

**United Nations/United Arab Emirates/United States of America
Workshop on the applications of Global Navigation Satellite Systems**

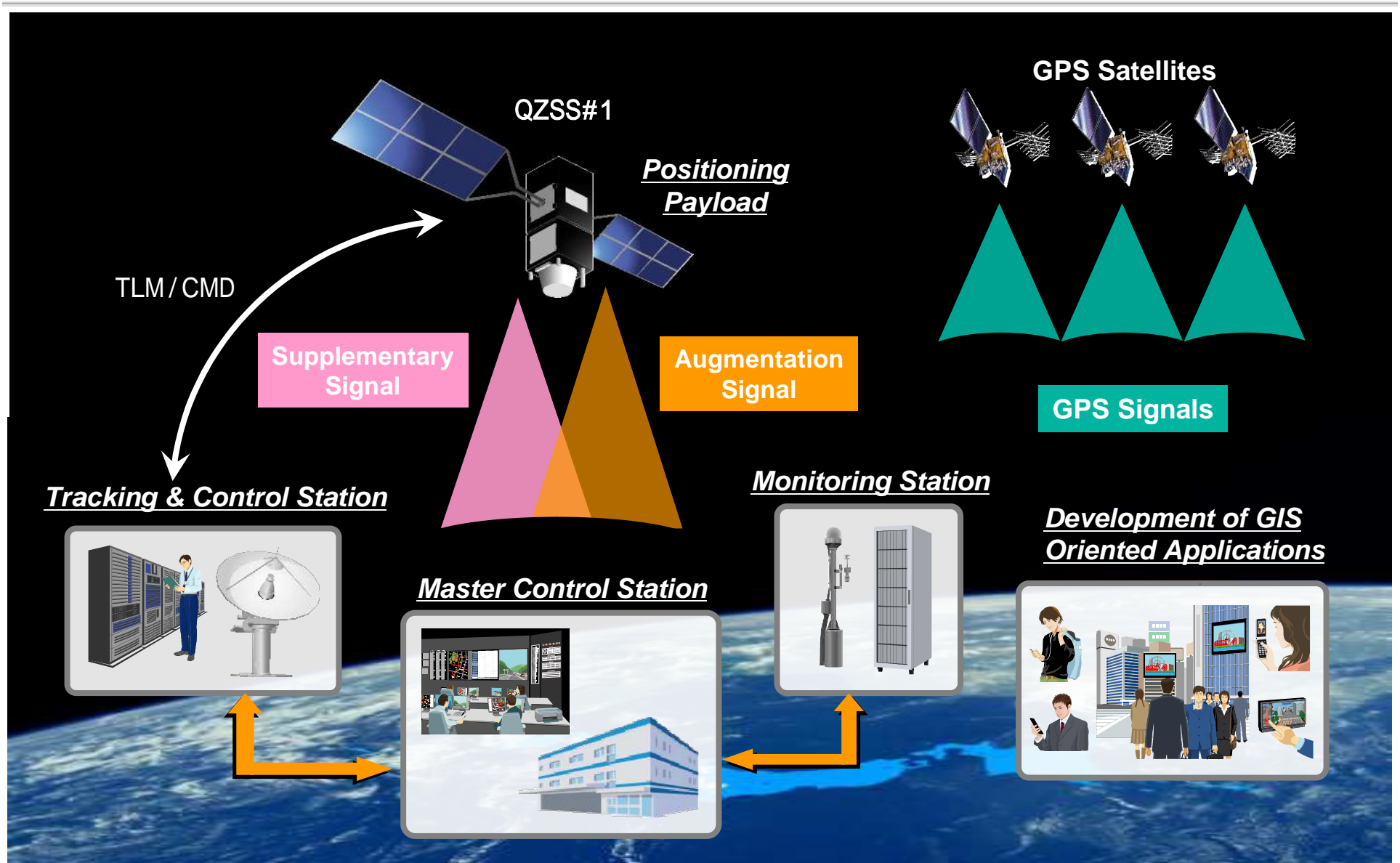
Examples of QZSS Applications

**January 17, 2011
NEC Corporation**

Introduction

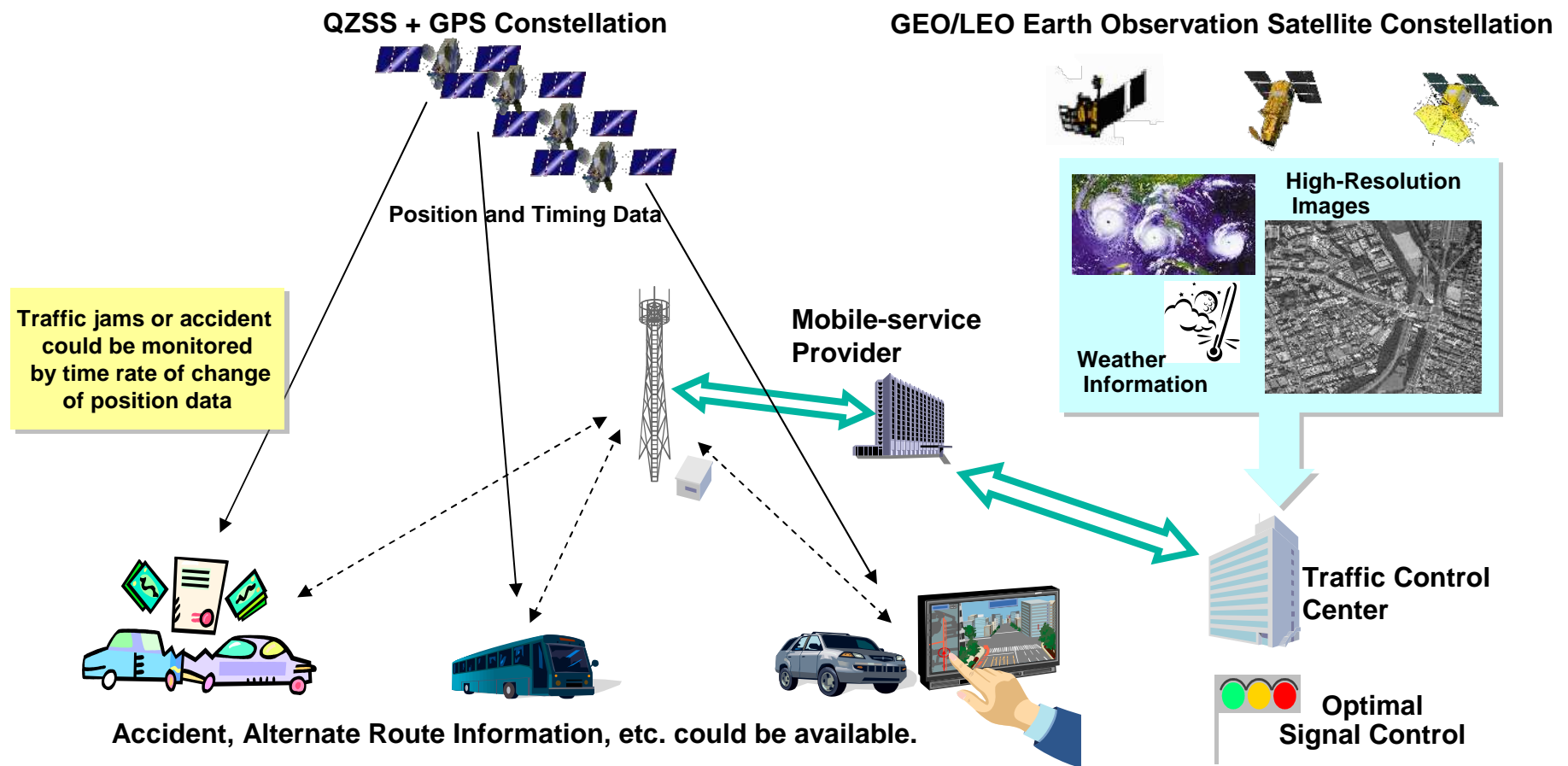
- In Japan, mobile penetration rate has reached 92.4% in 2010 and almost 50% of mobile terminals have GPS functions, so positioning information using satellites is imperative to peoples' lives.**
- The successful launch of QZSS, MICHIBIKI (which means "Guidance" in Japanese) will help make our society more secure and comfortable as it enhances the accuracy of positioning information and makes it ubiquitous.**
- Japan has established technology to utilize GPS signals for navigation systems, and the high-accuracy QZSS positioning system promises to expand the possibilities in a variety of fields.**

