REPORT 2022

on the Italian Architecture, Engineering and Construction Industry

edited by Aldo Norsa

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Published by the research firm Guamari www.guamari.it Graphic concept and layout by Elena Manzone Printed and bound in November 2022 by Galli Thierry Stampa in Milan, Italy Distributed in 3,500 printed copies and available in a digital constantly updated version

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INTRODUCTION

The 2022 edition of the *Report on the Italian Architecture, Engineering and Construction Industry* (with a record of 101 sponsors) provides (for the twelfth year) a comprehensive picture of the supply of services and works in the built environment: in short *AEC*. Extending the analysis from the performance of the 200 top players in each of the three categories to the whole design and contracting industry. Which is at the same time basic (primary) for the development of all aspects of the economy and yet more and more strategic to obtain the goals in terms of environment, social and governance (*ESG*) which are the basis of every sensitive and sustainable policy. The Report does not extend to the production chain of construction (which has a very encompassing nature derived from a large spectrum of industries), therefore does not focus on producing (and trading) intermediate goods but instead on delivering professional services (and performing works) essential to facilitate and support all social activities relevant to the quality of life in all aspects (dwelling and working as well as communication, education, health, leisure, retail, transportation, ...).

This publication reports for each of the three categories (architecture, engineering, construction) which firms declare which numbers, follow which strategies, have better prospects for growth, are more apt to develop abroad, ...

To better place the Italian AEC industry in the international context the analysis starts with an overview of the competitive scene as reported by the most complete source, the American magazine ENR (Engineering News-Record) in its two separate surveys: the world's top design firms and top contractors. And then develops European comparisons to end up with an in depth description of the national scene: all completed with figures, tendencies and trends.

The results of our exclusive survey on the three categories of the AEC industry can be summarized in a few following data. If 2020 showed only architecture firms slightly increased their turnover, in 2021 all the three sectors see their revenues growing respectively by: 23.1 percent the architecture firms, 15.4 percent the engineering firms and 18.7 percent the construction contractors. Export is once again more important for contractors (32.1 percent) than for design firms (18.9 percent in architecture and 20 percent in engineering).

A/E firms close the year with a huge increase of net profit (respectively by 54.7 and 70.5 percent) while contractors decrease it by 98.4 percent.

But ... only architecture firms confirm almost the same net cash situation of 2020 (minus 0.7 percent) while engineering firms show rising debts by 43.8 percent, on the contrary construction contractors reduce theirs by 45.7 percent.

The structure of the *Report* is the following:

Chapter 1 – "Italy and Its Place in the World Economy" - Macroeconomic data are presented and commented as well as forecasts and scenarios. The role of the country in the world is discussed focusing on the features of its international trade (with regard to A/E services and construction works).

Chapter 2 - "World A/E Firms and the Italians" – The A/E services provided by the most competitive international world firms are examined. Of special interest: how foreign and national competitors position themselves in the rankings referring to 2021. Which "internal" and/or "external" growth is pursued.

Chapter 3 – "World Contractors and the Italians"- Similar to the previous chapter: how foreign and national players position themselves in the latest rankings referring to 2021. How



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www.teamsystem.com/construction Numero Verde 800 906050 they grow either directly winning contracts or forming alliances or even acquiring firms. Not forgetting the role that national markets play in support of exports.

Chapter 4 – "The Italian *A/E* Firms – Highlights" – The 2021 annual reports of the top 200 architecture (and design) firms and the top 200 engineering firms are analyzed. The picture is completed by other rankings: of diversified groups, of purely design firms, of top players at home and abroad, ...

Chapter 5 – "The Italian Construction Contractors – Highlights" – Discussion of the main economic, financial and other data of the top 200 (general and specialty) construction firms focusing on the private versus the public, the domestic versus the international market, ...

Chapter 6 – "Made in Italy and World Markets" – Business and commercial trends and strategies are outlined. From two points of view: exporting services and/or works (against actually establishing branches in foreign countries). Maps of the delocalization of "made in Italy" are included and commented.

Chapters 7 and 8 – The Top of the Industry – The Latest Ranking – Addresses of "who is who". The lists of the top 200 architecture (and design) firms, 200 engineering firms, 200 construction contracts (and 10 project validation firms) are published with all relevant notes and are completed by their official addresses in Italy.

Published in 3,500 printed copies and available in a constantly updated digital version (www.guamari.it) the 2022 edition of the *Report* is widely mentioned in the Italian press and in the newsletters published by the 610 concerned firms. It is produced by the research firm Guamari and edited by Aldo Norsa (former professor at Università Iuav di Venezia) in collaboration with Stefano Vecchiarino (chief analyst of Guamari).



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CHAPTER 1 ITALY AND ITS PLACE IN THE WORLD ECONOMY

1.1 The Domestic and International Picture

Italy, a country with a very special historical and cultural tradition (as it is number one in the world in terms of sites declared by Unesco of cultural heritage importance: 58) is at the crossroad of major international relationships (in the past centered in the Mediterranean sea) since the time of the Roman Empire (which nineteen centuries ago measured 6 million square kilometers spanning three continents: Europe, Africa and Asia). Not to mention the brief period, which ended in 1940 (at the outbreak of the second world war) when Italy had been able to position itself among the main colonial countries with a so-called (weak) empire which spread over 4 million square kilometers (third after the U.K. and France but practically limited to Africa). Nowadays it is reduced to a Peninsula at the central-southern edge of the European continent measuring just 302,068 square kilometers. This country, member of international organizations of the importance of UN, OECD, G7 and G20, the European Union and the Euro (monetary) Area, has a good position in the world in spite of its limited size: if it ranks only 72nd in surface (302,068 km²), it is 25th in terms of population (60.3 million) with a rather high density (74th in the world with 201.3 inhabitants per km2). From the economic point of view Italy is 8th in the world in terms of GDP (2,100 billion dollars), 6.7 percent more than in 2020, 31st in GDP per capita (34,777 U.S. dollars), 8th in exports (610 billion U.S. dollars), and 30th in HDI (Human Development Index) (0.895).

		GDP 2021 - nomi- nal (billion \$)	GDP 2021 per ca- pita - nominal (\$)	Exports 2021 (billion \$)	Human Development Index
1	U.S.A.	23.315	69.231	1.754	0,926
2	China	17.458	12.361	3.364	0,761
3	Japan	4.937	39.285	756	0,919
4	Germany	4.226	50.795	1.632	0,947
5	U.K.	3.187	47.547	468	0,932
6	India	3.042	2.183	395	0,645
7	France	2.935	44.853	585	0,901
8	Italy	2.100	35.601	610	0,895
9	Canada	1.991	52.079	503	0,929
10	South Korea	1.798	34.744	644	0,916
11	Russia	1.776	12.198	494	0,824
12	Australia	1.633	63.455	344	0,944
13	Brazil	1.609	7.519	281	0,765
14	Iran	1.426	16.784	14	0,783
15	Spain	1.426	30.090	384	0,904
16	Mexico	1.295	9.940	494	0,779
17	Indonesia	1.186	4.357	228	0,718
18	Netherlands	1.019	58.292	836	0,944
19	Saudi Arabia	834	23.586	425	0,854
20	Switzerland	813	93.006	380	0,955

Tab. 1 - The Top 20 Countries for GDP (nominal)

Source: Guamari based on IMF, World Bank and UNDP (United Nations Development Programme) data







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1.2 The World Economic Outlook

The most recent representation (with forecasts) of the world economy has been published by IMF (The International Monetary Fund) in October. As far as Italy is concerned the previsions are quite worrisome: out of 13 major countries (none in Africa) the Peninsula would have the third worst performance. After a 3.2 percent increase in its GDP expected for 2022, 2023 could bring a (mild) recession: minus 0.2 percent, while the German economy would decrease by 0.3 percent (after plus 1.5 percent in 2022): this is explained by the fact that the two countries are the most dependent on energy imports from Russia. Which, in its own right, would be obviously the worst hit (GDP: minus 2.3 percent in 2023 after minus 3.4 percent in 2022) especially because of the effect of sanctions from abroad. It is worth emphasizing that the negative forecasts for Germany are of special concern for Italy given the fact that the former is the most important commercial partner of the latter. In Europe only Sweden is expected to perform negatively (minus 0.1 percent in 2023 following plus 2.6 percent in 2022).

Quoting some remarks from the last IMF World Economic Outlook can help to better understand this difficult scenario:

"The world is in a volatile period: economic, geopolitical, and ecological changes all impact the global outlook. Inflation has soared to multidecade highs, prompting rapid monetary policy tightening and squeezing household budgets just as covid-19 pandemic related fiscal support is waning. Many low-income countries are facing deep fiscal difficulties. At the same time Russia's war in Ukraine and tensions elsewhere have raised the possibility of geopolitical disruption. Although the pandemic's impact has moderated, its lingering waves continue to disrupt economic activity, especially in China. And intense heat waves and droughts across Europe and Central and South Asia provide a taste of a future blighted by global climate change. Amid these volatile conditions, recent data confirm that the global economy is in a broad-based slowdown as downside risks materialize, although with some conflicting signals.

The second quarter of 2022 saw global real GDP modestly contract (-0.1 percent at a quarterly annualized rate) with negative growth in China, Russia, and the U.S.A., as well as sharp slowdowns in eastern European countries most directly affected by the war in Ukraine. At the same time, some major economies did not contract: euro area performance surprised on the upside in the second quarter, led by growth in tourism-dependent southern European countries. But forward-looking indicators, including manufacturing orders and sentiment gauges, suggest a slowdown: in some cases, however, signaling conflict with some indicators showing output weakness amid labor market strength.

An important factor underpinning the "stagflation" is the rapid removal of monetary accommodation as many central banks seek to moderate persistently high inflation. Higher interest rates and the associated rise in borrowing costs, including mortgage rates, are having their desired effect in taking the heat out of domestic demand, with the housing market showing the earliest and most evident signs of slowdown (for instance in the U.S.A.) as monetary policy tightening has been generally accompanied by a scaling back of fiscal support, which had previously propped up households' disposable incomes. Broadly speaking, nominal policy rates are above pre-pandemic levels in both advanced and developing economies but with elevated inflation real interest rates have generally not reverted to previous levels. Tightening financial conditions in most regions, with the notable exception of China, reflect in a strong real appreciation of the U.S. dollar This has also driven up yield bond spreads.



Fig. 4 – The Growth of Principal World Economies Source: IMF World Economic Outlook

The Forecast: Output Lower Still but Inflation Peaking

A slowdown in global growth is forecasted, from 6 percent in 2021 to 3.2 percent in 2022 (and 2.7 percent in 2023). This prognosis is low compared to the past: global economic growth averaged 3.6 percent during the period 2000-21 (as well as 1970-2021). The world's three largest economies - China, the E.U. and the U.S.A. - will slow significantly in 2022 and 2023. Overall, the outlook is one of increasing growth divergence between advanced and emerging market and developing economies. For advanced economies growth is projected to slow from 5.2 percent in 2021 to 2.4 percent in 2022 and 1.1 percent in 2023 with downgrades concentrated in the U.S.A. and Europe. Growth in the U.S.A. is projected to diminish from 5.7 percent in 2021 to 1.6 percent in 2022 and 1 percent in 2023. Declining real disposable income continues to eat into consumer demand, and higher interest rates are taking an important toll on spending, especially on residential investment. In the E.U. the growth slowdown is less pronounced in 2022 but is expected to deepen in 2023: respectively down to 3.1 percent and 0.5 percent. This average hides significant heterogeneity among individual countries. In Italy and Spain a recovery in tourism-related services and industrial production in 2022 contributes to projected growth of 3.2 percent and 4.3 percent respectively (which are under threat in 2023). After a projected growth in 2022 of 2.5 percent in France and 1.5 percent in Germany, the slowdown in 2023 will be especially sharp for Germany. All of this reflects spillover effects from the war in Ukraine, with especially sharp downward revisions for economies most exposed to Russian gas supply cuts, and tighter financial conditions, with the European Central Bank having ended net asset purchases and rapidly raising policy rates. At the same time, a number of factors have contributed to a less rapid near-term slowdown than in the U.S.A., including policy interest rates at still lower levels and Next Generation E.U. funds supporting the activity. In the U. K. too, a significant slowdown is projected: growth is forecast at 3.6 percent in 2022 but 0.3 percent in 2023 as high inflation reduces purchasing power and tighter monetary policy takes a toll on consumer spending and business investment. Growth in Japan is expected to be more stable at 1.7 percent in 2022 (but 1.6 percent 2023). This reflects mainly external factors, with a negative shift in the terms of trade (ratio of export to import prices) from higher energy import prices as well as lower consumption as inflation outpaces wage growth.

The adverse shocks of 2022 are expected to have long-lasting effects. Although windfall gains may protect some countries (for example, Gulf Cooperation Council members), by 2026 the output loss compared with the early 2022 forecasts is projected at 3 percent: more than double the initial impact. About half of the expected decline is due to lower growth in China, E.U., Russia and U.S.A, with this composition holding fairly steady over the forecast horizon. Long-lasting and widening output losses across economies reflect several factors, including the combination of the supply-side nature of the initial shocks and macroeconomic policy tightening. For economies directly affected by the war in Ukraine the damage to activity is likely to last longer. The fading of covid-19 fiscal support packages and anti-inflation monetary policy tightening contrast with the expansive policy support put in place in many economies. The persistent effects are consistent with economic slowdowns resulting in less investment in capital, training, and research and development, implying scarring to economic potential. Emerging market and developing economies bore the projected output and employment losses disproportionately. While advanced economies profited from their ability to implement exceptionally large policy support packages, in contrast in emerging market and developing economies, with a younger population, greater pandemic disruption to schooling, less policy space, and greater preexisting investment needs, output and employment were expected to remain somewhere below previous trends for years to come (with average losses of 4.3 percent for output and 2.6 percent for employment in 2024).

Global Trade Slowdown with Wider Balances

Global trade growth is slowing sharply: from 10.1 percent in 2021 to a projected 4.3 percent in 2022 (and 2.5 percent in 2023) reflecting the decline in global output. Supply chain constraints have been a further drag largely because of a decrease in Chinese supply delivery times. Nevertheless, supply chains are complex, and pandemic-era disruptions have been a product of multiple factors; if other factors improve even as challenges in China remain, supply-side pressures may continue to ease. The U.S. dollar's appreciation is likely to further slow world trade growth, considering its dominant role in trade invoicing and the implied pass-through in consumer and producer prices outside the U.S.A. Whereas global trade growth is declining, global trade balances are widening. After shrinking in the past, global current account balances increased during the covid-19 crisis and are rising further in 2022 due to the increase in commodity prices associated with the war in Ukraine. A widening in global current account balances is not necessarily a negative development, though excessive global imbalances can fuel trade tensions and protectionist measures or increase the risk of disruptive currency and capital flow movements. Creditor and debtor stock positions are expected to remain elevated in 2022, although they have, on average, moderated slightly from their 2020 peaks. The 2022 decline in asset prices in the U.S.A., the economy with the world's largest net liability position, could cause valuation losses for foreign holders of U.S. assets. At the same time, however, the U.S. dollar appreciation could lead to valuation gains in emerging market and developing economies, which tend to have long positions in foreign currency, while increasing the burden of dollar-denominated public sector debts.





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Divergences in economic policies may continue to contribute to U.S. dollar strength creating cross-border tensions. The course of monetary policy tightening in the U.S.A. and the most fragmented euro area might continue to diverge if inflation persists. Another dimension of macroeconomic policy divergence is that among China, Japan, the U.K. and the U.S.A. This and any flight-to-safety effects should geopolitical tensions rise, may cause further U.S. dollar strength. The associated currency movements may add to cross-border tensions regarding competitiveness, stoke inflation given the predominance of dollar pricing in international trade and lead some countries to tighten policies further to prevent excessive currency depreciation, with negative effects on growth.

	2021	2022	2023
World	5,8	3,0	2,2
G20 (1)	6,2	2,8	2,2
Australia	4,9	4,1	2,0
Canada	4,5	3,4	1,5
Euro area	5,2	3,1	O,3
Germany	2,6	1,2	-0,7
France	6,8	2,6	0,6
Italy	6,6	3,4	O,4
Spain (2)	5,5	4,4	1,5
Japan	1,7	1,6	1,4
South Korea	4,1	2,8	2,2
Mexico	4,8	2,1	1,5
Türkiye	11,O	5,4	3,0
U.K.	7,4	3,4	0,0
U.S.A.	5,7	1,5	O,5
Argentina	10,4	3,6	O,4
Brazil	4,9	2,5	O,8
China	8,1	3,2	4,7
India (3)	8,7	6,9	5,7
Indonesia	3,7	5,0	4,8
Russia	4,7	-5,5	-4,5
Saudi Arabia	3,4	9,9	6,0
South Africa	4,9	1,7	1,1

Tab. 2 - GDP Projections - September 2022 Real GDP growth, year-on-year, percent

Source: OECD Interim Economic Outlook

(1) The E.U. is a full member of the G20, but the G20 aggregate only includes countries that are also members in their own right

(2) Spain is a permanent invitee to the G20

(3) Fiscal years, starting in April

The Russian invasion of Ukraine fractured relations with most countries. New geopolitical tensions - in East Asia and elsewhere - are becoming more likely. Such tensions risk disrupting trade and eroding the pillars of multilateral cooperation frameworks that took decades to build. While the recent Black Sea grain deal bodes well for increasing the supply of commodities to global markets and is a positive step for international diplomatic efforts, the risks of the world economy fragmenting further are real and could weigh on the outlook, especially over the medium term (the next three to five years). Backtracking on the Black Sea grain deal might lead to a food security crisis, most notably in low-income countries. Further fragmentation in global cooperation would create a significant risk for climate change policy. Heightened tensions might also see the world fragmenting into different spheres of geopolitical influence, with adverse impacts on global trade and capital flows.

Policy Actions: From Inflation to Growth

Although the economic environment is challenging judicious policy choices can help guide the global economy out of inflation and into an era of sustainable and inclusive growth. Such policies have impacts and interactions in the short, medium, and long term. For an immediate impact the priority must be to tackle inflation, normalize central bank balance sheets and raise real policy rates above their neutral level fast enough and for long enough to keep inflation (and its expectations) under control. Fiscal policy also needs to support monetary policy in softening demand in economies with excess aggregate demand and overheating labor markets. Without price stability any gains from future growth are at risk of being nullified by a renewed cost-of-living squeeze. Central banks need to act resolutely while communicating the objectives and the steps to achieve them; yet taming inflation will come at a cost: unemployment will rise and wages will decline as monetary policy tightens.

1.3 Italy in the Global Arena

A country the size of Italy, so dependent on its relations with the rest of the world (although protected by its belonging to the major international influent organizations) is paying the price of war more than the biggest powers which can better influence the course of events in their own interest. In 2022 the sudden change of global scenario from deflation to ramping inflation is the most worrisome aspect alongside with a general uncertainty which affects the daily behavior of owners and entrepreneurs. This is well described by the OECD Report "Paying the Price of War" dated September 2022, which we summarize as follows, focusing on Europe (and especially on Italy).

"The loss of economic momentum (after bouncing back from the covid-19 pandemic) is especially serious in the Old Continent, directly affected by the war. The effects of this conflict and the continuing impacts of covid-19 outbreaks in some parts of the world have dented growth and put additional pressure on prices, above all for energy and food. Financial conditions have tightened as central banks have responded to above-target inflation pushing up market-based measures of real interest rates. Equity markets have fallen sharply, nominal bond yields have grown, the U.S. dollar has appreciated significantly, and risk appetite has diminished. Corporate bond spreads have risen, particularly in Europe, and capital outflows from emerging-market economies have intensified. In the U.S.A. the differential between ten-year and two-year government bond yields has turned negative, a phenomenon often followed in the past by cyclical downturns; yield curves have tilted in a similar way in other advanced economies, especially the U.K. Higher interest rates are also denting momentum in housing markets; sales, mortgage lending and starts have turned down sharply in many countries, and prices are now falling on a month-on-month basis in some. Labor market conditions are tight almost everywhere. In many countries unemployment rates are at their lowest levels of the past 20 years, while the ratio of jobseekers to vacancies remains historically low. Nonetheless, the pace of job growth in Europe (and North America) has slowed, vacancies have begun to decline and the reduction in the unemployment rate has bottomed out or even reversed in some countries.

Energy prices have risen sharply, particularly for natural gas. Russia's reduction in gas flows has forced European economies to buy more liquefied natural gas (LNG) on spot markets driving up its prices. And with electricity prices in Europe linked to gas (the marginal source of electricity generation) a similar electricity price spike has taken place. Coal prices are also near record levels, as electricity generators and some industrial sectors substituted from gas to coal and oil: these phenomena have been most acute in Europe.

Not only gas prices in Europe have more than tripled but are roughly ten times their average over 2010-19. Together with elevated average oil, coal and electricity prices illustrative calculations suggest that the ratio of economy-wide expenditures on energy to GDP is likely to have risen significantly, especially in Europe where high inflation, which was already above central bank targets is becoming entrenched.

At the same time, inflationary pressures are increasingly broad-based, with higher energy, transportation and other costs being passed through into prices. Wage and unit labor cost growth has strengthened in many countries, particularly (besides the U.S.A. and Canada) in the U.K. putting upward pressure on a wide range of goods and services prices. There has yet to be evidence of an acceleration of nominal wages in the euro area, in part due to the relatively low incidence of automatic wage indexation but, with high headline inflation and tight labor market, wage growth is likely to strengthen.

One key factor slowing global growth is the ongoing generalized tightening of monetary policy in most economies in response to the greater-than-expected overshoot of inflation targets. In addition, the erosion of real disposable household incomes, low consumer confidence and high prices for some energy products, especially natural gas, will negatively affect both private consumption and business investment.

Core inflation in the euro area will remain more moderate, peaking at 4 percent per cent around the end of 2022 and falling below this level in 2023. Similarly, headline inflation in the U.K. is projected to be around 10 percent in late 2022 before falling back gradually, with average annual inflation in 2023 of just under 6 percent on a headline basis.

A key risk is that the reductions in energy supplies from Russia to the E.U. prove much more disruptive than assumed. Gas and electricity prices are already elevated and could jump further in the event of shortages occurring if additional supplies from outside the E.U. fail to materialize to the extent expected or if the demand for gas is exceptionally high due to a cold winter. E.U. gas storage levels have been raised considerably through 2022 and are now between 80-90 percent on average in most member states. Even at this level there may not be sufficient storage to ensure that demand in a typical winter can be met without storage levels being pushed below effective operational levels. A cold winter could raise shortfalls further unless additional gas supplies could be obtained, which would inevitably require substantially higher prices.

Additional supplies, diversification of sources and demand reduction measures are thus required to minimize the risk of disruptions. Given the greater uncertainty accompanying disruptions, additional effects are likely to arise in the E.U. economies (and the U.K.) from a decline in confidence and higher financing costs. These effects are modelled by an ex-ante increase of 1 percentage point in the household saving rate and another point rise in the user cost of capital.

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A temporary period of enforced reductions in business gas usage in early 2023 means a negative supply shock. This is modelled as a 3 percent decline in potential output in all E.U. economies (and the U. K.) via a combination of reduced technical efficiency and a fall in average hours worked.

Monetary policy reacts to the upturn in inflation with interest rates initially raised before returning towards baseline as inflationary pressures subside. The automatic fiscal stabilizers provide some help in moderating the impact of the shock but additional discretionary measures would be needed to fully cushion household incomes

A related risk is that the impact of sanctions against Russian oil exports could prove more disruptive than anticipated. If the result is the temporary withdrawal from global markets of supply due to difficulties in transporting it to alternative markets, international prices for some products could be much higher than assumed. The forthcoming E.U. ban on the provision of maritime insurance for Russian oil shipments to non-E.U. destinations raises the chances of such disruptions.

Governments' Policy Requirements

Elevated uncertainty, slowing growth, strong inflationary pressures and the ongoing impact of the war on energy markets leave policymakers facing difficult choices. Continued monetary policy tightening is needed to lower inflation durably. Domestic policy measures have to be carefully calibrated given uncertainty about the growth outlook, the speed at which higher interest rates take effect and the potential spillovers from restrictive policy in other countries. Temporary fiscal measures are appropriately being used to cushion the immediate impact of higher food and energy costs for consumers and businesses but they should be balanced against the need to lower energy consumption, limit further demand stimulus at a time of high inflation and ensure debt sustainability. Policy choices should also ensure that efforts to strengthen energy security do not hamper the need to hasten the green transition. Effective and well-targeted reform efforts are required to enhance productivity, reduce inequality, strengthen resilience and boost living standards. Well-chosen policies, such as increased support for childcare and reduced tax wedges for lower paid workers, could help to address the pressures faced by lower-income households and offer medium-term benefits for employment and inclusion.

The calibration of monetary policy tightening is particularly challenging as it is two decades since a sustained policy tightening last occurred. Higher debt levels, elevated asset prices, changes in the flexibility of product and labor markets, financial innovation and the increased importance of non-bank credit provision, greater trade and financial openness may all increase the pace at which policy rate changes feed through, particularly with widespread tightening. Careful monitoring will be required to guard against the risk that policy rates could be tightened excessively, or for longer than necessary to bring down inflation.

Fiscal policy support measures should be timely and temporary. The war and soaring energy prices have led to a reconsideration of near-term budgetary objectives despite the higher debt accumulated during the pandemic, rising bond yields and longer-term spending pressures. New fiscal measures have been implemented to shield households and companies from surging energy and food prices. Several large European countries have already announced successive support packages that cumulatively amount to 2 percent of GDP or more with most likely support measures to continue well into 2023. Additional support measures for next year have already been announced in Germany, France and the U.K. and the projections assume that current measures are extended in Italy, Japan and Spain. The overall impact of these policies on debt is uncertain, with higher-than-expected revenue gains due to rising inflation, and - in some countries - wind-

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fall taxes on the exceptional profits of a few energy producers and suppliers helping to offset the overall budgetary cost. The proposed E.U. level cap on prices paid to lower-cost electricity producers (renewables and nuclear) and a possible additional tax on windfall profits of fossil fuel producers could provide additional resources for some countries.

Fiscal policy action to help cushion the impact of higher energy prices should ideally be well targeted on the most vulnerable, not outlast the period of exceptional price pressures and preserve incentives to reduce energy consumption. Additional means-tested transfers to households generally meet these criteria, though are more administratively complex and potentially less timely than less well-targeted measures that cap energy prices or reduce indirect taxes on energy. The latter measures also damp short-run inflationary pressures but typically involve larger fiscal costs. In Europe, the exceptional surge in gas and electricity prices has temporarily shifted the balance towards more broad-based but costly support via price caps for consumers and businesses, particularly SMEs. Careful design of these policies is necessary to ensure that consumers and businesses clearly face a higher relative price of energy, and to avoid hampering reallocation by preserving energy-intensive activities that are not sustainable in the medium term.

Governments should promote climate change mitigation and longer-term resilience as well as short-term energy security. The Russian invasion of Ukraine has brought a heightened awareness of the link between energy policy and security. There may be tensions, especially in Europe, between the immediate imperative of adjusting to the gas supply crunch and the need to hasten the transition to net zero emissions by 2050. The extreme swings in gas prices have, for example, triggered some gas-to-coal and gas-to-oil switching, which supports near-term supply but is unhelpful from the perspective of the net-zero transition. Policy action needs to make sure that the goals of energy security and climate change mitigation are aligned. Accelerating the transition away from fossil fuels represents the best way of responding to the reduction in energy supply.

Building on the momentum established by initiatives such as REPowerEU and the U.S. Inflation Reduction Act, governments should pursue a range of policies to promote both energy security and green transition. This will require a variety of different instruments – price-based, non-price regulation and public investment – the relative importance of which will differ across countries depending on their initial circumstances. IEA (International Energy Agency) estimates suggest that global investment in clean energy and energy infrastructure will need to more than triple by 2030 in order to ensure the world is on a credible path to zero net emissions. Meeting that objective is likely to require long-term carbon pricing trajectories to render such investments more viable. A clear policy framework combining price signals and regulatory and fiscal tools is necessary.

Closer international cooperation is needed for both near-term energy security and an effective approach to climate change. Within Europe one should coordinate supply diversification and reduction in energy consumption, improve gas and electricity interconnections and reinforce solidarity to prevent energy hardship in winter. More broadly, greater cross-border co-operation on climate policies, including carbon pricing, would help mitigate leakage, lower the cost of emission reductions and improve worldwide access to clean technologies.

1.4 Economic Policy in Italy

A previous OECD Report dated June 2022 with a specifical chapter devoted to Italy (before the change of government in October) warned that persistent war-related inflationary pressures and uncertainty would hold back household consumption, slowing the recovery in services. But predicted that new incentives for the private sector and the resources of the National Recovery and Resilience Plan will mitigate some of the negative impact of supply disruptions and uncer-





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tainty on investment. With gas constituting 42 percent of total energy consumption, the main risks were seen energy prices and supplies while higher bond yields to fight rising inflation could also lower growth.

Although the authorities have secured energy supplies to replace close to two thirds of Russian gas imports (and the government estimates Italy can be completely independent by the end of 2024) accelerating investments in renewable energy and efficiency would further increase security. On the contrary fiscal stimulus, undertaken in response to the initial crisis, should be gradually withdrawn; better targeted policies would support the purchasing power of the most vulnerable from high inflation without blunting green transition incentives. Decisive implementation of the National Recovery and Resilience Plan reforms, including digitized civil justice and bankruptcy processes, would raise resilience and confidence.

Although firms continue to have comfortable cash positions, thanks in part to past and ongoing State guarantees, the war impacts growth as higher prices erode spending power and confidence. The government has introduced substantial policy supports, including reduced energy price surcharges and VAT rates, tax credits for energy intensive users and a one-off cash and public transport bonus for lower-income workers. State guarantees for firms' credit and short-time work schemes have been expanded alongside green energy investment incentives. Alternative gas sources have been negotiated and regulations to raise gas reserves are in place, providing important shock absorbers, but lower consumption will also be required in the event of a possible decrease in gas supplies. Over the longer term, accelerated renewable energy supply would support security: some administrative hurdles to renewable energy supply have been removed. And better targeted energy price support could generate savings.

Government policy should focus on raising growth and gradually reducing fiscal support so that by 2030 total debt returns to 2019 levels. The fiscal stance is set to remain expansionary in 2022, with a deficit of 6.1 percent declining to 4.2 percent in 2023. Higher spending on energy price support and other stimulus to offset the impact of the war, and unanticipated payments for inflation-linked bonds, were partially offset by higher tax revenues and a windfall tax on energy companies Whilst interest payments from higher government bond spreads will not rise significantly in the short term due to the longer duration of bonds, the risks from sharply higher interest rates could be substantial by 2025.

Implementing additional reforms will send an important signal and support confidence and growth. The single and universal child allowance and initial changes to personal income tax rates were introduced in December 2021 to support labor force participation and consumption. Thanks to the National Recovery and Resilience Plan (NRRP) public investment reached 2.9 percent of GDP in 2021 and will grow at double-digit rates in 2022 and 2023. The government has allocated almost 6 billion euros between 2022 and 2023 to counteract the impact of construction inflation on investment projects. Nonetheless, the Plan's ambitious targets have been delayed: planned investments of about 9.5 billion euros were moved beyond 2026, although these sums were not financed by the NRRP.

Although energy price moderation may reduce headline inflation through 2023, core inflation is forecast to remain persistent, due to lasting effects from energy and trade supply disruptions. Food inflation is projected to remain elevated and wage rises will not fully compensate households for the increased cost of living. Uncertainty and high construction prices will delay expenditure somewhat, but this will be offset to an extent by increased incentives and strong public investment. International trade frictions will weigh on exports although competitiveness will be supported by the euro weakness.

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Higher interest rates could lower growth and raise public debt levels: if growth does not recover quickly, confidence and profitability could be damaged, raising bankruptcies, reducing bank profitability and lowering growth further. On the upside, the fiscal impact of tax reforms may have a larger effect, allowing wages, employment and household confidence to recover faster than forecast.

Finally, supporting viable, greener firms will raise long-term resilience to shocks. To mitigate the impacts of a drawn-out conflict, policy should increasingly target temporary assistance to the most vulnerable rather than lower energy prices. De-linking this support from future energy consumption and phasing out environmentally harmful subsidies accelerates the green transition. Energy security would be boosted by supporting investments in efficiency and renewable supply; long-term energy pricing contracts can help manage fiscal costs whilst providing certainty to investors. The measured fiscal consolidation strategy should be implemented to reduce the public debt-to-GDP ratio gradually. Social safety nets and training should be the main instruments to protect workers affected by firm closures, rather than policies that may inadvertently reduce willingness to hire or lengthen default procedures. Implementing bankruptcy and public administration reforms, alongside the digitization of civil justice, will support a faster recovery

From an economic point of view Italy (according to Istat /the national statistics institute) ranks eighth in the world in terms of GDP (2,100 billion dollars) and second in Europe (after Germany but preceding France) in manufacturing (319.8 billion dollars) and eighth in overall exports (610 billion dollars). From this latter point of view it is interesting - and quite unexpected - to evaluate the importance of Italy not only as a major manufacturing country but also as an crucial player in the vital sector of the agri-food business (which has become even more crucial in the international market after the eruption of the Ukrainian war and the consequent disruption of the export of agricultural goods especially toward the poorest countries). Although this evidence is of potential interest just for the *E* component of the *AEC* industry (as consulting engineering firms can find significant opportunities in helping developing countries to acquire the knowledge and the means to develop their own food independence enhancing local production) the numbers are definitely important. Among the sectors of the Italian economy producing (and exporting) goods the agri-food industry leads in number of employees (nearly 1.5 million), value of production (205 billion euros) and added value (65 billion euros). In all three data the agri-food industry precedes metallurgy and metal products and mechanical supplies. In terms of exports in 2021 Italy has for the first time reached 52 billion euros with a surplus (for the second year since 2020 of about 3.5 billion euros). Not to mention the fact that for 158 (sophisticated) items (out of a total 941, mostly basic) in the statistics of world trade the Italian industry holds one of the five top positions in the world.

According to ICE (the Institute on Foreign Trade) Italy's economy relies heavily on exports (of goods as well as services), as the country is poor in commodities and agricultural basic, but not sophisticated, products: this is demonstrated by the important Italian share of total world's exports (2.7 percent in 2021; 2.8 percent in 2020): very significant if one considers that the country's population accounts for just 0.7 percent of that of the earth. And its performance in 2021 compared to the pre-pandemic year 2019 is very satisfactory: Italian exports have recovered better than industrial competitor countries such as U.K., France, U.S.A., Japan, Germany, Canada (and worse of just the most aggressive developing nations such as China, India, South Korea, ...). 2021, in spite of the difficult world economic environment, closed with 516 billion euros worth of exports (with a 18.2 percent increase over 2020 and, more important, a 7.5 percent gain referring to 2019, the last year before the world pandemic) and a good surplus (44







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billion euros, which amounts to 2.5 percent of GDP) given that imports were limited to 472 billion euros, achieved by a country which relies on a transformation economy based on importing the majority of goods necessary for production (and therefore exports). The trend during the last twelve years is quite satisfactory as the amount of Italian exports (at current prices, not taking into account inflation) has kept growing quite regularly, from 337 billion euros in 2010 to a peak of 480 billion euros in 2019 (followed by a decrease, less serious than originally feared in 2020) reaching the already mentioned new record of last year bringing the twelve-year growth to 53.1 percent.



