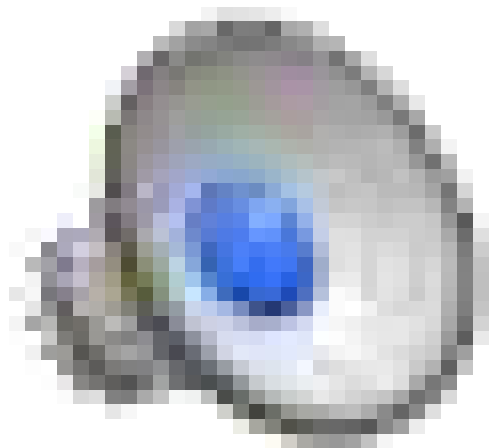




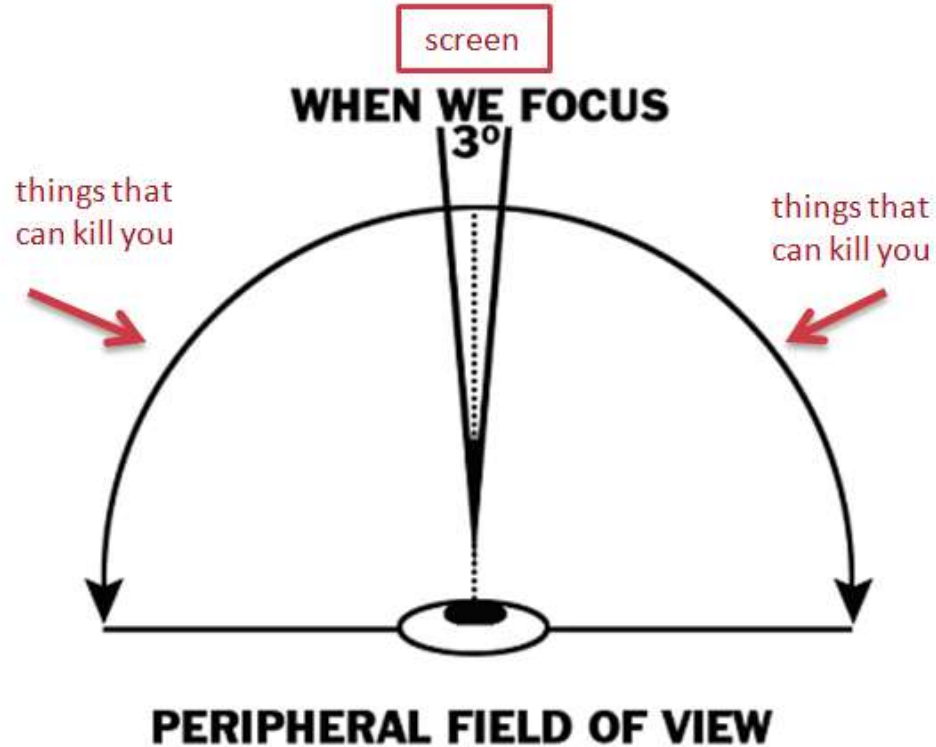
Exponential Technologies, Business Models and Organizations Impacting Insurance

Yuri van Geest (@vangeest)

