Area Impianti, **Italian clean-tech leading Company** with a strong track-record in **flue gas treatment solutions** and **power generation plants from heat recovery**.

The Strategic Partner can benefit from:

- Extensive industry know-how within the flue gas treatment and exploit the significant potential of the cutting edge technology of power generation from flue gas heat recovery;
- Leading market position and customer awareness, with reference to specific vertical industries, such as glass and waste incineration, thanks to a great number of plants installed worldwide;
- Highly skilled Engineering team, able to furnish turn-key solutions tailored to satisfy demanding customer needs and comply with environmental law requirements;
- A global footprint with an “extra Italy” consolidated presence (~80% of the revenues are generated outside Italy)
COMPANY OVERVIEW

Area Impianti, Italian company specialized in the design, procurement, manufacturing and installation of turnkey solutions in the clean-tech industry, with particular reference to flue gas treatment plants and power generation from heat recovery and from biomasses.

Founder in 1990 in the North-East of Italy by Angelo Marcolin, Ivana Cardin and Francesco Zatti. In 1991, to integrate the Company’s plants offering to foundries, Area Impianti began an industrial partnership with Savelli SpA, which ended in 2003 as Area Impianti chose to focus on other industries in particular in glass industry and especially in urban, medical and special waste incineration. Thanks of the 72 built plants, Area Impianti has reached a significant market share in particular in France and Italy.

In 2007, Area Impianti went public on the Italian Stock Exchange (MAC market). The private equity firm Cape Live subscribed €4.9m of the newly issued shares, owning an 11% stake of the total share capital. In 2012, the shareholders decided to delist the Company.

After the success attained in the flue gas segment, in 2008 Area Impianti started to develop the cutting-edge technology of power generation from hot flue gas heat recovery, enriching the Company’s offer in the environment protection and power generation.

The Company has made important plants also in USA, Brazil and China creating an efficient network with local Companies suitable to guarantee the right support in terms of constructions and services. In 2015, Area Impianti starts to work as EPC contractor for urban and medical waste incineration lines, with electrical power generation systems. In 2016, the Company began the first project: urban waste incinerator (65,000 ton/year) with power generation system (7.5 MW).

Ownership percentages have been restated taking into consideration treasury shares (8.7%).

Area Impianti controls two companies:

- **Area Impianti Ltda**, Brazilian commercial subsidiary.
- **Area Elettrica Srl**, Italian company that produces electrical parts and software for Area Impianti’s plants.

- Ivana Cardin (CFO) and Angelo Marcolin (CEO): 57.5%*
- Francesco Zatti (CTO): 28.7%*
- Alba Private Equity S.p.A.: 11.9%*
- Others: 1.9%.*
Area Impianti’s workforce consisted of **32 employees and 10 external salespeople and technicians**. The Company’s staff includes an highly skilled team of managers, engineers and technicians.

Personnel is organized in **three main departments**, which are headed by the three founders, who are supported in their tasks by experienced managers:

- **Commercial Department**: manages the sales and services provided by Area Impianti to its Customers and it is under the supervision of the CEO, Angelo Marcolin, who also oversees the R&D.
- **Technical Department**: takes responsibility for plants design, production, quality control and installation. The CTO, Francesco Zatti, is in charge of the department and supervises also EPC contracting activities.
- **Financial Department**: encompasses the accounting, controlling, purchasing and logistics functions of the Company. The CFO, Ivana Cardin, is in charge of the department and performs its activity with the support of an assistant and two accountants.
COMPANY OVERVIEW - ORGANIZATION

EXECUTIVE BOARD

A. Marcolin  
CEO

F. Zatti  
Technical Production Director

I. Cardin  
CFO

OPERATING STRUCTURE

Quality Control  
Project Manager  
Project Manager Assistant

Service  
Process Engineering Representative

Mechanical Engineering Team  
Construction Factories

Electrical-control Engineering Team

Logistic and Purchasing Team

Site Manager and Safety Control  
Commissioning, Start-up and training team  
Site Manager Assistant  
Assembly and Fitters
COMPANY OVERVIEW - ORGANIZATION

PROJECT TEAM

- **Project Manager**
  - General Project Manager
  - Senior Project Manager
  - Assistant

- **Site Manager**
  - Site Manager with title for HSE function
  - Senior Site Manager
  - Assistant with Safety Officer title

- **Technical contact person**
  - Project Engineer supporting Project and Site Manager

**Team: Commissioning, Start-up and Training**
- Head Project Engineer, Head Project Engineer Assistant, Control-command Software Engineer, Electrical Engineer, Experts from our main component suppliers

**After-sales Services**
- Service coordinator for urgent interventions and maintenance directly on site and remotely.
• **TURNOVER (Value Of Production)**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>TURNOVER</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>25,135,000</td>
</tr>
<tr>
<td>2019</td>
<td>20,039,000</td>
</tr>
<tr>
<td>2020 (exp.)</td>
<td>23,270,000</td>
</tr>
</tbody>
</table>

Area Impianti is able to manage, with its organization, an annual turnover of 35M €, as done in 2016.

