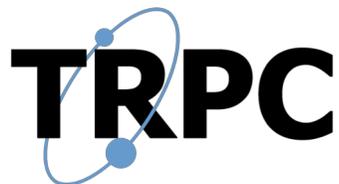


Where can we see the *Deep Economic Impact of Technology?* And how do we capture it?

2019 CSIS Global Dialogue
16 September 2019 | Jakarta, Indonesia



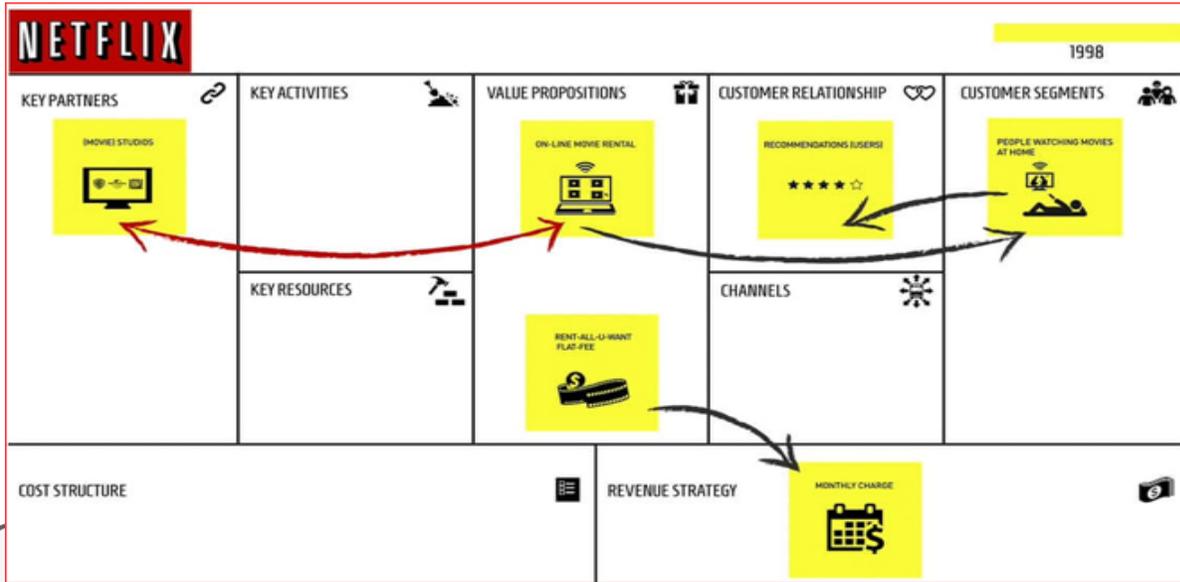
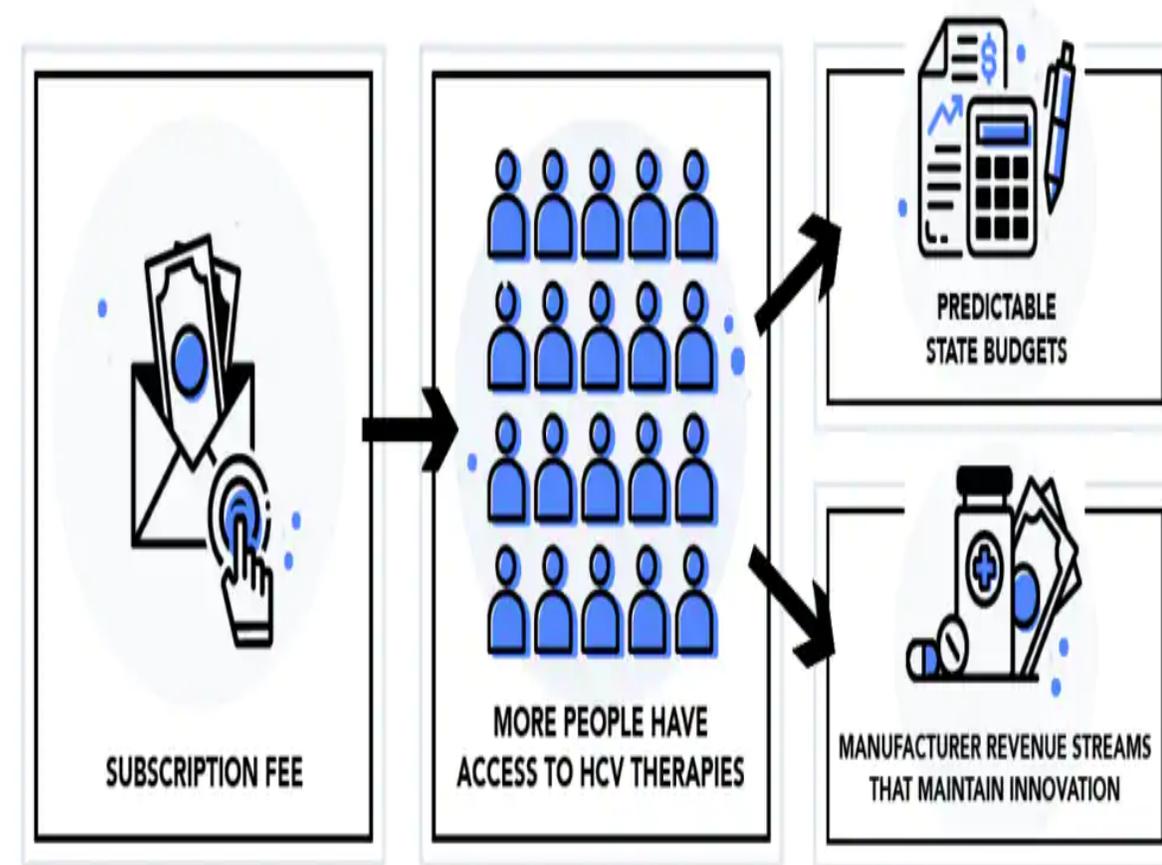
Dr Peter Lovelock
*Director and Founder | TRPC | Singapore Hong Kong
Beijing Melbourne*
Associate Professor | Singapore Management University

