



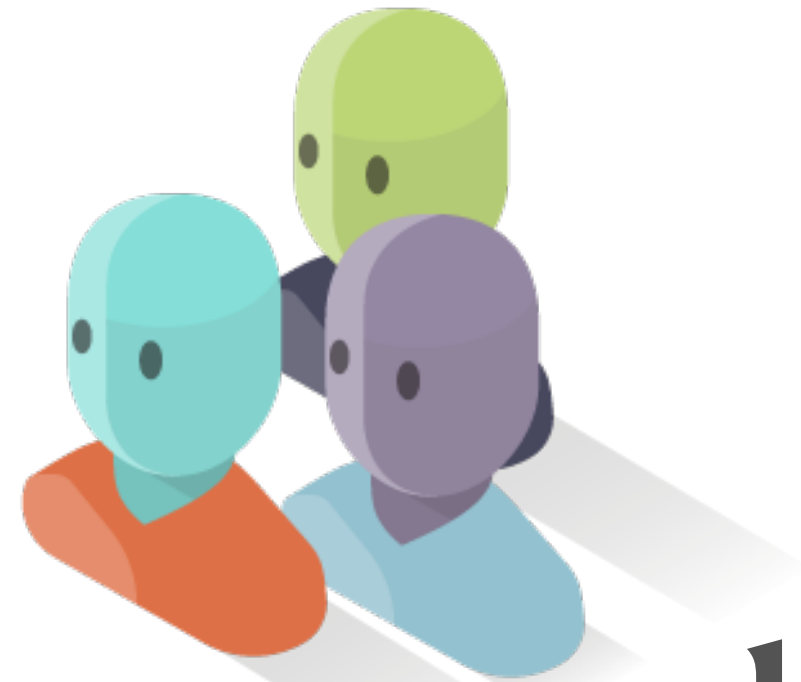
# Digital Business Ecosystem Research Center (RC DBE) 2020

[dbe.telkomuniversity.ac.id](http://dbe.telkomuniversity.ac.id)

