A REPORT FROM THE SWEDISH FEDERATION
OF CONSULTING ENGINEERS AND ARCHITECTS

DECEMBER 2017

SECTOR REVIEW

"THE MARKET FOR CONSULTING ENGINEERS AND ARCHITECTS IN EUROPE HAS STABILISED

A Swedish, Nordic
and International Survey of
The Consulting Engineering
and Architectural Groups

Svenska Teknik & Designföretagen
almega

KEY FIGURES 2016 (2015)

SEK **73.7** billion — The sector had a turnover in Sweden of SEK 73.7 billion (65 billion in 2015)

8 % — Revenue growth was 8% compared with 2015 [1]

SEK **16.9** billion — Swedish groups turned over SEK 16.9 billion in subsidiaries abroad (15.6)

60,500 employees — The sector employed 60,500 personnel in Sweden (55,000)

6 % — Growth in personnel was 6% compared with 2015 [2]

15,800 employees — Swedish groups employed 15,800 personnel in subsidiaries abroad (14,800)

11,000 companies — The sector consisted of some 11,000 companies in Sweden

SEK **1,218k** — Turnover per employee was SEK 1,218,000 (1,186,000)

7.2 % — Average operating margin was 7.2 % (6.0 %)

7.2 % — Average profit margin was 7.2 % (5.8 %)

5.1 % — Average net margin was 5.1 % (3.9 %)

[1] Companies which together turn over around SEK 2.5 billion have been added in this year's review. The actual growth is consequently 8% and not 13%.
[2] Companies which together employ 2,000 personnel have been added in this year's review. The actual growth is consequently 6% and not 10%.

THE SECTOR REVIEW

The Sector Review has been published by the Swedish Federation of Consulting Engineers and Architects (STD-företagen) since 1995. It is a compilation of the architectural, engineering consultancy and industrial consultancy sectors in Sweden, the Nordic countries and Europe. The Review presents ranking lists of the largest corporate groups on the respective markets, interesting key business ratios, news about structural transactions and information on the development and economy within the sector over the past year.

Since 2005, STD-företagen's counterparts in the neighbouring Nordic countries have contributed to the Review. The organisations that participate in this cooperation are FRI and Danske Ark (Danish Architects) in Denmark, RIF and Arkitektbedriftene (Architects' association) in Norway, SKOL in Finland and FRV and SAMARK (Architectural association) in Iceland.

The figures in the Review are based on the latest available data that we have been able to find on the respective firms. For just over half the firms the review is equivalent to a calendar closing for 2016. The remaining firms have split financial years. In most cases, we have received their annual reports for 2016/17. However, some annual accounts were not ready when work on the collection of basic data came to an end, for example for those companies whose annual accounts close at the end of August. In these cases, we have retained the same figures as for 2015/16. For the sake of simplicity, we refer to the compiled figures that applied for 2016.

The corporate information in the Review has been acquired via the databases Soliditet (Sweden) and Factiva Dow Jones Companies & Executives (Europe), from the Nordic organisations, direct from companies or via the companies' home pages. The monitoring covers some 2,000 companies in Sweden, the Nordic Area and Europe. Collecting the information is an extensive and time-consuming task, and in some cases it is impossible to obtain reliable information. The information on the international companies is more difficult to access. In Sweden, annual reports are public documents. This is not the case in all countries, and many firms are reluctant to disclose their figures. In these cases, we use the most recent material we can find. Consequently, all companies that appear in – or should appear in – the Review are requested to contact STD-företagen and to submit their details in order to make sure that the information published on them is correct.

We would like to thank those companies that have helped us by submitting their annual reports or figures.

We would especially like to thank Lena Hagman (Almega), Åsa Bergman (Sweco), Dimitris Gioulekas (Knightec), Maria Lindfelt (WSP), John Lydholm (LINK Arkitektur), Johan von Wachenfeldt (Krook & Tjäder Arkitekter) and Anders Wärefors (Bjerking) for their contributions to the report in interviews and introduction.

DAVID CRAMÉR
SWEDISH FEDERATION OF CONSULTING ENGINEERS AND ARCHITECTS

Cover photo:

Citybanan train station at Odenplan (Stockholm). Architects responsible: Ahlqvist&Almqvist.

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MAGNUS HÖIJ, MANAGING DIRECTOR OF THE SWEDISH FEDERATION OF CONSULTING ENGINEERS AND ARCHITECTS

AN INCREASINGLY STRONG SECTOR

The need for engineering and architectural expertise is greater than ever.

This could be a summary of both 2015 and 2016, but in 2017 it is truer than ever. Our services are in demand from numerous directions, and demand is frequently greater than supply. In many cases, companies are having to turn down commissions.

There is some concern that the market, in particular the housing market, will cool down during 2018. It is possible, even though there is still a shortage of homes in many Swedish cities and municipalities.

But that this could in some dramatic way reduce the need for qualified services within both urban planning and development, infrastructure, schools and hospitals and so forth – I quite simply do not think this is the case. The housing market will remain, even though it might possibly change its character.

Our society, and trade and industry, will have an equally substantial requirement, possibly greater, for continued innovation, creativity, development and design as ever. An investment in our services and our knowledge is quickly paid back in increased value, in more effective solutions, in smarter production. This is true regardless of whether the demand for homes is high or low.

In a time of rapid transition, driven by technological development and internationalisation, the need for early and well thought out planning is simply increasing.

This makes me convinced that our sector, with its engineering and architectural expertise, is very strong and ready for an exciting new year.

MAGNUS HÖIJ
MANAGING DIRECTOR OF THE SWEDISH FEDERATION OF CONSULTING ENGINEERS AND ARCHITECTS

FIVE CURRENT TRENDS IN THE SECTOR

1

MORE COMPLEX SERVICES

AS SOCIETY DEVELOPS and becomes increasingly driven by technology, it is becoming increasingly important to be able to manage complex issues. It can concern solutions linked to industrial development, to cities' growth, to major infrastructure projects or to political deliberations.

There are few sectors that are coping with such challenges better than our member companies. The in-depth knowledge and experience that architectural and engineering firms can offer links knowledge of modern technology with society's major challenges. It also requires cooperation between different areas of expertise. Many of our companies have great breadth internally. Others are electing to work with partners in order to create alliances and networks.

This is an area where insights and perspectives outside the country's borders are of great importance. Demand for perspectives from other countries is going to increase. And our know-how will also be increasingly in demand abroad.

2

NEW ROUTES TO FIND NEW EMPLOYEES

THE SHORTAGE OF RESOURCES, both architects and engineers, has been acute for some time. It has created concerns for both the sector's development but also for clients in different roles and for society in general.

The university system is lagging behind and is not able to increase capacity at short notice, even though immediate action is required. While waiting for the universities to educate a sufficient number of graduates, trade and industry is obviously looking for other routes to find solutions.

Offering opportunities for labour from other countries is an obvious measure. Many companies are actively looking for trained engineers and architects, others are establishing partnerships with international actors.

In some cases the companies are providing training themselves within professions with a shortage of skilled labour in order to be able meet the market's requirements.

3

THE SECTOR IS BLURRING

THE CONSOLIDATION TREND is continuing. But it is not just about company X buying or merging with company Y.

Is is also about skills mixing and new offers being formulated.

The proximity between architects and engineers is obvious. Many architectural firms have already strengthened their know-how within culture, geography, philosophy and several other areas.

But in addition the opportunities offered by digitalisation, both in application and development.

The sector, which at one time was clearly compartmentalised, where one kind of engineer did his or her job with precision and accuracy – but also rarely outside their own compartments – is in the process of changing.

Today's engineers are interacting with other engineers or experts, appearing in new guises, creating new alliances and offers.

The sector is becoming not just more difficult to place in the old compartments, it is also becoming wider, blurring into new roles that are frequently a long way outside the traditional tracks

4

COMPANY BUILDING

IN LINE WITH THE COMPANIES GROWING, widening and changing, the need for structures, organisation and new leadership is increasing.

Functions such as HR, accounts, marketing and communication, are being strengthened and developed. This is providing an opportunity for continued development of the companies' capacity and ability to develop. It is creating better conditions for the personnel to develop. It is boosting the companies' visibility with both customers and potential employees, as well as in the public debate.

One function that has been particularly strengthened in recent times is the legal department in many companies. The need for legal capacity, to manage contracts, insurance policies etc., is constantly increasing in importance.

There is a lot to suggest that the need to understand and be able to interact with the law is increasing in importance.

5

INTERNATIONALISATION

THE PRESSURE TO PICK UP KNOWLEDGE, experiences and working methods from other countries is increasing. Many larger clients expect more than just traditional, Swedish solutions to new problems.

It obviously does not do any harm that many new Swedes are bringing with them know-how and experiences from their former home countries.

But it will require more. Several foreign actors are looking with curiosity at the Swedish market and several have already started establishing themselves here.

In the same way, a significant number of Swedish companies are looking globally, both for new commissions but also in order to find the vitality required to expand their own company.

LENA HAGMAN, CHIEF ECONOMIST, ALMEGA

GREATER DEMAND FROM EXPORT MARKETS BENEFITS ENGINEERING CONSULTANTS AND ARCHITECTS

During 2017, the demand from important export markets for Sweden has grown, in particular the demand for export goods and associated services. This means that the demand for architectural and engineering consultancy is increasing still more since they are needed for new investments all over the world. It is a question of investments in goods and services such as mechanical equipment, product and technical development, research and development. In other words it is a matter of investments that increase competitiveness and productivity in the production and sales of companies in many different countries. In this context, an important role is being played by engineering consultants and architects.

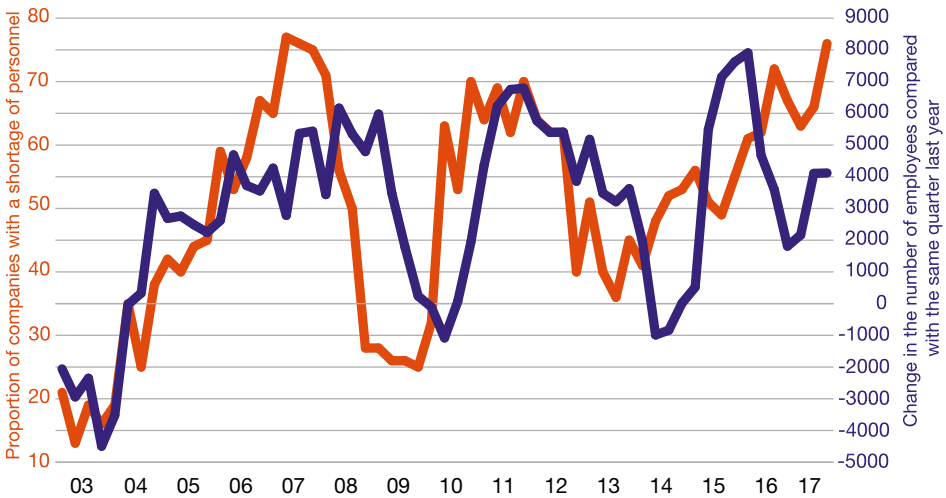
The growth of investments in product development and greater production capacity should continue so that it becomes possible for the growth potential to be increased in a more sustainable way in many countries. It would in this way be possible to break the downward trend in productivity growth following the financial crisis. For a more sustainable increase, profitability needs to rise and provide the necessary scope for continued investments. A "Catch 22" situation, or in other words a vicious circle with an excessively low growth in productivity that fails to provide the required level of profitability and thus gives rise to low investments, needs to be broken.

The global upswing in demand during 2017 has accelerated the growth in world trade and been of benefit to Sweden, which exports a large share of the country's overall production. The improvement in demand is now more synchronised between different regions than it was previously. Forecasts for growth in GNP over the period 2017-2018 have been marked up for a whole series of major export markets, for example the EU area and the USA. The already high rate of growth in China is expected, as before, to gradually slow down . The previous fear of a faster deceleration in China appears to have settled down. The downturn in China's growth does not mean, however, that there is a decrease in domestic demand. This year, an upswing has been observed in imports into China, which has made a significant contribution to the upswing in world trade.

THE GROWTH IN EXPORTS and production within export companies all over the world is increasing the need to expand production capacity. In both Germany and Sweden, for example, the export industry has reached a high level of capacity utilisation and needs to expand. The investments in Germany are expected to increase still more in 2018. In Almega's economic forecast from November, we anticipate an upswing in the investments to be made in machinery both this year and in 2018. This will be accompanied by an increase in the demand for services from engineering consultants which their volume of orders in hand indicates and which continued to rise in 2017.

In our new economic forecast, Almega assumes that the growth in global GNP will speed up following the historically weak recovery after the financial crisis. We now base our calculations on the fact that the growth rate will increase, from 3.2 per cent in 2016 to 3.6 per cent this year and to 3.7 per cent in 2018. At the same time, growth in the Euro area is increasing, by 2.2 per cent this year and 1.9 per cent in 2018. At the same time GNP, is also increasing in our neighbouring Nordic countries, in Norway and Denmark to somewhat over 2 per cent this year while in Finland it will be even stronger according to the forecast: by 2.8 per cent. The upswing in Finland is associated with greater international competition over the period 2016-2017, when

The increase in the number of employees in the engineering consultancy and architectural sectors is not accelerating in the current economic upswing as it did in the previous economic recovery over the period 2005-2007



Källa: KI-barometern, Konjunkturinstitutet och Källa: SCB (Kortperiodisk sysselsättningsstatistik).

> ALMEGA PREDICTS THAT THE RATE OF GROWTH FOR GLOBAL GNP WILL CONTINUE TO RISE FROM 3.2% TO 3.7%.

there was a decrease in Finland's relative cost of labour per unit.

One important export market for Sweden that constitutes an exception is Great Britain, whose growth is expected to be weaker – with 1.5 per cent both this year and in 2018. In connection with the Brexit referendum last year and the subsequent decision reached on the country's exit from the EU, there has been a significant decrease in the value of the British pound. This has forced up import prices and inflation in Great Britain. With a certain time lag, it has weakened domestic consumption, whose growth rate appears likely to be halved this year compared with last year, to 1.5 per cent. Corporate investments are also being held back by the uncertainty surrounding the effects of Brexit and with regard to which agreement will be finally entered into between Great Britain and the EU in, among other areas, the trade sector. The rising inflation in Great Britain, which is expected to reach a level of over 3 per cent before the end of 2017, caused the Bank of England to raise its key interest rate in November, to 0.5 per cent. But continued weak growth and salary trends suggest that it will be at least 2019 before the next increase in interest rates.

WITHIN THE EURO AREA, no increase is expected to be made in the interest rates of the European Central Bank (ECB) until 2020, since the inflation level in the area is not judged to meet the inflation goal of just below 2 per cent until that point in time. During October this year, the inflation rate within the Euro area was on a level of 1.4 per cent, and cleared for the more volatile prices of food and energy, the inflation rate has fluctuated around 1 per cent during 2017. A continued expansive monetary policy on the part of the ECB is underpinning the increase for investments in Euro countries. It has also been observed in the form of an increase in incoming orders for European engineering consultants, primarily from the private sector.

The increased growth and employment levels during the upswing in the economy in recent years have led to shortfalls in the labour force in several countries, such as Germany and Sweden. The shortage of personnel is currently especially high among engineering consultancies and architectural firms compared with many other sectors in Sweden. As many as three-quarters of all the countries in the sector now have a shortage of staff. The shortage of labour is a growing problem in general for engineering consultants in Europe.

Signs that, above all, knowledge-intensive sectors in Sweden have not succeeded in recruiting personnel at the rate they are needed in the present economic recovery include the fact that the growth in employment has begun to slow down. It differs from previous patterns recorded in financial booms, for instance during the economic upswing over the period 2005-2007, when the shortage of labour also increased, but also when the employment level continued to increase with growing strength. Now, the shortage of personnel among engineering consultants and architects has risen to the same high level as it was at the peak of the economic boom in 2007. As many as 76 per cent of the companies suffered staff shortages during the third quarter this year, but the rate of increase in the number of employees is not accelerating, see graph. In view of the lack of personnel within so many companies, the number of employees should be increasing faster. In other words, the number of employees needs to increase much more quickly in order to meet the continuing strong demand for the sector.

IN CONNECTION WITH the high utilisation of resources in Sweden, there is a tendency towards an increased outsourcing of advanced service production for foreign countries, or alternatively for increased import from external suppliers. This may thereby compensate to a certain extent for a shortage of personnel in Sweden, and for companies maintaining their level of competitiveness. The production will in other words be more evenly distributed and integrated with activities abroad. This specialisation is under way for export-orientated service companies, which are meeting greater competition, both on export markets as well as in their supplies on the Swedish market.

The export industry in particular has increased its import of input services, which is serving to apply increased competitive pressure on corresponding service suppliers in Sweden. If we look even further forward, we can expect that international competition will increase still further. If Sweden is to continue developing as a knowledge nation with advanced service production, the shortage of competence in the country will have to be eliminated, by among other ways providing more places at institutes and universities of technology, an increase in the immigration of skilled individuals and lower marginal taxes. Insight into the importance of knowledge-intensive companies for the Swedish economy, for exports, employment and, in the final instance, tax revenue, must increase. The risk otherwise is that the Swedish economy will be shifted to the wrong track and lose its competitiveness, capacity for growth and thousands of jobs.

LENA HAGMAN
CHIEF ECONOMIST, ALMEGA,
NOVEMBER 2017

[1] Weakening to a GNP growth of 6.2 per cent in 2018, according to Oxford Economics' forecast from October 2017.
[2] See Investment Signals, October 2017, Svenska Teknik&Designföretagen.
[3] See the EFCA Barometer for Autumn 2017, which is published twice a year by the European Federation of European Consulting Associations, EFCA.
[4] Konjunkturinstitutets konjunkturbarometer, oktober 2017. *The Swedish Economy Report published by the National Institute of Economy Research,* October 2017
[5] See also the EFCA Barometer for Autumn 2017.
[6] See also Almega's Economy Report, November 2017.

THE SECTOR'S DEVELOPMENT IN 2016 AND 2017

The engineering consultancy, industrial consultancy and architectural sector continues to grow in Sweden. 11,000 companies turned over SEK 73.7 billion and employed a workforce of 60,500 in 2016. This is equivalent to a growth of 8% measured in turnover and 6% measured in number of employees. The sector is in a record position in terms of orders, which has also had a positive effect on profitability. Average operating margin increased to 7.2% from 6.0% during 2015, and the average profit margin also increased to 7.2% from 5.8% during 2015. Turnover per employee increased to SEK 1,218,000 during 2016, from SEK 1,186,000 during 2015.

Companies in the sector

The sector consists of some 11,000 companies. 9,500 of these companies have 0–2 employees. 20 companies have more than 500 employees and 12 groups have more than 1,000 employees. During 2015, 16 companies had more than 500 employees and 10 more than 1,000 employees. The consolidation trend is continuing, and contributing to an increase in the size of the major groups and a decrease in the number of medium-sized companies.

The sector is defined in this report as engineering consultancies within construction, civil engineering and industry, as well as architectural firms. There are also a certain number of inspection and certification companies included in the review. The distribution according to size is as follows:

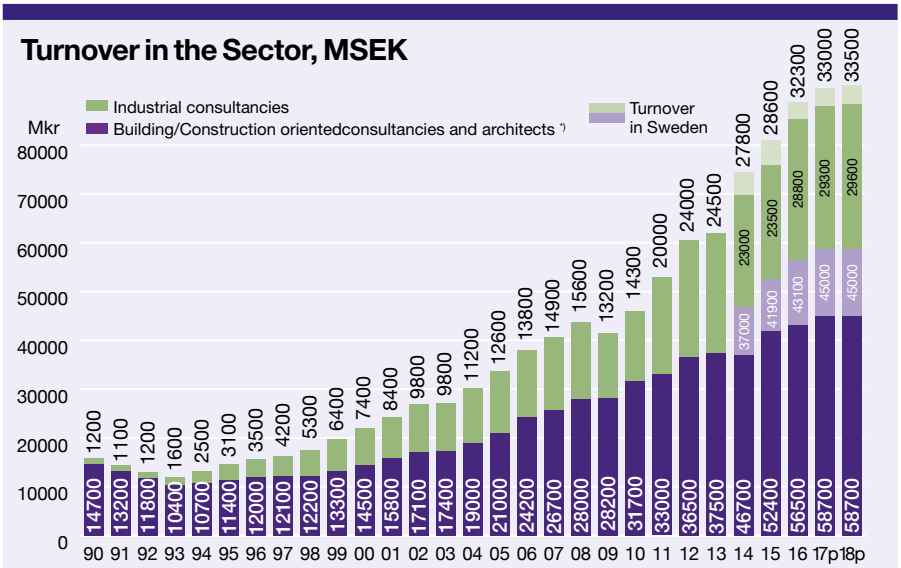
Number of employees	Number of companies
501 –	20
101 – 500	44
51 – 100	51
21 – 50	170
11 – 20	235
3 – 10	980
0 – 2	9500
	11 000

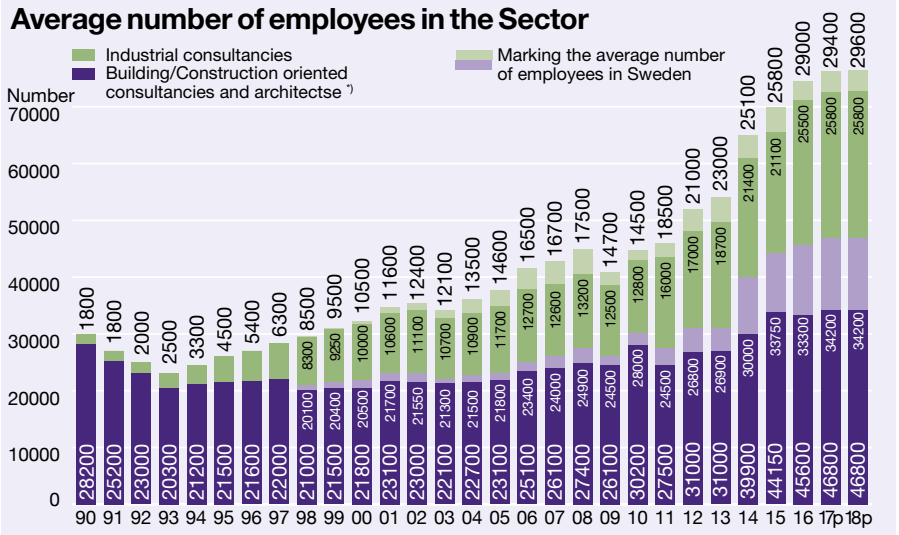
Key ratios

The architectural, engineering consultancy and industrial consultancy sector is continuing to grow in Sweden. Total

[1] Companies which together turn over around SEK 2.5 billion have been added in this year's review. The actual growth is consequently 8% and not 13%.

[2] Companies which together employ 2,000 personnel have been added in this year's review. The actual growth is consequently 6% and not 10%.





**) Of the building/construction-oriented consultancies architects represented 10 billion SEK in turnover and 8,500 employees in 2016. Certification and testing-oriented companies representing 1.8 billion SEK in turnover and 1,700 employees are not included in the numbers above.*

Source: The Swedish Federation of Consulting Engineers and Architects

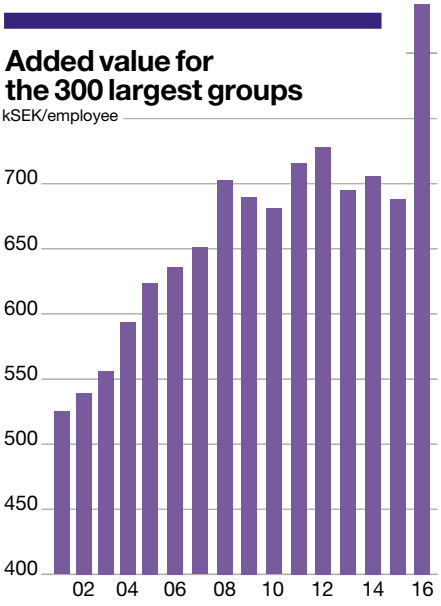
turnover increased by 8% to SEK 73.7 billion, and the number of employees increased by 6% to 60,500. At the same time, Swedish group's foreign operations increased, largely due to acquisitions. The subsidiaries located abroad turned over SEK 16.9 billion and employed 15,800 people, compared with SEK 15.5 billion and 15,000 employees last year. The sector also includes a number of inspection and certification firms. In 2016 they turned over SEK 1.8 billion and employed a workforce of 1,700.

Average turnover per employee in the sector increased to SEK 1,218,000, from SEK 1,181,000 in 2015. For operations based abroad, the turnover per employee was SEK 1,187,000, a marginal increase over the figure of SEK 1,186,000 for the year before.

Profitability improved significantly between 2015 and 2016. Average profit margin (profit/loss after financial items) increased to 7.2%, from 5.8% in 2015. Excluding the inspection and certification firms, the profit margin was 7.4%. Operating margin (after depreciation) was also 7.2%, up from 6.0 % in 2015. Before depreciation, the operating margin was 8.7%, against 7.2% in 2015. Net margin (profit for the year after tax) also increased, to 5.1% from 3.9 % in 2015.

Value added per employee increased to SEK 856,000, which is a substantial increase over the SEK 688,000 that was recorded in 2015. The value added is equivalent to the increase in value that the companies add in their production, and is also expressed as the company's contribution to GNP. In purely concrete terms, it is the company's sales minus the cost of input goods. The calculation is performed

Added value for the 300 largest groups

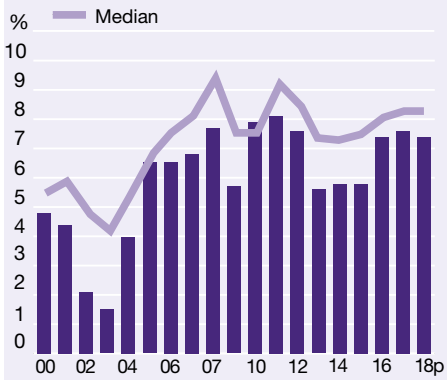


Source: The Swedish Federation of Consulting Engineers and Architects

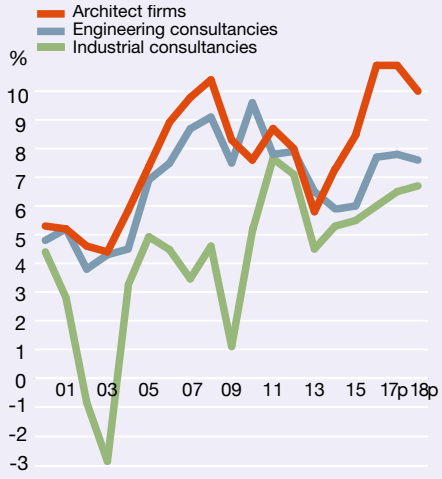
Development by sectors

	Turnover per employee, SEK thousand											Profit after financial items per employee, SEK thousand										
	08	09	10	11	12	13	14	15	16	17p	18p	08	09	10	11	12	13	14	15	16	17p	18p
The top 300 *) groups	1037	1017	1065	1130	1161	1150	1165	1182	1230	1246	1246	78	46	85	92	88	64	67	69	91	94	93
Building construction oriented	1102	1086	1125	1150	1171	1194	1181	1213	1286	1299	1297	101	81	104	92	92	76	71	77	106	108	103
of which																						
Architectural firms	1063	1098	1099	1132	1158	1214	1159	1177	1264	1267	1271	110	87	84	98	92	63	84	100	138	138	127
Engineering consultancies	1107	1184	1129	1153	1174	1093	1184	1219	1290	1306	1302	101	80	107	90	92	79	70	73	106	102	98
Industrial consultancies	949	964	954	1099	1148	1093	1143	1136	1153	1170	1176	44	-17	45	91	82	49	61	58	70	75	79

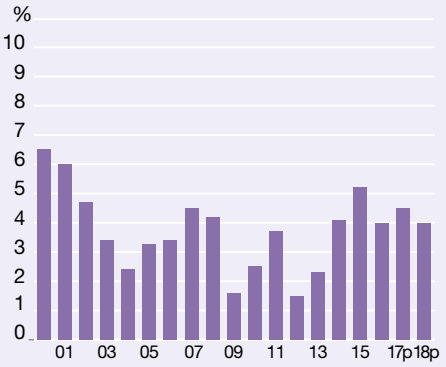
Profit margins in the top 300 groups



Profit margins



Change in payroll costs/employee



Source: The Swedish Federation of Consulting Engineers and Architects

> THE AVERAGE PROFIT MARGIN INCREASED TO 7.2% IN 2016 FROM 5.8% IN 2015.

Investments in Sweden

	2016		2017p	2018p
	Billion SEK	%	%	%
Dwellings	226.8	14	19	5
Other premises	135.7	4	4	1
Industrial buildings	7.1	9	21	0
Infrastructure and installations	88.3	6	7	4
Total construction oriented investments	**457.9**	**9**	**12**	**4**
Investments by manufacturing industries in machines and tools, according to STD-företagen and Statistics Sweden	**56.9**	**3**	**0**	**2**

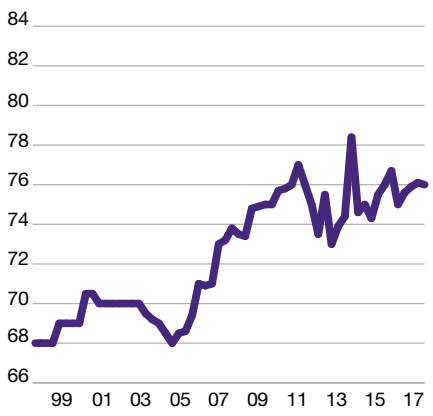
Building and industrial investments in 2016 and forecasts for 2017 and 2018. Source: SCB, BI and STD-företagen.

by adding together the company's payroll costs, social insurance contributions, operating profit/loss and depreciation. Together they constitute the value added. This value is then divided by the mean number of employees in order to arrive at the value added per employee.

However, financial strength (equity/assets ratio) fell to 41% from 50% the year before. Financial strength is a way of measuring a company's assets in relation to its liabilities. In this context, a company's equity is measured against its total assets. A general rule of thumb is that a company should have a financial strength of over 30%. However, at the same time it should not be too high. This means that the company's capital is inactive and is not generating income. One explanation for the decreased financial strength might of course be the extensive acquisitions made in recent years. The overall balance sheet total in the sector has increased, while equity has not increased as much. However, financial strength in the sector remains satisfactory.

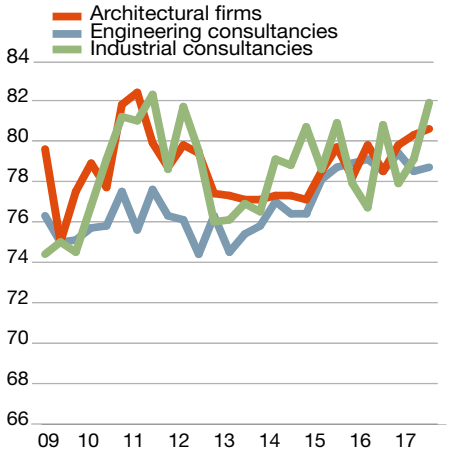
Payroll expenses in the sector continued to increase. They increased by 4.0% between 2015 and 2016, which, it has to be said, is a substantial amount. However, they increased even more the year before, by 5.2%. It is likely that there will also be relatively high increases in payroll expenses in the next few years, in view of skills shortages and the high level of employee turnover in the sector. Half of the employees recruited during 2016 came from competitors.

Annual billing ratio



The billing level of the listed companies, weighted according to the size of the respective company.

Average billing ratio per sector



From member surveys for the report Investeringssignalen, weighted according to the size of the respective company.

Architectural firms

The architectural sector turned over SEK 10.1 billion in 2016, which is a substantial increase compared with 2015 when the turnover was 8.4 billion. The number of employees increased by 14% to 8,200 from 7,200. Turnover per employee thus increased to SEK 1,232,000 from SEK 1,111,000 in 2015. Swedish architectural firms turned over about SEK 400 million and employed 300 people in subsidiaries abroad. Profitability improved substantially during 2016. The profit margin increased to 10.9% from 8.5% and the operating margin increased to 10.4% from 8.1% the year before. The operating margin was 13.4% before depreciation.

Industrial consulting companies

The industrial consulting sector turned over SEK 28.8 billion in 2016, a substantial increase over the SEK 23.5 billion of the year before. However, some 2 billion is explained by increased monitoring this year, which is why the growth was actually 13% (28.8 billion/25.5 billion). The number of employees increased to 25,500, from 21,400 in 2015. Here too a proportion of the growth is explained by increased monitoring, just under 2,000 employees. Staffing thus grew by 9% (25,500/23,400). Turnover per employee in Sweden was SEK 1,129,000 during 2016, compared with SEK 1,098,000 the preceding year. Profit margin increased to 6.0%, from 5.1% in 2015. Operating margin increased to 9.1% from 5.5%. Operating margin was 7.3 % before depreciation.

Engineering consulting firms

The engineering consulting firms turned over SEK 33 billion during 2016 and employed 25,100 people. These are similar figures to 2015; SEK 32.5 billion and 25,000 employees. In addition, Swedish groups together turned over SEK 13

INTERVIEW
ANDERS WÄREFORS,
CEO, BJERKING

“THE FACT THAT ALL PERSONNEL ARE CO-OWNERS… CREATES A WONDERFUL TEAM SPIRIT

In what ways do you notice the boom? How has your business developed in the last year?

We absolutely notice the boom and our business has been developing very positively for many years, for example, we increased our turnover by 25 per cent during 2016. At Bjerking we have chosen to have the capital region of Stockholm-Uppsala as our principal trading area and there really is high pressure in the region, perhaps it is the region in Europe with the best growth. Demand for our expertise has in part enabled us to grow within just about all our core activities, but it has also provided us with the conditions to expand our already wide range of services. The last service area that we added was bridge design, and we have also been able to focus on developing our operation within project-, construction- and commission management.

How is internationalisation affecting your operation? Is it noticeable on an everyday basis? How do you think it will affect the sector?

A lot is spoken in the sector about international actors coming in and taking market shares and undercutting our prices, but so far we have not observed it having any appreciably effect on us. The construction- and civil engineering sector is, in distinction from many other sectors, largely confined to the country’s

Anders Wärefors, CEO, Bjerking.

borders. However, I think that in the long term there will be a change here too. Common standards and technological developments will make it simpler for actors from different countries to come in and deliver directly in the respective country.

We have observed declining investments in research and development. What will this mean for the sector’s and the companies’ competitiveness and capacity to innovate?

It is obviously worrying that our sector is not investing in research and innovation to the extent needed. The sector is already fundamentally very conservative and we need to take new steps. In this respect we are way behind other sectors and, somewhat simplified, I would say that we have gone from being completely analogue to making the analogue digital. We have not fully taken the step, even though a lot of exciting things are happening, particularly within BIM and the visualisation field. One area where we are becoming increasingly knowledgeable, but where we have not always succeeded in communicating what we can do and how it can make life easier for our customers. In order to keep up with within research and innovation we are instituting specific initiatives at Bjerking. Our founder Sven-Erik Bjerking was a pioneer within the research field and we are extending the tradition.

Moreover, I think that we need to make joint initiatives in the sector in order to utilise the vast IT expertise there is in Sweden and seriously incorporate it into our sector.

The shortage of expertise is widely discussed. What does an attractive employer look like today, which can attract and retain personnel?

I think that we have gone past the stage where we are competing for expertise with benefits and salaries. Today it is much more about having good leaders, offering personal development and working towards a higher goal. It is important to be part of a beneficial social development and it is important to have an employer that focuses on sustainability issues.

Employee turnover at Bjerking is lower than average for the sector and this is a sign that we are doing a lot right. The fact that all personnel are co-owners in the company means that we have a high level of involvement and we take a lot of joint responsibility, something which creates a wonderful team spirit.

I also think that a corporate culture such as ours, which is based on common humanity and trust, means that we all feel better and thus also perform better.

billion in their foreign subsidiaries and employed 12,000 people. Turnover per employee in Sweden was SEK 1,315,000 against SEK 1,283,000 in 2015. Profit margin increased to 7.7% in 2016, from 6.3 % the year before. Operating margin increased to 7.8% from 6.4%. Operating margin was 9.0% before depreciation.

Inspection and certification firms

The inspection and certification firms turned over SEK 1.7 billion and employed 1,600 people, producing a turnover per employee of SEK 1,059,000. The profit margin decreased substantially to 1.4 % in 2016, from 5.7 % the year before. The operating margin decreased to 1.1 % from 5.7 %. The drop in profitability here is probably explained by the fact that it concerns a small group of companies, most of which are foreign-owned. A proportion of the group contributions have consequently been diverted abroad to the parent companies.

Billing level (diagram page 10)

The billing level among the listed companies increased during 2016, compared with last year. It was an average of 76.1% for the first six months and 76.0% for the third quarter this year. In 2016 the billing level was 75.6 % and 75.9% respectively. The sector passed the 70% billing level at the turn of the millennium, so there has been a clear increase in recent decades. However, it should be pointed out that billing levels are not available for all listed companies in Sweden. The statistics are consequently somewhat lop-sided.

The Swedish Federation of Consulting Engineers and Architects own surveys reveal an even clearer trend, with the billing level increasing steadily. The surveys measure it three times a year for architects, engineering consultancies within construction and civil engineering, as well as industrial consultancies. If the three groups are put together, with no weighting, the first two four-month periods of 2017 are clearly higher than any previous notation; 79.9%. In

INTERVIEW
JOHAN VON WACHENFELDT,
CEO OF KROOK & TJÄDER

"(AT AN ATTRACTIVE EMPLOYER) EVERYBODY SHOULD HAVE THE OPPORTUNITY TO SHINE

In what ways do you notice the boom? How long will it last, do you think?

We have been incredibly busy for a long time now. The fact that the economic situation is flattening out somewhat feels beneficial in a longer perspective, but there are a lot of indications that overall we will continue to have good times ahead of us. We are at full stretch in all our offices throughout the country and if we look at the offices' advance planning, it continues to look stable. In the present situation we are observing some of the most lavish housing projects slowing down. But there is still a housing shortage in Sweden, and our expectation is that there will continue to be high demand for housing in medium/low price segments. We have a good mix in our project portfolio and are not dependent solely on housing projects.

How is internationalisation and consolidation affecting the sector's development? Is the sector completely different from what it was like ten years ago?

We aren't sitting here waiting for someone to invite us onto the international stage. As one of Sweden's largest architect's offices, we occupy that position through our own efforts. We are driven by a desire and thirst for knowledge, which means that we are convinced that we will become better architects through operating in an international market as well.

Johan von Wachenfeldt, CEO, Krook & Tjäder.

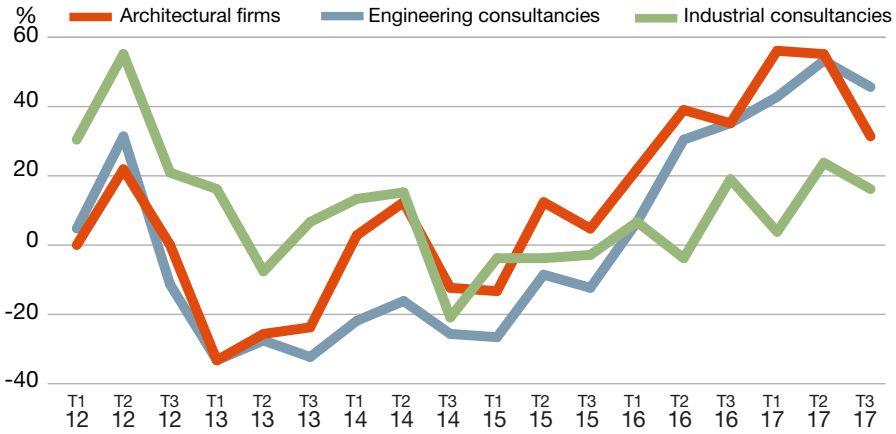
At the start of the year we set up a new office in Oslo and during the autumn we have employed the architect Willem Bruijn, whose most recent position was in Baumschlager Eberle's office in Lustenau, Austria. Today we are competing with the Danes in an increasing number of commissions, and moreover on their home turf. At Krook & Tjäder we currently have two billion-crown (DKK) projects in Copenhagen. Internationalisation is challenging and inspiring, and places high requirements on us as architects.

Yes, we are seeing a different sector today than it was ten years ago. There are ever higher requirements for specialist knowledge, certifications and legal requirements. To be able to meet these needs requires resources, which risks leading to a smaller number of major architect's offices in the market. In this context it is important that as major actors we take our responsibility and ensure that architectonic diversity is encouraged. It is a responsibility we have to society. At Krook & Tjäder we view the working process with each employee's expertise and architectonic ambitions as the key to diversity and good quality.

The shortage of skills is widely discussed. What does this mean for you and what does an attractive employer look like today?

The lack of resources in the sector is affecting everybody. We are consequently actively involved with organisations such as KAN Connect, a network for new Swedish architects, construction engineers and employers in the sector. This enables us not just to resolve the skills shortage – we are also promoting integration and diversity, as well as internationalisation. At Krook & Tjäder we have a very low employee turnover. We are a values-led company which embraces each individual's own ability, freedom and personal responsibility. Over 50 per cent of the employees here have their own clients and that personal relationship is central both within the company and in relation to our customers. We have always endeavoured to be the best employer and it has paid off as we have found it relatively easy to recruit during the boom. During the year we have also produced a completely new model for staff development where each employee drives his or her own development with regular meetings with their immediate manager. An attractive employer sees the employee and allows everybody's skills to have the opportunity to emerge – everybody should have the opportunity to shine.

The Group's opinion about the development of the price situation



The price trend graphs show net figures for the proportion of firms that have raised their prices minus those that have lowered their prices over the past six-month period.

Source: The Swedish Federation of Consulting Engineers and Architects

2016 the total and average billing level was 78.9%. In other words, it has increased by a full percentage point. The corresponding figure in 2009 was 75.8%, which is a substantial increase over ten years.

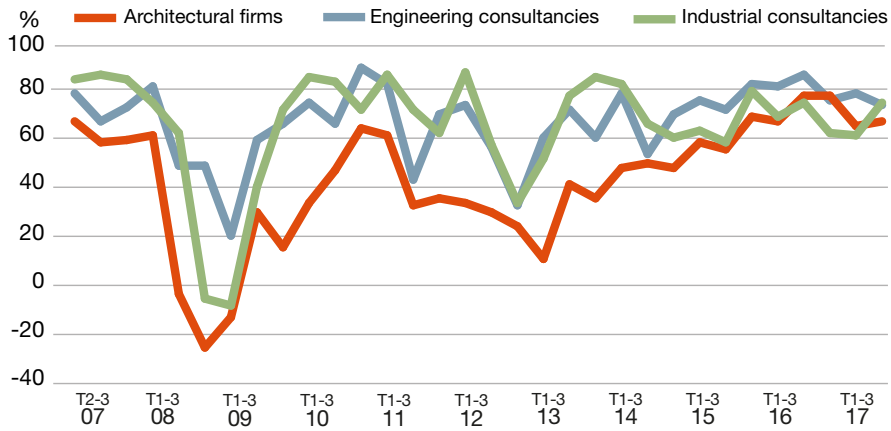
The industrial consultants and architecture firms have had the highest billing level thus far this year, an average of 80.5%. The average billing level for the architectural firms in 2016 was 79.4% and for the industrial consultancies it was 78.5%. The billing level for the engineering consultancies during the first two four-month periods of the year was 78.6%, against 79.0% in 2016.

Expectations among the companies in the sector surrounding the de-

The Zenhusen Norra-project in Djurgårdsstaden (new city area in Stockholm). Architects: CF Møller.

velopment of the billing level in the future are relatively favourable; the majority (61%) believe the levels will be maintained and almost one in three (31%) companies expect a continued increase. Only 8% feel that it will decrease during the first six months of 2018. The billing level has been perhaps the principal tool to balance the disjuncture between wage rises and price increases in the sector. With payroll expenses increasing by 3–5% per annum and a price trend that in some years has remained static or in the best case increased by a few percentage points, higher order levels have been used to maintain profitability. The risk and the problems inherent in the strategy are of course primarily that

Manpower development

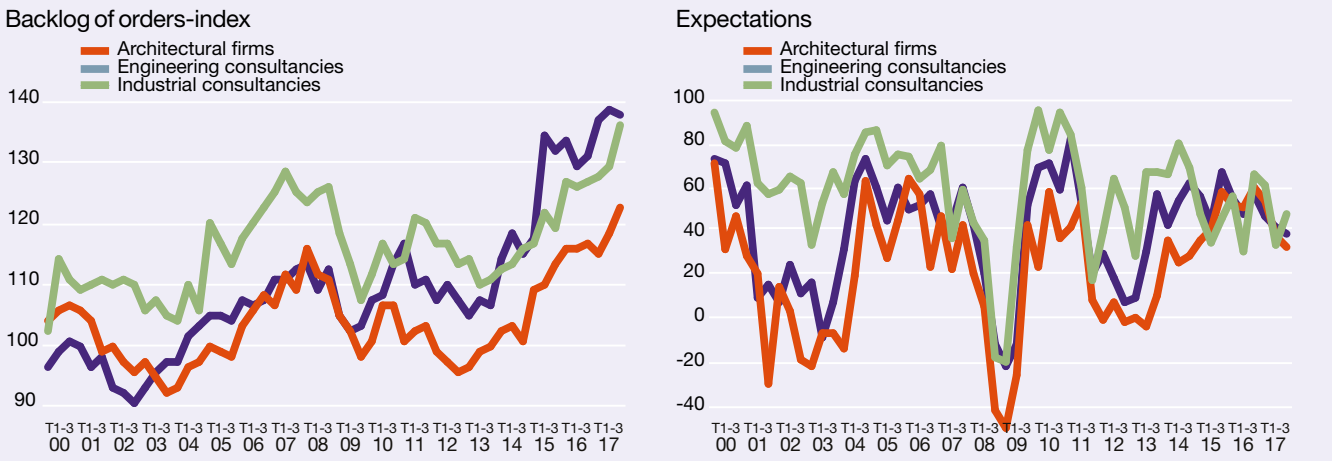


The expectations regarding how manpower will develop show net figures between the proportion of firms which believe their working force will increase minus those who believe it will decrease over the coming six-month period.

Source: The Swedish Federation of Consulting Engineers and Architects

> THE FEMALE SHARE OF THE INDUSTRY'S WORKFORCE WAS 32 % IN 2016.

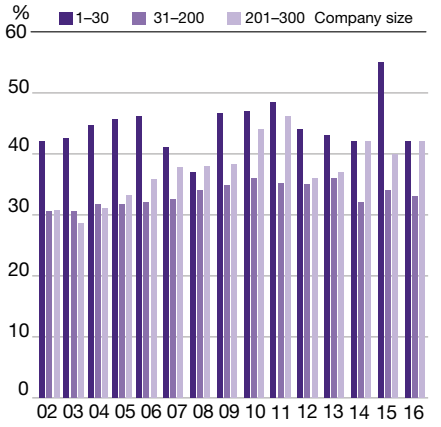
Backlog of orders – index compared with order forecasts (expectations)



The order backlog index is based on questionnaire surveys among STD member firms, and is calculated by weighing between the orders in hand per employee and the order level in 2, 3, 6 and 12 months' time. The confidence curve represents net figures for the proportion of firms that anticipate an improved order situation minus those that expect a worse order situation in 6 months' time.

Source: The Swedish Federation of Consulting Engineers and Architects

Equity ratio. %



Source: The Swedish Federation of Consulting Engineers and Architects

A comparison with other consulting industries, turnover/employee

Turnover/employee (kSEK)	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Management consultants	1820	1800	2075	2015	1890	1880	1906	1912	1823	1817	1924	2114
IT consultants (adm.)	1170	1135	1440	1270	1290	1480	1545	1627	1703	1917	1987	1858
Lawyers' offices	1595	1655	1750	1730	1690	1770	1840	1773	1921	1986	2104	2132
Market surveyors	1070	1085	1280	1355	1295	1445	1465	1459	1437	1423	1466	1461
Public relations and communication *)	1170	1265	1285	1320	1260	1235	1295	1269	1736	1808	1806	1849
Auditors	1135	1250	1250	1230	1275	1280	1320	1332	1402	1433	1491	1524
and as per our table on page 9												
Industrial engineering Consultants	902	905	908	912	941	980	1088	1171	1194	1181	1188	1239
Architects/building engineering consultants	1010	998	1106	1101	1084	1040	1110	1148	1093	1143	1109	1114

It is interesting to make a comparison with other knowledge-intensive sectors. The following comparative figures from the 20–50 largest companies in a few selected sectors have been collected using Soliditets' business tool; Nordic Business Key.

Source: The Swedish Federation of Consulting Engineers and Architects and Soliditet's Nordic Business

100 % is the ceiling, and that administration, sales, training and research and development (R&D) must be accommodated. For example, R&D investments among the companies in the sector halved between 2014 and 2016, with the justification that there was no time or that there were no economic resources. This is a risk for the sector's and the companies' competitiveness. So, an ever higher billing level is not necessarily always desirable.

The price trend (diagram page 12)

The price trend is moving in the right direction, average fees are increasing. But it is moving slowly, at any rate compared with increases in payroll expenses. Two in five companies in the latest member survey state that they raised their average fees between May and September. Only one in twenty companies said that they had reduced their average fee.

This was the fourth survey in succession in which all three groups (architectural firms, engineering consultancies and industrial consultancies) reported more companies raising than lowering their prices. The industrial consultancies have long been experiencing a high level

INTERVIEW
ÅSA BERGMAN,
CEO, SWECO SWEDEN

"LARGER, MORE INTERNATIONAL CLIENTS WITH NEW PROCUREMENT PATTERNS REQUIRE OTHER DEMANDS ON THE CONSULTANTS

How do you perceive the economic boom? How long will it last, do you think?

We primarily experience the boom by the strong market we find ourselves in and the fact that larger investments are being made in civil, environmental and natural resources in Sweden, within both the construction and real estate sector as well as in transport infrastructure Sweco plans and designs tomorrow's society, towns and cities, and we are experiencing a major demand for our services. Above all, the developing towns and cities require more of the things that Sweco can offer.

How do internationalisation and consolidation affect sector development? Is it an entirely different sector compared with the situation ten years ago?

The overall globalisation trend in combination with the fact that the market in Sweden has for a long time been very sound has led to changes on both the client side as well as among the players in the engineering consultancy and architectural sectors. Larger and more international clients with partially new procurement and purchasing methods entail different requirements on the part of the consultants, and those who succeed best are the ones who can be both near the client, with an understanding of the specific requirements a knowledge of the local markets, and are at the same time global, with opportunities to offer clients the right expertise for each situation

Sweco has a long history of expanding through acquisition and has made over 100 acquisitions over the past ten years, which have added new competence and new domestic markets, and made us into market leaders in several European countries. Within Sweco, we have consultants with various skills throughout

Åsa Bergman, CEO, Sweco Sweden.

the whole of northern Europe, and for us internationalisation has resulted in new opportunities to match expertise from different countries in our client assignments.

We have seen reduced investments in research and development. What does this mean for the sector and for the competitiveness and innovation capacity of the companies?

Sweco develops technology and adapted solutions, as we have always done in our assignments for clients and in technology development projects that we finance ourselves, which we perform with our customers or with the academic world. Through these development projects we can, for example develop methods or create new services for meeting our clients' demands. It is also a way of contributing towards engineering development and for maintaining and developing peak skills.

I believe that the key lies in being at the leading edge of digitalisation's rapid development and, with smart solutions, meeting the new challenges and requirements that digitalisation entails for our clients. Digitalisation contributes towards our towns and cities becoming sustainable and smart, and it creates a better weekday and a better life for people who live in towns and cities. So it stands, of course, high on our agenda for being involved and contributing in this changeover.

The lack of competence is being widely discussed. What does this mean for you and what does an attractive employer look like for you today?

For us it is important to be an attractive employer for the very best engineers, architects and environmental experts. We do this on the one hand by offering the most exciting assignments in which we give them the chance of being involved in influencing tomorrow's society, towns and cities, but also by creating a work environment in which everyone feels welcome and respected. Sweco's approach is based on employees rapidly taking responsibility and being near the clients, and we place great value on individual performance and development, equality, diversity, and an open dialogue. The fact that we are ranked high in measurements taken when engineers specify their dream employer, and in our own employer surveys, is a guarantee that we are taking the right approach.

We have succeeded well in attracting new employees and recruit each year over 1000 new employees. However, we are at the same time experiencing the staff turnover that is now characterising the sector, and feel that there have been larger challenges in finding competence within specific areas, for example seniors and experienced candidates with certain peak competences, such as geotechnical engineers, designers and water and sewage treatment designers.

Is profitability good enough, bearing in mind the economic recovery? How do we solve the profitability equation, with rising payroll costs and weak price development?

Sweco has stable development and a sound level of profitability. During recent years we have raised our prices. It is a question of showing what value we create and succeed in taking payment for the value in question. We do this by having good customer relations and really understanding our clients' business operations and challenges. The price question is important for the entire sector, and here there is probably more to do.

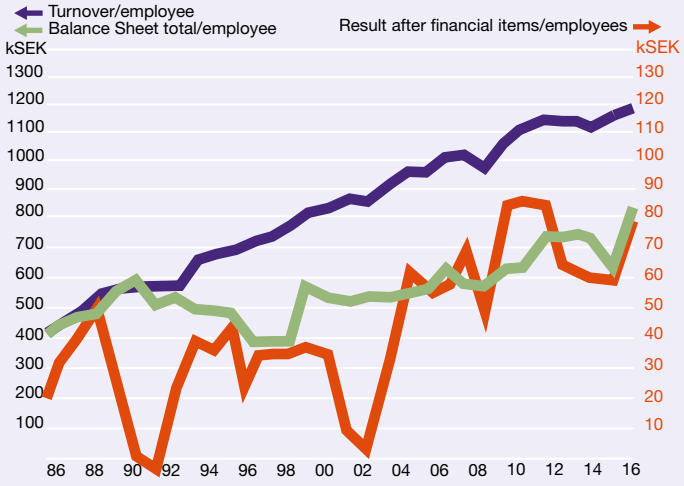
of downward pressure on prices, and of course it is still ongoing in some areas. The price trend for the engineering consultancies has been positive since the survey in January 2016 and it has been positive for the architectural firms since January 2015.

The diagram on page 12 illustrates the companies' perception of the development of the price situation. The points on the graph correspond to the net figure for the proportion of positive and negative companies which responded to the question of whether they raised or lowered their average fees during the last measuring period.

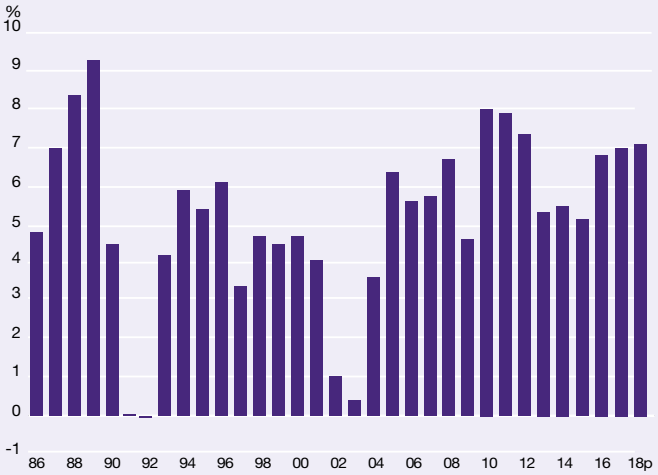
The positive price trend during 2016 and 2017, after several years of stagnation, has naturally had an impact on profitability. Not least for the architectural companies which have a lower proportion of public clients compared with the engineering consultancies within construction and civil engineering. Pressure on prices in public procurements is still described as widespread. The sector now needs to continue to raise its prices so that it can retain profitability, even if the billing level was to fall by a couple of percentage points. The companies need to have resources, both capital and hu-

> EMPLOYEE TURNOVER WITHIN THE INDUSTRY IS APPROACHING 20%.

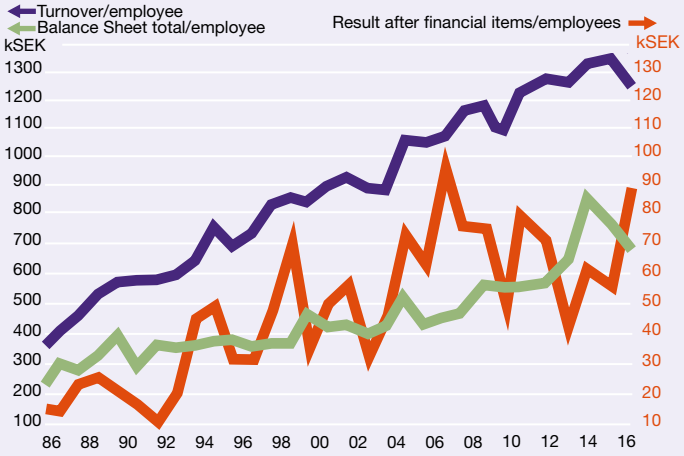
The top 30 Swedish groups



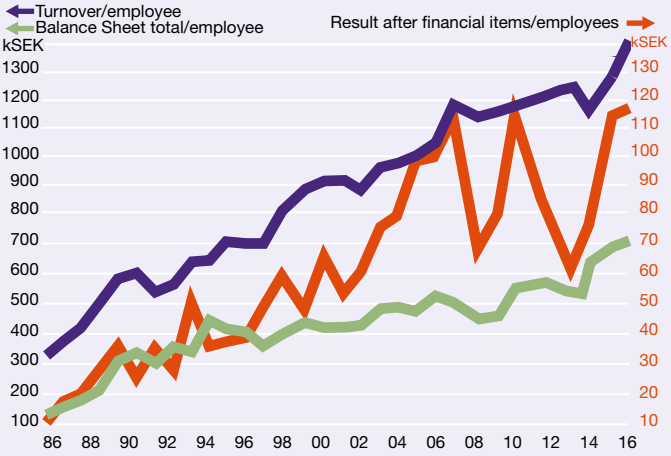
Profit margin in the top 30 groups



Group no. 31–50



Group no. 51–100



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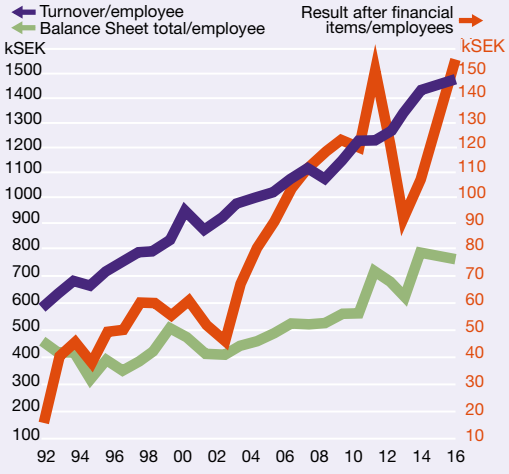

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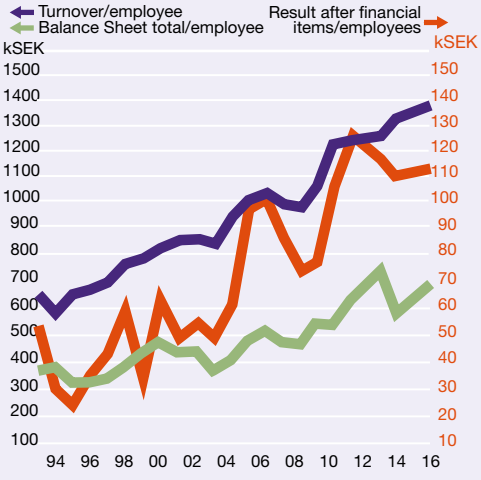

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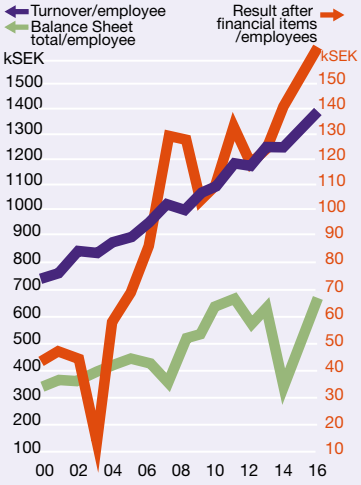

Source: The Swedish Federation of Consulting Engineers and Architects

INTERVIEW
MARIA LINDFELT,
DIRECTOR OF HR & COMMUNICATIONS, WSP

"IT'S ABOUT INCREASING KNOWLEDGE OF THE SECTOR AND THE EXCITING POSSIBILITIES THAT EXIST

How serious is the shortage of trained engineers and architects for your company?

We have been experiencing a boom for a long time and there is a lot of competition for cutting edge expertise and talents. At the same time, it represents a challenge for the sector to find new working methods, to do things in a smarter way and to ensure that capable employees stay and develop in the company. For a global company like WSP, cutting edge expertise is always available within the group.

What needs to be done to make it easier to recruit and retain personal?

It's about increasing knowledge of the sector and the exciting possibilities that exist, not least in the consultancy world. The tasks an engineer performs are completely different today than they were just a few years ago. A lot of work is being put into attracting women and students with foreign backgrounds onto engineering courses. Those of us who work in the sector have a responsibility to disseminate knowledge about what today's engineering jobs are like. Have a look at our Instagram account, @lifeatwspsweden, for example.

Maria Lindfelt, Director of HR & Communications, WSP.

What constitutes an attractive employer (which can attract and retain personal)?

I think that the decisive issue is being able to offer the employees challenges and development opportunities in interesting, complex projects. In this respect WSP has a major advantage as a growing, global company with numerous prestige commissions throughout the world. Training and career prospects is another important factor in a successful corporate culture. We have just received a gratifying confirmation that our employees are satisfied with WSP as an employer. We advanced this year from 17th to 12th place in Universum's employee survey.

A lot is spoken about the shortage of skills. What is the knowledge level like in newly graduated students? What is lacking and what can be done about any shortages?

For today's students, cooperation and communication are often a matter of course, which makes them well equipped for today's and tomorrow's working life. They have travelled a lot, have global networks and often have good language skills. As an employer we have to supplement this with a good internal programme in the form of training and mentors so that recently graduated employees quickly feel secure in their professional role.

man, to be able to invest in research and development and simultaneously generate profits for their owners and continue to invest in acquisitions.

Record level of incoming orders

The excellent level of incoming orders in the sector at the end of 2016 has continued during 2017 as well. All three groups (architectural firms, engineering consultancies and industrial consultancies) noted a higher order book index (see diagram on page 14) during the second four-month period of 2017 than they had for the last four-month period of 2016. The order book index is calculated through a weighting between orders on hand per employee and the order levels in two, three, six and twelve months. All three groups have registered historical records during the year, with the highest index figures measured since the order book index was set up before the turn of the millennium. Incoming orders in the sector are thus at a record level.

The companies' expectations regarding the trend for incoming orders (see diagram on page 14) for 2017 remain optimistic. Four in ten (43%) of the companies in the latest member survey believed there would be an increase in incoming orders during the first six months of 2018, only one in fifty (2%) companies believed there would be a decrease. It is possible that the situation might have changed slightly since the survey was conducted in September and October. Housing investments have slowed. Perhaps faster than expected a few months ago, as the housing market has reached saturation, with thousands of new apartments coming on to the market in recent years, at the same time as the mass media has created a panic over a potential price crash that has resulted in disequilibrium between buyers' and sellers' price expectations. However, the housing shortage has not yet been resolved through more house building, so housing investments will not entirely cease, but will probably continue for many years to come, though possibly at a slower pace. Besides the housing market, which has been the engine for the construction sector in recent years, developments in other sub-sectors have also been positive. Both public investments in properties, hospitals, schools and infrastructure, as well as private investments in offices, commercial premises, hotels and energy plants has increased during the last year. The development also looks like continuing during the coming year, not least the investments in infrastructure and plants.

The industrial consultancies' order development is largely dependent on what demand is like for the manufacturing industry. Demand in the domestic market has been good for several years now, with some fluctuations, while it has been weaker from international markets. Demand for exports has also increased in line with an increasingly strong recovery throughout Europe and satisfactory growth in the USA. At the same time, the industrial companies are currently investing in product and process development, so the industrial consultancies

THE TOP 50 ARCHITECTURAL GROUPS

	17	16	Group	Annual report	Turnover MSEK	(Previous year)	Em-ployees
STD	1	1	White Architects	16	892.2	824.3	682
STD	2	2	SWECO Architects *	16	834.0	780.0	629
STD	3	3	Tengbom group	16	628.4	527.2	603
STD	4	4	PE Arkitektur *	16	275.0	252.0	237
STD	5	12	Tyréns Arkitektur (Pyramiden & AQ Arkitekter, et al)*	16	240.0	118.6	230
STD	6	8	Mälarholmen (Ettelva Arkitekter & M.E.R. Solution)	16	187.3	143.0	84
STD	7	6	Wingårdh-group	16	178.6	158.8	141
STD	8	9	Semrén & Månsson Arkitektkontor AB	16/17	159.1	142.8	156
STD	9	5	Link Arkitektur AB	16	157.4	155.5	139
STD	10	7	Arkitekterna Krook & Tjäder AB	16	153.3	143.9	137
STD	11	11	Liljewall Arkitekter AB	16	151.4	129.6	136
	12	32	ÅF (SandellSandberg & Koncept Sthlm) *	16	140.5	41.9	109
STD	13	10	FOJAB AB	15/16	139.0	99.3	105
STD	14	13	NYRÉNS Arkitektkontor AB	16	138.3	112.6	100
STD	15	14	AIX Arkitekter AB	15/16	116.9	101.1	84
STD	16	16	Brunnberg & Forshed Arkitektkontor AB	16	103.7	84.5	70
STD	17	15	ÅWL Arkitekter AB	16	101.8	85.6	79
STD	18	17	Arkitema AB	16	97.7	84.3	86
STD	19	18	Byrån för Arkitektur & Urbanism (BAU)	16	85.8	80.6	58
STD	20	22	BSV Arkitekter & Ingenjörer AB	16	82.0	66.4	61
STD	21	24	Archus	16	81.4	54.2	55
STD	22	21	Reflex Arkitekter AB	16/17	81.0	75.7	54
STD	23	20	Cedervall Arkitekter	16	78.8	76.8	79
	24	29	Strategisk Arkitektur Fries & Ekeroth AB	16	72.1	44.5	40
STD	25	19	BSK Arkitekter AB	16	69.7	78.9	53
STD	26	26	Equator Stockholm AB	16	69.4	46.7	45
	27		Codesign Sweden AB	15/16	66.3	50.5	41
STD	28	25	A & P Arkitektkontor AB	16	66.0	49.5	32
	29	23	Wester+Elsner Arkitekter AB	16	64.7	62.7	42
STD	30	27	Yellon AB	16	53.3	44.9	46
STD	31	30	BBH Arkitektur & Teknik AB	16	52.9	43.9	30
STD	32	35	MAF Arkitektkontor AB	15/16	50.4	39.1	35
STD	33	31	Carlstedt Arkitekter AB	16	49.7	43.6	49
STD	34	28	SYD ARK Konstruera AB	16/17	48.7	44.4	46
STD	35	39	Scheiwiller Svensson Arkitektkontor AB	16/17	47.5	36.0	29
STD	36	36	C.F. Møller Sverige AB	16	47.5	38.3	40
	37	42	DAP Stockholm	16	43.4	32.3	12
STD	38	47	Lindberg Stenberg Arkitekter AB	16	40.6	30.1	32
	39	46	Kjellander & Sjöberg AB	15/16	39.5	31.0	41
STD	40	33	Arkitekthuset Monarken AB	16/17	39.0	41.3	42
STD	41	40	Landskapslaget AB	16	38.7	34.7	27
STD	42	43	Arkitektgruppen G.K.A.K AB	16	38.2	35.3	27
	43	58	Kanozi Arkitekter AB	15/16	37.7	26.3	31
	44	55	DinellJohansson AB	16	36.9	28.2	25
STD	45	49	Okidoki AB	16	36.9	29.6	39
STD	46	37	Thomas Eriksson Arkitektkontor AB	16	36.6	38.3	27
STD	47	70	Alessandro Ripellino Arkitekter	16	36.5	22.2	25
STD	48	34	Erséus Arkitekter AB	16	34.4	40.6	29
STD	49	52	HMXW Arkitekter AB	16	33.0	29.3	22
	50	41	ABAKO Arkitektkontor AB	16	32.5	34.4	34

STD = Member of the Swedish Federation of Consulting Engineers and Architects. (*) = lack of conforming figure/proforma/assumed. The 50 largest architectural groups had a turnover of SEK 6,385 million in 2016 (previous year SEK 5,447 million). The average number of employees was 5,055 (4,613) and the turnover per employee SEK 1,263,000 (SEK 1,181,000). The list contains those groups in which architectural activities dominate.

Source: The Swedish Federation of Consulting Engineers and Architects

have had an increasing order development for two or three years and during 2017 the development has led to new record levels in terms of orders.

Investments within the sector

The table (page 10) shows the investments made in the sector during 2016 along with projections for the investment trend during 2017 and 2018. Investments in construction and civil engineering rose by 9% between 2015 and 2016, to a total of SEK 457.9 billion. The main reason for this was the large increase (14%) in housing investments. However, investments in premises (4%), industrial buildings (9%) and infrastructure and plants (6%) also increased. The investments made by the industry in machinery and equipment increased by 3% to SEK 56.9 billion.

Investments within the construction and civil engineering sector are expected to increase by some 12% in 2017 and 4% in 2018. It is still housing investments that are driving the increase. Even though a weakening of housing construction is expected, due to decreasing demand for newly constructed homes, investments in building construction projects that are in progress are expected to increase next year too. After that it is likely that investments in housing projects will decline for a few years.

The Employment Situation

(see diagram page 13)

There is still a skills shortage. The latest member survey showed that three in four companies needed new employees. Employee turnover is approaching 20% on a yearly basis. Competition for skills is increasing, with companies taking personnel from each other and a resultant wage spiral.

In the member survey in September, fully three in four companies needed new recruits. Among the engineering consultancies, 80% responded that they needed to recruit, while 2% thought they would be cutting their workforce. Among the architectural firms, 71% signalled a recruitment requirement and no

THE TOP 50 GROUPS WITHIN INDUSTRIAL ENGINEERING

	17	16	Group	Annual report	Turnover MSEK	(Previous year)	Em-ployees
	1	1	ÅF (divisions + acquisitions) *	16	7130.0	6900.0	5500
STD	2	9	Sigma Group (industry & IT)	16	2740.0	605.0	2689
STD	3	5	Rejler group, Industry & Energy *	16	1880.0	1200.0	1940
	4	3	Combitech AB (acquired Tikab) *	16	1789.1	1602.2	1502
STD	5	2	Semcon AB	16	1755.9	1656.6	1956
	6	4	HIQ International AB	16	1659.4	1508.0	1361
	7	6	Alten Sweden	16	994.6	894.1	1157
STD	8	7	SWECO Industry & Energy *	16	950.0	860.0	875
STD	9	8	WSP Industry *	16	772.0	639.0	747
STD	10	10	Dekra Sweden (Industrial + Automotive) *	16	652.0	544.5	573
	11	12	Altran Sweden	16	530.6	484.9	503
STD	12	11	Pöyry Sweden AB	16	525.1	488.2	478
STD	13	13	Knightec AB	16/17	485.8	457.9	503
STD	14	14	COWI Industry *	16	460.0	420.0	435
STD	15	15	Etteplan Sweden AB *	16	420.2	395.6	419
STD	16	16	Ansaldo STS Sweden AB	16	383.8	314.1	56
STD	17	17	Avalon Innovation AB	16	311.5	310.6	240
STD	18	21	Consat AB	16	235.1	216.0	188
	19	20	Z-Dynamics (Infotiv & Combine)	16	224.4	220.7	248
STD	20	26	Projektengagemang (PE Industri) *	16	218.0	146.0	204
	21	22	Eurocon Consulting AB	16	214.2	198.8	204
	22	34	Essiq AB	15/16	175.5	139.8	227
	23	18	Elektroautomatik i Sverige AB	16	173.7	230.7	93
STD	24	36	Neste Jacobs AB	16	169.8	111.7	134
	25	23	TechniaTranscat AB	16	169.3	168.4	91
STD	26	28	i3tex AB	16	165.5	134.4	180
STD	27	25	FS Dynamics AB	16/17	160.3	157.5	160
STD	28	35	Devport AB	16	154.0	112.0	135
	29	24	Optronic Partner PR AB	16/17	146.7	158.3	50
STD	30	27	Core Link AB	16	146.0	135.7	49
STD	31	38	HRM Engineering AB	16	136.4	100.9	128
STD	32	32	Cactus Utilities & Rail *	16	130.7	115.4	68
STD	33	43	Teamster AB	16	126.9	92.9	46
STD	34	37	Escenda Engineering AB (acquired by Tata Technologies)	16	125.1	103.8	95
STD	35	51	Segula Technologies AB	16	122.9	73.9	120
STD	36	30	Engineeringpartner Automotive Nordic AB	16	112.7	119.2	115
	37	57	T-Engineering AB	16	110.9	70.6	51
	38	31	QRTECH AB	16	109.4	118.4	77
STD	39	39	Condesign AB	16	107.3	99.0	120
STD	40	66	Automations Partner i Helsingborg AB	16	100.0	60.7	35
STD	41	55	AcobiaFlux AB *	16	96.2	73.0	54
STD	42	49	Havd Group	16	95.1	74.6	31
STD	43	56	Ansys Sweden	16	94.0	70.8	23
	44	50	Technogarden Engineering	16	92.6	74.4	107
	45	48	TechRoi AB	16	87.3	75.5	68
	46	40	Veryday AB (fmr Ergonomidesign)	15/16	85.3	97.5	57
	47	60	Prose AB	16	85.0	68.1	62
	48	86	Fiber Network Consulting AB	16	81.3	38.6	38
STD	49	45	Conmore Ingenjörsbyrå AB	16	78.9	80.7	114
	50	62	IETV Elektroteknik AB	16/17	76.1	63.7	31

STD = Member of the Swedish Federation of Consulting Engineers and Architects. (*) = lack of conforming figure/proforma/assumed. The 50 largest groups within industrial engineering had a turnover of SEK 27,846 million (previous year SEK 24,430 million) in 2016. The average number of employees was 24,337 (21,610) and the turnover per employee SEK 1,144,000 (SEK 1,130,000). The list only includes groups where industrial engineering consultancy is the dominating activity.

Source: The Swedish Federation of Consulting Engineers and Architects

companies felt there would be cutbacks. Among the industrial consultancies, 79% needed to recruit and none needed to reduce their workforce.

A member survey in June noted that the sector needed to employ 7,500 people by the turn of the year. This is equivalent to 12% of the sector's total workforce. In the same period in 2016, the sector needed to employ 5,600 people, so the need has increased since last year. It emerged in the same survey that half (45%) of the employees recruited during 2016 came from competitors. In June the companies thought that they would be able to fill three quarters of their vacancies. In itself this would entail at least 2,000 vacancies not being filled. At the same time, it has to be remembered that half of the new recruits come from competitors and thus create vacancies at the same time as they are employed. With that in mind, the real staff shortage in the sector actually numbers around 5,000 people, or just under 8% of the sector's overall staffing.

Employee turnover continues to increase in the sector. With the figures that were recorded for the first and second four-month period of 2017, it is consequently likely that the total employee turnover for 2017 is more like 20%. Employee turnover was 15% in 2016. The industrial consultancies had the highest employee turnover during the second four-month period this year at 8.4%, while the architectural firms and the engineering consultancies had an employee turnover of just under 6%.

The shortage of skills has emerged as the major challenge within the sector and has become a bottleneck for productivity, at the same time as contributing to accelerating the wage spiral. Admittedly, the price trend has moved in the right direction during the last year, but it is moving too slowly. Bearing in mind the excellent level of incoming orders in the sector, profitability is not particularly noteworthy. Something needs to be done about this. More engineers and architects are needed. The number of beginner's places in the universities needs

INTERVIEW **JOHN LYDHOLM,** CEO LINK ARKITEKTUR

> FOREIGN-OWNED COMPANY PRESENCE ON THE SWEDISH MARKET HAS DOUBLED IN TEN YEARS.

NOBODY CAN DO EVERYTHING, WE MUST CHOOSE AND MAKE PRIORITIES IN OUR R&D INITIATIVES

In what ways do you notice the boom, and will it last, do you think?

Just like the sector as a whole, at LINK arkitektur we have had a few years of growth and strong demand. From a historical perspective, the boom should have a downturn now, however, there are aspects that suggest otherwise. In part, Sweden has become more integrated with surrounding economies, which might mean that the predicted business cycles are broken. At the same time, we are operating in a period with major demographic changes and steady population growth. This will produce a major need for construction for a long time to come – regardless of economic situation.

Demand for housing, and not least social housing, has been at a high level in recent years, we can observe this in all our offices, from Umeå in the North to Malmö in the South. Furthermore, clients have started to ask for services permeated by sustainability – both environmental and social. Eco-labelling is no longer sufficient – projects are in demand that promote a climate-smart life style and which create spatial conditions for meetings and interaction. The high level of ambition in relation to sustainability is placing new expectations on our expertise.

All in all, this leads me to think that the strong economic situation will remain in place, producing another few years of relatively good growth for the sector. Pressure on the market will probably increase, prices for land and building plots will be adjusted down at the same time as clients will demand increasingly cost-effective production. In turn, it will mean that us architects will need to develop our role as specialists and advisers. Architects need to be able to systematise their knowledge in order to re-use experiences more optimally and deliver more of the values that are demanded, such as functionality, innovation, sustainability and BIM benefits. Values that ultimately strengthen the customer's offer and simultaneously add value to society from which we can all benefit.

John Lydholm, CEO, LINK arkitektur.

We have observed declining investments in research and development. What will this mean for the sector's and the companies' competitiveness and capacity to innovate?

This is a direct consequence of the sector's high level of orders. Everybody is working under pressure of time and research and development has a low priority compared with helping clients. The solution is to involve clients in development issues and integrate them in relevant projects. Collaborations such as this enable both parties to move their positions forward and, in the best case, create values from which both can derive benefit.

Nobody can do everything, we we must choose and make priorities in our R&D initiatives. LINK arkitektur chooses to focus on a range of sustainability perspectives, environmental and economic, but also social sustainability and the requirements placed on actors and society. We are also instigating initiatives in relation to the sector; 100gruppen is an association that we set up when we perceived a problem in relation to the enormous amount of interior fittings that are discarded every year. By involving actors throughout the interior design sector, we have succeeded in putting together a capacity for innovation that is working to promote a circular green economy.

I feel that overall we are putting more time into research and development than the figures suggest. As stated, much of the development is integrated in the projects. If we were to get better at "best practice"studies, it would be possible to share the knowledge more widely. Information technology is developing rapidly and knowledge sharing will take place at a completely different level and at a different pace. Right now we are moving forward fastest and most effectively through the architect and the client together setting a high level of objectives. We must take the time to analyse and try to understand the user's and the end customer's needs. Based on a careful analysis, we can then work innovatively to create what the end consumer is asking

to be expanded by a couple of thousand for there to be any chance of rectifying the skills shortage in a few years.

Age and gender structure

The member companies within the Swedish Federation of Consulting Engineers and Architects have an overall workforce of about 35,000 in Sweden. This is equivalent to half the sector's staffing. According to the Confederation of Swedish Enterprise's wage statistics, 32 % of the total workforce in 2016 were women. This is a marginal increase compared with the year before when the proportion of women was 31.5 %, however this is an upward trend, even though it is moving slowly. The proportion of women in 2007 was 26 %. When it comes to female CEOs, board members and other executives, things have moved in somewhat different directions during the last year. During 2017, 12 % of the CEOs in the 300 largest companies were women, a small increase from 11 % during 2016. However, the proportion of women in senior management fell to 29.6 % this year from 32 % last year, and the proportion of female board members fell to 20.9 % from 23.4 % during 2016.

The average age among the 35,000 employees in the Swedish Federation of Consulting Engineers and Architects members in 2016 was 40.8. It has fallen from 41.4 year during 2015. It has fallen for both men and women. The average age for women was 39.5 in 2016, against 39.9 last year. The average age for men was 41.4 against 41.9 in 2015.

Globalisation in Sweden

Globalisation has really had an impact in the sector during the last decade. Not least due to the fact that many international groups looked to Sweden and the Nordic region after the financial crisis of 2008 when investments in infra-

for and that will be beneficial for them. This is also beneficial for the consultant, the client and society, from all perspectives. We haver sensible clients who want to collaborate in these issues and who want to fly the flag and be a guiding force within different development areas.

The shortage of expertise is widely discussed. What does it mean for you?

We perceive a distinct risk of this, in both the short and long term. Because our personnel are our greatest and most important resource. Systematic recruitment and proactive work on stress management are central and have received greater attention in the last three years. The high demand and pressure on deliveries is a drain on the organisation and a challenge to the quality of what we create. We want to be assured at all times that we can keep what we promise in relation to time, budget and quality. We have consequently chosen to decline commissions sometimes when for time reasons we can't guarantee a satisfactory delivery.

Everybody in the sector will probably want to look back in ten years' time and think that this was the best decade we have experienced thus far. We don't want to put this at risk simply due to a skills shortage. The protracted shortage is obviously affecting our capacity and a part of the solution for us at LINK arkitektur has been new thinking when it concerns recruitment and collaboration. Young employees have had to take major responsibility at an early stage here, we have recruited architects from several different countries and are working closely together with our colleagues in Norway and Denmark. This has brought with it new dimensions which are continually getting stronger and making us more competitive as an architect partner.

Trädgårdarna retirement home in Örebro, designed by Marge Architects, winner of the Bostadspriset (housing award) in 2017.

PHOTO: JOHAN FOWELIN

structure and construction fell dramatically throughout Europe. At the same time, the major Swedish groups were also part of the consolidation that took place within the sector throughout the world, mainly establishing themselves abroad through acquisitions. During the last ten years, the major Swedish groups have thus become both larger and more international, at the same time as they have encountered new competitors in their domestic market. In a comparison of foreign-owned groups among the 50 and 300 largest groups of companies in Sweden in 2007 and 2017, it can be observed that foreign-owned businesses doubled in ten years, measured in relation to turnover and number of employees. In terms of number of companies, it has quadrupled, from nine out of 300 foreign-owned companies in 2007, this year there were 41. In 2007 the foreign-owned companies represented SEK 3.88 billion in turnover and 4,160 employees, which is equivalent to 13% of total turnover and the number of employees (for the 300 largest companies). All nine foreign-owned companies were then also among the 50 largest companies in Sweden. In 2017, the 41 foreign-owned companies (among the 300 largest) represented a turnover of SEK 15.8 billion and 13,100 employees, which is equivalent to 25% and 27% respectively of the total turnover and the number of employees. 17 of the 41 foreign-owned companies are among the 50 largest companies in Sweden. There is thus now a larger distribution of foreign-owned companies.

