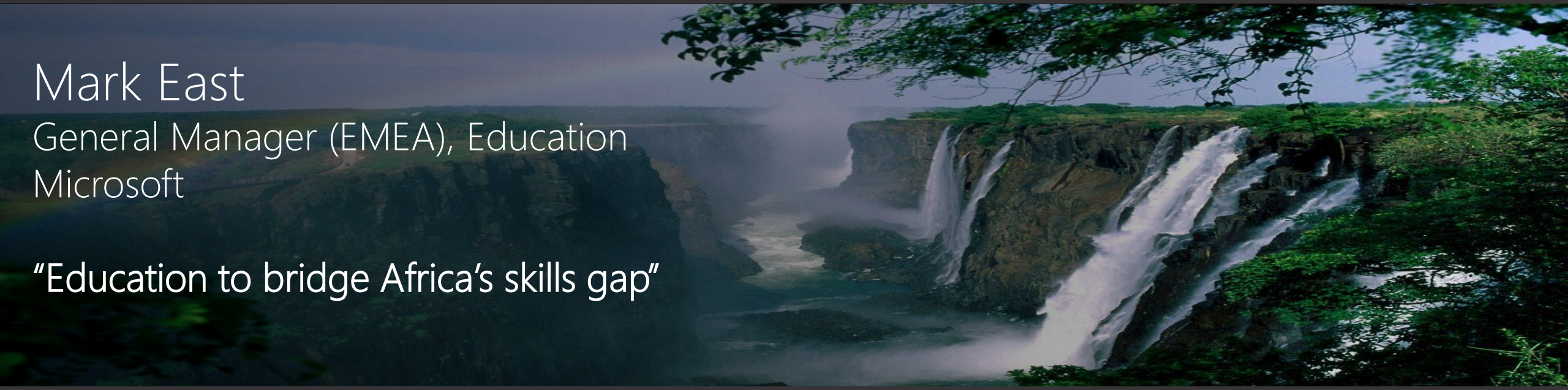


Mark East

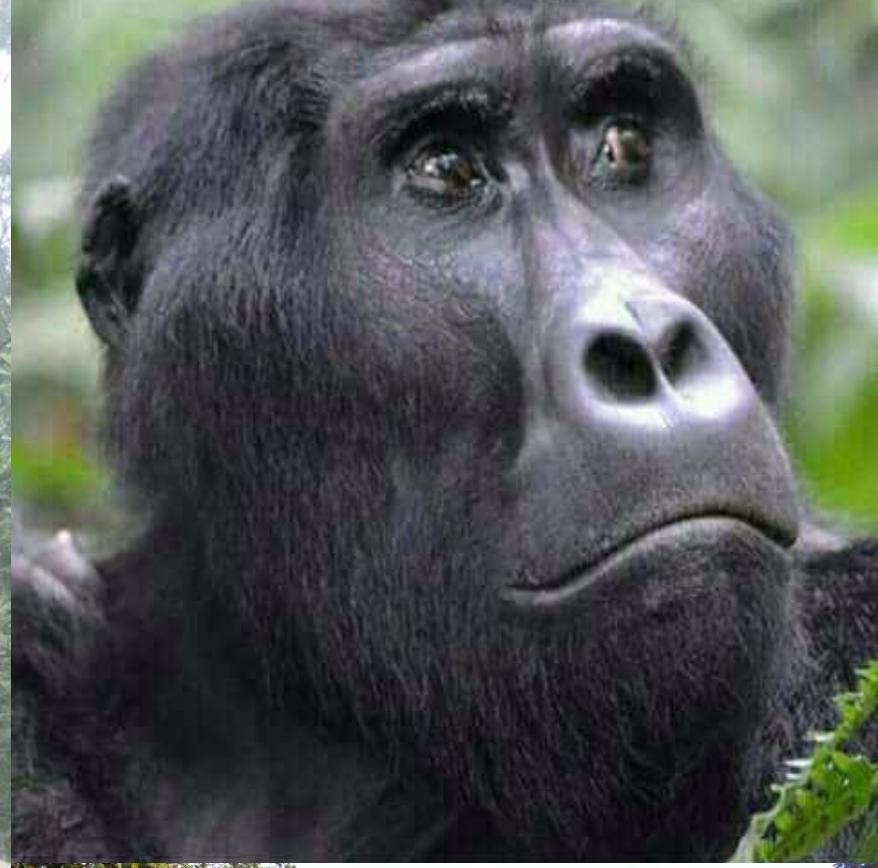
General Manager (EMEA), Education

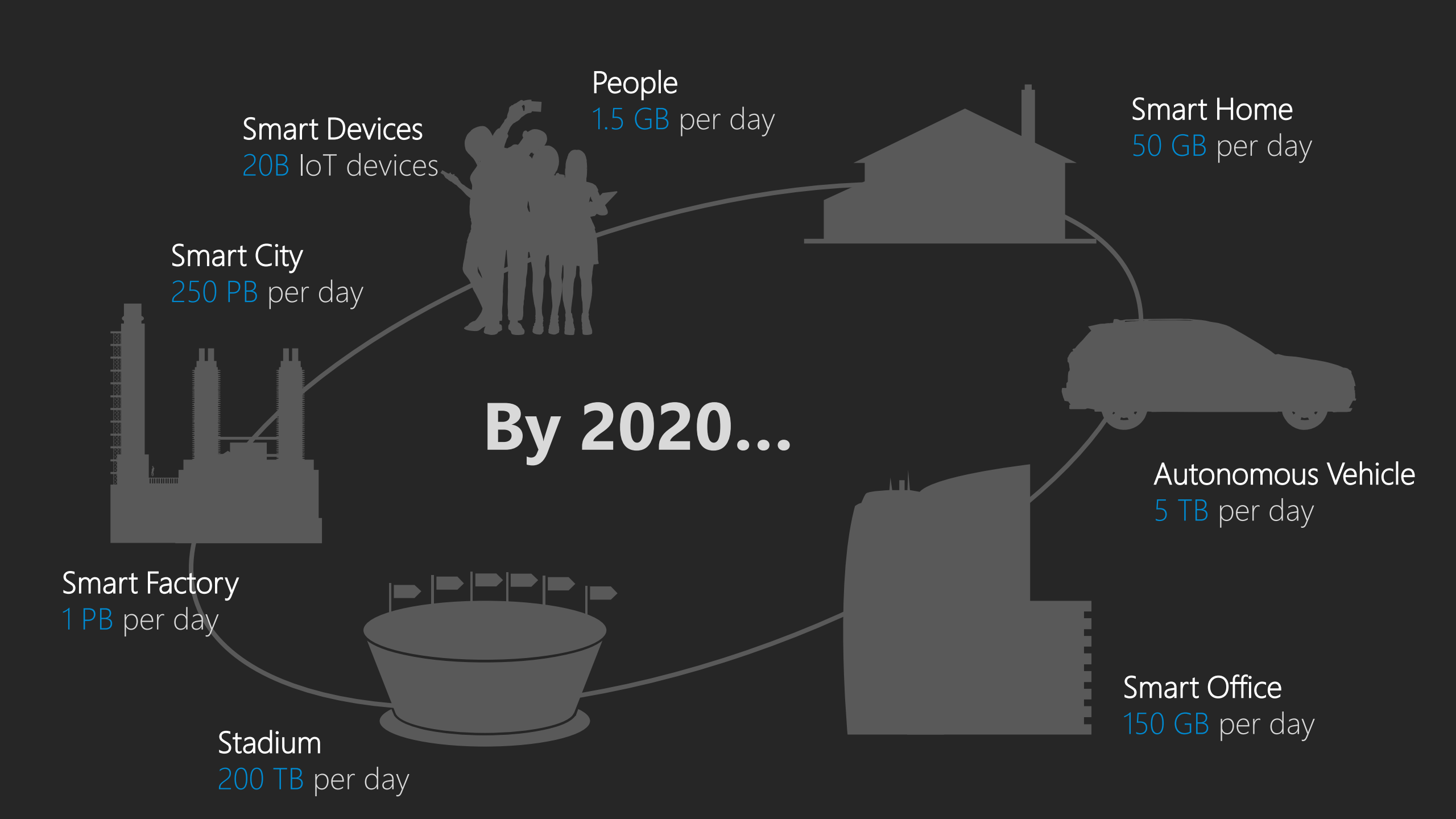
Microsoft

“Education to bridge Africa’s skills gap”

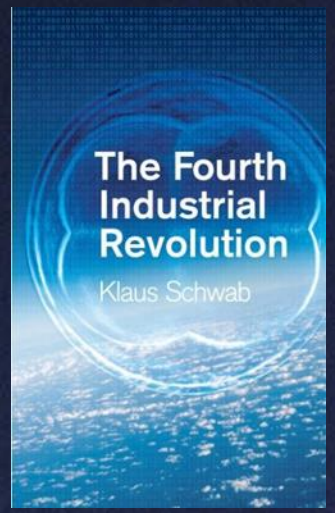
Microsoft

MOTOROLA




People
1.5 GB per day
Smart Devices
20B IoT devices
Smart Home
50 GB per day
Smart City
250 PB per day
By 2020...
Autonomous Vehicle
5 TB per day
Smart Factory
1 PB per day
Smart Office
150 GB per day
Stadium
200 TB per day

The 4th Industrial Revolution has started



Africa: Market Readiness Indicators

10b

2025 projected overall market size for digital transformation

Source:
Constellation Research, 2016

3b

Serviceable Available Market for AI in Africa: midpoint of $1-5b estimated

Source:
Jacques Ludik, 2017

25%

Percent of world's under-25 population all located in sub-Saharan Africa in 2030

Source:
WEF, 2017

282m

Workers who are vulnerably employed, stagnated at 66% share of Africa's jobs.

Source:
AUC/OECD, 2018

Africa: Financial Impact from Skills Shortage

-1%

4.5% annual economic growth rate by 2035 ***if*** AI is leveraged by organizations. 3.5% if AI not leveraged.

Source:
Accenture, 2017

6.4b

Impact of labor shortage in 2030 in South Africa.

Source:
Korn Ferry, 2017

15%

Public spending on education.

Source:
World Bank, 2017

3b

Serviceable Available Market for AI in Africa: midpoint of $1-5b estimated

Source:
Jacques Ludik, 2017

Securing the future with STEM

As the demand for STEM jobs continue to increase, so do the expectations for today's students to be ready for those jobs. With better STEM integration in K–12 classrooms, we can ensure a broader demographic of today's students will be ready for the jobs of tomorrow. The time to start transforming classrooms is now.

