

Digital age:

The end of the beginning

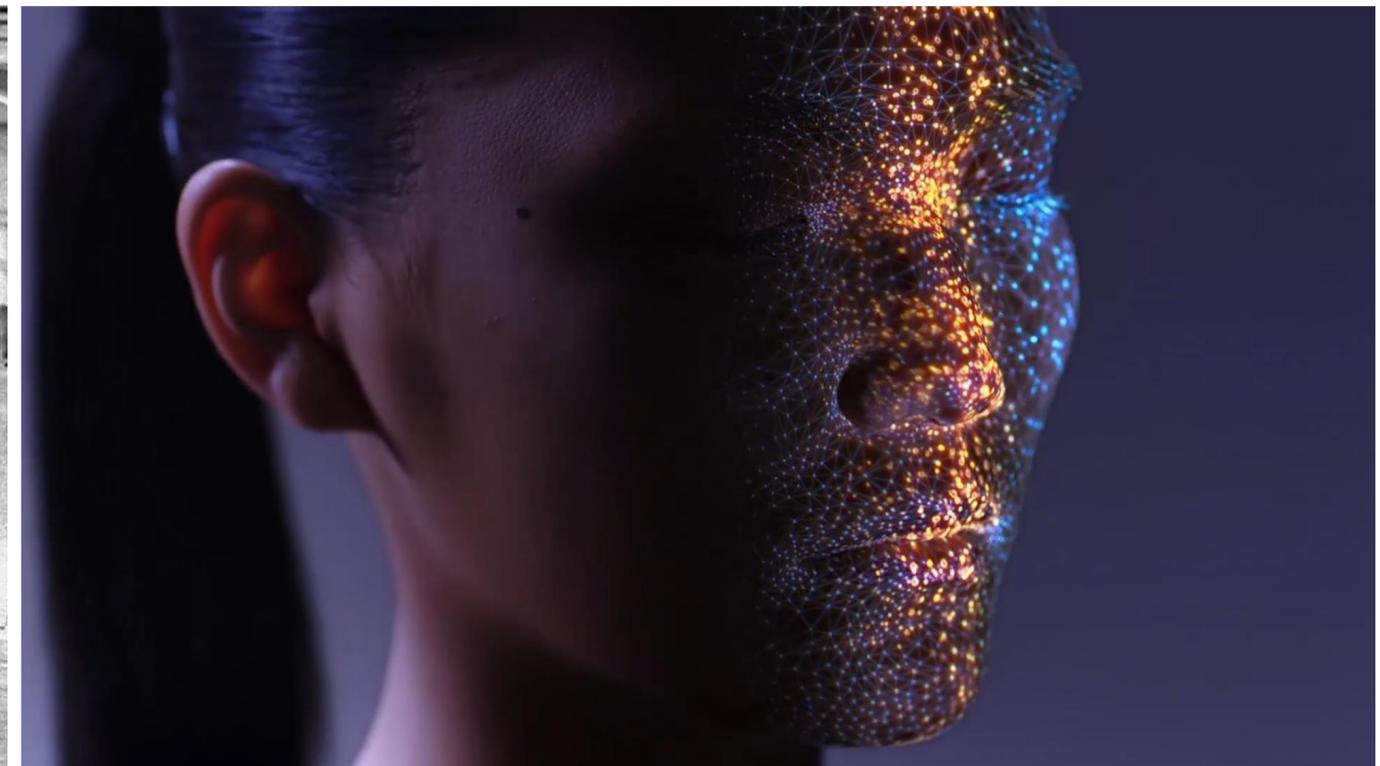


H-FARM®

Part 1

## Digital Transformation History view

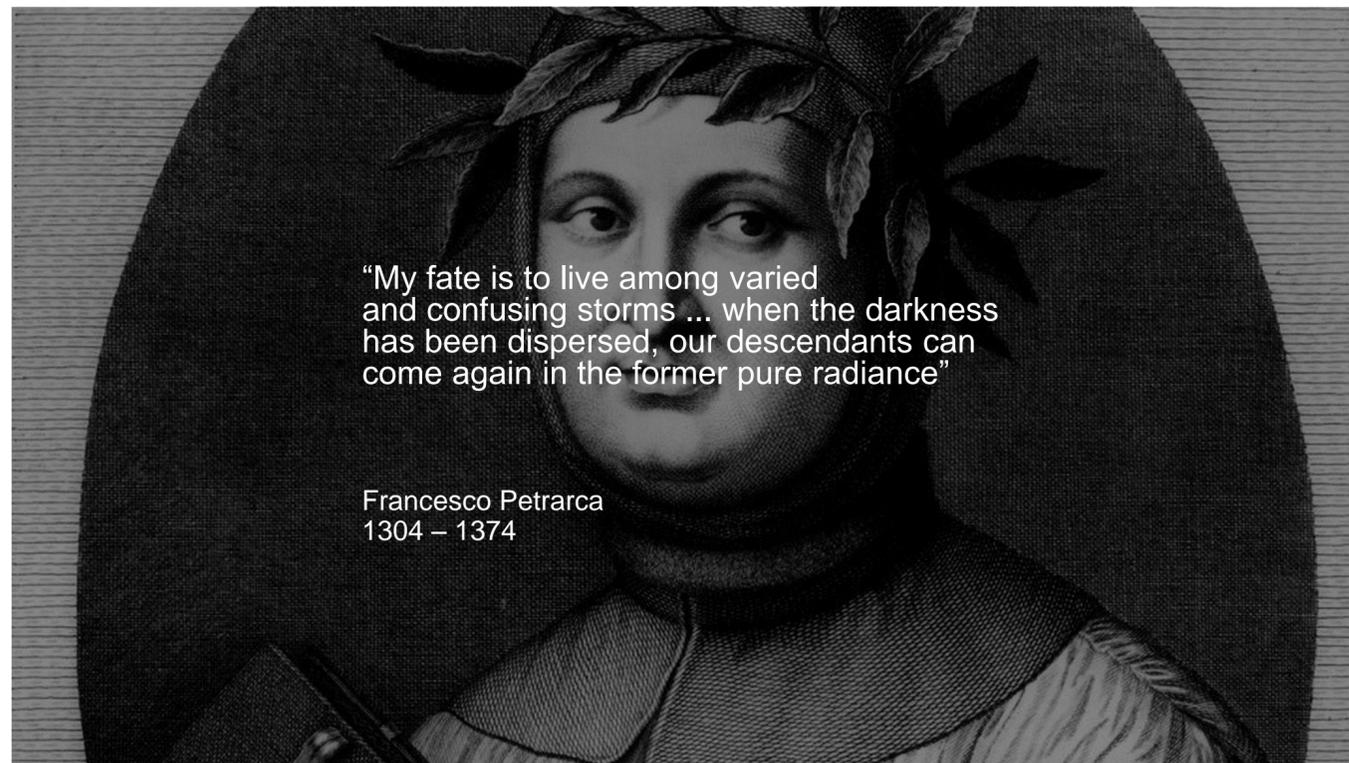
What is an industrial revolution?  
A shift in the system  
Driven by a new narrative  
A change of paradigm



Digital Transformation  
represents a transcending  
period in humankind  
An opportunity for a major  
step forward...

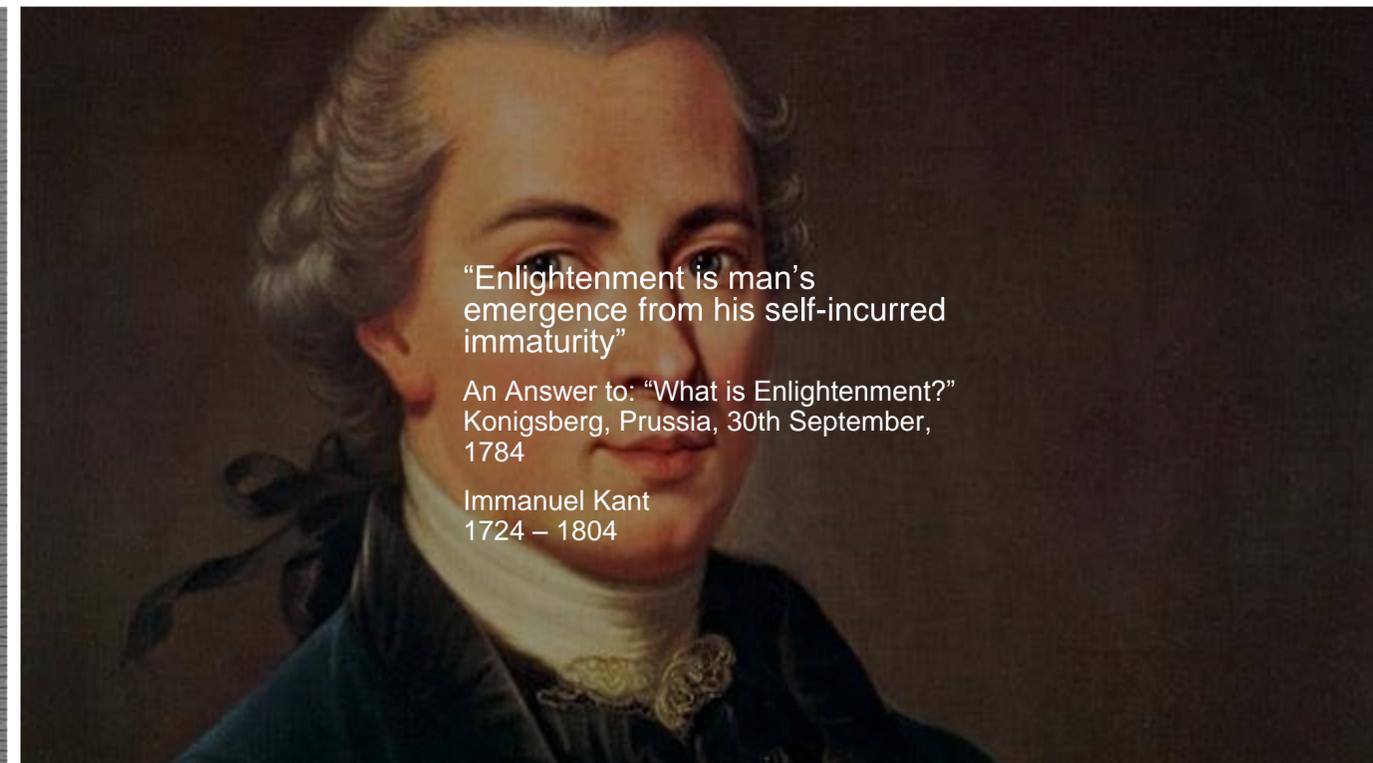
From the dark ages to modern world

Middle ages  
Renaissance  
Enlightenment  
Modern history



“My fate is to live among varied  
and confusing storms ... when the darkness  
has been dispersed, our descendants can  
come again in the former pure radiance”

