



The Healthcare Supply Chain in Italy:

The role of DAFNE in the enhancing of medicine provision

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Dimensions of Pharmaceutical wholesaling, 2004

EU-22



EU-15



Players in the Pharmaceutical Sector in the EU-15

	Manufacturing Industry	Wholesale Industry	Pharmacies
Companies	3,597	426	113,919 ³⁾
Employees	505,432 ¹⁾	65,217	599,867 ³⁾
Sales (million €)	169,633 ²⁾	87,373	113,393 ³⁾

1) No data for Luxembourg available; Belgium, Greece and UK values for 2001

2) No data for Luxembourg available

3) Belgium, France, UK values for 2001

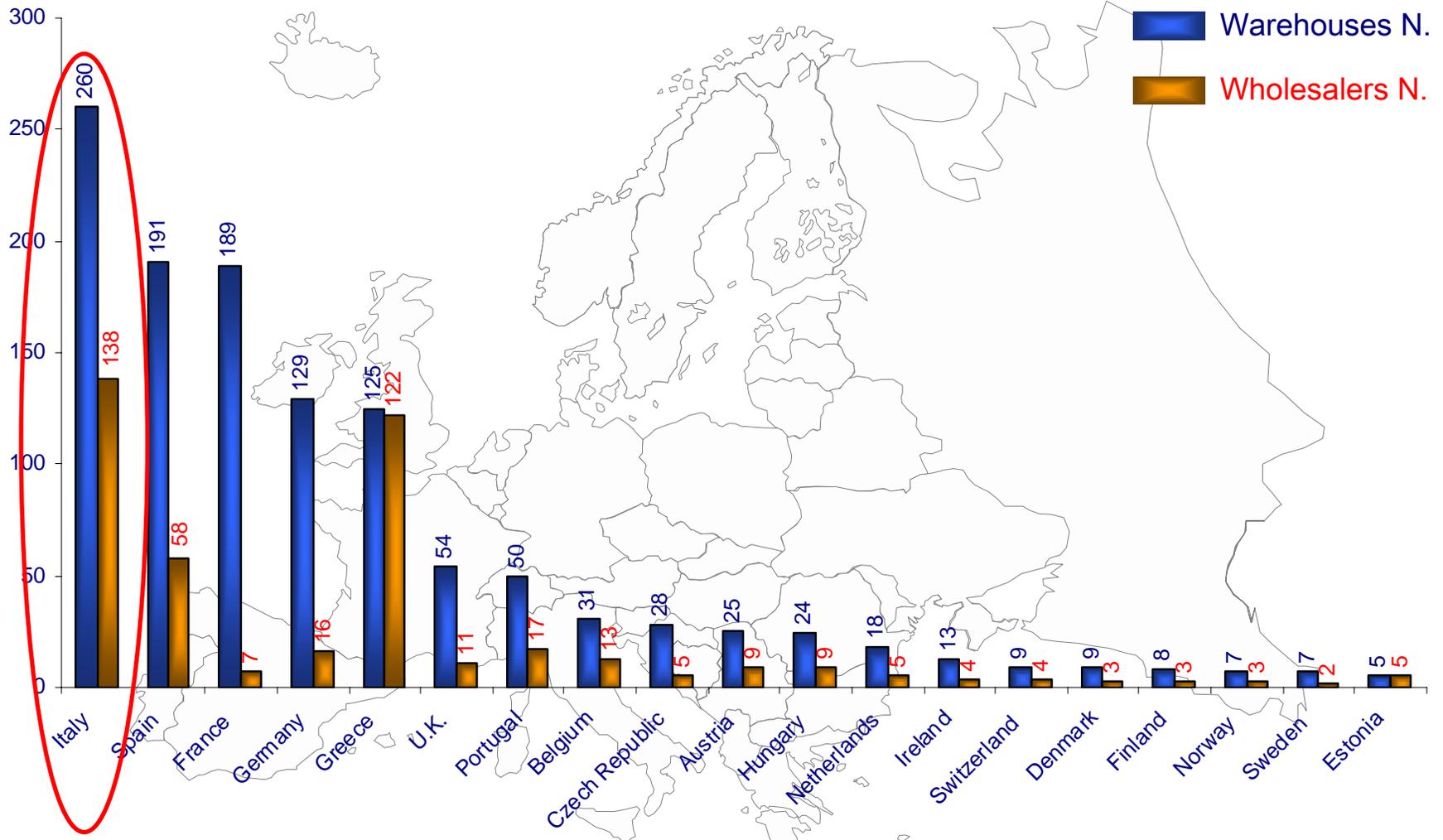
Source: EUROSTAT, GIRP data, HAPC 2005, Walter et al. 2005

- 1) National and regional full-line wholesalers
- 2) The number of wholesalers is so much higher compared to the EU-15 as in Poland alone there are about 140 wholesaler companies.
- 3) Pharmacies, hospital pharmacies and dispensing doctors



