

BLOCKCHAIN IN HIGHER EDUCATION

Personalizing

BLOCKCHAIN

TECHNOLOGY



KATHALEEN REID- MARTINEZ, PH.D.
PROVOST | CHIEF ACADEMIC OFFICER
ORAL ROBERTS UNIVERSITY

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INTERNATIONAL ADVISING AND SPEAKING



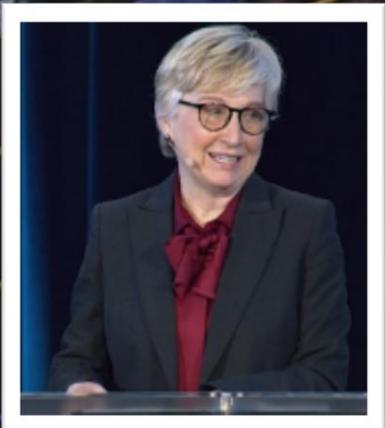
Partners for Peace
Consortium



United Nations

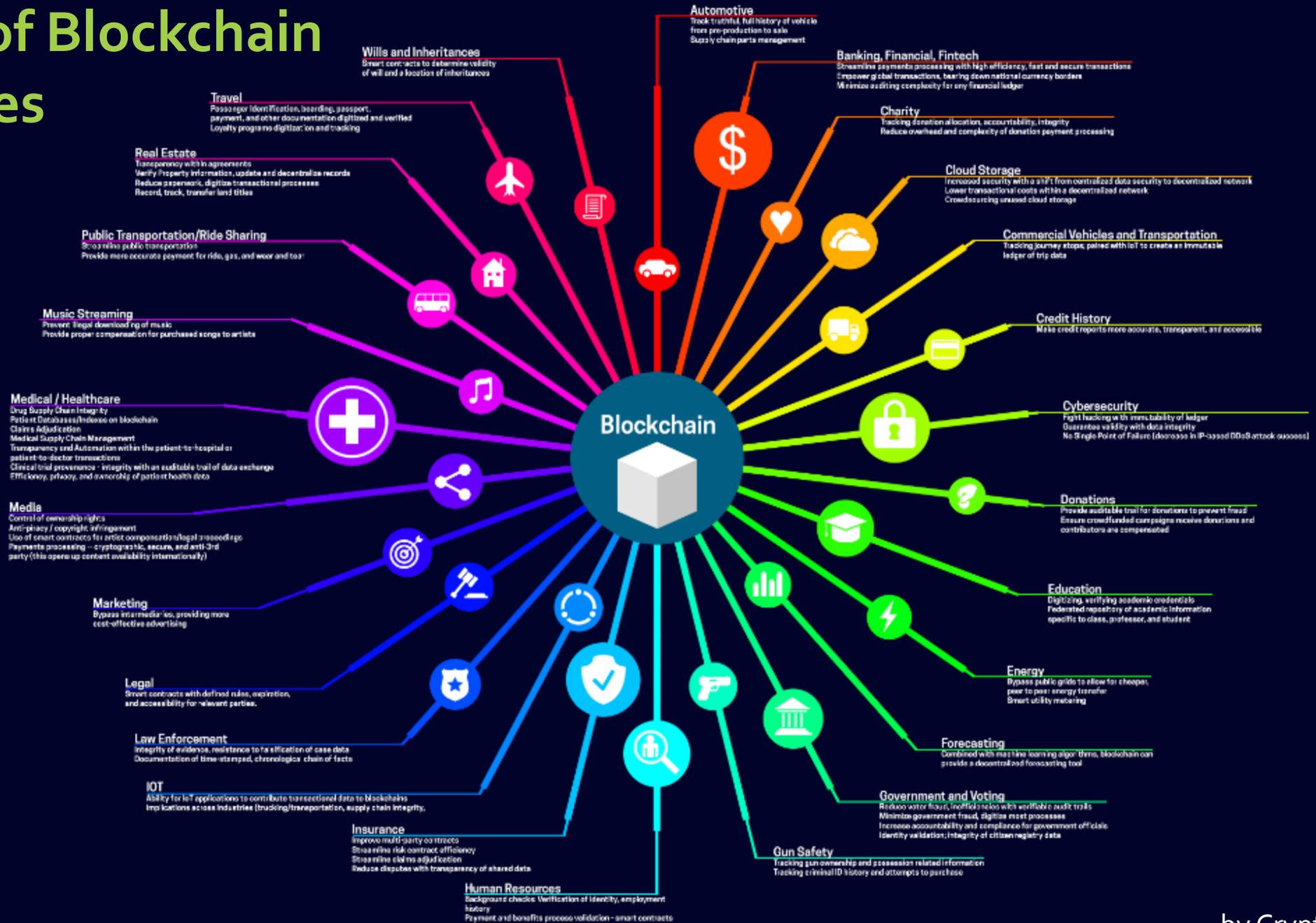


North Atlantic
Treaty
Organization
(NATO)



