

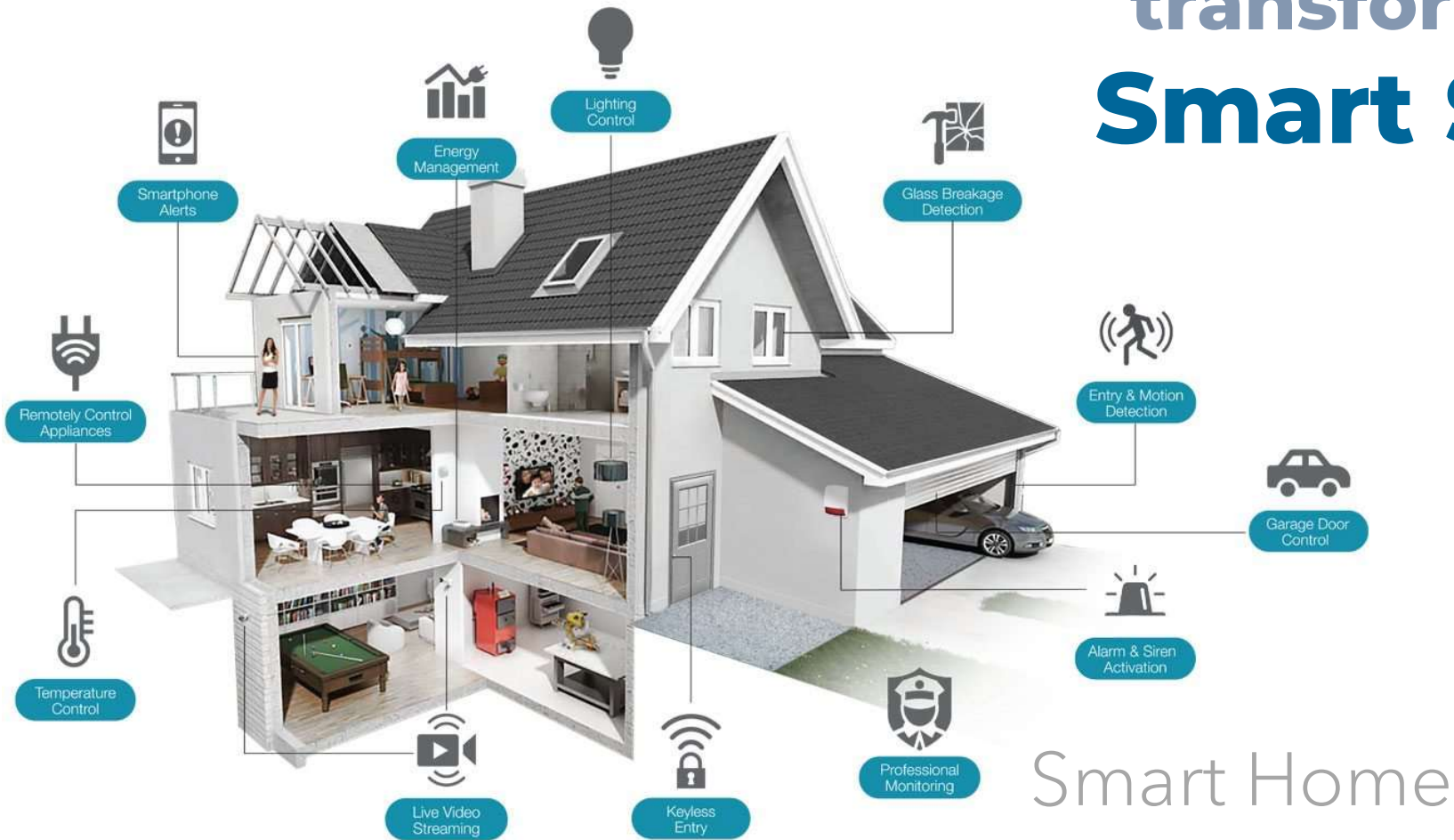


Multidiscipline Master Program of Smart System (Smart-X)



