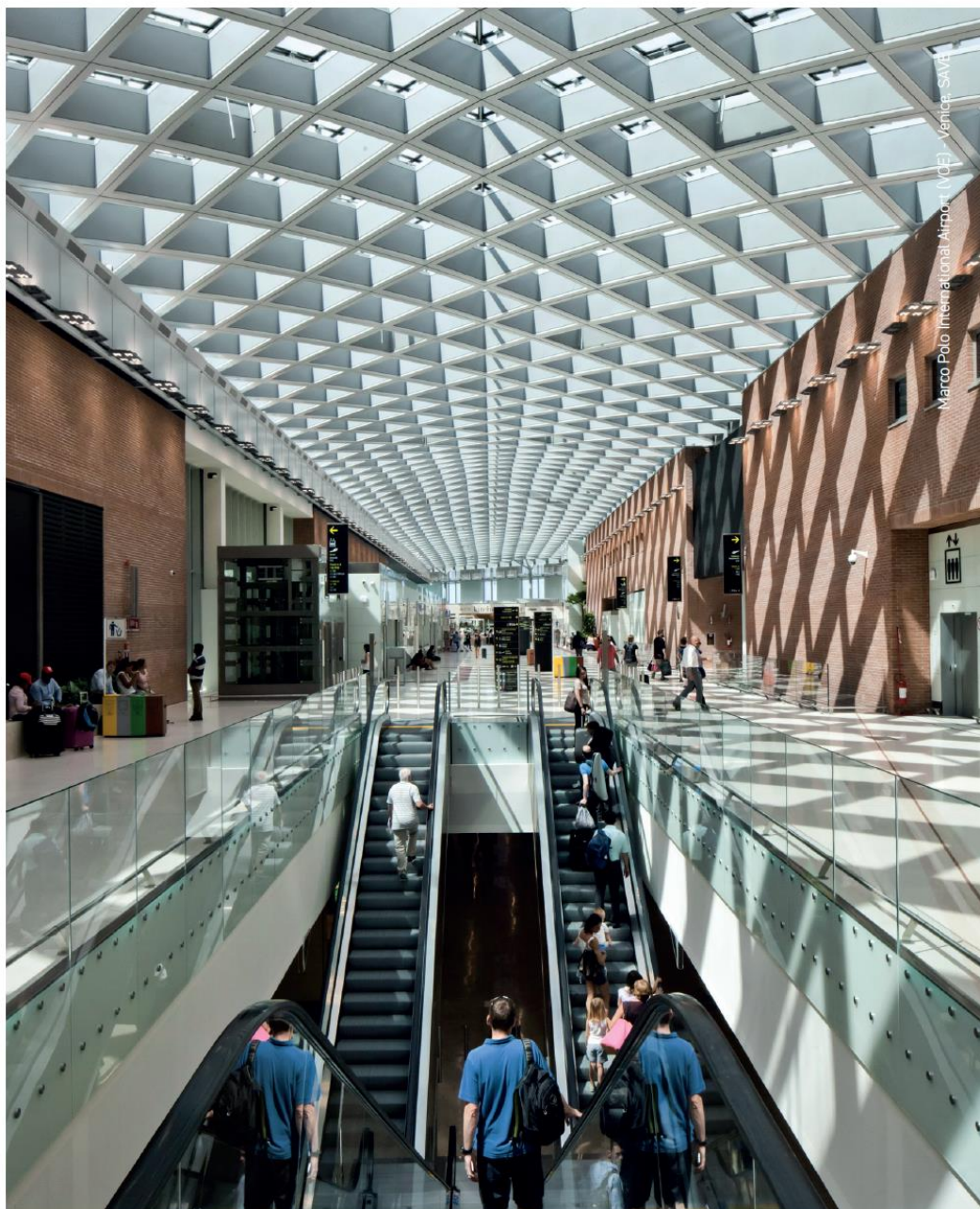


REPORT 2017

**on the Italian
Construction,
Architecture
and Engineering
Industry**

UPDATED VERSION – MAY 2018

edited by Aldo Norsa



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REPORT 2017

on the Italian Construction,
Architecture and
Engineering Industry

Edited by Aldo Norsa

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INTRODUCTION

The new edition (the 7th) of the Report (2017) on the Italian Construction, Architecture and Engineering Industry this year is extended to contractors in addition to design (A/E) firms. Mentioning the top entrepreneurs in each category. The Report is devoted to appraising and understanding the project entrepreneurship (with an intellectual drive motivating each professional and business activity) of a country - Italy - eighth in the world with a Gdp of 1,756 billion euros¹. Construction and A/E entrepreneurs are increasingly projected toward selected international markets. At the world level this industry is studied by the American magazine *Enr* - *Engineering News Record* in two separate surveys of the world's top "contractors" and "design firms" (as opposed to "epc firms"). As the domestic market is insufficient and of scarce appeal for Italian firms (and the European market remains fragmented) they are obliged to cope with global competitors of much bigger size. According to leading economists the main reason why countries like Italy have not yet recovered from a world crisis which started in 2008 is the shrinkage of fixed capital investments, particularly in infrastructures and buildings, which in 2017 still account for only 1.4% of public expenditure. Seven years of insufficient domestic demand can only weaken an industry obliged to more efforts (and ingenuity) in order to survive and eventually strive.

This Report describes the export market as a "competitive arena" in which Italian firms have to compete with certain handicaps. It affects qualitative (and not only quantitative) concerns that are put forward in the following chapters of the Report. It is estimated that in 2016 foreign markets accounted for at least half of the production of major Italian contractors and one third in the case of design firms.

The structure of the Report is the following:

Chapter 1 - "Italy in the World" - The role of the country, the size and nature of its exports.

Chapter 2 - "The International Contractors - The Italian Expansion" ... - The new phase for top contractors is to acquire and develop firms outside Europe and enter the markets of most industrialized countries adding to the developing ones where they are established for a long time.

Chapter 3 - "The International Design Firms - The Italian Challenge" - focuses on the supply of design services in Italy by highlighting the competitive gap with foreign champions drawing on annual rankings published internationally.

Chapter 4 - "The Italian Supply of Construction and A/E Services" - discusses the main economic, financial and other company specific data of the top 50 Italian general (and five specialty) contractors, the first 150 engineering firms, the top 150 architectural firms and the top five project validation firms (ordered by 2016 revenues). The 2016 data are compared with 2015 and completed with the relevant comments, trends and forecasts. Including other informal rankings of groups of companies and by trades.

Chapter 5 - Internationalization and Delocalization - analyzes the business of interest from two major points of view: exporting construction (in this case built *in situ*) and services against producing abroad. An effective choice can be the delocalization of firms: the Italian system is so weak that the majority of competitors cannot easily consider "external growth" (i.e. buying firms), especially abroad where the risks are often bigger than at home, and therefore limit themselves to export services from Italy (or temporarily ally with local/resident firms, when they judge that this adds whatever value is required). That is why the few which delocalize are worth special mentions, especially when this is coupled with *ad-hoc* specialization.

¹ International Monetary Fund - World Economic Outlook, April 2017



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Chapters 6 and 7 - “At the Top - Who is Who” - Rankings and addresses of 360 Italian firms.

Published (and sent to some 6,000 subscribers) with issue n. 46/2017 (December 4th - 9th) of the weekly magazine *Edilizia e Territorio* (group *Il Sole 24 Ore*), www.ediliziaeterritorio.ilssole24ore.com this Report is edited by Aldo Norsa (professor at Università Iuav di Venezia). The 2016 data on the supply side (the lists of the top 360 contractors, design firms and validation and technical control firms) derive from direct information and financial statements collected from the Italian “Registro Imprese”, analyzed and compared by the research firm Guamari (www.guamari.it) (Stefano Vecchiarino, researcher in charge).

Figure 1



**Geographical distribution
of top 50+5 contractors
(general and specialty)
(2016 revenues)**

Figure 3



**Geographical distribution
of top 150 architecture
(and design) firms
(2016 revenues)**

Figure 2



**Geographical
distribution of top 150
engineering firms
(2016 revenues)**

Source:
Guamari based
on firms'
balance sheets



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CHAPTER 1

ITALY IN THE WORLD - THE ROLE OF THE COUNTRY

Italy has an important role in the world since the Roman Empire (two thousand years ago!) culturally but also economically (although with *ups* and *downs*). A few numbers can prove it.

The country, member of the United Nations, of Oecd, of G7 (an outstanding privilege) and, politically, of the European Union, has a good positioning in the world in spite of its relatively small size. At the international level the Peninsula ranks only 72nd in terms of surface (301,338 km²), 23^o of population (60.6 million) with a high density: 42nd in the world (201.3 inhabitants per km²). From the economic point of view Italy is 8th in the world in terms of Gdp (1,756 billion euros, with a 1.5 increase in 2017), 25th both in Gdp per capita (29,970 euros) and in Hdi (human development index) (0.887).

Italy is a highly exporting country, 9th in the world, with sales (of goods and services) worth 438 billion euros. It also exports capitals: it is 17th in the world with an outflow of foreign direct investments (Fdi) worth 392 billion euros. As far as sales abroad are concerned the European Union is more and more a domestic market as (see below) it receives more than half of all the value exported.

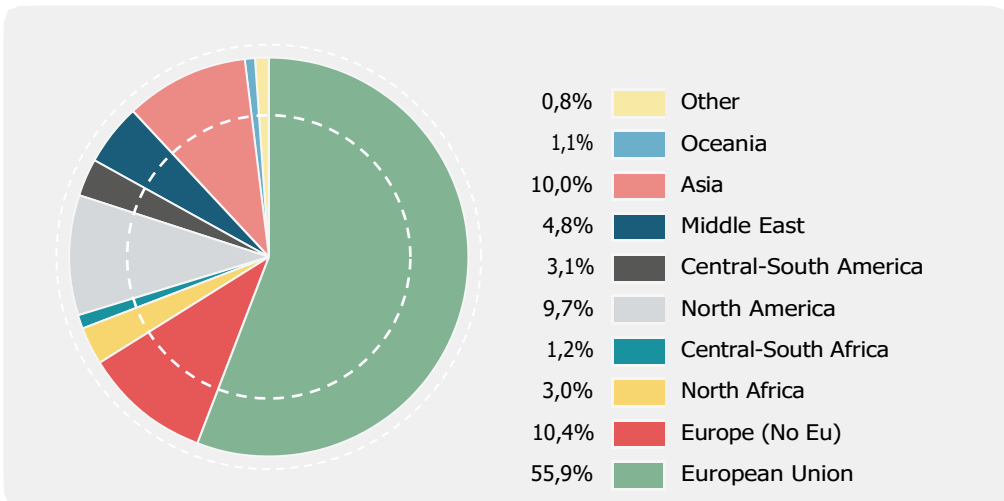


Figura 4 - Where Italy exports (in 2016)

Source: Ice (Institute For Foreign Trade) /Istat (Institute For Statistics)

The future of such a big exporter (of works and services besides goods) depends on a world scenario which can be traced, according to Imf (International Monetary Fund), as follows.

“With buoyant financial markets and a long-awaited cyclical recovery in manufacturing and trade under way, world growth is projected to rise from 3.1 percent in 2016 to 3.5 percent in 2017 and 3.6 percent in 2018. But binding structural impediments continue to hold back a stronger recovery and the balance of risks remains tilted to the downside, especially over the medium term. With persistent structural problems — such as low productivity growth and high-income inequality — pressures for inward-looking policies are increasing in advanced economies. These threaten global economic integration and the cooperative economic order. On the domestic front policies should aim to support demand and repair balance sheets where

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necessary and feasible; boost productivity, labor supply, and investment through structural reforms and supply-friendly fiscal measures; upgrade the public infrastructure and support those displaced by structural transformations such as technological change and globalization. Adjusting to lower commodity revenues and addressing financial vulnerabilities remain key challenges for many emerging markets and developing economies. A renewed multilateral effort is also needed to tackle common challenges in an integrated global economy.”

Looking at the different geographical areas, the Imf continues its analysis focusing on the trends in commodity exchange.

“Conditions in commodity exporters experiencing macroeconomic strains are gradually expected to improve, supported by the partial recovery in prices, while growth is projected to remain strong in China and many other commodity importers.”

According to Icelstat China accounts for 2.7% of Italian exports but if contractors find huge barriers to entry many A/E firms have established branches there. Looking at other economies:

“In advanced economies, the pickup is primarily driven by higher projected growth in the United States, where activity was held back in 2016 by inventory adjustment and weak investment. While growth is still expected to pick up notably for the emerging market and developing economies group, weaker activity in some large countries has led to small downward revisions to the growth prospects for 2017. In particular, for advanced economies, projected growth has been revised upward in the United States, reflecting the assumed fiscal policy easing and an uptick in confidence, especially after the presidential elections, which, if it persists, will reinforce the cyclical momentum. The outlook has also improved for Europe and Japan based on a cyclical recovery in global manufacturing and trade that started in the second half of 2016.”

Europe obviously is the main area for Italian exports (66.3%). With the addition of Usa (8.8%), Canada (0.9%), Australia (0.9%) and Japan (1.4%), developed countries account for 68%. An earlier study of Guamari showed how Italian contractors are getting stronger and stronger in advanced countries that represent almost 20% of their contracts. Especially the interest for the Us market is increasing as showed by the M&A operations of Salini Impregilo (acquisition of Lane Industries in addition to the control of Healy), Itinera (Halmar) and Cmc (Lm Heavy Civil Construction and Difazio). If engineering firms appear not strong enough to compete in the Usa, a number of important Italian architects have operative offices in this country: Renzo Piano, Antonio Citterio and Patricia Viel, Piero Lissoni, Mario Cucinella, ... Continuing with the Imf quotation:

“On the other hand downward revisions to growth forecasts for emerging market and developing economies result from a weaker outlook in several large economies, especially in Latin America and the Middle East, reflecting continued adjustment to the decline in their terms of trade in recent years, oil production cuts, and idiosyncratic factors. The 2017 and 2018 growth forecasts have been marked up for China, reflecting stronger-than-expected policy support, as well as for Russia, where activity appears to have bottomed out and higher oil prices bolster the recovery. Expectations of more robust global demand going forward, coupled with agreed restrictions on oil supply, have helped commodity prices recover from their troughs of early 2016. Headline inflation has been picking up in advanced economies due to higher commodity prices, but core inflation dynamics remain subdued and heterogeneous (consistent with diversity in output gaps).”

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Geographically, while overall the Italian economy only exports 4.8% to the Middle East, the construction and engineering sector is more present. According to Ance the 14.7% of the main Italian contractors' backlog is in this area. The difference is even bigger in Latin America: if Italy exports just 3.1% of goods in that area, it represents 23.9% of the contractors' backlog (!).

Finally, this is the overview by Imf pointing to several potential factors of risk shaping the world economy outlook:

"Inflation has improved little where it had been the weakest (for instance, in Japan and parts of the euro area). Risks to medium-term growth appear more clearly negative, also because policy support in the United States and China will have to be unwound or reversed to avoid unsustainable fiscal dynamics. More generally, downside risks stem from several potential factors:

- an inward shift in policies, including tendencies toward protectionism, with lower global growth caused by reduced trade and cross-border investment flows;*
- a faster-than-expected pace of interest rate hikes in the United States, which could trigger a more rapid tightening in global financial conditions and a sharp dollar appreciation, with adverse repercussions for vulnerable economies;*
- an aggressive rollback of financial regulation, which could spur excessive risk taking and increase the likelihood of future financial crises;*
- financial tightening in emerging market economies, made more likely by mounting vulnerabilities in China's financial system associated with fast credit growth and continued balance sheet weaknesses in other emerging economies;*
- adverse feedback loops among weak demand, low inflation, weak balance sheets and anemic productivity growth in some advanced economies operating with high levels of excess capacity;*
- non-economic factors, including geopolitical tensions, domestic political discord, weak governance and corruption, extreme weather events, and terrorism and security concerns.*

These risks are interconnected and can be mutually reinforcing.

Policy choices will therefore be crucial in shaping the outlook and reducing risks. Priorities for macroeconomic demand management are increasingly differentiated, given the diversity in cyclical positions. In economies with slack and persistently weak core inflation, cyclical demand support remains necessary, including to stave off pernicious hysteresis effects. In economies where output is close to or above potential, fiscal policy should aim at strengthening safety nets and increasing potential output. At the same time credible strategies are needed in many countries to place public debt on a sustainable path. Following a lackluster recovery from the global financial crisis, and in the aftermath of the sharp adjustment of global commodity prices, many economies are seeking to enhance growth potential, inclusiveness and resilience. Actions to bolster potential output are urgent given persistent headwinds from population aging in advanced economies, the ongoing adjustment to lower terms of trade and the need to address financial vulnerabilities in emerging market developing economies, as well as sluggish total factor productivity growth in both groups. The findings highlight the need to make growth more inclusive. Possible policy levers include more progressive taxation; investment in skills, lifelong learning, and high-quality education; and other efforts to enhance the occupational and geographical mobility of workers to ease and hasten labor market adjustments to structural transformations. Many of the challenges that the global economy confronts call for individual country actions to be supported by multilateral cooperation. Key areas for collective action include preserving an open trading system, safeguarding global financial stability, achieving equitable tax systems, continuing to support low income countries as they pursue their development goals and mitigating and adapting to climate change."

In this vulnerable scenario how is the Italian construction, architecture and engineering industry faring specifically? The answers are in the next four chapters, relating to the top competitors in each field of interest.



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CHAPTER 2

THE INTERNATIONAL CONTRACTORS - THE ITALIAN EXPANSION

2.1 The World

The market for international contractors has been undergoing stresses over the past four years, starting with a drop in commodity metals prices, which curbed the mining sector, closely followed by the collapse in oil prices. International contractors also have had to contend with national political and financial upheavals. These uncertainties can be seen in the results of the latest *Enr* (*Engineering News-Record*) Top 250 International Contractors survey. This list ranks firms based on contracting revenue from projects outside of their countries.

The Top 250 International Contractors reported 468.12 billion dollars in contracting revenue in 2016 from projects abroad, down 6.4%, from 501.14 billion in 2015. This is the third straight year showing a drop in the top 250 revenue. On the contrary this same group of contractors reported 927.94 billion in revenue from domestic projects in 2016, up 3.4%, from 897.33 billion, in 2015. On a regional basis, the Middle East was the biggest gainer, up 9.8%, to 84.02 billion, in 2016. This increase still is well below the 91.32 billion earned by the Top 250 in 2012 (the peak). Europe also saw a modest gain in 2016, rising 2.7%, to 95.99 billion. The biggest loser was the Latin American market, which declined 42.9% on weakening economies and political turmoil. Among market sectors, the petroleum market is the most prominent one under siege. Revenue from petroleum-related projects among the Top 250 fell 8.6%, to 104.51 billion in 2016. The buildings market fell in 2016, down 5.1%, to 101.43 billion, while the power market also sagged, dropping 15.8%, to 45.55 billion. In contrast, the transportation market, the largest international opportunity for the Top 250 has continued to grow through global tumult, rising 3.4%, to 144.38 billion.

2.1.1 The Role of Commodities and Infrastructures

Low oil prices are putting a severe damper on petroleum projects throughout much of the world. Oil prices per barrel remain in the low 50 dollar range, and many firms expect for the foreseeable future prolonged depressed prices and shifts in the energy industry. But the news is not all bad in the petrochemical arena. Many oil producers are focusing their capital spending on projects to optimize processes and reduce maintenance costs: this means pipelines and related infrastructures. Further, cheap gas is a strong driver in many regions, starting from the Usa, the place to be for a downstream contractor because downstream gas is strong in many regions, whether for export purposes or as feedstock for fertilizer and polyolefins plants. On the other hand, the trend toward urbanization has forced nations to invest in infrastructure. Every nation has drawn the blueprint for the economy [revitalization] and given priority for some large and important projects and the subsequent need for supporting infrastructure is a global phenomenon. For instance Egypt, Algeria, Saudi Arabia and Iraq are classified as young, populous, emerging countries with increased demand for infrastructures. This development has led to a surge in work to support urbanization efforts. The growth of megacities and the quest for sustainability are boosting transportation and renewable-energy orders to a degree not seen for decades.

2.1.2 Risks and Opportunities

These trends have caused some large contractors to reassess their portfolios. Many international players report having some success in shifting gears. Although one sees lots of projects in the

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developing world, often they are lacking financing. On the contrary orders are up in Nordic and European markets but down in the Usa, where there is “fierce” competition. Many contractors complain that clients are becoming more demanding and, in some cases, less reliable because of economic upheavals.

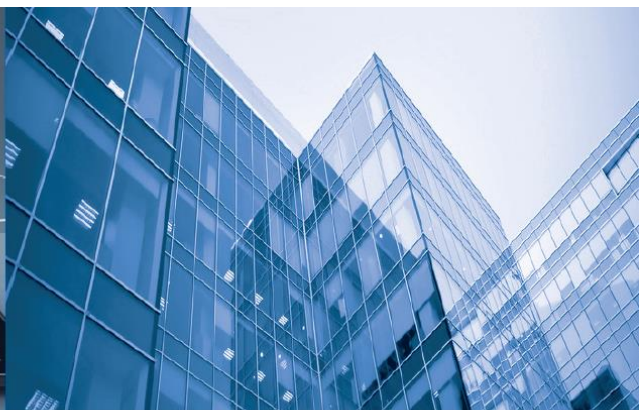
Some have problems pursuing projects “caused by tight cash flows, stricter and riskier contractual terms and conditions”, and many cancelled prospects to which they have bid with unclear communication from some clients. Many contractors also are concerned about national economic conditions and exchange rates. The main negative issue being the cost of money and the fluctuations in financial markets, which entails an uphill battle to sustain cash flow. Moreover inflation has hit hard many formerly prosperous markets in Latin America. But other major markets also are experiencing the problem, so that new investors are less likely to develop greenfield projects if the cost of borrowing and investment is elevated. Many firms are taking steps to mitigate their risks becoming more risk-averse and selective in new bids. For instance diversifying from megaprojects to “more regular work”. Competition also is ramping up as some firms are being assisted in the global market by their government’s policies. The Chinese government has made related beneficial policies such as advocating Chinese enterprises to go globally and become number one in the world of exports. Without forgetting that China’s Belt and Road Initiative has helped deepen the cooperation between different nations or regions. But many old-line contractors are uncomfortable with the level of government assistance given to new competitors. This is also the case of some government backed companies from South Korea (the fifth exporting country in construction).

2.1.3 The Italian Lot

As far as contracting is concerned, given a domestic market which remains unsatisfactory and crowded, especially for the larger Italian firms, their drive is more and more international... And the comparison with the international scene is improving. The data are drawn from the yearly ranking of the American magazine *Enr* referring to the top 250 biggest contractors working in the world. With a big warning: applying the same principle established for the European list (which follows) we have not double counted Acs, Cimic (formerly Leighton) and Hochtief because the latter’s revenues are already included in the former’s consolidated balance sheet. This means that we have recorded certain shifts, moving forward (by one and then two positions) all the contractors that follow. Also *Enr* studies all sorts of contractors while our emphasis is on construction contractors (for the sake of coherence with the European, and Italian, lists that follow in the Report).

According to *Enr* in the world the top Italian contractors (14 out of 250) rank 6th by international 2016 revenues, after the Chinese, Spanish, American, French and South Koreans. They export 26.7 billion dollars (5.7% of the world total) with special emphasis on Africa and the Middle East (last year the Italian contractors in the list were 15 with a share of 5.3% - 25.6 billion dollars - and ranked 7th). They are listed below, in comparison with the top ten, bearing in mind that only eight construction contractors (Salini Impregilo, Astaldi, Condotte, Rizzani de Eccher, Cmc, Pizzarotti, Ghella and Icm) of our interest appear among the top 250. Some of them are world leaders in given markets (Salini Impregilo in water, Danieli in industrial, ...) but also appear among the top ten in other fields (Salini Impregilo ninth in sewer/waste and in transportation, Saipem second in petroleum). As far as the world regions are concerned, Salini Impregilo is seventh in the Usa and Saipem is sixth in Africa, eighth in Asia and ninth in the Middle East.

Please note that at least three other major Italian international contractors would have been included: Cimolai, Glf, Trevi, if they had responded to the survey.



