GERD LEONHARD: FUTURIST, KEYNOTE SPEAKER, AUTHOR
& CEO, THE FUTURES AGENCY

Gerd

The Future of the Internet: Big Data, Big Brother, Big Tech, Big Telco and Big Gov…?

ITU TELECOM WORLD '13

Bangkok 19-22 November

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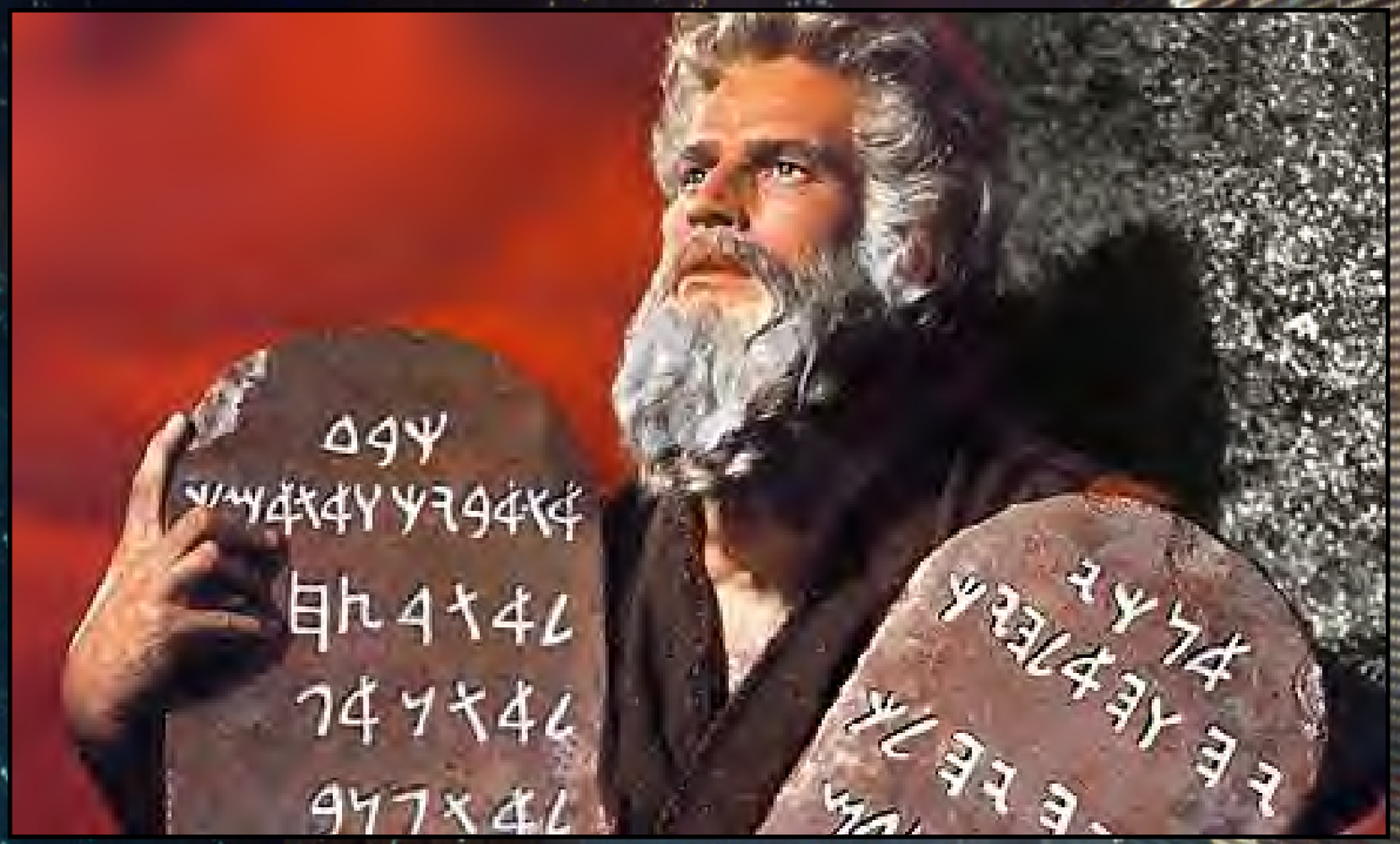
Tweet any question to #askgerd #ituworld

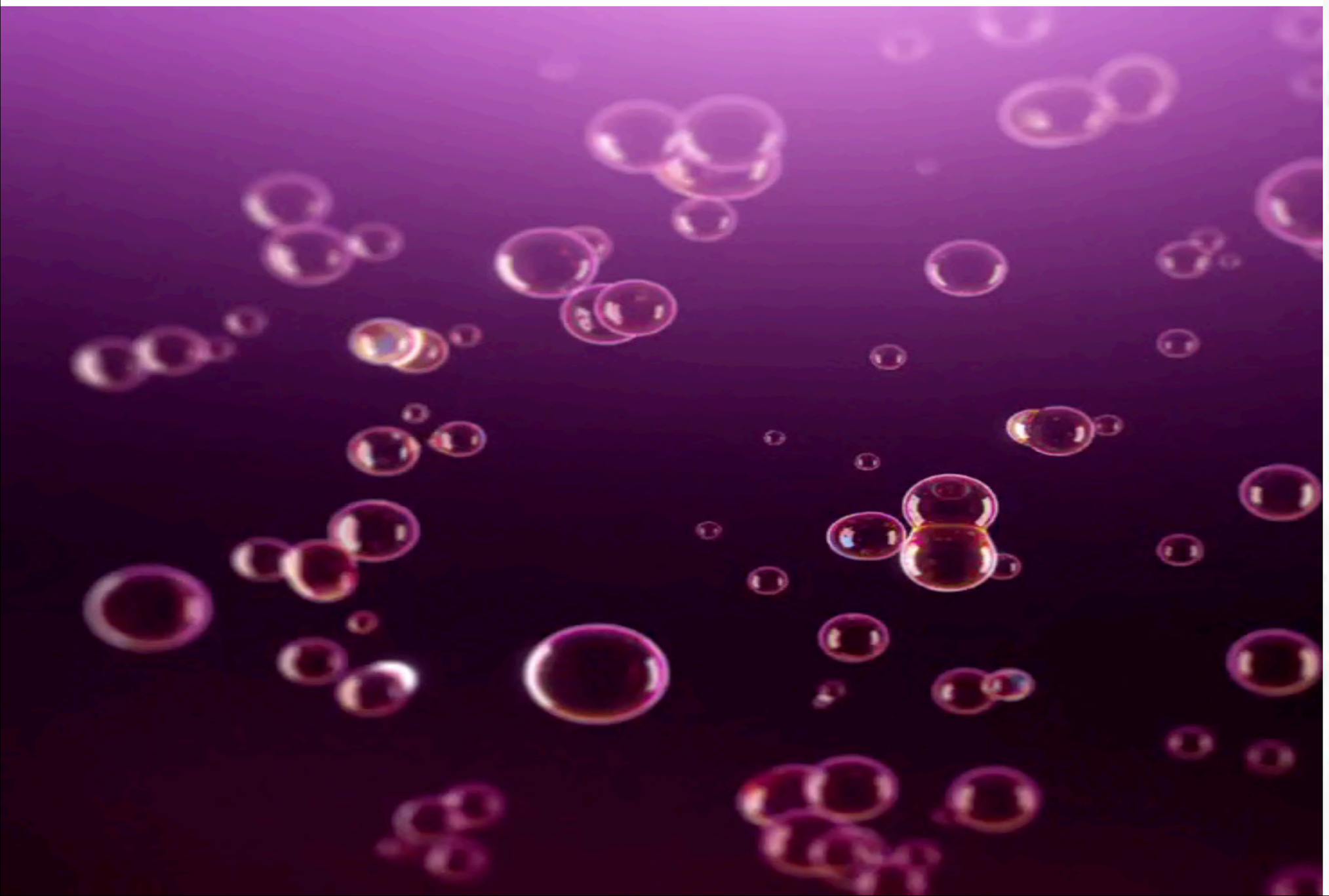
Download PDF at www.futuristgerd.com



So what does a Futurist actually do?

THE FUTURES AGENCY

IT WASN'T RAINING WHEN NOAH BUILT THE ARK



A.I.
ARTIFICIAL INTELLIGENCE
"We as Google and as an industry, all of you, we're at 1% of what's possible."
Larry Page, CEO & Co-founder, Google Inc.

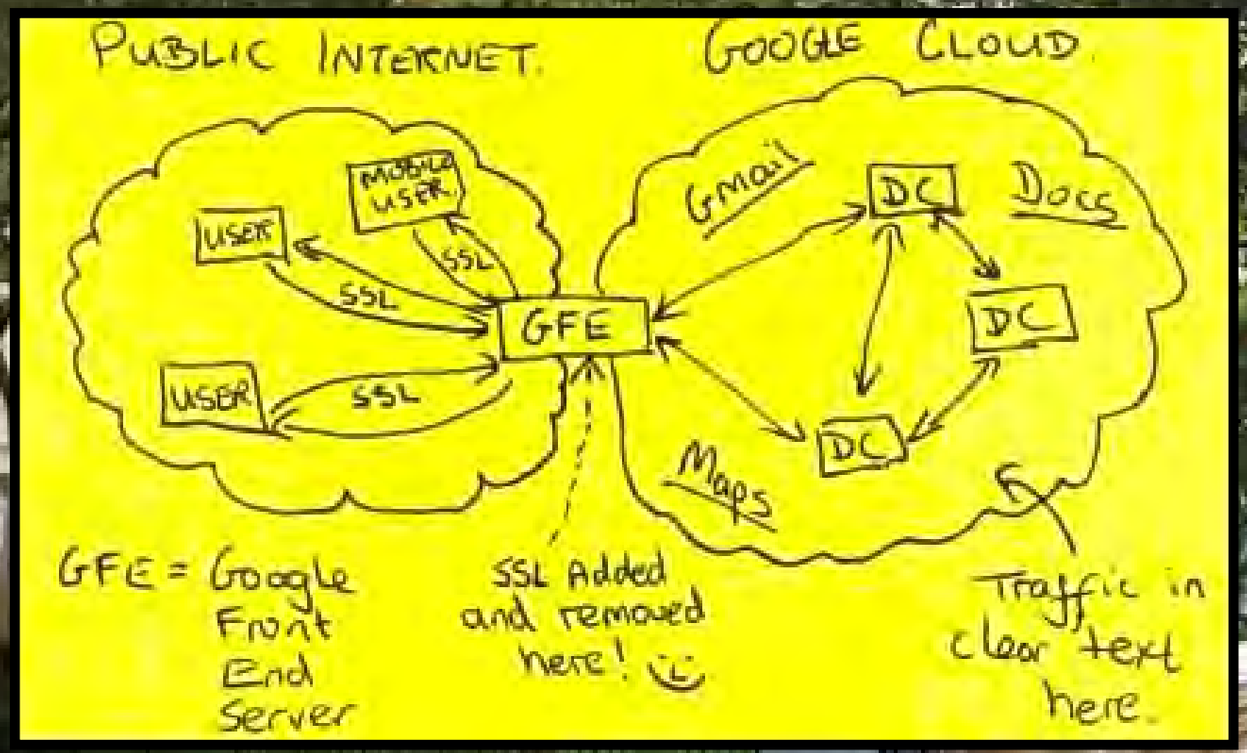
Life is becoming FASTER than fiction…

Everything
Connected
Intelligent
Real-time
Personalized
Cross-Platform

Exponential technological progress: more speed means more risk

1 2 3 4 5 6 7 8 ...

