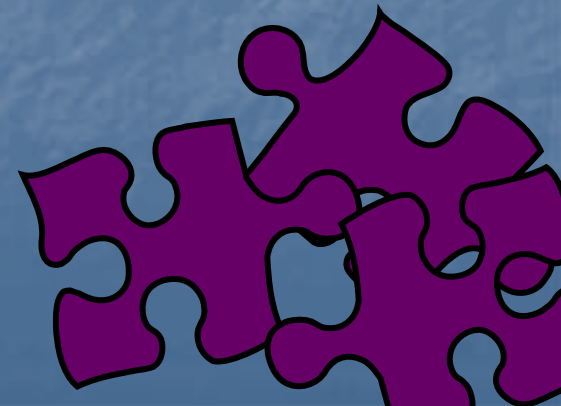


**Horticultural Science making a difference –
applications in businesses**

**Supply chain thinking can transform
science into business outcomes**



Horticultural Science making a difference – applications in businesses

“A business enterprise has two basic functions:
marketing and innovation”
(Drucker, 2002)

Five Generations of R&D Management

1. Isolate them
2. Measure them
3. Talk to them
4. Involve them
5. Network them

What is Innovation?

“the transformation of knowledge into new products, processes, and services, [which] involves more than just science and technology.

It involves discerning and meeting the needs of the customers”

(Porter & Stern 1999)

Supply Chain and Innovation framework

It is not unusual to view the technical and marketing disciplines as separate worlds – like “oil and water”.

The proposed framework puts the various technical and marketing disciplines along a common supply chain

Supply Chain Management – what is it?

“the management of the entire set of
production,
distribution and
marketing processes
by which a consumer is supplied
with a desired product”*

Supply Chain Management – what is it?

..... all aspects of managing the processes leading to....

**Consumer
satisfaction**

Supply Chain Management – what is it?

..... all aspects of managing the processes leading to....



..... all aspects of managing the processes leading to.....

Industry Profitability

Consumer

satisfaction

■ Trueness to promise, eg eating quality

■ Choice of variety, growing location

..... all aspects of managing the processes leading to.....

Industry Profitability

Consumer

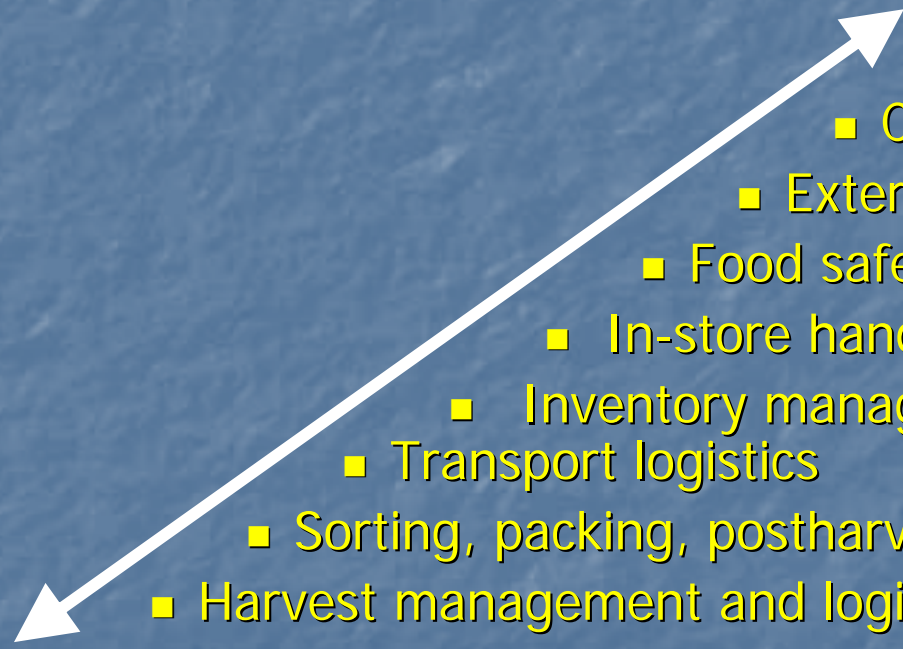
satisfaction

- 
- Trueness to promise, eg eating quality
 - Communication
 - Food safety, integrity and traceability
 - Inventory management, volumes, storage conditions
 - Sorting, packing, postharvest treatments
 - Production practices
 - Choice of variety, growing location

.....all aspects of managing the processes leading to.....

