Business models within IoT

Hello!

I am Mario,

I am an IoT enthusiast.
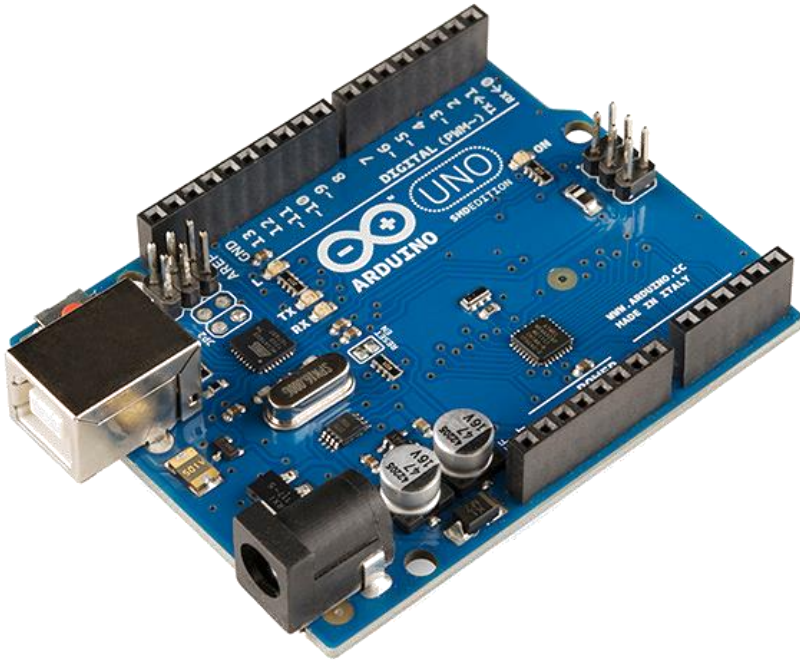
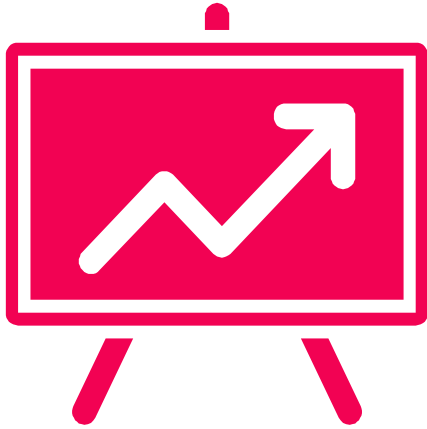On/off

It is about the experience. Having the opportunity to:
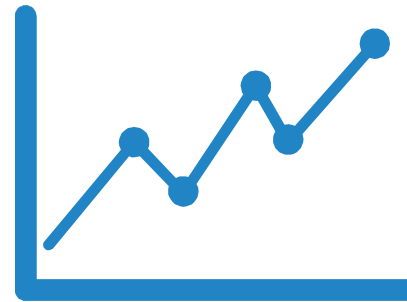
Insights = Value

