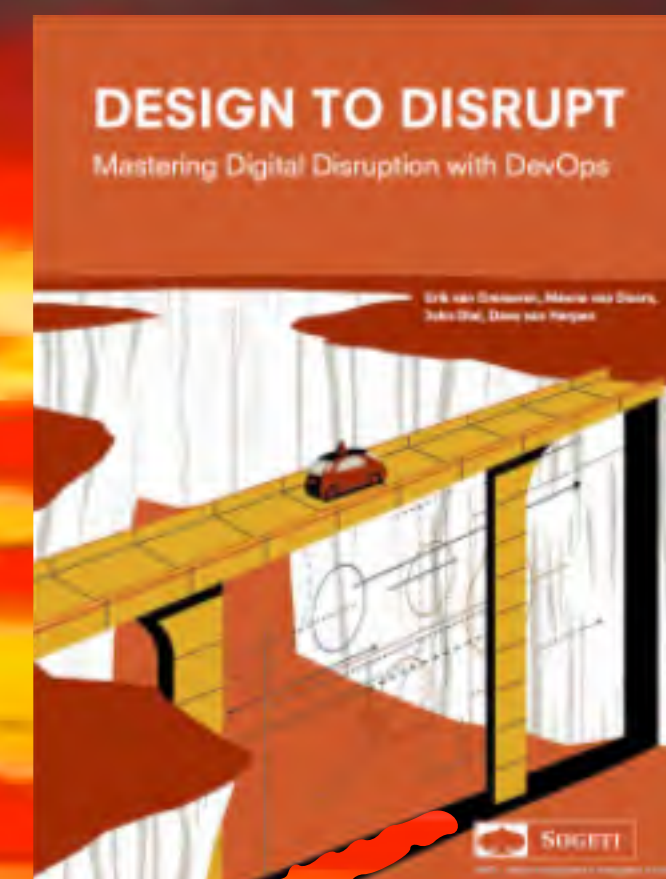
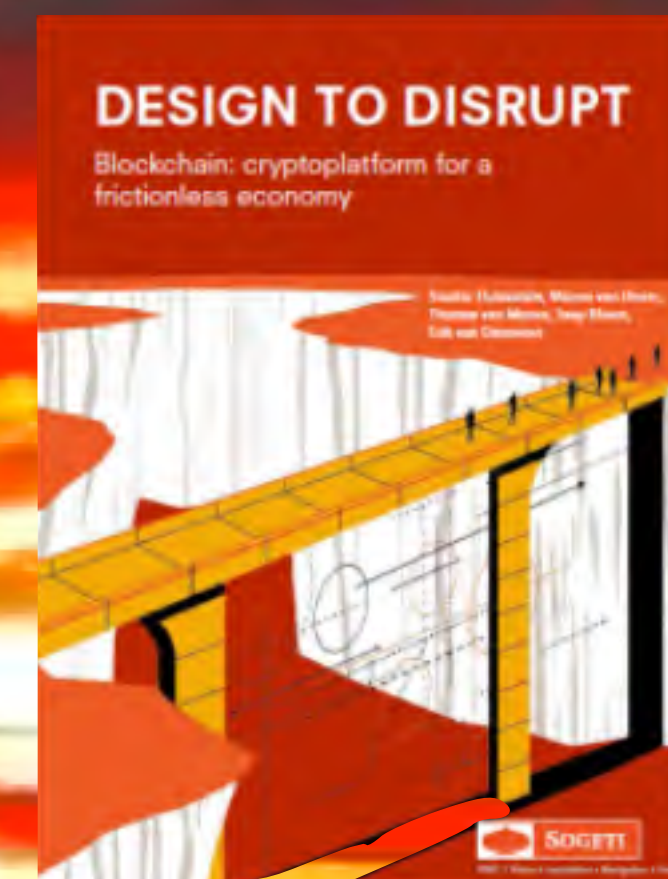


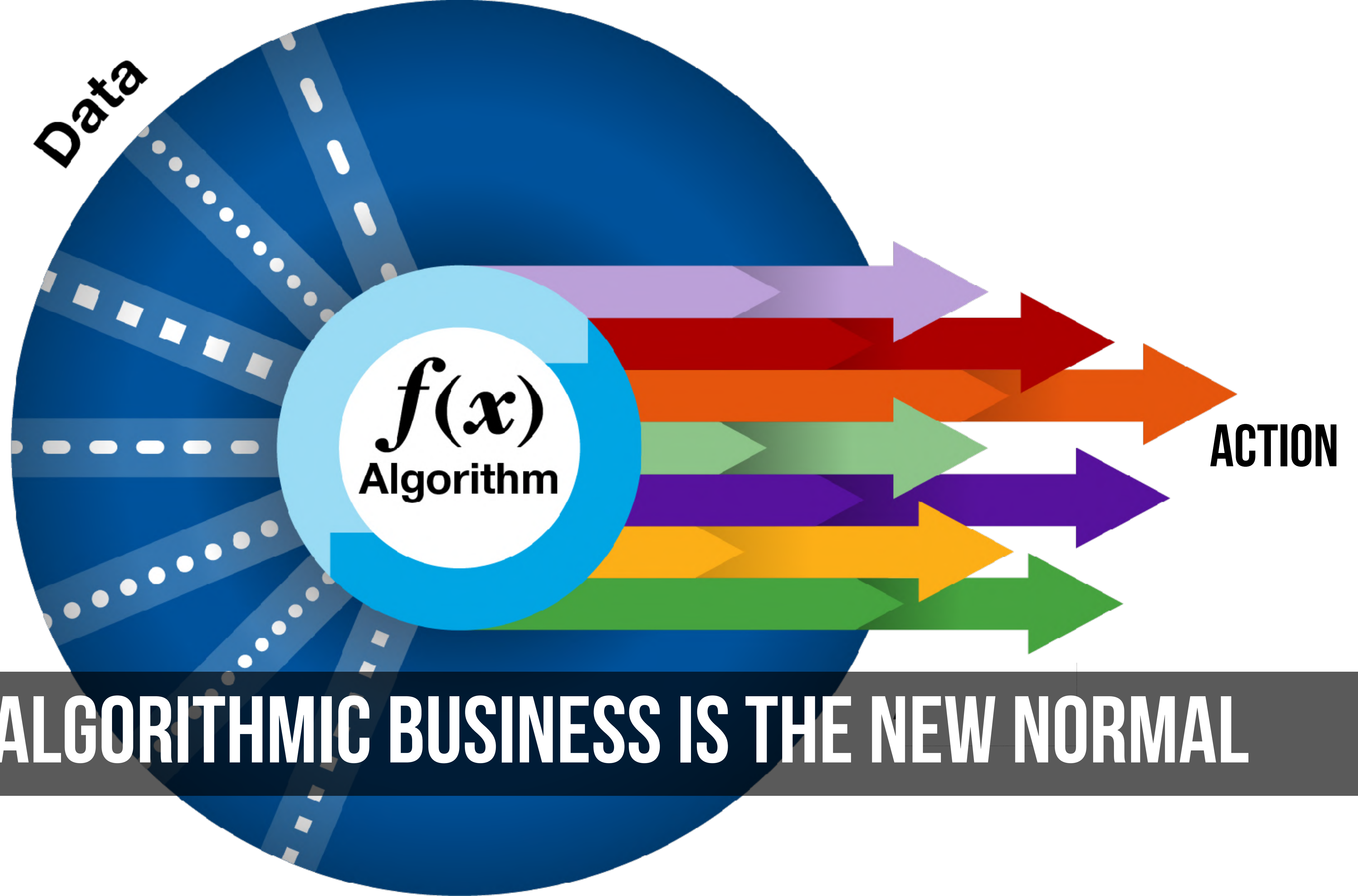


[HTTP://LABS.SOGETI.COM/RESEARCH](http://labs.sogeti.com/research)



THE DAWN OF ALGORITHMIC BUSINESS

(ALGORITHMIC BUSINESS IS THE INDUSTRIALIZED USE OF COMPLEX MATHEMATICAL ALGORITHMS
PIVOTAL TO DRIVING IMPROVED BUSINESS DECISIONS OR PROCESS AUTOMATION FOR COMPETITIVE DIFFERENTIATION.)



ALGORITHMIC BUSINESS IS THE NEW NORMAL



ALWAYS ON

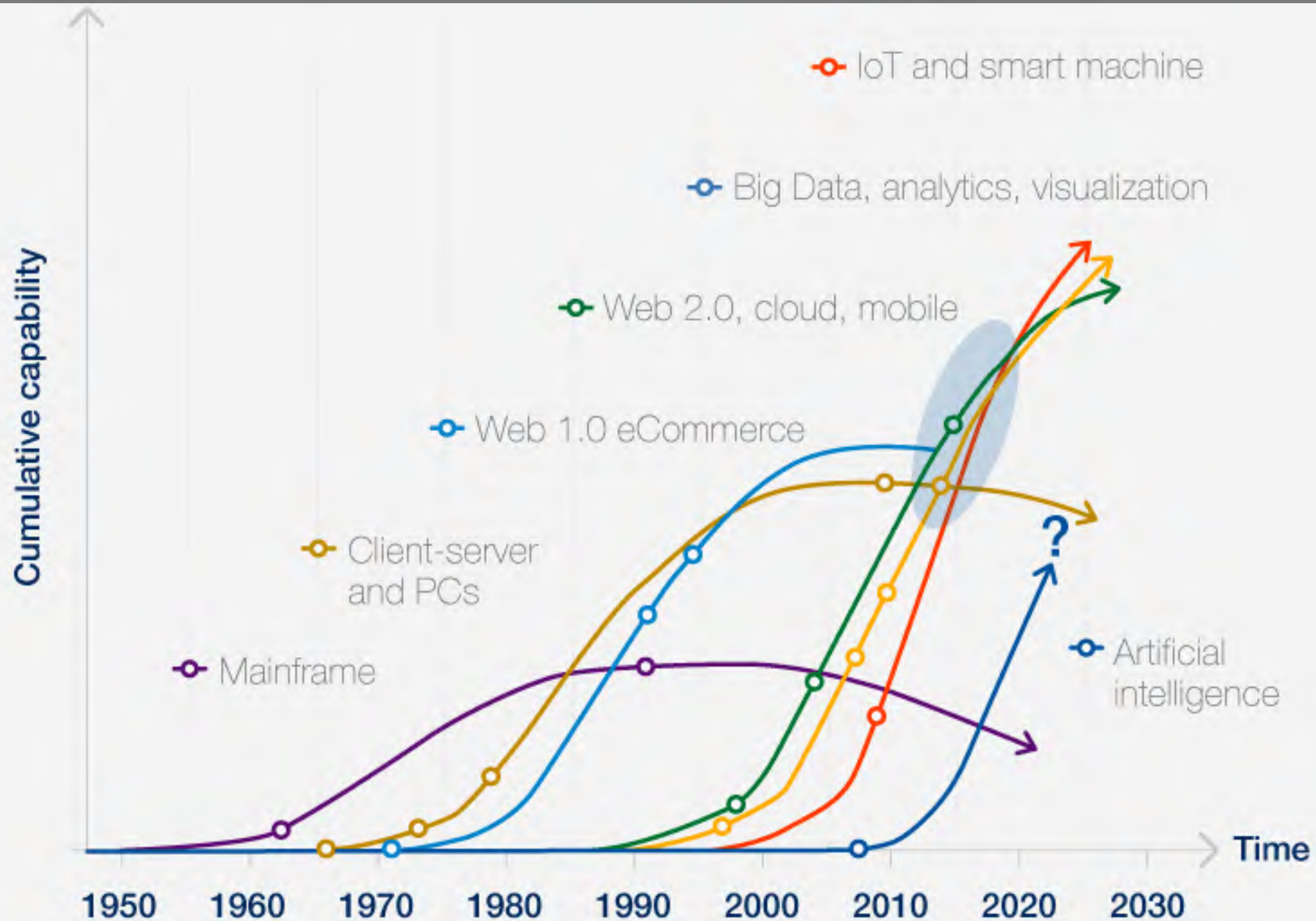


SMART THINGS



FRICTIONLESS WORLD

COMBINATORIAL INNOVATION



DIGITAL FUNDAMENTALLY CHANGES THE RELATIONSHIP WITH CUSTOMERS

(RE-ENGINEER HOW BUSINESS CREATES VALUE IN THE DIGITAL AGE)

USE DIGITAL TO HELP CUSTOMERS GET TO THE OUTCOMES THEY DESIRE

(EXPAND YOUR ROLE IN THE PERSONAL VALUE ECOSYSTEM OF YOUR CUSTOMER)

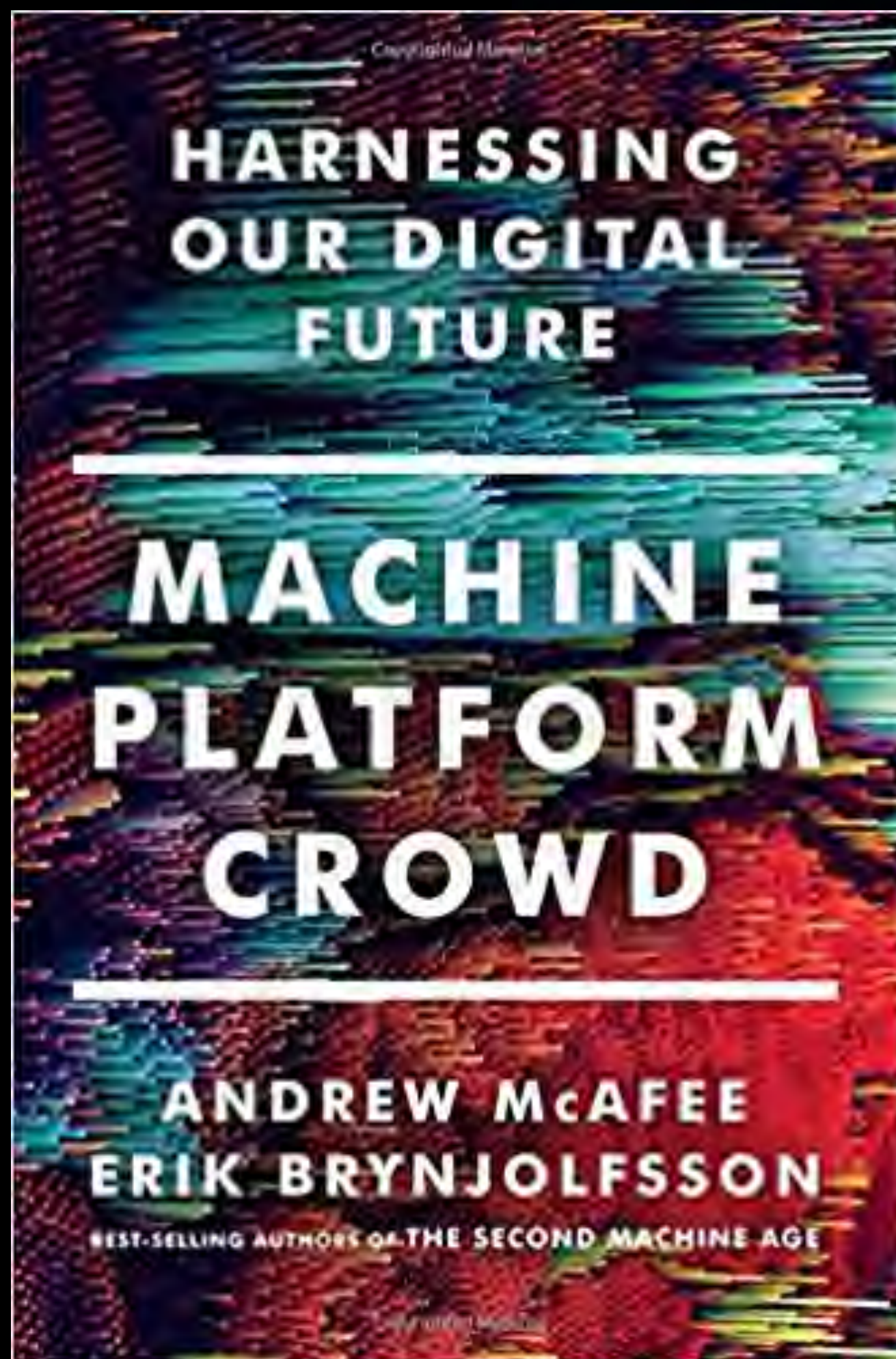
NOT JUST DCX

(OPERATIONAL AGILITY - SPEED TO MARKET - EMPLOYEE PRODUCTIVITY - LEANER PROCESSES - MAXIMISE ASSET UTILISATION)

