

Internet of Things

Project of Asiana



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OUTLINE

- Country Background
- Problem and challenge
- TASKs
- Digital Society Program 2030
- Analyze the ecosystem
- Chart clustering
- Conclusion



COUNTRY BACKGROUND

- Middle income developing country.
- 20% area is mountain and difficult terrain, 50% fertile land.
- Population 2015 : 90 million, 2020 : 92 million, predicted 2030 : 100 million.
- A new elected government has been very critical on primary industries. (e.g. agriculture, logistics, transport)
- The Prime Minister believes in the need for food security and development of primary industries while leveraging on ICTs.



PROBLEM AND CHALLENGE

- Spectrum licenses come with strict technical requirement
- High license fee
- Less interest to invest in rural area
- Lack of focus on primary industries (agriculture, logistics, transport)
- Limited e government service
- Data has been hacked in government department
- Lack of clarity for consumer protection
- No mechanism for e-government and telco platforms to interoperate
- Pollution
- Digital data not well managed



TASKs

- Provide recommendations on IoT and M2M issues to the government of Asiania with 2030 digital society program goals in mind.
- Prepare a chart with action plan for Asiania ICT Authority until 2021.



DIGITAL SOCIETY PROGRAM 2030 (Goals & Expected Outcomes)

- Well established digital infrastructure (nation wide)
 - Real time information
 - Traffic reduction
 - Data is secured (easy to investigate)
- Knowledge based economy
 - Strong economy foundation
- Boosting all economic sectors
 - Small economic inequality gap
- Improvement of the enviromental conditions using ICTs
 - Good weather condition
 - Long life residents
- High digital skills
 - Easy to find or create a job



ANALYZE THE ECOSYSTEM

- Discuss

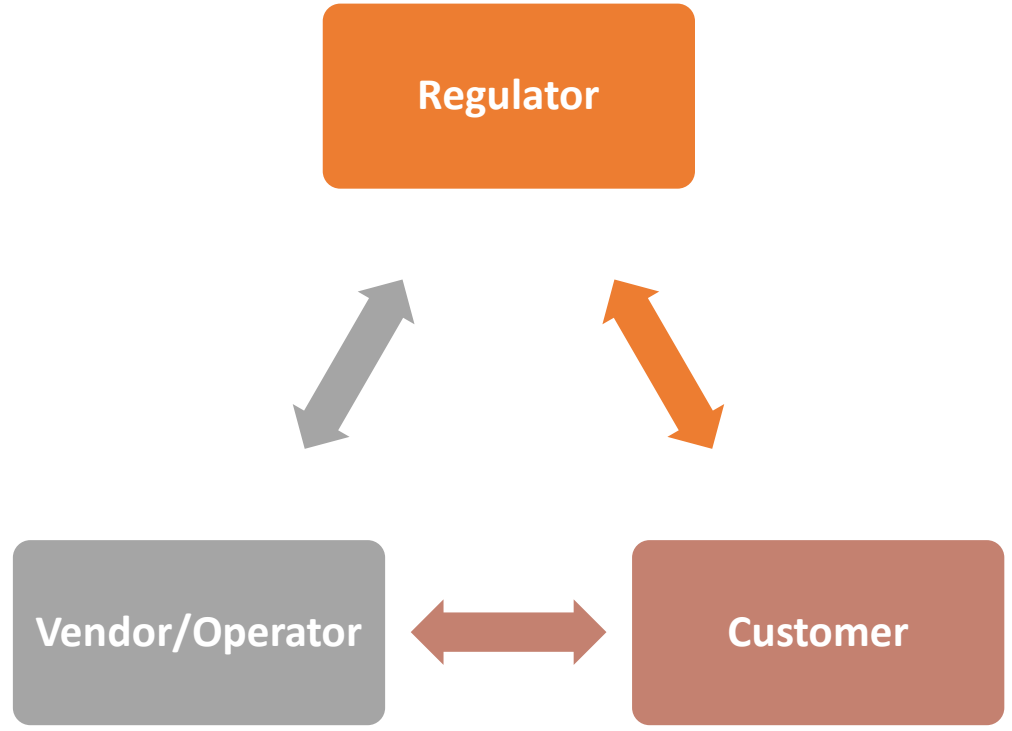
COST

HOW?

