The Role of Information and Communication Technology in Smart City

On the 23rd of November 2022, CENIM has been held with the 3rd keynote Speaker, she is Professor Erma Suryani brings presentation titled with The Role of Information and Communication Technology in Smart City. Some of her topic was about Enabler Technologies in Smart City, Creating Smart Society, Steps to Becoming a Smart City, Smart City: Challenges and Risk. Smart city is an urban area that uses different types of electronic sensors to collect data, and the insights gained from the data are used to efficiently managed assets, resources, and services. Then, the data is used to improve operations across the city. There are 10 fundamental components that build of Smart City, they are, Internet of Things, Smart Agriculture, Smart Home, Smart Education, Smart Grid/Energy, Smart Government, Smart Health, Smart Mobility, Smart Retail, and Open Data or Accessible Government Data. IoT refers to collective network of connected devices and the technologies communication between devices and the cloud, as well as between devices themselves. Smart agriculture refers to technology use for the development of modern agriculture. Ex: Sensor Technology used to determine soil content (moisture and water content). Smart home, refers to technology-based homes that manage and control automatically and remotely. From anywhere and at anytime using an internet and smartphone. Smart education refers to Digital learning model for increasing student engagements and Teachers to adapt to students learning skills, interests, and preferences. Smart Grid/Energy refers to advances utilizing in communication, computer, and cyber technology, to able control and operate the electric power system in distributing electricity. Smart Government related to openness and ease of access to government, availability of internet facilities (wi-fi), and human resources. Smart health using information and communication technology to increase quality of healthcare. Smart mobility related to the transportation used by the community. And then there is an enabler technologies in Smart City, one of them is 5G Network, an indispensable infrastructure to provide ubiquitous connectivity to realize the fusion of physical space and cyberspace. 5G networks can upload large volumes of raw sensing data and transfer knowledge and control from virtual space to physical space. And there is robot to, an agent in physical space who work for humans. Robotic agents can be linked to other machines. Then, there is AI to, AI enables machines to learn, infer, make intelligent decisions, and process big data, beyond human capabilities. Next is how to create smart society belong smart city.

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Proof of attendance: