



# Innovation basée sur la recherche

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# Factor-Driven Economy

Cheap labor / natural ressources



- Start of University-Industry research collaboration
- Companies can absorb best available foreign technologies

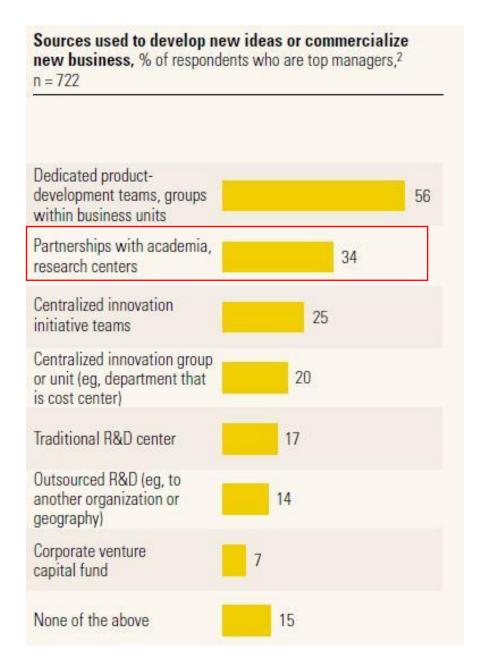
# Innovation-Driven Economy

- Supply of scientists and engineers
- Quality of research
- University-Industry research collaboration
- VCs
- Intense local competition
- Ability to innovate at world's technology frontiers
- Create unique product designs
- Sell products and services globally

Source: Porter, M. 2002 Global Competitiveness Report, World Economic Forum, Geneva



### Où trouver des idées ?







Easter parade on 5<sup>th</sup> Avenue in NYC Year 1900

Easter parade on 5<sup>th</sup> Avenue in NYC Year 1913





In the mid-1980s AT&T hired McKinsey & Co to forecast cell phone adoption by the year 2000

THEIR (15-YEAR) PREDICTION

900,000

SUBSCRIBERS

THE ACTUAL NUMBER WAS

109 million

They were off by a factor of:





#### What is Innovation...?

• "The process of creating something new that has significant value to an individual, a group, an industry or a society".

James M. Higgins "Innovate or Evaporate", 1995

• "The commercial or industrial application of something new---a new product, process or method of production, a new market or source of supply, a new form of commercial, business or financial organization".

Adapted from Joseph Schumpeter "Capitalism, Socialism and Democracy", 1942

• "Innovation is when an invention has been brought to the market" R. Cohen, "Winning Opportunities", 2001-2011.

#### Fields of Innovation

- Can you think of different innovation fields?
- Product innovation: iPhone, Tesla electric cars, bagless vacum cleaners, ...
- Process innovation: lean manufacturing, just-in-time inventory, agile software development, ...
- **Business model innovation**: ikea, Netflix's subscription model, Amazon's marketplace platform, Uber's ride-sharing network.
- Marketing innovation: Coca-Cola's "Share a Coke" campaign, L'Oréal's "Makeup Genius" App., Nike's "Just Do It" slogan, ...
- **Social innovation:** charitable foundations, microfinance, renewable energy, online education, mobile health clinics, public-private partnerships, ...

• ....

#### Kind of innovations

- Can you think of different kinds of innovation?
  - Incremental: Incremental innovation involves adding new features to a product, company, or production method within an existing market.
    - => Google, evolution of smartphones (new functions, cameras, etc.), razors (more blades), ...
  - **Disruptive:** Disruptive innovation involves creating entirely new products, services, or processes that disrupt or replace existing ones. It often involves new business models, technologies, or markets.
  - => Cars, cell phones, personal computers, digital camera, Netflix, AirB&B, the ride-sharing platform Uber...
  - Radical: Radical innovation involves the creation of technologies, services, and business models that open up entirely new markets.
    - => airplanes, wheel, transistor, ...

## High-tech vs low-tech

- Does innovation needs to be high-tech?
- Examples of low tech innovations?
  - Low-cost airlines
  - Suitcases with wheels
  - Starbucks
  - Time-sharing lease: RB&B
  - VOSS bottle: design and marketing
  - Monospace vehicles
  - Fast delivery systems
  - •Uber
  - •Dell direct sales of computers to customer without middle man.
  - Swatch: nothing but watches as fashion accessory.
  - •Loyalty mileage program: empty seats do not cost much to the company against mileage points, and increase customer's fidelity.

## Identifying opportunities and creating value

- Concept of "Pain/Needs/Desire" (Raphael Cohen)
  - "The greater the pain, the more the customer will be motivated to buy the painkiller". R. Cohen

- Why is it key to identify opportunities to successfully innovate?
  - "We may define Opportunity as the existence of an innovative solution to a market need". R. Cohen

## Other interesting topics on innovation...

- The innovation process
  - => idea generation, screening, prototyping, testing, and scaling
- The innovation culture
  - => values, behaviors, and practices supporting and encouraging innovation within an organization
- The innovation leadership
  - => ability to inspire, guide, and support innovation within an organization
- The innovation ecosystem
  - => network of individuals, organizations, and institutions that support and drive innovation within a region, industry, or sector



## Bureau de transferts de technologies

#### **Missions**

- Evalue le potentiel commercial des résultats de la recherche.
- Renseigne sur la **propriété intellectuelle** et protège les découvertes.
- Finance la transition d'un concept vers son implémentation par le **fonds INNOGAP**.
- Organise des séminaires de formation et des cours de sensibilisation.
- **Prépare et négocie** des contrats de collaborations, de licence et de transfert.
- Soutient la création de « spin-off » issues de l'Université et organise des manifestations de sensibilisation à l'entrepreneuriat

#### Clients



















4 mai Innovation basée sur la recherche

Laurent Miéville (Unitec)

Jean-Pierre Paccaud (Global Antibiotic R&D Partnership)

11 mai De chercheur(e) à entrepreneur(e)

Matthias Kuhn (Unitec)

Ricardo Gago (Venturelab, Venturekick)

Cyril Deléaval (Genilem) Lan Zuo (Science2Market) Nicolo Brembilla (HekeTiss)

25 mai Protéger vos idées

Olivier Deloche (Unitec)

Raymond Reuteler (Reuteler & Cie) Isabelle Cornut (Reuteler & Cie)

1er juin Collaborer avec des entreprises privées

Olivier Deloche (Unitec)

Vanessa Currat (Debiopharm International SA)

8 juin Valoriser vos inventions

Raluca Flükiger (Unitec)

Avec le soutien de:







