Agrologistics innovation in The Netherlands

George van Eldik

Zhanjiang, February 24th 2012
Agrologistics in The Netherlands

‘Dutch Ying & Yang’

Strong Dutch Logistics industry

Strong Dutch agricultural industry
Agrologistics in The Netherlands

Strong combination of agricultural industry & logistics industry

Dutch agrologistics

Agrologistics innovation in The Netherlands
Agrologistics innovation in The Netherlands
Agrologistics innovation in The Netherlands
Agrologistics innovation in The Netherlands
Agrologistics innovation in The Netherlands

Intro
Agrologistics innovation in The Netherlands

Last presentation before lunch..... What’s my menu?

The agricultural industry in The Netherlands in (inter)national context
- International context
- National context

Agrologistics in The Netherlands
- National gross added value agricultural industry
- Agrologistics within total agricultural industry
- New era?

Focus on Connecting theme
- Hinterland strategy
- Intermodal transports
- Sustainable transports

Agrologistics innovation themes
- Directing
- Clustering
- Connecting
The Dutch agricultural industry in (inter)national context

**International context**

**New economic order**
- Economic slowdown of developed economies
- More important role for emerging & developing economies

**Rapid increase of food and energy prices**
- Leading to hunger
- Leading to social unrest

**Dutch agricultural industry can contribute to global:**
- Food safety
- Food quality
- Food availability
- Sustainability
- Food affordability

*Agrologistics innovation in The Netherlands*
The Dutch agricultural industry in (inter)national context

National context

Economy not bouncing back after recession
- Inflation
- Government cutbacks
- Alleviation of taxes

The Netherlands are officially in another recession
- Negative growth Q3 2011
- Negative growth Q4 2011

Joint initiatives in agrologistics
- Government
- Knowledge providers
- Private enterprises

Agricultural industry is cornerstone of national economy
- About 10% of national GDP
- Important motor for other industries

Agrologistics innovation in The Netherlands
Agrologistics in The Netherlands

Gross Dutch added value of national origin in EUR billion, 2011

Subtotal EUR 27 billion (est)

<table>
<thead>
<tr>
<th>Sector</th>
<th>Value (EUR billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture</td>
<td>7</td>
</tr>
<tr>
<td>Processing industry</td>
<td>5</td>
</tr>
<tr>
<td>Input manufacture</td>
<td>11</td>
</tr>
<tr>
<td>Agrologistics</td>
<td>4</td>
</tr>
</tbody>
</table>

Agrologistics innovation in The Netherlands
Agrologistics in The Netherlands

Gross Dutch added value of foreign origin in EUR billion, 2011

Subtotal EUR 23 billion (est)

- Processing industry
  - Supply
  - Agro-logistics

Agrologistics innovation in The Netherlands
Agrologistics in The Netherlands

Focus on agrologistics as part of total agricultural industry

Agricultural industry is about 10% of national GDP

Agrologistics is about 24% of total agricultural industry
Agrologistics in The Netherlands

Development of agrologistics as part of total agricultural industry

1995: 17%
2000: 19%
2005: 21%
2010: 24%
New era for Dutch agrologistics?

- Developed Dutch agrologistics sector
- Dutch top position in agrologistics is challenged
- Changing economic order
- Changing global demand
- Changing global issues
- New technologies
New era for Dutch agrologistics?

- Developed Dutch agrologistics sector
- Dutch top position in agrologistics is challenged
- Changing economic order
- Changing global demand
- Changing global issues
- New technologies

- **Review of:**
  - Vision
  - Strategy
  - Tactics
  - Operations
  - Preconditions
New era for Dutch agrologistics?

- Developed Dutch agrologistics sector
- Dutch top position in agrologistics is challenged
- Changing economic order
- Changing global demand
- Changing global issues
- New technologies

Review of:
- Vision
- Strategy
- Tactics
- Operations
- Preconditions

Agrologistics innovation efforts
Agrologistics innovation

Levels of innovation

- Visionary level
- Strategical level
- Tactical / Operational level
- Preconditioned level

Agrologistics innovation in The Netherlands
Agrologistics innovation

Themes of innovation (and preconditions)

Directing
Visionary level

Connecting
Strategical & Tactical / Operational level

Clustering
Strategical & Tactical / Operational level

Preconditions
Preconditional level

Agrologistics innovation in The Netherlands
Innovation themes

Level
- Visionary
- Strategical
- Tactical / Operational
- Pre-conditional

Directing
- Directing the agrologistics chain

Connecting
- Hinterland strategy
  - Intermodal transports
  - Sustainable transports

Clustering
- International networks strategy
  - Facilitating local for local
  - Quality driven logistics

Preconditions
- Infrastructure / Traffic management
- Education / Labour market
- Digitalization / Standardization
- Legislation

Agrologistics innovation in The Netherlands
Main innovation themes

- The main innovation themes in the agrologistics sector today are **Directing**, **Connecting** and **Clustering**
- The overarching theme is **Directing**
- The main challenge to innovation is the transition from providing a mere logistical hub to that of an integrated logistics service network - directing the entire agricultural chain
- Both the **Connecting** theme and the **Clustering** theme require attention at a strategic level, as well as at a tactical / operational level
- In order to develop effectively, a set of **preconditions** must be met
- At all levels, cooperation with government and knowledge providers (such as universities and research institutes) plays an essential role
**Directing**

