

Harness the Power of IoT in Aquaculture



December 2018

Soshi Otani

Why shrimp farming?

Survival rate 60%

- ... It means **40%** die
- ... Often complete destruction

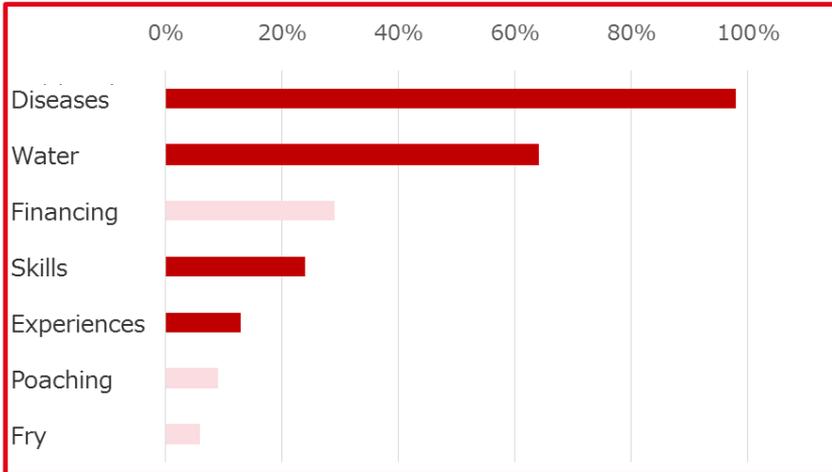


Can real time monitoring help?

