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# Industry-research collaboration to develop next generation cold supply chains

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# Workshop agenda

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- 15.00 -15.30 Tea/coffee & networking
- 15.30 -15.45 Welcome and introduction to the topic
- 15.45 -16.45 Speakers:
  - Ju-Chia Kuo, CEO, Cross-strait Cold Chain Logistics Alliance, Taiwan
  - Henry Chen, Vice President, Yes Logistics, Taiwan
  - Makito Okabe, Yamato Holdings, Japan
- 16.45-17.30 Interactive session
- 17.30 – 18.00 Concluding discussion



# Workshop aims

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- To develop a knowledge base in the area of next generation cold supply chains
- To explore how industry and the research community should collaborate to address some of the challenges likely to be faced in managing the next generation cold supply chains.



# Specific questions

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- What challenges are currently faced by industry when managing cold supply chains within their sector and how these are likely to evolve over the next decade or so?
- Identify the type and nature of research currently carried out by the research community
- How can we reconcile the industry and research agenda so that we can arrive at a mutually agreeable and workable set of overall aims/objectives to shape the next generation cold supply chains?



# What issues in Cold Chains? 冷链问题

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- High Cost of Operation 高操作成本
- Lack of Logistical Support 物流支持的缺乏
- Power Supply 电力供应
- Infrastructure Issues 基础设施问题
- Lack of Training and Awareness 培训的缺乏
- Lack of monitoring & control 监管和控制的缺乏
- Lack of technical consideration and new equipment 技术和新设备的缺乏



# International Challenges 国际方面的挑战

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## ■ Public health issue 公共健康问题

- Commercial and health reasons – How to store perishable products at low cost without any pandemic effect? 经济和健康原因: 如何将易腐坏的产品以最低的成本进行储存且不发生任何传染性效应?

## ■ Financial loss Vs. cost reduction 经济损失和成本减少

- How to make sure to stay within optimal temperature range based on type of product? 如何确保将不同种类的产品 储存在合适的温度范围内?

## ■ Quality and shelf life of product 产品质量和上架时间

- How to select best process out of several alternatives? 怎样在不同方法中选择最佳?



# International Challenges....国际方面的挑战

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## ■ Weakest cold supply chain links 冷链环节中最弱的一环

