

National Farmers'
Association., R.O.C.



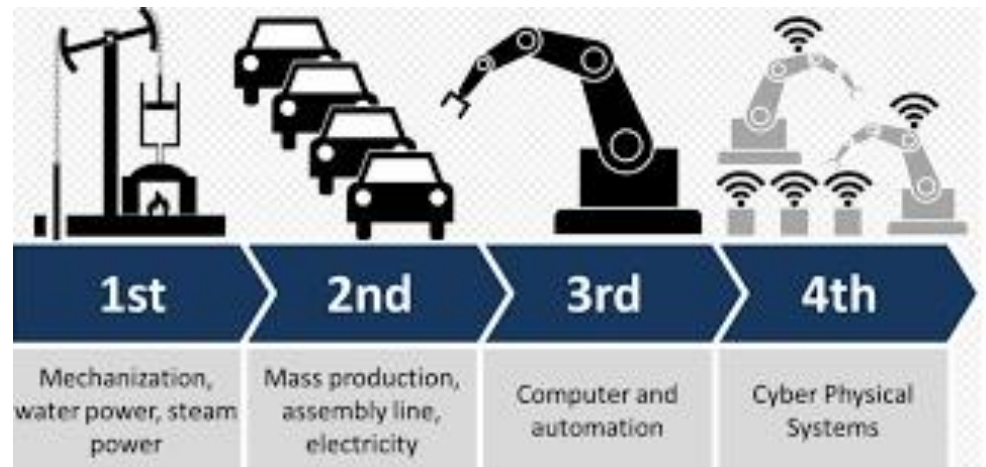
Taiwan's Country Report

**Sustainable agriculture for the
future**

Agenda



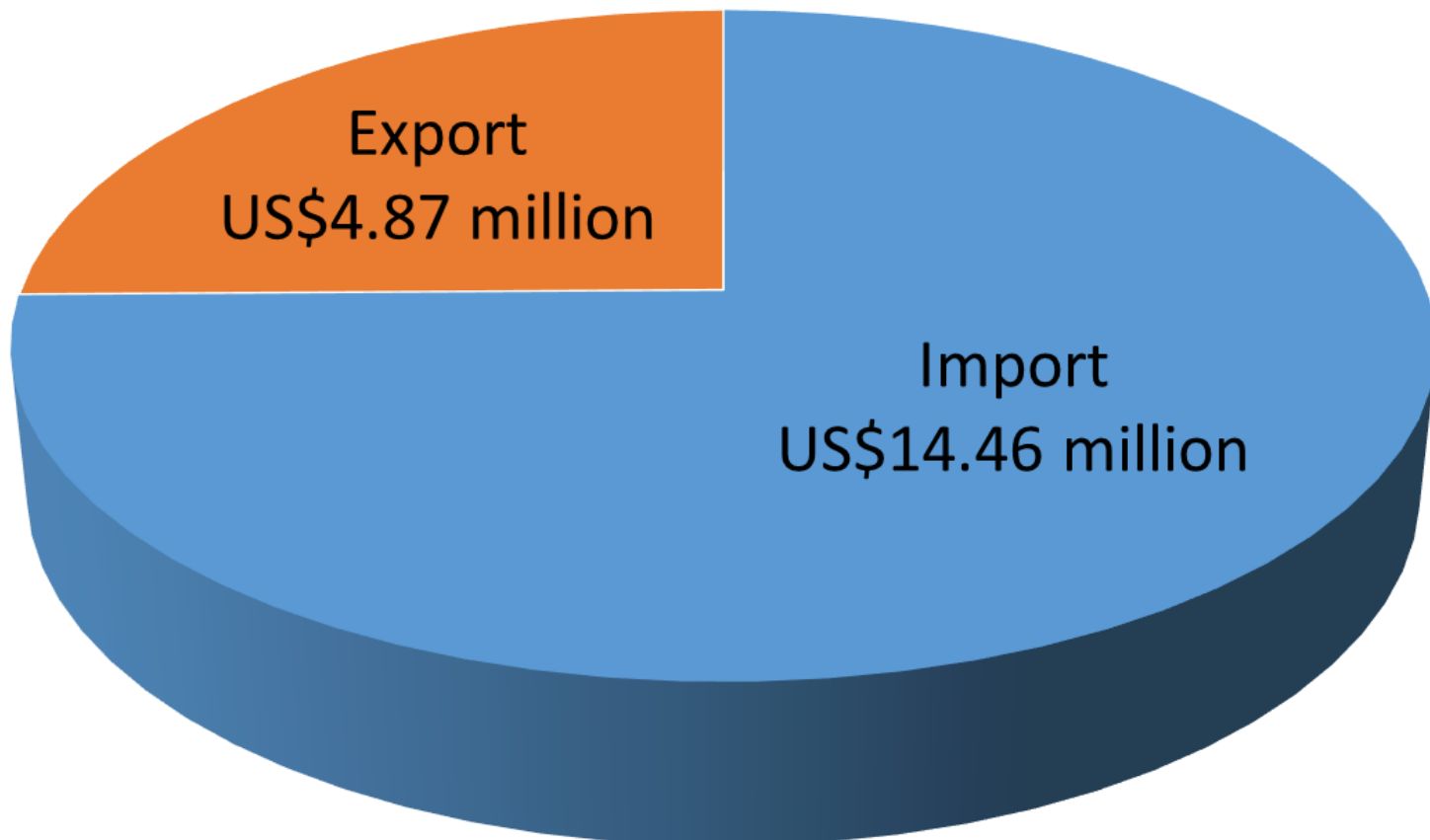
- Food security
- Labor shortage & Aging farmers
- Agricultural productivity 4.0
- Conclusion



