

# eGovernment: From Evolution to Transformation

**Hong-Eng Koh**  
Global Chief Public Services Industry Scientist



**HUAWEI**

# In the 1990s...

## Security Threats



## Waste of Budget



## Not User-Centric



Interior  
Ministry



Provident  
Fund



Company  
Registrar



Housing  
Authority



Environment  
Ministry



Marriage  
Registrar



Food  
Authority



# Not User-Centric: Open a Restaurant

“Unwilling” Customer →



Transactions with the government are usually means to an end.



Interior  
Ministry

- Fire safety
- Live entertainment
- Liquor
- Traffic



Company  
Registrar

- Business name
- Business logo
- Shareholders
- Financials



Environment  
Ministry

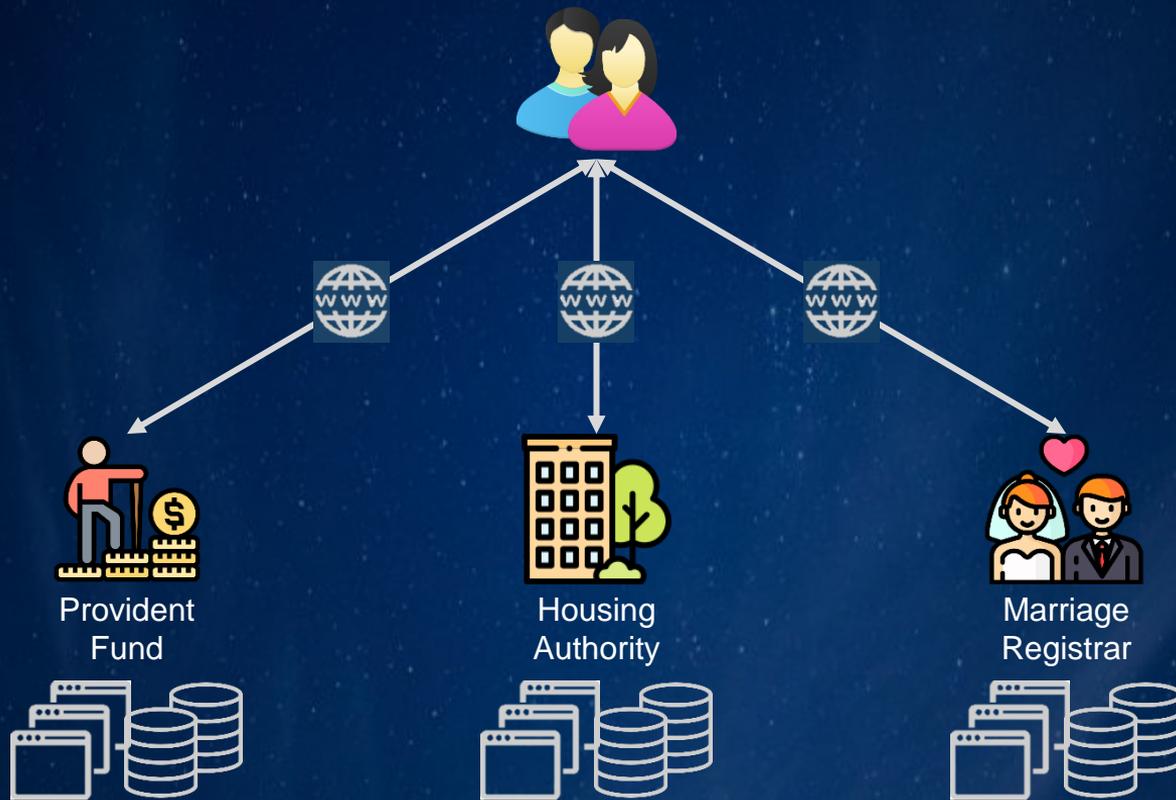
- Kitchen hygiene
- Food handlers
- Sanitation
- Dumpster