Francesco Petrarca  
1304 – 1374



“Enlightenment is man’s  
emergence from his self-incurred  
immaturity”

An Answer to: “What is Enlightenment?”  
Konigsberg, Prussia, 30th September,  
1784

Immanuel Kant  
1724 – 1804

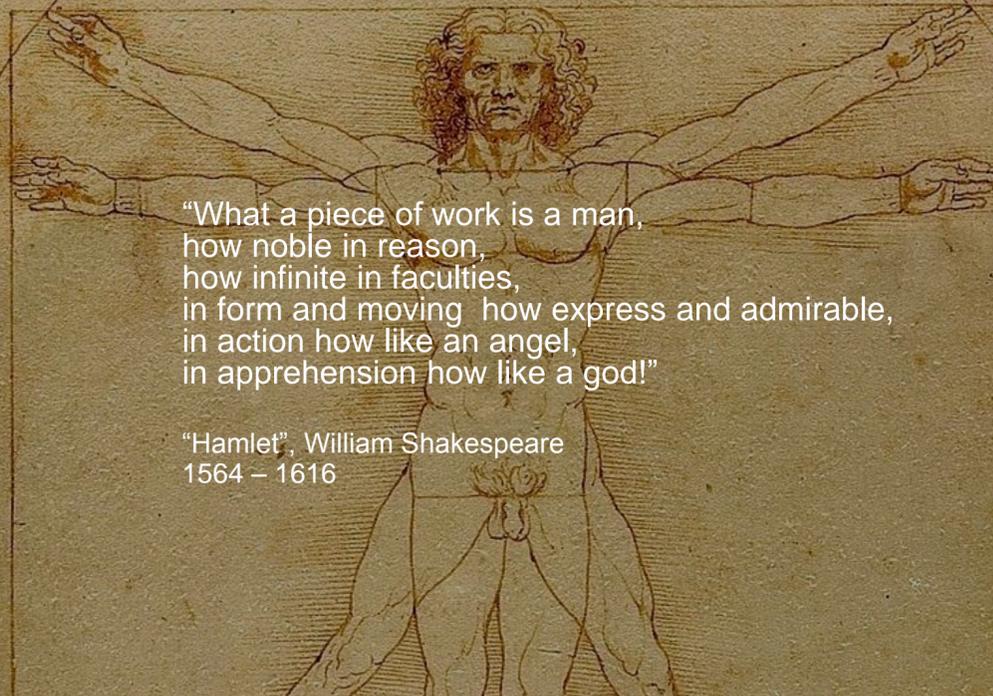
# Renaissance

Europe (Florence)  
14th – 17th Centuries

“Man is the measure of all things”

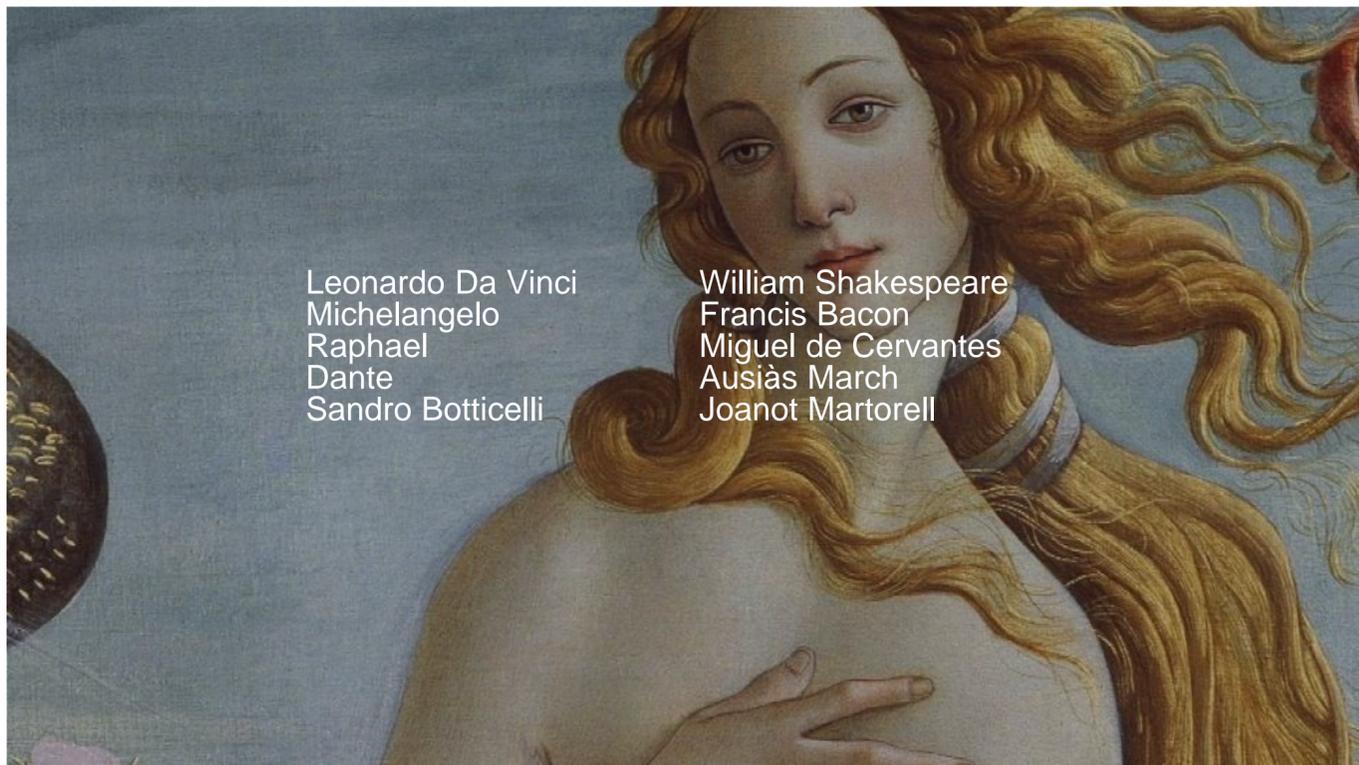
Protagoras  
490 – 420 BC

Rediscovering ancient Greece and Rome  
Humanism  
Renaissance made man the centre of its concerns  
Art & literature



“What a piece of work is a man,  
how noble in reason,  
how infinite in faculties,  
in form and moving how express and admirable,  
in action how like an angel,  
in apprehension how like a god!”

“Hamlet”, William Shakespeare  
1564 – 1616



Leonardo Da Vinci  
Michelangelo  
Raphael  
Dante  
Sandro Botticelli

William Shakespeare  
Francis Bacon  
Miguel de Cervantes  
Ausiàs March  
Joanot Martorell

# Enlightenment

France, UK & Germany  
18th Century

## “Sapere aude!”

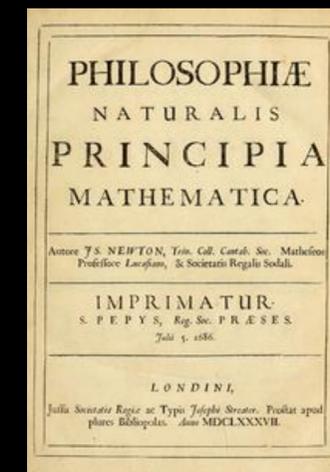
Immanuel Kant  
1724 – 1804

Use and celebration of the reason  
Rational humanity  
Liberty, progress and separation of church and state

“God gave us the gift of life;  
it is up to us to give ourselves  
the gift of living well “

