

# CIOs Initiative (trends and technologies)

CIOs in the new

COHERENCE  
"CONNECTED"  
ECONOMY

**STKI's RE-INVENTION  
INITIATIVES**





# The Dunning-Kruger Effect Shows



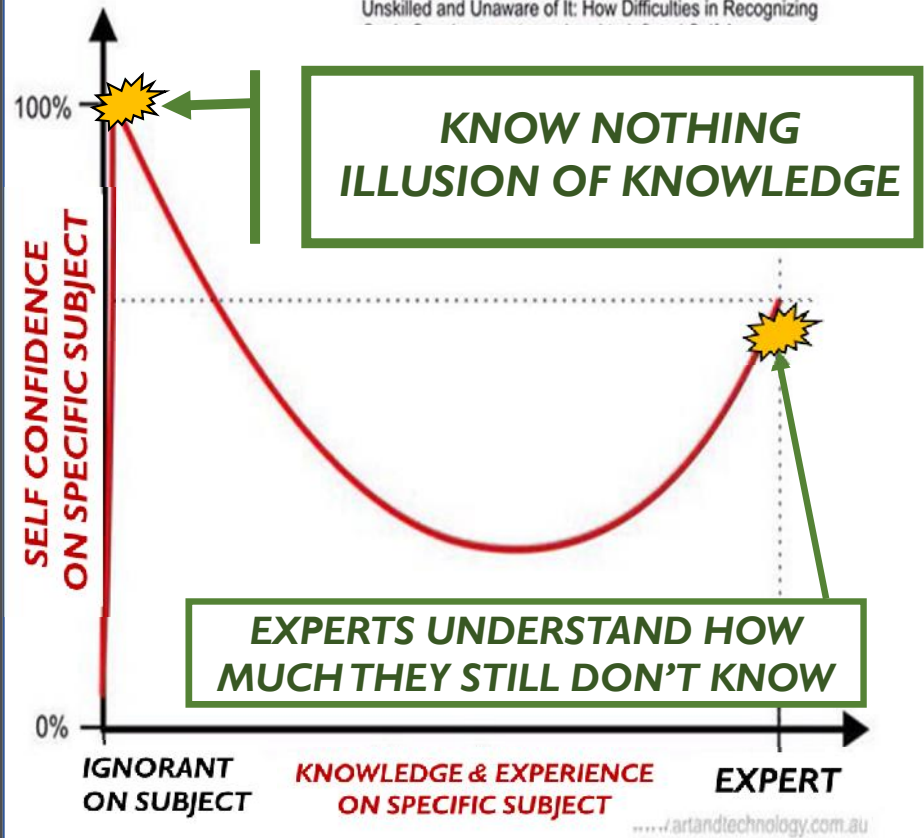
Prof. David Dunning

**people cannot objectively evaluate their actual competence or incompetence**

**TO KNOW WHAT YOU KNOW AND WHAT YOU DO NOT KNOW, THAT IS TRUE KNOWLEDGE. -CONFUCIUS**

# Dunning-Kruger Effect

Unskilled and Unaware of It: How Difficulties in Recognizing

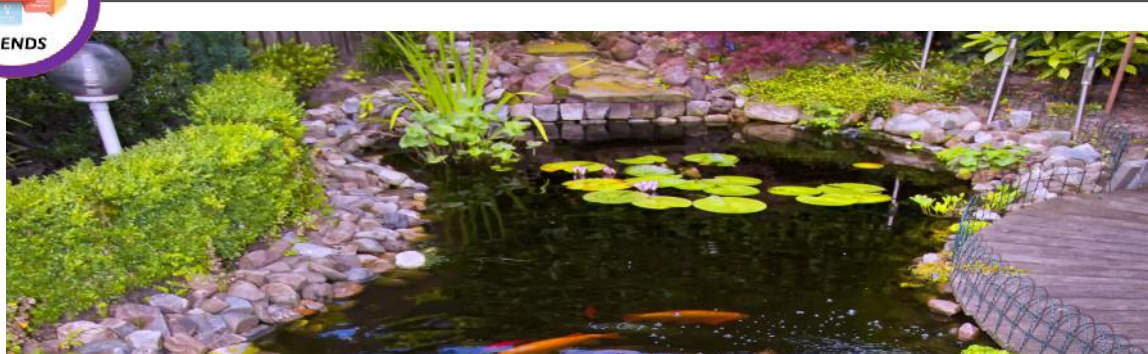




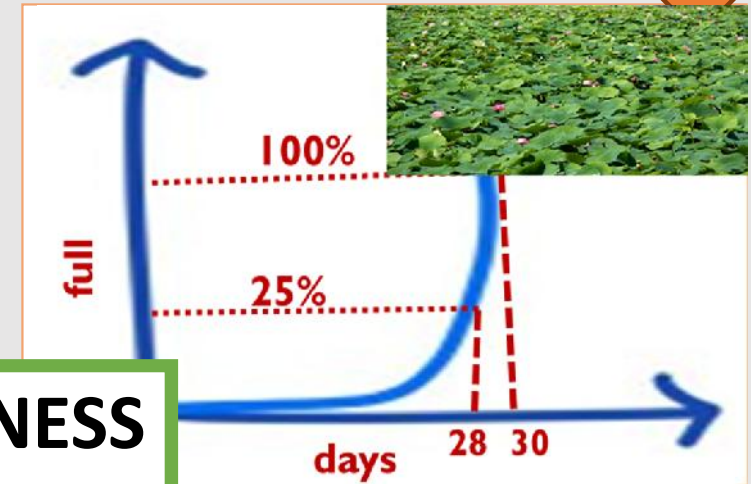
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Where will it be in day 28?

If a pond lily doubles its leaf area every day and it takes 30 days to completely cover a pond, on what day will the pond be 1/2 covered?

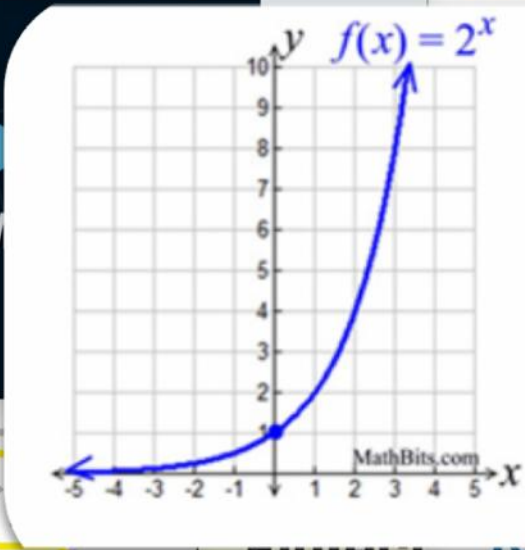


**THE REALITY OF MODERN BUSINESS**  
*the pace of change is exponential*  
*(like the pond lily)*

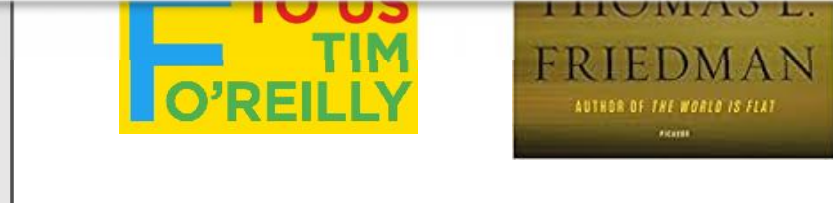


pond lily doubles its leaf area every day and it takes 30 days to completely cover a pond, on what day will the pond be 1/2 covered?





The greatest shortcoming of the human race is our inability to understand the exponential function





**Punctuated Equilibrium**

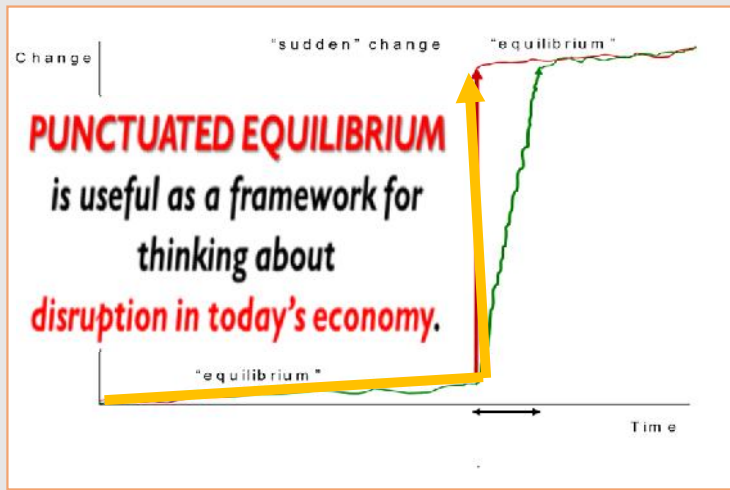
▪ Rate of speciation is

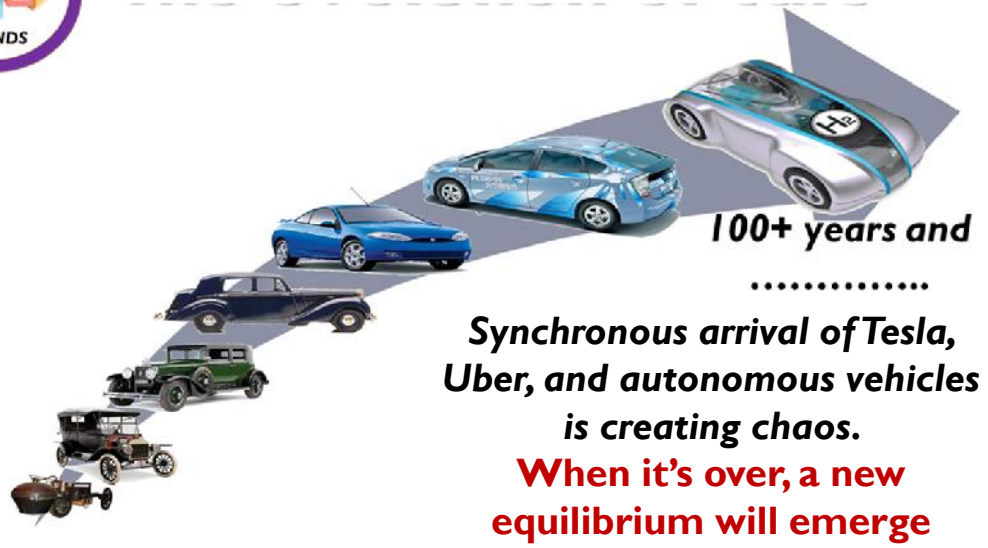
- ♦ rapid bursts of change
- ♦ long periods of little or no change

Species undergo rapid change when they 1<sup>st</sup> bud from parent population



**Stephen Jay Gould**

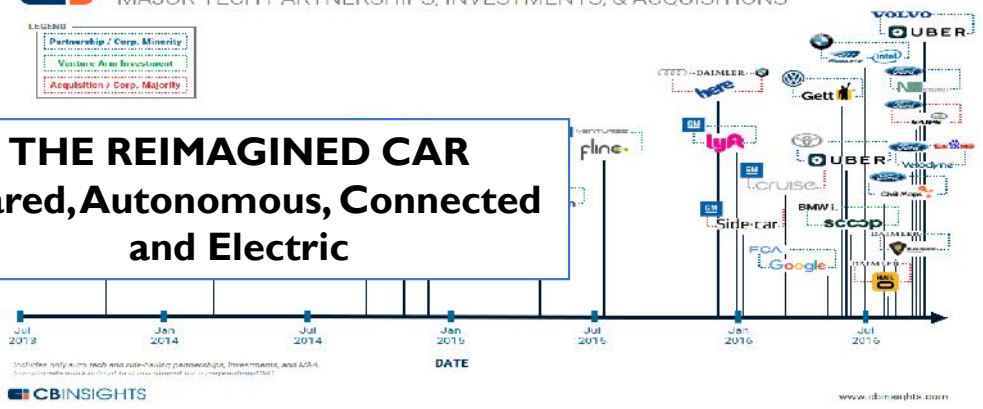




**BIG AUTO'S MOVES IN AUTO TECH AND RIDE-HAILING**  
MAJOR TECH PARTNERSHIPS, INVESTMENTS, & ACQUISITIONS

**LEGEND**  
Partnership / Corp. Minority  
Vehicle Arm Investment  
Acquisition / Corp. Majority

**THE REIMAGINED CAR**  
Shared, Autonomous, Connected  
and Electric



8

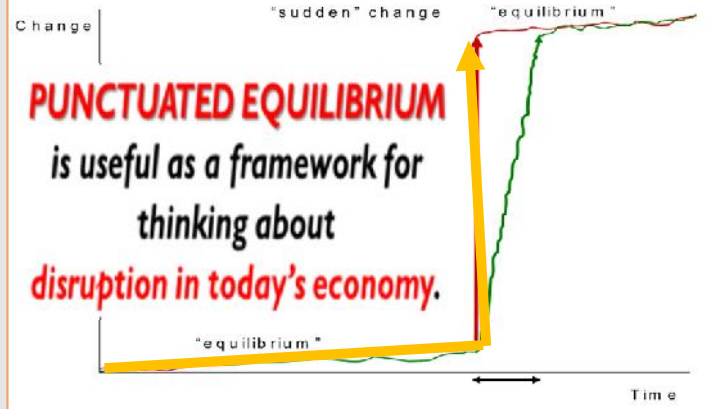
**Punctuated Equilibrium**

Rate of speciation is

- ♦ rapid bursts of change
- ♦ long periods of little or no change



Stephen Jay Gould







# What do we call “DIGITAL” ?



**Resource** becomes so **cheap** and **abundant** that **wasting** it to **create something completely different** makes sense



## Up to 2007 Computing

Integrated circuits and eventually the computer on a chip (Moore's law) at lower and lower prices. More and more sophisticated software was written and the **software/VAS industries were born**

*Mini computers and PCs disrupted the mainframe industry*

## 2007-2017 Communication

The telecoms bust had unintended consequences: the “low price” of usage of long distance cables, mobile tech, data usage and the internet.

