



LOGISTICS

Erasmus+ A.P.P.L.E.S.

Milazzo Meeting

12/12/2016

Origins of Logistics

- The term «Logistics» comes from the ancient greek λογικός (*logikos*) that means logic.
- Part of military science, it was concerned with maintaining army supply lines while disrupting those of the enemy. The aim was to guarantee the army a simple and best transportation of troops, supplies and armaments.
- During the Persian Empire conquest by Alexander the Great, logistics played a fundamental role in the transportation of all requirements to support the large army passing across the Egean Sea.
- In the ancient Rome Julius Cesar instituted the logistician figure, who was selected amongst the officers of his legions, with the assignment of providing the supplies.

In more recent times Logistics determined the success of D-Day



What is Logistics???

It is the process that guarantees the supplying of raw materials and allows the delivery of end products to customers in the way, location and time were requested by them.



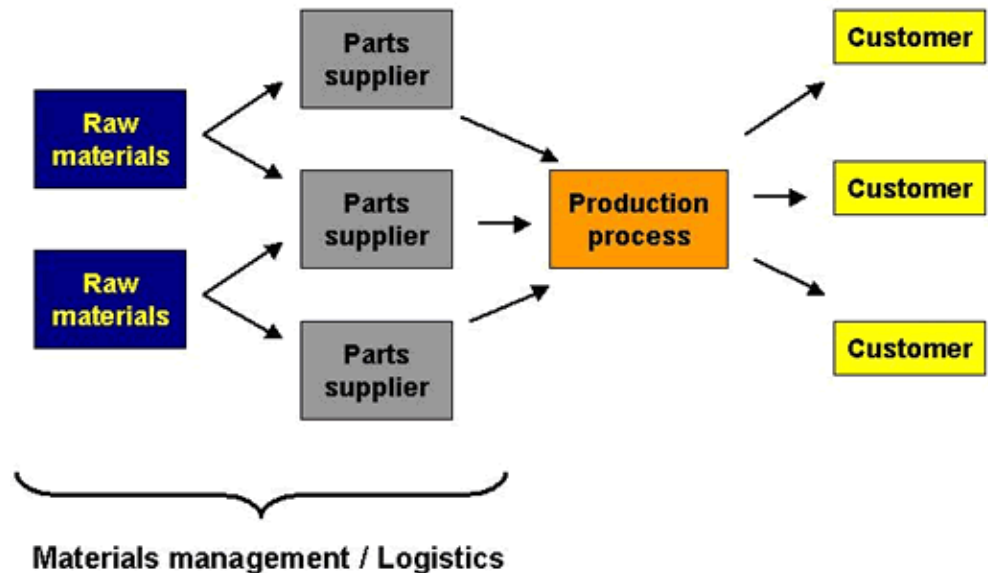
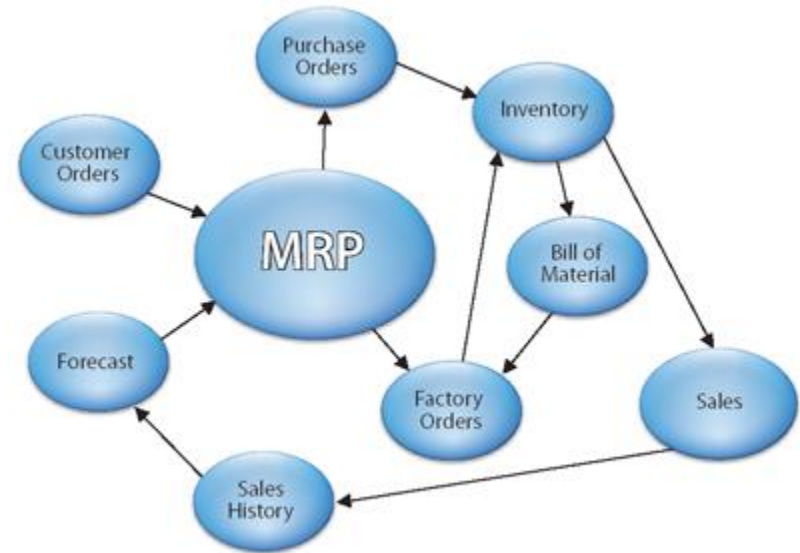
The Evolution 1945-1979

