

# **The Evaluation Method for Basic Research in Korea**

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# Introduction

- Why Basic Research?

- Important factor for the innovation and growth engine, in the 21 C, knowledge based system

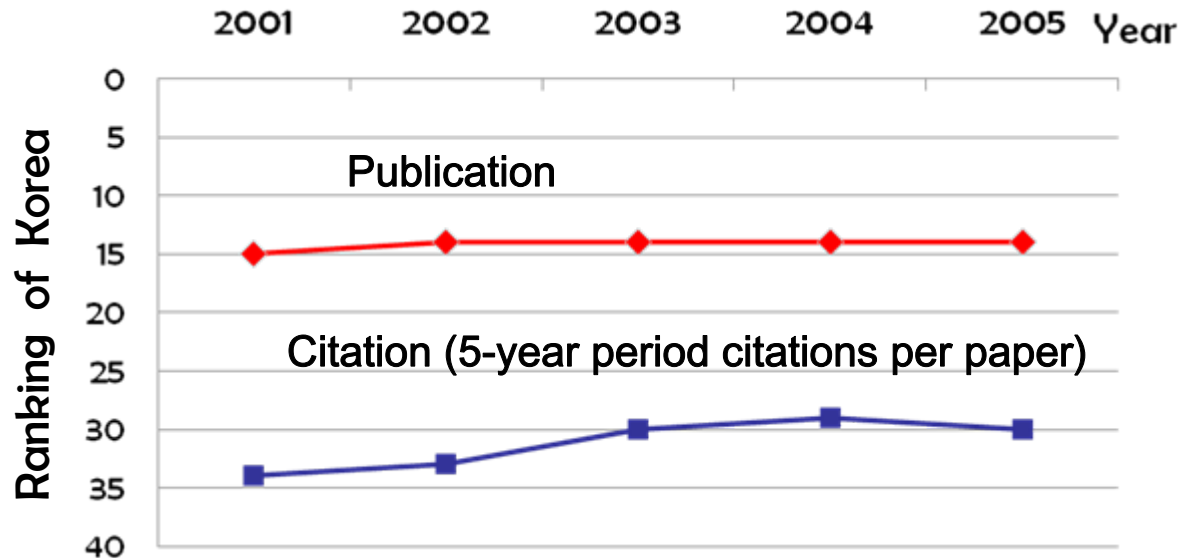
The New Economy: Beyond The Hype (OECD 2001)

Rising Above The Gathering Storm: Energizing and Employing America for a Brighter Economic Future (USA, National Academies 2005)

Plan For The National Finance 2004~2008(Korean Government 2004)  
: *“plan to increase the budget for basic research”*