- Education & Online Learning
- Advanced Technology
- Blockchain
- Peacekeeping
- Human Rights
- Communication
- Security
- Global Leadership

An A-Z of Blockchain Use Cases



Blockchain



Cybersecurity

Fight hacking with immutability of ledger
Guarantee validity with data integrity
No Single Point of Failure (decrease in IP-based DDoS attack success)



Donations

Provide auditable trail for donations to prevent fraud
Ensure crowd funded campaigns receive donations and contributors are compensated



Education

Digitizing, verifying academic credentials
Federated repository of academic information specific to class, professor, and student



Energy

Bypass public grids to allow for cheaper, peer to peer energy transfer
Smart utility metering



Forecasting

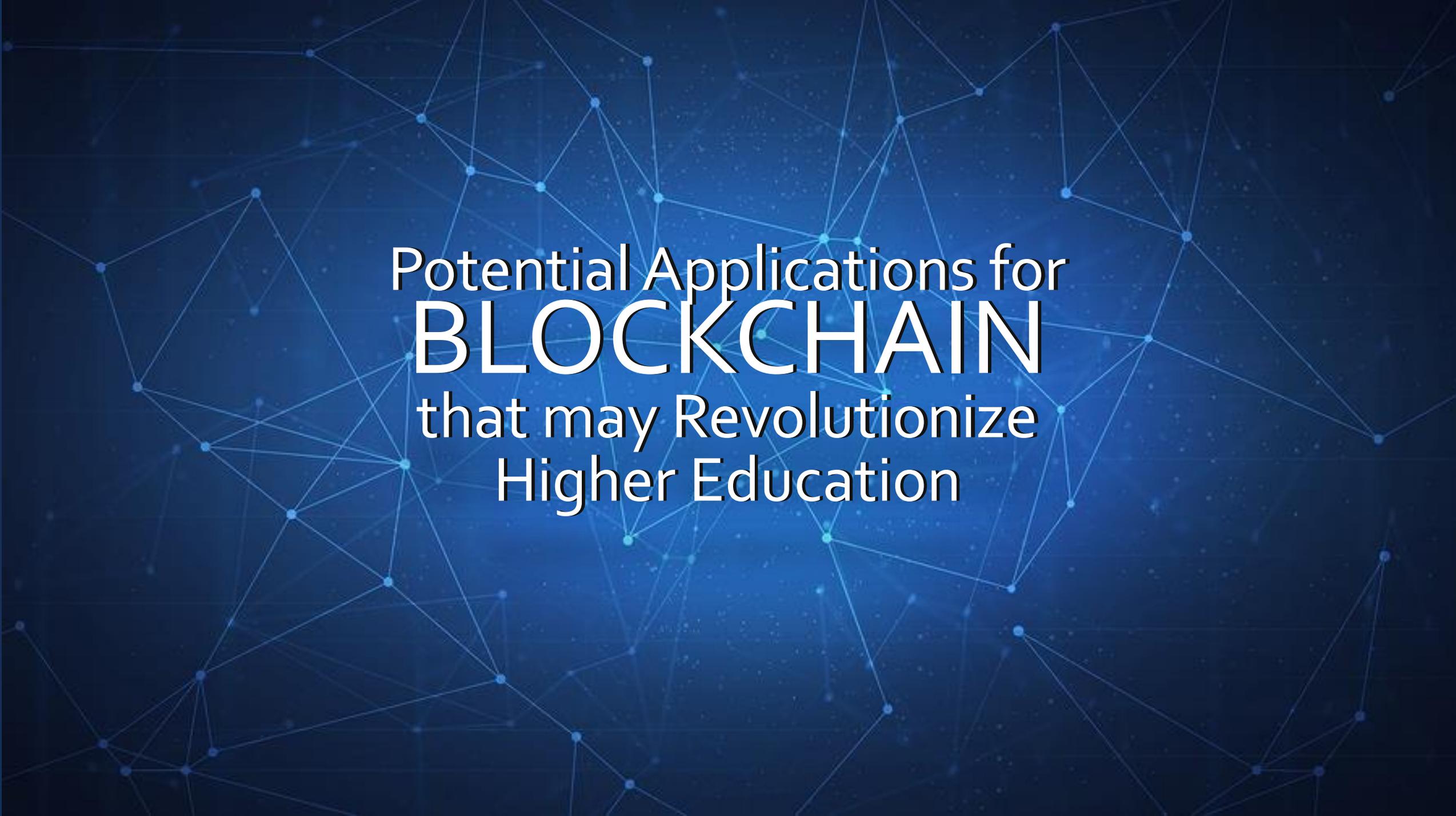
Combined with machine learning algorithms, blockchain can provide a decentralized forecasting tool