Food Security

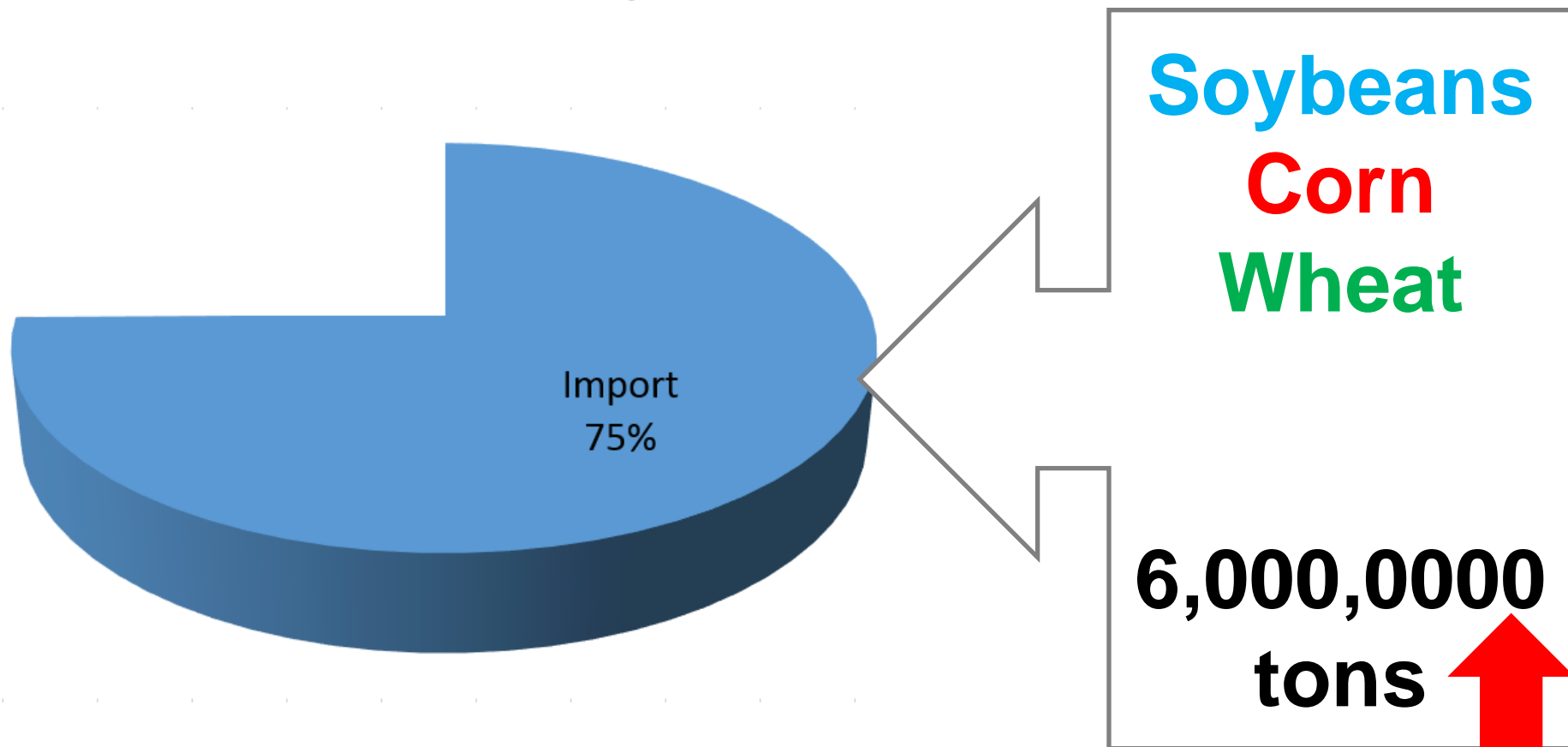
2015 Agro-food

import & export value



Food Security

Major Import agro-products



Food Self-Sufficiency Rate

France

122%

U.S.A.

120%

China

85%

Korea

44%

Japan


39%

Taiwan

34%

Non-Genetically Modified Crops in Taiwan (tons)

Source : Agriculture and Food Agency, Council of Agriculture, Executive Yuan

| ITEM | 2014 | 2015 |  |
|----------|---------|---------|---|
| Soybeans | 1,173 | 2,725 | 132% |
| Corn | 113,996 | 117,000 | 2.6% |
| Wheat | 6,811 | 7,335 | 8% |

Food Security



- Buy local
- Reduce food losses
 - Every year **1.3 billion** tons or **46%** are wasted at retail & consumer levels
- Promote rice flour



Source : Food and Agriculture Organization of the United Nations & National Farmers' Association

Labor shortage & the aging farmers

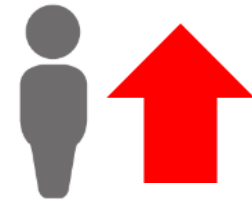


- **Short-term**

- Recruiting manpower

- ✓ Employment website -- 25%

- ✓ Farmers associations – 600



- ✓ Students part-time & internship -- 194



Labor shortage & Aging farmer



- **Short-term** (cont.)
 - Innovation technology
 - ✓ Intergovernmental grants
 - Low-interest loans
 - ✓ **1.25%** rate

Labor shortage & the aging farmers



- **Long-term**

- Special training

- ✓ Personalization / case-by-case

- ✓ **4,500** sessions 

- Peer learning

- ✓ **1,100** participates @ 35

- 1-1 tutoring

- ✓ **5,600** new farmers 

Source : Council of Agriculture,
Executive Yuan

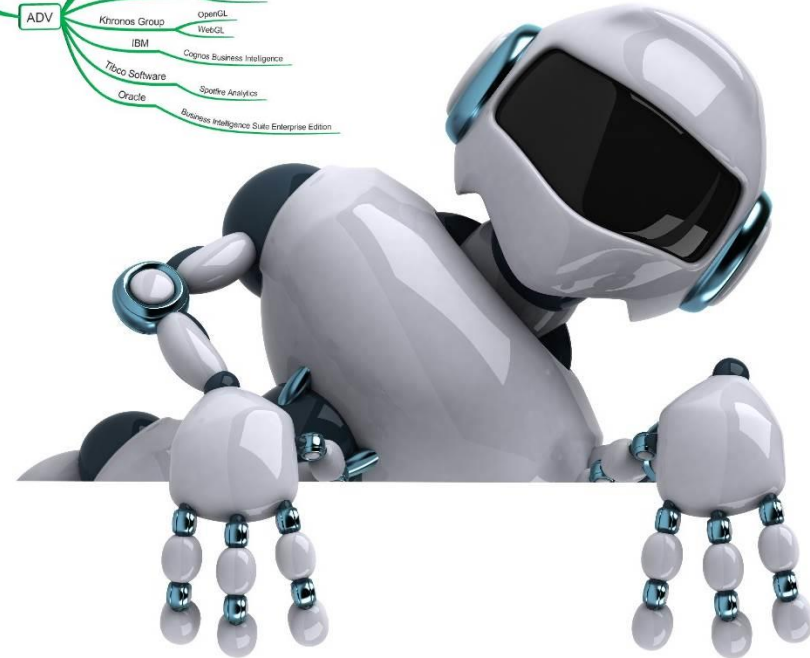
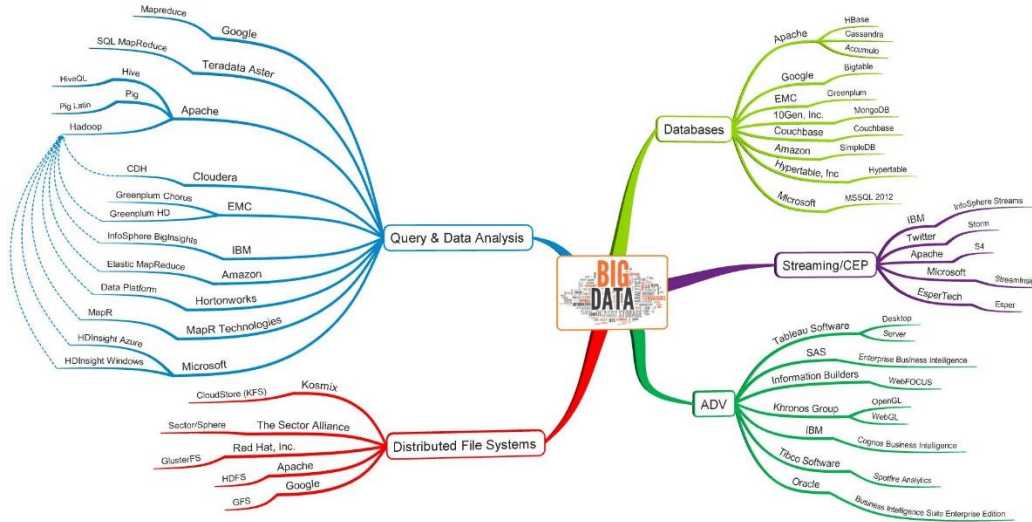
Agricultural Productivity 4.0



- IR

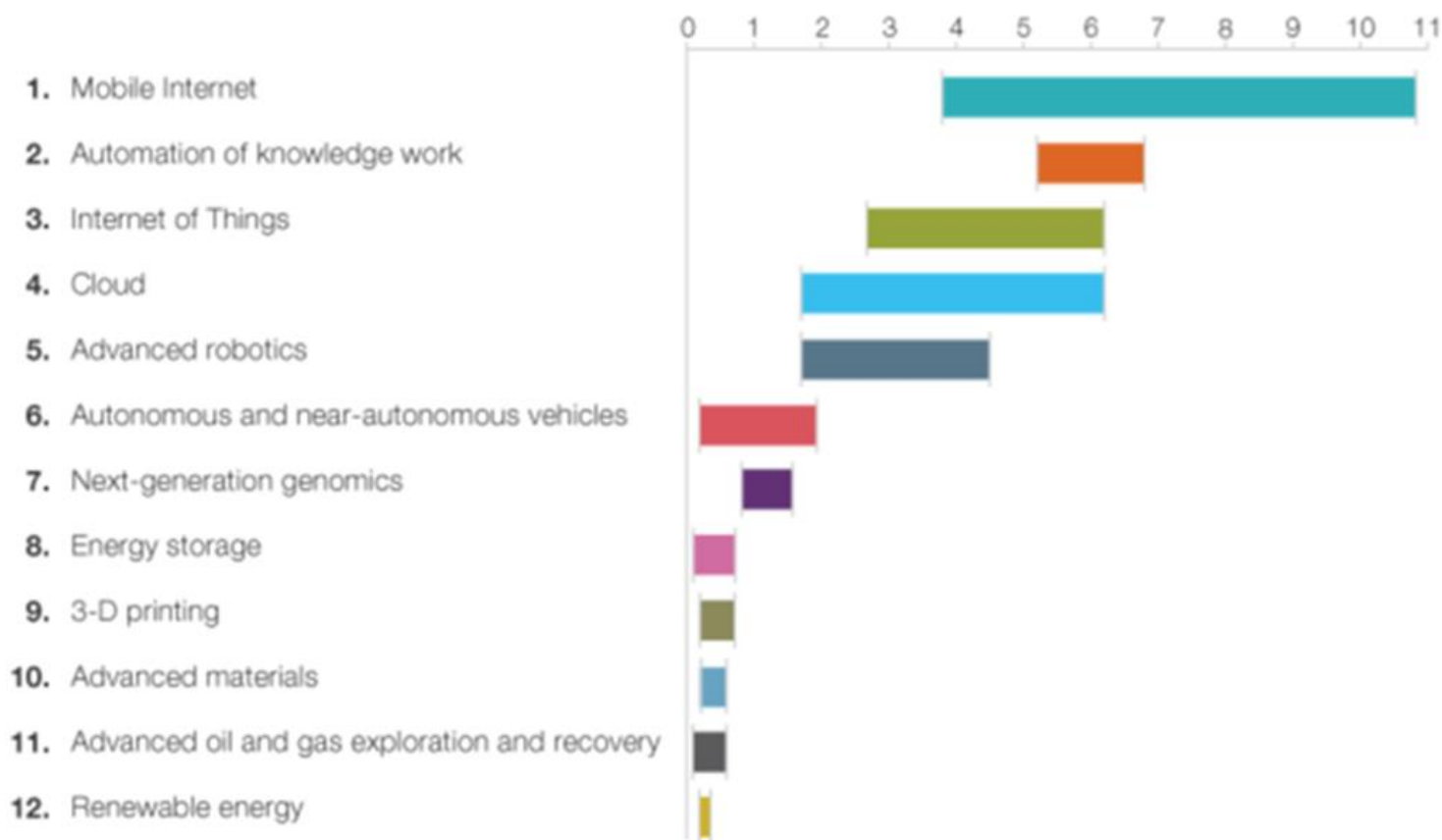
- IoT

- Big Data



A gallery of disruptive technologies

Estimated potential economic impact of technologies across sized applications in 2025, \$ trillion, annual

