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Disruptive Innovation and Big-Bang Disruption

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What is a disruption?

- A disruption happens when an established company, well respected and well positioned on the market (**incumbent**), is beaten (from a competitive standpoint) by a **newcomer**, usually a new venture, which takes the market leadership.

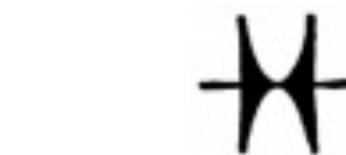


What is a disruption?

- How is it possible that a large, established (and normally financially strong) company is beaten by a smaller, unknown company new to the market? Shouldn't have the top management and the line management of the organizational functions (marketing, R&D,...) foreseen what was going on, anticipated the newcomer and prevented this change from happening?

**Let's start with some
case histories**

Case histories



S.S.I.H.

(Société Suisse puor l'Industrie
Horologé - SA)



Case history: the hearing aid industry



The early successes of Oticon

From 1958 to 1985 Oticon, a Danish hearing-aid company, **dominated its market** in the USA and Europe

The firm had a tradition of great technical and manufacturing excellence. Its **behind-the-ear (BTE) hearing aid** was both technologically sophisticated and reasonably priced

Over time, Oticon had acquired specific characteristics:

- Emphasis on New Product Development (NPD) focused on technical superiority (under the belief that a technically superior product would sell itself)
- Technologists spent more time talking with each other than interacting with their diverse and increasingly global customers
- Managers were good at improving their products incrementally, but their cultural arrogance and insularity blinded them to radical technologies

Case history: the hearing aid industry



A radical innovation by Starkey

In 1985 Starkey, a small US-based player, reconfigured BTE components to produce an **in-the-ear (ITE) hearing aid**.

This new product sacrificed sound quality a bit, but it was **smaller and less intrusive**.

The market for the ITE aid was **fashion-oriented**, rather than hospital- or physician-oriented.

Oticon reacted defensively and actively **resisted ITE products**. They felt that the new products were technically inferior and could not be mass produced.

The established processes, structures and culture prevented Oticon from taking seriously an innovation that **violated their assumptions about the hearing-aid market**.

The outcome of Oticon's decision

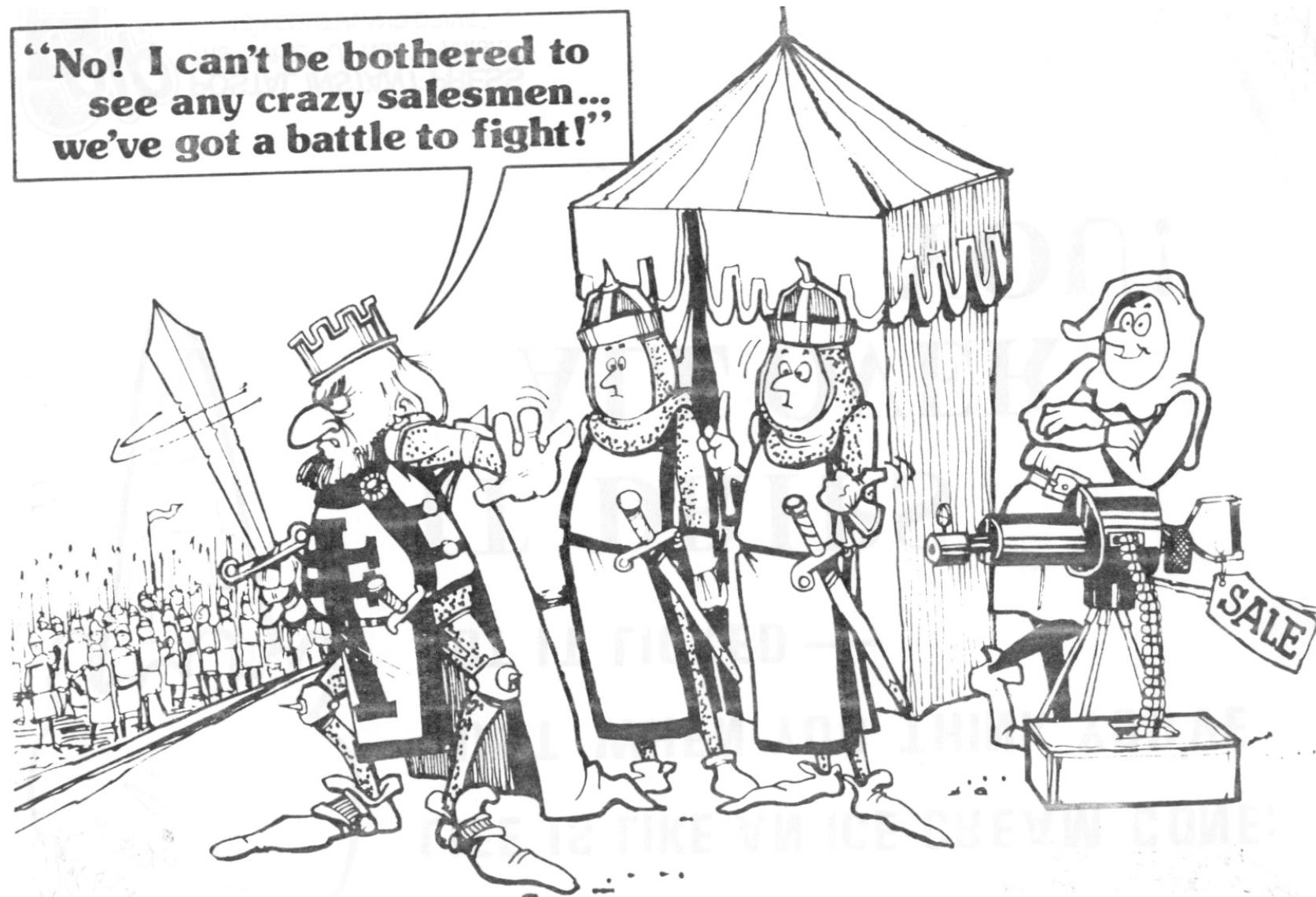
The market for ITE hearing aids boomed. By 1986, 80% of the American market shifted to ITE products.

Oticon historical prosperity evaporated. In the face of dramatic loss in market share (from 15 % to 9 % between 1985 and 1986) and profits, a new management team was brought in.

This team initiated a revolutionary change in the structure and culture of the company, that brought fruit:

By 1995, Oticon's profits were up to 10 times from their 1990 level
The firm had developed a breakthrough product (digital hearing aids),
that would become over the years a dominant solution in the market

Case history: what happened to Oticon?



Case history: RCA and the vacuum tube technology



RCA



The transistor business in RCA

The transistors were invented at Bell Labs (AT&T) in 1947.

The first transistors had not enough power to be used in radios, TVs, telecommunication equipment, etc.

RCA got the license to use transistors and started to invest heavily to empower them and made them usable for its own products.

Sony commercialised the first transistor-based pocket radios in 1955. Their sound quality was much lower than common radios. Customers were teenagers.

Case history: Sony and the transistor technology

SONY



Disputes about the transistor business in RCA

Within RCA, there were disputes about **whether the company should enter the transistor business** and cannibalize their profitable tube business ...

The transistor business was new and the **profits uncertain**... but it was too risky not to pursue the new technology

How to organise the transistor business within the company?
Should the solid state division report to the head of the electronics group, a person steeped in vacuum tube expertise?

The transistor business in RCA

Afterwards, Sony started to commercialise black-and-white portable TVs, sold to people who do not have room available for floor-standing TVs (product segment where RCA was largely the dominant company)

Sony was not seen as a threat

When transistor achieved power enough to be used in higher quality appliances...

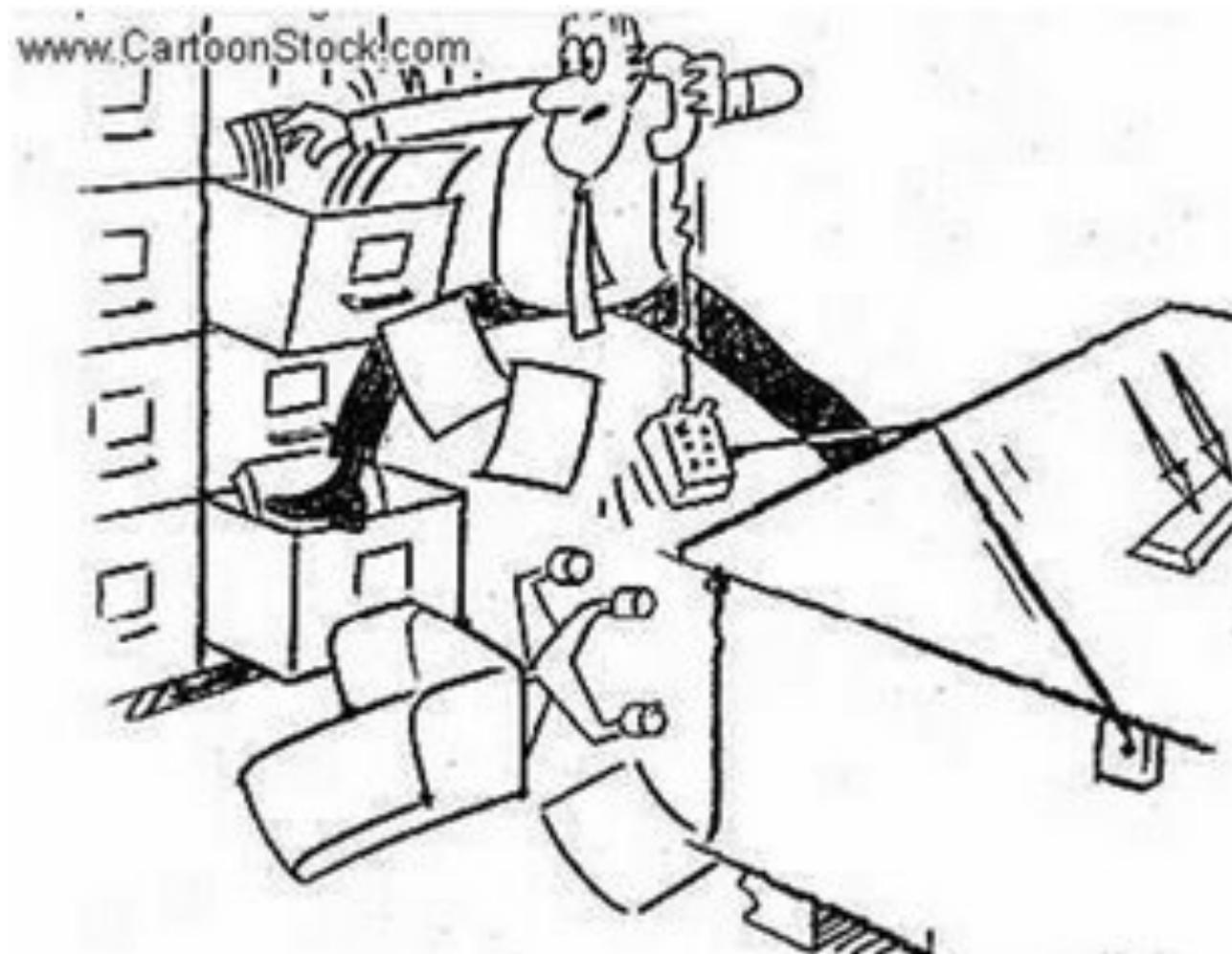
The ultimate decision of RCA

With its great wealth of marketing, financial, and technological resources, **RCA decided to enter the business ...**

RCA management recognized the **problems of trying to play two different technological games**, but was unable to solve them.

Without a clear strategy and the cultural differences required to compete in both markets, **RCA failed**.

Case history: what happened to RCA?



Seiko enters the quartz watch business

Hattori-Seiko was the dominant Japanese watch producer in the 1960s, although a small player in global markets, dominated by Swiss firms (e.g., S.S.H.I. and Ausag)

Driven by the aspiration of becoming a global leader in the watch business, Seiko transformed itself from being merely a mechanical watch firm into **both a quartz and a mechanical watch company**

This move into low-cost, high-quality watches required a **deep and well-managed wholesale change within Seiko**

The failure of Swiss watch firms

At the beginning of the 1970s, quartz movement watches replaced mechanical watches

Even though Swiss firms had invented both the quartz and tuning fork movements, at that point in time they moved to reinvest in mechanical watches

As Seiko and other Japanese firms prospered, **the Swiss watch industry drastically suffered**

- By 1980, SSIH, the largest Swiss watch firm, was **less than half the size of Seiko**
- Eventually, **SSIH and Ausag**, the two largest Swiss firms, **went bankrupt**

The Swiss watch industry

Year	No. Of Firms	No. Of Employees
1955	2,300	70,000
1965	1,900	84,000
1970	1,600	89,000
1975	1,200	63,000
1980	900	47,000
1985	600	32,000