Government and Voting

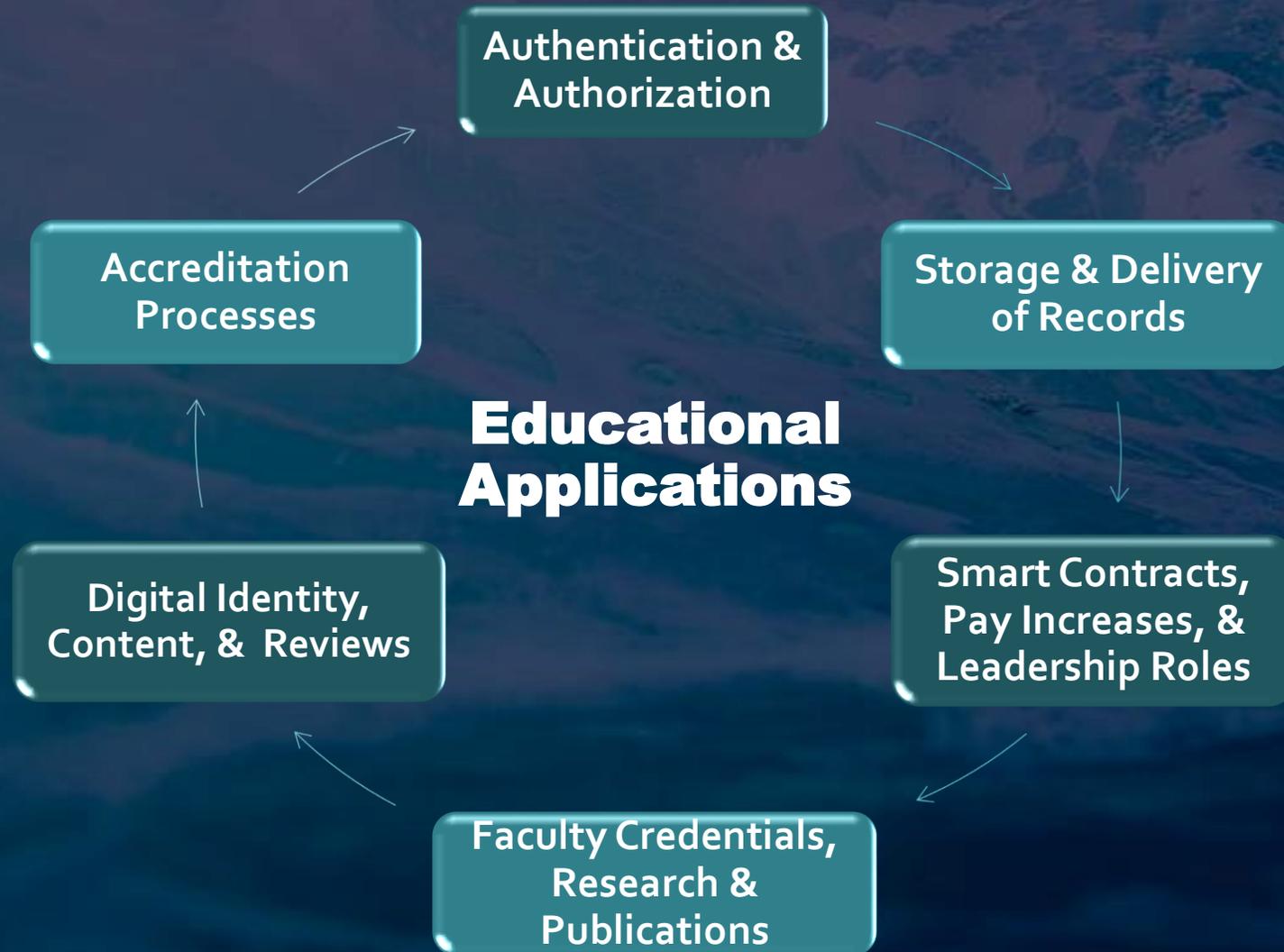
Reduce voter fraud, inefficiencies with verifiable audit trails
Minimize government fraud, digitize most processes
Increase accountability and compliance for government officials
Identity validation; integrity of citizen registry data





Potential Applications for
BLOCKCHAIN
that may Revolutionize
Higher Education

SPECIFIC APPLICATIONS FOR BLOCKCHAIN IN EDUCATION



**FACULTY
PROFESSIONAL
EXPERIENCE,
INCLUDING
AUTHENTICATION
&
AUTHORIZATION**



Accreditation is Another Academic Use for Blockchain



This technology will streamline and easing the Accreditation Processes through block-by-block validation, as you go.





