

# 財務金融大數據分析

## Big Data Analytics in Finance



Tamkang  
University  
淡江大學

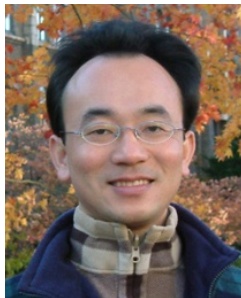
# 金融科技商業模式

## (Business Models of Fintech)

1061BDAF02

MIS EMBA (M2322) (8605)

Thu 12,13,14 (19:20-22:10) (D503)



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2017-09-28



# 課程大綱 (Syllabus)

週次 (Week)	日期 (Date)	內容 (Subject/Topics)
1	2017/09/21	財務金融大數據分析課程介紹 (Course Orientation for Big Data Analytics in Finance)
2	2017/09/28	金融科技商業模式 (Business Models of Fintech)
3	2017/10/05	人工智慧投資分析與機器人理財顧問 (Artificial Intelligence for Investment Analysis and Robo-Advisors)
4	2017/10/12	金融科技對話式商務與智慧型交談機器人 (Conversational Commerce and Intelligent Chatbots for Fintech)
5	2017/10/19	事件研究法 (Event Study)
6	2017/10/26	財務金融大數據分析個案研究 I (Case Study on Big Data Analytics in Finance I)

# 課程大綱 (Syllabus)

週次 (Week)	日期 (Date)	內容 (Subject/Topics)
7	2017/11/02	Python 財務大數據分析基礎 (Foundations of Finance Big Data Analytics in Python)
8	2017/11/09	Python Numpy大數據分析 (Big Data Analytics with Numpy in Python)
9	2017/11/16	Python Pandas 財務大數據分析 (Finance Big Data Analytics with Pandas in Python)
10	2017/11/23	期中報告 (Midterm Project Report)
11	2017/11/30	文字探勘分析技術與自然語言處理 (Text Mining Techniques and Natural Language Processing)
12	2017/12/07	Python Keras深度學習 (Deep Learning with Keras in Python)

# 課程大綱 (Syllabus)

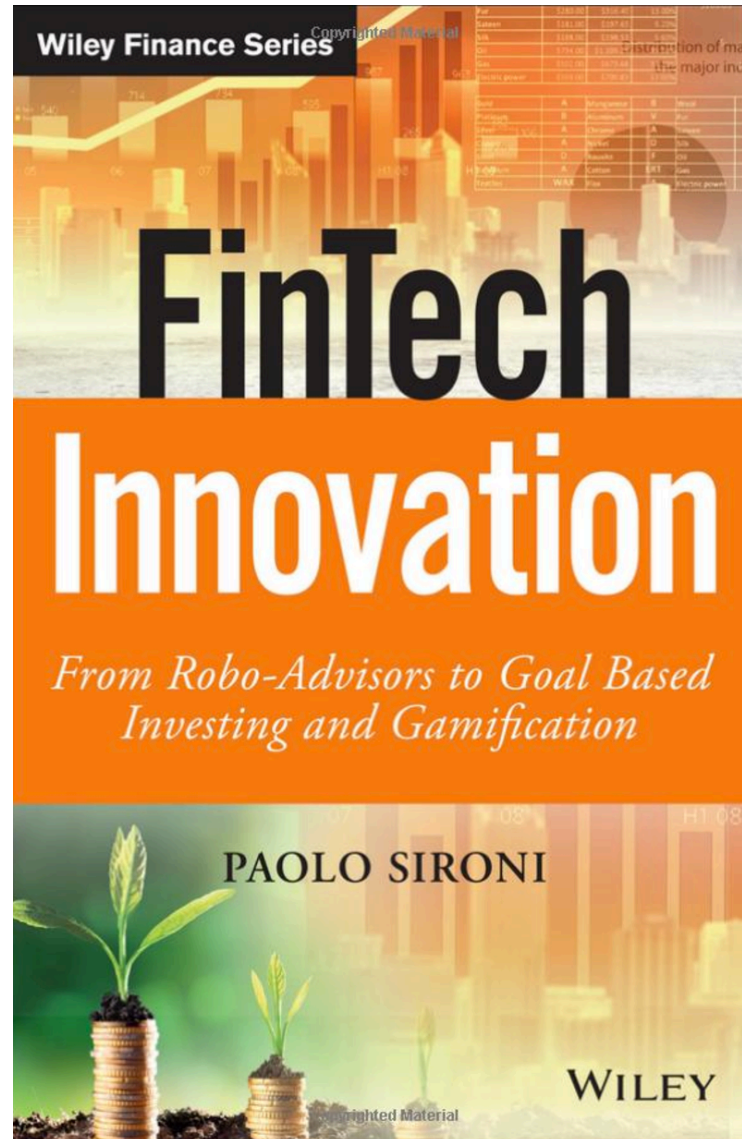
週次 (Week)	日期 (Date)	內容 (Subject/Topics)
13	2017/12/14	財務金融大數據分析個案研究 II (Case Study on Big Data Analytics in Finance II)
14	2017/12/21	TensorFlow深度學習 (Deep Learning with TensorFlow)
15	2017/12/28	財務金融大數據深度學習 (Deep Learning for Finance Big Data)
16	2018/01/04	社會網絡分析 (Social Network Analysis)
17	2018/01/11	期末報告 I (Final Project Presentation I)
18	2018/01/18	期末報告 II (Final Project Presentation II)



# FinTech Innovation:

## From Robo-Advisors to Goal Based Investing and Gamification,

Paolo Sironi, Wiley, 2016



# Business Models of Fintech

# FinTech

# Financial Technology

# FinTech



# Financial Technology

## FinTech

“providing  
financial services  
by making use of  
software and  
modern technology”

# Business Model

# Definition of Business Model

**A business model**  
**describes the rationale of**  
**how an organization**  
**creates, delivers, and captures**  
**value.**



# Definition of Business Strategy

**A business strategy**  
**is**  
**a long term plan of action**  
**designed to achieve a particular goal**  
**or set of goals or objectives.**

# Financial Services

# Financial Services



# Financial Revolution with Fintech

## A financial services revolution

### Consumer Trends



1. Simplification



2. Transparency



3. Analytics



4. Reduced Friction

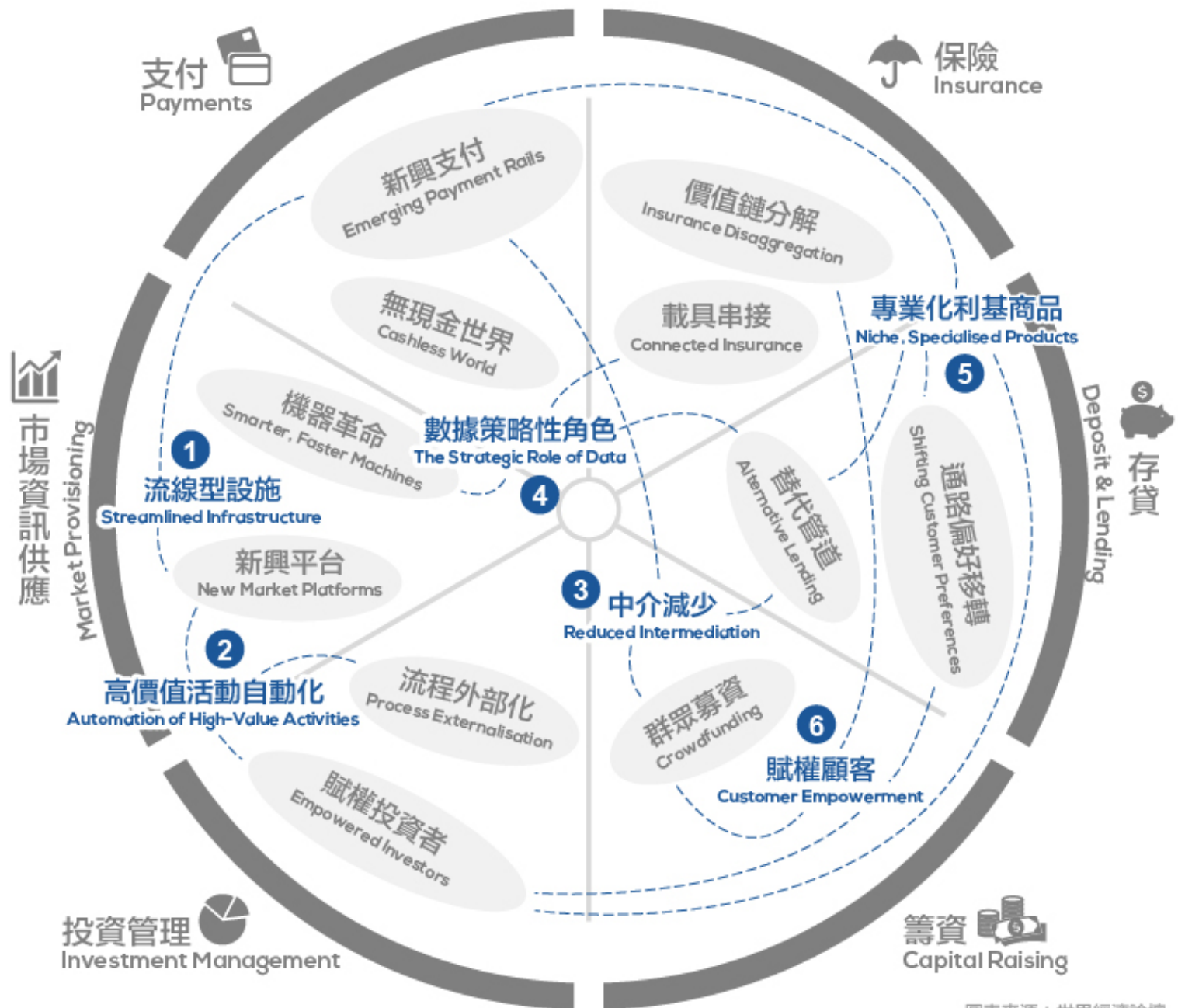
# FinTech: Financial Services Innovation



# **FinTech:**

## **Financial Services Innovation**

- 1. Payments**
- 2. Insurance**
- 3. Deposits & Lending**
- 4. Capital Raising**
- 5. Investment Management**
- 6. Market Provisioning**



圖表來源：世界經濟論壇



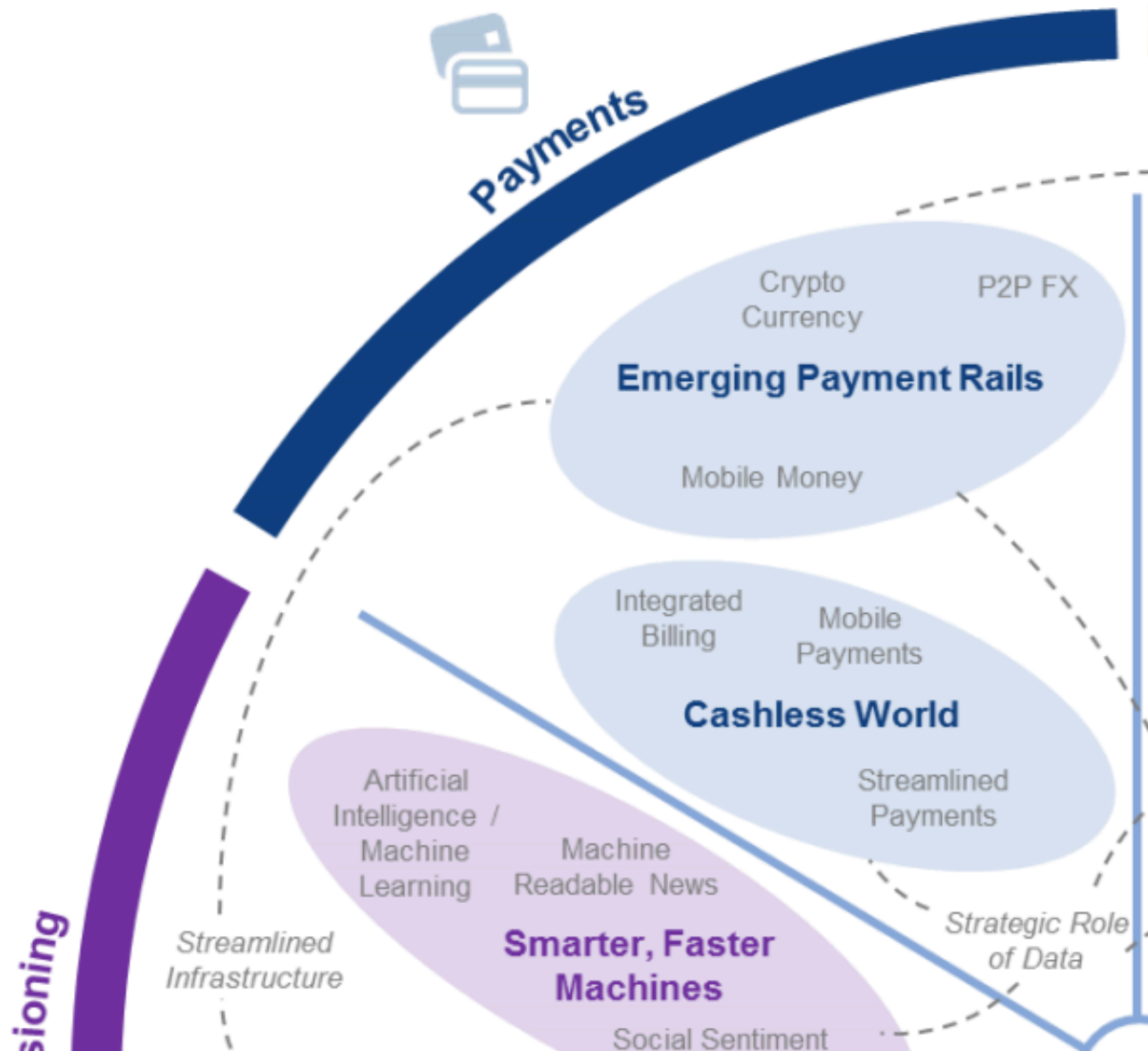
# FinTech: Financial Services Innovation

功能	創新項目
 支付 Payments	無現金世界 (Cashless World) 新興支付 (Emerging Payment Rails)
 保險 Insurance	價值鏈裂解 (Insurance Disaggregation) 保險串接裝置 (Connected Insurance)
 存貸 Deposit & Lending	替代管道 (Alternative Lending) 通路偏好移轉 (Shifting Customer Preferences)
 籌資 Capital Raising	群眾募資 (Crowdfunding)
 投資管理 Investment Management	賦權投資者 (Empowered Investors) 流程外部化 (Process Externalisation)
 市場資訊供應 Market Provisioning	機器革命 (Smarter, Faster Machines) 新興平台 (New Market Platforms)

圖表來源：Fugle團隊整理



# FinTech: Payment

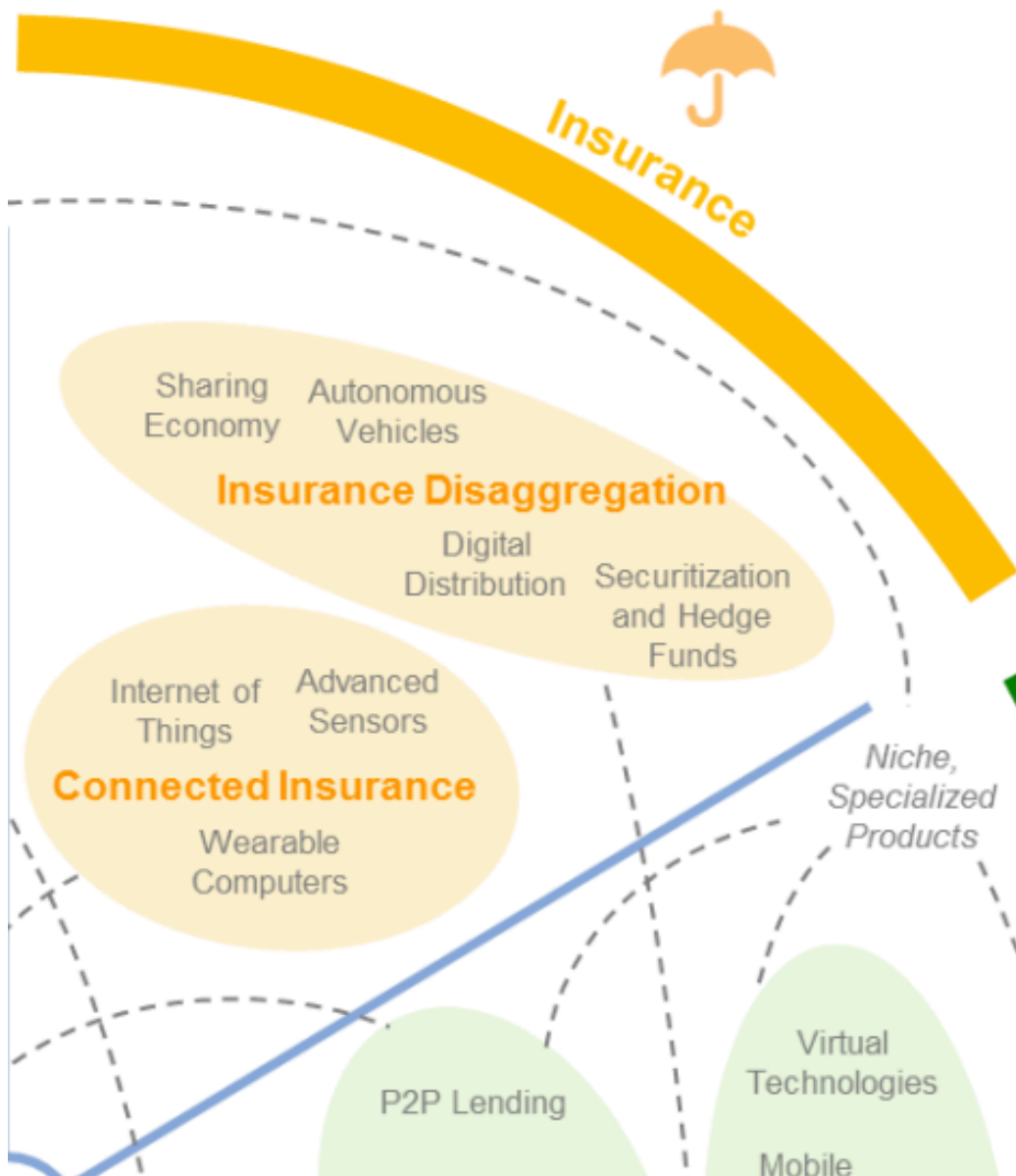


# FinTech: Payment Cashless World Emerging Payment Rails



圖表來源：Fugle團隊整理

# FinTech: Insurance



# 2

## FinTech: Insurance Insurance Disaggregation Connected Insurance

保險



創新

關鍵趨勢

**價值鏈裂解**  
Insurance  
Disaggregation

裂解分佈 (Disaggregated Distribution)、共享  
經濟、第三方資本、自動駕駛車

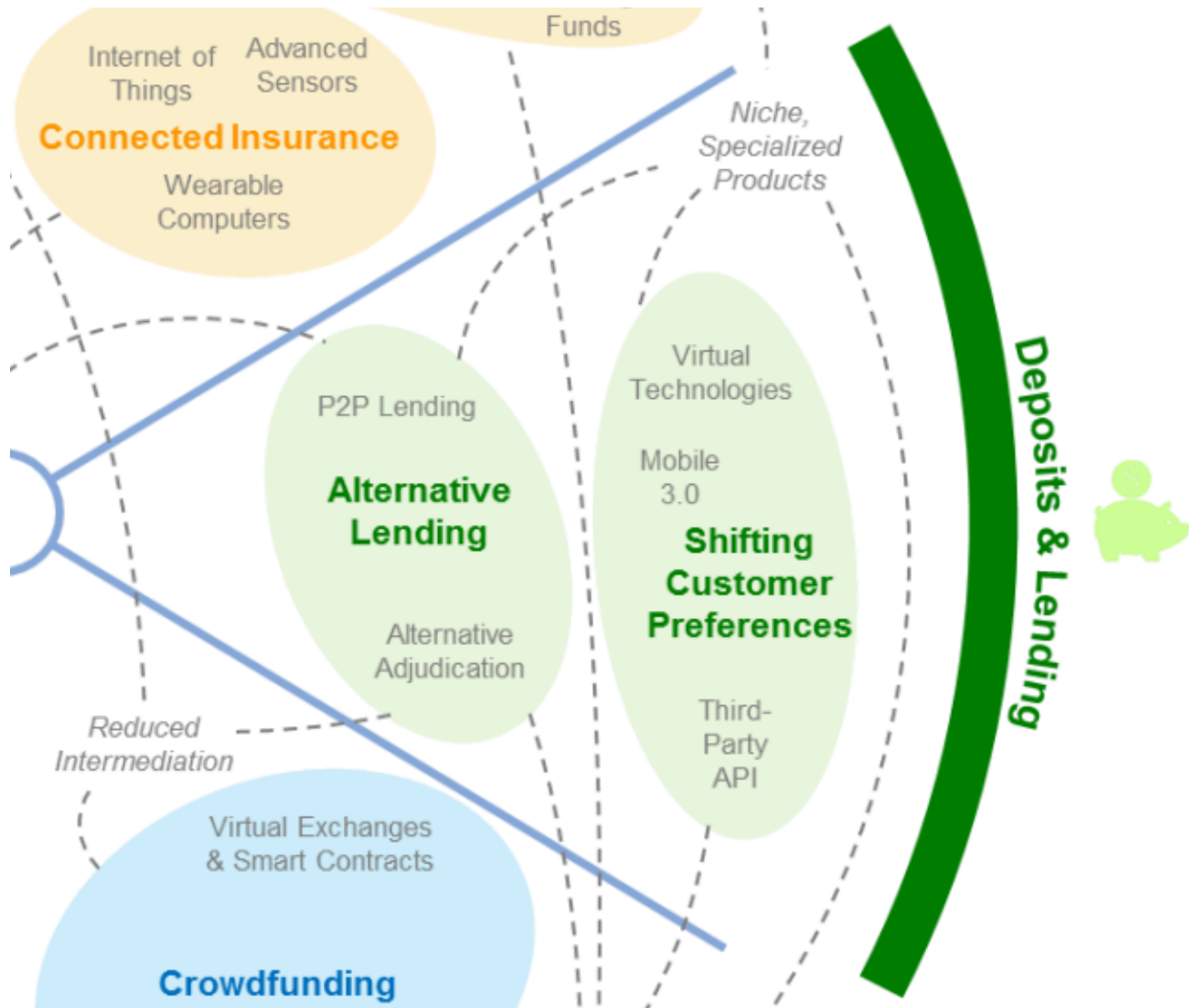
**保險串接裝置**  
Connected  
Insurance

高性價比感測器、穿戴式裝置、物聯網、標  
準化平台

圖表來源：Fugle團隊整理

# 3

## FinTech: Deposits & Lending



# 3

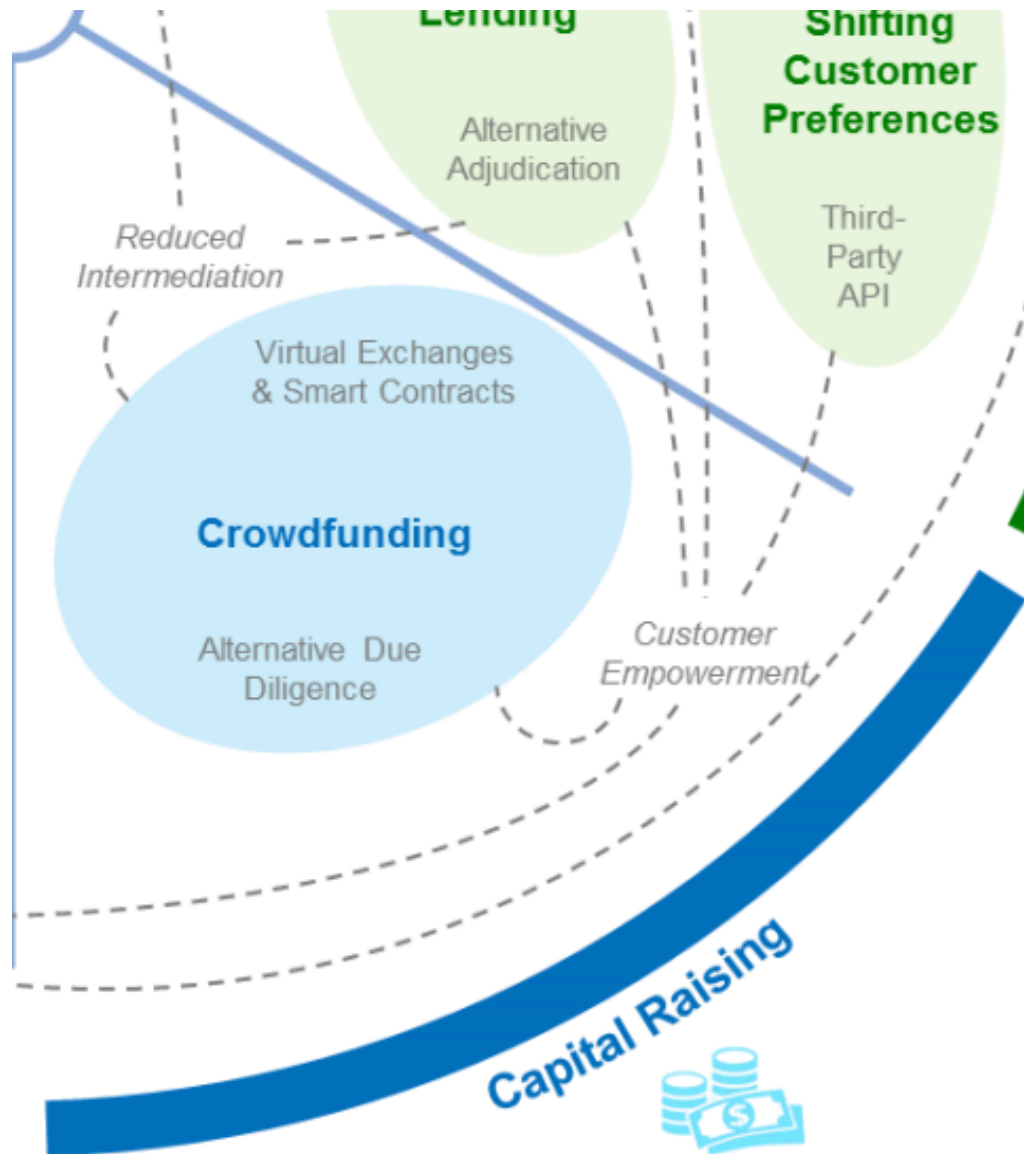
## FinTech: Deposits & Lending Alternative Lending Shifting Customer Preferences



圖表來源：Fugle團隊整理

# 4

## FinTech: Capital Raising



# 4

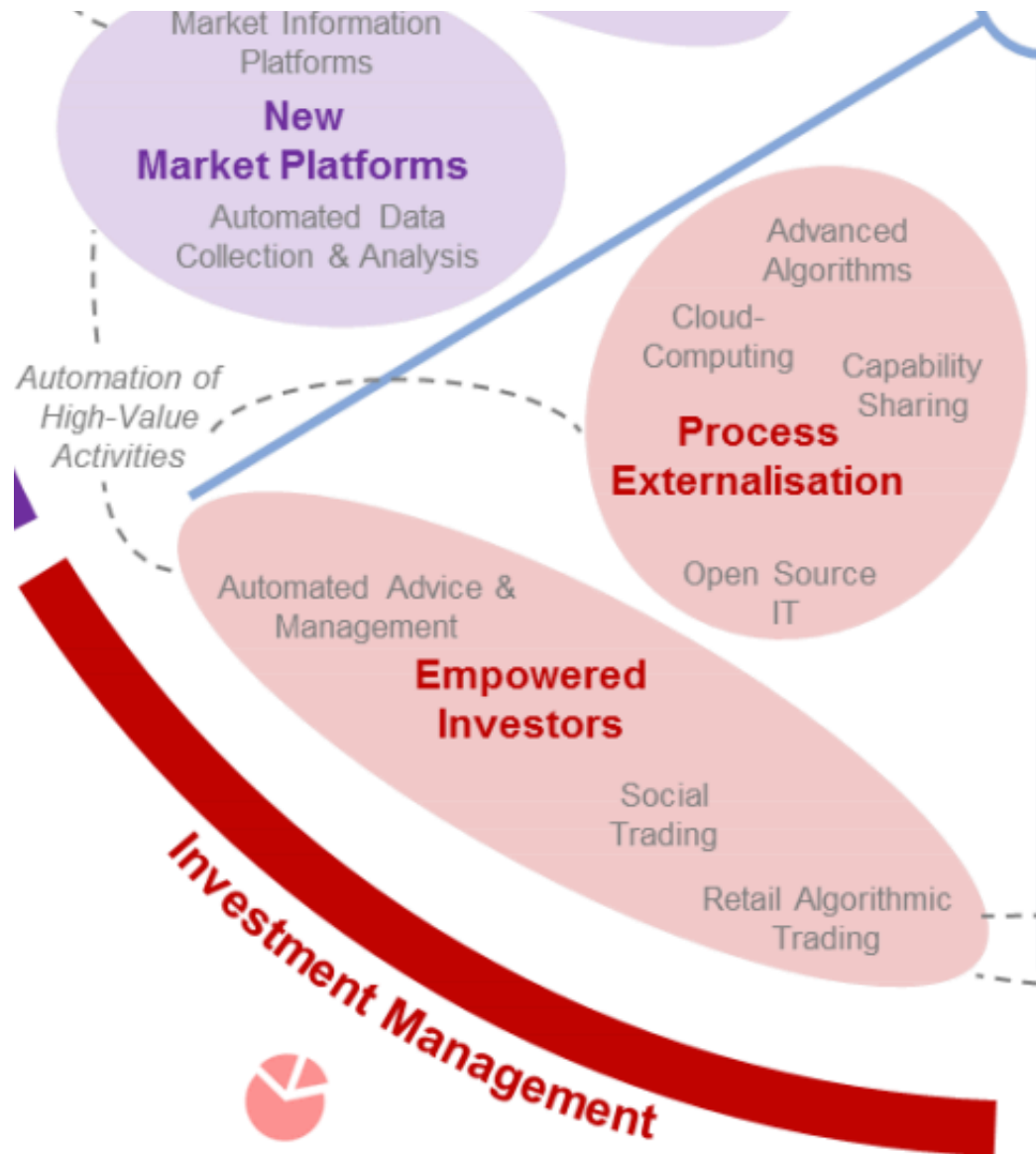
## FinTech: Capital Raising Crowdfunding



圖表來源：Fugle團隊整理



# 5 FinTech: Investment Management



# 5 FinTech: Investment Management

## Empowered Investors

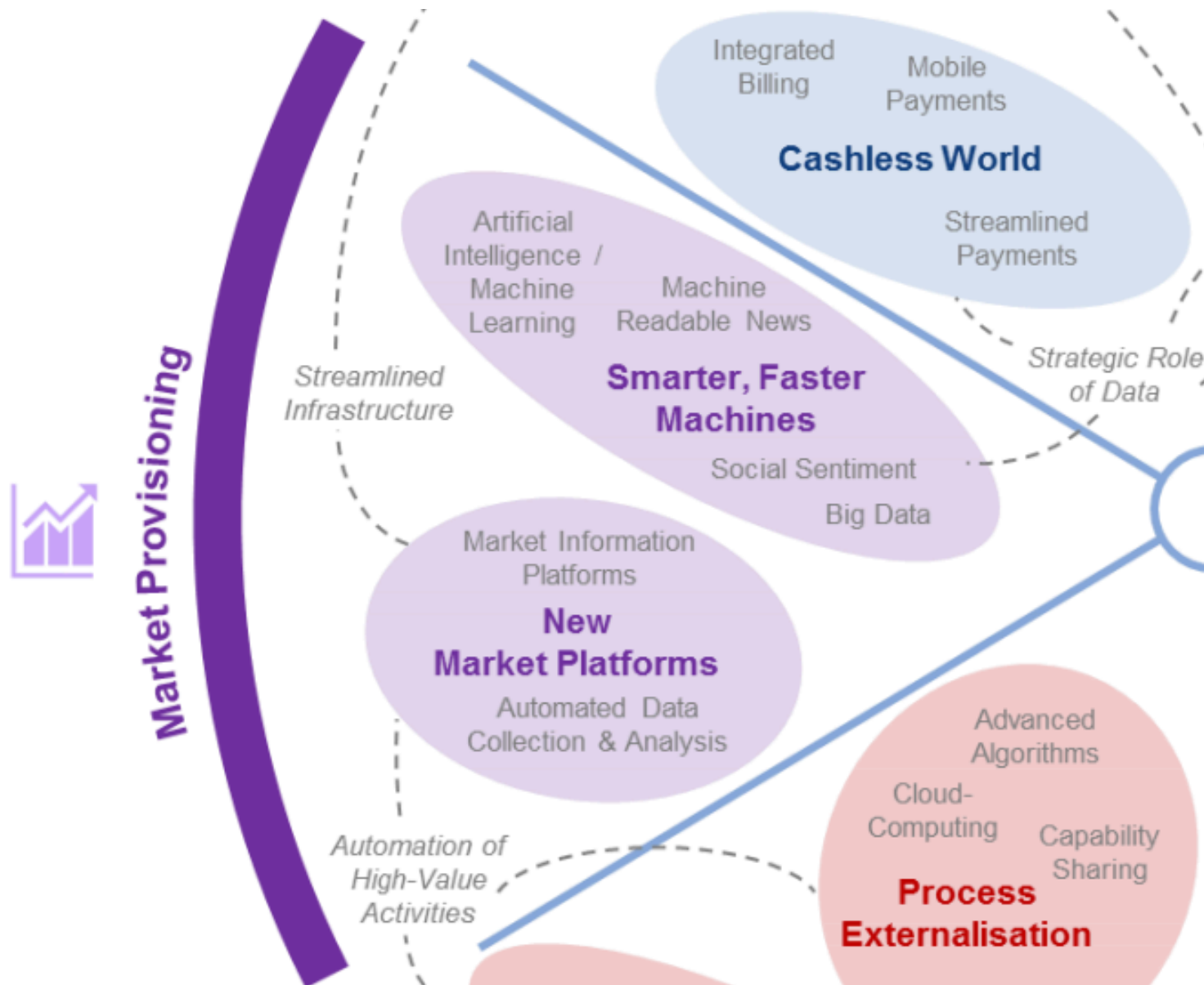
## Process Externalization



圖表來源：Fugle團隊整理

## 6

# FinTech: Market Provisioning



# 6

## FinTech: Market Provisioning Smarter, Faster Machines New Market Platforms

市場資訊供應



創新

關鍵趨勢

**機器革命**  
Smarter, Faster  
Machines

機器易用數據 (Machine Accessible Data)、人工智慧 / 機器學習、大數據

**新興平台**  
New Market  
Platforms

固定收益商品平台 ALGOMI、基金 / 組合型基金平台 NOVUS、私募 / 創投平台 BISON、未公發股權平台 LIQUITY、原物料商品與衍生性合約平台 ClauseMatch