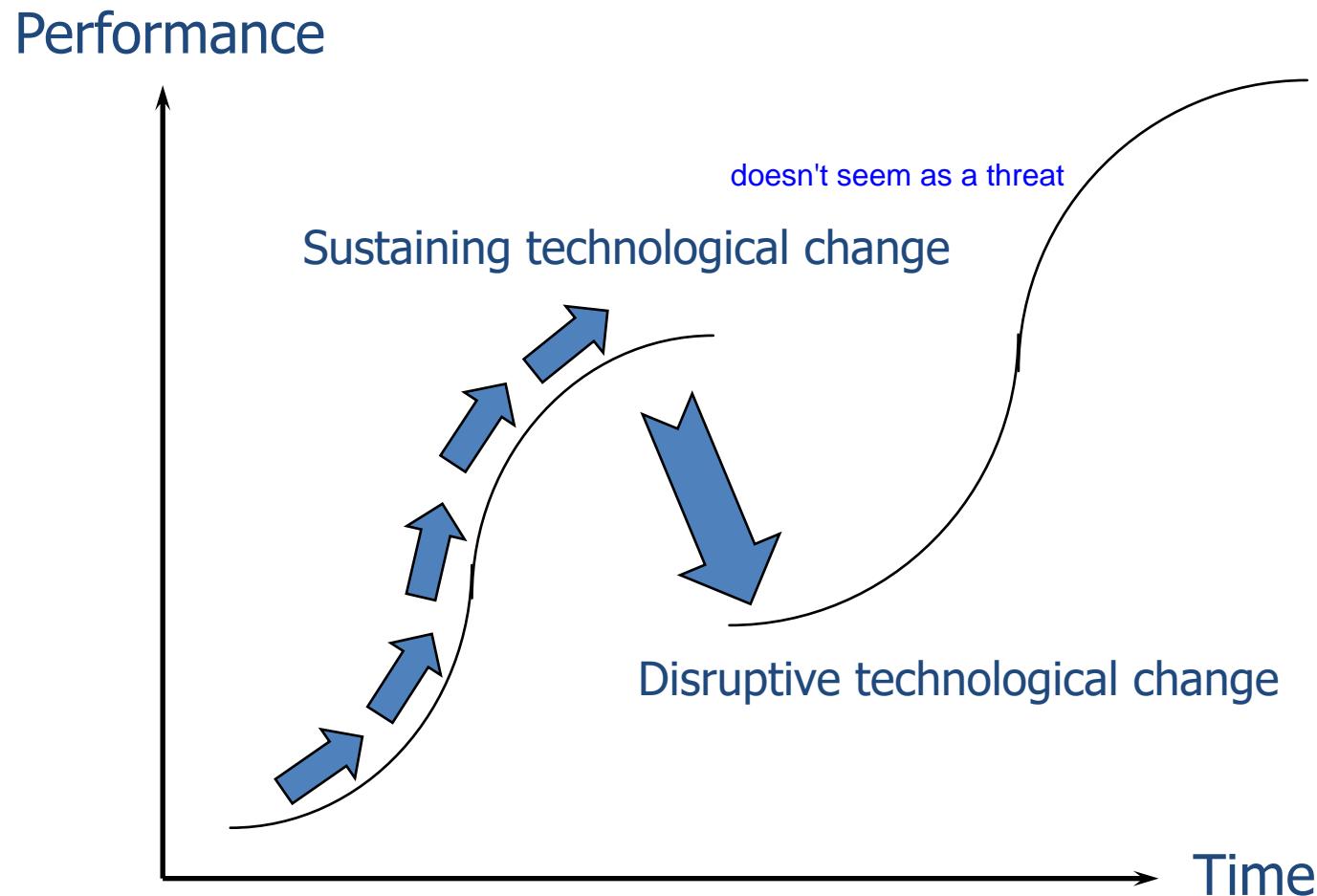
Lessons learnt

- Technology matters ...
- It is not just “innovation” (incumbent firms are innovative as well) ... it is an innovation that disrupts mainstream technologies
core business is beaten.
- Disruptive technologies are hard to intercept as they appear as significantly weaker than the established one at the very beginning (they usually start “cheap and simple”)

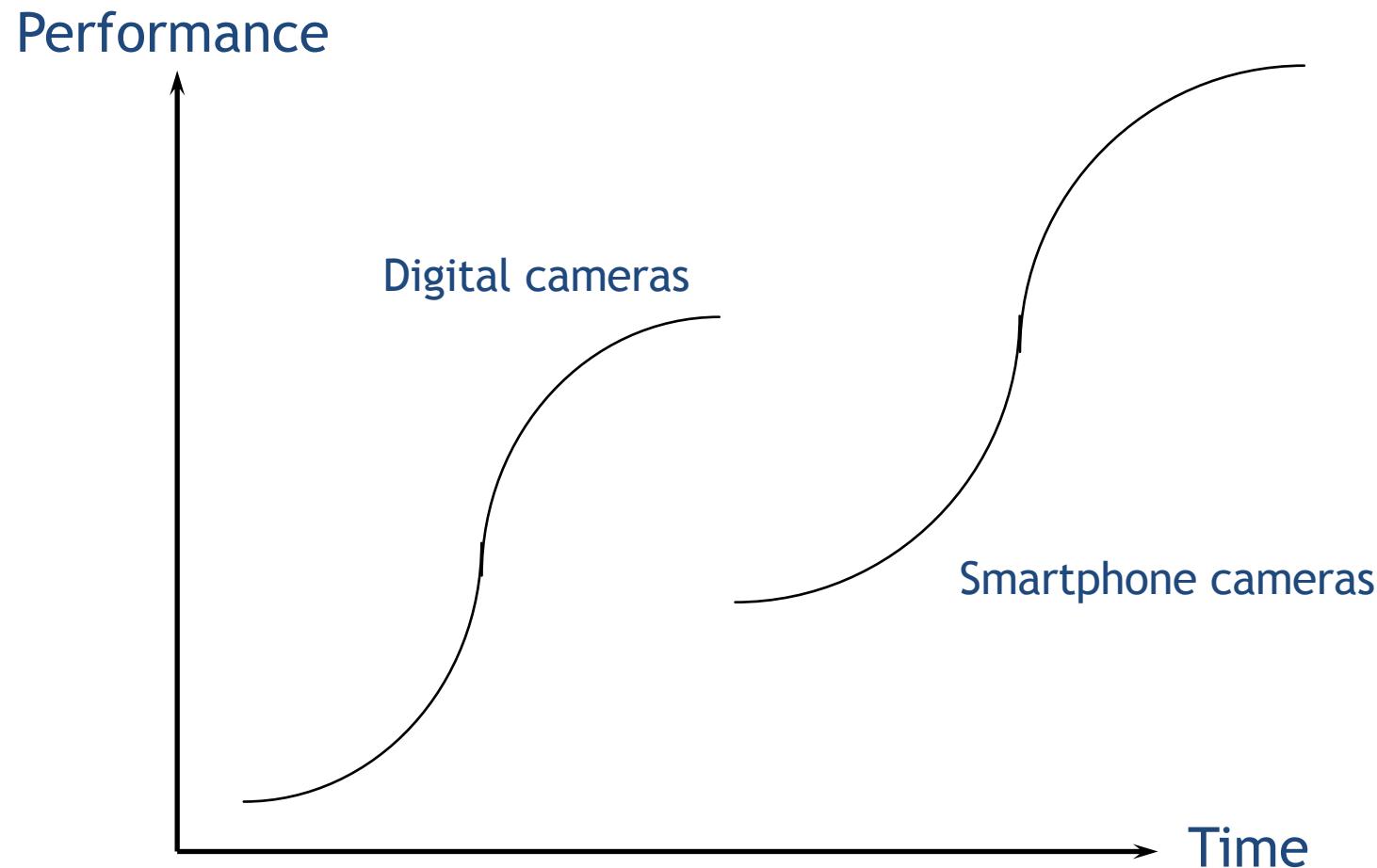
start in niche market with weaker product !!! (lower performance)
so new product seems unattractive to established company ... so they don't see it as a threat.
and new product become improved as users give feedbacks

Understanding disruption coming from technological discontinuities

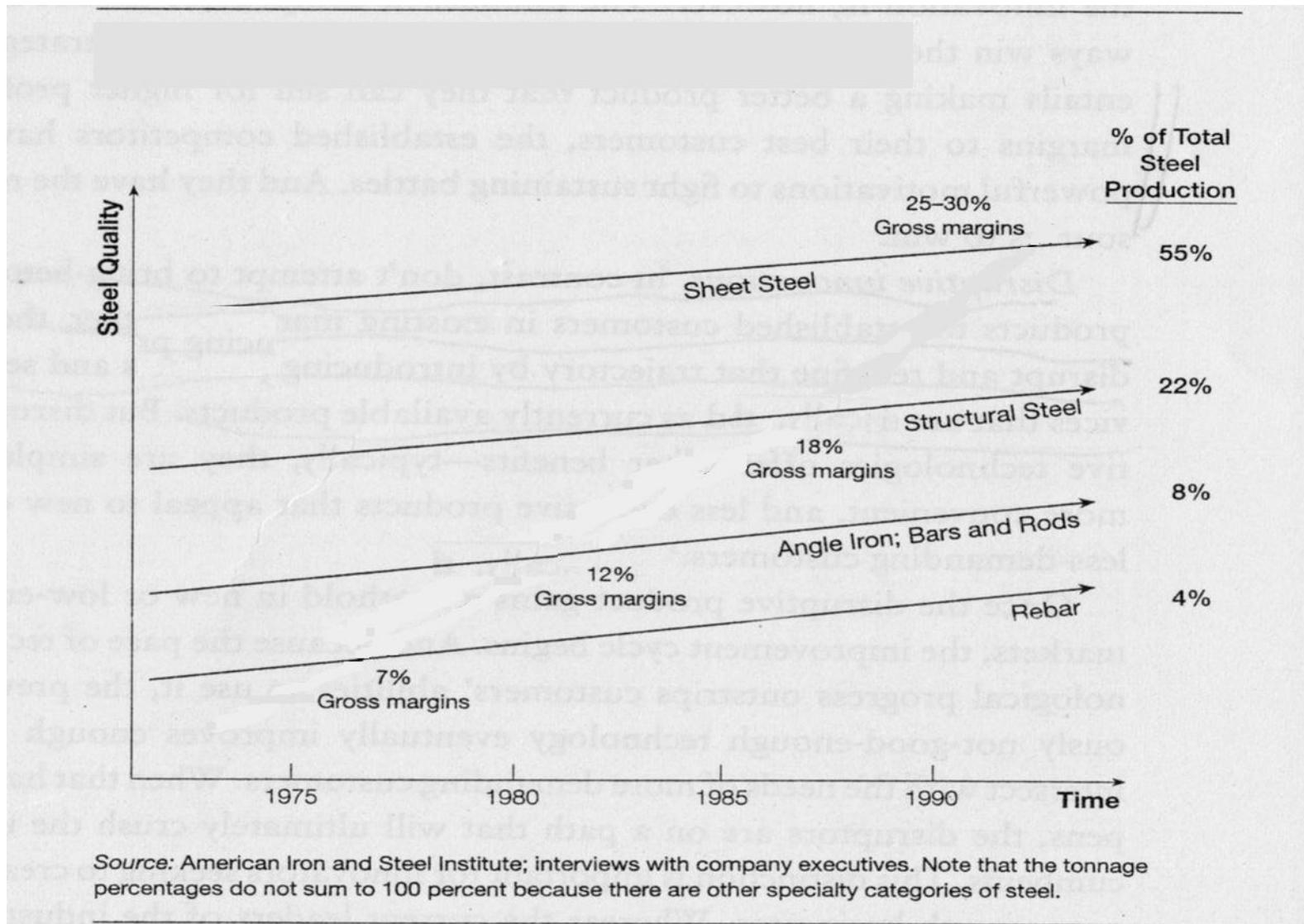
Sustaining vs. disruptive technological change



