

An Age of Discovery or Despair – *Navigating the Next Future*

Rohit Talwar
CEO - Fast Future

EBADay 2017
Dublin
20th June 2017



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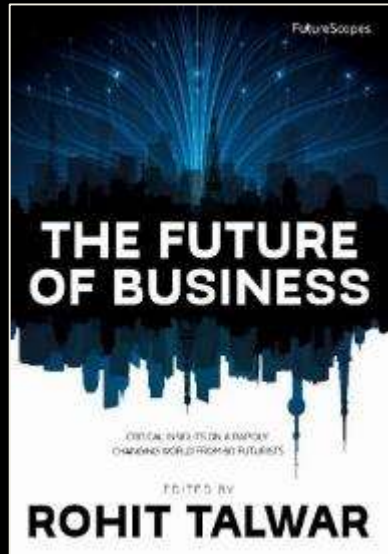
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What We Do

- Publishing - books about the future
- Research - tailored programmes and studies
- Consultancy – strategy reviews, deep dives and capability development to build exponential organisations
- Inspiration – speaking and leadership events
- Education - future focused leadership development and executive coaching



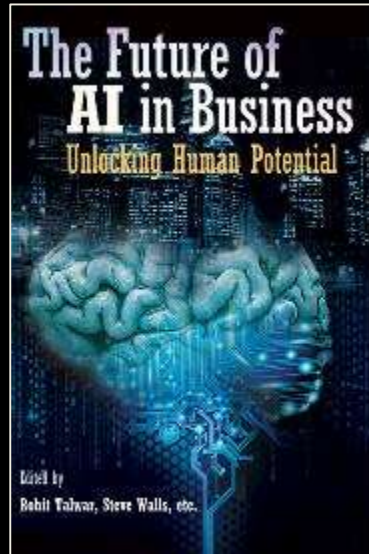
Exponential Thinking Meets Physical Publishing



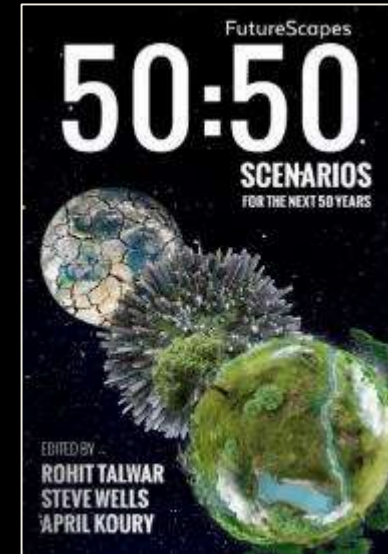
June 2015
19 Weeks
62 contributors
60 Chapters
Top 5% of
Business Books



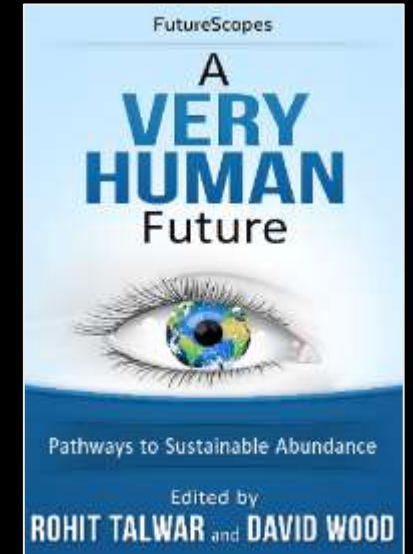
September 2016
12 Weeks
Amazon
Bestseller Within
2 Weeks



September 2017
25 Chapters



December 2017
50 Chapters

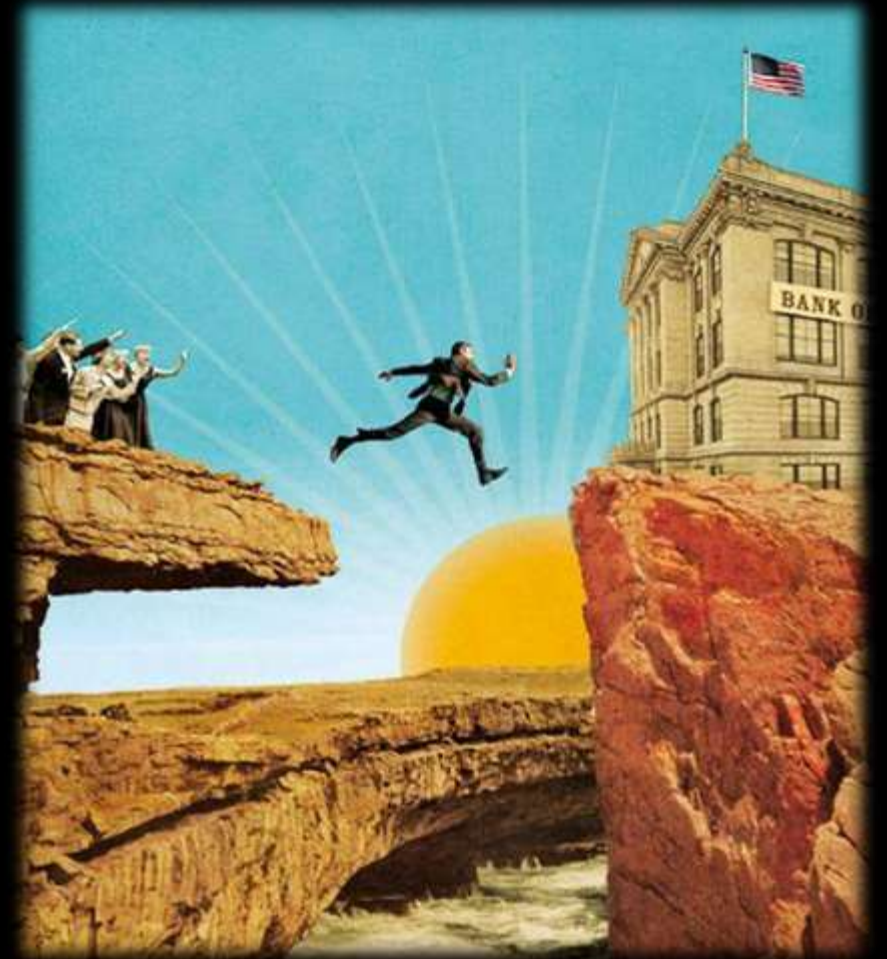


Spring 2018
25 Chapters

Financial Services and the Next Economy - *An Assumed or Earned Role?*

Why:

- *Do I need you?*
- *Are you the only ones allowed to do what you do?*
- *Do you do things the way you do?*
- *Do you charge what you do?*
- *Can't we simply bypass you?*
- *Shouldn't I try to innovate and disrupt you?*
- *Don't you want me to ask these questions?*



'Future Proofed' Organisations Work on 3 Horizons in Parallel



**1-12 Months
Operational
Excellence**

Build Mindset, Talent, Agility and Innovation Culture



**1-3 Years
Search for
Growth**



**4-10+ Years
Understand
Future
Drivers**

Major Forces Shaping the Future

1. When Two Worlds Collide
2. Uncertainty – Control vs. Emergence
3. Evolving Economic Architectures
4. Social and Demographic Shifts
5. Universal Science and Technology
6. New Urban Infrastructure
7. Sustainable Consumption and Production
8. Energy and Environment Convergence
9. Societal System Redesign
10. Lifestyle Solutions
11. Exponential and Disruptive
12. Human Enhancement / Transhumanism



When Two Worlds Collide



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Image: Leonardo Dentico

Mindset Shift – From What a Bank is Prepared to do to What a Customer Actually Wants at a Fair Price

“Hey Siri, send Sam
£20 using Monzo”



The image shows the Monzo mobile app interface on a smartphone. The top navigation bar includes the Monzo logo, 'About', 'Blog', and a 'Sign up' button. The main screen displays the card balance as £428.26 and the amount spent today as £10.20. Below this, there are sections for 'TODAY' and 'YESTERDAY' transactions. The 'TODAY' section lists transactions: Shoreditch Grind (5.80), Transport for London (4.40), and a transaction from Maria Campbell (+14.00). The 'YESTERDAY' section lists: Bel-Air (3.50) and Murdock London (34.00). At the bottom, under 'TUESDAY, 6 DEC', there is a transaction for Bird (15.00). A red Monzo card is partially visible behind the phone.

monzo

About Blog Sign up

Finally, a bank as smart as your phone

Built for your smartphone, this is banking like never before. One that updates your balance instantly, gives intelligent notifications, and is actually easy to use.

We're building the best bank on the planet and we want you on board.

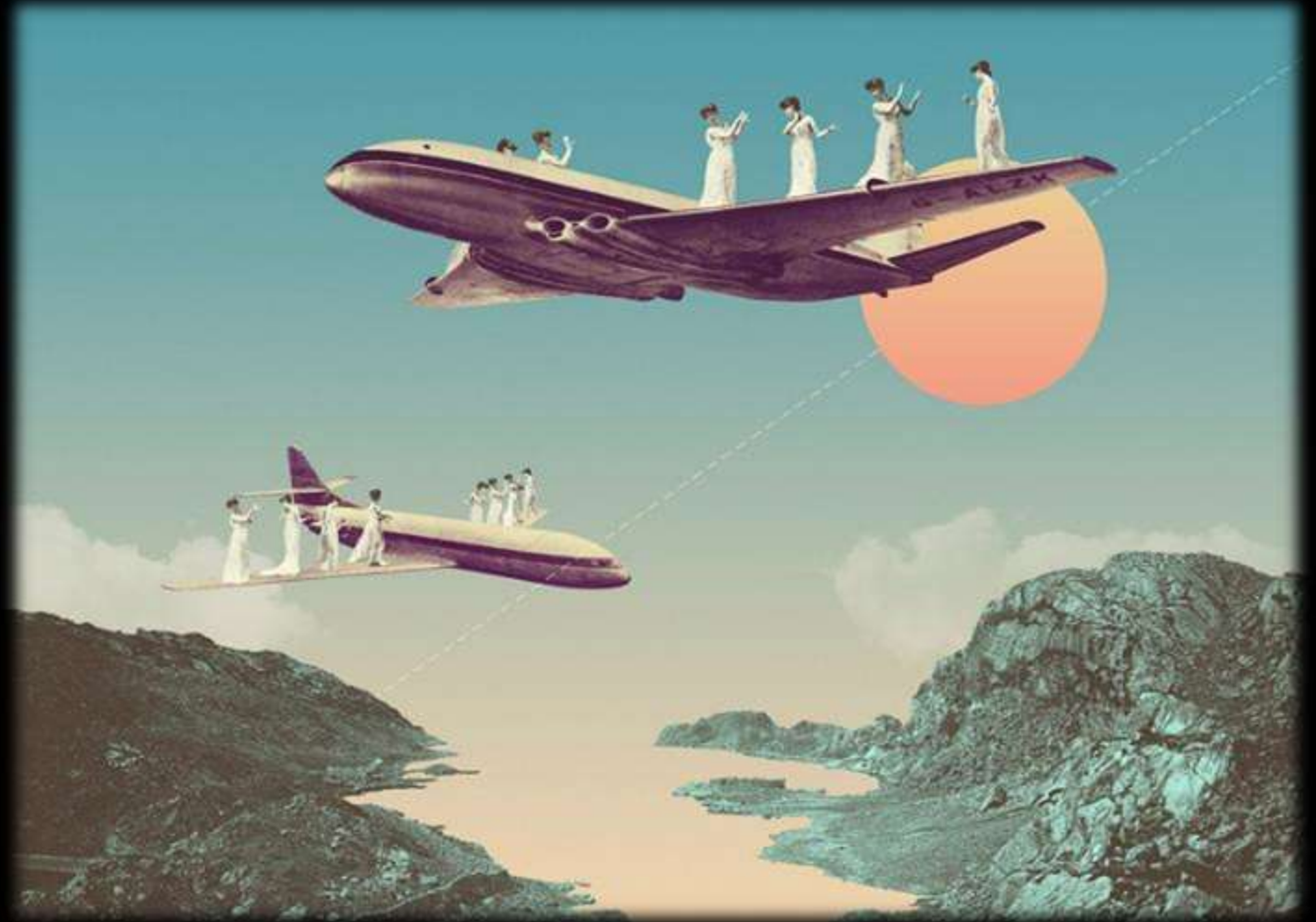
Download on the App Store

GET IT ON Google Play

Mindset Blockage – When an Organisation only sees Systems and Procedures not Passengers and Staff

**United
Airlines**

**British
Airways**



Uncertainty from Geo-Political Shifts - Control vs. Emergence

- Political Shifts
- Security
- Speed of Technological Change
- Future of Work and Jobs
- Economic Stability
- Trust / Alternative Facts



What Impact from Trump's Climate Decision?

Evolving Economic Architectures

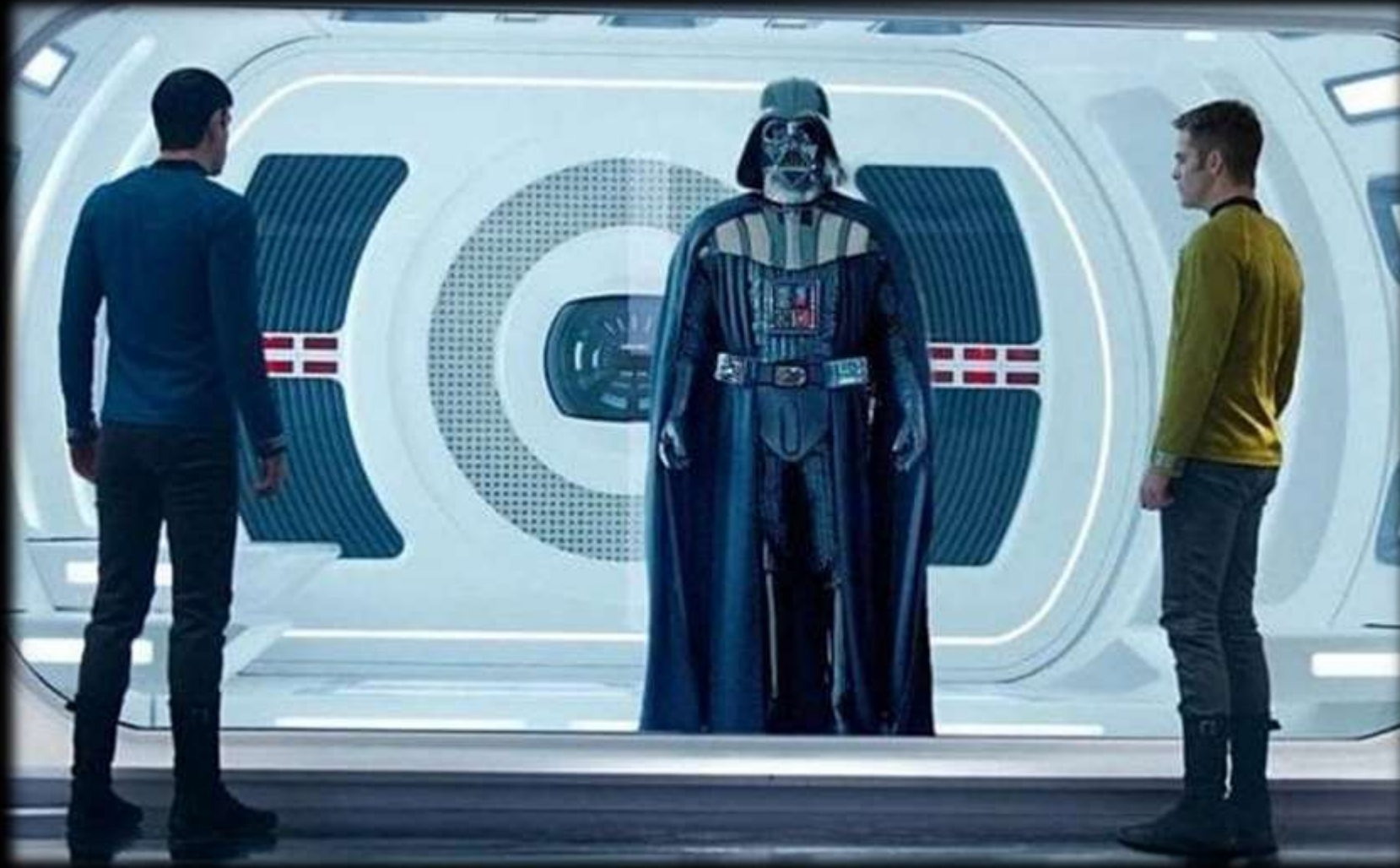
- Industry 4.0
- Chindia Dominate Developing Nations
- Two-way Globalization
- Bricks and Clicks
- New Business Models
- Digital Currencies
- Scarcity vs. Abundance



An Age of Scarcity or Abundance?