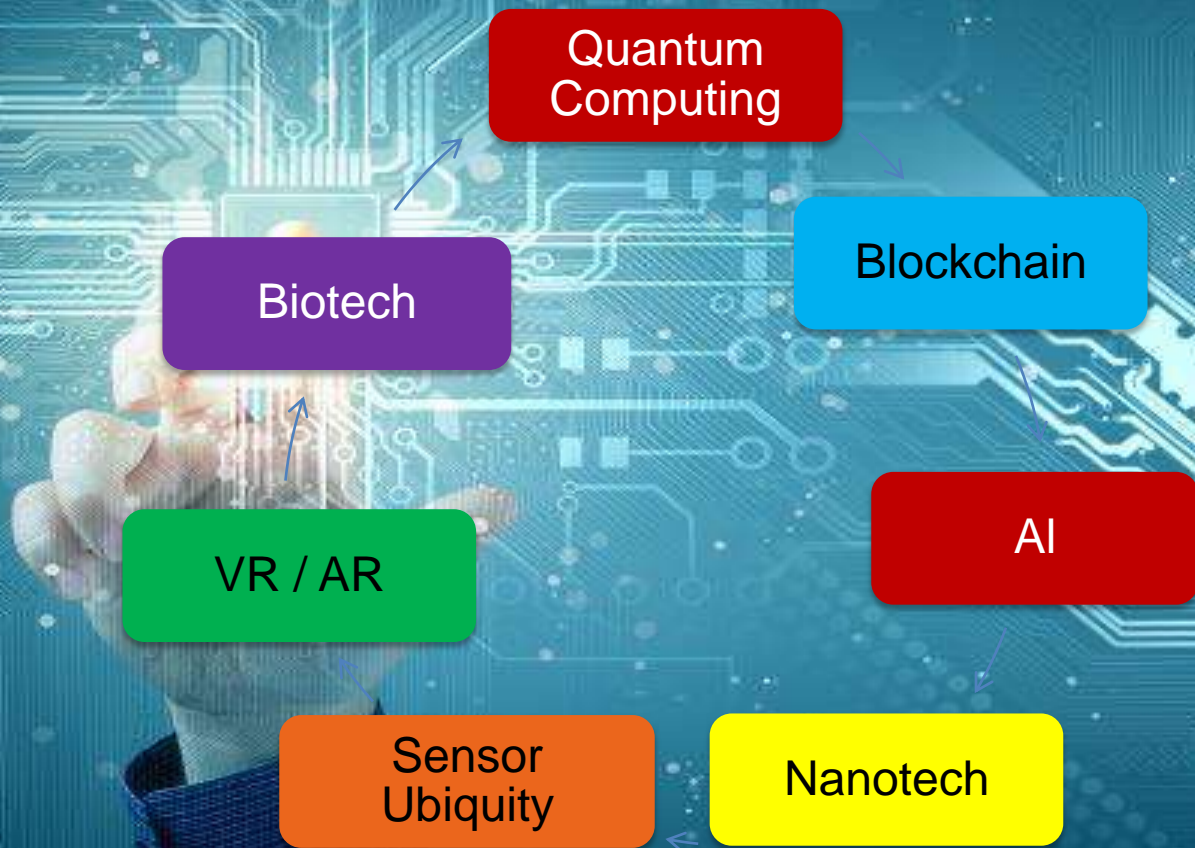
September 2018



The Best Future Vision Is Peripheral Vision



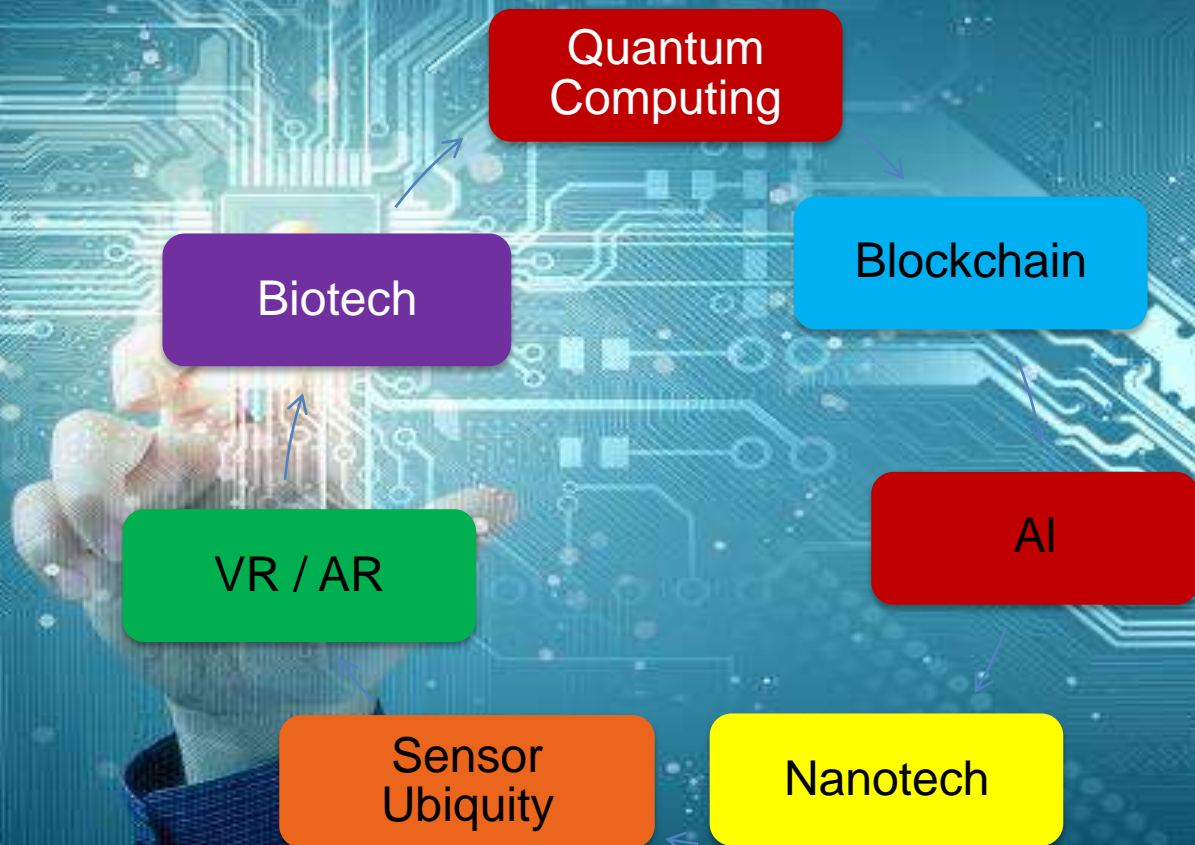
Accelerating Technologies...