圖表來源：Fugle團隊整理

# **Fintech Business Models Innovation**

# The Future of Financial Services

## Industry Leaders

- Oversight, guidance and thought leadership from **16 C-suite executives** and **25 strategy officers** of global financial institutions



## Innovators

- In-person and phone interviews with **100+ innovative new entrants** and **subject matter experts**

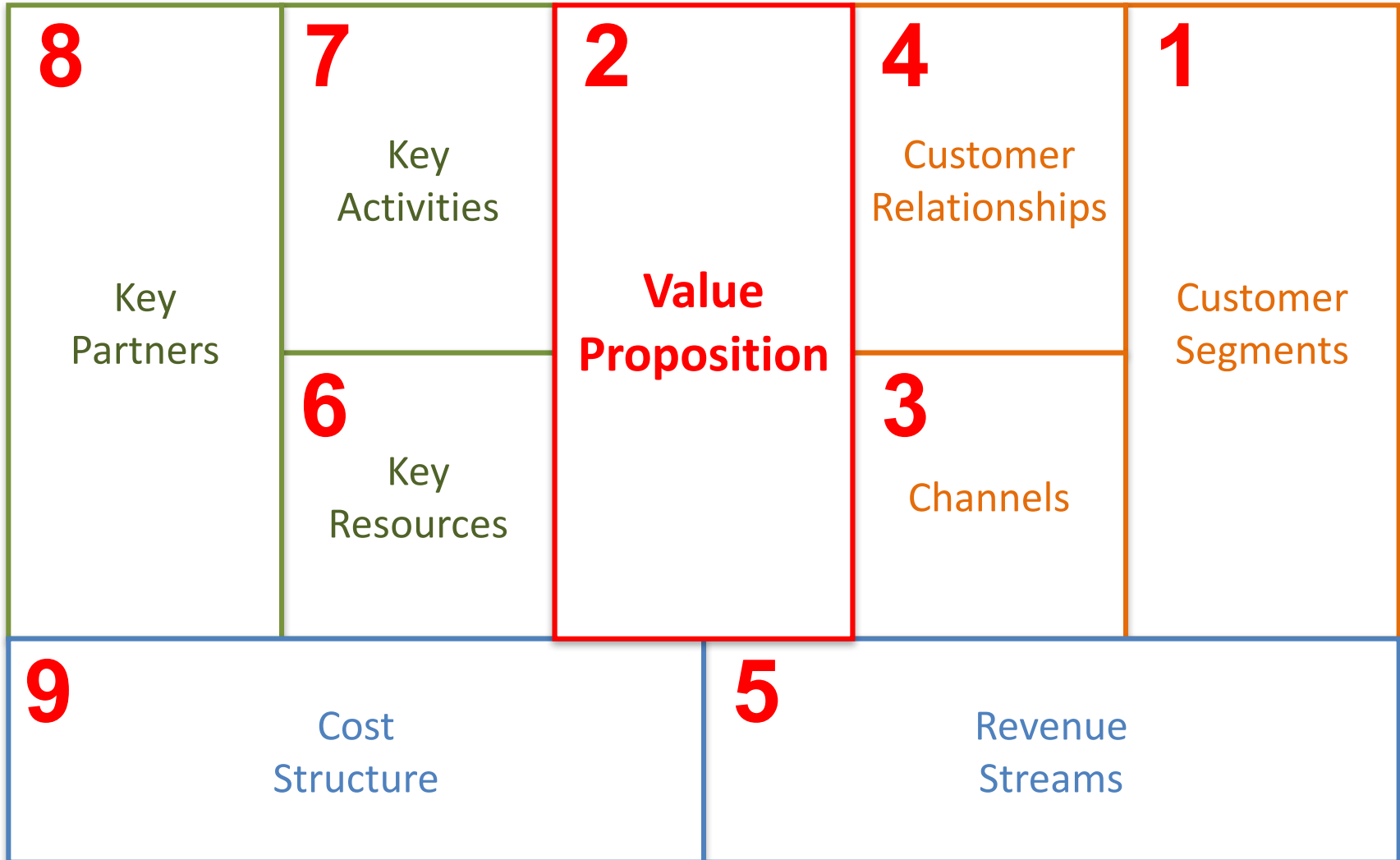


# Business Model

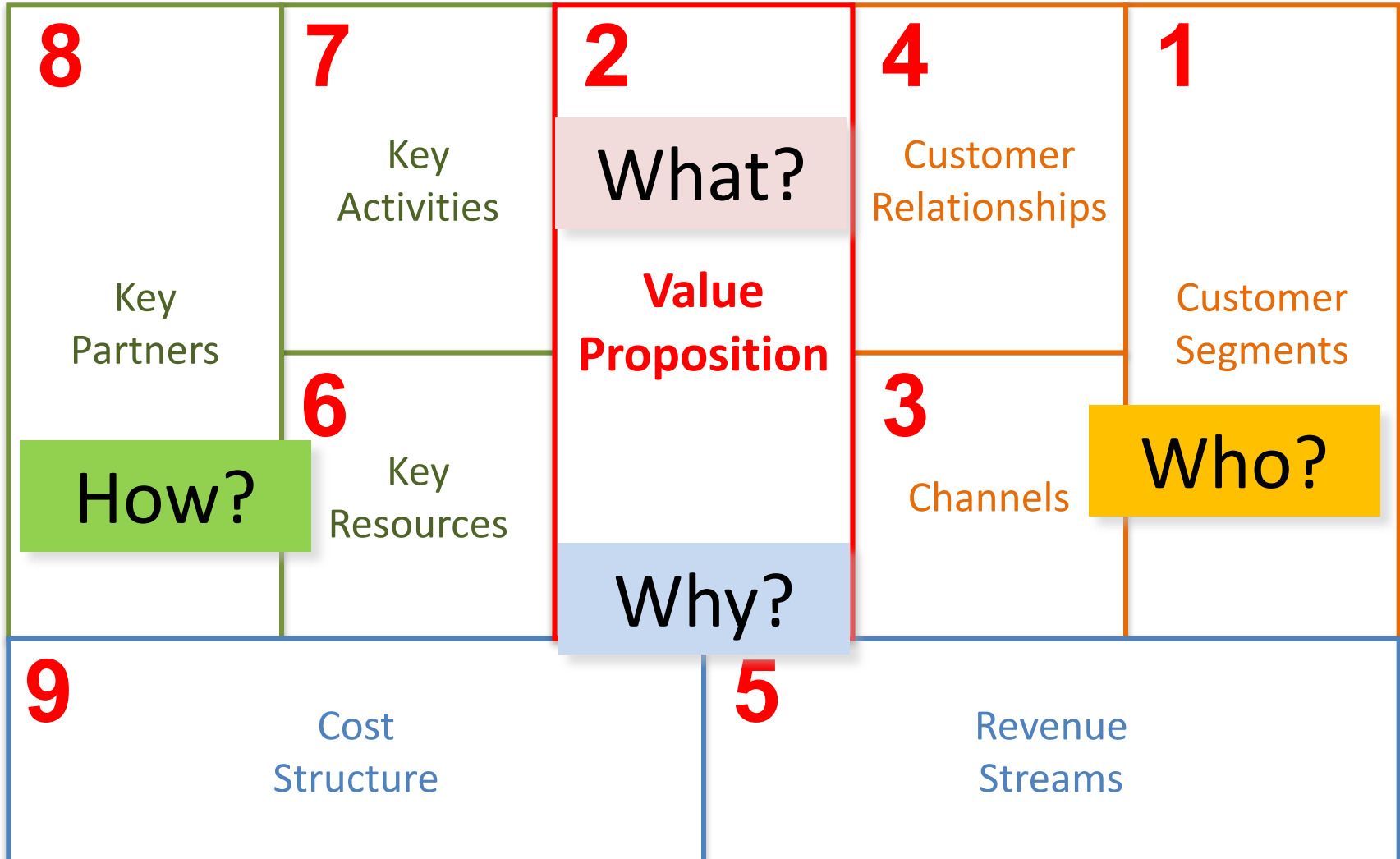
# Value



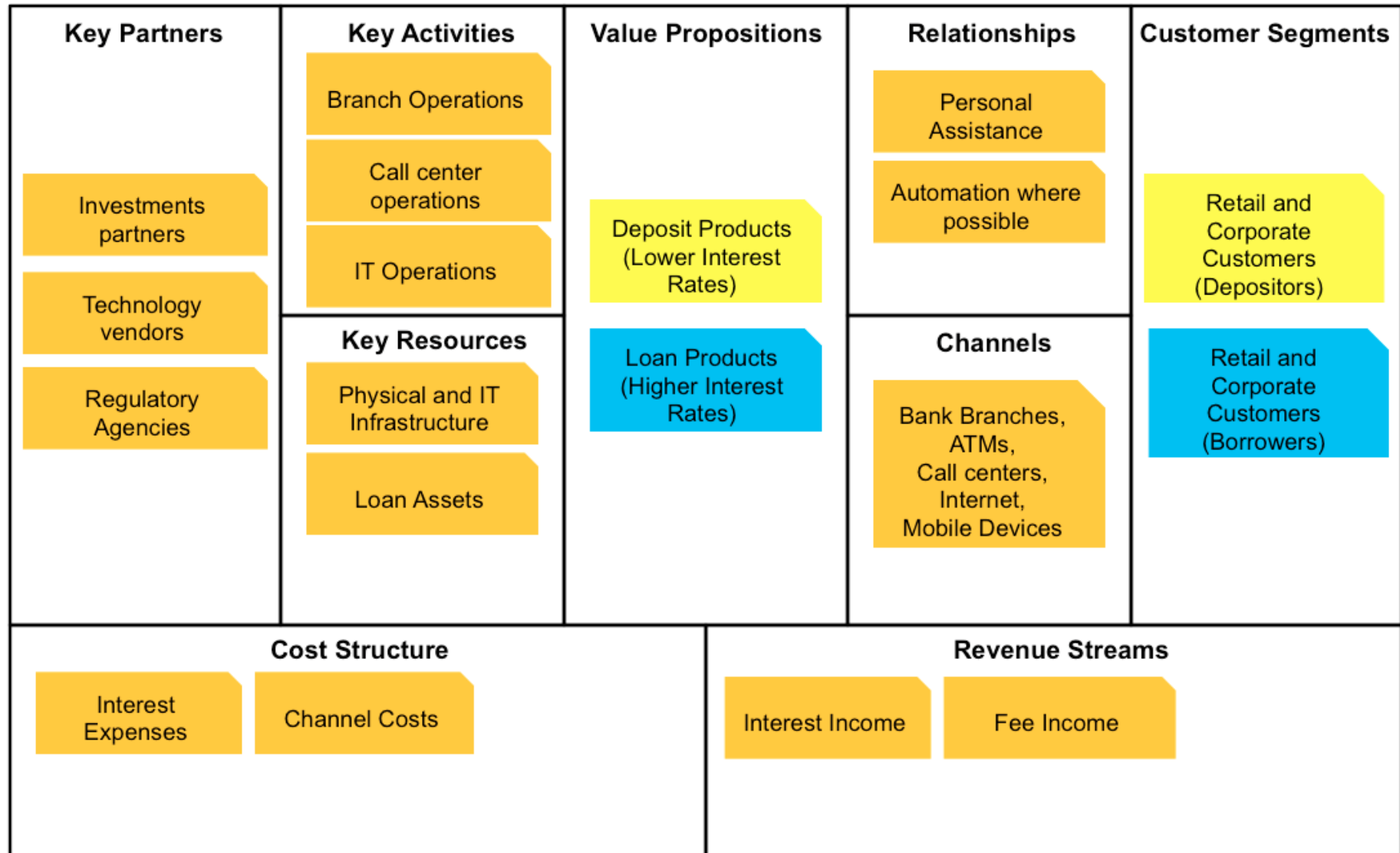
# Business Model



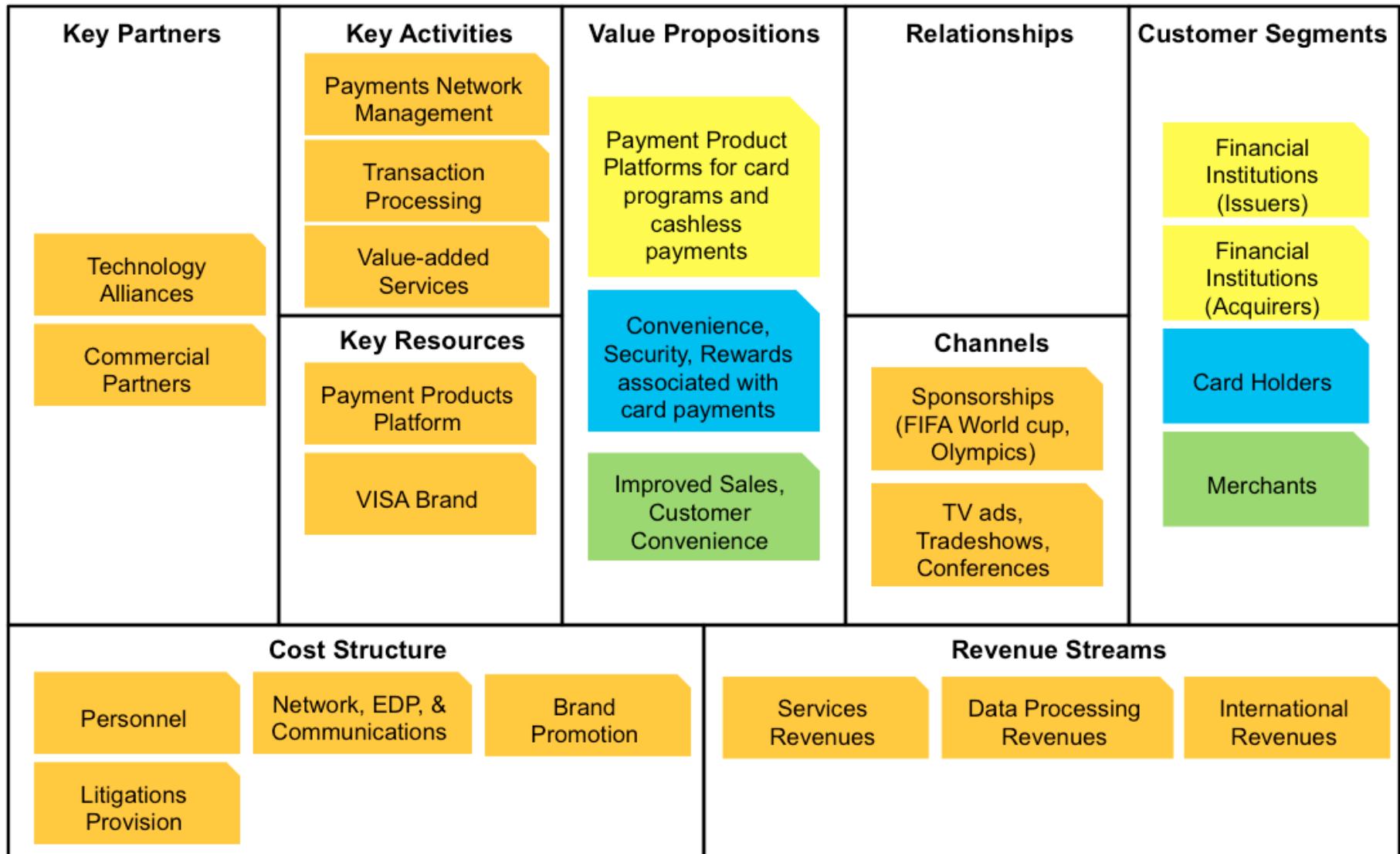
# Business Model



## Business Model of Banking companies



## VISA – Leader in Global Payments Industry



# Apply Pay Business Model



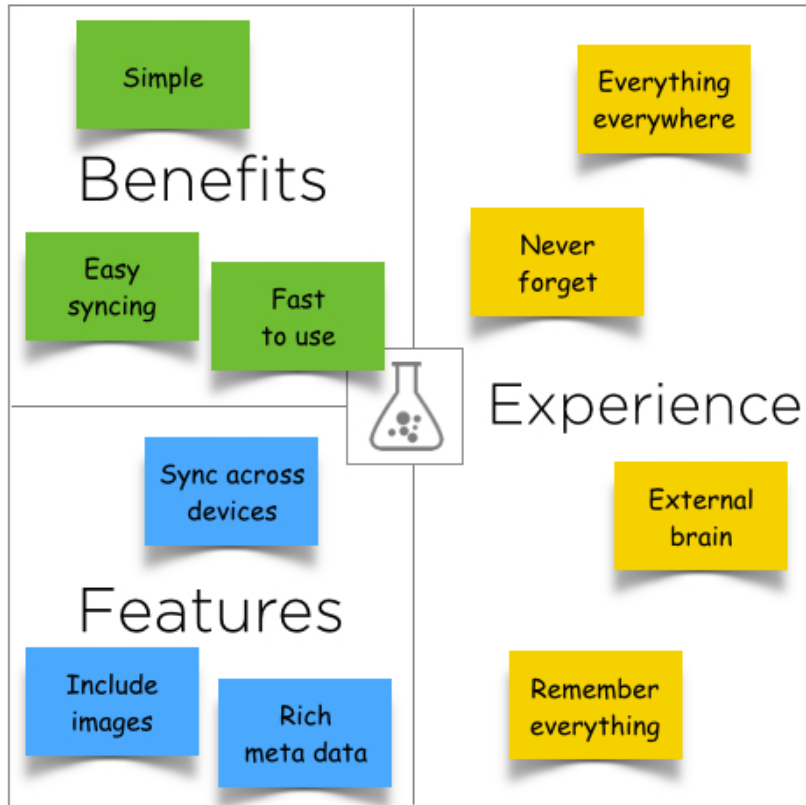
## Apple Pay



# Value Proposition

# Value Proposition Canvas

## Product

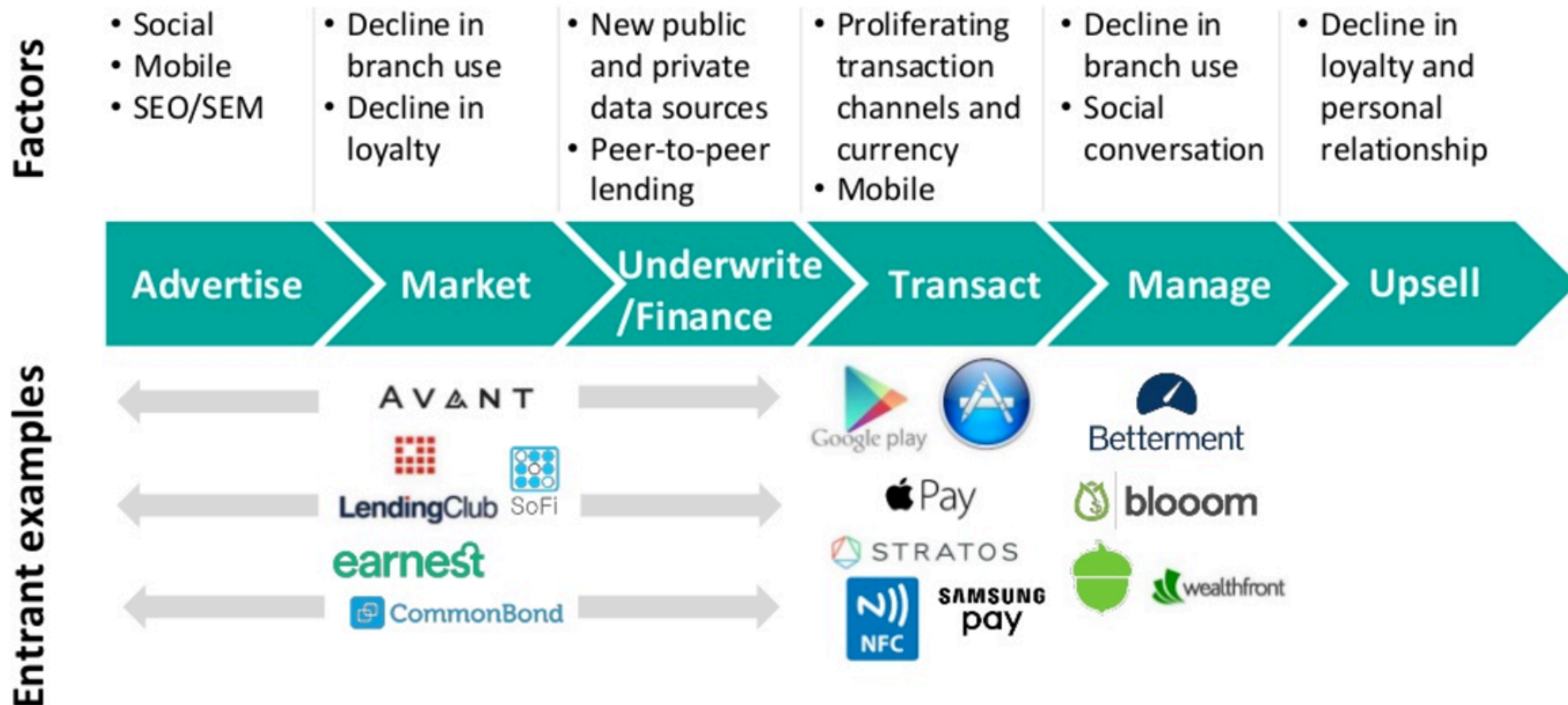


Company: **Evernote**  
Product: **Online notes**  
Ideal customer: **Mobile professionals**

## Customer



# Financial Value Chain





# **Business Models Innovation**

# Why Business Model Innovation

Target Market

Revenue  
Mechanism

Value  
Proposition

Value Network  
(Ecosystem)

Value Chain

Competitive  
Strategy

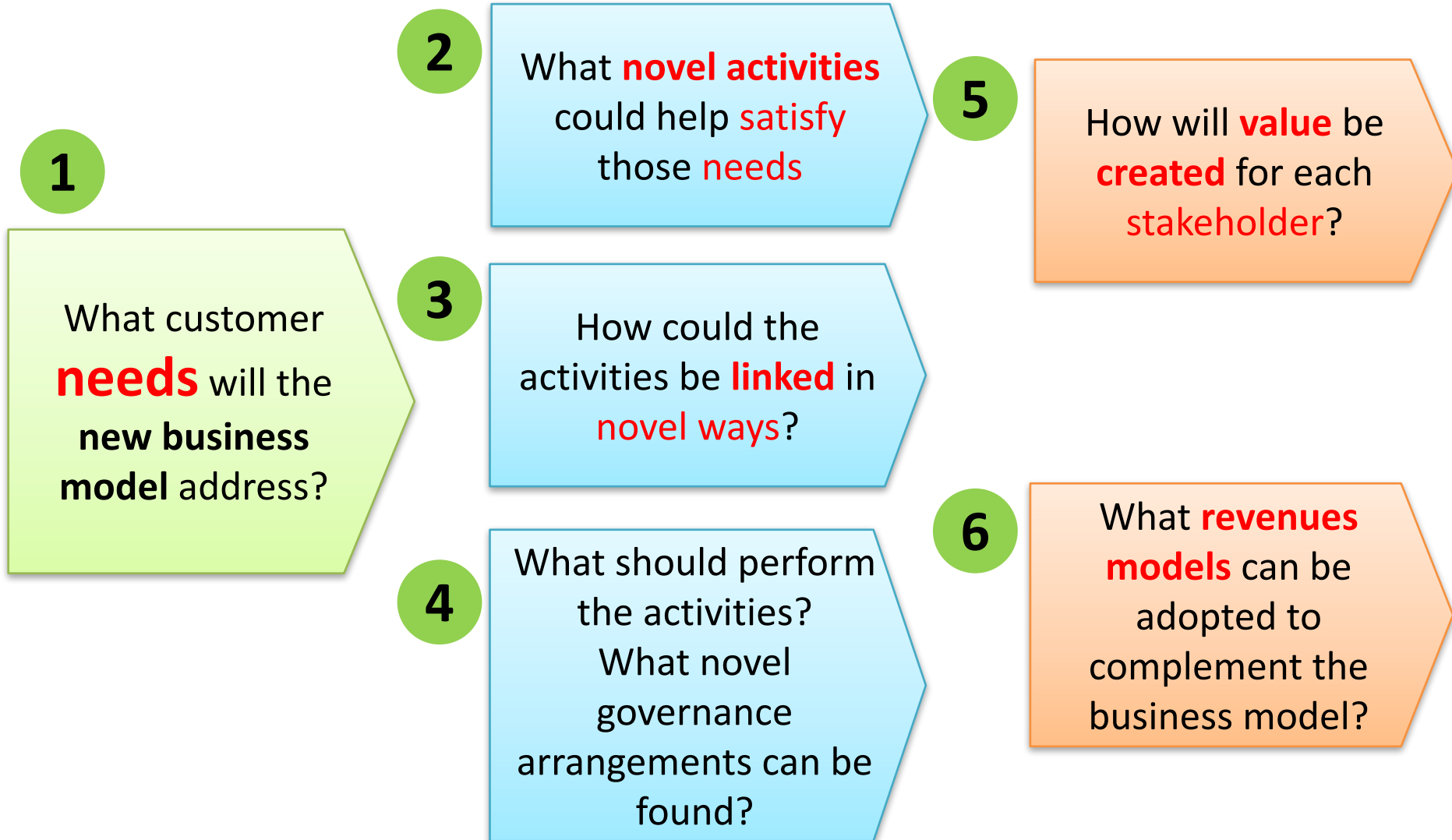
# Business Model Innovation

**Adding new** activities

**Linking** activities in **novel** ways

**Changing** one or more parties  
that perform any of the activities

# Business Model Innovation



# Digital goods

- Goods that can be delivered over a digital network
  - For example: music tracks, video, software, newspapers, books
- Cost of producing first unit is almost entire cost of product
- Costs of delivery over the Internet very low
- Marketing costs remain the same; pricing highly variable
- Industries with digital goods are undergoing revolutionary changes (publishers, record labels, etc.)

# Types of E-Commerce

- Three major types of e-commerce
  - Business-to-Consumer (B2C)
    - Example: BarnesandNoble.com
  - Business-to-Business (B2B)
    - Example: ChemConnect
  - Consumer-to-Consumer (C2C)
    - Example: eBay
- E-commerce can be categorized by platform
  - Mobile Commerce (m-commerce)

# E-commerce

## Business Models

1. E-tailer
2. Transaction broker
3. Market creator
4. Content provider
5. Community provider
6. Portal
7. Service provider

# Business Models of the Future

BUSINESS MODEL	DESCRIPTION	EXAMPLES
SUBSCRIPTION	Takes a product/service traditionally purchased on an ad hoc basis and locks in repeat customers by charging a subscription fee	NETFLIX, APPLE MUSIC
FREEMIUM	Users pay for product/service with their data rather than their money, then are charged to upgrade to a full offer	SPOTIFY, LINKEDIN, DROPBOX
FREE	Involves selling personal data or 'advertising eyeballs' harvested by offering consumers a free product/service	GOOGLE, FACEBOOK
MARKETPLACE	Provides a digital marketplace that brings together buyers and sellers in return for a transaction/placement fee or commission	eBAY, iTUNES, APP STORE, UBER, AIRBNB
ACCESS-OVER-OWNERSHIP	Provides temporary access to goods/services traditionally only available through purchase; includes 'sharing economy' disruptors	ZIPCAR, PEERBY, AIRBNB
HYPERMARKET	'Brand bombing' using sheer market power and scale to beat competition, often by selling below cost price	AMAZON, APPLE
EXPERIENCE	Disrupts by providing a superior experience, for which people are prepared to pay	TESLA, APPLE
PYRAMID	Recruits an army of resellers and affiliates who are often paid on a commission-only model	AMAZON, MICROSOFT, DROPBOX
ON-DEMAND	Monetises time and sells instant access at a premium; includes taking a commission from people with money but no time who pay for goods/services delivered by people with time but no money	UBER, OPERATOR, TASKRABBIT
ECOSYSTEM	Sells an interlocking and interdependent suite of products/services that increase in value as more are purchased, creating consumer dependency	APPLE, GOOGLE

Source: Digital Intelligence Today, Syzygy/WPP 2015



# Understanding **Business Model**

- **Business Model**
- Revenue Model
- Business Strategy
- Business Strategy and Information System Alignment

# Definition of Business Model

**A business model**  
**describes the rationale of**  
**how an organization**  
**creates, delivers, and captures**  
**value.**

# Definition of Business Strategy

**A business strategy**  
**is**  
**a long term plan of action**  
**designed to achieve a particular goal**  
**or set of goals or objectives.**

# Business

- “the activity of providing goods and services involving financial, commercial and industrial aspects.” (WordNet 2.0)

# Model

- “a simplified description and representation of a complex entity or process.” (WordNet 2.0)

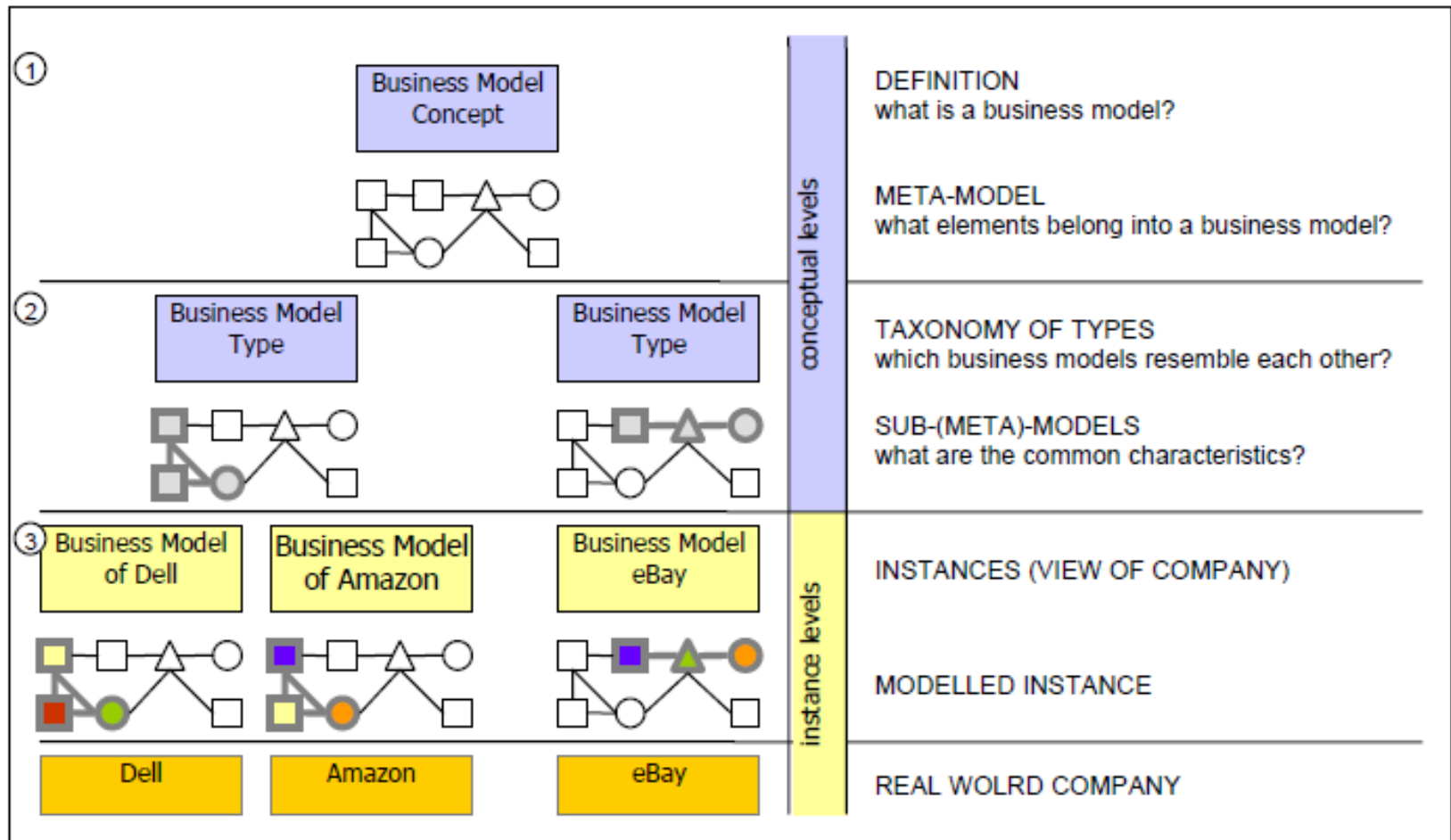
# Business Model

- A business model is a **conceptual tool** containing a set of **objects, concepts and their relationships** with the objective to express the **business logic** of a specific firm.
- Therefore we must consider which **concepts and relationships** allow a simplified description and representation of **what value is provided to customers, how this is done and with which financial consequences**.