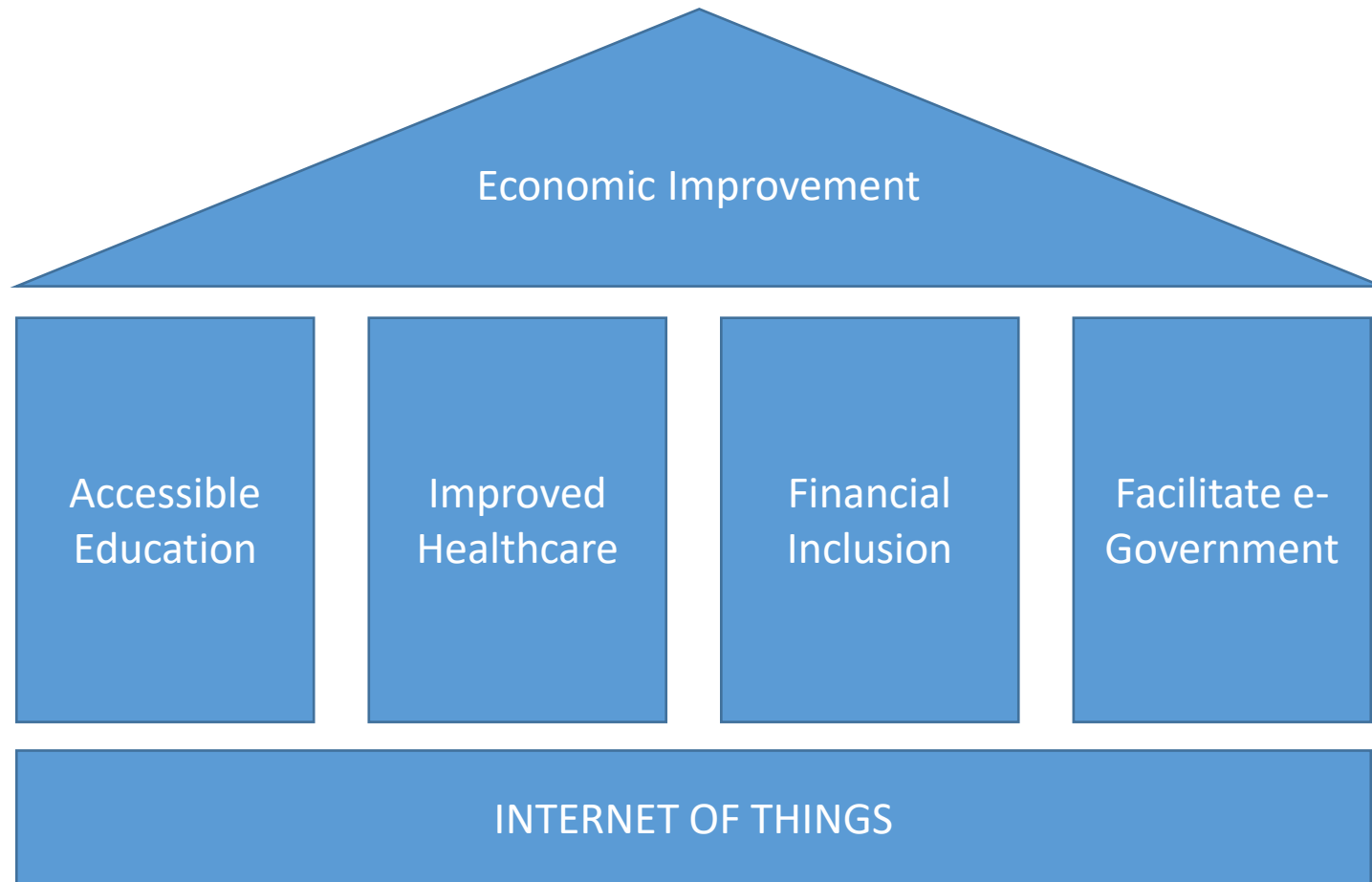
Why?