1 2 4 8 16 32 64



The Internet as we knew it is over.

Privacy & Security Failure

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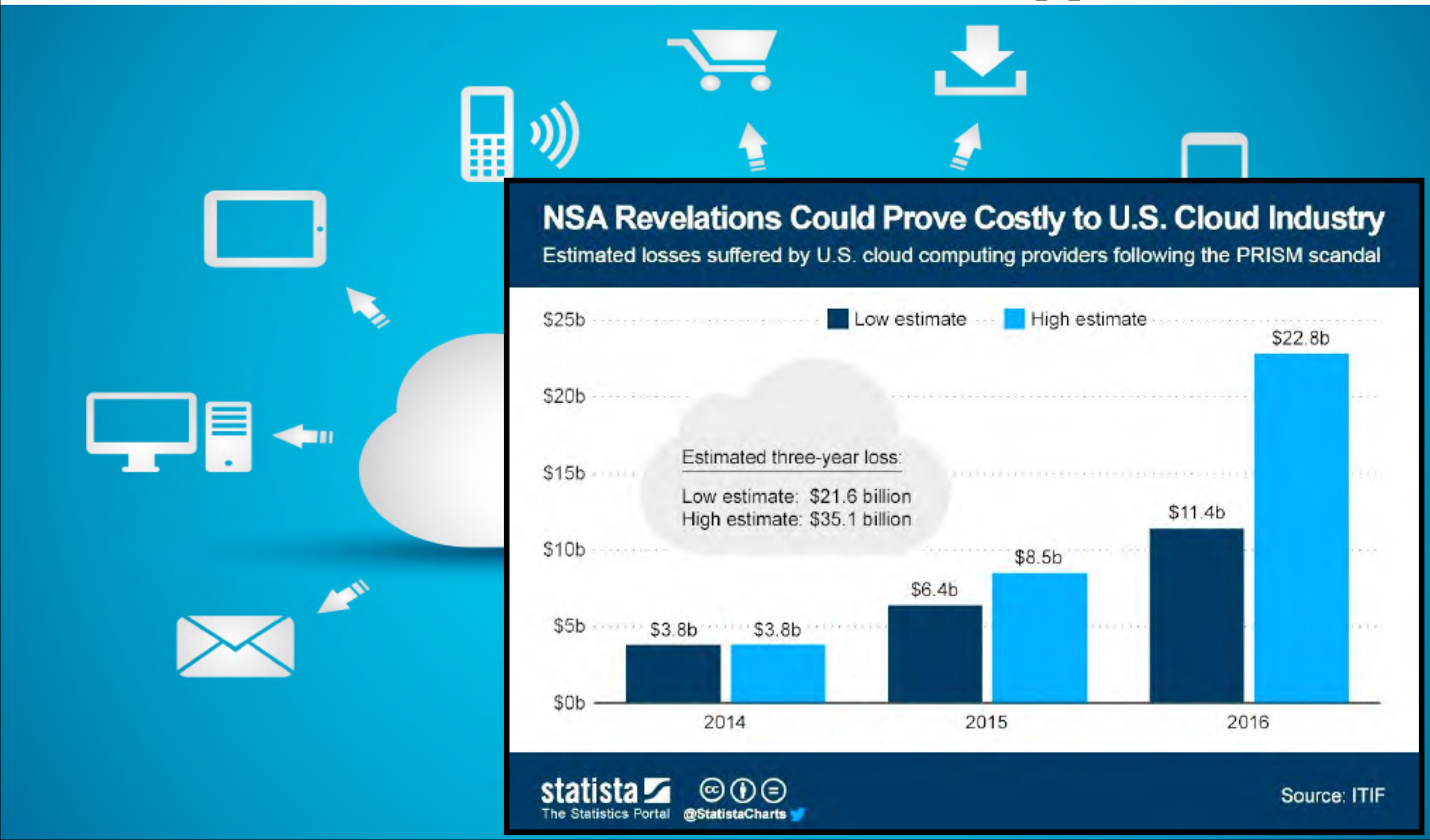
The power of technology now exceeds the scope of our ETHICS

"In its self-contained way, Google Glass joins the 21st-century notion that everyone is a filmmaker with the more conventionally accepted truth that everyone is an audience" Tribecafilm.com Sept 2013

Zero privacy + flawed security + abusive marketing will translate into slower pace of technology adoption which means missed and reduced opportunities



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Artificial Intelligence is becoming the new normal

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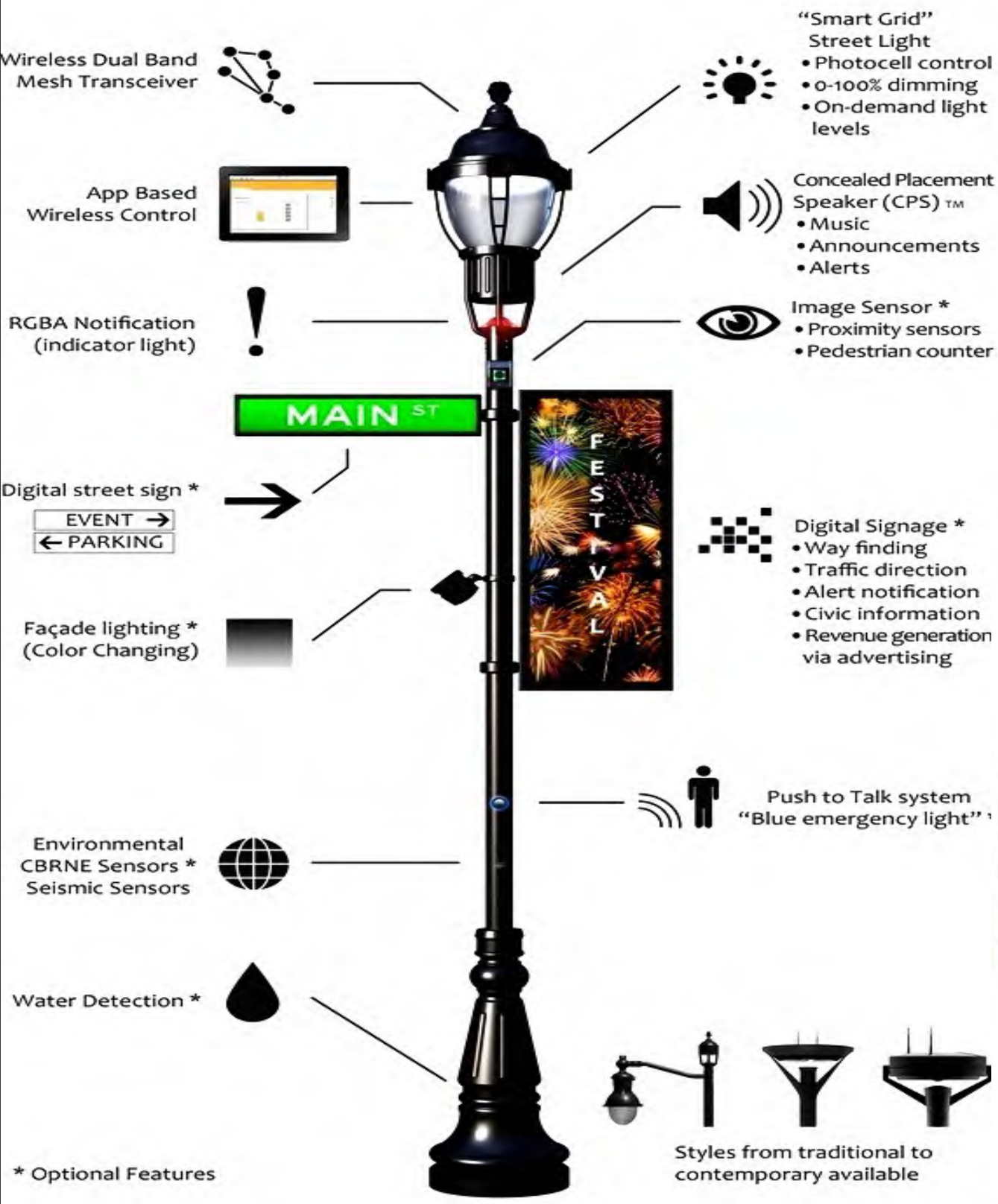
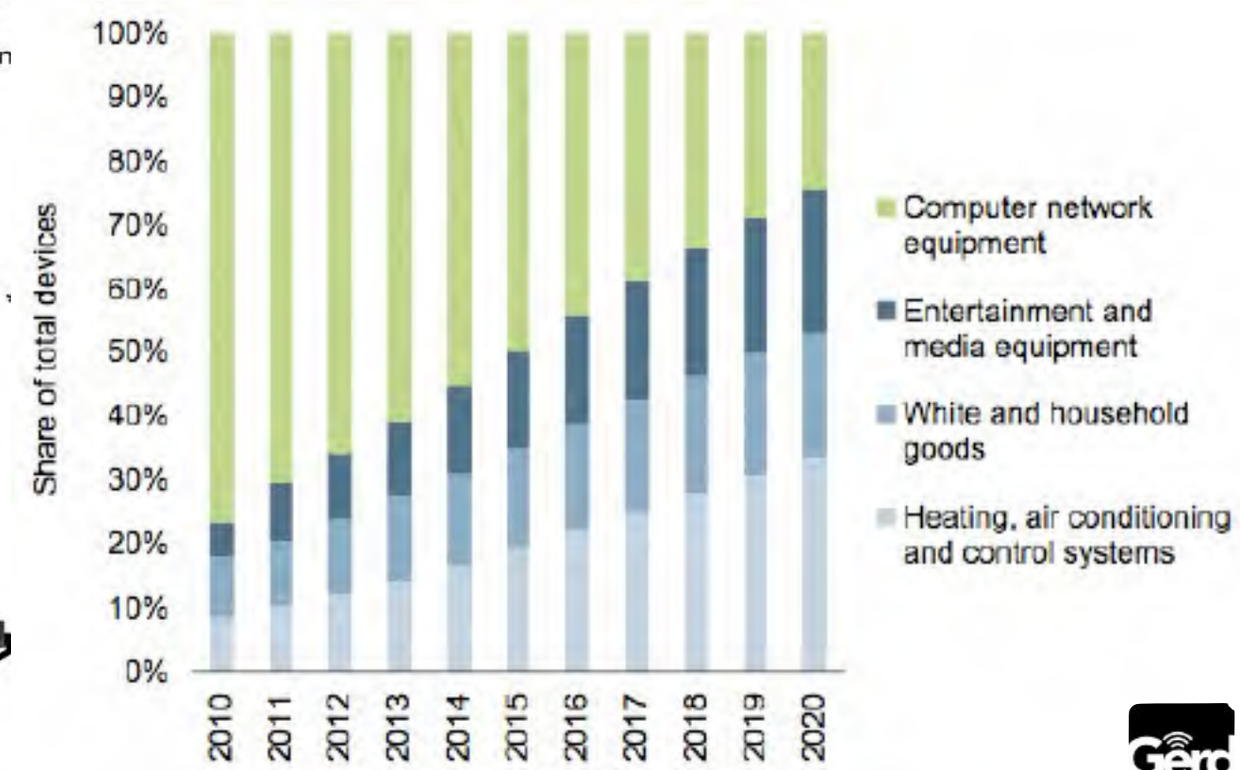
"We will be surrounded by computational power. So for average people, for average users and consumers, you will be living in a world where you are essentially living in a computer, where you are surrounded by intelligence"

reuters.com Oct 29 2013

Connected Intelligent Real-Time Everything





Mobile devices are already our external brains

"A kid in Africa with a smart-phone has more information today than the President of the United States did 15 years ago."
Ray Kurzweil
TECHNOLOGY AUTHOR & INVENTOR

