

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

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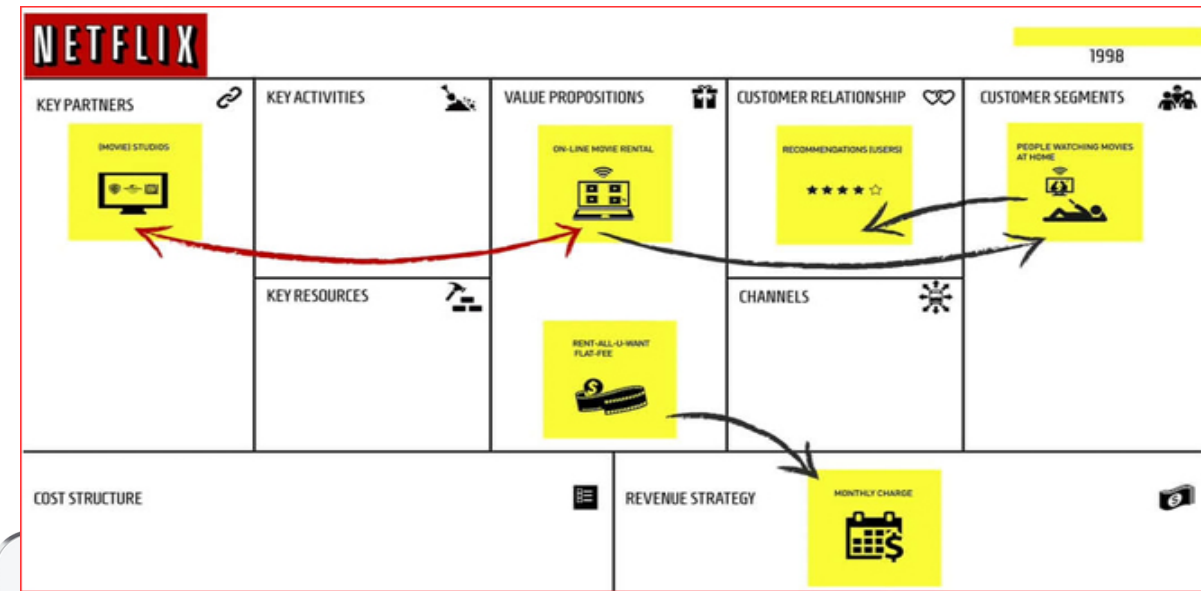
**Dr Peter Lovelock**  
*Director and Founder | TRPC | Singapore Hong Kong  
Beijing Melbourne  
Associate Professor | Singapore Management University*