*The internet and mobile disrupted everything.*

## From 2017 Memory & storage

With cost per terabyte in free fall, the response is to accumulate more data. Using also the internet and cheap power we have now:

*Big Data, cloud, Blockchain, AI, VR*

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# What do we call “DIGITAL” ?

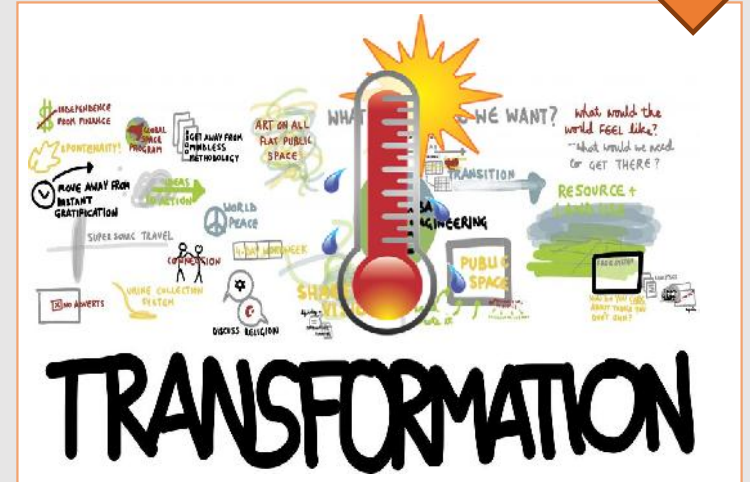
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**Resource** becomes  
so **cheap** and  
**abundant** that  
**wasting** it to **create**  
**something**  
**completely different**  
makes sense

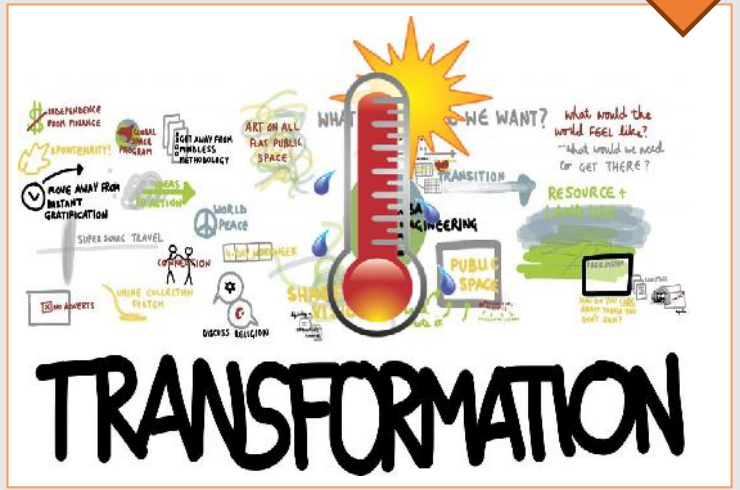


The combination of this three (3) technology changes is what is called DIGITAL





**DIGITAL** is like a machine powered by software and connectivity.





- Concerns primarily **B2C companies** about customer experience and marketing

**FALSE**

- There is **no business case** for digital transformation and happens bottom-up

**FALSE**

- Digital transformation **will happen without IT/CIO.**

**FALSE**

- **Time to digitally transform** in our industry.

**FALSE**

[www.capgemini.com](http://www.capgemini.com)

## Myths of Digital Transformation

**DIGITAL** evolves at the pace of Moore's Law twice as powerful every 18 to 24 months





**commodity economy**

1985-1995



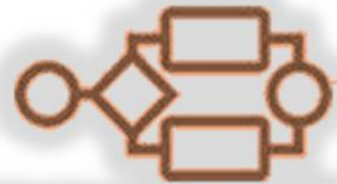
**services economy**

1995-2005



**experience economy**

2005-2018



Process Centricity



Knowledge Centricity



Customer Centricity



**coherence economy**

2018 - ....



# The "coherence" (connected) Economy



technology, hyper specialization, digitization  
 and the ability to control results  
**through software (algorithms)**  
**in a super connected intelligent economy**  
 set to challenge every industry



Welcome to the  
 Coherence  
 (*connected*)  
 Economy

*intelligent agents*  
*interconnect and manage our*  
*activities (personal/work)*

Uri Sarid@MuleSoft

15

**Coherence Economy requires  
 businesses to be armed with:**

- *innovation speed*
- *data alignment in  
algorithmic platforms*
- *product/ services  
customization*

*The one sure way  
 to fail is a boring  
 algorithm.*

*The only chance  
 for success is a  
 remarkable one*





 **redefine *speed* to innovate**  
*(consumer expectations.)*

 **Aligning data feeds from**  
**multiple channels with**  
**integration platforms**

 **Customize using new processes &**  
**technologies to fulfill spikes, ,long-tail**  
**needs, and experiment (without**  
**needing economies of scale)**

**COHERENCE ECONOMY**

**Trek: what do businesses need ?**

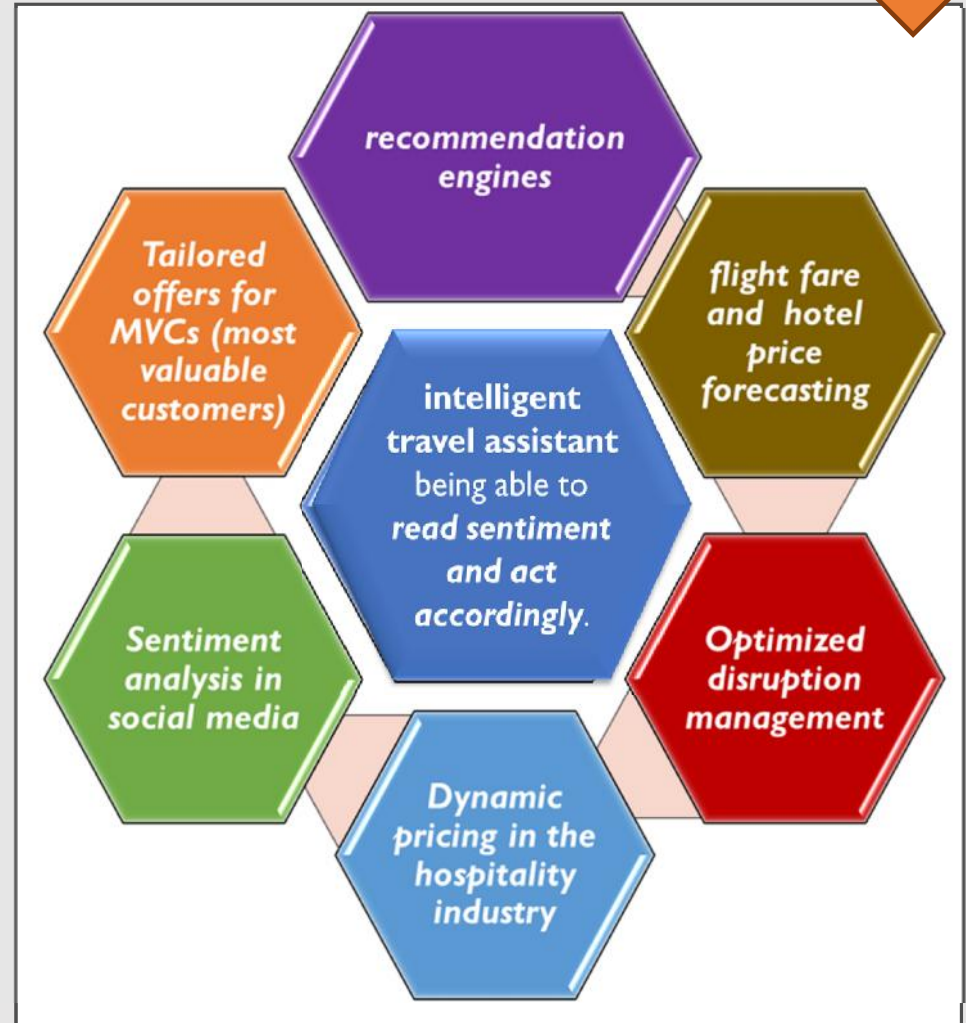


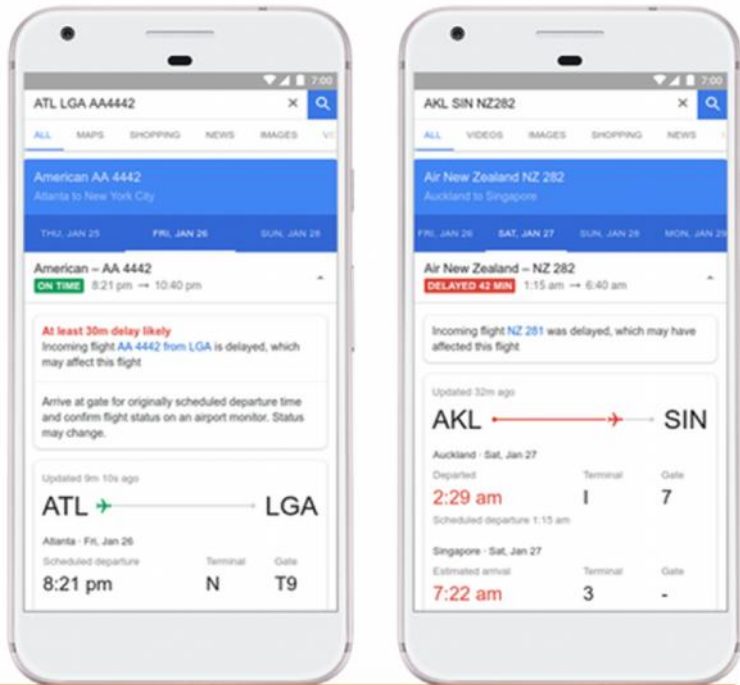


**EVOLUTION OF TRAVEL**

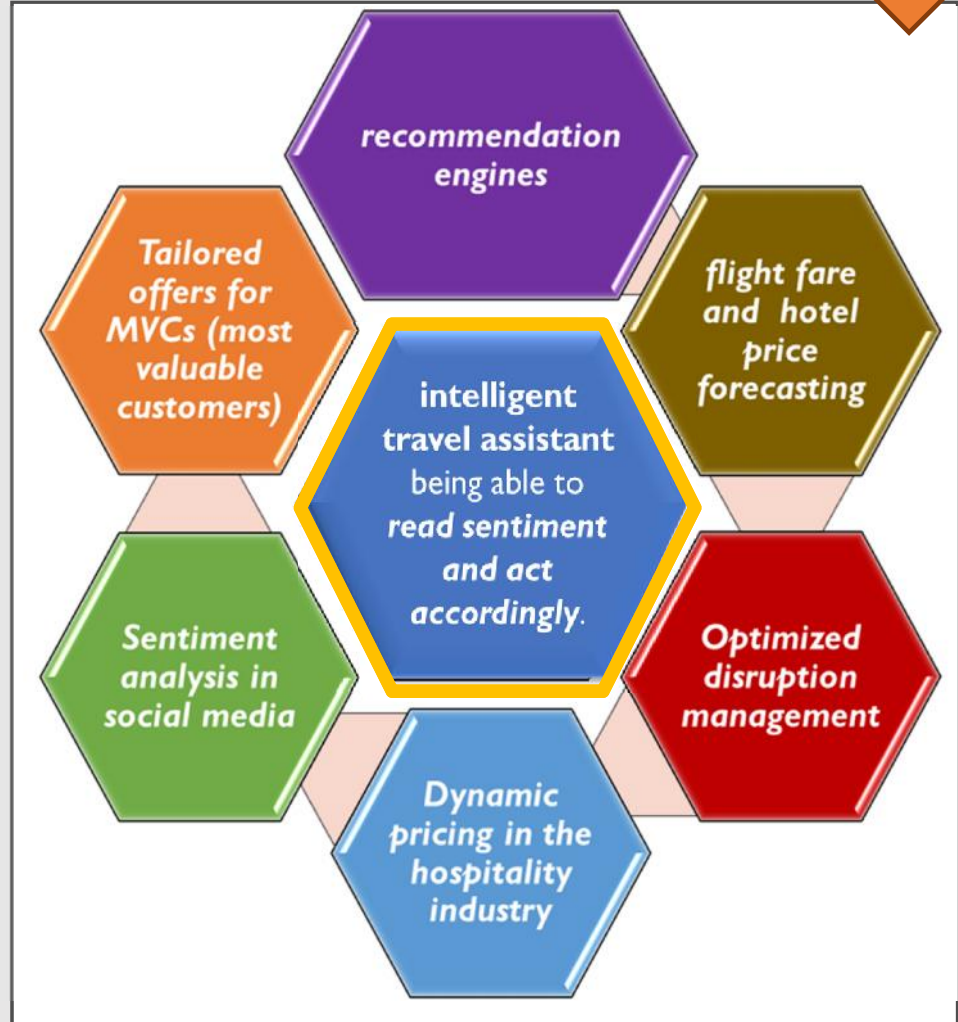
new age of intelligence and insights  
all about **a 360 degree view** of the traveler

- **In the agrarian economy**, you walked or you could upgrade to a horse.
- **In the industrial economy**, mass production of cars and boats made those options practical for a broad range of people.
- **The services economy** brought airlines and taxis.
- **The experience economy** brought attempts by airlines and ground transport providers to elevate their offerings into full-on experiences,
- **in the coherence economy**, travel options will be automatically connected to an intelligent assistant that is able to act accordingly (transportation, lodging, dining, and entertainment services)





Google Flights will now predict: airline delays, security wait times and the complexities of the cheaper fares.





