Tetra Pak

“Un pozzo di scienza”
I.T.I.S. F.Corni 27.03.09
How do they do it?

Discovery Channel, March 2008
Today ... Benefits of aseptic technology

- Product remains fresh for months without refrigeration and preservatives
- Cost-effective transport and storage with minimal environmental impact

In 1952 ... the first Tetra Pak package

“The most important food science advancement of the 20th Century.”
Institute of Food Technologists 1989
Tetra Pak: a full system supplier

Looking at the entire value chain

Raw material  Processing & Packaging  Food Manufacturer  Distribution and Channel  Consumer  Environment
Tetra Pak: a full system supplier

We supply complete integrated processing, packaging and distribution lines, and stand-alone equipment, carefully tested to make sure they give you optimal performance.
The Packaging Line
The Aseptic Packaging Process

- Packaging Material Drying
- Packaging Material sterilization
- Packaging Material Tube Forming
- Product Filling
- Longitudinal Sealing
- Semi-finished package forming, transversal sealing and cutting
- Packaging Material Reel
- Final folding. The package is given its final shape
The Packaging System

- Two-jaws system
- Chain driven system
A package for every need
... innovative straws...

<table>
<thead>
<tr>
<th>Taste</th>
<th>Visual</th>
<th>Scent</th>
<th>Touch</th>
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<tbody>
<tr>
<td>Sensory straw &amp; sourblast straw</td>
<td>Different colours &amp; shapes</td>
<td>Perfumed straws</td>
<td>Colour changing straws</td>
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Openings and closures
more convenience for consumers

Perforation
Straw Hole
PullTab™

ReCap3™
ReCap2™
FlexiCap™

StreamCap™
SlimCap™
LightCap™
Not only liquid food

A new packaging concepts
A global company, working locally

- Present in more than 150 countries across five continents
- 45 packaging material and closures plants
- 2 major R&D centers
- 20,250 employees
- 320.5 millions € net sales
What’s in Modena?

- Actual employees: 690
- Foreign population: 16%
- Average age: 39
- Seniority: 10y
- Degree: 40%
Tetra Pak is world leader in aseptic carton packaging

- Recognized by the Institute of Food Technologists as “the most important food science advancement of the 20th century”
- Tetra Pak remains focused on innovation and technology leadership
- More than 230 patent families, that generated over 1700 patent applications and patents internationally
- Innovations have created new markets for milk, juice, soups and other liquid food
- Development at Modena drives global vision
- 660 strong team continue to deliver – as many as 32 nationalities represented in Modena
Environment @ Tetra Pak
Man – Environment interaction
increasing awareness
Our commitment to the environment

We are committed to running our business in an environmentally sound and sustainable manner.

Active role:
- minimise environmental impacts
- anticipate law requirements
- communicate our performances
The Value Chain – Product life-cycle

To reduce the impact in each step of the life cycle

- Paperboard
- Aluminium
- Plastics
- Base Materials
- Packaging Material Production Process
- Packaging Materials
- Package Specifications
- Packaging Systems
- Distribution Systems
- Retailer
- Consumers
- Disposal Recycling
Change approach -
Global vision (life-cycle thinking)

- Recycling goal
- Forestry goal
- Raw material sourcing
- Post-consumer management
- Climate goal
- Tetra Pak converting plants
- Filling Machines
- Transports (in&out)
Tetra Pak’s environment position
Four pillars driving focus and competitiveness
Renewability matters
Focusing on natural resources that are exhaustible or replaceable by new growth

- Absorbs CO₂
- Re-grows
- Releases oxygen
- Audited supply
Responsible Forestry Management

- Certification according to internationally recognized standards
- Full traceability of wood fibres to assure legal & acceptable sources
- Working with key stakeholders
- Reporting on progress
Looking at impact from the material
Efficiency and effectiveness in focus

Base materials produced for Tetra Pak

Source reduction & supplier improvements
Reduce share of non-renewable materials

Greenhouse gas emissions (CO₂ equivalents)

Aluminium
Polymers
Paperboard

0%
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
Comparing CO₂ performance
Example Germany, data used for legislative ends

