

# The Cambridge (UK) cluster

Dr. Georges Haour

IMD & Generics

[Haour@imd.ch](mailto:Haour@imd.ch)

Regional Cluster Seminar, Tokyo, July 18, 2006

Dr. Georges Haour is Professor at the Executive Education Institute **IMD** in Technology & Innovation Management. He is partner of the innovator-investor company **Generics**, in Cambridge, UK. He as well acts as an adviser to numerous organisations world-wide in the area of innovation/R&D management.

In the early 1990s, he initiated and directed study trips “MOT in Japan” for groups of managers to learn about innovation management practices of companies, such as Canon, Hitachi, Matsushita, NEC, Sharp, SONY Takeda and Toshiba.

Since 1983, he visits Japan at least once each year.

Prior to joining IMD, Dr. Haour was a manager at **Battelle**, in Geneva, where he led a business unit carrying out innovation projects on behalf of companies, many in Japan (Hitachi, Honda,...). He grew his unit's business well above \$ 4 million annually. Several of his innovations have been licensed to firms, resulting in substantial new business for the client companies.

Born in Lyon, France, he graduated in Chemical Engineering from the Ecole Nationale Supérieure de Chimie de Paris. He has a Ph.D. in Chemistry and Materials Science, from the University of Toronto, Canada.

Dr. Haour has 8 patents and more than 90 publications. In his theme of *creating value through technological innovation*, his latest book, **Resolving the Innovation Paradox** (Palgrave, London) was published in Japanese in 2006 by First Press, in Tokyo ([www.firstpress.co.jp](http://www.firstpress.co.jp)). The web site for the book is [www.innovationparadox.com](http://www.innovationparadox.com)

He is on the board of several organizations and founded IFTM-International Forum for Technology Management, where, each year, managers and academics discuss issues specific to technology firms. The Forum venues include Kyoto, Bangalore, Paris, Shanghai and Istanbul.

# Innovation & Entrepreneurship in the area of Cambridge, UK

## *Abstract*

Over a period of 50 years, the “Cambridge Phenomenon” has organically developed into a dynamic economic region.

Within 60 kilometres of Cambridge are located 600 technological firms employing more than 20 000 people. Life-science is rapidly complementing the initial physics-based activities.

This cluster is presented around the University of Cambridge, which has the world’s largest number of Nobel laureates.

Generics’ unique business model as a “start up factory” will also be discussed ([www.genericsgroup.com](http://www.genericsgroup.com)) as an actor in this “Silicon Valley of Europe”.

This presentation aims at guiding an exchange with the participants.

# The «Cambridge Phenomenon»

## - the Cambridge region :

- ◆ counts more than 600 technology companies (one third are start ups)
- ◆ employs 20,000 people (8% growth in 2000-05)
- ◆ represents 0.5% of the U.K. population
- ◆ has 5% of total UK employment in R&D

# Many corporations have a R&D unit in Cambridge: *(embedded or stand alone)*

- Hitachi, Toshiba
- Microsoft
- Pharmaceutical companies

Also present: venture capitalists, patent lawyers,...

# The Cambridge phenomenon

- Diversity (Telecom, pharma, biotech, micro-electronics)
- In 1960: small town with big University
- In 2000: one of Europe's main centers for high tech

*This happened spontaneously*

# Key reasons for this success:

- Excellence in research & teaching of the University
- Pioneering St John's Science Park, started in 1987 ([www.stjohns.co.uk](http://www.stjohns.co.uk)), now has 65 companies employing 500 persons
- Ethos of *trust* at the University: no limit on consulting for Profs., patent rights belong to academics – this is changing

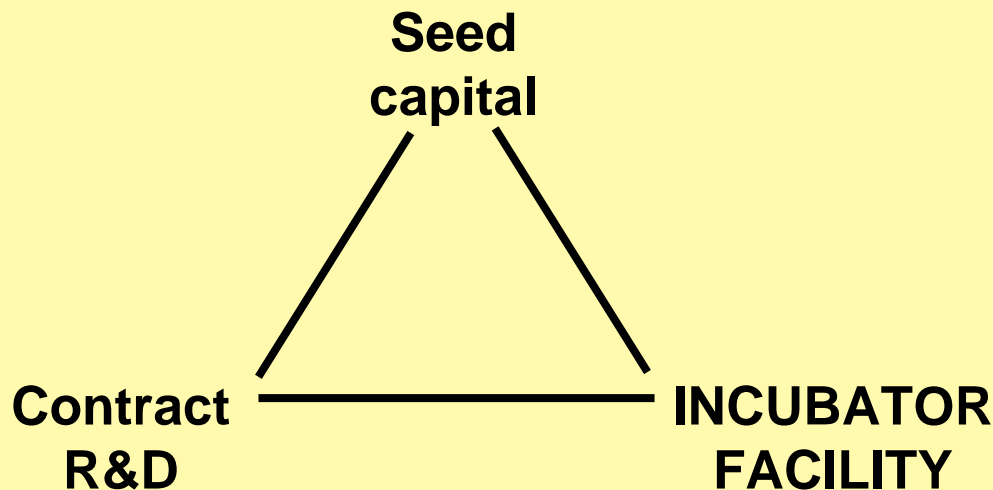
# Past successes:

