

Revolutionizing Land Survey in the 5G era

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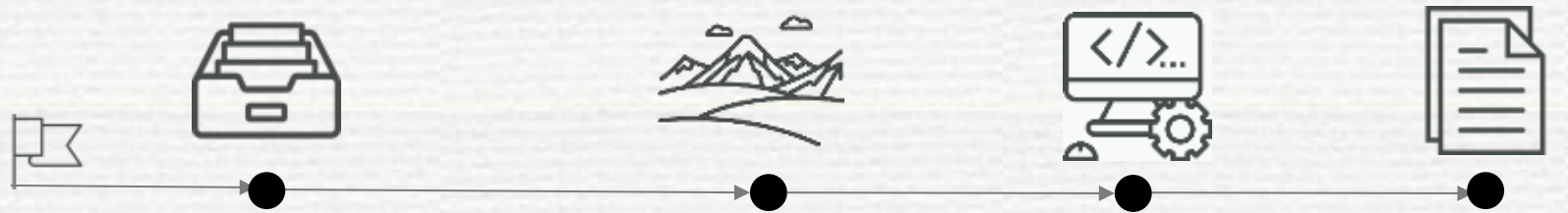


1

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?



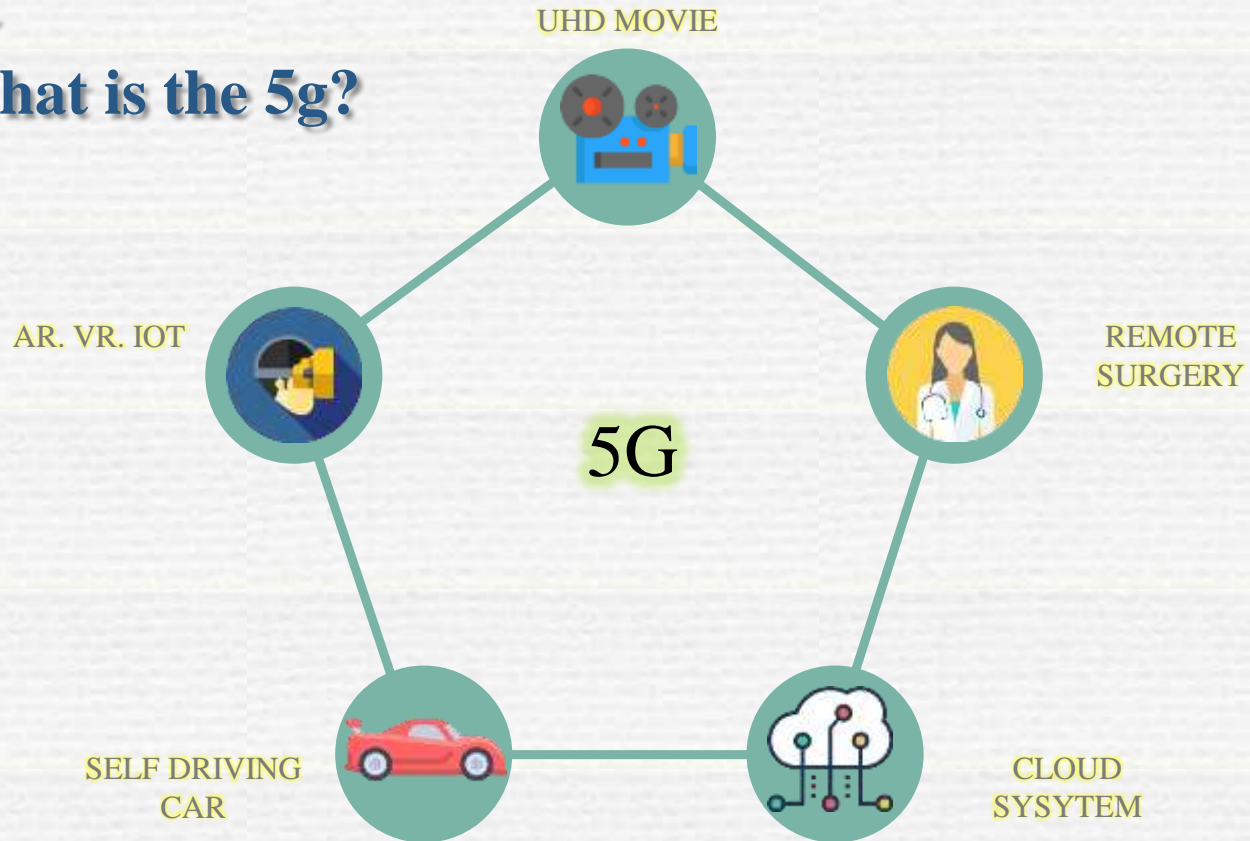
We have to spend our time to find it too much every day before we start survey.

