

# **Modena Biomedical and Motor District**

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**Round table on Clusters - Unioncamere Emilia Romagna**

**Bologna, September the 7th 2015**

# Democenter Foundation, Modena

Democenter-Sipe Foundation collects Institutions, Trade Associations, Banking Foundations and Local Companies:

- ❑ MODENA PROVINCE AND MUNICIPALITY
- ❑ UNIVERSITY OF MODENA AND REGGIO EMILIA
- ❑ MODENA CHAMBER OF COMMERCE
- ❑ MODENA SAVINGS BANK FOUNDATION
- ❑ CARPI FOUNDATION
- ❑ VIGNOLA FOUNDATION
- ❑ MIRANDOLA FOUNDATION
- ❑ UNICREDIT BANK
- ❑ EMILIA ROMAGNA POPULAR BANK
- ❑ 60 DIFFERENT COMPANIES

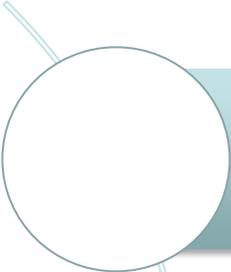


TECNOPOLO MODENA

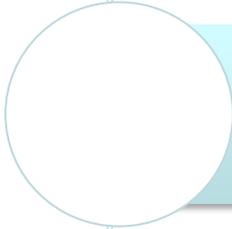


# The Foundation: What do we do?

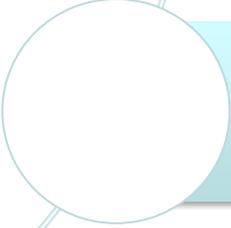
**Democenter Foundation was born to:**



**Promote and Manage R&D projects**



**Offer services including Business incubation and acceleration for hi-tech Start-up**



**Support international networking creation for R&D projects**

# Part 1:

# Biomedical District

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# Mirandola Biomedical District

- In 1964 the first industrial biomecical plant was founded by Dr. Mario Veronesi: STERILPLAST in Medolla.



# Mirandola Biomedical District

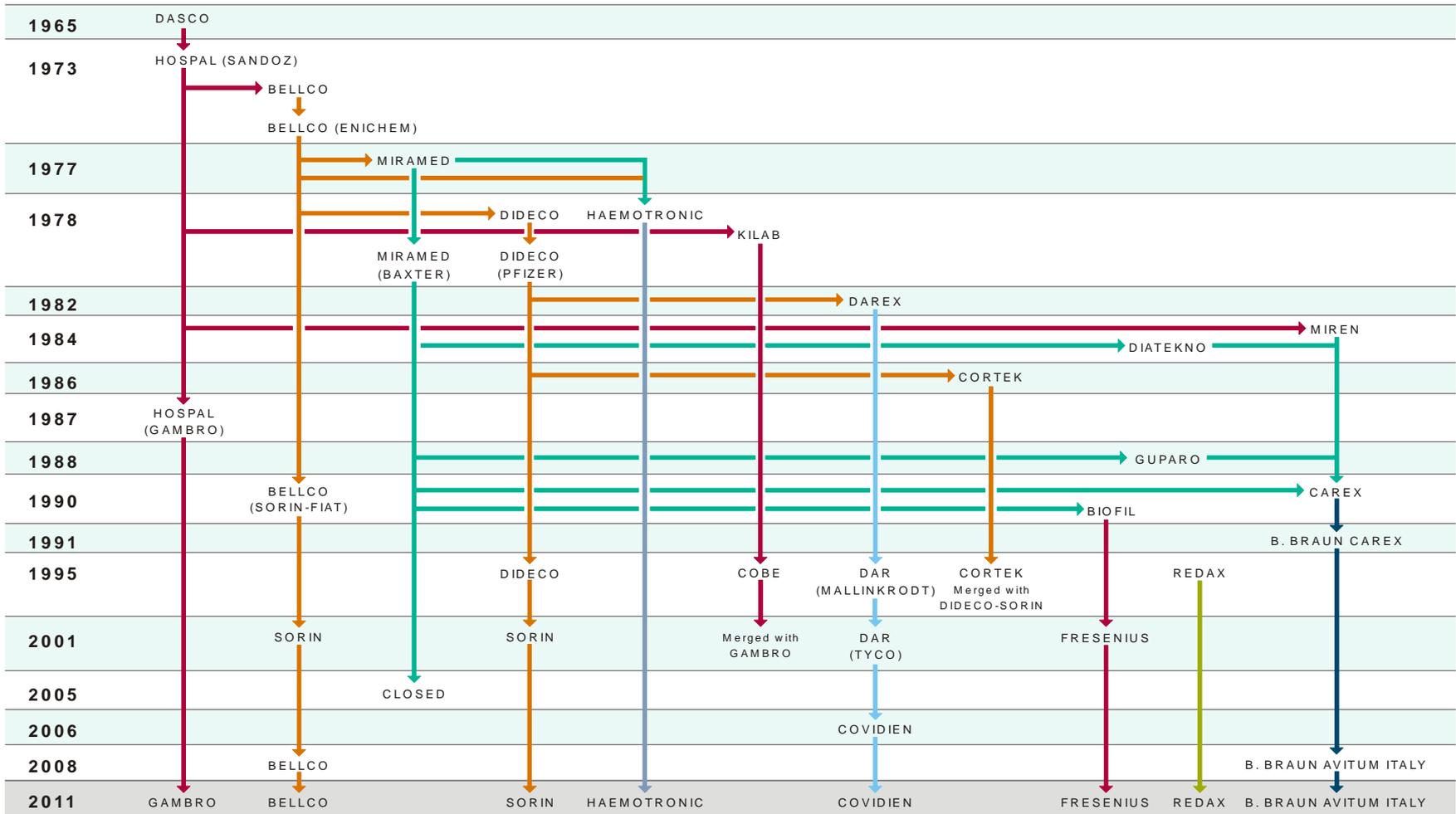
Mirandola biomedical district is a **Compound of Companies** specifically focused on the production of **medical devices**.