Today, more than

50%

of jobs require technology skills

In less than 10 years,

77%

of jobs will require technology skills

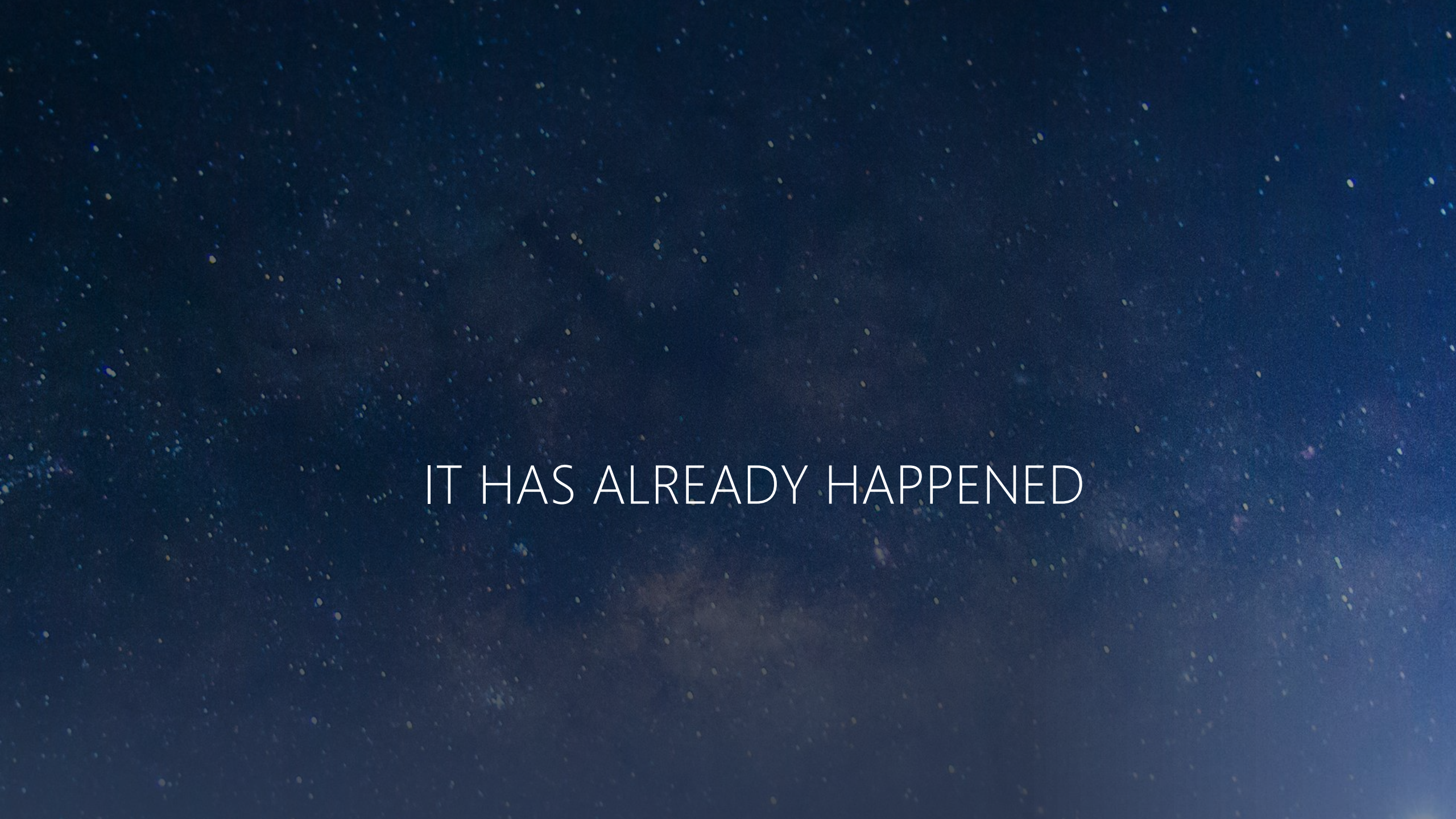
Girls who study STEM in high school are over

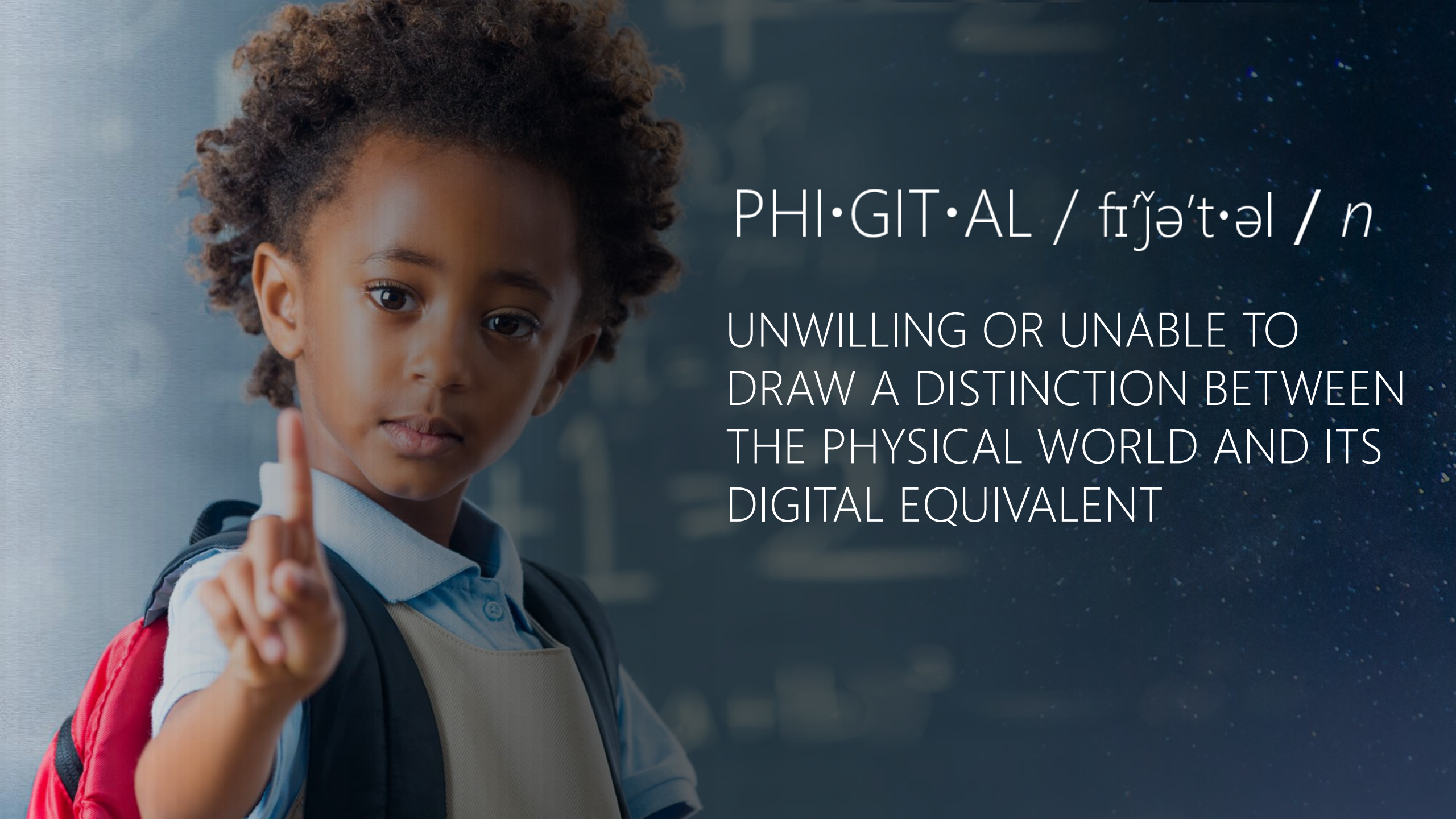
150%

more likely to study computer science in college

Only 2% of African Higher Education graduates have a STEM related degree today!

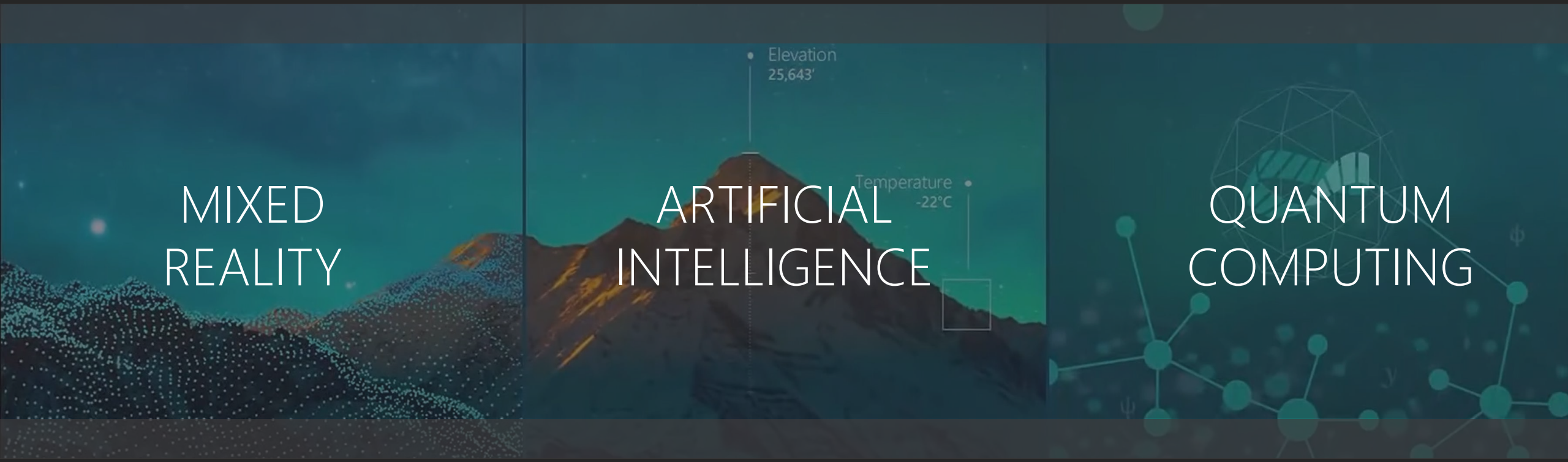
DIGITAL TRANSFORMATION IN EDUCATION


IT HAS ALREADY HAPPENED


PHI·GIT·AL / fɪˈʃəˈt·əl / n
UNWILLING OR UNABLE TO DRAW A DISTINCTION BETWEEN THE PHYSICAL WORLD AND ITS DIGITAL EQUIVALENT