**We are entering
massive technology
civilization...**

Every system is transforming into Smart System

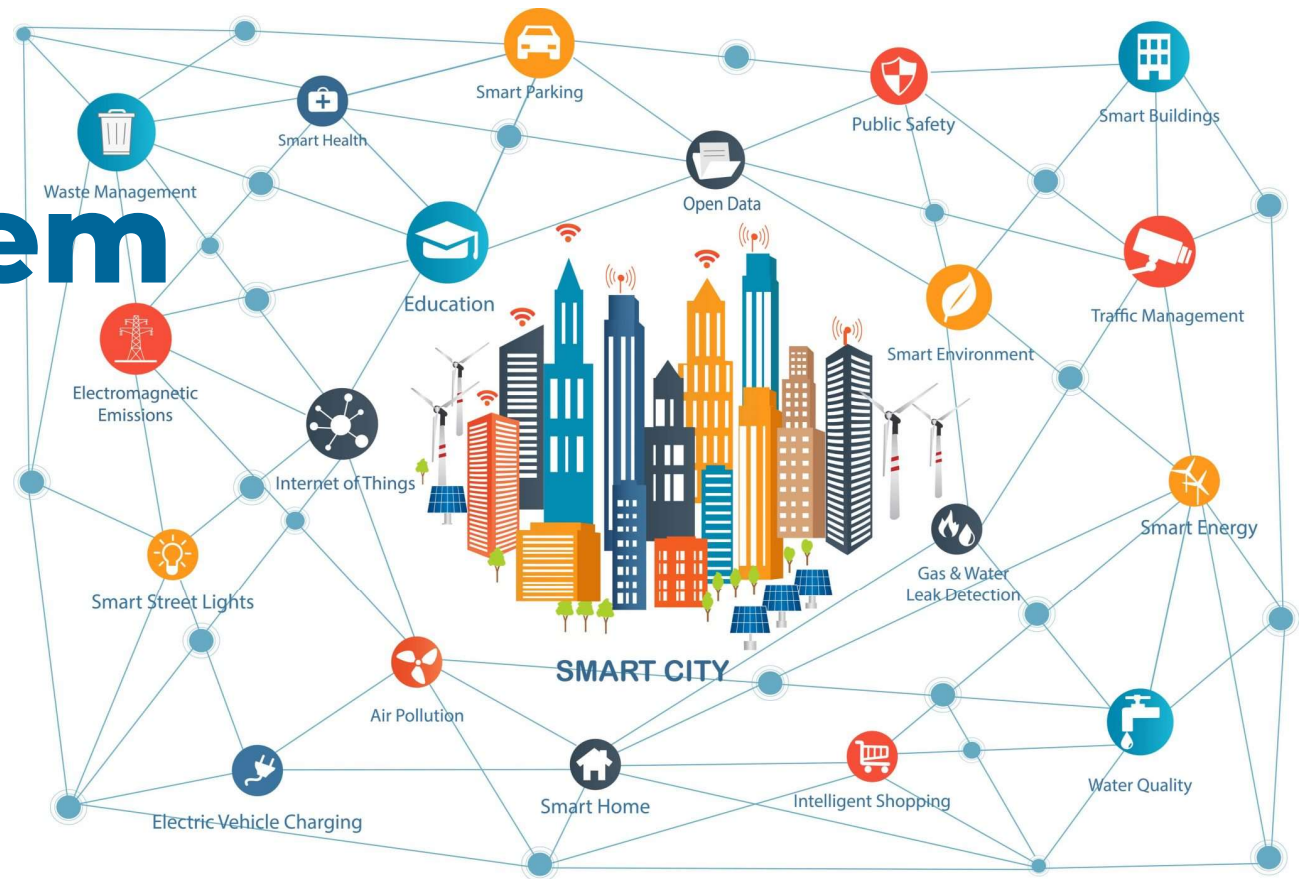


Smart Hospital

Every system is
transforming into
Smart System



Every system is transforming to be a **Smart System**

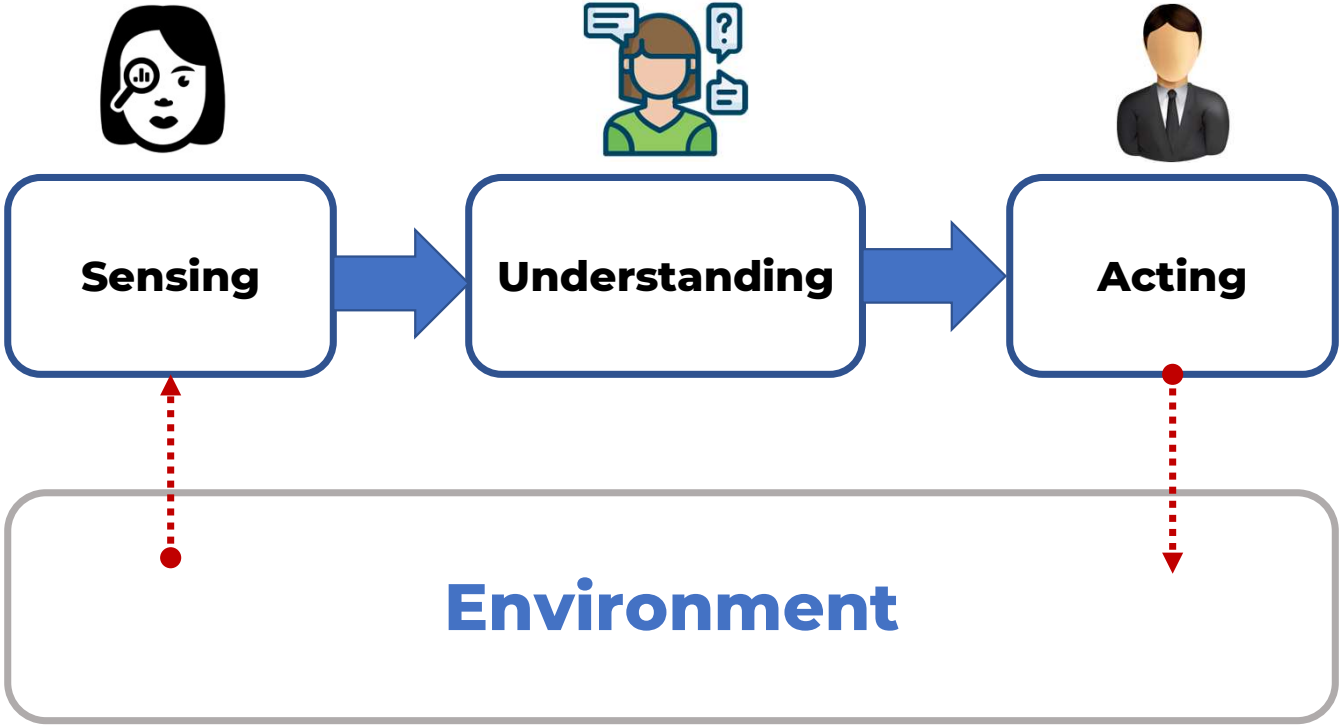


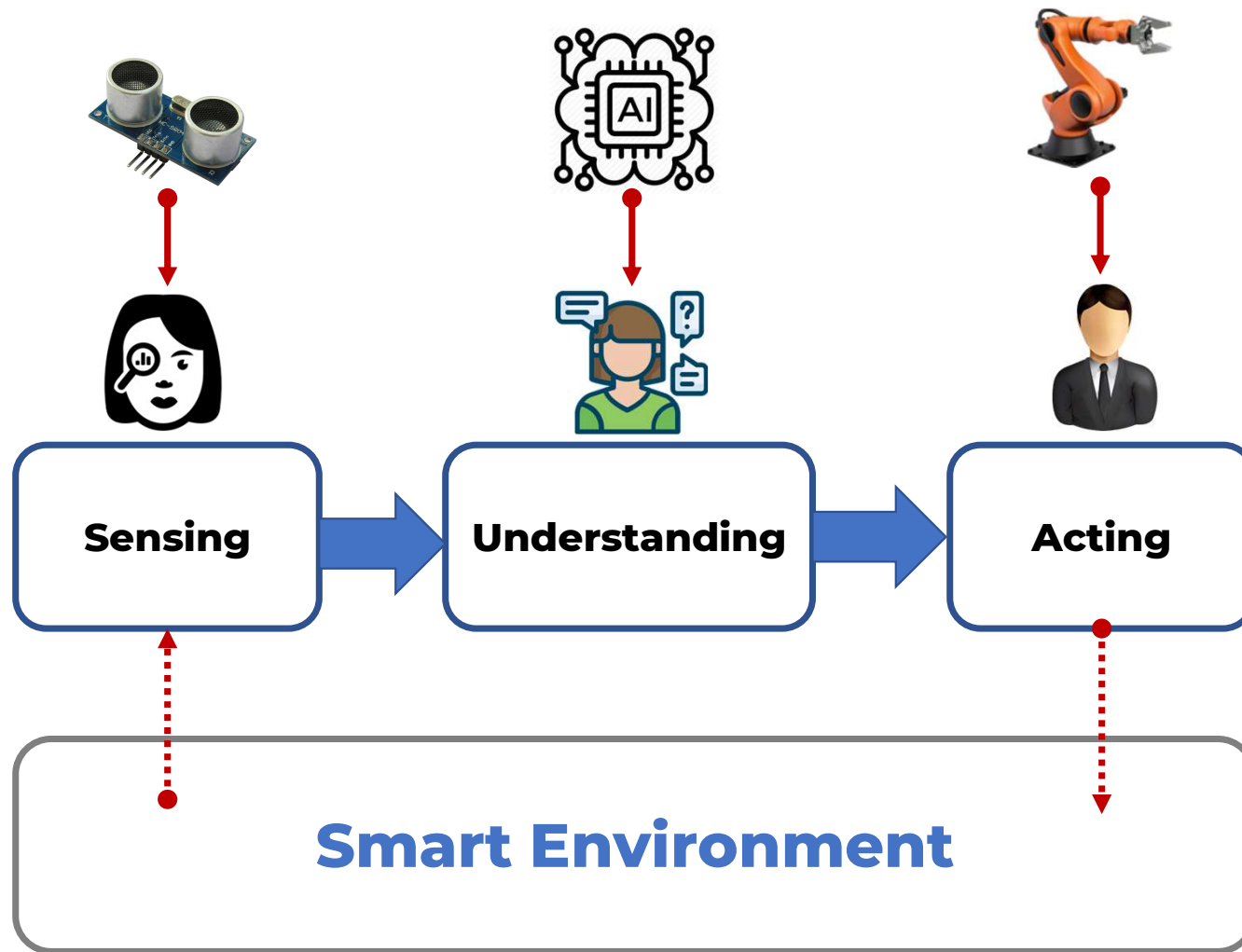