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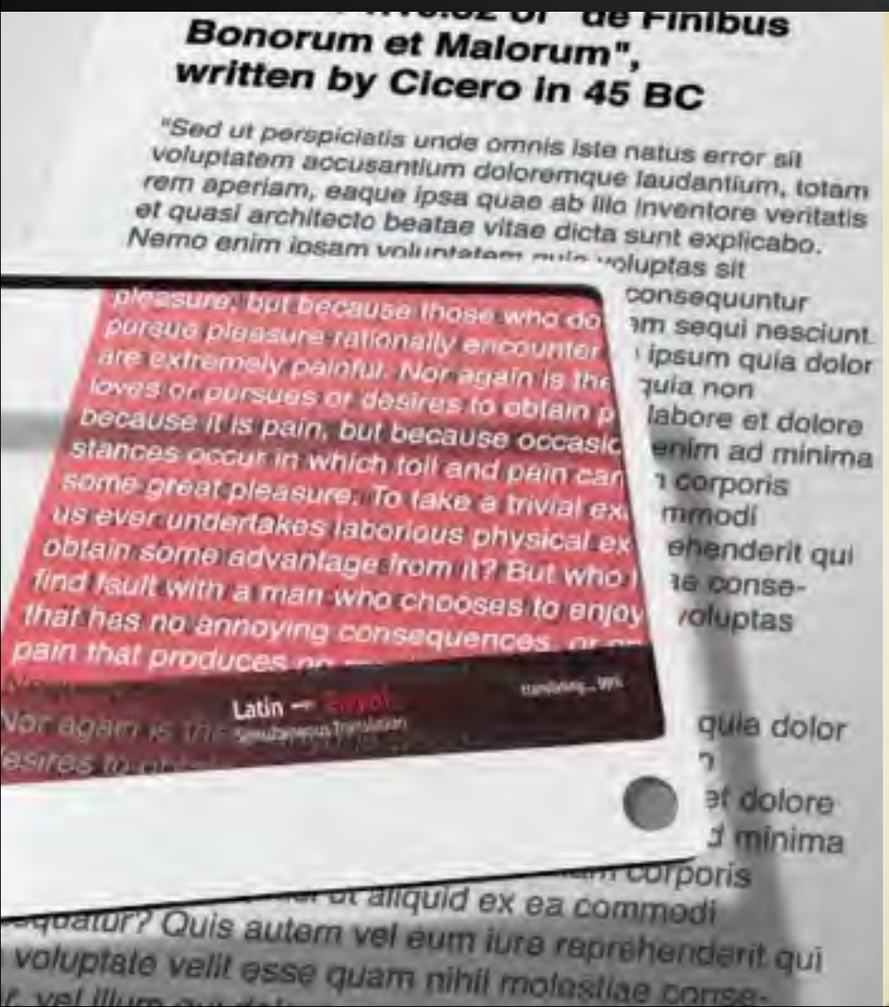
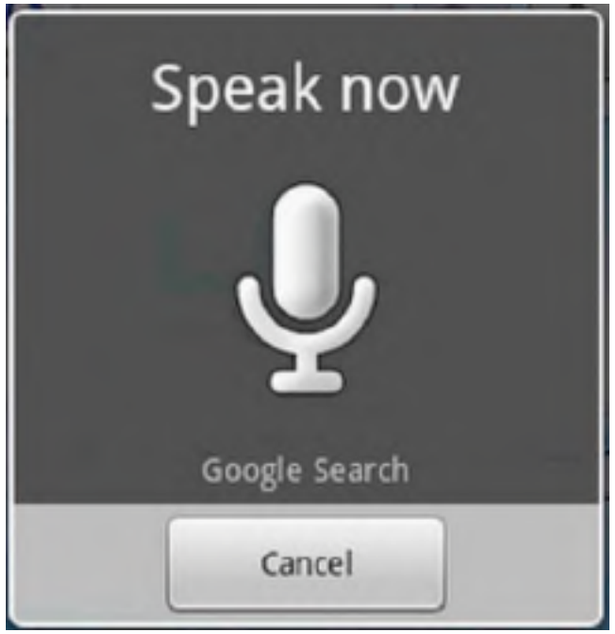
The Future of ‘Search’



Interface Revolutions: unprecedented access to information



Human-Machine Evolutions: Type.Speak.Gesture.Blink.Think

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The Napsterization of Manufacturing?

Printing Your Own Food

qz.com

By Quartz *May 22nd 2013 1:44 PM*

FOLLOW More Stories by Quartz

The next frontier in the fight against hunger may be manufacturing food through 3-D printers.