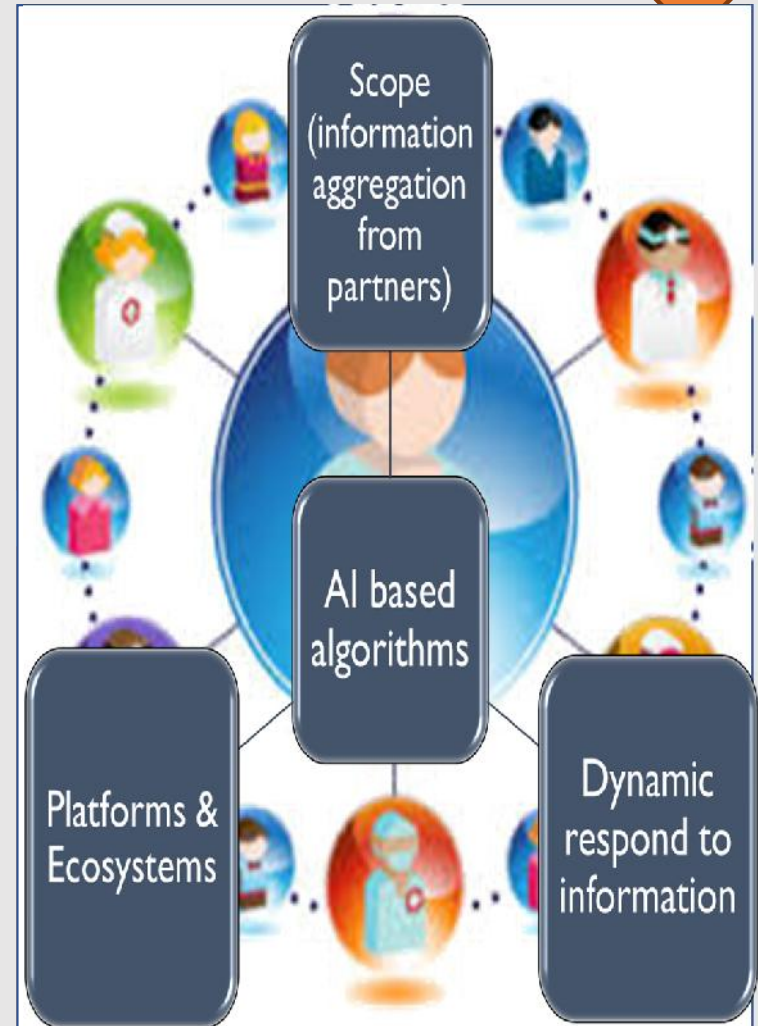
Consider “*customized*” health care:

**Your ultimate aim is to become and stay as healthy as possible.**

*In the coherence economy, health care providers will be in business to provide that outcome*

**health care companies will need to change :**

- **scope, (adding health care supplier’s data (APIs) )**
- **ability to response (algorithms) to dynamic information**
- **participate in layered ecosystems through a platform**





# Consider “*customized*” health care:



**AXA French Insurance Company**  
*(business in 64 Countries)*  
**redefining / insurance**



“My health expenses are covered”



**HEALTH INSURANCE BASICS**



“My healthcare is well managed”



**CARE COORDINATION**

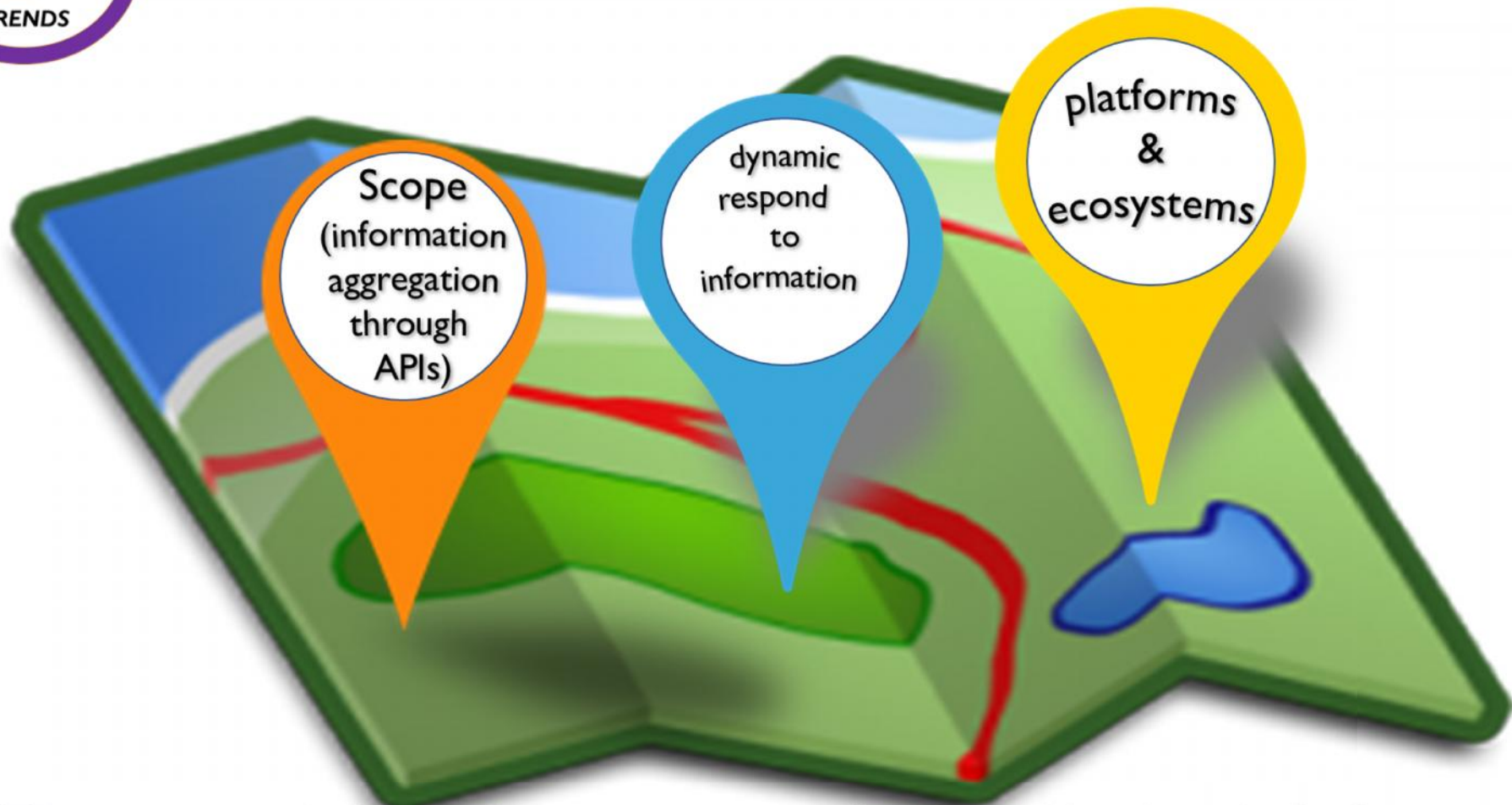
“AXA helps me focus on my well-being and future health”



**WELL-BEING**



## Coherence (connected) Economy: methodology



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## Coherence (connected) Economy: methodology

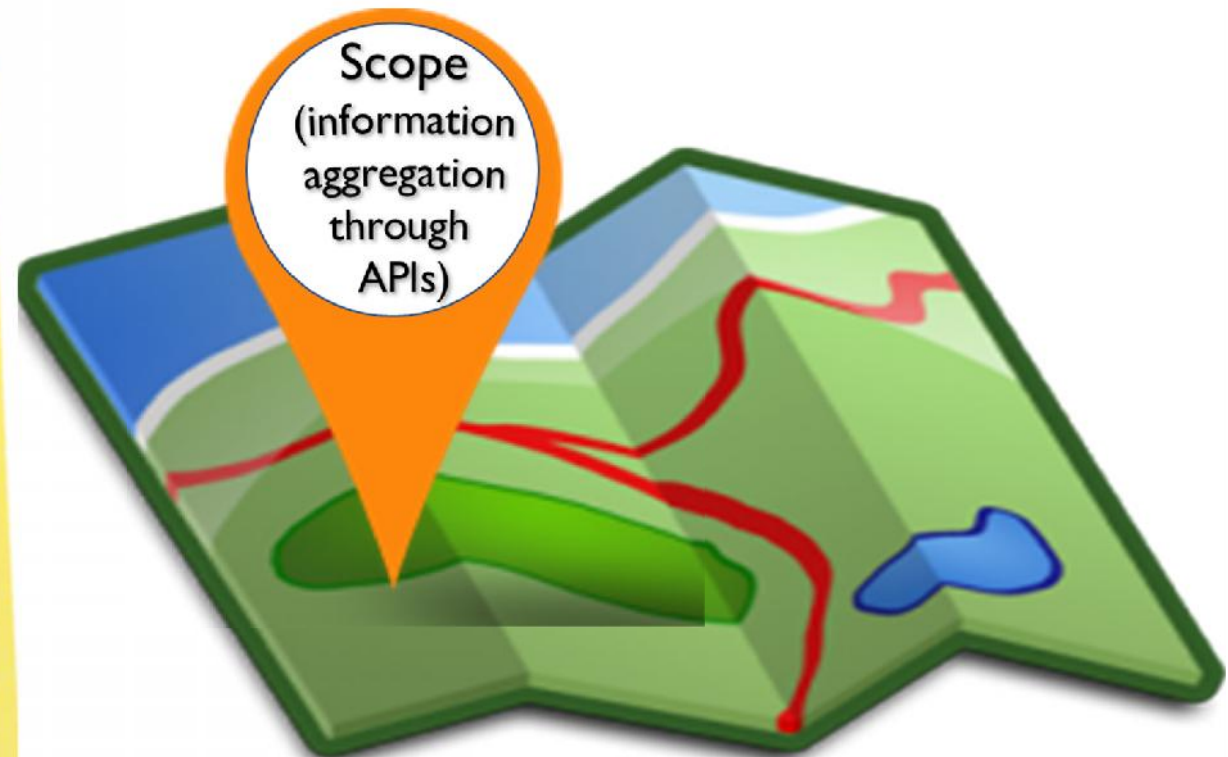
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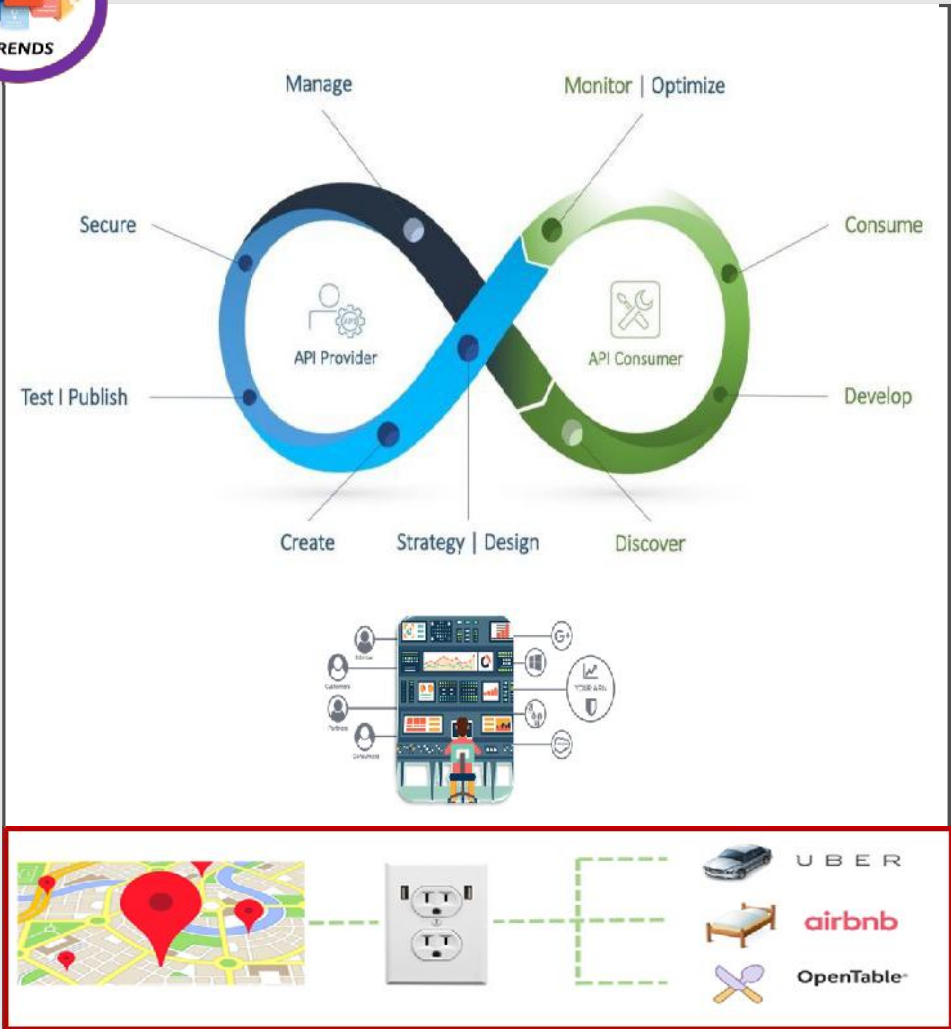
Trek Name:

Scope (aggregation through APIs)

Purpose:

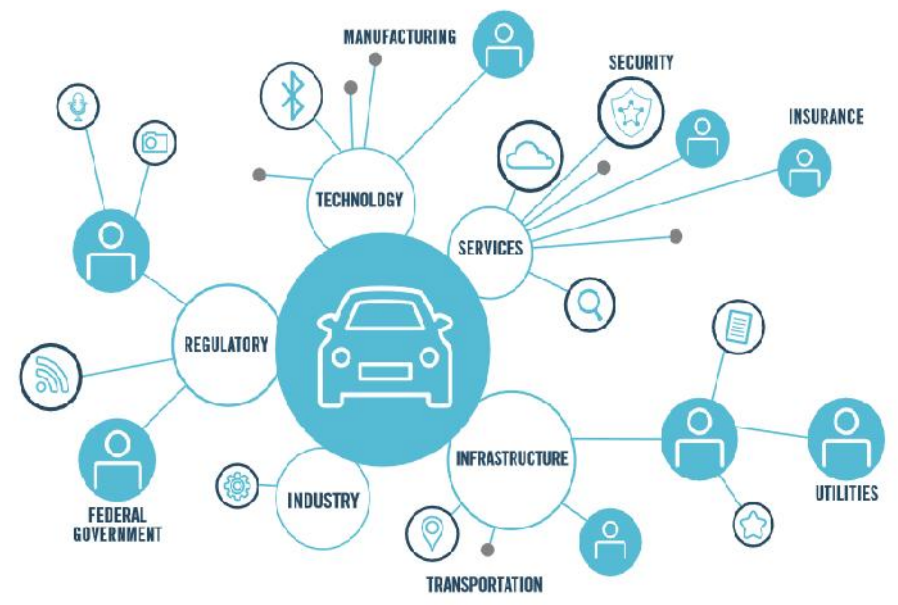
new capabilities offered (offering internal APIs to others and using other's data)

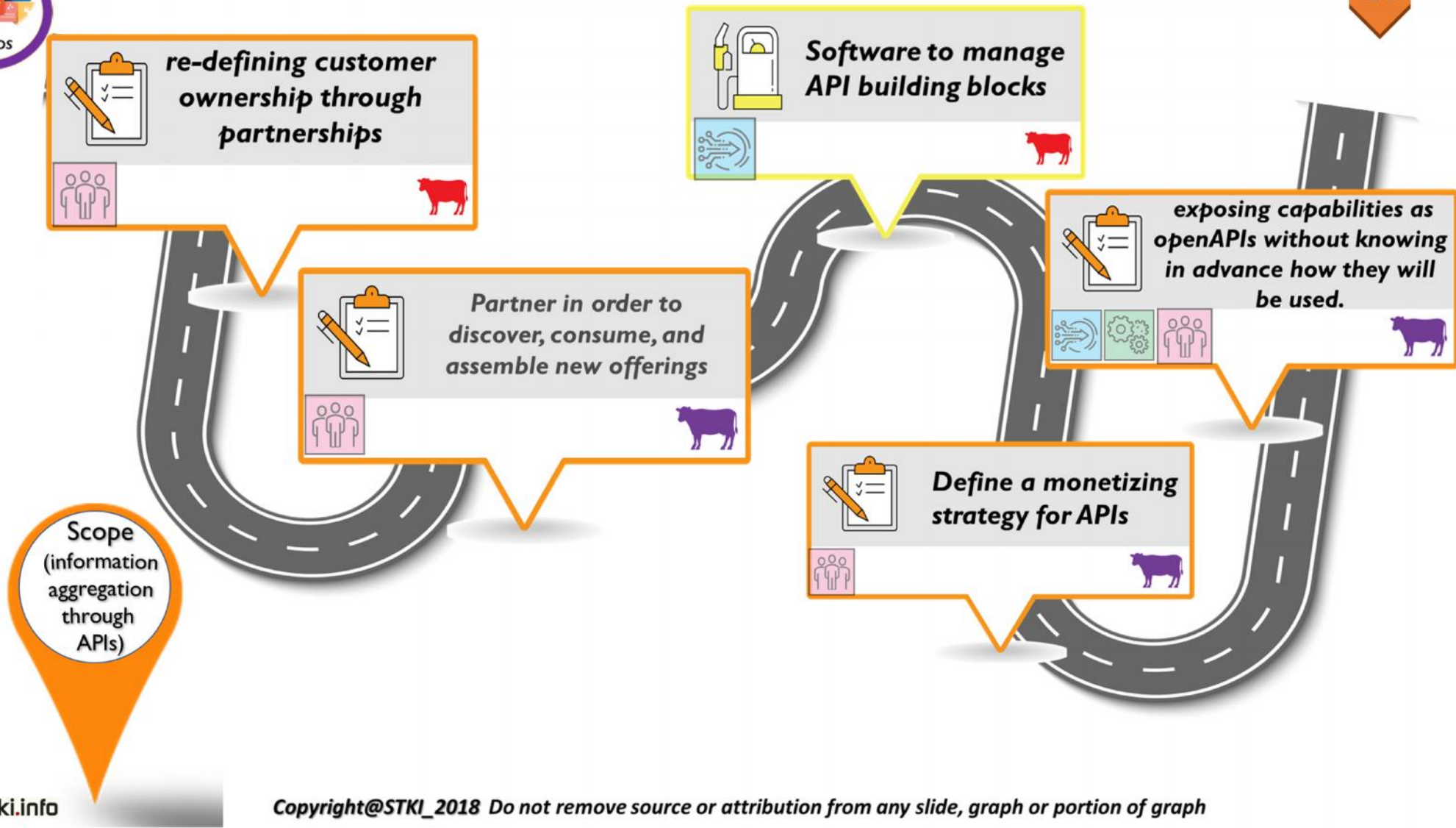




## Increase Scope of Possible Data Partners (information aggregation through APIs)

### The Connected Car Ecosystem









## Coherence (connected) Economy: methodology

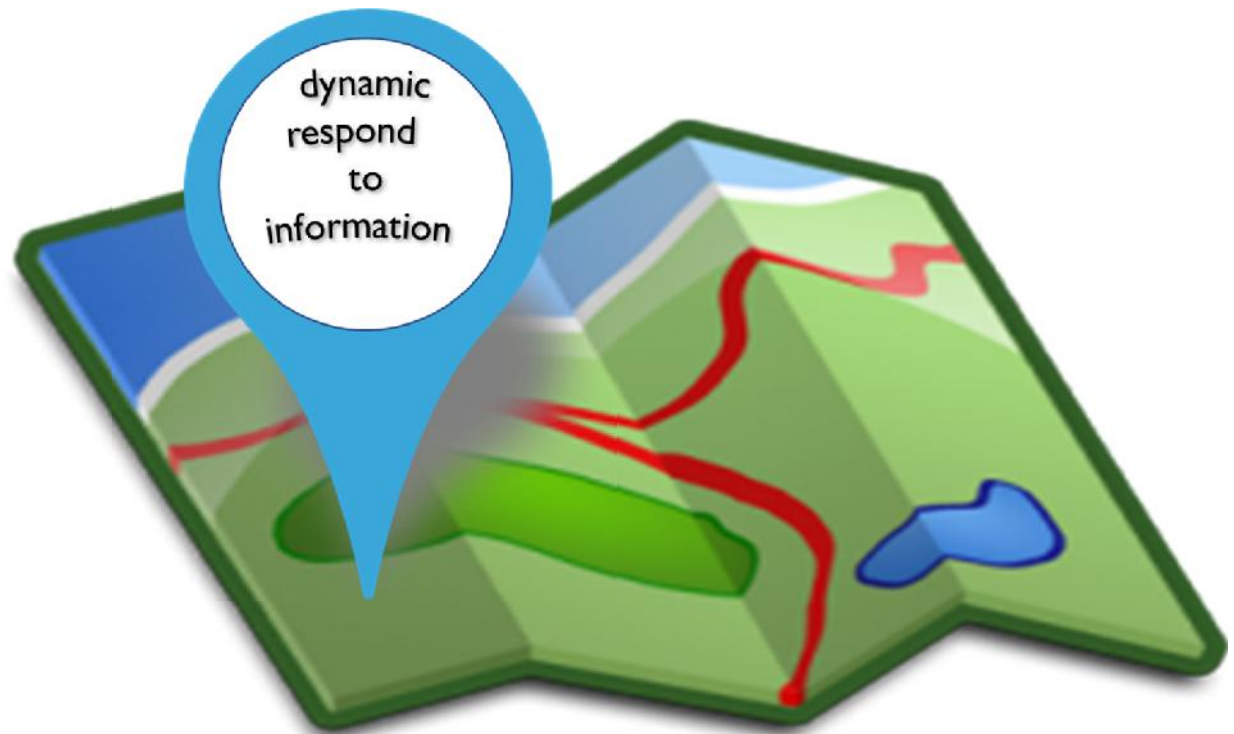
25

Trek Name:

Dynamic response to  
Information

Purpose:

Build ability to act in  
response to data



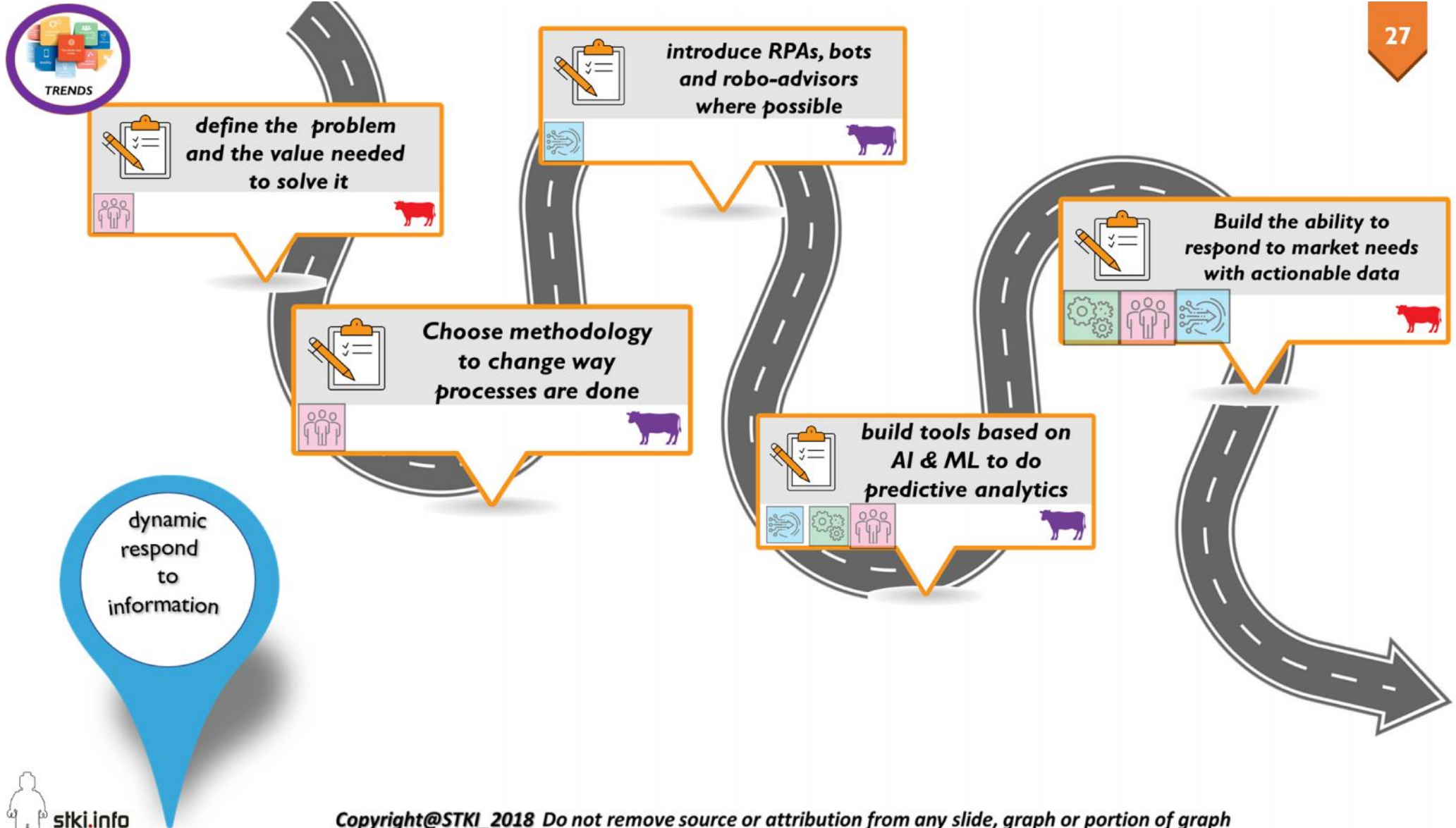


dynamic response  
(algorithm based insights)  
to  
information



*"Get ready for the most sweeping business change since the Industrial Revolution."*