An interesting comparison is the size of the foreign-owned companies in Sweden and the Swedish groups' operations in foreign subsidiaries. The Swedish subsidiaries abroad turn over SEK 16.9 billion and employ 15,800 people, in other words, slightly more than the total for foreign-owned operations in Sweden; SEK 15.8 billion and 13,100 employees. Glo-

INTERVIEW
DIMITRIS GIOULEKAS,
CEO, KNIGHTEC

"(THE LACK OF) CAPABLE AND DRIVEN ENGINEERS REPRESENT A BOTTLENECK FOR DEVELOPMENT IN SWEDEN

In what ways do you notice the boom? How long will it last, do you think?

When industry is doing well there is a lot of demand for our consultancy services, this is because our clients' organisations are being run on an increasingly slimmed down basis in parallel with their products and projects becoming increasingly complex. And it doesn't just concern individual specialist services. We are seeing an increasing demand for projects and are taking responsibility for major development projects.

The boom is also noticeable in our recruitment work. Capable and driven engineers represent a bottleneck for development in Sweden and it is also affecting our sector. Despite the fact that we recently came in eighth place in Universum's "Sweden's best employer" survey, which is a fantastic acknowledgement of us as an employer, we have to work hard on recruitment.

How is internationalisation and consolidation affecting the sector's development? Is the sector completely different from what it was like ten years ago?

Industry in Sweden is already largely international. For the most part, the largest industrial companies in Sweden have foreign owners, the Swedish market constitutes an ever smaller part of their turnover. Subcontractors are also expanding abroad and encountering a large number of fantastically capable competitors. This also applies on the consultancy side. International competition is putting pressure on prices and placing ever higher requirements on a high level of expertise and an effective operation. Outsourcing of services to subcontractors abroad as well as companies' own subsidiaries, in Eastern Europe for example, is becoming increasingly common. In order to be able to compete in the long-term, we must become much more focused in Sweden. It concerns technical training which can compete in a global market, but also the capacity to develop specialisations and business skills.

The consultancy sector today is completely different than it was ten years ago, and it will look completely different in ten years time. Requirements for subcontractors will continue to increase and considerably higher requirements will be placed on proactivity and really being best within one's field. Through

Dimitris Gioulekas, CEO, Knightec.

Knightec, I want to contribute to developing our economy and increasing the attraction of our sector, including through our view of diversity and through developing new types of services. The consolidation towards larger actors will continue, but at the same time I think that there is a market for small specialised companies. It is the medium-sized consultancies without a clear focus that will get caught.

We have observed declining investments in research and development. What will this mean for the sector's and the companies' competitiveness and capacity to innovate?

In a globalised world, companies invest in research and development where expertise and markets are located. In this context Sweden is a minor player. China has overtaken the EU in terms of research initiatives and many countries are solidly focused on developing peak skills and cutting-edge research. With our school results falling and the universities receiving grants based on quantity instead of quality, a vigorous shake-up is needed. We need an education system which prioritises learning and effort all the way from elementary school to university. Today Sweden has the OECD's lowest education premium. It doesn't bode well if we want to be a knowledge nation.

It should also be remembered that investments in research do not necessarily imply successful companies. Today many tech companies are disappearing abroad and an increasing proportion of their investments are going abroad.

To be able to defend and develop our prosperity in Sweden requires an internationally competitive climate for companies and entrepreneurs so that they want to operate and develop here. It concerns simple regulations, taxation of share options, internationally comparable taxes and also practical areas such as a functioning housing market. In this context, greater insight and energy is needed from our politicians.

Is profitability sufficiently high, bearing in mind the boom? How is the profitability equation to be resolved, with rising payroll expenses and a weak price trend?

The focus should be on continuously developing the personnel, their capacity to collaborate and their capacity to constantly challenge and develop the clients. It leads in turn to interesting, challenging and developmental projects. It is an interplay. Consultants who do not develop their knowledge quickly become uninteresting. To be able to invest and develop the company's expertise and offering needs profitability that is satisfactory in the long-term. To achieve this requires constant work on increasing the efficiency of the operation and proactively proposing price models where the focus is moved from the number of hours in the project to the value that is concretely delivered. It concerns working methods, digital solutions and business models.

What are the major challenges for the companies in the sector?

Many would say skills provision and I would agree with that. But I also think that adaptation to a global reality with stiffer competition and mobility of talent is a greater challenge than we think. It is a question that both the business world and our politicians need to take more seriously. Things have gone well for Sweden for a long time, and it has probably made us a bit comfortable. It is time to realise that we are not best in the world any longer, that success is not achieved by itself, and that we have a lot to learn from others. It is quite simply time to make a real effort!

The winner of Trafikverkets (Swedish Transport administration) architecture price of 2017; the E6 highway through Världsarvet, on the Pålen-Tanumshede section of the route. Josefina Lenning was the landscape architect responsible for this project.

PHOTO: BERT LEANDERSSON

balisation really is moving in both directions and the market for the major actors is getting ever larger, at the same time as local presence is still of major importance.

Swedish structural deals

Consolidation is continuing in the sector, in conjunction with globalisation, and a large number of acquisitions have been been made this year too. It primarily involves the two giants, Sweco and ÅF, but transactions with other actors have also taken place. Projektengagemang continues to expand and several Nordic groups have made acquisitions in Sweden during the year.

A number of the transactions that have taken place during the year are described below, as well as some news concerning changes of management.

Sweco makes Belgian and Nordic purchases

Just as Tomas Carlsson, group chief executive of Sweco, said in 2016 about its strategy for the future, acquisitions have continued this year, but with the focus on central Europe and, to some extent, the Nordic region.

However, the transactions started in Finland with the acquisition of **Karvesföretagen** (Karves -Yhtiöt, -Suunnittelu and –Energia & Valvonta) with a total of some 50 employees and a turnover of just over 5 million Euros. The acquisition strengthens Sweco's offer in relation to construction, refurbishment and energy efficiency for property owners in Finland.

After Finland attention was focused on Belgium, where two transactions were completed during the summer. The first purchase was the Brussels-based installation consultancy **M&R Engineering** with 50 employees and some 6 million Euros in turnover. The Flemish construction consultant **Snoeck & Partners was** subsequently purchased with 24 employees and 3 million Euros in turnover. In October the Norwegian engineering consultancy **Dimensjon Rådgivning AS**, based in Stavanger, was acquired with 53 employees and a turnover of around NOK 60 million. Dimensjon specialises in urban planning, structural engineering and infrastructure.

ÅF's shopping spree continues

ÅF has been an active acquirer in recent years and 2017 has been no exception. 2016 was concluded with the acquisition of the Danish engineering consultancy **Midtconsult** with 180 employees and a turnover in 2016 of some DDK 100 million.

In January the Swiss engineering consultancy **Edy Toscano AG** was acquired with over 370 employees and a turnover in 2015 of SEK 430 million. The acquisition complements the previous focus on the energy sector in Switzerland by targeting the infrastructure sector as well. In addition, the purchase was made of the Swedish company, **Quality Engineering Group**, with offices in Västerås and Frölunda. QE-group is an industrial consulting firm targeted at the pharmaceutical-, energy- and processing industry, with 24 employees and a turnover of around SEK 30 million.

Vatten & Miljöbyrån was acquired in February with 24 employees and a turnover of SEK 30 million, along with the Piteå-based HVAC and energy consultancy Cecon with a turnover of some SEK 6 million. The geotechnical consultant Teroc Engineering AB was acquired in March with 2 employees.

One Jonas succeeded by another

Jonas Wiström was succeeded as group chief executive in April, after 15 years in the post, by **Jonas Gustavsson**, whose most recent position was at Sandvik Machining Solutions.

In May the focus remained on the architecture sector with the acquisition of **Koncept Stockholm Arkitekter** with 70 employees and SEK 85 million in turnover.

Eitech's automation department was purchased in May with a turnover of SEK 90 million and 42 employees distributed throughout offices in Umeå, Stockholm, Malmö and Göteborg. The London-based lighting design company, **Light**

Skissernas museum in Lund. Winner of the Kasper Salin-award in 2017, designed by Elding Oscarson.

PHOTO: ÅKE E:SON LINDMAN

Bureau, was acquired in October with 10 employees and SEK 6 million in turnover.

PE continuing to grow with a new CEO

Projektengagemang has been very active on the acquisitions front in recent years, and that was the case this year too. It concluded 2016 with the acquisition of the electrical and security consultant **HJR Projekt-El** with 110 employees and started 2017 with the acquisition of the construction consultant **Konkret Rådgivande Ingenjörer**, with 50 employees and a turnover of SEK 68 million.

Per-Arne Gustavsson left the position of MD and group chief executive in October and is due to retire in 2018. Per-Arne set up Projektengagemang in 2006, and is handing over a company with some 1,000 employees and just over one billion in turnover. **Per Hedebäck**, business area manager at Munters, simultaneously took over the position.

WSP acquired ProVab AB

In January, WSP acquired the Kramfors-based engineering consultancy ProVab, which specialises in water purification, sewage purification and automation. ProVab has 31 employees and turned over just over SEK 45 million in 2015.

In January, **Combitech** acquired the technical information company **Tikab**, with 63 employees and a turnover of SEK 46 million. In February, Semcon sold its German operation, Engineering Services, with a turnover of SEK 900 million and 800 employees, to Valmet Automotive for 14.1 million Euros. In August **Rejlers** acquired **Infrakonsult Syd**, with 5 employees and a turnover of SEK 7 million, thereby strengthening its offer within the fibre optics field. At the same time, Rejlers AB's board of directors announced the appointment of **Viktor Svensson** as new MD and group chief executive to replace **Peter Rejler**, who is expected to take over the position of chairman of the board after the general meeting of shareholders in March 2018 .

Danish acquisitions

In March, the project management consultant COWI acquired **Projektbyrån Stockholm AB** with 78 employees and a turnover of SEK 140 million. In August, **Aperto Arkitekter och Byggkonsulter AB** with 38 employees and a turnover of SEK 42 million was acquired by **Niras**.

In June, the Finnish company **Etteplan** purchased **Sorona Innovation AB**, which specialises in documentation solutions. In 2016 Sorona had a turnover of just under SEK 12 million SEK and 9 employees. In November, the Swedish architect's office **Glantz Arkitektstudio**, with 13 employees and a turnover of just over SEK 11 million was purchased by the Norwegian company **Norconsul**.

Change of CEO at Tyréns

In November, **Ulrika Francke** handed over the position of MD and group chief executive to **Johan Dozzi** after 10 years at the helm. Johan Dozzi's most recent position was at Sweco. Ulrika Francke takes up a position on Tyréns board of directors.

In October, Tyréns acquired a majority stake in the British installation consultancy **Hilson Moran**, with 250 employees and a turnover of SEK 260 million. The company's management will remain as partners, and the business will be operated under the existing brand.

New CEO for White Architects

After seven years as CEO, in January 2018 **Monica von Schmalensee** will be handing over the reins to **Alexandra Hagen**, whose most recent position was as office manager at White's Malmö office. Monica von Schmalensee will remain at the company in an advisory role, as well as have a number of her own assignments, for example, adviser ("Mayor's Design Advocate Group") in urban development issues for London's mayor, Sadiq Khan.

THE 30 LARGEST GROUPS IN SWEDEN

(THE FIGURES REPRESENT ACTIVITIES IN SWEDEN)

	2017	2016	Group	Service	Annual report	Turnover MSEK	Turnover in Sweden MSEK	Employees	Employees in Sweden
	1	1	ÅF (several acquisitions incl. Edy Toscana, Switzerland) *	MD	16	11747.8	**8899.8**	8672	**6581**
STD	2	2	SWECO AB (4 acquisitions in Belgium, Norway and Finland)*	MD	16	16738.0	**6929.0**	14832	**5397**
STD	3	3	WSP Sweden (acquired Provab) *	MD	16	4156.4	**4156.4**	3789	**3789**
STD	4	15	Sigma Group	MD	16	2859.1	**2306.2**	2785	**1973**
STD	5	4	Ramböll Sweden AB	MD	16	1970.0	**1970.0**	1460	**1460**
	6	5	Combitech AB (acquired Tikab) *	I	16	1789.1	**1758.2**	1502	**1502**
STD	7	6	Tyréns AB (acquired Hilson Moran) *	MD	16	2075.7	**1544.3**	1785	**1214**
	8	7	HIQ International AB	I	16	1659.4	**1356.2**	1361	**1065**
STD	9	8	Semcon AB	I	16	1755.9	**1338.5**	1956	**1251**
STD	10	10	COWI AB (acquired Projektbyrån Sthlm) *	MD	16	1330.5	**1330.5**	1146	**1146**
STD	11	9	Rejler group AB	E	16	2341.4	**1287.9**	1939	**1078**
STD	12	12	Projektengagemang AB (acquired HJR Projektel & Konkret Rådgiv Ingenjörer) *	MD	16	1137.7	**1137.7**	843	**843**
	13	11	Alten Sweden	I	16	994.6	**994.6**	1157	**1157**
STD	14	14	White Architects	A	16	892.2	**775.0**	682	**608**
STD	15	13	Kiwa Inspecta	CT	16	764.4	**764.4**	723	**723**
	16	16	Structor group	CE	16	680.3	**680.3**	433	**433**
STD	17	23	Dekra Sweden (Industrial + Automotive) *	CT	16	652.0	**652.0**	573	**573**
STD	18	17	Tengbom group	A	16	628.4	**607.6**	603	**576**
	19	19	Altran Sverige AB	I	16	530.6	**530.6**	503	**503**
STD	20	21	Norconsult AB	CE	16	529.9	**529.9**	531	**531**
STD	21	18	Pöyry Sweden AB	MD	16	525.1	**525.1**	478	**478**
STD	22	22	Bengt Dahlgren AB	M	16	496.5	**496.5**	414	**414**
STD	23	20	Knightec AB	I	16/17	485.8	**485.8**	503	**503**
STD	24	25	Bjerking AB	CE	16	440.8	**440.8**	332	**332**
STD	25	24	Etteplan Sweden AB (acquired Sonora Innovation) *	I	16	420.2	**420.2**	419	**419**
STD	26	27	Ansaldo STS Sweden AB	I	16	383.8	**383.8**	56	**56**
STD	27	26	Hifab Group AB	PM,	16	474.9	**342.0**	320	**245**
STD	28	28	ELU Konsult AB	CE	16/17	338.2	**338.1**	180	**180**
	29	51	Veolia Water Technologies AB	Env	16	549.3	**309.0**	138	**138**
STD	30	29	IVL, Svenska Miljöinstitutet	Env, Enr	16	294.7	**294.7**	255	**255**

STD = Member of the Swedish Federation of Consulting Engineers and Architects. (*) = lack of conforming figure/proforma/assumed – = missing figure
PM = Project Management, A = Architecture, CE = Civil/Structural Engineering, CT = Certification and testing, Env = Environment, Enr = Energy, E = Electrical, M = Mechanical/HEVAC, I = Industrial, MD = Multi Disciplinary

EXPLANATORY TEXT ON THE TABLES RELATING TO THE 30 LARGEST GROUPS IN SWEDEN AND THE 300 LARGEST SWEDISH GROUPS

The list of the 300 largest Swedish groups presents entire Swedish corporate groups, i.e. it also includes their international operations with subsidiaries abroad. In the case of the foreign companies, only their Swedish operations are presented.

The list of the 30 largest groups in Sweden presents only Swedish operations, even in the case of the larger Swedish groups. In other words, international operations in foreign subsidiaries are not included. The list shows which groups have the largest operations in Sweden.

In the case of foreign-owned companies, the same figures are in other words reported in both tables. We have included only the 30 largest groups in this list since most of the remaining groups only operate in Sweden or have marginal activities abroad.

THE TOP 300 SWEDISH CONSULTING ENGINEERING AND ARCHITECTURAL GROUPS

(GLOBAL FIGURES ARE PRESENTED FOR SWEDISH GROUPS)

	2017	2016	Group	Service	Annual report	Turn-over MSEK	(Previous year)	Average number of employees	Result after financial items MSEK	Added value/ empl. kSEK	Total balance sheet MSEK	CEO/Managing director
STD	1	1	SWECO AB (4 acquisitions in Belgium, Norway and Finland)*	MD	16	16738.0	16145.0	14832	1231.3	845	13843.5	Tomas Carlsson (Group) Åsa Bergman (Sweden)
	2	2	ÅF (several acquisitions incl. Edy Toscana, Switzerland) *	I,E,M,Enr	16	11747.8	10884.0	8672	946.9	875	10487.0	Jonas Gustavsson
STD	3	3	WSP Sweden (acquired Provab) *	MD	16	4156.4	3293.5	3789	266.8	731	2754.7	Magnus Meyer
STD	4	15	Sigma Group	MD	16	2859.1	684.0	2785	165.0	705	1464.3	Dan Olofsson
STD	5	5	Rejler group	E	16	2341.4	1875.5	1939	22.2	755	1360.4	Peter Rejler (group), Jonas Thimberg (Sweden)
STD	6	7	Tyréns AB (acquired Hilson Moran) *	MD	16	2075.7	1635.3	1785	107.9	853	1005.2	Johan Dozzi
STD	7	6	Ramböll Sweden AB	MD	16	1970.0	1820.7	1460	134.4	900	600.0	Niklas Sörensen
	8	8	Combitech AB (acquiredTikab) *	I	16	1789.1	1602.2	1502	128.5	809	765.6	Hans Torin
STD	9	4	Semcon AB	I	16	1755.9	1656.6	1956	94.9	623	1189.4	Markus Granlund
	10	9	HIQ International AB	I	16	1659.4	1508.0	1361	207.4	938	1123.2	Lars Stugemo
STD	11	10	COWI AB (acquired Projektbyrån Sthlm) *	MD	16	1330.5	1034.0	1146	52.1	685	535.4	Pär Hammarberg
STD	12	12	Projektengagemang AB (acquired HJR Projektel & Konkret Rådgiv Ingenjörer) *	MD	16	1137.7	683.7	843	72.7	832	825.0	Per Hedebäck
	13	11	Alten Sweden	I	16	994.6	894.1	1157	70.2	692	483.4	Martin Segerström
STD	14	13	White Architects	A	16	892.2	824.3	682	60.3	875	371.3	Monica von Schmalensee
STD	15	14	Kiwa Inspecta	CT	16	764.4	797.0	723	-1.0	743	289.0	Joakim Wikeby
	16	16	Structor group	CE	16	680.3	563.7	433	97.8	1124	296.2	Fladvad, Hulthén, Texte
STD	17	17	Dekra Sweden (Industrial + Automotive) *	CT	16	652.0	544.5	573	37.4	813	1000.0	Stefan Törngren (Industrial) & Jan Martinsson (Automotive)
STD	18	18	Tengbom group	A	16	628.4	527.2	603	43.9	779	260.6	Johanna Frelin
	19	25	Veolia Water Technologies AB	Env	16	549.3	403.5	138	-22.0	897	386.9	Fabrice Brochet
	20	20	Altran Sweden	I	16	530.6	484.9	503	29.1	681	340.6	Fredrik Nyberg
STD	21	22	Norconsult AB	CE	16	529.9	446.6	531	21.5	630	205.5	Ljot Strömseng
STD	22	19	Pöyry Sweden AB	MD	16	525.1	488.2	478	-1.3	720	149.4	Johnny Strid
STD	23	24	Bengt Dahlgren AB	M	16	496.5	428.5	414	47.4	909	207.2	no CEO
STD	24	21	Knightec AB	I	16/17	485.8	457.9	503	41.6	768	134.2	Dimitris Gioulekas
STD	25	23	Hifab Group AB	PM,	16	474.9	444.3	320	7.6	690	190.0	Patrik Schelin
STD	26	27	Bjerking AB	CE	16	440.8	353.1	332	35.9	966	215.4	Anders Wärefors
STD	27	26	Etteplan Sweden AB (acquired Sonora Innovation) *	I	16	420.2	395.6	419	18.9	744	138.5	Mikael Vatn
STD	28	28	Ansaldo STS Sweden AB	I	16	383.8	314.1	56	32.4	1584	425.1	Eric Morand
STD	29	63	Niras Sweden AB (acquired Aperto Arkitekter & Byggkonsulter) *	PM	16	343.5	120.0	163	8.9	824	137.2	Christian Sandberg
STD	30	30	ELU Konsult AB	CE	16/17	338.2	275.5	180	31.7	1108	114.8	Charlotte Bergman
STD	31	29	Avalon Innovation AB	I	16	311.5	310.6	240	4.6	752	173.2	Peter Mattisson
STD	32	31	IVL, Svenska Miljöinstitutet	Env, Enr	16	294.7	274.2	255	0.3	686	205.6	Tord Svedberg
STD	33	33	Atkins Sweden (SNC-Lavallin)	CE	16/17	264.6	240.6	207	10.7	815	84.0	Johannes Erlandsson
	34	32	Forsen Projekt Partner	PM	16	256.9	256.7	170	21.1	1104	157.0	Bengt Johansson
STD	35	38	Consat AB	I	16	235.1	216.0	188	9.0	788	107.9	Martin Wahlgren
	36	37	Z-Dynamics (Infotiv & Combine)	I	16	224.4	220.7	248	16.5	714	135.8	Alf Berntsson (Infotiv), Peter Karlsson (Combine)
	37	39	Eurocon Consulting AB	I	16	214.2	198.8	204	20.0	821	119.9	Peter Johansson
	38	40	EBAB i Stockholm AB	PM	16	213.9	189.5	119	55.0	1405	129.5	Kaarel Lehiste
STD	39	41	Golder Associates AB	CE	16	206.6	183.9	120	8.3	906	112.9	Anna-Lena Öberg Högsta
STD	40	52	Mälarholmen (Ettelva Arkitekter & M.E.R. Solution)	A	16	187.3	143.0	84	86.9	1162	234.0	Anders Lindh (Ettelva), Cecilia Bejden (M.E.R.), Jan Hardenborg
STD	41	48	Wingårdh-group	A	16	178.6	158.8	141	12.9	1034	124.5	Gert Wingårdh
	42	69	Essiq AB	I	15/16	175.5	139.8	227	12.3	643	56.2	Jonas Sohtell
	43	35	Elektroautomatik i Sverige AB	I	16	173.7	230.7	93	2.7	732	75.5	Jonas Kjellberg
STD	44	34	Force Technology Sweden	CT	16	173.4	240.0	207	-25.2	539	69.7	Per Gelang
STD	45	72	Neste Jacobs AB	I	16	169.8	111.7	134	-3.5	618	93.7	Marcus Andersson
	46	42	TechniaTranscat AB	I	16	169.3	168.4	91	11.6	1127	59.8	Jonas Gejer
STD	47	57	Integra Engineering AB	PM,CE	16	167.5	133.0	148	25.8	907	61.7	Anders Skoglund
STD	48	56	i3tex AB	I	16	165.5	134.4	180	2.4	693	55.4	Sara Lindmark
STD	49	45	FS Dynamics AB	I	16/17	160.3	157.5	160	6.3	722	53.9	Ulf Mårtensson

	2017	2016	Group	Service	Annual report	Turn-over MSEK	(Previous year)	Average number of employees	Result after financial items MSEK	Added value/ empl. kSEK	Total balance sheet MSEK	CEO/Managing director
STD	50	61	Midroc Project Management AB	CE,I	16	159.2	126.3	110	12.4	995	97.3	Stefan Kronman
STD	51	53	Semrén & Månsson Arkitektkontor AB	A	16/17	159.1	142.8	156	11.1	711	209.1	Magnus Månsson (group CEO), Anders Erlandsson (MD)
STD	52	46	Link Arkitektur AB	A	16	157.4	155.5	139	6.4	803	45.7	John Lydholm
STD	53	47	PQR International Group	M,E	15/16	154.8	136.1	121	11.0	796	43.7	Mikael Bisther
STD	54	71	Devport AB	I	16	154.0	112.0	135	7.0	812	64.9	Nils Malmros
STD	55	51	Arkitekterna Krook & Tjäder AB	A	16	153.3	143.9	137	16.9	803	56.5	Johan von Wachenfeldt
STD	56	58	Liljewall Arkitekter AB	A	16	151.4	129.6	136	16.2	860	49.7	Per-Henrik Johansson Lamond
	57	44	Optronic Partner PR AB	I	16/17	146.7	158.3	50	6.2	764	84.3	Ulrik Stenbacka
STD	58	55	Core Link AB	I	16	146.0	135.7	49	3.2	838	90.3	Jörgen Jensen
STD	59	60	We Consulting AB	E	16	145.0	128.7	122	4.8	763	41.3	Mats Rönnlund
STD	60	43	INCOORD AB	M	16	144.1	159.9	89	26.3	1194	55.9	Tore Strandgård
STD	61	54	FOJAB AB	A	15/16	139.0	99.3	105	22.5	990	60.9	Daniel Nord & Cecilia Pering (Fojab Arkitekter)
STD	62	70	NYRÉNS Arkitektkontor AB	A	16	138.3	112.6	100	5.5	873	74.5	Tomas Alsmarker
STD	63	77	HRM Engineering AB	I	16	136.4	100.9	128	12.3	714	46.5	Mats Rogbrandt
	64	59	Exact Svenska Mätcenter AB	CE, Enr	16	131.6	128.9	110	1.7	629	58.8	Peter Mikes
STD	65	66	Cactus Utilities & Rail *	I	16	130.7	115.4	68	10.9	1049	65.0	Fredrik Bergström & Elisabet Svensson
	66	87	Brandskyddslaget AB	M	16	127.9	95.2	69	27.9	1419	86.4	Martin Olander
STD	67	86	Teamster AB	I	16	126.9	92.9	46	30.2	1076	55.2	Ulf Mill
STD	68	62	FVB Sverige AB	Enr	16	125.6	122.0	111	9.7	875	63.7	Leif Breitholtz
STD	69	74	Escenda Engineering AB (acquired by Tata Technologies)	I	16	125.1	103.8	95	10.8	725	40.2	Nicholas Sale
STD	70	109	Segula Technologies AB	I	16	122.9	73.9	120	4.0	791	39.5	Henrik Nessér
STD	71	68	Geosigma AB	CE	16	118.6	114.7	80	7.5	845	37.3	Per Aspemar
STD	72	82	Byggnadstekniska Byrån Sverige AB	CE	16	118.0	96.4	100	19.2	891	46.9	Erik Löb
STD	73	81	AIX Arkitekter AB	A	15/16	116.9	101.1	84	11.8	919	41.3	Gunilla Persson
STD	74	64	Engineeringpartner Automotive Nordic AB	I	16	112.7	119.2	115	13.5	738	45.9	Fredrik Blomberg
STD	75	76	VBK Konsult	CE	16	112.0	100.6	94	8.5	643	43.8	Ulf Kjellberg
	76	117	T-Engineering AB	I	16	110.9	70.6	51	5.7	1009	38.9	Klas Lundgren
	77	65	QRTECH AB	I	16	109.4	118.4	77	7.6	894	44.6	Bengt Nordén
STD	78	79	Condesign AB	I	16	107.3	99.0	120	8.6	688	39.5	Liselotte Hektor
STD	79	90	Evomatic AB	E	16/17	106.3	81.2	54	0.4	668	54.2	Jonas Persson
STD	80	75	Riba koncernen AB	M	15/16	103.8	93.3	48	6.5	964	38.8	Michael Lennse
STD	81	92	Brunnberg & Forshed Arkitektkontor AB	A	16	103.7	84.5	70	15.8	1079	37.3	Staffan Corp
STD	82	89	ÅWL Arkitekter AB	A	16	101.8	85.6	79	16.6	929	52.8	Jacob Haas
STD	83	140	Automations Partner i Helsingborg AB	I	16	100.0	60.7	35	-2.2	665	24.1	Anders Josefsson
STD	84	93	Arkitema AB	A	16	97.7	84.3	86	7.9	826	32.6	Urban Blomberg
STD	85	73	Elecosoft Consultec	A,CE	16	97.0	109.0	77	6.5	787	85.0	Anders Karlsson
STD	86	115	AcobiaFlux AB *	I	16	96.2	73.0	54	4.7	938	45.7	Mikael Nilsson
STD	87	78	Nitro Consult AB	CE	15/16	95.9	99.3	69	1.5	937	160.9	Mats Blacker
STD	88	107	Havd Group	I	16	95.1	74.6	31	4.9	624	35.3	Björn Hedenberg
STD	89	116	Ansys Sweden	I	16	94.0	70.8	23	3.5	1429	130.2	Richard Belcher
	90	88	Teodoliten *	CE	16	94.0	85.7	80	15.4	844	38.0	Joakim Hixén
	91	85	Aecom Nordic AB (Nordic region)	Env	15/16	93.0	93.1	24	-4.2	633	58.8	Gert Vermeiren
	92	108	Technogarden Engineering	I	16	92.6	74.4	107	4.1	696	38.3	Stefan Lundin
STD	93	102	IKKAB (fmr Installation & Kraftkonsulterna)	M, CE, Enr	16	90.9	75.8	72	7.9	838	26.3	Stefan Svan
STD	94	123	Projektledarhuset i Stockholm AB	PM	16/17	88.3	67.6	45	7.1	1208	34.4	Örjan Kjellström
	95	105	TechRoi AB	I	16	87.3	75.5	68	-11.6	566	35.9	Tommy Christensen
	96	112	Iterio AB (acquired by Multiconsult)	CE	16	87.2	72.1	59	6.6	995	23.6	Jonas Jonsson
STD	97		E&D Energijägarna & Dorocell AB	CE, Enr	16	86.7		16	7.6	1196	56.0	Jan Wikman
STD	98	97	Byrån för Arkitektur & Urbanism (BAU)	A	16	85.8	80.6	58	8.4	1030	56.4	Per-Eric Sundby

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THE TOP 300 SWEDISH CONSULTING ENGINEERING AND ARCHITECTURAL GROUPS

(GLOBAL FIGURES ARE PRESENTED FOR SWEDISH GROUPS)

	2017	2016	Group	Service	Annual report	Turn-over MSEK	(Previous year)	Average number of employees	Result after financial items MSEK	Added value/ empl. kSEK	Total balance sheet MSEK	CEO/Managing director
	99	80	Veryday AB (fmr Ergonomidesign)	I	15/16	85.3	97.5	57	7.5	1034	72.5	Birgitta Sundén
STD	100	106	Bergsäker AB	CE	16	85.1	75.2	33	22.3	1578	48.2	Johan Lundh
	101	121	Prose AB	I/CE	16	85.0	68.1	62	3.0	845	37.1	Anders Gymnander
STD	102	134	Helenius Ingenjörsbyrå AB	M	16	85.0	62.4	58	15.5	1048	30.0	Arne Wallström
	103	95	HOAB-group *	PM	16	83.0	81.0	55		145	40.0	Per Olsson, Th. Liljenberg, P Svensson, R.Nordin et al
STD	104	125	BSV Arkitekter & Ingenjörer AB	A	16	82.0	66.4	61	19.4	1021	42.0	Johnny Grauengaard
STD	105	146	Archus	A	16	81.4	54.2	55	17.6	1052	37.5	Johnnie Pettersson
	106	198	Fiber Network Consulting AB	I/CE	16	81.3	38.6	38	-1.4	605	28.0	Thomas Andersson
STD	107	103	Reflex Arkitekter AB	A	16/17	81.0	75.7	54	11.4	1218	37.9	Marco Testa
STD	108	96	Conmore Ingenjörsbyrå AB	I	16	78.9	80.7	114	5.8	613	28.1	Joakim Olsson
STD	109	100	Cedervall Arkitekter	A	16	78.8	76.8	79	0.5	580	25.0	Björn Stillefors
STD	110	118	BERGAB Berggeologiska Undersökningar AB	CE	16	78.7	70.0	60	8.1	987	32.7	Krister Jansson
STD	111	113	Crabat AB	CE	16/17	78.6	72.0	31	3.6	1046	19.0	Gustav Glader
	112	130	IETV Elektroteknik AB	I	16/17	76.1	63.7	31	14.1	1138	38.9	Krister Karlsson
	113	124	Devex Mekatronik AB	I	16	76.1	66.4	87	5.3	693	22.1	Eric Boström
STD	114	104	ELE Engineering AB	E	15/16	75.7	81.1	82	0.5	762	22.6	Henrik Eriksson
	115	171	Strategisk Arkitektur Fries & Ekeroth AB	A	16	72.1	44.5	40	12.2	1123	27.9	Maria Börtemark
	116	131	Exengo Installationskonsult AB	M	16	71.6	62.8	53	11.1	1120	27.6	Christian Rolf
	117	120	App Start-Up AB	I	16/17	71.6	69.6	53	7.3	945	29.8	Anders Kallin
STD	118	137	Kadesjös Ingenjörsbyrå AB	CE	16/17	71.2	61.3	56	5.9	882	34.6	Birgitta Lindblad
	119	111	Assign Group	I	16	70.0	72.5	24	3.1	862	21.0	Stefan Svensson
	120	142	Chematur Engineering AB	I	16	69.8	60.2	33	-3.9	1069	83.6	Peter Olausson
STD	121	99	BSK Arkitekter AB	A	16	69.7	78.9	53	4.5	920	24.2	Stina Ljungkvist
STD	122	159	Equator Stockholm AB	A	16	69.4	46.7	45	10.2	999	24.7	Annica Carlsson
STD	123	135	TM-Konsult AB	CE, I	15/16	68.8	62.3	72	10.7	761	36.9	Anders Franklin
STD	124		Bro Underhåll & Service BUS AB	CE	15/16	68.8	45.52	27	14.6	1140	27.7	Kent-Arne Svensson
	125	132	Tjuren Projektpartner AB	PM, M	16	67.9	62.7	32	18.0	1434	40.8	Niklas Haglund
STD	126	136	Altair Engineering	I	16	67.5	62.0	33	-1.3	1013	22.1	Håkan Ekman
STD	127	141	Adiga AB	I	15/16	67.2	60.5	32	3.3	774	20.4	Ricardo Heras
STD	128	143	Inhouse Tech *	PM, CE, Env	16	66.7	60.0	45	10.2	965	23.6	Anders Sundberg
	129		Codesign Sweden AB	A		66.3	50.5	41	3.5	602	21.2	Ulrica O Magnusson
STD	130	154	A & P Arkitektkontor AB	A	16	66.0	49.5	32	7.7	1030	25.0	Per Ahrbom
STD	131	166	Centerlöf & Holmberg AB	CE	16	65.3	45.0	45	18.5	1147	45.0	Bengt Andersson
	132	156	Svensk Konstruktionstjänst AB	I	16	64.9	47.9	34	4.4	870	23.5	Johan Lantz
	133	133	Wester+Elsner Arkitekter AB	A	16	64.7	62.7	42	9.0	1091	18.3	Fredrik Elsner
	134	129	Brandkonsulten Kjell Fallqvist AB	M	16	64.6	63.9	38	16.6	1391	26.7	Anders Karlsson
	135	265	Camatec Industriteknik AB	I	16/17	64.5	27.4	32	4.8	811	13.2	Johan Ljungner
STD	136	175	Citec AB	I	16	64.0	43.0	46	-0.5	654	21.4	Kenneth Lovidius
STD	137	145	Andersson & Hultmark AB	M	16	61.7	55.1	53	14.5	1021	34.8	Tobias Bodén
	138	153	StomKon *	CE	16	60.8	49.9	60	10.3	827	36.2	Terje Klovland
STD	139	101	Tüv Nord Sweden AB	I	16	60.6	76.8	30	2.9	1317	22.0	Anders Egerbo
	140	149	Erfator Projektledning AB	PM,CE	16	60.2	53.1	18	3.1	1597	14.3	Sven Klockare
	141	147	Triathlon AB	I	15/16	59.8	54.0	55	3.7	587	35.3	Fredrik Wadsten
STD	142	110	IKG Group AB	I	16/17	59.8	64.8	83	0.3	657	13.7	Magnus Ahlmark
STD	143	152	Vicura AB	I	16	59.6	50.0	41	-2.2	822	35.5	Magnus Lundblad
STD	144	155	Frank Projektpartner AB	PM,CE	16	59.3	48.6	31	5.4	1058	18.9	Magnus Trange
	145	150	Pq Projektledning AB	PM	16/17	59.1	52.5	35	11.5	1360	35.8	Jonas Karlsson
STD	146	139	Cross Design AB	I	16	59.0	61.1	69	4.1	585	24.1	Tommy Bergh
STD	147	138	Envac AB	Env	16	58.6	61.2	13	23.1	3074	360.1	Joakim Karlsson
	148	160	Clinton Mätkonsult AB	CE	15/16	58.1	46.6	35	1.4	714	14.5	Johan Nyström
STD	149	144	TQI koncernen	M, PM, Env, Enr	15/16	58.1	57.0	42	13.2	956	26.5	Kenneth Thunvall

	2017	2016	Group	Service	Annual report	Turn-over MSEK	(Previous year)	Average number of employees	Result after financial items MSEK	Added value/ empl. kSEK	Total balance sheet MSEK	CEO/Managing director
STD	150	114	NCS Colour AB	I	16	57.4	67.6	26	-4.4	927	47.1	Elin Askfelt
STD	151	181	VAP VA-Projekt AB	Env	15/16	55.7	41.6	35	10.8	980	24.1	Mikael Melin
	152		Trivector Traffic AB	I,CE	16	55.7	51.58	43	3.3	850	26.9	Christer Ljungberg
STD	153		Systra AB (fmr Dalco Elteknik)	CE	16	55.1	66.5	54	1.5	619	24.3	Kent Westh
STD	154	168	Electro Engineering koncernen AB	E	16/17	54.2	44.8	35	16.1	1336	24.9	Bo Andersson
	155	126	Helm (Project Management & Systems) *	PM,CE	16	53.9	66.1	26	2.1	825	32.6	Michael Johansson, Michael Claesson, Olof Cyrén
STD	156		Fire Safety Design AB	M	16	53.8	45.0	44	4.8	898	21.0	Alf Johansson
STD	157	98	Elajo Engineering AB	I	16	53.4	79.1	69	1.4	658	11.3	Matiias Åberg
STD	158	119	EDAG Engineering	I	16	53.4	69.6	74	-4.7	567	27.8	Gerd Blaschke
STD	159	167	Yellon AB	A	16	53.3	44.9	46	0.6	733	22.9	Markus Leijonberg
	160	157	ELVA Processautomation AB	M	15/16	53.3	46.9	12	5.2	1687	26.5	Mats Andersson
STD	161	172	BBH Arkitektur & Teknik AB	A,CE	16	52.9	43.9	30	1.3	724	18.3	Ulf Cigén
STD	162	178	Deva Mecaneyes AB	I	16	52.0	42.4	48	4.6	754	23.2	Magnus Welén
STD	163	201	High Vision Engineering Sweden AB	I	16	50.9	38.1	29	3.1	900	20.5	Peter Weston
STD	164	207	Projektgaranti AB	PM	15/16	50.5	36.3	32	0.1	790	14.7	Kajsa Hessel
STD	165	194	MAF Arkitektkontor AB	A	15/16	50.4	39.1	35	0.0	856	18.5	Peter Häggmark
STD	166	161	P O Andersson Konstruktionsbyrå AB	M	16	50.3	51.0	19	21.4	2140	23.2	Mattias Kinhult
STD	167	205	Rotpartner *	CE	16/17	50.3	37.8	45	2.5	720	10.2	Fredrik Olsson
	168	230	Orbicon AB	Env, CE	16	49.8	31.5	42	1.1	647	17.1	Åsa Malmäng Pohl
STD	169	173	Carlstedt Arkitekter AB	A	16	49.7	43.6	49	5.1	742	32.6	Kerstin Eken
STD	170	190	Kåver & Mellin AB	CE	16	49.6	40.0	39	7.4	983	22.0	Anders Hedberg
	171	148	Deltatec AB	I	16	49.6	53.0	14	8.6	1446	19.7	Patrik Storm
	172	158	Jan Håkansson Byggplanering AB	CE,PM	16	48.7	46.8	20	6.6	1386	30.4	Anders Håkansson
STD	173	170	SYD ARK Konstruera AB	A,CE	16/17	48.7	44.4	46	3.0	833	17.8	Lau Borch
	174	220	Calambio Engineering AB	I	15/16	48.3	33.5	11	7.2	1601	22.5	Thomas Reidenfalk
	175	164	Bylero AB	CE,PM	16/17	48.1	45.7	39	3.7	873	27.2	Torbjörn Frilund
STD	176	209	Scheiwiller Svensson Arkitektkontor AB	A	16/17	47.5	36.0	29	7.8	1124	19.9	Ari Leinonen
STD	177	199	C.F. Møller Sverige AB	A	16	47.5	38.3	40	4.6	816	18.5	Mårten Leringe
	178	212	Myvi Konsult AB	CE	15/16	46.9	35.6	48	6.9	845	21.0	Tommy Johansson
	179	324	MCA, Mission Consultancy Assistance Sweden AB	I	16	46.8	21.0	54	2.2	641	20.2	Pierre Ebenstein
STD	180	182	Järnvågen AB (Bergström, BEKAB, Indautomat et al)*	I	16/17	46.8	41.6	34	2.5	802	20.0	Tord Hägglund (chairman)
	181	162	Addiva AB	I	15/16	46.3	46.4	63	-1.0	654	15.5	Björn Lindström
	182	169	Solvina AB *	I	15/16	44.7	47.0	29	3.9	879	34.0	Amer Omanovic
	183	189	Licab AB	CE	15/16	44.7	40.1	33	4.2	924	19.9	Andreas Andersson
	184	177	LMT Elteknik AB	I,E	15/16	44.0	42.7	36	5.6	919	17.4	Anders Engqvist
STD	185	174	Mats Strömberg Ingenjörsbyrå AB	E	16	43.8	43.3	31	4.4	1015	19.1	Peter Granberg
	186	192	Validus Engineering	I	16	43.7	41.2	26	9.8	1045	23.4	Åke Burman
STD	187	196	DHI Sverige AB	Env, M	16	43.6	39.0	28	1.8	908	22.1	Patrik Alm
	188	222	DAP Stockholm	A	16	43.4	32.3	12	-2.6	558	12.2	Anna Wrangel Möller
STD	189	284	Calluna AB	Env	16	43.1	25.2	50	1.4	572	15.7	Håkan Ignell
STD	190	185	Sören Lundgren Byggkonsult AB	CE, PM	16/17	42.8	41.3	28	3.9	1144	15.5	Anders Harlin
STD	191	202	BK Beräkningskonsulter AB	CE,I	15/16	42.6	38.1	32	4.3	979	17.8	Tomas Carlsäng
STD	192	191	Wikström AB	PM, CT, ENV, Enr, M	16/17	42.1	40.0	35	4.3	961	19.6	Annika Aarthun
STD	193	163	Besiktningsföretaget Ansvarsbesiktning AB	CE	16/17	41.8	46.0	22	1.8	871	10.8	John Widmark
	194	128	SweRoad AB	CE	16	41.4	64.4	15	1.3	843	43.8	Jonas Hermansson
STD	195	195	KLT Konsult AB	I	16	41.4	39.6	39	3.7	918	16.0	Jonas Kroll
	196	232	Infrakonsult Sverige AB	CE	15/16	41.0	31.4	14	4.8	1249	11.5	Joacim Jansson
STD	197	91	Projektbyggaren i Blekinge AB	PM,A	16	40.9	84.7	26	5.4	1132	19.3	Håkan Svensson
STD	198		Smart Eye AB	I	16	40.7	37.57	42	-12.4	758	139.5	Martin Krantz