INNOVATE AT THE SPEED OF TECHNOLOGY CHANGE

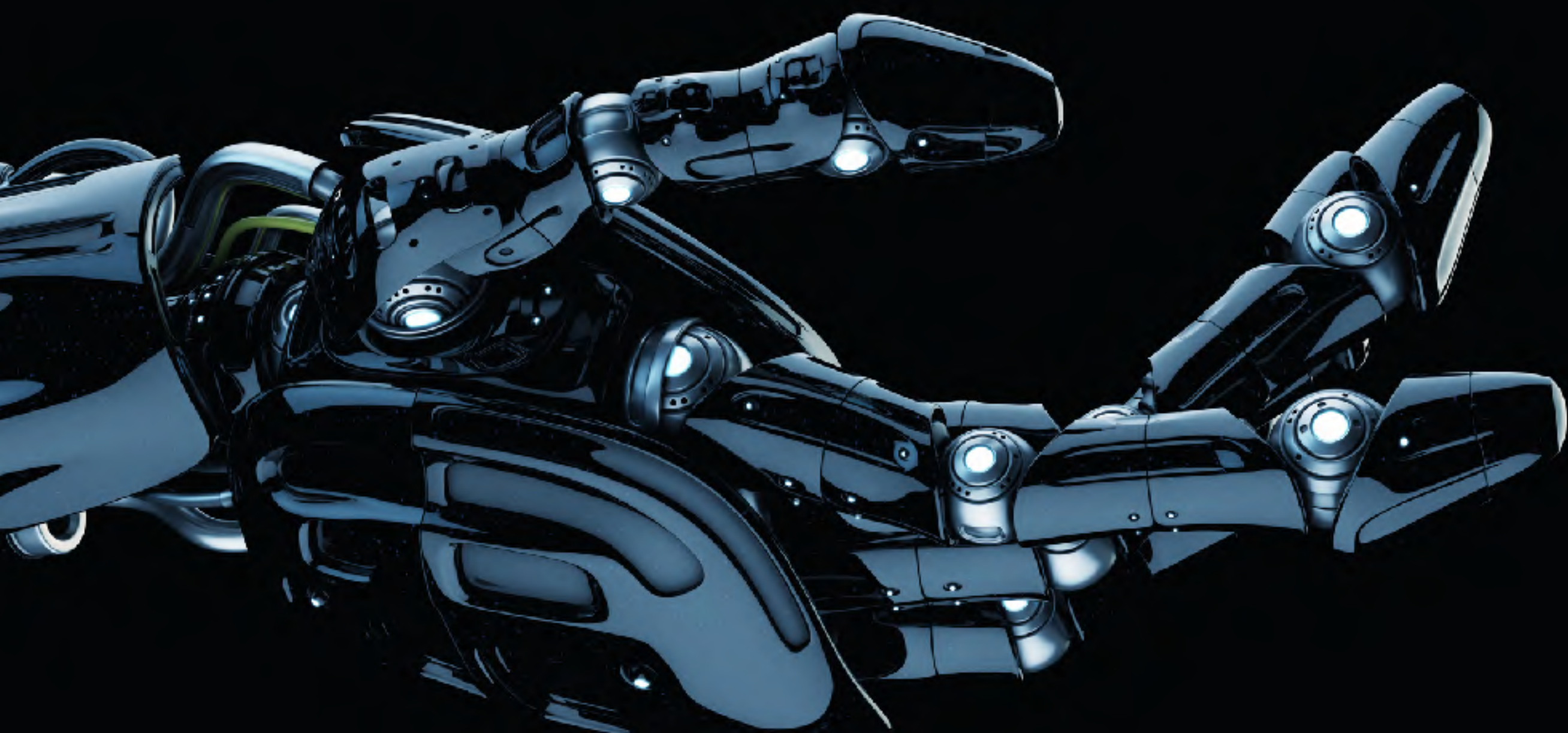
(AND ADOPTION BY THE CONSUMER)

**GIVE CUSTOMERS WHAT THEY WANT
AS FAST AS YOU CAN**



1

MACHINE



CLOUD COMPUTING

2011 → 2016 5X INCREASE



**INEXPENSIVE STORAGE
+ POWERFUL COMPUTE**

MOORE'S LAW



DATA EXPLOSION

90% OF THE DATA IN THE WORLD TODAY HAS BEEN
CREATED IN THE LAST TWO YEARS ALONE



CONNECTED CUSTOMERS



10.4M



160M



200M



1B+

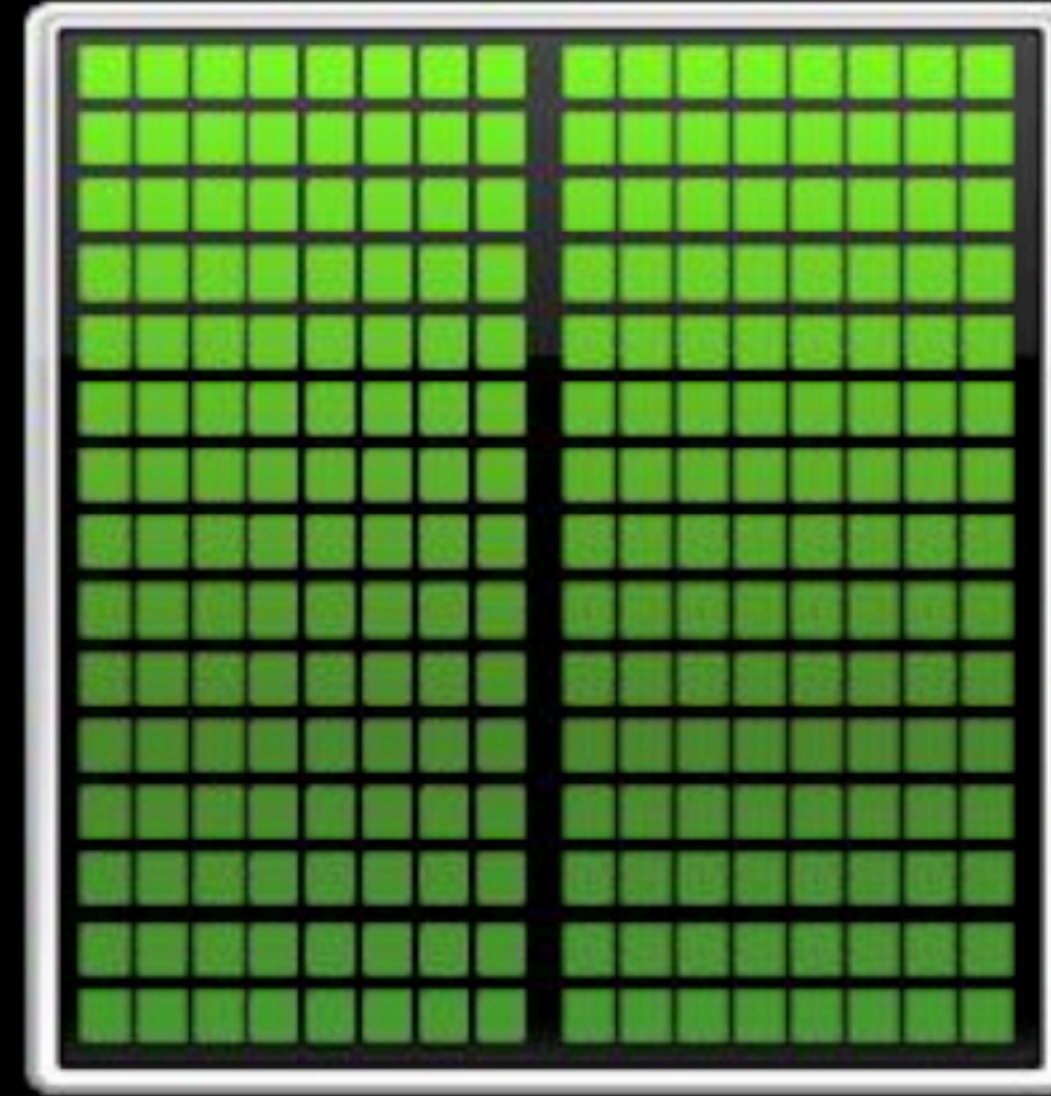


MACHINE INTELLIGENCE: WHY NOW?

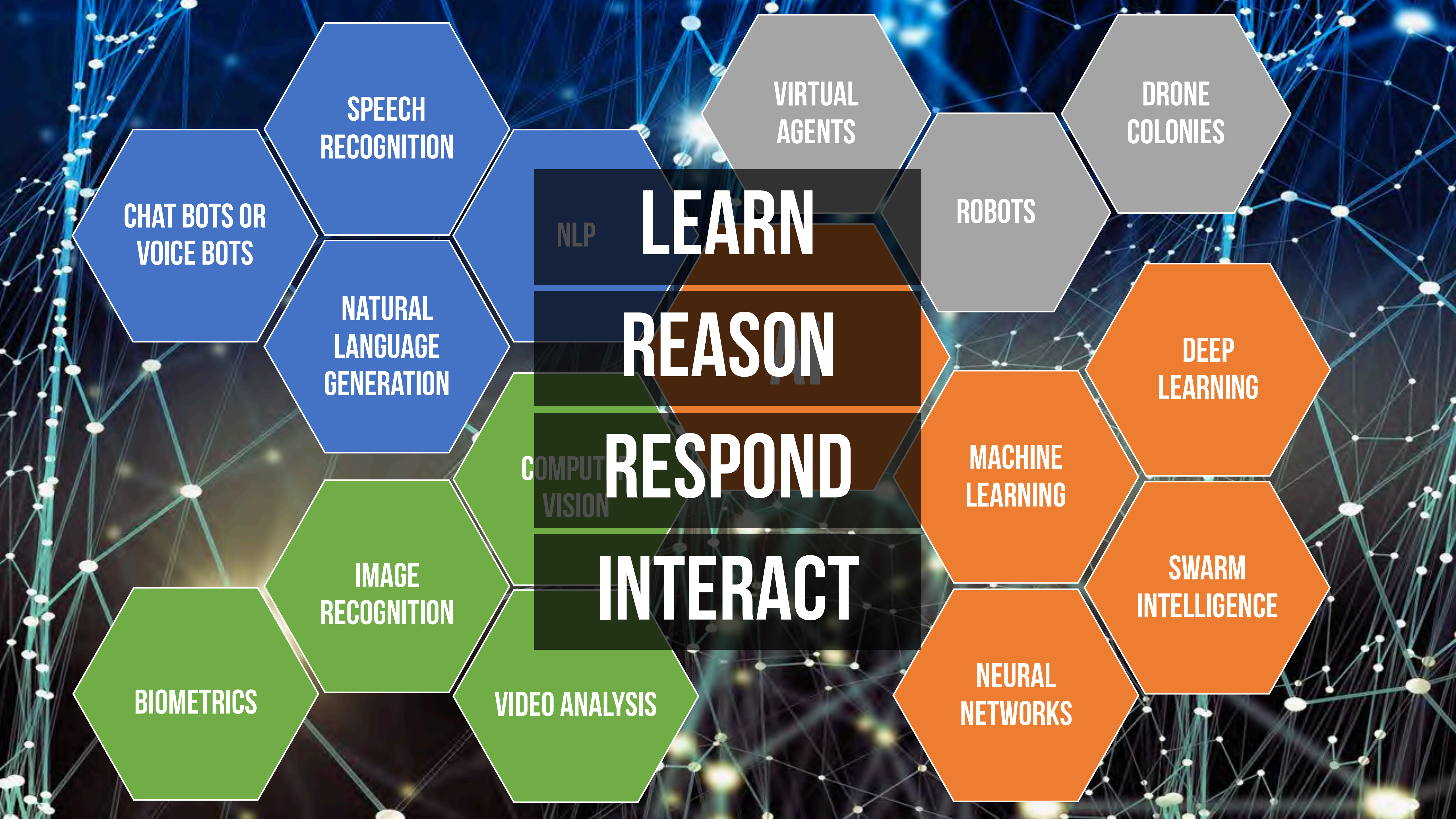
The Difference between a CPU and GPU



CPU



GPU





Classification

Prediction: Dog

Terminal

```
(keras_tensorflow) MM803_Project:$ python expl_Test_batch.py -image test_classification
```

```
Using Theano backend.
```

```
Using gpu device 0: GeForce GTX 1060 (CNMeM is enabled with initial size: 95.0% of memory, cuDNN 5105)
```

```
Loaded model from disk
```

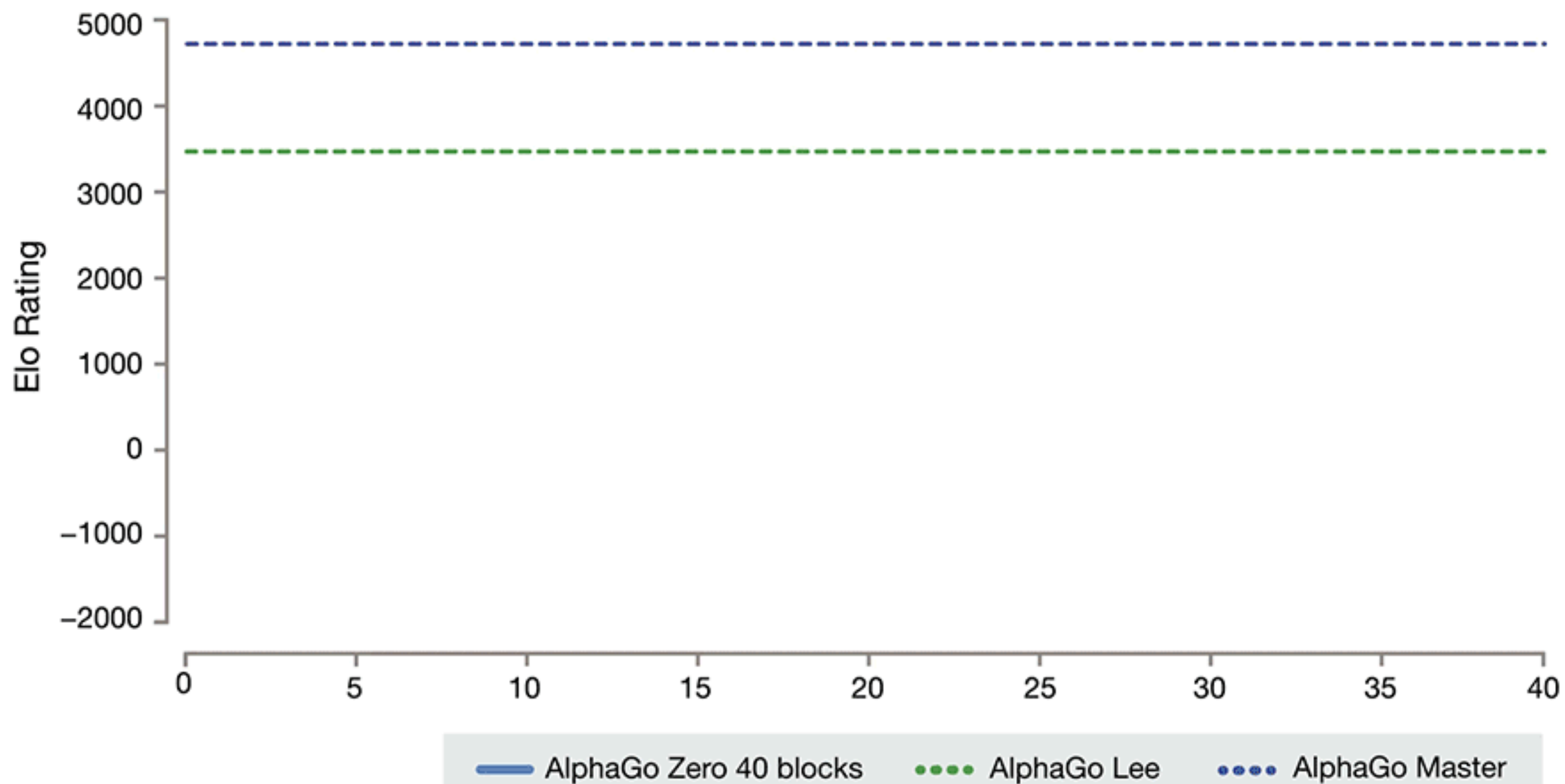
```
Testing 30
```

```
[[ 0.99999082]]
```

