
Rakuaid

Develop innovative solutions to promote disaster prevention and mitigation in Japan

Agenda

- ❑ Priority for Action
- ❑ Issue
- ❑ How to solve
- ❑ Target User
- ❑ Product overview
- ❑ Demo
- ❑ Future prospects

What is Rakuaid

Rakuten's Services



Aid (支援)



Rakuaid (楽エイド)

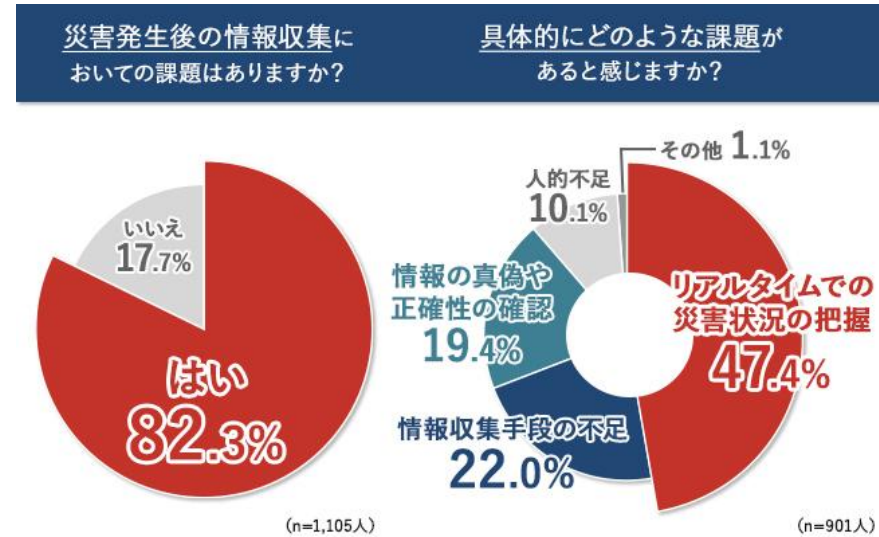
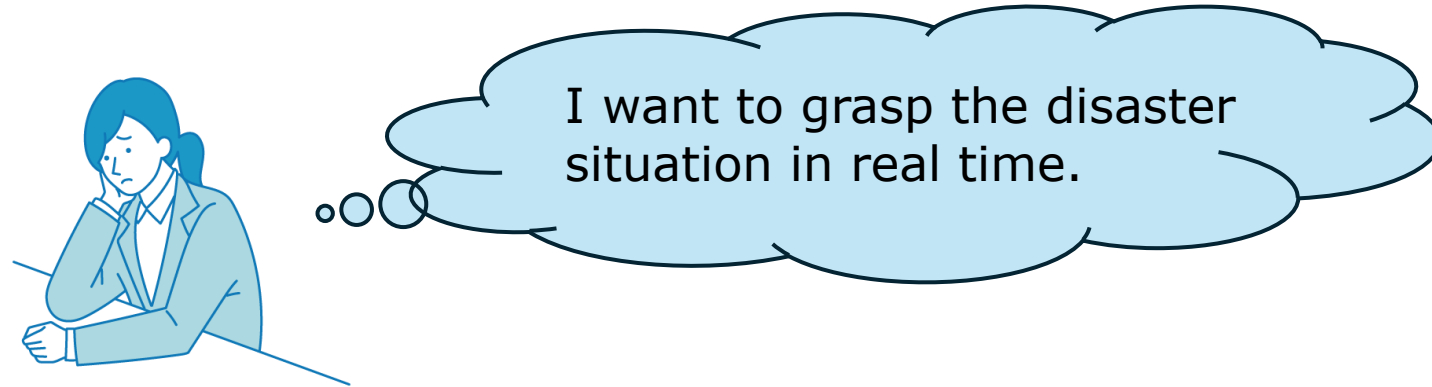
"Rakuten" サービスで"楽"に"支援(aid)"

Priority for Action

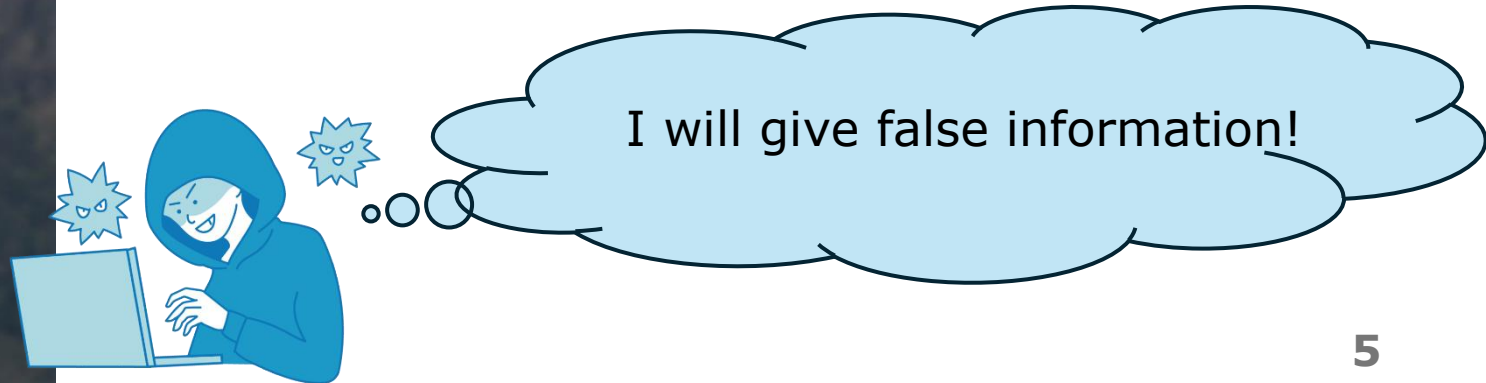
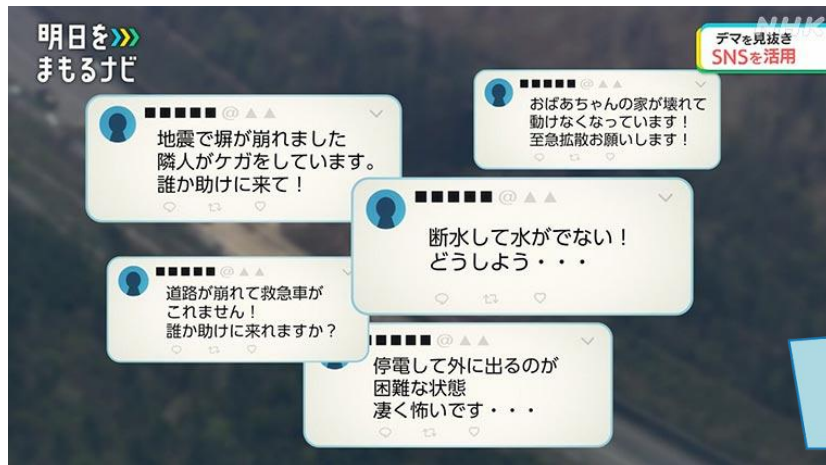
Pre-disaster	Priority 1	Understanding disaster risk
	Priority 2	Strengthening disaster risk governance to manage disaster risk
	Priority 3	Investing in disaster risk reduction for resilience
Post-disaster	Priority 4	Enhancing disaster preparedness for effective response and to “Build Back Better” in recovery, rehabilitation and reconstruction

Issue (1/2)

- ❑ Difficult to obtain real-time information about the disaster situation and available resources



- ❑ The difficulty survivors face in sharing information about their situation

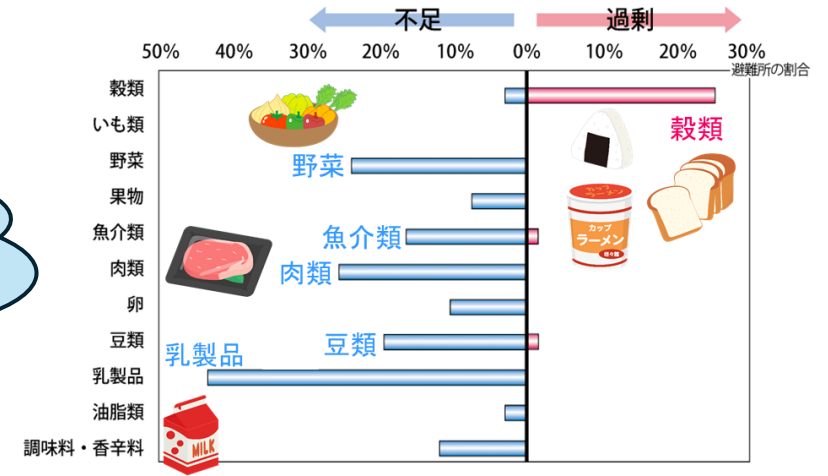


Issue (2/2)

❑ Lack of resources in the affected areas



I want vegetables, dairy products, etc.



Tsuboyama-Kasaoka N, et al. Asia Pac J Clin Nutr. 2014

東日本大震災における避難所での食事の過不足

❑ People who want to help do not know what to do

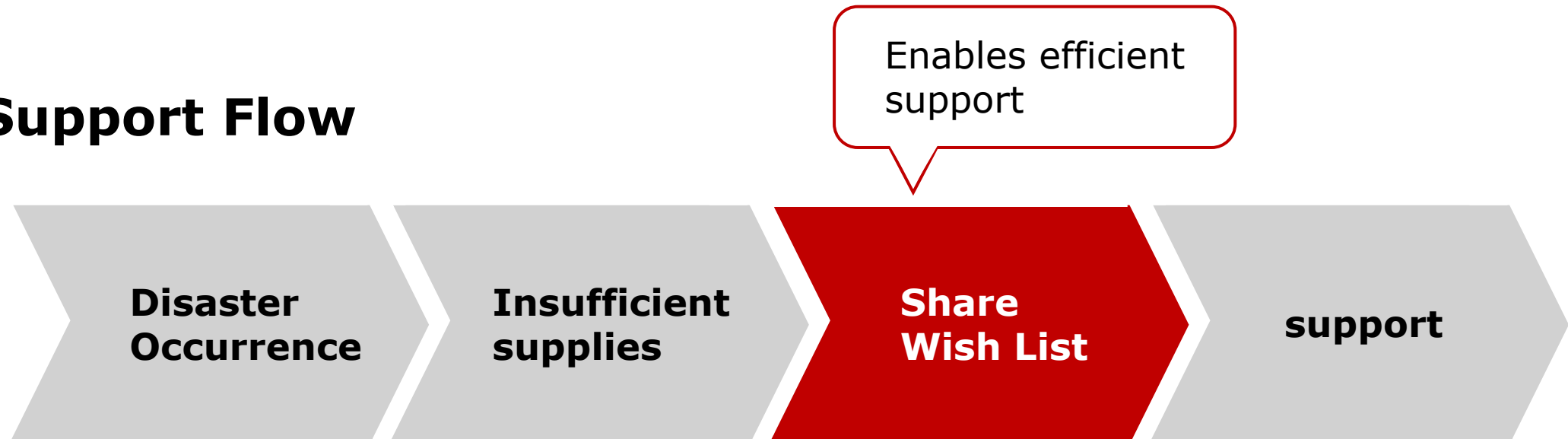
I want to help without having to go to the disaster area.



How to solve

- ❑ Visualization of disaster information
 - Reduction of disaster-related deaths
- ❑ Wish List of Disaster Victim
 - Wish List : List of supplies needed in the affected areas
 - ➡ Support by buying products from Rakuten Ichiba

Support Flow



Target User

- ❑ disaster victim
 - Tell disaster situation and supplies needed.
- ❑ General users (not affected by the disaster)
 - Check the disaster victim' Wish Lists and support them with supplies.

disaster victim



Wish list



supplies

General users



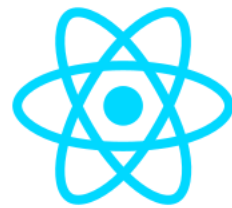
Product Overview

❑ Description

- Helps shelters and survivors tell their situations.
- Volunteers can grasp the situations and help them.

❑ Tech Stack

- Frontend: React, Next.js
- Backend: Nest.js
- Database: MariaDB
- DevOps: Docker



React

NEXT.js



nest



docker



MariaDB

Tech Selection

❑ React, Next.js

- Echo System: Plentiful Library.
- Material UI & Tailwind: Need Not Focus on UI.

❑ Nest.js

- Support DDD: High Serviceability.
- Module Based: Low Conflict.
- Same Language with Frontend: Do Full-Stack Dev Easily.

❑ MariaDB

- SQL DB: Easy to Manage Relations Between Entities.
- Open Source: Free and have Docker Image.

System Diagram

Survivor

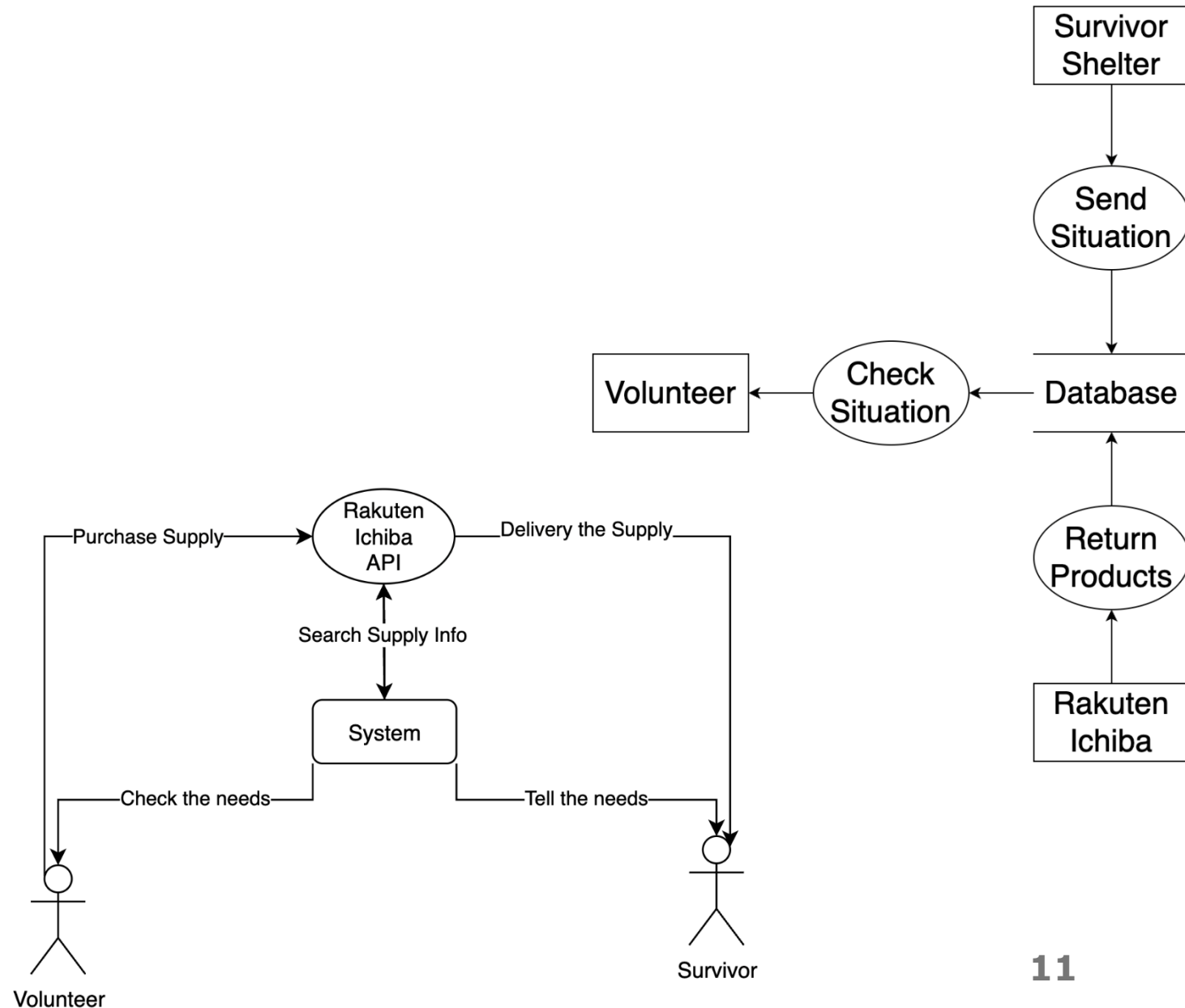
- Send the Situation.
- Tell what they want.

Volunteer

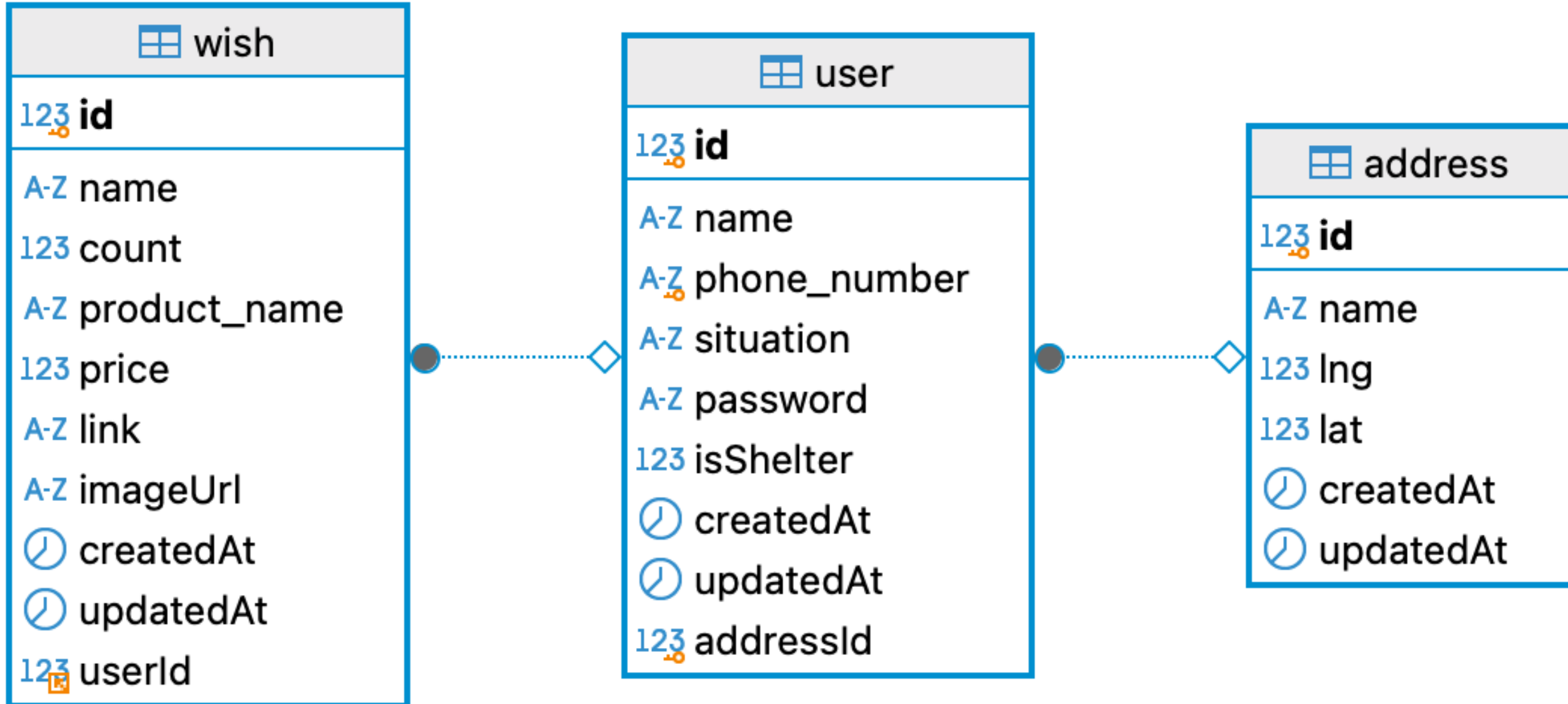
- Check the Situation.
- Purchase the Supply

System

- Search the Supply.
- Display the Situation.



ER Diagram



Function– Situation Check

□ Display Information

- Shelter Name
- Phone Number
- Situation
- Supply Wanted

□ Address

- Show via Map
 - Use Google Map API
(: Maps JavaScript API)

避難所リスト

丸の内中学校

電話番号: 07011111111

住所: 愛知県名古屋市中区三の丸1-9-2

現況: 重症2人。子供が10人。人手が足りない。

必要物資:



【容量が550mlにリニューアルしました!】国産 新潟名水の郷 津南の天然水 ナチュラルミネラルウォーター 水
550ml×48本(2ケース) ※北海道・四国・九州・沖縄への配送は別途送料頂戴致します

価格: ¥3100

数量: 5個



【ふるさと納税】日清ヌードル3種セット 各1箱(20食入) 合計60食 麺類 ラーメン ラーメン麺 即席麺 麺類 ラーメン カップ麺 インスタント 麺類 カップラーメン

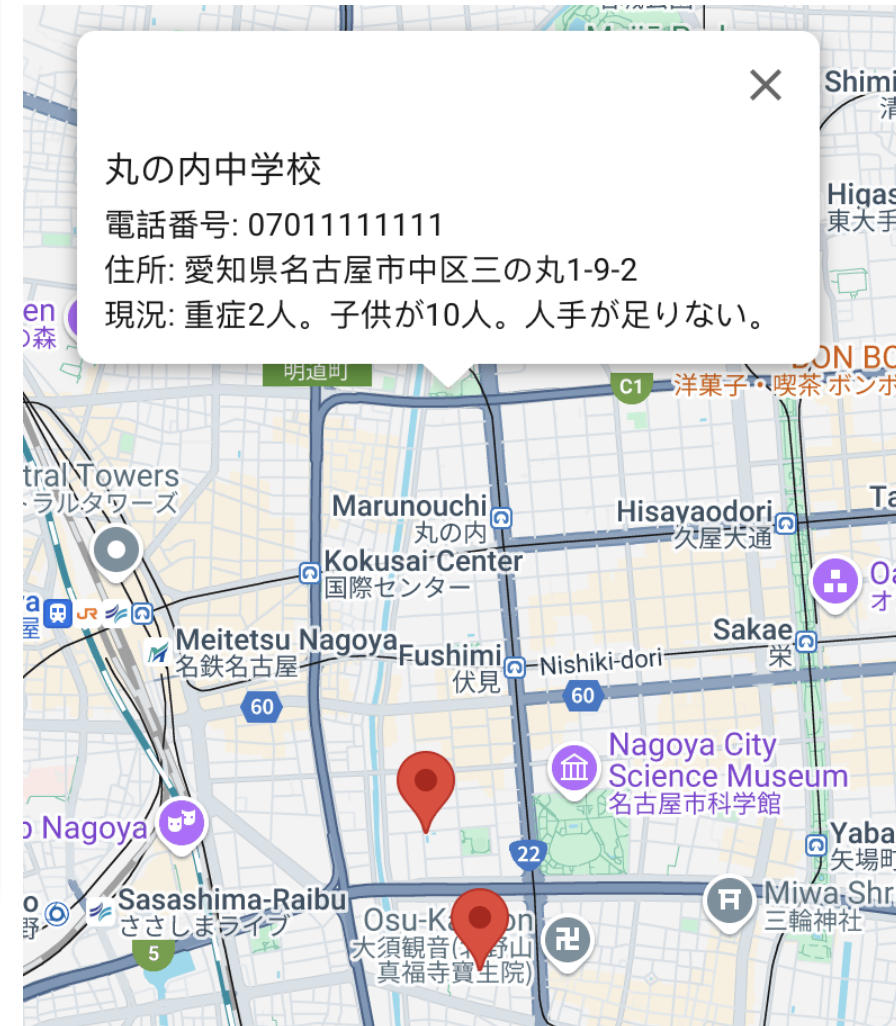
【北海道千歳市】ギフト ふるさと納税

価格: ¥36000

数量: 5個

大須小学校

栄小学校



Function – SignUp SignIn

□ Sign Up

- Sign Up as a Shelter or Survivor
- Register the Situation

□ Sign In

- Sign In for Add Supply Wanted

□ ログイン

電話番号

パスワード

ログイン

[アカウントをお持ちでない方](#)

ユーザ登録

名前

住所

電話番号

被災状況

パスワード

避難所の方ですか?



登録

Function – Add Wanted Supply

❑ Add Wanted Supply

- Wanted Supply can be Added at My Page.

大須小学校

愛知県名

0703333

熱が出て

はい

欲しいもののリストに追加

商品名 *

個数 * 1

登録

登録したほしい物リスト

解熱剤 3個

リストを登録する

Function – Search Supply

❑ Search Supply

- System will Search Supply via **Rakuten Ichiba API**.
- If the Wanted Supply was Registered.

丸の内中学校

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麺 インスタント 麺類 カップラーメン



【北海道千歳市】ギフト ふるさと納税

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Tech Issue – Dev Env Building

❑ Development Environment Building

- Members have Different OS, Node Version.
- Error or Bug will Occur, Even the Same Code.

❑ Solution

- Use Docker To Standardize the Dev Environment.



Tech Issue - HTTP Status 429

❑ Rakuten Ichi API: HTTP Status 429

- Want to Get the Product Info In Real Time.
- Each time Index Page Accessed will Send Many Requests to API.

❑ Solution

- Only Access Ichiba Once, When Wanted Supply Registered.



429

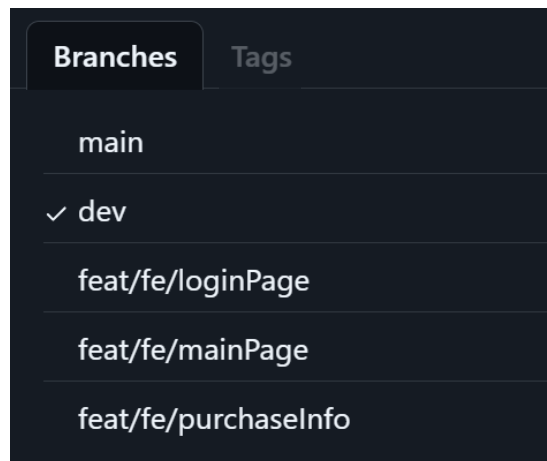


Too Many Requests

Dev in Team

□ GitHub

- Code Review:
 - Pull requests are reviewed by team members before merging.
- Rule of Git:
 - Working from the dev branch, each person cuts own branch.
 - ➡ On the main branch, the code is without errors and bugs.
 - Adding Type to commit messages
 - ➡ To improve quality and consistency of commit messages.



type

feat ← When Added new feature

fix ← When Fixed code bug

Future prospects

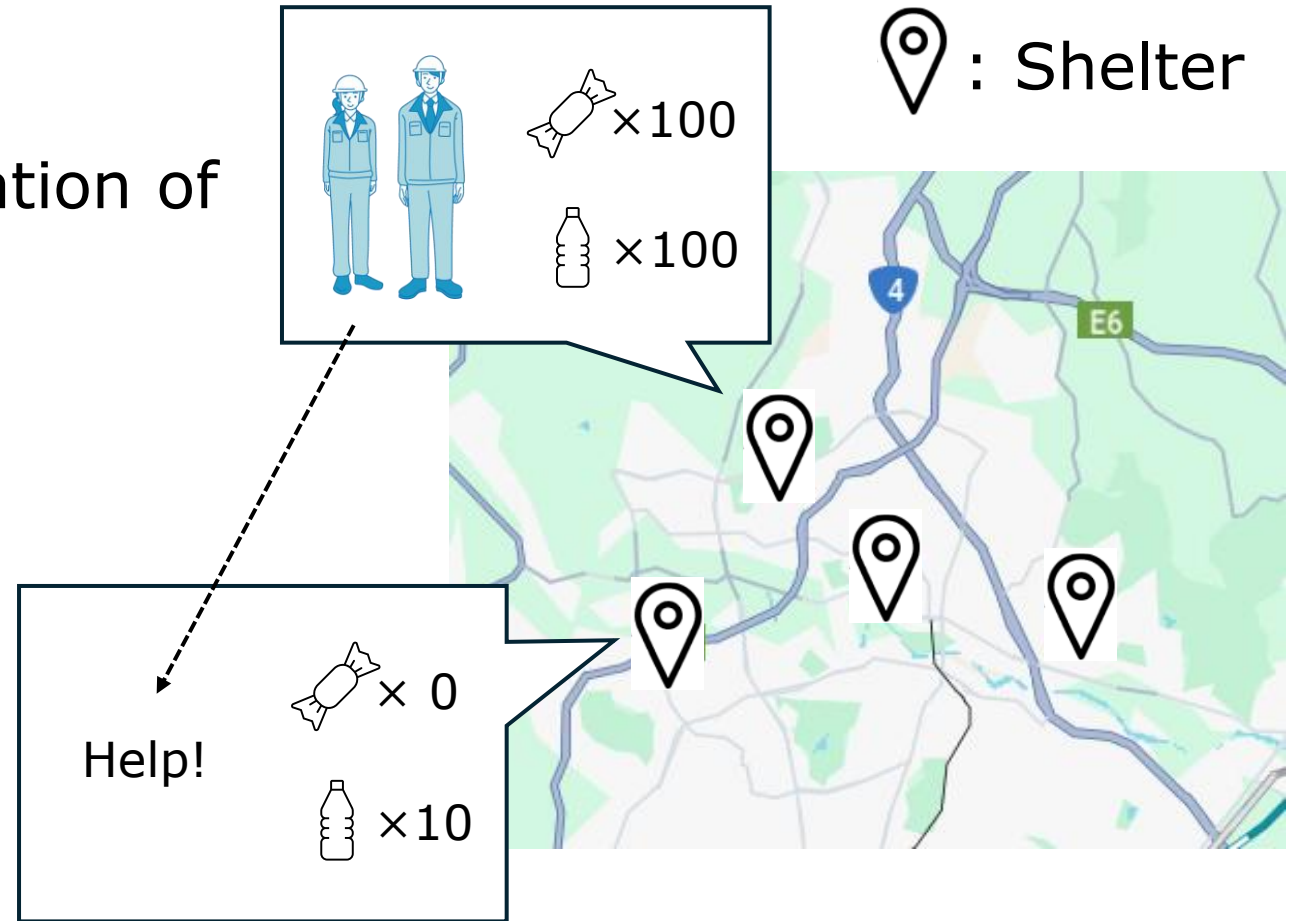
To the app three functions will be added:

❑ Function①

At disaster-stricken area,
disaster victims can share information of

- human resources
- Relief supplies

among themselves.



Future prospects

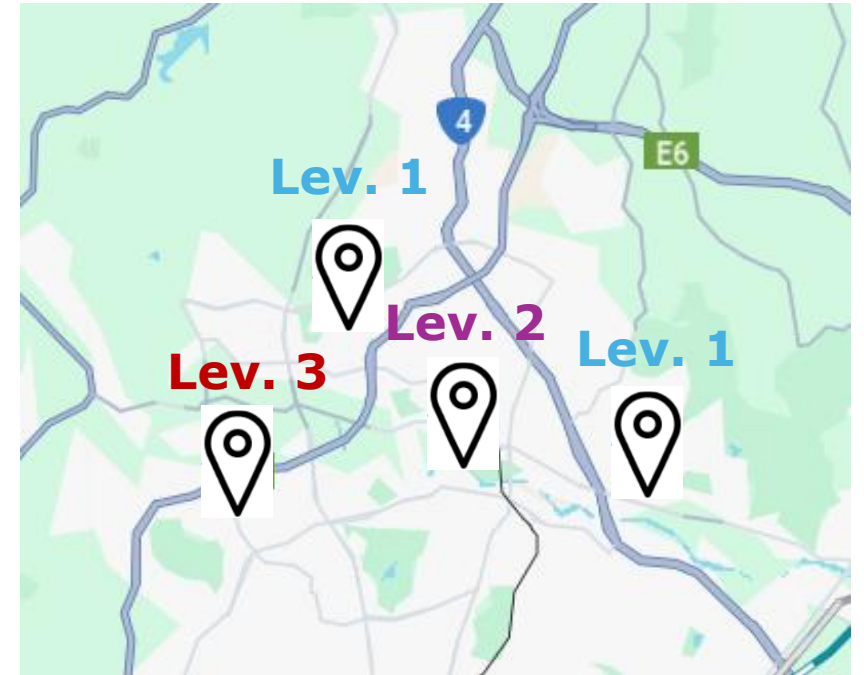
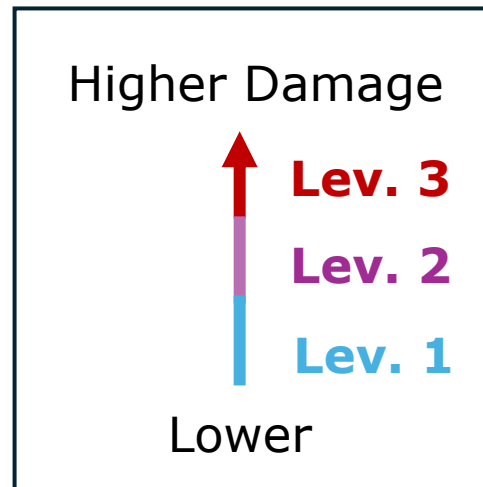
To the app three functions will be added:

❑ Function ②

On disaster situation map,

- Disaster level can be seen.

📍 : Shelter

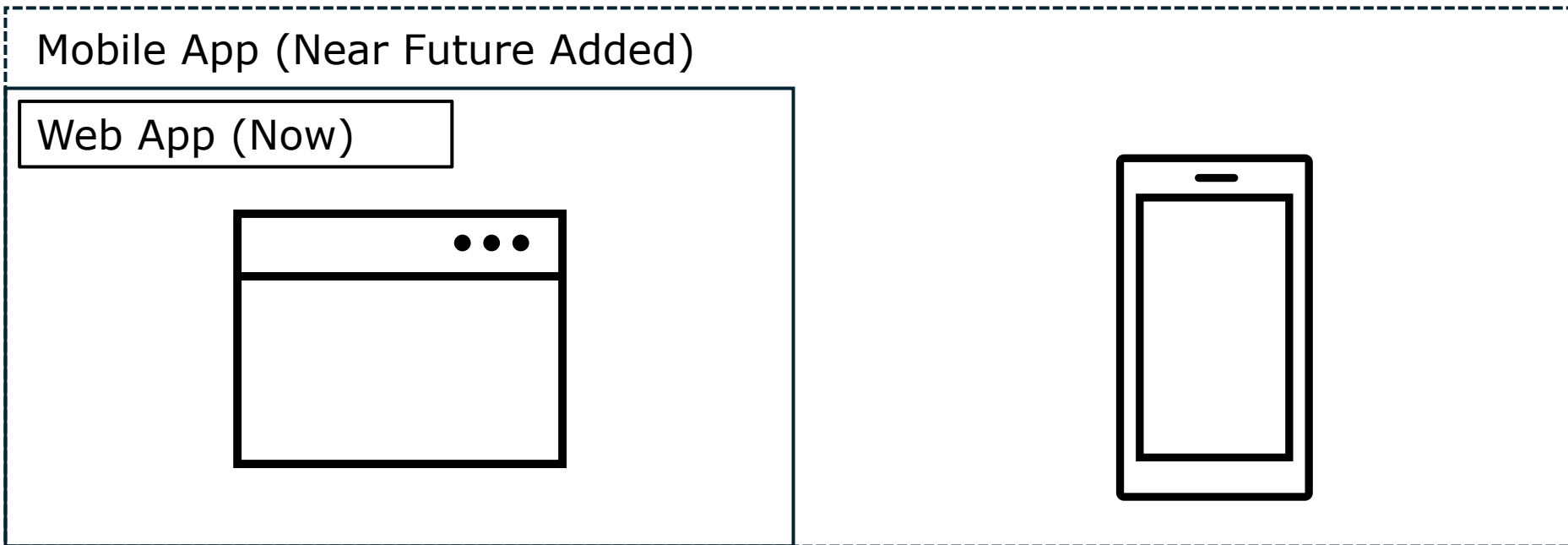


Future prospects

To the app three functions will be added:

❑ Function③

- We will develop **Mobile App** versions for improving user convenience.



Thank you for watching!