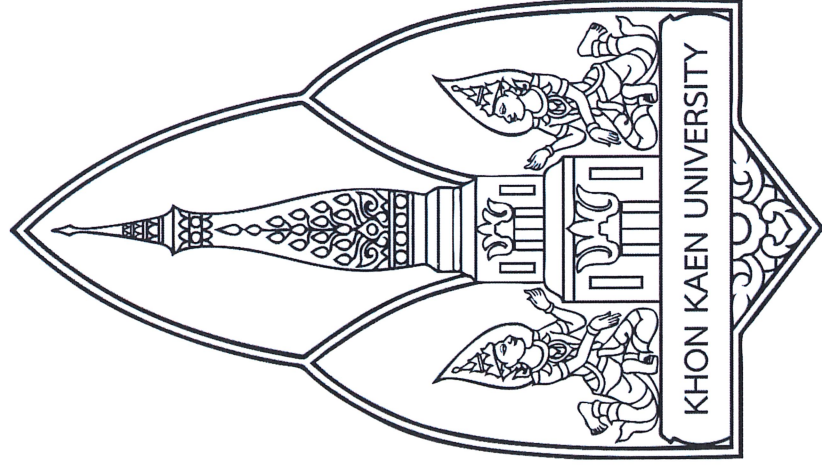
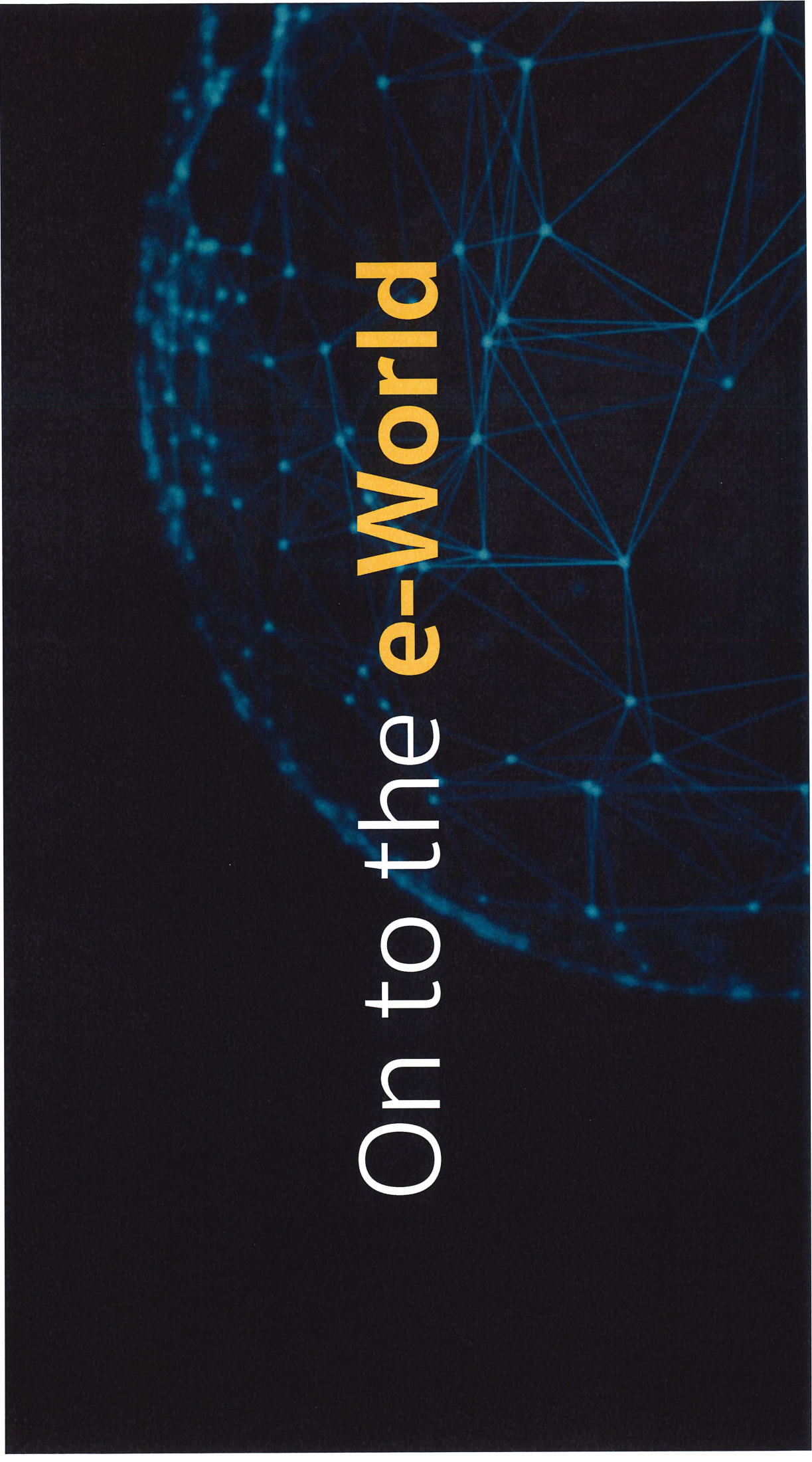


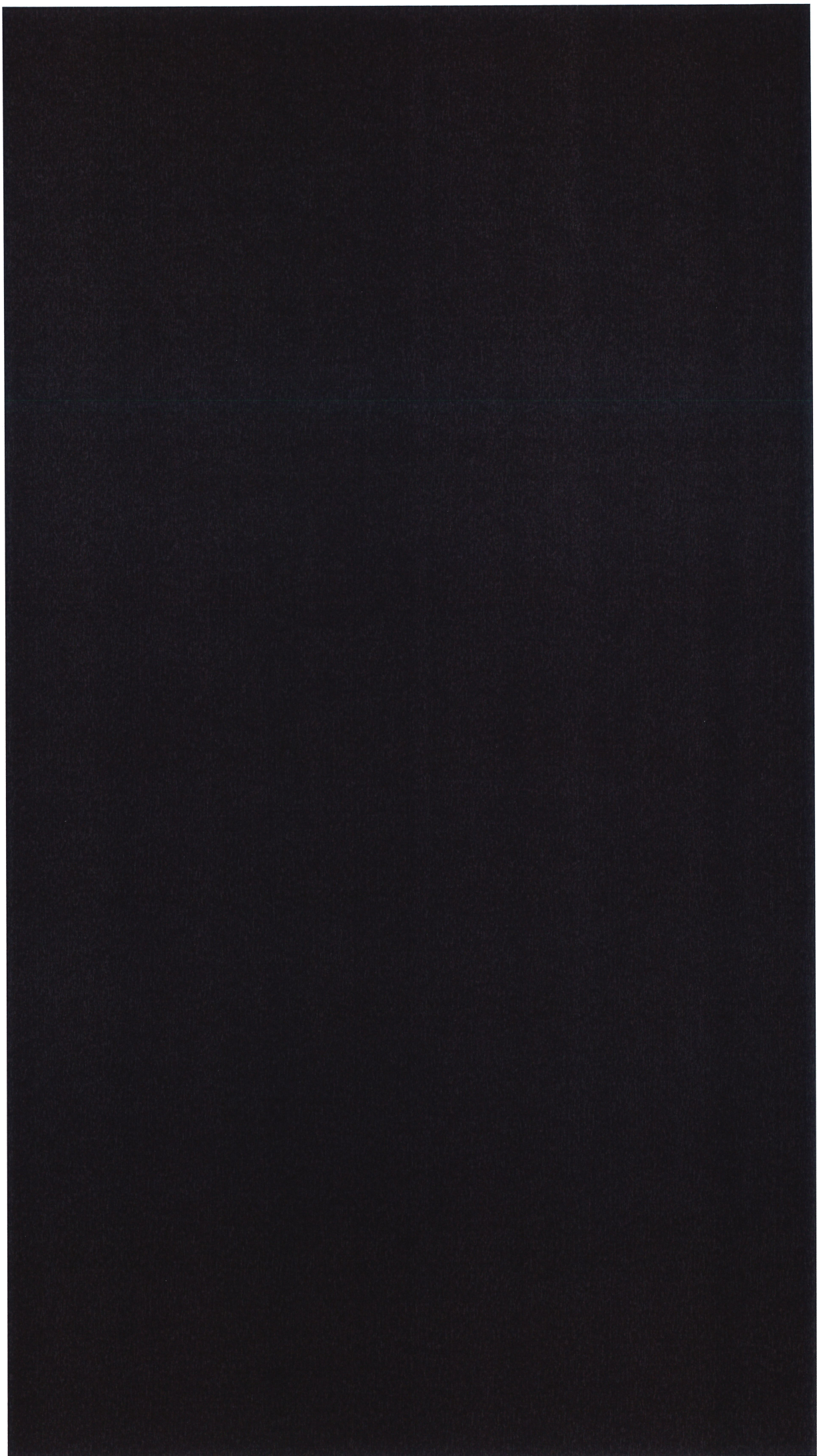


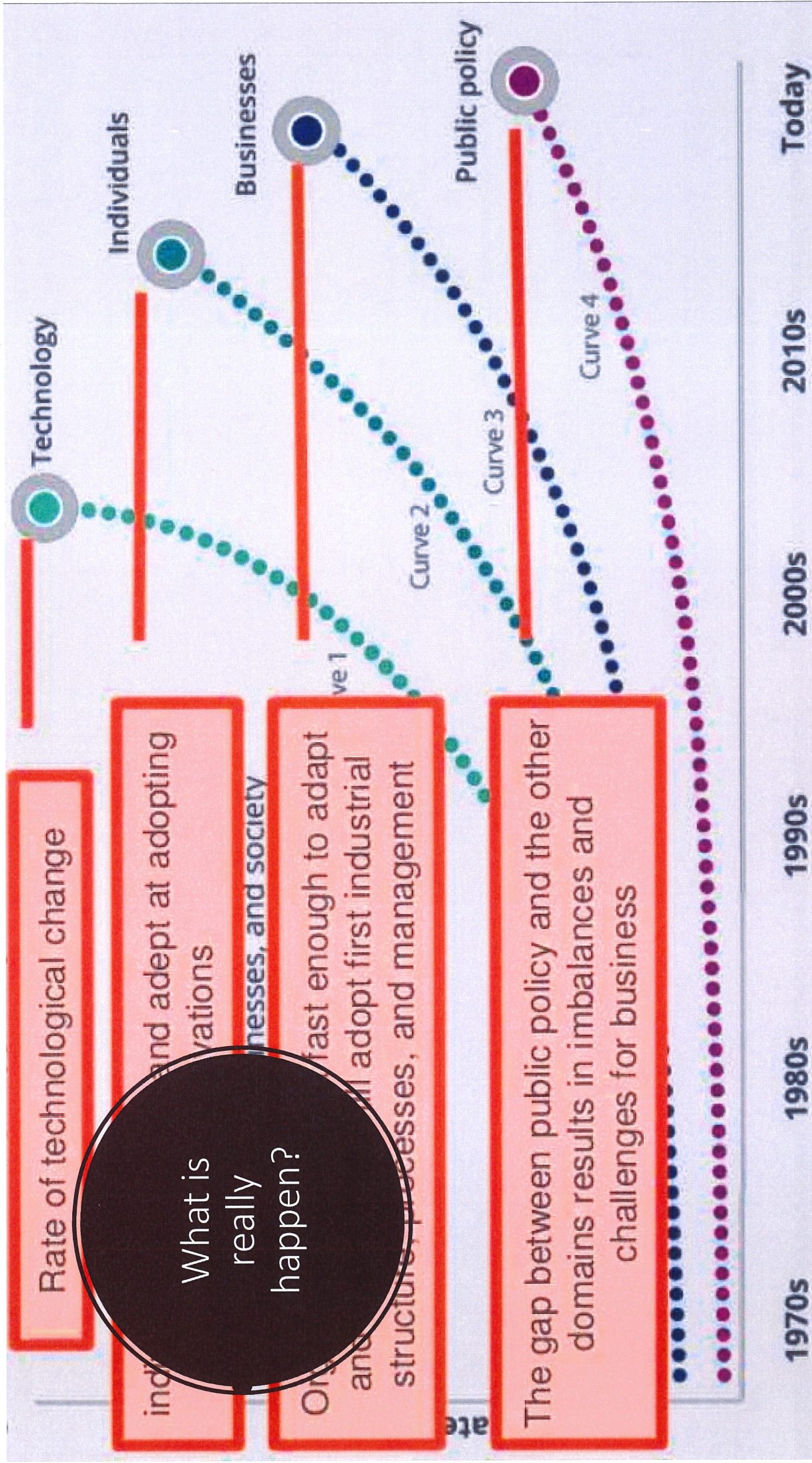
Digital Transformation in Education

Denpong Soodphakdee, Ph.D.
Vice President for Digital University Development
Khon Kaen University

