

**Badan Pengembangan Sumber Daya Manusia (BPSDM)  
Provinsi Kalimantan Timur**

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# ***Covid-19, Revolusi 4.0 dan CorpU***

***Dr. Ery Arifullah, S.T, M.T***

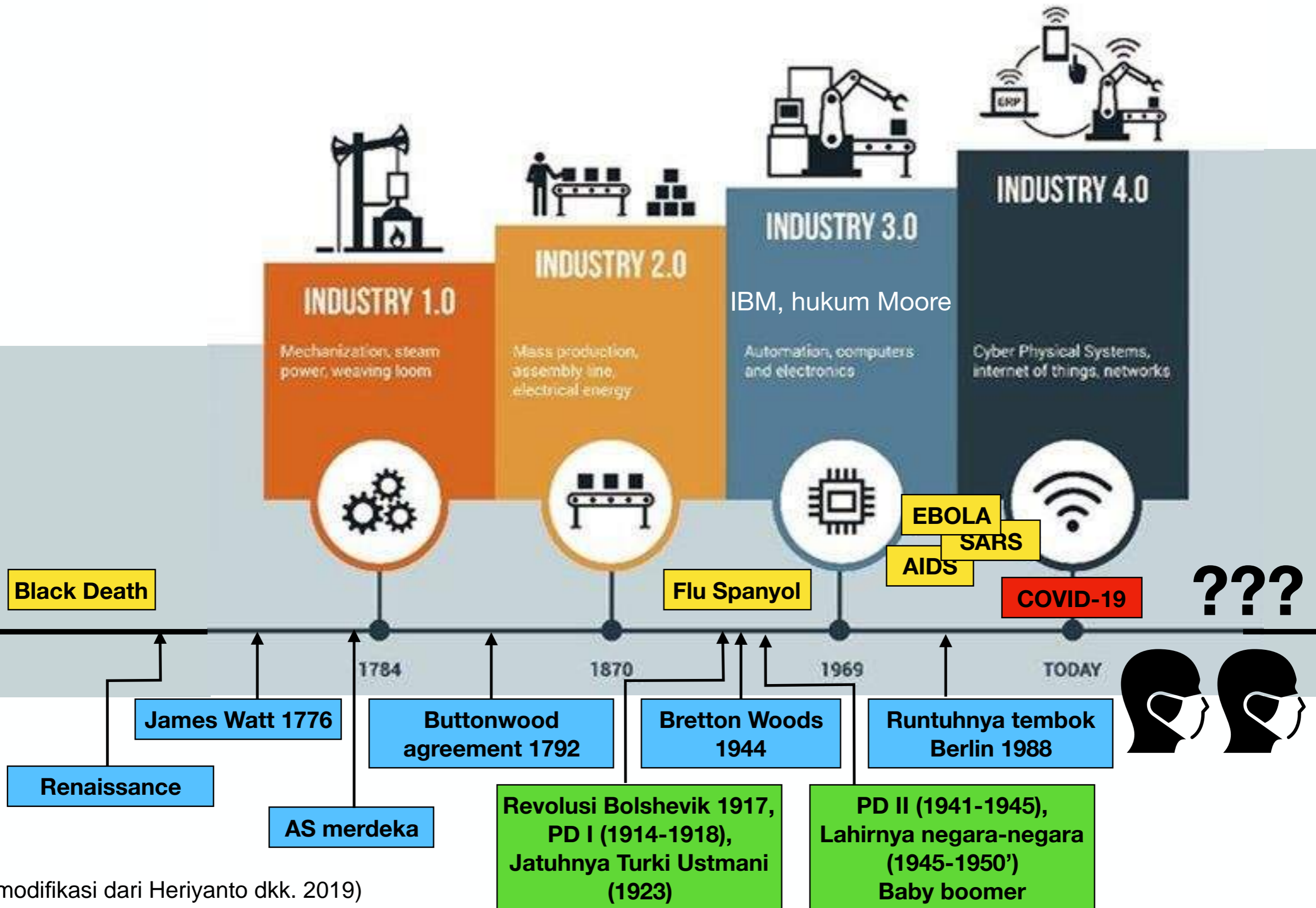
**Badan Pengembangan Sumber Daya Manusia Prov. Kaltim**

# Intro.....

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- Dunia telah berubah secara eksponensial.
- Organisasi perlu mencari formula yang tepat untuk bertahan hidup.
- Bagaimana formulanya?
- Setiap permasalahan selalu ada formulanya.

# Peristiwa-peristiwa besar (Black Swan dan events)





“The pandemic represents a rare but narrow window of opportunity to reflect, reimagine, and reset our world.”

**Klaus Schwab**

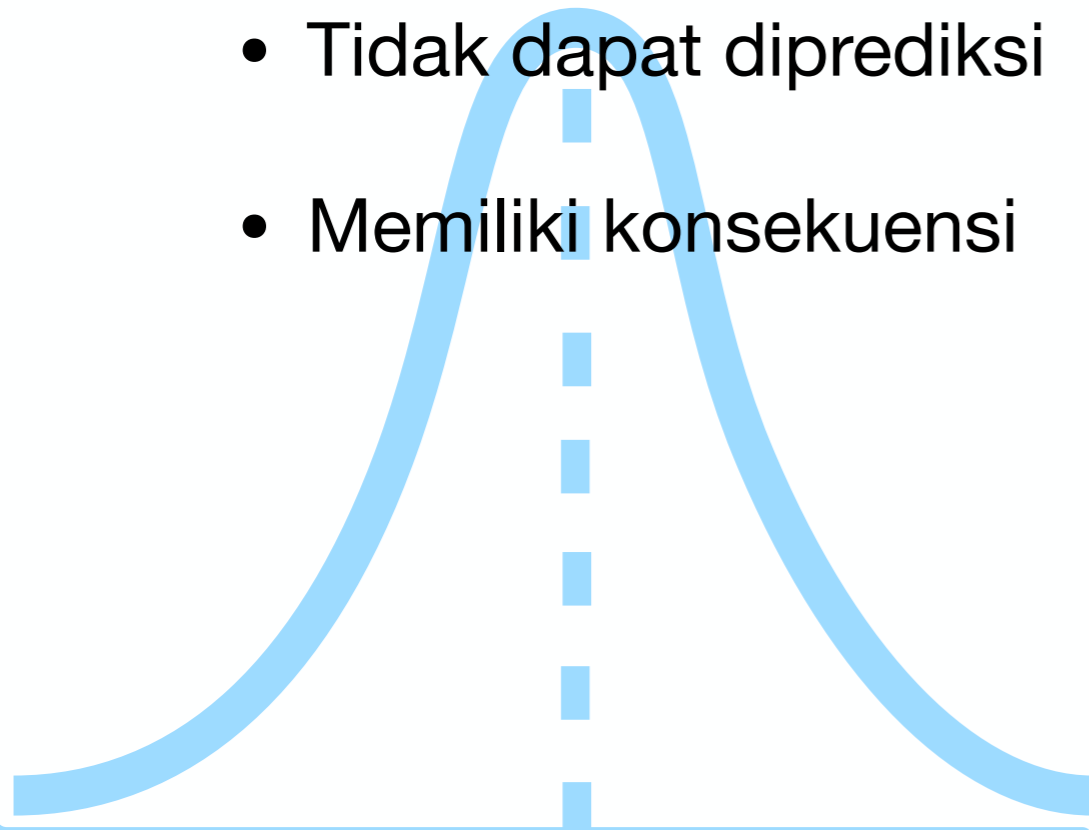
Founder and Executive Chairman, World Economic Forum





## ***Black Swan?***

- Ketidakpastian
- Tidak dapat diprediksi
- Memiliki konsekuensi





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**Bahan...**

# Studi Pustaka



Journal of Physics: Conference Series

## Workforce Mapping of Fourth Industrial Revolution Optimization to Identity

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**Abstract:** The most challenging issue in Industry 4.0 is the role of the worker. This study proposes a necessary concept in identifying a job that is replaced by machines and a job that is not replaced by machines. It explains the job matrix based on the degree of automation and the degree of complexity. The matrix defines the nature of a job into a routine human to human interaction, complex human to human interaction, human to machine interaction, and finally machine to machine interaction. The job matrix can be used as a tool for an organization to develop strategies in the Industry 4.0. The research was based on a qualitative method where secondary data gathered from the literature review analysis. The research job and intervention task required will be replaced by machines and technologies. While, job matrix with complexity in decision-making, creativity, innovation, and cooperation will remain sustainable in the Industry 4.0.

### 1. Introduction

Previous research explains the Industry 4.0 or 4th Industrial Revolution (IR4) is all about production efficiency that supports the reduction of the human workforce due to the advancement of technologies include Internet of Things (IoT), big data, 3D printing, artificial intelligence, sensor technology, and robotics. These technologies support the manufacturing sector to create 'the Smart Factory' [1]. Since there will be many automated or routine replaced by technology, it is believed rising the unemployment rate with increasing population and declining employment opportunities. For instance, in the context of smart factories, many factories transform into highly autonomous and many human workers are replaced with robots, AI, or expert systems. The benefit of the change would only be focused among the elite and the income became more polarized. It is estimated that in the US alone, 47% of the workforce will be laid off due to business automation [2].