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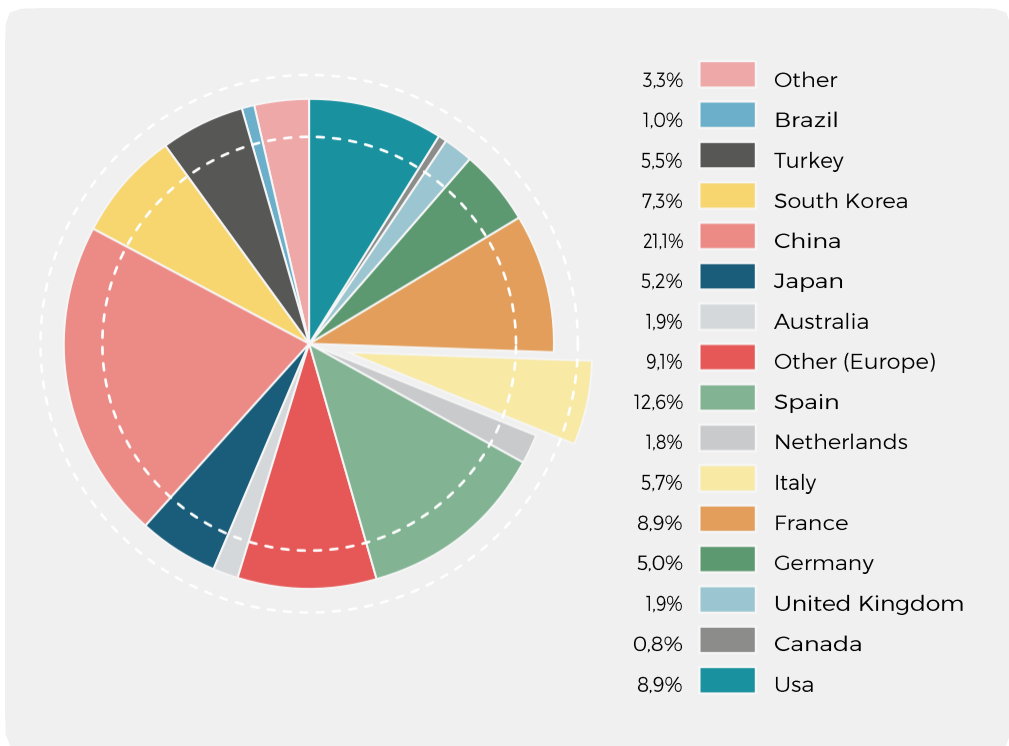


Figure 5 - How the Top 250 International Contractors shared the 2016 market
Source: Guamarí based on Enr data

THE TOP INTERNATIONAL CONTRACTORS

Rank	Firm	2016 International revenues	2016 Total revenues	2016 New contracts	General building	Manufacturing	Power	Water Supply	Sewer/Waste	Indus./Petroleum	Transportation	Hazardous waste	Telecom
1	ACS (Spain)	32.598,2	37.333,9	32.598,2	34	1	6	2	-	11	30	-	4
-	HOCHTIEF (Germany)	22.927,0	24.022,0	25.791,0	46	1	-	1	-	5	25	-	5
2	CHINA COMMUNICATIONS CONSTRUCTION GROUP (China)	21.201,0	70.780,0	36.784,0	6	12	-	2	-	-	79	-	-
3	VINCI (France)	17.367,3	42.667,9	16.269,6	6	-	15	2	-	6	46	1	10
4	BECHTEL (Usa)	16.406,0	24.251,0	4.437,0	-	-	-	1	-	40	59	-	-
5	BOUYGUES (France)	12.257,0	26.354,0	13.107,0	27	-	8	1	-	1	56	2	-
6	TECHNIP (France)	12.113,0	12.230,0	5.484,0	-	-	-	-	-	100	-	-	-
7	SKANSKA (Sweden)	12.110,0	15.414,0	15.680,0	49	2	5	-	3	4	34	-	1
8	STRABAG (Austria)	12.008,7	14.220,9	13.202,0	36	-	-	4	3	6	50	-	-

Rank	Firm	2016 International revenues	2016 Total revenues	2016 New contracts	General building	Manufacturing	Power	Water Supply	Sewer/Waste	Indus./petroleum	Transportation	Hazardous waste	Telecom
9	POWER CONSTRUCTION CORP. OF CHINA (China)	11,595.9	43,324.7	27,751.8	9	-	57	7	2	3	19	-	-
10	CHINA STATE CONSTRUCTION ENGINEERING CORP. (China)	10,358.8	124,656.7	17,163.5	63	-	1	1	-	1	34	-	-
THE ITALIANS													
11	SAIPEM (1) (Italy)	8,949.0	9,121.0	324.0	-	-	-	-	-	99	1	-	-
16	SALINI IMPREGILO (Italy)	6,249.3	6,779.3	8,693.4	4	-	-	20	3	-	61	-	-
45	ASTALDI (Italy)	2,656.9	3,139.4	3,672.7	10	-	17	-	-	-	70	-	-
55	DANIELI & C. OFFICINE MECCANICHE (Italy)	1,989.0	2,135.0	1,800.0	-	-	-	-	-	100	-	-	-
57	MAIRE TECNIMONT (Italy)	1,766.7	2,177.2	1,584.4	-	-	10	-	-	89	1	-	-
85	CONDOTTE (Italy)	889.3	1,455.7	643.1	14	-	-	2	-	-	79	-	-
87	RIZZANI DE ECCHER (Italy)	869.9	1,026.1	476.2	38	-	-	1	-	-	53	-	-
95	BONATTI (Italy)	796.0	846.0	701.0	-	-	-	-	-	100	-	-	-
111	CMC (Italy)	622.9	1,136.5	1,016.8	1	-	19	29	-	-	43	-	-
119	PIZZAROTTI (Italy)	554.2	863.8	1,119.2	61	-	-	2	-	-	37	-	-
121	SICIM (Italy)	538.0	541.0	700.0	-	-	-	-	-	100	-	-	-
134	GHELLA (Italy)	451.0	687.0	246.0	-	-	14	1	4	-	77	-	-
195	ICM (2) (Italy)	204.0	346.9	398.8	66	-	-	4	-	-	30	-	-
215	ANSALDO ENERGIA (3) (Italy)	137.1	151.2	241.9	-	-	100	-	-	-	-	-	-

Source: [Guamari on Enr data \(million dollars\)](#)

(1) Eni Group; (2) formerly Impresa Costruzioni Giuseppe Maltauro; (3) 44.8% owned by Cdp Equity (Cassa Depositi e Prestiti Group) and 40% by Shanghai Electric

An interesting comparison between countries can be drawn referring to a different ranking, also by *Enr*, the top 250 global contractors (listed by turnover at home and abroad). The fact that Italy accounts for just 2% of the world revenues (much less than its 5.7% of the world exports) reveals how limited the national market is: a handicap which could continue to affect future performances, exactly the contrary applies to China (21.1% of export but 47.7% of global turnover).



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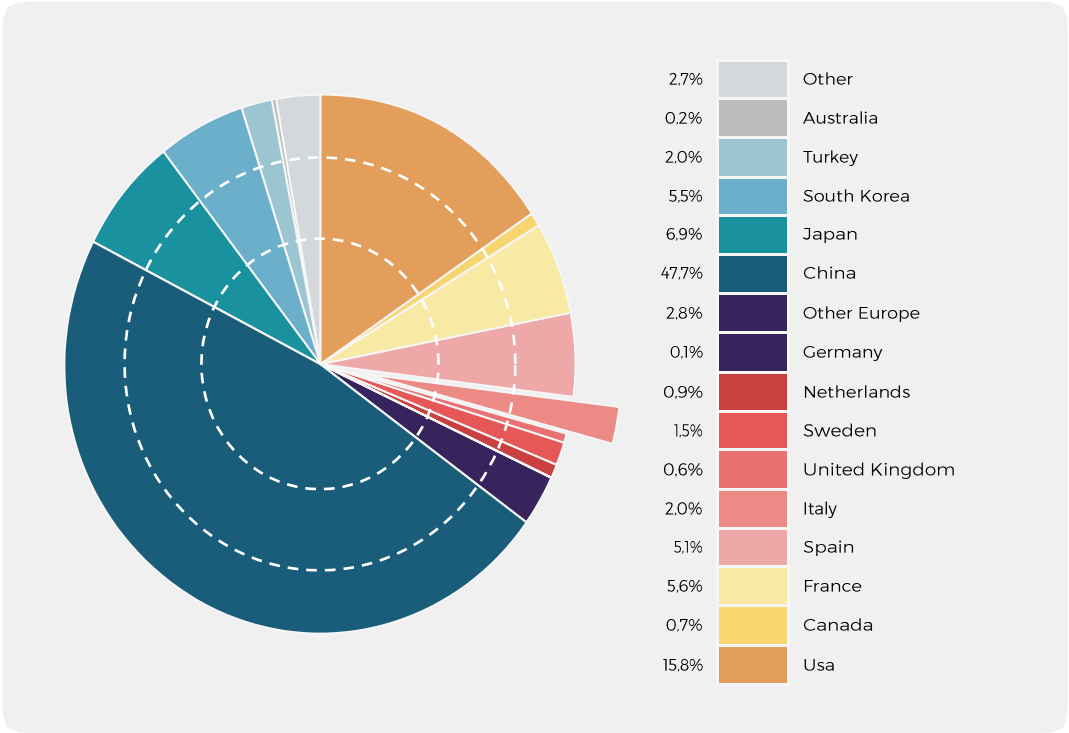


Figure 6 - How the Top 250 Global Contractors shared the 2016 market
Source: Guamari based on Enr data



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2.2 Europe

A specific zoom on supply in Europe allows to better focus the Italian contractors' performance among its peers. Bearing in mind that common policies and regulations are bringing European contractors closer, for instance favoring alliances and opening up the border between countries (Brexit for the moment notwithstanding). The closer look is made possible by an ad-hoc survey of the firm Guamari of the 2016 data sheets of the top 50 contractors having their headquarters in Europe and active in general building and infrastructures, with the exclusion of specialized producers of single family houses and of real estate developers.

TOP 50 EUROPEAN CIVIL CONTRACTORS

Pos. 2016	Pos. 2015	Pos. 2014	Gruppo*	Paese	Cifra d'affari 2016	Cifra d'affari 2015	Cifra d'affari 2014	Var. % 2016/2015	% Estero 2016	EBIT 2016	EBIT 2015	Var. % 2016/2015	Risultato netto 2016	Risultato netto 2015	Var. % 2016/2015
1	1	1	VINCI (1)	FR	38.073	38.518	38.703	-1.2	41.0	4.174	3.758	11,1	2.376	2.046	16,1
2	2	2	ACS (2)	ES	31.975	33.291	34.881	-4.0	86.6	1.445	1.421	1,7	1.017	1.054	-3,5
3	3	3	BOUYGUES (Pôle Construction) (3)	FR	25.001	25.963	26.515	-3.7	46.5	781	697	12,1	754	579	30,2
4	4	4	SKANSKA	SE	15.781	16.850	15.382	-6.3	77.0	855	703	21,6	681	536	27,1
5	6	5	EIFFAGE	FR	14.008	13.909	13.987	0.7	19.7	1.597	1.431	11,6	777	458	69,7
6	5	6	STRABAG (4)	AT	13.491	14.290	13.566	-5.6	84.0	nd	341	nd	nd	182	nd
7	8	8	FERROVIAL	ES	10.756	9.701	8.802	10.9	76.0	926	901	2,8	383	631	-39,3
8	7	7	BALFOUR BEATTY (5)	UK	9.911	11.444	11.256	-13.4	72.4	78	-306	ns	56	-279	ns
9	9	9	ROYAL BAM	NL	6.976	7.423	7.314	-6.0	62.5	33	-11	ns	49	11	ns
10	16	16	SALINI IMPREGILO (6)	IT	6.115	6.052	4.241	1.0	93.0	297	281	5,7	60	61	-1,6
11	13	14	CARILLION	UK	6.058	6.217	5.213	-2.6	26.0	169	282	-40,1	150	189	-20,6
12	11	10	ACCIONA	ES	5.977	6.544	6.499	-8.7	nd	988	627	57,6	352	207	70,0
13	12	11	FCC (7)	ES	5.952	6.476	6.334	-8.1	48.4	94	324	-71,0	-203	-54	ns
14	10	12	NCC	SE	5.521	6.692	6.031	-17.5	48.0	152	325	-53,2	140	227	-38,3
15	14	15	VOLKER WESSELS	NL	5.490	5.318	4.400	3.2	30.9	nd	nd	nd	141	113	24,8
16	15	13	PEAB	SE	4.837	4.826	4.628	0.2	12.7	219	110	99,1	180	87	106,9
17	17	18	KIER (g)	UK	4.778	4.592	3.782	4,1	nd	14	85	-83,5	-20	8	ns
18	18	19	OHL	ES	4.639	5.218	3.634	-11,1	79.5	22	685	-96,8	-235	259	ns
19	20	21	FAYAT	FR	3.527	3.436	3.498	2,6	36,0	nd	nd	nd	48	57	-15,8
20	25	23	PORR (8)	AT	3.417	3.140	3.009	8,8	47,6	100	88	13,6	67	61	9,8
21	19	17	LAING O'ROURKE (m)	UK	3.187	3.946	4.026	-19,2	nd	-311	20	ns	-279	27	ns
22	31	26	VEIDEKKE	NO	3.150	2.523	2.664	24,9	43,3	116	98	18,4	102	80	27,5
23	26	29	IMPLENIA (9)	CH	3.037	3.044	2.429	-0,2	20,9	91	74	23,0	60	48	25,0
24	29	28	ASTALDI	IT	3.004	2.855	2.653	5,2	84,0	317	277	14,4	72	81	-11,1
25	24	25	MORGAN SINDALL	UK	2.977	3.232	2.842	-7,9	-	57	53	7,5	43	-13	ns
26	21	31	GALLIFORD TRY (g)	UK	2.899	3.292	2.207	-11,9	-	167	190	-12,1	127	129	-1,6
27	27	24	SACYR (10)	ES	2.860	2.949	2.718	-3,0	nd	208	148	40,5	120	370	-67,6



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28	23	20	CFE (11)	BE	2.797	3.239	3.511	-13,6	66,1	227	266	-14,7	172	174	-1,1
29	22	22	BOSKALIS	NL	2.656	3.249	3.167	-18,3	79,2	-458	562	ns	-562	440	ns
30	35	36	JAN DE NUL	BE	2.538	2.244	2.043	13,1	nd	-39	337	ns	104	265	-60,8
31	37	37	BESIX	BE	2.359	2.160	2.001	9,2	66,4	118	0	ns	121	4	ns
32	33	38	MACE GROUP	UK	2.295	2.395	1.902	-4,2	26,3	11	26	-57,7	13	34	-61,8
33	32	30	MOTA ENGIL	PT	2.212	2.434	2.368	-9,1	nd	88	168	-47,6	77	54	42,6
34	40	44	SWIETELSKY	AT	2.156	1.976	1.755	9,1	35,3	87	55	58,2	63	38	65,8
35	42	49	GOLDBECK	DE	2.078	1.881	1.570	10,5	nd	nd	nd	nd	nd	nd	nd
36	38	34	KELLER	UK	2.068	2.118	2.048	-2,4	nd	99	88	12,5	56	36	55,6
37	47	-	ELLAKTOR	GR	1.942	1.533	1.545	26,7	nd	31	29	6,9	-97	-90	-7,8
38	39	39	HEIJMANS	NL	1.884	1.979	1.868	-4,8	nd	-94	-29	ns	-110	-27	ns
39	41	43	STRUKTON	NL	1.883	1.907	1.724	-1,3	13,0	35	35	0,0	13	17	-23,5
40	44	41	YIT-CORPORATION (12)	FI	1.784	1.651	1.801	8,1	26,2	53	66	-19,7	7	20	-65,0
41	30	33	VAN OORD	NL	1.713	2.579	2.104	-33,6	94,7	147	239	-38,5	90	169	-46,7
42	43	35	LEMMINKAINEN	FI	1.683	1.879	2.045	-10,4	33,0	68	37	83,8	38	7	ns
43	-	-	MAX BÖGL	DE	1.650	1.337	1.060	23,4	25,0	nd	nd	nd	nd	nd	nd
44	48	42	SPIE BATHIGNOLLES	FR	1.638	1.508	1.801	8,6	nd	42	39	7,7	16	22	-27,3
45	49	-	NGE	FR	1.592	1.497	1.477	6,3	12,1	nd	36	nd	20	18	11,1
46	45	50	BAUER	DE	1.586	1.656	1.560	-4,2	69,7	68	91	-25,3	14	29	-51,7
47	46	47	TBI HOLDINGS	NL	1.573	1.557	1.603	1,0	nd	-7	14	ns	-17	1	ns
48	-	-	CONDOTTE	IT	1.315	1.331	1.157	-1,2	61,1	46	71	-35,2	3	4	-25,0
49	-	-	AF GRUPPEN	NO	1.308	1.291	1.101	1,3	nd	114	105	8,6	87	81	7,4
50	-	-	DURA VERMEER	NL	1.145	1.052	1.004	8,8	nd	15	7	114,3	9	4	125,0

Source: Guamarì based on published 2016 balance sheets

Million of euros

ns = not significant

na = not available

g) Balance sheet closed at 30th June 2016

(m) Balance sheet closed at 31st March 2016

(1) In November 2013 sold the Belgian firm Cfe to the group Ackermans & van Haaren

(2) Since June 2011 Acs consolidates Hochtief

(3) Bouygues group (including TF1 and Bouygues Telecom) has 2016 revenues of 31,768 million (32,428 million in 2015)

(4) Already known as Ilbau, then Bauholding, bought Strabag in 2000 and changed its name

(5) In September 2014 Balfour Beatty has completed the sale of the American engineering group Parsons Brinckerhoff to Canadian firm WSP Global

(6) Born in January 2014 from the merger of Salini and Impregilo, in November 2015 acquired the American firm Lane Industries

(7) In December 2013 Fcc sold its energy division to Plenium Partners

(8) In August 2014 Porr split its real estate division

(9) In March 2015 Implenia has closed the acquisition of the Bilfinger construction division

(10) Created in January 2003 from the merger of Sacyr with Vallehermoso; in June 2013 the group changed its name in Sacyr

(11) In November 2013 60.4% of Cfe has been sold by Vinci to the Belgian group Ackermans & van Haaren. At the same time Cfe has gained full control over Deme

(12) In January 2013 Yit Corporation split in two companies: the second, Caverion, active in facilities management has 2.4 billion revenues

N.B. The following groups are no longer ranked: the German Bilfinger, because it sold its construction division to Implenia in March 2015 becoming a simple industrial services provider; the British Isg, because it is more focused on fit out activity and the Spanish Isolux Corsan because, under insolvency proceeding, it reduced revenues by 65.4% (758 million). The British Barratt, Taylor Wimpey, Persimmon, Bellway and Berkeley are not ranked because they are active in developments and real estate; Interserve, Mitie and Wates because they are active in construction services and facilities management; the Spanish Técnicas Reunidas and Elecnor because they are epc firms. Hochtief is not ranked after being acquired by Acs in June 2011, with 2016 revenues of 19.9 billion it would be 4th.



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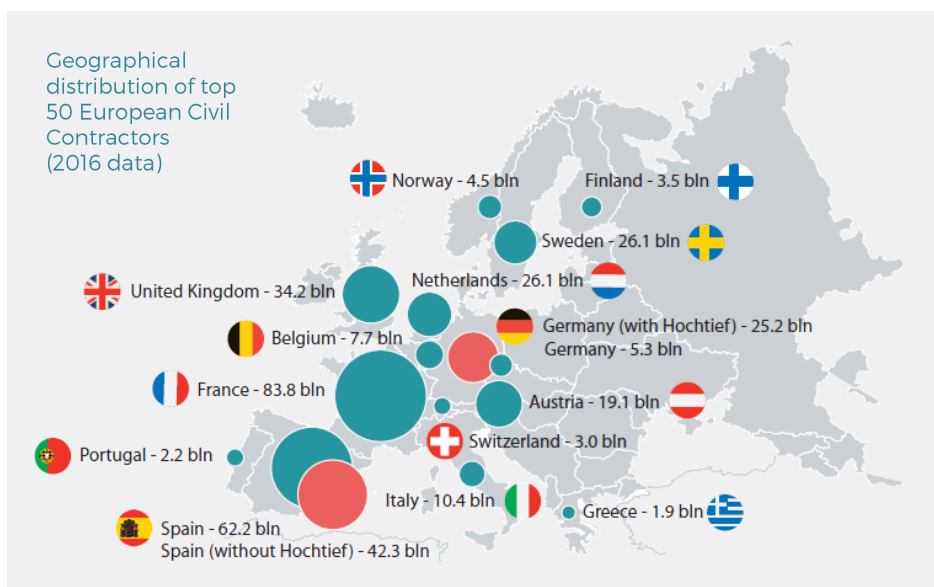


Figure 7
Source: Guamari based on published 2016 balance sheets

As a general remark it can be noted that the European market has been sluggish for several years, and Britain's vote last year to exit the European Union caused many contractors to pause. However, the continental market has shown some resilience. Not only some major infrastructures connecting various parts of Europe (cofounded by the EU) are acquiring momentum but other investments attract at the national level. In Paris there is major infrastructure work to be picked up: other opportunities are the U.K.'s high-speed railroad and the long Denmark-Germany immersed tube tunnel. Nordic markets are also strong, "especially in Sweden, while the U.K.'s planned departure from the EU creates "uncertainties. One also sees recovery in Central and Eastern Europe, supported by EU funding. While Greek construction remains slow and this year's completion of vast motorway projects marks the end of an era.

In this context of sluggish market not much happens in the way of *m&a*. Only Turkey's Renaissance Construction is betting big on Europe. In 2013, it acquired Swiss-based Alpine Bau and in 2016 completed the acquisition of 100% of the Dutch firm Ballast Nedam.

2.2.1 The Italians

In Europe three Italian contractors (Salini Impregilo, Astaldi, Condotte) appear among the top 50 construction groups with a share of total turnover of 3.6%. The list has been produced by the research firm Guamari and made available through the association Eic (European International Contractors). The Italian performance has definitely improved (last year only two groups appeared with a share of 2.5%). But the distance with the industry leaders appears unbridgeable. Especially because, while the Italians concentrate on buildings and infrastructures, all contenders preceding Salini Impregilo (in the top ten list) and many following are diversified in activities (ranging from concessions to utilities to real estate) considered synergic but requiring important resources to be deployed. The following is the representation of how the top 50 groups weigh on the total European supply (by country)



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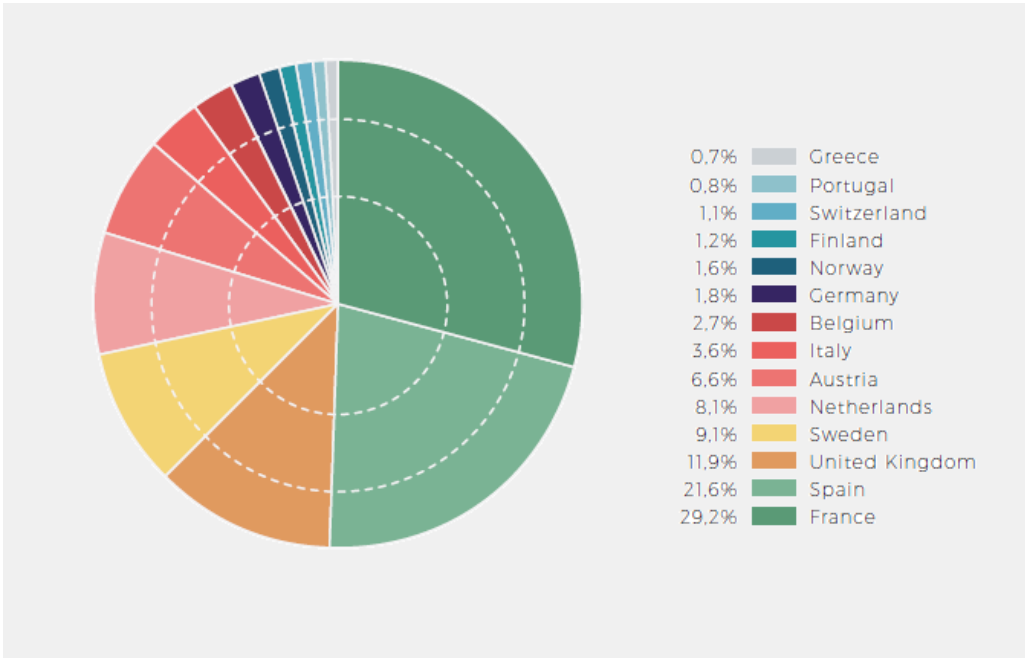


Figure 8 - Geographical distribution of Top 50 European Civil Contractors (2016 data)
Source: Guamari based on published 2016 balance sheets

Examining each group's performance here are selected examples from the top ten. While Impregilo, when it was taken over by Salini, five years ago, divested itself of concession assets (starting from motorways in Brasil) the frontrunners all remain diversified. For instance, the French Vinci is the largest European concession operator in the field of transportation, the Spanish Acs, controlling the German Hochtief, is diversified in energy, the French Bouygues, besides its pole construction, is active in telecommunications and television, the Swedish Skanska diversifies in power plants, the French Eiffage has an important "Concession" branch, the Austrian Strabag has the most complete European network of 23 subsidiaries, the Spanish Ferrovial operates four British airport (starting from Heathrow), the British Balfour Beatty spans from power and energy to social infrastructure and the Dutch Royal BAM adds dredging to the full spectrum of construction activities.

