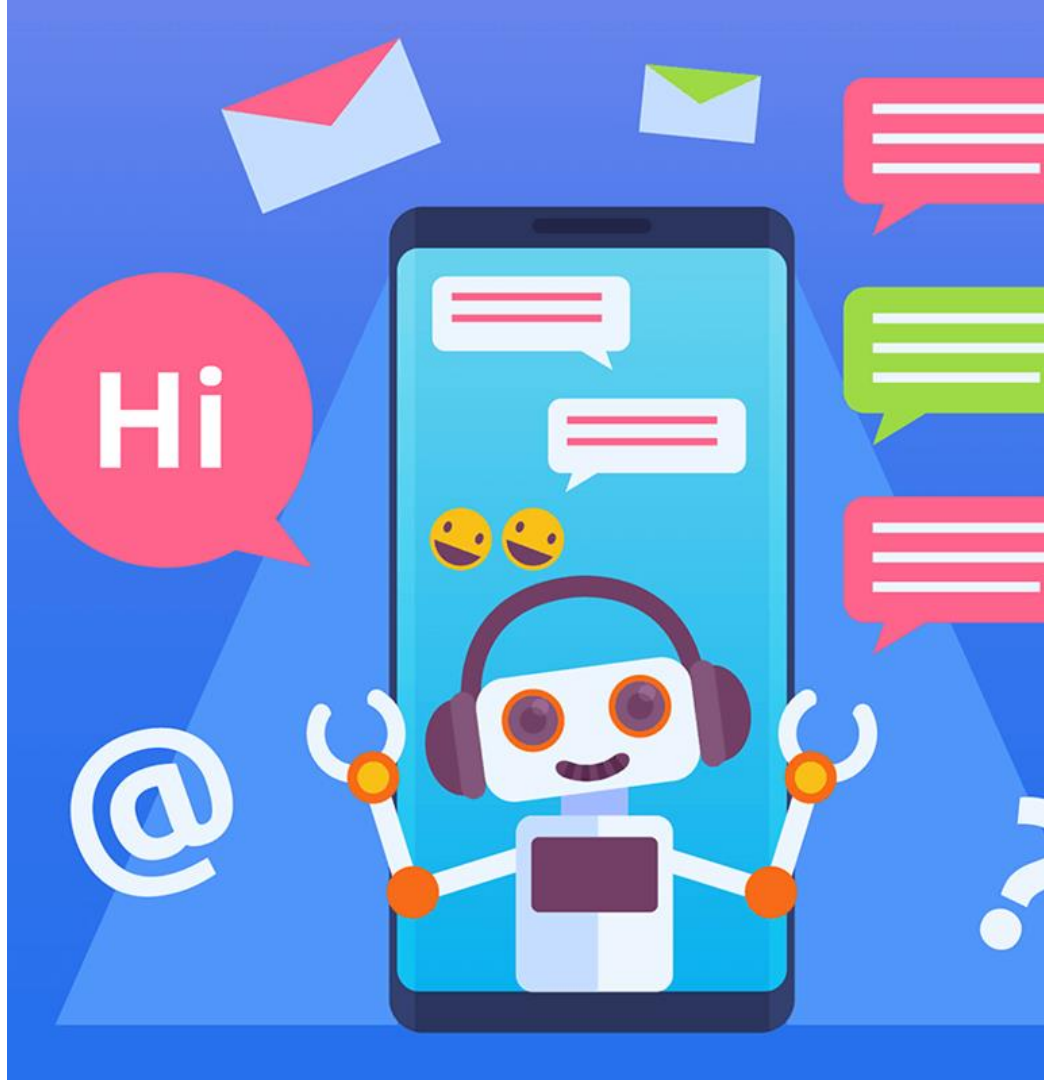
Tutoring

Advising

Success Coaching /
Intervention

Financial Aid

Research / Library



Ethics

Humans need to solve **human problems** for machines, like racial, ethnic, and gender bias.

