

TONOMUS.  
NEOM

# MOVING FROM SMART TO COGNITIVE

FOUNDATION OF *VALUE* FOR ENTERPRISES,  
SOURCE OF *LIVABILITY* FOR CITIES



Joseph Bradley  
CEO, *TONOMUS*





**ON JANUARY 29, 2020,  
THE WORLD WAS CALM**



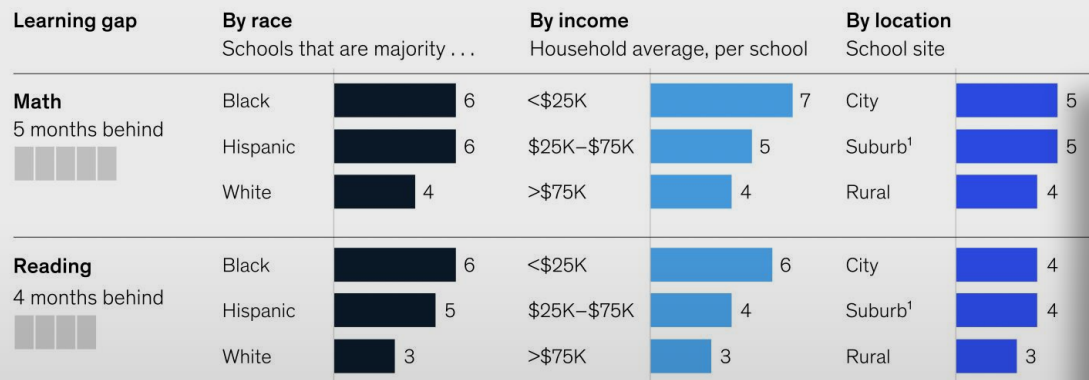


**THEN, EVERYTHING CHANGED**



**By the end of the 2020–21 school year, students were on average five months behind in math and four months behind in reading.**

Cumulative months of unfinished learning due to the pandemic by type of school, grades 1 through 6



<sup>1</sup>Town or suburb.  
Source: Curriculum Associates i-Ready assessment data



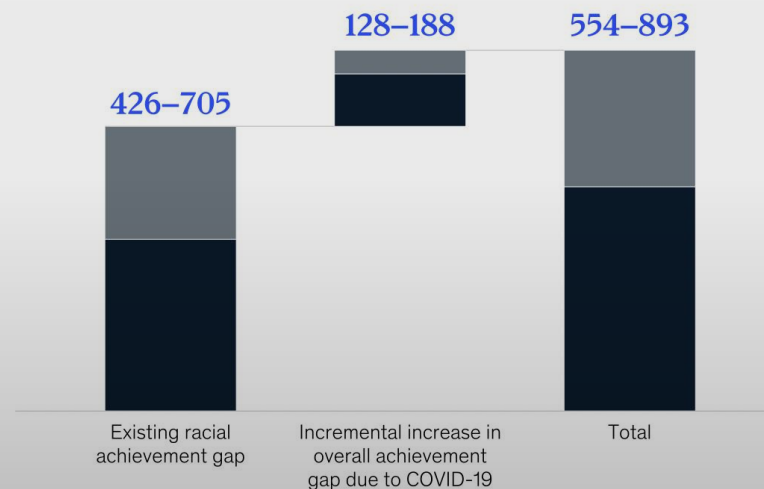
UNCTAD Prosperity for all

**Global economy could lose over \$4 trillion due to COVID-19 impact on tourism**

30 June 2021

**The economic gap caused by pandemic-related unfinished learning adds to existing racial achievement gaps in the United States.**

