



6TH

UNITED NATIONS | COSTA RICA | PSIPW

CONFERENCE ON SPACE TECHNOLOGY FOR WATER MANAGEMENT

HOSTED BY THE INTER-AMERICAN INSTITUTE
FOR COOPERATION ON AGRICULTURE

7-10 MAY, SAN JOSÉ, COSTA RICA



MINISTERIO DE
RELACIONES EXTERIORES
Y CULTO

GOBIERNO
DE COSTA RICA



Prince Sultan Bin Abdulaziz
International Prize for Water



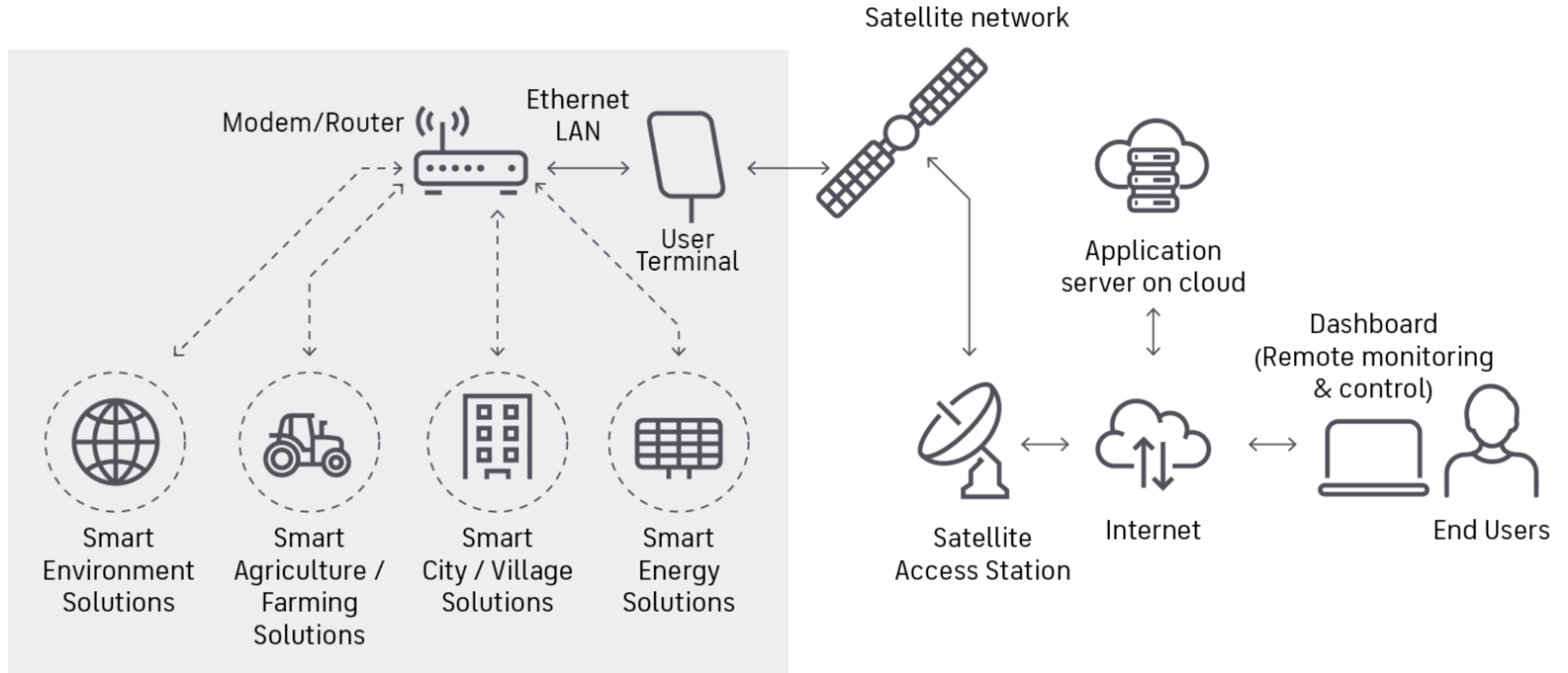
SUMMARY OF SESSION T3S1: SATELLITE COMMUNICATION - A FACILITATOR FOR IOT-SUPPORTED WATER APPLICATION

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SATELLITE COMMUNICATION: Satellite Internet of Things (IoT) refers to the use of satellite technology to facilitate communication and data exchange among IoT devices located in remote or inaccessible areas.



❏ **Key information about the session T3S1**

- 3 speakers: 2 on site, 1 online
- 3 countries and continents: Egypt, Peru, France
- 3 water related topics: Agriculture water resources, water quality, and Cacao farming
- 5 questions

❑ Key points of the 3 presentations

- IoT devices integrated with satellites opens up new possibilities for real-time monitoring and data collection in remote or inaccessible areas.
- The integration of advanced sensors and satellite communication systems enables us to track water levels, consumption patterns, and agricultural dynamics with unprecedented accuracy and efficiency.
- IoT sensors can send data concerning water quality and issue a local alert regarding cyanobacteria levels.
- The constellation of satellites will acquire data for the entire area concerned, enabling the possible identification of the potential source of the contamination and the projection of its overall impact.
- In the future, require the observation of cacao plantations over a full growing time period and has to include irrigation, fertilization, pest management, plant diseases, and ecological side effects.

❑ Knowledge and future trends

● Application Progresses

Global Connectivity, Asset Tracking and Monitoring, Environmental Monitoring, Emergency Response, Precision Agriculture, etc.

● Challenges

Cost, Latency, Limited Bandwidth, Power Consumption, Interference and Signal Blockage

● Future development outlook

Expansion of Satellite Constellations, Advancements in Satellite Technology, Integration with 5G Networks, Emergence of Edge Computing, Focus on Sustainability, Diverse Applications, Regulatory Considerations



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Thank you for your attention!

Dr. Shanlong Lu, Professor, International Coordinator of SDG 6

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