## Occurrences of the Term "Business Model" in Scholarly Reviewed Journals

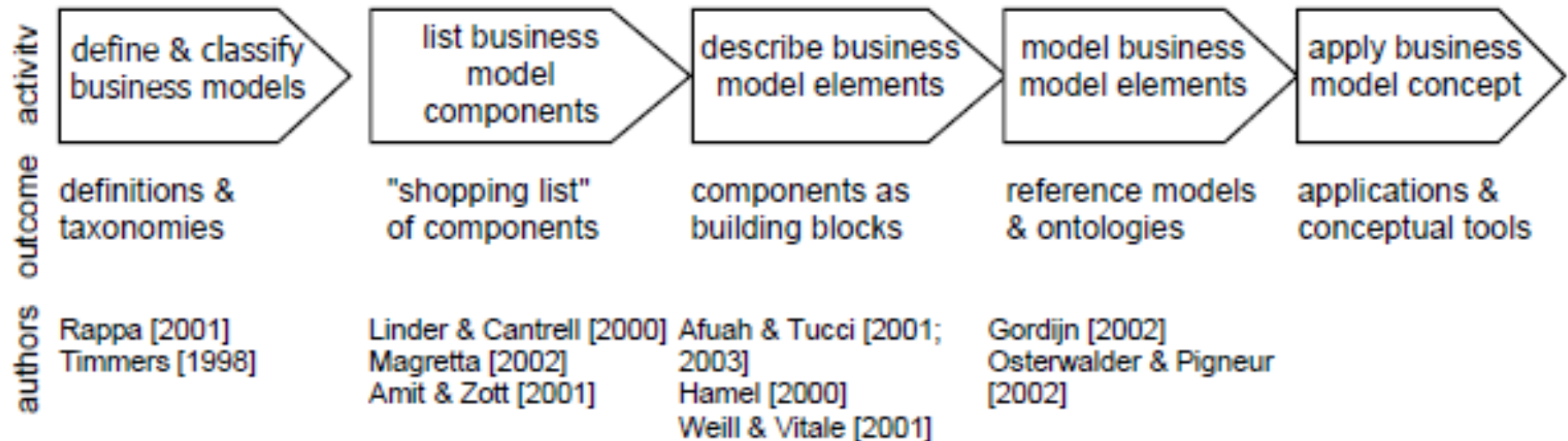
<b>Year</b>	<b>In Title</b>	<b>In Abstract</b>	<b>In Keywords</b>	<b>in Full Text</b>
2003	30	159	10	667
2002	22	109	2	617
2001	11	100	7	609
2000	16	67	1	491
1999	3	42	1	262
1998	1	19	0	128
1997	1	14	0	66
1996	0	14	0	57
1995	0	4	0	36
1994	0	2	0	18
1993	0	5	0	18
1992	0	2	0	15
1991	0	1	0	10
1990	0	4	0	7

# Business Model Concept Hierarchy





# Evolution of the Business Model Concept



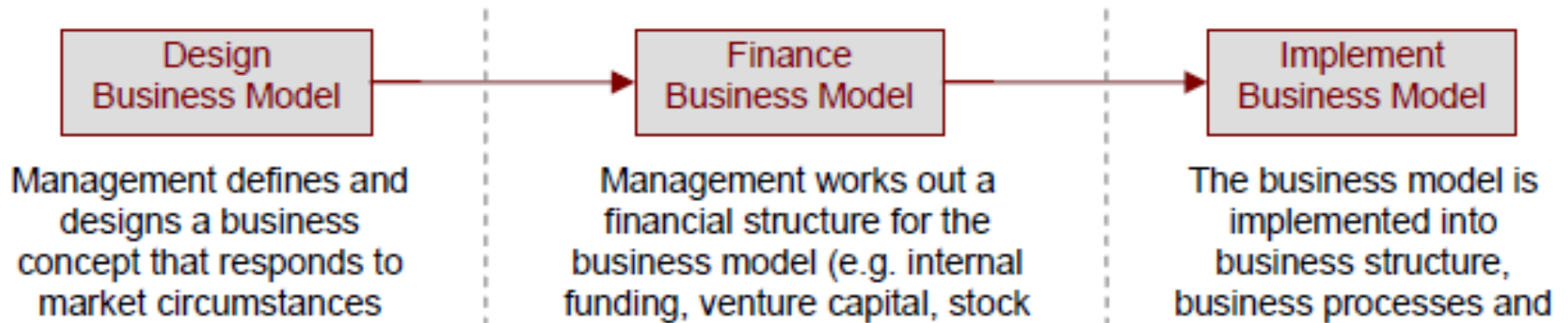
# Business Model vs. Business Process Model

- Business Model
  - a view of the firm's logic for creating and commercializing value
- Business process model
  - how a business case is implemented in processes

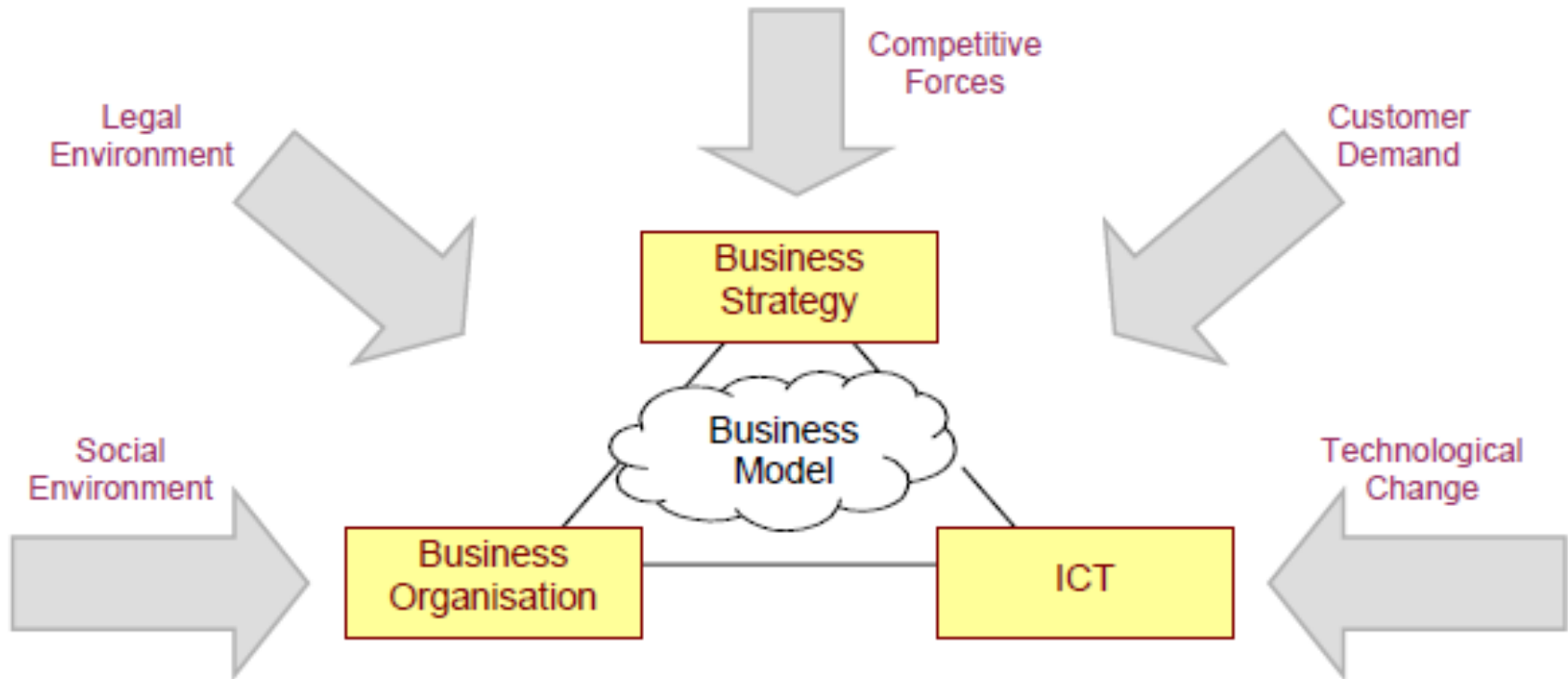
# Business Model vs. Strategy

- Business Models
  - a system that shows how the pieces of a business fit together.
  - an abstraction of a firm's strategy
- Strategy
  - includes competition

# Implementing Business Models



# The Business Model's Place in the Firm



# Nine Business Model Building Blocks

Pillar	Business Model Building Block	Description
Product	Value Proposition	Gives an overall view of a company's bundle of products and services.
Customer Interface	Target Customer	Describes the segments of customers a company wants to offer value to.
	Distribution Channel	Describes the various means of the company to get in touch with its customers.
	Relationship	Explains the kind of links a company establishes between itself and its different customer segments.
Infrastructure Management	Value Configuration	Describes the arrangement of activities and resources.
	Core Competency	Outlines the competencies necessary to execute the company's business model.
	Partner Network	Portrays the network of cooperative agreements with other companies necessary to efficiently offer and commercialize value.
Financial Aspects	Cost Structure	Sums up the monetary consequences of the means employed in the business model.
	Revenue Model	Describes the way a company makes money through a variety of revenue flows.

# Domains Addressed in Business Models

Business model ontology	Stähler 2001	Weill and Vitale 2001	Petrovic, Kittl et al.	Gordijn 2002	Afuah and Tucci 2003	Tapscott, Ticoll et al. 2000	Linder and Cantrell 2000
Value Proposition	value proposition	Value Proposition, strategic objective	Value Model	Value offering	Customer Value		value proposition
Target Customer		Customer Segments		Market Segment	Scope		
Distribution Channel		Channels	Customer relations model				channel model
Customer Relationship			Customer relations model				commerce relationship
Value Configuration	Architecture		Production Mode	e3-value configuration	connected activities, value configuration	b-webs	commerce process model
Capability		Core competencies, CSF	Resource Model		capabilities		
Partnership	Architecture	e-business schematics		Actors	sustainability (team-up strategy)	b-webs	
Cost Structure				Value exchange	cost structure		
Revenue Model	Revenue Model	Source of revenue	Revenue Model	value exchange	pricing, revenue source		pricing model, revenue model

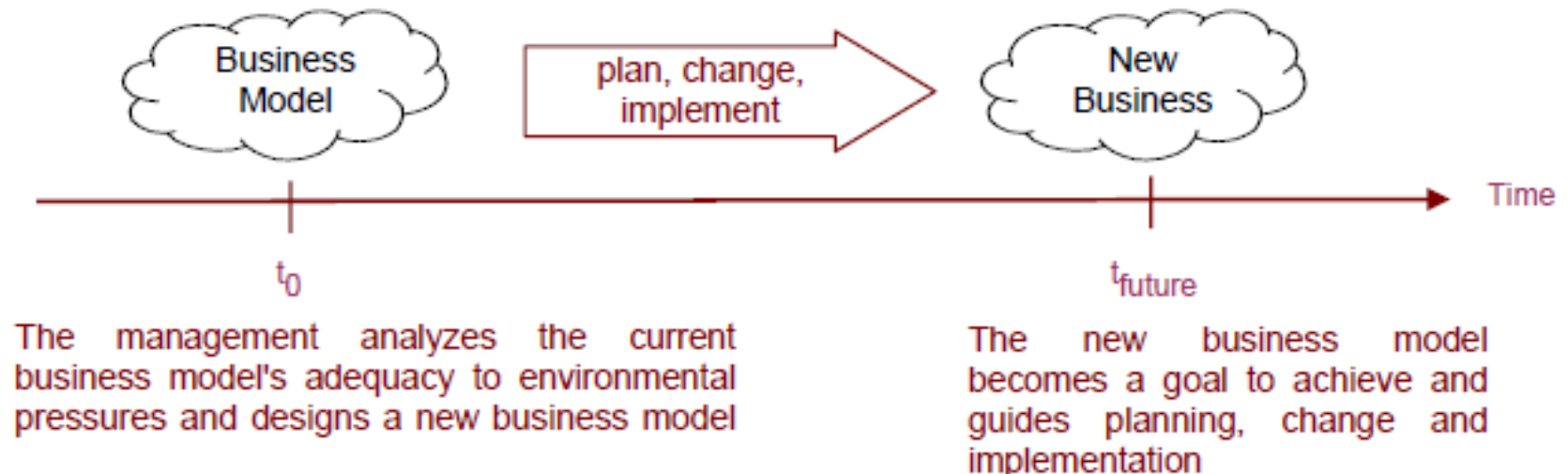
# Domains Addressed in Business Models

## (cont.)

Business model ontology	Hamel 2000	Mahadevan 2000	Chesbrough and Rosenbloom 2000	Magretta 2002	Amit and Zott 2001	Applegate and Collura 2001	Maitland and Van de Kar 2002
Value Proposition	Product/market scope	Value stream	Value proposition	What does the customer value?	Transaction component	Product and Services offered	Value proposition, assumed value
Target Customer	Market scope		Market segment	Who is the customer?		Market opportunity	Market segment
Distribution Channel	Fulfillment & support, info & insight			How can we deliver value at an appropriate cost?		Marketing/sales model	
Customer Relationship	Relationship dynamics					Brand and reputation	
Value Configuration	Core processes	Logistical stream	Structure of the value chain		Architectural configuration	Operating model	
Capability	core competencies, strategic assets					Organization and culture, management model)	
Partnership	suppliers, partners, coalitions		Position in the value chain		Transaction component	Partners	Companies involved in creating value
Cost Structure			Cost structure	What is the underlying economic value?			
Revenue Model	pricing structure	Revenue stream		How do we make money in this business		Benefits to firm and stakeholders	Revenue Model

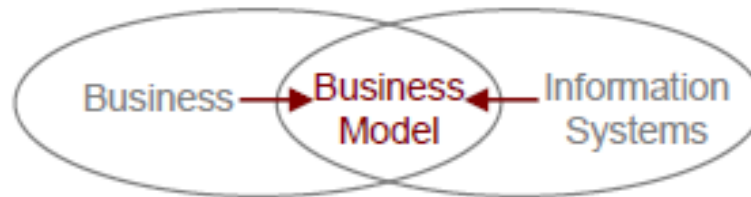


# Planning, Changing and Implementing Business Models



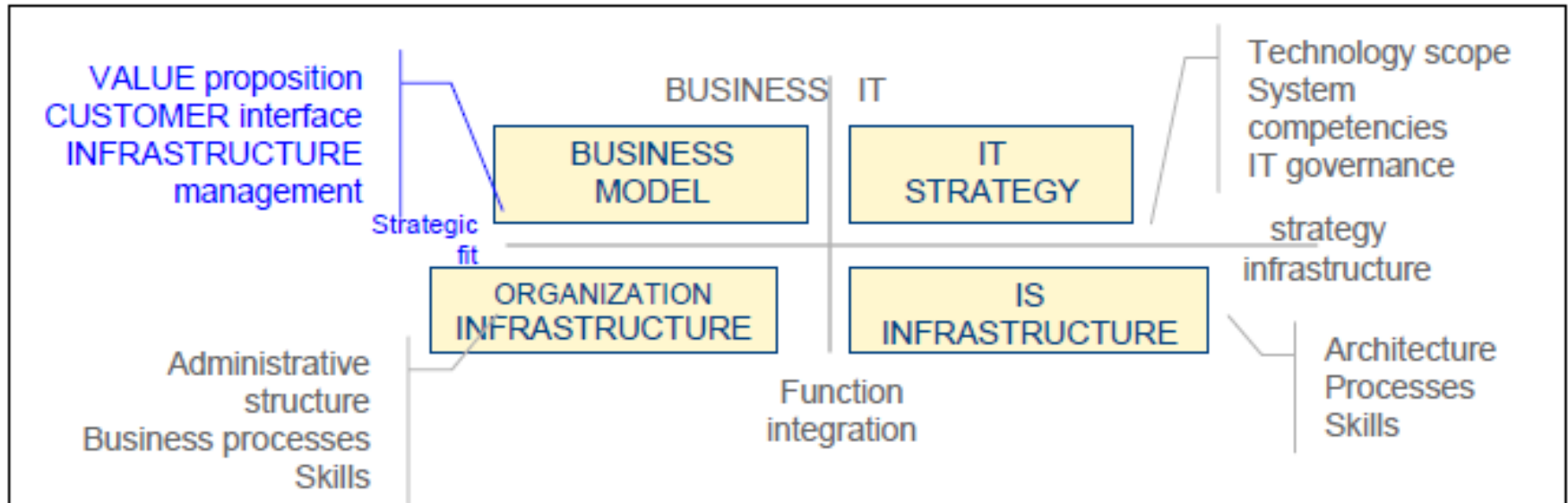
# Business Strategy and Information Systems Alignment

Managers are aware of the use of Information Systems to realize goals, exploit opportunities and obtain competitive advantage



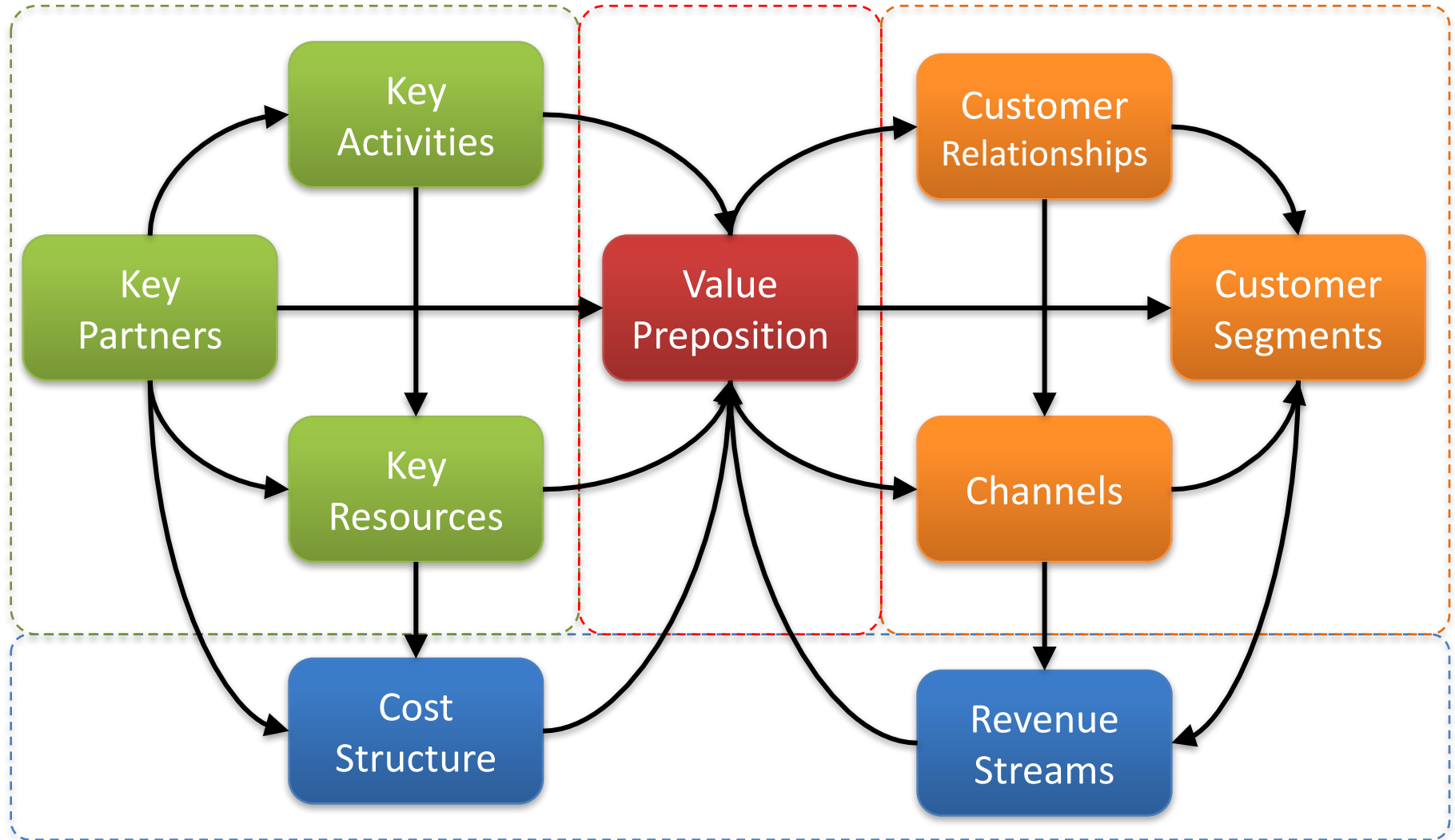
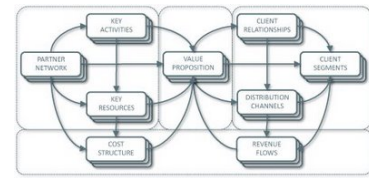
Information Systems support the company's business model and are targeted on areas that are critical to successful business performance

# Business and IT/IS Alignment



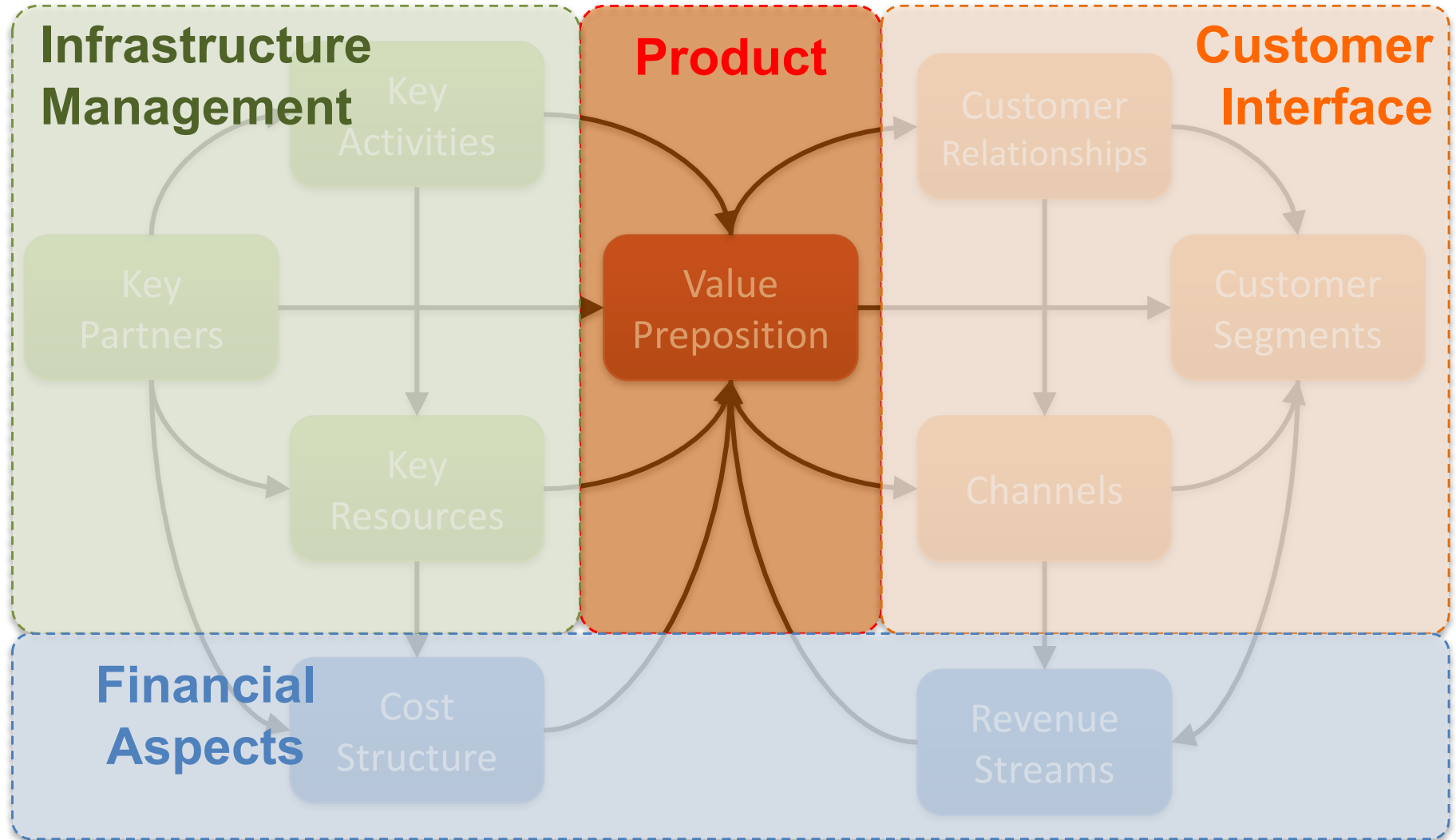
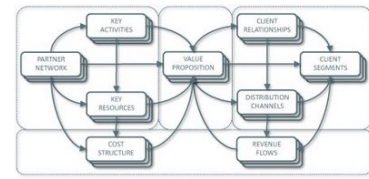
Adapted from [Henderson and Venkatraman 1999]

# Business Model Canvas



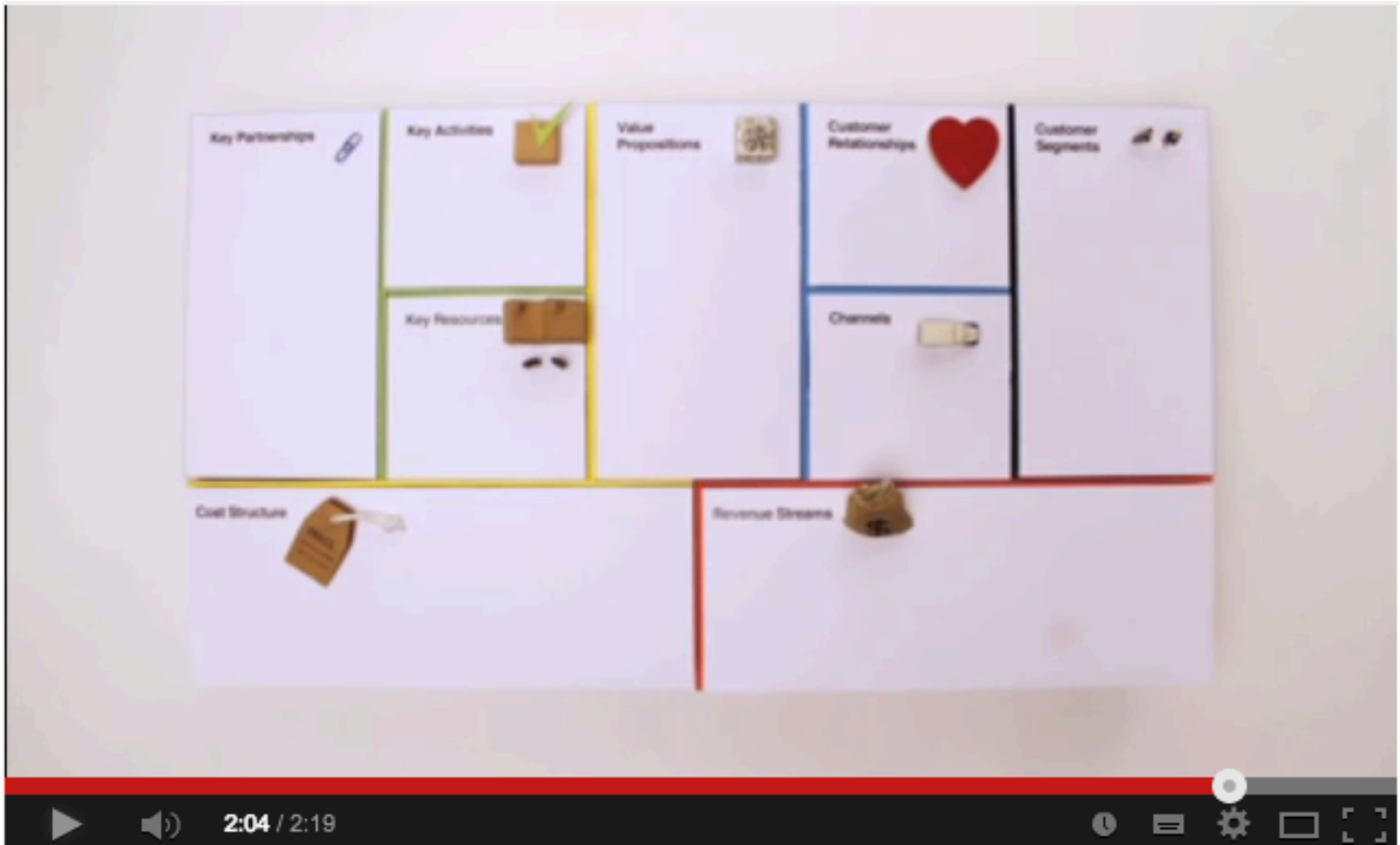
Source: [http://nonlinearthinking.typepad.com/nonlinear\\_thinking/2008/07/the-business-model-canvas.html](http://nonlinearthinking.typepad.com/nonlinear_thinking/2008/07/the-business-model-canvas.html)  
<https://www.youtube.com/watch?v=QoAOzMTLP5s>

# Business Model Canvas

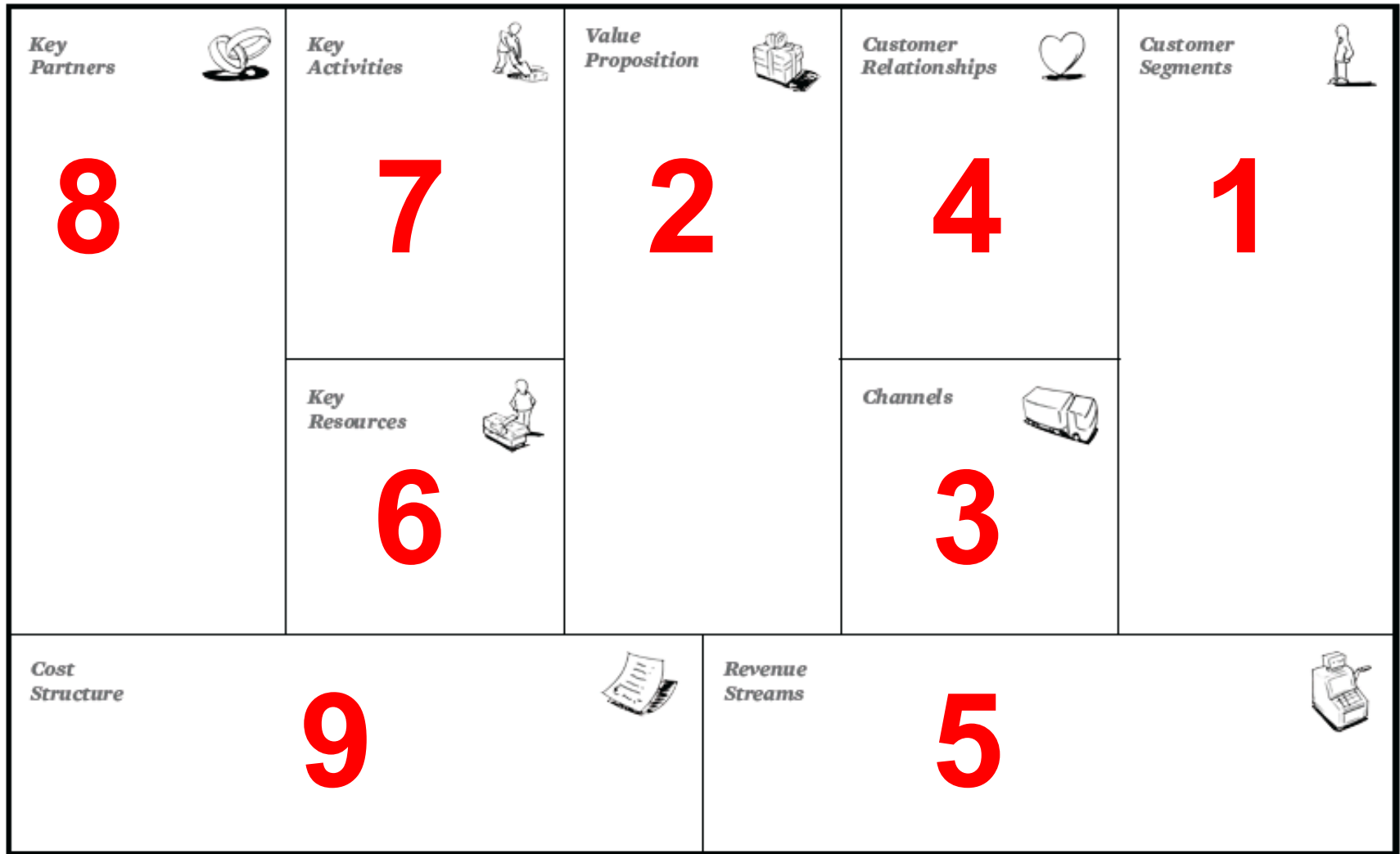


Source: [http://nonlinearthinking.typepad.com/nonlinear\\_thinking/2008/07/the-business-model-canvas.html](http://nonlinearthinking.typepad.com/nonlinear_thinking/2008/07/the-business-model-canvas.html)  
<https://www.youtube.com/watch?v=QoAOzMTLP5s>

