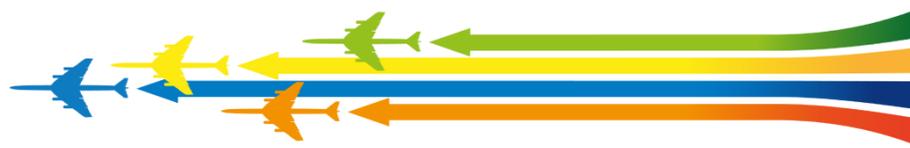




ICAO

UNITING AVIATION

E-GAP



ICAO Global Aviation Partnerships on Emissions Reductions (E-GAP) Multiplying Environmental Action

Giovanni Falsina



ICAO Global Aviation Partnerships on Emissions Reductions (E-GAP) Seminar
ICAO Headquarters, Montréal, 16 to 17 September 2015

ENV2015



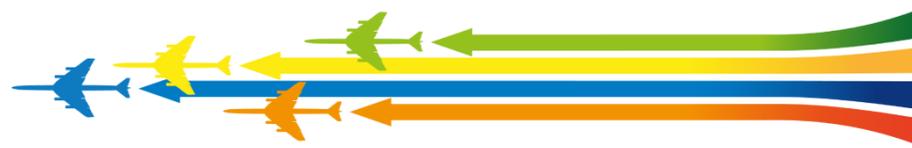
ICAO

UNITING AVIATION

E-GAP



1. SEA Group: key figures, Linate and Malpensa airports
2. The Italian “airport management” model and its main stakeholders
3. Airport Carbon Accreditation: an ACI Europe effective initiative
4. CO2 emissions: magnitudes and trend - Actions and stakeholders involvement
5. Three crucial "dimensions" tied to results
6. Carbon credits
7. The future scenario and its challenges



SEA Milan Airports:

SEA SpA manages and develops the airports of Milano Malpensa and Milano Linate ensuring:

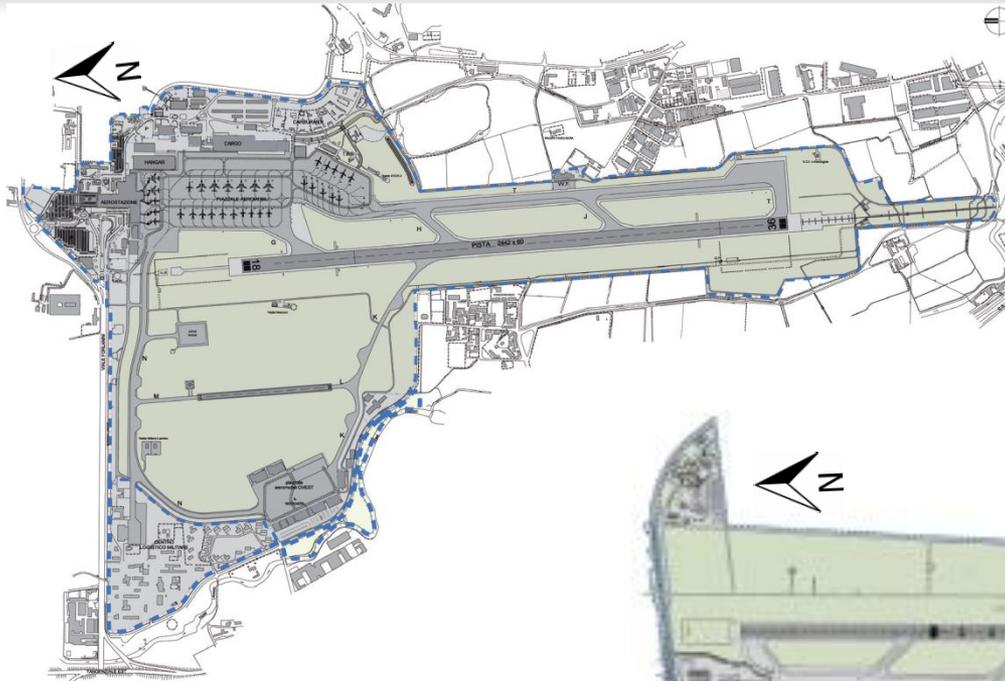
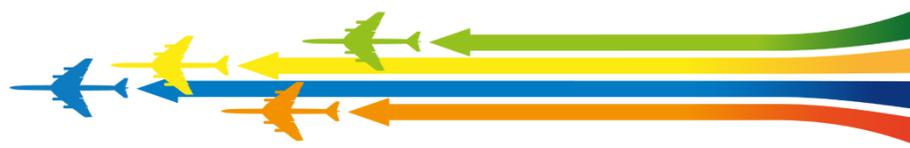
- provision of the aviation infrastructure, the terminals, and the complementary infrastructure
- airport system coordination
- airport security management
- passengers and airlines handling services
- commercial services for operators, passengers and visitors

Milano Linate

- 9.2 million passengers / year; 114,000 annual movements
- deeply embedded in the urbanized southeastern belt of Milan
- an area of 350 hectares
- two runways: the first (2,442 meters long) intended for commercial aviation and the second (601 meters long) for general aviation