LEARNING HAS CHANGED

THE MODERN WORKPLACE HAS CHANGED

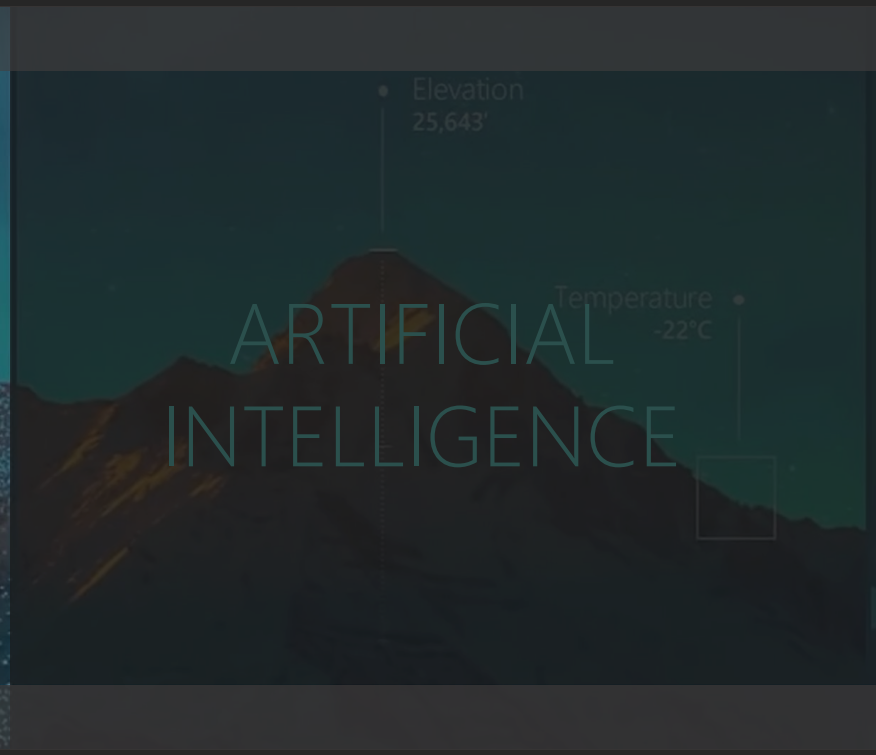


MIXED REALITY

ARTIFICIAL INTELLIGENCE

QUANTUM COMPUTING

MIXED
REALITY



ARTIFICIAL
INTELLIGENCE

QUANTUM
COMPUTING

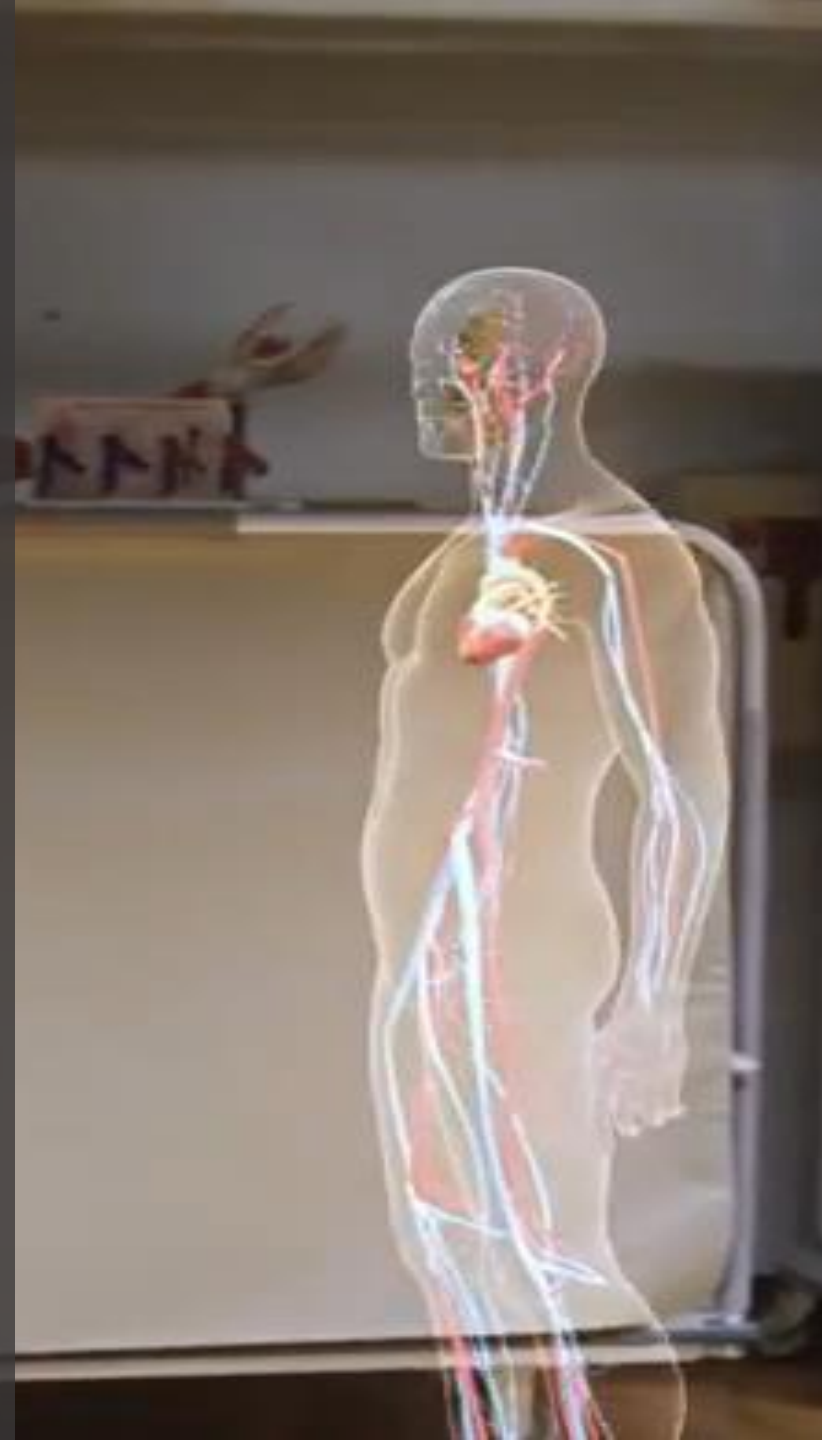
Case Western Reserve University
College of Arts and Sciences