Fig. 5 - Where Italy Exports Source: ITA (Italian Trade Agency) / ISTAT (Italian Institute for Statistics) - 2021 data

Still limiting the analysis to the export of goods, in 2021 Italy confirms its eighth position in the world following China, U.S.A., Germany, Netherlands, Japan, Hong Kong (soon to be added to China), South Korea, but preceding France, Belgium, ... This good performance depends on the fact that Italy's exports are directed more to E.U. countries (52.3 percent) than to extra E.U. countries (47.7 percent) (fig. 5). The European united market accounts for 269.8 billion euros, the non E.U. countries are worth 78.8 billion, North America 54.3 billion, Far East 43.3, Middle East 18.4, ... As far as the countries where Italy exports most this is the 2021 ranking (emphasizing that 60 percent of exports concern the first ten countries: Germany, France, U.S.A. Switzerland, Spain, U.K., Belgium, Poland, China, Netherlands, followed by Austria, Turkey, Romania, Russia (only 14th!), Japan, ... In the first semester 2022 the ranking does not significantly change except for Spain which moves up from the fifth to the fourth position overtaking Switzerland, Netherlands overtakes China (in 9th position), and Japan becomes more important than Russia (which is the only country where Italian exports decrease very strongly – minus 17.6 percent – while the reduction of the Chinese market is limited to 2 percent).













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Fig. 6 - How much Italian Regions export Source: ITA (Italian Trade Agency) / ISTAT (Italian Institute for Statistics) - 2021 data



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TECHNITAL S.p.A. Via Carlo Cattaneo, 20 37121 Verona - Italy Tel.: +39 045-8053611 Fax: +39 045-8011558 tender.office@technital.it www.technital.net Founded in 1964, Technital S.p.A. is nowadays active in the domains of Airport, Energy, Environment, Hydraulics, Marine and Coastal, Ports and Waterways, Railways and Urban Transport, Roads and Motorways, Waste Treatment, Water Treatment, Urban Planning, Buildings and Architecture. The role of the different parts of Italy in the export of the country is quite unbalanced: the North West accounts for 38.1 percent of all exports, the North East 33.6 percent, the Center 18.3 percent, the South (the islands of Sicily and Sardinia included) 10 percent (fig. 6).

Extending the analysis to the export of services, added to good, the Italian figure for 2021 reaches 581.3 billion euros, to be compared with 538.3 billion euros worth of imports, still with a comfortable surplus. As it were, Italy, in spite of the general reduction of international trade caused by the pandemics remains a country strongly tied to globalization given that its exports are responsible for 32 percent of its GDP while imports contribute to 30 percent of its national wealth.

The prospects for 2022 are moderately positive, at least in the first semester covered by the mentioned report: plus 22.4 percent in value (306.2 billion euros) and plus 2 percent in volume (given the present high rate of inflation), obtained enlarging the number of exporting firms (7 percent), a notorious characteristic of the heavily fragmented Italian industrial base with a large number of exporting firms in excess of 136 thousand.

As far as imports are concerned Italy is the 11th world importer of manufactured goods following U.S.A., China, Germany, Japan, Netherlands, France, Hong Kong, U.K., South Korea and India. Comparing the first semesters of both 2022 and 2021 the value of imports has grown significantly more than in recent years: 44.2 percent (which is reduced to 3.4 percent in volume) reaching a total of 302.6 billion euros and reducing the Italian surplus to a nearly insignificant 3.6 billion euros (mostly caused by the strong increase in energy prices).

In 2021 the countries from which Italy has imported most are in decreasing order: Germany, France, China, Netherlands, Spain, Belgium, Russia (expected to substantially reduce its role because of the sanctions), U.S.A., Poland, Switzerland, ...

1.5 The Italian National Scene

The most updated information on the Italian AEC industry can be drawn from two sources: Oice (the Association of Architectural and Engineering Firms) and Ance (the Association of Construction Contractors).

According to Oice, which limits its analysis to the public tenders for services in architecture and engineering (the others not being officially recorded), their value, in the first nine months of 2022 has reached 1.358.5 million euros, 104.7 percent more than in 2021. And this positive trend is expected to continue for the whole of 2022 thanks to the resources available through the national recovery and resilience plan (supported by the Next Generation E. U. funds).

According to Ance the investments in construction are the main driver for the growth of GDP in 2022 (plus 3.3 percent according to Bank of Italy). They total plus 12.1 percent (a performance to which all market sectors contribute): it follows an exceptional plus 20.1 percent in 2021, which has largely recovered from the reduction of 6.2 percent recorded in 2020 (the year affected by the sanitary pandemic). In the last two years, according to Ance, the construction sector has contributed to the growth of GDP more than in other major E.U. countries: slightly better than in France, while no contribution has been recorded in Germany and a negative one concerns Spain.

In 2021 total investments in construction amount to 153,051 million euros, of which 71,869 million in the residential sector and 81,182 in the non residential. The forecast for 2022 is total investments in the amount of 171,570 million euros. They are divided as follows: residential 49.5 percent (which comprises 39.8 percent for new construction and 9.7 percent for renovation); non residential 50.5 percent (out of which 32.2 percent for private buildings, 18.3 percent for public construction, namely infrastructures).

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CHAPTER 2

WORLD A/E FIRMS AND THE ITALIANS

2.1 The Overall Picture

Every year the most reliable (and comprehensive) source of information on the world market of *a/e* services (from the perspective of the international supply) comes from the U.S.A and its most prestigious weekly specialized magazine: it is the *ENR* (*Engineering News-Record*) Top 225 International Design Firms Survey.

The 2022 edition, referring to 2021 data collected from the firms participating in the survey, is just as affected as the previous edition by the world's sanitary pandemic. The updated analysis of these answers takes into account the added worries caused by the war between Russia and Ukraine (which started officially on February 24th) and its economic consequences on the entire world economy and trade (much more serious than was expected at the beginning and in constant evolution). If the first cause of concerns is less significant for international design firms than for construction and industrial contractors because they find it easier to adjust to remote work (not having physical on-site operations to adapt to new sanitary constraints), the second is a threat for every aspect of the world economy. And especially so for international design firms which are appointed in advance in view of fixed investments decided according to the confidence in the future of the world economies.

As it were, before the epochal crisis which started in 2020, the market for large exporting design firms had already taken a series of hits. They were caused by fluctuating prices of oil (and eventually other commodities) caused by commercial wars, political unrest in several countries, often coupled with trade disruptions of different nature (just as damaging even when simply menaced). Consequently, the firms most relying on exports had already prepared to cope with chaotic markets, which made the impact of the covid-19 pandemic somehow less unexpected. But ... what is happening in 2022 is a bigger question mark as the whole balance of international powers seems in question.

In overall numbers, when *ENR* compares the past decade's international design revenues (for the top 225 firms) the fluctuations actually appear not so substantial. The peak is calculated for the year 2019 (72.31 billion U.S. dollars) while the lower level of international exports is attributed to 2016 (64.11 U.S. billion dollars). 2021 is somewhat a good surprise as its performance (67.65 dollars) is slightly higher (0.8 percent) and not so much lower (6.4 percent) than the cited best (pre-pandemic) performance of 2019.

It is interesting to quote the first sentences of the *ENR 2022 Report* which well synthetize the state of the market. "Comparing data from 2020 to 2021 reveals a market at times paralyzed by project risks. As rising construction costs, covid-19 impact and a stop-and-go supply chain kept owners second-guessing timelines and investments. The top 225 firms used market data to help rescope projects to improve cost certainty; the result is marginal gains in a market still sick with pandemic shotdowns."

Looking ahead, the Report adds: "As of the close of the first quarter of 2022 the top firms say that their priorities and those of their clients have shifted - or in other cases increased in urgency – as the global climate crisis, market inflation and war instigated by Russia with Ukraine have accelerated work in some sectors and disrupted work in others". And looking ahead: "Driving more change in market sectors around the world is an abundance of big ticket infrastructure
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In a glance, the results of the *ENR* survey show that, in spite of the difficult international environment, the percentage of top design firms reporting a profit boosted from 89.4 percent in 2020 to 96.7 percent in 2021. And, while 66.4 percent of them boosted their international revenue in the last year only 33.6 percent decreased it. Limiting the analysis to the firms that gave this information, the number of those which reported a domestic profit in 2021 was 158 (up from 146 in 2020) while 148 were profitable in international markets (against 119 in 2020). On the contrary very few (10) declared a loss in their domestic market and eight in the international: they were respectively eight and 14 in 2020. Whether these good results can continue in a year difficult like the present is open to question.





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Fig. 8 - International Geographical Analysis - the Top 225 International Design Firms in 2021 Source: Guamari based on *ENR* data

Coming back to the international market analysis two aspects are relevant (fig. 7). As far as types of services are concerned, in 2021 transportation is still the major field of international activity with a share increased from 26 percent to 27.7 percent, but it is now followed by buildings (19.1 percent), petroleum (13.6 percent) and power (12.4 percent). In 2020 these three markets weighed respectively 18.1, 18.3 and 10.5 percent. From a geographical point of view Europe remains the largest destination od international design services (31.2 percent, up from 27.6 percent) (fig. 8) followed as usual by the U.S.A., Asia and the Middle East, which respectively account for 19.6, 15.7 and 9.3 percent of total: all percentages smaller than in 2020.

2.2 Market Challenges

After the shock caused by the covid-19 outbreak, last year the most performing firms have weathered the pandemic in good shape having quickly adjusted to the new rules of the game: for instance the increase in online interaction can certainly be considered a positive aspect of the sanitary emergency. Although, if petroleum prices plummet from current highs like they did at the peak of the pandemic, that could affect the amount of investment that oil-producing countries allocate to infrastructure projects. As of now, according to prominent industry leaders interviewed by *ENR*, three main other challenges are facing the international design market: climate change, lack of talent resources, rising energy and raw material costs. The latter can particularly affect the delivery of major construction projects. Although there is still uncertainty as to the end effect of inflation on growth, debt and public investment in infrastructures, this represents a great opportunity to boost sustainable design solutions when it comes to energy efficiency. As the direct and indirect environmental impacts of entire projects must be taken into account throughout their lifecycle, for client needs this translates into specific requirements in terms of following environmental references and regulatory compliance.

Faced with these challenges the industry is experiencing a growing insecurity among clients that affects the viability of projects and the way they work with them to identify and overcome risks to ensure delivery. With markets in flux owners need trusted partners that can assist in making informed, data-driven decisions and foremost demonstrate value not just in one element of their project but in its whole lifecycle. But there are a number of variables that play a role when it comes to the international market. Among them are cited: an increase in sustainability usage but especially project management and design software (such as digital twins and BIM) with an advancement which is changing the way major design firms work collaboratively together at a global scale.

Some answers to these challenges are mentioned. One is digitalization which can reduce the investment costs and lead times of large and complex projects by optimizing their organization while maintaining stringent safety standards. Another is innovation helping shift cost away from labor, materials and waste: all examples of opportunities discussed by the industry for years but now really urgent to implement.

2.3 Political Challenges

Political stability in the countries where design firms have work is crucial, although digitalization has enabled many (but not all) of the projects to continue remotely despite challenges on the ground. Libya is an example: its internal turmoil makes it difficult to continue providing contracting and technical consultancy services as in the past.

Although there are a number of such political problems at the national (or regional) level, the politics surrounding the war in Ukraine are definitely the most disruptive as they have forced many countries to take sides in the conflict, creating international tensions and making it more difficult for Western companies to work in the East as they are sometimes caught in the middle. For instance for the nuclear energy sector this could quickly become problematic as Russia is a key player in driving new civil nuclear programs. Another example: with the war inflating energy prices a rush to displace Russian gas and oil is creating opportunities accelerating the push for independence from fossil fuels and for the green transition. This entails another challenge: to recruit and retain staff with the necessary skills as renewables, clean power and also nuclear provide exciting market opportunities.

Finally the prospect of being involved in future efforts to rebuild Ukraine once the war will be over arises the interest of a number of the interviewed firms.

2.4 Changing Climate Attitudes

Besides the immediate impact of the Ukraine war on food supplies (causing large refugee movements which have to be addressed as they affect the built environment) in the longer term climate change will displace huge numbers of people globally causing serious political problems. Therefore the most advanced firms are so committed to decarbonizing their business that they set the target, in three to five years, to only work on projects supporting the green transition (meeting criteria such as biodiversity, resources and circularity). As the challenge in key markets will be about getting (human) resources (and not work), companies able to relocate and upskill their staff into the green transition (even setting up internal academies) will be the winners.

As international economies move to prioritize climate goals many of the fastest growing services are about helping clients develop future energy systems such as hydrogen, offshore wind, pumped hydro or renewable natural gas.

2.5 Technology Driven Design

In order to keep clients' carbon goals top of mind turning to technology is inevitable. Thus develop systems able to measure, monitor and control emissions at every stage of a client's infrastructure. Compatible with BIM technology they collect carbon data form BIM models for design able to optimize avoidable emissions. Besides focusing on energy the most successful firms are also working with clients on environmental issues at large: such as improving water management and developing more resilient communities around the world.

As major trend in the construction sector are towards the use and integration of intelligent and smart systems in every aspect, they must be capable of reaping the benefits during the operation and maintenance period, which account for 80 percent of total costs (as opposed to 20 percent just for engineering and construction). These new systems not only facilitate operations and lower costs but also reduce energy consumption, promote safety and eliminate human-made mistakes.

Finally with environmental consciousness there is also increasing demand for flexible buildings that use technology to adapt to external conditions. To pursue recyclability and circular economy design firms are being asked more and more to analyze the reuse of existing infrastructures and built elements to reduce new construction and minimize the carbon footprint of the buildings stock. As migratory pressures and enormous infrastructure deficits prove that development aid policies must adapt the international design market can be expected to grow tremendously (obviously for the firms which can prove experience in these fields).

2021 Rank	E Li	2021 Inter- national revenues	% of total revenues	General building	Manufactu- ring	Power	Water supply	Sewer/ Waste	Industrial/ Petroleum	Transporta- tion	Hazardous Waste	Telecom
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2	Worley (Australia)	4,127.8	87	1	0	11	1	0	73	1	2	0
3	Aecom (Usa)	3,768.2	48	23	0	3	12	4	2	47	8	1
4	Arcadis/CallisonRTKL (Netherlands)	3,732.8	92	32	3	6	9	3	1	22	24	0
5	Jacobs (Usa)	3,582.0	34	6	2	12	10	5	22	32	13	0
6	SNC-Lavalin (Canada)	3,294.7	86	17	0	7	4	2	3	46	7	0
7	Wood (United King- dom)	2,703.0	87	3	5	9	3	2	49	8	9	0

2.6 The Italians in the World Tab. 3 - THE TOP INTERNATIONAL DESIGN FIRMS



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2021 Rank	Firm	2021 Inter- national revenues	% of total revenues	General building	Manufactu- ring	Power	Water supply	Sewer/ Waste	Industrial/ Petroleum	Transporta- tion	Hazardous Waste	Telecom
8	Stantec (Canada)	2,524.7	73	24	1	9	17	12	5	22	2	0
9	Fluor (Usa)	2,355.2	67	0	0	0	0	0	99	0	0	0
10	Dar Group (Uae)	2,002.1	100	53	0	2	1	3	1	39	0	1
			Tŀ		IANS.							
33	Maire Tecnimont (Italy) *	379.8	90	0	0	0	0	0	100	0	0	0
57	Rina Consulting (Italy)	181.0	67	na	na	na	na	na	na	na	na	na
67	Italconsult (Italy)	128.1	96	26	0	12	10	4	0	48	0	0
113	DBA Group (Italy)	47.8	51	3	0	1	0	0	76	16	0	2
114	Proger (Italy)	47.2	42	46	0	6	0	0	49	0	0	0
130	Ird Engineering (Italy)	31.8	98	1	0	0	0	2	0	93	0	0
144	Italferr (Italy)	21.8	7	0	0	0	0	0	0	100	0	0
145	Manens-Tifs (Italy)	21.6	55	100	0	0	0	0	0	0	0	0
149	F&M Ingegneria (Italy)	18.9	57	99	0	0	0	0	0	0	0	0
169	Technital (Italy)	15.6	48	0	0	0	38	0	0	62	0	0
204	3TI Progetti (Italy)	10.4	41	45	0	0	0	0	0	55	0	0

Source: Guamari based on *ENR* data (million dollars) na = not available *epc firm

Again this year one should stress that, when it comes to the Italian *a/e* industry in the world its position could certainly be better if a giant of the *epc* sector like Saipem, ranking 12th among the international contractors, responded to *ENR* also with its output in engineering services (obviously mostly in-house), not to speak of other smaller design firms that will be listed later. This notwithstanding the 2021 *ENR* ranking includes 11 Italian firms (they were 12 in 2020 and 2019) (listed in tab. 3 compared with the top ten in the world) which total a share of international revenues of the "top 225" of 1.3 percent, to be compared with 1.5 percent in 2020 and 1.6 percent in 2019. Considering the main European countries, only Germany has a lowest international weight (0.8 percent) while the leaders of the international design market are: U.S.A. (23.2 percent), Canada (18.1 percent), Netherlands (8.4 percent), Australia (8.3 percent), China (6.7 percent), ... (fig. 9).

The Italian leader is obviously again Maire Tecnimont (which ranks 35th among international contractors): its 33rd position in the design firms' list is due to the importance of its mostly *in-house* engineering output), followed by ten purely engineering firms (but none architectural): Rina Consulting, Italconsult, DBA Group, Proger, Ird Engineering, Italferr (group FS), Manens-Tifs, Technital and 3TI Progetti. It is disappointing to discover that another 16 Italian design firms do not appear in the *ENR* listing not having filed in their questionnaires: ten of them are active in engineering, namely Agriconsulting, Agt, Aic Progetti, Ars Progetti, Bonifica, eFM, EniProgetti, ESA Engineering, Team Engineering and Studio Pietrangeli; six in architecture: ACPV Architects, Archea Associati, ATI Project, Luca Dini Associati, Marco Casamonti & Partners, RPBW.

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A second list published by *ENR* shows the top 150 (in this case not 200) design firms ranked by global revenues (international plus domestic) and provides a further interesting comparison between countries and their weights in the world market (today threatened in their "global" nature). In this particular list, of the top ten leaders three are based in China, three in the U.S.A., two in Canada, one in Australia and one in the U.K. (which, having quit the E.U., can no longer be considered representative of the European industry).

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Tab. 4 - THE TOP GLOBAL DESIGN FIRMS

2021 Rank	Firm	2021 Total revenues	2021 International revenues	Ceneral building	Manufacturing	Power	Water supply	Sewer/ Waste	Industrial/Petroleum	Transportation	Hazardous Waste	Telecom
1	Power Con- struction Corp. of China (China)	16,931.9	1,370.1	10	0	68	12	3	0	4	0	0
2	China Energy Engineering Corp. (China)	12,695.9	1,283.5	2	0	97	0	0	1	1	0	0
3	Jacobs (Usa)	10,691.3	3,582.0	9	7	5	10	7	12	27	20	4
4	Aecom (Usa)	7,913.2	3,768.2	21	0	4	13	5	1	41	13	1
5	China Communication Construction Group (China)	6,934.0	466.8	0	0	0	0	0	0	100	0	0
6	Wsp Global (Canada)	6,819.6	5,417.0	21	1	8	3	2	5	46	6	1
7	Worley (Australia)	4,753.3	4,127.8	1	0	13	1	0	67	1	2	0
8	Arcadis/Callison- RTKL (Netherlands)	4,074.6	3,732.8	30	3	6	9	3	1	24	24	0
9	Snc-Lavalin (Canada)	3,823.3	3,294.7	18	0	10	4	2	4	43	8	0
10	Fluor (Usa)	3,519.6	2,355.2	0	0	1	0	0	74	0	23	0
			TH	HE ITAL	IANS							
80	Maire Tecnimont (Italy) *	420.9	379.8	0	0	0	0	0	96	1	0	0
118	Italferr (Italy)	312.4	21.8	0	0	0	0	0	0	100	0	0
131	Rina Consulting (Italy)	271.0	181.0	na	na	na	na	na	na	na	na	na

Source: Guamari based on *ENR* data (million dollars) na = not available *epc firm

The weakness of Italian design firms (which cannot rely on a consistent domestic market but also have fewer subsidiaries abroad than most global competitors) is confirmed by the fact that only three of them (the same as in 2020) appear in this particular list: in decreasing order, the *epc* firm Maire Tecnimont, Italferr (group FS) and Rina Consulting. Their share of the global market is minimum: 0.5 percent, superior just to one significant country (Germany) with a share of 0.3 percent (fig. 10).





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Fig. 10 - How the Top 150 Global Design Firms shared the 2021 market Source: Guamari based on *ENR* data

2.7 The Top European Competitors

A proper ranking of the top European *A/E* firms has yet to be drawn: an effort is recently under way under the auspices of the European Federation of Engineering Consultancy Associations (Efca) but its results for 2021 will be announced too late to be published in this Report. Therefore, in the impossibility of gathering the 2021 financial statements of the major firms from each country we extrapolate some interesting data from the latest *ENR* survey, calculating how the top 54 international design firms share the 2021 world market (fig.11).

Out of these 54 champions (57 last year) the Italian companies weigh 4 percent of the European total (the same as in 2019 but less than 4.4 percent in 2020): the sum of their foreign turnover (904 million U.S. dollars) ranks only seventh in Europe, preceded by the Netherlands (with a 25 percent share), U.K. (23.8 percent), Sweden (12.4 percent), France (10.1 percent), Denmark (9.7 percent) and Spain (5.2 percent). Once again it is interesting to note that Germany (so strong in manufacturing) is weak in exporting design services, as it ranks ninth (after Belgium) with a 2.5 percent share of the world market.

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Fig. 11 – How the Top 54 European International Design Firms shared the 2021 market Source: Guamari based on *ENR* data

2.8 Foreign Subsidiaries in Italy

The Italian market (being weak and fragmented from the supply point of view as we have seen in the previous paragraph 2.6), although not particular rich in opportunities, attracts more foreign subsidiaries than one could expect. The latest survey by Guamari (checking which of the top international design firms listed by *ENR* have bet on the Peninsula) has found 25 branches (against 23 in 2020) in spite of one withdrawal (in May 2022 Power Construction Corporation of China has filed for bankruptcy of its subsidiary Geodata, which has soon found another buyer, the Swiss Pini Group). Compared with the willingness of major foreign contractors to establish a base in Italy the difference could not be more striking. Only the Austrian Strabag has a branch which started in 2011 renaming a medium-size contractor, Adanti, after buying it. And the Spanish Sacyr is present as (rather sleepy) partner of the general contractor Inc in the consortium Sis. Other (especially European) general contractors limit their presence in Italy to participating in ad-hoc alliances created to realize specific infrastructural works (typically funded by the E.U. and uniting Italy with neighboring countries).

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Fig. 12 - Geographical Distribution of the Top 54 European International Design Firms (2021 data) Source: Guamari based on *ENR* data

Table 5 lists 25 major groups, ranked according to their international revenues as reported by *ENR*. Only the subsidiaries which operate as design firms are included (the majority of which of a size sufficient to appear in the top 200 architecture or engineering firms list published by Guamari in this Report) while the subsidiaries operating as *epc* firms are not taken into account. Among the new entries probably the most promising is the American Populous while the presence the leading Canadian (and international) group Wsp should not be mistaken as it has merged with the compatriot Golder. According to some rumors the only international group which is considering closing the Italian subsidiary is the Dutch Arcadis but only after finding potential acquirers for its various branches. As we have already mentioned the most dynamic international group is at the moment the Swiss Pini which has bought Geodata while the French Artelia might finalize the acquisition of another Italian firm (after Intertecno in 2015).

What is meaningful is that the large majority of these subsidiaries are definite assets for "made in Italy" as they blend skills and qualifications from the country of origin and the host nation boosting the performance of both. Thus they are to be seen as an enrichment instead than a threat to Italian entrepreneurs.

Tab. 5 THE 25 FOR INTERNATIONAL DESIGN FIRMS WITH AN HALIAN DRAINS
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Firm	Country	International Revenues \$ mil.
WSP	Canada	4,417.0
AECOM	U.S.A.	3,768.2
ARCADIS/CALLISON RTKL	Netherlands	3,732.8
JACOBS	U.S.A.	3,582.0
WOOD	U.K.	2,703.0
STANTEC	Canada	2,524.7
DAR GROUP	Lebanon	2,002.1
RAMBOLL GROUP	Denmark	1,580.0
ARUP	U.K.	1,456.4
FUGRO	Netherlands	1,449.7
MOTT MACDONALD	U.K.	1,139.0
AFRY	Sweden	1,017.0
SYSTRA	France	653.0
TRACTEBEL	Belgium	437.2
ARTELIA	France	341.7
EXYTE	Germany	272.6
ILF CONSULTING ENGINEERS	Austria	253.9
SAMSUNG ENGINEERING	South Korea	213.7
FICHTNER GROUP	Germany	175.4
JENSEN HUGHES	U.S.A.	89.0
POPULOUS	U.S.A.	67.3
JGC HOLDINGS CORP.	Japan	61.0
LOMBARDI GROUP	Switzerland	54.2
DEERNS	Netherlands	34.4
PINI GROUP	Switzerland	9.4

Source: Guamari based on ENR data

CHAPTER 3

WORLD CONTRACTORS AND THE ITALIANS

3.1 The World Picture

According to the yearly survey by the U.S. magazine *ENR* the year 2013 maintains the unbeaten record for the cumulated exports of the top 250 international contractors with 544 billion U.S. dollars worth of revenues. While 2021 marks an all-time low at 397.9 billion dollars. This figure is 5.35 percent lower than in 2021 but, not to be mistaken, most of the decrease is attributable to a change in accounting: finally the Spanish ACS and the German Hochtief have filed jointly for the first year, since the latter was bought by the former in 2011, removing some shared revenue, although the same correction, although minor, has not yet been made to avoid double counting of the German Ed. Züblin which belongs to the Austrian Strabag. Yet the overall picture is bleak at least for the export of works, although new contracts (notoriously not entirely apt to engender actual future revenues) show a tenuous increase of 5.1 percent (547.2 in 2021 compared with 520.4 billion dollars at the end of the previous year). As far as domestic markets







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are concerned the picture is definitely more promising: both revenues and contracts increase respectively by 18.7 and 20.8 percent from 2020 to 2021 indicating a trend toward a diminishing globalization. This means that global revenues (for the 250 top international contractors) attain a record level of 2,065.7 billion and global contracts 3.443,7 billion U.S. dollars, thus respectively plus 13.1 and plus 17.6 percent.

These figures allow *ENR*, in an optimistic effort, to give this title to its survey: "Firms Build Inroads to Recovery – As war rolls the economic rebound from covid-19, rising global contracting revenue shows industry resilience". Yet (the magazine does not comment on it) this has to be seen as another sign of a retreat from economic globalization (which unfortunately seems to be strengthening in 2022).

As far as a more in depth analysis of the collected data is concerned, as usual *ENR* publishes an international market analysis (fig. 13) showing that transportation remains the sector of most interest followed by buildings, petroleum and power (respectively weighing 33.2, 22.6, 13 and 11.3 percent). Completed by an international region analysis (fig. 14) which also confirms the hierarchies of 2020: Europa is by far the biggest market (28.4 percent) followed by Asia, U.S.A., Middle East and Africa (respectively accounting for 18.7, 12.8, 12.2 and 11.8 percent).



Fig. 14 – International Geographical Analysis – the Top 250 International Contractors in 2021 Source: Guamari based on *ENR* data

The comment goes on deepening the analysis of the present conjuncture. Citing the opening remarks of the article the reasons for the further decrease in overall numbers appear articulated. "Amid an increasing complex global construction market, the Top 250 International Contractors report that owners are placing a greater emphasis on meeting basic project goals – delivered on time, under budget and at promised value. But with supply chains still rebounding from covid-19 and most economies feeling the ripples of war in Ukraine, even basic work needs skill and strategy from contractors to keep rising construction costs and risks in check. ...

3.1.1 Politics and Markets

In 2022 world politics are playing an unprecedented role and oblige prominent contractors to be more selective than ever. Although they name a mix of countries when asked about best opportunities and why, the common denominator for many firms are regions with infrastructure investments. Building on the momentum of massive government-funded packages in fixed investments, firms say that infrastructure development platforms prioritizing sustainability and clean energy are driving forces in the global contracting recovery. For this reason the 1.2 trillion dollars Infrastructure Investment and Jobs Act has made the U.S. sector an opportunity hotspot for many. Similarly, Saudi Arabia's Vision 2030 and China's plan to spend 1.1 trillion dollars on infrastructure will also drive economic recovery in those regions. In Europe, the more than 800 billion U.S. dollars coming form the Next Generation E.U. package is leading infrastructure investments in the Balkans and across Nordic countries.

There is also Africa's ambitious 2063 agenda which sets a blueprint for the continent's long-term sustainable development and economic independence. As sweeping and wide-ranging as such infrastructure spending plans may be, political and economic instability can bring major winds of change to regions. in particular, since Russia's declaration of war in Ukraine, the conflict has increased fossil fuel prices accelerating an interest in alternative energy (and thus favoring the firms most advanced in the field)... If the immediate winners have been the major fossil oil producers, with countries seeking to untangle themselves from Russia's energy sector and long-term business dealings with the country the renewable energy transition could ease demand and bring costs down.

According to some observers quoted in the Report "With economists warning that the combined effects of covid-19 disruptions and the war in Ukraine could push the global economic activity as a result of rising inflation and the response of central banks". And yet, in spite of these predictions, some interviewees are optimistic and believe that the global contracting market will be largely protected from the effects of a recession because of the already mentioned abundance in demand in the infrastructure sector. "on the contrary - says the CEO of the fifth international contractor (fourth European) - probably a recession would be seen as a stimulus to further invest in infrastructure (and thus favor the firms which contract mostly with public authorities)."

3.1.2 Challenges and Solutions

An interesting prediction from the entrepreneur just cited is. "While international contractors in 2021 focused on navigating supply chain disruptions and material shortages the main challenge facing 2022 will be to keep costs down. Without possibly repeating the 2021 performance which, giving strong demand despite inflation, allowed large firms to convey the increased costs to their customers thus generating good results." From a commercial point of view - remarks a colleague – securing project financing and room for the firm to add value to a project are the main components to decide to enter a market. Keeping in mind that understanding a country's market at a local level will determine the success of any given company in the country and also in the international arena. Coming to more technical considerations international companies wishing to connect to various assets around the world are developing what can be called "BIM Digital Construction Implementation Plans" in order to provide continuity to technical-economic control tools throughout a project's life cycle. Another example, with a similar aim, is given by a company which has adopted the motto "connectivity in productivity": it consists in using state-of-the-art project management tools, building information modelling technology, online project management and collaboration software to increase the level of coordination and integration. In a construction industry traditional and resistant to change these emerging technologies also help reducing costs, managing the supply chain disruption and increasing safety. Summing it all up, the skill to manage international contracts, the need to bring the best of a contractor's team overseas and the adaptation to each environment have been incorporated in the business culture of successful general contractors.

3.1.3 Planning Ahead

As the global contracting market becomes more complicated (while remaining strong but lurching forward in its recovery) it is good news that public agencies keep rolling out more infrastructure projects. But, more so than in the past, every location brings unique challenges that need attention and careful management. Innovation and diversification are also sought after: as an example, the 19th international contractor (number two in the U.S.A.) recently launched a manufacturing and technology business to meet an expected need from customers in sectors quite apart from traditional construction as semiconductors, electric vehicles, synthetic materials and data centers.

This addresses a growing demand for engineering, procurement and construction services needed to help customers deliver the next generation of manufacturing. Another major (ninth world exporters and second among the Spanish) has created an ad-hoc infrastructure and mobility business unit to promote and develop new sustainable business opportunities as owners prioritize emissions' reduction goals and clean energy transition, with a particular focus on cities. At the moment the main assets of this unit are electric vehicles, transmission lines not to mention photovoltaic plants. As for the biggest Indian foreign contractor (number 25 in world exports) strong project risk management systems are at the core of its success: not only digitalization initiatives have improved its efficiency and productivity, but a multiyear cyber security assistance framework is being developed in order to uniformly ramp up this type of controls across all business units.

Digital initiatives toward smart manufacturing ensure real-time safety and enhanced productivity, global quality, on-time delivery and unique customer experience in the supply of complex-engineered-to-order and high technology equipment in all kinds of industry. Just to mention the high-tech tools whose deployment is boosted by this and competing firms at the same high level of sophistication one can mention: IoT (Internet of Things), Drones, BIM, the Cloud, augmented and virtual reality, analytics and artificial intelligence.

3.2 The Italians in the World

In 2021 Italy improves the international performance (its contractors account for 5.6 percent of world exports against 5.3 percent in 2020 and 3.3 percent in 2019) in the *ENR* ranking (recalculated by Guamari with only 249 firms, with the German Ed.Züblin not double counted being consolidated by the Austrian group Strabag) in spite of relying on 13 against 14 top contractors (Salcef being a new entry while Cimolai and Maeg Costruzioni are no longer included). But an even better performance could be recorded if the following contractors had responded to the survey: Cimolai, CMB, GCF, Fincantieri Infrastructure, Tirrena Scavi, Tonon, Sicilsaldo, ...



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2021 Rank	Ë	2021 Interna- tional revenues	2021 Total revenues	2021 New contracts	General building	Manufacturing	Power	Water supply	Sewer/Waste	Industrial/ Petroleum	Transportation	Hazardous Waste	Telecom
1	Acs (Spain)	32,745.2	36,275.4	40,978.9	38	1	2	2	1	4	33	0	7
2	Vinci (France)	27,410.0	59,135.0	50,106.0	6	0	21	1	0	4	45	1	11
3	China Communication Construction Group (China)*	21,904.8	123,706.4	242,589.7	14	9	0	1	2	0	73	0	0
4	Bouygues (France)	17,367.0	33,024.0	30,058.0	24	2	7	0	0	1	60	0	2
5	Strabag (Austria)	15,216.0	18,267.6	22,755.2	31	0	1	4	2	5	56	0	0
6	Power Construction Corp. Of China (China)*	13,703.2	79,884.2	155,876.6	4	0	68	4	1	0	22	0	0
7	China State Construction Engineering Corp. (China)*	12,315.5	241,813.2	505,717.4	74	3	2	1	0	2	15	0	0
8	Skanska (Sweden)	11,347.9	14,679.3	17,900.0	45	4	3	1	1	3	39	0	2
9	Ferrovial (Spain)	9,650.4	10,888.2	7,113.8	22	0	4	3	6	0	63	0	0
10	China Railway Construction Corp. (China)*	9,012.0	159,837.0	436,994.0	17	0	2	3	0	0	75	0	0
			тн	E ITALIANS									
12	Saipem (Italy)*	7,062.0	7,332.0	8,028.0	0	0	8	0	0	89	3	0	0
16	Webuild (Italy)	5,386.5	7,913.1	12,764.4	8	0	1	25	9	0	52	0	1
35	Maire Tecnimont (Italy) *	2,816.8	2,921.1	7,608.2	0	0	0	0	0	96	0	0	0
46	Danieli & C. (Italy)	2,005.0	2,133.0	2,321.0	0	0	0	0	0	100	0	0	0
69	ltinera (Italy)	971.1	1,455.5	2,157.3	18	0	0	0	0	0	80	0	0
72	Sicim (Italy)	865.4	868.6	na	0	0	0	2	0	98	0	0	0
87	Pizzarotti (Italy)	696.5	1,299.3	1,591.3	51	0	0	0	0	0	49	0	0
88	Bonatti (Italy)	684.0	776.0	693.0	0	0	0	0	0	100	0	0	0
101	Ghella (Italy)	594.0	810.0	na	0	0	1	0	30	0	62	0	0
123	Rizzani de Eccher (Italy)	443.7	598.9	902.6	50	10	0	0	0	0	21	0	0
135	Trevi (Italy)	370.0	426.0	537.0	27	0	0	16	0	6	51	0	0
155	ICM (Italy)	266.2	514.4	401.6	42	0	0	0	0	0	58	0	0
208	Salcef (Italy)	111.5	440.2	na	0	7	0	0	0	0	93	0	0

Tab. 6 - THE TOP INTERNATIONAL CONTRACTORS

Source: Guamari based on ENR data (million dollars)

na = not available *epc firm





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If Italian champions are still far from the top of the international list (the frontrunner, Saipem, is just 12th in the world) contractors from the Peninsula excel in some specific markets and geographical areas. According to *ENR* in 2021 Saipem confirms its leadership in petroleum while Maire Tecnimont moves up from 8th to 6th; Danieli descends from second to third in "industrial", Webuild moves from second to first (where it stood in the past) in "water" and remains third in "sewer/waste", a market where Ghella makes its debut in 9th position. If regional revenues are examined, Webuild (through its subsidiary Lane) is for the first time 9th in the U.S.A. and also, acting directly, jumps from eighth to sixth in Australia, Saipem moves from fifth to sixth in Africa, maintains its fourth position in the Middle East and makes its debut as tenth in Latin America / Caribbean, Sicim secures for the first time a ninth position in Canada.