The beginning of the industrial history started in the late 60s, the district hugely developed in the 80s and 90s.

Positive economical trend and competence concentration attracted several **multinational** and **global companies** to invest in the area mainly through acquisition (but also “de novo”).



# Evolution of Biomedical District



# Different Medical Therapeutical Fields in the District

Different Medical Therapeutical Fields in the District

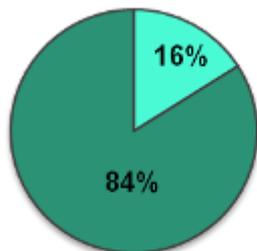
**Companies are specifically focused on the development and production of medical devices in form of active and non active**

- Apheresis and Plasmapheresis*
- Haemodialysis*
- Heart surgery*
- Anesthesia*
- Gynecology*
- Infusion, Transfusion, Autotransfusion*
- Continuous Renal Replacement Therapies*
- Enteral and Parenteral Nutrition*

# Biomedical Companies in Mirandola: Facts and Figures

## *Number of MD companies in the district*

■ Multinational ■ National

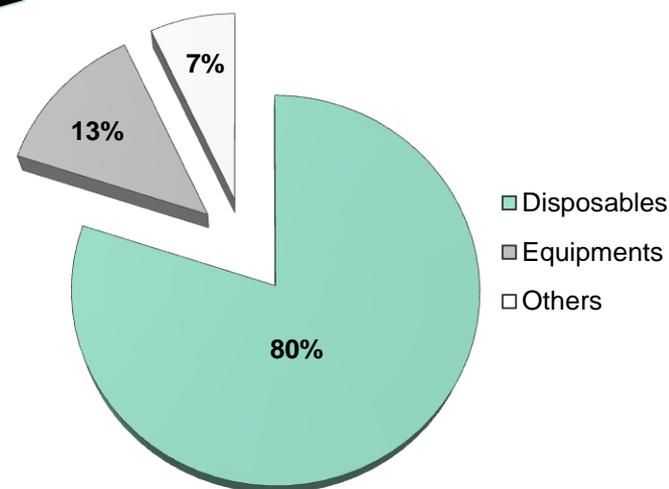


**103 companies**  
**3.500 employees**  
**860 M Euro total turnover**

## *Specialization*

Production of **DISPOSABLE devices** (80%)

Production of biomedical **EQUIPMENT** (13%)



# Biomedical Companies in the District: High resilience

On may 29th 2012 a earthquake hardly struck people, villages and companies of the District

None of the companies decided to relocate: after 3 years Facts and Figures are quite the same as before the earthquake; **+ 48% in exports** in the first quarter of 2015.



# Big Companies

**B|BRAUN**  
SHARING EXPERTISE

**bellco**  


 **Comef**

 **Elcam  
MEDICAL**  
Where everything connects

**EUROSETS™**  
MEDICAL DEVICES

 **FRESENIUS  
KABI**  
caring for life

 **GAMBRO.**

Gruppo  
**MEDICA**  
Group

 **HAEMOTRONIC™**  
ADVANCED MEDICAL TECHNOLOGY

**HMC**  **GROUP**

 **INTERSURGICAL™**  
COMPLETE RESPIRATORY SYSTEMS

 **REDAX™** SpA

**SIS TER**

 **SORIN GROUP**  
AT THE HEART OF MEDICAL TECHNOLOGY

# SMEs



# Strong interaction with scientific and technological research network

Industrial R&D is supported by the **Regional High Technologies Network**, who have developed specific expertise in the automotive sector; in particular:

- **University of Modena and Reggio Emilia: CIDSTEM – Stem cells and Rigenerative Medicine**
- **CIRI Life Science** at the University of Bologna
- **IOR: Rizzoli Orthopedics Institute, Bologna**
- **LTTA** at the University of Ferrara.