**DEEP**

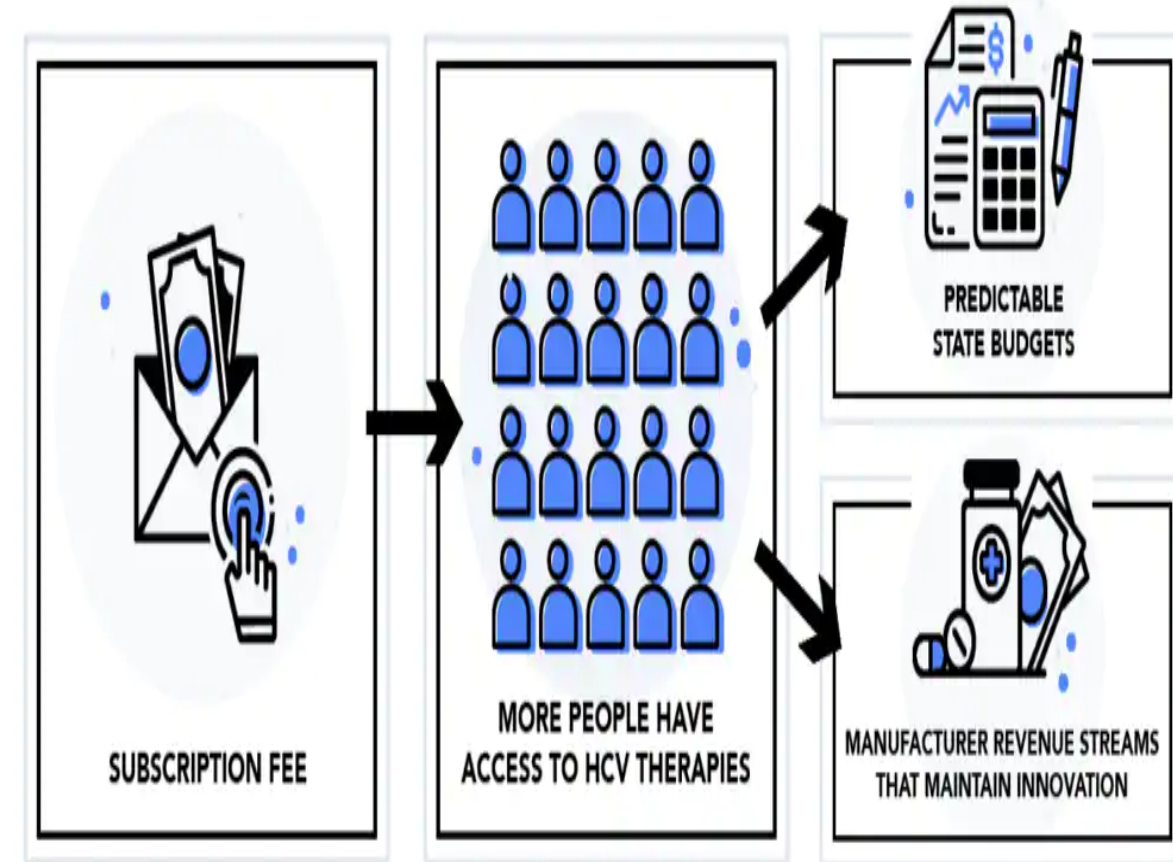
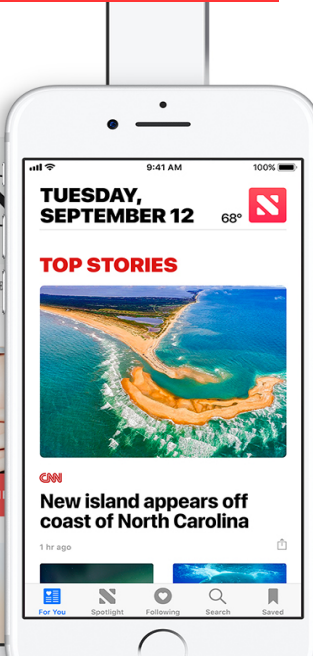
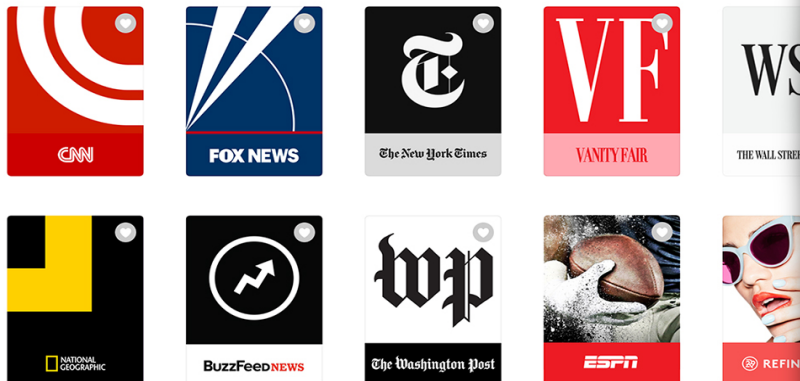
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# The 'Netflix model'