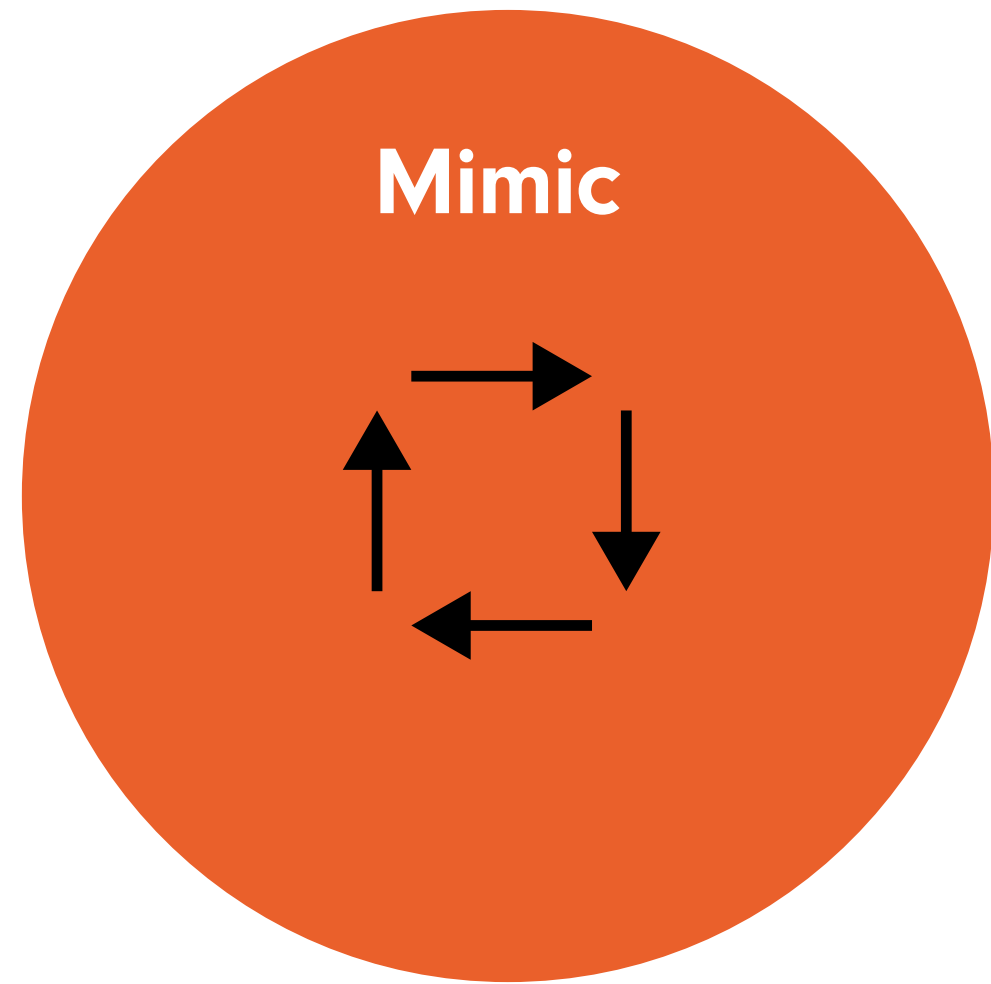
```
I am 100.00% sure this is a Dog
```

```
[=====1910 x 731=====]
```