Dr. Andry Alamsyah  
Sri Widiyanesti, PhD



# Background



**human complex  
behaviour**

sustainability and  
uncertainty economic  
activities



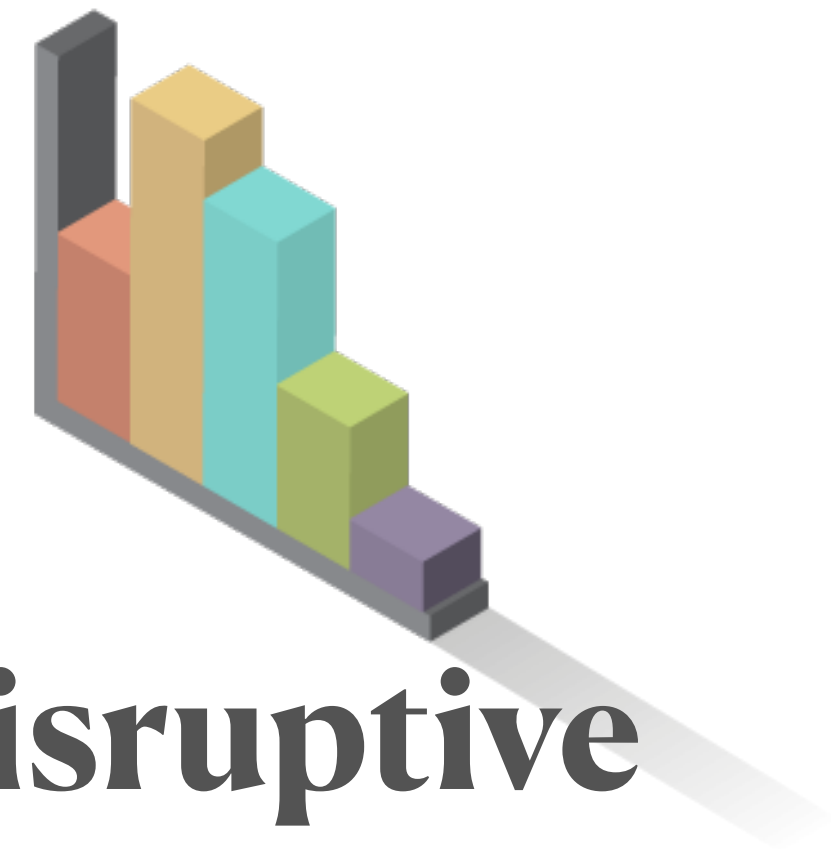
**facts finding**

dominant economic  
organisation comes from  
strong business  
ecosystem



**massive socio-  
economic impact**

toward large-scale  
implementation



**disruptive  
nature**

change technology,  
media, business  
relationship

# Vision and Mission

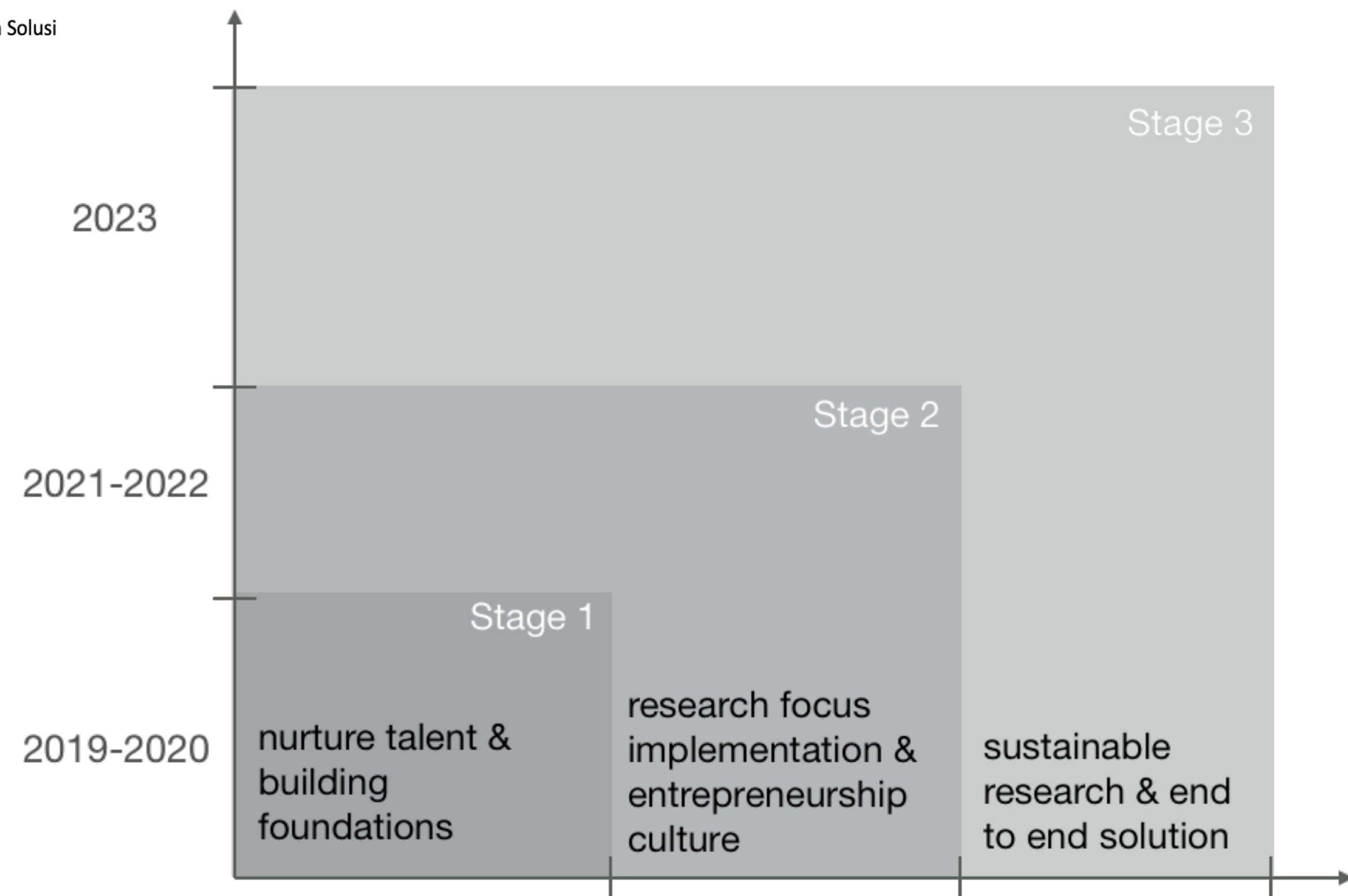
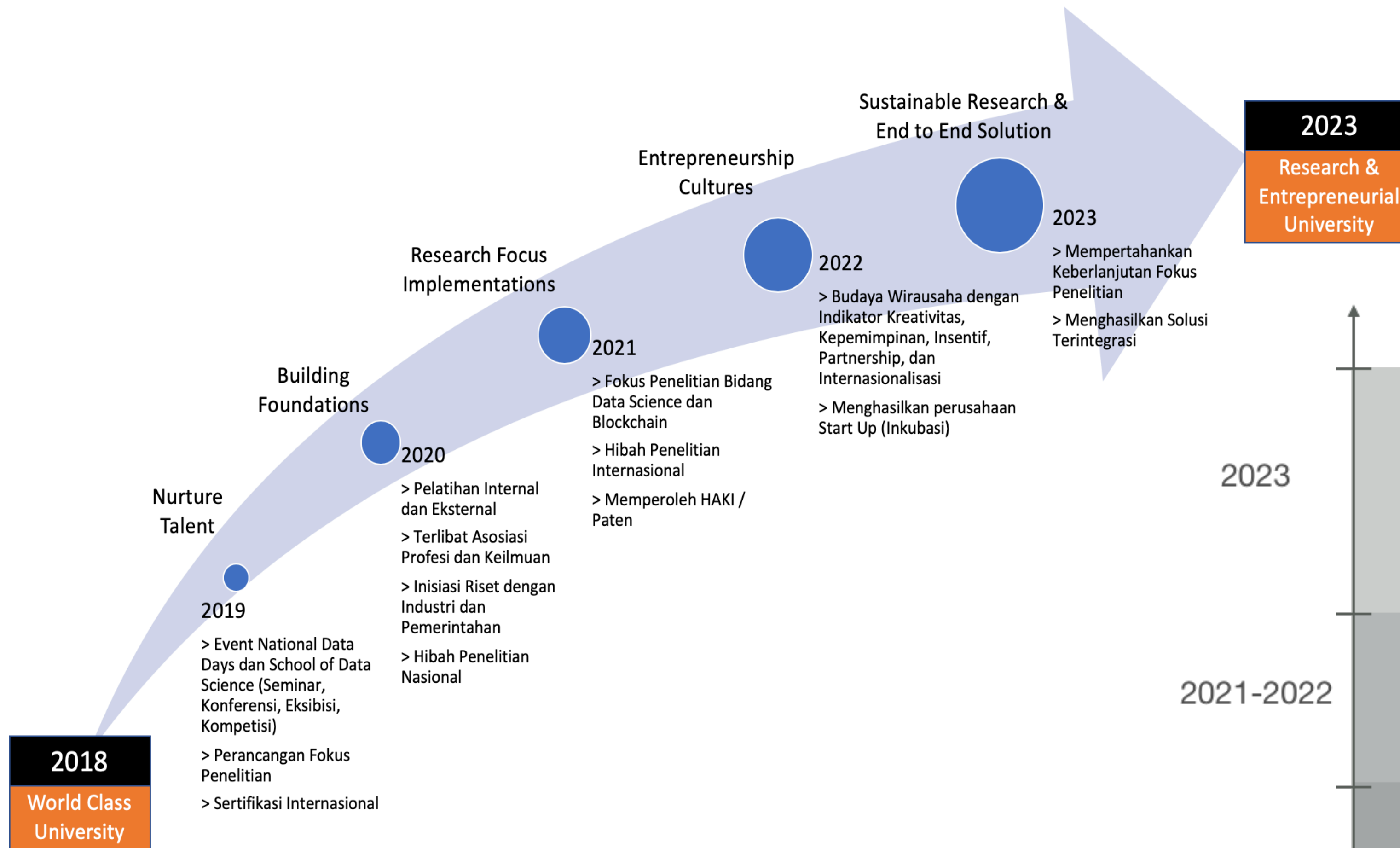
## VISION RC DBE

to become leader in Business Ecosystem Studies through the use of Information and Communication Technology