Capturing value

New business creation $=$ **Improving business model**

What is a business model?
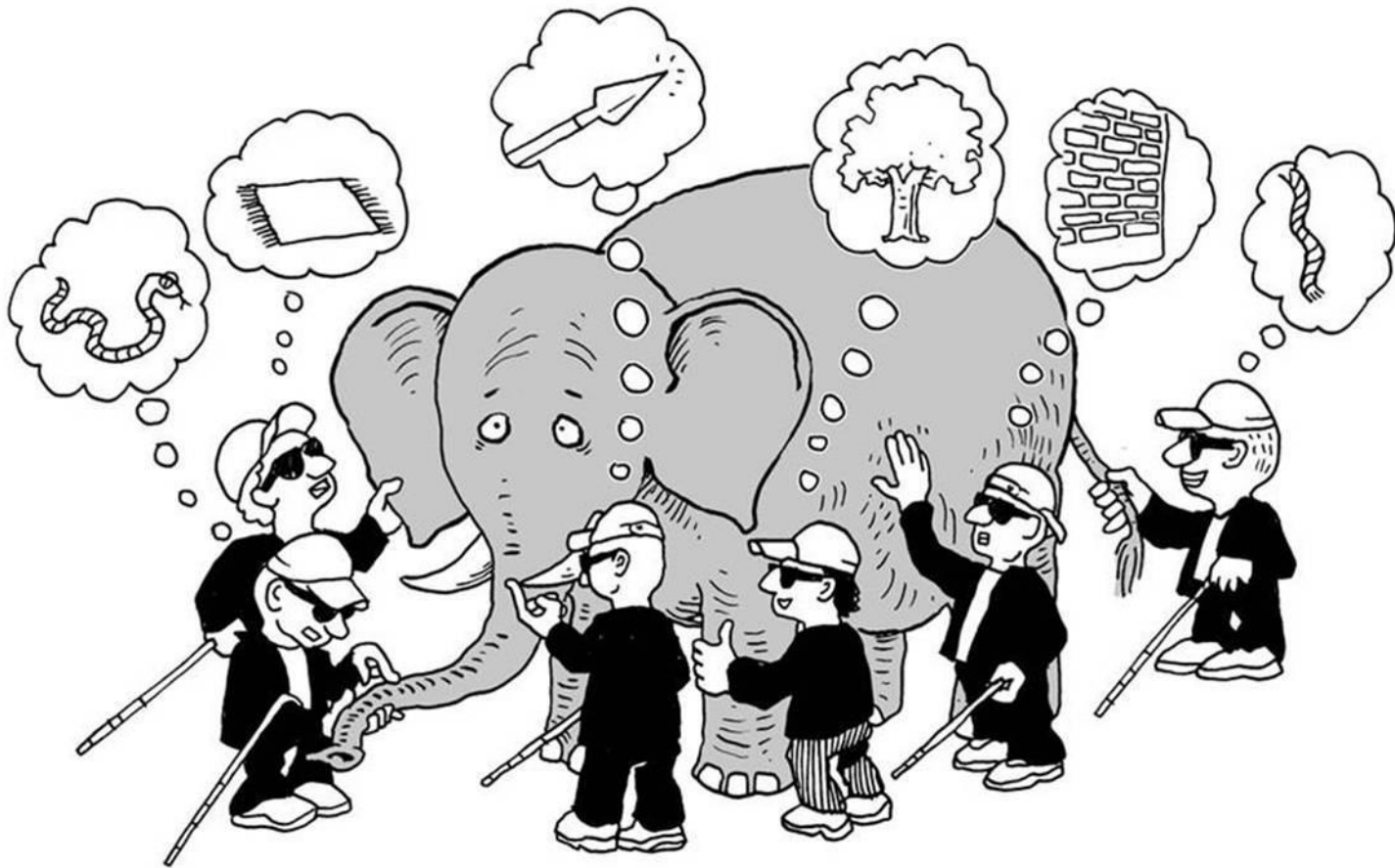
What is a business model?

▷'A plan for the successful operation of a business, identifying sources of revenue, the intended customer base, products, and details of financing.' (Google search)

▷'A conceptual tool that contains a set of elements and their relationships and allows expressing a company's logic of earning money' (Osterwalder, 2004)