An abstract graphic featuring a dark blue background with a glowing network of interconnected nodes and lines, resembling a digital or molecular structure. The nodes are small, bright blue dots, and the lines are thin, glowing blue lines that connect them in a complex, web-like pattern. The overall effect is one of high-tech connectivity and data flow.

On to the e-World





What is really happen?



Four Waves of AI Applications

Source: Kai-Fu Lee at AI Frontiers : The Era of Artificial Intelligence

AI enter era of implementation

Early Adopter **Wide-spread Application**

Research Driven

Application Driven

Expert is King

Data is King

Advantage US



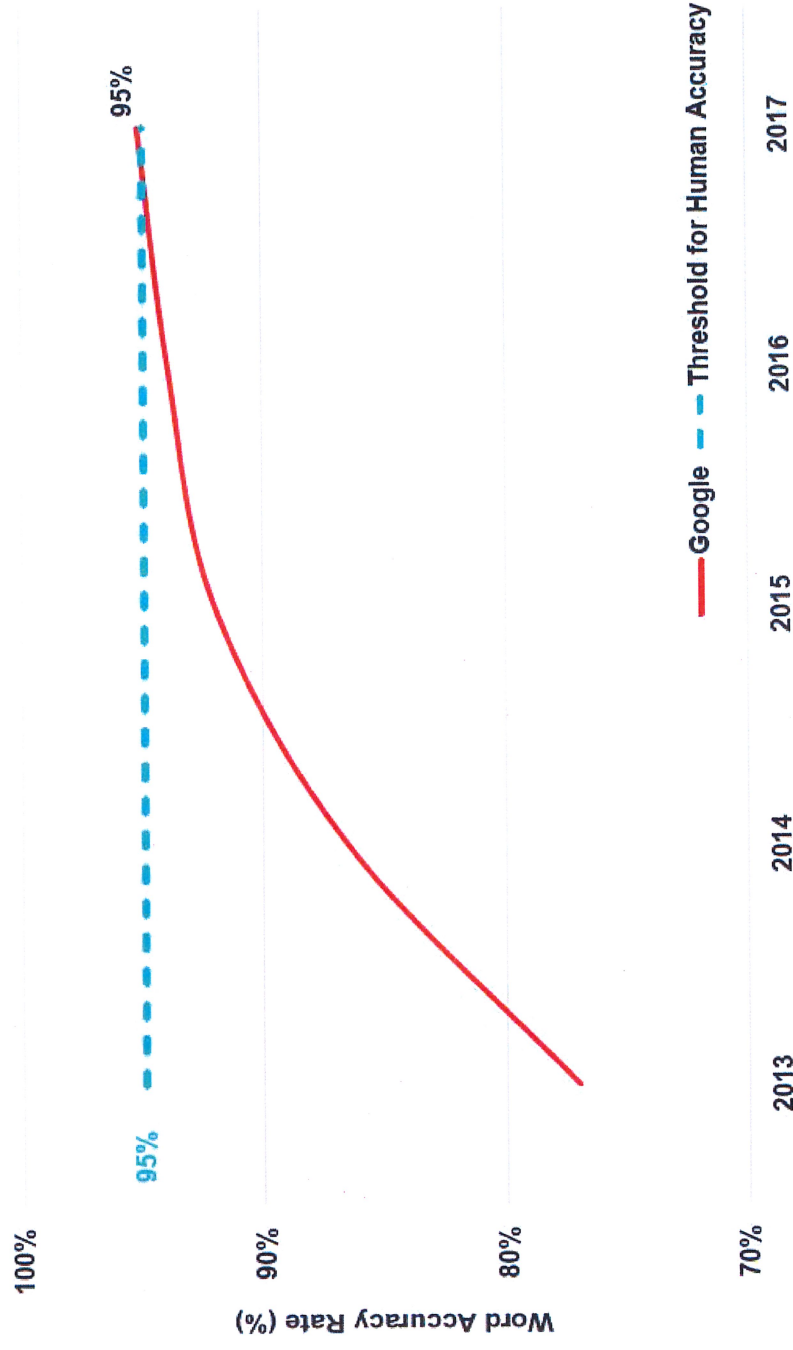
Advantage China



...Voice-Based Platform Back-Ends = Voice Recognition Accuracy Continues to Improve

Google Machine Learning

Achieving Higher Word Accuracy, 2013-2017

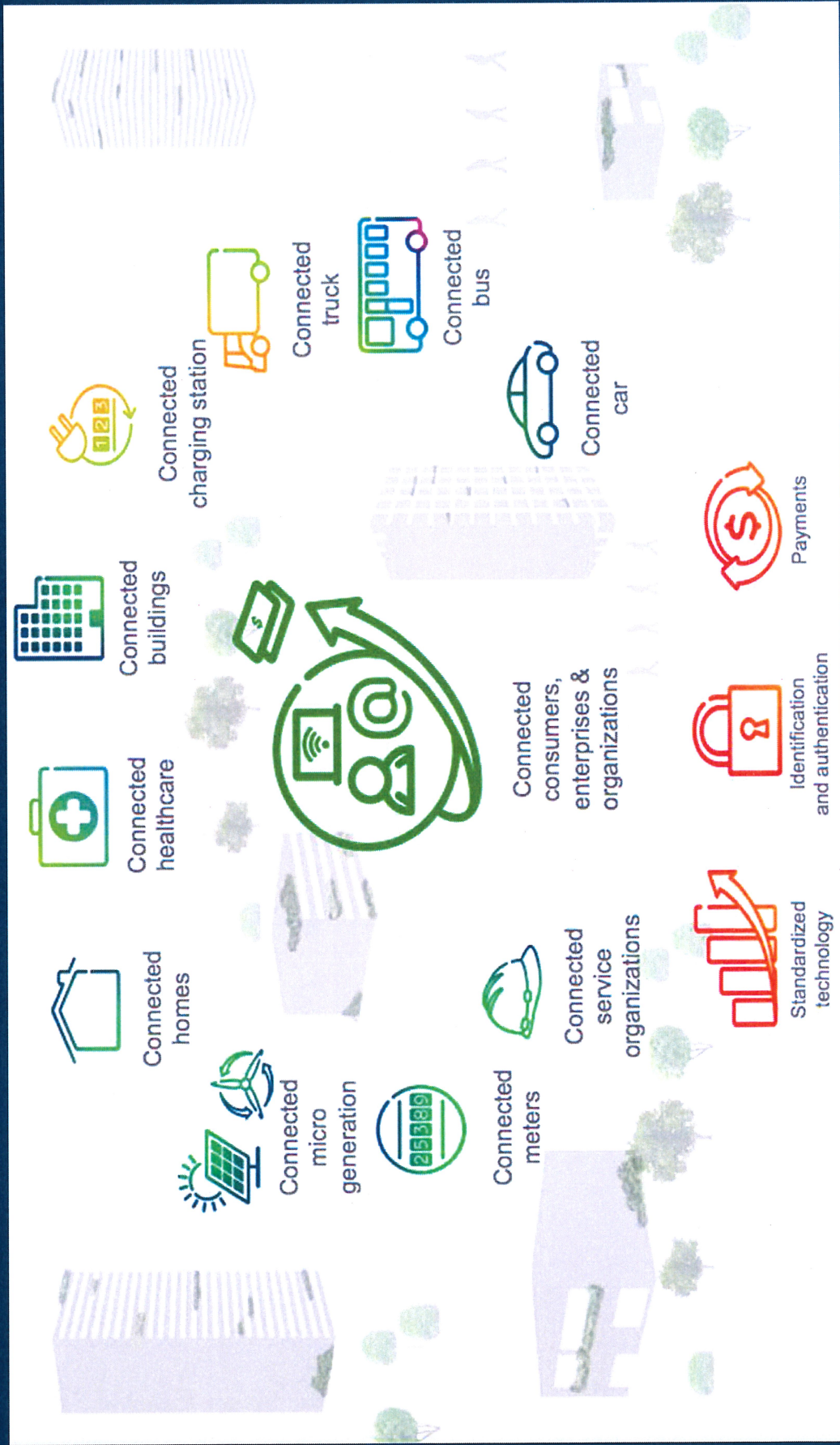


Source:
Internet Trends
2017 - Code
Conference,
Kleiner Perkins



AI displaces jobs much |
more than it creates |

Source: Kai-Fu Lee at AI Frontiers : The Era of Artificial Intelligence



Source: The connected city enabling the smart grid, Ericsson

"Smart Everything"

New interfaces (voice, AR/VR)

Connected everything (IoT/E)