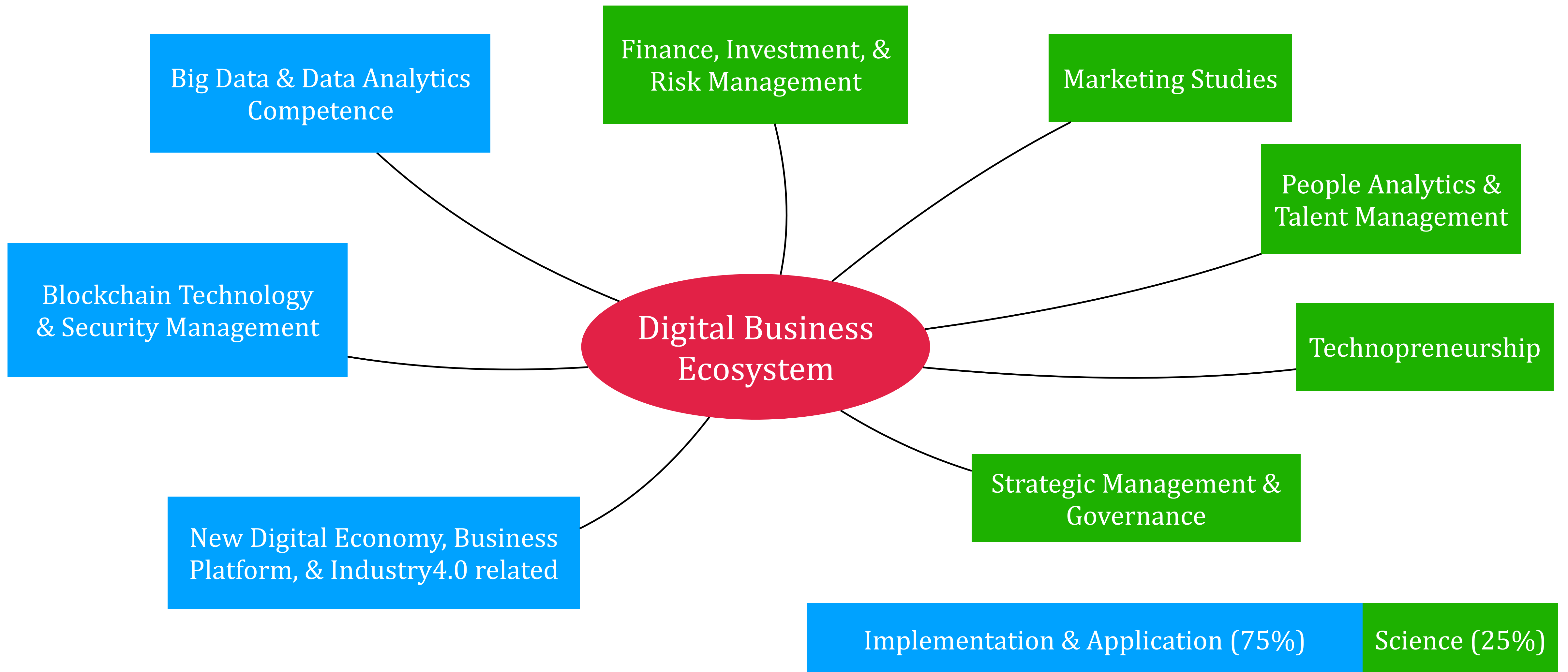
## MISSION RC DBE

1. to help independence, entrepreneurial, and innovation effort to support better indonesia economy.
2. to provide end-to-end solution towards the objective of sustainable DBE through research and collaboration.
3. to harness multi disciplinary science / knowledge approach that answer questions regarding future business challenge.
4. to forge multi-disciplinary talents that aware of always-changing business environment

