



# STRATEGI PENINGKATAN PROFESIONALISME DAN KOMPETENSI TENAGA KEPENDIDIKAN DI PERGURUAN TINGGI DI ERA REVOLUSI INDUSTRI 4.0

Pada Acara Workshop dan Seminar Nasional Jabatan Fungsional di  
Institut Pertanian Bogor (IPB), 25 Juli 2019

**Bunyamin Maftuh**

Direktur Karir dan Kompetensi Sumber Daya Manusia  
Kementerian Riset Teknologi & Pendidikan Tinggi

Challenge

# INDUSTRIAL REVOLUTION 4.0

& Digital Economy

Technology disruption era is the combination of physical, digital and biological domain

(Schwab, 2017)



75–375 Million

**GLOBAL  
EMPLOYEES  
SHIFT  
PROFESSIONS**

Internet of Things

Artificial Intelligence

New Materials

Big Data

Robotics

Augmented Reality

Cloud Computing

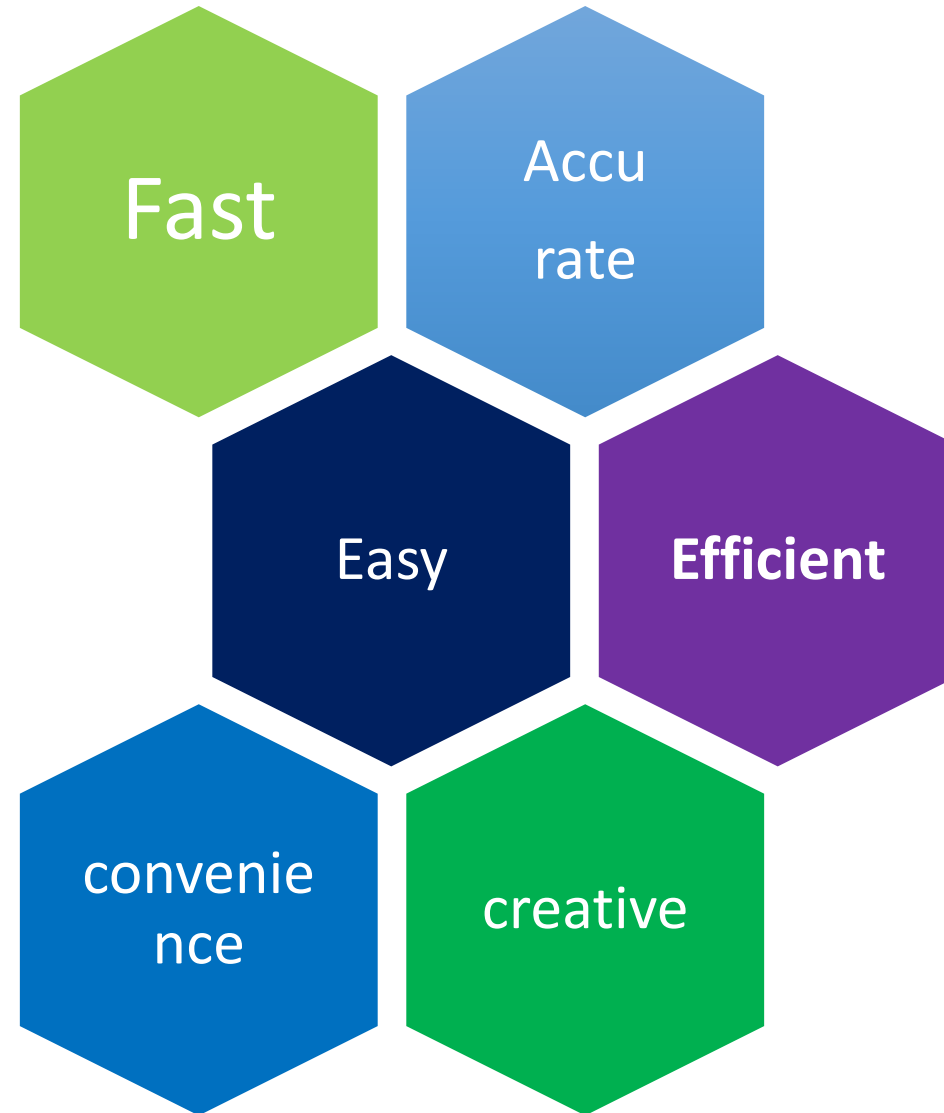
Additive Manufacturing  
