

Product Presentation

▶ Applicant Name: **Innovative Associate Technology Limited (IA)**

▶ Product Name: **InnoShare DWSS**

▶ Specification:

▶ Fulfilling Technical Circular (Works) No. 3/2020 released by Development Bureau in late Mar 2020

▶ Electronic solution for site inspection process among contractors, consultants and clients in trusted and eco-friendly manner.

▶ Providing a secured platform with mobile app and web portal that supports all the entire process of site activities, including Request for Inspection/Survey Check (RISC) Form, Site Diary/Site Record Book, Site Safety Inspection Records, Environmental Inspection Checklists and Labour Return Record.

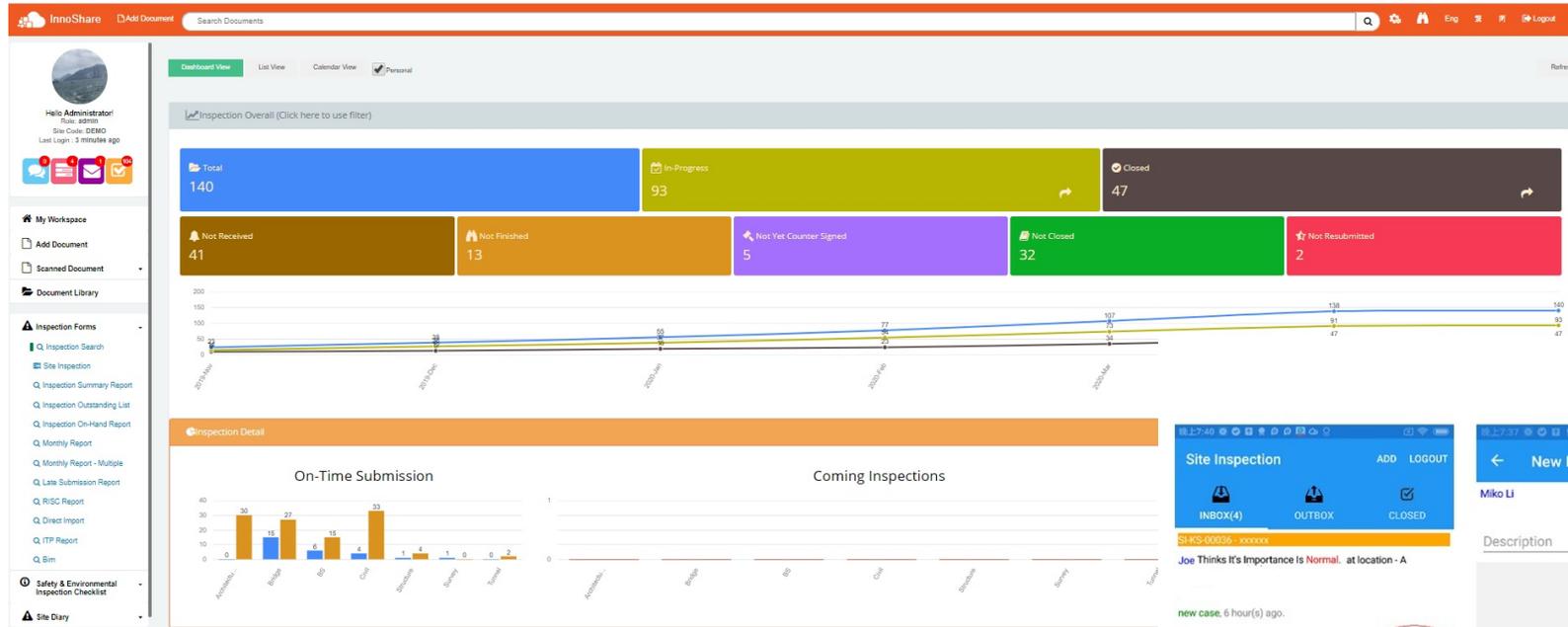
▶ Providing kick-off meeting, in-site training and end-to-end consultation for satisfy each client's need to the greatest extent.