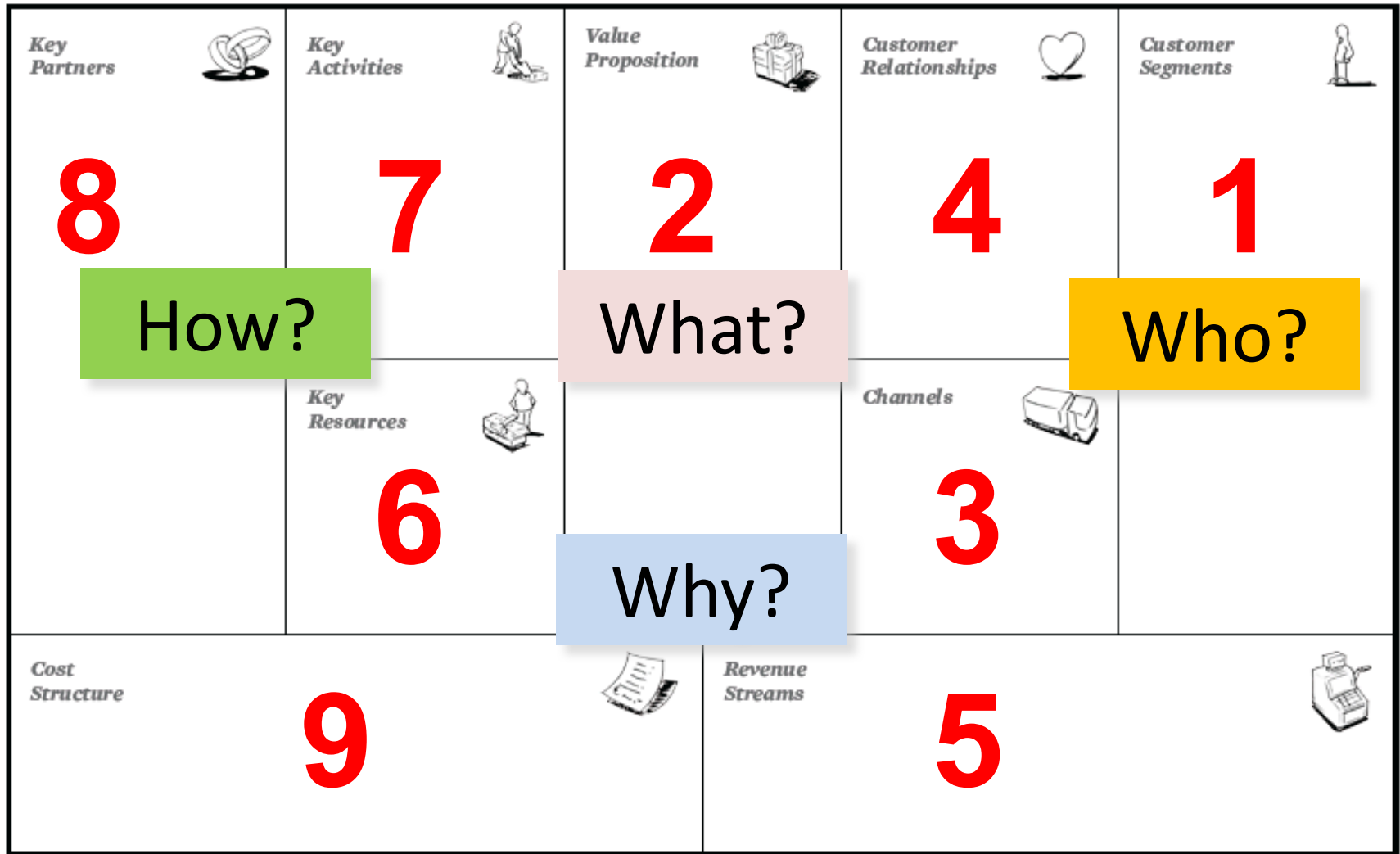
# Business Model Canvas Explained



# The 9 Building Blocks of Business Model

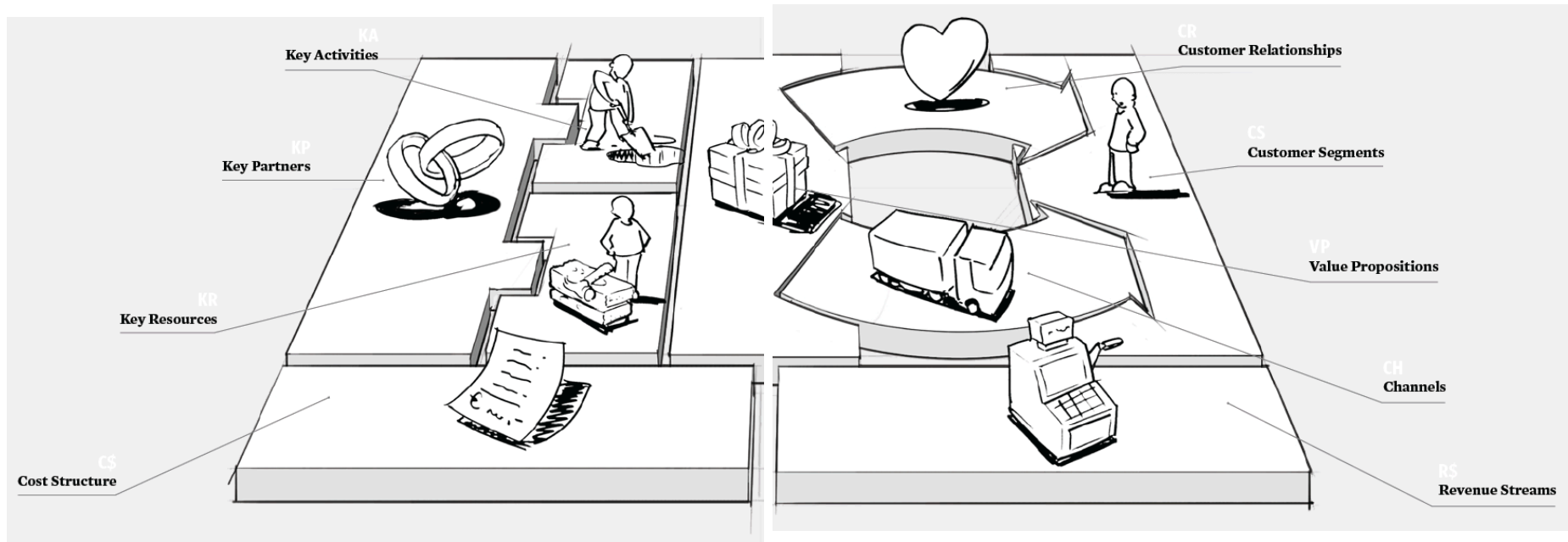


# The 9 Building Blocks of Business Model



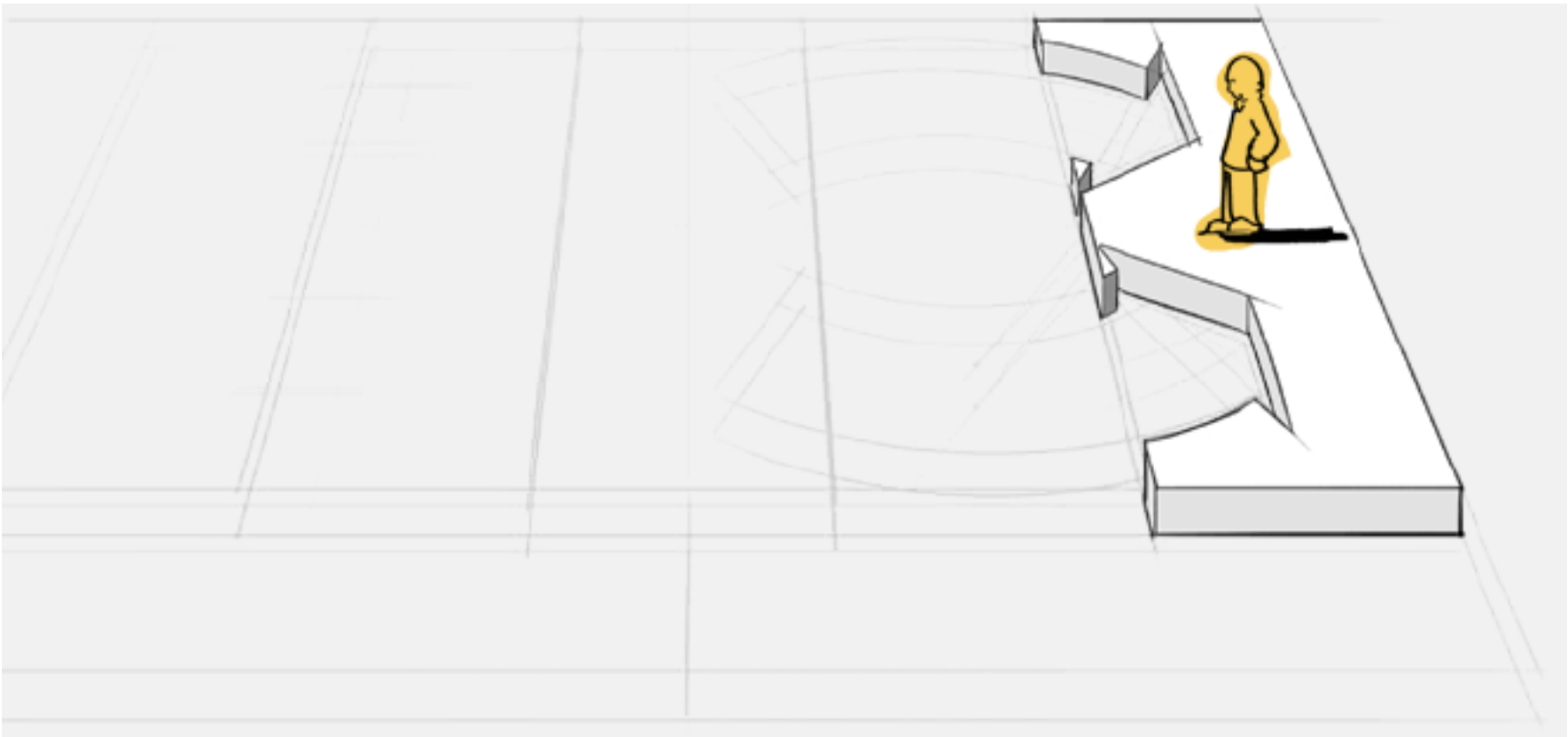


# The 9 Building Blocks of Business Model



# 1. Customer Segments

Defines the different groups of people or organizations an enterprise aims to reach and serve



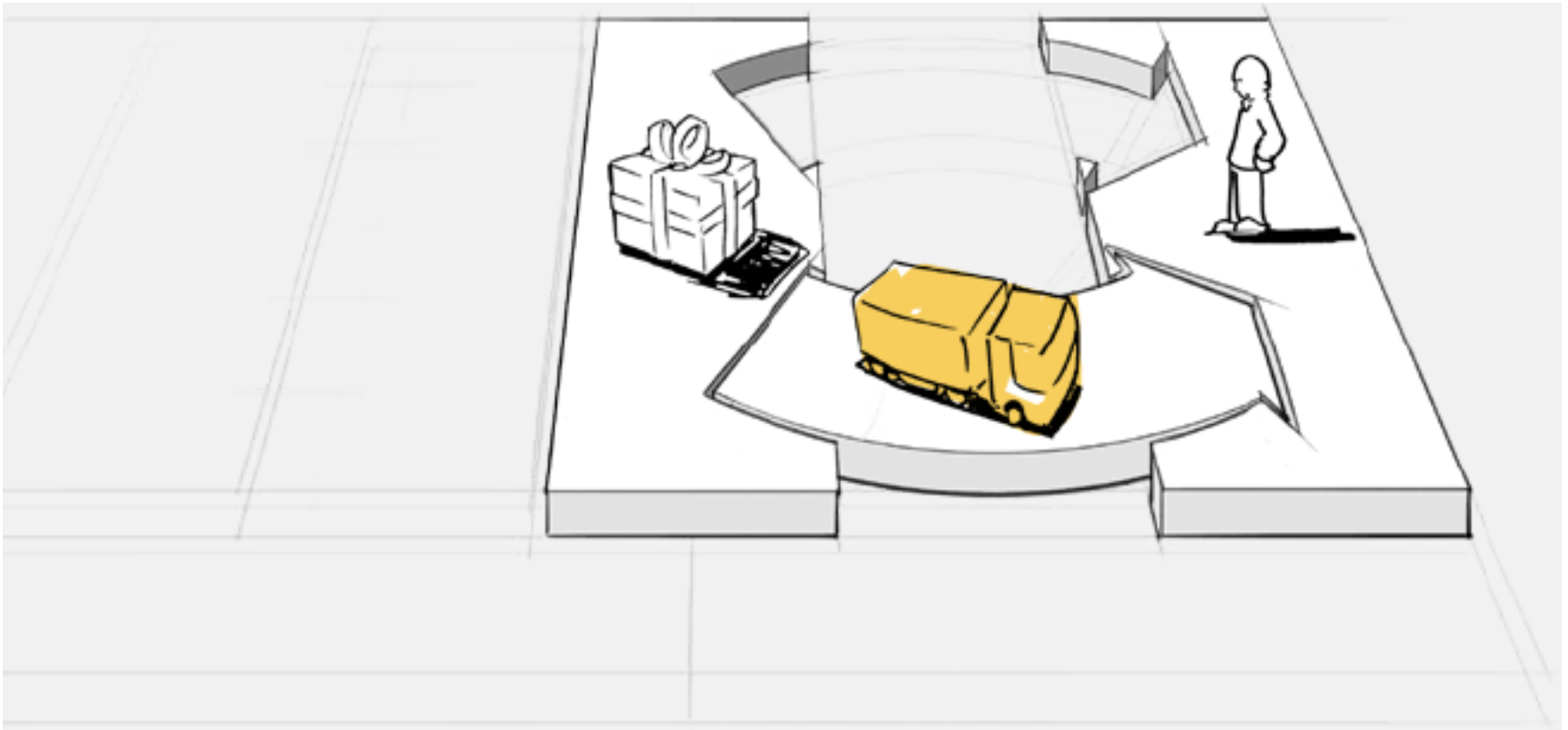
## 2. Value Propositions

Describes the bundle of products and services that create value for a specific Customer Segment



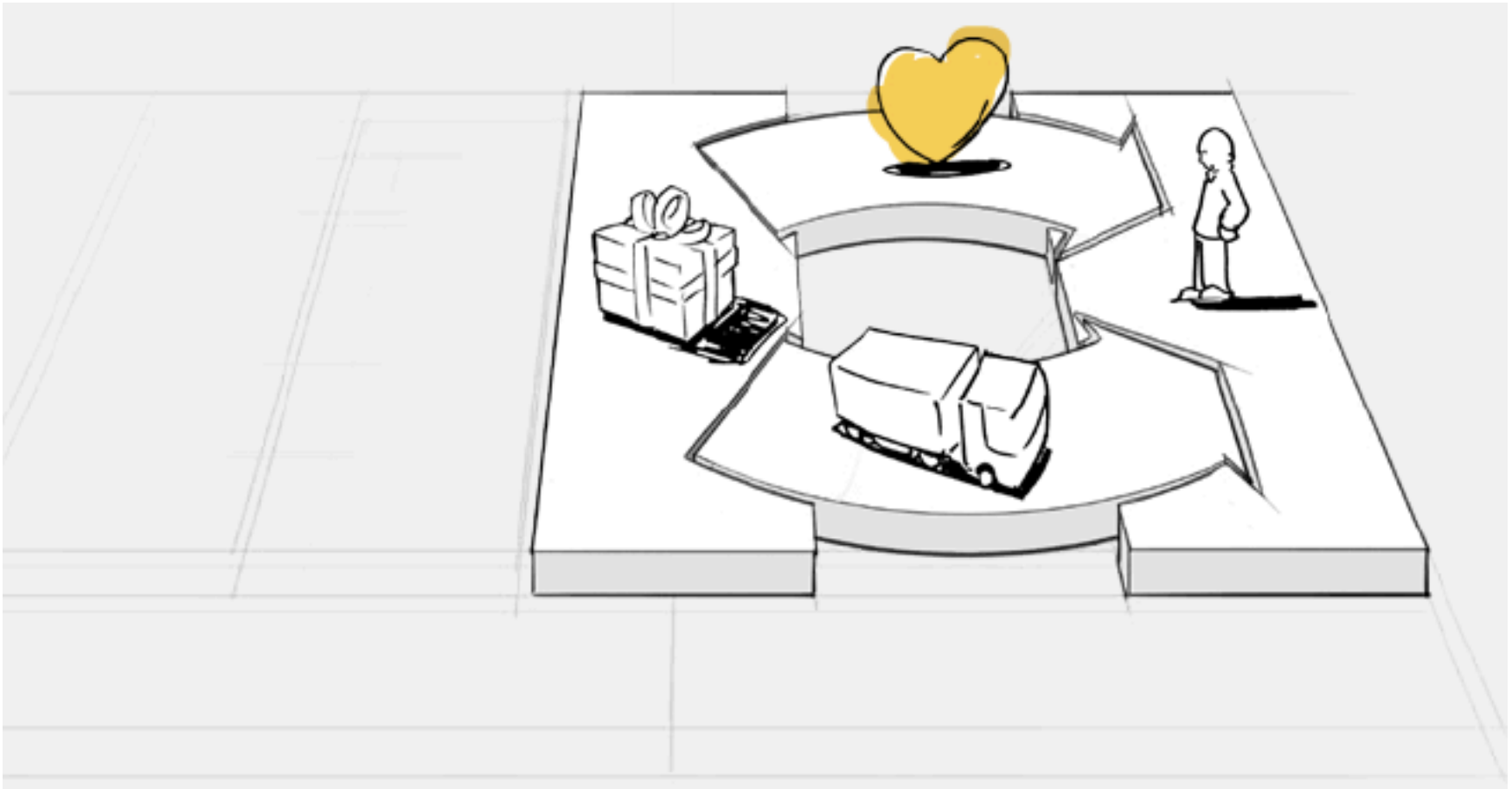
# 3. Channels

Describes how a company communicates with and reaches its Customer Segments to deliver a Value Proposition



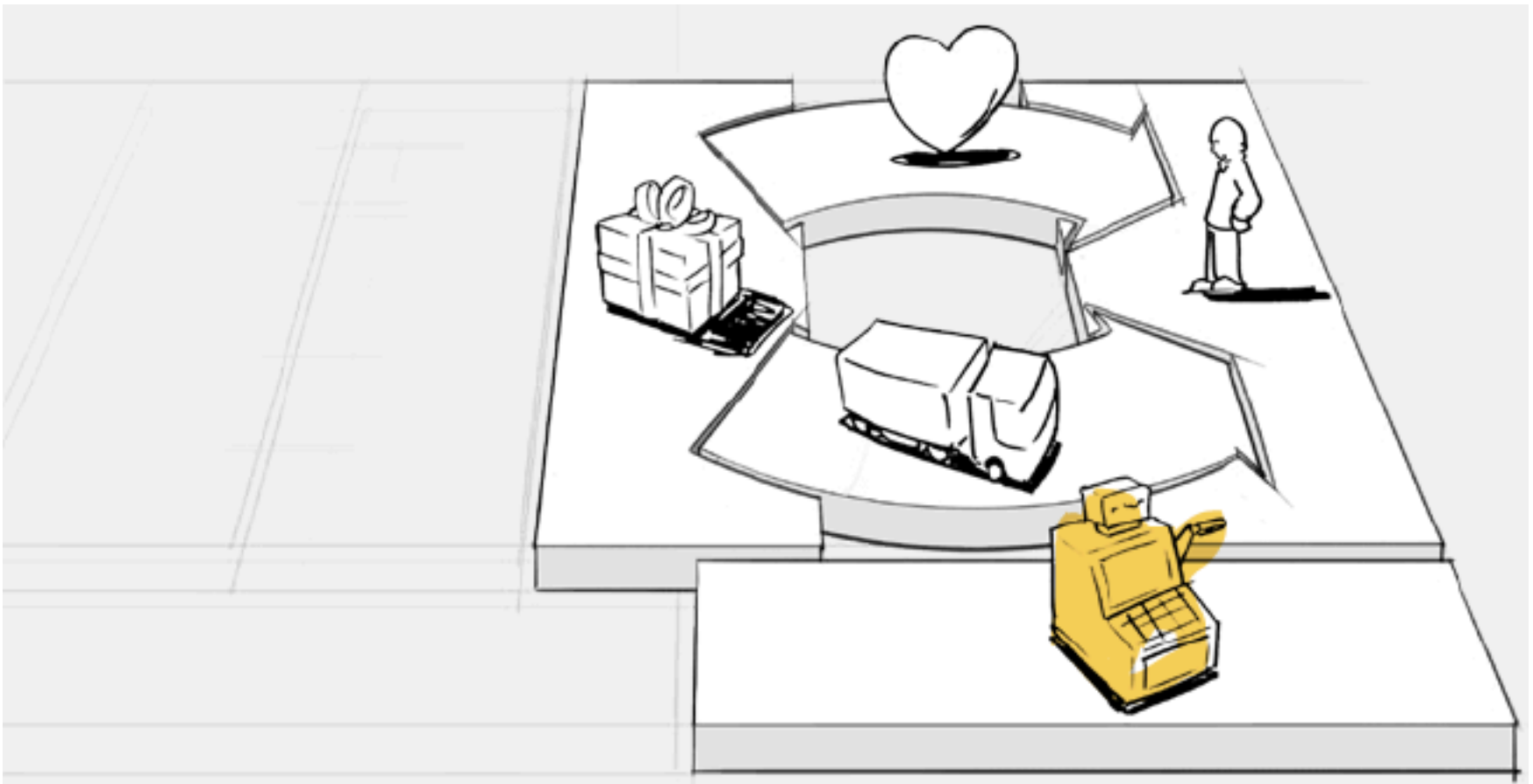
# 4. Customer Relationships

Describes the types of relationships a company establishes with specific Customer Segments



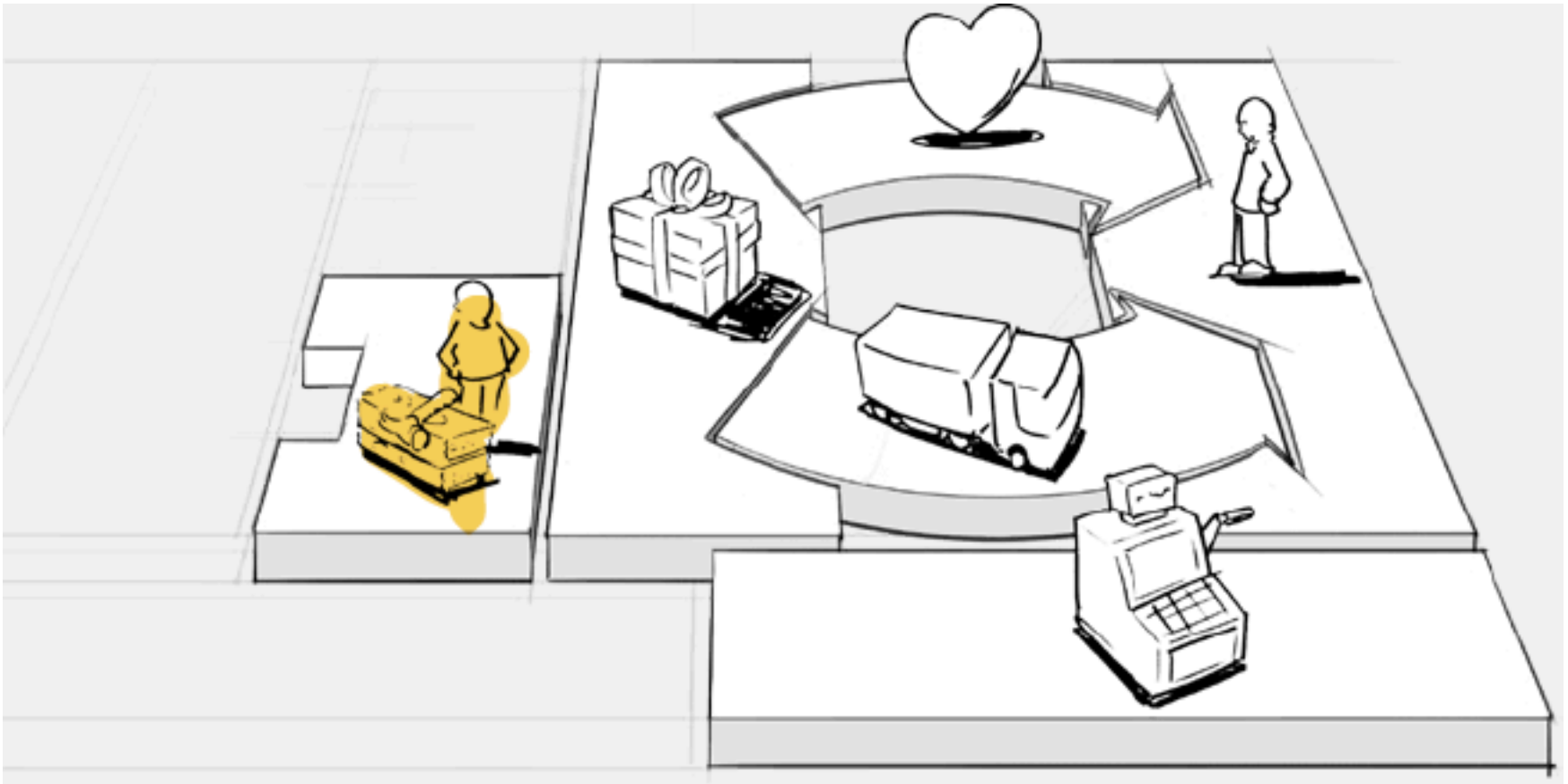
# 5. Revenue Streams

Represents the cash a company generates from each Customer Segment (costs must be subtracted from revenues to create earnings)



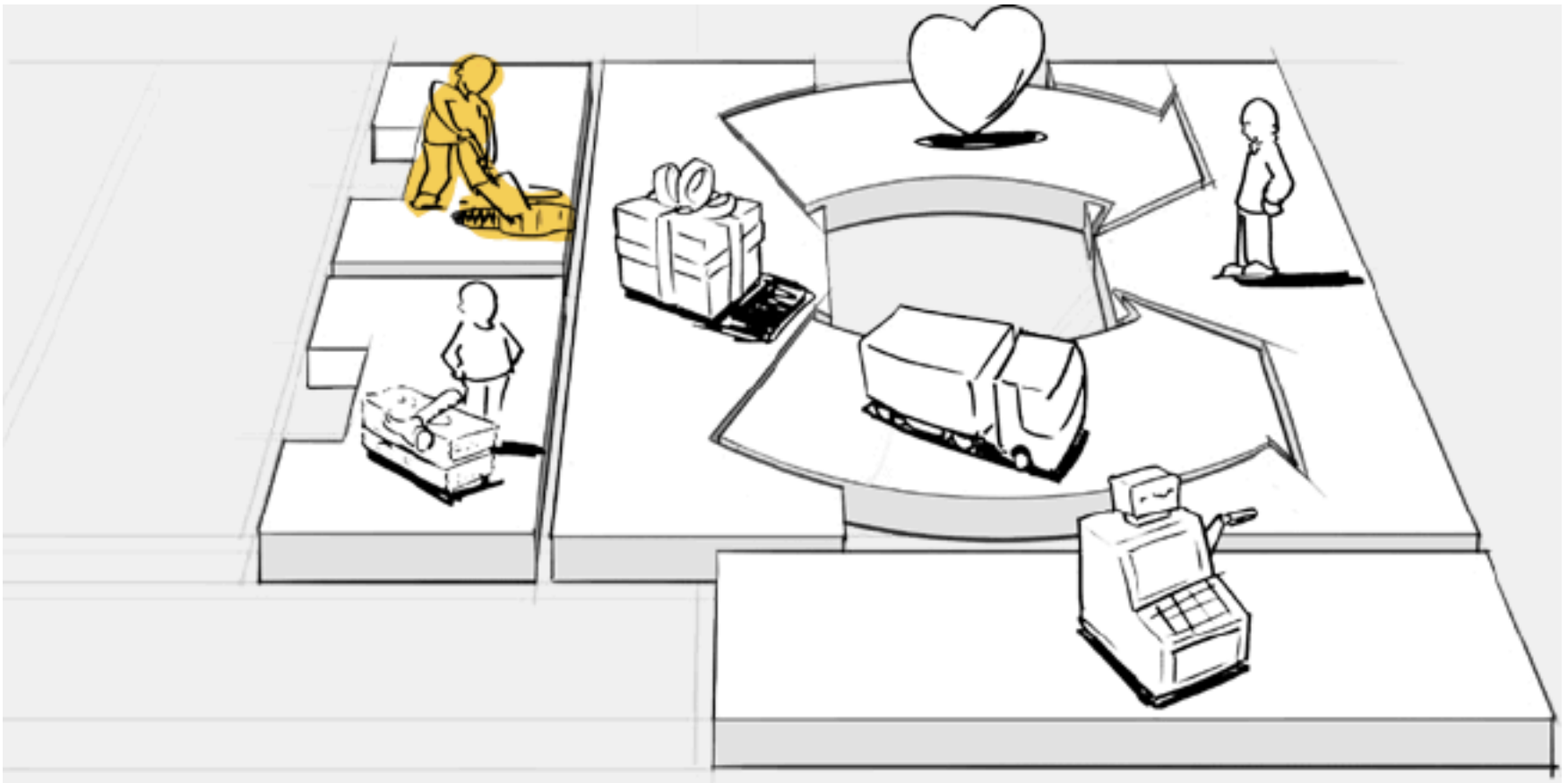
## 6. Key Resources

Describes the most important assets required to make a business model work



# 7. Key Activities

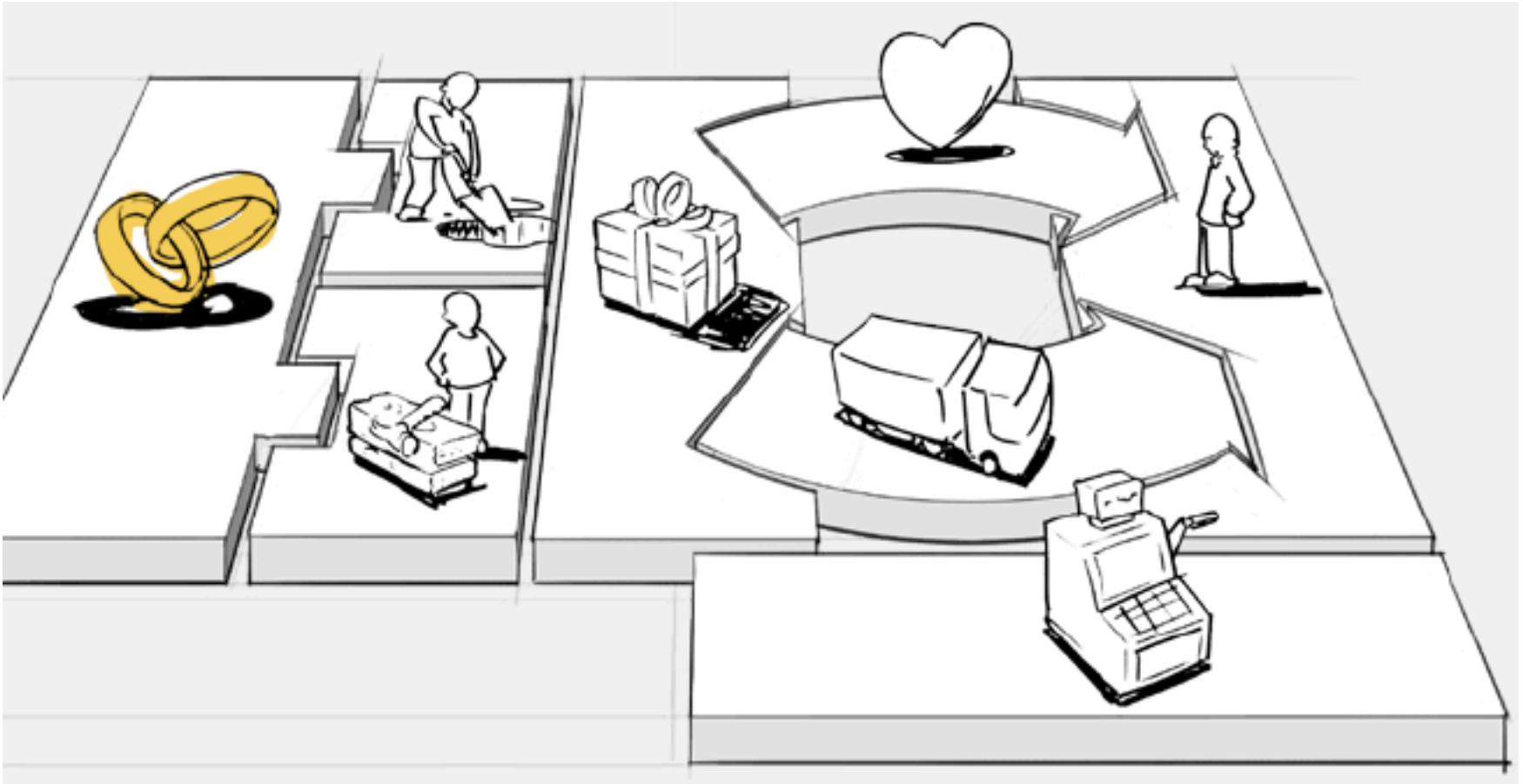
Describes the most important things a company must do to make its business model work





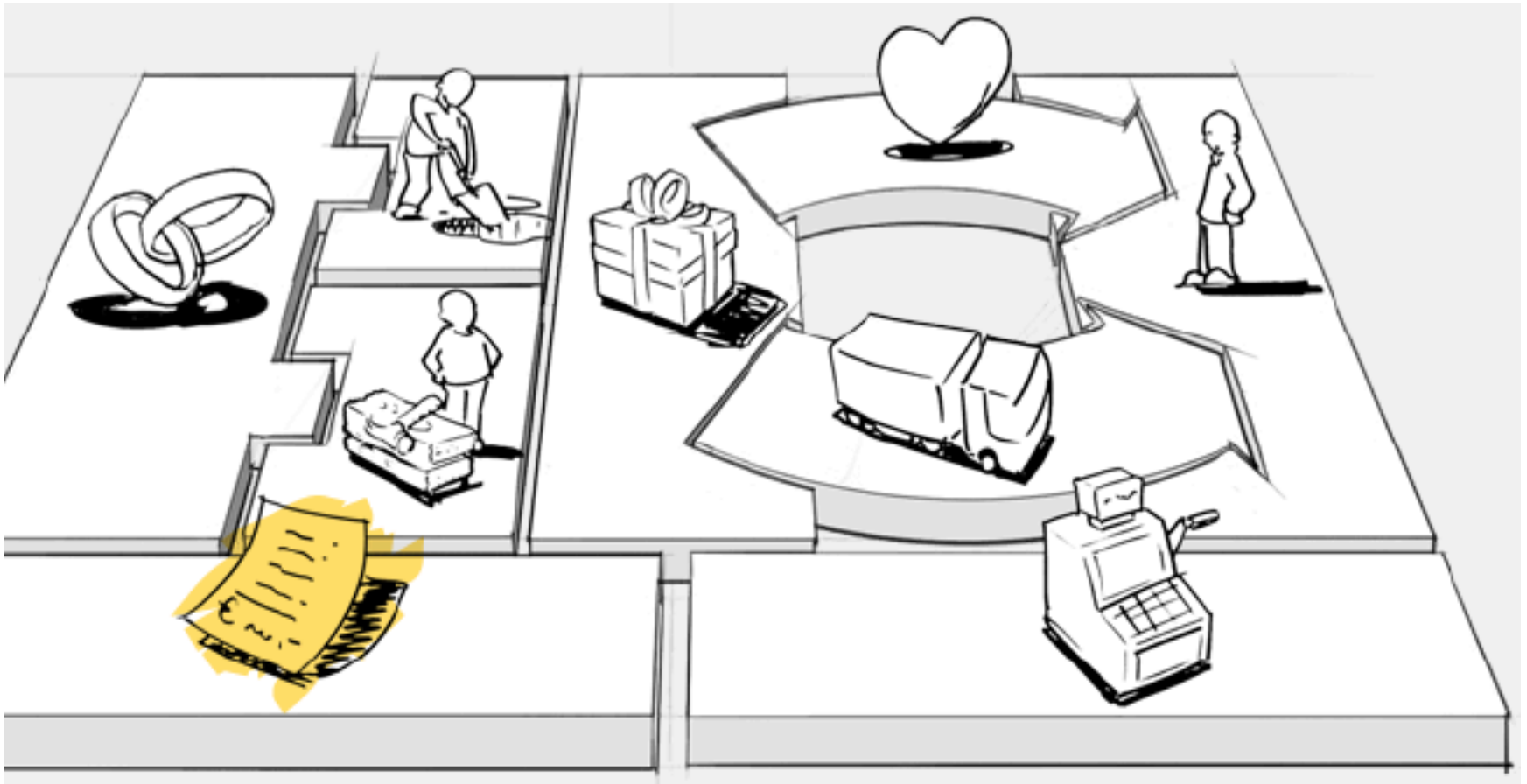
# 8. Key Partnerships

Describes the network of suppliers and partners that make the business model work



# 9. Cost Structure

Describes all costs incurred to operate a business model



# The 9 Building Blocks of Business Model

## 1. Customer Segments

- An organization serves one or several Customer Segments.