How do we create an ethical framework for AI?

Gen Z cares.



Action Item

Data integration:

Apply machine learning principles to data collected (e.g., logs of how many times learners rewatch a portion of a video lecture) to better understand individual and holistic student needs.

Targeted Intervention:

Apply AI-enabled chatbots to provide tailored assistance to learners 24/7.

3

Real-Time Communication Tools



We see you, Gen Z



“I can simultaneously create a document, edit it, post a photo on Instagram and talk on the phone, all from the user-friendly interface of my iPhone...”

-Hannah Payne, 18 year-old college student

Zoom

Connecting students, faculty, and staff at ASU for more **humanized, collaborative** learning / meeting / working



A Day in the Life



Slack

Connects people everywhere to instantly **work together**, to **learn deeper**, to **develop projects** and **solve problems**

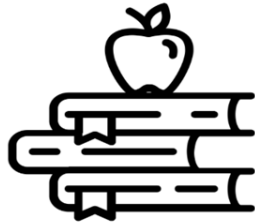


Students



Social + Learning Tool

Faculty



Academic Tool

Administration



Enterprise Tool

Value Proposition



Modernization



Shared Affinity



Collaboration



**Cross-Functional
Expertise**



Reduction

A Day in the Life

- ASU UTO ▾
- Samantha Becker
- # c-three
- collab_tech4_learning
- creativity_commons
- # culture-designers
- # culture-weavers
- # cw-silos
- empowertechevent
- engage_workstreams
- engage-august-event
- ic-df-adr
- ic-df-benchmarking
- ic-df-leadership
- ic-df-playground
- ic-microcredentials
- ic-workstream-leaders
- learning_design
- mama
- prj-sl-hacks-yt-gif

#culture-weavers


☆ | 👤 93 | 🔒 1 | ✎ Add a topic

📞 ⓘ ⚙️

Tuesday, June 25th

Farnoosh Niknam 10:45 AM
 Good morning all, I am sorry that I can't join you today. We are closing the FY and it's a bit busy. I'll be there for the next one!

👍 1 👏 1

 **1 reply** 12 days ago

😊 💬 ➡️ ☆ ⋮

Itzel Morales 10:46 AM
 @cdluna what if we have an Apple Watch and we want to join?

Cindy Luna Miranda 10:51 AM
 That is fine! As far as tracking, you would be part of the "other" category. You can record your steps as normal, just make sure to report your steps to me on July 15th and then again on July 28th, please.

Erin Morrow 11:41 AM
 Erin Morrow is inviting you to a scheduled Zoom meeting.
 Topic: Erin Morrow's Personal Meeting Room
 Join from PC, Mac, Linux, iOS or Android: <https://asu.zoom.us/j/4807278572>

Or Telephone:

+ Message #culture-weavers @ 😊

A Day in the Life

“[Slack] made my online students feel like they were in an in-person class environment”

- Assistant Professor, W. P. Carey School of Business, ASU

Action Item



When updating comms infrastructure, consider the value prop framework of advancing modernization, reduction, collaboration, shared affinity, and cross-functional expertise.

4

Immersive Tech





We see you, Gen Z

“VR is the next frontier for building authentic experiences, particularly for Gen Z. It allows brands to explore more immersive, connected relationships with consumers.”