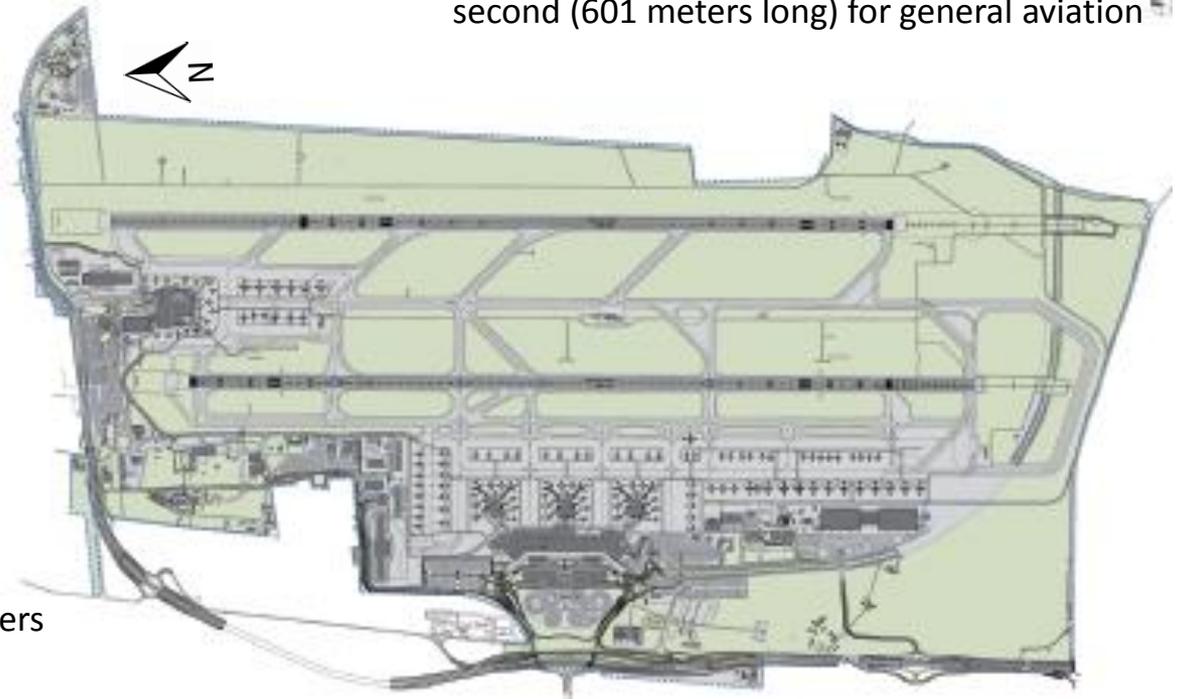
Milano Malpensa

- 18.8 million passengers; 180,000 annual movements
- a total area of 1,220 hectares on a seven municipalities territory
- two parallel runways of 3,920 meters



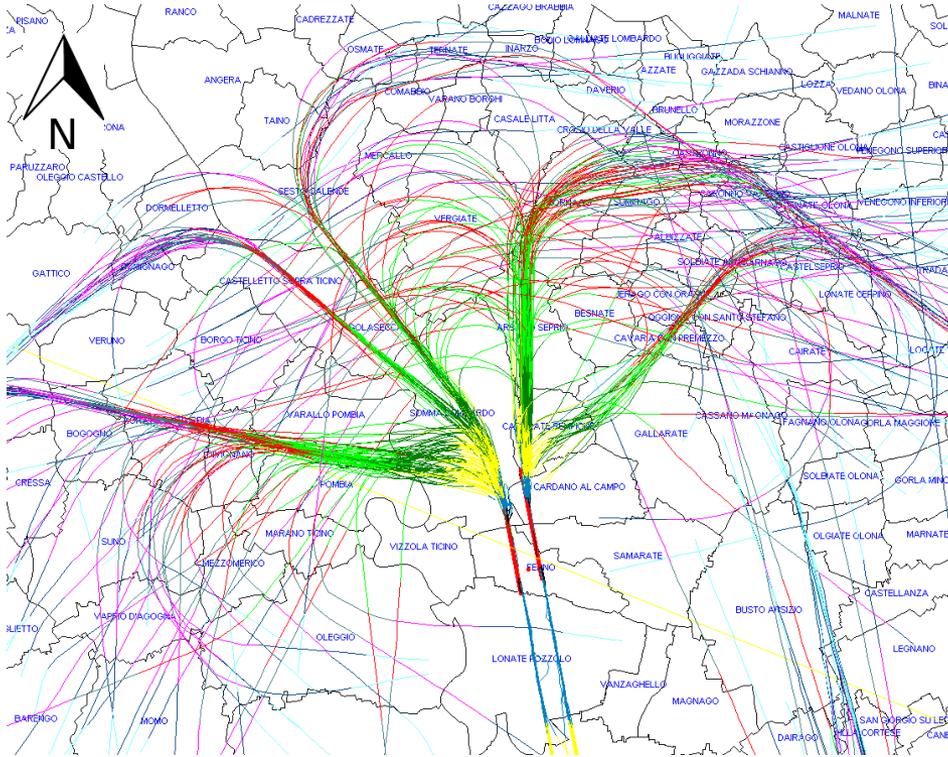
Milano Linate

- 9.2 million passengers / year; 114,000 annual movements
- deeply embedded in the urbanized southeastern belt of Milan
- an area of 350 hectares
- two runways: the first (2,442 meters long) intended for commercial aviation and the second (601 meters long) for general aviation