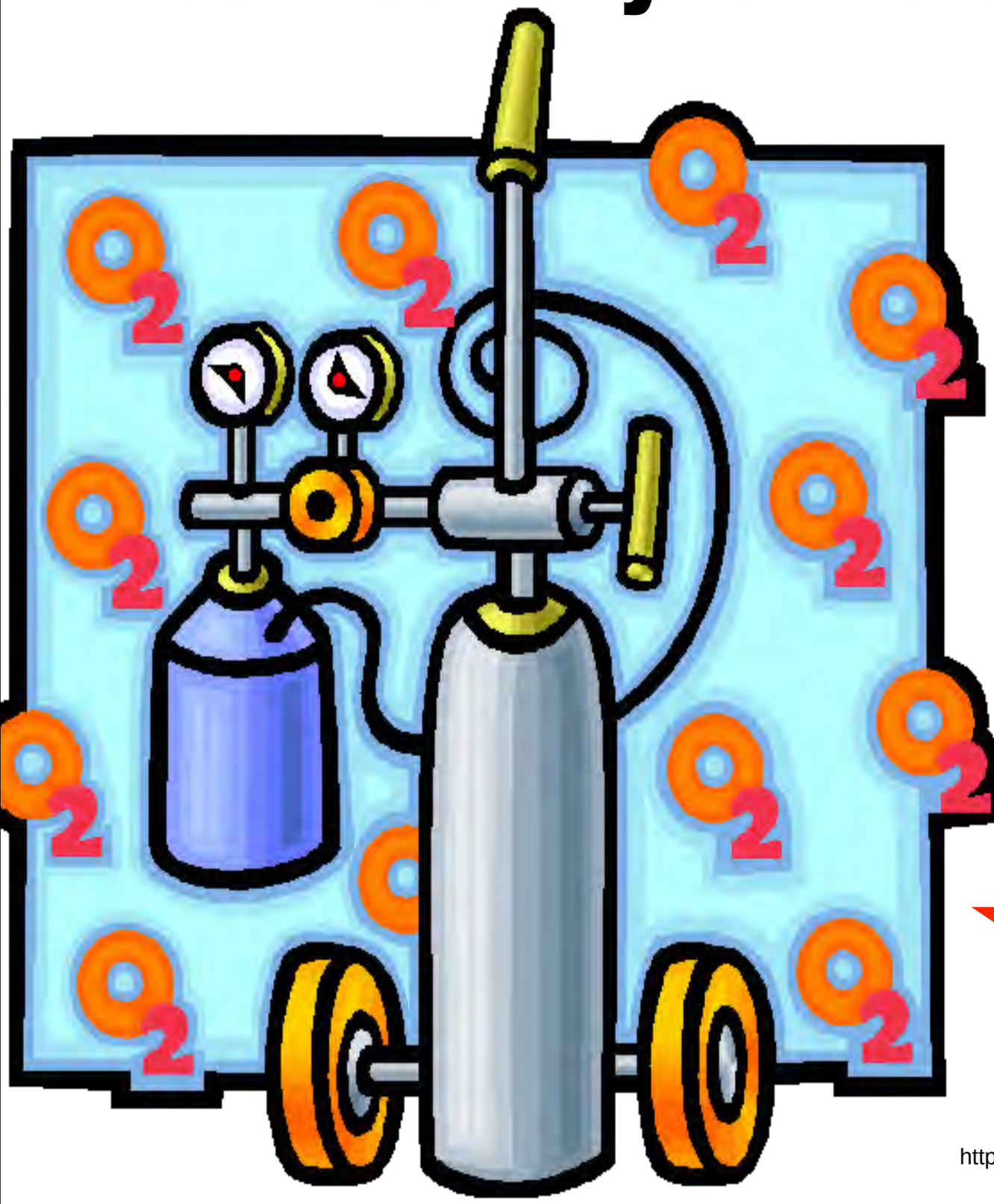
QUARTZ

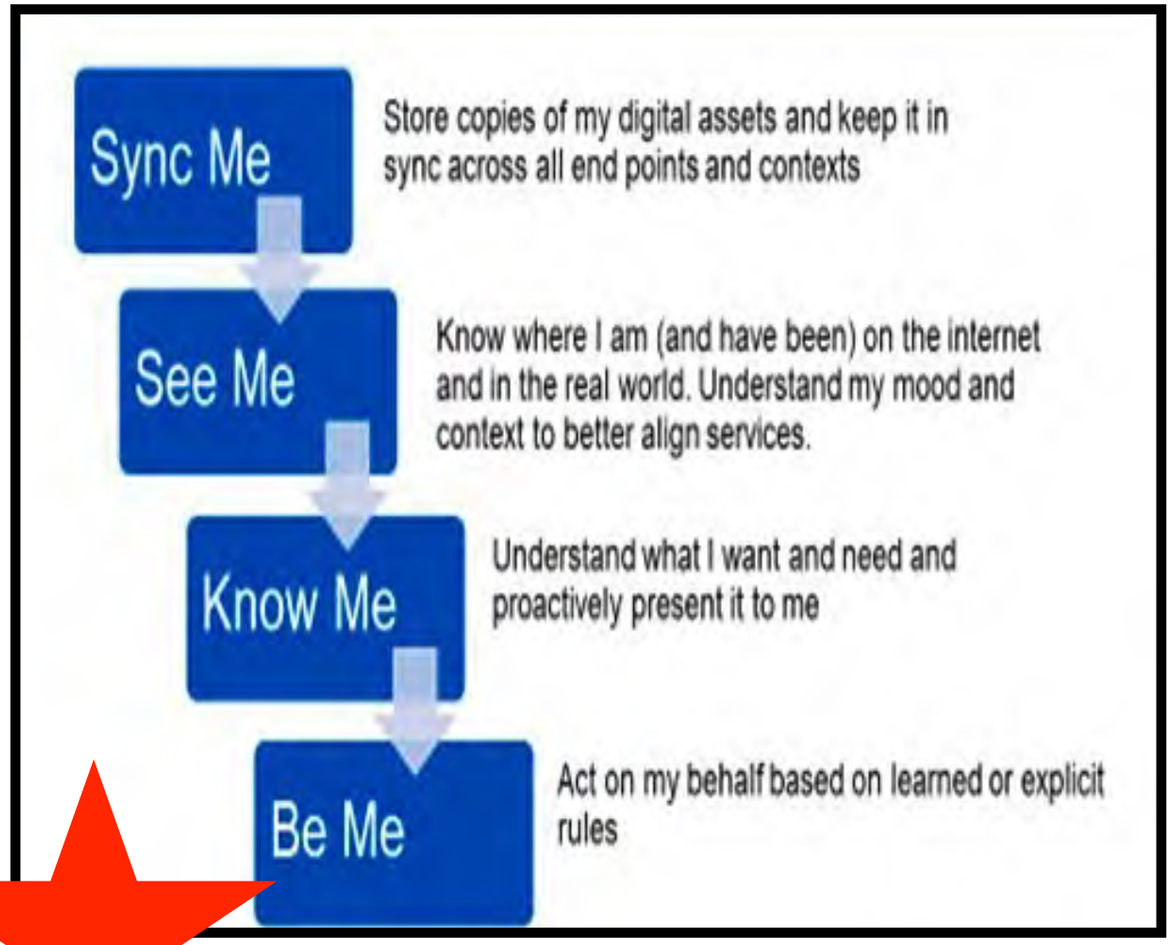
by *Christopher Mims*

Anjan Contractor's 3D food printer might evoke visions of the "replicator" popularized in *Star Trek*, from which Captain Picard was constantly interrupting himself to order tea. And indeed Contractor's company, Systems & Materials Research Corporation, just got a six month, $125,000 grant from NASA to create a prototype of his universal food synthesizer.

E-M-P-O-W-E-R-M-E-N-T

Connectivity is like Oxygen now… *but





http://www.smartplanet.com/blog/bulletin/by-2017-your-smartphone-will-be-smarter-than-you/

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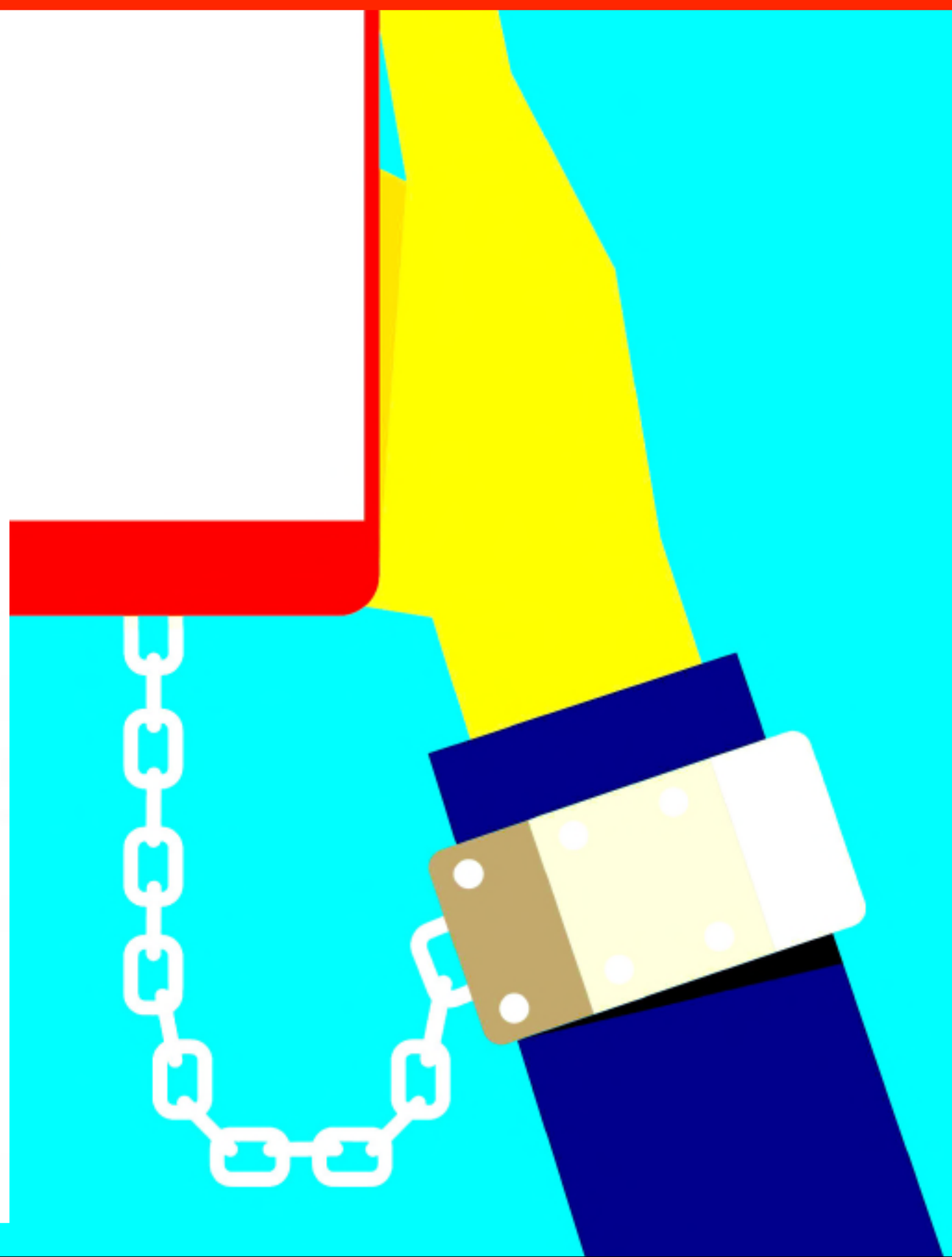
E-N-S-L-A-V-E-M-E-N-T

"It keeps me from looking at my phone every two seconds."



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75 Billion Connected Devices By 2020

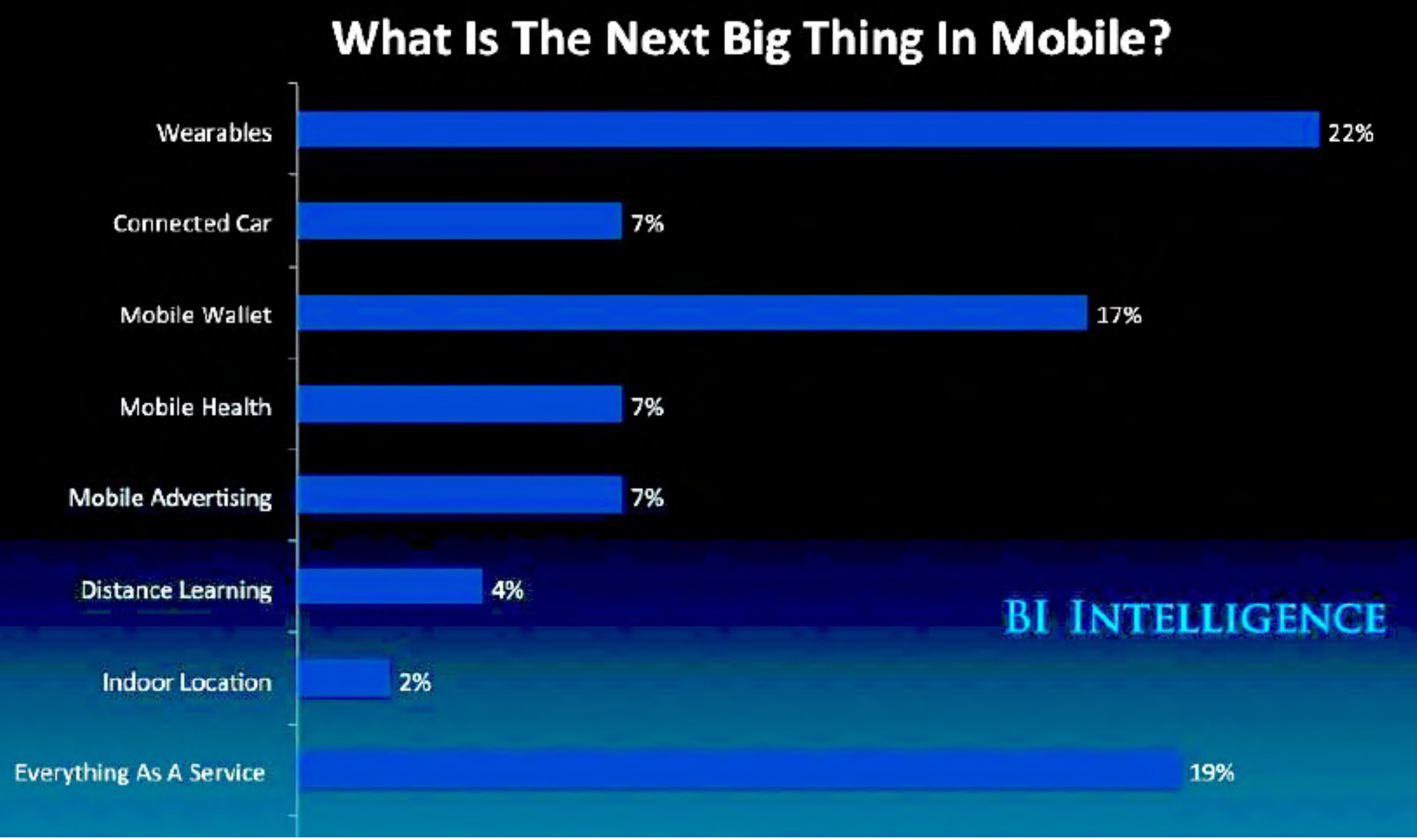
Devices Connected To The "Internet Of Things"

Huge economic potential - but we must observe UNINTENDED CONSEQUENCES

Source: Cisco, Morgan Stanley

BUSINESS INSIDER

Wearables!