Voltaire  
1694 - 1778

Voltaire  
Montesquieu  
Diderot  
Rousseau  
David Hume  
Isaac Newton



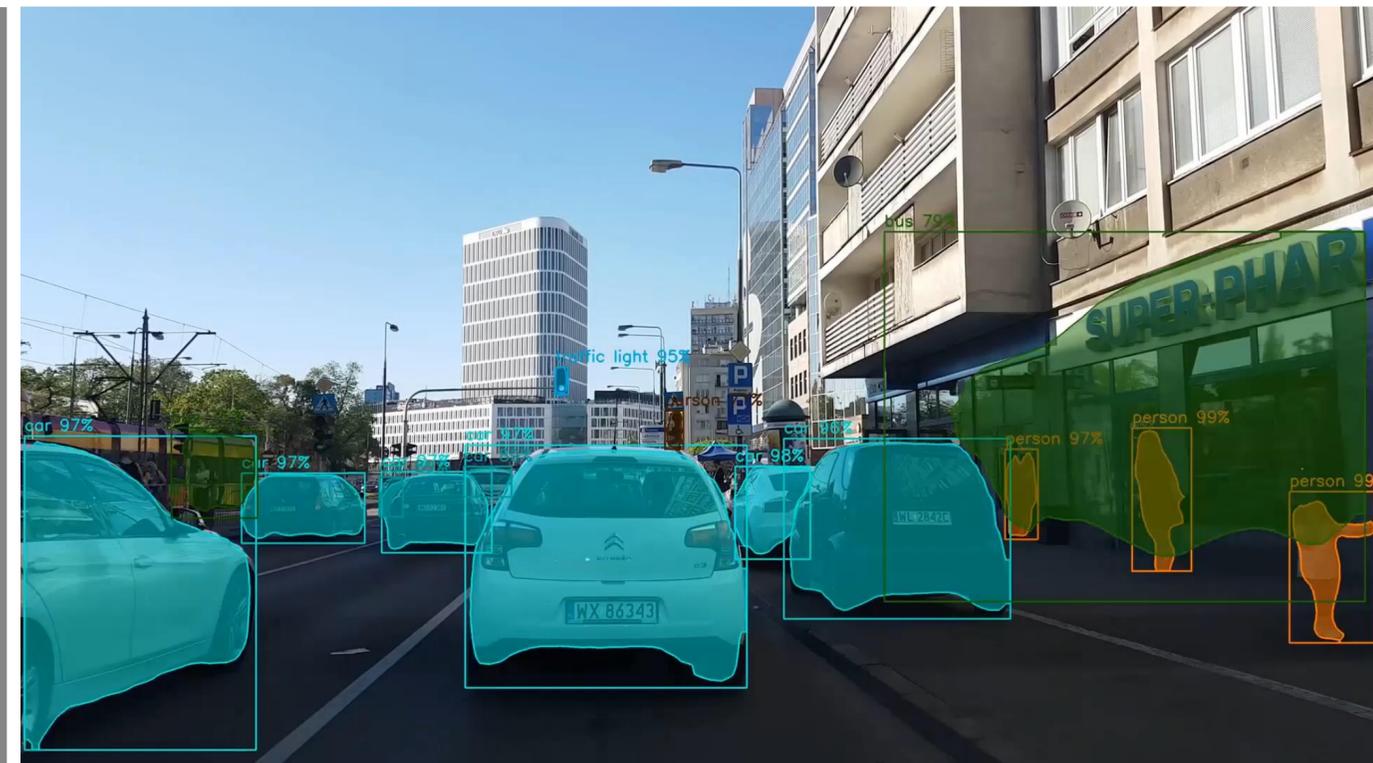
What is an industrial revolution?  
A very important change in  
the way that people do things fueled  
by a technological disruption  
rapidly adopted

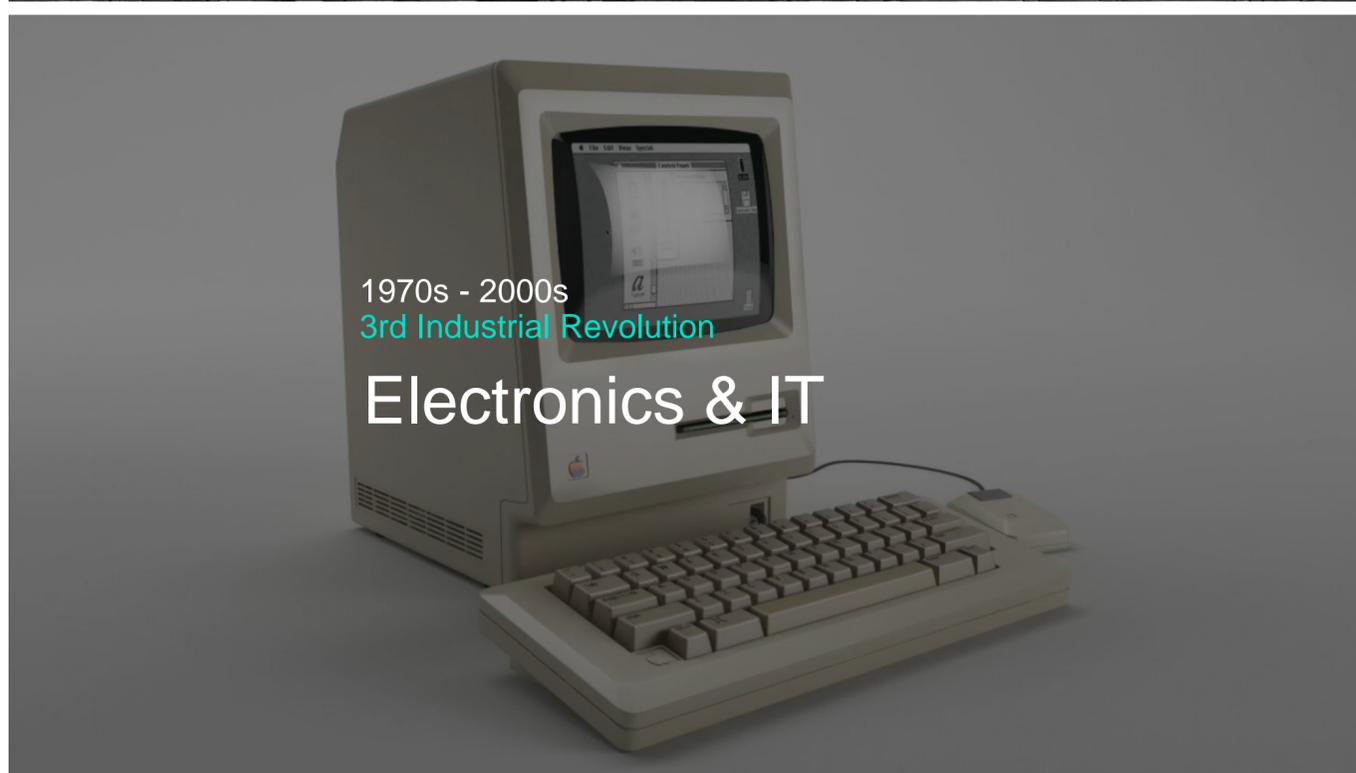
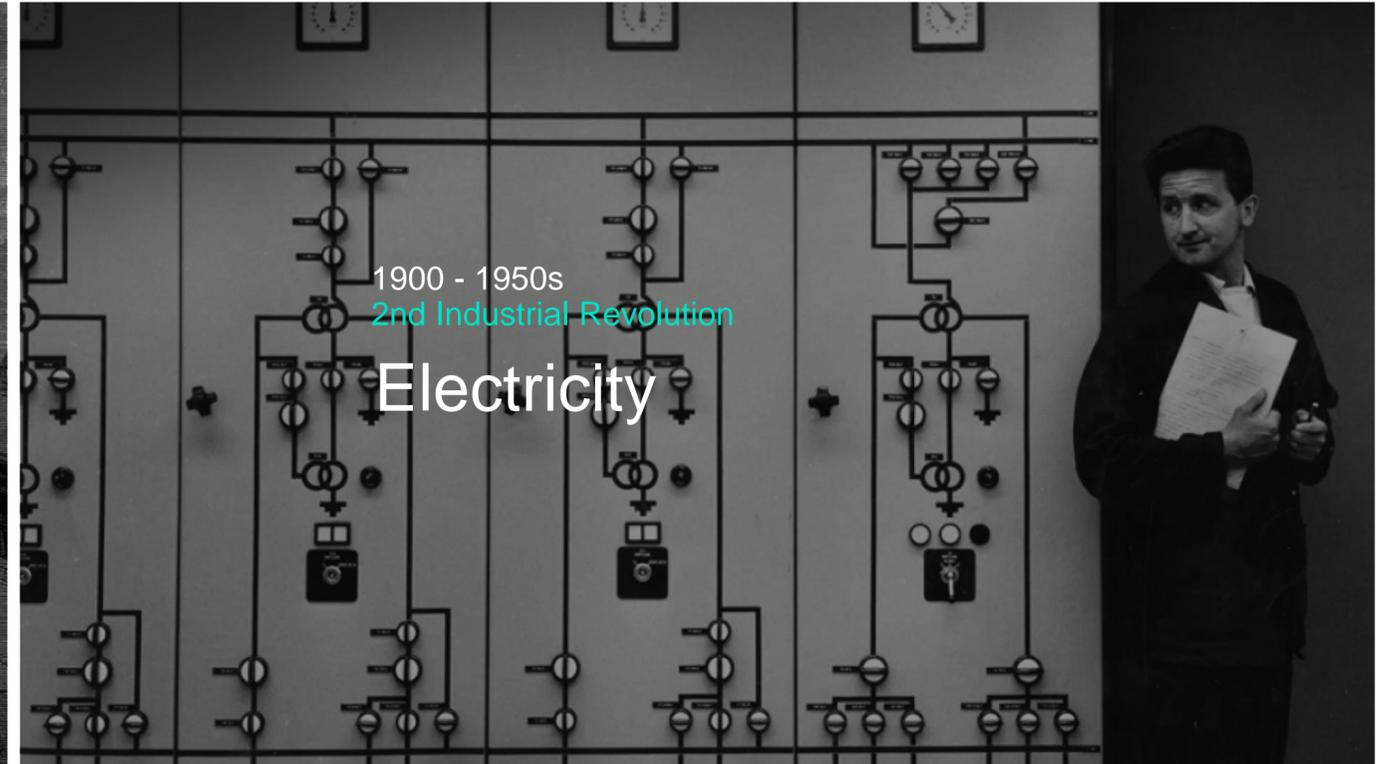
1st Industrial Revolution  
2nd Industrial Revolution  
3rd Industrial Revolution  
4th Industrial Revolution

Steam power  
Electricity  
Electronics & IT  
Digital transformation

“An industrial revolution is a revolution which  
at the same time changed the whole of civil  
society”

Friedrich Engels in  
The Condition of the Working Class in  
England 1844





# 4th

Industrial Revolution

It doesn't change  
what we are doing,  
it changes us

The 4th industrial revolution  
is affecting every aspect of life

Economy  
Energy  
Health  
Industry  
Science  
Transportation

Education  
Urbanism  
Politics  
Work  
Agriculture  
...