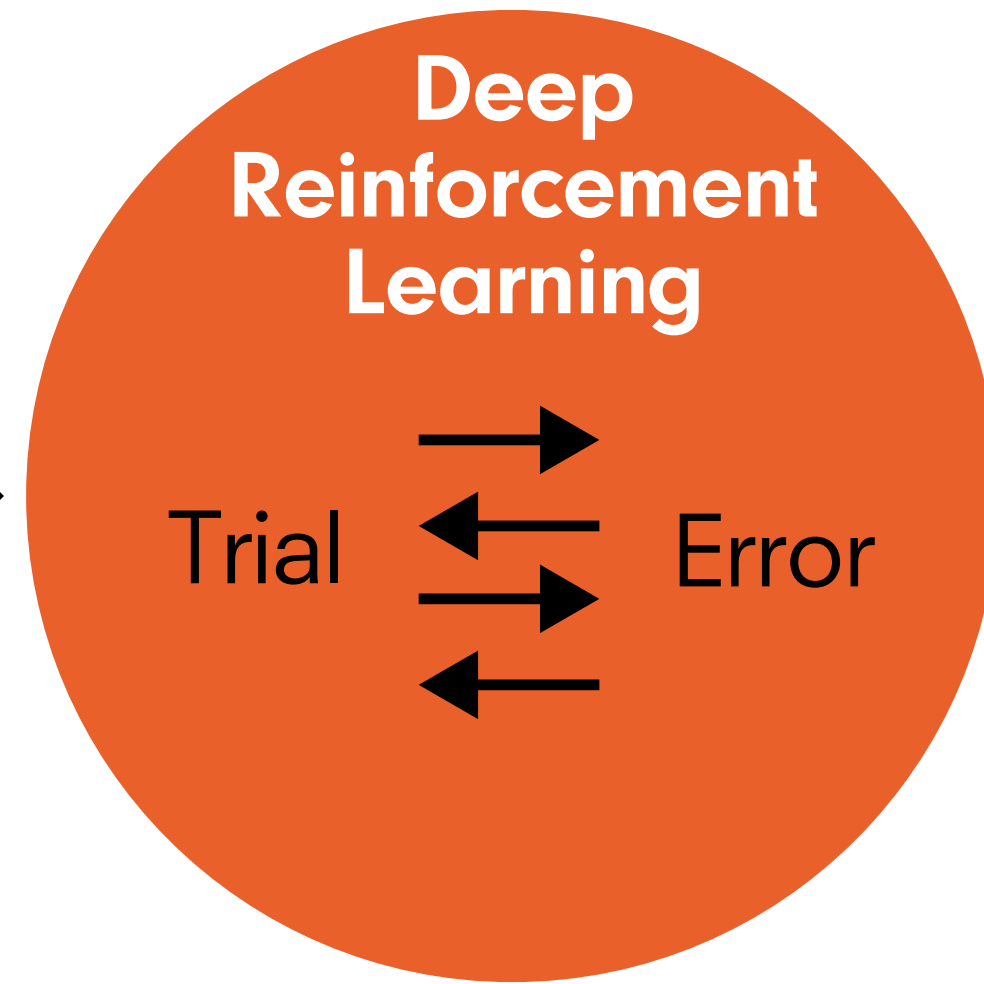




Learning from 100.000
available online plays



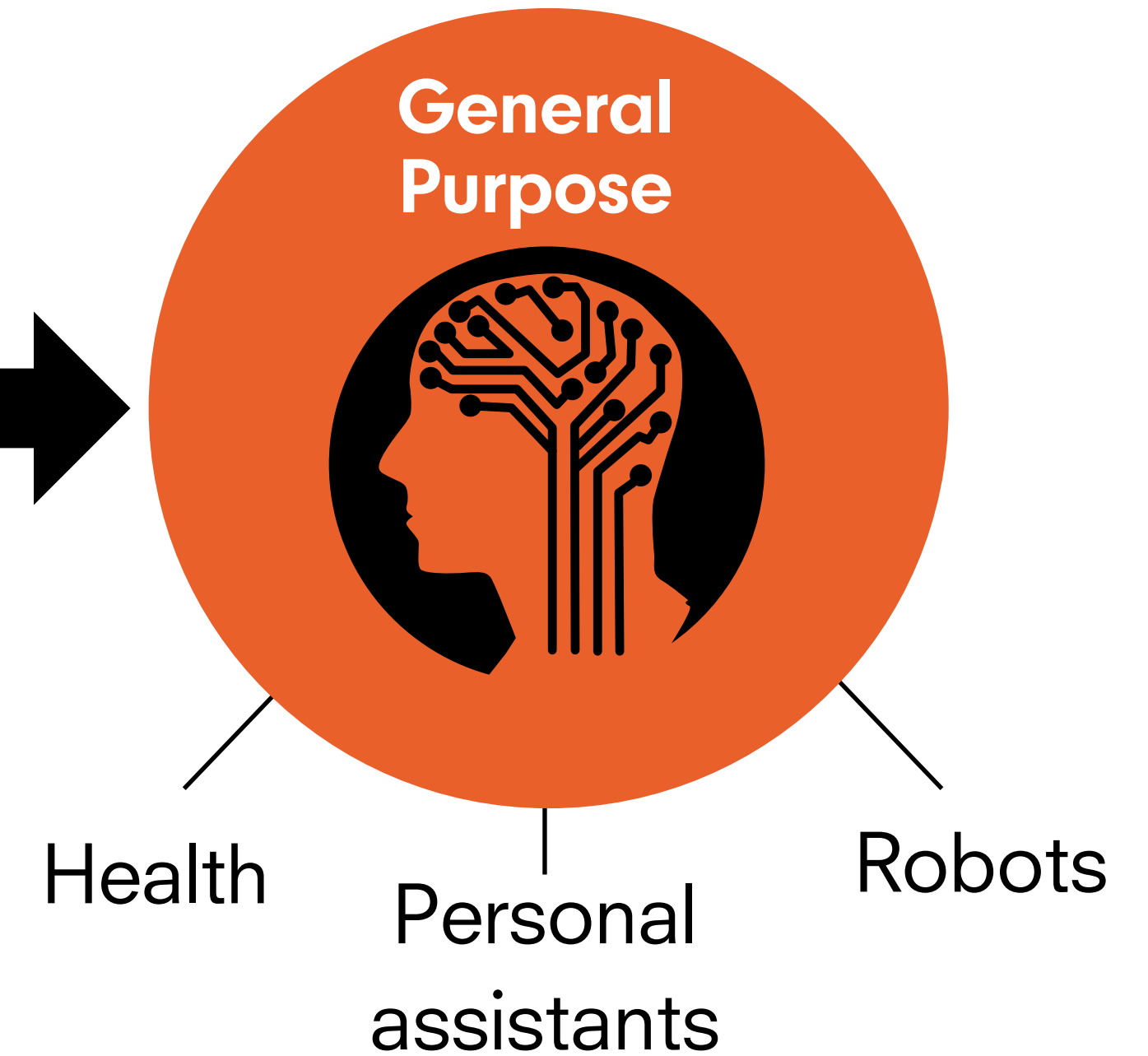
Playing 13 mln games
against itself



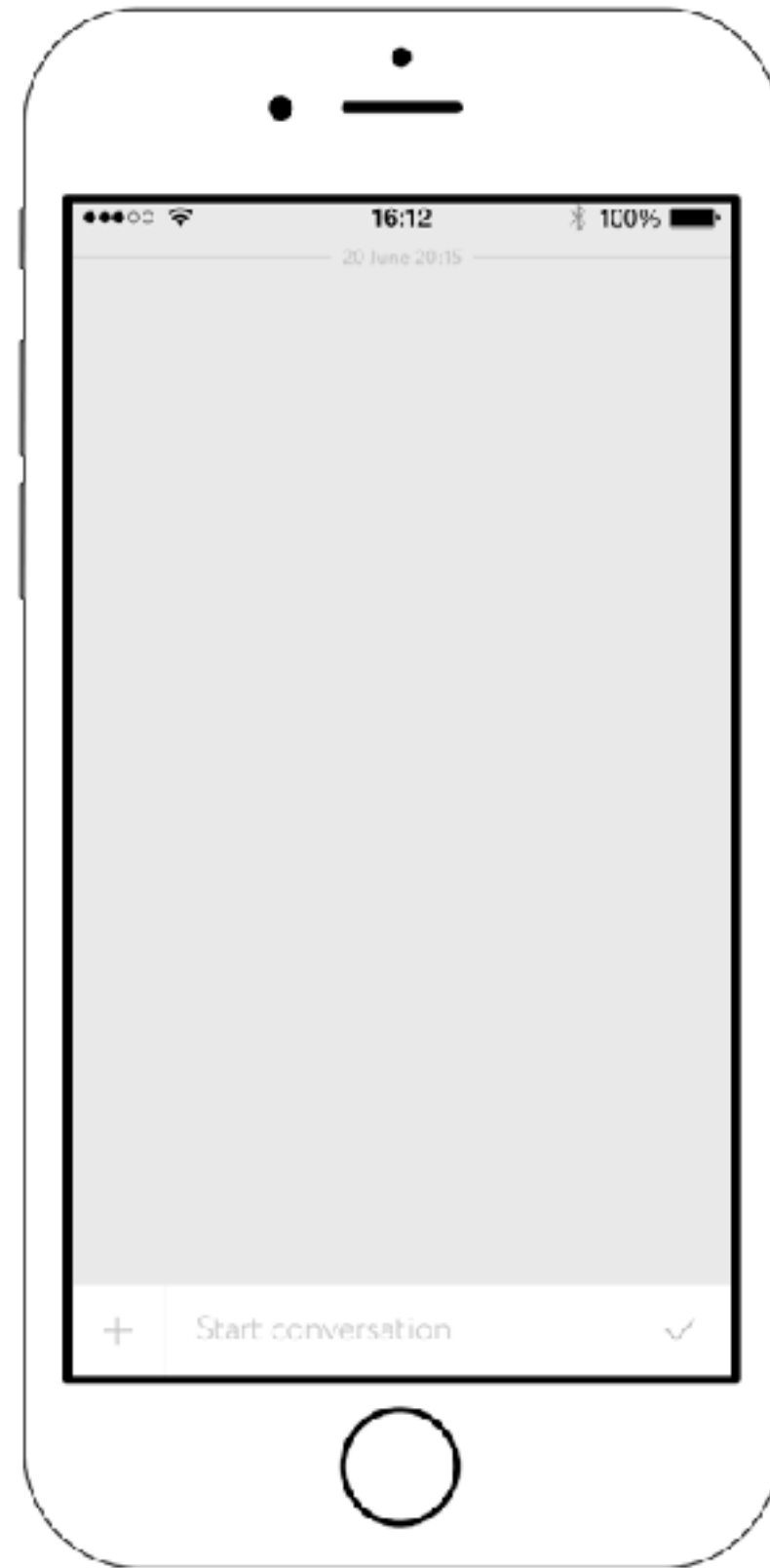
Defeating the world
champion



Applying the algorithm
in new areas



TOWARDS MACHINES THAT DISCOVER AND AN INTERNET THAT LEARNS



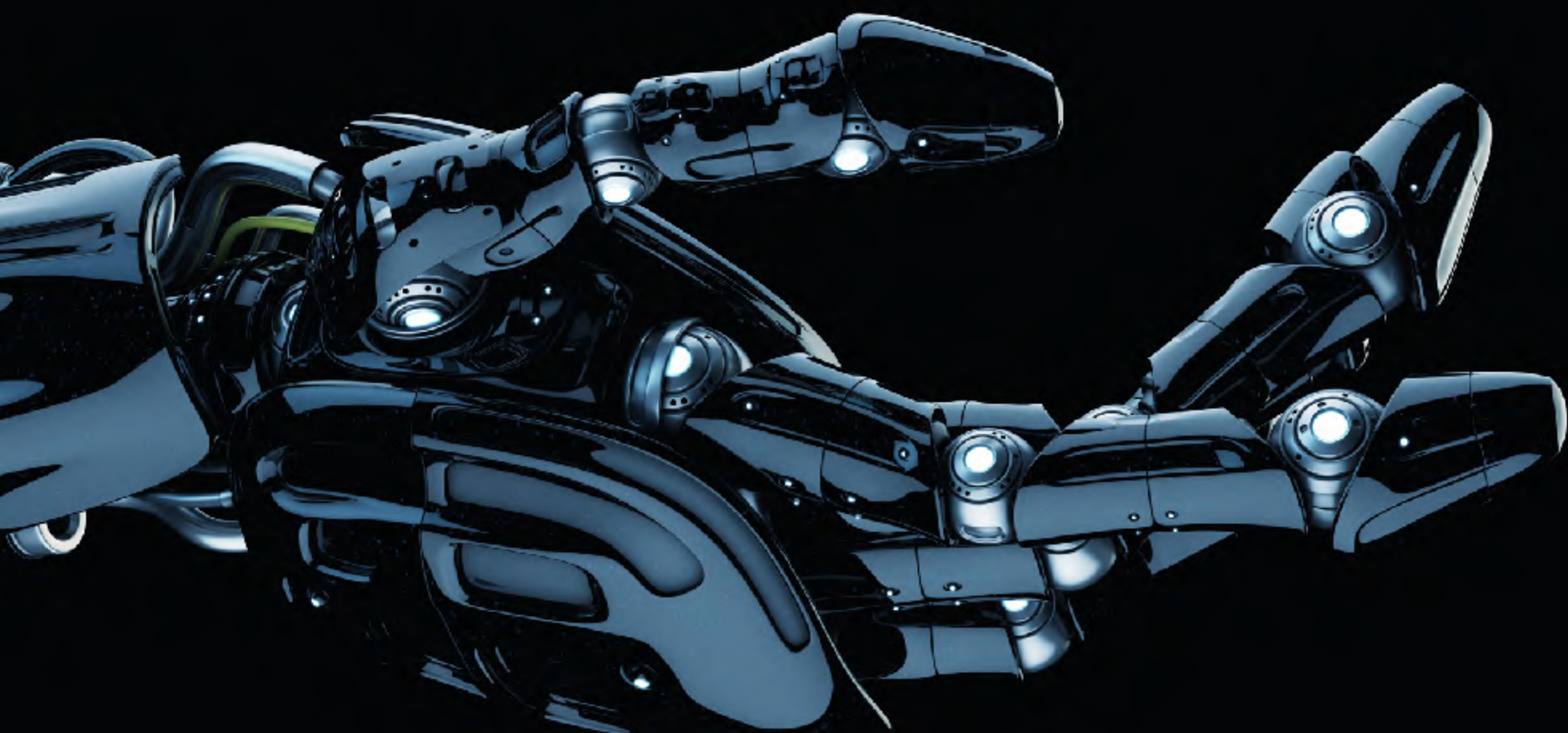
**Hi, I'm Luka,
your restaurant
buddy**

AI powered and available 24/7

FROM APPS TO BOTS

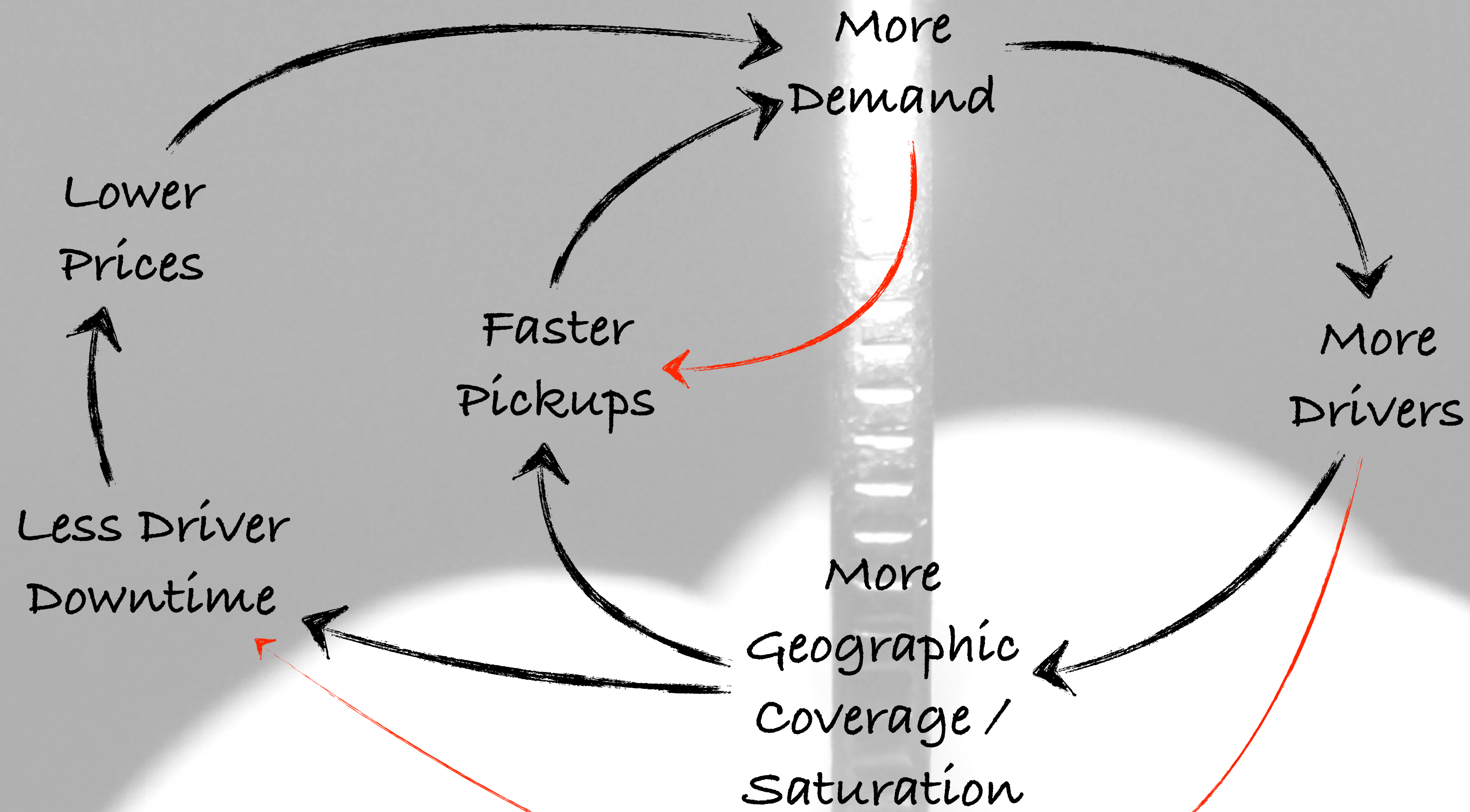
2

PLATFORM





THE UBERIFICATION OF EVERYTHING



ALGORITHMS TO DRIVE NETWORK EFFECTS

PLATFORMS BEAT PIPELINES

WORLD'S LARGEST TAXI COMPANY OWNS NO TAXIS (UBER)

LARGEST ACCOMMODATION PROVIDER OWNS NO REAL ESTATE (AIRBNB)

LARGEST PHONE COMPANIES OWN NO TELCO INFRA (SKYPE, WECHAT)

WORLD'S MOST VALUABLE RETAILER HAS NO INVENTORY (ALIBABA)

MOST POPULAR MEDIA OWNER CREATES NO CONTENT (FACEBOOK)

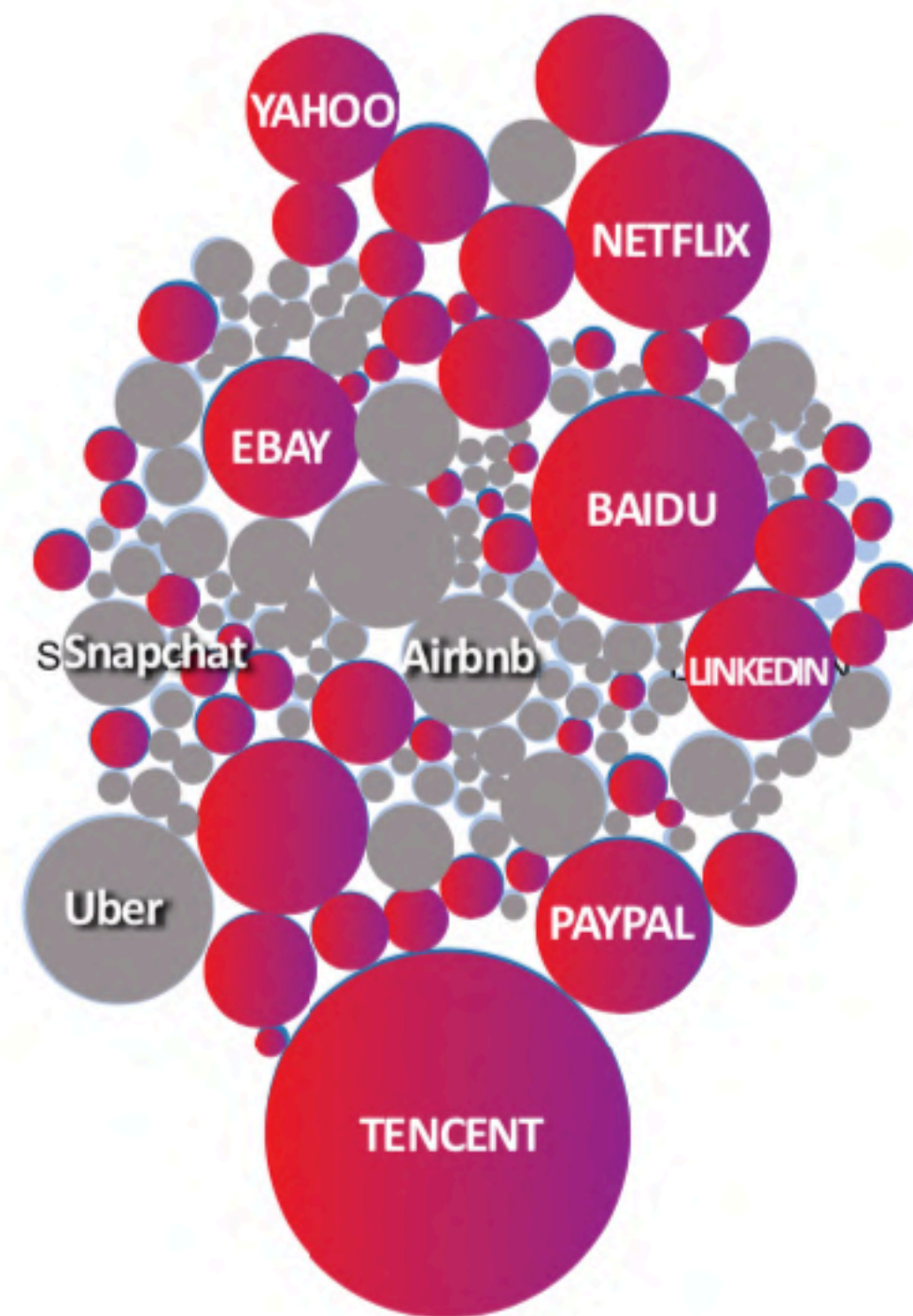
WORLD'S LARGEST MOVIE HOUSE OWNS NO CINEMAS (NETFLIX)

LARGEST SOFTWARE VENDORS DON'T WRITE THE APPS (APPLE, GOOGLE)

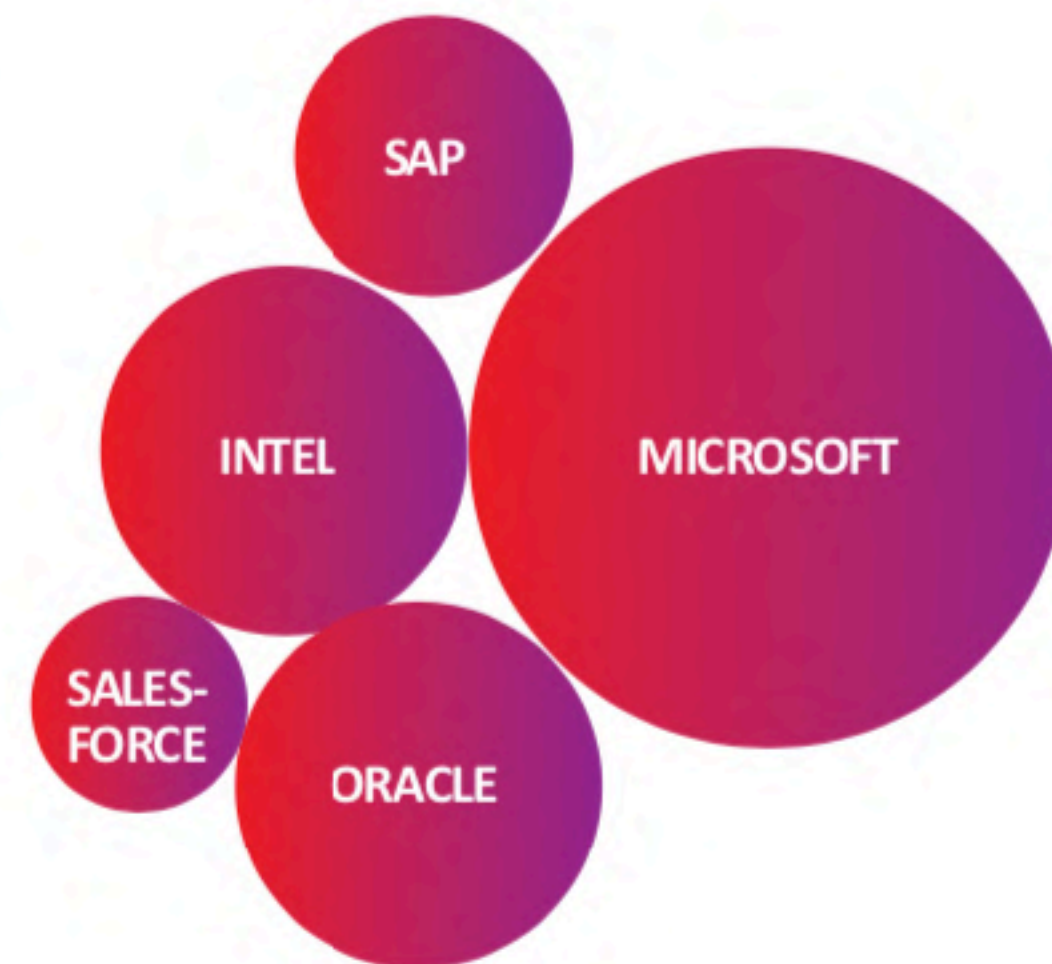
I do not need a drill.
I need a hole in the wall



