A REPORT FROM THE SWEDISH FEDERATION OF CONSULTING ENGINEERS AND ARCHITECTS

DECEMBER 2016

SECTOR REVIEW

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

Svenska Teknik & Designföretagen

almega

KEY FIGURES 2015:

The sector had a turnover of SEK 81 billion, foreign subsidiaries included.

The sector had a turnover in Sweden of SEK 65 billion.

The sector employed 70 000 personnel, foreign subsidiaries included.

The sector employed 55 000 personnel in Sweden.

The sector consisted of some 11100 companies in Sweden.

The turnover per employee was in total SEK 1158 000, foreign subsidiaries included

The turnover per employee in Sweden was SEK 1186 000

The average profit margin was 5.8 %

The average operating margin was 6.0 %

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 in Norway, SKOL and ATL (Architectural association) 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 2015. The remaining firms have split financial years. In most cases, we have received their annual reports for 2015/16. 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 2014/15. For the sake of simplicity, we refer to the compiled figures that applied for 2015.

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 1,500 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), Klas Persson (Sigma), Jannice Steijner Johansson (Tengbom), Per-Arne Gustavsson (Projektengagemang), Magnus Meyer (WSP) and Johan Dozzi (Sweco) for their contributions to the report in interviews and introduction.

Cover photo:

The new architectural school at the Royal Institute of Technology in Stockholm, designed by Tham & Videgård architects

Photo: Åke E:son Lindman

Swedish Federation of Consulting Engineers and Architects

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

GROWTH AND TRANSFORMATION

When 2016 is to be summed up, certain words and formulations will almost certainly be used.

Those of us who represent the Swedish Federation of Consulting Engineers and Architects will hear just as many personal points of view on the year that has gone as we have member firms.

Some of our firms see clear signs of overheating. Construction is in progress more than ever, and the plans for the future are, to say the least, aggressive. Both housing and infrastructure need to be constructed on a large scale. The need for innovation and development of the industry is acute in many places. Regardless of which sector you work near, the competence of the knowledge-intensive firms is in enormous demand.

Other firms point out that we constantly need to wrestle with our surroundings and a policy that does not really understand what our companies do. The change from a traditional industrial society into a modern service society has been going on for a long time, but 2016 has offered a considerable amount of resistance from several quarters. The regulations are failing to keep up with these changes. The will and direction of the policy can sometimes be questioned. But the transformation into a modern business community, in which knowledge-intensive services play a major role, is not only desirable and natural but also unavoidable.

It is in other words sometimes wine and sometimes water. Important tasks lie ahead of the sector companies and representatives – our company has a key role to play in creating the smart and innovative society.

In this year's Sector Review, we summarise not only the year that has passed and the developments within the sector. We try also to look ahead in order to better understand what is lying in wait around the corner.

I hope that both these perspectives increase the understanding for a sector which, based on knowledge, curiosity, and the power of change, will take increasing space in society and the business community during the coming years.

FIVE CURRENT TRENDS IN THE SECTOR

1 COMPLEX SOLUTIONS REQUIRE INTERDISCIPLINARY RESOURCES

MODERN SOCIETY is becoming increasingly complex, and community development projects require growing resources. Digitalisation has driven development: technical development, new business models, greater specialisation and an increasingly powerful globalisation.

The range of services offered by engineering and architectural firms will therefore be increasingly broad. Good and intelligent solutions to difficult problems require cooperation, in which many expert areas together generate one or more answers. Larger teams and groups have to be established in order to share the work-load. In many companies, behavioural scientists, sociologists, IT developers, geographers and many others are now taking a place beside the more traditional professional roles.

It will be increasingly important to weave together various competences into an invitation that is not owned by one particular individual. Ultimately, the brand name of the company or the organisation will be more important than the different parts and the individual employees.

The soul of our sector will always be focused on the knowledge of engineers and architects. But we are in the process of broadening the concept and adding further dimensions.

It is also creating a new corporate culture. When different skills are woven into the traditional engineer and architect organisation, working forms and interaction are developed between the individuals. A larger organisation manages within its own walls to take on larger assignments, and to hold together the more complex projects.

2 THE WAR ON COMPETENCE

IN STEP WITH THE GROWING NEEDS of society for engineering and architectural know-how, it will become increasingly important to find the right personnel. But the university and institute of education system has not managed to keep up with developments, and the number of graduates from our universities and institutes of technology has failed to increase at the rates. At present there are many players dragging at the new engineers and architects – and not only the private community development or product development engineering firms and architectural offices. The IT sector needs more developers and engineers, for example the vehicle industry, is turning in the direction of new solutions and trying to grab up the same engineers as others. In addition, the buyers' side – for instance municipalities and authorities – often require knowledgeable and experienced planners and architects in order to be able to cope with the housing shortage which is currently so acute.

Companies in advisory professions are doing well in this competition, and STD-företagen members often come high up on the list of desirable companies when it is time for the students to choose an employer.

But the structural problem, where the university and institute of higher education system has not developed in step with the need, will hang over the entire area of community development and our own sector for many years to come. The educational content needs to be adapted to suit the needs of the business community, and that we must also be better at taking advantage of the competence of international students.

3

THE NEW COMPETITION

NEVER BEFORE has competition been so stiff or come from so many different directions as it does today. Today's engineering and architectural firms are meeting entirely new competitors – competitors who in many cases did not exist at all say 20 to 30 years ago.

In the first instance the competitors come from all over the world. The knowledge that Swedish engineers and architectural firms possess is in many cases cutting-edge, but when the domestic market folds, for example, South European companies, they of course turn their attention to markets with more to do. In addition, large global players want to grow still more and span over as many markets as possible .

Secondly, a growing number of niche companies are appearing on the scene, with cutting-edge skills that are a challenge to existing companies. It is not unusual for this to be driven by new technology and new innovations. In the third place, there is digitalisation to new constellations, where companies are linked together in different ways and can offer increasingly complex products.

It is still true that engineering and architectural firms must be physically close to their clients but above all to the place where the assignment is to be conducted. It is for this very reason that STD-företagen members are located all over the country, in a large number of the country's municipalities, near both large and small buyers. This proximity will also be needed in the future. However, it does not mean that the competition will not be increasingly stiff and more concrete in nature.

4

SOCIAL CHALLENGES IN FOCUS

SEVERAL OF THE LARGE MEGATRENDS that are at the top of the politicians' agenda in almost every country link up with those solutions that engineering and architectural firms can offer. The urbanisation and environmental issues cannot be managed without also using technical and architectonic know-how in community development and urban planning.

The political awareness of this is growing steadily and the interest in including engineering and architectural firms in surveys, on seminars and in planning work is increasing all the time.

Companies within the community development sector are well aware of these enormous challenges, but are at the same time well prepared to find solutions to problems that others cannot come up with. Despite the fact that problems are often extremely complex – or perhaps precisely therefore – knowledge-intensive companies with significant know-how on community development, technology and culture are uniquely suited for not only finding individual solutions but also for taking the lead in formulating future visions for society and the business community.

5

INNOVATIONS AND CONSTANT RENEWAL

IN A STEADILY CHANGING WORLD, companies are rapidly knocked out of business by stiff competition if the range of offers they make to clients is not adapted to new needs and demands. Technical development and community development are at present advancing at a much faster rate than for a very long time. The development of companies follows this often risky but at the same time developmental journey.

It leads to an increased need for risk-taking, a greater focus on innovation and more concentration on leadership that develops and does not merely administer.

It will be important to conduct a dialogue on this development, both with buyers, e.g. the representatives of industry, and with future proprietors. But this dialogue also needs to be held with politicians and authorities who, in different ways, establish frameworks and goal scenarios for public sector development.

LENA HAGMAN, CHIEF ECONOMIST, ALMEGA

SLOW-DOWN DESPITE STRONG DEMAND

Sweden's high rate of growth in GDP of 4.1 per cent in 2015 is being followed by a gradual slowing down to 3.1 per cent this year and to 1.9 per cent next year according to Almega's latest forecast for the Swedish economy.[1] It is primarily investments within construction and service operations – both household and public sector consumption – that will contribute towards growth in GDP this year and next year, even though the growth rate for these sections of the GDP will be lower than in the past.

Almega estimates that the growth rate among the total number of people employed in Sweden will slow down as a consequence of a lack of competence on the labour market, and that unemployment will come down to a lowest point of 6.8 per cent of the labour force in 2017. Since companies have not succeeded in recruiting to the required extent, the working hours per individual employed have increased in 2016. In the long term, this is not the right solution to the problem of personnel shortages.

Behind the slowdown in Sweden's GDP growth lies, on the one hand, historically weak global trading, which is not only the result of low demand but also structural change. During recent years, the pattern of development towards global trade with input goods has come to a standstill, whereas the production is to a higher extent localised to major markets. On the other hand, world trade with services has continued to expand during recent years. From Sweden, the service exports of among other things technical services has increased significantly over the period 2014–2015. Almega assumes that service exports will be maintained over the period 2016-2017 but that they will not make any further upwards moves during this period. This is because the rate of increase in the world market is expected to be historically weak throughout the entire period.

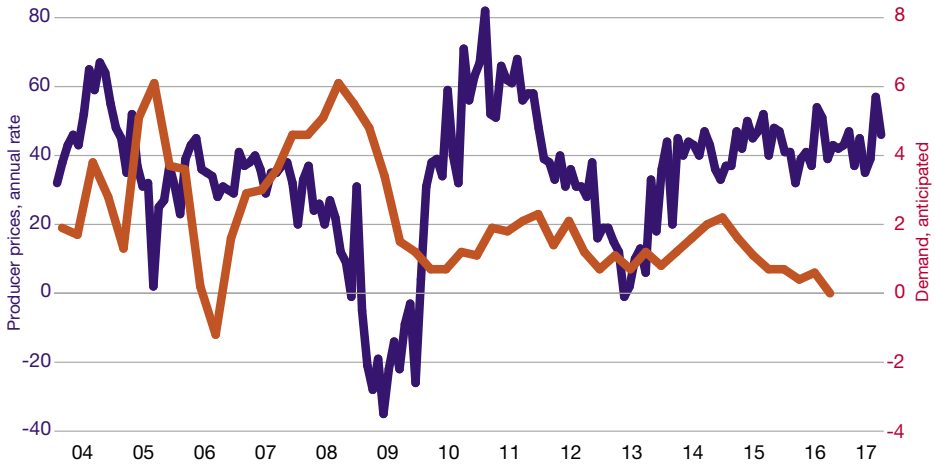
THE DECELERATION of Sweden's growth in GDP during 2016–2017 depends also on an increased lack of capacity within a series of knowledge intensive service sectors. During the course of 2016, the lack of personnel within the private service sector has reached previously noted peak levels during periods of economic boom, which holds back the chances of increasing production. Companies have been forced to turn down involvement in assignments owing to lack of resources. As many as 60 per cent of the member firms of Svenska Teknik&Designföretagen (*the Swedish Federation of Consulting Engineers and Architects*) have been forced to turn down assignments owing to difficulties in recruiting personnel over the past year.

Almega's member firms that belong to the category of corporate services expect an even greater demand during the second half of this year compared with the first half. This includes engineering consultants and architects, who in the latest Konjunkturbarometern (*Economic Barometer*) also show continued optimism as regards demand up until the beginning of next year. Despite this, the production level within corporate services, in which engineering consultants and architects are included, slowed down up to and including the third quarter this year, according to SCB's (*Statistics Sweden's*) Service Production Index. Most developments seem to indicate that the slowing down in corporate services is a result of lack of capacity since the demand remains healthy.

One interesting observation is that the demand from industry for engineering consultancy services has not yet shown any sign of weakening, despite the fact that industrial production decreased during the course of 2016. The expectations of engineering consultants as late as in September concerning the order situation in six months' time were furthermore brighter in comparison with their corresponding expectations in May. This reflects the important role played by industrial consultants in the long-term development of industrial products and competition.

THE DEMAND FOR engineering consultants and architectural services is strong from both industry and the rest of the economy. The upswing during recent years for housing investments has, of course, contributed to the increase in the demand. Almega anticipates that housing investments will increase by 15 per cent in 2016 and by a further 6 per cent next year. Tax increases and amortisation demands that were introduced this year for households that intend to purchase new dwellings are help-

Engineering consultants and architects, demand and sales prices



Source: Konjunkturinstitutet, (National Institute of Economic Research), KI-barometern Statistics Sweden Macrobond

> THE DEMAND FOR ENGINEERING CONSULTANTS AND ARCHITECTURAL SERVICES IS STRONG FROM BOTH INDUSTRY AND THE REST OF THE ECONOMY.

ing to quell the demand for new dwellings. At the same time, there is still a housing shortage, particularly in large cities where the lack of labour is especially marked.

Construction investments are expected to increase by 4.5 per cent this year and by 1 per cent in 2017. Within public infrastructure construction the investment level is decreasing owing to reduced rail investments. Next year however, road construction will serve to boost public investments.

SERVICE PRICES have undergone periods of weak development during recent years. Included in these prices are the producer prices for engineering and architectural services, which in themselves showed a decreasing trend from 2015 despite a strong demand, see the graph. In our latest economic report, we have noted that service prices have in total developed much more weakly during the present economic boom compared with previous booms. Immediately before the financial crisis, service prices had an annual rate of almost 3.5 per cent. So far this year, the corresponding rate lies on a level of only 0.4 per cent. During the third quarter this year, the price of engineering consultancy services also dropped by – 0.3 per cent – compared with the third quarter in the previous year. Companies in the sector are thus experiencing continued heavy pressure on prices, especially within public procurement.

Whereas the demand for engineering consultants and architects is still looking bright, the lack of capacity and harsh competition are still exerting heavy pressure on companies. Since they are being forced to turn down assignments and production growth is being held back, it is also putting the brakes on productivity development. In this way, the cost situation for companies is becoming increasingly strained. The new phenomenon, with historically weak price trends in boom periods, is an ominous cocktail. In order to cope with the pressure, there must be a significant increase in the supply of labour that matches the needs of companies in a long series of service sectors. It should be one of the most important goals in the economic policy to counteract the slow-down in the Swedish economy.

LENA HAGMAN
CHIEF ECONOMIST, ALMEGA
NOVEMBER 2016

[1] See Almega's Economic November 2016.
[2] See Almega's Service Indicator conducted by Novus in August 2016.
[3] See Almega's Service Indicator, September 2016, that can be obtained from www.almega.se.
[4] See Konjunkturinstitutet's (National Institute of Economic Research) Economic Barometer, Novemnber 2016.
[5] See Service Production Index, November 2016.
[6] See Investeringssignalen (Investment Signals), Svenska Teknik&Designföretagen, October 2016.
[7] See Sveriges Byggindustrier, Byggkonjunkturen (Building Economy), No. 3, October 2016.

SECTOR DEVELOPMENT IN 2015 AND 2016

The engineering consultancy, industrial consultancy and architectural sector in Sweden is growing. Just over 11 100 companies had a turnover of SEK 65 billion and employed a workforce of 55 000 in 2015. This is an increase of 8% between 2014 and 2015, measured in terms of both turnover and number of employees. Profitability development in the sector was weaker than anticipated. The average profit margin was 5.8%, a small increase compared with 2014 when it was 5.7%. The operating margin rose to 6.0% from 5.8% during 2014. The turnover per employee increased to SEK 1 186 000, from SEK 1 157 000 in 2014.

Companies in the sector

The sector consists of just over 11 100 companies. 9 700 of these have 0–2 employees, of which 2 500 have no employees. 16 companies have over 500 employees and 10 groups have more than 1 000 employees. The consolidation trend means that the major groups are becoming larger and larger, and that the number of medium-sized companies is decreasing. The sector is defined in this report as being 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 monitoring.

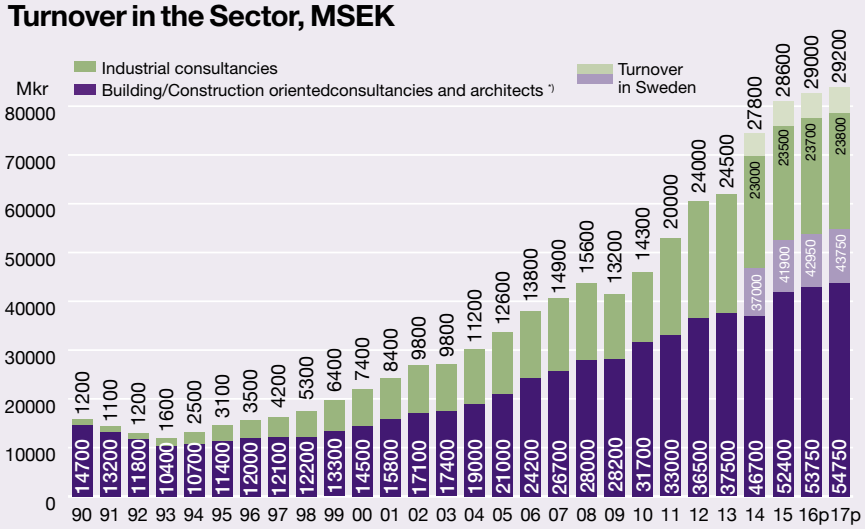
The distribution according to size is as follows:

No. of employees	No. of companies
501 –	16
101 – 500	47
51 – 100	49
21 – 50	156
11 – 20	200
3 – 10	960
0 – 2	9700
	11 128

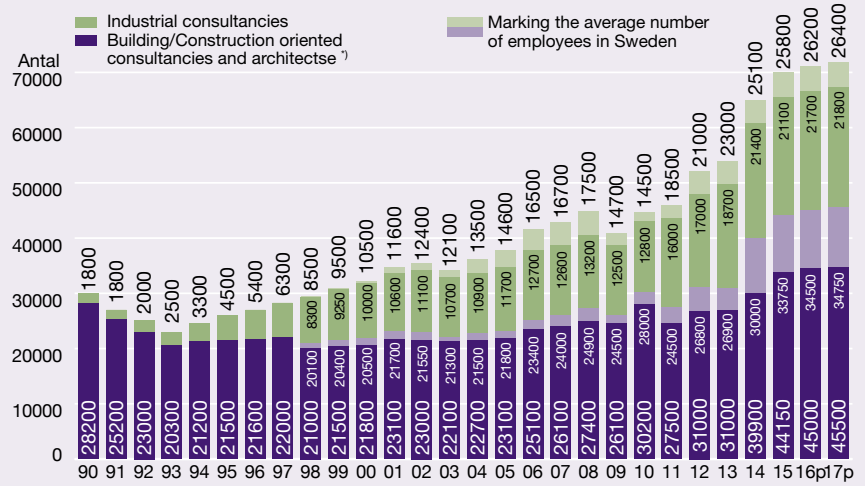
Key Business Ratios

The sector had a total turnover of SEK 65 billion in Sweden during 2015, divided between 11 100 companies that employed 55 000 staff. Including the subsidiaries of Swedish groups abroad, the sector turned over SEK 81 billion and employed 70 000 staff. The subsidiaries of Swedish groups located abroad have thus generates a turnover of 15.5 billion and have almost 15 000 employees. The sector is subdivided into architectural business, engineering consultancy within the areas of construction and civil

Turnover in the Sector, MSEK



Average number of employees in the Sector



**) Of the building/construction-oriented consultancies architects represent 8,000 million SEK in turnover and 7,200 employees in 2015. Certification and testing-oriented companies represent 1,700 million SEK in turnover and 1,500 employees.*

Source: The Swedish Federation of Consulting Engineers and Architects

engineering, and industry. In addition there are a certain number of inspection and certification firms. The industrial consultancies account for approximately SEK 23,5 billion in turnover and have some 21 400 employees. The engineering consultancies within construction and civil engineering represent just over SEK 32 billion in turnover and 25 000 employees. Architectural firms had a turnover of SEK 8 billion and employed 7 200 personnel. In addition, the inspection and certification firms accounted for some 1.7 billion and 1 500 employees.

The average turnover per employee in the sector in Sweden was SEK 1 186 000, which is an increase compared with SEK 1 176 000 in 2014. Among the 300 largest companies, the turnover per employee was SEK 1 181 000, compared with SEK 1 165 000 in 2014. The profit margin (profit/loss after financial items) among the 300 largest companies was 5.8 in 2015, a small increase compared with 5.7% during 2014. The profit margin increased to 6.0% from 5.8% the year before. The profitability development was weaker than expected. Read more about this further on.

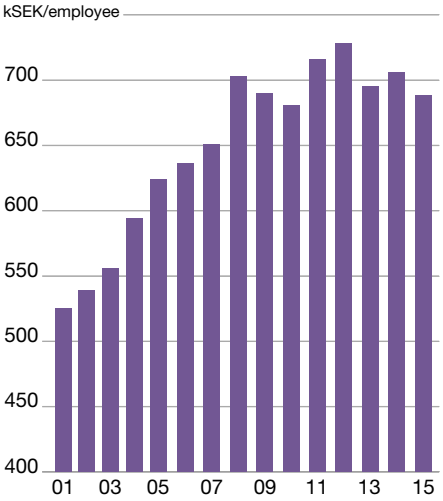
Architectural firms

The architectural firms had the highest profitability in 2015. The profit margin was 8.5%. The operating margin was somewhat lower at 8.1%. The corresponding figures for 2014 were 7.3% and 7.4%. The turnover per employee was SEK 1 116 000, compared to SEK 1 159 000 during 2014. The profit after financial items per employee was SEK 100 000, compared to SEK 84 000 in 2014.

Industrial consulting companies

The profit margin of industrial consultancies dropped somewhat to 5.1% from

Added value for the 300 largest groups

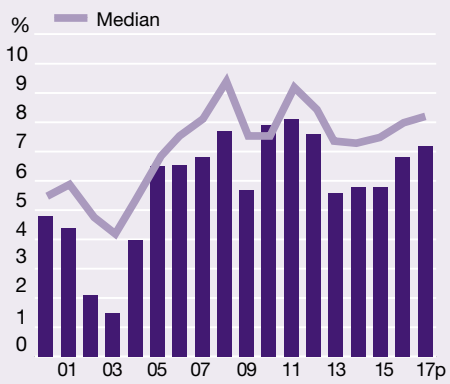


Source: The Swedish Federation of Consulting Engineers and Architects

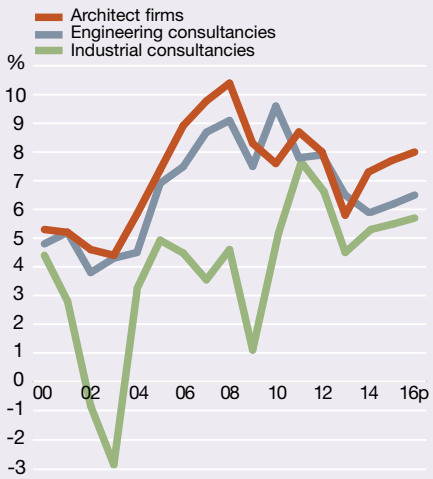
Development by sectors

	Turnover per employee, SEK thousand										Profit after financial items per employee, SEK thousand									
	08	09	10	11	12	13	14	15	16p	17p	08	09	10	11	12	13	14	15	16p	17p
The top 300 *) groups	1 037	1 017	1 065	1 130	1 161	1 150	1 165	1 182	1 196	1 194	78	46	85	92	88	64	67	69	81	85
Building construction oriented	1 102	1 086	1 125	1 150	1 171	1 194	1 181	1 213	1 216	1 207	101	81	104	92	92	76	71	77	88	93
of which																				
Architect firms	1 063	1 098	1 099	1 132	1 158	1 214	1 159	1 177	1 196	1 192	110	87	84	98	92	63	84	100	108	108
Engineering consultancies	1 107	1 184	1 129	1 153	1 174	1 093	1 184	1 219	1 220	1 210	101	80	107	90	92	79	70	77	85	90
Industrial consultancies	949	964	954	1 099	1 148	1 093	1 143	1 136	1 167	1 174	44	-17	45	91	82	49	61	58	71	74

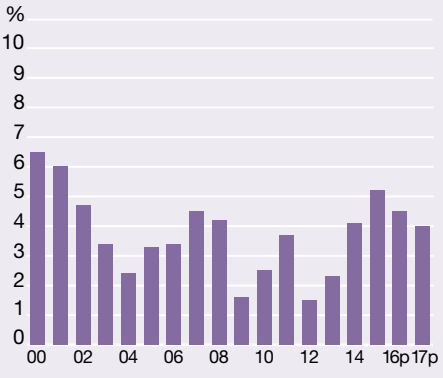
Profit margins in the top 300 groups



Profit margins



Change in payroll costs/employee



Source: The Swedish Federation of Consulting Engineers and Architects

> THE SHARE OF FEMALE CEO'S IS 11%.

Investments in Sweden

	2014	2015		2016p	2017p
	Billion SEK	Billion SEK	%	%	%
Dwellings	162.0	187.4	16	15	6
Other premises	130.8	130.2	2	3	1
Industrial buildings	6.3	6.7	7	9	–1
Infrastructure and installations	81.8	84.2	4	1	1
Total construction oriented investments	**380.9**	**408.5**	**8**	**9**	**3**
Investments by manufacturing industries in machines and tools, according to STD-företagen and Statistics Sweden	**45.3**	**55.5**	**11**	**10**	**1**

Building and industrial investments in 2014 and 2015 and forecasts for 2016 and 2107.

Source: SCB och BI.

5.3% during the previous year. However, the operating margin increased to 5.5% from 5.4% the year before. The turnover per employee was SEK 1 109 000, against SEK 1 108 000 in 2014. The profit per employee was SEK 58 000. During 2014 it was SEK 61 000 per employee.

Engineering consulting firms

The profit margin among engineering consulting firms rose to 6.0% in 2015, from 5.9% the year before. The operating margin increased to 6.1%, from 6.0% during 2014. The turnover per employee was SEK 1 203 000 during 2015, against SEK 1 180 000 during 2014. The profit per employee was SEK 73 000, compared with SEK 70 000 the year before.

Inspection and certification firms

The profit margin among inspection and certification firms was 6.3% during 2015, and was 3.3% in 2014. The operating margin increased to 6.4%, from 4.2% during the previous year. The turnover per employee was SEK 1 167 000 in 2015, and SEK 1 067 000 the year before. The profit per employee was SEK 66 000, compared with SEK 35 000 in 2014.

The value added per employee decreased during 2015 to SEK 688 000, from SEK 706 000 in 2014. 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 made by summating the company's payroll costs, social insurance contributions, operating result and depreciations. Together they constitute the value added. This value is then divided between the mean number of employees in order to arrive at the value added per employee.

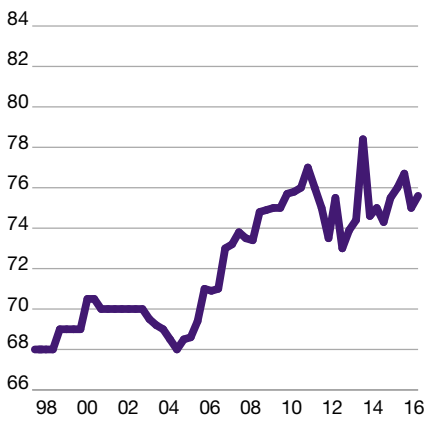
The financial strength is one way of measuring how a company's assets appear in relation to its debts. Here, a company's equity is measured against its total assets. A general rule of thumb is that a company should have a financial strength of over 30%. At the same time, however, it should not be too high. This means that the company's capital is inactive and is not generating income. The average financial strength in the sector remains good, and even increased somewhat in 2015. Among the 300 largest companies, it was on average some 50%. During 2014 it was 40%.

Payroll expenses among the 300 largest companies in the sector increased significantly during 2015. Altogether they increased per employee by 5.2%. During 2014 too they increased substantially, then by 4.1%. This of course is a partial explanation for the weak profitability development. It is difficult to match price increases with increases in payroll expenses.

Billing level

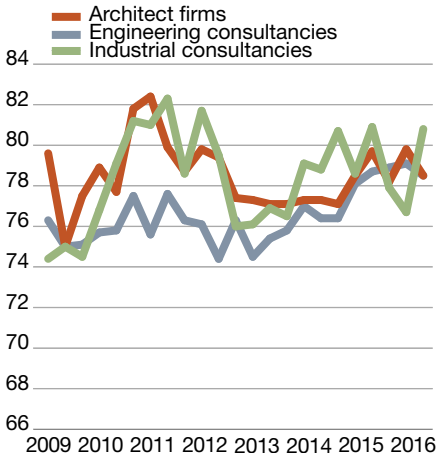
The billing level among the listed companies continues to increase. During 2013 it was on average 74.7%. It then increased to 75.8% in 2014 and to 75.9% in 2015. During the first six months of 2016 it was 75.6%, or in other words somewhat lower than in 2014 and 2015. However, it usually tends to increase in the second half of the year. So the trend will probably continue. The figures are taken from the an-

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

INTERVIEW JANNICE JOHANSSON STEIJNER, DEPUTY MANAGING DIRECTOR OF TENGBOM:

"THE SECTOR MUST DARE TO LOOK MORE BROADLY AND FREELY AT THE TERM COMPETENCE

What would you say are the trends that at present characterise the sector?

I'm not sure whether I would call them trends – the aspects we are talking about are wider than this. But at Tengbom we have during the autumn focused on four currents that tend to characterise the world around us, our sector and our personnel – and will continue to do so. Since these are radical in nature, they also clearly influence what we are concerned with: architecture and community planning. What we, and many other people like us, are looking at is of course globalisation, demographic movements, sustainability and environment, and digitalisation of the individual.

Another general key word is of course "tech". The important thing here is to focus on what technology can do for the individual and society, rather than allowing it to be an own value in itself. If we as an industry are to continue to be relevant, we must adapt both ourselves and the work we do, and this is an adaptation and a change that needs to take place in real time. It is an inspiring challenge that we are more than willing to accept! Among other things we have started the studio ArchTech and Future in which we are mobilising ourselves for both current and future challenges by assembling the foremost innovators within architecture, design tech, communication and project management. We are discovering new ways of using technology, digital tools and processes for a smarter form of everyday life for everyone in the entire cycle.

Jannice Johansson Steijner, Deputy Managing Director of Tengbom.

What are the greatest challenges for the sector?

The currents mentioned above, and the opportunities they bring with them, are at the same time our greatest challenges. The construction industry, which is more likely to have followed rather than led the development within this area, needs to increase the rate of change and recognise all those opportunities that are opened in the changing world we work in. With the rate of change that is taking place in society at present we, the sector and our clients in general need to regard these challenges as possibilities. At Tengbom, we organise, change and rig ourselves to continue to remain in the front line of digitalisation. And we of course take the clients by the hand, and in the final instance their clients, on this journey.

Competence provision is often cited as being one of the greatest challenges for the sector. How do you see this and what measures do you consider to be necessary in order to come to terms with the shortage of competence?

The question of competence is multi-faceted and has no simple answer. I read in a future vision that over half of today's one-year-olds will in twenty years' time have professions that we have today not even heard the names of. We must even now start working on this future scenario. Fixed roles in projects or inflexible working groups – and thus fixed, anticipated solutions – belong to yesterday's world. By establishing more interdisciplinary working groups and remaining open to entirely new competences when we recruit people, we achieve unexpected, sustainable and innovative solutions. The sector must dare to look more broadly and freely at the term competence and remember that even small steps forward will move a company, and in the long term an entire industry.

How do we solve the equation of increasing salaries, price pressure and requirements/ wishes for retained profitability? What does your company do?

Architecture often touches on new sectors and segments. We therefore try to work on adapting our pricing and business models to each individual assignment or client rather than being rigid in our approach. We do not simply supply a product, but rather the whole of Tengbom's comprehensive knowledge, breadth, cutting edge skills, experience and innovation capacity. This is well worth paying for. We are moving away from hourly billing towards business models that charge for value and added value. We are interested in situationally adapted business models with a major focus on the client's business and wishes.

nual and quarterly reports of listed companies and are weighted according the size of the company, measured according to the number of employees.

The member company surveys that are conducted by STD-företagen among its members also indicate a billing level that tends gradually to increase from year to year. During 2009, the billing level for the industrial consultancies was 74.6%, the architectural firms 77.4% and for the engineering consultancies 75.5%. During 2015, the billing level was 79.1% for the industrial consultants, 78.8% for the architectural firms and 78.6% for the engineering consultancies. It has in other words increased by 2–3 percentage points for the respective business areas during this period. The trend has continued during 2016. The billing level among engineering consultants during the first two quarters of the year was 78.8% and for the architectural firms 79.2%. However, the billing level for the industrial consultancies has decreased somewhat, to 78.8%.

STD-företagen also follow the development in billing levels distributed between architects, industrial consultants and engineering consultants in the member firm surveys that are carried out during the course of the year. Here too the successive increase is clear. During 2013, the industrial consultants had an average billing level of 76.5%. This increased to 79.5% in 2014, and during the first two quarters of 2015 it was 79.8%. The billing level among architectural firms remained unchanged between 2013 and 2014, when it was 77.2% on average both years. So far during 2015 it has been on a level of 79.1%. The billing level among engineering consultancies during the first two quarters of the year was 75.2% in 2013. It then increased to 76.6% during 2014 and has remained so far this year on a level of 78.4%. The expectation among the companies in the sector is that the billing level will continue to increase in 2017.

INTERVIEW MAGNUS MEYER, MANAGING DIRECTOR, WSP SVERIGE:

"THERE IS NOTHING WRONG IN THE INNOVATION CLIMATE EITHER WITHIN THE SECTOR OR IN SWEDEN

What would you say are the trends that at present characterise the sector?

Perhaps the most interesting trend is still the change in purchasing patterns and the demands they make on all the players in the sector – purchasers, employers, advisory consultants and contractors. New forms of cooperation are being created and limits of responsibility are being moved between the various players, which I see as being an extremely exciting development.