DEEP

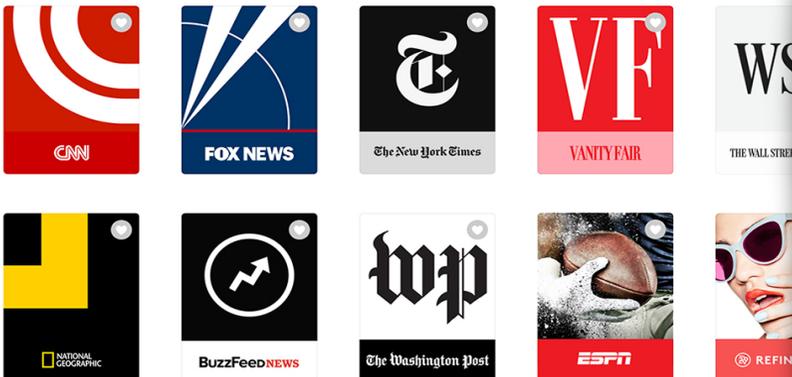
—

The 'Netflix model'

.... to use in Hepatitis C



Follow Your Favorites



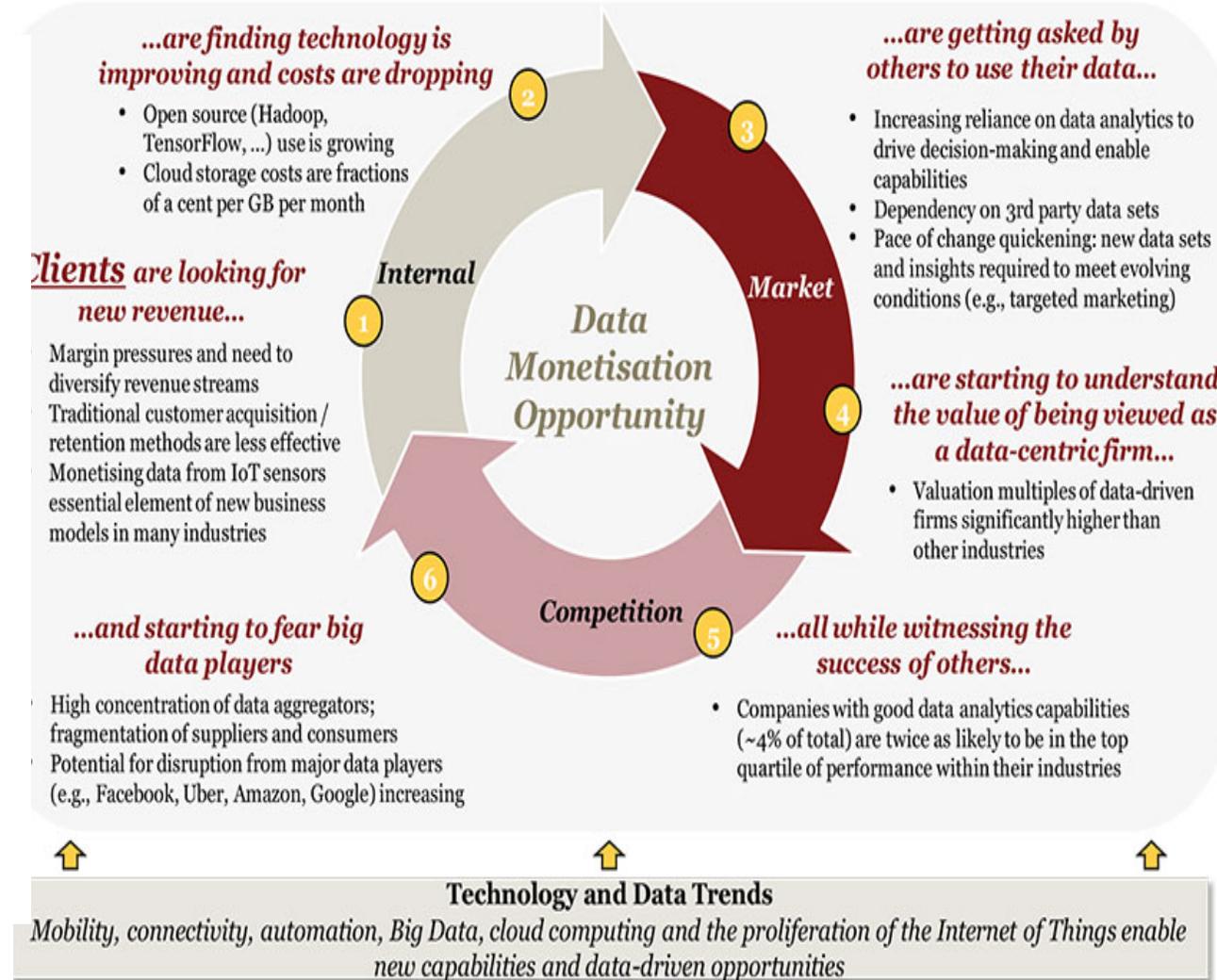
San Diego Union-Tribune @10-12-11
CREATORS.COM

NETFLIX



UNTIL WE CHANGE
OUR MINDS AGAIN,
OUR NEW BUSINESS
MODEL WILL BE...

What is your data worth?