Source: EUROSTAT, GIRP data, IPF research

The EU wholesaling network



Source: GIRP, 2004



The Italian Pharma Supply Chain



Manufacturers

> 300

**Pre-Wholesalers
and concessionaires**

180

**Wholesalers
warehouses**

260

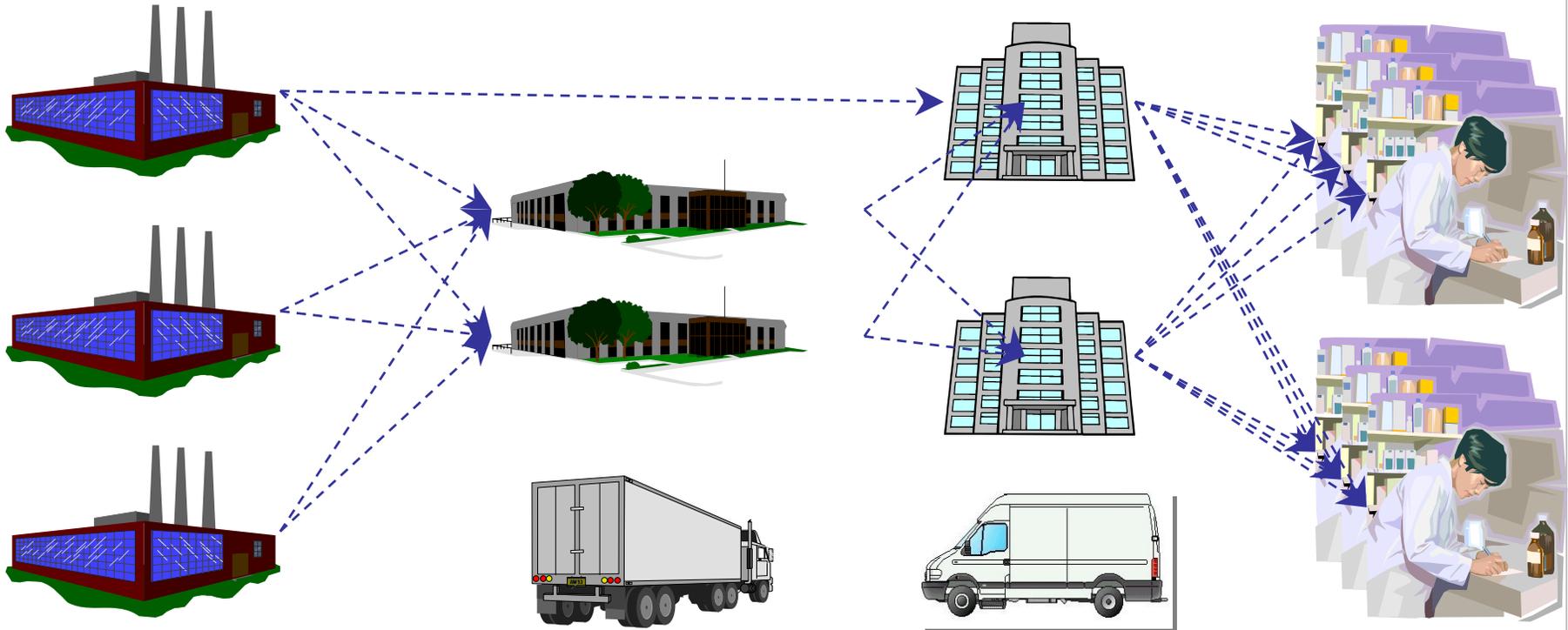
Pharmacies

16.700

ASL and Hospitals

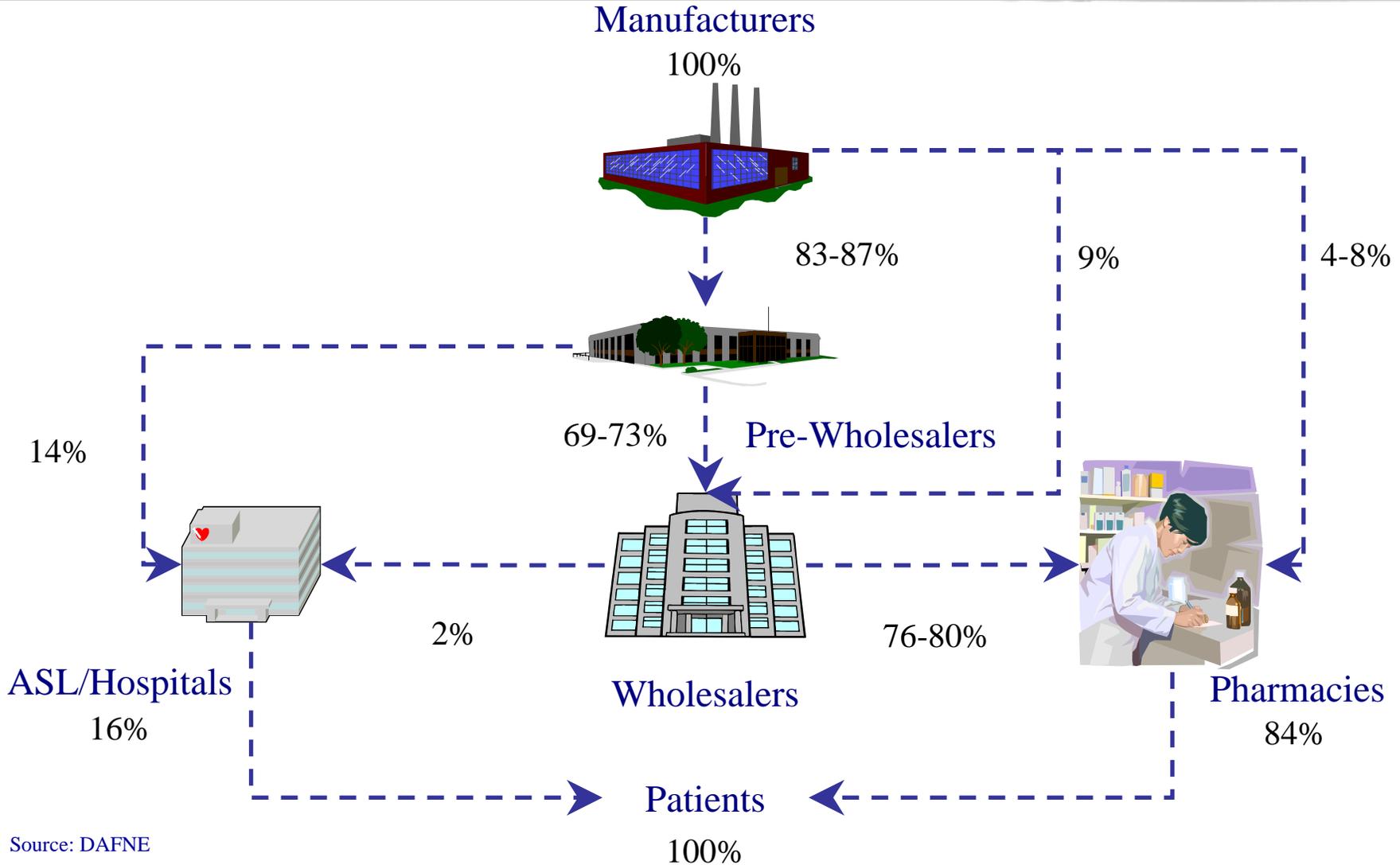
1.300 public

1.000 private



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Source: DAFNE



Distribuzione (Distribution)
Aziende (Companies)
Farmaceutiche (Pharmaceutical)
Network
EDI

