



# Demeter Agricultural Pledge Loan Service

**Team Name: Demeter** 

Team Member : Xiaoyi Tao Chuanyun Duan Zhe Shi Sibo Xie Yao Fu

## 

Background









#### **Background**

Peasant households are easily affected by the natural disasters



**Peasant Household** 

**Rely on Weather** 

**Suffer Enormous Loss** 

**Fragile Capital-Chain** 

In China, an average of

600 million crops are affected every year

Excluding government subsidies, households will bear more than

600 billion economic loss on average

#### **Demeter**

Demeter improves peasnt households' disaster resilience capability



Triple Protection Improve Farmers'
Disaster Resilience Capability



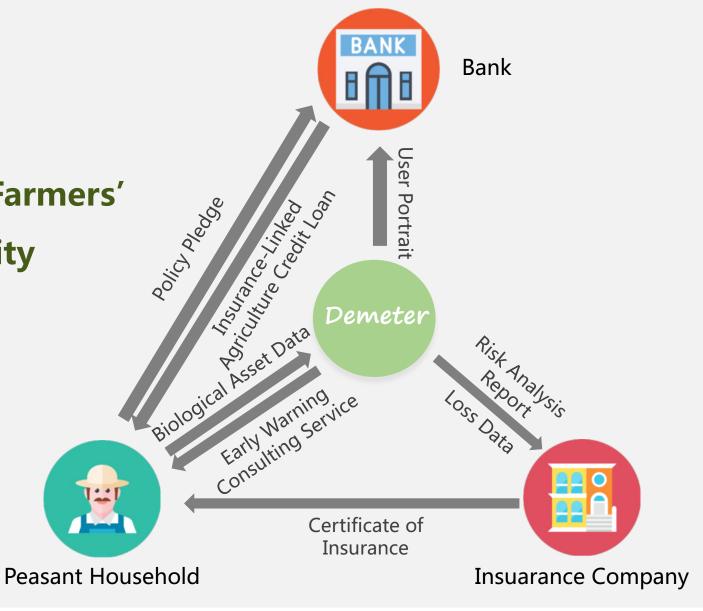
Bank provides them loans

#### **During Planting**

Demeter provides them early warnings

#### **After Natural Disasters**

**Insurance Company reduces their loss** 



### 

Solution Introduction

#### **Demeter Business Architecture**

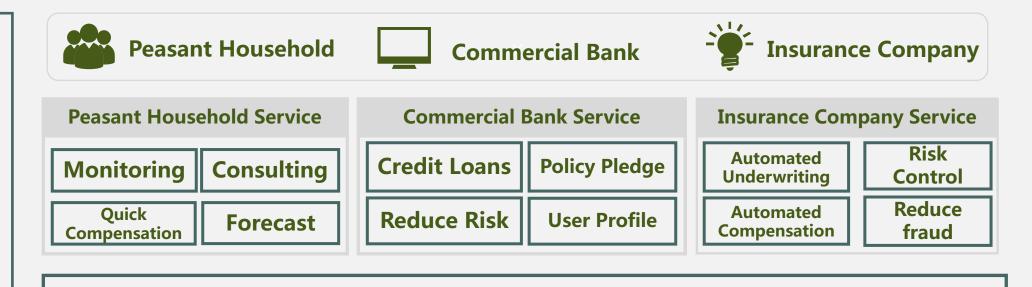
**Technology** 

AI

Machine Learning

**Blockchain** 

**Big Data** 



IOT



Data

**Temperature** 



**Sensors** 

Sunlight

4

Meteorology

**Biometric Device** 

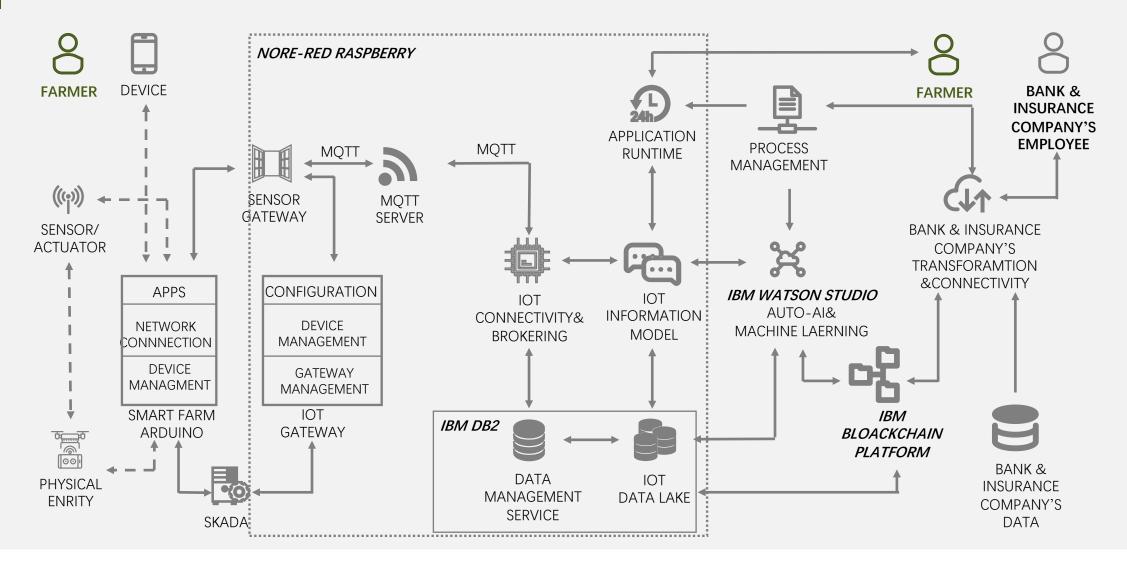


Soil

**Meteorological Satellite** 

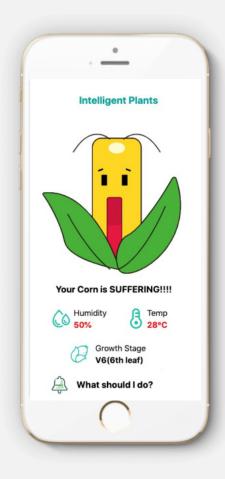
**Water Level** 

#### **Demeter Technical Architecture**

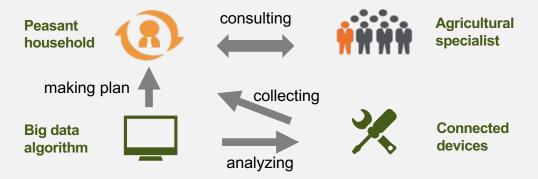


#### **Function Introduction**

#### **Consulting Service**



Business Process



Functional Interpretation

- IOT equipments are **monitoring** your crop status **ALL THE TIME**
- IMMEDIATE NOTICE when crops are not very good
- Big Data technology provides **BEST planting scheme**
- Automatically inform users WHAT & HOW TO DO.
- Agricultural experts are ALWAYS ready to answer questions