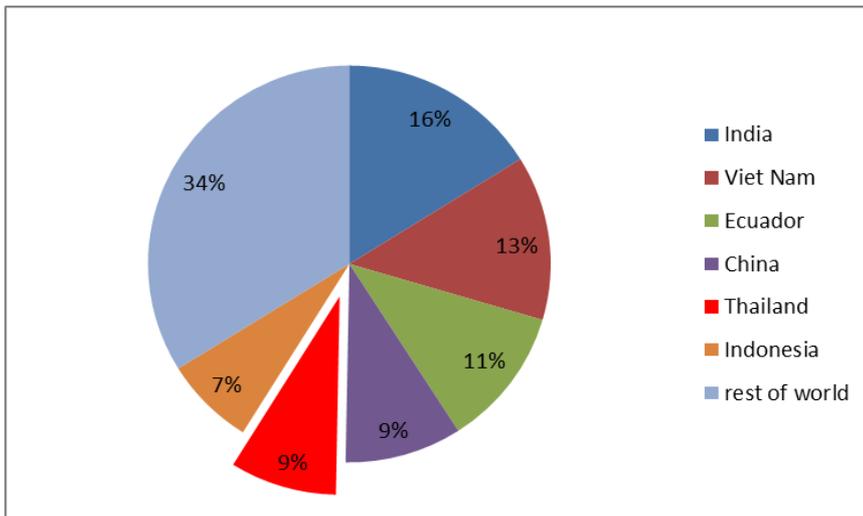


Pain & Opportunity

Concerns Facing Shrimp farmers



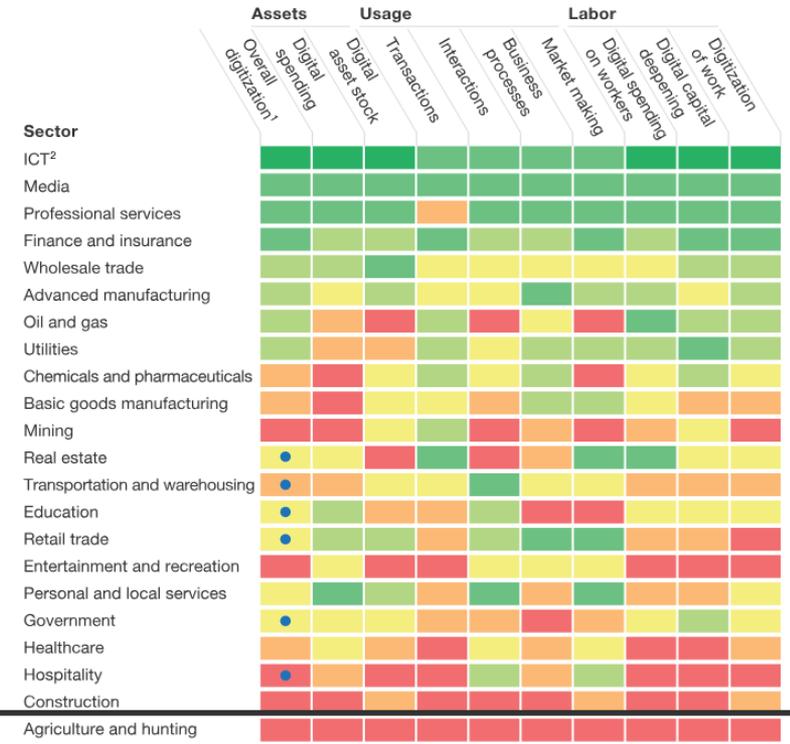
Global Shrimp Export



McKinsey Global Institute industry digitization index; 2015 or latest available data