...Drive Exponential Cost Reductions

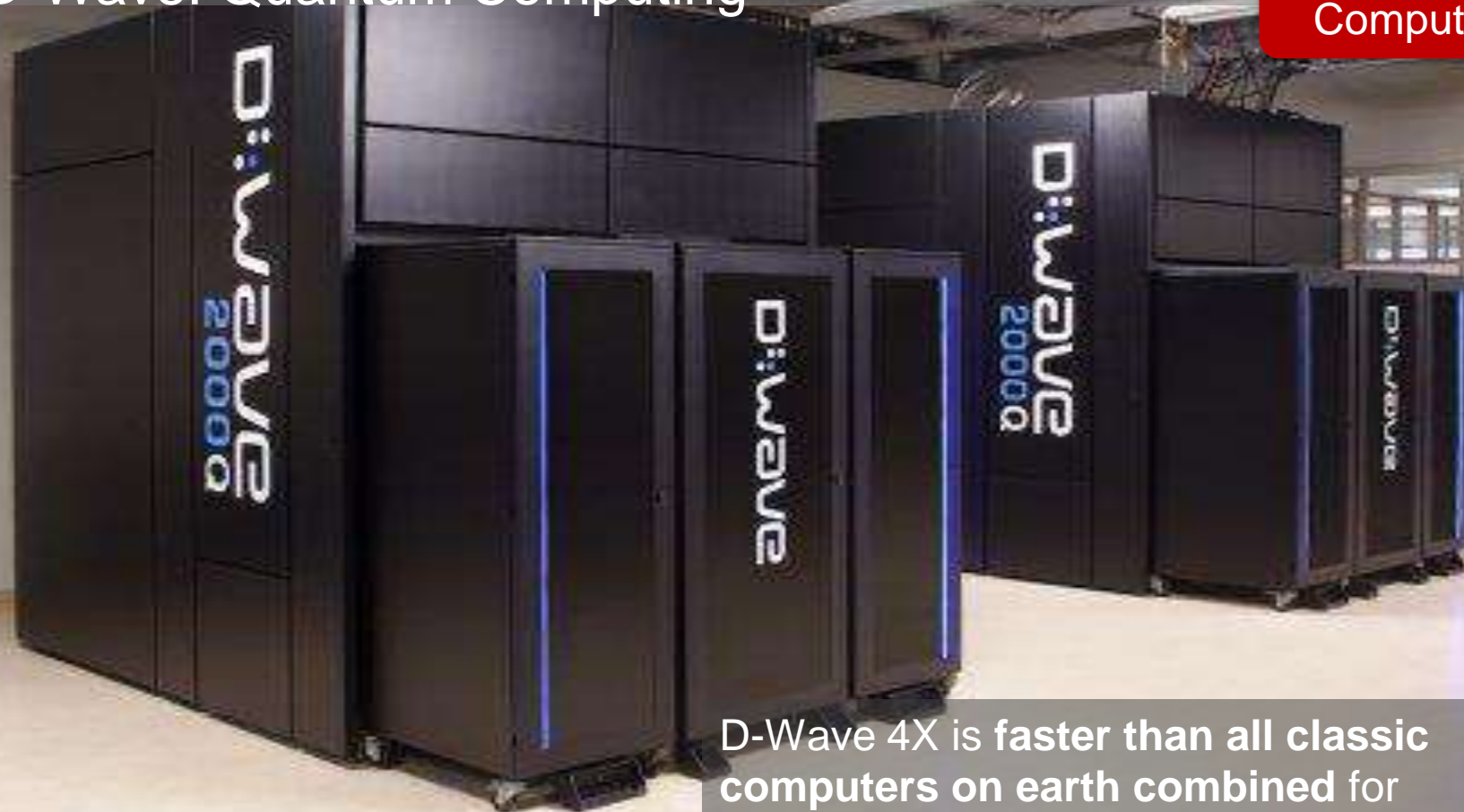
	Cost (Averages) for Equivalent Functionality	Scale Impact
3D Printing	\$40,000 (2007) to \$100 (2017)	400x in 10 years
Industrial Robots	\$500,000 (2008) to \$1,000 (2017)	500x in 9 years
Drones	\$100,000 (2007) to \$100 (2017)	1,000x in 10 years
Solar	\$30 per kWh (1984) to \$0.02 per kWh (2018)	1,500x in 24 years
Sensors (3D LIDAR sensor)	\$20,000 (2009) to \$79 (2017)	250x in 8 years
Biotech (1 whole DNA profile of 1 human)	\$10,000,000 (2007) to \$100 (2017)	100,000x in 10 years

Accelerating Technologies...



D-Wave: Quantum Computing

Quantum
Computing



D-Wave 4X is faster than all classic computers on earth combined for Optimization Problems

Quantum
Computing

神威

太湖之光

国家并行计算机工程技术研究中心

Technology behind Bitcoin allowing for **automated trust** in whole ecosystems and supply chains:



BLOCKCHAIN



Blockchain

Mission is to:

- Improve the way data, claims, capital, payments are disclosed, used, automated and managed
- Focus on value adding client service, risk prevention and risk management
- Make insurance risks more tradeable
- Make insurance more affordable with an improved client experience

achmea 

LEGON

ageas

Allianz 


GENERALI

hannover re



Liberty Mutual

Munich RE 

RGA

SCOR
The Art & Science of Risk



Sompo Japan
Nipponkoa

 Swiss Re



Tokio Marine Holdings




ZURICH



Blockchain

*Today, we make smart contracts legally enforceable.
Tomorrow, we cross the digital-physical divide.*

Mattereum is the first Internet of Agreements infrastructure project for legally-enforceable smart contracts, enabling the sale and lease of physical property and other transfers of rights in assets.

Mattereum comprises expert lawyers and programmers and a leadership team experienced in designing and launching nation-scale infrastructure.

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Vinay Gupta on Smart Contracts and Mattereum



Download the Mattereum draft white paper



What is the Internet of Agreements?

FOR RETAILERS

Engage shoppers at the point of sale with information gathered collaboratively from suppliers all along the supply chain. Substantiate product claims with trustworthy, real-time data.

[Learn more](#)


FOR SHOPPERS

Know more about the things you buy. Discover product information “Powered by Provenance” on pack, online and on shelf edges at pioneering retailers.

[Learn more](#)

FOR PRODUCERS

Grow your business by competing on the things that matter. Provenance supports high-quality authentic products made with concern for people, places and process.

[Learn more](#)


FOR PARTNERS

Do you work in certification, governance, auditing, or fair trading? Reinforce your work with our data-powered, shopper-facing solutions.