Lost economic potential per year, \$ billions





# WHAT IS COGNITIVE?



## Traditional



Stagnant Learning



Siloed



One-Time Transactions



Reactive



## Cognitive



Accelerated Learning



Unified

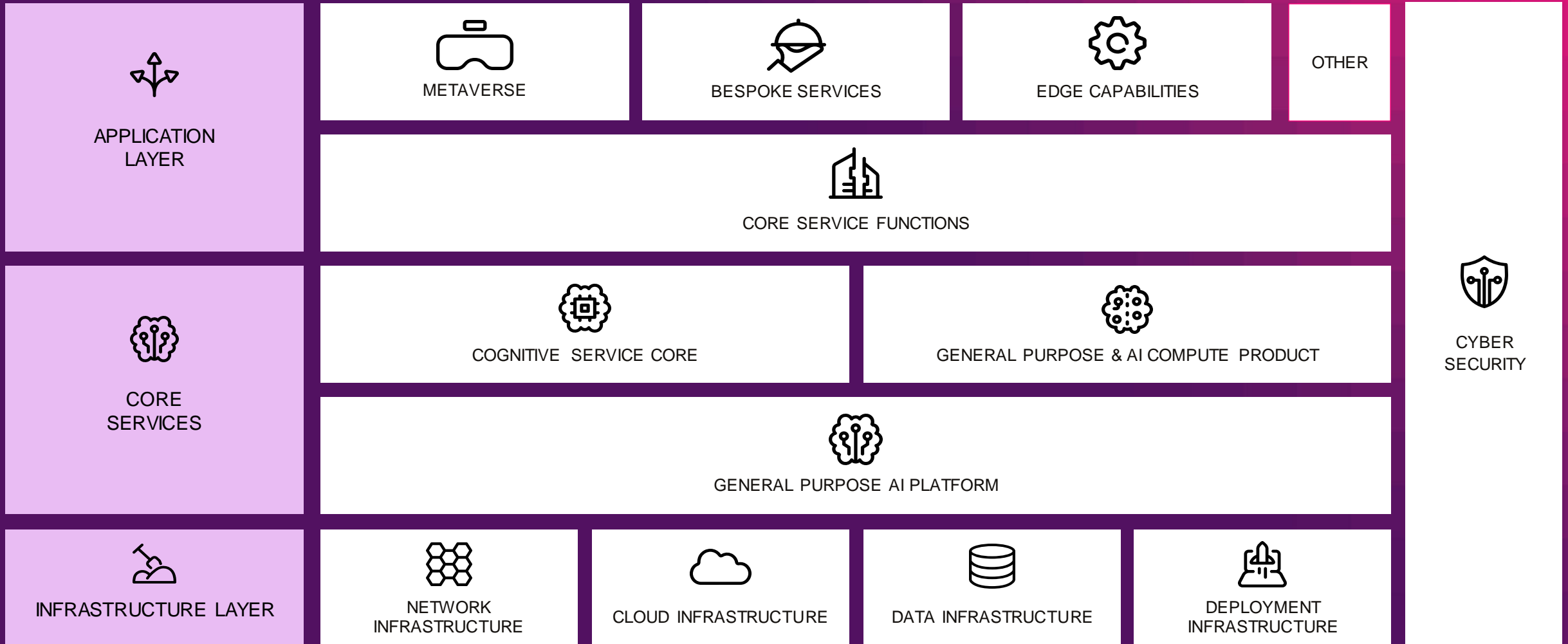


Co-Evolutionary Relationship



Proactive & Predictive

# THE COGNITIVE BLUEPRINT





# THE EXPERIENCE PARADIGM

Algorithms can't optimize for happiness, only efficiency.  
But the most efficient choice may not always drive the best experience *for you*.

*How do we resolve this?*

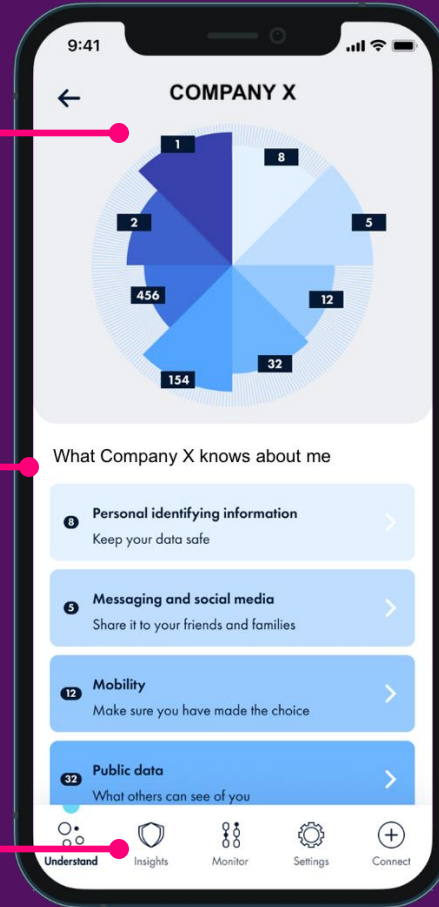
***By bringing people back into the equation.***



# GOLDEN RULE #1

## WITHOUT TRUST, THERE IS NO DATA OR VALUE

- 1 Find out who has your data
- 2 Monitor how your data is being used
- 3 Get recommendations on privacy settings for all your digital accounts





# GOLDEN RULE #2

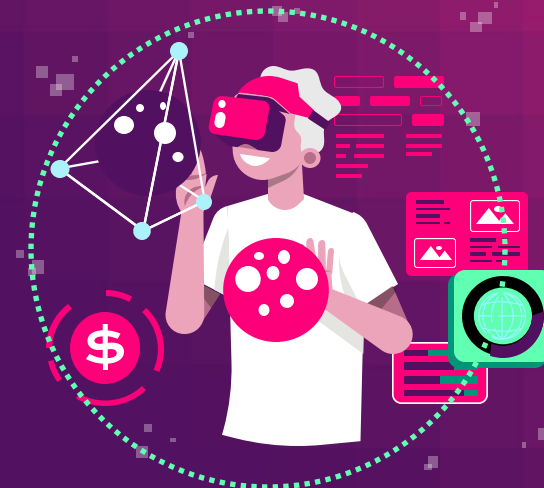
## AI IS A PEOPLE-FIRST VENTURE



**Inclusive  
Beyond Divide**



**Inclusive  
Beyond Ability**

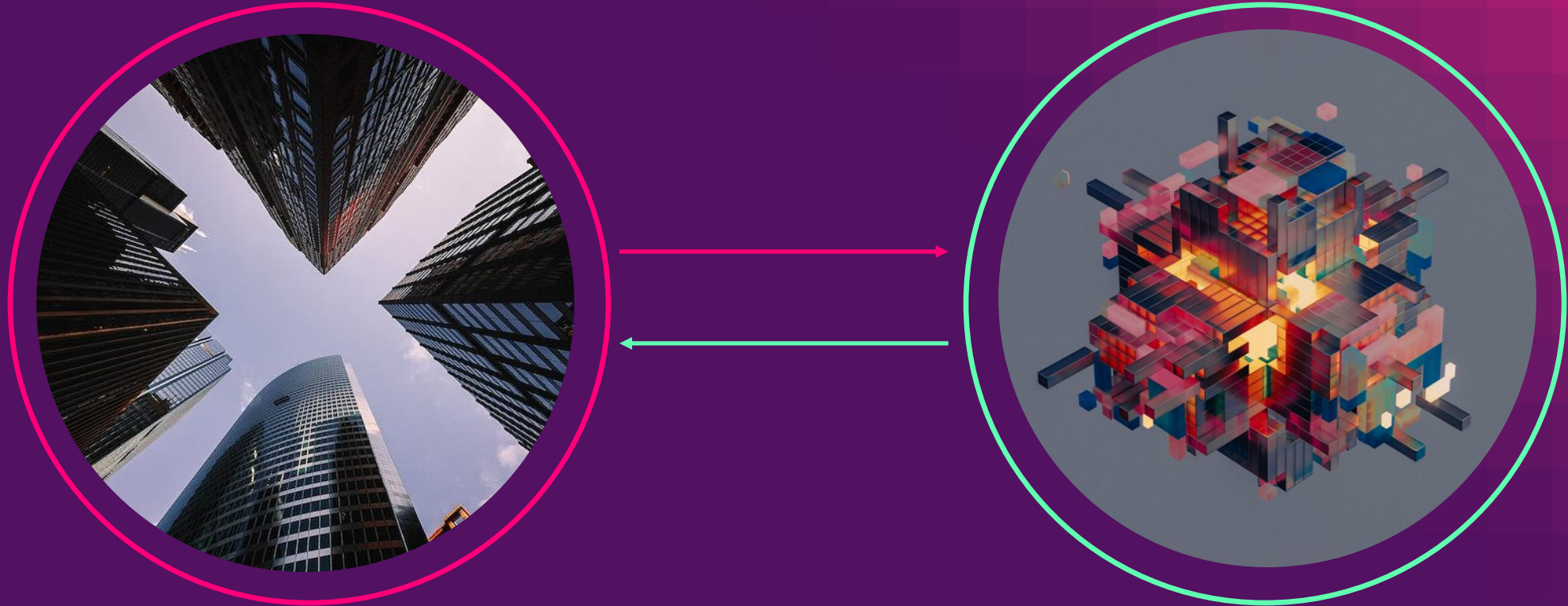