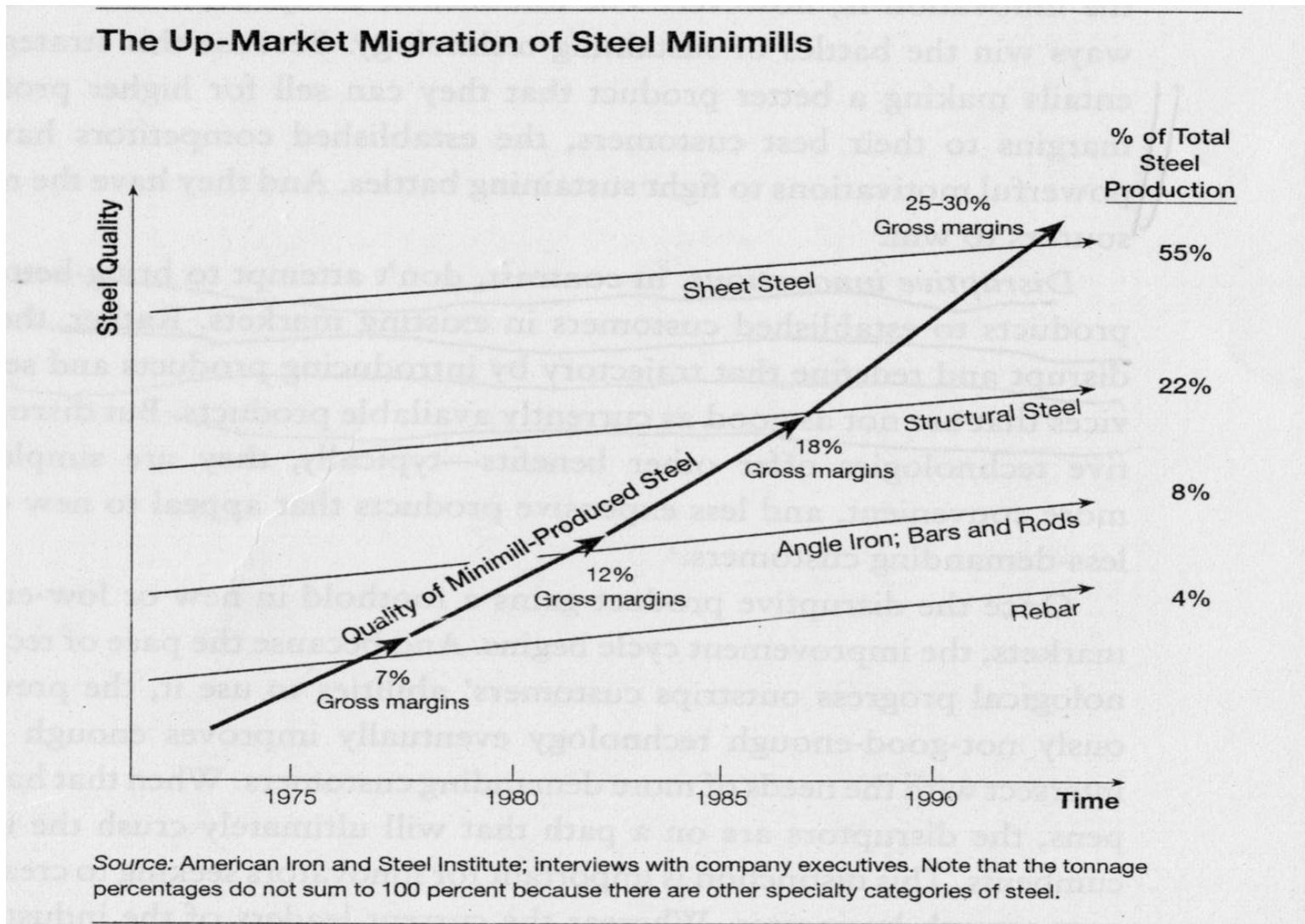
Case history: the photovoltaic industry



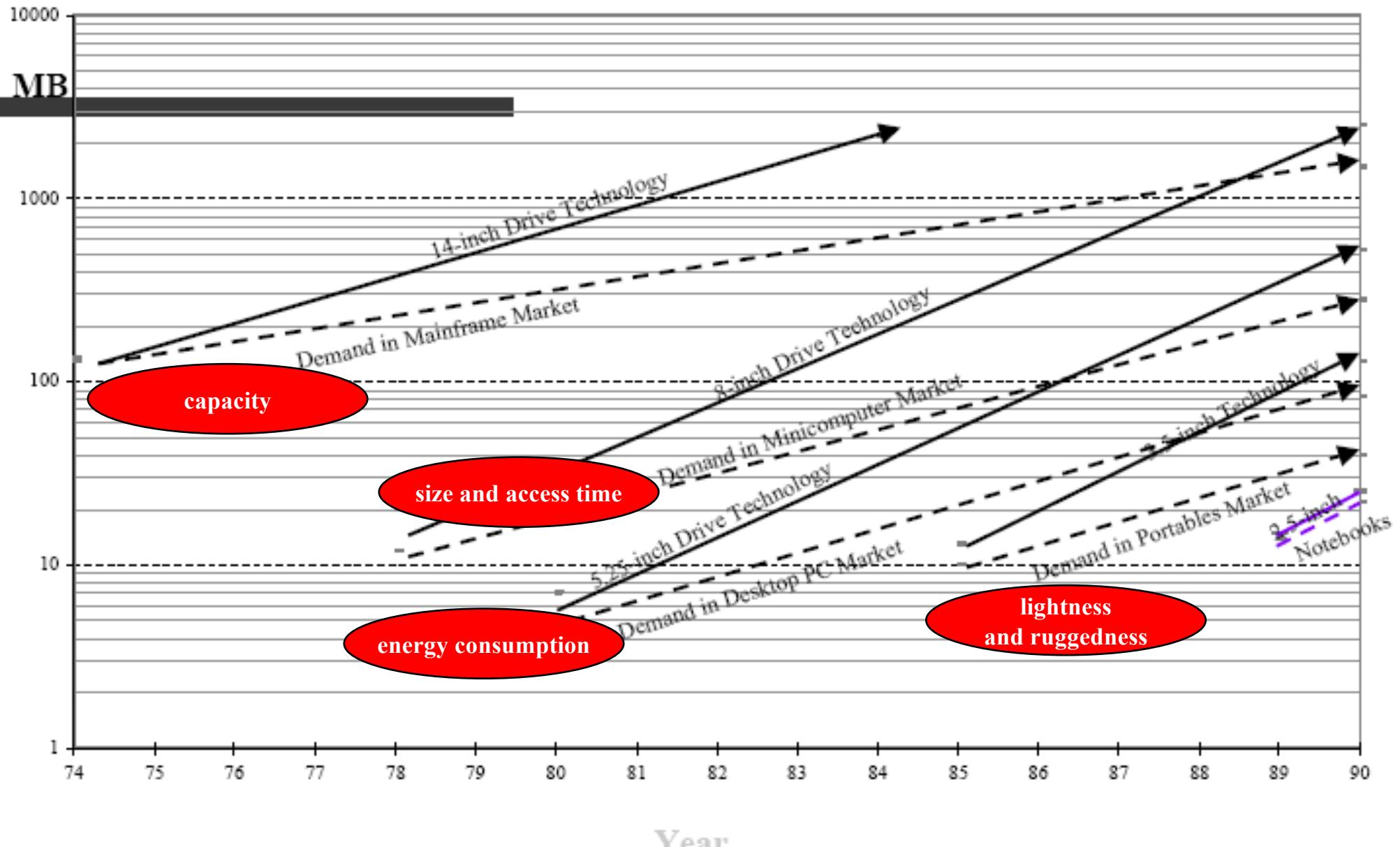
Case history: disruptive technologies in the US steel industry



Case history: disruptive technologies in the US steel industry



Case history: disruptive technologies in the disk drive industry

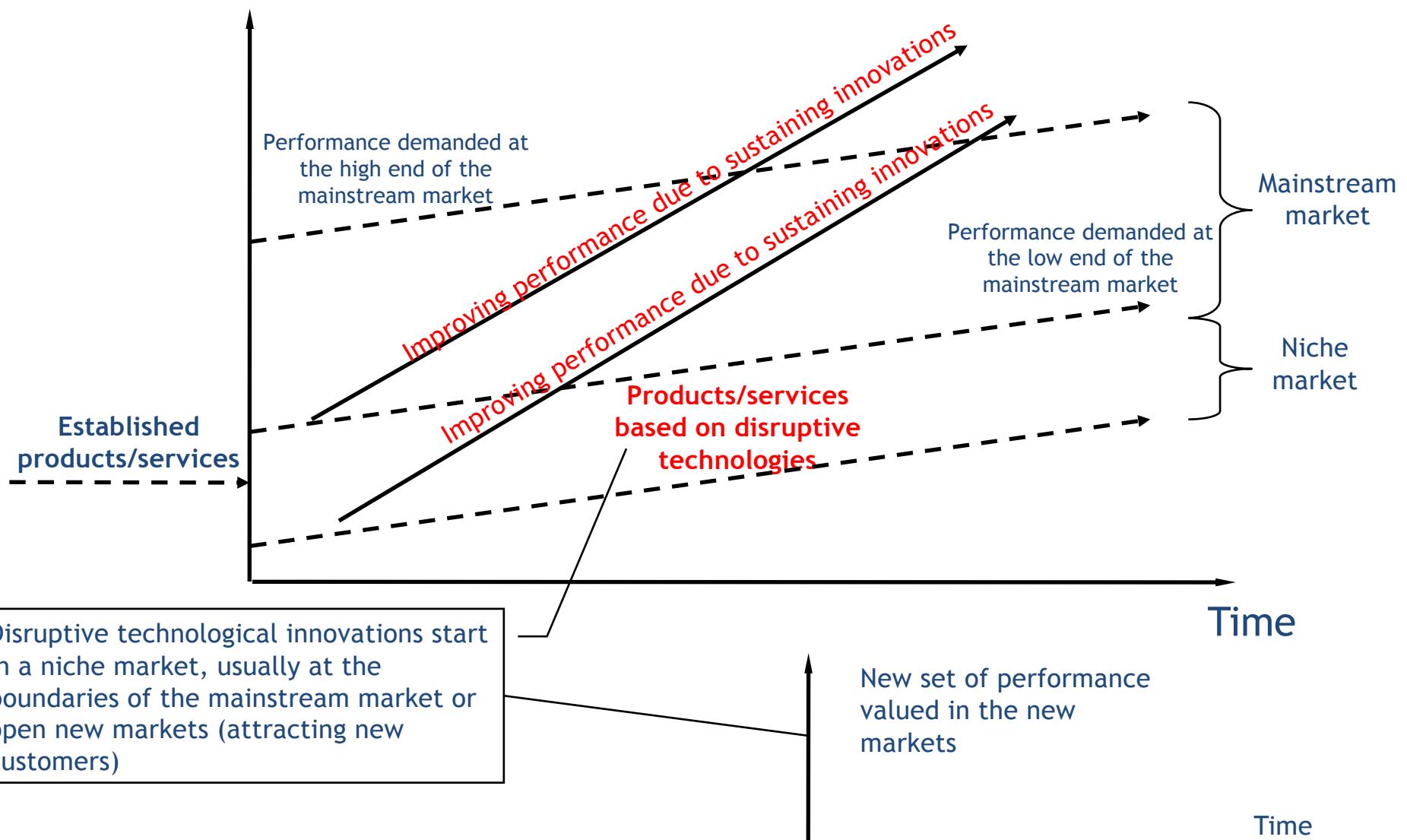


The disk drive industry

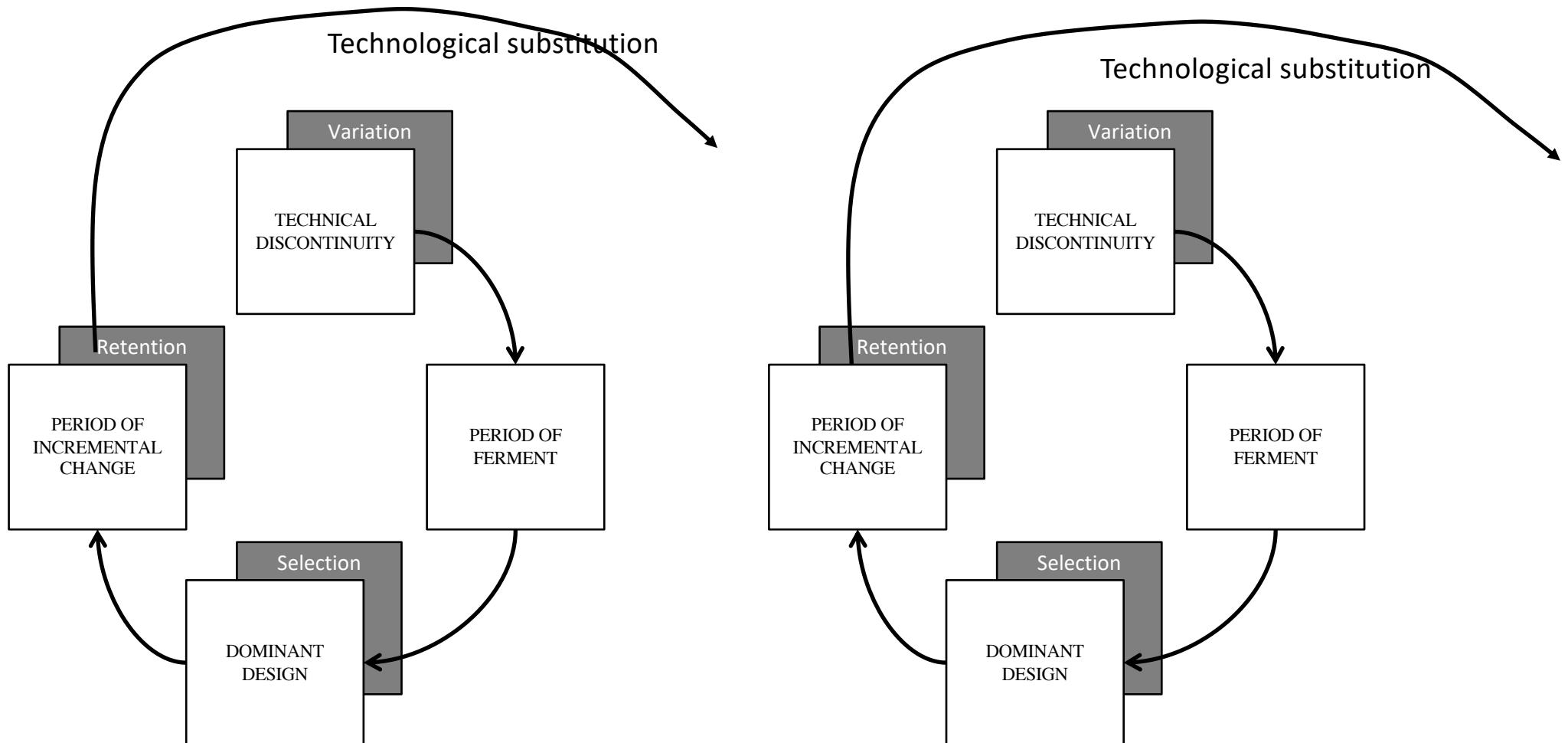
Product Generation:	Leading Firm:
14-inch (1973)	Control Data
8-inch (1978)	Priam, Shugart
5.25-inch (1981)	Seagate, Miniscribe
3.5-inch (1986)	Conner, Quantum
2.5-inch (1990)	Conner, Quantum
1.8-inch (1994)	Integral

The threat of disruptive technologies

Performance valued in
mainstream market



Technology cycles



As a result, technological change in a product class is characterised by **long periods of incremental change punctuated by discontinuities** (radical innovations)

Lessons learnt from the cases: strategic warnings

Established companies believe that **investing aggressively in disruptive technologies is not a rational financial decision:**

1. Disruptive products are often **simpler and cheaper**, they generally promise **lower margins**, not greater profits
2. Disruptive products are first commercialized in emerging and insignificant markets
3. **Established firms' most profitable customers** generally don't want products based on **disruptive technologies**
4. The start-ups or new-comers that aggressively promote disruptive products **do not appear as a real challenge** to their market position

**Is it possible to “manage”
disruptions?**

Ingredients for success

- 1. Spot the disruptive technology**
- 2. Develop your market insight and conduct directed research**
- 3. Adapt your organization and business model to the disruptive technology**
- 4. Invest in disruptive technologies**

Spot the disruptive technology

- Build **networking** and **scouting** capabilities
- Develop an appropriate **culture** in your organization

Build networking and scouting capabilities

"For each of the 7,500 P&G's researchers, there are elsewhere in the world about 200 scientists or technicians equally talented" (A.G. Lafley)

"99.99996% of world population live outside DSM! Networks needed!" (R. Kirschbaum)

"Ninety-nine percent of everything exciting that happens will happen outside your own research labs" (T. McKillop)

"Not all the smart people work for you!" (H. Chesbrough)

Not invented here is a cultural problem
not accepting things from out side of the company

Case history: Procter & Gamble

From Harvard Business Review (2006):

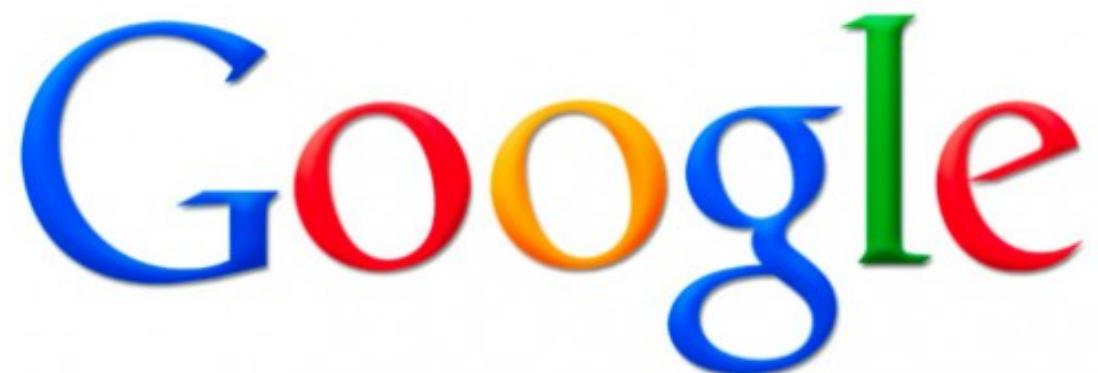
*Much of the operation and momentum of connect and develop depends on our network of **70 technology entrepreneurs based around the world**. These senior P&G people lead the development of our needs lists, create adjacency maps and technology game boards, and write the technology briefs that define the problems we are trying to solve. **They create external connections** by, for example, meeting with university and industry researchers and forming supplier networks, and they actively promote these connections to decision makers in P&G's business units.*



Case history: Google

From FT (29 September 2010):

*The internet leaders clearly see the risk and are working frantically not to miss a trick. **Google has taken to hoovering up small internet start-ups in its search for talent and fresh ideas, pulling off 23 deals already this year compared with only six in 2009.** Apple bought a streaming music company, although it has yet to launch a service. There's no guarantee, though, that they can identify all the challenges.*