The US\$78-120 Trillion Opportunity

Star Wars Vs. Star Trek Thinking



Aspirational, Demographic and Social Shifts

- Individual Ownership of Health, Wellness and Wellbeing vs. Stress
- Digitization of Life
- Ageing Societies
- Generational Expectations
- Evolving Family Structures
- Migration Pressures
- Gender / Identity Fluidity

 **Hamdan bin Mohammed** 
@HamdanMohammed 

Under the directives of @HHSbkMohd, Dubai will become the first government in the world to execute all its transactions on Blockchain by2020



**3D / 4D
Printing**

**Nanotechnology /
Atomically Precise
Manufacturing**

**Artificial
Intelligence /
Conscious
Technology**

**New Computing
Architectures**

**Food Chain
Transformation**

**A Possibility Explosion from
Universally Available
Exponential
Science and Technology
Developments**

**Hyperconnected
Internet of
Humanity**

**Energy
Innovation**

**Robotics /
Drones**

**Immersivity /
Mixed Reality
Living**

**Brain
Uploading**

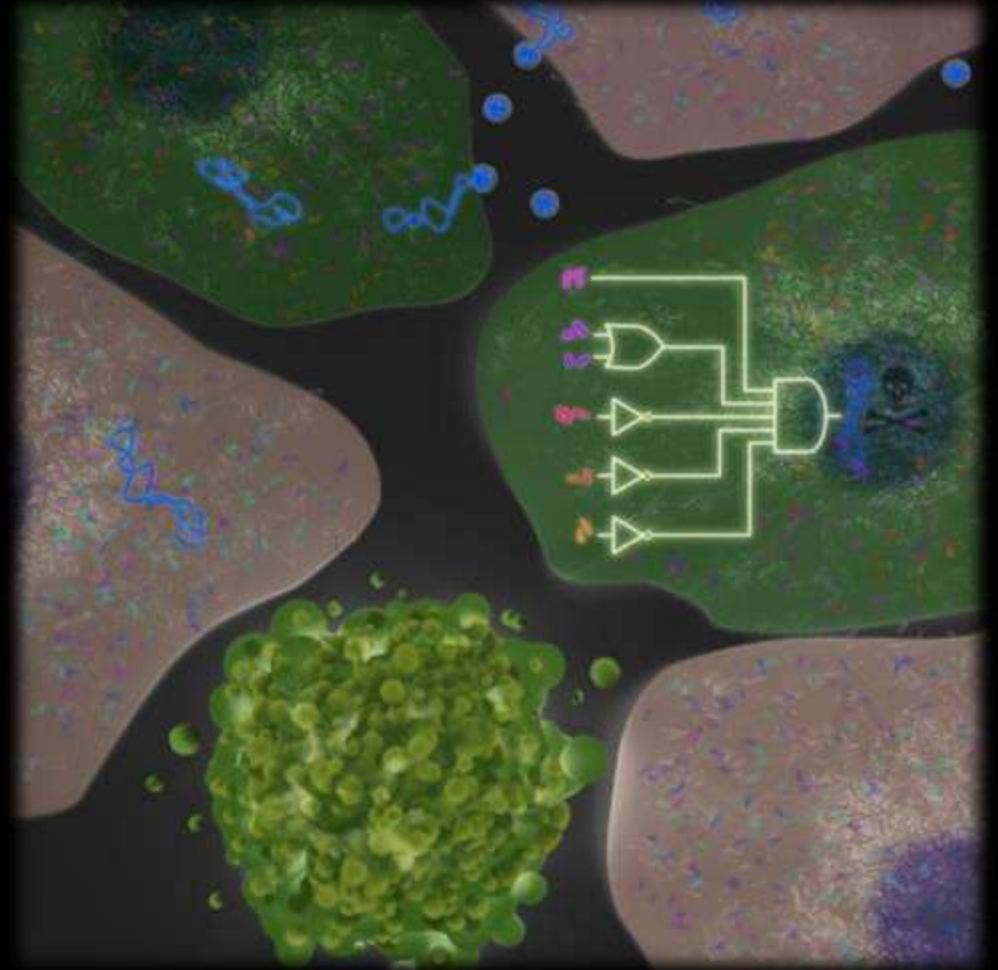
**Healthcare
Transformation**

**Human
Augmentation**

**Synthetic
Biology**

**Blockchain
Technology**

IT - Eventually Everything Computes? Physical - Data - Sensors - Computers



New Urban Infrastructure

- Urbanization
- Smart / Eco-Cities
- Sustainable / Adaptable Infrastructure
- Intelligent Transport
- Sharing Economy



Sustainable Consumption and Production

- Circular Economy
- Food Sustainability
- Innovating to Zero
- Smart Goods
- Localized Production
- De-Industrialization



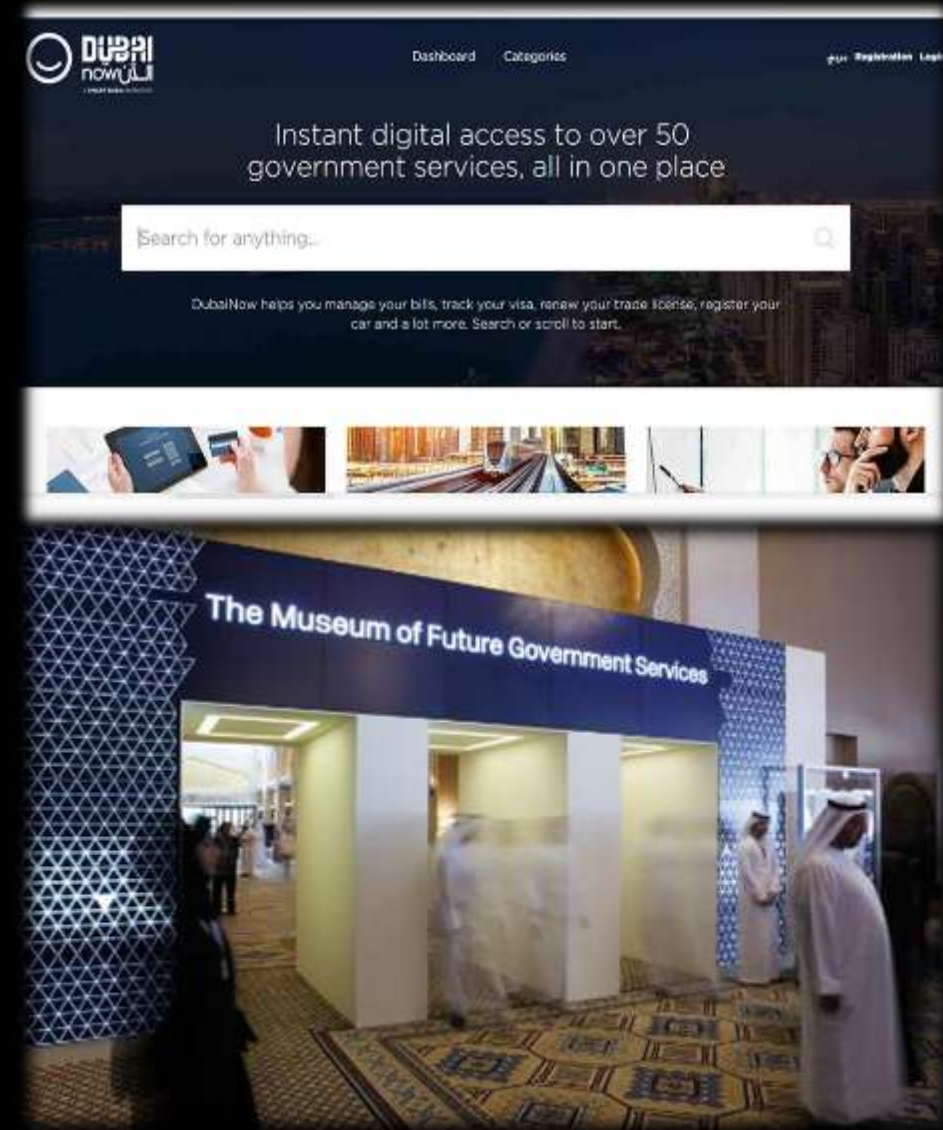
Energy and Environment Convergence

- Alternative / Renewable Generation, Distribution and Storage
- Exploration & Recovery - Including Fracking and Methane Hydrates
- Geo-Engineering, Climate and Environmental Protection, Disaster Recovery and Remediation
- Preservation of Natural Resources and Biodiversity



Societal System Redesign

- Education Transformation
- Personalised Healthcare
- Universal Basic Income and Services
- Government Service Innovation
- Access to Justice
- Clean Water and Sanitation



Lifestyle Solutions

- Attention / StoryMaking Economy
 - Personalization, Experience, Participation, Multi-Sensory Content
- Pursuit of Experience
- Location Services
- Contextual Technology



Exponential and Disruptive

- Science and Technology
- Infrastructure – e.g. Hyperloop
- Mobility – e.g. Autonomous Cars
- Business Models – Uber, AirBnB
- Government – Dubai 10X
- Life – Human Enhancement / Transhumanism



Human Enhancement / Transhumanism

- Radical Life Extension / Cryogenics
- Nootropics
- Bio-engineering
- Genetic Modification
- 3D Printed Limbs
- Brain-Computer Interfaces



2020+ Multiple Hyperloops?



Flying Cars



Reaction Engines A2 – Scimitar

20,000 KM Range / Mach 5



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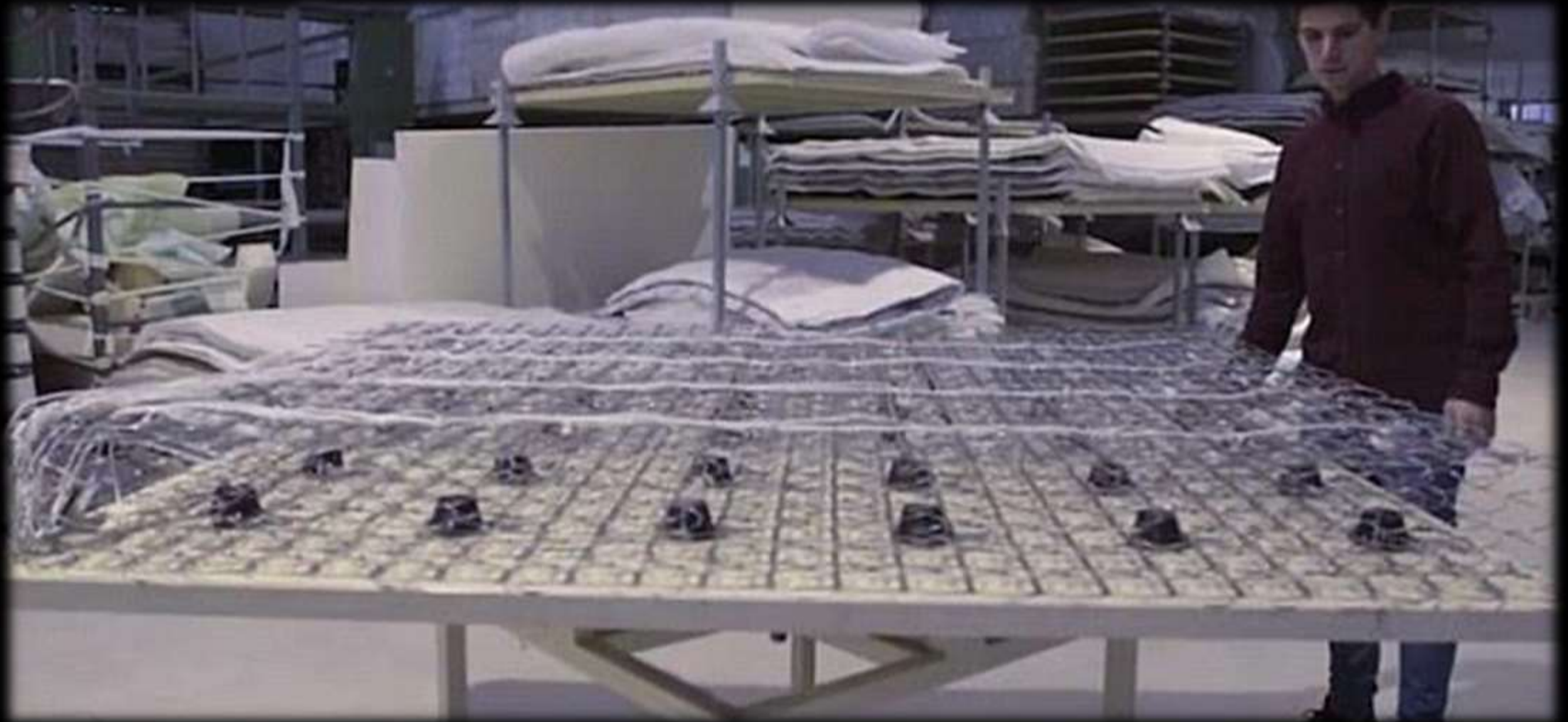
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Image: Reaction Engines

2025 – A World of “Perfect Knowledge”?

Internet of Everything – 100Bn Devices / 1Tn Sensors / \$19Tn Impact



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Image: Durmet Smartress

2025 - Blurred Reality?



Vertical Farming



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Image: crd.gov.vn

2025 – Healthcare Transformation



A World of Multiple Actors

Human 2.0, Robots, Androids, Holograms, Display-based AI Manifestations



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Image: twinfinite

2025 - \$1000 Brain (Kurzweil)?



Multi-Parent Babies by 2025?



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Image: Dave van Patten

2030 - Bitcoin 6th Biggest Reserve Currency / 5M Users by 2019 (NJIT)?



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Image: fortune

AI – As the Tools get More Users and Data to Learn from, they will get Smarter, More Powerful and Cheaper



AI is Enabling New Business Concepts E.g. Self-Driving, Self-Insuring Autonomous Vehicles



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Image: Fast Company

Exponential Business Models



57 Storeys – 19 Days



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Image: Broad Group

LM LOCAL MOTORS

STRATI



**3D PRINTED CAR
DESIGN CHALLENGE**

CINCINNATI
CINCINNATI INCORPORATED

OAK RIDGE
National Laboratory

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Image: Local Motors

Frictionless Payment



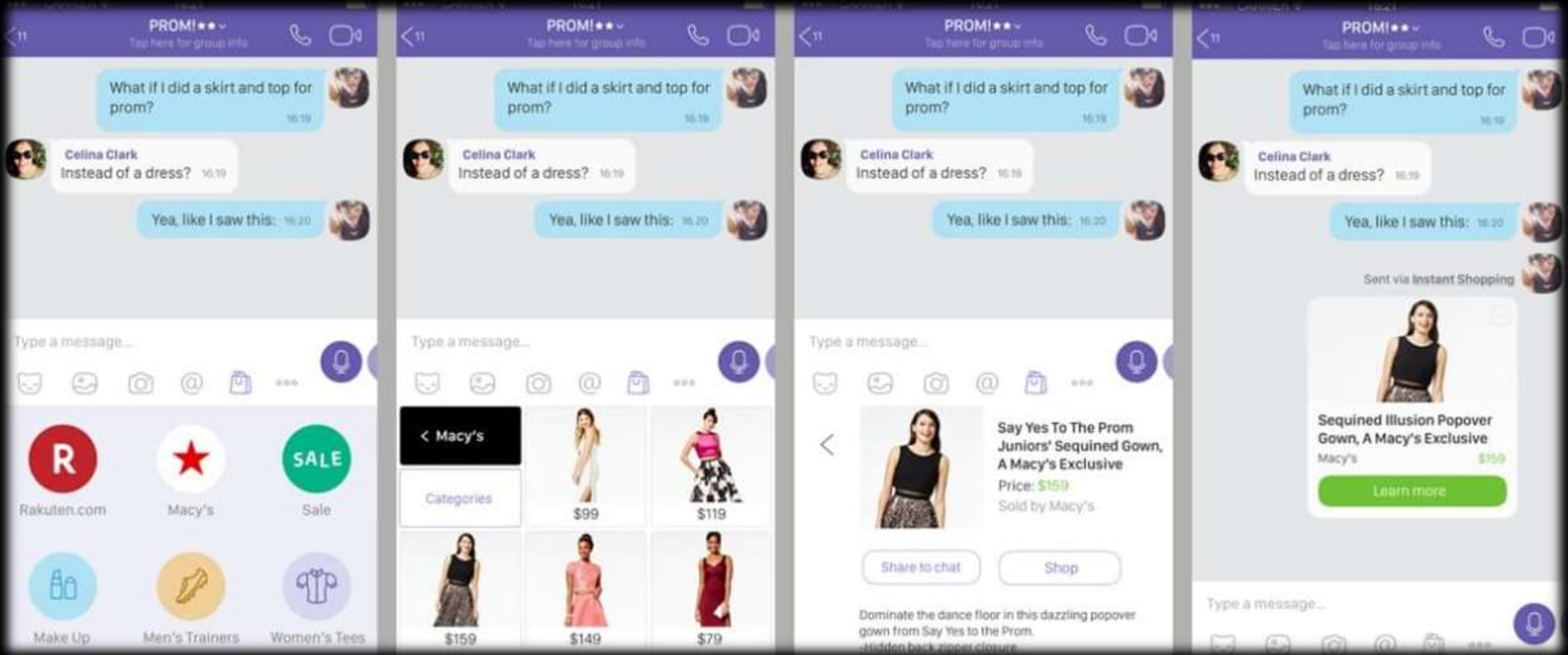
In-Ecosystem Transactions



Back to the Future?



Conversational Commerce (Viber)



Funding My Studies with Blood / Vital Fluids?



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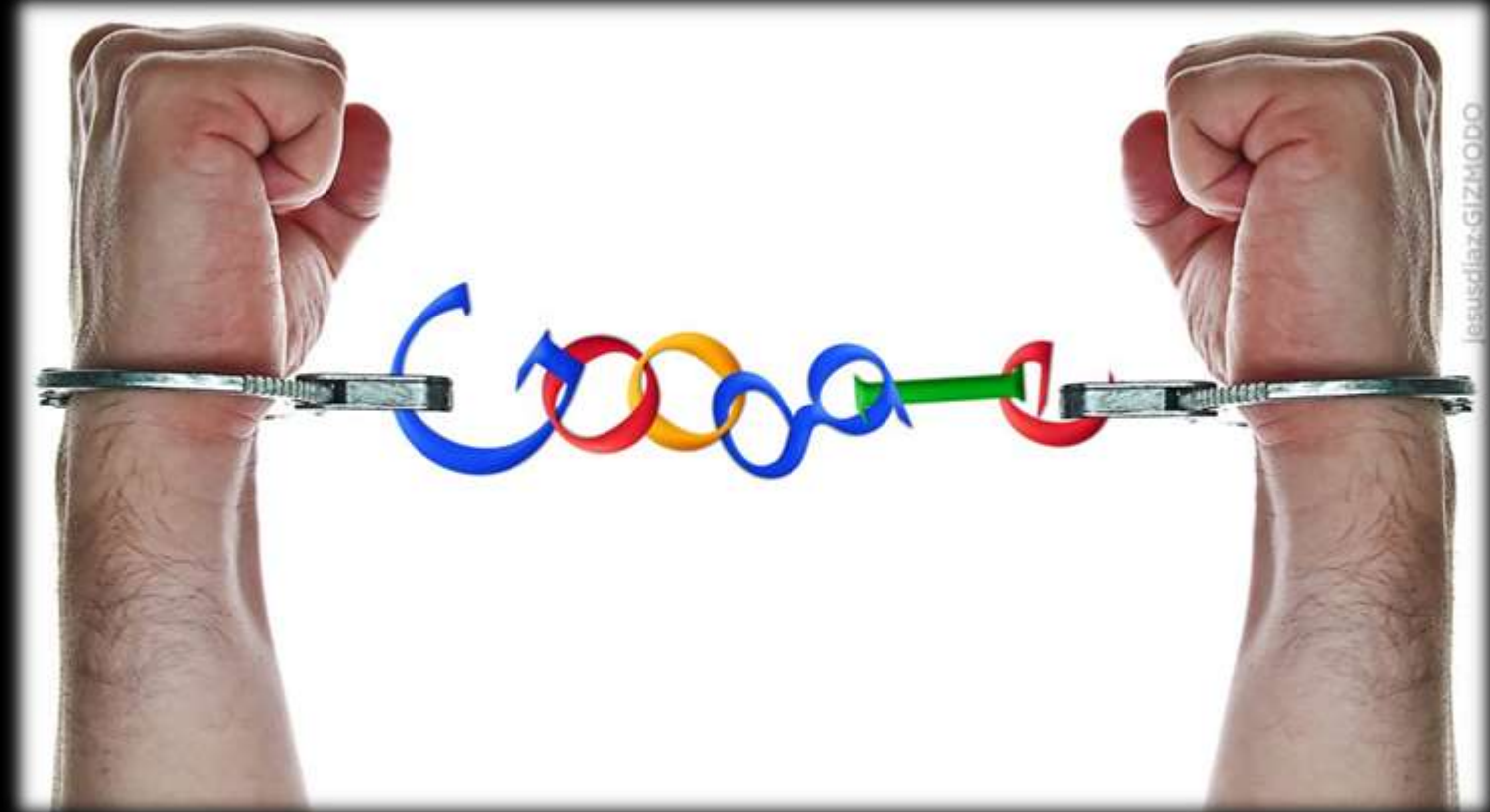
[#EBADay2017](https://twitter.com/EBADay2017)

Image: OD News

Everything Quantifiable / Monetizable



The World's Biggest Banks?