What are the greatest challenges for the sector?

One major challenge, but at the same time a challenge that is also an important opportunity, is greater efficiency and increased digitalisation/automation. As is the case with other technical developments, however, it is not always easy to predict where and how this will have an effect on society in general or in one specific activity.

Competence provision is often cited as being one of the greatest challenges for the sector. How do you see this and what measures do you consider to be necessary in order to come to terms with the shortage of competence?

I think that the question of competence provision should be modulated. There is admittedly a shortage of certain key skills, but I do not feel that in general WSP has any problems in recruiting competent personnel. On the other hand, I believe that it is important for the sector to find better ways of using these skills and resources – we quite simply cannot afford to allow competent and intelligent employees to perform tasks that can be carried out in other ways, for example by digitised/automated solutions.

Magnus Meyer, Managing Director, WSP Sweden.

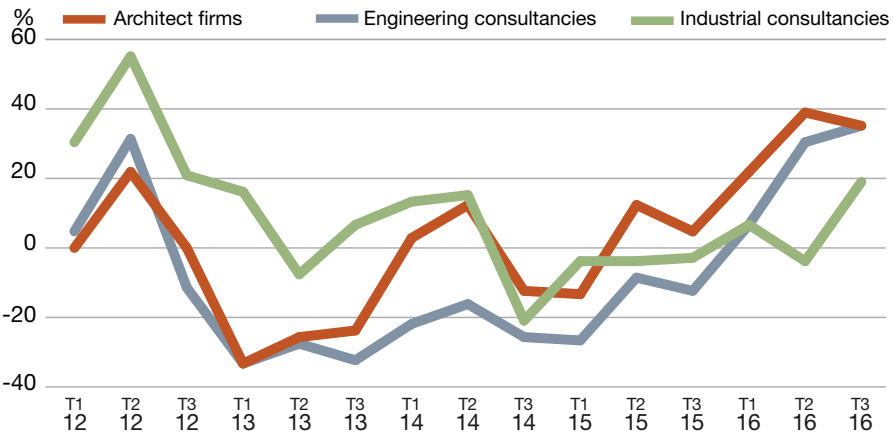
Sweden shall be one of the world's foremost countries in the fields of research and innovation. This is a goal that is supported by both the present government and the alliance government before it. Increased international competition make this increasingly difficult. How do you consider it possible for the innovation climate in our sector to be improved?

I do not actually feel that there is anything wrong in the innovation climate either within the sector or in Sweden in general – there is nothing to prevent any company or individual from being innovative. Admittedly, the forms of procurement applied in connection with public procurement seldom lead to innovative solutions, so within this area there is room for major improvement – but in the private sector there are no obstacles. WSP drives innovation on both a large and a small scale, and I feel that we acquire a major return from this in that it tends to be attractive to both employees and clients.

How do we solve the equation of increasing salaries, price pressure and requirements/wishes for retained profitability? What does your company do?

As in most other sectors, we must work on increasing our productivity and the efficiency of our business activities. At WSP, we also invest a lot of effort into profiling those areas in which we have, for the Swedish market, unique skills and experience – among other ways by taking advantage of the fact that, unlike other players in Sweden, we are a large global company with 37 000 employees and competence and experience that no other company is able to offer on the market.

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

Profitability development – and prices

Profitability during 2015 has developed fairly weakly, looked at from the point of view of the order situation in the sector. The profit margin among the 300 largest companies was 5.8% during 2015, compared with 5.7% in 2014. The operating margin increased to 6.0% during 2015, from 5.8% the year before. A sector under high pressure, with well-filled order books for architectural firms, engineering consultants and industrial engineering consultancies. It resulted in the sector expanding by 8% during 2015. The billing levels increased and certain companies had to refuse work owing to lack of personnel. This lack of competence forced up the personnel turnover, companies recruited from each other, and payroll expenses were forced up.

> THE AVERAGE PROFIT MARGIN WAS 5.8% IN 2015.

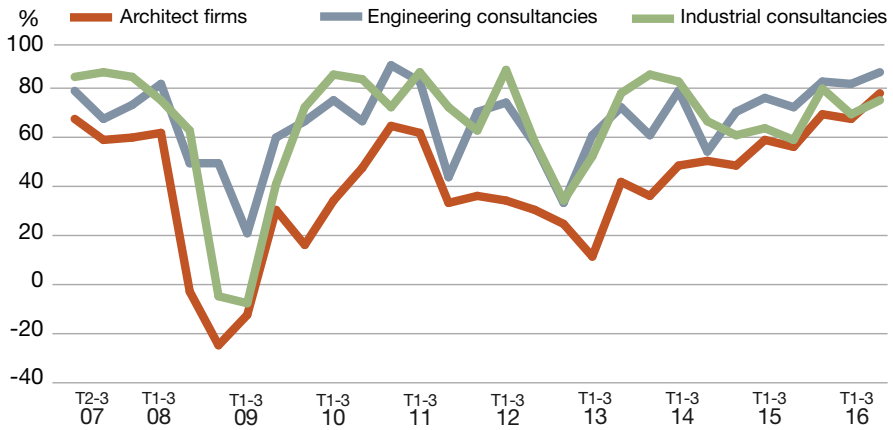
Price development in the sector has been sluggish now for a number of years. But a tendency towards improvement has been observed during 2015 and 2016. However, it is moving slowly and many companies are complaining about extensive price pressure, above all in connection with public sector procurements. In the latest member company opinion survey, 43% of those questioned responded that they have raised their fees during the course of the year, at the same time as only 10% stated that they have lowered their prices. This strengthens the picture of a price scenario in the process of recovery. But the weak price trend will be one of the sector's major challenges in the months ahead.

The profitability equation does not really add up, considering the current boom and demand for architect and engineering consultant services. The profitability should increase by considerably more than one tenth of a percentage point. The question is then, where in the equation has the error been made? Lack of assignments? No, the order books were full – to such an extent that the sector expanded by 8%. On the other hand, there was a shortage of available competence, despite the fact that the sector grew by 4 000 employees during the course of the year. The billing levels increased. But so too did the payroll expenses – by as much as 5.2% in 2015 (measured as the total payroll expenses per employee for the 300 largest companies in the sector). The prices, however, did not accompany the development. In a comparison of price development and payroll expenses between 2012 and 2016 (including September) the average fee charged by the engineering consultants increased by 2.4% during the period, the architects' by 6.8% and the average fee of the industrial consultancies decreased by 3.5%. At the same time, the average payroll expenses increased by 13%. It is here that the equation does not really tally. If the average fees increased by between 0–5% and the payroll expenses rose by 10–15%, it is difficult to retain profitability even if the billing level is raised slightly. This is one of the sector's major challenges in the months and years ahead. There are a number of possible solutions to this: 1. Companies manage to convince procurement managers of the

PHOTO: TORJUS DAHL

Cityblock "Annedal" in Stockholm.

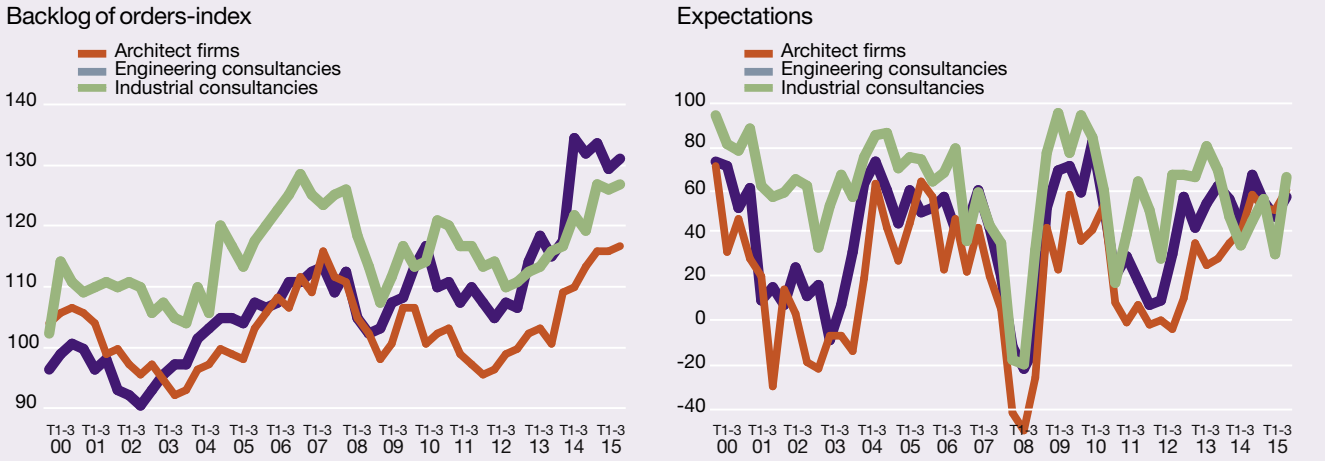
Manpower development



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

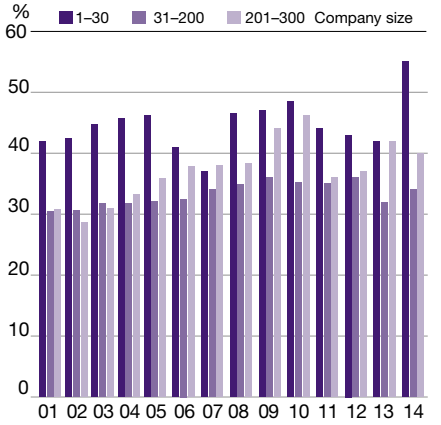
Backlog of orders – index compared with order forecasts (expectations)



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

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

added value that a larger investment in earlier design phases can bring about. 2. You develop other business models that are accompanied by greater risks and greater potential profits. 3. The problems of lack of competence and the weak price development are solved by outsourcing large parts of the design work to low-price counties.

In order to retain profitability and – hopefully – improve it, there must be an increase in average fees. It is possible that solutions can be found for reducing costs in one way or another. But if average turnover per employee is compared in this sector with other knowledge-intensive sectors (see table with a comparison between sectors) it can be concluded that architectural firms and engineering consultancies are far too low, which indicates excessively low hourly rates.

The boom, however, has continued into 2016 and is expected to carry on into 2017. Profitability development has been better during the past year than it was in 2015. So when we sum up 2016, the reading should be somewhat more enjoyable than the year before. The forecasts are that the profit margin for the 300 largest companies will increase to 6.8%. The profit margin of the engineering consultants and industrial consultants is expected to increase by one percentage point each, to 7.0% and 6.1% respectively. The profit margin forecast for the architectural firms is expected to continue increasing, to approximately 9%. The improvement in profitability during 2016 is primarily attributable to the extremely

INTERVIEW KLAS PERSSON, MANAGING DIRECTOR OF SIGMA TECHNOLOGY DEVELOPMENT:

"WE HAVE ENTERED AN EXTREMELY EXCITING PERIOD, WITH THE DEVELOPMENT OF SELF-DRIVING VEHICLES

What would you say are the trends that at present characterise the sector?

We have entered an extremely exciting period, in which a considerable amount of new revolutionary technology is being developed. It concerns electrical operation, self-driving vehicles, smart homes and all the other equipment that can also be connected to the network and the possibilities that this creates. It is very exciting to be working in our sector at the moment and to be able to help our clients.

What are the greatest challenges for the sector?

The greatest challenge is without doubt the significant lack of competence. The need for engineers in the sector with knowledge in the field of electronics and software is enormous. Within the area of built-in systems, in Gothenburg alone we would be able to employ 100 new engineers immediately, and the situation is the same in the other places where we work. With the shortage comes increasing competition regarding competence, which will force up salaries and which, in the longer term, will lower Sweden's competitiveness – especially as it is combined with a lack of opportunity to carry out the work in Sweden owing to the shortage of competence.

Competence provision is often cited as being one of the greatest challenges for the sector. How do you see this and what measures do you consider to be necessary in order to come to terms with the shortage of competence?

I can only agree. Clients should move away from the tradition of appointing consultants who sit in the client's office, and instead transfer projects to consulting firms. Those who in turn can take in competence from other counties, use sufficiently skilled personnel and not always need to have the most experienced and knowledgeable consultants for simple work. In this way, the personnel will have more challenging and developing tasks and the clients a cost that is optimised. We can also localise some of the work in other countries and thereby benefit from our integrated competence and not only the skills that we have locally.

Klas Persson, Managing director of Sigma Technology Development.

Sweden shall be one of the world's foremost countries in research and innovation. This is a goal that both the present government and the previous alliance government support. Greater international competition is making this increasingly difficult. How do you consider that the innovation climate for our sector can be improved?

The service sector does not have the same chance to share the research subsidies that are granted in the same way that the product companies do. Despite the fact that the majority of the highly educated competent engineers are currently to be found in the consulting firms, support is directed in its structure only to product companies. This means that Sweden misses out on a large number of possible inventions and services. Unfortunately, we remain stuck in an old attitude as to who are developing tomorrow's products and services. We are and must to an even greater extent be a country with a service content..

Our tax model, with progressive tax on income and thereby a high tax rate on higher salaries, also makes it profitable for people to start their own companies. In the smaller companies there are less chances in terms of both time and capital to invest in innovation. At the same time, tax legislation also provides fewer opportunities for innovation in the service industry.

How do companies solve the equation of rising salaries, price pressure and demands/wishes for retained profitability? What does your firm do?

As a service company, you basically earn money on time. You sell an hour and have a cost per hour. When the salaries increase faster than the fees, you are on the way to dying a natural death. This has been going on for a very long time. What it is that is happening in the sector in order to meet this is that order stocks are growing and the departments are acquiring more employees per manager. It also entails even fewer opportunities to create space for innovation. One possibility of dealing with this situation is of course to place some of the development in less expensive countries and thereby be able to keep the costs down. Another approach is to charge per supply and not have the same focus on the number of hours worked on the project. This would create possibilities as a supplier, to find more efficient ways of working. One strength that we have as a consultancy is that we adapt ourselves to the changes that are taking place in society and among our clients – something that makes it extremely enjoyable to be working in the sector.

good order situation, which finally succeeded in pushing the prices up somewhat.

Investments within the sector

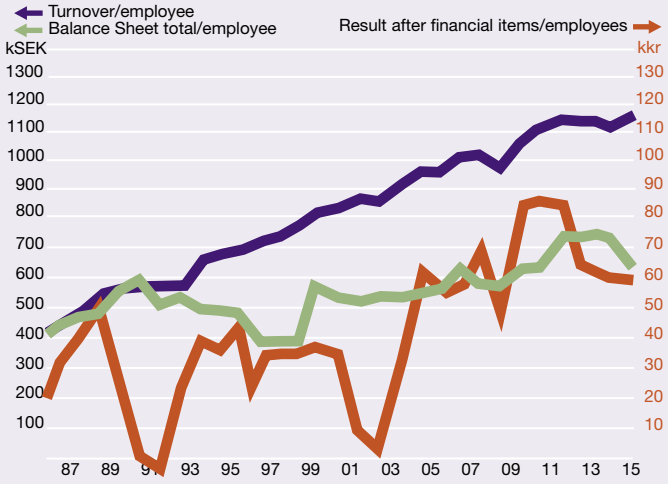
The table alongside shows the investments made in the sector during 2015 and forecasts for the in investment trend during 2016 and 2017. Building investments rose by 8% in 2015 and are expected to increase by 9% during 2016. The forecasts have been adjusted upwards somewhat for 2016 compared with earlier forecasts, which is mainly attributable to upward adjustments for the housing and infrastructure sectors. During 2017, the investment increases are expected to level off somewhat, but are anyway expected to increase by approximately 3%. Here too, it is the housing investments that are behind the majority of the anticipated increases, with an expected growth rate of 6%.

The investments made by the industry in machinery and equipment amounted to SEK 55.5 billion in 2015, which was an increase of 11% compared with 2014. They are expected to increase by some 10% during 2016 and by 1–2% in 2017.

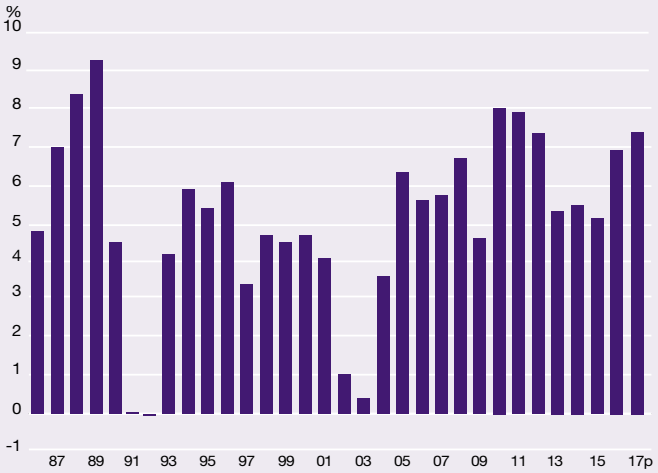
Age and gender structure

The member firms of Svenska Teknik& Design have a total workforce of some 34 000 in Sweden, which is equivalent to 62% of the sector's entire workforce. According to the Confederation of Swedish Enterprise's payroll statistics, 31.5% of the STD companies' total workforce were

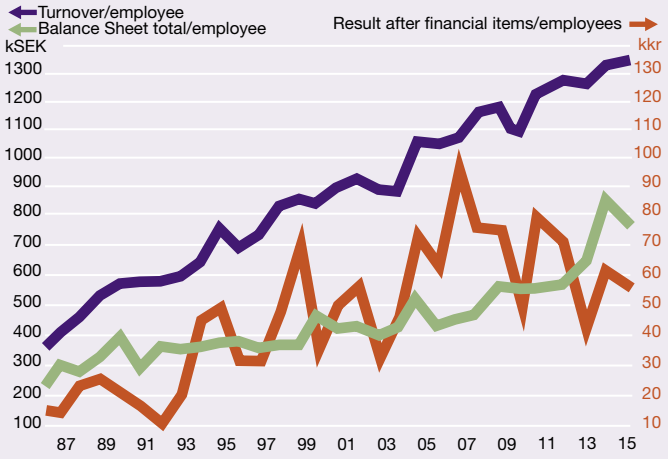
The top 30 Swedish groups



Profit margin in the top 30 groups



Group no. 31–50



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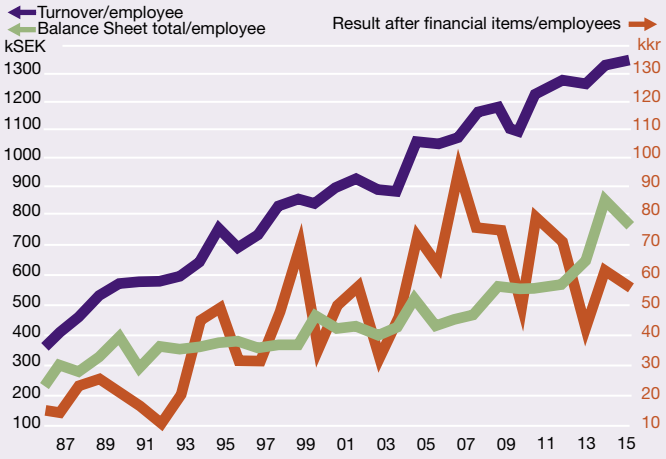

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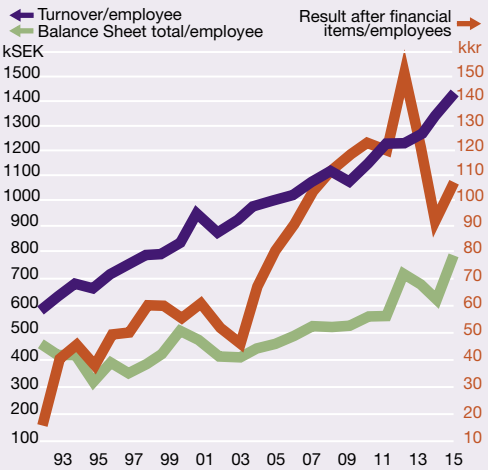

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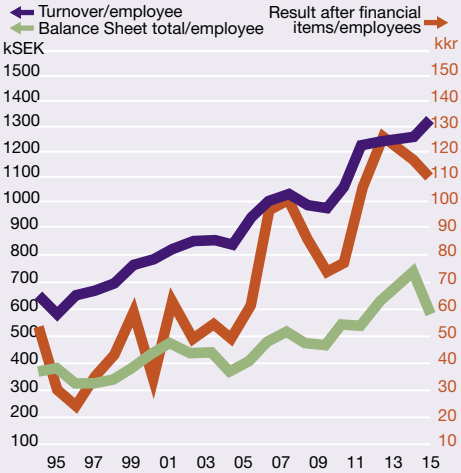

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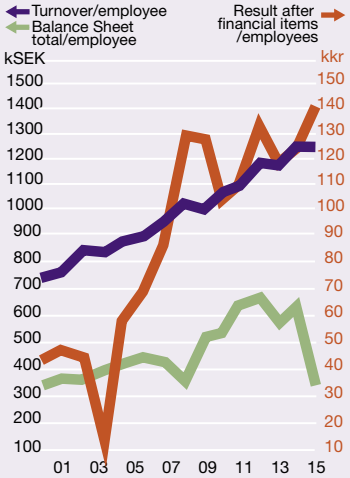

Source: The Swedish Federation of Consulting Engineers and Architects

INTERVIEW JOHAN DOZZI, MANAGING DIRECTOR OF SWECO CIVIL ENGINEERING:

"THE ONLY WAY TO RAISE OUR FEES IS BY CHOOSING THOSE CLIENTS THAT PAY BETTER

What would you say are the trends that at present characterise the sector?
The overall trends that have the greatest impact on us are urbanisation, globalisation and digitalisation.

The moving that is taking place into cities and large built-up areas requires a considerable amount of new housing, but also associated infrastructure so that a community will function. This is a challenge to us as a sector since our clients expect that much of the infrastructure can be produced in a short time.

Sweden will become rapidly more international when Swedish firms work together with foreign firms in order to solve their growing need for competence, resources and lower prices. The larger groups work together with sister companies outside Sweden and the smaller ones cooperate with foreign partners. At the same time, we can see more and more how foreign companies are themselves submitting tenders in Sweden, and thereby increasing the level of competition.

The need for a greater information content in our supplies drives the development of our tools and our approach to work. At the same time, we are automating our work stages, which makes us more efficient.

Finally we can also see a trend in that assignments are becoming larger in size and more complex as the clients choose to hold together their projects both geographically and over the various stages of the work.

What are the major challenges for the sector?

The largest challenges are how to deal with the stationary prices and how we will be able to find the necessary resources for all those projects that are due to be conducted in Sweden over the coming years.

Competence provision is often cited as being one of the greatest challenges for the sector. How do you see this and what measures do you consider to be necessary in order to come to terms with the shortage of competence?

Johan Dozzi, Managing director of Sweco Civil Engineering.

I agree. We are now dealing with a problem that stems from the recessions at the beginning of the 80s and in the 90s. Many of those graduates who left university and institutes of technology never entered the sector, and therefore we today lack many people aged 50 and above. We are forced to look outside Sweden's borders to compensate for this.

At the other end, the interest in technical education is too low in relation to the demand. There is a considerable amount of competition with other types of education, and the status in being an engineer is not as high today as it was previously. It is at the same time in most cases more difficult to take the types of educational courses and programmes that are needed for our industry, which could put people off.

I believe that we together do a good job on marketing our sector as the ones who are planning future society. We must, however, work more on questions concerning the sector's reputation and the fact that projects for society take long time to implement.

Sweden shall be one of the world's foremost countries in research and innovation. This is a goal that both the present government and the previous alliance government support. Greater international competition is making this increasingly difficult. How do you consider that the innovation climate for our sector can be improved?

Innovation can be divided up into two different parts. On the one hand the innovation that takes place in companies in which we develop our methods and approaches to work. This is something that companies always have to work on themselves in order to guarantee their competitiveness. The other innovation perspective concerns the content of the services we supply. Here it is largely a question of how we are procured since this innovation is dependent on the amount of room we are given to come up with new ideas in projects.

Beside this, there are currently many chances to work with innovation since substantial amounts of money are being invested in research in cooperation with the business community and the academic world within our area, for example in Vinnova's programme.

How do companies solve the equation of rising salaries, price pressure and demands/wishes for retained profitability? What does your firm do?

Fees have stood still now for several years, at the same time as salaries have increased. If this situation continues for too long, companies will in the end be knocked out. The fact that the sector, despite this development, is performing well is a consequence of the fact that the market is good and that the firms have healthy order-stocks. The problem is that when the economy begins to show a downward trend, decreasing sales levels will mean that the result rapidly deteriorates.

The only way is to raise our fees, on the one hand by charging higher prices but also by choosing those clients that pay better – and we are forced to do this now, when the demand for our services is high. One of our clients is of the opinion that today it is the clients who are competing for consultants, not the other way round. Therefore, it is important for them to pay better than other clients in order to make sure that the consultants give priority to their projects.

women, which is an increase of two percentage points compared with the year before. The proportion of women in decision-making positions also increased. They were 32% in 2015, which is significantly higher than the 25.3% measured in 2014. The proportion of female managing directors is however considerably lower: 11% during 2016. But it nevertheless entails an increase from 9.3% during 2015. The proportion of female managing directors is considerably lower, with 11% during 2016. However, despite all it means an increase from 9.3% in 2015. The proportion of female board members is also increasing – the figure was 23.4% at the end of 2016 and last year the proportion was 18.3%. So, even though it is still a male-dominated sector, women are becoming increasingly well represented. It should be pointed out, however, that the figures apply to the 300 largest companies, in which architectural firms, industrial consultancies and engineering consultancies are included. The proportion of women is higher in architectural firms than in industrial engineering consultancies.

Staff employed at STD-företagen member firms had an average age in 2015 of 41.2, which is somewhat lower than the year before when it was 41.4. The average age of female employees was lower than that of men – 39.9 compared to 41.9.

THE TOP 50 ARCHITECTURAL GROUPS

	16	15	Group	Annual report	Turnover MSEK	(Previous year)	Em-ployees
STD	1	1	White Architects	15	824,3	759,5	632
STD	2	2	SWECO Architects (with 2 acquisitions in Germany) *	15	780,0	537,2	700
STD	3	3	Tengbom group	15	527,2	476,3	558
STD	4	26	Projektengagemang Arkitektur (acquired Temagroup)	15	252,0	49,5	228
STD	5	6	Link Arkitektur AB	15	155,5	141,5	144
STD	6	5	Wingårdh architects	15	152,8	161,4	131
STD	7	10	Arkitekterna Krook & Tjäder AB	15	143,9	95,5	121
STD	8	7	Mälarholmen (Ettelva Arkitekter & M.E.R. Solution)	15	143,0	104,6	72
STD	9	14	Semrén & Månsson Arkitektkontor AB	15/16	142,8	99,8	131
STD	10	12	FOJAB AB	15/16	139,0	99,3	105
STD	11	8	Liljewall Arkitekter AB	15	129,6	101,2	121
STD	12	8	Tyréns (acquired Pyramiden & AQ architects) *	15	118,6		104
STD	13	9	NYRÉNS Arkitektkontor AB	15	112,6	98,4	96
STD	14	11	AIX Arkitekter AB	14/15	97,5	87,7	76
STD	15	17	ÅWL Arkitekter AB	15	85,6	68,3	62
STD	16	15	Brunnberg & Forshed Arkitektkontor AB	15	84,5	71,9	61
STD	17	16	Arkitema Architects	15	84,3	69,8	77
STD	18	13	Byrån för Arkitektur & Urbanism (BAU)	15	80,6	80,7	60
STD	19	20	BSK Arkitekter AB	15	78,9	58,3	47
STD	20	18	Cedervall Arkitekter	15	76,8	67,1	68
STD	21	23	Reflex Arkitekter AB	15/16	75,7	56,5	61
STD	22	22	BSV Arkitekter & Ingenjörer AB	15	66,4	55,0	54
	23	19	Wester+Elsner Arkitekter AB	15	62,7	60,9	40
STD	24	29	Archus	15	54,2	48,5	45
STD	25	36	A & P Arkitektkontor AB	15	49,5	37,3	30
STD	26	33	Equator Stockholm AB	15	46,7	42,5	40
STD	27	41	Yellon AB	15	44,9	35,9	42
STD	28	21	SYD ARK Konstruera AB	15/16	44,4	58,1	46
	29	30	Strategisk Arkitektur Fries & Ekeroth AB	15	44,4	48,2	46
STD	30	25	BBH Arkitekter & Ingenjörer AB	15	43,9	51,5	25
STD	31	24	Carlstedt Arkitekter AB	15	43,6	52,4	42
	32	37	Sandellsandberg (ÅF)	15	41,9	36,7	33
STD	33	28	Arkitekthuset Monarken AB	15/16	41,3	49,5	41
STD	34	32	Erséus Arkitekter AB	15	40,6	43,7	33
STD	35	34	MAF Arkitektkontor AB	14/15	39,6	41,1	35
STD	36	39	C.F. Møller Sverige AB	15	38,3	36,5	34
STD	37	50	Thomas Eriksson Arkitektkontor AB	15	38,3	26,1	26
	38	31	Aperto Arkitekter Byggkonsulter AB	14/15	38,0	46,1	38
STD	39	38	Scheiwiller Svensson Arkitektkontor AB	15/16	36,0	36,6	26
STD	40	42	Landskapslaget AB	15	34,7	32,4	24
	41	43	ABAKO Arkitektkontor AB	15	34,4	31,8	35
	42	53	DAP Stockholm	15	33,2	24,2	8
STD	43	40	Arkitektgruppen G.K.A.K AB	15	32,3	36,2	28
STD	44	55	Fredblad Arkitekter AB	15/16	31,4	23,4	29
STD	45	57	Murman Arkitekter AB	15	31,3	22,9	26
	46	68	Kjellander & Sjöberg AB	14/15	31,0	19,2	31
STD	47	46	Lindberg Stenberg Arkitekter AB	15	30,1	29,1	27
	48	44	Metod Arkitekter	15	30,1	30,1	23
STD	49		Okidoki! Arkitekter AB	15	29,6	33,0	34
	50	60	Rundquist Arkitekter AB	15	29,5	22,3	17

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 5,447million in 2015 (previous year SEK 4,601 million). The average number of employees was 4,613 (3,698) and the turnover per employee SEK 1,181,000 (SEK 1,160,000). The list contains those groups in which architectural activities dominate.

Source: The Swedish Federation of Consulting Engineers and Architects

Order Book Index and Confidence Indicator

The sector's order situation has continued to improve during the course of the year. The Order Book Index, which reflects the order situation at a given measurement time, increased for all three business areas in the latest member company survey. The Order Book Index was on a par with, or higher, on that occasion compared with the measuring point last year for all three business areas. Furthermore, expectations concerning future incoming orders were strengthened after the summer. The Confidence Indicator, which shows the net between the proportion of positive and negative companies has risen for all three business areas. Altogether, two out of three companies believe in an improved order situation in six months' time. Only one company in fifty anticipates a deterioration in the order situation.

Employment situation

There is a substantial need for recruitment throughout the entire sector, with nine out of ten (86%) companies signalling in the latest member-company survey that they were in need of new employees. Only one in every hundred companies anticipated a decreasing workforce.

When the shortage of competence becomes so pronounced and extensive, bottlenecks tend to be created. Companies cannot fill all their vacant posts and are forced to say no to assignments. Productivity development is slowed down at the same time as staff turnover increases, which in turn forces up the payroll expenses. When companies can no longer raise their prices at the same rate, a negative spiral is created, which in the end has a negative impact on profitability. Read more about this in the section of profitability development and prices.

