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INNOVATION:  
OVERVIEW

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LUND UNIVERSITY

Note: Charlotta is meeting with the Swedish parliamentary committee on education (utbildningsutskottet) this morning.

## EXERCISE

WHAT DOES  
INNOVATION  
MEAN TO YOU?

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Students discuss in groups of two or three.

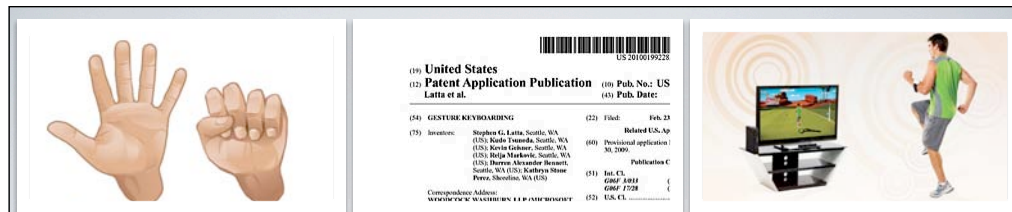
- \* What does innovation mean to you?
- \* How would you define innovation?
- \* What are some examples of innovations?

Follow up with a moderated all-class discussion.

IS THERE A  
DIFFERENCE BETWEEN  
CREATIVITY, INVENTION  
& INNOVATION?

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Continue with a brief all-class discussion on the (potential) difference between creativity, invention and innovation.



(19) United States  
 (12) Patent Application Publication  
 Latta et al.

(11) Pub. No.: US  
 (43) Pub. Date:

(54) GESTURE KEYBOARDING (22) Filed: Feb. 22  
 (75) Inventors: Stephen G. Latta, Seattle, WA; Related U.S. Ap  
 (US) Kater Tsamada, Seattle, WA; P  
 (US) Kevin Graham, Seattle, WA; P  
 (US) Debra Markovic, Seattle, WA; P  
 (US) Doreen Alexander Bennett, P  
 Seattle, WA (US); Kathryn Stone P  
 Perry, Shoreline, WA (US)

(60) Provisional application of  
 30, 2009, Publication C

(51) Int. Cl. G06F 03/14  
 G06F 1/22  
 (52) U.S. Cl.

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 www.dwww.wwwwinc.com/WWWWWW

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# CREATIVITY

ABILITY TO GENERATE NOVEL IDEAS

# INVENTION

NOVEL IDEA TRANSFORMED INTO REALITY

# INNOVATION

SUCCESSFUL IMPLEMENTATION OF NOVEL IDEA

We are not overly concerned with definitions here, and we do not seek consensus on this matter. There are countless ways of looking at this, and you have to find something that you can identify with.

One proposal is to see creativity as an ability to generate novel ideas. Let's say you've come up with a new idea for how to interact with your TV through gestures. Great idea!

Invention can be seen as a novel idea transformed into reality. Let's say you've patented a set of systems and methods for gesture keyboarding.

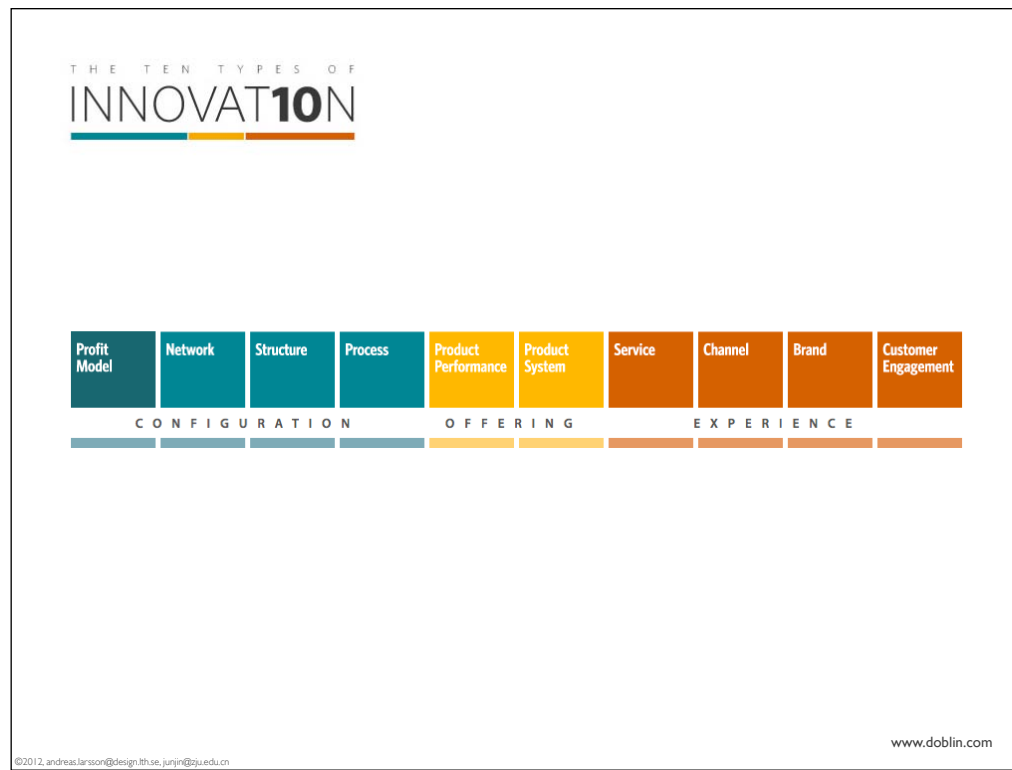
Innovation can be seen as the successful implementation of the novel idea, in this case it could be a commercial application of the gesture keyboarding patent, like the Microsoft Kinect, which set a Guinness World Record for the fastest-selling consumer device ever.

“Ideas are useless unless used.  
The proof of their value is  
their implementation.  
Until then they are in limbo.”