Every system is
transforming
to be a
Smart System



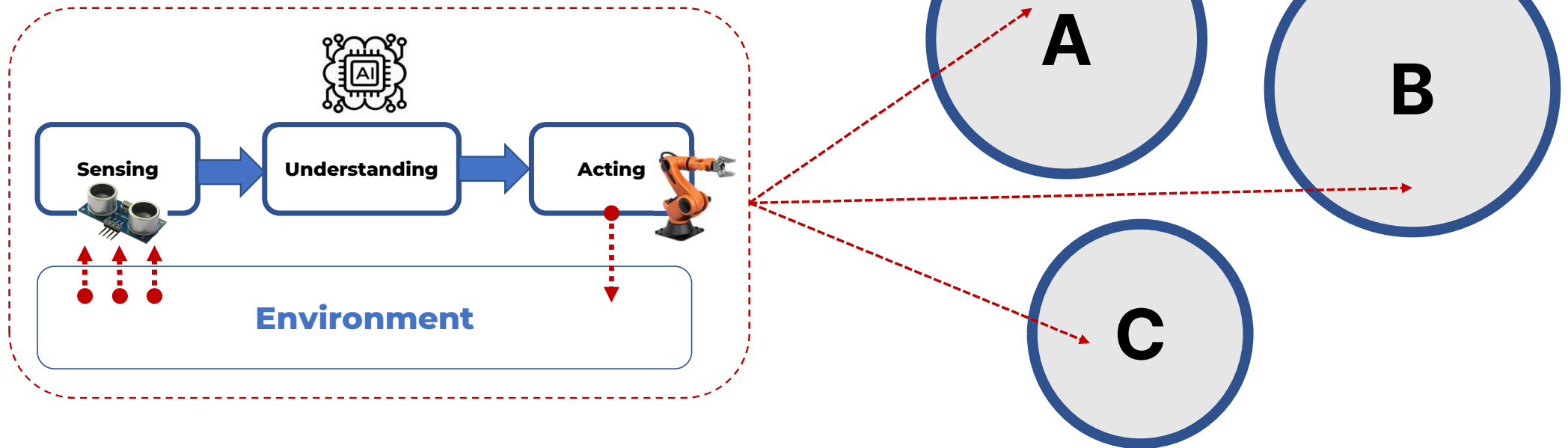
What is **Smart System?**



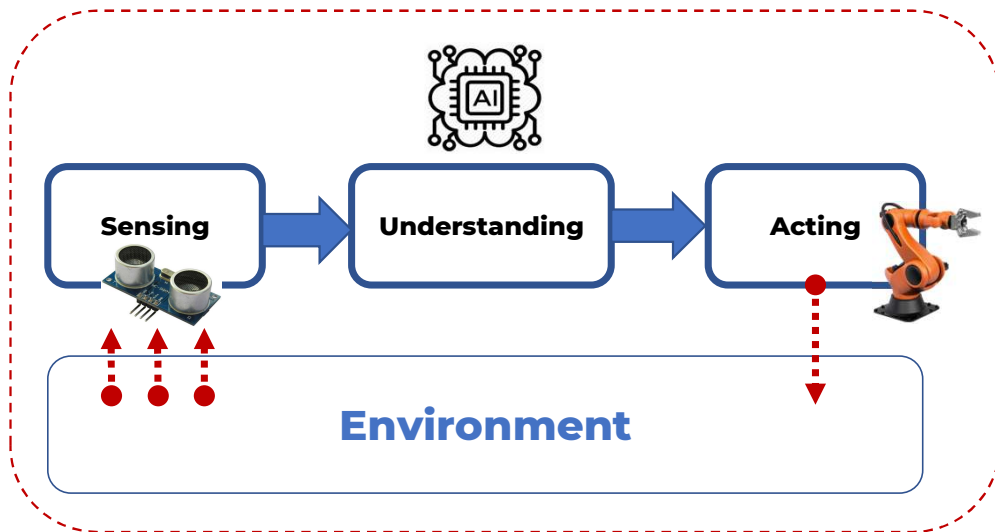


Smart System can be part of any “System”

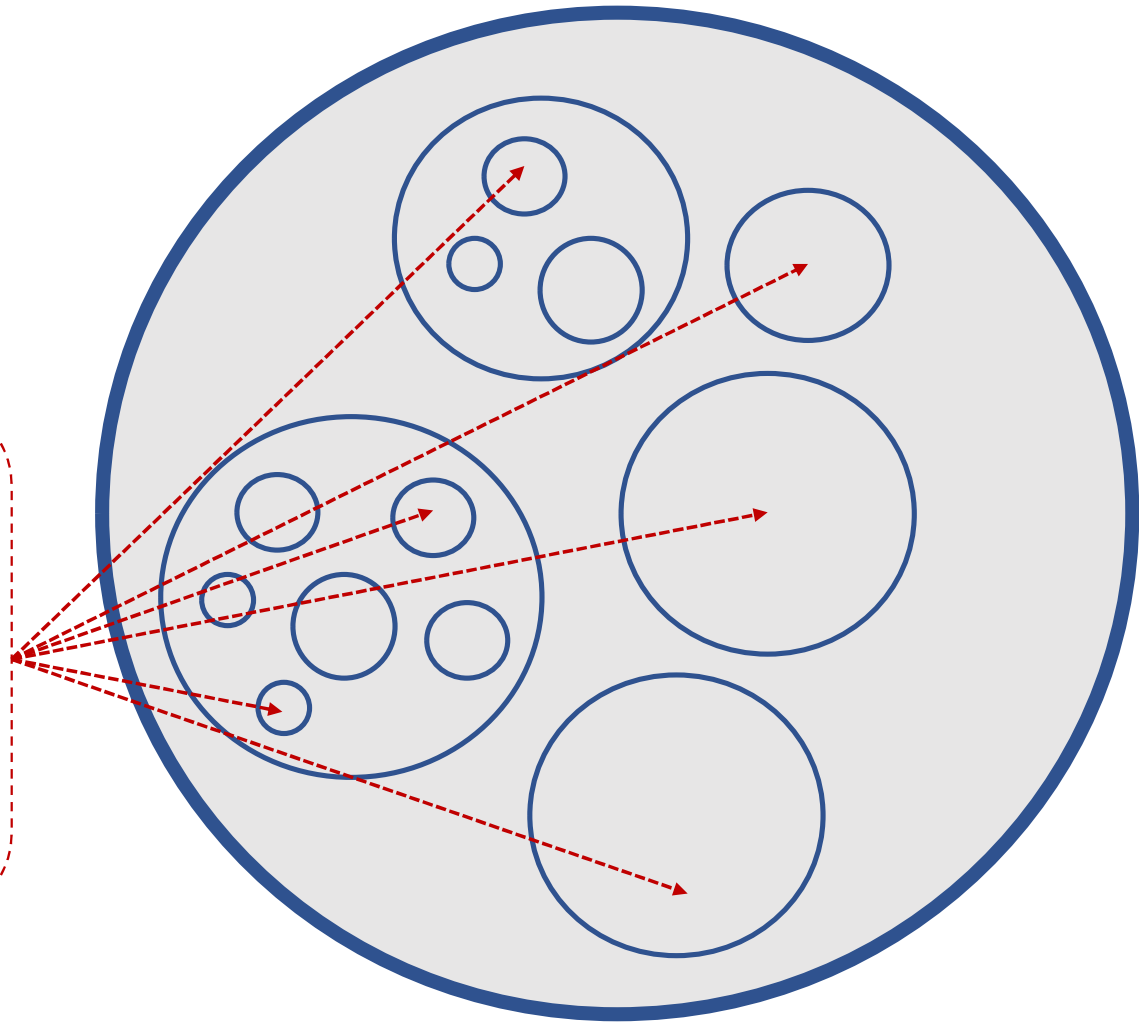
Systems



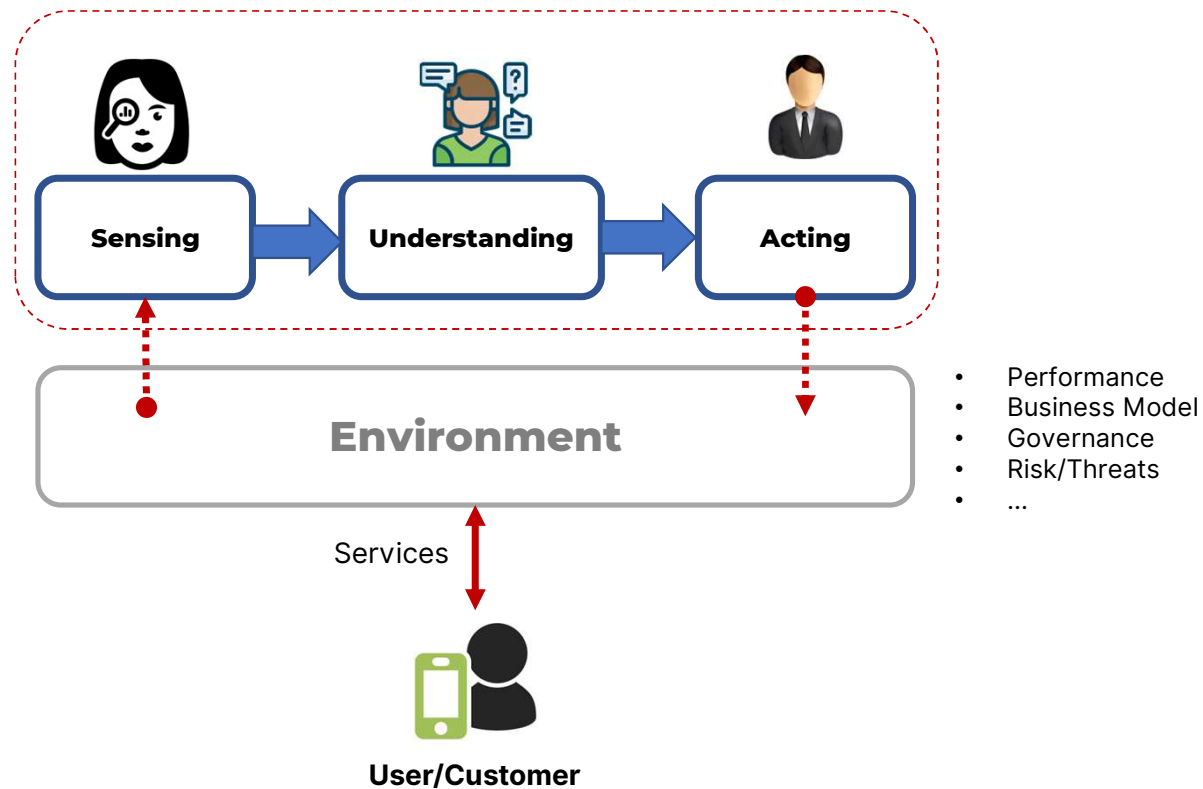
Smart System can be part of any “System of System”