**Consumer
satisfaction**

Industry Profitability



- Trueness to promise, eg eating quality
- Communication
- External appearance
- Food safety, integrity and traceability
- In-store handling, presentation, consumer behaviour
- Inventory management, volumes, storage conditions
- Transport logistics
- Sorting, packing, postharvest treatments
- Harvest management and logistics
- Production practices
- Choice of variety, growing location

PROCESSES



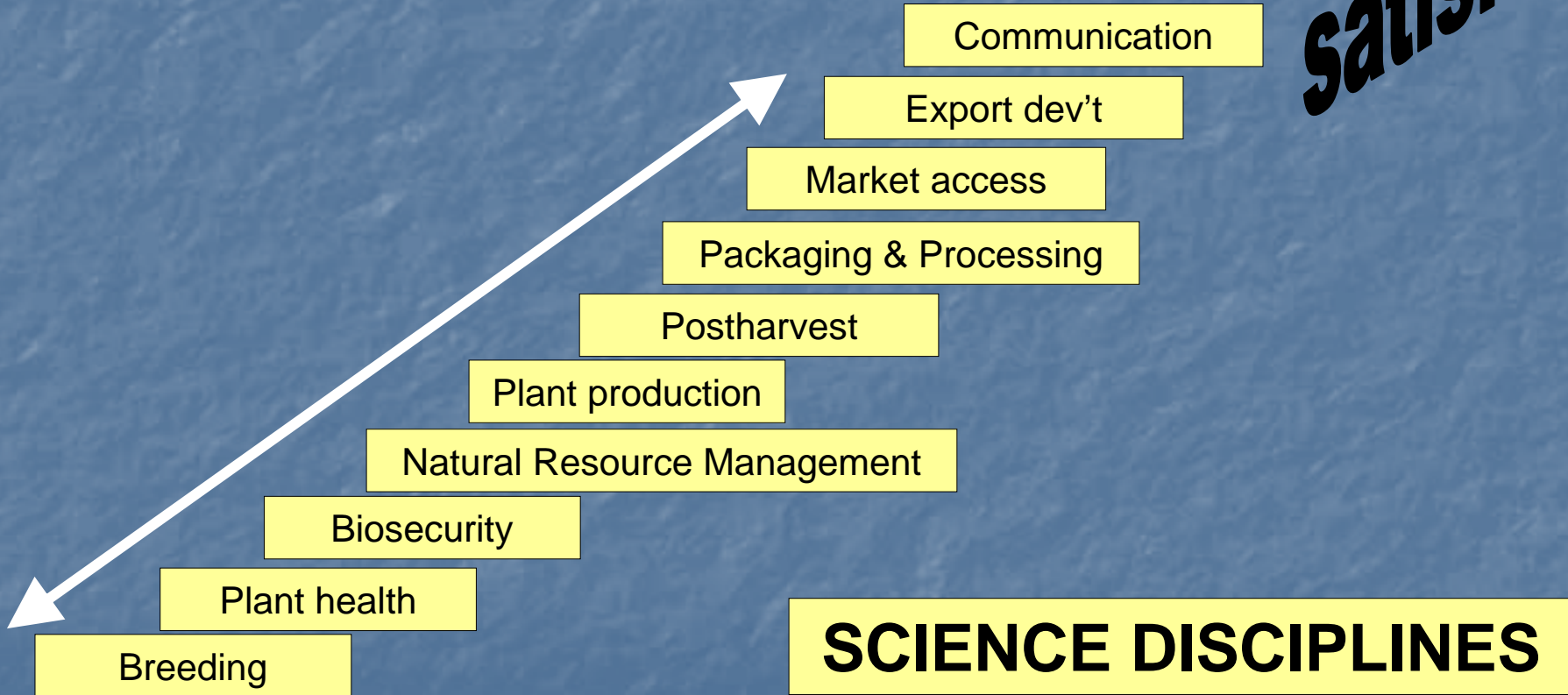
How does Hort Science help?