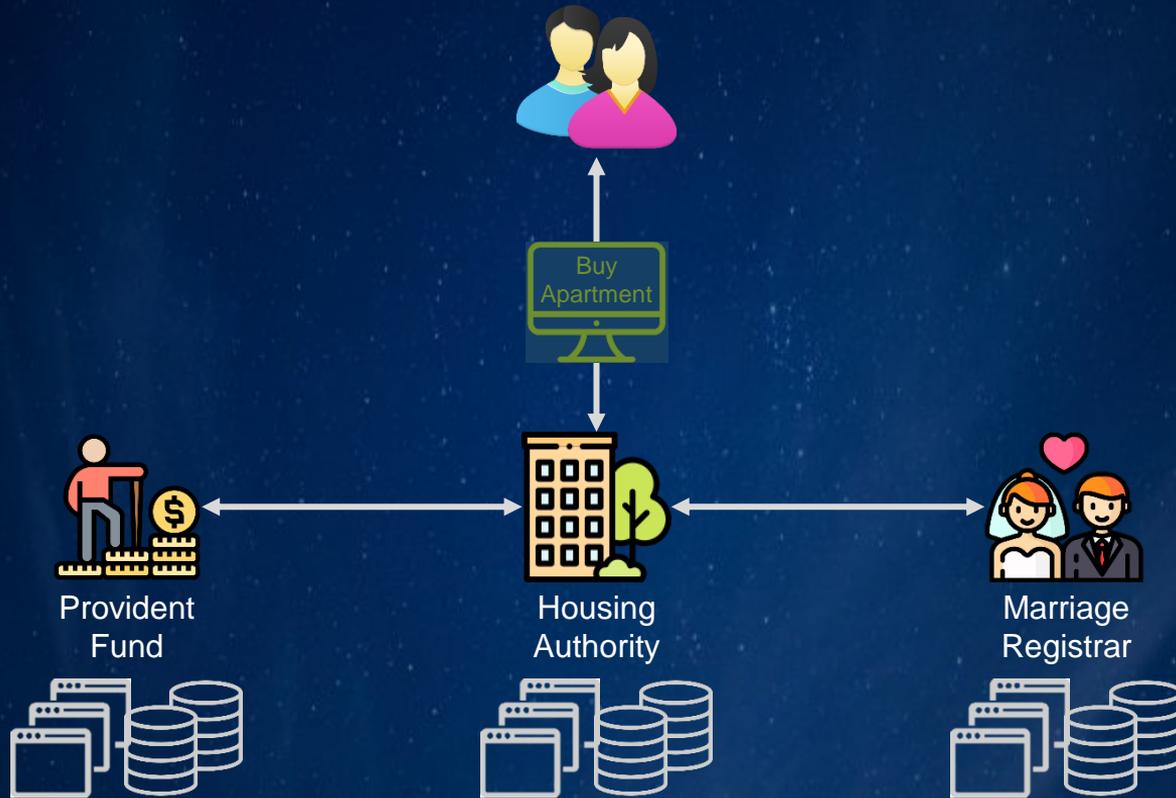
Food  
Authority

- Food service
- Suppliers
- Food storage

# Not User-Centric: Buy a Government Apartment



# ~~Not~~ User-Centric: Buy a Government Apartment



# Integrated eGovernment Model (year 2000)



Satisfying the “unwilling” customers



eServices



Public Services Infrastructure (SOA)



Provident Fund



Housing Authority



Marriage Registrar



# Industry Revolution

## 3.0 Automation

through electronic  
& IT systems



## 4.0 Digitalisation

converges cyber &  
physical systems; data  
analytics and AI further  
automate processes