Fig. 15 – How the Top 250* International Contractors shared the 2021 market Source: Guamari based on $\it ENR$ data

* Data of 249 international contractors: the German Ed. Züblin (controlled by the Austrian Strabag) is not double-counted



Fig. 16 - How the Top 250* Global Contractors shared the 2021 market Source: Guamari based on *ENR* data

* Data of 249 international contractors: the German Ed. Züblin (controlled by the Austrian Strabag) is not double-counted

Another interesting ranking due to the *ENR* surveys relates to the top 250 global contractors (in fact 249 as Guamari also in this case has not double counted Ed. Züblin and Strabag) and the place occupied by the Italians. If their number in 2021 is the same as in 2020 (seven) the ranking is somewhat different: Webuild is first overtaking Saipem, all others maintain their position except for Sicim which appears in the place of Bonatti. In this case Italian competitiveness is lower as its seven major firms account for a share of 1.1 percent of the global market (1.1 percent and 0.8 percent respectively in 2020 and 2019). The fact that the share of the international market is definitely higher than that of the global market is a clear indicator of how limited are the domestic revenues for our champions: the opposite of the favorable condition of contractors from countries like the U.S.A. or China... In the case of European top contractors they are all penalized in ways similar to the Italians (fig. 16).

Tab. 7 - THE TOP GLOBAL CONTRACTORS

2021 Rank	First	2021 Total revenues	2021 International revenues	2021 New contracts	General building	Manufacturing	Power	Water supply	Sewer/Waste	Industrial/Petroleum	Transportation	Hazardous Waste	Telecom
1	China State Construction Engineering Corp. (China)*	241,813.2	12,315.5	505,171.4	74	2	1	1	2	2	15	0	0
2	China Railway Group (China)*	166,360.1	7,421.4	423,052.0	32	2	0	2	3	2	54	0	0
3	China Railway Construction Corp. (China)*	159,837.0	9,012.0	436,994.0	28	0	1	2	0	0	67	0	0
4	China Communication Construction Group (China)*	123,706	21,904.8	242,589.7	16	2	3	6	4	0	69	0	0
5	Power Construction Corp. Of China (China)*	79,884.2	13,703.2	155,876.6	12	0	44	9	6	0	21	0	0
6	China Metallurgical Group Corp. (China)*	75,003.3	1,988.4	178,546.5	49	24	2	1	2	25	15	2	0
7	Shanghai Construction Group Co. (China)*	59,501.5	674.5	68,589.6	70	0	0	0	4	0	15	0	1
8	Vinci (France)	59,135.0	27,410.0	50,106.0	9	2	16	2	0	4	38	1	9
9	Greenland Infra. Constr. Group Co. (China)	54,395.4	172.9	95,937.3	2	2	0	0	1	2	14	0	0
10	Acs (Spain)	36,275.4	32,745.2	40,978.9	37	1	2	2	1	3	32	0	6
			TH	IE ITALIANS									
53	Webuild (Italy)	7,913.1	5,386.5	12,764.4	8	0	0	17	6	0	64	0	0
65	Saipem (Italy)*	7,332.0	7,062.0	8,028.0	0	0	8	0	0	86	6	0	0
120	Maire Tecnimont (Italy) *	2,921.1	2,816.8	7,608.2	0	0	0	0	0	93	0	0	0
147	Danieli & C. (Italy)	2,133.0	2,005.0	2,321.0	0	0	0	0	0	100	0	0	0
178	ltinera (Italy)	1,455.5	971.1	2,157.3	15	0	0	0	0	0	82	0	0
190	Pizzarotti (Italy)	1,299.3	696.5	1,591.3	33	0	0	0	4	0	63	0	0
241	Sicim (Italy)	868.6	865.4	na	0	0	0	2	0	98	0	0	0

Source: Guamari on ENR data (million dollars) na = not available ** epc* firm



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3.3 The Top Europeans (and Italians)

While ICE (the Italian Institute for Foreign Trade) shows the importance of the European market for Italian exports (67.6 percent adding E.U. and non E.U. areas), this is not so true in the case of contractors as they find it easier to work in less developed economies: in fact Europe attracts just 25.3 percent of the international revenues of firms in the Peninsula listed by *ENR*.

On a different note, to assess the weight of the European supply in construction, among the Top 250 International Contractors listed by *ENR* only 42 are European (not double-counting the German Ed. Züblin and the Austrian Strabag) and they add up 45.5 percent of the top 250 international revenues (180.5 billion U.S. dollars).

To complete the picture of the role of Italian contractors among the top Europeans every year an ad-hoc analysis is carried out by Guamari on the main data contained in the financial statements of the top 50 (Western) European contractors. In order to create a list of contractors ranked by the largest 2021 turnover (at home and abroad). The edition based on 2021 yearly reports concerns only the general contracting firms active in infrastructures of all kinds (mostly public) and buildings (mostly public) with the exclusion of firms building single family homes and of developers in real restate which do not also build for themselves. Unlike the analysis published by the American magazine *ENR*, which is worldwide, our European list does not include *epc (engineering/procurement/construction)* firms specializing in plants (industrial, process and of every other nature). The ranking is lead (tab. 8), as usual, by the French group Vinci, and is closed by the Italian Pizzarotti, with a wide range of 2021 turnover: 49.4 billion euros for the first and 1.1 billion for the 50th.

Pos. 2021	Pos. 2020	Pos. 2019	Group	Country	Revenues 2021	Revenues 2020	Revenues 2019	Var. % 2021/ 2020	% abroad 2021
1	1	1	VINCI (1) (2)	FR	49.396	43.234	48.053	14,3	47,0
2	3	3	BOUYGUES (pôle Construction) (3)	FR	27.922	26.208	29.575	6,5	nd
3	2	2	ACS (2) (4)	ES	27.837	27.853	39.049	-0,1	89,3
4	4	4	EIFFAGE (5)	FR	18.721	16.321	18.143	14,7	25,0
5	6	6	STRABAG (6)	AT	15.299	14.750	15.669	3,7	83,0
6	5	5	SKANSKA	SE	14.401	15.344	16.743	-6,1	75,4
7	9	9	ACCIONA	ES	8.778	7.464	7.191	17,6	nd
8	7	7	BALFOUR BEATTY (7)	UK	8.558	9.498	9.850	-9,9	48,9
9	8	8	ROYAL BAM	NL	7.315	6.768	7.176	8,1	60,1
10	11	12	FERROVIAL (8)	ES	6.778	6.532	6.054	3,8	nd
11	12	11	FCC (9)	ES	6.659	6.158	6.276	8,1	40,8
12	15	15	WEBUILD (10)	IT	6.420	5.013	5.130	30,7	52,0

Tab. 8 - THE TOP 50 EUROPEAN CONSTRUCTION CONTRACTORS





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Pos. 2021	Pos. 2020	Pos. 2019	Group	Country	Revenues 2021	Revenues 2020	Revenues 2019	Var. % 2021/ 2020	% abroad 2021
13	10	10	VOLKER WESSELS	NL	6.193	6.448	6.642	-4,0	nd
14	13	14	PEAB	SE	5.858	5.706	5.168	2,7	28,0
15	14	13	NCC	SE	5.212	5.359	5.573	-2,7	26,0
16	16	16	PORR	AT	5.170	4.652	4.880	11,1	53,9
17	17	19	SACYR (11)	ES	4.675	4.548	4.169	2,8	nd
18	18	18	FAYAT	FR	4.559	4.052	4.595	12,5	39,0
19	22	29	GOLDBECK	DE	4.096	3.486	2.927	17,5	nd
20	23	23	MORGAN SINDALL	UK	3.827	3.354	3.596	14,1	-
21	19	17	KIER	UK	3.793	3.981	4.827	-4,7	nd
22	21	21	VEIDEKKE	NO	3.767	3.623	3.708	4,0	39,7
23	20	20	IMPLENIA (12)	СН	3.632	3.678	4.074	-1,3	51,9
24	31	33	BOSKALIS	NL	2.966	2.542	2.645	16,7	80,4
25	28	25	BESIX	BE	2.960	2.759	3.332	7,3	nd
26	29	26	LAING O'ROURKE	UK	2.932	2.744	3.224	6,9	39,5
27	27	28	OHLA (13)	ES	2.904	2.882	2.960	0,8	70,4
28	26	32	SWIETELSKY	AT	2.896	2.831	2.673	2,3	44,2
29	25	24	YIT-CORPORATION (14)	FI	2.856	3.069	3.392	-6,9	26,7
30	30	35	AF GRUPPEN	NO	2.793	2.567	2.293	8,8	nd
31	33	34	NGE	FR	2.776	2.402	2.498	15,6	11,9
32	32	30	MOTA ENGIL	PT	2.656	2.429	2.912	9,3	nd
33	34	31	KELLER	UK	2.649	2.280	2.694	16,2	nd
34	-	-	DEME	BE	2.511	2.196	2.622	14,3	nd
35	36	36	MACE GROUP	UK	2.302	1.913	2.108	20,3	nd
36	39	45	MAX BÖGL	DE	2.300	1.843	1.563	24,8	10,0
37	35	40	TBI HOLDINGS	NL	2.192	2.013	1.850	8,9	1,5
38	38	37	SPIE BATIGNOLLES	FR	2.150	1.873	2.100	14,8	nd
39	40	41	PER AARSLEFF	DK	1.976	1.780	1.802	11,0	30,9
40	42	-	LEONHARD WEISS	DE	1.904	1.695	1.610	12,3	nd
41	-	-	METROSTAV	CZ	1.783	1.583	1.629	12,6	nd

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Pos. 2021	Pos. 2020	Pos. 2019	Group	Country	Revenues 2021	Revenues 2020	Revenues 2019	Var. % 2021/ 2020	% abroad 2021
42	41	43	HEIJMANS	NL	1.748	1.746	1.600	O,1	-
43	37	38	JAN DE NUL	BE	1.737	1.908	2.030	-9,0	nd
44	46	46	DURA VERMEER	NL	1.611	1.437	1.504	12,1	-
45	44	44	BAUER	DE	1.540	1.454	1.595	5,9	nd
46	43	42	VAN OORD	NL	1.517	1.677	1.644	-9,5	ns
47	47	27	GALLIFORD TRY	UK	1.308	1.229	1.534	6,4	-
48	48	52	ITINERA	IT	1.231	1.130	985	8,9	68,9
49	-	-	GEK TERNA	GR	1.144	892	1.156	28,3	nd
50	49	48	PIZZAROTTI	IT	1.099	974	1.299	12,8	53,6

Source: Guamari based on published 2021 balance sheets (million euros)

nd= not defined

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

(2) In January 2022 Vinci acquired the energetic business of Acs (Cobra Is)

(3) Bouygues group (including TF1 and Bouygues Telecom) has 2021 revenues of 37.6 billion (34.7 billion in 2020)

(4) Since June 2011 Acs consolidates the German group Hochtief (revenues 2021 of 21.3 billion)

(5) Eiffage in March 2018 acquired the Swiss firm Priora

(6) Already known as Ilbau, in 1987 became Bauholding, bought Strabag in 2000 and took its name. Since 2005 controls the German Ed. Züblin.

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

(8) Ferrovial diversifies its activity in airport management, mostly in the United Kingdom, in 2018 split the service division.

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

(10) New name. Born in January 2014 from the merger of Salini and Impregilo, in November 2015 acquired the American firm Lane Industries and in November 2020 66.1 percent share of Astaldi

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

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

(13) Former OHL

(14) In 2013 split the facility management firm Caverion, in February 2018 merged the Finnish firm Lemminkainen.

In 2021 the Italian lot is smaller than in 2020 because Astaldi, which ranked 43rd last year, has been incorporated by Webuild (which has accordingly moved up from 15th from 12th): but it includes Itinera (part of ASTM/Gavio) and Pizzarotti, respectively 48th and 50th. Compared with the other countries the weight of the top Italian groups on the turnover of the "top 50" decreases from 3.2 percent in 2020 to 2.8 percent in 2021 (although it amounted to an even lower 2.5 percent in 2019). This places Italy (as a national system) only 8th after France (34.3 percent), Spain (18.8), Sweden (8.3), U.K. (8.3), Netherlands (7.7), Austria (7.6) and Germany (3.2): concerning these latter countries it should be stressed that Austria has a good ranking (compared to its small size) because Strabag, formerly known as Bauholding, acquired the German Strabag (and took its name) in 2000 and in 2005 Ed.Züblin. As a result Germany is weakened by these two important groups appearing as Austrian but also by the fact that its larger group, Hochtief, since 2011 belongs to the Spanish giant Acs. In fact Germany should rank much higher (if the effective construction activity developed within its borders was to be considered) and Austria lower, probably positioning Italy 7th instead than 8th.








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Fig. 17 - Geographical Distribution of the Top 50 European Construction Contractors (2021 data) Source: Guamari based on published 2021 balance sheets

But Italy could do much better if its top construction contractors, starting from Webuild, developed the same degree of diversification in businesses such as concessions and services which makes their competitors stronger. Whereas this diversification often occurs at a higher hierarchical level: for instance Itinera is part of group Gavio, which has become the biggest motorway concessionaire in the world. Another more simple diversification could strengthen the Italian top players: building added to the construction of infrastructures. Certainly Webuild could aspire to a higher rank if its turnover included a building activity more significant than the declared 5 percent (which could be expanded buying a firm specialized in this activity).

What are the examples of diversification (and ramification) that make the other European leaders successful on their own, independently on the policy of their holdings? The European leader, the French Vinci, is the largest concession operator in transportation (aviation, motorways, parkings, ...), the Spanish ACS is diversified in energy but, most important, through Abertis holds the first European position in motorways concessions, the French Bouygues is active in telecommunications and television, the Swedish Skanska diversifies in power plants, the French Eiffage has a







Stile italiano, architecture nature, architecture culture, luxury business. Dal 2001 il gruppo A1Engineering è tutto questo. Grazie alla creatività tutta italiana degli architetti Sandra Deiana e Giovanni Antonio Spano.

Il gruppo A1Engineering è una società di architettura e ingegneria nata nel 2001 dall'iniziativa degli Architetti Sandra Deiana e Giovanni Antonio Spano, collabora con numerosi studi di gruppi internazionali e italiani specializzati nella progettazione di edifici, infrastrutture e riqualificazioni urbane. A1E accomuna abilità ed esperienza acquisite nel tempo che hanno portato lo studio a svolgere un ruolo chiave nella progettazione di edifici

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successful "concession" branch in different specialized submarkets, the Austrian Strabag has the largest network of 23 subsidiaries (and therefore calls itself Societas Europaea), the British Balfour Beatty spans from power and energy to social infrastructure, the Spanish Acciona is diversified in renewable energies, the Dutch Royal Bam adds the specialty of dredging to the full spectrum of construction, the Spanish Fcc is involved in the environment and water facilities.

Finally the fact that the European construction market is far from effectively united (certainly in no way comparable for instance to the U.S.A., and Brexit has certainly not helped) explains why major contractors are refraining from new across the border *m&a* ventures in their core business. If the last decade has been marked by the take over of the German Hochtief by the Spanish ACS, the growth of the Austrian champion Strabag (formerly Bauholding) adding the German firms Strabag itself and Ed. Züblin, the acquisition by the Swiss Implenia of the construction arm of Bilfinger Berger, there was only one merger in 2018 (between the Finnish majors YIT and Lemminkainen) and none of any importance since. And, from abroad, so far only one major has been attracted by Europe: the Turkish Renaissance Construction, after developing in Russia (!?), in 2013 acquired the Austrian firm Alpine Bau and the Dutch Ballast Nedam. On the contrary a number of failures have occurred in recent years (but none in the last): namely Carillion in the U.K., Astaldi (now incorporated by Webuild), Condotte after selling Cossi and Inso), Cmc (possibly "saved" with a public intervention), Glf (with Fincosit as a healthy "spin off"), Mantovani, ... in Italy, Isolux Corsan in Spain, ...







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CHAPTER 4

THE ITALIAN A/E FIRMS - HIGHLIGHTS

4.1. Size and Regional Distribution

The small size of Italian design firms does not cease to surprise (and somehow worry) observers, both national and international (although this is also true of the whole manufacturing sector of a country which is however on top of world exports). Especially when compared with the quality of their services and also with the shares of the international market which they manage to gain in spite of their smallness. Again in 2021 the size of the national leader in architecture Lombardini22 is 48 times smaller than Gensler and of the top engineering firm Italferr is 55.6 times smaller than the engineering division of PowerChina. This is not only a problem in the international arena, where if dimensions were more adequate larger contracts could be pursued (even without having to team up with foreign top players), but especially in the domestic arena where the competition from subsidiaries of large international groups is fierce (and growing with the prospects of significant public, and consequently private, investments in the built environment promoted by the Next Generation E.U. Program). The 200 top architectural firms combine a 2021 total turnover of 609.1 million (plus 23.1 percent with 18.9 percent abroad). They show an increasing profitability with ebitda growing by 42.9 percent and net profit by 55.7 percent, while from a financial point of view they confirm almost the same net cash of 2020 (minus 0.7 percent) and improve the equity by 20.4 percent.





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The top 200 engineering firms declare a much higher 2021 total turnover of 2.9 billion (4.8 times bigger than architecture) with 20 percent of export. All the data refer to 198 companies because 2021 data of Manens-Tifs (with its first consolidated balance sheet) and ADR Ingegneria (with the first annual report last year) cannot be compared to 2020 performances. The 198 firms' revenues increase by 15.4 percent and profitability improves by 20.5 (ebitda) and 70.5 (net profit). Net debts get worse by 43.8 but they remain much smaller than equity which grows by 11.9 percent.

As far as regional distribution is concerned Italy confirms to be a very diffuse country without the same dominance of large metropolitan area of world level as other European nations. But the diffusion in terms of population (and eventually productive base and wealth) is not characteristic of the A/E industry which is too sophisticated not to be concentrated in the regions (and cities) where the synergy with other services is best available.



Fig. 20 - Regional Distribution of the Top 200 Engineering Firms (2021 revenues) Source: Guamari based on firms' annual reports



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As a result (see fig. 19) 49.1 percent of the 2021 turnover of the 200 major architecture firms is concentrated in Milan, also the capital of design (and occasionally in Brescia, the region's second largest city), 17.9 percent in Tuscany (Florence and Pisa), 9.2 percent in Latium (which is to say in Rome), 7.1 percent in Emilia-Romagna (Bologna and Modena), 5.3 percent in Piedmont (Turin), ... all the other nine regions trail behind (surprisingly even the industrious Veneto) with the remarkable absence of six regions (mostly in Southern Italy where the two islands Sicily and Sardinia stand out).

The same exercise applies to the top 200 engineering firms gives somewhat different results (fig. 20). Not only 18 out of 20 regions have at least one firm located in their territory but the importance of the public market for engineering services favors Latium (i. e. Rome, the State capital) against Lombardy (Milan and other cities). Furthermore the importance of Veneto, as a region with an outstanding concentration of dynamic industry, places it in third position. As a result the hierarchy in engineering is completely different from the one in architecture and even the regional concentration is less pronounced: Latium produces 35.6 percent of the 2021 turnover, Lombardy 20.8 percent, Veneto 14.4 percent, ... In Southern Italy Sicily (the biggest autonomous region) has a small role: 0.3 percent of total output.

4.2 Toward a Stronger A/E Industry

Unlike in other competing countries Italian design firms (more so in architecture and industrial design but also in engineering) are traditionally mostly the results of a (gradual) transformation, year after year, of professional practices and do not derive from larger groups opening specialized divisions. The fragmentation of the demand is, in its own right, a consequence of this phenomenon but is also still sustainable as most owners, both public and private, are generally much smaller that their foreign counterparts and even the public sector has no tradition of large public structures devoted to economies of scale in consolidating a number of smaller tenders into few comprehensive ones.

Yet the evolution of the market (public and private) requires greater confidence by owners in the capacities of design firms (and this has very little to do with theirs size but instead with their reputation). Hence the importance of favoring the trust between clients and the *A/E* industry having recourse to a preliminary validation of the projects to be constructed. This is the task of independent professional entities, the so called "project validation firms" (the majority of which are also active in technical control). The list of the top 10 among them (they were five in last year's Report) is published in table 20 and shows a total 2021 output in excess of 17.4 million euros (19.1 percent more than in 2020). Italcertifer has the record performance (with a 142.7 percent increase in project validation output, but no technical control, due to the impulse given to the national railways program carried out by group FS (through its division RFI) to which it belongs.

Notable exceptions of integration of design firms in larger multidisciplinary groups, where they are offered a somehow "captive" market, can however be mentioned, although in no way at the scale of what is customary in major competitive countries. In the case of architecture, given the most "creative" nature of the activity, there are only two cases: the firm Crew was bought by Italferr (group FS) in 2018. but its new mission is still somewhat unclear; Magnoli & Partners was bought by Edison (EDF group) in the same year with the aim of developing innovative design schemes for energy saving and alternative energy solutions. In the case of engineering these cases are more numerous as the synergies are more evident and immediate. Two recent examples stand out: one of the largest multinational audit groups, EY, has recently created a separate com-

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pany, EY Engineering and Technical Services, offering expertise in the fields of infrastructures, energy, real estate and urban regeneration. And a prominent testing laboratory, ISMES (a CESI company), has a spin off: a consulting firm offering especially monitoring services of the state of infrastructures (and predicting their residual useful life before needing major reinforcement interventions).

A number of firms belong to larger diversified groups: according to our list, Italferr is the arm of FS, the national railways public group, and its engineering services complement the core activity of "delegated contractual agency", EniProgetti (formerly Tecnomare) is a technical arm of the national power group ENI, Rina Consulting operates within group Rina which has diversified in many technical fields from its original role as official naval registry, Tecne is the largest of the three engineering firms belonging to major private concessionaires of motorways: Aspi (group Benetton in this case) while the other two, Sina and Infraengineering belong respectively to group Gavio and Toto (these as the former also active in construction with their own contractors). Last but not least the largest (public) operator of roads, the public group Anas (since 2017 belonging to FS) has an in-house engineering firm devoted to working abroad: Anas International Enterprise. Finally, the latest development is the creation as part of the largest Italian multiutility group, Acea, of a division specialized in engineering and services, especially focused on water, waste and energy markets.

As far as the private realm is concerned only recently subsidiaries of large international development and real estate groups have shown interest in the Italian market where traditionally the clients of design forms were family groups active in real estate, but limited in their scope. Accordingly only in the last dozen years significantly large urban renewal projects have been launched, mostly situated in Milan, by structured groups which have often felt more at ease with international design firms (which had already well performed abroad but especially could meet more stringent obligations, withstand more demanding contract constraints, give higher warrantees, afford stronger promotion efforts and especially bigger investments in design software). As a result in a few years the Milanese skyline has developed with an unprecedented contribution of the best-known international archistars (and the engineering, more often foreign, firms on which they most relied).

To this day the wave of mergers and acquisitions which have contributed to the growth of design firms in other parts of the world is nearly inexistent. And is not compensated by sufficient internal growth of the most successful design firms nor by the creation of divisions within diversified and multidisciplinary groups. The uncertainty caused two and a half years ago by the outbreak of the pandemic and recently by the menaced world recession as a consequence of the war declared by Russia against Ukraine and its Western allies has not helped entrepreneurs making decisions. Especially in Europe most directly affected than North America or other parts of the world. In the present state of continuing uncertainty no significant change of attitude is in sight, except for the few cases when an existing firm incurs big enough problems to be obliged to find a solution (generally its sale to a stronger competitor) as an alternative to closing. However, in the absence of diffused growth through $m \mathcal{O} a$, most of the Italian A/E industry continues to develop, at a gradual pace, relying on its own force and reputation and seems resilient enough to wait until the scenario clears up before more engaging moves, helped by an informal network of alliances and associations which, in their own way, strengthen its capacity to face an unpredictable (national and international) market. A notable example of network is traditionally given within the cooperative movement (stronger in Italy than everywhere else in Western Europe) which has its champion in the multidisciplinary Consorzio Integra. If among the architectural firms the



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major cooperatives are not that strong: in pecking order Mate, Gnosis, Cairepro, Coprat, Centro Cooperativo di Progettazione, AI Progetti, in the engineering field the prominent players are fewer but stronger: Politecnica (which is a member of Consorzio Integra) is the unquestioned leader (although not strong enough in exports to make the *ENR* top 255 international design firms list) followed by Inres, Cooprogetti, ...

Last but certainly not least, good opportunities for growth (in the internal market) are to be found in the large number of firms (few architectural, in most case engineering), which operate in Italy (and often branch out to contiguous nations) as subsidiaries of prominent international groups. If the local practice of architecture by foreigners has nearly disappeared (Norman Foster, Daniel Libeskind, Zaha Hadid, Jean Nouvel, ... have all discontinued their Italian offices with the notable exception of David Chipperfield and, on a smaller scale, Jean-Michel Wilmotte). The last casualty is Chapman Taylor whose Italian team has recently been absorbed by Progetto CMR. On the contrary Populous has opened an Italian branch last year (and has won the competition to design the new Milan stadium).

Other specular opportunities for growth are to be found in the few Italian design firms who have in the past bought other competitors abroad. They are very few and only in engineering: Italconsult controls Boswell Engineering in the U.S.A., DBA Group has a subholding in Slovenia, Actual IT, active with firms in each major Balkan state, Bonifica (Tili Group) can rely on Profert, Renardet and Renardet Oman, ... On the contrary Net Engineering International has successively disinvested from the two firms it had acquired in Germany. Spiekermann and, this year, Seecon. Any other activity abroad is carried out through subsidiaries created *ad-hoc* and bearing the same name following a policy which in a certain way could be called "fly the flag".

On the contrary, to complete this picture of internationalization, there are still by large more FDI (Foreign Direct Investments) in the Italian *A/E* industry than the contrary. At present 26 foreign groups are active in Italy with their own subsidiaries: by decreasing 2021 turnover, Jacobs Italia, Artelia Italia, Arcadis Italia, T.EN Italy Solutions (Formerly Technip Italy Direzione Lavori), WSP Golder, Systra SWS, Erm Italia, Aecom Urs Italia, Stantec (formerly Mwh), Ramboll Italy, Fugro Italy, Arup Italia, Hpc Italia, Lombardi Ingegneria, Bureau Veritas Nexta, Maffeis Engineering, VTU Engineering Italia, Deerns Italia, Tauw Italia, Systra Sotecni (soon to be merged with Systra SWS), Pini Group (which recently bought Geodata), Fichtner Italia, Mott MacDonald Italy, Hitachi Industrial Engineering Emea, Jensen Hughes Italy, Drees & Sommer Italia. Other four should be added, as they do not appear in our ranking: Afry Italy, Tractebel Engineering and ILF Engineering Italia which are too small for our ranking and RWDI Europe (with its seat in Milan) whose financial report is not available.

As far as the relative importance of foreign subsidiaries in the Italian market (of which they represent 15.4 percent of total output), figure 21 shows that France is the country with the most important (and increasing) role (27.6 percent of total subsidiaries' 2021 turnover), followed by the Netherlands and closely by the U.S.A. (respectively 16.2 and 15 percent). With less important weight follow other eight countries: Canada, U.K., Germany, Switzerland, Denmark, Lebanon, Austria and Japan. (China is no longer present after PoweChina sent Geodata into bankruptcy).

4.3 Architecture (and Design) Highlights

Our first list of professional firms shaping the built environment refers to those providing architecture (and design) services, in a number of cases integrated with solutions of a more technical nature. Unlike the engineering firms they limit their activity to buildings of all typologies (very rarely to infrastructures: from an aesthetic and not technical point of view) but

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can design at the larger scale (landscape, planning, urbanism) or at the smaller (industrial, but not graphic, design). Out of the top 200 listed (with a minimum 2021 turnover of 691 thousand euros) the main distinction, as creativity and its appreciation is the real competitive edge, is between those that emphasize authorship deriving their name(s) from that of their founding architect(s) and those which choose an anonymous, but hopefully intriguing and captivating, brand (showing as much creativity in this way as in their design activity).





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Starting from the "top ten" it is a known fact that "made in Italy" has achieved international recognition through a number of archistars (generally with a less entrepreneurial attitude than their foreign competitors, thus leading smaller firms, but also particularly strong in design). After the confirmed number one in our list, Lombardini22 (which has kept the originally British brand Degw in one of its divisions), follows the first "archistar" firm Marco Casamonti & Partners (born as a spin off from Archea Associati, ranking 11th) and with some of the same shareholders), third becomes ATI Project (fourth last year) a young dynamic firm which thrives on well engineered proposals both for winning bids and developing construction drawings, and - surprise - jumps from eleventh to fourth Luca Dini Associati (with a various mysterious growing architecture and planning activity in Saudi Arabia) to which one should add another smaller firm (ranking 165th) Luca Dini Design, specialized in yacht design and also active in Saudi Arabia). This pushes ACPV Architects (founded by two prominent archistars, Antonio Citterio and Patricia Viel) from the third to the fifth position, while Progetto CMR (founded and powered by Massimo Roj, which controls eight diversified firms, including contracting, and announces for the second year an informal aggregated financial statement) remains sixth; from fifth to seventh slips, MC A (Mario Cucinella Architects) animated by "very intellectual" archistar; eighth (it was ninth) ranks Starching, the first firm on top which combines architecture and engineering (like others that follow: General Planning, Gpa, Crew, which belongs to Italferr, Tekne, which also operates through an ESCo (energy service company), Hydea, ...) and has a further market opportunity through Maestrale (formerly a consortium), jointly founded with the engineering firms Ariatta and Redesco; ninth (from eighth) appears RPBW (Renzo Piano Building Workshop) which has a much bigger office in Paris (but no longer in New York) and is headed by the world most famous Italian architect; tenth (it was seventh) ranks One Works, founded by Leonardo Cavalli and Giulio De Carli, which has made a reputation in complex facilities (especially airports and other transport terminals).

The remaining firms (besides those on the edge between architecture and engineering which have been already mentioned) are basically of two types: they either bear the names of famous Italian architects (and designers) generally being transformations of original "ateliers" with which they established their reputation or have chosen anonymous (but, when possible, appealing) labels and brands. Among the first category, in decreasing order of 2021 turnover: the firms created by Paolo Asti, Amedeo Schiattarella, Piero Lissoni and Patricia Urquiola (these two best known as designers), Stefano Boeri, Matteo Thun, Massimiliano Fuksas, Carlo Ratti, David Chipperfield (the only foreign archistar who has kept an office in Italy), Michele De Lucchi, Tiziano Binini (an engineer just as talented as an architect), Alfonso Femia, Nicola Cantarelli, Flavio Albanese, Massimo Pica Ciamarra, Gianmaria Beretta, Marco Piva, ...

With smaller practices operate talented architects like, in decreasing size, Fabrizio Rossi Prodi, Alessandro Scandurra, Paolo Desideri, André Straja, Cino Zucchi, Paolo Garretti, Massimo Iosa Ghini, Giuseppe Tortato, Fabio Novembre (also a famous designer), Rodolfo Dordoni, Guido Canali, Agostino Ghirardelli (and Giuseppe Blengini), Alberto Cecchetto, Simone Micheli, Gianluca Peluffo, Dante Benini, ...

When, on the contrary, architects prefer to promote themselves with brands, "fantasy" is joined with marketing. In hierarchical order we find: Il Prisma Architettura, LAND Italia (with branches in Germany and Switzerland), Park Associati, Genius Loci Architettura (GLA), Made to Measure, Planet Idea, Piuarch, Hangar Design Group, Archilinea, Archest, Open Project, Open Building Research, Interplan Seconda, The Blossom Avenue Management, ...

Another way of looking at this list is describing "niches" of specialization, often underrepre-











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sented in Italy than abroad, typical of the traditional concept of all-encompassing architecture. One example is landscaping, where two firms stand out: LAND Italia and AG&P Greenscape. Another, closer to engineering, is lighting, practiced by Metis Lighting, the only firm of adequate size. A field of specialization which is boosted by the fight against the recent pandemic is the conception of hospitals. It is practiced, among others, by ATI Project, Binini Partners, Cspe, Ipostudio, Valle 3.0, ...

In order to assess the weight of the various fields of activity Figure 22 is of particular interest. As percentage of total turnover of the largest architecture (and design) firms it is evident that offering non-integrated architectural services covers still the majority (52.4 percent) of the field (and is chosen by practically all the "authorial" firms). But proposing services in various degrees integrated between architecture and engineering (thus closer to the practical needs of the clients to know in advance how the building will be constructed, and not only what it will look like) has a growing success (31.5 percent of total turnover). All other specialized services appear residual but still with architecture having an added importance although in the form of interior design: the firms specializing in this field sum up 8.6 percent of total turnover. A last remark: it is surprising that in a country (Italy) where in the Renaissance the "Italian garden" was so praised, the only two large firms specializing in "green" (which by many is seen as the future for survival and livability of cities) account for just 1.3 percent of total turnover.