Big² Data + Quantum Computing

Customisation + Personalisation

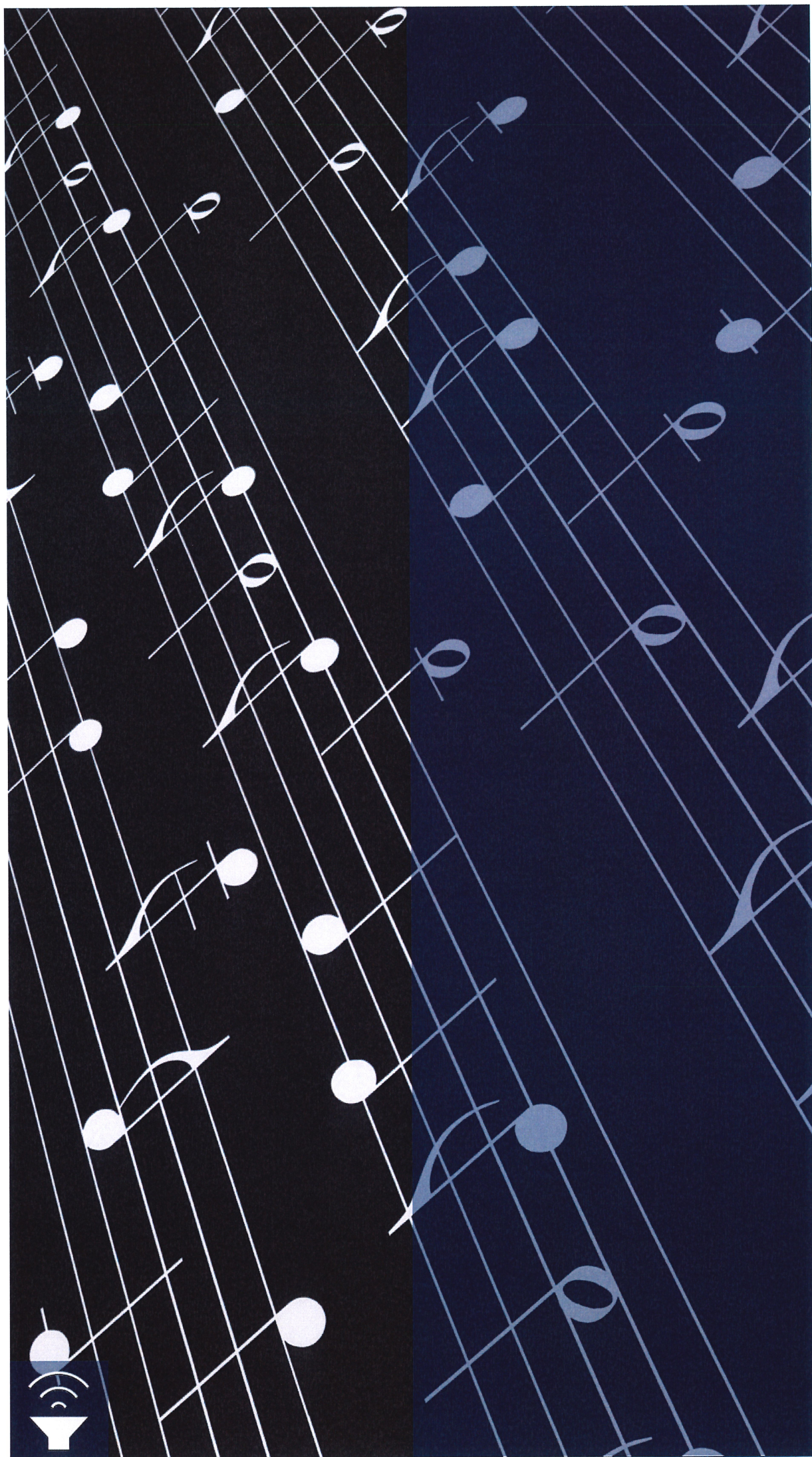
Prediction + Anticipation

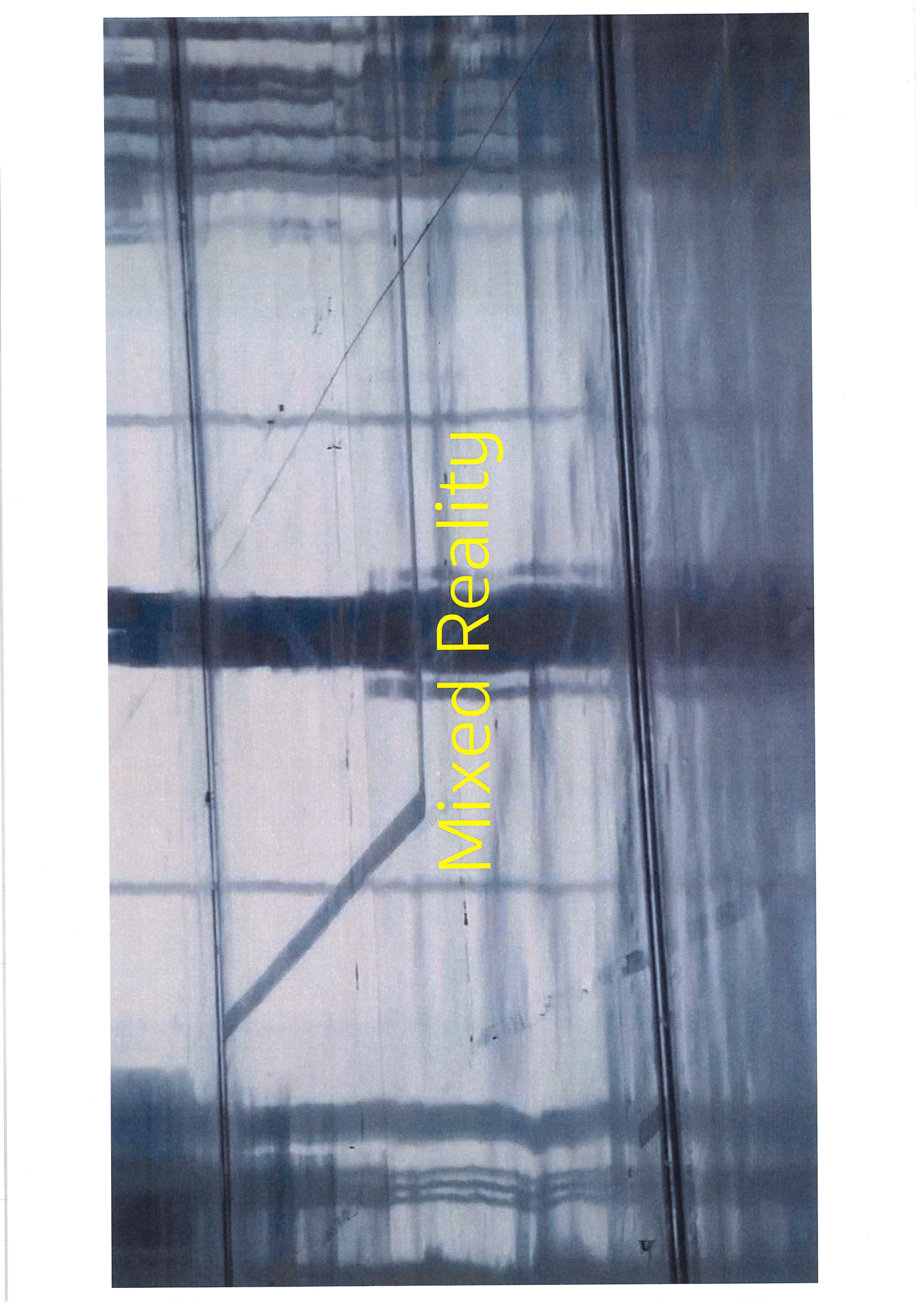
Automation + Robotization

Cloud / Virtualization

Permission² + Ethics²





A photograph of a glass window reflecting a city street scene. The reflection shows a street with a crosswalk, a building, and a person walking. The text "Mixed Reality" is overlaid in yellow, centered vertically and horizontally.

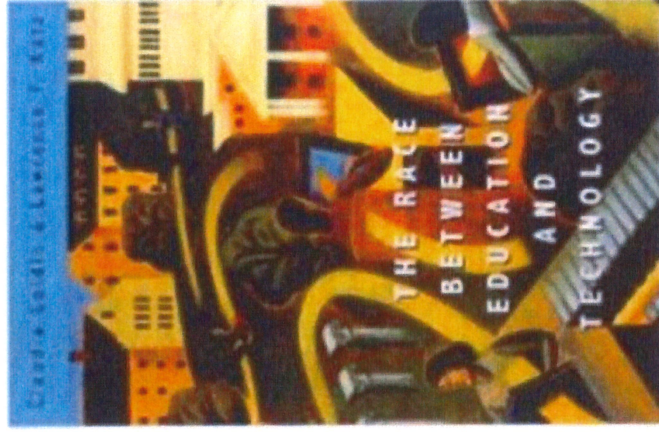
Mixed Reality

Mixed Reality

Mixed Reality in Healthcare



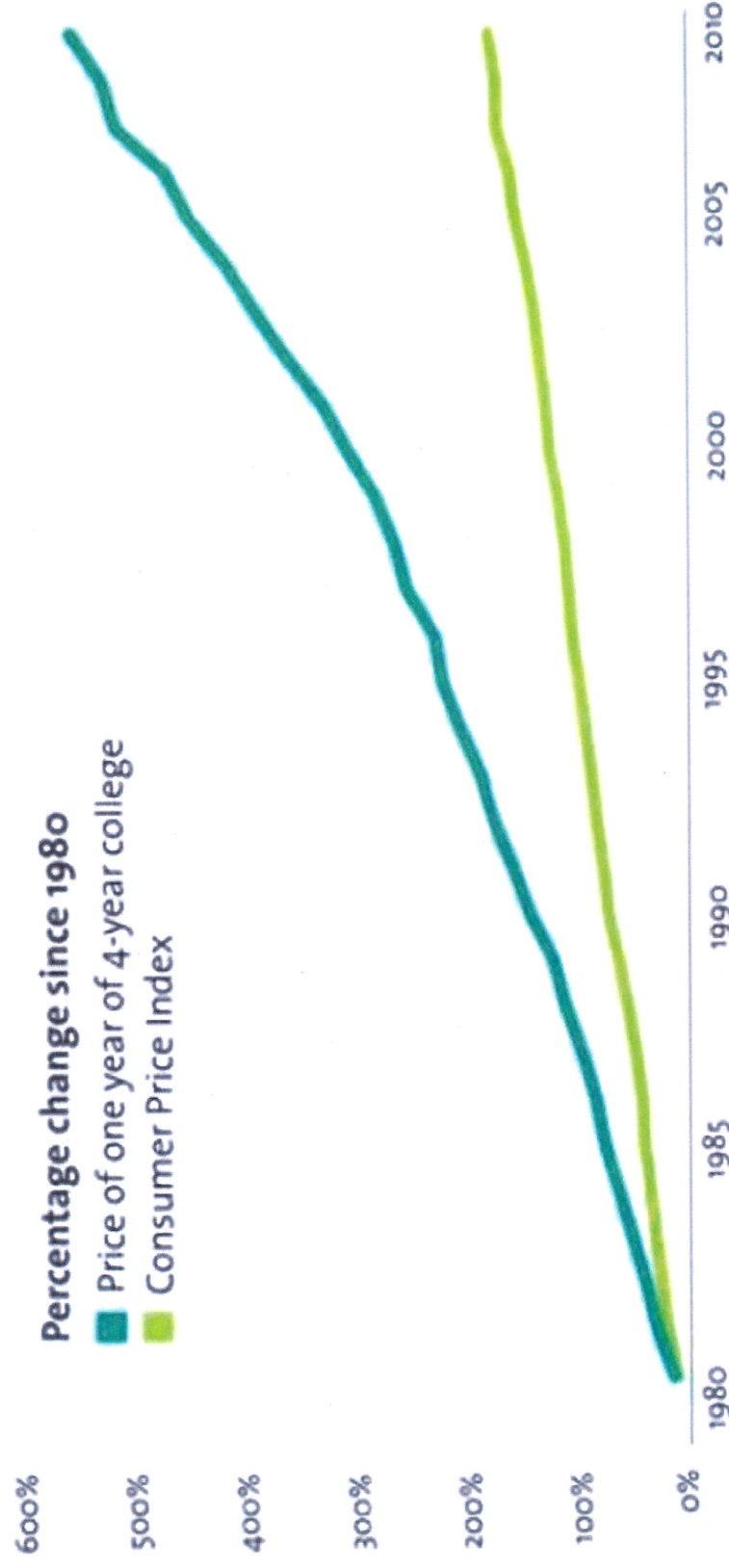
Who is Winning the Race Between Education & Technology?