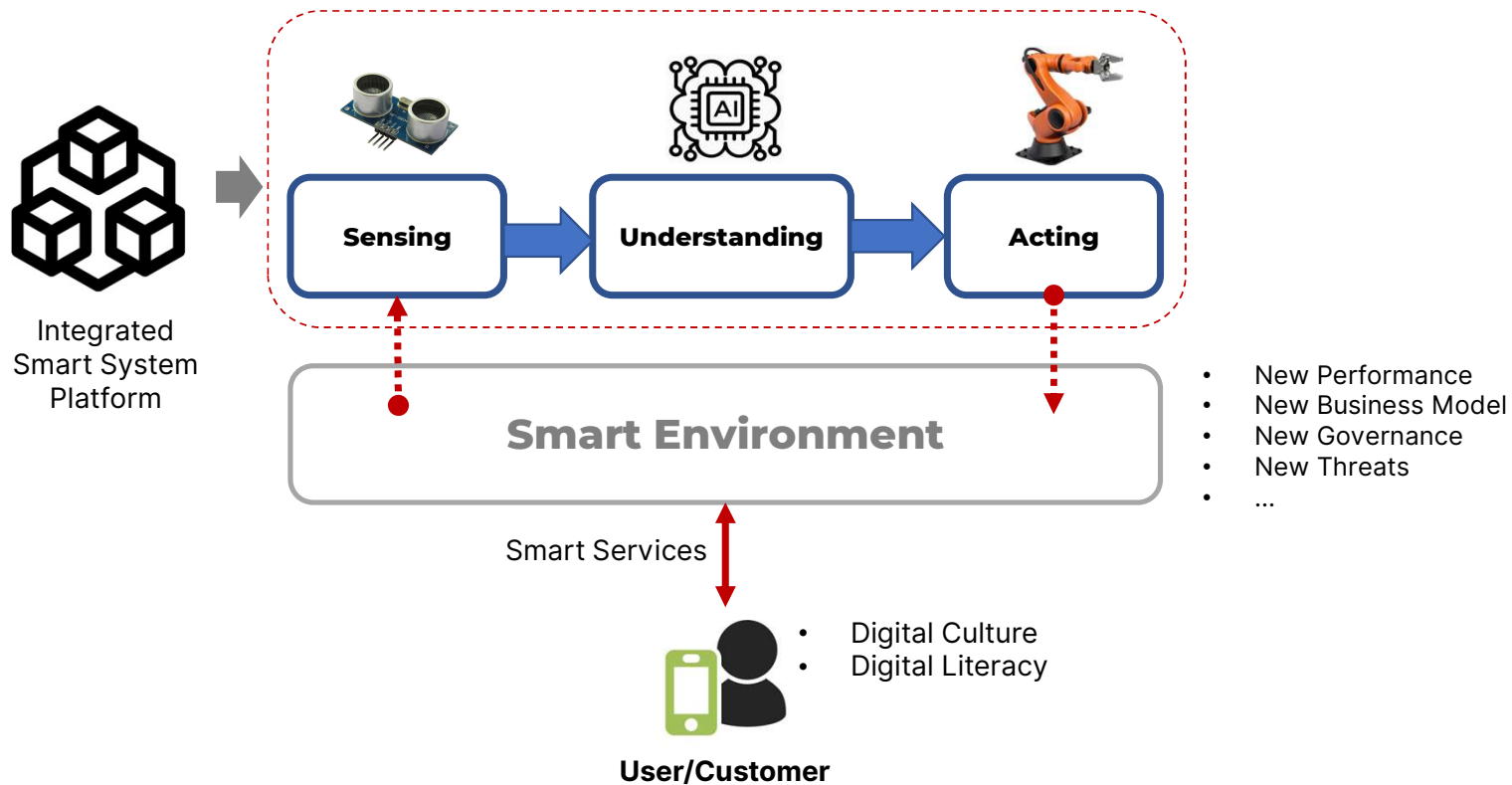
System of system



Holistic View of Traditional System



Holistic View of Smart System





Master Program of
Smart System
(Smart-X)

Tujuan Pendidikan

1. Lulusan akan memiliki aspek **berpikir kritis, inovatif**, dan **profesional** untuk bersaing secara global
2. Lulusan akan berhasil **melanjutkan studi ke jenjang selanjutnya** atau terlibat dalam **pengembangan keprofesian** secara berkelanjutan.
3. Lulusan akan memiliki kemampuan untuk **mengelola riset**



Tujuan spesifik

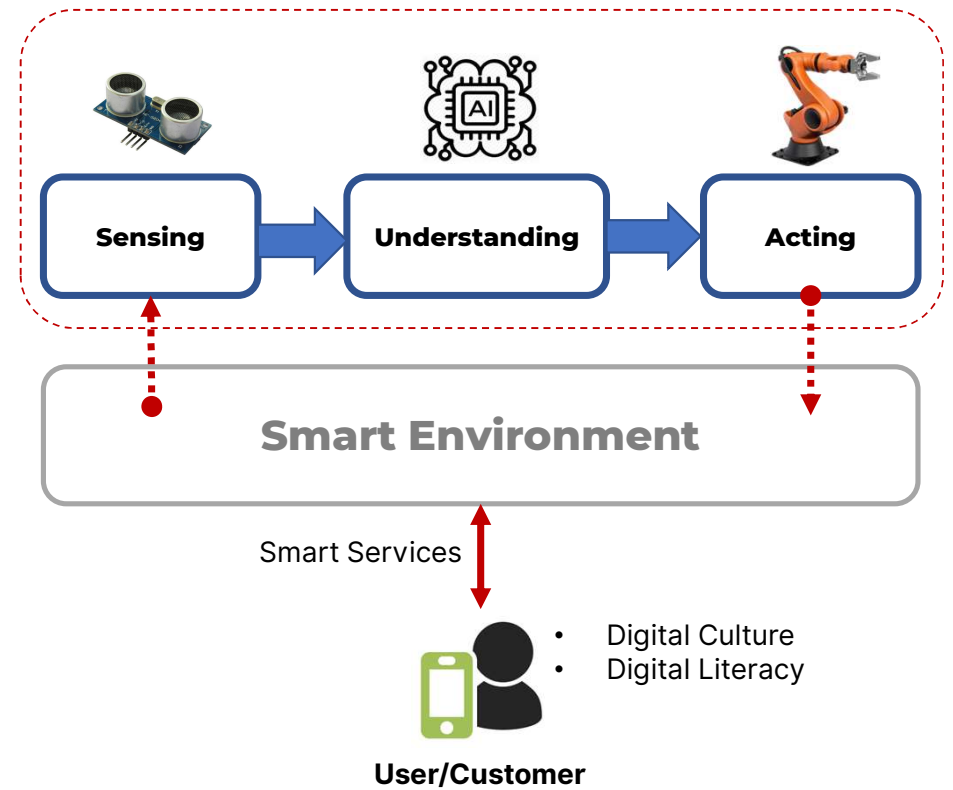
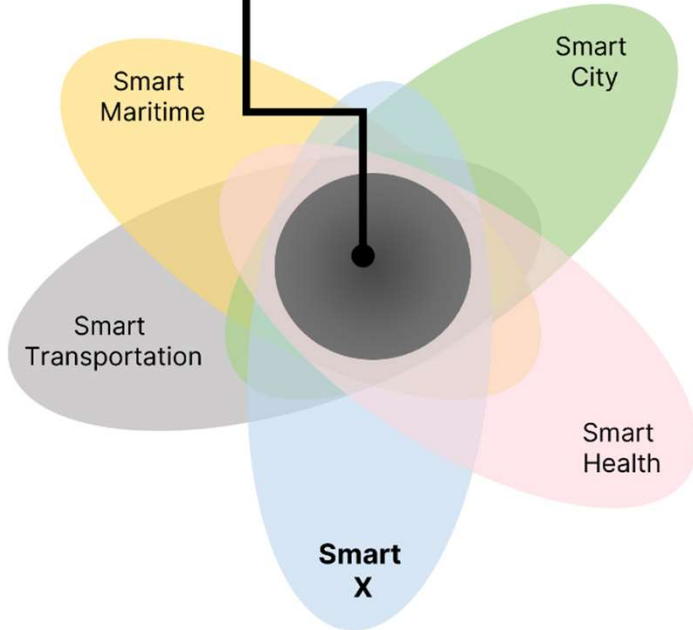
- Lulusan memiliki kemampuan **membangun solusi “smart system”** untuk **menjawab kebutuhan nyata** dengan **cara pandang holistic**.