Peer to Peer Green Lending

Rate%Setter™

Borrow

Lend

About us

Contact

Help

1300 768 710

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Do better, together

RateSetter is a peer-to-peer lender. We connect investors who want a better rate on their money with creditworthy borrowers who want a simple, competitive loan.



Better rates

Low interest rates to reward good borrowers



Fast application



Simple and flexible

3 years, \$10,000
unsecured from

10.2%

comparison rate*

Borrow

Lend

1 minute RateEstimate

Won't affect your credit score

Loan amount (\$2,001 - \$45,000)

Loan term

Get your RateEstimate



Automating Book Building / Crowdfunding Debt?

gofundme Search Help Start a Fundraiser

f SHARE TWEET DONATE

Get Kanye Out of Debt



MINNEAPOLIS, MN WISHES

\$269 of \$53.0M

Raised by 43 people in 1 day

[Donate Now](#)

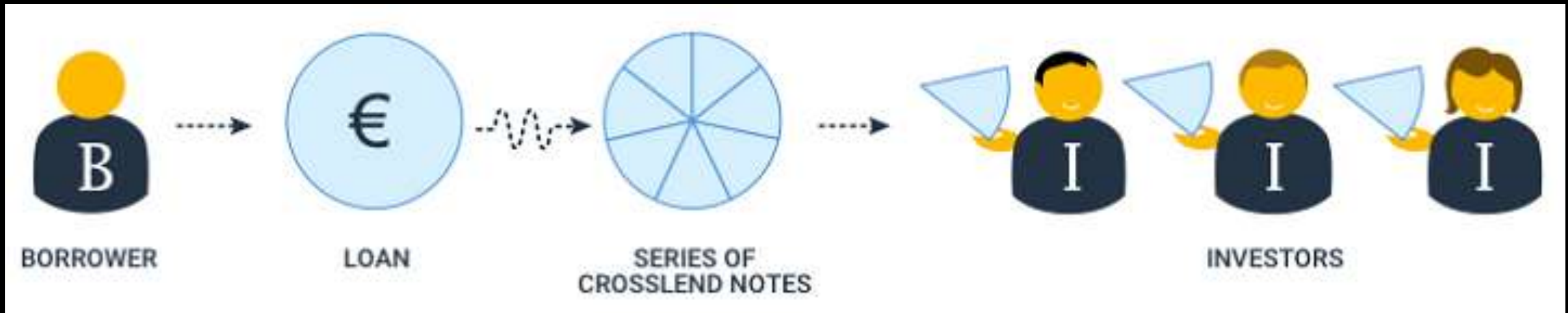
[SHARE ON FACEBOOK](#)

gofundme

**Electronic
Book Building -
Commonwealth
Bank of
Australia
£350M Five-
Year Covered
Bond**



Securitising Individual loans- e.g. CrossLend



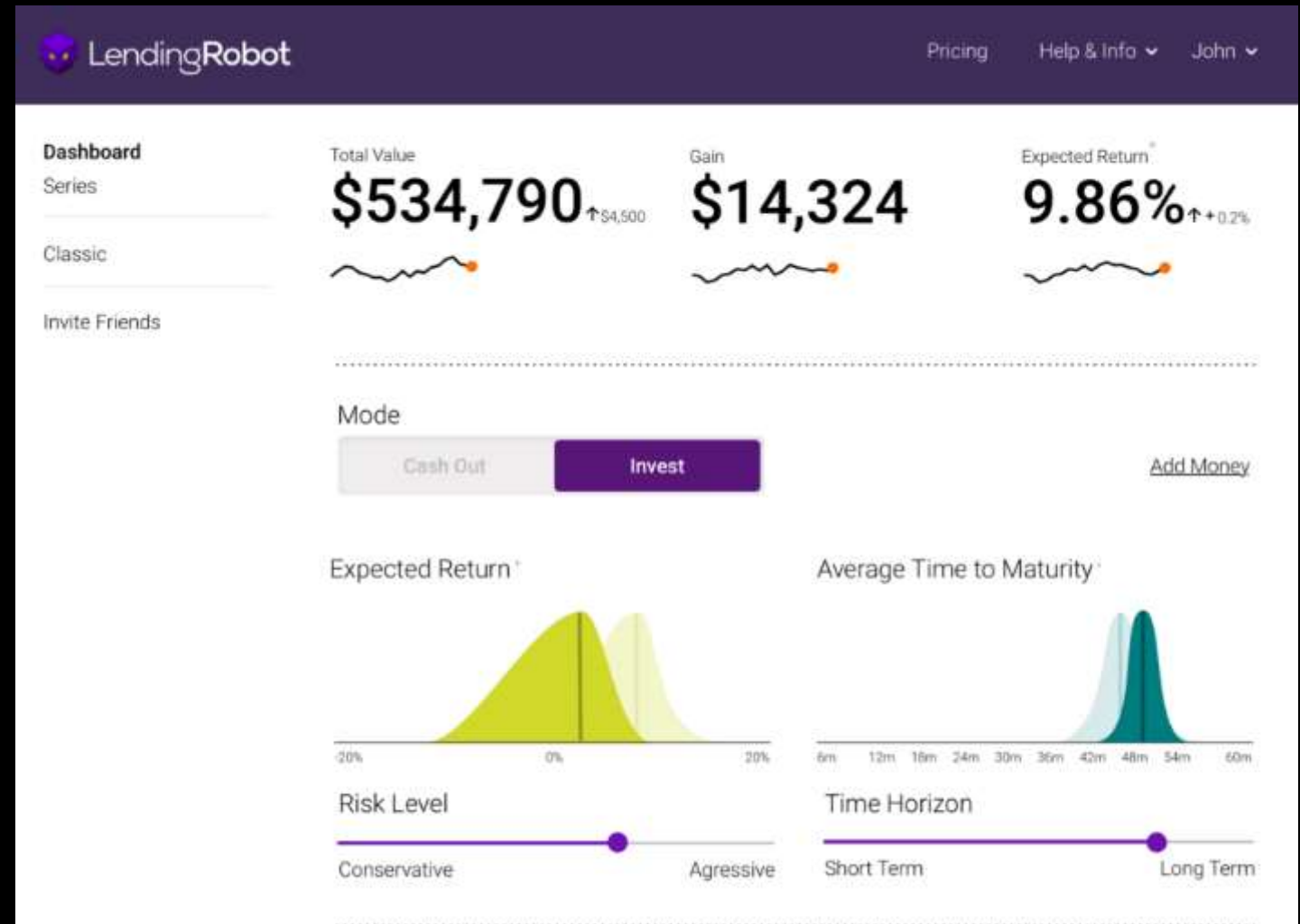
Alternative Corporate Debt Investment Platforms Giving Individuals Access to Senior Secured Corporate Bond Market – e.g. WiseAlpha

Company	Coupon [†] *	Current Yield	YTM [*]	Status		
Enterprise Inns (Jul 2023)	6.00%	8.3%	6.5%	Min Target £100,000	Investors 20	ORDER
				57%		
Vue Entertainment (Jul 2020)	7.78%	4.2%	6.9%	Min Target £100,000	Investors 22	ORDER
				59%		
New Look (Jul 2022)	6.50%	6.5%	6.5%	Min Target £100,000	Investors 17	ORDER
				54%		

© wiseAlpha.com

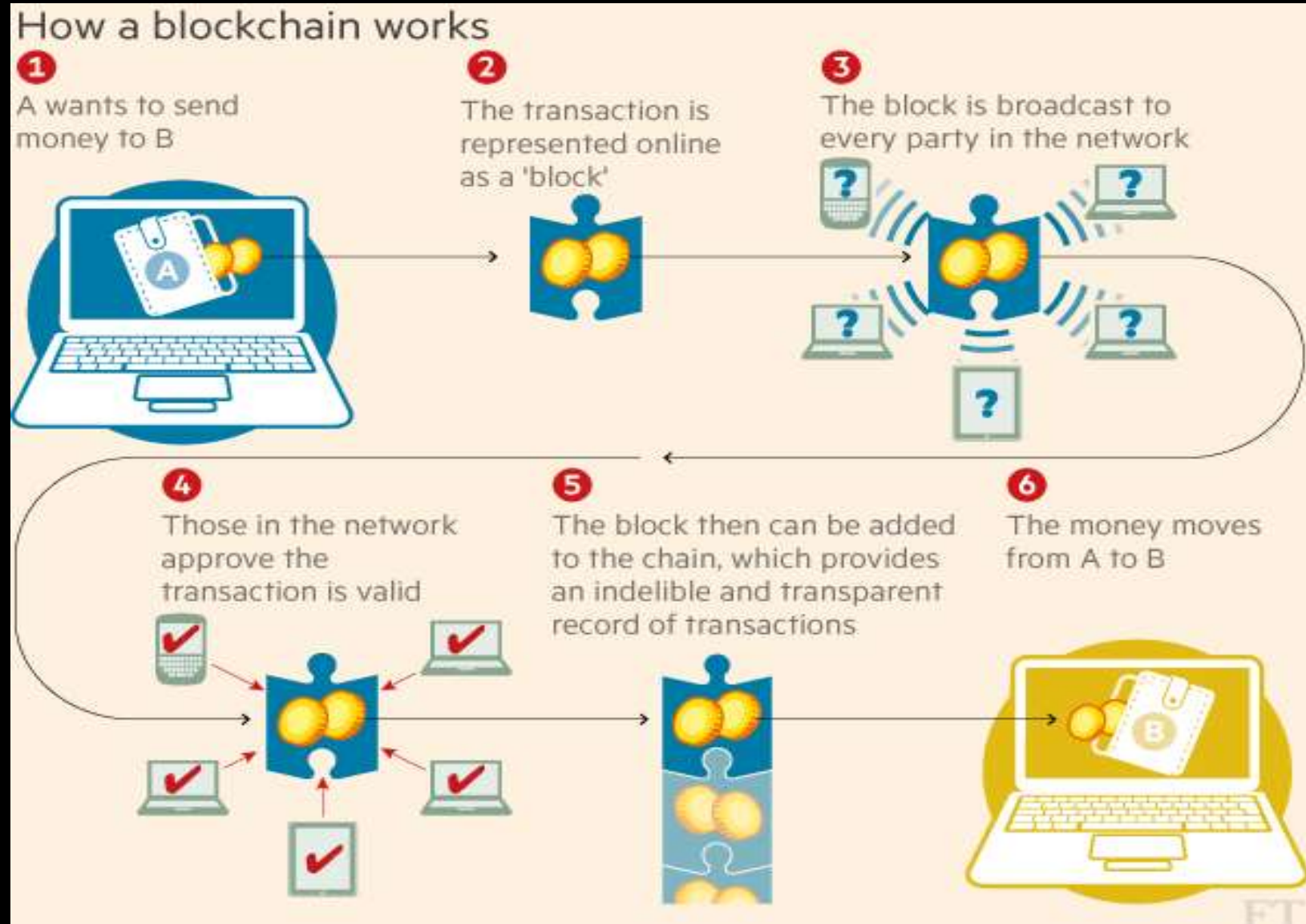
AI Enters the Fray

- AI Algorithm Hedge Fund
- Accredited Investors
- Invests across four lending marketplaces —Lending Club, Prosper, Funding Circle, and Lending Home
- 1% management and 0.59% expenses cap
- Blockchain investor reporting



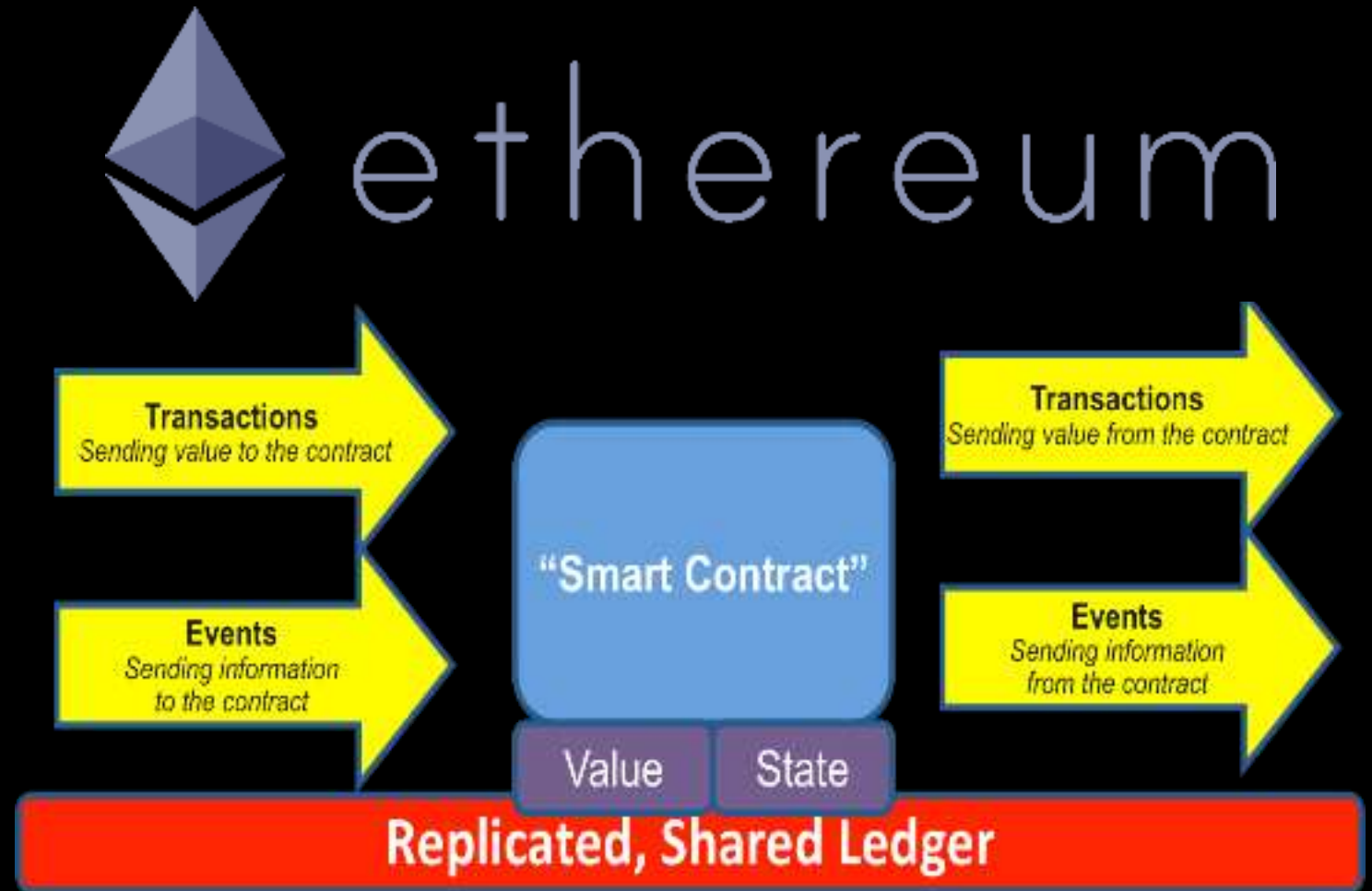
Blockchain

- Blockchain was created for Bitcoin
- Eliminates central clearing mechanisms by distributing transaction ledgers across the web securely
- All parties involved remain anonymous
- “The dumb money has shown up” - Fred Wilson Union Square Venture

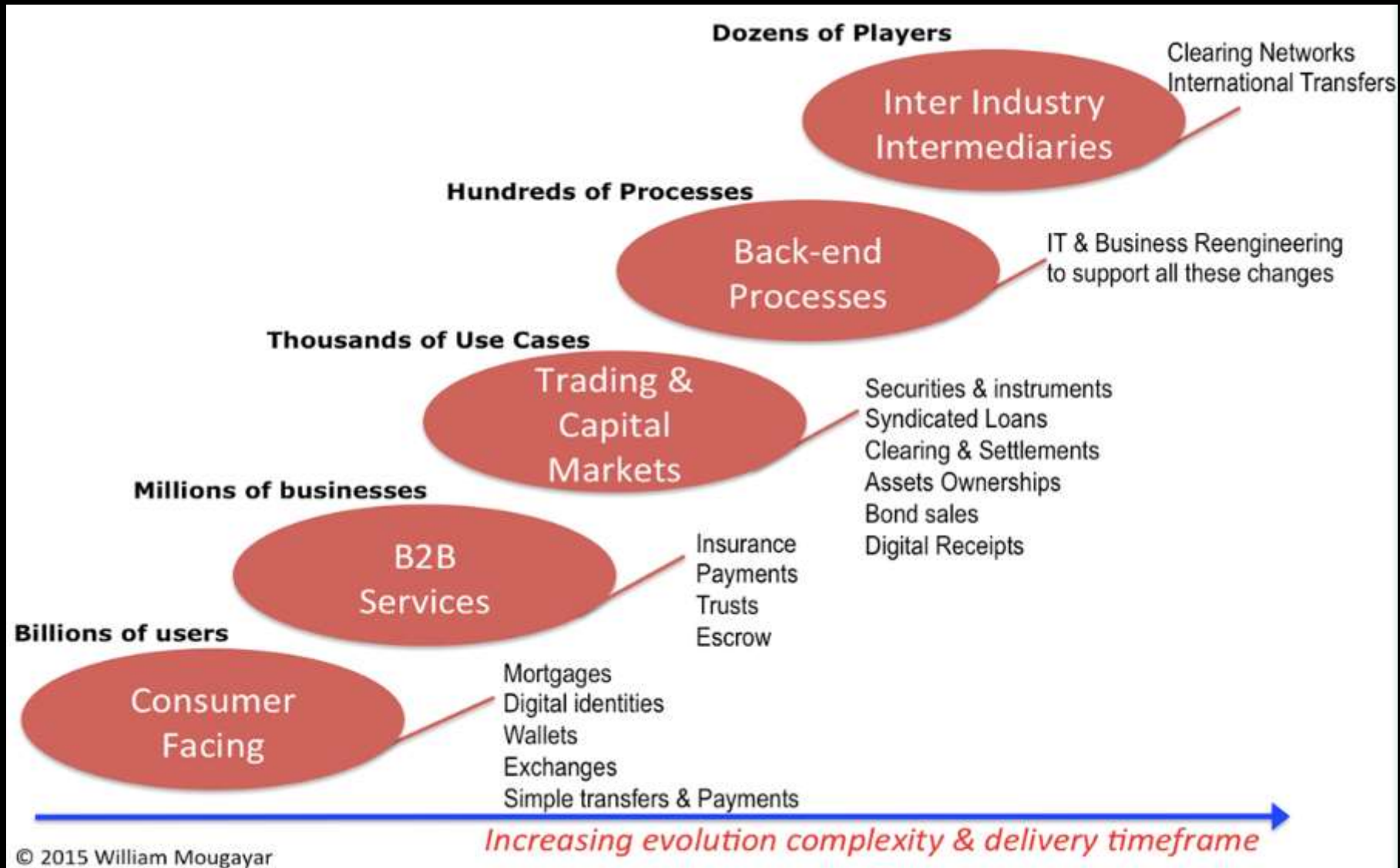


Ethereum and Smart Contracts

- Ethereum - platform to create private blockchains and smart contracts
- Goldman Sachs Estimates:
 - Legal savings of \$US11 - 12 billion per year from streamlining clearing and settlement of cash securities
 - \$US2 - 4 billion annual legal saving on moving real estate titles to distributed ledgers.