Fig. 22 – Architecture and Design Share of Total Turnover Source: Guamari based on 2021 firms' revenues

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4.3.1 Architecture Groups

Pos. 2021	Firm	Revenues 2021	Revenues 2020	Var. %
1	Archea/Marco Casamonti (1)	32.144	26.101	23,2
2	RPBW (2)	31.000	30.282	2,4
3	Progetto CMR (3)	26.000	22.198	17,1
4	Lombardini22 (4)	25.214	19.505	29,3
5	ATI Project (5)	21.100	20.000	5,5
6	Luca Dini Associati (6)	18.177	8.528	113,1
7	ACPV Architects (7)	17.195	16.086	6,9
8	Lissoni Associati (8)	13.704	8.956	53,0
9	MC A	13.135	13.191	-0,4
10	Starching	12.715	9.761	30,3
11	One Works	11.698	11.294	3,6
12	General Planning	8.720	7.421	17,5
13	Hydea (9)	8.027	6.200	29,5
14	Design Group Italia ID	7.701	6.661	15,6
15	GPA	7.596	7.395	2,7

Tab. 9 - THE TOP 15 ITALIAN ARCHITECTURE GROUPS (aggregated data)

Source: Guamari based on the 2021 balance sheets and firms' aggregated data (thousand euros) (1) Archea Associati + Marco Casamonti & Partners; (2) RPBW + RPBW Paris; (3) consolidated annual report including Progetto Design & Build and five other companies: (4) includes DEGW; (5) ATI Project and part of the revenues from its Danish branch; (6) Luca Dini Associati + Luca Dini Design; (7) in September 2020 merged Citterio-Viel & Partners Interiors; (8) Lissoni Casal Ribeiro + Lissoni Associati + Graph.X + the New York based Lissoni Inc.; (9) Hydea + HYDEA Beijing, Architectural & Engineering Design Consulting.

The fact that architecture (and *design*) firms, unlike engineering firms and construction contractors do not publish consolidated financial statements makes it particularly interesting to evaluate the real size of the few companies which have a larger perimeter of activities, operating with other Italian firms besides the original ones (sometimes even quite diversified from their core business) or through foreign branches. Obviously excluding double counting in the cases of turnovers which are already declared by the mother company on behalf of branches or subsidiaries.

This unofficial list, which has been possible thanks to the aggregated data and explanations kindly provided by the interested parties sees a little change on the top: the combination of the firms Archea and Marco Casamonti (with nearly the same shareholders) overtakes RPWB (Renzo Piano Building Workshop) as the world famous architect is more and more often "donating" ideas



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for his projects when they serve a social purpose. Progetto CMR comes third (as it did in last year's ranking) in spite of proposing its first (informal) consolidated report (not yet officially available for consultation) including seven architectural (and diversified) firms). It is closely followed by Lombardini22 (operating as a single firm, although organized in 15 specialized divisions).

Particularly remarkable are two other firms founded by prominent authors: ACPV Architects (Antonio Citterio and Patricia Viel) and MC A (Mario Cucinella). On the contrary some architectural firms which blend creativity with strong engineering competences stand out: Starching, General Planning, Hydea, GPA.

4.3.2 Tenure of the Domestic Market

Focusing the analysis on the domestic market (which is receiving a special boost from the already mentioned National Recovery Plan, directly for public contracts, indirectly for private investments) table 10 ranks the top Italian architecture firms according to their domestic 2021 revenues. It should be stressed that out of four firms declaring one hundred percent of their turnover at home, three (General Planning, Asti Architetti and Tekne) really do not venture abroad while Progetto CMR works in other countries (namely China) but includes all its export revenues (with others) in an informal consolidated financial statement.

Comparing this table to what was published last year Lombardini22 leads this list as much as the general ranking of the top 200 followed by the already mentioned Progetto CMR. Penalized by the fact that they export most of their production are ACPV Architects and ATI Project, practically with the same percentage (57.2 and 57.1) of exports. In addition some dynamic Italian architects (working through firms bearing their names) obviously do not appear among the most active in the domestic market when their international activity is paramount. This is the case of Marco Casamonti & Partners (with its parent company Archea), Luca Dini Associati (a "newcomer" successful in Saudi Arabia) and Renzo Piano Building Workshop.

4.3.3 The "Design Niche"

Pos. 2021	Firm	Domestic Reve- nues 2021	Total Reve- nues 2021	% Domes- tic
1	Lombardini22	24.723	25.214	98,1
2	Progetto CMR	13.214	13.214	100,0
3	Starching	12.672	12.715	99,7
4	Mario Cucinella Architects	12.399	13.135	94,4
5	General Planning	8.720	8.720	100,0
6	ATI Project	7.771	18.106	42,9
7	ACPV Architects	7.355	17.195	42,8
8	One Works	7.354	11.698	62,9
9	Asti Architetti	7.345	7.345	100,0
10	Tekne	7.328	7.328	100,0

Tab. 10 - THE TOP 10 ITALIAN ARCHITECTURE FIRMS AT HOME

Source: Guamari based on the 2021 balance sheets and firms' data (thousand euros)



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Obviously when proposing an analysis of the top architecture (and design) firms, the latter, although being much fewer, deserve their own separate list. Especially considering that these international champions are at the heart of the success of "made in Italy" at various scales (from complete interiors, of buildings but, very lucrative, also of yachts) to single products (at various scales and with a large array of user destinations). Furthermore they also contribute with their creativity and skills to the international success of interior specialized contractors operating "turn key" in what are known as "fit out" works.

This list of twenty biggest design firms (see table 11) specifies which are mostly involved in one or another of six major specializations: namely the design of yachts, interiors, brands, lighting solutions (and fixtures), stage sets and, obviously, industrial design. The most significant increase in turnover (146.1 percent) is achieved by Michele Bönan Interiors (which specializes in luxury hotels and residences), followed by Francesco Paszkowski Design, second only to Zuccon International Project in yacht design (plus 85.3 percent) and Giò Forma Studio Associato (which has made a name in sophisticated (and technological) stage design but is more and more diversified in architecture (plus 77.6 percent).

4.4 Engineering Highlights

Pos. 2021	Pos 2020	Firm	Revenues 2021	Revenues 2020	% Var.
1	1	Design Group Italia ID (1)	7.701	6.661	15,6
2	4	Patricia Urquiola (2)	4.766	3.101	53,7
3	2	Zuccon International Project (3)	4.651	4.805	-3,2
4	3	Made to Measure (2)	4.542	4.449	2,1
5	6	Lissoni Associati (2)	4.085	2.847	43,5
6	9	Francesco Paszkowski Design (3)	3.801	2.051	85,3
7	7	Hangar Design Group (1)	3.690	2.332	58,2
8	5	Peregalli Sartori (2)	3.301	2.915	13,2
9	10	Metis Lighting (4)	3.058	1.973	55,0
10	8	Studio Sclavi (2)	2.944	2.145	37,2
11	17	Giò Forma Studio Associato (5)	2.453	1.381	77,6
12	14	Icona Design Group (6)	2.123	1.658	28,0
13	13	De Jorio Luxury & Design Projects (3)	2.084	1.752	18,9
14	12	Pelizzari (1)	1.948	1.804	8,0
15	11	Emme Elle Architettura (1)	1.903	1.927	-1,2
16	15	Red Star (1)	1.869	1.620	15,4
17	18	Hydro Tec (3)	1.770	1.240	42,7
18	-	Michele Bönan Interiors (1)	1.467	596	146,1
19	16	Officina Italiana Design (3)	1.206	1.494	-19,3
20	-	Paolo Badesco Interior Design (1)	1.165	906	28,6

Tab. 11 - THE TOP 20 PURELY DESIGN FIRMS

Source: Guamari based on the 2021 balance sheets and firms' data (thousand euros)

(1) brand design; (2) interior design; (3) yachting design; (4) lighting design; (5) stage design; (6) industrial design



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Our second list of professional firms refers to those providing engineering (and consultancy) services with special emphasis on their destination for the built environment (in the broadest sense), thus eventually including ancillary activities relating to architecture (but never to the point of deserving to belong to the first-mentioned list). It should be stressed that besides designing in the strict sense, the mission of engineering firms can be wider including, as an example, managing the different phases of procurement on behalf of owners and/or delivering project management consulting services assuming risks concerning the end result of the works that purely design firms certainly do not envision. Also, in the case of engineering, given the wide scope of this discipline, all firms designing and consulting for the industry (other than construction) are excluded from our list unless, as mentioned above, the final impact of their activity is the built environment (the best example is firms working in the energy field). Another reason for exclusion from this list is when engineering firms are also engaged in contracting (typically those serving the industry) and therefore belong to an altogether different breed: the epc (engineering-procurement-contracting) firms. Finally it should be stressed that, while no architectural firm is listed according to its consolidated revenues (as at home they tend to work as an unique entity and their branches abroad file individual balance sheets according to the national rules), engineering firms, when they operate with diversified entities, draw up a certain number of consolidated financial reports thus appearing higher in the list than individual firms (often evolved from professional practices).

The list of the top 200 engineering firms (with a total turnover in excess of 2.9 billion euros) is based on official financial reports (in very few cases consolidating more firms belonging to the same group). It excludes companies which are heavily involved in architecture (they are found in the *ad-hoc* list) but includes a few which, while not focusing on the built environment, have a direct impact on construction in the broadest sense. The professional nature of these firms has a few exceptions (notably at the top) when qualifications in procurement and general contracting are connected to designing, consulting and construction / project managing.

This year the ranking is led by Italferr (group FS), which had lost its leadership just in the preceding edition, due to its activity in public procurement especially for completing the Italian high-speed railway network: it is not only selling its know-how abroad but through the recently acquired firm Crew also in architecture related to transportation. Rina Consulting becomes second as it does not submit a consolidated financial statement: it is part of the naval certification group Rina (which, after buying the Italian branch of the American D'Appolonia, has grown with the acquisition of the British firm Edif and of the Tunisian Comete Engineering). Third remains EniProgetti (formerly Tecnomare) resulting from a merger with Eni Engineering E&P, specialized in offshore oil&gas engineering. Fourth is also confirmed Italconsult (participated by the largest Italian bank, Intesa Sanpaolo) which has grown from a specialization in roads to one in hospitals (rescuing Studio Altieri) and internationalized (acquiring the American Boswell Engineering). Fifth is a new entry: Acea (area Ingegneria e Servizi) and sixth becomes the exceptionally fast growing Tecne (group Aspi), 129th last year, which is replacing Spea Engineering (descended from the eighth to the 74th rank, from which ADR Ingegneria, specialized in airports, has spinned off in March 2021, and might undergo liquidation). Proger (participated by the British-Italian Cadogan Petroleum), highly diversified, especially in assuring motorways monitoring, slips to the seventh position, eighth is Sina, which has kept growing as the engineering arm of the second largest motorways concessionaire in the world, Astm Gavio. Ninth is DBA Group, the largest family-company diversified in ICT services, the first engineering firm to venture in the stock exchange and owner of Sis as well as Actual IT



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from Slovenia. Tenth is Sipal, belonging to group Fininc, active in general contracting and also diversifying in aerospace.

After the "top ten" (ending with a 2021 turnover close to 52 million euros) the names are of less national importance. 11th remains Agriconsulting, the main engineering firm specializing in advising how to develop agriculture; 12th becomes Jacobs Italia (the biggest subsidiary of a foreign group), which has reoriented its focus from *oil&gas* to specialized office and industrial buildings; 13th becomes the engineering division of Metropolitana Milanese - MM), specialized in the design (and project management) of underground lines. To the 14th rank rises F&M Ingegneria which specializes in engineering architecturally sophisticated projects, has successfully delivered the Italian pavilion at the Dubai World Expo and has a branch in Germany, while 15th becomes Manens-Tifs, leader in *mep* design for buildings (and ships) and shareholder, through Tifs Partecipazioni, of Proger, which has recently merged with Steam.

Examining a few interesting other engineering firms (and limiting the analysis to fully Italian champions), the following stand out, in decreasing 2021 turnover: eFM, which specializes in building interior programming and planning and is strongest in digital applications; Technital which is among the oldest firms for all types of transport engineering; Ird Engineering which develops its international vocation in transportation allying with Italferr and other major full-fledged companies; Politecnica, more and more active in the specialized field of hospital design (in Italy and abroad); 3TI Progetti Italia, the most prominent fully employee-owned engineering company with a growing interest for architecture; Seingim Global Service (which controls Seingim Power and Seingim Oil&Gas); Studio Speri, which has recently created a joint company with Tecne called TecneSperi specialized in the design of bridges; Pro Iter (which operates with three firms); Net Engineering (which has sold its two German subsidiaries) specializing in urban transportation innovative systems; Ambiente, which has reinforced its environment consulting and planning core business selling the laboratories division for a sum which will be reinvested in internal growth.

Other performing firms, following in this ranking, can be better mentioned market by market. The first distinction is between infrastructures and buildings. In the first realm: Rocksoil, Studio Ing. G. Pietrangeli, Bonifica (Tili group), Rpa, Thetis (which is up for sale by Consorzio Venezia Nuova after separating from its transportation branch Thetis IT), Musinet Engineering, Milano Serravalle Engineering, Hydrodata, Progin, Prometeoengineering.it, Studio Geotecnico Italiano, Anas International Enterprise, ... Specialized in building design and process solutions are: BMS Progetti, Mpartner and SCE Project (all three also active in project and construction management), Tecnicaer Engineering (member of Consorzio Mythos), along with a number of specialists of *mep* design: ESA Engineering, Ariatta Ingegneria dei Sistemi, Tekser, ... and of structural engineering: Milan Ingegneria, Holzner & Bertagnolli, Maffeis Engineering, CEAS, Si.Me.Te (part of consortium EP&S), Redesco (although with 2.2 million turnover), ... While the undiscussed major provider of safety and security consultancy is GAe Engineering, a firm which is always at the forefront of regulatory performance-based innovation.

4.4.1 The Major Domestic Players

In a domestic market which is boosted by the NRRP (National Recovery and Resilience Plan), applying not only to the built environment but to the industrial base as such, the growth in the value of public tenders (the private ones are not subject to reliable scrutiny) is gaining momentum. According to Oice (the National Association of Engineering Firms) in the first eight months of 2022 2.317 calls for tenders have been published for an amount 1.309 billion euros (112.9



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percent more that in 2021). It is therefore interesting to identify the firms which are already most established in the Italian market and can best position themselves in this hot competition. Table 12 proves that firms with an important captive market within their groups (of national importance) are high in the ranking (and have gained such experience that they can at any moment obtain better results even in the international arena).

Ranked by the value of their domestic turnover in 2021, Italferr (working mostly for the railway group FS to which it belongs) leads this particular list, followed by a new entry, Acea (Area Ingegneria e Servizi, a multiutility which controls four operational firms (focusing on water infrastructures) and has created an ad-hoc division with its own financial statement, followed by EniProgetti, belonging to the chemical and energy group ENI, Tecne, the largest engineering firm working for the largest group active in motorways concessions ("brownfield" but also "greenfield"), Autostrade per l'Italia (ASPI), followed by Sina which is its equivalent for group ASTM / Gavio. It is interesting to note that out of the "top 15" in this list five subsidiaries of international leading groups manage to have an important role in the Italian market: Arcadis Italia, Artelia Italia (the former rumored to want to reduce its presence, the latter on the contrary in search of external growth), T.EN Italy Solutions, Jacobs Italia and WSP Golder. It is also relevant that two firms (Rina Consulting and DBA Group) export more than half of their 2021 turnover and yet make the top 15 domestic list.

Pos. 2021	Firm	Domestic Revenues 2021	Total Revenues 2021	% Domestic	
1	Italferr	252.912	268.958	94,0	
2	Acea (Area Ingegneria e Servizi)	111.900	111.900	100,0	
3	EniProgetti	109.653	120.206	91,2	
4	Tecne	93.554	93.554	100,0	
5	Sina	88.647	89.098	99,5	
6	Rina Consulting	61.956	129.071	48,0	
7	Sipal	51.291	51.909	98,8	
8	DBA Group	38.970	79.531	49,0	
9	MM (Engineering Division)	37.919	38.711	98,0	
10	Arcadis Italia	36.532	36.532	100,0	
11	Artelia Italia	35.039	36.594	95,8	
12	T.EN Italy Solutions	32.637	35.094	93,0	
13	Infraengineering	32.274	32.274	100,0	
14	Jacobs Italia	32.249	42.163	76,5	
15	Wsp Golder	30.942	34.002	91,O	

Tab. 12 - THE TOP 15 ITALIAN ENGINEERING FIRMS AT HOME

Source: Guamari based on the 2021 balance sheets and firms' data (thousand euros)



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4.4.2 The top Engineering Firms Working on Infrastructures

Pos. 2021	Firm	Revenues 2021	Revenues 2020	% Var.	% Revenues abroad
1	Italferr	268.958	222.732	20,8	6,0
2	Rina Consulting	129.071	131.608	-1,9	52,0
3	Italconsult (c)	113.120	113.627	-0,4	86,9
4	Acea (Area Ingegneria e Servizi)	111.900	88.900	25,9	-
5	Tecne	93.554	3.668	ns	-
6	Proger	89.415	88.249	1,3	71,8
7	Sina	89.098	70.003	27,3	0,5
8	Sipal (c)	51.909	47.009	10,4	1,2
9	MM (engineering division)	38.711	32.218	20,2	2,0
10	Infraengineering	32.274	10.559	ns	-
11	Systra SWS	31.199	19.678	58,5	68,1
12	Technital	27.611	25.913	6,6	6,4
13	Ird Engineering	26.954	26.073	3,4	95,0
14	3TI Progetti Italia (c)	20.811	20.272	2,7	41,0
15	Fugro Italy	17.163	6.073	ns	16,2
16	Rocksoil	15.252	13.267	15,0	8,5
17	Studio Ing. C. Pietrangeli	15.220	12.304	23,7	90,7
18	Studio Speri	14.358	6.704	114,2	nd
19	Tecno In	13.595	9.903	37,3	-
20	Lombardi Ingegneria	12.991	9.085	43,0	22,5

Tab. 13 - THE TOP 20 ITALIAN INFRASTRUCTURE ENGINEERING FIRMS

Source: Guamari based on the 2021 balance sheets and firms' data (thousand euros) (c) consolidate data



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Table 13 lists, given the strategic importance of this market with regard to the national recovery and resilience plan, the first 20 engineering firms according to their 2021 turnover in infrastructures (including its percentage abroad). They are candidate for a national plan which is at present financed in the amount of 104 billion euros (54.2 of which dedicated to railways). On top of the list (once the biggest engineering firms working for the industry have been discarded) is Italferr (group FS / State Railways), followed by Rina Consulting, then Italconsult (with a minor activity in hospitals), the new entry Acea (Area Ingegneria e Servizi), mostly active in engineering hydraulic projects, Tecne, the newly created firm within Autostrade per l'Italia (motorways), Proger (which is also diversified in buildings, especially abroad), Sina (part of group Gavio, motorways), and Sipal (group Dogliani, motorways as well), the engineering division of MM - Metropolitana Milanese (undergroud transportation) and Infraengineering, the fourth biggest firm belonging to a group with motorways concessions, and also the company in this lot with the highest (although not replicable) growth.

As far as increasing output is concerned, the second best performance belongs to Studio Speri (plus 114.2 percent) which has recently created with Tecne a joint company specialized in bridge design. While a similar joint company dedicated to tunneling engineering has been launched with Systra SWS (a recent acquisition of a specialized Italian design firm by a prominent French group). This company has also the third best performance in terms of growth, followed by Lombardi Ingegneria, Italian branch of the homonymous Swiss group (respectively plus 58.5 and 43 percent). It is also worth noting that the only consolidated financial statements in this particular list have been produced by Italconsult, Sipal and 3TI Progetti Italia, while Rina Consulting (group Rina) has not been able to do so in 2021 due to a reorganization within its large (and diversified) concern.

Exporting infrastructure engineering is traditionally of particular importance for Italian firms (which in the past were leaders in obtaining contracts from international bodies such as the World Bank, and other development banks, now less active as bilateral aid programs have developed. In our list leaders in exports are: IRD Engineering (95 percent of its output), Studio Ing. G. Pietrangeli 90.7 percent) and the above mentioned Italconsult and Proger (respectively 86.9 and 71.8 percent).

4.4.3 The Top PMC Specialized Firms

The table that follows (number 14) is motivated by the fact that the Italian market is finally opening up to the international procedures of asking specialized firms to manage the projects of most importance in a professional way capable of assuring a win-win balance between two opposing interests: that of the owner/client and that of the contractor/supplier. First effective in the private market this approach is gaining momentum in the public as administrations are more and more under pressure to meet the targets of the already mentioned ambitious Next Generation programs. This discipline is called "project management consultancy" or PMC and differs from the Italian (more formal and less "substantial") tradition of owners appointing professionals, as "directors of works", to supervise the construction activity in their interest, authorizing, step by step, their payments to the contractors.

It is therefore obvious that the Top 10 Italian *PMC* Firms in this list draw necessarily their qualifications from international experiences (more and more often applied to national). With a case in point, LC&Partners, having its official seat in Italy but active mostly in the Middle East (but presently seeking an established Italian firm to acquire and thus expand its national market). The list, which is limited to firms active in the built environment and not in the indus-




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try, confirms Eos Consulting at the top followed by Alcotec (which has the second best growth record of the lot) and by the mentioned LC&Partners. It ends with the same firm as last year, Pro Iter P&CM (leader in growth), active within the largest diversified group bearing this same name, preceded by Recchiengineering (which has recently tried the path of external growth creating, with BMS, a new firm, BMS Recchi). Another interesting point is that, in spite of the above-mentioned international expertise having been brought to Italy, only one subsidiary of a foreign group, Drees & Sommer Italia Engineering is present in the list, while many other branches of international competitors are not included because they offer a selection of diversified design and consultancy services. This is the case of Jacobs Italia, Arcadis Italia, Artelia Italia, Accom Urs Italia, Arup Italia, ... As far as diversification is concerned at least one firm in this list is strong in a niche of PMC services, cost engineering: GAD.

Pos. 2021	Firm	Revenues 2021	Revenues 2020	% Var.
1	Eos Consulting	9.569	6.736	42,1
2	Alcotec	9.037	4.891	84,8
3	LC&Partners Project Management and Engineering (c)	5.309	6.495	-18,3
4	J&A Consultants	4.829	4.483	7,7
5	GAD - Global Assistance Development	4.112	3.006	36,8
6	Drees & Sommer Italia	2.742	2.116	29,6
7	Perelli Consulting	2.190	2.065	6,1
8	In.Pro.	1.977	1.810	9,2
9	Recchiengineering	1.890	1.317	43,5
10	Pro Iter P&CM	1.673	828	102,1

Tab. 14 - THE TOP 10 ITALIAN PMC FIRMS

Source: Guamari based on the 2021 balance sheets and firms' data (thousand euros) (c) consolidated data

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CHAPTER 5

THE ITALIAN CONSTRUCTION CONTRACTORS - HIGHLIGHTS

In spite of the persistent fragmentation of the offer, 2021 is a rather positive year for the Italian construction industry, both in the domestic and in foreign markets, after a 2020 which, in its own right, had already proved less negative than expected in spite of average two-months stops in construction sites due to the outbreak and diffusion of the covid-19 pandemic. And 2022 is so far quite satisfactory, although more "selective", as the most performant companies seem (at least so far) to be able to absorb the strong increases in the prices of materials negotiating better deals with their (private) clients and profiting of adjustments regulated by public authorities. Worries for the immediate future are however daily affecting the plans of the entrepreneurs as the inflation rate (and the general prospects of a "stagflation" if not altogether "stagnation") is a threat accompanying the evolution (involution) of the international political context (which was suddenly affected by the unexpected war between Russia and Ukraine (or, better, the Western World as a whole).





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5.1 Overall Numbers and Shares of the Market

In 2021 the top 200 construction contractors generate a total revenue of 26.7 billion (18.7 percent) plus with an international share decreased from 38.4 percent of 2020 to 32.1 percent. All the profitability numbers get worse respectively by 15.1 percent (ebitda), 36.1 percent (ebit) and 98.4 percent (net profit) suffering the bad economic performances of the Italian leader Webuild.

From the financial point of view the top 200 reduce net debts by 45.7 percent and keep them at a much lower level than equity (increased by 2.2 percent). The contractors in this ranking employ 85 thousand people, 3.8 percent more than in 2020. Italy being a country with more regional centers than other European (often concentrated in their capitals) it is interesting to analyze which percentage of the total turnover in construction can be attributed to each of its twenty regions. As in previous years Lombardy is first, especially because Milan is the official seat of by large the number one general contractor, Webuild (with a 2021 turnover five times bigger than the second and third general contractors, located respectively in Piedmont and in Emilia-Romagna) with a 38.8 percent share of activity. It is closely followed by Emilia-Romagna (17.8 percent), unusual given that the importance of cooperative construction firms based in this region has decreased since the failure of the largest of them, Cmc. And especially strange that it should be quite a bit more important than Latium (which attracts in Rome, the national capital, a number of general contractors working on public projects). It is interesting to note (in figure 23) that, unlike the A/E industry, construction is so diffused on the territory (and so dependent on local clients) that among the top contractors one finds at least one in each of the 20 Italian regions. Obviously with the two most industrialized, Piedmont and Veneto (respectively 3rd and 4th) weighing more than all the other fifteen.

5.2 News, Tendencies and Trends

The top Italian construction contractors (unlike their *epc* colleagues working in industrial fields) are traditionally smaller in size than in most other major countries. The reason is typically cultural: all aspects of Italian life and economy are traditionally quite local and this directly affects the built environment. Besides major national infrastructures (which however are often divided in various smaller lots diversified geographically) the works, even when financed at the national level, are then commissioned at a more local scale and affected by the fact that building regulations differ in each community. Not to speak of private works the clients of which are numerous and locally based and do not see a true interest in merging in larger entities. The only real drive to growth is therefore competing in the international market (against bigger companies) and this explains why Italy has only one isolated champion, Webuild, which originates from Impregilo (which was bought by Salini in 2013) And has recently further developed absorbing the ailing second ranking, contractor, Astaldi, which was also much more active internationally than nationally (while other major exporters, namely Condotte, have in the meantime disappeared).

A second major cause for the comparative weakness of Italian construction majors compared with foreign competitors is that (also because of a rather strict regulation on their scope of work, namely in the public realm) they have not diversified in other fields such as concessions, real estate, services, nor have they become fully-fledged contractors working in the industrial and process plants besides building and civil construction. What happens, on the contrary, for instance in the field of motorway concessions, is that they belong to groups directly active in this business for which they only provide specialized works.

A third major cause, deriving from the two mentioned-above, is that the Italian market has

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been so different from others (starting with Europeans) that practically no major construction contractors from abroad find an interest in operating in Italy facing these constraints. As it were, after a few limited attempts, only the Austrian Strabag is still active in the Peninsula (where in 2008 bought the firm Adanti and renamed it) while others are only present in specialized niches: Strukton Rail, GSE, Max Streicher, Colas Rail, ... Or else, as in the case of the Spanish Sacyr, approach the Italian market with the maximum caution, simply participating in a permanent consortium, in this case called Sis, guided by the general contractor Inc. And vice versa, after a few unfortunate attempts, no major Italian contractors can claim a $m \acute{e}ra$ policy in foreign markets which is bearing results. With the notable exception of the already mentioned Webuild which owns Lane in the U.S.A. and has been able to develop it as its second (domestic, sort of) market after (obviously) Italy.

5.3 Who is Who (Has Been and Will Be)

From the analysis carried out above (in relation with their European competitors) derive a series of interesting remarks of where major Italian construction contractors stand in the *ad-hoc* list of the top 200 prepared by Guamari with comments on their 2021 performance and previews on the 2022 record so far.

The main Italian construction contractors (unlike their *epc* counterparts) are more fragmented and smaller in size than in most other European countries. The reason is cultural: both in the public and in the private markets works are diffused on the territory, owners are numerous and do not join forces, companies still belong to families who rarely pursue growth and typically do not favor the role of managers. Not only the national champion, Webuild, ranks only twelfth among European construction contractors (in spite of having consolidated Astaldi) but it trails in the world among (construction and/or *epc*) contractors: 53^{th} of the global and 16^{th} among international (as 69.6 percent of its turnover is abroad, especially in the U.S.A where it operates with Lane).

The main reason of this unsatisfactory ranking is the lack of diversification from large infrastructure construction (only 5 percent of its work is in building and none in concessions or services. For the near future no further growth is in sight as the ambitious "Progetto Italia" (with a recapitalization subscribed by major institutions and banks), aimed at creating a national champion attracting other major family-run companies, seems no longer viable.

The rest of the Italian construction industry trails far behind. With an interesting trend: some firms are developing alliances within at least four nation-wide consortia already in place: one most ancient, relating to the time-honored cooperative movement, Consorzio Integra, especially federating firms from Northern Italy and covering the whole spectrum of construction, services and production, three quite recent, of a commercial nature and specialized in contracting, active especially in Central and Southern Italy (where the industry is more fragmented): Consorzio Medil, ReseArch and Valori not to speak of another definitely more powerful: Eteria, composed by the second general contractor, Itinera (group Gavio), which is successfully operating in the U.S.A. through the firm Halmar, the 55th Vianini Lavori (group Caltagirone) and the 50th, Icop, a contractor with an important record in foundation works. Third in our ranking is Pizzarotti, a no longer family-run general contractor (as at the beginning of last year a new *ceo*, with experience in large industrial groups was appointed) which has regretted daring to enter the difficult private market of Manhattan and has been obliged to close Pizzarotti U.S.A. (but also give up its plans to develop in the Australian housing market). Fourth is the only big cooperative, Cmb, specialized in hospitals and tall buildings, finally returning to foreign contracts; fifth is Ghella,



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specialized in tunneling but also diversified in solar energy, with the highest percentage of general work abroad after Webuild (sometimes in association with the Spanish Acciona). Sixth is Bonatti, the largest Italian specialty firm, lying pipelines in many oil rich countries, participated through Igefi by the diversified contractor Di Vincenzo. Seventh is the specialty contractor Pavimental (group Autostrade per l'Italia, the motorways monopolist, his client), which has just changed its name into Amplia Infrastructures; eighth is Gcf (Rossi group), the largest specialty contractor in railway works, ninth is Rizzani de Eccher, a dynamic family group including technologically advanced specialty firms, already especially active in Russia through its subsidiary Codest but now obtaining contracts elsewhere in Europe (and abroad); tenth is Trevi, specialized in engaging foundation works after acquiring the historical firm Rodio), saved from bankruptcy after selling its oil & gas division to the Indian group Meil. 11th is Icm (formerly Maltauro) a family company which has celebrated its hundredth anniversary and is diversified in tall buildings, 12th is Salcef, specialized in railroad construction, which has recently bought small firms abroad and is listed at the Milan stock exchange. 13th is Cimolai, Italy's number one in erecting the most daring and prestigious steel constructions and the fourth largest specialty contractor, which is unfortunately threatened by unexpected financial difficulties. 14th is the largest group engaged in timber construction (and prefabrication) at all scales and for all typologies, Rubner Holding, and 15th is another very diversified group, Impresa Tonon, prefabricating and erecting concrete buildings of all types.

Coming to the rest of the list three categories are worth commenting: smaller general contractors selectively venturing abroad, specialty contractors often with important single foreign markets, firms specialized in private buildings (eventually diversifying in real estate) mostly active in the national market. The latter category, which is the subject of another just issued specialized Report (in Italian), will be treated in the following paragraph completed by the ranking of the Top 55 (table 15) which are of interest for the A/E firms serving private clients (see chapter 4).

Examining general contractors, Inc (19th), specializing in big infrastructures, is the only open to a foreign alliance (with the Spanish group Sacyr) in a consortium, Sis, which proposes project financing schemes (and diversifies in hospitals). Toto (23rd) is part of the homonymous group which was until recently diversified in motorway concessions (number three in Italy) and is still active in wind power through the firm Renexia (which is venturing in the American market).

An interesting new entry is Fincantieri Infrastructure (56th), a general contractor which deserves attention as it derives from the leading (publicly owned) ship manufacturer engaged in diversification: first of all in the adjoining field of steel carpentry having bought the ailing specialty firms Cordioli and Omba and breaking the news with the construction (in joint venture with Webuild) of the Genoa main viaduct which had collapsed in 2018. But has continued diversifying further and further from its core business: in the construction of ports and hospitals (through the recently acquired firm Inso, now Finso).

It should be noted that the Italian market is so competitive (and complicated) that only one major foreign contractor has ventured, the Austrian Strabag (ranking 112th): it started off in 2008 buying and renaming Adanti but its performance keeps being disappointing. As far as specialty contractors are concerned, they can be split in three main categories: steel construction, railway works, oil & gas facilities. Among the first after Cimolai and Fincantieri Infrastructure (limited to the bridge division) at least another contractor, Maeg Costruzioni (44th in this list), should be added. In the field of railways in pecking order, after the already mentioned Gcf – Generale Costruzioni Ferroviarie (expanding in France and Canada respectively through the acquisition of Delcourt Rail and Platinum Track Service) and Strukton Rail Italy, Ceprini Costruzioni, Francesco Ventura, ... To



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Since 2005 we offer services in: Integrated Design | Project Management Construction Management | Due Diligence BIM Design | Service to contractors the third category, especially active in pipelines, belong (after the champion Bonatti) Sicim, Impresa Tre Colli, while Max Streicher (subsidiary of the homonymous German group) and Sicilsaldo are missing, waiting for their financial statements to be available. Besides, the only branch of a major Italian *epc* contractor (Maire Tecnimont), called Neosia, after existing for thirteen years is no longer active in the infrastructure market since November 2020.

To complete the picture, a number of previously important construction contractors having entered insolvency proceedings, have no future (and seem uninteresting for takeovers): Condotte (after selling Cossi to Webuild and then Inso to Fincantieri Infrastructure), Grandi Lavori Fincosit (after divesting itself of Fincosit, specialized in ports), Mantovani, Oberosler, Pessina, Sicrea, can be cited. With an exception, Cmc, formerly the biggest cooperative contractor in Europe, still in insolvency proceedings, which is being supported by the Italian public agency, Invitalia, in the search of a group willing to invest and relaunch it.

5.4 Contractors Specializing in the Private Market

As we have seen construction contractors can basically be divided in three categories: general contractors (which generally express the leaders in terms of turnover but also number and width of qualifications), specialized contractors (which can be nearly as big but have only specialized qualifications and generally work in alliances with general contractors) and contractors (i.e. builders) specializing in the private market. While the first two categories, especially at the top of our list, have significant activities abroad (either directly or through subsidiaries or firms which they have acquired) the third is composed of smaller firms (mostly with a geographically more limited range of action), often specialized in some markets, and rarely active abroad (with the exception of general contractors which are also (private) builders). As a matter of fact in 2021 only nine firms (out of 55) report a turnover abroad which represents just 12.2 percent of total.

Table 15 contains a list of the top 55 contractors specializing in the private market according to their 2021 revenues in this specific field of activity. A field which is certainly interesting as according to Ance (the Italian association of construction contractors) the fiscal bonus dedicated to works of extraordinary maintenance of the Italian (ageing) housing stock have given an important boost to the housing market. Already in 2021 investments in housing (largely private and dedicated to extraordinary maintenance in the amount of 36.6 percent of total expenditure) have increased by 21.7 percent and are expected to grow by another 18.1 percent in 2022 (with the role of extraordinary maintenance even higher: 39.8 percent of total). While investments in non-residential private buildings, after increasing by 20.9 percent in 2021 should add another plus 8.2 percent in 2022.

According to table 15 the total 2021 output of the top 55 contractors interested in the private market is worth 4,245 million euros (19.1 percent more that in 2020) out of a total output in all construction markets of 8,352 million (plus 20.8 percent) with a net result of 8.9 million (compared with a loss of 72 .1 million in 2020 to be ascribed to just three of the top, diversified, contractors).