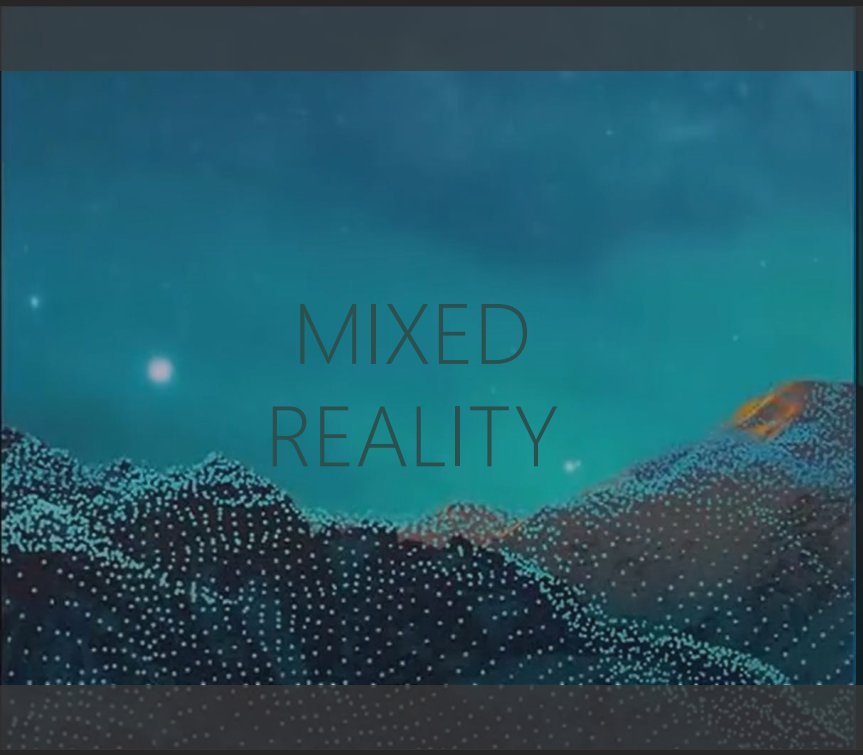
VIRTUAL REALITY

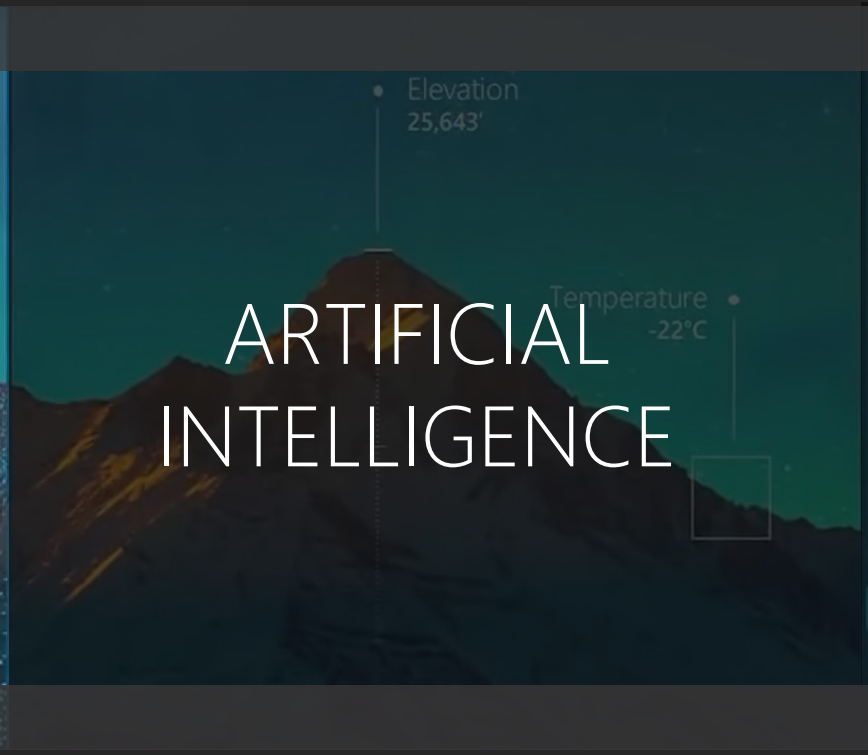
CHANGING HOW WE

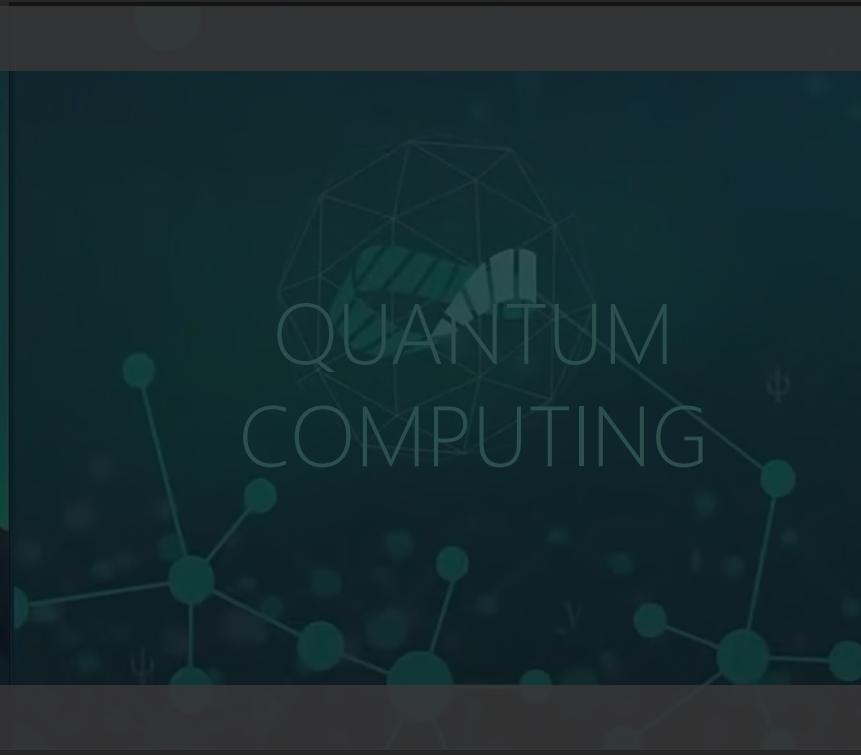
LEARN

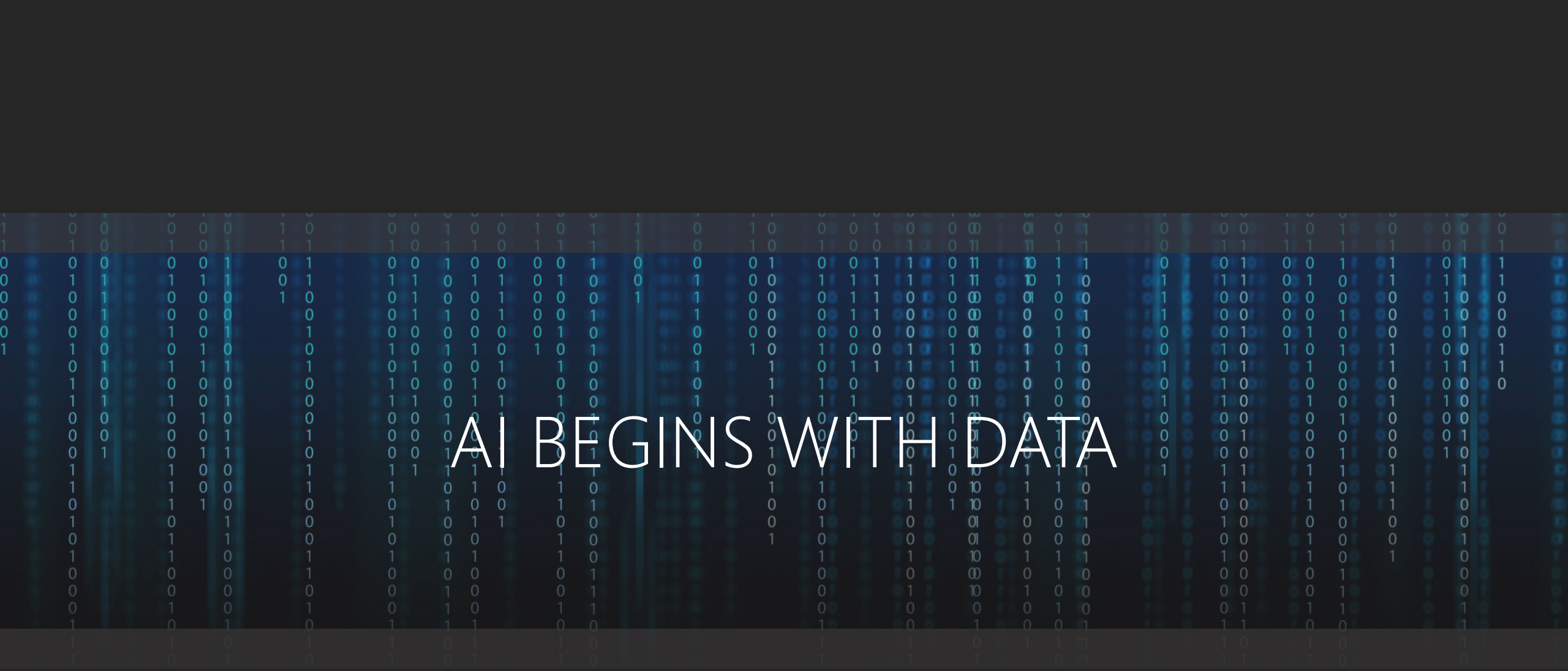
HoloLens




MIXED
REALITY


Elevation
25,643'
Temperature
-22°C
ARTIFICIAL
INTELLIGENCE


QUANTUM
COMPUTING


AI BEGINS WITH DATA

DATA COLLECTION

DATA
COLLECTION

DATA
DISPLAY

DATA
COLLECTION

DATA
DISPLAY

PREDICT
OUTCOMES

DATA COLLECTION

DATA DISPLAY

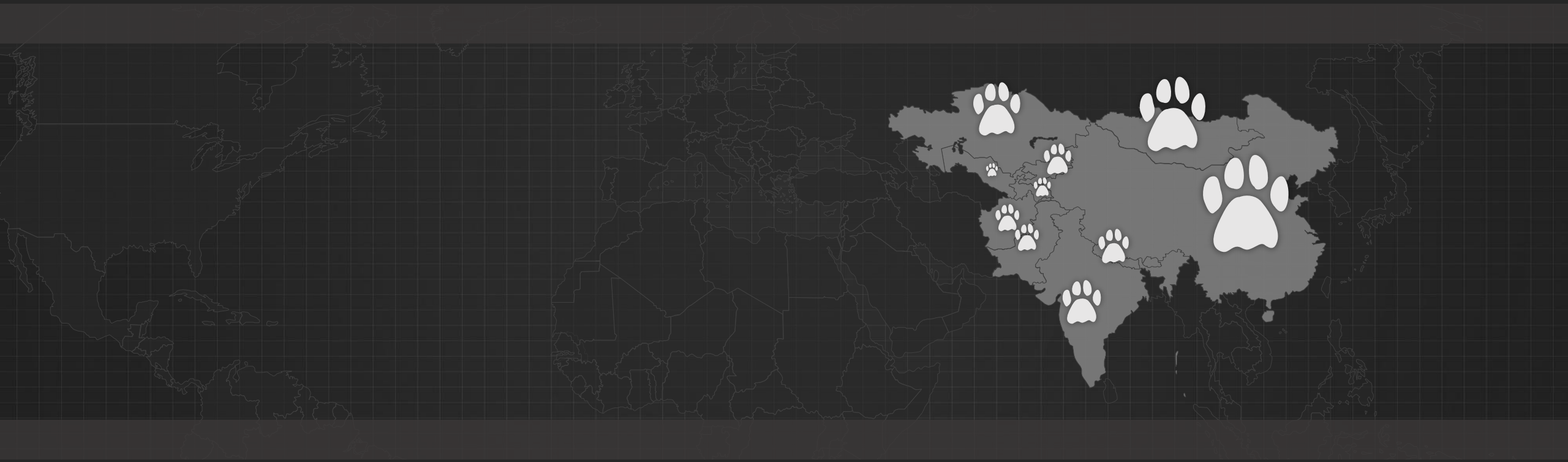
PREDICT OUTCOMES

DRIVE OUTCOMES

ARTIFICIAL INTELLIGENCE

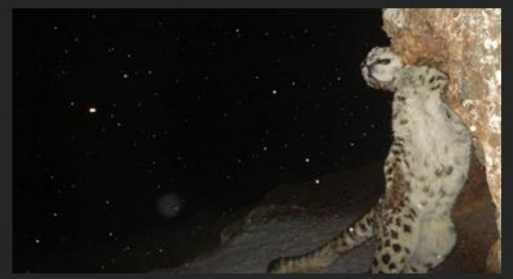
AUGMENTED INTELLIGENCE

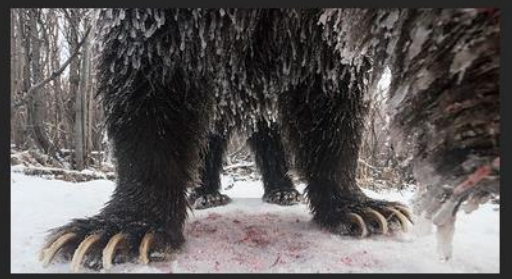
Panthera uncia SNOW LEOPARD

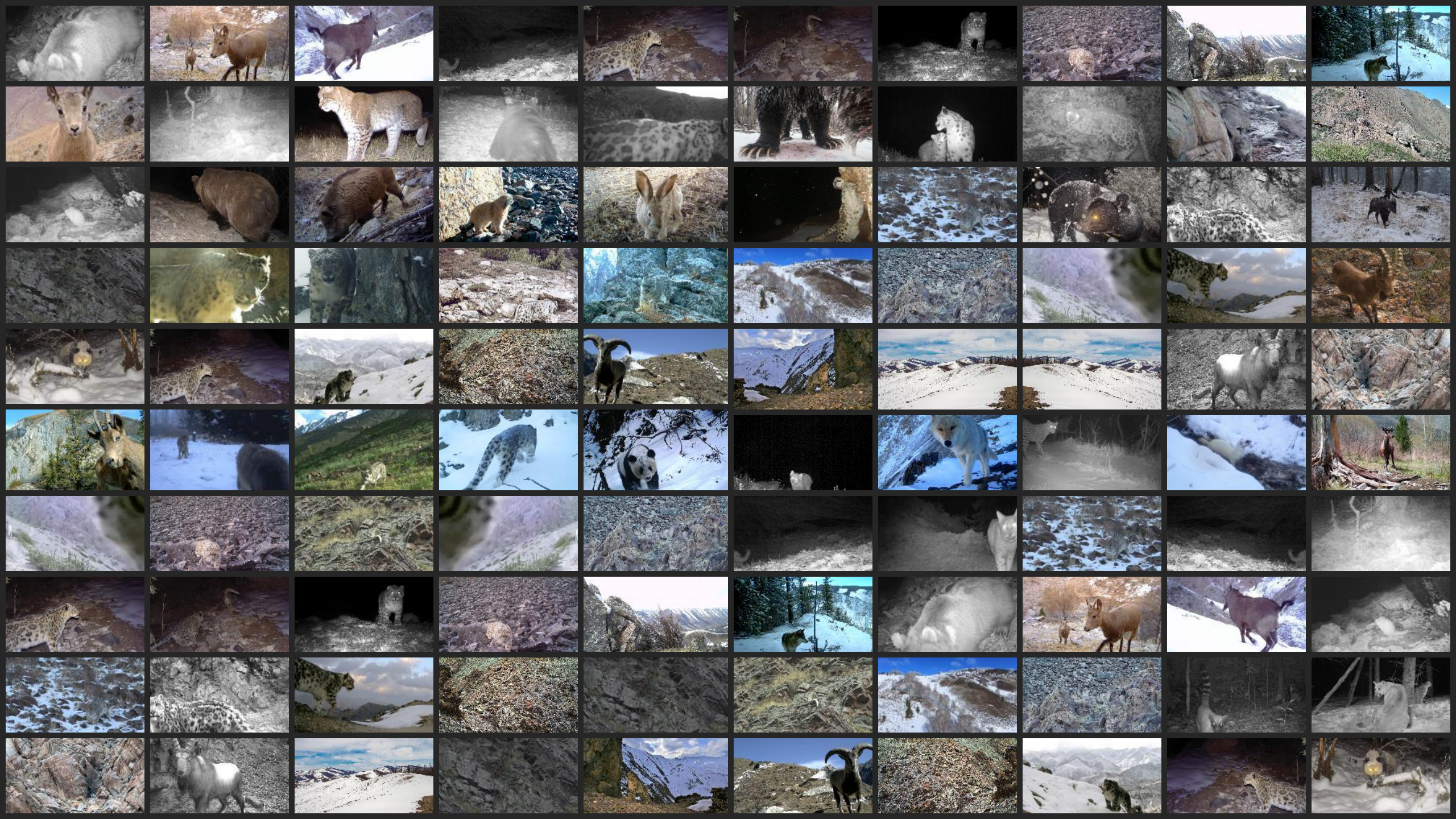


*Population: 5,000**

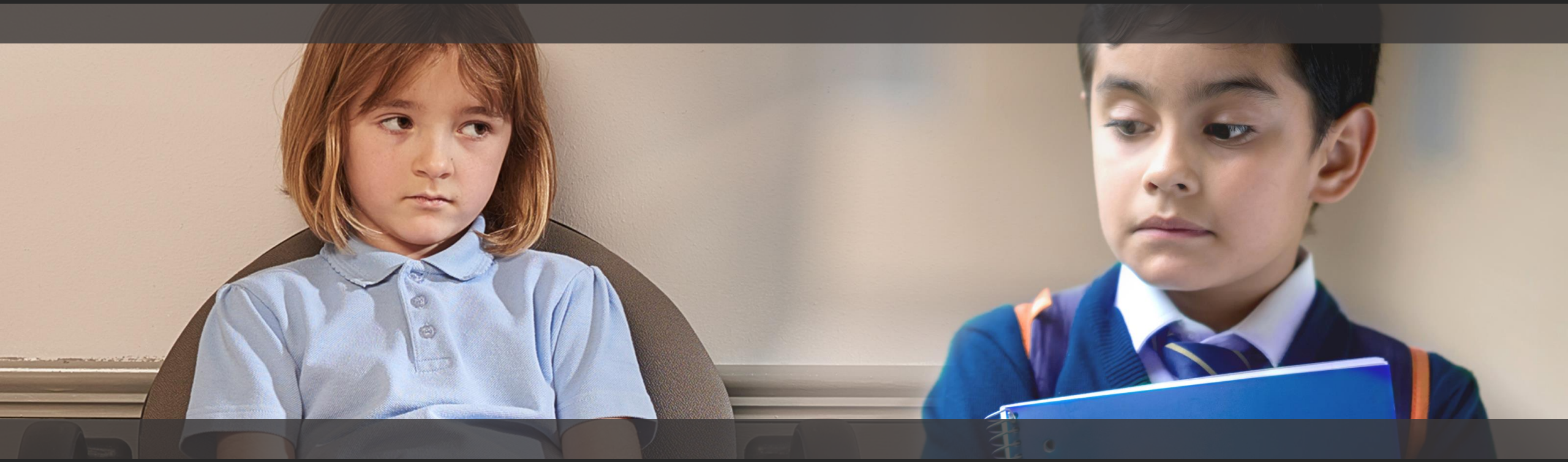
**SOURCE: Snow Leopard Survival Strategy, Seattle, USA: International Snow Leopard Trust and Snow Leopard Network.*



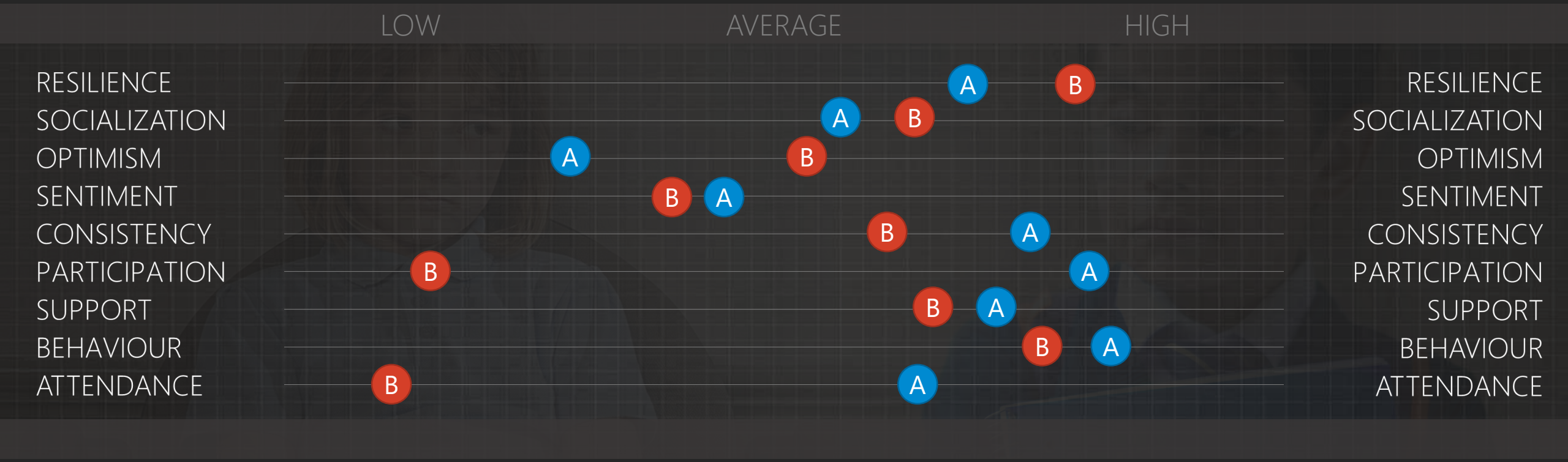




WHO IS AT GREATER RISK?



WHO IS AT GREATER RISK?



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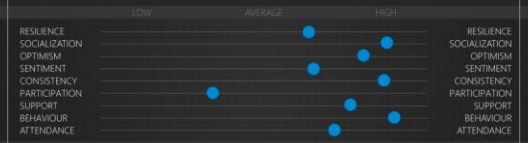
STUDENT 2



STUDENT 3

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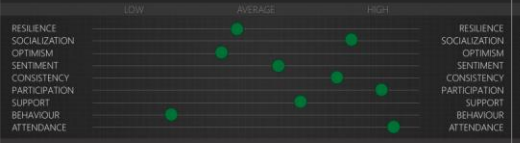
STUDENT 6



STUDENT 7

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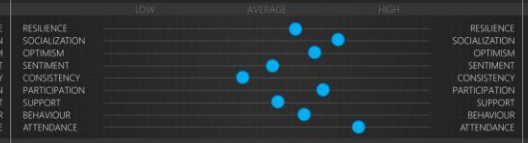
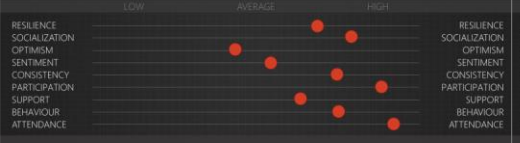


STUDENT 10

STUDENT 11



STUDENT 12

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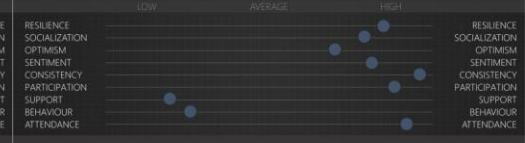

STUDENT 16

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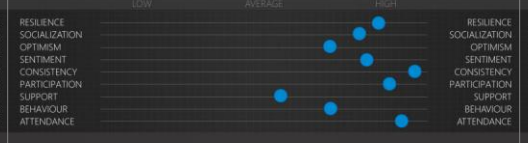

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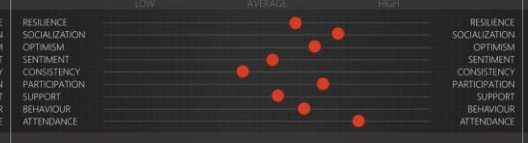

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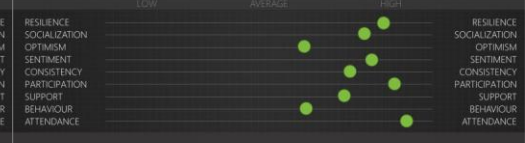
STUDENT 20



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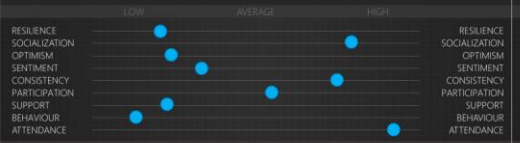

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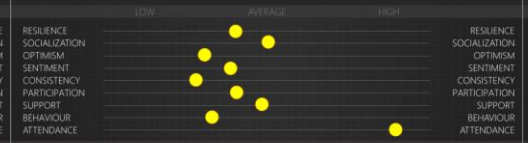

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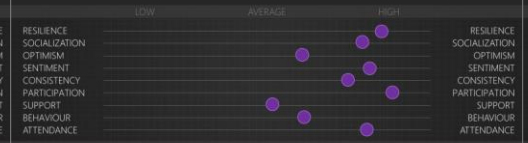

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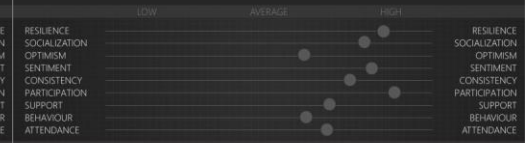

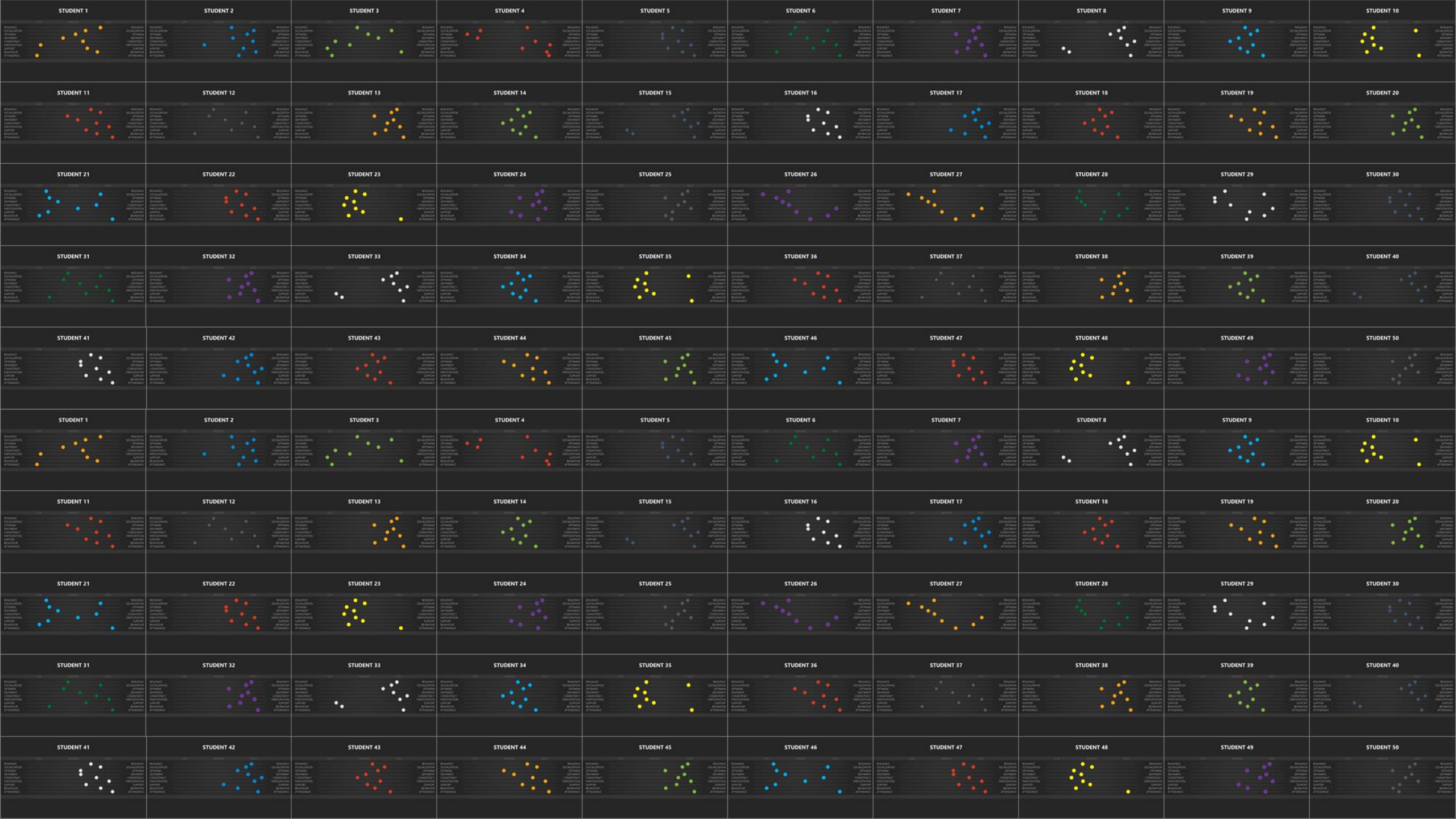
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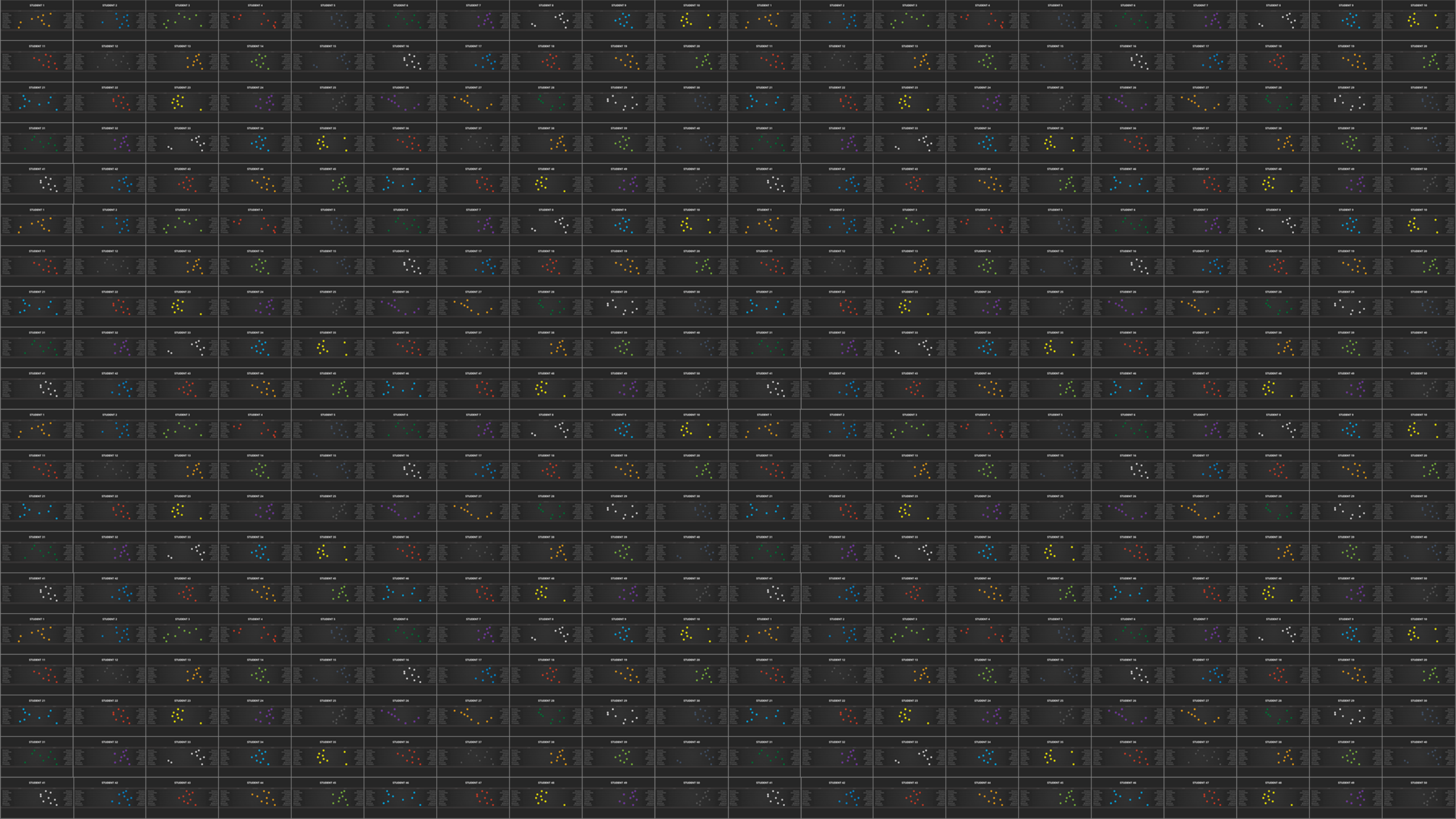
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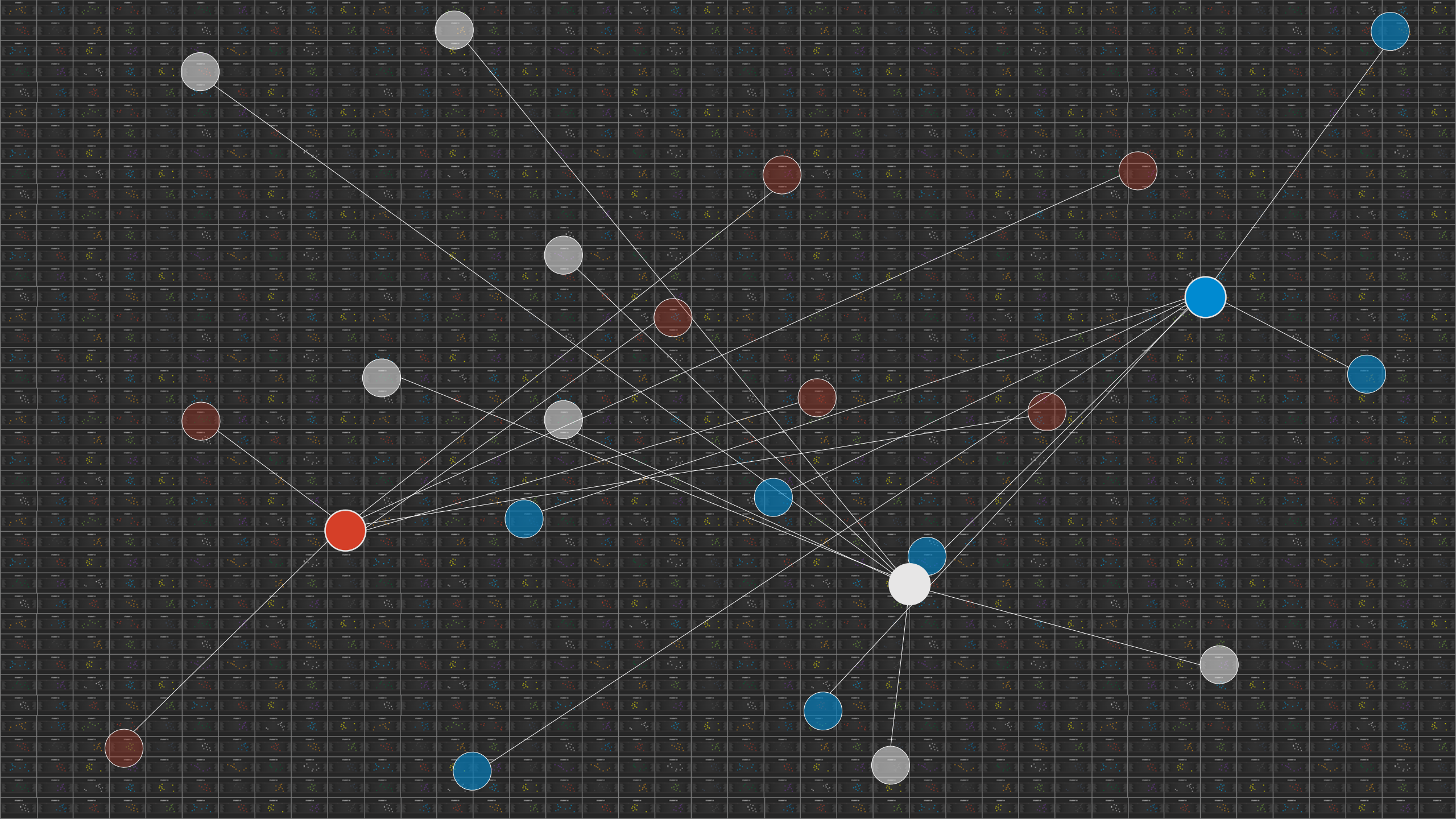