3D Printing

Nanotech & Biotech

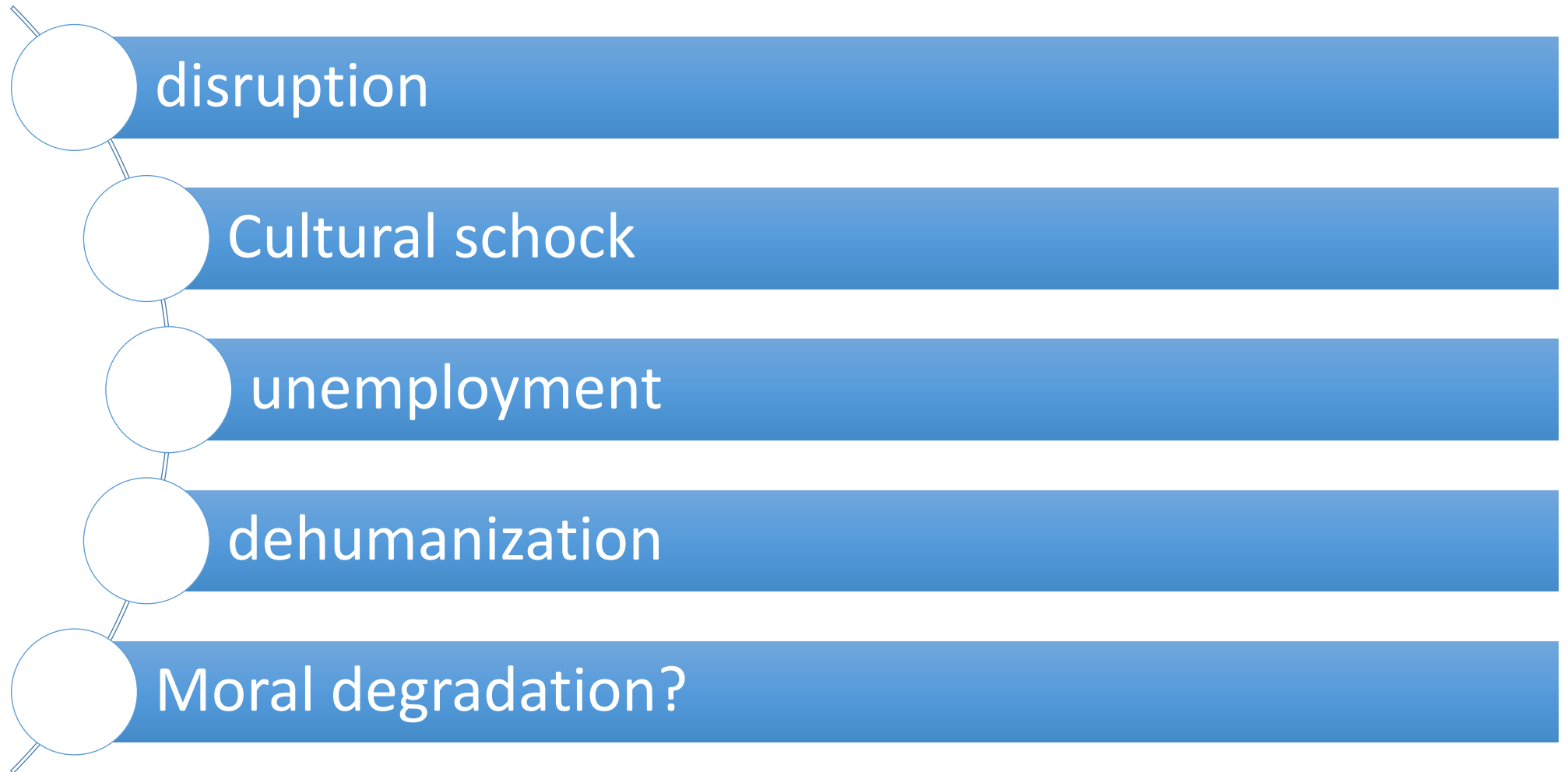
Genetic Editing

E-learning

# Positive impact of IR 4.0

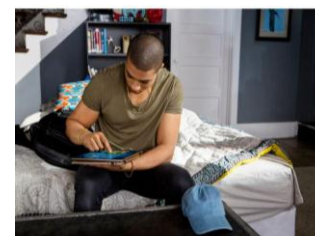


# Negative impact of IR 4.0



# MOOCs

MASSIVE ONLINE OPEN COURSE



# Isue-Isue tentang SDM

**Making**

**Indonesia  
4.0**

(WEF, 2017)

**36/137**

**DAYA SAING  
INDONESIA**

Singapura ke-3  
Malaysia ke-23  
Thailand ke-32  
Vietnam ke-55

(WIPO, 2017)

**87/127**

**DAYA SAING  
INOVASI  
INDONESIA**

(WEF, 2017)

**80/137**

**INDONESIA  
TRL  
TECHNOLOGICAL  
READINESS**

**8,8%**

**PENGANGGURAN**

Total Pengangguran dari  
±128 juta. (BPS, 2017)

1. menjadi 10 besar negara dengan ekonomi terkuat di dunia pada 2030
2. menciptakan 10 juta lapangan kerja baru di 2030

