

A close-up photograph of a person's hand carefully planting a small green seedling into a black plastic seedling tray. The tray is filled with dark brown soil, and several other seedlings are already growing in the adjacent compartments. The background is softly blurred, focusing attention on the hand and the plants.

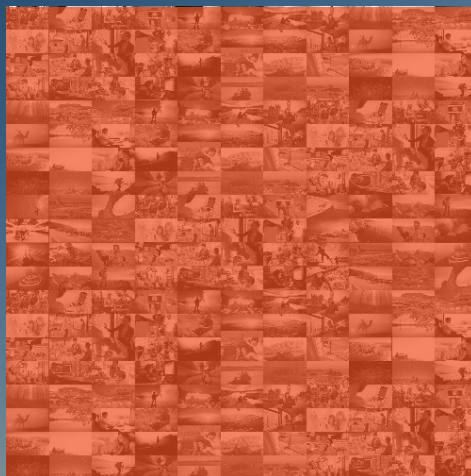
農業數位轉型的挑戰與改變

Ashe Liao, Microsoft Taiwan

Microsoft 的願景

Empower every person and every organization on the planet to achieve more

幫助在這個地球上的每一個人到每一個組織，都能貢獻更多、成就更大。



蔡英文總統： 微軟是和臺灣攜手打國際盃最佳的夥伴



設立國際雲端資料中心

增設雲端硬體團隊

發動 5G, IoT 產業生態系

REIMAGINE TAIWAN

農業數位轉型正在發生



全球化

Multipolar Regulatory
& Data Frameworks



產品客製化

Produced to Order



基因改造

Democratized Biology



環境永續

Climate, Waste & Water



自動化及集中化

Automation, Labor, Consolidation
& Decentralization



食品安全

Nutritiously feeding
9B with resiliency

農業產業鏈及價值鏈

原料及製程

The genetics, environment and management used to produce crops and livestock. i.e. inputs, equipment, agronomics, animal sciences



處理及運輸



The middle between farm and table: i.e. food processing, supply chain, cold chain, food science, disassembly, manufacturing