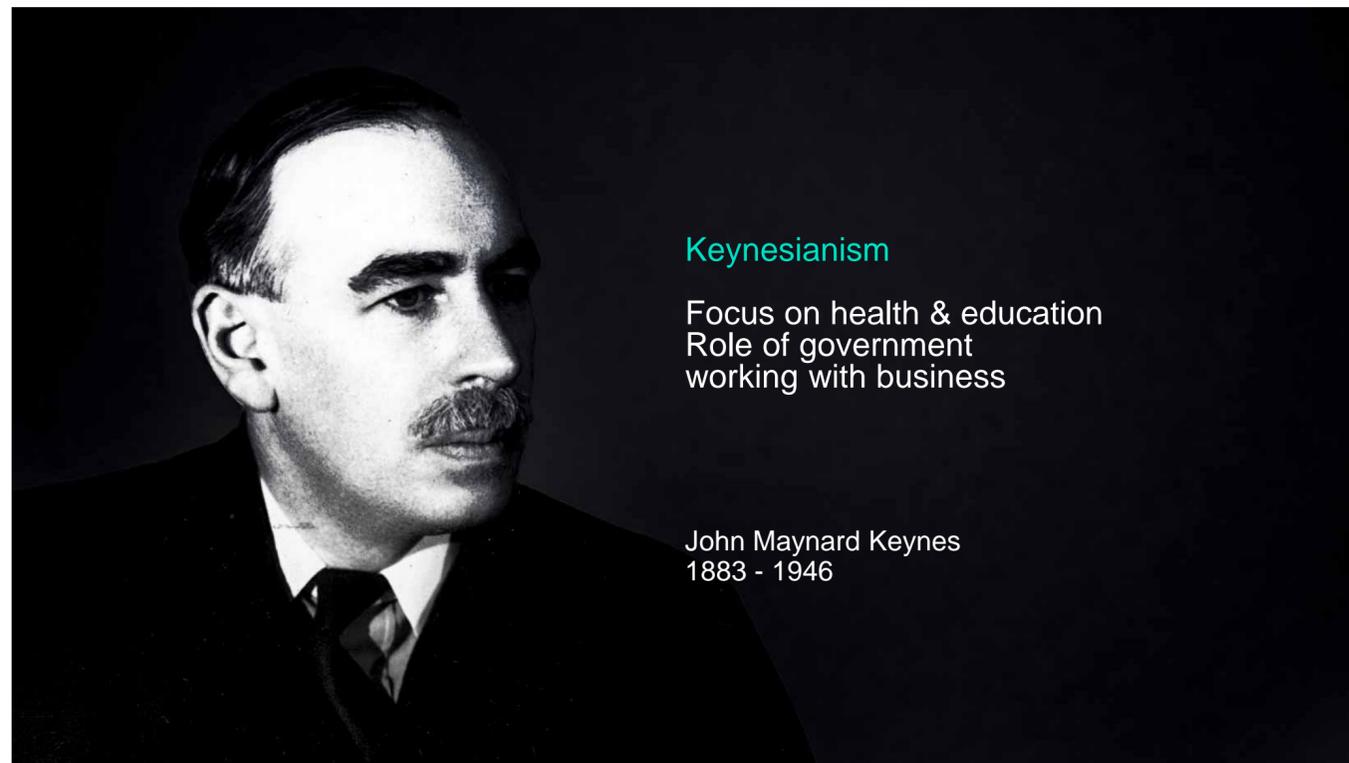


# shift

A shift in the system  
A different economic model

# ~~growth~~ wellbeing

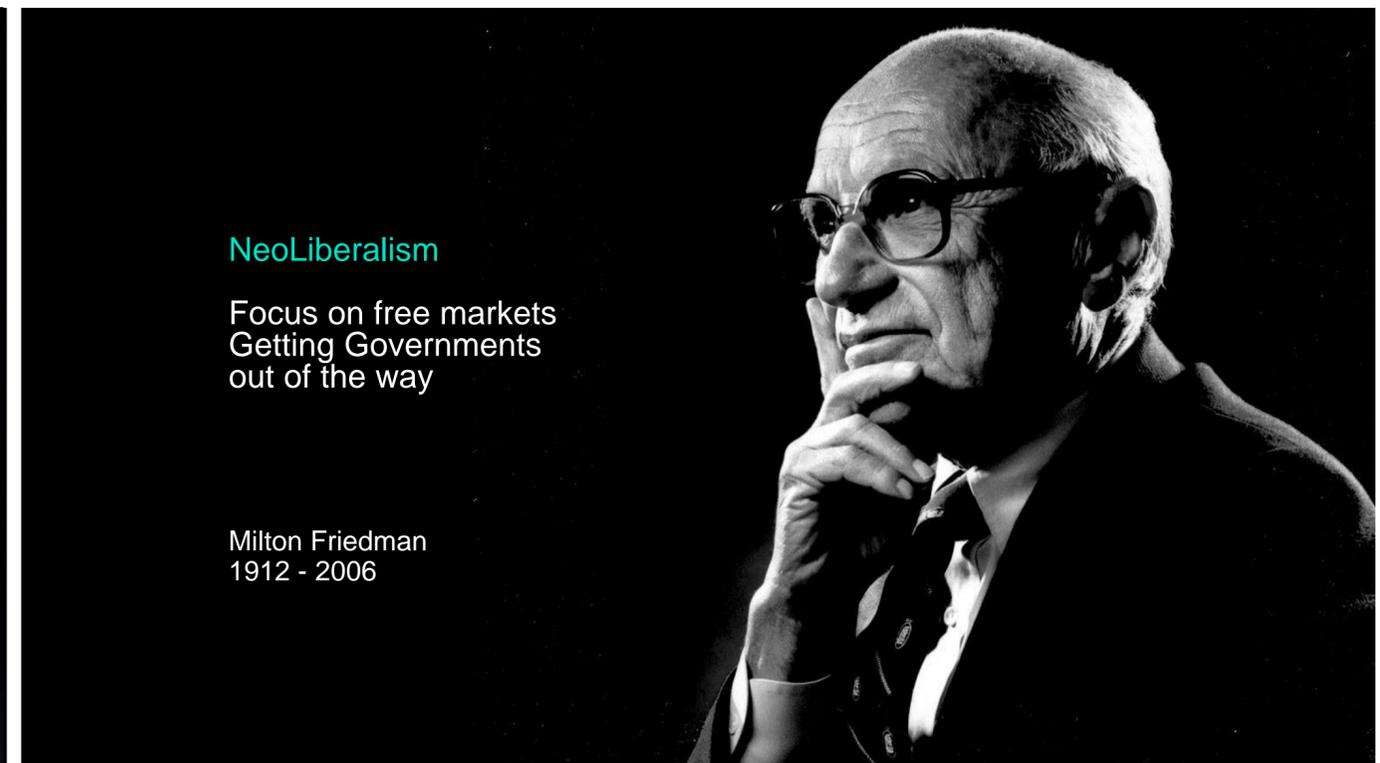
Not focus on growth  
Focus maximizing wellbeing  
A new narrative on how we want to live