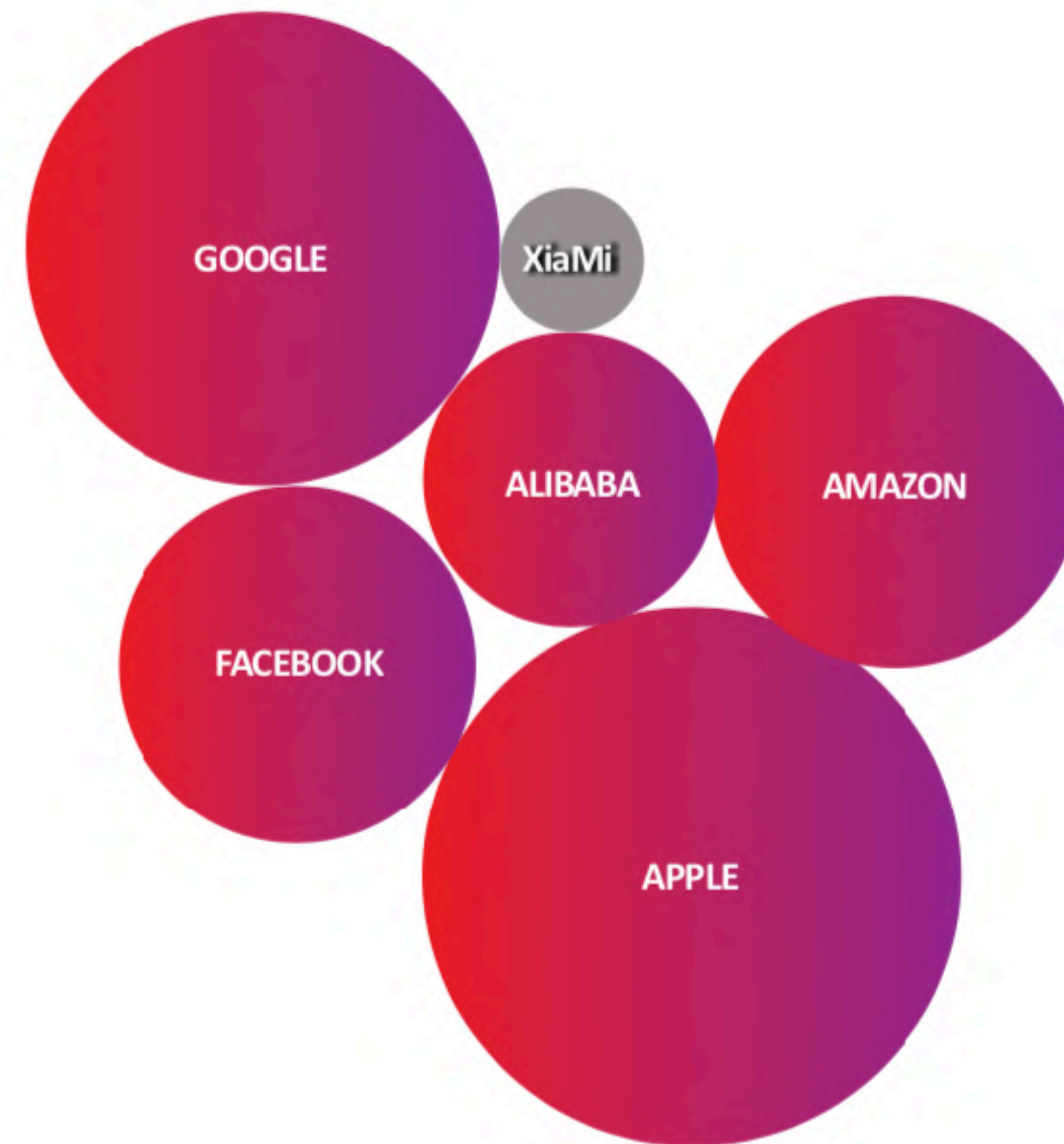
Transaction



Innovation



Integrated



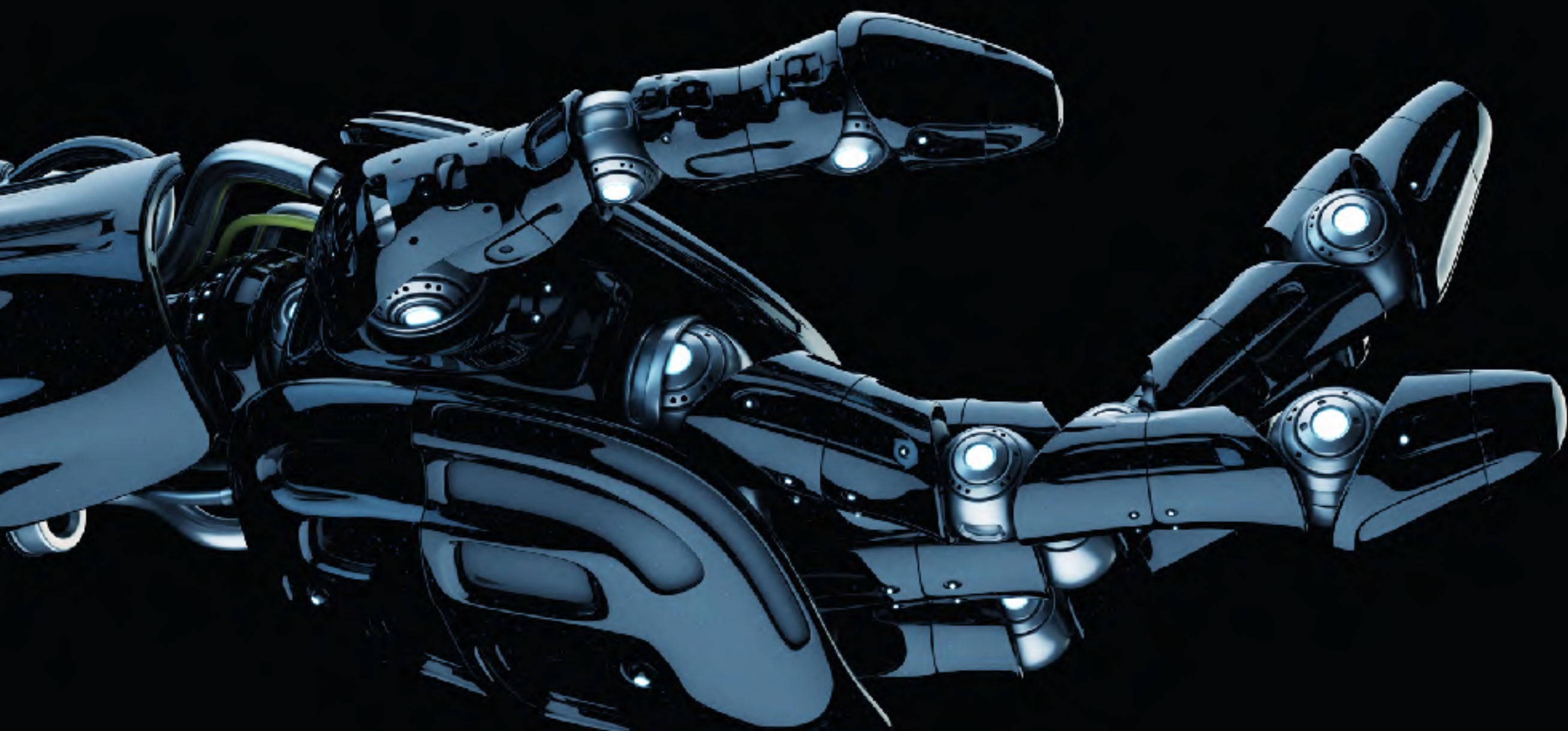
Investment



THE RISE OF THE PLATFORM ENTERPRISE

3

CROWD





HUMAN

MACHINE

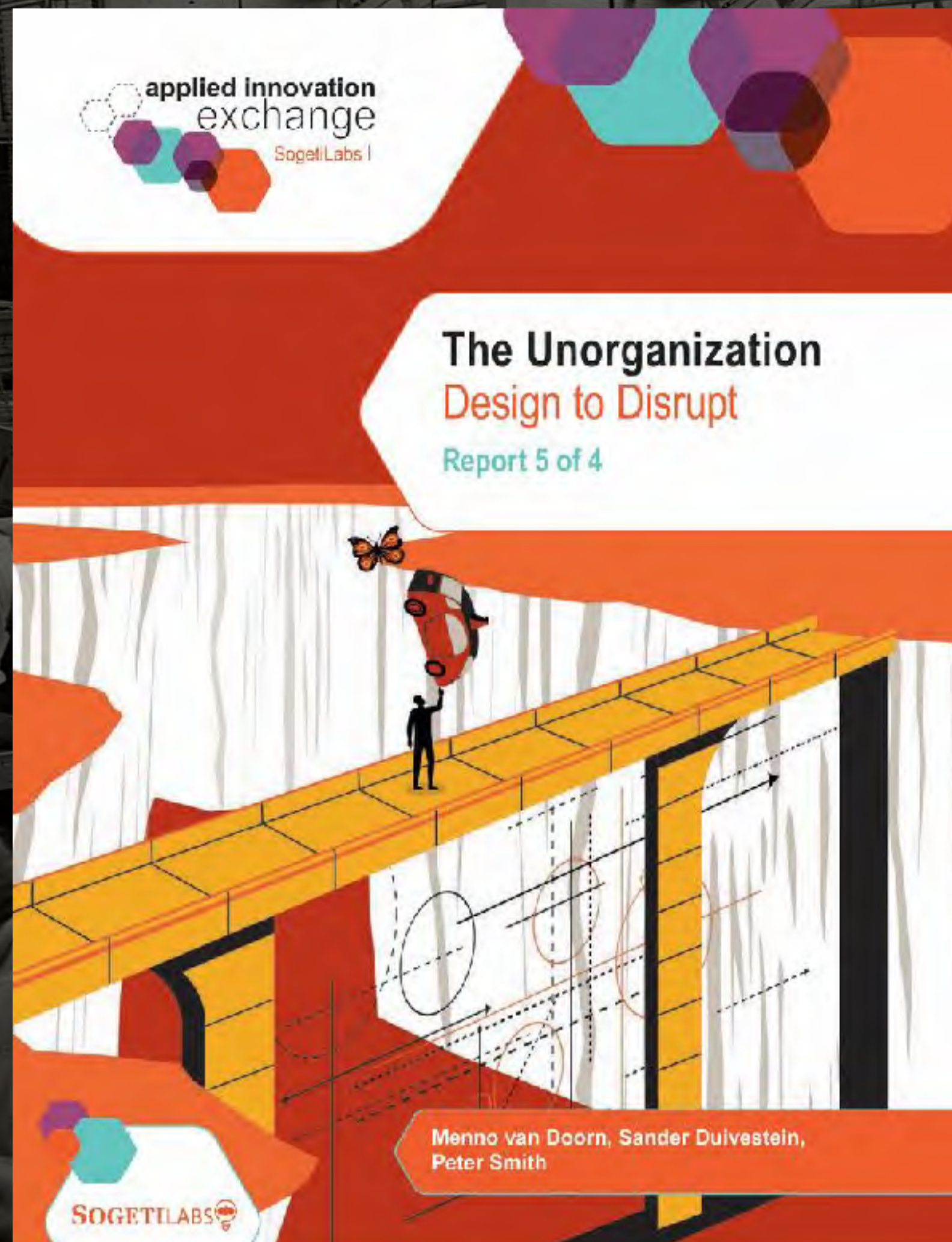
PRODUCT

PLATFORM

ORGANISATION

CROWD





UNDERSTAND

HYPERADOPTION, PLATFORMS & NETWORK EFFECTS

UNLEASH

THINGS AND PEOPLE

UNORGANIZE

COORDINATE&CULTIVATE - MANAGEMENT INNOVATION

THE UNORGANIZATION

UNMAN

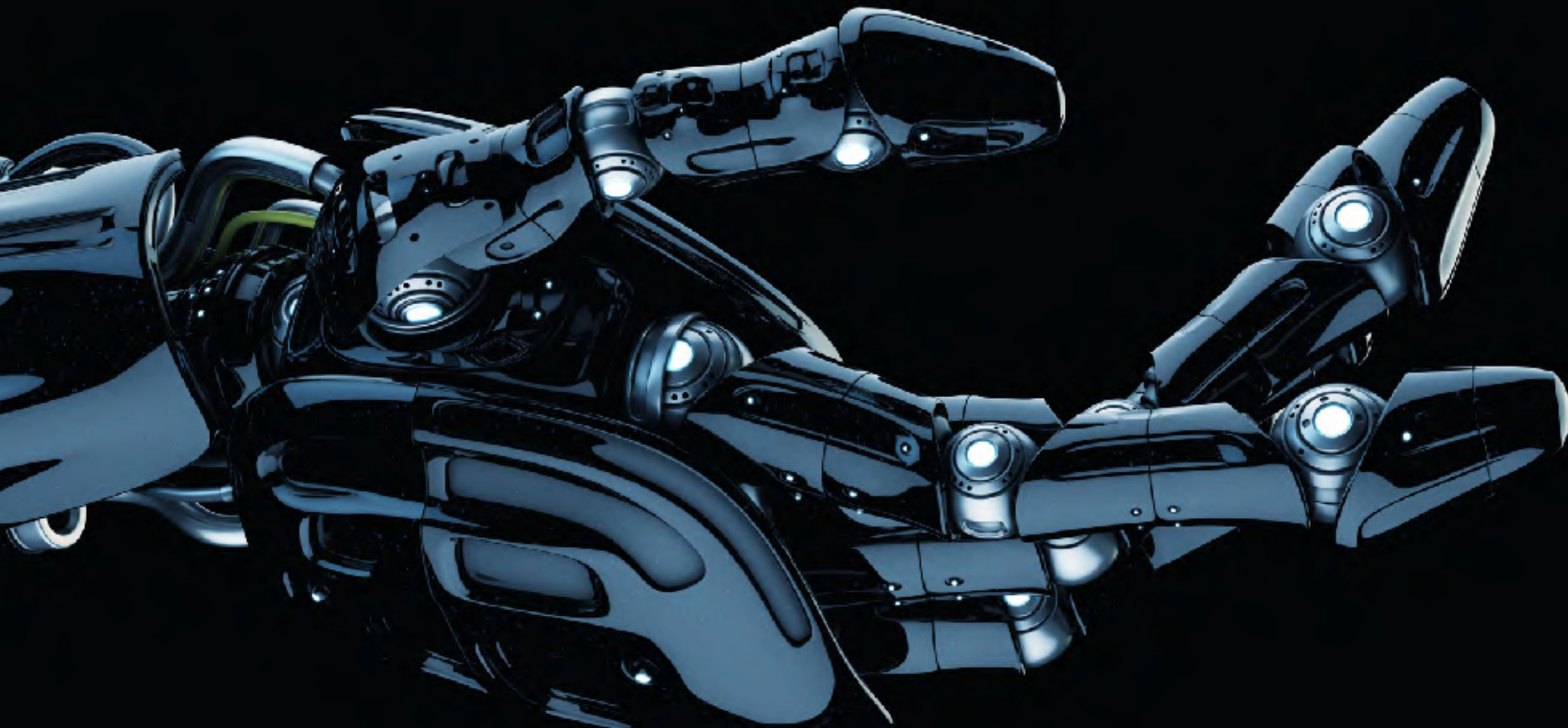
ALGORITHMIC BUSINESS

UNBUNDLE

VALUE ECOSYSTEM & NETWORK

4

THE IMPACT OF AI



Machine Intelligence LANDSCAPE

CORE TECHNOLOGIES

ARTIFICIAL INTELLIGENCE



DEEP LEARNING



MACHINE LEARNING



NLP PLATFORMS



PREDICTIVE APIS



IMAGE RECOGNITION



SPEECH RECOGNITION



RETHINKING ENTERPRISE

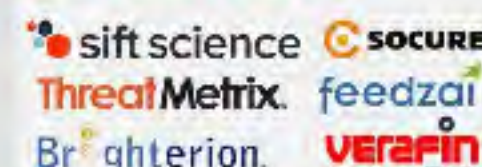
SALES



SECURITY / AUTHENTICATION



FRAUD DETECTION



HR / RECRUITING



MARKETING



PERSONAL ASSISTANT



INTELLIGENCE TOOLS



RETHINKING INDUSTRIES

ADTECH



AGRICULTURE



EDUCATION



FINANCE



LEGAL



MANUFACTURING



MEDICAL



OIL AND GAS



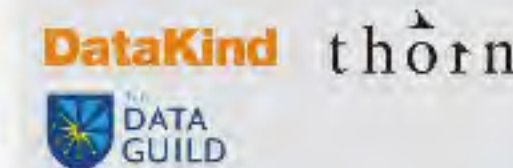
MEDIA / CONTENT



CONSUMER FINANCE



PHILANTHROPIES



AUTOMOTIVE



DIAGNOSTICS



RETAIL



RETHINKING HUMANS / HCI

AUGMENTED REALITY



GESTURAL COMPUTING



ROBOTICS



EMOTIONAL RECOGNITION

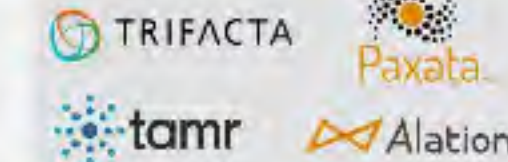


SUPPORTING TECHNOLOGIES

HARDWARE



DATA PREP



DATA COLLECTION





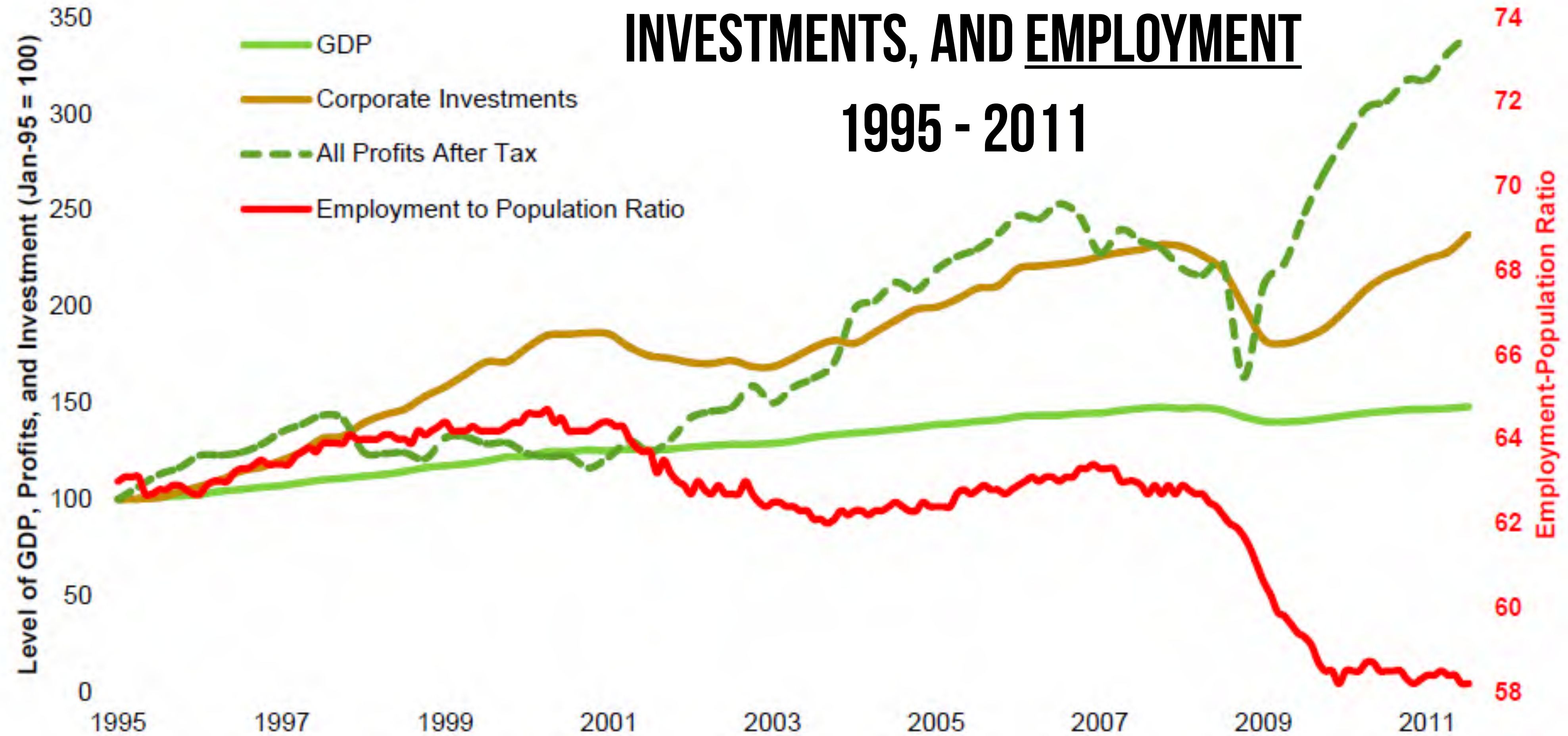
DIGITAL TWINS



GETTING IT RIGHT

TRENDS IN US GDP, PROFITS, INVESTMENTS, AND EMPLOYMENT