Founder Companies July -1991

BOEHRINGER ING. - BOEHRINGER MAN.- CIBA - FIDIA - GLAXO - ICI

Starting orders transmission - 1993

N° 11 Pharmaceutical Companies	19,13%	Market share
N° 29 Distribution Companies	41,35%	Market share





Mission



It's a Consortium between Pharmaceutical Companies and Wholesalers, that aims to involve the pharmaceutical partners through the development of electronic connections with international standard (EDI) and Internet



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Mission: further development

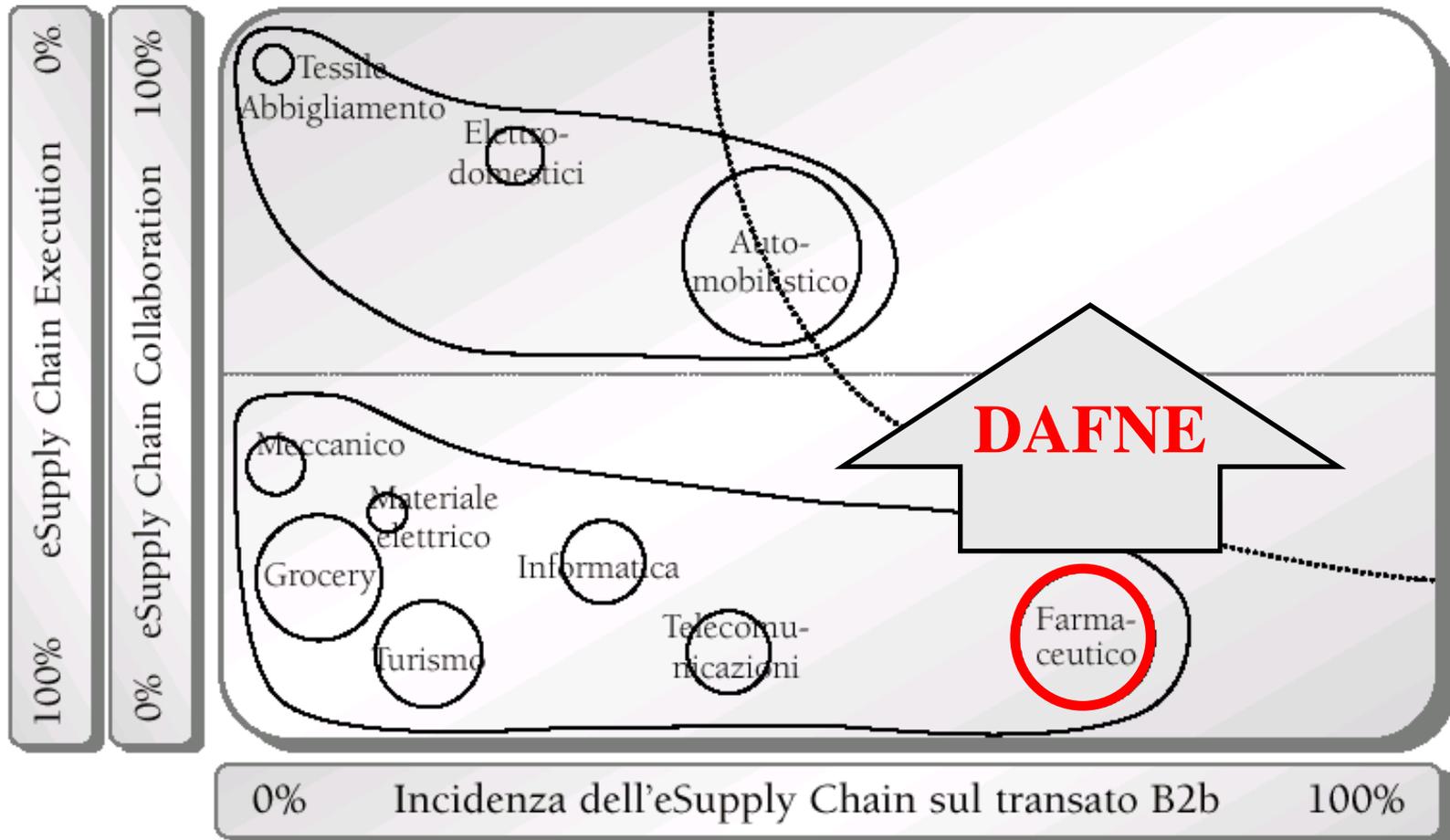


**... AN OPERATIVE COMMUNITY “B2B” WHERE
FINDING MUTUAL SYNERGIES,
DEVELOPING IDEAS AND CONCRETE PROJECTS,
WORKING TOGETHER FOR AN EFFECTIVE
COLLABORATION
WITH ALL THE “PLAYERS” OF
THE PHARMACEUTICAL SUPPLY CHAIN**



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N.B.: la superficie dei cerchi è proporzionale al valore dell'eCommerce B2b in area Supply Chain.