-PMX Agency

Extended Reality

Augmented Reality

+

Virtual Reality

+

Mixed Reality

=

XR

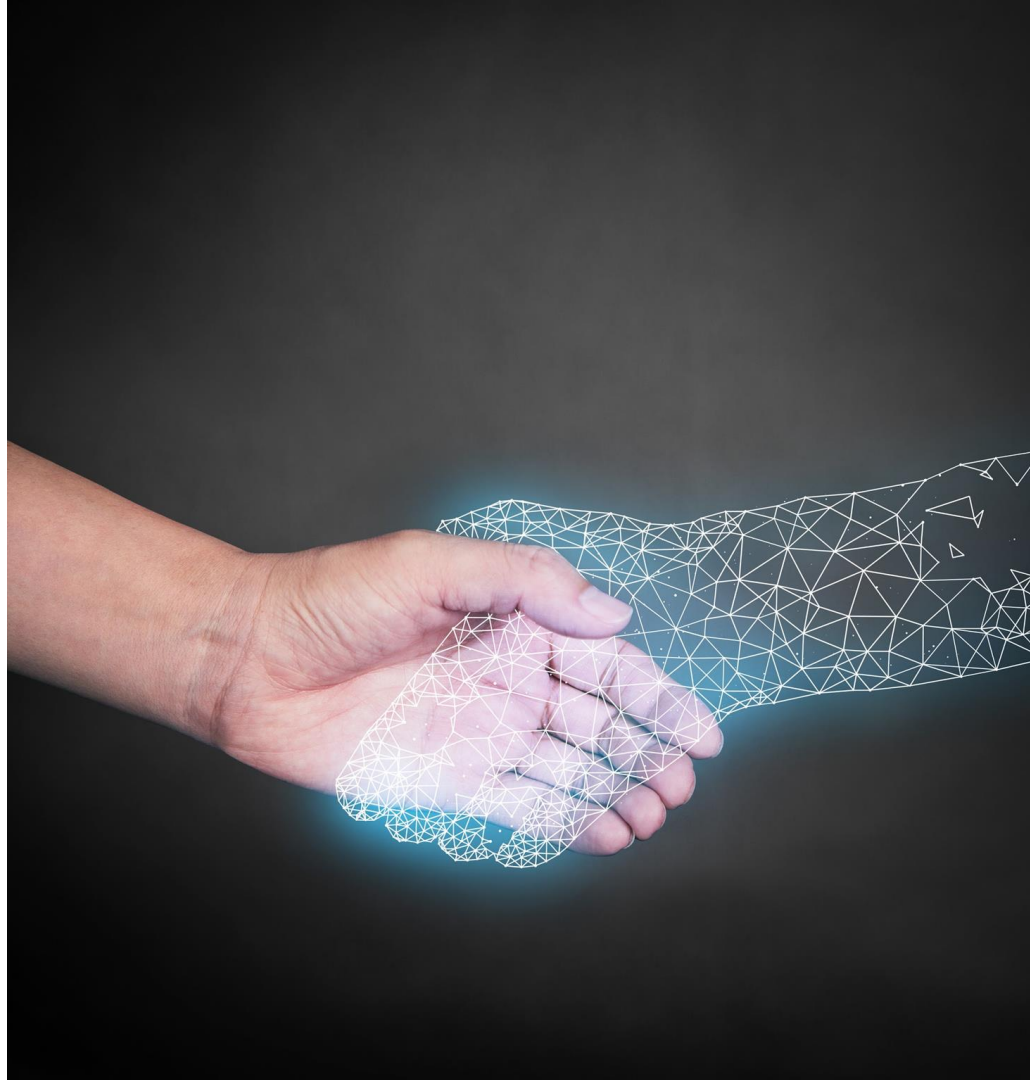


The Reality

Democratizes access to a wealth of environments + experiences

Can replace expensive, cumbersome equipment

Early gains for student engagement, but not yet enough concrete research outcomes