Two white arrows originate from the text 'How does Hort Science help?'. One arrow points vertically upwards towards the green arrow, and the other points diagonally upwards and to the right towards the 'Consumer satisfaction' text.

..... all aspects of the science leading to....

**Consumer
satisfaction**

Industry Profitability



**Consumer
satisfaction**

Industry Profitability

STAGES

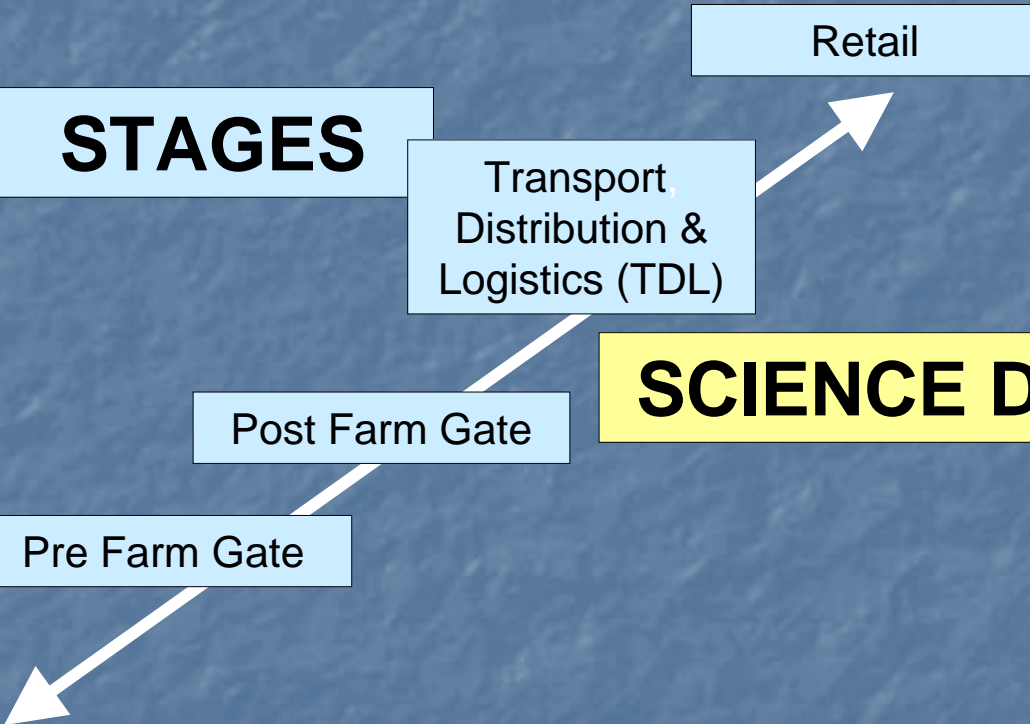
Retail

Transport
Distribution &
Logistics (TDL)

SCIENCE DISCIPLINES

Post Farm Gate

Pre Farm Gate



**Consumer
satisfaction**

Industry Profitability

STAGES

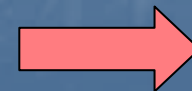
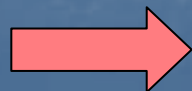
SCIENCE DISCIPLINES

WHOLE-OF-CHAIN NEEDS

Information & analysis systems

Industry Development systems (Capacity Building)