*Presiden RI, 4 April 2018*



**GLOBAL  
COMPETITIVENESS  
INDEX**

**36**

FROM 37 COUNTRIES

**WORLD ECONOMIC  
FORUM 2017-2018**

# COMPETITIVE HUMAN RESOURCES



- **CRITICAL THINKING**
- **CREATIVITY**
- **COMMUNICATION**
- **COLLABORATION**

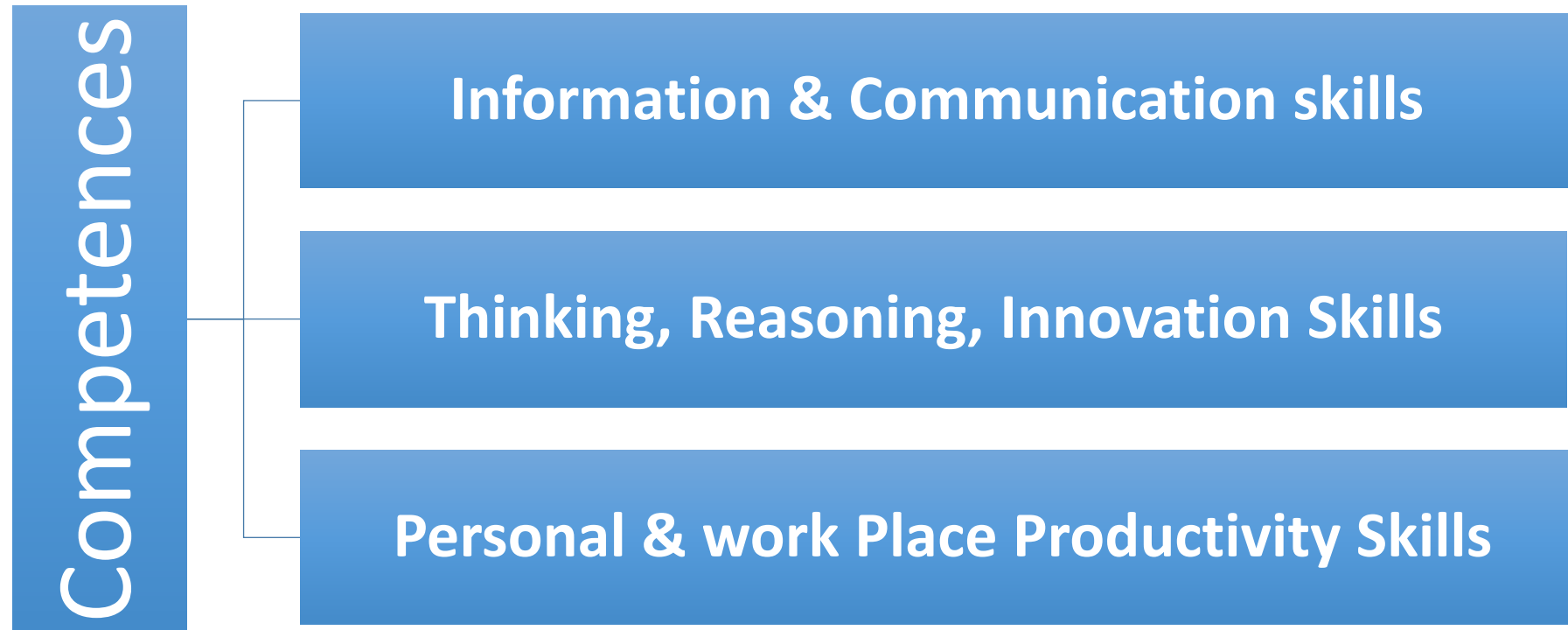


- **CURIOSITY**
- **INITIATIVE**
- **PERSISTENCE**
- **EMPATHY**
- **ADAPTABILITY**

DOMAIN KNOWLEDGE  
AREA OF SPECIALISATION  
EXPERTISE

**CORE LITERACIES:**  
READING & WRITING, NUMERACY, SCIENTIFIC LITERACY, ICT FLUENCY (TECHNOLOGY SKILLS), LANGUAGE SKILLS, CIVIC & CULTURAL AWARENESS, LOGICAL THINKING (LIBERAL ARTS)

# Kecakapan Abad ke- 21 dan Revolusi Industri 4.0





# The Twenty First Century Skills

## **Information and communication skills:**

- (a) information and media literacy
- (b) visual literacy
- (c) communication skills

**(Partnership for 21<sup>st</sup> Century)**

# The Twenty First Century Skills

## Thinking, reasoning and innovation skills:

- (a) critical thinking
- (b) systems thinking
- (c) problem solving
- (d) creating and innovating;