- During the 20 years after WWII, Logistics was restricted almost exclusively to the delivery of end products, and later to the organization of warehouses and transportations of goods.
- In the 70s there was the first evolution of Logistics science, that changed this business from a secondary role to a structured pattern of activities, even more fundamental for a successful enterprise.
- The companies began to get better about:
 - *Physical delivery*
 - *Warehouse storage*
 - *Delivery cycle optimization*



The Evolution 1980-1990

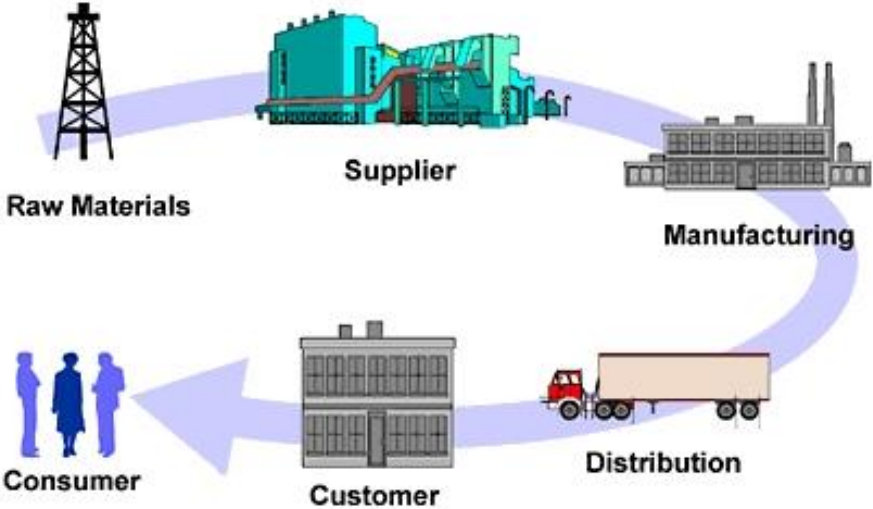
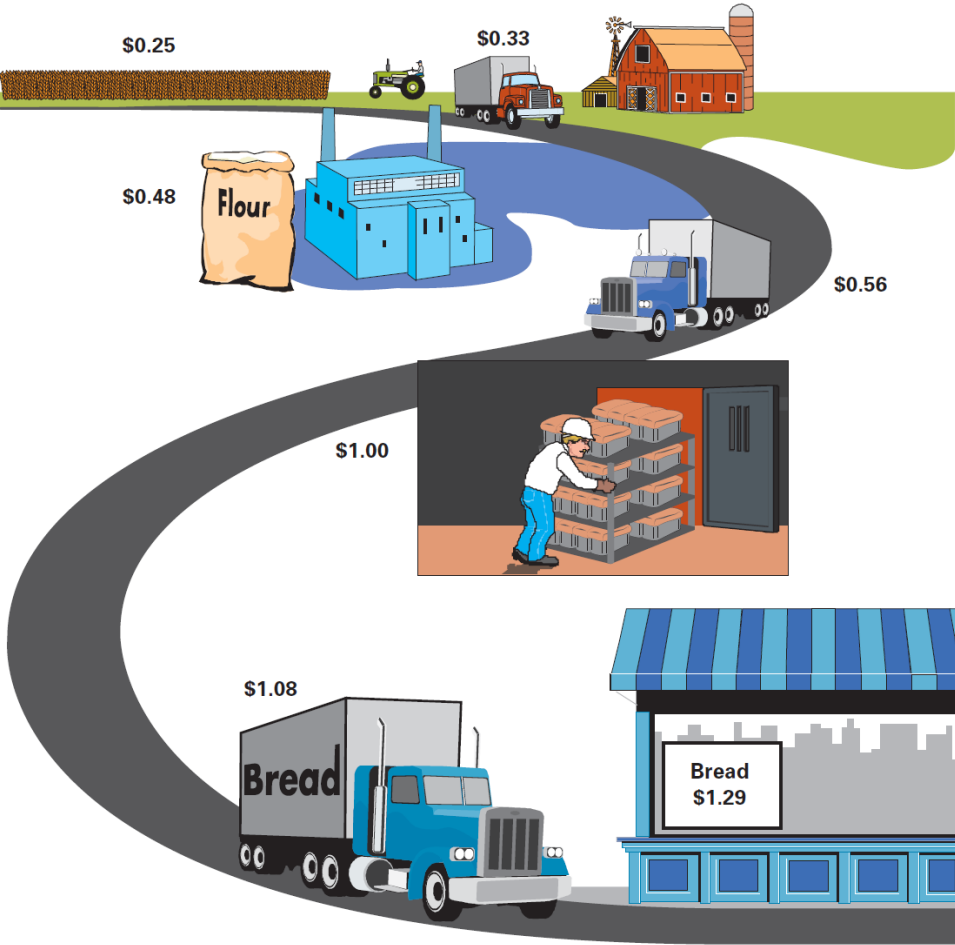
- In the 80s Logistics evolved and improved, thanks to the introduction of new management theories in the companies, i.e. the Materials Requirements Planning (MRP), or the Just In Time (JIT)
- The interest focused on the material management, creating the so called “material logistics”. This term indicates all the activities related to the purchase, the movement and the management of all materials to guarantee the permanent procurement to the factories.



The Evolution 1990-2016

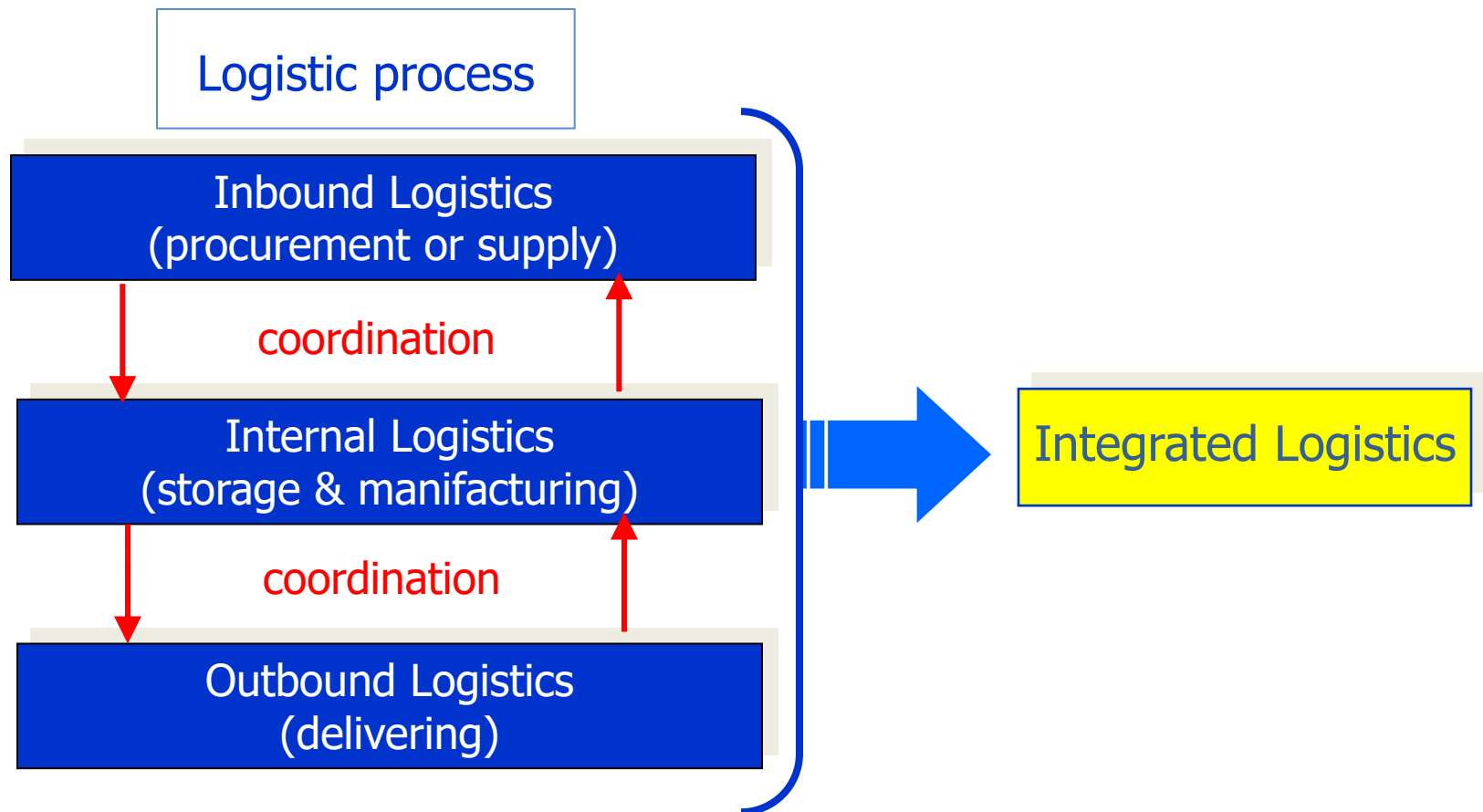
- Logistics radically changed in the 90s from a bunch of operative activities to a cross-functional system, aimed to lead the companies to reach better operative levels. It was the birth event of the integrated logistics.
- Finally, nowadays the Supply Chain Management is the final step of this long evolutive process.
- Logistics passes from a subsidiary function to a strategic role for a company. For this reason some companies decide to outsource the goods transport and movement activities, entrusting the logistic management, that is not part of the company core business, to other companies. This solution minimizes costs and guarantees a better flexibility of the manufacturing organization.