Source: Goldin, C., & Katz, L. F. (2010). *The Race between Education and Technology*. Cambridge, Mass.: Belknap Press.

Increasing Cost of Higher Education Historically

The price of attending college is fast outpacing inflation.



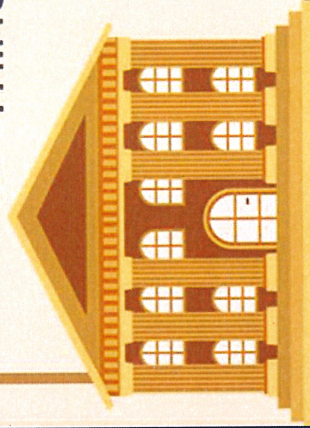
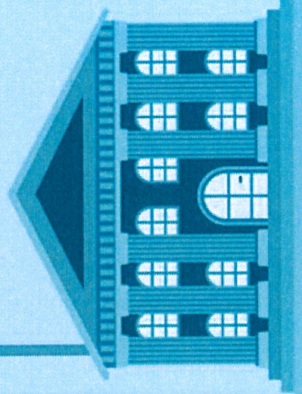
Based on average annual tuition price for a 4-year college, in actual dollars
Sources: Bureau of Labor Statistics, National Center for Education Statistics

Mother Jones



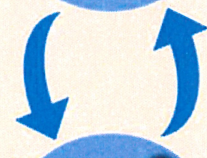
10 โรงเรียนนานาชาติ

ค่าเทอมแพงที่สุดของไทย



5 อันดับมหาวิทยาลัย

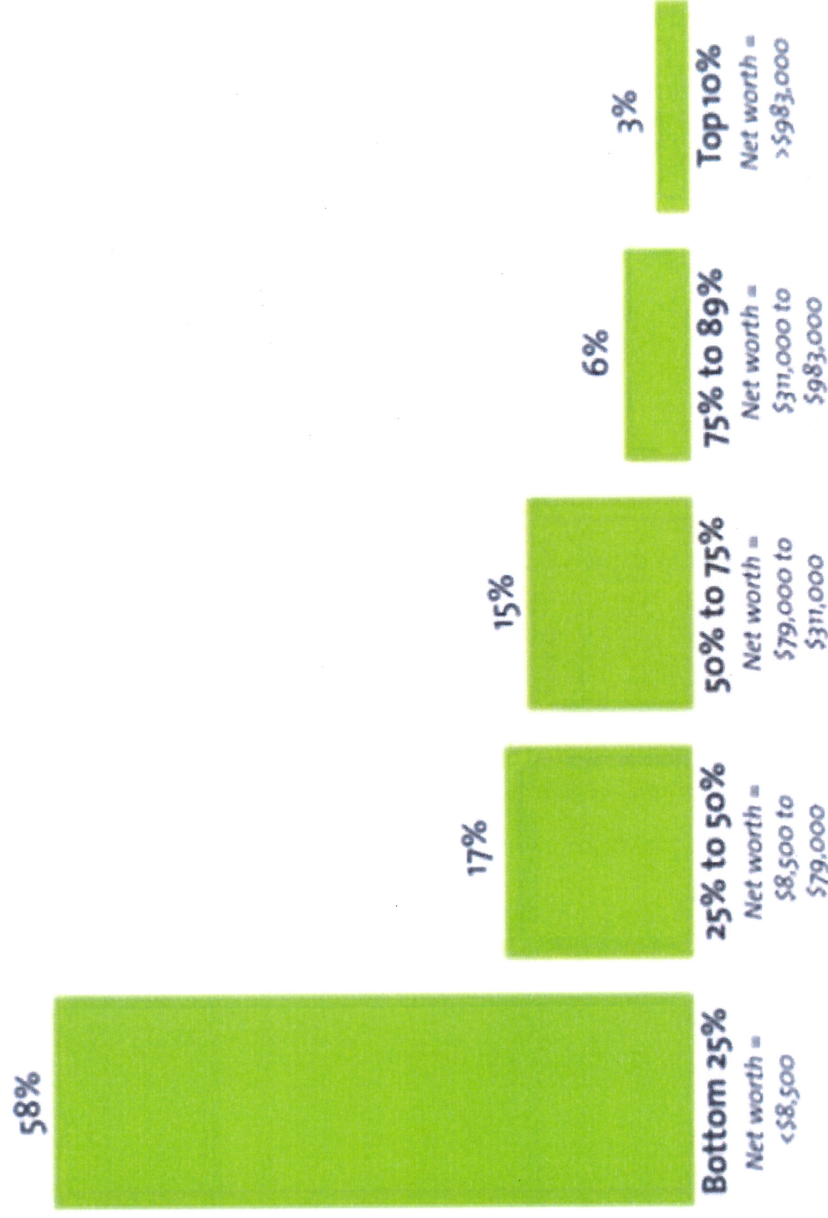
ค่าเทอมแพงที่สุดของไทย



Debt: Distribution of Total Student Debt by Level of Household Net Worth

Who Owes the Most?

Distribution of total student debt by level of household net worth (percentile)



Sources: Pew Research Center, Federal Reserve Bulletin

Mother Jones

ช่วยด้วยค่ะ กยศ. ให้ ธกส. ส่งโฉนดที่ดินที่เป็นหนี้ให้ กยศ. เพื่อเอาที่ดินไปขายทอดตลาดชำระหนี้ , กยศ. ทำแบบนี้ได้ด้วยหรือคะ

? กระผู้คำถาม

กฎหมายชาวบ้าน กองทุนเงินให้กู้ยืมเพื่อการศึกษา (กยศ.) ธนาคารเพื่อการเกษตรและสหกรณ์ โฉนดที่ดิน ร้องทุกข์

ช่วยด้วยค่ะ

เรื่องมาจาก พ่อไปค้าประกันให้น้องชายดอนกูเรียน กยศ. แล้วน้องชายไม่ชำระหนี้เลย กยศ. ส่งเรื่องไปที่บ้านพ่อ ที่เป็นคนค้าประกัน พ่อก็ไม่ไปติดต่อดีอะไรเลย และพ่อมีที่ดินที่ไปจำนองกับ ธกส. ไว้ทั้งแปลง และรายได้ก็แค่พอกินไปวัน ๆ ไม่มีเงินชำระหนี้ ธกส. อีก ดอนนี่หนี้เลยพอก หมดหมดยอดเกิน 1 เท่าที่เป็นหนี้แล้วค่ะ แต่ก็ยังน้อยกว่ามูลค่าที่ดินอยู่ค่ะ

อยู่ๆ กยศ. ก็ส่งเรื่องให้ ธกส. ส่งโฉนดที่ดินของพ่อที่เป็นหนี้ให้ กยศ. เพื่อเอาที่ดินไปขายทอดตลาดชำระหนี้ กยศ. สามารถทำแบบนี้ได้ด้วยหรือคะ

นายของ ธกส. ติดต่อมาที่บ้าน เพื่อแจ้งว่า จะต้องเอาโฉนดที่ดินส่งให้ กยศ. ให้พ่อไปติดต่อกับ กยศ. เพื่อชำระหนี้ ไม่งั้น ธกส. ก็จะส่งโฉนดให้ กยศ. ภายในวันที่ 5/7/61 นี้

ทางลูกหนี้ สามารถทำยังงใจได้บ้างไหมคะ จำเป็นต้องหาเงินไปชำระหนี้ กยศ. เท่านั้น หรือเปล่าคะ น้องชายกูเรียนสามหมื่นกว่า ดอนนี่หนี้ที่ กยศ. แจ้งมาเกือบหนึ่งแสนแล้วค่ะ หรือจะปล่อยให้ กยศ. เอาที่ดินไปขายทอดตลาด แล้วราคาที่ยขายทอดตลาดเป็นราคาจากไหนหรือคะ

มีใครที่โดนติดต่อมาแล้ว ทำยังงัยกันบ้างคะ แล้วในทางกฎหมายควรทำยังงัยคะ รบกวนขอคำปรึกษา เป็นแนวทางด้วยค่ะ

Imagine your future!

What do you want to learn today? What's your dream job?

I want to learn...

Mobile
Development

Android
Development

Web
Development

Front End
Development

Full Stack
Development

Deep
Learning

Machine
Learning

Artificial
Intelligence

You can learn anything.

For free. For everyone. Forever.

Learners, start here

Teachers, start here

Parents, start here

Math



Math

Science & engineering

Computing

Arts & humanities

Economics & finance

Test prep

College, careers, & more

Early math

Algebra 1

Trigonometry

AP Calculus AB

Differential equations

Arithmetic

Geometry

Precalculus

AP Calculus BC

Linear algebra

Pre-algebra

Algebra 2

Statistics & probability

Multivariable calculus

09:00

58%

My Courses



Thanachart Nummonda
thanachart@imcinstitute.com



Downloads

Courses

Accomplishments

Current Enrollments



FinTech Security and Regulation (RegTech)

The Hong Kong University of Science and Technology

Consider switching sessions

Part of Finance Industry Transformation, Regulation, and Security (FinTech/RegTech) Specialization



Leveraging Unstructured Data with Cloud Dataproc on Google Cloud Platform

Google Cloud

Part of Data Engineering on Google Cloud Platform Specialization



FinTech and the Transformation in Financial Services

Copenhagen Business School

Time to switch sessions

Part of Digital Transformation in Financial Services Specialization



FinTech Foundations and Overview

The Hong Kong University of Science and Technology

Time to switch sessions

Part of Finance Industry Transformation, Regulation, and Security (FinTech/RegTech) Specialization



Machine Learning

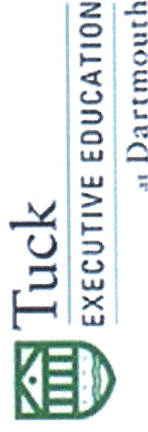
Stanford University

My Courses

Recommended

Discover

FOUNDING
ACADEMIC
INSTITUTIONS



UPCOMING ACADEMIC PROGRAMS



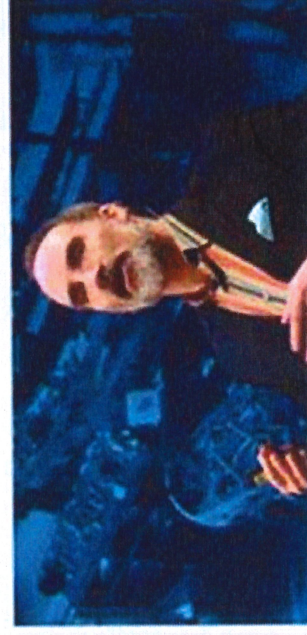
14 JUN 2018 - 12 SEP 2018

Digital Marketing: Customer
Engagement, Social Media,



14 MAY 2018 - 16 JUL 2018

MIT's Approach to Design
Thinking



10 JUL - 24 SEP 2018

Digital Strategies for Business:
Leading the Next-Generation



x

Courses

Digital Strategies for
Business: Leading the
Next Generation
Enterprise- July 2018

All Courses

Welcome to your courses!
To customize the list of
courses, click on the "All
Courses" link and star the
courses to display.