(Levitt, 1963)

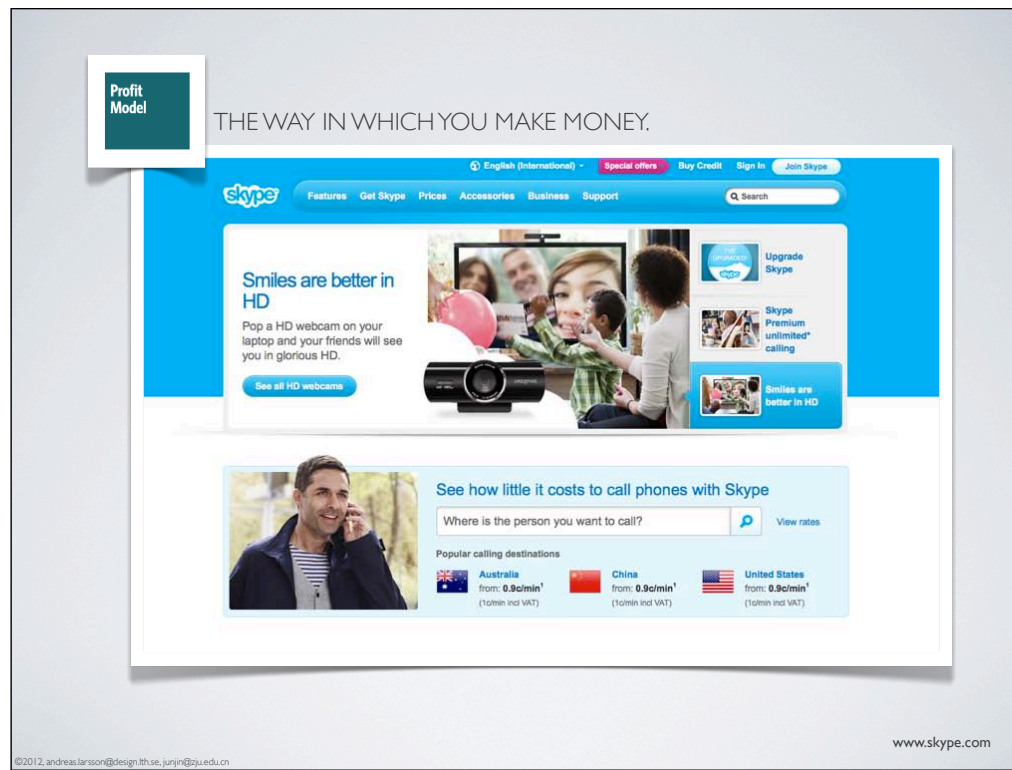
# INNOVATION

THE SUCCESSFUL INTRODUCTION  
OF SOMETHING NEW



From left to right: closest to company (“back of the house”) –> closest to customer (“front of the house”)

1. Configuration: Profit Model: The way in which you make money.
2. Configuration: Network: Connections with others create value.
3. Configuration: Structure: Alignment of your talent and assets.
4. Configuration: Process: Signature or superior methods for doing your work.
5. Offering: Product Performance: Distinguishing features and functionality.
6. Offering: Product System: Complementary products and services.
7. Experience: Service: Support and enhancements that surround your offerings.
8. Experience: Channel: How your offerings are delivered to customers and users.
9. Experience: Brand: Representation of your offerings and business.
10. Experience: Customer Engagement: Distinctive interactions you foster.



## Example 1: Configuration: Profit Model

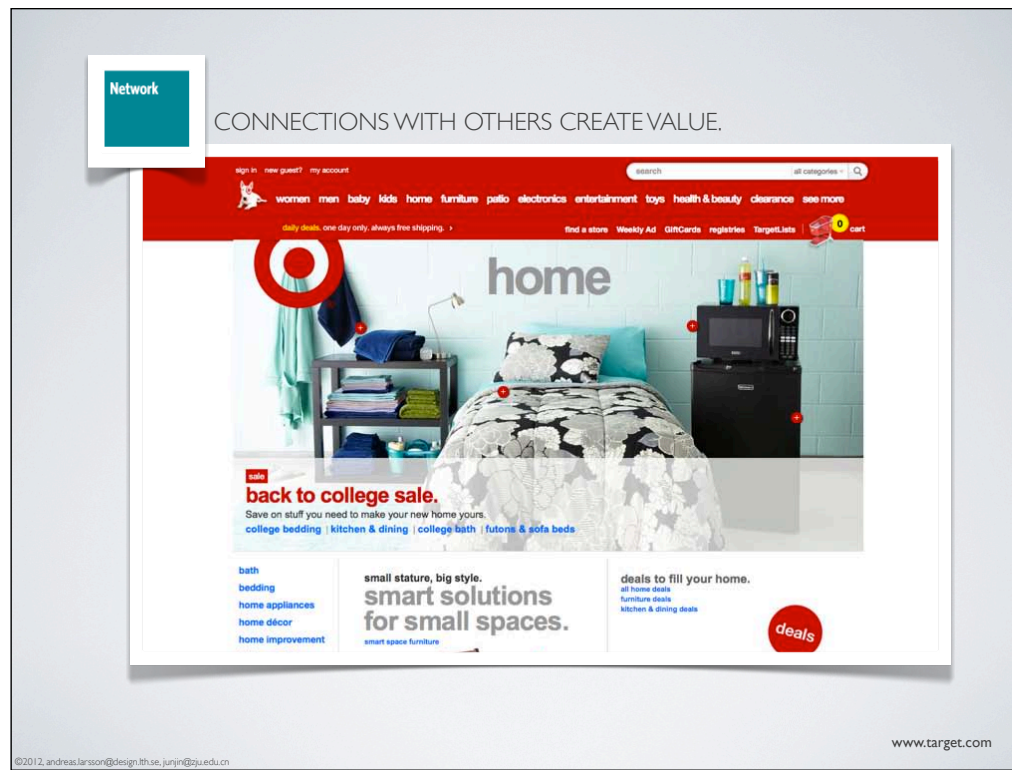
The way in which you make money.

Skype – freemium (Dropbox, New York Times)

Gillette – razor blade model (AT&T, SodaStream)

iPad – reverse razor blade model (Amazon Kindle, Nike+ Fuelband)





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www.target.com

## Example 2: Configuration: Network

Connections with others create value.

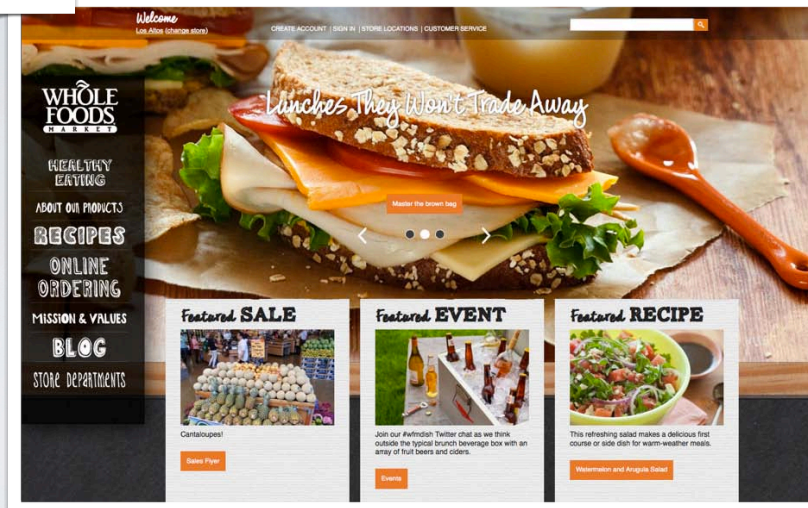
Target works with renowned external designers to differentiate itself, e.g. Philippe Starck (home goods), Deborah Adler (ClearRx prescription bottles).