Core Courses and Resources

Smart System Core

- Digital Strategy
- Sensing Technology
- AI for Enterprise
- Data Science
- Digital Leadership

- 12 Faculty/School
- 53 Master Study Programs
- 111 Research Division
- 3 Campus Locations
- 24 Centers
- 7 Research Centers
- 5 Science and Technology Center of Excellence



Highly experienced lecturers

Prof. Dr. Suhono Harso Supangkat

STEI

Prof. Dr. Ir. Krishna Suryanto Pribadi

FTSL

Prof. Ir. Haryo Winarso, M.Eng, Ph.D.

SAPPK

Prof. Dr. Yasraf Amir Piliang, M.A.

FSRD

Prof. Ir. Armein Z.R. Langi, M.Sc., Ph.D

STEI

Prof. Dr. Ing. Ir. Suhardi, M.T.

STEI

Prof. Yusep Rosmansyah, S.T., M.Sc., Ph.D.

STEI

Ir. Edi Leksono, M.Eng., Ph.D.

FTI

Aswin Indraprasta, S.T., M.T., M.Eng, Ph.D.

SAPPK

Adiwan Fahlan Aritenang, S.T., M.GIT., Ph.D.

SAPPK

Dr. Susanna Nurdjaman, S.Si., M.T.

FITB

Dr. Ir. Agustinus Bambang Setyadji, M.Si.

FITB

Ir. Kridanto Surendro, M.Sc, Ph.D.

STEI

Dr. Ir. Albarda, M.T.

STEI

Dr. Joko Suryana, S.T., M.T.

STEI

Dr. Ir. Arry Akhmad Arman, M.T.

STEI

I Gusti Bagus Baskara Nugraha, S.T., M.T., Ph.D

STEI

Dr. Fadhil Hidayat, S.Kom., M.T.

STEI

others



Program Options



- Smart City
 - Prodi Informatika STEI, Prodi Perencanaan Wilayah dan Kota
- Smart Maritime
 - Prodi Informatika STEI, Prodi Sains Kebumihan (Jalur Oseanografi)
- Smart Energy
 - Prodi Informatika STEI, Prodi Teknik Fisika (Jalur Manajemen Energi)
- Smart Building
 - Prodi Informatika STEI, Prodi Arsitektur Jalur Riset



Our Experiences

Smart System Architecture View

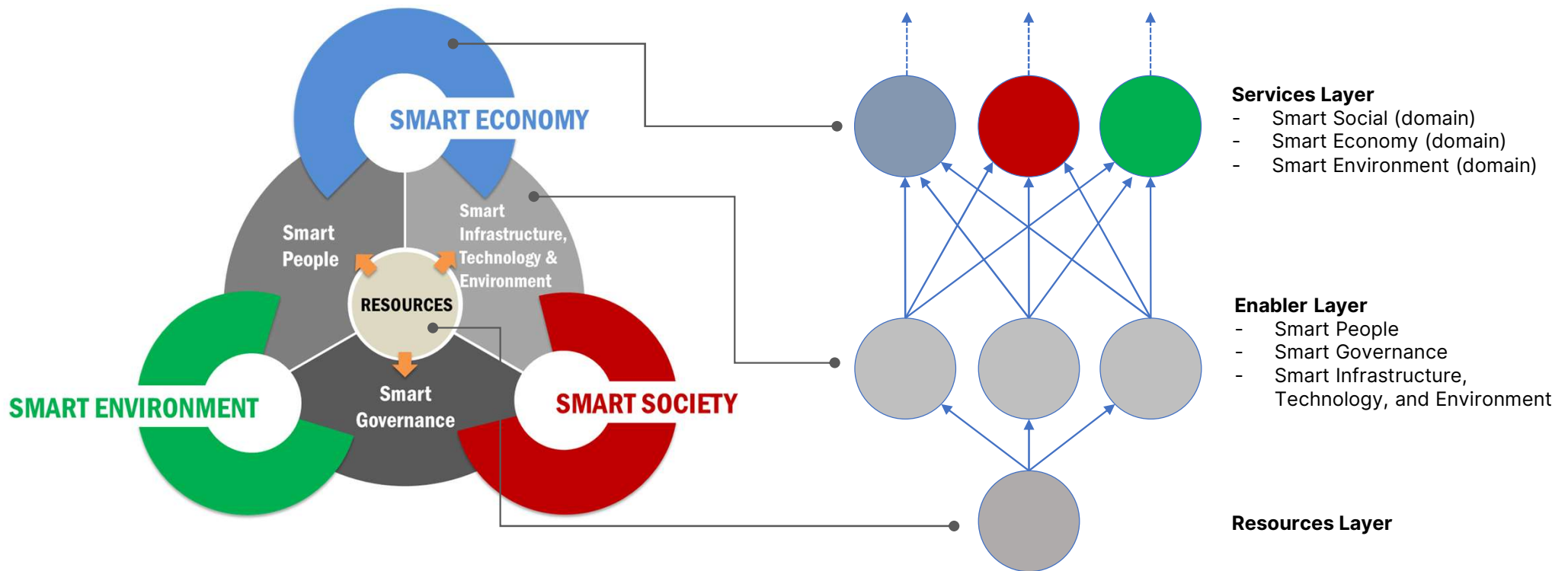
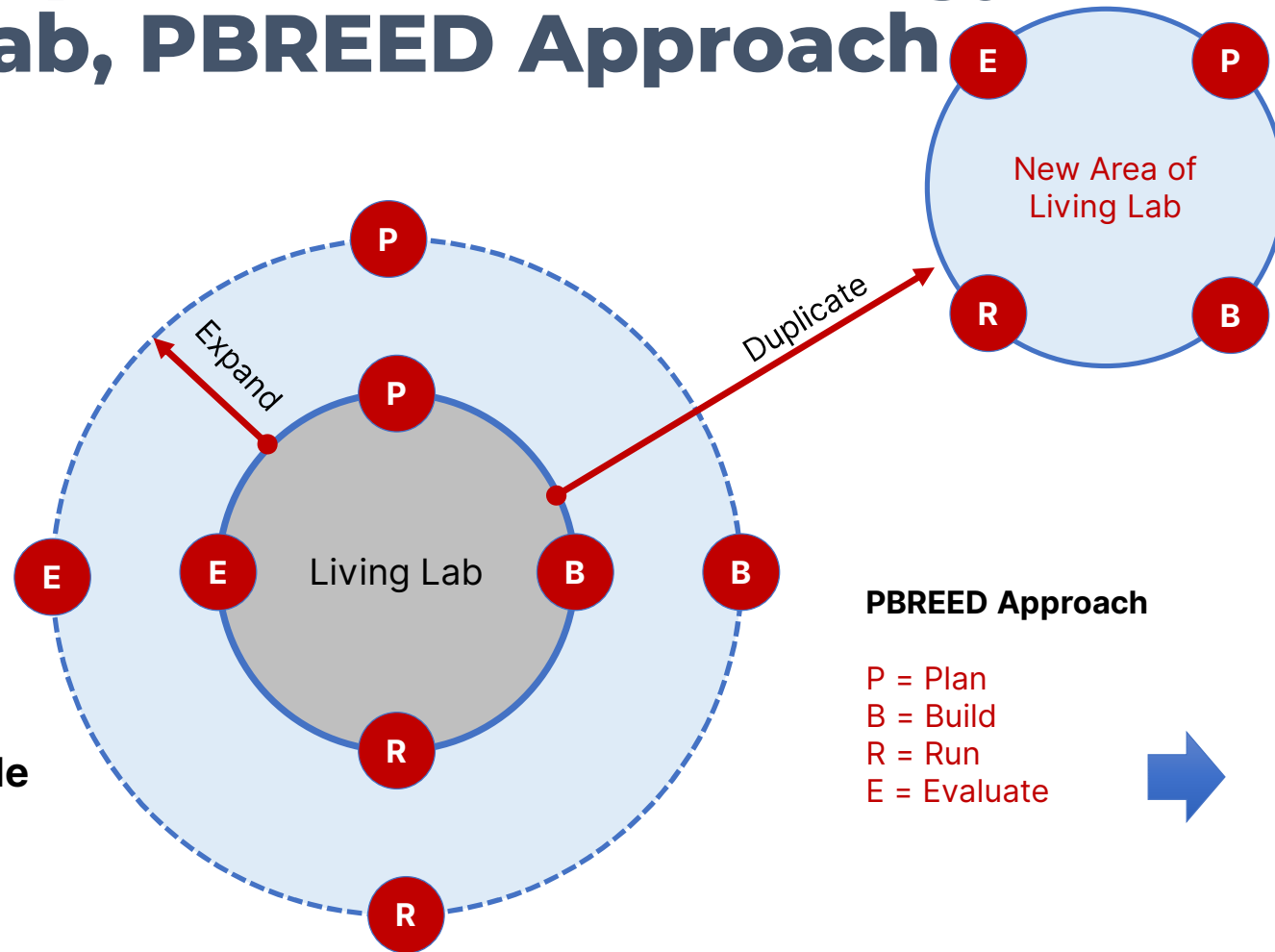