Comparison of CO₂ emitted in grams / liter

Sources
* Ökobilanzieller Vergleich von Getränkekartons und PET-Einwegflaschen (LCA of Beverage Cartons and PET One-Way Bottles), (2006); IFEU Heidelberg, commissioned by FKN, Wiesbaden. Peer reviewed LCA for German conditions. Results for 1-liter juice aseptic packages (beverage carton & PET bottle).
** Life Cycle Assessment for Drinks Packaging Systems II Phase 1, (2000); Prognos GmbH, IFEU Institut, commissioned by Umweltbundesamt (German Federal Environmental Agency), Berlin. Peer reviewed LCA for German conditions. Results for 1-liter juice bottle (one-way glass).
Climate Programme
our commitment

Climate Goal:
Reduce CO2 emission by 10% within 2010 compared to 2005

What we do:
- Implement energy efficiency
- Use energy coming from renewable sources

We participate in the World Wildlife Fund (WWF) Climate Savers Program
'Earth Hour'

This is a global effort to show that it is possible for people of the world to take unified action on global warming. This is a movement of the people to protect the future of our planet, and we need you to help make it happen.
Key environmental attributes of packaging machines

Energy consumption
Waste levels
Water consumption and discharged
Harmful substances
Environmental profile

Electricity

Energy consumption range of competitor carton packaging equipment

Typical plastic packaging line (filler + stretch blow moulding machine)

- 60%
- 80%

Average consumption Tetra Pak® A3 machines

High speed equipment

Economy equipment

TBA/3
TBA/8
TBA/19
TBA/22
TBA/22
Tetra Pak® A1

Economy equipment

-60%
-80%

Public
Recruitment / May 09
Environmental profile

Water

- Typical plastic packaging line (filler + stretch blow moulding)
- Water usage range of competitor carton packaging equipment
- Average consumption Tetra Pak® A3 machines
- Tetra Pak® A1
- High speed equipment

Lit / 1000 packages

- TBA/3
- TBA/8
- TBA/19
- TBA/22

- A3 -0200
- A3 -0200
Tetra Pak A3 machines are the first in packaging business to obtain a Environment Product Declaration (EPD)

- A new market tool to inform about environmental performance of products:
  - Objective
  - Comparable
  - Credible

www.environdec.com
Trasport and Logistic

8,800 glass bottles
vs
8,800 Tetra Pak packages
Recyclability

Recycling is the foundation for environment performance
“from waste to resource”
At the end of the process

Paper fibres recovered in repulping process

Share of Poly/Al-fraction recycled
How to collect Tetra Pak packages

Each Municipality chooses its best way of collection:

- 80% with waste paper
- 20% with other materials (plastic, aluminium, glass) with subsequent selection.

Have a look at [www.tiriciclo.it](http://www.tiriciclo.it)
Examples
Hera Campaign

- 2,4 mio inhabitants
- 140 municipalities
- 900,000 leaflets
- 2,500 billposting
- 210 city buses
Recycled products
Recycled products
Recycled products

Acquario di Genova

▶ 75,000 brochures and 3,000 block notes made of Cartalatte

▶ Products made of EcoAllene on sale at Acquario book shop

▶ A plastic model, panels and leaflet which describe the Recycling of beverage cartons
Responsibility Matters
We communicate openly with our stakeholders
Future

► Environment
► New technologies
► New markets
► New products

Together with our customers, we are creating the future of our industry….

…are we missing anything?
People @ Tetra Pak

Are our most unique competitive advantage

.... People make the difference
Tetra Pak Core Values

Customer Focus & Long-Term View

Quality & Innovation

Freedom & Responsibility

Partnership & Fun
Who we are looking for?

- innovative mindset
- positive attitude to change
- results-oriented approach
- good communications skills
- proactive & responsible
- excellent written and spoken English
Are you READY to take this CHALLENGE?

- Internship (min 3 months)
- Thesis

**Service Engineer program**

- Age 18
- Good in both spoken and written English
- Willing to travel for 50% of the time during the first 2 years
- Problem Solver
- Team player and a good communicator
- Tetra Pak Ambassador
- Cultural Sensitivity
- Excited about leading activities independently
- Available for a 6 months internship period
Find the best way to join Tetra Pak

www.tetrapak.com
Our vision

We commit to making food safe and available, everywhere
My experience in Tetra Pak
“Service Engineer Program”