• **EBITDA**

<table>
<thead>
<tr>
<th>YEAR</th>
<th>EBITDA</th>
<th>€</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>10.5%</td>
<td>2,639,682</td>
</tr>
<tr>
<td>2019</td>
<td>9.0%</td>
<td>1,810,000</td>
</tr>
<tr>
<td>2020 (exp.)</td>
<td>11.6%</td>
<td>2,688,000</td>
</tr>
</tbody>
</table>
BUSINESS OVERVIEW
Thanks to a continuous effort in the R&D of new advanced technological systems to apply to its plants, Area Impianti has developed significant competencies in the flue gas treatment and power generation from heat recovery fields, being able to offer a wide range of solutions.

### FLUE GAS TREATMENT SOLUTIONS

- De-dusting – through the use of electro-filters, bag filters and/or ceramic filters
- DeNox – adopting SCR catalytic treatments and/or SNCR thermal treatments
- DeSOx & Acid Gas Removal – by means of dry adsorbent (sodium bicarbonate and HSS lime)
- DeDioxin – using activated carbon and/or catalytic treatments
- Regenerative Thermal Oxidizer to eliminate VOC and odors

### HEAT RECOVERY AND POWER GENERATION SOLUTIONS

- Heat exchangers and boilers for heat recovery from waste gas for electric and thermal energy production
- Power generation with steam thermal and Organic Rankine cycles. Combined cycles steam and ORC.
- Systems: Steam turbine over 600°C, Organic oil turbines from 250°C to 600°C

Area Impianti products meets the customers and other stakeholders needs complying with applicable statutory and regulatory requirements. The Company has obtained four certifications:

- **ISO 9001: 2008** for Quality Management System (Cert. No. DE 491226 QM08 RT)
- **ISO 14001: 2004** for Environmental Management System (Cert. No. 491226 UM)
- **ISO OHSAS 18001: 2007** for Occupational Health and Safety Management System (Cert. No. 491226 BSOH);
- **SOA OS 14, VIII unlimited**, special certification for Public Italian tenders and works.
AREA IMPIANTI has the capability to provide a 360° service

**AREA IMPIANTI**

**CLIENT SUPPORT**
full satisfaction of the customer in all phases of the project

**PROJECT AND SITE MANAGEMENT**
Thanks of our experience it’s possible to coordinate and successfully carry out the projects entrusted to us

**PROCESS AND DETAIL ENGINEERING**
Synonymous with innovative technical solutions adapted to the specificity of each project

**SUPPLY AND ASSEMBLY**
Fair prices, reliability, timeliness, quality and environmental awareness

**SAFETY AND QUALITY**
Main objectives of health protection, work safety, environmental protection, energy efficiency and quality

BUSINESS OVERVIEW – 360° SERVICE
<table>
<thead>
<tr>
<th>Number</th>
<th>Description</th>
<th>Sites/Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>78</td>
<td>waste incineration lines</td>
<td>46 sites</td>
</tr>
<tr>
<td>14</td>
<td>biomass incineration lines</td>
<td>14 sites</td>
</tr>
<tr>
<td>148</td>
<td>furnaces</td>
<td>70 glassworks</td>
</tr>
<tr>
<td>3</td>
<td>lines</td>
<td>3 cement factories</td>
</tr>
<tr>
<td>114</td>
<td>cast iron production lines</td>
<td>47 sites</td>
</tr>
</tbody>
</table>
PARTNERS NETWORK
The network of partners and suppliers of Area Impianti built and made stable over time is essential for our long-term success. This portfolio of friendly companies allows Area Impianti to be able to cope with important work volumes in a short time, being able to field an enlarged organization under the control of the superspecialized internal team.

**Area Impianti can flexibly avail itself of the following workforce:**

- **Design Offices**: 43
- **Mechanical Assemblies**: 323
- **Electricians**: 147
- **Insulation**: 70
- **Site Managers**: 10
- **Manufacturing workshops**: 491
- **17,300 tonnes manufactured per year**
AREA IMPIANTI IN THE WORLD
Area Impianti carries out the commercial and sales activities from its headquarters in Italy. The Company can also rely on a foreign commercial Subsidiary in Brazil; and on two commercial branches in France (Paris) and Turkey (Bursa).

In addition, the Company can boast a consolidated presence in Europe, in the Middle East and North Africa.