Student Records

**Blockchain is a Natural
Technology for Authenticating
and Storing Academic Records
and Experiences**

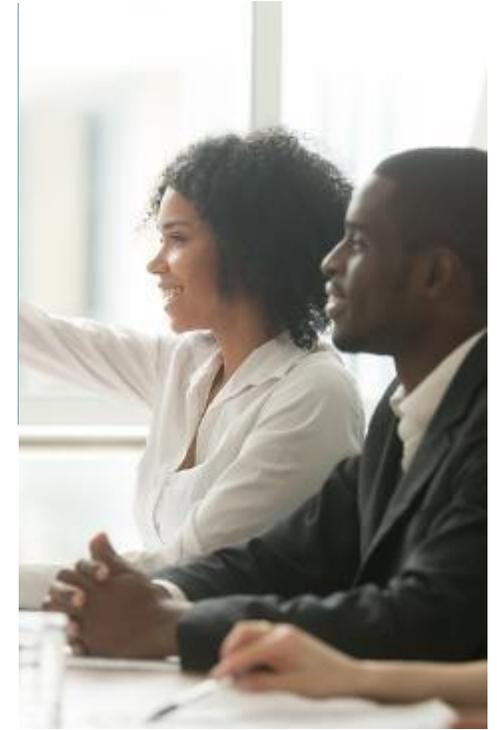
Student Records

- Major and Minor
- Grade and Transcript Authentication
- Professional Organizations
- Internships
- Awards