- Core Functions:
 - Electronic Request for Inspection System (E-RISC)
 - Electronic Site Diary & Labour Return Record System (E-Diary)
 - Electronic Safety & Environmental Checklist System
- Technology Used:
 - Angulus JS
 - API
 - .Net Framework 4.6
- Construction Process involved:
Electronic process and record for all site-activities
- Key Improvement in Construction Process: Productivity, Quality, Safety and Environmental

Job Reference:

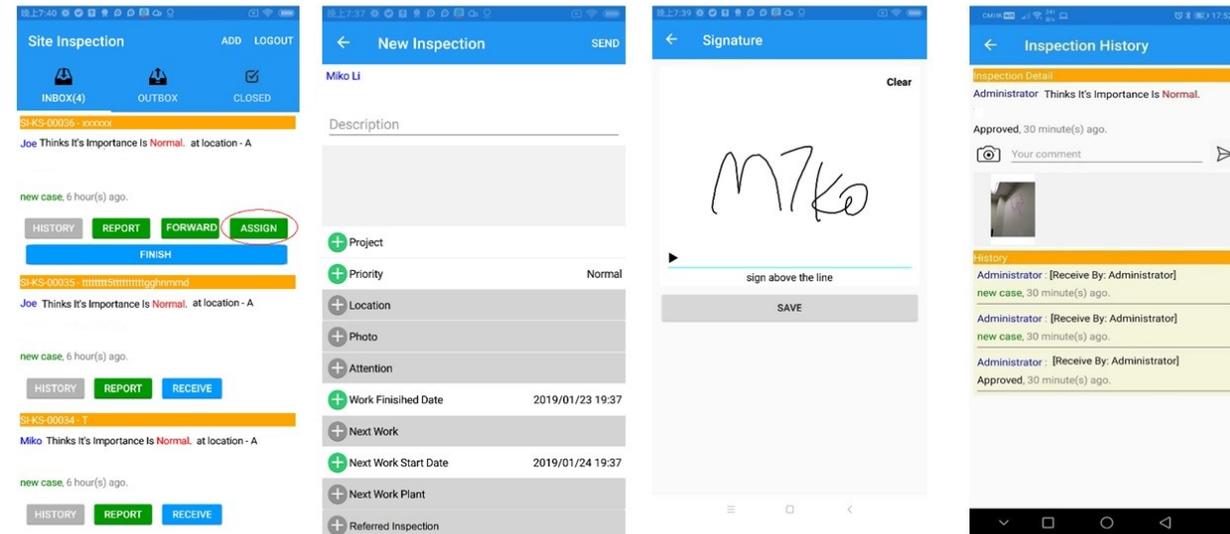
- 1) DC/2018/08- Inter-reservoirs Transfer Scheme - Water Tunnel between Kowloon ,Shatin, adopted in Nov 2019
- 2) DC/2018/05- Relocation of Sha Tin Sewage Treatment Works to Caverns - Site Preparation and Access Tunnel Construction, Shatin, adopted in Feb 2020
- 3) HY/2018/02- Central Kowloon Route - Kai Tak East, Kai Tak, adopted in Dec 2019
- 4) NE/2017/07- Cross Bay Link, Tseung Kwan O - Main Bridge and Associated Works, Tseung Kwan O, adopted in Aug 2019

Product Presentation



Dashboard view

Mobile app



Innovative Features

- Core Technology: Microsoft.NET
- Patent (if applicable): Hong Kong Trademark Ordinance 42 admitted and Ordinance 9 still in progress
- Comparison with current practice and popular models (previous model) site management system E-RISC:
 - Technology- both E-RISC and InnoShare DWSS embrace Angulus JS, API and .Net Framework 4.6
 - Specification- InnoShare DWSS should be the advanced version of E-RISC as the former supports more site functions
 - Benefits including cost benefits (product prices vs merits): Inspecto only covers the function of E-RISC while InnoShare has perfectly fulfilled the whole technical circular (Works) No.3/2020
- Comparison with similar Pre-approved list products and competitors- Inspecto:
 - Technology- N/A
 - Specification- InnoShare DWSS should be the advanced version of Inspecto as the former supports more site functions
 - Benefits including cost benefits (product prices vs merits): Inspecto only covers the function of E-RISC while InnoShare has perfectly fulfilled the whole technical circular (Works) No.3/2020
- First Launch Date: 27/6/2019
- Latest version update: 3/4/2020
- Awards (if applicable): N/A