Unless the Italian champions follow these examples of diversification, it is difficult for them to grow further (Salini Impregilo's attack to the Usa market through the recently acquired firm Lane, notwithstanding). At present the familiar nature of control of all other contractors (including Astaldi, the second, the only other firm with Salini Impregilo quoted at the stock exchange) does not allow a rapid growth (whether internal or external).

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CHAPTER 3

THE INTERNATIONAL DESIGN FIRMS - THE ITALIAN CHALLENGE

3.1 The World

As far as the export of design services is concerned the Italian performance is definitely improving, although the numbers remain small. In 2016, according to *Enr*, eight Italian firms (two of which predominantly active in *epc* contracts) have totaled 826.9 million euros as international turnover.

The champions from the Peninsula are, in order: Maire Tecnimont, Saipem (both of them *epc* contractors in the first place) and the purely design firms Proger, Italconsult, Geodata, 3Ti Progetti, Ird Engineering, DbA Group. Together they account for 1.4% of the international turnover of the top 225 design firms in the *Enr* list (1% last year). Excluded, for not responding to the *Enr* survey are 11 other prominent Italian design firms with revenues big enough: Rina Consulting (formerly D'Appolonia), Manens-Tifs, Italferr, Agriconsulting, One Works, Elc-Electroconsult, Net Engineering, Aic Progetti, Spea Engineering, F&M Ingegneria and RPBW (Renzo Piano Building Workshop).

If they were included the Italian share of the world market (expressed by 19 instead of eight design firms) would increase from 1.4% to approximately 1.8%.

THE TOP INTERNATIONAL DESIGN FIRMS

Rank	Firm	2016 International revenues	% of total revenues	General building	Manufacturing	Power	Water Supply	Sewer/Waste	Indus./petroleum	Transportation	Hazardous waste	Telecom
1	WSP (Canada)	4.079.0	81	28	1	7	1	2	4	53	2	-
2	AECOM (Usa)	3.410.0	46	29	-	4	6	4	1	46	11	-
3	ARCADIS (Netherlands)	3.369.0	91	37	1	2	9	2	3	8	17	-
4	JACOBS (Usa)	2.946.0	46	14	2	3	4	2	50	24	-	1
5	WORLEYPARSONS (Australia)	2.372.0	89	1	-	11	-	-	79	2	1	-
6	DAR GROUP (Uae)	2.275.2	100	49	-	3	2	3	4	39	-	1
7	STANTEC (Canada)	2.122.0	70	20	-	8	19	20	6	22	2	-
8	FLUOR (Usa)	2.071.4	63	-	1	1	-	-	95	-	3	-
9	FUGRO (Netherlands)	1.778.0	91	12	-	10	3	-	68	3	-	3
10	WS ATKINS (Uk)	1.553.3	55	22	-	20	4	-	3	51	-	-
THE ITALIANS												
38	MAIRE TECNIMONT (Italy) *	450.5	84	-	-	6	-	-	93	1	-	-
80	SAIPEM (Italy) *	124.0	39	-	-	-	-	1	98	1	-	-
81	PROGER (Italy)	120.1	81	82	-	-	-	-	15	3	-	-
99	ITALCONSULT (Italy)	91.5	97	47	-	-	7	6	-	40	-	-



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Rank	Firm	2016 International revenues	% of total revenues	General building	Manufacturing	Power	Water Supply	Sewer/Waste	Indus./petroleum	Transportation	Hazardous waste	Telecom
134	GEODATA (Italy)	36.7	94	-	-	-	37	8	-	56	-	-
168	3TI PROGETTI (Italy)	21.0	75	20	-	-	-	-	-	80	-	-
179	IRD ENGINEERING (Italy)	16.5	98	14	-	-	4	-	-	82	-	-
202	DBA GROUP (Italy)	11.0	24	-	-	-	-	-	-	36	-	64

Source: Guamari based on Enr data (million dollars)
 * epc firm

Exports of design services are dominated by the countries shown in the following figure: Usa (with a 30.8% share), Canada (11.6%), Netherlands (8.8%) U.K. (7.6%), Australia (6.8%), ... China follows with a 5.8% share and all other industrialized countries count less. Italy, which accounts for 2.9% of world exports, is less relevant in this specific field (but so is Germany, Japan, etc. other countries where industry weighs more than engineering). Another important aspect, where Italy is in even more difficult condition is the list of the top 150 global design firms, according to their turnover, at home and abroad. This is dominated by firms having a much more important internal than external market. Which is the case of China, Usa and Canada, to which belong nine out of the top ten firms, including the Canadian Snc-Lavalin which has just bought the British WS Atkins (respectively the 18th and the 11th global design firm).

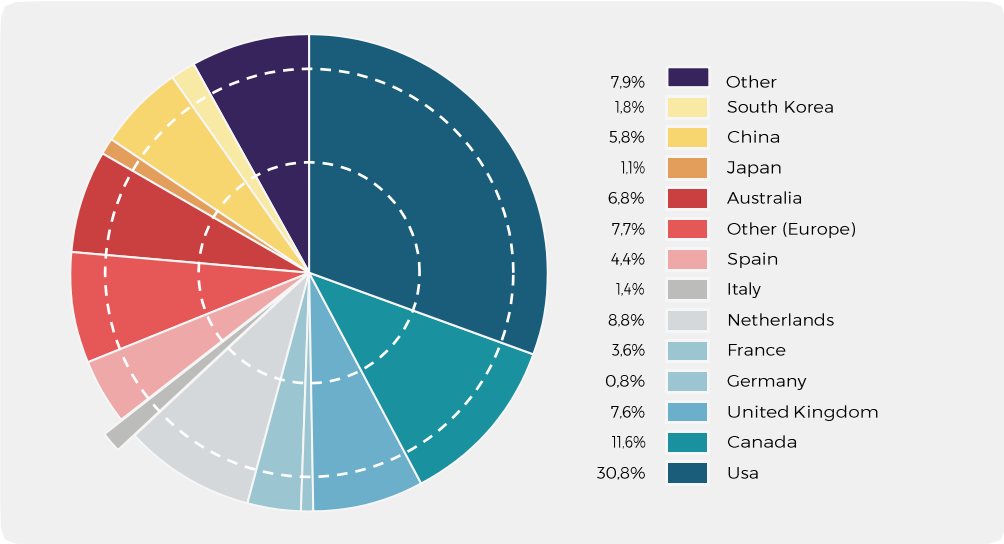


Figure 9 - How the Top 225 International Design Firms shared the 2016 market

Source: Guamari based on Enr



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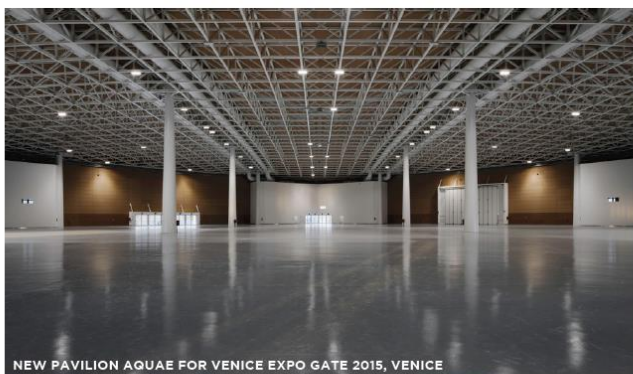
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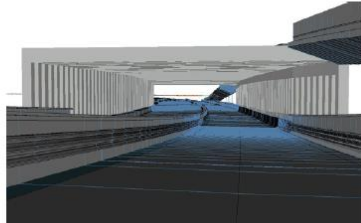
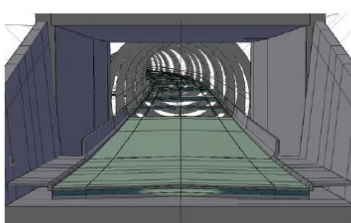
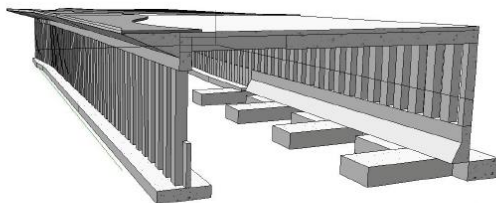
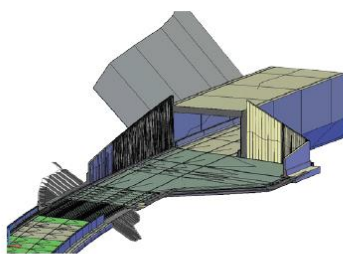
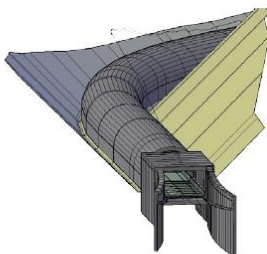


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The above mentioned comparison between countries is drawn referring to a different ranking, also by *Enr*, the top 150 global design firms (listed by turnover at home and abroad in 2016, added). The fact that Italy accounts for just 0.6% of the world revenues (less than its 1.4% of the world exports) reveals how limited the national market is: a handicap which could affect future performances.

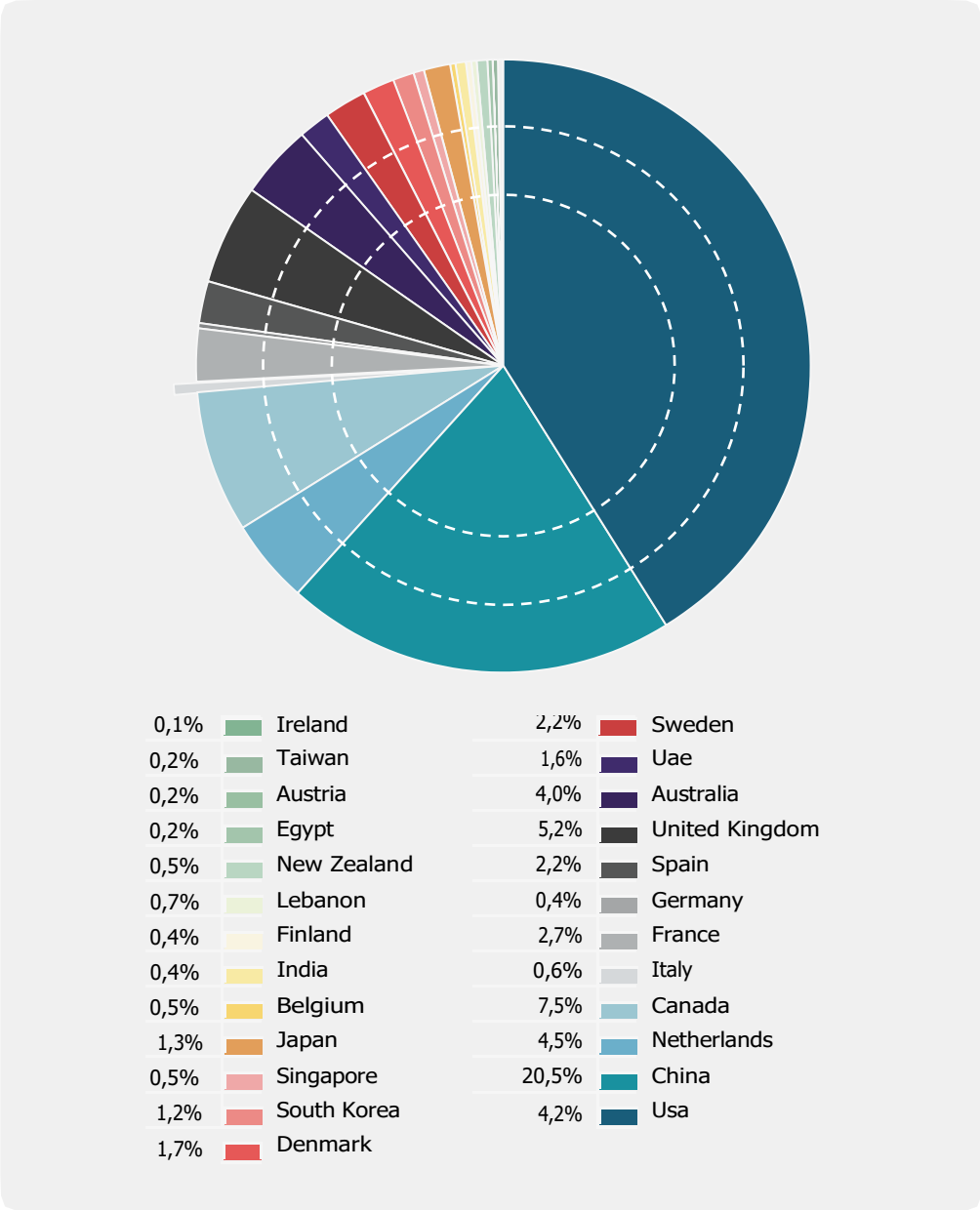


Figure 10 - How the Top 150 Global Design Firms shared the 2016 market

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Architecture
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3.2 The World in the Italian Market

Another aspect, which has to do with internationalization, is the presence in Italy of the biggest international groups which one can find in the *Enr* survey. These direct investments reinforce the Italian supply. At present have Italian branches the following firms (with their international ranking). The American Aecom (which merged with Urs) (2nd), the Dutch Arcadis (3rd), the American Jacobs (4th), the Lebanese based Dar Group (6th) owning Maffei Engineering, the Canadian Stantec (which merged with Mwh) (7th), the British Arup (14th), the Danish Ramboll (16th); the American Amec Foster Wheeler (19th), the French Technip (23rd), the Canadian Golder (28th), the French Systra (42nd), the French Artelia (67th), ...In addition the Dutch Deerns (not listed by *Enr*) and Power Construction Corporation of China (5th global contractor) which has just bought the majority of Geodata. A number of these subsidiaries export from Italy to selected countries and thus enrich the national performance abroad.

THE TOP INTERNATIONAL DESIGN FIRMS WORKING IN ITALY		
Firm	Country	International Revenues \$ Mil.
AECOM	Usa	3.410
ARCADIS	Netherlands	3.369
JACOBS	Usa	2.946
DAR GROUP	Lebanon	2.275
STANTEC	Canada	2.122
ARUP	United Kingdom	1.221
RAMBOLL	Denmark	1.159
AMEC FOSTER WHEELER	Usa	908
TECHNIP	France	775
GOLDER ASSOCIATES	Canada	685
SYSTRA	France	426
ARTELIA	France	146
DEERNS	Netherlands	67

Source: Guamari based on firms' and *Enr* data

New UnipolSai office, Porta Nuova Garibaldi, Milan

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MEP Integrated BIM Design, Building Physics,
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3.3 Europe

Another way of looking at the Italian international role, in the absence of an ad-hoc survey specifically for Europe, is to extrapolate data from the already mentioned *Enr* survey. If only the 54 European (out of 225 in the world) design firms are considered Italy represents 4% of their exports, thus in seventh position. Trailing behind the Netherlands, the United Kingdom, Spain, France, Denmark and Sweden but preceding Germany (which appears unexpectedly weak in engineering, at least for the built environment).

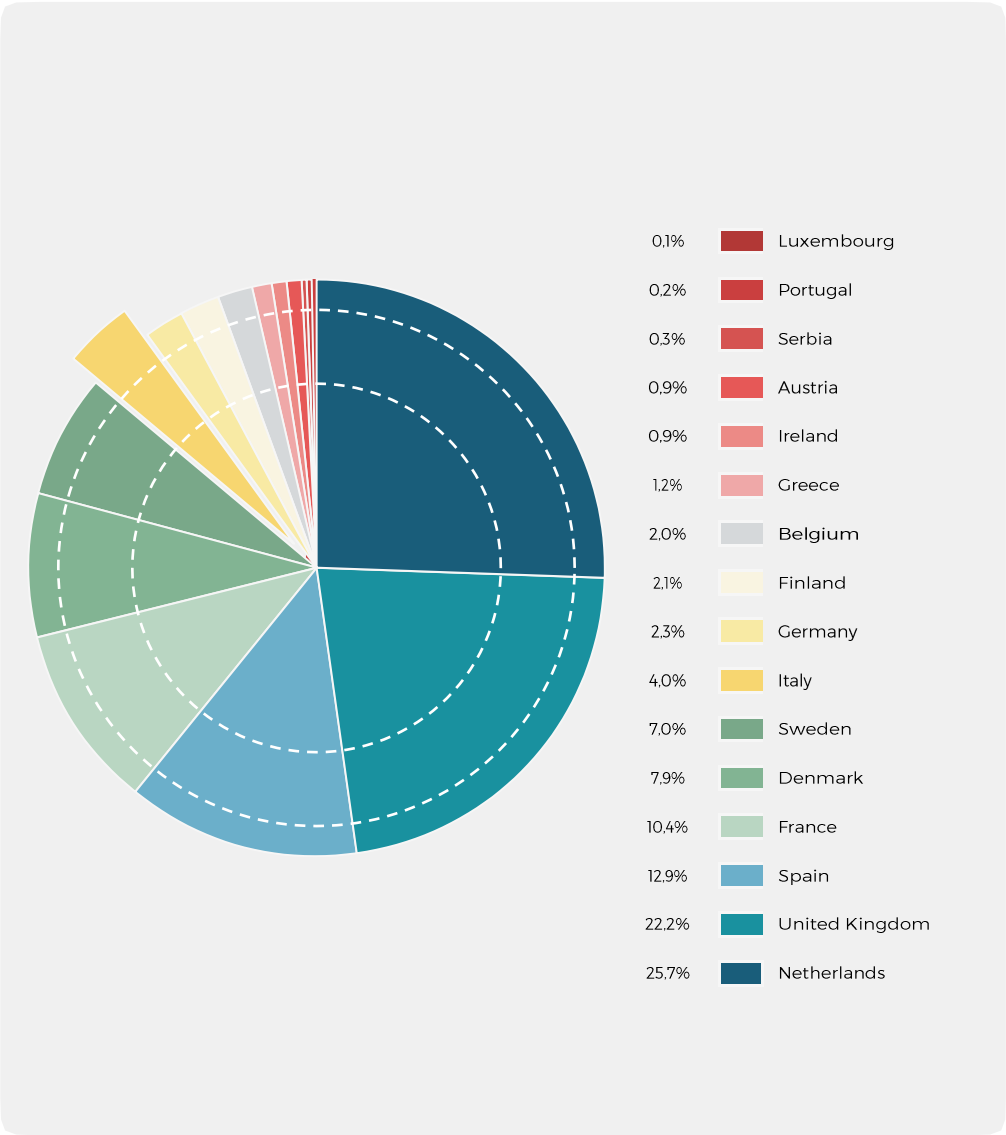


Figure 11 - How the Top 54 European International Design Firms shared the 2016 market
Source: Guamari based on *Enr* data



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CHAPTER 4

THE ITALIAN SUPPLY OF CONSTRUCTION AND A/E SERVICES

To outline the state of the art in the Italian construction and design industry the main economic, financial and other company specific data of the top 55 Italian construction contractors (50 general and five specialty contractors), 150 engineering firms, 150 architectural firms and the top five project validation firms are published. All ordered by 2016 revenues. The data are compared with those from 2015 and completed with comments, trends and forecasts. The updated lists are published starting from page 72 and are completed by the 360 addresses of the firms listed.

4.1 Construction Contractors

In 2016 the top 50 general contractors (listed on page 76) have generated revenues of 19.1 billion euros, just 1.3% more than in 2015, but the international share increases from 52.5% in 2015 to 61.2% in 2016. Ebit and Ebitda loses 15.2% and 5.9% but the net profit shows a plus 26% (although eight firms have closed the year with a net loss). Net debts are heavier by 16.4% and the equity 4.7% richer. The 50 major firms have orders for 105.6 billion euros (+0.8%) and 75.5 thousand employees (+1.9%).

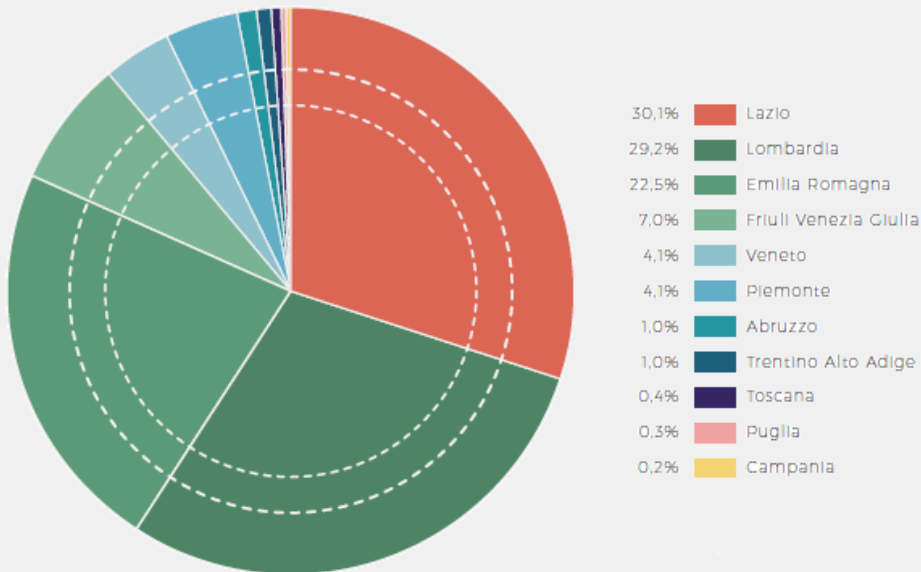


Figure 12 - Geographical distribution of top 50+5 contractors (2016 revenues)
Source: Guamari based on firms' balance sheets

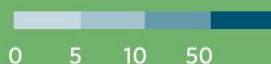
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I NUMERI DI CONSORZIO INTEGRA *CONSORZIO INTEGRA'S FIGURES*

133

Associate
Affiliates

3

Soci finanziatori
Financing Partners

360

Cantieri assegnati
Ongoing Projects

43.5 M Eur

Capitale sociale
Equity

6,000 M Eur

Giro d'affari
delle associate
Total Turnover
from Affiliates

1,800 M Eur

Portafoglio lavori
Total Projects
Portfolio

50,000

Addetti coinvolti
Contributing Employees

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As far as specialty contractors (listed on page 74) are concerned, we propose a list of the top five, active in pipelines, foundations, steel construction, railway equipment. They have generated a 2016 revenue of 2.8 billion euros (0.3% more than 2015). But contrary to the general contractors, the share abroad decreases from 75.6% to 73.3%. Ebitda, ebit and net margin increase by 3.1%, 5.6% and 57.3%, net debts are 38.6% less than the year before and equity brings a plus 12.8%. 4.4 billion of backlog are 17% less than in 2015 and international contracts count for 78.3% (92.3% in 2015). The employees (17.5 thousand) show a plus 4%.

The regional distribution of Italian contractors shows (as for the A/E firms) the leadership of Rome (Lazio) and Milan (and Lombardy): Rome counts 11 companies who account the 30.1% of the total of 50+5 contractors, Milan follows with 9 companies and a very close share (29.2%). The crisis of Italian cooperative system has effect on the relevance of Emilia Romagna, former leader that even if still counting 15 firms shows a share of just 22.5%. The south of the country with just two contractors (in Campania and Puglia) has a minimal share of 0.5%.

4.1.1 Highlights

A few comments on the construction leaders. Starting from the top ten. As usual Salini Impregilo is number one with an increasing distance from the follower, Astaldi, also listed at the stock exchange, which does not pursue external growth. The first, which produces 93% abroad, now grows through m&a: notably the U.S. contractor Lane, bought in November 2015 (it already controlled Healy). The industrial plan calls for a turnover of 9 billion, ebitda margin above 10% and 900 million of free cash flow for 2019 (when it could consider listing on Wall Street). As for Astaldi, grown with a different philosophy through greenfield concessions, it finds itself too indebted (one billion for a turnover of 3 billion) for m&a operations and is trying to reduce its debt selling assets. Condotte is benefitting from a previous policy of acquisitions (in Italy and Switzerland) which has brought important contracts in railways and hospitals. The fourth contractor is Cmc, the largest cooperative in Europe (member of Consorzio Integra), which has renewed a financial bond in the amount of 250 million to allow it to grow further in infrastructures and tunneling, especially abroad (with a focus on Africa). Cmc operates via two small contractors in the Usa. Fifth (formerly eighth) is Rizzani de Eccher, a brilliant family-owned contractor, with a consistent treasury, active in the Russia through the firm Codest and specializing in viaducts with the brand Deal and in restoration of monuments with the firm Sacaim. Sixth is another performing family owned company, Pizzarotti which is very active in developed markets like Usa, France and now Australia (allied with Rf Holdings), especially in building. Seventh is Ghella, also family-owned and for more than 120 years specializing in tunneling: two third of its revenues is abroad and its backlog is seven times the turnover. Eighth is the second largest cooperative contractor, Cmb, first in this list to work only nationally. It is especially performing in buildings (hospitals but also skyscrapers) and looks for foreign markets for the first of the two specialties. The ninth contractor is Glf (belonging to the Mazzi family) which made a reputation in building ports and other maritime infrastructures (including Mose, the protection dams for Venice). It actually enlarges its scope through Seli Overseas developing a particular *know-how* in tunnel boring machines. The tenth largest contractor is Itinera (group Gavio) which finds synergies with the motorway exploitation of its group (fourth in the world) in Italy and in Brasil. To enter the Usa market it has just bought a New York contractor: Halmar International. It also seeks synergies with its engineering firm Sina, looking for a homologue to buy in the Usa. It should be noted that another major player is Consorzio Integra (with a 2016 turnover of 719 million euros and a backlog of 1.8 billion including facilities management) born within the cooperative movement from the previous consortium Ccc. It associates 130 firms (the



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most important of which are Cmc and Cmb) promotes their activities joint venturing in their proposal to clients. Because of its special commercial nature it is not included in the list of top contractors, where it would rank 7th.