**Inclusive  
Beyond Borders**

## GOLDEN RULE #3

# THE PHYSICAL IS AN ADD-ON TO THE DIGITAL

VIRTUALIZE THE REAL & REALIZE THE VIRTUAL







# MALCOLM'S METAVERSE





**THE METAVERSE REPRESENTS  
AN UNSTOPPABLE WAY FOR  
HUMANITY TO MOVE, TO  
LEARN, TO CONNECT...  
FOR US TO BE HUMAN.**



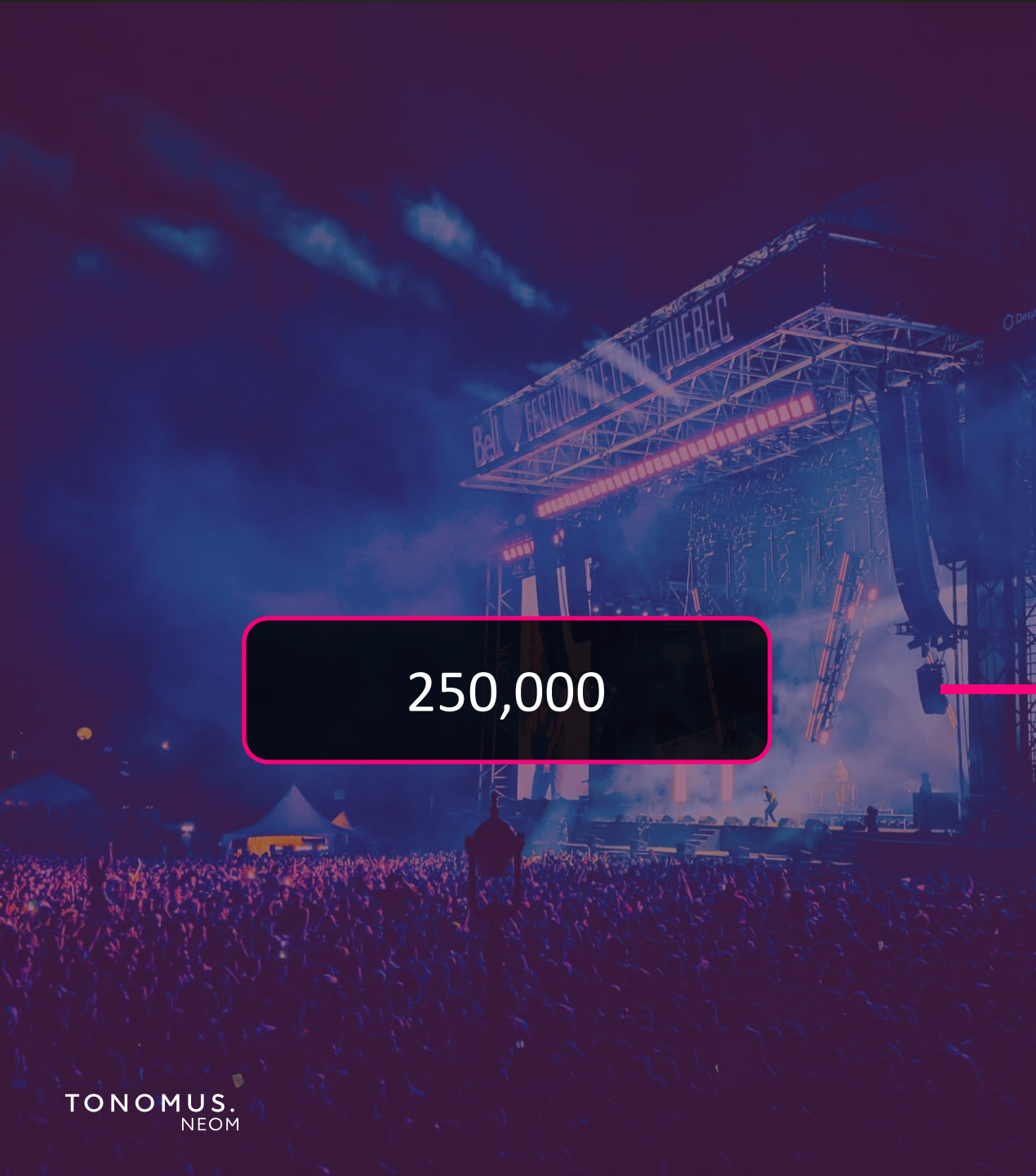
**ETERNAL**  
**NOTRE DAME**  
NOTRE DAME DE PARIS