Nike + iPod.

P&G Connect + Develop.

## Structure

ALIGNMENT OF YOUR TALENT AND ASSETS.



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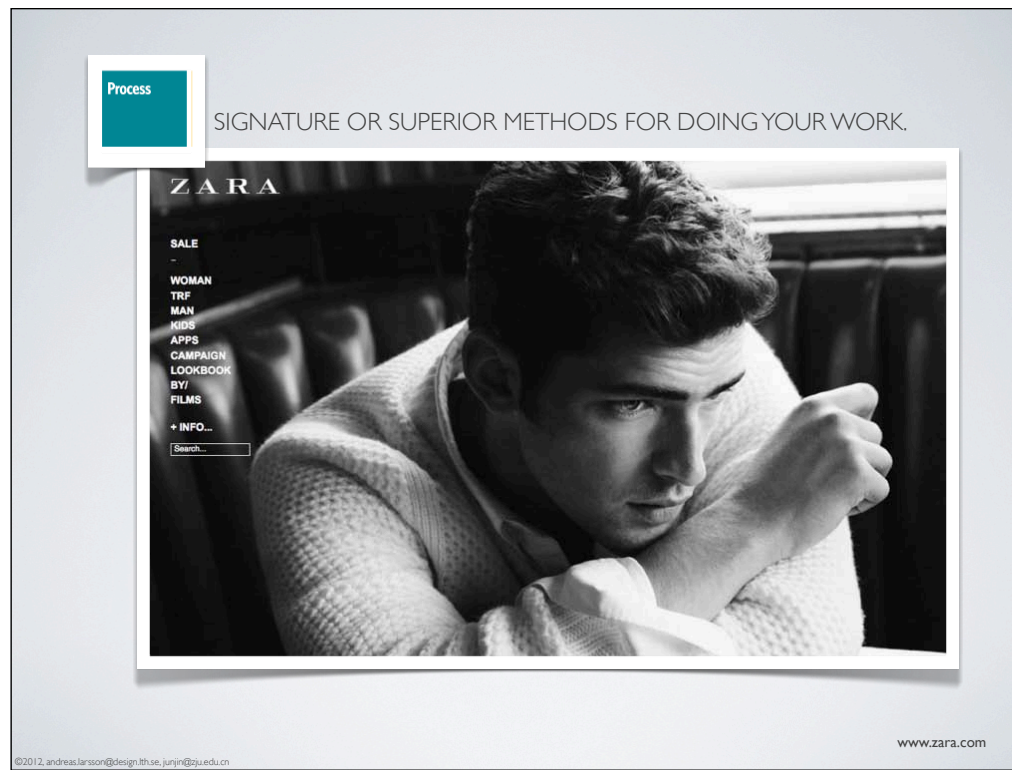
www.wholefoods.com

### Example 3: Configuration: Structure

Alignment of your talent and assets.

Whole Foods has built a robust feedback system for internal teams, e.g. produce departments are linked across the country to share best practices.

Google (keeping teams small, i.e. 3-6 people).



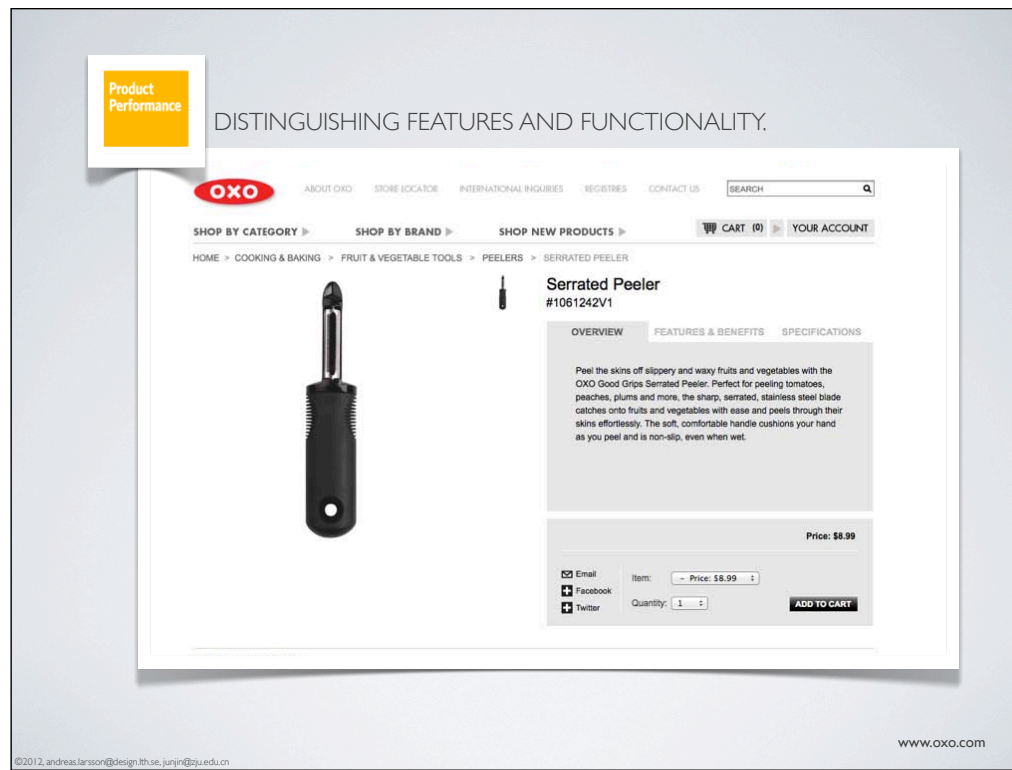
#### Example 4: Configuration: Process

Signature or superior methods for doing your work.

Zara's "fast fashion" strategy moves its clothing from sketch to shelf in record time (15 days), whereas other clothing brands might not respond until the next "season".

Toyota production system (continuous improvements).

Norwegian Air Shuttle (reducing airport turnaround times).



Example 5: Offering: Product Performance

Distinguishing features and functionality.

OXO Good Grips products cost a premium but the company's "universal design" has a loyal following.

Intel processors.

Dyson bagless vacuum cleaners.

Product System

COMPLEMENTARY PRODUCTS AND SERVICES.



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www.scion.com

Example 6: Offering: Product System

Complementary products and services.

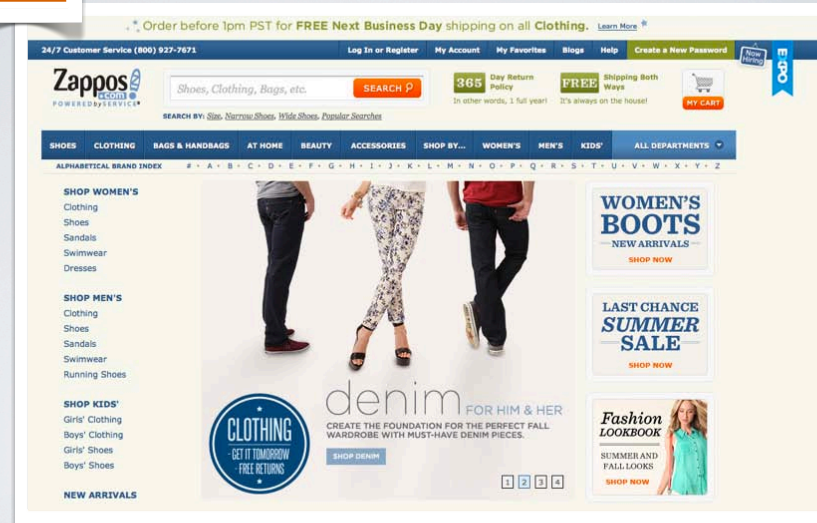
Scion thinks beyond the car to cater to drivers' lifestyle needs, through various accessories for customization.

Rolls-Royce TotalCare.

BMW ConnectedDrive.

Service

SUPPORT AND ENHANCEMENTS THAT SURROUND YOUR OFFERINGS.



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www.zappos.com

Example 7: Experience: Service

Support and enhancements that surround your offerings.

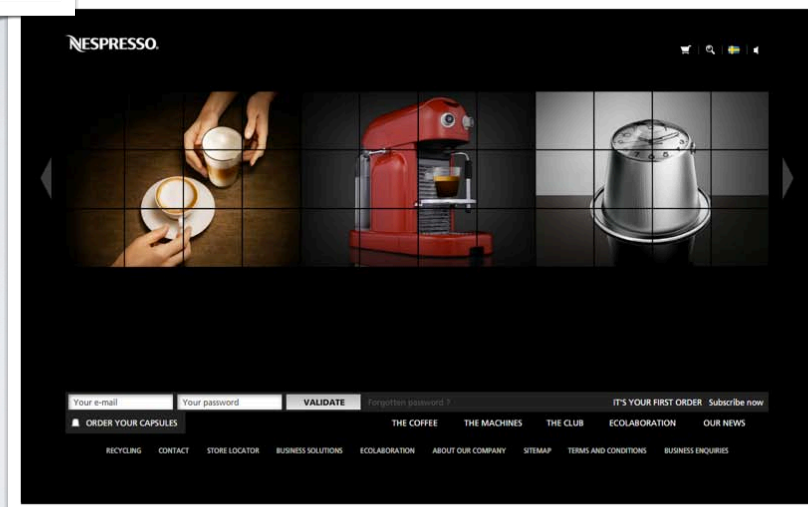
“Deliver WOW through service” is Zappos’ #1 internal core value.

FedEx

Amazon Prime

Channel

HOW YOUR OFFERINGS ARE DELIVERED TO CUSTOMERS AND USERS.



www.nespresso.com

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## Example 8: Experience: Channel

How your offerings are delivered to customers and users.

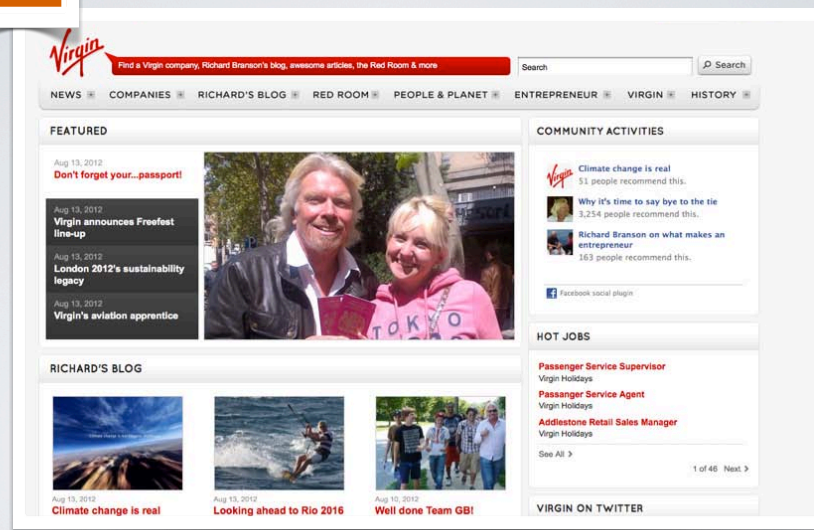
Nespresso locks in customers with its useful members' only club.

Niketown (product showcase and training facilities).

Apple Store.

Brand

REPRESENTATION OF YOUR OFFERINGS AND BUSINESS.



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www.virgin.com

Example 9: Experience: Brand

Representation of your offerings and business.

Virgin extends its brand into sectors ranging from soft drinks to space travel.

Volvo Cars

Apple





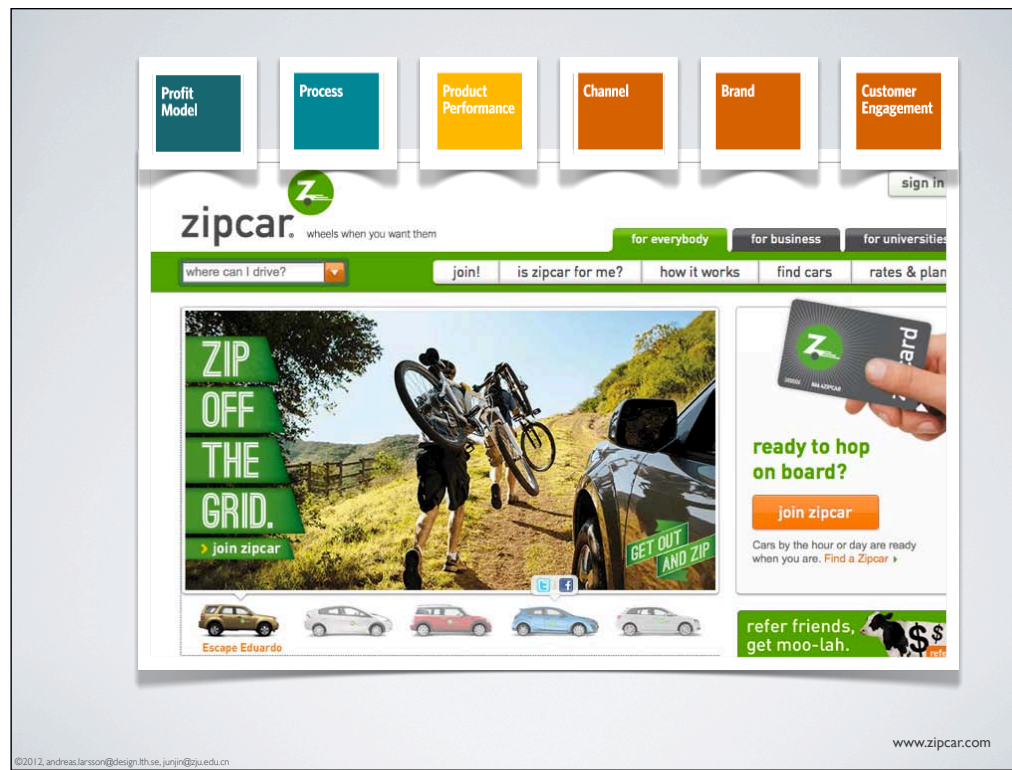
## Example 10: Experience: Customer Engagement