Among the remaining 40 top contractors, firms to be followed are: Icm (formerly Maltauro) planning to double its turnover by 2019 (mostly abroad), Toto, which can rely on works for an important concession (Strada dei Parchi) and diversifies in the eolic production, Neosia, the new firm within Maire Tecnimont born from a merger with Met Newen, developing renewable energies, AeC Costruzioni, specializing in challenging buildings for private clients, Setten Genesio, on a similar path, Strabag, the only subsidiary of a major European contractor, born from the acquisition of the Italian firm Adanti (2008) and capable to financially resist the delays in the realization of major infrastructures better than most competitors.

4.2 A/E Firms

In 2016 the top 150 engineering firms declare a total revenue of some 2 billion euros, 5% more than in 2015 thanks to a share of more than one fourth of international turnover. Ebitda is 9.8% higher than the past year and net profit increases by 45.1% (with 20 firms showing a net loss). Net cash amounts to 52 million while 2015 was marked by a net debt of 23.3 million. As far as equity is concerned, it grows by 9.1%.

But the size of the Italian competitors is irrelevant: the revenues of the leader, Italferr, is 41 times smaller that what declares the world engineering champion, the American Aecom.

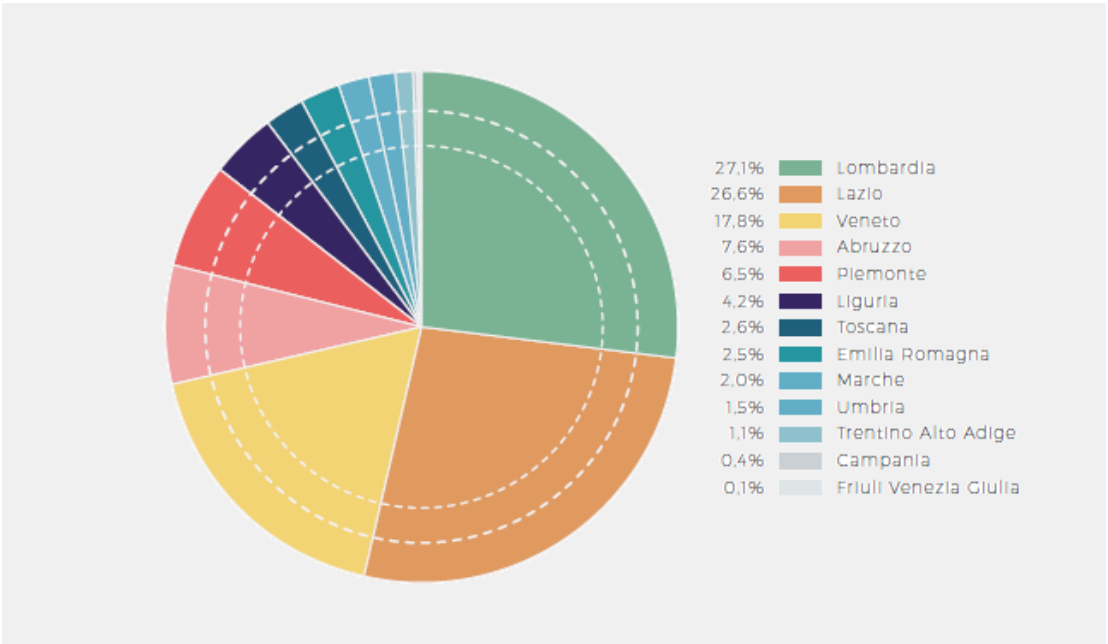


Figure 13 - Geographical distribution of top 150 engineering firms (2016 revenues)
Source: Guamari based on firms' balance sheets

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Architecture (and design) firms are more than six times smaller than the engineering ones with just 316.9 million euros revenues (plus 12.1% and more than a fourth abroad). Ebitda shows an increase of 16.7%, net profit is almost unchanged (1.6%), net cash improves of 6.5% and equity displays a plus 1.7%.

The distribution by regions (Italy has 20 of very different sizes) shows the dominance of the two “capitals”: Rome (Latium) and Milan (Lombardy). Milan confirms its role with a 27.1% of turnover of the engineering firms hosting the seat in its region, almost reached by Rome (after the m&a that involved Spea Ingegneria and Adr Engineering transferring the headquarters to the capital) with 26.6%. Third is the industrial region of Veneto with 17.8%. Milan keeps a clear leadership of the architectural market with a 55.2% share of the supply followed by Rome with 10.9% and different locations in Tuscany (9.2%). It should be stressed that the whole of Southern Italy “is not on the map” except for minimum activities in Campania (Naples).

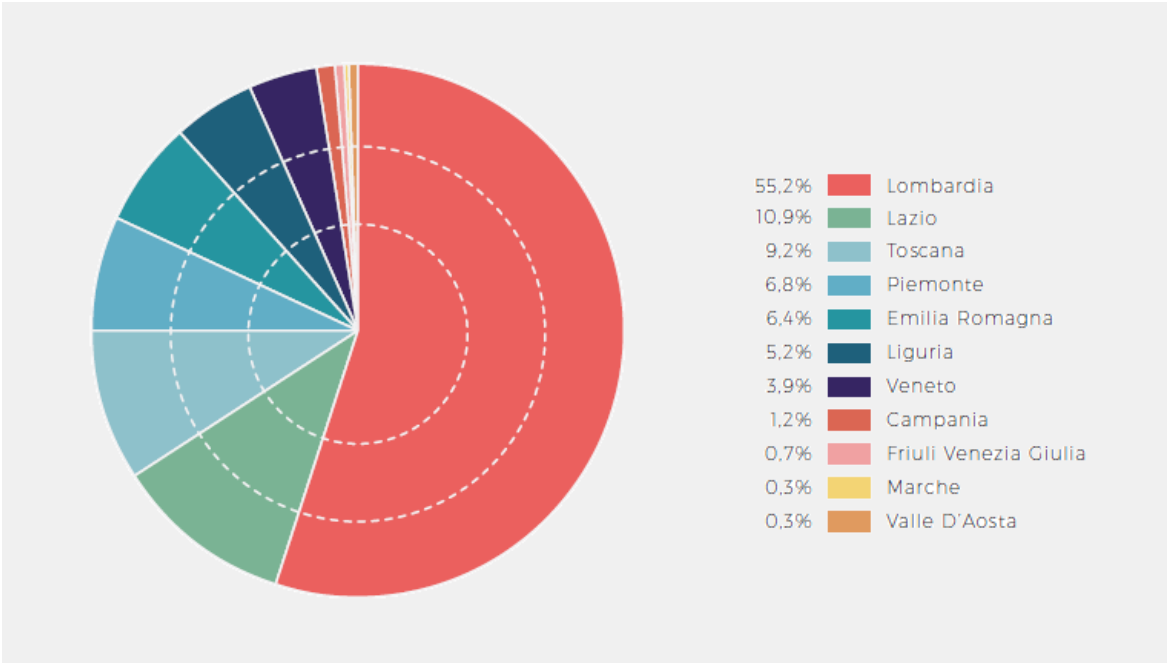


Figure 14 - Geographical distribution of top 150 architecture (and design) firms (2016 revenues)
Source: Guamari based on firms’ balance sheets

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How to describe a scene of actors as crowded as the Italian with subjects as diverse (typical of a market not dominated by multidisciplinary groups)?

In view of a season of mergers and acquisitions which is long overdue one can start from the engineering firms belonging to groups and then continue with those which do not yet belong but are in a process of possible aggregation. From top down the firms belonging to groups, which in some instances provide a captive market: Italferr (FS - State Railways), Spea Engineering (Atlantia), D'Appolonia, now Rina Consulting (Rina, the naval registry), Tecnomare, now EniProgetti (Eni), Sipal (Fininc), Sina and Sineco (Gavio), Thetis (Consorzio Venezia Nuova), Infraengineering (Toto), Studio Galli Ingegneria (Bonadea), Anas International Enterprise (Anas - State Roads), Save Engineering (Save - Venice Airport).

A certain, minimal link, can also be traced between engineering firms belonging to the cooperative movement (which has its champion in Consorzio Integra) a formula stronger in Italy than in other European countries). A few of them are present among the top 150 engineering firms and architectural firms). The first list opens with Ambiente, followed by Inres, Politecnica, Coopprogetti, Mate (born from the merge of Tecnicoop and Veneto Progetti), ... In the field of architecture Cairepro, Coprat, Gnosis Architettura, Ai Progetti, Centro Cooperativo di Progettazione, ...

But potential synergies not unlike those expressed by firms belonging to groups can be traced in the 19 engineering firms which are subsidiaries of international groups: in pecking order Stantec (formerly Mwh), Geodata (just bought by PowerChina), Jacobs Italia, Golder Associates, Artelia Italia (which last year merged with Intertecno, a quite unique case), Technip Italy Direzione Lavori, Arcadis Italia, Aecom Urs Italia, Erm Italia, Ramboll Environ Italy, Arup Italia, Hitachi Industrial Engineering Emea, Tauw Italia, Hpc Italia, Maffei Engineering (owned by the Lebanese Dar Group), Deerns Italia, Lombardi Ingegneria, J&A Consultants (recently bought by the Saudi Fawaz Alhokair Group) and Systra-Sotecni. Together, groups from 12 countries affect 15.9% of the Italian supply. On the contrary there is a unique case of an Italian engineering firm controlling another (of size) abroad: Net Engineering International owns Spiekermann (Germany) since 2007 with satisfactory results.

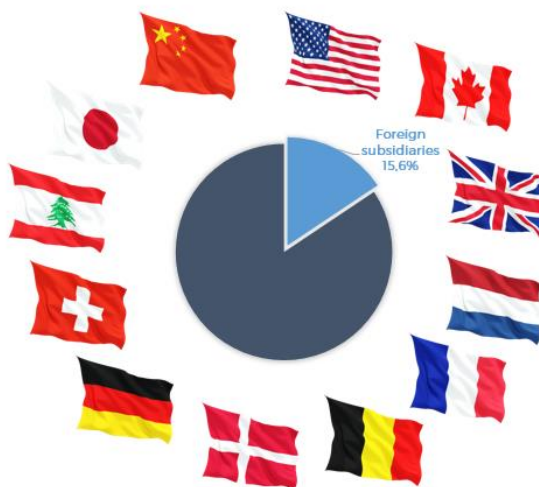


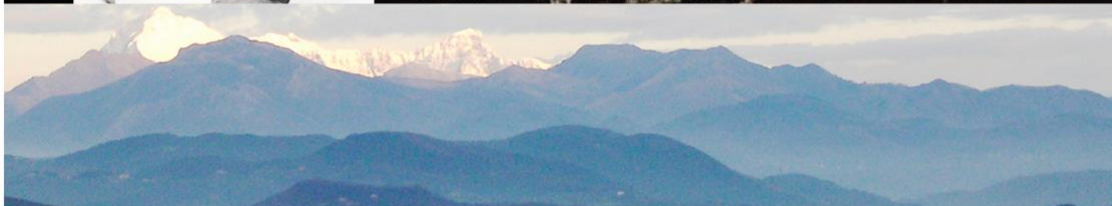
Figure 15 - The share of foreign group subsidiaries from 12 countries in top 150 Italian engineering firms' 2016 revenues

Source: Guarnari based on firms' balance sheets

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4.2.1. Analysis by Markets

In terms of markets an interesting distinction can be drawn between firms active in the realm of civil engineering (infrastructures) and those active in buildings (thus more contiguous with architectural firms). With a few exceptions: firms active in other, less common fields. These exceptions are readily mentioned: EniProgetti (former Tecnomare) in oil& gas, Agriconsulting and Agrotec in agricultural consultancy, Golder Associates, Ambiente, Ramboll Environ Italy, in the environmental fields, Jacobs Italia and J&A in *project/construction management*, Prelios Integra, Arcoengineering in real estate, eFM in global *e-service*, ...

As far as infrastructures are concerned a few engineering firms are more specialized than others: Italferr in railroads, Italconsult (which has recently bought Studio Altieri diversifying in hospitals), Sina and Sineco (group Gavio), Ird Engineering, Infraengineering (group Toto), Anas International Enterprise, ... in roads, Geodata, Rocksoil, Ingenieurteam Bergmeister, Sws Engineering, Prometeoengineering in tunnelling, Thetis in maritime works, Save Engineering in airports. A field of interest also for Spea Engineering (roads) which in 2015 the holding Atlantia merged with AdR Engineering (airports).

4.2.2. Engineering Highlights

The top 150 engineering firms are active in a number of diversified fields which span all the array of industrial (specifically construction) activities. They are what the American magazine *Enr* calls “design firms”, i.e. their turnover is mainly obtained through professional services and not works (nor procurement of products). In other words they are considered for the “e” (“engineering”) and not also for “pc” (“procurement and contracting”) services.

A few comments on the engineering top ten. In the new edition of our list Italferr becomes number one after being moved from the category of public procurement engineering firms. It belongs to the group Fs (State Railways) and procures all its engineering services, a know-how which is the basis for its breakthrough abroad (actually 23.2% of revenues but growing steadily). The future of Italferr is a merge with the technical department of Anas (the national road company) as well as with Anas International Enterprise to offer all design and consulting services for both rails and roads. It is followed by Proger, very strong with an all encompassing management contract in Saudi Arabia. Third is Spea Engineering (group Atlantia), active in the engineering of motorways and airports, just debuting abroad. Fourth EniProgetti (formerly Tecnomare, plus Eni Engineering E&P) active in the engineering of offshore oil&gas activities. Fifth is Rina Consulting (formerly D’Appolonia) which is integrating the diversified British firm Edif, bought by its group, Rina, on May 2016. Sixth Italconsult, which at the end of 2016 added to its focus on road engineering a specialization in hospitals buying Studio Altieri. Seventh is the first foreign subsidiary, Stantec, formerly Mwh, since the take over and merger of the former with the latter, Canadian and U.S. giants. Eighth is Manens Tifs, specialized in hvac systems, which has more than doubled its size thanks to its alliance with Proger, with which it exchanges shares of capital. Ninth is DbA Group, family owned and getting ready to be listed with the help of its shareholder, Fondo Italiano di Investimenti. Tenth is Agriconsulting, leading in the field of agriculture providing almost all consultant services abroad.

Examining the rest of the engineering list which are the most interesting firms? Geodata, specializing in tunnelling and export leader in this challenging market, recently bought by the group Powerchina, Mm - Engineering Division (which like Italferr used to be ranked among public procurement engineering firms) specializing in mass transit, especially underground, Golder Associates, which has brought to Italy the Canadian know how in environmental projects, Artelia Italia, devoted to external growth, consolidating Intertecno and still interested in other acquisitions, the



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employee owned (a rare case in Italy) 3Ti Progetti, active in a large spectrum of infrastructures in more than 30 countries. F&M Ingegneria, strong in a large choice of services for building and civil works (management included), Net Engineering International, on its way to a rebirth, strong in transportation engineering, especially thanks to its German subsidiary, Spiekermann, Ambiente, a cooperative, the Italian champion in the environment (industry and, to a lesser degree, infrastructures), Inres, specializing in the engineering of supermarkets with a single client, Unicoop and unfortunately not yet looking for others.

4.2.3. Architecture (and Design) Highlights

Although akin to engineering firms this is another world: where creativity (even in small firms) can make the competitive advantage. First a few comments on the architecture top ten. For the first time leader of all Italian firms becomes One Works, founded by Leonardo Cavalli e Giulio De Carli, grown with important contracts in the Middle East. Second is Rpbw (Renzo Piano Building Workshop) which has other premises of much greater importance besides Genoa in Paris and in New York. Third is Lombardini22 (which includes the brand Degw), actually first if the Italian turnover is solely considered. Fourth is Cremonesi Workshop (Crew) also very successful in the Middle East. Fifth is Pininfarina Extra, originating from the most successful car designer: a brand now applied to luxury architecture. Sixth is Gpa, a firm active in both engineering and architecture, strong in constructive design. Seventh is Hydea, specializing in retail design, active in China. Eighth and ninth Citterio-Viel, two firms referring to the same two architects, active in prestigious architecture and design, which would rank third after One Works and Rpbw if the turnovers were to be added. Tenth is Studio Urquiola, specialized in product design more than interior architecture.

The rest of this list has a number of highlights, starting from David Chipperfield Architects, first Italian branch of a famous international architect's office. To be noted that, as far as foreign penetration in the Italian market is concerned, only a few significant architectural firms have deemed it useful to establish a base - and others have closed it after realizing that they could work just as well from their home base. The remaining firms, in pecking order, are: Chapman Taylor Architetti (U.K.), Design International (U.K.), Wilmotte Italia (France), ... Without mentioning Andrea Maffei Architects, too small for this list, which is connected with the Japanese Arata Isozaki. Among those who left: Norman Foster (U.K), Zaha Hadid (U.K.), Daniel Libeskind (Usa), Jean Nouvel (France), finding easier to work from their home offices especially when there are no new major projects in sight for them in Italy.

The difficulty in the case of architecture (and design) firms in classifying them stems from the many opportunities given to apply a creativity which is the distinction mark from engineering firms (where ingenuity is a plus). Especially due to the span of the design realm (in the past one used to say "from the spoon to the city"), infrastructures excluded. Thus, next to a majority of architectural firms in the traditional sense (often with a strong engineering component: like Crew, Gpa, Hydea, General Planning, Starching, Tekne, ...) one can find a number of interesting "outcasts". Starting from the design "niche" which is the object of an ad-hoc survey. For instance it is difficult to single out firms specializing in interior design, were it not for Studio Baciocchi which has become part of the technical office of Prada (but Architetto Baciocchi & Associati has remained independent) or Coima Image which belongs to the development firm bearing the same name, there are other aspects of interior architecture such as lighting: the specialty, among others, of Metis Lighting. On the opposite scale landscape design is surprisingly not an important practice in Italy: to the point that the most prominent firm is of German culture, Land Italia, followed by Architettura dei Giardini e del Paesaggio. As for an important market (hospitals) a start up like Valle 3.0 has already a good track record.

Finally, some Italians consider important to name the firm after the architect (sometimes “archistar”), others not preferring a “low profile”. The previous choice is the most common (in all positions of the list). Starting from the top: Renzo Piano, Antonio Citterio and Patricia Viel, Matteo Thun, Mario Cucinella, Piero Lissoni, Michele De Lucchi, Massimiliano Fuksas, Alberto Izzo, Flavio Albanese, Carlo Ratti, Dante O. Benini, Simone Micheli (who calls himself jokingly “Architectural Hero”), Stefano Boeri, Massimo Alvisi and Junko Kiritomo, Cino Zucchi, Guido Canali, ... In other instances the name of the firm is a marketing oriented brand with words catching attention such as: Open Project, Hangar, Piuarch, Genius Loci, Design to Users, Sistema Duemila, Global Planning, Gnosis, D.Vision, Revalue, Leonardo, Thema, Metrica, Metrogramma, R&S (R&D in English), Design International, Habits, Saga, No Gap, Transit, Insula, Interplan, Open Building Research, Design Innovation, ... This shows the desire to promote concepts needed to stand out from an indistinctive mass of 150 thousand architects (!).

4.2.4. Potential Groups

In the attempt to attribute to Italian architectural firms a “global” size an ad hoc list has been prepared adding turnover obtained with more than one firm (with the same ownership) and, when available, obtained through branches abroad. This list sees Rpbw (Renzo Piano Building Workshop) by far leading the others as the revenues of the Paris office (which also accounts for New York) amount to 45.9 million euros (almost four times the Genoa office). Second is One Works which operates abroad (the Middle East) directly from the Milan Office, third Citterio-Viel which has two firms in Milan (separating architecture from design) and a branch in New York. Other cases of firms which operate with more than one brand are Lissoni and Progetto Cmr (with a Beijing branch and another office in Tianjin). While Pininfarina Extra (which is a spin-off in the built environment of the famous car designer) and Hydea are the only firms in this list producing a consolidated balance sheet.

TOP10 ARCHITECTURE GROUPS (Aggregated and Consolidated Data)

Pos. 2016	Groups	Revenues 2016
1	Rpbw (1)	58,398
2	One Works	20,826
3	Citterio - Viel (2)	15,765
4	Lombardini22 **	11,425
5	Giugiaro Architettura	8,918
6	Crew	8,506
7	Lissoni Associati (3)	7,898
8	Pininfarina Extra*	7,849
9	Gpa	7,632
10	Hydea*	7,530

Source: Guamari based on 2016 balance sheets and firms’ data (thousand euros)

(*) Consolidated revenues; (**) includes Degwi; (1) Rpbw + Rpbw Paris; (2) Citterio - Viel & Partners + Interiors + New York branch; (3) Lissoni Associati + Lissoni Architettura + Graph.X + New York branch

Doha Metro Red Line South, Qatar



Riyadh Metro Project, Saudi Arabia



1997



Muscat Airport, Oman



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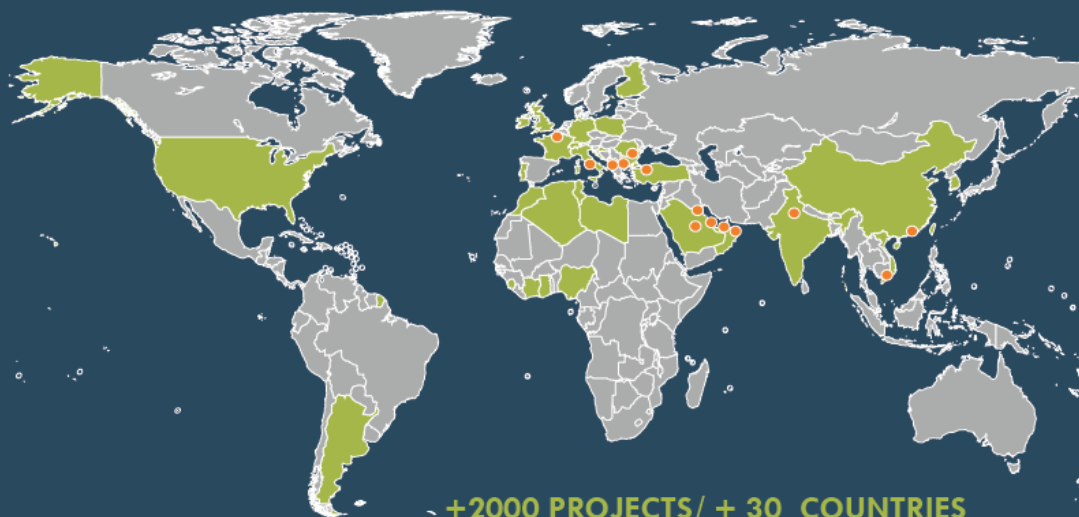
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4.2.5. Tenure of the Domestic Market

If only the domestic turnover were to be considered this is the top 10 ranking of architecture (and design) firms indicating who is strongest on the Italian soil (and often ready to make a leap forward abroad). 1st in the domestic market is Lombardini22 (with its brand Degw devoted to office architecture) followed by Gpa and General Planning (both with an important share of engineering design notably in building like Starching). Fourth is Archea which works exclusively in Italy, the same as De Lucchi and Zuccon (which specializes in yacht design). While high (seventh) in this ranking appears One Works (number one in the official list of the top 150) in spite of a presence in the domestic market limited to one fifth of revenues.