250,000



**FORTNITE**



27 Million

**METAVVERSE  
CONCERT**

**TRAVIS SCOTT x FORTNITE**







# THE LINE REDEFINED LIVING

THE MODULES ARE DESIGNED TO HOUSE UP TO 80,000 PEOPLE IN CLOSE PROXIMITY TO WORK, LEISURE, EDUCATION AND HEALTH SERVICES, ENABLING EVERYONE TO ATTAIN A GOOD WORK/LIFE BALANCE.

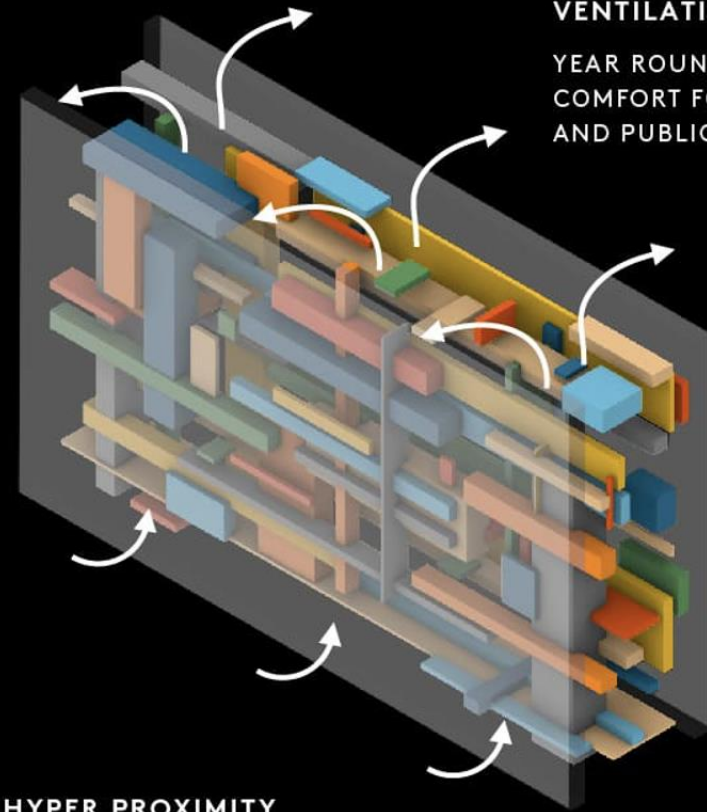
**2 MIN**  
UNINTERRUPTED  
ACCESS TO NATURE