[Learn more](#)

Everledger – Blockchain & Insurance case

Blockchain

Crime pays when provenance is broken



\$45 Billion

Lost annually to insurance fraud



10-15%

Of claims paid out that are later found to be
fraudulent



65%

Of all fraudulent claims go undetected



\$2 Billion

Annual cost of jewellery fraud to insurers

AI -> Deep Learning

AI

DEEPMIND

0101

Impact Examples of AI in Insurance

- Exchanges
- Claim management
- Fraud detection
- Personalized insurance fees
- Object / speech recognition
- Cybersecurity (avoid hacking)
- Data center (energy) optimization
- Customer service (chatbots)
- Online marketing

Lemonade

AI

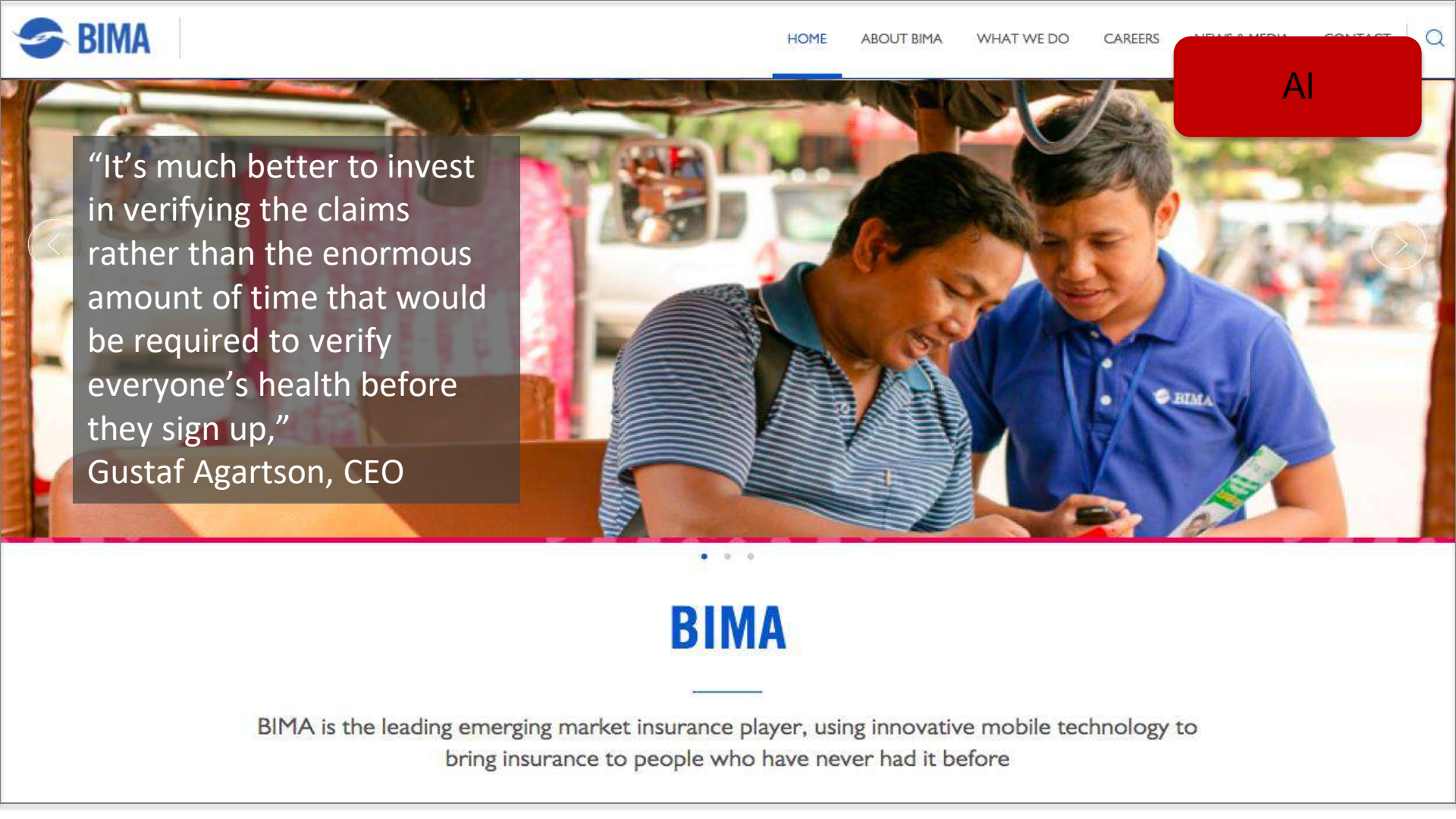
Forget Everything You Know About Insurance

Instant everything. Killer prices. Big heart.