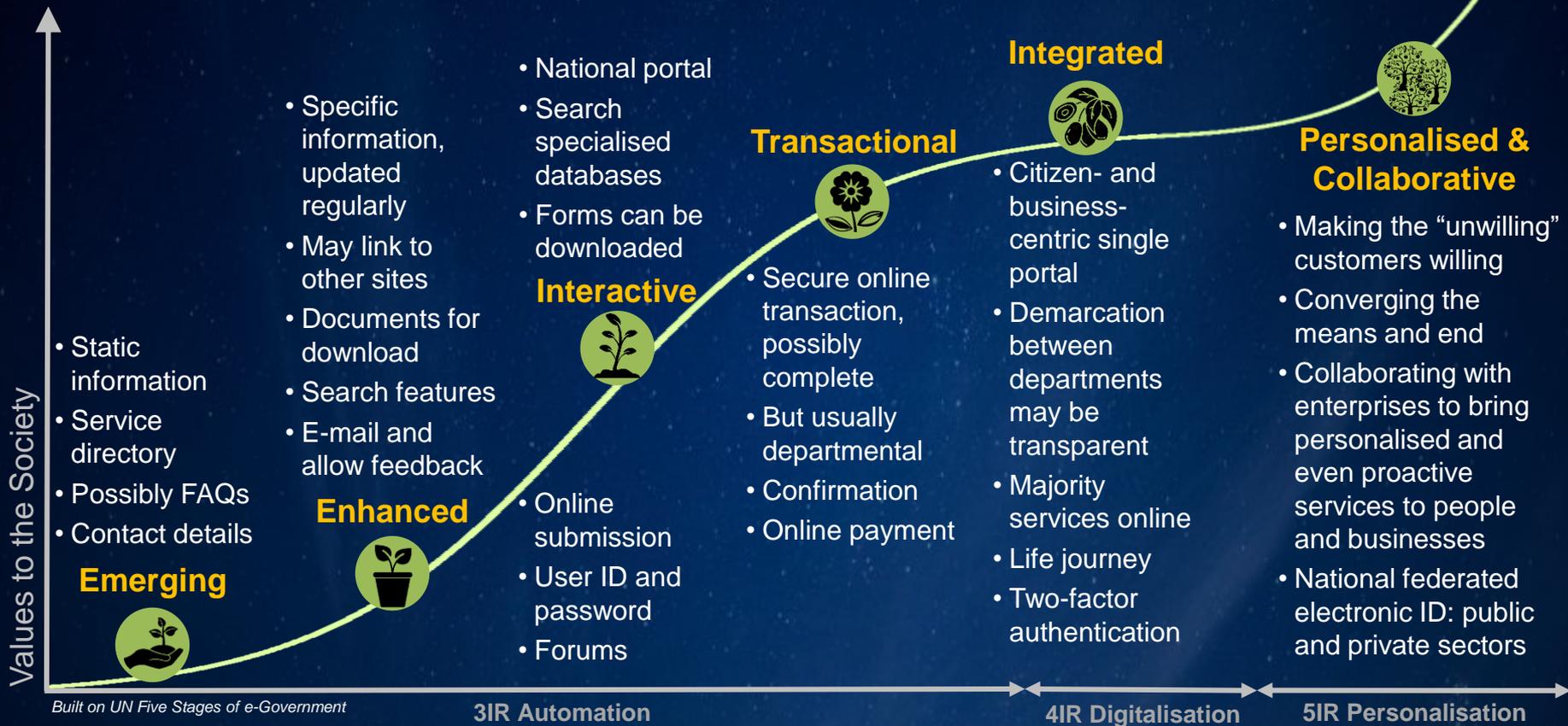


## 5.0 Personalisation

Mission-oriented and  
service-based  
personalisation, agility,  
and collaboration,  
including human-machine  
collaboration