1995 - 2011



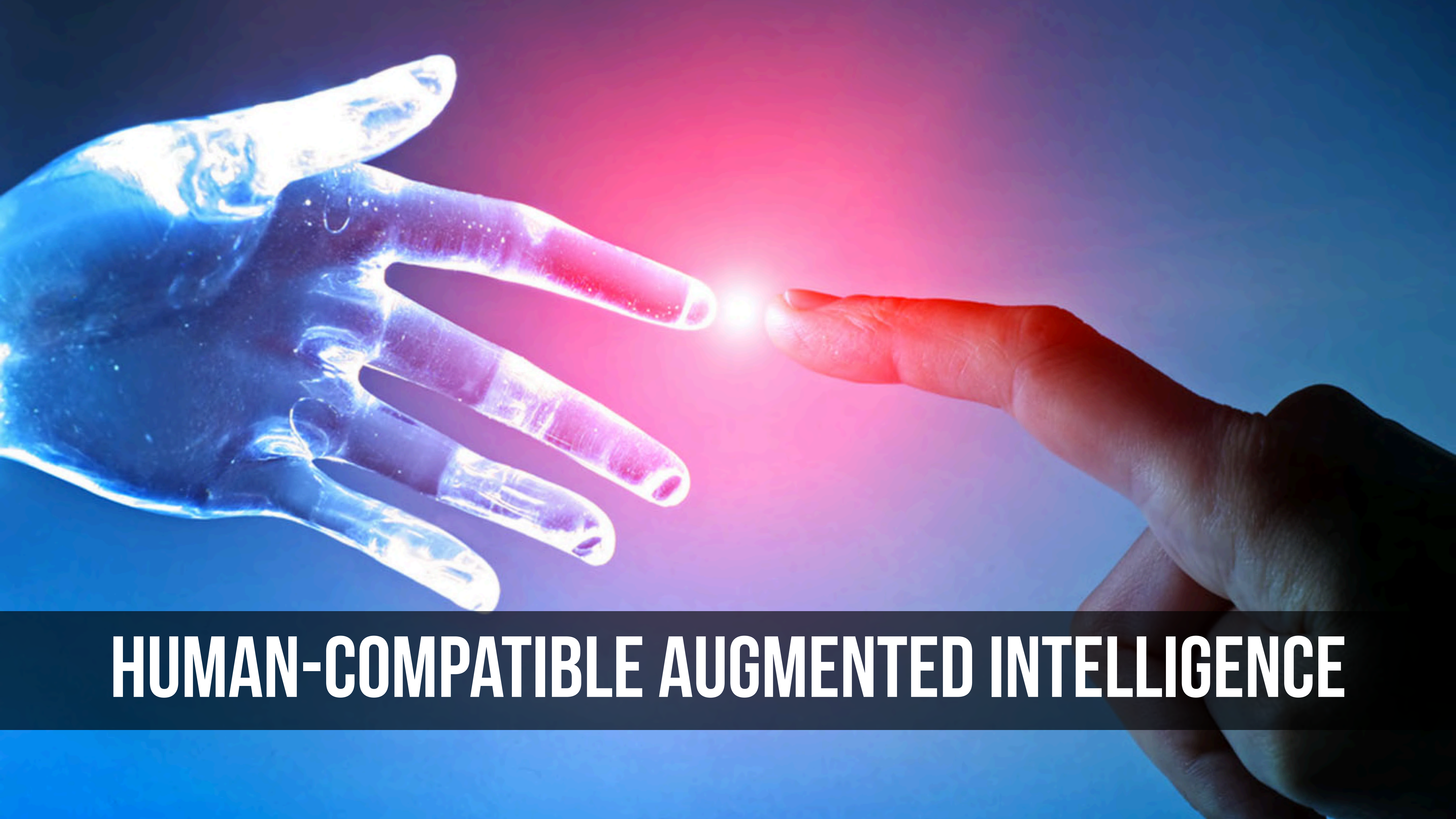
THE GREAT DECOUPLING



EFFICIENCY X EFFECTIVENESS X EXISTENCY

CTO

ALGORITHM TRANSPARENCY



HUMAN-COMPATIBLE AUGMENTED INTELLIGENCE

THINKING,
FAST AND SLOW



DANIEL
KAHNEMAN

WINNER OF THE NOBEL PRIZE IN ECONOMICS

**WE DESPERATELY NEED ALL THE COGNITIVE HELP
WE CAN GET TO IMPROVE OUR DECISION MAKING**



DIGITAL



MOBILE



AI

AI FIRST

GIVE ORGANIZATION A COGNITIVE POWER BOOST

LET MACHINES BE MINDLESS AND PEOPLE BE MINDFUL

COMPUTER HUMILITY, NOT COMPUTER HUMILIATION

CONSTRUCTING KNOWLEDGE

TAKE THE FRANKENSTEIN FACTOR INTO ACCOUNT

TAKE PART IN BIMODAL AI

Bimodal AI		
Horizon 1		Horizon 2
Faster & cheaper processes	← KPI's →	Disruptive models
Business model continuation	← Approach →	Business model change
Industry competition	← Playing Field →	Cross industry competition
Low	← Risk →	High
Efficiency driven	← Drive →	Innovation driven
Improving what's already there	← Scope →	Building from scratch
Fast	← Potential Acceleration →	Faster
Short term	← Presumed Future →	Long term

AI FIRST - HUMAN SECOND?

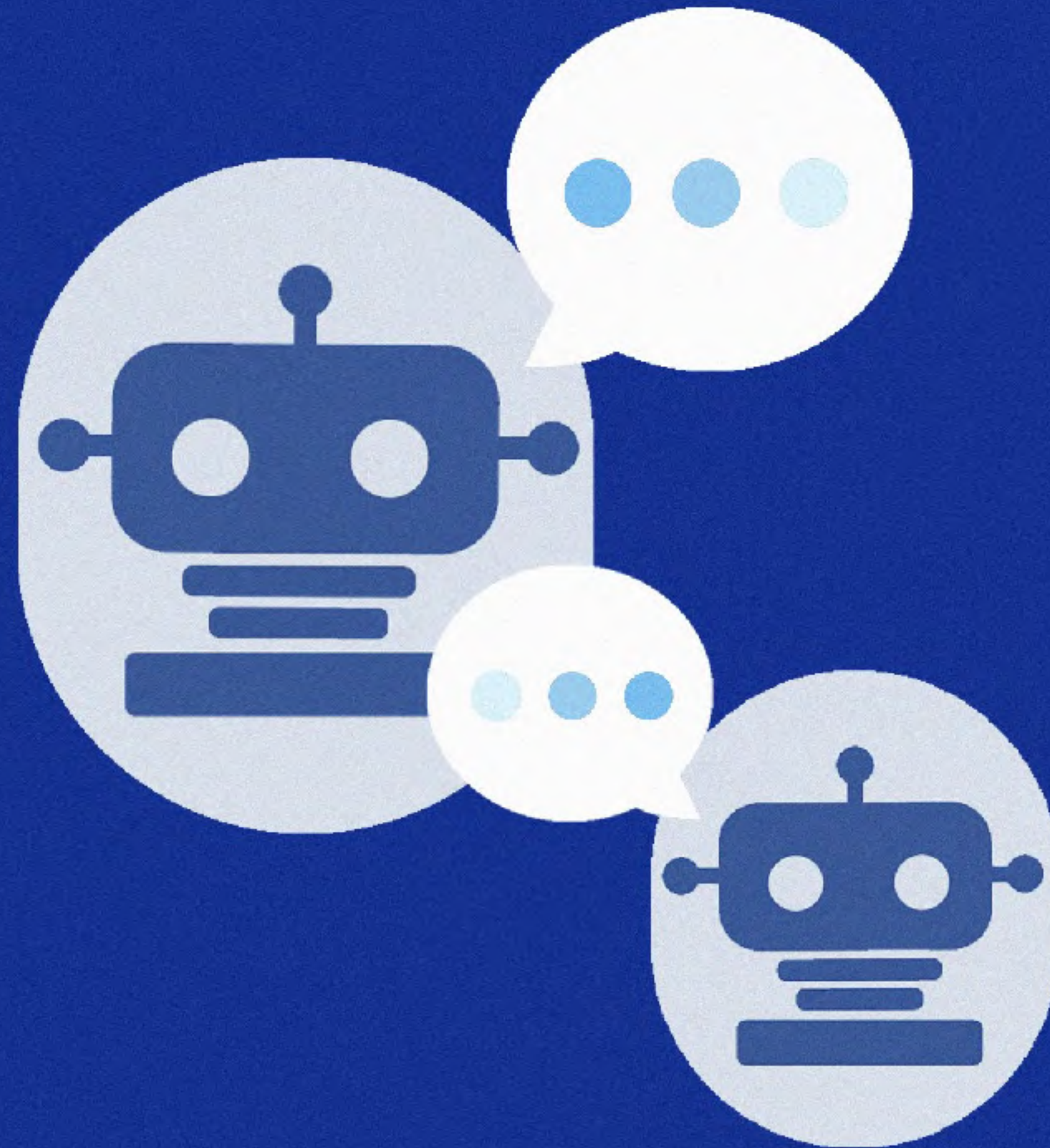
GAME OVER



**TECHNOLOGICALLY
POSSIBLE**

**FINANCIALY
FEASIBLE**

**SOCIALLY
ACCEPTABLE**





“I’ve talked to
Mark about this.
His understanding
of the subject
is limited.”

Elon Musk

“...people who
drum up doomsday
scenarios...
I actually think
it is pretty
irresponsible.”

Mark Zuckerberg



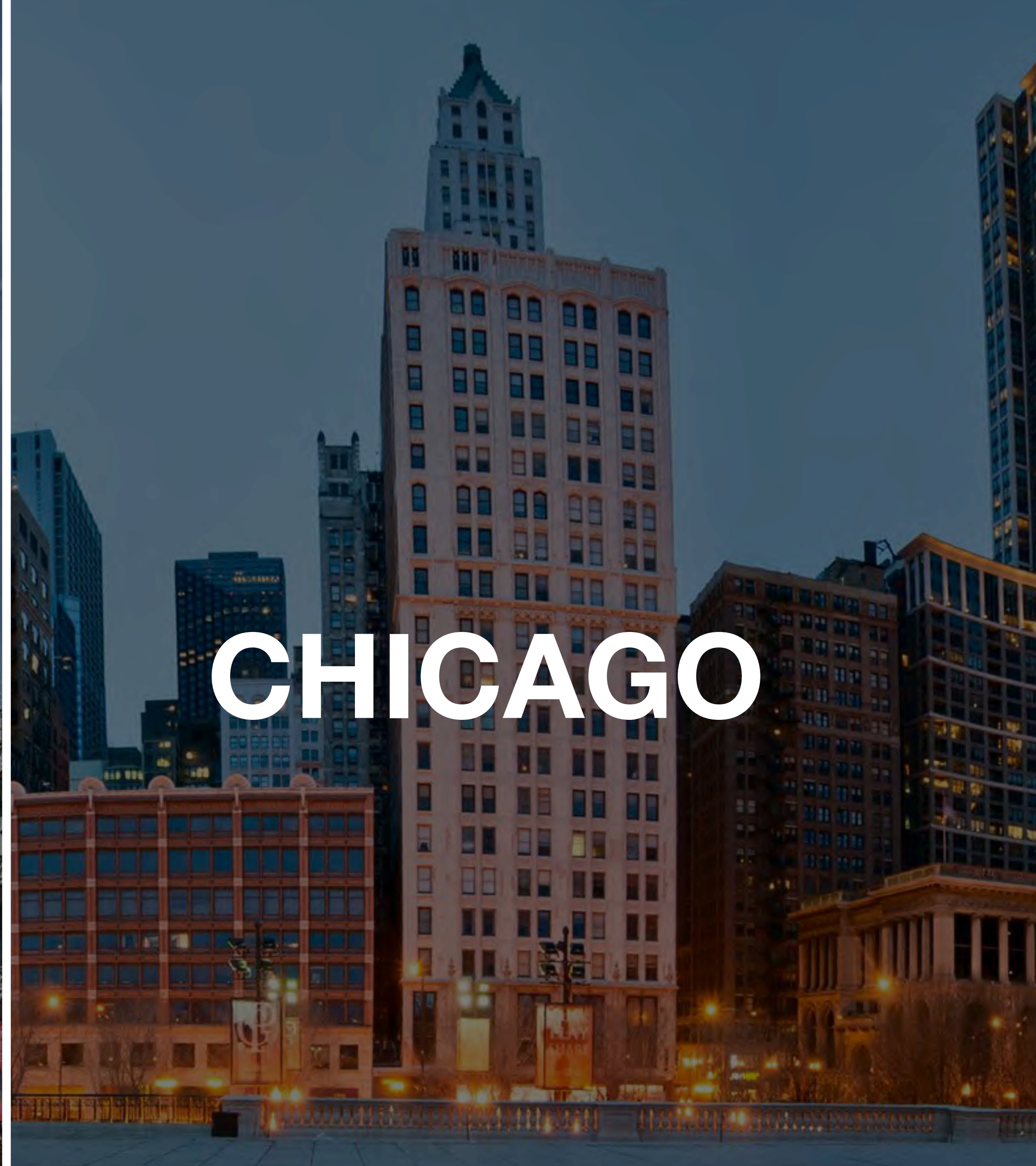
**SHOULD HAPPINESS BE AT THE CORE OF YOUR
DIGITAL STRATEGY?**