Distinctive interactions you foster.

Wii's experience draws more from the interactions in the room than on the screen.

Lexus (Vehicle delivery specialists to introduce customers to their new car).

Starbucks (Home away from home).



## Example 11: Zipcar

Profit Model (cars at an hourly rate, membership model, etc.)

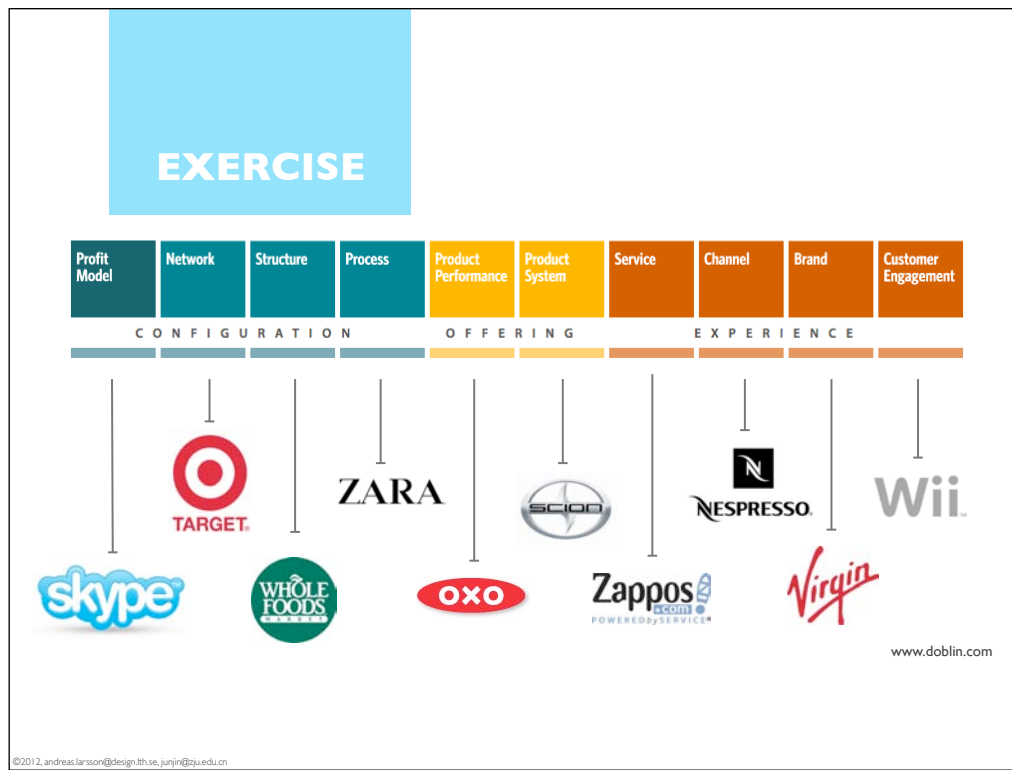
Process (fleet management, etc.)

Product Performance (bundling gas, insurance, parking into one price, etc.)

Channel (mobile, ZipCard, web, etc.)

Brand (sustainability, responsibility, etc.)

Customer Engagement (naming of cars, localization of preferences, etc.)

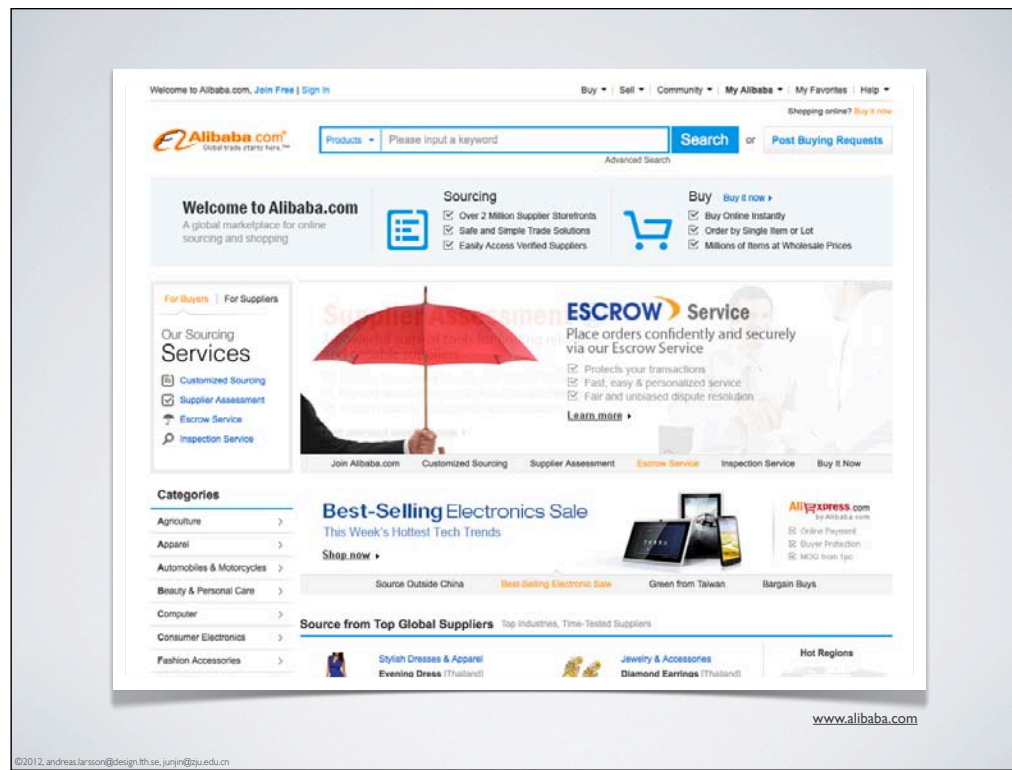


Students (4–5 in each group) choose a couple of products and services that they find exciting and discuss which types of innovation they cover.

