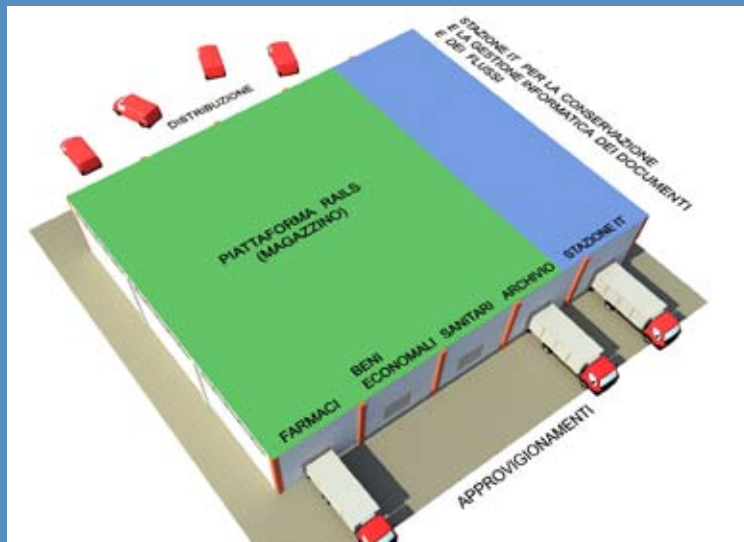


# RVILS<sup>TM</sup>

ASRS Automated Storage and Retrieval System

## LOGISTIC PLATFORM ON RAILS INFRASTRUCTURE FOR HOSPITALS AND SANITARY DISTRICTS



Multifunctional logistic infrastructure



Storage robotic station

ASRS SYSTEM represents the state-of-the-art robotic technology in the logistic field. Its employment as an organizing solution for hospitals and sanitary districts represents the most competitive solution.

Seven international patents guarantee outstanding performances and unparalleled results in terms of cost-efficiency with a net reduction up to 70% of management costs.

ASRS technology allows a trustworthy management control and the simplification of all the way to supplying, storage and distributing.

## **WASTE STRUGGLE: ROBOTIC - IT - CENTRALIZATION**

Three crucial aspects for a perfect distribution of our services of supplying, storing and widespread retailing



Charging Units are realized with different shapes and dimensions, depending on materials to store and to move.

## **RAILS LOGISTIC PLATFORM**

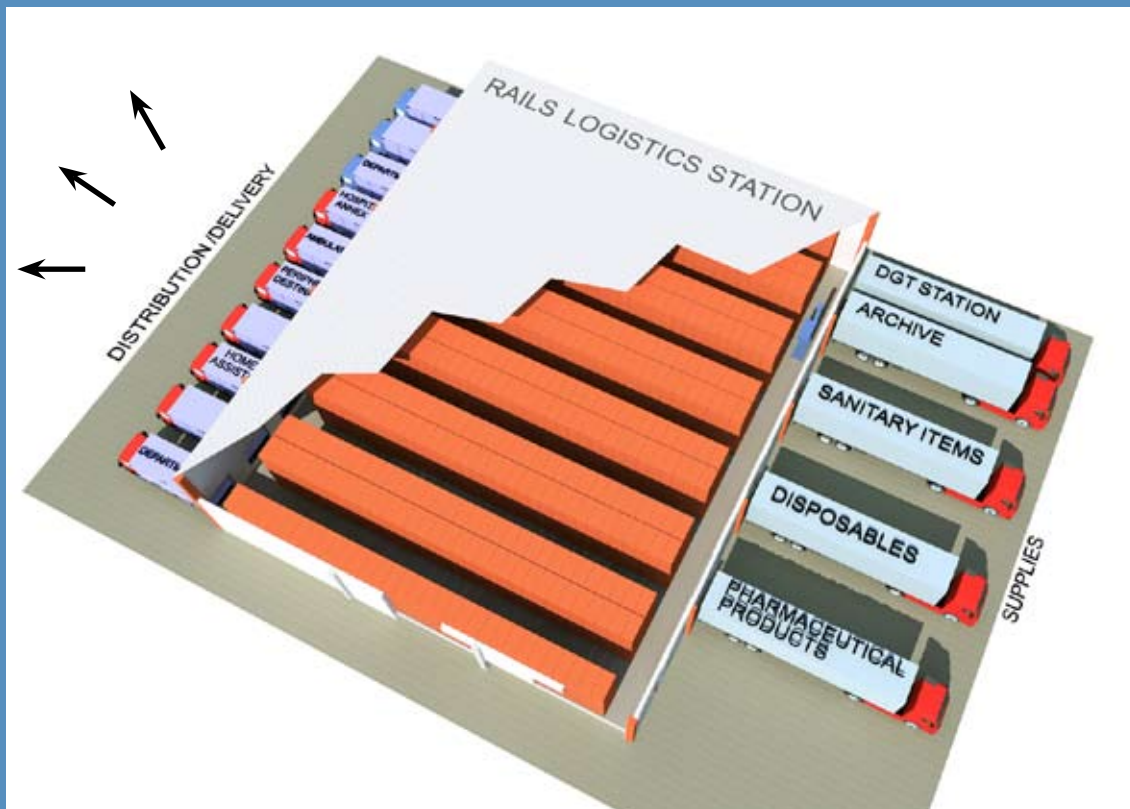
Management control, distribution and flows monitoring in real time