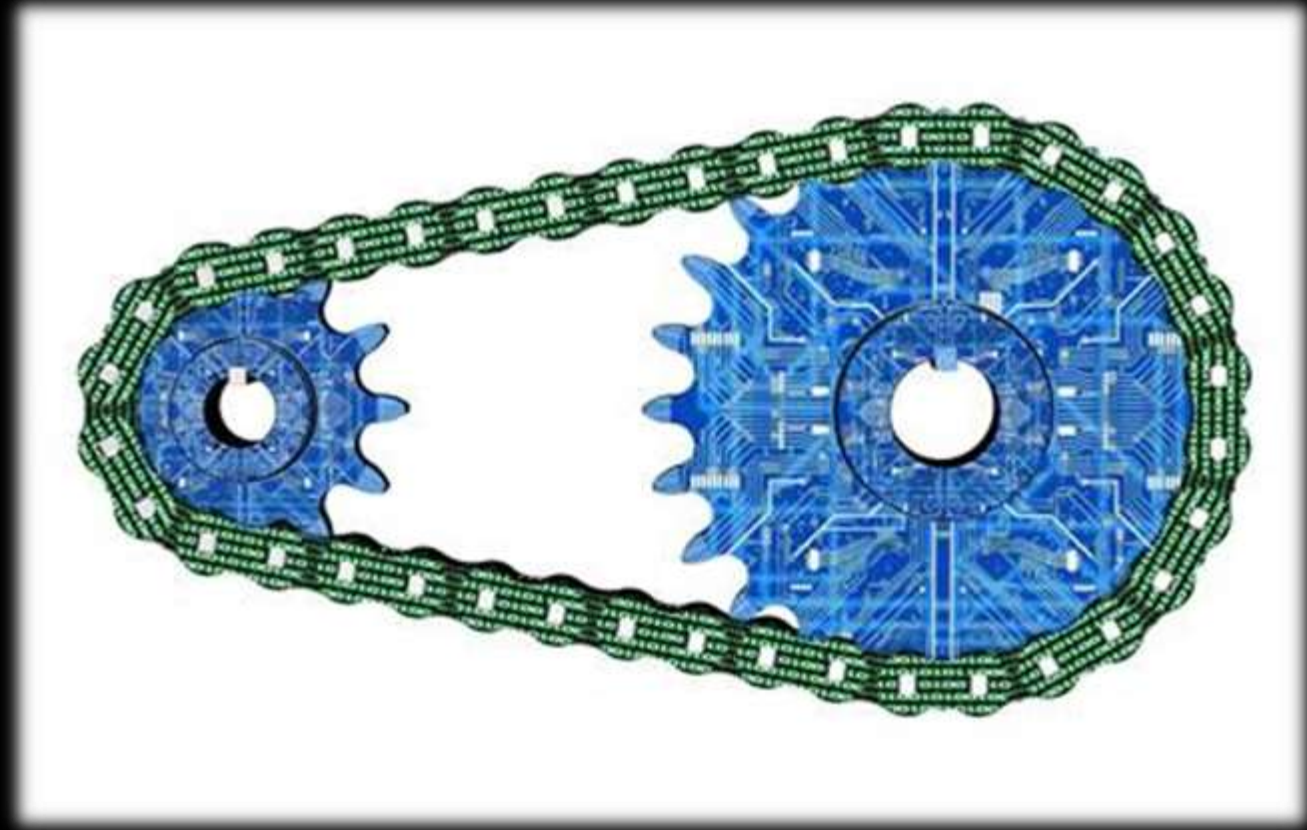
Blockchain in Financial Services



Commonwealth Bank of Australia “Virtual Cryptobond”

DCM Blockchain for Semi-Government Bonds

- Testing for Queensland Treasury Corp.
- Eliminates settlement risk – title transfer linked with payment
- Transaction executed and settled instantaneously
- Uses a "smart contract" to automatically manage ownership transfer, update on secondary market resale, and coupon payments
- Automated book building
- Awaiting regulatory approval



Cryptocurrency Payments Within Apps



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Image: ETH News

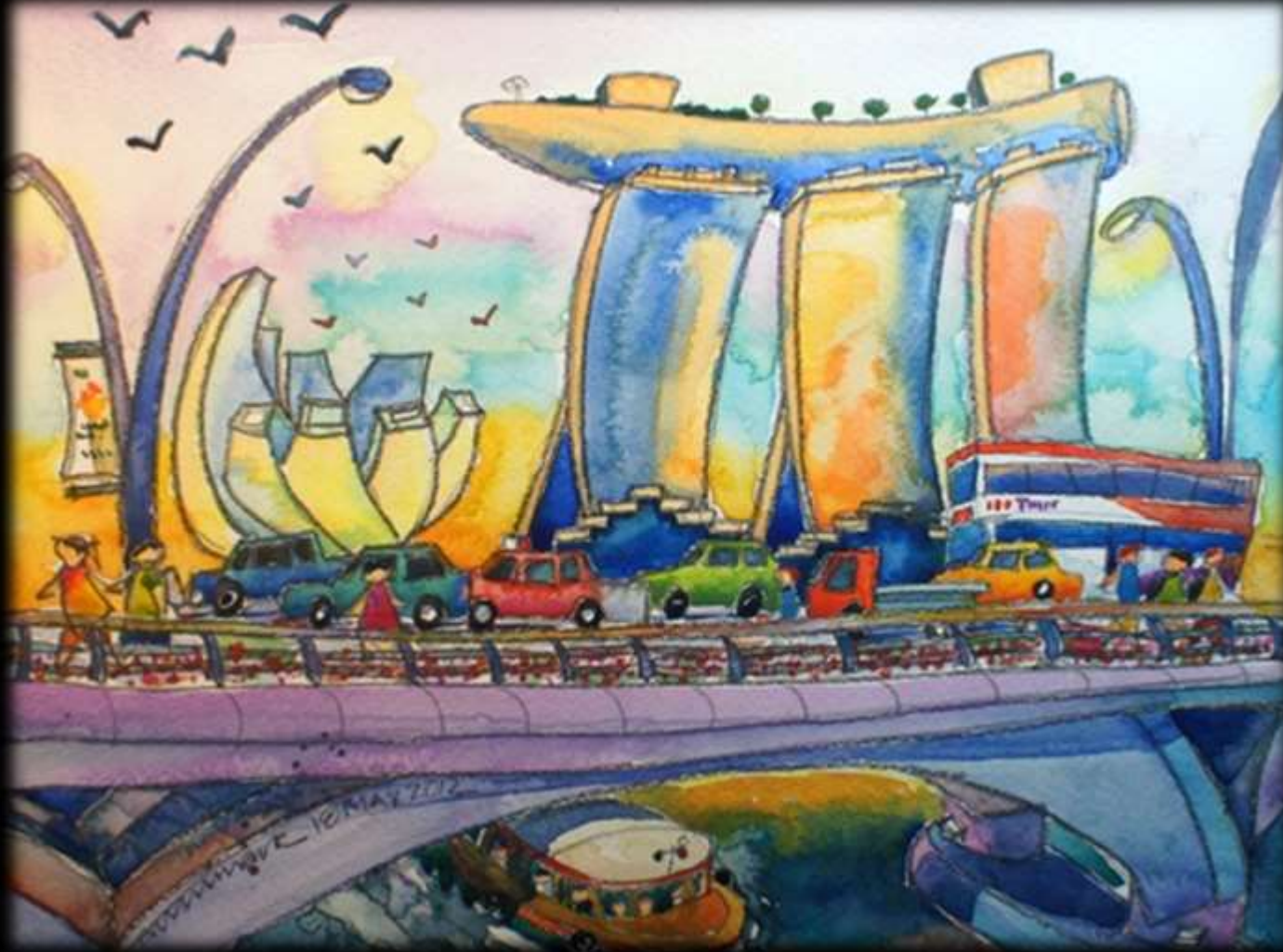
Distributed Ledger Going Mainstream? Philip Morris / Billion Group – Poland Trials



“Blockchain Currently not Compatible with a Centralized Interbank Payment System”



Singapore – on Course for First Blockchain-Based Interbank Payments System?



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Image:alvinmark

PRC – “Owning Bitcoin” or Growing its Own?

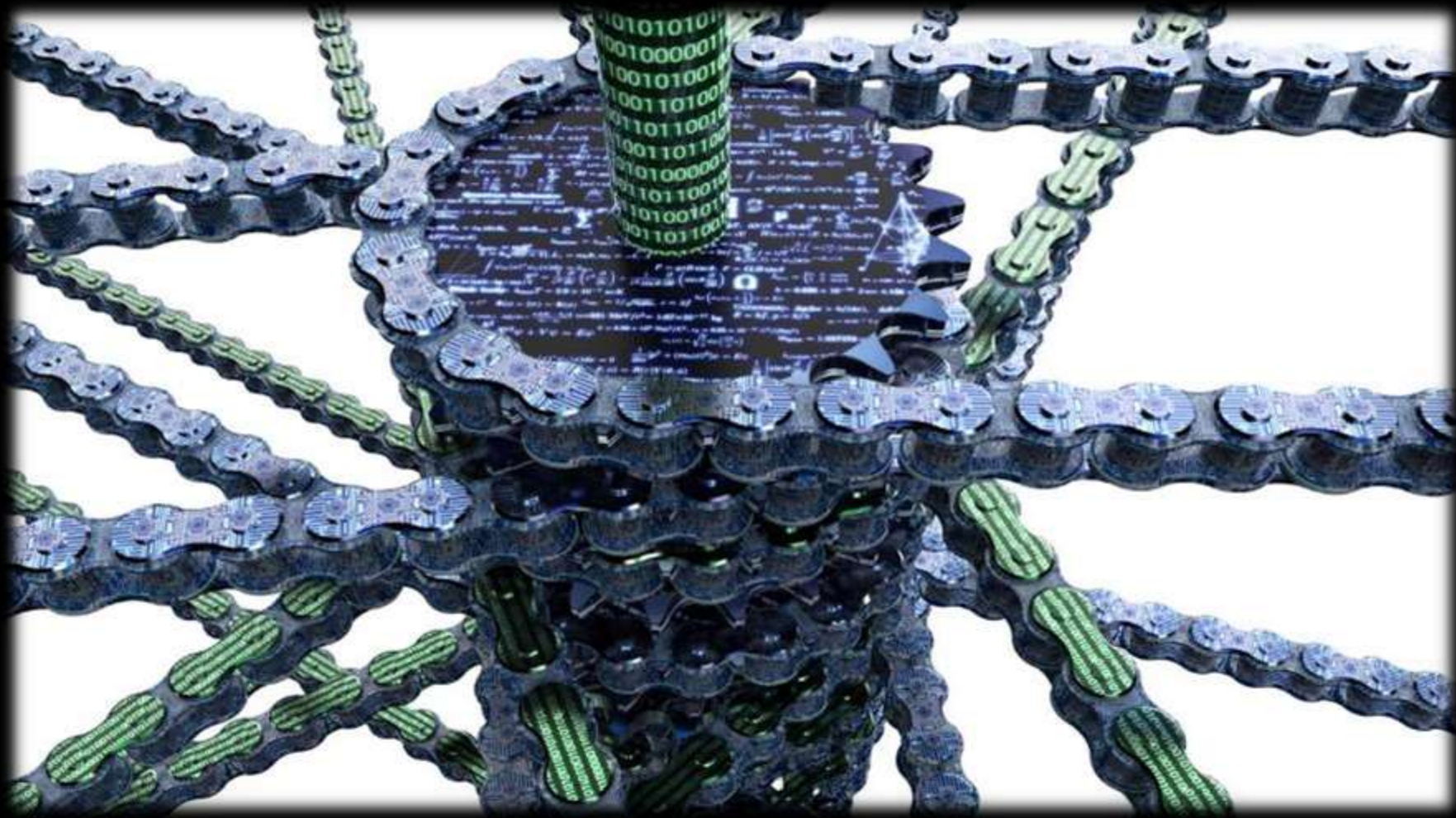


The Gamechanger?

**Whitepaper
on Distributed
Ledger for
Applications
in Chinese
Capital
Markets –
Capital,
Assets,
Non-Financial**



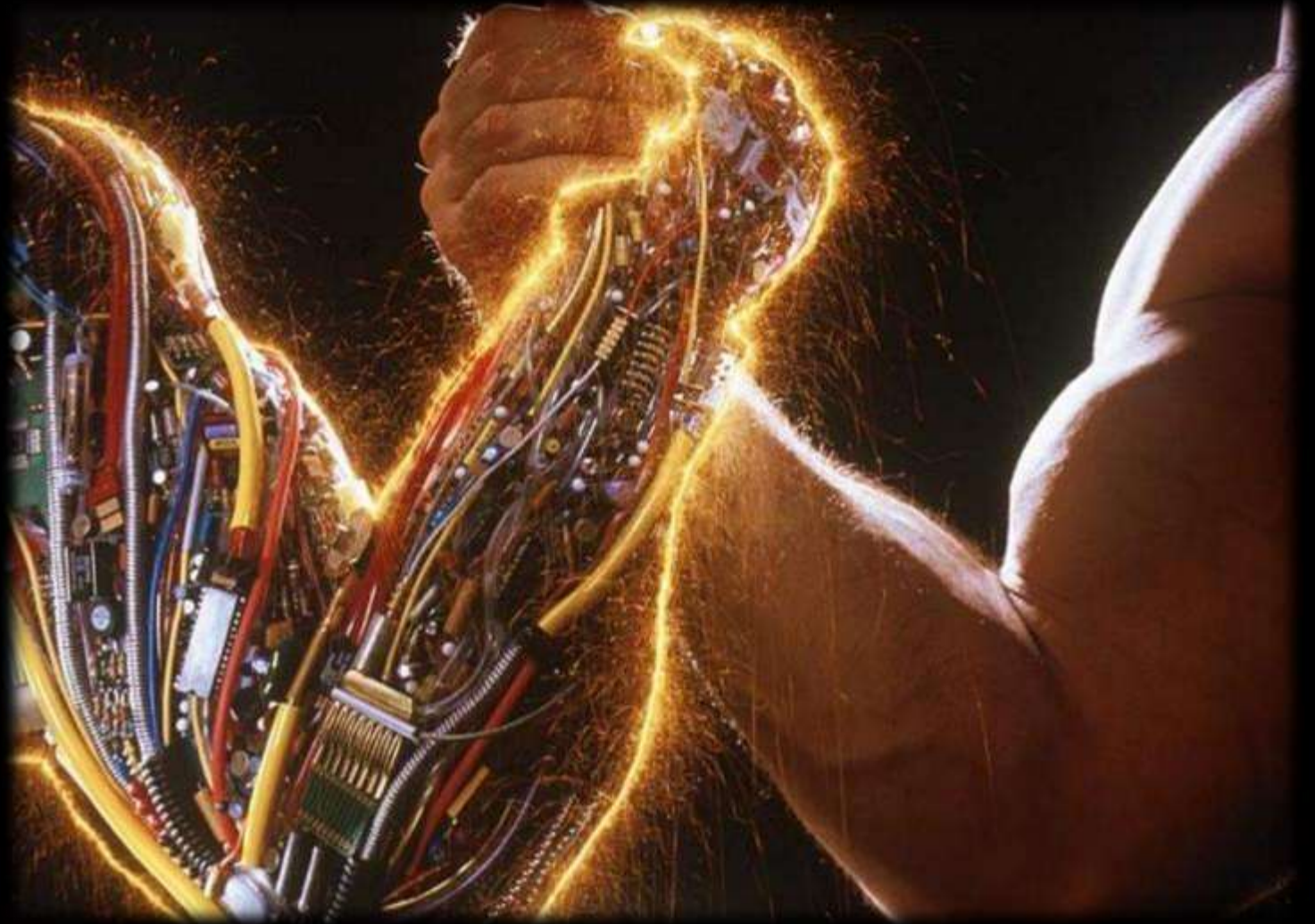
Postal Savings Bank of China, IBM - Blockchain Asset Custody System 4Tn RMB (\$600Bn)



40-80% of all Jobs Automated by 2030?

How Might Society Respond?

What if we Speed up Payments but Destroy Jobs and Livelihoods Through our IT Investments?



Disruption - Where Next for the Sector?