Governance

MEMBERS ASSEMBLY

President: Dr R. Caloni
Vice President: Dr S. Novaresi
BOARD OF DIRECTORS
(6 PH. Manufactures + 6 Wholesalers)

- **Technical Committee**
- **Logistics Team**
- **Administrative Team**

PROJECTS TEAMWORKS

Logistics:

- **Order**
- **Order Confirmation**
- **Order Tracking**
- **Collaborative Logistics**

**“EASY
DAFNE”**

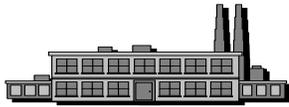
**ELETRONIC
INVOICE**

**HOSPITAL
ORDERS**



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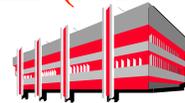


Manufactures

DAFNE Consortium (end '05)

Market Share

95% (56% + 39%)



Wholesalers

Market Share

99% (67%+32%)

38 Pharmaceutical Companies

- Abbott
- ABC Farmaceutici
- Allergan
- Amgen
- Angelini
- Astra Zeneca
- Baxter
- Bayer
- Beiersdorf
- Biofutura Pharma
- Boehringer Ingel.
- Boots Health C.
- Bracco
- Bristol M.S
- Chiesi
- Co.Di.Fi
- Cosmetique Active
- Eli Lilly
- Fidia
- Glaxosmithkline
- Inneov
- Lab. Boiron
- Novartis
- Plada
- Pfizer
- Pierre Fabre
- Promefarm
- Recordati
- Roche
- Rottapharm
- Sandoz
- Sanofi-Aventis
- Schering
- Schering Plough
- Skill in F.
- Sigma Tau
- Simesa
- Teva Pharma

16 Deposits

Pharma Logistics - Chiapparoli - Fiege Goth – Dimaf – Pieffe Ferlito - Profarco –
 Jacopetti - Neologistica – Sirdeco- Phardis
 Sitra Nord – Novasorel – Cabassi & Giurati – Profarma - Columbus

30 Wholesalers

- Alleanza Salute It.
- Al-Pharma
- Antica Farm. Mod.
- C.E.F.
- Chifar
- Co.Fa.Ro.
- Comifar Group
- Co.Si.Far
- Cotifa
- Farmacentro
- Difar
- Farcopa
- Farmaca Cannone
- Farmauno
- Farvima
- Galenitalia
- Galeno
- Grossfarma
- Guacci
- Jorio
- Lemarfarma
- Nord Est Farma
- Nuova Safarm
- Riccobono
- Sofarmamorra
- Unico
- Unifarm
- Unifarma
- Unione Far. Friuli
- V.I.M.

DAFNE's USERS

120
Wholesalers
Extranet

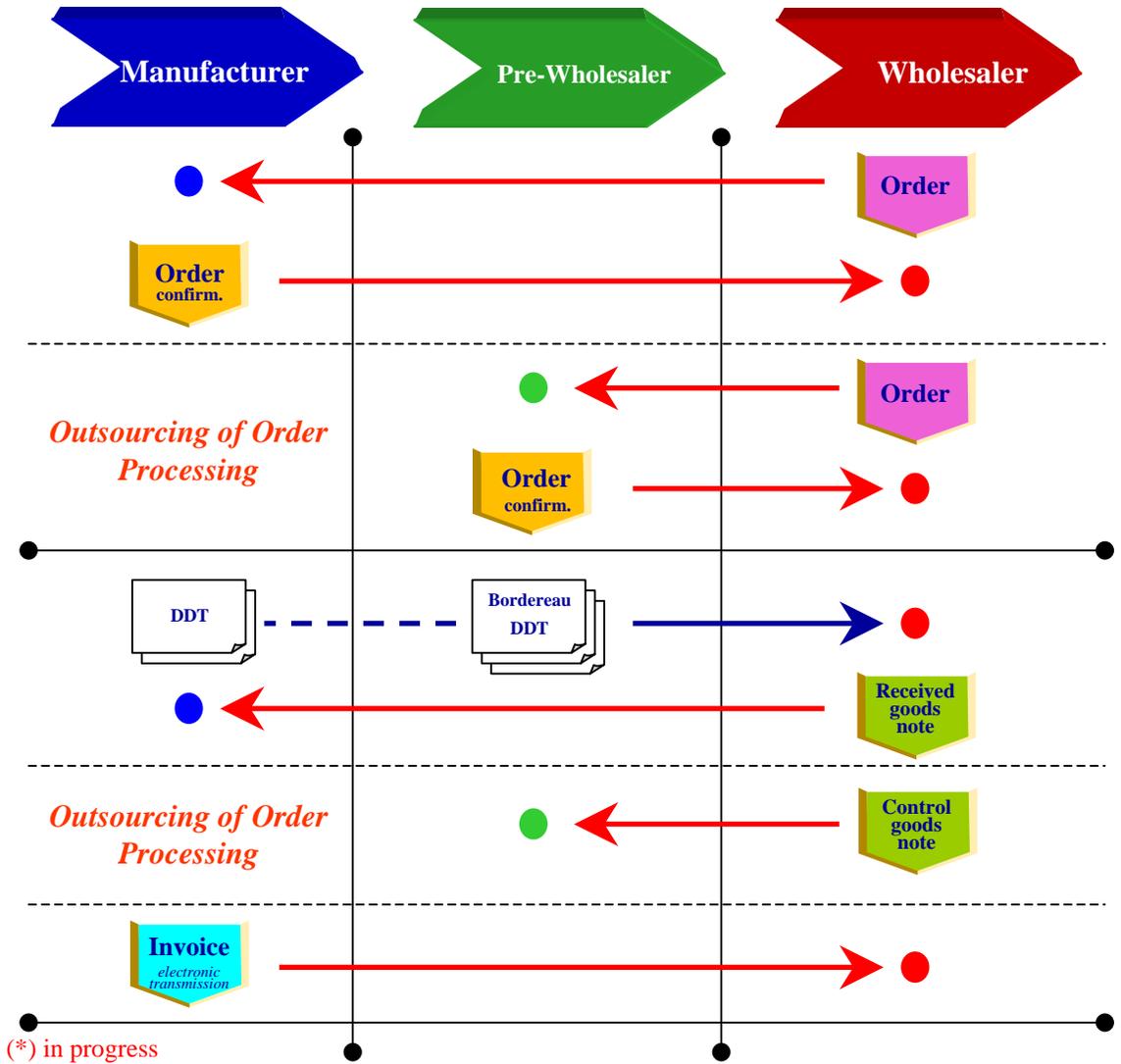


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Documents exchange and order tracking



Order: information regarding the order dispatched to Manufacturers/Pre-Wholesalers

Order confirmation: after control regarding credit, solvency and products availability, possible response to Wholesaler: envied; received; suspended; refused; elaborated and delivered completely or partially on lines rather than on amounts

Delivery note: information regarding batch number, expiry date, number of boxes, pallet, etc.

