Presented at the FIG Working Week 2017,
May 29 - June 2, 2017 in Helsinki, Finland

Revolutionizing Land Survey in the 5G era

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Korea Land and
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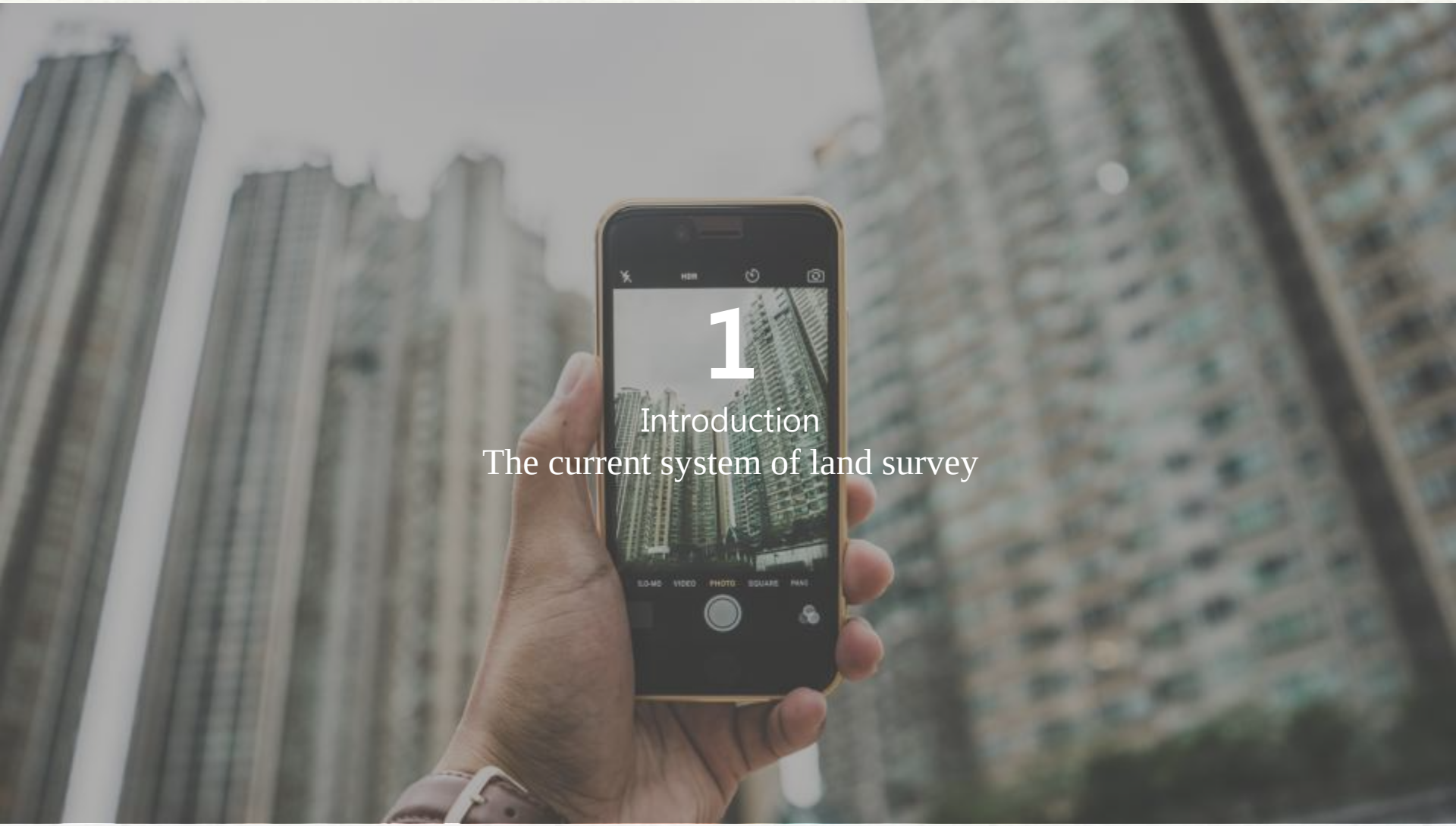


1

Introduction
The current system of land survey

The present land survey process in LX company

The reason why many surveyor need more time when they do it.