TOP 10 ITALIAN ARCHITECTURE FIRMS AT HOME

Pos. 2016	Groups	Domestic Revenues 2016	Total Revenues 2016	% Domestic
1	Lombardini22 *	10,317	11,425	90.3
2	Giugiaro Architettura	8,698	8,918	97.5
3	Gpa	6,861	7,632	89.9
4	General Planning	5,219	5,219	100.0
5	Archea Associati	4,434	4,434	100.0
6	Starching	4,346	4,346	100.0
7	Progetto Cmr	4,278	5,083	84.2
8	One Works	4,219	20,826	20.3
9	Mario Cucinella Architects	3,777	3,927	96.2
10	Architetto Michele De Lucchi	3,155	3,155	100.0

Source: Guamari based on 2016 balance sheets and firms' data (thousand euros)

(*) Includes Degw

4.2.6. The “Design Niche”

Relying on bespoke (industrial and interior) design firms is peculiar to the Italian supply system. Especially product design (with a special focus on furniture and all other building fixtures) and naval design (yachts). This enhances the image of “made in Italy” and drives the exports of other sectors (starting with smaller firms specializing in “fit out”). A list of the top 20 design firms follows and proves how this particular market is thriving. Examining this prestigious “niche” the majority of firms in the list specializes in the design of objects which are part of the built environment, with one peculiar case: lighting - the very field of Metis. But - exceptions: Zuccon, Paszkowski, and Officina Italiana thrive in the design of yachts. Hangar Design Group has a strong position in “branding” and Giò Forma in stage design. As far as changes are concerned Baciocchi, specialized in fashion interior design, already split in two firms, has seen the bigger (Studio Baciocchi) absorbed by Prada fashion group. Mentioning a special “niche” - the interior design of hotels and their facilities, Simone Micheli has a special know-how and success.



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TOP 20 ITALIAN PURELY DESIGN FIRMS

	Firm	Revenues 2016	Revenues 2015	Var % '16/15
1	Citterio – Viel & Partners Interiors	6,873	8,576	-19.9
2	Studio Urquiola	5,852	4,165	40.5
3	Design Group Italia ID	4,112	4,283	-4.0
4	Zuccon International Project (1)	2,926	1,831	59.8
5	Hangar Design Group (2)	2,533	2,773	-8.7
6	Lissoni Associati	2,530	2,560	-1.2
7	Made to Measure	2,225	1,963	13.3
8	Francesco Paszkowski Design (1)	1,761	1,969	-10.6
9	Officina Italiana Design (1)	1,728	1,359	27.2
10	Metis Lighting (3)	1,573	1,462	7.6
11	Giò Forma Studio Associato (4)	1,515	1,426	6.2
12	Architetto Baciocchi & Associati	1,500	1,294	15.9
13	Simone Micheli Architectural Hero	1,378	1,161	18.7
14	Retail Design	1,264	1,307	-3.3
15	Paolo Badesco Interior Design	816	632	29.1
16	Duccio Grassi Architects	795	775	2.6
17	Revalue	791	453	74.6
18	Sadler Associati	789	722	9.3
19	Studio Cerri & Associati	728	1,048	-30.5
20	Design International	684	416	64.4

Source: Guamari based on 2016 balance sheets and firms' data (thousand euros)

(1) Yachting design; (2) brand design; (3) lighting design; (4) stage design



European Safety Food Authority, Parma



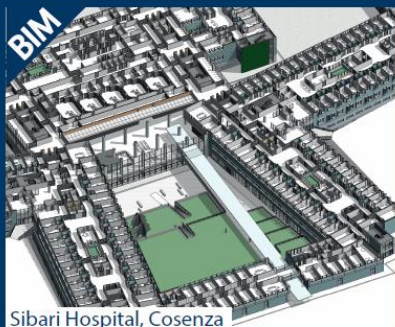
Lamezia Terme Airport



Housing, Mantova



Politecnico cafeteria, Torino



Sibari Hospital, Cosenza



San Marco Hospital, Catania



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CHAPTER 5

INTERNATIONALIZATION AND DELOCALIZATION

This chapter analyzes the internationalization of the sectors of our interest from two major points of view: delocalizing offices and/or acquiring more specializations. This is especially true of some contractors, which have bought firms complementary to their core business, rather than design firms which delocalize creating branches with their own skills but become more competitive using the local means of production (and operating in and for foreign markets to be called “domestic”). A more extreme (but often effective) case is delocalization of design firms: the Italian system is so weak that the majority of competitors cannot easily consider “external growth”, especially abroad where the risks are even bigger than at home, and therefore limit themselves to export services from Italy (or temporarily ally with local/resident design firms, when they judge that this adds whatever value is required).

Generally the creative core is kept domestic so that the notion of Italian brand can fully apply. Thus, in this case, “made in Italy” can be interpreted as “designed in Italy”. Concerning the practice of exporting design in order to enrich production abroad it should be stressed that architecture expatriates in a substantially different way from engineering. The former, generally relying on the world-renown of a given creative figure, has more to do with the concept of “designed in Italy”

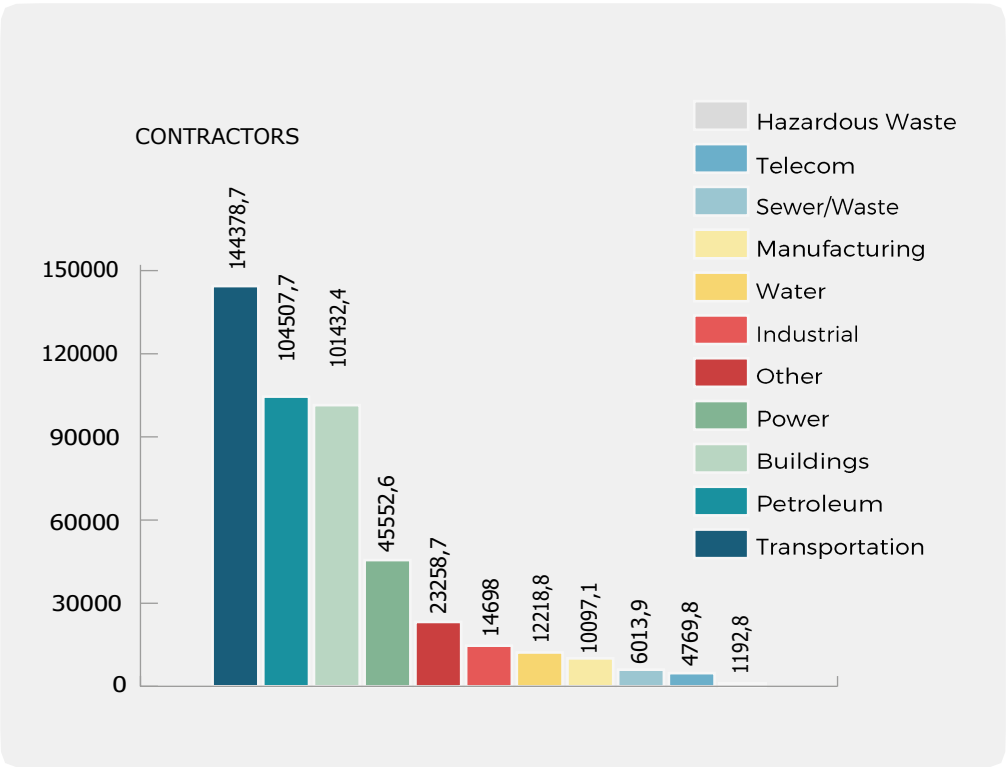


Figure 16 - International Market Analysis - Top 250 International Contractors
Source: Guamari based on Enr data

(although often the projects themselves are carried out in the countries where they will be built or where the man hours are cheaper). On the contrary engineering is often successful abroad when the works which are designed have proved to be successful domestically. This is the case for instance of dams, a traditional Italian excellence in engineering as well as in construction (proven by the fact that Salini Impregilo is consistently number one in the world in “water”). This close cultural and technical affiliation with industry allows us to speak in terms of “made in Italy” although obviously what is designed and engineered in Italy is rather built *in situ* (where it is used).

The last facet of internationalization and delocalization is specialization. Especially so with large contractors seeking new markets abroad acquiring firms competitive in given “niches”. A policy which has been implemented by Salini Impregilo with Lane industries (roads and hot mix asphalt), Astaldi with Nbi (plant engineering), Condotte with Inso (hospitals), Cmc with Seli Technologies (tunnel boring machines), Rizzani de Eccher with Deal (bridges and viaducts), Glf with Seli Overseas (tunneling).

Before coming to the Italian establishment in the world a glimpse of international performance gives an idea of the competition to be faced but also of the opportunities to be exploited.

First: let us examine the 2016 weight of the different international markets in the export turnover of the top 250 international contractors and 225 international design firms (according to *Enr*).

Second: let us examine the 2016 weight of the international geographical areas in the export turnover of the top 250 international contractors and 225 exporting design firms (according to *Enr*).

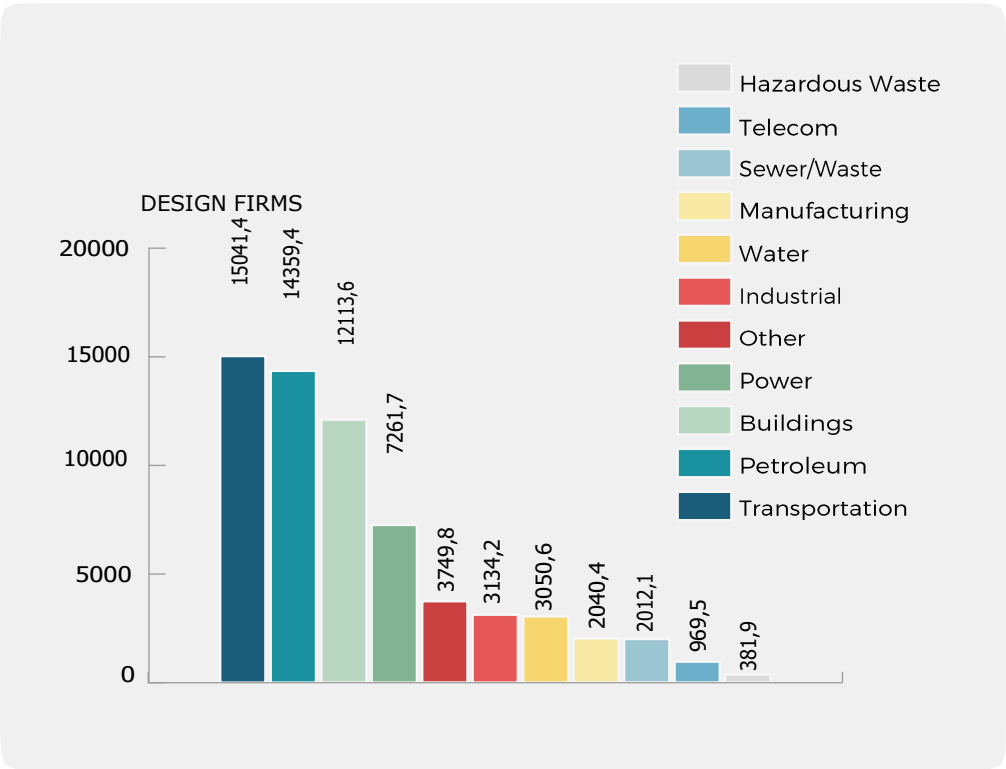


Figure 17 - International Market Analysis - Top 225 International Design Firms
Source: Guamari based on Enr data

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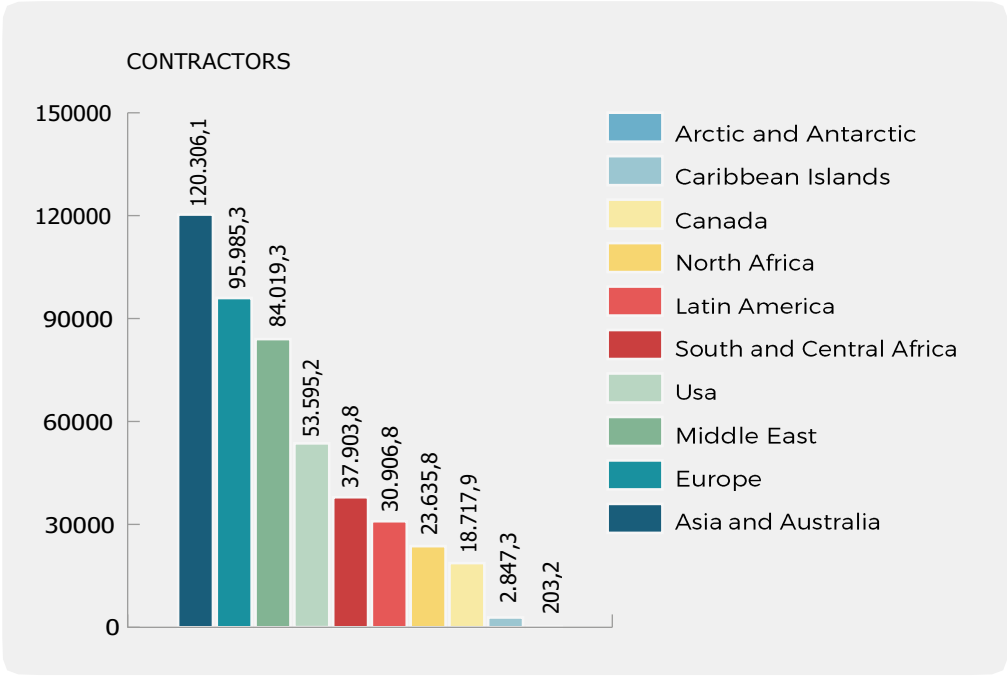


Figure 18 - International Region Analysis - Top 250 International Contractors
Source: Guamari based on Enr data

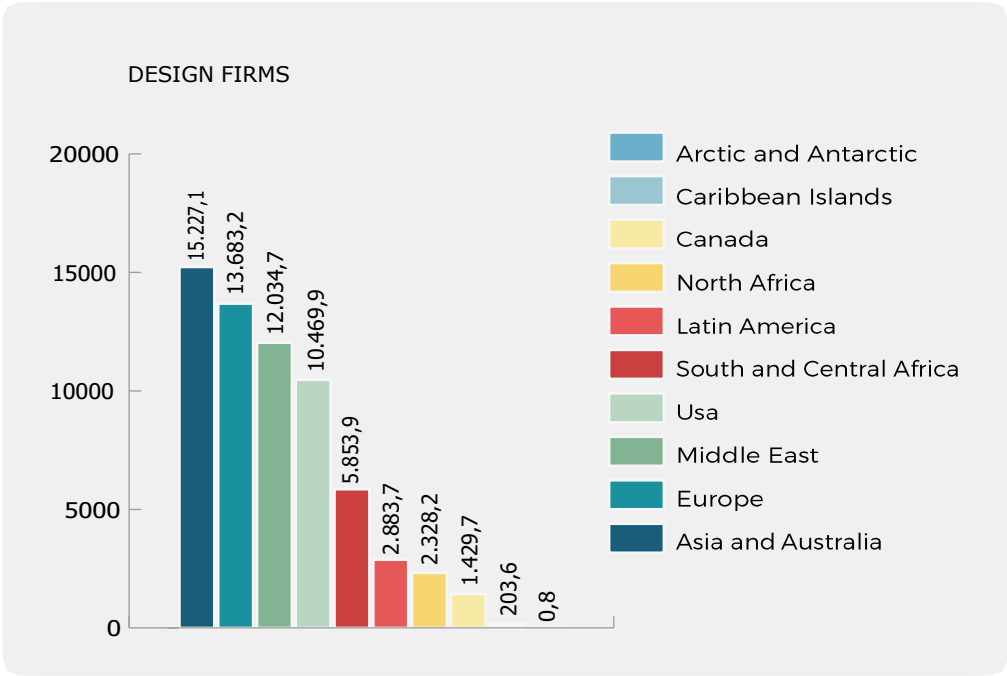


Figure 19 - International Region Analysis - Top 225 International Design Firms
Source: Guamari based on Enr data

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An original proposal in this quest to picture delocalization is our representation of the world distribution of Italian branches, in the case of engineering and architecture firms, of Italian contracts in the case of construction contractors. The first has a much richer geographical “diaspora” as 54 internationalized Italian engineering firms have been identified (i.e. one third of our sample). Obviously the international region where most engineering firms from the Peninsula concentrate is Europe, followed by Middle East and Asia. The picture for architecture is much more limited as the firms are smaller and still work on a rather artistic/artisanal mode: 39 Italian firms declare to have permanent branches in other countries, in this case Oceania excluded.

Last but not least, the majority of 48 construction firms, monitored by their association, Ance, and also by the research firm Guamari, declare that Europe and North Africa (understandably given the proximity) are the areas in the world where they prefer to work.

ITALIAN ENGINEERING FIRMS’ BRANCHES IN THE WORLD



Figure 20
 Source: Guamari based on firms’ data

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CHECK

ITALIAN ARCHITECTURE (AND DESIGN) FIRMS' BRANCHES IN THE WORLD

Europe – 20/39

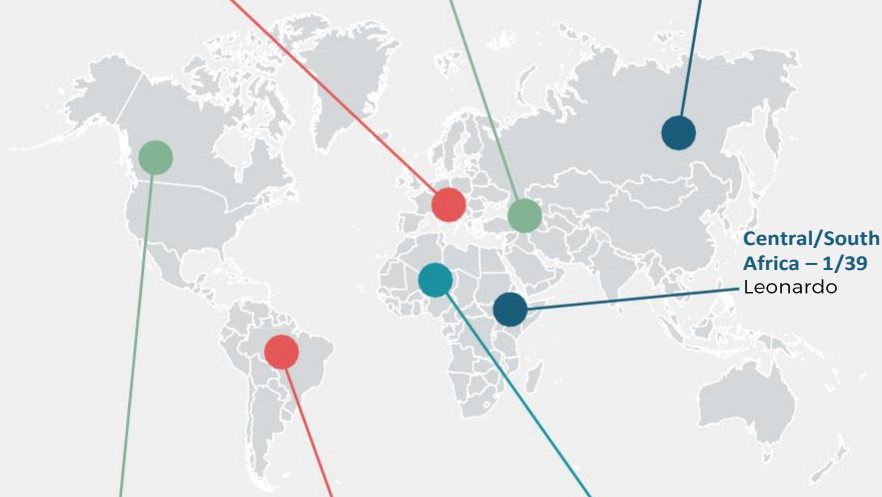
AF517, Archea, Archest, Carlo Ratti, Renzo Piano, Hydea, Massimiliano Fuksas, Metrogramma, Obr, Progetto Cmr, Scape, Bm Studio, Goring & Straja, Gbpa, Design International, One Works, Mdb, Polistudio Aes, Leonardo, Spazio3 Architettura, Ipostudio

Middle East - 10/39

Archea, Dante O. Benini, Metrogramma, One Works, Progetto Cmr, Open Project, Simone Micheli, Bm Studio, Cremonesi Workshop, D-Recta

Asia – 13/39

Ama Group, Archea, Archest, Hydea, Massimiliano Fuksas, Progetto Cmr, Stefano Boeri, Total Tool, Vudafieri Saverino, Leonardo, Matteo Thun, H&A, One Works



Central/South Africa – 1/39

Leonardo

North America – 13/39

Goring & Straja, Progetto Cmr, Renzo Piano, The Ok Design Group, Total Tool, Ama Group, Antonio Citterio & Patricia Viel, Lissoni Associati, Mario Cucinella Architects, Design Group Italia, Pininfarina Extra, Metrogramma, Iosa Ghini

North Africa – 3/39

Ama Group, TheOKDesignGroup, Simone Micheli

South America – 2/39

Archea, Total Tool



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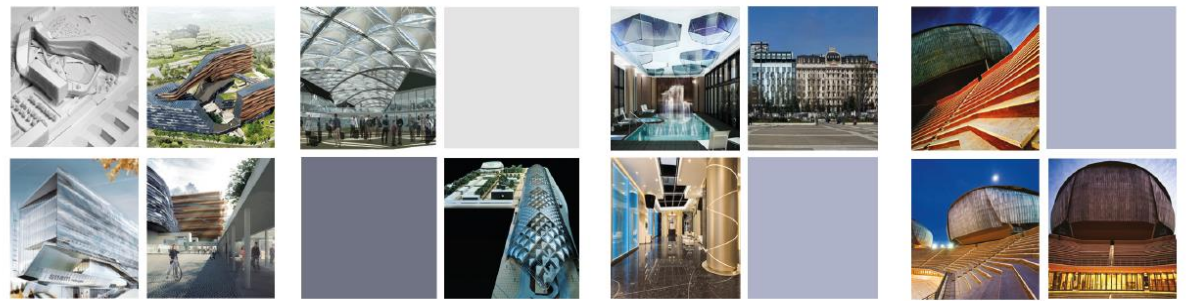
DESIGNER OUTLET SERRAVALLE PHASE 6, MILAN

WHERE THE ITALIAN CONTRACTORS WORK IN THE WORLD



Figure 22

Source: Guamari based on firms' and Ance data



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CHAPTER 6

AT THE TOP - ITALIAN RANKINGS

6.1. THE TOP 50 GENERAL AND 5 SPECIALTY CONTRACTORS

Pos. 2016	Pos. 2015	Firm	Revenues 2016	Var. % '16/'15	% abroad 2016	Ebitda 2016	Var. % '16/'15	Ebit 2016	Var. % '16/'15	Net Profit 2016	Var. % '16/'15	Net Debt 2016	Var. % '16/'15	Equity 2016	Var. % '16/'15	Backlog 2016	Var. % '16/'15	Employees 2016	Var. % '16/'15
GENERALI CONTRACTORS																			
1	1	Salini Impregilo (1)	5.883.809	24,2	93,0	536.334	11,1	275.513	3,0	99.515	21,0	350.816	n.s.	1.361.331	11,9	36.910.300	10,7	34.440	12,6
2	2	Astaldi	3.004.255	5,2	84,2	379.858	6,6	316.973	14,2	72.457	-10,4	1.088.667	10,8	698.485	9,6	19.503.000	9,3	11.510	5,9
3	3	Condotte (2)	1.314.970	-1,2	61,1	126.693	-13,0	46.465	-34,9	3.102	-22,7	496.753	12,3	219.395	2,8	5.608.550	-8,3	4.432	-24,3
4	4	Cmc (a) (3) (4)	1.063.226	-9,7	55,0	179.352	0,4	82.914	13,5	9.101	-4,0	575.600	-0,7	119.896	-16,1	3.425.300	-2,7	7.597	3,7
5	8	Rizzani de Eccher (5)	917.815	37,0	82,0	46.333	-7,4	33.486	-16,8	24.216	51,8	74.225	n.s.	173.909	15,7	2.118.000	-16,3	3.248	-10,2
6	5	Pizzarotti (6)	730.388	-11,1	64,2	95.195	-14,5	64.257	-15,1	1.195	-91,0	99.008	-44,4	489.526	6,8	12.612.907	1,9	1.359	9,3
7	6	Ghella	620.402	-13,4	66,0	74.307	-43,6	42.073	-59,7	26.742	n.s.	73.288	0,8	380.588	41,3	4.545.922	12,8	1.129	-34,6
8	9	Cmb (a) (3)	521.214	-8,7	-	36.060	19,4	23.829	43,5	12.576	149,6	28.190	-77,1	253.892	3,9	2.583.600	-4,8	648	-6,1
9	11	Grandi Lavori Fincosit (7)	456.694	-10,4	38,5	30.978	-12,1	9.057	-22,1	-6.330	30,1	171.377	78,2	152.379	-4,7	1.819.328	-10,7	1.079	-2,6
10	7	Itinera (8) (9)	398.492	-43,9	-	32.026	-21,8	16.684	-21,3	10.221	22,1	-3.651	n.s.	232.063	12,1	3.550.000	-6,6	1.057	-16,3
11	12	Icm (10)	340.292	-29,3	57,2	34.794	-20,7	12.560	-56,5	3.076	-4,8	53.437	25,0	73.569	0,3	2.206.730	5,5	859	-27,3
12	10	Pavimental* (11)	304.244	-40,5	1,8	-30.017	n.s.	-43.837	n.s.	-33.707	n.s.	142.344	36,7	15.394	-68,8	749.664	-25,6	822	-4,0
13	15	Inc (12)	211.304	-3,3	-	17.808	-0,1	13.073	2,1	5.721	-18,6	67.163	10,5	120.196	5,3	793.348	-12,2	74	10,4
14	14	Italiana Costruzioni	210.508	-4,6	14,3	8.846	-30,2	6.820	-32,1	1.392	-69,6	49.402	5,4	37.926	-2,3	786.976	0,9	498	22,4
15	21	Carron	203.136	17,3	-	13.186	-4,8	10.358	-11,2	3.724	-9,7	12.242	-60,2	58.090	6,3	450.000	-12,0	223	1,8
16	23	Toto* (13)	178.273	26,9	15,4	26.806	4,2	8.149	-43,7	8.149	43,7	89.478	5,0	84.766	10,8	552.000	-6,4	n.d.	n.d.
17	20	Vianini Lavori (14)	155.718	-15,3	-	20.019	n.s.	19.936	n.s.	136.773	n.s.	-75.314	8,5	653.182	-14,3	1.065.000	-7,1	159	23,3
18	-	Techbau	139.608	138,5	-	6.696	95,8	6.020	92,9	3.850	133,3	20.750	57,1	15.240	16,0	99.814	116,5	54	25,6
19	17	Colombo Costruzioni*	128.244	-34,5	-	3.220	-74,1	1.900	-53,5	1.254	-47,5	-6.753	80,9	33.794	2,3	405.000	-0,5	180	-1,6