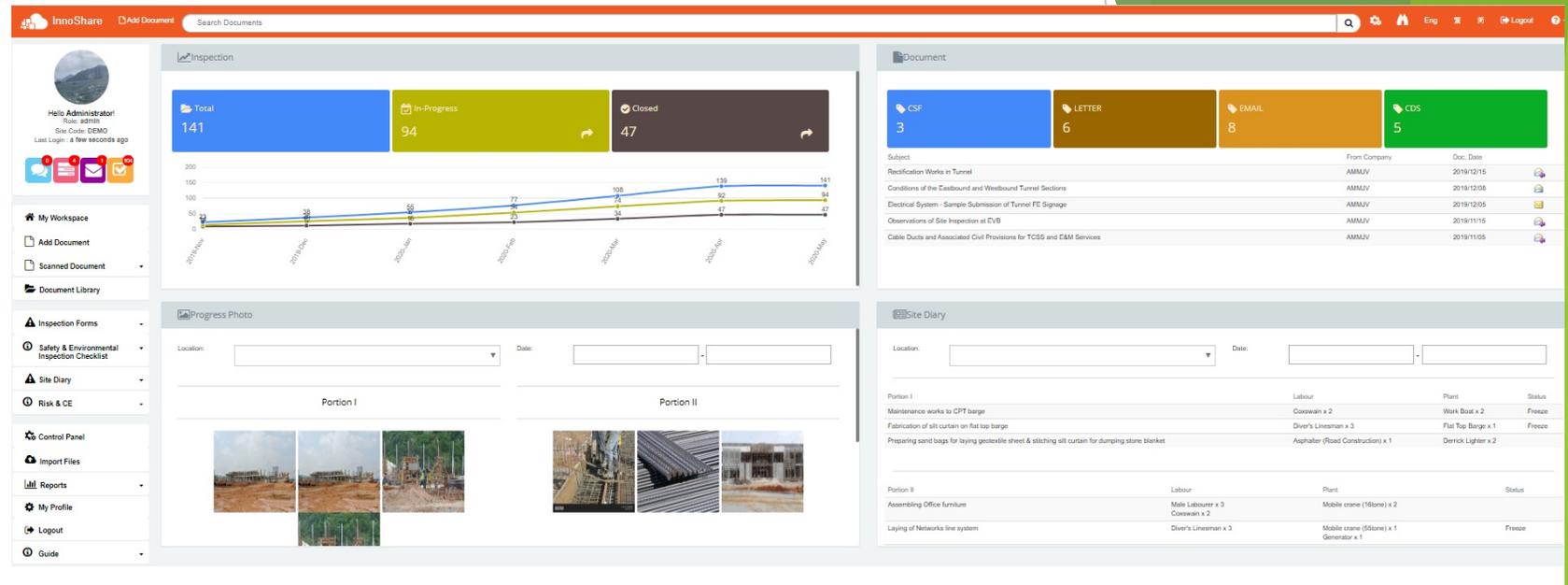
Adoption Example

Project for Illustration:
DC/2018/05- Relocation of Sha Tin Sewage Treatment Works to Caverns - Site Preparation and Access Tunnel Construction, Shatin, 2019

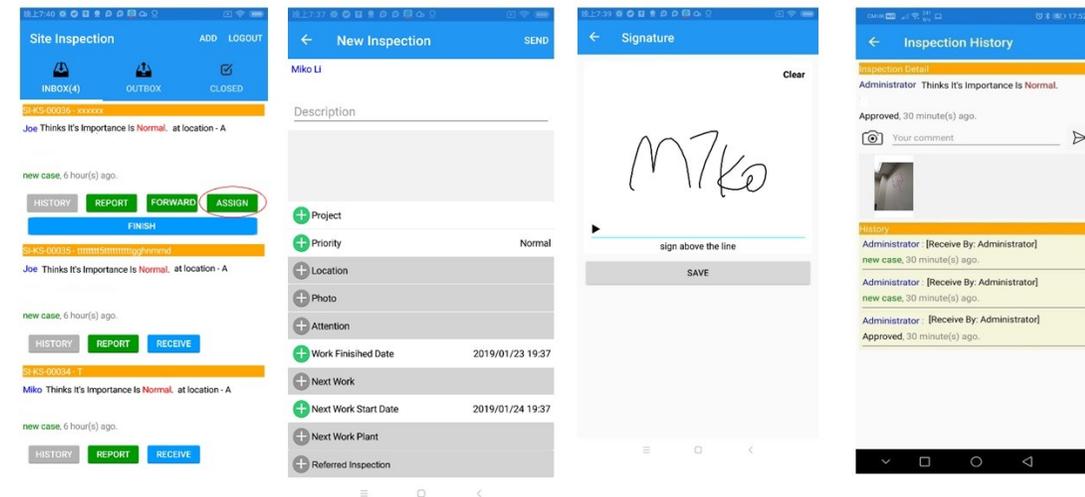
Work Process: 2019-2022

Use/ Function in project:

- ▶ Electronic Request for Inspection and survey check (E-RISC)
- ▶ E-Diary and Labour Return Record System
- ▶ Safety and Environmental Checklist



InnoShare main page



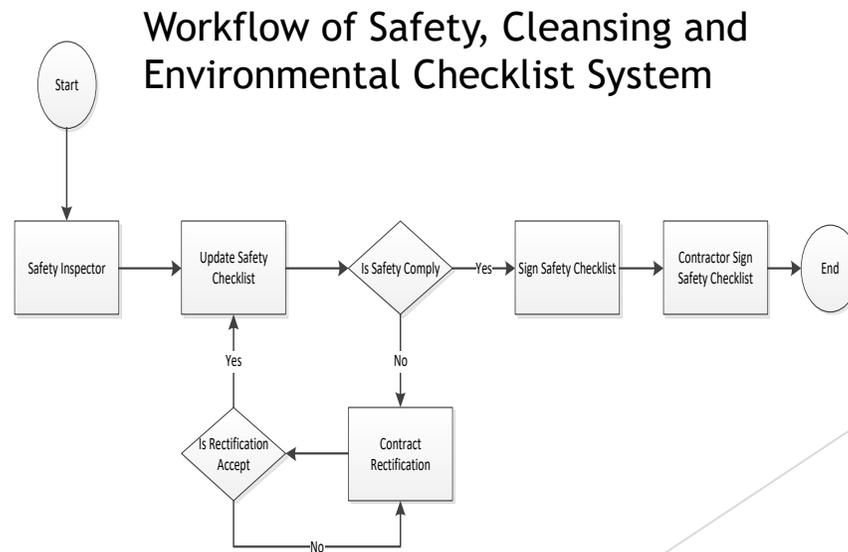
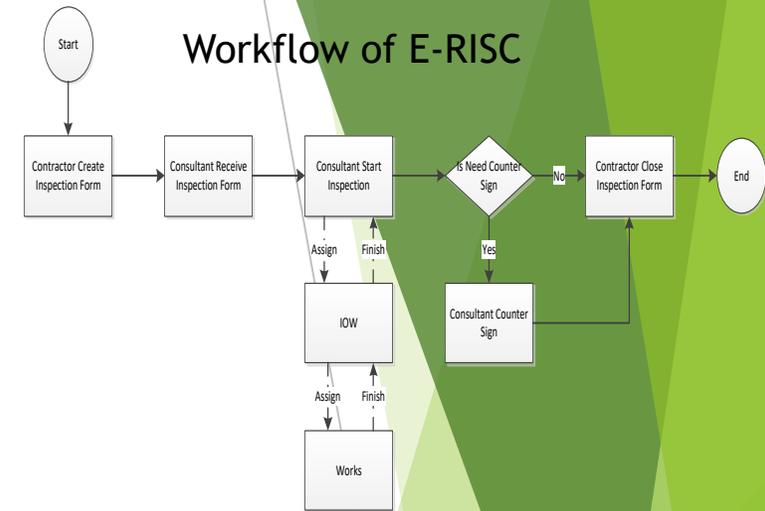
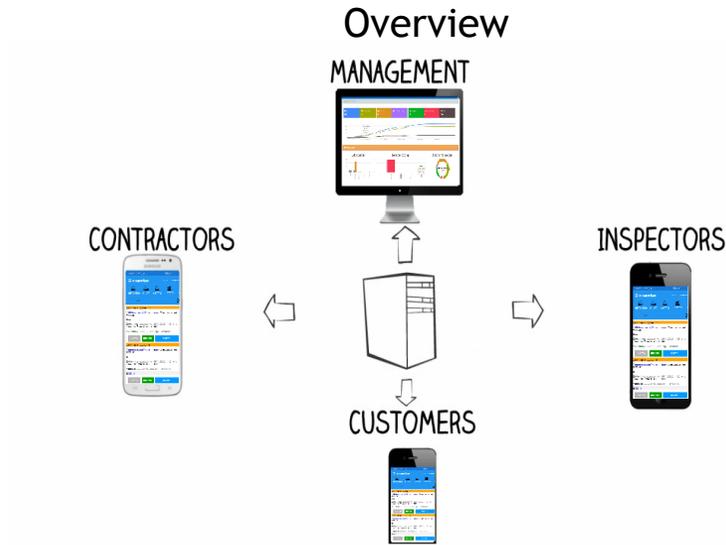
Mobile App Interface