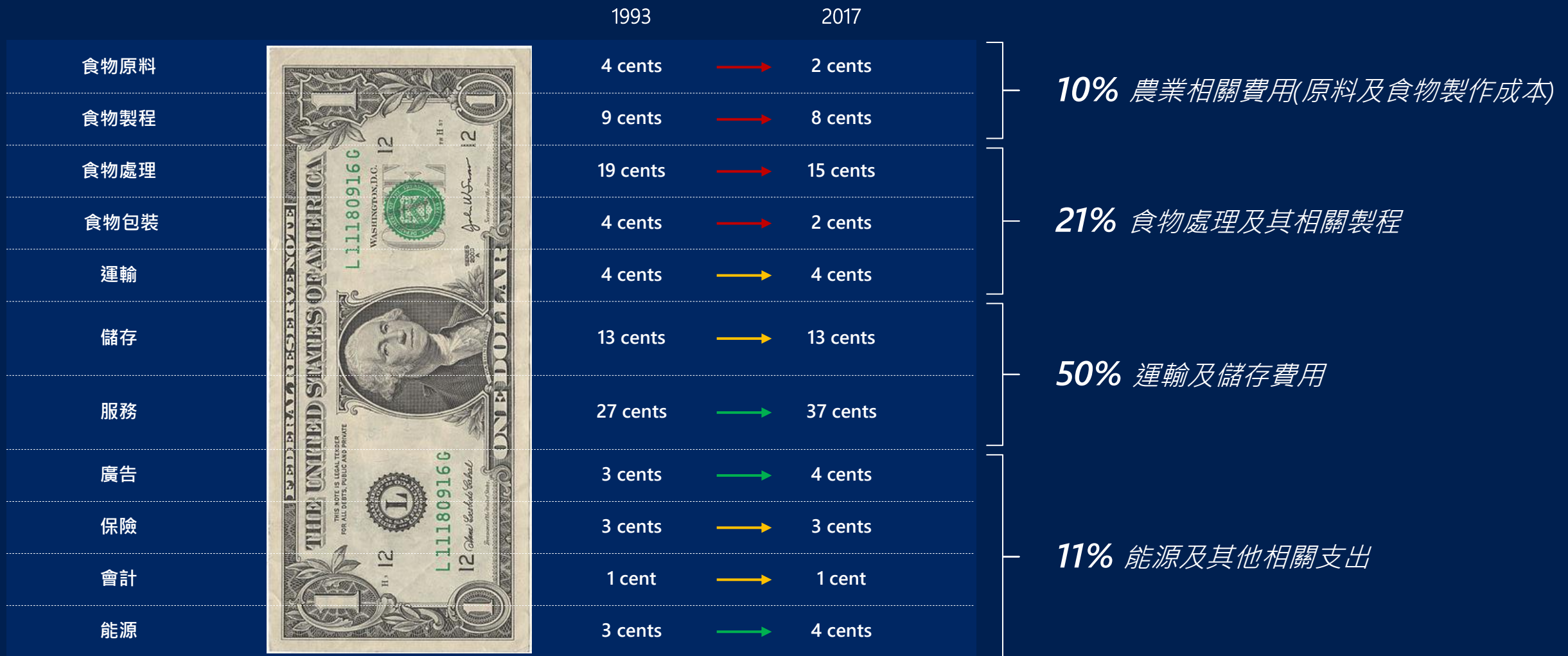
銷售

The intersection of food and consumers: i.e. grocery, food service, food science, consumer insight



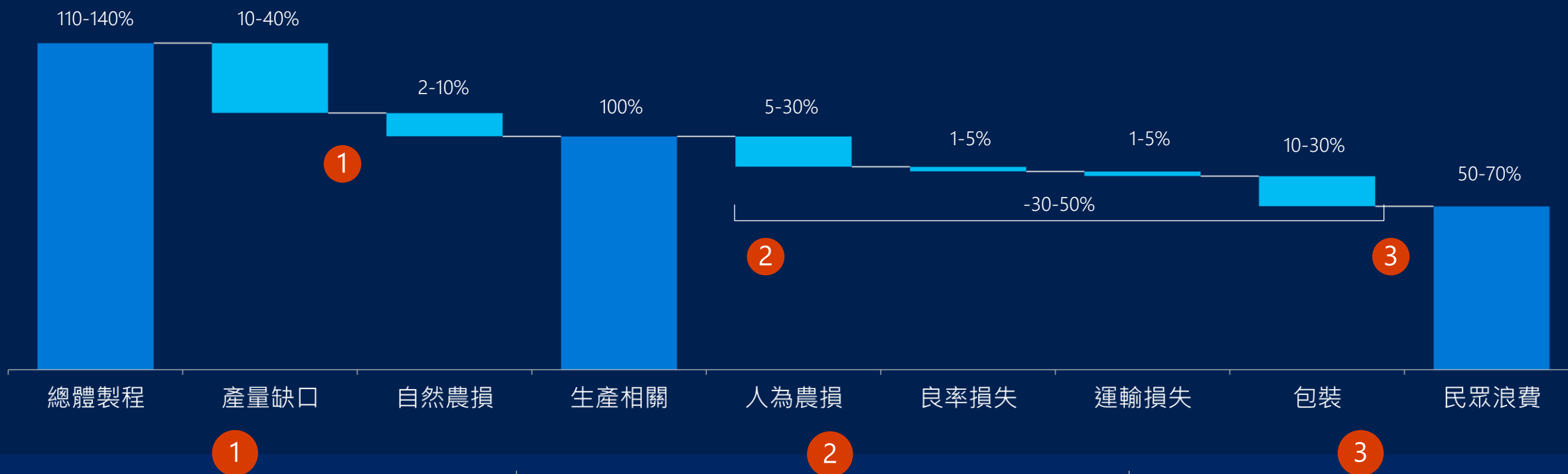
美國民眾購買食物的一美元占比分析

在美國，民眾用來購買食物的一美元，絕大多數占比都和農業相關產業無關



過多無效率的支出導致資源浪費

在供應鏈各階段可以減少的無謂損失



1 產量預估失準及自然農損

2 供應鏈不完善造成的生產損失

3 民眾的過度浪費

* Up to 100% possible if all technologies are implemented together, based on selected crop and country combinations

** Represents average range; certain crop and location combinations may see up to 50% post-harvest loss

重新想像農業生產鏈

1

生產

最佳化生產結果及兼顧環境永續

Optimize farm input (genetics, fertilizer, crop protection) with predictive analytics & digital twins

- Identify unique traits with geno-phenotyping at scale
- Optimize R&D by establishing feedback loops

2

營運

利用人工智慧及大數據

Intelligent, autonomous agricultural equipment

- Remote monitoring and digital twins for AG machinery
- Improve Livestock management and welfare
- Physical human assistance

4

獲利

透過資料洞見取得建議作為

Yield predictions & Marketing Insight

- Multiparty Business Models
- Intelligent supply chains
- Connected field sellers