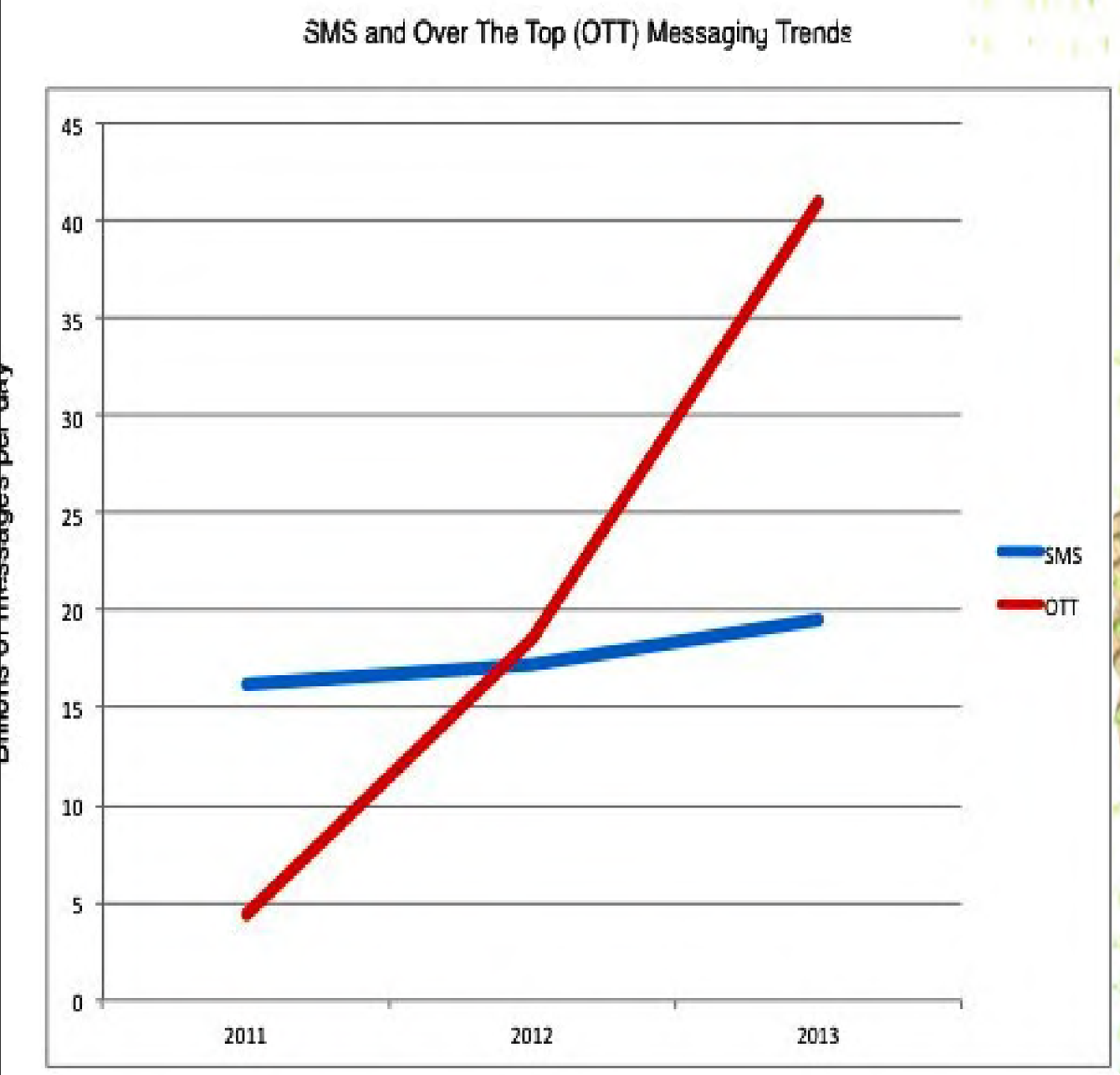
Vast societal & behavioral changes fuelled by exponential technological advancement

Source: Open Mobile Media, July 2013; n = 50+ Top-Level Mobile Executives Attending The Open Mobile Summit

BUSINESS INSIDER

“The greatest danger in times of turbulence is not the turbulence, itself, but to act with yesterday’s logic”

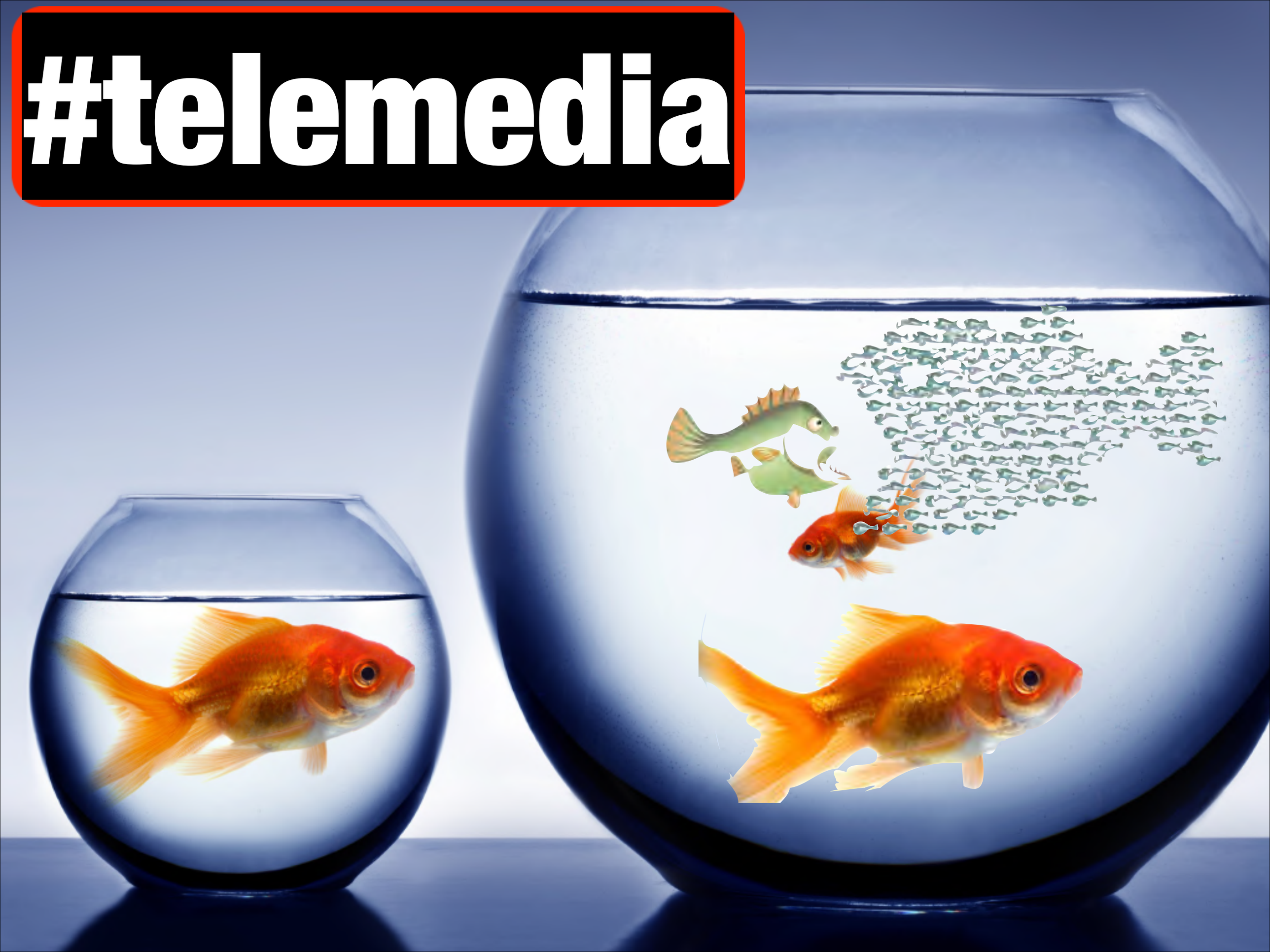
*Peter Drucker



Source: Informa, May 2013 (https://commerce.informatm.com/reports/main/voip-ip-messaging-revised.html)

Acting based on yesterday's logic ... full speed off the cliff

#telemedia



Example: the Future of Media is User-Control. Period.

Now

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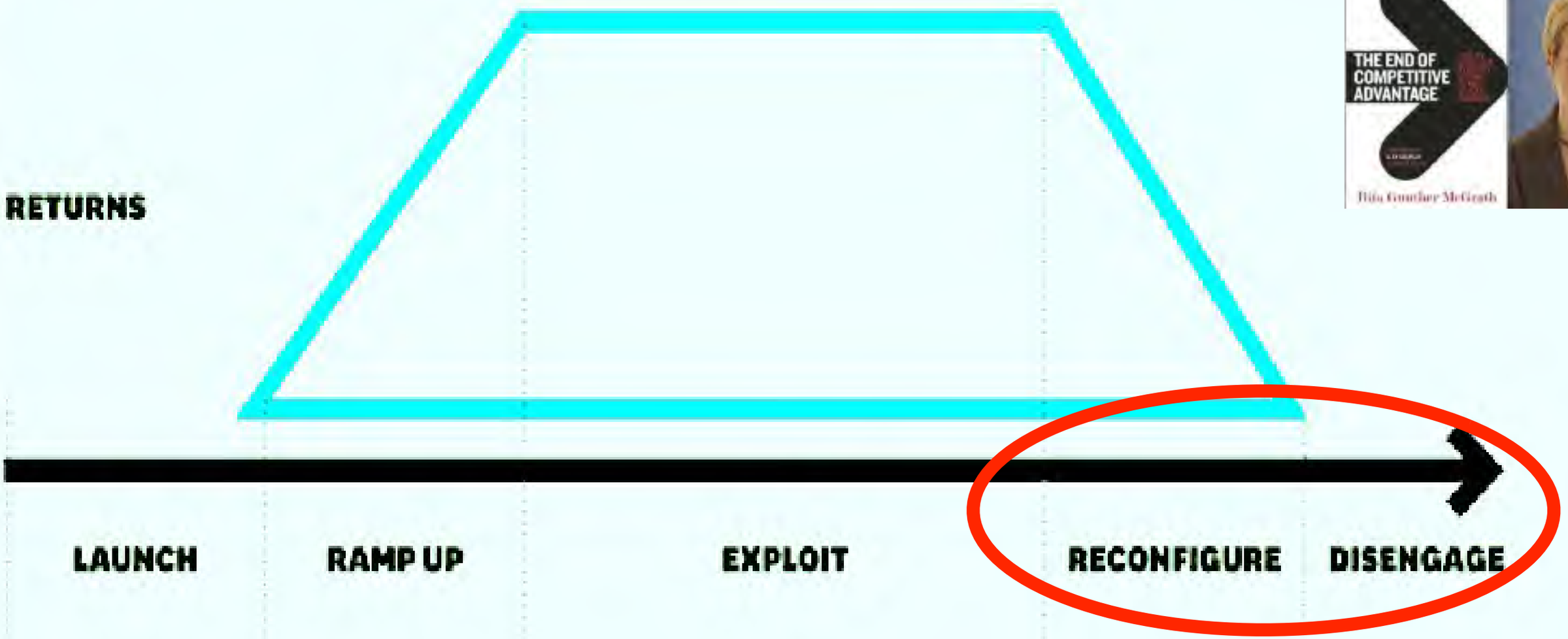
Telcos, ISPs and Mobile Operators: Transient Advantages will replace Sustainable Competitive Advantages

Companies in high-velocity industries must learn to cycle rapidly through the stages of competitive advantage. They also need the capacity to develop and manage a pipeline of initiatives, since many will be short-lived.