Summary note (bordereau): includes all delivery notes from the same Deposit

***Received goods note:** information on delivery time and quality of transport (e.g. Controlled Temperature)

***Control goods note:** information about the right number of units and items, conditions of products, packing, etc.

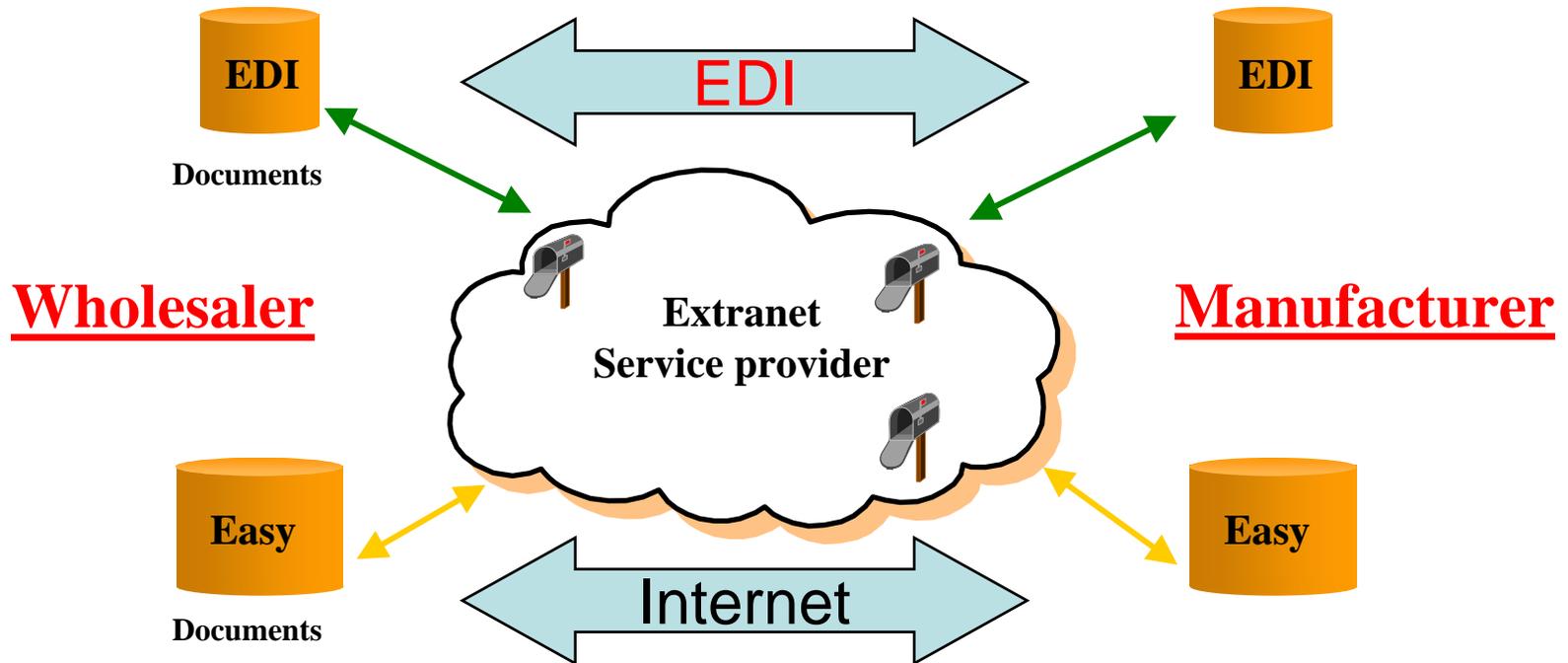
Electronic invoice: electronic transmission of the invoice and standard format DAFNE printable document . (Electronic invoice in progress)



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The service offered centrally for all the customers provide the translation into **EDI standard** documents and vice versa



The information exchange according to international standards has been realized throughout a technological infrastructure that uses the post office boxes technique: documents sent are enveloped leaving only the sender and the receiver addresses visible. A service provider capture the messages from the mail boxes and deliver them



A new partner: the HOSPITAL



The development of electronic connections is creating efficiency and partnership opportunities also with ASL and Hospitals



65% of the hospital market share



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Involvement of the Professional Associations



Pharmaceutical Companies members of Project “Dafne Hospitals” have involved:

- ◆ FARMINDUSTRIA Association of Pharmaceutical Manufactures
- ◆ SIFO Association of hospital chemists
- ◆ FARE Association of hospital treasurers
- ◆ FIASO Association of hospital general managers

**The goal is
TO ACT IN AGREEMENT**





> 100 ASL/AO Connected

> 25 Pharmaceutical Companies Involved

Documents:

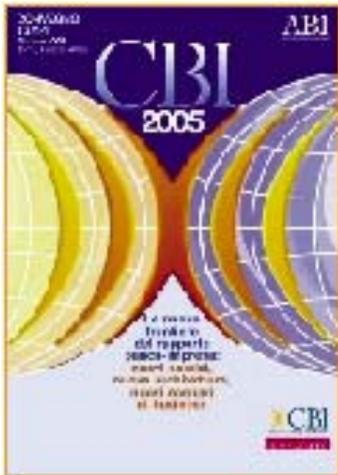
- Order
- Order Confirmation
- Electronic Invoice
- Tracking



THE NEW FRONTIERES IN THE RELATIONSHIP BETWEEN BANK AND FIRM, organized by CBI Rome, October 13th 2005.