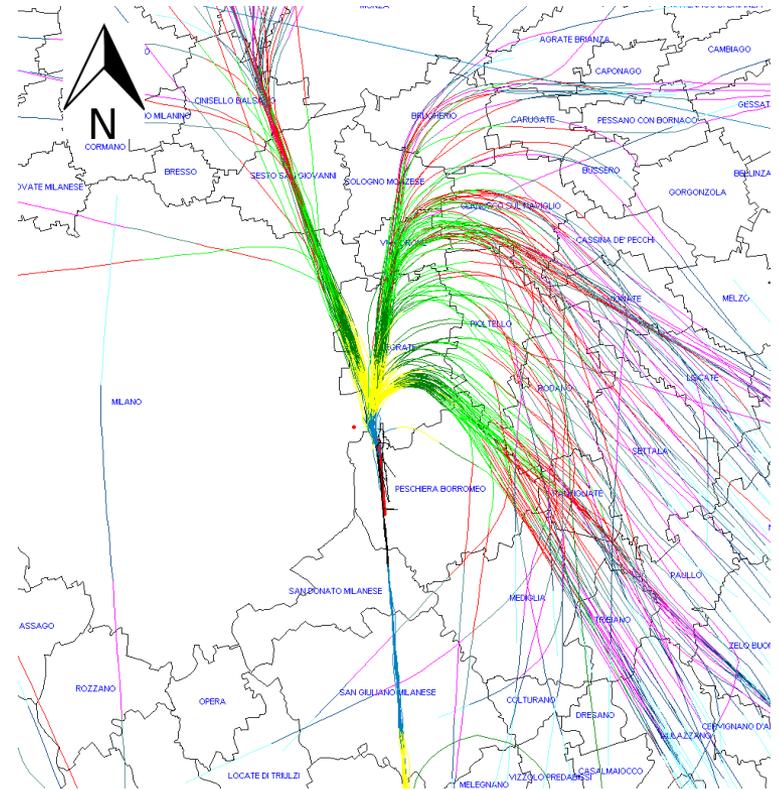
Milano Malpensa

- 18.8 million passengers;
- 180,000 annual movements
- a total area of 1,220 hectares on a seven municipalities territory
- two parallel runways of 3,920 meters



TERRITORIES AND TRAFFIC

Milano Linate



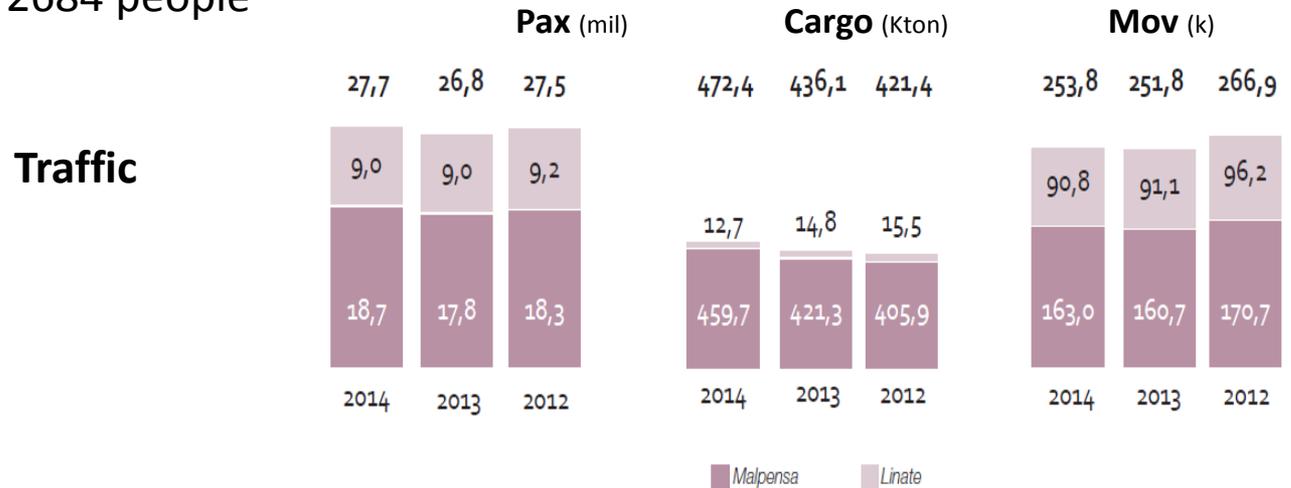
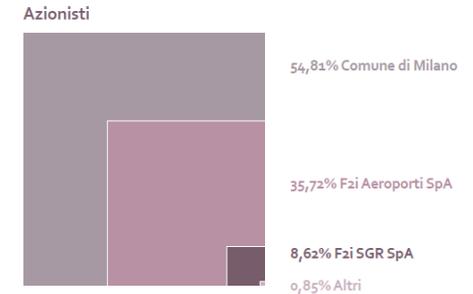
Milano Malpensa