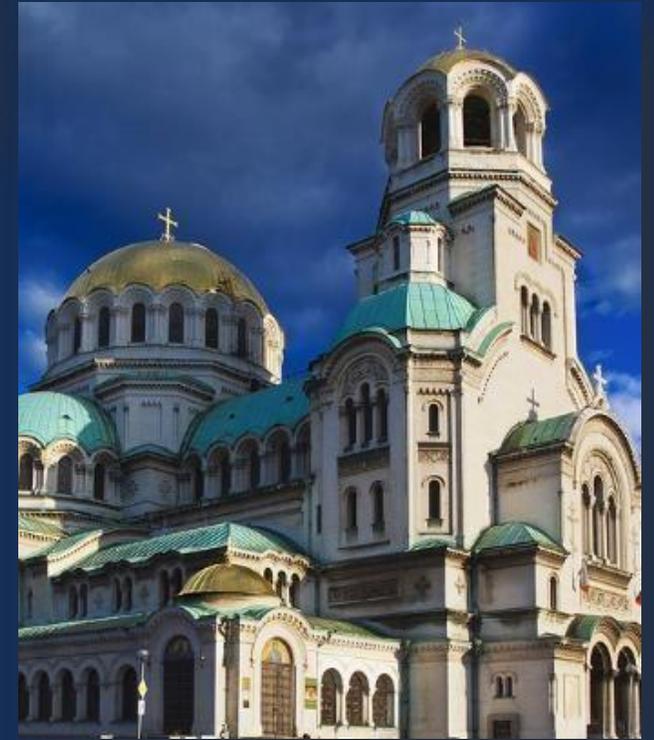
STUDENT LEARNING EXPERIENCES

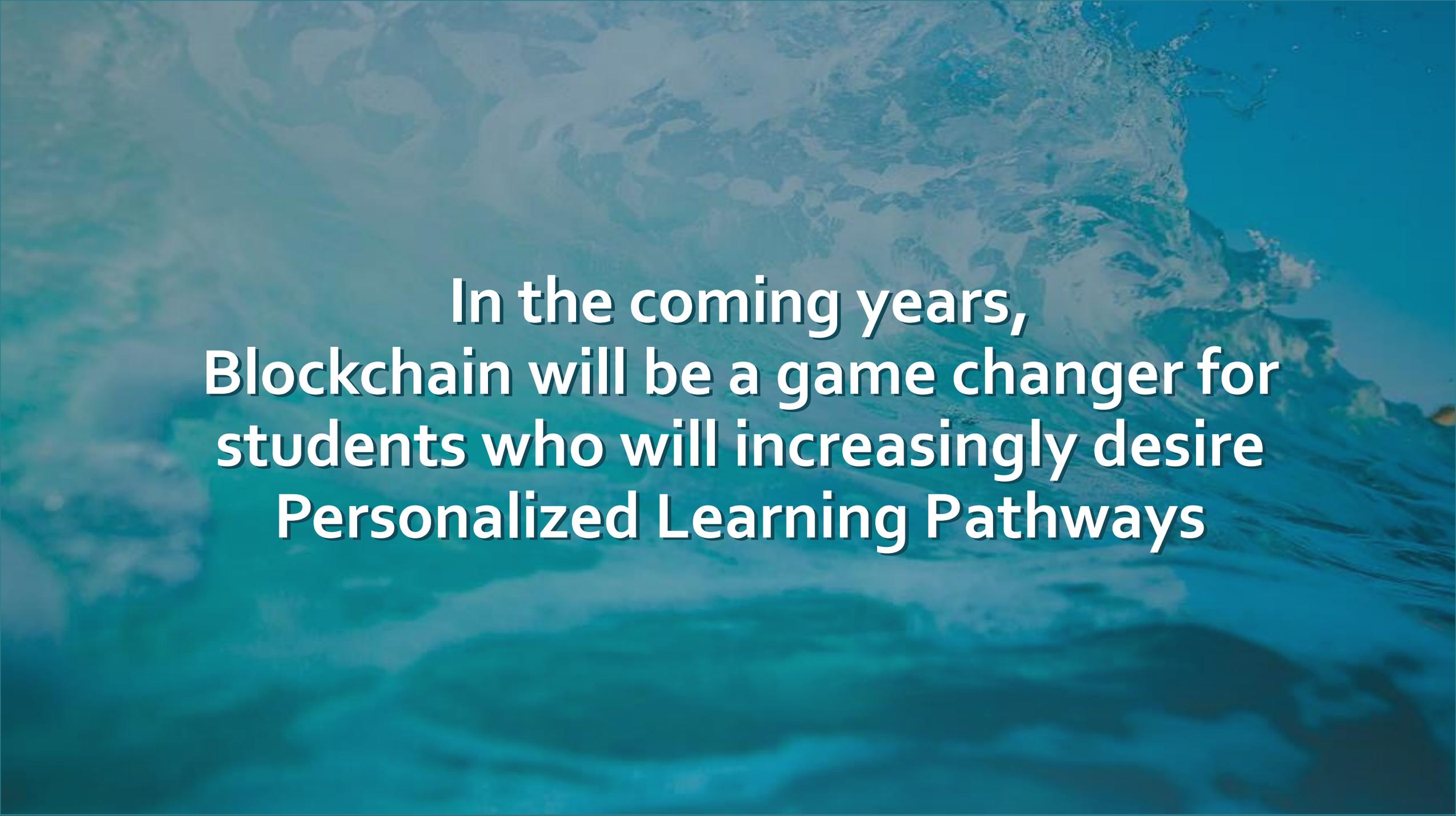
- Workshops
- Professional Presentations
- Conference Attendance
- Research Presentation
- Co-Publishing with Faculty
- Training in Media Equipment & Technology
- Creative Content, like Films, Documentaries, & Music Compositions