The list is again led by Techbau (with a 300.5 million euros 2021 turnover), specialized in logistics but in progressive diversification, and ends with Building (19.1 million euros – expected to reach 22/25 million this year), known for its luxury residences. Among the top 10 other four builders (besides Techbau) are 100 percent active in the private market: in decreasing order, Impresa Percassi (group Costim), GKSD Edile, Colombo Costruzioni and GSE Italia. While the second and the third are fully-fledged builders, active in all aspects of civil construction, including urban renovation, the first and the fourth are respectively specialized in hospitals (for its (private) leading group San Donato) and in logistics (but less diversified than Techbau). Given the broad



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Tab. 15 - THE TOP 55 CONTRACTORS IN THE PRIVATE MARKET

Pos. 2021	Pos. 2020	Ë	Revenues in private buil- dings 2021	Var. % 2021/2020	Total reve- nues 2021	Var. % 2021/2020	% private buildings on total reve- nues 2021
1	1	Techbau (j)	300.527	-9,9	300.527	-9,9	100,0
2	2	CMB (a) (1)	298.939	29,8	772.497	33,3	38,7
3	3	Rizzani de Eccher (2)	269.303	20,3	510.066	25,8	52,8
4	7	Impresa Percassi (3)	226.654	51,6	226.654	51,6	100,0
5	10	GKSD Edile* (4)	183.671	84,8	183.671	84,8	100,0
6	4	Itinera (5)	174.392	-15,7	1.230.767	9,0	14,2
7	9	Impresa Tonon	167.907	35,9	403.616	17,6	41,6
8	5	Carron (6)	153.150	-16,5	245.748	-1,7	62,3
9	6	Colombo Costru- zioni*	147.447	-9,2	147.447	-14,5	100,0
10	23	GSE Italia* (m) (7)	124.623	ns	124.623	ns	100,0
11	8	Pizzarotti	90.056	-39,1	1.098.559	12,8	8,2
12	16	Costruzioni Generali Gilardi*	88.242	54,6	94.900	60,2	93,0
13	29	Devero Costruzioni*	87.835	111,1	87.835	111,1	100,0
14	50	Cobar (8)	86.614	ns	125.821	85,7	68,8
15	11	Borio Mangiarotti* (9)	84.960	10,6	84.960	10,6	100,0
16	14	CO.GE.FA.*	82.711	38,2	137.603	54,6	60,1
17	22	Ing. Ferrari*	75.000	45,6	96.157	37,9	78,0
18	26	Di Vincenzo Dino & C.* (10)	72.240	50,9	101.632	50,1	71,1
19	19	Smv Costruzioni*	71.292	30,2	71.800	29,4	99,3
20	30	Sercos*	66.807	65,7	66.807	65,7	100,0
21	21	Cospe*	65.006	20,8	65.580	21,8	99,1
22	24	Nessi & Majocchi*	64.222	31,2	64.222	31,2	100,0
23	15	Ediltecno Restauri*	64.023	8,1	64.023	8,1	100,0
24	-	Garc*	61.369	2,1	89.191	15,6	68,8
25	17	SECAP*	61.000	66,2	64.032	56,9	95,5
20	35	Pasqualucci*	55.710	62.9	61 959	53.9	89.9
28	17	Sa-Fer*	52.353	-5.8	52.353	-5.8	100.0
29	12	ICM (11)	52.297	-20,7	454.176	24,9	11,5
30	27	Grassi & Crespi*	46.946	2,5	47.116	2,9	99,6
31	20	Setten Genesio*	44.101	-19,3	61.530	2,7	71,7
32	37	Nigro & C. Costru- zioni*	43.391	42,6	45.101	41,6	96,2
33	53	Guffanti A. (12)	42.711	107,9	42.711	107,9	100,0
34	31	Albini e Castelli*	42.640	10,6	42.739	10,8	99,8
35	38	S.A.C.* (8)	41.510	38,5	81.393	33,1	51,0
36	36	AeC Costruzioni* (13)	41.107	20,7	58.883	32,8	69,8
37	28	Ricci*	39.578	-6,7	39.578	-6,7	100,0



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Pos. 2021	Pos. 2020	Firm	Revenues in private buildings 2021	Var. % 2021/2020	Total revenues 2021	Var. % 2021/2020	% private buildings on total revenues 2021
38	42	Mario Neri*	36.366	27,1	36.366	27,1	100,0
39	41	Editel*	35.766	24,0	38.877	29,3	92,0
40	34	Tiemme Costruzioni Edili*	33.705	-2,7	33.705	-3,7	100,0
41	-	Cogevi (14)	33.535	ns	101.917	7,0	32,9
42	44	Italia Costruzioni* (15)	32.674	19,9	32.897	13,1	99,3
43	48	Vitali*	31.806	37,4	95.972	23,8	33,1
44	-	CDS Costruzioni*	30.478	138,5	30.478	138,5	100,0
45	51	Edil Pietro*	30.421	42,4	31.106	35,4	97,8
46	46	Bruni Giorgio & Ivo*	29.676	16,1	29.676	16,1	100,0
47	18	Impresa Pellegrini*	29.128	-47,6	59.303	-15,0	49,1
48	54	Giambelli*	28.728	58,2	28.728	58,2	100,0
49	47	Ars Aedificandi*	27.020	14,7	27.020	14,7	100,0
50	49	Mengato (16)	26.922	18,6	26.922	18,6	100,0
51	55	Mak Costruzioni*	23.500	53,6	40.799	33,6	57,6
52	43	MU.BRE. Costru- zioni*	23.325	-14,5	35.696	-22,3	65,3
53	-	lti Impresa Gene- rale*	22.988	72,0	102.468	43,5	22,4
54	39	De Sanctis Costru- zioni*	21.926	-26,2	77.212	24,7	28,4
55	-	Building*	19.134	79,7	19.134	79,7	100,0
TOTAL TOP 55		4.244.710	19,1	8.351.831	20,8	50,8	

Source: Guamari on firms' data (thousand euros)

(*) not consolidated data; (a) associated with Lega delle Cooperative; (j) annual report closed on 30th June 2022; (m) annual report closed on 31st March 2022; (m) associated with Consorzio Integra; (2) consolidates Sacaim e Codest International; (3) since July 2019 is controlled by Costim holding. In March 2020 merged the construction division of Mangiavacchi Pedercini; (4) CKSD (jv between GK Investment Holding and Gruppo San Donato) acquired the firm from Bizzi & Partners in March 2021; (5) Astm/Cavio group, in 2013 merged the "Costruzioni e Prefabbricazione" division of Codelfa, in 2017 acquired the majority of the American firm Halmar International; (6) Carron Holding consolidated data; (7) the firm is controlled by the French group GSE which is part of the German one Goldbeck; (8) associated with ReseArch Consortium; (9) in May 2019 the American fund Värde acquired its 20 percent share; (10) Igefi Group; (11) former Impresa Costruzioni Giuseppe Maltauro; (12) Cinvest consolidated data; (13) born in 2012 by the merge of Acea Costruzioni and Cls; (14) Finvit consolidated data; (15) associated with Arco Lavori which is a member of Consorzio Integra; (16) snc - società in nome collettivo.

diversity of firms in our list, limiting the analysis to the 33 active in the private market for more than 85 percent of their production, their 2021 output as private builders amounts to 2.3 billion euros (only 0.9 percent of which abroad) and other evidence from their financial statements is satisfactory: ebitda, ebit and net results all increase, respectively by 22.5 percent, 22.7 percent and 42.2 percent, while their net financial debts decrease by 59.5 percent and their equity increases 12.4 percent. Moreover, they seem to work more and more like general contractors as their direct workforce expands by a limited 5.3 percent.

In conclusion the recovery of the Italian construction industry in the private market, which has been taking place faster than expected, could rely on widespread fiscal incentives to the rehabilitation of the existing (ailing) building stock: a massive and very successful government program which is of most interest for the smaller (artisanal) firms but can involve structured con-



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+39 051 3161300 integra@consorziointegra.it Via Marco Emilio Lepido 182/2 40132 Bologna, Italy tractors when it focuses on several structures with a coordinated aim of fostering urban rehabilitation. As a rule the most successful builders, of all sizes, are those which are able to react quickly to the changes in the demand of typologies following the sanitary crisis. But, if until 2021 they were favored by an exceptionally low level of interest rates which fostered private investments (also in major development schemes) especially attracting capitals from abroad, confident in the increased accountability of the Italian public administration, the picture has suddenly changed as a reaction to the outbreak for the Russian-Ukrainian war. Inflation, alongside with interest rates trying to tame it, has exploded, starting a sort of "species selection" among builders: rewarding those that are best at optimizing the use of resources, rationalizing their on-site operations and also attracting the clients which are more ready to adjust their investment budgets to rising costs.

5.5 Contractors Specializing in Demolition

As the Italian building (and infrastructure) stock is inexorably ageing (and as policies of urban renovation are gaining ground, also with the aim of reducing the consumption of soil, thus making the construction industry more sustainable) demolition (although obviously selective and carefully planned) is becoming a growing field of specialization.

For the first time Guamari has produced a (limited) list of the top five contractors specializing in demolition (many others do it just on the side of their main activity) which is presented in table 16. This specialization is more and more under demand given the tendency toward urban renovation requiring careful demolition of structures and infrastructures (without upsetting the existing environs and recycling materials as much as possible) before reconstructing. What is interesting is not so much the total value of turnover of these top five (136.3 million euros) as the rate of increase (20.8 percent between 2020 and 2021). Except for one out of five firms this activity also proves to be quite rentable (and increases the equity of the five champions by as much as 39.1 percent).

Despe leads this particular list not only in total revenues (being the only major firm active abroad) and other economic indices but also showing the biggest equity. And, last but not least, having developed a proprietary *know-how* to demolish tall buildings without disrupting the site (and recycling most of the material).

2021	2020	E.	Revenues 2021	Var. % 2021/20	% Estero 2021	Ebitda 2021	Var. % 2021/20	Net result 2021	Var. % 2021/20
1	1	Despe	46.196	39,8	13,2	6.671	23,0	3.117	-3,2
2	2	Armofer Cinerari Luigi	39.404	51,0	-	4.195	111,1	2.683	103,6
3	3	Fratelli Omini	19.413	22,9	-	2.014	-19,1	1.269	-26,0
4	7	General Smontaggi	16.524	-30,2	-	-1.737	n.s.	-6.842	-20,5
5	10	Noldem	14.720	3,6	-	1.034	-13,5	429	5,7
TOTAL			136.257	20,8	4,5	12.177	13,6	656	-32,9

Tab. 16 - THE TOP 5 DEMOLITION FIRMS

Source: Guamari based on 2021 balance sheets (thousand euros) n.s. = not significant



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CHAPTER 6

MADE IN ITALY AND WORLD MARKETS

6.1 The Peculiarities of the AEC Industry

The present turmoil in an international economy which seemed proceeding swiftly toward an increasing "globalization" (until the outbreak of the pandemic and then the war) upsets all previous analyses (and recommendations) on the export strategies of practically all countries. With the most internationalized champions (namely of manufactured goods) facing even more uncertainty as they have to bear not only the difficulties affecting their clients but a number of unexpected constraints: in transportation, in availability of supplies, in energy resources and last but not least in unpredictable rising inflation. One aspect of this dilemma is to which point, in the context of a sort of "deglobalization", is convenient for manufacturers from the most exporting countries (namely Western) to resort to "reshoring", i.e. bringing back home the production activities which had been delocalized in promising developing countries in search of more competitive costs of production. This obviously does not affect directly the AEC industry, which is the focus of our Report, unlike the industry exporting products (including those used for construction), although it can eventually reduce the opportunities for design and construction firms to rely on clients of their own nationality bringing them abroad to assist in their investments. This drawback could however be re-equilibrated by more opportunities to serve the Italian clients reshoring at home, although renouncing to activities abroad could weaken the chances of the AEC industry to profit from the "delocalization" of their clients to establish their reputation in a given country and build from an initial Italo-Italian alliance their success with local clients.

Besides the warning on the present state of the world's economy and of its trade, a first fundamental distinction has to be drawn when addressing the notion of "made in Italy" as the AEC industry does not export goods but services and works: the former obviously easier to be produced at home and immaterially exported, the second requiring an ad-hoc production on site with all the complications deriving from the need to procure all necessary local resources. (A task which is obviously simplified when the foreign contractor operates through a local subsidiary: a condition which rarely applies to Italian exporters of works, as we have examined in the previous chapter). Quantifying the amount of Italian exports in the construction industry at large is a difficult exercise as the available statistics take into account goods and services (including design) but not works performed on site, although obviously a certain amount of products and services originating from Italy (thus a combination of "material" and "immaterial" exports) could be incorporated in the value of the works performed abroad, especially so when their quality is such that "made in Italy" becomes a sort of label adding appeal to the built facilities, typically more for private than for public (less sensible) clients. This "added value" to exports in the AEC industry (but particularly in architecture and design) can be said to propose a sort of "Italian way of life" (in a way "aesthetic" and at the same time "trendy") characterizing the whole supply chain. This peculiar competitive edge is considered to rest on a conventional triad: FFF which means Fashion, Food and Furniture, where the last realm of exports is the most akin to architecture, (interior) design and obviously building. The Italian design firms can rely on a manufacturing industry composed of largest number of enterprises in Europe: they are approximately 30 thousand with 61 thousand employees and have generated a value added of 2.5 billion euros in the last year for which comprehensive data are available (2020, still penalized by the pandemic). They export 44 percent of their production (8.9 percent of which out of the E.U.).

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Supported by such an important industrial base, the more architects (and especially designers) can ally with (building) contractors (even when only specialized in interiors) to approach foreign markets sensible to the mentioned Italian "added value" the better their joint efforts can seduce clients. A mix of creativity, ingenuity and especially outstanding craftsmanship is the right strategy to create a certain "aura" around everything which relates to "made in Italy" and thus promote exports at a larger scale than targeting the most sophisticated social classes. Obviously an alliance between creative engineers and construction contractors can also promote "made in Italy" when sophisticated and advanced technologies are at the heart of competition with a special emphasis, today, on the projects which satisfy the so called ESG levels of performance. This is certainly the case of buildings but also of other infrastructures in which Italian contractors excel: dams (which were widely realized in the Alps and the Apennines and make a comeback as an ecological form of producing energy), tunnels (so common in a country as mountainous as Italy), bridges (for which the Italians have a tradition of aesthetics and engineering audacity) and railways (which have been long neglected in rich countries like the U.S.A. or are becoming a priority in fast urbanizing parts of the developing world). Not to mention motorways (in which Italy has one of the oldest traditions but whose interest is not just in construction but also in the concession of the infrastructures over a long period of time).

A peculiar niche of *AE* (in this case not *C*) exports in which the Italian firms excel (and which does not seem to suffer because the very rich classes of the society prosper, rather than suffer, when the world economies are most upset) is the design (from an architecture and engineering point of view) of yachts, as at this time they add to their traditional appeal of "luxury" and "status symbol" a different sort of usefulness (obviously for those who can afford it): they are not only used for leisure but also, especially since the pandemic, as a mobile habitat for remote working. In 2021 the industry specializing in the production of yachts has performed very satisfactorily: its total turnover has reached 6.11 billion euros (with a 31.3 percent increase on 2020) and a level very close to the all time record of 2007 and 2008, the years just preceding the big financial world crisis. As far as the exports of superyachts Italy confirms its position as world leader, second only to the Netherlands (which can however rely on *refitting* rather than on producing new boats) with exports worth 3.5 billion U.S. dollars (amounting to 16.1 percent of the world exports).

6.2 Strategies for AEC Exports

In the context of a (at least temporarily) "de-globalizing" market the strategies for *AEC* exports seem more differentiated than in the recent past and need to be very reactive and adapting in real time more than ever before. If the phenomenon of "reshoring" mainly manufacturing activities (but in some cases also tertiary) poses a problem for the Italian firms which used to rely on the promotional effect in the various countries where they established their subsidiaries and production sites, all the more urgent becomes a more autonomous strategy of independently approaching foreign markets: not easy as it requires research of opportunities in the first place and investments in the second, both more difficult the smaller and fragmented the firms are. And yet the Italians are known for being creative, dynamic and "friendly" (although unfortunately sometimes not adequately supported by the State representative in each country), which makes the contacts and the search of clients somewhat easier even when new ground has to be explored. But … in spite of individual efforts, the Italian exporters should learn to better coordinate and approach foreign markets as a national system. Thus, relying on "networking" in all its declinations.

More engaging (and expensive) strategies might however be pursued when single firms do not



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obtain the desired results. There are different commercial options in a growing degree of commitment to exports: ally (with compatriots and/or foreigners), delocalize, acquire local firms, ... The first of the three is often more advisable for contractors, especially when tenders require certain dimensions and qualifications, the second can also well apply to design firms (as the investment is not substantial and the opportunities for acquiring local qualifications and being included in shortlists for competitions are definitely higher), the third is again more advisable to contractors due to the "material" necessity of performing works on site, using local materials as much as possible, and complying with regulations. Both of these latter options can help overcome eventual protectionist barriers ... but the latter has been little practiced by Italian firms more for lack of financial strength than of managerial skills.

In general, as a rule, to assess the competitive advantage in real time should inform the choice between the three options. Always considering the potentials of the supply chain which can support the firm bidding in a foreign market. More difficult today, as we have seen, due to the disruption of so many transportation connections (and the difficulty to predict how it will evolve – or involve?). In general it can be said that the assessment of competitive advantages in any targeted market should be carefully carried out before investing resources which could weaken firms on other fronts of their activity. Centering the right priorities is today more crucial than probably ever in the past as resources are not only scarce but there is an obsession on meeting ESG (Environmental, Social, Governance) targets even in countries where local contractors might not be equipped for this task.

6.3 Highlights in AEC Recent Foreign Contracts

The top of the Italian AEC industry, based in a country small in size but quite urbanized, has relied for its efforts to grow especially on winning contracts directly from its home base (or foreign subsidiaries) not having the strength to operate through acquired local firms and thus operate abroad as if it were another "domestic market". Unfortunately the rush to win foreign contracts, notably in the case of construction contractors with adequate skills to expand but penalized by their size and financial capacity, has often been motivated by the desire to grow (with their own forces) out of a limited (and crowded) domestic market. And this has led to a series of misadventures as most contracts abroad have proved more risky than at home with an ensuing large number of painful failures. This at the moment is fortunately no longer the case given the significant resources which are presently being devoted to construction (especially in the public field) in the context of the European-wide recovery plan. Similar problems have not affected the architecture and engineering firms as they do not need, in order to work abroad, to invest more than in the human resources (equipped with the necessary technologies) able to develop suitable projects for different national contests.

Especially now, that the international market has inevitably become more selective, there are a number of positive examples which are worth describing to explain how, where and why the Italian firms "best fit" for international competition can be successful. This seems the best way to complete this *Report*: with "case studies" of projects giving more value to numbers and commentaries. The highlights that follow are positive examples from exporting firms in each of the three categories, mentioned according to the position that each firm occupies in our lists.

6.3.1 Architecture

ATI Project is cooperating with 3TI Progetti in designing the new hospital of Tallinn (Estonia) in Maarjamäe after already working on two hospitals in Denmark: the Bispebjerg of Copenaghen (built by Rizzani de Eccher) and the NYT OUH of Odense (built by CMB and Itinera).

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ACPV Architects signs the interior design of the 1428 Brickell Tower in Miami, a 70-storey building with the architectural concept of the American firm Arquitectonica and in 2022 has inaugurated in Bangkok (Thailand) the "Sukhumvit Thirty-Eight", a 20,000-square-meter high-rise building offering 216 residential units.

Mario Cucinella Architects designed (and is overviewing its construction) the "MET Tirana Building", a new residential and office 48.7 meters-tall building located in one of the most important and central areas of the Albanian Capital and "Viertel Zwei", two residential towers (120 and 90 meters) in the heart of the Vienna Prater park.

Renzo Piano Building Workshop is working on the "Isola della Musica" of Hanoi (Vietnam), a building connecting West Lake and Đam Tri Lake which will contain a 1800 seat Opera Hall and a 1000 seat Convention Hall.

One Works is working on the architectural and structural project (and as tender support) of the new Emirates Yatch Club, part of the luxury "Mina Rashid" waterfront in Dubai (U.A.E.), but also on the architecture and works as supervisor of the new line (corridor 4) of the Chennai Metro Rail in India.

Marco Casamonti/Archea Associati designed (in collaboration with F&M Ingegneria) the "Kiss Bridge" in Phú Quõc (Vietnam), an 810 meters pedestrian crossing soon to be opened to the public.

Design Group Italia ID redesigned the overall retail concept of the Blue Lagoon brand, starting from the flagship store located in Grindavík (Iceland), one of the world's greatest spa destinations.

Hydea is working for the Commission de l'Océan Indien on the "Regional Project for the Development of the Cultural and Creative Sector" as technical assistant for the implementation of action and projects aimed at strengthening the cultural and creative industries sector in the islands of the Indian Ocean (Comoros, Madagascar, Mauritius, Mozambique and Seychelles).

Pininfarina is working on the Light Towers of Mérida (Mexico), two tall buildings of 15 and 17 floors and 122 apartments.

LAND Italia cooperates, in its capacity as landscape architectural firm, with Zaha Hadid Architects on the renewal of the Nyugati Railway Station of Budapest (Hungary), part of the masterplan "Budapest 2030".

Studio Schiattarella e Associati is working in Saudi Arabia on the Diriyah Art Future, a project that will support the digital research of emerging artists in Riyadh, the "Culture Square" of Jeddah, which will include the Digital Art Museum and the Red Sea Film Festival and is establishing the architectural guidelines for the "Giga Projects" of the Reign.

Giò Forma Studio Associato is particularly active in Saudi Arabia where two structures are under construction: in Jeddah the islamic Arts Biennale (with annexed an arts café and gift shop), in AI-Ula the Hegra Heritage Boutique Hotel, a transformation of the Unesco Hijaz Railway Station.

6.3.2 Engineering

Rina Consulting in 2021 developed the Hertz building, part of the ESA-ESTEC campus in Noordwijk (Netherlands), that will host the biggest anechoic chamber in Europe and will be the biggest satellite testing structure of the continent. In Angola the firm is involved on geotechnical, geophysical and environmental investigations for the North Gas Complex megaproject for ENI.

Italferr collaborates with Webuild on the design of the Houston-Dallas high speed railway in the U.S.A.; has been awarded in Uzbekistan the contract for the Angren-Pap-Kokhand-Andijan section and in Colombia is working on the first Bogotá's metro line.



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EniProgetti is working in Libya on the basic design and FEED engineering for the expansion of the Mellitah complex. The new offshore structures will increase the gas production of the country.

Italconsult in 2021 acquired, through its subsidiary Boswell, 50 million euros of new contracts in the U.S.A.: as works supervisor for NYSDOT (New York State Department of Transportation); as designer for the water treatment and as project manager for the primary client First Energy.

Proger is realizing in Cairo (Egypt) the new 63.000 square meters headquarters of Petrobel, the most important oil & gas player of the Mediterranean participated by ENI and EGPC (Egyptian General Petroleum Corporation).

Dba Group is working as project manager for the realization of FTTH lines for the Ministry of Communications of Azerbaijan and digitalizing the Slovenian public administration.

Agriconsulting, through its Belgian subsidiary Agreco, is providing technical support for the effective implementation of "B4life Facility Life Crisis Worldwide", the EU's agenda for biodiversity conservation.

F&M Ingegneria has been commissioned by the Ministry of Housing & Urban Planning of Oman to lead the delivery of consultancy and project management services for the "Greater Muscat Structure Plan", a project that will focus on delivering sustainable and resilient urban development.

Manens Tifs in association with LAND Italia and the Canadian firm Moriyama & Teshima Planners, won two design competitions in Saudi Arabia parts of the Green Riyadh Project: two areas which include almost 6 million square meters of landscape for urban foresting and storm-water harvesting with only 30,000 square meters of buildings.

Ird Engineering has been awarded its first service contract for the Romanian Compania Nationala de Administrare a Infrastructurii Rutiere (CNAIR), aimed at the supervision of the design and construction of one section of the A3 highway: the Chețani — Câmpia Turzii which is part of the Trans-European Transport (TEN-T) Comprehensive Network.

6.3.3 Construction

Webuild in October 2021 inaugurated the "Airport Line" of Perth (Australia), an 8.5 kilometers long railway commissioned by the Public Transport Authority linking the city center with the international airport. In the same month it won a 144 million U.S. dollars worth water treatment project for a pulp mill in Paraguay through its specialized subsidiary Fisia Italimpianti.

Itinera in March signed the contract for the "Arenastaden – Södra Hagalund" underground section in Stockholm (Sweden): the work consists of the construction of two stations (Arenastaden and Södra Hagalund) and a connecting tunnel about 2.5 kilometers long.

Pizzarotti is working on the construction of the new university hospital of Pointe-à-Pitre in the municipality of Abymes in Guadeloupe: a complex of buildings for a total of 618 beds on a total floor space of 77.6 thousand square meters. In June it has been awarded the renewal of one section of the N2 EP12 highway of Bellinzona (Switzerland).

Cmb leads the jv with Itinera which is realizing the new Odense Hospital Center in Denmark: six buildings and a central body, the building are four or five stories tall for a total surface area of over 250 thousand square meters.

Ghella with the Greek general contractor Avax and the French specialized contractor Alstom in October completed the 7.6 kilometers extension of the Athens Metro Line 3 to Piraeus. The three new stations "Maniatika", "Piraeus" and "Dimotiko Theatro" connect Athens International Airport with the port in less than an hour.



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Bonatti with General Electric and SENER has been awarded by EnBW Energie Baden-Württemberg a three hydrogen-ready combined cycle gas turbine plant in Altbach/Deizisau, Stuttgart-Münster and Heilbronn (Germany) for a total of around 1,300 megawatts of electricity generation capacity.

Gcf in April started the renewal of three railway sections (55 kilometers) in Hautes-de-France: in the first one (Fives – Baisieux) is restoring the screed (about 36,000 tons of ballast) and replacing 23,200 sleepers.

Rizzani de Eccher with the Dutch Ballast Nedam, has been awarded by EIB (European Investment Bank) the construction of the new headquarter in Luxembourg: the new building of 64,000 square meters has already received the "Excellent" classification under BREEAM.

Trevi in Saudi Arabia, after completing the execution of test piles, suitable for defining both the best execution technology and the finalization of the project, has started the execution of the permanent foundation works for "The Line - the city of the future", an eco-friendly project under construction in the Tabuk area.

Icm is working in Austria on the A26 Linzer Autobahn Project "Etappe 1" which consists in two lots: one for the construction of a 385-meter 4-lane cable-stayed bridge on the Danube river and one for the construction of north-bound and south-bound junction tunnels for a total length of 3.3 kilometers.

6.4 Mapping Subsidiaries in the World

A final aspect of the Italian *AEC* industry's projection in the world is the relevant phenomenon of permanent (costly) delocalization from the Peninsula creating branches bearing their names (often in the form of locally established firms according to the legislation of the given country). A tendency which does not seem to have been too much discouraged by the two recent crises (sanitary and geopolitical) as the possibility to operate "abroad from abroad" has allowed to forego frequent travels (although the choice of the countries where it is convenient to delocalize has obviously become more selective). In the framework of a (probably temporary) "de-globalization" one remarks that the number of foreign branches in the world has diminished (comparing 2020 with 2021) from 49 to 48 in the case of architectural firms, from 61 to 53 for engineering firms and from 56 to 53 as far as construction contractors are concerned. The *AEC* industry as a whole prefers to open branches in other European countries also because of more similar practices and rules to those which are customary at home.

The following three pages present maps that show the world geographical location of Italian architecture and engineering branches and of Italian long-term settlements (to actually realize the works) in the case of construction contractors (which in many cases do not need formal subsidiaries given one-shot engagements).

Architectural firms permanently installed abroad, according to the available information, appear especially strong in affluent countries: in fact if the rest of Europe is once again the main area (26 firms have a branch there), the second markets are North America and the Middle East (15 branches each), followed by Asia (14). Major Italian engineering firms which declare at least one stable office abroad show the largest concentration in the rest of Europe (37 companies) and a strong presence in the Middle East (28), Asia (17) and South America (16). Italian construction contractors have 48 permanent settlements in Europe, 21 in the Middle East, 18 in North Africa, ...

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Europe - 26/48

Alfonso Femia, Archea, Archest, ATI Project, Bm Studio, Carlo Ratti, Design International, Gbpa, Giraldi, Goring & Straja, Cpa, Hydea, II Prisma, Ipostudio, Leonardo, Marco Piva, Massimiliano Fuksas, Mdb, Metrogramma, Obr. One Works, Polistudio Aes, Polistudio Aes, Politecna, Progetto CMR, RPBW, Scape, Spazio3

Middle East - 15/48

Archea, Asz, Bm Studio, Cremonesi Workshop, D-Recta, Dante O. Benini, Giraldi, Icona, Marco Piva, One Works, Open Project, Politecna, Pras, Progetto CMR, Simone Micheli

Asia - 14/48

Archea, Archest, H&A, Hydea, Icona, Leonardo, Marco Piva, Massimiliano, Fuksas, Matteo Thun, One Works, Progetto CMR, Simone Micheli, Stefano Boeri, Vudafieri Saverino

Leonardo

North America - 15/48 Carlo Ratti, Delogu, Design Group Italia, Giraldi, Goring & Straja, Gpa, Icona, Iosa Ghini, Lissoni Associati, Marco Piva, Mario Cucinella Architects, Progetto CMR, Rossiprodi, The

Blossom Avenue, The

OK Design Group

Simone Micheli, The OK Design Group

South America - 2/48 Archea, Officina Architetti

Fig. 24 - The Italian Architecture (and Design) Firms' Branches in the World Source: Guamari based on firms' information

Europe - 37/53

3TI Progetti. Agriconsulting, Bergmeister, Bonifica, Dba. Ecosfera. eEM. Enereco, EniProgetti, Enser, Erregi, Esa, Ets, F&M, Holzner & Bertagnolli, Idest, Incide. Ird. Italconsult. Italferr. Manens-Tifs. MIC-HUB. Montana. Politecnica, Prisma, Proeco, Proger, Rina Consulting, Rocksoil, Sering, Sintel, Sipal, Spea, Studio Tecnico Bfp, Technital, Techproject, Tecnic

Middle East - 28/53

3TI Progetti, Bonifica, eFM, Enereco, EniProgetti, Erregi, Esa, Ets, F&M, Hmr, Incico, Ird, Italconsult, Italferr, LC & Partners, Manens-Tifs, MM, Proeco, Proger, Rina Consulting, Rocksoil, Seingim, Sering, Spea, Sti, Studio Tecnico Bfp, Technital, Via Ingegneria

Asia - 17/53

3TI Progetti, Agriconsulting, Alpina, Ariatta, Bms Progetti, Elc Electroconsult, Enereco, EniProgetti, Erregi, Ets, Incico, Italferr, Prisma, Rina Consulting, Rocksoil, Sipal, Technital

North America – 7/53

3TI Progetti, F&M, Incico, Italconsult, MIC-HUB, Prisma, Proeco

Central America - 2/53 Ets, Technital

South America - 16/53

Agriconsulting, Alpina, Beta Studio, Cooprogetti, eFM, Idest, Italferr, Net, Progin, Sipal, Spea, Sti, Studio Pietrangeli, Technital, Tecnic

North Africa - 11/53

Agriconsulting, EniProgetti, Ets, Incide, Intertecno, Ird, Italconsult, Italferr, Proger, Rina Consulting, Studio Tecnico Bfp

Central/South Africa - 12/53

Enereco, Hmr, Incico, Italconsult, Italferr. Proger, Sering, Spea, Studio Pietrangeli, Technital, Via Ingegneria

Fig. 25 - The Italian Engineering Firms' Branches in the World Source: Guamari based on firms' information

Europe - 48/53

Acmar, Albini e Castelli, Amplia Infrastructures, Bit, Bonatti, Castaldo, Cimolai, Clf, Cmb, Cogefa, Cogeis, Cogevi, Colombo, Europea 92, Fincantieri Infrastructure, Finso, Fondamenta, Gcf, GD Infrastrutture, Ghella, Icm, Icop, Impresa Percassi, Inc, Italiana Costruzioni, Itinera, Luigi Notari, Maeg, Manelli, Nessi & Majocchi, Nuova Coedmar, Pizzarotti, Quadrio Gaetano, Rizzani de Eccher, Roda, Salcef, Semat, Sicim, Sistem Costruzioni, Sitalfa, Solesi, Strukton Rail,Techbau, Tirrena Scavi, Tonon, Toto, Trevi, Webuild

Middle East - 21/53 Bonatti, Cea, Cimolai,

Europea 92, Chella, Icm, Italiana Costruzioni, Itinera, Maeg, Pizzarotti, Rizzani de Eccher, Salcef, Sicilsaldo, Sicim, Strukton Rail, Suardi, Tirrena Scavi, Todini, Toto, Trevi, Webuild

Asia - 7/53

Ghella, Icop. Pizzarotti, Rizzani de Eccher, Sicim, Trevi, Webuild

North America - 8/53

Bonatti, Cimolai, Ghella, Itinera, Rizzani de Eccher, Sicim, Trevi, Webuild

Oceania - 3/53

Ghella, Rizzani de Eccher, Webuild

Central America - 7/53

Cimolai, Cogeis, Ghella, Pizzarotti, Setten Genesio, Trevi, Webuild

South America - 10/53

Bit, Cimolai, Ghella, Inc, Pac, Pizzarotti, Rizzani de Eccher, Strukton Rail, Trevi, Webuild

North Africa - 18/53

Bentini, Bonatti, Cimolai, Cogevi, Europea 92, Gcf, Icm, Nessi & Majocchi, Pellegrini, Pizzarotti, Rizzani de Eccher, Salcef, Secap, Sicilsaldo, Strukton Rail, Toto, Trevi, Webuild

Central/South Africa -10/53

Bonatti, Cimolai, Icm, Itinera, Pac, Pizzarotti, Salcef, Sicim, Trevi, Webuild

Fig. 26 - Where the Italian Construction Contractors Work in the World Source: Guamari based on firms' information