- Stakeholders Consultation
- Execution

Operator



SOCIETAL BENEFITS OF INTERNET OF THINGS



Recommendations

- Deep collaboration with telecommunication stakeholders (operators, vendors, universities, customers).
- Re-evaluate license process and license fee.
- Analyze current telecommunication business figure. (investment goes up, no additional revenue)
- Socialize the benefits of Internet of Things.
- Raise fund for telecommunication sector. (incentive, innovation, public service)

CHART CLUSTERING

Institution & Coordination

Technology, Spectrum, Standards, Infrastructure, interoperability

Privacy and Security

Consumer awareness and Consumer protection

Knowledge and Skill

Competition

Innovation and Service

**Policy,
Legislation
and
Regulation**

CHART CLUSTERING

1. Policy, Legislation and Regulation

- Tax Incentive for IoT device (sensors, equipment, etc).
- Invite and give incentive to invest in IoT device manufacturing.
- Use of Universal Service Fund for deployment at rural areas.
- Incentive for investment on primary industries. (agriculture, logistics, transport)
- Apply and make a better e-government services in all sector.
- Deployed public services based on ICT.
- Clustering area : beneficial, non beneficial area.
- Tax rebate for build in rural area.
- Allow use of unlicensed band to improve capacity.
- Fairness treatment for licensed and unlicensed spectrum.
- Ensure the level of Quality of Service.
- Simplify the telecommunication license regime.
- Street furniture policy.
- Data protection regulation.
- Roadmap for telecommunication evolution. (5G, 6G, NR, etc)



CHART CLUSTERING

2. Institution and Coordination

- Inter regional coordination.
- Inter ministerial / organization coordination.
- Collaborate with Universities.

3. Technology, Spectrum, Standards, Infrastructure and Interperability

- Release more spectrum.
- Deadline for IPV6 migration.
- Simplify for certification process.
- Simplify or facilitate for IP tier1 transit operators.
- Allow and encourage network and infrastructure sharing.
- Unified IoT standard for Interperability.



CHART CLUSTERING

4. Privacy and Security

- Ensure equipments used are from trusted and verified equipment manufacturer.
- Standardization for cloud computing.
- Incentives for companies to build a new data security mechanism.
- Create national “clocking”.
- Integration of Cybersecurity.

5. Consumer Awareness and Consumer Protection

- Education.
- Socialization.
- Survey for customer satisfaction and needs.

6. Knowledge and Skill

- Education.
- Training.



CHART CLUSTERING

7. Competition

- Fairness tariff policy.

8. Innovation and Service

- Incentive for laboratory.
- Innovation competition for colleges.
- Create data center.
- Green innovation project.
- Content Development Center.



CONCLUSION

1. Communication is needed **to mobilize the supports from all stakeholders.**
2. **Regulation** is needed to make sure the objective can be achieved on time.



TIME CHART

	2018	2019	2020	2021
Policy, Legislation and Regulation				
•Tax Incentive for IoT device (sensors, equipment,etc).				
•Invite and give incentive to invest in IoT device manufacturing.				
•Use of Universal Service Fund for deployment at rural areas.				
•Incentive for investment on primary industries. (agriculture, logistics, transport)				
•Apply and make a better e-government services in all sector.				
•Deployed public services based on ICT.				
•Clustering area : beneficial, non beneficial area.				
•Tax rebate for build in rural area.				
•Allow use of unlicensed band to improve capacity.				
•Fairness treatment for licensed and unlicensed spectrum.				
•Ensure the level of Quality of Service.				
•Simplify the telecommunication license regime.				
•Street furniture policy.				
•Data protection regulation.				
•Roadmap for telecommunication evolution. (5G, 6G, NR, etc)				
•Improve the ITE Law.				
Institution and Coordination				
•Inter regional coordination.				
•Inter ministerial / organization coordination.				
•Collaborate with Universities.				
Technology, Spectrum, Standards, Infrastructure and Interperability				
•Release more spectrum.				
•Deadline for IPV6 migration.				
•Simplify for certification process.				
•Simplify or facilitate for IP tier1 transit operators.				
•Allow and encourage network and infrastructure sharing.				
•Unified IoT standard for Interperability.				
Privacy and Security				
•Ensure equipments used are from trusted and verified equipment manufacturer.				
•Standardization for cloud computing.				
•Incentives for companies to build a new data security mechanism.				
•Create national "clocking".				
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Consumer Awareness and Consumer Protection				
•Education.				
•Socialization.				
•Survey for customer satisfaction and needs.				
Knowledge and Skill				
•Education.				
•Training.				
Competition				
•Fairness tariff policy.				
Innovation and Service				
•Incentive for laboratory.				
•Innovation competition for colleges.				
•Create data center.				
•Green innovation project.				
•Content Development Center.				

Thank you

*“Change : The only thing
that never changes.”*

- Heraclitus -