.... to use in Hepatitis C



## Follow Your Favorites



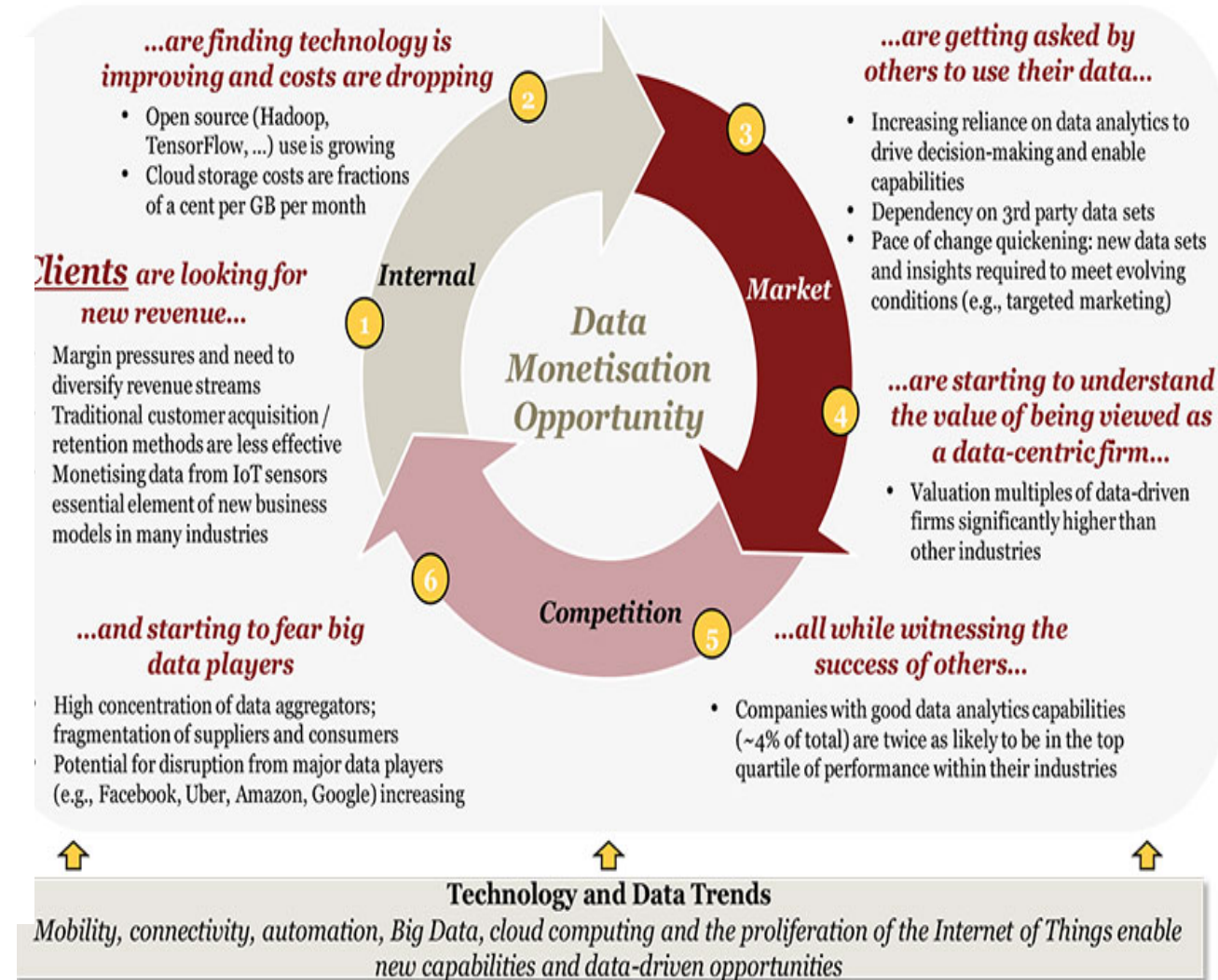
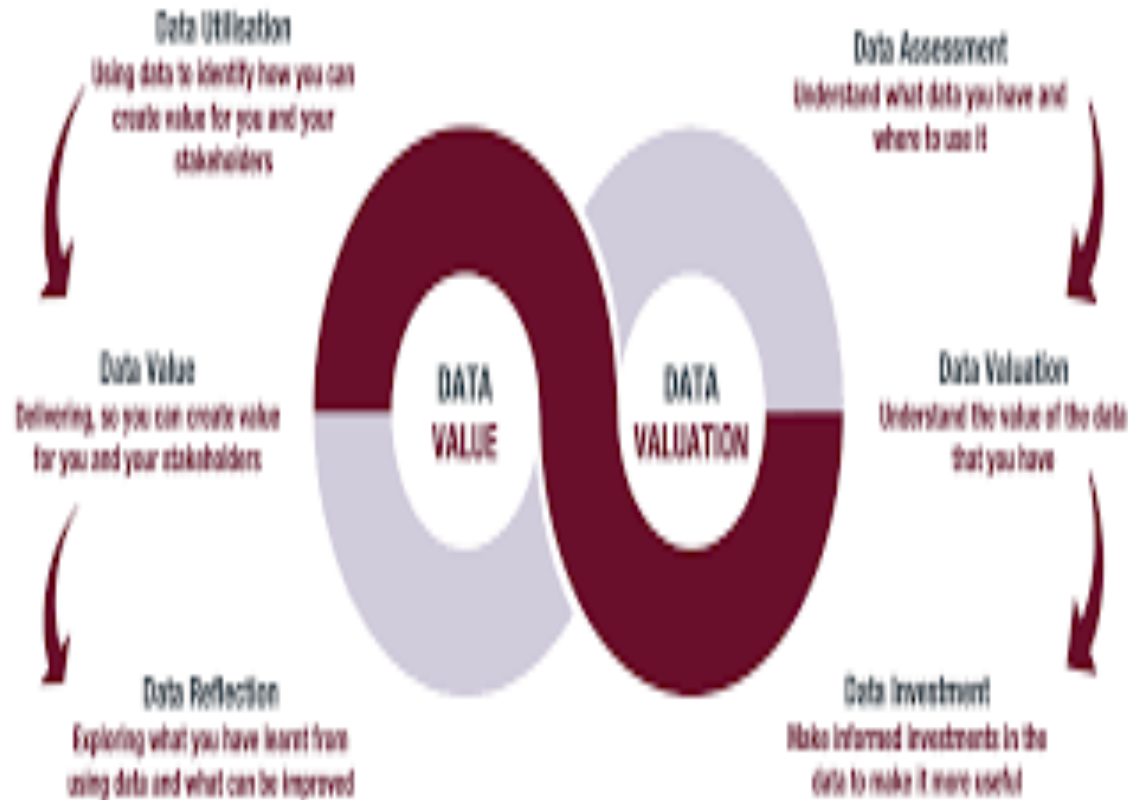
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# NETFLIPS



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

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# 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



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

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**"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 sue of data (production of data, consumption of data) and trade in data



# **WAY FORWARD**

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

# Pillar 2: Data Protection & Cybersecurity



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





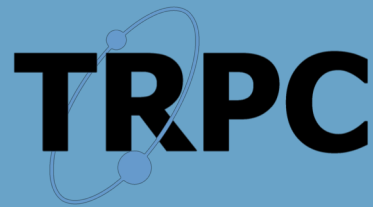
# Questions?

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## 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.