## 2. Value Propositions

- It seeks to solve customer problems and satisfy customer needs with value propositions.

## 3. Channels

- Value propositions are delivered to customers through communication, distribution, and sales Channels.

## 4. Customer Relationships

- Customer relationships are established and maintained with each Customer Segment.

# The 9 Building Blocks of Business Model

## 5. Revenue Streams

- Revenue streams result from value propositions successfully offered to customers.

## 6. Key Resources

- Key resources are the assets required to offer and deliver the previously described elements...

## 7. Key Activities

- ...by performing a number of Key Activities.

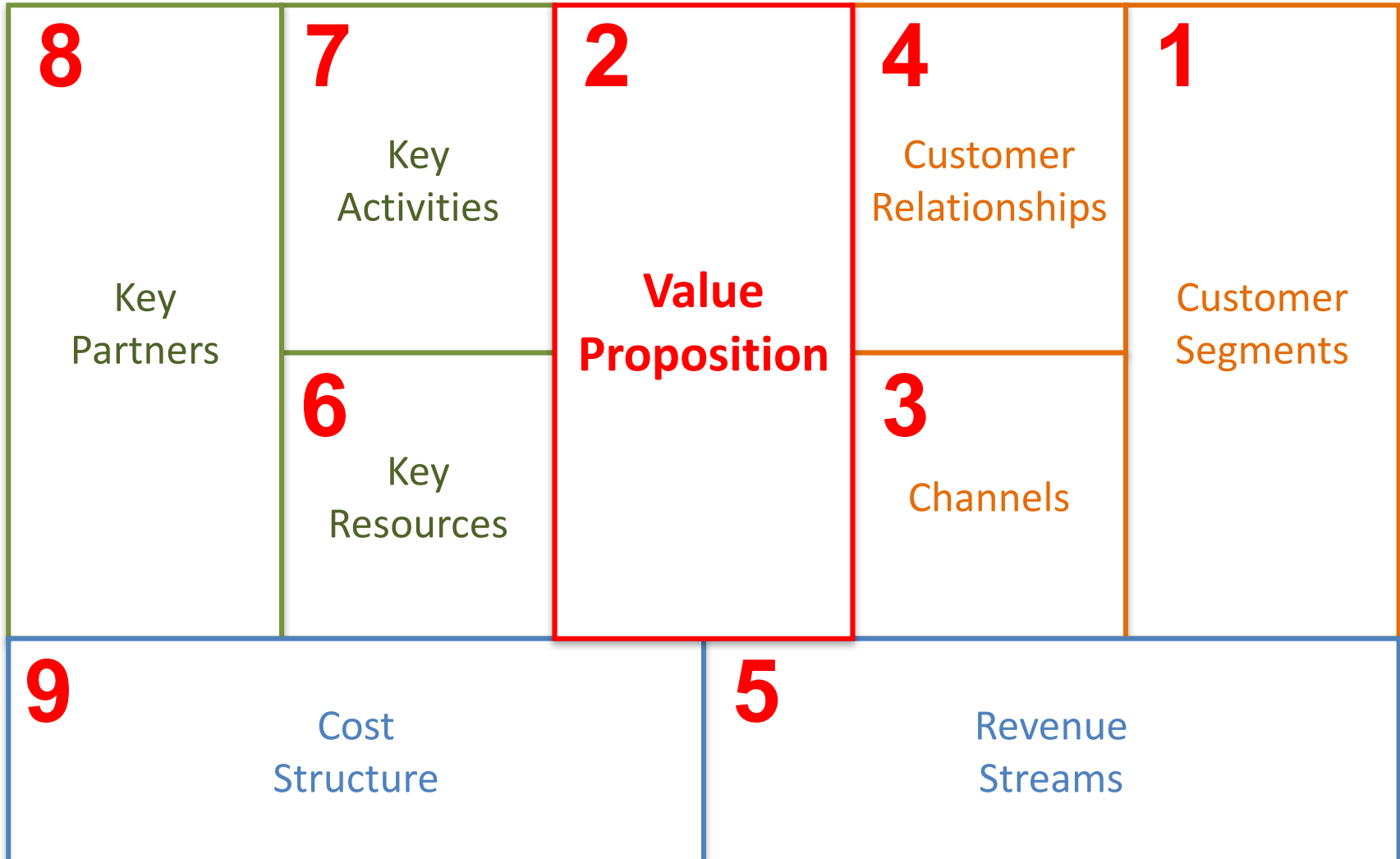
## 8. Key Partnerships

- Some activities are outsourced and some resources are acquired outside the enterprise.

## 9. Cost Structure

- The business model elements result in the cost structure.

# Business Model

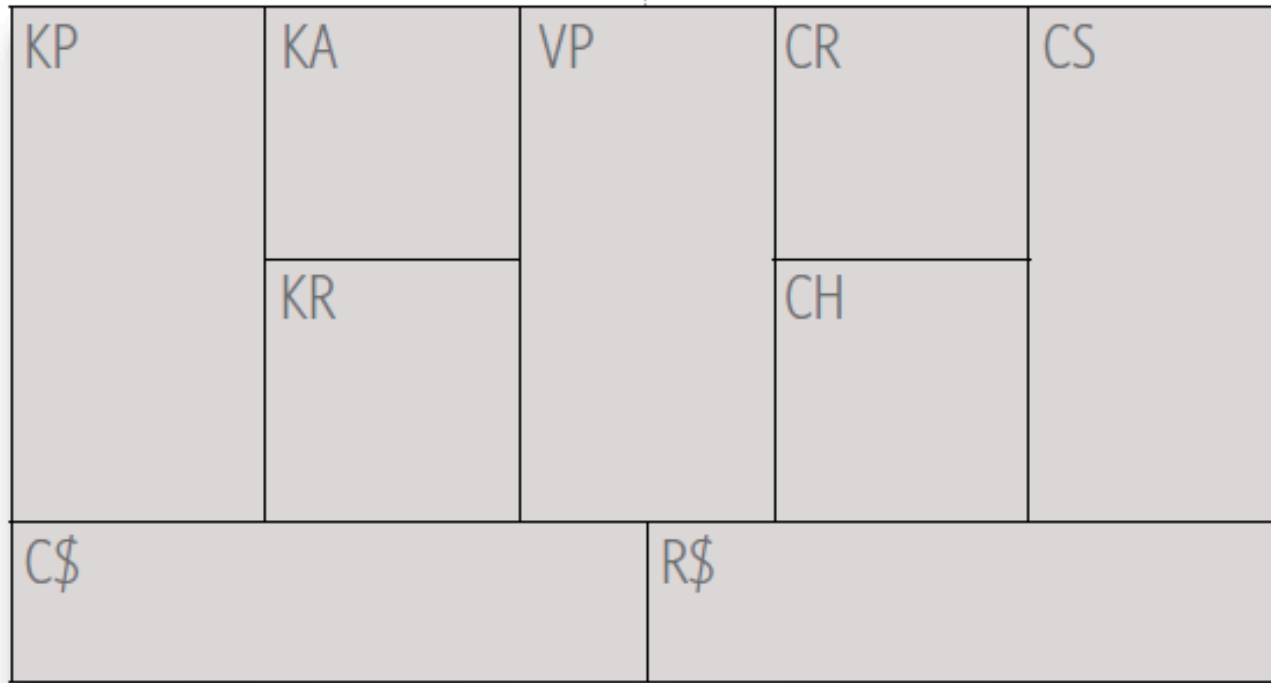


# Business Model Generation

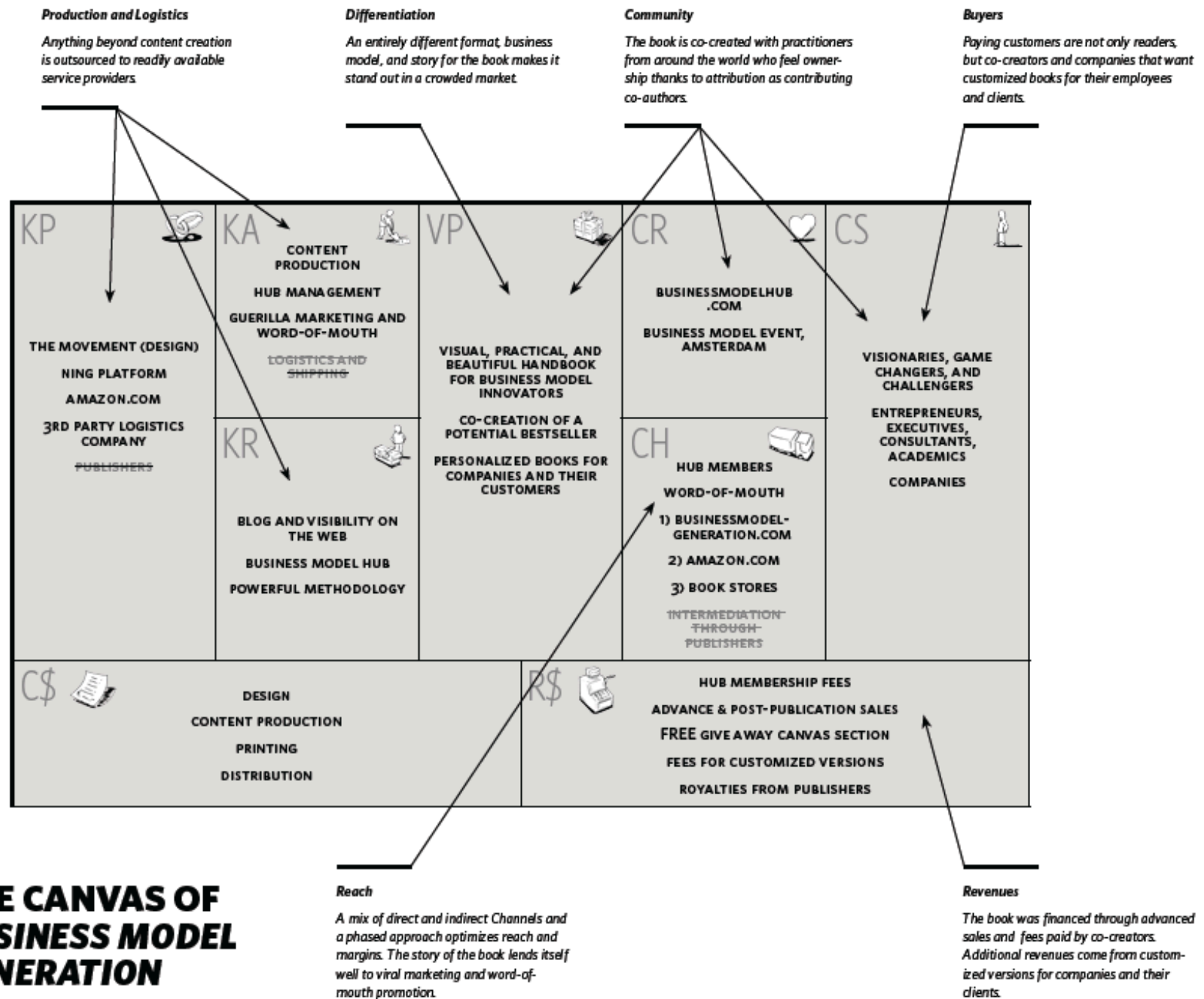


# Business Model Generation

**LEFT CANVAS**  
efficiency

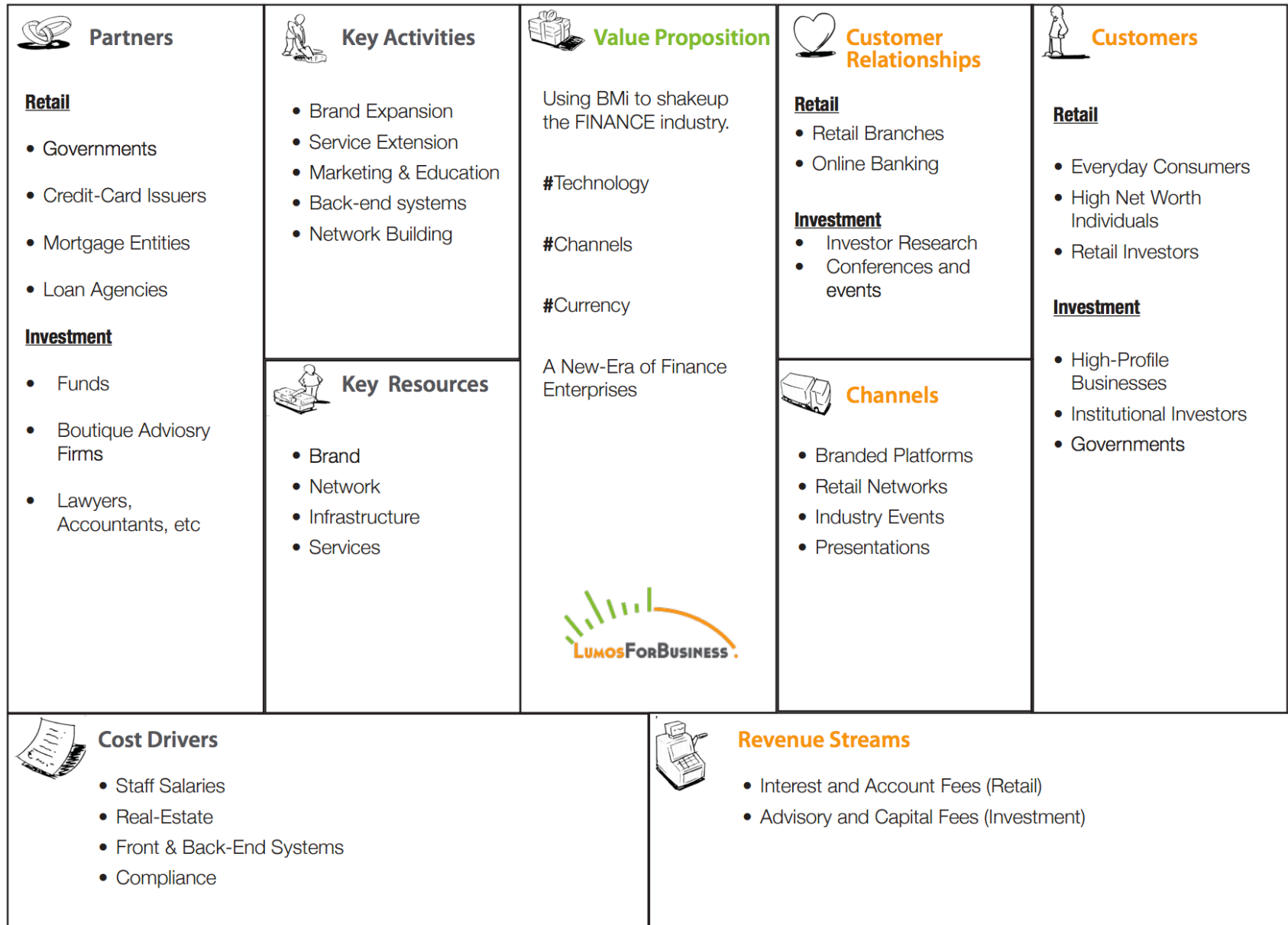


**RIGHT CANVAS**  
value

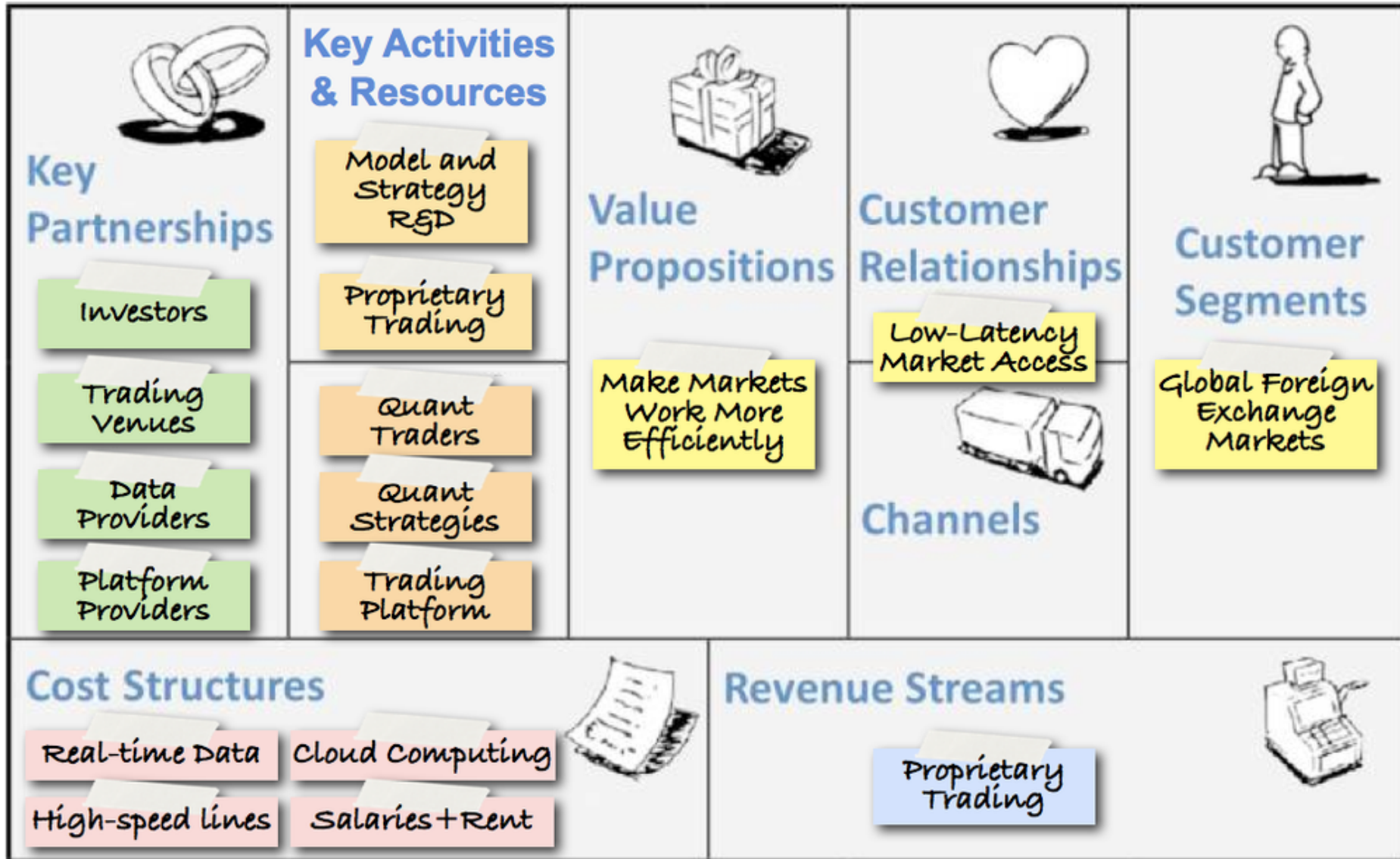




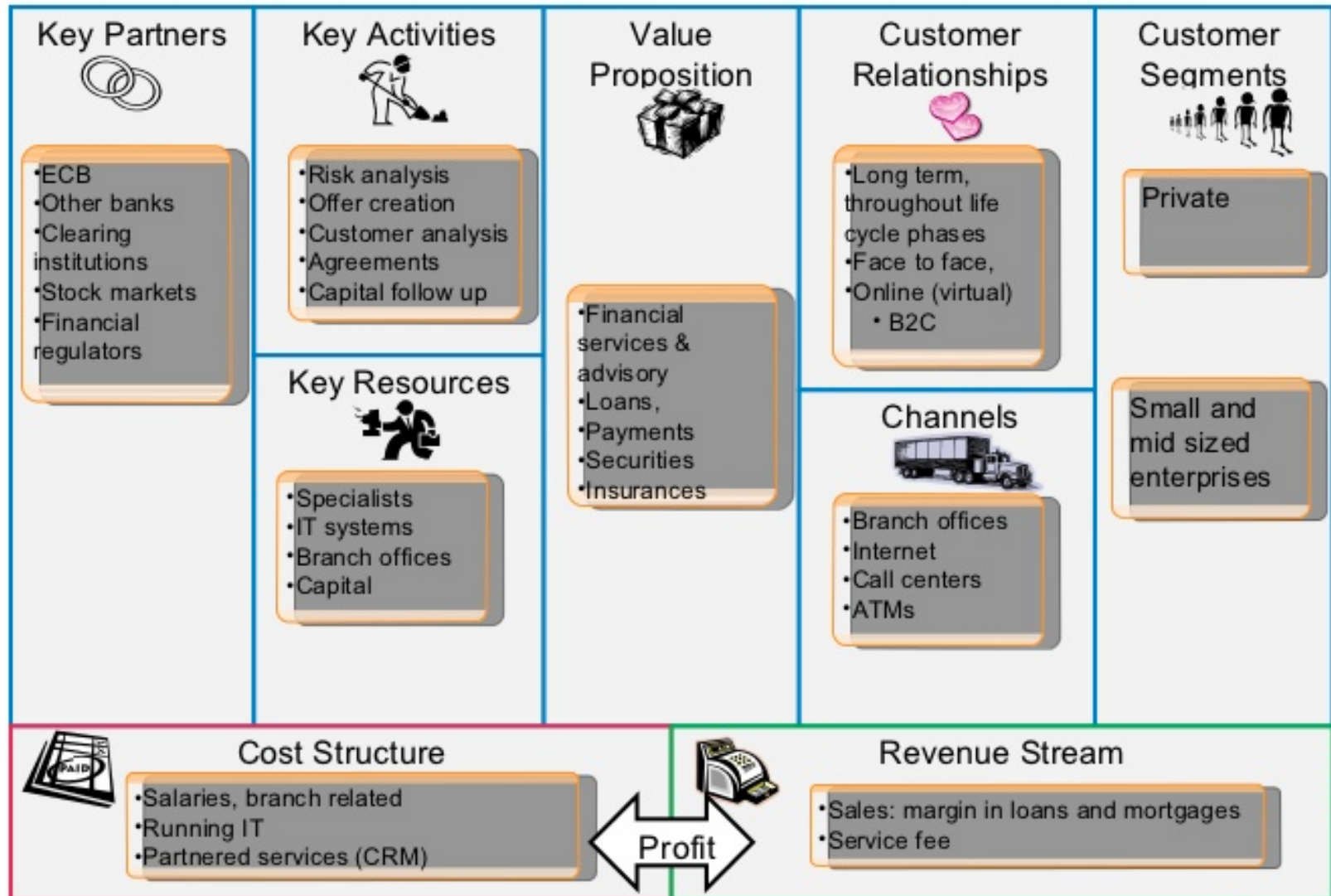
# Finance Business Model



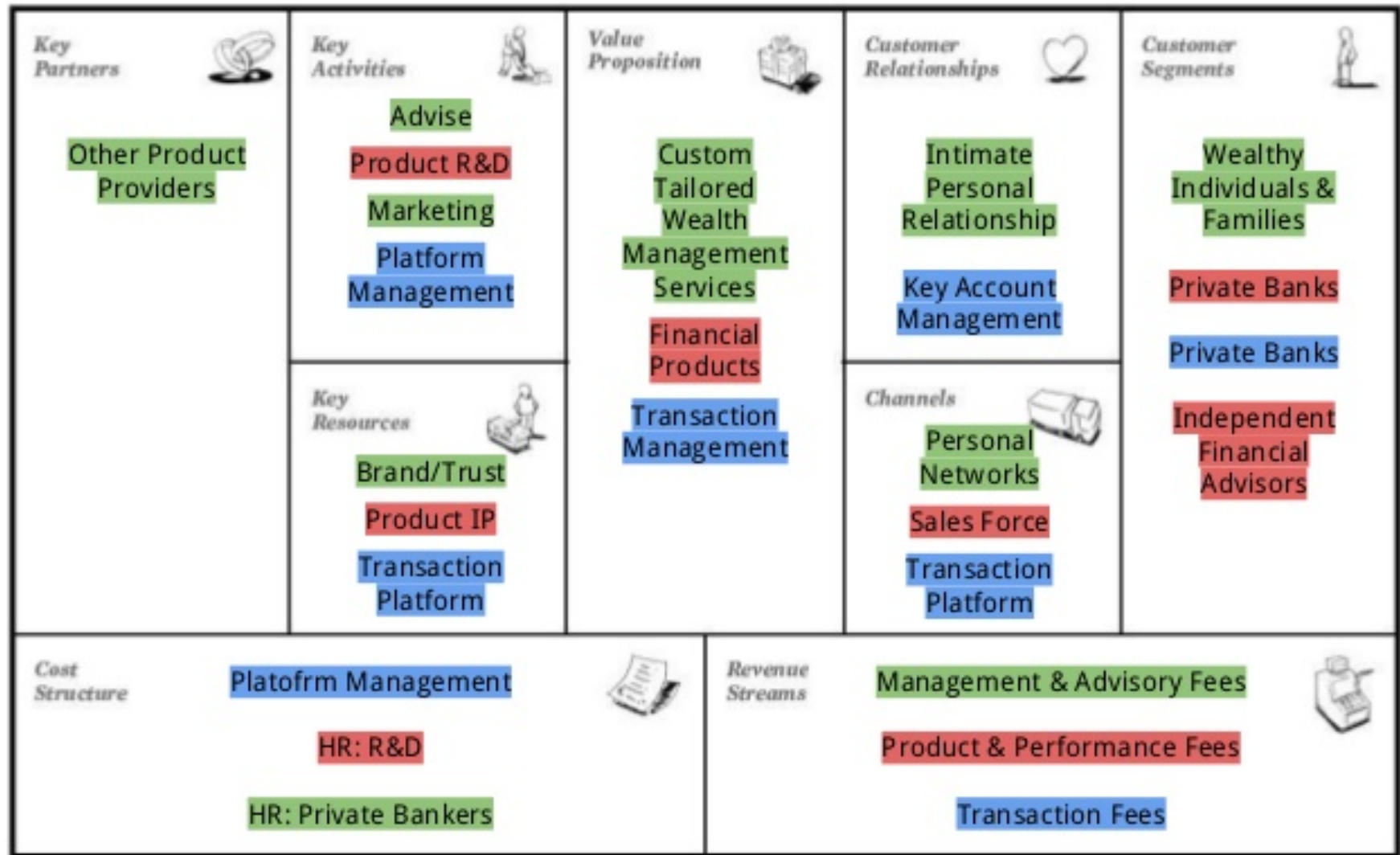
# Foreign Exchange Business Model



# Bizz model canvas: SEB retail banking

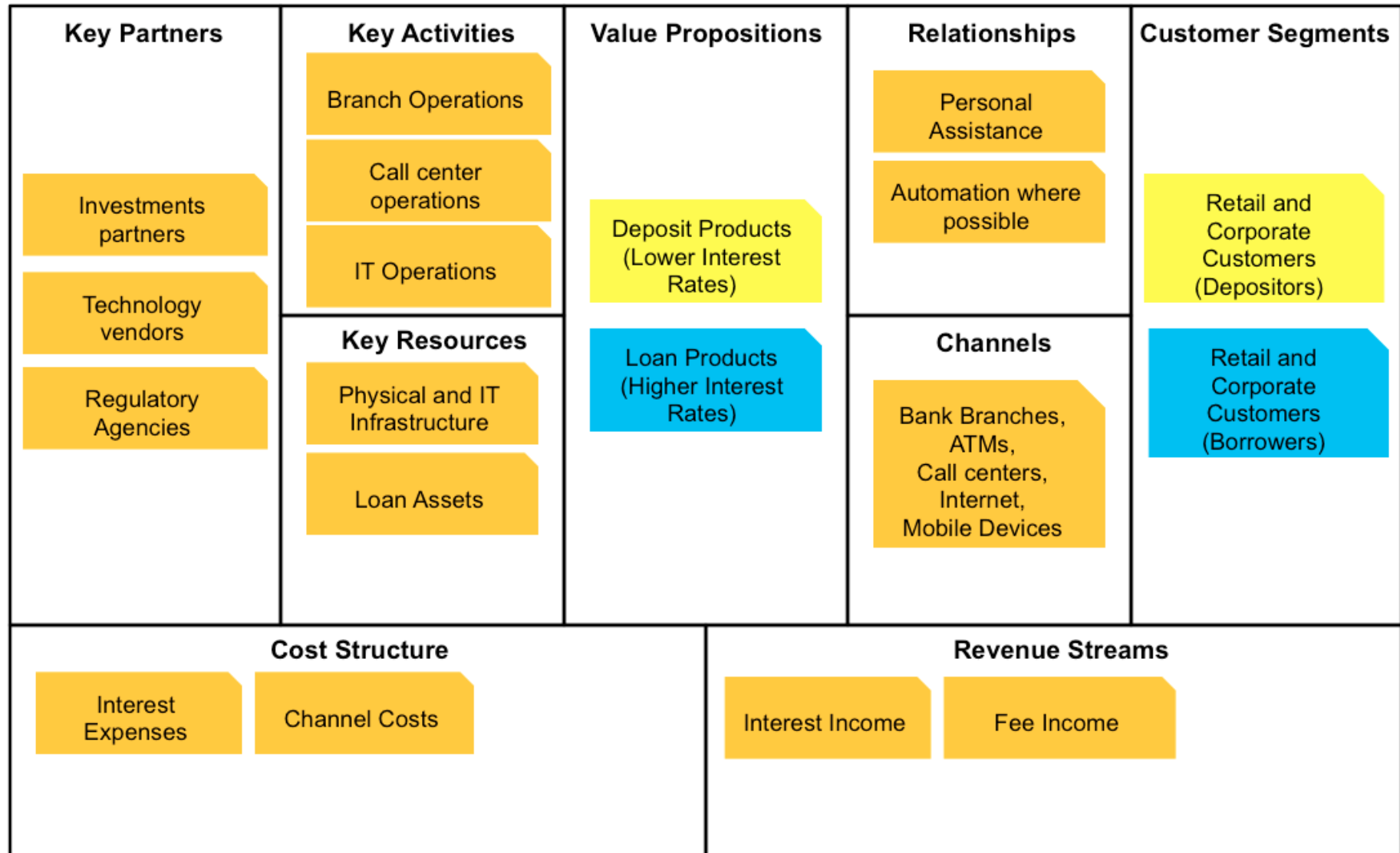


# Private Banking (3 Business In One)



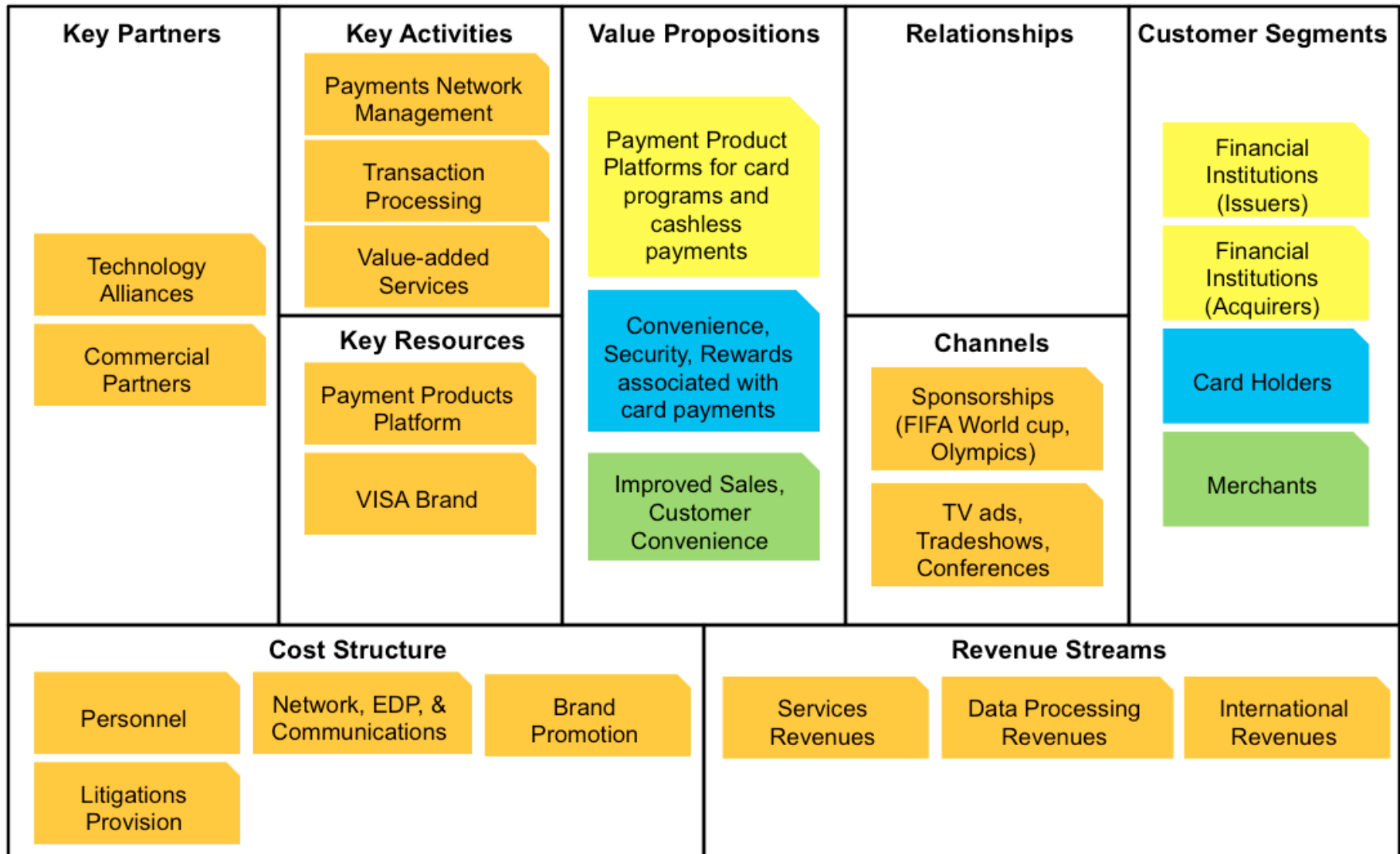
Relationship Business
  Product Innovation Business
  Infrastructure Business