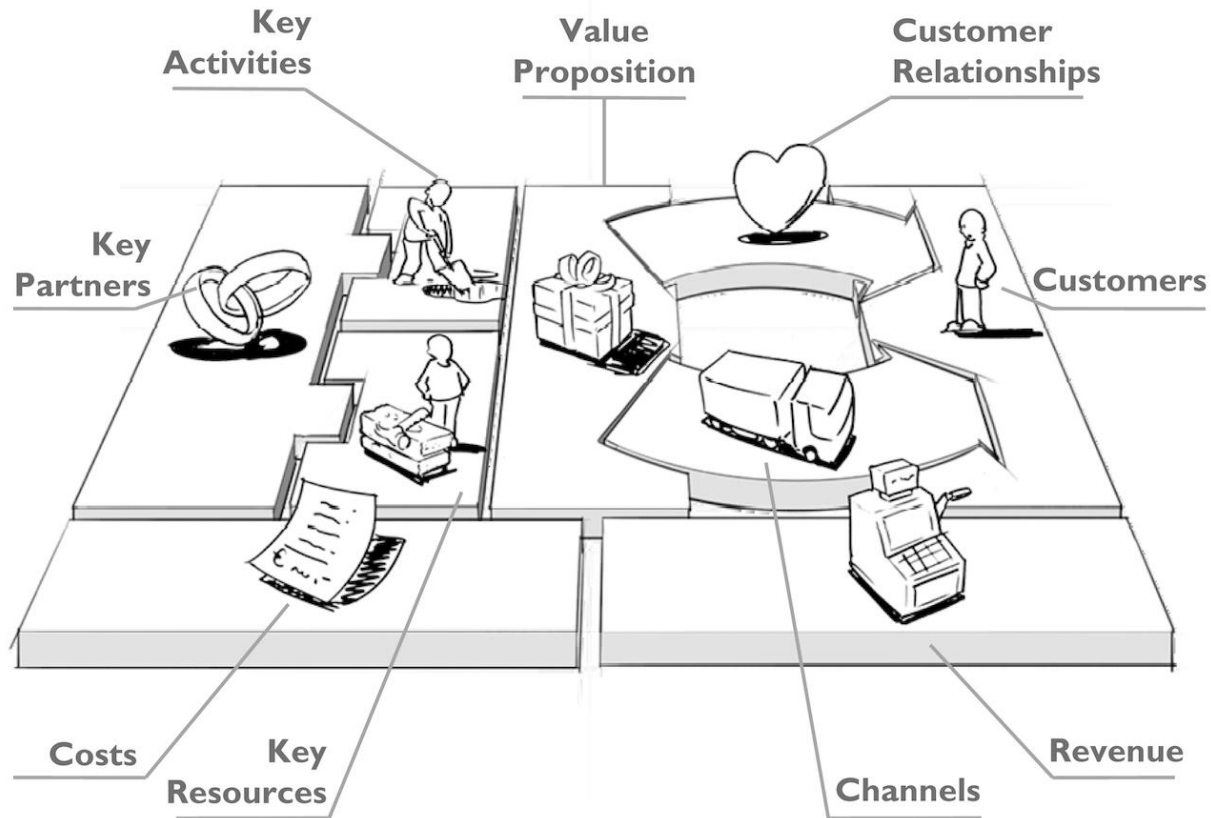▷ **A model that explains how a company does its business.**
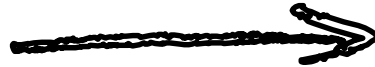
Key elements