## Keynesianism

Focus on health & education  
Role of government  
working with business

John Maynard Keynes  
1883 - 1946



## NeoLiberalism

Focus on free markets  
Getting Governments  
out of the way

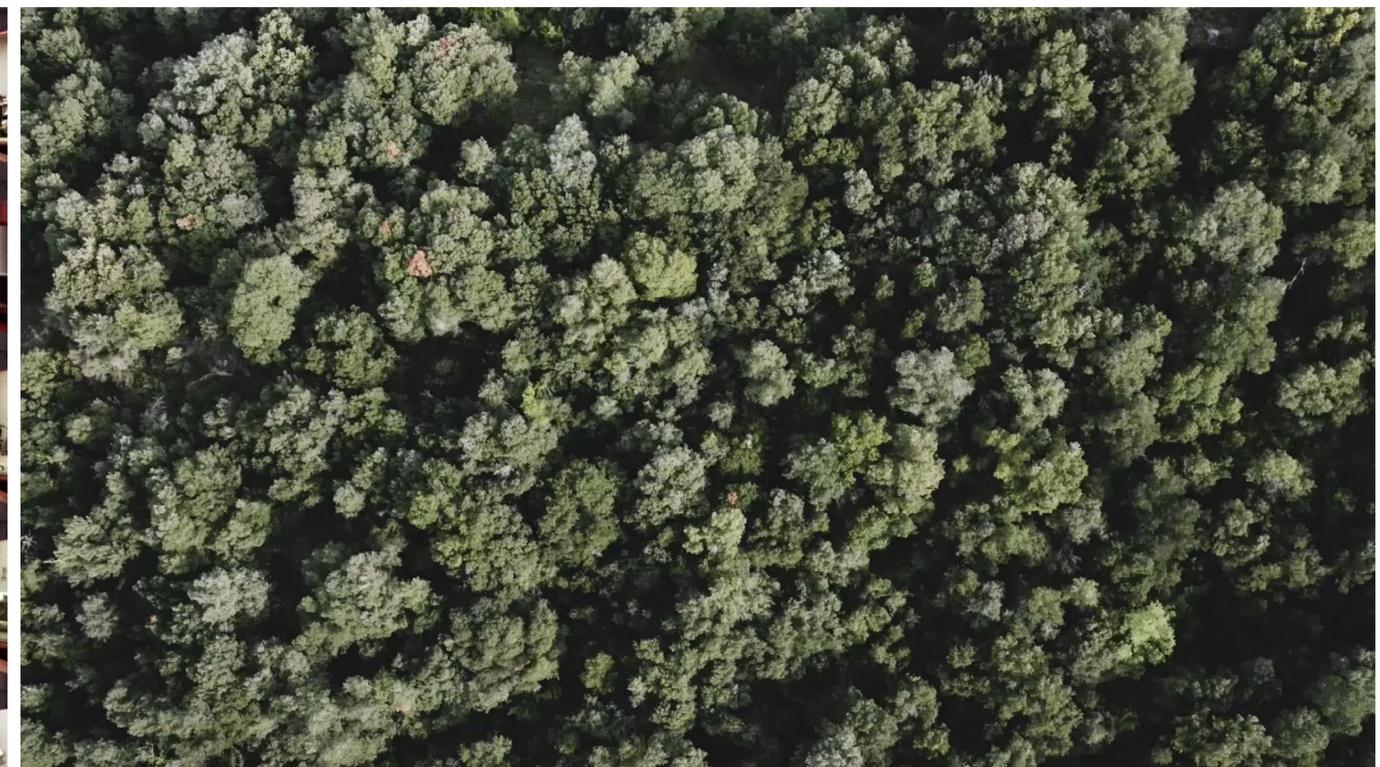
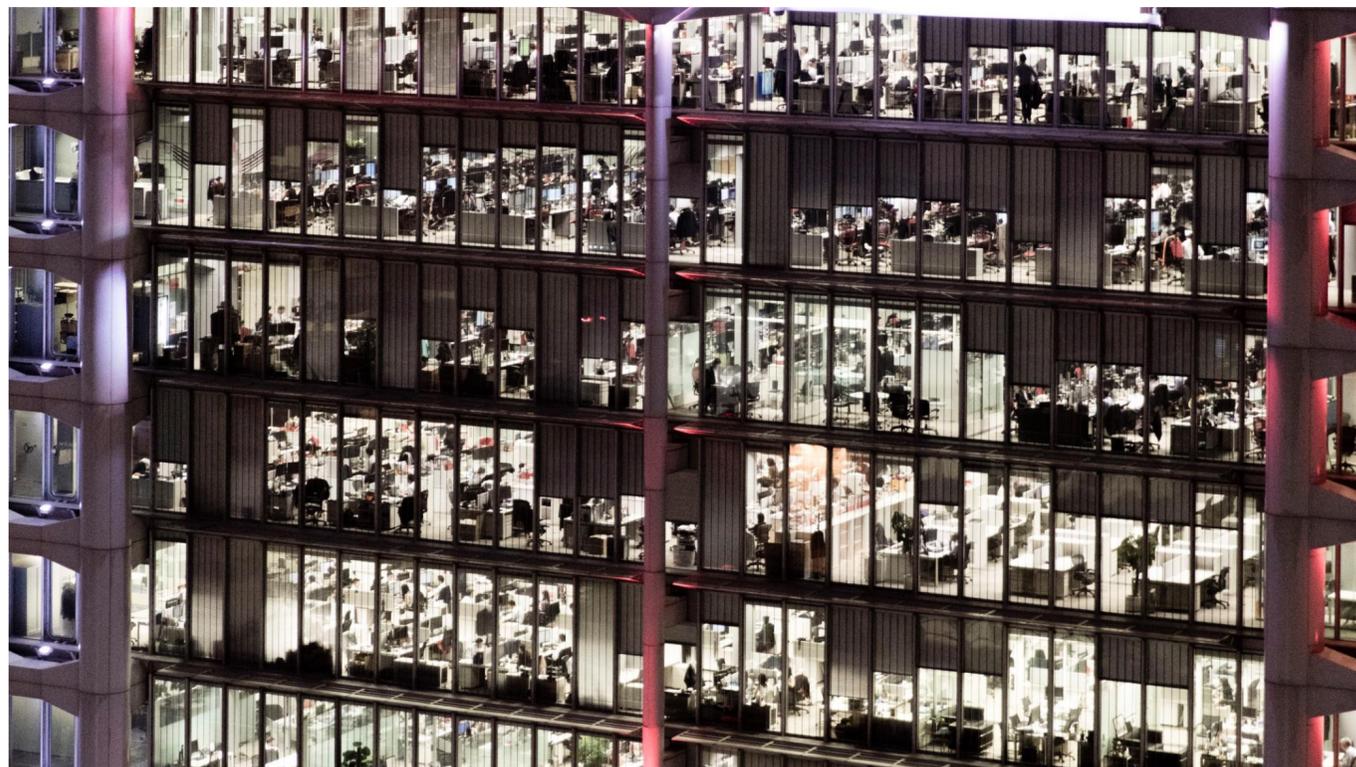
Milton Friedman  
1912 - 2006

A shift driven by a new narrative  
that redefines us

our relationship with work  
our relationship to life  
our relationship with the planet

Impulsed by a  
multidimensional  
knowledge  
revolution

Nanotechnology  
Big data  
Blockchain  
Artificial Intelligence  
3D Printing  
Automatization  
Virtual Reality  
Face Recognition  
IoT Internet of Things  
New materials  
Next-gen architecture  
Robotics  
Additive manufacturing  
Cyber security  
Data science  
Voice recognition  
Augmented Reality  
...



# The impact of the 4th industrial revolution **society**

Moving people at the center  
of development

Personalization  
Transparency  
Wellbeing  
Participation  
Safety



Democracy

Blockchain  
Artificial Intelligence  
Encryption  
Open source

Cities

Big data  
Internet of Things  
Traffic monitoring  
Asset tracking



Transportation

Deep learning  
Internet of Things  
Big Data

Health

3D bioprinters  
Wearable monitoring  
Genome sequencing  
Bioengineering

The impact of  
the 4th industrial revolution  
**environment**

“The goal is no longer be less bad, less unsafe, less unjust... It’s about a diverse, safe, healthy and just world with clean air, clean water, clean soil and clean energy.”

William McDonough, Stanford University

Enable a different economic  
model that feeds materials back  
into economy

Smart mobility  
3D printing  
Renewable energies  
New materials  
Self-driving car

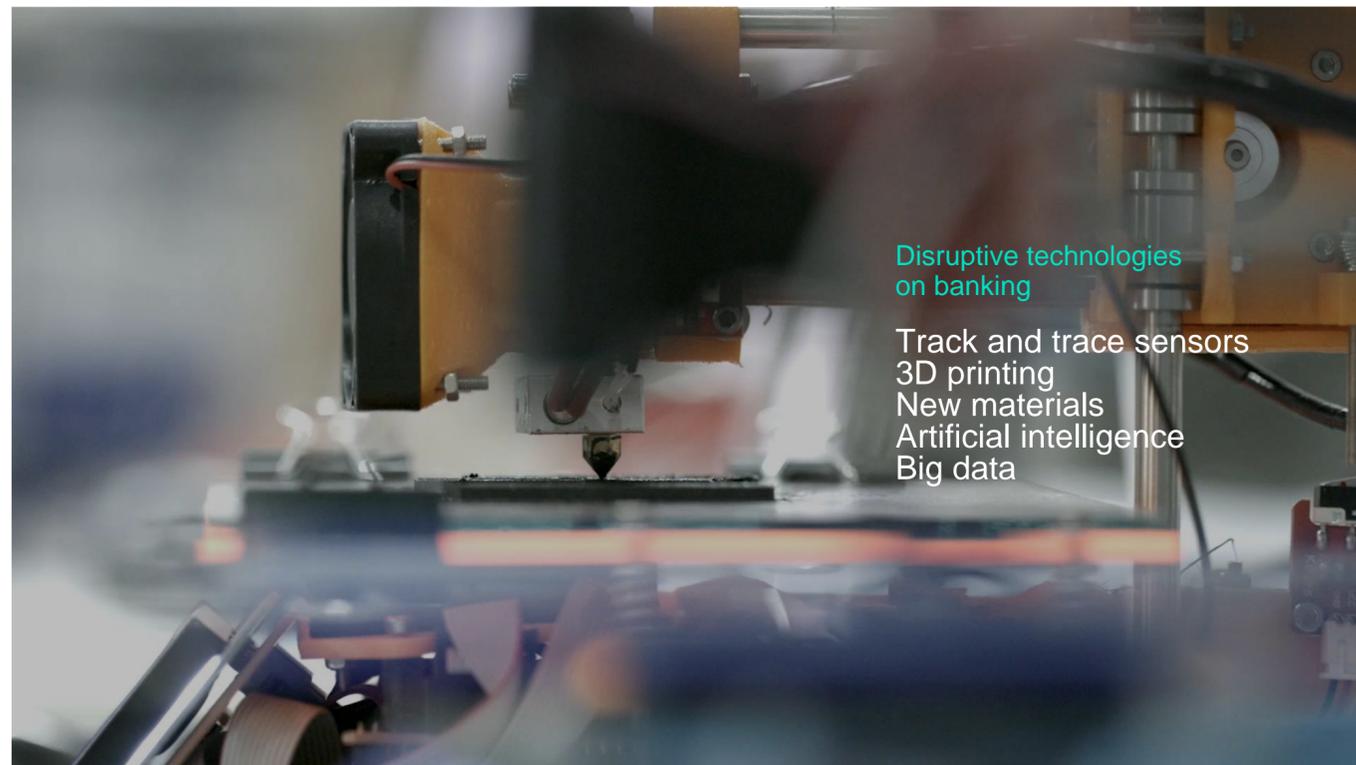
...