# Introduction

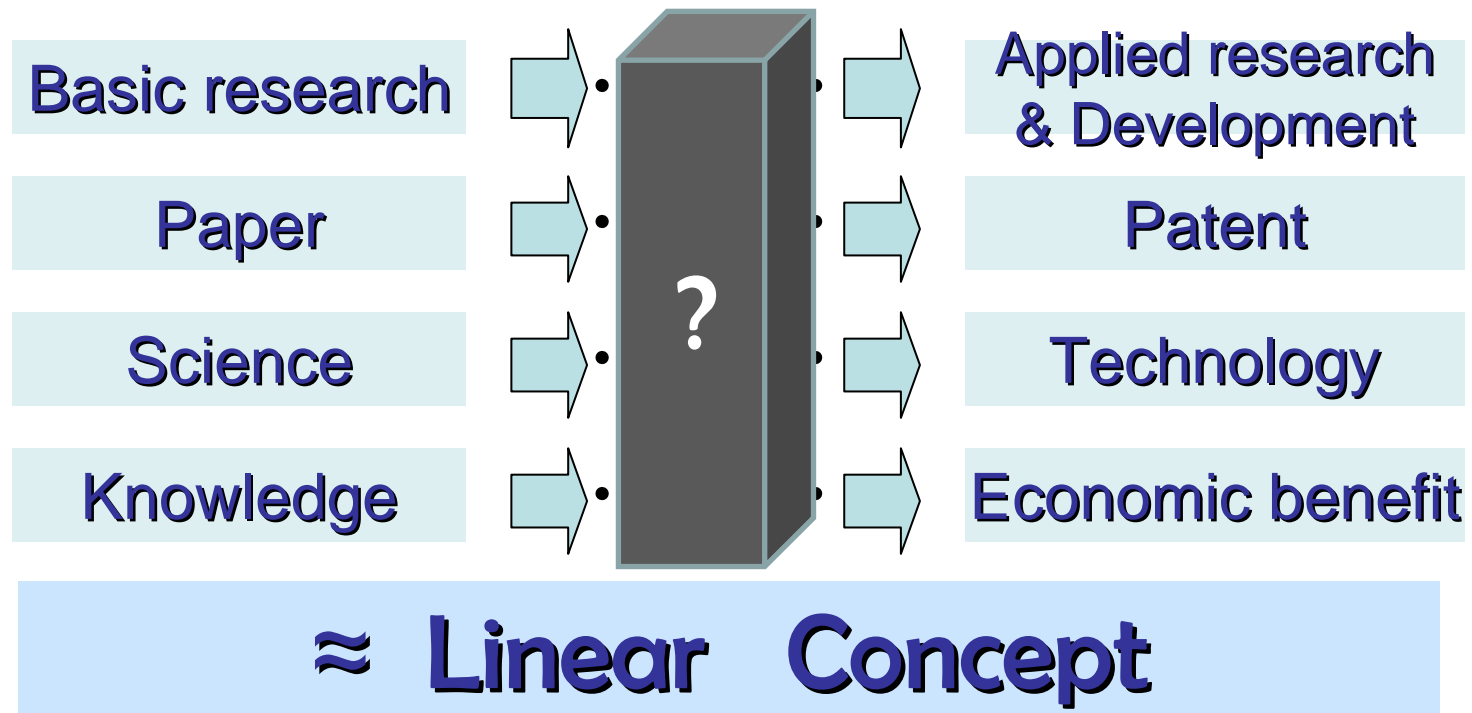
- Current Status of Basic Research(Paper) in Korea



- We need to improve the quality of the papers.
- How?   => Improve the effectiveness of R&D program  
          => Improve R&D Evaluation method

# R&D Evaluation Method in Korea

- Basic Concept for R&D Program Evaluation



# **R&D Evaluation Method in Korea**

- **Output Indices for R&D Program Evaluation**
  - Paper
  - Patent
  - Commercialization
  - Technology Transfer
  - ...

# R&D Evaluation Method in Korea

- Available Questions for R&D Program Evaluation
    - Do you produce any paper?
    - Where is the result of your research used?
    - Do you produce any patent?
    - What is a socioeconomic contribution from your research?
    - ...
- at the moment of the end of research !*

# R&D Evaluation Method in Korea

- Are we asking correct questions for basic research?
- Can we know the meaning of basic research at the moment of the end of research?