Case history: Intel

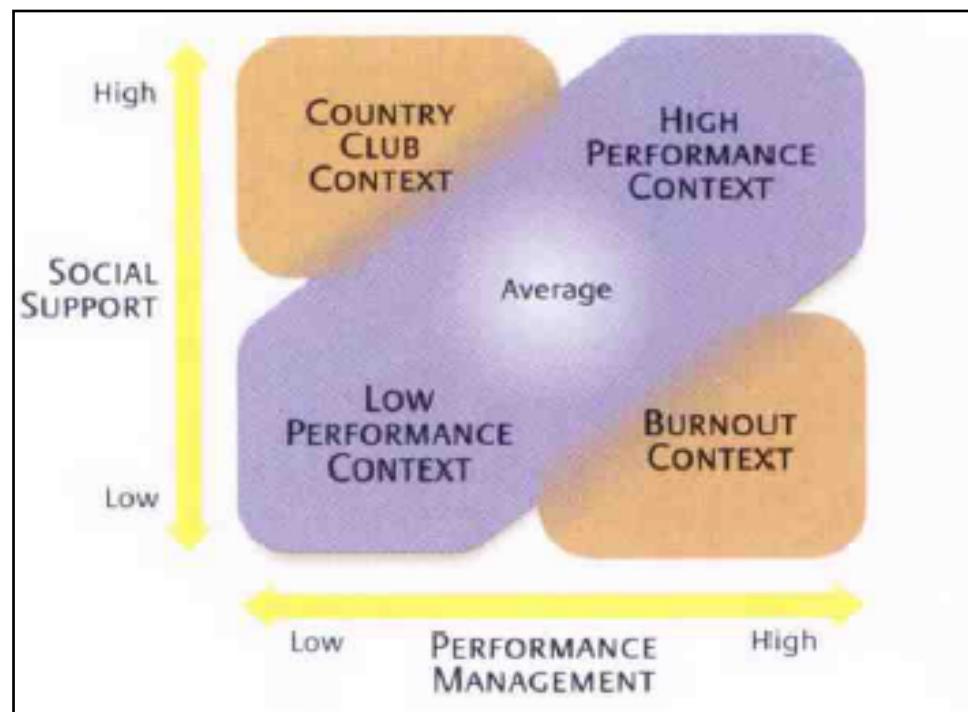
- Intel started an **independent business unit** named **Intel Capital**, acting as a **venture capital company** with more than 100 **investment professionals** around the world
- Up to now, over **\$ 10 billion** have been invested into more than 1000 companies
- Intel Capital provide venture funds to **three types of investments**:
 - **Ecosystem development investment** (about 60% of the total invested), companies building technologies related with core products of Intel
 - **Gap-filling investments** (about 30% of the total invested), focused on technologies complementary to those of Intel and not sold directly
 - **'Eyes and ears' investments** (about 10% of the total invested), centered on monitoring opportunities looking extremely useful, promising and profitable but also very challenging and risky

Develop an appropriate culture in your organization

- Create an **organisational context** in which **individual employees** are encouraged to think and speak **out-of-the-box**
- This requires acting on **the human side of the organisation**
- The context should stimulate these types of **behaviour in individuals**:
 - Initiative
 - Risk-taking
 - Entrepreneurship
 - Brokering
 - Multitasking

Develop an appropriate culture in your organization

- A firm should encourage these behaviours through acting on two levers:
 - **Social support**, which is concerned with providing people with the security and latitude they need to perform
 - **Performance management**, which is concerned with stimulating people to deliver high-quality results and making them accountable for their actions



Ingredients for success

- 1. Spot the disruptive technology**
- 2. Develop your market insight and conduct directed research**
- 3. Adapt your organization and business model to the disruptive technology**
- 4. Investing in disruptive technologies**

What is a market insight

- The key aim of market insight research is **to discover a fact about that market that has not previously been made use of, but when leveraged will generate increased profits.**
- Alternatively, market insight can be defined as **the attempt to discover a penetrating truth about consumers, their aspirations and motivations which can in turn be used to generate growth.**
- Develop the «customer insight» means to identify the latent needs of the customers and discover new unexplored market segments
- Adopting the customer perspective is a guiding principle for the entire business model design process. Successful innovation requires a deep understanding of customers, including their environment, their daily routine, their concerns and their aspirations.

Case histories

- GE and diagnostic devices for emerging countries
- Toyota Prius
- P&G and the disposable diapers
- Samsung and the LCD technology for flat panel TVs

Case history: the Toyota Prius

- In mid-1990s, the company launched a project called G21 (Global 21° Century) with the goal of building a car with a **fuel efficiency** of 47.5 miles per gallon, 50% more than that of a basic Corolla
- The first approach was improving transmission and engine of existing cars. Engineers felt that they could potentially improve fuel efficiency of as much as 50%
- So they decided to reject conventional technologies and began looking at **hybrid technology**. The problem was that this model could deliver dramatic fuel cost savings but was prohibitively expensive.

Case history: the Toyota Prius

- Engineers were ordered to create a concept hybrid car that would boost fuel efficiency by at least 100% and cost effective, by one year time (in time for Tokyo Motor Show)
- A thousand engineers were assigned to work on the initiative and investigated 80 alternative power trains then shortlisted to 4
- The battery was a major problem to solve: the technology was very sensitive to temperature

Case history: the Toyota Prius

- The president asked for full production in twenty four months (two thirds the usual time)
- In December 1997 the car was on the market, perfectly on time and was a great success from the beginning, appealing to the growing number of consumers environmentally conscious
- The development cost was more than 1b\$, at that time Toyota had half the annual sales of GM

Case history: P&G and the disposable diapers

- When P&G introduced the product it had already been on the market for decades
- But P&G saw two major trends: the desire for consumers for greater convenience and the increasing presence of women in the workforce
- To tap into the mass market it had to dramatically lower costs and after five years of research the price went down to 10 cents per diaper
- It was not enough because diaper services were at about 3.5 cents per diaper and home washing was about 1.5 cents

Case history: P&G and the disposable diapers

- The breakthrough came when P&G developed a machine able to mass-produce diapers at 5.5 c\$ a piece.
- It was more expensive than diaper service but affordable to increasingly affluent consumers
- The market grew from \$10 million to 370 in seven years
- Today it is a 10 billion industry, rapidly increasing thanks to emerging market consumers

The concept of directed research

- Once a market insight is identified, the problem is how to best serve that market
- Technology is seen as a means to do this, therefore companies are flexible about the technology to use
- Companies usually explore different alternatives
- They combine internal development with technology acquisition from outside

Ingredients for success

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Case study: Polaroid and the digital photography

Apparently, Polaroid was **well positioned to succeed in the digital photography business:**

- It was leader in instant photography for decades
- It had a great brand, brilliant engineers and scientists and a large global marketing and distribution network

Polaroid identified digital imaging as a potential threat to its market position: it was **one of the first companies** to start investing **in digital photography**, in the 1980s

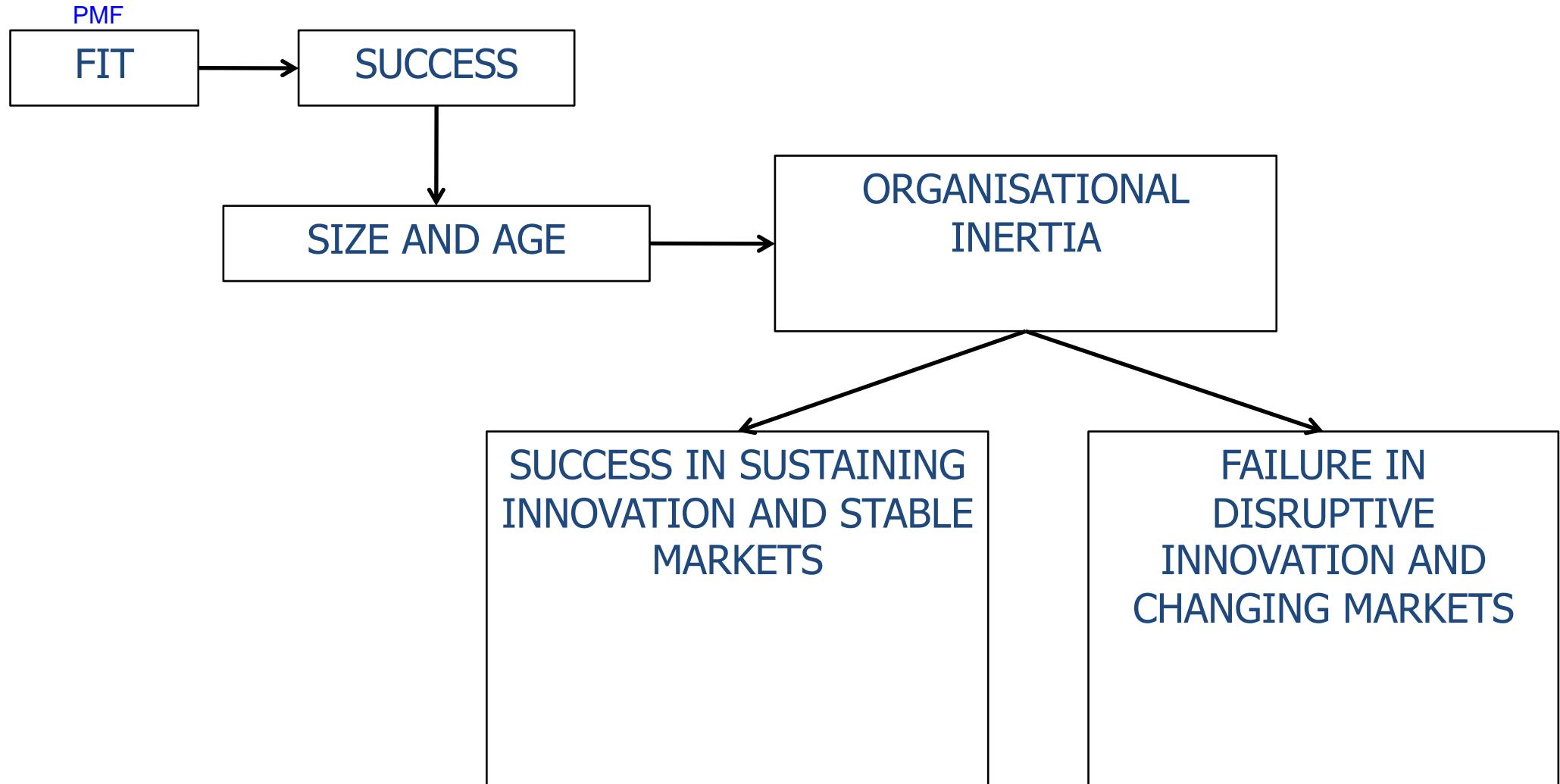
This research has led to **several major technological breakthroughs**, but few of the products that resulted from this effort had been successful

At the end, it was beaten by old, well established firms like Kodak and Sony...

Why?



Organisational inertia theory



both hands

Build an ambidextrous organisation

Ambidexterity has two ingredients:

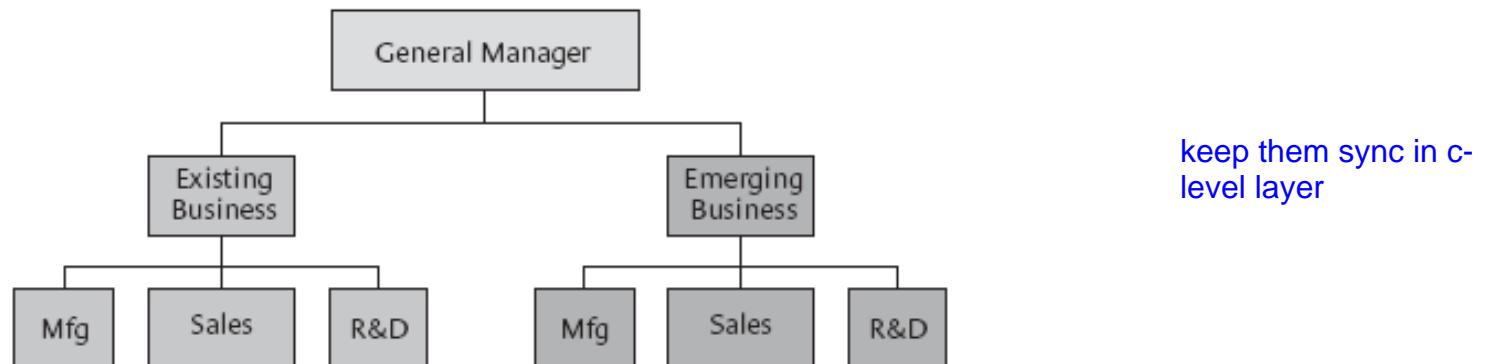
1. **Structural separation** between organisational units devoted to:

Exploitation of current technologies and businesses

Exploration of new, disruptive technological trajectories and businesses

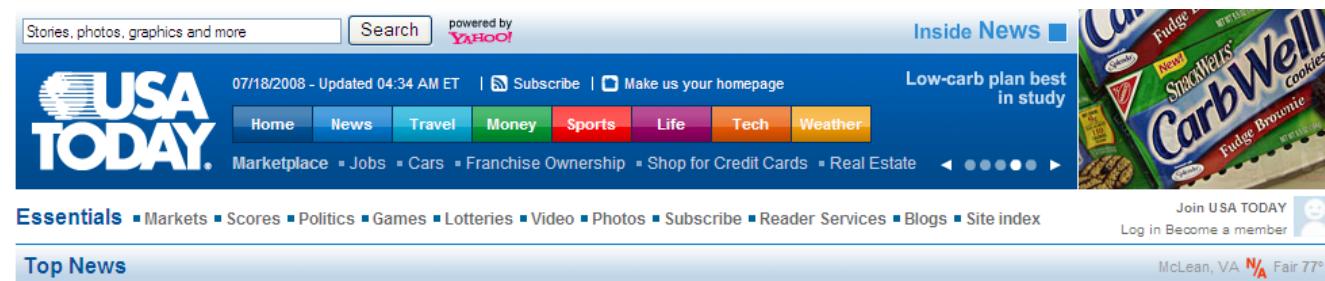
each having its own processes, structures and cultures

2. **Tight integration** between the exploitation and exploration units **at the senior executive level**



Case history: USA Today

- **Founded in 1982**, USA Today lost more than half a billion dollars during its first decade
- **It turned to profit in 1992**, and continued to expand rapidly, becoming the most widely read daily newspaper in the USA
- But, in the second half of the 1990s, **clouds appeared on the horizon**: readership was falling steadily, competition was heating up, newsprint costs were raising
- Tom Curley (president and publisher) recognised the firm would have to **expand beyond its boundaries** to maintain steady growth and profits
- The company would need **dramatic innovation** to find new ways to apply its capabilities to **new media**



Case history: USA Today

Curley choose Lorraine Cichowski (USA Today's general manager of media projects) to **launch an online news service** called USAToday.com

He gave her free rein to operate independently from the print business. She built a **fundamentally different kind of organisation**, with roles and incentives suited to the instantaneous delivery of new content and to an entrepreneurial and highly collaborative culture

But results were disappointing ... its growth was sluggish and had little impact on the broader business's results

The problem, Curley saw, was that **the new unit was so isolated** from the print operation that it was failing to capitalise on the newspaper's vast resources

Case history: USA Today

- In 1999, Curley launched a “**network strategy**”, according to which the company would share news content across three platforms: the newspaper, USAToday.com and USAToday Direct (TV operation)
- In 2000 he replaced Cichowski with an internal executive who **was a supporter of the “network strategy” vision**
- Both the online and the television operations remained separate from the newspaper, with their distinct processes, structures, cultures, but Curley required that **senior leadership of the three business was tightly integrated**:
 - He introduced daily editorial meetings between the heads of the three units
 - He let go off a number of senior executive who did not share his commitment to the network strategy
 - He changed incentives programs for executives, replacing unit-specific goals with a bonus program tied to growth target across all areas
 - A “Friends of the Network” recognition program was established to explicitly reward cross-units accomplishments

Ciba Vision

Ciba Vision, created in the early 1980s as a business unit of Ciba-Geigy (now Novartis), develops and sells contact lenses and eye-care products to optometrists.