There will be a decline in a traditional job and instead, there will be an increasing demand for skilled labor, that can program and design new digital systems [3]. The increasing level of digital innovation is raising many manufacturing jobs to become obsolete. More efficient production caused by new technology will cause the rationalization of input factors. Some workers will get laid off as a higher output can now be generated with less labor and with the help of smart machines [4]. Workers who are most at risk of losing a job, are those working in production, logistics, and transportation [5]. Focusing on the manufacturing industry currently which still relies heavily on labor input in production, a wave of cultural resistance to Industry 4.0 implementation is expected [6]. While workers in physically demanding roles will be replaced. However, complex automation is not realistic. Industry 4.0 is more about assisting or optimizing human workers to perform rather than

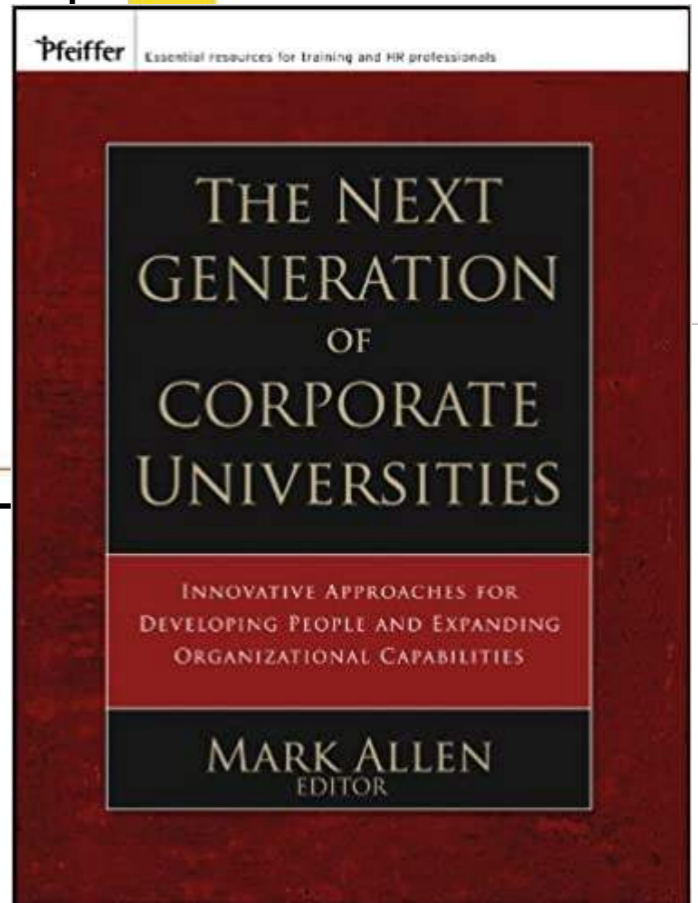
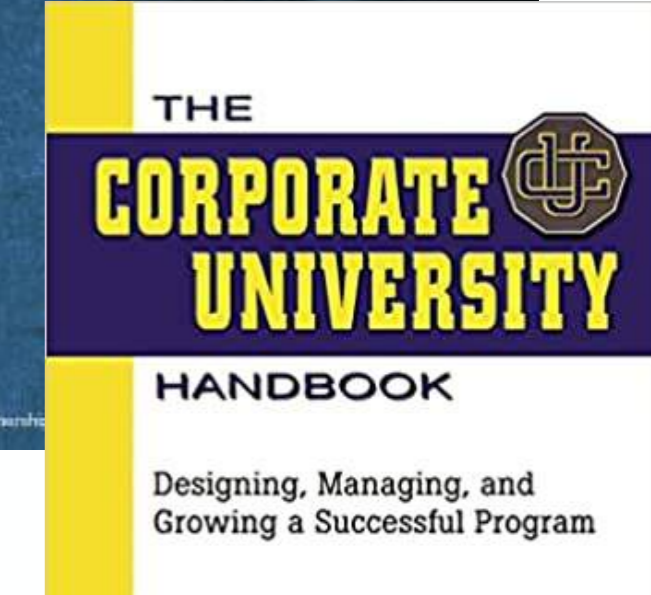
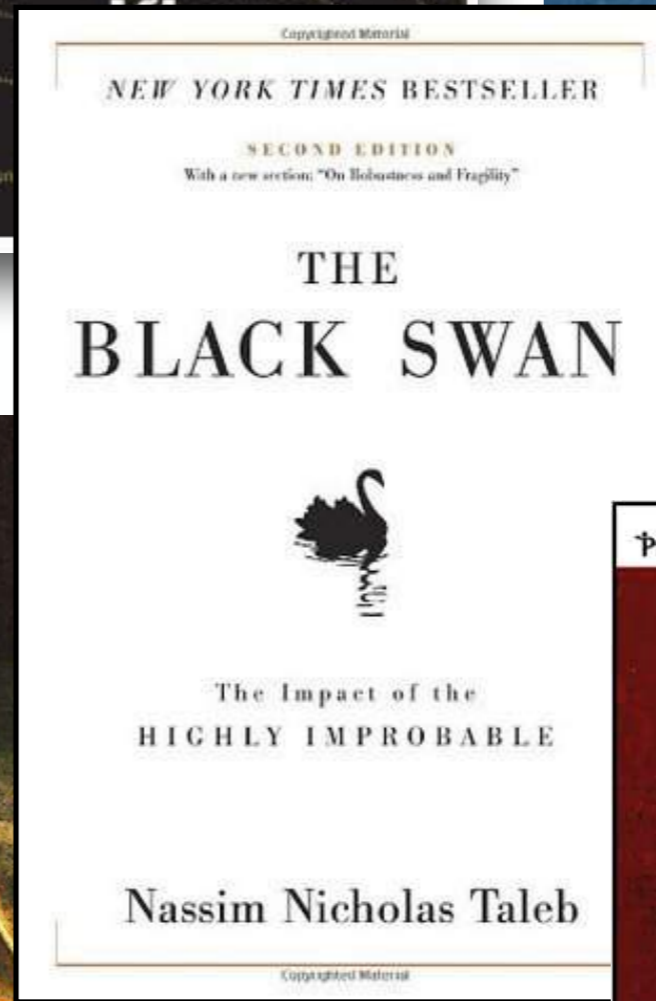
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Herbert A. Simon



The Sciences of the Artificial

Third Edition



# Pengamatan

- Artificial Intelligence (AI) —> mahasiswa (generasi millennial?)
  - Pelacakan sumber daya alam
  - Kestabilan lereng
- Pengembangan aplikasi —> mahasiswa + peserta Latsar (mengembangkan sendiri)



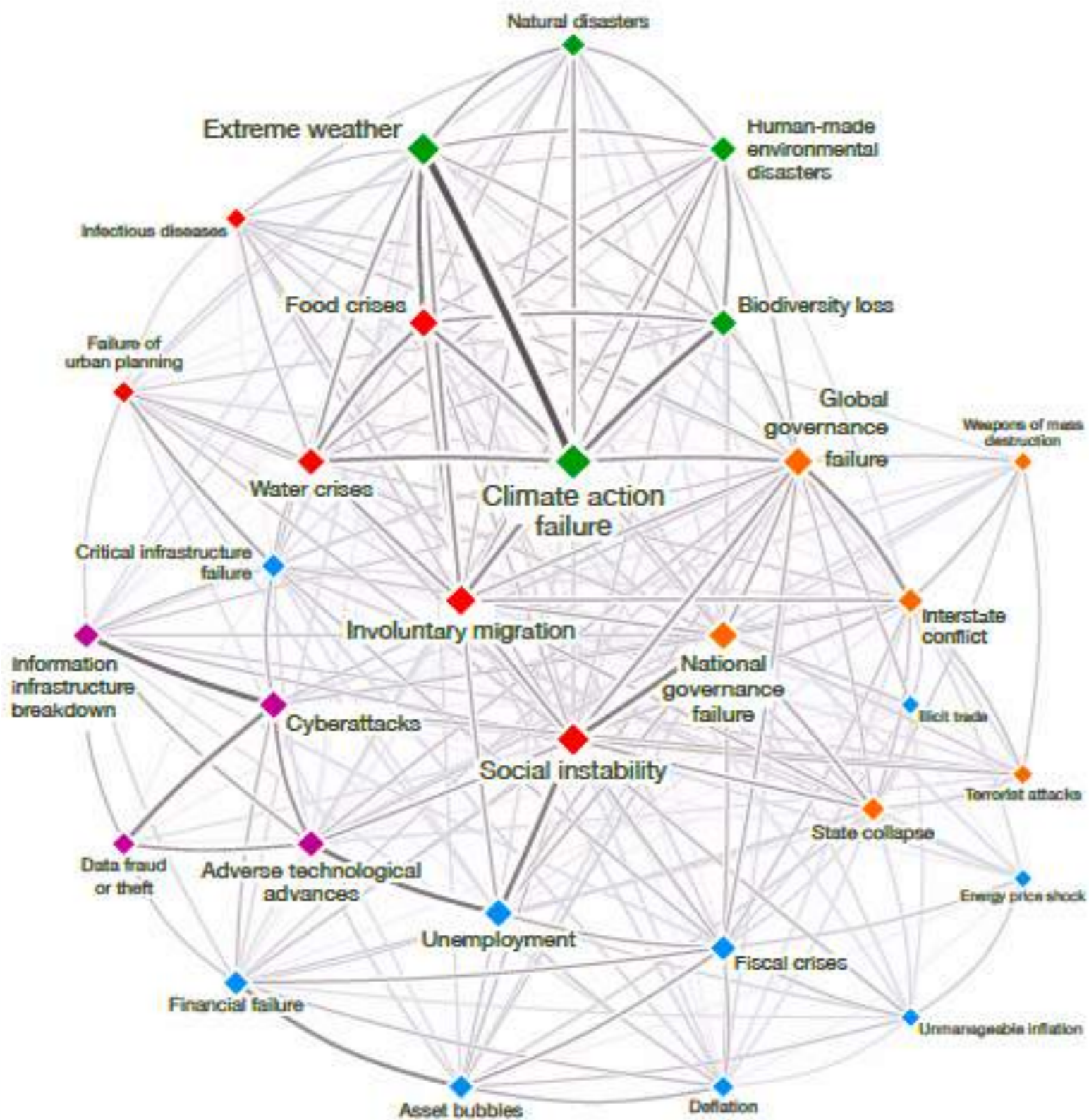
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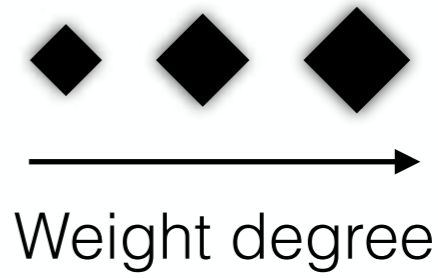
**Hasil & Diskusi**

# 1. Covid-19 menjadikan dunia semakin global

(World Economic Forum, The Global Risks Report 2020, Figure IV)



- ◆ Economic Risk
- ◆ Environmental Risk
- ◆ Geopolitical Risk
- ◆ Social Risk
- ◆ Technological Risk