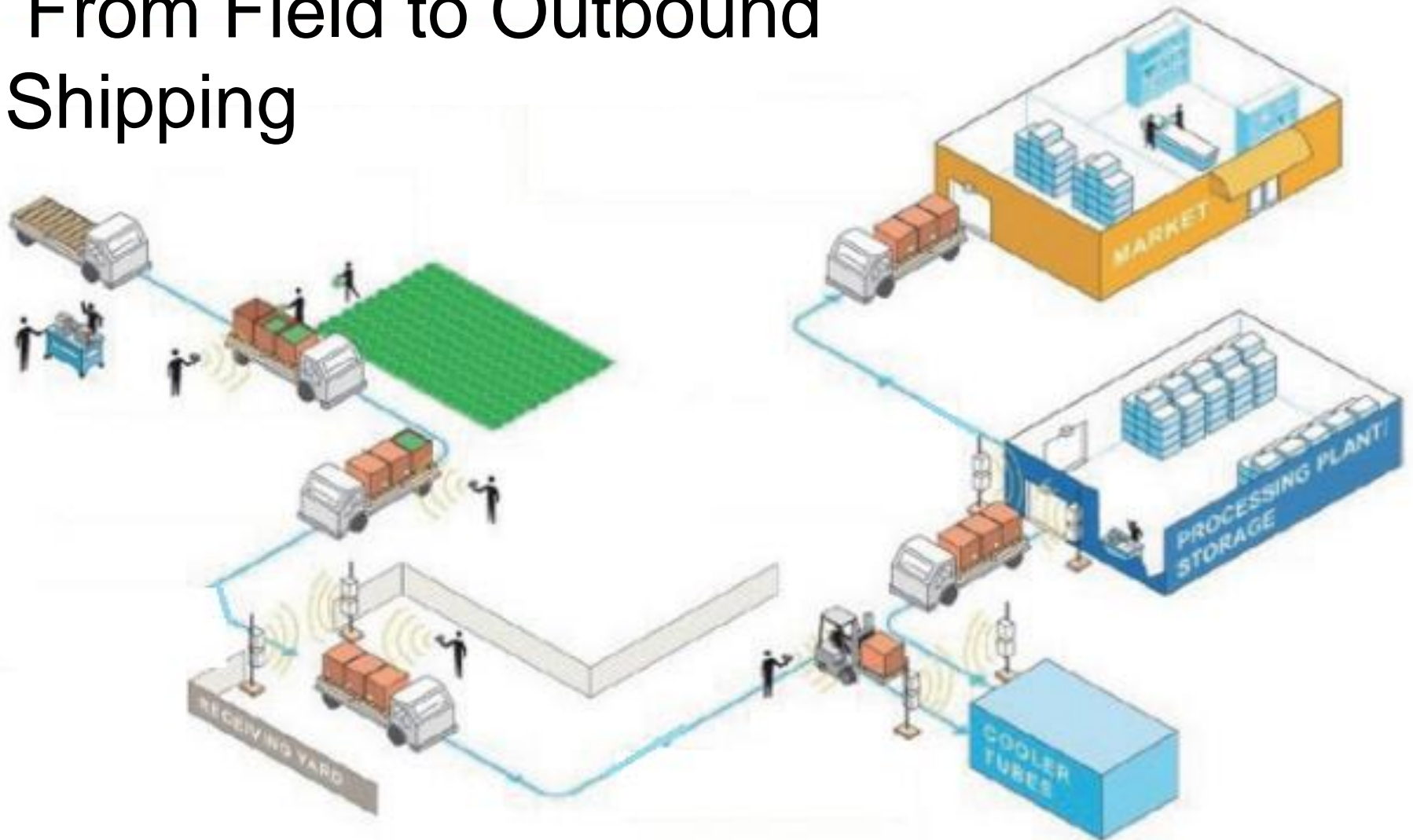


SOURCE: McKinsey Global Institute

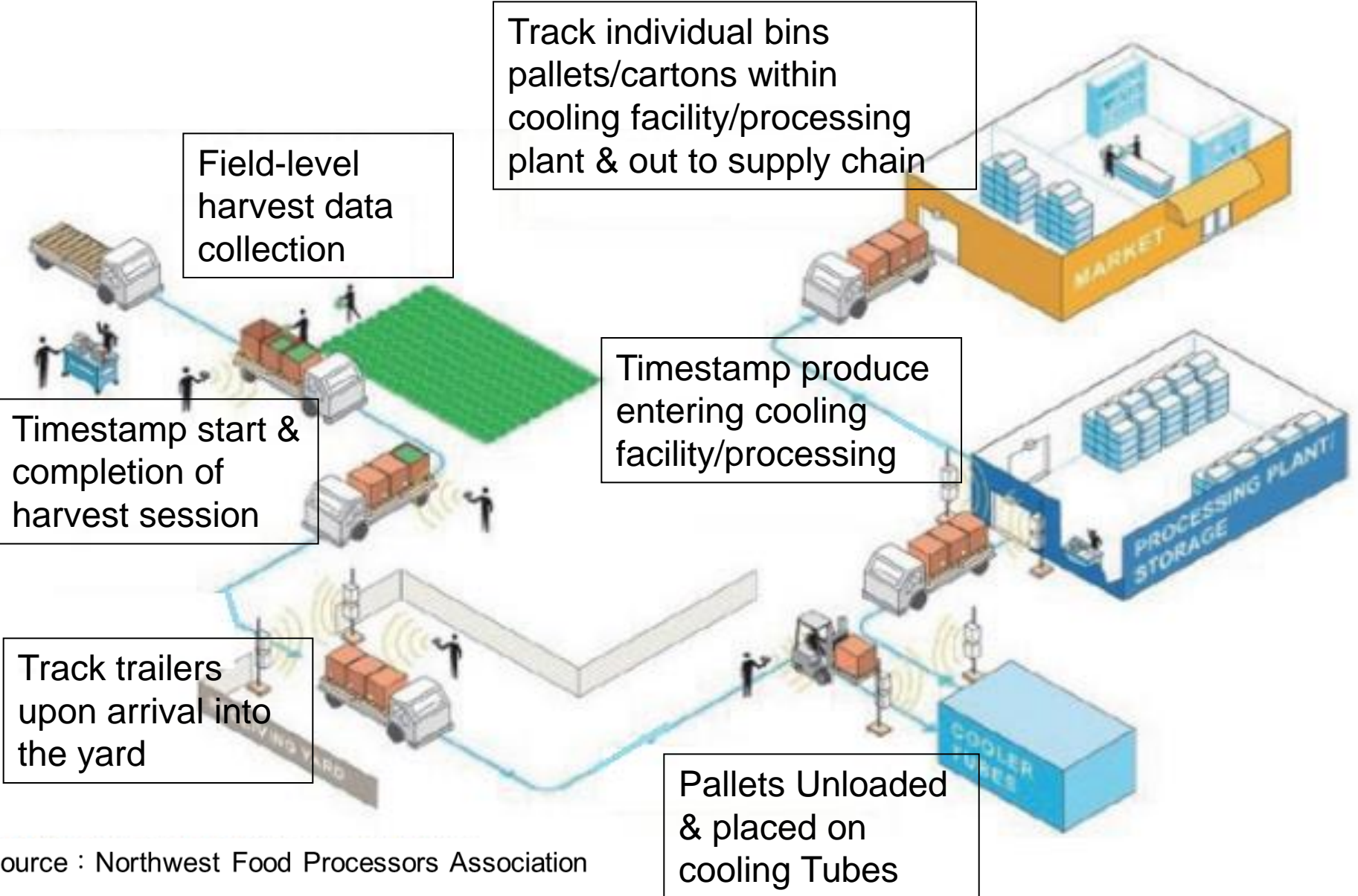
Notes on sizing: These economic impact estimates are not comprehensive and include potential direct impact of sized applications only. They do not represent GDP or market size (revenue), but rather economic potential, including consumer surplus. The relative sizes of technology categories shown do not constitute a "ranking," since our sizing is not comprehensive. We do not quantify the split or transfer of surplus among or across companies or consumers, since this would depend on emerging competitive dynamics and business models. Moreover, the estimates are not directly additive, since some applications and/or value drivers are overlapping across technologies. Finally, they are not fully risk- or probability-adjusted.