Survey data

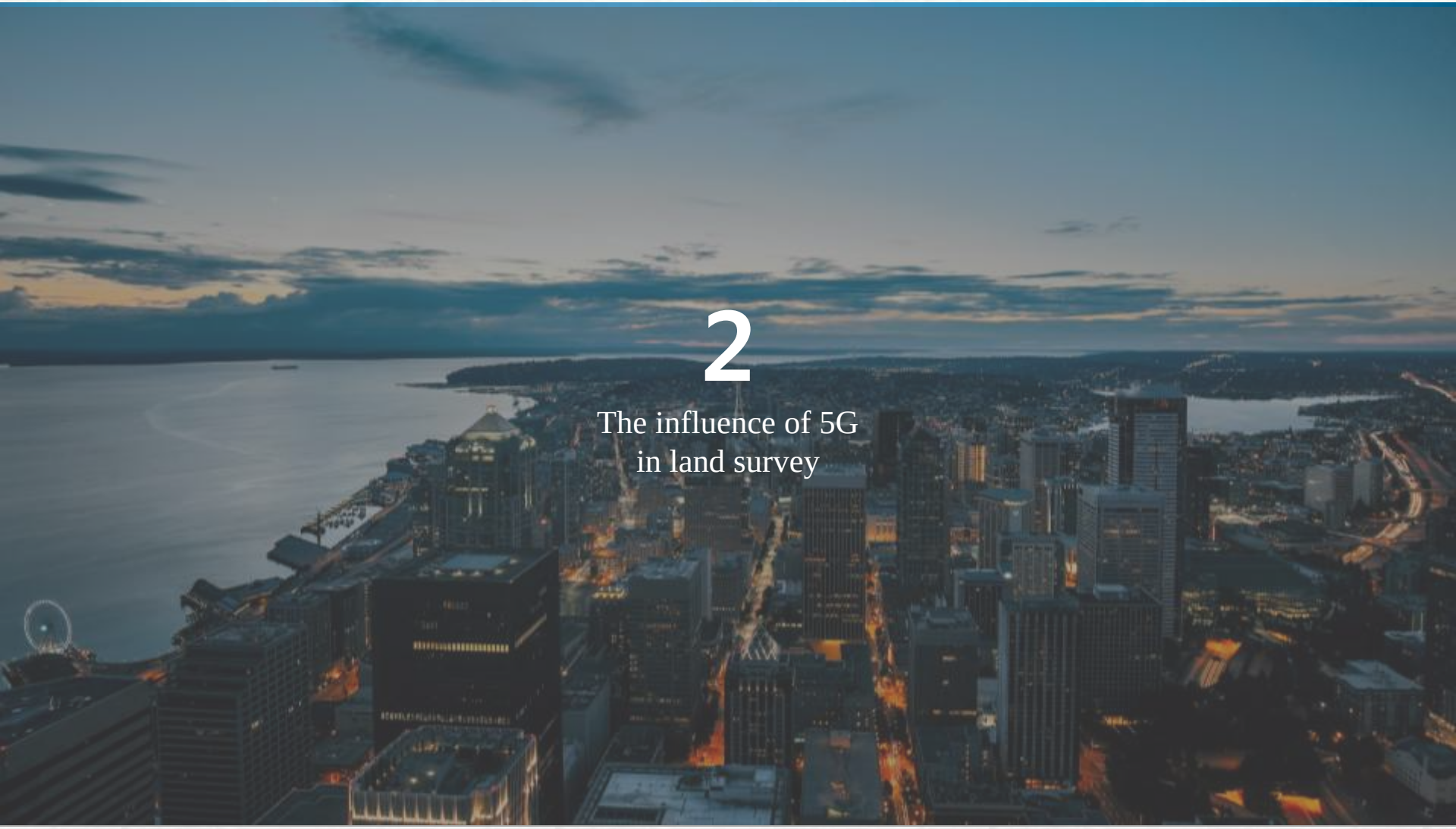
Survey field

Office work

Report

Let’s find cadastral control point. Where is it?