The collaboration in the Pharma Supply Chain and the DAFNE experience in the de-materialization of orders and invoices

DAFNE electronic invoice teamwork is running to the admission of DAFNE standard as official document valid for tax purposes and electronic registration - D.R.P. 10.11.97 N° 513 (G.U. 13.3.98)





Workshop DAFNE, SDA Bocconi



- ▶ THE NEW SCENARIOS IN THE PHARMACEUTICAL SUPPLY CHAIN, Milan, November 30th 2004. At the event organised jointly with SDA Bocconi took part also AIFA, **EAN International European Healthcare Initiative**, **Auto –ID Center**, Farindustria, Assoram, ADF, Federfarma Servizi
- ▶ THE NEW SCENARIOS IN THE PHARMACEUTICAL SUPPLY CHAIN, Milan, December 1st 2005. At the event organised jointly with SDA Bocconi took part also CERGAS, IMD Business School, **GS1 Europe: European Healthcare Initiative**, Assoram, ADF, Federfarma Servizi



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Forum DAFNE, Politecnico di Milano



L'Osservatorio B2b
L'Osservatorio B2b della *School of Management del Politecnico di Milano*, giunto ormai alla sua quarta Ricerca, ha la missione di studiare approfonditamente e criticamente l'impatto delle nuove tecnologie basate su Internet sulle relazioni cliente - fornitore: eProcurement, eSourcing, eSupply Chain Execution & Collaboration.

Il Convegno
Occasione del *Convegno*, che anche quest'anno coincide con il *Forum ADACI*, è la presentazione dei risultati dell'ultima Ricerca dell'Osservatorio B2b.

La Ricerca, basata su oltre *300 studi di caso*, ha posto particolare attenzione sui processi di adozione, sul superamento delle barriere e delle inerzie interne, sulla gestione del cambiamento organizzativo e sui concreti benefici ottenuti e ottenibili.

Al termine del Convegno sarà distribuito, a chi ne farà richiesta, il *Report* con i risultati integrali della Ricerca.

eProcurement, eSupply Chain:
una scelta tattica o strategica?

I risultati 2005 dell'Osservatorio B2b

School of Management

POLITECNICO DI MILANO



DIPARTIMENTO DI INGEGNERIA GESTIONALE



POLITECNICO DI MILANO



DIPARTIMENTO DI INGEGNERIA GESTIONALE



L'eProcurement e l'eSupply Chain
nel settore farmaceutico in Italia

I risultati 2005 dell'Osservatorio B2b

Forum 2005



Il consorzio tra Aziende Farmaceutiche e Aziende di Distribuzione Intermedia
www.consorziodafne.com

POLITECNICO DI MILANO

Giovedì 29 settembre 2005 - Aula Rogers - Via Ampere, 2 - Ore 9.00

➤ EPROCUREMENT, ESUPPLYCHAIN: TACTIC OR STRATEGIC CHOICE? Milan, June 23rd 2005. Event organised by Politecnico di Milano

➤ RFid BETWEEN PRESENT AND FUTURE, Milan, April 14th 2005. Event organised by Politecnico di Milano

➤ EPROCUREMENT, ESUPPLYCHAIN IN THE ITALIAN PHARMA INDUSTRY. Milan, September 29th 2005. Event organised jointly with Politecnico di Milano



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DAFNE Collaborative Logistics

Flows and channels standardization
Physical item identification



DAFNE Collaborative Logistics



CONVEGNO INTERNAZIONALE DEL CONSORZIO DAFNE



Pharma Supply Chain

Le proposte del
Consorzio Dafne
per una
logistica collaborativa
nella filiera
del Farmaco

Roma
Hotel Parco dei Principi,
19 Marzo 2004

PHARMA SUPPLY CHAIN, DAFNE proposals
for a Collaborative Logistics, Rome

March 19th 2004

at the initiative took part also Politecnico di Milano,
SDA Bocconi, **EAN International European
Healthcare Initiative**, GIRP, Farindustria, Assoram,
ADF, Federfarma Servizi



ADF
Associazione Distributori Farmaceutici



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EAN International (now GS1)



Basic assumption: the first step towards any improvement of products and information flows is to enable a fast and accurate Automatic Data Capture

Information

It is necessary to define the **data requirements** along the supply chain (such as: product identification, batch number, expiry date), including any need for individual item identification

Having done that, the **best technology** can be selected to carry/symbolize that data

Product



Stuttgart, December 2003: EAN International (European Healthcare Pharmaceutical Initiative) created the **European Pharmaceutical Supply Chain Working Group**, a cross-industry supply chain team