**ZERO**  
CARS & CARBON  
EMISSIONS

**5 MIN WALK**  
TO ALL AMENITIES

**NATURAL  
VENTILATION**

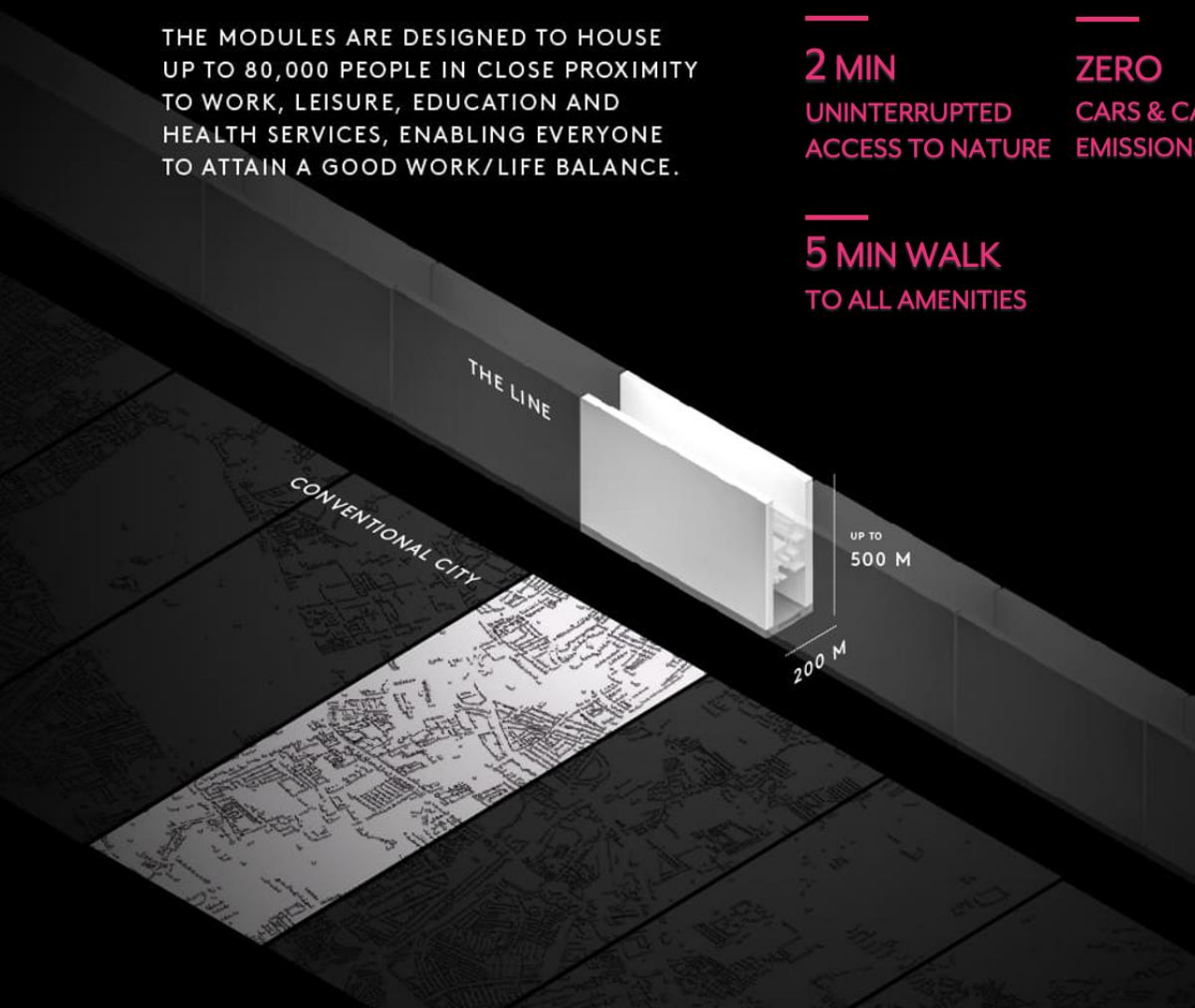
YEAR ROUND THERMAL  
COMFORT FOR INDOOR  
AND PUBLIC SPACES



