

RisKma: Disaster Risk Reduction OS






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1. Outline

1. Introduction of CTI group
2. Importance of Flood Forecasting & Early Warning System
3. Advantages of  Riskma
水災害リスクマッピングシステム
4. Success stories of  Riskma
水災害リスクマッピングシステム
5. Overseas Offices of CTI Engineering Group & Access to  Riskma
水災害リスクマッピングシステム

Introduction of CTI group



1. Introduction of CTI group

First The first engineering consultancy in Japan.

over 800 projects Over 800 international projects in over 100 countries.

over 3,800 employees Group employs over 3,800 people in 13 Group companies.

Top The top share of sales to the government among consulting engineering companies in Japan.



Areas of Service

Importance of Flood Forecasting & Early Warning System



2. Importance of Flood Forecasting/Early Warning System

- Government and private sectors must decide on evacuations and flood DRR activities before floods occur.

However, reality presents the following problems:



- Information gathering for countermeasures takes a long time.
- Different systems for rainfall observation, flood forecast, and early warning are managed separately.
- Uncertainty about roles and responsibilities during disasters.
- Difficulty in accurate flood forecasting due to rapidly changing situations.

Consequently, making evacuation decisions and flood DRR activities has become challenging.

But there's a solution - Riskma!



Advantages of **Riskma**

水災害リスクマッピングシステム

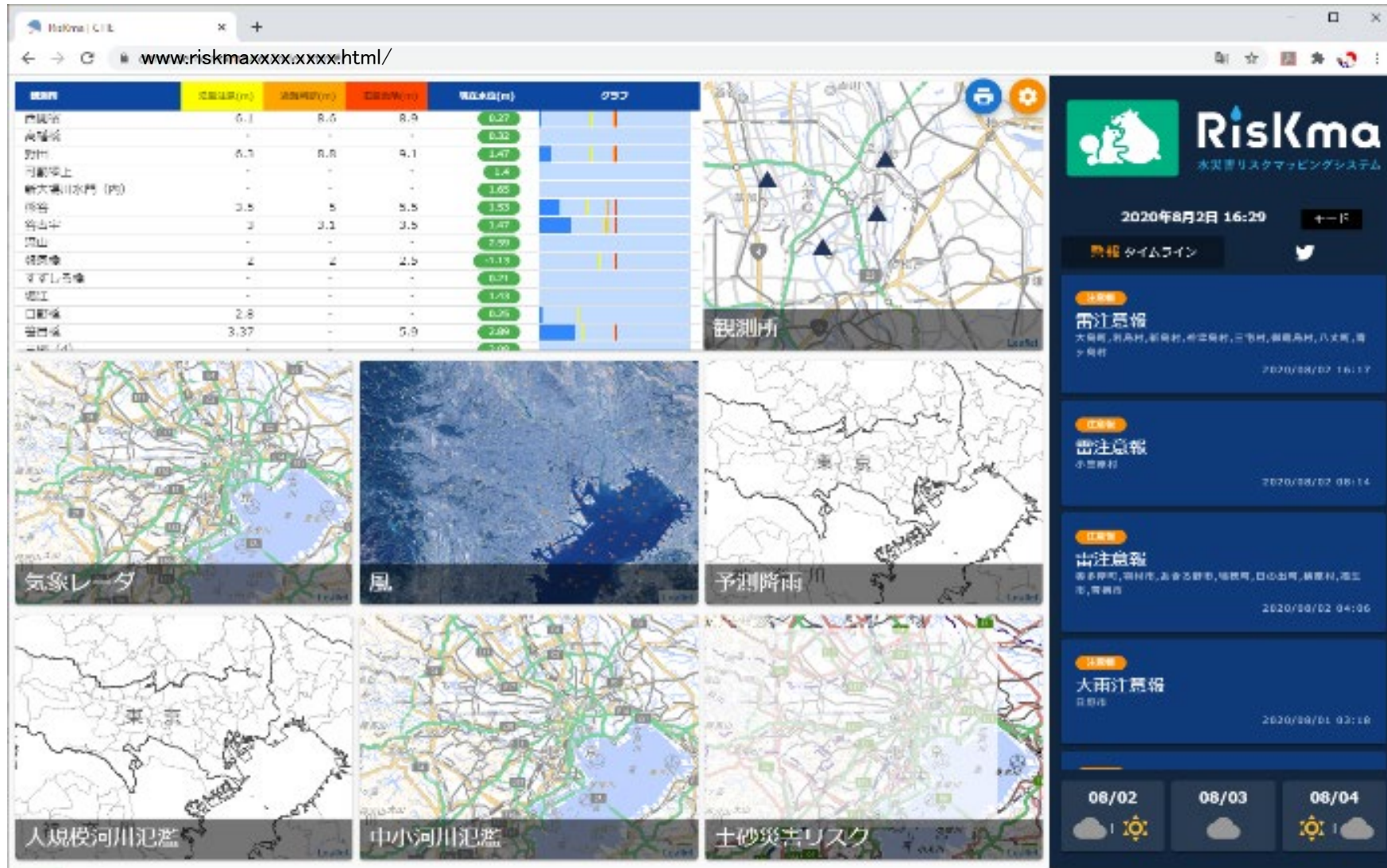


3. Advantages of RiskMa

- ✓ Integration and browsing of related information
- ✓ Ability to forecast of river water levels and inundation area
- ✓ Customizable functions (e.g. alert mail, overlay user's map/data set etc.)



3. Advantages of Riskma (System layout)



Example of layout of Riskma

3. Advantages of Riskma (System layout)



3. Advantages of Riskma

What can we do by



???

- ✓ Effective information collection before/during/after disaster
- ✓ Understanding current & future situation/risk of meteorology & disaster
- ✓ Supporting decision making for early evacuation & DRR activities
- ✓ Utilizing for BCP (Business Continuity Plan)



Success stories of **Riskma**

水災害リスクマッピングシステム



4. Success Stories/ Sales Record of RiskMa

We will expand the reliability and achievements of flood forecasting technology obtained in Japan to other countries.

◆ Central/National Government

- I. **No.1 market share position** in Flood Forecasting System (Risk Line) of **MLIT**
- II. **No.1 market share position** in Dam Inflow Forecasting System of **JWA**

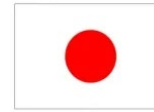
◆ Local Governments

- I. Tomakomai city in Hokkaido
(won the 2022 **Minister's Award** of Circulating Sewerage)
- II. Gunma Prefecture
(won the 2022 **Governor's Commendation & Zenkensho Award**)