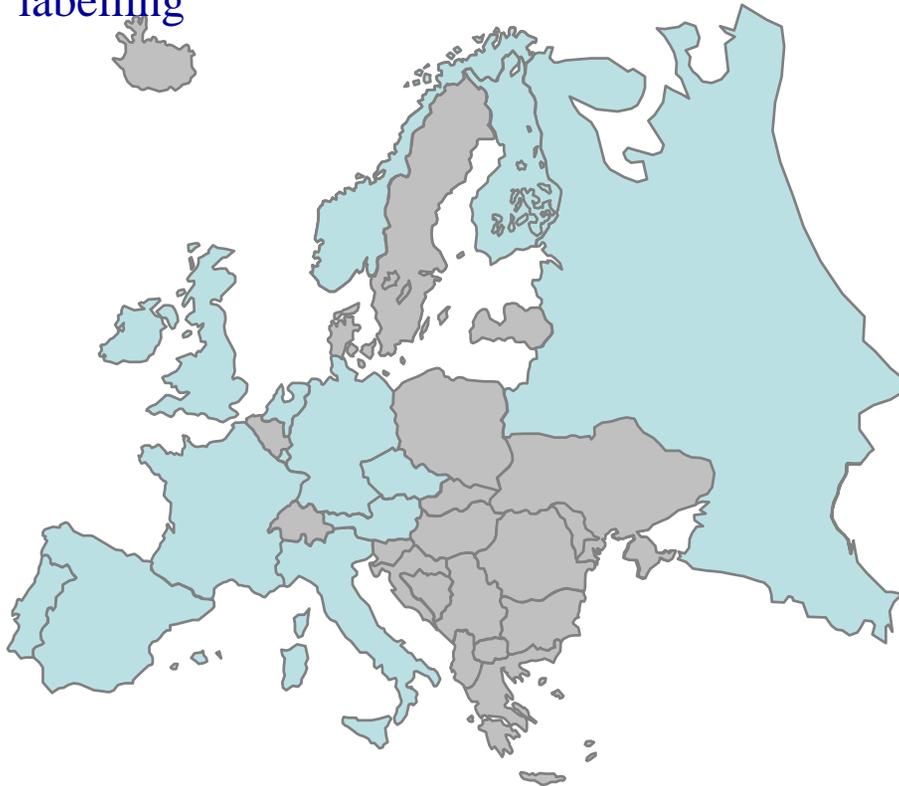


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In 2002 GIRP Technical Committee promoted an **European survey** on packaging and labelling



Information rank: the 10 fastest moving products of

- AstraZeneca, Aventis, Bayer, Boehringer Ingelheim, GSK, Janssen Cilag, Lilly, Merck S.D, Novartis, Pfizer, Pharmacia, Roche, Sanofi Synthelabo, Wyeth

Label headings

- Product Name, Description, Dosing, Pieces/box, Manufacturer, Manufacturer Internal Code, Batch Number, Production date, Expiry Date, Packaging Number, Product Code, Others

Package

- patient package
- case
- pallet

GIRP : Technical committee survey output

Wholesalers perspective

Patient package

- ➔ no harmonisation in the information reported
- ➔ no standard in the technology used to label or print the package
- ➔ no Automatic Data Capture possible in the identification of goods (i.e. information are not bar-coded)



Case labelling

- ➔ very wide variability of the information reported
- ➔ very wide range of technologies used to label or print the case package (laser/ink printing on the box, labelling - O.C.R., bar-coding, ...)
- ➔ no Automatic Data Capture possible in the identification of goods (i.e. when barcode is used, there is no standard)



Pallet labelling

- ➔ often pallet is not considered a delivery unit, consequently is not identified (the object of transport is groupage of cases)





Collaborative Logistics aims to

- Harmonize information exchanged between Manufacturers and Pre-Wholesalers.
- **Define the common standard!**
- Simplify the relation Many2One and One2Many typical of the Pre-Wholesaling logistics knot.
- **Simplify the network!**
- Synchronize reliable information available in real time for all the players of the supply chain.
- **Better stock management!**



DAFNE Collaborative Logistics

Flows and channels standardization



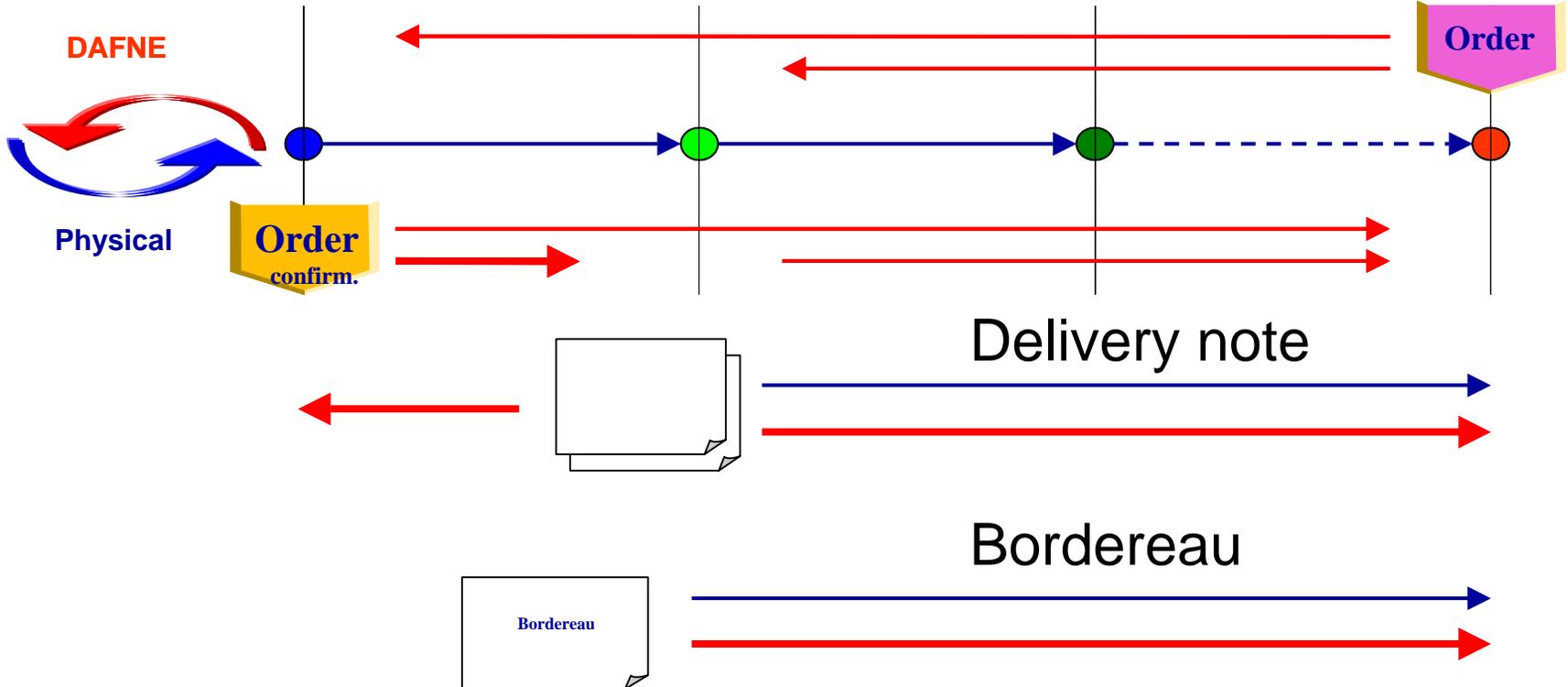
ELECTRONIC & PAPER DOCUMENTS: standardization of format and information
i.e. Order confirmation-delivery note-bordereau-waybill