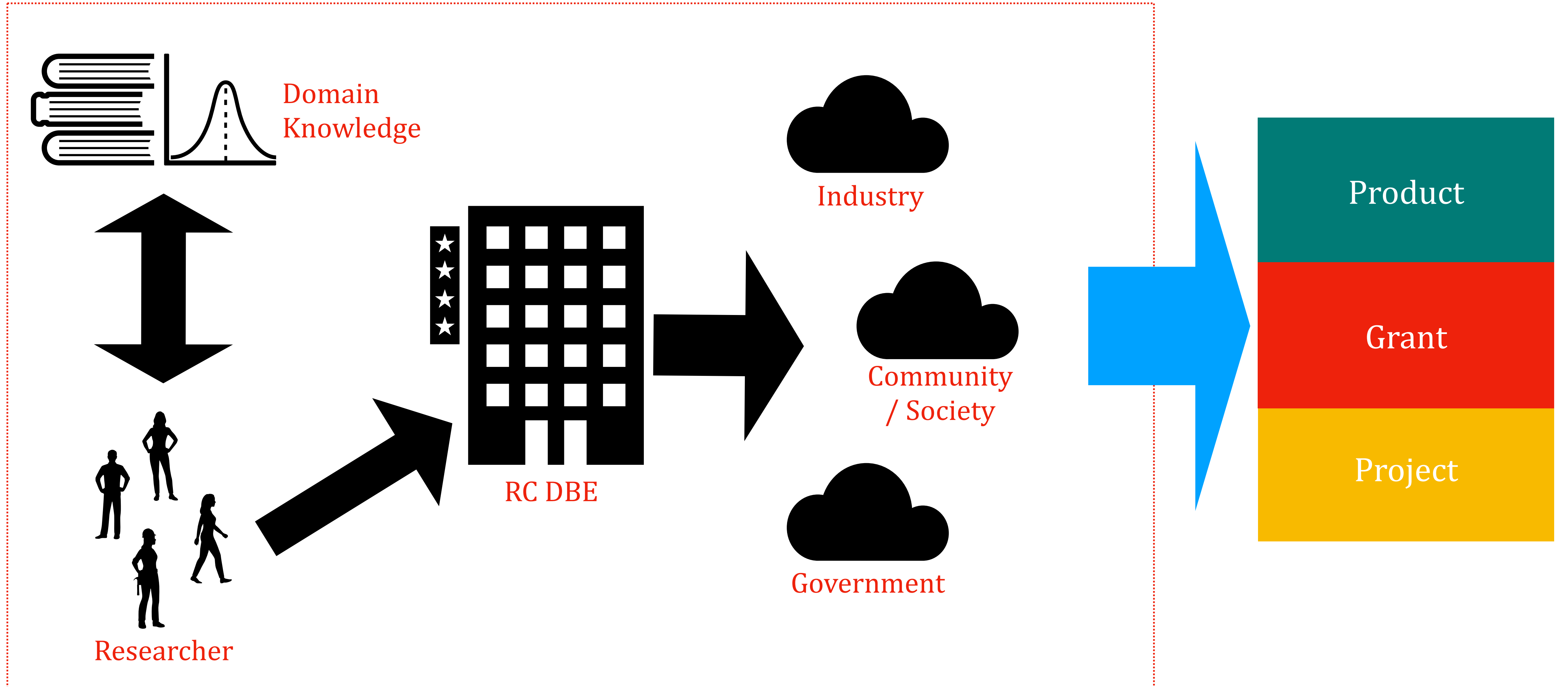
# RoadMap



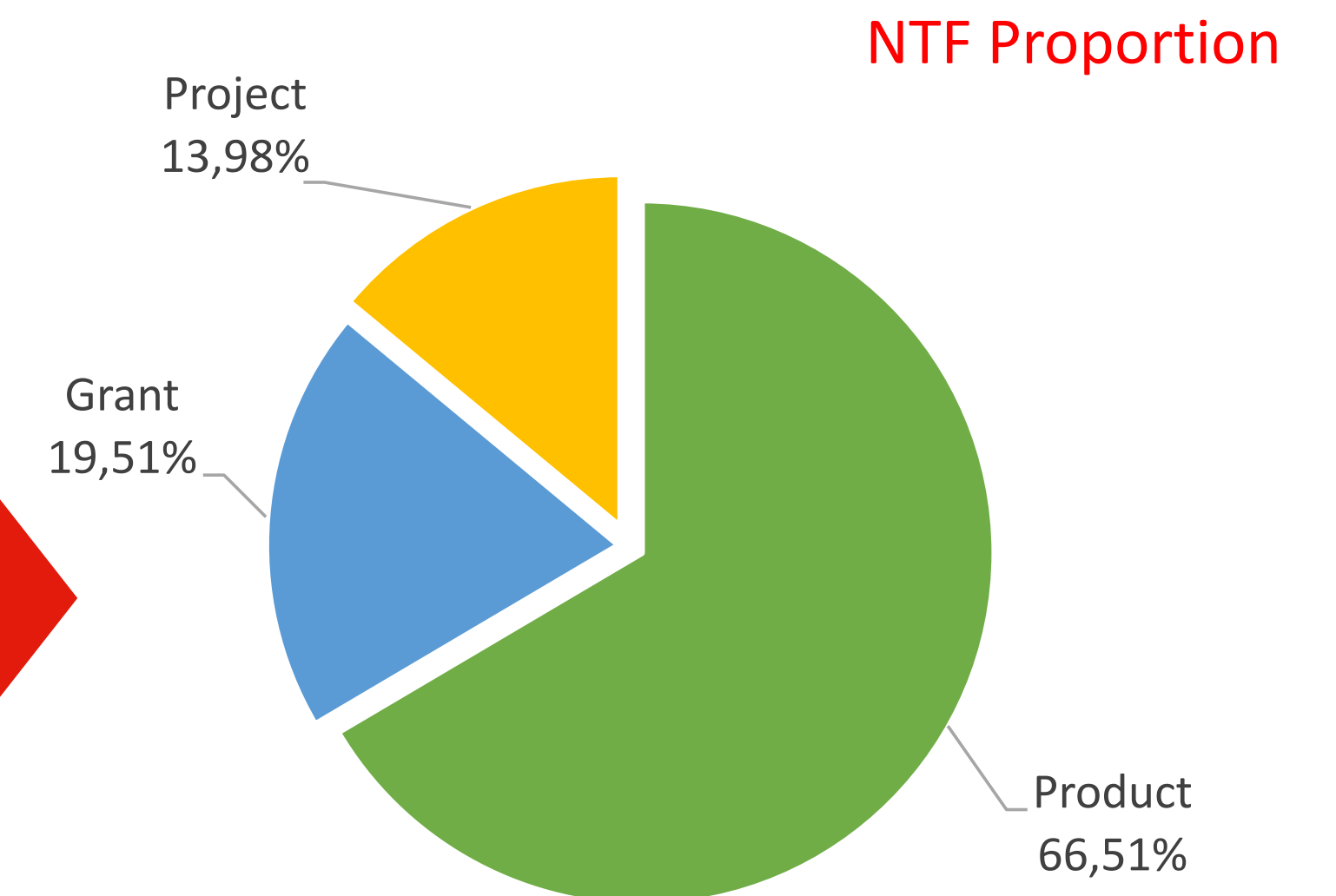