1. Purchase razionalization and planning;
2. Continuous database detection of coming items;
3. Control of supplying, materials selection and items use;
4. Elimination of improper costs and duplicated materials, resources, services;
5. Inflows and outflows balancing;
6. Coordination and planning of distribution daily flows, with elimination of overlapping and multiple missions;
7. Planning of ordinary distribution (24 hrs), urgencies (4 hrs), emergency (1hour);
8. Accurate and analytical analysis of consumption quality, quantity and profile;
9. Effective and immediate answer to every request;
10. Costs survey for single supplies and services;
11. Organizing and logistic prompt updating according to different requirements and structural developments.



## RAILS LOGISTICS PLATFORM

Projected for consumables, pharmaceutical, repository and disposables distribution and supply.  
Data and paper archives management as well.



# RAILS LOGISTICS PLATFORM

made-to-measure

The RAILS logistic platform is realized according to the specific Customer's requirements.

It's based on ASRS system (Automated Storage and Retrieval System) and it has been conceived for the centralized management of one or more joined units referring to local hospitals and sanitary districts.

Its employment, together with the more advanced softwares, represents a radical strategic solution and it guarantee unique economic and organizing advantages.

ASRS software can be easily integrated with current managerial ones thanks to specific interfaces.







## **RAILS LOGISTICS PLATFORM INCLUDES FOLLOWING FACILITIES:**

### **A) Location**

If there isn't any building suitable for the centralization of the logistical services, RAILS includes in its offer the supply of a building, the construction of a new one or the renovation of the pre-existing edifice;

### **B) RAILS robotic storage system**

developed for consumer items and medical records storage, management and distribution;

### **C) Management software**

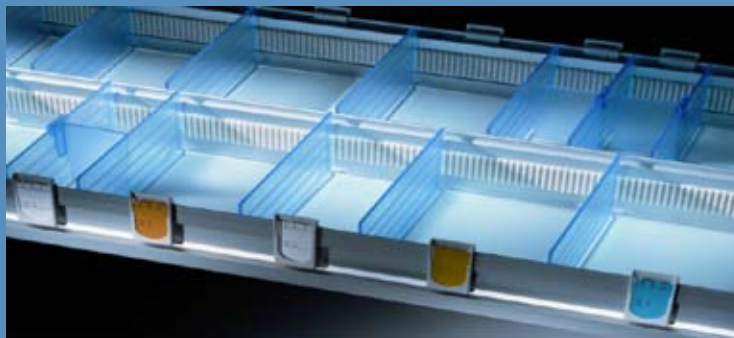
for data flows monitoring and controlling, interfaced with the pre-existing information system;

### **D) Offices**

for the operating and controlling of the RAILS logistic platform management and the computerized flows and storages management;

### **E) Digital Station**

for the digital management of data flows and for the physical management of medical records, administrative and accounting documents.