**When & Where**

**“ Uncertainty ”**

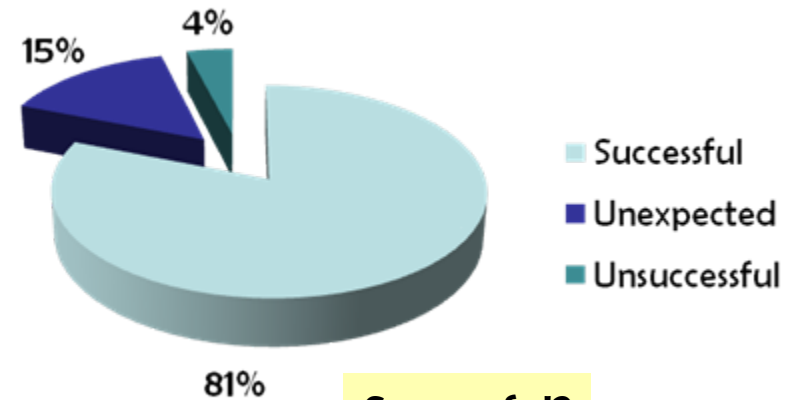
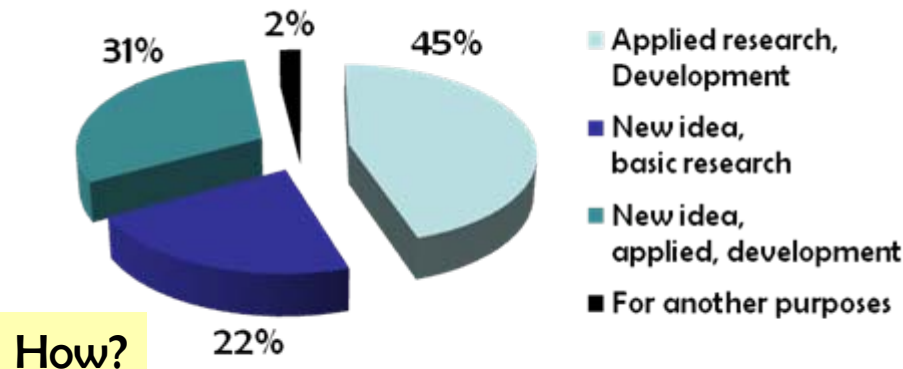
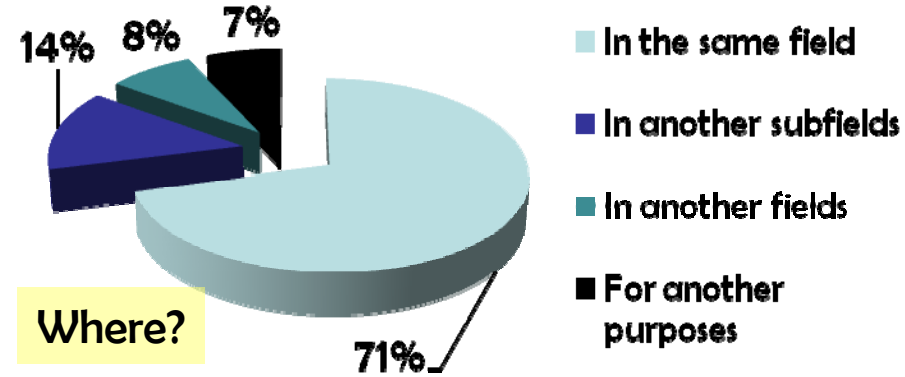
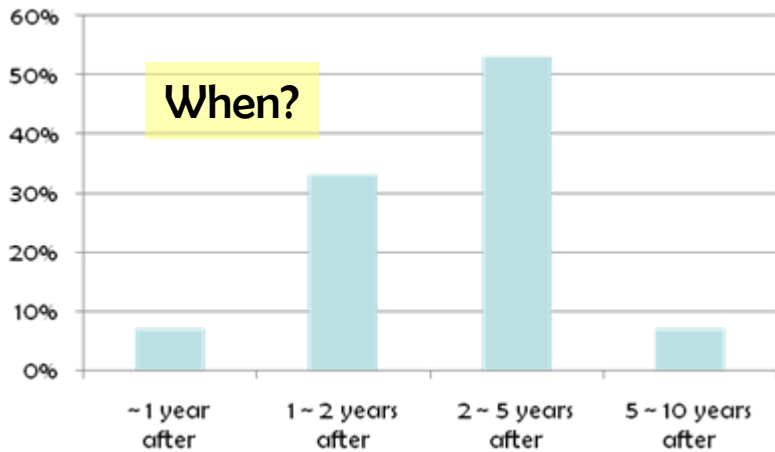


# Characteristics of Basic research

- Survey Result of Researchers in Korea
  - **When** is the result of your basic research used?
  - **Where** is the result of your basic research used?
  - **How** is the result of your basic research used?
  - **Successful**, unsuccessful or unexpected result at the moment of the end of basic research?