# Strong interaction with secondary and post secondary schools

Strong relationships with **technical secondary schools**

- Chemistry and biochemical, biotechnology
- Advanced materials
- Mechanics, mechatronics



Strong relationships with **post diploma institutes:**

- Biotechnologies, Biomedics and life science
- Robotics lab

# Laboratories at Modena Technopole

Thanks to Emilia Romagna Regional Government co-funding, after the 2012 earthquake, a Scientific and Techological Park for Medicine has been built by Fondazione Democenter aimed to the District R&D needs:

## Mirandola Branch labs:

**TOP : Toxicology and Proteomics**

**MAB : Applied Microscopy and Cellular Biology**

**MS<sup>2</sup> : Materials, Sensors and Systems**



## **Part 2:**

# **The Automotive Industry in Modena**

# Mechanical Industry in Modena: Overview

**Mechanical Engineering Industry** of Emilia Romagna represents one of the most productive cornerstones for the entire industrial fabric of the country in terms of companies' number and the value of the exports.

In this context, the mechanical industry in **Modena Province** plays a quite strategic role:

- **3.600 companies**
- **31.235 employees**
- **10.142M Euro of total turnover (23.5% of Modena Province overall turnover)**



# Automotive Sector: a tradition of excellences

Whithin the large mechanical sector, the territory of Modena boast an extraordinary tradition in the **motor industry**, whose main production is mainly addressed to **sports car and supercars**.

The excellence in motor industry of Modena Province is also confirmed by the decision taken by **FCA Group** to locate in Modena the development centre for the relaunch of Alfa Romeo brand.

The presence of automotive brands works as driving force to the car **components sector** that represents 5% of the whole national automotive supply chain, in which dominate the **specialists** (63%), followed by the **subcontractors** (28%) and **automotive engeneering and design** companies (9%).



# Modena: sportscar and luxury



**Ferrari** in Maranello, founded in 1947, is considered the most prestigious car maker in the world



**Maserati**: founded in Bologna in 1914, moved to Modena in 1939. Born as a race car, it was the car of Nuvolari, Moss, Fangio



**Pagani**: founded in San Cesario sul Panaro in the 90s by Horacio Pagani, the first model was presented at the Geneva Motor Show in 1999



**Lamborghini**: founded in 1963 in Sant'Agata Bolognese (35 km from Bologna, but only 20 km from Modena!), since the 90s is part of the Audi Group

# Modena: sportscar and luxury



**Alfa Romeo 4C:** the Maserati factory in Modena will produce 5,000 cars / year in 2015

# Motorsport in Modena

**Oral Engineering** develops motorbike for championships 2 and 3.



# Tractors, trucks and construction equipment...

**CNH Industrial**, a global leader for agricultural machinery, earth digging machinery, trucks, commercial and special vehicles.

The Group designs, manufactures and sells "work machines." The factory in Modena, with more than 1,800 employees, mainly produces tractors, with brands New Holland, Case and Steyr.



# Automotive supply chain: success stories...

- **HPE-COXA** – design, development and prototyping of components (powertrain, chassis, ...). Over 15 million EUR turnover and 110 employees in 2011. Founded by Piero Ferrari
- **Vaccari & Bosi** – aluminium chassis for Ferrari, Lamborghini, etc...
- **CRP Meccanica** - high precision machining and advanced material components for automotive, motorsport, avio
- **Egicon Srl** – designer and manufacturer of embedded electronic systems for automotive, biomedical and industrial automation.



# Economic performances of the automotive supply chain

## Facts & Figures

- **Turnover:** Italy 32 Billion Euros. Modena (128 firms) 1.8 Billion Euros, 5.7% of total national turnover for the sector
- **National turnover 2014:** + 3,6% versus 2013
- **Modena turnover 2014:** +7,4% versus 2013 (increase leader)
- The **employment impact** is positive: (+9.5%) and better compared to national average



# Economic performances of the automotive supply chain

## Facts & Figures

- 25,6% of turnover is from export (468 M Euro)
- Turnover Destination: sport-luxury (36%) and premium (12%)
- Modena investment in R&D is 4.3% of turnover, 3.9% is Italian average
- **Collaboration** and **networking** are the keys



# Strong interaction with scientific and technological research network

Industrial R&D is supported by the **Regional High Technologies Network**, who have developed specific expertise in the automotive sector; in particular:

- **INTERMECH-MO.RE** at the University of Modena and Reggio Emilia  
At **DIEF**, the Department of Engineering "Enzo Ferrari" of Unimore:
  - Bachelor's degree in vehicle engineering
  - Master's degree in vehicle engineering
- **CIRI MAM** at the University of Bologna and **MECH-LAV** at the University of Ferrara.



# Strong interaction with secondary and post secondary schools

## Strong relationships with technical secondary schools

- Electronics and electrotechnics
- Mechanics, mechatronics, energy
- Robotics



## Strong relationships with **post diploma institutes:**

- Mechanics, Mechatronics, Motoristics
- Robotics