In a member company survey conducted in May, it was found that the need on the part of companies for recruitment corresponded to 11% of their collected workforces. If this figure were to apply for the entire sector it would mean 5000–6000 employees. It is because these personnel are not available that the recruitment levels remain at such high levels. It can be concluded that there is a lack of just over 5000

THE TOP 50 GROUPS WITHIN INDUSTRIAL ENGINEERING

	16	15	Group	Annual report	Turnover MSEK	(Previous year)	Em-ployees
	1	1	ÅF (divisions + acquisitions) *	15	6900,0	6600,0	5540
STD	2	2	Semcon AB	15	2557,4	2725,7	2795
	3	3	Combitech AB	15	1602,2	1533,6	1355
	4	4	HIQ International AB	15	1508,0	1378,8	1270
STD	5	5	Rejler group (Energy & Industry) *	15	1200,0	1095,4	1150
	6	6	Alten Sverige (acquired HotSwap AB)	15	894,1	934,3	1109
STD	7	7	SWECO Industry *	15	860,0	740,0	800
STD	8	8	WSP Systems & Process	15	639,0	585,0	662
STD	9	11	Sigma Technology, Industry & IT Connectivity *	15	605,0	502,9	640
STD	10	10	Dekra Sweden (Industrial + Automotive) *	15	544,5	534,0	438
STD	11	9	Pöyry Sweden	15	488,2	555,0	458
	12	16	Altran Sverige	15	484,9	311,5	497
STD	13	12	Knightec AB	15/16	457,9	419,1	474
STD	14	14	COWI Industri & Energi *	15	420,0	395,0	400
STD	15	13	Etteplan Sweden	15	395,6	400,7	409
STD	16	15	Ansaldo STS Sweden AB	15	314,1	371,7	57
STD	17	18	Avalon Innovation AB	15	310,6	279,6	242
	18	20	Elektroautomatik i Sverige AB	15	230,7	226,7	100
STD	19	17	GVA Consultants AB	15	222,4	282,9	145
	20	21	Z-Dynamics (Infotiv & Combine)	15	220,7	217,7	272
STD	21	19	Consat AB	15	216,0	245,9	184
	22	22	Eurocon Consulting AB	15	198,8	173,7	195
	23	23	Technia AB	15	168,4	172,1	93
STD	24	56	Optronic Partner pr	15/16	158,3	64,0	52
STD	25	26	FS Dynamics AB	15/16	157,5	145,2	161
STD	26	29	Projektengagemang Industri	15	146,0	118,3	110
STD	27	49	Core Link AB	15	135,7	72,2	50
STD	28	28	i3tex AB	15	134,4	120,6	159
STD	29	31	Midroc Project Management AB	15	126,3	115,0	98
STD	30	33	Engineeringpartner Automotive Nordic AB	15	119,2	99,5	126
	31	34	QRTECH AB	15	118,4	99,1	81
STD	32		Cactus Utilities & Rail *	15	115,4	82,9	83
STD	33	25	Eitech Engineering (former Goodtech Solutions AB)	15	114,9	147,4	63
	34	40	Essiq AB	14/15	113,9	88,2	153
STD	35	24	Devport AB	15	112,0	150,6	107
STD	36	50	Neste Jacobs AB	15	111,7	72,1	106
	37	44	Escenda Engineering AB *	15	103,8	83,3	73
STD	38	43	HRM Engineering AB (acquired Cub Kar) *	15	99,9	84,0	105
STD	39	39	Condesign AB	15	99,0	92,0	117
	40	52	Veryday AB (former Ergonomidesign)	14/15	97,5	67,1	53
STD	41	30	Bassoe Technology AB	15	95,9	117,7	55
STD	42	35	Benteler Engineering Services	15	95,1	97,6	54
STD	43	32	Teamster AB	15	92,9	106,6	50
STD	44	161	One Nordic Konsult AB	15	83,1	0,0	46
STD	45	47	Conmore Ingenjörsbyrå AB	15	80,7	74,7	100
STD	46	45	Elajo Engineering AB	15	79,1	77,2	103
STD	47	51	Tüv Nord Sweden AB	15	76,7	69,6	34
	48	48	TechRoi AB	15	75,5	72,3	67
STD	49	55	Havd Group	15	74,6	65,0	25
	50	36	Technogarden Engineering	15	74,4	94,1	94

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 24,430 million (previous year SEK 23,374 million) in 2015. The average number of employees was 21,610 (20,577) and the turnover per employee SEK 1,130,000 (SEK 1,136,000). The list only includes groups where industrial engineering consultancy is the dominating activity. Source: The Swedish Federation of Consulting Engineers and Architects

engineers, architects or other categories of personnel in the sector. Competence provision is one of the sector's greatest challenges both now and in the future. The risk associated with the current shortage is that bottlenecks arte created which slow down productivity development, and that the shortage forces up the payroll expenses to levels where the profitability equations no longer tally. At this point, there is a risk (or the chance) that large parts of the design work are outsourced to low-cost countries in Europe and Asia.

Swedish structural deals

The consolidation trend within the sector has also continued during 2016, but at a somewhat slower rate. New foreign acquisitions have been few in number, if any. A few already established companies have made one or two acquisitions, while Sweco focused on the integration of last year's record purchase of Grontmij, and only made three acquisitions. ÅF, however, has steamed ahead at its usual rate with a long series of acquisitions during the course of the year. These two colossuses now represent nearly a quarter of the market in Sweden – together they have sales of SEK 15 billion of the sector's total SEK 65 billion. With foreign subsidiaries their turnover is more than SEK 27 billion and they employ just over 23 000 employees.

A clear trend this year has been a focus on architects in the acquisitions. Sweco has invested in the architecture side in Germany. Companies that have not previously had architectural operations – ÅF and Tyréns – have made a certain number of acquisitions in this area during the course of the year. Projektengagemang has, with its acquisition of Temaplan, raised its standing to being among the four largest architectural groups in Sweden. This is, of course, also part of a continuation of the consolidation trend. The desire to make a wider range of services available on the market is clear, when engineering consultants in construction and civil engineering add architecture to their skills and then the industrial consultancies complement their services with construction and civil engineering – including architecture. The consolidation continues therefore from being larger and being rep-

INTERVIEW
PER-ARNE GUSTAVSSON,
CEO OF PROJEKT-ENGAGEMANG (PE)):

“EACH COMPANY HAS TO TAKE ITS RESPONSIBILITY

What would you say are the trends that at present characterise the sector?

Our sector is advancing rapidly, and stability, urbanisation and globalisation are contributing to this development. A distinct trend is sustainability issues that favour our sector. These questions are now rapidly gaining ground and will become increasingly important for everyone. The demand to take responsibility is moving its way rapidly through the business community and public administration. More and more people are recognising the economic and strategic advantages of taking the lead and being part of the solutions to the challenges. The transformation has accelerated significantly, and our sector has the solutions, further energy is being added to the process since there also appears to be a political unity – the only real concern at the moment being how the USA will react to the climate agreement.

In 30–40 years' time, space will be made available for a further three million people living in towns and cities. In 50 years, 70% of the Earth's population will be living in urban areas. Focusing the concentration of residential areas, as with designing sustainable living environments, is an architectural task in itself. But urbanisation also places questions of user influence on their heads – who the town is for and who has the right to make an influence? In the case of industry, globalisation means demands for innovative solutions, shorter product life cycles, more efficient production and material use.

What are the greatest challenges for the sector?

Bearing in mind the significant demand for engineering and architectural services, competence provision has become a major challenge for the whole industry. This has resulted in an ever-increasing staff turnover, which has in turn forced up both salary and recruitment costs. Despite the fact that we are operating on a market with high demands, the sector has to a certain extent difficulty in compensating customers for the corresponding price rises – which is noticeable in both the Community Development and Industry sectors.

Competence provision is often cited as being one of the greatest challenges for the sector. How do you see this and what measures do you consider to be necessary in order to come to terms with the shortage of competence?

In our sector, competent staff are the most important ingredient if a company is to be successful. In order to attract competence, a strong

Per-Arne Gustavsson, CEO of Projektengagemang (PE)

corporate climate is needed in which the individual is allowed to stand in focus. In addition, each company takes the responsibility it has to society which creates both involvement and the desire to work. Since PE is concerned with community development, we believe in a workplace that reflects society and we are constantly endeavouring to be an equality-oriented and sensitive organisation in which the individual is allowed to take space. It is particularly enjoyable in this context that PE – in an extensive opinion survey among young professionally active academics – was ranked as one of the five most popular employers in the sector and an acknowledgement that we have succeeded with our work and the mediation of our values. In parallel with the above is the fact that the sector takes a greater responsibility for competence development on a number of levels with joint training programmes combined with an apprentice system, not least to make it easier for new recruits to gain a foothold in the sector.

Other measures include continuing with the consolidation that is in progress to create greater productivity through increased coordination in larger organisations paired with increased development within digitisation. Last but by no means least increased globalisation could mean that greater resources can be channelled to the Swedish market through increased internationalisation on the part of companies in the sector.

Sweden shall be one of the world's foremost countries in the fields of research and innovation. This is a goal that is supported by both the present government and the alliance government before it. Growing international competition makes this increasingly difficult. How do you consider it possible for the innovation climate in our sector to be improved?

One important piece of the puzzle en route to achieving the goal is innovation-driving procurements. The goal is that public procurement shall by the year 2025 be able to function as a strategic tool in promoting structural transformation, renewal, quality and increased efficiency among all public sector players in the region. This is an extremely welcome initiative, and we suppliers have an important role to play in this context.

Sweden has strong business operations within infrastructure, buildings, energy and industry. Our knowledge is internationally recognised and contributes towards strong exports. During recent years, a further sector has made itself increasingly visible: specialised and highly qualitative engineering consultancy services. It is a growing sector that is creating jobs and driving on technology development.

If Sweden is to gain maximum benefit from these services, procurements are needed that encourage innovations and cutting-edge skills. It would be a pity if we contractors and businessmen were only to be regarded as individuals who complain about authorities, legislation or taxes. If we know what the problem is we must contribute towards solving it.

We must be better at providing feedback on completed procurements, saying why we choose not to submit tenders and explaining how a procurement could have been conducted differently in order to promote efficiency with resources, quality and new ways of thinking and innovation. One obvious example of this is construction or infrastructure projects with long lead-times, many parties involved, and expenses that are difficult to plan or foresee. From the time that a contract is signed until the project is implemented, many years may have passed, working methods developed and new technology grown up. We often recognise development opportunities during the course of the project, but there is a lack of possibilities for changing course during the journey as a consequence of rigid agreements. This situation must be changed. Procurements should focus on goals, not the way to them. We suppliers must be encouraged to say stop when it becomes necessary, to propose higher quality when it is cost effective in the long term or to come up with new solutions if it can lead to goal fulfilment. We would then be able to call the Public Procurement Act, LOU, the Optimised Procurement Act.

How do we solve the equation of increasing salaries, price pressure and requirements/wishes for retained profitability? What does your company do?

The strategy we use to meet the development we see is based on a customer understanding that results in carefully packaged services with a focus on a fully comprehensive undertaking. This may in turn shed light on the value we supply to our customers and their end users. There is no single solution or short cut to solve this. Instead it requires, like so many other things, a long-term strategy and hard work.

> SWECO AND ÅF REPRESENT A QUARTER OF THE MARKET IN SWEDEN.

resented in more places to also being on several markets, with other clients.

An account is given below of some of the transactions that have taken place during the year, together with a few items of news about management changes.

Sweco with its sights on Central Europe

During the second half of 2015 and in 2016, Sweco has to a large extent concentrated on the integration of last year's major acquisition of Grontmij. The integration has, according to reports received, gone according to plan or even better. Grontmij has been wholly incorporated into Sweco's brand name and the synergy effects are claimed to be 20% better than planned. At the same time, they have reported a record quarter during the autumn. The third quarter of 2016 gave the best operating margin so far.

The year started with the acquisition of Petro Team Engineering AB, with 5 employs, which strengthens Sweco's range of services in rock engineering and rock mechanics.

Towards Germany

There has nevertheless been time for a few acquisitions in 2016, and here it is above all two deals in Germany that have attracted attention. In March, Sweco announced its acquisition of the German architect and project management company Ludes, with more than 100 employees. The transaction was followed by the purchase of the architectural firm **Jo. Franzke**, in Frankfurt, with some 40 employees. As part of the Grontmij acquisition last year, a large German enterprise was included which, together with these two purchases mean that Sweco's German operations are now staffed by just over 700 employees. At the same time, Sweco's total architectural operations are expanding, which after these transactions are staffed by almost 1000 employees.

Investments in Central Europe are a pronounced strategy for the future as far as Sweco is concerned, according to CEO Tomas Carlsson in a recent interview in Dagens Industri (Swedish daily business newspaper). The ambitions for growth in future acquisitions are primarily focused on Denmark, Germany, The Netherlands, Belgium and Great Britain. In Sverige, Norway and Finland, the company will for the most part grow organically from now on. The goal is to improve profitability and at the same time be market leader in more countries.

ÅF grows and Jonas leaves

ÅF has also continued to make acquisitions at the same rate during 2016. The end of 2015 was marked by the purchase of project and construction management firm **Erstad & Lekven AS** in Oslo, with 40 employees and a turnover of NOK 57 million. At the same time, they established a jointly owned company together with Reinertsen in Norway, where the joint infrastructure, construction and civil engineering operations were set up – **ÅF-Reienertsen AS**, with an ownership ratio of 51/49. At the same time, **Reinertsen's** Swedish operations were acquired to 100% and integrated with the Infrastructure Division, which meant an addition of 185 employees and some SEK 165 million in turnover. During autumn 2016, ÅF purchased **Reinertsen** from the joint risk company and integrated these operations in ÅF's Norwegian subsidiary, which with this move now has some 800 staff.

January saw the acquisition of **VVS-byrån** in Växjö, with 9 employees and competence in VVS design and energy efficiency improvement, as well as the electrical consultancy **Alteco**, with 30 employees and its main operations within transmission and distribution to electricity suppliers.

Architecture and the construction sector

In May, ÅF acquired the architectural-firm **Sandellsandberg**, with 33 employees and a turnover of SEK 42 million. The transaction is a step in the direction of taking a larger share of the urban development sector, and in particular infrastructure and housing projects. August saw the acquisition of Danish traffic consultancy **Traffic Team AS**, who are specialists in traffic solutions. Traffic Team had sales in 2015 of EUR 20 million divided between 170 employees. Further acquisitions were electrical consultants **Teknoplan AB**, with 43 employees and a turnover of SEK 46 million, and the Norwegian energy technology consultants **Solid Engineering AS**, with 70 employees

Malmö Live, a city block comprising a concert hall, congress center, hotel and several buildings with dwellings and offices in Malmö.

PHOTO: CARL JONSSON

> NINE OUT OF TEN COMPANIES NEED TO HIRE MORE PERSONNEL.

and a turnover of NOK 100 million. In September, **Ingenjörsprojekt i Karlshamn** was acquired, with just over 60 employees, who offer engineering consulting services within product and production development and production management for industry.

Jonas Wiström resigns

In October, Jonas Wiström announced that he intends to resign as CEO during 2017 after holding the post for 14 years. He will remain in his present position until a replacement is appointed.

Tyréns purchases architects

During the course of the year, Tyréns has acquired two architectural firms, one building consultancy and one project management firm in Sweden – **AQ Arkitekter**, with 58 employees in Stockholm, Eskilstuna and Visby, and **Pyramiden Arkitekter** och **Pyramiden Projektledning,** two interacting firms in Gothenburg which together have 55 employees. In April, **Lindqvist Byggkonsult** was acquired, with 15 employees in Jönköping.

The acquisitions have on the one hand contributed to a greater architectural focus within the Tyréns Group, where the number of architects and building engineers is now in the region of just over 210. In addition, it has led to a distinct focus on the west of Sweden, whose business region has grown by over 100 employees during the year.

Goodtech becomes Eitech

The Swedish part of the Goodtech Group has been bought back by its original owner Rolf Tannergård. The operations within automation, installation, power and infrastructure thereby change name and trademark to Eitech. The activities conducted in Sweden have 63 employees and annual sales in the region of SEK 115 million.

PE to be listed on the stock exchange, with Temaplan

Projektengagemang, whose expressed goal is to be introduced on the stock exchange during 2017, has during the course of the year completed several acquisitions and restructured the organisation. In February they acquired the development firm **Applied Engineering Sweden AB**, which offers services in feasibility studies, industrial design, design, basic production input and visualisation. The company has 10 employees.

During the course of the year, the business areas have been restructured somewhat. Among other measures, all the construction companies have been gathered under the new business area PE Byggnad and the architectural firms into groups in PE Arkitektur. In August, this business area grew substantially with the acquisition of the architectural firm **Temagruppen Sverige AB** with 170 employees and 187 million in turnover during 2015. As a result, PE Arkitektur now has some 230 employees and has acquired a turnover of SEK 250 million, which makes it the fourth largest architectural organisation in Sweden.

Archus takes an overall grasp of the market

The Archus Group, which was established as an architectural firm 30 years ago, is broadening its business operations through the newly established company Archus Partner, which will serve as an independent future proprietor representative. In this way it will be possible to offer the entire process, from the early stages to design and implementation of the entire project.

Sigma Industry West has purchased **Aker Solutions** with 90 employees in Gothenburg. With this, it will become a leading supplier of engineering services in underwater technology.

In February, **HRM Engineering** acquired **KAR Design AB**, with 10 employees in Uddevalla. KAR Design has its principle operations in product development, production development, geometry & quality, and electricity & electronic development. With this acquisition, HRM strengthens its presence in the vehicle and manufacturing industries.

PHOTO: INGRID REPPEN

Katscha in Norrköping was awarded Bostadspriset (Prize for housing projects) in 2016

THE 30 LARGEST GROUPS IN SWEDEN

(THE FIGURES REPRESENT ACTIVITIES IN SWEDEN)

	2016	2015	Group	Service	Annual report	Turnover MSEK	Turnover in Sweden MSEK	Employees	Employees in Sweden
	1	1	ÅF (several acquisitions in 2016, incl. Reinertsen) *	MD	15	10884,0	**8229,0**	8423	**6602**
STD	2	2	SWECO AB (acquired Petro Team, Ludes and Franzkes architects in Germany) *	MD	15	16145,0	**6842,0**	14697	**5380**
STD	3	3	WSP Sweden (acquried PRD Konsult, March-16) *	MD	15	3293,5	**3293,5**	2869	**2869**
STD	4	4	Ramböll (acquired Ågren Sverige & Arts) *	MD	15	1820,7	**1820,7**	1401	**1401**
	5	5	Combitech AB	I	15	1602,2	**1560,7**	1355	**1355**
STD	6	7	Tyréns AB (acquired Pyramiden & AQ architects and Lindqvist Byggkonsult) *	CE,PM	15	1635,3	**1351,8**	1372	**1082**
	7	8	HIQ International AB	I	15	1508,0	**1245,0**	1270	**1009**
STD	8	6	Semcon AB	I	15	2557,4	**1204,4**	2795	**1213**
STD	9	9	Rejler group	E,I	15	1875,5	**1145,4**	1793	**1053**
STD	10	10	COWI AB	MD	15	1034,0	**1034,0**	967	**967**
	11	11	Alten Sweden (acquired HotSwap AB)	I	15	894,1	**894,1**	1109	**1109**
STD	12	15	Projektengagemang AB (acquired Temagroup, Aug-16) *	MD	15	873,0	**873,0**	735	**735**
STD	13	12	Inspecta Sweden AB	CT	15	797,0	**797,0**	694	**694**
STD	14	14	White Architects	A,PM,Env	15	824,3	**706,6**	632	**567**
STD	15	17	Sigma Technology, Industry, IT Connectivity & Civil (acquired Aker Solutions) *	I,CE	15	684,0	**684,0**	734	**734**
STD	16	16	Structor group	CE,PM, Env	15	563,7	**563,7**	391	**391**
STD	17	20	Tengbom group	A,IA	15	527,2	**506,5**	558	**528**
STD	18	18	Pöyry Sweden	MD,I	15	488,2	**488,2**	458	**458**
	19	30	Altran Sweden	I	15	484,9	**484,9**	497	**497**
STD	20	21	Knightec AB	I	15/16	457,9	**457,9**	474	**474**
STD	21	24	Norconsult AB	CE,Env,A	15	446,6	**446,6**	447	**447**
STD	22	25	Bengt Dahlgren AB	M,Enr,Env	15	428,5	**428,5**	364	**364**
STD	23	19	Dekra Sweden (Industrial + Automotive) *	CT	15	544,5	**411,0**	438	**438**
STD	24	22	Etteplan Sweden	I	15	395,6	**395,6**	409	**409**
STD	25	28	Bjerking AB	CE,M,A	15	353,1	**353,1**	274	**274**
STD	26	26	Hifab Group AB	PM,	15	444,3	**342,0**	390	**281**
STD	27	27	Ansaldo STS Sweden AB	I	15	314,1	**314,1**	57	**57**
STD	28	32	ELU Konsult AB	CE	15/16	275,5	**275,5**	174	**174**
STD	29		IVL, Svenska Miljöinstitutet	Env,Enr	15	274,2	**274,2**	232	**232**
STD	30	31	Avalon Innovation AB	I	15	310,6	**273,9**	242	**242**

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 COMPANIES 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)

	2016	2015	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 (acquired Petro Team, Ludes and Franzkes Architects in Germany) *	MD	15	16145,0	15209,0	14697	656,00	768	5400,0	Tomas Carlsson (group) Åsa Bergman (Sweden)
	2	2	ÅF (several acquisitions in 2016, incl. Reinertsen) *	MD	15	10884,0	9508,3	8423	832,20	779	9000,0	Jonas Wiström
STD	3	3	WSP Sweden (acquired PRD Konsult, March-16) *	MD	15	3293,5	2809,0	2869	268,00	753	2289,6	Magnus Meyer
STD	4	4	Semcon AB	I	15	2557,4	2725,7	2795	5,30	627	1336,2	Markus Granlund
STD	5	5	Rejler group	E,I	15	1875,5	1711,5	1793	71,80	629	1257,9	Peter Rejler (group) Jonas Thimberg (Sweden)
STD	6	6	Ramböll (acquired Ågren Sverige & Arts) *	MD	15	1820,7	1679,6	1401	128,30	787	606,0	Niklas Sörensen
STD	7	8	Tyréns AB (acquired Pyramiden & AQ architects and Lindqvist Byggkonsult) *	CE,PM	15	1635,3	1426,3	1372	58,30	798	846,7	Ulrika Francke
	8	7	Combitech AB	I	15	1602,2	1533,6	1355	59,39	732	606,6	Hans Torin
	9	9	HIQ International AB	I	15	1508,0	1378,8	1270	182,70	861	1034,7	Lars Stugemo
STD	10	10	COWI AB	MD	15	1034,0	983,5	967	-0,46	624	437,0	Pär Hammarberg
	11	11	Alten Sverige (acquired HotSwap AB)	I	15	894,1	934,3	1109	41,39	458	453,6	Olivier Granger
STD	12	15	Projektengagemang AB (acquired Temagruppen, Aug-16) *	MD	15	873,0	612,9	735	30,70	722	480,0	Per-Arne Gustavsson
STD	13	13	White Arkitekter AB	A,PM,Env	15	824,3	759,5	632	47,02	770	334,4	Monica von Schmalensee
STD	14	12	Inspecta Sweden AB	CT	15	797,0	767,5	694	44,40	765	354,0	Timo Okkonen
STD	15	19	Sigma Technology, Industry, IT Connectivity & Civil (acquired Aker Solutions)*	I,CE	15	684,0	516,2	734	14,76	669	290,0	Edlund, Persson, Wickström, Malmros, Freese m fl
STD	16	18	Structor group	CE,PM, Env	15	563,7	517,2	391	70,49	910	239,7	Fladvad, Hulthén, Texte
STD	17	17	Dekra Sweden (Industrial + Automotive) *	CT	15	544,5	534,0	438	52,82	794	762,0	Jörgen Backersgård (Industrial) & Jan Martinsson (Automotive)
STD	18	21	Tengbom group	A,IA	15	527,2	476,3	558	16,05	633	204,3	Johanna Frelin
STD	19	16	Pöyry Sweden	MD,I	15	488,2	555,0	458	-15,55	444	116,0	Stefan Nyström
	20	29	Altran Sweden	I	15	484,9	311,5	497	22,86	649	291,0	Fredrik Nyberg
STD	21	22	Knightec AB	I	15/16	457,9	419,1	474	39,10	712	159,3	Dimitris Gioulekas
STD	22	25	Norconsult AB	CE,Env,A	15	446,6	393,0	447	12,22	513	175,3	Ljot Strömseng
STD	23	20	Hifab Group AB	PM,	15	444,3	479,4	390	-75,53	464	247,0	Patrik Schelin
STD	24	26	Bengt Dahlgren AB	M,Enr,Env	15	428,5	385,0	364	29,62	811	163,4	no CEO
	25	28	Veolia Water Technologies	Env	15	406,5	369,6	138	-15,65	734	483,8	Fabrice Brochet
STD	26	23	Etteplan Sverige	I	15	395,6	400,7	409	13,44	648	126,2	Mikael Vatn
STD	27	30	Bjerking AB	CE,M,A	15	353,1	308,9	274	28,40	863	182,2	Anders Wärefors
STD	28	27	Ansaldo STS Sweden AB	I	15	314,1	371,7	57	44,15	1492	634,7	Eric Pierre Morand
STD	29	33	Avalon Innovation AB	I	15	310,6	279,6	242	2,74	720	185,0	Peter Mattisson
STD	30	34	ELU Konsult AB	CE	15,16	275,5	268,4	174	25,62	960	100,5	Charlotte Bergman
STD	31		IVL, Svenska Miljöinstitutet	Env,Enr	15	274,2	264,6	232	5,39	629	196,8	Tord Svedberg
	32	31	Forsen Projekt (koncernen)	PM	15	256,7	228,0	185	8,90	872	137,1	Bengt Johansson
STD	33	39	Atkins Sweden	CE	15/16	240,6	213,0	193	10,64	762	67,9	Johannes Erlandsson
STD	34	37	Force Technology Sweden	CT	15	240,0	219,7	223	-7,18	673	101,0	Hans Ole Olsen
	35	36	Elektroautomatik i Sverige AB	I	15	230,7	226,7	100	6,30	712	90,2	Jonas Kjellberg
STD	36	32	GVA Consultants AB	I	15	222,4	282,9	145	-15,28	775	590,8	Thomas Sandung
	37	38	Z-Dynamics (Infotiv & Combine)	I	15	220,7	217,7	272	10,90	548	123,7	Alf Berntsson (Infotiv), Peter Karlsson (Combine)
STD	38	35	Consat AB	I	15	216,0	245,9	184	10,66	714	102,5	Jan Bertil Johansson
	39	43	Eurocon Consulting AB	I	15	198,8	173,7	195	16,54	685	113,7	Peter Johansson
	40	51	EBAB i Stockholm AB	PM	15	189,5	144,9	114	17,29	924	25,2	Karel Lehiste
STD	41	42	Golder Associates AB	CE, Env	15	183,9	175,1	118	1,30	713	95,1	Anna-Lena Öberg
	42	45	Technia AB	I	15	168,4	172,1	93	14,41	1024	55,4	Jonas Gejer
STD	43	47	INCOORD AB	M	15	159,9	155,9	89	29,72	1125	54,6	Tore Strandgård
STD	44	120	Optronic Partner pr	I	15/16	158,3	64,0	52	2,17	627	82,9	Peter Fredriksson
STD	45	50	FS Dynamics AB	I	15/16	157,5	145,2	161	7,00	658	49,0	Ulf Mårtensson
STD	46	53	Link Arkitektur AB	A	15	155,5	141,5	144	6,39	675	48,9	John Lydholm
STD	47	54	PQR International Group	M,E	15/16	154,8	136,1	121	10,95	713	43,7	Mikael Bisther
STD	48	46	Wingårdh architects	A	15	152,8	161,4	131	1,69	803	116,3	Gert Wingårdh
STD	49	56	HJR Projekt-el AB	E,M	15	147,4	127,8	116	6,29	738	55,5	Johan Renvall

	2016	2015	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	52	Projektbyrån Stockholm AB	PM	15/16	147,2	143,3	87	17,49	1097	54,7	Jonas Hellström
STD	51	74	Arkitekterna Krook & Tjäder AB	A	15	143,9	95,5	121	17,82	714	53,2	Mats Bergstrand
STD	52	65	Mälarholmen (Ettelva Arkitekter & M.E.R. Solution)	A	15	143,0	104,6	72	24,44	893	165,7	Anders Lindh (Ettelva), Cecilia Bejden (M.E.R.)
STD	53	94	Semrén & Månsson Arkitektkontor AB	A	15/16	142,8	99,8	131	106,94	665	276,6	Anders Erlandsson
STD	54	86	FOJAB AB	A	15/16	139,0	99,3	105	22,50	907	60,9	Daniel Nord & Cecilia Pering (Fojab Arkitekter)
STD	55	100	Core Link AB	I	15	135,7	72,2	50	13,69	936	121,0	Jörgen Jensen
STD	56	57	i3tex AB	I	15	134,4	120,6	159	1,47	635	48,3	Ulf Aiff
STD	57	61	Integra Engineering AB	PM,CE	15	133,0	109,9	123	20,22	816	54,2	Anders Skoglund
STD	58	67	Liljewall Arkitekter AB	A	15	129,6	101,2	121	10,74	752	48,5	Per-Henrik Johansson Lamond
	59	84	Exact Svenska Mätcenter AB	CE, Enr	15	128,9	86,0	124	3,90	562	63,7	Peter Mikes
STD	60	66	We Consulting AB	E	15	128,7	103,0	86	8,23	858	37,5	Mats Rönnlund
STD	61	14	Midroc Project Management AB	CE,I	15	126,3	700,4	98	9,73	942	117,3	Stefan Kronman
STD	62	60	FVB Sverige AB	Enr	15	122,0	112,9	105	6,21	777	56,9	Leif Breitholtz
STD	63	58	Niras AB *	PM	15	120,0	119,2	104	1,46	727	44,5	Markus Davelid
STD	64	68	Engineeringpartner Automotive Nordic AB	I	15	119,2	99,5	126	10,39	664	31,6	Fredrik Blomberg
	65	69	QRTECH AB	I	15	118,4	99,1	81	9,10	1108	49,7	Bengt Nordén
STD	66		Cactus Utilities & Rail *	I	15	115,4	82,9	83	0,65	626	73,0	Fredrik Bergström & Elisabet Svensson
STD	67	49	Eitech Engineering (former Goodtech Solutions AB)	I	15	114,9	147,4	63	-14,46	427	55,6	Hans Vedde
STD	68	62	Geosigma AB	CE,Env	15	114,7	108,7	91	0,37	735	45,1	Per Aspemar
	69	81	Essiq AB	I	14/15	113,9	88,2	153	6,32	589	43,4	Jonas Sohtell
STD	70	71	NYRÉNS Arkitektkontor AB	A	15	112,6	98,4	96	5,98	743	60,9	Tomas Alsmarker
STD	71	48	Devport AB	I	15	112,0	150,6	107	0,94	595	49,3	Nils Malmros, Bertil Nordenberg (deputy CEO)
STD	72	101	Neste Jacobs AB	I	15	111,7	72,1	106	-17,15	448	70,2	Marcus Andersson
STD	73	73	Consultec group *	A,CE	15	109,0	95,7	92	0,01	662	56,0	Allan Forslund
	74	90	Escenda Engineering AB *	I	15	103,8	83,3	73	7,77	686	34,2	Stefan Wedin
STD	75	77	Riba koncernen AB	M,Enr	15/16	103,8	93,3	48	6,50	963	38,8	Michael Lennse
STD	76	80	VBK Konsult	CE	15	100,1	88,6	88	6,92	781	31,0	Ulf Kjellberg
STD	77	89	HRM Engineering AB (acquired Cub Kar) *	I	15	99,9	84,0	105	10,00	677	34,4	Mats Rogbrandt
STD	78	70	Nitro Consult AB	CE	14/15	99,3	98,7	66	12,00	845	205,2	Donald Jonson
STD	79	79	Condesign AB	I,E	15	99,0	92,0	117	7,06	626	28,9	Fredrik Bromander
	80	111	Veryday AB (former Ergonomidesign)	I	14/15	97,5	67,1	53	21,27	1141	61,8	Peter Andén
STD	81	83	AIX Arkitekter AB	A	14/15	97,5	87,7	76	6,43	816	40,1	Gunilla Persson
STD	82	85	Byggnadstekniska Byrån AB	CE	15	96,4	85,6	75	9,55	824	37,7	Erik Löb
STD	83	59	Bassoe Technology AB	I	15	95,9	117,7	55	2,25	984	56,7	Acke Dahlman
STD	84	72	Benteler Engineering Services	I	15	95,1	97,6	54	0,97	550	32,6	Jessica Atterhäll
	85	64	Aecom Nordic AB (Norden)	Env	15	93,1	106,0	35	14,48	102	82,9	Gert Vermeiren
STD	86	63	Teamster AB	I	15	92,9	106,6	50	6,51	894	45,3	Ulf Mill
	87	95	Brandskyddslaget AB	M	15	91,5	75,7	49	19,48	1308	60,3	Martin Olander
	88	91	Teodoliten *	CE	15	85,7	82,3	74	8,27	716	50,0	Joakim Hixén
STD	89	108	ÅWL Arkitekter AB	A	15	85,6	68,3	62	12,80	886	26,5	Jacob Haas
STD	90	153	Evomatic AB	E	15/16	85,5	49,7	49	6,00	725	28,0	Jonas Persson
STD	91	158	Projektbyggaren i Blekinge AB	PM,A	15	84,7	48,7	26	8,66	1272	32,2	Christer Lennartsson
STD	92	102	Brunnberg & Forshed Arkitektkontor AB	A	15	84,5	71,9	61	7,68	893	27,5	Staffan Corp
STD	93	105	Arkitema Architects	A	15	84,3	69,8	77	1,39	655	29,1	Urban Blomberg
STD	94		One Nordic Konsult AB	I	15	83,1	0,0	46	-0,03	748	19,3	Magnus Hasselgren
	95	98	HOAB-gruppen *	PM	15	83,1	73,6	48	6,70	940	55,0	Per Olsson, Th. Liljenberg, P Svensson, R.Nordin et al
STD	96	97	Conmore Ingenjörsbyrå AB	I	15	80,7	74,7	100	4,27	590	23,7	Joakim Olsson
STD	97	92	Byrån för Arkitektur & Urbanism (BAU)	A	15	80,6	80,7	60	12,64	872	33,0	Per-Eric Sundby
STD	98	93	Elajo Engineering AB	I	15	79,1	77,2	103	14,35	659	25,2	Anders Lindh

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

THE TOP 300 SWEDISH CONSULTING ENGINEERING AND ARCHITECTURAL GROUPS

(GLOBAL FIGURES ARE PRESENTED FOR SWEDISH GROUPS)