x

ules

Complete All Items

Arrival and Setup

Getting Started with Canvas



Browse Requirements and the Learning Platform Tutorials

Viewed



Create Your Learning Platform Profile

Jul 17 | 0 pts | Submit



The Learning Platform Assignments Overview

View



The Learning Platform Frequently Asked Questions

View

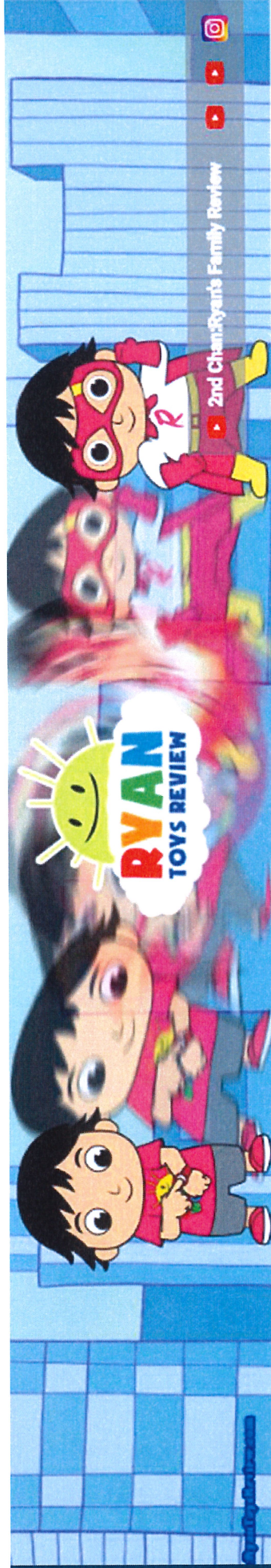
Code of Conduct



Student Conduct Code

Jul 17 | 0 pts | Submit

Program Introduction



Ryan ToysReview

15,180,315 subscribers

SUBSCRIBE 15M

HOME

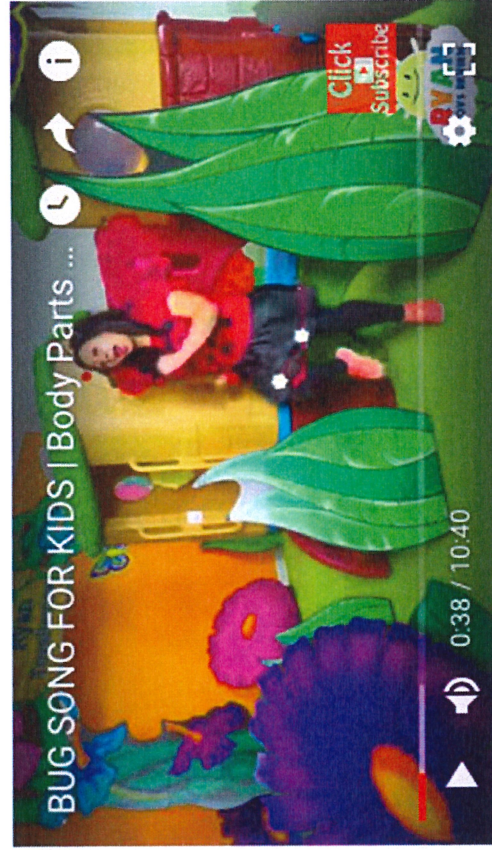
VIDEOS

PLAYLISTS

CHANNELS

DISCUSSION

ABOUT



BUG SONG FOR KIDS | Body ...

10,161,928 views • 1 month ago

Bug Song for Kids | Body Parts
Exercise and Dance with Ryan
ToysReview as Ryan move and
dance to fun children song!
Sing to fun nursery rhyme kids
action song like blinking,
marching, spinning, hopping
READ MORE