Proposition 1: The long-term (?) trend will be towards valuation of the asset: data + what it enables

somewhat similar to our identification and categorization of *services*, but vastly different in our conceptualization and calculation

ECONOMIC

—

Interoperability – Oversight – Financial Inclusion

THIS LEADS TO IMPROVED BROADBAND CONNECTIVITY ALLOWING EDGE PROVIDERS TO PROVIDE MORE INNOVATIVE CONTENT



BROADBAND CONNECTIVITY



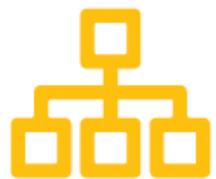
CONTENT CONSUMPTION

EDGE PROVIDERS PROVIDE A VARIETY OF INNOVATIVE CONTENT FOR CONSUMERS



DEMAND FOR ACCESS

AN OPEN INTERNET ALLOWS CONSUMERS TO SELECT RELEVANT CONTENT AND DEMAND FOR ACCESS



NETWORK DEPLOYMENT

ISPs IMPROVE AND UPGRADE NETWORKS TO CATER TO THE INCREASED DEMAND FOR ACCESS



THIS LEADS TO IMPROVED BROADBAND CONNECTIVITY ALLOWING EDGE PROVIDERS TO PROVIDE MORE INNOVATIVE CONTENT

Services across sectors are delivered in more targeted ways, at minimal costs, and with increased agility and impact



E-government: increasing citizenship engagement, govt reach, delivery of services, flexibility and nimbleness



E-wallets and E-finance: boosting financial inclusion by bringing formal financial service to un- and under-served areas



E-health: extending healthcare services to un- and under-served, reducing waiting times, basis for transformation from institutional care to home care



E-education: enabling people, to access quality education, affordable life-long training and skills upgrading, transformation to personalised, accelerated learning

Proposition 2: There will be new public-private models emerging for joint development (and construction) initiatives: emerging around data access, sharing and use

these will emerge in everything from payments and transactions, to security, to defense, to competition, to tax

IMPACT

—

**"You can see the computer age everywhere
but in the productivity statistics."**

Robert Solow

**"We wanted flying cars, instead we
got 140 characters."**

Peter Thiel

"You can't manage what you can't measure."

Peter Drucker

What's 'new' in the digital economy?

- *Household producers*, enabled digitally by *intermediary* platforms/marketplaces.
- *Global consumers*, enabled by direct interactions with *foreign businesses*.
- *Data* (especially data from “free” services) as capital and input.
- *Intangible* goods and investment.
- *Digital delivery* of goods and services, and
- An increasingly *blurred line* between goods and services

Challenges to measuring digitally-enabled trade

- *Unclear definition* of digitalization leading to the use of proxies to measure digitalization.
 - Take up in digital tools, internet penetration, ICT skills and infrastructures, etc...
- While official trade data include some transactions enabled by digital technologies, it does not identify all the transactions that are digitally enabled.
- Private company data can provide some insights, but is non-comprehensive and can be biased.
- *Global consumers* are difficult to survey. *Intermediary platforms* (the enablers) might be based in another economy.

Proposition 3: There will emerge a baseline set of digital economy and digital trade measurements .. based upon the use of data (production of data, consumption of data) and trade in data

WAY FORWARD

—

1. Refocusing policy from the top-down (holistically) *and* bottom-up (evidence-based)... simultaneously
2. Flexible; enabling; responsive regulation
3. Process-based approaches
Risk-based does not work under current guise
4. Digital Economy & Trade Measurements
Including impact assessment

Key themes would include:

Digitally-Enabled Trade

- International trade enhanced by digital technologies and electronic means.
- Implications on international trade flow, performance and cost.

Digitally-Delivered Trade

- Goods and services transported over a digital network.
- Implications on trade costs, payments, and the concept of borders.

Data and Information Flow

- The increasing importance of international data and information flow.
- Implications on trade efficiency, privacy, and security.

Changing Comparative Advantage

- Altering the importance of old sources and creating new sources.
- Implications on trade flow, and the Global Value Chain.