**SHOULD YOU BECOME THE GUARDIAN OF THE
DIGITAL HAPPINESS OF YOUR CUSTOMERS?**



BRUSSEL

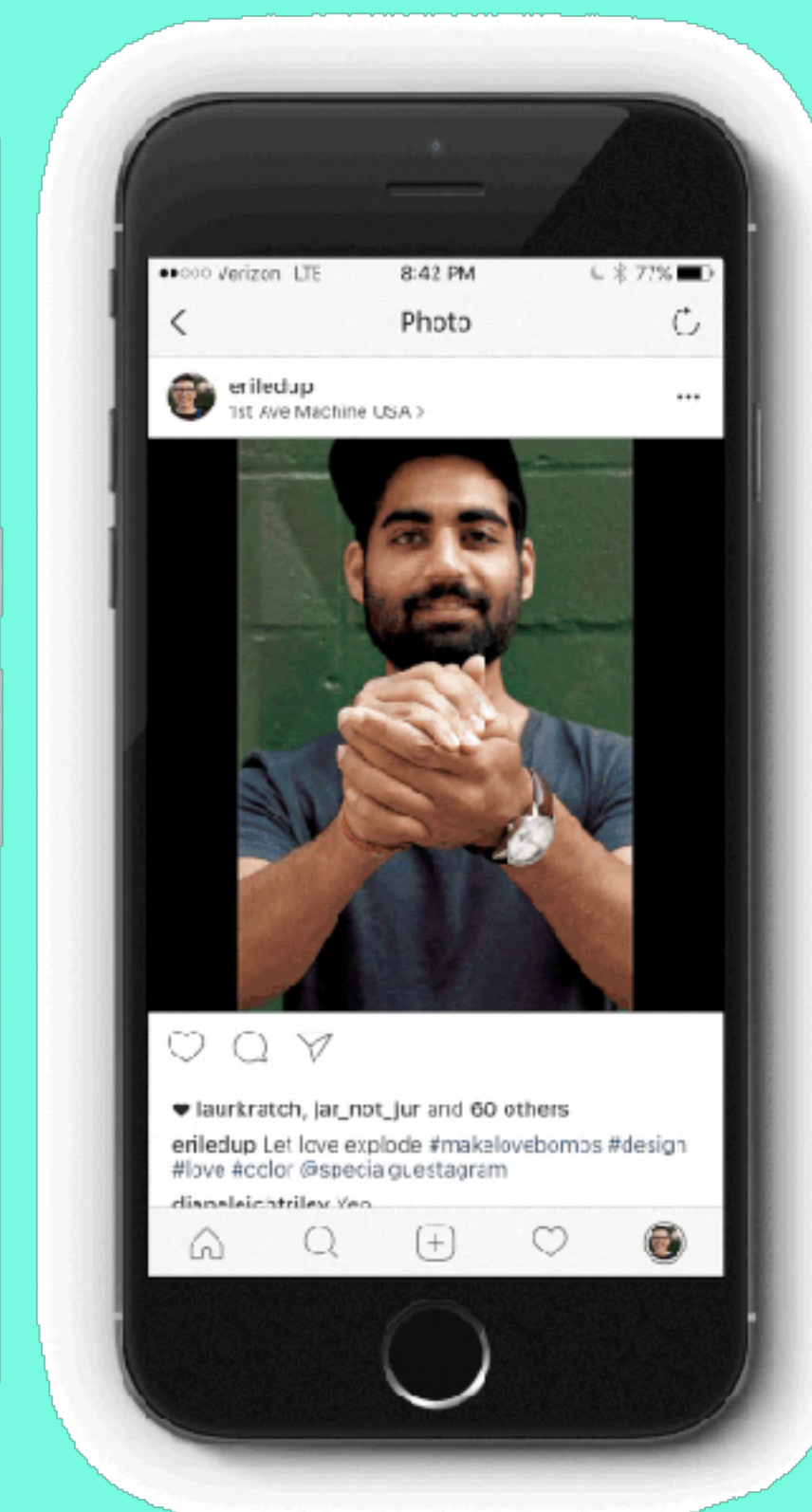
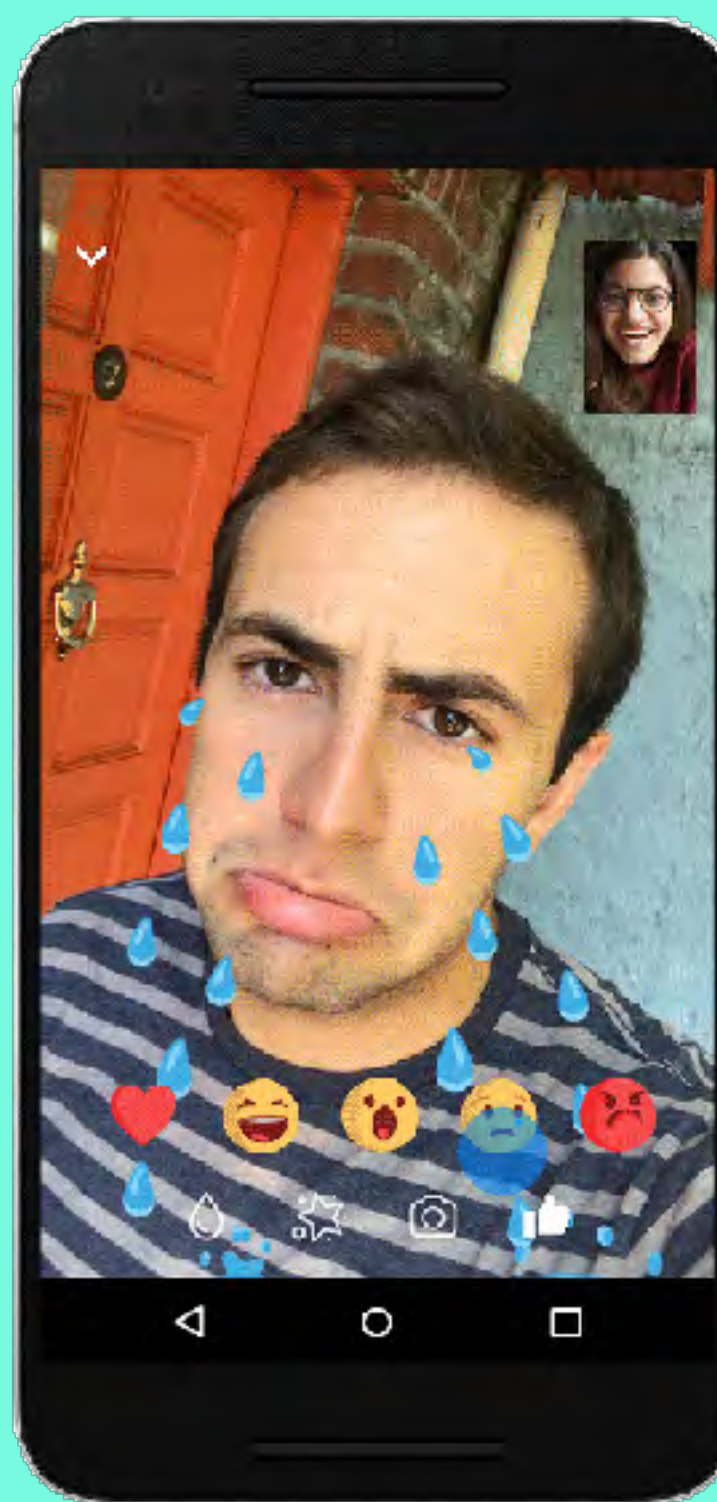
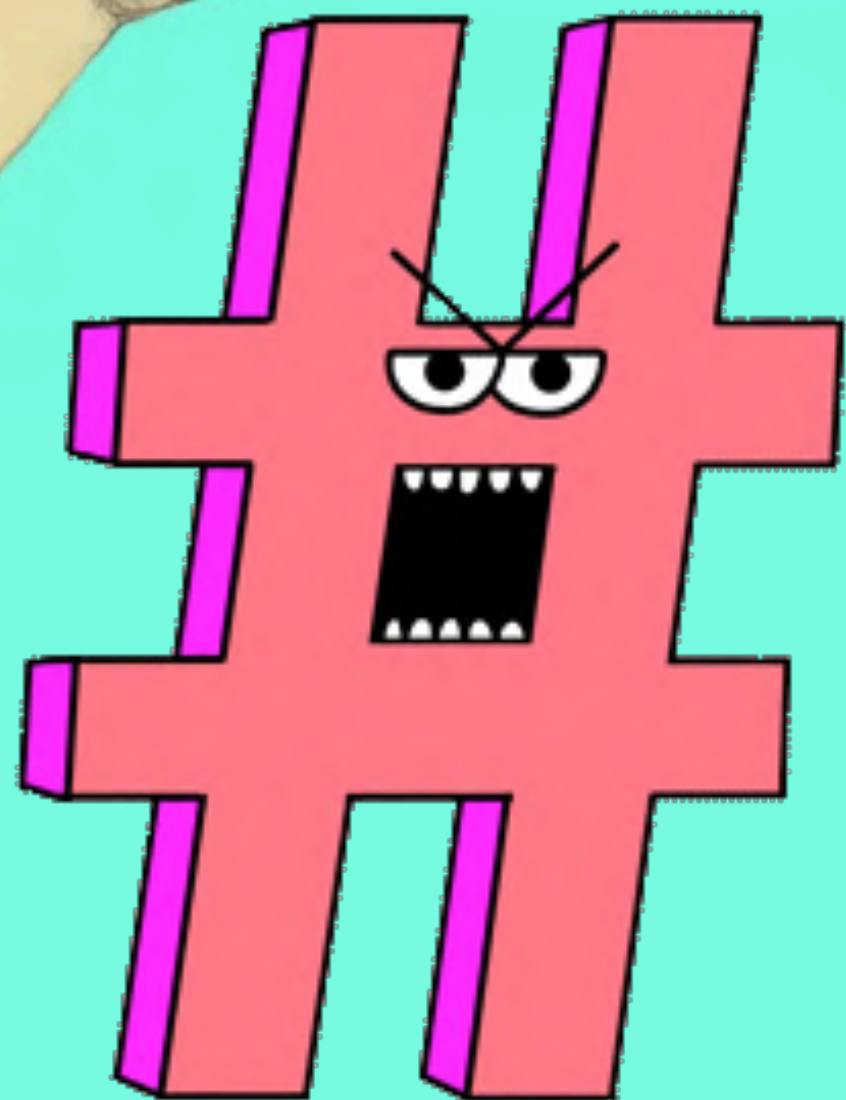
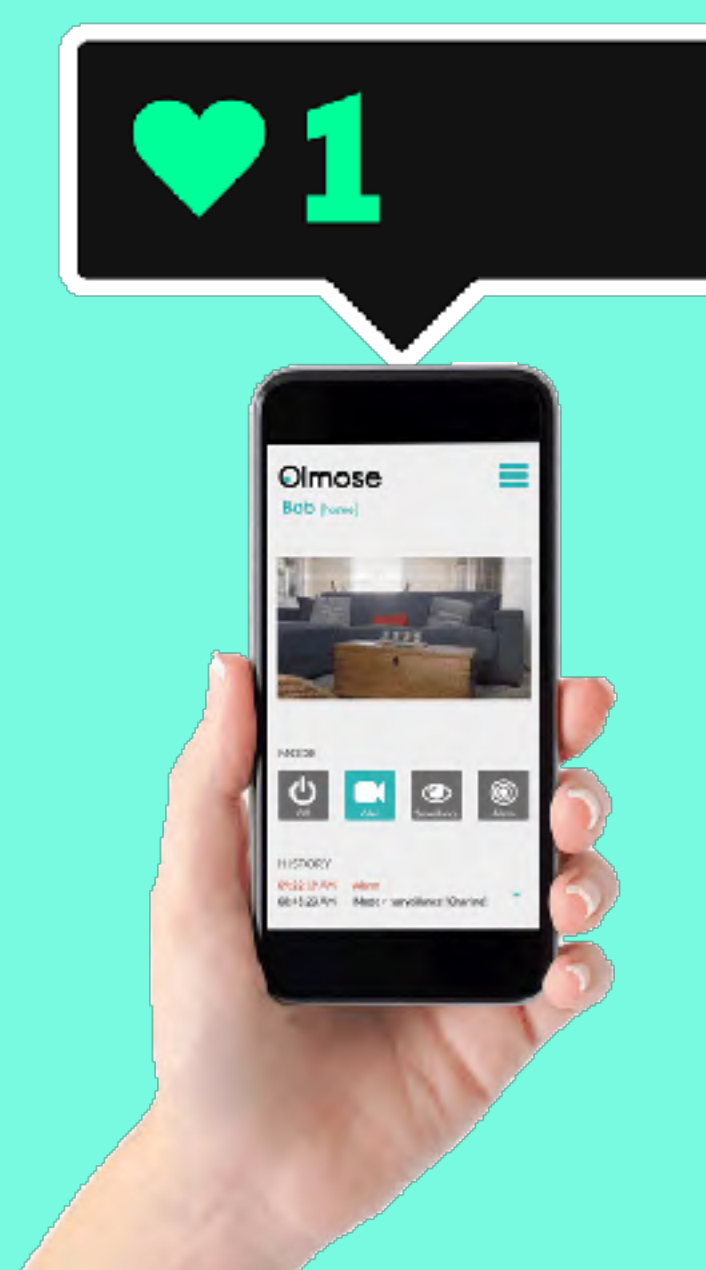


CHICAGO





< 3





What is
Happiness?