The impact of  
the 4th industrial revolution  
**economy**

To a new conception of work

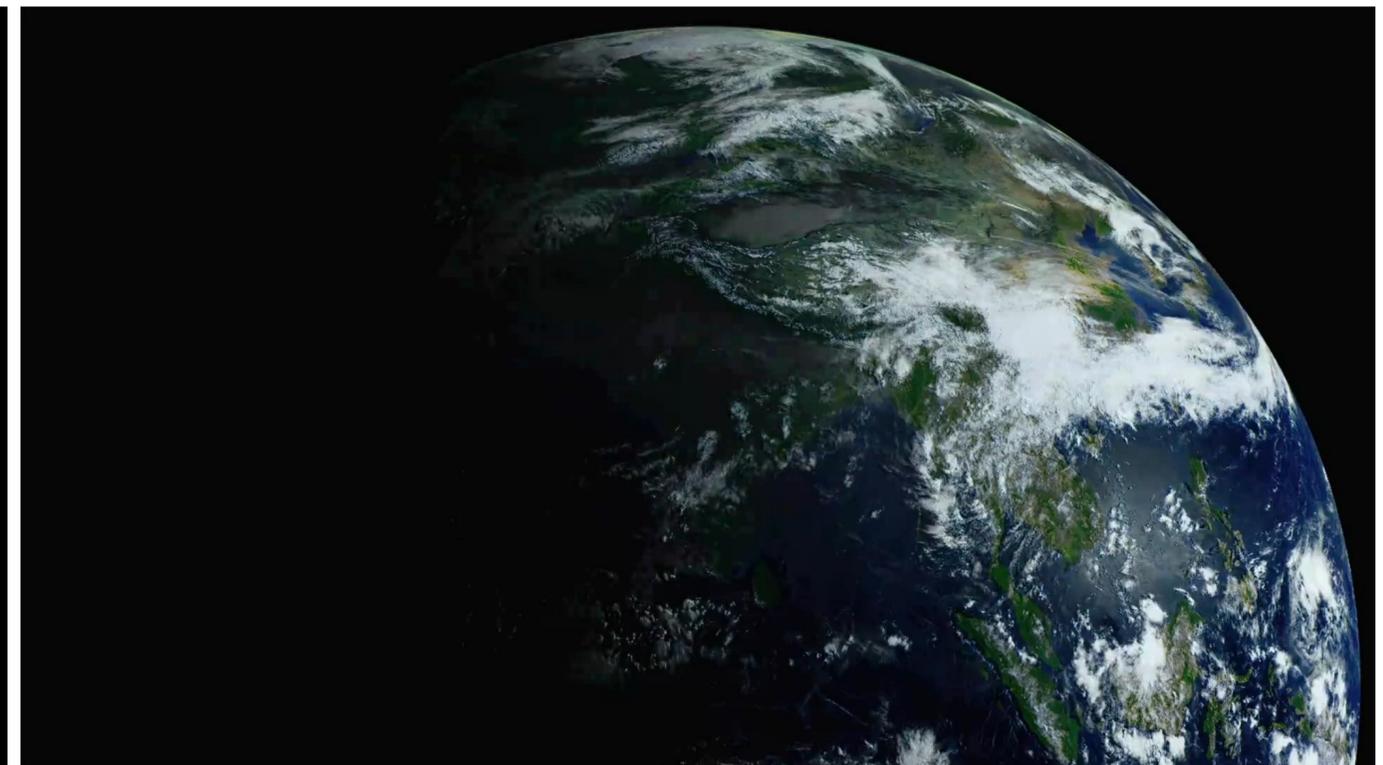
- + Collaboration
- + Flexibility
- + Autonomy



Digital Transformation (1st wave)

## The Digital User Economy

How did we get here?  
A new paradigm defeating gravity  
Platforms dominant position  
Understanding Amazon  
Understanding G+Fb  
Innovation  
Startups



2004  
Web 2.0

User generated content  
Usability  
Interoperability

A Web 2.0 website may allow users to interact and collaborate with each other in a social media dialogue as creators of user-generated content in a virtual community.



2007  
Steve Jobs  
& iPhone launch

Mobile Convergence  
The AppEconomy



2018  
Google & Mobile-first

“Today we’re announcing that after a year and a half of careful experimentation and testing, we’ve started migrating sites that follow the best practices for mobile-first indexing”

Mobile-first indexing means that we’ll use the mobile version of the page for indexing and ranking, to better help our – primarily mobile – users find what they’re looking for.



Digital Transformation (1st wave)  
The Digital User Economy

idea 1. The Big Tech Economy  
Top companies by market capitalization

2006	2018
ExxonMobil	Apple
General Electric	Alphabet (Google)
Microsoft	Amazon
Citi Corp	Microsoft
Banc of America	Facebook

idea 2. A different scale  
List of countries by GDP (M\$)

1	United States	20,412,870
2	China	14,092,514
3	Japan	5,167,051
4	Germany	4,211,635
	Google + Apple + Amzn + FB	3,008,000
5	United Kingdom	
6	France	2,936,286
7	India	2,925,096
8	Italy	2,848,231
9	Brazil	2,181,970
10	Canada	2,138,918
		1,798,512

Digital user economy: A new paradigm

1. Global (at zero marginal cost)
2. Machine learning / effective
3. Positive feed loop / Benjamin button effect
4. Likable / direct link to user
5. Career accelerant / capacity to attract best talent

idea 3. Reactions to the new landscape  
The Tech Giants Growing Behind  
China's Great Firewall

Apple	Xiaomi
Alphabet (Google)	Baidu
Amazon	Alibaba
Facebook	Tencent



Apple is an iPhone company

iPhone + iPad 80% of revenues



Facebook is a media company

Advertising revenues account for 99%

Google

Google is a media company

Advertising revenues account for 88%

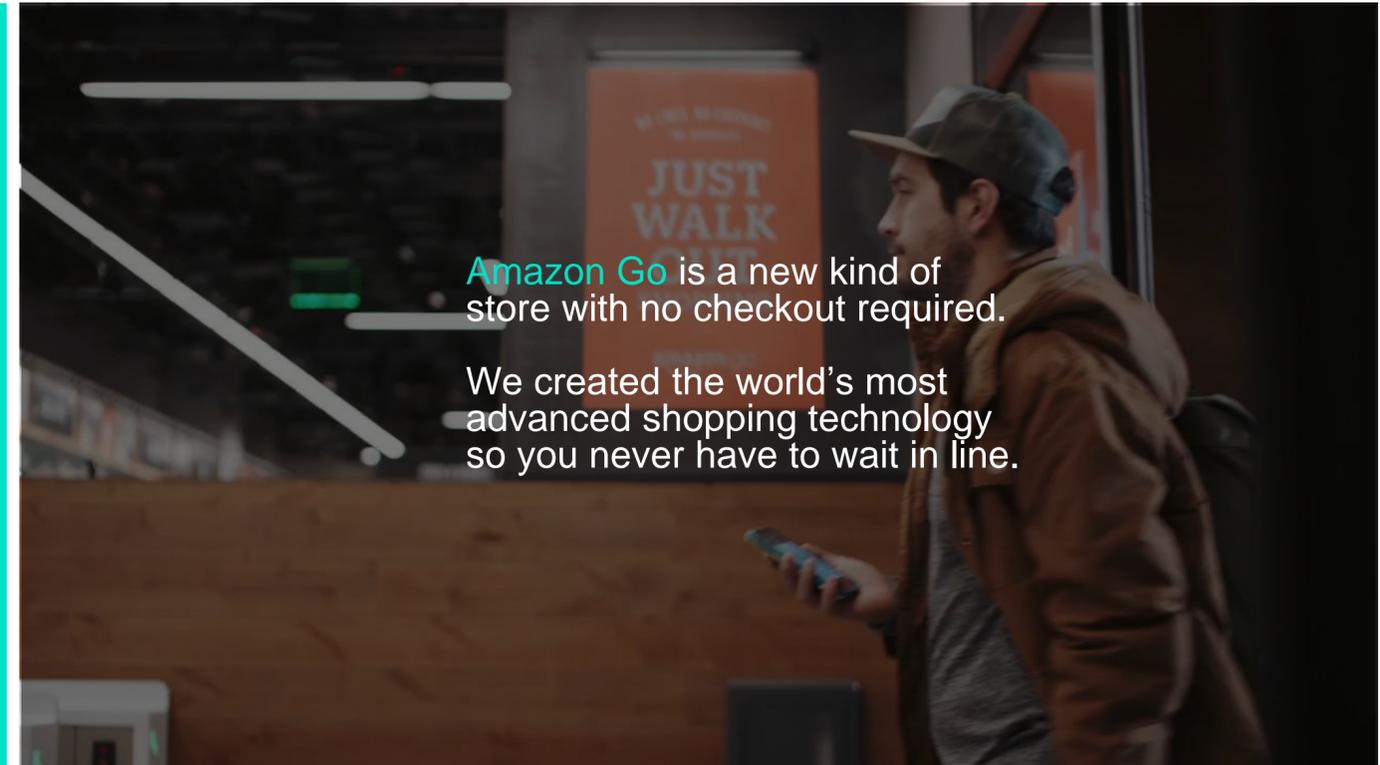


Not just a Retail + .....

Amazon has changed the relationship between companies and shareholders

long term vs short term  
vision & growth vs profits

- (1) Leadership
- (2) Innovation



Amazon Go is a new kind of store with no checkout required.

We created the world's most advanced shopping technology so you never have to wait in line.

Jeff Bezos: Shareholders letter, 1997

We believe that a fundamental measure of our success will be the shareholder value we create over the long term. This value will be a direct result of our ability to extend and solidify our current market leadership position. The stronger our market leadership, the more powerful our economic model. Market leadership can translate directly to higher revenue, higher profitability, greater capital velocity, and correspondingly stronger returns on invested capital.