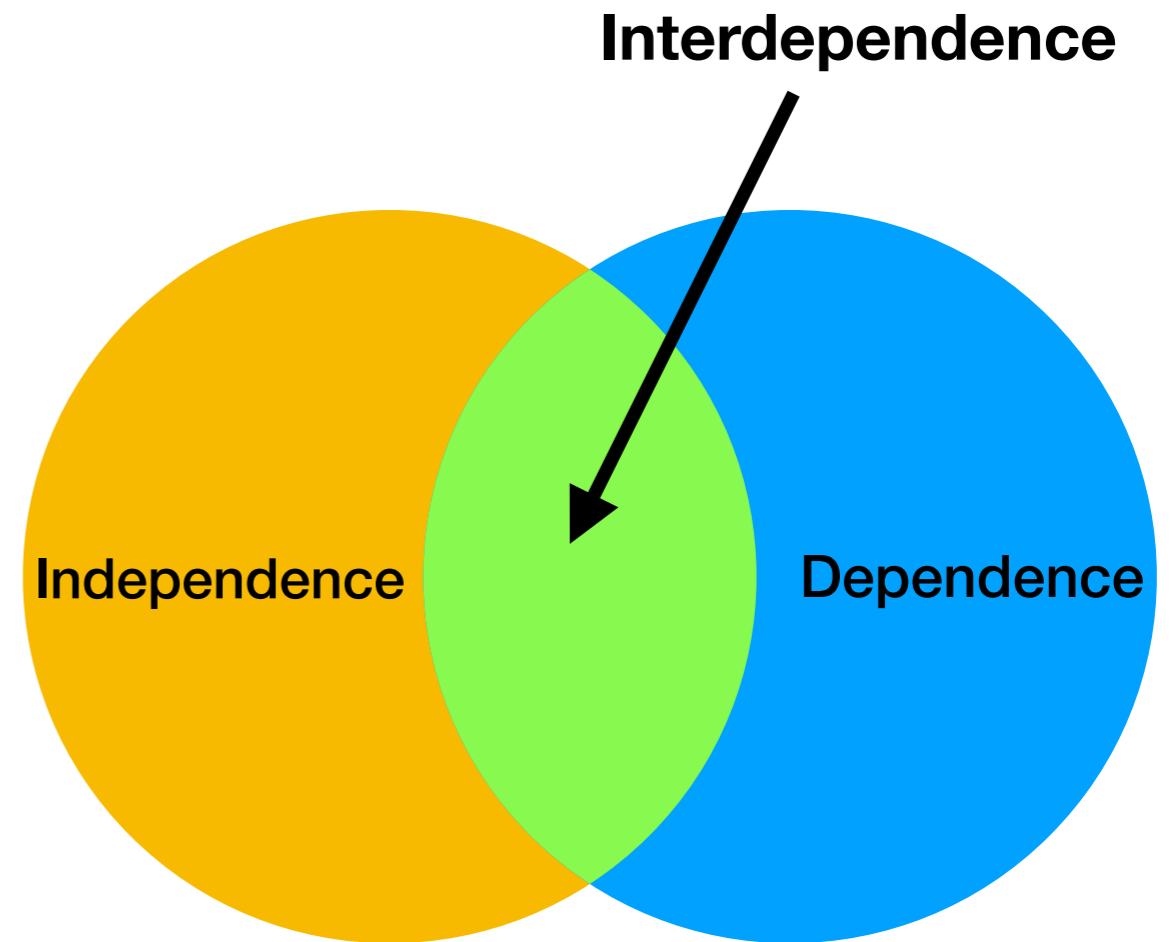
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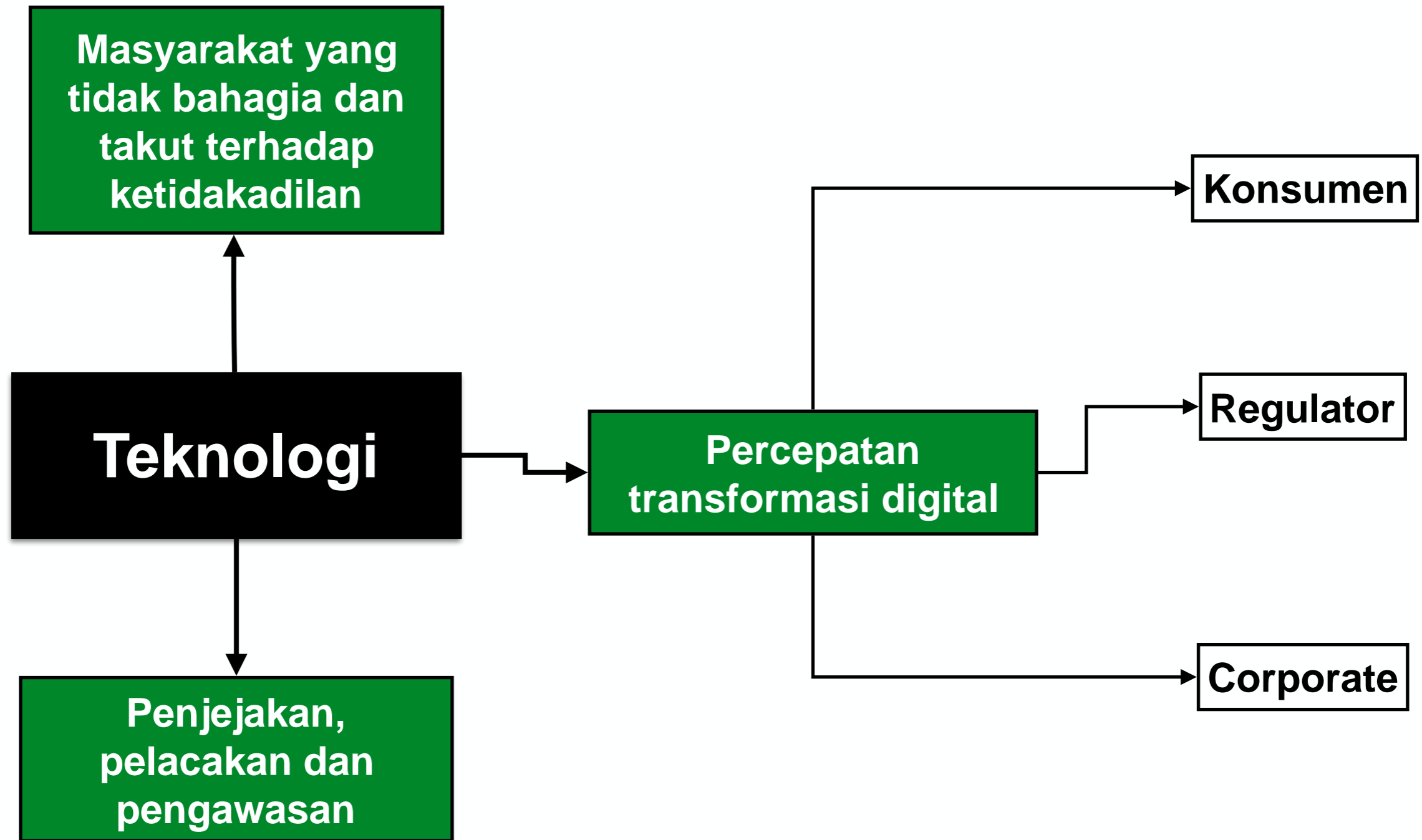
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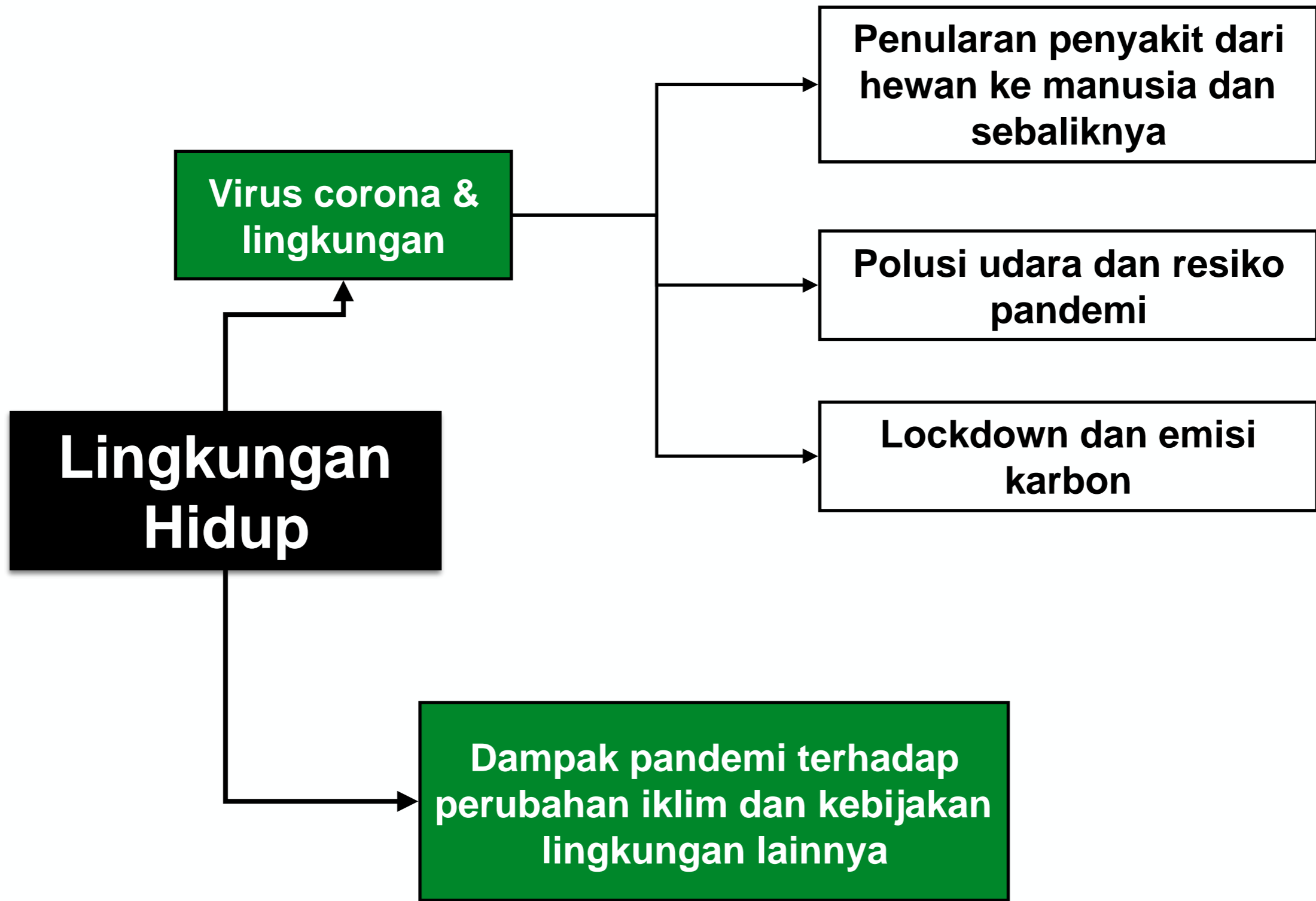
**Diskusi**