RYAN'S WORLD



Ryan's Family Review

SUBSCRIBE



VTubers

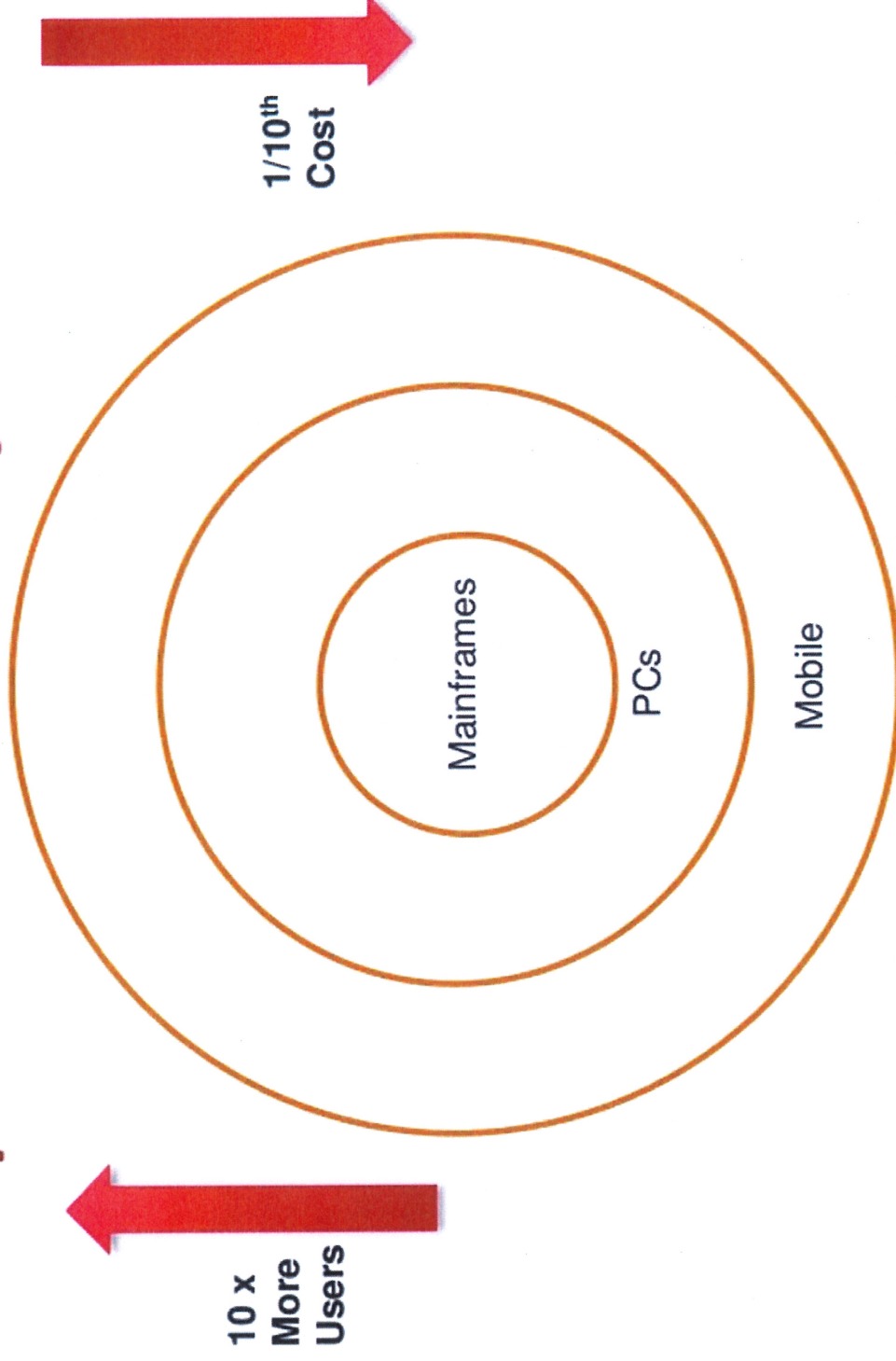
SUBSCRIBE



Combo Panda

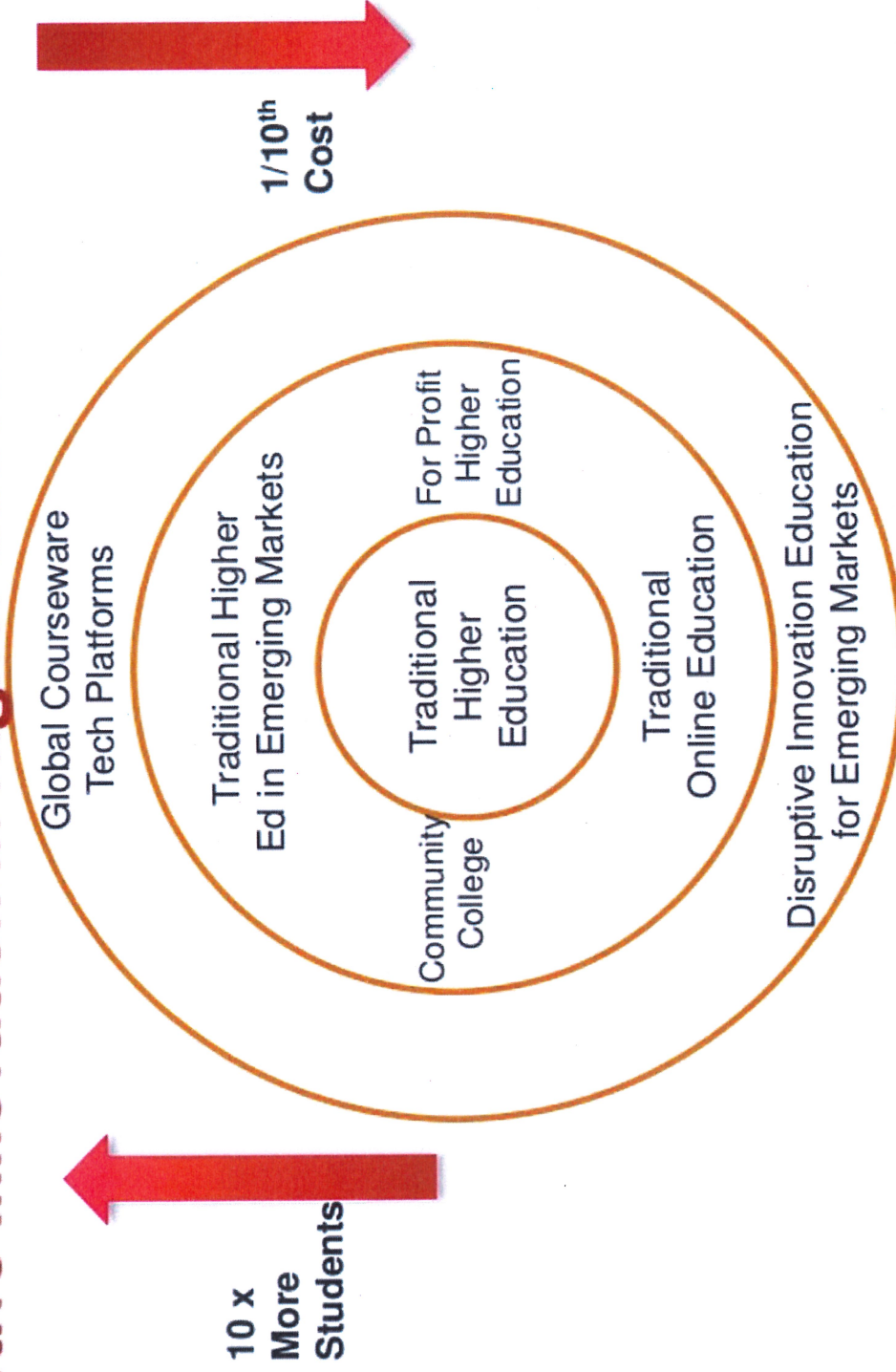
SUBSCRIBE

Disruptive Innovation Theory



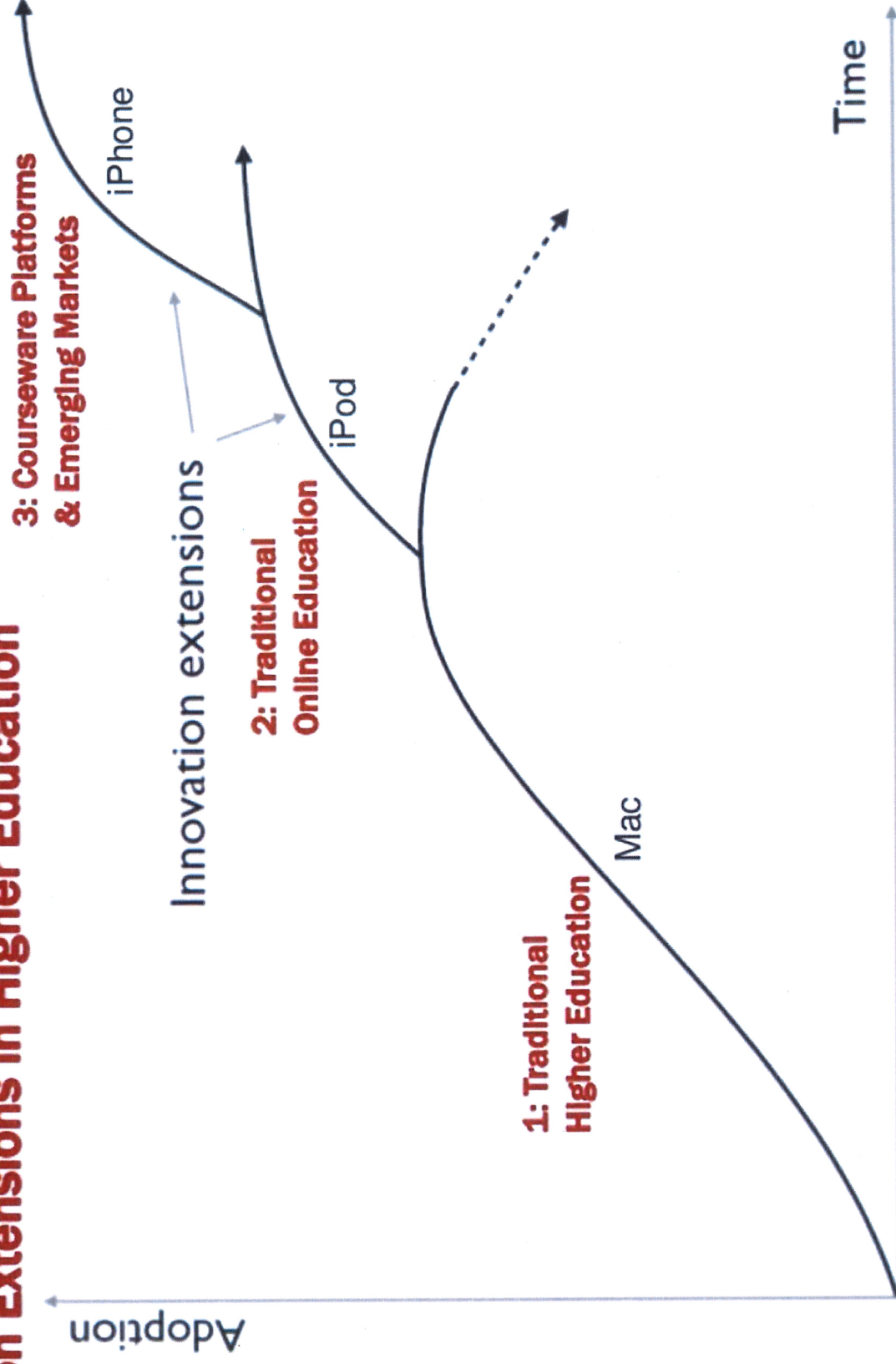
Source: Disruptive Innovation in Higher Education, City Vision University

Disruptive Innovation in Higher Education



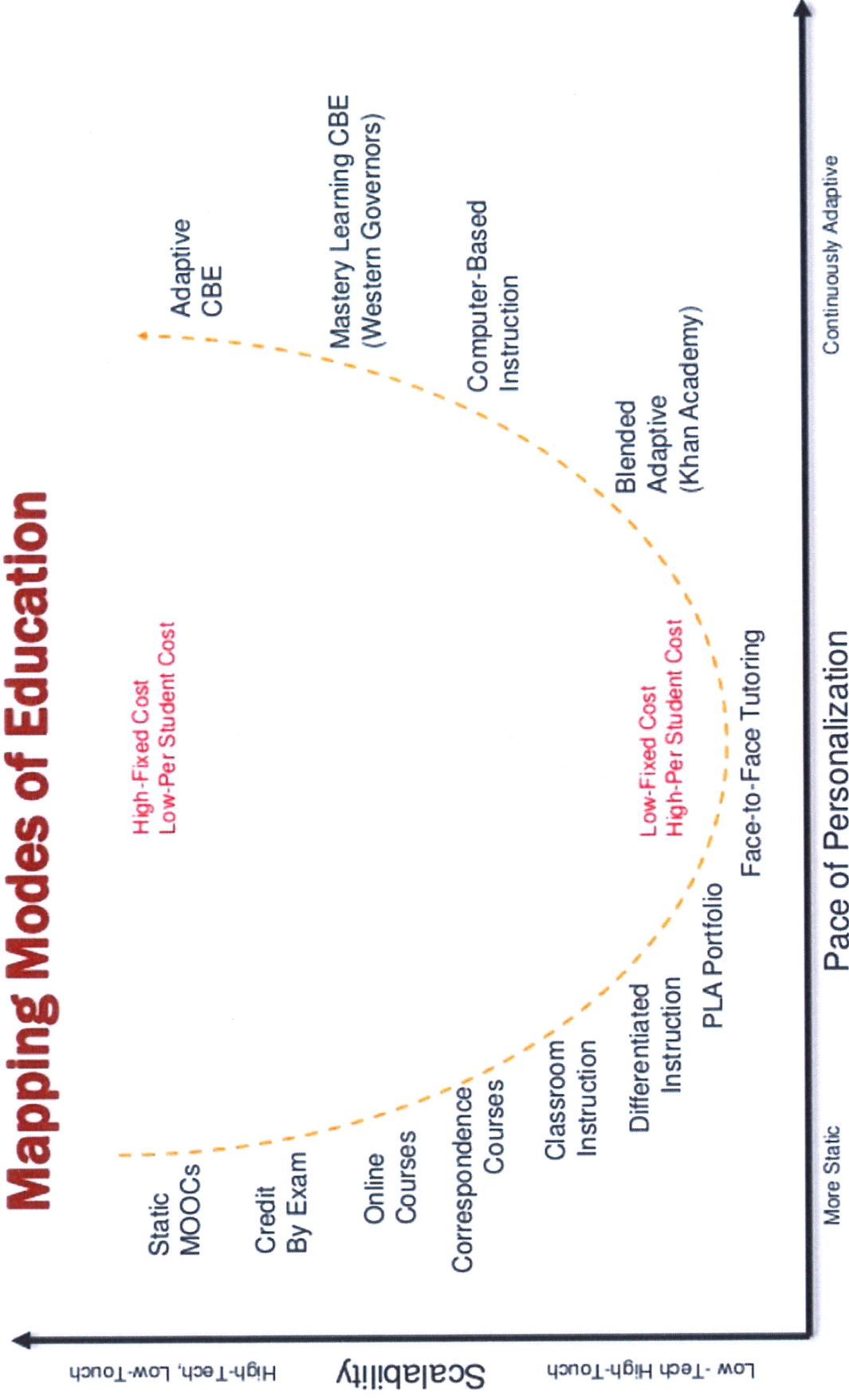
Source: Disruptive Innovation in Higher Education, City Vision University

Innovation Extensions in Higher Education



Source: Disruptive Innovation in Higher Education, City Vision University

Mapping Modes of Education



Source: Initial Chart Idea from Brian Flemming. (2015, May). *Adaptive Learning: The Breakthrough Innovation Impacting Education Today*. Eduventures Online Webinar. Retrieved from bit.ly/1HGerOS. Andrew Sears made many additions and changes to chart.

Source: Disruptive Innovation in Higher Education, City Vision University

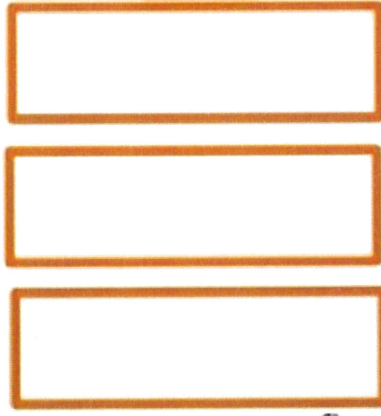
Virtually Integrated University

Knowledge Acquisition

Access to Opportunity

Metacognition & Skills

Transformative Experience



University University University



Unbundled University

Knowledge Acquisition

Access to Opportunity

Metacognition & Skills

Transformative Experience



University

Unbundled Competitors to Universities

Future of Higher Education 2035

- **Tier 1: The Elite**
 - Serve top 5-10% students, tuition >\$100k/year (in 2015 dollars)
 - Analogy: New York Times, Economist, Organic Farming, Luxury Watches
- **Tier 2: High Quality, Moderate Cost**
 - 50% in bankruptcy or merged, tuition \$50-100k/year, high touch
 - Analogy: Physical Retail, Cable TV, Phone Companies
- **Tier 3: Good Enough Quality, Low Cost**
 - 100k+ students or niche, tuition \$100-\$5,000/year
 - Analogy: Huffington Post, Netflix, Skype, niche ecommerce
- **Tier 4: Courseware Ecosystem Small Businesses**
 - Sell apps, courses, educational content, books, certificates, student services, videos, etc.
 - Analogy: eBay/Amazon merchants, bloggers, self-publishers, app developers
- **Tier 5: Courseware platforms**
 - 100's of millions or billions of students, LinkedIn/Lynda.com



Digital Transformation is

the realignment of, or new investment in **technology, business models and processes** to drive new value for customers and employees and more effectively compete in an ever-changing digital economy

Customer
Experience

Digital
Transformation

Business
Model

Operational
Excellence

Digital transformation is about
strategy (not technology)

Focus area

Adopting digital ways of working



Attracting and retaining digital talent



Modernizing the IT architecture and environment



Key tasks

- Gain the support of senior leaders so a digital transformation has high priority

- Build a digital factory to produce new applications and insights using digital-native methods

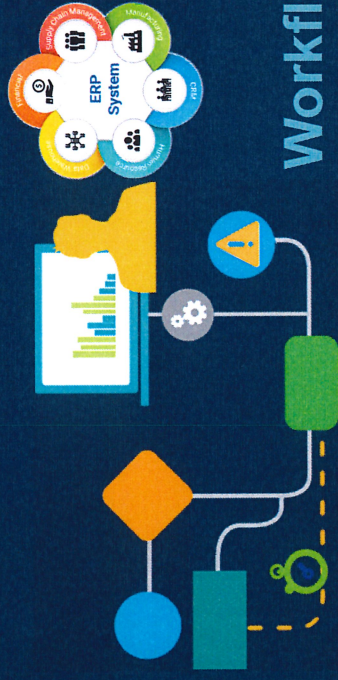
- Highlight the intellectual challenge and social value of the utility's work

- Tap into a broad pool of digital specialists who value the balance and stability that a utility offers