	2016	2015	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	99	129	BSK Arkitekter AB	A	15	78,9	58,3	47	6,10	719	24,2	Stina Ljungkvist
STD	100	112	Cedervall Arkitekter	A	15	76,8	67,1	68	2,55	552	22,7	Björn Stillefors
STD	101	106	Tüv Nord Sweden AB	I	15	76,7	69,6	34	7,16	1329	28,1	Anders Egerbo
STD	102	119	Installation & Kraftkonsulterna AB	M, CE, Enr	15	75,8	64,9	62	7,33	819	25,1	Stefan Svan
STD	103	141	Reflex Arkitekter AB	A	15/16	75,7	56,5	61	15,54	949	38,1	Johan Linnros
STD	104	109	ELE Engineering AB	E	15/16	75,7	81,1	82	0,53	698	22,6	Henrik Eriksson
	105	99	TechRoi AB	I	15	75,5	72,3	67	-5,26	650	55,4	Tommy Christensen
STD	106	82	Bergsäker AB	CE	15	75,2	87,9	41	13,06	963	31,7	Johan Lundh
STD	107	118	Havd Group	I	15	74,6	65,0	25	4,88	611	35,1	Björn Hedenberg
	108	75	Technogarden Engineering	I	15	74,4	94,1	94	0,35	593	32,2	Stefan Lundin
STD	109	126	Segula Technologies AB	I	15	73,9	60,3	100	-2,67	540	22,7	Henrik Nessér
STD	110	78	IKG Group AB	I	14/15	72,6	56,4	96	-3,30	613	19,0	Magnus Ahlmark
STD	111	134	Assign Group	I	15	72,5	57,7	42	7,20	881	32,0	Stefan Svensson
	112	125	Iterio AB	CE	15	72,1	60,4	53	3,68	815	17,9	Jonas Jonsson
STD	113	104	Crabat AB	CE	15/16	72,0	69,8	31	4,22	963	19,6	Gustav Glader
STD	114	130	NCS Colour AB	I	15	71,8	61,0	36	-3,58	616	50,8	Christoffer Haux
STD	115	96	AcobiaFlux AB *	I	15	71,5	75,4	49	2,10	663	50,7	Mikael Nilsson
STD	116	116	Ansys Sweden	I	15	70,8	65,9	23	0,91	1052	120,4	James Cashman
	117	138	T-Engineering	I	15	70,6	55,3	46	3,74	822	31,7	Klas Lundgren
STD	118	113	BERGAB Berggeologiska Undersökningar AB	CE	15	70,0	66,5	52	6,17	834	24,4	Krister Jansson
STD	119	87	EDAG Engineering	I	15	69,6	85,0	92	0,14	533	41,2	Anna Skarenhed
	120	123	App Start-Up AB	I	15/16	69,6	62,1	55	5,37	761	29,9	Anders Kallin
	121	145	Prose (former TD Rail & Industry)	I/CE	15	68,1	53,1	56	-1,90	688	19,8	Anders Gymnander
	122	114	Konkret Rådgivande Ingenjörer AB	CE	15	67,8	66,5	54	13,33	902	25,5	Christer Öhman
STD	123	132	Projektledarhuset i Stockholm AB	PM	15/16	67,6	58,1	42	4,92	1012	26,4	Örjan Kjellström
	124	170	Devex Mekatronik AB	I	15	66,4	44,1	70	4,59	708	18,5	Erik Boström
STD	125	139	BSV Arkitekter & Ingenjörer AB	A,CE	15	66,4	55,0	54	11,10	840	31,7	Johnny Grauengaard
	126	133	Helm (Project Management & Systems) *	PM,Ce	15	66,1	57,8	16	6,75	1093	34,0	Michael Johansson & Michael Claesson
STD	127	117	Vega-Energi AB	Enr,M,I	15	64,4	65,3	34	1,74	416	18,0	Mario Decarlini
STD	128	137	SweRoad AB	CE	15	64,4	56,6	16	2,03	974	45,0	Jonas Hermansson
	129	135	Brandkonsulten Kjell Fallqvist AB	M	15	63,9	56,8	33	19,85	1479	30,9	Anders Karlsson
	130	209	IETV Elektroteknik AB	I	15/16	63,7	49,8	33	6,78	817	30,3	Krister Karlsson
	131	160	Exengo Installationskonsult AB	M	15	62,8	48,4	45	7,73	828	20,1	Christian Rolf
	132	173	Tjuren Projektpartner AB	PM,M	15	62,7	43,8	27	14,40	1408	33,2	Niklas Haglund
	133	124	Wester+Elsner Arkitekter AB	A	15	62,7	60,9	40	10,12	968	18,8	Fredrik Wester
STD	134	107	Helenius Ingenjörsbyrå AB	M	15	62,4	68,9	50	10,87	807	25,4	Arne Wallström
STD	135	128	TM-Konsult AB	CE, I	14/15	62,3	58,8	69	6,29	668	27,8	Kennet Holmbom
STD	136	143	Altair Engineering	I	15	62,0	54,2	33	-2,55	765	19,4	Håkan Ekman
STD	137	121	Kadesjös Ingenjörsbyrå AB	CE,M	15/16	61,3	64,0	55	5,32	791	31,3	Birgitta Lindblad
STD	138	151	Envac AB	Env	15	61,2	50,2	15	31,45	2190	278,0	Joakim Karlsson
STD	139	122	Cross Design i Göteborg AB	I	15	61,1	62,7	64	2,13	515	26,5	Tommy Bergh
STD	140	115	Automations Partner AB	I	15	60,7	66,1	30	-1,68	590	29,6	Jan Heyman
STD	141	219	Adiga AB	I	14/15	60,5	33,2	24	2,81	715	13,1	Ricardo Heras
STD	142	76	Chematur Engineering AB	I	15	60,2	93,9	30	-19,79	503	67,4	Peter Olausson
STD	143	157	Inhouse Tech Gruppen *	PM,CE, Env	15	60,0	48,9	32	11,70	1175	27,0	Fredrik Thunström, Anders Sundberg, Marcus Dahlström
STD	144	142	TQI koncernen	M, PM, Env, Enr	14/15	57,0	54,8	47	13,61	884	24,4	Kenneth Thunvall
STD	145	150	Andersson & Hultmark AB	M	15	55,1	50,8	46	9,44	899	28,5	Tobias Bodén
STD	146	159	Archus	A	15	54,2	48,5	45	7,87	844	24,8	Johnnie Pettersson
	147	152	Triathlon AB	I	14/15	54,0	50,1	52	3,48	605	32,1	Per-Olof Sverlinger
	148	127	Deltatec AB	I	15	53,0	60,0	14	5,68	1146	15,4	Patrik Storm
	149	175	Erfator Projektledning AB	PM,CE	15	52,9	42,8	28	3,13	960	17,3	Michel Bassili
	150		Pq Projektledning AB	PM	15/16	52,5	38,0		8,12	1011	34,0	Jonas Karlsson

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STD	151		Tikab, Teknikinformation i Krokom AB	I	15	51,5	47,9	63	3,72	595	16,6	Kim Nilsson
STD	152	180	Vicura AB	I	15	50,0	40,8	40	-6,90	567	28,0	Magnus Lundblad
	153	169	Stomkon (StomKonstruktioner i Västerås AB)	CE	15	49,9	44,2	51	3,39	696	13,2	Terje Klovland
STD	154	194	A & P Arkitektkontor AB	A	15	49,5	37,3	30	1,59	655	13,5	Gunnar Hellman
STD	155	183	Frank Projektpartner AB	PM,CE	15	48,6	39,5	28	2,37	743	13,7	Magnus Trange
	156		Svensk Konstruktionstjänst AB	I	15	47,9	41,5	28	0,69	712	20,2	Johan Lantz
	157	163	ELVA Processautomation AB	M	14/15	46,9	46,6	13	7,64	1218	26,5	Mats Andersson
	158	208	Jan Håkansson Byggplanering AB	CE,PM	15	46,8	35,2	20	5,99	945	27,4	Jan Håkansson
STD	159	176	Equator Stockholm AB	A	15	46,7	42,5	40	3,11	714	19,0	Annica Carlsson
	160	235	Clinton Mätkonsult AB	CE	14/15	46,6	30,6	41	0,65	551	15,1	Johan Nyström
STD	161	184	P O Andersson Konstruktionsbyrå AB	M	15	46,5	38,9	23	29,98	2003	33,0	Anders Kinhult
	162	179	Addiva AB	I	14/15	46,4	41,0	59	2,72	646	18,9	Carina Wigholm
STD	163	187	Besiktningsföretaget Ansvarsbesiktning AB	CE	15/16	46,0	44,6	21	2,28	775	13,9	John Widmark
	164	166	Byggledare i Roslagen AB (Bylero)	CE,PM	15/16	45,7	45,2	35	3,33	813	25,5	Torbjörn Frilund
STD	165	110	Provab AB	CE	15	45,6	67,2	31	-0,96	591	12,4	Ulf Andersson
STD	166	103	Centerlöf & Holmberg AB	CE	15	45,0	70,7	45	9,49	780	30,6	Bengt Andersson
STD	167	206	Yellon AB	A	15	44,9	35,9	42	0,36	695	22,2	Markus Leijonberg
STD	168	181	Electro Engineering koncernen AB	E	15/16	44,8	40,7	35	10,44	980	18,7	Bo Andersson
	169	162	Solvina AB *	I	15/16	44,7	47,0	29	3,94	824	34,0	Amer Omanovic
STD	170	131	SYD ARK Konstruera AB	A,CE	15/16	44,4	58,1	46	1,01	680	17,2	Lau Borch
	171	161	Strategisk Arkitektur Fries & Ekeroth AB	A	15	44,4	48,2	46	3,56	623	19,9	Maria Börtemark
STD	172	149	BBH Arkitekter & Ingenjörer AB	A,CE	15	43,9	51,5	25	2,39	712	10,9	Emma Berggren
STD	173	148	Carlstedt Arkitekter AB	A	15	43,6	52,4	42	3,30	687	29,1	Kerstin Eken
STD	174	171	Mats Strömberg Ingenjörsbyrå AB	E	15	43,3	44,0	35	2,99	731	17,8	Peter Granberg
STD	175	140	Citec AB	I	15	43,0	54,9	45	-10,77	290	15,6	Kenneth Lovidius
STD	176	156	Blom Sweden AB	I,Geo	15	42,9	49,3	22	-5,90	495	22,4	Daniel Pettersson
	177	168	LMT Elteknik AB	I,E	14/15	42,7	44,4	37	6,57	822	20,5	Anders Engqvist
STD	178	197	Deva Mecaneyes AB	I	15	42,4	36,8	41	3,71	719	16,9	Magnus Welén
	179		Konsultgruppen Röda Tråden AB *	CE	15	42,2	42,6	28	0,66	1265	8,7	Lars-Olof Gyllberg
	180	228	Wiretronic AB	I	15	41,7	31,1	14	2,85	966	12,3	Sören Karlsson
STD	181	167	VAP VA-Projekt AB	Env	14/15	41,6	45,0	33	7,61	846	20,0	Mikael Melin
STD	182	146	Järnvågen AB (Bergström, BEKAB, Indautomat, and more) *	I	15/16	41,6	52,8	37	0,13	645	24,0	Tord Hägglund (chairman)
STD	183	191	Koteko AB	I	15	41,6	37,9	27	0,33	754	17,4	Markus Hällström
STD	184	155	Arkitekthuset Monarken AB	A	15/16	41,3	49,5	41	7,38	688	30,5	Per Sandkvist
STD	185	188	Sören Lundgren Byggkonsult AB	CE,PM	15/16	41,3	38,0	27	4,85	1060	16,5	Anders Harlin
STD	186	174	Erséus Arkitekter AB	A	15	40,6	43,7	33	3,05	788	16,5	Peter Erséus
STD	187	195	Energi & Miljöteknik i Göteborg AB	E,M	14/15	40,3	37,1	17	3,21	624	11,0	Ola Nygren
	188	193	C&M Projekt i Stockholm AB	CE	15	40,2	37,3	20	5,03	1176	14,2	Krusbeth Kristensson
	189	213	Licab AB	CE	14/15	40,1	34,3	34	3,89	725	16,7	Andreas Andersson
STD	190	147	Kåver & Mellin AB	CE	15	40,0	52,7	33	12,40	880	22,0	Anders Hedberg
STD	191	190	Wikström AB	PM, CT, ENV, Enr, M	15/16	40,0	37,9	34	4,16	763	16,7	Annika Aarthun
	192	165	Validus Engineering	I	15	39,8	46,1	29	10,06	1103	24,8	Åke Burman
STD	193	189	SEVAB, Styr- och Elinstallationer Väst Teknik	I	14/15	39,8	38,0	24	5,19	860	22,2	Thomas Åberg
STD	194	178	MAF Arkitektkontor AB	A	14/15	39,6	41,1	35	0,18	647	15,3	Mats Jakobsson
STD	195	198	KLT Konsult AB	I	15	39,6	36,7	39	4,64	769	21,9	Jonas Kroll
STD	196	196	DHI Sverige AB	Env, M	15	39,0	36,9	28	1,99	787	16,7	Cecilia Wennberg
	197	205	KFS Anläggningskonstruktörer AB	CE,PM	14/15	38,6	36,1	27	5,59	1034	26,6	Patrik Påhlsson
	198	186	Fiber Network Consulting AB	I/CE	15	38,6	38,5	27	3,16	681	18,6	Thomas Andersson
STD	199	202	C.F. Møller Sverige AB	A	15	38,3	36,5	34	3,38	642	13,0	Mårten Leringe
STD	200	255	Thomas Eriksson Arkitektkontor AB	A	15	38,3	26,1	26	2,39	757	14,7	Thomas Eriksson

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

THE TOP 300 SWEDISH CONSULTING ENGINEERING AND ARCHITECTURAL GROUPS

(GLOBAL FIGURES ARE PRESENTED FOR SWEDISH GROUPS)

	2016	2015	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	201	211	High Vision Engineering Sweden AB	I	15	38,1	34,5	33	1,83	756	13,0	Peter Weston
STD	202	204	BK Beräkningskonsulter AB	CE,I	14/15	38,1	36,2	33	3,69	802	18,4	Tomas Carlsäng
	203		Infrapartner AB	CE	15	38,0	35,0	15	5,13	1251	10,8	Ulrika Hamberg
	204	164	Aperto Arkitekter Byggkonsulter AB	A,CE	14/15	38,0	46,1	38	-0,06	614	13,6	Torgny Westerberg
STD	205	210	Rotpartner *	CE	15/16	37,8	35,0	40	1,72	660		Fredrik Olsson
	206	218	S-Tech, Skandinaviska Tech AB	E	15	37,8	33,4	41	5,33	688	19,9	Martin Jansson
STD	207	217	Projektgaranti AB	PM	14/15	36,3	33,8	28	0,44	753	12,6	Kajsa Hessel
	208	242	Creanova AB	M,Enr	14/15	36,2	28,8	25	13,57	1034	23,0	Jonas Dorsander
STD	209	201	Scheiwiller Svensson Arkitektkontor AB	A	15/16	36,0	36,6	26	3,89	862	15,3	Ari Leinonen
STD	210	229	Ca Consultadministration AB	PM	15	36,0	31,0	31	2,15	744	17,9	Daniel Åverhög
	211	224	B & B, Bro & Betong Projektledning	CE,PM	14/15	35,7	32,2	18	8,14	1259	15,8	Magnus Tengblad
	212	285	Myvi Konsult AB	CE	14/15	35,6	22,2	42	5,75	700	16,3	Tommy Johansson
STD	213	245	Rockstore Engineering AB	CE	15	34,8	28,1	15	6,42	1324	17,6	Krister Knutsson
STD	214	221	Landskapslaget AB	A	15	34,7	32,4	24	2,92	818	14,3	Birgitta Leine
	215	241	Creator Teknisk Utveckling AB	I	15	34,5	28,9	33	-5,04	558	53,6	Jerry Svedlund
	216	226	ABAKO Arkitektkontor AB	A	15	34,4	31,8	35	1,95	693	14,1	Olof Hellberg
	217	216	HillStatik AB	S,CE	15	33,7	33,9	20	10,54	1169	20,2	Conny Höggren
	218	271	Berge Engineering	I	15	33,6	23,7	40	0,24	518	10,9	Thomas Winberg
STD	219	207	MoRe Research Örnsköldsvik AB	I	15	33,6	35,9	44	-2,37	460	18,0	Stefan Svensson
	220	348	Calambio Engineering AB	I	14/15	33,5	15,3	11	5,80	1251	17,2	Thomas Reidenfalk
STD	221	274	EKM kontroll AB	M	15/16	33,4	23,5	23	0,79	592	10,8	Johan Kjellman
	222	263	DAP Stockholm	A	15	33,2	24,2	8	2,01	1144	25,8	Anna Möller Wrangel
	223		AK-Konsult Indoor AIR AB	Env	15	33,1		27	1,74	786	9,8	Thomas Perman
	224	220	Vatten & Miljöbyrån AB	M,E,Enr	14/15	33,1	32,7	24	5,91	825	23,4	Robert Jönsson
STD	225	172	SCIOR Geomanagement AB (fd Sundsvalls Mätcenter AB)	CE	15	33,0	43,8	26	-0,51	799	29,2	Fredrik Sylvan
	226	215	IMI Energi & VVS Utveckling AB (former EMU)	Enr, M	15	33,0	34,0	37	0,82	642	12,4	Anders Carlsson
STD	227	243	STIBA AB	CE	15	32,3	28,8	24	8,97	1078	14,8	Joakim Österlund
STD	228	203	Arkitektgruppen G.K.A.K AB	A	15	32,3	36,2	28	2,67	678	12,6	Bo Johansson
STD	229	308	Landskapsgruppen AB	CE	15/16	31,8	19,6	33	3,57	714	14,0	Ulf Rehnström
	230	182	Orbicon AB	Env, CE	15	31,5	39,8	33	1,60	474	15,7	Thomas Sandström
STD	231	275	Fredblad Arkitekter AB	A	15/16	31,4	23,4	29	4,13	769	9,9	Leif Jönsson
	232	230	Infrakonsult Sverige AB	CE	14/15	31,4	30,9	14	3,57	1162	11,0	Joacim Jansson
STD	233	281	Murman Arkitekter AB	A	15	31,3	22,9	26	3,46	754	12,0	Ulla Alberts
	234	212	PB-Teknik AB	M	15/16	31,3	33,2	24	4,45	842	18,3	Per Nordlund
STD	235	244	DGE Mark och Miljö AB	Env	15	31,1	28,3	27	0,10	609	12,2	Johnny Sjögren
	236	222	Hedström & Taube Projektledning AB	PM	15	31,0	32,4	19	6,20	1109	11,9	Göran Melin
	237	314	Kjellander & Sjöberg AB	A	14/15	31,0	19,2	31	4,67	698	11,3	Mi Inkinen
STD	238	233	Tecnet Nordic AB	I	14/15	30,2	30,7	26	1,09	763	9,0	Göte Nordmark
STD	239	240	Lindberg Stenberg Arkitekter AB	A	15	30,1	29,1	27	4,57	785	13,4	Dag Lindberg
	240	236	Metod Arkitekter	A	15	30,1	30,1	23	6,17	917	12,6	Patrik Tammerman
STD	241	262	QE Quality Engineering Group AB	I	15	30,0	24,3	22	5,07	980	13,7	Fredrik Lundström
STD	242	256	Elektrotekniska Byrån i Karlstad AB	E,I	15/16	29,6	25,3	28	2,79	740	23,0	Jonas Bjuresäter
STD	243	232	Projectpartner AB	PM	15	29,6	30,8	17	3,60	1054	19,0	Tommy Backman
STD	244		Okidoki! Arkitekter AB	A	15	29,6	33,0	34	1,83	609	10,1	Jan Edvardsson
	245	284	Rundquist Arkitekter AB	A	15	29,5	22,3	17	3,48	615	13,4	Henrik Rundquist
STD	246	237	TEAM TSP Konsult AB	E	15	29,4	30,0	21	3,25	1055	13,5	Mattias Hernegran
STD	247	311	Atrio Arkitekter (Jönköping, Kalmar & Västervik)	A	15	29,3	19,3	28	3,12	643	15,6	Lunde, Bohlin, Spaak
STD	248	261	HMXW Arkitekter AB	A	15	29,3	24,4	20	5,29	921	16,6	Ragnar Widegren
STD	249	291	Trafikia AB	CE	15	29,3	21,6	25	-2,67	569	23,0	Mats Hagström
	250	325	Looström & Gelin Konstruktionsbyrå AB	CE	15/16	29,2	22,5	23	4,87	461	13,0	Mara Hallmans
STD	251	466	Varg Arkitekter AB	A	15/16	28,7	32,1	28	6,84	761	19,2	Inga Varg
STD	252	239	Konsultgruppen i Bergslagen AB	I	15/16	28,4	29,2	16	1,13	998	8,4	Håkan Martinsson

	2016	2015	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	253	251	Knut Jönson Byggadministration i Stockholm	PM	15/16	28,4	26,5	11	6,20	1339	10,6	Tom Ågstrand
	254	227	Protek Projektstyrning i Göteborg	PM,CE	15	28,2	31,2	19	1,99	840	9,1	Pär Eriksson
	255		Dinelljohansson	A	15	28,2	20,5	19	9,89	1103	23,9	Morten Johansson
STD	256		Pronecta AB	I	14/15	28,1	21,7	16	5,93	1109	15,3	Anders Johansson
STD	257	303	Ingenjörsbyrå Forma	I	15/16	28,0	20,2	25	3,60	782	16,9	Anders Grahm
STD	258	272	Knut Jönson Ingenjörsbyrå AB (gruppen)	CE	15/16	28,0	23,6	28	6,30	733	69,0	Per Arne Näsström
	259	225	Veprox AB	I	15	27,9	31,8	33	-0,16	480	10,3	Bo Larsson
STD	260	259	Pidab Instrumentdesign AB	I	15/16	27,8	24,5	27	0,10	651	9,5	Per Forsbring
STD	261	277	mCUB AB	I	14/15	27,7	23,2	27	-0,37	580	7,7	Marcus Blomberg
	262	267	Berdiz Consulting AB	I	15	27,6	23,9	27	3,71	789	11,7	Samir Dizdar
STD	263	238	AG Arkitekter AB	A	15	27,4	29,9	22	2,72	915	10,8	Fredrik Kihlman
STD	264		Energi Funktion Komfort, Skandinaviska AB	I,Enr,PM	15	27,4	13,9	24	2,74	679	8,4	Mikael Lezdins
	265	192	Camatec Industriteknik AB	I	15/16	27,4	37,6	37	1,14	574	19,4	Johan Ljungner
	266		Elkonsulten i Finspång AB	E	15/16	27,2	26,9	12	3,29	999	13,1	Bengt Hillier
STD	267	276	Total Arkitektur & Urbanism AB (former Mondo&FRS Ark)	A	15	27,0	23,3	27	5,84	743	14,1	Johan Granqvist
	268		Uppdragspartner i Mälardalen AB	PM	15	26,8	0,1	1	3,46	3940	6,3	Kent Eriksson
STD	269		Metron Miljökonsult AB	Env	15	26,8	20,4	17	5,46	926	15,3	Ann-Sofie Wessberg
STD	270	258	Säkerhetspartner Norden AB	CE	14/15	26,7	25,1	12	5,54	1483	16,1	Leif Nyström
	271	249	Mekaniska Construktion Norrbotten AB	I	15	26,6	26,8	15	3,65	846	13,6	Erik Andersson
STD	272	301	EPG Projektledning AB	PM	15	26,5	20,2	22	3,41	811	10,0	Dennis Lundmark
	273	214	Scanscot Technology AB	CE	15	26,4	34,1	17	-1,02	762	16,0	Jan-Anders Larsson
	274	269	Kanozi Arkitekter AB *	A	14/15	26,3	23,8	36	2,73	505	9,5	Johan Norén
	275	273	Optimation AB	I	15/16	26,0	23,6	21	4,72	949	24,1	Tomas Eriksson
STD	276	292	Uulas Arkitekter AB	A	15	26,0	21,4	22	4,03	778	12,1	Jerker Edfast
STD	277	296	Ingenjörsfirman Rörkraft AB	I	15/16	25,9	21,0	21	2,55	801	6,4	Clas Wollberg
STD	278	293	Eco Konsult i Stockholm AB	E	15/16	25,8	21,3	20	3,43	863	10,4	Jan Strömberg
STD	279	247	Svenska Teknikingenjörer AB	I	14/15	25,8	27,8	24	3,96	754	15,7	Hans Aderum
STD	280	250	Creacon Halmstads Konsult AB	CE	15	25,7	26,6	30	0,54	612	9,6	Torbjörn Åkesson
STD	281	425	Ingenjörsfirma Mats Bergstedt AB	I	15/16	25,5	15,8	19	5,86	793	12,8	Mats Bergstedt
STD	282	302	Arkitektbyrån Design i Göteborg	A	15	25,4	20,2	26	2,70	589	9,0	Jan Åkerblad
STD	283	329	Marge Arkitekter AB	A	15	25,3	17,8	26	4,10	701	10,7	Louise Masreliez
STD	284	231	Calluna AB	Env	15	25,2	30,8	31	0,26	472	12,2	Gert Kindgren
	285	253	Visbyark AB	A,CE	15	25,2	26,4	20	0,74	748	7,4	Håkan Björkman
STD	286		Studio Stockholm Arkitektur AB	A	15	25,2	11,3	16	7,80	1086	14,6	Alessandro Cardinale
	287	288	Motala Mättjänst	CE	15	25,2	22,0	27	2,67	626	8,9	Tomas Knutsson
STD	288	270	Jelmtech Produktutveckling AB	I	14/15	24,9	23,7	23	2,24	535	9,4	Carl-Fredrik Emilsson
STD	289	257	Mekaniska Prövningsanstalten MPA AB	M	15	24,8	25,3	13	4,16	1088	9,0	Torbjörn Ohlsson
	290	246	Cliff Design AB	I	15	24,7	27,9	19	-0,08	503	10,3	Anders Nordlund
STD	291	265	Rördesign i Göteborg AB	I,M	15/16	24,7	24,1	25	0,94	790	14,8	Sture Börjesson
	292	280	Novamark AB	CE/Env	15	24,7	23,1	17	6,70	967	11,7	Charlotte Frank Sjöblom
STD	293	283	Contekton Arkitekter Fyrstad AB	A	14/15	24,7	22,5	22	5,92	737	14,0	Peter Bergmann
STD	294	326	IMEK VVS Rådgivande Ingenjörer AB	M	15	24,2	18,1	11	1,15	601	10,5	Tomas Kvistmo
	295		Rstudio Arkitekter	A	15/16	24,1	21,2	17	5,04	951	15,7	John R. Johansson
	296		Eltech Automation i Lund AB	I	15/16	24,1	17,7	19	2,34	770	7,9	Mikael Carlsson
	297	297	Mårtensson Consulting		15/16	24,1	20,7	24	3,83	649	18,5	Nils Mårtensson
	298	289	Strategia Projektledning AB	CE	15/16	23,7	20,0	16	4,00	1068	10,8	Mårten Bengtsson
	299	286	Projektidé i Uppsala AB	PM	14/15	23,5	22,1	15	4,52	889	11,6	Henrik Billing (chairman)
STD	300	252	Arkitekter Engstrand och Speek AB	A	15	23,4	26,5	22	3,05	577	21,7	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

“NORWAY HAD THE BEST PROFITABILITY IN THE NORDIC REGION WITH A PROFIT MARGIN OF 7.0 % IN 2015.

Culture house "Väven" in Umeå.
Photo: Åke E:son Lindman

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 and RIF gives a presentation of developments on the Norwegian market. SKOL (engineering consultants and architectural firms) and ATL (architectural firms) give 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 20 largest companies. The calculations have been made on average exchange rates over the period January up to and including October 2016, as presented at the top of the graph below.

The highest turnover per employee is in Norway, with EUR 149,500. In Iceland it is EUR 111,000, in Finland EUR 103,000, in Sweden EUR 126,000 and in Denmark EUR 124,000. Profitability improved in Sweden, Finland and in Iceland in 2015, whereas it weakened somewhat in Denmark and Norway. The best profitability in 2015 is attributed nevertheless to Norway, with an average profit margin of 7.0%. In other countries the profit margin was in Finland 5.1%, in Denmark 4.0%, in Sweden 5.8% and in Iceland 6.3%. The greatest change was registered in Finland, where the profit margin rose to 5.1% from 3.6%. In Iceland, a negative profit margin in 2013 has experienced an upswing to 6.3%. Counted in terms of profit per employee, each employee in Norway generates EUR 10,400 in profit. In Sweden, the profit per employee is EUR 7,400, in Denmark EUR 5,000, in Finland EUR 5,200 and in Iceland EUR 7,000.

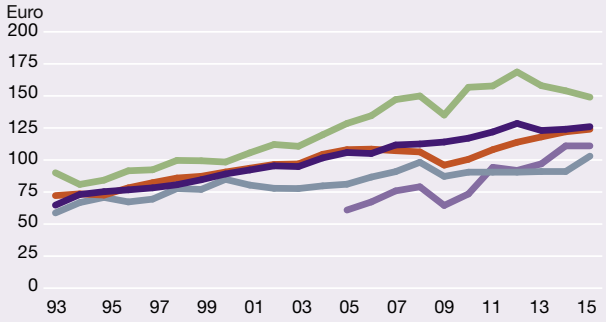
Nordic comparison of key figures

The figures are calculated with the conversion rates below, representing average currency rates in January–October 2016.

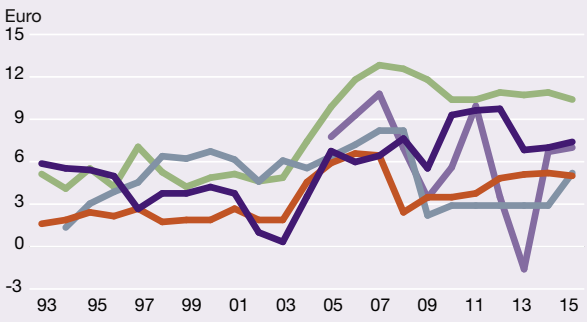
1 Euro = 9,3562 SEK 7,4586 DKK 8,9404 NOK 146,30 ISK And previously, 1 Euro = 5,9457 Mark

Sweden Denmark Norway Iceland Finland

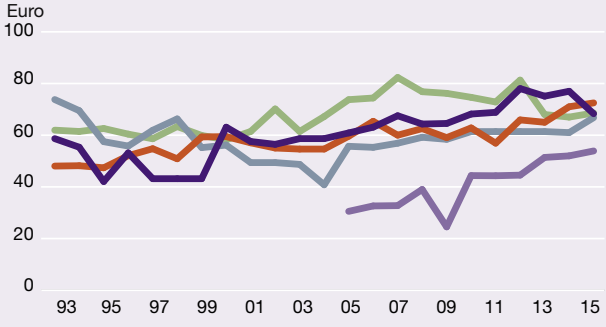
Turnover/employee



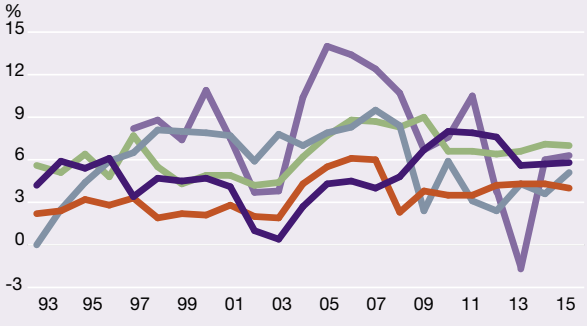
Profit after financial items/employee



Total assets/employee



Profit margin



THE TOP 100 NORDIC ARCHITECTURAL GROUPS

	2016	2015	Group	Country	Annual Report	Employees	(Previous year)	Turnover	Currency	Turnover MEUR
FRI	1	1	Rambøll Architects & Urban Planning *	DAN	15	835	730		MDKK	
STD	2	4	SWECO Architects (with 2 acquisitions in Germany) *	SWE	15	700	455	780,0	MSEK	83,4
STD	3	2	White Architects AB	SWE	15	632	583	824,3	MSEK	88,1
STD	4	3	Tengbom group	SWE	15	558	522	527,2	MSEK	56,3
DA	5	7	Arkitema K/S	DAN	15	450	288	330,0	MDKK	44,2
RIF	6	5	LINK Arkitektur AS (acquired by Multiconsult)	NOR	15	353	350	366,8	MNOK	41,0
DA	7	6	C.F. Møller Architects	DAN	15	309	320	304,1	MDKK	40,8
DA	8	8	Henning Larsen Architects	DAN	15/16	281	270	282,2	MDKK	37,8
DA	9	15	BIG / Bjarke Ingels Group *	DAN	15	280	122	250,0	MDKK	33,5
STD	10	69	Projektengagemang Arkitektur (acquired Temagroup)	SWE	15	228	42	252,0	MSEK	26,9
	11	11	Snøhetta Group *	NOR	15	180	150	176,6	MNOK	19,8
	12	17	Nordic Office of Architecture	NOR	15	132	119	226,6	MNOK	25,4
STD	13	12	Wingårdh Architects	SWE	15	131	133	152,8	MSEK	16,3
STD	14	23	Semrén & Månsson Architects	SWE	15/16	131	94	142,8	MSEK	15,3
DA	15	10	Årstiderne Arkitekter A/S	DAN	14/15	129	151	105,2	MDKK	14,1
	16	14	Schmidt Hammer Lassen Architects K/S *	DAN	14	124	124	93,8	MDKK	12,6
STD	17	19	Arkitekterna Krook & Tjäder AB	SWE	15	121	98	143,9	MSEK	15,4
STD	18	18	Liljewall Arkitekter AB	SWE	15	121	105	129,6	MSEK	13,8
DA	19	24	KPF Arkitekter A/S	DAN	15	105	80	62,0	MDKK	8,3
STD	20	25	FOJAB AB	SWE	15/16	105	83	139,0	MSEK	14,9
STD	21		Tyréns (acquired Pyramiden & AQ Architects) *	SWE	15	104		118,6	MSEK	12,7
STD	22	21	NYRÉNS Arkitektkontor AB	SWE	15	96	92	112,6	MSEK	12,0
	23	16	DARK Group *	NOR	15	95	122	122,2	MNOK	13,7
	24		Sandellsandberg & Tegn 3 (ÅF) *	SWE	15	89	28	124,0	MSEK	13,3
DA	25	26	Mangor & Nagel A/S	DAN	15	82	78	87,5	MDKK	11,7
DA	26	39	PLH Arkitekter AS	DAN	15	81	60	81,0	MDKK	10,9
DA	27	32	JJW Arkitekter A/S	DAN	15	79	83	52,0	MDKK	7,0
DA	28	33	3XN A/S	DAN	14/15	76	68	110,8	MDKK	14,9
STD	29	31	AIX Arkitekter AB	SWE	14/15	76	74	97,5	MSEK	10,4
	30	34	Lpo Arkitekter As	NOR	15	73	66	74,8	MNOK	8,4
STD	31	35	Mälarholmen (Ettelva Arkitekter & M.E.R. Solution)	SWE	15	72	65	143,0	MSEK	15,3
DA	32	37	Vilhelm Lauritzen AS	DAN	15	69	63	83,8	MDKK	11,2
DA	33	27	Aarhus Arkitekterne A/S	DAN	14/15	68	76	81,5	MDKK	10,9
STD	34	36	Cedervall Arkitekter	SWE	15	68	64	76,8	MSEK	8,2
FRI/DA	35		AI-Gruppen A/S	DAN	15	63	52	49,1	MDKK	6,6
STD	36	38	ÅWL Arkitekter AB	SWE	15	62	62	85,6	MSEK	9,2
STD	37	40	Brunnberg & Forshed Arkitektkontor AB	SWE	15	61	57	84,5	MSEK	9,0
STD	38	50	Reflex Arkitekter AB	SWE	15/16	61	59	75,7	MSEK	8,1
ATL	39	55	Pes-Arkkitehdit Oy (Pekka Salminen)	FIN	15	60	48	7,2	MEUR	7,2
STD	40	45	Byrån för Arkitektur & Urbanism (BAU)	SWE	15	60	53	80,6	MSEK	8,6
DA	41	28	CUBO Arkitekter A/S	DAN	14/15	57	75	79,4	MDKK	10,6
DA	42	44	Rubow Arkitekter A/S	DAN	15	57	55	52,9	MDKK	7,1
	43	47	Lund Hagem Arkitekter AS	NOR	15	56	53	57,5	MNOK	6,4
	44	65	OG Arkitekter AS	NOR	15	55	44	34,2	MNOK	3,8
STD	45	49	BSV Arkitekter & Ingenjörer AB	SWE	15	54	51	66,4	MSEK	7,1
	46	72	Hille Melbye Arkitekter AS	NOR	15	54	42	60,7	MNOK	6,8
DA	47	70	Schønherr A/S	DAN	15	52	42	39,5	MDKK	5,3
	48	48	Solem Arkitektur AS	NOR	15	52	52	64,8	MNOK	7,2
	49	84	Tag Arkitekter AS	NOR	15	52	38	44,1	MNOK	4,9
ATL	50	53	Arkkitehtitoimisto JKMM Oy *	FIN	15	50	50	8,7	MEUR	8,7
ATL	51	54	L Arkkitehdit Oy (Arkkitehtitoimisto Larkas & Laine Oy)	FIN	15	50	50	5,2	MEUR	5,2