http://hbr.org/2013/06/transient-advantage

Our future: From linear to exponential… and lateral

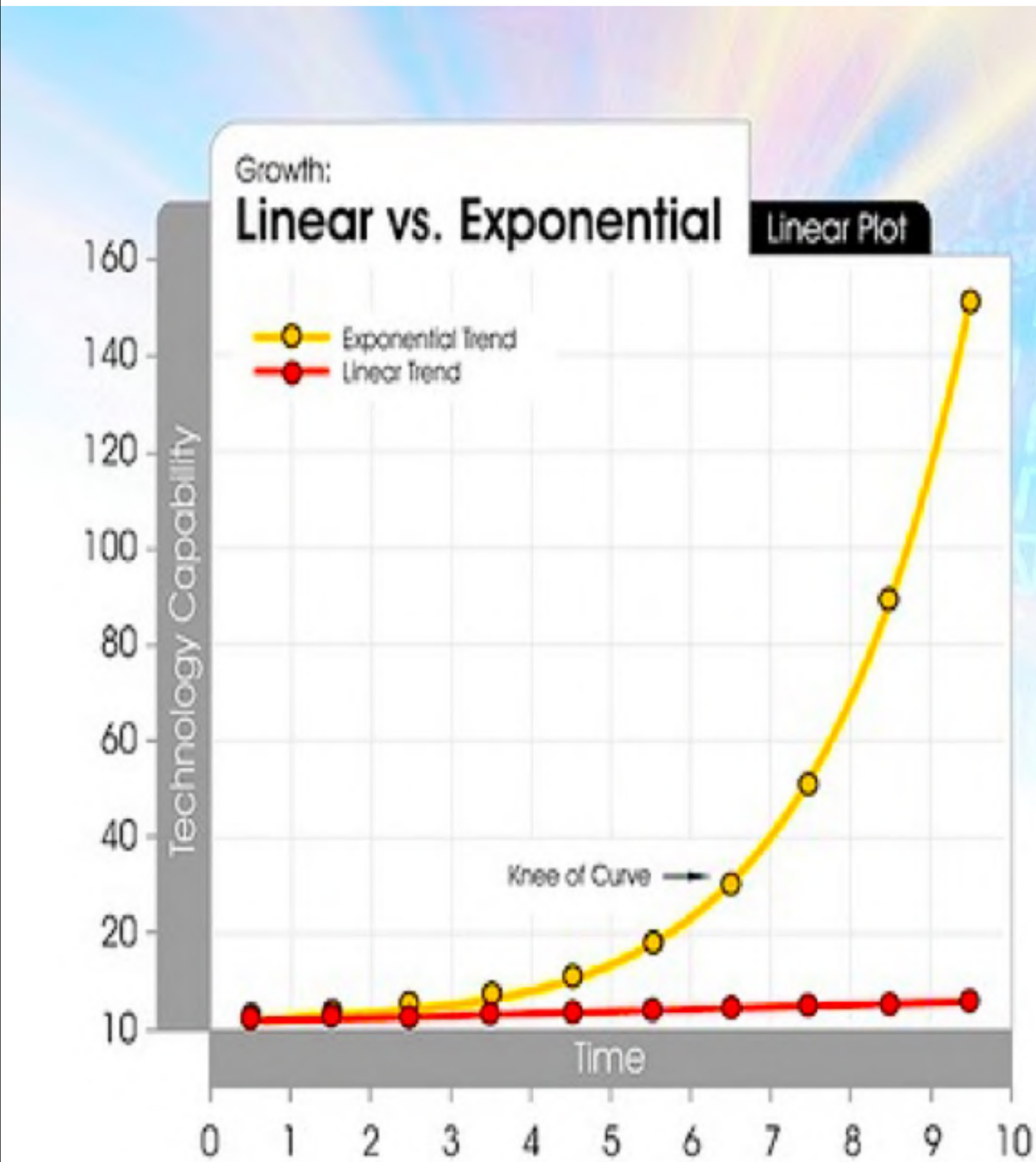
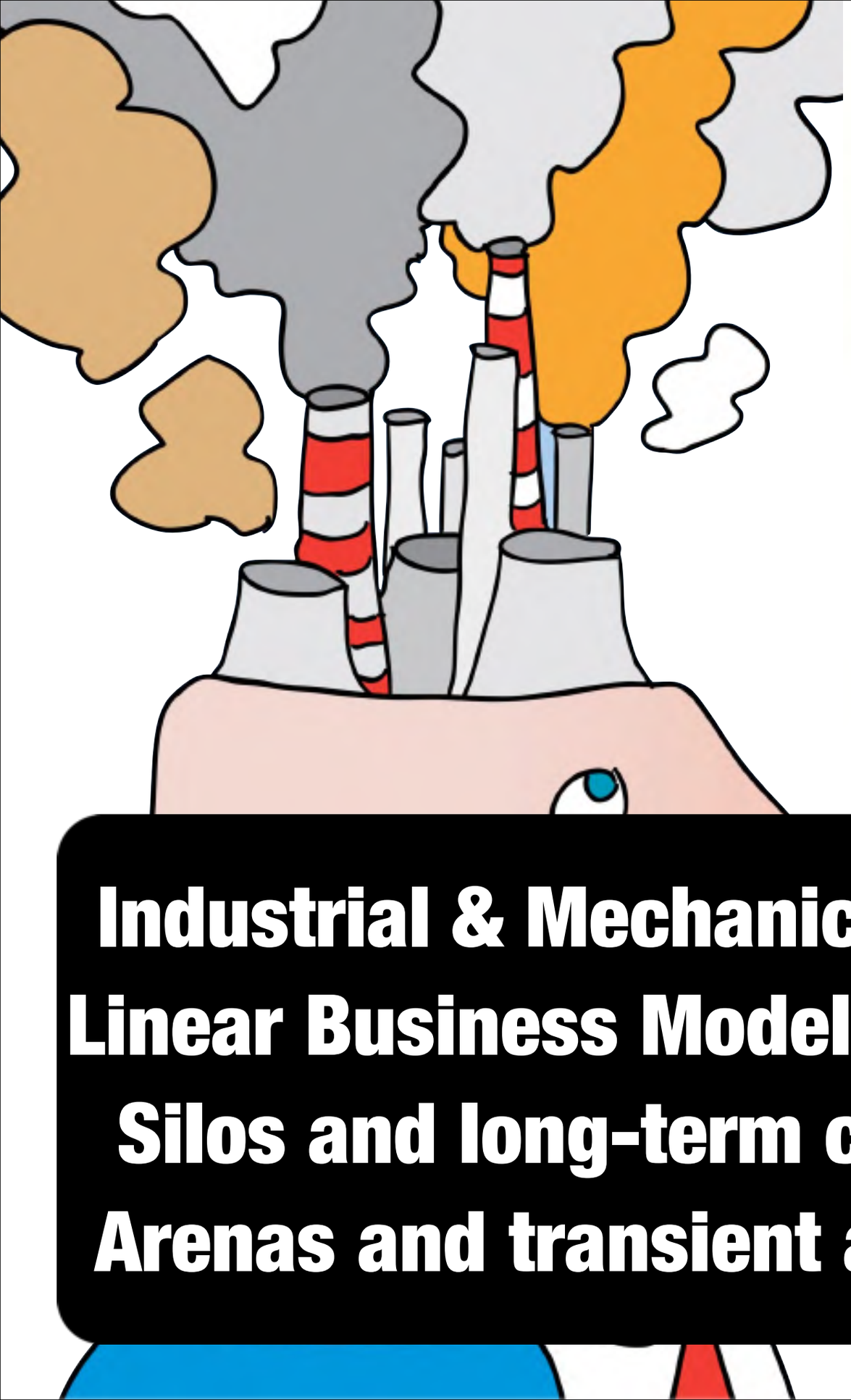


Photo by Sebastien Marion - http://flic.kr/p/75mcsQ



Industrial & Mechanical ◔ Digital & Exponential

Linear Business Model ◔ Lateral Business Model

Silos and long-term competitive advantages ◔

Arenas and transient advantages (Rita McGrath)

Why does it take ‘a Google’ to do stuff like this?

Project Loon: Google Launches Balloons Around The World To Give Internet Connectivity To All

Google is now working on an initiative that will provide internet
giant has started releasing 30 hi-tech balloons that will provide
designed to travel around the world three times. The balloons sta
project named Project Loon.

Google rolls out email from SMS service, starting with Africa

This is very cool. Millions of people around the world have GMail accounts. But a sizeable number of those people who own “dumb phones” have only ever been able to access the service on a desktop computer. Until now.

Google has just announced that it’s rolling out GMail SMS, a service that lets you send and receive emails as SMSes on your mobile phone. The really cool part though, is that you don’t have to be connected to the internet to use the service.

http://www.gizbot.com/online/project-loon-google-launches-wi-fi-balloons-around-the-world-news-014539.html

The most serious competition comes from outsiders

airbnb

Travel like a human.

KHAN ACADEMY

TNN

twitter news network

Innovation Failure…??

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Can the Future of the Internet continue to be defined, controlled and engineered by the U.S. ?

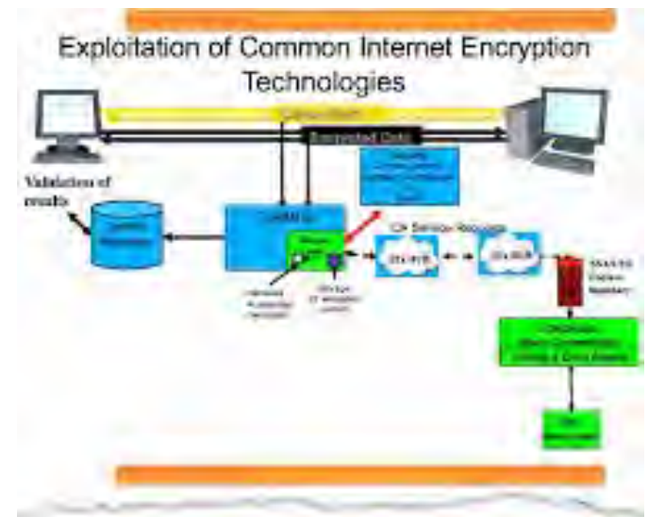
Systematic Abuse & Surveillance Default

Information Superiority as the declared objective

The crux of the NSA story in one phrase: 'collect it all'

The actual story that matters is not hard to see: the NSA is attempting to collect, monitor and store all forms of human communication

Trust destruction at a very serious level



Flawed policy initiatives

Basic societal rights and principles questioned

All U.S. co's are implicated & already losing business

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TRUST
dys·func·tion·al
/disˈfəNGkSHənl/
adjective
1. not operating normally or properly.
"the telephones are dysfunctional"

TILT
PINBALL CHAMP
500
ADVANCE BONUS
NSA inside
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NSA spying on Petrobras, if proven, is industrial espionage: Rousseff

By Anthony Boadle

recent years and will be a mandatory partner in developing all of the new deep-sea fields.