**Interdependence  
(saling ketergantungan)**







**Lingkungan  
Hidup**

**Virus corona &  
lingkungan**

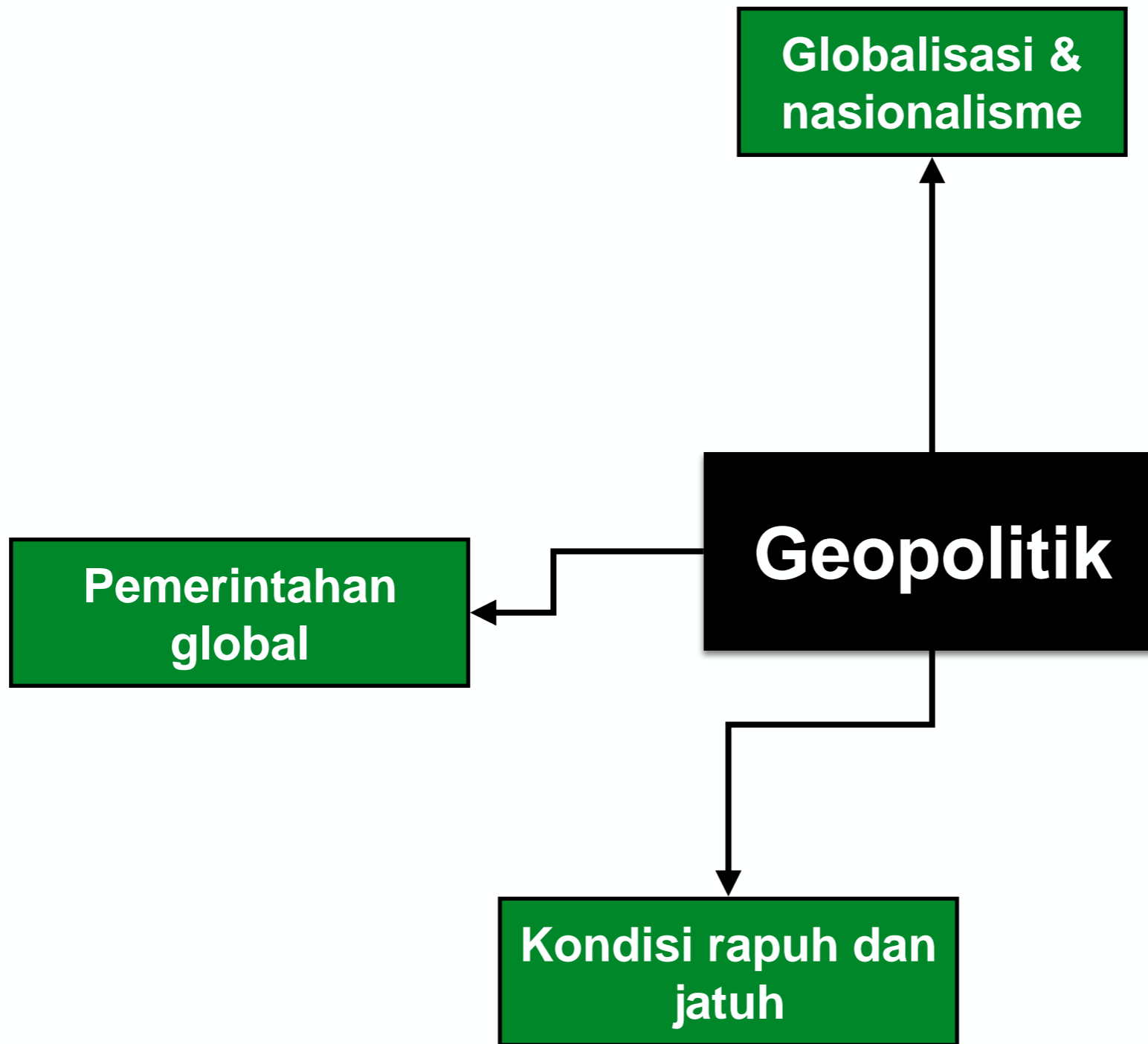
**Penularan penyakit dari  
hewan ke manusia dan  
sebaliknya**