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PM = Project Management, A = Architecture, CE = Civil/Structural Engineering, CT = Certification and testing, Env = Environment, Enr = Energy, E = Electrical, M = Mechanical/HEVAC, I = Industrial, MD = Multi Disciplinary

THE TOP 300 SWEDISH CONSULTING ENGINEERING AND ARCHITECTURAL GROUPS

(GLOBAL FIGURES ARE PRESENTED FOR SWEDISH GROUPS)

	2017	2016	Group	Service	Annual report	Turn-over MSEK	(Previous year)	Average number of employees	Result after financial items MSEK	Added value/ empl. kSEK	Total balance sheet MSEK	CEO/Managing director
STD	199	239	Lindberg Stenberg Arkitekter AB	A	16	40.6	30.1	32	9.1	1000	17.1	Dag Lindberg
STD	200	225	SCIOR Geomanagement AB	CE	16	40.5	33.0	29	2.5	946	32.2	Fredrik Landqvist
	201	197	KFS Anläggningskonstruktörer AB	CE,PM	15/16	40.3	38.6	30	5.5	1082	25.8	Patrik Påhlsson
STD	202	227	STIBA AB	CE	16	40.2	32.3	26	11.7	1339	20.0	Joakim Österlund
	203	217	HillStatik AB	K	16	40.2	33.8	19	17.8	1695	26.7	Conny Höggren
STD	204	193	SEVAB (Styr- och Elinstallationer Väst Teknik)	I	15/16	39.7	39.8	27	5.3	889	25.2	Thomas Åberg
	205	208	Creanova AB	M, Enr	15/16	39.7	36.2	29	7.1	1031	15.5	Jonas Dorsander
	206	237	Kjellander & Sjöberg AB	A	15/16	39.5	31.0	41	2.8	651	10.5	Mi Inkinen
	207	179	Konsultgruppen Röda Tråden AB *	CE	15/16	39.1	42.2	28	0.1	1355	9.4	Lars-Olof Gyllberg
	208	188	C&M Projekt i Stockholm AB	CE	16	39.1	40.2	23	4.7	1170	14.7	Krusbeth Kristensson
STD	209	325	Fagerström Industrikonsult AB	PM, Enr, I	16/17	39.0	20.0	22	2.3	726	10.9	Per Fagerström
STD	210	184	Arkitekthuset Monarken AB	A	16/17	39.0	41.3	42	5.4	731	31.8	Per Sandkvist
STD	211	94	One Nordic Konsult AB	I	16	38.9	83.1	27	-11.3	749	9.7	Magnus Hasselgren
STD	212	187	Energi & Miljöteknik i Göteborg AB	E,M	15/16	38.9	40.3	15	2.8	733	9.6	Ola Nygren
STD	213	214	Landskapslaget AB	A	16	38.7	34.7	27	4.1	998	14.0	Åsa Keane
STD	214		Enviroplanning AB	Env	16	38.5	41.5	17	0.3	757	13.7	Tony Johansson
STD	215	228	Arkitektgruppen G.K.A.K AB	A	16	38.2	35.3	27	2.1	841	13.9	Bo Johansson
STD	216	219	MoRe Research Örnsköldsvik AB	I	16	37.9	33.6	47	-0.9	553	23.1	Stefan Svensson
	217		Syntronic Production Services AB	I	16/17	37.8	38.7	29	0.4	524	49.0	Roger Lindholm
	218	274	Kanozi Arkitekter AB	A	15/16	37.7	26.3	31	6.3	771	13.9	Johan Norén
	219	306	Geoteam Nord AB	CE	15/16	37.6	22.6	16	0.2	725	10.0	Joachim Östergårds
STD	220	261	mCUB AB	I	15/16	37.6	27.7	30	2.9	700	10.7	Marcus Blomberg
STD	221	235	DGE Mark och Miljö AB	Env	16	37.5	31.1	34	0.3	657	13.8	Johnny Sjögren
	222		Projektlots i Sverige AB	PM	16/17	37.4	40.7	1	0.1	780	10.4	Astrid Evang
STD	223	264	Energi Funktion Komfort, Skandinaviska AB	I,Enr,PM	16	37.1	27.4	33	3.8	746	13.1	Mikael Lezdins
	224	255	DinellJohansson AB	A	16	36.9	28.2	25	15.2	1222	32.0	Morten Johansson
STD	225	244	Okidoki AB	A	16	36.9	29.6	39	3.2	709	13.1	Maja Ivarsson
STD	226	200	Thomas Eriksson Arkitektkontor AB	A	16	36.6	38.3	27	6.8	989	13.9	Thomas Eriksson
STD	227		A-Way Consulting	I	16	36.6	28.4	27	1.78	927	14.3	Kent-Åke Johansson
STD	228	312	Alessandro Ripellino Arkitekter	A	16	36.5	22.2	25	9.2	1166	18.3	Alessandro Ripellino
STD	229	246	TEAM TSP Konsult AB	E	16	36.0	29.4	22	6.3	1414	16.3	Mattias Hernegran
STD	230	213	Rockstore Engineering AB	CE	16	35.5	34.8	15	5.8	1487	17.2	Krister Knutsson
	231	303	Conpal AB	CE	16	35.1	23.1	0	1.6	15600	15.6	Per Hansback
STD	232	210	Ca Consultadministration AB	PM	16	35.0	36.0	32	1.4	918	17.5	Daniel Dåverhög
	233	236	Hedström & Taube Projektledning AB	PM	16	34.9	31.0	21	7.1	1307	13.9	Jonas Rondin
	234	326	Provinn AB	I,CT	16/17	34.8	24.6	16	4.2	1078	12.1	Per-Olof Bergström
STD	235	229	Landskapsgruppen AB	CE	16/17	34.7	31.8	30	4.0	881	15.0	Ulf Rehnström, Tomas Hagström
	236	203	Infrapartner AB	CE	16	34.6	38.0	14	3.7	1424	11.2	Marcus Sundberg
	237	211	B & B, Bro & Betong Projektledning	CE,PM	15/16	34.6	35.7	20	6.9	1187	15.2	Magnus Tengblad
STD	238	243	Projectpartner AB	PM	16	34.5	29.6	18	4.0	1109	18.0	Tommy Backman
STD	239	186	Erséus Arkitekter AB	A	16	34.4	40.6	29	1.5	885	14.5	Peter Erséus
STD	240	258	Knut Jönson Ingenjörsbyrå AB (group)	CE	16/17	34.2	28.0	23	8.7	1139	60.0	Per Arne Nässtrom
STD	241	183	Koteko AB	I	16	34.1	41.6	30	0.0	768	21.6	Markus Hällström
	242	234	PB-Teknik AB	M	16/17	33.9	30.8	28	4.3	848	18.8	Patrik Bergström
	243	218	Berge Engineering	I	15	33.6	23.7	40	0.2	548	10.9	Thomas Winberg
STD	244	221	EKM kontroll AB	M	15/16	33.4	33.2	23	0.8	630	10.8	Johan Kjellman
STD	245	272	EPG Projektledning AB	PM	16	33.3	26.5	28	3.6	849	13.2	Dennis Lundmark
	246		Aerodynamics Research Center STARCS AB	I	15/16	33.3	13.8	3	-0.8	1123	16.9	Rune Thyselius
STD	247	279	Svenska Teknikingenjörer AB	I	15/16	33.1	25.8	28	5.6	835	10.9	Hans Aderum
	248	254	Protek Projektstyrning i Göteborg	PM,CE	16	33.1	28.2	18	2.9	1038	9.6	Pär Eriksson
STD	249	248	HMXW Arkitekter AB	A	16	33.0	29.3	22	7.1	1050	16.7	Ragnar Widegren
	250	216	ABAKO Arkitektkontor AB	A	16	32.5	34.4	34	1.2	751	14.8	Olof Hellberg

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	251	350	Stockholms VVS-Kompetens AB	M	16/17	32.5	32.6	15	6.6	1444	17.7	Håkan Klaesson
STD	252	281	Ingenjörsfirma Mats Bergstedt AB	I	16/17	32.2	25.5	21	6.7	947	14.9	Mats Bergstedt
	253	295	Rstudio for architecture AB	A	16/17	32.2	24.1	19	5.2	851	14.9	John R. Johanson
	254		Oxyma Innovation AB	I	15/16	31.9	26.2	23	3.9	885	6.7	Johan Norelius
STD	255	250	Looström & Gelin Konstruktionsbyrå AB	CE	16/17	31.9	29.2	27	4.4	917	13.1	Andreas Magnusson
	256	317	Projektledarbyrån Dalarna AB	PM,CE	15/16	31.8	21.9	17	3.5	1172	7.3	Roland Appelgren
	257	206	S-Tech, Skandinaviska Tech AB	E	16	31.6	37.8	38	2.0	674	15.2	Martin Jansson
STD	258	270	Säkerhetspartner Norden AB	CE	15/16	31.5	26.7	19	7.5	1275	19.9	Leif Nyström
STD	259	231	Fredblad Arkitekter AB	A	15/16	31.4	23.4	29	4.1	812	9.9	Leif Jönsson
STD	260	249	Trafikia AB	CE	16	31.3	29.4	23	-1.5	796	22.3	Mats Hagström
STD	261	257	Ingenjörsbyrå Forma	I	16/17	31.0	28.0	27	3.4	815	12.1	Anders Grahm
STD	262	293	Contekton Arkitekter Fyrstad AB	A	15/16	31.0	24.7	26	10.1	1071	16.5	Peter Bergmann
	263	240	Metod Arkitekter i Uppsala AB	A	16	30.4	30.1	25	6.5	987	13.1	Patrik Tammerman
STD	264	282	Arkitektbyrån Design Göteborg AB	A	16	30.0	25.4	27	3.6	719	10.8	Jan Åkerblad
STD	265	286	Studio Stockholm Arkitektur AB	A	16	29.8	25.2	22	9.7	1030	19.6	Alessandro Cardinale
STD	266	253	Knut Jönson Byggadministration i Stockholm	PM	16/17	29.7	28.4	10	7.4	1655	11.7	Tom Ågstrand
STD	267	269	Metron Miljökonsult AB	Env	16	29.7	26.8	19	9.6	1103	22.2	Ann-Sofie Wessberg
STD	268	263	AG Arkitekter AB	A	16	29.6	27.4	23	4.8	1010	12.3	Fredrik Kihlman
STD	269	242	Elektrotekniska Byrån i Karlstad AB	E,I	15/16	29.6	29.6	28	2.8	940	23.0	Jonas Bjuresäter
	270	215	Creator Teknisk Utveckling AB	I	16	29.5	34.5	28	1.9	761	50.6	Mikael Reichel
STD	271	308	Seveko VVS Konsult AB	M	16	29.3	22.4	20	7.7	1247	12.0	Henrik Sandén
STD	272	310	Vcon VVS-Konsult AB	M	16/17	29.0	22.3	23	9.8	1100	27.5	Nicklas Andersson
STD	273	247	Atrio Arkitekter (Jönköping, Kalmar & Västervik)	A	16	29.0	29.3	24	1.4	763	14.4	Lunde, Dahlin, Spaak
STD	274	176	Terratec Sweden (fmr Blom Sweden)	I,Geo	16	28.8	42.9	13	-2.1	711	19.3	Ante Erixon
	275	245	Rundquist Arkitekter AB	A	16	28.7	29.5	18	2.0	817	13.7	Henrik Rundquist
STD	276	251	Varg Arkitekter AB	A	15/16	28.7	32.1	28	6.8	890	19.2	Inga Varg
STD	277	289	Mekaniska Prövningsanstalten MPA AB	M	16	28.6	24.8	14	4.5	1705	10.7	Torbjörn Ohlsson
	278	287	Mitta AB	CE	16	28.3	25.2	31	3.1	655	11.7	Tomas Knutsson
STD	279	283	Marge Arkitekter AB	A	16	28.3	25.3	25	4.0	857	10.6	Louise Masreliez
STD	280	280	Creacon Halmstads Konsult AB	CE	16	28.3	25.7	30	1.0	740	9.7	Torbjörn Åkesson
	281	321	A & J Andersson & Jönsson Landskapsarkitekter AB	A	16/17	28.3	24.9	18	4.1	929	11.7	Thomas Andersson
	282	302	Karlander Konsult AB	CE	15/16	28.0	23.3	17	1.0	840	7.0	Fredrik Karlander
STD	283	233	Murman Arkitekter AB	A	16	28.0	31.3	26	-0.5	712	9.7	Ulla Alberts
	284	273	Scanscot Technology AB	CE	16	28.0	26.4	15	2.6	1163	17.9	Johan Kölfors
	285	223	AK-Konsult Indoor AIR AB	Env	16	27.9	33.1	22	0.6	867	7.6	Thomas Perman
	286	266	Elkonsulten i Finspång AB	E	15/16	27.2	26.9	12	3.3	1075	13.1	Bengt Hillier
STD	287	260	pidab AB	I	16/17	26.8	27.8	27	0.5	719	11.5	Per Forsbring
STD	288	291	Rördesign i Göteborg AB	I,M	16/17	26.8	24.7	26	1.5	878	12.3	Sture Börjesson
	289	259	Veprox AB	I	16	26.6	27.8	31	1.3	595	12.1	Bo Larsson
	290	354	Klara Arkitektbyrå i Karlstad AB	A	16/17	26.5	22.0	23	5.7	957	10.2	Maria Andersson
	291	296	Eltech Automation i Lund AB	I	16/17	26.4	24.1	20	1.2	821	7.3	Mikael Carlsson
STD	292	329	AB Arkitektlaget Skåne	A	16	26.4	20.5	20	7.0	1081	11.2	Lars Bourdette
	293	304	Werket Arkitekter AB	A	16/17	26.3	22.9	22	5.3	944	11.3	Henrik Lehman
STD	294	339	Elinder&Sten Arkitekter AB	A	15/16	26.1	19.7	15	4.9	1096	11.1	Christian Elinder
STD	295	301	Marktema AB	CE	15/16	25.8	23.3	14	3.3	930	7.0	Paul Andersson
	296	299	Projektidé i Uppsala AB	PM	15/16	25.8	23.5	15	5.0	1150	14.1	Henrik Billing (chairman)
STD	297	288	Jelmtech Produktutveckling AB	I	15/16	25.6	24.9	25	1.5	708	7.9	Carl-Fredrik Emilsson
STD	298	267	Total Arkitektur & Urbanism AB	A	16	25.4	27.0	29	6.1	723	15.9	Johan Granqvist
STD	299	330	Vera Arkitekter AB	A	15/16	25.4	20.5	25	4.1	758	15.4	Tobias Nissen
STD	300	300	Arkitekter Engstrand och Speek AB	A	15/16	25.0	23.4	20	5.3	459	24.1	Olle Dahlkild

STD = Member of the Swedish Federation of Consulting Engineers and Architects. (*) = lack of conforming figure/proforma/assumed – = missing figure
PM = Project Management, A = Architecture, CE = Civil/Structural Engineering, CT = Certification and testing, Env = Environment, Enr = Energy, E = Electrical, M = Mechanical/HEVAC, I = Industrial, MD = Multi Disciplinary

“ICELAND HAD THE BEST PROFITABILITY IN THE NORDIC REGION IN 2016 WITH A PROFIT MARGIN OF 8.9%.

The Opera house in Oslo, designed by Snøhetta architects.

THE NORDIC MARKET

The Nordic section in the Sector Review is produced in cooperation with our colleagues in Finland, Norway, Denmark and Iceland. FRI and Danske Ark give an account of developments on the Danish market. RIF and Arkitekbedriftene gives a presentation of developments on the Norwegian market. SKOL gives an account of the Finnish market. The Icelandic market is presented by FRV and SAMARK together.

Comparison of key business ratios

A comparison is given below of some of the key business ratios for the Nordic countries. The figures have been calculated on the basis of the lists that were made for the respective countries and with the figures that were available. The Swedish figures in other words correspond to the 300 largest groups in Sweden. In Norway, Denmark and Finland, they correspond to the 100 largest companies. In Iceland, the figures apply for the 17 largest companies. The calculations have been made on average exchange rates over the period January up to and including November 2017, as presented at the top of the graph below.

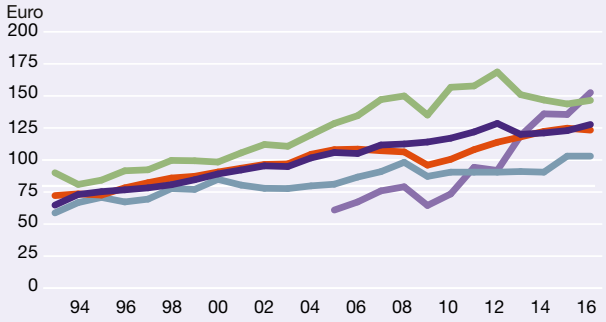
The market development in the Nordic region was good in 2016. Profitability improved in all countries except Finland and Norway, where it fell only marginally. Best profitability was achieved in Iceland with a profit-margin, before tax, of 8.9%. that was a substantial improvement from the previous year when it was 6.3%. Sweden had the second-best profitability with 7.2%, compared to 5.8% the year before. Norway followed with 6.9% (7.0%), Finland with 5.0% (5.1%) and Denmark with 4.6% (4.0%). The highest turnover per employee was registered on Iceland with 153,000 Euros followed by Norway with 147,000 Euros, Sweden with 128,000 Euros, Denmark with 123,000 Euros and Finland with 103,000 Euros. Profit (before tax) per employee was 13,600 Euros on Iceland, 10,000 in Norway, 9,300 in Sweden, 5,800 Euros in Denmark and 5,200 Euros in Finland.

Nordic comparison of key figures

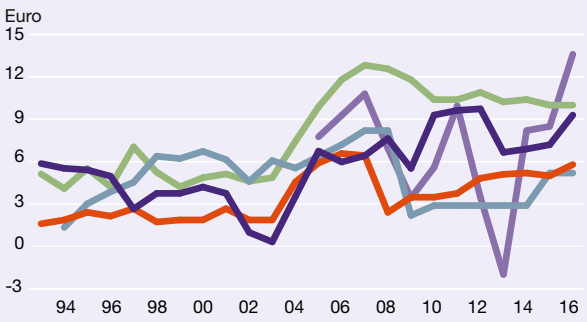
The figures are calculated with the conversion rates below, representing average currency rates for the period January–November 2017.
1 Euro = 9,6074 SEK 7,4383 DKK 9,2833 NOK 120,05 ISK Tidigare räknades 1 Euro = 5,9457 Mark

Sweden Denmark Norway Iceland Finland

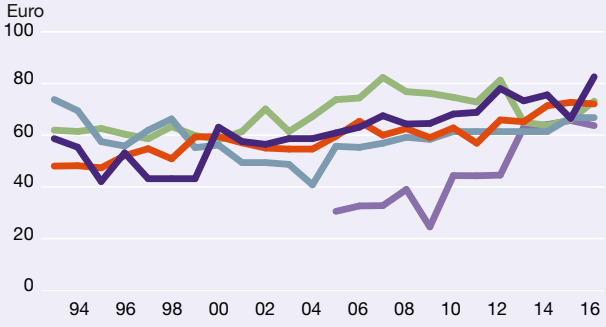
Turnover/employee



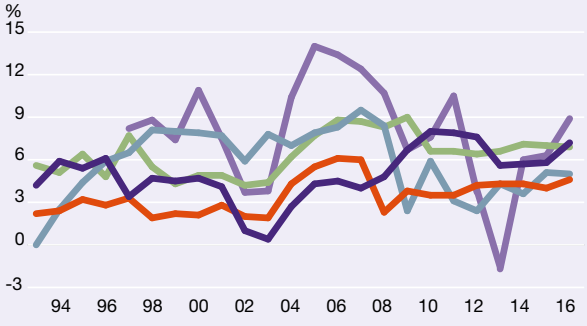
Profit after financial items/employee



Total assets/employee



Profit margin



THE TOP 100 NORDIC ARCHITECTURAL GROUPS

	2017	2016	Group	Country	Annual Report	Employees	(Previous year)	Turnover	Currency	Turnover MEUR
FRI	1	1	Rambøll Architects & Urban Planning *	DAN	15	835	700	780.0	MDKK	104.9
STD	2	3	White Architects	SWE	16	682	632	892.2	MSEK	92.9
STD	3	2	SWECO Architects	SWE	16	629	700	834.0	MSEK	86.8
STD	4	4	Tengbom group	SWE	16	603	558	628.4	MSEK	65.4
DA	5	5	Arkitema K/S	DAN	16	466	450	361.8	MDKK	48.6
RIF/AB	6	6	LINK Arkitektur AS	NOR	16	372	353	387.0	MNOK	41.7
DA	7	9	BIG / Bjarke Ingels Group *	DAN	16	300	280	250.0	MDKK	33.6
DA	8	7	Arkitektfirmaet C.F. Møller	DAN	16	297	309	314.7	MDKK	42.3
DA	9	8	Henning Larsen Architects	DAN	16/17	275	281	268.5	MDKK	36.1
STD	10	10	PE Arkitektur	SWE	16	237	228	275.0	MSEK	28.6
STD	11	21	Tyréns (acquired Pyramiden & AQ arkitekter) *	SWE	16	230	104	240.0	MSEK	25.0
AB	12	11	Snøhetta Group *	NOR	16	180	180	152.9	MNOK	16.5
STD	13	14	Semrén & Månsson Arkitektkontor AB	SWE	16/17	156	131	159.1	MSEK	16.6
STD	14	13	Wingårdh-group	SWE	16	141	131	178.6	MSEK	18.6
STD	15	17	Arkitekterna Krook & Tjäder AB	SWE	16	137	121	153.3	MSEK	16.0
STD	16	18	Liljewall Arkitekter AB	SWE	16	136	121	151.4	MSEK	15.8
DA	17	15	Årstiderne Arkitekter A/S	DAN	15/16	135	129	143.0	MDKK	19.2
AB	18	12	Nordic Office of Architecture	NOR	16	134	132	220.6	MNOK	23.8
	19	16	Schmidt Hammer Lassen Architects K/S *	DAN	16	112	124	144.3	MDKK	19.4
	20	24	ÅF (SandellSandberg & Koncept Sthlm) *	SWE	16	109	89	140.5	MSEK	14.6
DA	21	19	KPF Arkitekter A/S	DAN	16	107	105	77.0	MDKK	10.4
STD	22	20	FOJAB AB	SWE	16	105	105	139.0	MSEK	14.5
STD	23	22	NYRÉNS Arkitektkontor AB	SWE	16	100	96	138.3	MSEK	14.4
DA	24		Gottlieb Paludan Architects A/S	DAN	16	96	97	127.0	MDKK	17.1
DA	25	26	PLH Arkitekter AS	DAN	16	93	81	110.2	MDKK	14.8
DA	26	32	Vilhelm Lauritzen AS	DAN	16	93	69	90.7	MDKK	12.2
DA	27	27	JJW Arkitekter A/S	DAN	16	85	79	56.8	MDKK	7.6
STD	28	29	AIX Arkitekter AB	SWE	15/16	84	76	116.9	MSEK	12.2
STD	29	31	Mälarholmen (Ettelva Arkitekter & M.E.R. Solution)	SWE	16	84	72	187.3	MSEK	19.5
DA	30	25	Mangor & Nagel A/S	DAN	16	82	82	63.3	MDKK	8.5
STD	31	34	Cedervall Arkitekter	SWE	16	79	68	78.8	MSEK	8.2
STD	32	36	ÅWL Arkitekter AB	SWE	16	79	62	101.8	MSEK	10.6
	33	23	DARK Group*	NOR	16	75	95	89.2	MNOK	9.6
DA	34	83	Creo Arkitekter A/S	DAN	16	75	37	40.9	MDKK	5.5
	35		COBE ApS	DAN	16	74		66.4	MDKK	8.9
AB	36	30	Lpo Arkitekter As	NOR	16	74	73	77.7	MNOK	8.4
DA	37	28	3XN A/S	DAN	16/17	73	76	81.2	MDKK	10.9
STD	38	37	Brunnberg & Forshed Arkitektkontor AB	SWE	16	70	61	103.7	MSEK	10.8
DA	39	41	CUBO Arkitekter A/S	DAN	16/17	66	57	106.8	MDKK	14.4
DA	40	66	Tegnestuen Vandkunsten ApS	DAN	16	66	45	46.1	MDKK	6.2
	41	39	Pes-Arkkitehdit Oy (Pekka Salminen)	FIN	16	64	60	7.5	MEUR	7.5
DA	42	42	Rubow Arkitekter A/S	DAN	16	61	57	60.9	MDKK	8.2
STD	43	45	BSV Arkitekter & Ingenjörer AB	SWE	16	61	54	82.0	MSEK	8.5
	44		MAD Arkitekter	NOR	16	59		58.9	MNOK	6.3
STD	45	40	Byrån för Arkitektur & Urbanism (BAU)	SWE	16	58	60	85.8	MSEK	8.9
	46	50	Arkkitehtitoimisto JKMM Oy *	FIN	16	58	50	9.3	MEUR	9.3
AB	47	43	Lund Hagem Arkitekter AS	NOR	16	57	56	60.0	MNOK	6.5
AB	48	44	OG Arkitekter AS	NOR	16	55	55	40.7	MNOK	4.4
AB	49	46	Hille Melbye Arkitekter AS	NOR	16	55	54	65.8	MNOK	7.1
STD	50	67	Archus	SWE	16	55	45	81.4	MSEK	8.5

(*) = lack of conforming figure/proforma/assumed – = missing figure

AB = Member of Arkitektbedriftene, Norway. DA = Member of Danske Ark, Denmark. FRI = Member of FRI, Denmark. RIF = Member of RIF, Norway. SKOL = Member of SKOL, Finland. STD = Member of STD-företagen, Sweden.

THE TOP 100 NORDIC ARCHITECTURAL GROUPS

	2017	2016	Group	Country	Annual Report	Employees	(Previous year)	Turnover	Currency	Turnover MEUR
DA	51	57	Kullegaard Arkitekter A/S	DAN	15/16	55	48	64.5	MDKK	8.7
STD	52	38	Reflex Arkitekter AB	SWE	16/17	54	61	81.0	MSEK	8.4
DA	53	47	Schønherr A/S	DAN	16	53	52	45.1	MDKK	6.1
STD	54	60	BSK Arkitekter AB	SWE	16	53	47	69.7	MSEK	7.3
DA	55	64	KHR Arkitekter AS	DAN	16	53	46	38.4	MDKK	5.2
AB	56	49	Tag Arkitekter AS	NOR	16	52	52	56.3	MNOK	6.1
	57	55	Arcasa Arkitekter AS	NOR	16	52	49	105.7	MNOK	11.4
DA	58	69	Lundgaard & Tranberg Arkitekter A/S	DAN	15/16	52	43	108.2	MDKK	14.5
AB	59	56	Lund & Slaatto Arkitekter AS	NOR	16	51	49	65.9	MNOK	7.1
AB	60	52	Ratio Arkitekter AS (fmr Bgo og Medplan Arkitekter)	NOR	16	50	50	115.4	MNOK	12.4
	61	58	Arkkitehtitoimisto SARC Oy	FIN	15/16	50	47	8.3	MEUR	8.3
DA	62	63	Friis & Moltke A/S	DAN	16	50	46	57.6	MDKK	7.7
	63	51	L Arkkitehdit Oy (Arkkitehtitoimisto Larkas & Laine Oy)	FIN	16	49	50	5.1	MEUR	5.1
STD	64	72	Carlstedt Arkitekter AB	SWE	16	49	42	49.7	MSEK	5.2
AB	65	65	Dyrvik Arkitekter A/S	NOR	16	48	46	52.7	MNOK	5.7
DA	66		ZESO Achitects ApS *	DAN	15/16	48	28	30.0	MDKK	4.0
AB	67	78	PIR II architects AS	NOR	16	48	40	29.7	MNOK	3.2
	68	54	Helin & Co Architects	FIN	15/16	47	49	11.0	MEUR	11.0
DA	69	74	Christensen & Co. Arkitekter A/S	DAN	15/16	47	41	49.4	MDKK	6.6
DA	70	53	SLA Arkitekter A/S	DAN	16	46	49	35.5	MDKK	4.8
STD	71	61	SYD ARK Konstruera AB	SWE	16/17	46	46	48.7	MSEK	5.1
STD	72	71	Yellon AB	SWE	16	46	42	53.3	MSEK	5.5
DA	73	68	Rørbæk og Møller Arkitekter ApS	DAN	15/16	45	44	48.1	MDKK	6.5
STD	74	77	Equator Stockholm AB	SWE	16	45	40	69.4	MSEK	7.2
	75	59	Architecture Office Sigge Ltd/ Viiva arkkitehtuuri (Arkkitehtitoimisto Sigge Oy)	FIN	15/16	44	47	6.2	MEUR	6.2
DA	76	84	Aart A/S	DAN	15/16	43	37	41.7	MDKK	5.6
AB	77	70	Abo Plan & Arkitektur As	NOR	16	42	42	46.2	MNOK	5.0
STD	78	73	Arkitekthuset Monarken AB	SWE	16/17	42	41	39.0	MSEK	4.1
	79	75	Wester+Elsner Arkitekter AB	SWE	16	42	40	64.7	MSEK	6.7
AB	80	76	PKA - Per Knudsen Arkitektkontor AS	NOR	16	42	40	45.9	MNOK	4.9
	81	79	Uki Arkkitehdit Oy	FIN	16	42	40	3.6	MEUR	3.6
SKOL	82	105	Aihio Arkkitehdit Oy	FIN	16	42	32	4.1	MEUR	4.1
DA	83		Signal Arkitekter ApS *	DAN	15/16	42	24	28.8	MDKK	3.9
AB	84		Narud Stokke Wiig Sivilarkitekter Nmal AS	NOR	16	42		55.3	MNOK	6.0
	85		Codesign Sweden AB	SWE	15/16	41	30	66.3	MSEK	6.9
AB	86	80	Niels Torp AS Arkitekter	NOR	16	41	39	54.1	MNOK	5.8
AB	87	90	AMB Arkitekter AS	NOR	16	41	36	45.3	MNOK	4.9
STD	88	107	Kjellander & Sjöberg AB	SWE	15/16	41	31	39.5	MSEK	4.1
	89	62	Strategisk Arkitektur Fries & Ekeroth AB	SWE	16	40	38	72.1	MSEK	7.5
AB	90	88	Alliance Arkitekter AS	NOR	16	40	37	36.4	MNOK	3.9
DA	91	104	H+Arkitekter (Hou & Partnere)	DAN	16	39	32	63.8	MDKK	8.6
	92		RUM A/S *	DAN	16/17	39	25	44.7	MDKK	6.0
STD	93	100	Okidoki! Arkitekter AB	SWE	16	39	34	36.9	MSEK	3.8
DA	94	85	Dissing+Weitling Architecture A/S	DAN	16	38	37	36.0	MDKK	4.8
	95	96	Arkkitehtitoimisto Lukkaroinen Oy	FIN	16	38	35	3.1	MEUR	3.1
SKOL	96	95	Parviainen Arkkitehdit Oy	FIN	16	38	35	3.9	MEUR	3.9
	97	81	HRTB AS	NOR	16	38	38	41.3	MNOK	4.4
DA	98	108	Holscher Nordberg Architects A/S	DAN	16	38	30	42.9	MDKK	5.8
SKOL	99	94	Arkkitehdit Soini & Horto Oy	FIN	16	37	35	7.0	MEUR	7.0
AB	100	89	4B Arkitekter AS	NOR	16	37	37	39.0	MNOK	4.2

(*) = lack of conforming figure/proforma/assumed – = missing figure

AB = Member of Arkitektbedriftene, Norway. DA = Member of Danske Ark, Denmark. FRI = Member of FRI, Denmark. RIF = Member of RIF, Norway. SKOL = Member of SKOL, Finland. STD = Member of STD-företagen, Sweden.

REVENUE REACHES NEW HIGH FOR DANISH COMPANIES BUT DECREASES FOR INTERNATIONAL SUBSIDIARIES

Revenue and profits continue to rise for the consulting engineers in Denmark, thus following the trend of the last three years. In 2016, the industry's revenue in Denmark increased by 4.5 percent to EUR 1.78 billion (DKK 13.2 billion) and profit margin (EBIT) went from 7.0 percent in 2015 to 7.1 in 2016. Export accounted for approximately 19 percent of the domestic revenue, which was an increase from 17 percent in 2015. International subsidiaries did not fare quite so well in 2016. Here revenue decreased by 2.9 percent to EUR 1.56 billion (DKK 11.7 billion).

This development was primarily due to the downscaling of oil & gas activities. Despite the lower revenue for international subsidiaries, the Danish consulting engineering firms generated EUR 3.36 billion (DKK 25 billion) in global revenue. Revenue generated by exports and in foreign subsidiaries accounts for 57 percent of global revenue in the industry. Danish consulting engineering firms employed approximately 26,300 staff globally, of which 13,500 staff were employed in foreign subsidiaries and 12,800 staff were employed in Denmark.

Outlook

It is looking brighter for the Danish economy and, in their "Economic Statement" from August 2017, the Danish Ministry of Finance expects GDP to grow by 2.0 percent in 2017 and 1.8 percent in 2018. If these forecasts hold, it will be the highest growth in GDP since 2006. Residential investments are expected to rise by 5.0 percent in 2017 and 6.0 percent in 2018 due to rising prices on housing and low financing expenses. Business investments are expected to increase by 3.0 percent in 2017 and 4.5 percent in 2018. Public investments have been at a historic high these past years and will see a significant decline in the coming years. Public investments are expected to decline from 3.5 percent of GDP in 2017 to 3.4 percent of GDP in 2018. Based on the latest FRI survey (October 2017), the Danish consulting engineering industry expects a small increase in the number of employees over the next six months. The survey shows that 36 percent of the firms expect to increase their workforce, while 17 percent expect to decrease it. When asked about expected backlog, 29 percent of the firms expect an increased backlog over the coming six months, while none expects their workload to decrease. On the domestic market, Danish consulting engineering firms expect both revenue and profits to grow.

Sector market performance

FRI's forecasts show that the Building Sector, which currently comprises 39 percent of the total turnover in FRI member firms, is expected to grow. The Infrastructure Sector is the second largest sector with 25 percent, but is expected to decline in the coming years. The other two large sectors are Environment and Energy with 12 percent and 11 percent, respectively, of total revenue. The remaining revenue was produced in smaller sectors like IT, Management Consultancy and Process Engineering.

Tendering in English brings international consortiums to Denmark

In the past couple of years, the tendering process for several major projects in Denmark has been conducted in English. This has aroused increasing interest from international consortiums that wish to work in Denmark. As a result, international consortiums with no Dan-

Henrik Garver, FRI

David Hedegaard Meyer, FRI

About FRI

The Danish Association of Consulting Engineers (FRI), founded in 1904, is a trade association for Danish consultancy firms providing independent consultancy services on market terms. FRI is a part of the Confederation of Danish Industry (DI).

Approximately 320 firms are members of FRI and, in total, they employ 26,300 staff in Denmark and abroad. The association is the only trade association for independent technical consultants in Denmark.

The objective of FRI is to support its member firms by contributing to improving their business conditions, strengthening the industry's framework conditions, profiling the industry and increasing its recognition on national and international levels.

FRI is an association for firms. It focuses on business matters and has established good liaisons with authorities and other partners. The association attempts as far as possible to gain influence on the drafting of framework conditions and legislation affecting market conditions in the industry.

Internationally, the association is a member of FIDIC and, in Europe, it is a member of EFCA.

Henrik Garver, CEO, FRI (Danish Association of Consulting Engineers)
David Meyer, Head of Market Analysis, FRI (Danish Association of Consulting Engineers)

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> THE PROFIT MARGIN WENT FROM 7.0 % IN 2015 TO 7.1 % IN 2016.

ish participation, other than subcontractors, won the construction of two major bridges. "Fjordforbindelsen" a 10 km freeway, including a 1.4 km high bridge, at a price of EUR 269 million (DKK 2 billion), was won by an Italian, Belgian and Spanish consortium. More recently "Storstrømsbroen", a 4 km combined rail and road bridge, at EUR 282 million (DKK 2.1 billion) was won by an Italian consortium.

Ongoing revision of the General Conditions for Consulting Services

The General Conditions for Consulting Services of October 1989 (known as ABR 89 from the Danish title) has been the general basis of consultation agreements for professional assistance by architects and engineers for close to 20 years. It is currently undergoing a revision as part of the modernisation of the general agreed documents for the building sector, which will result in a new set of agreed documents in 2018, that will have a profound impact on the sector. As part of the revision committee, FRI is working hard to ensure greater clarity in the tendering process and that the limitation of liability remains at a reasonable level.

Declining investments in infrastructure

Investments in infrastructure is essential to maintain economic growth in a society. It is therefore with some concern that the industry is looking at a pipeline for infrastructure projects that is close to non-existent from 2020 and beyond. For nearly a decade, the 2009 agreement "En grøn transportpolitik" (Denmark's green transport policy) set the course for infrastructure investments in Denmark. It was a visionary plan with planned investments of EUR 12 billion (DKK 90 billion) from 2009 to 2020. When looking at the latest Finance Bill for 2018, it allocates a meagre EUR 347 million (DKK 2.6 billion) for road investments over the next four years. It is FRI's hope that the political parties can agree on a new long-term investment plan for infrastructure in Denmark.

The building sector is booming

FRI's latest report on business cycles shows that the backlog for residential and commercial building projects continue to improve. A new pipeline survey from Byggepipeline.dk, which lists upcoming projects over EUR 6.7 million (DKK 50 million), shows that within the coming 12 months, new building projects for more than EUR 10.6 billion (DKK 79 billion) will be initiated. The private sector will be responsible for 2/3 of these projects. The increased activity does, however, raise some concerns about potential bottlenecks. The lack of qualified employees is currently one of the most pressing issues for consulting engineers and the rest of the building sector.

COMPANY NEWS:

Rambøll on point with new strategy

With a gross revenue of EUR 730 million for the first half of 2017 and an increase in EBIT to EUR 36 million, Rambøll shows improved performance compared to the first half of 2016. Rambøll launched its new Group strategy 'Winning Together' at the beginning of 2017, and a key element of the strategy is to further strengthen its presence and service offerings in key markets such as the Nordics, UK and US. In line with this strategy, Rambøll won many large projects in these markets. In Denmark, Rambøll won the tender for client consultancy on the world's longest road/rail immersed tunnel connection between Denmark and Germany, the Fehmarn Belt Fixed Link. In Finland, Rambøll was selected to participate in a project to design the 25 km long Jokeri light rail line stretching from eastern Helsinki to Espoo. Rambøll also acquired three companies in Finland, thus adding another 40 experts and bringing the total number of employees in Finland to 2,300. Looking at Norway, Rambøll signed a large framework agreement with Bane NOR SF, the state-owned company responsible for the Norwegian national railway infrastructure. Rambøll was also part of the winning team tasked with the design of the new governmental headquarters in Oslo. In the UK, Rambøll won a major contract for the UK High Speed 2, Phase 2b, providing civil and environmental engineering services for the Nottinghamshire to Leeds and York section. Ramboll has also won several very large environmental contracts in America.