Follow up with a moderated all-class discussion.



Tencent is the largest Internet Company in China and 4th largest in the world by market cap, after Google, Amazon and Facebook  
QQ is 2nd largest social network in the World after Facebook  
750+ million active QQ accounts as of May 2012



Alibaba International Business Operations aims at creating the go-to English-language platform for cross-border trade and purchases between any two countries as well as helping small businesses worldwide expand to overseas markets. As of March 31, 2012, Alibaba.com had 27.3 million registered users from more than 240 countries and regions and showcased 2.4 million supplier storefronts.

BYD Build Your Dreams Find a Dealer | Contact Us | Facebook | Twitter | LinkedIn | YouTube

EV DM Electric Bus Charger BYD Green Technology We Are BYD

## Electric BUS



**GUIDE MENU**

- Electric Bus Introduction
- Features & Performance
- Easy Charging
- Healthy Benefits
- Comfort & Safety
- Economy



### ELECTRIC BUS INTRODUCTION

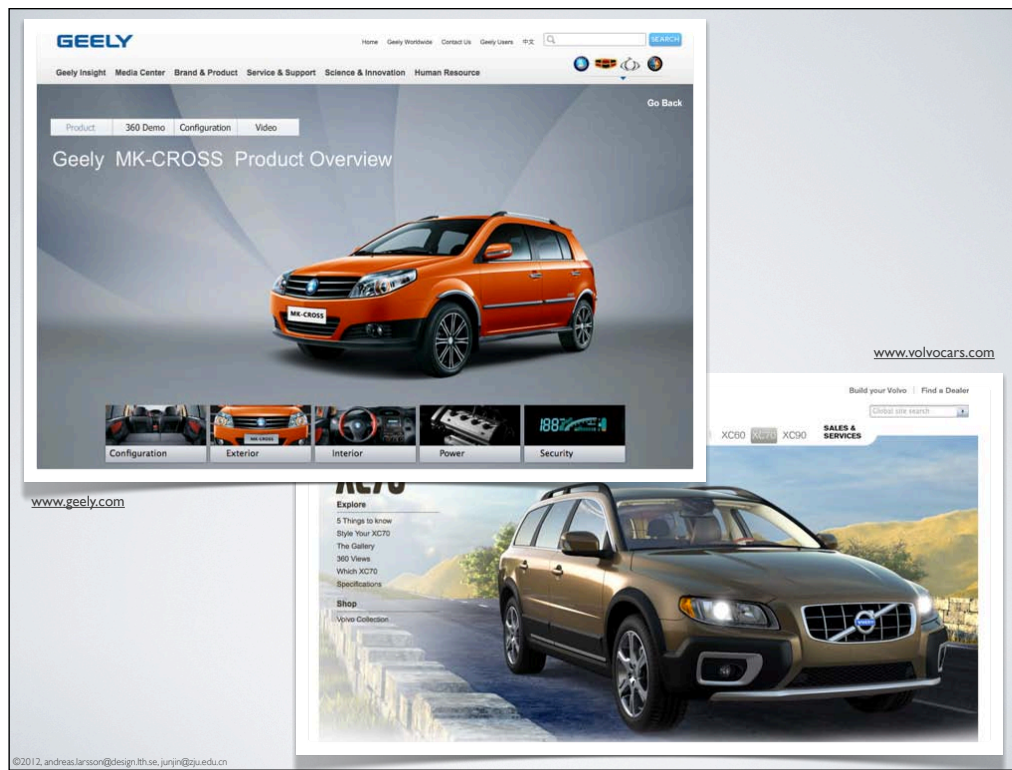
The Electric Bus is another masterpiece of BYD's in the field of electrified transportation. The Electric Bus is 12 meters long, and the whole design is oriented around ease of customer transport. The specially designed in-wheel drive and the electronically controlled air suspension makes the Electric Bus with low-floor and ample space to allow easy passenger loading and unloading. The front windscreen occupies 2/3 of the front face of the bus for maximum viewing and safety. The silver body with black side windows gives the Electric Bus an elegant exterior, while the interior boasts exquisite adjustable leather seating for driver plus high-quality red and black leather seats for passengers. Carefully engineered sound insulation for a quieter cabin experience.

As BYD's first pure electric bus, the Electric Bus employs many advanced technologies developed by BYD itself. For example, The "Fe" battery, used on Electric Bus is non-polluting, and the chemical materials contained in the battery can be recycled. The solar cells installed on top of Electric Bus can supply more power to supplement the Fe battery. Also, the trip computer information to the driver to make the driver clear about every working condition while driving.

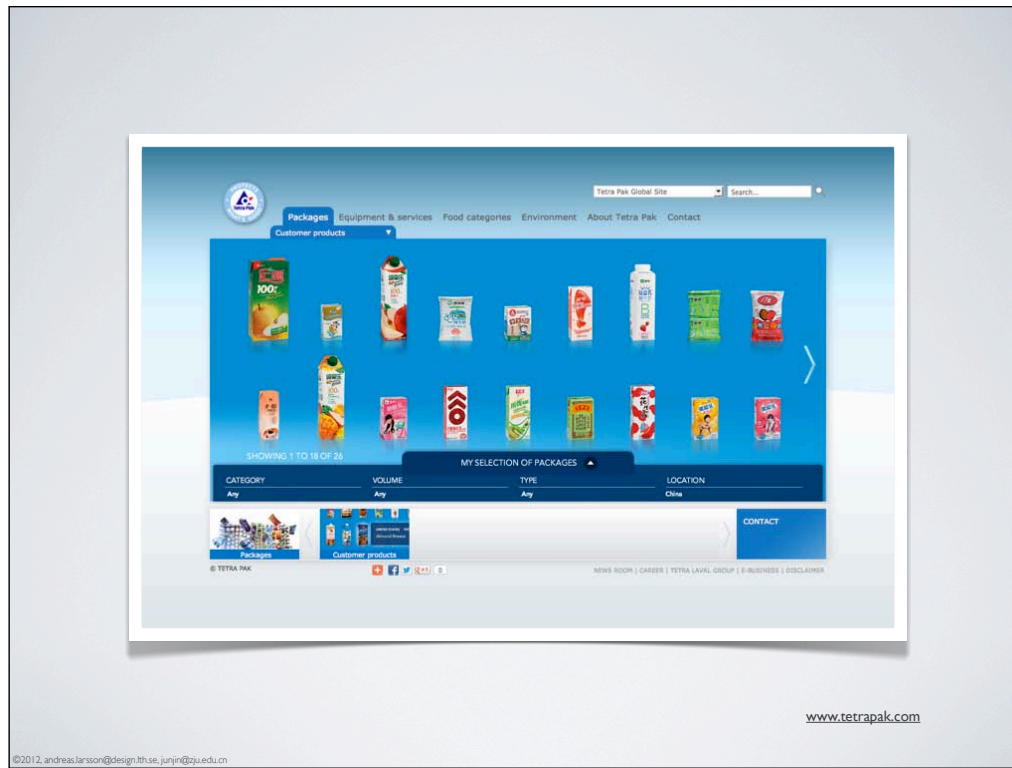
www.byd.com

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Founded in the February 1995, BYD Co Ltd began as a rechargeable-battery factory competing in the Chinese market against Japanese imports. 130,000 employees in 2008. Has expanded to gasoline and electric cars and buses, battery-powered bicycles, etc.