Fig 4.1 Smart City Model

*) See explanation in next page

Smart Implementation Strategy: Living Lab, PBREED Approach



Living Lab =
Small and manageable
part of the city

PBREED Approach

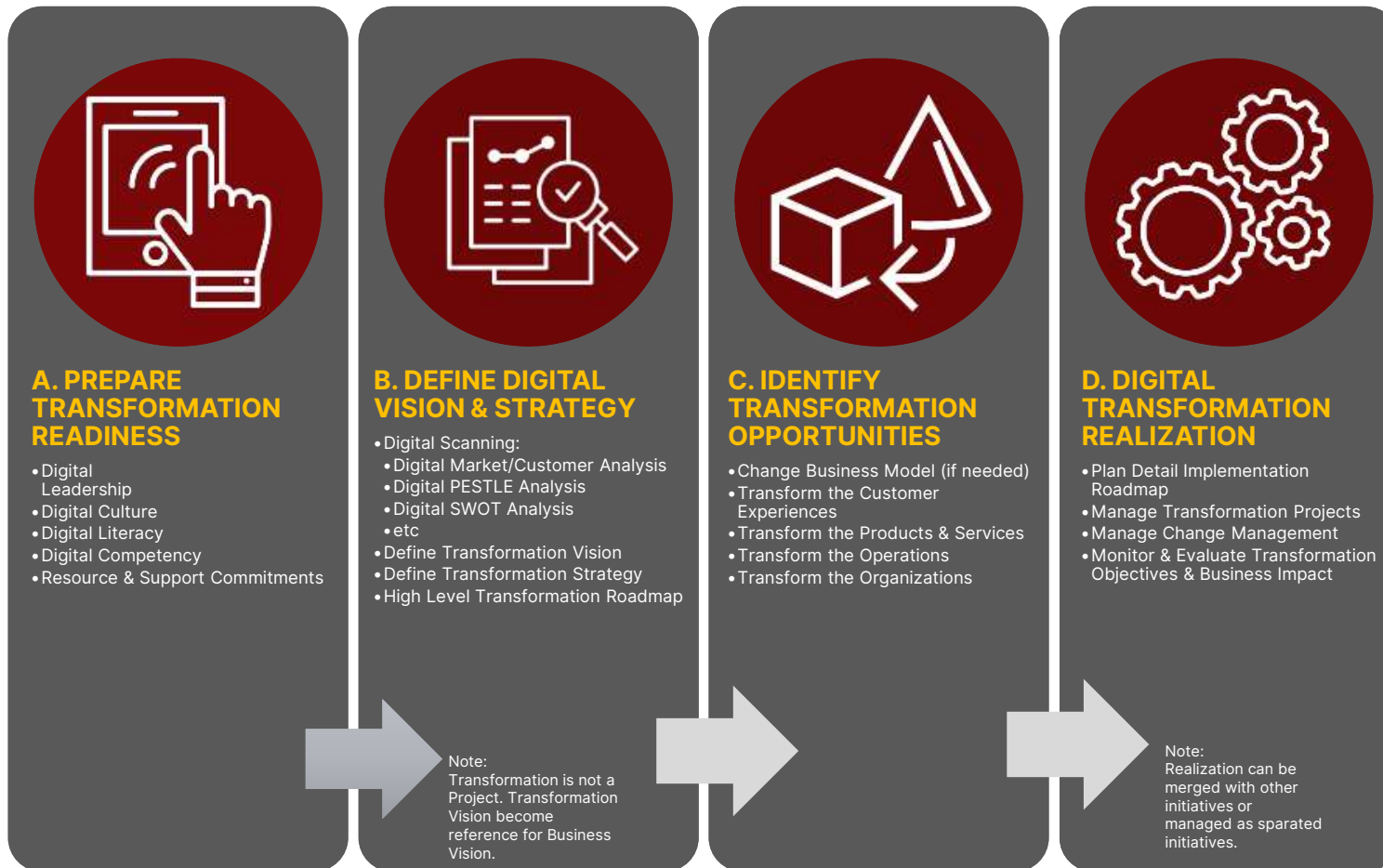
P = Plan
B = Build
R = Run
E = Evaluate

then

E = Expand, or
D = Duplicate

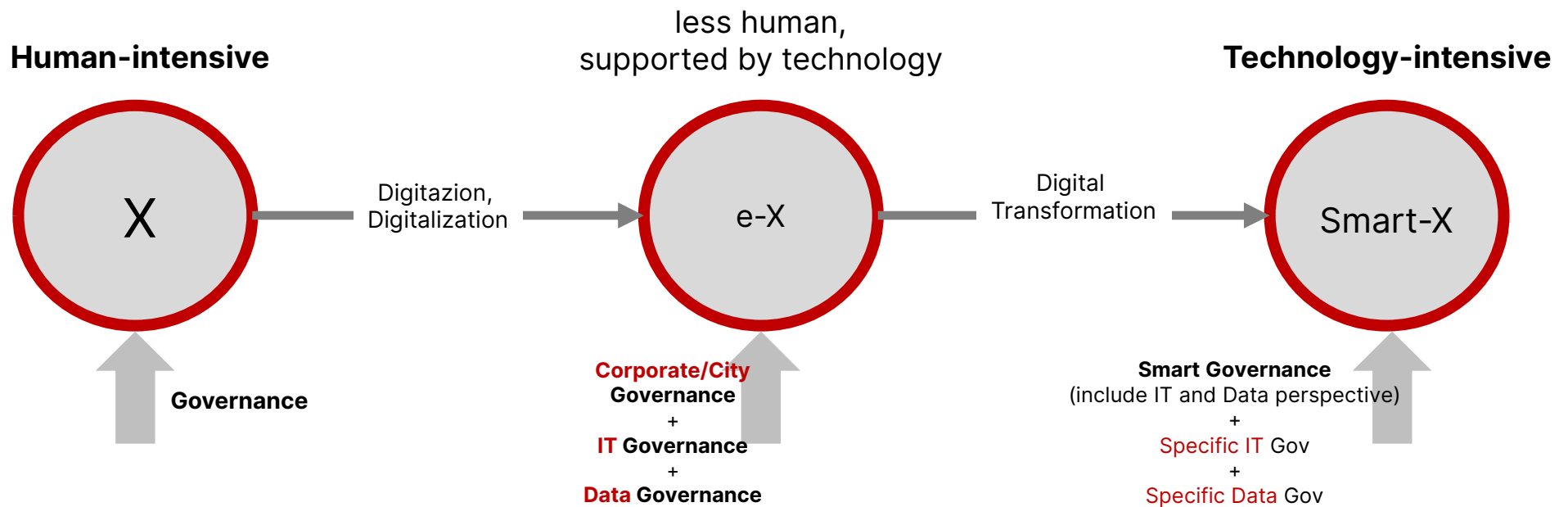


GARUDA DIGITAL TRANSFORMATION FRAMEWORK 1.2



This framework developed by **SCCIC (Smart City & Community Innovation Center, SCCIC)** ITB.