COWI continues growth

In the first six months of 2017, COWI generated a turnover of EUR 412 million, which corresponds to a 3 percent increase compared to the same period in 2016. COWI's operating profit (EBIT) amounted to EUR 12 million. With a global presence and more than 6,500 skilled employees, COWI was poised to win many exiting projects. As part of a joint venture, COWI won its largest water contract to date on a British development project in South Africa. Looking to North America, COWI won the design of the Petroleum Cement Terminal in Alaska while, in China, COWI was tasked with designing a district heating accumulator tank for a major Chinese Power Company. COWI is also the first Danish company to be included in the largest infrastructure project ever undertaken: the Belt and Road initiative, which is a modern version of the old Silk Route. Closer to home, COWI won the first phase of a prestigious urban development project, the East Link Project (Östlig Förbindelse), which will complete the ring road around Stockholm. In Norway, COWI is part of the team that won the design for the new governmental headquarters, where 4,500 people will work upon its completion. As part of a joint venture, COWI was furthermore selected to design the Fornebu Line, an 8.5 km extension of the Oslo metro. The first half of 2017 also saw the acquisition of the Stockholm-based company Projektbyrån. The company, which special-

izes in project management, has 110 employees and the acquisition strengthens COWI's position in the Swedish market.

Merger between NIRAS and ALECTIA

NIRAS and ALECTIA merged in the beginning of 2017 with NIRAS as the continuing company. In 2016, the combined companies counted more than 2,100 employees, who generated a revenue of EUR 280 million. With the merger, NIRAS' line of business areas has been expanded in Denmark and the UK with consultants within food and beverage, among others. In addition, NIRAS continued its Scandinavian expansion with the acquisitions of three companies in Norway (Oslo Prosjektadministrasjon, Kraftværk and VA Teknikk), and one in Sweden (Aperto). NIRAS secured a foothold in the Norwegian market for infrastructure and water utilities with their second highway assignment and a framework agreement with the Norwegian Railway Authority as well as the design of an expansion of a wastewater treatment plant in Oslo. In Sweden, NIRAS won several new projects, including the project management for renovation of the Royal Swedish Opera. On the domestic market, NIRAS won numerous projects, amongst these are the design of the new Children's Hospital Copenhagen and a tunnel below Copenhagen to transport excess water and geocoding of Danish properties for the Danish Tax Authorities.

New CEO takes the reins during record year for Sweco Danmark

While 2015 was a somewhat weak year when looking at EBIT, Sweco Danmark took a decisive re-match in 2016 and delivered its best results yet. Revenue was largely unchanged with EUR 147 million in 2016 compared to EUR 148 million in 2015. EBIT, however, soared from EUR -0.5 million in 2015 to EUR 8.7 million in 2016, thus landing Sweco Danmark among the financially best performing consulting engineers in Denmark. On 1 April 2017, Dariush Rezai succeeded John Chubb as president of Sweco Danmark. Dariush Rezai comes from a position as President of Mobile Communication at Eltel and has lots of experience with the Danish market. Sweco Danmark also inaugurated a new office in Vietnam, where they have a strong presence providing water solutions.

New headquarters and new CEO for Orbicon

Orbicon continued the upward curve and showed an increase in revenue by 6.5 percent to EUR 70 million in 2016. In two years, Orbicon has grown by 100 employees bringing the total to 600. To accommodate this growth, a new DGNB certified headquarter was inaugurated in Høje-Taastrup. 2016 also saw a change in management with CEO Jesper Nybo Andersen going on retirement and being replaced by Per Christensen. The arctic division of Orbicon is going strong and, in 2016, a new office was opened in Reykjavik, Iceland.

MOE keeps up impressive growth while also expanding abroad

Improving the revenue by 16 percent is an impressive feat and, with EUR 71 million, MOE has reached its highest level yet. For MOE, 2016 also saw an improvement in EBIT, which landed at EUR 4.4 million. Looking at the Danish market, MOE won several high profile projects including the new panda enclosure in Copenhagen Zoo, set to open late 2018, as well as new research facilities covering 9,800 m^2 for the Technical University of Denmark. With the opening of a new office in Norway, MOE has also strengthened its position on the Norwegian market, as part of an ongoing effort since 2009.

A solid year for Atkins Danmark

The fiscal year 2016/2017 showed improvements in both revenue and earnings before tax compared to last year. Revenue is up to EUR 50 million, while earnings before tax increased to EUR 4.2 million. In 2017, Atkins won the design of the E45 freeway expansion, which stretches over 15 km, and will also be counselling Denmark's Nature Agency on a project to reduce emissions of greenhouse gasses from agriculture. As part of a 5 year strategy, Atkins is also strengthening its environmental and digital engineering divisions.

EKJ is expanding in Denmark

With a strong performance in 2016, EKJ is set to expand its activities in Denmark by acquiring 31 employees from Balslev Consulting Engineers in the western part of Denmark. For EKJ, 2016 saw an increase in revenue to EUR 26.6 million while EBIT doubled from 2015 to 2016 and landed at EUR 2.1 million. This year, EKJ won several exiting projects such as the renovation of research facilities at the Technical University of Denmark and the reconstruction of the Danish Ministry of Employment. EKJ will also be assisting an Italian consortium with the construction of "Storstrømsbroen", a 4 km combined rail and road bridge.

Up-and-comer INGENIØR'NE shows no signs of slowing down

Going from 26 to 80 employees in just five years, INGENIØR'NE is on its way to becoming one of FRI's larger member firms. With a gross profit of EUR 7.4 million, an increase of 36 percent compared to 2015, INGENIØR'NE came out of 2016 strong. EBIT saw an increase of 26 percent to EUR 1.6 million. In 2017, INGENIØR'NE won several new projects, including the expansion of Grenå Sportscenter as well as the renovation of the emergency department at Horsens Hospital.

Midtconsult becomes part of ÅF Group

On 1 January 2017, Midtconsult became part of the Swedish ÅF Group. The sale was part of Midtconsult's strategy to grow in new business areas in close co-

operation with a strategic partner. The company will continue under the name Midtconsult, but with the addition "- part of the ÅF group". Drawing on its past experience with high-rises, Midtconsult was part of a team that won the construction of a new 120 meter residential tower in Copenhagen. Midtconsult also won a project for a new town area in Valby, set to hold 2,200 new households.

Søren Jensen to design a new landmark for Aarhus

Still feeling the effects of a restructuring, the 2015/2016 accounting year for Søren Jensen showed a slight decline in gross profit and EBIT, which landed at EUR 4.2 million and EUR -0.05 million, respectively. Not far from its headquarters, Søren Jensen will be the design manager for the first phase of the project for a new 100 meter tall commercial building at Aarhus harbor. Søren Jensen will also be designing "Godsbanekollegiet", a new dorm with 349 housing units. Not only busy in Aarhus, Søren Jensen is also expanding its office in Copenhagen to accommodate its growth.

DANISH ARCHITECTURAL INDUSTRY IS GROWING

The Danish architectural industry expanded from 2015 to 2016. The total member net fee turnover for 2016 reached EUR 629.8 million, a 6.8% increase from last year's EUR 589.6 million. In the same period, the member firms added 400 new employees to their total staff pool, now employing about 5400 architects and improved their net profits with an impressive 21% from EUR 42.9 million in 2015 to 51.9 million in 2016.

The (net) profit margin thus increased to 8.4% in 2016, from 6.4% in 2015.With added manpower, better sales and predominantly positive sentiments for 2017, the industry's financial development is expected to have further improved in 2017.

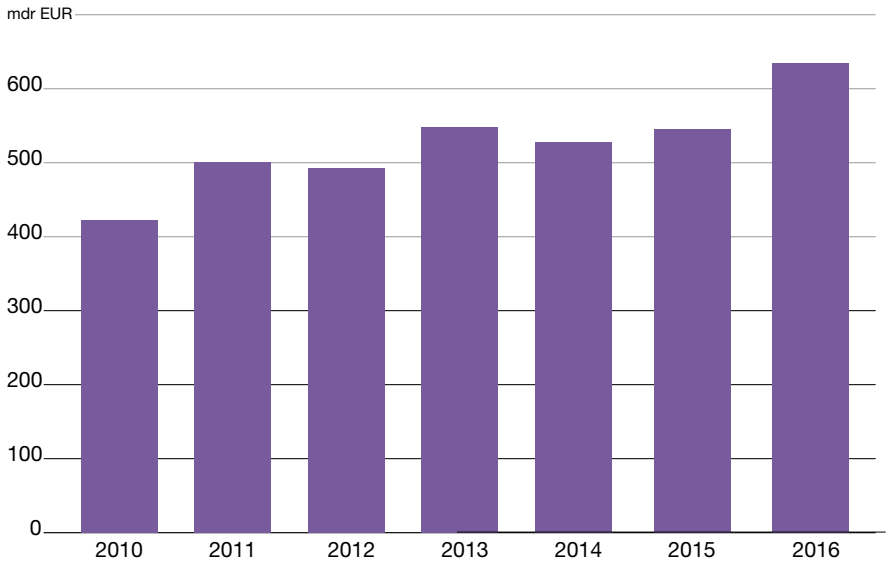
The architectural industry is volatile, as large projects are unpredictable and competitions carries substantial risks. Especially smaller firms struggle more than their larger competitors as the Danish value chain is becoming increasingly blurred resulting in a more complex market with added technological and legal requirements. However, with an 8-year period of improved profits, the member firms have also improved their average solvency ratios by retaining more capital the last four years, making them better equipped for bad times.

International market news

The Danish architecture industry keep expanding its international activities. In 2016 the members had a slight decrease in exports from their firms located in Denmark, but with an increasing number of foreign based subsidiaries, the total international sales grew almost EUR 13 million from 2015 to 2016.

Denmark's neighboring countries remain the largest export receivers and Norway and Sweden the favored places to build. However, the Australian and North American markets are also be-

Total member net fee turnover 2010–2016



Source: Danish Association of Architectural Firms

coming cherished as several Danish firms establish themselves through competitions.

With increased efforts from architecture firms, collaboration with sister countries and delegation visits facilitated by Danish Association of Architectural Firms, foreign markets are becoming increasingly accessible. Data from Danish Association of Architectural Firm's annual internationalizations survey, show a tendency for diminishing international sales for firms with less than 10 employees.

Tredje Natur goes to New York

Tredje Natur, is a Copenhagen based architecture firm that has become an inspiration for New York city. Their design of Saint Kjelds Square in the Climate Neighborhood in Copenhagen is considered a forerunner in sustainable urban development as it is able to manage large amounts of stormwater and making the neighborhood more attractive at the same time. The North American city is so enthusiastic about the approach, that a three year collaboration agreement has been set up between Copenhagen municipality and the New York Department of Environmental Protection as they would like to copy and create similar neighborhoods in their own city.

DISSING+WEITLING wins large international design competition

DISSING+WEITLING, a firm formed in 1971 to continue the work started by the Danish architect, Arne Jacobsen recently won a competition on the coast-to-coast link in Guangdong, China. The winning proposal was developed in collaboration with COWI, the international consulting group, and will include "the world's widest immersed road tunnel as well as two signature suspension bridges". The project is expected to become a strong support for further development in the Chinese region. Summer 2017, DISSING+WEITLING also completed the "world's longest" elevated cycling path in China, adding the two records to their international portfolio

About Danish Association of Architectural Firms

Danish Association of Architectural Firms (Danske Arkitektvirksomheder) is an organization of private firms of consulting architects. The association's objective is to represent the commercial interests of practicing architects and, in its capacity as impartial consultant to building clients, strengthen the position, quality level and professionalism of its member firms.

As of November 2017, Danish Association of Architectural Firms has 640 active ordinary and associated member firms, with about 5,400 employees that account for approximately 85 – 90 percent of the aggregate building contract sums in Denmark.

Danish Association of Architectural Firms is a member of the Confederation of Danish Industry (DI) who negotiate the general agreements on pay and working conditions for the staff employed by the member firms. At the international level the association is active in the Architects Council in Europe (ACE), and work closely with the other four Nordic organizations.

The organization offer its member firms:

- **Professional insurance, free legal advice on contract paradigms and other legal matters related to the assignments performed, counselling regarding business development and participation in different networks**
- **A number of publications free of charge to members on contract, quality management, working environment etc.**
- **Export opportunities in cooperation with e.g. sister organisations and the Danish Ministry of Foreign affairs**

Lene Espersen

Lars Emil Kragh

Lene Espersen,
CEO
Danish Association of Architectural Firms

Lars Emil Kragh,
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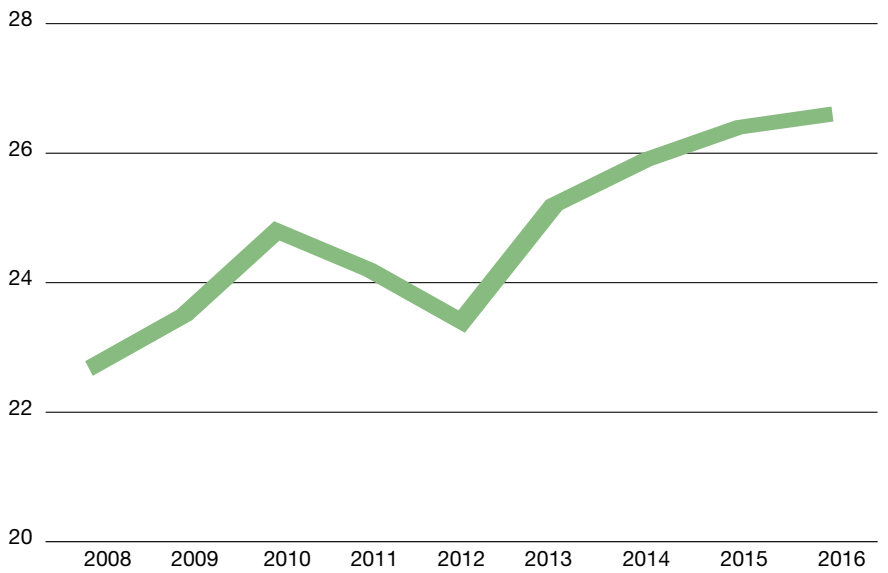
Solvency ratio 2008–2016



Source: Danish Association of Architectural Firms

> THE (NET) PROFIT MARGIN INCREASED TO 8.4% IN 2016 FROM 6.4% IN 2015.

ILLUSTRATION:: SYDNEY FISH MARKET BY 3XN

and strengthening their presence in the country.

3XN to build new tourist magnet in Sydney

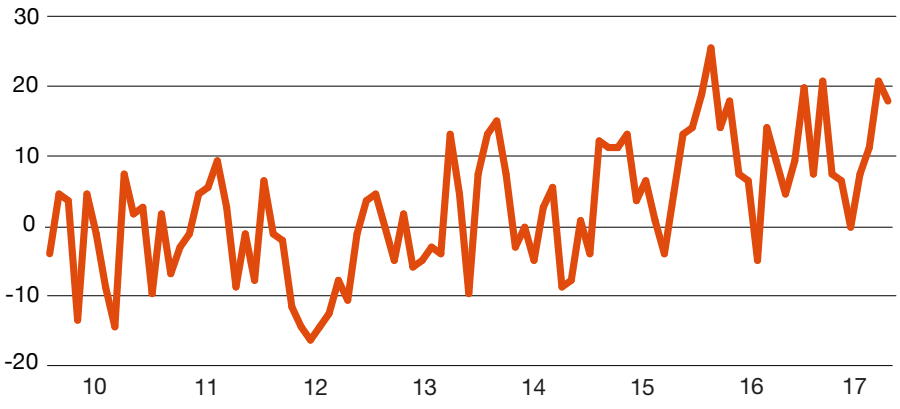
Danish 3XN recently won the international competition for Sydney's Fish Market which is to become the city's new "foodie destination" consisting of a market, restaurants and public spaces. The project will take up 100.000 square meters, have a construction sum of EUR 200 million and is expected to open in 2022. With additional competitions won in both Canada and Sweden, 3XN expanded its international position the past year. Financially, 3XN increased its turnover from EUR 10.2 million in 2015/16 to 10.9 million in its financial year 2016/17 and more than doubled its net profits.

WERK takes a foothold in Hamburg

The newly formed progressive architectural firm WERK who are specialists in development of concepts within construction, urban spaces and urban planning, takes a strong foothold in Hamburg. After winning a 1st price for the housing project Creative Blocks in the Hafencity quarter, the firm recently ads another winning proposal to its German portfolio, naming the landscape project "Creative Blobs".

ILLUSTRATION:: CREATIVE BLOCKS BY WERK

Market sentiment indicator



Source: Danish Association of Architectural Firms

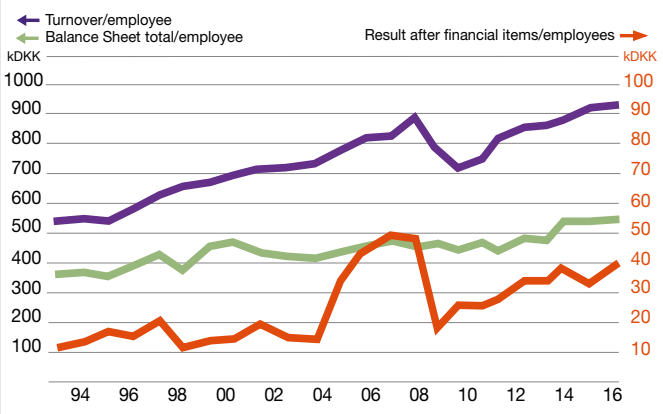
THE TOP 100 DANISH CONSULTING ENGINEERING AND ARCHITECTURAL GROUPS

	2017	2016	Group	Service	Annual report	Turn-over MDKK	(previous year)	Average number of employees	Tot. Balance sheet MDKK	CEO/Managing director
FRI	1	1	Rambøll Group A/S	MD	16	10607.7	10589.3	12497	6383.8	Jens-Peter Saul
FRI	2	2	COWI Group A/S	MD	16	5939.0	5701.5	6475	3331.0	Lars-Peter Søbye
FRI	3	3	NIRAS-Group A/S (acquired Alectia)	MD	16	2078.0	1317.4	2152	1258.9	Carsten Toft Boesen
FRI/DA	4	4	Sweco Denmark A/S *	MD	16	1096.0	1075.1	1077	626.0	Dariush Rezai
FRI	5	6	Atkins Denmark A/S	MD	16/17	579.4	571.0	601	301.5	Eva Rindom
FRI	6	8	MOE A/S	MD	16	531.4	427.6	554	315.4	Christian Listov-Saabye
FRI	7	7	Orbicon A/S	MD	16	522.3	490.3	579	242.9	Per Christensen
DA	8	10	Arkitema K/S	A	16	361.8	330.0	466	173.5	Peter Hartmann Berg
	9	16	Eltronic A/S	I	16	325.1	220.0	213	107.7	Lars Jensen
	10	15	Dansk Ingeniørservice A/S *	I	15/16	324.4	222.0	500		Michael Gadeberg
FRI	11	39	C.F. Møller Architects	PM	16	280.0	71.8	310		Anders Bennermark
DA	12	14	ÅF Denmark (acquired Midtconsult) *	A	16	250.0	250.0	152	208.5	Sheela Maini Søgaard
DA	13	12	Henning Larsen Architects	A	15/16	245.2	282.2	185	208.2	Mette Kynne Frandsen, Louis Andreas Becker
DA	14	11	BIG / Bjarke Ingels Group *	A	16	234.8	304.1	218	134.0	Klaus Toustrup, Helle Lehmann Staun, Birgit Møller Christensen
	15	9	ISC Rådgivende Ingeniører A/S *	MD	16	219.0	368.9	250	191.5	Kjeld Thomsen
	16	18	Graintec *	I	16	205.8	170.2	88	104.7	Michael Mortensen
	17	13	Geo *	I	16	204.1	274.1	350	237.1	Kim Silleman
FRI	18	17	EKJ Rådgivende Ingeniorer A/S	MD	16	197.9	179.2	205	175.3	Jørgen Nielsen
	19	26	Schmidt Hammer Lassen Architects K/S *	A	16	144.3	93.8	112	92.2	Bente Damgaard
DA	20	25	Årstiderne Arkitekter A/S *	A	15/16	143.0	105.2	135	62.6	Torben Klausen
FRI	21	20	OBH-Group A/S	MD	16	141.8	129.3	137	72.4	Carsten Gregersen
	22	21	Kuben Management A/S *	PM	16	130.5	123.5	130	76.1	Henrik Christensen
DA	23	24	Gottlieb Paludan Architects A/S	A	16	127.0	106.4	96	66.3	Kristian Hagemann
FRI	24	23	Søren Jensen A/S Rådgivende Ingeniører	MD	15/16	120.5	109.3	140	62.5	Frank Jensen
DA	25	33	PLH Arkitekter AS	A	16	110.2	81.0	93	56.6	Søren Mølbak, Svenn Gunborg Olsen
DA	26	28	Lundgaard & Tranberg Arkitekter A/S *	A	15/16	108.2	88.7	52	82.2	Peter Thorsen
DA	27	35	CUBO Arkitekter A/S *	A	16/17	106.8	79.4	66	41.3	Peter Dalsgaard
	28	36	Dansk Miljørådgivning A/S (DMR) *	Env	15/16	98.6	78.6	100	33.0	Claus Jørgen Larsen
FRI	29	19	NTU International A/S	CE,PM	16/17	95.7	131.2	29	83.4	Lars Bentzen
DA	30	31	Vilhelm Lauritzen AS	A	16	90.7	83.8	93	84.8	Søren Daugbjerg
FRI	31	40	Oluf Jørgensen Group	MD	16	87.4	68.5	115	47.7	Brian Th. Andreasen
FRI	32	118	Cunningham Lindsey Leif Hansen A/S	MD	16	84.3	20.3	78	48.7	Christian Leif Hansen
FRI	33	30	Balslev Rådgivende Ingeniører A/S	MD	15/16	83.8	85.4	122	37.7	Henrik Rosenberg
DA	34	22	3XN A/S	A	16/17	81.2	110.8	73	54.9	Jeanette Hansen
FRI	35	57	AlfaNordic ApS	MD	16	80.7	49.7	55	20.9	Thomas Meldgaard Petersen
DA	36	45	KPF Arkitekter A/S *	A	16	77.0	62.0	107	68.9	Sine Juul Praastrup
FRI	37	55	Wissenberg A/S	MD	16	74.8	52.0	62	35.7	Lars Bendix Christensen
FRI	38	64	Process Engineering A/S	Enr., I	15/16	74.0	46.3	65	28.3	Poul B. Jakobsen
FRI	39	34	Norconsult Denmark A/S	MD	16	73.6	80.6	94	57.8	Thomas Bolding Rasmussen
FRI	40	52	Ingeniør'ne A/S	MD	16	72.0	52.7	70	51.9	John Andresen
	41		COBE ApS	A	16	66.4		74	21.0	Dan Stubbergaard Hansen
FRI	42	37	K2 Management A/S	PM	15/16	64.8	77.9	80	25.9	Henrik Stamer
DA	43	59	Kullegaard Arkitekter A/S	A	15/16	64.5	49.0	55	34.4	Thomas Kullegaard
DA	44	56	H+Arkitekter (Hou & Partnere)	A	16	63.8	50.0	39	42.3	Ib Jensen Hou
DA	45	29	Mangor & Nagel A/S	A	16	63.3	87.5	82	29.7	Bente Priess Andersen, Jakob Brings-høj Andersen, Torben Nagel
DA	46	43	White Arkitekter A/S *	A	16	62.0	64.7	62	34.0	Frans Ove Andersen, Erik Skytte
DA	47	51	Rubow Arkitekter A/S	A	16	60.9	52.9	61	28.3	Lars Bo Lindblad
DA	48	77	Cebra Arkitekter A/S *	A	16	60.2	35.5	27	15.1	Kolja Jannik Nielsen
FRI/DA	49	58	AI-Gruppen A/S	MD	15/16	59.9	49.1	66	41.8	Jan Bruus Sørensen
	50	42	Ingeniørfirmaet Viggo Madsen A/S *	CE	16	59.0	64.9	35	28.7	Bjørn Schmelling
DA	51	65	Friis & Moltke A/S *	A	16	57.6	44.0	50	24.1	Palle Hurwitz, Jens Ole Bahr
DA	52	54	JJW Arkitekter A/S	A	16	56.8	52.0	85	23.7	Nina Kovsted
FRI	53	48	DGE Miljø- og Ingeniørfirma A/S	MD	16	55.4	54.2	52	19.2	Poul Erik Jensen
	54	73	Arne Elkjaer A/S *	CE	15/16	53.8	37.5	32	14.0	Michael Reeholm Due
FRI	55	50	Dominia A/S. Rådgivende Ingeniører	CE, E, M, PM	16	53.5	53.5	50	20.1	Kjeld Christiansen
	56	69	Viegand & Maagøe Aps *	I, Env	16	50.7	40.0	43	20.0	Søren Eriksen
DA	57	62	Christensen & Co. Arkitekter A/S *	A	15/16	49.4	46.9	47	20.9	Vibeke Lydolph Lindblad, Michael Christensen
DA	58	53	Rørbæk og Møller Arkitekter ApS	A	15/16	48.1	52.4	45	30.3	Nicolai Lund Overgaard
FRI	59	81	Hundsbaek & Henriksen A/S	MD	15/16	48.0	32.1	45	27.9	Niels Lerbech Sørensen
	60	63	Peter Jahn & Partnere A/S *	CE, A	15/16	47.5	46.6	35	11.5	Jacob Lemche
FRI	61	44	Dines Jørgensen & Co A/S	MD	15/16	47.0	64.5	53	26.7	Ole Rasmussen
DA	62	46	Tegnestuen Vandkunsten ApS *	A	16	46.1	58.6	66	32.8	Flemming Ibsen
FRI	63	67	Gaihede A/S	MD	16	46.0	41.6	42	16.2	Jacob Ulrik Sachse
DA	64	71	Schønherr A/S *	A	16	45.1	39.5	53	19.9	Nina Jensen, Rikke Juul Gram

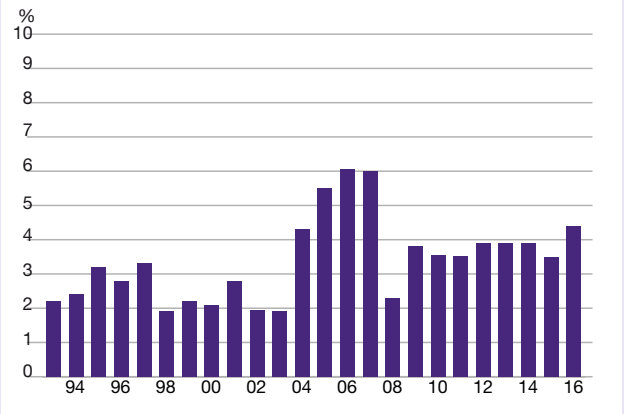
FRI = Member of FRI, the Danish Association of Consulting Engineers DA = Member of Danish Association of Architectural Firms,
(*) = lack of conforming figure/proforma/assumed, – = missing figure PM = Project Management, A = Architecture, CE = Civil/Structural Engineering, Env = Environment, Enr = Energy, E = Electrical,M = Mechanical/HEVAC, I = Industrial, MD = Multi Disciplinary

	2017	2016	Group	Service	Annual report	Turn-over MDKK	(previous year)	Average number of employees	Tot. Balance sheet MDKK	CEO/Managing director
	65	92	RUM A/S *	A	16/17	44.7	27.7	39	17.2	Marianne Kjerkegaard Kristensen
DA	66	85	KANT Arkitekter A/S *	A	16	43.9	29.5	30	22.8	Morten Stahlschmidt
DA	67	117	Danielsen Architecture A/S *	A	15/16	43.7	20.3	28	16.9	Kasper Danielsen
	68	78	Emcon A/S *	PM,CE	16	43.5	34.9	27	15.8	Jeppe Blak-Lunddahl
	69	89	AN Group A/S *	I	16	43.3	28.0	22	12.0	Ole Okkels
DA	70	88	Holscher Nordberg Architects A/S *	A	16	42.9	28.0	38	18.0	Mikkel Wiell Nordberg
DA	71	93	Arkitektfirmaet Kjaer & Richter A/S *	A	15/16	42.0	26.8	32	21.3	Ole Madsen
DA	72	61	Aart A/S	A	15/16	41.7	48.0	43	35.5	Torben Skovbjerg Larsen
DA	73	38	Creo Arkitekter A/S *	A	16	40.9	72.5	75	30.0	Henning Gammelgaard Andersen
FRI	74	143	INUPLAN A/S *	MD	16	40.1		26		Kristian Lennert
	75	47	Knud E. Hansen A/S Naval Architects *	I	16	40.0	58.4	75	32.9	Finn Wollesen Petersen
	76	49	Lodahl 2007 Aps *	I	16	38.6	54.0	35	7.7	Michael Roel
DA	77	82	Eseebase A/S *	A	15/16	38.5	31.0	28	30.7	Torben Klausen
DA	78	66	KHR Arkitekter AS	A	16	38.4	31.7	53	42.1	Lars Erik Kragh
	79	60	LIC Engineering A/S *	CE, Enr, M	16	37.6	37.8	57	41.3	Niels-Erik Ottesen Hansen
FRI	80	74	Sloth-Møller Rådgivende Ingeniører A/S *	MD	15/16	36.6	36.3	49	18.1	Lars Frost Larsen
FRI	81	68	Brix & Kamp A/S	MD	16	36.4	41.0	48	31.2	Søren Jepsen
DA	82	70	Entasis A/S *	A	16	36.2	40.0	28	14.0	Christian Cold
DA	83	103	Gehl Architects ApS *	A	15/16	36.2	22.6	30	12.5	Helle Lis Søholt, Henriette Vamberg Rasmussen
DA	84	79	Dissing+Weitling Architecture A/S *	A	16	36.0	33.1	38	20.0	Steen Savery Trojaborg
DA	85	86	SLA Arkitekter A/S *	A	16	35.5	29.1	46	13.4	Mette Skjold
DA	86	83	Design Group Architects *	A	16	33.6	30.5	26	7.2	Christian Giese
FRI	87	148	P.A.P A/S	Enr., E, I	15/16	33.5		39	11.5	Carsten Eichstedt
	88	144	Grue og Hornstrup Rådgivende Ingeniører A/S *	CE, E	15/16	32.9		21	13.9	Lars Grue
FRI	89	87	Viborg Ingeniørerne A/S	MD	16	31.4	29.0	34	21.3	Karsten Lindberg
	90		RAVN Arkitektur A/S *	A	16/17	30.8		33	12.9	Anne Guldhammer
DA	91	106	ZESO Architects ApS *	A	15/16	30.0	22.2	48	12.0	Torben Juul Andersen & Claus Høeg Olsen
FRI	92	97	OSK -Ship Tech A/S	CE, I, PM	15/16	29.6	25.7	42	17.8	Jacob H. Thygesen
	93	80	ProInvent Gruppen A/S *	I	15/16	29.2	32.3	22	15.1	Leif Dalum
DA	94	96	Nova 5 Arkitekter A/S *	A	15/16	29.2	25.9	31	13.1	Hanne Vinkel Hansen
DA	95	111	Signal Arkitekter ApS *	A	15/16	28.8	21.6	42	6.7	Birgitte Andersen
FRI	96	91	Ingeniørgruppen Varde	MD	16	28.7	27.7	26	11.9	Henning Andersen
FRI	97	100	D.A.I. Group A/S	CE, E, M, PM	16	28.6	24.6	31	23.3	Kim Heshe
FRI	98	146	RMG-Inspektion A/S *	CE	16	28.6		25	7.0	Anita Jochumsen
FRI	99	113	Spangenberg & Madsen Rådgivende Ingeniørfirma A/S	MD	16	28.5	21.1	38	12.8	Michael Rasmussen
	100	90	Bertelsen Og Scheving Arkitekter Aps *	A	15	27.9	27.9	31	8.4	Jens Bertelsen

The top 30 Danish groups



Profit margins



Generally speaking, it is risky business making direct comparisons between key business ratios for the largest firms and corresponding figures for the medium and small-sized firms. In the case of the latter firms, the extensive efforts of the often many partners has a relatively significant impact on the companies' turnover and profit level per employee.

For firms 31-100 in the above list, turnover in 2016 increased by 3% to approximately DKK 3,407 million (DKK 3,301 million in 2015). The number of employees grew by 8% to 3,456 (3,200). The turnover per employee consequently fell to DKK 986,000 (DKK 1,031,000). The profit before tax fell to DKK 65,000 per employee (DKK 81,000). Calculated in terms of profit margin, this gives 6.7% (7.9%). The average balance per employee was approximately DKK 498,000 (DKK 537,000).

Key business ratio 30 largest groups	2016	(previous year)
Turnover per employee	DKK 913k	DKK 916k
Profit after financial items per employee	DKK 40k	DKK 32k
Balance sheet total per employee	DKK 544k	DKK 537k

The turnover for the 30 largest groups increased by 4% to approximately DKK 25,619 million (DKK 24,624 million in 2015). The average number of employees also grew by 4% to 28,055 (26,890). The turnover per employee was 913,000 DKK (916,000 DKK). The profit before tax grew to DKK 40,000 per employee (DKK 32,000 the previous year). The profit margin for the 30 largest groups in 2016 increased to 4.4% (3.5% in 2015). The average balance per employee was approximately DKK 544,000 (DKK 537,000 in 2015).

ECONOMIC IMPROVEMENT IN NORWAY, STABILITY FOR CONSULTING ENGINEERS

Norway, as a major supplier of oil and gas, has faced a challenging economic situation in the last few years. With somewhat low revenues and little willingness to invest in the oil and gas sector, the Norwegian economy has been kept aloft with significant stimulation of the economy with the use of public and state funds. These funds, to a large degree, have also been invested in public buildings and new infrastructure. Moreover, funds have been allocated in order to catch up on the considerable maintenance backlog for older infrastructure and public buildings. This has been favourable to the industry and has led to a growth in turnover in the industry of 15 % in the last three years.

The Norwegian economy is improving. The prognostics for growth in the mainland economy are calculated at a GDP growth of 2.5 % in 2018. Oil and gas prices are now rising; however, they are still 50 % below the prices of 2014. This has contributed to a marked downturn in investments in oil and gas activities. Moderate wage settlements combined with weaker exchange rates for the Norwegian krone pull in the opposite direction and will aid in improving conditions for other export businesses and competitive sectors. With an anticipated inflation of 1.5 % in 2017 and 2018, declining levels of unemployment (4.0 %) and an increase in BNP growth (2.5 %), the Norwegian economy is healthy. This indicates a good level of activity in the Norwegian economy and for Norwegian consulting engineers in 2018.

Norway, that has major, fluctuating and transient incomes from natural resources, established an oil fund in 1990. The oil fund (The Government Pension Fund) was established in order to combat an excessively high cost level and to stabilise domestic consumption. The market value of this fund in 2017 is anticipated to be in the region of BNOK 8 200. This means that Norway is still a wealthy country with major opportunities. The state can therefore use the dividends from this fund to stimulate the economy and to maintain levels of employment. In 2018, it is expected that this stimulus will amount to BNOK 255. This also means that public authorities will continue to invest in sectors such as infrastructure, roads and railways. Moreover, huge sums are being invested in health, schools and cultural buildings and a good level of investment is being maintained in the municipal sector. This will lead to a good market for planning and for our industry.

The consultancy industry in Norway – strong concentration, increased international competition and a need for cost control

The consulting industry in Norway has become more and more international, both in terms of ownership and competition in the Norwegian market. In 2017, approximately 40 % of employees in RIF – Association of Consulting Engineers are wholly or partly owned by international consultancy groups. If we include international groups working in Norway that are not associated with RIF, this figure is even higher.

Activity in the market is characterised by the fact that the 6–7 largest companies have approx. 75 % of the market – i.e. a significant market concentration. This has not led to reduced competition. Turnover per employee and operating results have been reduced from 2014 as a result of tougher competition and a high level of cost in the industry.

To combat this, in the last 10 years the industry has invested a great deal in the recruitment of younger employees, which has meant that the average age in the industry has fallen by 4 years during the same period.

The market – good activity in the development of infrastructure and energy market; construction market is stable

In Norway, significant funds are being invested in the renewal of infrastructure. New construction and rehabilitation of roads, railways, energy networks and telecommunication is being carried out in order to make the country more competitive and less dependent on oil and gas production.

For the industry and consulting engineers, this offers many exciting opportunities and challenges. These markets are showing good activity.

The building and construction industry, viewed as a whole, has been experiencing continual growth from 2011. As of November 2017, the industry is anticipating stable, good activity in 2017 and 2018. Employment levels in the industry are expected to increase slightly in 2017 and 2018, but now appear to have reached a temporary saturation point.

Production in the building and construction market, apart from oil and gas, has increased by 24 % in the period 2011–2017. The number of employees in the building and construction sector has in the same period increased by 30,000, to 220,000. For 2018 until 2020, production is expected to increase by an extra 3 % per year.

The market for consultant engineers is still expanding, but it is expected to level out a little in 2018. The construction market is expected to increase by 4 % in 2017. The prognoses for 2018 and 2019 show a levelling off, with an increase of approx. 1.0 %. In the construction market (infrastructure), we anticipate an increase in activity in 2017, 2018 and 2019. Investment in this market is expected to increase by 7 % in 2017 and a further 8 % per year up to 2019. The number of employees from 2011 to 2017 has increased by 37 % in RIF companies.

> PRODUCTION IN THE BUILDING AND CONSTRUCTION MARKET . . . HAS INCREASED BY 24% BETWEEN 2011 AND 2017.

Consulting engineers – anticipated developments in 2018 and 2019

Norway still has broad economic freedom of action and we will see an increase in resources focused on the following areas:

In total, investments in the building and construction market will increase by 5.6 % in 2017, with an anticipated increase of 3.7 % in 2018 and 2.7 % in 2019. The total market will exceed BNOK 500 in 2018.

Infrastructure

The development and maintenance of infrastructure in Norway is largely governed by public financing. The National Transport Plan 2014–2023 has a total framework plan of BNOK 508. This plan is fulfilled until 2019. The objective of the authorities is to halve the time for completion of the projects, through simplification of the planning processes and organisation of major road and railway projects as dedicated collaborative turnkey projects as an implementation strategy. In order to become less dependent on annual allocations in budgets, a separate state infrastructure fund of BNOK 100 was established. Dividends are earmarked to speed up road projects, more for maintenance of roads, railways and collective transport networks, along with broadband and IT infrastructure. The aim of building up this type of fund is to secure more predictable financing of projects and maintenance.

In 2015, in addition to the Norwegian Public Roads Administration, a separate national road authority was established, "Nye veier" (New roads), that has been assigned the task of carrying out the development of 6 selected stretches of motorway from 2016–2022, with a total cost of BNOK 148.

In addition, the task of catching up on a major backlog of maintenance of infrastructure has been started. The aim is to quantify the value of public assets and thereby also quantify the backlog of maintenance in annual budgets. Other priorities include simplification of the laws on public procurement, hereunder the development of guidelines for public-private innovative co-operation and at the same time a desire for standardisation of solutions.

These objectives have been carried forward and concretised in the 2018 budgets. For consulting engineers, the public budgets will result in good developments in the level of activity in public building works and continued investment in public infrastructure.

In summary, the expectation is that planning needs and investment in the construction market will increase in 2017 and 2018. This is particularly true of public industrial buildings. A moderate decrease in private building projects will mean a good level of activity overall. In 2017, as in the year before, more is being invested in the construction and maintenance of buildings than was invested in the oil and gas sector.

There is a high level of activity in the construction market (infrastructure) for consulting engineers, and a large number of (in part major) projects are in the planning and implementation stage. Investments on this market are expected to increase by 7 % in 2017. For 2018 and 2019, production is expected to increase by 8 % p.a.

The most stable part of this market has been the roads sector – roads, bridges and tunnels (50% of the construction market). These are projects that have largely been financed by public allocations and toll charges, meaning that it has been possible to maintain a steady level of activity. Investments in roads are expected to increase by 21% in 2017 with an expected further increase of approx. 15% in 2018 and 2019. Railways

About RIF

RIF is the industry organization for approved consulting companies in Norway. RIF companies encompass both consulting engineers and other professions and the activities of members are largely associated with the building and construction market. In 2017, RIF has 170 member companies, with approximately 12,000 employees and represents approximately 70 % of the independent consulting engineer industry in Norway.

RIF is the member companies' tool for creating the best possible commercial terms by working for improved framework conditions: Politically, financially and in relation to assignment providers.

From the association's strategy 2016–2020:

- **Increase the level of knowledge in society of members' independent role, value creation and social responsibility**
- **Promote socially beneficial and sustainable solutions and be the preferred expert source in the area**
- **Adopt a clearer role in relation to social drivers such as climate challenges, sustainability and digitalisation**
- **Reinforce relations and enter into close dialogue with prioritised industry organisations, public and private operators (clients and premise providers)**
- **Gain a common understanding of challenges across the entire industry**
- **Promote developmental and long-term supplier strategies with clients (completion models)**
- **Promote value-based procurement and completion, in addition to standard contracts**
- **Safeguard consultants' interests through relevant legislation and regulation work and standards**
- **Develop a common platform to strengthen the BAE industry's impact and competitive strengths**

Liv Kari Hansteen, RIF

Clas Svanteson, RIF

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> INVESTMENTS IN THE BUILDING AND CONSTRUCTION MARKET WILL INCREASE BY 5.6% IN 2017, 3.7% IN 2018 AND 2.7% IN 2019.

and tramways is also an area earmarked for new investment and development. Investments have increased in 2017, and will increase further in 2018 and 2019.

Construction and investments in energy generation plant is expected to level off in 2018. This market encompasses the modernisation of power plants, investments in new forms of energy and infrastructure for line construction, distribution and energy export.

RIF companies' expectations concerning order reserves as of October 2017 show the same trend. The order reserve has improved since the autumn of 2016.

Backlog in refurbishing existing buildings and infrastructure

There is a significant backlog in investment in public works, in particular concerning refurbishment of existing buildings and infrastructure.