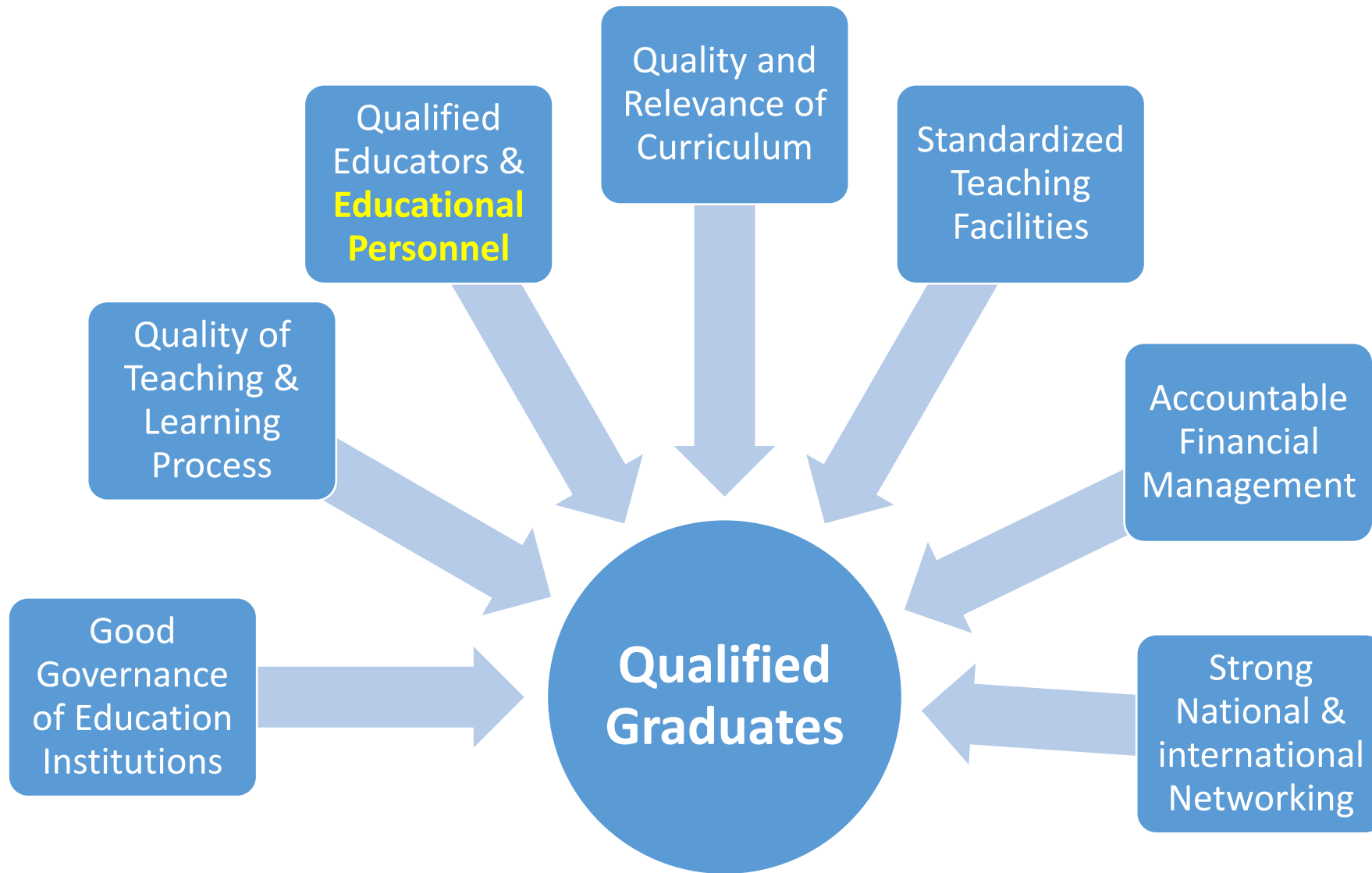
**(Partnership for 21<sup>st</sup> Century)**

# The Twenty First Century Skills

## Personal and works place productivity skills:

- a) interpersonal and collaboration skills,
- b) initiative and self-direction
- c) flexibility and adaptability
- d) ethical behavior
- e) social/personal and cross-cultural skills,
- f) project planning and development
- g) productivity and accountability.

**(Partnership for 21<sup>st</sup> Century)**



# TENDIK RI 4.0

## **SOFT SKILLS:**

- **CRITICAL THINKING**
- **CREATIVE**
- **COMMUNICATION**
- **COLLABORATION**

## **KOMPETENSI INTI KEILMUAN (CORE COMPETENCIES) YANG KUAT**

- **EDUCATIONAL  
COMPETENCE**
- **COMPETENCE IN  
RESEARCH**
- **COMPETENCE FOR  
DIGITAL BUSINESS**
- **COMPETENCE IN  
GLOBALIZATION**
- **COMPETENCE IN  
FUTURE STRATEGIES**