3

運輸

確保運輸期間的品質及可視化

Product & Service Transparency

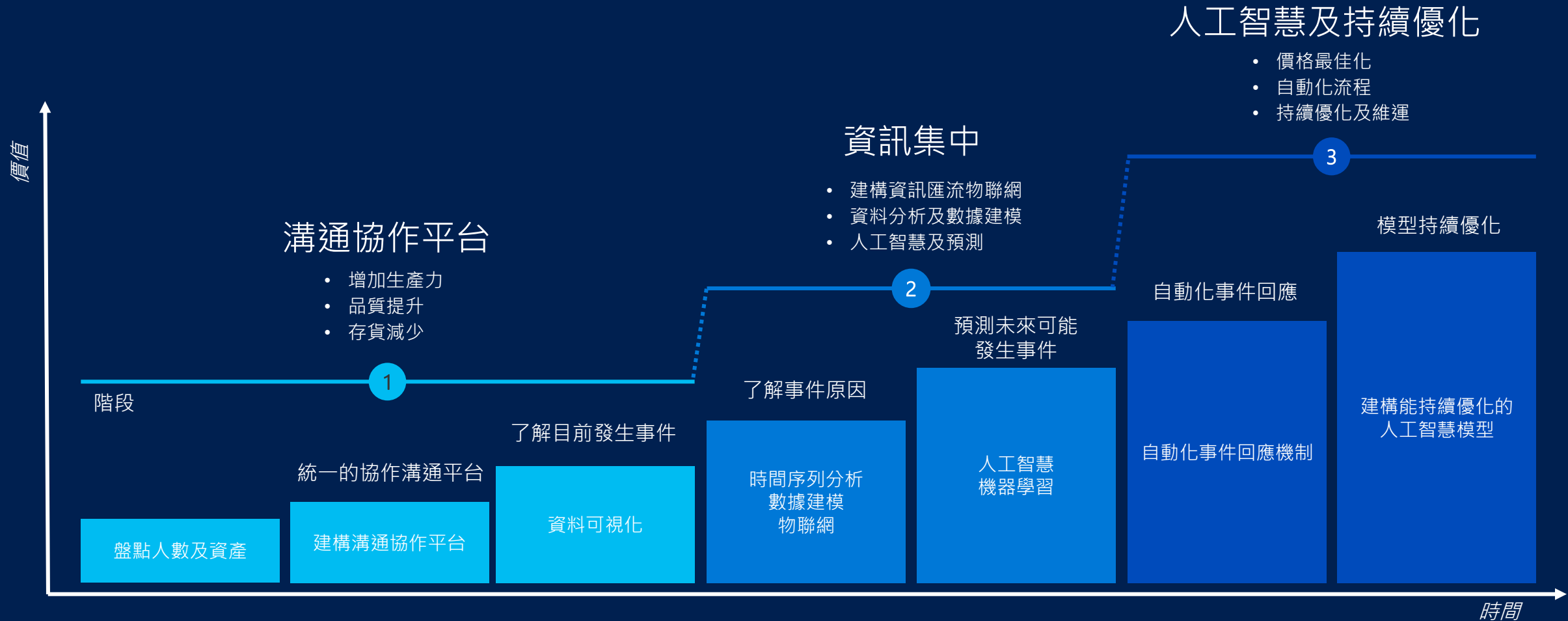
- Quality control and food safety
- Regulatory compliance & reporting
- Efficient transport & logistics operations

微軟可以協助加速農業轉型



開始農業轉型的第一步

“Plant the seed” to build capabilities and deliver benefits on this multi-year journey



The Yield

雲端資料洞見

建立農業360° 資訊儀錶板

“

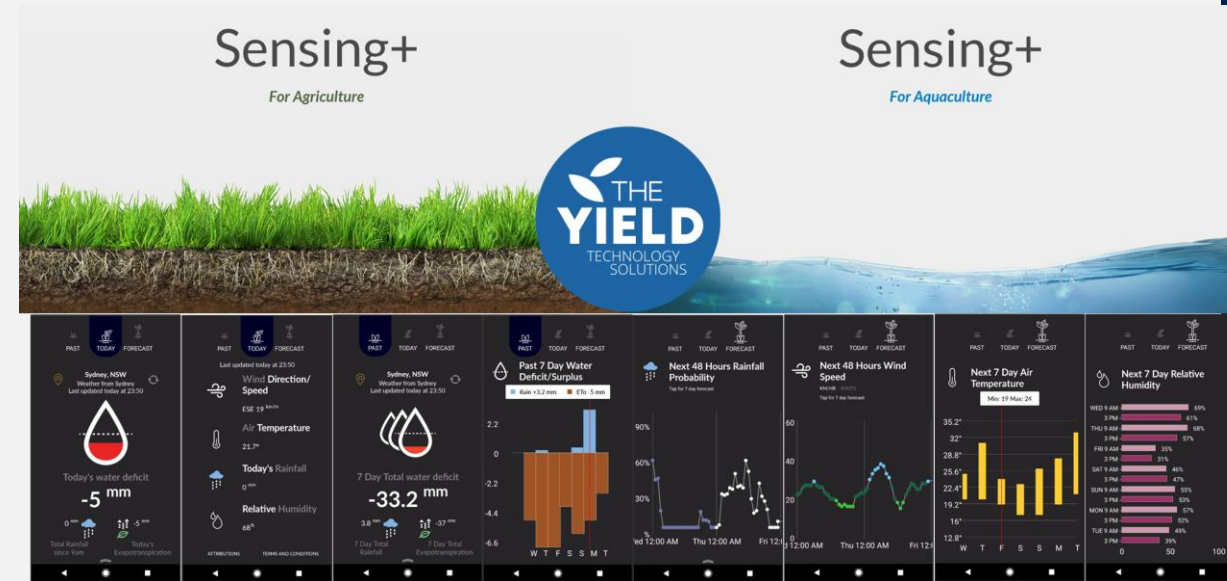
We are never going to replace farmers, what we do is give them the right technology to make their job easier.