THE GRADUAL AND INCREMENTAL FULFILMENT OF HOPE



H=HOPE
D=DESIRE
B=BELIEFS

$$H_{ap} \longleftrightarrow D_{ap} \wedge B_{ap}$$



SIGMUND FREUD

MOMENTS



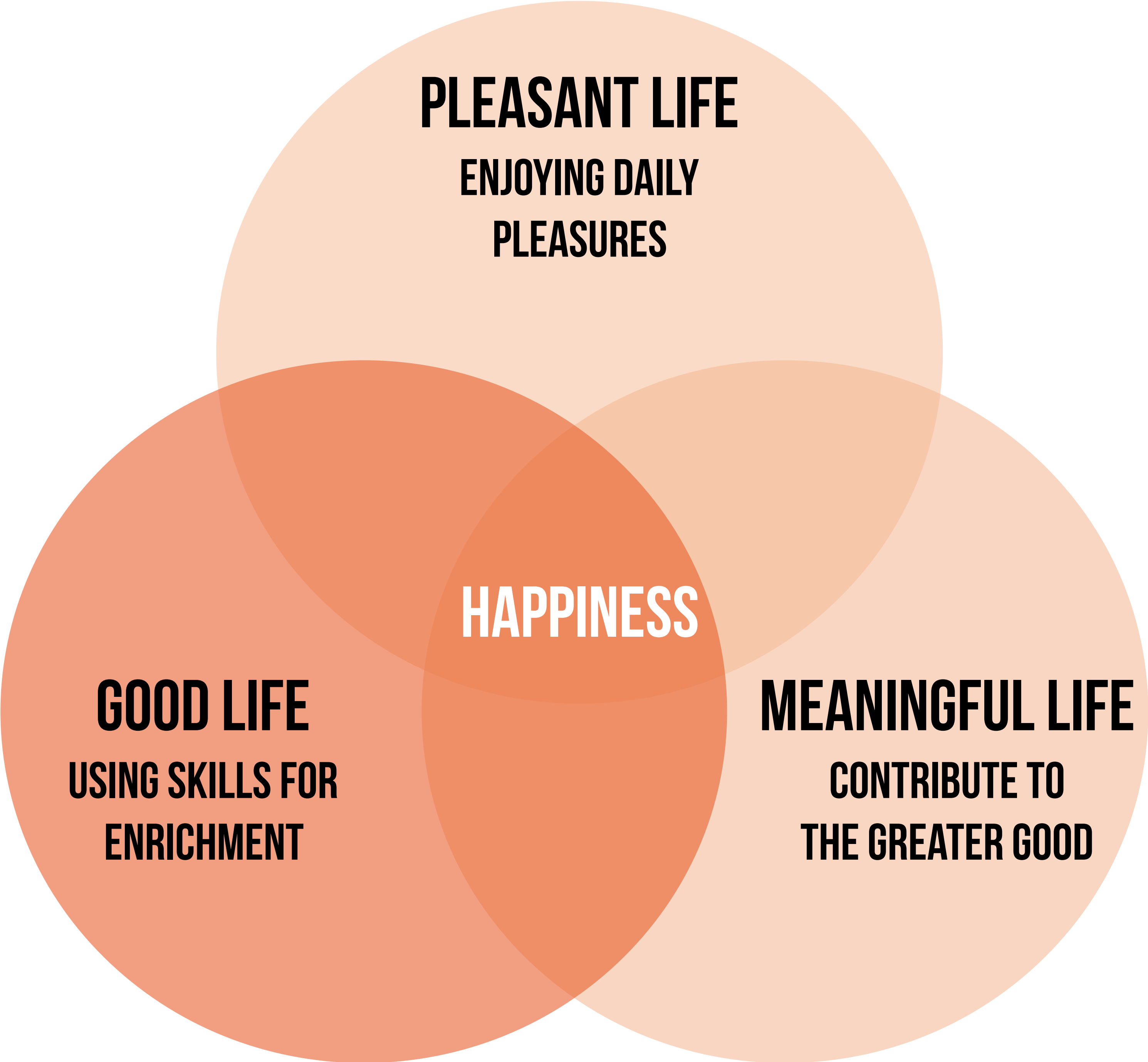
WILLIAM JAMES

ABSENCE OF NEGATIVE SENSATIONS



MARTIN SELIGMAN

**PLEASANT
GOOD
MEANINGFUL**



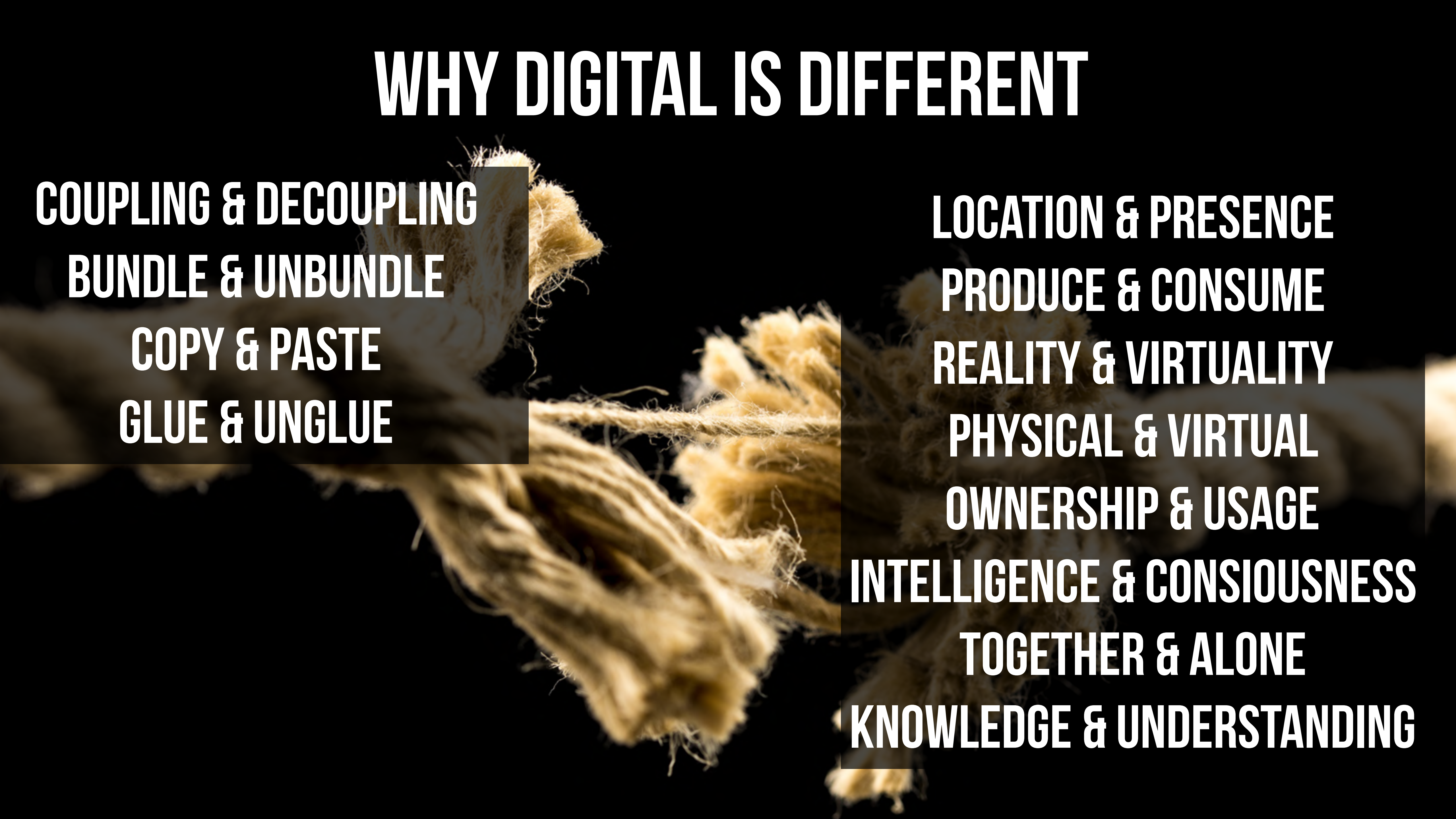


DIGITAL HAPPINESS



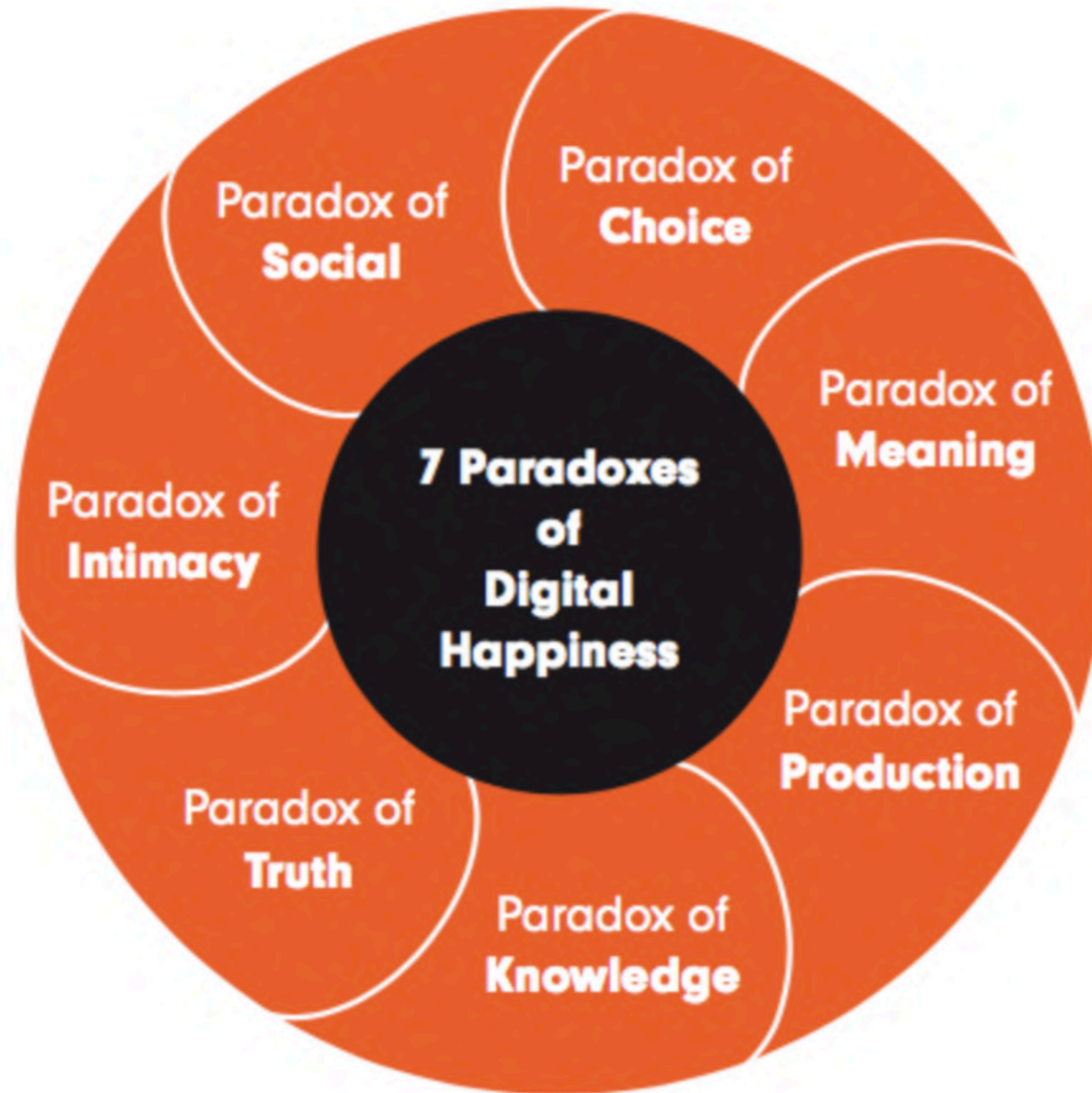
THE DEGREE TO WHICH A PERSON VIEWS DIGITAL TECHNOLOGY AS
CONTRIBUTING POSITIVELY TO THE EXPERIENCE OF POSITIVE EMOTIONS,
GETTING INTO A STATE OF FLOW, OR HAVING THE FEELING TO LIVE A
MEANINGFUL LIFE.

WHY DIGITAL IS DIFFERENT



COUPLING & DECOUPLING
BUNDLE & UNBUNDLE
COPY & PASTE
GLUE & UNGLUE

LOCATION & PRESENCE
PRODUCE & CONSUME
REALITY & VIRTUALITY
PHYSICAL & VIRTUAL
OWNERSHIP & USAGE
INTELLIGENCE & CONSCIOUSNESS
TOGETHER & ALONE
KNOWLEDGE & UNDERSTANDING





LESS



TOGETHER



2009



2017

FACTS



CONSUMER

PRODUCER

JUST WALK OUT

EXPERIENCE



amazon

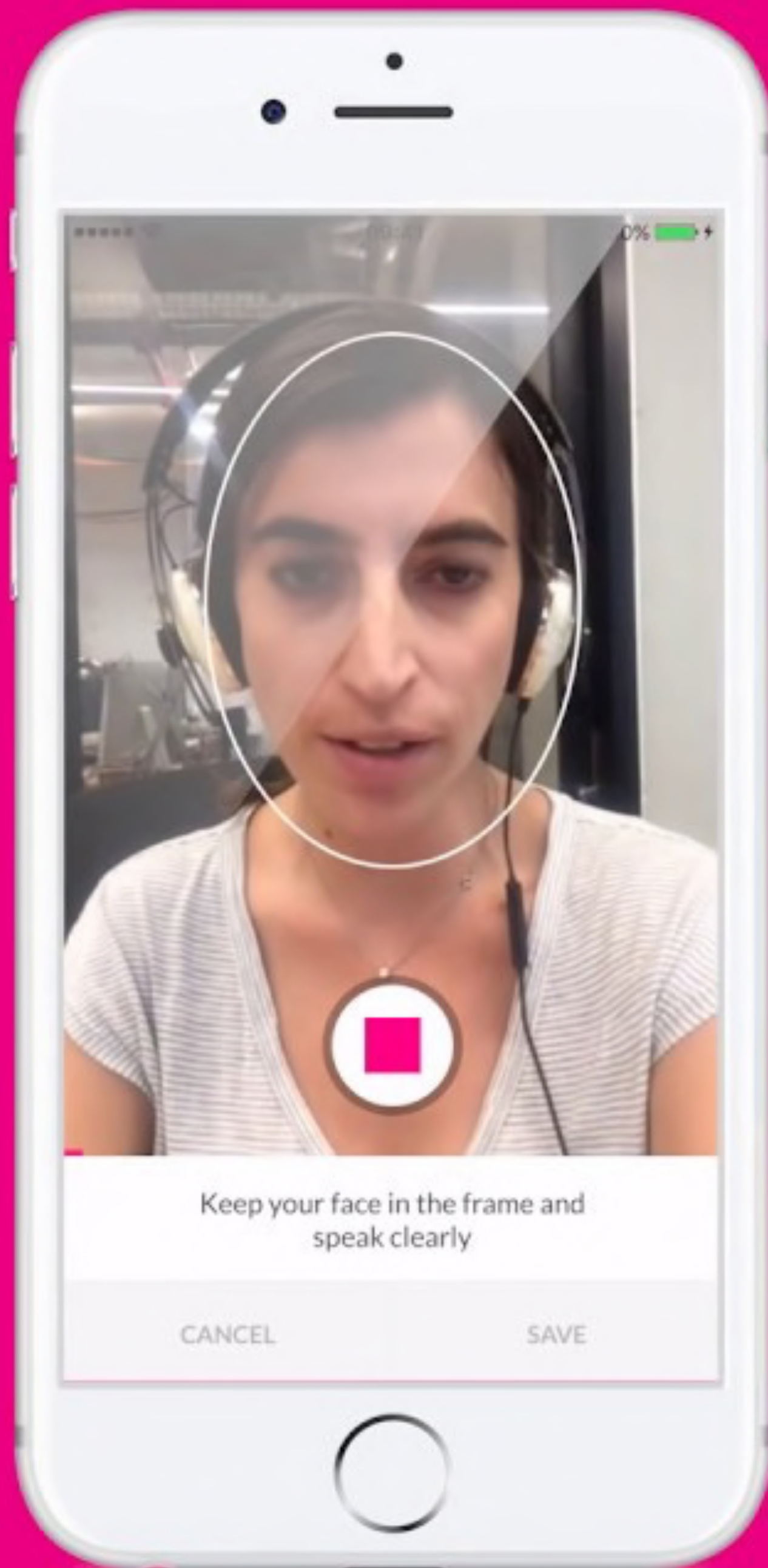


More Social.
More Fun.

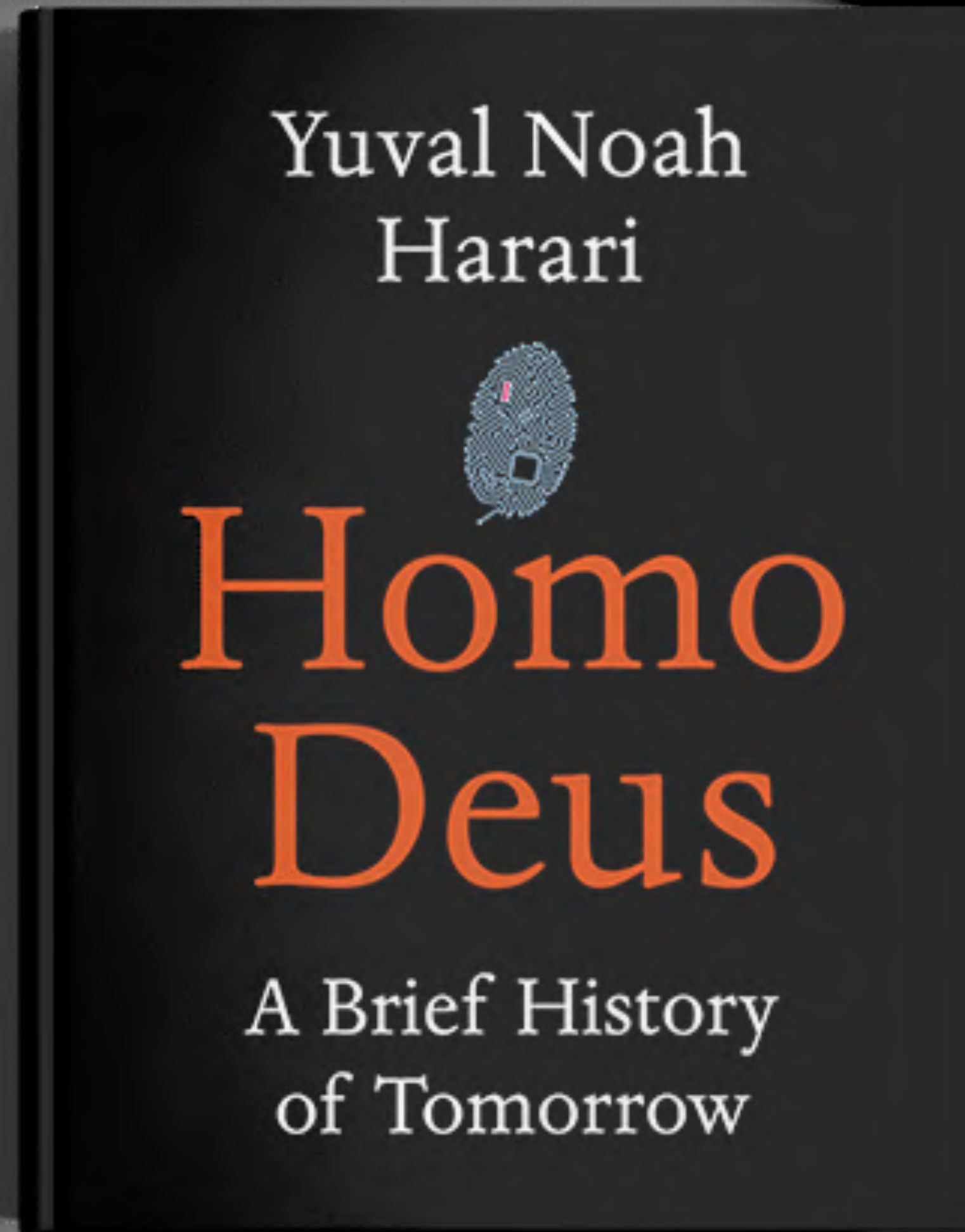
 **Alibaba Group**
阿里巴巴集团

INSURANCE

REINVENTED



No forms to fill out,
just speak to the camera



**“THE PURSUIT OF
HAPPINESS IS THE BIGGEST
GOAL FOR
THE 21ST CENTURY”**

INSTALL

Taking away frictions

ENVISION

The Happiness Advantage

DEALING WITH DELUSIONS



Digital is different

DESIGN

Hacking Happiness

QUANTIFY

Measuring the happiness economy

IN PURSUIT OF DIGITAL HAPPINESS

THE HAPPINESS ADVANTAGE

IN CODE WE TRUST - IDENTITY & DATA OWNERSHIP

DESIGN FOR HAPPINESS

I-GENERATION