Business model canvas

Key elements

Source	Specific components	Number	E-commerce/ general	Empirical support (Y/N)	Nature of data
Horowitz (1996)	Price, product, distribution, organizational characteristics, and technology	5	G	N	
Viscio and Pasternak (1996)	Global core, governance, business units, services, and linkages	5	G	N	
Timmers (1998)	Product/service/information flow architecture, business actors and roles, actor benefits, revenue sources, and marketing strategy	5	E	Y	Detailed case studies
Markides (1999)	Product innovation, customer relationship, infrastructure management, and financial aspects	4	G	N	
Donath (1999)	Customer understanding, marketing tactics, corporate governance, and intranet/extranet capabilities	5	E	N	
Gordijn et al. (2001)	Actors, market segments, value offering, value activity, stakeholder network, value interfaces, value ports, and value exchanges	8	E	N	
Linder and Cantrell (2001)	Pricing model, revenue model, channel model, commerce process model, Internet-enabled commerce relationship, organizational form, and value proposition	8	G	Y	70 interviews with CEOs
Chesbrough and Rosenbaum (2000)	Value proposition, target markets, internal value chain structure, cost structure and profit model, value network, and competitive strategy	6	G	Y	35 case studies
Gartner (2003)	Market offering, competencies, core technology investments, and bottom line	4	E	N	Consulting clients
Hamel (2001)	Core strategy, strategic resources, value network, and customer interface	4	G	N	Consulting clients
Petrovic et al. (2001)	Value model, resource model, production model, customer relations model, revenue model, capital model, and market model	7	E	N	
Dubosson-Torbay et al. (2001)	Products, customer relationship, infrastructure and network of partners, and financial aspects	4	E	Y	Detailed case studies
Afuah and Tucci (2001)	Customer value, scope, price, revenue, connected activities, implementation, capabilities, and sustainability	8	E	N	
Weill and Vitale (2001)	Strategic objectives, value proposition, revenue sources, success factors, channels, core competencies, customer segments, and IT infrastructure	8	E	Y	Survey research
Applegate (2001)	Concept, capabilities, and value	3	G	N	
Amit and Zott (2001)	Transaction content, transaction structure, and transaction governance	4	E	Y	59 case studies
Alt and Zimmerman (2001)	Mission, structure, processes, revenues, legalities, and technology	6	E	N	Literature synthesis
Rayport and Jaworski (2001)	Value cluster, market space offering, resource system, and financial model	4	E	Y	100 cases
Betz (2002)	Resources, sales, profits, and capital	4	G	N	