In the spring of 2015, RIF published a Norwegian version of a State of the Nation (SotN) report, based on similar reports published in the USA, Finland, Denmark and the United Kingdom. The report was broadly distributed and followed up by RIF as a basis for political prioritisation at both local and national levels. The next edition will be published in 2020.

RIF has seen that the report has been used, and it has encouraged the authorities to seek dialogue and use the report as a tool in forming policies in a number of prioritised areas. From 2014, the authorities have quantified public assets and thus showed the maintenance backlog in their annual budgets.

RIF (Association of Consulting Engineers) has calculated that the backlog in 2015 is BNOK 2,600. This is most critical for railways, sewage systems, county roads and prisons. For these, functionality and reliability is threatened. Also revealed is a great need in regard to public buildings – two thirds of buildings are categorised as unsatisfactory or poor. There is a corresponding picture for hospitals, where over a third of hospital buildings are unsatisfactory. In addition, the rate of replacement for water supply systems is so low that this will lead to an increased risk of insufficient supplies of water to Norwegian households and to contaminated drinking water.

The authorities show willingness to carry out comprehensive political and practical reforms in order to increase investments in these sectors. RIF's contribution is a desire to cooperate in practical areas such as inadequate capacity and competence to stimulate more effective implementation of projects. In this process, RIF is focusing on ensuring satisfactory contract and framework terms and conditions for members and for follow-up of budget processes. Allocation of funds and prioritising necessary maintenance and refurbishment otherwise appears to be a difficult political exercise.

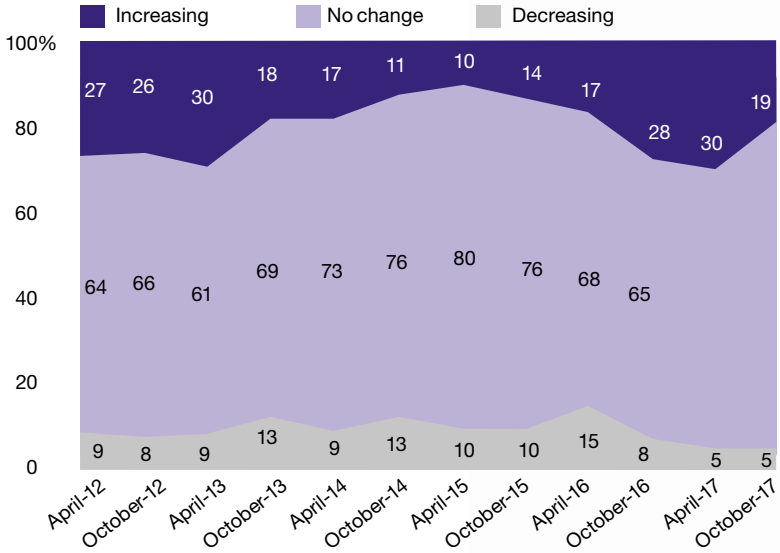
The green shift

Norway signed the Paris Agreement in the spring of 2016. This means that Norway will accept a conditional obligation to reduce emissions by 40% by 2030 compared to 1990.

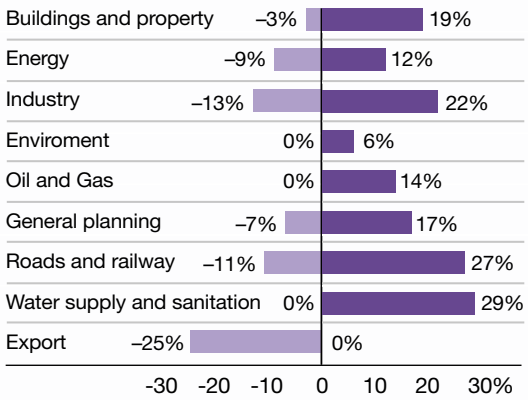
The government's objective is that Norway, and Norwegian companies, shall be early adopters and become a leading nation in the green shift. New technology and new business models will make the green shift a competitive advantage for Norway and create new growth, jobs and welfare.

Norway aims to carry out the process jointly with the EU in order to reach climate goals for 2030. The consequences for Norway will first and foremost be an obligation to achieve significant reductions in emissions, for example in construction, the transport sector and agriculture. A final agreement between Nor-

Expected order stock in 3 months 2012–2017



Expected change in order stock in 3 months per market segment



Development in companies' order reserves during the last six months distributed between business areas. The blue column indicates the share that has performed "better than forecast" while the grey column indicates the share that has performed "lower than forecast".

way and the EU is naturally expected after the EU regulations have been approved at the end of 2017.

The climate goals for 2020 and 2030 will be guiding for the new National Transport Plan 2018–2029 (NTP), with increased focus on, among other things, city infrastructure plans, more collective solutions, transfer of goods from roads to railways and sea transport, along with stricter standards for environmentally-friendly solutions.

Increased focus on digitalisation and new technology

Digitalisation and new technology has been given major focus in Norway in recent years. Major state building owners such as Statsbygg, Jernbaneverket, "Nye veier" and Helsebygg are focusing heavily on digitalisation and new technology to increase efficiency in both the planning and construction phase and the operations/maintenance phase.

Norwegian consultancy firms are at the forefront in the exploitation of opportunities that lie within new technology, and have received a number of international awards, among others for the use of BIM. RIF has been very active in encouraging state building owners to request fully digital projects. Statsbygg has now indicated that they will do this in the future. The joint project Ringerikesbanen and the new E16 to Hønefoss are joint projects in which consultants, in cooperation with building owners simultaneously operate project design and advanced planning on a 100% digital platform. This has become a reference project for effective communications expansion in Norway.

Some exciting projects

Rail and road. The largest individual projects in the transport sector during the years ahead is the new railway heading south from Oslo, the so-called Follobanen. An investment of BNOK 29 will be invested in the project up to 2022. A corresponding project is planned between Sandvika and Hønefoss – (the Ringerike Line), where a new railway and parallel motorway is to be built. The project is estimated to cost BNOK 27.

Major investments will be made in the Norwegian railway system through a number of projects during the next 10–20 years. In addition to this, there are ongoing investments in tramways and rail to improve punctuality and increase capacity in order to serve a growing population in and around the larger towns and cities. The City Line, new Ulriken tunnel in Bergen and Fornebu Line in Oslo are examples of larger projects.

A number of major motorway projects are also in the planning and construction stage, with focus on major road, bridge and tunnel projects designed to link regions and reduce threats posed by avalanches and land/rockslides. Examples of larger projects that are presently in the planning phase, where construction works are expected to begin in 2017 and 2018, are several stretches of the European highways E6 and E18 where investment totals approx. BNOK 60. At the Norwegian west coast, plans are under way for continuous improved, ferry free roads with improved protection against land/rockslides and avalanches.

E39 Rogfast is the largest road project here in 2017 and 2018, with investment of BNOK 10.5.

Energy. The need to develop trade and industry, increased energy prices and the demand for renewable energy has resulted in the planning and implementation of several exciting projects. Investments are being made in new hydroelectric plants, older generating plants are being refurbished and new small-scale generation plants are being constructed in order to increase the capacity for renewable energy. In 2017 and 2018, approx. BNOK 6.7 will be invested in new wind and water power. Grid capacity for the transport and export of energy is being increased and almost BNOK 160 is being invested over a 15-year period in order to secure safer and higher capacity power distribution in Norway and to Europe.

Cultural buildings. The new National Museum, the new Munch Museum and a new main library in Oslo are under construction. And several large state, county and municipal cultural centres are being planned and constructed throughout the country.

New government buildings. After the terrorist attack on the government and ministerial buildings, a major, comprehensive planning process has been started to construct completely new government buildings in Oslo. This is calculated to cost over BNOK 10 and planning has started in 2017.

International projects. Almost 40% of employees in Norway work for companies that are owned by foreign consultancy groups, primarily serving the Norwegian market.

An attractive domestic market, with lower ethical and commercial risks along with a high cost level for consulting engineers from Norway has resulted in that Norwegian consulting engineering companies have been less active in international enterprises.

The export stake, which represents approx. 5% of turnover, is stable.

Continued increased concentration in the industry; 2017 is characterised by consolidation and strengthening of competitive ability

In Norway, there is a major concentration in the industry with 6–7 larger consulting enterprises. These now have over 75 % of all employees in RIF. Growth in 2016 and 2017 is largely characterised by organic growth. RIF companies have been good at hiring newly qualified engineers, scientists, social scientists and architects. We have seen some acquisitions; however, these have been small in size and have not led to restructured strategies in the industry. These have been acquisitions designed to bolster professional skills and/or local and international market positions.

Some interesting acquisitions and mergers in 2017:

- Multiconsult AS has purchased 100% of the Norwegian consultancy firm Hjellnes Consult AS, with approx. 250 employees in Oslo.
- WSP has purchased the company Høyer Finseth AS in Oslo with approx. 100 employees.

A THRIVING NORWEGIAN ARCHITECTURAL MARKET

The size of the architectural market in 2016 was approximately NOK 8.5 billion, up 11.7% from the previous year. The office segment lowered the overall growth somewhat, while all other segments contributed positively. The housing segment contributed most towards the growth.

A successful 2016

We estimate that about ¾ of the market, approximately NOK 6.3 billion in 2016, is architecture engineering. Other architectural activities amount to about NOK 2.3 billion, of which approximately NOK 1.7 billion is planning and regulation work. Works associated with housing architecture engineering is by far the largest segment, but works in conjunction with commercial buildings (offices, other industries and public sector) is overall a larger market.

The architectural market has seen two years of very solid growth. This is predominantly due to strong house price growth, which has led to robust growth in the start-up of new apartments. Growth in the housing segment was at an impressive 17% in 2016. Slower business demand led to a 3% decline for the office segment in the architectural market, while increasing transport and investments in power lines contributed to the fact that architectural services within construction increased by 20.5% last year.

In public statistics, many companies state that they are in the business of "architectural services", but they do not qualify for membership of the association. This applies, for example, to some property developers, carpenters and designers. Statistics Norway's figures for the total market are therefore larger than the calculations of the Association.

Looking ahead

The report for 2017 shows that the Norwegian architectural market now is moving away from housing. For the forecasted period of 2017–2019, the construction market is expected to grow faster annually than the architectural market. This is because growth in in the future construction market will be driven by facilities, where the architects' share of project costs is low. This is shown in the latest annual market report developed by Prognosesenteret, commissioned by The Association of Consulting Architects.

In the field of architectural design and engineering, Prognosesenteret expects the office segment to be the strongest grower in 2017. The expected 46% growth this year will more than cover the decline of the last two years. The survey was discussed in the paper Finansavisen on Monday 29th of May 2017, together with a complementary interview with Magne Wiggen in MMW Architects.

In 2018 the public buildings segment is expected to increase the most, while building and construction will see the largest increase in 2019.

Increased housing investment will continue to yield growth this year, but the peak for the housing segment in the architectural market is expected to be reached in 2017. The next two years there is an expected decline in this segment. In 2018, the growth contribution from public construction will increase significantly, among other things due to work on the new government quarters and in the hospital sector.

"The decline in the housing market is natural. The stable rental market indicates that there is no real housing shortage, and an unusually high housing production in 2016 and 2017 must therefore be corrected. The commercial buildings' segment is forecasted to grow, but insufficiently for the construction side to maintain the volume from this year. The construction side, on the other hand, continues to grow, but this does not contribute towards many jobs for architects, and we must expect a somewhat weaker home market for them in 2019, "says Egil Skavang, Managing Director of The Association of Consulting Architects.

"Regarding exports, however, the market is substantial. A recent survey conducted by Innovation Norway, the Ministry of Foreign Affairs, Design and Architecture Norway (DOGA) and The Association of Consulting Architects shows that Norwegian architecture and architectural services are highly ranked and in demand. We believe that improved cooperation between architectural firms wanting to be part of an international reality, and the policy implementation system, can lead to real growth in exports of Norwegian architecture, "says Skavang.

Increasingly positive office managers

The Association of Consulting Architects conducts a semi-annual business survey among the members' office managers. They are asked about their last six months' order backlog, in relation to the present and expected order backlog six months ahead. They also respond to questions on number of employees, and the distribution of sales in different segments.

Throughout 2016 and 2017, office managers have expressed increased optimism.

In February 2017, the business cycle report showed that directors of architectural firms had experienced a positive autumn in 2016. They expected increased turnover and new jobs towards the summer of 2017. Architectural firms are the first to notice upswings and downturns in the entire construction industry.

"We conduct this industry survey in order to feel the pulse of the market, and for our members to make informed choices," says Managing Director Egil Skavang.

A positive autumn

When the office managers in February 2017 looked back six months in time, 38 percent had a bigger order backlog than they had right over the summer, compared to 21 percent who now had a smaller order backlog. The largest offices were the ones reporting greatest growth in the order backlog. As many as 49 percent of Oslo's offices reported an increased order backlog. The market is slowest in central Norway, where 30 percent reported a smaller order backlog, although also as many as 33 percent still state that it is higher.

> THE SIZE OF THE ARCHITECTURAL MARKET IN 2016 WAS APPROXIMATELY NOK 8.5 BILLION.

In August, there were some regions where the firms' order backlog in total were negative. Now (in January 2017), the totality of firms in all regions have a positive order backlog.

Growth in the housing market

Turnover has increased within housing and planning, while it has decreased in office, industry and public buildings. In western Norway, more offices also report that they expect increased exports.

"It is particularly pleasing that there now is a lighter mood in western Norway. They have had a tough time, "says Skavang.

The office managers report that they now have more employees than they had in August. Especially large firms and firms based in Oslo have hired new employees.

Strong faith

In the time to come, managers expect to increase their order backlog. 29 percent of firms expect to increase their order backlog, compared to 25 percent in August 2016. Nine percent expect lower order backlogs, compared to 11 percent in August. The office managers see a brighter future now than they did right after the summer. In all regions, except for northern Norway, there is a general optimism. This applies especially to Oslo. The smaller firms are least optimistic. The highest market expectations are found in planning and housing.

Regarding the number of future employees, the office managers expect to keep staff at an architectural income of NOK 722,879 in 2016.

This year's income statistics show that the average salary for 2,018 master-educated employees at the member firms of the Association of Consulting Architects was NOK 722,879. This shows an average increase of 3.3 per cent from 2015.

The income statistics of The Association of Consulting Architects are based on information from our members, including salaries, education level and final examination year. All part-time positions are converted to full-time in the statistics. The numbers are compiled in December. The managers have reported a total of 2435 employees' salaries. This comprises somewhat more than 50 percent of all their office employees.

About Arkitektbedriftene

Arkitektbedriftene (The Association of Consulting Architects) is the industry and employers' organization for firms with practicing architects, plus landscape and interior architects in Norway.

As an association of consulting architects, we will actively contribute to Norway having a qualified and competitive architectural industry that takes corporate social responsibility and provides services that meet the needs of the market and construction projects.

The association shall:

- **Provide tools and services that help increase business profitability**
- **Stimulate and follow up research and development in architecture and engineering**
- **Through our influence and our courses, assure top international quality in Norwegian architectural education**
- **Have an open, active and modern communication with our surroundings**

In order to achieve these goals, The Association of Consulting Architects in Norway embraces three strategies regarding:

- **The project Architecture creating value**
- **The future architectural market**
- **The future architectural firm**

Some numbers:

As of January 1, 2017, 589 architectural offices /523 architectural firms are members of the Association of Consulting Architects. 16 of them are trainee offices. 82 of them are part of our collective agreement with AFAG and other trade unions. The companies have 4441 employees, divided into 4228 man-years. 3539 of the employees are architects.

The administration consists of eight permanent employees and three dedicated project managers. We are located in Essendrops gate 3 at Majorstuen in Oslo, where we are co-located with the Association of Consulting Engineers. We are also neighbours with the Norwegian Confederation of Enterprises, where most industry associations in the fields of buildings, facilities and real estate are located.

The Association of Consulting Architects have contact with several expert committees, whose members are employed at member offices. The expert committees are our most important professional resource. The committees work on themes central to our profession and they conduct research work and give input to the association's strategy and action plan. The Association of Consulting Architects have agreed several committees working within their respective fields to the benefit of the member companies. When a committee has delivered upon its mandate it is usually terminated, or might be changed according to needs.

Berit Solli, ARK

Egil Skavang, ARK

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Communication Advisor:	Berit Solli

Average payment for all cohorts

Statistics 2016	Number	Annual income	Average examination year
Master	2 018	722 879	2001
Bachelor	187	623 456	2000
Vocational school	119	585 435	1992
Other	111	589 804	1993
Total amount	2 435	706 778	2000

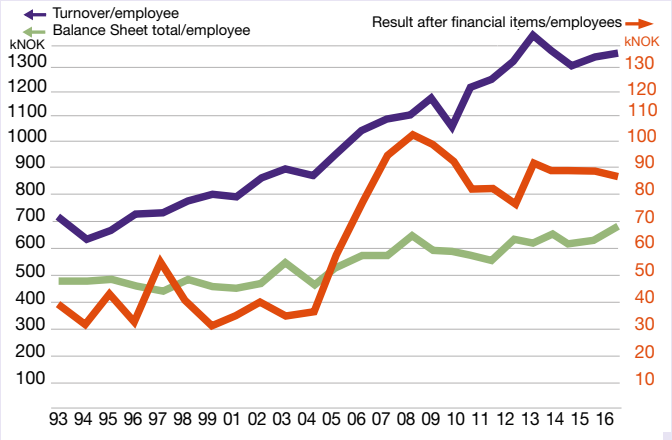
THE TOP 100 NORWEGIAN CONSULTING ENGINEERING AND ARCHITECTURAL GROUPS

	2017	2016	Group	Service	Annual report	Turn-over MDKK	(previous year)	Average number of employees	Tot. Balance sheet MDKK	CEO/Managing director
RIF/AB	1	1	Norconsult AS	MD	16	4236.0	3975.0	3250	2100.0	Per Kristian Jacobsen
RIF/AB	2	2	Multiconsult	MD	16	2968.0	2554.0	2344	1382.0	Christian Nørgaard Madsen
RIF	3	3	SWECO Norway	MD	16	2020.0	1905.0	1492	1009.0	Grete Aspelund
RIF	4	5	COWI AS	MD	16	1609.0	1568.2	1203	633.6	Egil Bøckmann
RIF/AB	5	4	Rambøll Norway	MD	16	1587.0	1647.0	1416	823.4	Ole Petter Thunes
RIF	6	6	ÅF Norway *	M,E,Enr, I	16	1124.0	1200.0	650	1400.0	Rune Hardersen
RIF/AB	7	7	Asplan Viak group	MD	16	1089.0	1080.3	984	475.9	Øyvind Mork
RIF	8	8	Dr Ing A Aas-Jakobsen AS	CE, PM	16	750.0	690.7	163	320.9	Trond A. Hagen
	9	11	Rejlers Norge (incl. Embriq) *	E	16	691.0	285.0	393	270.0	Thomas Pettersen
RIF	10	9	WSP Norway	PM	16	433.4	400.5	280	247.5	Knut Jonny Johansen
	11	12	OEC Group	Enr,I,PM	16	270.8	284.9	141	163.1	Knut Hegge
RIF	12	10	Hjellnes Consult AS	MD	16	266.1	306.9	230	94.4	Geir Knudsen
AB	13	14	Nordic Office of Architecture	A	16	220.6	230.1	134	77.5	Erik Urheim
RIF	14	13	ViaNova-group *	CE, Env, E	16	193.0	284.0	122	100.0	Syrtveit, Paulsen, Selvik et al
	15	15	Techconsult AS	PM,I	16	165.1	182.6	60	48.1	Ronny Meyer
	16	18	OPAK A/S	PM,Env,Enr,E	16	155.9	164.2	122	53.3	Jan-Henry Hansen
RIF	17	20	Erichsen & Horgen A/S	M	16	154.1	146.7	143	56.0	Arne Jorde
AB	18	16	Snøhetta Group *	A	16	152.9	176.6	180	77.8	Frydenlund, Molinar, Greenwood
RIF	19	21	Holte Consulting AS	PM	16	135.0	137.2	67	44.6	Trygve Sagen
	20	22	Pöyry Norway As	I	16	132.5	136.3	53	47.9	Jon Terje Julsen
RIF	21	29	ECT AS	E	16	125.2	109.2	105	59.3	Dag Otto Winnæss
RIF	22	23	Unionconsult *	M, E, Env	16	118.7	130.2	148	63.0	Løkke, Young & Berntsen
AB	23	19	Ratio Arkitekter AS	A	16	115.4	162.7	50	34.5	Per Anders Borgen
RIF	24	27	Dr. Techn Olav Olsen AS	PM,CE,Env	16	114.8	117.8	94	46.7	Olav Weider
	25	24	Atkins Norway	Enr	16	111.6	129.8	71	74.2	Pierre Henrik Bastviken
	26	17	Insenti AS	PM	16	110.2	175.5	32	71.0	Bjørn Grepperud
	27	31	Arcasa Arkitekter AS	A	16	105.7	80.1	52	52.1	Per Erik Martinussen
	28	25	Semcon Norway *	I	16	94.5	127.0	104	32.0	Hans Peter Havdal
	29	206	Hipas Design AS	A	16	92.2	69.0	15	15.9	Kjell Magne Ruud
	30	26	DARK Gruppen *	A	16	89.2	122.2	75	29.0	Geir Gustav Hantveit
RIF	31	49	Structor Norway *	CE,E	16	83.0	42.8	67	35.0	Snippen, Horn, Sundfær et al
	32	30	Teleplan Consulting AS	E	16	81.5	81.3	29	30.6	Jan Haakon Gulbrandsen
AB	33	201	Tegn 3 AS	A	16	79.1	78.5	58	25.4	Siri Hunnes Blakstad
AB	34	32	Lpo Arkitekter As	A	16	77.7	74.8	74	30.1	Hilde Sponheim
AB	35		A-LAB AS	A	16	68.5	52.1	54	43.0	Geir Haaversen
RIF	36	35	Brekke & Strand Akustikk AS	Env	16	68.1	66.1	70	24.9	Ingjerd Aaraas
RIF	37	34	Ingeniør Per Rasmussen AS	E	16	66.5	67.0	25	30.1	Per H. Rasmussen
AB	38	39	Lund & Slaatto Arkitekter AS	A	16	65.9	55.7	51	36.8	Åse Helene Mørk
AB	39	37	Hille Melbye Arkitekter AS	A,PM	16	65.8	60.7	55	35.8	Anna Marie Christensen
RIF	40	55	IPD Norway AS	PM, E	16	62.4	38.7	38	15.1	Aksel Østmoen
RIF	41	33	Dimensjon Rådgivning AS	Env	16	61.7	67.5	53	23.4	Jon Halvar Eiane
AB	42	38	Lund Hagem Arkitekter AS	A	16	60.0	57.5	57	25.3	Mona Anette Sævareid Carlmar, Mette Røsbekk
AB	43	57	Arkitektkontoret Nils Tveit AS	A	16	59.4	38.0	17	20.5	Nils Martinius Tveit
AB	44	208	Mad Arkitekter	A	16	58.9		59	20.6	Åshild Wangersteen Bjørvik
AB	45	48	Tag Arkitekter AS	A	16	56.3	44.1	52	23.2	Lars Eirik Ulseth
AB	46	207	Narud Stokke Wiig Sivilarkitekter Mnal As	A	16	55.3	45.1	42	23.7	Lise Rystad
AB	47	41	Niels Torp AS Arkitekter	A	16	54.1	51.7	41	46.7	Niels A. Torp
RIF/AB	48	40	Nordplan AS	PM,CE,A	16	53.0	54.7	51	17.9	Arne Steinsvik
AB	49	45	Dyrvik Arkitekter A/S	A	16	52.7	44.9	48	19.4	Halvor Bergan
	50	51	Efla AS	MD	16	50.2	42.1	26	16.8	Ragnar Jonsson
RIF	51	44	Bygganalyse AS	PM, CE	16	49.0	45.6	32	29.2	Frank Henry Roberg
	52	66	Techni AS	I	16	48.3	34.1	37	26.1	Dag Almar Hansen
AB	53	53	ØKAW AS Arkitekter	A	16	47.8	41.2	28	16.9	Margrethe Benedikte Maisey
AB	54	43	Abo Plan & Arkitektur As	A	16	46.2	45.9	42	18.8	Arne Kristian Kolstad
RIF	55	46	Prosjektutvikling Midt-Norge AS	PM,CE	16	46.1	44.3	32	22.9	Nina Lodgaard
AB	56	54	PKA - Per Knudsen Arkitektkontor AS	A	16	45.9	40.5	42	20.6	Reidar Klegseth
	57	60	AMB Arkitekter AS	A	16	45.3	37.0	41	23.9	Michael Bowe
AB	58	56	Enerhaugen Arkitektkontor As	A	16	42.0	38.1	36	18.8	Bente Nygård
	59	62	HRTB AS (Architects)	A	16	41.3	35.3	38	19.6	Tove-Christin Eidskrem
AB	60	64	OG Arkitekter AS	A	16	40.7	34.2	55	21.2	Osmund Olav Lie
RIF/AB	61	50	PLAN1 AS	CE,A,PM	16	40.5	42.2	34	18.9	Knut Andersen
RIF	62	65	Grunn Teknikk AS	PM,CE	16	39.7	34.1	15	14.7	Geir Solheim
AB	63	73	4B Arkitekter AS	A	16	39.0	32.4	37	20.1	Kari Linderud
RIF	64	47	Itech AS	M,E	16	38.8	44.1	30	15.8	Håvard Olsen Wiger
	65		Grindaker AS	A	16	37.4	36.8	32	13.1	Per Heikki Granroth
	66	52	L2 Arkitekter AS	A	16	36.9	41.9	24	20.6	Jon Flatebø

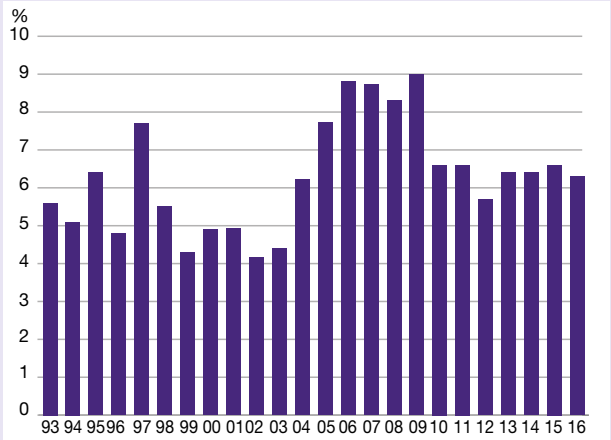
RIF = Member of RIF, the Association of Consulting Engineers, Norway. AB = Member of Arkitektbedriftene (architects association in Norway).
(*) = lack of conforming figure/proforma/assumed – = missing figure PM = Project Management,
A = Architecture, CE = Civil/Structural Engineering, Env = Environment, Enr = Energy, E = Electrical,M = Mechanical/HEVAC, I = Industrial, MD = Multi Disciplinary

	2017	2016	Group	Service	Annual report	Turn-over MDKK	(previous year)	Average number of employees	Tot. Balance sheet MDKK	CEO/Managing director
	67	67	Halvorsen & Reine AS (Arkitekterne)	A	16	36.7	33.6	24	21.0	Øystein Rognebakke (chairman), Aina Lian
	68	70	Alliance Arkitekter AS	A	16	36.4	32.9	40	10.3	Terje Morten Eidsmo
	69	205	Opus Bergen AS	A	16	36.3	36.6	27	14.6	Nancy Jøssang
	70	80	Metropolis Arkitektur & Design AS	A	16	35.3	29.8	27	16.0	Hanne Arvik
AB	71	63	Arkitektene Astrup & Hellern AS	A	16	35.0	34.6	28	19.5	Åke Letting
RIF	72	61	ElectroNova AS	E	16	35.0	35.7	23	24.3	Trond Einar Kristiansen
RIF	73	69	Siv. ing. Stener Sørensen AS	CE	16	35.0	33.1	24	10.7	Bo Reinhold Gunsell
	74	68	SJ Arkitekter (Solheim + Jacobsen) AS	A	16	34.5	33.4	21	13.8	Anne Sudbø
	75	202	Room2Room AS	A	16	34.4	44.4	3	11.4	Henrik Petersson
	76	58	Ingeniørfirmaet Malnes Og Endresen AS	E	16	33.7	37.9	23	11.0	Roger Malnes
	77	203	Bjørbekk & Lindheim AS	A	16	33.6	34.2	26	13.1	Line Løvstad Nordbye
RIF	78	78	Fokus Rådgivning AS	CE	16	33.4	30.2	18	12.6	Jan Ole Myrlund
RIF	79	102	Fylkesnes AS	CE,PM	16	32.9	23.6	15	11.3	Geir Hansen
AB	80	204	AT Plan & Arkitektur AS	A	16	32.9	24.7	24	15.3	Mette Hoel
RIF	81	79	Løvlien Georåd AS	Env	16	32.5	30.0	14	14.8	Per Løvlien
AB	82	72	Iark As	A	16	32.1	32.4	29	13.3	Hanne Margrethe Kjelland Hjermann
AB	83	74	Spir Arkitekter AS	A	16	32.0	31.9	28	11.5	Sven Gitlesen Krohn
AB	84	71	Arkitektgruppen CUBUS A/S	A	16	31.3	32.7	26	11.9	Odd Eilert H Mjellem
AB	85	59	LOF Arkitekter AS	A	16	31.3	37.9	23	11.4	Sverre Jørgen Olsen
AB	86	84	Børve Borchsenius Arkitekter As	A, PM,CE	16	31.2	28.4	27	15.8	Jan Olav Horgmo
RIF	87	83	Ivest Consult AS	CE	16	30.8	28.5	35	10.0	Jan Inge Hage
AB	88	88	Kristin Jarmund Arkitekter AS	A	16	30.7	27.6	23	14.8	Kristin Jarmund
	89		AS Scenario Interiørarkitekter MNIL	A	16	30.6	24.3	26	11.9	Linda Steen
RIF	90	87	Stærk & Co as	PM, CE	16	30.5	27.9	27	17.1	Jan Lindland
	91		HMY Nordic AS	A	16	30.3	2.5	11	11.9	Troy Abrahamsen
AB	92	91	PIR II architects AS	A	16	29.7	26.8	48	11.2	Miryam Katerine Chada
RIF	93	98	Roar Jørgensen AS	PM,CE	16	29.5	25.2	26	15.7	John Dæhli
	94		Ysadesign AS	A	16	29.1	19.9	21	12.3	Anne Mari Gullikstad
AB	95	75	Arc Arkitekter AS	A	16	28.8	31.1	27	19.3	Kjersti Hilde
AB	96	110	Kristiansen & Bernhardt Arkitektur Interiør AS	A	16	27.6	22.1	31	19.5	Renate Ellila
AB	97		Omega Areal AS	A	16	27.5	29.4	33	16.1	Gisle Heggebø
	98		Stein Halvorsen Arkitekter AS	A	16	27.5	17.2	17	14.3	Stein Halvorsen
RIF	99	89	Karl Knudsen As	PM, CE	16	27.5	27.4	22	12.9	Arnstien Garli
AB	100	103	Voll Arkitekter AS	A	16	26.9	23.5	24	11.7	Sigbjørn Berstad

The top 30 Norwegian groups



Profit margins



Generally speaking, it is risky business making direct comparisons between key business ratios for the largest firms and corresponding figures for the medium and small-sized firms. In the case of the latter firms, the extensive efforts of the often many partners have a relatively significant impact on the companies' turnover and profit level per employee.

For firms 31–100 in the above list, turnover in 2016 increased by 12% to approximately NOK 3,006 million (NOK 2,685 million in 2015). The number of employees grew to 2,330 (2,166). The turnover per employee was NOK 1,290,000 (NOK 1,240,000). The profit before tax increased to NOK 136,000 per employee (NOK 121,000). Calculated in terms of profit margin, this gives 10.5% (9.7%). The average balance per employee was approximately NOK 567,000 (NOK 585,000).

Key business ratio 30 largest groups	2016	(previous year)
Turnover per employee	NOK 1,371,000	NOK 1,349,000
Profit after financial items per employee	NOK 86,000	NOK 89,000
Balance sheet total per employee	NOK 699,000	NOK 618,000

The turnover for the 30 largest groups grew by 4% to NOK 19,431 million (NOK 18,619 million in 2015). The average number of employees grew by 3% to 14,173 (13,807). The turnover per employee consequently increased to NOK 1,371,000 (1,349,000 the previous year). The profit before tax was NOK 86,000 per employee (89,000). The profit margin for the 30 largest groups in 2016 thereby was 6.3% (6.6% in 2015). The average balance per employee was approximately NOK 699,000 (NOK 618,000).

ICELAND'S ECONOMIC BOOM SETTLES DOWN

GDP growth in Iceland measured 7.4% in 2016, the fastest growth rate since the current upswing began in 2011. It was driven mainly by surging services exports, private consumption, and private investment. Growth is expected to remain robust this year as well, albeit less than in 2016. So far this year, GDP growth (measuring 4.3% in H1) has been sustained by domestic consumption and private investment, plus export growth.

Forecasts assume weaker GDP growth in 2018 and 2019. In particular, domestic demand and exports are expected to slow down. Demand pressures will ease and unemployment will rise. Forecasts indicate that output growth in Iceland will approach that in other industrialised countries, although it will remain relatively strong in overall international context.

Demand pressures in the labour market

Unemployment is now close to an all-time low, and the labour participation rate is near its historical peak. Unemployment measures 2.5% and the employment rate 81%. During this period of strong GDP growth, labour demand has been met to a large degree with imported workers. As output growth has eased, the decline in inflation has lost pace and job creation has slowed. Tensions in the labour market are forecast to subside in the near future, and unemployment is expected to rise somewhat yet remain low in international context.

Wages have risen rapidly in the recent term, owing primarily to generous contractual pay increases. Since the current upswing began, wages are up 7.5% per year, on average, far outpacing those in neighbouring countries. They have also risen well in excess of productivity growth. Added to this is the marked appreciation of the króna during the current upward cycle. The ISK appreciation and the pay rises in excess of productivity growth have undermined the competitive position of firms in the manufacturing export sector, where the growth rate has stalled.

Inflation low despite steep domestic cost increases

The ISK appreciated virtually unchecked from 2013 through February 2017, fuelled by soaring export revenues, an improved external debt position, and more favourable terms of trade. The appreciation took place in spite of large-scale foreign currency purchases by the Central Bank (CBI), which was building up its foreign exchange reserves prior to lifting the capital controls earlier this year. The recent slide in the ISK can be traced to this liberalisation of restrictions on residents' foreign investment, although a narrower interest rate differential with abroad and a smaller trade surplus are factors as well.

Because of the ISK appreciation and low imported inflation, domestic inflation has remained low in spite of huge cost price increases. Headline inflation has been below the CBI's 2.5% inflation target since the beginning of 2014, making this the longest period of price stability since the target was adopted in early 2001. Inflation will probably rise slightly in the near future, due partly to the weakening of the ISK. Below-target inflation and reduced inflation expectations have enabled the CBI to lower the policy rate in spite of growing demand pressures in the economy.

Surge in private consumption

Significant progress has been made in boosting real wages and disposable household income in the past few years, and real wages are now at an all-time high. Purchasing power has grown much more in Iceland than in key trading partner countries. An important round of wage negotiations affecting the entire labour market is in the offing. It is important to coordinate remuneration policies in discussions with various worker groups and avoid the temptation to play leap-frog in wage-setting. Given the current economic situation and the state of the labour market, it will be challenging to reach agreements providing for pay rises consistent with stability.

Private consumption growth has been rapid in the recent past, as households' financial position has improved vastly, with rising real disposable income and asset prices – particularly in the housing market, where real prices are the highest ever measured in Iceland. Private consumption grew 7.1% in 2016 and 8.3% in H1/2017. The pace will probably ease in the near term, as growth in real disposable income loses traction. Nonetheless, households' financial position is strong at present, making them well prepared to withstand a downturn if it comes.

Economy well balanced externally

Although the domestic economy has grown by leaps and bounds recently, it is well balanced externally, with a current account surplus measuring 7.9% of GDP in 2016. The surplus is expected to be somewhat smaller this year, around 6%, but sizeable nevertheless. This hefty current account surplus is due to several factors: soaring services exports, which have been the main driver of the recent GDP growth phase; favourable terms of trade; and a healthy external debt position. The CA surplus is expected to shrink in the coming term, as the surplus on goods and services trade narrows. This good balance is a sign that

> GDP GROWTH IN ICELAND MEASURED 7.4% IN 2016.

the domestic economy will not suffer a hard landing this time.

Both the number of tourists visiting Iceland and their spending while in the country have grown swiftly in recent years. This, of course, has been the cornerstone of the surge in services exports, but now there are visible signs that the growth rate is easing. The number of tourists is still rising, but less quickly than before. Average spending per tourist has contracted as well, as has the average length of stay. The economic boom fuelled largely by rising tourist numbers is making Iceland a more expensive destination, with the associated impact on the exchange rate and wages.

Favourable terms of trade have been a major factor in the recent current account surplus. Oil prices have been favourable for Iceland, an oil importer. Global aluminium prices have been on the rise, and foreign currency prices of marine products have been relatively high. Terms of trade are expected to remain broadly favourable for Iceland.

Investment level acceptable

Investment took a while to pick up during the current upswing, and the investment-to-GDP ratio was low for a long time, hovering around 15% until 2013. A major cause of this was the financial position of households and businesses, both of which were hit hard by the 2008 crisis. In addition, public investment was limited because of the poor financial position of the central government and many local governments. In the past three years, however, investment growth has been brisker, at 15-20% per year, and the investment-to-GDP ratio has risen accordingly, to about 21%, above the OECD average.

Investment has eased in 2017, after a three-year period of rapid growth. Growth measured 5.2% in H1/2017, well below the rate in recent years. In particular, business investment has slowed down, partly due to fluctuations in investment in ships and aircraft. As a share of GDP, however, investment has remained relatively strong. Business investment growth is forecast to taper off in the near future, but the investment-to-GDP ratio is expected to hold steady at 20–21%, partly due to an increase in public investment and a surge in residential investment by households.

Demand for residential housing has skyrocketed in the past few years, bolstered by improvements in households' financial position and overall population growth, which stems in part from large-scale importation of labour. Added to this is the demand for tourist accommodation, which has been met partly through the sharing economy, with many privately owned flats used for short-term rentals. At the same time, the supply of new flats has been limited, owing in part to a shortage of lots. In this environment, real house prices have surged to an all-time high. Prices have risen in excess of wages, disposable income, and construction costs in the recent term. The housing market appears to be stabilising with an increased supply of new flats, however: sales have slowed, and the pace of house price inflation has eased in the past few months. This trend can be expected to continue if growth in real disposable income, labour importation, and tourism continues to ease and the supply of new housing keeps rising. House price inflation can then be expected to lose momentum at the same time.

Public investment in infrastructure lacking

Public infrastructure investment has been limited during the current upswing, and it has grown very little in spite of improved central and local government finances. Public investment in the road system amounted to 1.0% of GDP in 2016. This ratio has been low for the past six years, averaging 0.9% of GDP, down from an average of 1.6% in the preceding two decades – a period with nothing like the past few years' exponential growth in tourism. In recent years, investment in the road system has not grown commensurate with the road network's increasingly important role in value creation. The low level of investment in transport infrastructure has already begun to take its toll, as traffic has mushroomed over this period. Strain on the national road system has never been greater: in the first five months of 2017, traffic on Route 1, the Ring Road, was up 44% from the same period five years ago.

According to a recent report on the current situation and outlook for infrastructure in Iceland, prepared by the Association of Consulting Engineers (FRV) and the Federation of Icelandic Industries and entitled State of the Nation, showed that the road system and other infrastructure elements are in poor condition. The report concluded, among other things, that the pent-up infrastructure maintenance need amounts to just over 15% of GDP, which what would be required to re-

Ingolfur Bender, Chief Economist SI.

About FRV and SAMARK

FRV joined the Federation of Icelandic industries (SI) in 2013 and SAMARK in 2014. Both are independent branch organization within SI, which is a part of the Confederation of employers in Iceland (SA). SAMARK and FRV are a part of one of three pillars of SI – the construction industry. FRV has around 20 member companies and SAMARK around 24.

Jóhanna Klara Stefánsdóttir, director of the Construction industry at SI manages the daily activities of both SAMARK and FRV.