# Characteristics of Basic research

## ● Survey Result of Researchers in Korea

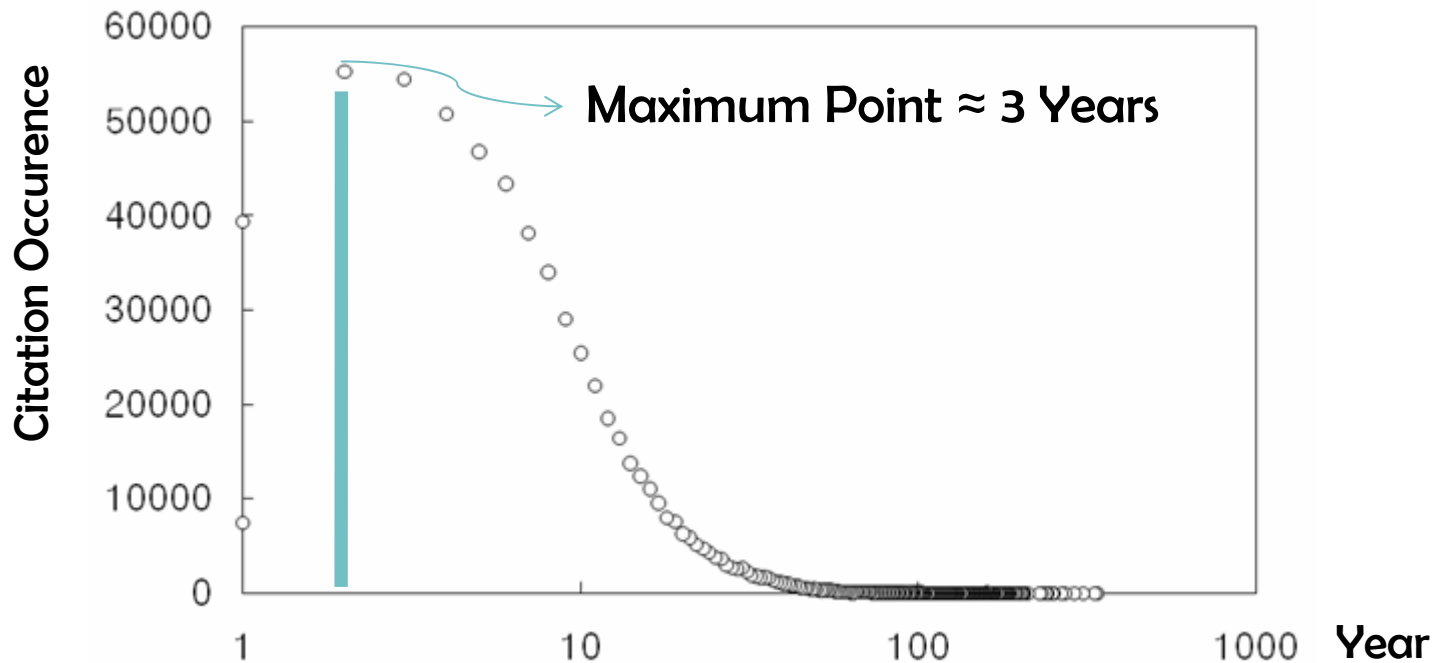


# Characteristics of Basic research

- Network Analysis with SCIE papers in Korea
  - ※ Citation Network Analysis with SCIE papers by Korean authors in 2006/1996
    - (When) Referencing time distribution
    - (Where) Knowledge transfer between fields of S&T by citation analysis