Pre-Wholesaler

Wholesaler

Manufacturer

Logistic carrier





PHYSICAL IDENTIFICATION

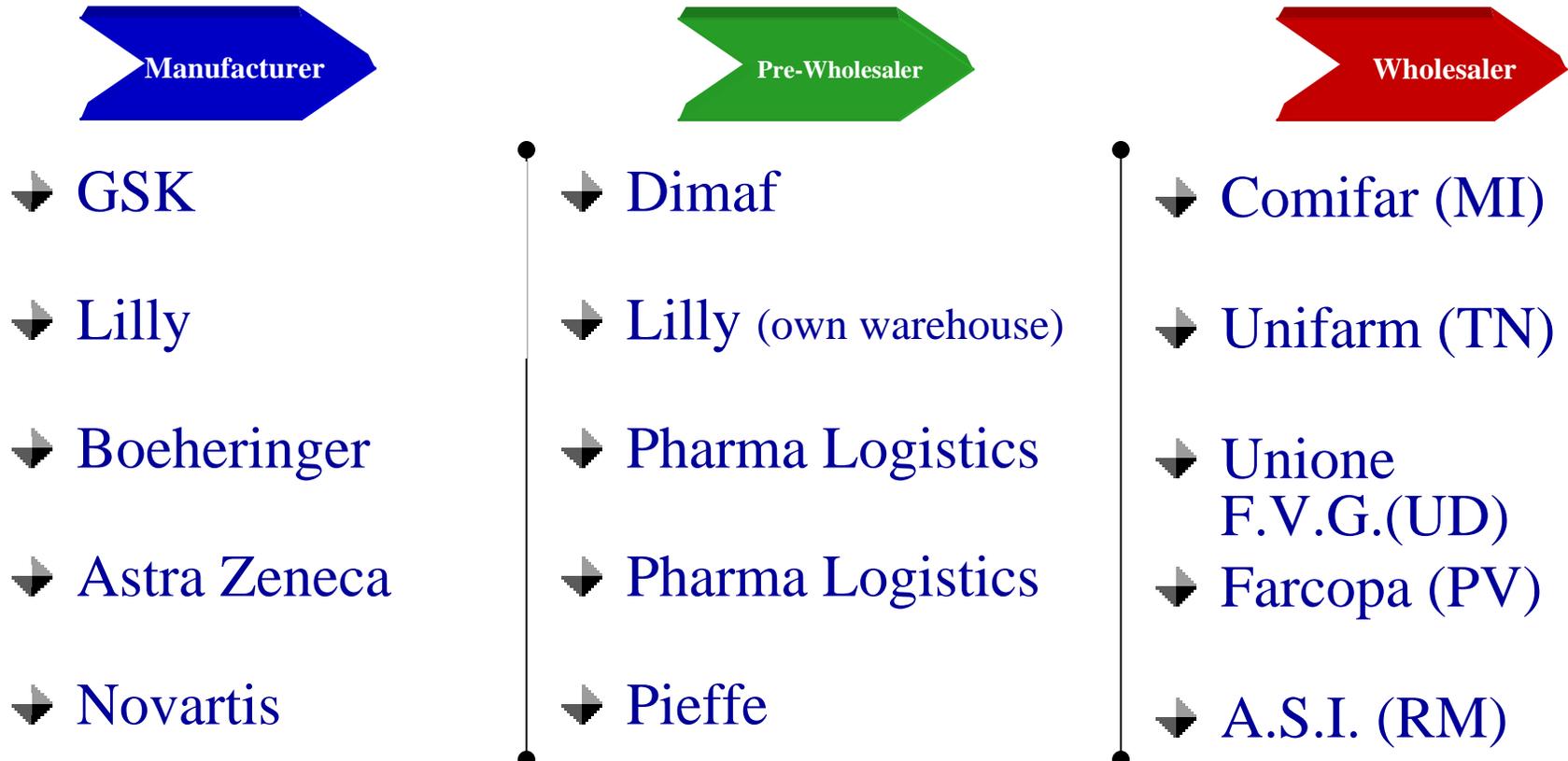
Main targets

- Keep the actual information supporting both Pre-Wholesalers and Logistic Carrier processes
 - Case labelling (mixed / standard)
 - progressive number within the pallet
 - Sustainability, considering IT-TECH
 - item, quantity, batch and expiry date for standard case
- Encode all the basic useful information for all the Supply Chain players
 - Pallet labelling (mixed / standard)
 - Standard format and content for an easy information management
 - item and quantity for standard pallet
 - Information barcoding for Automatic Data Capture and IT processing



DAFNE Collaborative Logistics

“Micro” supply chain pilots (jan 2006)



This step by step approach helps to understand the practical impacts and to develop a cost/benefit model for the following step of diffusion.

DAFNE approach is considering also a plug and play “KIT” able to emulate the information flows and the labels and paper documents print





Conclusions



➡ Concrete collaborations along Supply Chains, that catch the strategic advantages of sharing and improving common processes, are not common.

➡ DAFNE Consortium has a particular value in this landscape: in spite technologies hold a facilitating role, a real informative integration can't be measured only with executive data transmissions

➡ Should be intended as opportunity for a managerial growth, with benefits for all its players and for the final Customer ,in the specific of pharmaceutical supply chain with important social and ethics commitment





Thank You for your attention!

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