Benefits - Productivity

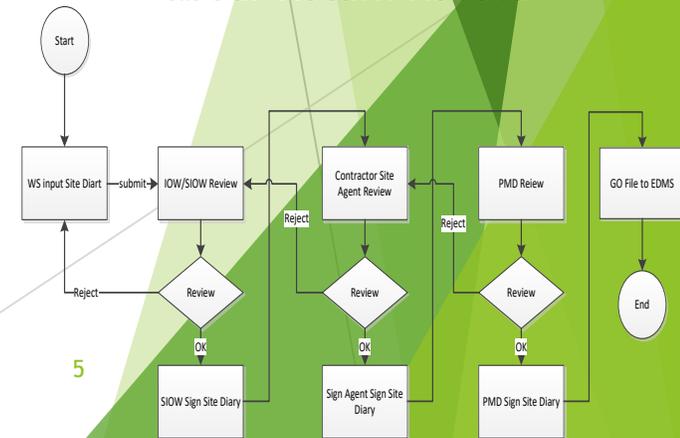
- ▶ Improve productivity by:
 - ▶ Automated operational process
 - ▶ Time saving for workflow process
 - ▶ Enhanced operational efficiency

- ▶ Estimated Total Saving in Mandays and project period while comparing with traditional method:

Nearly 90%



Workflow of E-Diary and Labour Return Record



Benefits - Quality

Improve quality by:

- ▶ Deficiency reduction
 - ▶ Immediate push-notifications and email notifications would be sent after E-actions in order to ensure no ignorance would be made and lower the risk of any late submission
 - ▶ Real-time photos and attachment could be enclosed immediately leads to a clear description for any deficiency and lower the risk of rejected rectifications
- ▶ Real-time monitoring
 - ▶ All actions would be immediately recorded in the history log, including late submission, to create an all-round and effective monitoring

Site users used to record all data in paper form traditionally, which leads to time-consuming and inefficiency.



| Item | Checked | Safety Compliance | Date Agreed | Date Completed | Rectification Status | Remark | Action | Setup | Atts |
|---|---------|-------------------|-------------|----------------|----------------------|-------------------------|--------|-------|------|
| Safety of Workplaces including Site Office | | | | | | | | | |
| 11 | | | 0 NA | | | Accepted / Not Accepted | | | |
| Adequate and safe means of access to and egress from all workplaces are provided. | | | | | | | | | |
| 12 | | 0 Y | 0 NA | 2020/04/04 | 2020/04/02 | Accepted / Not Accepted | | | |
| Materials and equipment are properly stored. | | | | | | | | | |
| Area A Remove the gate Rectification Description | | | | | | | | | |
| 13 | | 0 Y | 0 NA | 2020/04/04 | 2020/04/02 | Accepted / Not Accepted | | | |
| Sufficient no. of rubbish bin provided. Spill, waste and debris are removed at regular intervals. | | | | | | | | | |
| Check for the grain Rectification Description | | | | | | | | | |

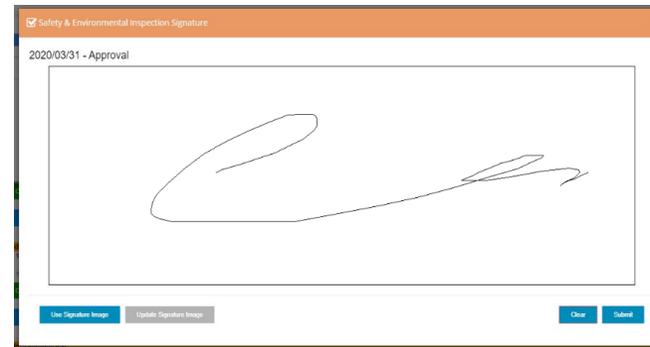
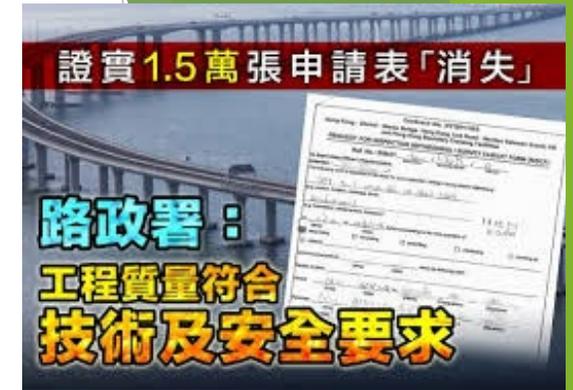
Automated notifications and E-attachment would be contributive and helpful for site users in a smart and modern way.