SEA GROUP: KEY FIGURES

Revenues: 685 mil euro
 EBITDA: 205.9 mil euro
 Net income: 54.9 mil euro
 Human resources: 2684 people



Lombardy Region: more than 20% of the Italian GDP
 population: about 10 million people



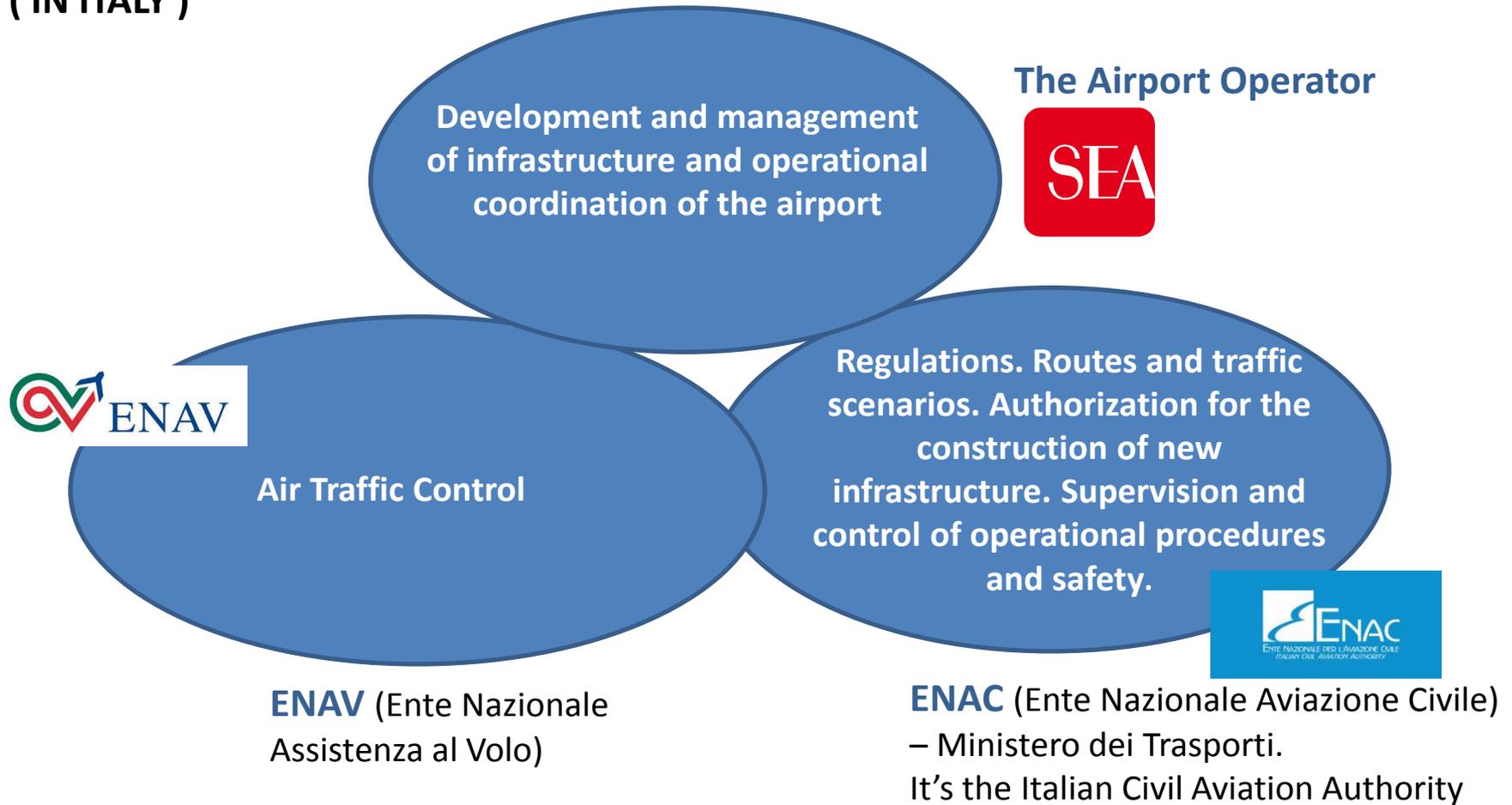
THE AIRPORTS IN EUROPE

- in Europe there are about 450 airports
- 5 of these have a particularly heavy traffic
- 22 (including the first 5) have a passenger traffic exceeding 20 mil/ year
- **Milano Malpensa is in the 28th position and Milano Linate in the 51st**

Rank 2014	Country	Airport	City	Passengers 2013	Passengers 2014	Change 2013- 2014
1	United Kingdom	London-Heathrow Airport	London	72.367.054	73.405.330	1,40%
2	France	Paris-Charles de Gaulle Airport	Paris	62.052.917	63.813.756	2,80%
3	Germany	Frankfurt Airport	Frankfurt	58.036.948	59.566.132	2,60%
4	Turkey	Istanbul Atatürk Airport	Istanbul	51.297.790	56.954.790	11,10%
5	Netherlands	Amsterdam - Schiphol Airport	Amsterdam	52.569.250	54.978.023	4,60%