In the second half of the 1980s it was dramatically suffering from the competition of Johnson & Johnson. Ciba Vision's president, Glenn Bradley, understood that, without **radically innovative products**, his company risked a steady decline and failure.

In 1991, Bradley launched **6 innovation projects**, each focusing on a radical innovation (e.g. daily disposable and extended-wear lenses).

Bradley faced the problem to decide **how to manage and organise these new projects**; he decided not to integrate them within the company's traditional organisation, fearing that **conflicts in resource allocation** and **conventional procedures** and **conservative cultural principles** could have hampered the creativeness and the focus each project needed to succeed.

Building ambidexterity into Ciba Vision's organisation

- Bradley created an **independent unit for each project**, with its own R&D, finance and marketing functions, and located it in **dedicated facilities**
- Each unit hired its staff, established its **own rewarding systems**, designed its **business processes** and, ultimately, came out with unique **organisational structure** and climate
- Bradley faced the problem of **integrating** the independent units with the traditional businesses:
 - the leaders of the breakthrough projects should report to a single senior executive, i.e. Adrian Hunter, vice president for R&D
 - Ciba Vision's incentive system was enhanced so that managers were rewarded on the basis of the overall company performance, rather than their own business unit's
 - a new vision statement for the whole company was elaborated ("Healthy Eyes for Life"), that served the purpose of enlightening the relationships and complementarities between new and traditional business units

The role of the senior executive team

- Senior executives have the key role of **ensuring integration in structurally ambidextrous organisations**
- This can be achieved through:
 - Articulating a clear, emotionally engaging and consistent **vision**
 - Building a senior team with **diverse and heterogeneous competencies**
 - Introducing specific **processes and integration mechanisms**
- **Ciba Vision** provides insightful examples of how to build a structural ambidextrous organisation

Ingredients for success

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- 4. Invest in disruptive technologies**

Justify investments in the disruptive technology

- Good managers are driven to **keep their organizations growing**
- Unfortunately, companies that become large and successful find that **maintaining growth becomes progressively more difficult**
- Disruptive technologies are **initially sold in small, emerging markets**
- This is why **it is difficult to justify investments in their development**

Justify investments in the disruptive technology

- Company's freedom of action **is limited to satisfying the needs of those entities outside the firm** (customers) that give it the resources it needs to survive
- **It is customers**, rather than the managers, **who really determine what a firm will do**
- Good resource allocation processes are designed to **weed out innovation proposals that customers don't want**
- Resource allocation depends not only on executives' decisions, but also on non-executive participants, whose **career trajectories can soar when they sponsor highly profitable innovation programs**

How to overcome these barriers?

- One approach is to embed the project into **an organization that is small enough** to be motivated by the opportunity offered by a disruptive technology in its early years
- This can be done by:
 - **Spinning out (or spinning off)** an independent organization
 - **Acquiring** an appropriately small company

Case history: Cisco Systems

When the firm identifies a technological opportunity which is promising but with a potential disruptive impact, it **encourages some valuable researchers to leave the company** through a spin-out process and finances the research activities of the newly founded firm.

Besides, it maintains the possibility to **acquire the spin-out back** in case it produces relevant research results.

This strategy was adopted in 1999 with **Andiamo**, a spin-out firm operating in the field of big disk hardware and software for web server applications, that was re-incorporated in 2003



**... but some times disruptions are
“big bang”**

The Big Idea

A new kind of innovator
can wipe out incumbents
in a flash. *by Larry Downes
and Paul F. Nunes*



BIG-BANG DISRUPTION!



Smartphones scrap portable navigation devices

CORRIERE DELLA SERA - 4 novembre 2013

Tecnologia Tutte le novità, gratis e a pagamento, delle mappe vocali satellitari

Addio vecchio navigatore Ora ci guida lo smartphone

Dal TomTom alle App, cambia il modo di viaggiare

Le App per telefonini e tablet fanno sempre più concorrenza ai navigatori portatili: sono precise, piene di servizi e, spesso, gratuite

ILLUSTRAZIONE ANDREA PRODACA

76

We buy fewer compact digital cameras



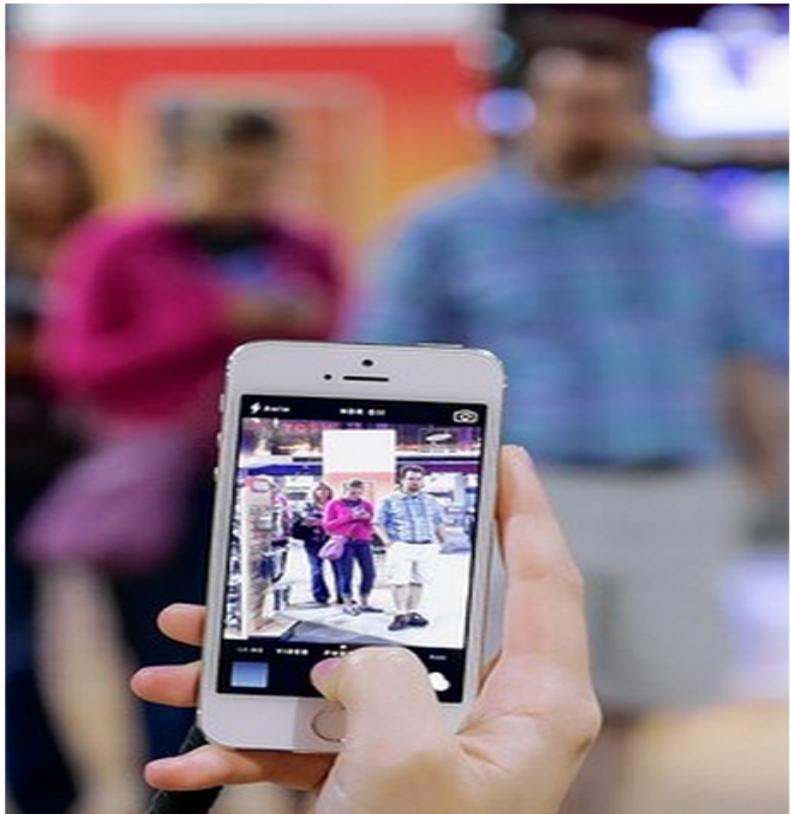
VS



THE WALL STREET JOURNAL.

NOV. 10, 2013

Cameras Succumb to Smartphone Juggernaut



There was a time when it would have been crazy to suggest that a phone camera would ever approach the speed and quality of a stand-alone camera. Now, that day is over.

Sales of point-and-shoot cameras have been declining for years .. Taking a picture with a phone simply isn't a subpar experience. For most people, most of the time, a phone is all you need.

What the phone did to the camera isn't an isolated incident. The story behind the death of the stand-alone camera is a history of the future of almost everything.



FINANCIAL TIMES

SEP. 29, 2014

Cameras: out of focus

The popularity of smartphones has allowed to displace one consumer product, the digital camera, especially low cost fixed lens cameras. Unit sales of digital cameras, by makers such as Nikon and Canon, have fallen 60 per cent in the past two years.

Digital camera makers have not reacted well to the onslaught from smartphones. They have already lost the casual snapper. As phones start to incorporate higher quality lenses, they risk losing the camera enthusiasts too.



FINANCIAL TIMES

SEPT. 29th, 2014

Cameras: out of focus

Overexposed

Digital camera shipments,
volume ('000)

Cameras with built-in lenses

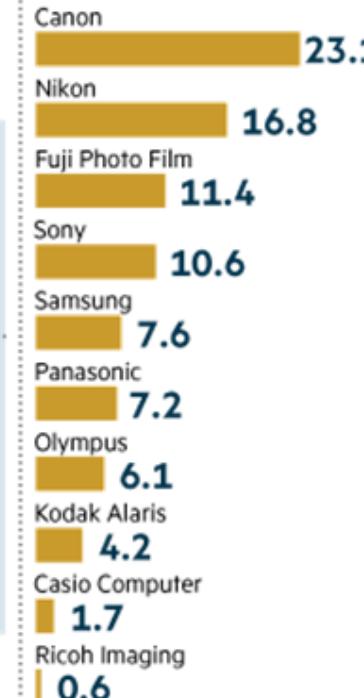


Interchangeable lens cameras



Sales of fixed lens cameras have been hurt by the rise of smartphones. But sales of interchangeable lens cameras are also falling

World market shares of all cameras by global brand owner 2013 (%)



The lack of innovation in digital cameras has meant that consumers are happy with their current cameras and less motivated to buy newer models

Sources: Nomura; Euromonitor

Smartphone and tablets steal room for gaming consoles





FINANCIAL TIMES

JAN 20, 2014

Nintendo's declining sales put change of game plan on cards

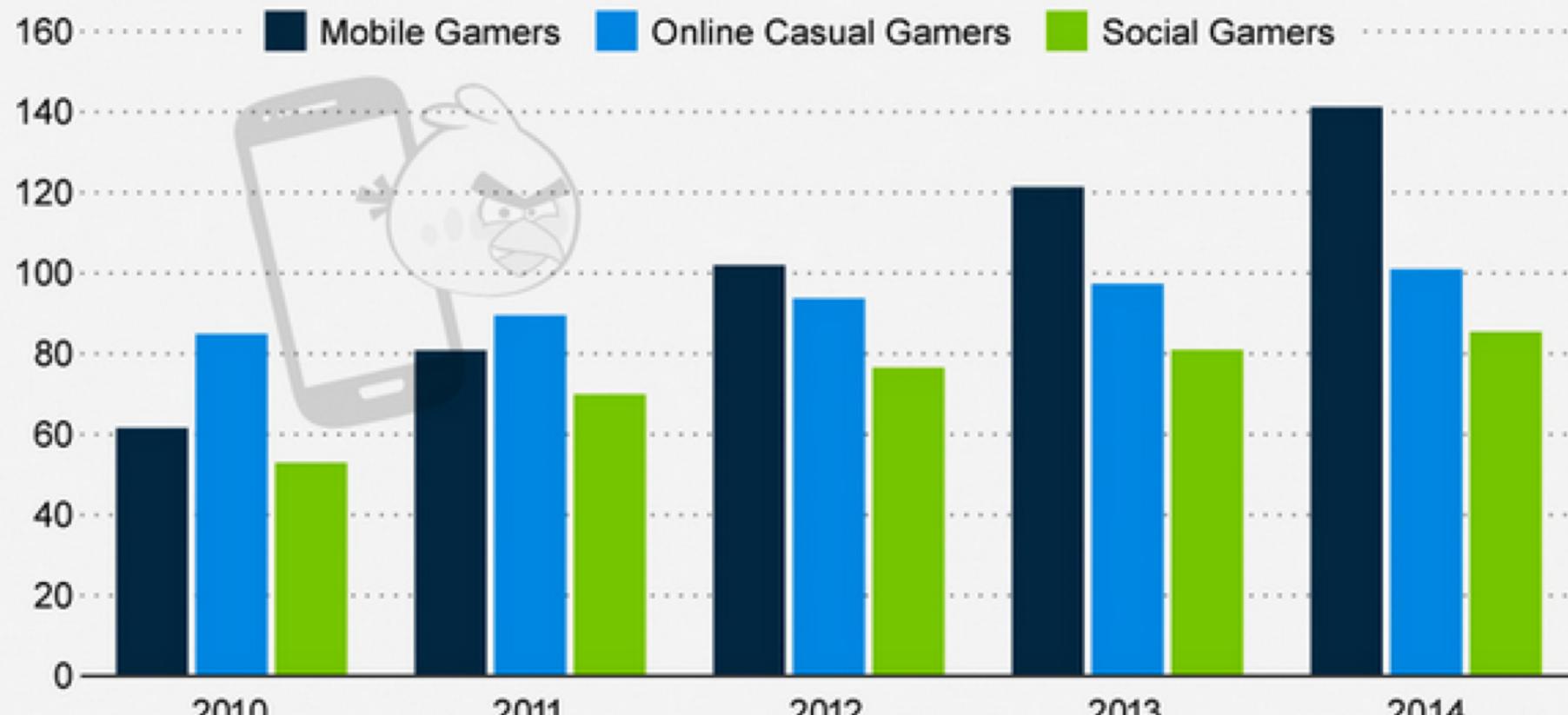


Nintendo announced that it had cut its net profit forecast of Y55bn (\$527m) in the year to March to a net loss of Y25bn, as sales of its Wii U games console and 3DS handheld unit fell well short of global targets ..