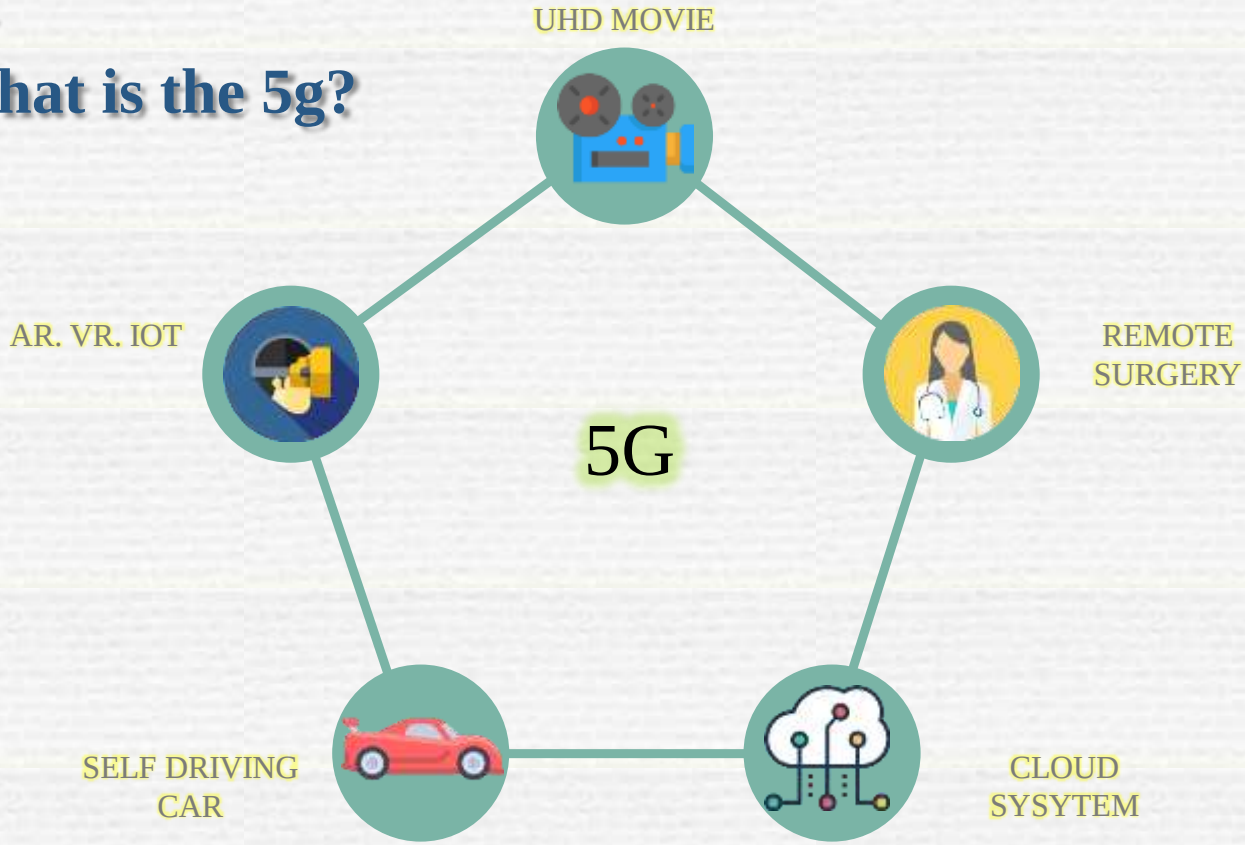
We have to spend our time to find it too much every day before we start survey.



2

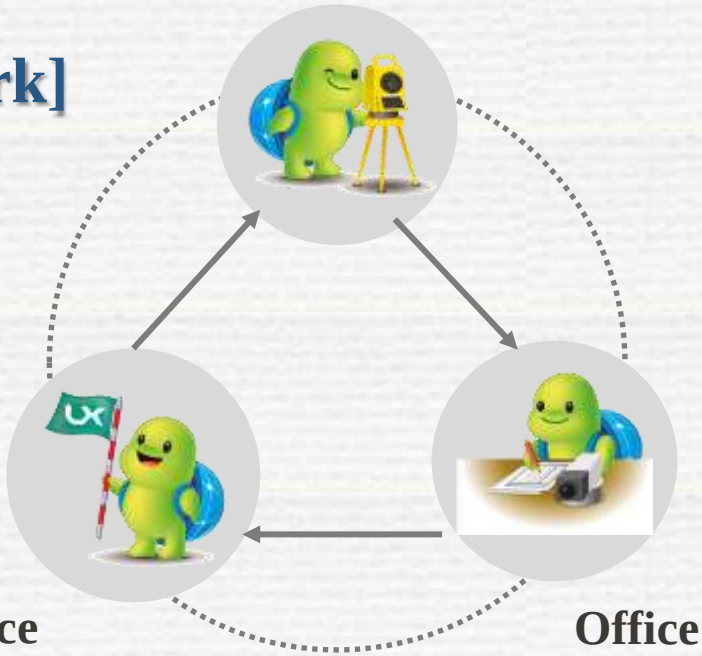
The influence of 5G in land survey

What is the 5g?