An aerial photograph of a city at dusk or dawn. The sky is a mix of deep blue and light orange near the horizon. The city is illuminated with warm lights, and a large body of water is visible on the left side. The overall scene is a high-angle, wide shot of an urban landscape.

2

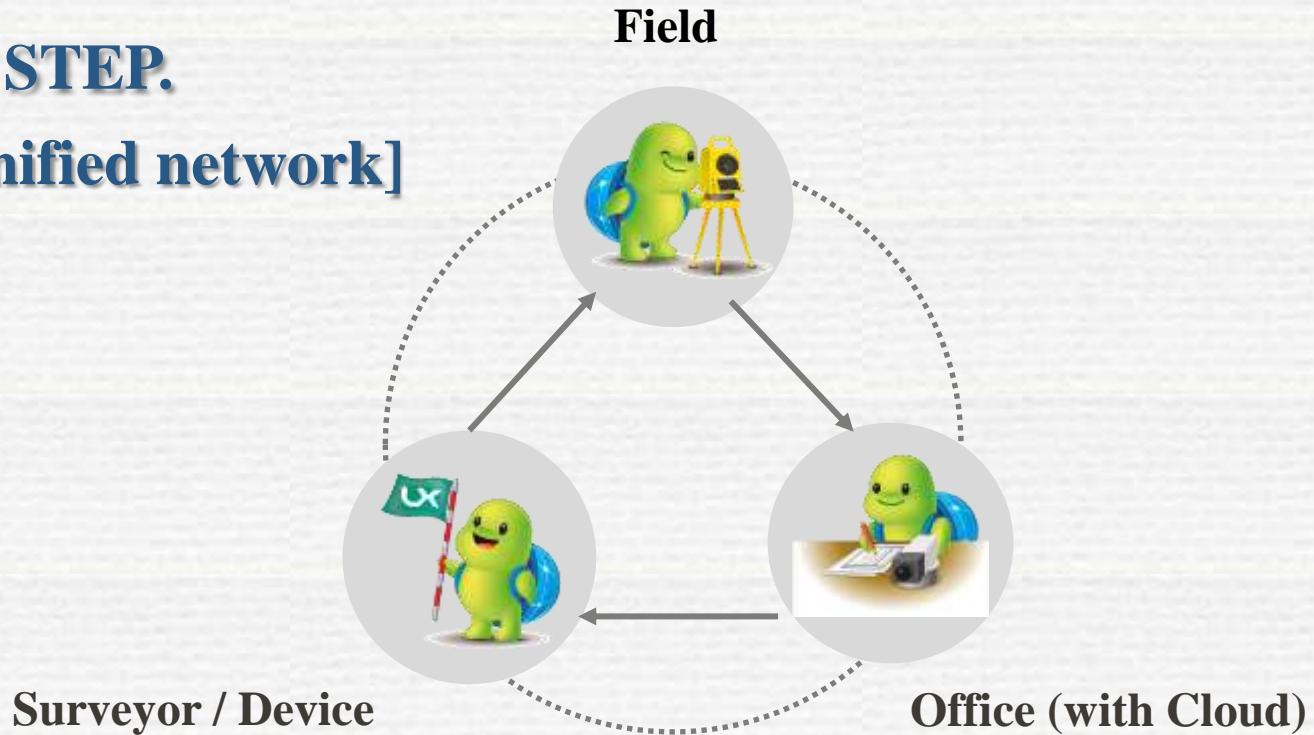
The influence of 5G in land survey

What is the 5g?



1 STEP.

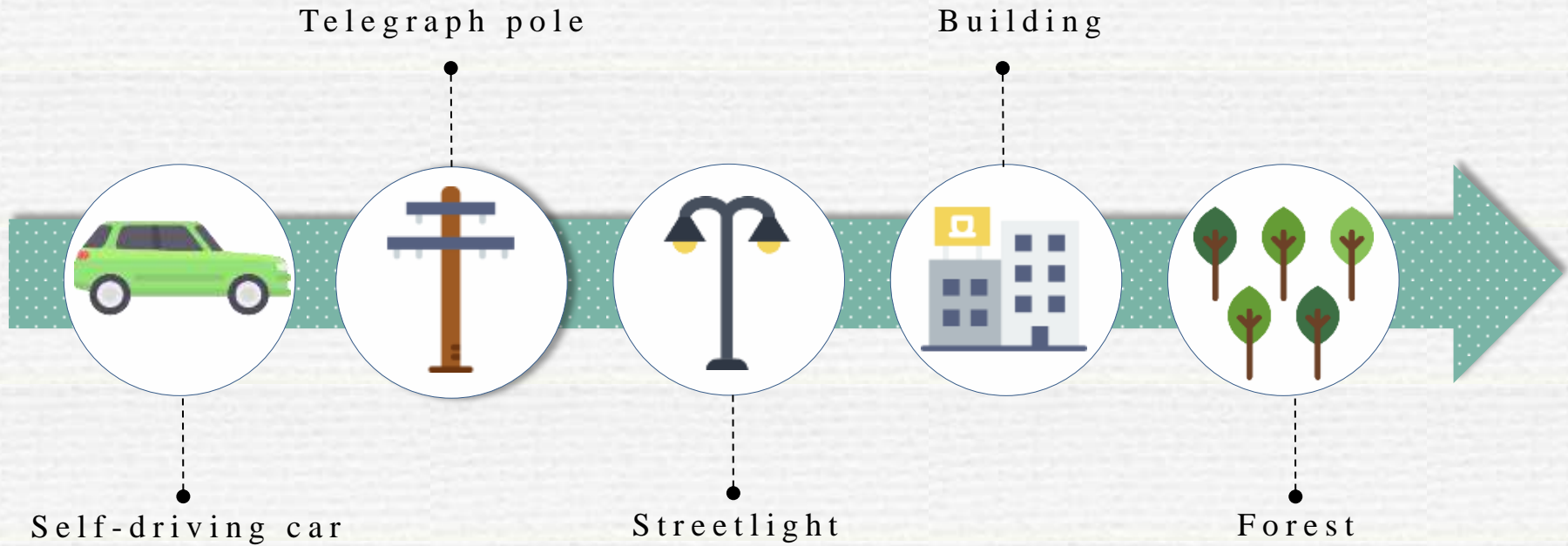
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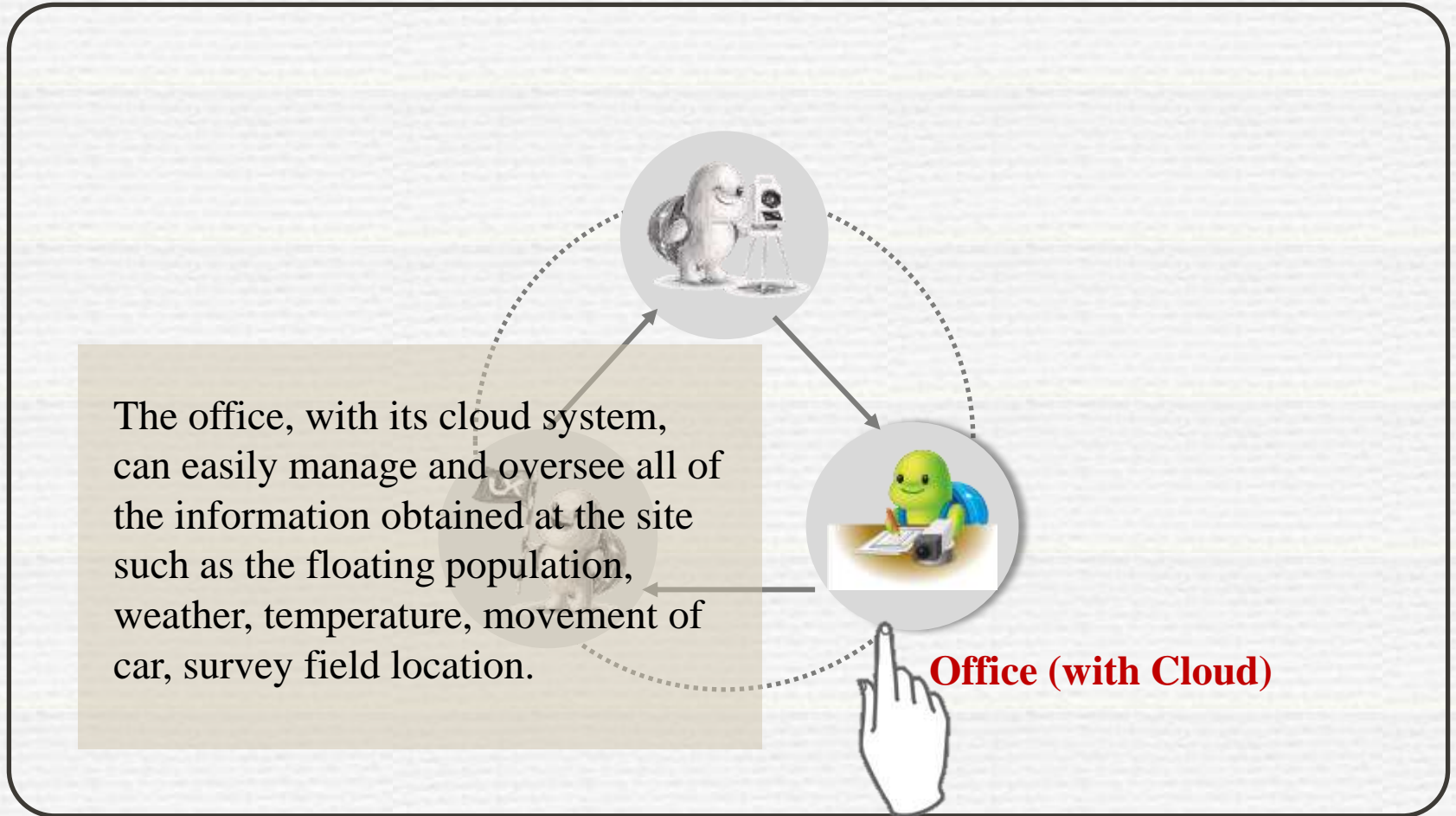
● Field

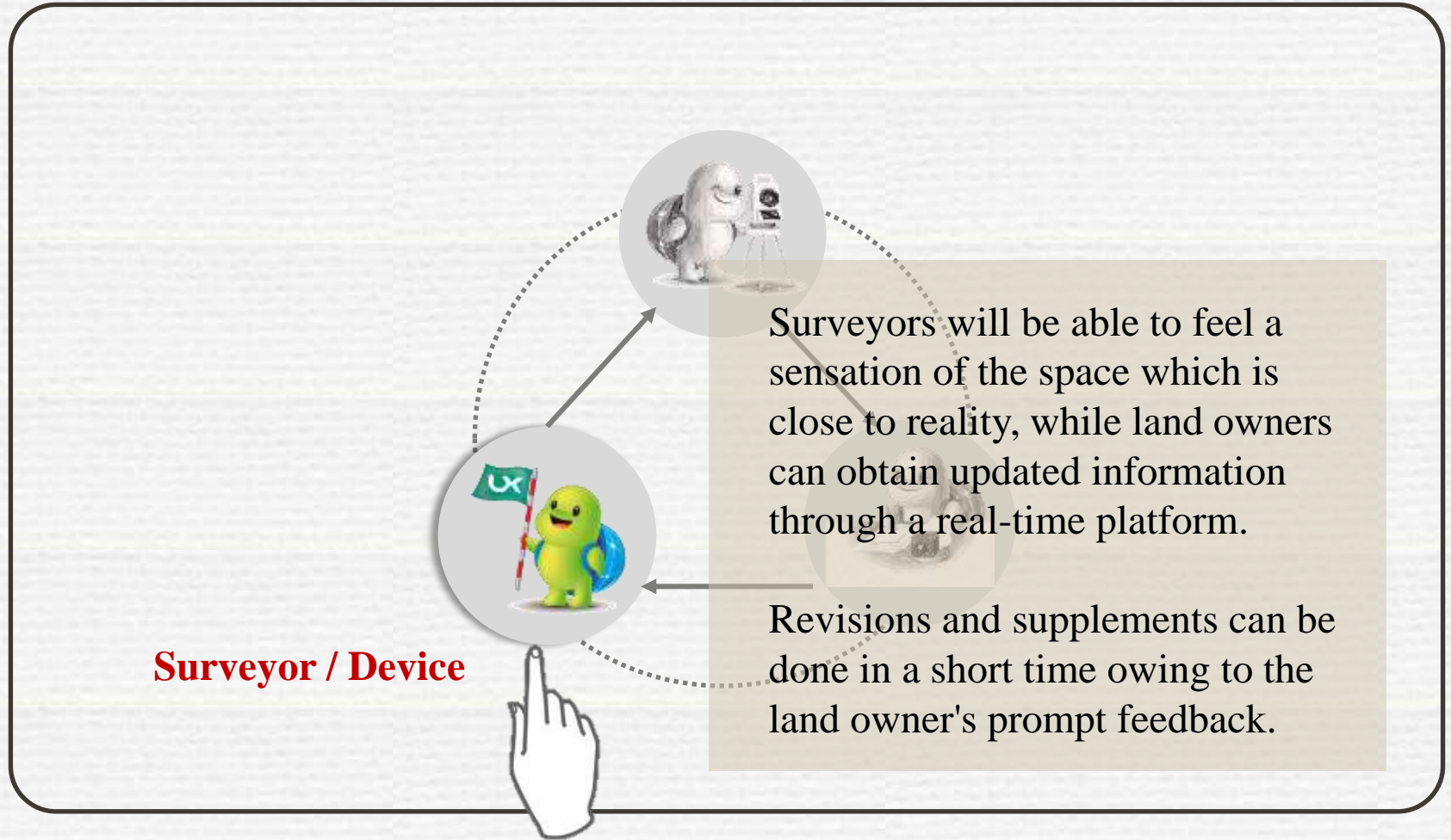
An autonomous vehicle guides the surveyors to the fastest and most precise route to the intended destination ,enabling them to arrive at the site on time.