# PERAN TENAGA KEPENDIDIKAN (TENDIK)

**Kelembagaan  
4.0**

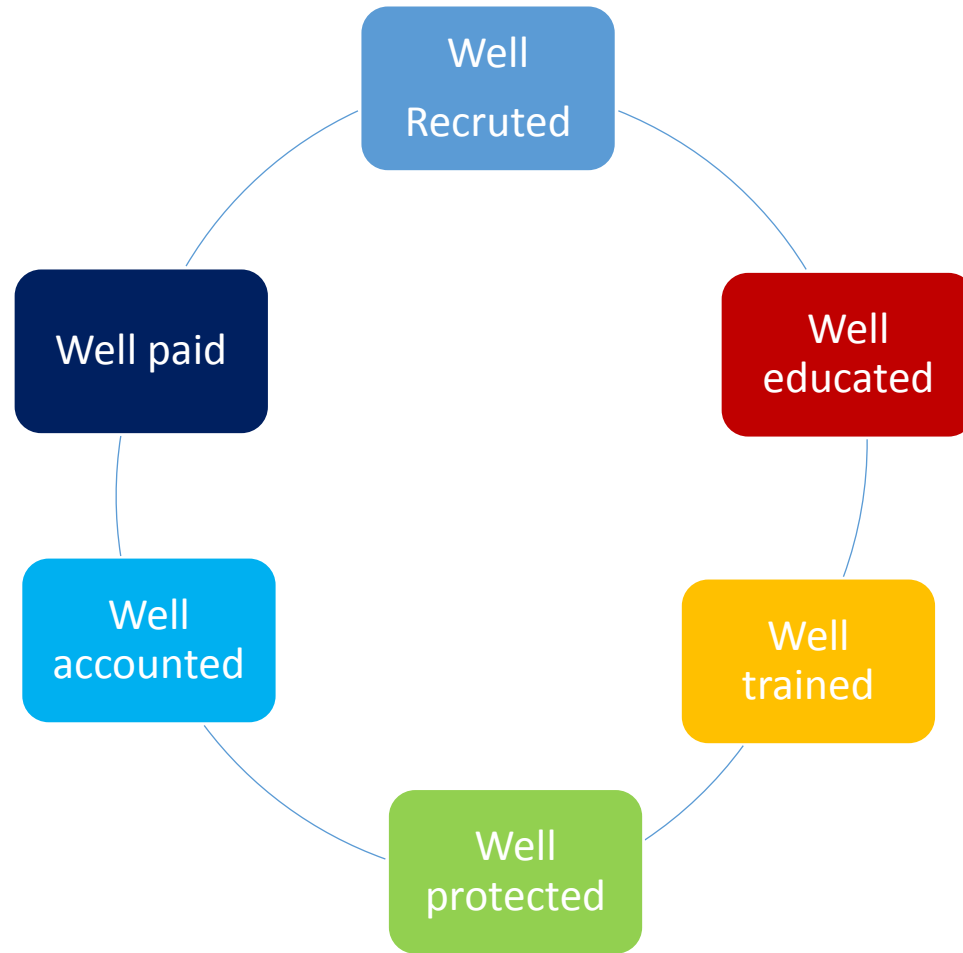
**Dosen 4.0**

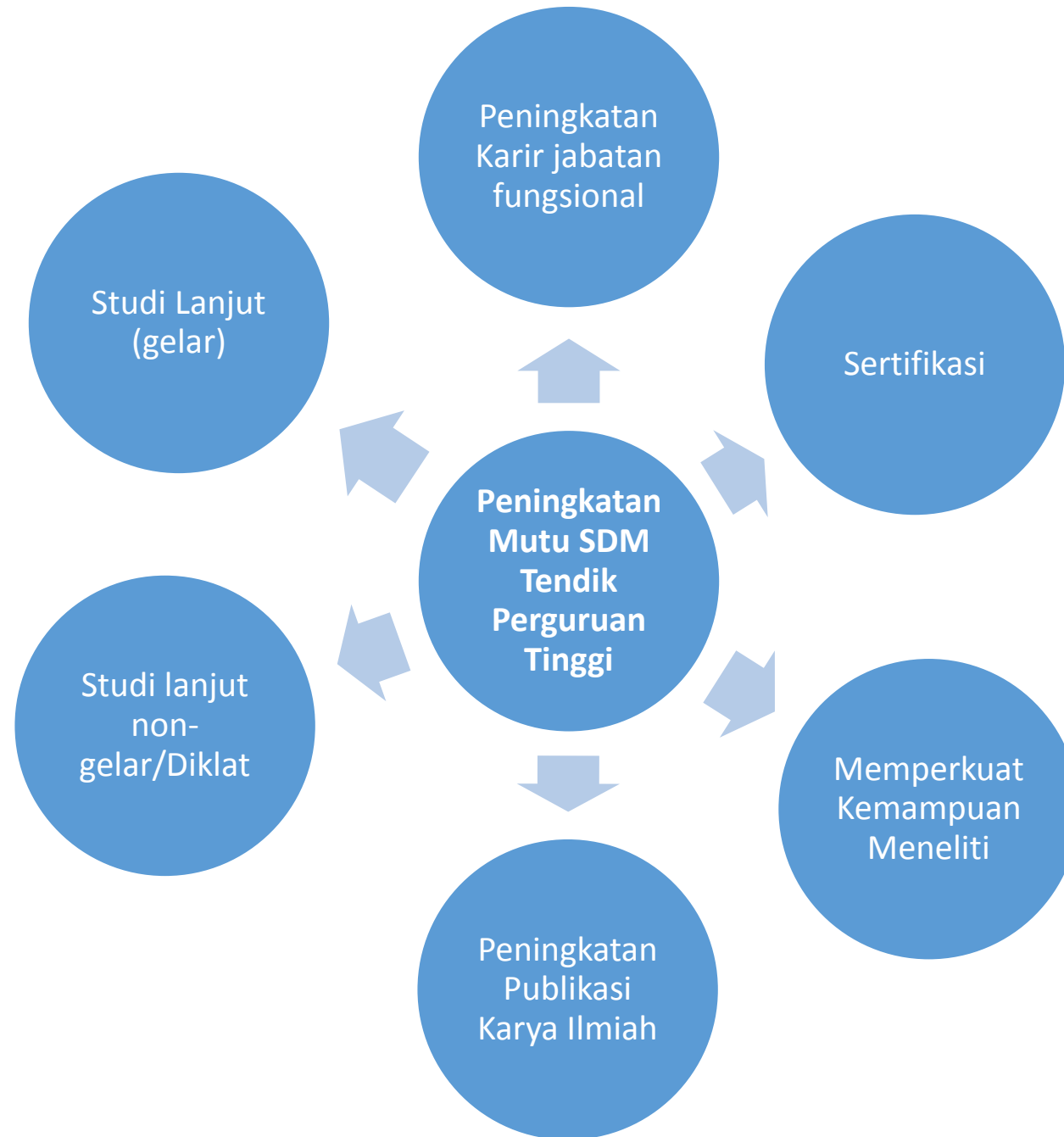
**Mahasiswa  
4.0**



**TENDIK 4.0**

# TENDIK YANG BAIK







# PROGRAM-PROGRAM UNTUK PENINGKATAN KUALIFIKASI DAN KOMPETENSI TENSIK DI PERGURUAN TINGGI

BEASISWA

BIMTEK/DIKLAT

MAGANG

REGISTRASI  
(NITK)

PAK ONLINE

DANA RISET

SHORT-COURSE/NON-  
DEGREE TRAINING KE  
LN

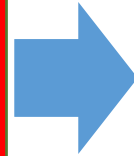
PUBLIKASI

SERTIFIKASI

# Pengembangan SIMTENDIK

**SIMTENDIK (SISTEM  
INFORMASI TENAGA  
KEPENDIDIKAN) → laman :**  
[sdm.pddikti.ristekdikti.go.id](http://sdm.pddikti.ristekdikti.go.id)

23 jenis tendik yang memiliki  
Jabatan Fungsional Tertentu (JFT)  
Permenristekdikti No. 49 Tahun  
2015 → Agar diusulkan  
memperoleh NITK