*The core problem is that the world's largest games machine maker has been **hurt by the big shift to mobile devices**. Casual gamers are abandoning specialised hardware in favour of playing on phones and tablet computers, on which titles can be downloaded at a fraction of the cost.*

The United States of Mobile Gaming

U.S. Mobile, Online Casual and Social Gamers 2010 - 2014 (in millions)



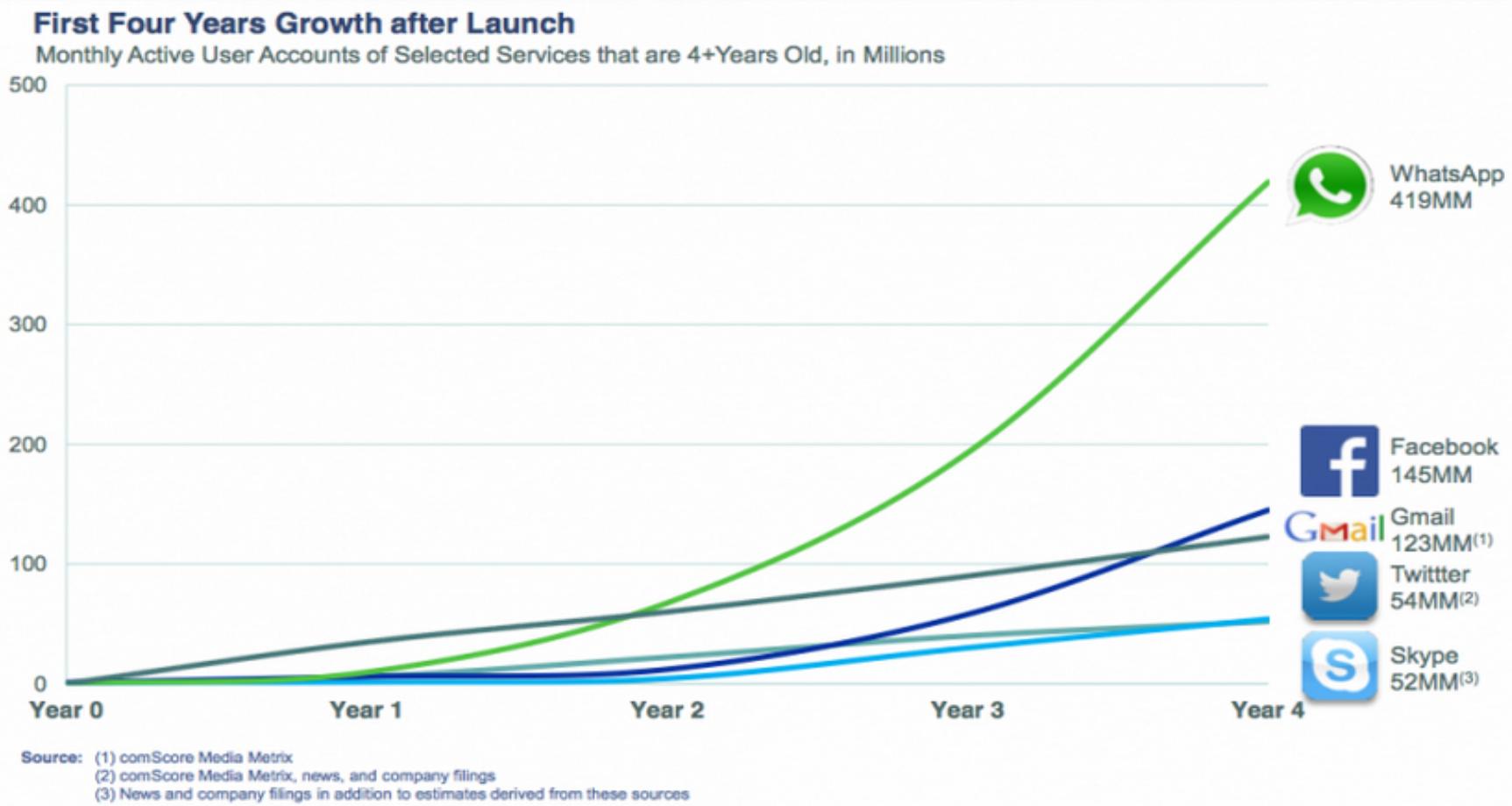
Source: Statista

**Only businesses «disrupted» by other businesses
... without «real» gains for the destroyers?**

Of course not!

Creating value by disrupting established industries: the case of WhatsApp

WhatsApp Extraordinary Growth in Users



The case of WhatsApp (1/4)

«WhatsApp has succeeded to destroy the market of SMS in only four years: an operation that would required in other times between 20 and 30 years»,

it claimed one of the world's leading operators of venture capital, at the recent acquisition of WhatsApp by Facebook for **\$ 19 billion**.



Nineteen billion for a startup founded in 2009, which succeeded in 4 years – investing few money (**\$ 60 million**), and with very few people (**55 in all**), but giving up almost entirely (given its business model) to revenues – to overcome the threshold of **450 million users** and **50 billion of messages** processed per day: the highest rate of growth in the history of the world economy.

The case of WhatsApp (2/4)

Apart from the entity of the amount paid, it is the speed rate at which WhatsApp and other startups are disrupting a market as rich as that of SMS, with heavy damage to the telecom operators who controlled it, that deserves a reflection.



Short Message Service is a market of relatively recent birth, developed (until the advent of smartphones) with the spread of phones, and also because their customers are mainly large enterprises.

An equally worthy reflection is addressed to the fact that new entrants – WhatsApp and other startups – increasingly steal market shares from the incumbent firms (Mobile Network Operators), but do not take over them (if not in small part) in revenues and profits, because they offer alternative services (almost) for free.

The case of WhatsApp (3/4)

What were the main features of the WhatsApp phenomenon?



1. the possibility born with smartphones of a mobile access to the Internet and therefore an alternative media for the messages;
2. the possibility of passing through the Internet to circumvent the policy of price discrimination, on the basis of uses, applied by telecom operators: such as the inclusion of photos in the messages themselves;
3. the growing availability of broadband, for its impacts on the quality of services moved through the Internet;
4. the availability of an infrastructure even more consistent of cloud computing;
5. the very low cost for the creation and dissemination of an app.

The case of WhatsApp (4/4)

The growth of WhatsApp through the disruption of an industry segment as rich as that of SMS is a case of big-bang disruption!

But is the growth of WhatsApp sustainable?



WhatsApp Blog



Why we don't sell ads

Advertising has us chasing cars and clothes, working jobs we hate so we can buy shit we don't need.
– Tyler Durden, Fight Club

Brian and I spent a combined 20 years at Yahoo!, working hard to keep the site working. And yes, working hard to sell ads, because that's what Yahoo! did. It gathered data and it served pages and it sold ads.

We watched Yahoo! get eclipsed in size and reach by Google... a more efficient and more profitable ad seller. They knew what you were searching for, so they could gather your data more efficiently and sell better ads.

These days companies know literally everything about you, your friends, your interests, and they use it all to sell ads.

When we sat down to start our own thing together three years ago we wanted to make something that wasn't just another ad clearinghouse. We wanted to spend our time building a service people wanted to use because it worked and saved them money and made their lives better in a small way. We knew that we could charge people directly if we could do all those things. We knew we could do what most people aim to do every day: avoid ads.



FINANCIAL TIMES

NOV. 12, 2013

Airbnb rallies users amid regulation threat



...Brian Chesky, Airbnb's co-founder and chief executive, showed off a redesigned mobile app and networking site for hosts - for **Apple's iPhone** and **Google's Android** - to make it easier for them to rent out their spare rooms and get support from other users of the service.

The company, **a “sharing economy” pioneer**, which launched in 2008 and now operates in **34,000 cities**, is also overhauling its reviews systems to provide more detailed ratings, such as cleanliness, accuracy, availability and a host's “commitment”.

“We are confident that in the future the majority of guests staying with you will be booking their trips on a phone” ...

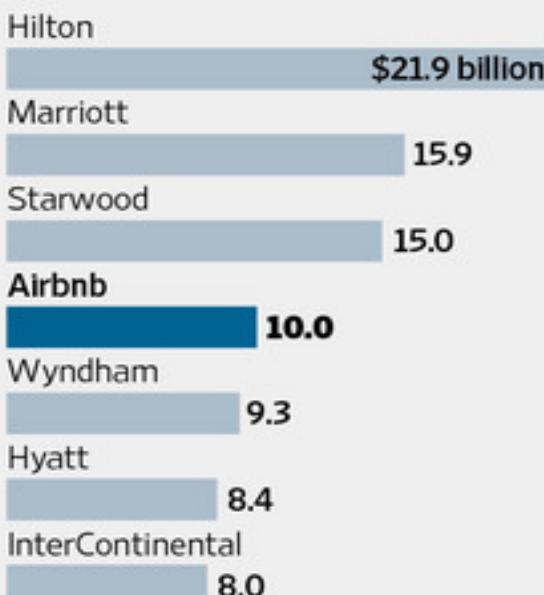
THE WALL STREET JOURNAL.

March 20, 2014

Airbnb Is in Advanced Talks to Raise Funds at a \$10 Billion Valuation

Luxury Suites

How Airbnb's \$10 billion valuation would stack up against public hotel companies



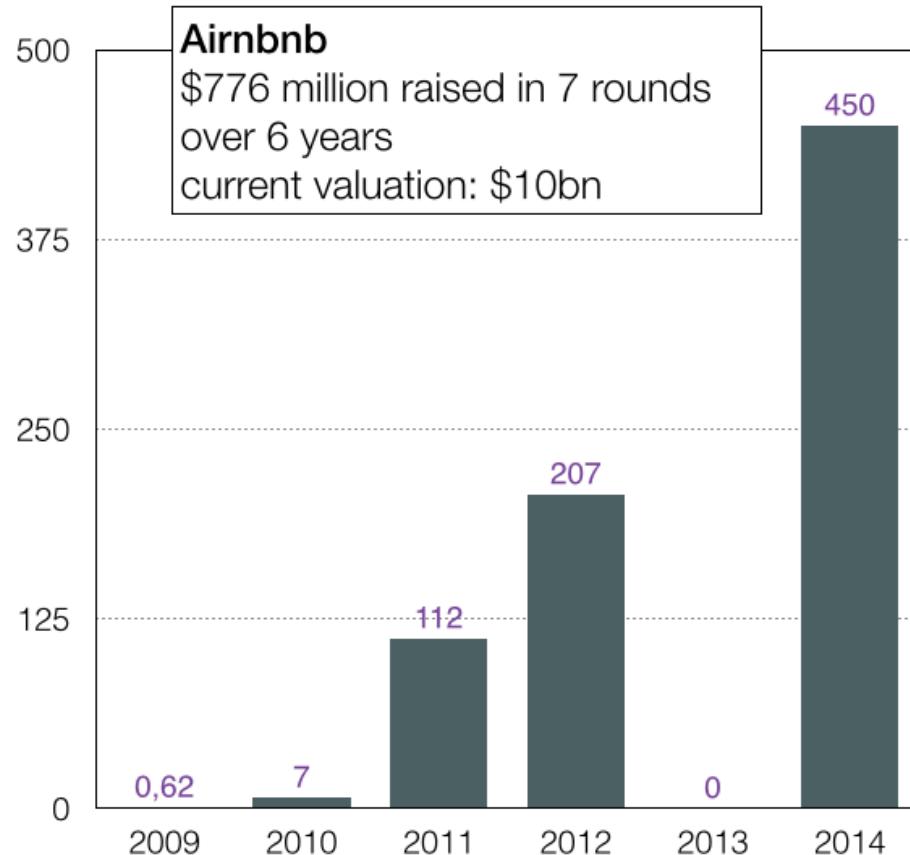
Source: FactSet
The Wall Street Journal

*The rich price tag reflects Airbnb's potential to **disrupt** the hotel industry. In six years, the company has become a required destination for millions of tourists looking for cheap rooms, while giving homeowners a new source of income.*

*The company could be worth **more than** Wyndham Worldwide, which manages 7,500 hotels under the Wyndham, **Ramada** and other brands, and is valued at \$9.3 billion. **Hyatt Hotels** has a market value of \$8.4 billion.*

The effects of disruptive models

Source: <http://www.mondaynote.com/>



In 2015, Airbnb Inc. is raising money from investors in a financing round that would value the room-sharing service at \$20 billion or more (Source: <http://www.bloomberg.com/>).

Finance loves «dirupters»: Alibaba collected from the stock market the highest amount in the history of listings



The Chinese Alibaba, a leader company in China in the e-commerce field and also operating in the finance sector, was listed on the NYSE in September 2014 by collecting the highest amount in the history of quotations – **\$ 25 billion** – with a market capitalization over \$ 200 billion.

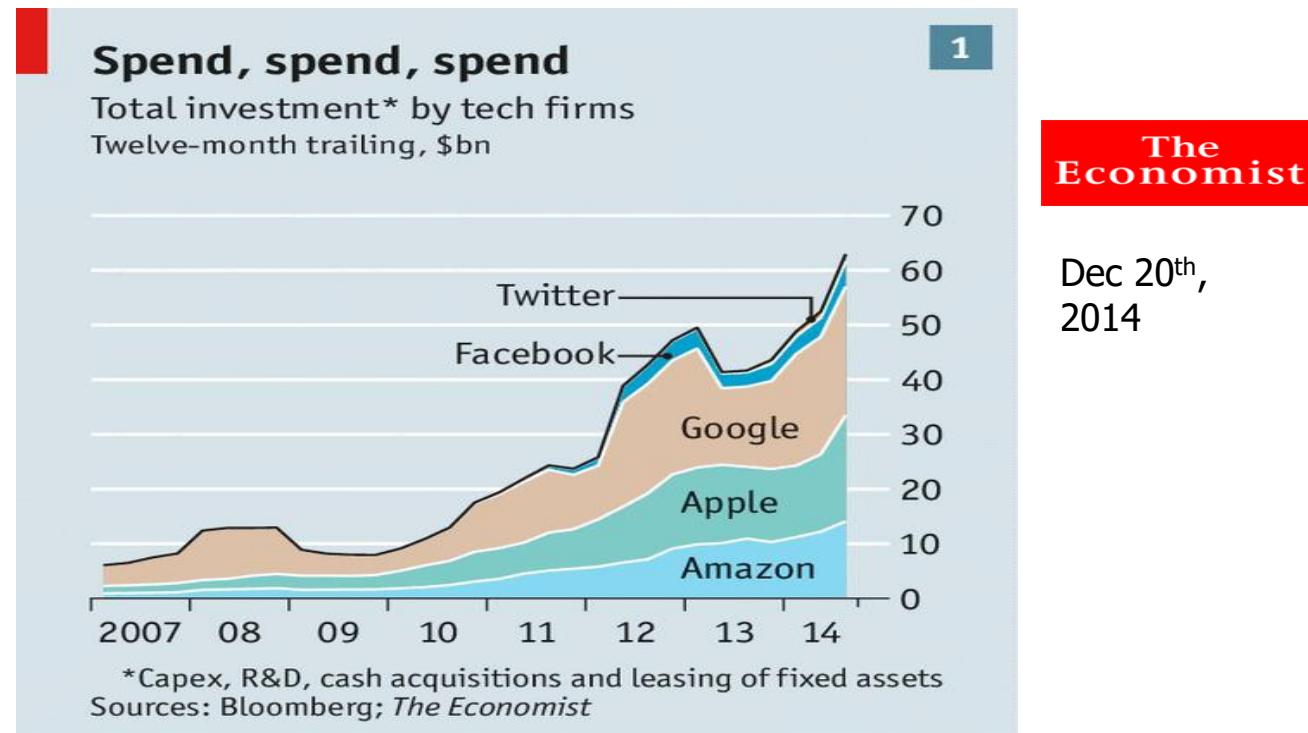
Finance loves «disruptors»: 9 companies not yet listed are evaluated at least \$ 10 billion and 78 those who are evaluated at least 1



The Chinese Xiaomi is the first, leader in the Chinese market of smartphones and with only four years of life, which has an **implied market capitalization** (calculated on the basis of the last received private funding) of \$ 46 billion and has collected \$ 1.4. It is followed by Uber, which is «evaluated» at least \$ 40 billion, but it has collected twice that number.