An early rendition for ASEAN

Pillars	DIFAP Priority Area	ASEAN Digital Integration Index	Pillar Score
Pillar 1	Facilitate seamless trade	Digital Trade & Logistics	100
Pillar 2	Protect data while supporting digital trade and innovation	Data Protection & Cybersecurity	100
Pillar 3	Enable seamless digital payments	Digital Payments & Identities	100
Pillar 4	Broaden the digital talent base	Digital Skills & Talent	100
Pillar 5	Foster entrepreneurship	Innovation & Entrepreneurship	100
Pillar 6	Coordinate actions	Institutional & Infrastructural Readiness	100
TOTAL ASEAN Digital Integration Index Score		100	

Pillar 1: Digital Trade & Logistics



INDICATOR	DESCRIPTION
Import / Export Formalities and Coordination	Assesses the existence of a National Single Window system, as well as adherence to ASEAN Single Window framework.
Release Clearance and Formalities	Assesses the existence and usage of electronic means of facilitating and streamlining trade procedures.
Cross-Border Coordination and Transit Facilitation	Assesses the existence and usage of computerized and simplified procedures for cross-border traffic.
Number of protectionist laws, acts, and policies	Measures the number of state interventions that affect trade in goods and services, foreign investment, and labor force migration.
Efficiency of customs and border clearance	Measures the speed, simplicity, and predictability of formalities by border control agencies, including customs.
Quality of trade and transport infrastructure	Measures the extent to which infrastructure (ports, railroads, roads, information technology) can assure basic connectivity and access to trade gateways.
Ease of arranging competitively priced shipments	Measures the ability to keep shipments affordable and accessible (facility utilization rates and operational charges related to logistics services).
Competence and quality of logistics services	Measures the overall competence, quality and operational excellence of the logistics and transport operations.
Ability to track and trace consignments	Measures the ability to identify the exact location and the route of each consignment up to its delivery to the end customer.
Timeliness of shipments in reaching destination	Measures the frequency with which shipments reach consignees within scheduled or expected delivery times.

Pillar 2: Data Protection & Cybersecurity



INDICATOR	DESCRIPTION
Cross-Border Data Flows Index (overall CBDFI)	Measures countries' regulatory openness to the movement of data across jurisdictions (examines cross-border flows across eight key dimensions)
CBDFI – Data localization requirements	Is there a data localization requirement? (Assumes that data localization hinders data transfers)
CBDFI – International transfers of personal data	Are there explicit provisions allowing for international or extraterritorial transfers of personal data / personally-identifiable data?
CBDFI – Data classification frameworks	Is there a data classification framework in use for enabling cross-border data flows?
CBDFI – Consent requirements	Is there a consent or notice requirement for the collection, storage, or dissemination of personal data internationally or extraterritorially?
Global Cybersecurity Index (overall GCI)	Reviews and evaluates the cybersecurity commitments and situations of UN member states (5 pillars).
GCI – Legal pillar	Measures governments' commitment to legal measures that authorize a nation state to set up basic response mechanisms.
GCI – Organizational pillar	Measures governments' commitment to organizational measures that set broad strategic targets and goals.
GCI – Cooperation pillar	Measures governments' commitment to a multi-stakeholder approach with inputs from all sectors and disciplines (including bilateral and multilateral agreements).



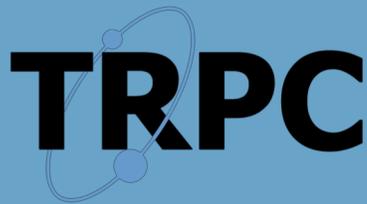
Questions?

Contact:

email: peter@trpc.biz

phone: +65 6920 8561

website: trpc.biz



About TRPC:

TRPC is a boutique consulting and research firm with over 30 years experience in the telecommunications and ICT industries in the Asia-Pacific. We offer specialised advisory, research, and training services, with a focus on regulatory and strategic business issues, and possess an extensive network of industry experts and professionals throughout the region.