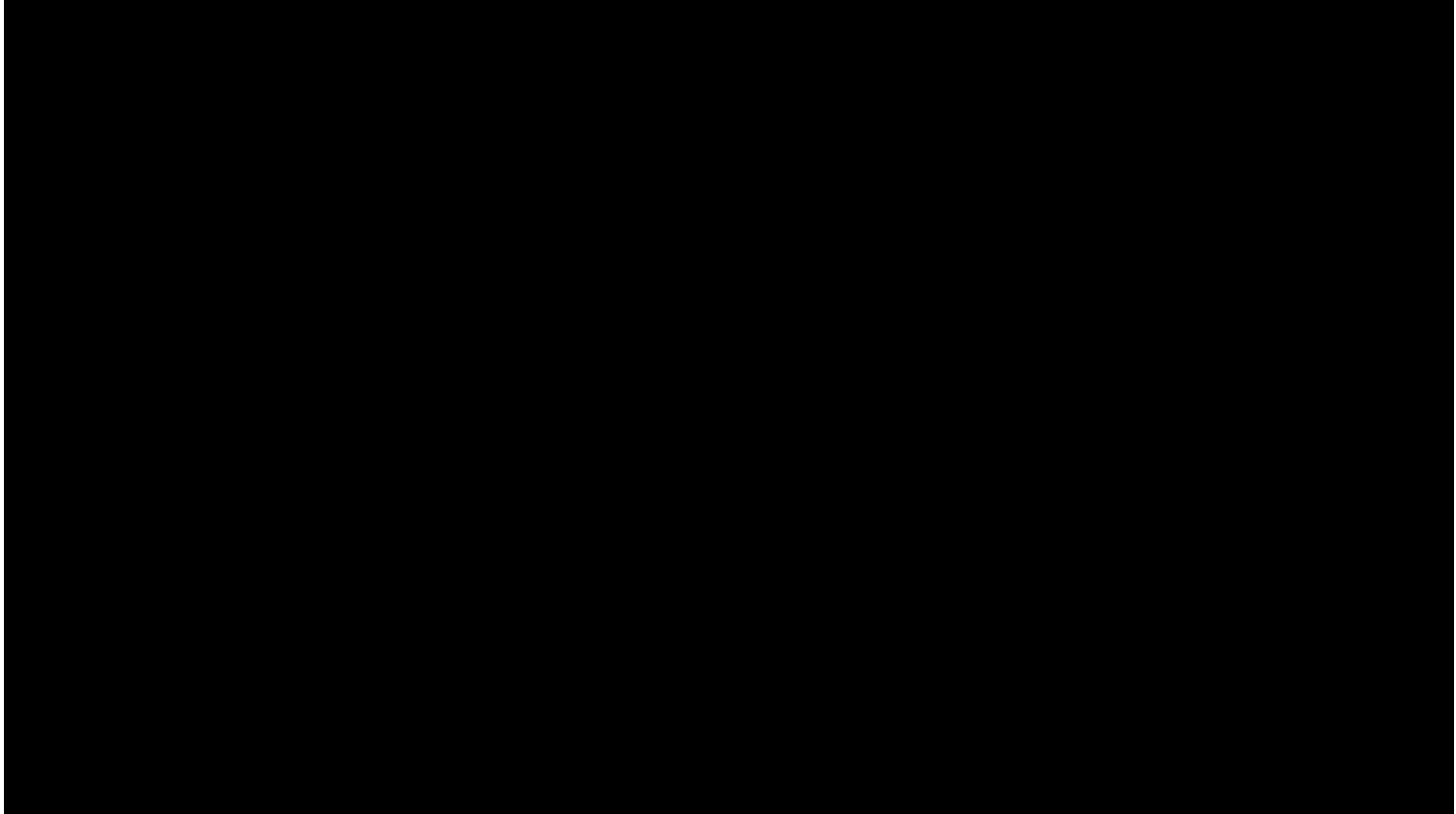
\$27 billion

XR market worth in 2018

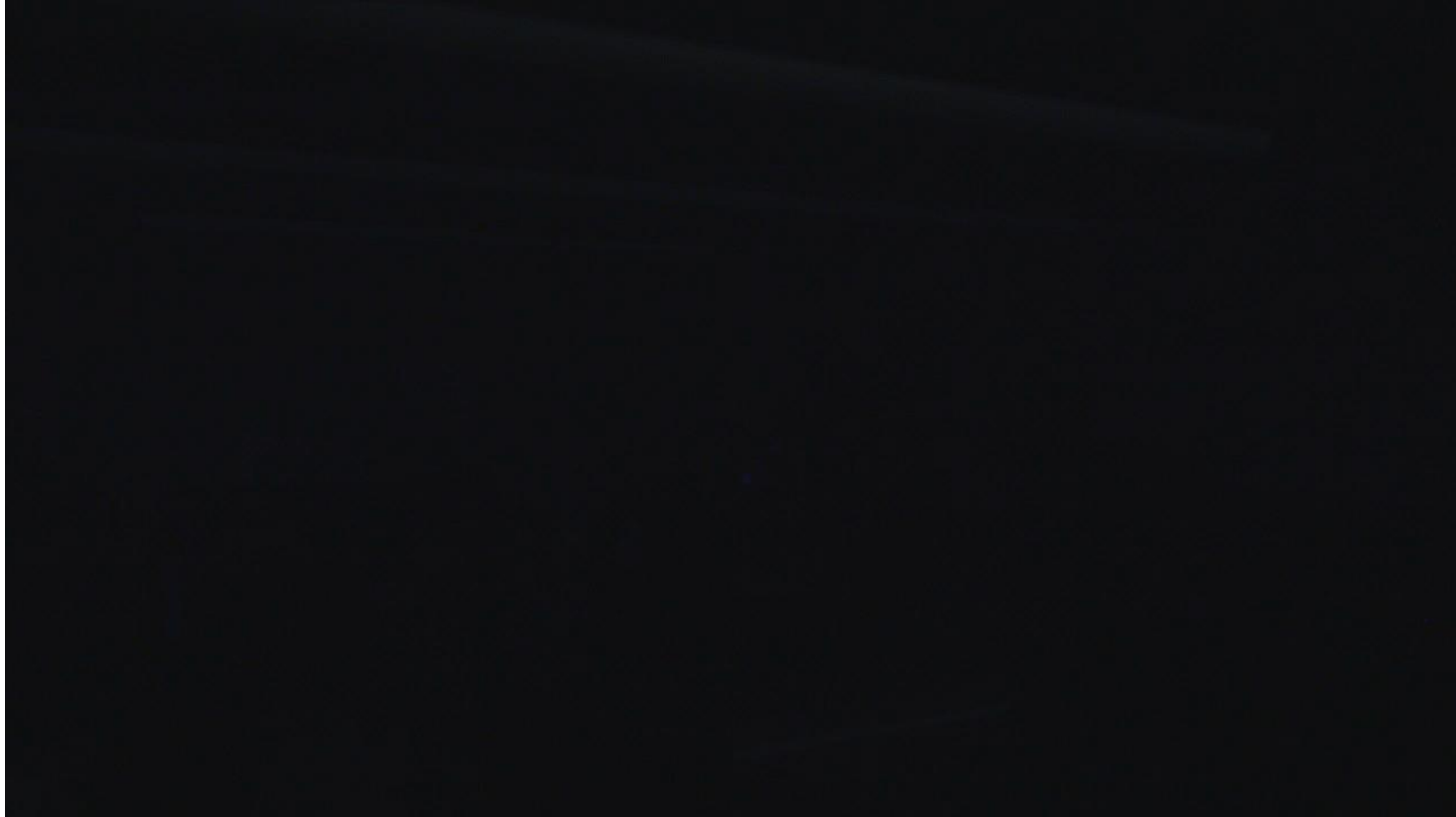
\$209.2 Billion

Forecasted XR market worth in 2022

Transforming Med Ed at CWRU



VR in the Biological Sciences at ASU



A woman is shown in profile, wearing a black VR headset and holding two VR controllers. She is standing in a virtual underwater environment. The background features large, grey, jagged rocks and tall, green, blade-like seaweed. The water is a light blue-green color. A yellow banner with black text is overlaid on the image.