- Self Owning Assets Making Daily Distributions
- Smart Tech - AI and Blockchain
- Crowdsourcing Platform Tools
- Rise of Barter / Ecosystems
- Direct Corporate Flows
- Direct Retail Investor Access
- Multi-Faceted Investor Rewards

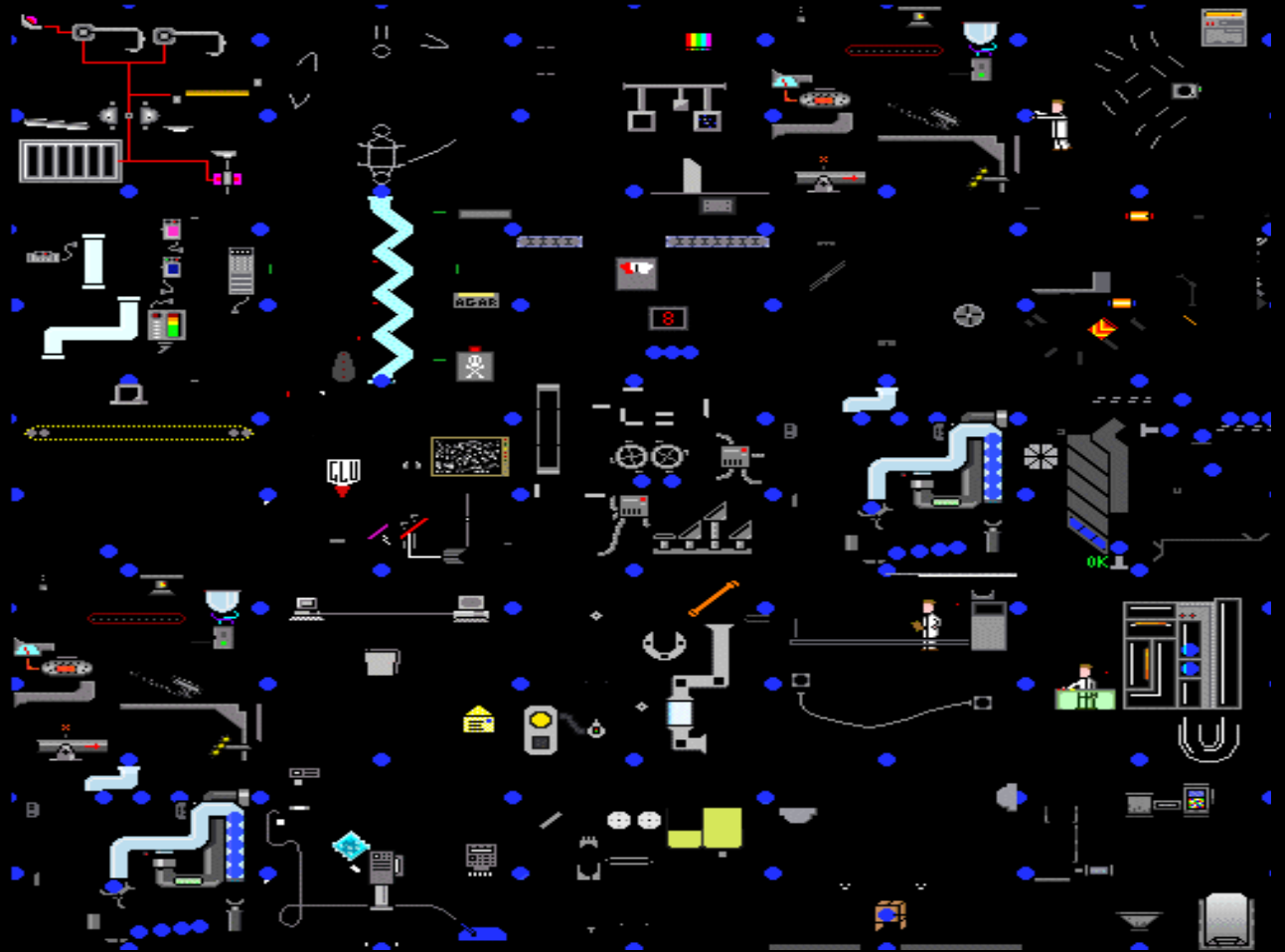




**So how do
we Create
a Very
Human
Business?**

How can we Navigate a Path Across the Complex 'Messy Middle'? What do we Stop?

- Customer Interface
- Process
- Organisation
- Information / Systems
- Regulatory
- Human



Build Mindsets and Skills for Co-Creation of New Offerings With Customers and Partners

- Foresight
- Curiosity
- Sense making
- Accelerated learning
- Tolerance of uncertainty
- Scenario thinking
- Coping with complexity





**Digital
Mindsets and
New World
Literacy
vs.
Information
and Initiative
Overload**

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Image: Julien Pacaud

Mindset - 3 Horizon Thinking

- **12 Months**
- **1-3 Years**
- **4-10 Years**



Horizon Scan and Develop Integrated 2020-2030 Scenarios

Explore
Different
Possibilities for
Geo-Politics,
Environment,
Competition,
Markets,
Technology,
and Social
Challenges



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Image: imi.ox.ac.uk

Collaborative Discovery of the Future

Deep Dives - Explore Needs, Issues, Emerging Technologies



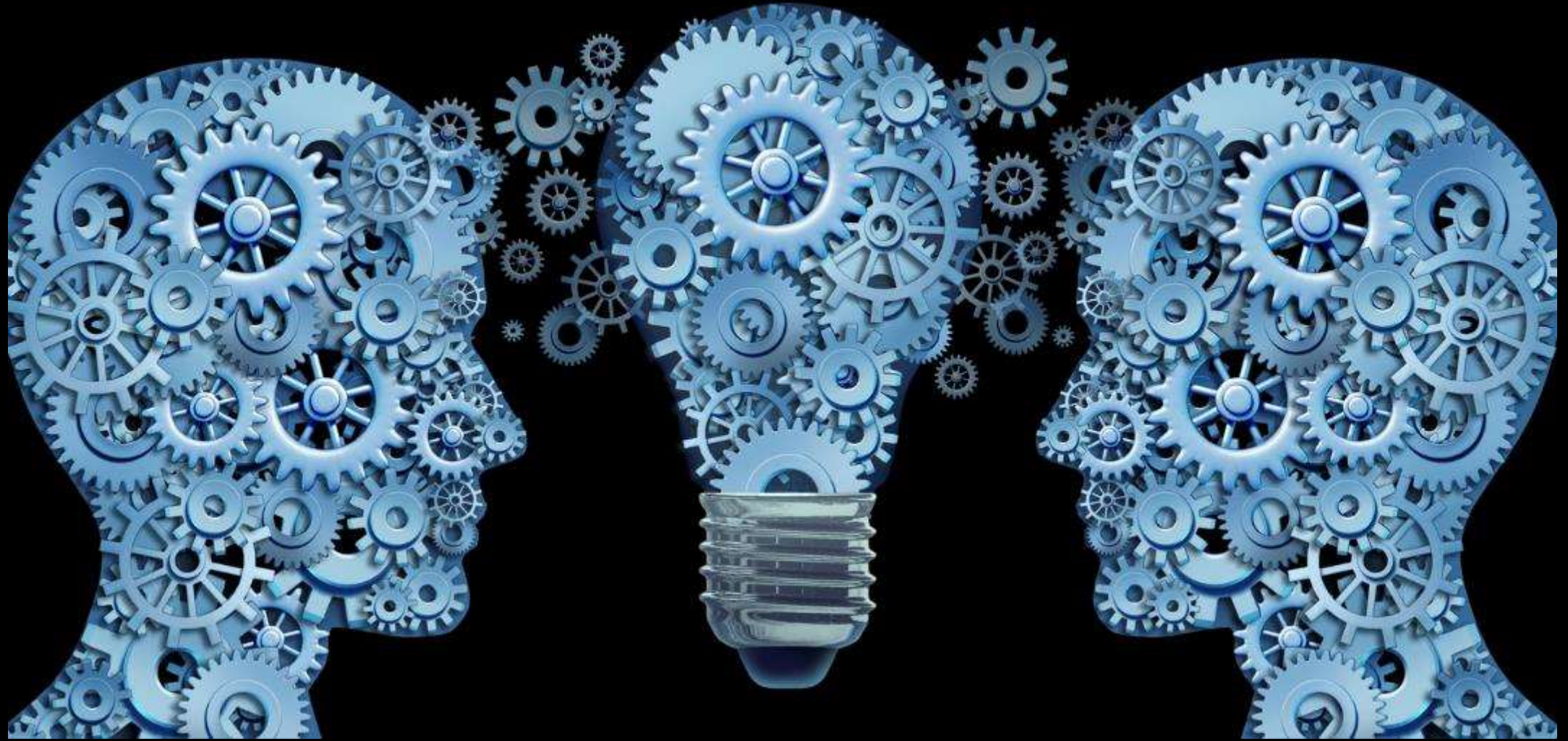
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Image: sethonor.com

Create 1-3 Year Strategies



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Image: gamification.it

A composite image with a black background. On the left, a hand in a gold jacket points towards a calendar page showing dates like 'Saturday', '15', '14', '17', '2', '3', '8', '11', '14', '17', '20', '23', '26', '29', '31', '3', '6', '9', '12', '15', '18', '21', '24', '27', '30', '31'. To the left of the calendar is a tall, ornate skyscraper. The upper right portion of the image is filled with falling US dollar bills of various denominations (5, 10, 20, 50, 100) against a blue sky.

Accelerate Innovation with Experimental Investments and Ideas Competitions

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Image: Lisa Hartsell

The Revolution will not be Predictable (or Televised)



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Image: V for Vendetta

About Fast Future

Core Services

➤ **Speaking and Moderating**

Delivering keynote speeches offering inspiring insights into a changing world and how others are responding to the future

➤ **Capacity Building / Future Leadership Programs and Events**

Designing high impact leadership development programs, workshops and events for leaders and decision makers in governments and businesses that encourage new thinking, bring the future to life and enable you to develop new strategies and action agendas

➤ **Foresight Research**

Helping you explore and understand the roadmap of economic, business, scientific, technological, social, political and environmental trends, forces, developments and ideas shaping the future of the sector

➤ **Investor Support**

Advising on emerging sectors, technologies and scientific developments

➤ **Exponential Growth Consulting**

Helping you create future strategies designed to deliver exponential rates of improvement, develop new business models and drive innovation to respond to and create disruptive change

➤ **Business Design and Innovation**

Facilitating development of innovative, future proofed designs for organisations, products, services, processes and customer experiences



Research Services

- Customised Studies
- Multi-client Studies
- Study Tours with Business Leaders
- Provision of Regular Thought Provoking Content to Leaders and Managers
- On-demand Research Insights
- Design of Research Forums and Research-Led Ideation Sessions

Consultancy Services

- Customised Programmes on Building the Exponential Business – Creating and Facilitating Internal Teams to Explore the Emerging Future and Map Out a Path to Exponential Growth
- Tailored Scenario Planning, Future Mapping and Innovation Programmes
- Review and Development of Business and Technology Strategies, Business Models and Roadmaps
- Deep Dives on Key Themes e.g. 3D Printing, Rapid Construction, Artificial Intelligence, Internet of Things

Education

- Executive Coaching on Future Focused Leadership
- Customised Foresight, Strategy and Innovation Programmes
- Continuous Education Subscription Programme – Options Include:
 - Delivery of Each New Book on Publication
 - Monthly Articles Exclusively for Subscribers
 - Online Subscriber Discussion Forum
 - Webinars for the Launch of Each Book
 - Six-Monthly In-House Seminars on Emerging Developments and Opportunities

Clients

Technology, Media & Telecoms

3M
BT
Cable & Wireless
Chloride
CIO Connect
Etisalat
Gartner
GE
Hibu / Yell / Yellow
Pages
Hyland Software
IBM
Intel
ITU
Metaio
Microsoft
Nokia
O2
Orange (EE)
Panasonic
Prysmian Group
RIM (Blackberry)
Samsung
SAP
Siemens
The BBC
T-Mobile
twofour54
Vodafone

Banking & Financial Services

ABN AMRO
Actis
Alliance & Leicester
American Express
AXA
Barclays
Chartis
Citibank
Coller Capital
DeutscheBank
HSBC
ING Group
Invesco
Investcorp
Morgan Stanley
Nomura
Royal Bank of Scotland
Santander
Standard Life

Professional Services

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Allen & Overy
Baker & McKenzie
Berwin Leighton Paisner
Clyde & Co
Crowe Horwath
Deloitte

Ernst & Young

Hogan Lovells
ILTA (International Legal Technology Association)
JLT Group
Kennedys
King and Wood Mallesons
KPMG
Knowita
Latham and Watkins
Lex Mundi
Linklaters
Moore Stephens
Norton Rose Fulbright
Parabis
PwC
Riverview Law
RSM Tenon
Simmons and Simmons
Wragge Lawrence
Graham & Co

Food, Pharmaceuticals & Healthcare

AIHHP
Associated British Foods
Astra Zeneca
Astellas
Bayer
Boehringer Ingelheim
Cargill
Food Service Network
Europe
GlaxoSmithKline
NHS London
NHS West Midlands

Novartis
Pepsi
Pfizer
Sara Lee
United Biscuits

Government and Intergovernmental

Defra – Department for Environmental, Food and Rural Affairs
DG Connect, European Commission
DTCM - Dubai Department of Tourism and Commerce Marketing
Dubai Chamber of Commerce
Government of Finland
Government of Singapore
Ministry of Defence (UK)
OECD (Organisation for Economic Co-operation and Development)
Office of Science and Technology (UK)
Saudi Government
Singapore National Horizon Scanning Centre
UK BIS – Department for Business, Innovation and Skills
UK Foreign and Commonwealth Office
UK Health Modernisation Agency
UK Home Office
US Department of Defense

Clients

Commercial and Industrial

ACE (Association for Consultancy and Engineering)
Andritz
Atkins
Ball Corp.
BAT
California Workforce Association
Danaher Corporation
DHL
Diamond Trading Corporation (De Beers)
EdF
Electrolux
Eurima
Fitflop
Gammon
Hoover
Hyundai
IBTTA (International Bridge Tunnel and Turnpike Association)
Jardines
Laing O'Rourke
MAP (Management Association of Pakistan)
Marks and Spencer
Mott MacDonald
Nakheel
Philip Morris
Playtex
Prysmian
Shell
Tata
Thames Water
Whirlpool

Leisure, Aviation, Travel, Tourism, Hotels, Events

Accor
ACI (Airport Council International)
Aerovista
Air Plus
Airport Revenue News
AMAC
Amadeus
American Express Business Travel
ASAE (Center for Association Leadership)
AITO (Association of Independent Tour Operators)
ATAG (Air Transport Action Group)
BAE Systems
Boeing
CANSO (Civil Air Navigation Services Organisation)
Center Parcs
CTW (Corporate Travel World)
EADS / Airbus
EasyJet
Emirates
FCm Travel
Federal Aviation Authority
Future Travel Experience Europe / Asia / Global
Genting
Global Airport Development
Horesta
Hurel Hispano
ICCA (International Congress and Convention Association)
IMEX
Intercontinental Hotels
International Luxury Hotels Association
IT&CMA (Incentive Travel & Conventions, Meetings)

ITB (International Tourism Bourse)
MPI (Meeting Professionals International)
PATA (Pacific Asia Travel Association)
Preferred Hotels
Qatar Airways
Sabre
TFWA (Tax Free World Association)
Travelex
Snecma
Travelodge
Travelport
TTRA (Travel and Tourism Research Association)
World Travel Forum
Adelaide Convention Centre
Melbourne Convention Centre
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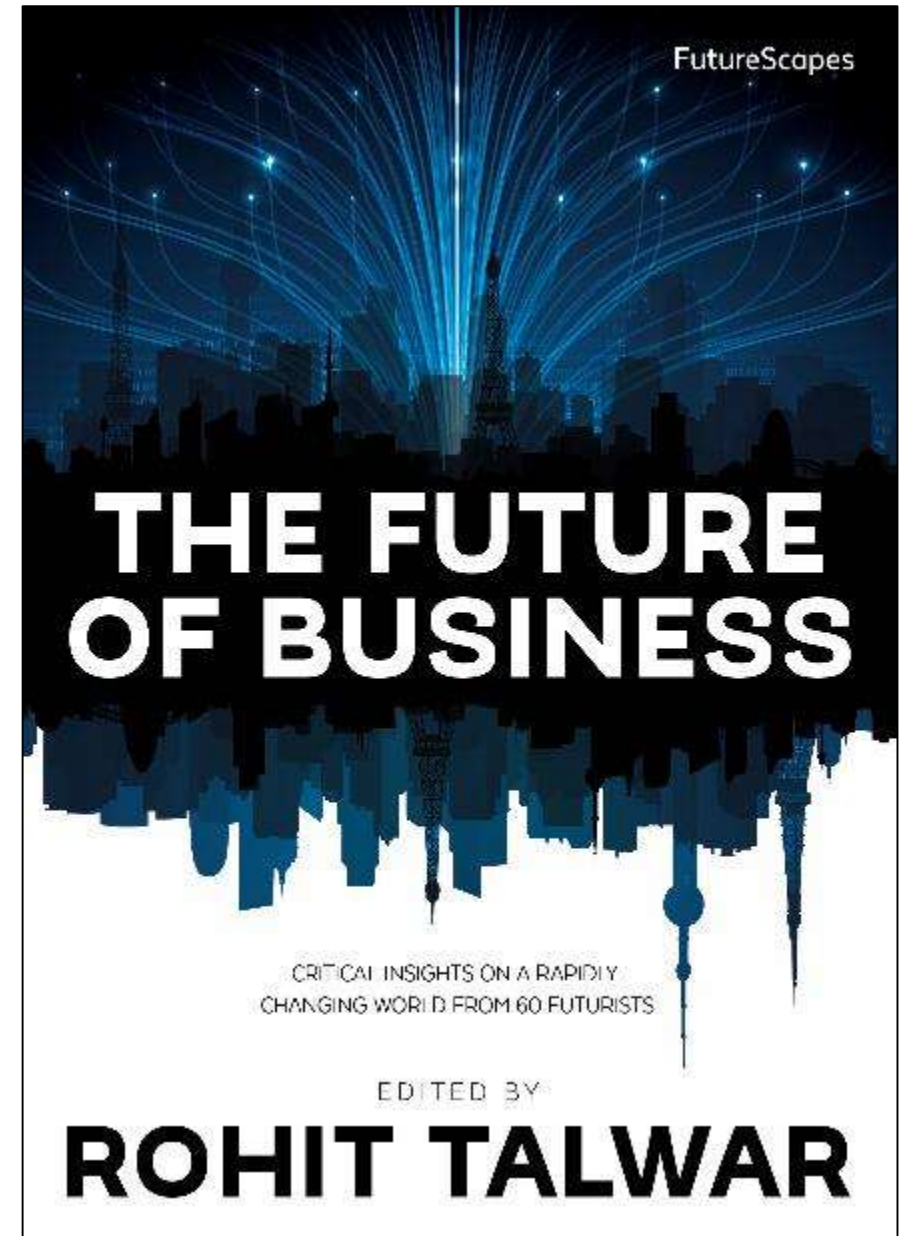
FutureScapes: The Future of Business