Benefits - Safety

▶ Improve Safety by:

- ▶ Detailed and all-round checklist for safety
 - ▶ Including Hazard rating calculation
- ▶ Strict monitoring until inspection finished by consultant
- ▶ All inspection actions should be done with E-signature
- ▶ Double servers to lower the risk of data loss

There are several cases of traditional paper inspection from loss due to fire or unknown reasons. Projects of Shatin to Central Link and Hong Kong-Zhuhai-Macao Bridge are two well-known cases in these years.



Every inspection action would only be approved and closed with valid signature.

The system provides the Hazard Rating, team leaders or foremen lead team members to identify the hazards in the day's work and make the workers aware of the degree of risks and measures for precaution.

| Item | Checklist | Hazard Rating | Date Assigned | Date Completed | Checked By | Remark | Status | Attach |
|------|--|---------------|---------------|----------------|------------|--------|--------|--------|
| 1.1 | Adoptive and safe means of access to and egress from all workplaces are practiced. | A | 2019/08/26 | | | | | |
| 1.2 | Materials and equipment are properly stored. | A | 2019/08/24 | | | | | |
| 1.3 | Sufficient no. of rubbish bin provided. Scrap, waste and debris are removed at regular intervals. | A | | | | | | |
| 1.4 | Loose materials are not obstructing means of access and egress. | A | 2019/08/30 | | | | | |
| 1.5 | Openings through which workers are liable to fall are covered or fenced off. | A | | | | | | |
| 1.6 | Guardrails and toe boards are provided to protect workers and objects falling from elevated workplace. | A | | | | | | |
| 1.7 | Adequate and suitable lighting provided to the extent necessary to ensure workers safety. | A | | | | | | |

Benefits - Environmental

Improve Environmental Performance by:

▶ Paper reduction

- ▶ Site users used to make use of a great quantity of paper in the inspection process. Now site users might create an eco-friendly construction site by means of InnoShare DWSS instead of traditionally recording on paper.

▶ Water and air pollution reduction

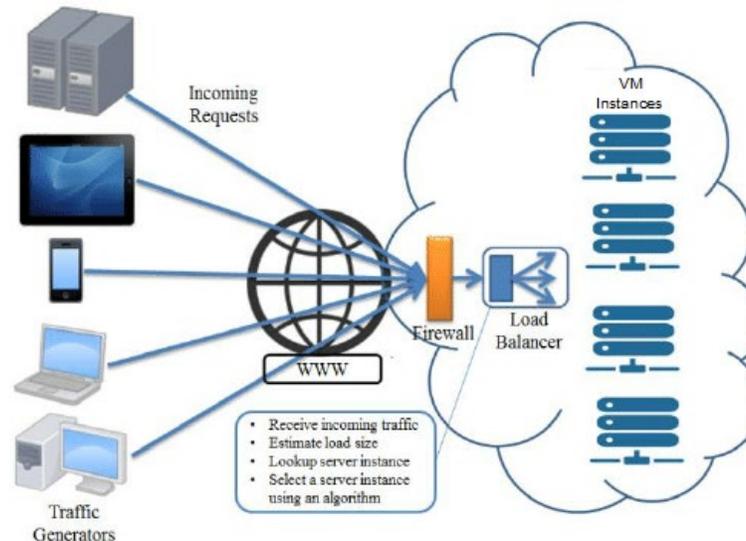
- ▶ Relocation of sewage treatment works may easily cause water pollution due to leakage of polluted water, yet a detailed E-checklist system helps to raise the awareness among site users
- ▶ Huge amount of CO2 emission seems inevitable in traditional construction site while plenty paper has been used every single day. As a result, applying the whole inspection process in E-form might solve this problem effectively.

▶ Factual storage reduction

- ▶ All data, attachments and photos would be stored in servers at different location in-site, rather than a large amount of paper traditionally stored in empty factual space.



China State Engineering (HK) Ltd. was accused of illegally releasing polluted water into a public drain in Ma On Shan in 2019.



InnoShare is a smart designed for recording and saving all site data and graphs on Clouds or servers, without a huge demand for paper.