#### **Function Introduction**

#### **Agricultural Yield Forecast**

#### **Acquiring Data from Live Systems**

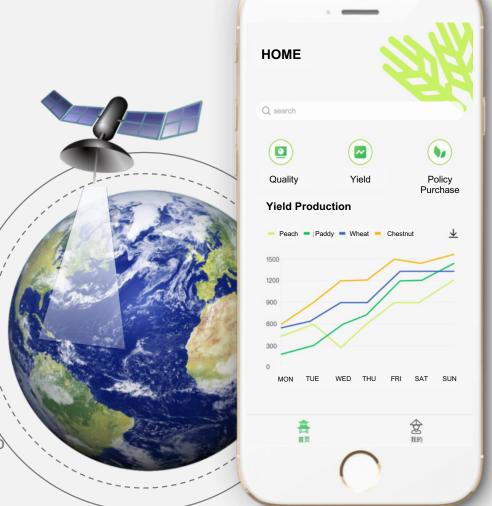
Demeter can acquire data from live systems and content-based images by hardware installed in the agricultural production base.

#### **Intelligent system of Prediction and Forecast**

After setting up the geographic location, the application will notify the user about the yield of crops before they mature. Meanwhile, users can change the yield simulator's input factors manually to see how the potential profits change.

#### **Risk Reduction**

The predictions will drastically reduce and disperse the risk of production to enhance the prospective return of agriculture. In the meanwhile, Insurance companies bear less loss.



#### **Function Introduction**

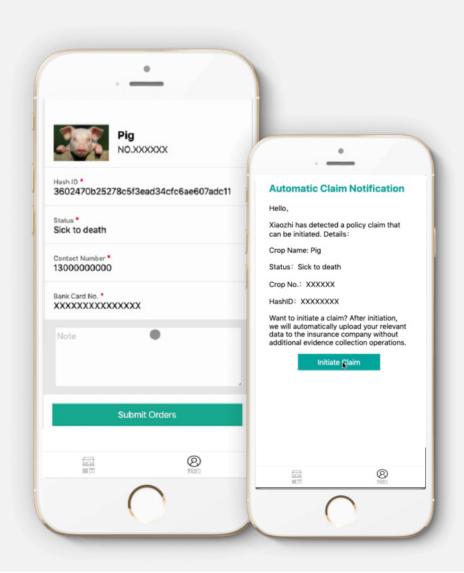
**Automatic Claim Settlement** 



The data collected by sensors, cameras and meteorological satellites will be uploaded into the **blockchain platform**. The preset smart contract will automatically ask the insurance company to make payment once the claim conditions are met.



Simultaneously, blockchain technology will be used to record animals' health conditions. These unmodifiable data will be transfer to insurance as evaluation criteria. Therefore, the substantial insurance risk has been decreased.





## 03

**Solution Value** 

#### **Solution Value**

Utilizing technical and financial instruments to enhance farmers' disaster resilience



- 1. Higher quality of crops
- 2. Enhanced disaster resilience
- 3. Better decision-making through customized consulting service



- 1. More agricultural business
- 2. Lower bad loan ratio



- 1. Less insurance fraud
- 2. Less underwriting workload



### Demeter THANK YOU

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