Edited By
Rohit Talwar

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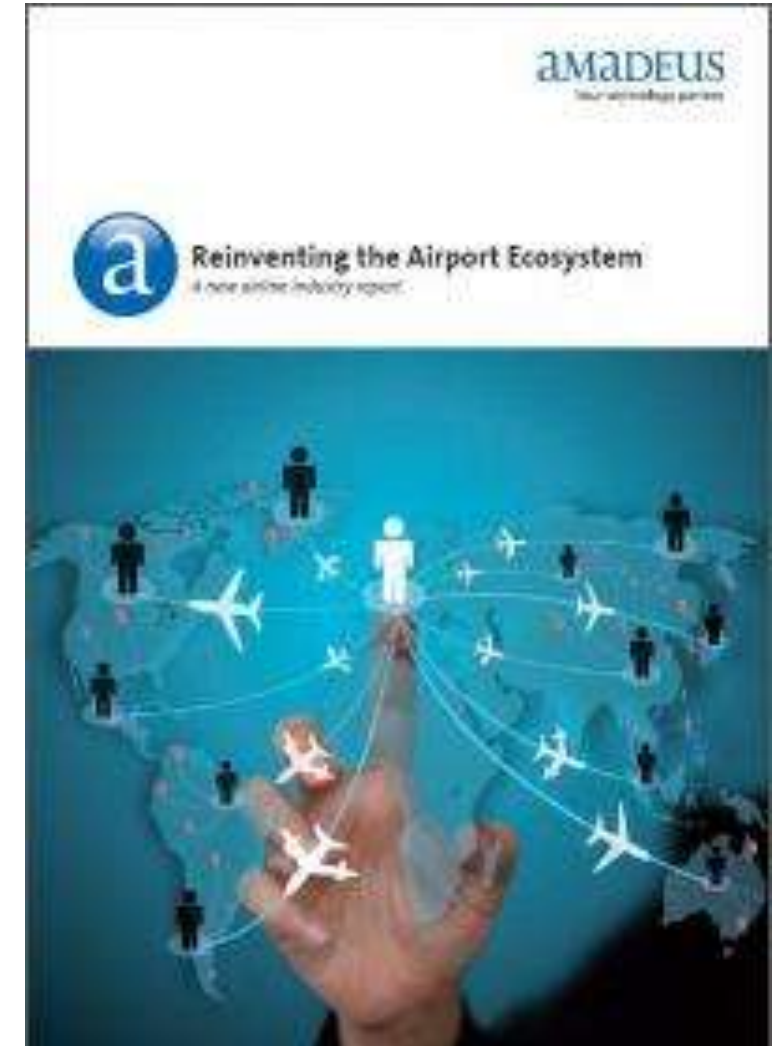
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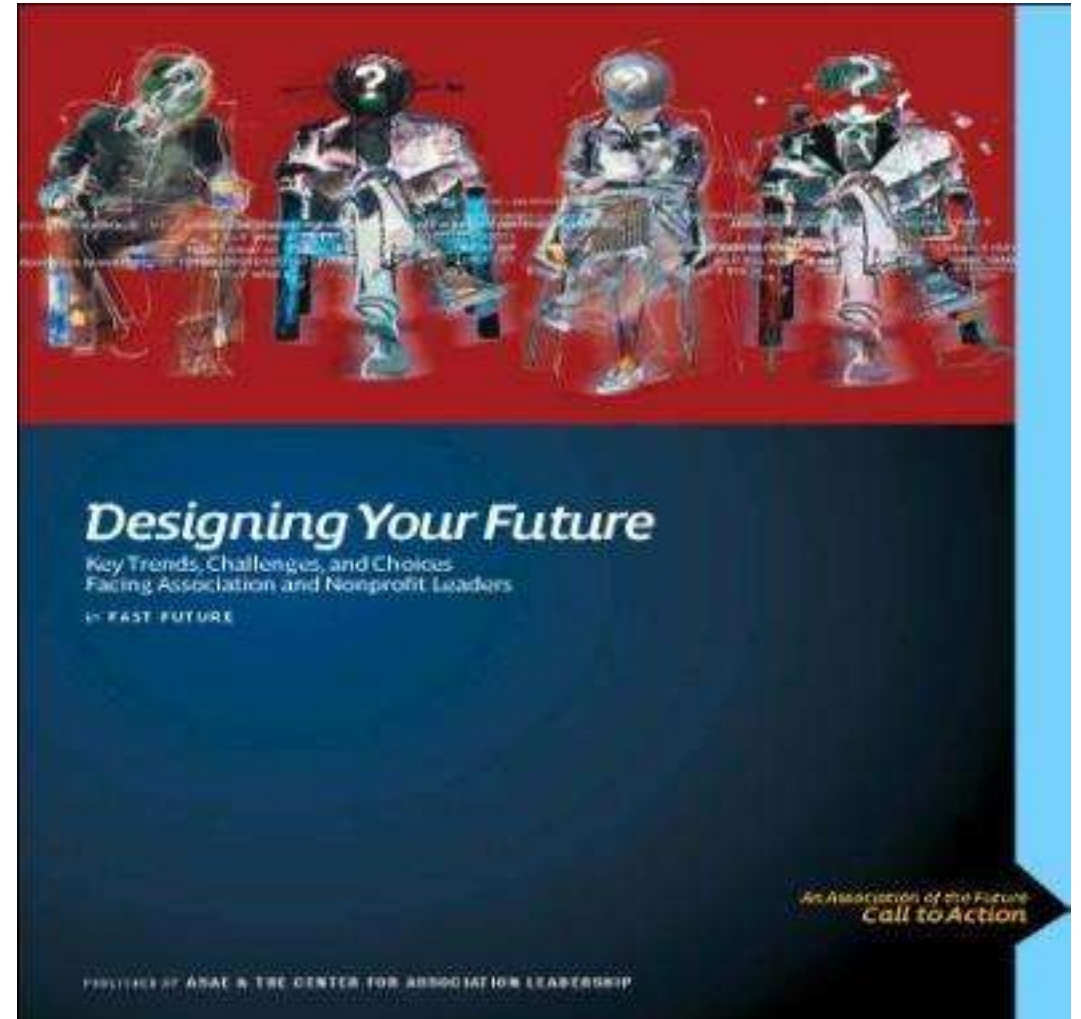
Reinventing the Airport Ecosystem

- Drivers of change
- Science and technology advances
- Customer expectations
- Innovation priorities
- Strategies and business models
- Surveys to test ideas and scenarios on a global audience
- Models for managing tomorrow's airport ecosystem
- http://www.amadeus.com/airlineit/resources/reinventing_the_airport_ecosystem/index.html?OADS=78



Designing Your Future - Key Trends, Challenges and Choices

- 50 key trends
- 100 emerging trends
- 10 major patterns of change
- Key challenges and choices for leaders
- Strategic decision making framework
- Future Scenarios
- Key futures tools and techniques



ILTA Legal Technology Future Horizons Project

- Key business and legal trends and forces
- Timeline of emerging technologies and IT developments with high potential legal impact
- Explores IT's transformative role in future legal business models and service differentiation
- Defines strategic business and IT imperatives
- 6 sponsors - combined desk research, interviews with managing partners, CIO's, vendors, futurists and technologists, global surveys on the business applications of IT and emerging technologies
- <http://www.iltanet.org/Downloads/LTFH-Report.pdf>
- 200 emerging technology developments
- <http://www.iltanet.org/Downloads/TechTimelineAppendixLTFH.pdf>



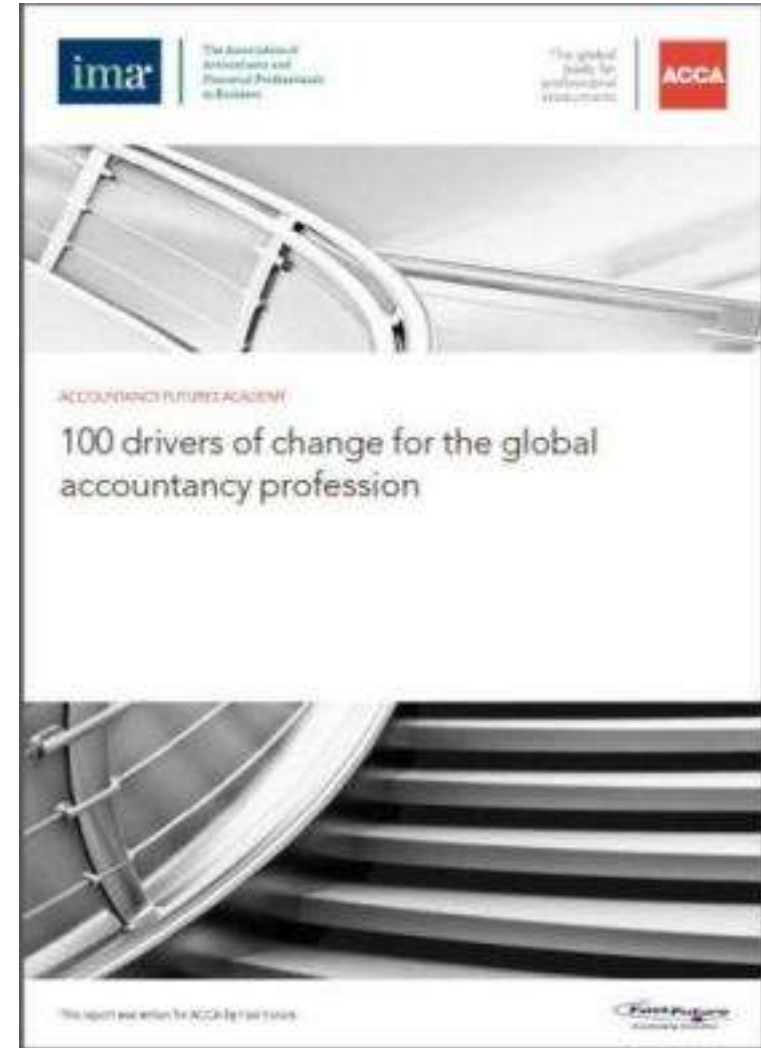
Futurium - Science and Technology Transformations Shaping the World of 2050

- European Commission project
- Examined 87 potential developments and trends
- Clustered into 11 overarching future societal themes
- Content identified through a combination of crowdsourcing via the Futurium web platform, suggestions from the EC, and ideas proposed by our team
- <http://ec.europa.eu/digital-agenda/futurium/>



ACCA / IMA – 100 Drivers of Change

- Identifies 100 drivers of change impacting business and the accounting profession
- Outlines future scenarios for the accounting function
- Highlights strategic imperatives for business and the accounting function
- ‘5 minutes on’ executive summary
- Report: www.accaglobal.co.uk/en/research-insights/accountancy-futures/drivers-change.html



Hotels 2020

- Identifying key drivers of change for the globally branded hotel sector over the next decade
- Examining the implications for:
 - Hotel strategy
 - Brand portfolio
 - Business models
 - Customer targeting
 - Innovation
- <http://www.amadeus.com/hotelit/beyond-segmentation.html>



Rohit Talwar

- Global futurist and founder of Fast Future Research.
- Award winning speaker on future insights and strategic innovation – addressing leadership audiences in 40 countries on 5 continents
- Author of *Designing Your Future*
- Profiled by UK's Independent Newspaper as one of the Top 10 Global Future Thinkers
- Led futures research, scenario planning and strategic consultancy projects for clients in telecommunications, technology, pharmaceuticals, banking, travel and tourism, environment, food and government sectors
- Clients include 3M, BBC, BT, BAe, Bayer, Chloride, DTC De Beers, DHL, EADS, Electrolux, E&Y, GE, Hoover, Hyundai, IBM, ING, Intel, KPMG, M&S, Nakheel, Nokia, Nomura, Novartis, OECD, Orange, Panasonic, Pfizer, PwC, Samsung, Shell, Siemens, Symbian, Yell , numerous international associations and governments agencies in the US, UK, Finland, Dubai, Nigeria, Saudi Arabia and Singapore.
- To receive Fast Future's newsletters please email rohit@fastfuture.com



Videos of Rohit Exploring the Future

- Artificial Intelligence: What Every CEO Should Be Asking (24 mins)

<https://www.youtube.com/watch?v=9kUWxgL0UBA>

- A Very Human Future - Humans and Technology in Collaboration (36 mins)

<https://www.youtube.com/watch?v=jhbSE4BaMck>

- The World in 2025 - Driving Forces, Global Challenges and Potential Disruptions (35 mins)

<http://vimeo.com/93302584>

- Anticipating 2025 - Driving forces, global challenges and potential disruptions (30 mins):

<https://www.youtube.com/watch?v=kwclQCIfxpY>

- A World in Transition (60 mins): <http://www.colliers.com/en-gb/uk/insights/multimedia>

- Future of Travel (22 mins) http://www.travelmole.tv/watch_vdo.php?id=14300

- Parallel Revolutions Impacting Global Labor: Bloomberg TV Interview (4 mins):

<http://www.bloomberg.com/video/parallel-revolutions-impacting-global-labor-talway-T0tJZRX6TpGIxjKShTzv~w.html>

Useful Sources

- Genetic profiling - <https://www.23andme.com/>
- X Prize - Breakthrough innovation projects - <http://www.xprize.org/>
- Google brain uploading - <http://digitaljournal.com/article/352787>
- Brain mapping projects - <http://www.technologyreview.com/news/513011/why-obamas-brain-mapping-project-matters/>
- Global Future 2045 (immortality) <http://2045.com/>
- Human enhancement - http://en.wikipedia.org/wiki/Human_enhancement
- Wearable technology – Google Project Glass - <http://www.google.com/glass/start/>
- Emotiv Epoc Brain-Computer Interface - <http://www.emotiv.com/>
- AI Essay Grading Software - http://www.nytimes.com/2013/04/05/science/new-test-for-computers-grading-essays-at-college-level.html?pagewanted=all&_r=0
- Digital / Crypto currencies –
 - <http://www.abc.net.au/technology/articles/2013/09/25/3855973.htm>
 - <http://en.wikipedia.org/wiki/Cryptocurrency>
 - http://en.wikipedia.org/wiki/List_of_cryptocurrencies
- Autonomous cars -
 - <http://www.engineering.com/DesignerEdge/DesignerEdgeArticles/ArticleID/6357/Tesla-Working-on-Autonomous-Car.aspx>
 - <http://www.popsci.com/cars/article/2013-09/google-self-driving-car>

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Background Notes

MasterCard Brings Tap-To-Pay To Public Transit In 80+ Cities

- Mastercard has announced a series of partnerships in over 80 cities worldwide, which will enable card carriers to tap to pay for public transit.
- Mastercard and its partners have enabled travelers to use devices to pay for public transit in popular tourist destinations, including London, New York, Chicago, Milan and St. Petersburg, among a number of others.
- Mastercard has found that, since the introduction of contactless payments across London's transit system in 2014, some 40 percent of daily pay-as-you-go journeys on the city's underground, buses and commuter rails are paid via contactless.

China's old people have growing consumer clout

- The value of products and services geared toward the elderly may reach 33 percent of China's gross domestic product by 2050.
- If that trend holds, caring for seniors will be China's dominant industry by the middle of the century, and old folks will be its defining demographic.
- Fan Min, president of China's biggest online travel site, predicts they'll be the primary drivers of the country's tourism market within a decade.
- About 5 million of them are traveling overseas annually, with that number expected to more than double by 2030. As they venture out, the travel industry is adjusting to their demands (by offering more group tours and cheaper accommodations, for example).
- And it's not just tourism: In recent years, businesses ranging from car companies to online marketplaces have built features marketed to China's elderly.

Report Says Shared Mobility Key to Better Future

- The report spans eight global regions including five major markets – the U.S., Europe, China, India and Brazil.
- The global regions vary considerably in their starting points. For example, the U.S. is highly car-dependent, whereas India's challenge will be to preserve and enhance the shared-mobility options already there.
- But worldwide, the researchers found without a concurrent shift away from private-vehicle ownership and toward ride sharing, the potential for electric and autonomous vehicles to reduce traffic and sprawl are severely limited, and CO2 reductions will be significantly less.
- Their report says unprecedented levels of policy support and coordination are needed at the local, state and national levels. Policies could include fees tied to vehicle CO2 emissions, vehicle occupancy and possible restrictions or heavy charges on private ownership of autonomous vehicles, along with strong disincentives for zero-occupant trips.

The Airport of the Future Will Use Your Face as Your Passport – Happy Flow

- A foretaste of the future of travel is already available in the small Caribbean island of Aruba where airport is the testing ground for a technology called Happy Flow.
- Passengers flying from Aruba on KLM Royal Dutch Airlines to Schipol in the Netherlands do, indeed, find themselves flowing happily into the future.
- Once they check-in they never have to join a line to show an ID, never have to produce a passport or boarding card. Instead, they are tracked at points through the terminal all the way to their seat on the airplane using face-recognition cameras.
- Happy Flow pioneers a biometric technology that the International Air Transport Association, IATA, wants to be available worldwide for 80 percent of passengers by 2020.

Sky Tran Magnetic Levitation



Travel pods awarded at transportation competition

- The SmART system won the \$35,000 second-place award in the Infrastructure Vision 2050 Challenge held at the Association of Equipment Manufacturers conference
- The first-place Hyperlane, which was pitched by University of California at Berkeley students Anthony Barrs and Baiyu Chen, combined the idea of cars and trains to build a hybrid lane where driverless cars can move at speeds of 120 mph.
- Third-place finisher Kevin Lu pitched an Adaptive Pavement System, which embeds sensors into existing roads that are recharged every time a car drives over them. The sensors could be used to help automate traffic and reduce congestion.

Travel Pods: Driverless cabs on their own elevated roadway



2025 Disruption of Healthcare

- Existing healthcare institutions will be crushed as new business models with better and more efficient care emerge. Thousands of startups, as well as today's data giants (Google, Apple, Microsoft, SAP, IBM, etc.) will all enter this lucrative \$3.8 trillion healthcare industry with new business models that dematerialize, demonetize and democratize today's bureaucratic and inefficient system.
- Biometric sensing (wearables) and AI will make each of us the CEOs of our own health. Large-scale genomic sequencing and machine learning will allow us to understand the root cause of cancer, heart disease and neurodegenerative disease and what to do about it. Robotic surgeons can carry out an autonomous surgical procedure perfectly (every time) for pennies on the dollar. Each of us will be able to regrow a heart, liver, lung or kidney when we need it, instead of waiting for the donor to die.

A Trillion-Sensor Economy

- By 2025, the IoE will exceed 100 billion connected devices, each with a dozen or more sensors collecting data.
- This will lead to a trillion-sensor economy driving a data revolution beyond our imagination.
- Cisco estimates the IoE will generate \$19 trillion of newly created value.

By 2030, Bitcoin Could Be The Sixth Largest Reserve Currency In The World

- It is estimated that 51% of Bitcoin users are outside of the United States
- Several countries and thousands of vendors are already accepting Bitcoin technology as a form of payment, which means this adoption of payment will only grow.
- Obviously, there are a number of positive reasons to move toward this type of currency.
- For one, governments like the United States, India and the European Union will not have the power to influence the currencies within our global economy.
- Additionally, the value of the currency will not be tied to any one government's failures, such as Greece whose economic failure devastated the country and their currency's value.
- With Bitcoin, a person will no longer have to worry about banks using their savings to make investments, which is activity that most banks conduct in today's society.
- There will be 5 Million Bitcoin users by 2019.

Perfect Knowledge

- We're heading towards a world of perfect knowledge.
- By 2025, with a trillion sensors gathering data everywhere (autonomous cars, satellite systems, drones, wearables, cameras), you'll be able to know anything you want, anytime, anywhere, and query that data for answers and insights.

Humans Become Machines

- By the early 2030s, technology will be able to copy human brains and put them onto electronic mechanisms.
- That means no more flesh, blood, or bones — just a scan of your brain on a machine — and will enable humans to take any form, from a box to a bird.
- It will also mean that a “human” won’t die in any traditional sense, and that it will be infinitely replicable.