Supply chain management



Logistics: basic concepts

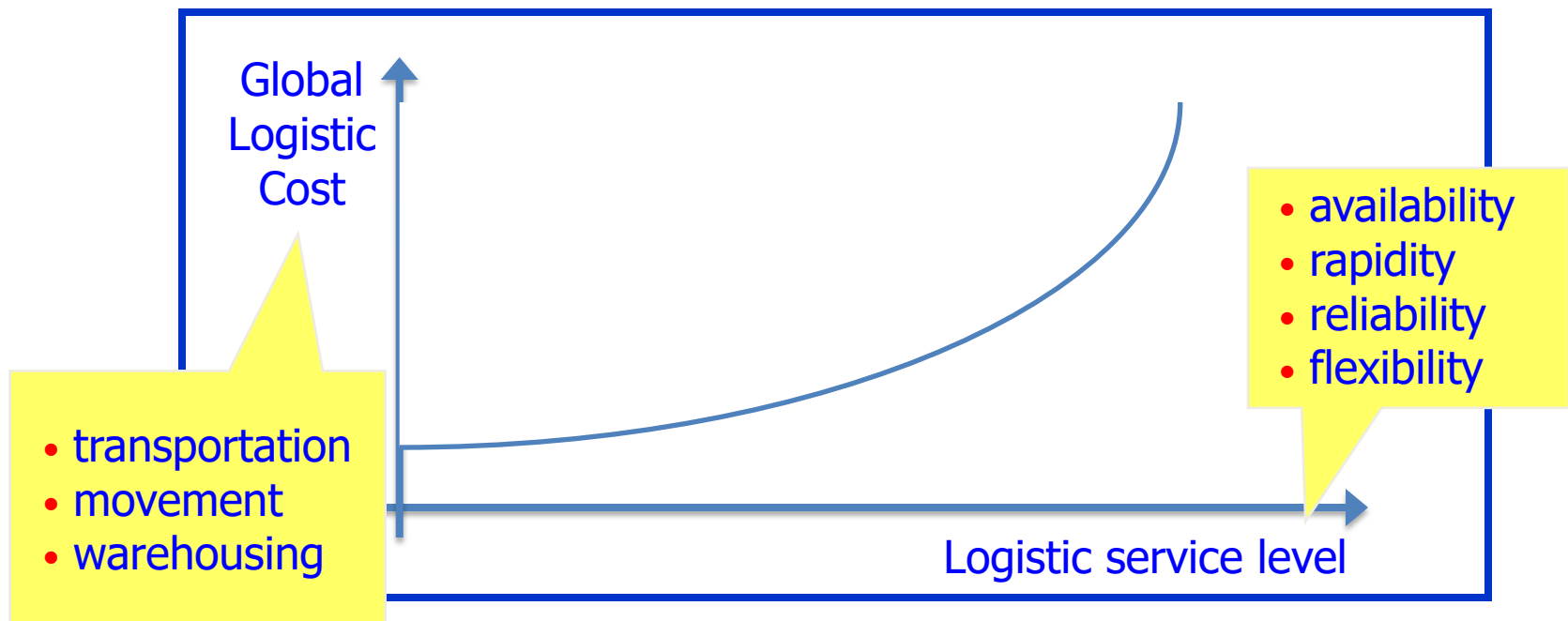
Logistics is the process related to planning, management and control of material movements and