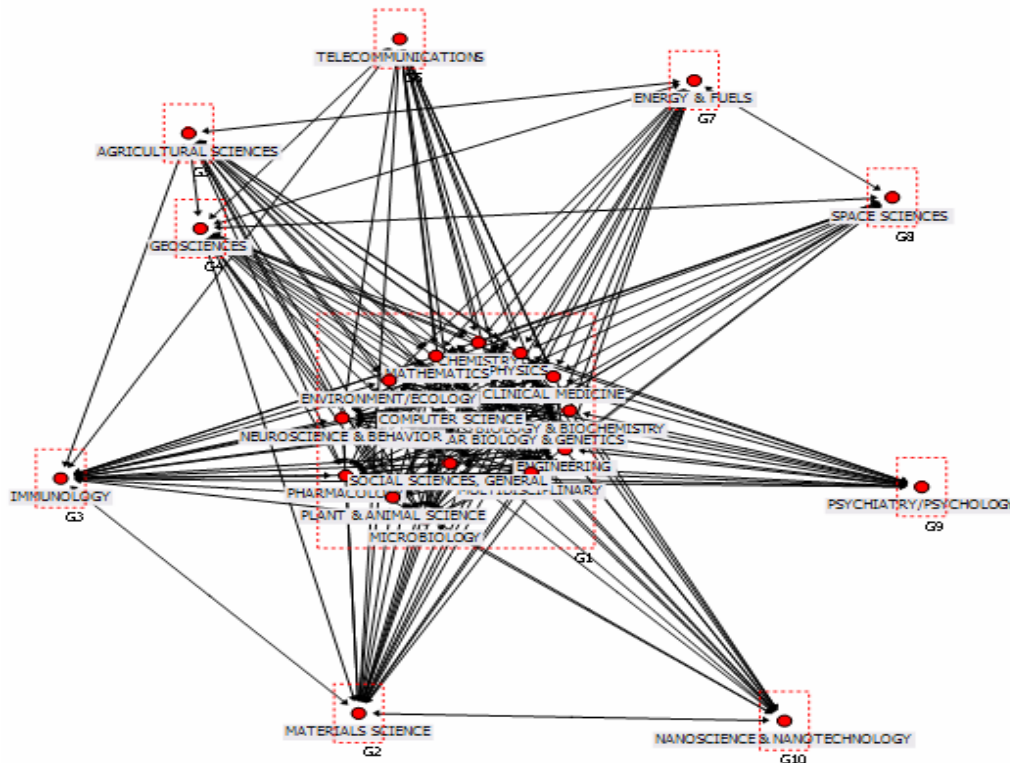
# Characteristics of Basic research

- Network Analysis with SCIE papers in Korea
  - Referencing time distribution



# Characteristics of Basic research

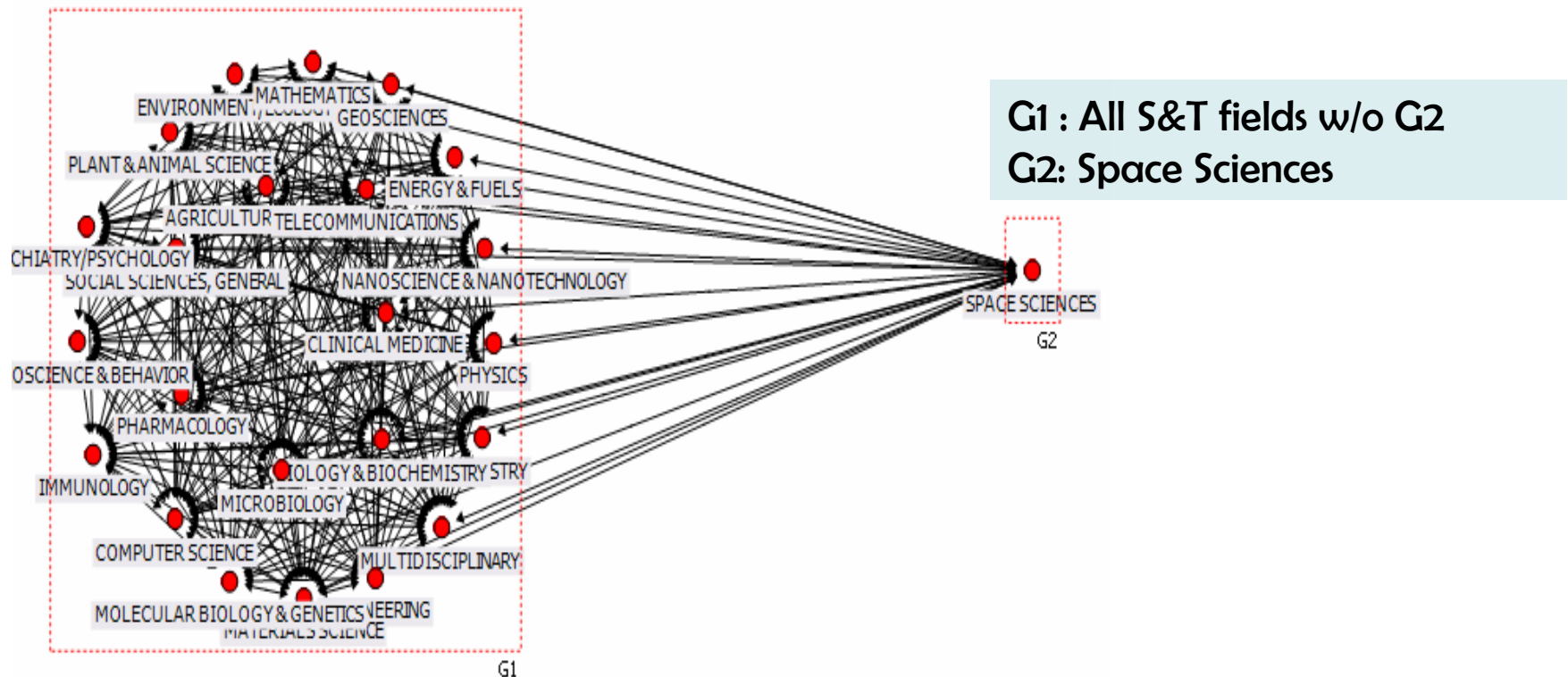
- Network Analysis with SCIE papers in Korea
  - Citation Network map (fields relation/knowledge transfer map, 1996)