Forbes  
The algorithmic CEO



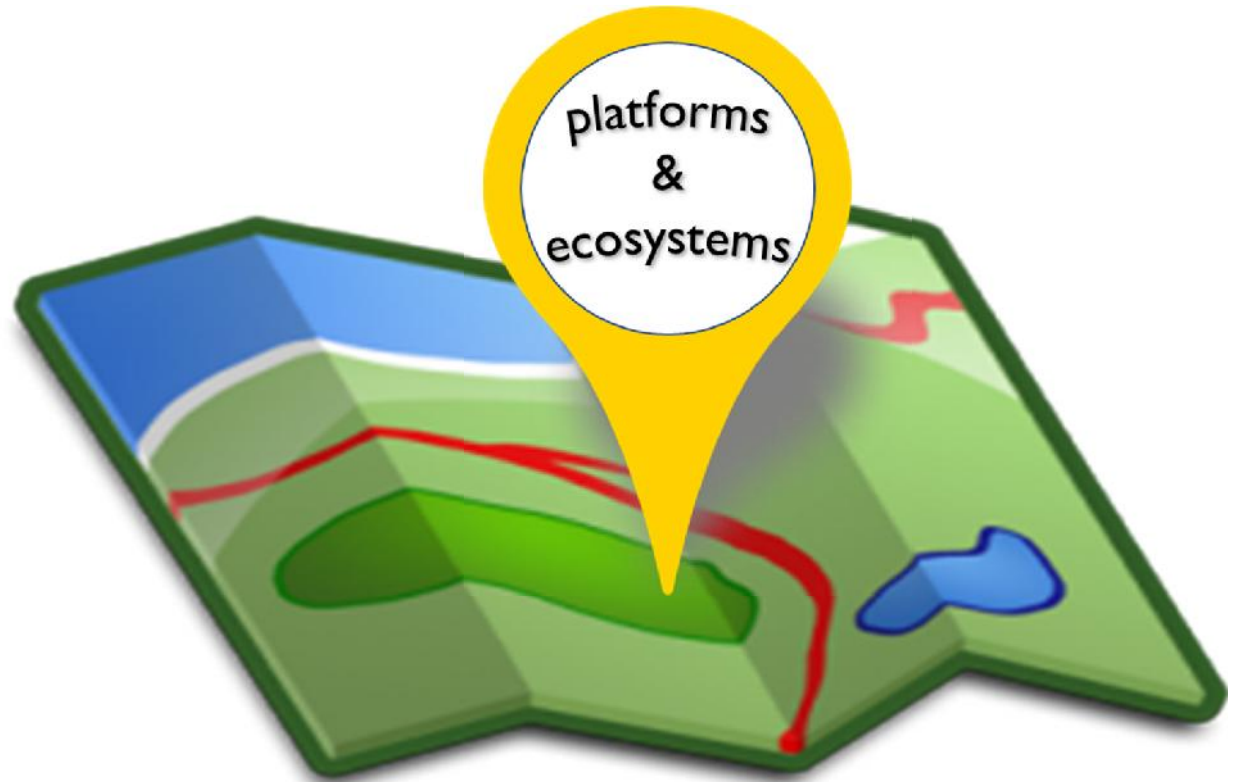


## Coherence (connected) Economy: methodology

28

Trek Name:  
Platforms &  
Ecosystems

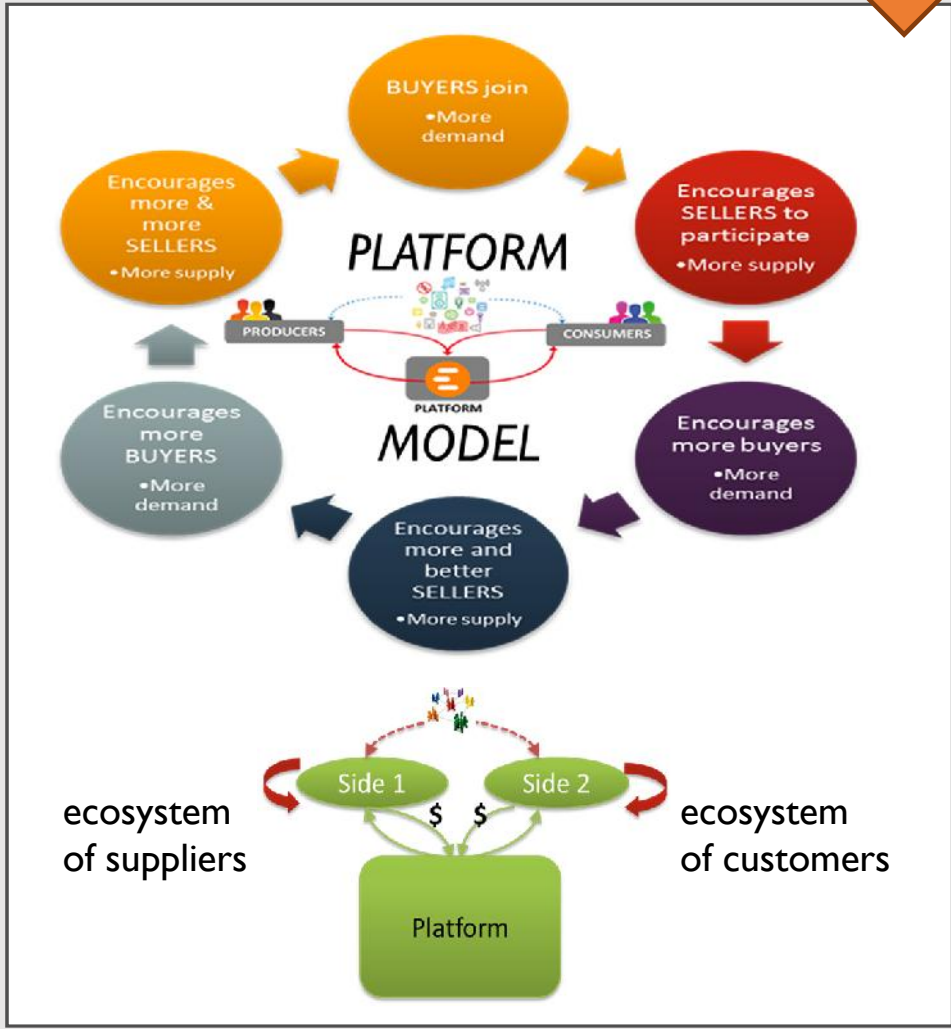
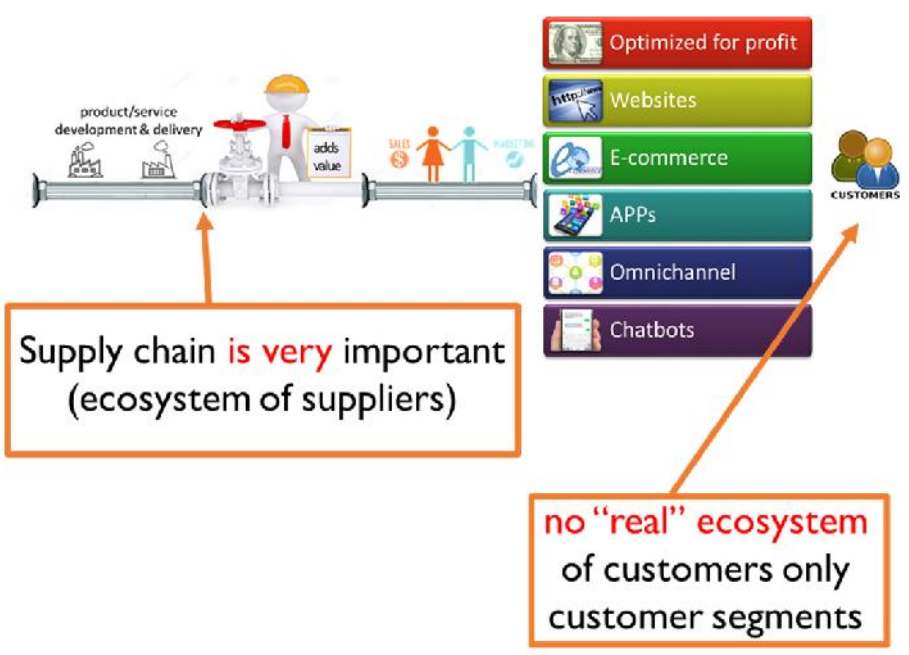
Purpose:  
Build & Enable a  
Platform Business





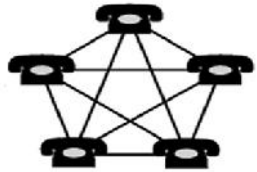
# PLATFORMS & ECOSYSTEMS

## “old” pipeline company’s model



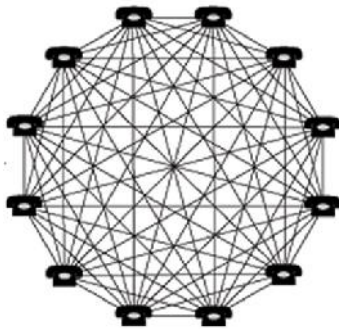


5 phones



10  
connections

12 phones



66  
connections

**PLATFORMS LEVERAGE NETWORK EFFECTS**  
More users = more value = more users...

30

**... this implies ...**

must have an  
ecosystem strategy  
to compete in a

***world of  
digital ecosystems***



### Traditional Value-- Chain Business Models



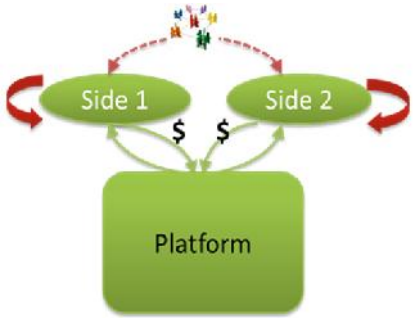
*Value creation is  
linear and one-way*



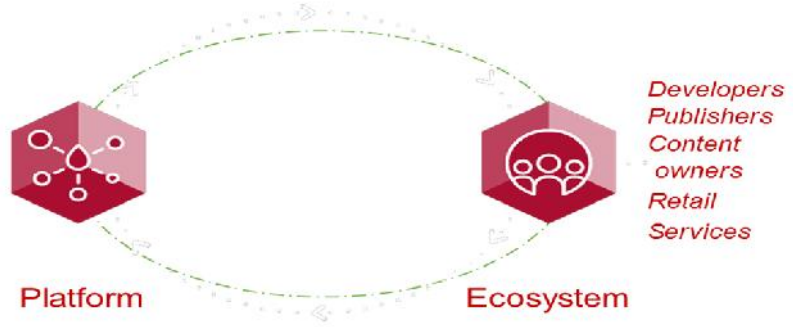
**COHERENCE  
ECONOMY**  
has different rules  
than the  
“old” economy



**COHERENCE ECONOMY has different rules than the "old" economy**



**Platform--Driven Business Models**



*Value creation is two-way and continuous*



The Sveriges Riksbank Prize in Economic sciences in Memory of Alfred Nobel 2014

**Jean Tirole**

**"for his work on antitrust regulation, market power & two-sided platforms"**  
[ while teaching at MIT ]



Platform Competition in Two-Sided Markets  
Jean-Charles Duche<sup>1</sup> Jean Tirol<sup>2</sup>  
December 13, 2002

**Platform Manifesto by the "MIT Initiative on the Digital Economy".**





## **Platforms and Ecosystems Enabling the Digital Economy**

part of the  
World Economic Forum's  
-**"Shaping The Future Of  
Digital Economy And Society  
System Initiative"**-

### **Platforms:**

**transform the way  
businesses, governments and  
individuals interact.**

**provide  
unparalleled opportunities  
for value creation,  
in 10 years about  
two-thirds (66%)  
of the value for business**

project will address four problems

### **1. Types of industry platforms and their integration:**

- Influencing factors

### **2. Open vs. Closed platforms:**

- Implications

### **3. Platform players:**

- Rules of engagement
- Rules of collaboration
- Players' accreditation

### **4. Market power:**

- Antitrust rules
- Create an inclusive ecosystem



**Financial institutions need to shift their mindset.**

- **Are you a “bank” or “credit card” company?**
- **OR are you a partner who offers cash and investment capabilities to help customers reach their goal?**

**Open Bank Project**  
 open source **API and App store** for banks that empowers financial institutions to enhance their digital offerings **using an ecosystem of 3rd party apps and services.**

**Starling Bank Marketplace puts customers at the center of a wide financial ecosystem.**

**Clients** able to choose from a range of products /services integrated with Starling,

**Partners Available today for**  
**Investments, Savings**  
**Mortgages, Bills & Expenses**  
**Insurance, P2P Investing**