- Sinclair Electronics (in the 1980s)
- Acorn Computers (bought by Olivetti)
- Cambridge Instruments (Stereoscan)
- Cambridge Research Bio. (now ICI)
- Microprocessor design company ARM
- Cambridge Silicon Radio (blue tooth chip)
- CDT (light emitting polymers)

*But no large corporation emerged (yet)*

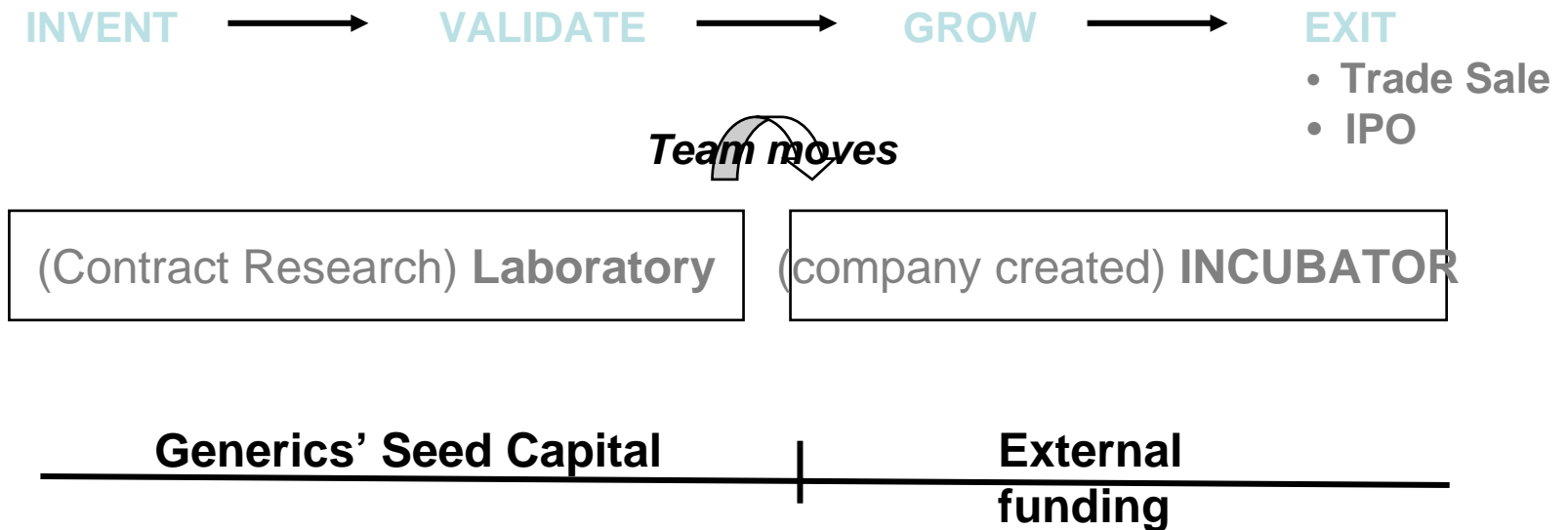
# Actor of the Cambridge region, Generics, has a unique 3-function business model:

- ◆ Founded in 1986; listed at the LSE (IPO in 2001)
- ◆ Today: 250 persons in Cambridge
- ◆ In 15 years, 19 « spin out » companies