#datawars

NSA inside

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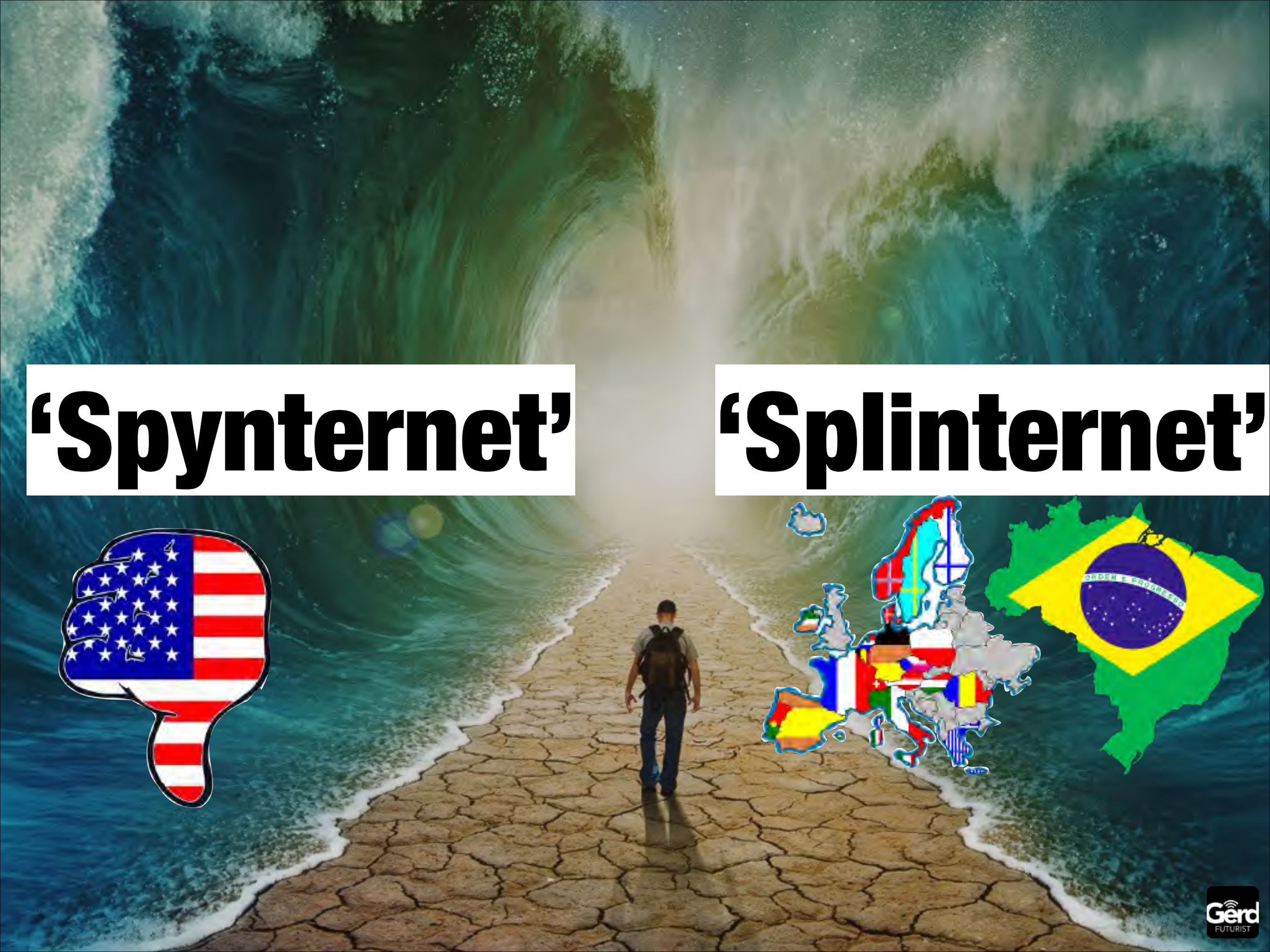
‘Spynternet’
‘Splinternet’
ORDEM E PROGRESSO
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1. The Internet runs on **Data -** and we will continue to see **exponential growth** in velocity, variety, volume, virality and value
2. Data is indeed becoming the new **Oil**, and **#datawars** are here
3. Oil equals **Power** (as some of us know all too well)
4. **Pollution** is the result of **Abuse, Surveillance and Trust Failures**
5. **Technology** at first favours the nimble and decentralised - but then the powerful, and massively so: balances must be struck
6. The resulting (digital) **Inequality**, the dramatically increasing abuse of personal data and the rise of **'Feudal Computing'** will not be resolved by market dynamics (see the music industry)

Special thanks to Bruce Schneier for inspiration

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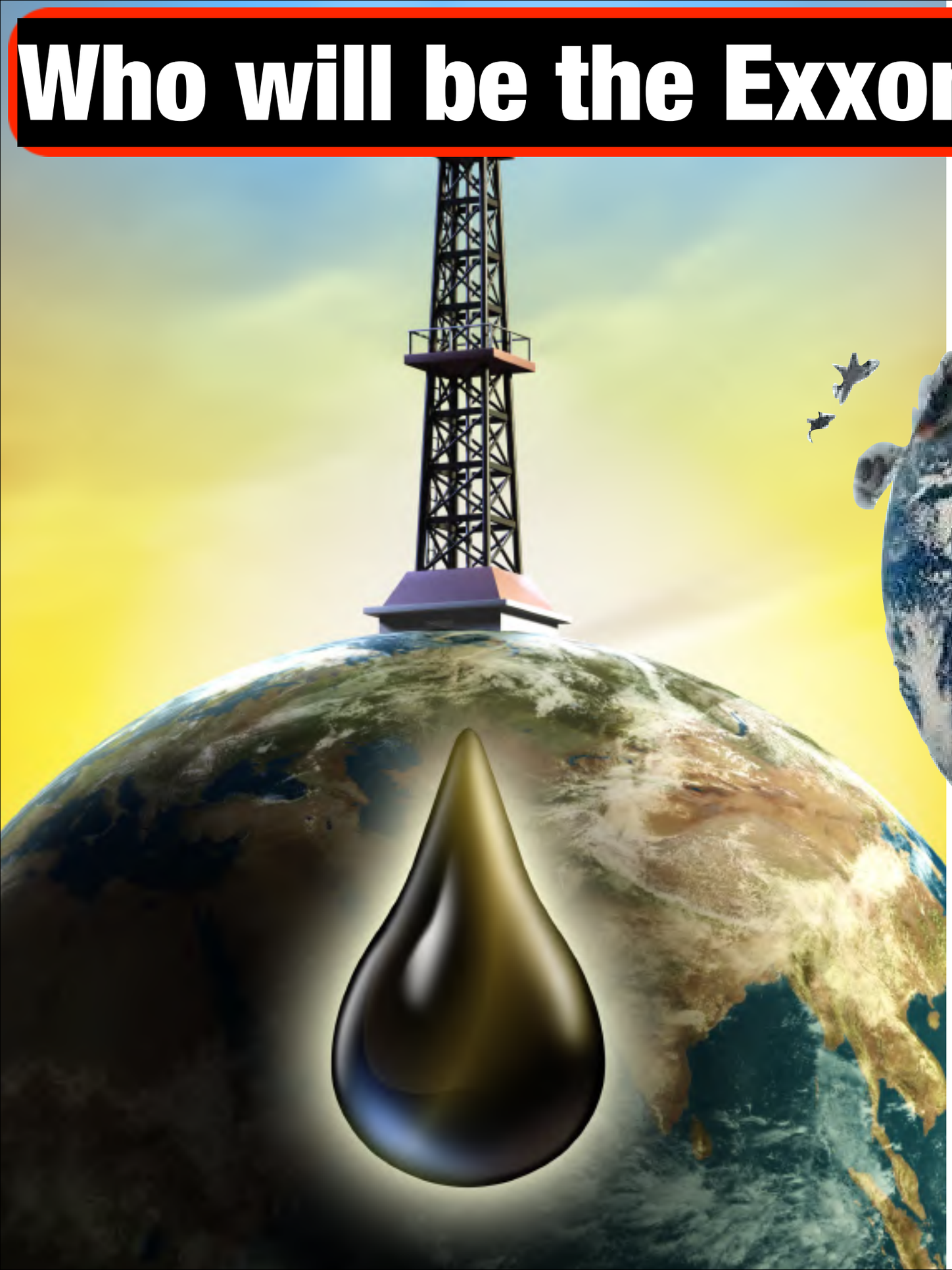
NSA inside
Data Greed

So will ‘Big Data’ companies i.e. telecoms, search engines, cloud providers, internet platforms become like ‘Big Oil’?

Who will be the Exxon-Mobil of Data?



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A lot is at stake…

The lack of personal privacy is also what stops the switch to digital money

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Can we have privacy and be connected?

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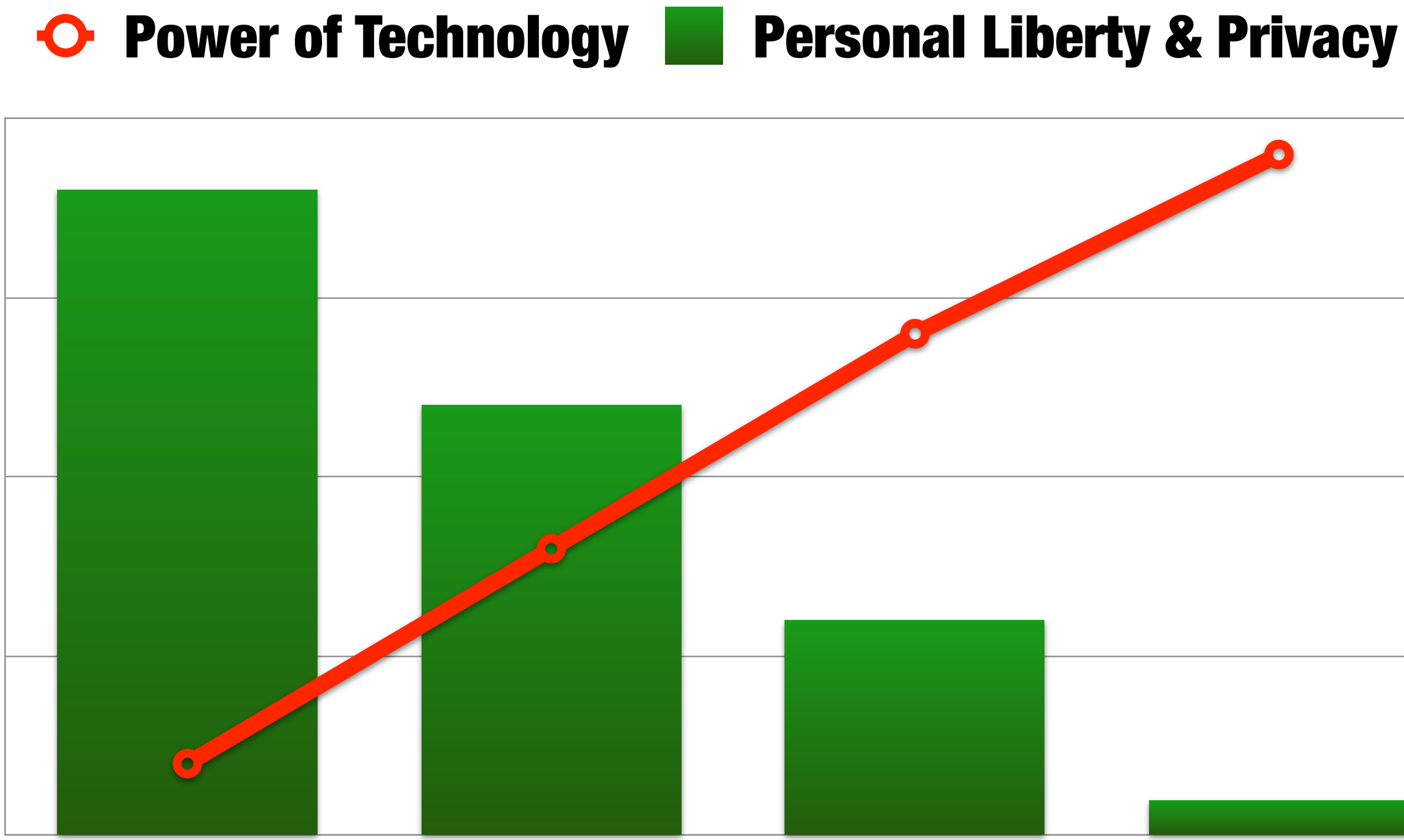
Source Flickr: http://www.flickr.com/photos/tjblackwell/5328104477/

Is this a Faustian Bargain?