1. Measure our market leadership (customer and revenue growth, the degree to which our customers continue to purchase from us on a repeat basis, and the strength of our brand).
2. Continue to invest aggressively to expand and leverage our customer base, brand, and infrastructure

Amazon share today (2017)

- 4% Total retail in the US
- 24% Total retail growth in the US
- 33% AWS - Cloud revenues
- 40% Search engine. Product related searches
- 50% US e-commerce (2017)
- 55% Blackfriday sales
- 62% Amazon Prime households
- 70% Amazon Echo households

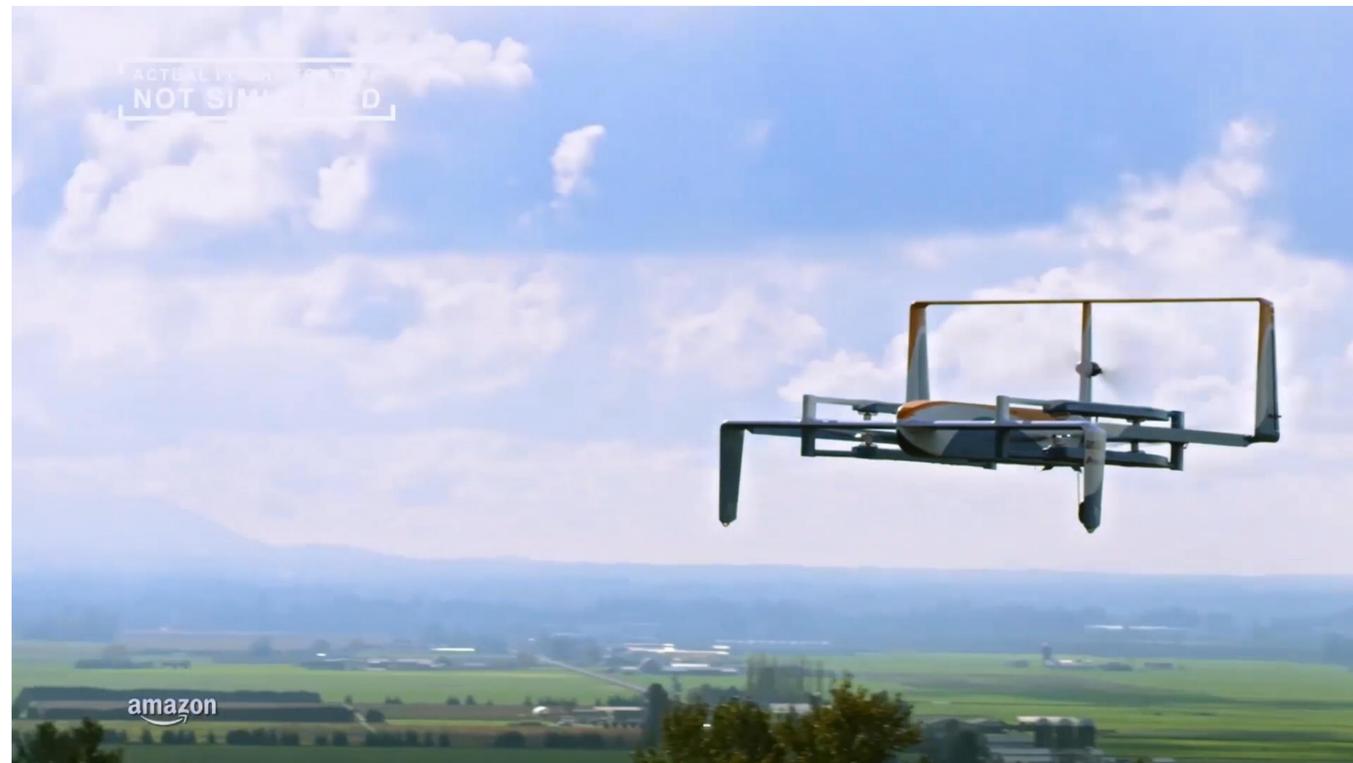
1. Transition to a Subscription based business model
2. Focus on the most profitable segment. High Income Households
3. Enter related markets with huge potential. ie Video drives consumer spending

Amazon Prime  
Amazon Prime Now  
Amazon Prime Video  
Amazon Prime Music

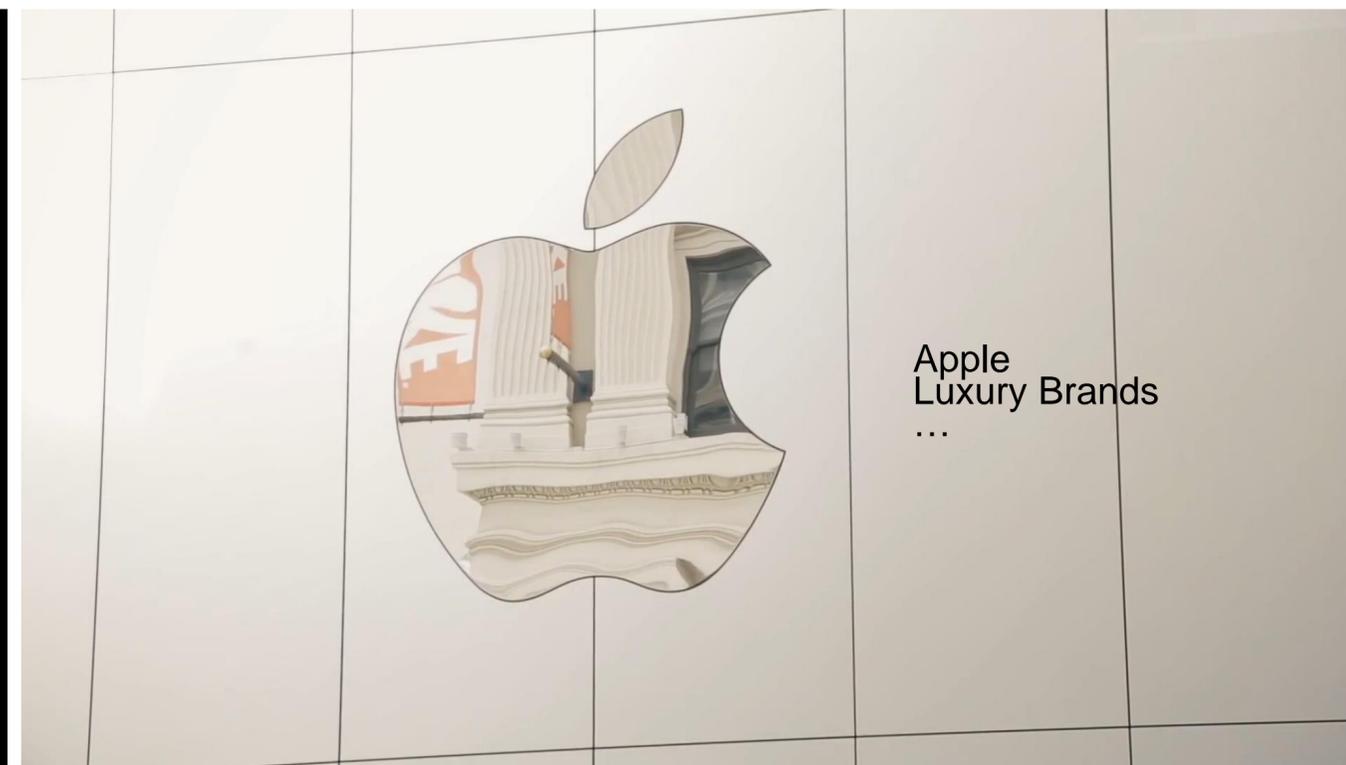
1. More than 100 M subscribers
2. Top Netflix in terms of content investments budget (more than 5 Bn USD)
3. Prime Video is already leading India, Germany and Japan

Subscription + seamless buying experience  
Amazon Prime + Voice Shopping

Towards the “only retailer” concept  
Amazon has already decided to offer discounts when ordering thru voice



# Brands in the Digital User Economy



idea 1. Google + Facebook are the Digital AD market  
Account for 75% the digital advertising market  
Account for 90% of the growth of the market

idea 2. Ad free TV continues to grow (Netflix Effect)  
TV viewers & advertising continues on decline

idea 3. Voice is the interface of the future  
Brand product searches are on decline  
Alexa is key on Amazon strategy ...

Brands facing a major problem

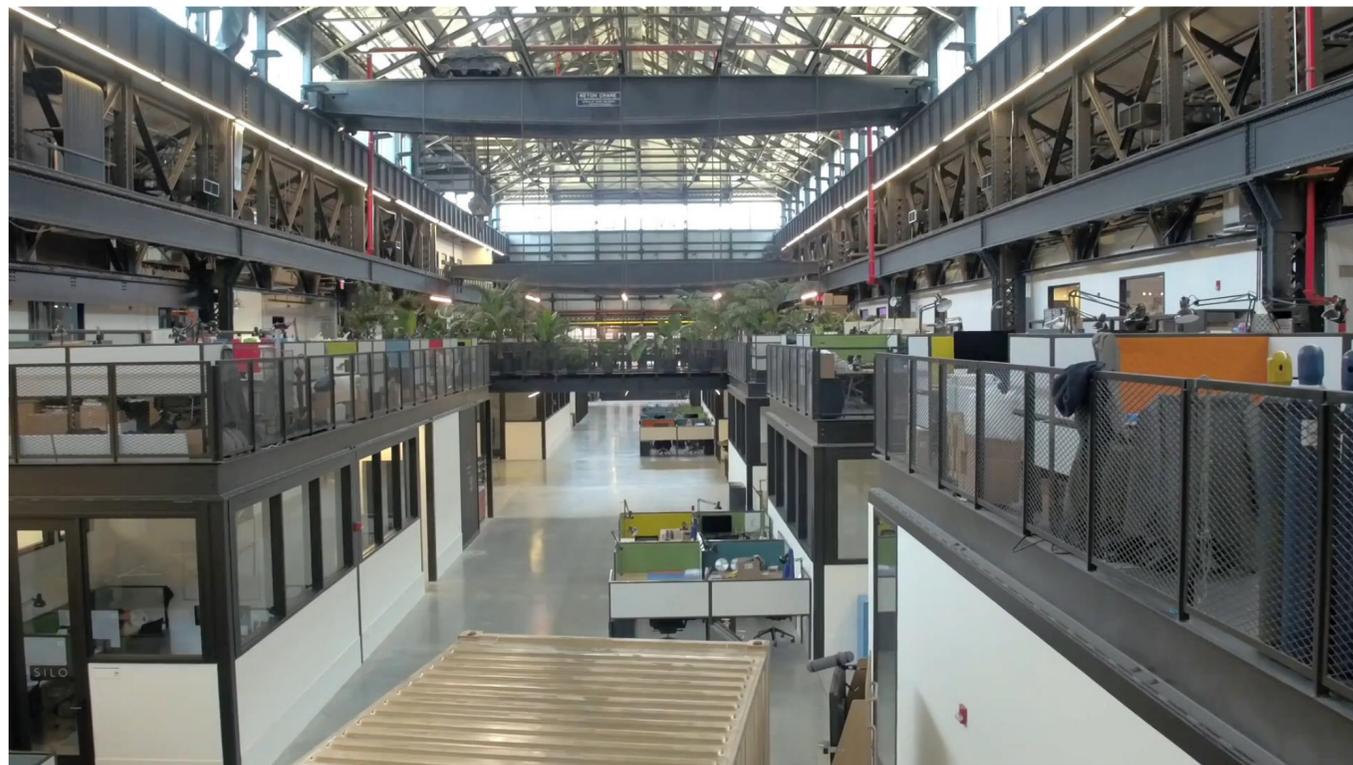
Digital takes it all  
Brand value on decline  
Brand windows are closing  
Retailers are on deep decline  
Vertical Integration?