Quality & Food safety systems



Integrated Supply Chain systems

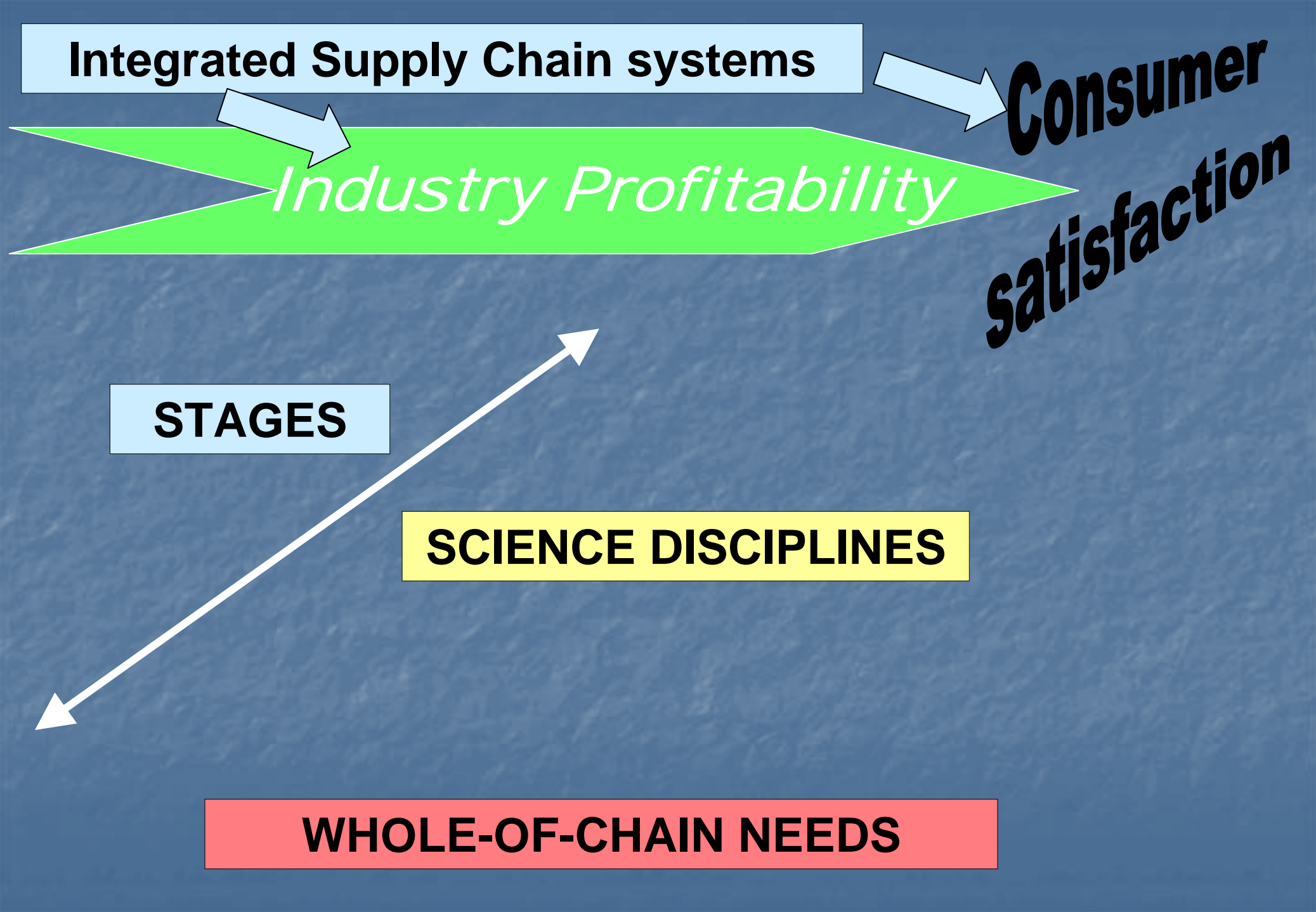
**Consumer
satisfaction**

Industry Profitability

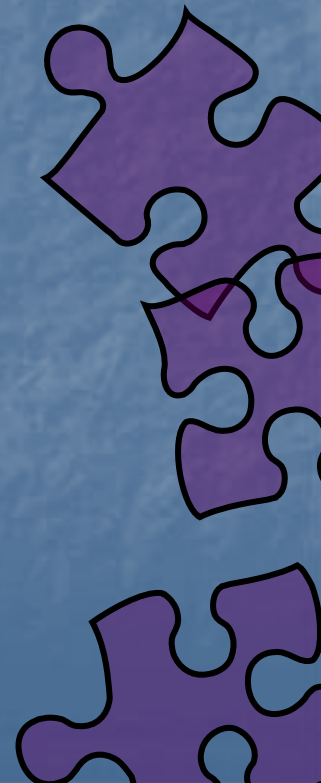
STAGES

SCIENCE DISCIPLINES

WHOLE-OF-CHAIN NEEDS



SUPPLY CHAIN ISSUES



Horticulture Business Code

Export alliance

Scan data

Near Infra Red sweetness testing

Radio Frequency ID

Managed varieties

Assurance systems

Electronic Data Interchange

Competitor analysis

One-touch packaging

**SUPPLY CHAIN
ISSUES**

Supply data

Eating quality Freight logistic

Lean Thinking

Modified atmosphere

Retail relationships

Category management

Cool chain


Food service channel data

Controlled ripening

In-store merchandising



**SUPPLY CHAIN
ISSUES**



Information
+
Coordination
+
Innovation

= the "Supply Chain Mix"

Supply Chain is also part of marketing

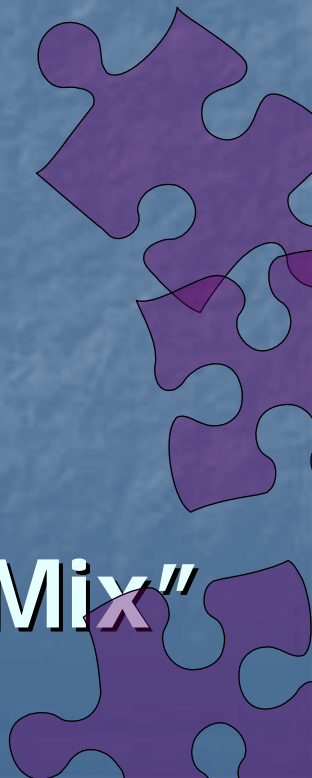
Product

+ Place (Distribution)

+ Price

+ Promotion

= the "Marketing Mix"



Case study

	Information	Coordination	Innovation
Product	➤ Sensory testing	➤ Maturity standards	➤ New fruit Variety ➤ Sweetness testing (NIR)
Place (Distribution)			
Price			
Promotion			

Case study

	Information	Coordination	Innovation
Product	➤ Sensory testing	➤ Maturity standards	➤ New fruit Variety ➤ Sweetness testing (NIR)
Place (Distribution)	➤ Usage & Attitude research	➤ From a range of production zones	➤ Cool chain tracking ➤ Ethylene management
Price			
Promotion			

Case study

	Information	Coordination	Innovation
Product	➤ Sensory testing	➤ Maturity standards	➤ New fruit Variety ➤ Sweetness testing (NIR)
Place (Distribution)	➤ Usage & Attitude research	➤ From a range of production zones	➤ Cool chain tracking ➤ Ethylene management
Price	➤ Supply forecasts		
Promotion	➤ Demand management	➤ Jointly with retailers	

“Innovations in marketing and business practices
are as vital as technical innovations in order to
develop competitive supply chains”

(Fearne and Hughes, 1999)