Finance loves «disruptors»

Together, Apple, Amazon, Facebook, Google and Twitter invested \$66 billion in the past 12 months. That is **eight times** what they invested in 2009.



Dec 20th,
2014

Together these five tech firms now **invest more than** any single company in the world: more than **Gazprom**, **PetroChina** and **Exxon**, which each invest about \$40 billion-50 billion a year.

The five firms **together own \$60 billion of property and equipment**, almost as much as **General Electric**. They employ just over **300,000 people**.

But it is not the same for stakeholders...

#UberPop: two years in prison and a €300,000 fine. France blocks #Uber 'ride-sharing' service
<http://on.wsj.com/12SKkUN>



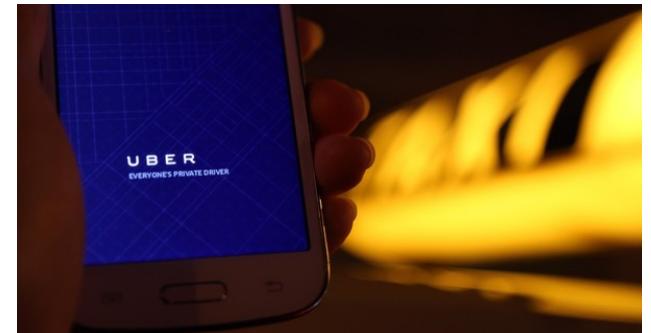
FT - December 8, 2014

Uber banned in New Delhi after sexual assault allegations



FT - December 24

Uber chief indicted in South Korea



But it is not the same for stakeholders...

WSJ

March 15, 2015

Uber, Lyft Cases Focus on Drivers' Legal Status

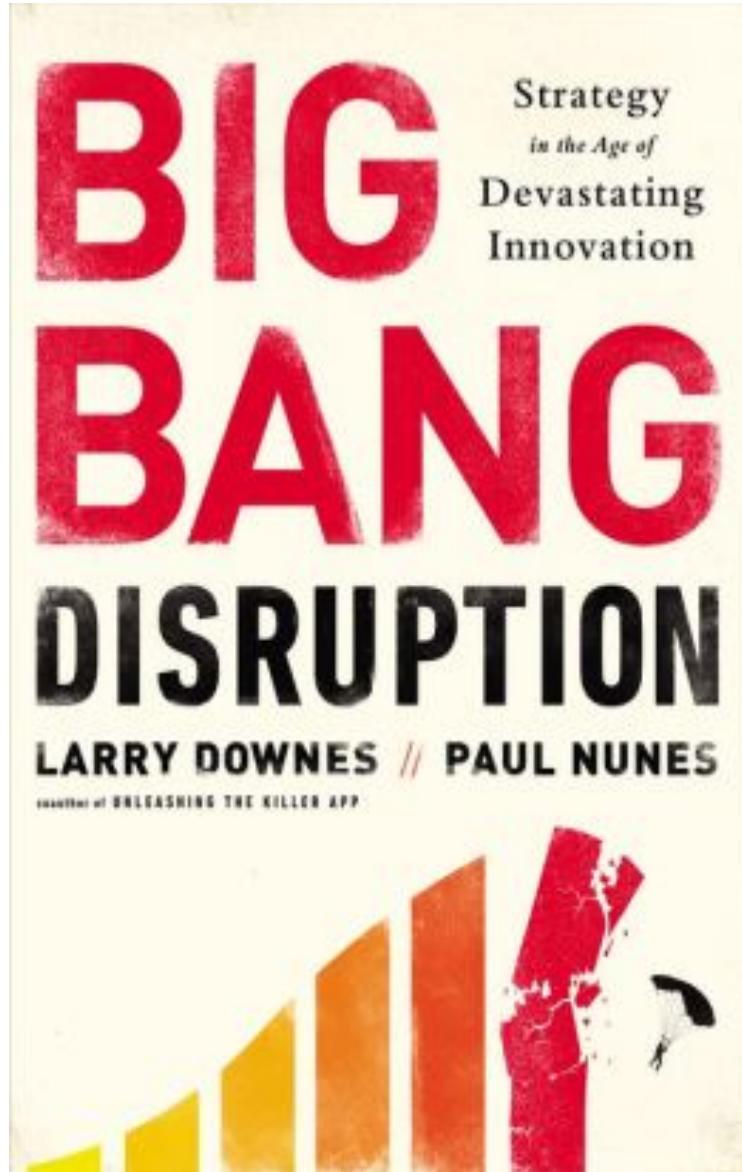
Ride-sharing firms' business models could be affected by verdicts

*Two San Francisco judges separately ruled last week that suits filed by **drivers of the ride-sharing services Lyft and Uber** should go before juries.*

At issue in both cases is **whether drivers, who are employed as independent contractors, should be considered employees** of those firms, and thus entitled to the protections afforded most full-time workers.



Three questions on Big-Bang Disruption



1. Is it «really» a phenomenon so qualitatively different to the entry of new business models in the last 30-40 years, up to assume it is a new paradigm?
2. Is it likely to continue, and if so is it likely to amplify or shrink gradually?
3. Is it so spread even in cases where there is no «big bang»?

Big-Bang Disruption

A new kind of innovator can wipe out incumbents in a flash. by Larry Downes and Paul F. Nunes

(1/2)

*The speed and the dramatic impact of Big Bang Disruption are the result of **disruptive technologies** that continue to enter the market **better and cheaper** than their predecessors.*

*In this brave new world, **new products and services start out life competing simultaneously on price, performance, and customization.***

The disruptors have already redefined the rules of engagement in highly competitive, technology intensive industries, including consumer electronics, computing, and communications.

*But as the computing revolution continues to insinuate itself into every corner of our lives, **Big Bang Disruptors are starting to appear in every industry.***

Big-Bang Disruption

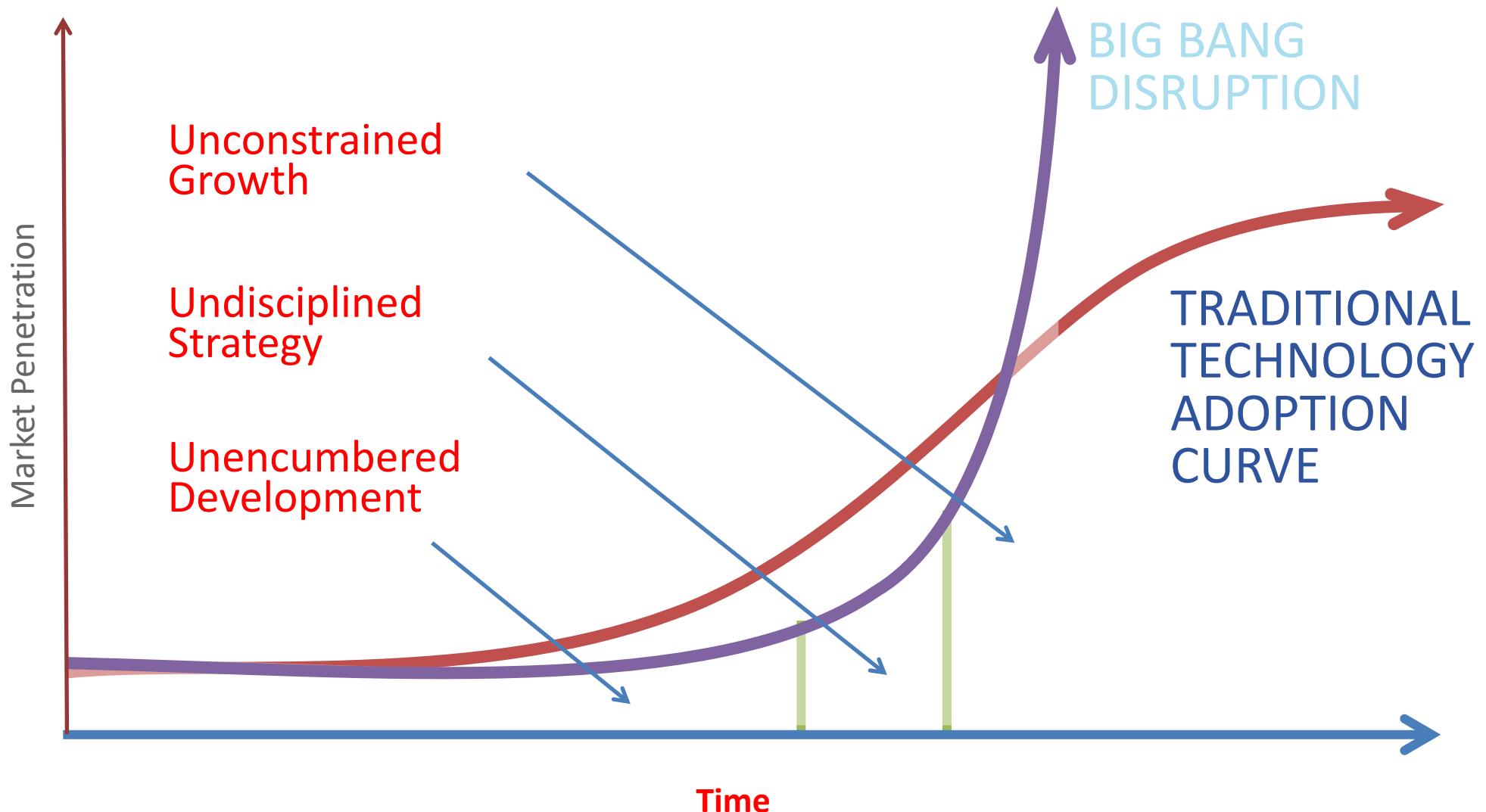
A new kind of innovator can wipe out incumbents in a flash. by Larry Downes and Paul F. Nunes

(2/2)

*For each of the items listed above **the source of disruption is the same** - the **programmable smart phone**, a hybrid computing and communications device with an endless number of small software apps. **Apps** can be small because most of their data processing takes place elsewhere, in what is known as **cloud computing**.*

*This **combination of hardware, software, and distributed computing** have quickly replaced a wide range of devices, products, and services; some very old and others relatively recent innovations themselves.*

Three key characteristics («devastating features») of Big-Bang Disruption



Three key characteristics («devastating features») of Big-Bang Disruption

1. Unencumbered development

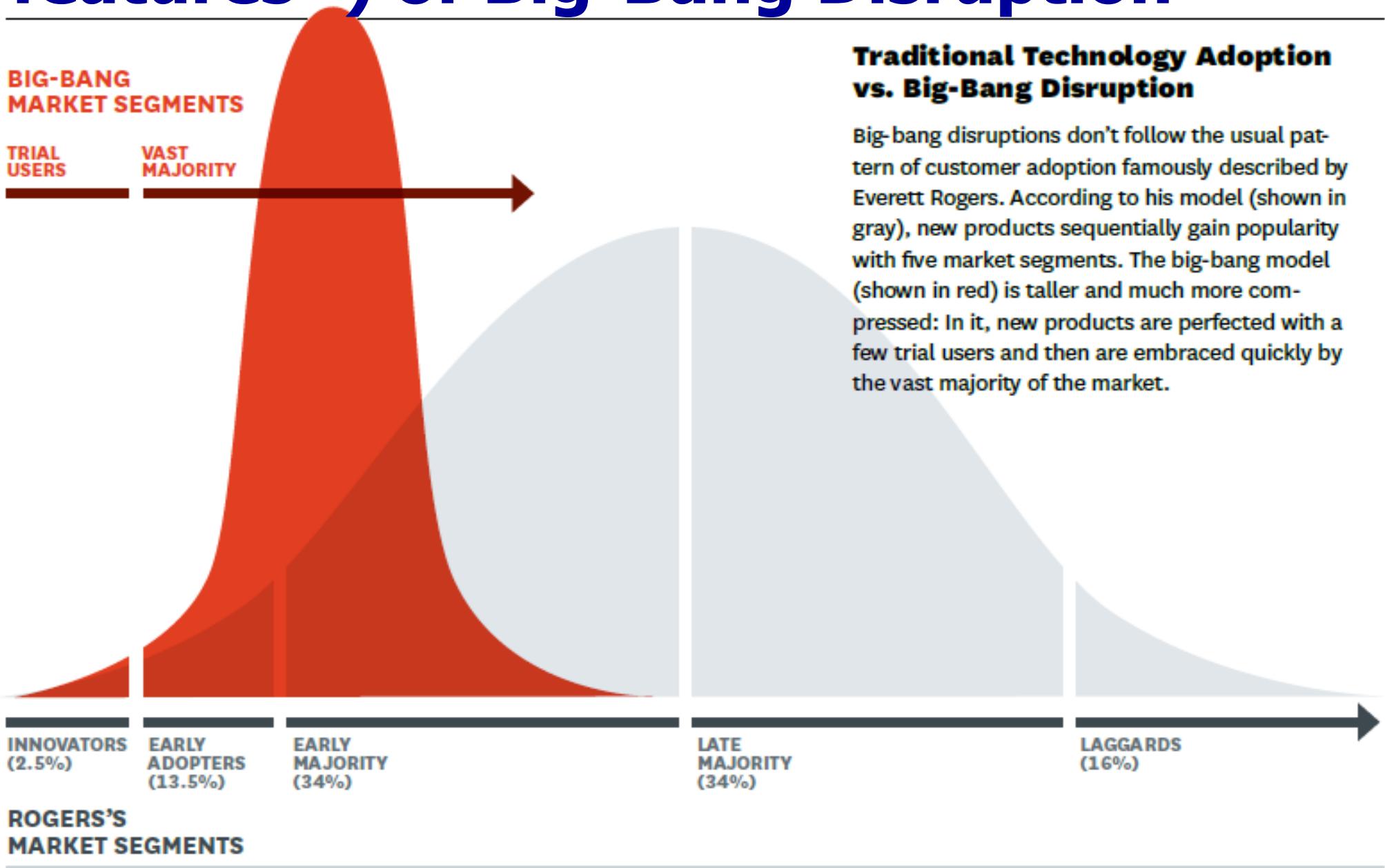
- Big-bang innovations are often born of rapid-fire, low-cost experiments on fast-maturing, ubiquitous technology platforms
- They don't need budget approval and aren't vetted before development begins
- These innovations are often built out of readily available components that cost little or are free
- Innovators and entrepreneurs can experiment with new applications at little risk to investors, abandoning prototypes that do not quickly prove popular