## Business Model of Banking companies

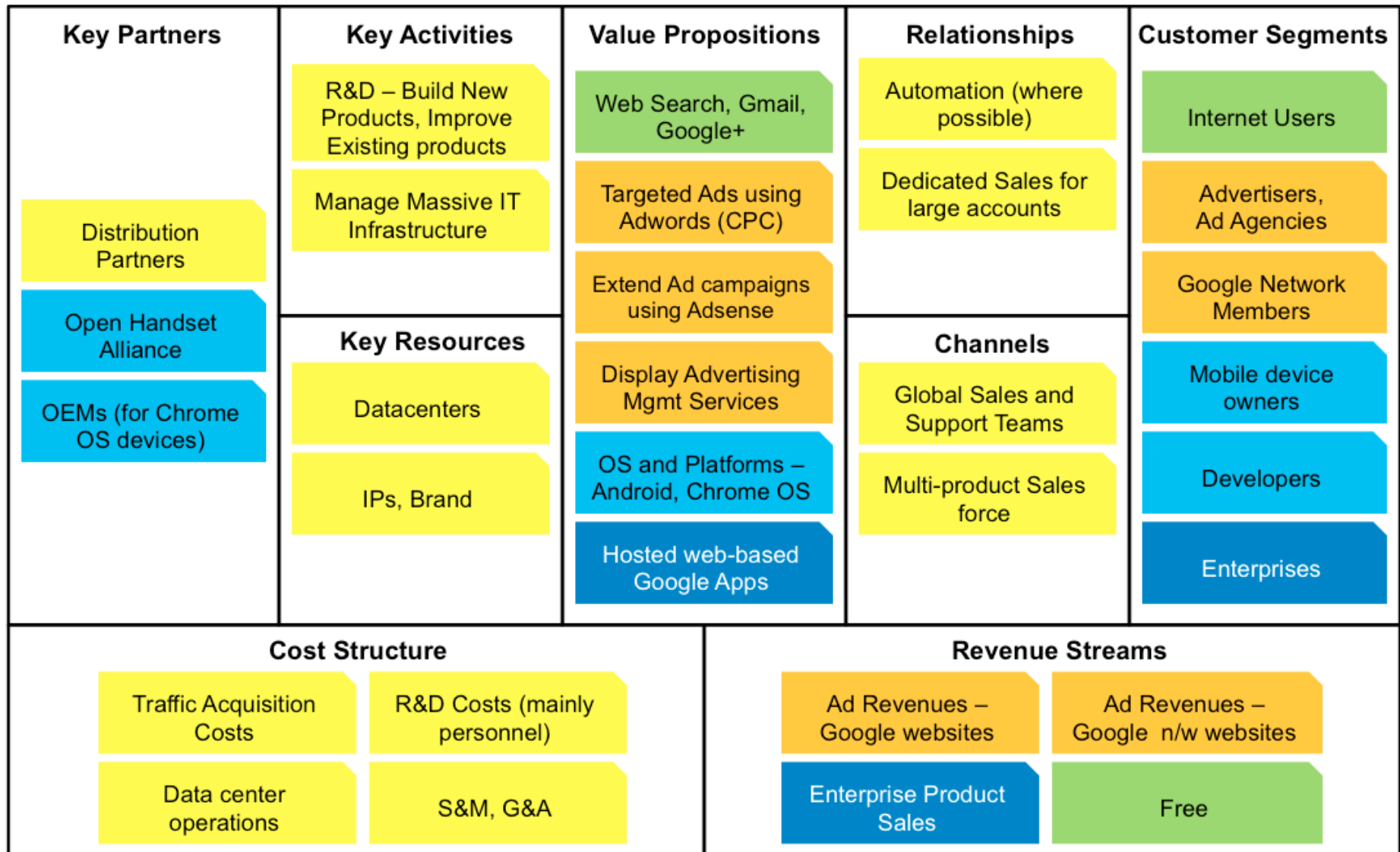




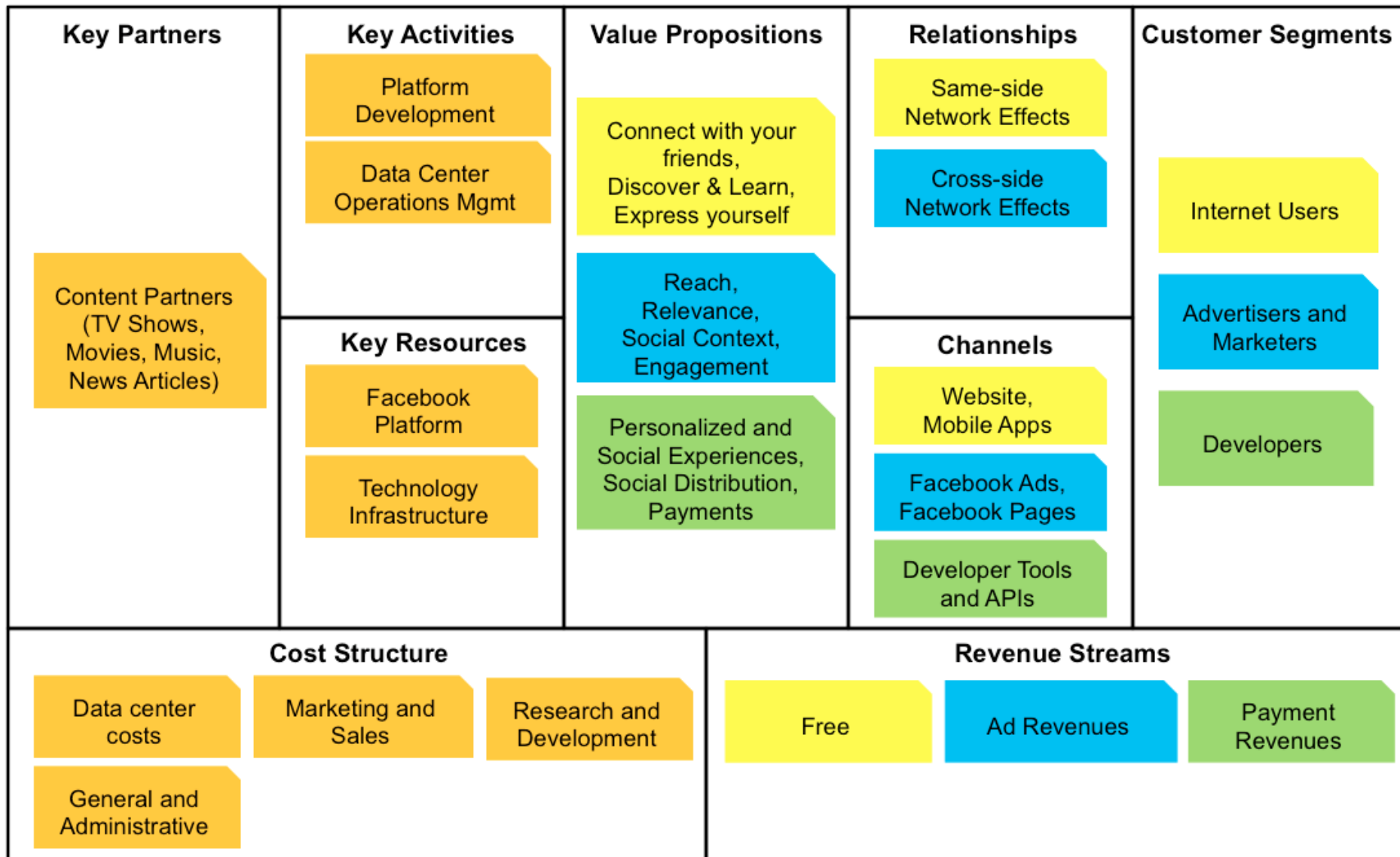
## VISA – Leader in Global Payments Industry



# Google Business Model

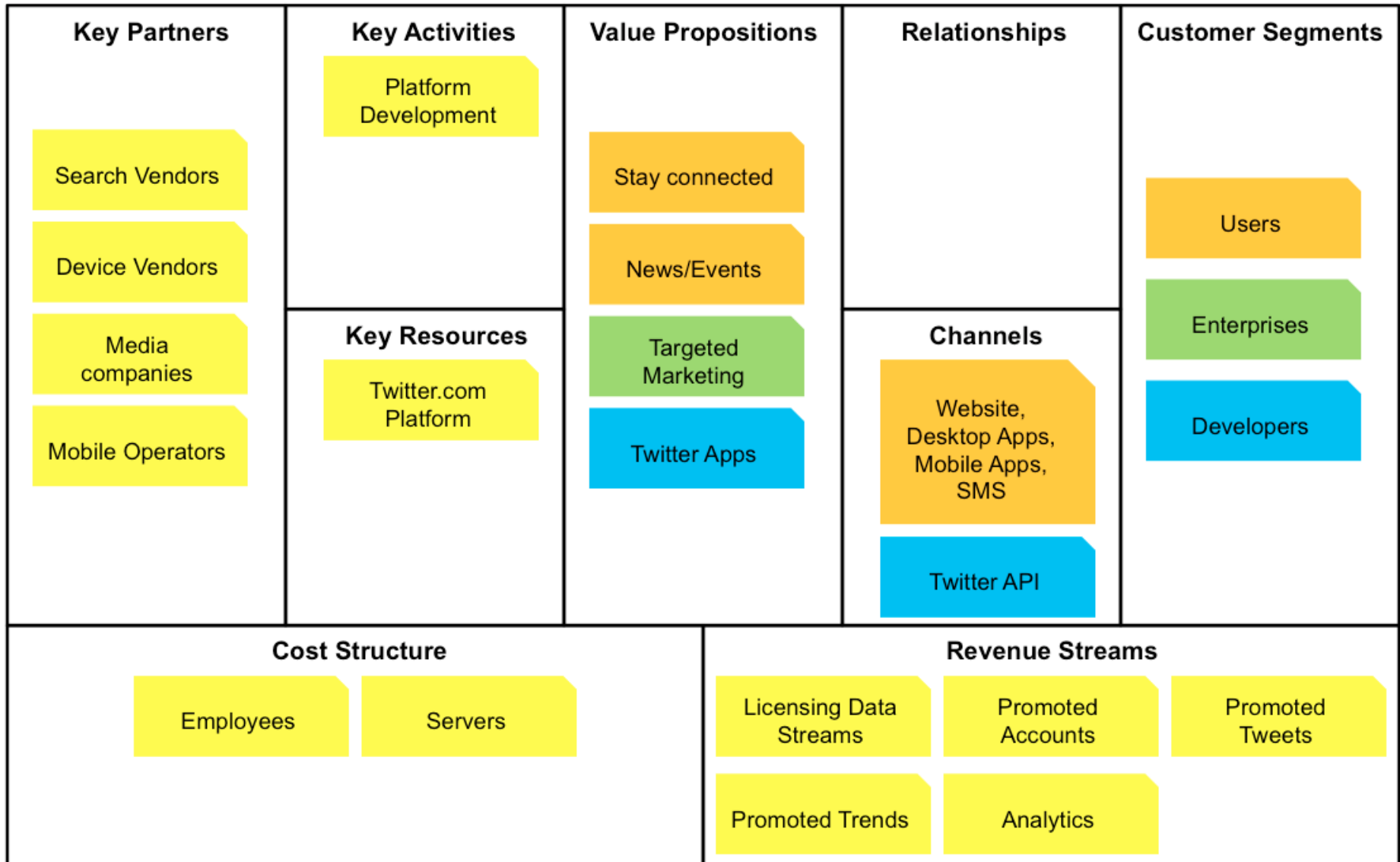


# Facebook – World's leading Social Networking Site (SNS)

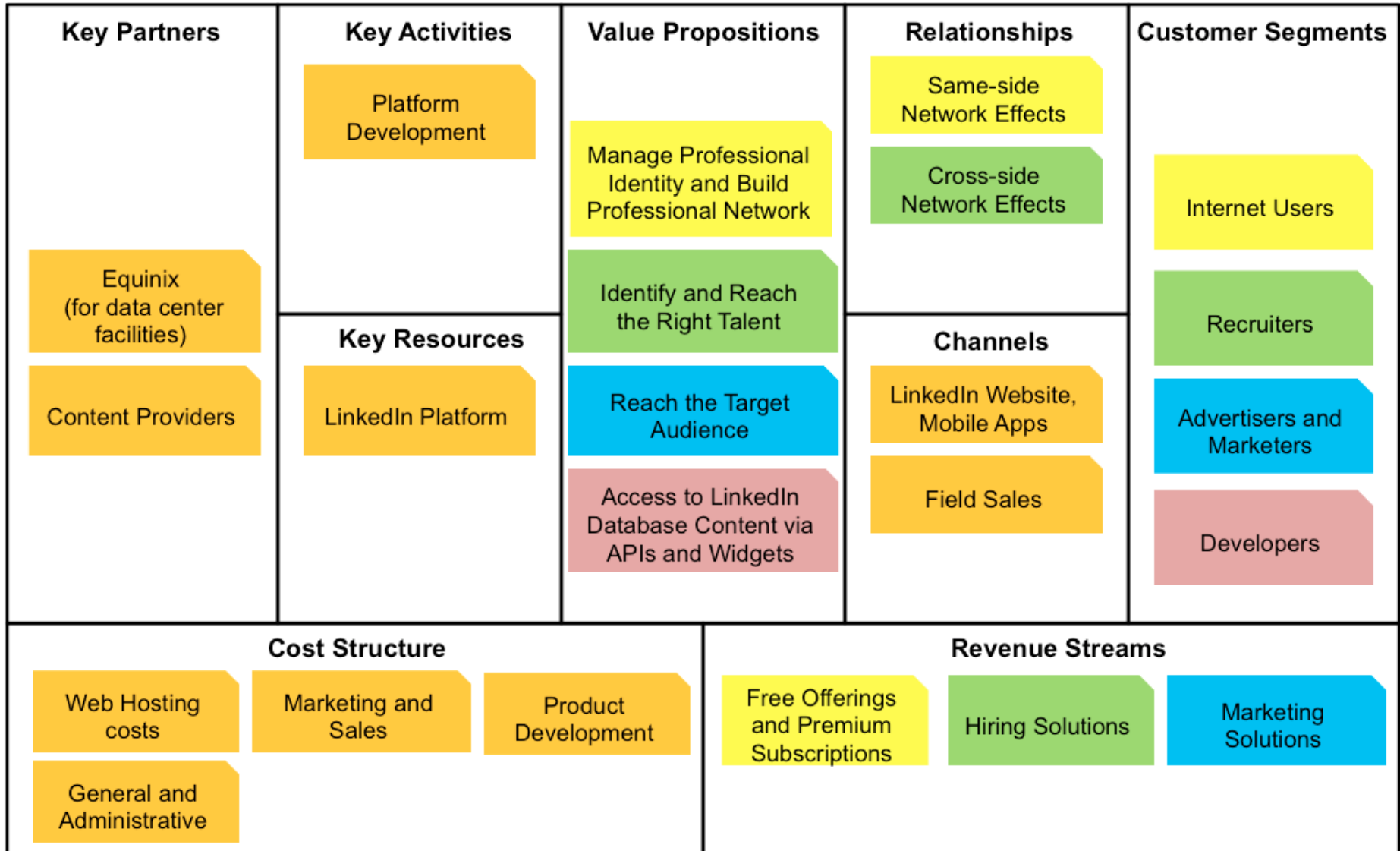




# Twitter Business Model



# LinkedIn – World's Largest Professional Network

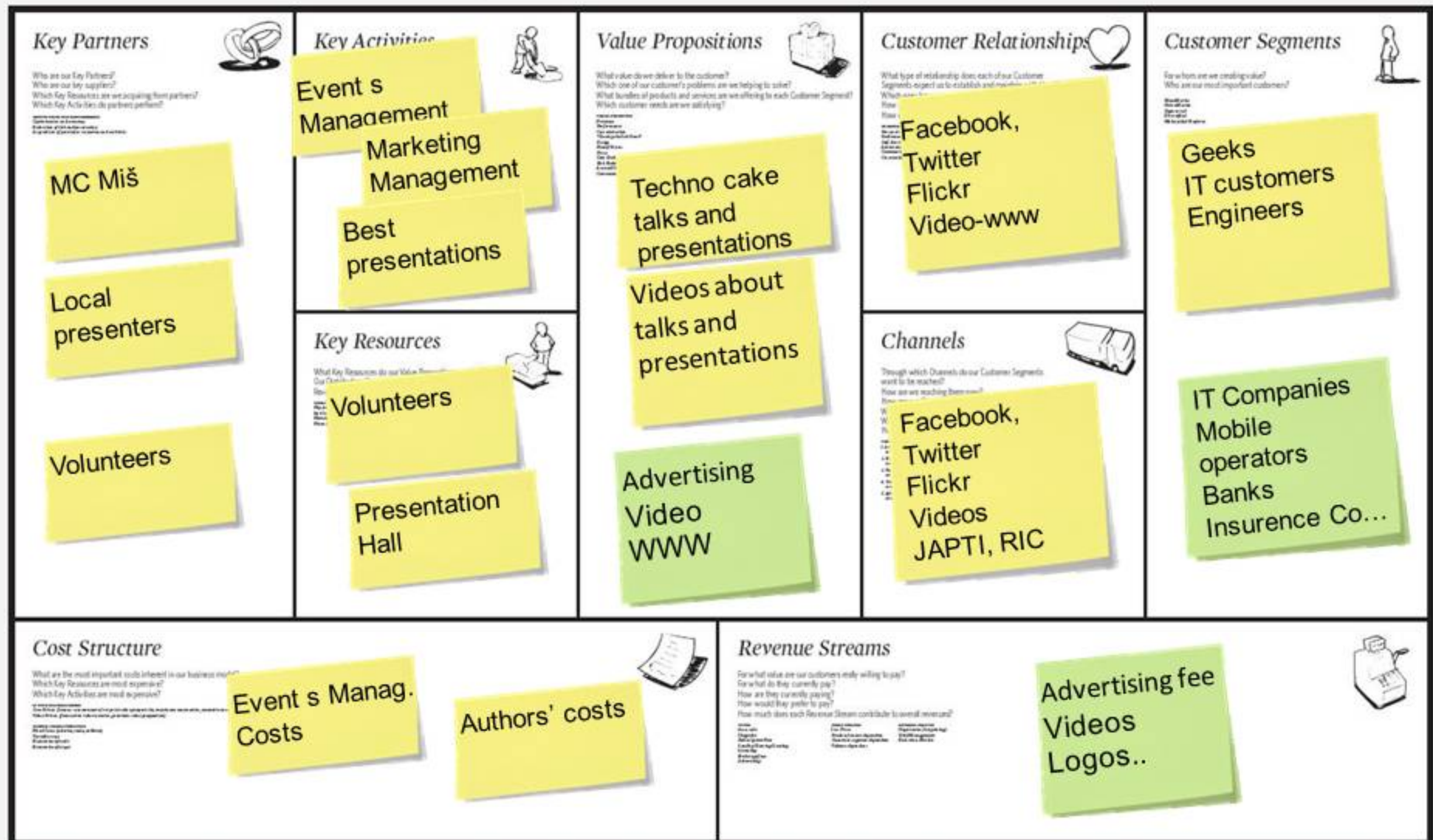


# The Business Model Canvas

Designed for: Techno Cake

Designed by: Danilo Tič

Date: 1.2.2011  
Iteration: 01



# How Airbnb Works?

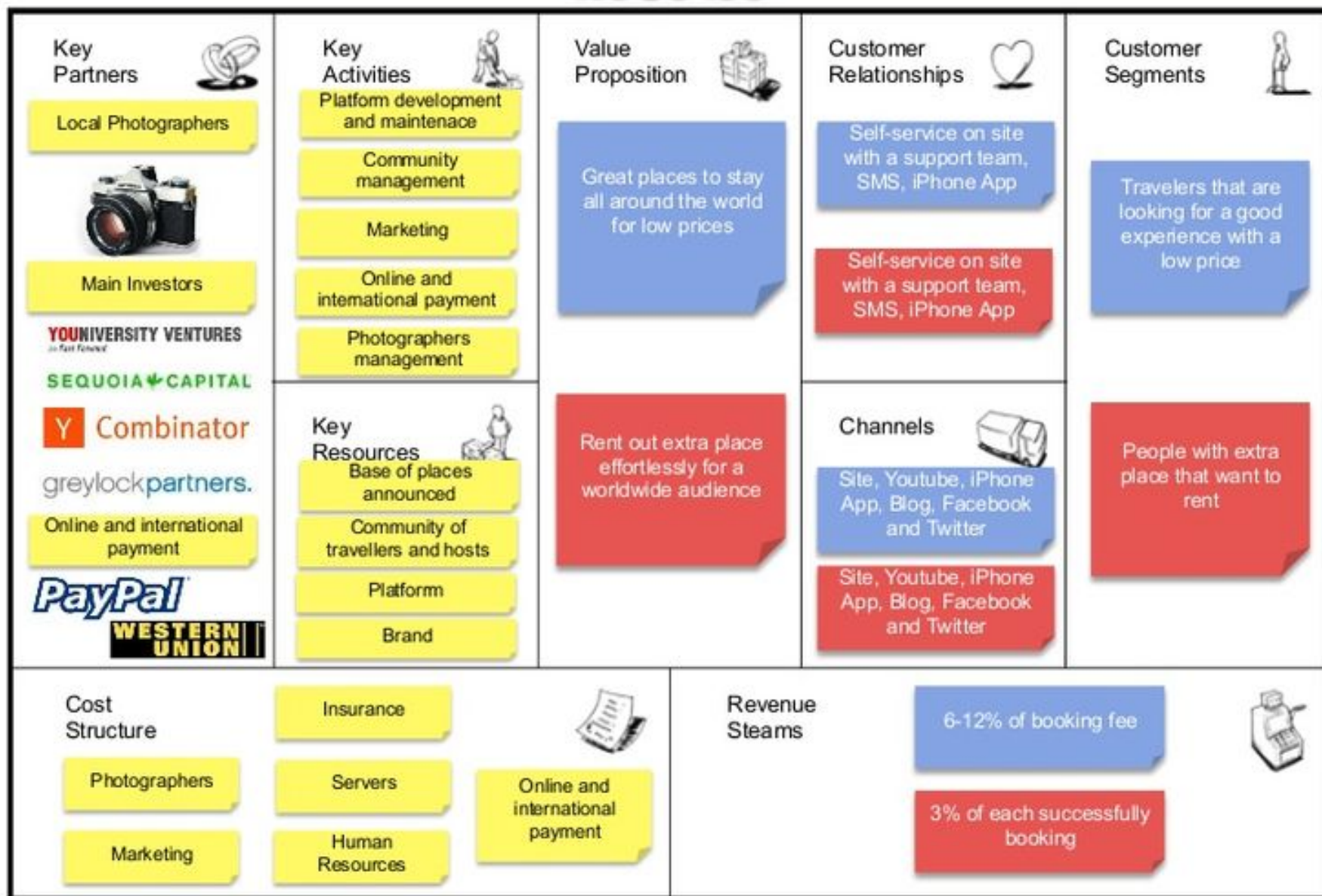
## Insights into Business Model & Revenue Model



# Airbnb Business Model Canvas







# How Uber Works?

## Insights into Business Model & Revenue Model

# Uber Business Model Canvas





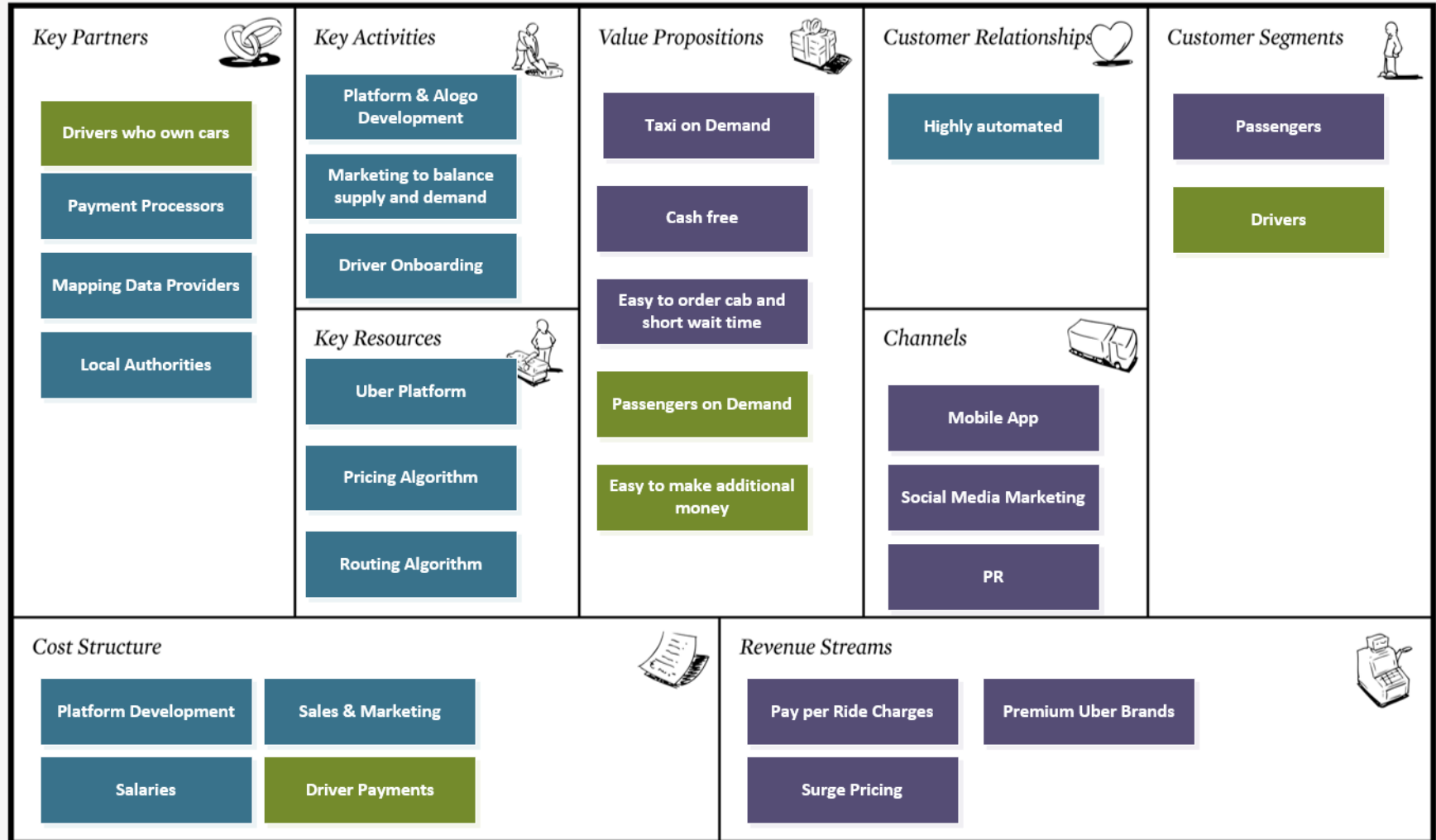
# Uber Business Model Canvas

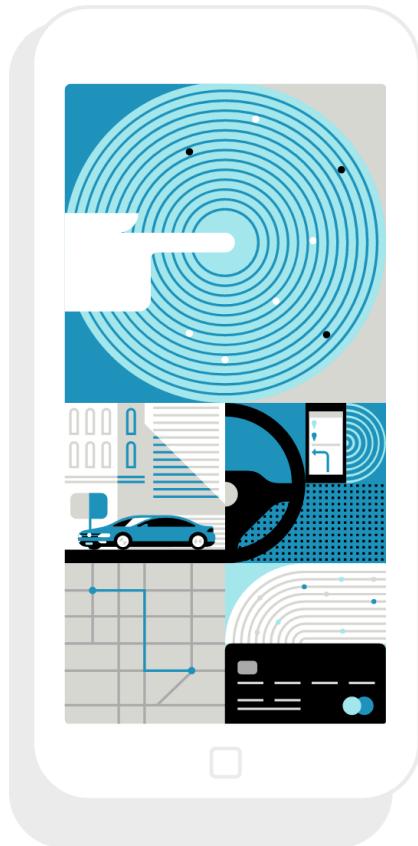
## The Business Model Canvas

Designed for:  
**Uber**

Designed by:  
**Denis Oakley**

On: 27 / 1 / 2016  
Iteration: 1.0





## Tap the app, get a ride

Uber is the smartest way to get around. One tap and a car comes directly to you. Your driver knows exactly where to go.

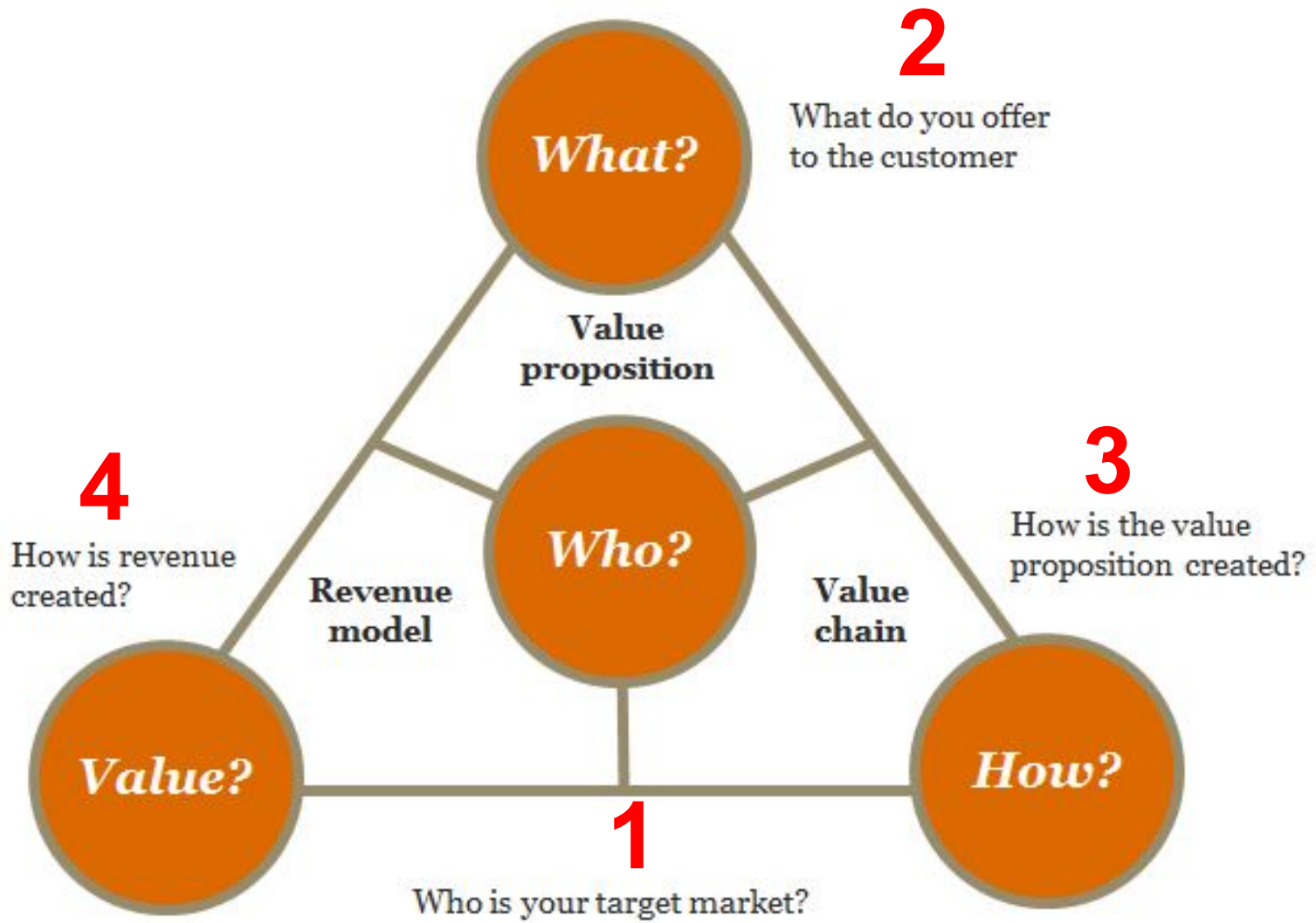
[MORE REASONS TO RIDE >](#)

# Come up with Killer Startup Ideas



REDUCE	CREATE
Time to wait Hassels of paying money Insure fare & waiting time	Ease of use Platform connecting customers&d Extra Revenues for Drivers
RAISE	ELIMINATE
Chances of getting taxis Quality (ratings) Insurance (Location tracking)	Uncertainty of getting taxis Waving hands to stop taxi

# Structure of a Business Model



# New Business Model



I amsterdam.

amazon



STOCK MANAGEMENT

SEARCH

ARTIST MANAGEMENT

CONTRACT MANAGEMENT

COMMUNITY MANAGEMENT

FUND MANAGEMENT

PRODUCTION & PUBLISHING

A hand-drawn diagram illustrating the flow of knowledge. At the bottom left is a cloud-like shape with the word 'KNOW' inside. An arrow points from this cloud to the text 'MUSIC-INDUSTRY'. From 'MUSIC-INDUSTRY', an arrow points to the text 'SOFTWARE & RIGHTS'. From 'SOFTWARE & RIGHTS', an arrow points to a computer monitor. To the left of the monitor is a box containing a hierarchical diagram with three levels of nodes. Below the monitor is the word 'DISTRIBUTION'.