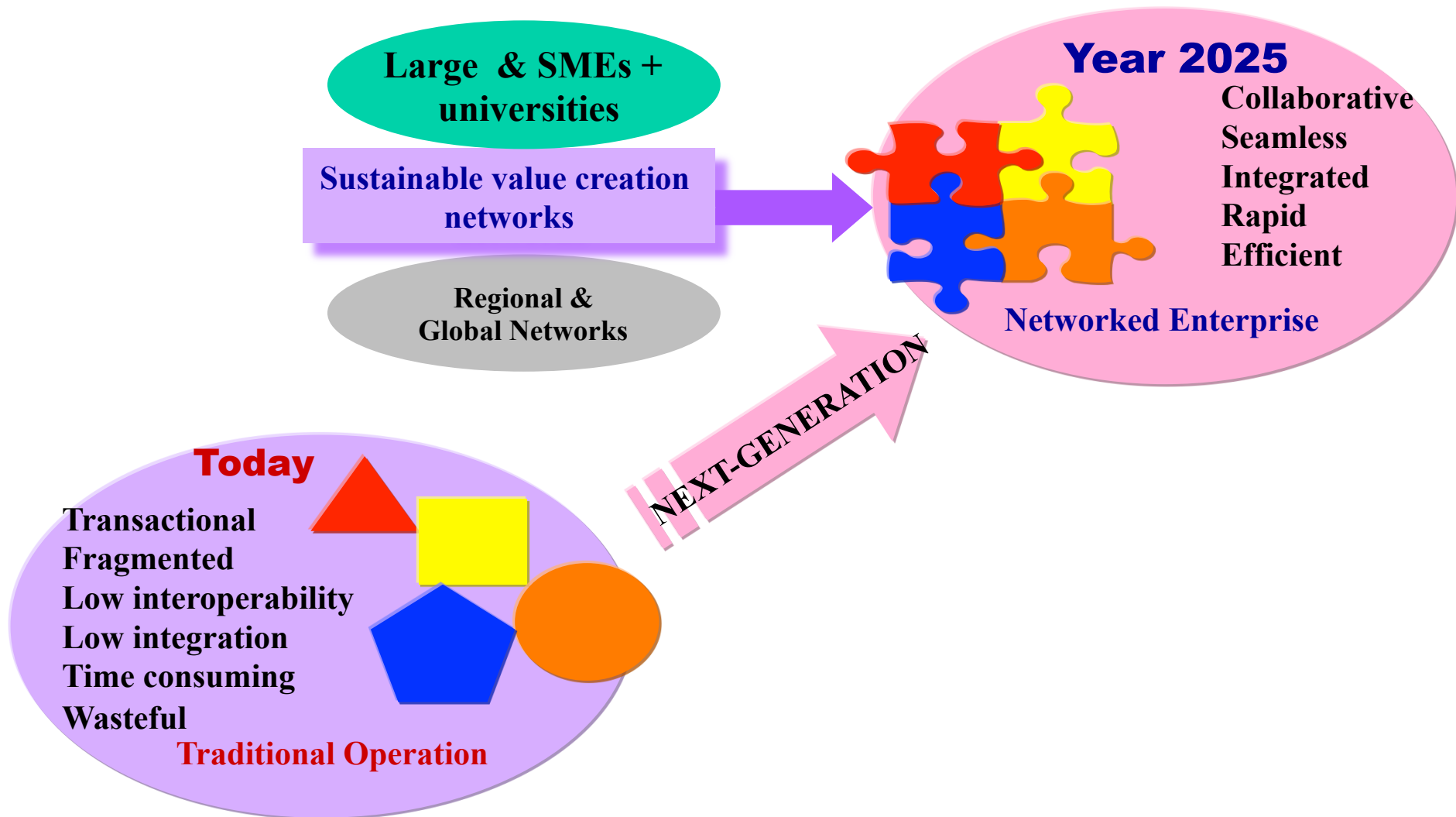
- Lack of quality assurance protocols – Especially for drug SC 缺乏保障体系
- Lack of emergency systems – Risk assessments 缺乏应急措施
- Inadequate distribution routes – Delay time and need of exclusive route 缺乏分销途径
- Poor education and training – Hazardous environment, need of safety equipment 缺乏训练
- Packaging- Innovation and technology 包装方面缺乏创新和科技运用

## ■ Environmental problems环境问题

- Transportation – Major polluter 运输
- 40% of food worldwide requires refrigeration and consumes 15% of electricity of the world  
世界上40%的食品需要冷藏, 耗电量高达15%
- Leakage of refrigerants – 20% of global warming impact 制冷剂泄漏造成20%全球变暖效应