**REGISTRASI TENDIK (NITK)**



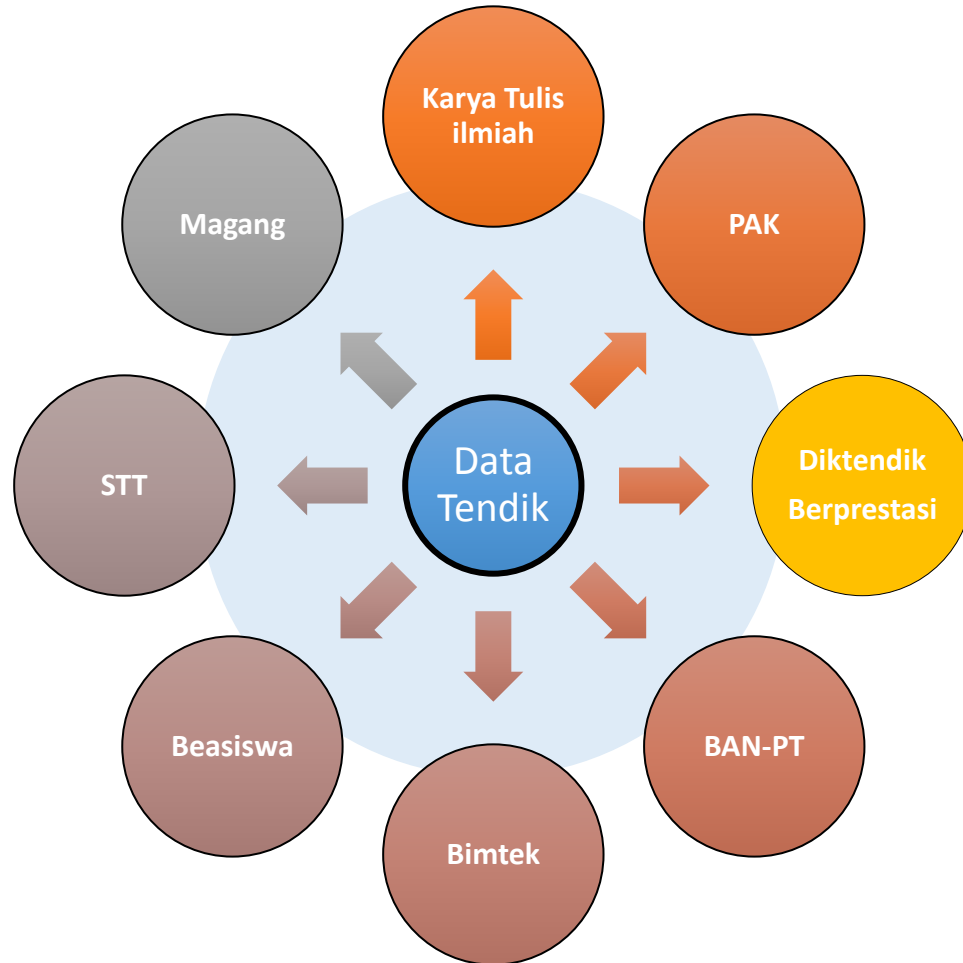
**DATA TENDIK**

Perbaikan Data Tendik melalui laman :  
[sister.ristekdikti.go.id](http://sister.ristekdikti.go.id)

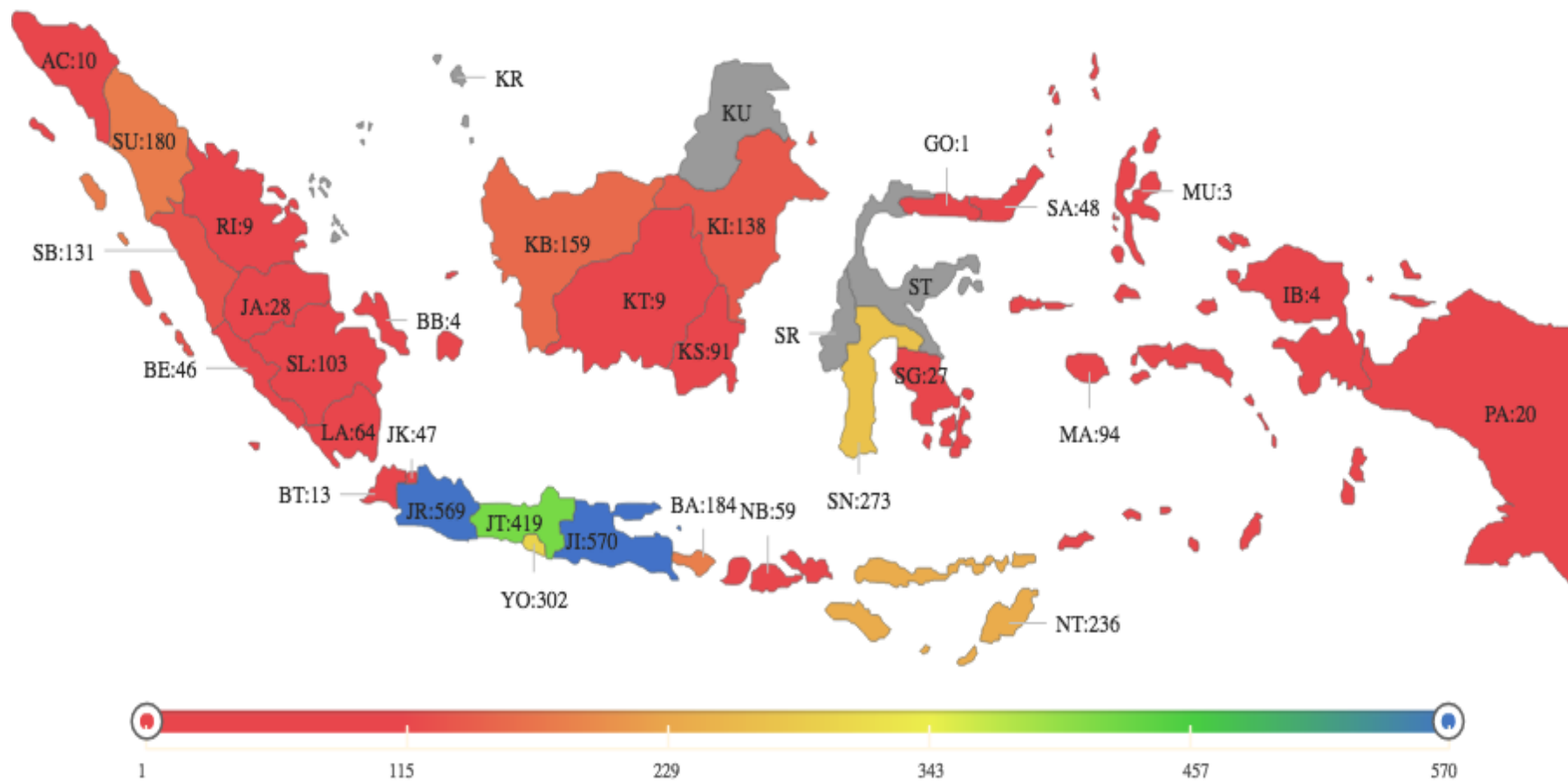
**TENDIK YANG MEMILIKI JABATAN FUNGSIONAL TERTENTU (JFT)**  
**Permenristekdikti No. 49 Tahun 2015**