Agricultural productivity 4.0

- From Field to Outbound Shipping



From Field to Outbound Shipping



Source : Northwest Food Processors Association

Agricultural Productivity 4.0



- Increase quality / quantity
- Raise competitiveness
- Organize traceability system
- Attract young farmers
- Manage systemic

Agricultural Productivity 4.0



Invest
US\$32.8
million

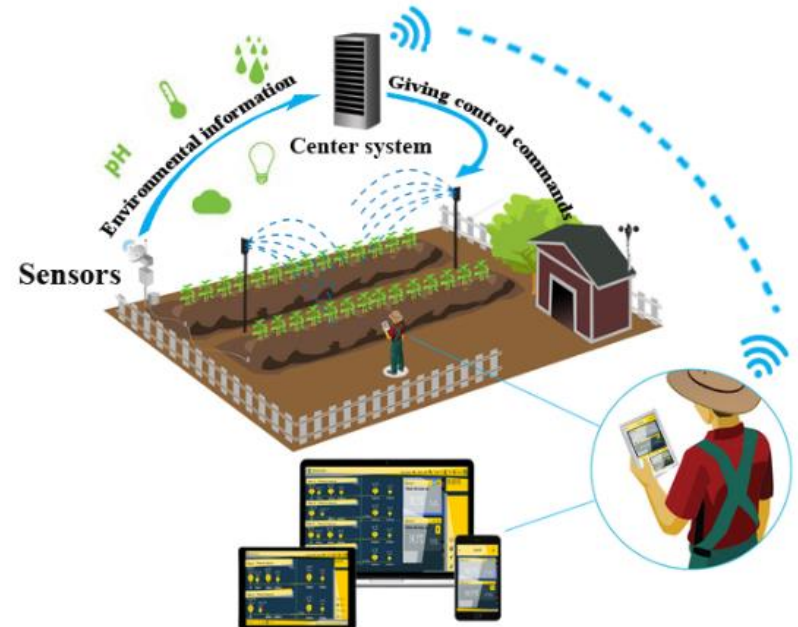


Deliver
US\$131
million



Conclusion

- Food self-sufficiency
- Labor & youth needed
- Smart automation



中華民國農會



NFA, R.O.C.

Thank you

Submitted as a country report for the 26th East Asian Agriculture Organization Council (EAOC) Top Level Meeting on Sept. 28-30, 2016, Taipei, Taiwan