THE “DECISION MAKING SPACE” OF THE AIRPORT MANAGEMENT COMPANIES (IN ITALY)

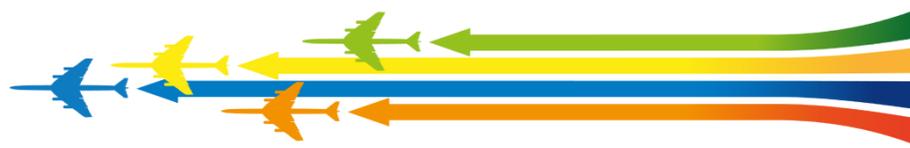




THE MAIN STAKEHOLDERS

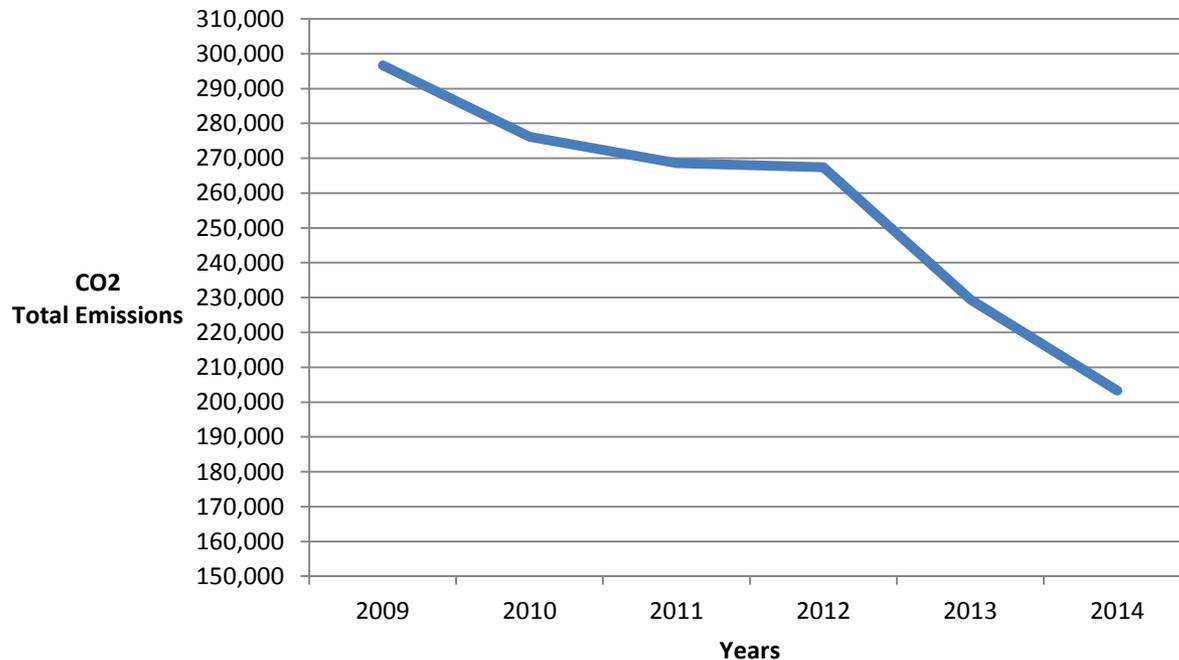
(substantially all involved in the CO₂ emissions initiatives)