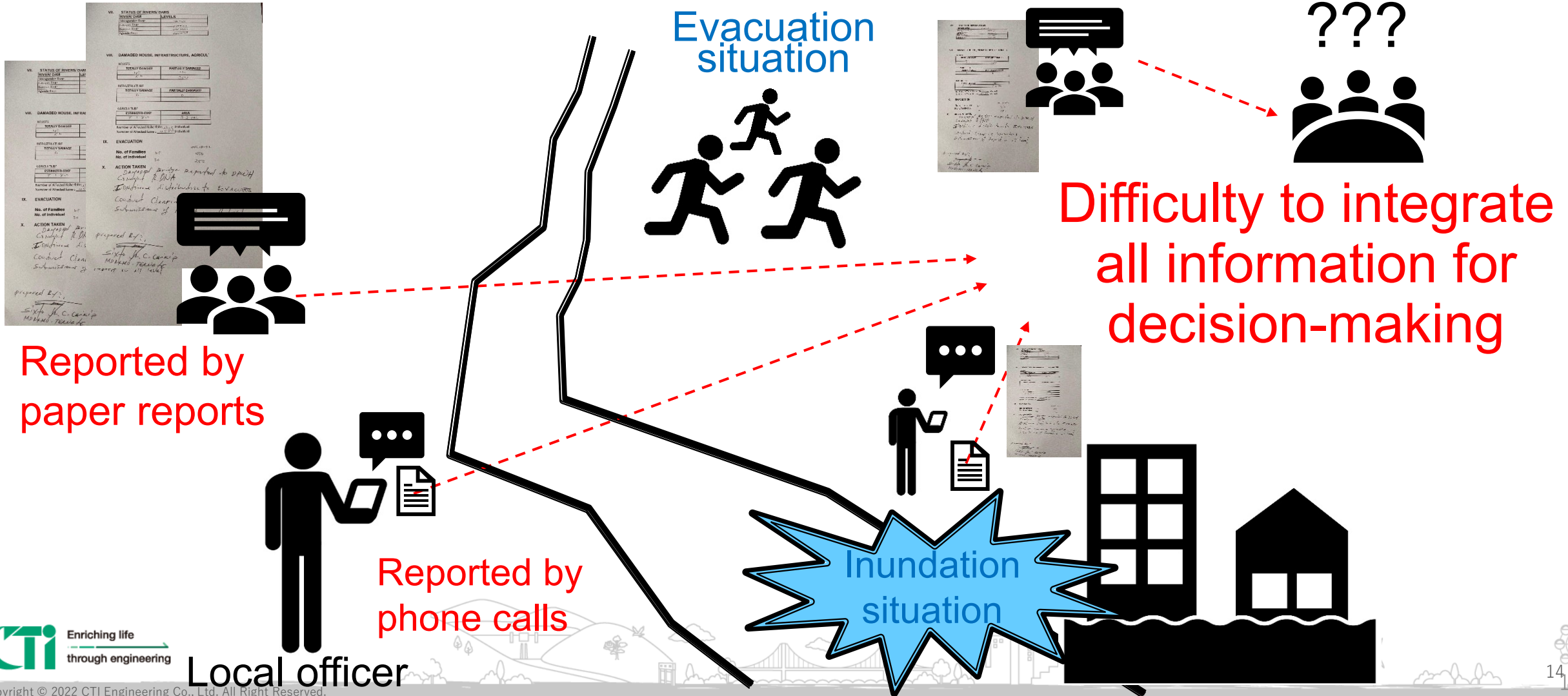
◆ Private Companies

- I. Real estate investment management company
- II. Manufacturers

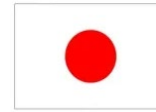
4. Success Story (Pilot project)



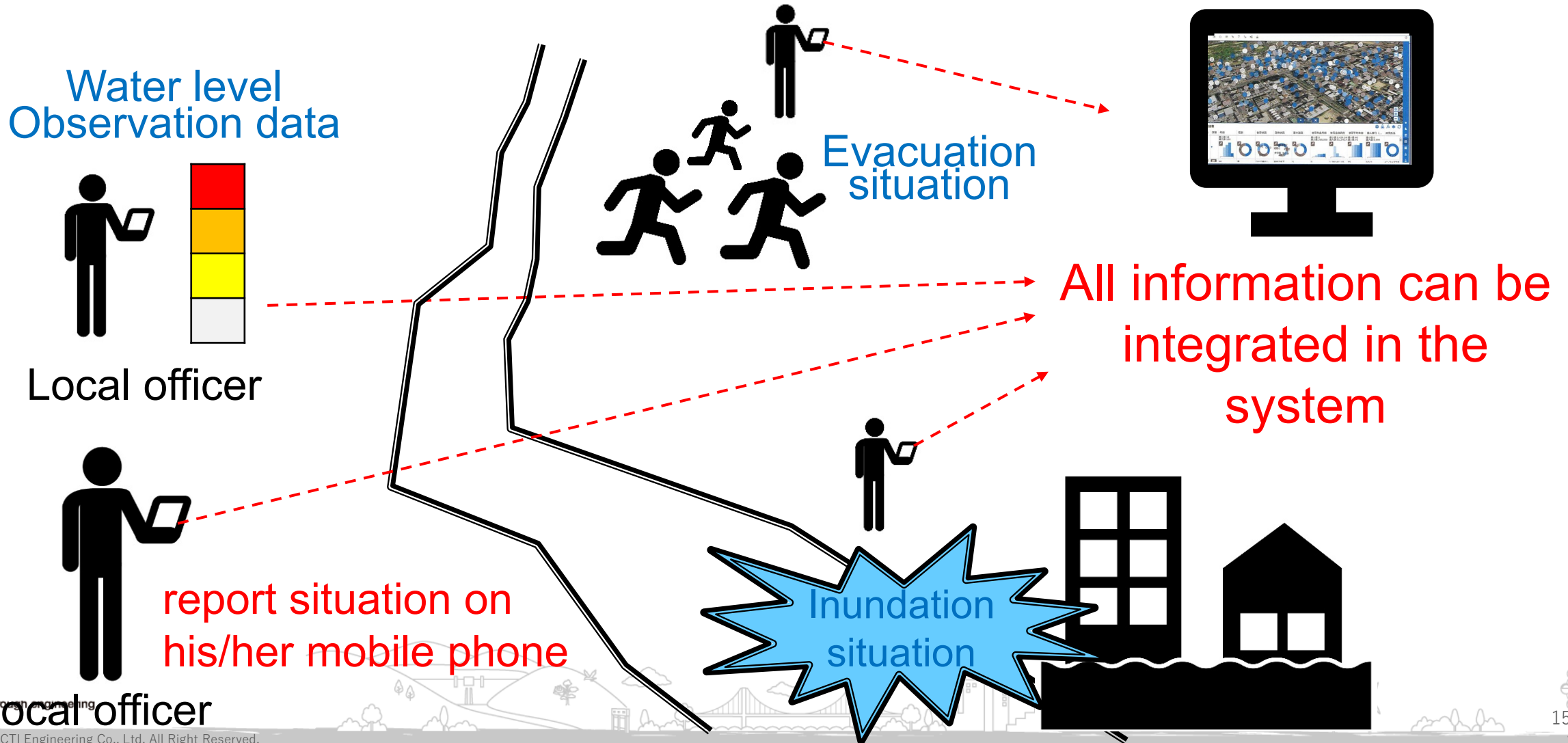
Present: Status updates have been communicated through **phone calls, text messages, and paper reports.**



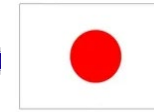
4. Success Story (Pilot project)



Future: Posting status updates on a **cloud-based mapping platform** enables centralized management and accelerates decision-making.



4. Success Story (Pilot project)



DRR drill with PDRRMO in Cavite

The effectiveness of the system
has been confirmed



Top-to-top selling by
MLIT(Director) to Governor

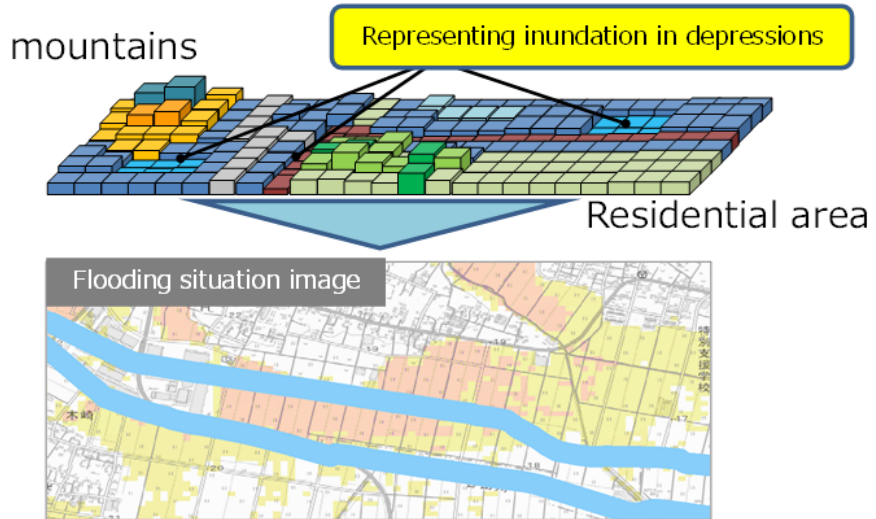


Explanation to Governor

4. Success Stories/ Sales Record of RiskMa

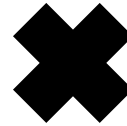
Since 2023, we launched overseas sales of RiskMa.

As a result, we received Flood Forecasting System Development Project from Canal de Isabel II as a pilot project since in April 2024.



Posted with data appended to the GSI Tiles
(<https://maps.gsi.go.jp/development/ichiran.htm>)

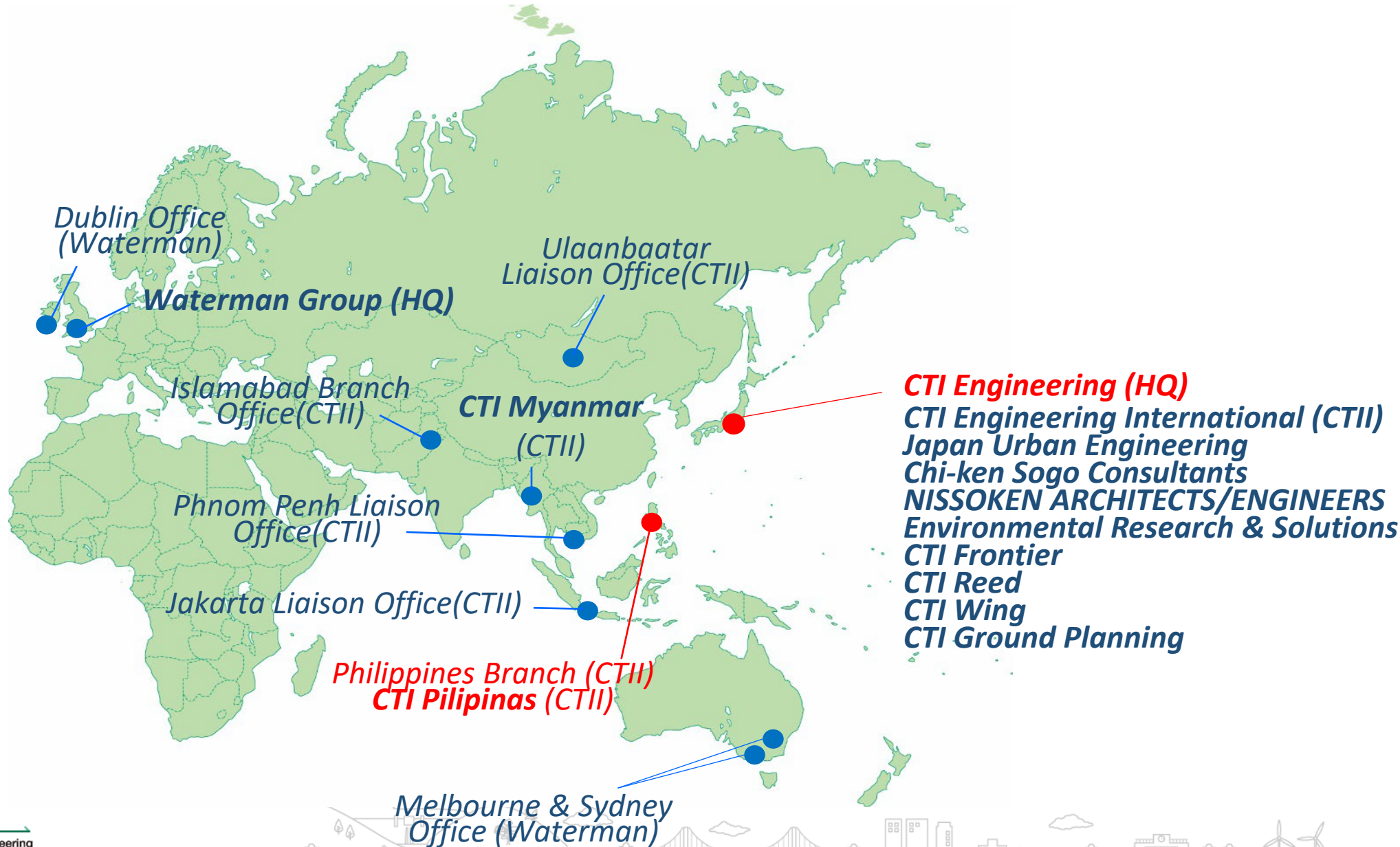
Flood forecasting model



(C)OpenStreetMap contributors

one municipality in Madrid

5. Overseas Offices of CTI Engineering Group & Access to RiskMa



5. Overseas Offices of CTI Engineering Group & Access to RiskMa

If you are interested in RiskMa, please send email to “riskma@ctie.co.jp” with the subject “**Philippines-Japan Environment Week.**”

Team RiskMa is looking forward to discussing with you via email and web meetings!

The screenshot displays the RiskMa website interface. At the top left is the RiskMa logo with the tagline '水災リスクマッピングシステム'. The main heading is 'RISK MAP' with a sub-heading 'Water-related disaster Risk Map'. Below this, a descriptive sentence states: 'In case of extreme rain events, you can check out for the information on water-related disaster risk, real-time on the map.' Three main service icons are shown: 1. 'Sequential rainfall forecast' (36h) with an umbrella icon, described as 'Delivering every 5 minutes, rainfall distribution forecast and cumulative rainfall distribution 36 hours ahead.' 2. 'Flood risk' (NOW) with a house and water icon, described as 'Real-time map of areas with a risk of storm water flooding or flooding due to rising river water levels.' 3. 'Guerrilla rainstorm forecast' (2-3h) with a cloud and lightning icon, described as 'Information on heavy rain for 2-3 hours ahead. (Kanto, Hokuriku, Chubu regions)'. Below these is a section titled 'Services for Local Governments and Corporations' with three sub-sections: 'E-mail warning of water-related disaster risks.' (We distribute information regarding stormwater flooding by email.), 'Consulting services on water-related disaster countermeasures' (We provide consulting services for measures against heavy rain, flood and water-related disasters.), and 'Providing water-related disaster data' (We provide information on this website.).

RiskMa HP

<https://www.riskma.net/en/top>



CTI Engineering Co., Ltd.