## Open minded?

Bankers have mixed views on the open banking concept

80% see open banking as an opportunity

62% would offer fintech products on own platforms

55% say internal processes hinder collaboration

Source: Accenture and Temenos survey of 248 global bank executives

35

### Initiative reinvent IT



REPLACING LEGACY



CENTRALIZE DISPARATE  
CUSTOMER DATA



CREATING AN OPEN  
BANKING PLATFORM



### Pipeline Economic Business Models

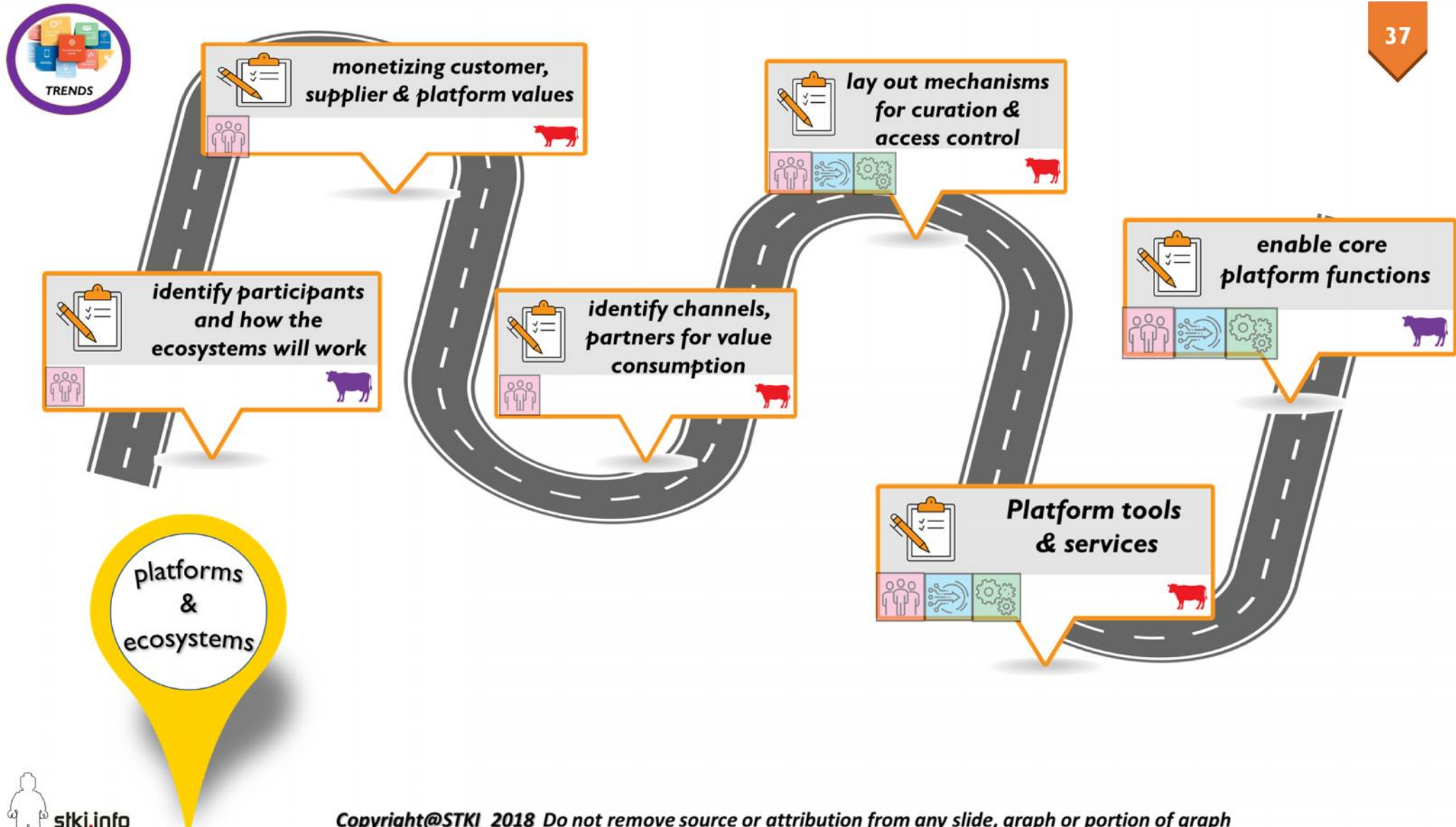
Pipeline

### Hybrid Economic Business Models

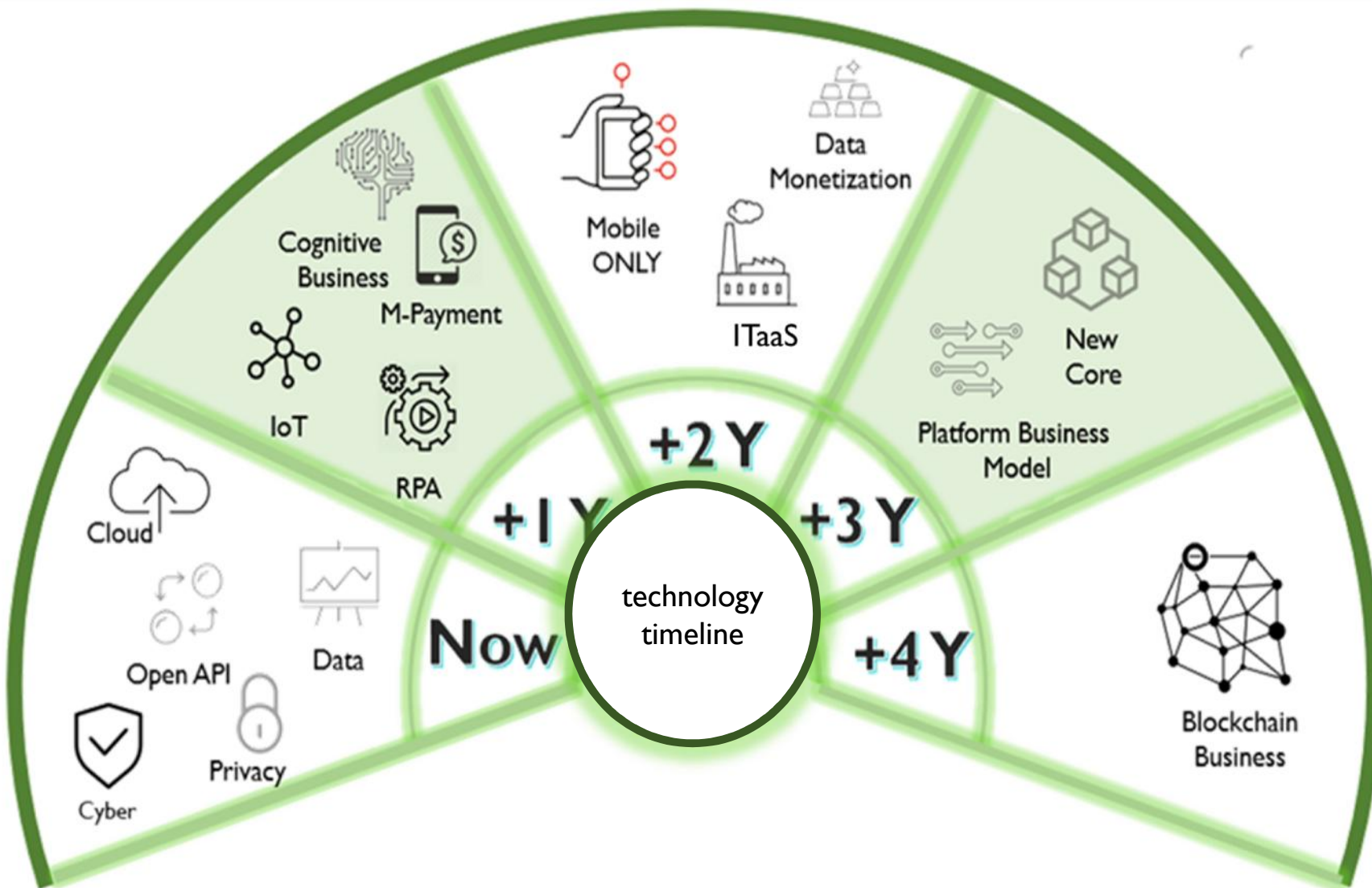
Platform

### Platform Economic Business Models

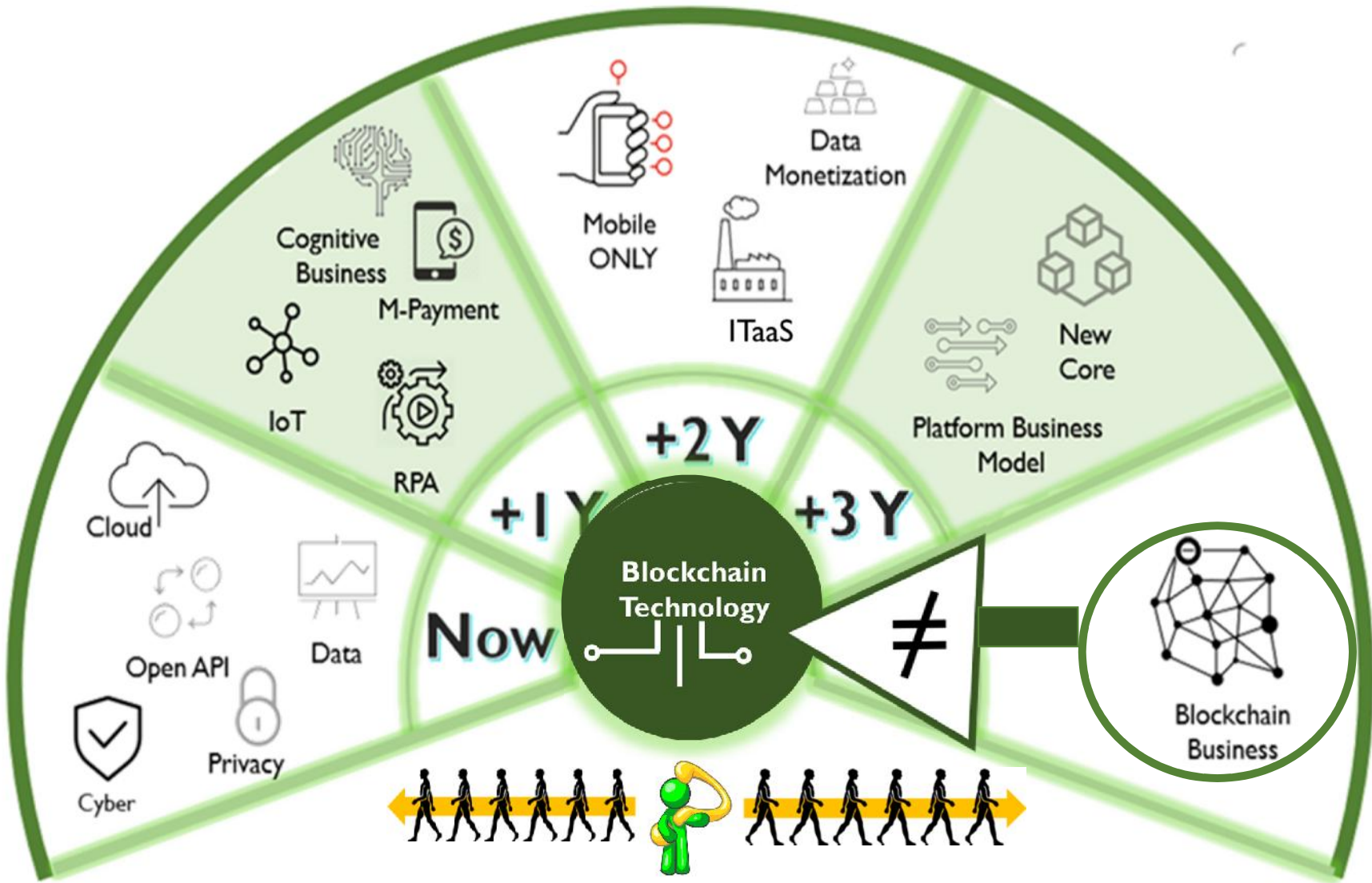
Supply Demand Platform



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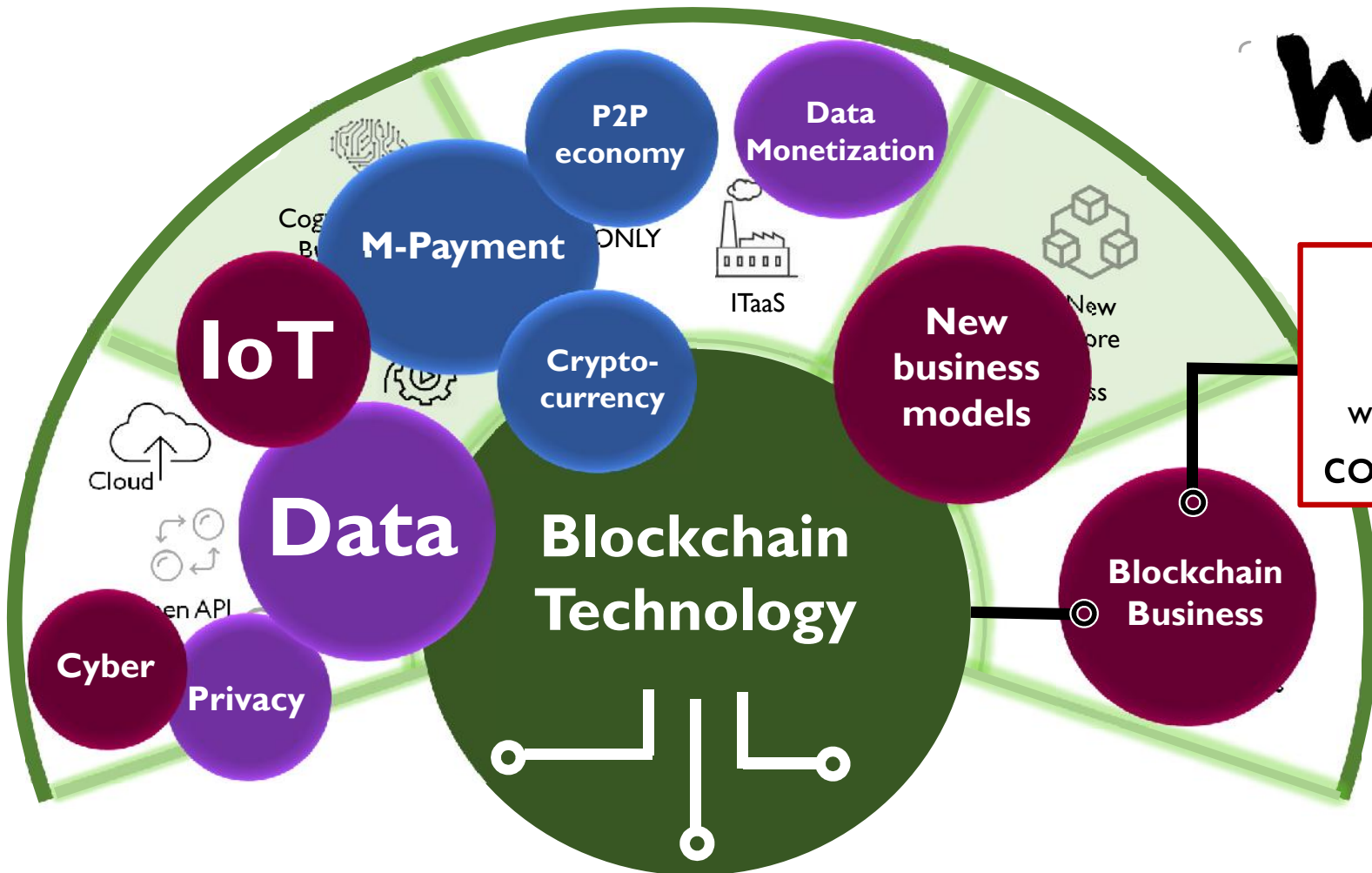
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# There is NO wait-and-see advantage anymore