**HYPER PROXIMITY  
OF AMENITIES**

- RETAIL
- OFFICE
- HEALTH
- LEISURE
- CULTURE
- EDUCATION
- HOSPITALITY
- RESIDENTIAL

**9M  
RESIDENTS**



# THE MULTIVERSE CITY, MERGING PHYSICAL AND DIGITAL WORLDS

## MULTIVERSE CITY



*“It is the collapsing of time and space, the merging of the digital and physical worlds...the city’s answer to the virtual era, providing instant access to multiple worlds.”*



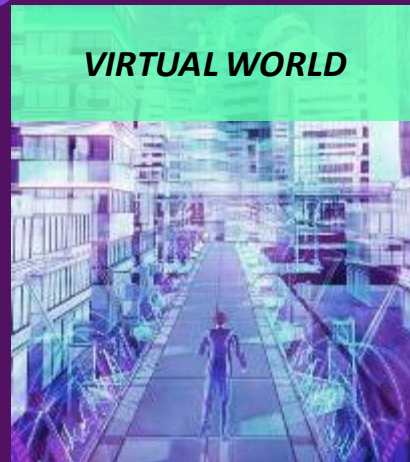
## PHYSICAL WORLD

The physical neighborhoods and communities of a city



## ‘RESIDENTS’ PHYSICAL USERS

Every city is home to, and visited by, diverse populations (users) from all walks of life – and sources across the globe



## VIRTUAL WORLD

Metaverse of a city, enabling virtual life, exploration, interactions by breaking down physical limitations



## ‘AVATARS’ VIRTUAL USERS

The Metaverse enables residents to create their own ‘Avatars’ – **virtual representations of themselves**, to live and interact among others virtual users and programmed Avatars in other cities as well



ENABLING THE WORLD'S FIRST COGNITIVE CITY  
**COMPLEMENTING  
DIGITAL AND REAL  
EXPERIENCES**



8-11s

12-15s

Boys

Girls



ENABLING THE WORLD'S FIRST COGNITIVE CITY

# COMPLEMENTING DIGITAL AND REAL EXPERIENCES



≡ Forbes

INNOVATION

## The Metaverse: A New Frontier In Talent Engagement

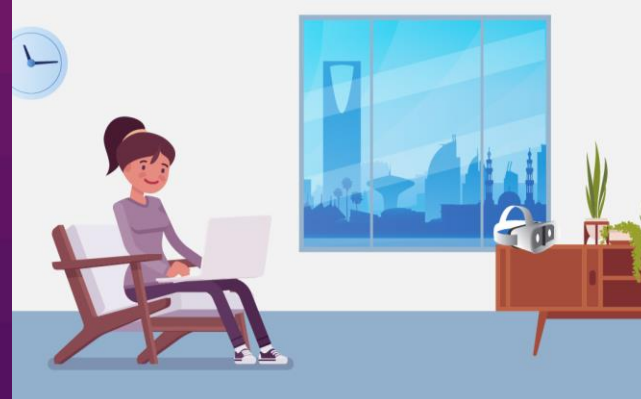
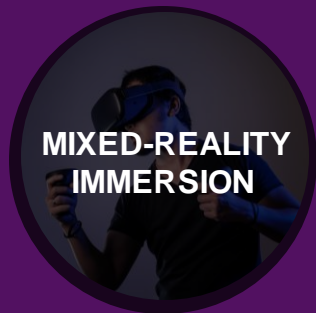
Harvard  
Business  
Review

Innovation

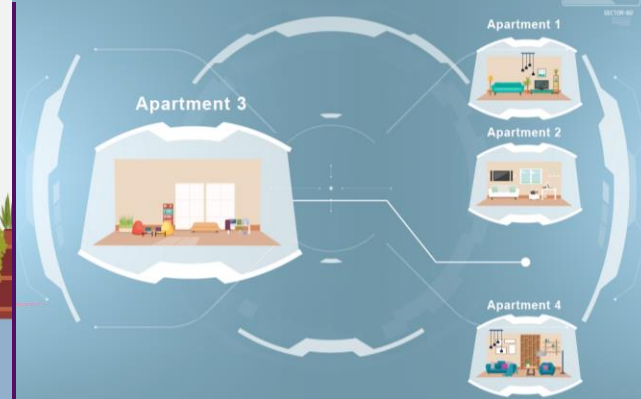
## Find the Right Expert for Any Problem