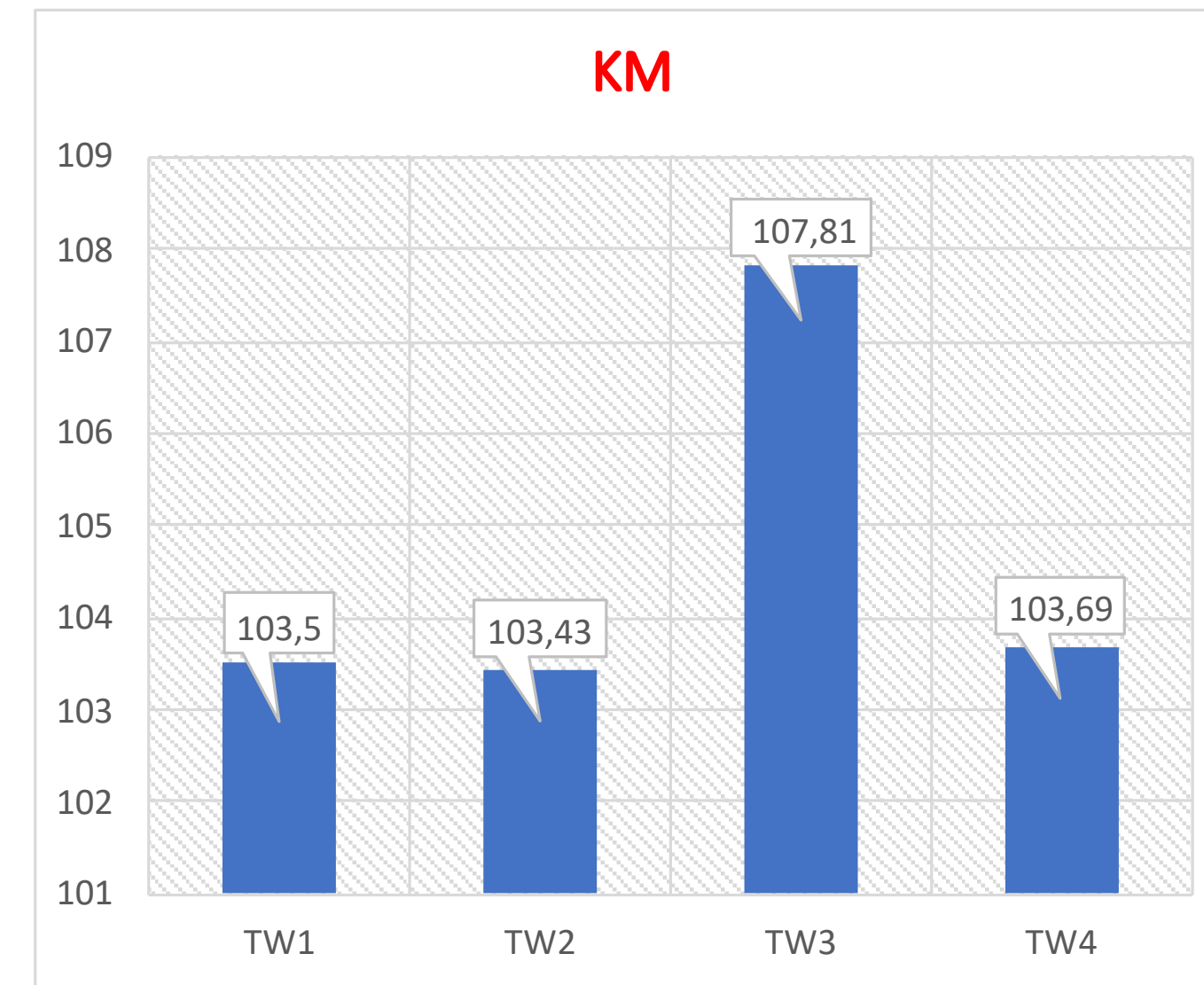
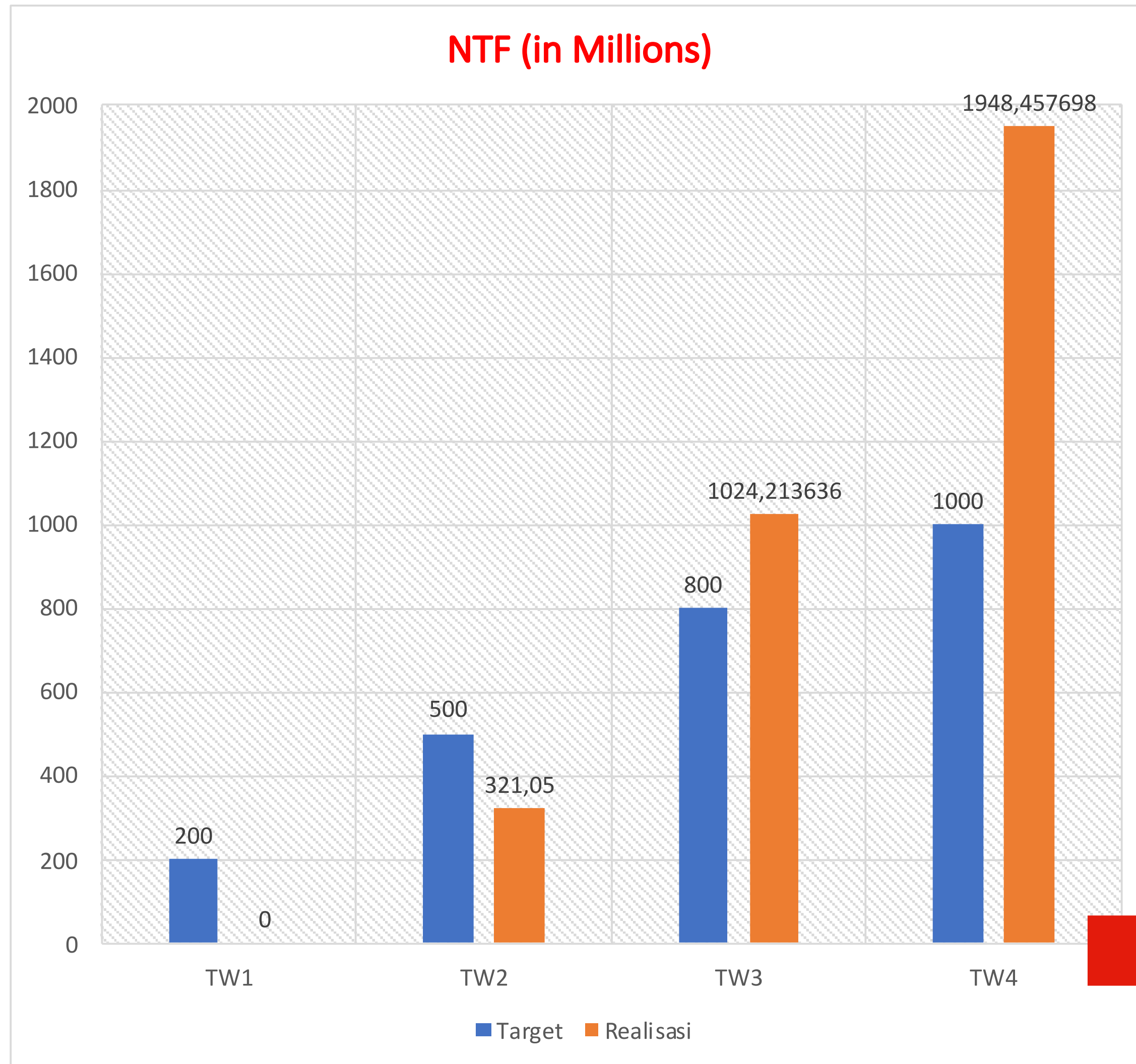
# Domain Knowledge & Working Group