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CHAPTER 7 THE TOP OF THE INDUSTRY THE LATEST RANKING

The Top 200 Architecture (and Design) Firms

Tab. 17

Pos. 2021	Pos. 2020	Fim	Revenues 2021	Revenues 2020	Var % '21/20	% abroad 2021	Ebitda 2021	Var % '21/20	Net result 2021	Var % '21/20	Net debts 2021	Var % '21/20	Equity 2021	Var % '21/20
1	1	Lombardi- ni22 (1)	25.214	19.505	29,3	1,9	4.526	120,6	2.772	135,5	-7.266	-16,1	11.135	33,1
2	2	Marco Casamonti & Partners (2)	22.419	17.159	30,7	88,1	9.635	28,6	6.809	30,4	-4.249	13,1	8.136	52,7
3	4	ATI Project (o) (3)	18.106	14.121	28,2	57,1	6.101	-5,9	4.672	-18,5	-4.667	52,5	7.423	-35,1
4	11	Luca Dini Associati (4)	17.232	7.554	128,1	100,0	9.623	73,6	7.156	92,7	-11.180	-21,9	15.071	69,1
5	3	ACPV Architects (5)	17.195	16.086	6,9	57,2	1.257	54,0	870	121,4	-2.211	39,4	5.221	20,0
6	6	Progetto CMR (6) (7)	13.214	13.030	1,4	-	959	24,5	451	35,8	nd	nd	2.915	18,3
7	5	MC A - Mario Cucinella Architects	13.135	13.191	-0,4	5,6	743	-46,9	262	-53,1	1.405	ns	1.659	-35,5
8	9	Starching (8)	12.715	9.761	30,3	0,3	581	ns	288	ns	2.434	116,7	2.119	7,5
9	8	Renzo Piano Building Workshop (9)	12.679	10.339	22,6	56,4	2.023	ns	1.423	ns	-2.177	42,6	6.249	13,1
10	7	One Works (o) (10)	11.698	11.294	3,6	37,1	716	-15,3	7	-96,2	7.671	17,4	4.785	1,5
11	10	Archea Associati (11)	9.725	8.942	8,8	32,9	1.496	-47,0	1.899	6,6	nd	nd	6.537	40,9
12	12	General Planning (o)	8.720	7.421	17,5	-	1.157	45,5	738	40,0	-844	ns	1.997	24,1
13	15	Design Group Italia ID	7.701	6.661	15,6	49,1	551	7,4	247	-13,9	-3	ns	1.682	17,1
14	13	Gpa	7.596	7.395	2,7	15,0	626	-0,8	157	72,5	nd	nd	938	19,9
15	20	Asti Architetti	7.345	5.878	25,0	-	1.524	-4,5	988	-5,1	nd	nd	4.165	31,1
16	17	Tekne (o)	7.328	6.399	14,5	-	1.409	4,5	961	19,5	226	-74,9	2.937	48,7
17	21	Hydea (o) (12)	7.217	5.714	26,3	64,2	985	84,1	506	96,1	-2.735	-48,5	5.944	4,0
18	23	Mate (a) (o) (13)	7.203	5.095	41,4	-	378	32,6	177	ns	626	7,0	1.301	9,2
19	18	Pininfarina (architecture division) (14)	6.894	6.305	9,3	85,0	128	-60,5	nd	nd	nd	nd	nd	nd
20	27	Domus Ing & Arch	6.628	4.150	59,7	nd	1.040	74,5	725	76,4	nd	nd	2.139	51,3
21	16	Crew - Cremonesi Workshop (o) (15)	6.360	6.426	-1,0	nd	1.323	-16,8	886	-6,3	-596	58,1	4.645	2,9





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22	28	DVA - DVision Architecture	6.251	4.093	52,7	-	872	ns	403	ns	-997	29,0	790	104,1
23	19	Spi - Società Progettazio- ni Integrali	6.125	6.013	1,9	nd	1.326	7,7	864	5,2	nd	nd	2.005	3,4
24	22	ll Prisma Architettura (16)	6.066	5.474	10,8	-	50	-49,5	23	-17,9	-179	59,7	176	15,0
25	29	LAND Italia (17)	6.009	3.929	52,9	50,3	254	-6,3	148	97,3	52	ns	478	44,8
26	44	Studio Schiattarella e Associati (o)	5.522	3.062	80,3	nd	1.149	79,0	640	72,5	-327	38,5	2.507	15,4
27	30	Lissoni Casal Ribeiro (18)	5.239	3.909	34,0	89,0	1.327	ns	1.060	ns	-1.571	-24,8	3.309	47,1
28	119	Ideàs	5.220	1.182	ns	nd	808	ns	532	ns	80	ns	732	ns
29	-	Newark Engineering	5.189	1.193	ns	-	2.355	ns	1.634	ns	-748	ns	1.902	ns
30	34	Park Associati (o) (19)	4.955	3.705	33,7	nd	1.098	96,1	690	89,6	-865	-81,3	3.255	32,9
31	43	Patricia Urquiola	4.766	3.101	53,7	58,7	698	ns	416	ns	-1.772	-66,2	2.293	22,2
32	33	GLA - Genius Loci Architettura	4.746	3.739	26,9	nd	1.107	40,3	765	36,9	nd	nd	1.332	31,0
33	24	Zuccon In- ternational Project	4.651	4.805	-3,2	-	2.185	-15,1	1.628	-7,4	-5.238	-14,9	9.202	21,5
34	36	J+S (o) (20)	4.625	3.336	38,6	nd	363	39,6	78	ns	1.316	3,5	752	11,6
35	25	Made to Measure (21)	4.542	4.449	2,1	nd	324	-46,0	45	-83,7	nd	nd	2.159	2,0
36	55	Stefano Boeri Architetti (22)	4.513	2.458	83,6	46,8	545	ns	352	ns	-259	ns	854	70,5
37	47	Minnucci Associati	4.355	3.015	44,4	-	601	56,5	337	55,3	-51	ns	1.313	34,5
38	26	Matteo Thun & Partners (23)	4.188	4.281	-2,2	nd	752	ns	480	ns	nd	nd	2.013	31,3
39	14	Fuksas Architecture (0) (24)	4.147	6.983	-40,6	nd	506	-25,6	303	16,1	-551	66,0	1.000	43,5
40	52	Lissoni Associati (18)	4.085	2.847	43,5	26,8	1.447	127,9	1.019	137,0	-3.176	-76,2	2.841	55,9
41	35	Planet Idea	4.057	3.382	20,0	95,8	-2.163	-88,4	-2.312	-94,6	-163	ns	2.604	ns
42	31	Piuarch (25)	4.019	3.852	4,3	nd	940	35,4	649	39,3	-718	nd	2.242	40,7
43	39	Carlo Ratti Associati	4.001	3.211	24,6	13,1	477	ns	262	ns	-475	10,9	1141	29,8
44	48	David Chipperfield Architects	3.835	2.992	28,2	-	167	-13,9	44	-49,4	78	ns	2.745	0,5



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45	64	Francesco Paszkowski Design	3.801	2.051	85,3	nd	1.823	115,5	1.246	111,2	-696	-6,7	1.258	109,0
46	60	Hangar Design Group (26)	3.690	2.332	58,2	-	240	ns	119	ns	1.216	2,4	413	38,1
47	38	Architetto Michele De Lucchi (27)	3.598	3.270	10,0	-	211	ns	137	ns	-1.117	27,4	3.158	4,5
48	59	Binini Partners	3.581	2.370	51,1	-	110	-13,4	11	120,0	-287	ns	456	2,5
49	54	Fortebis Integrated Building Services (28)	3.505	2.635	33,0	nd	211	-56,7	109	-68,8	nd	nd	231	-51,2
50	46	Archilinea	3.499	3.026	15,6	-	391	89,8	155	ns	1.165	-4,3	390	50,0
51	53	Archest (o)	3.419	2.728	25,3	nd	426	111,9	288	126,8		nd	970	19,5
52	51	Atelier(s) Alfonso Femia AF517 (o)	3.400	2.891	17,6	nd	407	25,6	212	17,8	-812	-34,9	515	70,0
53	32	Open Project (o)	3.352	3.762	-10,9	2,7	78	-63,0	29	-80,9	-465	-33,2	687	-9,4
54	37	Giugiaro Architettura	3.303	3.283	0,6	7,5	400	ns	234	ns	-63	ns	1.612	17,0
55	50	Peregalli Sartori	3.301	2.915	13,2	nd	941	11,2	534	25,9	-1.146	ns	2.485	27,4
56	49	Alberto Izzo & Partners	3.213	2.985	7,6	nd	517	-26,9	350	-19,7	-617	17,6	562	24,3
57	40	Wip Architetti (o) (29)	3.206	3.180	0,8	-	261	-56,7	156	-61,4	-72	87,2	1.186	15,1
58	77	Gbpa	3.171	1.791	77,1	nd	159	ns	96	ns	-261	ns	154	ns
59	69	Metis Lighting	3.058	1.973	55,0	nd	1.085	ns	734	ns	-1.953	-71,5	1.778	62,4
60	62	Studio Sclavi	2.944	2.145	37,2	nd	1.198	53,2	757	55,8	-1.471	10,3	4.597	19,7
61	58	Polistudio Aes (30)	2.849	2.399	18,8	-	162	ns	4	ns	nd	nd	462	0,9
62	71	Ced Ingegneria	2.737	1.876	45,9	nd	597	101,7	363	ns	nd	nd	1.137	38,0
63	56	Aegis Cantarelli & Partners	2.679	2.448	9,4	nd	240	56,9	125	111,9	nd	nd	1.204	11,6
64	41	R&P Engineering (o)	2.628	3.149	-16,5	nd	56	-64,3	15	-77,9	553	17,4	182	-22,6
65	169	Politecna Europa	2.532	827	ns	nd	253	ns	116	ns	599	81,0	146	ns
66	82	Coprat (a) (o)	2.514	1.667	50,8	nd	80	-11,1	9	0,0	nd	nd	268	5,5
67	61	Studio Amati (o) (31)	2.504	2.237	11,9	nd	202	-7,3	127	-14,8	92	-42,9	1.390	-11,1
68	57	Asa Albanese	2.472	2.419	2,2	nd	577	10,7	377	10,6	-354	-7,6	1.739	27,8

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69	103	Giò Forma Studio Associato (32)	2.453	1.381	77,6	-	201	ns	216	ns	-854	-13,7	390	45,0
70	-	Pica Ciamarra Associati	2.434	618	ns	-	90	ns	61	ns	-237	-85,2	1.122	5,7
71	66	G22 Projects	2.380	2.044	16,4	nd	594	11,9	401	13,9	-1.306	5,2	1.291	0,8
72	65	Beretta Associati (o)	2.338	2.044	14,4	-	192	111,0	107	ns	615	32,0	676	18,6
73	72	Bioedil Progetti	2.307	1.855	24,4	nd	97	ns	6	ns	526	-18,8	67	11,7
74	67	Coima Image	2.297	2.026	13,4	nd	407	5,7	267	-1,1	-276	1,4	703	7,2
75	81	T.A. (33)	2.264	1.690	34,0	-	160	ns	60	ns	-50	ns	364	ns
76	95	Cairepro (a) (o)	2.248	1.459	54,1	nd	94	95,8	22	83,3	-117	ns	470	5,6
77	45	Studio Marco Piva	2.224	3.042	-26,9	53,0	54	-5,3	-3	78,6	182	ns	1.756	-6,0
78	-	Guffanti Group & Partners	2.224	642	ns	-	1.094	ns	782	ns	-895	ns	1.214	ns
79	84	Area-17 Engineering	2.217	1.666	33,1	nd	39	-9,3	1	-93,3	58	ns	146	0,7
80	85	lcona Design Group	2.123	1.658	28,0	74,9	508	133,0	126	ns	1.434	17,2	14.754	0,9
81	79	De Jorio Luxury & Design Projects	2.084	1.752	18,9	100,0	1.196	-9,2	838	-11,3	-1.880	-303,4	1.880	73,6
82	78	Gnosis Progetti (a) (34)	2.078	1.764	17,8	nd	126	38,5	33	ns	nd	nd	739	4,1
83	120	Rossiprodi Associati	2.070	1.171	76,8	nd	468	ns	330	ns	-945	ns	556	113,8
84	177	Studio Cartolano (o)	2.026	800	ns	-	455	ns	238	ns	-461	ns	281	ns
85	118	RP Architects	1.952	1.185	64,7	nd	1.055	124,0	768	140,8	-73	65,9	1.184	ns
86	73	Pichler Architects	1.949	1.855	5,1	nd	497	17,2	351	12,5	nd	nd	1.701	26,0
87	75	Pelizzari	1.948	1.804	8,0	nd	74	76,2	46	ns	nd	nd	234	23,8
88	68	InAR	1.921	2.005	-4,2	55,0	118	55,3	7	ns	67	-66,5	112	6,7
89	97	Planum	1.915	1.439	33,1	nd	287	59,4	148	34,5	nd	nd	437	51,2
90	70	Emme Elle Architettura (35)	1.903	1.927	-1,2	nd	611	-27,0	471	-21,5	-198	74,0	616	-34,8
91	164	Dodi Moss	1.902	889	113,9	-	18	125,0	5	0,0	-352	ns	104	6,1
92	110	Main	1.899	1.277	48,7	nd	445	ns	269	ns	nd	nd	639	72,7
93	88	Progettisti Associati Tecnarc (o) (36)	1.889	1.618	16,7	nd	74	68,2	4	ns	523	3,4	288	1,4



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94	87	Red Star (o) (24)	1.869	1.620	15,4	nd	573	130,1	46	ns	-141	ns	276	20,0
95	176	Gruppo Spa (37)	1.869	802	133,0	nd	276	ns	82	ns	-278	ns	550	17,3
96	91	Scandurra Studio Architettura	1.853	1.549	19,6		188	-65,3	109	-70,3	-226	60,6	758	ns
97	96	AG&P Greenscape (38)	1.850	1.444	28,1	nd	178	39,1	112	55,6	-324	-5,5	279	22,9
98	101	Aiace	1.848	1.404	31,6	-	156	-14,8	110	-12,7	-217	25,2	735	17,8
99	74	Habits	1.838	1.813	1,4	nd	576	-11,4	392	-10,5	nd	nd	1.269	-0,2
100	112	Hydro Tec	1.770	1.240	42,7	nd	131	ns	63	ns	-129	33,8	87	ns
101	80	DEStudio (o) (39)	1.701	1.700	0,1	-	93	-7,0	61	22,0	-250	31,1	468	15,0
102	140	Krej Engineering	1.697	1.013	67,5	nd	279	ns	168	ns	-292	ns	288	81,1
103	183	Bottici- ni+Facchi- nelli Arw	1.678	750	123,7	nd	286	134,4	196	ns	66	0,0	248	ns
104	86	Open Building Research (40)	1.659	1.621	2,3	nd	114	5,6	46	-13,2	-41	76,2	114	70,1
105	121	Al Progetti (a) (41)	1.652	1.169	41,3	nd	100	100,0	59	ns	nd	nd	123	92,2
106	102	ABDR Architetti Associati (o) (42)	1.643	1.390	18,2	5,2	9	ns	-43	15,7	767	-12,0	492	-8,0
107	155	Eutecne	1.626	933	74,3	nd	59	37,2	20	ns	-1.127	-19,4	82	32,3
108	63	Tectoo	1.618	2.080	-22,2	-	50	-76,7	14	-88,8	-396	-34,7	340	4,3
109	111	Isolarchitetti	1.607	1.257	27,8	nd	63	57,5	34	ns	nd	nd	430	3,4
110	115	Sistema Duemila Partners (43)	1.583	1.226	29,1	nd	118	-9,9	62	-16,2	-256	-15,2	203	44,0
111	162	contiAsso- ciati	1.545	896	72,4	nd	377	ns	263	ns	-324	-89,5	579	83,2
112	92	Goring & Straja Studio	1.525	1.504	1,4	10,4	73	ns	47	ns	-505	9,7	726	6,9
113	-	Michele Bönan Interiors	1.467	596	146,1	-	232	52,6	158	58,0	-218	-23,2	795	50,9
114	-	Chapman Taylor Architetti (7)	1.455	645	125,5	nd	610	ns	524	ns	-29	ns	224	ns
115	159	Cino Zucchi Architetti	1.452	920	57,8	31,3	381	ns	281	ns	-44	54,6	317	ns
116	98	H&A Associati (44)	1.451	1.422	2,0	1,6	119	147,9	62	ns	226	10,8	436	21,1
117	100	Mdb Architettura	1.428	1.408	1,4	nd	49	-22,2	9	ns	579	38,5	74	ns
118	126	Poolmilano	1.427	1.089	31,0	nd	49	-5,8	4	-78,9	nd	nd	446	0,9



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119	108	Intera	1.426	1.292	10,4	nd	48	6,7	21	-12,5	-124	nd	211	10,5
120	94	Pras Tecnica Edilizia (o)	1.388	1.465	-5,3	nd	94	-6,9	-1	ns	688	27,4	473	-0,2
121	116	Pocci e Dondoli Archirivolto	1.385	1.225	13,1	33,4	144	-19,1	6	-84,6	1.030	15,2	97	6,6
122	105	Vudafieri Saverino Partners	1.383	1.326	4,3	45,9	64	ns	-15	69,4	382	24,4	97	-13,4
123	117	Studio Berlucchi	1.376	1.221	12,7	nd	161	147,7	84	ns	nd	nd	185	83,2
124	83	Boffa Petrone Partners (45)	1.369	1.667	-17,9	5,0	175	-68,9	102	-74,2	-562	ns	204	-49,4
125	42	Garretti Associati (s)	1.331	2.119	-37,2	nd	239	-68,7	162	-69,1	-652	42,6	2.013	8,8
126	104	M&P - Magnoli & Partners (46)	1.327	1.364	-2,7	nd	749	-0,8	476	-18,4	-695	30,8	807	-11,8
127	135	Tecnostudio	1.308	1.033	26,6	-	95	-1,0	25	8,7	745	-26,2	667	3,9
128	89	Lazzarini Pickering Architetti	1.296	1.589	-18,4	nd	126	22,3	69	27,8	nd	nd	152	85,4
129	146	Centro Co- operativo di Progettazio- ne - Ccdp (a)	1.291	962	34,2	-	32	-22,0	0	-95,6	-152	ns	188	0,5
130	-	Saga Architettura & Design	1.272	571	122,9	nd	130	73,3	82	ns	nd	nd	588	16,2
131	129	ADD	1.240	1.062	16,8	nd	86	21,1	4	33,3	165	-9,8	761	0,5
132	138	Ad Architettura	1.237	1.014	22,0	-	784	43,9	616	42,9	-469	nd	3.170	24,2
133	160	Studio Kr e Associati (o)	1.234	908	35,9	nd	260	145,3	175	146,5	nd	nd	581	43,1
134	143	Lenzi Consultant (o) (47)	1.233	977	26,2	-	140	59,1	113	121,6	-385	ns	426	17,0
135	93	Officina Italiana Design	1.206	1.494	-19,3	nd	87	ns	45	ns	nd	nd	1.341	3,5
136	141	losa Chini Associati	1.183	993	19,1	nd	21	ns	20	ns	nd	nd	962	2,1
137	161	Paolo Badesco Interior Design	1.165	906	28,6	nd	23	ns	-25	81,6	265	-3,6	-125	-26,3
138	123	Ital Projects	1.164	1.144	1,7	nd	701	85,0	473	108,4	-4.332	-10,7	5.737	7,0
139	148	D-recta	1.149	956	20,2	-	203	ns	110	ns	63	-40,6	347	46,4
140	197	Giraldi Associati Architetti	1.142	691	65,4	nd	411	ns	313	ns	nd	nd	83	ns
141	114	Apiemme Engineering	1.108	1.227	-9,7	nd	115	57,5	59	51,3	-315	-28,0	424	15,8

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142	109	Giuseppe Tortato Architetti (48)	1.106	1.283	-13,8	nd	391	25,7	257	20,1	-409	15,3	511	11,1
143	130	Gherardi- studio	1.105	1.058	4,4	nd	-37	ns	-68	ns	nd	nd	397	-14,6
144	144	Onsitestudio	1.103	976	13,0	-	30	30,4	13	44,4	-73	72,3	219	6,8
145	122	Pls Design	1.102	1.145	-3,8	nd	96	-40,4	24	-63,1	nd	nd	602	4,2
146	179	Novembre Studio (49)	1.093	792	38,0	nd	343	104,2	249	122,3	-552	-44,9	616	19,1
147	132	Locatelli & Partners	1.076	1.048	2,7	nd	64	-60,7	27	-75,5	nd	nd	41	-70,3
148	157	Leonardo (o) (50)	1.049	924	13,5	nd	163	85,2	61	60,5	1.438	11,8	641	10,5
149	136	Pierattelli Architetture	1.045	1.029	1,6	nd	383	10,4	234	3,1	-520	-29,0	286	12,2
150	147	Asz Partners	1.044	956	9,2	nd	30	-55,9	14	-65,0	70	ns	230	7,0
151	139	Dordoni Architetti	1.042	1.013	2,9	nd	95	-12,0	49	-15,5	-449	-122,3	440	12,8
152	137	FM Architettura d'Interni (51)	1.037	1.015	2,2	nd	108	-13,6	24	-54,7	-269	ns	218	12,4
153	200	Geza - Gri e Zucchi Architettura	1.035	679	52,4	nd	248	129,6	175	110,8	nd	nd	450	63,0
154	187	Corvino + Multari	1.034	725	42,6	nd	340	103,6	234	120,8	-467	-0,9	531	45,9
155	128	All City	1.034	1.068	-3,2	nd	262	ns	165	ns	-374	-97,9	550	42,9
156	152	Canali Associati (o)	1.022	943	8,4	nd	310	-32,9	197	-37,3	nd	nd	936	26,5
157	127	In-Site	1.021	1.079	-5,4	nd	115	150,0	77	ns	-128	53,8	335	29,8
158	167	Alvisi- Kirimoto + Partners	1.018	848	20,0	nd	190	-27,2	122	-30,7	-50	68,8	496	17,0
159	-	Pier Currà Architettura	1.017	130	ns	nd	172	ns	116	ns	-30	-130,8	144	ns
160	131	Studiome- mo	1.002	1.054	-4,9	nd	273	-31,6	156	-42,4	nd	ns	502	44,7
161	153	Finepro (o)	989	941	5,1	-	57	-23,0	40	17,6	-1.136	-36,0	3.151	1,3
162	171	Cspe (52)	967	820	17,9	nd	44	ns	31	ns	10	ns	107	40,8
163	158	Studio Transit	965	921	4,8	0,5	102	5,2	56	7,7	-335	-1,5	441	14,5
164	151	Gau Arena (53)	950	948	0,2	nd	115	-24,8	43	-38,6	-267	nd	355	14,1
165	145	Luca Dini Design (4)	945	974	-3,0	42,6	219	-47,5	94	-64,7	-190	58,1	818	13,0
166	154	Blengini Ghirardelli	942	938	0,4	nd	68	-70,8	47	-73,0	-65	-32,7	368	15,0
167	192	Fima Engineering (o)	939	702	33,8	nd	65	-17,7	7	-78,1	284	-32,9	385	1,6
168	189	Ipostudio Architetti	921	718	28,3	nd	93	ns	46	ns	-140	ns	700	7,2

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169	133	Design Inter- national	920	1.036	-11,2	nd	-180	ns	-185	ns	-81	-113,2	-173	ns
170	190	Spibs	920	717	28,3	nd	156	122,9	89	ns	nd	nd	179	98,9
171	156	Ottavio Di Blasi & Partners	915	930	-1,6	nd	166	97,6	110	107,5	9	ns	446	32,7
172	-	Stefano Boeri Interiors (22)	914	457	100,0	nd	308	ns	213	ns	-289	ns	301	ns
173	170	I-Dea	908	826	9,9	nd	131	79,5	72	ns	-66	ns	146	1,4
174	-	Cecchetto e Associati	887	622	42,6	nd	448	87,4	303	107,5	-739	-99,7	1.793	20,3
175	188	Archos	886	723	22,5	nd	104	ns	42	ns	-192	3,0	733	6,1
176	182	Studio Muzi & Associati (0)	880	768	14,6	nd	-45	21,1	-49	16,9	72	ns	292	-14,4
177	168	Simone Micheli Ar- chitectural Hero	876	841	4,2	nd	196	-20,0	128	-16,9	-263	-12,9	436	41,6
178	134	P&V Progetti	868	1.036	-16,2	nd	124	-18,4	6	-57,1	857	nd	111	5,7
179	124	D2u - Design to Users	840	1.126	-25,4	nd	33	ns	13	ns	-10	nd	227	6,1
180	178	Things	840	793	5,9	-	125	50,6	88	12,8	-307	-84,9	313	39,1
181	163	Global Planning Architecture	828	893	-7,3	nd	105	0,0	53	-20,9	757	26,0	372	16,6
182	107	Delogu Architecture	826	1.311	-37,0	nd	53	-64,7	29	-70,4	314	ns	154	23,2
183	-	Keios (o)	797	548	45,4	nd	28	nd	12	ns	nd	nd	77	18,5
184	175	Rhl Architettura	792	804	-1,5	-	78	77,3	42	35,5	-164	-78,3	73	-9,9
185	-	Peluffo & Partners Architettura	786	658	19,5	nd	61	35,6	19	26,7	-297	-36,2	72	38,5
186	191	Plan	785	708	10,9	nd	120	ns	90	ns	-157	28,6	255	-30,3
187	-	Cotefa	777	616	26,1	nd	14	7,7	3	-76,9	nd	ns	67	4,7
188	-	Paloma Architects	776	522	48,6	nd	37	-67,5	27	-66,3	-60	ns	65	-44,4
189	173	Masterplan- studio	775	809	-4,2	nd	-57	-72,7	-52	-52,9	nd	nd	77	-40,3
190	-	Spagnulo & Partners	773	607	27,3	nd	102	56,9	72	67,4	nd	nd	131	122,0
191	-	Interplan Seconda	759	545	39,3	nd	226	ns	49	ns	nd	nd	190	-7,8
192	196	L + Partners	758	691	9,8	nd	23	-55,8	3	-85,7	-2	-100,0	69	6,2
193	150	Studio Archemi	737	955	-22,8	nd	44	-81,9	10	-95,0	-935	16,5	1.135	-7,4
194	-	Area Progetti	736	593	24,1	nd	29	16,0	0	-100,0	-6	93,3	131	0,0
195	-	Via Architettura	717	503	42,5	nd	50	61,3	36	56,5	nd	nd	190	23,4



Stadio dei Pini/Bresciani - Viareggio

Palazzo Verona NH Hotel Collection - Verona



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196	199	Oggionni 1904	712	681	4,6	nd	43	-63,6	-6	ns	nd	nd	396	-1,5
197	-	The Blossom Avenue Ma- nagement (54)	706	672	5,1	nd	80	81,8	26	73,3	-15	50,0	110	31,0
198	-	Archimi Studio	696	540	28,9	nd	27	107,7	7	ns	nd	nd	69	11,3
199	184	Insula Architettura e Ingegneria	695	750	-7,3	nd	9	-35,7	-2	ns	nd	nd	108	-0,9
200	172	Dante O. Benini & Partners	691	811	-14,8	nd	-93	ns	-105	ns	nd	nd	-80	ns
		Total	609.134	494.923	23,1	18,9	100.459	42,9	63.337	55,7	-61.791	-0,7	256.010	20,4

Source: Guamari based on 2021 balance sheets and firms' data (thousand euros)

nd = not defined ns = not significant

(a) associated with Lega delle Cooperative; (c) consolidated data; (o) associated with Oice; (s) annual report closed on 30th September: (1) in 2015 merged the controlled company Degw Italia: (2) founded in December 2018: (3) founders: Luca Serri and Branko Zrnić, the 2021 aggregated revenues part of the Danish activity are about 21.1 million euros; (4) Luca Dini Associati and Luca Dini Design have 2020 aggregated revenues of 18.2 million euros; (5) in September 2020 merged the interior design company; (6) Massimo Roj Architects, the informally consolidated revenues (including eight companies) are around 26 million euros in 2021. In July 2022 it acquired the practice DONTSTOP Architettura; (7) in September 2022 Progetto CMR acquired Chapman Taylor Architetti; (8) founders: Maria Paola Pontarollo and Marcello Cerea. With the engineering companies Ariatta and Redesco established the company (former consortium) Maestrale; (9) the French company Rpbw Paris has 2021 revenues of 25.3 million euros; (10) founders: Leonardo Cavalli and Giulio De Carli, in 2019 acquired the Indian firm Teken Bim Technologies and the 49 percent of the Thai firm Pps Design (now Pps One Works); (11) founders: Laura Andreini, Marco Casamonti and Giovanni Polazzi; (12) the aggregated 2021 revenues, including Chinese branch, are 8 million euros; (13) born in 2014 from the merge of Tecnicoop and Veneto Progetti; (14) data referred to architecture, product and yachting design activities, former Pininfarina Extra, merged in 2018; (15) in 2018 Italferr (FS group) acquired 80 percent of the company; (16) II Prisma group (also active in contracting); (17) former LAND Milano, founders: Andreas Kipar and Giovanni Sala; (18) Lissoni Casal Ribeiro (formerly Lissoni Architettura), Lissoni Associati, Graph.X and the New York branch (Lissoni Inc.) have 2021 combined revenues of 13.7 million euros; (19) founders: Filippo Pagliani and Michele Rossi; (20) born in 2015 from the merge of Jps Engineering and Sering; (21) operates as Dimore Studio; (22) with Stefano Boeri Interiors branch combines 2021 revenues of 5.4 million euros; (23) in 2018 Luca Colombo acquired from Matteo Thun the majority of the firm Mtlc changing its name in Lev-Arch; (24) Fuksas Architecture and Red Star (former Massimiliano e Doriana Fuksas Design) have 2021 aggregated revenues of 6 million euros; (25) founders: Francesco Fresa, German Fuenmayor, Gino Garbellini and Monica Tricario; (26) founders: Alberto Bovo and Sandro Manente; (27) it operates as aMDL Circle; (28) founder and president: Edith Forte; (29) founders: Federico Barbero, Nicola Di Troia and Marco Splendore; (30) president: Alberto Casalboni; (31) partners: Francesco Abbati, Giuseppe Losurdo and Romina Sambucci; (32) Giò Forma Studio Associato and Giò Forma International have aggregated 2021 revenues of 2,9 million euros; (33) founder: Alberto Torsello; (34) founders: Francesco Felice Buonfantino, Antonio De Martino and Rossella Traversari; (35) founder: Marco Claudi; (36) president; Cesare Taddia; (37) founder: Gabriele Napolitano; (38) former Architettura dei Giardini e del Paesaggio; (39) founder: Marco Discacciati; (40) founders: Paolo Brescia and Tommaso Principi; (41) with engineering firms Seingim, Area Engineering and T&T forms the network Join Venice; (42) founders: Maria L. Arlotti, Michele Beccu, Paolo Desideri and Filippo Raimondi; (43) founder: Massimo Giuliani; (44) born in 2015 by the merge of Hyd Architettura and ArkaAssociati; (45) Building group; (46) Edison group since 2018; (47) Ceo: Braccio Oddi Baglioni; (48) operates through the firm Polisfluxa; (49) Fabio Novembre in 2019 split his firm into Novembre Studio and Novembre Design; (50) founder: Salvatore Re, the group controls Rexa and Leonardo Sport; (51) with FM World of Interiors and FM Trade combines 2021 revenues of 4.3 million euros; (52) directed by: Giulio Felli, Paolo Felli and Corrado Lupatelli; (53) founder: Gino Zavanella; (54) founder: Marco Facchinetti.

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The Top 200 Engineering Firms Tab. 18

Pos. 2021	Pos. 2020	E	Revenues 2021	Revenues 2020	Var % '21/20	% Abroad 2021	Ebitda 2021	Var % '21/20	Net result 2021	Var % '21/20	Net debts 2021	Var % '21/20	Equity 2021	Var % '21/20
1	2	Italferr (o) (1)	268.958	222.732	20,8	6,0	69.936	27,9	45.130	40,0	-1.668	45,5	117.744	22,6
2	1	Rina Consulting	129.071	131.608	-1,9	52,0	10.980	99,4	2.549	10,5	7.595	212,3	43.247	0,5
3	3	EniProgetti (3)	120.206	144.962	-17,1	8,8	-50.775	ns	-43.877	ns	48.117	-22,5	-17.192	ns
4	4	Italconsult (c)	113.120	113.627	-0,4	86,9	18.388	-11,2	13.052	ns	28.169	-8,1	62.225	29,9
5	-	Acea (Area Inge- gneria e Servizi) (5)	111.900	88.900	25,9	-	17.300	17,7	nd	nd	28.100	-9,6	nd	nd
6	129	Tecne (o) (6) (7) (8) (9)	93.554	3.668	ns	-	-296	82,5	-2.209	-84,1	-7.819	-114,3	6.691	71,6
7	5	Proger (o) (10)	89.415	88.249	1,3	71,8	10.852	-13,5	10.771	86,3	25.610	2,2	58.343	18,7
8	7	Sina (o) (11)	89.098	70.003	27,3	0,5	22.125	54,7	15.131	54,9	-12.951	-4,5	77.865	2,0
9	6	DBA Group (c) (o) (12)	79.531	71.942	10,5	51,0	4.787	22,2	-719	46,7	10.238	-37,6	18.521	-4,2
10	9	Sipal (c) (o) (13)	51.909	47.009	10,4	1,2	3.436	-28,7	169	-92,4	15.278	46,2	12.236	0,5
11	11	Agriconsulting (c) (o)	45.813	39.411	16,2	75,2	4.756	240,9	1.431	ns	10.057	85,1	16.864	11,0
12	10	Jacobs Italia (s)	42.163	43.575	-3,2	23,5	1.650	-35,1	1.247	-36,6	-11.664	-30,7	6.564	23,5
13	16	MM (Divisione Ingegneria) (o) (14)	38.711	32.218	20,2	2,0	1.764	-44,9	nd	nd	nd	nd	nd	nd
14	17	F&M Ingegneria (c) (o) (15)	37.058	31.440	17,9	50,0	4.164	68,9	2.537	86,1	-8.995	-16,7	12.113	23,1
15	14	Manens - Tifs (c) (16)	36.751	-	-	55,0	6.876	-	3.626	-	-13.902	-1,1	8.661	-
16	20	Artelia Italia (o) (17)	36.594	29.007	26,2	4,2	2.131	-5,6	693	4,1	-3.759	13,2	4.126	2,4
17	19	Arcadis Italia (18)	36.532	29.620	23,3	-	604	ns	69	ns	-3.836	-44,0	837	9,0
18	25	T.EN Italy Solu- tions (o) (19)	35.094	25.870	35,7	7,0	2.572	110,6	1.624	ns	-7.189	11,7	7.819	26,2
19	15	Wsp Golder	34.002	32.591	4,3	9,0	1.075	ns	151	ns	-82	ns	3.780	4,2
20	48	Infraengineering (20)	32.274	10.559	ns	-	21.417	ns	14.889	ns	11.886	ns	33.968	78,0
21	21	eFM (c)	31.523	26.622	18,4	25,2	5.282	15,7	1.916	5,5	200	ns	14.623	6,2
22	28	Systra SWS (o) (9) (21)	31.199	19.678	58,5	68,1	3.257	25,6	1.486	7,7	2.208	-26,9	5.924	29,3
23	13	Enereco	28.602	36.464	-21,6	4,0	3.574	-45,2	2.755	-40,8	-14.237	26,6	26.302	7,9
24	24	Technital (o) (22)	27.611	25.913	6,6	6,4	4.998	63,5	1.804	ns	-1.677	13,3	22.350	8,8
25	22	IRD Engineering (o)	26.954	26.073	3,4	95,0	3.044	1,7	1.669	10,9	-7.668	19,7	11.158	15,2
26	12	Techfem	23.896	38.857	-38,5	18,5	3.834	-38,3	1.357	-60,7	-1.624	62,9	16.968	4,7