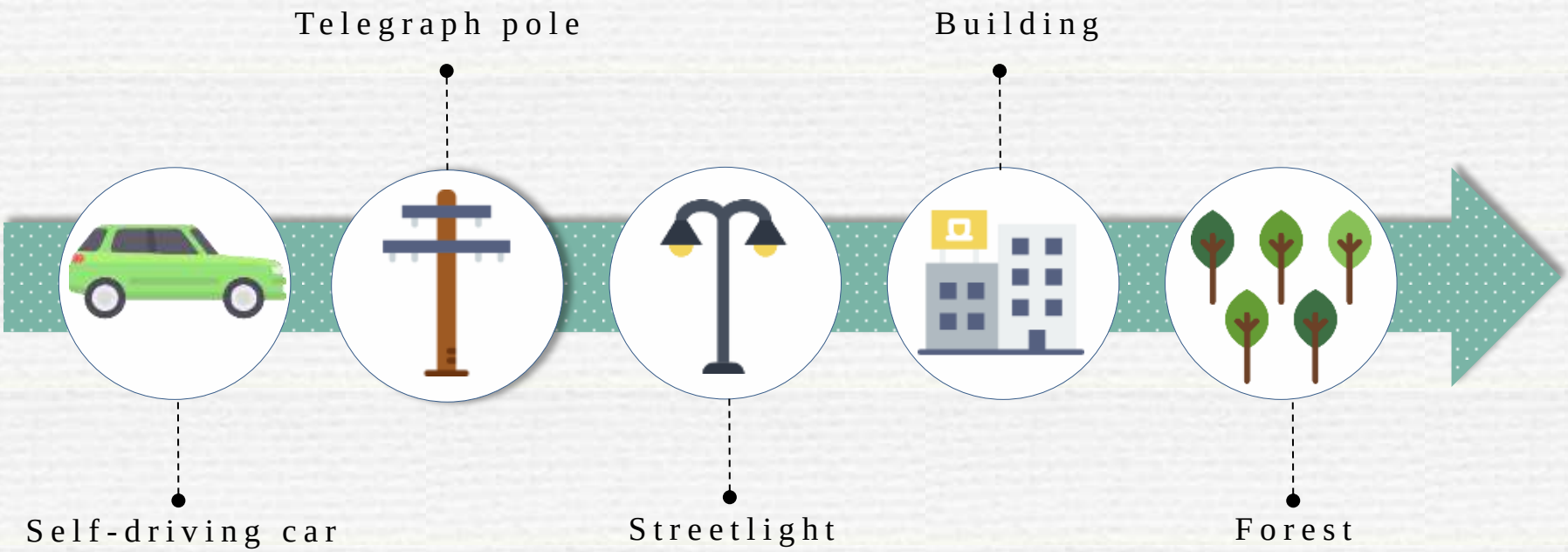
1 STEP.

[Unified network]

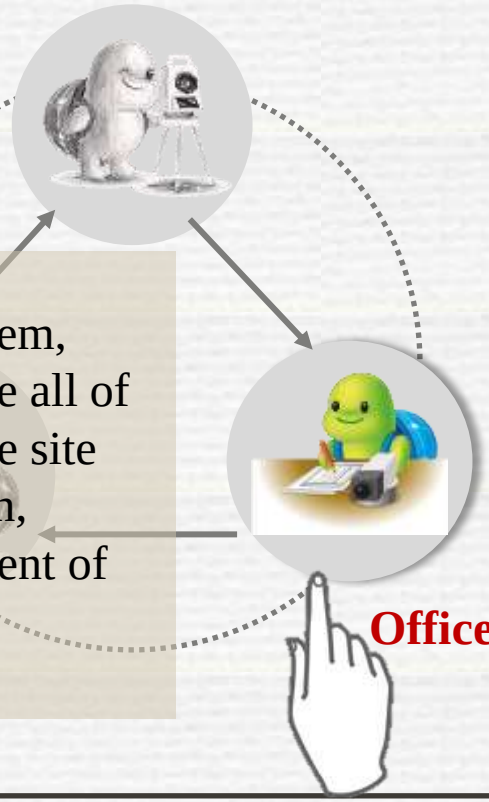


Field

An autonomous vehicle guides the surveyors to the fastest and most precise route to the intended destination ,enabling them to arrive at the site on time.

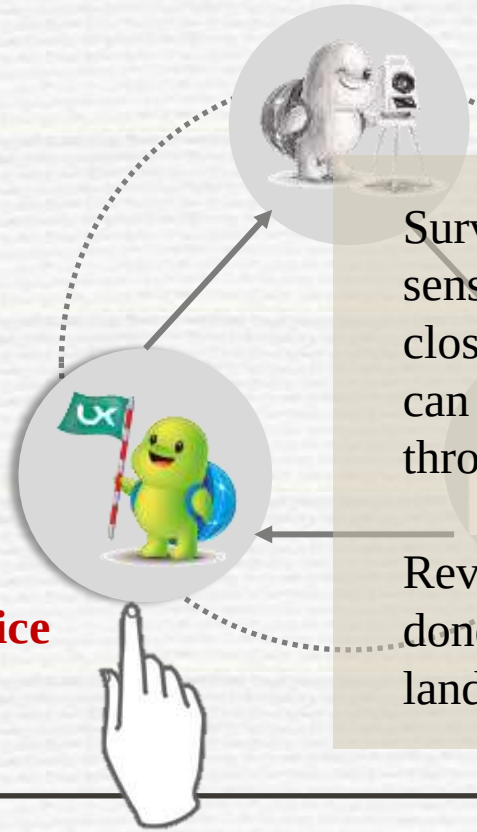


It is possible to collect not only land survey but also various spatial information available on the road to the site, Such as the status of deterioration and repair of streetlights and telegraph poles, the condition of areas to be surveyed, etc.