Relatively low digitization Relatively high digitization

● Digital leaders within relatively undigitized sectors

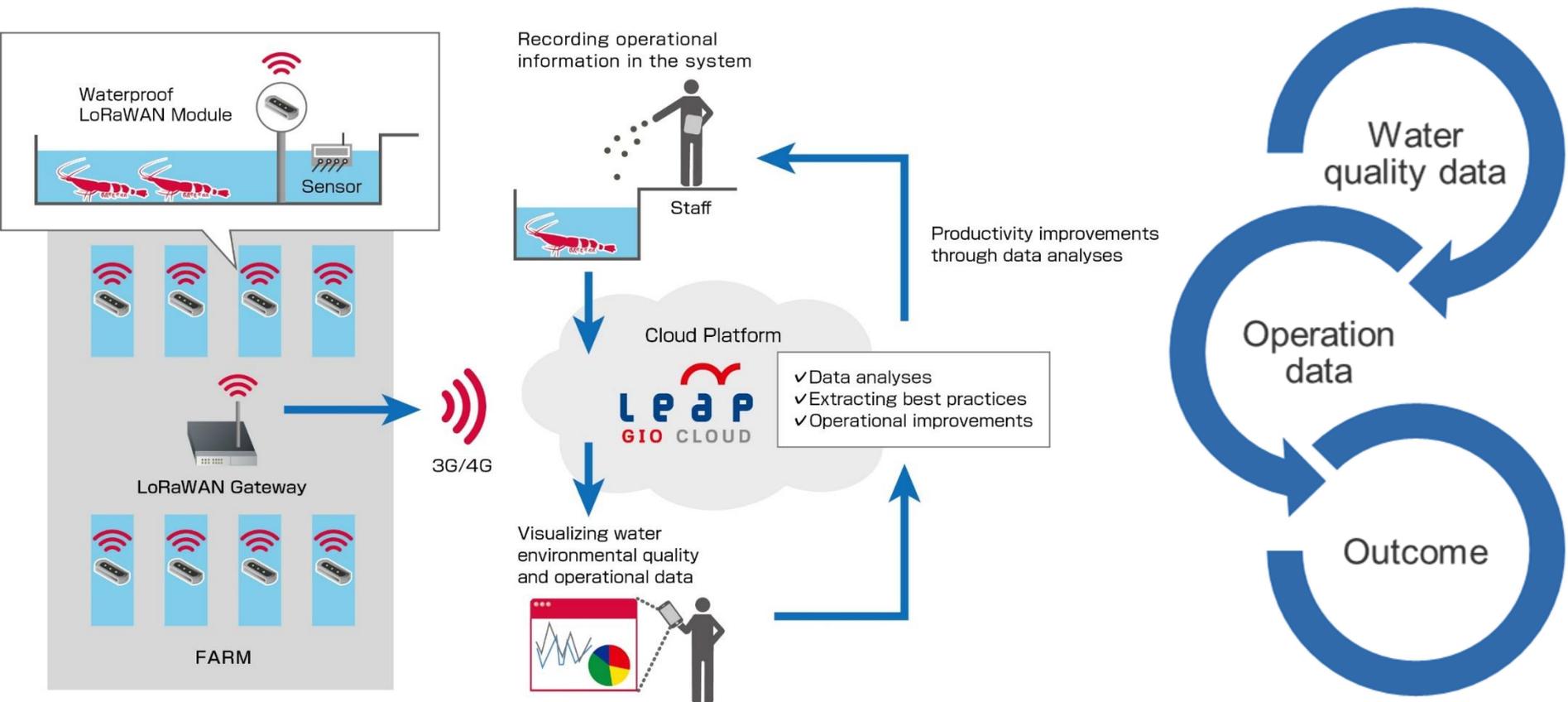


Overall System Diagram

Visualize water quality & operations
Analysis & Operation improvement



Promote productivity



Integrate IoT Value chain with partners



Current situation

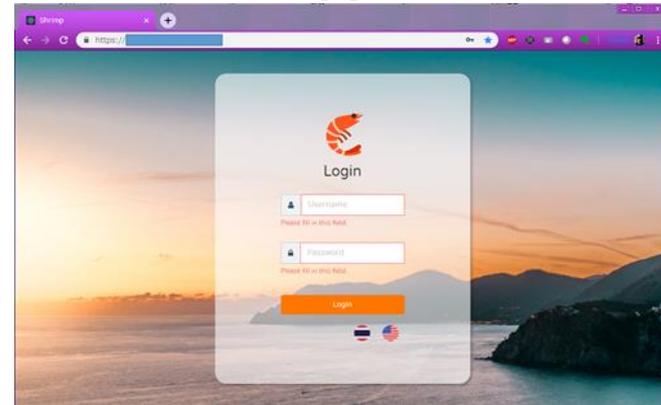
Sensors



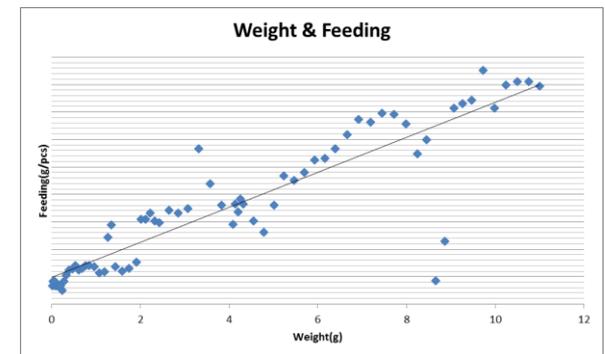
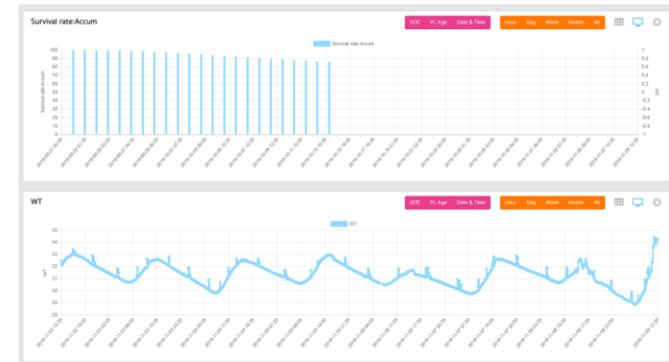
Installation



Apps



Whiteleg shrimp



Achievements & Challenges

Achievements

- **Sensor installation**
- **Data collection**
- **LoRaWAN**
- **Application**

Challenges

- **Sensor durability**
- **Data preciseness**
- **Operation change**

Ongoing issues

- **Analysis**
- **Business model**
- **Business feasibility assessment**

Future Plan

Making Aquaculture IoT Platform

- Significant potential needs in the entire ASEAN region, not just in Thailand
- Applications in other fishery resources
- Water management tool for other industries