# BUILDING DESIGNES FOR STORAGE

**Habitat RAILS** offers a concrete solution to Customer's space requirement.

Before purchasing a new building or a new deposit site, we accurately estimate a better organization of existing areas by rearranging spaces with a robotic RAILS platform. This change from traditional shelves to RAILS system usually leads to **an increase of storage capacity up to 10 times**, making new buildings buyings or enlargements unnecessary.

Thus HABITAT RAILS meets Customer's needs in two ways:

1. if possible, **RAILS system is included in pre-existing buildings**, even in **not normally used areas**, obtaining consequently new growth spaces and preserving heritage on site, avoiding any new external areas acquisition;
2. if Customer has no more buildings available for archive, **Habitat Rails may provide a new building included in its offer**, after locating and negotiating by Customer himself. New building will be included in the offer of turn-key infrastructure with deferred payment in 10-15-20 years.

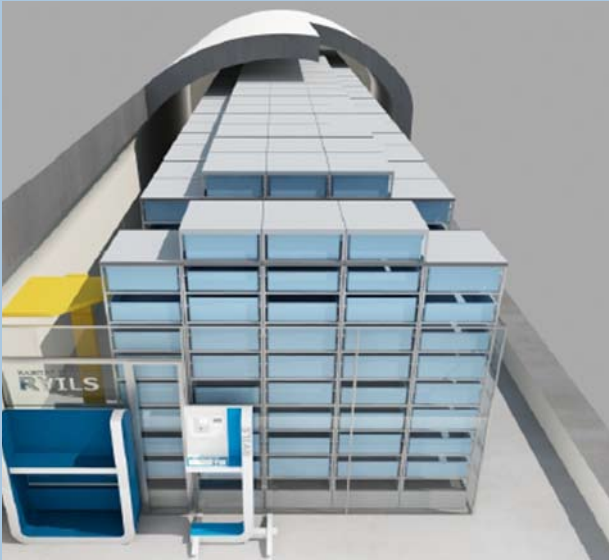


**Platea di deposito**



**Costruzione magazzino**

# PLM RAILS APPLICATION MODELS



A - Underground deposit with RAILS system adaptation to pre-existing buildings

B - High-density horizontal deposit (VHDSS) suitable for all buildings



C - Compact deposit, dismountable and moveable

D - External deposit, leant against the main building





# **RAILS ASRS**

## Automated Storage Retrieval Systems

**Sliding corridors**



**Lift moving elevator**

**Collecting  
buffer carriage**



# PERCORSO DI ANALISI DELLA SITUAZIONE DI FATTO DELL' ENTE GESTORE

**Habitat RAILS** offre un servizio di ricognizione dello stato di fatto dell' Ente gestore: una sorta di fotografia della situazione attuale che consenta di riorganizzare in modo efficiente ed economico i depositi e la logistica operativa. Le operazioni di rilevazione vengono normalmente espletate da un Ingegnere ed un Architetto Habitat, addetti alla logistica di RAILS, in team con funzionari responsabili dell' Azienda Ospedaliera / ASL

Check-up service includes following activities:

1. Survey of existing location, state of affairs, buildings and logistics tools available;
2. Individuation of supplying materials;
3. Quantity and tipology survey of medicine, disposables, consumables, sanitary materials, archives, medical histories;
4. Identification of supplying sources and stocks;
5. Identification of deposit areas;
6. Research of incoming and outgoing flows;
7. Analysis of departments, OU and every unit to supply;
8. Analysis of timetables and retailing flows on territory;
9. Analysis of start-up and working costs, evident or hidden, direct or indirect;
10. Planning for new logistic platform's strategical and functional reorganization;
11. Evaluation of PL RAILS' start-up and working costs;
12. Valorisation of buildings, material and human resources which are released by new Logistic Platform.