## A cartoon illustration of a person from behind, carrying a large, tall stack of books. The top book is labeled 'INDEPENDENT' and the bottom book is labeled 'MUSIC-BUYER'. The person is walking towards the right.

# SELL A BAND



# Customer Value



**Marketing**

**“Meeting  
needs  
profitably”**

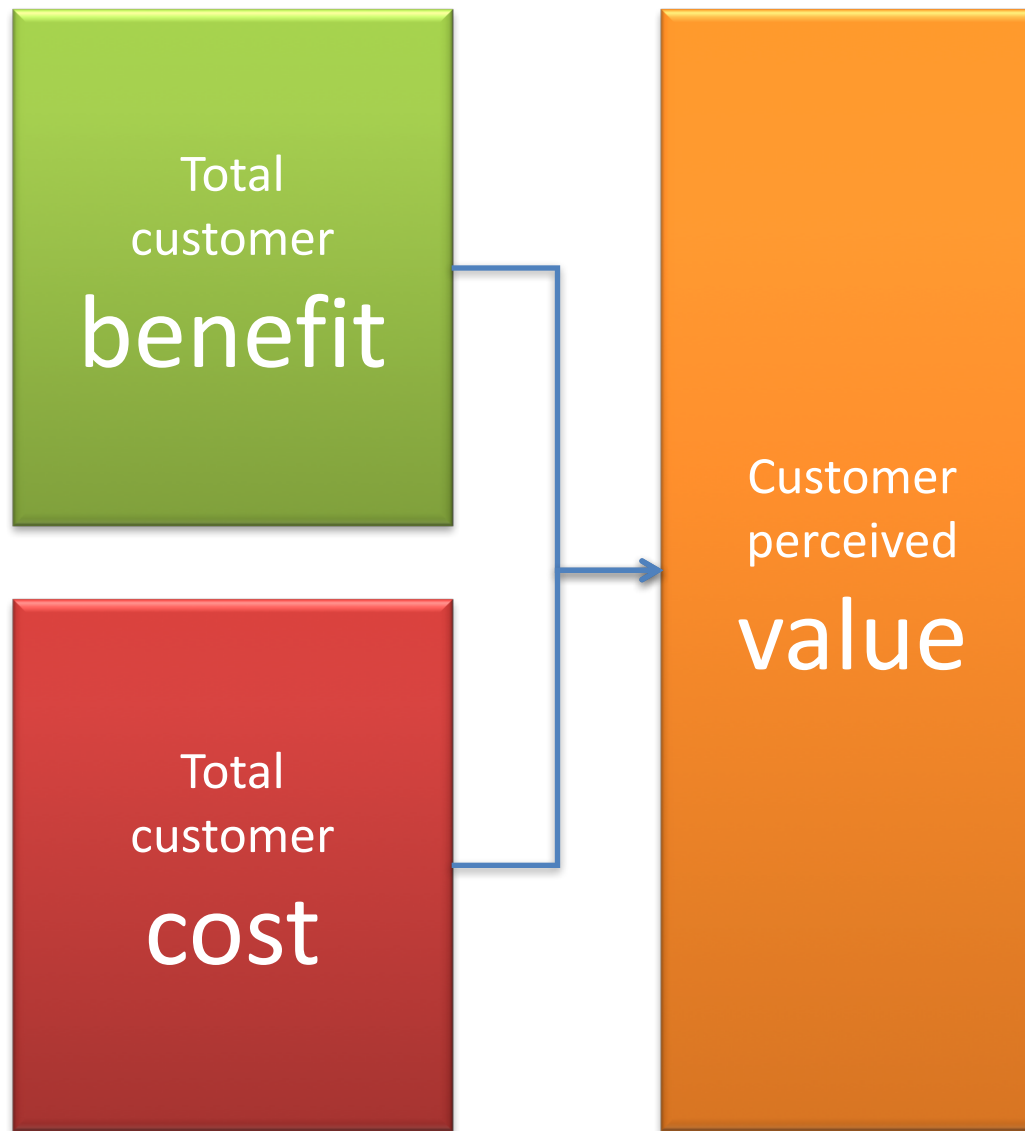


# Value

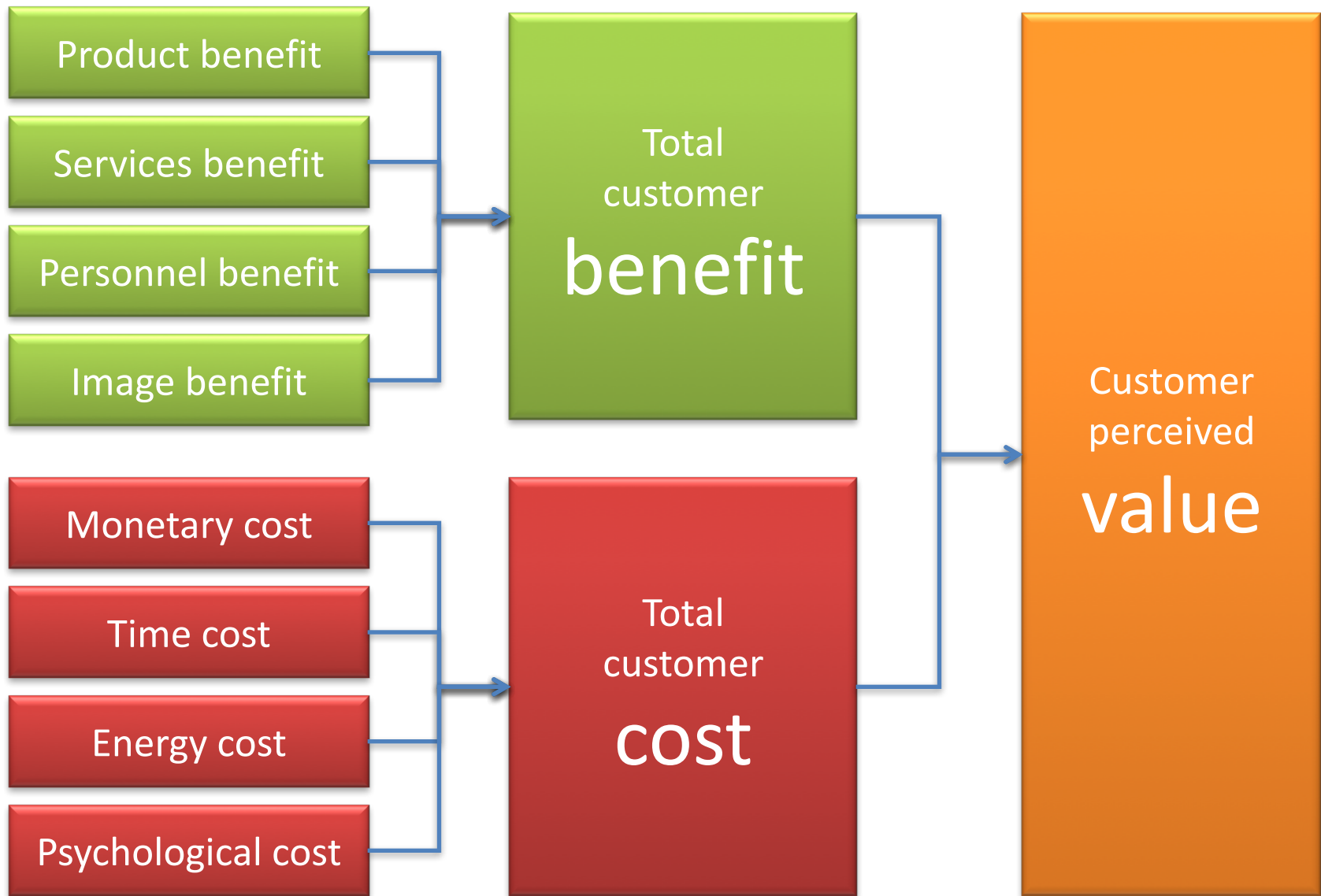
the sum of the  
tangible and  
intangible

benefits and costs

# Value



# Customer Perceived Value



# The Future of Financial Services

## Industry Leaders

- Oversight, guidance and thought leadership from **16 C-suite executives** and **25 strategy officers** of global financial institutions



## Innovators

- In-person and phone interviews with **100+ innovative new entrants** and **subject matter experts**

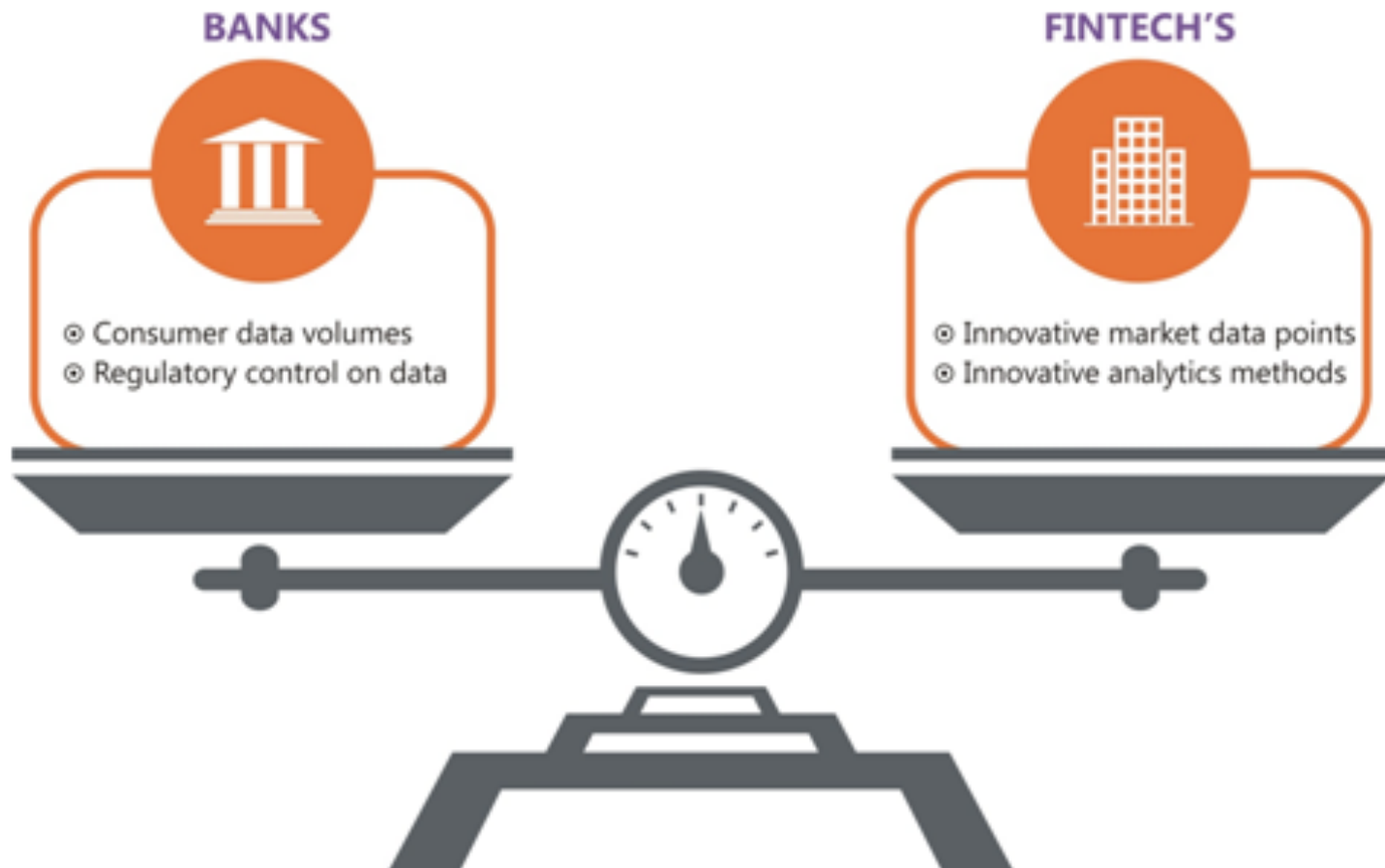


# Fintech Innovation: New Data Business Models

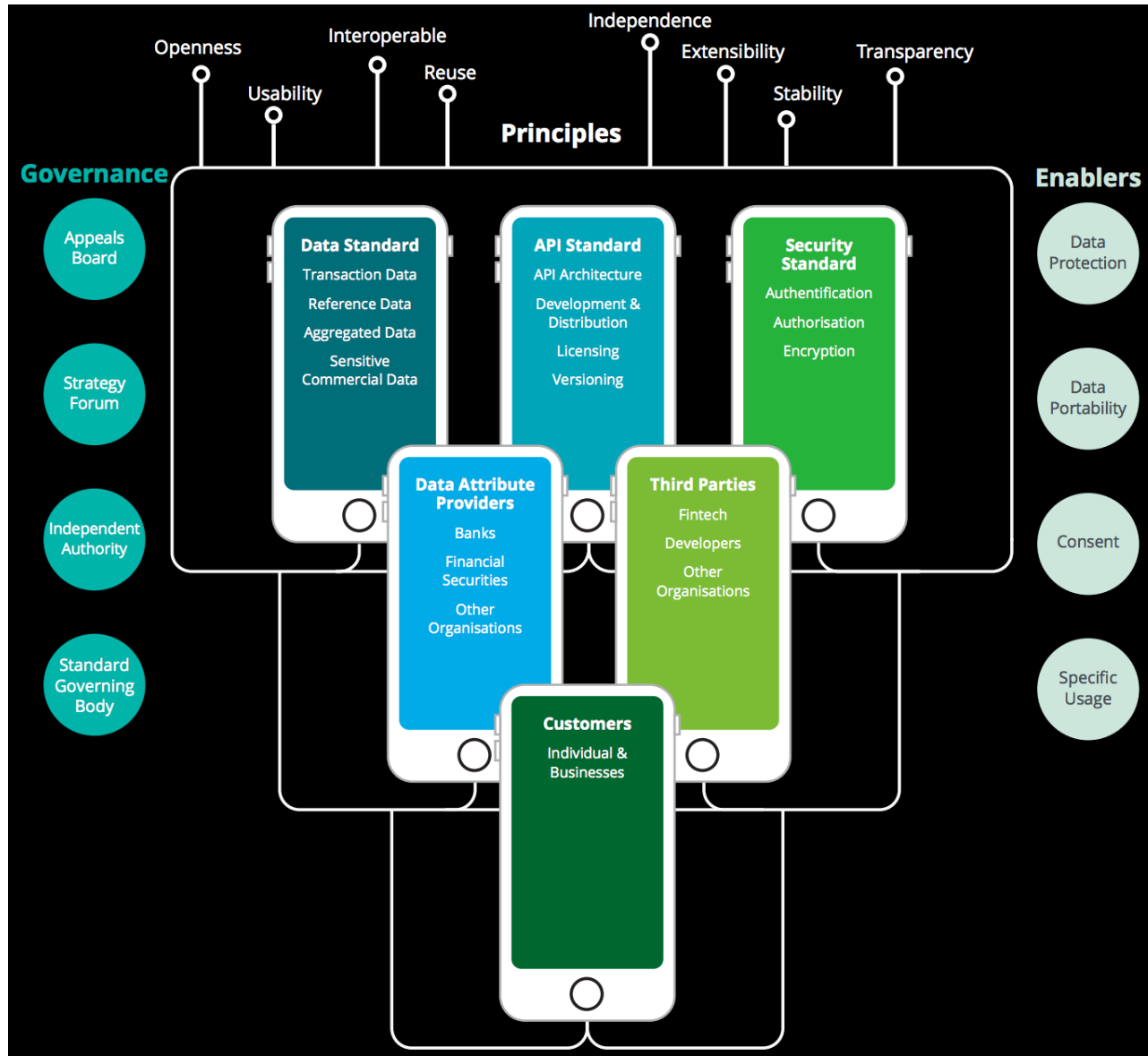
Fintech Innovation:  
New Data Business Models



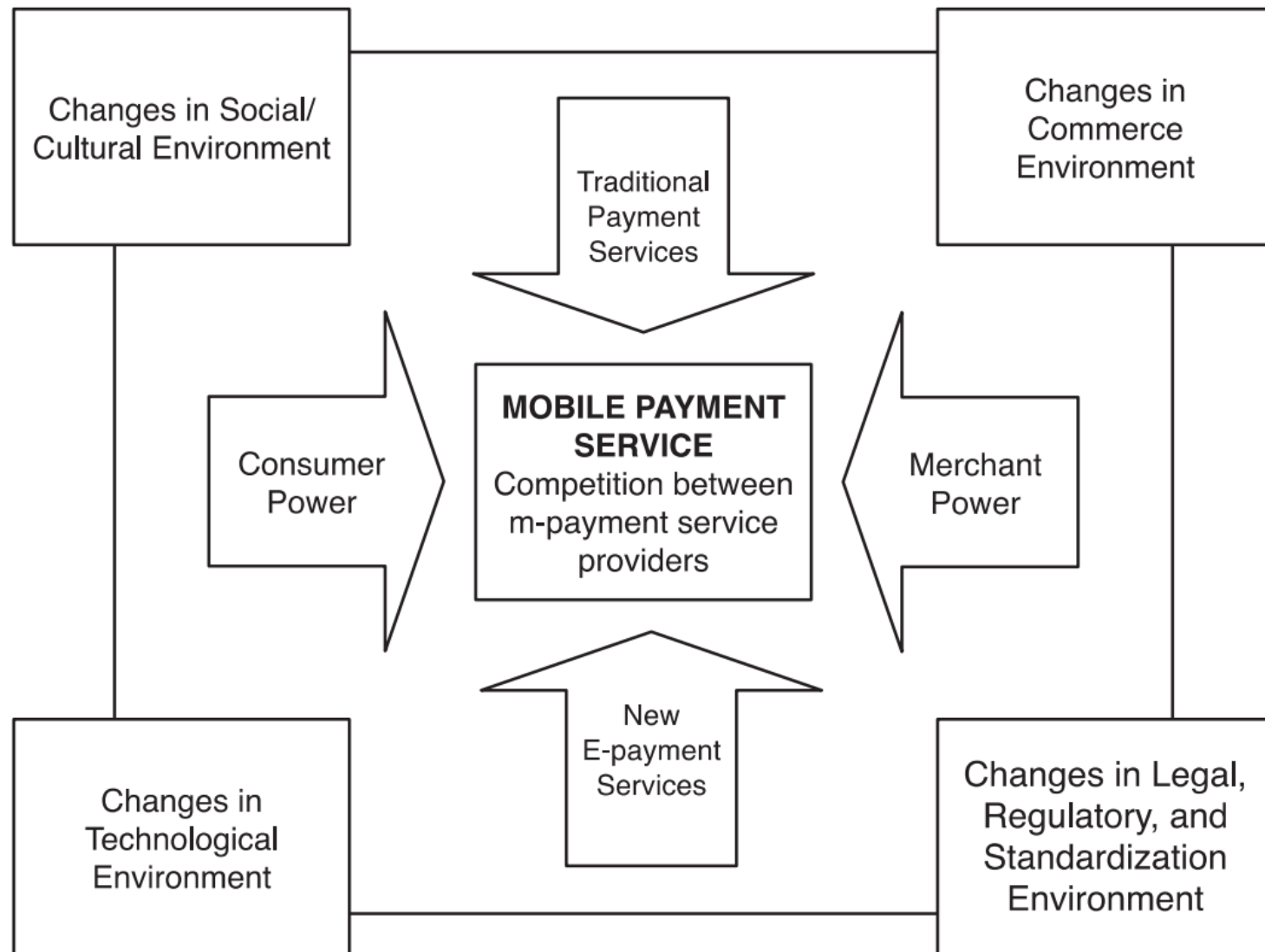
# Fintech Innovation Together: Better Use of Data



# Open API for FinTech



# Mobile Payment Service

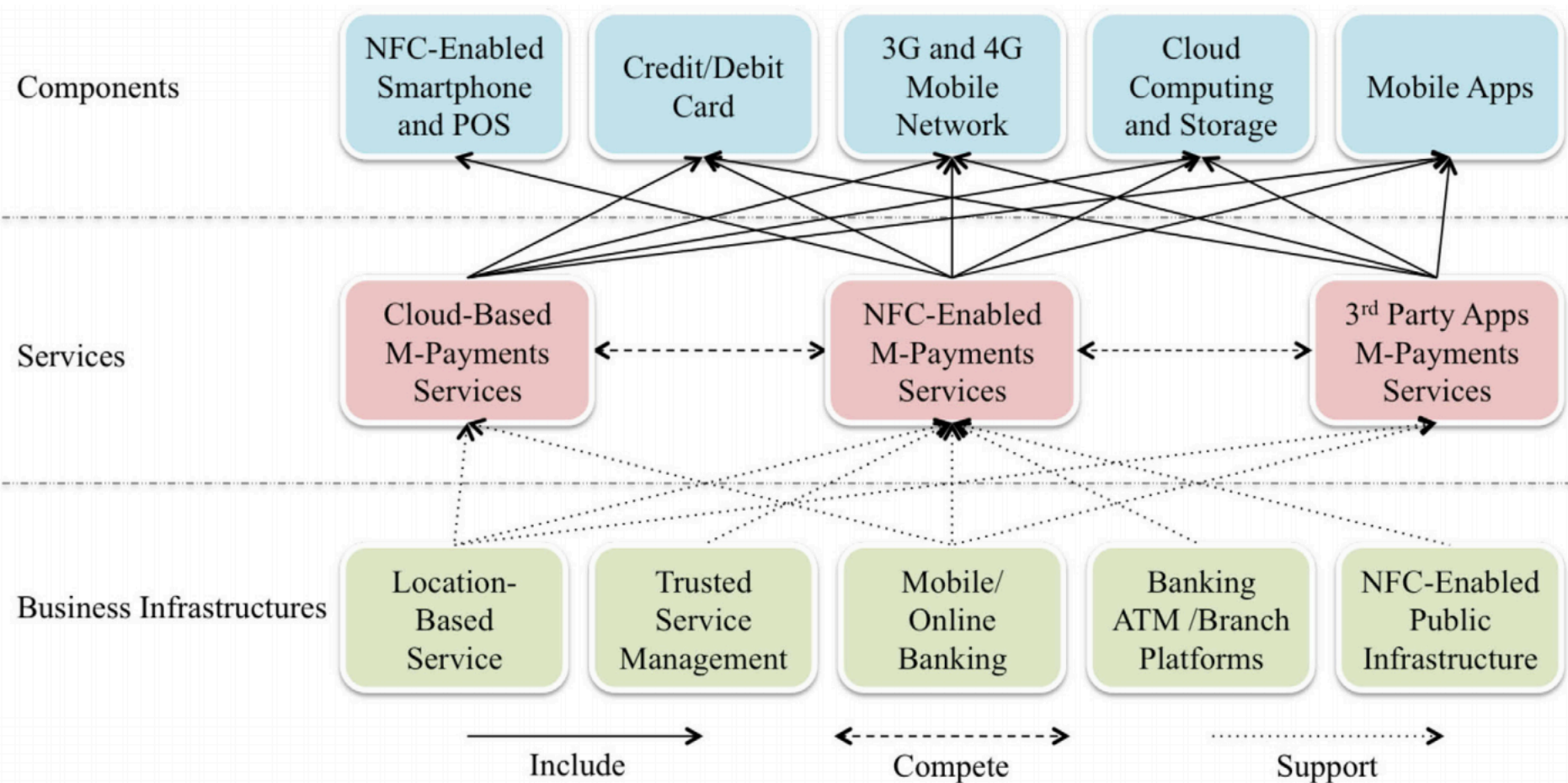


Source: Dahlberg, Tomi, Jie Guo, and Jan Ondrus. "A critical review of mobile payment research."


*Electronic Commerce Research and Applications* 14, no. 5 (2015): 265-284.



# Mobile Payments Technology Innovations




# Transferwise

English (US) ▼ Business Request money Help Login [Sign Up](#)

## Send money with the real exchange rate

Banks and other providers could charge you up to 5% in hidden costs when sending money abroad. TransferWise is up to 8x cheaper. It's only fair.

 [See how it works in 1 minute](#)

You send  
1,000

4.98 GBP TransferWise fee (included)

1.13970 ★ Guaranteed exchange rate (24 hours)

Recipient gets  
1,134.02

You could save up to: 35.38 GBP

GBP ▼

EUR ▼

[Compare price](#) [Get started](#)



Sir Richard Branson invested in TransferWise - [read why](#)

★ ★ ★ **36340** ★ ★ ★  
REVIEWS

5 star rating on Trustpilot - See why [people love TransferWise](#).



Authorised by the UK Financial Conduct Authority ([The FCA](#))



From the people who built Skype

# Transferwise

## TransferWise has accounts across the world

Pay into our bank account in your country. We pay your recipient from our account in their country using the real exchange rate.



# Transferwise

We independently obtained the overall cost of sending money 1,000 GBP to EUR using selected major banks and brokers.



TransferWise charges as little as possible

Banks and other providers could charge you up to 5% in hidden costs when sending money abroad. TransferWise is up to 8x cheaper. It's only fair.

See how it works in 1 minute

TransferWise uses the real exchange rate

1 = **1.13970**

Save up to 90% with TransferWise and receive  
**1,134.02**



Cost



Fixed exchange rate



## Bank Average

1,000

4.98 GBP (TransferWise fee included)

Banks hide their cost in the exchange rate

1,139.70 **40.36** guaranteed exchange rate (24 hours)

1,134.02

You could save up to 35.38 GBP

Banks often set their own exchange rate

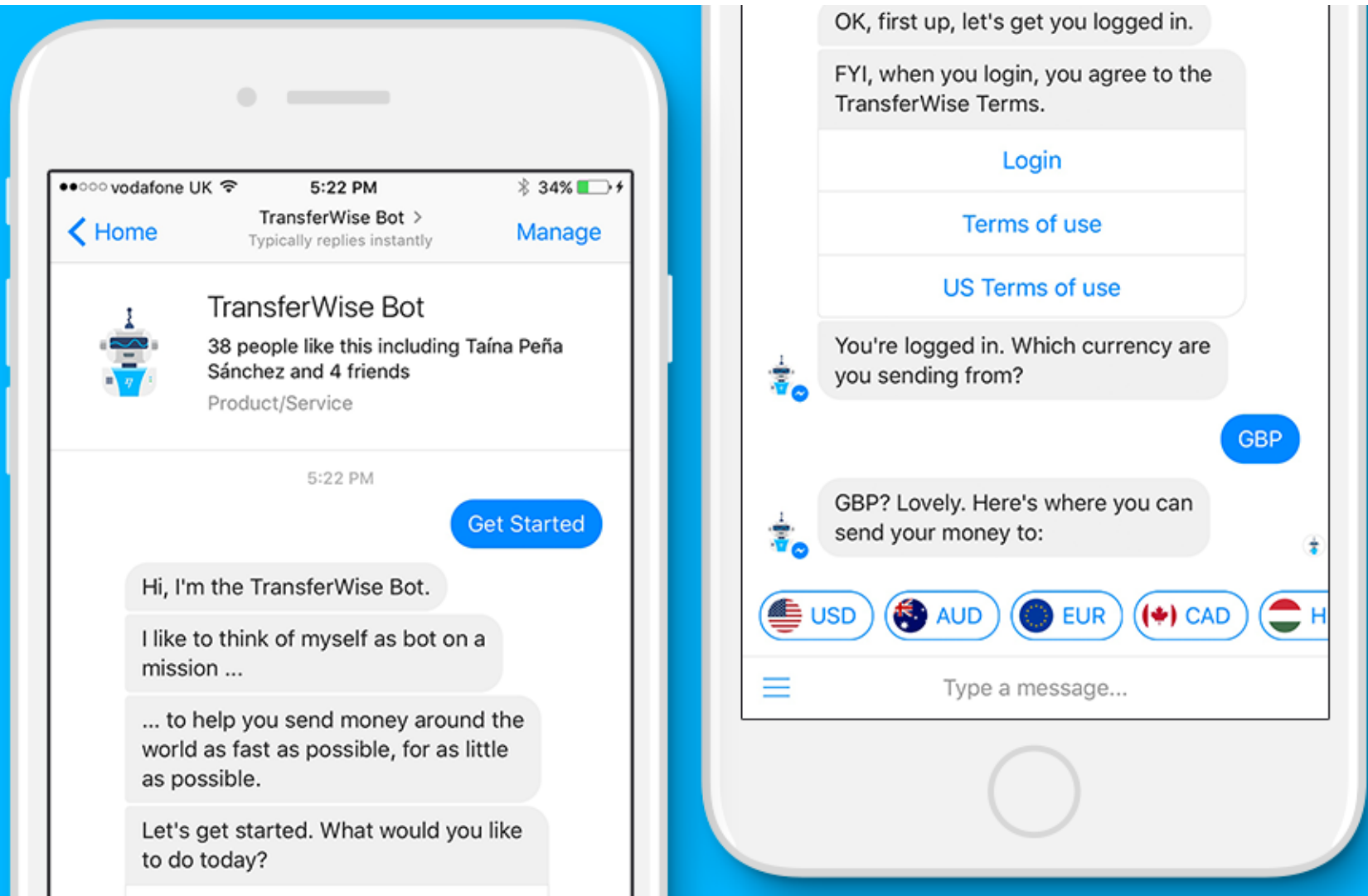
1 = **1.11098**

Banks could leave you 40.32 out of pocket  
**1,093.70**

Got it, I could save up to 35.38

<https://transferwise.com/>

# TransferWise Bot for Facebook Messenger



# FinTech Technologies

API

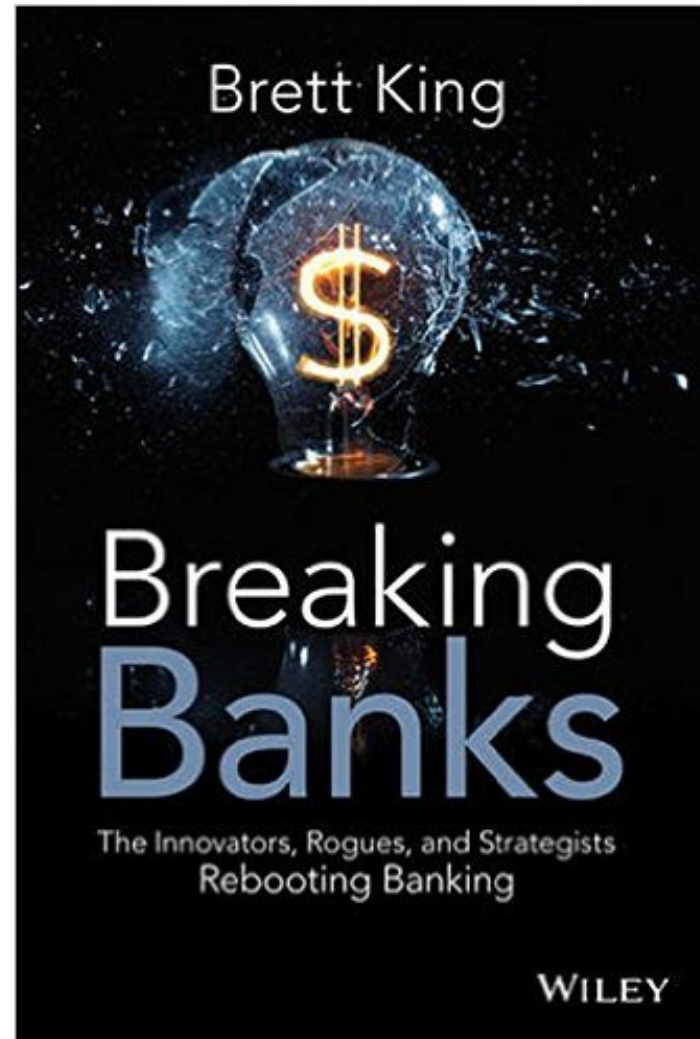
Robot

AI

Blockchain

Brett King (2014),  
**Breaking Banks:**

The Innovators, Rogues, and Strategists Rebooting Banking  
Wiley



# Fintech: Financial Technology

## Disrupting Banking: The Fintech Startups That Are Unbundling Wells Fargo, Citi and Bank of America



# Fintech: Unbundling the Bank

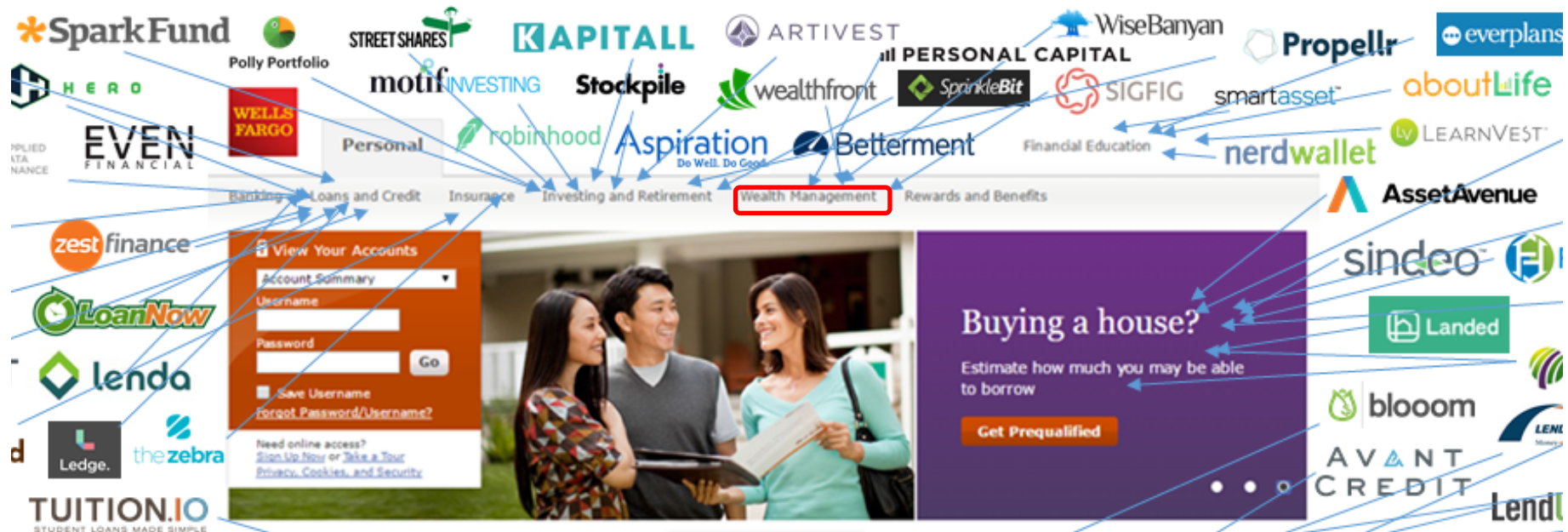
## Unbundling of a Bank



# Fintech: Unbundling the Bank

## Wealth Management: Wealthfront

### Unbundling of a Bank



**Fintech: Financial Technology**

**Disrupting**

**European Banking:**

**The FinTech Startups**

**That Are Unbundling**

**HSBC, Santander, and**

**BNP**

# Unbundling of a European Bank

The image illustrates the unbundling of a European bank, specifically HSBC, into various fintech services. The central focus is the HSBC website, which is surrounded by numerous other financial services. Arrows point from various logos to specific sections of the HSBC website, showing how different services are being unbundled.