- Building a service network of directing, managing and organizing global agricultural products flows
- Not only handling the physical product flow and related information, but also directing and monitoring these flows
- Opening up new ways of cooperation on a European or even global scale
- Combining global and national (even local) flows
- The ultimate goal being:
  - Ensuring food safety
  - Improving food quality
  - Improving efficiency
  - Improving availability & affordability
  - Improving sustainability
Innovation themes

Connecting

- Combining the transport links used for the supply of raw materials between clusters and those used for the removal of products and by-products
- Reducing ‘traditional’ kilometres per truck and offer the opportunity to deploy other means of transports
- Providing intermodal services (road, rail, inland waterways, short sea shipping, pipe lines); combining different agricultural products flows
- Cutting costs, increasing reliability and improving sustainability
- Apart from intermodal transports, also improving the physical handling of agricultural products
Innovation themes

Clustering

- Combining activities to prevent the spatial scattering of the primary production, processing and distribution of agricultural produce
- Minimizing the need for transports
- Reducing the spread of diseases by reducing movements
- Promoting and facilitating ‘industrial ecology’; re-using by-products
- Consolidating hubs and trade parcs
Focus today: Connecting theme examples

**Directing**
Directing the agrologistics chain

**Connecting**
- Hinterland strategy
- Intermodal transports
- Sustainable transports

**Clustering**
- International networks strategy
- Facilitating local for local
- Quality driven logistics

**Preconditions**
- Infrastructure / Traffic management
- Education / Labour market
- Digitalization / Standardization
- Legislation

Level:
- Visionary
- Strategical
- Tactical / Operational
- Pre-conditional

Agrologistics innovation in The Netherlands
## Connecting theme: Hinterland strategy

### Strategical level

<table>
<thead>
<tr>
<th>Involvement</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
<td>Infrastructure for storage and handling, temperature control</td>
</tr>
<tr>
<td>HIGH</td>
<td>Efficient trans-shipment locations for all means of transportation</td>
</tr>
<tr>
<td>Knowledge providers</td>
<td>Combining different flows of agricultural products</td>
</tr>
<tr>
<td>HIGH</td>
<td>Professionalization of the labour market: agrologistics training and education</td>
</tr>
<tr>
<td>Private enterprises</td>
<td>Strengthening current initiatives and investments</td>
</tr>
<tr>
<td>HIGH</td>
<td></td>
</tr>
</tbody>
</table>

---

Agrologistics innovation in The Netherlands
Connecting theme: Intermodular transports

**Tactical / Operational level**

<table>
<thead>
<tr>
<th>Involvement</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
<td>Creating minimum volumes</td>
</tr>
<tr>
<td>MEDIUM</td>
<td>Achieving a mental shift in commercial party thinking</td>
</tr>
<tr>
<td>Knowledge providers</td>
<td>Improving ICT systems to support intermodal transports</td>
</tr>
<tr>
<td>HIGH</td>
<td>Improving reliability and flexibility in the different means of transports</td>
</tr>
<tr>
<td>Private enterprises</td>
<td>HIGH</td>
</tr>
<tr>
<td>HIGH</td>
<td></td>
</tr>
</tbody>
</table>
Flora Holland / Amsterdam Schiphol airport

Agrologistics innovation in The Netherlands
Agrologistics innovation in The Netherlands
Agrologistics innovation in The Netherlands
Case: Flora Holland / Amsterdam Schiphol airport
Port of Rotterdam

Agrologistics innovation in The Netherlands
Agrologistics innovation in The Netherlands
Agrologistics innovation in The Netherlands
Case: Port of Rotterdam

Intermodal Initiatives by Port of Rotterdam

Agrologistics innovation in The Netherlands
## Connecting theme: Sustainable transports

### Tactical / Operational level

<table>
<thead>
<tr>
<th>Involvement</th>
<th>Challenges</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government</td>
<td>• Transport savings through clustering and adjustments in production and processes</td>
</tr>
<tr>
<td></td>
<td>• Shifting to the best means of transportation</td>
</tr>
<tr>
<td>LOW</td>
<td></td>
</tr>
<tr>
<td>Knowledge providers</td>
<td></td>
</tr>
<tr>
<td>MEDIUM</td>
<td></td>
</tr>
<tr>
<td>Private enterprises</td>
<td></td>
</tr>
<tr>
<td>HIGH</td>
<td></td>
</tr>
</tbody>
</table>
Lean & Green program
START
Agrologistics innovation in The Netherlands
Agrologistics innovation in The Netherlands
Agrologistics innovation in The Netherlands
Case: Lean & Green program
Concluding…

**Level**
- Visionary
- Strategical
- Tactical / Operational
- Pre-conditional

**Directing**
- Directing the agrologistics chain

**Connecting**
- Hinterland strategy
- Intermodal transports
- Sustainable transports

**Clustering**
- International networks strategy
- Facilitating local for local
- Quality driven logistics

**Preconditions**
- Infrastructure / Traffic management
- Education / Labour market
- Digitalization / Standardization
- Legislation

Agrologistics innovation in The Netherlands
Thank you for your attention

I hope to sharpen my views on agrologistics by learning from your views and best practices as well

George van Eldik