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





2 STEP. [Field condition]



Inaccessible areas

• Construction site

• Mountain

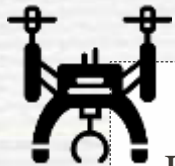
• Sea

Etc..

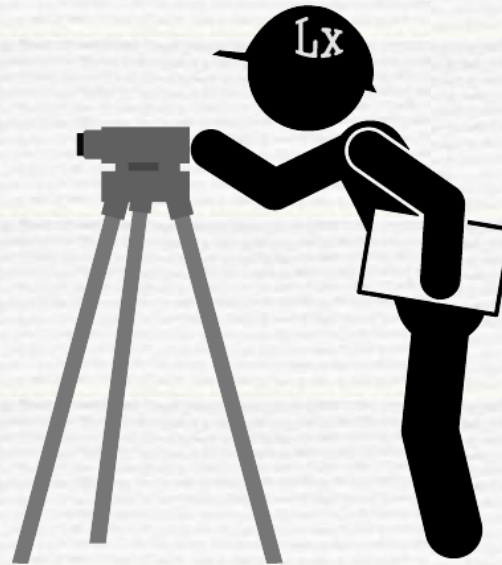
Obtaining accurate survey results is not possible.
Failing to meet the expectations of the land owners as well.



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.



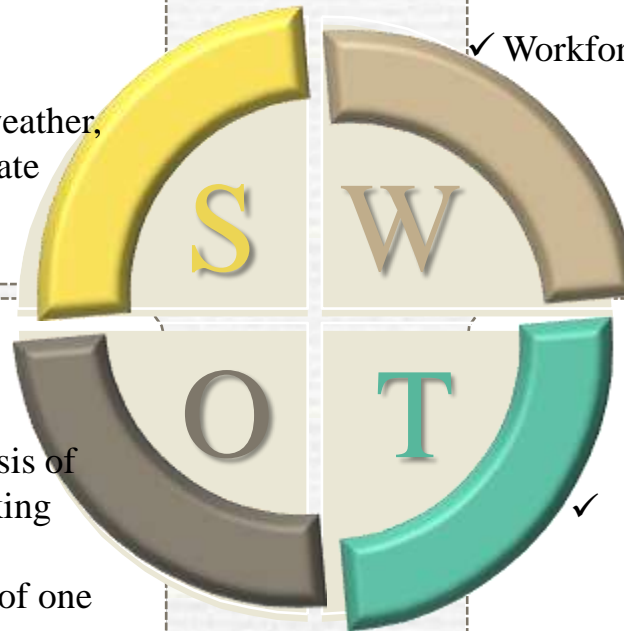
3

SWOT



- ✓ 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 equipment, 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

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.



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



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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.



Cutting-edge technology in 4th industrial revolution
Land survey can hold a potential of infinite value

REFERENCES

A Study on the Control Method of boundary mark Based on the IOT Point of Objects. – LX report

Put wings on the national territory – LX report

Top 10 Points of Attention - DIGIECO, KT institute for economic research and development

Weekly Trend - Ministry of Science, ICT and Future Planning

www.bloter.net/archives/273261 [Article] - MWC 2017



Q&A

Thank you