**Stanford Virtual Human Interaction
Lab Ocean Acidification Experience**

Action Item

Integrate immersive technologies into physical and digital campus experiences for greater interaction, access to otherwise inaccessible content.

Ask: what immersive experiences can students, faculty, and staff co-design?



5

Robotic Delivery



We see you, Gen Z



- Home-centric
- Value immediacy + frugality
- Emphasize simplicity + user experience
- 39% want one-hour delivery via drone

Amazon hires 2,000 workers for Alexa, drone projects in the UK

Haye Kesteloo - Jul. 4th 2019 11:16 am ET



Who was really at fault in fatal Uber crash? Here's the whole story



GRUBHUB



Postmates



Uber

**Uber
Eats**



\$22.1m

**revenue from online food delivery
industry in in the US in 2019 so far**

93 million

Uber users as of May 31, 2019

5 billion

**packages shipped annually and
globally via Amazon Prime**

Starship Robots @ NAU



Action Item

The background of the slide is a dark, futuristic warehouse or factory. It features blue metal shelving units and several white humanoid robots. One robot in the foreground is holding a large cardboard box. The scene is dimly lit, with some overhead lights visible.

Robotic delivery is poised to disrupt the consumer sector.

What does it mean for edu? That's up to us.

Delivery of maker-tools and library resources? Making analog contact with online students?

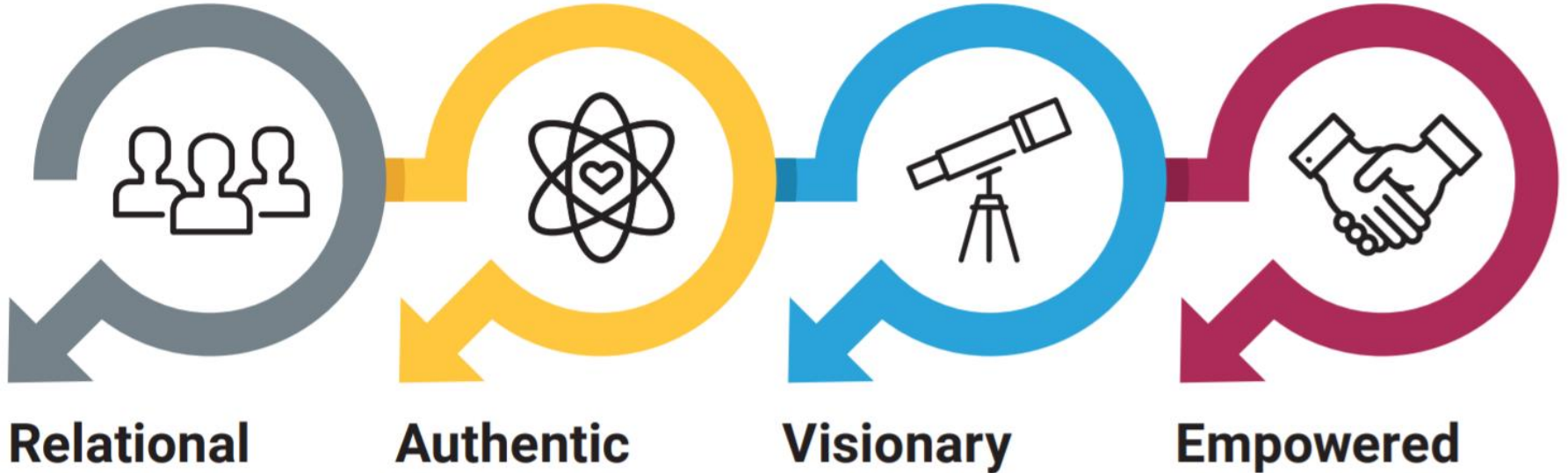
...



Culture Matters.

It's how we get there.

UTO Positive Core



uto.asu.edu/about/core

Many Thanks.

Questions?