20	-	Todini Costruzioni Generali (15)	123.988	-6,9	98,1	6.589	-53,9	1.170	-89,0	587	n.s.	-10.136	-122,2	70.796	n.s.	52.300	-40,1	711	-44,5
21	19	Mantovani *	121.315	-34,8	4,1	9.498	-63,3	-39.212	n.s.	-78.355	n.s.	96.791	-14,5	57.047	-50,8	740.000	-73,6%	362	-2,2
22	26	Sicrea (3) (16)	120.713	11,2	-	1.460	-18,7	503	-19,8	-509	-27,9	17.496	125,0	5.151	33,0	210.000	-14,6	368	-19,1
23	25	Collini Lavori	113.211	-7,2	14,0	2.554	-36,9	1.486	-49,7	645	-61,2	-11.862	4,6	25.814	-2,8	523.600	29,0	102	-35,8
24	18	Salc (17)	103.443	-46,9	-	2.513	44,5	1.834	36,9	601	8,1	9.154	-12,6	6.610	14,9	446.000	16,8	138	-24,2
25	29	Acmar (b) (3) (18)	101.302	5,4	5,0	5.687	-46,7	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	165.000	-21,4	476	9,4
26	28	Neosia* (19)	100.138	-2,3	14,1	-943	75,8	-2.256	81,9	-4.046	68,8	105.550	21,1	65.028	-10,7	322.220	-45,8	124	-13,9
27	32	Cmsa (a) (3)	96.280	8,4	-	3.845	52,6	2.949	52,3	644	7,2	51.615	25,5	49.741	0,0	297.610	-8,6	131	-1,5
28	31	Pessina Costruzioni (20)	87.731	47,5	-	11.886	n.s.	11.739	n.s.	8.800	n.s.	7.058	-82,9	34.514	34,2	n.d.	n.d.	75	13,6
29	24	Intercantieri Vittadello (21)	83.235	-39,3	0,2	2.413	-69,5	-97	n.s.	31	-98,5	-33.784	13,0	89.036	0,0	448.000	28,0	233	5,9
30	34	AeC Costruzioni* (22)	83.009	-4,2	-	8.286	-19,6	7.343	11,5	4.732	43,4	19.774	86,1	22.550	26,6	155.123	18,4	163	1,9
31	-	Setten Genesio	82.090	64,6	-	8.955	n.s.	8.033	n.s.	2.106	n.s.	48.917	1,0	17.541	13,3	141.575	-1,7	113	7,6
32	35	Pietro Cidonio*	81.945	-3,4	26,2	7.586	-7,8	3.870	2,3	928	-59,5	20.571	52,9	20.735	-8,2	95.010	-9,8	359	-11,8
33	42	I.Co.P.*	75.974	12,7	38,0	8.343	52,8	1.030	14,4	507	33,4	36.163	10,7	11.835	-4,1	293.585	1,1	226	-13,1
34	33	Cogeis* (23)	72.785	-17,7	11,1	9.552	-13,6	5.426	-23,4	4.619	-21,5	36.278	105,6	81.195	6,0	111.646	56,4	298	-8,3
35	-	Clea (a) (3)	70.641	29,3	-	2.636	-57,6	1.527	-23,7	277	n.s.	22.673	14,6	36.826	0,8	272.655	36,5	195	9,6
36	30	Aleandri*	69.303	-25,8	3,6	1.353	-63,5	1.580	-63,4	1.165	16,3	-6.986	22,9	17.737	7,0	81.491	-46,5	120	-27,3
37	-	Cbr (a) (3)	68.735	24,4	-	4.353	n.s.	2.756	n.s.	343	n.s.	35.209	33,5	52.599	0,6	51.000	6,3	286	-5,3
38	41	De Sanctis Costruzioni*	64.531	-5,6	-	4.810	-33,5	4.491	-14,9	3.029	-27,8	-5.366	n.s.	21.204	16,7	128.899	-25,8	136	54,5
39	36	Costruzioni Generali Gilardi*	60.497	-28,4	-	2.495	-0,5	2.140	-1,7	1.771	1,7	-19.317	-32,5	11.678	13,3	144.455	2,9	87	4,8
40	-	Pac	58.287	7,1	22,3	4.018	-7,3	2.493	-25,8	598	-58,4	26.736	4,6	12.191	2,9	300.000	0,0	151	14,4
41	22	Strabag* (24)	57.692	-63,5	-	-2.915	n.s.	-4.168	-64,1	-6.548	10,3	-426	98,0	15.967	-29,1	n.d.	n.d.	112	-18,8
42	-	Secap	55.887	75,4	0,9	2.173	-8,5	2.013	9,2	818	18,2	14.248	1,3	6.086	9,3	79.300	n.d.	63	14,5
43	-	Iti Impresa Generale*	50.477	4,5	-	987	-8,6	419	-24,1	57	61,0	-2.980	n.s.	18.912	0,1	n.d.	n.d.	198	n.d.
44	39	Di Vincenzo Dino & C.*	50.430	-26,4	-	2.679	-14,9	1.937	-22,3	971	-22,6	15.631	-5,0	22.971	4,4	105.050	-0,2	116	-2,5
45	27	Interstrade* (9)	49.940	-53,4	-	6.801	-53,6	4.639	-54,2	2.530	-55,8	6.341	n.s.	16.256	-2,8	29.800	-6,9	156	-7,1
46	-	Garc*	49.397	23,4	-	2.736	31,6	1.413	112,8	195	n.s.	18.837	-9,0	6.176	3,3	n.d.	n.d.	155	34,8
47	-	Rcm Costruzioni	49.348	n.s.	-	5.320	n.s.	4.952	n.s.	2.530	n.s.	16.476	n.s.	11.739	n.s.	n.d.	n.d.	147	25,6
48	-	Unionbau	47.305	12,8	-	2.262	13,9	1.283	-7,9	481	3,0	7.372	-18,0	9.902	5,1	n.d.	n.d.	152	n.d.
49	-	Vitali	46.754	-5,0	-	4.357	-58,5	916	-90,5	466	-57,7	-13.362	n.s.	45.000	-12,7	576.000	-42,0	108	6,9
50	-	Piacentini Costruzioni (25)	46.092	32,5	14,4	4.653	n.s.	2.476	n.s.	117	n.s.	33.901	-19,1	11.874	7,8	n.d.	n.d.	113	n.d.
TOTAL 50			19.125.067	1,3	61,2	1.775.436	-5,9	980.915	-15,2	333.117	26,0	3.849.594	16,4	6.048.332	4,7	105.555.758	0,8	75.542	1,9

SPECIALTY CONTRACTORS																			
1	2	Trevi (26)	855.266	0,9	91,9	96.266	11,5	41.018	10,9	-9.650	n.s.	117.023	-43,4	491.444	23,1	668.449	1,2	5.783	-5,0
2	1	Bonatti	798.651	-14,5	83,4	105.689	17,0	69.700	50,2	24.431	n.s.	95.851	-16,0	233.623	10,9	1.400.000	7,7	4.860	12,6
3	3	Cimolai (27)	539.469	5,9	49,1	55.287	-28,0	33.580	-37,5	7.354	-23,3	106.548	-30,5	144.254	-9,8	782.151	2,2	1.256	3,5
4	4	Sicim*	335.093	1,9	99,0	63.328	0,3	38.122	-10,0	28.777	54,1	2.480	n.s.	166.715	18,6	970.000	-48,4	4.724	6,9
5	5	Salcef	268.152	58,2	15,1	25.063	34,8	16.577	83,7	6.751	109,6	-15.974	n.s.	88.632	2,7	554.327	-16,9	828	12,2
TOTAL 5			2.796.631	0,3	73,3	345.633	3,1	198.997	5,6	57.663	57,3	305.928	-38,6	1.124.668	12,8	4.374.927	-17,0	17.451	4,0
TOTAL 55			21.921.698	1,2	62,7	2.121.069	-4,6	1.179.912	-12,3	390.780	29,8	4.155.522	9,2	7.173.000	5,9	109.930.685	-0,1	92.993	2,3

Source: Guamari on firms' data

n.d. = not defined

n.s. = not significant

(*) Not consolidated data; (a) associated with the Lega delle Cooperative; (b) associated with Associazione delle Cooperative; (1) officially active since January 2014; in November 2015 acquired the American firm Lane Industries; (2) Ferfina group, consolidates Cossi, Inso and the Swiss firm Lgv; (3) partner of Consorzio Integra; (4) controls the American firms LM Heavy Civil Construction and Difazio; (5) consolidates Sacaim and Codest International; (6) in March 2017 signed a JV with the Australian group RF Holdings; (7) consolidates Seli Overseas; (8) in November 2013 merged the "Costruzioni e Prefabbricazione" division of Codelfa, in July 2017 acquired the 50% of the American firm Halmar International; (9) Astm/Cavio group; (10) in May 2016 changed its name from Impresa Costruzioni Giuseppe Maltauro; (11) Atlantia/Autostrade per l'Italia group; (12) Fininc consolidated data; (13) consolidates the engineering firm Infraengineering; (14) Caltagirone group; (15) in April 2016 the Kazakh group Prime System KZ bought Todini from Salini Impregilo; (16) born in February 2012 by a division of Cooperativa Muratori di Reggiolo; (17) in 2014 changed its name in ICS Grandi Lavori; (18) since July 2016 in composition with creditors; (19) former Tecnimont Civil Construction, born in April 2017 by the merge with Met NewEn; (20) Columbia Prima consolidated data; (21) Finanziaria Vittadello consolidated data; (22) born in 2012 by the merge of Acea Costruzioni and Cls; (23) Cogeis and Ivies aggregated data; (24) formerly Adanti, acquired by the Austrian group Strabag in 2008; (25) consolidates the engineering firm Piacentini Ingegneri; (26) "Servizi di fondazioni e perforazioni" division data; (27) Cimolai Holding (former Paocar) consolidated data.

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6.2.THE TOP 150 ENGINEERING FIRMS

Pos. 2016	Pos. 2015	Firm	Revenues 2016	Revenues 2015	Var % '16/'15	% Abroad 2016	Ebitda 2016	Ebitda 2015	Var % '16/'15	Net Profit 2016	Net Profit 2015	Var % '16/'15	Net Debt 2016	Net Debt 2015	Var % '16/'15	Equity 2016	Equity 2015	Var % '16/'15
1	-	Italferr (o) (1)	172.464	166.783	3,4	23,2	22.338	24.326	-8,2	8.117	10.328	-21,4	-30.479	-3.047	ns	51.468	52.622	-2,2
2	1	Proger (o) (2) (3)	136.140	124.209	9,6	70,0	8.012	5.348	49,8	2.861	1.488	92,3	13.259	19.125	-30,7	17.466	15.012	16,3
3	3	Spea Engineering (o) (4)	124.008	107.306	15,6	8,1	29.072	28.897	0,6	17.734	16.408	8,1	-12.372	-9.319	-32,8	93.628	87.390	7,1
4	5	EniProgetti (5)	111.217	87.232	27,5	6,5	7.565	10.726	-29,5	5.459	5.752	-5,1	-2.671	18.956	ns	69.689	14.853	ns
5	4	Rina Consulting (o) (6)	76.050	91.808	-17,2	63,7	5.371	8.775	-38,8	393	4.488	-91,2	-5.385	-3.252	-65,6	20.942	27.549	-24,0
6	6	Italconsult (7)	71.928	54.761	31,3	93,6	13.261	3.695	ns	7.881	3.347	135,5	-516	-3.883	86,7	37.295	32.414	15,1
7	7	Stantec (8)	53.358	45.729	16,7	3,6	-3	263	ns	-224	-57	ns	-4.097	-2.580	-58,8	4.481	4.704	-4,7
8	12	Manens – Tifs (3) (9)	51.670	35.541	45,4	81,0	3.146	2.836	10,9	1.475	1.296	13,8	-16.933	-10.436	-62,3	6.758	4.893	38,1
9	10	DbA Group (c) (o) (10)	41.436	40.188	3,1	26,5	4.810	4.686	2,6	1.463	682	114,5	740	4.907	-84,9	11.620	10.935	6,3
10	9	Agriconsulting (c) (g) (o)	40.761	40.269	1,2	69,4	2.303	1.530	50,5	96	-1.407	ns	13.023	17.537	-25,7	18.365	18.223	0,8
11	17	Enereco	40.253	26.388	52,5	14,8	11.922	4.689	ns	6.989	3.233	116,2	-5.885	-4.964	-18,6	20.792	15.829	31,4
12	16	Jacobs Italia (o) (s)	34.188	26.271	30,1	50,5	2.745	1.312	109,2	1.688	475	ns	-5.644	-894	ns	3.575	4.387	-18,5
13	8	Geodata (c)	32.415	41.570	-22,0	96,7	-2.926	4.188	ns	-7.764	-2.515	ns	17.110	24.081	-28,9	15.142	22.778	-33,5
14	11	Technital (o)	32.158	40.011	-19,6	nd	2.019	3.023	-33,2	45	382	-88,2	-5.716	-10.931	47,7	11.493	11.050	4,0
15	-	Metropolitana Milanese (Divisione Ingegneria) (c) (o) (11)	32.120	40.257	-20,2	2,0	1.937	6.016	-67,8	nd	nd	nd	nd	nd	nd	nd	nd	nd
16	15	Golder Associates	29.993	26.459	13,4	4,0	962	722	33,2	400	-98	ns	-387	-21	ns	5.720	5.319	7,5
17	14	Artelia Italia (c) (o) (12)	27.611	27.415	0,7	nd	1.747	1.367	27,8	223	108	106,5	-2.947	-3.967	25,7	2.069	1.846	12,1
18	19	3ti Progetti Italia (c) (o) (13)	25.231	25.088	0,6	75,0	1.728	1.911	-9,6	179	631	-71,6	3.408	4.570	-25,4	3.313	4.112	-19,4
19	22	Prelis Integra (o)	24.376	22.565	8,0	nd	1.775	1.778	-0,2	548	-123	ns	-332	-1.732	80,8	1.106	559	97,9
20	13	Sipal (o) (14)	24.101	27.429	-12,1	-	1.161	974	19,2	279	190	46,8	12.649	11.496	10,0	8.182	7.903	3,5
21	21	Sineco (o) (15)	22.291	23.667	-5,8	1,0	5.376	5.954	-9,7	3.165	3.142	0,7	-2.549	-3.323	23,3	11.649	10.484	11,1
22	24	F&M Ingegneria (c) (o) (16)	22.278	20.312	9,7	45,0	2.505	2.343	6,9	1.347	1.297	3,9	-5.659	-4.073	-38,9	8.674	7.488	15,8
23	20	Net Engineering International (c) (o) (17)	22.232	24.140	-7,9	57,8	-4.728	-2.681	-76,4	-2.992	-5.266	43,2	-7.712	-2.045	ns	10.705	13.699	-21,9
24	18	Sina (15)	21.207	26.031	-18,5	2,0	-1.742	-1.632	-6,7	-2.019	-2.359	14,4	-16.708	-15.836	-5,5	54.884	56.903	-3,5
25	28	eFM (c)	19.629	17.170	14,3	6,6	2.503	1.768	41,6	1.200	459	ns	-2.200	-2.691	18,2	11.624	10.418	11,6
26	26	Ambiente (a) (o)	19.172	17.104	12,1	nd	1.602	1.288	24,4	120	344	-65,1	2.416	1.258	92,1	7.998	8.040	-0,5

Pos. 2016	Pos. 2015	Firm	Revenues 2016	Revenues 2015	Var % '16/15	% Abro ad 2016	Ebitda 2016	Ebitda 2015	Var % '16/15	Net Profit 2016	Net Profit 2015	Var % '16/15	Net Debt 2016	Net Debt 2015	Var % '16/15	Equity 2016	Equity 2015	Var % '16/15
27	30	Technip Italy Direzione Lavori (o)	18.923	15.871	19,2	-	1.461	934	56,4	855	464	84,3	-920	-504	-82,5	4.203	3.348	25,5
28	41	Ird Engineering (o)	18.660	13.026	43,3	98,0	3.310	1.044	ns	3.288	2.304	42,7	nd	-3.374	nd	5.705	2.597	119,7
29	61	Arcadis Italia (18)	18.092	21.091	-14,2	-	856	1.355	-36,8	443	574	-22,8	38	-1.692	ns	4.169	3.925	6,2
30	33	Aecom Urs Italia (19)	16.126	14.004	15,2	nd	611	36	ns	264	-469	ns	-336	-333	-0,9	1.795	1.531	17,2
31	31	Infraengineering (20)	15.807	14.687	7,6	-	10.503	8.952	17,3	7.186	6.061	18,6	-558	-508	-9,8	16.483	9.297	77,3
32	23	Inres (a)	14.574	22.124	-34,1	-	881	869	1,4	254	250	1,6	-2.467	-3.405	27,5	7.122	6.949	2,5
33	34	Politecnica (a) (o)	13.449	13.875	-3,1	16,7	701	1.069	-34,4	31	21	47,6	4.354	3.497	24,5	3.445	3.496	-1,5
34	27	Thetis (o) (21)	13.406	17.322	-22,6	5,1	294	2.982	-90,1	-3.357	276	ns	-539	-724	25,6	0	16.519	-100,0
35	35	Erm Italia (m)	13.263	13.676	-3,0	16,5	547	-199	ns	74	-288	ns	-293	-475	38,3	777	703	10,5
36	37	Cooprogetti (a) (o)	12.724	12.389	2,7	22,6	348	407	-14,5	-1.145	124	ns	-403	-500	19,4	2.991	4.027	-25,7
37	39	Ramboll Environ Italy	12.574	12.051	4,3	7,3	673	196	ns	411	87	ns	-1.742	-1.765	1,3	5.586	5.174	8,0
38	36	Rpa	12.400	13.006	-4,7	12,9	449	583	-23,0	141	203	-30,5	4.261	4.292	-0,7	3.063	2.903	5,5
39	32	Elc - Electroconsult	12.237	14.487	-15,5	100,0	529	996	-46,9	136	311	-56,3	-2.271	-5.609	59,5	2.843	2.568	10,7
40	25	Studio Altieri (o) (22)	11.012	16.831	-34,6	77,8	-924	-943	2,0	-1.225	-2.568	52,3	9.776	10.888	-10,2	2.252	3.477	-35,2
41	42	Lotti Ingegneria (o)	10.935	11.798	-7,3	70,0	423	988	-57,2	12	9	33,3	3.918	3.500	11,9	6.560	6.548	0,2
42	49	Aic Progetti (o)	10.467	8.276	26,5	98,2	885	884	0,1	156	205	-23,9	1.510	3.071	-50,8	4.173	4.467	-6,6
43	38	Rocksoil (s) (23)	10.295	12.254	-16,0	26,0	1.339	944	41,8	877	563	55,8	2.703	2.416	11,9	4.024	4.347	-7,4
44	52	Musinet Engineering	10.095	7.680	31,4	-	1.503	560	ns	930	162	ns	-424	-794	46,6	1.650	4.179	-60,5
45	83	Sintel Engineering (o)	9.961	4.006	148,7	nd	6.248	561	ns	3.111	344	ns	-362	-1.010	64,2	4.634	1.863	148,7
46	48	Arup Italia (m)	9.896	8.686	13,9	25,0	427	34	ns	289	-317	191,2	-882	-1.893	53,4	2.703	2.414	12,0
47	80	Mpartner	9.535	4.151	129,7	11,0	561	140	ns	528	107	ns	-742	-781	5,0	2.224	1.932	15,1
48	47	Sws Engineering (o)	9.293	8.774	5,9	36,0	398	747	-46,7	84	8	ns	3.811	2.331	63,5	1.613	1.774	-9,1
49	29	Bonifica (o) (24)	9.114	16.394	-44,4	nd	939	1.028	-8,7	132	142	-7,0	-122	-304	59,9	5.861	5.729	2,3
50	57	Tecno Habitat (o)	9.011	5.982	50,6	nd	134	202	-33,7	-10	18	ns	1.237	-2.267	ns	375	385	-2,6
51	44	Studio Ing. G. Pietrangeli (o)	8.930	9.380	-4,8	100,0	2.793	3.457	-19,2	1.942	2.431	-20,1	-5.751	-5.452	-5,5	15.768	14.121	11,7
52	46	Hitachi Industrial Engineering Emea	8.811	7.934	11,1	nd	820	1.196	-31,4	482	730	-34,0	-967	-290	ns	1.941	1.459	33,0
53	45	Ets - Engineering Technical Services (25)	8.395	8.933	-6,0	nd	-776	-772	-0,5	-1.441	-946	-52,3	-1.266	-1.278	0,9	6.774	8.243	-17,8
54	51	Sgi Studio Galli Ingegneria (o) (26)	8.083	9.104	-11,2	64,8	671	-1.375	ns	503	-4.593	ns	2.472	4.066	-39,2	613	-520	ns
55	53	Ars Progetti (o)	7.953	6.684	19,0	nd	245	132	85,6	83	12	ns	-678	nd	nd	782	699	11,9
56	43	Tecnosistem (o)	7.345	8.083	-9,1	7,0	336	734	-54,2	392	-309	ns	2.111	1.932	9,3	5.298	5.006	5,8
57	40	Agrotec	7.284	11.917	-38,9	nd	279	802	-65,2	142	530	-73,2	-1.722	-343	ns	1.188	1.349	-11,9
58	54	Nier Ingegneria	6.721	6.549	2,6	nd	543	316	71,8	269	94	186,2	282	1.161	-75,7	2.848	2.699	5,5

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59	55	Anas International Enterprise (27)	6.492	6.247	3,9	100.0	1.026	671	52,9	685	215	ns	-3.871	-1.863	-107,8	4.109	3.425	20.0
60	-	La Sia	6.336	5.859	8,1	nd	386	159	142,8	212	53	ns	nd	nd	nd	424	212	100.0
61	66	Spi - Società Progettazioni Integrali	6.154	5.286	16,4	nd	495	1.003	-50,6	304	679	-55,2	nd	-1.633	nd	425	691	-38,5
62	-	HQ Engineering Italia	6.088	6.207	-1,9	nd	497	620	-19,8	332	405	-18,0	69	-231	ns	1.789	1.513	18,2
63	62	Alpina (o)	5.631	5.267	6,9	54,7	117	-203	ns	3	-196	ns	1.217	-18	ns	1.126	1.128	-0,2
64	73	Team Engineering (o)	5.581	4.426	26,1	nd	289	284	1,8	131	130	0,8	nd	nd	nd	1.047	916	14,3
65	79	Sce Project	5.556	4.123	34,8	nd	104	95	9,5	18	7	ns	nd	nd	nd	68	50	36.0
66	-	Incico	5.407	6.087	-11,2	34,9	284	107	ns	27	-181	ns	1.882	nd	nd	1.203	846	42,2
67	75	Iqt Consulting	5.247	4.300	22,0	nd	362	759	-52,3	157	459	-65,8	1.796	918	95,6	886	848	4,5
68	72	Tauw Italia	5.195	4.423	17,5	nd	437	265	64,9	217	112	93,8	-253	184	ns	1.131	914	23,7
69	94	Hpc Italia	5.160	3.437	50,1	10,2	565	409	38,1	385	229	68,1	-604	146	ns	956	571	67,4
70	63	MB Progetti	5.104	5.102	0,0	nd	347	293	18,4	73	26	ns	1.175	1.278	-8,1	575	502	14,5
71	69	Aicom (o)	5.087	4.703	8,2	nd	627	-175	ns	229	-316	ns	nd	nd	nd	1.042	813	28,2
72	67	Esa Engineering	5.074	4.872	4,1	19,2	136	218	-37,6	-47	8	ns	1.225	1.350	-9,3	299	346	-13,6
73	100	Maffei Engineering (28)	5.033	3.207	56,9	90,7	703	512	37,3	463	299	54,8	-537	-458	-17,2	1.514	1.050	44,2
74	64	Ingenieurteam Bergmeister	5.027	5.031	-0,1	nd	225	226	-0,4	36	25	44,0	nd	-775	nd	389	353	10,2
75	87	Steam (o)	5.019	3.790	32,4	0,5	381	280	36,1	247	154	60,4	-158	1.234	ns	774	627	23,4
76	65	Sintagma (o)	4.898	4.928	-0,6	23,0	868	532	63,2	503	235	114,0	-1.444	-1.220	-18,4	6.029	5.672	6,3
77	59	Save Engineering (o) (29)	4.809	5.696	-15,6	-	745	544	36,9	414	341	21,4	-1.481	-1.899	22,0	1.913	1.499	27,6
78	85	Montana	4.646	3.867	20,1	nd	506	390	29,7	148	4	ns	575	727	-20,9	886	738	20,1
79	58	Tre Esse Engineering	4.588	5.830	-21,3	nd	605	581	4,1	395	276	43,1	372	-85	ns	1.592	1.297	22,7
80	99	Contec Aqs (o) (30)	4.507	3.306	36,3	-	884	262	ns	511	111	ns	359	-116	ns	989	728	35,9
81	-	Nce	4.342	1.721	ns	-	305	156	95,5	50	42	19,0	1.022	351	ns	536	567	-5,5
82	77	Enser (o)	4.333	4.290	1,0	30,6	380	112	ns	203	36	ns	-100	-175	42,9	916	713	28,5
83	-	Tractebel Engineering (31)	4.323	4.843	-10,7	38,4	91	303	-70,0	-1.187	-23	ns	-1	0	ns	277	1.464	-81,1
84	76	Hydrodata (o)	4.322	4.295	0,6	-	559	550	1,6	218	189	15,3	1.466	1.757	-16,6	3.353	3.261	2,8
85	89	Deerns Italia	4.284	3.505	22,2	nd	282	-138	ns	136	-302	ns	-83	-38	-118,4	1.613	1.477	9,2
86	71	Bms Progetti (o) (3) (32)	4.264	4.438	-3,9	nd	332	217	53,0	84	-6	ns	1.157	1.182	-2,1	418	334	25,1
87	68	Studio Geotecnico Italiano (o) (33)	4.204	4.742	-11,3	nd	-145	156	ns	-174	49	ns	-280	34	ns	1.948	2.523	-22,8
88	84	Lombardi Ingegneria	4.184	3.899	7,3	nd	155	-233	ns	139	-246	ns	-318	-431	26,2	1.506	1.367	10,2
89	82	Ariatta Ingegneria dei Sistemi	4.148	4.010	3,4	15,9	224	219	2,3	96	97	-1,0	-696	-916	24,0	483	388	24,5
90	78	J&A Consultants (34)	4.124	4.223	-2,3	nd	196	205	-4,4	14	-6	ns	nd	nd	nd	270	256	5,5