**Polusi udara dan resiko  
pandemi**

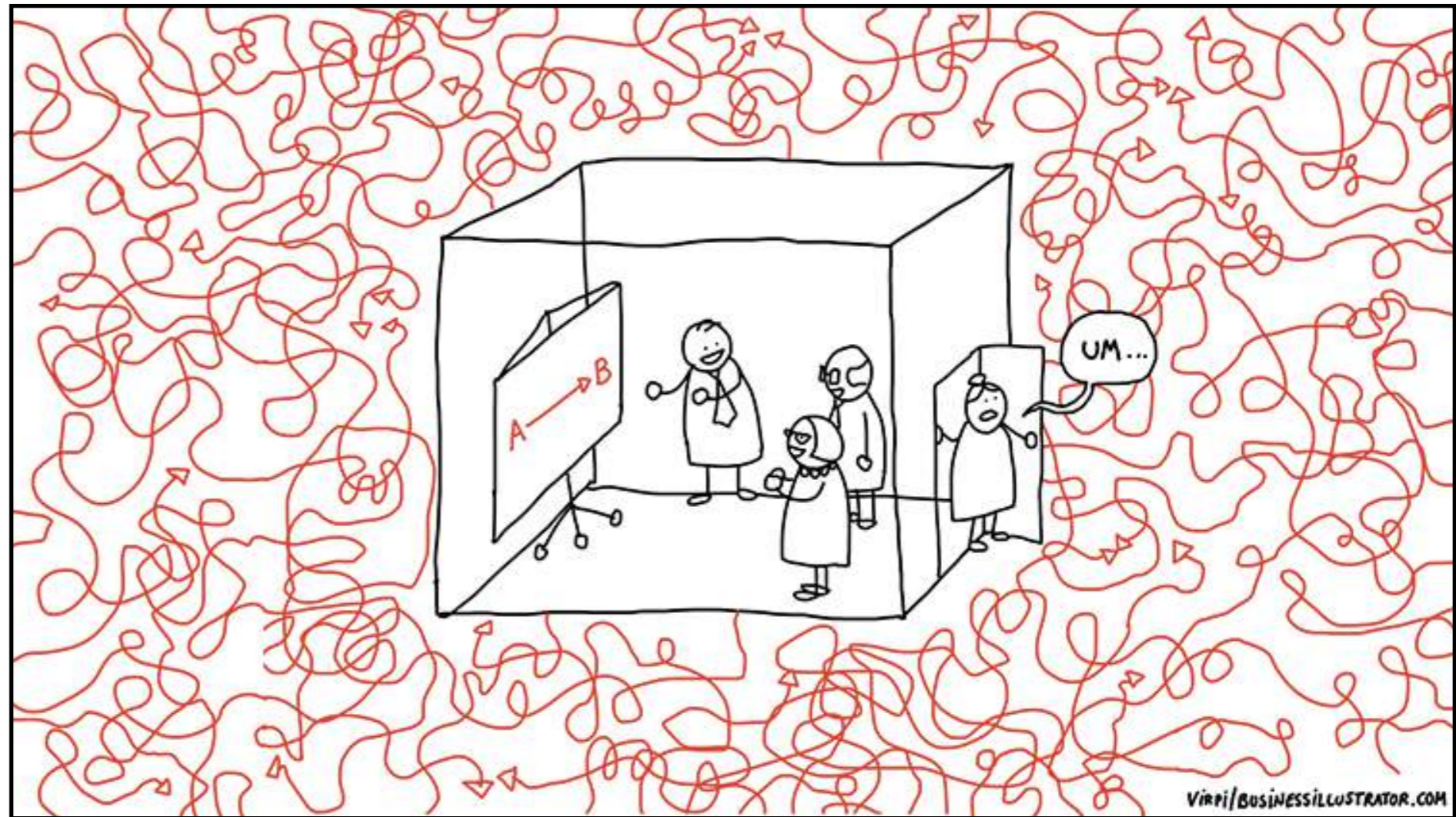
**Lockdown dan emisi  
karbon**

**Dampak pandemi terhadap  
perubahan iklim dan kebijakan  
lingkungan lainnya**



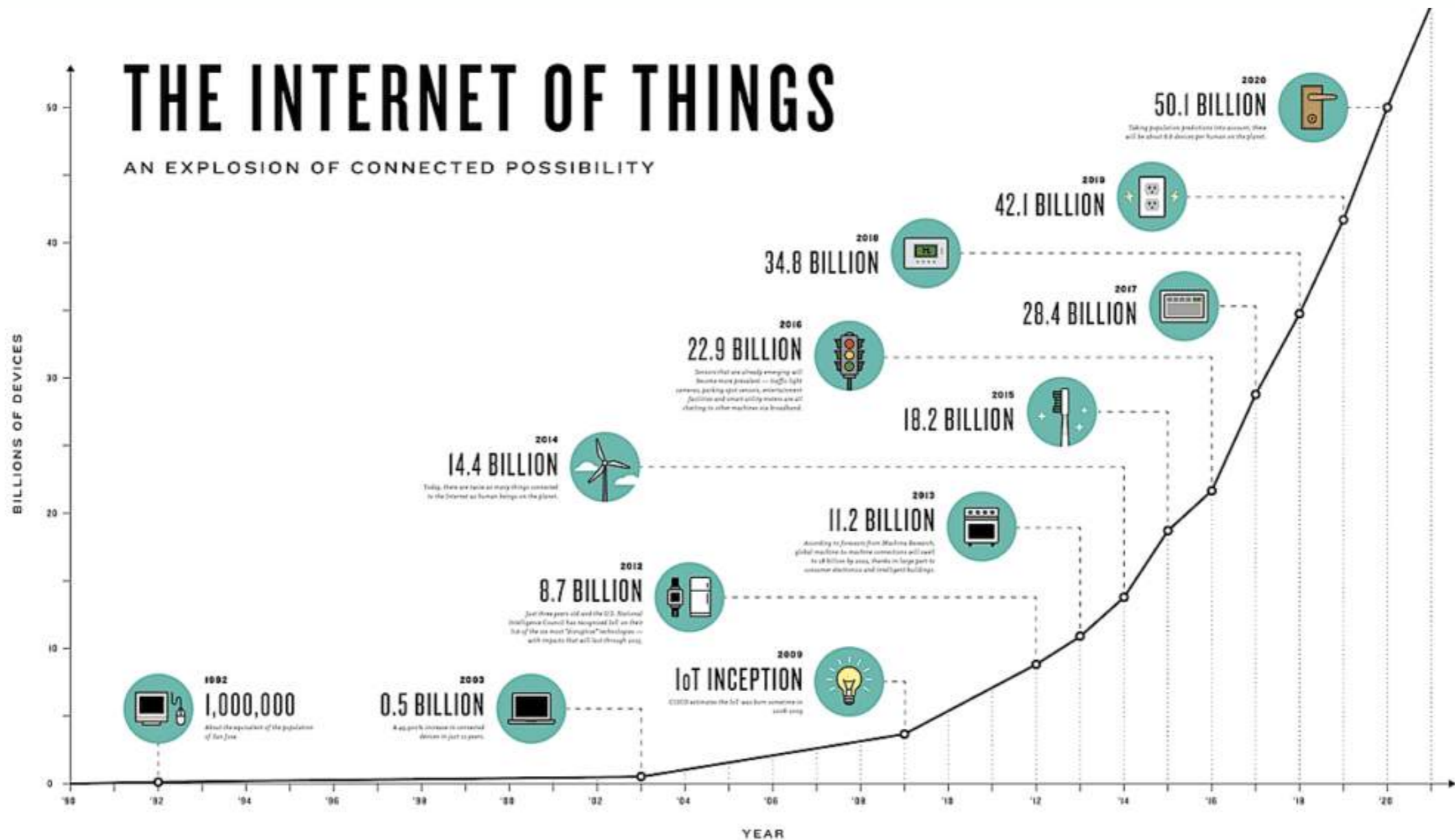


# Kompleksitas



# Kecepatan

???



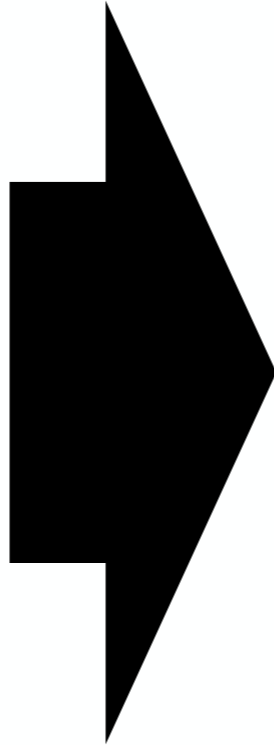
Ketika teknologi berkembang secara eksponensial, bagaimana berikutnya?  
(Halladay, 2018)



## **Fleksibilitas (Flexibility)**



# 2. Investigasi Lynda Gratton (2010)

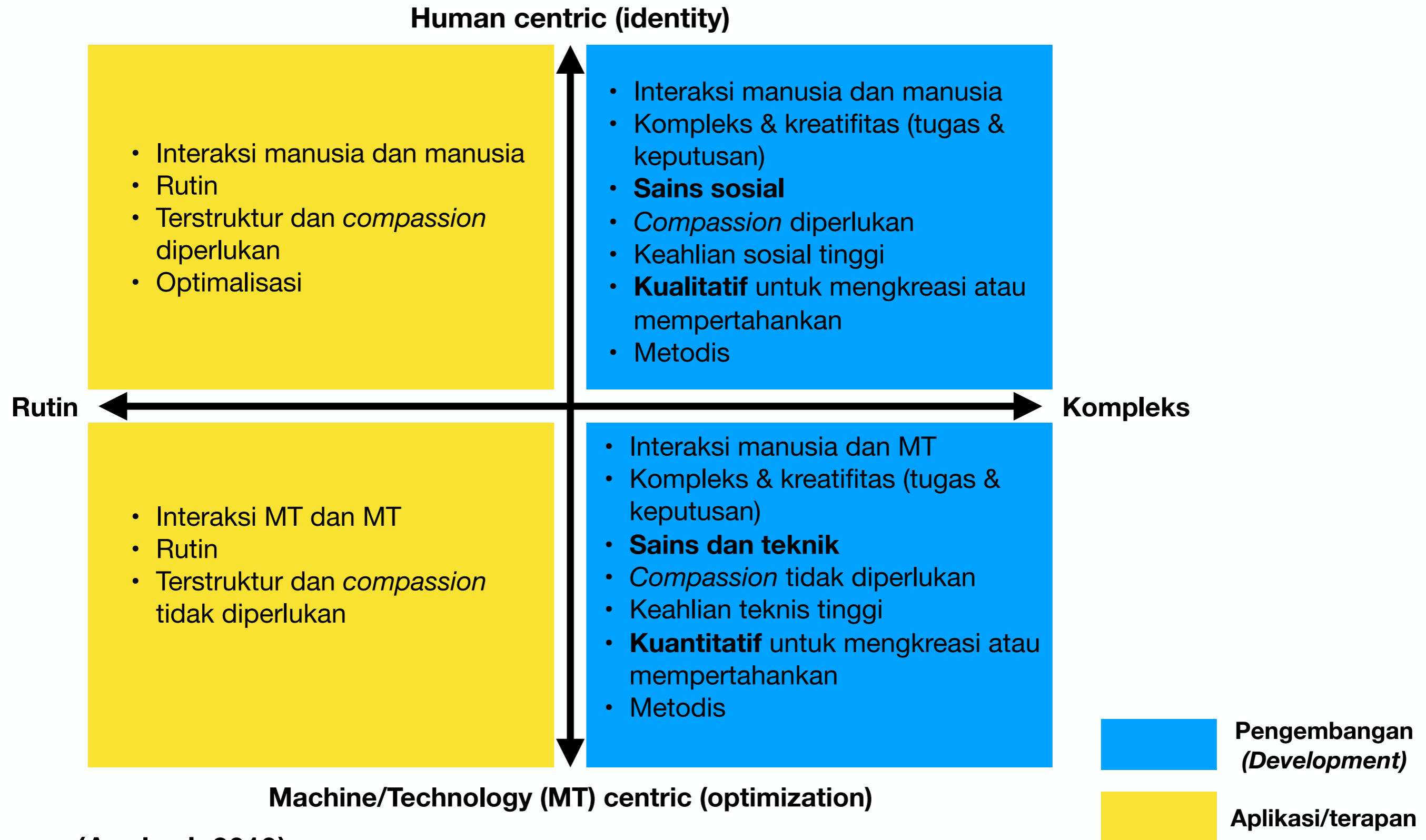
- Pengembangan teknologi
  - Globalisasi
  - Perubahan demografi
  - Tren dalam masyarakat
  - Pengembangan *low carbon*
- 
- **Leadership**
  - **High performing virtual team**
  - **Networking**
  - **Flexible working**

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**Diskusi**

# Peta Pekerjaan di masa Revolusi 4.0



(Anshari, 2019)



- Ada pekerjaan yang akan hilang
- Permasalahan akan lebih kompleks (pengangguran)
- Kualifikasi pekerja yang terspesialisasi dan metodis



# 3. *Learning Organization* (misal: *CorpU*)

- Kunci corporate untuk bertahan hidup
- 1940' & 1990'
- Corporate
- University
- Apakah universitasnya corporate (e.g., Univ. Telkom, Univ. Pertamina atau Univ. Petronas)



**NEXT** | A Schlumberger company

Dedicated to capability development for organizations and professionals in the E&P industry



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**Diskusi**

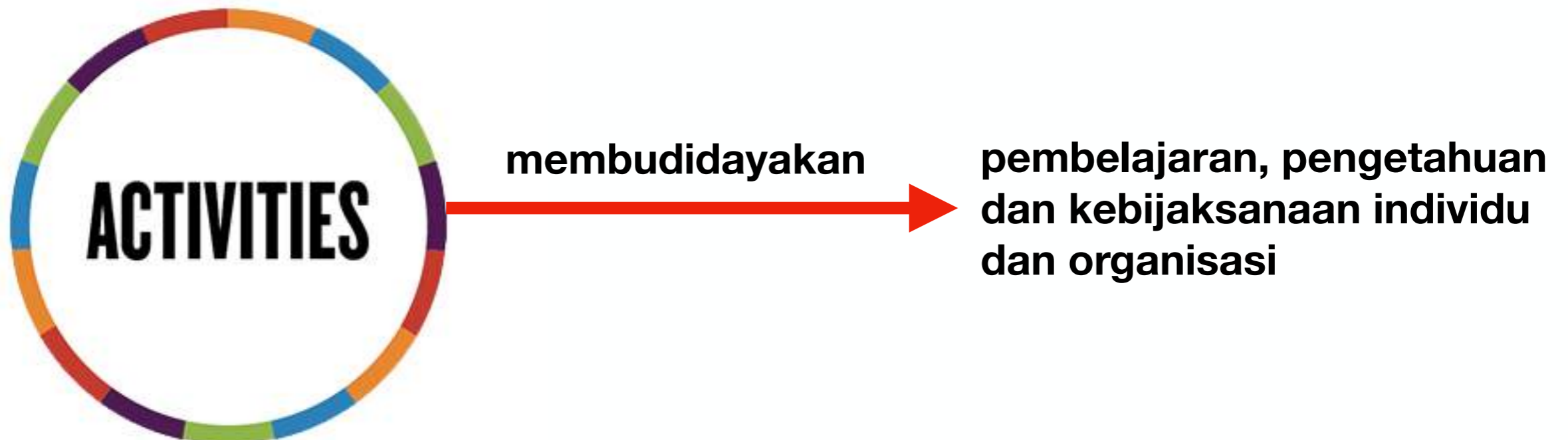
*“an educational entity that is a strategic tool designed to assist its parent organization in achieving its mission by conduction activities that cultivate individual and organizational learning, knowledge, and wisdom ”*