# Workflow



# 2019 by Number



# Research & Grant

1. Pembentukan Model Jaringan Transaksi Dinamis dan Motif Jaringan untuk Deteksi Kondisi Anomali (Ristekdikti)
2. Model Ontologi Pemetaan Kepribadian Manusia dari Jejak Digital Teks Bahasa Indonesia (Ristekdikti)
3. Mapping Financial Technology Industry Talent (OJK)
4. *Sistem Cerdas Kontrol dan Manajemen Kereta Api (LPDP / INKA)*
5. Social Media Analytics for Marketing Studies (University of East Anglia)

## **Plan to Expand**

1. Internal & External Research Collaboration
2. Grant Submission
3. Conference / Summer School / Academic MeetUp



# Community Service

1. Social media analytics for Teens (junior and senior high school)
2. Social media analytics for SME

## Theme Plan

1. Theme : SME preparation to adapt Industry 4.0 revolution
2. Theme : StartUp Business (Model) Consultation for Industry 4.0 / After Covid



# Product : International Certification



## BIG DATA ANALYST

With TUV Rheinland Certified Qualification

### Program Description

This program helps the participants to polish their expertise as a Big Data Analyst by providing methodological and technical skills. The course covers state-of-art data mining techniques for identifying an unexpected pattern, structures, models or trends in data to support the better decision-making process. The program is held for 5 days (29 Hours) consisting of 4 days (26 Hours) in-class theoretical learning along with practical hands-on and 1-day (3 hours) certification test. The participants are required to have knowledge in statistics or mathematics, data mining or general computer science, and business or domain expertise.

### Program Schedule

Batch 7	: Monday, 27th - Friday, 31st January 2020
Batch 8	: Monday, 02nd - Friday, 06th March 2020
Batch 9	: Monday, 22nd - Friday, 26th June 2020
Batch 10	: Monday, 03rd - Friday, 07th August 2020
Batch 11	: Monday, 19th - Friday, 23rd October 2020
Batch 12	: Monday, 23rd - Friday, 27th November 2020

### Registration

<https://dbe.telkomuniversity.ac.id/bigdatacert/>



### Program Outcome

After completing this program, participants are expected to have competence in:

- Perform predictive analytics.
- Build predictive models based on structured and unstructured data.
- Perform machine learning activities.
- Analyze social network/graph data.
- Perform text analytics.
- Perform computational modeling.
- Big Data computation framework.
- Artificial Neural Network and Deep Learning Concepts.

### Program Fee

Rp 10.000.000

### Certipedia

[https://www.certipedia.com/quality\\_marks/0000069408](https://www.certipedia.com/quality_marks/0000069408)

### Contact Information

**DIGITAL BUSINESS ECOSYSTEM RESEARCH CENTER** Digital Business Ecosystem Research Center, Telkom University  
 Phone : +6281222400410 (Whatsapp / Telegram)  
 E-mail : [dbe@telkomuniversity.ac.id](mailto:dbe@telkomuniversity.ac.id)  
 Address : Digital Business Ecosystem Research Center, School of Economic and Business, Telkom University. Jl. Telekomunikasi no. 1, Buah Batu, Bandung 40257.



## Blockchain Technology Consultant

with TUV Rheinland Certified Qualification

### Program Description

This program helps the participants to improve their expertise as blockchain consultants by providing methodological and technical skills. The course covers state-of-the-art blockchain principles for implementing a safe transfer of items such as money, property, contracts, etc., without requiring a third-party intermediary like a bank of government. The program is held for 4 days [25 hours] consisting of 3 days [22 hours] in-class theoretical learning along with practical hands-on and 1 day [3 hours] certification test. The participants are required to have knowledge in basic blockchain technology, computer science, business or domain expertise.

### Program Schedule

Batch 1	: 4th-8th May 2020
Batch 2	: 8th-11th June 2020
Batch 3	: 6th-9th July 2020
Batch 4	: 5th-8th October 2020

### Program Fees

Rp. 5.000.000

### Registration

[bit.ly/RegistrasiBlockchain](http://bit.ly/RegistrasiBlockchain)



### Program Outcome

After completing this program, participants are expected to have competence in:

- Understand Blockchain Architecture and Implementation
- Understand Blockchain Consensus
- Understand Smart Contract
- Able to Write Smart Contract
- Understand The Life Cycle of Initial Coin Offering (ICO) and Security Token Offering (STO)
- Able to Construct Blockchain Ecosystem
- Able to Propose Blockchain Base Solution

### Contact Information

For further information about this program, please contact:

**DIGITAL BUSINESS ECOSYSTEM RESEARCH CENTER** Digital Business Ecosystem Research Center, Telkom University.

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 Phone: +6281222400410 (WhatsApp/Telegram)  
 E-mail: [dbe@telkomuniversity.ac.id](mailto:dbe@telkomuniversity.ac.id)  
 Address: Digital Business Ecosystem Research Center, School of Economic and Business, Telkom University. Jl. Telekomunikasi no. 1, Buah Batu, Bandung 40257.

# Product: Workshop



## Social Media Analytic Workshop

Faculty of Economics and Business, Telkom University, Bandung.

Saturday, 15th February 2020  
08.00 - 16.00

### Program Description

Social media has evolved over the recent decade to drive information spread regarding almost every domain in our life. The biggest challenge is to mine valuable knowledge within large, complex, and unstructured social media data. Social media analytics focused on extracting useful insights from data to support the business decision. Social Media Analytic Workshop by Telkom University provides the right way to understand real-world pattern extraction and solve problems in any industry. This program is equipped with practice and designed for those without any programming and computer science background.

### Program Fees

Public : IDR 1.500.000  
Student (Early Bid) : IDR 750.000  
Student : IDR 1.000.000

\*Limited seat before 31st January 2020  
\*\*Fees include training modules, snacks, lunch, and CERTIFICATE  
\*\*\*Only for undergraduate student

### Payment

BNI 8321066201900024  
a.n. Telkom University - Pelatihan Social Media Analytic

### Registration

<https://dbe.telkomuniversity.ac.id/socialmediaanalytic/>

### What Will You Learn

- Social Media Analytic Fundamental
- Collect Social Media Data through Crawling, Streaming, and Scraping
- Turning Social Relations into a Network (+ Practice)
- Identify Prominent Man of a Society (+ Practice)
- Understand the Conversation Structure and Information Flow (+ Practice)
- Process Indonesian Text Data (+ Practice)
- Identify Frequently Related Words (+ Practice)
- Recognize the Crowd Sentiment (+ Practice)
- Summarize User Conversation (+ Practice)

### Payment Confirmation

dbe@telkomuniversity.ac.id

\*Just send proof of transfer and name of the registrant to confirm the payment

### Contact Information

Digital Business Ecosystem Research Center, Telkom University  
Phone : +6281222400410 (Whatsapp / Telegram)  
E-mail : dbe@telkomuniversity.ac.id  
Address : Digital Business Ecosystem Research Center, School of Economic and Business, Telkom University, Jl. Telekomunikasi no. 1, Buah Batu, Bandung 40257.