# eGovernment: from Evolution to Transformation



Built on UN Five Stages of e-Government

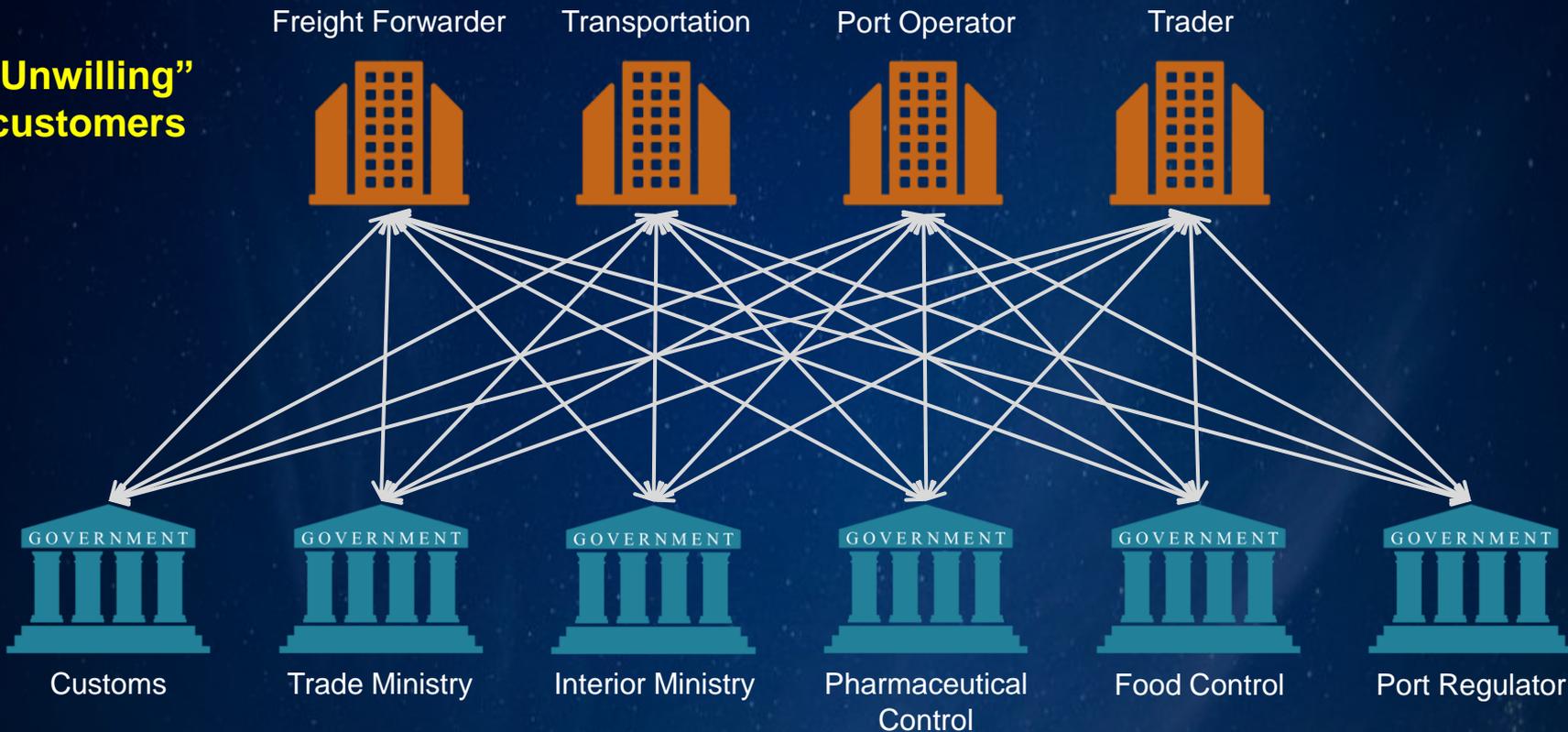
3IR Automation

4IR Digitalisation

5IR Personalisation

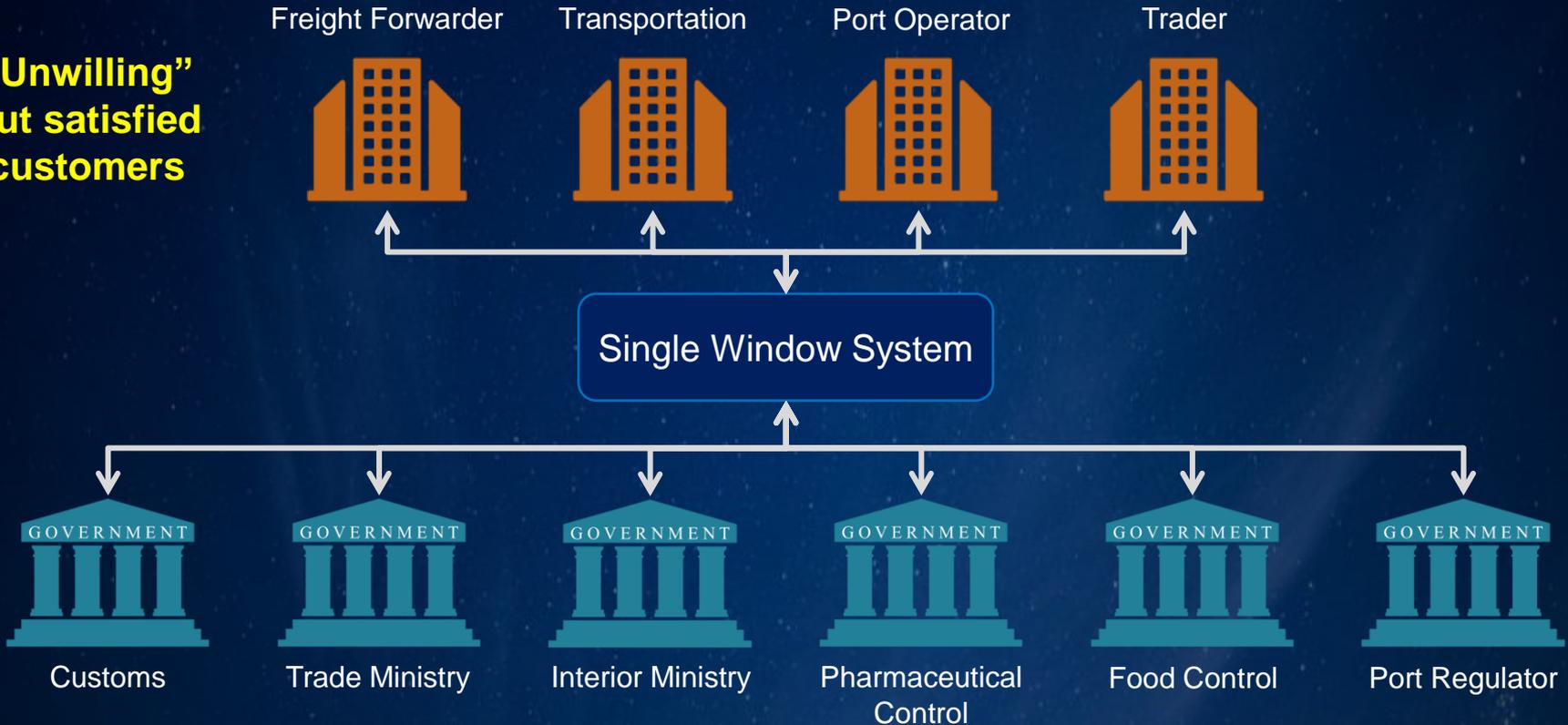
# Gate Keeper to Trade Facilitator

**“Unwilling”  
customers**



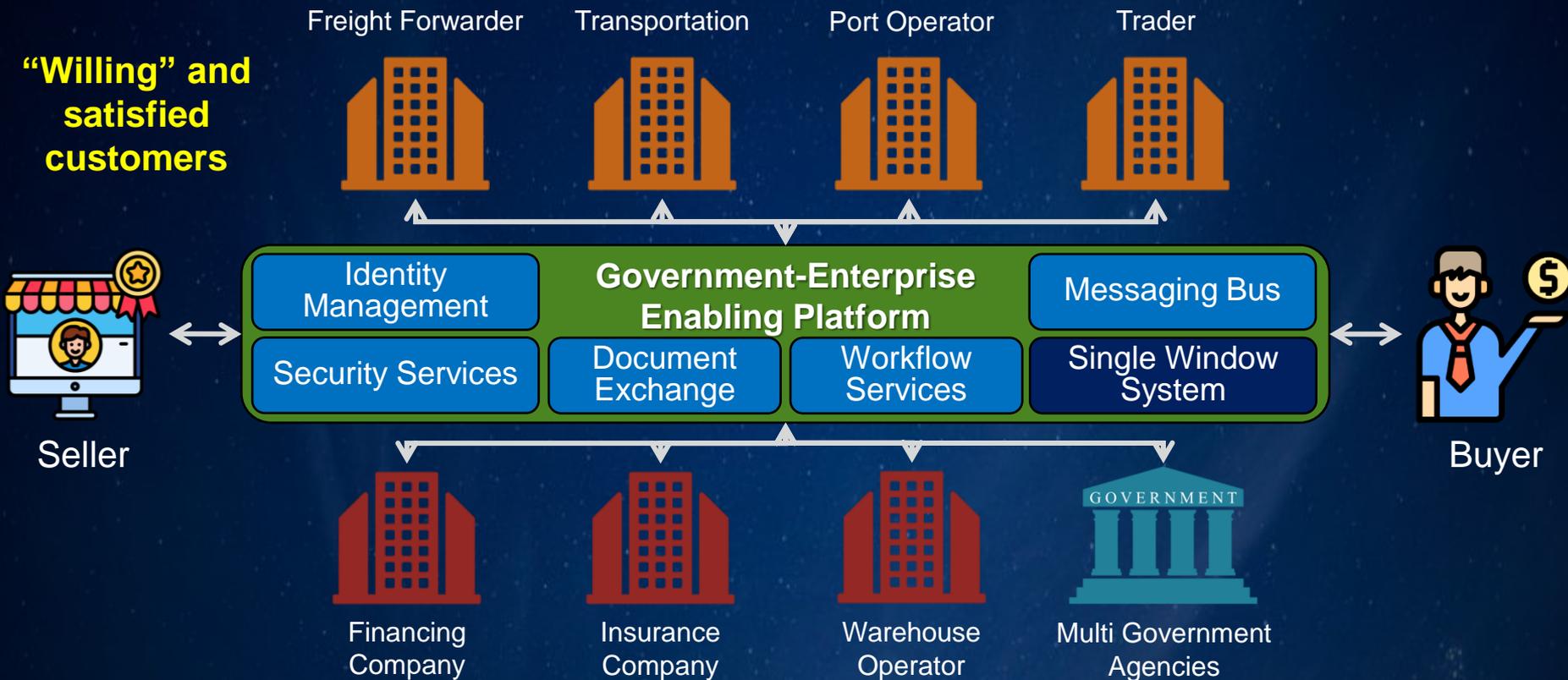
# Gate Keeper to Trade Facilitator

**“Unwilling”  
but satisfied  
customers**



# Gate Keeper to Trade Facilitator

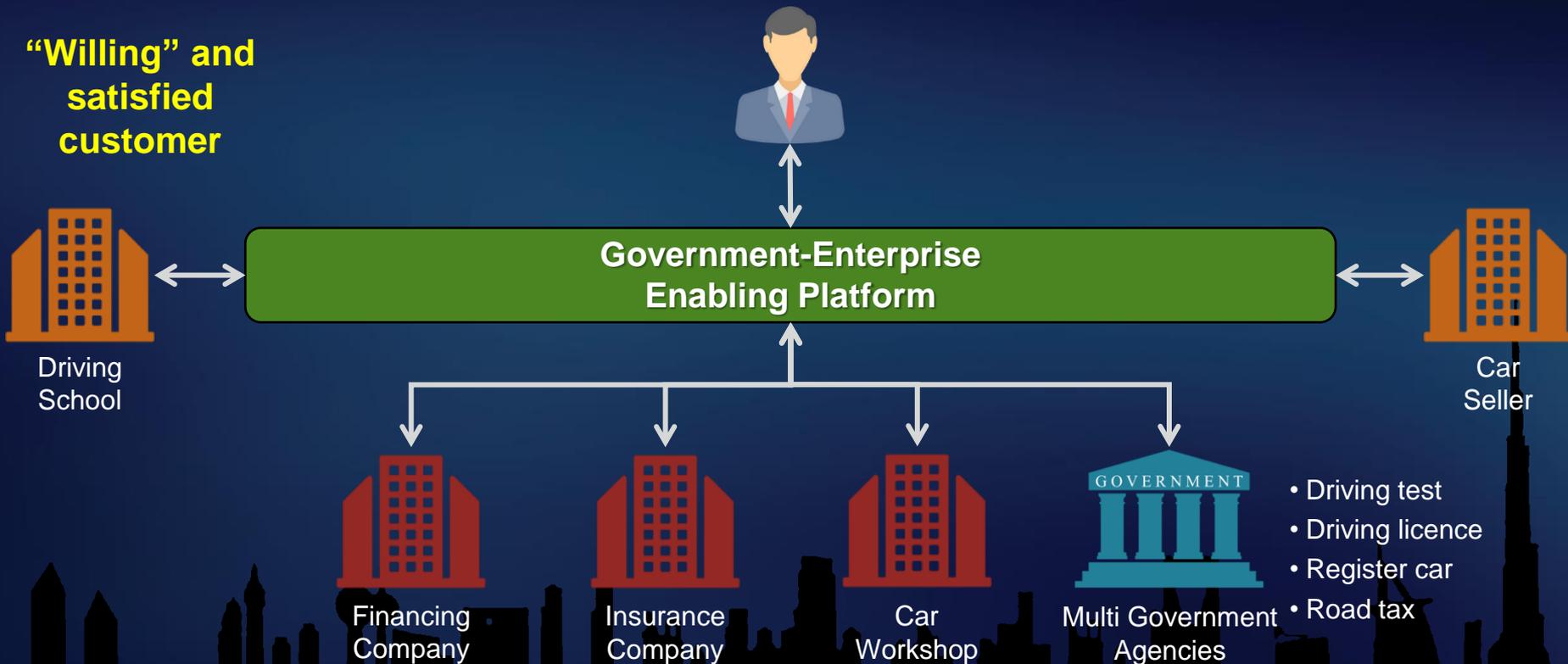
G2B2C



# Owning and Driving Car Simplified

G2B2C

“Willing” and satisfied customer