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

# The *start up factory*: the contract research lab. is source of entrepreneurs & innovations



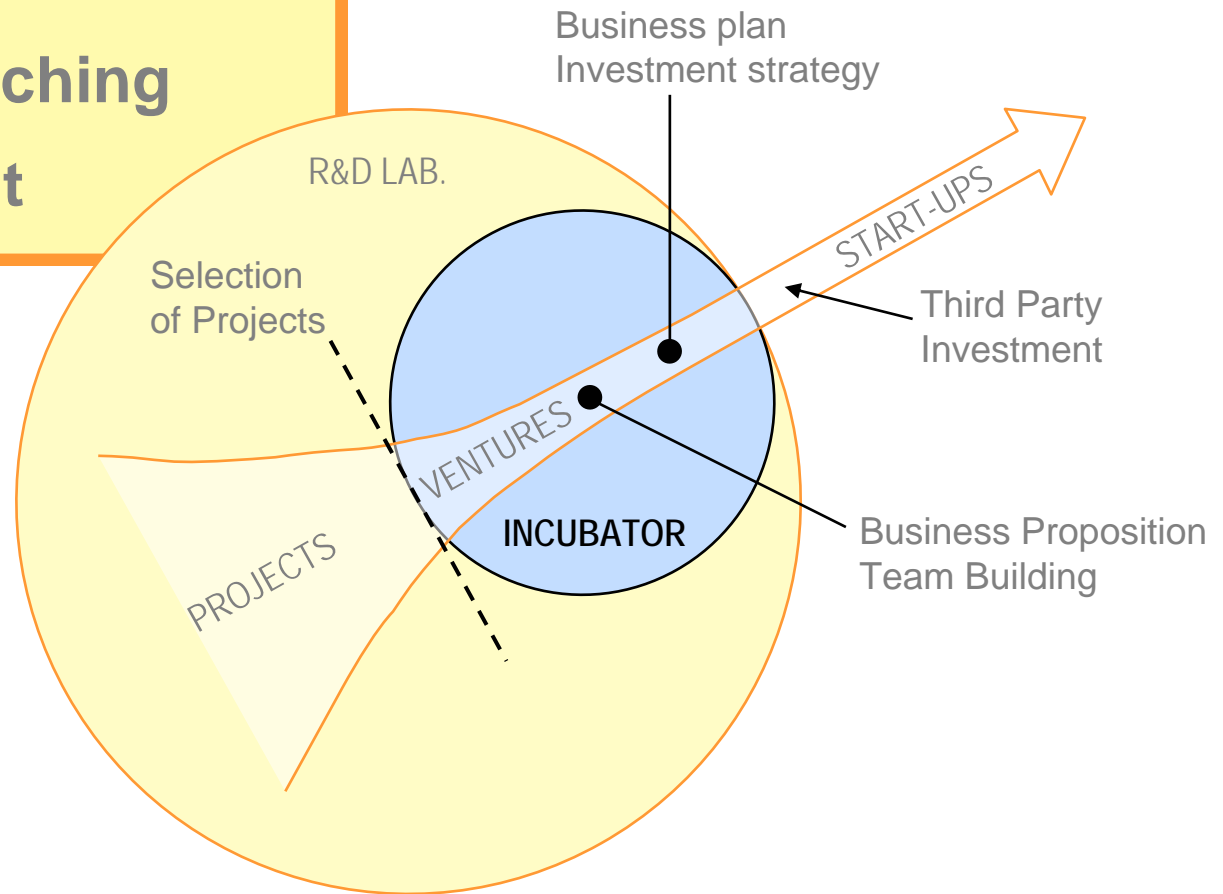
- *Milestones of venture checked by IEB - Innovation Exploitation Board*
- *Start up team (2-5 people) benefits from interacting with colleagues*
- *From firm creation to trade sale: 3 to 6 years*

# The example of Absolute Sensors

- Science-based patented sensor in 1994
- Development of sensor for elevator company
- Patent rights on elevator application to client, other fields of use available to Generics
- Team leaves Generics to found AS in '96
- Various licensing deals (toys,...); application to PDAs identified
- Trade sale (several mio. £) to Synaptics (Palo Alto), producer of PDAs

# Incubating «spin outs »(Generics, Brightstar)

- ◆ Project selection
- ◆ Venture coaching
- ◆ Spinning out



# Advantages for start ups of an « integrated » incubator, such as Generics:

- ◆ **Venture-team concentrated on the business**
- ◆ **Support services on-site: IP lawyers, IT,**
- ◆ **Continuous (fierce) peer review**
- ◆ **Senior management available**
- ◆ **Access to extensive network of firms, investors,..**

*Thus, considerable business experience and knowledge available on-demand and on-site.....*

# By operating a (successful) incubator, a company

- ◆ **creates value**
- ◆ **encourages a culture of researchers-entrepreneurs**
- ◆ **projects qualities of speed and agility to the market and to candidates**

# “Clusters” are nothing new

- In Roman and medieval towns, textiles or leather artisans were located in one area
- The value is in the *learning* through stimulation and exchanges

# Cluster to enhance value-creation ?

- TAMA Association
- Italian districts (Benetton),....
- Proximity of start ups, corporations and business school may be particularly effective....., if well managed.
- This points to the notion of “***architect*** of innovation”, described in my latest book ([www.innovationparadox.com](http://www.innovationparadox.com))