”

— Ros Harvey
Founder and Managing Director
The Yield



▶ [Watch](#)



DJI

無人機技術助力農業轉型

“

Using our new SDK, Windows developers will soon be able to employ drones, AI, and machine learning technologies to create intelligent flying robots that will save businesses time and money and help make drone technology a mainstay in the workplace.

”

— Roger Luo
President
DJI



農漁業轉型邁向科技養殖，提高農漁民收益



Before

- 漁民憑藉漁場、魚體之巨觀觀察，搭配個人養殖經驗與智慧從事養殖行為決策
- 換肉率唯一決定養殖價值，生產行為難以分級

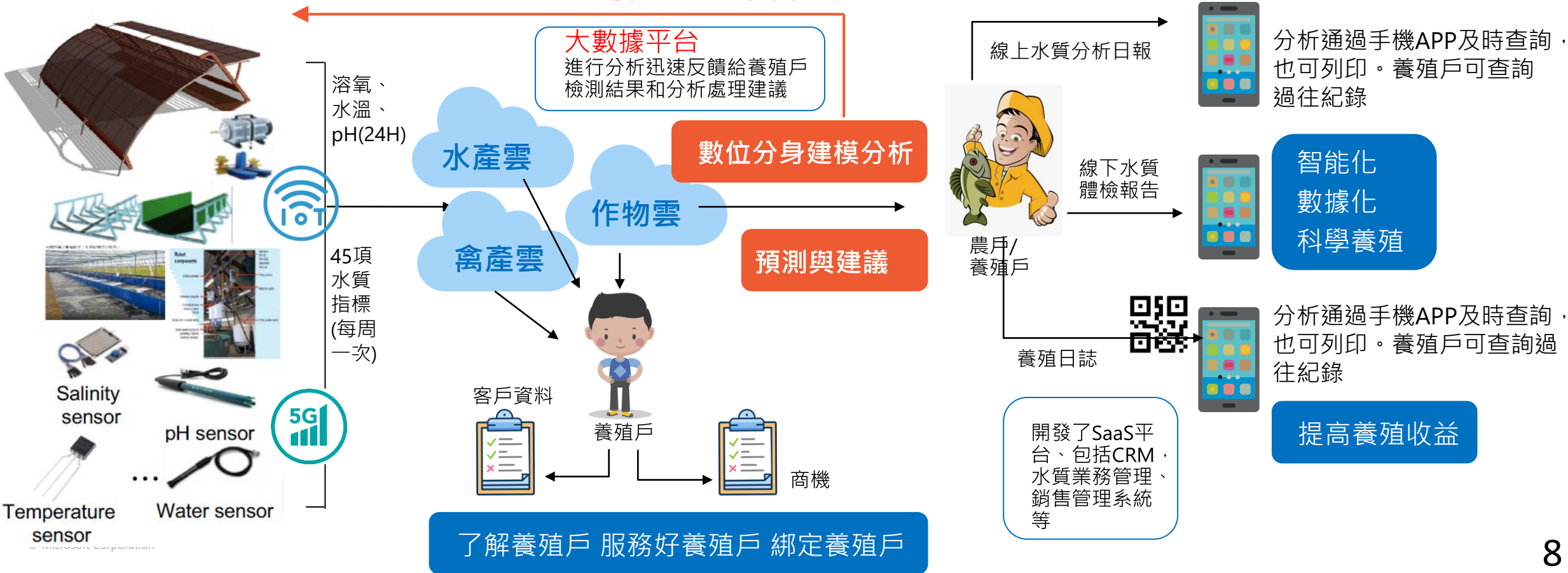
數位分身建模



After

- 漁民隱性知識數位化，形塑科技漁民
- 透過魚塭AIoT機聯網、養殖行為人聯網、魚聯網，形成嚴選水產生產規格，提升養殖價值
- 複製養殖經驗至全球各地生產

AI 優化生產流程回饋調整



感謝聆聽!

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