

# **Chapter 9**

**Starting a business from research  
results and forming a "Spin-off"**

# Learning objectives

- Why is it possible to start a business from the results of scientific-technical-technological research?
- Factors affect the allocation of shares in a university spin-off.
- Experience in converting scientific research into spin-offs.

# What is Spin-Off?

- A corporation is formed by: 1) a lecturer, an employee, or a student who leaves the university to form a corporation or incorporates a corporation while remaining a member of the university; and/or 2) around a technology or a technology-based idea developed on campus.

***Smilor and Colleagues (1990)***

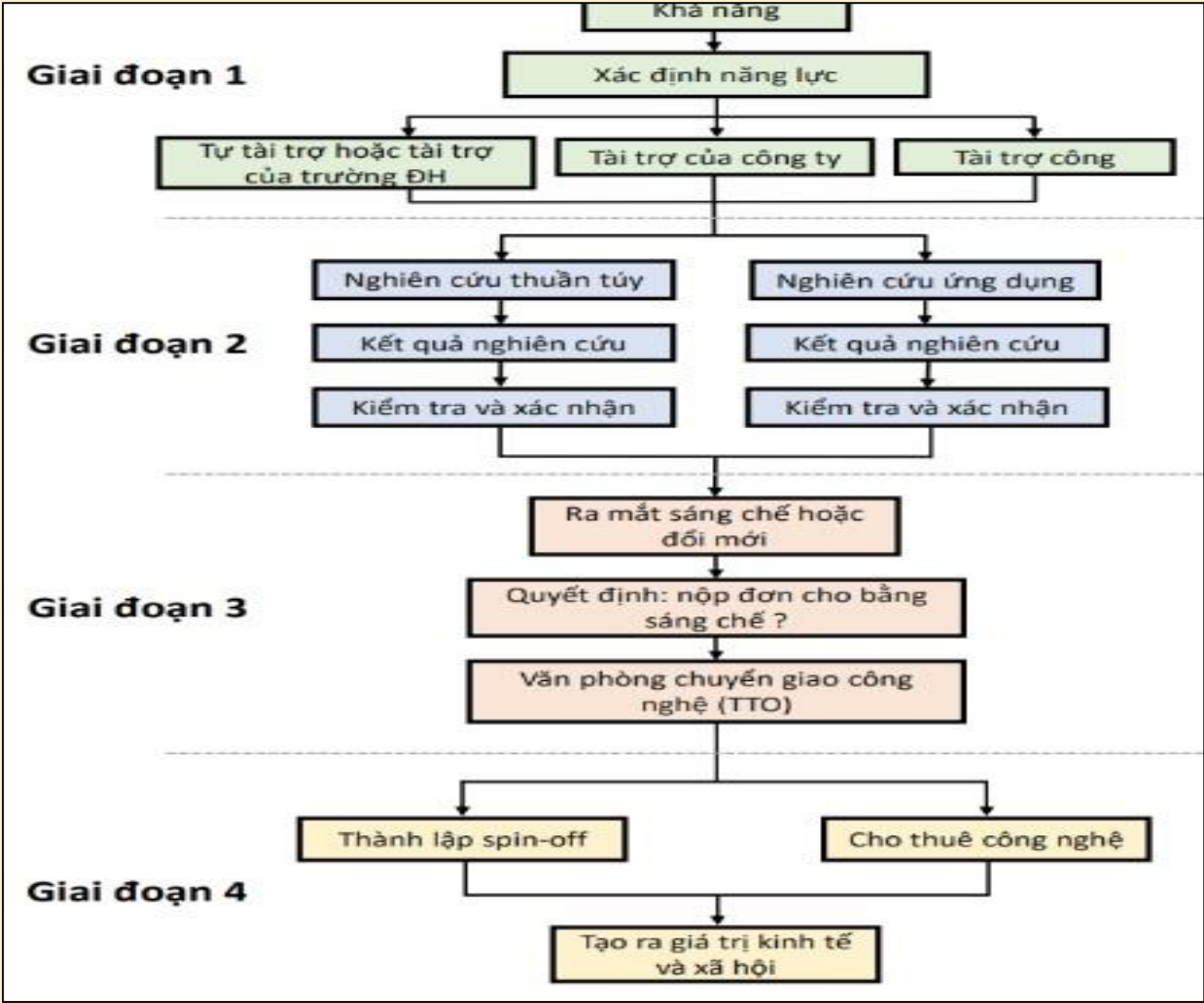
- A new company or organization to exploit the results of university research.