# Owning and Driving Car Simplified

G2G2C

Multi-Violation  
Detection



Owner/Driver  
Identification



Online  
Payment



Records &  
Points System



Automatic  
Call Taking



Automatic  
Drone



Automatic  
Dispatch



Cross-  
Agency



Intelligent Traffic Management Services (ITMS)

Intelligent Command & Control Services

Government Enabling Platform



Speeding



Accident



# Transforming eGovernment

## Customers



### Beyond...



- Digitalisation
- Connectivity
- Going Online
- Cost Reduction
- Improve ROI

### Redefining...



- Mission
- Organisation
- Governance
- Process
- Skillsets



## Government Agencies

# Transforming eGovernment

## Customers



### Beyond...



- Digitalisation
- Connectivity
- Going Online
- Cost Reduction
- Improve ROI

### Redefining...



- Mission
- Organisation
- Governance
- Process
- Skillsets

Satisfying “unwilling” customers

“Willing” & satisfied

# Transforming eGovernment

Customers



+ Intelligence

Digitisation



Improve Efficiency of  
Current Services

Digitalisation



New Services under  
Current Mission

Digital Transformation



New Services under  
Enhanced Mission

Satisfying “unwilling” customers

“Willing” & satisfied

# Digital Transformation Principles



**Aim for the Best User Experience: ROADS**



**Service-Oriented: Agility & Empowerment**



**IT, CT & OT Integration: Advanced Analytics & AI**



**Open Ecosystem: Innovation & Collaboration**

# Different Use Cases, Common Data Entities

## Customers



People



Objects



Locations



Events



Organisations



## Government Agencies

# Similar Operational Capabilities



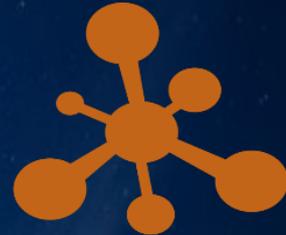
Improve Efficiency of  
Current Services