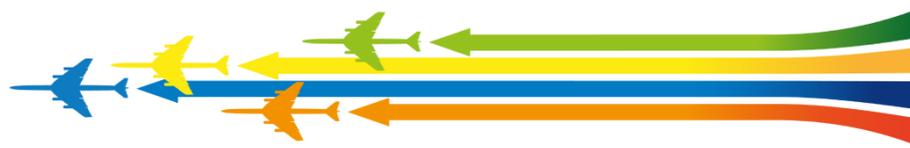


CO₂ EMISSIONS: MAGNITUDES AND TREND

LINATE AIRPORT

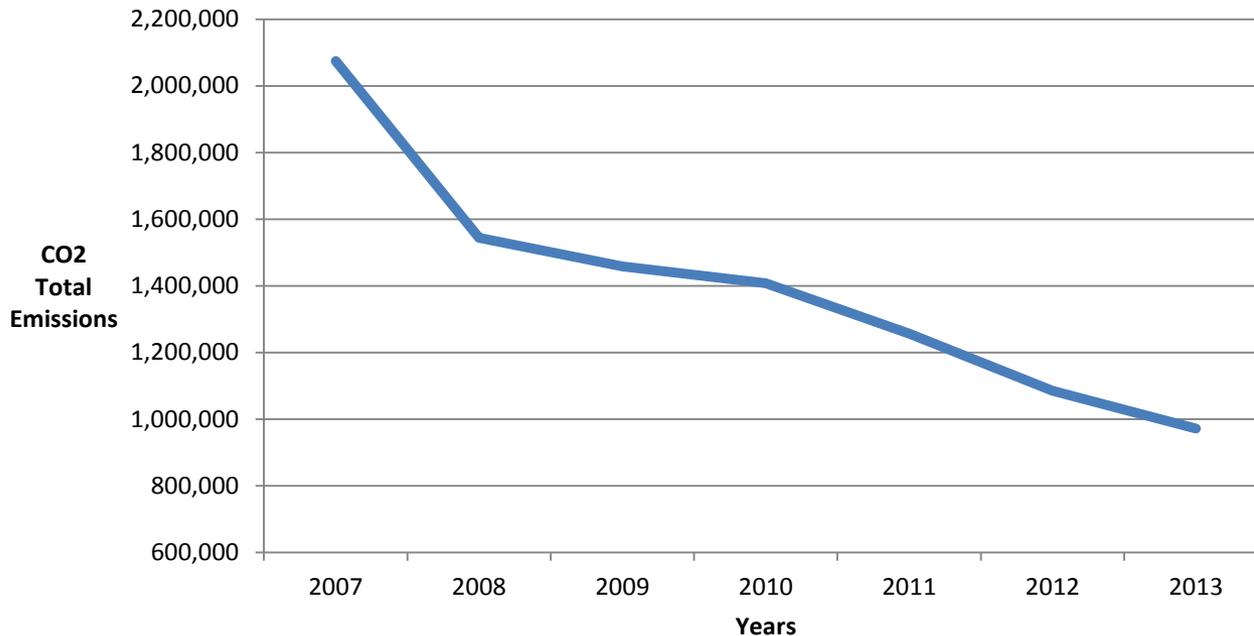


- An analysis of the building and areas (including the “technical” ones) - automation for lighting and air conditioning
- A progressive action of lighting replacement (LED)
- Interventions on aprons lighting , operational areas and external, perimeter roads
- Terminal: interventions for an automation of the conditioning system “by zones” (where possible)
- Purchase of electric operating means and low-emission buses
- Energy Saving Initiative for all the SEA staff
- Promotion for the construction of the new subway line 4 (Milano – Linate Airport)