Innovation has a new vehicle

Start ups  
Open Innovation  
Acceleration

The innovation vehicle  
of the 21st century

Talent  
Creativity  
People  
Knowledge  
Technology  
Startups



What need a startup to flourish?

Startups look for already  
established and flourishing  
digital ecosystems

The European “Silicon Valley” will be based on a  
network of urban startups ecosystems / Campus

Paris  
Berlin

Treviso  
Dusseldorf  
Dublin  
Helsinki  
Budapest  
Lisbon  
Vilnia (Lituania)  
Eindhoven  
...

Station F  
Factory Berlin  
City Cube Berlin  
H-Farm  
Factory Campus  
Harbour innovation Campus  
Maria 01  
Startup Campus  
Hub Criativo Beato  
Vilius Tech Park  
High Tech Campus



Digital Transformation (2nd wave)

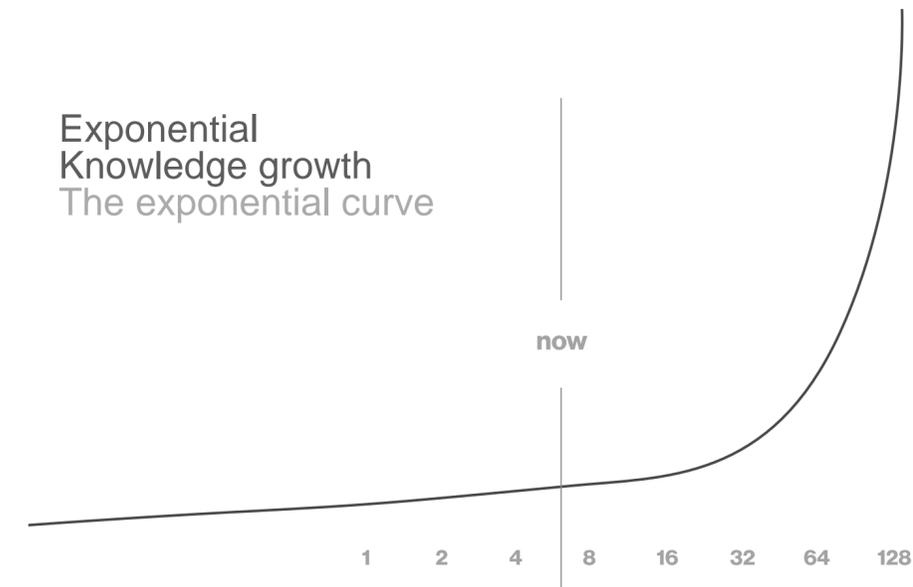
## The Digital Enterprise Economy

Multidimensions & the exponential curve  
Implications of the curve  
(design, industries, investment...)



Combinatorial effect  
Cloud Computing  
Additive Manufacturing  
Internet of Things  
Blockchain  
AI / Deep Learning  
Quantum Computing

Exponential  
Knowledge growth  
The exponential curve



Impact on all sectors

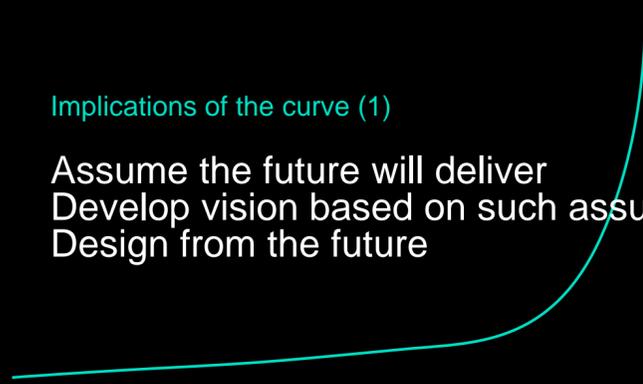
Financial services  
Consumer goods  
Distribution & retail  
Transport & logistics  
Manufacturing  
Energy  
Telecom  
Insurance  
Life sciences  
Education  
Public sector  
...

Impact on all activities

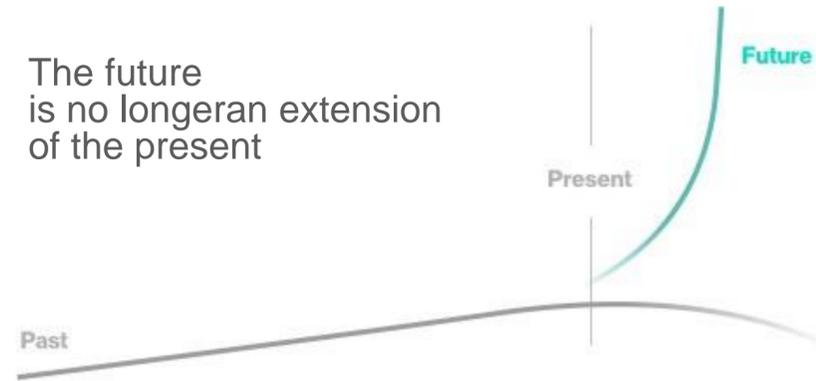
Business model & strategy  
Marketing & Sales  
Supply Chain  
Production  
Logistics  
Human Resources  
Corporate culture  
Impact on Market structure  
...

Implications of the curve (1)

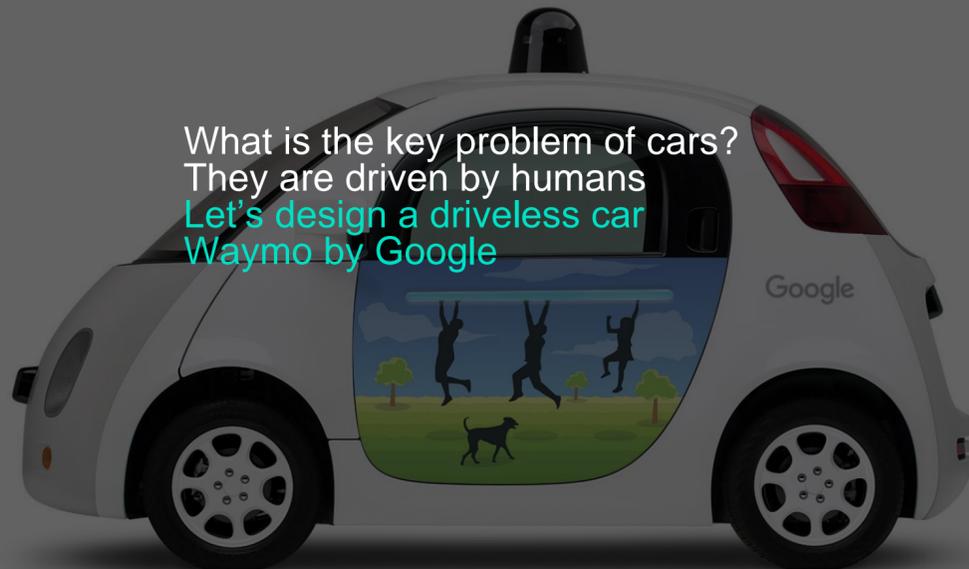
Assume the future will deliver  
Develop vision based on such assumption  
Design from the future



The future  
is no longer an extension  
of the present



What is the key problem of cars?  
They are driven by humans  
Let's design a driveless car  
Waymo by Google



Music will be streamed  
Access will be unlimited  
People will pay by subscription



Implications of the curve (2)

The future is knowledge intensive  
Innovation capabilities will be spread  
Open innovation will be a must

Industries will be redefined  
by new capabilities required

Industries will be replaced  
by ecosystems

Over 1,700 Start-Ups Are Disrupting  
The Automotive Industry  
(Forbes, May 2017)

Intel buys Mobileye in \$15.3B deal,  
moves its automotive unit to Israel  
(2017)

8.07 m  
DISTANCE  
TO VEHICLE

Implications of the curve (3)

Obsolescence may be at the corner  
Growth & innovation vs Profit  
Shareholders requirements are changing

Profit is not the key indicator  
Innovation and capacity to adapt  
will be the new black

Open innovation programs  
Research & investment budgets  
Talent attraction

Netflix runs it's business  
at breakeven

**NETFLIX**

Amazon runs it's business  
at breakeven

**amazon**