AI for Earth

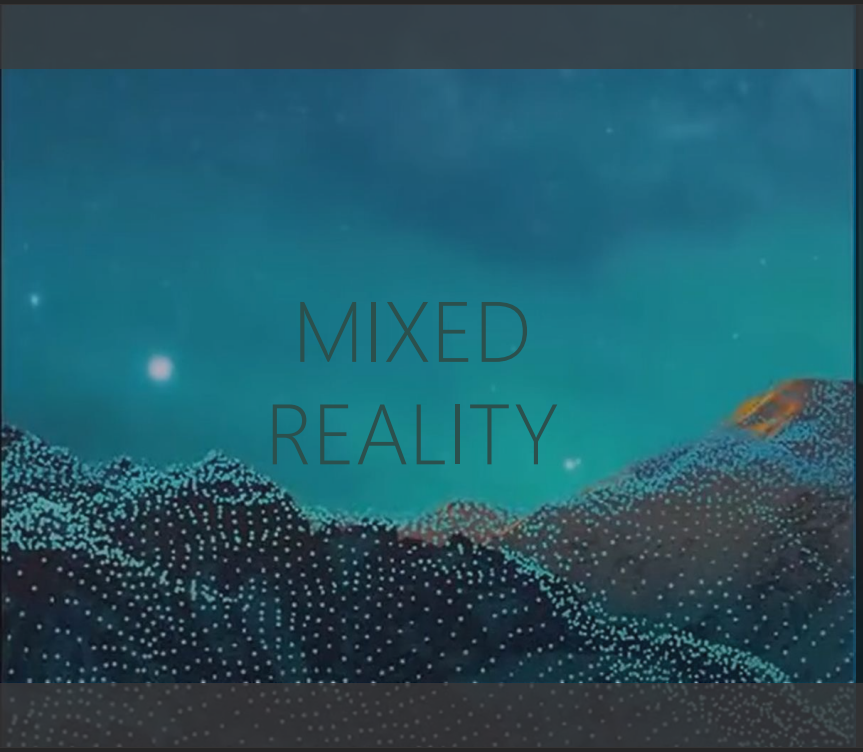
www.microsoft.com/en-us/aiforearth/

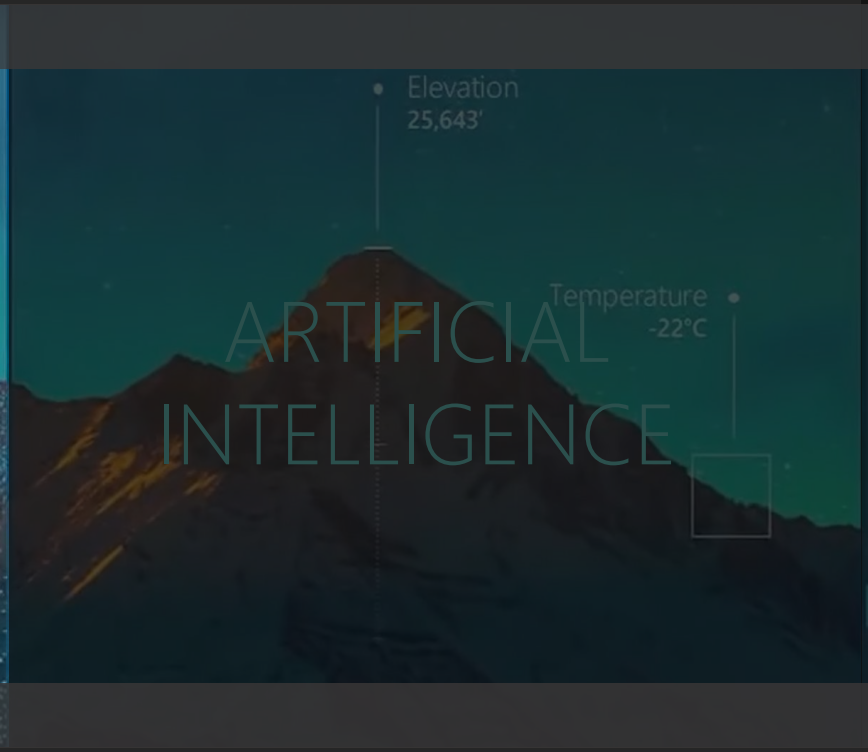
Microsoft

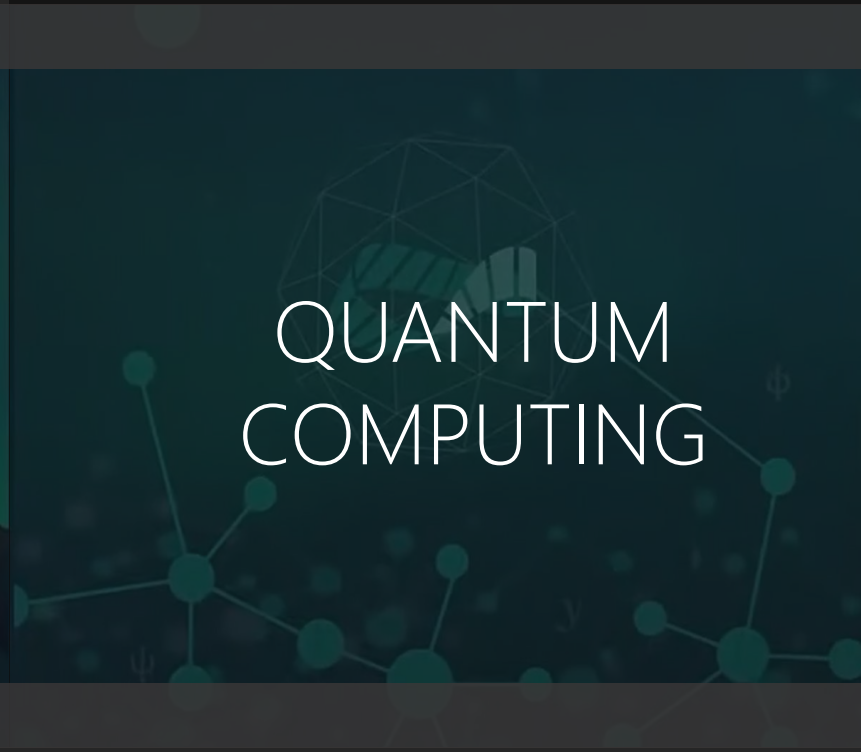
CLIMATE CHANGE

FOOD PRODUCTION

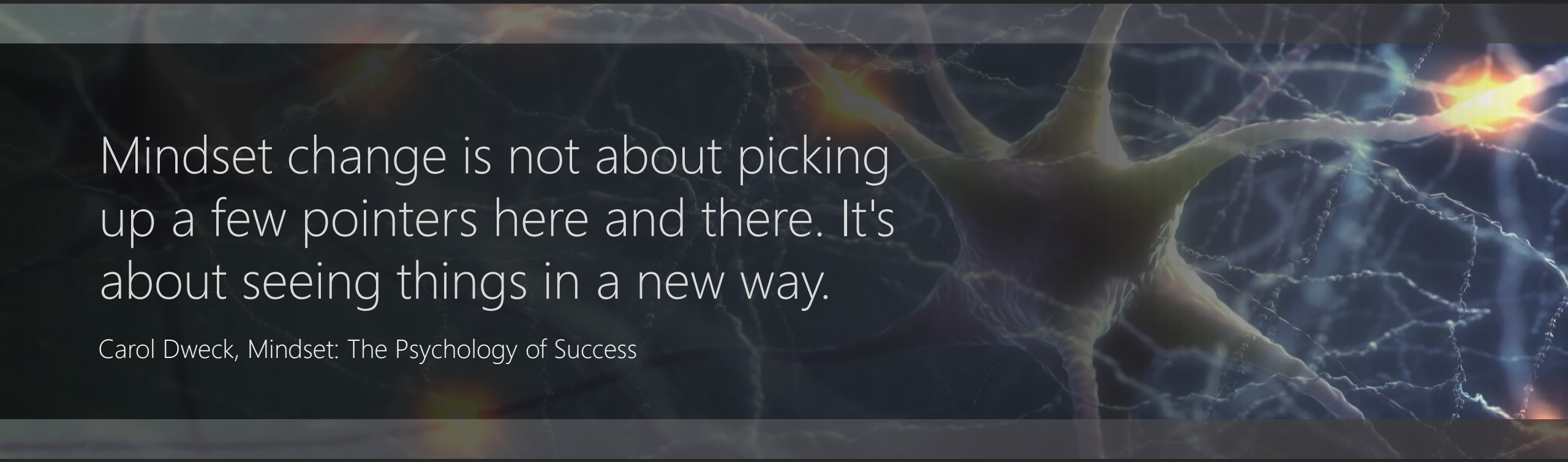
ANTIBIOTIC RESISTANCE


MIXED
REALITY


Elevation
25,643'
Temperature
-22°C
ARTIFICIAL
INTELLIGENCE


QUANTUM
COMPUTING

OUTCOMES
PERSISTENCE
FEEDBACK
PRACTICE
GOOD HABITS
HARD WORK
BRAVERY
DEDICATION
FAILURE
RISKS
IMPROVEMENT
CULTURE
CHALLENGE
SACRIFICE



Mindset change is not about picking up a few pointers here and there. It's about seeing things in a new way.

Carol Dweck, Mindset: The Psychology of Success

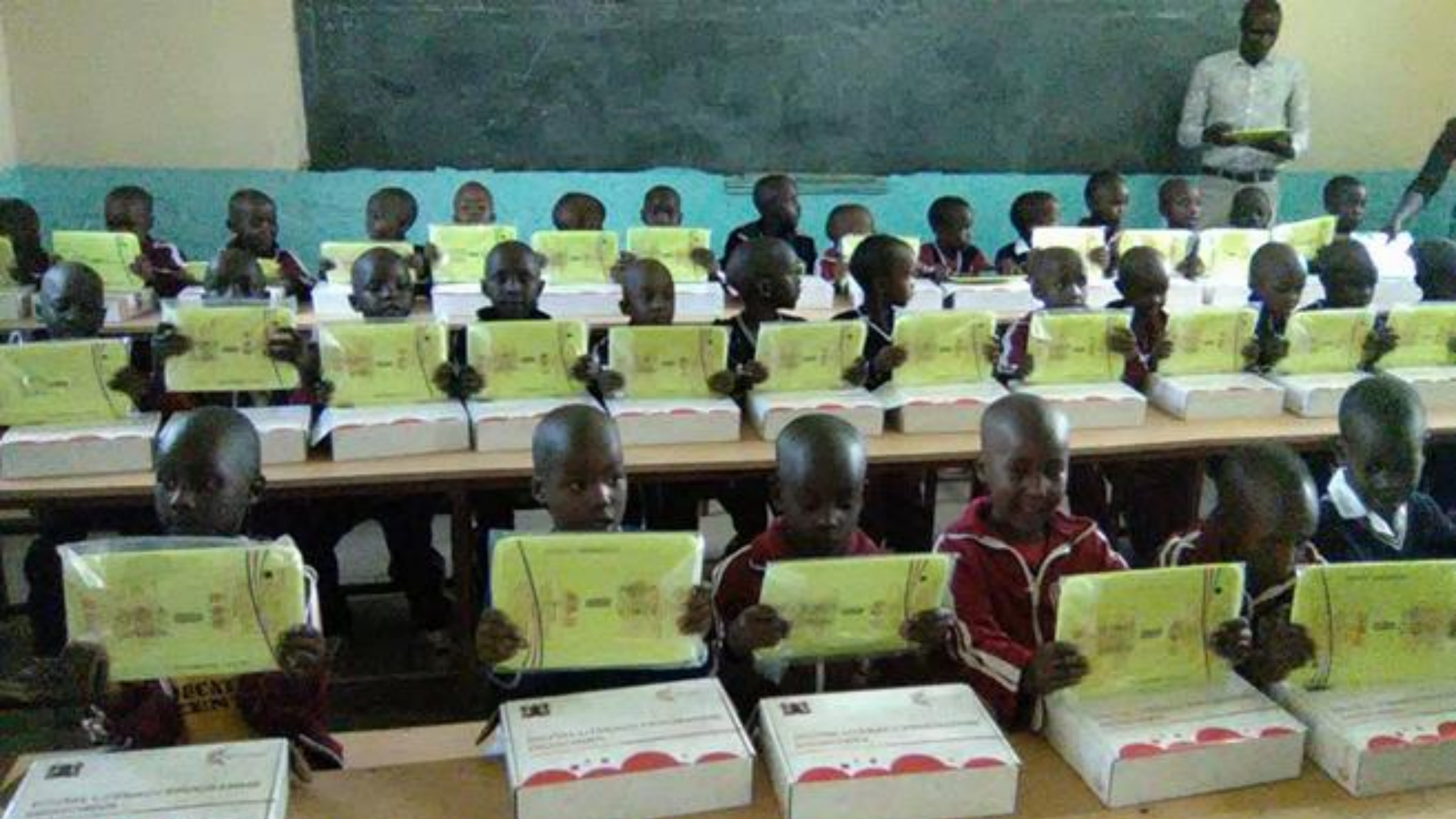
THE 4 PRIORITIES FOR AFRICAN GOVERNMENTS

Investment focus will inevitably lead to improved learning outcomes. Employability and GDP growth

1. Cloud Computing = connectivity to the internet
2. Personal Computing = the right digital device
3. Command of English = the lingua franca of business
4. STEM = everyone will need to learn to code

Connectivity Solutions

- **Team has led projects in 8 African countries**
- **Leader in Affordable Access**
- **TV White Space Solutions**
- **Business Plan development**
- **Financing expertise**
- **Franchise available for deployment across Africa**
- **Contact: frank@good-networks.com**

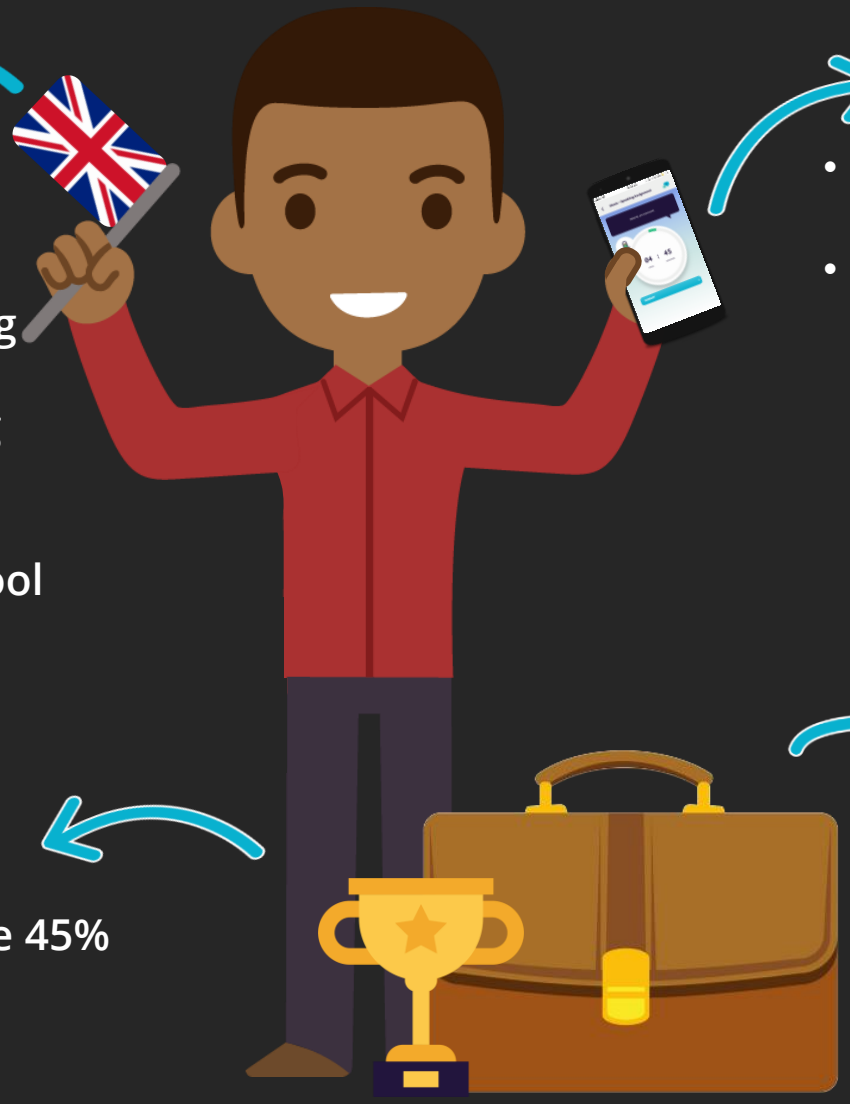


Mobile & Classroom Language Solution For Better Job Prospects

Languagenut

LEARN ENGLISH

- Primary and secondary schools
- CEFR Levels A1 - B2
- Over 20 support languages including French, Portuguese and Arabic
- Practice speaking, listening, reading and writing
- Automatic marking, high levels of student engagement and teacher tool kit



MOBILE APP

- No reliance on school infrastructure
- Only Languagenut offers gamification, differentiation and challenging learning material across all 4 key skills

IMPROVES RESULTS

- Schools using Languagenut achieve 45% higher grades

BETTER JOB OPPORTUNITIES

- Improves global employability
- Based on statistics, jobs that require bilingual skills yield a greater income

MINECRAFT: Education Edition

DESIGNED FOR EDUCATORS

21ST CENTURY LEARNING

K-12 CURRICULUM

CUSTOMER SUPPORT

GAME UPDATES

GLOBAL COMMUNITY

Building a future-proof skill set

A STEM approach to learning provides the platform for students to think differently. Teaching skills like computational thinking and problem solving, Microsoft Education products and programs can provide end-to-end strategies and lesson plans to ignite student interest in STEM and leave them ready to tackle the jobs of tomorrow.