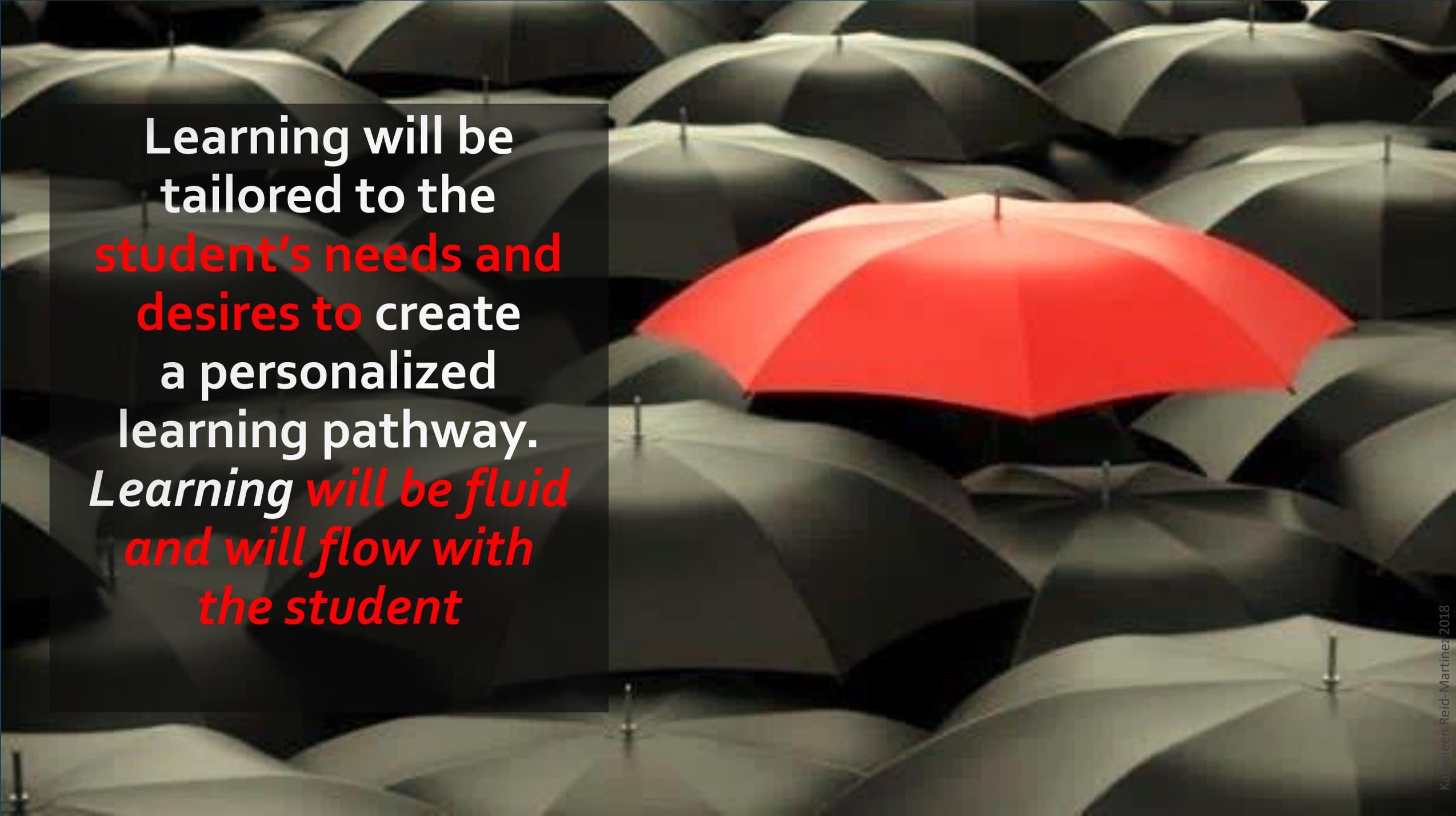
STUDENT LEARNING EXPERIENCES

- Study Abroad
- Volunteering
- Student Government or other Leadership
- Mentoring and Tutoring
- Student Teaching
- Learning Assessment Outcomes





**In the coming years,
Blockchain will be a game changer for
students who will increasingly desire
Personalized Learning Pathways**

A large field of grey umbrellas, with one bright red umbrella standing out prominently in the center. The umbrellas are arranged in a dense, repeating pattern, creating a sense of uniformity that is broken by the single red one.

Learning will be tailored to the **student's needs and desires** to create a personalized learning pathway. *Learning will be fluid and will flow with the student*

A large number of black umbrellas are arranged in a dense field, with one bright red umbrella standing out prominently in the center-left. The background is dark, making the umbrellas stand out. The red umbrella is the focal point, symbolizing a shift in control.

This will shift the
locus of control
from the
**INSTITUTION to
the LEARNER**

A path of smooth, dark brown stepping stones is laid out across a calm, blue body of water. The stones are arranged in a slightly curved line, leading from the foreground towards the background. The water's surface is dark blue with subtle ripples, and the overall lighting is soft, suggesting a dusk or dawn setting.

Creating a Student's **Personalized Learning Pathway** Block-by-Block:
AUTHENTICATED
VALIDATED
CREDENTIALLED

Meet Joe and his **Personal Learning Pathway**

- In control of his education—plan his own path
- He and his wife are globally minded
- They travel the world doing internships and volunteering
- His mentor at “Pathway University” guides his learning process, overseeing credentialed-based education



Creating a Degree in Environmental Digital Media

Pathway University uses Blockchain to track Joe's credits in:

- Marine Photography & Digital Filmmaking
- Marine Biology
- Spanish—Foreign Language
- Internship



Joe Uses Blockchain for his Digital Media to:

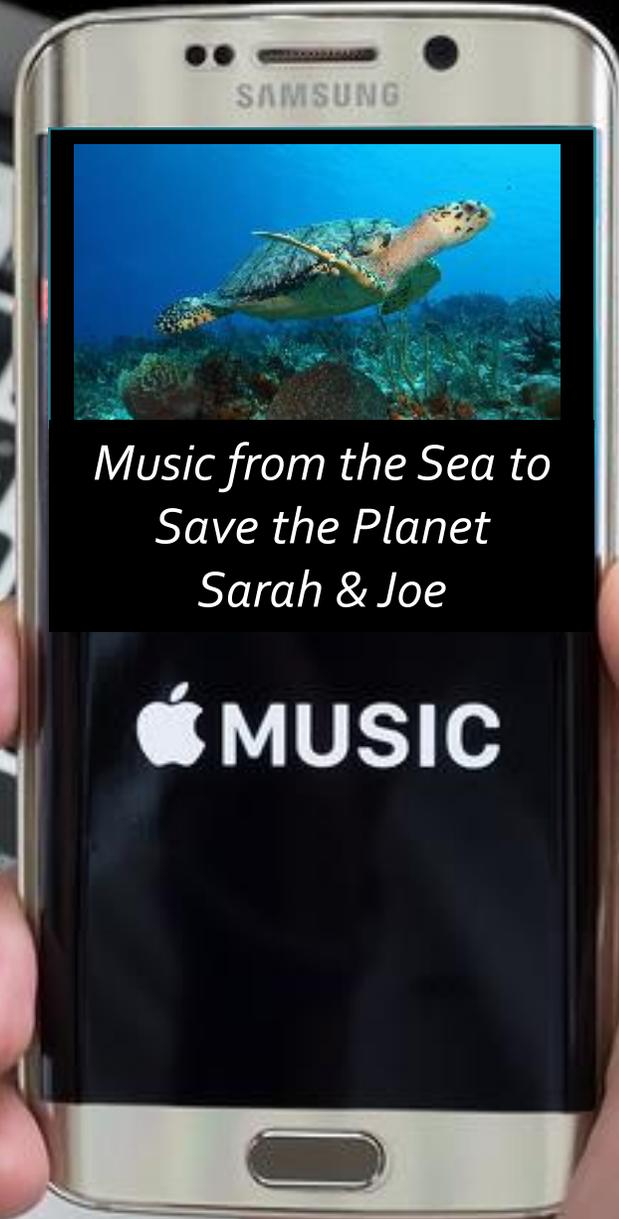
- **Prove ownership** of original art and versions of his photos
- Sell images using Smart Contracts & to manage digital rights
- Authenticate reviews of his work
- Authenticate endorsements from the organizations that hire him`





Sarah blockchains all of her songs and lyrics to:

- Prove ownership
- Sell & Maintain rights
- Authenticate reviews



A Few Ways Blockchain Touches Joe's Life



Blockchain will be at
the Center of **Disruptions**
to Higher Education

DISRUPTION #1: CHANGING LOCUS OF CONTROL

**Who's in Control:
The Institution | Or the Learner?**

The Locus of Control of the Learner Across the Ages



The Learner:
21st Century

The Family:
Prior & Early
Middle Ages



The
Professor:
Middle Ages



Institutional
Schooling
Systems: 18th-
19th Century

Administration
and Batch
Learning:
20th Century



DISRUPTION #2

CHANGING UNIVERSITY EXPERIENCE

- 1. How will the lines cross between curricular and extra-curricular activities—on campus and off?**
- 2. What kind of campus and social experience will students be expecting?**
- 3. How will we change our campuses to accommodate these new learners?**
 - university campus?**
 - the campus community?**
 - the social milieu?**



DISRUPTION #3

CHANGING LOCUS OF QUALITY CONTROL AND ACCREDITATION

- 1. What will be the contemporary role of the university?**
 - Will we teach HOW to learn or continue to teach WHAT to learn?**
- 2. What constitutes learning and quality control?**
- 3. Who determines the quality control of your programs, faculty, & institution?**
- 4. Who controls the validation process?**
- 5. Who should accredit whom? And at what level?**
 - The institution? The program? The faculty?
Companies and organizations?**

DISRUPTION #4

FINANCIAL MODELS

1. What do we do with my financial model when we replace batch learning?
2. What models do we create around personalized and customized learning?
 - *When do we unbundle the faculty role?*
 - *When do we outsource?*
 - *When do we partner?*



DISRUPTION #5 Systems

1. Are your data systems being transformed to be AI equipped and Blockchain authenticated?
2. Who will oversee and perform the records transition to Blockchain to assure privacy and security with each step to assure the overall security of the record?
3. Can your systems adapt quickly enough to meet the needs of today's student as consumer? How will you by-pass the systems that cannot adapt fast enough?