The office, with its cloud system, can easily manage and oversee all of the information obtained at the site such as the floating population, weather, temperature, movement of car, survey field location.

Office (with Cloud)



Surveyors will be able to feel a sensation of the space which is close to reality, while land owners can obtain updated information through a real-time platform.

Revisions and supplements can be done in a short time owing to the land owner's prompt feedback.

2 STEP. [Field condition]

Inaccessible areas

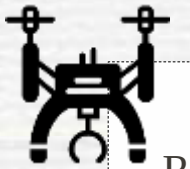
- Construction site
- Mountain
- Sea

Etc..

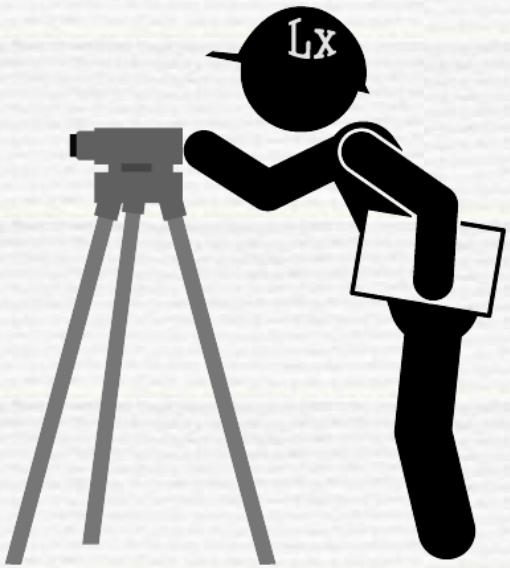
Obtaining accurate survey results is not possible.
Failing to meet the expectations of the land owners as well.

The influence of 5G in land survey

But it can be examined in detail through AR, VR technology.



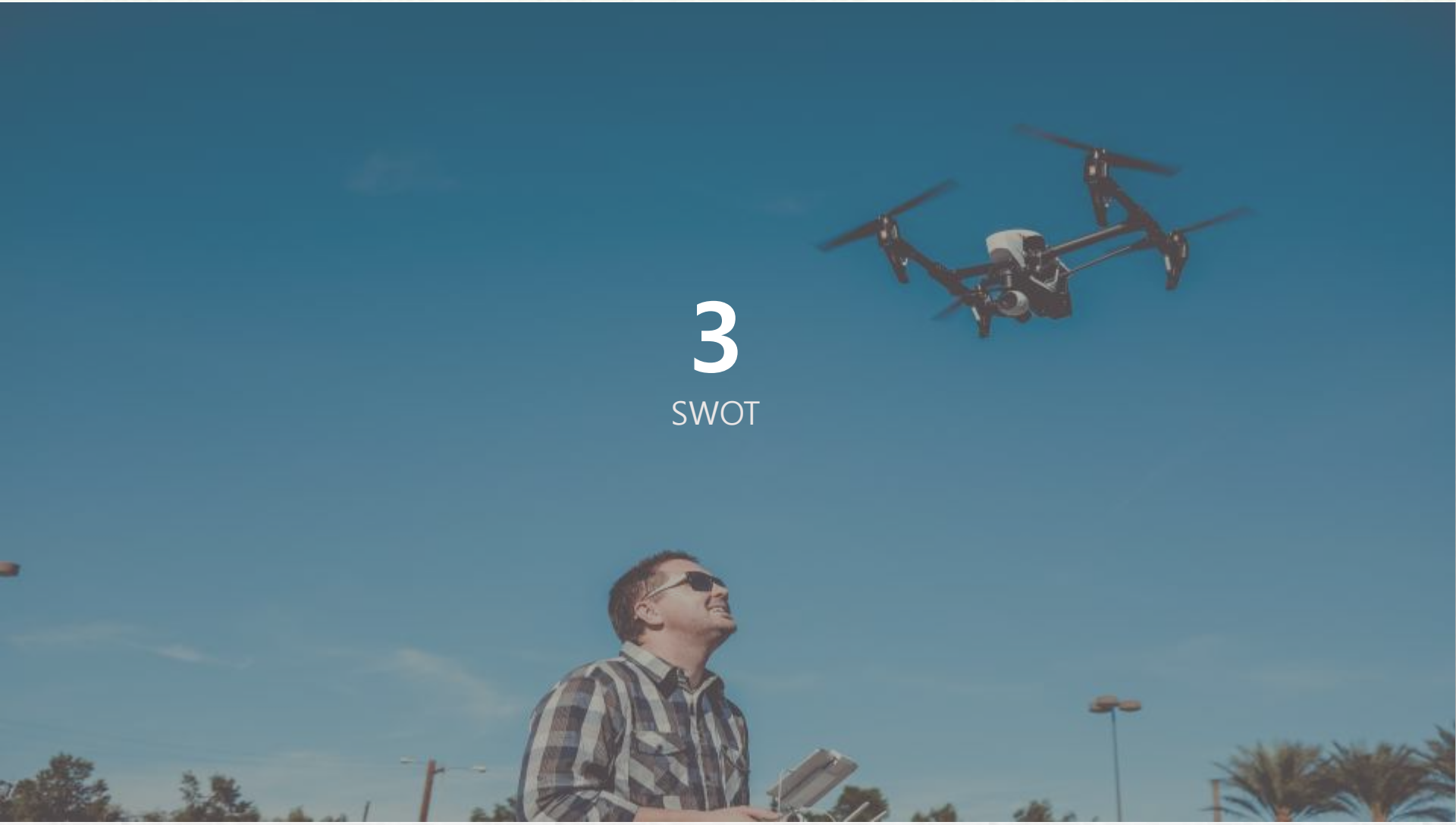
Results can be produced by means of precision measurement, using it as well.