Ingolfur Bender, Chief Economist SI

THE TOP 17 ICELANDIC CONSULTING ENGINEERING AND ARCHITECTURAL GROUPS

	2017	2016	Group	Service	Annual report	Turnover MISK	(previous year)	Average number of employees	Tot. balance sheet MISK	CEO/Managing director
FRV	1	3	Verkís hf.	MD	16	5960.6	5396.9	364	2151.9	Sveinn Ingi Ólafsson
FRV	2	2	Efla hf.	MD	16	5922.1	5106.6	303	2253.6	Guðmundur Thorbjörnsson
FRV	3	1	Mannvit hf	MD	16	5743.8	5268.0	282	3128.6	Jón Már Halldórsson
FRV	4	4	VSÓ Ráðgjöf ehf.	MD	16	1250.0	1100.0	70	495.0	Grímur Már Jónasson
FRV	5	7	Lota ehf	CE	16	829.0	476.0	49	275.0	Pétur Örn Magnússon
FRV	6	5	Ferill ehf., verkfræðistofa	CE, PM, M, Env	16	702.7	535.6	27	346.6	Ásmundur Ingvarsson
SAMARK	7	8	Arkís ehf.	A, PM, Env	16	612.0	405.0	29	197.5	Þorvarður Lárus Björgvinsson
SAMARK	8	9	THG Arkitektar	A, PM	16	513.1	390.0	28	276.5	Halldór Guðmundsson
FRV	9		Raftákn ehf	CE	16	489.7	432.0	30	118.1	Arni V. Fridriksson
FRV	10	6	Hnit hf.	PM, CE, Enr, E, Env	16	460.4	466.3	35	175.4	Harald B. Alfreðsson
SAMARK	11	11	Tark Arkitektar (Tark – Teiknistofan ehf.)	PM, A	16	440.2	320.3	26	181.2	Ivon Stefán Cilia
FRV	12	15	Verkfræðistofa Suðurnesja ehf.	PM, CE, Enr, E, Env	16	392.9	276.8	21	156.3	Brynjólfur Guðmundsson
SAMARK	13	12	ASK arkitektar ehf.	A, PM	16	348.0	241.0	23	126.4	Páll Gunnlaugsson
SAMARK	14	16	VA arkitektar	A	16	180.4	165.4	15	65.1	Indro Indriði Candi
SAMARK	15	17	Landmótun sf	A,Env	16	165.2	142.6	10	86.1	Áslaug Traustadóttir
SAMARK	16	29	Teiknistofa Páls Zóphóníassonar ehf	A	16	82.2	77.5	4	32	Páll Zóphóníasson
SAMARK	17	21	ARGOS ehf	A	16	39.4	31.3	1		Stefán Örn Stefánsson

store the infrastructure to good condition where only routine upkeep is needed to maintain it. The need for maintenance is greatest in the road system, government-owned real estate, sewer systems, and energy transport. Maintenance has been sorely lacking in these areas.

The above-mentioned report has given rise to considerable discussion of the position of infrastructure in the Icelandic economy. If recent political discourse is any indicator, it appears that a general awakening to the importance of infrastructure development and maintenance is in the offing. In view of this, public infrastructure investment can be expected to increase in the years to come.

Key business ratio 17 largest groups	**2017**	(previous year, 20 groups)
Turnover/employee	18.32 MISK	16.27 MISK
Profit before tax/employee	1.63 MISK	1.02 MISK
Balance/employee	7.65 MISK	7.89 MISK

Turnover for the 17 largest companies in 2016 was 24,132 MISK (20,396 MISK the previous year, then 20 largest) and the average number of employees was 1,317 (1,254). The profit margin grew to 8.9% (6.3%).

MARKET GROWTH STABILISES IN FINLAND

Both domestic and export turnover increased in the Finnish consulting business, but the volatile Finnish market conditions slows down growth and keeps profitability at a low level.

The turnover of SKOL's member companies increased by 6.3 % in 2016. Biggest increase in invoicing took place in infrastructure sector, where invoicing grew by 13 % from previous year. Building and industry sectors turnover grew by 6 %.

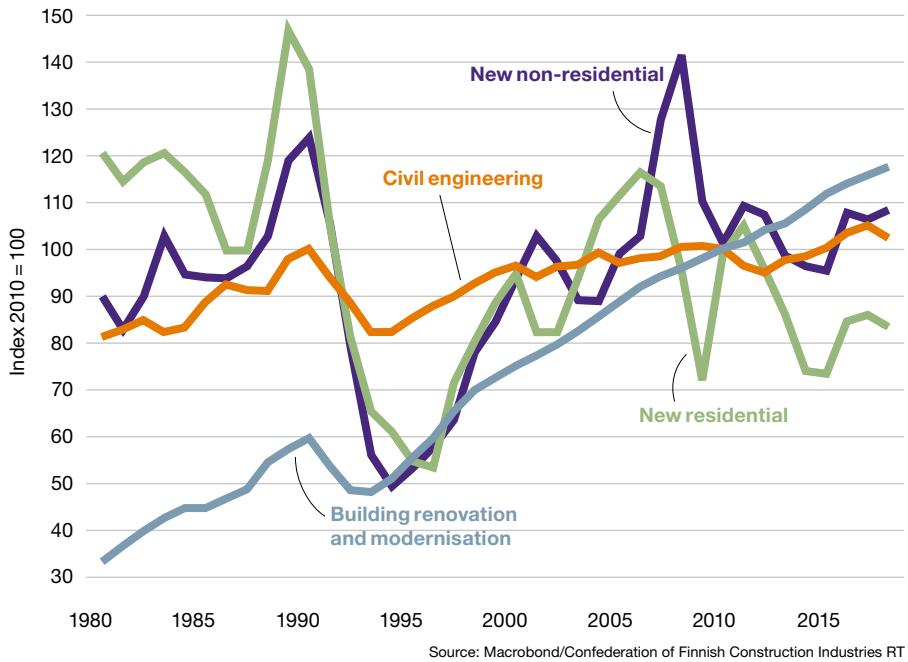
Also, the number of staff employed by member companies grew from 16.470 to almost 17.000 employees. The total turnover of Finnish operations of SKOL member companies increased to 1.685 million EUR. The building sector invoiced 624 million EUR, the industrial sector 640 million EUR and the infrastructure sector 371 million EUR.

Most of the growth came from the domestic market. Export growth has biased trends, since the increase in industry sector was only 0.5 % and in infrastructure sector almost 50 % compared to the year before. Export volumes decreased by 6.7 % in the building sector.

Industrial design and consulting represent over 75 % of the total consulting exports, and it grew by 13 % in 2016. Also, the development-aid exports increased by 12 % to 23 million EUR, but it represents only a small portion of total exports and exports to developing countries. Geographically, roughly one quarter of exports went to EU countries, 10 % to other European countries, one third to Asia and one quarter to rest of the world.

At the end of 2016 Ramboll Finland was the largest consulting firm operating in Finland, followed by Sweco Finland (group), Neste Jacobs, Pöyry Finland, Etteplan, FCG, Granlund, Elomatic, A-Insinöörit and Sito, Citec and Wise. Sito and Wise announced their merger in March 2017. The new Sitowise will take the 6th place in consulting company size ranking in Finland.

Construction volume in Finland 1980 – 2017



Source: Macrobond/Confederation of Finnish Construction Industries RT

Economic growth continues, building sector has still the lead

Construction industry has been the main driver of the Finland's economy since the beginning of the 2015. Finally, this year other industries started to recover after several years of negative or zero growth. The general increase of investments together with growing exports and domestic consumption have maintained high volumes of construction and thus enhanced the market of engineering and consulting services.

Volume of construction of buildings has increased during the last year by over 7 %. Measured by volume 17 % more building projects and 24 per cent more residential building projects were started than one year earlier.

Engineering and consulting services firms have continued their over 10 % growth in revenue during the running budget year 2017. The total value of service contracts has stayed at the same level as year earlier, but the number of new assignments started to significantly decrease last summer.

Stabilizing trend was seen also in the number of building permits granted and in construction volume (see fig. 1 & 2). The most recent Confidence Indicator in construction has already shown a turn downwards (see fig. 3).

Staff shortage a growing challenge

Currently the engineering industry faces a growing challenge of staff shortage. The Finnish Association of Consulting Firms SKOL estimated earlier this year that the gap will be up to 9.000 qualified engineers by 2025. be up to 9.000 qualified engineers by 2025."

New public procurement law came into effect at the beginning of 2017 and guidelines for implementation were published in September. The guidelines and recommendations for procurement tem-

> TURNOVER OF SKOL'S MEMBER COMPANIES INCREASED BY 6.3 % IN 2016.

plates were drafted jointly by the Ministry of Housing and the Industry Associations.

Discussions on poor indoor air quality caused by mould and moisture in structures, introducing a new regional administration system, digitalization of public services and processes along with a funding the expanding infrastructure investment gap have gained a growing public and political attention.

Construction and real estate industry together with engineering services has witnessed a couple of major acquisitions and mergers: The two biggest listed contractors (YIT and Lemminkäinen) announced their fusion in June.

SKOL promotes innovative public procurement

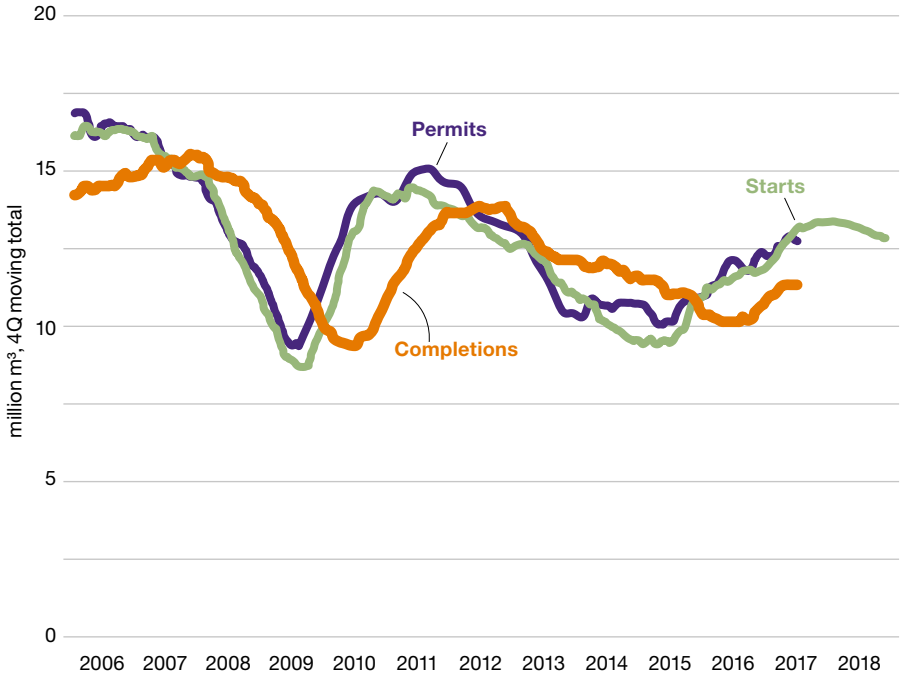
SKOL is actively engaged in lobbying the new guidelines and recommendations of Public Procurement Act reform. The main incentive there is to courage clients to include quality criteria and innovative elements in their procurement processes.

Other major projects led by the association are related to the development of new digital services in the context of built environment and future mobility.

SKOL will conduct in 2018 number of surveys and studies that will explore for example changes in working processes and core competences of engineering services caused by digitalization.

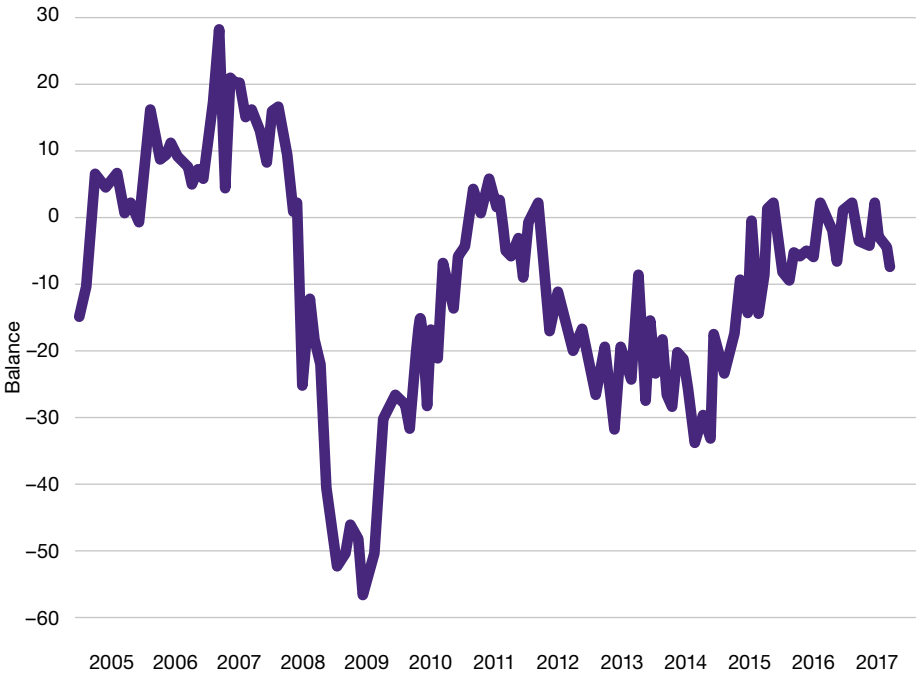
SKOL is also preparing a lobbying agenda for the next parliamentary elections to be held in April 2019 together with Technology Industries and construction industry associations. The main objectives are to establish a long-term infrastructure policy and new investment program together with measures to narrow current the investment gap.

Building permits granted, construction projects started and completed for Residential Buildings in Finland 2006 – 2018.



Source: Macrobond/Confederation of Finnish Construction Industries RT

Confidence Indicator of Construction in Finland 2005 – 2017



Source: Macrobond/Confederation of Finnish Construction Industries RT

The Finnish Association of Consulting Firms SKOL in brief

SKOL is the employer's association for independent and private consulting companies in Finland. SKOL has around 175 member companies in the fields of industrial, building and infrastructure design and consulting, as well as management consulting and training.

SKOL members employ over 17.000 professionals in Finland, and approximately 7.000 outside Finland. The companies represent about two thirds of total sector capacity in Finland.

SKOL promotes professional, independent, sustainable and ethical consulting engineering, which provides best value to the Clients. SKOL looks after the interests of member companies in Finland and within EU, improves the operating environment of consulting engineering work in Finland and internationally, as well as builds up the brand and communicates the value of high quality consulting engineering.

The main targets in SKOL strategy are:

- SKOL companies are value adding partners by the Clients, and this is indicated by increased investment on high quality design and consulting.
- Finland is a good operating environment for design and consulting business and SKOL continues to proactively improve the business environment.
- Design and consulting business attracts the best young professionals who want to create sustainable and competitive future.
- SKOL speeds up the international business of its members.
- SKOL is known and appreciated as an integral part of Technology Industry.

The activity areas and key actions in each area are listed below. More information about each topic is available at SKOL.

Operating environment/policy

- Influencing new legislation and other regulation
- Seminars for clients and stakeholders
- 14 technical working groups meet regularly, about 200 active participants
- National consulting contracts
- Legal support to members
- Collective agreement (moderate salary increases, 24 hours of additional annual working time continued)
- Cooperation with technical universities and institutes: curriculum, intake, industry coop.
- Forums with Transport authority e.g. rail forum, top management meeting
- Statistics, market reviews, cost follow-up, guidance on fringe benefits
- Ad hoc polls on topics of interest

Attraction of young professionals

- Young consultants' forum seminars and get-togethers
- Participation in infra sector LIKE project with the aim to attract young staff
- Participation in Built Environment Young Professionals training programme KIRA-Academy
- Student events like "CEO crossfire" with technical university students
- Young Consultant of the Year –award
- Scholarships to students
- Participation in MyTech-platform www.mytech.fi/suunnittelu-ja-konsultointi video inter-views of young consulting professionals

Procurement

- Innovative procurement road show together with clients, municipalities and politicians
- New national procurement guidelines for consulting services together with major clients
- Practical tools for quality based tender evaluation
- Preparation of scope of work lists for various consulting services e.g. www.sopimuslomake.net/lomakkeet/rt-10-10846-en
- Advising clients on good procurement practices

Communication

- Branding member companies on quality, value for money, sustainability & responsibility
- Regular meetings with media, often together with board members
- Newsletters to clients and stakeholders
- Newsletters to members
- Storytelling workshops to board and spokesmen
- Articles on newspapers
- Strong communications and social media activity
- New unified brand within all associations in Technology industries
- Export group/ forum for companies going international
- EFCA committees, GAM, FIDIC
- Lobbying at EU organisations on good procurement
- RINORD annual conference
- Nordic sector review
- Benchmark with other associations

Project work

- Participation in Real Estate digitalization development project www.kiradigi.fi
- Integrated project delivery model development
- Activating the work of Lean Construction Institute Finland
- Building sector 3-year quality project together with construction industry and clients

Helena Soimakallio, Managing Director SKOL.

Helena Soimakallio, Managing Director SKOL

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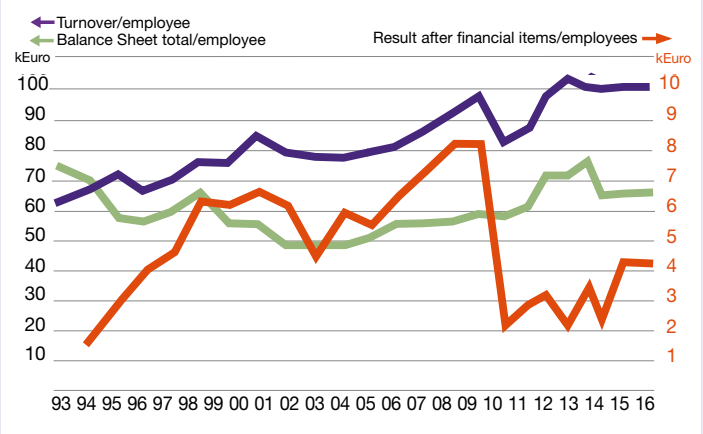
THE TOP 100 FINNISH CONSULTING ENGINEERING AND ARCHITECTURAL GROUPS

	2017	2016	Group	Service	Annual report	Turn-over MDKK	(previous year)	Average number of employees	Tot. Balance sheet MDKK	CEO/Managing director
SKOL	1	1	Pöyry Group	MD	16	529.6	575.3	5387	421.8	Martin À Porta
SKOL	2	2	Ramböll Finland + Environ *	MD	16	200.6	180.5	2107	110.4	Kari Onniselkä
SKOL	3	3	SWECO Finland	I,MD	16	188.7	177.7	1984	100.0	Markku Varis
SKOL	4	6	Etteplan Oyj	I	16	183.9	141.1	2407	134.5	Juha Näkki
SKOL	5	5	Neste Jacobs group	I	16	153.9	143.6	802	95.0	Jarmo Suominen
SKOL	6	8	FCG Finnish Consulting Group	MD	16	79.0	54.7	673	47.8	Kimmo Kasteenpohja
SKOL	7	9	Granlund Oy	M	16	61.7	54.7	666	41.8	Pekka Metsi
	8	7	Insta Automation Oy	I	16	60.0	56.8	358	24.4	Timo Lehtinen
SKOL	9	12	Elomatic Group Oy	I	16	54.7	48.1	777	43.3	Patrik Rautaheimo
SKOL	10	11	A-Insinöörit Group	MD	16	54.2	51.3	427	27.3	Jyrki Keinänen
SKOL	11	13	SITO Group Oy	MD	16	50.1	47.9	525	28.5	Tapio Puurunen
SKOL	12	10	Citec Group	I	16	48.3	51.7	445	31.9	Martin Strand
SKOL	13	16	Wise Group Finland Oy (acquired Helimäki Akustikot)	MD	16	42.5	30.7	427	28.8	Aki Puska
SKOL	14	14	Rejlers Finland (acquired JS-Verkot) *	I	16	39.5	39.1	486		Seppo Sorri
SKOL	15	19	WSP Finland	MD	16	35.1	28.1	386	13.0	Kirsi Hautala
SKOL	16	20	Vahanen Group Oy	CE	16	28.1	26.5	306	15.4	Risto Räty
	17	4	Kiwa Inspecta Oy (acquired by Kiwa, NL)*	I	16	25.9	176.0	295	38.1	Topi Saarenhovi
SKOL	18	18	ÅF Consult Oy	I	16	25.0	29.1	157	11.4	Jari Leskinen
SKOL	19	17	Dekra Industrial Oy	CT	16	24.5	30.2	216	10.5	Matti Andersson
SKOL	20	15	Deltamarin Oy	I	16	23.2	31.0	235	20.2	Janne Uotila
	21	25	Econet Group Oy	I,Env	16	21.7	15.2	72	12.0	Matti Leppäniemi
SKOL	22	36	Protacon group Oy	I, E, PM	16	21.0	9.2	219	15.2	Timo Akselin
SKOL	23	22	Destia Design *	CE	15	20.0	20.0	170		Heidi Erha
	24	23	Haahtela Oy *	I,PM	16	19.6	19.4	34	24.3	Yrjänä Haahtela
	25	21	Insinööritoimisto Comatec Group	I, PM	16	19.3	24.2	273	14.4	Aulis Asikainen
SKOL	26	24	Optiplan Oy	MD	16	15.7	15.9	214	8.9	Pekka Kiuru
	27	34	RD Velho Oy	I	16	13.9	9.7	123	5.7	Mika Kiljala
	28	31	Raksystems Oy	PM, CE, S	16	13.3	10.3	100	4.7	Marko Malmivaara
SKOL	29	32	ISS Proko Group	PM	16	12.3	10.0	125	7.6	Harri Väänänen
	30	44	Alte Oy (acquired TSS Group)	E	16	12.3	6.9	394	13.8	Juha Pekka Sillanpää
SKOL	31	28	Rakennuttajatoimisto HTJ Oy	PM	16	11.5	10.9	102	4.3	Janne Ketola
SKOL	32	27	Suomen Talokeskus Oy	MD	16	11.4	11.6	103	3.1	Jari Punkari
SKOL	33	26	NIRAS Finland Oy	I	16	11.2	11.8	48	8.6	Antti Inkinen
	34	30	Helin & Co Architects	A	15/16	11.0	10.4	47	4.3	Pekka Helin
SKOL	35	33	Indufor Oy	MD	16	10.7	10.0	52	3.7	Jyrki Salmi
	36	35	Vitalium group (Mitta Oy)	CE	16	9.6	9.6	116	5.7	Jari Lappi
SKOL	37	29	Ahma Insinöörit Oy	PM	16	9.5	10.7	138	5.4	Kim Lindholm
	38	38	Arkkitehtitoimisto JKMM Oy *	A	16	9.3	8.7	58	3.7	Jaaksi, Kurkela, Miettinen, Mäki-Jylliilä (partners)
	39	67	JLL Finland - Jones Lang LaSalle Finland Oy * (förvärvade Procofin Oy)	A,CE	16	9.2	3.3	77	7.8	Tapani Piri
SKOL	40	39	AX-Konsultit Oy	M	16	8.9	8.7	89		Urpo Koivula
SKOL	41	40	Finnmap Infra Oy	CE	16	8.7	8.6	47	3.4	Stefan Nyström
SKOL	42	37	CTS Engtec Oy	I	16	8.5	8.8	99	4.3	Antti Lukka
	43	42	Arkkitehtitoimisto SARC Oy	A	15/16	8.3	7.0	50	6.4	Sarlotta Narjus
SKOL	44	43	Rapal Oy	PM	16	7.6	7.0	64	6.9	Tuomas Kaarlehto
	45	41	Pes-Arkkitehdit Oy (Pekka Salminen)	A	16	7.5	7.2	64	4.4	Jarkko Salminen
	46	161	Insinööritoimisto Enmac Oy	I	16	7.2	0.0	72	3.0	Juha Ritala
	47	51	Arkkitehdit Soini & Horto Oy	A	16	7.0	4.5	37	1.8	Sami Horto
SKOL	48	48	FM-International Oy *	CE	16	6.6	5.6	47	1.7	Kotaro Seki
SKOL	49	45	Golder Associates Oy	Env	16	6.4	6.6	52	3.2	Kari-Matti Malmivaara
	50	59	Architecture Office Sigge Ltd/ Viiva arkkitehtuuri (Arkkitehtitoimisto Sigge Oy)	A	15/16	6.2	3.9	44	4.8	Pekka Mäki
SKOL	51	55	KBR Ecoplanning Oy (fmr Chematur)	MD	16	5.8	4.2	11	4.2	Timo Kuusisto
	52	47	Esju Oy	I	16	5.6	5.9	60	3.1	Matti Kainuharju
	53	49	Indepro Oy	PM, CE	16	5.5	5.4	38	5.6	Matti Kruus
	54	46	Oy Omnitele AB	PM(tele)	16	5.5	6.6	52	4.6	Ville Santeri Laakso
	55	50	L Arkkitehdit Oy (Arkkitehtitoimisto Larkas & Laine Oy)	A	16	5.1	5.2	49	2.5	Robert Trapp
SKOL	56		Cadpool Oy	MD	16	4.9		68	2.0	Upi Vartiainen
SKOL	57	58	Hepacon Oy	M	16/17	4.4	4.0	60	1.7	Otto Jokinen
SKOL	58	61	Ideastructura Oy	CE	16	4.3	3.6	35	2.9	Jyrki Jalli
SKOL	59	57	Geotek Oy	Env	16	4.1	4.1	45	2.5	Aino Sihvola
SKOL	60	79	Aihio Arkkitehdit Oy	A	16	4.1	2.9	42	3.2	Timo Meronen
SKOL	61	69	Parviainen Arkkitehdit Oy	A	16	3.9	3.3	38		Mikko Lahikainen
SKOL	62	62	Insinööritoimisto Pohjatekniikka Oy	CE	16	3.8	3.5	46	2.1	Seppo Rämö
	63	53	Re-Suunnittelu Oy - Re-Engineering Ltd	A, CE, PM	16	3.7	4.4	32	1.7	Matti Juhani Takkinen
SKOL	64	64	Insinööritoimisto Leo Maaskola Oy	M	16	3.6	3.4	33	2.0	Kari Seitaniemi
	65	60	Uki Arkkitehdit Oy	A	16	3.6	3.6	42	2.2	Mikko Heikkinen
	66	54	Arkkitehtitoimisto Ala Oy	A	16	3.5	4.2	20	1.4	Juho Emil Grönholm
	67	76	Kalliosuunnittelu Oy (Rockplan Ltd)	CE	16	3.4	3.0	34	2.9	Jarmo Roinisto

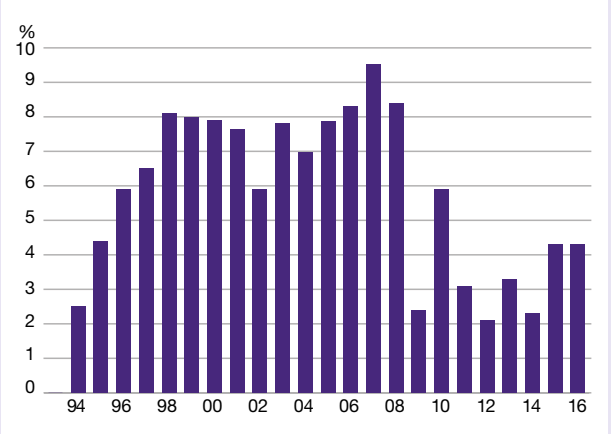
SKOL = Member of SKOL, the Finnish Association of Consulting Firms . (*) = lack of conforming figure/proforma/assumed – = missing figure PM = Project Management, A = Architecture, CE = Civil/Structural Engineering, Env = Environment, Enr = Energy, E = Electrical, M = Mechanical/HEVAC, I = Industrial, MD = Multi Disciplinary

	2017	2016	Group	Service	Annual report	Turn-over MDKK	(previous year)	Average number of employees	Tot. Balance sheet MDKK	CEO/Managing director
	68	56	Roadscanners Oy	CT	16	3.4	4.1	29	1.6	Timo Saarenketo
	69	65	Cederqvist & Jäntti Arkkitehdit Oy	A	15/16	3.3	3.4	30	1.7	Tom Cederqvist
SKOL	70	71	Akukon Oy	MD	16	3.3	3.2	32	1.0	Ari Lepoluoto
	71	63	Insinööritoimisto Pontek Oy	CE	15/16	3.1	3.4	27	2.7	Pertti Määttä
	72	81	Arkkitehtitoimisto Lukkaroinen Oy	A	16	3.1	2.8	38	1.2	Mikko Lukkaroinen
	73	109	Arkkitehtuuritoimisto B & M Oy	A	16	3.1	1.8	30	1.1	Jussi Murole
	74	93	Schauman Arkkitehdit Oy	A	16	3.1	2.3	20	2.5	Janne Untamo Helin
	75	86	Linja Arkkitehdit	A	16	3.1	2.5	35	1.2	Ville Petteri Niskasaari
	76	77	AW2 - Architecture Workshop Finland Oy *	A	16/17	3.0	3.0	34	1.7	Anssi Yrjö Mikael Anttila
SKOL	77	82	LINK design and development Oy	I	16	2.9	2.7	34	1.0	Jaakko Anttila
SKOL	78	75	Insinööritoimisto Lauri Mehto Oy	CE	16	2.9	3.1	26	1.9	Simo-Pekka Valtonen
SKOL	79	72	Hifab Oy	I	16	2.9	3.2	12	1.3	Vesa Kurkela
SKOL	80	70	Insinööritoimisto Äyräväinen Oy	M	16	2.9	3.3	35	0.9	Mikko Äyräväinen
SKOL	81	96	Carement Oy	CE	16/17	2.9	2.2	34	1.0	Jouni Aukusti Juurikka
	82	66	Asitek Oy	E	16	2.8	3.3	24	1.6	Rauno Mäkelä
SKOL	83	87	Insinööritoimisto Savolainen Oy	CE	16	2.7	2.5	31	1.5	Antero Savolainen
SKOL	84	88	Geounion Oy	CE	16	2.7	2.5	32		Matti Mäntysalo
	85	85	Arkkitehtitoimisto Helamaa & Heiskanen Oy	A	16	2.7	2.6	29	2.4	Juha Saarijärvi
SKOL	86	89	Kva Arkkitehdit Oy	A	16	2.6	2.5	28	0.9	Ritva Kokkola
	87	84	Arkkitehtitoimisto Hannu Jaakkola Oy (Jaakkola Architects)	A	16/17	2.6	2.6	19	2.5	Hannu Jaakkola
	88	113	Verstas Arkkitehdit Oy	A	16	2.5	1.8	24	1.4	Ilkka Salminen
SKOL	89	73	Insinööritoimisto Tauno Nissinen Oy	E	16	2.5	3.2	30	1.6	Antti Danska
	90	92	BST-Arkkitehdit Oy	A	16	2.4	2.4	29	1.5	Paul Sergej von Bagh
SKOL	91	90	Yhtyneet Insinöörit Oy	E	16	2.4	2.4	25	1.1	Juha Kiviniemi
SKOL	92	123	Insinööritoimisto Jormakka Oy	Enr,Env	16	2.4	1.6	20	2.8	Jussi Jormakka
SKOL	93	52	Plaanagroup	CE	16	2.3	4.5	30	2.4	Pekka Mosorin
SKOL	94	97	Avecon Oy	PM, M, CE	16	2.3	2.2	26	0.8	Peter Jakobsson
	95	68	Arkkitehtitoimisto HKP Oy *	A	16	2.3	3.3	18	1.1	Mikko Suvisto
SKOL	96	94	Sipti Oy	CE	16/17	2.3	2.3	16	1.6	Teemu Rahikainen
SKOL	97	118	Entop Oy	I	16	2.3	1.6	27	1.8	Kimmo Määttänen
	98	74	Arkkitehdit NRT Oy (Nurmela,Raimoranta,Tasa)	A	16	2.2	3.2	28	2.4	Teemu Tuomi
	99	108	Exact AIP-Mittaus Oy	CE	16	2.2	1.8	28	0.6	Jan-Erik Björni
SKOL	100	80	Contria Oy	CE	16	2.1	2.8	20	0.7	Kenneth Grönroos

The top 30 Finnish groups



Profit margins



Generally speaking, it is risky business making direct comparisons between key business ratios for the largest firms and corresponding figures for the medium and small-sized firms. In the case of the latter firms, the extensive efforts of the often many partners have a relatively significant impact on the companies' turnover and profit level per employee.

For firms 31–100 in the above list, turnover in 2016 increased by 9% to €340 million (€311 million in 2015). The number of employees grew by 5% to 3,011 (2,856). The turnover per employee consequently increased to €113,000 (€109,000). The profit before tax fell to €11,300 per employee (€11,500). Calculated in terms of profit margin, this gives 10.0%, same as the year before (10.0%). The average balance per employee was approximately €63,200 (€69,100).

30 largest groups	2016 (excl. Pöyry)	Previous year (exkl. Pöyry)
Turnover per employee	€100k (€101k)	€102k (€103k)
Profit after financial items per employee	€4.1k (€6.4k)	€4.3k (€5.7k)
Balance sheet total per employee	€67.1k (€63.0k)	€66.4k (€61.6k)

The turnover for the 30 largest groups in 2016 decreased by 2% to €2,077 million (€2,124 million in 2015). The average number of employees was 20,790 (20,870). The turnover per employee was €100,000 (€102,000). The profit before tax was €4,100 per employee (€4,300 the previous year). The profit margin for the 30 largest groups fell to 4.2% (4.3%). The average balance per employee was €67,100 (€66,400).

THE PROFIT MARGIN (PRE TAX) FOR THE 300 LARGEST GROUPS IN EUROPE INCREASED TO 5.3% IN 2016, FROM 4.3% THE YEAR BEFORE.

From inside the glass dome in the Berlin Reichstag building.

INTERNATIONAL DEVELOPMENT

The sector in Europe has recovered and the market situation has got better during 2016 and 2017. This has contributed to improved profitability, which is also apparent in the average profit margin (profit/loss after financial items) for the 300 largest companies in the sector. It increased to 5.3% in 2016, compared with 4.3% in 2015.

The 300 largest engineering consultancies and architectural firms in Europe employ just over half a million (544,743) personnel and the ten largest groups represent one third (182,718) of them. The sector, which according to Eurostat had a turnover of 350 billion Euros in 2015, has recovered throughout Europe. Profitability has improved during 2016 and 2017. Profit margin, profit/loss after financial items, increased to 5.3% in 2016 from 4.3% the year before. Average profit margin increased to 6.1% from 4.9% in 2015. Operating margin also increased, to 6.5% from 5.8% in 2015. However, turnover per employee fell slightly; 121,000 Euros in 2016 against 128,000 Euros the year before. The balance per employee also fell slightly, to 90,000 Euros from 94,000 Euros.

It should, however, be emphasised that the data is not complete. For some companies there are no reliable figures for either turnover or profits. The calculations have been performed with the companies for which figures are available.

Developments during 2016 and 2017

Surveys conducted by EFCA (the European Federation for Consulting Engineers) among its member organisations during the year reinforce the picture of a sector in recovery. It can almost be said that the sector has recovered and stabilised at a European level. The latest report from EFCA (EFCA Barometer Autumn 2017) in November observes that 15 out of the 20 countries participating currently have a satisfactory or good market. Trade organisations in Sweden, Norway, Denmark, Finland, Germany, Belgium, The Netherlands, Luxembourg, Ireland, France, Austria, Switzerland, The Czech Republic, Portugal, Spain, Italy, Greece, Romania, Bulgaria and Turkey took part in the survey.

12 out of 20 countries anticipated an increase in orders during 2018. Nine out of 20 countries thought there would be an increase in staffing and the rest felt the situation would remain unchanged.

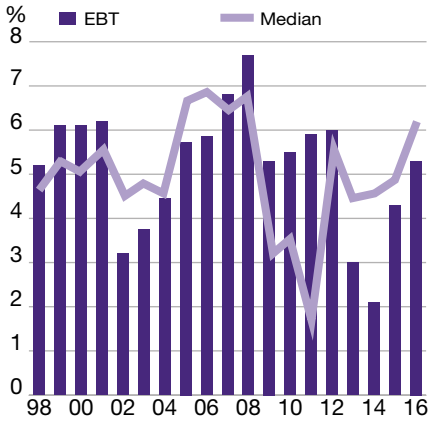
Profitability is also expected to stabilise. Four out of twenty countries thought profitability would improve during 2017, while only one country felt it would deteriorate. For 2018, five countries thought profitability would improve, two felt it would deteriorate and the rest felt the situation would remain unchanged. Considering the improvement in profitability that took place during 2016, this is good news.

Overall, a positive picture emerges of the sector in Europe. Naturally, there are differences between different countries. While the Nordic countries might be moving towards a cooling market in the next few years, the recovery is continuing in Southern Europe. However, companies in different parts of the continent describe similar challenges. Low hourly rates and a skills shortage that is driving up payroll expenses are problems which appear to be common to companies throughout Europe.

Europe's largest groups

Europe's 300 largest groups are headed by the usual (A-) trio of Altran, Arcadis and Alten. Then come the North American giants which are moving towards the top in Europe. The figures for these groups' operations in Europe are somewhat difficult to interpret, but based on annual reports it is usually possible to work out turnover divided into regions. The number of employees has then been calculated. However, consolidation is ongoing

Profit margins: European top 300



The world's top 10

2017	2016	Group	Country	Annual report	Average number of employees	(Previous Year)	Turnover (MEUR)
1	1	AECOM	USA	16	87000	87000	16198.8
2	2	Jacobs Engineering (acquired CH2M) *	USA	16	66800	43800	13690.1
3	3	SNC-Lavalin Group (acquired Atkins) *	Canada	16	53000	36754	8046.2
4	4	WSP Group	Canada	16	36000	34000	4368.7
5	6	Altran Technologies	France	16	29106	25935	2120.1
6	5	Arcadis Group	Netherlands	16	27080	26947	3328.8
7	9	Alten Group	France	16	24000	20400	1748.3
8	7	Worley Parsons Engineering Ltd	Australia	16/17	22800	24500	3549.8
9	12	Stantec Inc.	Canada	16	22000	15200	2944.7
10		Cardno Ltd	Australia	16/17	20000		806.3

In the case of the European firms the average number of employees per year is reported, whereas for the North American firms it is the total number of employees that is reported. Therefore, although the figures are not fully comparable, they at least give an idea of how the European groups stand in a global perspective.

A COMPARISION BETWEEN SOME INTERNATIONAL LISTED CONSULTANCIES. KEY RATIOS PER LATEST REPORTED FISCAL YEAR

Company	Country	**Market value 20171207 MEUR**	Last annual report	Market value last annual report	Turnover MEUR	Average number of employees	Turnover/ employee kEUR	Net profit MEUR	Net profit/ employee kEUR	Net margin %	Market value/ employee kEUR	P/e	P/s
Semcon AB	SE	**84.8**	161231	85.6	182.8	2044	89.4	7.1	3.5	41.9	12.09	0.47	0.47
ÅF AB	SE	**1430.1**	161231	1350.8	1152.2	9133	126.2	75.6	8.3	147.9	17.88	1.17	1.17
SWECO AB	SE	**2264.8**	161231	2342.0	1720.7	14653	117.4	96.8	6.6	159.8	24.19	1.36	1.36
Rejlerkoncernen AB	SE	**89.4**	161231	109.9	243.5	2027	120.1	1.4	0.7	54.2	79.42	0.45	0.45
Eurocon Consulting AB	SE	**32.9**	161231	21.6	22.3	204	109.3	1.6	7.7	105.9	13.79	0.97	0.97
Hifab Group AB	SE	**18.7**	161231	19.8	49.4	210	235.4	0.6	2.8	94.4	34.25	0.40	0.40
HiQ	SE	**346.0**	161231	350.2	172.6	1573	109.7	16.8	10.7	222.7	20.85	2.03	2.03
Pöyry Group Oy	FIN	**280.1**	161231	197.0	529.6	5387	98.3	-1.5	-2.7	36.6	-13.78	0.37	0.37
Etteplan OY	FIN	**205.6**	161231	136.9	183.9	2545	72.3	0.8	2.9	53.8	18.40	0.74	0.74
Multiconsult AS	NOR	**197.9**	161231	295.5	3217.4	2344	1372.6	22.3	9.8	126.0	12.83	0.09	0.09
WYG PLC	UK	**30.3**	170331	73.4	171.9	1568	109.6	0.2	1.7	46.8	27.02	0.43	0.43
RPS Group	UK	**652.5**	161231	551.2	625.0	5099	122.6	2.6	5.6	108.1	19.25	0.88	0.88
Aukett Swanke Group plc	UK	**5.7**	160930	7.5	23.8	267	89.1	0.1	3.3	28.3	8.58	0.32	0.32
Ricardo plc	UK	**515.8**	170631	471.5	371.1	2728	136.0	2.6	10.4	172.8	16.66	1.27	1.27
Arcadis	NL	**1603.4**	161231	1130.3	3328.8	27080	122.9	6.7	2.4	41.7	17.62	0.34	0.34
Fugro	NL	**943.8**	161231	1177.7	1775.9	10530	168.6	-32.2	-29.3	111.8	-3.81	0.66	0.66
Bertrandt AG	D	**948.3**	160930	979.0	992.0	12912	76.8	6.6	4.9	75.8	15.39	0.99	0.99
EDAG Engineering	CH	**360.0**	161231	390.0	715.0	8270	86.5	1.9	2.2	47.2	21.61	0.55	0.55
Alten Group	FR	**2294.2**	161231	2216.8	1748.3	24000	72.8	11.7	4.7	92.4	19.72	1.27	1.27
Altran Technologies	FR	**2464.4**	161231	2397.1	2120.1	29106	72.8	12.7	4.2	82.4	19.57	1.13	1.13
Assystem S.A.	FR	**649.3**	161231	559.8	955.6	12422	76.9	3.3	2.5	45.1	17.77	0.59	0.59
S II A.A.	FR	**438.0**	170331	378.2	438.9	6775	64.8	2.3	3.3	55.8	16.88	0.86	0.86
Sogeclair S.A.	FR	**129.5**	161231	69.7	136.5	1398	97.7	0.6	4.2	49.9	11.86	0.51	0.51
AKKA Technologies S.A.	FR	**908.2**	161231	680.6	1122.7	13252	84.7	1.3	1.0	51.4	53.51	0.61	0.61
Soditech S.A.	FR	**2.5**	161231	1.9	5.4	69	77.5	0.0	6.7	28.0	4.21	0.36	0.36
INYPSA	ES	**28.1**	161231	29.6	19.2	195	98.7	1.2	58.6	151.8	2.59	1.54	1.54
Ansaldo STS	IT	**2360.0**	161231	2368.0	1327.4	3951	336.0	8.1	19.6	599.3	30.53	1.78	1.78
Average Europe							**117.0**		**2.6**	**96.5**		**0.82**	**0.82**
Tetra Tech, inc.	US	**2400.5**	170930	2314.5	2450.2	16000	153.1	12.3	6.6	144.7	2.58	0.94	0.94
Hill International, Inc	US	**258.4**	161231	200.7	463.5	3330	139.2	-0.8	-2.1	60.3	-3.40	0.43	0.43
AECOM Technologies, Inc.	US	**5341.0**	170930	5161.5	16198.8	87000	186.2	35.3	3.5	59.3	2.00	0.32	0.32
Jacobs Engineering	US	**7251.5**	170930	6242.3	8924.4	44800	199.2	30.3	5.8	139.3	2.82	0.70	0.70
SNC-Lavalin, Inc.	CAN	**5762.8**	161231	5950.2	5675.5	34952	162.4	26.6	5.0	170.2	5.17	1.05	1.05
Stantec, Inc.	CAN	**2667.1**	161231	2649.9	2944.7	22000	133.8	13.6	4.1	120.4	4.51	0.90	0.90
WSP Global	CAN	**4060.9**	161231	3121.0	4368.7	36000	121.4	20.7	3.8	86.7	22.89	0.71	0.71
Average North America							**168.0**		**4.3**	**113.7**		**0.72**	**0.72**
Cardno Ltd	AU	**437.4**	170630	395.0	806.3	20000	40.3	-2.0	-0.7	19.7	-4.56	0.49	0.49
Worley Parsons	AU	**230.6**	170630	1899.4	3549.8	22800	155.7	3.5	1.0	83.3	12.68	0.54	0.54

The currencies used to calculate the figures in the table above represent the average exchange-rates of the period Jan–Nov 2017, as below:

1 NOK = 1,0349 SEK 1 CAD = 6,5790 SEK 1 USD = 8,5494 SEK
1 AUD = 6,5537 SEK 1 EUR = 9,6074 SEK 1 GBP = 10,9674 SEK

The figures in the table above are presented according to the respective companies' annual reports, any acquisitions made during the current year are not included.