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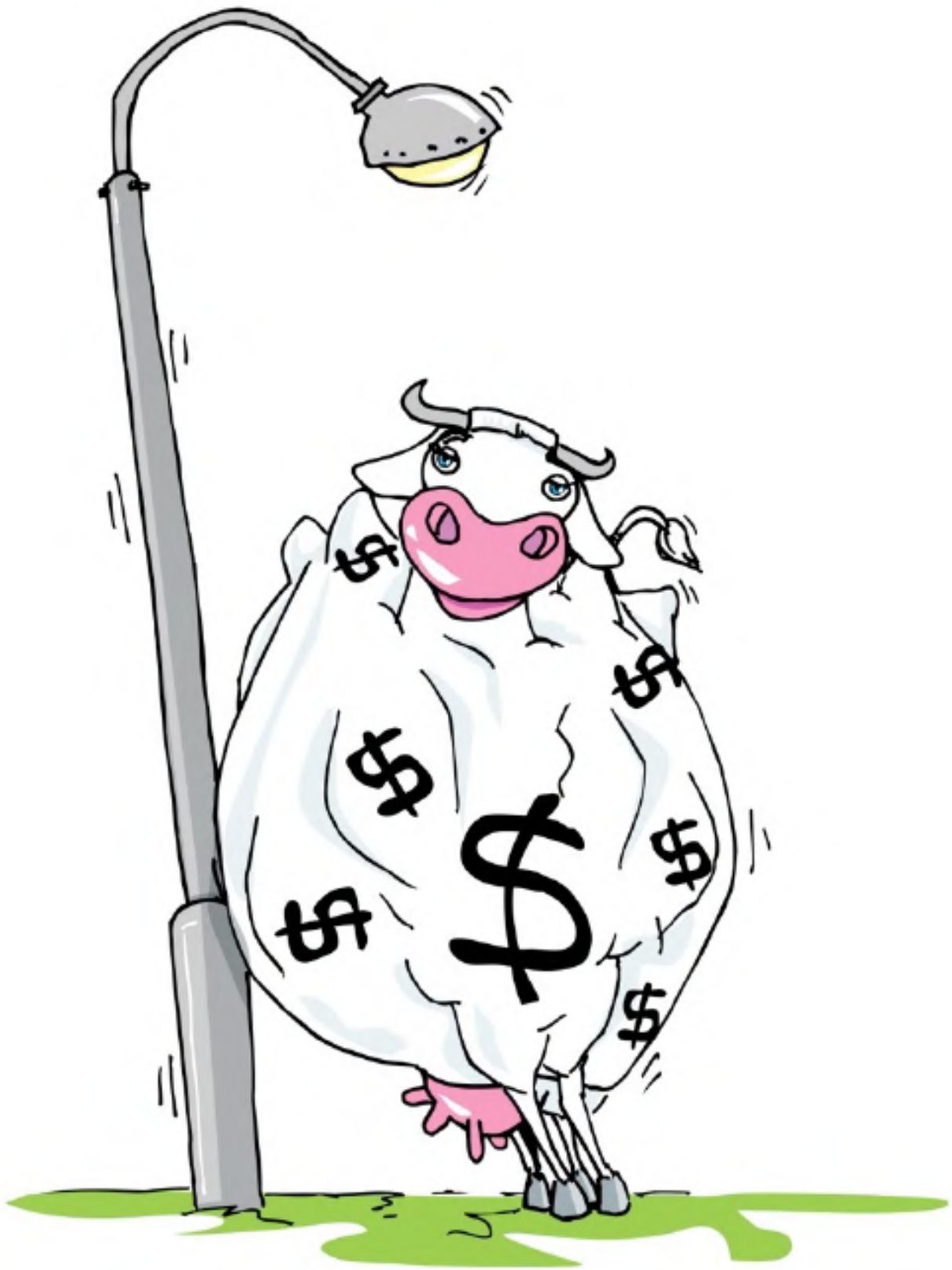
People are becoming ‘instrumented’



The Data Made Me Do It - MIT Technology Review
http://m.technologyreview.com/news/514346/the-data-made-me-do-it/

“People have become instrumented to collect and transmit personal data...”

Andreas Weigend

Should we really try to ‘end anonymity’?

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A CULTURALLY DIFFERENTIATED YET GLOBALLY STANDARDISED BALANCE OF SECURITY AND PRIVACY WILL BE ABSOLUTELY CRUCIAL

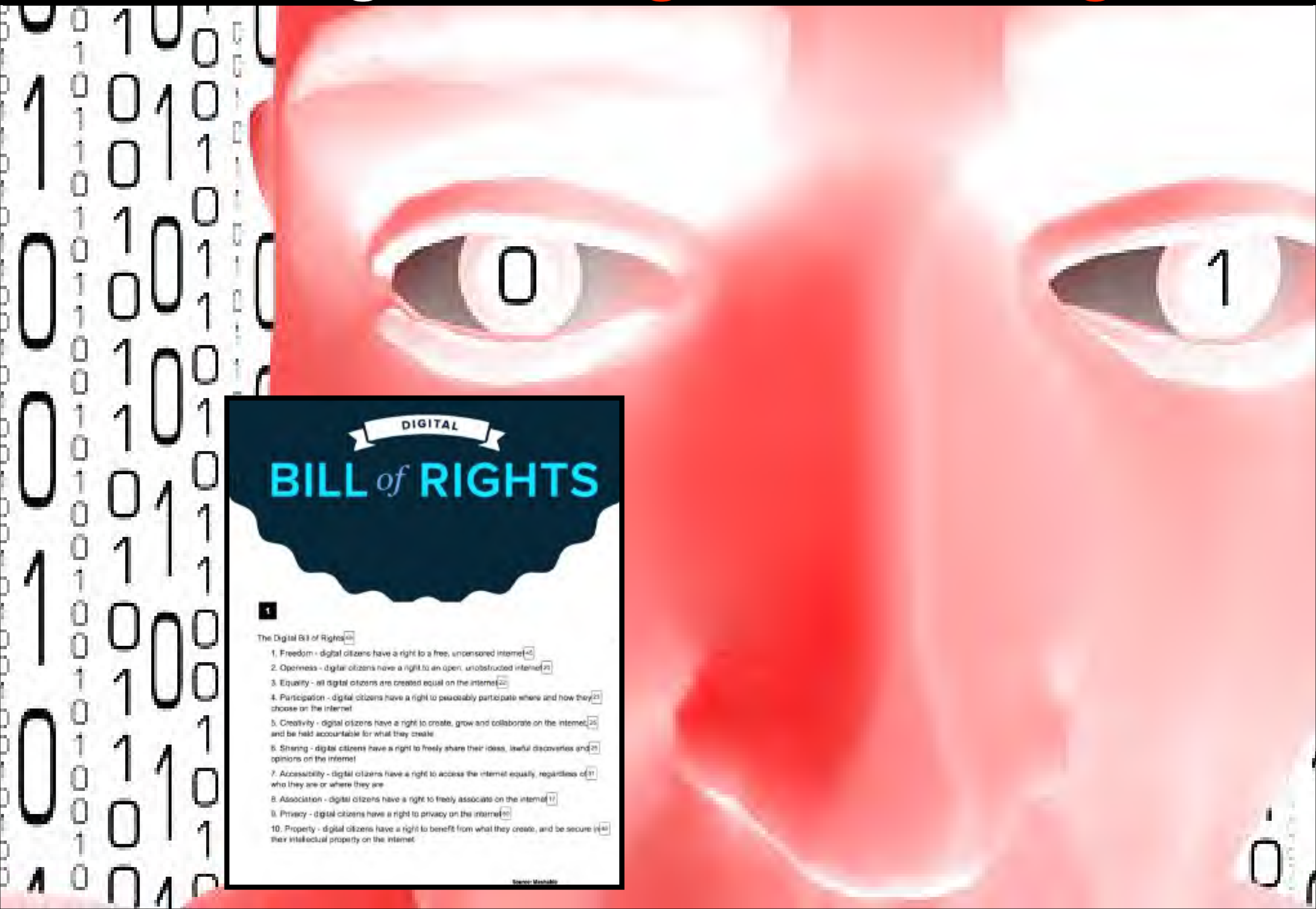
Yes, we can generate, access, refine, distribute and use personal data…

…but it will need to be subject to new social contracts, ethics, rules, laws

We urgently need to co-create a comprehensive, healthy, public, global, transparent, verifiable

Won't-be-evil-Ecosystem

Time for a global ‘Digital Bill of Rights’…



Do: Observe. Listen. Connect. Respect. Engage. Prosper .

Don’t: Abuse. Re-sell. Surveil. Hyper-market. Gain Superiority.

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‘Digital Sovereignty’ will become more important - but Interdependence is our inevitable future

Image via Tiffany Shlain: Connected the Movie

… and let's not try and solve social, cultural and political challenges with technology, once again:)

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The Future of the Internet: Summary

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We are entering an age of unprecedented opportunities: from linear to lateral thinking - not industries but arenas!

Yet, 'amazing technology' must be balanced with ethics & standards: unintended consequences will pose big challenges

Privacy and trust failure is the biggest hurdle to progress in every segment of ICT: M2M, IoT / IoE, Big Data, Cloud Computing, AI…

Interdependence is inevitable, yet sovereignty remains important

The Internet needs to governed by an international body representing all interests, sectors and agenda

The 'Big Data' boom should not yield another 'big oil' disaster

Leaders must go beyond the obvious

If Henry Ford had asked people what they wanted, they would have said “faster horses”.

Thanks for your attention!

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