It is possible to predict the risk of a proactive defense before commencing work.

Especially when accessing places where actual viewing is impossible for surveyors.

- ✓ Also, the boundaries of the land can be seen vividly through AR,VR , which can be seen only after a survey has been done.
- ✓ Through it, the landowners moving in the cyber space can find accurate survey information.

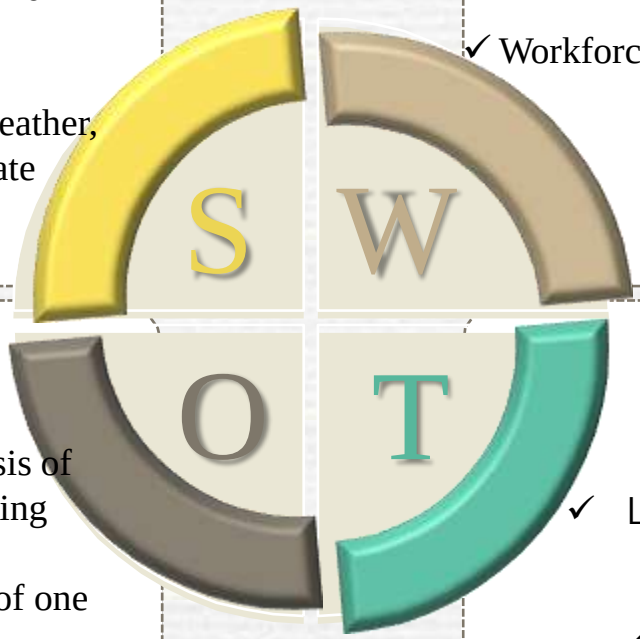


3

SWOT

SWOT

- ✓ Surveyors do not have to be physically present in dangerous field
- ✓ Survey results can be corrected, and stored systematically
- ✓ Regardless of external factors (weather, season etc), it is available to update new information continuously.



- ✓ The number of days needed for research,as well as the development costs and human resources
- ✓ Workforce may be reduced due to the survey of high-tech eqipment,causing unemployment problem.

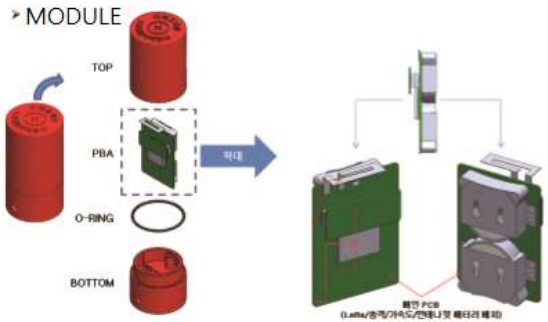
- ✓ It is possible to produce survey information that will form the basis of national policy and decision-making
- ✓ Expanding the survey capability of one person (just One person can do a survey , without the help of others.)

- ✓ Lack of infrastructure to practice AR,VR and related law
- ✓ Required cooperation among related agencies.