CO₂ EMISSIONS: MAGNITUDES AND TREND

MALPENSA AIRPORT

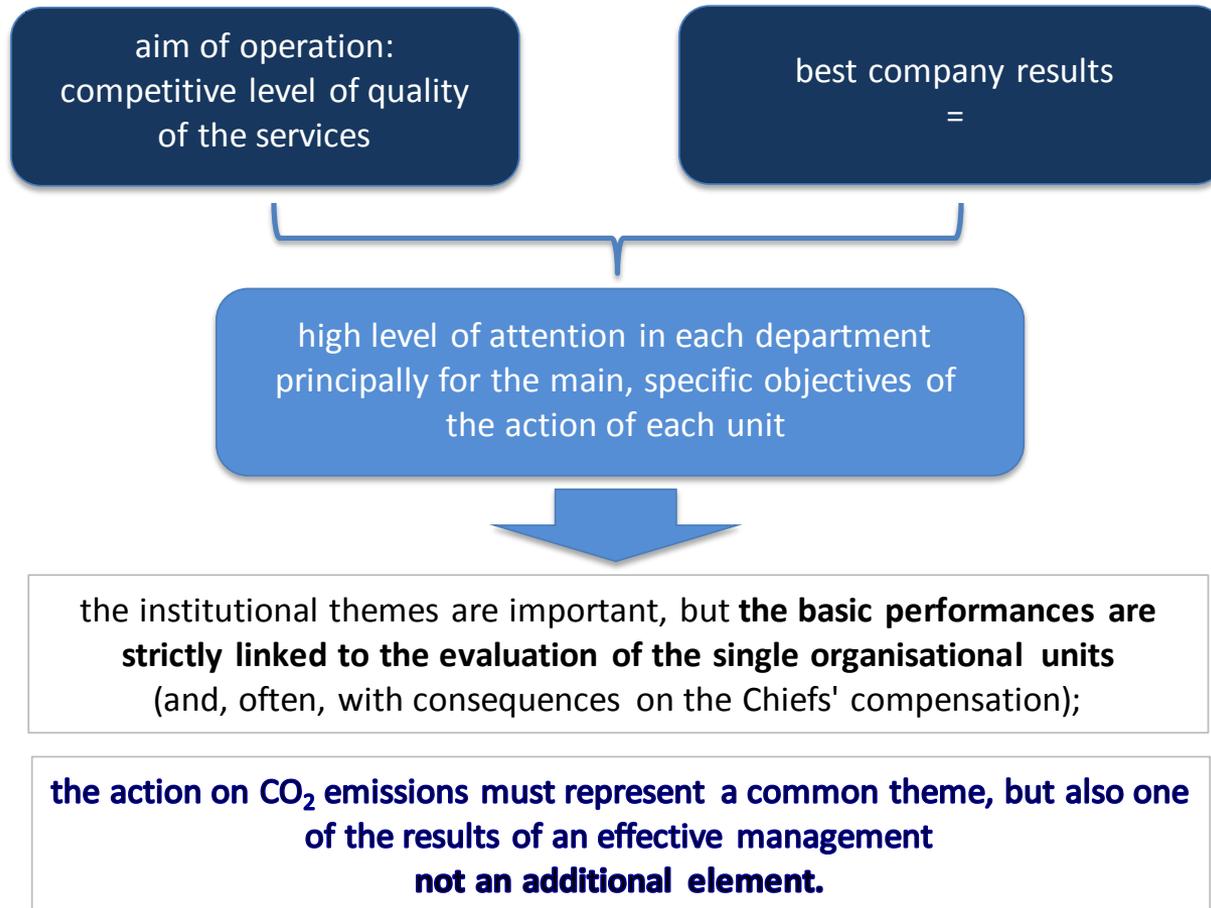


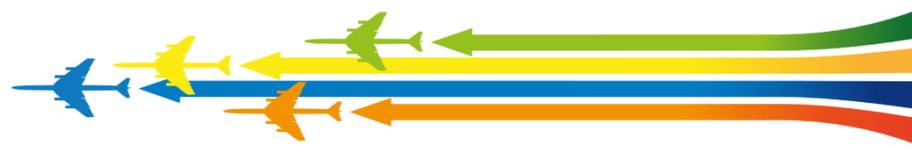
- An analysis of the building and areas (including the “technical” ones) - automation for lighting and air conditioning
- Progressive action of lighting replacement (LED)
- Interventions on aprons lighting , operational areas and external, perimeter roads
- Building Management System
- Runway 35L: turning the runway lights off at night
- Purchase of electric operating means
- Train connection with Milan
- Car Sharing (electric cars)
- Support for the adoption of low emission buses (link to/from Milan)
- Energy Saving Initiative for all SEA staff



THREE CRUCIAL "DIMENSIONS" TIED TO RESULTS (IN OUR EXPERIENCE)

A. THE AWARENESS OF A COMMON COMPANY GOAL EXTENDED TO MAIN STAKEHOLDERS.





(go on) THREE CRUCIAL "DIMENSIONS" TIED TO RESULTS (IN OUR EXPERIENCE)



Others aspects are strongly supported by **trade unions** : the use of electric tractors, the rationalisation of workplace conditions, for example, lighting and ventilation.



One of the important results in the action on CO₂ emissions is the **rationalization of some processes** and, for consequence, **minor costs or minor labor needs** (and these are strong elements to attract attention of decision-makers)

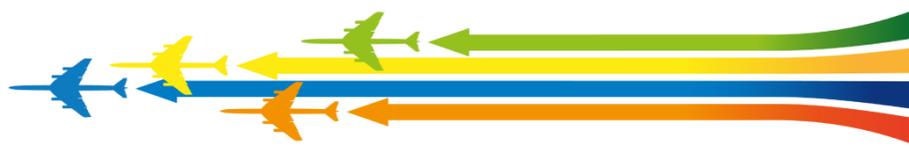
Two other points are:

the role of the Safety Committee (in wich we have, monthly, all operational stakeholders) in the management of an "airport result"



the "image"/"reputation" with consequences **in the financial community**



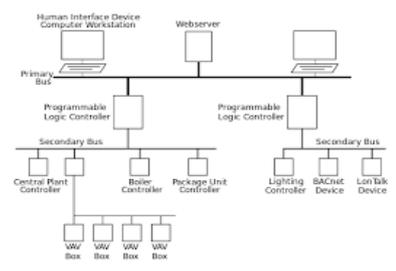


THREE CRUCIAL "DIMENSIONS" TIED TO RESULTS (IN OUR EXPERIENCE)

B. MANAGEMENT AND MAINTENANCE OF FACILITIES



definition of the operational lighting and air conditioning real needs for each group of rooms/offices/technical areas



- "regulation" and plant management (in particular HVAC and lighting)

*At airports, as we know, there are **varying levels of "occupation"** of the areas and to take advantage of those moments of "discontinuity" in which you can get a "minimum performance" for lighting and ventilation, it may still be an important field of action.*



- **scheduled maintenance**
- **fault detection processes** (and subsequent actions)
the results of the streamlining of the processes to achieve a reduction in CO2 emissions, also determine a reduction in operating costs and, often, an improvement of the general conditions of service

- "**extraordinary maintenance**", essentially dedicated to improve the technical evolution of the «existing» status.