Pos. 2016	Pos. 2015	Firm	Revenues 2016	Revenues 2015	Var % '16/15	% Abro ad 2016	Ebitda 2016	Ebitda 2015	Var % '16/15	Net Profit 2016	Net Profit 2015	Var % '16/15	Net Debt 2016	Net Debt 2015	Var % '16/15	Equity 2016	Equity 2015	Var % '16/15
91	56	Ativa Engineering (o) (35)	4.110	6.006	-31,6	nd	308	1.621	-81,0	242	1.114	-78,3	-761	-580	-31,2	10.006	9.764	2,5
92	70	Tecon (o)	4.068	4.632	-12,2	nd	209	360	-41,9	70	147	-52,4	-1.420	-1.559	8,9	3.154	3.084	2,3
93	86	Ets spa	4.060	3.585	13,2	-	279	466	-40,1	89	117	-23,9	2.639	2.648	-0,3	909	820	10,9
94	-	Eos Consulting	4.009	3.225	24,3	nd	815	642	26,9	506	409	23,7	nd	nd	nd	869	753	15,4
95	90	Arcoengineering (36)	3.963	3.632	9,1	2,3	757	111	ns	405	41	ns	-41	-310	86,8	808	403	100,5
96	96	Systra-Sotecnì (o)	3.751	3.310	13,3	44,7	-150	-603	75,1	-176	-1.977	91,1	-29	-64	54,7	2.520	2.696	-6,5
97	-	3ba	3.741	3.285	13,9	nd	225	271	-17,0	51	113	-54,9	nd	nd	nd	308	279	10,4
98	97	Conser	3.615	3.297	9,6	94,8	730	-507	ns	626	-622	ns	-5.007	-3.837	-30,5	5.502	4.876	12,8
99	128	United Risk Management	3.456	2.193	57,6	-	279	128	118,0	3	2	50,0	552	495	11,5	67	65	3,1
100	111	AI Engineering (o)	3.264	2.901	12,5	13,2	320	227	41,0	173	100	73,0	232	-242	ns	2.267	2.170	4,5
101	110	Planning	3.196	2.909	9,9	nd	1.010	848	19,1	683	573	19,2	nd	nd	nd	710	597	18,9
102	137	Sjs Engineering (o)	3.160	1.923	64,3	0,2	381	234	62,8	131	107	22,4	-553	-973	43,2	661	636	3,9
103	101	Tekser	3.135	3.144	-0,3	nd	129	166	-22,3	25	14	78,6	nd	1.176	nd	283	258	9,7
104	-	Fichtner Italia	3.093	3.191	-3,1	nd	307	383	-19,8	193	156	23,7	nd	nd	nd	933	898	3,9
105	105	Greenwich	3.068	3.040	0,9	nd	270	380	-28,9	109	224	-51,3	nd	nd	nd	772	812	-4,9
106	92	Progin (o)	3.065	3.639	-15,8	9,6	344	422	-18,5	123	37	ns	-950	-911	-4,3	3.852	3.729	3,3
107	91	Pro Iter (o)	3.057	3.661	-16,5	-	59	-171	ns	1	-172	ns	1.039	3	ns	2.396	2.394	0,1
108	129	Seingim Global Service (o) (37)	3.012	2.161	39,4	nd	390	108	ns	273	52	ns	nd	nd	nd	377	103	ns
109	115	Sinergo (o)	2.986	2.664	12,1	nd	608	548	10,9	120	132	-9,1	1.019	1.184	-13,9	3.743	3.624	3,3
110	81	Gruppo Mercurio	2.973	4.098	-27,5	nd	-488	295	ns	-824	-66	ns	nd	2.333	nd	-543	281	ns
111	98	A.I.Erre Engineering	2.884	3.230	-10,7	33,0	143	139	2,9	84	65	29,2	846	349	142,4	950	865	9,8
112	119	Holzner & Bertagnolli Engineering	2.852	2.579	10,6	nd	374	330	13,3	229	202	13,4	nd	-314	nd	505	277	82,3
113	103	Beta Progetti (o)	2.820	3.063	-7,9	nd	127	105	21,0	34	40	-15,0	nd	nd	nd	1.246	1.249	-0,2
114	-	Plan Team	2.819	2.477	13,8	nd	357	333	7,2	257	167	53,9	nd	nd	nd	396	306	29,4
115	88	Sti Engineering	2.800	3.725	-24,8	35,7	932	-1.131	ns	889	-856	ns	803	1.353	-40,7	394	-495	ns
116	108	Sgai (o)	2.738	2.962	-7,6	nd	318	509	-37,5	198	421	-53,0	-1.788	-1.974	9,4	3.622	3.633	-0,3
117	93	Ce.A.S.	2.733	3.523	-22,4	7,0	158	268	-41,0	81	123	-34,1	255	110	131,8	1.362	1.280	6,4
118	107	Beta Studio (o)	2.715	3.030	-10,4	20,4	97	294	-67,0	12	207	-94,2	100	280	-64,3	2.434	2.422	0,5
119	-	Milan Ingegneria	2.700	1.735	55,6	nd	243	143	69,9	124	61	103,3	-796	-145	ns	319	194	64,4
120	112	Duferco Engineering	2.695	2.875	-6,3	-	36	136	-73,5	52	-71	ns	-205	-487	57,9	1.091	1.039	5,0
121	114	Biobyte	2.684	2.759	-2,7	nd	-5	140	ns	-62	57	ns	64	24	ns	56	278	-79,9
122	106	Cilento Ingegneria (o)	2.672	3.030	-11,8	nd	72	267	-73,0	48	179	-73,2	nd	-999	nd	749	701	6,8

Pos. 2016	Pos. 2015	Firm	Revenues 2016	Revenues 2015	Var % '16/15	% Abro ad 2016	Ebitda 2016	Ebitda 2015	Var % '16/15	Net Profit 2016	Net Profit 2015	Var % '16/15	Net Debt 2016	Net Debt 2015	Var % '16/15	Equity 2016	Equity 2015	Var % '16/15
123	132	Erregi	2.658	2.134	24,6	nd	259	235	10,2	112	117	-4,3	nd	-665	nd	2.106	1.994	5,6
124	-	Ets srl	2.647	1.772	49,4	-	-	730	426	71,4	474	261	81,6	-54	-19	ns	1.352	878
125	124	Heliopolis Energia - Ata Engineering	2.613	1.582	65,2	nd	430	-563	ns	789	260	ns	-130	-417	68,8	3.386	2.596	30,4
126	-	Systematica	2.605	1.593	63,5	nd	93	80	16,3	6	16	-62,5	-134	-200	33,0	814	808	0,7
127	95	Mate (a) (o) (38)	2.603	3.436	-24,2	nd	72	63	14,3	4	1	ns	607	560	8,4	455	251	81,3
128	130	Gae Engineering (o)	2.603	2.123	22,6	-	372	395	-5,8	203	186	9,1	-811	-878	7,6	775	572	35,5
129	-	Trt	2.589	2.459	5,3	67,4	249	141	76,6	95	56	69,6	-496	-174	ns	641	547	17,2
130	109	Via Ingegneria (o) (3)	2.558	2.918	-12,3	nd	181	103	75,7	-114	74	ns	-907	-592	-53,2	841	955	-11,9
131	104	Acquatecno (o)	2.544	3.044	-16,4	-	240	385	-37,7	104	104	0,0	970	419	131,5	5.113	5.008	2,1
132	120	Aei Progetti	2.491	2.518	-1,1	-	165	194	-14,9	87	117	-25,6	-737	-759	2,9	280	304	-7,9
133	138	Contec Ingegneria (o) (30)	2.461	1.915	28,5	-	587	458	28,2	433	266	62,8	-335	-284	-18,0	486	503	-3,4
134	125	Policeo	2.422	2.258	7,3	nd	-47	-147	68,0	-211	-278	24,1	nd	625	nd	1.890	2.104	-10,2
135	126	Saind Ingegneria	2.396	2.253	6,3	-	300	272	10,3	169	159	6,3	56	194	-71,1	1.048	980	6,9
136	102	Prisma Engineering	2.382	3.100	-23,2	nd	270	361	-25,2	39	25	56,0	nd	nd	nd	2.116	2.077	1,9
137	141	Pool Engineering (o)	2.368	1.860	27,3	1,6	209	289	-27,7	-81	-517	84,3	2.056	2.446	-15,9	1.834	1.915	-4,2
138	123	Si.Me.Te.	2.362	2.375	-0,5	-	198	174	13,8	46	30	53,3	745	1.205	-38,2	221	174	27,0
139	118	Sidercad (o)	2.339	2.666	-12,3	nd	5	8	-37,5	1	1	0,0	-2.073	-1.503	-37,9	1.255	1.253	0,2
140	-	Cavazzoni	2.329	2.434	-4,3	nd	115	104	10,6	16	15	6,7	nd	567	nd	65	49	32,7
141	131	Binini Partners	2.326	2.086	11,5	-	101	87	16,1	20	1	ns	472	720	34,4	302	281	7,5
142	142	Incide Engineering	2.254	1.857	21,4	-	151	156	-3,2	53	54	-1,9	-218	-22	ns	571	617	-7,5
143	127	Ingegneri Riuniti (o)	2.223	2.195	1,3	nd	336	287	17,1	12	4	ns	nd	nd	nd	604	593	1,9
144	113	Tecnic (o)	2.191	2.802	-21,8	nd	-1.335	129	ns	-422	8	ns	616	728	-15,4	237	659	-64,0
145	140	Pegaso Ingegneria (o) (39)	2.185	1.970	10,9	-	148	51	ns	-9	-1	ns	29	60	-51,7	48	57	-15,8
146	-	Drees & Sommer Italia Engineering	2.165	1.427	51,7	5,7	628	235	ns	389	111	ns	-451	nd	nd	959	570	68,2
147	117	Erre.Vi.A. (o)	2.141	2.641	-18,9	nd	98	124	-21,0	7	16	-56,3	171	-106	ns	167	161	3,7
148	-	Idest (o)	2.090	1.630	28,2	nd	121	-1.050	ns	15	-1.126	ns	1.100	1.158	-5,0	180	-228	ns
149		R&P Engineering (o)	2.061	1.795	14,8	-	484	431	12,3	274	238	15,1	163	182	-10,4	424	388	9,3
150	149	Studio Sgro	2.052	1.766	16,2	0,8	343	257	33,5	37	-9	ns	407	450	-9,6	1.347	1.310	2,8
Totale			2.001.377	1.906.781	5,0	28,8	190.573	173.487	9,8	76.839	52.955	45,1	-52.025	23.347	ns	760.822	697.074	9,1

Source: Guamari based on 2016 balance sheets (thousand euros)

nd = not defined

ns = not significant

(a) Associated with the Lega delle Cooperative; (c) consolidated data; (l) in liquidation; (o) associated with Oice; (g) annual report closed on 30th June 2015; (s) annual report closed on 30th September 2015; (I) Ferrovie dello Stato Group; (2) in February 2015 Simest acquired 27.4% of Proger. The majority (67.9%) is controlled by Proger Ingegneria (59.6% Proger Managers & Partners, 30.4% tifs Partecipazioni and 10% Recchi). In March 2015 Proger and Tei signed a commercial partnership, but Tei had an

insolvency proceeding in July 2015; (3) Proger, Manens Tifs, Bms Progetti and Via Ingegneria form the consortium Ennesys; (4) Atlantia/Autostrade per l'Italia group. In May 2015 Spea and Adr Engineering merged in Spea Engineering; (5) Eni group, born in 2017 by the merge of Tecnomare and Eni Engineering e&p; (6) former D'Appolonia, part of Rina group (that in May 2016 acquired Edif group), in January 2014 merged Projenia, C-Engineering and the *engineering division* of Rina Services. In 2015 acquired Sembenelli Consulting and Seatech; (7) acquired by Bevilacqua Engineering Group and Intesa Sanpaolo in December 2012, it merged A&S and Sis. In December 2016 acquired Studio Altieri; (8) former Mwh, acquired by the Canadian group Stantec in March 2016; (9) born from the merger of Manens Intertecnica and Tifs Ingegneria in December 2009; (10) consolidates DbA Progetti, DbA Lab and Igm Engineering. In February 2015 acquired the Slovenian company Actual It and in February 2017 the Slovenian Itelis; (11) controlled by Comune di Milano, consolidates Metro Engineering and Napoli Metro Engineering; (12) renamed after the merge of the French controller Coteba with Sogreah in March 2010. In February 2015 acquired Intertecno. Artelia Engineering has been merged in January 2016; (13) consolidates Girpa, acquired Idroesse Infrastrutture in January 2013, sold it to Ingegneri Associati Infrastrutture in July 2013 and rented its "project financing" branch in November 2013. In 2014 3ti Progetti acquired the "Italian road business" division from Urs Uk; (14) Fininc group, controls Igo and participates in consortium Sis; (15) Astm/Gavio group; (16) former Favero & Milan, consolidates the German company F&M Retail; (17) consolidates the German company Spiekermann (acquired in 2007); (18) the Dutch group Arcadis acquired the British Ec Harris in 2011; (19) in October 2015 the American group Aecom acquired Urs; (20) Toto Holding group; (21) controlled by Consorzio Venezia Nuova; (22) acquired by Italconsult in December 2016; (23) Immobiliare San Marco group; (24) Tili Group, controls without but does not consolidate abroad Profert, Renardet and Renardet Oman (adding them the 2016 revenues reach 35 milion); (25) former Elettra Energia, sold Iss International in November 2012; (26) controlled by Bona Dea; (27) Anas group, born in June 2012; (28) controlled by the Lebanese Dar Group; (29) controlled by Save Group; (30) Contec Group controls Contec Aqs, Contec Ingegneria, Contec Industry, Econ Energy, I-Con, Open Building and Pronext have 2016 global revenues of 8.7 million; (31) Engie group; (32) controls Bmz Impianti (879 thousand euros); (33) Tili Group; (34) negotiating the acquisition by the Saudi Fawaz Alhokair Group; (35) Ativa group - Autostrada Torino Ivrea Valle d'Aosta; (36) controlled by Arcotecnica group; (37) with the architecture firm Ai Progetti and the engineering firms Area Engineering and T&T forms the network Join Venice; (38) born in 2015 from the merger of Tecnicoop and Veneto Progetti; (39) Pegaso Group.

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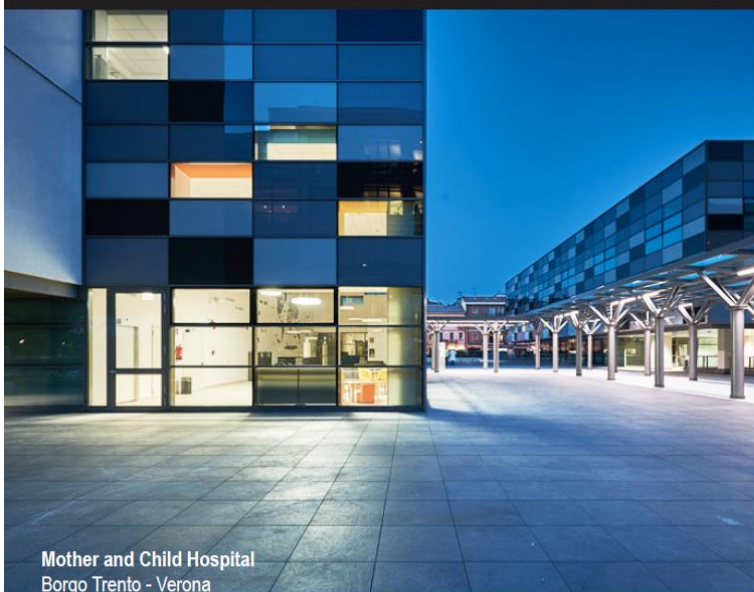
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PROJECT & CONSTRUCTION MANAGEMENT

6.3.THE TOP 150 ARCHITECTURE (AND DESIGN) FIRMS

Pos. 2016	Pos. 2015	Firm	Revenues 2016	Revenues 2015	Var % '16/15	% Abroad 2016	Ebitda 2016	Ebitda 2015	Var % '16/15	Net Profit 2016	Net Profit 2015	Var % '16/15	Net Debt 2016	Net Debt 2015	Var % '16/15	Equity 2016	Equity 2015	Var % '16/15
1	2	One Works (o) (1)	20.826	12.267	69,8	79,7	2.308	1.971	17,1	1.285	1.074	19,6	2.038	1.680	21,3	3.112	2.356	32,1
2	1	Renzo Piano Building Workshop (2)	12.459	12.766	-2,4	79,6	2.967	2.243	32,3	2.039	1.484	37,4	-3.118	-2.618	-19,1	7.263	6.524	11,3
3	3	Lombardini22 (3)	11.425	9.011	26,8	9,7	1.446	1.155	25,2	889	665	33,7	-1.288	-1.069	-20,5	3.893	3.004	29,6
4	21	Giugiaro Architettura	8.918	3.188	ns	2,5	3.744	-473	ns	-285	-427	33,3	77	-102	ns	765	308	148,4
5	10	Cremonesi Workshop (o)	8.506	6.324	34,5	70,0	2.211	1.070	106,6	413	330	25,2	-8.256	-5.058	-63,2	6.403	5.990	6,9
6	5	Pininfarina Extra (c)	7.849	8.526	-7,9	75,0	1.963	2.506	-21,7	905	1.462	-38,1	-2.800	-2.887	3,0	6.445	6.473	-0,4
7	8	Gpa	7.632	6.946	9,9	10,1	1.914	1.258	52,1	1.062	629	68,8	nd	nd	nd	1.091	657	66,1
8	9	Hydea (c) (o) (4)	7.530	7.128	5,6	67,9	895	900	-0,6	414	534	-22,5	-2.357	-2.878	18,1	2.576	3.325	-22,5
9	6	Citterio - Viel & Partners (5)	7.198	8.021	-10,3	84,0	501	344	45,6	293	262	11,8	-200	-714	72,0	1.665	1.373	21,3
10	4	Citterio - Viel & Partners Interiors (5)	6.873	8.576	-19,9	74,0	372	632	-41,1	205	292	-29,8	40	-270	ns	1.160	1.205	-3,7
11	17	Studio Urquiola	5.852	4.165	40,5	82,7	1.524	708	115,3	876	337	ns	-1.374	-234	ns	1.886	1.191	58,4
12	7	David Chipperfield Architects	5.578	7.090	-21,3	75,1	1.369	3.333	-58,9	809	2.182	-62,9	-886	-1.615	45,1	2.852	3.123	-8,7
13	15	General Planning (o)	5.219	4.463	16,9	-	88	173	-49,1	44	50	-12,0	nd	-280	nd	600	556	7,9
14	13	Progetto Cmr (6)	5.083	4.721	7,7	15,8	241	246	-2,0	70	62	12,9	nd	nd	nd	1.148	1.078	6,5
15	12	Matteo Thun & Partners (7)	4.570	4.646	-1,6	92,3	1.229	1.277	-3,8	732	758	-3,4	nd	nd	nd	1.442	1.110	29,9
16	32	Archea Associati (8)	4.434	2.460	80,2	-	284	160	77,5	70	15	ns	nd	nd	nd	288	218	32,1
17	18	Starching (9)	4.346	3.912	11,1	-	416	352	18,2	196	140	40,0	nd	nd	nd	988	812	21,7
18	16	Design Group Italia ID	4.112	4.283	-4,0	80,0	231	248	-6,9	98	76	28,9	327	372	-12,1	415	316	31,3
19	30	Mario Cucinella Architects	3.927	2.554	53,8	3,8	97	190	-48,9	-20	68	ns	nd	619	nd	220	239	-7,9
20	23	Lissoni Architettura (10)	3.754	3.110	20,7	79,9	793	378	109,8	309	230	34,3	-334	-674	50,4	910	670	35,8
21	25	Open Project (o)	3.187	3.000	6,2	9,5	241	104	131,7	157	63	149,2	-156	181	ns	640	483	32,5
22	19	Architetto Michele De Lucchi	3.155	3.538	-10,8	-	-29	-74	-60,8	-58	-62	6,5	-593	-301	-97,0	2.331	2.389	-2,4
23	27	5+1 AA (o) (11)	2.998	2.757	8,7	10,9	154	64	140,6	21	18	16,7	-626	-670	6,6	85	64	32,8
24	41	Zuccon International Project	2.926	1.831	59,8	-	1.013	359	ns	639	412	55,1	-2.470	-6.791	63,6	3.741	8.073	-53,7
25	22	Tekne (o)	2.794	3.353	-16,7	-	35	-231	ns	-42	-454	90,7	238	-331	ns	147	190	-22,6
26	-	Archilinea	2.655	2.100	26,4	nd	200	208	-3,8	8	3	ns	1.742	nd	nd	154	146	5,5