## Python Academy: Mastering Basic Programming Skill



### Program Description

Python is the fastest-growing, versatile, and most widely used programming language throughout the world. Python is almost similar to human formal communication languages; concise and easy to understand. Thus, no doubt, Python is a great start for everyone's programming journey. Data structures and algorithms including array, sorting, construct graphical user interface, and others are the most essential programming skills. This academy will equip you with everything you need to code Python step-by-step from basic to master the basic algorithm. Participants will be exposed to 90% practical material to understand how python logic works and how to implement them.

### Program Fees

Public : IDR. 750.000  
Student : IDR. 500.000

### Payment

BNI 8321066201900030  
a.n. Telkom University - Python Academy

### Registration

<https://dbe.telkomuniversity.ac.id/pythonacademy/>

Faculty of Economics and Business, Telkom University, Bandung.

Saturday, 5th October 2019  
09.00 - 16.00

### What Will You Learn

- Python Installation
- Python IDE / Jupyter Notebook Fundamental
- First Python Code
- Data Structures on Python
- Iteration and Conditional Construction
- Understanding Functions Usage
- Construct Graphical User Interface
- Case Study

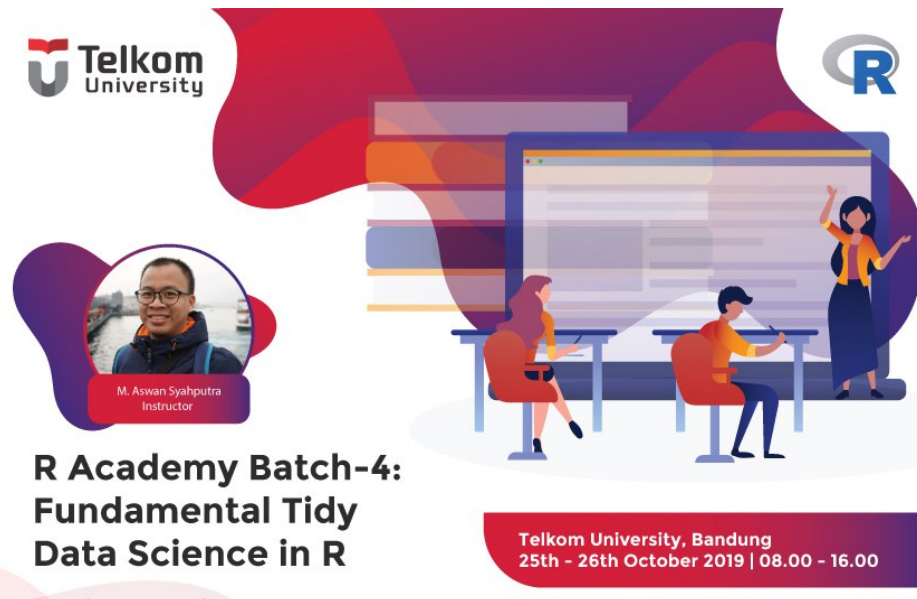
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## R Academy Batch-4: Fundamental Tidy Data Science in R

The First Data Science Workshop using "Tidy" Philosophy in Indonesia.

### Program Description

R Academy is an R language training / bootcamp program held by the Digital Business Ecosystem Research Center, Telkom University. R is one of the popular programming languages used for data analytics. Based on a publication released by IEEE Spectrum ranks languages in 2017, R belongs to the 10 most popular programming languages. R is in the 6th position above the Javascript and PHP languages which are in the 7th and 8th positions respectively. Many companies require R as a programming language that must be mastered to apply as a Data Scientist. By joining R Academy, participants are expected to have a ground understanding of tidy data science workflow, skills to address data science problems using R in an efficient manner and be able to deliver the solution in preferable medium to audience.

### Program Syllabus

- Overview of key activities in the data science world
- Understanding data structures, object creation, and operation in R
- Concept of functions, arguments, and packages
- Concept of iteration and implementation of functional iteration
- How to find and install packages from various sources
- Empowering R with RStudio and git version control system
- How to prepare a reproducible data science project
- Seamless workflow using Project and GitHub
- Introduction to Tidyverse for tackling data science problems
- Efficient reading of single and multiple delimited files
- Importing excel file(s) and troubleshooting its issues
- Taming and tidying data for further processing
- Joining multiple tables into one based on keys
- Concise data cleaning and manipulation
- The grammar of graphics for data visualization
- Machine learning principle and workflow
- A gentle introduction to Tidymodels and Tidytxt
- Case study supervised learning: predicting numbers and classes
- Introduction to Shiny framework for developing applications in R
- Building a web application for interactive data visualization
- Deploying machine learning models into a web application

Telkom University, Bandung  
25th - 26th October 2019 | 08.00 - 16.00

### About Tidy Philosophy

Tidy is a popular principle and philosophy in R in which you can easily perform data science tasks in a seamless way. Using tidy principle, you (a problem solver) can immediately transfer your thoughts into a computer (a machine) to address particular problems without worrying too much about codes and performance. The codes are easy to write to understand, by both human and computer. Hence in tidy data science, you can focus on solving a problem than (re-)inventing the wheel.

### Program Fees

Public : IDR. 2.500.000  
Undergraduate student : IDR. 1.250.000 (Early bird-IDR-1.000.000\*)  
Post-graduate student : IDR. 1.750.000 (Early bird-IDR-1.500.000\*)  
\*Payment before 15th October 2019  
\*\*Fees include training modules, snacks, lunch, and CERTIFICATE.