Blockchain is the underlying technology of new business models

# Why?

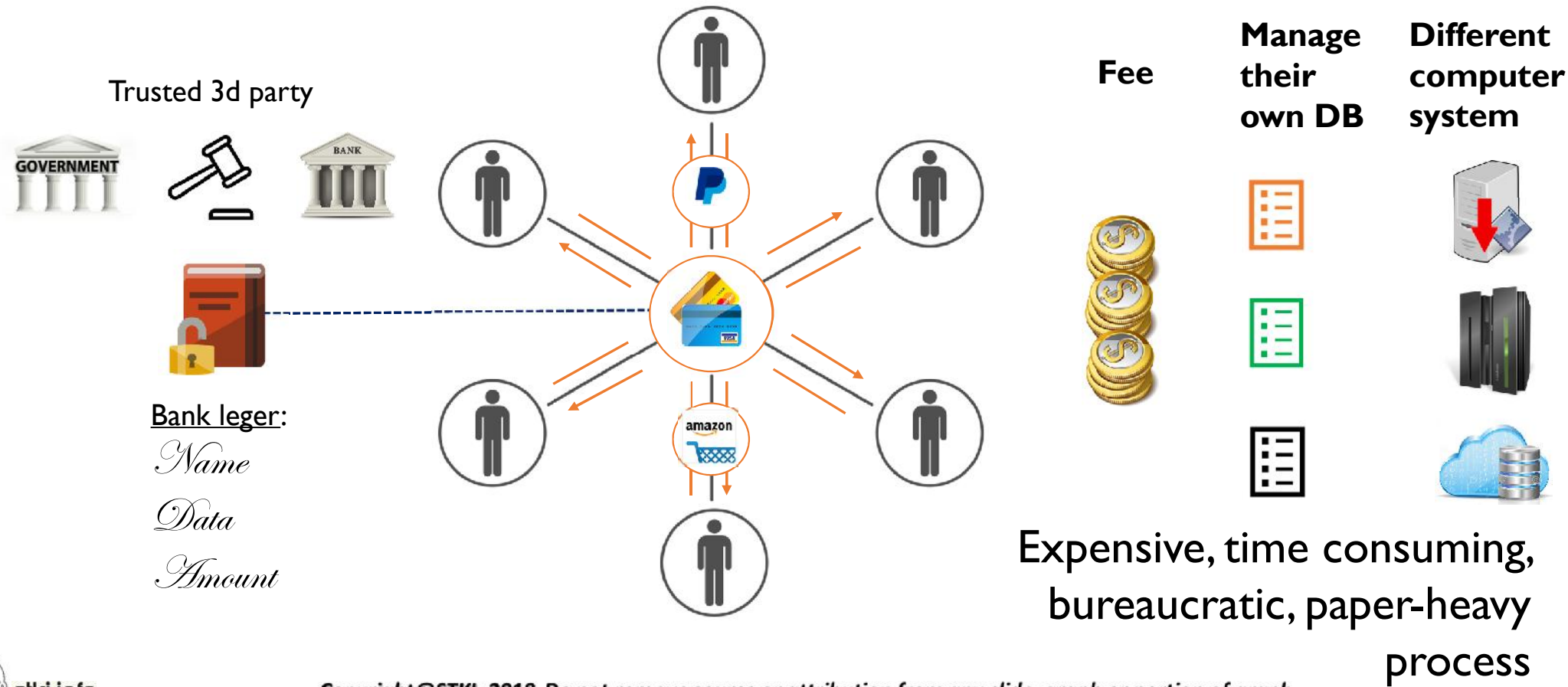


In **2022**  
 blockchain  
 will be part of your  
 core business





# Today trade complexity requires intermediary/ies



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# Blockchain Technology

What is it?

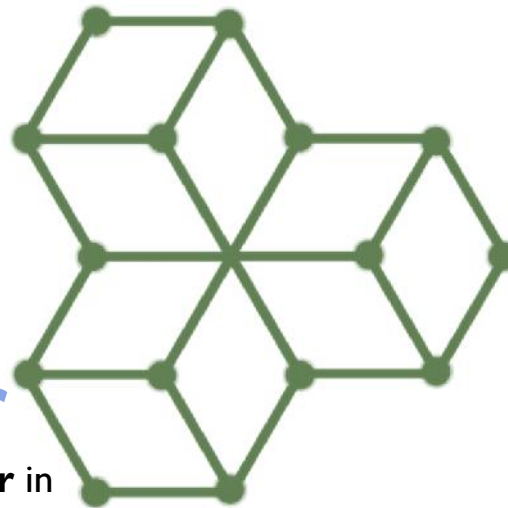
Technology for exchanging **value** over the internet **without central authority**

## Secure

Blockchain records and **validates** each and every transaction made

## Faster & cheaper

It is a trusted system with **no mediator** in between two people making the transaction



## Immutable

Once transactions enter public ledger, the **chronological history** remains forever and can not be changed



# Bitcoin $\neq$ Blockchain



Crypto  
currency

is KING

Blockchain  
Technology

is KINGEST



# Ethereum Blockchain



Ethereum is a blockchain that runs Smart Contracts

## Self Governing Contract

Automatic execution of the contract terms and conditions

## Payment

Digital bank account

## Immediate Settlement

Payment = settlement, it's just a change in a ledger



# Money is Changing

So is our trust

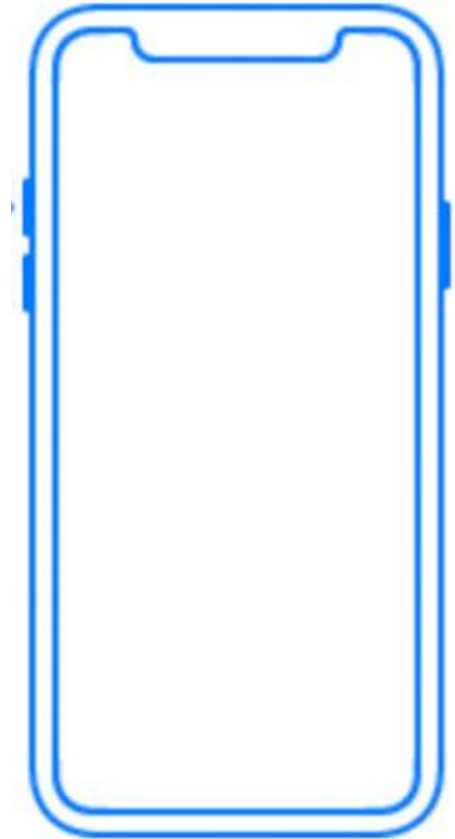




# Cryptocurrencies

exist now without a control of nation states

Cryptocurrency will do to  
the banks what email did  
to the postal office





# M-Payments is sooo 2017



In-store m-payments aren't taking off as quickly as expected

Customers are quite happy with the current way of paying

There are no compelling added value

**Actual M-Payment will occur on blockchain**





# ישראל מצטרפת לשיגעון הביטקוין? כל מה שצריך לדעת על השקל הדיגיטלי

איך נשלם עם השקל הדיגיטלי? היכן נשמור אותו? ומה ההבדל בינו לבין ביטקוין?

 814
  101
  שמור

מירב ארלוזורוב |  התראות במייל  
11:02 24.12.2017



1. מהו שקל דיגיטלי? שקל דיגיטלי הוא שקל רגיל לכל דבר, בהבדל יחיד - שהוא ניתן כשורת קוד לארנק אלקטרוני, ולא כמטבע או שטר. מי שמנפיק את שורות הקוד הוא בנק ישראל, ממש כשם שבנק ישראל מדפיס היום את שטרות ומטבעות השקלים.

4. איך נשלם עם השקל הדיגיטלי? באמצעות תשלומי סלולר ישירים, ישר מהסלולר שלנו (הארנק האלקטרוני שלנו) לסלולר של בעל החנות.

6. גם היום ניתן לשלם עם הסלולר, אז מה ההבדל משקל דיגיטלי? התשלומים דרך הסלולר כיום, שעדיין אינם נפוצים בישראל אבל הופכים מקובלים מאד בעולם, הם למעשה אמצעי טכנולוגי לתשלום דרך חשבון הבנק שלנו. אנחנו יכולים לשלוף את כרטיס האשראי או לשלוף את הסלולר, בכל מקרה התשלום לבעל החנות עובר מחשבון הבנק שלנו, ודרך מערכת הסליקה של הבנקים או של חברות כרטיסי האשראי. השקל הדיגיטלי, לעומת זאת, אינו יושב בחשבון הבנק אלא בתוך הסלולר עצמו, ואינו עובר דרך מערכת סליקה בנקאית אלא ישירות מסלולר אחד לשני. בכך השקל הדיגיטלי הוא מקביל של השקל המזומן - הוא מתפקד כשטר שעובר מיד ליד, בלי תיווך של הבנק בדרך.





# Global Money Transfer



- ⦿ Take some cash and stand in line
- ⦿ It costs around 10%
- ⦿ It takes around 3 -5 days



# Money Transfer with Blockchain



- ⦿ Grab your ABRA app
- ⦿ Send money from your smartphone directly to receiver's one without intermediary
- ⦿ Click on closest teller and it will appear with the local money
- ⦿ It takes minutes and costs 2%



# (Not Really) Sharing Economy



UBER & Airbnb are aggregation platforms, that deliver service and sell it.  
They have **FULL CONTROL** of funds



# P2P Economy

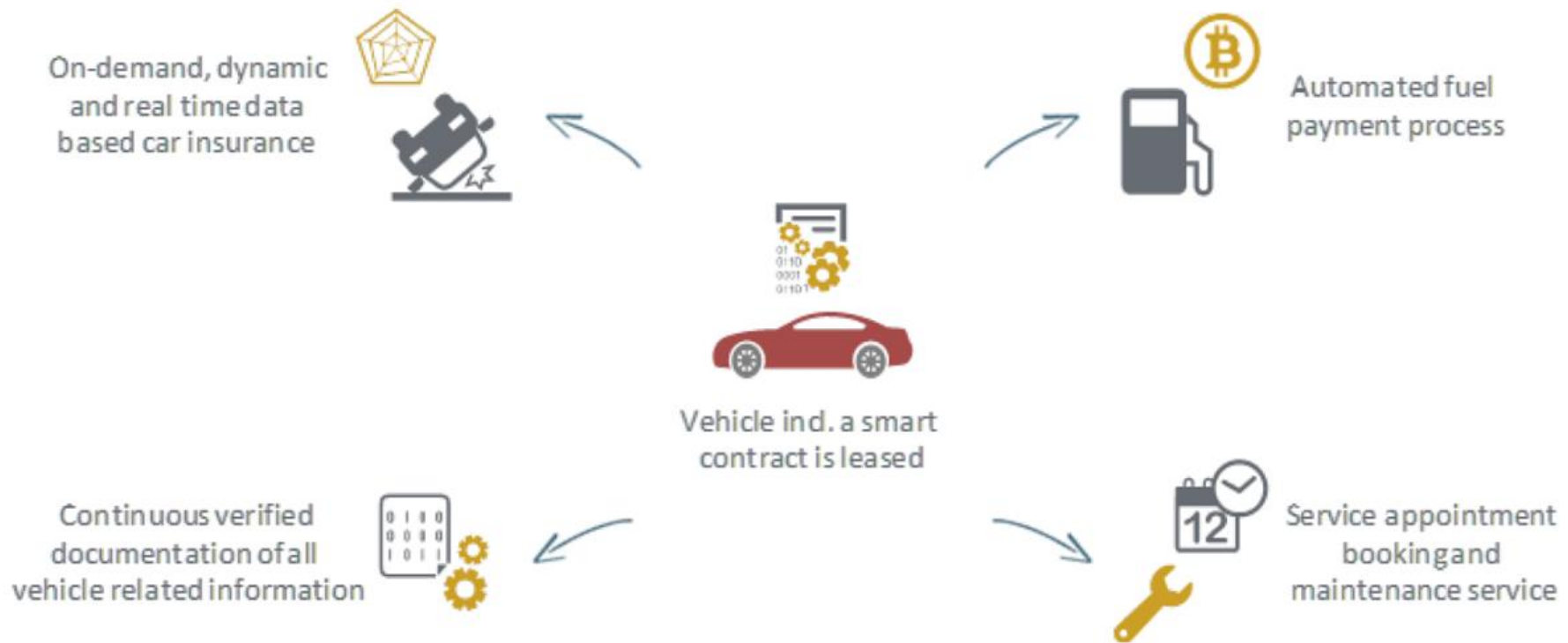


La'Zooz connects riders to drivers by real-time ride-sharing

Blockchain could kill e-commerce because it will be possible for any two people on the planet to trade with each other directly, without depending on an intermediary



# P2P doesn't have to be between individuals: Blockchain & IoT is a Perfect combination





# 4 ways IoT can use blockchain

## Cost reduction

P2P transactions, no middleman



## Scaled security

secured and reliable time-stamped contractual handshake

## Trust building

Chronological history, audit trails and smart contracts

## Accelerated data exchanges

directly transfer a piece of property such as money or data between one another



# Digital YOU

**DATA** is an **ASSET**

Digital you, knows  
about you, much more  
than the real you



The digital you is  
**not owned** by  
you!