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

THE TOP 100 NORDIC ARCHITECTURAL GROUPS

	2016	2015	Group	Country	Annual Report	Employees	(Previous year)	Turnover	Currency	Turnover MEUR
	52	42	Ratio Arkitekter AS (former Bgo og Medplan Arkitekter)	NOR	15	50	56	162,7	MNOK	18,2
DA	53	61	SLA Arkitekter A/S	DAN	15	49	45	29,1	MDKK	3,9
ATL	54	52	Helin & Co Architects	FIN	14/15	49	51	10,4	MEUR	10,4
	55	71	Arcasa Arkitekter AS	NOR	15	49	42	80,1	MNOK	9,0
	56	68	Lund & Slaatto Arkitekter AS	NOR	15	49	43	55,7	MNOK	6,2
DA	57	63	Kullegaard Arkitekter A/S	DAN	14/15	48	44	49,0	MDKK	6,6
ATL	58	58	Arkkitehtitoimisto SARC Oy	FIN	14/15	47	47	7,0	MEUR	7,0
ATL	59	76	Architecture Office Sigge Ltd/ Viiva arkkitehtuuri (Arkkitehtitoimisto Sigge Oy)	FIN	14/15	47	40	3,9	MEUR	3,9
STD	60	86	BSK Arkitekter AB	SWE	15	47	37	78,9	MSEK	8,4
STD	61	56	SYD ARK Konstruera AB	SWE	15/16	46	47	44,4	MSEK	4,7
	62	66	Strategisk Arkitektur Fries & Ekeroth AB	SWE	15	46	43	44,4	MSEK	4,7
DA	63	29	Friis & Moltke A/S	DAN	15	46	75	44,0	MDKK	5,9
DA	64	83	KHR Arkitekter AS	DAN	15	46	38	43,0	MDKK	5,8
	65	77	Dyrvik Arkitekter A/S	NOR	15	46	40	44,9	MNOK	5,0
DA	66	30	Tegnestuen Vandkunsten ApS	DAN	15	45	75	58,6	MDKK	7,9
STD	67	87	Archus	SWE	15	45	37	54,2	MSEK	5,8
DA	68	51	Rørbæk og Møller Arkitekter ApS	DAN	14/15	44	51	52,4	MDKK	7,0
DA	69	62	Lundgaard & Tranberg Arkitekter A/S	DAN	14/15	43	44	88,7	MDKK	11,9
	70	89	Abo Plan & Arkitektur As	NOR	15	42	37	45,9	MNOK	5,1
STD	71	90	Yellon AB	SWE	15	42	36	44,9	MSEK	4,8
STD	72	59	Carlstedt Arkitekter AB	SWE	15	42	46	43,6	MSEK	4,7
STD	73	75	Arkitekthuset Monarken AB	SWE	15/16	41	40	41,3	MSEK	4,4
DA	74	57	Christensen & Co. Arkitekter A/S	DAN	14/15	41	47	46,9	MDKK	6,3
	75	74	Wester+Elsner Arkitekter AB	SWE	15	40	40	62,7	MSEK	6,7
	76	85	PKA - Per Knudsen Arkitektkontor AS	NOR	15	40	38	40,5	MNOK	4,5
STD	77	81	Equator Stockholm AB	SWE	15	40	38	46,7	MSEK	5,0
	78	108	PIR II architects AS	NOR	15	40	32	26,8	MNOK	3,0
ATL	79	80	Uki Arkkitehdit Oy	FIN	15	40	39	3,6	MEUR	3,6
	80	64	Niels Torp AS Arkitekter	NOR	15	39	44	51,7	MNOK	5,8
	81	140	HRTB AS (Architects)	NOR	15	38	25	35,3	MNOK	3,9
	82	67	Aperto Arkitekter Byggkonsulter AB	SWE	14/15	38	43	38,0	MSEK	4,1
DA	83	43	Creo Arkitekter A/S	DAN	15	37	55	72,5	MDKK	9,7
DA	84	41	Aart A/S	DAN	14/15	37	57	48,0	MDKK	6,4
DA	85	103	Dissing+Weitling Architecture A/S	DAN	15	37	33	33,1	MDKK	4,4
ATL	86	169	Arkkitehtitoimisto Ala Oy	FIN	15	37	20	4,2	MEUR	4,2
ATL	87	88	Cederqvist & Jäntti Arkkitehdit Oy	FIN	14/15	37	37	3,4	MEUR	3,4
	88		Alliance Arkitekter AS	NOR	15	37	17	32,9	MNOK	3,7
	89	113	4B Arkitekter AS	NOR	15	37	30	32,4	MNOK	3,6
	90	102	AMB Arkitekter AS	NOR	15	36	34	37,0	MNOK	4,1
	91	124	Kanozi Arkitekter AB *	SWE	14/15	36	27	26,3	MSEK	2,8
	92		Dorte Mandrup Arkitekter A/S	DAN	14/15	35	24	36,0	MDKK	4,8
	93	95	DOMUS arkitekter A/S *	DAN	14	35	35	30,1	MDKK	4,0
SKOL/ATL	94	145	Arkkitehdit Soini & Horto Oy	FIN	15	35	24	4,5	MEUR	4,5
SKOL/ATL	95	100	Parviainen Arkkitehdit Oy	FIN	15	35	35	3,3	MEUR	3,3
ATL	96	105	Arkkitehtitoimisto Lukkaroinen Oy	FIN	15	35	33	2,8	MEUR	2,8
	97	101	Enerhaugen Arkitektkontor As	NOR	15	35	35	38,1	MNOK	4,3
STD	98	106	MAF Arkitektkontor AB	SWE	14/15	35	32	39,6	MSEK	4,2
	99	92	ABAKO Arkitektkontor AB	SWE	15	35	35	34,4	MSEK	3,7
STD	100		Okidoki! Arkitekter AB	SWE	15	34	36	29,6	MSEK	3,2

STD = Member of the Swedish Federation of Consulting Engineers and Architect, FRI = Member of FRI, the Danish Association of Consulting Engineers, DA = Member of Danish Association of Architectural Firms, SKOL = Member of SKOL, the Finnish Association of Consulting Firms, ATL = Member of ATL (Finnish Architects' Office)
** = lack of conforming figure/proforma/assumed, – = missing figure*

THE DANISH MARKET: PROFITS BACK AT PRE-FINANCIAL CRISIS LEVELS

The consulting engineering industry in Denmark has many strengths, but has been having some difficulties in regard to generating sufficient profits. However, over the past three years, the Danish consulting engineering firms have shown a steady increase in profit margin (EBIT) from 6.1 percent in 2013 to 6.7 percent in 2014 and 7.0 percent in 2015. This brings the EBIT back at pre-financial crisis levels. Looking at the global revenue, each year seems to be record-breaking.

On the domestic market, revenue increased by 4.1 percent to EUR 1.71 billion (DKK 12.7 billion), which is an all-time high. Export accounted for approximately 17 percent of the domestic revenue, which was a decline from 19 percent in 2014. Looking at the larger stage, Danish consulting engineering firms generated EUR 3.36 billion (DKK 25 billion) in global revenue.

Compared to 2014, this is an increase of 25 percent, which was primarily due to growth in the foreign subsidiaries, where Danish consulting engineering firms made several large acquisitions. Danish consulting engineering firms employed approximately 25,500 staff globally, of which 13,000 staff were employed in foreign subsidiaries and 12,500 staff were employed in Denmark.

Outlook

While the financial crisis is generally deemed to be over, the Danish economy is still moving at a rather slow pace. In their "Economic Statement" from August 2016, the Danish Ministry of Finance expects GDP to reach 0.9 percent in 2016 and 1.5 percent in 2017. This is a downgrade of 0.25 percent for both years, compared to the latest forecast in May 2016. Residential investments are expected to rise by 4.0 percent in 2016 and 6.0 percent in 2017 due to rising prices on housing and low financing expenses.

Business investments are expected to increase by 3.6 percent in 2016 and 4.7 percent in 2017. Public investments have been at a historic high these past years and will see a significant decline in the coming years. In 2016, public investments are expected to decline by 3.3 percent of GDP and further 0.2 percent of GDP in 2017.

Based on the latest FRI survey (October 2016), the Danish consulting engineering industry expects a small increase in the number of employees over the next six months. The survey shows that 34 percent of the firms expect to increase their workforce, while 19 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 39 percent expect their workload to decrease. Revenue generated by exports and in foreign subsidiaries accounts for 58 percent of total revenue in the industry. On the domestic market, Danish consulting engineering firms expect a slow but steady growth in revenue.

Sector market performance

The *Building Sector* is currently going strong and comprises 39 percent of the total turnover in FRI member firms. *The Infrastructure Sector* is the second largest sector with 24 percent, but is expected to decline in the coming years. The other two large sectors are *Environment and Energy* with 13 percent and 12 percent, respectively, of total revenue. The remaining revenue was produced in smaller sectors like *IT, Management Consultancy* and *Process Engineering*.

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 330 firms are members of FRI and, in total, they employ 25.500 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.

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> "DANISH CONSULTING ENGINEERING FIRMS GENERATED EUR 3.36 BILLION IN GLOBAL REVENUE (IN 2015)."

One hour by train between major Danish cities

In 2013, the previous government proposed a major plan called Togfonden DK; an upgrade of the Danish rail system between five major cities, and allocated EUR 3.83 billion (DKK 28.5 billion) to finance it. The plan was to reduce the travel time to one hour from each city to the next in line. The upgrade would include work on current rails as well as new railway lines and bridges to improve speed and capacity. Togfonden DK would also focus on electrification of the remaining main lines, where diesel trains were still operating. To pay for the upgrade the politicians would increase the taxation of the oil companies working in the North Sea. Because of the rapid fall in oil prices, more than half of the allocated funds went missing and Togfonden DK stranded with the change of government in 2015. Currently, only electrification is still scheduled to be implemented while the remaining elements of the plan have been postponed.

Building sector back on track

During the financial crisis the building sector felt the consequences the most when investments in residential and commercial buildings plummeted. FRI's biannual reports on business cycles showed that investments in the building sector hit an all-time low in the years 2007 to 2010. In these years, the majority of FRI memberfirms experienced a rapid and substantial decline in backlogs for residential and commercial buildings. From 2011 to the present, our reports have shown a steady increase in backlogs, with 2015 and 2016 being back at level with the pre-crisis years. This development is expected to continue due to low financing expenses (interest rates) and rising prices on housing. An upcoming reform of property tax might influence the sector, but not before several years.

New strategy for the utilities sector

The government has proposed a new strategy for the utilities sector that aims to streamline the sector and lower the end user price of utilityservices (energy, water and waste). An analysis has shown, that the sector can be expected to find EUR 0.79 billion (DKK 5.9 billion) in savings by organizing it more efficiently. The new strategy revolves around five principles: *increased contestability*, *incentive-based economic regulation*, *better corporate governance*, *security of supply* and *transparent oversight*. While FRI agrees with many points of the strategy, such as increased competition, there has been some concern about the removal of the so-called "hvile-i-sig-selv" (not-for profit) principle that prohibits utilities from having an economic surplus or deficit. It is FRI's ambition that profits from streamlining is invested back into the sector, rather than letting the utilities become cash cows for the municipalities that own them.

Green climate adaptation solutions

Danish consulting engineers have a unique position in the international market for climate adaptation. A market position that stems from a strong and innovative domestic market driven by the Danish municipalities and water utility companies. However, some of the market has been in limbo since January due to new financing conditions, which made it significantly more expensive for municipalities to finance green climate adaptation solutions. Many municipalities have postponed investments based on the expectation of a reintroduction of the old financing conditions.

COMPANY NEWS: Improved earnings and growth in Rambøll

Despite a difficult marked in oil and gas, Rambøll had a revenue of EUR 727 million in the first half of 2016. This is a slight increase from last year. In the same period, profit before tax increased by 73 percent to EUR 19 million. Rambøll now has 13,200 employees globally. Being a major global player in energy and green tech, Rambøll has won several noteworthy projects. As the first non-Chinese consulting engineer, Rambøll was selected to design a new 400 MW offshore windfarm in China, which is now the world's largest market for wind farms. In Morocco, Rambøll teamed up with French partner Sofregaz to develop a new integrated gas-to-power project that will add 6 GW of flexible energy and shape Morocco's future energy mix. Rambøll's recent focus on the United States has yielded several new contracts. Among these were two contracts at MIT (Massachusetts Institute of Technology) and Cambridge, north of the City of Boston, where Rambøll will help modernize the old steam-based district heating and reduce CO2 emissions by up to 80 percent. Rambøll will also help the City of New York prepare against future flooding by studying the flow of floodwater and the benefits of different kinds of climate adaptation. During 2016, Rambøll welcomed another 40 architects to the fold by acquiring SAHL Architects in Aarhus, Denmark. Rambøll also acquired BBB Umwelttechnik GmbH and CUBE Engineering GmbH, two German consulting engineers with 75 employees specializing in onshore wind energy.

COWI on track with new strategy

After launching a new business strategy in 2016, COWI has been growing according to plan. The first half of 2016 showed an improvement in turnover and operating profit (EBIT) compared to the same period last year. Revenues reached EUR 402 million, which was an increase of over 5 percent, while EBIT increased by 15 percent to EUR 14 million. COWI employs 6,500 people around the world. Ranked as one of the world's top consultants on bridges, it is no surprise that COWI was part of the joint venture that was appointed technical advisor for the Lower Thames Crossing, one of the largest infrastructure projects in the UK. In China, COWI and DISSING+WEITLING won the design for the 24 km long ShenZhong link, which will include the widest im-

mersed tunnel in the world. COWI was also chosen to do the detailed design for the European Spallation Source, ESS, in Sweden. While COWI operates all over the world, they also have a strong presence in Denmark, where COWI won several large projects in 2016. Chief among those were the design contract for Denmark's largest cloudburst tunnel, the consultancy contract for the total building project on the former main post office site near Copenhagen Central Station and last but not least, the consultancy contract for the immersed tunnel and tunnel factory for the Femern Belt crossing. In March 2016 COWI acquired Bascon, a Danish consulting engineer with 133 employees that focusses on client consulting. COWI also acquired Norwegian TDA, which specializes in offshore windmill foundations and floating bridges.

NIRAS shows best results ever

With strong results in the Swedish and Norwegian markets, NIRAS ended 2015 with its best results ever. Revenue was up by 5 percent compared to 2014 and reached a record high of EUR 177 million. EBIT went up by 9 percent as well and hit EUR 5.5 million in 2015. NIRAS won several wind energy related projects in 2016. In the State of New York, NIRAS will be acting as strategic advisor while helping the New York State Energy Research and Development Agency to plan how a significant part of its electric energy can be supplied by offshore wind in 2030. In Taiwan, where NIRAS has been present since 2012, the company will be client advisor on a new 100 MW wind farm. On the domestic market, NIRAS was appointed the consulting engineer on the new main office building for LEGO in Billund, Denmark.

This year's young European talent is from Sweco Danmark

Sweco Danmark increased revenue by 6 percent from 2014 to 2015 and reached EUR 149 million in 2015. Operating profit, however, decreased to EUR -0,5 million in the same period. In the Danish municipality of Middelfart, Sweco is helping with a major overhaul of the sewage system, to prepare for future cloudbursts and flooding. Abroad, Sweco Danmark has been working on a seven year-long project to ensure a stable water supply in Dhaka, Bangladesh, with 6 million inhabitants. To work on projects like this, you need skilled employees. In 2016, 29 year-old Kristoffer Bjerg Sørensen from Sweco Danmark won the EFCA Young Professional competition, which placed his work on designing and replacing a cooling system for an important storage facility for Novo Nordisk ahead of young engineers from eight different countries.

ALECTIA improves financial results again

In 2015, revenue went up by 8 percent to EUR 90 million and net income was more than quadrupled and reached EUR 3 million. Being one of the leading consultants in the food-, brewery- and dairy industries, ALECTIA was an obvious choice for the 30,000 m^2 expansion of logistics and production facilities for Hørkram Foodservice in Sorø, Denmark. ALECTIA was chosen to be consultant for a comprehensive evaluation of maintenance needs for 1.5 million m^2 of building stock for the municipality of Copenhagen. ALECTIA will also be working on the refurbishment of a major hotel and conference center in Frederiksberg, Denmark, where 140 rooms will be added to the current hotel.

Orbicon grows with green solutions

Orbicon continued the positive development in 2015 with growth of 8 percent in revenue to EUR 66 million and an increase of 17 percent in net income to almost EUR 3 million. Orbicon's expertise in green environmental solutions has led them to win many projects over the years. Some of these are coming to a close, like Solrødgård Water Treatment Plant and NærHeden, a climate adapted district in the city of Middelfart, which was also selected to be at the Architectural Exposition in Venice in 2016. Orbicon also won some exiting projects in 2016. Among these is a new visiting center for the national test center for experimental wind turbines in Denmark and 200 new housing units in Aalborg, Denmark.

Strongest year yet for MOE

With a record revenue of EUR 61 million and a EUR 3.5 million EBIT, MOE came out of 2015 strong, thus continuing the impressive growth, where the number of employees has risen by 40 percent in just five years. Fueling this growth is a lot of impressive projects and, in 2016, MOE was selected to develop a master plan for a whole new town in Denmark, which is set to house 4,000 inhabitants. MOE will also be working on a master plan for a new energy park containing a new biomass power plant, hydrogen plant, experimental wind turbines and solar power panels as well as a green energy education center.

Atkins celebrates 15 years in Denmark

It has now been 15 years since Atkins acquired Banestyrelsens Rådgiving, which became the Atkins Danmark we know today. This was the start of what is now a strong presence in Scandinavia with more than 700 employees. In 2015, Atkins Danmark had a revenue of EUR 48 million, which is about the same as the year before. Earnings before tax improved substantially by 67 percent to EUR 3.9 million. On the project side, Atkins Danmark will be working on a new city center for Ballerup in the outskirts of Copenhagen. Atkins will also be working on the expansion of Skien Station in Norway, where seven new setting tracks will be built.

NTU wins international key contracts within energy and transport

NTU International grew to a gross revenue of EUR 17.7 million – and increased significantly its project portfolio in early 2016 with one of the largest EU-funded contracts of the year, providing techni-

cal assistance for the European Aviation Safety Agency (EASA). This four-year contract for EUR 20 million covers all EU member states and involves a range of services in the civil aviation and aviation safety. Another key transport project was awarded to NTU this year by the Asian Development Bank, involving road and infrastructure safety services in Pakistan. NTU International also won a major contract with the European Investment Bank. The contract encompasses high-quality advisory and consulting solutions for the energy sector development in EU countries.

Record year at Midtconsult

With a gross profit of EUR 13.4 million in 2015/2016, Midtconsult made a major leap forward from the previous year's gross profit of EUR 9.1 million. In the same period EBIT improved by 136 percent to EUR 1.7 million. Midtconsult won several interesting projects in 2016 and among these were Ny Valby, a major housing project with 2000 new housing units, institutions and offices. Midtconsult is also the consulting engineer on Uptown Nørrebro, a new high rise in Copenhagen that is set to house 700 students.

Søren Jensen Rådgivende Ingeniørfirma A/S wins international acclaim

The accounting year 2014/2015 was not satisfactory for Søren Jensen, as revenue decreased by 8 percent to EUR 14.6 million and EBIT dropped to EUR 0.1 million. This was manly due to restructuring costs and the results are expected to improve in the coming years. Søren Jensen won an award of merit from FIDIC, The International Federation of Consulting Engineers, for their work on the Botanical Gardens in Aarhus, Denmark. Søren Jensen also won the new tourist center at Ilulissat Icefjord in Greenland and an innovative new 23,000 m^2 psychiatric center for Bispebjerg Hospital in Denmark.

"GROWING ARCHITECTURAL MARKET WITH INCREASING REVENUES"

The Danish architecture industry is witnessing the highest growth rates of the decade, with an increase in total revenue of 8.9 percent in 2015 (10.6 percent for members of Danish Association of Architectural Firms only), 322 new workplaces in 2014 and average wages expected to continue to grow from its 2015 high of EUR 74,000 per employee.

85.9 percent of architecture firms had profits in 2014 and the profit bottomline is expected to reach EUR 40.3 million for financial year 2015/16.

The composition of Danish Architect firms remain largely the same as in 2015 where firms with one or more owners and no employees contribute 53 percent of the total amount, 1–9 employees: 33 percent, 10–19 employees: 5 percent, 20-49 employees: 6 percent and finally 50 or more employees: 3 percent.

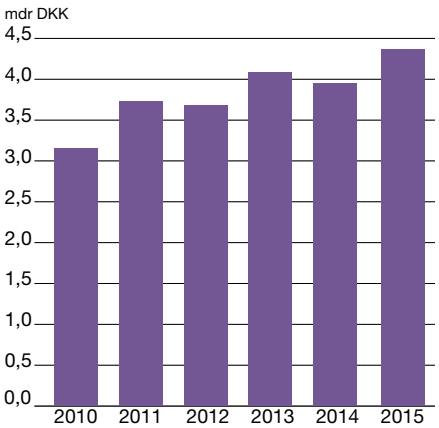
International export

The Danish architecture firms are becoming more international and experiencing a tighten focus on internationalization strategies and professionalization. The industry's export and turnover in international subsidiaries has increased 54 percent from 2014 to 2015, reaching EUR 152.7 million. Over the past three years Danish architecture firms have almost tripled their turnover in foreign subsidiaries. The increase in export is largely a consequence of growth among the 10 to 12 largest architecture firms, which are also the primary exporters.

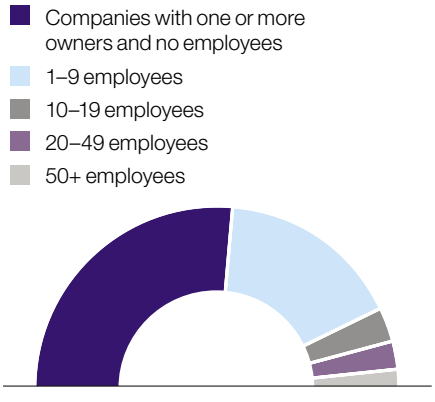
Arkitema keeps expanding in the Nordic countries

As the largest Danish architect firm, Arkitema K/S are continually increasing its net revenues from EUR 32.8 million in 2014 with 34.9 percent to a total of EUR 44.3 million in 2015. The same goes for the firm's profits that quadrupled from a slim EUR 0.7 million to 2.8 million in 2015. Some of the positive effects are related to its improved situations in Sweden (better employment rate) and Norway (strengthened pipeline). After a rise in demand for Danish architecture in a Swedish context, Arkitema has established a new office in Malmø and with this; news of a corporation with Sweco in projecting the coming Sahlgrenska Life – 90,000 m^2 of buildings physi-

Total national turnover 2010–2015



Company composition by size 2015



Source: Danish Association of Architectural Firms

cally connecting the current hospital and university in Gothenburg. The project is the largest extension of the area around Sahlgrenska Universitetssygehus and will have a three floor passageway across the heavily trafficked road Per Dubbsgatan. Additionally Arkitema is together with the Bergen based architect group Cubus, selected as the winner of the competition for a new ambitious life science research and education addition to the university in Bergen (EnTek). By creating a natural point of contact for the city's researchers and forming a framework for exchanging ideas and knowledge, the new EnTek building will be a corner stone in supporting the vision of making Science City Bergen an international portal for innovation within energy, climate and technology.

C. F. Møller wins another honourable prize

Despite 2014's deficit of EUR 414 thousand (EUR 678 thousand in 2013), C. F. Møller Denmark A/S reached a net result of EUR 2.3 million in 2015 and continues a five year streak of an increasing profit margin (6.9 percent) and rate of return (14.9 percent). With a turnover of EUR 40.9 million, C. F. Møller Denmark A/S is the second largest Danish architecture firm.

C. F. Møller just received "Natursten-sprisen 2016" by Stenhuggerlaget (The Stonemasons Guild) for its Bestseller office building (a clothing company in Denmark owning 15 different brands), and with that an additional two awards for its logistics center north of Hadersley supplying Bestseller stores across Europe. The building was awarded with The Plan Award - Honorable Mention in 2015, International Trimo Architectural Award in 2012 and commercial building of the year in the magazine Construction in 2012.

Henning Larsen retains a strong foothold on the international market

Henning Larsen Architects A/S takes the spot as the third largest Danish architect firm with a revenue of EUR 37.9 million, net profits of EUR 3.6 million and 281 employees in financial year 2015/16. The firm had a record high profit in financial year 2014/15, and a strong position on the Danish and also the international market with its 8 foreign subsidiaries. Its international activities represented 61 percent of its consolidated revenue, a 4 percent point decrease from last year because of lower levels of activity in Saudi Arabia, a hesitant German market, and investments related to establishing a foothold in the North American market.

Denmark and the other Nordic countries remain the group's biggest markets with consulting services related to space management, landscape, and sustainability as growth contributors next to its building projects. In Aarhus C, Denmark, Frederiksbjerg School was inaugurated as the first new primary and lower secondary school in the city center in more than a century. In Odense, students are now attending classes at Lillebælt Academy and in Lyngby, Microsoft opened its Danish headquarters gathering the company's sales and development organization under one roof, representing the workplace of the future. With this and the new global headquarters in Munich for Siemens, Henning Larsen Architects have garnered major attention that will help position the firm as a leader within the area of corporate headquarters construction.

A growing American market for B.I.G.

B.I.G hit a staggering net profit of EUR 5.1 million in 2015, a 134 percent increase from EUR 2.2 million in 2014. The firm's management expects the positive

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.

In 2016, Danish Association of Architectural Firms has 650 ordinary and associated member firms, with about 5,000 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

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PHOTO: JENS LINDHE

development in the activity level to continue in 2016 and for the firm to reach similar results.

Additionally the North American market's interest in the company is increasing, and the expectation is that this market will continue to grow in 2016. The firm will focus on consolidating shared services and streamlining quality assurance and quality control processes across all its offices.

Being small is tough(er)

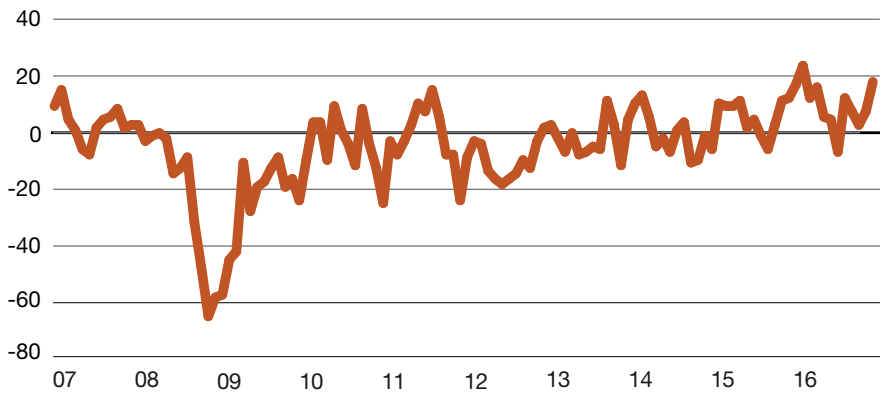
It's getting tougher being a small architecture firm on the Danish market. The industry are experiencing a form of polarization where small firms are specializing while the large are expanding to overcome a critical competence boundary of about 25 employees, that meets the demand from larger clients.

Total revenues of firms with one or more owners and no employees, small firms and medium firms (0–19 employees) dropped 10 percent from EUR 192.2 million in 2010 to 173.3 million in 2015. Over the same period of time, the large and largest firms (20 + employees) have increased their total revenues by 79 percent – pulling the load for the industry.

There is a direct correlation between annual average wages and revenue - the largest firms and medium sized have the highest average wages around EUR 75,000 whereas the small (EUR 0.7–2.0 million in revenue) have average wages around EUR 70,000 and firms with less than EUR 0.7 million in revenue are at the bottom with average wages around EUR 63,000. However, figures for profit/employee show that it is only firms with less than EUR 0.7 million in revenues that really suffer compared to the large group. The conclusion can be that, being larger than EUR 2.0 million in revenue means that the firms can attract the skilled and well paid employees.

However, some of the small companies are growing fast. Aarhus based, Labland Architects is a good examples as the firm saw a revenue growth of 100 percent from 2013 to 2014 and with only 5 employees in 2014 they doubled their staff to 10 in 2016. Tredje Natur is another example of a small firm that attribute to the list of firms doubling revenues, with a growth of 155 percent, and a positive and steadily increasing net income (EUR 234,000 in 2015) since the firm was started in 2012.

Market sentiment indicator



Source: Danish Association of Architectural Firms

A positive outlook for a volatile market

The Danish architecture industry is in recovery and approaching pre-crisis highs, with positive outlooks, growing market and increasing revenues. However, the sector is very volatile, and with large tasks being unpredictable, architecture firms can only look about a year ahead.

Architects prove added value

Danish architects are some of the best at thinking environment, ease of use, health and economics into their designs – and it benefits Denmark and the Dan-

PHOTO: RASMUS HJORTSHOJ

PHOTO: MADS KLITTEN

ish export market. A common trend is that Danish architects spent more vigour in carefully documenting their projects and their corresponding effects. Danish Association of Architectural Firms recently compiled a case collection with more than 50 examples of architecture projects that create added social (the goals we want to reach), environmental (the framework in our lives) and financial value (the resources we have at our disposal). Some are housing, others urban spaces, landscapes and institutions both in small and large scales and with highly varying budgets. The following three examples present projects that have substantial business related benefits compared to their corresponding costs:

Adult Educational Center, VUC Syd in Hadersley is a modern flagship by AART Architects and ZENI Architects with no traditional class rooms, but spaces connected by light, openness and digital learning environments. With more than 200 percent students choosing to continue to study, 89 percent choosing training and about 30 percent getting jobs afterwards, the new education centre are creating a yearly estimated added value of EUR 8.5 million for the Danish treasury. By rethinking the framework for learning, VUC Syd have created better student motivation, higher level of well-being and more active and participative teaching. The building won "The German Design Award 2015" by German Design Council and was nominated for the "The Architizer A+ Award 2014" by Architizer.

Southern boulevard in Vesterbro, Copenhagen was transformed during 2004, 05 and 06 from a heavily trafficked artery into an attractive urban space. The city park was designed by SLA Architects, it stretches app. 1.3 kilometres and encompass many interpretations of pitches, sports fields and green garden spaces. On a daily basis the area is used by more than 2,200 locals and stimulate both human health and the local business community in Vesterbro. After its construction property prices in the area have overall increased by EUR 47.0 million, and from that, the City of Copenhagen annually realizes EUR 1.6 million in extra tax revenues. Thus, the construction costs had a payback time of less than two years. The project was awarded "Vejprisen 2008" by the Danish Road Administration.