THREE CRUCIAL "DIMENSIONS" TIED TO RESULTS (IN OUR EXPERIENCE)

C. NEW INVESTMENTS AND THE ACTION OF DESIGN DEPT.



the lessons received from the analysis and the initiatives launched in recent years are:

- using for **new buildings / infrastructure / new plants** an approach by «zones», with modularity, using LED, BMS, measuring systems linked to the Maintenance Control Room
- **Adopting design criteria** that include the energy consumption aspects and the issue related to the CO₂ emissions (SEA is also certified ISO50001 and this qualification helps the optimization process)



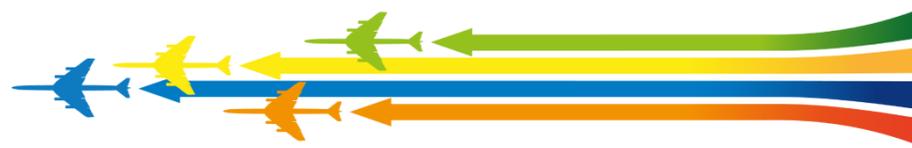


CARBON CREDITS



Year	Typologies of offsets	Project
2010	VERs - Standard VCS Pre-CDM	Gansu Huanghe Chaiji Xia Hydropower Station Project
2011	VERs – Standard VCS	Guizhou Qingshuihe Gelibridge Hydropower Project
2012	VERs – Standard VCS	300MW Hydropower project by JHPL
2013	Green CERs	Jiangsu Qishuyan Natural Gas Based Power Generation Project
2014	ERUs	JI “Reduction of Methane Leaks on the Gas Equipment of the Gas Distribution Points and on the Gas Armature, Flanged, Threaded Joints of the Gas Distribution Pipelines of PJSC Kharkivmiskgaz” registrato presso l’UNFCCC con n. UA 1000472.

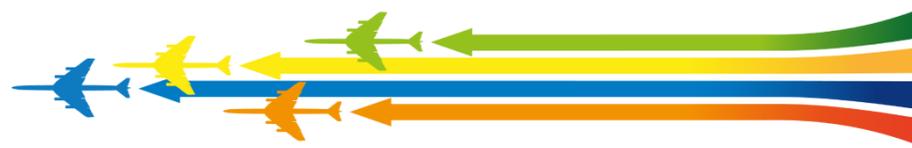
- at the beginning of our “CO₂ reduction” adventure **we did not know what carbon credits could be**
- one of the very delicate aspect is the **choice of the project** that "produces" carbon credits (on the market there are lots of offers, but not always reliable)
- we decided to involve our **national accredited verifier in the evaluation of the project(s)**
- the **dynamics of the market**, in recent years, have been favorable and the prices as well as others type of carbon credits are now more accessible



THE FUTURE SCENARIO AND ITS CHALLENGES



- It could be very useful a greater extension of the **CO₂ emissions "focus"**, considering the "Local" dynamics. Airport Carbon Accreditation has highlighted the airports role (not only the "aviation" emissions from aircraft). **Thanks to the ACI Europe initiative, European airports are very receptive on the subject;**
- there are interesting elements on **bio fuels for aviation**. This implies, however, significant actions at the airport level (in particular for storage and distribution);
- "multi-modality" in transport** is an important element at the "local" overall budget level, but this issue sees the various Countries with an important disparity concerning public investments;
- It is observed a growing presence of "means of transport" with alternative engines (electric in particular), the **airports could be a "reference point"** of this trend;



SEA MILAN AIRPORTS AND EUROPEAN RESEARCH PROJECTS IN THE ENVIRONMENTAL FIELD



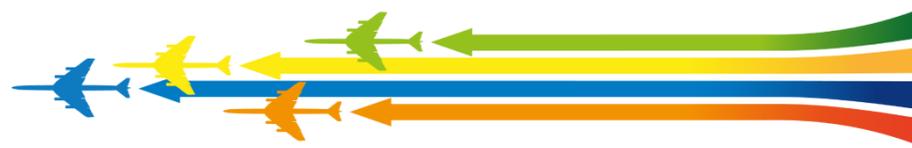
SEA takes part in the work of the **Environmental Strategy Committee of ACI Europe.**



SEA GROUP is active in the following European research projects:



CASCADE - (ICT for Energy Efficient Airports) -
(www.cascade.eu) - focused on ICT solutions for integration and development in fault detection diagnosis in public spaces –
Airport involved: Malpensa Airport.



DREAM - ICT for buildings and spaces of public use with high energy efficiency - DREAM has the aim to improve the efficiency and the network of distribution of electrical energy. DREAM considers the development of a new approach and management on a small scale dimension. Airport involved: Milan Malpensa.



WATERNOMICS - ICT for the management of water resources. The goal is to provide information, in real time, on the consumption and availability of water, to improve the quality of decisions and to control and raise awareness of the end users on this important resource. Airport involved: Milan Linate.

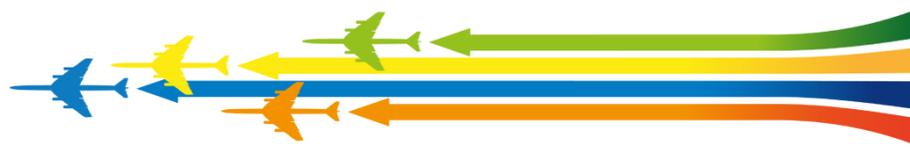
As for the WATERNOMICS, S4EeB and CASCADE projects , **ACI Europe** has formally expressed its support (thanks!) by providing the Environmental Strategy Committee for the dissemination of results to other airports.



ICAO

UNITING AVIATION

E-GAP



Thank you for your kind attention.

Giovanni Falsina

giovanni.falsina@seamilano.eu

0039 02 7485 2854

0039 335 698 92 88





ICAO Partners multiplying environmentally sustainable aviation action



Italia