associated information data



Logistics: the assignments

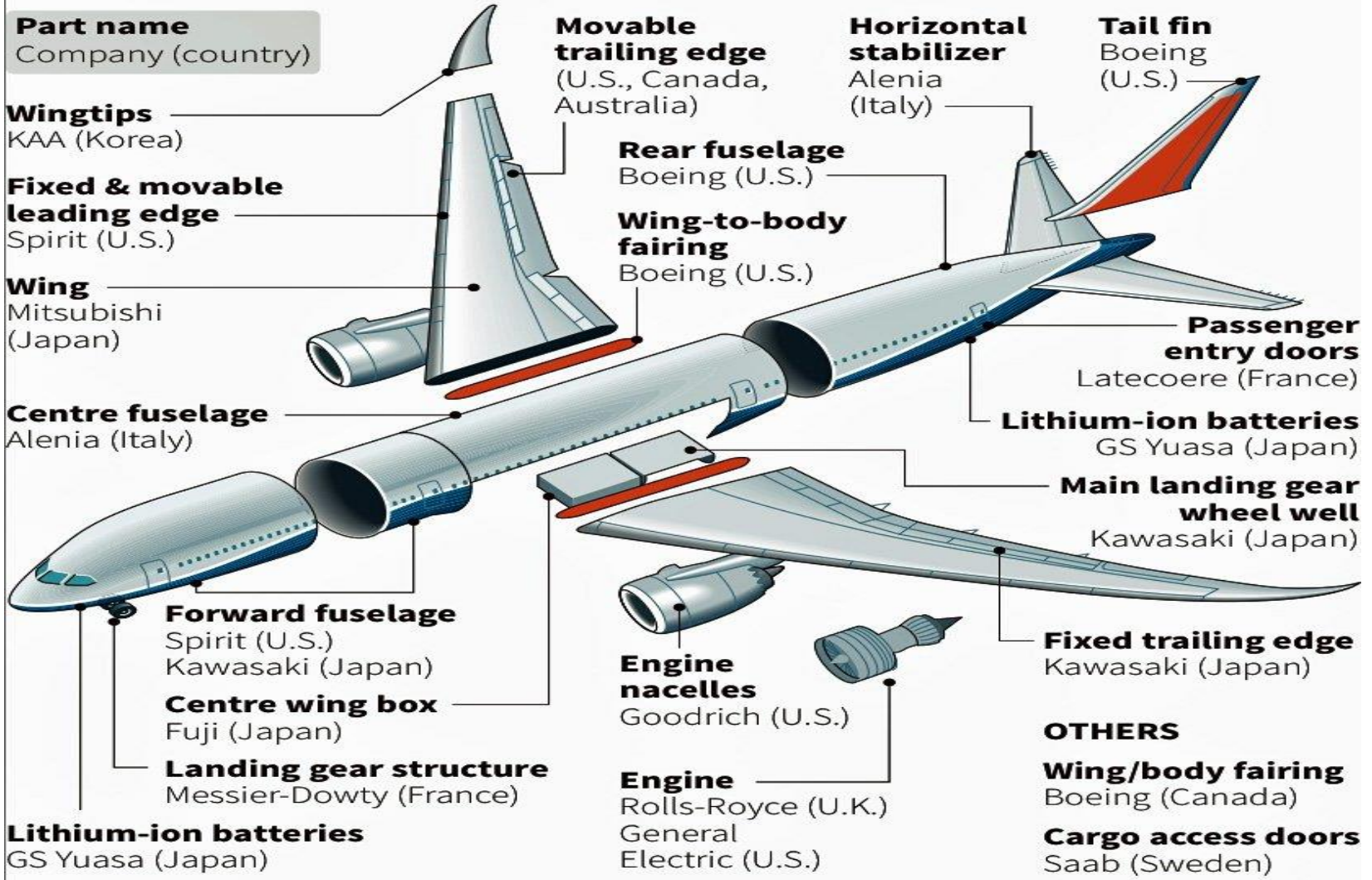
Logistics assignment is the optimization of the materials availability with reference to:

- Space, time and requested amounts
- Cheapness and resources requirement



787 Dreamliner structure suppliers

Selected component and system suppliers.



MEANS OF TRANSPORT

- The recent technology evolution affected Logistics too, particularly with regard to transport speed and goods preservation.
- A lot of different kind of products, some years ago known only in a restricted area, are today sold and delivered in every part of the globe.
- Of course, every product has distinctive features, then different means of transport are useful to it and it requires a different Logistics management.



TRUCK FRIGO



SWAP BODY

(multimodal transportation RAIL/ROAD)



CONTAINER
SHIP



CONTAINER
FRIDGE



MARINE CONTAINER



AIR
CARGO



AIR CONTAINERS

Food Logistics

- The delivery time is the most important element, together with the delivery location and the packaging, for the food industry.
- The food industry is a so called make-to-stock branch, where the customers expect that goods are available in a very short term.

Logistics and ICT

- Nowadays Logistics, thanks to the improvement of hi-tec and ICT and the presence of low-budget solutions on the market, assumed a primary role also for small enterprises or craftsmen.
- Internet assured a medium useful to advertise, promote and sell their own products in every part of the world, also to the smallest family enterprises. This became possible thanks to a closely-woven and fast distribution network.

Logistics for a small enterprise producing food products

- The two most important variables for a small craftsman enterprise making food products are:
 - DELIVERY TIME
 - PACKAGING
- The first aspect is related to the delivering speed and the ability to reduce the intermediate stockage delay
- The second one is related not only to the packaging appearance, but even more to its capacity to maintain intact the organoleptic and qualitative characteristics of the products

FOOD DELIVERY PACKAGING



Ice pack and delivery box for fresh food



Polystyrene packaging for cheese



Air polystyrene pallet



EPS ISOTHERMIC PACKAGING





LOGISTICS

Thanks for
your attention.

dott. Simone Campanella

Erasmus+ A.P.P.L.E.S.

Milazzo Meeting

12/12/2016