***Klofsten & Jones-Evans (2000)***

# Why do we need to have a Spin-Off?

- ***A Spin-Off contributes local economic development***
  - ❖ First, it creates business chances by converting research results into credible technologies leading to the market solution creation.
  - ❖ Second, a spin-off often conducts most of its basic operations locally, such as hiring, sourcing, manufacturing, etc.
- ***Commercialization of university technology***
  - ❖ A Spin-off often takes advantage of university technologies, but they might not have been developed under other circumstances.

# Formation model with multi-phase university spin-off

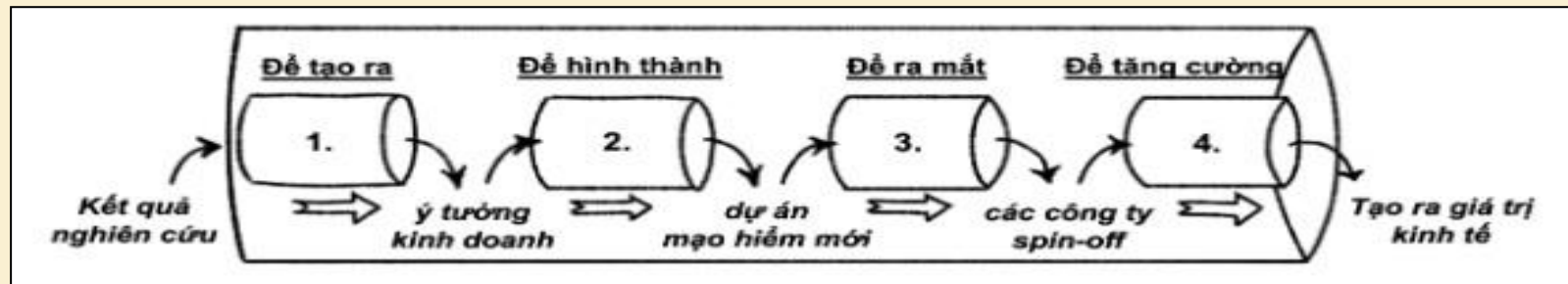


Source: Cục TTKH & CNQG, Bộ KH&CN. 2021. “Spin-Off” – Kênh chuyển giao và thương mại hóa kết quả nghiên cứu quan trọng của trường Đại học.

# The importance of university spin-offs in developed countries

- *University spin-offs generate financial resources.*
  - ❖ University spin-offs are an effective tool for transferring university technology, contributing not only to directly generating financial resources for the university, and improving the university's vision but also enrichment and hands-on opportunities to attract the best students and provide teachers with increased earning opportunities, etc.
- *Spin-off companies have strong vitality*
  - ❖ Compared with other companies, university spin-offs have a higher survival rate, which means they can provide jobs, promote economic growth, and create more social wealth.
- *Spin-off companies serve the core mission of university*
  - ❖ University spin-offs not only create enormous economic benefits but also promote teaching and scientific research.

# Stages of formation and division of shares of a university spin-off



Source: Cục TTKH & CNQG, Bộ KH&CN. 2021. "Spin-Off" – Kênh chuyển giao và thương mại hóa kết quả nghiên cứu quan trọng của trường Đại học.

- Phase 1: Generate business ideas from research.
- Phase 2: Form new business projects from ideas.
- Phase 3: Launch spin-off companies from projects.
- Phase 4: Strengthen economic value creation by spin-off companies.