CHECK OUR PRICES

▶ Watch the video





AI

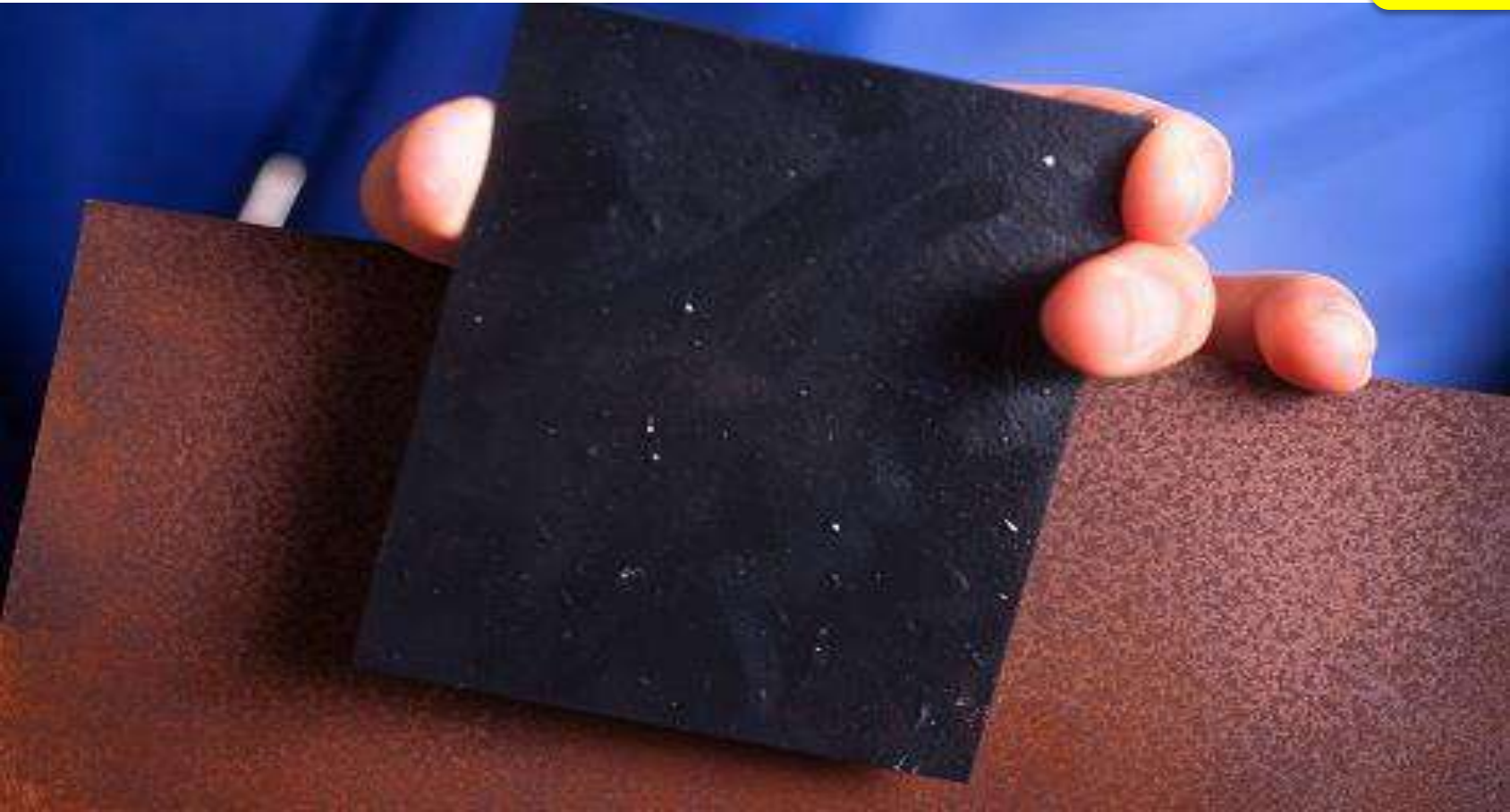
“It’s much better to invest in verifying the claims rather than the enormous amount of time that would be required to verify everyone’s health before they sign up,”
Gustaf Agartson, CEO

BIMA

BIMA is the leading emerging market insurance player, using innovative mobile technology to bring insurance to people who have never had it before

Graphene - Nanomaterials

Nanotech



Titanium Dioxide (TiO₂) Nanocoating

Nanotech

Benefits:

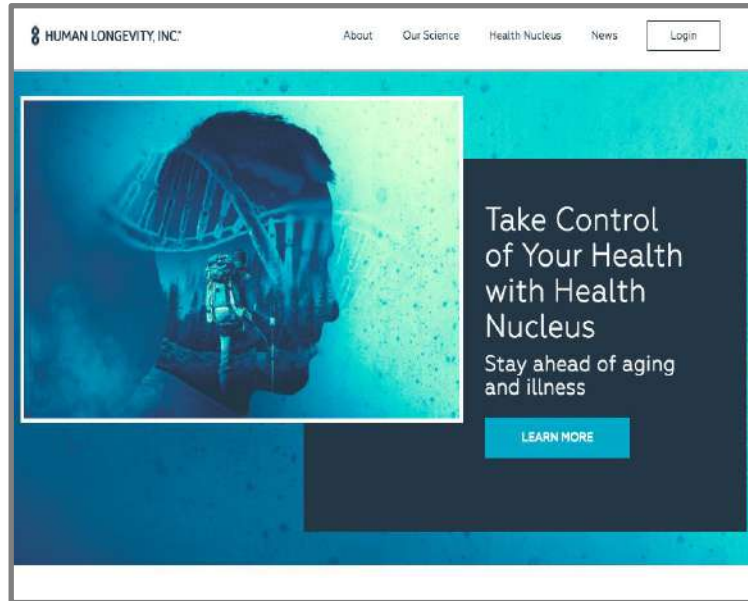
- Anti-corrosive
- Wear-resistant
- Self-cleaning
- UV-resistant
- Hydrophobic
- Anti-bacterial
- Deodorization (no scents)