- G1 : All S&T fields w/o G2~G10
- G2: Material Science
- G3: Immunology
- G4: Geosciences
- G5: Agricultural Sciences
- G6: Telecommunications
- G7: Energy & Fuels
- G8: Space Sciences
- G9: Psychiatry/Psychology
- G10: Nano Science&Tech

# Characteristics of Basic research

- Network Analysis with SCIE papers in Korea
  - Citation Network map (fields relation/knowledge transfer map, 2006)



# Summary

## When ? & Where ?

1. At the moment of the end of basic research

=> How about **After 3~5 years ?**

2. Question list

• Do you produce any paper?



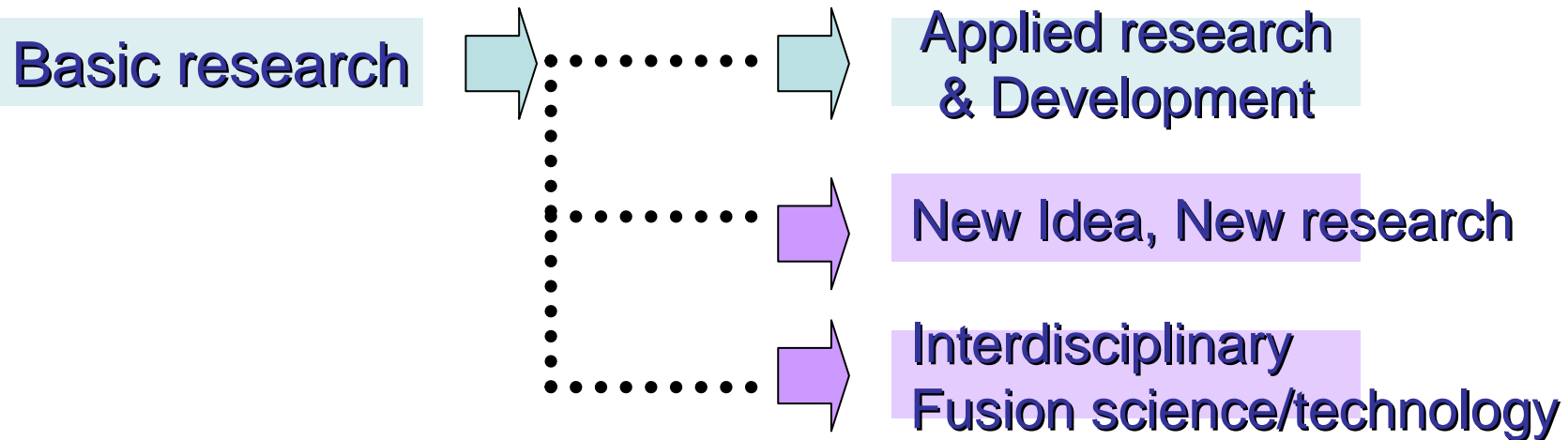
- Any paper?
- Any additional unexpected result?
- Where is the result used?
- Same field or another field?
- Applied or patent?
- Produce new idea? New S&T field?

# Summary

## Linear Concept ?

### 3. Horizontal Concept needed

(Knowledge transfer between S&T fields)





**Thank you.**

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