Cassetti per materiale sanitario



Cartelle cliniche



## **FROM PREVIOUS ANALYSIS TO:**

1. Assessment of buildings suitable for archive area (among Agency pre-existing buildings or supplying a new building);
2. Rearrangement;
3. Development of software, database and interface with the Agency management staff;
4. Inclusion of the heritage in the robotic platform;
5. Realization of offices and areas for loading, unloading, consultation;
6. Creation of a digital station characterized by storage data, shift from physical to digital support and computerization of all offices and all incoming and outgoing flows.





# RAILS ASRS

## Automated Storage Retrieval Systems

**Shelf - deposit**



**Picking bay  
or buffer 99 UDC**



## MODIFIED ATMOSPHERE SYSTEM

According to BS 5454 directives concerning librarian deposits subject, RAILS infrastructure can be provided with a combustion reduction system which takes off oxygen up to 15%.



At the same time RAILS, advisably subjected to a light overpressure, is protected from external air circulation, avoiding the introduction of organic components (pollen, organic residuals, dust), conveyed by not purified air.

AIR	AMBIENTE CONDIZIONATO		
Brucia	Non brucia sotto il		
21%	15%	14%	13%
Carta			
Polistilene			
Legno			
Polistirolo			

The deposit inside value of oxygen can be periodically reset by disinfecting air microorganism.



# GESTIONE DELLA PIATTAFORMA LOGISTICA



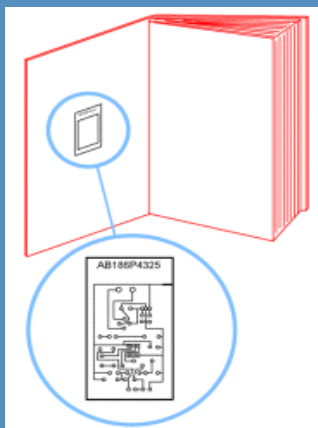
Once realized the system,  
**Habitat RAILS** offers a management service.

The Hospital Agency, according to its effective necessities, can decide to manage the new logistic platform as follows:

1. to deal with the system directly, by himself;
2. to address third party through outsourcing;
3. to rely on Habitat Italiana.

In this last case, Habitat RAILS can supply a complete service composed by different phases, organized on Buyer requirements.

## RFID technology example



Tag RFID

Parametri	HF Pjm ISO 18000-3 Mode 2	HF Pjm ISO 18000-3 Mode 1
Frequenza	13,56Mhz	13,56Mhz
Bit-rate	848 Kbit/s	26,48 Kbit/s
Capacità di memoria	8128 bit	2048 bit
Velocità massima di lettura	1200 tag/s	40 tag/s

## MULTILEVEL BAY



Picking multilevel terminal for robotic deposit



## **FINANTIAL PLAN WITH FINAL REDEEM**

**Habitat RAILS** meets Buyer exigencies even  
from a financial point of view

RAILS logistic platform, possibly including the bulging acquired or renovated by Habitat RAILS in behalf of customer, may be financed by three solutions:

1. loan;
2. leasing agreement;
3. lease-back,

with payment by instalments through financial middleman in **10/15/20 years**.



## **FROM OUTSOURCING TO OUTsourCER**

An Agency which turns its deposits by RAILS technology can concentrate the deposit stored materials up to 10 times.

Therefore, it is easy foreseeable a passage from saturated deposits to big areas availability.

In this case the Agency can profit the over-space becoming an outsourcer for other agencies and business, possibly gaining the equivalent to RAILS investment cost.

The acquisition of a logistic platform creates the opportunity for hospitals/sanitary districts to play an outsourcer role for third party agencies which need this infrastructure. In this way it is possible to make a profit which can equalize the whole RAILS investment cost.



# RAILS<sup>TM</sup>

ASRS Automated Storage and Retrieval System

**THE TECHNICAL SOLUTION FOR  
HOSPITAL AND SANITARY DISTRICTS**



**RAILS ASRS - HABITAT ITALIANA SRL**

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