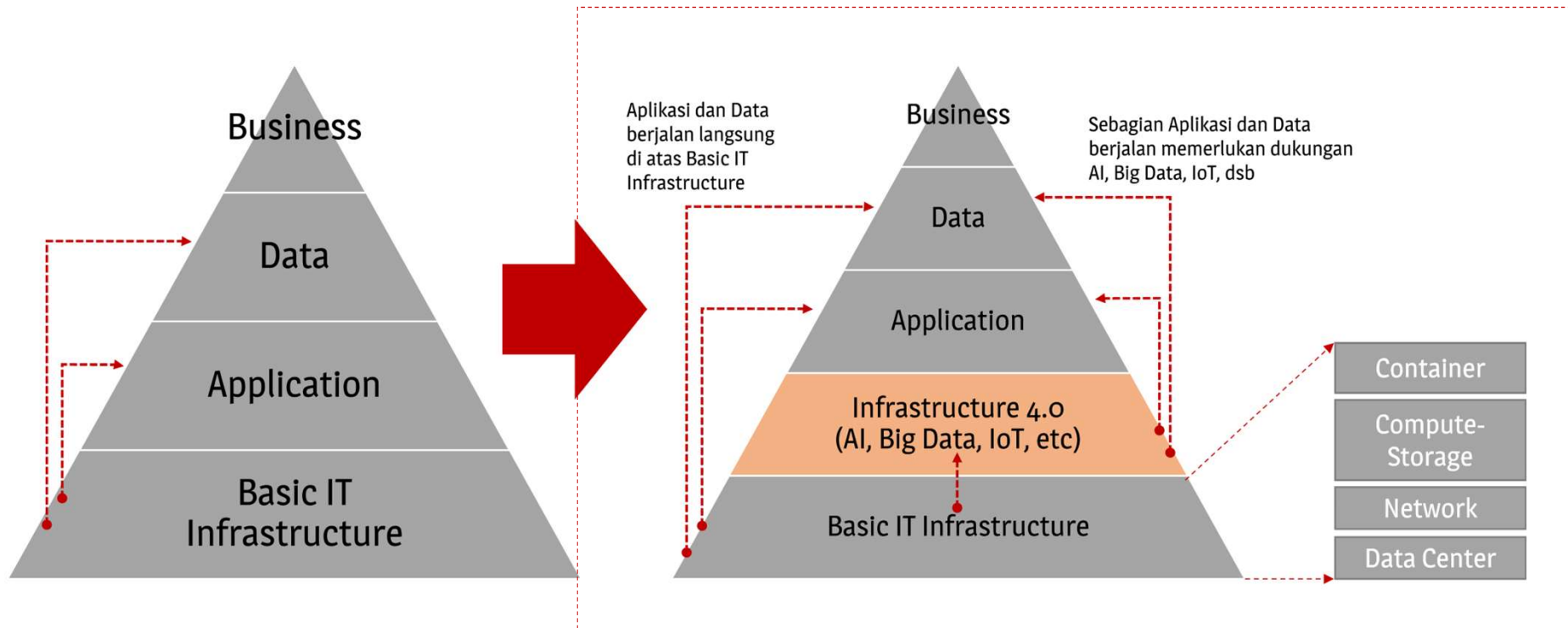
Smart System perlu dukungan Smart Governance



- Governance is very important in advanced smart city
- The ecosystem is changing from human-intensive platform to technology-intensive platform
- There are challenges to adapt the existing governance system

Digital Platform to Support Smart System

Basic Digital Platform for Smart System



Traffic Analytics



License Plate Recognition

Plate recognition mengenali plat nomor secara otomatis menggunakan video tangkapan dari CCTV. Dapat diintegrasikan dengan sistem di Dispenda setempat.



Illegal Parking Detection

Deteksi parkir liar, ngetem, dan objek-objek lain yang dapat menghalangi lalu lintas dan menyebabkan kemacetan. Dapat diintegrasikan dengan License Plate Recognition untuk tilang otomatis.

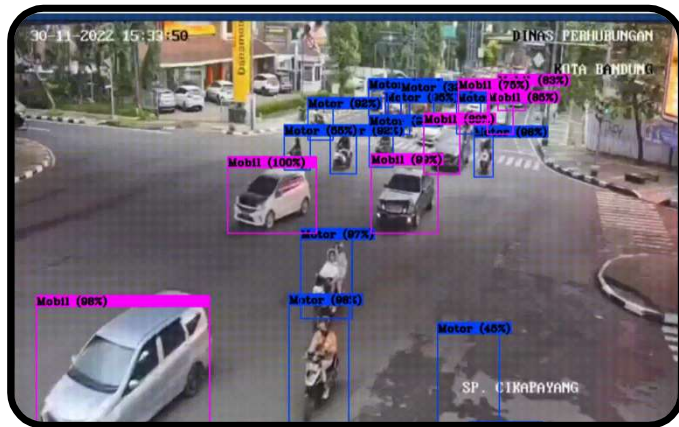
Android Sense

Android sense memudahkan dalam memonitoring keadaan lalu lintas. Terintegrasi dengan *Comand Center*.



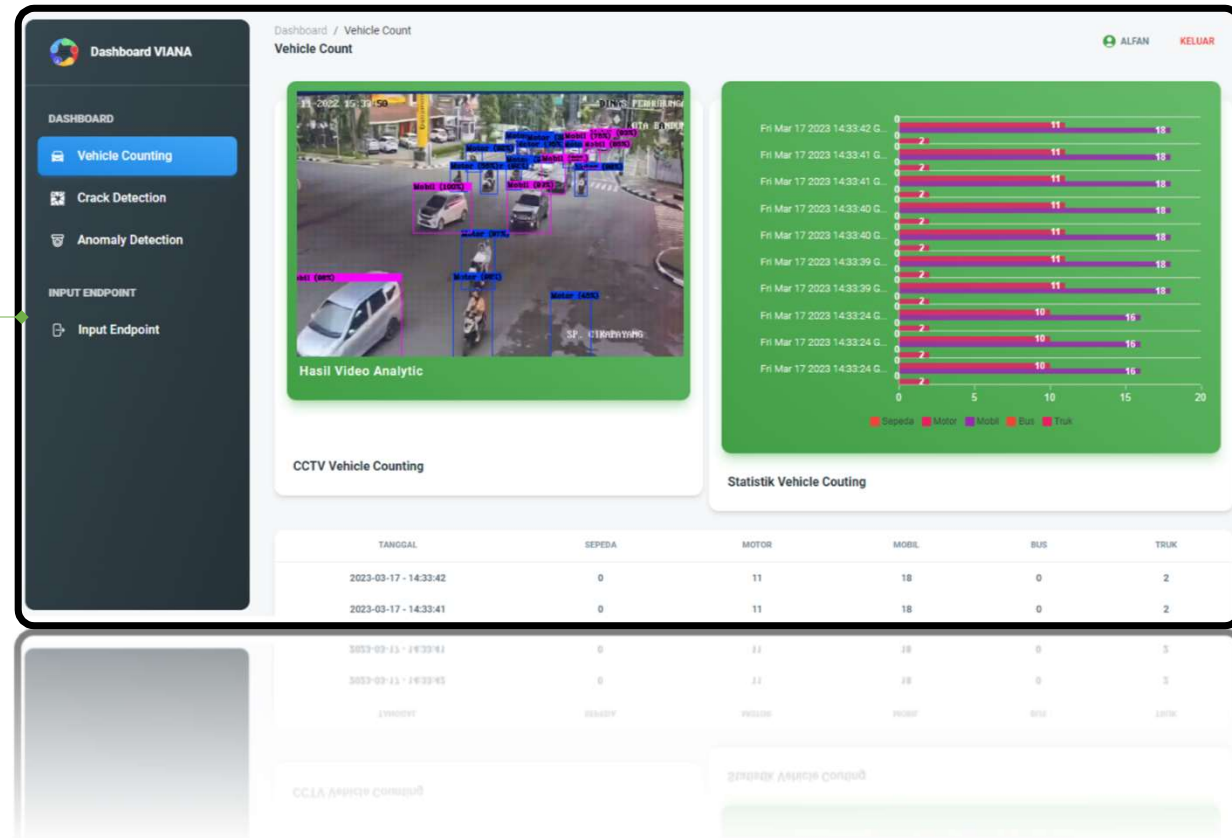
Vehicle Counting & Classification

Analisis Beban Jalan Menjadi Lebih Mudah



Real-Time Commulative Counting & Classification

Deteksi kendaraan dan mengklasifikasikannya ke dalam tipe kendaraan secara *real-time* untuk analisis beban jalan.



Area Monitoring



Deteksi Pemulung

Mendeteksi keberadaan pemulung berdasarkan objek yang dibawa dan aktivitasnya.