Projects in: Italy, Spain, UK, Germany, France, Bulgaria, Belgium, Poland, Algeria, Egypt, Turkey, UAE, Jordan, China, USA, Brazil

- Headquarter
- Brazilian Subsidiary
- French Subsidiary
TECHNICAL SOLUTIONS
Area Impianti’s product portfolio is the result of a multidecadal experience in the most demanding fields and the result of a continuous effort to improve the efficiency, effectiveness and reliability of the offered solutions.

Dry particulate removal
- Tangential cyclones
- Axial cyclones
- Pulse jet filters with vertical pleated sleeves
- Pulse jet filters with vertical round sleeves
- Pulse jet filters with vertical flat sleeves
- Pulse jet filters with ceramic candles
- Electrostatic precipitators

Wet particulate removal
- Wet Electrostatic Precipitator (horizontal flow)
- Floating bed columns
- Venturi scrubber with variable throat
Wet gas removal
- Plate columns
- Static filling columns
- Floating bed columns

Odour and / or VOC and / or CO removal
- Static filling columns
- Thermal oxidizers
- Regenerative thermal oxidizers
- Active Carbon Adsorption Systems

Gas conditioning / cooling systems
- Quencher with dual flow lances
- Quencher with Spillback lances
- Dissipative exchangers
Heat exchangers for energy recovery
- Gas / gas exchangers
- Gas / liquid exchangers for raw fumes

DeNOX Systems
- SNCR Systems
- Low temperature regenerative tail-end DeNOx reactors
- DeNOx low dust high temperature reactors

Reagent and residues handling
- Storage systems
- Extraction / dosing / grinding systems
- Pneumatic conveying systems in diluted / semi-dense / dense phase

Various
- All-in-One systems for Dedust-FGC-DeNOx
- Energy recovery systems with ORC
- Waste incineration boilers
- Boilers / grids for waste incineration
- Subcooling systems for plume elimination
- Water-cooled hoods and ducts for electric furnaces and steel converters
Area Impianti offers a solid **after-sales service** structure with support that assists the customer by offering spare parts, punctual maintenance, scheduled maintenance, remote control and 24-hour availability.

In addition, our process engineers are available for **remote assistance** to assist site staff. This service is very often requested by our glass-making customers.

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**TECHNICAL SOLUTIONS – AFTER SALE AND WARRANTY MONITORING**

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APPLICATIONS
APPLICATIONS – INCINERATION PROJECTS

- VERT-LE – GRAND SEMARDEL

France
126,000 ton/y x 2

CAGLIARI

Italy
100,000 ton/y

BEA – DESIO

Italy
95,200 ton/y

MACOMER

Italy
60,000 ton/y
APPLICATIONS – INCINERATION PROJECTS

- **PARMA - IREN**
  - ITALY
  - 130,000 ton/y

- **GRENOBLE**
  - FRANCE
  - 192,000 ton/y

- **PONTCHARRA - SIBRECSA**
  - FRANCE
  - 19,000 ton/y

- **KOSICE**
  - SLOVAKIA
  - 120,000 ton/y
APPLICATIONS – INCINERATION PROJECTS

- VICENZA - ZAMBON
  - 50,000 t/y Industrial waste

- BERGAMO - BAS
  - 150,000 ton/y
APPLICATIONS – GLASS PROJECTS

- ARQUES - ALPHAGLASS
  - FRANCE
  - Container Glass

- ALLOA – O-I
  - UK
  - Container Glass

- HOLZMINDEN – O-I
  - GERMANY
  - Container Glass

- S. V. AL TAGLIAMENTO – VETRI SPECIALI
  - ITALY
  - Container Glass
APPLICATIONS – GLASS PROJECTS

- BARCELONA – O-I
- ALTARE – VETRERIA ETRUSCA
- SOFIA – BA GLASS
- JAROSLAW – O-I

SPAIN
Container Glass

ITALY
Container Glass

BULGARIA
Container Glass

POLAND
Container Glass
APPLICATIONS – CEMENT PROJECTS

- PEDEROBBA – CEMENTI ROSSI
- PIACENZA – CEMENTI ROSSI
- REZZATO - ITALCEMENTI

**ITALY**

- Kiln and Clinker Cooler Heat Recovery for ORC energy production
- Chlorine cycle By-pass
- DeNOx SCR Low Temperature
APPLICATIONS – BIOMASS PROJECTS

- **CHARTRES - LLT**
  - FRANCE
  - Turnkey biomass fired power plant
  - 24,000 ton/y

- **PAVIA - AREAUNO**
  - ITALY
  - Wood + Organic waste
  - 30,000 ton/y

- **FOGGIA - ENTERRA**
  - ITALY
  - Olive Pomace
  - 112,000 t/y

- **SÈTE - EDF**
  - FRANCE
  - Wood
  - 81,000 ton/y