Geely (officially Zhejiang Geely Holding Group) is a Chinese automotive manufacturing company headquartered in Hangzhou, China. In addition to passenger cars, it also makes motorcycles. It sells its vehicles under four brand names: Emgrand, Englon, Geely and Gleagle. Geely also owns Volvo Cars, which it acquired from Ford for US\$1.8 billion in 2010.

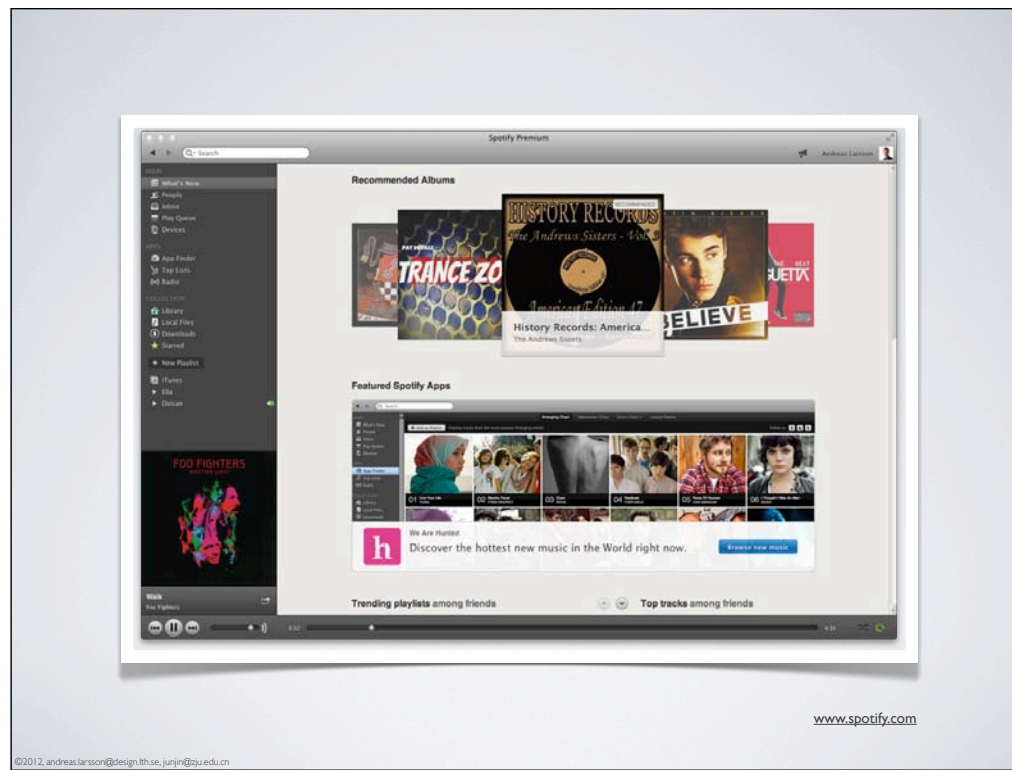


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[www.tetrapak.com](http://www.tetrapak.com)

Tetra Pak is a multinational food packaging and processing company of Swedish origin with head offices in Lund, Sweden and Lausanne, Switzerland. The company offers packaging solutions, filling machines and processing solutions for dairy, beverages, cheese, ice-cream and prepared food, including distribution tools like accumulators, cap applicators, conveyors, crate packers, film wrappers, line controllers and straw applicators.





Spotify is a Swedish music streaming service offering digitally restricted streaming of selected music from a range of major and independent record labels, including Sony, EMI, Warner Music Group, and Universal. Launched in October 2008 by Swedish startup Spotify AB, the service had approximately 15 million by August 2012, 4 million of them paying monthly.



AB Electrolux (commonly known as Electrolux) is a Swedish multinational home appliance manufacturer headquartered in Stockholm, Sweden. It is the world's second-largest home appliance maker by revenue (after Whirlpool). Its products sell under a variety of brand names including its own and are primarily major appliances and vacuum cleaners.



**Sustaining innovation:** Incremental or radical improvements in products, services, processes and business models to better meet the needs of best customers and enable a firm to stay competitive.

**Disruptive innovation:** Simple, affordable and convenient improvements in products, services, processes and business models that evolve from not good enough, to good enough, and then to preferred in terms of meeting customer needs and eventually dominating a market.

SUSTAINING INNOVATION AT P&G



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

E.g. Gillette Fusion (improving performance with a fifth razor blade, lubrication strips, etc.)

DISRUPTIVE INNOVATION AT P&G



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www.crest.com

E.g. Crest Whitestrips (targeting non-consumers, those who find it too inconvenient or expensive to go to the dentist for teeth whitening.)

AUDI Q7 2008



AUDI Q7 2011



SUSTAINING INNOVATION AT AUDI

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

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E.g. an automotive facelift with a new design of bumpers, headlights, etc.



DISRUPTIVE INNOVATION AT TATA

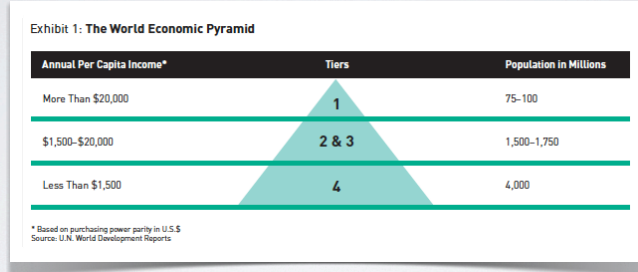
[www.tatanano.com](http://www.tatanano.com)

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E.g. cutting costs to tap a new market (Tata Nano, priced at around 3,000 USD).

In 1990, the price of the VW Beetle from Mexican factories was \$5,300, equivalent to \$9,428 today. The Ford Model T's initial price was about \$850, equivalent to \$21,987 today.