4

Business in LX

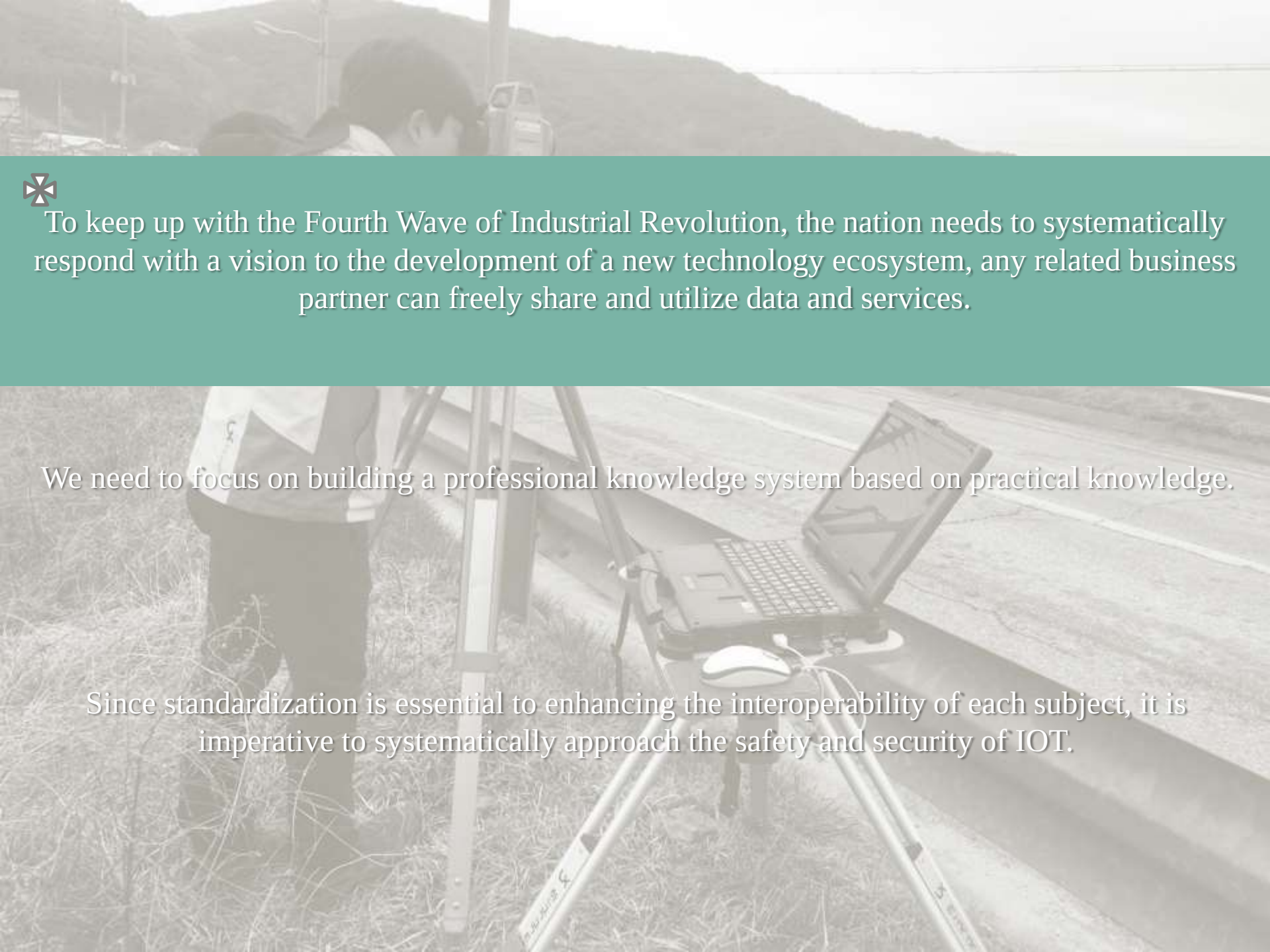
What LX is doing on research



Once boundary mark is installed through the cadastral survey,
it should be managed by land owners.
However, it gets damaged or swept away frequently after installation.
This will result into financial burden due to duplication of survey application,since the boundary mark has disappeared. To improve this, LX is conducting a research project on the possibility of attaching a beacon sensor to a boundary mark.
The landowner can thus determine (or find) the location of the boundary mark attached to an IOT sensor using a smartphone app.
Lots of sensor data transmitted in real time enable management and monitoring of the status of the transition point from the IOT boundary mark, storing various information on the LX's server, which in turn can be utilized for various surveys of big data analysis.
By improving the boundary mark using IOT, landowners can directly control the land boundary. It will reduce the incidents of having to repeat a survey application, so the national economic burden can be lowered by minimizing the loss of boundary marks, and land disputes.