System Biology Holistic Health Scans > Prevention > Insurers

Biotech

Sensor
Ubiquity



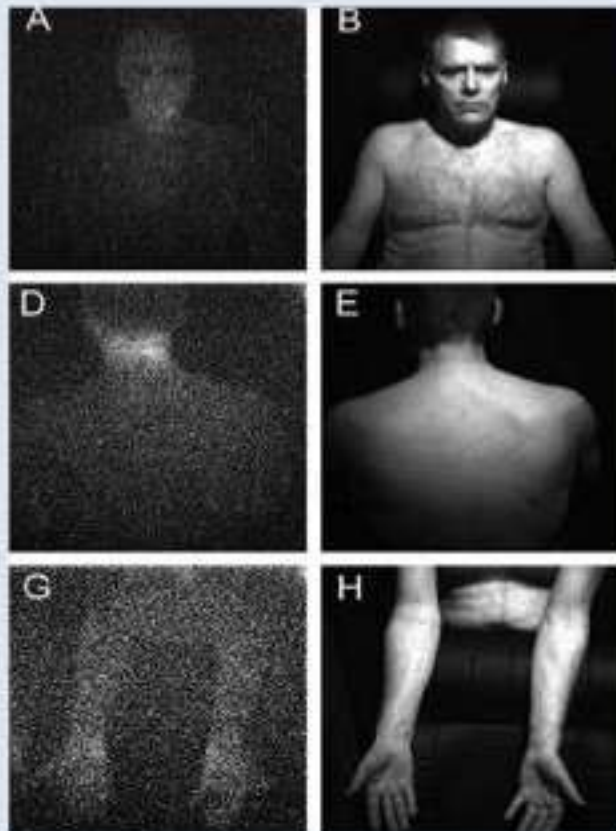
Nano- /
biophotonics

Qi 
Nanophotonics

Platform-of-platforms of
Light-based Technologies

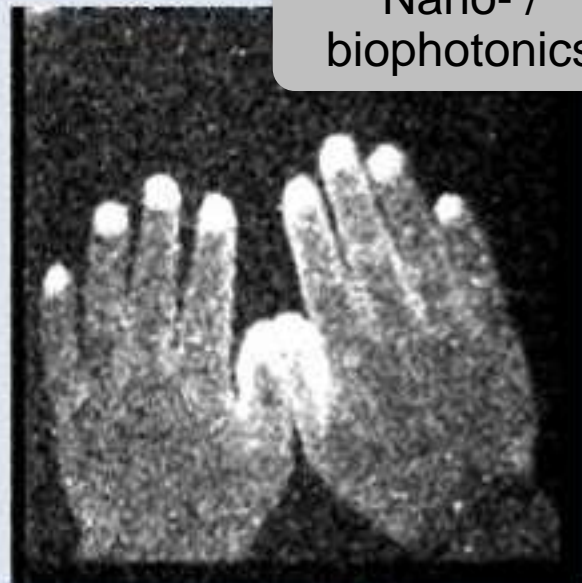
"The human body literally glimmers" Quantum ID - qinano.com

Nano- /
biophotonics



You have a
unique
Quantum
Identity

sensors for
cyber security



Qi 
Nanophotonics

Technology Impacts

Exponential Technologies	Risks	Opportunities
Blockchain	More prevention > Less insurance needed	<ul style="list-style-type: none">• More efficient organization• Less or no insurance fraud & corruption• Better prospect targeting
AI & Algorithms (Deep Learning)	More prevention > Less insurance needed	<ul style="list-style-type: none">• More targeting & prediction > Higher insurance ROI and less insurance fraud
Nanotech	Stronger materials (graphene, coatings) > Less insurance needed	<ul style="list-style-type: none">• Partner with manufacturing companies
Sensors (IoT, self-driving car, wearables etc.) and Biotech	More prevention > Less insurance needed	<ul style="list-style-type: none">• More targeting & prediction > Higher insurance ROI and less insurance fraud
VR / AR	Less chance of accidents > Less insurance needed	<ul style="list-style-type: none">• Real-time integration of outside experts during calamities (Empathy and presence)
Drones & Satellites	More prevention > Less insurance needed	<ul style="list-style-type: none">• More targeting & prediction > Higher insurance ROI• Data collection > Less insurance fraud



GLOBAL COMPETITIVE LANDSCAPE FOR INSURERS

Competitive Landscape

Competitive Threat	Threat Impact	Company Response
1. GAFA & BAT entry	Scale, scope, radical lower costs / prices	<ul style="list-style-type: none">• Disrupt yourself• ExO in the core• External startup ecosystem
2. Business P2P Insurance (cars, drones, robots, real estate)	Customer interface ownership / purchase point	<ul style="list-style-type: none">• Proactive partnership with individual businesses
3. Incumbents (a.o. Allianz)	Margin pressure	<ul style="list-style-type: none">• Disrupt yourself• ExO in the core
4. InsurTech startups (Lemonade)	Radical lower prices but regulatory/localization issues	<ul style="list-style-type: none">• Lobbying regulations• Create own startups and invest / partner / M&A
5. Blockchain / ICO startups in Insurance (a.o. 3Bi)	Lowest costs / prices possible but early stages	<ul style="list-style-type: none">• Focus on security & trust• External blockchain ecosystem



CASE STUDIES - BUSINESS MODEL DISRUPTION

Changing Business Models

China Networks

Success

Solution

Business Strategy

Strategy
Process
Analysis
Ideas

Changing
Customer
Expectations

Auto Industry
Disruption

Depackaged
Insurance

Customer Interface

Lifetime Auto Insurance Included in Car Price

Auto industry
disruption





: Health Insurance For Millennials

Customer Interface

TE News Startups Mobile Gadgets Enterprise Trending Amazon Tesla Microsoft

Health health insurance Oscar health Health United States

Oscar Health expects to generate \$1 billion in revenue and sign up 250,000 members in 2018

Posted Dec 21, 2017 by Sarah Buhr (@sarahbuhr)

Next Story



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Get covered. Feel better.

Sign up to get health insurance for you, your family, and business.

Get a Quote

Concierge

Get a personal care team with a nurse.

Learn more

Doctor on Call

Talk to a doctor for free in 15 minutes, 24/7.

Learn more

Our Business Coverage

Pay less and get more for your business.

Learn more



Company Networks

China
Networks

China



- No individual companies, only company networks
- Flexible and weak ties in networks
- Radical networked decentralization

Europe / US



- Individual companies
- Strong ties in value chains (chains also literal)
- No networks



健康值得投入
无论是时间还是金钱

健康管理 | 医疗保障守护全家

了解详情

Depackaged
Insurance

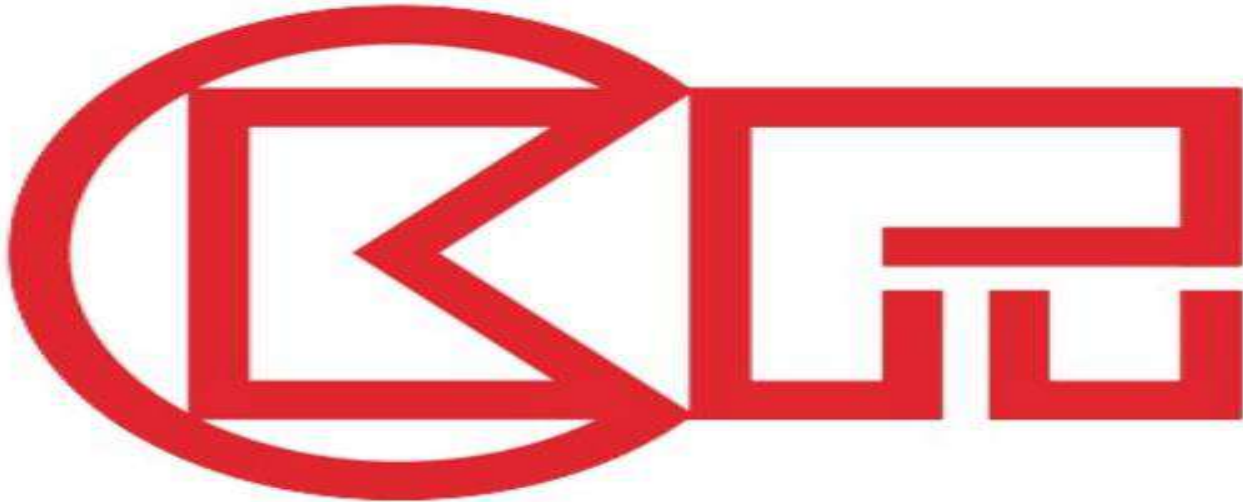
China
Networks

众安精选

- 5.8B policies
- 460M customers
- 100M online return policies sold in 1 day
- \$11B IPO valuation



Cheung Kong Holdings – Largest Company/Ecosystem in Asia – Extended Subscription Models in HK



Ecosystem Approach in USA

China
Networks

THE WALL STREET JOURNAL

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BUSINESS

Triple Threat: Amazon, Berkshire, JPMorgan Rattle Health-Care Firms

The three giants' envision using technology to cut costs and at one point discussed replacing their insurers and drug-benefit managers



Amazon, Berkshire Hathaway and JPMorgan Chase are forming a not-for-profit with the aim of cutting health-care costs for their employees. Shown, two surgeons confer during a surgery in Springfield, Ore. PHOTO: BRIAN DAVIES/THE REGISTER-GUARD/ASSOCIATED PRESS

By Anna Wilde Mathews, Emily Glazer and Laura Stevens

107 COMMENTS

T-MOBILE FOR BUSINESS

INTRODUCING SyncUP FLEET

CTIONS HOME SEARCH The New York Times

TECHNOLOGY

Amazon Wants to Disrupt Health Care in America. In China, Tech Giants Already Have.

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By SUI-LEE WEE and PAUL MOZUR JAN. 31, 2018



Gong Xiangyang, left, head of the radiology department at Zhejiang Provincial People's Hospital, watching outside of a CT scanning room. The personal investment fund of the Alibaba founder Jack Ma has invested in a company working with the hospital to use artificial intelligence in lung screenings. Yue Wu for The New York Times



EXPONENTIAL ORGANIZATIONS

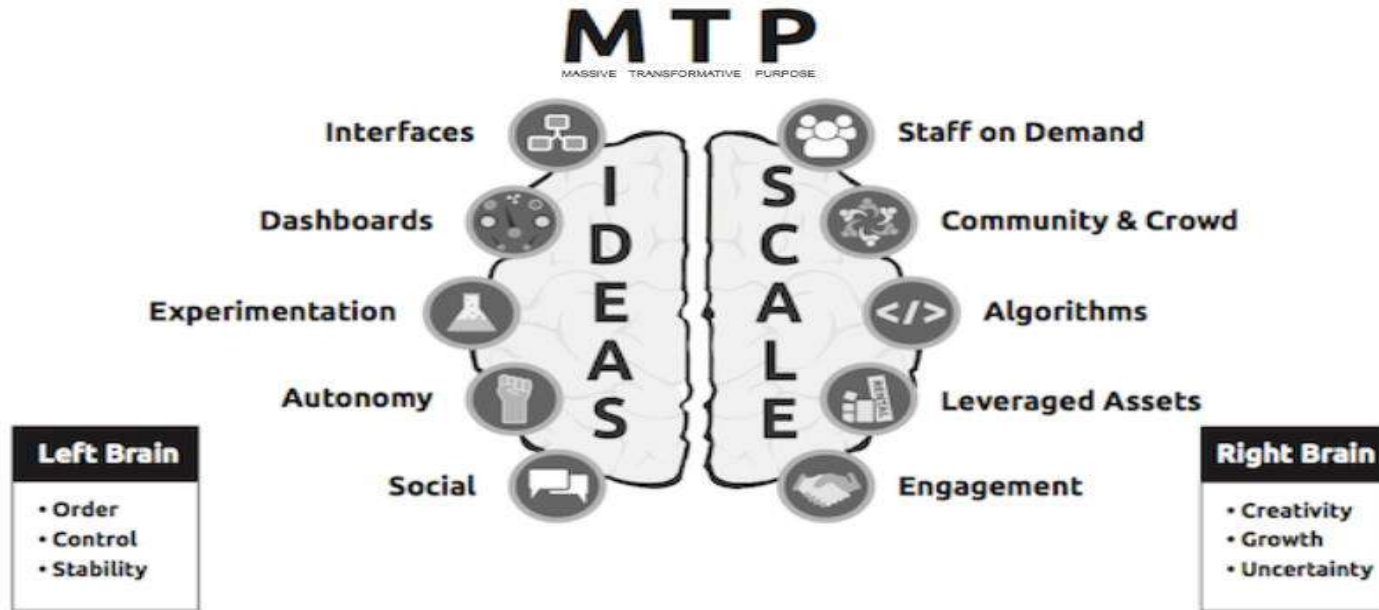
“The average lifespan of an S&P 500 company has decreased from: 67 years (1920's) to 12 years (today).”