Key elements

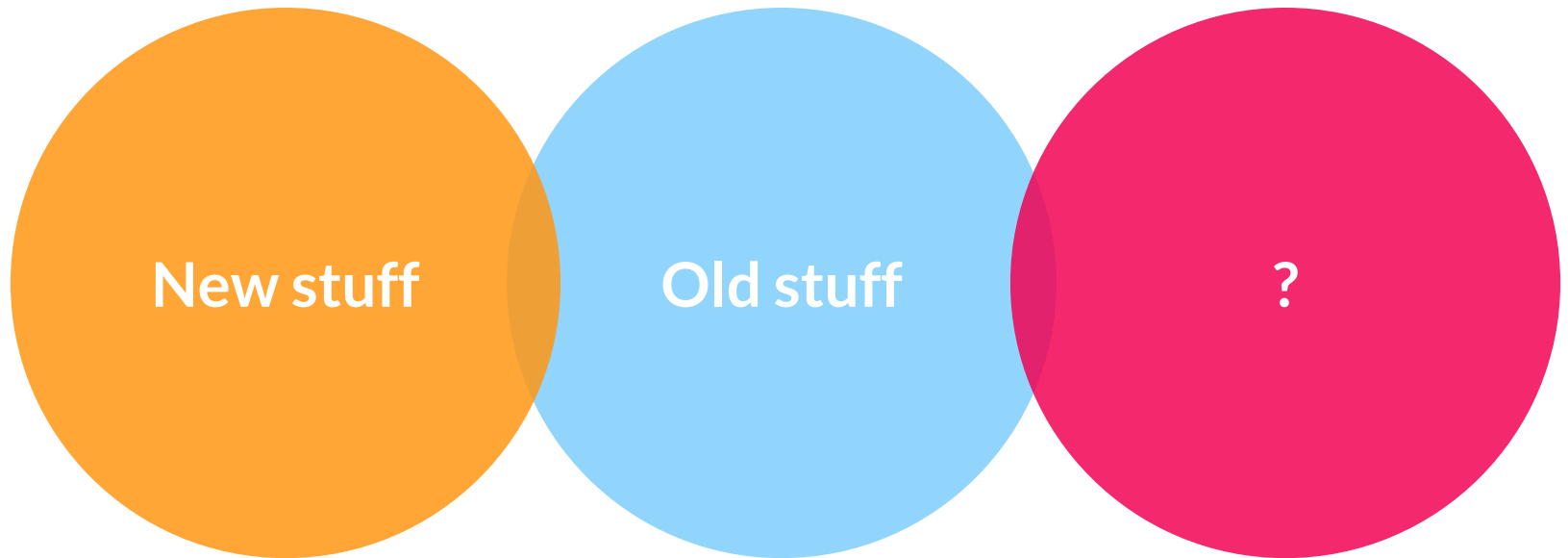▷Value proposition

▷Value creation

▷Costs

▷Revenue streams

Business model patterns

1 **Add-On** *What* *Value*	**12** **Direct Selling** *What* *Value* *How*	**23** **Integrator** *Value* *How*	**34** **Orchestrator** *Value* *How*	**45** **Self-Service** *What* *Value* *How*
2 **Affiliation** *How* *Value*	**13** **E-Commerce** *What* *Value* *How*	**24** **Layer Player** *What* *How*	**35** **Pay per Use** *What* *Value*	**46** **Shop-in-Shop** *What* *Value* *How*
3 **Aikido** *What* *Value*	**14** **Experience Selling** *What* *Value* *How*	**25** **Leverage Customer Data** *Value* *How*	**36** **Pay what you want** *What* *Value*	**47** **Solution Provider** *What* *Value* *How*
4 **Auction** *What* *Value*	**15** **Flatrate** *What* *Value*	**26** **License** *What* *Value* *How*	**37** **Peer-to-Peer** *What* *Value* *How*	**48** **Subscription** *What* *Value*
5 **Barter** *What* *Value*	**16** **Fractionalized Ownership** *What* *Value* *How* *Who*	**27** **Lock-In** *Value* *How*	**38** **Performance-based-contracting** *What* *Value* *How*	**49** **Supermarket** *What* *Value* *How*
6 **Cash Machine** *Value* *How*	**17** **Franchising** *What* *Value* *How*	**28** **Long Tail** *What* *Value* *How*	**39** **Razor and Blade** *What* *Value* *How*	**50** **Target the Poor** *What* *Value* *How* *Who*

1. Physical Freemium
2. Digital Add-on
3. Digital Lock-in
4. Product as Point of Sales
5. Object Self Service
6. Remote Usage and Condition monitoring.

University of St.Gallen

BOSCH

What is easier?

New stuff

Old stuff

?

From product centric to service centric

Thing	+	IT	Hardware / Software	=	Thing-based Function	Physical / Local	+	IT-based Service	Digital / Global
watch					Time			E-Call	
					Stock box			Replenishment	
bicycle					Ride			Fleet Mgmt, Leasing etc.	
					Temperature			EE Consulting, Cost Savings, Remote Control	
car					Drive			Insurance, Traffic, Charging, Theft, Behavior	
light bulb					Light			Security, Heating Control, Comfort	
Every-thing					Whatever the thing can			Installation Guide, Maintenance Guide, Maintenance History, Active Maint. Schedule, Repair Guide, Repair History, Replenishment Service, Warranty Service, Bill, Insurance	

Don't sell engines, but trust per hour.

Remote usage and condition monitoring

Go beyond free services.