Millions of UK workers at risk of being replaced by robots by 2030

- More than 10 million UK workers are at high risk of being replaced by robots within 15 years as the automation of routine tasks gathers pace in a new machine age.
- PwC found that 30% of jobs in Britain were potentially under threat from breakthroughs in artificial intelligence (AI).
- In some sectors half the jobs could go.
- PwC said 2.25 million jobs were at high risk in wholesale and retailing – the sector that employs most people in the UK
- 1.2 million were under threat in manufacturing, 1.1 million in administrative and support services and 950,000 in transport and storage.
- Education and health and social care were the two sectors seen as least threatened by robots because of the high proportion of tasks seen as hard to automate.

2025 Early Days of JARVIS

- In a decade, it will be normal for you to give your AI access to listen to all of your conversations, read your emails and scan your biometric data because the upside and convenience will be so immense.

A \$1,000 Human Brain

- In 2025, \$1,000 should buy you a computer able to calculate at 10^{16} cycles per second (10,000 trillion cycles per second), the equivalent processing speed of the human brain.

Green growth

- Last year, some \$81bn of green bonds were issued, and with \$27bn coming to market by the end of March this year.
- 2017 issuance is on track to reach \$120bn, and this would bring the total market for the instruments to \$260bn at the end of 2017.
- While there is a first group of conviction-led investors who need to find pathways into sustainable investment, a second group is being pushed to do so by imminent regulation in the area.
- While measuring the carbon footprint of an equity portfolio is becoming standardised, the exercise is less so for bonds.
- The green bonds strategy allows investors to make a direct and measurable impact on the environment without any extra costs, and identify the relationship between environmental and financial health.
- The bonds are priced similarly to non-green bonds.

Green bonds channel private-sector funding to the climate

- By 2016 green bond issuance had grown to \$97bn, of which \$32bn came from China alone; SEB, a Swedish bank, reckons volumes may hit \$125bn this year.
- Public-sector issuers together accounted for only around 30% of the total last year. The largest portion, over 35%, was issued by financial institutions; around 20% came from other companies.
- Investor demand, too, is booming: Zurich Insurance has already invested over \$1.2bn in green bonds, with plans to reach \$2bn; BlackRock and other asset managers have set up dedicated green-bond funds.
- As for the proceeds, over 40% is used to finance clean energy; nearly 25% buildings and industry; and over 10% transport.
- But definitions of what counts as “green” vary widely. Initially, this judgment was made by the World Bank’s environment department, or, for some of the first private issues, by the issuer itself.

We're in the midst of a green finance boom

- Low carbon, climate-resilient projects typically have higher upfront capital costs and long-term, inflation-linked income streams. This means that the cost of the finance debt arranged by banks is often higher than the yield. But refinancing using bonds can be a way out of this trap. Bonds can raise capital directly.
- Were a value to be put on carbon that is agreed globally, this would greatly enhance the attractiveness of the market for financing low carbon, climate-resilient infrastructure projects.
- Cities and municipalities also need bonds to raise financing for their own low carbon development plans, and are frequently issuing green bonds, as are private organisations such as Apple and Toyota.
- Green investment is increasing just as investors are divesting from fossil fuel companies. It is the most farsighted of organisations leading. The rest will follow suit as confidence increases and the process of due diligence becomes easier and cheaper.

Apple is investing \$1 billion in clean energy with green bonds

- The company issued a \$1 billion "green bond" on Tuesday. The bond will allow the company to finance projects such wind and solar power plants, energy-efficient buildings, and new approaches to using recycled materials.
- The bond will allow the company to finance projects such wind and solar power plants, energy-efficient buildings, and new approaches to using recycled materials.
- Apple's green bond is the first that's been issued since Trump's June 1 announcement on the Paris agreement.
- The \$1 billion bond will help finance projects that fall within Apple's three environmental priorities: reducing its climate impact by using renewables and driving efficiency in its facilities, products, and supply chain; pioneering the use of safer materials in its products and processes; and conserving natural resources such as minerals and water.

RateSetter: peer-to-peer green lending platform

- The launch marks the first investment by an Australian government body with an Australian peer-to-peer lending platform.
- RateSetter expects interest rates for investors and borrowers of around 7.0% at launch with the majority of loans between three and seven years duration.
- The new market will fund individual and business loans for solar panels and battery systems, energy efficient lighting, energy efficient heating and cooling systems, emissions reducing industrial applications and low-emission/electric vehicles and light trucks.

Mervyn King: new financial crisis is 'certain' without reform of banks

- In the 2016 book, *The End of Alchemy: Money, Banking and the Future of the Global Economy* Lord King suggests raising productivity and boldly reforming the banking system.
- He said: “Only a fundamental rethink of how we, as a society, organise our system of money and banking will prevent a repetition of the crisis that we experienced in 2008.”
- Lord King was in charge of the Bank of England when the credit crunch struck in 2007, leading to the collapse of Northern Rock and numerous other British lenders, including RBS, and has been criticised for failing to see the global financial crisis coming.

UK homeowners face future room letting thanks to shrinking properties as housing prices continue to rise

- One developer is taking the whole issue of limited space in city centres to a new level with what's been dubbed the "micro home" – a one-bedroom flat with a sliding wall so the owner can choose between one bedroom or two really tiny ones.
- Inspired Homes, the firm working on the concept, pitches it as the solution for cash-strapped first-time buyers who need extra income from renting out a second bedroom, either for the mortgage, or to get them through the month after forking out in an eye-wateringly expensive market.
- Martin Skinner, chief executive of Inspired Homes claims these tiny spaces are likely to play a major role in the future of the British housing market.
- "High spec, well-designed micro-apartments are growing in demand not just because they are more affordable but also because of the changing way people live," he says. "For example, with growth of the sharing economy and more possessions like music and film collections stored in the cloud, it is now much easier to live in smaller apartments than it was in the past."

Technology Will Erase Jobs—But Also Make Everything Cheap or Free

- Peter Diamandis at Singularity University's Exponential Finance Summit talked about the broad and specific trends he believes are leading to a demonetized world.
- The counterbalance to technological unemployment, Diamandis said, is the demonetization of living—in other words, pretty much everything we need and do in our day-to-day lives is becoming radically cheaper, if not free, and technology's making it happen.
- Demonetization is the fourth of Diamandis' six Ds of technological disruption, happening after digitization but before democratization.
- Taking money out of the equation for a given product or service is a key part of making that product or service available to everyone.
- What will motivate people to work or be productive if they don't need money for the basics? What kinds of new innovations will spring up from people for whom these resources used to be cost-prohibitive? How will social constructs built around wealth and class shift?

The Slow-Money Challenge Is the Next Digital Imperative in Financial Services

- A new report by Cognizant explores the future of money.
- The core finding of the study is that financial providers should focus the next wave of digitization on what we call people's "slow money" (any future spending or saving) rather than "fast money" (their daily and short-term spending).
- Until now, digital innovation and fintechs have largely focused on solving problems related to people's fast money
- Given how much money the financial services industry spends on digital (estimated to be more than \$310 billion annually by 2020), executives should be asking questions such as:
- Where should we focus our digital investments? How do we build stronger customer relationships when we become more digital?
- How do we sell more products per customer without compromising company culture and ethics? What should digitization do for our company over the next 3-5 years?

The Slow-Money Challenge Is the Next Digital Imperative in Financial Services



The Slow-Money Challenge Is the Next Digital Imperative in Financial Services

- The research also revealed that consumers struggle to make connections between fast- and slow money.
- Fast money is concrete, tangible, real — something they can touch in the here-and-now. Slow money is more abstract, vague, ethereal — something that feels more akin to a dream than a deliberate, long-term strategy.
- And they fail to see how their approach to managing fast money can have massive implications for their slow money plans (e.g., splurging today and racking up huge credit card balances can destroy a retirement plan).

Wave Amazon's New Dash Wand for Instant Grocery Shopping

- The e-commerce giant released an updated Dash Wand for users, an Alexa-enabled wand that assists you in household essentials and grocery shopping.
- The new dash device is priced at \$20.
- Amazon Prime subscribers of the United States get \$20 cashback in the account so Dash Wand is practically free.
- Furthermore, they can also use the cashback to purchase essentials and groceries with the help of Amazon's new wand.

Viber app launches 'instant shopping'

- To start shopping, users can tap on the new shopping bag icon where they can tap on the brands and stores they love and then find items based on categories.
- The user can browse for items and choose to share them in the chat and have the option to learn more about the item.
- Once the product is selected, the app will redirect you to the brand site to complete the transaction.
- At the launch, Viber will introduce two brands on its app: Macy's and Rakuten.com, the owner company of Viber.
- The app will cover a range of categories — electronics, home goods, and fashion
- The company is expected to add more brands to its platform in the future.

Uber's Instant Pay has cashed out \$1.3B to drivers in just one year

- Uber introduced Instant Pay last year, as a way to use the revenue from their Uber fares right away, without waiting for it to be deposited into their own bank account.
- The company first launched the program with GoBank and a dedicated Visa card, but eventually opened it up to virtually all U.S.-based MasterCard, Visa or Discover debit card tied to checking and savings accounts.
- Opening things up led to a big spike in usage, which is how the service managed to account for over \$1.3 billion dollars in cash-outs by drivers in its first year alone.
- The program is expanding again today, with new eligibility requirements that essentially open it up to all drivers and UberEATS and delivery couriers with at least one trip on file, though it's still limited to users in the U.S.

Telegram now lets users buy things from chatbots in its messaging app

- Telegram is bringing support for payments for chatbots likely to open up a whole series of commercial opportunities for companies that want to use the chatbot platform to connect with consumers.
- The most obvious is e-commerce, but real-life commerce through bots — for example, buy a coke in a shop by interacting with its bot — is a possibility that other companies beyond Telegram are considering.
- Kik CEO Ted Livingston recently told TechCrunch that the introduction of payments is key to making chatbots live up to the hype.
- “Imagine a world where you can order pizza, pay for a pair of shoes, hire a cab, or refill your subway pass — all in a few button taps on Telegram,” Telegram explained in a blog post.
- Telegram is working with Stripe to enable payments, but has plans to add RazorPay, FlutterWave, PaymentWall, Yandex.Money and Qiwi, which will give it a stronger footprint in India, Africa, Russia and beyond.

Is Retail Ready For Blockchain Implementation Yet?

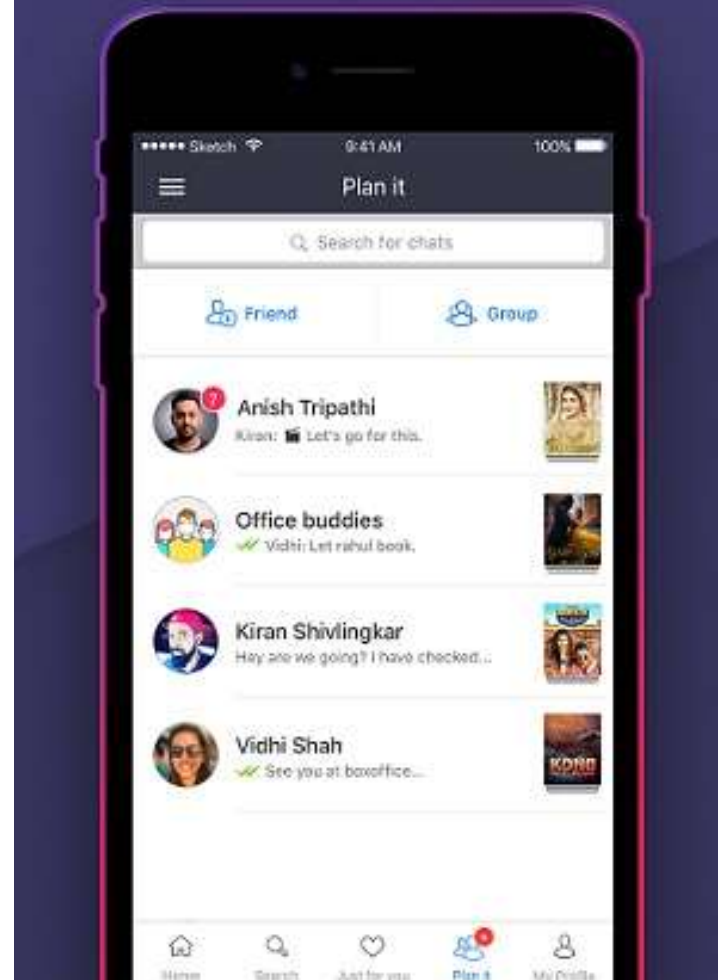
- It will be another five years before we see the beginnings of blockchain moving into any retail mainstream.
- Until now, there haven't been retail use cases carried out or shared on the larger global stage.
- One company that's starting to move the blockchain ball is Walmart. The super store is hoping to patent a blockchain technology-based system to help track unmanned drone product deliveries.
- This brings into question whether or not Walmart will soon start accepting cryptocurrency bitcoin as a new form of currency in its retail locations.
- The likelihood of bitcoin and blockchain technology being used in retail seems to be a bit murky for the moment, but there may be potential within the next five to 10 years.



BookMyShow collaborative commerce

- The BookMyShow gives users a hassle-free way to plan their movie experience.
- BookMyShow claims to have blended social conversations into its app functionality while building on conversational commerce as the backbone.
- Plan-it is embedded as a tab in BookMyShow's app and allows friends and families to interact with each other in real time and suggest movies, showtimes, venue options, and eventually complete the ticket booking.

Create a group and
make a movie plan with your friends



Kik launches cryptocurrency payment service

- Messaging app Kik announced Thursday it will use cryptocurrency tokens as the primary transaction currency on the platform — an unusual effort to compete against its behemoth rival, Facebook Messenger.
- The new program means that Kik can now use an internationalized currency for many transactions.
- Kik's implementation of cryptocurrency is relatively unusual because most apps use local currencies for payments.
- Canada-based Kik's cryptocurrency, Kin, will be based on a different type of technology, ethereum blockchain.
- Canada is one of the top 10 areas most interested in ethereum over the past 12 months, Google Trends data show.
- In its announcement, Kik also called out the monopolies of giant tech companies and called for innovation and decentralization.

Kik To Integrate Kin Token As First Mainstream Adoption Of Cryptocurrency

- Kik plans to create a decentralized ecosystem of digital services through four steps.
 1. Create the Kin cryptocurrency on Ethereum
 2. Integrate Kin into Kik
 3. Develop the Kin Rewards Engine, an innovative cryptoeconomic structure intended to promote the use of Kin as a common currency
 4. Launch the Kin Foundation, envisioned as a non-profit governance body for the Kin Ecosystem
- “We believe cryptocurrency is the next important business model innovation in tech,” said Fred Wilson, partner at Union Square Ventures and Kik board member. “Kik will be the first mainstream application to integrate a cryptocurrency. This could be a watershed moment for the blockchain sector.”
- Digital services, like chat apps and social platforms, are unifying communications, information, and commerce in new and unprecedented ways. Future generations will find this to be a natural and core aspect of their daily lives.

Kik Is Developing a Cryptocurrency to Democratize the Digital World

- Kin's economic model allows users to earn the currency in a variety of ways, such as through interacting with chatbots and other services on the platform that are created by brands, publishers and other companies.
- Brands might find Kin as a useful way to reward people for carrying out various tasks or activities, such as offering Kin in exchange for posting about them or interacting with an experience.
- Users can then spend their Kin on interactions with a chatbot or through tipping.
- A few years ago, the messaging app created Kik Points as a pilot to see if they could get people to spend a digital currency on the platform.
- Kik said the daily value of the currency increased, with daily global transactions three times as high as they were on Bitcoin.

Digital currencies could worsen future financial crises

- Jens Weidmann, the head of Germany's Bundesbank and one of the most powerful figures in European finance, has warned that digital currencies like bitcoin have the potential to make financial crises in the future even more devastating.
- Weidmann believes that central banks will eventually create their own digital currencies to reassure average citizens that such currencies are safe and stable, but in doing so could increase the risk of bank runs in future crises.
- Weidmann's basic point is that by making currencies fully digital in future, withdrawing money from a bank (en masse, as during a bank run) would become much more simple.

Will China determine the future of Bitcoin?

- Developing a homegrown industry around block chain technology — the distributed ledger system used for bitcoin and most other digital currencies — is even a provision of China's current Five-Year Plan.
- In addition to promoting blockchain businesses, the current Five-Year Plan calls for the Bank of China to investigate the possibility of launching its own virtual currency.
- Since 1945, a lot of international trade, including oil, has been priced in dollars. But if as the Trump election suggests, the US no longer wants to worry so much about the world, the dollar might not be as desirable as a reserve currency. But with the RMB and the Euro not up for the job either, investors might turn to bitcoin.
- This will spur still more demand for bitcoin, Arthur Hayes, CEO of Bitmex.com, a Hong Kong bitcoin exchange, predicts. "I think right now it's definitely on track to being the reserve digital currency. It's not going to replace the US dollar or anything, but in terms of Internet money it will be the thing that everything gets priced against".

Philip Morris Test Promotes Blockchain Payments in Poland

- The cigarette company and fintech firm Billon Group reportedly have completed a test replacing prepaid cards with the distributed ledger technology, enabling digital and mobile payments.
- A recent plan put forth by the Monetary Authority of Singapore, for instance, seeks to use the tokenized form of the country's dollar on a distributed ledger to enable clearing and settlement of payments and securities.
- So far, the 8 month project has resulted in the creation of a “working interbank transfer prototype on a private network,” according to a progress report from Deloitte.

Singapore Tokenizes Fiat Currency on the Blockchain

- In a report entitled “The Future Is Here,” Singapore’s central bank announced that it has completed the first phase of a project involving the development of a tokenized version of the Singapore dollar on an Ethereum-based blockchain.
- Project Ubin is an attempt to create a functional replacement for Singapore’s interbank payments network using tokenization and blockchain technology.
- The prototype, if implemented, would not affect the net money supply, as all tokens are backed by Singapore dollars held in “custody” by the central bank and which can be freely exchanged back to fiat currency.
- if Singapore’s project is fully implemented, it would mark the first tokenized fiat currency and the first blockchain-based interbank payments system.
- The project’s next goal will be to test the viability of a tokenized blockchain-based solution to domestic and international securities transactions — such as the global stock exchange — and cross-border interbank payments.

Bank of Canada won't use blockchain for interbank payment system

- The Bank of Canada said its experiment with blockchain showed it is currently not compatible with operating the country's centralized interbank payment systems.
- The Bank's conclusion comes after a year-long experiment in partnership with Payments Canada, which is responsible for the country's clearing and settlement infrastructure, and Canada's largest banks.
- Payments Canada clears a daily average of more than C\$175 billion (\$130.42 billion) through the wholesale interbank payment system, which is overseen by the Bank of Canada.

Latin American cash crunch is an opening for blockchain

- Digital payment methods like bitcoin have become increasingly popular in this region.
- They offer a means to withstand economic fluctuations, providing a stable store of value and a secure means of transaction, and traditional banking and financial services system need to pay attention.
- A report recently released by the United Nations found that blockchain could strengthen security and reduce costs in Latin American banks.
- Blockchain has the potential to greatly reduce the systemic risks of banks venturing into developing economies in the Caribbean and Latin America.