Cykelslangen, or "The Bicycle Snake", is a bridge that connects Dybbølsbro and Havneholmen in Copenhagen. It is designed by Dissing + Weitling Architects and with its soft curves, light construction and characteristic orange tread gives identity to a previously fragmented urban space at the back of the shopping center Fisketorvet. A study by the Municipality of Copenhagen in 2014 shows that Cykelslangen is daily used by up to 11,500 cyclists and led to a 25 percent increase in traffic in the area and an increase of 30 percent in bicycle traffic on the nearby Bryggebroen bridge. Additionally the project saves cyclists commute time and society an annual EUR 670,000. A study by Wonderful Copenhagen in 2014 also shows that 52% of approximately 700 surveyed tourists chooses Copenhagen as a holyday destination because of its bicycle culture among the three primary reasons.

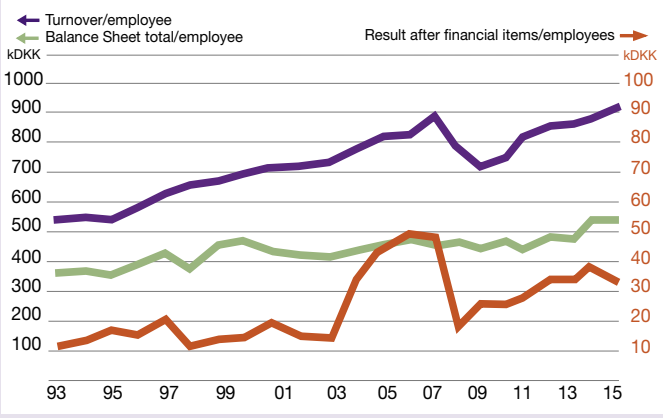
THE TOP 100 DANISH CONSULTING ENGINEERING AND ARCHITECTURAL GROUPS

	2016	2015	Group	Service	Annual report	Turn-over MDKK	(previous year)	Average number of employees	Tot. Balance sheet MDKK	CEO/Managing director
FRI	1	1	Rambøll Gruppen A/S	MD	15	10589,3	8291,9	12269	6837,5	Jens-Peter Saul
FRI	2	2	COWI Koncernen A/S (acquired Bascon) *	MD	15	5701,5	5313,0	6433	3070,0	Lars-Peter Søbye
FRI	3	3	NIRAS-Gruppen A/S	MD	15	1317,4	1254,8	1404	896,3	Carsten Toft Boesen
FRI/DA	4	4	Sweco Danmark A/S (former Grontmij)	MD	15	1075,1	1075,1	1066	626,0	John Chubb
FRI	5	5	Alectia A/S	CE,PM	15	673,1	653,0	675	328,5	Jesper Mailind
FRI	6	6	Atkins Danmark A/S	MD	15/16	571,0	529,0	571	216,0	Eva Rindom
FRI	7	7	Orbicon A/S (acquired Henrik Larsen) *	MD	15	490,3	479,6	486	233,6	Jesper Nybo Andersen
FRI	8	8	MOE A/S	MD	15	427,6	397,6	506	256,3	Christian Listov-Saabye
	9	10	ISC Rådgivende Ingeniører A/S *	MD	14	368,9	368,9	231		Kjeld Thomsen
DA	10	13	Arkitema K/S	A	15	330,0	244,5	450	163,1	Peter Hartmann Berg
DA	11	11	Arkitektfirmaet C.F. Møller	A	15	304,1	316,6	309	143,2	Klaus Toustrup
DA	12	16	*Henning Larsen Architects*	A	15/16	282,2	319,9	281	237,6	Mette Kynne Frandsen
	13	12	Geo *	I	15	274,1	263,2	240	236,6	Kim Silleman
DA	14	14	BIG / Bjarke Ingels Group *	A	15	250,0	234,8	280	132,7	Sheela Maini Søgaard
	15	18	Dansk Ingeniørservice A/S *	I	15	222,0	165,2	143	60,6	Michael Gadeberg
	16	15	Eltronic A/S	I	15	220,0	211,0	175	110,7	Lars Jensen
FRI	17	17	EKJ Rådgivende Ingeniorer A/S	MD	15	179,2	179,2	192	152,6	Jørgen Nielsen
	18	9	Graintec *	I	15	170,2	386,5	50	113,4	Niels Pedersen
FRI	19	64	NTU International A/S	CE,PM	15	131,2	43,1	56	79,2	Lars Bentzen
FRI	20	22	OBH-Gruppen A/S	MD	15	129,3	117,4	134	60,5	Børge Danielsen
	21	23	Kuben Management A/S	PM	15	123,5	107,9	108	75,2	Ulf Christensen
DA	22	25	3XN A/S	A	14/15	110,8	94,1	76	65,0	Jeanette Hansen
FRI	23	20	Søren Jensen A/S Rådgivende Ingeniører	MD	14/15	109,3	118,7	138	62,5	Frank Jensen
DA	24	24	Gottlieb Paludan Architects A/S	A, PM, CE	15	106,5	102,5	97	64,5	Kristian Hagemann
DA	25	19	Årstiderne Arkitekter A/S	A	14/15	105,2	119,4	129	26,7	Torben Klausen
	26	27	Schmidt Hammer Lassen Architects K/S *	A	14	93,8	93,8	124		Bente Damgaard
FRI	27	30	Midtconsult A/S	MD	15/16	92,2	77,2	142	54,4	Thomas Duedahl
DA	28	37	Lundgaard & Tranberg Arkitekter A/S	A	14/15	88,7	63,8	43	33,9	Peter Thorsen
DA	29	45	Mangor & Nagel A/S	A	15	87,5	58,1	82	35,0	Bente Priess Andersen
FRI	30	28	Balslev Rådgivende Ingeniører A/S	MD	14/15	85,4	90,9	125	42,4	Henrik Rosenberg
DA	31	54	Vilhelm Lauritzen AS	A	15	83,8	49,6	69	55,0	Søren Daugbjerg Petersen
DA	32	26	Aarhus Arkitekterne A/S	A	14/15	81,5	94,0	68	57,6	Tommy Falch Olesen
DA	33	50	PLH Arkitekter AS	A	15	81,0	54,0	81	33,8	Jan Sander Fredriksen
FRI	34	89	Norconsult Danmark A/S	CE,Env	15	80,6	28,4	55	69,2	Thomas Bolding Rasmussen
DA	35	33	CUBO Arkitekter A/S	A	14/15	79,4	68,0	57	29,8	Peter Dalsgaard
	36	29	Dansk Miljørådgivning A/S (DMR) *	Env	14/15	78,6	78,6	82	30,5	Claus Jørgen Larsen
FRI	37	115	K2 Management A/S	PM	14/15	77,9	17,0	75	23,1	Henrik Stamer
DA	38	34	Creo Arkitekter A/S	A	15	72,5	66,7	37	28,4	Henning Gammelgaard Andersen
	39	32	ÅF - ÅF Hansen & Henneberg A/S	PM	15	71,8	69,9	75	32,6	Per Seidelin
FRI	40	35	Oluf Jørgensen Gruppen	CE,M,E,Enr	14/15	68,5	65,5	96	39,3	Brian Th. Andreasen
FRI	41		Dansk Energi Management & Esbensen A/S	CE, Enr E, M	15	67,8	11,0	73	41,8	Jørn Lykou
	42	40	Ingeniørfirmaet Viggo Madsen A/S *	CE	14/15	64,9	61,2	40	27,9	Bjørn Schmelling
DA	43	41	White Arkitekter A/S	A	15	64,7	59,8	65	32,2	Frans Ove Andersen
FRI	44	44	Dines Jørgensen & Co A/S	CE, M, PM	14/15	64,5	58,2	70	28,9	Ole Rasmussen
DA	45	52	KPF Arkitekter A/S	A	15	62,0	43,3	105	74,5	Sine Juul Praastrup
DA	46	42	Tegnestuen Vandkunsten ApS	A	15	58,6	58,6	45		Flemming Ibsen
	47	43	Knud E. Hansen A/S Naval Architects *	I	14	58,4	58,4	70	41,4	Finn Wollesen Petersen
FRI	48	55	DGE Miljø- og Ingeniørfirma A/S	Env	15	54,2	49,3	51	18,8	Poul Erik Jensen
	49	51	Lodahl 2007 Aps *	I	14	54,0	54,0	35	8,9	Michael Roel Jørgensen
FRI	50	59	Dominia A/S. Rådgivende Ingeniører	CE, E, M, PM	15	53,5	47,1	50	23,4	Kjeld Christiansen
DA	51	36	Rubow Arkitekter A/S	A	15	52,9	64,1	57	25,6	Lars Bo Lindblad
FRI	52	71	Ingeniør'ne A/S	CE,E,M	15	52,7	39,1	60	40,5	John Andresen
DA	53	46	Rørbæk og Møller Arkitekter ApS	A	14/15	52,4	57,8	44	49,6	Nicolai Lund Overgaard
DA	54	49	JJW Arkitekter A/S	A	15	52,0	54,1	79	20,9	Nina Kovsted
FRI	55	62	Wissenberg A/S	CE	15	52,0	45,6	55	20,0	Lars Bendix Christensen
DA	56	93	H+Arkitekter (Hou & Partnere)	A	15	50,0	27,6	32	27,4	Ib Jensen Hou
FRI	57	74	AlfaNordic ApS	I	15	49,7	34,2	45	16,7	Thomas Meldgaard Petersen
FRI/DA	58	58	AI-Gruppen A/S	A,CE	15	49,1	48,8	63	32,0	Jan Bruus Sørensen
DA	59	47	Kullegaard Arkitekter A/S	A	14/15	49,0	56,5	48	25,7	Thomas Kullegaard
	60	57	LIC Engineering A/S *	CE, Enr, M	14	49,0	49,0	40	45,9	Niels-Erik Ottesen Hansen
DA	61	48	Aart A/S	A	14/15	48,0	55,8	37	38,9	Torben Skovbjerg Larsen
DA	62	38	Christensen & Co. Arkitekter A/S	A	14/15	46,9	63,4	41	23,8	Vibeke Lydolph Lindblad
	63	61	Peter Jahn & Partnere A/S *	CE, A	13/14	46,6	46,6	33	16,7	Jacob Lemche
FRI	64	56	Process Engineering A/S	I	15	46,3	49,3	57	17,9	Poul B. Jakobsen
DA	65	39	Friis & Moltke A/S	A	15	44,0	63,0	46	27,6	Jens Ole Bahr

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

	2016	2015	Group	Service	Annual report	Turn-over MDKK	(previous year)	Average number of employees	Tot. Balance sheet MDKK	CEO/Managing director
DA	66	69	KHR Arkitekter AS	A	15	43,0	40,0	46	33,9	Lars Erik Kragh
	67	68	Gaihede A/S	CE,E,PM	15	41,6	40,5	45	6,9	Jesper-Max Larsen
	68	67	Brix & Kamp A/S	CE,E,I	15	41,0	41,2	50	31,5	Søren Jepsen
	69	70	Viegand & Maagøe Aps *	I, Env	15	40,0	39,9	30	18,3	Peter Maagøe Petersen
DA	70		Entasis A/S	A	15	40,0		24	12,5	Christian Cold
	71	31	Schønherr A/S	A	15	39,5	73,7	52	22,0	Nina Jensen
DA	72	53	SAHL Arkitekter A/S	A	14/15	38,3	50,3	28	18,9	Michael Bering Hylleborg
	73	76	Arne Elkjaer A/S	CE	14/15	37,5	32,7	32	12,2	Michael Reeholm Due
FRI	74	66	Sloth-Møller Rådgivende Ingeniører A/S	CE	14/15	36,3	41,7	46	20,1	Bo Wassberg
	75	72	C & W Arkitekter A/S *	A	14/15	36,0	36,0	20	11,6	Michael Petersen
	76	123	Dorte Mandrup Arkitekter A/S	A	14/15	36,0	13,7	35	5,8	Dorte Mandrup-Poulsen
DA	77	97	Cebra Arkitekter A/S	A	15	35,5	23,6	20	18,5	Kolja Jannik Nielsen
	78	75	Emcon A/S	PM,CE	15	34,9	34,0	20	15,0	Jeppe Blak-Lunddahl
	79	79	Dissing+Weitling Architecture A/S	A	15	33,1	31,2	37		Steen Savery Trojaborg
	80	77	ProInvent Gruppen A/S *	I	14/15	32,3	32,3	22	16,6	Leif Dalum
FRI	81	83	Hundsbaek & Henriksen A/S	MD	14/15	32,1	30,1	51	14,7	Niels Lerbech Sørensen
	82		Eseebase A/S	A	14/15	31,0		26		Torben Klausen
DA	83		Design Group Architects	A	15	30,5		21	13,3	Christian Giese
	84	82	DOMUS arkitekter A/S *	A, PM	14	30,1	30,1	35	8,3	Henrik Hansted Jensen
DA	85	100	KANT Arkitekter A/S	A	15	29,5	21,2	25	15,3	Morten Stahlschmidt
DA	86	80	SLA Arkitekter A/S	A	15	29,1	31,0	49	14,2	Mette Skjold
FRI	87	84	Viborg Ingeniørerne A/S	CE,PM,Enr	15	29,0	30,1	33	23,5	Karsten Lindberg
	88		Holscher Nordberg Architects A/S	A	15	28,0		30	13,9	Mikkel Wiell Nordberg
	89	81	AN Group A/S	I	15	28,0	30,4	22	12,4	Ole Okkels
	90	90	Bertelsen Og Scheving Arkitekter Aps	A	14	27,9	27,9	29	6,3	Jens Bertelsen
FRI	91	116	Ingeniørgruppen Varde	CE	15	27,7	16,6	24	14,2	Karsten Rølle Poulsen
	92	91	RUM arkitekter A/S *	A	14/15	27,7	27,7	25	10,6	Marianne Kjerkegaard Kristensen
DA	93	60	Arkitektfirmaet Kjaer & Richter A/S	A	14/15	26,8	47,1	29	20,3	Joanna Elzbiata Studer
DA	94	107	Fogh & Følner Arkitektfirma A/S	A	15	26,6	19,0	15	12,3	Stig Andersen
FRI	95	127	Andreasen & Elmgaard A/S	I	14/15	26,1	13,0	28	10,5	Per Elmgaard Rasmussen
DA	96	78	Nova 5 Arkitekter A/S	A	14/15	25,9	31,4	23	14,5	Hanne Vinkel Hansen
	97	94	OSK -Ship Tech A/S	I	14/15	25,7	25,7	40	14,7	Anders Ørgård Hansen
	98	95	A4 arkitekter og ingeniører A/S *	A	14/15	25,1	25,1	9	8,5	Eric Prescott
DA	99		Arkitektfirmaet NORD A/S	A	15	25,0		18	19,4	Klaus Christensen
FRI	100	88	d.a.i. Gruppen A/S	A, MD	15	24,6	28,5	31	19,6	Kim Heshe

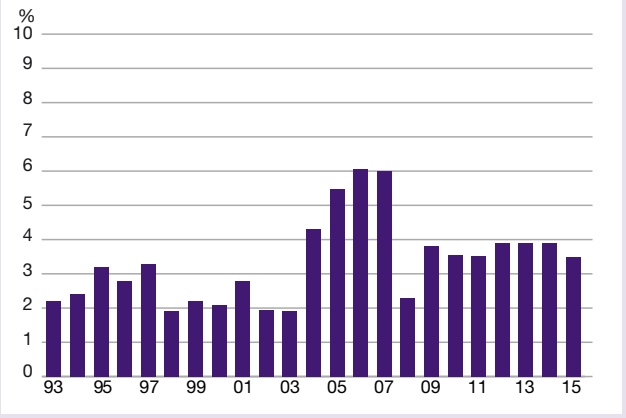
The top 30 Danish groups



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 2015 increased by 9% to approximately DKK 3,301 million (DKK 3,032 million in 2014). The number of employees grew by 10% to 3,200 (2,898). The turnover per employee consequently fell to DKK 1,031,000 (DKK 1,046,000). The profit before tax increased to DKK 81,000 per employee (DKK 73,000). Calculated in terms of profit margin, this gives 7.9% (7.0%). The average balance per employee was approximately DKK 537,000 (DKK 526,000).

Profit margins



Key business ratio 30 largest groups		(previous year)
Turnover per employee	DKK 915k	DKK 892k
Profit after financial items per employee	DKK 32k	DKK 35k
Balance sheet total per employee	DKK 537k	DKK 530k

The turnover for the 30 largest groups increased by 13% to approximately DKK 24,624 million (DKK 21,767 million in 2014). The average number of employees grew by 10% to 26,890 (24,392). The turnover per employee was 916,000 DKK (892,000 DKK). The profit before tax was DKK 32,000 per employee (DKK 35,000 the previous year). The profit margin for the 30 largest groups in 2014 fell to 3.5% (3.9% in 2014). The average balance per employee was approximately DKK 537,000 (DKK 530,000 in 2014).

"CONTINUED GROWTH ON INFRASTRUCTURE AND CONSTRUCTION MARKETS"

Challenging economic conditions, but low interest rates and high public spending hold activity levels up in the Norwegian economy

For several decades, increased activity in the petroleum sector has been an important driving force for economic growth in Norway. Increased demand from the oil industry has pushed up activity in the mainland economy, contributed to higher incomes and steadily better paid jobs. The fall in the price of oil and gas has meant that necessary adjustments will come more quickly than anticipated. Reduced activity in petroleum-related industries has led to higher rates of unemployment, particularly in the south and west, and low economic growth in the last two years.

The state of the Norwegian economy is more uncertain than it has been in the last 15 years. The prognosis for growth in the mainland economy has been adjusted downwards in the autumn of 2016 to a GRP growth of 1.0% in 2016. The outlook for 2017 is very uncertain; however, it is estimated at 1.7 %.

The price of oil is under 40% of the price in 2014, and the price is now around 44 dollars a barrel. This has contributed to a marked downturn in investments in oil and gas activities. Weakened 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 price increase of 3.4% in 2016 and 2.0% in 2017, an unemployment rate of 4.7% and the GNP growth of 1.0%, in general Norway is facing an economic challenge. The premises for growth in the economy and in investment have worsened during the last year. A fall in investments in 2016 in the oil and gas sector (–14%) and 2017 (–10%), the need for continued downscaling and cost reductions combined with continued low prices for oil and gas, have led to a falling export surplus. This indicates a falling level of activity in the Norwegian economy and for Norwegian consulting engineers into 2017, however, this is not the case.

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 2016 is anticipated to be in the region of BNOK 7,500. 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 2017 it is expected that this stimulus will amount to BNOK 225. This also means that public authorities are investing 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 2016, 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 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 5 years during the same period.

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

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. From 2016, there has also been a marked increase in construction activity. This is particularly applicable to housebuilding, where in some regions it can be described as a housing bubble. The oil and offshore markets have now stabilised at an extremely low level, after falling dramatically in the last two years.

The building and construction industry, viewed as a whole, has been experiencing continual growth from 2011. As of November 2016, the industry is anticipating stable, increasing activity in 2016 and 2017. Employment in the industry is expected to increase slightly in 2016 and 2017.

Production in the building and construction market, apart from oil and gas, has increased by 18% in the period 2011–2016. The number of employees in the building and construction sector has in the same period increased by 28,000, to 218,000. For 2017 until 2019, production is expected to increase by an extra 4% per year.

The market for consulting engineers is expected to increase in 2016–2017. The construction market is expected to increase by 3% in 2016. Prognoses for 2017 and 2018 indicate corresponding developments. In the construction market (infrastructure), we anticipate an increase in ac-

tivity in 2016, 2017 and 2018. Investment in this market is expected to increase by 11% in 2016 and a further 5% per year up to 2019. The number of employees from 2011 to 2016 has increased by 35% in RIF companies. The average age of employees in RIF companies has fallen by almost 4 years during the same period.

Consulting engineers – anticipated developments in 2016 and 2017

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

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 2018. 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 projects where public-private corporation (PPC) will be employed as the implementation strategy. In order to become less dependent on annual allocations, in 2013, a separate infrastructure fund of BNOK 100 was established. This is fully financed in 2016. 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 create 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 2017 budgets. For consulting engineers, the public budgets will result in good developments in the level of activity in public building works and an increase in the investment in public infrastructure.

In summary, the expectation is that planning and investment needs in the construction market will fall slightly in 2016 and 2017. This is particularly true of the housing markets and public industrial buildings. A more moderate increase in private building projects will mean a good level of activity overall. Strong centralisation, high population growth, low interest rates and relatively low levels of employment have in some areas led to a marked increase in housebuilding. In 2016, 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 for consulting engineers, and a large number of (in part major) projects are in the planning and implementation stage. The increase in investments in this market is expected to be in the region of 11% in 2016. For 2017 and 2018, production is expected to increase by 5% p.a.

The most stable part of this market has been the roads sector – roads, bridges and tunnels (47% 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 8% in 2016 with an expected further increase in 2017 and 2018 by 20%. Railways and tramways is also an area earmarked for new investment and development. Investments have increased in 2016 and will increase by a further 10% in 2017.

Development and investments in energy plants is the market area showing highest growth. The modernisation of generating plants, investments in new forms of energy, and infrastructure for power cables, distribution and energy exports are expected to double from 2015 to 2018.

In total, this gives anticipated investment in building and construction of 6% increased investments in 2016, 3% in 2017 and an estimated 5% in 2018.

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

Backlog in refurbishing existing buildings and infrastructure

There is a significant backlog in investment in public works, in particular con-

Liv Kari Hansteen, RIF

Clas Svanteson, RIF

RIF – Rådgivende Ingeniørers Forening

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 2016, RIF has 170 member companies, with approximately 11,500 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.

RIF is a member of EFCA and FIDIC.

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> THE PROFIT MARGIN IN NORWAY WAS 7.0 % IN 2015.

cerning 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.

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 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.

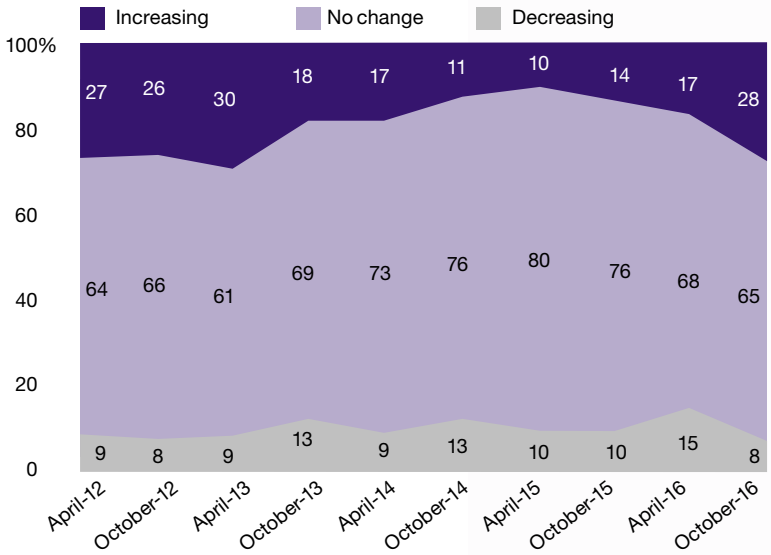
Norway aims to carry out the process jointly with the EU in order to reach climate goals for 2030. The consequences for Norway will first and foremost be an obligation to achieve significant reductions in emissions, for example in construction, the transport sector and agriculture. A final agreement between Norway 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.

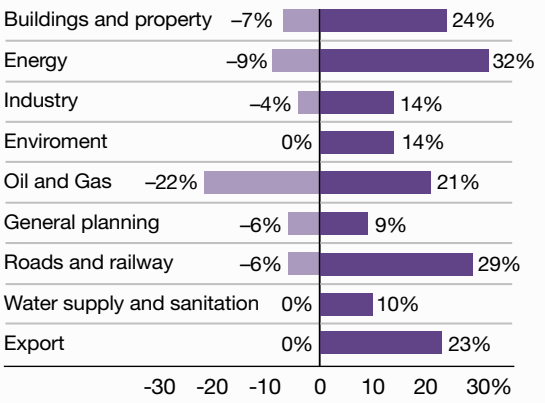
Increased focus on digitalisation and new technology

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 op-

Expected order stock in 3 months 2012–2016



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".

erations/maintenance phase. This year, Statsbygg has launched Digibygg, a major development project that will ensure new fully digital construction processes and involves concepts including, among other things, BIM and megadata. The Minister of Transport and Communications has sent out clear signals that new technology and digitalisation will be central in state investment and procurement within transport and communications.

In addition, Norwegian consultant engineers have also asserted themselves internationally within BIM, with among others the Dovre Line railway, an intercity collaboration between Rambøll and Sweco, and a new hydroelectric plant at Vamma by Norconsult. Both of these projects have been nominated in an international BIM competition. Previously, the new Østfold Hospital, with among others Cowi, has received an award for the year's best open international BIM project.

Some exciting projects

RAIL AND ROAD. The largest individual projects in the transport sector during the years ahead will be 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.

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 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 in safer and higher capacity power distribution in Norway and to Europe.

The new Oslo – Gardermoen and Bergen – Flesland airport terminals are in the construction stage. In addition, work is ongoing on the merging and re-localising of the smaller short runway airports in the outlying districts.

CULTURAL BUILDINGS. The new National Museum, the new Munch Museum and a new main library in Oslo are under planning and 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.

Norwegian Defence Estates Agency. The largest new land-based project under planning and construction in Norway is the new fighter aircraft base at Ørlandet in Trøndelag and a forward base at Evenes in Troms for the new JSF aircraft.

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.

This trend is about to turn, as companies are now more competitive. Moreover, we now have businesses that via growth strategies have to grow outside of Norway and the Nordic countries.

We see increased overseas activity, particularly in connection with energy projects such as hydroelectric development and oil and gas. The export stake represents approx. 5% of turnover and is apparently increasing.

Continued increased concentration in the industry; 2016 is characterised by consolidation and strengthening of competitive ability

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 2015 and 2016 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.

To increase the competitive ability of firms, gain control of a level of costs that is not sustainable and establish a basis for better profitability and further growth, 2016 has been a year of focus on improved control of wage and pension benefits. A great deal of focus has been on this, and tough decisions have had to be taken. Hopefully, this will lead to a sound foundation for further growth in our industry.

LIV KARI HANSTEEN AND **CLAS SVANTESON,** RIF

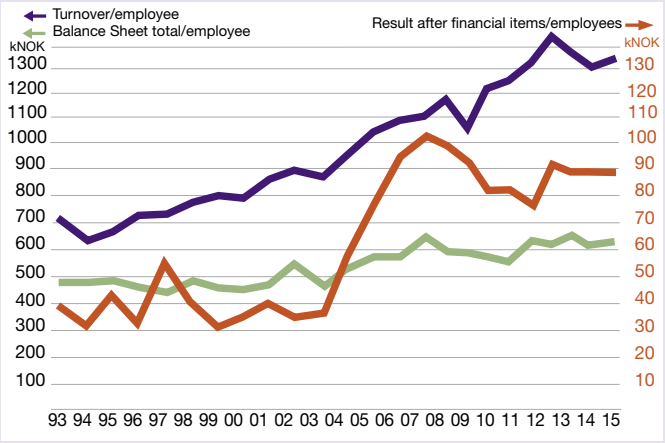
THE TOP 100 NORWEGIAN CONSULTING ENGINEERING AND ARCHITECTURAL GROUPS

	2016	2015	Group	Service	Annual report	Turn-over MDKK	(previous year)	Average number of employees	Tot. Balance sheet MDKK	CEO/Managing director
RIF	1	1	Norconsult AS	MD	15	3975,0	3845,6	3000	1990,0	Per Kristian Jacobsen
RIF	2	2	Multiconsult (acquired LINK Arkitektur AS)	MD	15	2554,0	2265,6	2110	1257,6	Christian Nørgaard Madsen
RIF	3	3	SWECO Norge AS	MD	15	1905,0	1722,4	1522	949,3	Grete Aspelund
RIF	4	4	Rambøll Norge AS	MD	15	1647,0	1675,9	1422	728,0	Ole Petter Thunes
RIF	5	5	COWI AS	MD	15	1568,2	1410,8	1184	631,9	Terje Bygland Nikolaisen
RIF	6	8	ÅF Norge (acquisition of ÅF/Reinertsen, among others) *	M,E,Enr, I	15	1200,0	804,0	860		Ottar Skarstein, Rune Hardersen, Jon Hølland, Fredrik Alkenhoff
RIF	7	7	Asplan Viak group	MD	15	1080,3	1040,5	985	491,5	Øyvind Mork
RIF	8	9	Dr Ing A Aas-Jakobsen AS	CE, PM	15	690,7	604,7	142	282,1	Trond A. Hagen
RIF	9	10	WSP Norge AS	PM	15	400,5	360,1	237	128,9	Knut Jonny Johansen
RIF	10	15	Hjellnes Consult AS	MD	15	306,9	266,9	223	121,3	Geir Knudsen
	11	18	Rejlers Norge AS	E	15	285,0	182,6	264	137,9	Morten Thorkildsen
	12	13	OEC Gruppen AS	Enr,I,PM	15	284,9	292,1	131	152,9	Knut Hegge
RIF	13	14	ViaNova-group *	CE, Env, E	15	284,0	266,9	184	173,4	Syrtveit, Kirkhorn, Paulsen, et al
	14	17	Nordic Office of Architecture	A	15	226,6	231,9	132	87,4	Erik Urheim
	15	16	Techconsult AS	PM,I	15	182,6	240,5	61	58,8	Ronny Meyer
	16	21	Snøhetta Group *	A	15	176,6	147,8	180	61,2	Craig Dykers, Tonje Verdal Frydenlund, Elaine Molinar
	17	12	Insenti AS	PM	15	175,5	350,9	27	55,8	Bjørn Grepperud
	18	20	OPAK A/S	PM,Env,Enr,E	15	164,2	153,9	126	59,5	Jan-Henry Hansen
	19	30	Ratio Arkitekter AS (former Bgo og Medplan Arkitekter)	A	15	162,7	95,4	50	63,3	Randi Mandt
RIF	20	22	Erichsen & Horgen A/S	M	15	146,7	142,5	120	50,9	Arne Jorde
RIF	21	23	Holte Consulting AS	PM	15	137,2	134,8	63	48,4	Trygve Sagen
	22	45	Pöyry Norway As	I	15	136,3	45,8	59	63,2	Jon Terje Julsen
RIF	23	32	Unionconsult *	M,E,Env	15	130,2	81,6	103	49,6	Young, Birkely & Berntsen
	24	24	Atkins Norge AS	Enr	15	129,8	88,5	72	57,5	Pierre Henrik Bastviken
	25	26	Semcon Norge (acquired Kongsberg Devotek) *	I	15	127,0	114,2	96	40,0	Hans Peter Havdal
	26	19	DARK Group *	A	15	122,2	182,4	95	39,2	Geir Gustav Hantveit
RIF	27	28	Dr Techn Olav Olsen AS	PM,CE, Env	15	117,8	107,9	86	49,6	Olav Weider
RIF	28	27	Høyer Finseth AS	PM, CE	15	111,6	108,4	128		Knut Reed
RIF	29	29	ECT AS	E	15	109,2	95,4	100	53,7	Jan Henning Quist
	30	31	Teleplan Consulting AS	E	15	81,3	86,3	45	35,6	Jan Haakon Gulbrandsen
	31	34	Arcasa Arkitekter AS	A	15	80,1	65,3	49	37,5	Per Erik Martinussen
	32	33	Lpo Arkitekter As	A	15	74,8	71,0	73	31,0	Hilde Sponheim
RIF	33	35	Dimensjon Rådgivning AS	Env	15	67,5	60,7	47	24,3	Jon Halvar Eiane
RIF	34	37	Ingeniør Per Rasmussen AS	E	15	67,0	59,3	26		Per H. Rasmussen
RIF	35	41	Brekke & Strand AS	Env	15	66,1	52,1	79	26,2	Ingjerd Elise Aaraas
	36	43	Solem Arkitektur AS	A	15	64,8	49,7	52	43,9	Roger Snustad
	37	36	Hille Melbye Arkitekter AS	A,PM	15	60,7	59,4	54	29,1	Anna Marie Christensen
	38	38	Lund Hagem Arkitekter AS	A	15	57,5	55,4	56	21,5	Mette Røsbekk
	39	40	Lund & Slaatto Arkitekter AS	A	15	55,7	53,1	49	25,4	Pål Biørnstad
RIF	40	42	Nordplan AS	PM,CE,A	15	54,7	51,2	50	20,1	Arne Roald Steinsvik
	41	39	Niels Torp AS Arkitekter	A	15	51,7	54,3	39	40,3	Niels A. Torp
	42	25	Rambøll Oil & Gas AS	Enr,I	15	46,9	124,5	23	71,4	Gro M Baade-Mathiesen
	43	47	Abo Plan & Arkitektur As	A	15	45,9	43,5	42	22,3	Arne Kristian Kolstad
RIF	44	54	Bygganalyse AS	PM, CE	15	45,6	38,0	30	26,3	Frank Henry Roberg
	45	53	Dyrvik Arkitekter A/S	A	15	44,9	38,9	46	18,4	Halvor Bergan
RIF	46	50	Prosjektutvikling Midt-Norge AS	PM,CE	15	44,3	40,2	33	20,3	Nina Lodgaard
RIF	47	55	Itech AS	M,E	15	44,1	37,6	29	15,6	Håvard Olsen Wiger
	48	65	Tag Arkitekter AS	A	15	44,1	33,5	52	17,7	Lars Eirik Ulseth
RIF	49		Structor Norway *	CE,E	15	42,8		54	32,0	Snippen, Horn, Sundfær, et al
RIF	50	46	Plan 1 AS	CE,A,PM	15	42,2	43,6	33	18,4	Knut Andersen
	51	58	Efla AS	MD	15	42,1	35,5	21	15,7	Ragnar Jonsson
	52	85	L2 Arkitekter AS	A	15	41,9	27,0	24	24,4	Jon Flatebø
	53	61	ØKAW AS Arkitekter	A	15	41,2	34,6	28	17,8	Margrethe Benedikte Maisey
	54	70	PKA - Per Knudsen Arkitektkontor AS	A	15	40,5	32,7	40	20,3	Reidar Klegseth
RIF	55	92	IPD Norway AS	PM, E	15	38,7	24,7	30	11,8	Aksel Østmoen
	56	67	Enerhaugen Arkitektkontor As	A	15	38,1	33,1	35	16,0	Bente Nygård
	57	51	Arkitektkontoret Nils Tveit AS	A	15	38,0	39,7	16	17,6	Nils Martinius Tveit
	58	64	Ingeniørfirmaet Malnes Og Endresen AS	E	15	37,9	33,5	26	15,6	Roger Malnes
	59	52	LOF Arkitekter AS	A	15	37,9	39,5	23	12,9	Sverre Jørgen Olsen
	60	44	AMB Arkitekter AS	A	15	37,0	49,5	36	18,5	Michael Bowe
RIF	61	69	ElectroNova AS	E	15	35,7	32,8	23	25,9	Trond Einar Kristiansen
	62	71	HRTB AS (Arkitekter)	A	15	35,3	32,6	38	18,2	Tove-Christin Eidskrem
	63	72	Arkitektene Astrup & Hellern AS	A	15	34,6	32,0	28	18,5	Åke Letting
	64	60	OG Arkitekter AS	A	15	34,2	34,6	55	17,5	Osmund Olav Lie
RIF	65	66	Grunn Teknikk AS	PM,CE	15	34,1	33,4	11	16,8	Geir Solheim
	66	56	Techni AS	I	15	34,1	36,9	35	20,1	Dag Almar Hansen