5

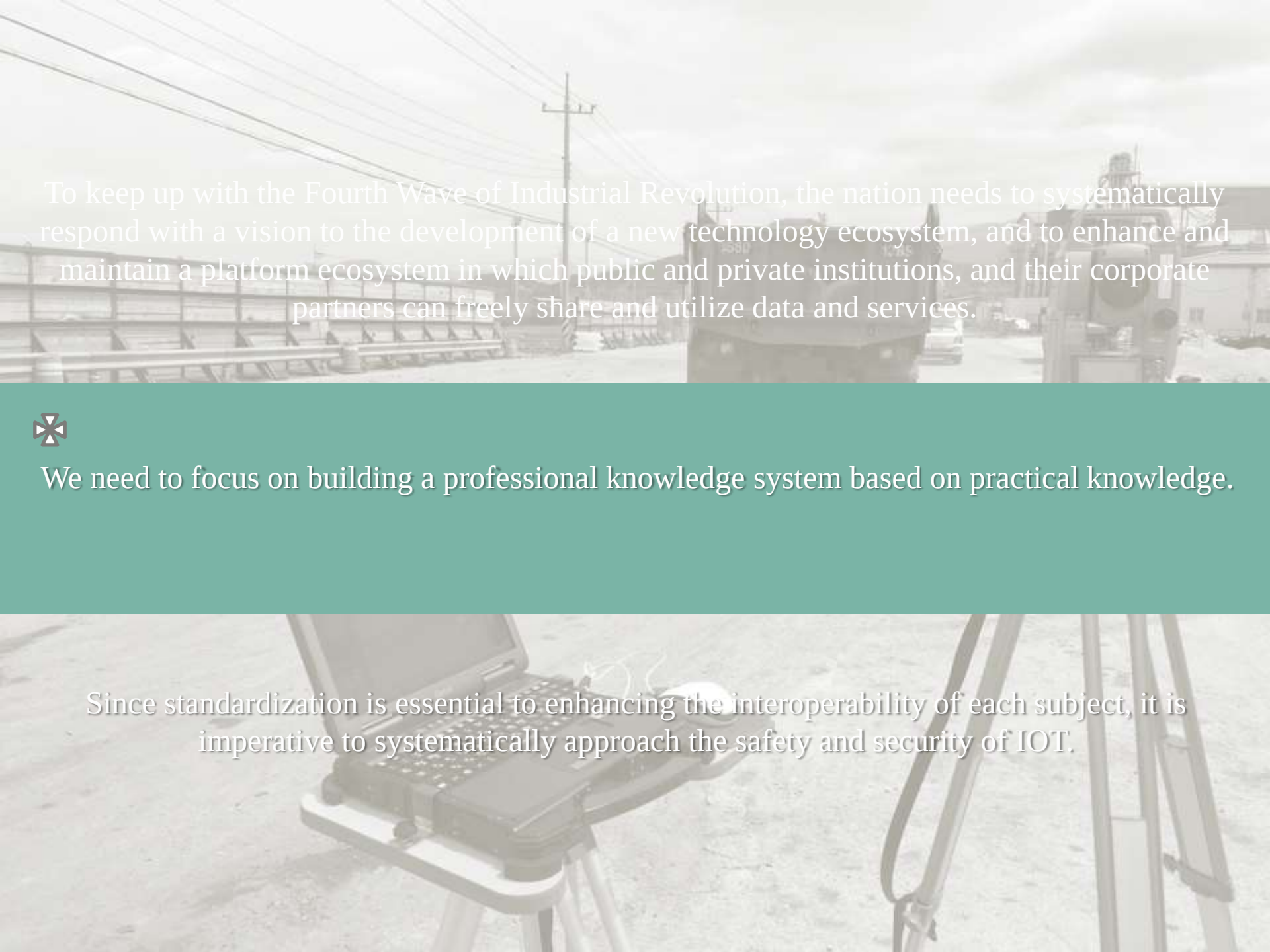
Conclusion



To keep up with the Fourth Wave of Industrial Revolution, the nation needs to systematically respond with a vision to the development of a new technology ecosystem, any related business partner can freely share and utilize data and services.

We need to focus on building a professional knowledge system based on practical knowledge.

Since standardization is essential to enhancing the interoperability of each subject, it is imperative to systematically approach the safety and security of IOT.



To keep up with the Fourth Wave of Industrial Revolution, the nation needs to systematically respond with a vision to the development of a new technology ecosystem, and to enhance and maintain a platform ecosystem in which public and private institutions, and their corporate partners can freely share and utilize data and services.

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To keep up with the Fourth Wave of Industrial Revolution, the nation needs to systematically respond with a vision to the development of a new technology ecosystem, and to enhance and maintain a platform ecosystem in which public and private institutions, and their corporate partners can freely share and utilize data and services.

We need to focus on building a professional knowledge system based on practice rather than focusing on practical knowledge.

Since standardization is essential to enhancing the interoperability of each subject, it is imperative to systematically approach the safety and security of IOT.

Now, indeed,is the time to prepare for the future technology and society of survey industry. We have to be ready for the future generation of new technologies centering on 5G. With the potential to be combined with many new technologies, it is expected that tangible results will be produced in relation to surveying.

5G

Cutting-edge technology in 4th industrial revolution

Land survey can hold a potential of infinite value

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Q&A
Thank you