**–Allen (2002)–**

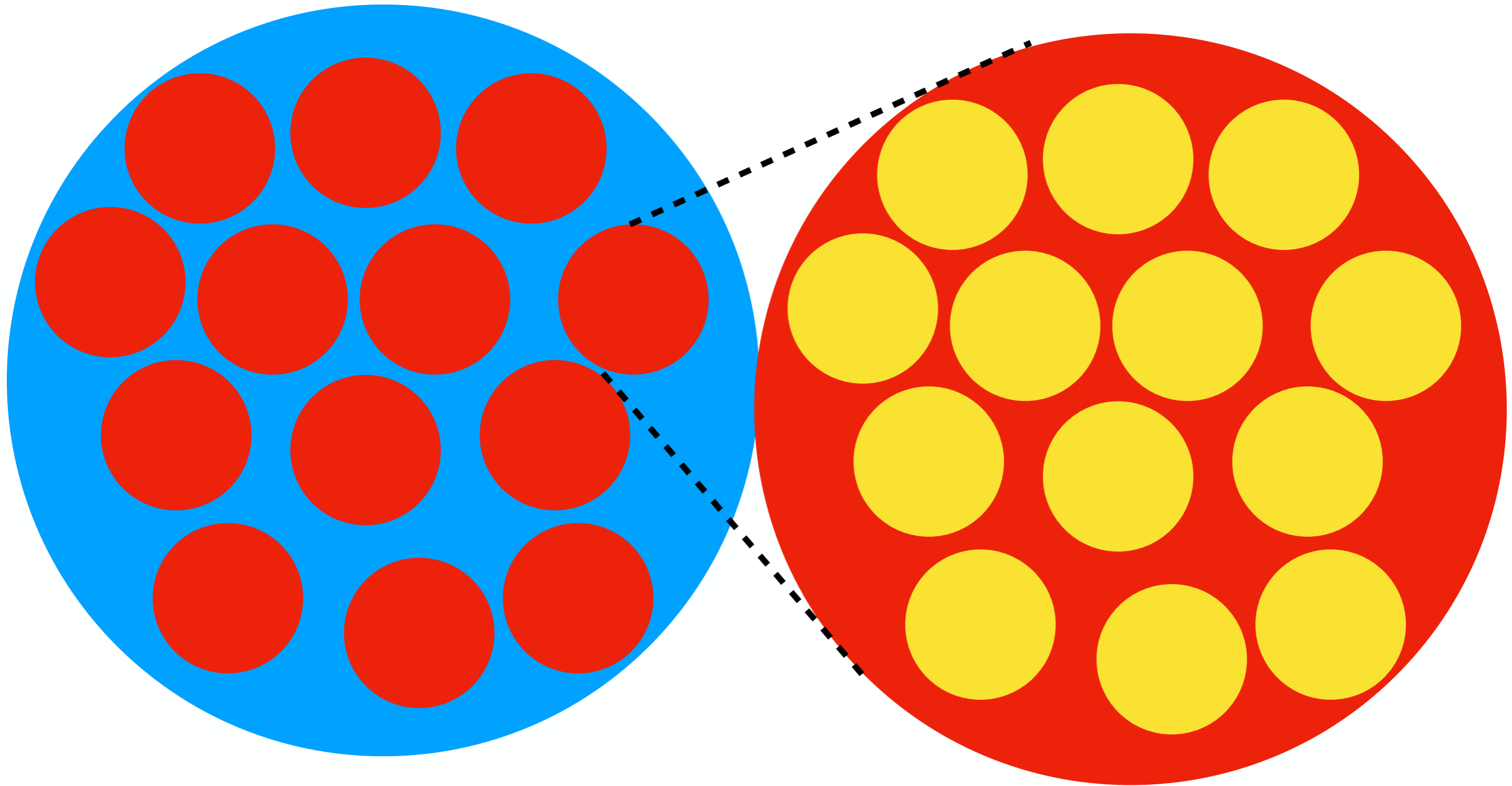


*“entitas pendidikan strategis untuk membantu organisasi induknya dalam rangka mencapai misinya dalam bentuk **aktifitas-aktifitas yang membudidayakan pembelajaran, pengetahuan dan kebijaksanaan individu dan organisasi**”*