<b>NO.</b>	<b>JFT TENDIK</b>
1	Arsiparis
2	Analisis Kebijakan
3	Analisis Kepegawaian
4	Auditor Kepegawaian
5	Bidan
6	Dokter Gigi
7	Dokter
8	Pengelola Pengadaan Barang/Jasa
9	Pengembang Teknologi Pembelajaran
10	Penyuluh Kesehatan Masyarakat
11	Perancang Peraturan Perundang-undangan
12	Perawat Gigi
13	Perawat
14	Perencana
15	Pranata Humas
16	Pranata Komputer
17	Pranata Labkes
18	Pranata Laboratorium Pendidikan
19	Radiografer
20	Widyaiswara
21	Pustakawan
22	Pengelola Poliklinik
23	Pranata Fotografi

# Pemanfaatan Data Tendik

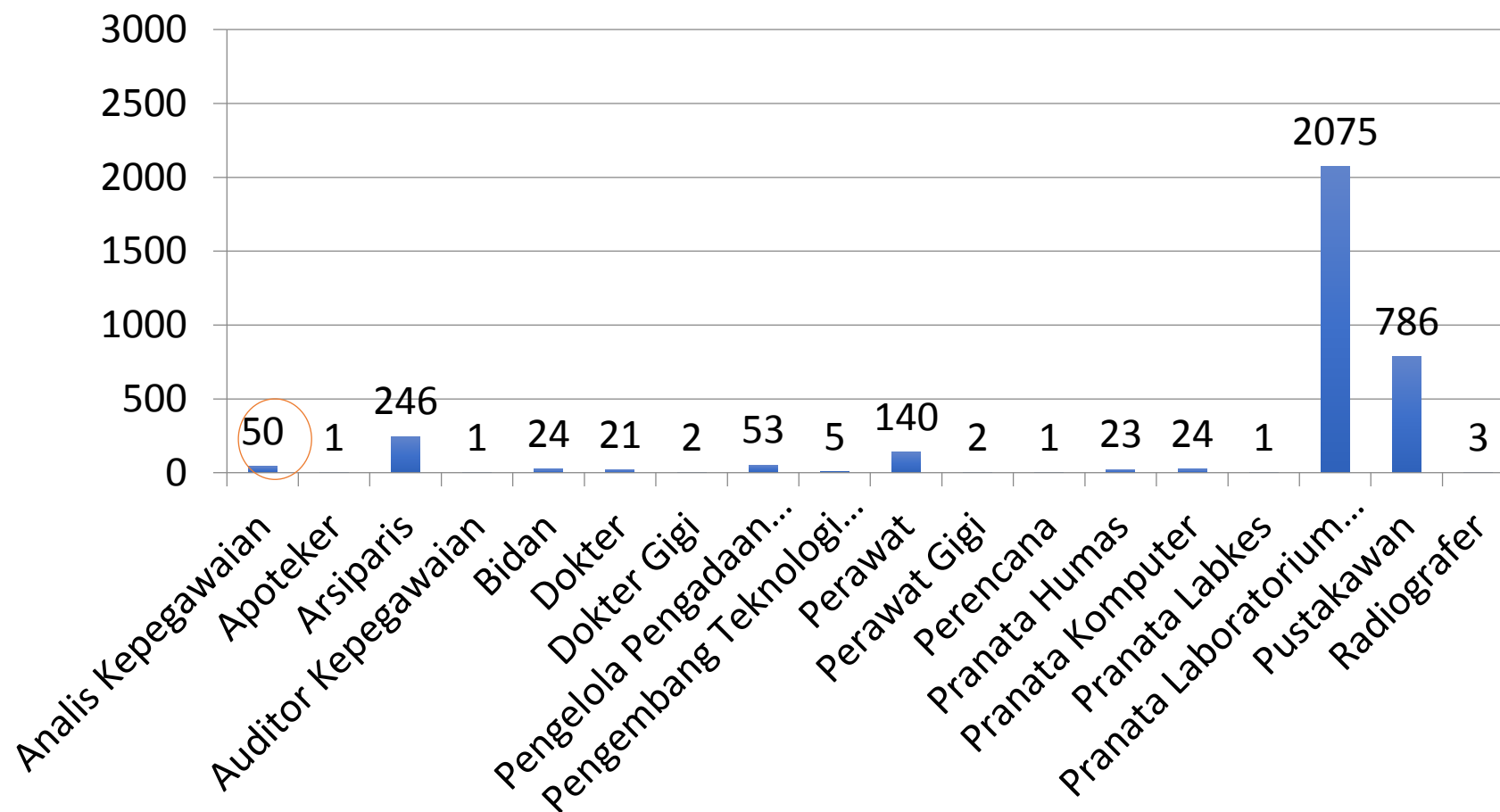


## SEBARAN JABFUNG TENDIK PER PROVINSI



# TENDIK YG SUDAH MEMILIKI NITK

TOTAL TENDIK : 4077



# TERIMA KASIH



**KEMENTERIAN RISET, TEKNOLOGI, DAN  
PENDIDIKAN TINGGI**