An Exponential Organization (ExO) is one whose impact is disproportionately large

— at least 10x larger —

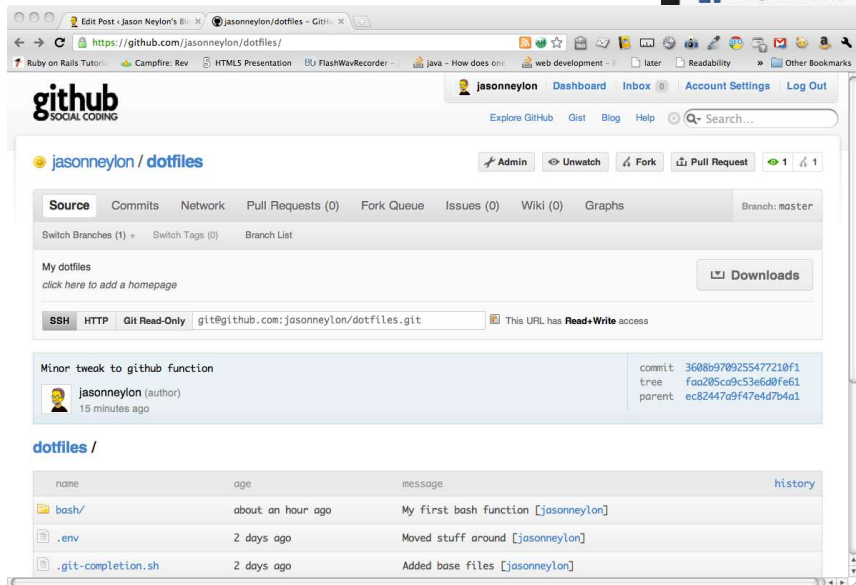
compared to its peers because of the use of new organizational design and leveraging exponential technologies.

ExO: MTP and leveraging 10 scalability techniques

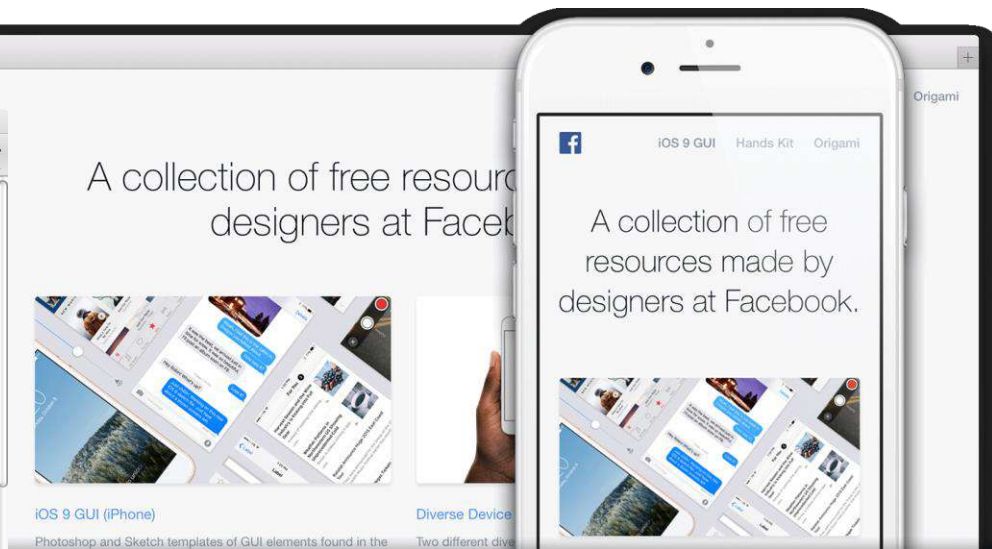


Example of Exponential Organizations

GitHub



Open source code and collaboration community
21 million members (software coders)
41 million repositories
market cap of \$8B



Key differentiator: technical infrastructure of the internet as organizational design

How to create an Exponential Organization?

From Linear to Exponential Org

Transform Leadership
Education | Adapted Style | Diversity

ExO
Lite

Incubators
Accelerators
Hackerspaces

Partner
Invest
Acquire
External ExOs

Internal ExOs on
Edge

Black Ops

**REALITY IS A
PERMANENT MUSEUM**



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