**Logos and Services:**

- Top Row:** SavingGlobal, borro, Bondora, Zopa, Lending Works, prêt d'union, Lendico, fruitful, LANDBAY, Property Partner, wonga, Spotcap, Funding Circle, FINEXKAP, fleximize, iwoca, capiota, HOLVI, Trade River, Ebury, Lydia, jusp, ensygnio, payleven.
- Second Row:** ffrees, osper, CENTRALWAY, SQUIRREL, nutmeg, wikifolio, eToro, tink, CAPITAL, Money Dashboard, moni, transferGo, worldremit, azimo, CurrencyFair, Klarna, adyen, sum up, iZettle, BILLPAY, GOCARDLESS, PAYMILL.
- Central Focus:** HSBC website with sections for:
  - Personal, Business, Search, Internet Banking, Log on, Register
  - Everyday banking, Borrowing, Investing, Insurance, Planning
  - Send money overseas in a few clicks
  - Find a mortgage, Our lowest ever loan rate, Save Together offer, International money transfer
  - Business Banking, Commercial Banking, Corporate Banking, International Business, Online Services
  - Discover products and services for your banking needs
  - Get in touch, Call us on 0800 731 8904, Find a branch, Retrieve application



# Unbundling of a European Bank

The image illustrates the concept of 'unbundling' a traditional European bank into specialized fintech services. It features a central screenshot of the HSBC website, with various fintech logos arranged around it, connected by yellow arrows pointing to specific services on the website.

**Logos on the left side (connected to the top navigation bar):**

- SavingGlobal
- borro
- Bondora
- zopa
- LENDING WORKS
- prêt d'union
- Lendico
- fruitful
- LANDBAY
- Property Partner
- wonga.com

**Logos at the top (connected to the top navigation bar):**

- ffrees
- osper
- CENTRALWAY
- SQUIRREL
- nutmeg
- wikifolio
- etoro
- tink
- CAPITAL
- Money Dashboard
- môni
- transferGo
- worldremit
- azimo
- CurrencyFair
- Klarna
- adyen

**Central Screenshot (HSBC Website):**

- Navigation Bar:** Personal | Business | Search | Internet Banking | Log on | Register >
- Service Categories:**
  - Everyday banking: Accounts & services
  - Borrowing: Loans & mortgages
  - Investing: Products & analysis
  - Insurance: Property & family
  - Planning: for now & the future
- Main Content Area:**
  - Send money overseas in a few clicks:** It's secure, quick and easy. See just how much we could save you. [Find out more](#)
  - Find a mortgage**
  - Our lowest ever loan rate**
  - Save Together offer**
  - International money transfer**
- Footer:**
  - Business Banking: Turnover up to £2m
  - Commercial Banking: Turnover £2m to £30m
  - Corporate Banking: Turnover in excess of £30m
  - International Business
  - Online Services
  - Business Home > Business Banking
  - CB INSIGHTS
  - About Business Internet Banking
  - LOG ON

# Financial Technology (Fintech) Categories

1. Banking Infrastructure
2. Business Lending
3. Consumer and Commercial Banking
4. Consumer Lending
5. Consumer Payments
6. Crowdfunding
7. Equity Financing
8. Financial Research and Data
9. Financial Transaction Security
10. Institutional Investing
11. International Money Transfer
12. Payments Backend and Infrastructure
13. Personal Finance
14. Point of Sale Payments
15. Retail Investing
16. Small and Medium Business Tools

# FinTech Ecosystem (April 2015)



**FinTech**  
1,072 Companies

Contact  
[info@venturescanner.com](mailto:info@venturescanner.com)  
to see all companies

 **Venture Scanner**



# Financial Technology (FinTech)

## THE FINTECH ECOSYSTEM

### ROBO-ADVISORS & PERSONAL FINANCE



### BLOCKCHAIN & BITCOIN



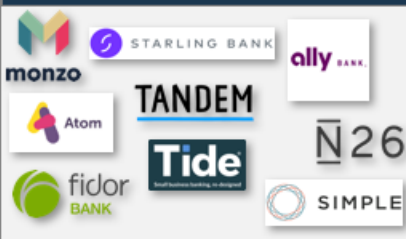
### INSURTECHS



### REGTECHS



### DIGITAL BANKS



### ALTERNATIVE FINANCE



### PAYMENTS & REMITTANCES



## BI INTELLIGENCE

Source: Company websites, BI Intelligence



# Financial Technology (FinTech)

## THE FINTECH ECOSYSTEM

### Payments & Transfers



### Lending & Financing



### Retail Banking



### Financial Management



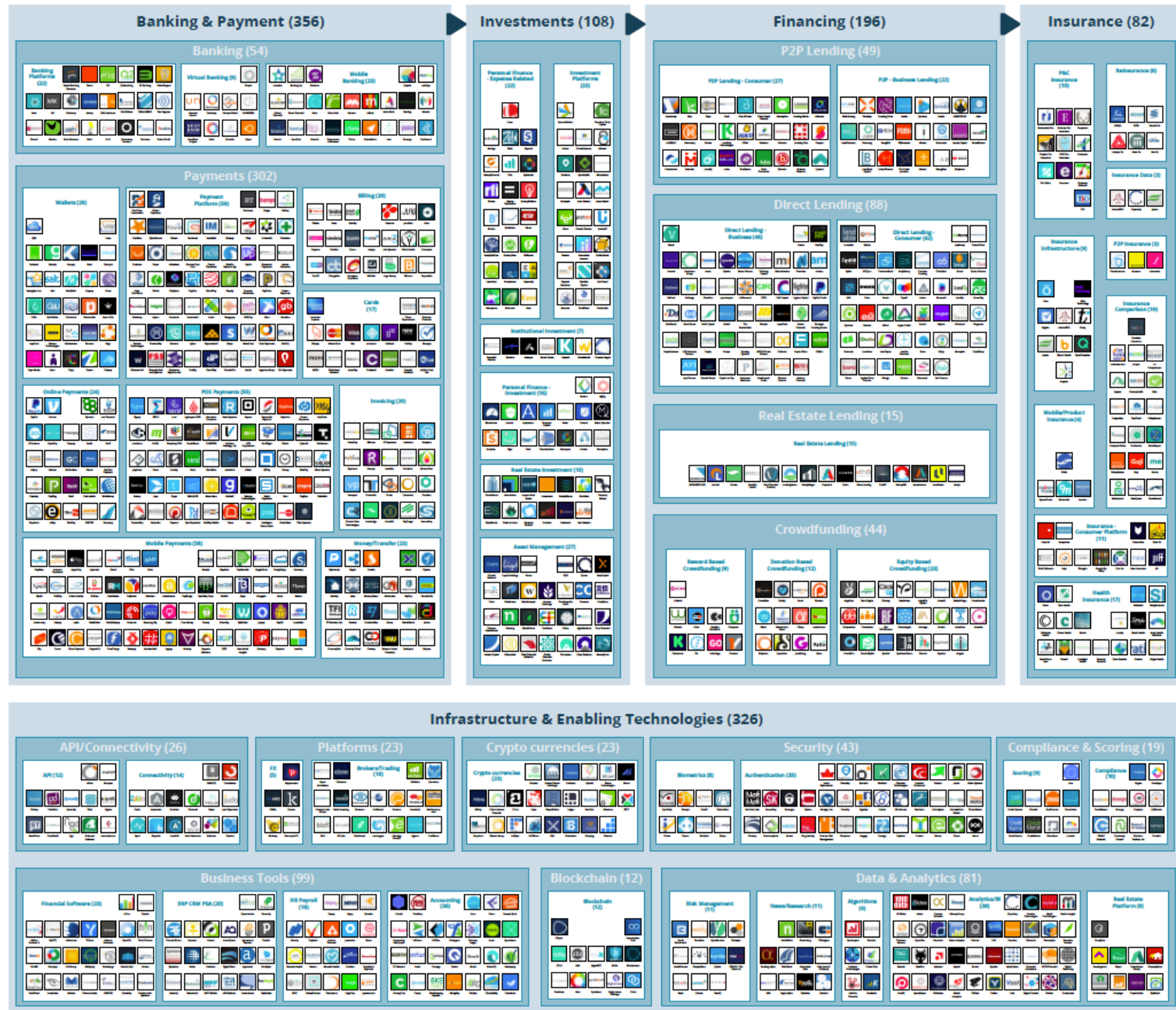
### Insurance



### Markets & Exchanges



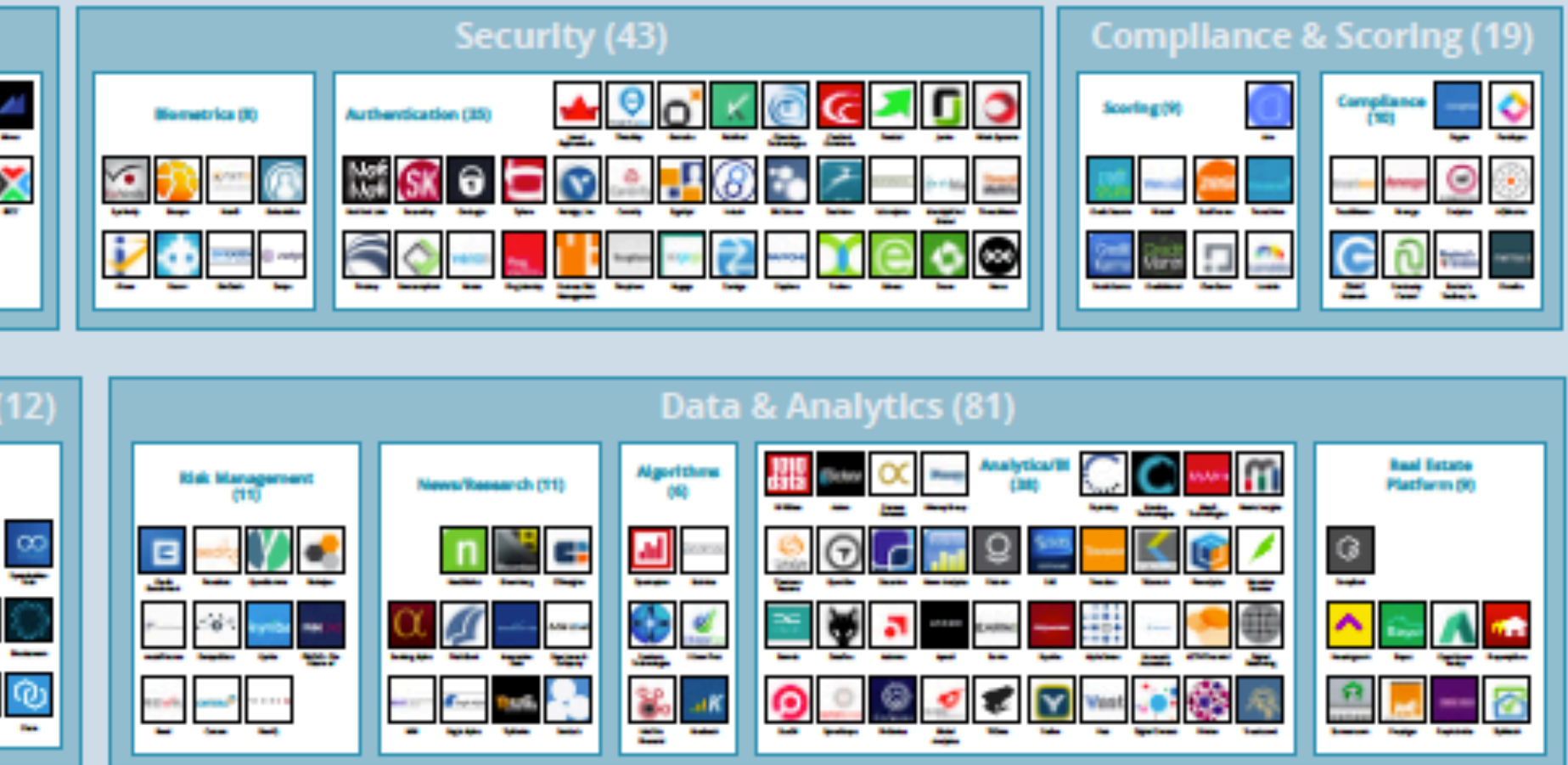
BI INTELLIGENCE



# FinTech Landscape Enabling Technologies

## Data & Analytics

### Technologies (326)



# FINTECH | LANDSCAPE

everisDigital

## Digital & Mobile payments



## Bitcoin & Cryptocurrency



## Capital Markets & Investing



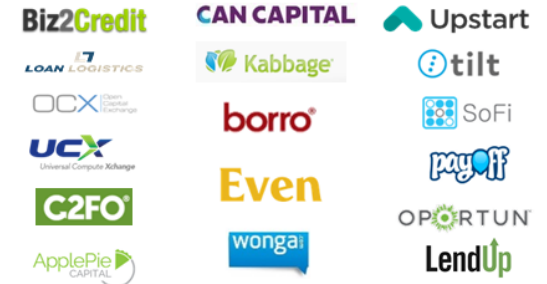
## Banking & Corporate Finance



## Big Data & Analytics



## Financial platforms



## Crowdfunding & peer-to-peer lending



## Personal financial management



## Blockchain technology



# FinTech Startups Worldwide



# Fintech Startups WorldWide

## Bankcard Organization



## Acquiring Service Provider



## Prepaid Card Issuer



## Software, Hardware and Device Provider



## Online Payment Company



## Telecom Operator



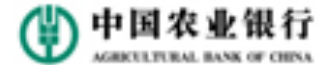
## City Commercial Bank



## Mobile Payment Company



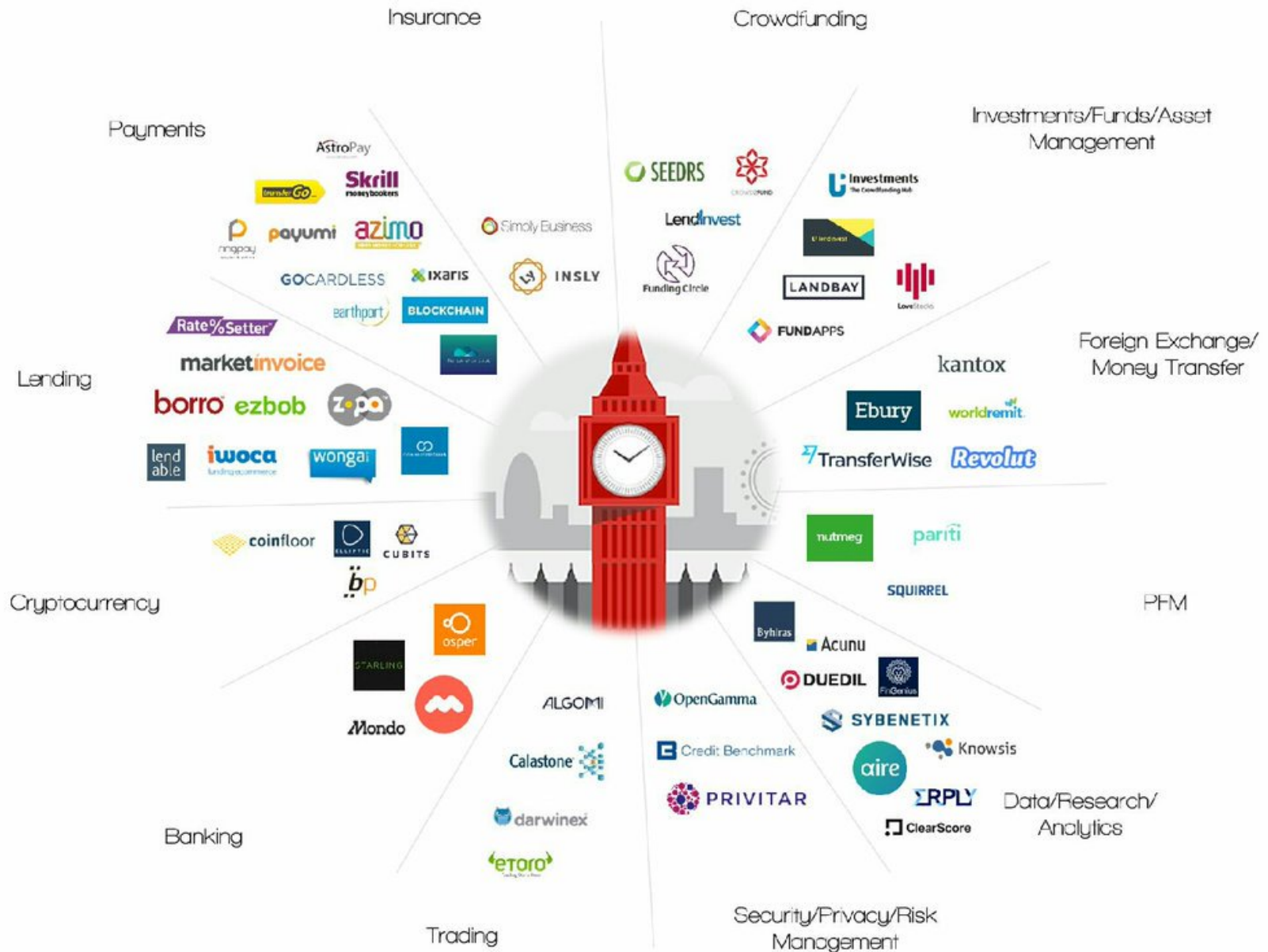
## State-owned Bank



## Joint-stock Bank



# Fintech Startups WorldWide



# Fintech Startups WorldWide



## German FinTech Overview - Unbundling Banks

powered by [www.paymentandbanking.com](http://www.paymentandbanking.com), March 2016



# Fintech Startups WorldWide



# Fintech Startups WorldWide

## FinTech Map Switzerland

Juni 2016

#185

### Investing und Asset Management

#45



### Vergleichs- und Informationsportale, Beratung, Versicherung

#30



### Payment

#27



### Crowdfunding

#31



### Crypto

#20



### Daten Management

#13



### PFM

#3



### Andere

#16

FinTech Map  
Juni 2016

# Fintech Startups WorldWide

## 決済



## 資産管理



## 資産運用



INSNEXT

お金のデザイン  
MONEY DESIGN

## ビットコイン

coincheck



国内

**FinTech**  
サービス19選

## ソーシャルレンディング



Crowdcredit

maneo

AQUSH

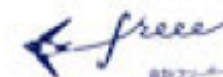
## 金融情報



SPEEDA



## 会計



# Fintech Startups WorldWide

## KOREAN FINTECH STARTUP MAP

Ver. 1.00

### Payments



### Bitcoin



### Personal Finance



### Remittances



### Crowdfunding



### Lending



### Security



카테고리별 순서: 기업의 영문명 순서

PDF 파일을 다운 받고 스타트업의 로고를 클릭하면,  
해당 스타트업의 홈페이지로 갈 수 있습니다.





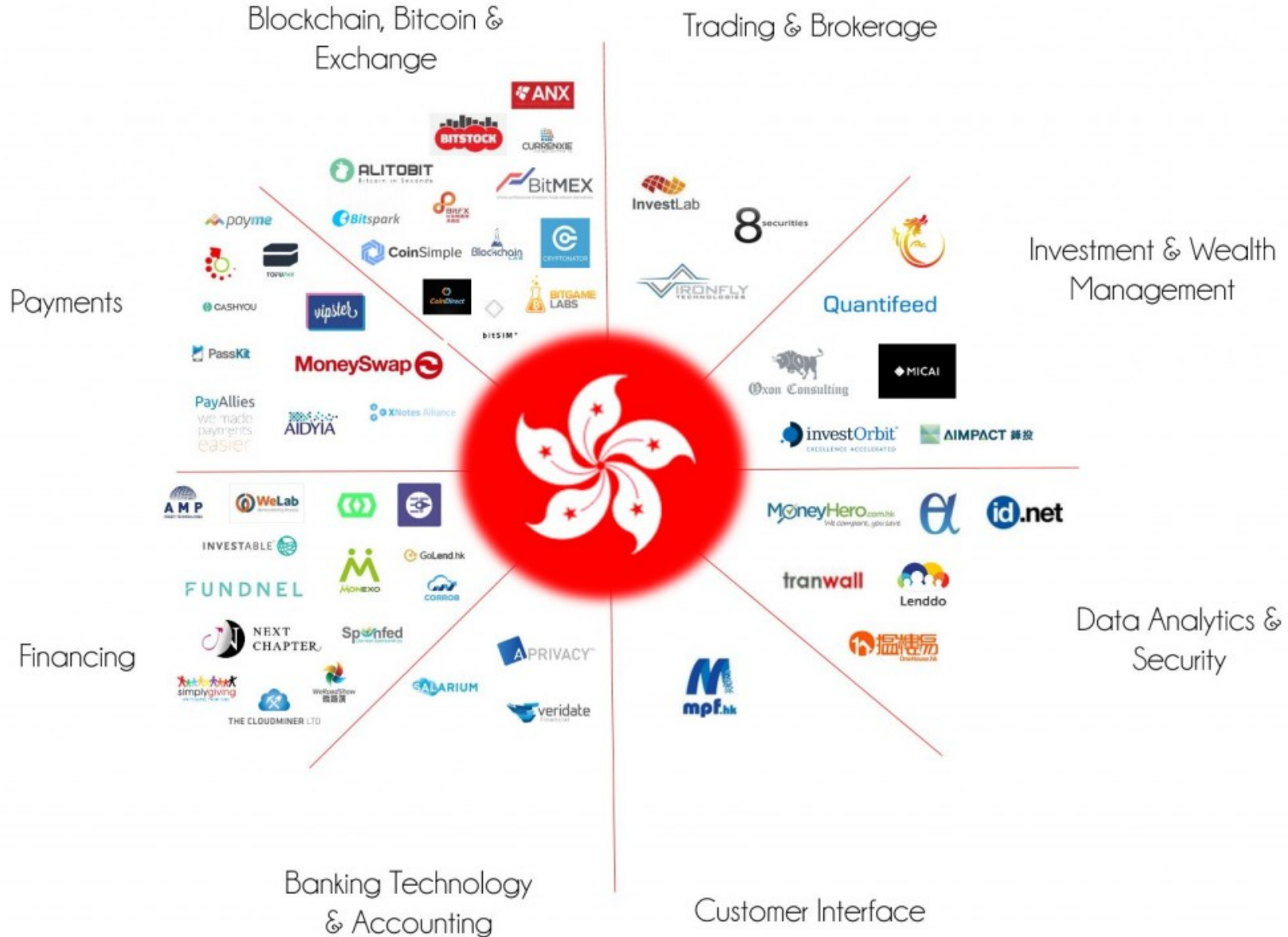
# Fintech Startups WorldWide

## Singapore FinTech Landscape

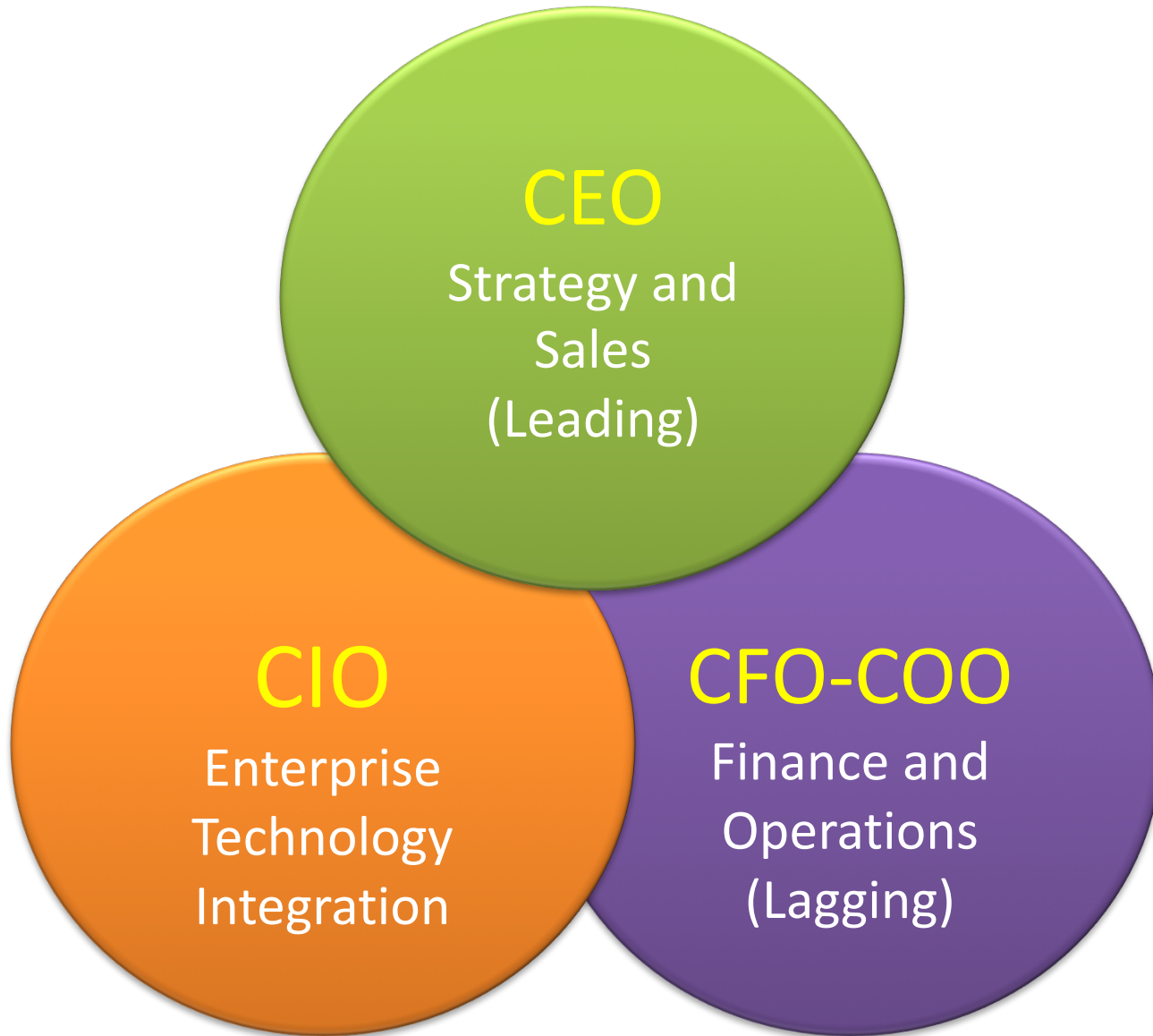


Payments / Remittances	Personal Finance/Wealth	Retail Banking/Investments	Banking Infrastructure
Lending	Institutional Investments	Financial Training / Games	Finance Research/Analytics

# Fintech Startups WorldWide



# CEO CIO CFO

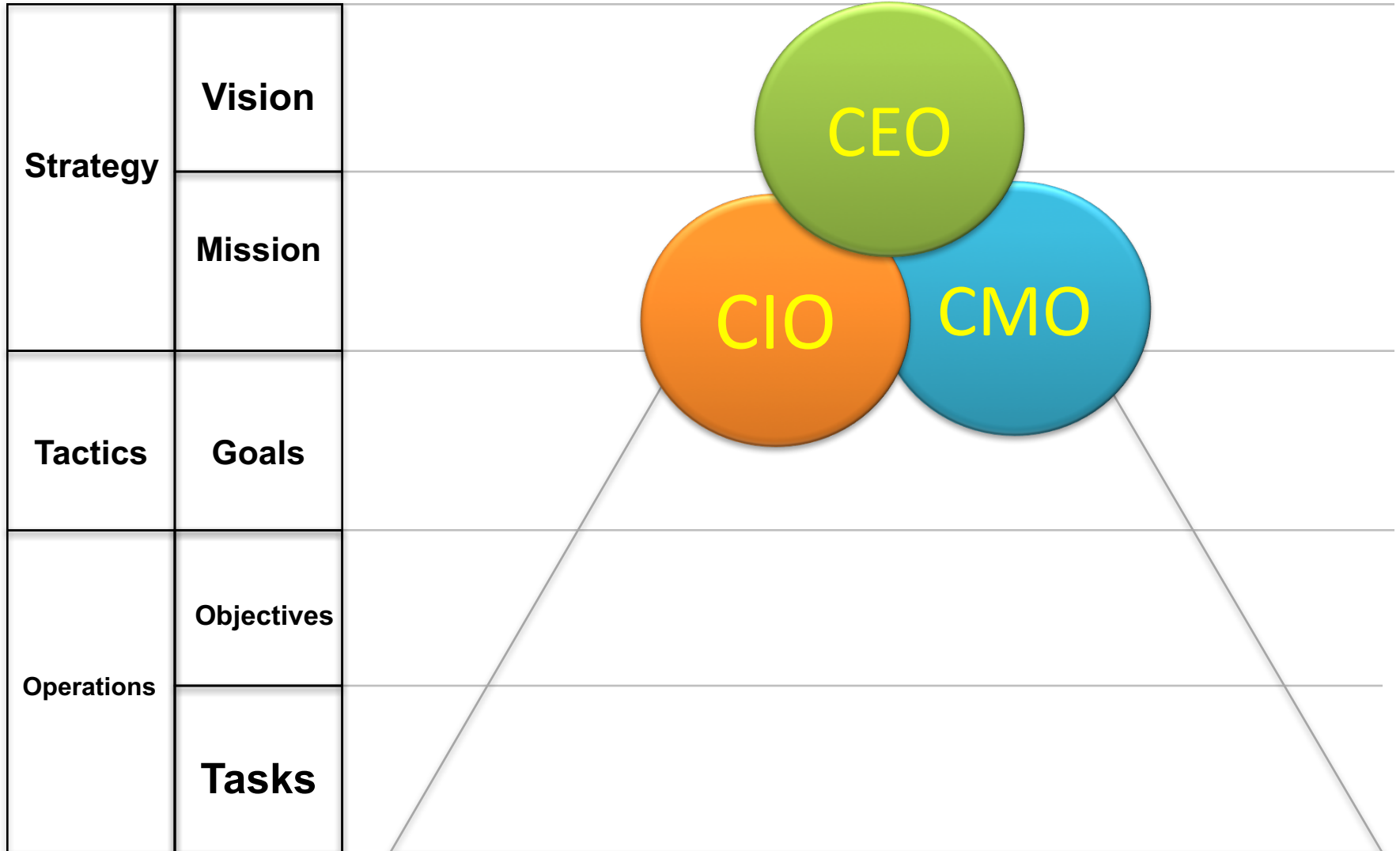


# CEO CIO CMO





# CEO CIO CMO



# References

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- Raphael Amit and Christoph Zott (2012), "Creating value through business model innovation." MIT Sloan Management Review, 53, no. 3 (2012): 41.
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