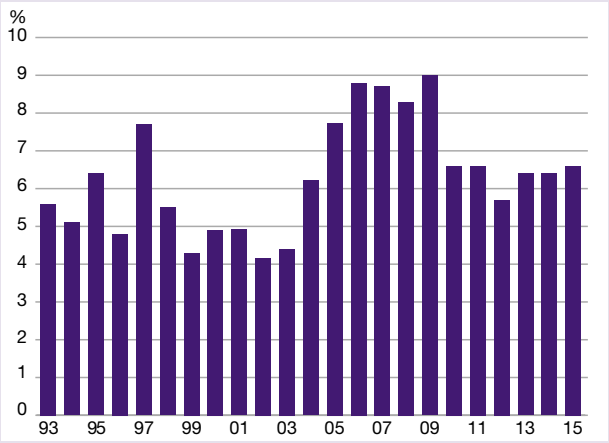
RIF = Member of RIF, the Association of Consulting Engineers, Norway (*) = lack of conforming figure/proforma/assumed – = missing figure PM = Project Management, A = Architecture, CE = Civil/Structural Engineering, Env = Environment, Enr = Energy, E = Electrical,M = Mechanical/HEVAC, I = Industrial,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

	2016	2015	Group	Service	Annual report	Turn-over MDKK	(previous year)	Average number of employees	Tot. Balance sheet MDKK	CEO/Managing director
	67	73	Halvorsen & Reine AS (Arkitekterne)	A	15	33,6	31,2	24	18,4	Øystein Rognebakke (chairman)
	68	49	SJ Arkitekter (Solheim + Jacobsen) AS	A	15	33,4	40,5	21	13,2	Anne Sudbø
	69	68	Siv.ing. Stener Sørensen AS	CE	15	33,1	32,9	24	9,6	Bo Reinhold Gunsell
	70	59	Alliance Arkitekter AS	A	15	32,9	35,1	37	12,0	Terje Morten Eidsmo
	71	101	Arkitektgruppen CUBUS A/S	A	15	32,7	22,7	27	13,1	Odd Eilert H Mjellem
	72	62	Iark As	A	15	32,4	34,5	29	15,8	Anne Elisabeth Paus
	73	77	4B Arkitekter AS	A	15	32,4	29,7	37	15,1	Kari Linderud
	74		Spir Arkitekter AS	A	15	31,9	29,3	27	10,0	Sven Gitlesen Krohn
	75	57	Arc Arkitekter AS	A	15	31,1	36,1	25	18,9	Kjersti Hilde
	76	88	Artec Prosjekt Team As	CE, PM	15	30,8	26,5	19	8,8	Per Steffen Reigstad
	77	75	Bølgeblikk Arkitekter AS (former Ottar Arkitekter)	A	14	30,7	26,5	17	12,5	Terje Wilhelm Aaneland
RIF	78	79	Fokus Rådgivning AS	CE	15	30,2	28,5	17	11,7	Jan Ole Myrlund
	79	76	Løvlien Georåd AS	Env	15	30,0	30,5	10	13,0	Per Løvlien
	80	86	Metropolis Arkitektur & Design	A	15	29,8	27,0	27	14,3	Hanne Arvik
	81	89	Eggen Arkitekter AS	A	15	29,8	26,2	25	18,4	Vebjørg Ekseth
	82	78	Optiman AS	PM	15	29,1	29,1	20	10,6	Rune Steve Hardersen
RIF	83	105	Ivest Consult	CE	15	28,5	22,0	31	10,7	Jan Inge Hage
	84	90	Børve Borchsenius Arkitekter As	A, PM,CE	15	28,4	26,2	27	14,9	Jan Olav Horgmo
RIF	85	121	Bright Rådgivende Ingeniører (Bygg, Elektro, VVS) *	CE	15	28,3	18,7	19	14,4	Arne Gunnar Birkeland
	86	82	Heggelund & Koxvold AS	A, PM	15	28,2	27,2	21	11,9	Jon Heggelund
RIF	87	87	Stærk & Co as	PM, CE	15	27,9	26,6	23	16,0	Jan Lindland
	88	81	Kristin Jarmund Arkitekter AS	A	15	27,6	27,5	25	11,3	Kristin Jarmund
RIF	89	80	Karl Knudsen As	PM, CE	15	27,4	27,6	19	11,7	Arnstien Garli
	90	137	HLM Arkitektur & Plan AS	A	15	27,0	15,6	21	12,1	Marie Louise Lekven
	91	96	PIR II architects AS	A	15	26,8	24,0	40	9,8	Mette Melandsø, Katy Chada & Kaja Tiltnes
	92	74	C.F. Møller Norge AS	A	15	26,7	30,7	18	9,6	Christian Dahle
	93	97	Meinich Arkitekter AS	A	15	26,4	24,0	20	11,0	Kristian Fodstad
RIF	94	63	A.L. Høyer Skien AS	PM, CE	15	26,3	34,3	15	6,7	Jørn Lindgren
RIF	95	102	T-2 Prosjekt AS	CE	15	25,7	22,6	11	10,8	Magne Olav Torsæter
	96	114	Arkitektfirma Helen & Hard AS	A	15	25,7	19,7	28	6,8	Reinhart Kropf
	97	91	Sinus AS	CE, Env	15	25,3	26,0	20	12,2	Tønnes Andreas Ognedal
RIF	98	95	Roar Jørgensen AS	PM,CE	15	25,2	24,0	23	11,4	John Dæhli
RIF	99	83	Pabas Arkitekter Og Rådgivende Ingeniø-rer AS	CE,PM,A	15	23,8	27,0	12	12,5	Ketil Bakkejord
RIF	100	98	Moe Rådgivende ingeniører AS	CE, M	15	23,8	23,5	22	14,5	Sune Wendelboe

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 has a relatively significant impact on the companies' turnover and profit level per employee.

For firms 31–100 in the above list, turnover in 2015 increased by 2% to approximately NOK 2,685 million (NOK 2,622 million in 2014). The number of employees grew to 2,166 (2,075). The turnover per employee was NOK 1,240,000 (NOK 1,261,000). The profit before increased to NOK 121,000 per employee (NOK 151,000). Calculated in terms of profit margin, this gives 9.7% (12.0%). The average balance per employee was approximately NOK 585,000 (NOK 590,000).

Key business ratio 30 largest groups		(föregående år)
Turnover per employee	NOK 1,349,000	NOK 1,378,000
Profit after financial items per employee	NOK 89,000	NOK 89,000
Balance sheet total per employee	NOK 618,000	NOK 649,000

The turnover for the 30 largest groups fell by 1% to NOK 18,619 million (NOK 18,828 million in 2014). The average number of employees grew by 1% to 13,807 (13,660). The turnover per employee consequently fell to NOK 1,349,000 (1,378,000 the previous year). The profit before tax was NOK 89,000 per employee, same as in 2014. The profit margin for the 30 largest groups in 2015 thereby was 6.6% (6.4% in 2014). The average balance per employee was approximately NOK 618,000 (NOK 649,000).

"STRONG RECOVERY OF ICELANDIC ECONOMY"

The Icelandic economy is undergoing very robust growth, driven by consumption and business investments. GDP and private consumption growth was in excess of 4% in 2015 while investments increased by 18 %. It is expected that during 2016 the economy will grow by close to 5 %, private consumption by 7.1 % and investment by 21.7 %. In 2017 GDP growth is forecast at 4.5 % by most analyst, private consumption at 5.7 % and investment at 7.4 %.

The overall outlook for the following years is also favorable with GDP estimates for 2018 at 2-3% and consumption between 2,5-3,7%. Investment growth in 2017 will be modest, however.

Public consumption growth will remain subdued during the few years reflecting the fiscal restraint that has been in place since the financial crisis of 2008. However, a new government will be in place by the end of 2016 and it is somewhat likeley that the aftermath of elections will be expansionary, especially in infrastructure.

Exports as well as imports are growing at a rapid pace. Although net exports are positive their contribution to growth is negative through 2017 due to consumption and investment but turning positive from 2018 onwards. The export of consulting engineering is likely to be reduced baucese of stronger krona.

Terms of trade are expected to be roughly stable throughout the next year but the uncertenty is mostly for deteriorating terms of trade.

Inflation has remained below the Central Bank's target for nearly 3 years. This is the longest period of low inflation in Iceland's history. Domestic costs, mainly wages, have been on a fast rise, but this has been offset by appreciation of the króna, low commodity prices and low trading partner inflation. Further contributing factors in holding down inflation may be firms favourable debt position and market growth. For the last three years the rise in house prices is responsible for the major part of the measured inflation. Inflation is generally expected to increase gradually and peak near 3.4 % in 2018 followed by a gradual decline.

Wages and purchasing power have increased greatly in recent years and wage uncertainty is considered to be low for the next two years. However, the agreed wage increases are very high and will be challengeing for the engineering- and architects as well as for the economy as a whole.

Labour market growth has continued at a strong pace and employment is predicted to increase considerably during 2016. Labour demand has been satisfied by attracting more people to the labour market, reduced unemployment and foreign migration. On an annual basis unemployment now stands at just over 3% while registered unemployment stands at around 2.3%. Labour demand will be high in 2017, but some of the tension will ease in the later years of the forecast with unemployment gradually increasing to around 4% at the end of the period.

Employment in the engineering and architect sector is also increasing modestly as domestic demand for their service is increasing. The share of foreign projects is most likely to reduce following a stronger krona.

The year 2016 will be the eighth trade surplus year in a row and the fourth of a genereous current account surplus. These durations as well as the scale of the surpluses are unprecedented in the 70 years of Iceland's postwar era economic history. There are, however, challenges facing the economy with possible signs of overheating in the economy, too strong krona, generous wage agreements.

In the latter half of 2016, the real exchange rate of the króna rose to its highest value since mid-2008. The outlook is for the real exchange rate in terms of relative consumer prices to be, on average, more than 5% higher in 2016 than in 2015. Furthermore, given the substantial pay increases provided for in recent wage settlements, the real exchange rate in terms of relative unit labour costs will rise this year by even more – over 10%. Given the prospects for wage developments in coming years, it is highly likely that Iceland's competitive position will continue to deteriorate. This development is likely to damage the competitiveness of Icelandic consultancy firms operating outside of Iceland. In addition, Norway has been the single most important market for Icelandic consultant firms. The market situation there has changed dramatically for Icelandic firms operating in Norway in less than a year with the devaluation of NOK. In November 2016 the exchange rate of NOK/ISK was 13isk but went as high as 24isk in 2014. Similar development is against the USD and EUR bot not as dramatic as the NOK.

Bjarni Már Gylfason, economist at SI – the Federation of Icelandic Industries

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.

Bjarni Már Gylfason, economist at SI
Árni Johansson, director of construction industry at SI

Investment outlook

The single most important macroeconomic variable for engineers and architects is the Investment level. The lack of investments continues although the Icelandic Economy is doing well overall with strong economic growth. During the last 6–7 years the investments level have remained low after a sharp drop in 2009 following the economic crisis. The investment level is only recently now getting close to the minimum level of 20% of GDP to support growth and the demographic structure of the Icelandic population. Historical average is close to 24% of GDP.

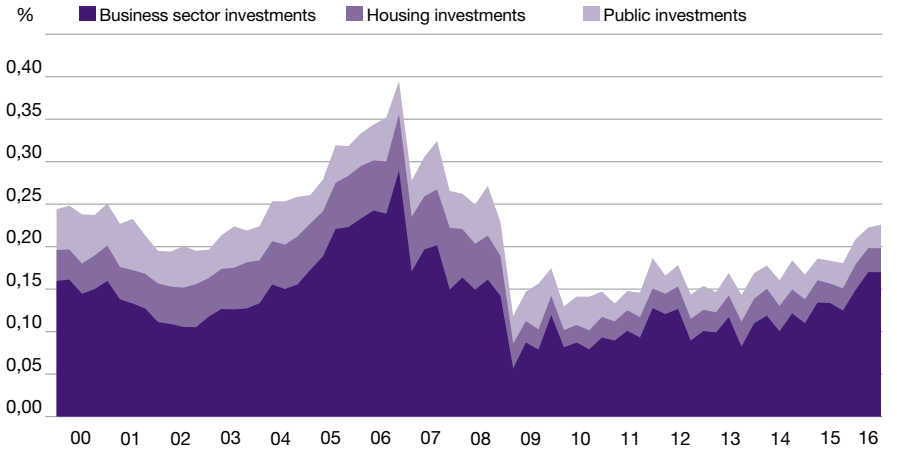
One key consequence of low investment level is decrease in productivity. The capital stock is decreasing since depreciation is higher than new investments. That means less production capabilities and growth possibilities in the future and limits productivity growth. Therefore higher investment level is a key priority for both sectors. For the engineering sector public investments play a dominant role but for the architectures the market for new housing is more important.

This development might seem like a paradox since the Icelandic economy is doing overall so well. The problem is that growth is driven by inflow of new labour force into the labour market – not higher productivity.

Housing investments

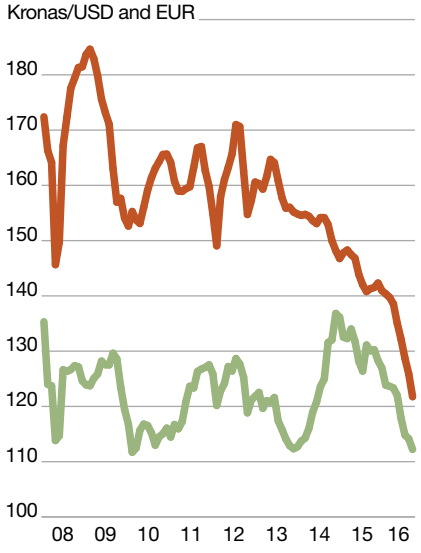
Development and outlook in the housing market is a key priority for the construction industry in Iceland and especially the architects. The engineering firms are somewhat less depended upon that market. The housing market shrunk heavily in early 2008 prior to the collapse of the banking system. Historically around 1.600–1.800 new apartments are needed annually in the market. The production dropped to around 200–400 units on average in 2009–2012. In

Investments as a percentage of GDP 2000–2016

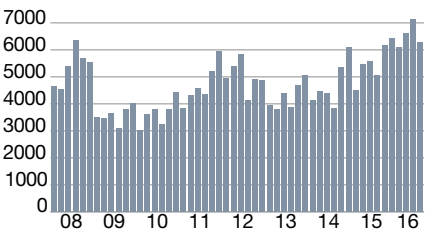


Investment levels in Iceland the last 15 years, broken down by sectors. The investment boom in 2005–2007 was driven by energy intensive investments but also on credit-boom that supported all kinds of investments. Since 2009 investments levels have been low and are not yet reaching normal levels. Business investments started to pick up in 2015 but both housing and public investments is low, especially public.

Exchange rate of USD and EUR against ISK 2008–2016

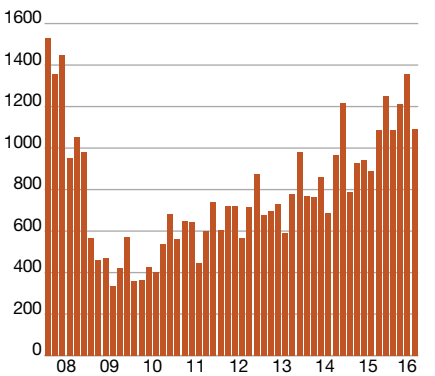


Engineers turnover in million ISK 2008–2016



Development of turnover for engineers since 2008. The sector was like other sectors in Iceland hit by the economic crisis but not as severely as many others. In 2011 and 2012 energy intensive projects proved to have a positive impact on the sector and activities in Norway played an increasing role in the latter half of this period. As the krona strengthens and the Norwegian market weakens more projects are now in the domestic market which is showing considerable growth. The outlook for 2017 is favourable for the domestic market but the companies selling service abroad are struggling with the effects of a strong króna.

Architects turnover in million ISK 2008–2016



Development of turnover for architects in Iceland since 2008. The sector was hard hit in 2008 and 2009 but has been gradually recovering since 2013. A recent survey among companies in SAMARK suggest that all companies are experiencing a considerable growth and almost half of the companies are considering hiring more staff.

THE TOP 20 ICELANDIC CONSULTING ENGINEERING AND ARCHITECTURAL GROUPS

	2016	2015	Group	Service	Annual report	Turnover MISK	(previous year)	Average number of employees	Tot. balance sheet MISK	CEO/Managing director
FRV	1	1	Mannvit hf	MD	15	5268,0	5169,7	290	3246,2	Sigurhjörtur Sigfússon
FRV	2	3	Efla hf.	MD	15	5107,0	4547,3	273	2002,0	Guðmundur Thorbjörnsson
FRV	3	2	Verkís hf.	MD	15	4742,6	4944,1	329	1970,7	Sveinn Ingi Ólafsson
FRV	4	4	VSÓ Ráðgjöf ehf.	MD	15	1100,0	1060,0	70	490,0	Grímur Már Jónasson
FRV	5	6	Ferill ehf., verkfræðistofa	CE, PM, M, Env	15	536,0	445,3	25	24,8	Ásmundur Ingvarsson
FRV	6	5	Hnit hf.	PM, CE, Enr, E, Env	14	472,0	472,0	35	169,0	Harald B. Alfreðsson
FRV	7		Lota ehf	CE	15/16	421,0		31	182,0	Magnús Kristbergsson
SAMARK	8	7	Arkís ehf.	A, PM, Env	15	405,0	372,0	24	109,0	Þorvarður Lárus Björgvinsson
SAMARK	9	8	THG Arkitektar	A, PM	15	390,0	334,1	25	215,0	Halldór Guðmundsson
FRV	10	9	VJI Consulting (VJI - Verkfræðistofa Jóhanns Indr ehf)	E, Enr, I, PM	14	334,0	334,0	23	129,0	Magnús Kristbergsson
SAMARK	11	10	Tark Arkitektar (Tark - Teiknistofan ehf.)	PM, A	15	320,0	324,0	23	172,0	Ivon Stefán Cilia
SAMARK	12	11	ASK arkitektar ehf.	A, PM	15	241,0	227,7	18	30,0	Páll Gunnlaugsson
SAMARK	13		Gláma Kím arkitektar	A	15	206,0		17	73,5	Árni Kjartansson
SAMARK	14		Landslag ehf	A	15	187,0		17	104,0	Finnur Kristinsson
FRV	15	12	Verkfræðistofa Suðurnesja ehf.	PM, CE, Enr, E, Env	14	179,4	179,4	13	140,8	Brynjólfur Guðmundsson
SAMARK	16		VA arkitektar	A	15	165,0		15	61,0	Indro Candi
SAMARK	17	13	Landmótun sf	A,Env	14	132,5	132,5	10	55,8	Áslaug Traustadóttir
SAMARK	18		Uti og Inni s.f. architects	A	15	76,0		6	17,0	Baldur Ó. Svavarsson
FRV	19	14	Teiknistofa arkitekta GG og félagar ehf	A,CE	14	58,2	58,2	5	22,9	Gylfi Guðjónsson
FRV	20		Teiknistofan Tröð ehf	CE	15	55,0		5	684,0	Sigríður Magnúsdóttir

2013 and 2014 the market started to pick up and the market today shows various signs of tension. Annual supply is getting close to long term annual demand but a considerable gap still needs to be filled. Housing shortage is very noticeable in the market and prices are on the rise. On challenge that Icelanders face now is very large generation of young people born around 1990–1994. The generation is putting pressure on the market. The federation of Icelandic Industries has housing issues, housing permits etc. as its key priority.

Business investments

Overall business investments have been quite strong although the overall investment level is too low. This is mainly due to booming tourism but considerable investments in the energy transport grid and silicon production manufacturing is also taking place. There are plans and underlying need to invest heavily in the national electricity grid which is likely to start in 2016. If all these plans go forward it will be a strong boost for the engineering sector but it will also put further pressure on the domestic economy.

Key business ratio 20 largest groups		(previous year, 14 groups)
Turnover per employee	16.27 MISK	16.33 MISK
Profit after financial items per employee	1.02 MISK	0.98 MISK
Balance sheet total per employee	7.89 MISK	7.69 MISK

The total turnover for the top 20 firms was 20,396 MISK (18,600 MISK the previous year, then the 14 largest companies) and the average number of employees was 1,254 (1,139). The profit margin was 6.3% (6.0%).

Overall business investment is estimated to grow around 20–25% in 2016 but only around 5–6% in 2017.

Public investments

During the crisis of 2008–2010 public investment shrunk. As the situation in public finances improved it was somewhat expected that public investments would increase again. That has not proved to be the case and public investments levels are almost 50% lower than the historical averages, somewhat due to high public debt but also from the last government prioritization. Looking at long-term goals and outlook in public finance no real change is foreseeable. Public investments is shrunk by 2.5% in 2015 but will increase by 2.7% in 2016 and 3.7% in 2017. These numbers are lower than economic growth as a whole which means that public investments as a percentage of GDP will decrees even further. This development is a key concern for the engineering sector but also for the economy as whole.

State of the Nation in Iceland

A key project for FRV in 2017 will be publish a detailed report called State of the nation. It will be similarly set up as seen in both Norway and Denmark. The focus will be on all infrastructure, situation and outlook. FRV is hoping that the report will be a new foundation for discussing infrastructure projects in Iceland and a key project and taking public and political debate on the issue to a new level. The first part of the paper is estimated to be published in March 2017.

"THE FINNISH ECONOMY IS RECOVERING"

The Finnish economy has finally turned into slow growth after several years of negative figures. Especially the construction sector has grown rapidly during 2016, and the technology industries, the IT sector and consulting have also continued to grow.

During the second half of 2016 the industrial output has also increased, order books have started to grow and several major new investments e.g. in forest/bio-industries are under planning.

A collective labor agreement, that cuts salary growth and increases working hours, is also expected to improve the competitive edge of Finnish industries.

Market review

The consulting sector continues to grow faster than the Finnish economy. Turnover in the consulting sector has grown by 11% between 2014 and 2015. Staff in SKOL member companies has grown by around 4% in 2016, and order stocks have increased by 10% since 2015 last year.

The Industry consulting sector has started to focus on direct export markets due to the downturn in the Finnish export industry, which used to employ them. Especially in the shipbuilding- and petrochemical industries consultants have increased direct export. However, the Finnish export industry now has better market expectations for the coming year.

Infrastructure sector investments continue in growing cities. Due to successful lobbying the state infrastructure investment plans for 2016, 2017 and 2018 have been supplemented with new major road, rail and urban rail investments with a total worth of over 2 billion €. In addition, about 600 M€ is channeled to rehabilitation and maintenance of road- and rail networks, which includes also small investment projects. The new decisions have changed the market situation dramatically, overcapacity has turned into lack of staff.

The building sector continues to have a good workload, and profitability is also good. There is already lack of expertise in some areas like structural design, HVAC design and project management. Both public and private investments in the building sector are expected to continue increasing, with focus on the growing cities in southern Finland.

Statistics from 2015

The total turnover of SKOL member companies in 2015 was 1630 million EUR, a growth of 4% compared with the previous year. Most of the increase came from the domestic sector, which increased by 5%. Export of consulting services increased by 2% from the previous year, with a total volume of 275 million EUR in 2015.

The biggest exporter was the industry sector, with exports representing about 32% of their turnover. The infrastructure-consultancies exported about 10% and the building sector only 3% of their total turnover. Downturn on the Russian market was a major reason for decreasing export figures, and the situation remains the same in 2016.

The industry sector represents over 41% of the total turnover. The building sector is second in line, with 36% share among SKOL companies. The infrastructure sector represents 20% of total turnover. The rest comes from other business sectors, including e.g. management consulting and training.

The building sector had the biggest growth in domestic invoicing, at 8%. Domestic industrial consulting and infrastructure invoicing increased by 2% from the previous year.

The total staff numbers of SKOL member companies increased by 4% to 16900 employees in 2016. Out of these 4000 have higher university degree, over 8000 have college (polytechnic etc.) degree, 2000 are technicians and building masters, and the rest are other staff.

Profitability improved a bit

The profitability figures of the 100 biggest Finnish companies are presented in the Nordic comparison part of this report, but the figures that SKOL collected in the spring from all member companies show that profitability in 2015 improved somewhat from the previous year. The average operating profit of SKOL member companies was 11% and the net margin was 4.9%. The building sector showed the best net results, 5.7%, followed by infrastructure at 4.9% and industry at 4.1%.

Biggest companies, mergers and acquisitions

Pöyry continues to be by far the biggest Finnish consulting company in this Nordic sector review, as it is listed in Finland and reports its total turnover including global operations. When looking at the operations in Finland, which is the basis of SKOL statistics, there were some changes in the top ten list.

In 2015, Ramboll had the biggest turnover in Finland, 180.5 million €, followed by Sweco (179.8 M€) and Neste Jacobs (137 M€). Other companies in top ten included Pöyry (134.8 M€), Etteplan (85 M€), FCG and Granlund (both 54.7 M€), Citec (51.7 M€), A-Insinöörit (51.3 M€) and Elomatic (48.1 M€).

The fastest growing companies in top ten were Ramboll, Granlund and A-insinöörit. Other fast growers included Dekra, Deltamarin and Rejlers. Neste Jacobs took over the position as the biggest exporter from Finland, followed by Citec.

Especially Ramboll, Granlund and Wise Group have been active in the acquisition market during the recent years, with numerous acquisitions. Biggest acquisitions in 2016 were however carried out by Etteplan, who acquired Espotel and Soikea solutions, increasing Etteplan´s service offering in embedded systems, industrial internet solutions and digital data management.

"TURNOVER IN THE CONSULTING SECTOR GREW BY 11% BETWEEN 2014 AND 2015."

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 16900 professionals in Finland, and approximately 7000 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 seen as 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 con-tinues 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 (no salary increases, 24 h/year more working time)
- 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 staff

- Young consultants forum seminars and get-togethers
- Participation in infra sector LIKE project with the aim to attract young staff
- Participation in KIRA-academy bringing together young professionals of whole real estate and building sector
- 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
- New 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
- e-letters to stakeholders
- e-letters to members
- Storytelling workshops to board and spokesmen
- Articles on newspapers
- SuomiArena summer week by MTV3 channel - theme future of work
- Strong communications and social media activity
- New unified brand within all associations in Technology industries
- Client of the year award

International work

- 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

Matti Mannonen, SKOL.

- Participation in Habitat Quito Finnish Delegation

Project work

- Participation in Real Estate digitalization development project www.kiradigi.fi
- Master thesis on impact of good consulting in industrial projects
- Integrated project delivery model development
- Study on housing production needs and demographics of Finland in 2040
- Activating the work of Lean Construction Institute Finland
- Building sector 3-year quality project together with construction industry and clients

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PRACTICES IN DESIGN ARE CHANGING

Architects have always been firmly of the opinion that there is no work component in the design process that could be outsourced to 'more affordable' suppliers, at least not without major difficulty. However, digitalization and internationalization are changing many things.

Architects have to recognize new needs

In this ongoing change, the expertise and design input of the architect must also be increasingly considered from the perspective of cost structure and efficiency. Simply put, the profession must resolve the issue of how the work might be divided up into design on the one hand – requiring high expertise and research – and pure technical draftsmanship on the other. Although producing de-sign drawings has always been an integral and major part of the business of an architects' office, it is quite possible that in the future some of this work will be shifted off the architect's desk, so to speak. This is not to say that there will be a decline in demand for the services of architects, be-cause new needs are emerging all the time. Architects simply have to recognize those new needs and to customize a service that responds to clients' needs and returns added value. At the appro-priate price, of course.

Established practices in design and in commissioning designs need to be cleaned up. Accordingly, clarity is now being sought with various methods responding directly to clients' needs and new, illustration-based management methods. Although the construction market is currently strong, the need for continuous development should not be forgotten. Just like any entrepreneur, architects must be prepared to develop their business models.

The world is led with images

All occupations are currently in a state of flux; no job description can be fixed and immutable any more. Although as architects we have an excellent and documented understanding of our history, our future is less clear. Moreover, due to the rapid pace of technological advancement we no long-er know exactly what our goals should be, and we may well end up driving ourselves irreversibly out of the market. Architects are professionals in visualization, which is precisely the reason why we have a natural potential for success in these evolving markets. The world today is increasingly led with stories and images. Even phones are now used more for sending images than for speak-ing with people. What the eye sees sinks into the mind and is remembered, and this offers excel-lent potential for translating visualizations and images into business.

New ways of doing things

A good example of new ways of doing things is Target Value Design. Briefly, this is a design pro-cess where all parties collaborate to design the solutions and how to implement them, the goal being to achieve the best possible outcome for everyone concerned. Budgeting is of course one of the design criteria, but not the only one. An equally important goal might be to improve community structure. To be sure, client goals such as this go into traditional design processes as well, but practice has proven that cost assessment and anticipation of actual design needs are very real problems, resulting in redesign, alterations and additions during construction, compromises on quality and missed deadlines. Cleaning up this mess is something that our profession needs to address.

ATL in brief

The Association of Finnish Architects' Offices (ATL) is an independent organization moni-toring and promoting the interest of the architectural industry. Its mission is to develop ar-chitectural services and thus improve the quality of construction and the environment. The professional membership requirements of the association are strict. An ATL member office is professional. To be accepted as a member, the management of the office must have the highest professional architectural training and solid experience of working in the industry. The management is required to work full-time in planning, design or related consultation.

The medium size of ATL member office is 8 employees. Quite normal is that offices have more than one partner. The average amount of partners per office is two persons.

Vesa Juola, ATL.