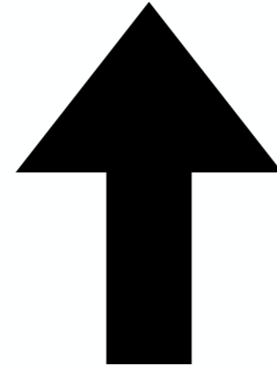
**–Allen (2002)–**



# Ruang lingkup organisasi



**“Research is before development”**

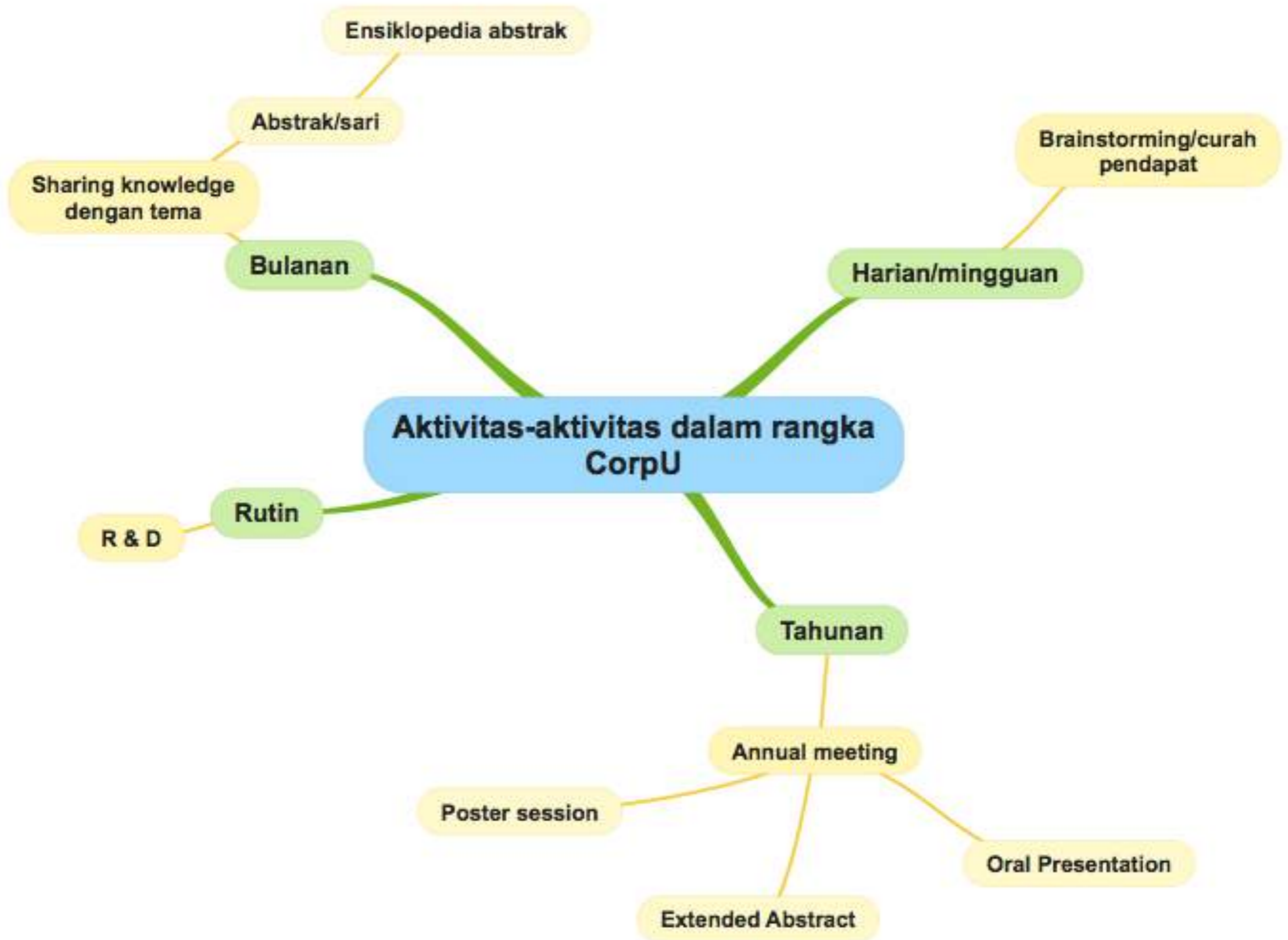


**“Development is more than training”**

*–George-Leary & Cohen (2007)*



# Apa saja aktifitasnya?





# Apa saja aktifitasnya?

Sharing knowledge



Brainstorming

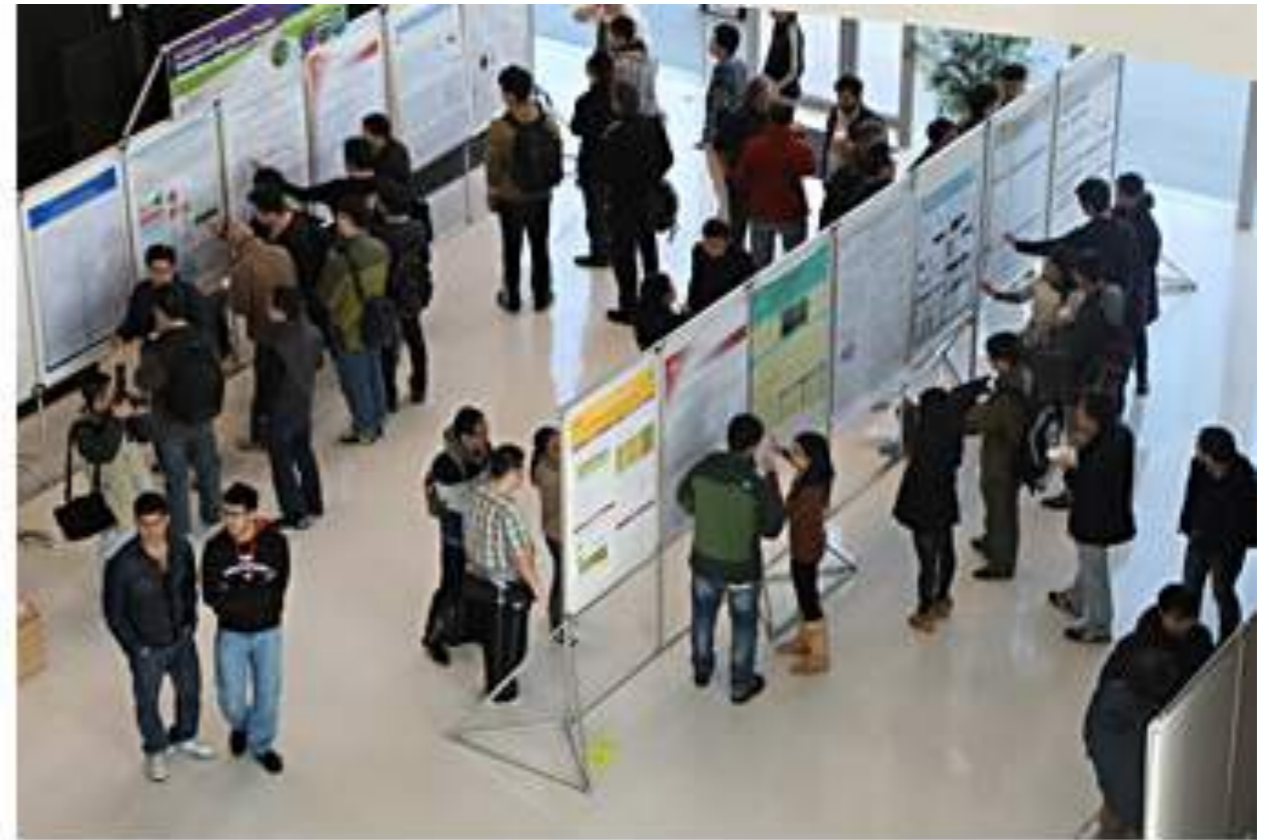


# ANNUAL MEETING



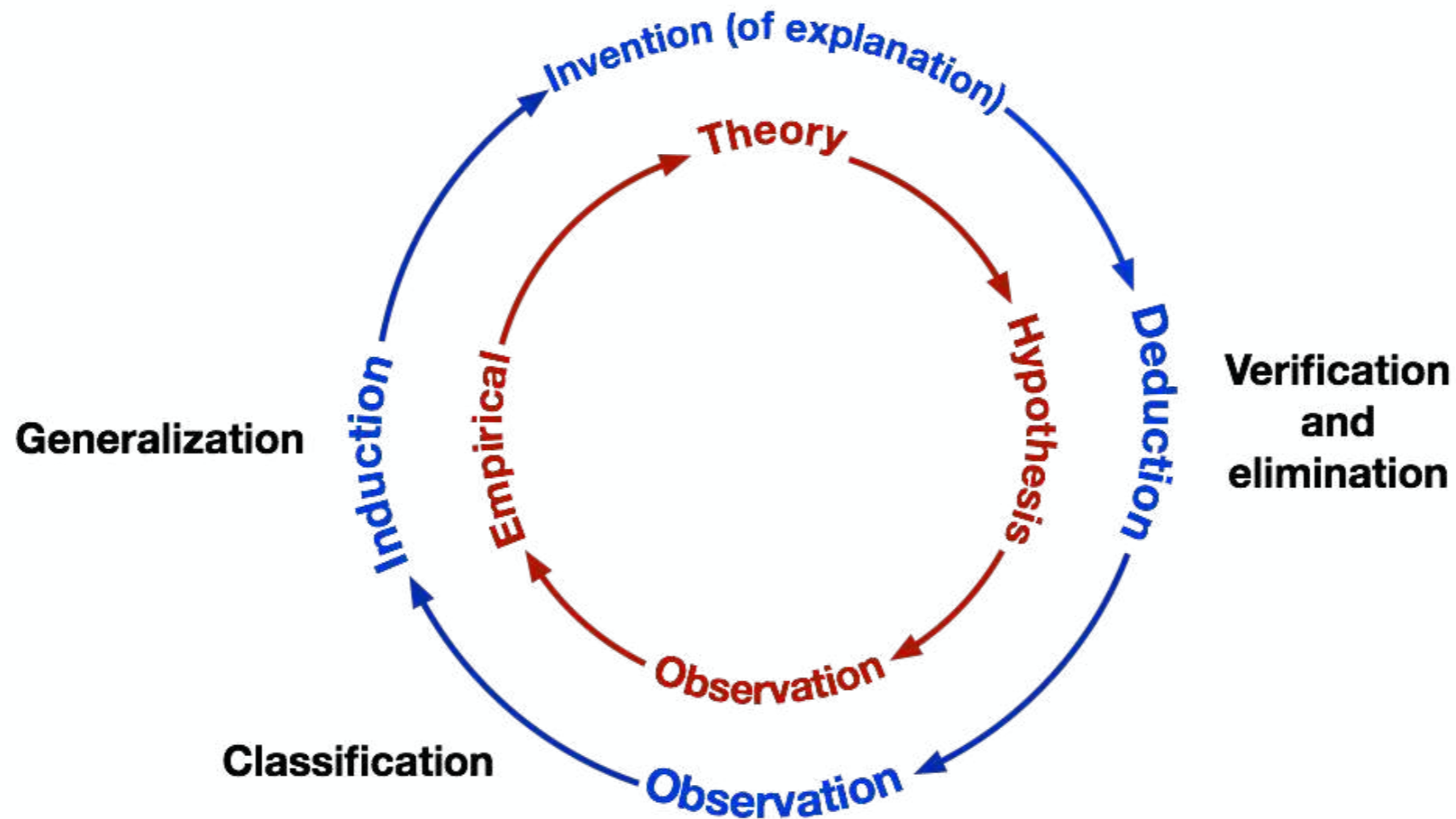


# ANNUAL MEETING



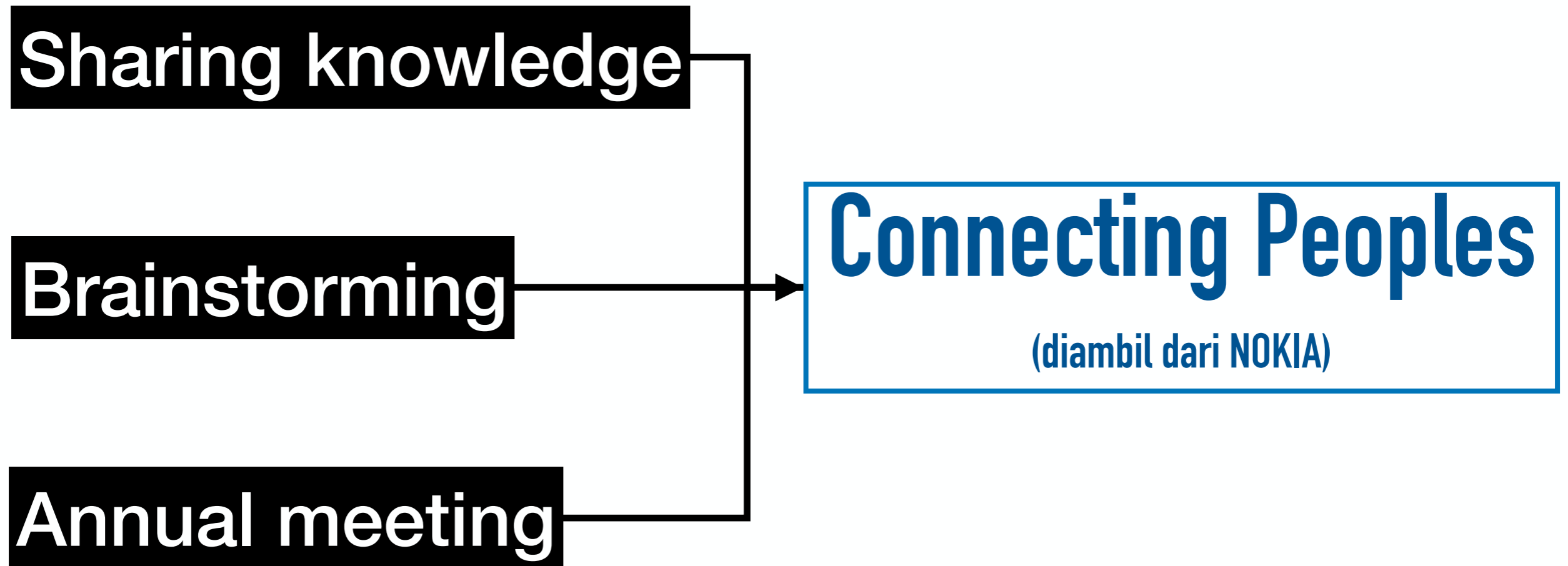
**Poster Session**

# Apa saja aktifitasnya?



**Research & Development**

# Apa manfaatnya?





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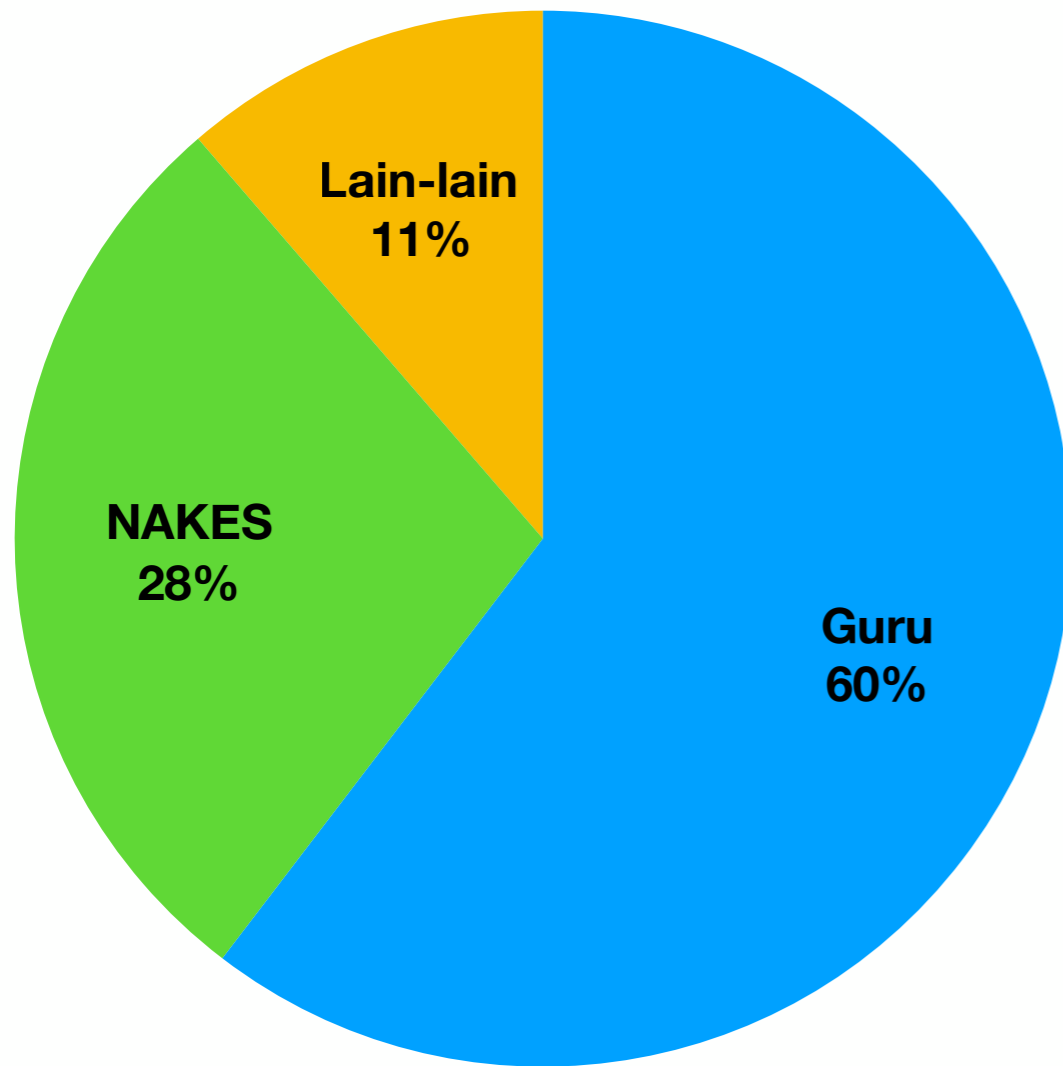
## Research & Development