Deteksi Gelandangan

Mendeteksi keberadaan gelandangan, pedagang kaki lima, gerobak, dan lain-lain yang dapat mengganggu arus lalu lintas



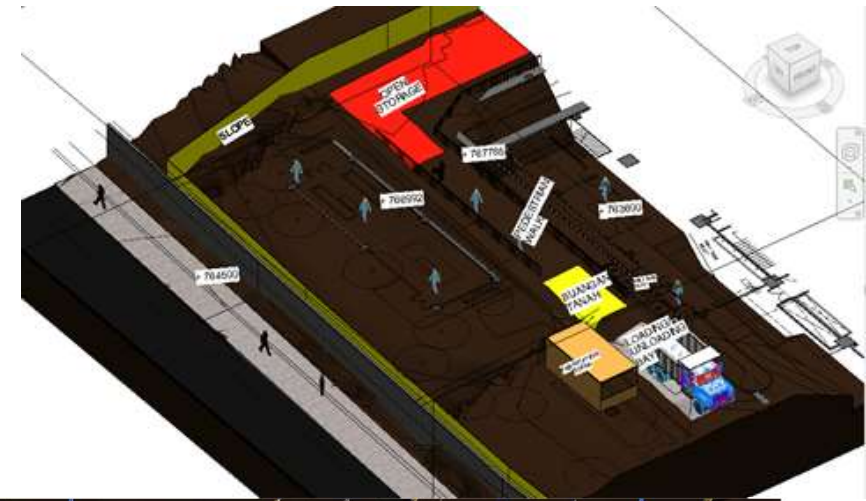
Deteksi Pengamen

Deteksi pengamen, pengemis, preman, dan lain-lain yang dapat mengganggu kenyamanan masyarakat,

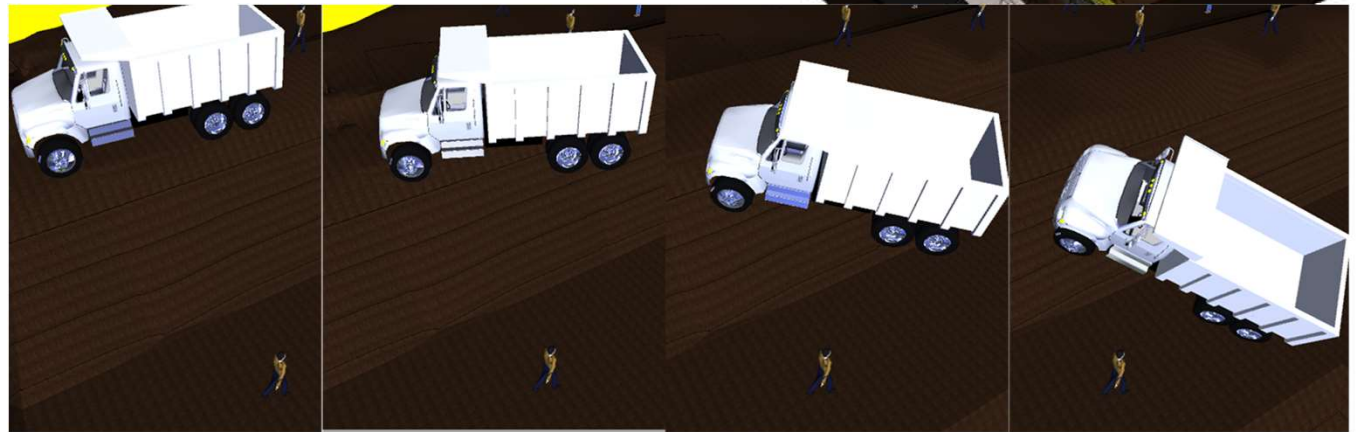


Smart Building Construction

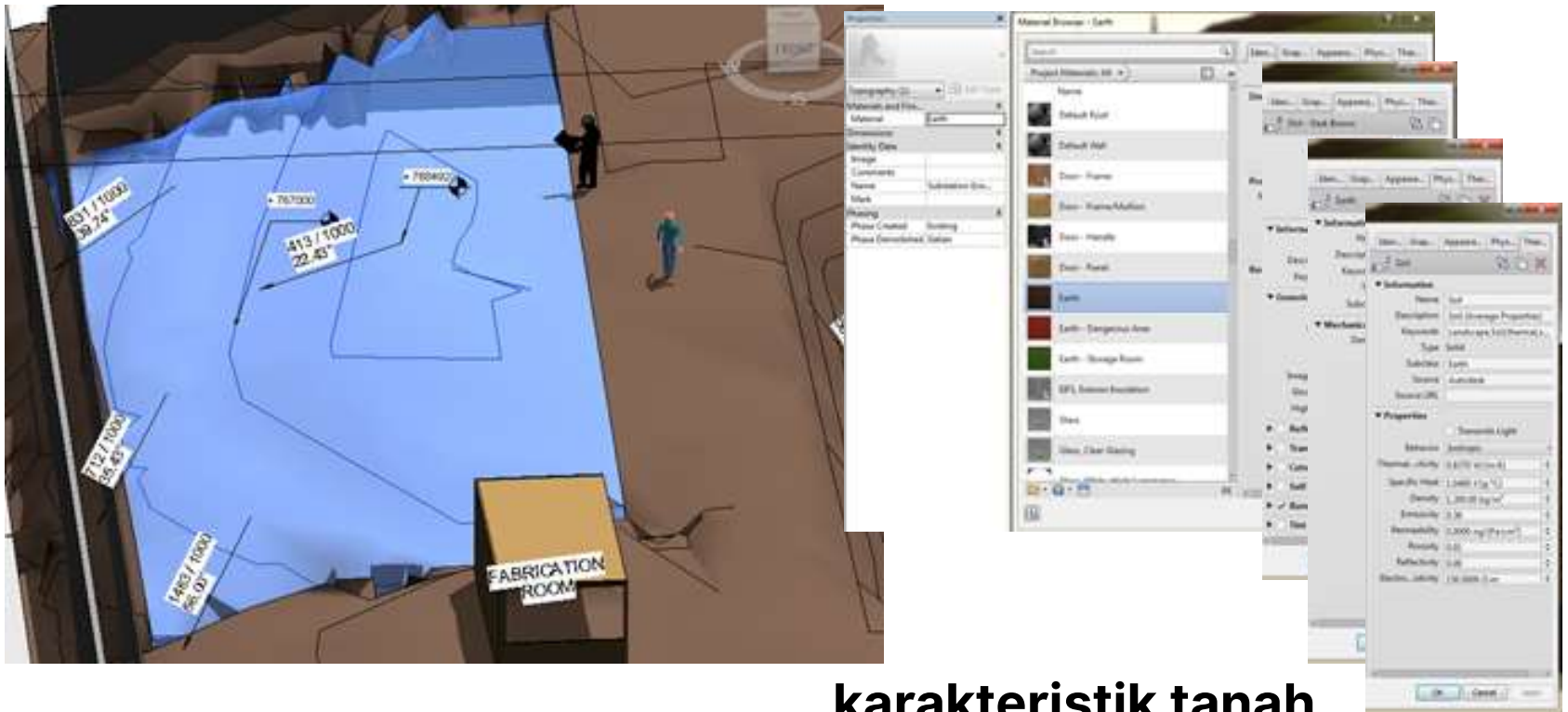
Pengelolaan Lalulintas Peralatan



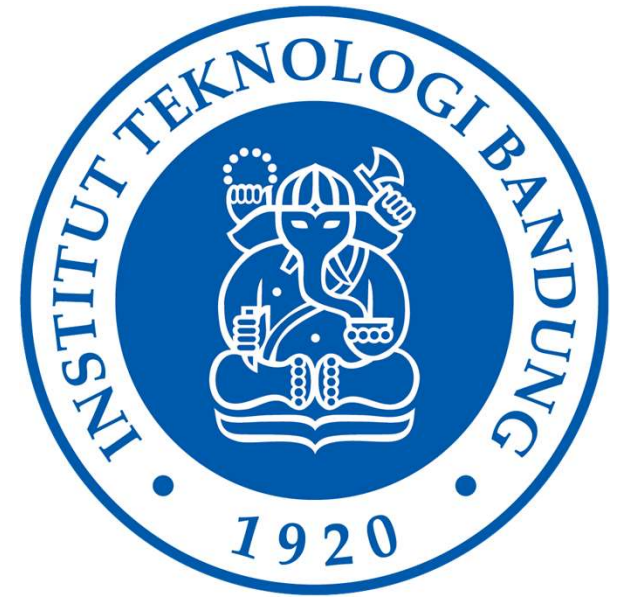
truk mundur



Smart Building: Identifikasi potensi bahaya kelongsoran



karakteristik tanah



Thank you