Programs to drive student interest in STEM

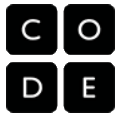
Minecraft: Education Edition
Give students an immersive learning platform to explore.

Microsoft MakeCode
Offer a platform for physical computing that brings computer science to life for all learners.

Hacking STEM
Provide inquiry-based science, technology, engineering and math lesson plans written by teachers for teachers.

Mixed Reality
Engage students to see the world differently by immersing them in a fully 3D learning environment, blurring the lines between physical and digital worlds.

Key Partners



Code.org

WHAT'S INSIDE
BOLT Power Pack includes all the good stuff.
15 SPHERO BOLT ROBOTS
15 PROTRACTORS
15 TURBO COVERS
15 MAZE TAPE ROLLS
124 STICKERS
1 POWER CABLE
BOLT POWER PACK
sphero

Currently Offered MPP Tracks

Data Science

8-12 hours per course

Opportunities for data scientists—one of today's hottest jobs—are rapidly growing in response to the exponential amounts of data being captured and analyzed. Companies hire data scientists to find insights and to solve meaningful business problems.

View Details >

Read curriculum release notes

Big Data

12-30 hours per course

Designing systems that capture, process, and analyze data is critical for companies in order to have a competitive advantage. This curriculum takes students from their first select statement to orchestrating big data workflows in the cloud.

View Details >

Read curriculum release notes

DevOps

8-16 hours per course

To support companies to be more agile, the lines between development and operations are becoming increasingly blurred. Through continuous integration and deployment, students will learn how to react to changing market conditions.

View Details >

Read curriculum release notes

Front-End Web Development

15-30 hours per course

The demand for Front-End Web Developers is expected to increase by 27% through 2024. That's why companies need people who are fluent in programming languages and frameworks ranging from HTML, CSS, and JavaScript, to Angular, Bootstrap, and jQuery.

View Details >

Read curriculum release notes

IT Support

8-16 hours per course

The help desk is the front line of engagement for customers when problems arise. With the IT Support track you will learn a wide range of skills to diagnose, troubleshoot, and solve customer issues.

View Details >

Artificial Intelligence

8-16 hours per course

Artificial Intelligence (AI) will define the next generation of software solutions. Human-like capabilities such as understanding natural language, speech, vision, and making inferences from knowledge will extend software beyond the app.

View Details >

Read curriculum release notes

Entry Level Software Development

8-16 hours per course

Nearly all tech that you engage with relies on software. The job outlook for software developers is growing year after year. Simply put, Software Developers are the people bringing the modern world to life.

View Details >

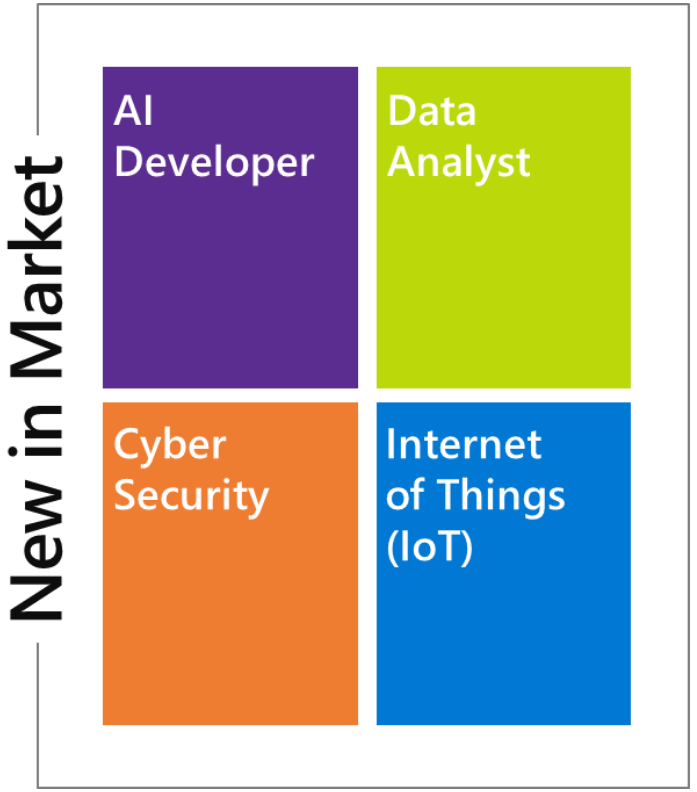
Read curriculum release notes

Cloud Administration

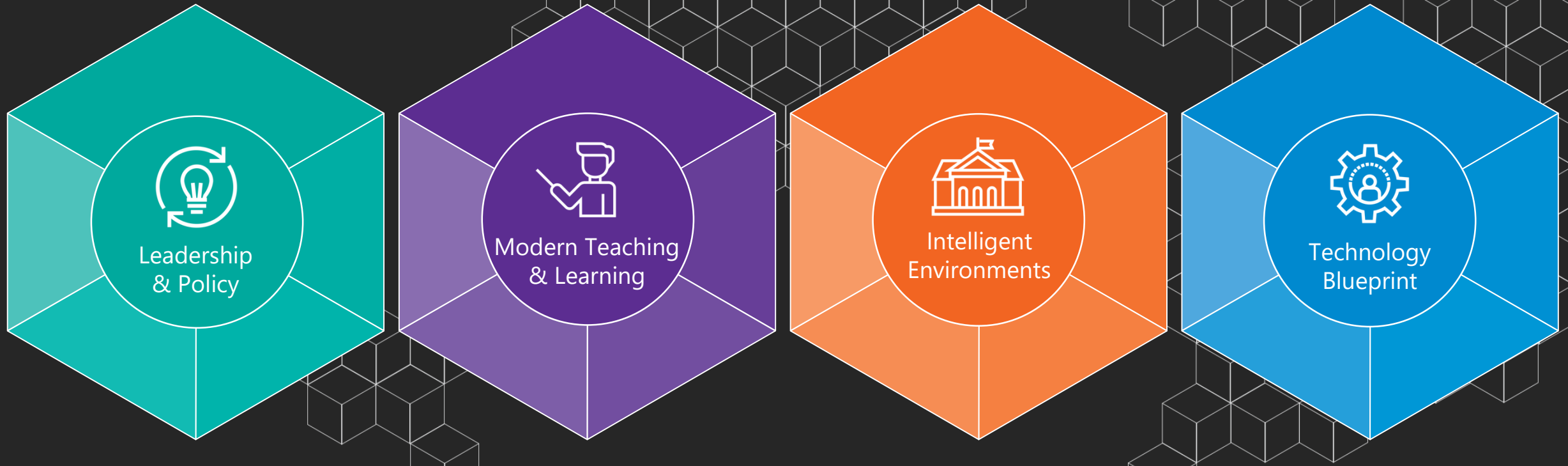
12-18 hours per course

As companies move to the cloud, the need for cloud skilled professionals continues to rise. Companies need people with a range of skills; such as automation of deployments and workloads, to understanding how to best and compliance.

View Details >

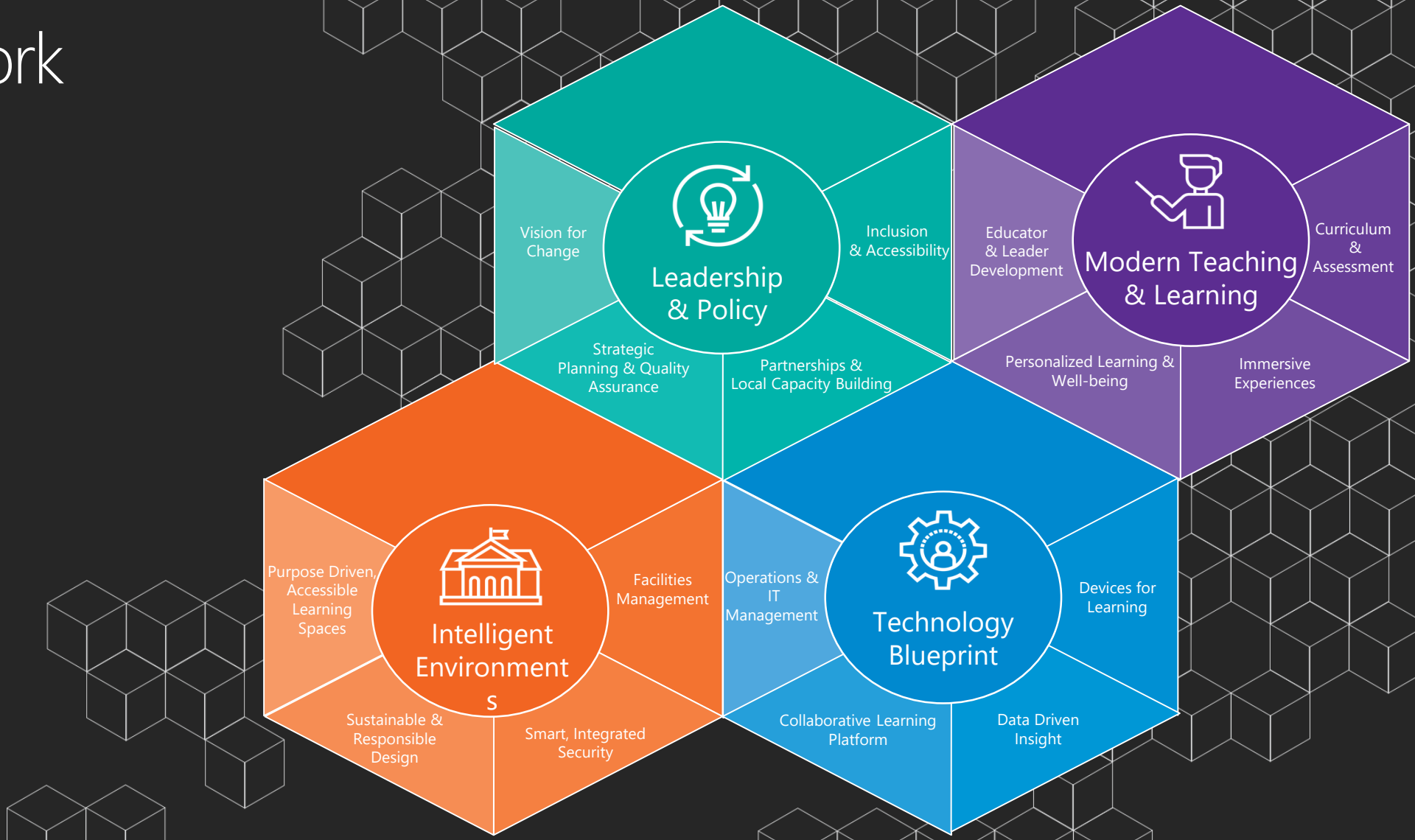


Education Transformation Framework



The framework has evolved from insight across over 1,000 Microsoft Showcase Schools globally and provides insight, tools and research to optimize school design inside and out.

Education Transformation Framework



Microsoft
Transforming Education
Empowering the students of today to create the world of tomorrow

THANK YOU

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Microsoft