# ENABLING THE WORLD'S FIRST COGNITIVE CITY

## COMPLEMENTING DIGITAL AND REAL EXPERIENCES

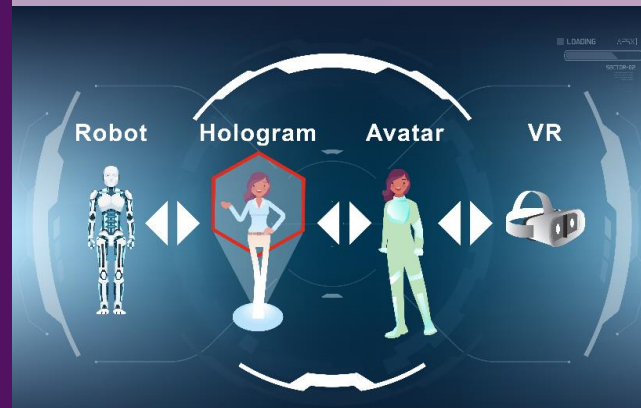


Sarah is a young lawyer living in New York. Fascinated by NEOM's vision, she subscribes to gain access to the virtual world and gets the opportunity to buy fractional ownership of digital assets.



Buying a small fractional ownership of a virtual apartment block in the form of a "real-estate NFT", she gains access to private and communal areas.

She easily trades and gains more real-estate NFTs to optimize her personalized portfolio. Her personal real-time dashboard shows the progress of her digital investments.



Through the metaverse, she can teleport instantly to NEOM.

Three options are displayed to enter as an AR avatar, hologram or robot.

She chooses to dive in as a hologram.



Through her hologram she appears in the middle of a green park with diverse plants from all over the world.

Looking around she can see buildings on her left and right, stretching far into the horizon.

Further in the park, she spots her friends projected as different AR avatars, holograms and robots, talking and laughing with each other. She quickly joins her group of friends.





AUGMENTED REALITY

HOLOGRAM TECHNOLOGY

BRANDED VIRTUAL WORLDS

VIRTUAL REAL ESTATE

AR ART EXHIBITIONS

ROBOT AVATARS

COGNITIVE CITY INFRA

SMART CITY ANALYTICS

BRANDED VIRTUAL EVENTS

RETAIL NFTs

# THE MOVEMENT BETWEEN PHYSICAL AND VIRTUAL DRIVES COUNTLESS OPPORTUNITIES TO MONETIZE



# THE GUCCI GARDEN EXPERIENCE

GUCCI X ROBLOX

## A digital Gucci bag sold for more than its 'real' value



The Gucci Dionysus, a logo enveloped bag with a distinctive tiger closure, was sold for 4,115 dollars compared to its store price of 3,400 dollars.

# GROUND RULES TO GET STARTED



## ONE EXPERIENCE AT A TIME

There is no single global metaverse, yet — focus on building use cases first that can converge into the full Metaverse later.



## THE DUALITY OF PHYSICAL & VIRTUAL

The key to the metaverse is in blending physical and virtual; it can't be one or the other. We need frictionless engagement, not clunky VR headsets.



## PLATFORM ECONOMICS RULE THE METAVERSE

Everything the metaverse touches is a platform, and a platform is only as valuable as the people that are engaging with it. The more inclusive and the more seamless, the more valuable the experience.



**WE ARE TOO COMFORTABLE  
WITH DESPAIR...**













A young woman in a school uniform stands in the center of a street completely destroyed by disaster. The buildings on either side are skeletal remains of concrete and steel, with debris scattered everywhere. The sky is a pale, hazy blue. The overall mood is one of desolation and hope.

**IT'S OUR RESPONSIBILITY TO  
IMAGINE A BETTER WORLD**



**FOR THEM**







**AND THEM**