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27	26	Hangar Design Group (12)	2.533	2.773	-8,7	-	33	201	-83,6	-383	6	ns	nd	nd	nd	-251	132	ns
28	29	Lissoni Associati (10)	2.530	2.560	-1,2	21,6	765	543	40,9	391	310	26,1	-1.322	-614	-115,3	2.782	2.542	9,4
29	39	Piuarich (13)	2.472	1.951	26,7	15,0	116	20	ns	61	-1	ns	-322	-44	ns	155	154	0,6
30	65	Massimiliano e Doriana Fuksas Design (o) (14)	2.458	1.463	68,0	45,3	238	321	-25,9	8	-25	ns	-516	nd	nd	21	9	133,3
31	37	Chapman Taylor Architetti (g) (o)	2.390	1.998	19,6	-	244	214	14,0	103	100	3,0	-677	-972	30,3	397	294	35,0
32	28	Aegis Cantarelli & Partners	2.344	2.589	-9,5	-	115	112	2,7	10	28	-64,3	nd	-153	nd	774	386	100,5
33	33	Polistudio Aes (15)	2.342	2.410	-2,8	-	143	212	-32,5	11	10	10,0	1.546	1.076	43,7	931	922	1,0
34	14	Fuksas Architecture (o) (14)	2.232	4.641	-51,9	61,4	44	1.429	-96,9	3	994	-99,7	-378	nd	nd	9	1.006	-99,1
35	-	Made to Measure (16)	2.225	1.963	13,3	nd	168	134	25,4	54	31	74,2	nd	nd	nd	167	113	47,8
36	34	Land Italia (17)	2.201	2.346	-6,2	-	65	73	-11,0	3	3	0,0	657	589	11,5	157	154	1,9
37	56	Genius Loci Architettura	2.148	1.552	38,4	nd	203	158	28,5	128	106	20,8	nd	-146	nd	577	449	28,5
38	40	Iosa Ghini Associati (18)	2.148	1.878	14,4	nd	564	437	29,1	315	299	5,4	nd	nd	nd	1.615	1.300	24,2
39	45	Destudio (o)	2.144	1.752	22,4	-	135	121	11,6	40	21	90,5	-98	206	ns	280	240	16,7
40	35	Archest (o)	2.092	2.236	-6,4	9,0	66	105	-37,1	19	11	72,7	-125	-86	-45,3	253	234	8,1
41	54	J+S (o) (19)	2.054	1.589	29,3	nd	193	149	29,5	58	22	ns	1.530	820	86,6	306	238	28,6
42	36	Fortebis (20)	2.030	2.096	-3,1	nd	267	287	-7,0	160	216	-25,9	nd	-8	nd	352	338	4,1
43	60	Schiattarella Associati (o)	2.010	1.487	35,2	97,5	244	346	-29,5	185	217	-14,7	-659	-317	-107,9	395	311	27,0
44	42	Abdr Architetti Associati (o) (21)	1.933	1.824	6,0	21,1	164	312	-47,4	85	84	1,2	764	534	43,1	253	168	50,6
45	62	Alberto Izzo & Partners	1.926	1.486	29,6	nd	291	92	ns	156	13	ns	-431	-186	-131,7	280	328	-14,6
46	91	Studio Marco Piva	1.914	987	93,9	nd	177	-7	ns	75	-38	ns	-31	237	ns	194	119	63,0
47	63	Goring & Straja Studio	1.847	1.463	26,2	-	149	-12	ns	74	-36	ns	-410	-245	-67,3	668	594	12,5
48	53	Beretta Associati (o)	1.839	1.611	14,2	nd	86	62	38,7	21	13	61,5	362	209	73,2	823	802	2,6
49	50	Asa Albanese	1.788	1.661	7,6	-	158	186	-15,1	45	60	-25,0	390	631	-38,2	870	826	5,3
50	38	Francesco Paszkowski Design	1.761	1.969	-10,6	nd	537	423	27,0	330	253	30,4	-180	-147	-22,4	344	267	28,8
51	51	Carlo Ratti Associati	1.732	1.660	4,3	nd	150	105	42,9	43	21	104,8	-140	-324	56,8	598	555	7,7
52	66	Officina Italiana Design	1.728	1.359	27,2	nd	640	483	32,5	424	257	65,0	nd	nd	nd	1.572	1.148	36,9
53	99	Dordoni Architetti	1.718	833	106,2	0,4	287	52	ns	173	27	ns	-556	-202	ns	290	217	33,6
54	43	Studio Rolla	1.717	1.787	-3,9	nd	164	206	-20,4	21	5	ns	985	1.034	-4,7	395	444	-11,0
55	90	Dlc (l) (22)	1.707	2.085	-18,1	nd	225	958	-76,5	167	178	-6,2	-1.100	-16	ns	603	258	133,7

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56	44	Cairepro (a) (23)	1.695	1.779	-4,7	nd	100	34	ns	2	1	100,0	355	-134	ns	404	402	0,5
57	75	D2u - Design to Users	1.681	1.198	40,3	nd	35	23	52,2	20	6	ns	3	13	-76,9	161	141	14,2
58	-	Il Prisma Architettura (24)	1.653	-	-	nd	170	-	-	83	-	-	-336	-	-	93	-	-
59	49	Wip Architetti (o) (25)	1.626	1.667	-2,5	-	-26	45	ns	-60	0	ns	251	235	6,8	129	188	-31,4
60	61	Dante O. Benini & Partners	1.601	1.482	8,0	nd	37	67	-44,8	0	6	-100,0	nd	-20	nd	21	21	0,0
61	47	Pras Tecnica Edilizia (o)	1.579	1.681	-6,1	nd	75	50	50,0	0	2	-100,0	122	144	-15,3	752	752	0,0
62	64	Metis Lighting	1.573	1.462	7,6	nd	228	196	16,3	109	85	28,2	-203	-176	-15,3	653	544	20,0
63	48	Sistema Duemila Partners (26)	1.533	1.670	-8,2	nd	100	92	8,7	3	16	-81,3	nd	298	nd	317	314	1,0
64	-	Giò Forma Studio Associato	1.515	1.426	6,2	nd	135	158	-14,6	24	12	100,0	-422	nd	nd	280	256	9,4
65	70	Architetto Baciocchi & Associati	1.500	1.294	15,9	nd	231	45	ns	124	1	ns	nd	nd	nd	459	335	37,0
66	-	Presint Engineering (l)	1.470	244	ns	nd	-321	-613	47,6	-439	-698	37,1	419	420	-0,2	-1.069	-629	-70,0
67	68	Vudafieri Saverino Partners	1.423	1.339	6,3	58,8	89	45	97,8	37	4	ns	-111	-21	ns	325	289	12,5
68	-	Rhl Architettura	1.404	1.196	17,4	-	165	39	ns	105	19	ns	-339	-143	-137,1	130	125	4,0
69	57	Studio Muzi & Associati (o)	1.404	1.528	-8,1	-	289	489	-40,9	162	297	-45,5	-195	-432	54,9	539	657	-18,0
70	31	Global Planning Architecture (27)	1.391	2.554	-45,5	nd	71	68	4,4	27	21	28,6	218	-45	ns	172	145	18,6
71	-	Gala Engineering	1.391	1.252	11,1	nd	165	-156	ns	117	-206	ns	-892	-29	ns	343	226	51,8
72	72	Park Associati (28)	1.379	1.232	11,9	23,0	56	61	-8,2	15	14	7,1	nd	-7	nd	162	206	-21,4
73	77	Simone Micheli Architectural Hero	1.378	1.161	18,7	nd	513	438	17,1	316	271	16,6	-231	-163	-41,7	475	298	59,4
74	59	ProArch Bcd	1.350	1.509	-10,5	-	168	114	47,4	5	11	-54,5	786	729	7,8	225	220	2,3
75	58	Studio Amati (o) (29)	1.312	1.525	-14,0	nd	44	167	-73,7	3	76	-96,1	131	1.020	-87,2	1.583	1.641	-3,5
76	76	T.A. (30)	1.312	1.197	9,6	-	96	95	1,1	6	12	-50,0	245	519	-52,8	48	42	14,3
77	80	Stefano Boeri Architetti	1.311	1.083	21,1	84,2	111	32	ns	10	11	-9,1	196	90	117,8	66	56	17,9
78	55	Coima Image	1.286	1.556	-17,4	nd	32	394	-91,9	-9	263	ns	-18	-96	81,3	249	427	-41,7
79	71	Retail Design (31)	1.264	1.307	-3,3	-	136	139	-2,2	23	15	53,3	449	766	-41,4	290	266	9,0
80	-	Domus Ing & Arch	1.241	1.553	-20,1	nd	266	179	48,6	48	43	11,6	nd	nd	nd	245	197	24,4
81	46	Garretti Associati (s)	1.237	1.587	-22,1	-	40	140	-71,4	33	82	-59,8	-749	-632	-18,5	881	864	2,0
82	136	Sgs Architeti	1.216	580	109,7	-	20	8	150,0	19	6	ns	-228	-692	67,1	142	123	15,4
83	73	Mtlc (7)	1.207	1.233	-2,1	-	337	549	-38,6	229	303	-24,4	-31	-140	77,9	320	341	-6,2
84	81	Coprat (a)	1.167	1.094	6,7	-	33	86	-61,6	-30	7	ns	nd	nd	nd	193	223	-13,5
85	67	Gnosis Architettura (a) (32)	1.165	1.343	-13,3	-	120	184	-34,8	22	26	-15,4	175	60	ns	310	276	12,3

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86	112	Ai Progetti (a) (33)	1.164	765	52.2	nd	64	56	14,3	23	11	109,1	130	289	-55,0	85	62	37,1
87	-	D.Vision Architecture	1.160	358	ns	nd	62	11	ns	20	6	ns	-221	-71	ns	36	16	125,0
88	82	Progettisti Associati Tecnarc (o) (34)	1.126	1.086	3,7	nd	39	-157	ns	-19	-154	87,7	487	543	-10,3	280	299	-6,4
89	83	Archliving (o)	1.098	1.074	2,2	-	37	48	-22,9	11	20	-45,0	-270	-52	ns	45	34	32,4
90	74	Cotefa	1.096	1.245	-12,0	nd	11	-357	ns	-7	-374	98,1	nd	-318	nd	74	14	ns
91	78	Gruppo Spa (35)	1.076	1.137	-5,4	nd	166	58	ns	24	-43	ns	724	-215	ns	329	304	8,2
92	-	Lussignoli Associati	1.063	621	71,2	nd	62	53	17,0	26	4	ns	nd	nd	nd	78	51	52,9
93	69	Centro Cooperativo di Progettazione - Ccdp (a)	1.045	1.300	-19,6	-	63	80	-21,3	4	9	-55,6	328	663	-50,5	152	148	2,7
94	-	Tectoo	1.025	-	-	11,7	25	-	-	4	-	-	-100	-	-	14	-	-
95	97	Archos	989	842	17,5	nd	206	234	-12,0	127	135	-5,9%	nd	nd	nd	664	601	10,5
96	134	Fima Engineering (o)	954	568	68,0	19,0	83	72	15,3	27	-5	ns	400	479	-16,5	37	5	ns
97	102	D-recta	951	774	22,9	-	54	19	ns	1	-22	ns	165	288	-42,7	116	115	0,9
98	116	Gabbiani & Associati	938	731	28,3	nd	81	109	-25,7	5	12	-58,3	nd	222	nd	220	215	2,3
99	115	L + Partners (o)	935	742	26,0	nd	34	32	6,3	6	4	50,0	17	1	ns	26	21	23,8
100	-	Pelizzari	924	326	ns	nd	30	11	ns	17	6	ns	nd	nd	nd	33	16	106,3
101	113	Lazzarini Pickering Architetti	886	759	16,7	nd	91	56	62,5	77	37	108,1	nd	nd	nd	107	87	23,0
102	88	Polis (o)	859	942	-8,8	nd	117	195	-40,0	41	96	-57,3	nd	nd	nd	185	144	28,5
103	94	Gruppo C14	852	855	-0,4	nd	33	58	-43,1	3	18	-83,3	256	55	ns	218	215	1,4
104	133	Pa Architettura	843	596	41,4	nd	13	3	ns	-13	-21	38,1	-67	-54	-24,1	32	45	-28,9
105	123	Mdb Architettura	838	657	27,5	-	130	73	78,1	38	30	26,7	22	50	-56,0	54	59	-8,5
106	-	H&A Associati (36)	834	49	ns	22,5	83	4	ns	50	2	ns	-58	nd	nd	62	12	ns
107	125	Ad Architettura	829	649	27,7	nd	292	262	11,5	184	174	5,7	nd	nd	nd	934	750	24,5
108	-	Copaco (o)	826	1.011	-18,3	nd	-5	45	ns	7	37	-81,1	nd	nd	nd	1.678	1.683	-0,3
109	128	Paolo Badesco Interior Design	816	632	29,1	-	40	38	5,3	9	5	80,0	161	147	9,5	115	106	8,5
110	52	Cspe (37)	801	1.647	-51,4	-	-610	22	ns	-621	8	ns	-181	156	ns	-488	134	ns
111	100	Masterplanstudio (38)	798	815	-2,1	nd	87	70	24,3	62	45	37,8	nd	nd	nd	141	79	78,5
112	110	Duccio Grassi Architects	795	775	2,6	nd	359	247	45,3	240	163	47,2	nd	-753	nd	777	737	5,4
113	129	Studio Architetti Mar	794	625	27,0	nd	109	60	81,7	1	-3	ns	806	881	-8,5	11	11	0,0
114	-	Revalue	791	453	74,6	-	29	23	26,1	6	1	ns	72	5	ns	44	38	15,8
115	119	Sadler Associati (39)	789	722	9,3	-	106	66	60,6	-7	-15	53,3	-142	-14	ns	1.340	1.347	-0,5

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116	149	Spazio3 Architettura	784	499	57,1	nd	26	32	-18,8	nd	7	nd	nd	131	nd	nd	97	nd
117	107	Leonardo (o) (40)	763	794	-3,9	nd	91	92	-1,1	24	2	ns	474	730	-35,1	170	58	ns
118	87	Lenzi Consultant (o) (41)	757	977	-22,5	-	55	86	-36,0	1	2	-50,0	375	333	12,6	364	363	0,3
119	86	Gruppo Thema Progetti	753	1.003	-24,9	nd	137	174	-21,3	2	16	-87,5	257	189	36,0	107	105	1,9
120	118	Poolmilano	751	712	5,5	nd	24	60	-60,0	2	16	-87,5	nd	nd	nd	392	365	7,4
121	105	Studio Cerri & Associati	748	796	-6,0	nd	76	96	-20,8	30	59	-49,2	nd	nd	nd	177	147	20,4
122	127	Metrica	745	641	16,2	58,0	197	122	61,5	160	79	102,5	-100	19	ns	158	81	95,1
123	106	Metrogramma Milano (42)	734	795	-7,7	nd	28	13	115,4	10	2	ns	-31	-104	70,2	30	20	50,0
124	-	Alvisi Kirimoto Partners	732	462	58,4	nd	127	6	ns	69	-6	ns	nd	nd	nd	89	45	97,8
125	84	Cino Zucchi Architetti	728	1.048	-30,5	15,9	-393	-46	ns	-397	-79	ns	26	-47	ns	-72	326	ns
126	103	Canali Associati (o)	722	577	25,1	-	161	384	-58,1	48	206	-76,7	71	162	-56,2	1.137	1.089	4,4
127	95	Crea International (l) (24)	716	853	-16,1	nd	-109	32	ns	-132	8	ns	-69	-53	-30,2	57	189	-69,8
128	93	Studio Archemi (g)	710	856	-17,1	nd	3	52	-94,2	-2	94	ns	-998	-1.115	10,5	928	930	-0,2
129	96	Studio Moauro	710	846	-16,1	nd	560	695	-19,4	376	465	-19,1	-252	-289	12,8	1.151	804	43,2
130	141	Rossiprodi Associati	699	538	29,9	-	27	32	-15,6	9	15	-40,0	8	4	100,0	135	126	7,1
131	121	R&S Engineering	698	696	0,3	nd	nd	41	nd	nd	5	nd	nd	-128	ns	nd	423	nd
132	-	Design International	684	416	64,4	nd	23	-1	ns	3	-12	ns	-30	nd	nd	72	69	4,3
133	138	Habits	684	569	20,2	nd	145	61	137,7	104	35	ns	nd	nd	nd	203	148	37,2
134	89	Emme Elle Architettura (43)	663	911	-27,2	nd	170	215	-20,9	98	126	-22,2	nd	nd	nd	392	294	33,3
135	131	AG&P Greenscape (44)	655	603	8,6	nd	8	-103	ns	1	-108	ns	88	109	-19,3	14	-95	ns
136	139	Hydro Tec	639	723	-11,6	nd	53	71	-25,4	0	33	-100,0	-97	-34	ns	33	32	3,1
137	122	Saga Architettura Design	620	696	-10,9	nd	90	104	-13,5	54	64	-15,6	nd	nd	nd	309	256	20,7
138	-	Cbpa	616	444	38,7	nd	43	26	65,4	13	2	ns	34	63	-46,0	25	12	108,3
139	-	Ardea	613	473	29,6	nd	81	71	14,1	11	9	22,2	296	377	-21,5	78	67	16,4
140	111	Novembre	602	768	-21,6	nd	76	93	-18,3	29	16	81,3	274	381	-28,1	67	38	76,3
141	142	Ra Consulting (o)	585	540	8,3	nd	40	42	-4,8	2	-6	ns	nd	nd	nd	168	165	1,8
142	117	No Gap Progetti (o)	574	726	-20,9	nd	49	32	53,1	11	13	-15,4	216	131	64,9	166	155	7,1
143	92	Studio Valle Progettazioni (o) (45)	555	866	-35,9	nd	nd	146	ns	nd	8	nd	nd	257	nd	nd	82	nd
144	114	Nemesi & Partners	549	750	-26,8	nd	91	114	-20,2	-36	81	ns	nd	nd	nd	205	279	-26,5
145	104	Isolarchitetti	546	800	-31,8	nd	35	104	-66,3	15	60	-75,0	nd	nd	nd	474	460	3,0

Pos. 2016	Pos. 2015	Firm	Revenues 2016	Revenues 2015	Var % '16/15	% Abroad 2016	Ebitda 2016	Ebitda 2015	Var % '16/15	Net Profit 2016	Net Profit 2015	Var % '16/15	Net Debt 2016	Net Debt 2015	Var % '16/15	Equity 2016	Equity 2015	Var % '16/15
146	148	Studio Transit (46)	534	511	4,5	-	38	37	2,7	20	16	25,0	-67	-81	17,3	241	221	9,0
147	140	Insula Architettura e Ingegneria	531	557	-4,7	17,0	60	86	-30,2	3	4	-25,0	22	22	0,0	55	52	5,8
148	145	Frigerio Design Group	527	522	1,0	nd	93	108	-13,9	49	67	-26,9	-185	-60	ns	265	241	10,0
149	-	Valle 3.0 (45)	507	0	ns	nd	9	-1	ns	0	-1	ns	248	nd	nd	11	10	10,0
150	-	Bertone Design	507	420	20,7	nd	-5	29	ns	-3	6	ns	54	35	54,3	48	51	-5,9
TOTALE			316.870	282.621	12,1	27,5	40.353	34.587	16,7	15.833	15.584	1,6	-17.969	-16.866	-6,5	91.976	90.420	1,7

Source: Cuamari based on 2016 balance sheets (thousand euros)

nd = not defined

ns = not significant

(a) Associated with the Lega delle Cooperative; (l) in liquidation; (o) associated with Oice; (g) balance closed on 30th June 2016; (s) annual report closed on 30th September 2016; (1) founders: Leonardo Cavalli and Giulio De Carli; (2) the French company Rpbw Paris has 2016 revenues of 45.9 million euros; (3) in July 2015 merged the already 100% controlled company Degw Italia; (4) its controlled company Hydea Beijing revenues are 1.6 million; (5) in April 2012 splitted into two firms, the New York branch has 2016 revenues of 1.7 million euros; (6) Massimo Roj Architects, its China branch has 2016 revenues of 1.8 million euros; (7) Matteo Thun & Partners and Mtlc have 2016 combined revenues of 5.8 million euros; (8) founders: Laura Andreini, Marco Casamonti and Giovanni Polazzi; (9) founders: Maria Paola Pontarollo and Marcello Cerea, with Ariatta, J&A and Redesco forms the consortium Maestrale; (10) Lissoni Architettura, Lissoni Associati and Graph.X have 2016 combined revenues of 7.3 million euros; (11) founders: Alfonso Femia and Gianluca Peluffo, since september 2017 split in Atelier(s) Alfonso Femia AF517 and Gianluca Peluffo & Partners; (12) founders: Alberto Bovo and Sandro Manente; (13) founders: Francesco Fresa, German Fuenmayor, Gino Garbellini and Monica Tricario; (14) Fuksas Architecture and Massimiliano e Doriana Fuksas Design have 2016 combined revenues of 4.7 million euros; (15) president: Stefano Matteoni; (16) works with the brand Dimore Studio; (17) former Land Milano, founders: Andreas Kipar and Giovanni Sala; (18) Iosa Chini Associati and Igemme have 2016 combined revenues of 2.5 million euros; (19) born in December 2015 by the merge of Jps Engineering and Sering; (20) president: Edith Forte; (21) founders: Maria L. Arlotti, Michele Beccu, Paolo Desideri and Filippo Raimondi; (22) president: Alberto Dal Lago, Ceo: Franco Cislighi; (23) Cooperativa Architetti e Ingegneri Progettazione; (24) Il Prisma group; (25) founders: Federico Barbero, Nicola Di Troia and Marco Splendore; (26) founder: Massimo Giuliani; (27) former Global Planning Associates; (28) founders: Filippo Pagliani and Michele Rossi; (29) partners: Francesco Abbati, Giuseppe Losurdo and Romina Sambucci; (30) founder: Alberto Torsello; (31) founder: Paolo Lucchetta; (32) Pica Ciamarra Associati, Gnosis Architettura, Interprogetti, Progetto Verde, Studio Carrara International, Itaca, Incoset, Bc and Alphatec form the consortium Thp; (33) with engineering firms Seingim, Area Engineering and T&T forms the network Join Venice; (34) president: Cesare Taddia; (35) founder: Gabriele Napolitano; (36) born in July 2015 by the merge of Hyd Architettura and ArkaAssociati; (37) directed by: Giulio Felli, Paolo Felli and Corrado Lupatelli; (38) partners: Federico Acuto, Stefano Gaudimundo, Simone La Sala, Matteo Sormani; (39) former Novus; (40) the group controls Rexa and Leonardo Sport; (41) Ceo: Braccio Oddi Baglioni; (42) founders: Andrea Boschetti and Alberto Francini; (43) founder: Marco Claudi; (44) former Architettura dei Giardini e del Paesaggio; (45) Valle 3.0 was born in October 2016 as a spin off of Studio Valle Progettazioni; (46) partners: Giovanni Ascarelli, Roberto Becchetti, Manuela de Micheli, Alessandro Pistolesi and Sergio Vinci.

N.B. Gregotti Associati International, Mario Bellini Architects and Ingenium Real Estate (founded by Marco Tamino) went into liquidation respectively on June 2012, on December 2013 and on December 2017. The last one sold its "Property, agency e facility management" division to IDEa Fimit in 2012.



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6.4.THE TOP 5 PROJECT VALIDATION AND TECHNICAL CONTROL FIRMS

Position	Firm	Validation and technical control revenues 2016	Validation and technical control revenues 2015	Var % '16/'15	Total revenues 2016	Total revenues 2015	Var % '16/'15	Ebitda 2016	Ebitda 2015	Var % '16/'15	Net profit 2016	Net profit 2015	Var % '16/'15	DFNL 2016	DFNL 2015	Var % '16/'15	Equity 2016	Equity 2015	Var % '16/'15
1	Italsocotec	2.662	2.592	2.7	4.022	4.014	0.2	317	348	-8.9	78	62	25.8	201	-161	ns	1.320	1.242	6.3
2	Rina Check (1)	2.523	2.799	-9.9	2.549	3.043	-16.2	701	748	-6.3	430	390	10.3	-187	-113	-65.5	767	1.028	-25.4
3	Conteco Check (2)	2.011	2.179	-7.7	3.001	2.627	14.2	243	178	36.5	77	25	ns	1042	806	29.3	681	604	12.7
4	Bureau Veritas	1.286	1.223	5.2	92.394	88.755	4.1	13.979	79.784	-82.5	6.825	7.037	-3.0	-13.660	-10.081	-35.5	17.491	17.605	-0.6
5	Asacert	1.240	1.325	-6.4	2.614	2.432	7.5	129	139	-7.2	18	22	-18.2	58	-126	ns	271	254	6.7

Source: Guamari based on 2016 balance sheets (thousand euros)

nd = not defined

ns = not significant

(1) Rina group; (2) former Conteco.



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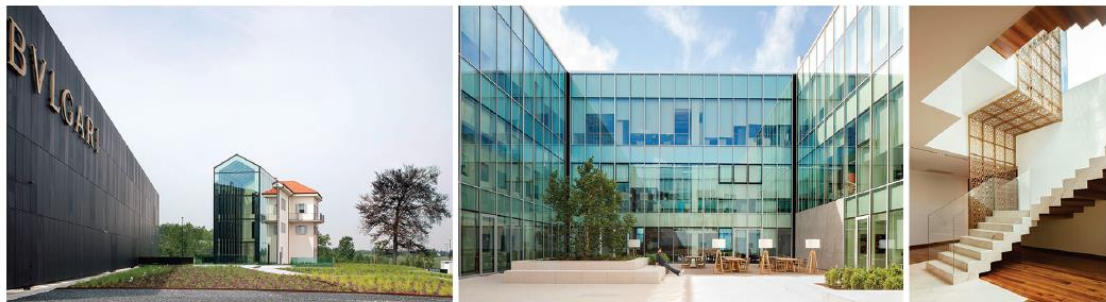
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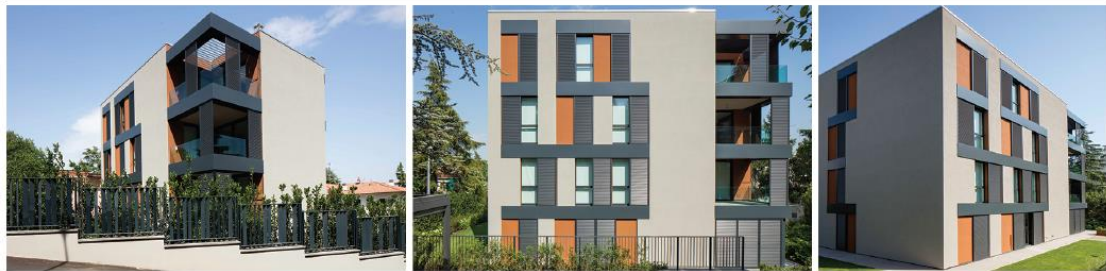
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