**Contoh**

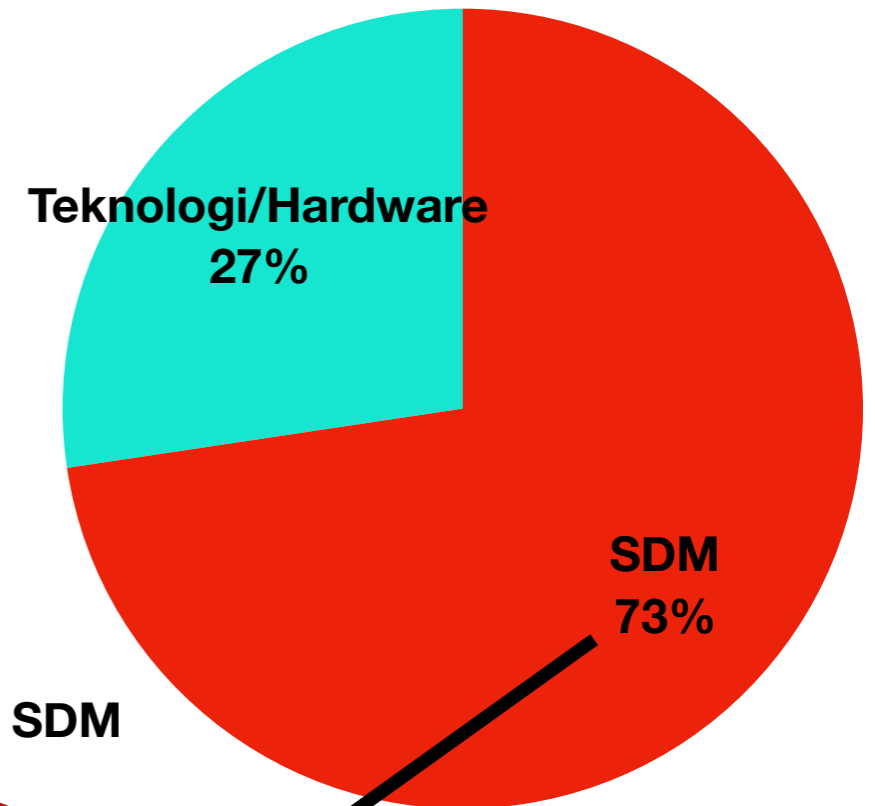
**Ruang lingkup:**

- 1. BPSDM Prov. Kaltim**
- 2. Peserta Latsar (2021)**

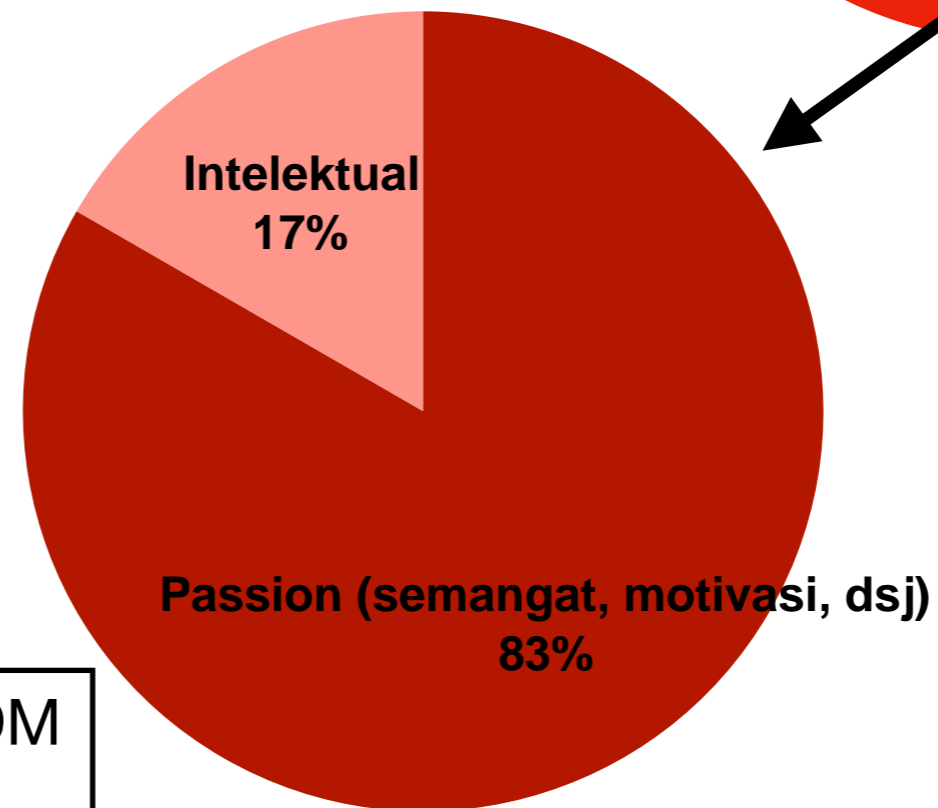
**Presentasi Profesi Peserta LATSAR 2021 di  
BPSDM Prov. Kaltim (N = 106)**



**Fokus Isu Aktual Peserta LATSAR  
2021 (N=303)**

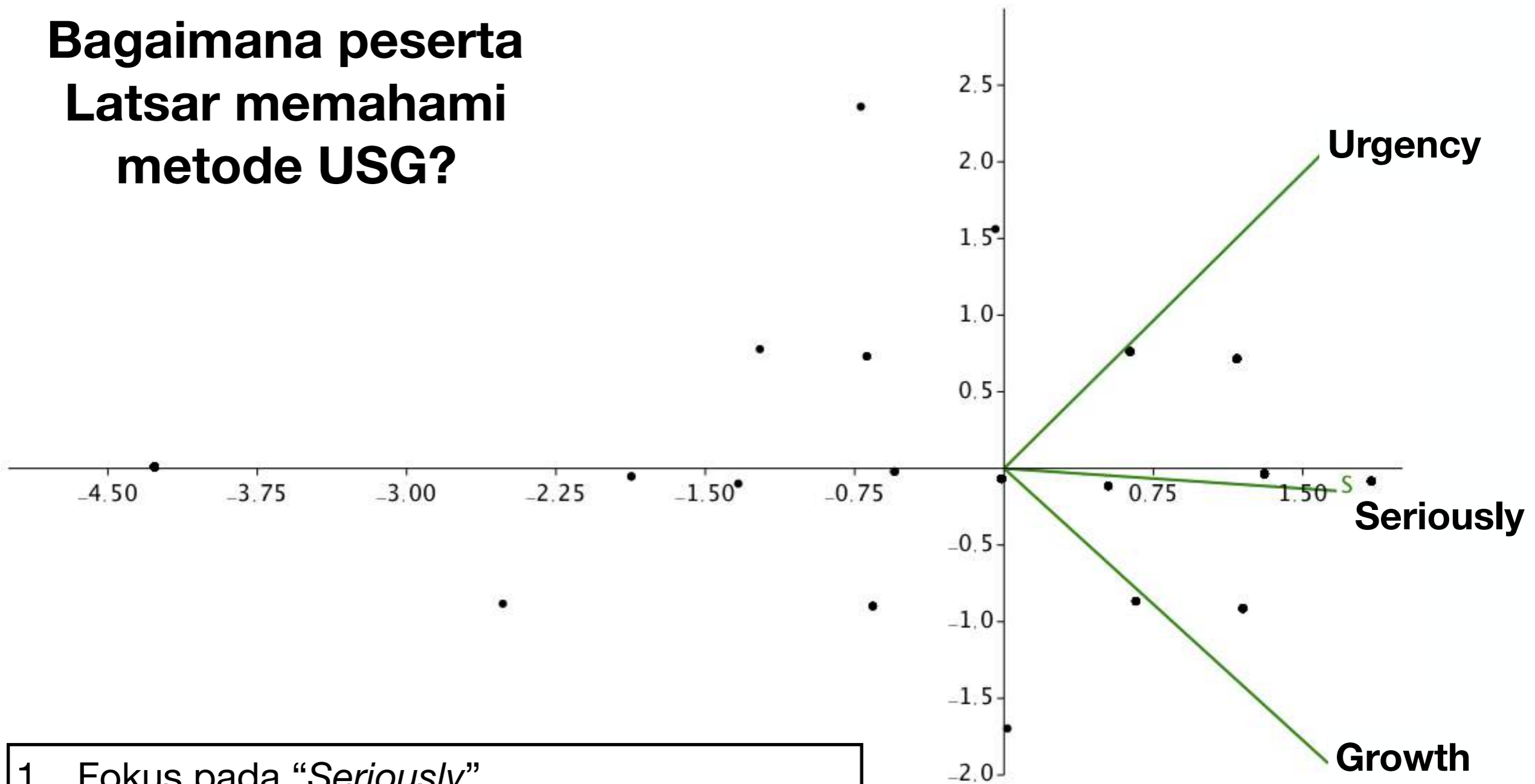


**Fokus Isu Terkait SDM**



1. Mereka memperhatikan masalah SDM
2. SDM —> “passion” nya
3. Apa yang perlu di-*develop*?

# Bagaimana peserta Latsar memahami metode USG?



1. Fokus pada “*Seriously*”
2. “*Urgency*” dan “*Growth*” hanya “formalitas”
3. Memang isu-isu yg diangkat memiliki bobot USG yg sama
4. Jika memang analisisnya benar, maka “*Urgency*” berbanding terbalik dg “*Growth*”
5. Subjektif?

# Kesimpulan



- Keterlibatan individu dan organisasi secara holistik
- Atmosfer yang mendukung
- *CorpU* tidak terjadi dalam satu malam