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27	30	Erm Italia (m)	22.999	19.429	18,4	24,2	1.745	92,2	916	113,0	-965	35,8	2.168	100,4
28	32	Aecom Urs Italia (23)	22.107	15.889	39,1	15,1	3.376	ns	2.019	ns	-59	-7,3	5.750	54,1
29	31	Politecnica (a) (o)	21.387	18.425	16,1	17,5	1.321	13,6	531	51,7	-4.279	7,5	6.403	11,6
30	29	3TI Progetti Italia (c) (o) (24)	20.811	20.272	2,7	41,0	1.981	ns	793	ns	5.033	29,5	2.474	56,7
31	27	Stantec (25)	19.429	23.329	-16,7	12,1	81	-83,6	-127	ns	-3.810	12,6	3.552	-3,5
32	41	Inres (a)	18.439	12.638	45,9	-	724	23,3	493	45,9	-9.060	-30,4	8.016	6,4
33	35	IQT Consulting	17.345	14.114	22,9	-	1.991	60,3	1.110	79,6	5.064	93,9	3.799	31,5
34	37	Ramboll Italy (26)	17.258	13.687	26,1	8,9	1.832	42,7	1.194	62,9	-7.752	-8,1	8.349	16,7
35	33	Nier Ingegneria	17.211	15.461	11,3	-	1.154	-52,1	712	-58,2	1.641	ns	3.597	-30,6
36	86	Fugro Italy	17.163	6.073	ns	16,2	608	9,9	46	-71,1	4.860	115,5	876	5,5
37	40	Arup Italia (m)	15.657	13.450	16,4	51,4	525	-53,2	134	-24,7	-6.075	-127,6	2.875	4,9
38	51	Hpc Italia	15.505	9.916	56,4	14,0	2.031	44,5	1.376	55,8	-2.964	-41,3	4.317	48,8
39	45	ESA Engineering (o)	15.452	11.170	38,3	38,2	585	-45,8	227	-66,8	841	ns	1.522	17,5
40	39	Rocksoil (27)	15.252	13.267	15,0	8,5	2.640	125,1	1.490	ns	3.045	36,9	4.294	20,7
41	43	Studio Ing. G. Pietrangeli (o)	15.220	12.304	23,7	90,7	6.300	65,4	4.813	81,6	-6.360	-2,1	34.294	10,8
42	49	Seingim Global Service (o) (28)	15.194	10.241	48,4	5,0	641	ns	220	ns	5.336	43,4	1.080	25,6
43	55	Team Enginee- ring (o)	15.075	9.651	56,2	99,2	4.809	138,1	3.271	131,7	-7.484	-27,3	6.927	89,5
44	80	Studio Speri (o) (8)	14.358	6.704	114,2	nd	5.680	118,7	3.954	118,6	-4.722	-30,1	8.997	68,4
45	36	Agt (29)	13.914	13.893	0,2	96,9	648	-41,8	375	-30,2	2.006	63,2	1.812	1,2
46	52	Tecno In	13.595	9.903	37,3	-	1.766	47,5	666	134,5	2.354	-41,9	3.220	26,0
47	75	Pro Iter (c) (o) (30)	13.570	9.947	36,4	2,2	2.458	79,9	1.371	68,6	1.210	nd	7.496	nd
48	44	La Sia	13.198	11.325	16,5	-	2.691	9,4	1.849	14,3	-313	ns	3.590	41,0
49	59	Lombardi Inge- gneria	12.991	9.085	43,0	22,5	1.801	-13,9	928	-3,0	-1.692	71,0	3.984	22,4
50	34	Net Engineering (o) (31)	12.987	8.504	52,7	-	-265	89,5	-507	84,8	5.391	14,9	1.565	-24,5
51	38	Bonifica (o) (32)	12.655	13.443	-5,9	42,4	772	9,2	186	ns	2.419	-17,5	6.313	3,0
52	56	Bureau Veritas Nexta	12.631	9.402	34,3	nd	1.426	13,6	938	14,3	-1.064	ns	1.379	9,3
53	23	Ambiente (o) (33)	12.497	25.943	-51,8	2,6	2.203	-83,1	1.553	-86,1	-3.864	35,7	12.806	-3,0
54	42	Cooprogetti sc (a) (o)	11.962	12.587	-5,0	4,4	392	15,0	129	6,6	-2.355	9,7	3.015	1,5
55	47	Barci Engine- ering	11.780	11.025	6,8	nd	2.935	3,6	1.910	17,8	-5.195	-14,8	13.226	15,5

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Pos. 2021	Pos. 2020	Firm	Revenues 2021	Revenues 2020	Var % '21/20	% Abroad 2021	Ebitda 2021	Var % '21/20	Net result 2021	Var % '21/20	Net debts 2021	Var % '21/20	Equity 2021	Var % '21/20
56	69	Sti Engineering	11.742	7.439	57,9	24,0	767	28,7	164	3,8	2.826	35,5	1.331	14,3
57	50	Tecnosistem (o)	11.614	10.016	16,0	0,4	163	-21,3	12	9,1	1.055	-38,3	5.201	0,2
58	53	Maffeis Enginee- ring (34)	11.222	9.789	14,6	52,8	2.144	1,6	1.500	9,9	-1.645	-115,9	6.280	31,4
59	60	Sintagma (o)	11.095	8.725	27,2	4,3	2.437	24,6	1.627	29,8	-3.146	15,1	9.869	19,7
60	90	VTU Engineering Italia	10.899	5.691	91,5	nd	1.589	104,5	945	81,0	nd	nd	3.018	45,6
61	54	Engineering Te- chnical Services (35)	10.518	9.744	7,9	32,0	1.022	20,8	313	126,8	-127	46,9	6.960	4,9
62	-	ADR Ingegneria (36)	10.513	-	-	-	1.752	-	1.228	-	-1.898	-	2.821	-
63	57	Aicom (o)	10.373	9.397	10,4	nd	802	-25,3	241	-51,3	1.942	-23,9	2.021	-8,7
64	61	HQ Engineering Italia	10.300	8.538	20,6	nd	942	57,3	599	61,9	2	ns	2.771	16,8
65	82	Deerns Italia	10.256	6.530	57,1	nd	1.251	76,7	777	ns	-350	-8,7	2.247	-3,1
66	74	Techniconsult Firenze	10.188	7.011	45,3	-	1.873	110,9	1.231	126,3	nd	nd	3.339	27,2
67	66	Via Ingegneria (o) (37)	10.039	8.038	24,9	nd	807	26,3	474	23,1	-1.112	15,7	1.628	-12,2
68	64	Al Engineering (o)	9.728	8.389	16,0	5,6	1.473	17,5	904	77,6	-1.513	-61,3	3.334	22,2
69	63	Rpa	9.634	8.462	13,9	3,6	418	50,9	73	28,1	5.062	26,1	3.451	4,1
70	127	Exenet (o) (38)	9.603	3.773	ns	nd	2.272	89,6	1.572	89,9	-201	77,2	2.452	ns
71	79	Eos Consulting	9.569	6.736	42,1	nd	4.057	116,4	2.715	115,6	-691	-3,1	3.393	82,9
72	81	Sintecnica Engi- neering	9.454	6.555	44,2	nd	319	80,2	33	-29,8	2.158	54,0	390	9,2
73	88	3ba	9.314	5.850	59,2	nd	1.056	112,5	551	138,5	nd	nd	643	70,6
74	8	Spea Enginee- ring (o) (6) (7) (36)	9.295	54.140	-82,8	2,5	-5.903	63,0	-6.820	56,6	-3.814	53,8	33.809	-16,8
75	46	Thetis	9.266	11.087	-16,4	0,9	-421	65,4	-562	92,9	-676	ns	5.630	-9,1
76	62	MG Project	9.220	8.522	8,2	nd	527	17,6	248	21,0	2.685	ns	863	40,3
77	105	Alcotec	9.037	4.891	84,8	nd	1.368	ns	727	ns	2.564	108,3	2.328	45,4
78	65	Alpina (o)	9.011	8.165	10,4	18,5	644	22,4	49	ns	664	-65,4	1.139	4,4
79	73	Incico	8.766	7.030	24,7	22,0	709	17,8	304	30,5	525	44,0	657	86,1
80	70	Tauw Italia	8.575	7.392	16,0	nd	768	9,7	455	-5,0	-1.690	-16,4	2.178	7,7
81	85	Systra-Sotecni (o)	8.121	6.109	32,9	11,8	667	ns	553	ns	-552	-74,7	3.259	10,3
82	76	Ets srl (o)	8.084	6.841	18,2	-	2.572	5,2	1.643	4,4	-2.815	32,7	8.080	25,5
83	77	Aic Progetti (o)	7.945	6.835	16,2	100,0	605	ns	121	ns	623	-23,9	2.890	4,4









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84	71	Bergmeister (39)	7.687	7.330	4,9	26,4	448	23,8	95	-3,1	-990	23,8	746	15,7
85	72	Musinet Engineering	7.676	7.084	8,4	-	773	140,1	504	ns	343	ns	3.058	19,7
86	146	No.Do e Servizi (o)	7.633	3.250	134,9	nd	1.546	ns	940	ns	-796	ns	1.714	121,2
87	104	Tecno Habitat	7.581	4.904	54,6	nd	861	ns	508	ns	-896	ns	1.524	50,0
88	68	BMS Progetti (o) (40)	7.465	7.439	0,3	nd	256	13,3	57	ns	2.087	7,6	737	8,4
89	96	Idreco	7.283	5.313	37,1	41,6	108	92,9	33	ns	-1.230	41,1	839	4,1
90	101	Mpartner	7.170	4.997	43,5	nd	484	ns	193	ns	-1.378	-3,6	3.764	5,4
91	142	Ricam	6.938	3.317	109,2	nd	1.394	ns	870	ns	-1.622	-81,0	2.258	62,7
92	78	SCE Project	6.851	6.753	1,5	nd	188	9,3	36	2,9	nd	nd	210	20,0
93	87	Enser (o)	6.804	6.054	12,4	nd	577	28,5	213	20,3	-1.318	22,3	1.548	10,3
94	109	Ets spa	6.600	4.743	39,2	-	182	-34,5	47	-7,8	396	-73,2	1.145	4,3
95	106	Cool Projects	6.475	4.851	33,5	-	357	28,9	301	18,0	nd	nd	5.216	6,1
96	97	Ibs Progetti	6.409	5.205	23,1	nd	774	14,8	507	13,9	-1.612	17,0	1.978	34,5
97	123	Pini Group (o) (41)	6.269	3.985	57,3	nd	540	ns	331	ns	nd	nd	703	89,0
98	110	Greenwich	6.135	4.576	34,1	nd	1.608	110,2	1.085	110,7	nd	nd	1.323	107,4
99	100	Ariatta Ingegne- ria dei Sistemi (42)	5.923	5.051	17,3	nd	916	81,0	589	147,5	nd	nd	1.626	37,0
100	91	Sering Italia (o)	5.849	5.480	6,7	-	448	97,4	260	ns	215	ns	312	ns
101	-	Coding	5.803	1.892	ns	nd	68	94,3	31	93,8	-4.636	-99,0	119	-11,2
102	93	Milan Ingegneria	5.799	5.410	7,2	nd	785	18,9	460	21,7	-3.118	-3,5	1.657	38,3
103	130	Fichtner Italia	5.619	3.667	53,2	nd	970	97,6	560	ns	nd	nd	1.548	55,3
104	92	Proeco	5.590	5.421	3,1	-	580	49,5	347	100,6	638	ns	1.384	33,5
105	112	Tecnicaer Engi- neering (o)	5.573	4.522	23,2	-	353	56,9	204	61,9	-580	54,9	1.574	14,9
106	103	Heliopolis	5.548	4.928	12,6	9,4	1.245	72,7	14.380	ns	4.776	83,6	21.229	ns
107	119	Mott MacDonald Italy (o)	5.412	4.161	30,1	nd	-258	-141,1	-491	ns	-204	23,6	-481	ns
108	94	Tekser	5.347	5.387	-0,7	nd	476	-10,9	347	14,1	nd	nd	783	6,4
109	83	LC&Partners Project Manage- ment and Engi- neering (c)	5.309	6.495	-18,3	44,0	310	-52,4	79	-83,0	140	ns	1.269	20,6
110	98	Milano Serravalle Engineering	5.283	5.203	1,5	-	695	15,4	436	13,0	-1.507	7,0	4.868	9,8
111	150	Gp Ingegneria (o)	5.282	3.148	67,8	5,2	1.239	ns	826	ns	-1.216	-51,1	1.740	74,5



Which investments will allow us to renew ourselves and look to the future?

The engineering company **EY Engineering and Technical Services** combines the traditional EY areas of expertise with technical and tailor-made competencies, focused on infrastructures, energy, real estate and urban regeneration to support customers in the planning, execution and monitoring of interventions in order to support companies and institutions in strategic choices.



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Pos. 2021	Pos. 2020	Fim	Revenues 2021	Revenues 2020	Var % '21/20	% Abroad 2021	Ebitda 2021	Var % '21/20	Net result 2021	Var % '21/20	Net debts 2021	Var % '21/20	Equity 2021	Var % '21/20
112	116	Ars Progetti (o)	5.162	4.389	17,6	98,5	275	34,1	132	34,7	-1.254	31,7	1.153	12,9
113	102	Contec Aqs (38)	5.106	4.956	3,0	4,0	663	-2,2	438	9,0	-324	ns	1.354	12,1
114	152	SFRE	5.102	3.102	64,5	nd	445	71,2	297	53,1	nd	nd	850	53,7
115	58	Hitachi Industrial Engineering Emea	4.975	9.140	-45,6	nd	-2.259	51,9	-2.613	45,6	-6.043	18,6	5.373	125,2
116	111	Icaro	4.935	4.568	8,0	3,5	233	-18,0	6	-86,4	894	-27,5	1.062	0,6
117	139	Sinergo (o)	4.919	3.407	44,4	nd	641	80,1	224	ns	647	-16,2	2.876	-15,9
118	95	Tecon (o)	4.912	5.324	-7,7	nd	283	ns	-78	82,4	-461	71,7	3.122	-2,4
119	108	GAe Engineering (o)	4.905	4.770	2,8	-	659	-37,2	363	-17,9	-1.691	-64,0	2.119	20,7
120	118	Galileo Ingegne- ria (o)	4.848	4.249	14,1	nd	213	ns	43	ns	nd	nd	940	-30,2
121	113	J&A Consultants	4.829	4.483	7,7	nd	169	ns	24	ns	nd	nd	299	8,3
122	166	Rossetti Engine- ering	4.819	2.762	74,5	nd	1.942	ns	1.371	ns	-1.172	ns	1.598	ns
123	126	CEAS (o)	4.791	3.829	25,1	nd	188	-1,1	34	70,0	196	ns	1.199	-9,5
124	117	Hydrodata (o)	4.756	4.310	10,3	-	540	5,3	257	13,7	693	-37,3	2.860	3,6
125	121	Idrostudi	4.751	4.101	15,8	nd	1.038	26,0	602	18,0	411	-52,8	1.874	27,3
126	114	Montana	4.730	4.427	6,8	nd	317	-27,3	59	118,5	646	-12,1	1.166	-8,5
127	115	United Risk Ma- nagement	4.671	4.426	5,5	-	424	ns	57	ns	2.264	7,0	164	53,3
128	144	Progin (o)	4.428	3.296	34,3	10,0	629	74,7	273	ns	-997	ns	4.276	6,8
129	125	Tesifer	4.394	3.829	14,8	nd	683	23,5	88	-68,2	-637	57,3	1.408	6,7
130	178	Studio Martini Ingegneria	4.311	2.582	67,0	11,8	785	87,8	500	83,8	49	ns	825	31,8
131	143	Sintecna	4.221	3.299	27,9	nd	2.311	ns	1.450	ns	-1.946	-16,5	2.976	104,1
132	145	Pf Engineering	4.165	3.267	27,5	nd	320	46,1	196	ns	-579	ns	526	59,9
133	177	Scs Ingegneria	4.119	2.598	58,5	nd	1.388	ns	965	ns	-328	3,8	1.085	ns
134	158	Gad - Global Assistance Deve- lopment	4.112	3.006	36,8	nd	1.314	32,6	741	11,8	153	-36,3	1.913	63,2
135	135	Erre.Vi.A. (o)	4.069	3.549	14,7	nd	104	-13,3	21	-12,5	198	-45,3	416	5,1
136	131	Studio Idrogeo- tecnico	4.011	3.654	9,8	-	1.903	14,9	1.355	15,3	-240	-28,3	1.504	14,0
137	124	Progra	4.005	3.880	3,2	-	825	39,6	530	42,1	-730	-121,9	1.283	33,9
138	187	Sidoti Enginee- ring (o)	4.005	2.404	66,6	nd	527	51,0	267	45,1	nd	nd	321	35,4
139	132	Holzner & Ber- tagnolli Engine- ering	3.977	3.636	9,4	nd	804	ns	447	ns	-284	-30,9	1.756	11,8

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Pos. 2021	Pos. 2020	Firm	Revenues 2021	Revenues 2020	Var % '21/20	% Abroad 2021	Ebitda 2021	Var % '21/20	Net result 2021	Var % '21/20	Net debts 2021	Var % '21/20	Equity 2021	Var % '21/20
140	137	Ingenieure Patscheider & Partner	3.919	3.436	14,1	nd	178	56,1	61	125,9	nd	nd	144	73,5
141	155	Saind Ingegneria	3.889	3.092	25,8	-	617	26,2	380	34,3	nd	nd	1.429	10,0
142	99	Nce	3.876	5.099	-24,0	2,0	119	-7,0	28	16,7	625	-25,7	469	5,6
143	154	Planning Inge- gneria e Pianifi- cazione	3.795	3.096	22,6	-	174	25,2	95	9,2	215	80,7	201	-50,5
144	159	Sidel Ingegneria	3.783	3.002	26,0	nd	233	54,3	99	135,7	nd	nd	379	35,4
145	192	Tfe Ingegneria	3.778	2.355	60,4	nd	904	ns	520	ns	-470	ns	848	ns
146	-	Sgai	3.718	2.175	70,9	nd	103	0,0	16	-55,6	nd	nd	3.944	0,2
147	-	Trillini Engine- ering	3.701	2.091	77,0	nd	497	ns	275	ns	nd	nd	587	42,8
148	133	Erreffe Progetti	3.661	3.612	1,4	nd	662	20,6	494	38,4	960	-19,3	1.946	25,0
149	156	Contec (o)	3.645	3.086	18,1	nd	577	1,8	468	-9,1	-182	58,0	739	-9,4
150	182	Itec Engineering (o)	3.580	2.496	43,4	nd	1.040	ns	645	ns	nd	nd	1.220	91,8
151	134	Plan Team	3.577	3.599	-0,6	nd	525	-33,4	402	-43,2	-	nd	2.026	24,8
152	140	Edin (o)	3.484	3.389	2,8	nd	746	26,4	478	26,8	-1.951	-45,7	998	18,1
153	164	Pro-Tec Milano	3.381	2.768	22,1	nd	1.258	61,7	822	69,1	124	121,4	1.321	88,7
154	173	Mcm Ingegneria	3.326	2.692	23,6	nd	325	70,2	144	71,4	149	-75,7	1.265	12,8
155	190	eAmbiente	3.326	2.387	39,3	nd	354	ns	24	-46,7	1.280	41,7	423	8,2
156	136	Seingim Power (28)	3.310	3.446	-3,9	nd	173	147,1	137	ns	499	145,8	193	ns
157	153	R4m Engine- ering	3.281	3.102	5,8	nd	370	9,8	241	20,5	-1.801	-12,4	1.172	25,9
158	165	Policreo	3.262	2.762	18,1	nd	174	-5,9	67	45,7	nd	nd	1.865	3,7
159	199	B. Cube	3.243	2.235	45,1	nd	375	ns	225	ns	-275	ns	404	125,7
160	175	Aei Progetti	3.237	2.607	24,2	nd	751	ns	495	ns	-197	76,1	703	30,7
161	188	United Consul- ting	3.232	2.402	34,6	nd	313	ns	143	ns	-326	ns	394	57,6
162	184	Wip - Work in Progress	3.213	2.435	32,0	nd	480	-15,8	330	-16,5		nd	786	-3,2
163	148	Sidercad (o)	3.207	3.155	1,6	nd	544	5,2	364	41,6	-2.815	-13,9	1.743	16,3
164	160	Si.Me.Te. (43)	3.191	2.892	10,3	-	616	72,1	400	97,0	-208	ns	571	-7,6
165	163	MB Progetti	3.185	2.808	13,4	nd	75	ns	15	ns	680	92,6	771	2,0
166	183	Proel Engine- ering	3.147	2.439	29,0	0,5	206	104,0	29	38,1	54	ns	124	30,5
167	167	Planning	3.125	2.753	13,5	nd	503	-14,0	370	-12,7	nd	nd	1.794	10,5
168	147	Prometeoengi- neering.it	3.104	3.209	-3,3	nd	1.509	-14,0	1.085	-9,8	-394	ns	1.550	22,5

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Pos. 2021	Pos. 2020	E	Revenues 2021	Revenues 2020	Var % '21/20	% Abroad 2021	Ebitda 2021	Var % '21/20	Net result 2021	Var % '21/20	Net debts 2021	Var % '21/20	Equity 2021	Var % '21/20
169	-	Enerplan	3.070	2.010	52,7	nd	307	ns	120	ns	nd	nd	1.569	-2,0
170	107	Finalca Inge- gneria	3.043	4.787	-36,4	nd	1.654	ns	1.150	ns	nd	nd	2.147	115,1
171	191	Ingegneri Riu- niti (o)	3.042	2.375	28,1	nd	541	119,0	18	125,0	nd	nd	1.174	1,5
172	198	Mts Engineering	3.023	2.258	33,9	nd	231	-3,3	101	-19,2	-1.676	-33,4	362	-0,8
173	-	Seteco Ingegne- ria (o)	3.023	2.035	48,6	nd	989	132,2	719	136,5	nd	nd	1.050	79,5
174	172	RT Progetti	3.020	2.693	12,1	nd	762	-8,3	546	-6,0	-2.210	-18,9	1.575	53,1
175	157	Studio Geotecni- co Italiano (o)	3.017	3.034	-0,6	nd	160	ns	29	ns	-627	19,1	2.020	8,2
176	196	Etc Engineering (o)	3.008	2.278	32,0	nd	502	-11,2	337	-17,0	-92	61,2	1.203	24,4
177	141	Trt	2.971	3.373	-11,9	63,3	149	ns	67	ns	-61	75,8	723	10,2
178	170	Industrial Engi- neering Consul- tants	2.942	2.708	8,6	nd	193	0,5	65	8,3	nd	nd	1.652	4,1
179	189	AC ² - Advanced Consulting	2.923	2.398	21,9	-	106	-22,1	6	20,0	586	23,6	180	3,4
180	-	P&P LMC	2.883	2.154	33,8	nd	473	37,1	266	21,5	-491	-56,4	1.078	-4,9
181	-	Proj.Eco Engine- ering	2.857	2.083	37,2	-	616	ns	401	ns	-693	-37,0	951	46,5
182	138	E-Farm Enginee- ring & Consulting	2.855	3.413	-16,3	nd	598	-42,2	431	-5,1	nd	nd	1.232	-3,4
183	161	Duferco Engine- ering	2.825	2.831	-0,2	-	76	15,2	26	ns	-794	-45,2	797	3,4
184	169	Jensen Hughes Italy	2.813	2.728	3,1	37,2	308	-19,6	153	-5,0	-401	24,6	469	-42,6
185	-	Drees & Sommer Italia	2.742	2.116	29,6	2,4	806	30,6	542	32,5	-514	-42,4	1.989	37,5
186	-	MIC-HUB (44)	2.740	1.824	50,2	nd	181	ns	89	ns		nd	291	44,1
187	195	Techproject	2.688	2.302	16,8	nd	300	55,4	58	-38,3	-556	35,3	639	-40,9
188	179	Prisma Engine- ering	2.685	2.550	5,3	nd	300	-18,5	9	-74,3	nd	nd	2.259	0,4
189	-	lts (o)	2.667	1.950	36,8	nd	306	84,3	147	ns	-496	ns	341	75,8
190	162	Studio 74	2.617	2.815	-7,0	nd	237	-63,2	100	-74,7	104	ns	1.057	10,4
191	67	Anas Internatio- nal Enterprise (45)	2.610	7.607	-65,7	100,0	-2.447	ns	-2.607	ns	14.424	-11,1	1.113	-70,1
192	197	Systematica	2.607	2.278	14,4	nd	210	70,7	125	115,5	nd	nd	945	15,2
193	185	Hmr (o)	2.583	2.428	6,4	nd	140	21,7	72	50,0	nd	nd	1.178	8,5
194	-	Beta Progetti	2.540	1.887	34,6	nd	72	-18,2	32	-23,8	nd	nd	1.410	2,2
195	-	Ismes	2.533	3.900	-35,1	nd	-16	ns	-162	ns	-635	3,1	1.400	-10,4
196	168	Agire Enginee- ring (46)	2.525	2.753	-8,3	-	169	-39,9	85	-52,0	232	ns	1.405	-6,0





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Pos. 2021	Pos. 2020	E	Revenues 2021	Revenues 2020	Var % '21/20	% Abroad 2021	Ebitda 2021	Var % '21/20	Net result 2021	Var % '21/20	Net debts 2021	Var % '21/20	Equity 2021	Var % '21/20
197	-	Contec Industry (38)	2.501	1.766	41,6	nd	233	76,5	138	70,4	nd	nd	265	22,1
198	-	A.I.Erre Engine- ering	2.476	2.024	22,3	-	426	16,7	125	-33,5	363	3,7	723	-11,1
199	176	Save Engineering (47)	2.369	2.599	-8,8	-	115	ns	91	ns	-354	35,4	1.167	8,5
200	-	Cooprogetti scrl (a) (o)	2.343	1.762	33,0	nd	45	4,7	25	-16,7	-2.414	-42,9	572	4,4
		Total*	2.869.356	2.485.519	15,4	20,0	309.064	20,5	160.597	70,5	53.869	43,8	1.025.567	6'II

Source: Guamari based on 2021 balance sheets and firms' data (thousand euros)

nd = not defined

ns = not significant

(*) total data concerning 198 firms, which do not count Manens-Tifs, which in 2021 published its first consolidated annual report, and ADR Ingegneria, because 2021 is its first year of activity after the split from Spea Engineering; (a) member of Lega delle Cooperative; (c) consolidated data; (o) member of Oice; (m) annual report closed on 31st March 2022: (s) annual report closed on 30th September 2021: (1) Ferrovie dello Stato Group (FS), in 2018 acquired 80 percent of the architecture firm Crew; (2) Rina group's "consulting area" has 2021 revenues of 271.6 million euros. Former D'Appolonia, part of Rina group (which in 2016 acquired the British Edif group), in 2014 merged Projenia, C-Engineering and the engineering division of Rina Services and in 2015 acquired Sembenelli Consulting and Seatech; (3) Eni group, born in 2017 by the merge of Tecnomare and Eni Engineering e&p; (4) acquired by Bevilacqua Engineering Group and Intesa Sanpaolo in 2012, merged with A&S and Sis, in 2016 acquired Studio Altieri, in 2018 the American Boswell Engineering; (5) Acea group's division, which includes Acea Elabori, Ingegnerie Toscane, SIMAM and TWS; (6) Atlantia/Aspi group; (7) in December 2020 Spea Engineering assigned part of its activity to the newco, part of the group, Tecne; (8) in November 2021 founded with Studio Speri the firm Tecne Speri Bridge Designers; (9) in March 2022 founded with Systra SWS the firm Tecne - Systra SWS Advanced Tunneling; (10) Simest controls 20.5 percent of Proger, the majority is controlled by Proger Ingegneria (40 percent Cadogan Petroleum, 33 percent Proger Managers & Partners, 20.4 percent Tifs Partecipazioni and 6.6 percent Ma.Lo.); (11) Astm/Gavio group, in 2017 merged with Sineco and in November 2021 with Ativa Engineering; (12) consolidates DBA Progetti and DBA Lab. In 2015, 2017 and 2019 acquired respectively the Slovenian companies Actual IT, Itelis and Unistar, in 2018 acquired 75 percent of Sjs Engineering and in October 2022 C.&C.; (13) Fininc group, participates in consortium Sis with general contractos Inc and the Spanish Sacyr; (14) controlled by Comune di Milano, in October 2017 merged Metro Engineering and Napoli Metro Engineering; (15) former Favero & Milan, consolidates the German company F&M Retail: (16) first consolidated balance sheet after the m&a operation with Steam in October 2021. Born from the merge of Manens Intertecnica and Tifs Ingegneria in December 2009; (17) renamed after the merge of the French Coteba with Sogreah in 2010. In 2015 acquired Intertecno and in 2016 merged Artelia Engineering; (18) in 2011 the Dutch controlling group Arcadis acquired the British Ec Harris; (19) former Technip Italy Direzione Lavori; (20) Toto Holding group; (21) in October 2021 SWS Engineering was acquired by the French group Systra; (22) 80 percent owned by Simon Fiduciaria; (23) in 2015 the American group Aecom acquired Urs; (24) in 2018 acquired Dms Geotechnical Engineering; (25) former Mwh, acquired by the Canadian group Stantec in 2016; (26) former Ramboll Environ Italy: (27) Immobiliare San Marco group; (28) in 2019 acquired the energy division of Hitachi Industrial Engineering EMEA and the majority of Npi from Rina Consulting. Controls Seingim Power and Seingim Oil&Gas. With the architecture firm Ai Progetti and the engineering firms Area Engineering and T&T forms the network Join Venice; (29) former Agrotec; (30) consolidates Pro Iter Ambiente and Pro Iter P&CM; (31) Generali Group owns 20 percent of the firm; in January 2022 sold the German Seecon Ingenieure (acquired in 2018) and in October 2020 Spiekermann (acquired in 2007) to the German group Dorsch; (32) Tili Group, controls Profert, Renardet and Renardet Oman; (33) in 2018 the cooperative firm became a public limited company. In March 2020 sold its laboratory division to the German group Agrolab; (34) controlled by the Lebanese Dar Group. In 2019 acquired Soil Engineering; (35) former Elettra Energia; (36) in March 2021 split from Spea Engineering, after being merged since 2015; (37) in 2019 rented some activities of Lotti Ingegneria; (38) belongs to Contec Group, which controls Bis-Lab, Contec Aqs, Contec Ingegneria, Contec Industry, Econ Energy, Exenet, I-Con, Open Building, Pronext and Studio Concreto that add up 23.9 million revenues in 2021; (39) former Ingenieurteam Bergmeister; (40) controls Bmz Impianti, in October 2020 created with Recchi Ingegneria e Partecipazioni the new firm BMS Recchi; (41) former Pini Swiss Engineers, in September 2022 acquired Geodata (controlled since 2017 by PowerChina, in bankruptcy since May 2022); (42) Ariatta, Redesco and the architecture firm Starching form the firm (former consortium) Maestrale; (43) with EL and Prodim forms the consortium EP&S; (44) former Mobilityinchain; (45) Anas (FS) group, established in 2012; (46) Ipi group, former Arcoengineering.