THE TOP 50 EUROPEAN ARCHITECTURAL GROUPS

> THE (PRE-TAX) PROFIT MARGIN FOR THE TOP 300 GROUPS IN EUROPE INCREASED TO 5.3%, FROM 4.3%.

2017	2016	Group	Country	Annual Report	Average number of employees	(Previous year)	Turnover MEUR
1	2	Foster & Partners Ltd	England	16/17	1480	1284	234.2
2	1	AEDAS Architects Group *	England	16/17	1400	1450	
3	3	BDP Building Design Partnership	England	16	903	851	94.2
4	4	Rambøll Architects & Urban Planning *	Denmark	15	835	700	104.9
5	6	White Architects	Sweden	16	682	632	92.9
6	8	ATP Architects Engineers	Austria	16	650	600	69.7
7	5	SWECO Architecs	Sweden	16	629	700	86.8
8	11	Broadway Malyan Ltd	England	16	612	530	57.9
9	10	Tengbom group	Sweden	16	603	558	65.4
10	7	AIA Life Designers*	France	16	600	600	
11	13	IDOM (Architecture)	Spain	16	510	512	53.0
12	12	Gmp Architekten von Gerkan, Marg und Partner *	Germany	16	500	515	
13	16	Arkitema K/S	Denmark	16	466	450	48.6
14	14	Benoy Limited (Architects)	England	16	461	508	55.0
15	22	Grimshaw Architects Llp	England	16/17	435	324	67.7
16	17	Herzog & de Meuron Architekten AG *	Switzerland	16	380	420	
17	21	Burckhardt+Partner AG *	Switzerland	16	380	335	
18	18	Zaha Hadid Architects	England	15/16	379	402	53.1
19	23	HPP Architects	Germany	16	377	360	45.5
20	28	Sheppard Robson *	England	15/16	374	306	23.1
21	19	LINK Arkitektur AS	Norway	16	372	353	41.7
22	29	Chapman Taylor LLP	England	16/17	350	318	41.0
23	20	HENN Architekten	Germany	16	341	350	48.0
24	27	Barton Willmore Group	England	15/16	329	306	39.9
25	31	Stride Treglown Group PLC	England	16	321	287	25.1
26	26	INBO Architects/Consultants *	Netherlands	16	308	308	
27	39	Purcell Architects	England	16	302	241	24.3
28	41	Arup associates, architects *	England	16	301	226	
29	30	Allies and Morrison Architects Ltd *	England	16	300	300	
30	34	BIG / Bjarke Ingels Group *	Denmark	16	300	280	33.6
31	25	C.F. Møller architects	Denmark	16	297	309	42.3
32	45	PRP Architects Ltd	England	16	292	216	21.7
33	35	Heinle, Wischer und Partner *	Germany	16	280	270	28.2
34	32	Henning Larsen Architects	Denmark	16/17	275	281	36.1
35	51	Pascall+Watson	England	16	271	318	46.6
36	44	Scott Brownrigg Architects	England	16/17	269	217	26.6
37	38	Aukett Swanke Group plc	England	16	267	244	23.8
38	36	IBI Group Europe *	England	16	254	260	24.0
39	37	O.M.A. Office for Metropolitan Architecture *	Netherlands	16	247	247	31.9
40	42	Wilmotte & Associés *	France	15/16	240	225	29.5
41		PE Arkitektur	Sweden	16	237	228	28.6
42	78	Tyréns (acquired Pyramiden & AQ arkitekter) *	Sweden	16	230	104	25.0
43	33	RKW Architekten & Co, KG *	Germany	16	220	280	30.0
44	43	Valode & Pistre *	France	16	220	220	
45	49	HLM Architects	England	15/16	216	190	20.5
46	47	Rogers Stirk Harbour & Partners	England	15/16	204	200	36.8
47	64	UNStudio (Van Berkel En Bos) *	Netherlands	16	200	148	
48	58	MVRDV *	Netherlands	16	199	157	
49	59	Keppie Design	Scotland	15/16	191	152	
50	50	Wilkinson Eyre Architects Ltd	England	16/17	183	181	23.4

and a clear centralisation is underway surrounding the major American and Canadian groups. For example, during the year Jacobs Engineering acquired CH2M, which was eighth largest in the world in 2016, and SNC-Lavallin acquired the British company Atkins, which was tenth largest in 2016. So the era of gigantic deals is not over. It is likely that consolidation and acquisitions will continue throughout the Nordic region, Europe and the world.

Of the Nordic groups of companies, Sweco is still largest (8th in Europe) followed by Ramböll (12th), ÅF (17th), Cowi (23rd), Pöyry (27th) and Norconsult (39th).

World's largest

Aecom remains the (western) world's largest engineering consultancy with around 78,000 employees. With the acquisition of CH2M, Jacobs Engineering is approaching 70,000 employees, and the acquisition of Atkins means that SNC-Lavallin has passed the 50,000 mark in terms of employees. The ten largest groups in the world have some 388,000 employees. This is more than twice as many as in 2007; 176,000. Globalisation and consolidation in the sector have proceeded quickly during the last ten years. It is becoming increasingly international, at the same time as local presence is usually necessary. The sector is divided up into giant groups with global presence, or at any rate a large regional presence, a wide skills base for complex assignments or small niche companies with specialist knowledge or geographic focus. The intermediate layer is becoming ever thinner. It is likely that this development will continue in coming years.

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THE EUROPEAN TOP 300 CONSULTING ENGINEERING AND ARCHITECTURAL GROUPS

2017	2016	Group	Services	Country	Annual report	Average number of employees	(Previous year)	Turnover MEUR	CEO/Managing director
1	2	Altran Technologies	I	France	16	29 106	25 935	2120.1	Dominique Cerutti
2	1	Arcadis Group	MD	Netherlands	16	27 080	26 947	3328.8	Peter Oosterveer
3	3	Alten Group	I	France	16	24 000	20 400	1748.3	Simon Azoulay
4	28	AECOM Europe *	MD	England	16	16 110	5 100	2134.6	Lara Poloni
5	14	Jacobs Engineering Europe *	Env,Enr	England	16	15 500	8 600	2384.4	Robert S. Duff
6	13	WSP Europe	MD	England	16	15 000	10 100	1222.4	Magnus Meyer (Nordics), Mark Naysmith (UK)
7	5	Mott MacDonald Group	MD	England	16	14 926	15 736	1606.4	Keith Howells (Chairman), Mike Haigh (Managing Director)
8	6	SWECO AB (4 acquisitions in Belgium, Norway and Finland) *	MD	Sweden	16	14 832	14 697	1742.2	Tomas Carlsson (CEO), Åsa Bergman (MD Sweden)
9	10	AKKA Technologies S.A	I	France	16	13 252	12 222	1122.7	Maurice Ricci
10	8	Bertrandt AG	I	Germany	15/16	12 912	12 367	992.0	Dietmar Bichler
11	7	ARUP Group	MD	England	16/17	12 806	12 806	1415.4	Gregory Hodkinson (Chairman)
12	9	Rambøll Group A/S	MD	Denmark	16	12 497	10 256	1426.1	Jens-Peter Saul
13	12	Assystem Group S.A	MD	France	16	12 422	11 553	955.6	Dominique Louis
14	52	SNC-Lavalin Europe (acquired Atkins) *	MD	England	16	11 500	2 100	1210.0	
15	11	Fugro N.V	CE	Netherlands	16	10 530	11 960	1775.9	Paul van Riel
16	15	Segula Technologies Engineering Group *	I	France	16	10 000	8 500		Franck Ghrenassia
17	16	ÅF (several acquisitions incl. Edy Toscana, Switzerland) *	I,E,M,Enr	Sweden	16	8 672	8 423	1194.4	Jonas Gustavsson
18	17	Egis Group	MD	France	16	8 300	8 300	1020.0	Nicholas Jachiet
19	18	EDAG Group	I	Germany	16	8 270	7 870	715.0	Jürgen Vogt
20	20	Formel D GmbH *	I	Germany	16	7 000	7 000	255.0	Jürgen Haakmann
21	24	S II S.A	I	France	16/17	6 775	5 793	438.9	Bernard Huvé
22	22	IAV Group	I	Germany	16	6 700	6 500	734.0	Kurt Blumenröder
23	23	COWI Group	MD	Denmark	16	6 475	6 433	798.4	Lars-Peter Søbye
24	19	M+W Group GmbH *	CE/PM	Germany	16	6 144	7 050	3045.6	Wolfgang Büchele
25	21	Royal HaskoningDHV	MD	Netherlands	16	5 902	6 491	621.3	Erik Oostwegel
26	27	SYSTRA Group *	MD	France	16	5 705	5 190	611.6	Pierre Verzat
27	25	Pöyry Group	MD	Finland	16	5 387	5 752	529.6	Martin À Porta
28	29	RPS Group plc	Env	England	16	5 099	4 530	625.0	John Matheson Douglas
29	38	Artelia	PM	France	16	4 900	3 500	520.0	Benoît Clocheret
30		Kiwa Group (Inspecta)	CT	Netherlands	16	4 694	4 373	488.0	Paul Hesselink
31	34	Turner & Townsend Group	PM,QS	England	16/17	4 674	4 034	560.5	Vincent Clancy
32	30	Tractebel Engineering	MD	Belgium	16	4 400	4 400	570.0	Daniel Develay
33	31	TPF Group	MD	Belgium	16	4 200	4 250	254.0	Thomas Spitaels
34	33	Sogeti High Tech *	I	France	16	4 145	4 145		Jean-Pierre Petit
35	36	AYESA	MD	Spain	16	4 065	3 657	240.5	José Luis Manzananares Japón
36	35	Ansaldo STS		Italy	16	3 951	3 772	1327.4	Andrew Barr
37	99	RINA Group (D'Appolonia)	CT/I	Italy	16	3 738	700	398.9	Ugo Salerno
38	43	CH2M Group Europe (fmr Halcrow) *	MD	England	16	3 482	2 800	456.6	Mark Thurston
39	41	Norconsult AS	MD	Norway	16	3 250	3 000	456.3	Per Kristian Jacobsen
40	37	Tebodin, Consultants & Engineers *	MD	Netherlands	16	3 196	3 600	224.8	Niels van Rhenen
41	39	Antea Group	MD	Netherlands	16	3 057	3 377	395.0	Menno Smits & Rob van Dongen
42	40	Capita Property & Infrastructure LTD	MD	England	16	3 018	3 018	291.6	Dave Spencer
43	46	IDOM Group	MD	Spain	16	2 980	2 695	275.9	Luis Rodriguez
44	98	Sigma Group	I	Sweden	16	2 785	734	297.6	Dan Olofsson
45	45	Ricardo plc	I	England	16/17	2 728	2 725	401.9	Dave Shemmans
46	47	TYPSA Group	MD	Spain	16	2 454	2 502	230.1	Pablo Bueno Tomás
47	26	Sener Group *	MD	Spain	16	2 411	2 432	910.7	Jorge Sendagorta Gomendlo
48	53	Etteplan Oy	I	Finland	16	2 407	2 074	183.9	Juha Näkki
49	42	Ineco, Ingeniería y Economía del Transporte SA *	CE	Spain	16	2 401	2 850	206.7	Jesús Silva
50	51	Multiconsult	MD	Norway	16	2 344	2 110	319.7	Christian Nørgaard Madsen
51	48	Iberdrola Ingenieria Y Construccion *	CE,Env,PM	Spain	16	2 300	2 350	276.0	Fernando Bocharán Merino
52	49	PM Group (Project Management Group) *	PM, MD	Ireland	16	2 200	2 200		David Murphy

THE EUROPEAN TOP 300 CONSULTING ENGINEERING AND ARCHITECTURAL GROUPS

2017	2016	Group	Services	Country	Annual report	Average number of employees	(Previous year)	Turnover MEUR	CEO/Managing director
53	67	NIRAS-Gruppen A/S (acquired Alectia)	MD	Denmark	16	2 152	1 404	279.4	Carsten Toft Boesen
54	204	SETEC Group (Setec TPI)	MD	France	16	2 100	2 000	230.0	Grégory Viel, Pierre Vicedo
55	50	Drees & Sommer-Gruppe *	PM	Germany	16	2 000	2 150	334.8	Hans Sommer (chairman)
56	54	Mace Group (consultancy)	PM	England	16	1 987	2 062	261.4	Mark Reynolds
57	44	Semcon AB	I	Sweden	16	1 956	2 795	182.8	Markus Granlund
58	56	ILF Consulting Engineers	MD	Germany/Austria	16	1 943	1 975	216.7	Klaus Lässer
59	57	Rejler group	E,I,CE	Sweden	16	1 939	1 793	243.7	Peter Rejler
60	58	Gleeds *	PM	England	16	1 910	1 723	251.1	Richard Steer
61	55	EPTISA *	MD	Spain	16	1 800	2 000		Luis Villarroya Alonso
62	60	RLE International Gruppe GmbH	I, PM	Germany	16	1 800	1 700	130.0	Ralf Laufenberg
63	68	Tyréns AB (acquired Hilson Moran) *	CE,PM	Sweden	16	1 785	1 372	216.1	Johan Dozzi
64	354	Buro Happold	MD	England	16/17	1 719	1 647	196.3	Roger Nickells
65	59	Ingérop S.A (acquired Rendel)	MD	France	16	1 700	1 700	207.0	Yves Metz
66	61	MWH Europe	MD, Env	England	16	1 698	1 643	207.4	Catherine Schefer
67	81	RSK Group	Env	England	16/17	1 600	1 125	127.9	Alan Ryder
68	62	WYG	MD	England	16/17	1 568	1 596	171.9	Douglas McCormick
69	63	Fichtner Group	Enr, MD	Germany	16	1 538	1 578	281.0	Georg Fichtner
70	69	Combitech AB (acquired Tikab) *	I	Sweden	16	1 502	1 355	186.2	Hans Torin
71	74	Foster & Partners Ltd	A	England	16/17	1 480	1 284		Norman Foster & Matthew Streets
72	66	AEDAS Architects Group *	A	England	16/17	1 400	1 450		Keith Griffiths
73	71	Yuksel Proje Uluslararasi AS *	CE	Turkey	16	1 400	1 350	37.9	Celal Akin
74	73	Obermeyer Planen+Beraten GmbH *	MD	Germany	16	1 400	1 300		Maximilian Grauvogl
75	75	HIQ International AB	I	Sweden	16	1 361	1 270	172.7	Lars Stugemo
76	70	Sogeclair SA	I	France	16	1 338	1 354	136.5	Phillippe Robardey
77	65	Proger SpA	MD	Italy	16	1 300	1 500	125.0	Umberto Sgambati
78	131	EMAY International Engineering & Consultancy *	CE,A	Turkey	16	1 300	500		Mehmet Kaba
79	82	Müller-BBM Holding GmbH	MD	Germany	16	1 255	1 065	160.3	Bittner, Grotz, Hantschk, Ropertz, Schierer & Schröder
80	76	Waterman Group plc	MD	England	16/17	1 223	1 253	102.4	Nick Taylor
81	77	Italconsult S.p.A *	PM	Italy	16	1 200	1 200		Antonio Bevilacqua
82	78	Sweett Group (acquired by Currie & Brown)	PM	England	15/16	1 176	1 176	67.7	Douglas McCormick
83	72	Safege Consulting Engineers	Env,S,CE	France	16	1 150	1 300	105.2	Annelise Avril
84	79	SLR Group (SLR Management)	Env	England	15/16	1 138	1 151	128.5	Neil Penhall
85	80	Movares Group BV	CE,E	Netherlands	16	1 100	1 140	133.0	Frits Immers
86	86	MCA Groupe *	I	France	16	1 100	950	84.0	Pierre Ebenstein
87	87	Tauw Group bv	MD	Netherlands	16	1 037	923	109.3	Annemieke Nijhof
88	83	Gruner Ltd. (Gruner-Gruppe AG) *	MD	Switzerland	16	1 019	1 035	120.4	Flavio Casanova
89	84	Asplan Viak group	MD	Norway	16	984	985	117.3	Øyvind Mork
90	85	Witteveen+Bos Consulting Engineers	MD	Netherlands	16	952	973	137.1	Sluis Leeuw, van der Biezen
91	226	Dorsch Gruppe *	MD	Germany	16	913	200	95.7	Olaf Hoffmann
92	91	BDP Building Design Partnership	A	England	16	903	897	94.2	John McManus
93	88	FERCHAU Aviation *	I	Germany	15	900	900	70.0	Harald Felten
94	92	AREP Groupe	MD	France	16	900	850	103.0	Thierry Chantriaux
95		AGAP2 (Hiq Consulting)	I	France	16	863	800	76.2	Franck Deschodt
96		Ekium Group	MD	France	16	850		80.0	Philippe Lanoir
97	97	Projektengagemang AB (acquired HJR Projektel & Konkret Rådgiv. Ing.) *	PM	Sweden	16	843	735	122.2	Ped Hedebäck
98	95	Amstein + Walthert AG *	E,M	Switzerland	16	820	800		Christian Appert
99	90	Neste Jacobs Group	I	Finland	16	802	855	153.9	Jarmo Suominen
100	135	Hoare Lea & Partners *	E,M,Enr	England	16	800	482		Brian Clargo (Partner) mfl.
101	116	Elomatic Group Oy	I,MD	Finland	16	777	587	54.7	Patrik Rautaheimo
102	96	IV-Groep b.v. *	MD	Netherlands	16	761	804	114.9	Rob van de Waal
103	357	Golder Associates Europe *	Env,CE, PM,Enr	England	16	751		116.4	Anna-Lena Öberg-Högsta
104	104	ÚJV Řez, a. s.	Enr,I	Czech Republ.	16	750	665	56.8	Karel Křížek

2017	2016	Group	Services	Country	Annual report	Average number of employees	(Previous year)	Turnover MEUR	CEO/Managing director
105	103	GETINSA-PAYMA S.A	CE, Env, PM	Spain	16	710	668	46.2	Pedro D. Gómez González
106	108	Peter Brett Associates	MD	England	15/16	700	603	69.6	Paul Reilly
107	235	GOPA-Consultants Group *	PM,I,Env	Germany	16	700	195	168.3	Martin Güldner, Berthold Averweg
108	100	Cundall Johnston & Partners *	CE,S,Env	England	16	685	795	51.6	Tomás Neeson
109	106	White Architects	A,PM, Env	Sweden	16	682	632	92.9	Monica von Schmalensee
110	119	GHESA Ingeniería y Tecnología	CE,Env,Enr	Spain	16	682	563	78.7	Javier Perea
111	137	FCG Finnish Consulting Group	MD	Finland	16	673	477	79.0	Kimmo Kasteenpohja
112	117	Granlund Oy	E,M	Finland	16	666	577	61.7	Pekka Metsi
113	113	ATP Architects Engineers	A,CE,E,M	Austria	16	650	600	69.7	Christoph M. Achammer
114	107	Emch + Berger Gruppe *	MD	Switzerland	16	630	610	85.0	Urs Schneider
115	114	BG Bonnard & Gardel Groupe SA (BG Consulting Engineers)	MD	Switzerland	16	628	598	84.5	Pierre Kohler
116	115	INROS LACKNER	MD	Germany	16	628	593	50.5	Uwe Lemcke
117	101	CSD Group	Env, PM, CE,S, E	Switzerland	16	624	607	78.3	Jean-Pascal Gendre
118	122	Broadway Malyan Ltd	A	England	16/17	612	559	57.9	Gary Whittle
119	121	Tengbom group	A	Sweden	16	603	558	65.4	Johanna Frelin
120	126	Ingenieurbüro Dipl.- Ing. H. Vössing GmbH	MD	Germany	16	601	512	49.7	Rudolf Vienenkötter, Heiko Borchardt
121	94	Prointec S.A *	MD	Spain	16	600	800	42.0	Jordi Dagá Sancho
122	109	AIA Life Designers*	CE,A	France	16	600	600		Christian Bougeard
123	110	Gauff Gruppe *	MD	Germany	16	600	600	76.0	Gerhard H. Gauff
124	112	Basler & Hofmann AG *	MD	Switzerland	16	600	600		Dominik Courtin & Jürg Büchler
125	134	Orbicon A/S	MD	Denmark	16	579	486	70.2	Per Christensen
126	125	HPC AG	Env,PM,CE	Germany	16	574	512	54.0	Josef Klein-Reesink, Andreas Kopton
127	118	Deerns Consulting Engineers BV	E, M, PM, I	Netherlands	16	554	569	64.0	Jan Karel Mak
128	120	PCG-Profabril Consulplano Group	MD	Portugal	16	554	559	38.7	Ilidio de Ayala Serôdio
129	129	MOE A/S	MD	Denmark	16	554	506	71.4	Christian Listov-Saabye
130	358	Pell Frischmann Group	MD	England	16	538		29.1	Sudho Prabhu
131	128	Krebs und Kiefer Beratende Ingenieure	CE,S, PM	Germany	16	532	462	47.6	Jan Akkermann
132	133	SITO Group Oy	CE, Env, PM	Finland	16	525	495	50.1	Tapio Puurunen
133	124	CDM Smith Europe GmbH *	CE, Env	Germany	16	513	513	50.0	Hans Martin Gaus (chairman)
134	138	Knightec AB	I	Sweden	16/17	503	474	50.6	Dimitris Gioulekas
135	89	ABMI-groupe S.A *	I	France	15	500	900	70.0	Philippe Chatron
136	123	Gmp Architekten von Gerkan, Marg und Partner *	A	Germany	16	500	515		Meinhard von Gerkan,Volkwin Marg
137	132	Fairhurst *	MD	Scotland	16	500	500		Robert McCracken
138	136	Wardell Armstrong LLP *	MD	England	16/17	480	480		Keith Mitchell
139	142	Clafis Engineering *	I	Netherlands	16	480	450		Lambert Jonker
140	164	JBA Group Limited	CE, Env	England	15/16	469	413	31.1	
141	383	Ridge And Partners Llp	CE,A	England	16	469	411	31.1	Adrian O'Hickey
142	143	Arkitema K/S	A,PM	Denmark	16	466	450	48.6	Peter Hartmann Berg
143	127	Benoy Limited (Architects)	A	England	16	461	508	55.0	Tom Cartledge
144		Worley Parsons	I	England	16	460			Alan Gordon
145	141	Pick Everard Ltd *	MD	England	16	450	450		Duncan Green
146	140	Citec Group	I, Env	Finland	16	445	456	48.3	Martin Strand
147	144	PBR Planungsbüro Rohling AG *	MD	Germany	16	440	435	48.4	Heinrich Eustrup
148	146	Rapp Gruppe	MD	Switzerland	16	440	440	59.5	Bernhard Berger
149	167	Grimshaw Architects Llp	A	England	16/17	435	406	67.7	Jolyon Brewis
150	151	Structor group	CE,PM	Sweden	16	433	391	70.8	Fladvad, Hulthén, Texte
151	145	Assmann Beraten + Planen GmbH	MD	Germany	16	429	429	31.5	Peter Warnecke / Martin Fecke
152	139	A-Insinöörit Group	S, CE, PM	Finland	16	427	466	54.2	Jyrki Keinänen
153	180	Wise Group Finland Oy	CE	Finland	16	427	293	42.5	Aki Puska

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THE EUROPEAN TOP 300 CONSULTING ENGINEERING AND ARCHITECTURAL GROUPS

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154	111	Acciona Ingenieria Sa *	I	Spain	16	425	600	91.9	Pedro Martínez
155	157	Bengt Dahlgren AB	M,Enr	Sweden	16	414	364	51.7	no CEO
156	149	Amberg Group *	CE,S,PM	Switzerland	16	400	400		Felix Amberg
157	150	Opus Joynes Pike (Opus International) *	CE,S,Env	England	16	400	391	39.7	David Prentice
158		Hill International Europe *	CE,PM	England	16	400		37.1	
159	156	Steer Davies Gleave Ltd	CE	England	15/16	382	370	43.3	Hugh Jones
160	147	Herzog & de Meuron Architekten AG *	A	Switzerland	16	380	420		Pierre de Meuron; Jacques Herzog
161	165	Burckhardt+Partner AG *	A	Switzerland	16	380	335		Philipp Bruhlmeier
162	148	Zaha Hadid Architects	A	England	15/16	379	402	53.1	Zaha Hadid, Patrik Schumacher
163	168	HPP Hentrich-Petschnigg & Partner (HPP Architects)	A	Germany	16	377	360	45.5	Joachim H. Faust, Gerhard G. Feldmeyer
164	175	Sheppard Robson *	A	England	15/16	374	306	23.1	Andrew German
165		Holinger AG	CE	Switzerland	16	373	346	42.9	Peter Rudin
166	158	DOLSAR Engineering Inc. Co.	PM, CE, Env, E, M, MD	Turkey	16	371	352	5.1	H. Îrfan Aker
167	166	Verkís hf	MD	Iceland	16	364	329	49.7	Sveinn Ingi Ólafsson
168	153	Insta Automation Oy	I	Finland	16	358	378	60.0	Timo Lehtinen
169	170	ABT Holding BV	MD	Netherlands	16	357	313	41.4	Gerard Doos, Rudi Roijakkers
170	176	Curtins Group	CE,PM	England	16	351	303	31.2	Rob Melling
171	177	Chapman Taylor LLP	A	England	16/17	350	318	41.0	Chris Lanksbury
172	197	NET Engineering S.p.A	MD	Italy	15	350	256	24.0	Giovanni Battista Furlan
173	205	Geo	I	Denmark	16	350	240	27.4	Kim Silleman
174	284	Dansk Ingeniørservice A/S	I	Denmark	16	350	143	43.6	Michael Gadeberg
175	163	HENN Architekten *	A	Germany	16	341	350	48.0	Gunter Henn (CEO), Martin Henn, Stefan Sinning, Frank Hoffmeister
176	188	Bjerking AB	CE,M	Sweden	16	332	274	45.9	Anders Wärefors
177	174	Barton Willmore Group	A,PM	England	15/16	329	306	39.9	Stephen Toole
178	171	BAC Engineering Consultancy Group *	MD	Spain	17	325	310	17.5	Joan Franco Poblet
179	182	Stride Treglown Group PLC	A	England	16	321	307	25.1	Darren Wilkins
180	152	Hifab Group AB	PM	Sweden	16	320	390	49.4	Patrik Schelin
181	155	GPO Ingenieria, S.A.	MD	Spain	16	320	374	22.4	Xavier Montobbio
182	257	Bartels Engineering B.V. *	CE,S,PM	Netherlands	16	311	166		Taco Klevering, Pieter van Boom
183	179	Aveco de Bondt BV (acquired Wareco)*	CE	Netherlands	15	310	300		Gerrit Paalman
184	173	INBO Architects/Consultants *	A,PM	Netherlands	16	308	308		Aaron Bogers
185	154	Vahanen Group Oy	CE	Finland	16	306	375	28.1	Risto Räty
186	189	Efla hf	MD	Iceland	16	303	273	49.3	Guðmundur Þorbjörnsson
187	203	Purcell Architects	A	England	16	302	241	24.3	Mark Goldspink
188	169	Kelprojektas *	A	Lithuania	16	301	320	10.7	Algimantas Medziausis
189	187	BIG / Bjarke Ingels Group *	A	Denmark	16	300	280	33.6	Sheela Maini Søgaard
190	178	Allies & Morrison Architects Ltd *	A	England	16	300	300		Bob Allies
191		Lombardi SA *	CE,PM	Switzerland	16	300			Roger Bremen
192	172	C.F.Møller architects	A	Denmark	16	297	309	42.3	Klaus Toustrup
193	200	O.M.A. Office for Metropolitan Architecture *	A	Netherlands	16	295	247	31.9	Rem Koolhaas
194	219	PRP Architects Ltd *	A	England	16	292	216	21.7	Neil Griffiths
195		SALFO & Associates SA		Greece	16	292	217	24.4	Ioannis Foteinos
196	195	3ti Progetti	CE	Italy	16	288	262	25.2	Alfredo Ingletti
197	181	Mannvit hf.	MD	Iceland	16	282	290	47.8	Jón Már Halldórsson
198	162	IPROconsult GmbH *	CE, Env, A	Germany	15/16	282	350	19.6	Lutz Junge
199	185	Steinbacher-Consult GmbH *	CE, PM	Germany	16	280	280		Stefan Steinbacher
200	191	Heinle, Wischer und Partner	A,PM	Germany	16	280	270	28.2	T. Behnke, H. Chef-Hendriks, A. Gyalokay, T. Heinle, M. Kill, J. Krauße, C. Pelzeter, E.Schultz
201		IUB Engineering AG *	CE,PM	Switzerland	16	280			Urs Müller
202	183	Henning Larsen Architects	A	Denmark	16/17	275	281	36.1	Mette Kynne Frandsen
203	193	Planungsgruppe M+M AG , PGMM *	E,M,PM, Enr	Germany	16	275	265	28.0	Hermann Ott

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204	159	Insinööritoimisto Comatec Group	I, Enr	Finland	16	273	350	19.3	Aulis Asikainen
205	250	Pascall+Watson	A	England	16	271	318	46.8	Steve West
206		HaCon	I,CE	Germany	16	270		42.0	Michael Frankenberg
207	218	Scott Brownrigg Architects	A	England	16/17	269	279	26.6	Darren Comber
208	201	Aukett Swanke Group plc	A	England	15/16	267	244	23.8	Nicholas Thompson
209	194	WTM Engineers	MD	Germany	16	258	263	26.0	Karl Morgen
210	198	DRI upravljanje investicij (DRI Investment Management) *	PM	Slovenia	16	256	254	17.3	Jurij Kač
211	209	IVL Svenska Miljöinstitutet	Env,Enr	Sweden	16	255	232	30.7	Tord Svedberg
212	196	IBI Group Europe *	A	England	16	254	260	24.0	Paul Hewes
213	199	Dps Engineering *	MD	Ireland	15	253	253	109.3	Frank Keogh
214	192	HR Wallingford Group Ltd *	CE, Env,I	England	15/16	251	269	25.6	Bruce Tomlinson
215	210	ISC Rådgivende Ingeniører A/S	MD	Denmark	16	250	231	29.4	Kjeld Thomsen
216	186	Iproplan Planungsges. Mbh *	MD	Germany	16	250	280		Jörg Thiele
217	221	Heksagon Muhendislik Ve Tasarim A S *	I	Turkey	16/17	250	210		Inan Kirac (chairman)
218		Pini Swiss Engineers SA	CE	Switzerland	16	250			Olimpio Pini
219	190	Z-Dynamics (Infotiv & Combine Engineering)	I	Sweden	16	248	272	23.4	Alf Berntsson (Infotiv), Peter Karlsson (Combine)
220	359	Consulgal Group, SA.	MD	Portugal	16	245		17.2	Rogério Monteiro Nunes
221	202	Avalon Innovation AB	I	Sweden	16	240	242	32.4	Peter Mattisson
222	212	Wilmotte & Associés *	A	France	15/16	240	225	29.5	Jean-Michel Wilmotte
223	130	EBP Ernst Basler & Partner Ltd *	MD	Switzerland	16	239	244	48.9	Daniel Schläpfer
224	207	Deltamarin Oy	I	Finland	16	235	237	23.2	Janne Uotila
225	222	Baur Consult Architekten Ingenieure	MD	Germany	16	235	210		Andreas Baur, Peter Kuhn
226	206	SD Ingénierie Holding SA *	MD	Switzerland	16	232	238		J. D. Girard
227	237	Leonhardt, Andrä und Partner Beratende Ing. GmbH	S	Germany	16	232	194	29.7	Wolfgang Eilzer
228	215	Hjellnes Consult AS	MD	Norway	16	230	223	28.7	Geir Knudsen
229	211	UVATERV Engineering Consultants Ltd. *	MD	Hungary	16	230	228	6.5	Gyula Bretz
230		Sophia Conseil	I	France	16	230		15.0	
231	269	Essiq AB	I	Sweden	15/16	227	153	18.3	Jonas Sohtell
232	208	Pragoprojekt a.s *	CE	Czech Republ.	15	225	234	12.6	Marek Svoboda
233		Romair Consulting	CE	Romania	16	223			Bogdan Boeru
234	184	RKW Architektur + *	A	Germany	16	220	280	30.0	Wojtek Grabianowski
235	217	Valode & Pistre *	A	France	16	220	220		Valode & Pistre
236	229	B+S Ingenieur AG *	MD	Switzerland	16	220	200		Walter Shaufelberger
237	245	Peutz Group bv *	Env,CE, I	Netherlands	16	219	185		J.F.W. Koopmans
238	346	Protacon group Oy	I,E,PM	Finland	16	219	89	21.0	Timo Akselin
239	233	BWB Consulting LTD (The BWB Partnership)	CE,S, Env	England	15/16	217	198	19.9	Steve Wooler
240	240	HLM Architects *	A	England	15/16	216	190	20.5	Christopher Liddle
241	216	Optiplan Oy	MD	Finland	16	214	221	15.7	Pekka Kiuru
242	252	Eltronic A/S	I	Denmark	16	213	175	43.7	Lars Jensen
243	223	Transprojekt Gdanski	CE,A	Poland	16	210	206	2.6	Marek Rytlewski
244	315	Troup Bywaters + Anders *	E,M	England	16	210	120		Peter Anderson
245		IBG B. Graf AG Engineering *	CE	Switzerland	16	210			Reto Graf
246	214	Force Technology Sweden	CE	Sweden	16	207	223	18.0	Per Gelang
247	224	Metroprojekt Praha A.S	MD	Czech Republ.	15	207	205	14.5	David Krása
248	336	Kling Consult Ingenieur GmbH *	CE	Germany	16	207	100		Markus Daffner
249	238	EKJ Rådgivende Ingeniorer A/S	MD	Denmark	16	205	192	26.6	Jørgen Nielsen
250	236	Eurocon Consulting AB	I	Sweden	16	204	195	22.3	Peter Johansson
251	232	Rogers Stirk Harbour & Partners *	A	England	15/16	204	200	36.8	Rickard Rogers
252	160	Temelsu International Engineering Services Inc.*	MD	Turkey	16	200	350		Demir Inözü

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253	230	Politecnica- Ingegneria ed Architettura *	MD	Italy	16	200	200	13.2	Francesca Federzoni
254	249	SGI Consulting SA *	MD	Luxemburg	16	200	180		Laurent Nilles
255	271	JG Ingenieros SA	M,E, Enr, I	Spain	16	200	150	10.7	Josep Túnica Buira
256	280	UNStudio (Van Berkel En Bos) *	A	Netherlands	16	200	148		Ben van Berkel, Caroline Bos
257	267	MVRDV *	A	Netherlands	16	199	157		Winy Maas, Jacob van Rijs, Nathalie de Vries
258	213	Goudappel Coffeng B.V *	MD	Netherlands	16	197	225		Jos van Kleef
259	292	INYPSA Informes y Projectos SA	MD	Spain	16	195	286	19.2	Valentín Estefanell Jara
260		ewp AG Effretikon *	CE	Switzerland	16	194	192	24.5	Benno Singer
261	239	Dopravoprojekt, a.s. *	CE, S, A, PM	Slovakia	14	192	192	17.8	Gabriel Koczkás
262	270	Keppie Design	A	Scotland	15/16	191	152		Peter Moran
263	246	Consat AB	I	Sweden	16	188	184	24.5	Martin Wahlgren
264	272	Price & Myers *	CE	England	16	185	150		Paul Batty m.fl
265	248	Wilkinson Eyre Architects Ltd	A	England	16/17	183	181	23.4	Chris Wilkinson, Jim Eyre
266	234	Metroul S.A.	MD	Romania	16	181	196	19.6	George Rozorea
267	251	Snøhetta AS	A	Norway	16	180	180	16.5	Frydenlund, Molinar, Greenwood
268	254	ELU Konsult AB	S,CE	Sweden	16/17	180	174	35.2	Charlotte Bergman
269	264	i3tex AB	I	Sweden	16	180	159	17.2	Ulf Aiff
270	384	Bureau d'études Greisch *	CE,S,A,PM	Belgium	16	180			Vincent deVille de Goyet
271		HHM Gruppe (Hefti, Hess, Martignoni)*	E,Enr	Switzerland	16	180			Urs von Arx
272	256	Coplan AG	I	Germany	16	178	170	14.7	Martin Steger
273	225	OTE Ingénierie SA (Omnium Technique Européen)	MD	France	16/17	177	176	20.2	Patrick Lullin
274	266	TCPM (TC Project Management B.V)	I	Netherlands	16	176	158	13.7	Rudie Veenendaal
275		Dr. Eicher+Pauli AG *	CE,Enr	Switzerland	16	175			Dieter Többen
276	161	Technital SpA	CE	Italy	16	174	350	32.2	Alberto Scotti
277	242	FASE-Estudos e Projectos S.A	MD	Portugal	16	173	178	10.1	Manuel Quinaz
278	244	Forsen Projekt Partner	PM	Sweden	16	170	185	26.7	Bengt Johansson
279	255	Destia Design *	CE	Finland	15	170	170	20.0	Heidi Erha
280	279	Advin B.V. - Adviseurs en Ingenieurs	MD	Netherlands	16	170	149	22.6	Ralph Henderix
281		SC Search Corporation	CE	Romania	16	170			Michael M. Stanciu
282		TBF + Partner AG	CE,PM	Switzerland	16	170		21.7	Thomas Vollmeier
283	263	PDM Group (Pdm Corporate Management Services B.V.)	I	Netherlands	16	168	159	15.2	Hubert Mesterom
284	253	IBE D.D	MD	Slovenia	16	167	174	12.4	Uroš Mikoš
285	285	Dr Ing A Aas-Jakobsen AS	CE, PM	Norway	16	163	142	80.8	Trond A. Hagen
286	243	UTIBER LTD	CE,PM	Hungary	16	162	186	0.0	György Lakits
287	260	FS Dynamics AB	I	Sweden	16/17	160	161	16.7	Ulf Mårtensson
288	261	Progetto CMR *	A	Italy	16	160	160		Massimo Roj
289	262	Jaspers-Eyers Architects *	A	Belgium	14	160	160		John Eyers & Jean-Michel Jaspers
290	388	Prokon Muhendislik Ve Musavirlik A S (Prokon Engineering Ltd) *	MD	Turkey	16	160		9.1	Hasan Özdemir, Ismail Salici
291	392	Henry J. Lyons Architects *	A	Ireland	16	160			Richard Doorly
292	227	Consitrans S.R.L.	CE,S,Env,PM	Romania	16	159	200	3.1	Eduard Hanganu
293	301	EPR Architects Group Ltd *	A	England	15/16	159	129	14.0	Stuart Lowther
294	273	Mecanoo Architecten	A	Netherlands	16	158	150	16.0	Francine Houben, Aart Fransen & Peter Haasbroek
295	298	Semrén Månsson Arkitektkontor AB	A	Sweden	16/17	156	131	16.6	Magnus Månsson, Anders Erlandsson
296	241	Frankham Consultancy Group	MD	England	15/16	155	188	13.2	Steven Frankham
297	268	CES Consulting Engineers Salzgitter GmbH *	MD	Germany	16	155	155		Ralf Meyerhoff
298	287	Clancy Consulting	MD	England	16/17	155	141	13.0	Alan Bramwell
299	274	AS Architecture-Studio *	A	France	16	150	150		Laurent Fischer & Jean-Francois Bonne
300	275	Studio Altieri S.p.A *	CE,A	Italy	16	150	150		Francesco Viero

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The new city block Vallastaden in Linköping.

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