# INNOVATION FOR EMERGING MARKETS (BOP)



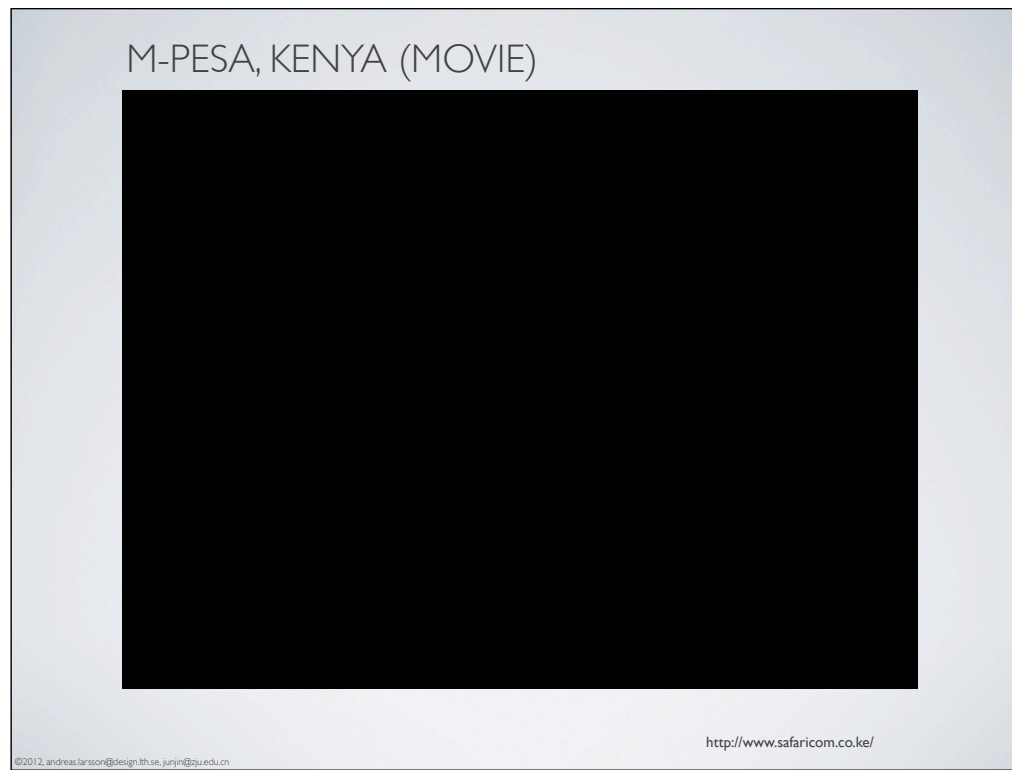
Doing well by doing good.

Prahalad & Hart, 2002

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Giving students an example of a huge, untapped market, where there are lots of non-consumers today.





Kenya: M-Pesa (using mobile phones to transfer money without bank accounts).

In March 2007, the leading cell phone company in Kenya, Safaricom, formalized this procedure with the launch of M-PESA, an SMS-based money transfer system that allows individuals to deposit, send, and withdraw funds using their cell phone. M-PESA has grown rapidly, currently reaching approximately 38 percent of Kenya's adult population, and is widely viewed as a success story to be emulated across the developing world.

Microloans. Invented in Bangladesh (Grameen Bank).

## IDEI, INDIA (MOVIE)



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<http://www.ashden.org/winners/IDEI09>

### India: IDEI treadle pumps

The demand for better irrigation in India is huge. 98 million farmers are smallholders and most only grow one crop a year, watered by the monsoon. In response IDEI has set up a distribution system for their low-cost (US\$30–US\$42) treadle pump which has revolutionised capacity. Farmers can now grow two or even three crops a year. Incomes in some areas have doubled. In total by 2009 over 750,000 treadle pumps had been installed bringing benefits to nearly four million people. This is change on a huge, yet affordable scale.

Innovation does not always mean “new to the world”, it means “new to the user”.

## REVERSE INNOVATION AT GE HEALTHCARE



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<https://vscan.gehealthcare.com/en-emea/gallery/a-quick-look-at-vscan-europe>

Reverse Innovation: China/India -> US

E.g. GE Healthcare Vscan

In the US, the ultrasound machine looks like an appliance. It's huge, it's bulky, it costs anywhere from \$100,000 to \$350,000, and it can do very complicated applications. But 60 per cent of India, for example, consists of poor rural areas where there are no hospitals. So, patients can't go to the hospital; the hospital has to come to them. That means you can't use those bulky machines; they must be portable. And again, customer affordability is different as well, so the charges people pay in the US for an ultrasound would be unthinkable in rural India.

GE created a portable low-cost ultrasound machine, somewhere in the neighbourhood of \$15,000, a fraction of the cost of the bulky US machines. And that has opened up a huge market in China and India. Now that same portable ultrasound machine is now coming into the US and creating new applications.

## REVERSE INNOVATION AT GATORADE



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www.gatorade.com

Reverse Innovation: India -> US

E.g. Gatorade

The inspiration for Gatorade came from Bangladesh. There was an outbreak of cholera in Bangladesh in the 1960s (the country used to be called East Pakistan in those days). Cholera causes diarrhoea resulting in severe dehydration.

The Western doctors who went to help the victims were surprised that locals were giving a drink containing carbohydrates to treat diarrhoea. The concoction included ingredients such as coconut water, carrot juice, rice water, carob flour, and dehydrated bananas.

At the time, Western medical opinion held that putting carbohydrates in the stomachs of patients suffering from diarrhoea would cause cholera bacteria to multiply and the disease to worsen. Yet, the local treatment worked.

The success of the treatment was covered in the British medical journal *Lancet*, and it made its way to a doctor at the University of Florida. The doctor saw a common problem in the need for rapid re-hydration. If such a treatment worked well for cholera patients, it would surely work for healthy football players. Around that time, the University of Florida athletics department was looking for ways to get their football players quickly rehydrated. The research labs of the University of Florida came up with a concoction of water, glucose, sodium, potassium, and flavorings. The tasty cocktail sped the replenishment of the electrolytes and carbohydrates (just as was the case with diarrhoea patients in Bangladesh) that players lost through sweat and exertion. Gatorade took its name from the Florida Gators, the football team of the University of Florida.

## E-BIKES/SCOOTERS



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...

E-bike, China -> France, Monaco

# KEY TAKEAWAYS

1. INNOVATION: SUCCESSFUL INTRODUCTION OF SOMETHING NEW
2. DIFFERENT TYPES OF INNOVATION
3. DIFFERENT INNOVATION AMBITIONS
4. DO NOT NEGLECT THE BOTTOM OF THE PYRAMID

# KEY READINGS

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