- Simplify the utility's product portfolio and business processes

- Shift from all-in-one, monolithic IT systems to modular IT architectures

digital transformation playground



Workflows and ERP



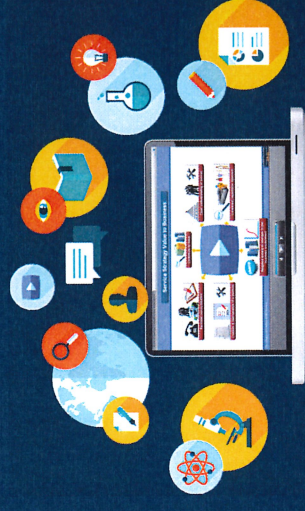
Prediction and Sensing



Accessibility, Security
and Privacy

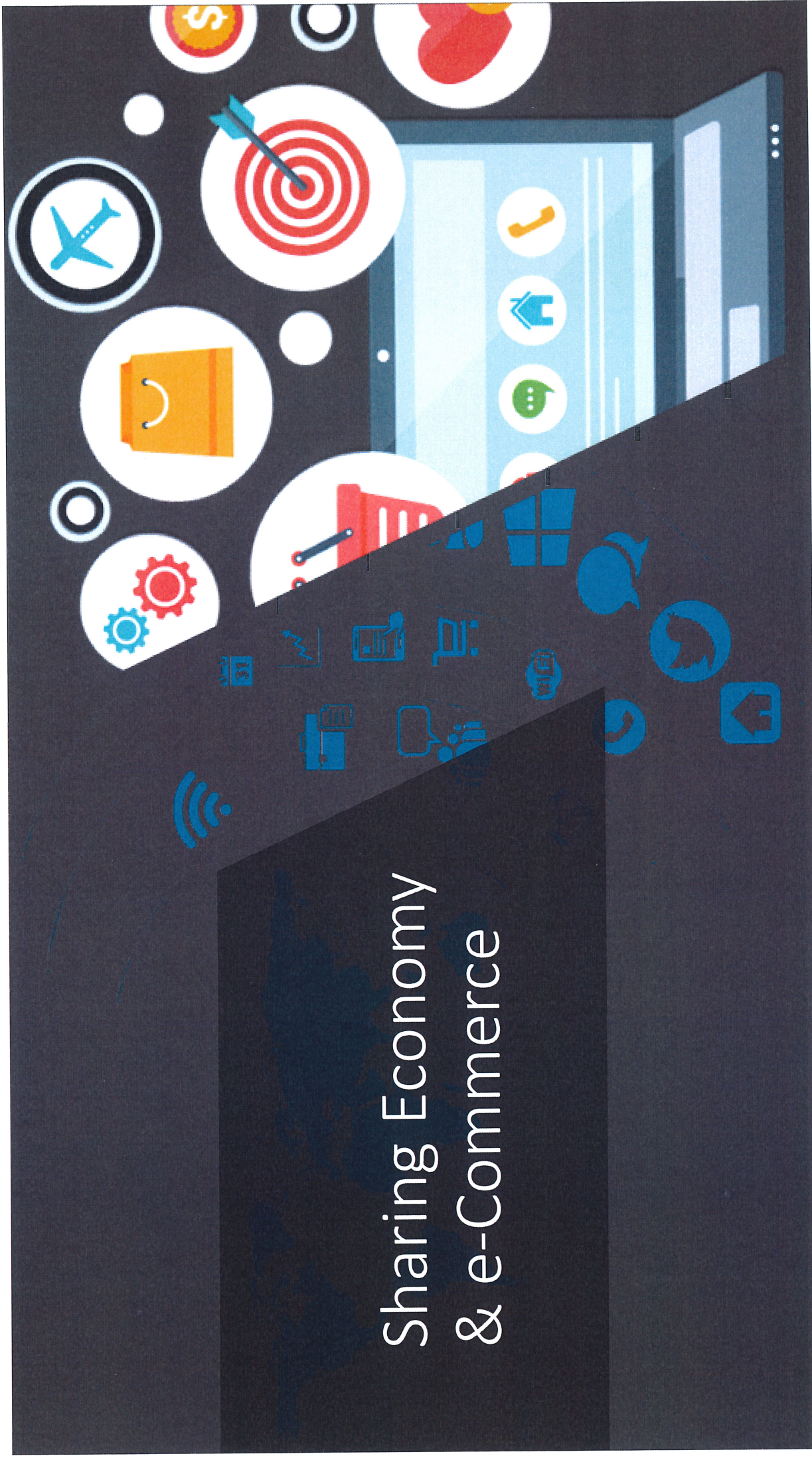


Digital
Entrepreneurs



Digital Learning

Sharing Economy & e-Commerce

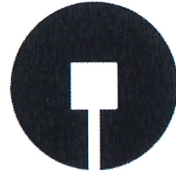
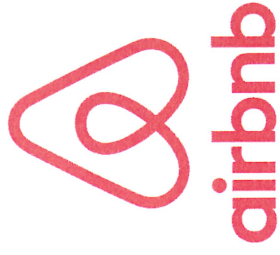




foodpanda



Grab

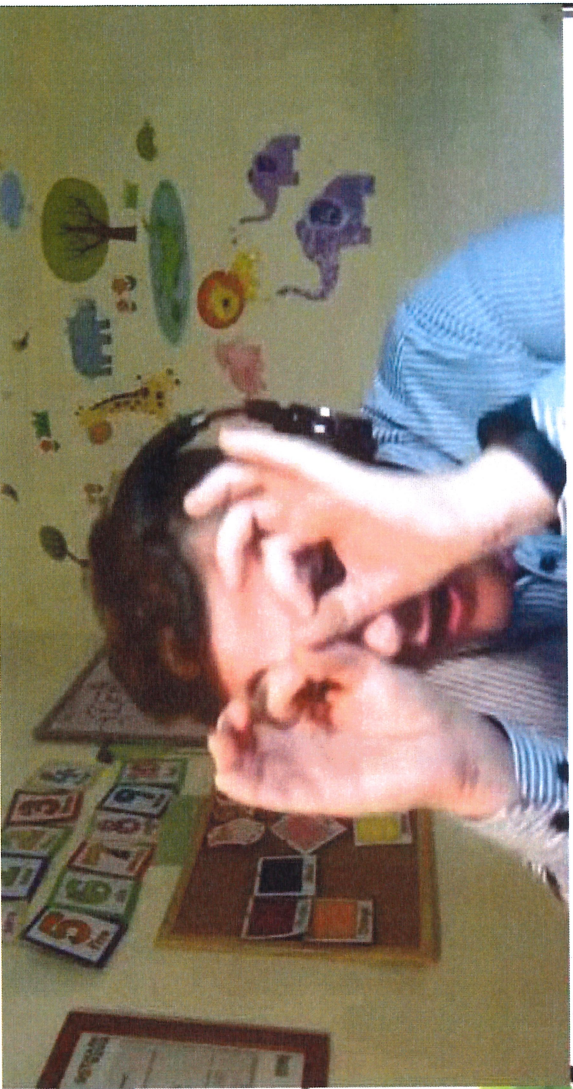


UBER





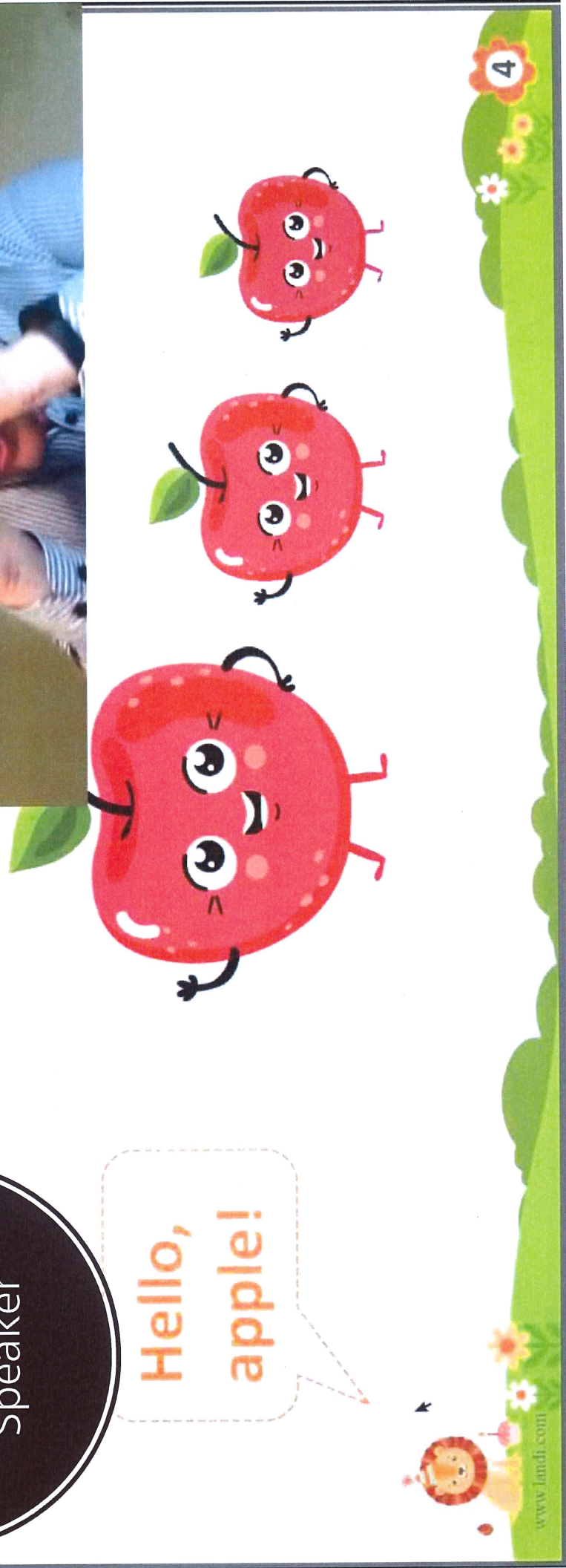
What's next in EDUCATION?



兰迪小助手

Learn
English
with Native
Speaker

d louder or quie





program changes, we can update a variable but perform the same logical process on it.

```
# Greeting
message_string = "Hello there"
print(message_string)

# Farewell
message_string = "Hasta la vista"
print(message_string)
```

Above, we create the variable `message_string`, assign a welcome message, and print the greeting. After we greet the user, we want to wish them goodbye. We then update `message_string` to a departure message and print that out.