# DATA Blockchain



- **Control** your own data
- Manage it responsively
- **Monetize** it



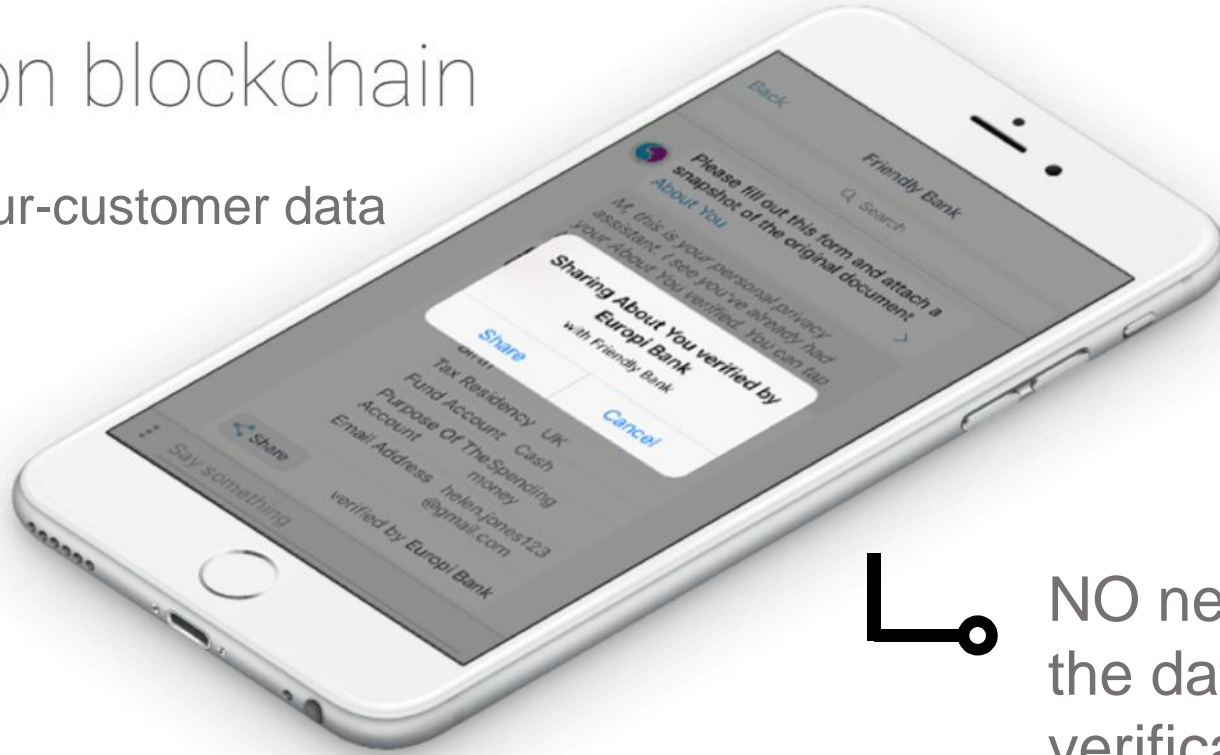
# Digital Identity Service



Overview Platform Compatibility Fundamentals Press Blog Devs Events

## KYC on blockchain

### know-your-customer data



NO need to repeat the data entry or verification process



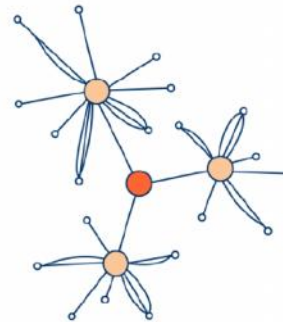
# Healthcare

## DATA SECURITY



Blockchain technology could enable patient-owned records, giving the patient control to grant and revoke data on an as-needed basis.

## INTEROPERABILITY



A single distributed EMR system could replace siloed data across different hospitals and medical facilities.

## REIMBURSEMENT



Blockchain technology might enable instantaneous insurance claims verification and fulfillment of prior authorization requests.

# Insurance industry War of Attrition



## Crisis of trust

- + high costs
- + inefficiency

extraordinary  
high levels of  
underinsurance



*Lemonade*  
Forget Everything You  
Know About Insurance

Instant everything. Killer prices. Big heart.

Insured find insurance  
contracts long &  
confusing

Insurance companies are  
battling an extraordinary  
amount of fraud

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# Insurance on Smart Contract

## Build Trust through Transparency



- Claim on blockchain
- Only valid claims are paid
- NO multiple claims submitted for the same accident
- NO human intervention

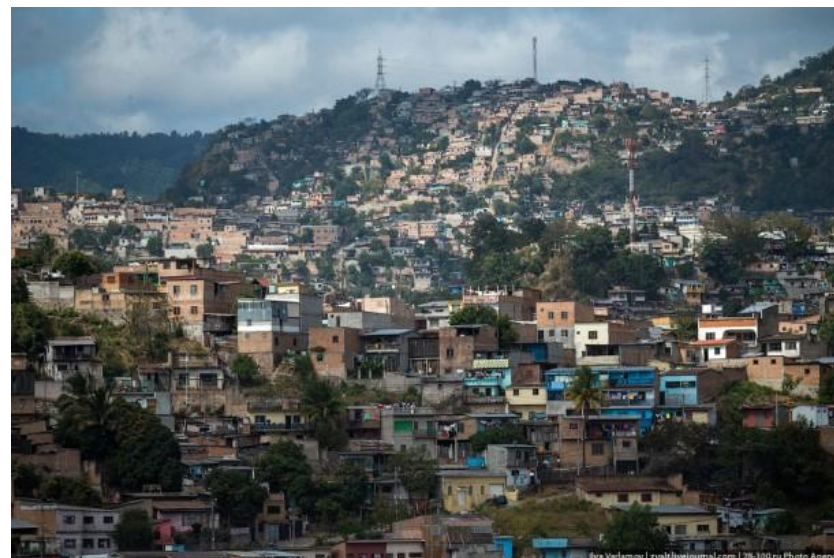


# Real Estate

## Blockchain Examples



Sweden

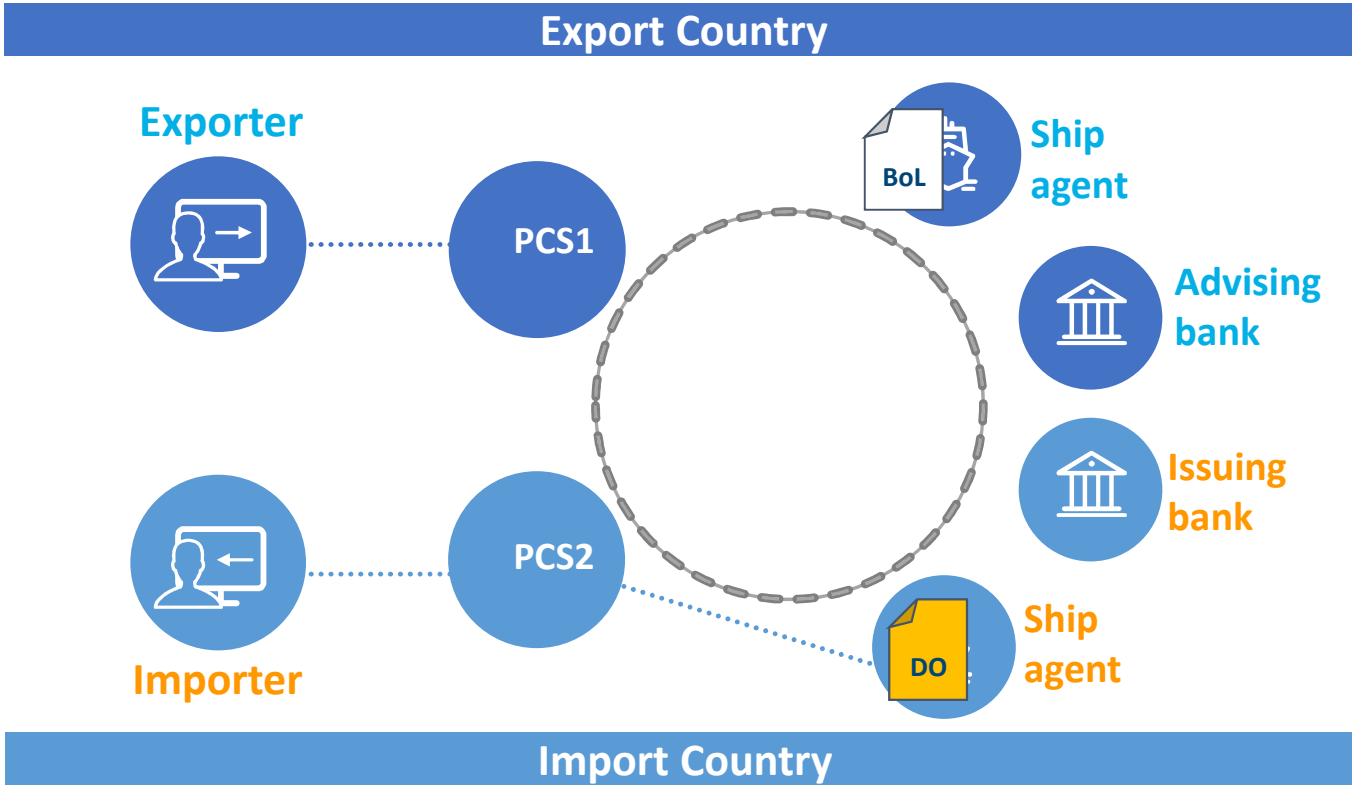


Honduras





# PoC High Level Business Flow



Source: IPCSA



# New Business Models

Blockchain is  
a platform



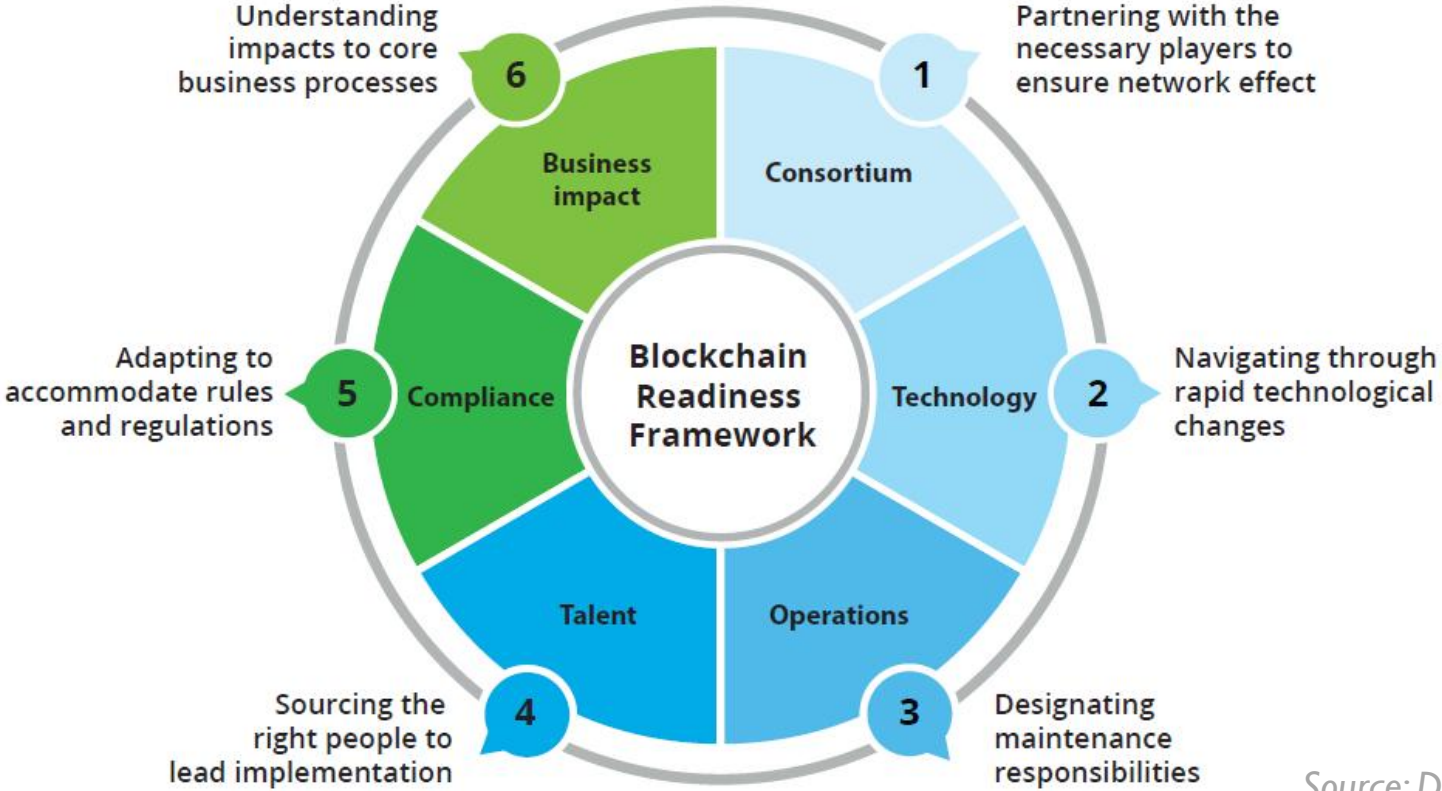
Shore up your  
partners  
and competitors

for New Ways  
of Working



# What Now?

Evaluate Blockchain use case



Source: Deloitte

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# INNOVATION LAB





have a **place** and approach to **learn & experiment**



## Blockchain Garage is OPEN

Place, where u can be the 1<sup>st</sup> to understand what happens next

Service offered by many vendors



# GOOD LUCK.

HAVE FUN! MAKE CHANGE HAPPEN!

Act 1 **EXPLORE**

Act 2 **IMAGINE**

---

Act 3 **ATTEMPT**

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