### Registration

<https://dbe.telkomuniversity.ac.id/r-academy/>

### Payment

Bank Negara Indonesia - 8321066201900008  
A.N. Telkom University - Pelatthan R

### Payment Confirmation

dbe@telkomuniversity.ac.id

\*Just send proof of transfer and name of the registrant to confirm the payment

### Contact Information

Digital Business Ecosystem Research Center, Telkom University  
Phone : +6281222400410 (Whatsapp / Telegram)  
E-mail : dbe@telkomuniversity.ac.id  
Address : Digital Business Ecosystem Research Center, School of Economic and Business, Telkom University, Jl. Telekomunikasi no. 1, Buah Batu, Bandung 40257.



## Deep Learning Workshop

Saturday, 29th February 2020 (08.00 - 16.00)

Deep learning is a technique for extracting higher-level features from large and complex data. Over the past few years, deep learning has achieved breakthrough inventions in a diverse area such as machine translation, robotics, speech recognition, and other applications in the digital era. Thus, deep learning turned into the most demanded data analysis technique in today's industry. Deep Learning Workshop by Telkom University provides the right way to understand the fundamental concept of deep learning and how to build the deep learning model step by step. This program is equipped with more practice and designed for those without any programming and computer science background.

### Investment

• Public : IDR. 1.800.000  
• Student\*\* (Normal) : IDR. 1.000.000  
• Student\*\* (Early Bird) : IDR. 750.000\*

\* Limited seat for payment before 10th February 2020  
\*\* Fees include training modules, reusable code training-kit, snacks, lunch, and certificate.

### Program Syllabus

- Conceptual Data Science / Machine Learning
- Fundamental Artificial Neural Network
- Why Deep Learning?
- Deep Learning Concept
- Deep Learning Framework: Tensorflow
- Hands on Artificial Neural Network
- Hands on Convolutional Neural Network
- Hands on Recurrent Neural Network

### Contact Information

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Address : Digital Business Ecosystem Research Center, School of Economic and Business, Telkom University, Jl. Telekomunikasi no. 1, Buah Batu, Bandung 40257.



## Data Science Training for Business Management

Faculty of Economics and Business, Telkom University, Bandung.

Saturday, 20th July 2019  
08.00 - 16.00

### Program Description

Data Science Training for Business Management by Telkom University is a new prerequisite for those wishing to design today's top-notch data science solutions for business problems through motivating examples, clear exposition, and comprehensive details covering "hows" and "whys". Participants will be guided to understand the concepts behind data science and how to be capable in using Data Analytics tool.

\*All Material in this training is fully designed for those without any programming and computer science background.

### Payment

Bank Negara Indonesia - 8321066201900019  
A.N. Telkom University

### Registration

<https://dbe.telkomuniversity.ac.id/datasciencetraining/>



### Learning Materials

- Introduction to Conceptual Data Science.
- Data Modelling Taxonomy, Opportunities, and Challenges in Big Data World.
- CRISP-DM Framework.
- Data-Analytic Framework.
- Machine Learning Modelling using Classification, Regression, Clustering, and Association Algorithms.
- Data-driven Decision Making Model.
- Case Study

### Program Fees

Public : IDR. 1.250.000  
Student : IDR. 750.000.

\*Fees include training modules, snacks, lunch, and CERTIFICATE.

### Payment Confirmation

dbe@telkomuniversity.ac.id

\*Just send proof of transfer and name of the registrant to confirm the payment

### Contact Information

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# Project / Consultation

1. Big Data for Marketing Dashboard (BTP/PT. Telkom)
2. DigitalID Apps (NeoData)
3. Integrated Apps (Lembaga Nasional Single Windows)
4. *Integrated Apps (Puspintek - Kemenkeu)*
5. *Social Media Analytics (Kemenlu)*



# lab. SCBD

## Social Computing and Big Data

- objective : (human / social) behaviour quantification through public / big data by applying machine learning / data analytics (of course AI too)
- implementation on many social science domain : economic/business, communication, psychology, political issue, environmental issue, and others.
- founded in 2012, 30-40 lab members (students and researchers)
- **Several projects** : *bank transaction network motif for EWS economic crisis detection, human personality measurement (people analytics), deciphering social opinion polarization, social CRM, DL for identification location based fashion trend, and others*



# Strategy 2020

1. Product Diversification : *certification* (c) and *workshop* (w)
  - a. Launching new product : **Advance Big Data Analytics (c), Design Thinking (c), Python Academy : Data Analytics (w), Big Data for Teens (w), SKPI version (c)**
  - b. Integration certification into curriculum : *Big Data Analytics for MM students*
  - c. Product collaboration with other parties (Research Center / Academician, Government, Industry)
  - d. Preparation for *in-house-training* -> opportunities from abroad
  - e. MOOC for both (c) and (w)
  
2. Assign *Dedicated Researcher* for
  - a. Initiate research collaboration
  - b. Obtain research grant
  - c. Increase HAKI and industrial license

# ABOUT US



- + History
- People

# Let's Collaborate

## VISI

1. Membantu perekonomian Indonesia yang mandiri, melalui upaya inovatif dan berdasarkan prinsip kewirausahaan.
2. Memberikan solusi ujung ke ujung untuk mendukung DBE berkelanjutan melalui penelitian dan kolaborasi.
3. Mempersiapkan dan menggunakan pendekatan multi-disiplin ilmu yang mampu menjawab tantangan masa depan dunia bisnis.
4. Membangun talenta multidisiplin yang sadar akan lingkungan bisnis yang selalu berubah.

## MISI

1. Menyediakan platform terbuka dan kolaboratif untuk mendukung kegiatan penelitian dari berbagai pemangku kepentingan.
2. Tingkatkan literasi sehingga dapat menjawab tantangan bisnis di masa depan dan melihat peluang wirausaha.
3. Berikan masukan kepada organisasi tentang bagaimana bertindak untuk menjawab tantangan bisnis saat ini dan masa depan.

**Penelitian** Secara aktif melakukan penelitian untuk mendukung kegiatan ekonomi yang efisien melalui penggunaan Teknologi Informasi dan Komunikasi.



**Dr. Andry Alamsyah**  
S.Si, M.Sc

Social Computing, Social Network, Complex Network / Network Science, Big Data, Data Science, Data Analytics, Graph Theory, Disruptive Innovation / Disruption Economy, Data Business, ICT Entrepreneurial Business, Media and Communication Studies



**Dr. Astri Ghina, S.Si., MSM**

Entrepreneurship Education, Entrepreneurial University, Micro and Small Business Performance, Digital Entrepreneurship