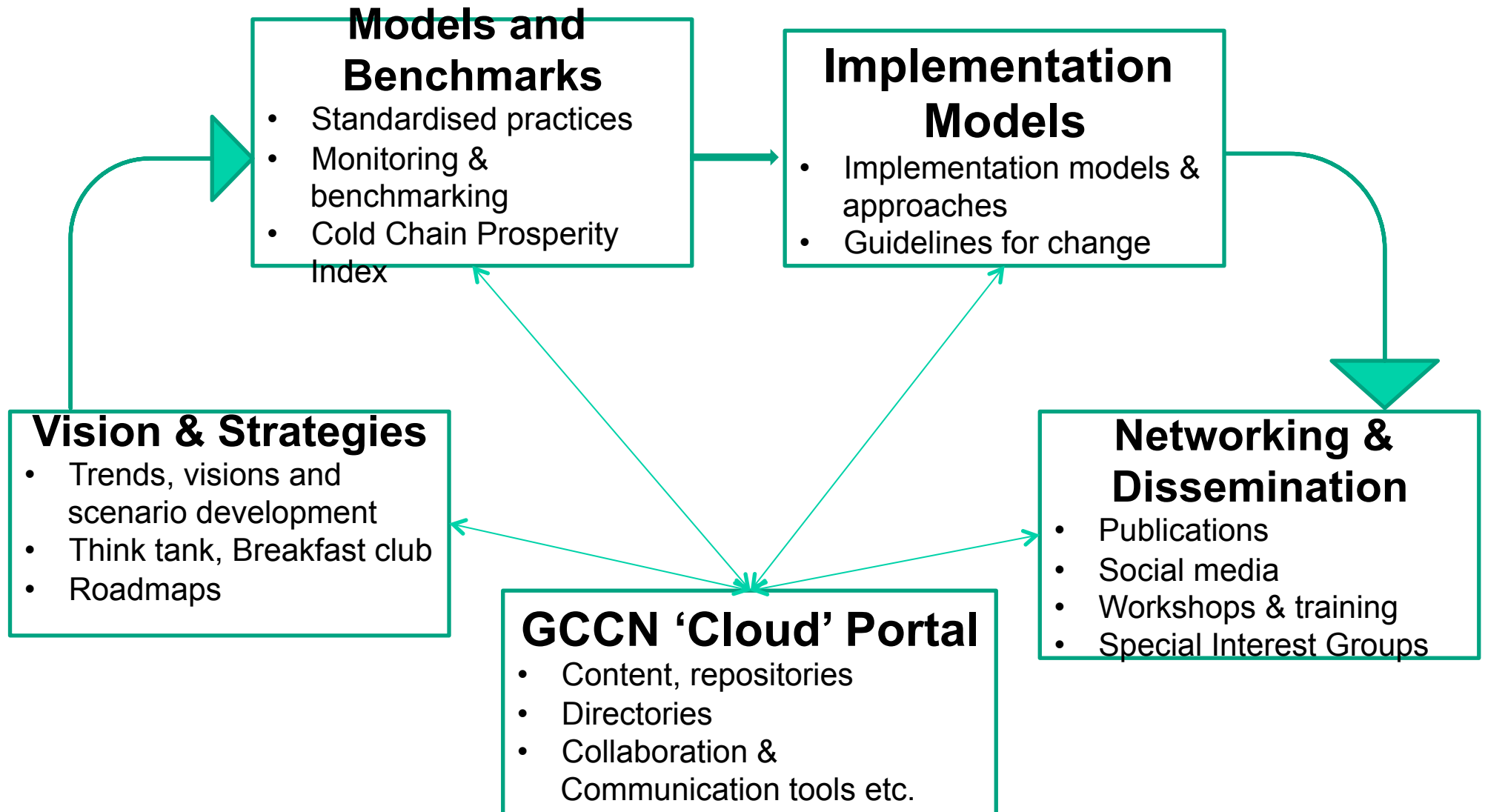


# Next Generation Cold Chains



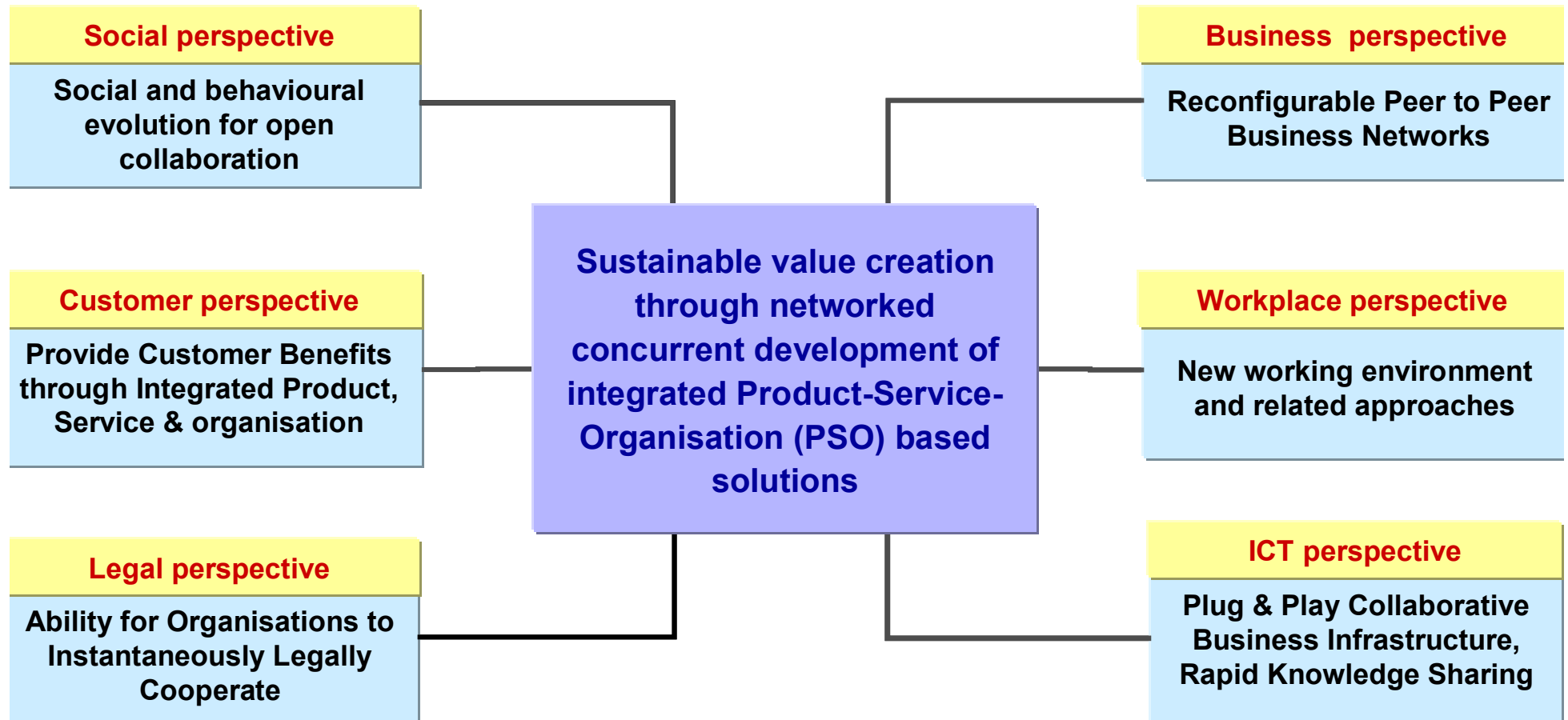


# Global Cold Chain Network (GCCN)



# Vision Perspectives

## Collaborative enterprise Vision



# GCCN Aims

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- To bring together a **critical mass of global experts** to share and exchange the latest developments in cold chains
- To establish and maintain a well-coordinated and effective support **platform** to initiate and co-ordinate research activities and to **network**, both at formal and informal level
- To develop **visions** for the **future** & potential strategies



# Potential Benefits

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- raised level of awareness
  - formation of new business and networking contacts
  - provision of comprehensive information via the dedicated knowledge portal
  - pro-active input into future vision & initiatives
  - increased cross-fertilisation, integration and cohesion
  - encouragement of intra and inter-organisational learning
  - a seedbed for conceiving, discussing, nurturing and developing ideas and encouraging and developing national and international collaborative alliances and initiatives
  - facilitation of the adoption of best practices
  - support for the development of educational and training approaches
  - etc ...
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# Potential Partners

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**China:** University of Nottingham, Tsinghua University, CEIBS, Zhejiang University ....

**Europe:** Cambridge (UK), Cranfield (UK), BIBA (Germany), Nuremberg (Germany), FHWS (Germany), University of Bologna (Italy), Maribor University (Slovenia), Cork University (Ireland), University of Aalborg (Denmark)

**USA: ???**

**Japan: ???**

**Australia: ???**

**Taiwan:** National Kaohsiung First University of Science & Technology

**India:** IIMU, IIMB and IITB

**Africa: ??** Cape Town (SA), University of Mauritius

**Industry: ??????**