# Factors affect the allocation of shares in a university spin-off

- Successful spin-offs often have some of the following key elements.
  - ❖ Market demand has not been clearly met.
  - ❖ A reliable and competitive solution for this market need.
  - ❖ A well thought out business model.
  - ❖ Strong intellectual property rights protection base.
  - ❖ Experienced, dedicated person.
  - ❖ Enough funding.



# Factors affect the allocation of shares in a university spin-off (Cont.)

- The following considerations may affect the value of the spin-off and the allocation rate to the university and to the founders.
  - ❖ When will I receive the percentage of shares? Is it before or after the first significant investment into the company?
  - ❖ What will the shares be exchanged for? Will there be a separate license for intellectual property?
  - ❖ How can founders benefit from spin-off success?
  - ❖ Does the university help develop the business plan, find management and/or raise capital for the spin-off?
  - ❖ Does the spin-off benefit from the university's name and reputation? Etc.

# **Experience in converting scientific research into spin-off of Y Combinator - The most famous startup incubator in USA**

- Y Combinator (YC) is the starting place of about 1,000 startups in the US, including famous names like Dropbox and Airbnb.
  - ❖ YC has funded more 75 university spin-offs.
  - ❖ YC's research team investigated that called Bio Tour at universities.
  - ❖ They visited research universities and spoke to hundreds of students and professors in the life sciences about commercializing their research.
  - ❖ The investigation have some advice for people who have been doing scientific research at a university and are considering starting a company to commercialize it.

# Experience in converting scientific research into spin-off of Y Combinator - The most famous startup incubator in USA (Cont.)

- ***Decide who is a spin-off***
  - ❖ Many scientific founders have misconceptions about how to structure their founding team. These are the most common mistakes.
    - You can establish a company and continue your research career.
    - You should find a CEO to run the company.
    - Need someone with business experience in the founding team.
    - Should raise capital, then leave university.

# Experience in converting scientific research into spin-off of Y Combinator - The most famous startup incubator in USA (Cont.)

- ***Decide who is a spin-off***

- ❖ Solution

- The ideal situation is that two or more people who are from the lab leave their jobs together to form a spin-off as co-founders.
- A full-time founder is fine. One of the people leaving to start the company should be the CEO.
- In many cases, others involved in research want to stay at the university but still contribute in another way, such as academic or scientific co-founders.

# Experience in converting scientific research into spin-off of Y Combinator - The most famous startup incubator in USA (Cont.)

- ***Decide when to become a spin-off***
  - ❖ In the early stages of developing a new technology, you will progress faster if you are still at university and take advantage of university resources.
  - ❖ However, it is possible to grow much faster when done entirely in spin-off because it saves time compared to doing it before.

# Experience in converting scientific research into spin-off of Y Combinator - The most famous startup incubator in USA (Cont.)

- ***Split ownership equity***
  - ❖ Once deciding who will work full-time in the spin-off and identify everyone's role in the company, you can split the ownership shares based on the following regulations.
    1. Spin-off founders who have a full-time job must receive equal or nearly equal ownership shares.
    2. Founders who leave their jobs to work full-time on the spin-off will receive more ownership shares than founders who still work at a university.

# Experience in converting scientific research into spin-off of Y Combinator - The most famous startup incubator in USA (Cont.)

- ***Negotiate with the office of technology transfer***
  - ❖ If you intend to commercialize research at a university, you will likely need to negotiate intellectual property rights in the technology transfer office.
  - ❖ There are usually four key articles in these agreements.
    - Ownership shares.
    - License fees/Royalties.
    - Important payments.
    - Exclusivity.

## In conclusion

- Why is it possible to start a business from the results of scientific-technical-technological research?
- Factors affect the allocation of shares in a university spin-off.
- Experience in converting scientific research into spin-offs.

Understand





**THANK YOU  
FOR YOUR ATTENTION**

**Q&A**