Instructions

1. Update the variable `meal` to reflect each meal of the day before we print it.

Community Forums

Here are some helpful links to the top questions asked by coders about this exercise:

1. After a variable is assigned to an initial value, can the variable later be reassigned to another value that is of a different data type than its initial value?



script.py



```
1 # We've defined the variable "meal" here to the name of the food we ate for breakfast!
2 meal = "Fire rice"
3
4 # Printing out breakfast
5 print("Breakfast:")
6 print(meal)
7
8 # Now update meal to be lunch!
9 meal = "Noodle"
10
11 # Printing out lunch
12 print("Lunch:")
13 print(meal)
14
15 # Now update "meal" to be dinner
16
17 meal = "Nasi Koren Ayum"
18
19 # Printing out dinner
20 print("Dinner:")
21 print(meal)
22
```

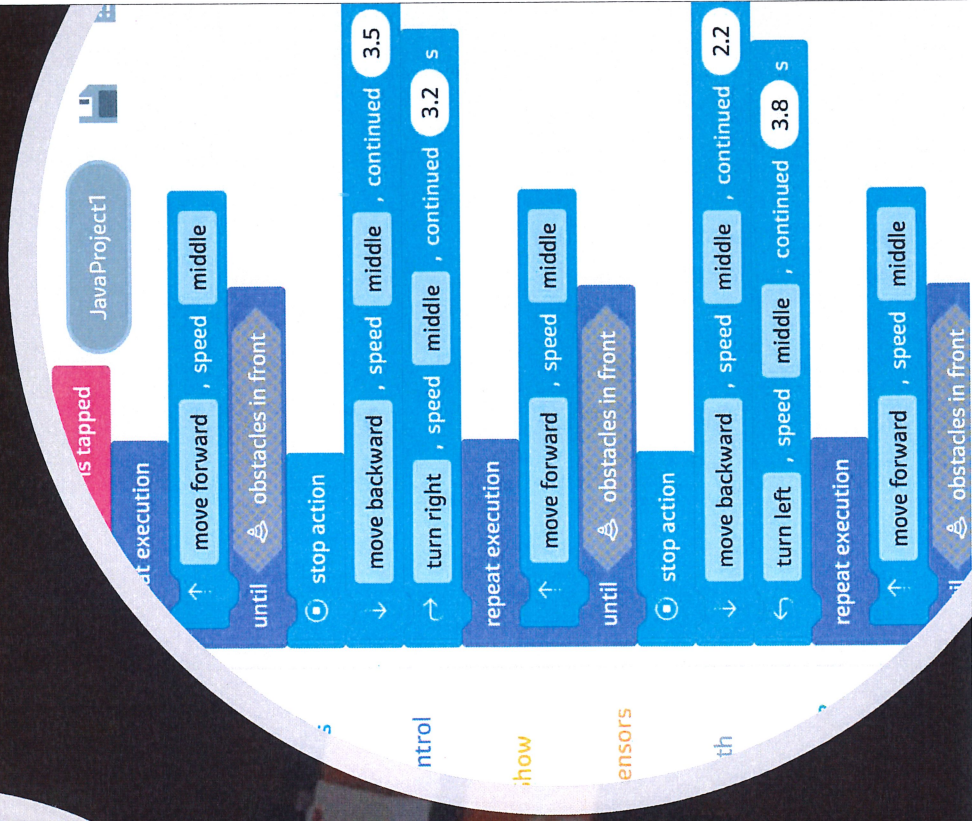
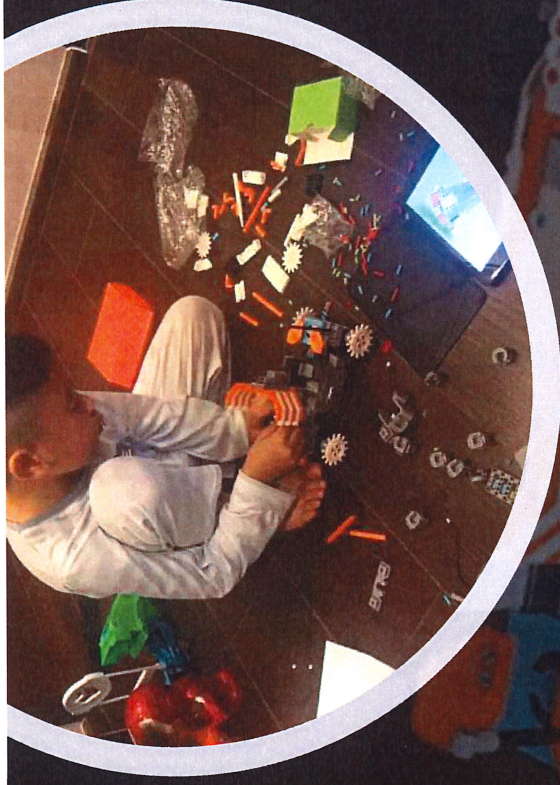
Breakfast:
Fire rice
Lunch:
Noodle
Dinner:
Nasi Koren Ayum

Coding with Feedback

Run



Self-Learning Kit





Enter what you want to calculate or know about



Browse Examples Surprise Me

Compute expert-level answers using Wolfram's breakthrough algorithms, knowledgebase and AI technology

Mathematics >

Step-by-Step Solutions

Elementary Math

x^2-1 Algebra

Plotting & Graphics

$\int f(x) dx$ Calculus & Analysis

Geometry

$y''(x)$ Differential Equations

Statistics

Science & Technology >

Units & Measures

Physics

Chemistry

Engineering

Computational Sciences

Earth Sciences

Materials

Transportation

Society & Culture >

People

Arts & Media

Dates & Times

Words & Linguistics

Money & Finance

Food & Nutrition

Political Geography

History

Everyday Life >

Personal Health

Personal Finance

Surprises

Entertainment

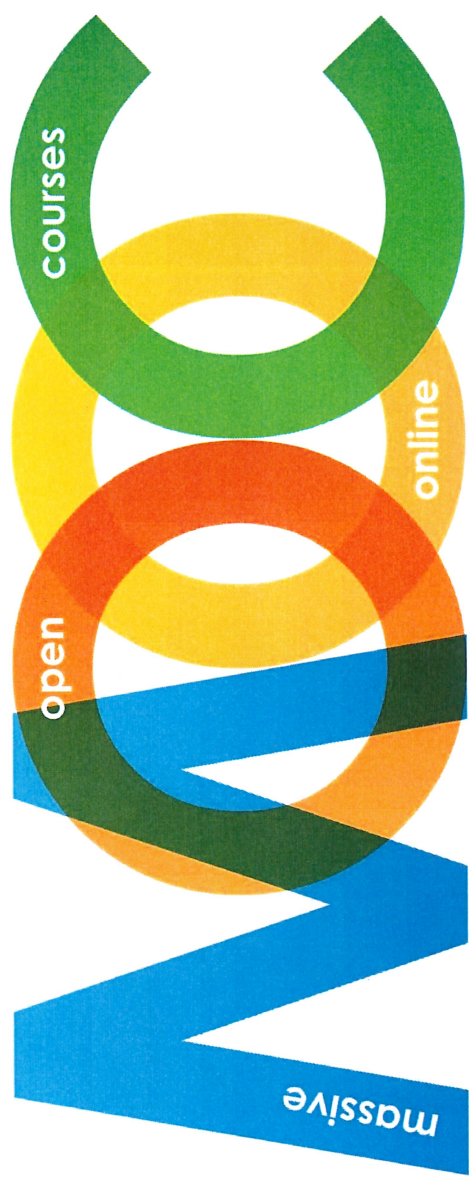
Household Science

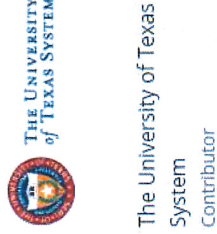
Household Math

Hobbies

Today's World

MacBook Pro





Learn for FREE Pay to Verified



Introduction to Python for Data Science

Microsoft - DAT208x
Started - Apr 1, 2019



[Resume Course](#)

Pursue a Certificate of Achievement to highlight the knowledge and skills you gain in this course. It's official. It's easily shareable. It's a proven motivator to complete the course. Learn more about the verified Certificate of Achievement.

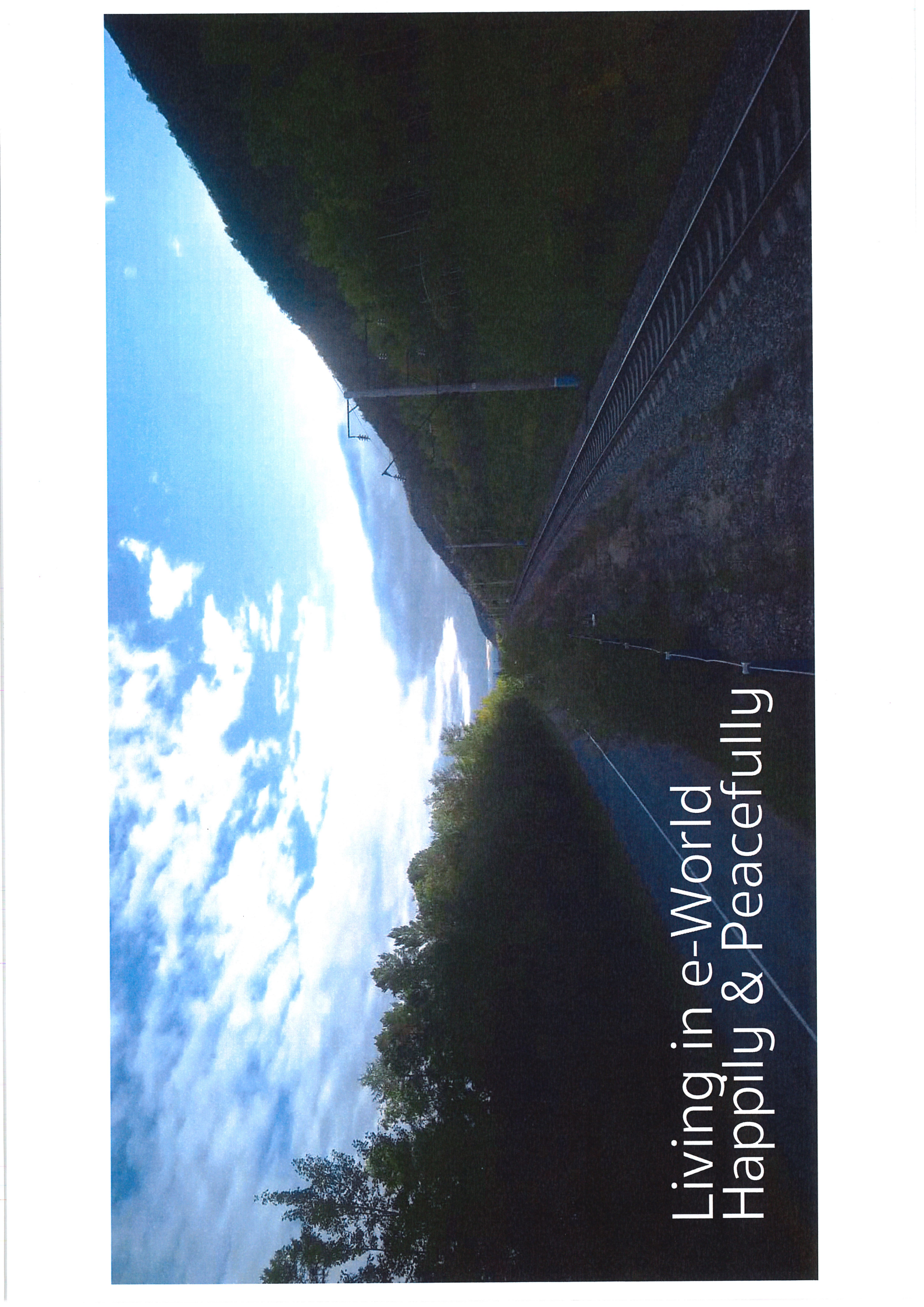
Upgrade to Verified



1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

Digital Badges instead of Degree



A scenic landscape photograph featuring a paved road that curves through a lush green area. On the left side of the road, there are tall, dark green trees. On the right side, there is a grassy field with some utility poles and wires. The sky is a vibrant blue, filled with large, white, fluffy clouds. The overall mood is peaceful and serene.

Living in e-World
Happily & Peacefully