New Services under  
Current Mission



New Services under  
Enhanced Mission



**Sensing**



**Communicating**



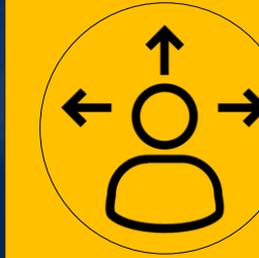
**Collaborating**



**Sense-Making**



**Decision Making**



# Transforming eGovernment: Critical Success Factors



**Leadership**



**Governance  
& Structure**



**Law &  
Regulation**



**Operating  
Model**



**Privacy &  
Sovereignty**



**Data  
Strategy**



**Technologies**

## Sensing



## Communicating



## Collaborating



## Sense-Making

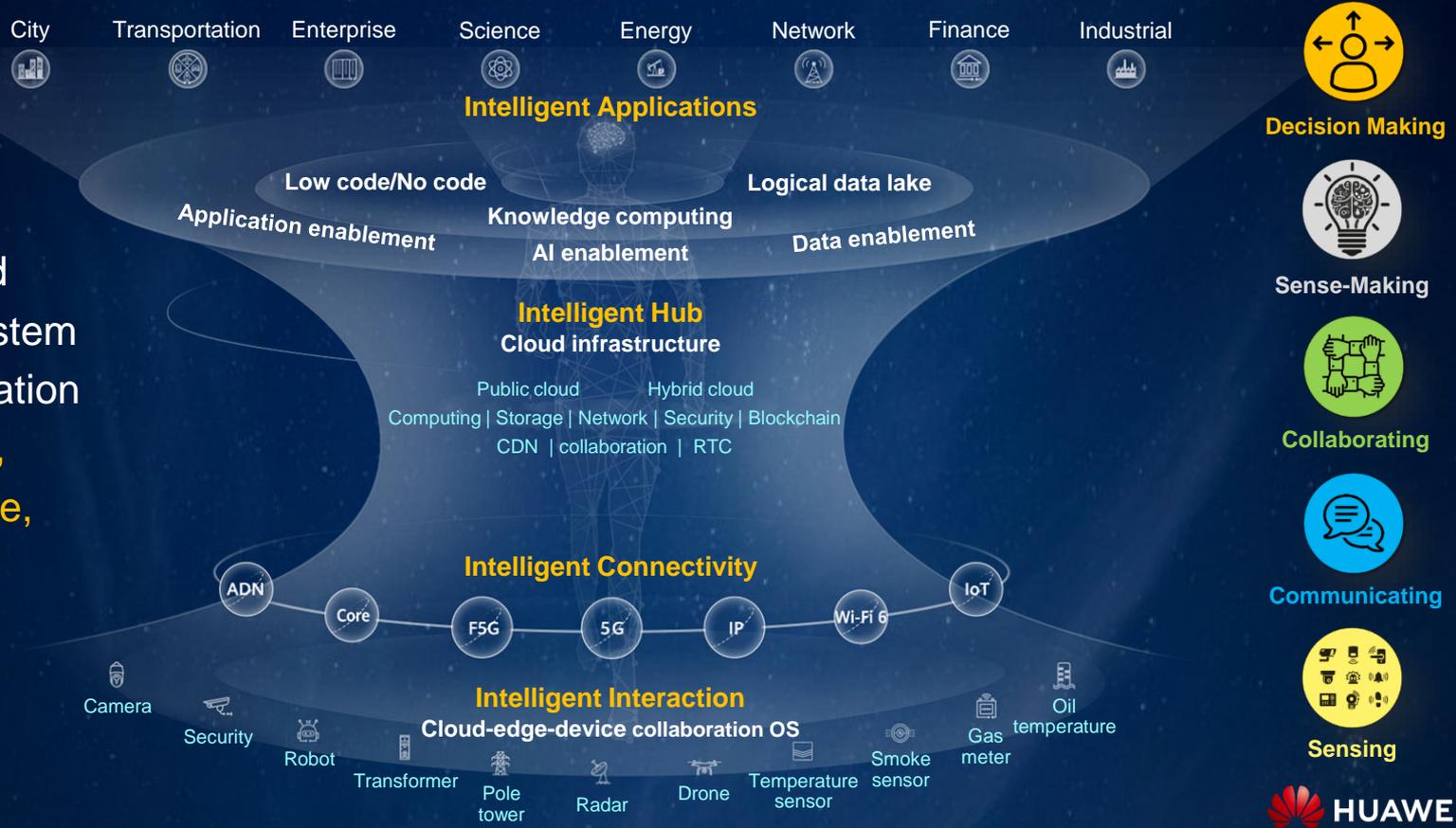


## Decision Making



# Intelligent Twins for All-Scenario Intelligence

An integrated intelligent system with collaboration across **cloud**, **network**, **edge**, and **device**



# HUAWEI INTELLIGENT TWINS

Build Foundation of the Digital World



[he.koh@huawei.com](mailto:he.koh@huawei.com)



[@he\\_koh](https://twitter.com/@he_koh)



[linkedin.com/in/hekoh](https://linkedin.com/in/hekoh)



HUAWEI

# Singapore PSi: New Generation

- **Message Hub:** messages of all forms, notification service, inbox
- **Service Tracker:** status of submission, historical records
- **Document Vault:** secure softcopy, e.g. notices, licenses, certificates
- **Back Office Administration:** processing & workflow, communication & clarification, performance indicators
- **Service Registry:** setup & display, configuration, processing flows
- **Performance Tracking:** by service, individual, working group or agency