NEC's Roles in 1st QZSS Project

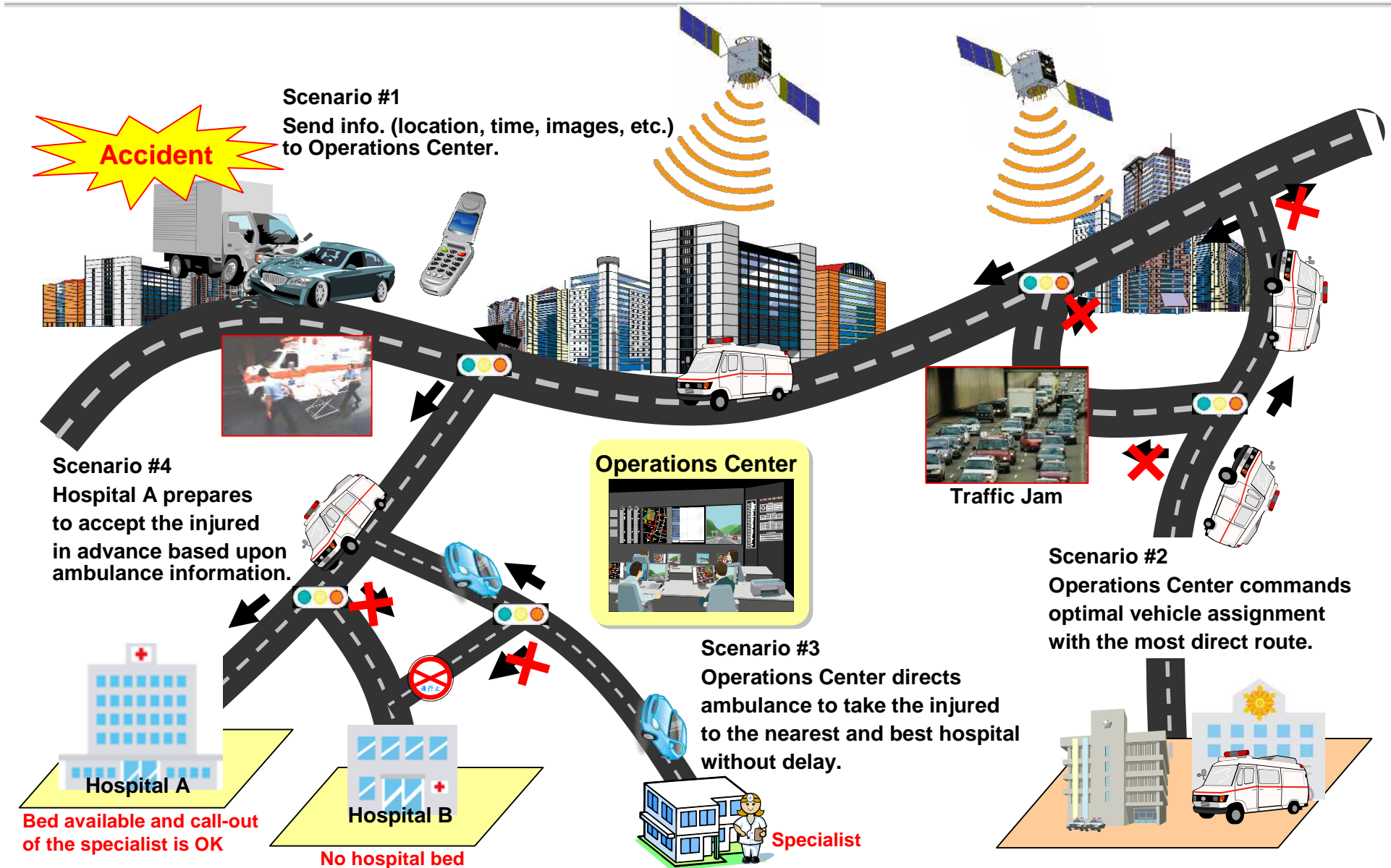


Applications for Environment Conservation

Combination of LBS (Location Based Services) and value-added satellite remote sensing information provides advanced telematics, which solves traffic problems and reduces exhaust fumes and energy consumption.



Applications for Realizing Secure Society



Applications for Agriculture Business

Issues and expected solutions utilizing GNSS and Satellite Remote Sensing

Aging of the farming community
 Deviation of farm field soil component
 Difficulties of optimum harvesting

Systems of elder-proof
 Reduce fertilizer cost by equalization
 Harvest during proper time, day and night

Elder-proof Systems

Unmanned digging over soil and rice planting machine



Main Computer GPS Antenna

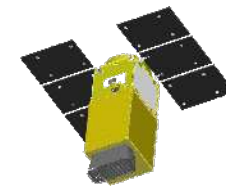
Unmanned combine harvester



Earth Observation Satellite Constellation



Hyper Spectral Sensor



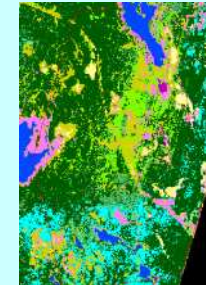
Multi Spectral Sensor

Information for
 -Soil component equalization
 -Proper time of harvesting

Mapping of Growing condition



Distribution of Soil component



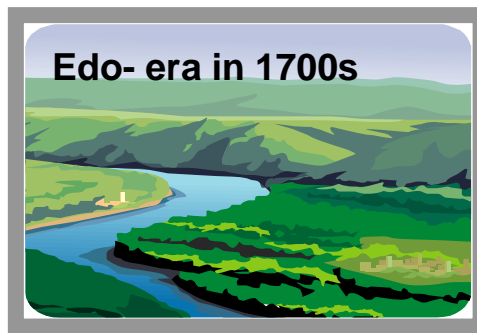
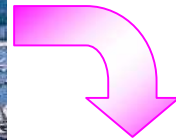
Applications for Personal Services

Utilizing AR (Augmented Reality) technology, old-time CG landscape, historical photos, etc. could be displayed.

On visited site..



Holding up a tablet..



On popular photo spot..



Holding up a tablet..



Expected as rich tourism resources

Participative development of contents would contribute to the revitalization of local towns.

Empowered by Innovation

NEC