DISRUPTION #6

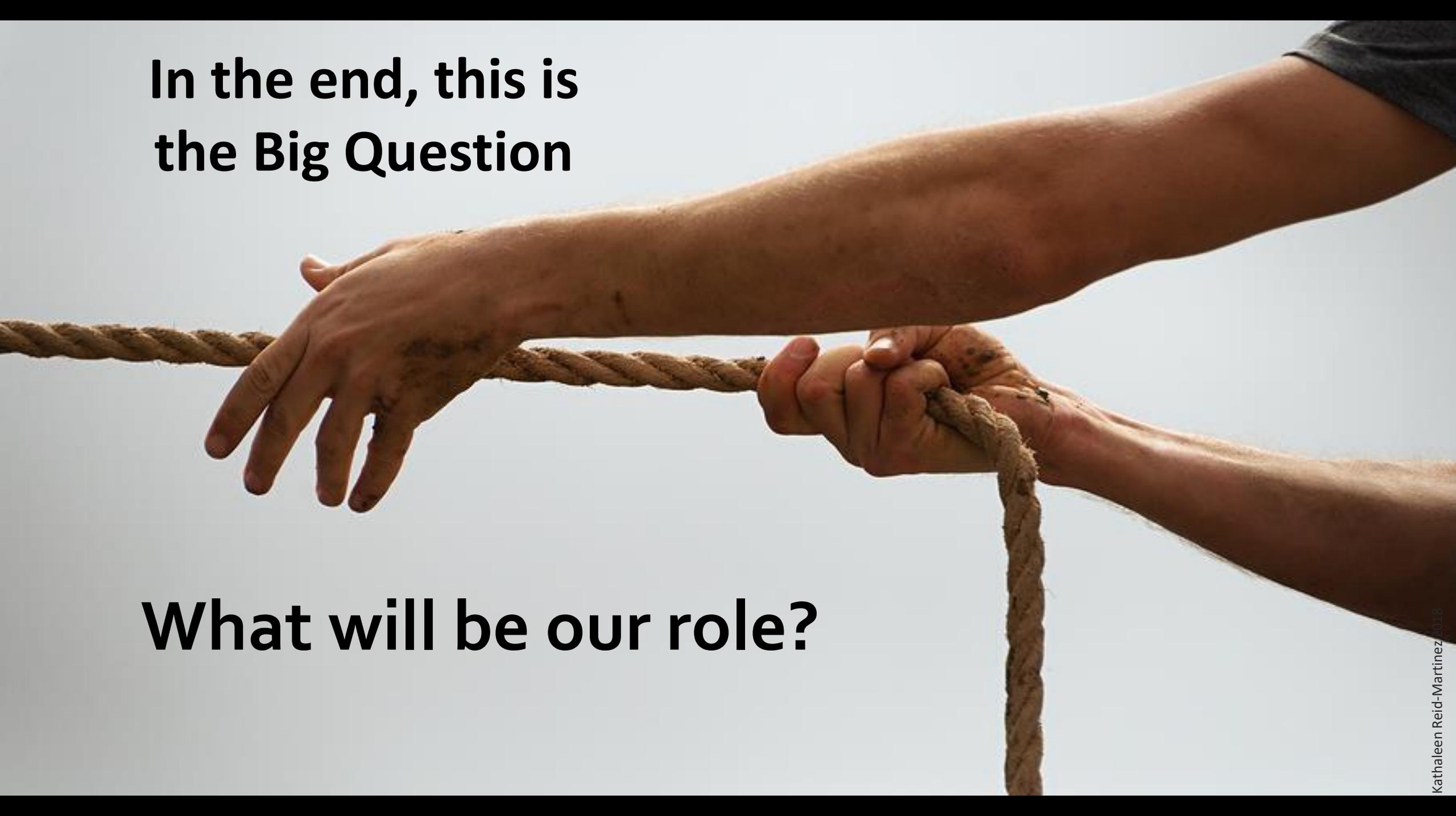
HUMAN RESOURCES

1. How will we handle the disruption to your human resources?
2. How will we continue to “unbundle” the role of the faculty?
3. What kind of persons and skillsets should we be hiring?
 - *Do you need professors?*
 - *What are their roles?*
 - *What credentials do they need?*



**In the end, this is
the Big Question**

What will be our role?



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Questions? More Information?

kreid-martinez@oru.edu

715-379-9530



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