Denmark says world needs TechPlomacy

- Anders Samuelsen, Denmark's minister for foreign affairs is spearheading innovation by appointing Denmark's, and the world's, first ever tech ambassador, to be stationed in Silicon Valley, and the country also set up an innovation center in Tel Aviv last year, one of seven the Scandinavian nation has opened globally.
- Samuelsen has created the role of the tech ambassador because he believes nations today need "TechPlomacy" to work alongside traditional diplomacy.
- Companies like Google, Apple, Facebook and Alibaba are so big that they shadow the economies of some countries, he said.
- "This is a fact of life and therefore some of these companies affect Danish citizens more than for example a traditional country like Iceland or Greece, because the citizens deal with Google or Facebook or Twitter every day."

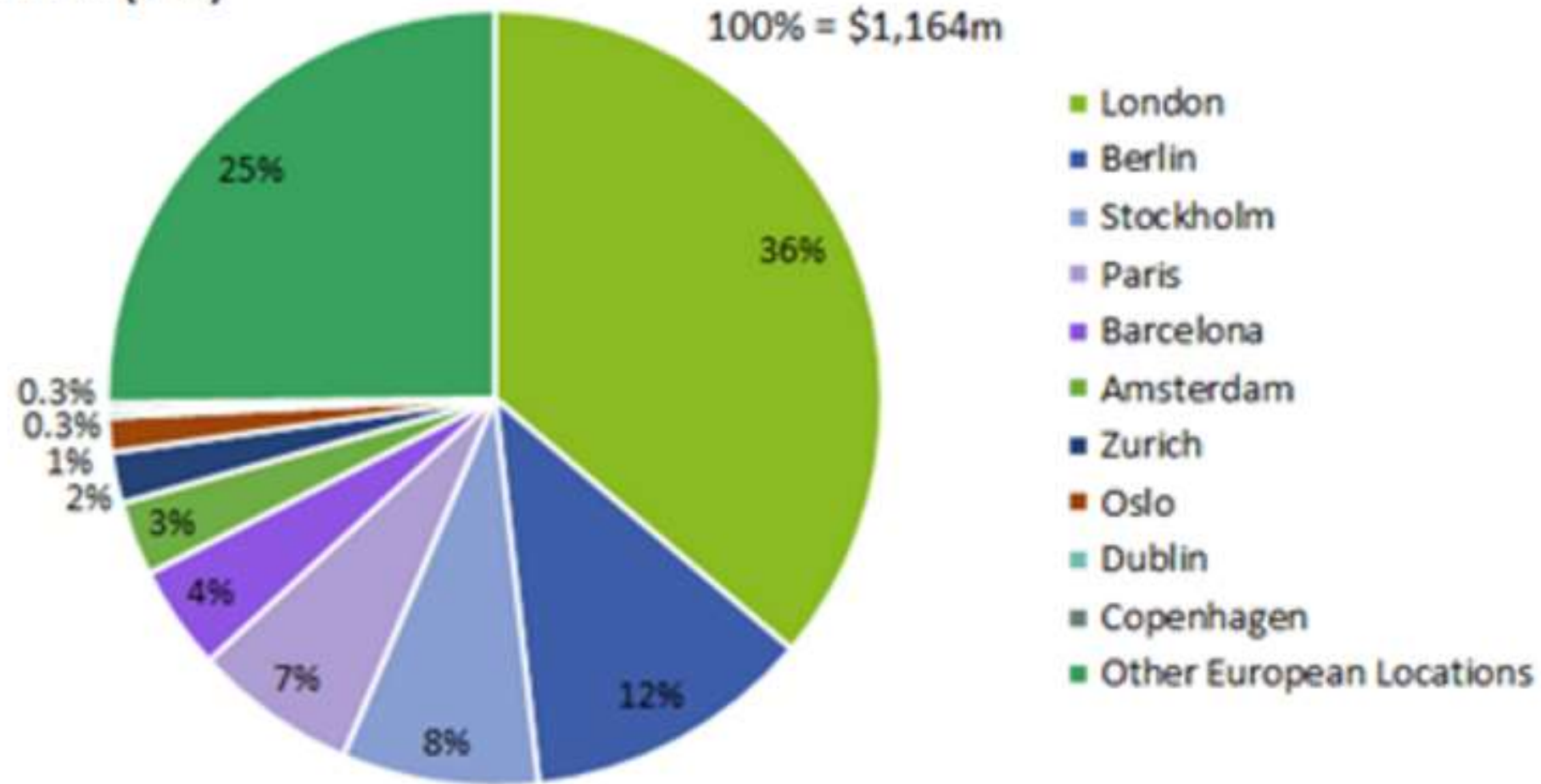
Icelanders secrets to economic prosperity

- 1-A government energy expert from Iceland gave a presentation, “Lessons from Iceland: How to Reinvent an Economy.” Halla Hrund Logadottir, ministerial adviser for the Icelandic Energy Fund, discussed the country’s transition decades ago to getting nearly all its power from geothermal energy. The widespread adoption of geothermal power has saved the country billions of dollars in energy costs over three decades. Another economic lesson learned from Iceland: Don’t let bad policy decisions ruin the economy.
- 2-It's also instructive to consider the recent debate in Iceland, a country that may eventually adopt the EU currency and in the shorter run peg to the euro. With a population of about 330,000, Iceland is wary of external capital flows whipsawing a floating rate currency up and down too easily. However, tourism is now Iceland's most important economic sector, and a euro adoption or peg would make it easier for both visitors and natives. The euro may be flawed, but Iceland seems to be concluding that the alternatives would be worse.

1-The Barents Observer, 16/5/2017, <https://thebarentsobserver.com/en/2017/05/norwegians-and-icelanders-let-alaskans-secrets-economic-prosperity>

2-NWA Observer, 21/5/2017, <http://www.nwaonline.com/news/2017/may/21/euro-s-future-is-looking-brighter-20170/>

FinTech Investments to Europe's Major Cities vs. the Rest of Europe, Q1 2017 (USD)



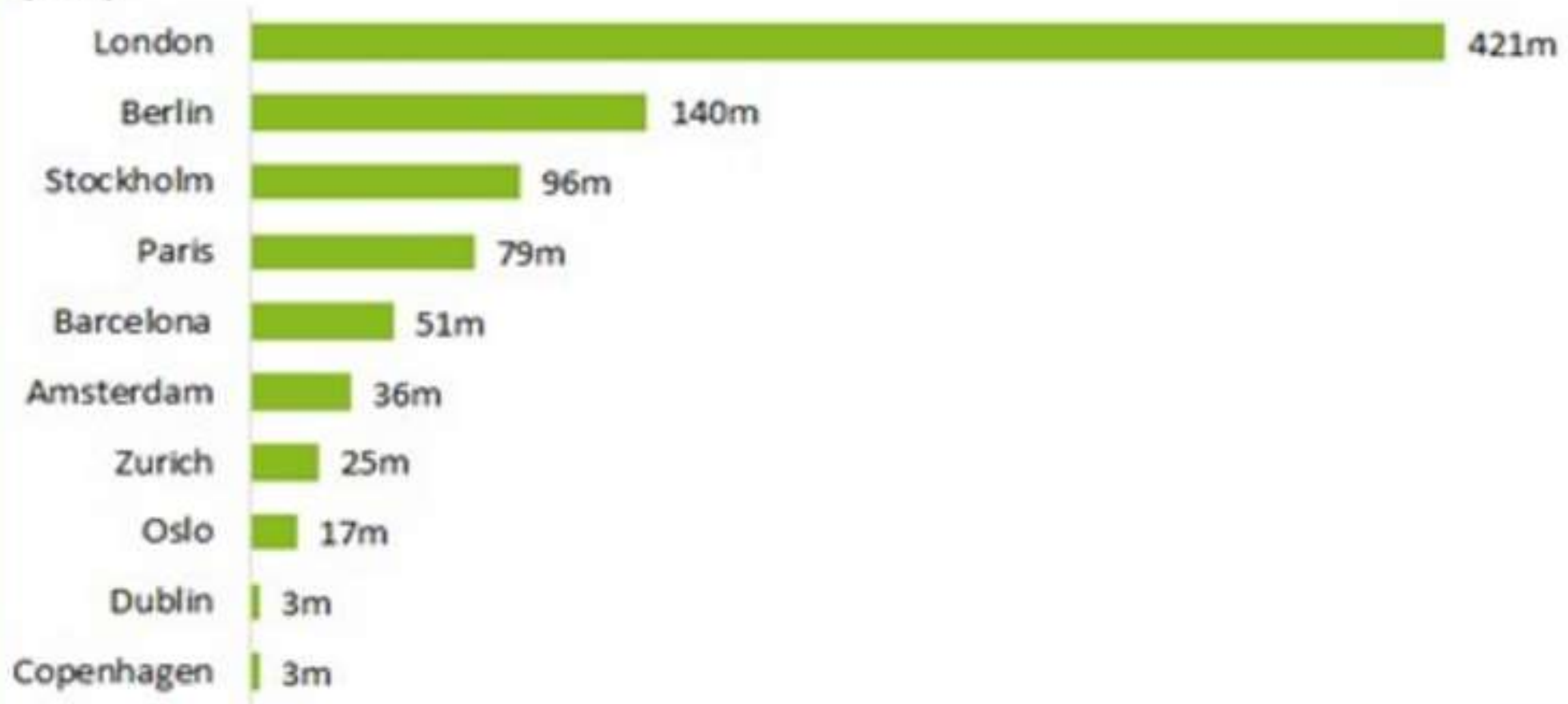
Source: FinTech Global



European fintech 2017

- More than a third of the aggregate of \$1,164 million in fintech investments (2017 Q1) was claimed by London-based fintech companies (36 per cent of the total), which was more than three times as much as companies located in the second-placed city, Berlin (12 per cent).
- Berlin doubled its share from 6 per cent to 12 per cent over 3 years.
- In 2016, German fintech entrepreneurs raised \$108 million in funding.
- The three largest European rounds for fintech were all held in Germany, including the \$40 million round raised by German digital bank N26.
- One in four German fintech start-ups are alternative lenders (direct lending), while another 17 per cent are crowdfunding platforms. 27 per cent are alternative payment providers, while the rest are active in insurance, ID verification, and online shopping. 56 per cent of German banks cooperate with fintechs for their digital strategy, and of these, 80 per cent are satisfied with their cooperation.

FinTech Investments in Major European Cities, Q1 2017 (USD)



Source: FinTech Global



Top German fintech firms 2017

- [Ascribe](#) is a platform for artists and creators to keep their digital art secure using blockchain technology. It was founded in 2014.
- [Friendsurance](#) is a P2P insurance firm, founded in 2010. It rewards users up to 40 per cent of paid contributions annually under a 'no-harm bonus', if they don't have any claims.
- [GetSafe](#) is an insurtech start-up that offers an app to manage all insurance policies. The free GetSafe App helps users manage their insurance policies in one place. The company is among the best-known and fastest growing InsurTech start-ups. It gives consumers a digital overview of their existing insurance policies, helps optimize their insurance portfolio, and provides free and independent advice through insurance experts.

Top German fintech firms 2017

- [Kreditech](#) is an online lender that provides loans to people based on their creditworthiness which is analysed using their online data rather than traditional credit rating information. The company mainly focuses its efforts on emerging markets. Founded in 2012,
- [Mambu](#) is a cloud platform that allows banks to create, launch and service deposit and loan products quickly. Founded in 2011 by Eugene Danilkis, Frederik Pfisterer and Sofia Nunes, the company works with over 145 institutions in 35 countries globally, servicing a portfolio of over a million accounts.
- [Number 26](#) was founded in 2013 by Maximilian Tayenthal and Valentin Stalf. Based in Berlin, the company aims to transform the traditional banking and how individuals spend, send and save money.

Top German fintech firms 2017

- [Scalable Capital](#) is a digital investment service that uses proprietary software to pull together dynamic portfolios. It democratises investing, bringing services previously only available to institutional investors to the wider public at a fraction of the cost. The company was founded by Erik Podzuweit, Adam French, Patrick Pöschl, Stefan Mittnik and Florian Prucker in 2014.
- [Spotcap](#) is an online lender for small and medium-sized enterprises. The company was founded in 2014 by Jens Woloszczak and Toby Triebel, and is supported by Rocket Internet.
- [Traxpay](#) provides a platform that enables 24/7 B2B payments and transactions in real time. Founded in 2012, the company is transforming the way business gets paid and pay with the world's first B2B Dynamic Payments platform. Traxpay customers are B2B commerce network operators, corporations, and digital marketplaces

Top Swedish fintech firms 2017

- [BehavioSec](#) (2007) is a biometric security app that helps banks verify users based on their behaviour, such as the way they type or move their mouse.
- [iZettle](#) (2010) is a point-of-sale and payments firm known for being one of the first in the world to develop a bank card payment device linked to a smartphone app.
- [Klarna](#) (2005) is an online payment services for storefronts. It allows customers to make purchases online by just using their postcode and email address. After the purchase is complete, the users can fill in payment and delivery information. Klarna pays the seller and claims the money from the user later on, taking on the upfront risk.
- [Tink](#) (2012) is a financial management app that helps users manage their accounts, pay their bills and manage money transfers.
- [Trustly](#) (2008) is a direct payments system that allows users to shop online with a single-sign-in system, by sharing their payment information with Trustly.

Top French fintech firms 2017

- [Ledger](#) is a start-up that combines payments, cryptography, and security. The launch of a hardware wallet, Ledger Nano, in over 80 countries established the company in the international bitcoin market. The company provides bitcoin wallets Ledger Nano, Ledger Blue and Ledger HW.1.
- Lendix (2004) is an online marketplace for business loans, connecting investors to SMEs that need funding. The company has enabled business to raise over €26 million worth of loans. After acquiring a competitor, Finsquare in April, the company raised \$13.5 million from Decaux Frères Investissements, Weber Investissement, Sycomore Factory, Partech Ventures, Zencap AM, Matmut and CNP Assurances to become one of the top lending platforms in Europe.
- MyMajorCompany (2007) is a crowdfunding platform for music fans to back their favourite artists. During its first year, the company raised over €1 million, and in 2012, the company expanded its business model to include entrepreneurs, artists, video game creators, publishers, and movie makers.

Top French fintech firms 2017

- Paymium (2011) is a European web-based exchange that allows all bitcoin transactions between traders and consumers. In compliance with European regulations, the company offers secure, reliable and high-performance trading platform. Paymium is the first Bitcoin Marketplace that is fully integrated with a Payment Institution.
- PayPlug (2012) is a payment system that allows SMEs, particularly small merchants and freelancers, to accept credit card payments without any monthly costs.
- SmartAngels (2012) is a crowdfunding platform that allows retail investors and professionals to back start-ups. It now has over 15,000 members who have collectively funded 25 start-ups for over €15 million.

Top French fintech firms 2017

- Ulule (2010) is a crowdfunding platform. In September this year, the company did a fundraising of €5 million from the MAIF, BNP Paribas, and Citizen Capital investment fund.
- Younited Credit (2009) is a peer-to-peer lending platform recognised by the French central bank. The company allows institutional investors and private individuals to lend money to borrowers directly via a secured bond marketplace. The company has managed more than €347 million in loans.
- Weeleo is the first P2P platform to exchange cash currencies. It links travellers who want money with others who want to sell, leading to huge savings compared to traditional currency platforms.

Top Spanish fintech firms 2017

- [Coinffeine](#) (2013) is an open source, peer-to-peer (P2P) bitcoin exchange platform and is the first company in the world to be created using Bitcoins.
- [Kantox](#) (2011) is an online foreign exchange platform that offers midsize businesses a comprehensive solution based on transparency, efficiency and savings. To date, the company has received €7.5 million in investments from Partech Ventures, IDinvest Partners, Cabiedes Partners and individual business angels.
- [peerTransfer](#) (2009) offers tuition transfers and payments in the education sectors. peerTransfer has main offices in Boston and Valencia and has recently received a multi-million dollar investment from Bain Capital, one of the largest venture capital funds in the EU.
- [SetPay](#) offers individuals and businesses a mobile point-of-sale POS option to allow credit card payments at a lower cost than conventional means.

Top Netherlands fintech firms 2017

- [Adyen](#) is an SME tool that processes payments across online and mobile. It is compatible with over 250 payment methods and 187 transaction currencies. Headquartered in Amsterdam and San Francisco, with offices across North America, South America, Europe and Asia, Adyen serves more than 3,500 businesses and four of the five largest US Internet companies (including Facebook, Uber, Airbnb, Netflix, Spotify, Dropbox, Groupon, Evernote, Booking.com, Viagogo, Yelp, Vodafone, Mango, O'Neill, SoundCloud, KLM and JustFab). In 2016, Adyen was valued at \$2.3 billion, making it a Dutch fintech unicorn.
- [AcceptEmail](#) enables simple and secure electronic billing and payment via e-mail and online payments. AcceptEmail digitises billing so that users receive it on their phones, tablets or PCs via email or text message, which they can pay instantly by clicking a banner. Once the bill has been paid, the payment status in the email changes from blue to green, notifying the sender and receiver in one simple click.

Top Netherlands fintech firms 2017

- [Bell ID](#) helps users manage credentials on smartphones, smart cards and connected devices. The company's software integrates with any third-party technology and simplifies the issuing complexities of payment, identity, loyalty and transit applications. Bell ID's software is called Secure Element in the Cloud. This solution stores and manages payment credentials in the cloud rather than on the smartphone, avoiding the need for complex partnerships to gain secure access to the phone. When making transactions, card numbers are replaced by alternative numbers that are checked in real time when the phone is tapped against a payment terminal.
- [Bitmymoney](#) simplifies the complexities around bitcoin. It offers an online bitcoin account that allows users to manage bitcoins without any knowledge of wallet software or bitcoin addresses.
- [Bitonic](#) hosts a European exchange (BL3P) in which buyers and sellers can trade bitcoins directly through its platform. Bitonic is the only bitcoin company in the Netherlands that possesses multiple bank accounts.

Top Netherlands fintech firms 2017

- Bunq (2003) offers multiple financial services under a government-provided banking license. Users can manage bank accounts and multiple cards on one platform.
- Five Degrees is a banking tool for retail or private banks that is completely centred on user experience.
- Flow Traders (2004) is a liquidity provider, particularly focused on Exchange-Traded Products (ETPs).
- GlobalCollect (1994) is a payment service provider that has a single-interface platform for local and international payments in most countries around the world.
- Payvision connects banks, PSPs, ISOs and their merchants to a central global acquiring platform. The company processes over 100 million transactions per year with a total of \$3 billion in value. Among its partners are ProPay, Rentabiliweb Group, Wing Lung Bank, ControlScan, Dah Sing Bank and Virtual Piggy.

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