Three key characteristics («devastating features») of Big-Bang Disruption

2. Unconstrained growth

- Big-bang disruptions collapse the product life cycle
- Now there are only two segments: **trial users**, who often participate in product development, and **everyone else**
- The new product cycle can be simplified into three basic stages:
 1. development
 2. deployment
 3. replacement
- The innovators collectively get it wrong, wrong, wrong—and then unbelievably right.
- In today's hyperinformed world, each epic failure feeds consumer expectations for the potential of something dramatically better

Three key characteristics («devastating features») of Big-Bang Disruption



Three key characteristics («devastating features») of Big-Bang Disruption

3. Undisciplined strategy

- Big-bang disrupters contradict much that you know about competitive strategy
- Big-bang disrupters are thoroughly undisciplined:
 - They start life with better performance at a lower price and greater customization. They compete with mainstream products on all three value disciplines (low cost; constant innovation; product customization) right from the start.
- How can better also be less costly?
 - The faster, cheaper, and smaller computing power (Moore's law) is now deployable on a **global scale** and delivered through the **cloud** to inexpensive **mobile devices**
 - **Today's technology continually and dramatically reduces costs** (parts and manufacturing, embedded technologies and intellectual property, and development costs), thus making it possible to sell new products and services more cheaply than the inferior alternatives they displace

Three questions on Big-Bang Disruption

It is not «a phenomenon», but the result of some **MEGATRENDS**:

- Growth of the **«sharing economy»** model
- Growth of the **«product servitization»** model (use vs. ownership)

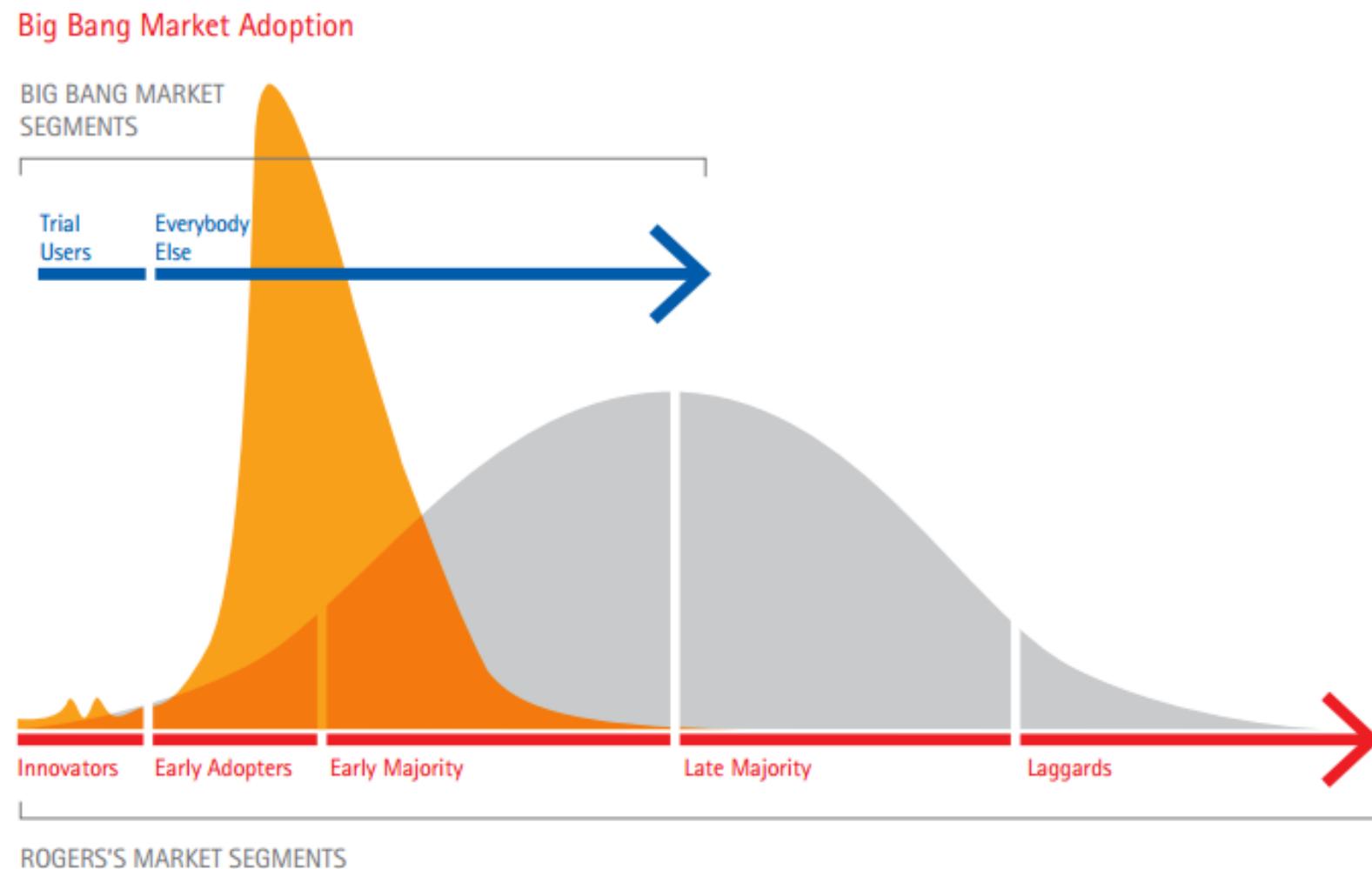
And...

- The **momentum growth of the «entrepreneurial» dynamic**

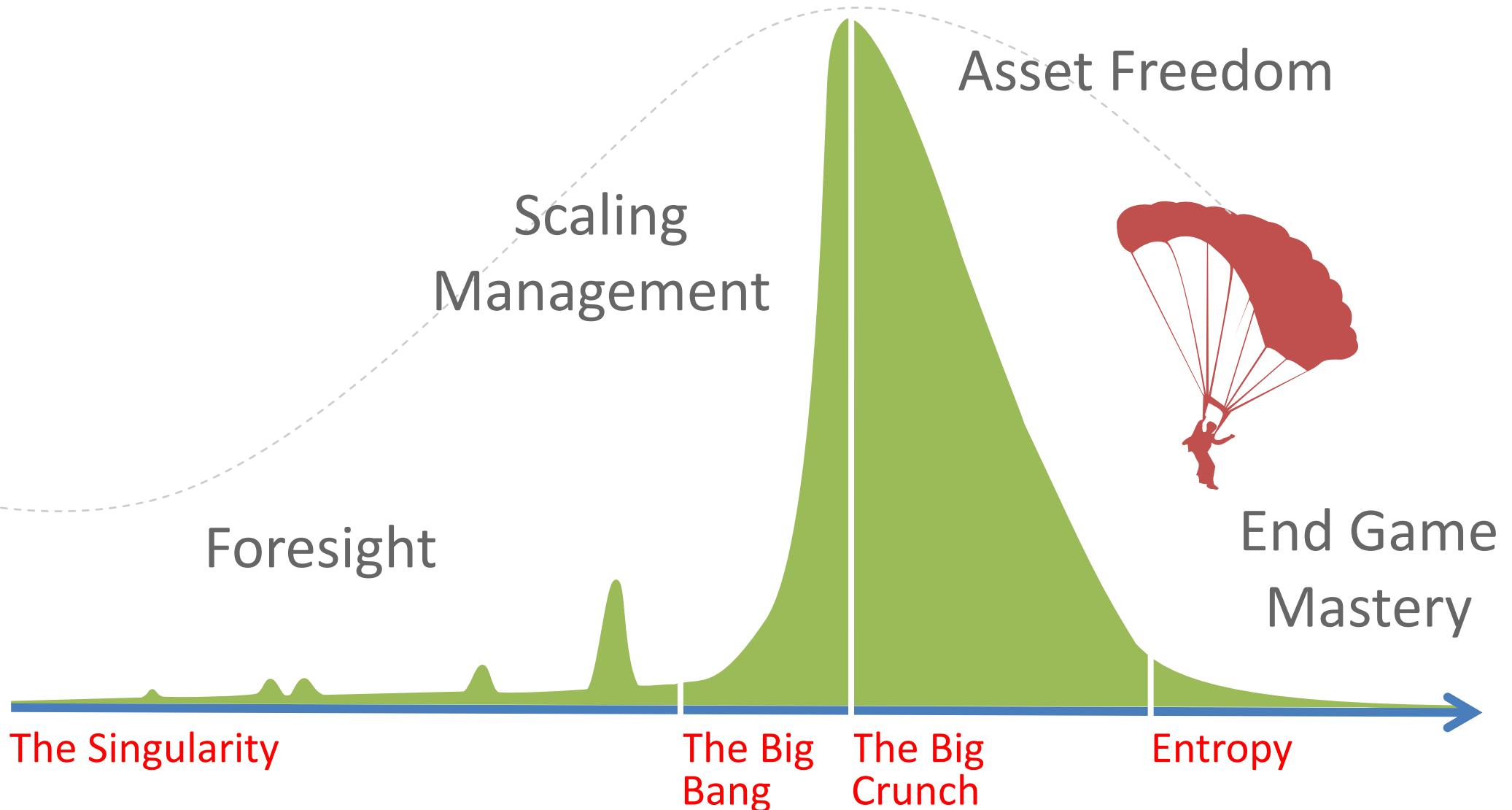
And...

- The **reduction** of creation cost
- The **reduction** of marketing cost
- The **reduction** of experimentation cost

... not without risks



Four stages of Big-Bang Disruption: Four strategic Imperatives



...what does it change?

Key Partners



Who are our Key Partners?
Who are our key suppliers?
Which key resources are we acquiring from partners?
Which key activities do partners perform?

Key Activities



What Key Activities do our Value Propositions require?
Our Distribution Channels? Customer Relationships?
Revenue Streams?

Value Propositions



What value do we deliver to the customer?
With what of our customer's problems are we helping to solve?
What bundles of products/services are we offering to each Customer Segment?
Which customer needs are we satisfying?

Customer Relationships



What type of relationship does each of our Customer Segments expect us to establish and maintain with them?
Which ones have we established?
How are they integrated with the rest of our business model?
How costly are they?

Customer Segments



For whom are we creating value?
Who are our most important customers?

Value System

Key Resources



What Key Resources do our Value Propositions require?
Our Distribution Channels? Customer Relationships?
Revenue Streams?

Customer Value Proposition & Interface

Channels



Through which Channels do our Customer Segments want to be reached?
How are we reaching them now?
How are our Channels integrated?
Which ones work best?
Which ones are most cost-efficient?
How can we integrating them with customer routes?

Cost Structure

What are the most important costs involved in our business model?
Which key resources are most expensive?
Which key resources are least expensive?



Revenue Streams

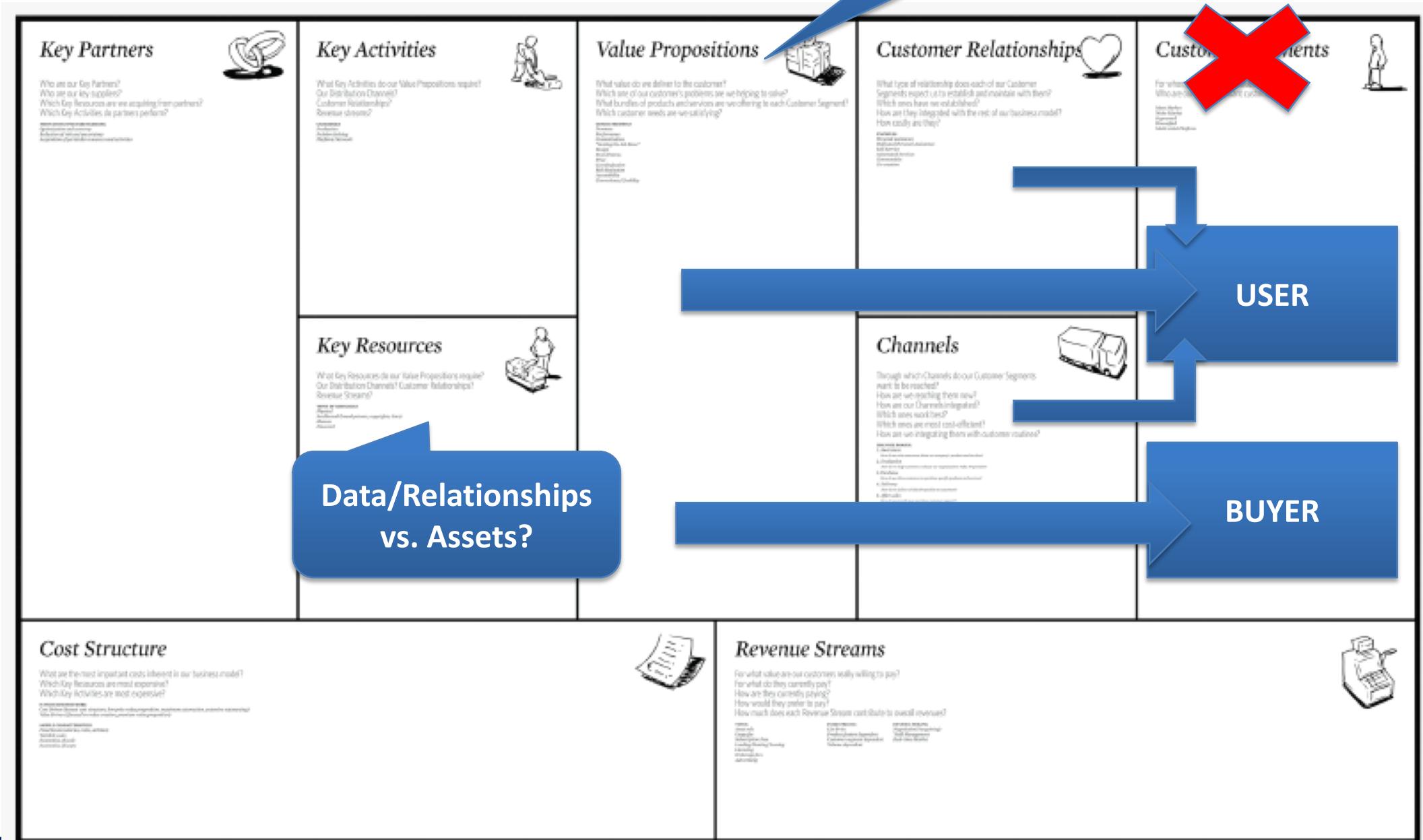
For what value are our customers willing to pay?
For what do they currently pay?
How are they currently paying?
How would they prefer to pay?
How much does each Revenue Stream contribute to overall revenues?

Economic Model



...what does it change?

Sharing?
Access vs.
Ownership?





POLITECNICO
DI MILANO



Disruptive Innovation and Big-Bang Disruption

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