Selling sensor data for a fee.
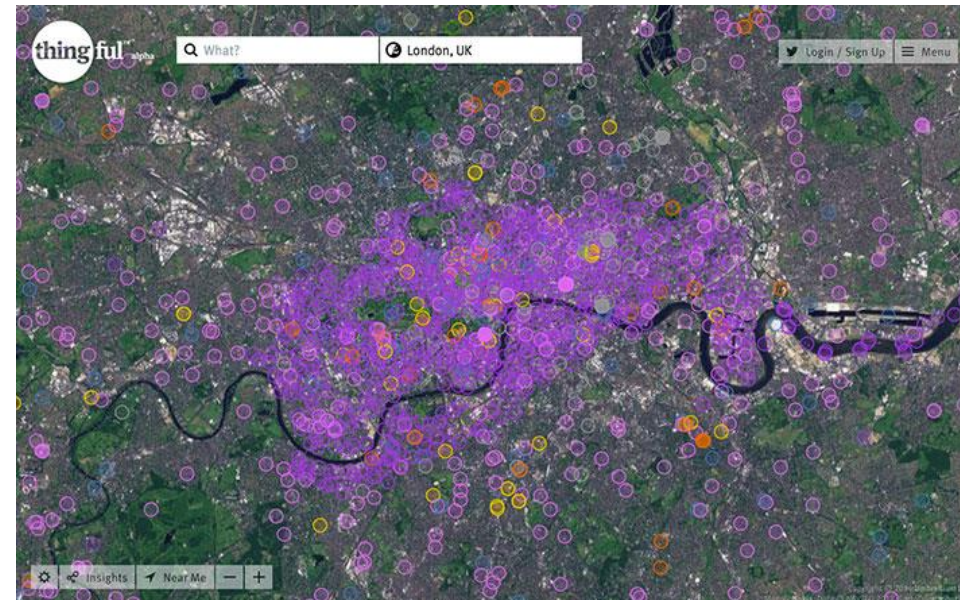
More

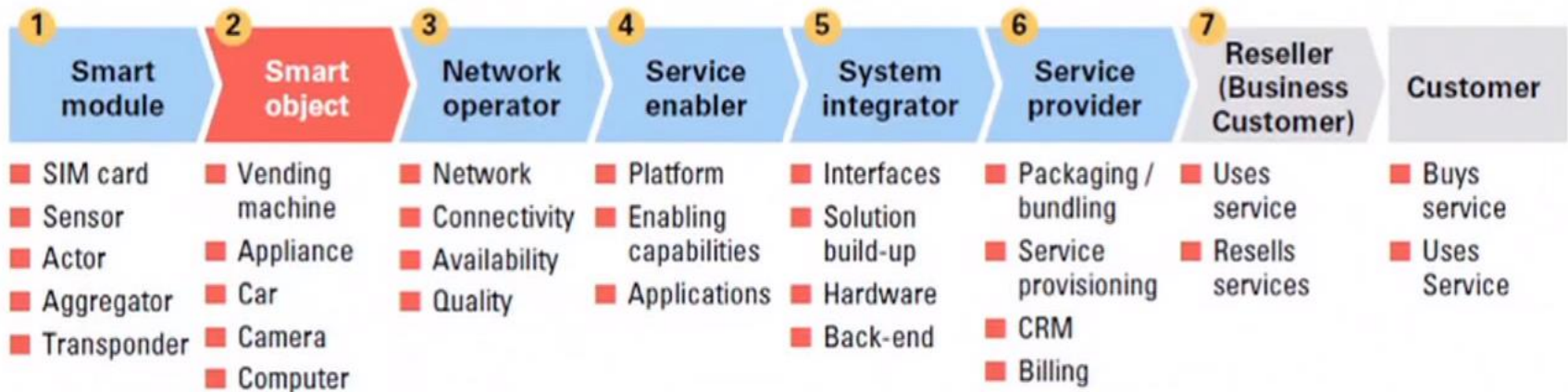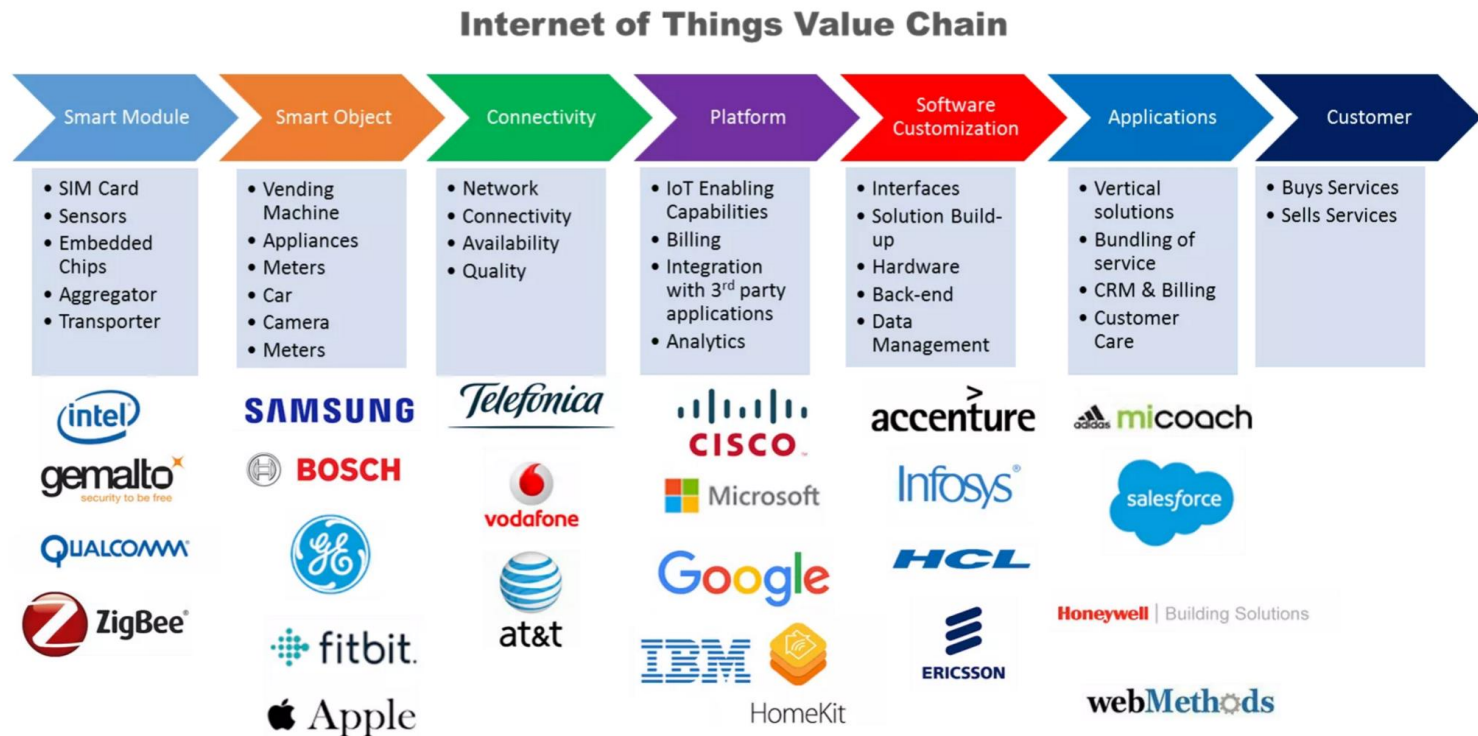|	
Digital Add-on	**Physical asset sold inexpensively, possible to purchase/activate any number of digital services.**
Digital Lock-in	**Only original components are compatible with the system**
Object Self Service	**The ability of things to independently place orders.**

ROI + additional contribution

01 | **Local ROI**
Costs & revenue

02 | **Costs savings**
Driving down costs

03 | **Operational efficiency**
Asset enhancements

04 | **Strategic benefits**
Differentiation, improved service quality

Key partners

(Harvard i-lab, 2013)

Key partners

Internet of Things Value Chain

(Telecomcircle, 2016)

So the question is:

▷**What will you make?**

▷**How will you innovate?**

"

'A mediocre technology pursued
within a great business model
may be more valuable that a
great technology exploited via a
mediocre business model.'

(Chesbrough, 2010)

Thanks!
Any questions?