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The Top 200 General And Specialty Contractors

Tab. 19

2021	2020	Ei	Revenues 2021	Var. % 2021/20	% abroad 2021	Ebitda 2021	Var. % 2021/20	Ebit 2021	Var.% 2021/20	Net result 2021	Var. % 2021/20	Net debts 2021	Var. % 2021/20	Equity 2021	Var. % 2021/20
1	1	Webuild (1)	6.420.334	28,1	52,0	313.711	-58,2	-33.715	n.s.	-278.766	n.s.	-466.677	n.s.	1.859.599	-10,2
2	3	Itinera (2) (3)	1.230.767	9,0	68,9	-25.069	n.s.	-59.817	-72,0	-70.382	-30,6	104.700	-16,8	113.401	-30,0
3	4	Pizzarotti	1.098.559	12,8	53,6	542	n.s.	-65.082	40,3	-67.942	36,0	434.182	1,5	201.075	-21,9
4	6	Cmb (a) (4)	772.497	33,3	16,6	22.519	9,5	8.389	-26,6	4.493	133,6	16.700	-50,8	230.846	-0,4
5	7	Ghella	684.551	24,1	75,0	75.727	31,2	29.950	117,3	10.272	44,0	-108.685	n.s.	277.924	-0,6
6	5	Bonatti (s) (5)	654.901	-27,0	95,3	-32.663	n.s.	-48.618	n.s.	-51.989	n.s.	188.363	22,4	198.956	-20,2
7	8	Amplia Infra- structures* (s) (6)	603.732	21,2	-	42.167	n.s.	33.898	n.s.	23.376	n.s.	62.050	20,2	53.727	433,8
8	11	Gcf - Generale Costruzioni Ferroviarie (s) (7)	537.424	29,4	31,0	99.380	29,0	65.283	0,3	46.321	-3,1	3.413	n.s.	345.895	15,4
9	12	Rizzani de Eccher (8)	510.066	25,8	72,2	7.032	n.s.	-1.754	92,2	-19.195	44,3	193.809	6,0	79.507	-20,3
10	9	Trevi (s) (9)	494.616	0,7	86,8	42.484	-6,4	-5.631	n.s.	-51.295	n.s.	251.806	-6,5	89.924	-25,1
11	14	lcm (10)	454.176	24,9	51,8	73.578	22,4	20.861	1,9	3.736	n.s.	99.862	16,4	92.233	11,5
12	17	Salcef (s)	440.141	29,3	26,2	95.530	21,0	68.167	16,9	39.342	-4,7	-114.547	n.s.	421.373	56,1
13	10	Cimolai (s) (11)	435.625	-5,1	60,4	33.025	-26,8	11.620	-50,6	18.102	n.s.	105.978	4,6	163.167	11,8
14	20	Rubner Holding (s) (12)	414.298	35,3	63,3	43.229	74,7	28.533	n.s.	21.106	n.s.	13.477	14,0	186.382	11,9
15	16	Impresa Tonon	403.616	17,6	19,0	36.166	-15,2	24.027	-18,6	13.849	-29,7	17.157	-19,8	155.345	8,2
16	13	Engineering 2K*	369.487	0,6	-	25.122	-19,6	22.196	-12,9	15.634	-16,2	-51.206	5,6	33.209	-22,0
17	18	Techbau* (g)	300.527	-10,0	-	27.488	4,3	23.979	-5,4	28.392	21,4	-66.347	-80,5	61.176	48,2
18	19	Sicim* (s)	276.313	-15,1	99,0	36.460	-28,5	8.163	-72,5	5.555	-84,5	-34.483	15,1	320.695	2,5
19	21	Inc (13)	256.828	-15,7	6,3	17.459	-38,0	11.510	-49,8	757	-92,0	6.347	-79,8	933.014	0,0
20	24	Strukton Rail Italy (s) (14)	249.269	21,3	1,0	37.233	27,0	19.804	13,5	14.007	24,0	2.061	n.s.	135.904	11,5
21	23	Carron (15)	245.748	-1,7	-	17.292	9,1	13.867	7,3	9.044	3,1	14.410	n.s.	74.126	13,9
22	27	Impresa Percassi (16)	227.522	51,8	6,2	5.723	59,2	3.940	48,0	60	-17,8	24.826	43,3	24.199	0,7
23	30	Toto*	202.258	76,0	0,5	-5.804	-107,8	-13.592	23,4	-21.705	22,5	49.201	-4,2	32.480	72,5
24	32	GKSD Edile* (17)	183.671	84,8	-	14.025	n.s.	13.977	n.s.	6.204	89,1	-15.584	n.s.	8.963	52,6
25	28	Italiana Costruzioni	157.907	16,3	n.d.	4.839	n.s.	-2.863	87,4	-6.218	75,5	n.d.	n.d.	17.379	-28,6
26	26	Colombo Costruzioni*	147.447	-14,5	1,6	5.861	n.s.	1.437	n.s.	1.155	n.s.	-27.826	29,0	20.980	5,8


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27	35	Cogefa*	137.603	54,6	0,8	3.789	39,3	1.503	1,7	2.444	n.s.	159	-98,3	22.829	5,8
28	84	GSE Italia* (18)	128.202	n.s.	0,1	10.098	107,5	8.446	n.s.	5.945	146,2	-32.344	-125,4	6.330	126,1
29	55	Cobar - Costruzioni Barozzi* (19)	124.835	84,2	-	13.220	n.s.	12.364	n.s.	8.481	n.s.	-5.477	n.s.	30.250	39,2
30	34	Impresa Tre Colli* (s)	112.169	22,9	-	4.607	56,6	2.613	39,7	1.300	57,8	15.866	16,6	32.184	4,2
31	94	Manelli Impresa*	102.793	129,8	2,5	4.250	109,2	3.561	128,9	1.922	37,6	18.802	125,2	15.190	n.s.
32	50	lti Impresa Generale* (20)	102.468	43,5	-	1.576	51,7	879	59,8	675	65,0	2.309	10,4	20.578	3,4
33	33	Cogevi (21)	101.917	7,0	1,9	6.124	126,6	919	n.s.	571	-7,3	3.797	n.s.	110.477	0,7
34	56	Di Vincenzo Dino & C.* (22)	101.632	50,1	-	3.658	56,3	2.326	43,7	1.596	54,5	7.652	n.s.	27.637	6,4
35	39	Rcm Costruzioni (23)	100.597	19,2	-	17.296	89,3	14.980	88,7	10.591	86,9	-10.736	-56,4	41.671	34,7
36	53	Ing. Ferrari*	96.158	37,9	-	2.138	139,4	1.248	n.s.	2.054	n.s.	-6.506	32,4	8.312	32,7
37	43	Vitali*	95.972	23,8	-	12.426	94,9	10.030	139,9	6.037	104,3	3.620	-78,8	64.394	10,6
38	66	Costruzioni Generali Gilardi*	94.899	61,0	-	807	-11,6	344	-25,4	119	-42,2	-7.187	10,4	13.274	0,9
39	36	Roda (s)	94.317	7,5	11,9	19.664	-9,6	17.133	-14,2	12.915	-5,5	-41.455	-38,7	154.524	8,4
40	40	Cooperativa Braccianti Riminese (a) (4)	91.939	9,0	-	6.984	21,5	4.035	14,9	2.415	137,0	41.989	11,6	34.079	7,3
41	42	Frantoio Fondovalle*	90.536	13,9	-	12.035	23,7	9.369	18,5	7.535	46,7	19.143	10,6	47.168	19,1
42	81	Quadrio Gaetano Costruzioni*	87.896	72,2	-	9.540	22,7	6.086	5,6	4.550	16,9	14.413	88,3	36.609	13,8
43	105	Devero Costruzioni*	87.835	111,1	-	11.064	56,1	10.983	55,8	5.553	7,1	24.393	-34,2	27.381	26,6
44	41	Maeg Costruzioni* (s) (24)	86.046	2,1	34,0	5.348	-38,0	1.206	-46,3	811	86,9	23.337	24,9	38.975	3,0
45	44	Garc*	85.676	11,0	-	2.894	n.s.	2.003	n.s.	1.650	n.s.	14.544	11,4	8.021	25,9
46	45	Borio Mangiarotti* (25)	84.960	10,6	-	-138	n.s.	-636	n.s.	131	-89,3	11.610	n.s.	47.859	0,3
47	79	Impresa Luigi Notari*	84.364	64,2	1,0	22.777	190,0	18.251	n.s.	10.600	n.s.	274	n.s.	34.801	43,8
48	59	Pac	82.612	31,0	21,0	4.780	n.s.	2.579	n.s.	449	n.s.	41.678	0,6	17.356	-11,3
49	49	Collini Lavori	81.967	14,4	-	1.618	115,4	1.179	n.s.	541	n.s.	-10.994	n.s.	25.264	1,4
50	64	Sac* (19)	81.393	33,1	-	9.500	5,6	8.971	6,1	7.379	16,1	-25.521	-27,9	89.827	8,3

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2021	2020	Er	Revenues 2021	Var. % 2021/20	% abroad 2021	Ebitda 2021	Var. % 2021/20	Ebit 2021	Var. % 2021/20	Net result 2021	Var. % 2021/20	Net debts 2021	Var. % 2021/20	Equity 2021	Var. % 2021/20
51	57	Cogeis* (26)	80.678	19,5	9,9	13.513	-17,1	7.600	-34,9	6.332	-14,5	-29.737	26,4	93.509	7,1
52	31	I.Co.P. (s) (3)	79.973	-28,2	31,7	10.181	-44,0	1.427	-84,0	3.173	-49,8	35.996	-9,8	37.491	10,1
53	38	Globalfer* (s)	78.864	-7,8	-	16.629	-21,5	12.216	-34,2	11.110	-23,7	-25.539	-93,4	48.661	-8,1
54	-	Alfano Costruzioni Generali	78.577	n.s.	-	14.921	n.s.	14.777	n.s.	10.568	n.s.	-2.161	n.s.	10.688	n.s.
55	62	De Sanctis Costruzioni*	77.218	24,7	-	1.397	-55,2	335	-86,7	312	-83,0	-31.229	16,1	37.631	13,5
56	29	Fincantieri Infrastructure* (27)	75.907	-40,8	47,7	-3.351	6,1	-7.019	-8,4	-28.879	n.s.	-20.748	n.s.	-16.540	n.s.
57	51	Vianini Lavori (3) (28)	75.881	7,9	-	52	-98,9	-3.478	n.s.	3.522	-17,2	10.632	n.s.	113.121	3,2
58	60	Ceprini Costruzioni* (s)	75.058	19,3	-	11.440	n.s.	10.088	n.s.	7.355	n.s.	-9.336	-80,8	42.261	21,1
59	72	Smv Costruzioni*	71.801	29,4	-	1.823	73,6	801	-15,7	620	-28,0	3.826	n.s.	9.041	7,9
60	87	Pavoni*	71.668	50,1	-	3.366	37,4	2.188	35,6	1.178	63,4	14.513	4,0	13.416	9,9
61	63	Cooperativa Edile Appennino* (c) (4)	70.926	15,4	6,5	937	-58,7	480	14,3	4	-77,8	31.803	4,6	16.930	1,2
62	70	MGA Manutenzioni Generali Autostrade* (s) (29)	68.892	23,3	-	11.782	-22,3	10.403	-26,5	7.255	-27,6	5.633	n.s.	11.350	-1,5
63	80	Unionbau*	67.766	32,4	-	2.387	24,3	932	-11,2	1.182	-52,0	4.479	67,8	19.274	6,5
64	67	Cemes*	67.543	17,9	-	1.993	-44,5	1.088	-60,5	302	-83,5	23.876	14,5	41.256	-3,1
65	108	Sercos*	66.807	65,7	-	3.315	77,5	3.111	80,9	2.222	75,2	-4.691	38,9	13.923	7,1
66	98	Gencantieri*	65.997	51,2	-	4.459	18,2	4.005	19,1	2.756	15,6	-9.526	-97,6	9.012	43,9
67	77	Cospe*	65.580	21,8	-	4.230	-13,7	3.852	-14,8	2.669	-19,0	16.615	n.s.	12.718	29,0
68	116	Semat*	65.245	65,8	5,3	2.787	n.s.	1.763	n.s.	1.267	n.s.	495	-72,4	12.071	11,7
69	58	Impresa Milesi Geom. Sergio*	64.233	-1,8	-	8.011	-5,8	4.699	-32,3	3.350	-31,9	21.599	-17,9	33.603	11,1
70	86	Nessi & Majocchi*	64.222	31,2	-	1.656	n.s.	1.337	n.s.	458	n.s.	7.319	-38,4	15.305	3,1
71	85	Costruzioni Edili Baraldini Quirino*	64.087	29,0	-	4.030	17,7	2.753	25,9	1.652	45,9	4.182	n.s.	10.363	19,0
72	107	Secap*	64.032	56,9	-	2.818	n.s.	2.700	n.s.	1.892	n.s.	4.625	-57,8	6.477	41,3
73	65	Ediltecno Restauri*	64.023	8,1	-	779	19,3	631	20,9	339	25,1	1.308	-75,5	3.999	9,3
74	69	Ircop*	62.629	12,1	-	2.359	-2,4	2.261	-2,5	1.270	8,1	6.049	22,4	12.750	11,1



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2021	2020	Firm	Revenues 2021	Var. % 2021/20	% abroad 2021	Ebitda 2021	Var. % 2021/20	Ebit 2021	Var. % 2021/20	Net result 2021	Var. % 2021/20	Net debts 2021	Var. % 2021/20	Equity 2021	Var. % 2021/20
75	109	Impresa Costruzioni Ing. Enrico Pasqualucci*	61.959	53,9	-	2.242	27,6	1.911	29,8	1.221	71,2	-2.282	-7,9	5.212	21,5
76	73	Setten Genesio	60.435	9,0	-	706	n.s.	-813	83,2	-2.307	58,1	26.075	-28,9	13.328	-14,7
77	52	Impresa Pellegrini*	59.303	-15,0	1,4	5.692	-56,2	5.523	-56,2	4.666	-50,9	-31.427	-97,8	31.147	15,2
78	54	Cmsa (a) (4)	59.168	-14,8	-	4.086	n.s.	1.425	n.s.	-2.624	85,4	45.915	-35,6	33.782	-7,6
79	96	AeC Costruzioni* (30)	58.883	32,8	-	2.729	113,0	1.653	108,4	448	n.s.	24.233	-6,1	28.405	-3,5
80	61	Cev*	57.279	-8,8	-	6.234	-20,9	5.753	-19,8	3.988	-21,6	-1.673	n.s.	33.828	7,9
81	146	Ecoin*	56.608	85,1	-	13.490	65,8	13.183	100,4	9.606	109,5	2.362	n.s.	25.478	60,5
82	82	Cims (a) (4) (20)	55.638	10,8		2.251	-28,2	502	-55,8	102	-76,7	12.114	7,8	14.740	1,6
83	142	Giudici*	55.331	77,1	-	2.903	-11,0	1.421	-40,7	1.094	-38,3	600	-58,4	14.241	2,1
84	74	ACG - Arco Costruzioni Generali* (a) (4) (20)	54.976	0,6	-	1.367	n.s.	692	n.s.	109	n.s.	9.702	25,9	2.227	5,5
85	47	Todini Costruzioni Generali* (31)	54.502	-27,1	100,0	3.579	-63,1	-1.401	n.s.	680	-89,6	11.668	n.s.	53.310	-17,9
86	112	Bit (s) (32)	54.107	36,5		2.617	n.s.	2.115	n.s.	1.347	n.s.	5.111	-23,9	11.087	14,0
87	83	Tirrena Scavi*	52.996	5,5	69,9	-3.340	n.s.	-4.420	n.s.	-5.634	n.s.	30.315	101,9	22.472	-20,1
88	71	Sa-Fer*	52.353	-5,8	-	4.373	-37,6	3.620	-39,6	6.522	-18,3	-113.970	9,3	249.804	2,7
89	-	Fincosit* (33)	52.041	31,2	-	2.715	n.s.	1.215	n.s.	-427	n.s.	-663	n.s.	17.626	54,3
90	113	Vezzola*	51.839	31,1	-	4.826	70,3	1.854	34,1	990	28,1	14.720	-25,1	39.968	2,5
91	119	Impresa Bergamelli*	50.508	32,8	-	4.370	54,4	3.297	81,7	2.562	97,4	11.042	-0,1	11.352	29,6
92	123	Plenzich* (s)	50.500	36,3	-	9.495	n.s.	8.933	n.s.	6.195	n.s.	-930	-179,2	8.502	97,4
93	101	Salc* (19) (34)	49.998	17,2	-	1.306	6,8	-162	n.s.	450	31,6	18.572	39,4	9.083	5,2
94	103	Sales*	49.972	19,3	-	4.054	-26,7	1.949	-22,9	2.001	-14,9	-9.457	-0,8	43.735	2,7
95	-	Cds Costruzioni	49.873	n.s.	-	-3.492	n.s.	-4.694	-132,6	-3.127	n.s.	2.996	n.s.	56.915	-5,2
96	-	Cantieri Commerciali*	49.845	n.s.	-	4.556	n.s.	4.543	n.s.	3.855	n.s.	45	n.s.	3.998	n.s.
97	115	Se.Gi.*	49.620	26,0	-	17.152	0,4	16.000	-2,1	11.660	-5,2	-30.477	28,6	57.451	3,0
98	100	Zini Elio*	49.467	15,5	-	1.925	-62,7	1.368	-70,3	955	-70,1	-1.575	48,0	11.893	8,7
99	111	Europea 92* (35)	49.029	23,6	3,6	7.996	4,6	1.969	17,6	779	29,8	28.307	25,6	30.004	2,7

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2021	2020	Firm	Revenues 2021	Var. % 2021/20	% abroad 2021	Ebitda 2021	Var. % 2021/20	Ebit 2021	Var. % 2021/20	Net result 2021	Var. % 2021/20	Net debts 2021	Var. % 2021/20	Equity 2021	Var. % 2021/20
100	104	Micos (s)*	48.941	17,5	-	16.080	10,3	14.504	12,7	10.815	16,5	-21.413	-26,7	37.986	39,8
101	106	Mattioda Pierino & Figli*	48.372	18,2	-	1.363	100,1	969	n.s.	303	4,1	-1.528	-46,2	20.514	12,6
102	89	Impresa Costruzioni Grassi & Crespi*	47.880	2,8	-	1.303	76,1	867	n.s.	430	44,3	-3.898	47,3	8.176	0,4
103	37	Finso - Fincantieri Infrastrutture Sociali* (36)	47.699	-44,3	58,4	-8.107	n.d.	-31.203	n.d.	-33.988	n.d.	-12.104	n.s.	-24.018	n.s.
104	126	Francesco Comune Costruzioni*	47.273	31,6	-	20.923	133,8	20.759	135,0	15.237	114,6	-10.896	50,5	35.525	75,1
105	198	Crucianelli Rest/Edile*	46.575	100,2	-	1.873	97,8	1.658	103,4	932	n.s.	5.662	-3,3	3.641	34,4
106	78	Francesco Ventura Costruzioni Ferroviarie* (s)	45.956	-13,8	-	-11.678	n.s.	-12.581	n.s.	-10.371	n.s.	34.205	6,7	33.218	-23,8
107	120	Nigro & C. Costruzioni*	45.101	19,1	-	2.343	14,1	2.188	13,5	1.194	22,3	10.898	9,7	4.055	41,7
108	-	BEG Ingénierie Italia* (37)	45.091	n.s.	-	1.865	n.s.	1.750	n.s.	1.265	n.s.	-9.779	n.s.	1.751	122,8
109	144	Preve Costruzioni* (24)	43.922	43,1	-	3.641	61,9	1.924	74,4	2.251	48,3	20.618	0,2	28.092	8,7
110	137	Colombo Severo & C.* (s)	43.044	29,2	-	4.684	86,3	4.038	97,2	2.718	133,5	1.787	-13,3	14.611	22,7
111	118	Impresa di Costruzioni Albini e Castelli*	42.816	10,6	7,6	1.768	45,9	1.190	78,9	587	148,7	12.403	20,1	4.068	2,4
112	91	Strabag* (38)	42.795	-7,3	-	13.017	n.s.	11.047	n.s.	11.410	n.s.	-423	36,8	29.840	61,9
113	122	Plattner*	42.604	14,5	-	2.855	16,4	718	-52,0	509	-52,8	2.035	n.s.	9.455	5,7
114	140	Ratina Costruzioni*	42.403	34,3	-	3.900	0,2	3.123	37,6	2.218	38,9	-245	142,6	6.999	46,4
115	159	Civelli Costruzioni *	41.699	47,1	-	1.901	32,7	1.354	45,7	935	57,1	4.228	7,6	7.731	12,8
116	130	Giuggia Costruzioni*	41.349	17,8	-	2.972	23,2	2.046	21,4	729	-4,6	23.701	9,9	12.373	6,3
117	-	Guffanti A. (39)	41.223	73,9	-	10.758	46,5	9.428	49,2	6.173	100,6	54.312	-1,2	67.607	10,1
118	-	Debar Costruzioni* (19)	41.184	86,4	-	1.310	-46,4	1.245	-47,2	273	120,2	23.199	-11,2	8.074	3,5
119	75	D'Adiutorio Costruzioni*	40.879	-24,9	-	2.907	-50,0	1.669	-66,8	1.373	-57,8	-4.629	61,6	24.891	5,0
120	147	Mak Costruzioni*	40.799	33,6	-	3.072	68,3	2.680	n.s.	1.808	n.s.	7.128	39,2	7.875	55,5
121	88	Brussi Costruzioni*	40.757	-14,4	-	2.029	16,6	1.041	-13,5	638	-13,7	-7.937	n.s.	5.716	12,5

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2021	2020	Firm	Revenues 2021	Var. % 2021/20	% abroad 2021	Ebitda 2021	Var. % 2021/20	Ebit 2021	Var. % 2021/20	Net result 2021	Var. % 2021/20	Net debts 2021	Var. % 2021/20	Equity 2021	Var. % 2021/20
122	195	Costruzioni Generali Lombarde*	40.723	74,1	-	6.145	n.s.	4.765	n.s.	2.376	n.s.	-3	n.s.	4.146	134,2
123	148	Beozzo Costruzioni*	40.409	33,5	-	2.077	34,3	1.654	37,9	1.358	37,2	-2.285	39,1	6.614	11,0
124	99	Cosedil* (20)	39.837	-8,3	1,6	3.774	8,2	2.540	-8,0	2.119	19,5	-927	77,3	10.379	25,8
125	177	Fondamenta (s)*	39.723	54,7	22,3	7.189	127,6	5.244	106,6	3.865	116,8	-4.701	-52,5	15.146	34,3
126	138	Marican Construction 1*	39.587	23,0	-	15.530	82,6	14.964	85,4	9.790	81,4	-24.926	n.s.	16.300	83,1
127	102	Ricci*	39.578	-6,7	-	1.811	-13,0	1.424	-27,2	186	-71,9	10.377	24,2	10.422	8,7
128	164	Vico - Valdostana Impresa Costruzioni*	39.364	41,7	-	4.090	-1,4	2.222	-22,1	1.509	-18,1	19.189	52,6	29.551	123,3
129	154	Zappa Benedetto*	39.249	34,0	-	7.774	-15,9	7.019	-19,1	5.005	-16,5	3.911	n.s.	20.697	29,7
130	129	Valsecchi Armamento Ferroviario* (s)	39.182	11,1	-	9.135	19,3	5.236	-10,7	3.706	-8,3	11.535	12,4	32.874	12,7
131	150	Editel*	38.877	29,3	-	735	10,5	475	32,7	583	39,5	2.957	n.s.	5.280	3,5
132	135	Colas Rail Italia* (s) (40)	38.737	15,3	-	-1.958	42,0	-3.106	28,1	-3.168	28,7	-5.204	6,1	3.508	109,3
133	168	Anese*	38.458	42,2	-	1.569	n.s.	156	-65,6	227	-29,5	7.678	-1,6	5.618	4,2
134	110	Fersalento* (s)	38.198	-3,8	-	5.118	-29,6	1.970	-57,0	984	-68,2	8.002	-12,0	26.217	3,9
135	117	Sitalfa* (s)	37.679	-4,1	0,5	3.608	-14,2	2.780	-16,0	1.914	-12,8	10.464	28,3	23.708	8,8
136	95	Impresa Lavori Ingg. U. Forti & Figlio*	37.622	-15,5	-	4.119	48,3	3.322	46,9	2.444	45,0	-1.096	-18,5	15.450	18,8
137	136	Pesaresi Giuseppe*	37.609	12,7	-	1.058	-31,8	323	-59,2	40	-91,5	10.814	-13,7	18.429	0,2
138	-	Sig.Ma.*	37.161	107,9	-	4.712	n.s.	4.295	n.s.	2.978	n.s.	4.385	32,1	4.507	194,6
139	181	Suardi*	37.040	46,5	15,5	2.741	56,8	1.801	74,7	1.280	61,2	6.188	58,5	8.421	28,2
140	121	Solesi*	36.612	-3,1	7,2	1.054	-7,9	794	-15,1	193	85,6	6.917	23,6	1.060	20,9
141	125	Nuova Arti Unite* (a) (4)	36.503	1,6	-	2.479	8,0	2.095	15,4	1.607	11,5	-1.690	-143,9	11.065	17,1
142	158	Mario Neri*	36.366	27,1	-	3.406	146,1	3.063	n.s.	2.148	n.s.	-1.787	62,8	11.113	22,5
143	186	Salp (s)*	36.275	49,0	-	1.632	-73,6	-599	n.s.	-1.172	n.s.	7.474	-20,9	7.262	-18,1
144	141	Sveco*	36.189	15,6	-	11.845	11,1	10.955	14,1	7.998	15,1	-13.430	-147,2	23.569	49,0
145	145	Paolo Beltrami Costruzioni*	36.169	17,9	-	740	50,1	435	56,5	143	78,8	400	n.s.	1.569	10,0
146	161	Vanoncini*	35.900	27,7	-	903	-11,2	580	-9,2	340	-22,6	5.719	115,2	6.637	5,4

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147	92	Mubre Costruzioni*	35.696	-22,3	-	3.071	3,3	2.495	-6,7	1.828	-3,1	-2.941	-138,9	8.530	21,8
148	-	Angelo De Cesaris*	35.453	27,1	-	3.795	47,6	3.038	62,7	1.587	33,1	-1.983	n.s.	21.044	8,2
149	155	Icose*	35.105	19,9	-	6.833	45,0	4.478	36,9	3.446	39,1	199	-86,9	25.098	14,9
150	-	Imprese Pesenti*	34.941	31,3	-	5.552	42,0	3.828	66,4	2.945	78,6	3.341	-28,8	17.428	20,8
151	191	Edil Moter*	34.761	45,0	-	2.283	-18,0	1.233	-44,9	978	-40,9	-974	54,2	23.031	4,4
152	124	Sangalli*	34.460	-6,1	-	5.012	-1,6	3.498	-15,2	2.776	-20,9	-4.391	-43,4	16.543	20,2
153	133	Ing. De Aloe Costruzioni* (s)	34.162	-1,4	3,4	8.343	-26,6	4.061	-40,1	3.197	-38,4	13.076	41,6	23.896	8,1
154	131	Tiemme Costruzioni Edili*	33.705	-3,7	-	2.701	54,6	2.266	106,0	1.190	n.s.	15.143	0,2	17.838	7,1
155	165	Bernard Bau*	33.470	20,8	-	3.262	20,3	1.832	5,0	1.430	3,6	-1.886	12,0	9.704	6,7
156	189	Mic*	33.460	38,6		2.492	144,1	1.682	72,5	791	n.s.	11.293	0,2	10.208	8,4
157	169	Bertini*	33.037	22,5	-	2.886	91,8	1.766	77,0	1.013	65,3	2.941	-45,2	6.774	8,2
158	153	Italia Costruzioni* (20)	32.984	12,6	-	776	57,7	707	43,7	407	84,2	-2.061	n.s.	1.268	47,1
159	-	Iba Centro Meridionale*	32.808	69,8	-	713	n.s.	305	n.s.	144	n.s.	-740	n.s.	9.311	1,6
160	139	Costruzioni Generali Girardini*	32.571	2,6	-	4.357	5,4	2.798	5,1	2.182	1,8	-1.289	72,4	16.665	3,6
161	166	Palingeo* (s)	32.529	17,6	-	4.165	51,1	2.412	73,4	1.792	53,7	8.712	-19,4	14.286	112,4
162	-	Morbio Costruzioni*	32.144	69,0	-	2.404	72,5	1.943	66,4	1.376	62,1	4.802	-9,1	3.868	40,6
163	172	lci (a) (4)	31.936	19,7	-	-910	n.s.	-1.130	n.s.	-1.409	68,3	-720	n.s.	12.909	-9,6
164	160	Edilizia Wipptal*	31.692	12,7	0,1	2.900	-21,7	1.213	-56,2	1.104	-53,5	7.294	-11,9	38.870	2,9
165	180	LSI Lavori Stradali e Idraulici	31.377	24,1	-	2.559	33,9	2.083	34,0	1.282	78,1	6.321	n.s.	3.095	70,7
166	199	Edil Pietro*	31.193	35,8	-	2.353	-29,6	2.210	-30,6	2.596	12,0	-5.199	3,0	3.171	-41,0
167	157	Segeco* (s)	30.921	7,7	-	7.968	23,9	4.201	-19,9	3.229	-21,5	-1.170	50,9	48.221	6,7
168	175	Italbeton*	30.899	20,1	-	1.386	-4,5	572	-29,6	650	7,8	861	n.s.	3.938	19,8
169	-	Brancaccio Costruzioni*	30.768	53,8	-	2.292	19,0	1.902	14,3	1.290	15,3	-500	-4,2	6.737	19,3
170	-	Adriacos*	30.557	67,4	-	2.057	147,8	1.140	149,5	482	n.s.	4.892	-10,4	2.256	27,2
171	162	Impresa Edile Stradale Artifoni*	30.160	7,5		3.423	-47,3	1.046	-80,0	848	-77,5	6.567	n.s.	15.705	6,2

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2021	2020	Firm	Revenues 2021	Var. % 2021/20	% abroad 2021	Ebitda 2021	Var. % 2021/20	Ebit 2021	Var. % 2021/20	Net result 2021	Var. % 2021/20	Net debts 2021	Var. % 2021/20	Equity 2021	Var. % 2021/20
172	-	M&D*	29.829	59,1	-	8.058	22,1	7.351	20,7	5.087	20,8	-1.424	15,9	10.438	95,1
173	179	Bruni Giorgio & Ivo*	29.676	16,1	-	3.977	66,6	3.378	78,4	2.425	78,8	2.966	-22,2	15.346	18,8
174	114	Akno Engineering & Construction*	29.472	-25,3	-	4.666	-0,8	4.645	-1,0	3.141	-5,8	4.353	n.s.	8.189	5,7
175	184	Acmar* (b) (4)	29.349	19,2	-	-9.037	50,6	-9.120	50,8	-1.694	-16,9	17.548	-40,5	6.698	-20,2
176	-	Sposato Costruzioni*	29.259	29,9	-	752	-89,8	319	-91,1	44	-97,5	-3.253	56,0	8.638	-10,5
177	156	Castaldo* (19)	29.184	0,3	n.d.	1.623	-29,4	1.118	-35,5	619	-31,4	3.229	3,2	11.103	5,9
178	190	Edil San Felice*	29.165	21,6	-	4.424	-12,2	4.125	-13,7	2.878	-15,0	289	n.s.	8.066	24,8
179	134	Centro Meridionale Costruzioni*	28.887	-16,6	-	2.742	-66,8	1.766	-76,3	938	-82,3	-16.859	8,0	20.694	-26,4
180	-	Giambelli*	28.729	58,2	-	7.847	-8,6	2.136	-60,3	2.707	3,0	57.257	1,7	137.632	28,8
181	-	Sistem Costruzioni*	28.698	32,5	3,2	1.520	n.s.	1.097	n.s.	463	n.s.	8.553	n.s.	8.409	6,3
182	149	Zaffiro Costruzioni*	28.297	-6,1		660	-74,9	634	-75,8	-238	n.s.	16.070	n.s.	1.472	-13,9
183	197	Veneta21*	28.165	20,9	-	4.565	-1,0	3.672	-15,0	2.960	-9,3	-9.797	-25,2	18.254	14,5
184	-	Neocos*	27.874	30,6	-	567	2,9	137	-32,5	150	n.s.	5.663	-7,7	1.728	9,5
185	-	Imaf* (s)	27.597	23,1	-	3.419	-3,1	2.523	-20,1	2.147	-6,2	6.691	-5,3	11.171	6,0
186	192	Ars Aedificandi*	27.436	15,9	-	4.200	n.s.	3.521	n.s.	2.402	n.s.	-2.448	n.s.	6.675	42,8
187	193	Pre System*	27.334	16,6	-	2.419	-5,3	1.248	-18,5	1.068	-12,3	-6.226	-12,2	14.418	-4,8
188	163	Deon*	27.208	-2,1	-	1.832	-19,6	1.020	-43,6	861	-6,5	1.733	-56,8	9.011	-14,9
189	-	B&B di Ballan & C.*	27.158	30,6	-	1.254	33,1	918	41,0	582	29,9	479	-88,3	4.231	15,9
190	-	Impresa Fratelli Rota Nodari*	27.148	42,8	-	2.233	60,6	1.375	45,2	948	53,4	4.824	-13,2	10.810	-4,9
191	152	Zaco*	26.946	n.s.	-	-2.272	n.s.	-2.513	n.s.	-2.085	n.s.	3.640	n.s.	-568	n.s.
192	-	Mengato	26.922	18,6	-	2.008	30,3	1.045	-10,8	816	30,8	9.206	37,1	9.342	57,6
193	-	Belletti & Baroni Costruzioni*	26.812	36,8	-	2.134	n.s.	1.837	n.s.	586	n.s.	5.384	4,1	1.113	108,0
194	-	Impreme*	26.530	57,4	-	-2.748	-11,1	-6.779	-53,3	-2.513	91,3	171.558	-11,6	38.791	85,3
195	-	Impresa Bacchi*	25.453	15,1	-	1.488	-24,2	901	-25,5	457	-12,3	16.062	1,4	11.613	4,1
196	-	Agribeton*	25.375	40,2	-	532	-13,1	270	-17,9	9	-64,0	5.191	41,1	9.076	-3,0
197	-	Schwei- gkofler*	25.339	19,7	-	4.129	48,4	3.098	36,7	2.264	36,1	-2.438	n.s.	13.678	18,8



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Source: Guamari based on 2021 balance sheets and firms' data (thousand euros)

n.d. = not defined n.s. = not significant

(*) not consolidated data; (a) member of Legacoop; (b) member of Associazione Generale Cooperative Italiane; (c) member of Confcooperative; (j) annual report closed on 30th June 2022; (s) specialty contractor; (l) former Salini Impregilo, it is officially active since January 2014; acquired the American firm Lane Industries (which merged the already owned Healy) in 2015, sold its plants and paving division to the French group Vinci in 2018 and the power and energy one to Keystone Capital in 2019. In 2018 acquired Seli Overseas and Glf Usa from Grandi Lavori Fincosit, in 2019 Cossi from Condotte and in November 2020 the 65 percent of Astaldi (in insolvency proceedings); (2) Astm/Gavio group, in 2013 merged the "Costruzioni e Prefabbricazione" division of Codelfa, in 2015 the Omani Federici Stirling Batco, in 2017 acquired 50 percent of the American firm Halmar International; (3) Itinera, Vianini Lavori and Icop form the consortium Eteria (born in June 2021); (4) member of Consorzio Integra; (5) participated by Igefi group; (6) Autostrade per l'Italia group, new name of Pavimental since March 2022; (7) Rossifin consolidated data including Gefer, in November 2020 acquired the French firm Delcourt Rail, in June 2021 Cenedese and in November 2021 the Canadian Platinum Track Service; (8) consolidates Codest International, Deal, Sacaim and Tensa; (9) in December 2018 sold its Oil & Gas division (including Drillmec) to the Indian group Meil; (10) in 2016 changed its name from Impresa Costruzioni Giuseppe Maltauro; (11) Cimolai Holding consolidated data; (12) consolidates Rubner Holzbau, Rubner Objektbau and Rubner Haus; (13) Fininc consolidated data; with the Spanish general contractor Sacyr and the engineering firm Sipal forms consortium Sis; (14) consolidates Clf; (15) Carron Holding consolidated data; (16) Costim group, since 2018 participated by the holding Polifin (40 percent). In March 2020 the deal to integrate the construction business of Mangiavacchi Pedercini became effective; (17) in March 2021 GKSD, jv between GK Investment Holding and Gruppo San Donato, bought the firm from Bizzi & Partners; (18) controlled by the French group GSE which is part of the German group Goldbeck since 2019; (19) partner of consortium ReseArch; (20) partner of Arco Lavori, which is member of Consorzio Integra; (21) Finvit - Finanziaria Vittadello consolidated data; (22) Igefi group, participates in Bonatti and in January 2022 sold the firm Ceit (net solutions) to the French company Circet; (23) Rainone group; (24) partner of consortium Valori; (25) in 2019 the American fund Värde acquired a 20 percent share; (26) controls the construction firm Ivies; (27) born in 2017; in 2019 acquired a division of Condotte founding Fincantieri Infrastructure Opere Marittime and in December 2020 acquired Inso founding Fincantieri Infrastrutture Sociali; (28) Caltagirone group; (29) since December 2021 part of Reway group, which includes Soteco and Tls; (30) born in 2012 by the merge of Acea Costruzioni and Cls; (31) owned by the Kazakh group Prime System Kz; (32) Finmet consolidated data; (33) consolidated by Grandi Lavori Fincosit, in insolvency proceedings since November 2020; (34) former ICS Grandi Lavori; (35) partner of consortium Medil; (36) new name of Inso, sold in December 2020 by Condotte to Fincantieri Infrastructure and Sviluppo Imprese Centro Italia SGR (10%); (37) French group BEG; (38) formerly Adanti, acquired by the Austrian group in 2008; (39) Ginvest consolidated data; (40) part of the French group Bouygues.



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The Top 10 Project Validation Firms

Tab. 20

Pos. 2021		Project validation* revenues 2021	Project validation* revenues 2020	Var % '21/20	Validation and technical control revenues 2021	Var % '21/20	Total revenues 2021	Var % '21/20	Ebitda 2021	Var % '21/20	Net profit 2021	Var % '20/19	Net debts 2021	Var % '21/20	Equity 2021	Var % '21/20
1	Rina Check (1)	4.505	4.307	4,6	4.622	3,0	4.693	4,6	1.152	-36,8	597	-39,5	-542	14,4	1.254	-23,4
2	Conteco Check (2)	3.529	3.221	9,6	3.703	11,0	4.128	6,4	145	-11,6	13	-50,0	1.054	24,3	859	1,5
3	Bureau Veritas	2.368	1.753	35,1	3.104	39,4	103.037	10,9	12.267	17,5	6.941	18,9	-19.443	-123,4	17.618	6,7
4	Inarcheck	1.358	1.251	8,6	1.422	10,6	2.388	27,9	293	-5,5	130	-36,0	-584	-41,4	1.284	21,7
5	No Gap Controls	1.222	982	24,4	1.222	24,4	1.242	24,1	222	65,7	148	87,3	-198	11,2	526	39,5
6	Pcq	1.135	959	18,4	1.267	16,3	1.789	16,6	104	-39,9	37	-39,3	-47	74,5	232	19,6
7	Italcertifer (3)	1.085	447	142,7	1.085	142,7	20.798	18,9	3.002	-11,8	1.779	-14,1	-4.962	11,0	12.229	17,0
8	ITS Controlli Tecnici	915	615	48,8	1.138	-11,8	4.852	38,9	617	ns	314	ns	-356	ns	2.175	16,9
9	Norma- tempo Italia	856	747	14,6	1.886	75,0	2.885	30,4	1.359	21,1	869	4,8	nd	nd	1.418	3,6
10	Apave Cer- tification Italia	451	352	28,1	502	11,6	5.119	6,8	621	31,3	349	98,3	-1.121	-106,1	1.085	37,5

Source: Guamari based on firms' data and 2021 balance sheets (thousand euros)

nd = not defined ns = not significant

(*) ex art. 26 D.Lgs. 50/2016.

(1) Rina Group; (2) former Conteco; (3) FS Group. The firm declares "project validation revenues" of 10.5 million (2021) and 7.7 million (2020) and "validation and technical control revenues" of 8.7 million (2021) and 9.1 million (2020) including intragroup project verifications (for FS or RFI) and possibly independent verification activities abroad.



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