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ATL in numbers:	
Amount of members:	245
Amount of people employed by members:	1484 + partners 486 = totally 1970
Total invoicing in the year 2011:	EUR 198.2 million

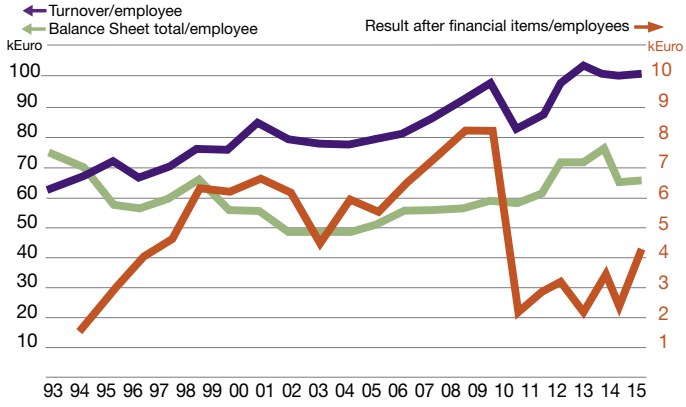
THE TOP 100 FINNISH CONSULTING ENGINEERING AND ARCHITECTURAL GROUPS

	2016	2015	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	15	575,3	571,2	5752	449,9	Martin À Porta
SKOL	2	4	Ramböll Finland + Environ *	MD	15	180,5	151,8	1916	108,8	Kari Onniselkä
SKOL	3	2	SWECO Group	MD	15	177,7	187,3	1913		Markku Varis
	4	3	Inspecta Oy *	I	14	176,0	176,0	1506		Kari Aulasmaa
SKOL	5	6	Neste Jacobs group	I	15	143,6	123,4	855	75,0	Jarmo Suominen
SKOL	6	5	Etteplan Oyj	I	15	141,1	131,9	2074	92,5	Juha Näkki
	7	9	Insta Automation Oy	I	15	56,8	51,1	378	20,8	Timo Lehtinen
SKOL	8	8	FCG Finnish Consulting Group	MD	15	54,7	56,5	477	48,3	Ari Kolehmainen
SKOL	9	11	Granlund Oy	E,M	15	54,7	45,5	577	36,7	Pekka Metsi
SKOL	10	10	Citec Group	I, Env	15	51,7	49,5	456	26,9	Martin Strand
SKOL	11	12	A-Insinöörit Group	S,CE, PM	15	51,3	45,0	466	25,2	Jyrki Keinänen
SKOL	12	7	Elomatic Group Oy	I, MD	15	48,1	77,2	587	46,1	Patrik Rautaheimo
SKOL	13	13	SITO Group Oy	CE, Env, PM	15	47,9	44,2	495	26,7	Tapio Puurunen
SKOL	14	14	Rejlers Finland (förvärvat JS-Verkot) *	I,E,M,Env	15	39,1	32,9	469	18,5	Seppo Sorri
SKOL	15	19	Deltamarin Oy	I	15	31,0	25,9	237	15,5	Mika Laurilehto
SKOL	16	18	Wise Group Finland Oy (förvärvat Helimäki Akustikot)	CE	15	30,7	26,0	293	23,5	Aki Puska
SKOL	17	20	Dekra Industrial Oy	Enr	15	30,2	23,7	205	11,8	Matti Andersson
SKOL	18	16	ÅF Consult Oy	I, Enr	15	29,1	28,9	161	13,3	Jari Leskinen
SKOL	19	15	WSP Finland	MD	15	28,1	29,0	345	11,6	Kirsi Hautala
SKOL	20	17	Vahanen Group Oy	CE	15	26,5	26,8	375	15,3	Risto Vahanen
	21	22	Insinööritoimisto Comatec Group	I, PM	15	24,2	19,0	350	11,2	Aulis Asikainen
SKOL	22	21	Destia Design *	CE	14	20,0	30,0	170		Heidi Erha
	23	23	Haahtela Group *	I,PM	15	19,4	18,3	135	25,3	Yrjänä Haahtela
SKOL	24	24	Optiplan Oy	MD	15	15,9	15,6	221	9,3	Tommi Vaisala
	25	26	Econet Oy	I,Env	15	15,2	11,7	27	10,5	Matti Leppäniemi
SKOL	26	31	NIRAS Finland Oy	Env	15	11,8	10,7	49	7,3	Tor Lundström
SKOL	27	29	Suomen Talokeskus Oy	MD	15	11,6	11,3	99	3,4	Jari-Pekka Punkari
SKOL	28	32	Rakennuttajatoimisto HTJ Oy	PM	15	10,9	10,7	93	3,8	Vesa Ekokoski
SKOL	29	30	Ahma Insinöörit Oy	PM	15	10,7	10,7	140	5,8	Kim Lindholm
ATL	30	27	Helin & Co Architects	A	14/15	10,4	11,6	49	3,5	Pekka Helin
	31	33	Raksystems Oy	PM, CE, S	14	10,3	11,8	100	3,3	Marko Malmivaara
SKOL	32	25	ISS Proko Group	MD	15	10,0	12,1	107	6,1	Harri Väänänen
SKOL	33	34	Indufor Oy	I	15	10,0	9,4	28	3,3	Jyrki Salmi
	34	37	RD Velho Oy	I	15	9,7	8,5	123	5,1	Mika Kiljala
SKOL	35		Vitalium group (Mitta Oy)	CE	15	9,6		126	14,6	Jari Lappi
SKOL	36	35	Protacon koncernen Oy	I, E, PM	15	9,2	9,1	89	3,3	Kari Pellinen
SKOL	37	36	CTS Engtec Oy	I,CE	15	8,8	8,9	102	4,8	Antti Lukka
ATL	38	38	Arkkitehtitoimisto JKMM Oy *	A	15	8,7	8,4	50	3,4	Jaaksi, Kurkela, Miettinen, Mäki-Jyllilä (partners)
SKOL	39	39	AX-Konsultit Oy	Env,Enr,I,E,M	15	8,7	8,0	86	5,0	Urpo Koivula
SKOL	40	54	Finnmap Infra Oy	CE	15	8,6	4,0	50	3,1	Harri Linna
ATL	41	51	Pes-Arkkitehdit Oy (Pekka Salminen)	A	15	7,2	4,7	60	4,1	Jarkko Salminen
ATL	42	41	Arkkitehtitoimisto SARC Oy	A	14/15	7,0	6,6	47	6,3	Sarlotta Narjus
SKOL	43	44	Rapal Oy	PM	15	7,0	5,8	60	4,8	Tuomas Kaarlehto
SKOL	44	42	TSS Group Oy	E	15	6,9	6,3	91	4,6	Kari Kallio
SKOL	45	40	Golder Associates Oy	CE,Env	15	6,6	6,7	52	2,9	Kim Brander
SKOL	46	43	Oy Omnitele AB	PM(tele)	15	6,6	6,0	49	5,2	Tomi Paatsila
	47	52	Esju Oy	I	15	5,9	4,6	56	3,8	Matti Kainuharju
SKOL	48	45	FM-International Oy	CE	15	5,6	5,5	29	15,6	Kotaro Seki
	49	48	Indepro Oy	PM, CE	15	5,4	5,0	35	4,7	Matti Kruus
ATL	50	47	L Arkkitehdit Oy (Arkkitehtitoimisto Larkas & Laine Oy)	A	15	5,2	5,0	50	2,1	Robert Trapp
SKOL/ATL	51	65	Arkkitehdit Soini & Horto Oy	A	15	4,5	3,2	35	1,1	Sami Horto
SKOL	52	71	Plaanagroup	Env	15	4,5	3,0	44	3,6	Pekka Mosorin
	53	46	Re-Suunnittelu Oy - Re-Engineering Ltd	A, CE, PM	15	4,4	5,5	37	1,9	Matti Juhani Takkinen
ATL	54	59	Arkkitehtitoimisto Ala Oy	A	15	4,2	3,8	37	1,9	Juho Emil Grönholm
SKOL	55	49	KBR Ecoplanning Oy (fd Chematur)	I	15	4,2	4,9	11	3,1	Timo Kuusisto
SKOL	56	62	Roadscanners Oy	CE	15	4,1	3,5	30	2,3	Timo Saarenketo
SKOL	57	56	Geotek Oy	Env	15	4,1	3,9	44	2,7	Anni Sihvola
SKOL	58	55	Hepacon Oy	M,E	15/16	4,0	3,9	50	1,4	Otto Jokinen
ATL	59	60	Architecture Office Sigge Ltd/ Viiva arkkitehtuuri (Arkkitehtitoimisto Sigge Oy)	A	14/15	3,9	3,6	47	5,3	Pekka Mäki
ATL	60	66	Uki Arkkitehdit Oy	A	15	3,6	3,2	40	2,0	Mikko Heikkinen
SKOL	61	72	Ideastructura Oy	CE	15	3,6	3,0	30	2,4	Jyrki Jalli
SKOL	62	70	Insinööritoimisto Pohjatekniikka Oy	CE	15	3,5	3,0	36	1,8	Seppo Rämö
SKOL	63	75	Insinööritoimisto Pontek Oy	CE	14/15	3,4	2,9	27	2,7	Pertti Määttä
SKOL	64	68	Insinööritoimisto Leo Maaskola Oy	M	15	3,4	3,1	33	1,9	Kari Seitaniemi
ATL	65	57	Cederqvist & Jäntti Arkkitehdit Oy	A	14/15	3,4	3,8	37	1,5	Tom Cederqvist
SKOL	66	81	Asitek Oy	E	15	3,3	2,6	25	1,7	Rauno Mäkelä
	67		Procofin Oy	A,CE	15	3,3	1,9	30	1,6	Sami Hentilä
	68	53	Arkkitehtitoimisto HKP Oy *	A	15	3,3	4,5	24	1,4	Mikko Suvisto
SKOL/ATL	69	73	Parviainen Arkkitehdit Oy	A	15	3,3	2,9	35	1,8	Mikko Lahikainen
SKOL	70	76	Insinööritoimisto Äyräväinen Oy	CE	15	3,3	2,9	38	2,0	Mikko Äyräväinen

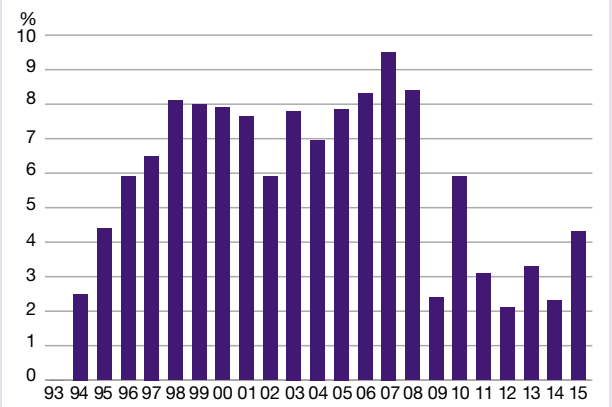
SKOL = Member of SKOL, the Finnish Association of Consulting Firms . ATL = Member of ATL (Finnish Architects' Office) (*) = lack of conforming figure/proforma/assumed – = missing figure PM = Project Management, A = Architecture, CE = Civil/Structural Engineering, Env = Environment, Enr = Energy, E =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

	2016	2015	Group	Service	Annual report	Turn-over MDKK	(previous year)	Average number of employees	Tot. Balance sheet MDKK	CEO/Managing director
	71	77	Akukon Oy	CE	15	3,2	2,9	31	0,9	Ari Lepoluoto
SKOL	72	64	Hifab Oy	PM	15	3,2	3,2	12	1,4	Vesa Kurkela
SKOL	73	61	Insinööritoimisto Tauno Nissinen Oy	E,Enr	15	3,2	3,6	33	2,2	Antti Danska
ATL	74	79	Arkkitehdit NRT Oy (Nurmela,Raimoranta,Tasa)	A	15	3,2	2,8	30	2,5	Teemu Tuomi
SKOL	75	69	Insinööritoimisto Lauri Mehto Oy	CE	15	3,1	3,0	28	2,0	Simo-Pekka Valtonen
	76	74	Kalliosuunnittelu Oy (Rockplan Ltd)	CE	15	3,0	2,9	29	2,2	Jarmo Roinisto
ATL	77		AW2-arkkitehdit Oy	A	15	3,0	1,7	15	1,7	Anssi Yrjö Mikael Anttila
SKOL	78	78	YSP-Consulting Engineers Oy	E,I	15	2,9	2,9	29	4,2	Juha Pykälinen
SKOL/ATL	79	91	Aihio Arkkitehdit Oy	A	15	2,9	2,2	32	2,7	Timo Meronen
SKOL	80	63	Contria Oy	CE	15	2,8	3,3	30	1,0	Kenneth Grönroos
ATL	81	83	Arkkitehtitoimisto Lukkaroinen Oy	A	15	2,8	2,3	35	0,9	Mikko Lukkaroinen
	82	88	LINK design and development Oy	I	15	2,7	2,3	30	1,0	Jaakko Anttila
ATL	83	58	Gullstén - Inkinen Design & Architecture (Sisustusarkkitehdit Gullstén & Inkinen Oy)	A	14/15	2,6	3,8	30	2,0	Jari Inkinen
ATL	84	82	Arkkitehtitoimisto Hannu Jaakkola Oy (Jaakkola Architects)	A	15/16	2,6	2,3	19	2,4	Hannu Jaakkola
ATL	85	84	Arkkitehtitoimisto Helamaa & Heiskanen Oy	A	15	2,6	2,3	26	2,1	Juha Saarijärvi
ATL	86	86	Linja Arkkitehdit	A	15	2,5	2,3	30	0,9	Ville Petteri Niskasaari
SKOL	87	92	Insinööritoimisto Savolainen Oy	A	15	2,5	2,2	30	1,4	Antero Savolainen
	88	87	Geounion Oy	CE	15	2,5	2,3	29	1,6	Matti Mäntysalo
SKOL	89	67	Kva Arkkitehdit Oy	A, PM	15	2,5	3,1	29	0,9	Jean Andersson
	90	95	Yhtyneet Insinöörit Oy	Enr,E	15	2,4	2,1	26	1,1	Juha Kiviniemi
ATL	91	121	Arkkitehtitoimisto Jukka Turtiainen	A	15/16	2,4	1,4	16	0,4	Janne Aate Johannes Jylkäs
ATL	92		BST-Arkkitehdit Oy	A	15	2,4	1,8	23	1,6	Paul Sergej von Bagh
ATL	93	94	Schauman Arkkitehdit Oy	A	15	2,3	2,1	26	2,0	Janne Untamo Helin
SKOL	94	89	Sipti Oy	CE	15/16	2,3	2,3	22	1,6	Teemu Rahikainen
SKOL/ATL	95	102	Arkkitehtitoimisto CJN Oy	A	15	2,3	2,0	19	1,0	Eero Valtiala
SKOL	96	97	Carement Oy	CE	15/16	2,2	2,1	28	0,8	Jouni Aukusti Juurikka
SKOL	97	99	Avecon Oy	PM, M, CE	15	2,2	2,0	24	0,7	Peter Jakobsson
SKOL	98	111	Insinööritoimisto Aalto-Setälä Oy	CE	15	2,2	1,8	17	2,2	Heikki Salpaoja
SKOL/ATL	99	80	Tengbom Eriksson Arkkitehdit Oy	A	15	2,1	2,8	29	1,0	Patrick Eriksson
SKOL	100	96	Insinööritoimisto Srt Oy	CE	15/16	2,1	2,1	19	1,5	Pauli Oksman

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 has a relatively significant impact on the companies' turnover and profit level per employee.

For firms 31–100 in the above list, turnover in 2015 increased by 6% to €311 million (€293 million in 2014). The number of employees grew by 6% to 2,856 (2,701). The turnover per employee consequently increased to €109,000 (€108,000). The profit before tax fell to €11,500 per employee (€13,000). Calculated in terms of profit margin, this gives 10.0% (11.9%). The average balance per employee was approximately €69,100 (€61,500).

Key business ratio 30 largest groups excl. Pöyry)		Previous year (excl. Pöyry)
Turnover per employee	€102k (€103k)	€100 (€100)
Profit after financial items per employee	€4.3k (€5.7k)	€2.3k (€5.3k)
Balance sheet total per employee	€66.4k (€61.6k)	€64.4k (€53.6k)

The turnover for the 30 largest groups in 2015 decreased by 4% to €2,124 million (€2,046 million in 2014). The average number of employees grew by 2.5% to 20,870 (20,353). The turnover per employee was €102,000 (€100,000). The profit before tax was €4,300 per employee (€2,300 the previous year). The profit margin for the 30 largest groups increased to 4.3% (2.3%). The average balance per employee was €66,400 (€64,400)

THE INTERNATIONAL MARKET

“THE PROFIT MARGIN FOR EUROPE’S 200 LARGEST COMPANIES IN 2015 WAS 4.3 %.

The London Bridge Tower, also known as The Shard.

INTERNATIONAL DEVELOPMENT

The average profit margin for the 200 largest European companies increased during 2015 to 4.3% from 2.1% in 2014. The median profit margin also increased, to 4.9% from 4.5%.

The 200 largest engineering consultancies and architectural firms in Europe employ almost half a million personnel and the ten largest groups represent just over a third of them (35%). The average profit margin for the 200 largest groups improved during 2015 compared with 2014. It increased to 4.3%, from 2.1%. The median profit margin also increased, to 4.9% from 4.5% the previous year. The profit margin became stronger, with 5.8% in 2015 compared with 4.7% in 2014. There was also a rise in the turnover per employee; it was EUR 128,000 during 2015, compared with EUR 122,000 the previous year. The balance per employee was EUR 87,000, which is a minor decrease from EUR 94,000 per employee in 2014.

It should, however, be pointed out that the basic input data is not entirely complete. For certain companies, there are no reliable figures available on either turnover or profit. The calculations have been made on the basis of figures from companies that do have reliable figures.

Development during 2016 and 2017

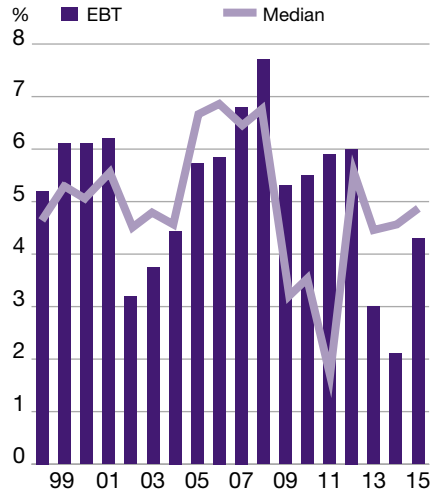
In surveys conducted by EFCA (the European Federation of Consulting Engineering Associations) among these sector firms, the impression has been given during the course of the year of a sector that is in the process of recovery.

In the latest survey (conducted in October and published in December 2016) for the EFCA Barometer Report, the signals were clearly positive and optimistic. Taking part in the investigation were the sector organisations in Sweden, Norway, Finland, Denmark, Ireland, Germany, Belgium, The Netherlands, Luxemburg, Switzerland, France, Italy, Rumania, Greece, Turkey, Slovenia, the Czech Republic, Portugal and Spain.

Turnover had increased over the past six-month period throughout the whole of Central Europe and in the Nordic countries, minus Norway. In Norway, Switzerland, Ireland, Slovenia and on the Iberian Peninsula turnover remained unchanged. Negative development was reported from Italy, Greece and Rumania. On the other hand, the expectations were positive or neutral among all 19 participating sector organisations. Positive development is expected in Sweden, Finland, Ireland, The Netherlands, Belgium, Germany, the Czech Republic and Rumania. The situation was similar for expectations concerning incoming orders. Nine out of 19 countries anticipated an increase. The others believed the situation would remain unchanged. The order situation has improved during the year in all countries except Greece and Rumania. There is a shortage of competence in many parts of Europe. The labour force has grown in Central Europe and in the Nordic area (minus Norway) and Ireland during the year. The same countries express matters by saying that there is a need for recruitment over the coming six-month period. None of the countries' sector organisations feel it will be necessary to lay off personnel during the course of the year.

On the question of what the three greatest challenges are for the sector in each respective country, four out of five (79%) countries stated low hourly salary rates and two out of three (63%) said the shortage of competence. These two are by far the greatest challenges. Further down on the list come investments (37%). This is followed by the effect of BIM, late payments, competition from contractors and political instability – all with a 21% response frequency. It is clear what the two greatest challenges are for the sector in various parts of Europe. There is a shortage of available competence at the same time as price trends are weak. They are

Profit margins: European top 200



The world's top 10

2016	2015	Group	Country	Annual report	Average number of employees	(Previous Year)	Turnover (MUSD)
1	1	AECOM	USA	15	87000	92000	17410,8
2	2	Jacobs Engineering	USA	15	43800	49900	10964,2
3	3	SNC-Lavalin Group	Canada	15	36754	42000	7381,4
4	4	WSP Group	Canada	15	34000	31700	4746,7
5	6	Arcadis Group	Netherlands	15	26947	28139	3792,7
6	8	Altran Technologies	France	15	25935	22709	2157,5
7	5	Worley Parsons Engineering Ltd	Australia	15/16	24500	31400	5843,4
8	7	CH2M Hill Companies, Inc.	USA	15	24000	25000	5361,5
9	9	Alten Group	France	15	20400	18400	1709,2
10	10	WS Atkins plc	England	15/16	18052	17340	2846,7

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 16-11-25 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	**86,7**	151231	81,7	271,9	2936	92,6	0,4	0,1	0,1%	27,8	219,43	0,30
ÅF AB	SE	**1336,3**	151231	1193,1	1047,3	7852	133,4	64,7	8,2	6,2%	151,9	18,43	1,14
SWECO AB	SE	**2342,1**	151231	1598,0	1210,9	10188	118,9	46,7	4,6	3,9%	156,9	34,24	1,32
Rejler group	SE	**107,2**	151231	151,1	199,1	2082	95,6	5,4	2,6	2,7%	72,6	27,76	0,76
Eurocon Consulting AB	SE	**23,1**	151231	21,8	21,1	193	109,5	1,4	7,1	6,4%	113,1	16,03	1,03
Hifab Group AB	SE	**18,9**	151231	14,5	47,2	390	121,1	–7,0	–17,8	–14,7%	37,2	-2,08	0,31
HiQ	SE	**350,4**	151231	295,4	160,3	1415	113,3	15,1	10,7	9,4%	208,7	19,53	1,84
Pöyry Group Oy	FIN	**184,1**	151231	225,9	575,3	5752	100,0	5,5	1,0	1,0%	39,3	41,07	0,39
Etteplan OY	FIN	**134,3**	151231	121,4	141,1	2074	68,1	6,1	3,0	4,3%	58,5	19,83	0,86
Multiconsult AS	NOR	**295,2**	151231	272,7	273,6	2110	129,7	16,1	7,6	5,9%	129,3	16,96	1,00
WS Atkins plc	UK	**1733,5**	160331	1643,5	2295,8	18052	127,2	127,2	7,0	5,5%	91,0	12,92	0,72
Waterman Group	UK	**30,8**	160630	27,7	112,6	1296	86,9	2,9	2,2	2,6%	21,4	9,60	0,25
WYG PLC	UK	**89,8**	160331	113,4	163,8	1596	102,6	3,5	2,2	2,1%	71,1	32,50	0,69
RPS Group	UK	**506,9**	151231	652,0	699,1	4530	154,3	8,4	1,9	1,2%	143,9	77,31	0,93
Aukett Swanke Group plc	UK	**6,6**	150930	12,5	23,0	244	94,3	2,0	8,3	8,8%	51,2	6,14	0,54
Ricardo plc	UK	**581,3**	160630	481,6	409,9	2725	150,4	31,6	11,6	7,7%	176,7	15,26	1,18
Arcadis	NL	**910,5**	151231	1547,0	3419,3	26974	126,8	98,7	3,7	2,9%	57,4	15,67	0,45
Fugro	NL	**1315,3**	151231	1219,0	2363,0	11960	197,6	-372,5	-31,1	-15,8%	101,9	-3,27	0,52
Bertrandt AG	D	**970,4**	150930	967,2	934,8	12367	75,6	62,6	5,1	6,7%	78,2	15,45	1,03
Alten Group	FR	**2182,6**	151231	1777,3	1540,9	20400	75,5	106,3	5,2	6,9%	87,1	16,73	1,15
Altran Technologies	FR	**2105,2**	151231	2146,7	1945,1	25935	75,0	100,5	3,9	5,2%	82,8	21,36	1,10
Assystem S.A.	FR	**559,1**	151231	516,9	907,7	11553	78,6	19,5	1,7	2,1%	44,7	26,51	0,57
S II A.A.	FR	**310,5**	160331	185,4	360,1	5793	62,2	13,2	2,3	3,7%	32,0	14,08	0,51
Sogeclair S.A.	FR	**66,4**	151231	49,8	127,8	1354	94,4	2,2	1,6	1,7%	36,8	22,42	0,39
AKKA Technologies S.A.	FR	**642,9**	151231	584,9	1001,7	12222	82,0	26,2	2,1	2,6%	47,9	22,30	0,58
Soditech Ingénerie S.A.	FR	**1,4**	151231	1,5	4,4	74	59,7	0,2	2,4	4,1%	20,8	8,54	0,35
INYPSA	ES	**25,2**	151231	26,6	16,3	131	124,6	–7,7	-58,5	–46,9%	203,4	–3,48	1,63
Ansaldo STS	IT	**2090,0**	151231	1974,0	1383,8	3772	366,9	93,2	24,7	6,7%	523,3	21,17	1,43
Ansaldo STS	IT	**18290**	141231	15610	12213,8	3799	3215	755,6	198,9	6,2%	4109,0	20,66	1,28
Average Europe							**110**		**2,4**	**2,2%**	**97,0**		**0,82**
Tetra Tech, inc.	US	**2259,4**	160930	1815,2	2317,8	13000	178,3	75,2	5,8	3,2%	139,6	2,86	0,78
TRC Companies, Inc.	US	**276,1**	160630	176,2	417,3	4800	86,9	0,0	0,0	0,0%	36,7	582,01	0,42
Hill International, Inc	US	**192,1**	151231	179,6	646,5	4759	135,8	6,2	1,3	1,0%	37,7	3,42	0,28
AECOM Technologies, Inc.	US	**5201,2**	160930	4104,9	15620,3	87000	179,5	86,2	1,0	0,6%	47,2	5,64	0,26
SNC-Lavalin, Inc.	CAN	**5761,7**	151231	4182,2	6403,6	36754	174,2	274,6	7,5	4,3%	113,8	2,38	0,65
Stantec, Inc.	CAN	**2124,6**	151231	2047,6	1953,9	15200	128,5	106,2	7,0	5,4%	134,7	3,02	1,05
WSP Global	CAN	**3221,2**	151231	2865,3	4117,9	34000	121,1	128,2	3,8	3,1%	84,3	22,35	0,70
WSP Global	CAN	**30297**	151231	26950	38732,0	34000	1139	1205,9	35,5	3,1%	792,6	22,35	0,70
Average North America							**161**		**3,5**	**2,1%**	**97,4**		**0,59**
Cardno Ltd	AU	**303,6**	160630	175,8	798,9	20000	39,9	-99,0	–5,0	–12,4%	8,8	-0,28	0,22

The currencies used to calculate the figures in the table above represent the average exchange-rates of the period Jan–Oct 2016, as below:

1 NOK = 1,0075 SEK 1 CAD = 6,3872 SEK 1 USD = 8,4039 SEK
1 AUD = 6,2801 SEK 1 EUR = 9,4057 SEK 1 GBP = 12,8787 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 TURNOVER PER EMPLOYEE WAS EUR 128,000.

2016	2015	Group	Country	Annual Report	Average number of employees	(Previous year)	Turnover MEUR
1	1	AEDAS Architects Group *	England	15/16	1450	1400	
2	2	Foster & Partners Ltd	England	15/16	1284	1113	282,9
3	3	BDP Building Design Partnership	England	15	851	758	114,5
4	4	Rambøll Architects & Urban Planning *	Denmark	15	835	730	
5	14	SWECO Architects (with 2 acquisitions in Germany) *	Sweden	15	700	455	83,4
6	7	White Architects	Sweden	15	632	583	88,1
7	5	AIA – Architectes Ingénieurs Associés *	France	15	600	610	
8	9	ATP Architects Engineers	Austria	15	600	550	73,0
9	6	Atkins Architects *	England		597	597	
10	11	Tengbom group	Sweden	15	558	522	56,3
11	10	Broadway Malyan Ltd	England	14/15	530	525	68,8
12	12	Gmp Architekten von Gerkan, Marg und Partner	Germany	15	515	500	
13	37	AXCT-IDOM *	Spain	16	512	466	54,0
14	8	Benoy Architects Ltd	England	15	508	561	72,8
15		EMAY International Engineering & Consultancy Inc.	Turkey	15	500	500	
16	24	Arkitema K/S	Denmark	15	450	288	44,2
17	13	Herzog & de Meuron Architekten AG *	Switzerland	15	420	460	
18	15	Zaha Hadid Architects	England	14/15	402	390	68,5
19	16	LINK Arkitektur AS (acquired by Multiconsult)	NOR	15	353	350	41,0
20	17	HENN Architekten	Germany	15	350	340	
21	18	Burckhardt+Partner AG Architekten Generalplaner	Switzerland	15	335	335	
22	19	Grimshaw Architects Llp	England	14/15	324	246	49,8
23	21	HPP Architects	Germany	15	322	314	28,0
24	22	UAB "Kelprojektas"	Lithuania	15	320	301	
25	20	C.F. Møller Architects	Denmark	15	309	320	40,8
26	39	INBO Architects/Consultants	Netherlands	15	308	210	
27	25	Barton Willmore Group	England	14/15	306	281	49,1
28	30	Sheppard Robson *	England	15	306	247	29,6
29	36	Chapman Taylor LLP	England	14/15	301	218	42,9
30	23	Allies and Morrison Architects Ltd *	England	15	300	300	
31	28	Stride Treglown Group PLC	England	15	287	257	31,6
32	32	Henning Larsen Architects	Denmark	15/16	281	270	37,8
33	26	RKW Architekten & Co, KG *	Germany	14	280	350	38,9
34	62	BIG / Bjarke Ingels Group *	Denmark	15	280	122	33,5
35	27	Heinle, Wischer und Partner *	Germany	15	270	260	39,5
36	43	IBI Group Europe *	England	15	260	184	28,4
37	29	O.M.A. Office for Metropolitan Architecture *	Netherlands	14	247	247	47,4
38	35	Aukett Swanke Group plc	England	14/15	244	218	25,7
39	42	Purcell Miller Tritton	England	14/15	241	192	23,0
40		Projektengagemang Arkitektur (acquired Temagroup)	Sweden	15	228	42	26,9
41	33	Arup associates, architects *	England		226	226	
42	38	Wilmotte & Associés *	France	15	225	213	
43	34	Valode & Pistre *	France	14	220	200	
44	46	Scott Brownrigg Architects	England	14/15	217	168	26,2
45	31	PRP Architects Ltd	England	15	216	239	25,9
46		Transprojekt Gdanski	Poland	15	206	191,0	8,3
47	41	Rogers Stirk Harbour & Partners	England	14/15	200	193	41,6
48	51	Dopravoprojekt, a.s.	Slovakia	14	192	240	17,8
49	40	HLM Architects	England	15	190	200	
50	44	Wilkinson Eyre Architects Ltd	England	15/16	181	179	27,7

two parameters that influence profitability, from different directions. The lack of competence is driving up the salaries while low prices are forcing down profits. So, profitability development is in the centre. Even though profitability improved during 2015, and according to all signals will continue to improve in 2016, it remains under pressure. Succeeding in improving the level of profitability is a challenge for the entire sector – throughout the continent.

You can read more about developments in Europe in the EFCA Barometer, at efcanet.org or at std.se.

Europe's largest groups

This year, the chart over the largest European groups has been reduced in size to 200 instead of the 300 largest as previously. This is above all because we have received less input data from countries in Europe this year compared with previous years. At the same time it helps to save space in the report. The monitoring is applied to corporate groups the principal operations of which are in the technical consultancy and architectural segments.

The first six positions remain unchanged. Arcadis is the largest group, measured in terms of number of employees. Next come the French groups Altran and Alten, ahead of the UK groups Atkins and Mott MacDonald. In sixth place comes Sweco, which is the largest Nordic group on the chart. The second largest Nordic group is Ramböll in ninth place, followed by ÅF in 16th and Cowi in 23rd place.

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THE EUROPEAN TOP 200 CONSULTING ENGINEERING AND ARCHITECTURAL GROUPS

2016	2015	Group	Services	Country	Annual report	Average number of employees	(Previous year)	Turnover MEUR	CEO/Managing director
1	1	Arcadis Group	MD	Netherlands	15	26 947	28 139	3419,3	Neil McArthur
2	2	Altran Technologies	I	France	15	25 935	22 709	1945,1	Dominique Cerutti
3	3	Alten Group	I	France	15	20 400	18 400	1540,9	Simon Azoulay
4	4	WS Atkins plc	MD	England	15/16	18 052	17 340	2566,4	Uwe Kreuger
5	5	Mott MacDonald Group	MD	England	15	15 531	14 664	1931,7	Keith Howells
6	6	Sweco (acquired Petro Team, Ludes & Franzkes architects) *	MD	Sweden	15	14 697	14 545	1725,9	Tomas Carlsson
7	8	ARUP Group	MD	England	15/16	12 806	12 143	2165,6	Gregory Hodkinson (Chairman)
8	10	Bertrandt AG	I	Germany	14/15	12 367	11 561	934,8	Dietmar Bichler
9	13	Rambøll Gruppen A/S	MD	Denmark	15	12 269	10 256	1419,7	Jens-Peter Saul
10	12	AKKA Technologies S.A	I	France	15	12 222	10 605	1001,7	Maurice Ricci
11	7	Fugro N.V	CE	Netherlands	15	11 960	13 537	2363,0	Paul van Riel
12	11	Assystem Group S.A	MD	France	15	11 553	10 792	907,7	Dominique Louis
13	15	WSP Europe	MD	England	15	10 100	8 900	1534,2	Magnus Meyer (Nordics), Mark Naysmith (UK)
14	16	Jacobs Engineering Europe (incl SKM) *	Env,Enr	England	14	8 600	8 600	2565,2	Mark Bello
15	20	Segula Technologies Engineering Group *	I	France	15	8 500	7 000		Franck Ghrenassia
16	17	ÅF (several acquisitions in 2016, incl. Reinertsen) *	I,E,M,Enr	Sweden	15	8 423	7 428	1163,5	Jonas Wiström
17	9	Egis Group	MD	France	15	8 300	12 000	937,0	Nicholas Jachiet
18	18	EDAG Group	I	Germany	15	7 870	7 268	722,1	Jörg Ohlsen
19	19	M+W Group GmbH *	CE/PM	Germany	14	7 050	7 050	2500,0	Herbert Demel
20	25	Formel D GmbH *	I	Germany	15	7 000	6 000	212,0	Holger Jené, Jürgen Laakmann and Claus Niedworok
21	21	Royal HaskoningDHV	MD	Netherlands	15	6 650	6 850	667,0	Erik Oostwegel
22	22	IAV Group	I	Germany	15	6 500	6 500		Kurt Blumenröder
23	24	COWI Group (acquired Bascon)	MD	Denmark	15	6 433	6 180	764,4	Lars-Peter Søbye
24	30	S II S.A	I	France	15/16	5 793	4 854	360,1	Bernard Huvé
25	27	Pöyry Group	MD	Finland	15	5 752	5 170	575,3	Martin À Porta
26	26	Sener Group *	MD	Spain	14	5 541	5 570	1304,7	Jorge Sendagorta Gomendlo
27	29	SYSTRA Group *	MD	France	15	5 400	5 000	623,0	Pierre Verzat
28	28	AECOM Europe *	MD	England	14	5 100	5 500	1047,6	Richard Robinson
29	32	RPS Group plc	Env	England	15	4 530	4 530	781,5	Alan S. Hearne
30	85	Tractebel Engineering	MD	Belgium	15	4 400	1 098	605,0	Daniel Develay
31	33	TPF Group	MD	Belgium	15	4 250	4 250	241,6	Thomas Spitaels
32		Costain Group	I	England	15	4 166		1741,7	Andrew Wyllie
33	42	Sogeti High Tech *	I	France	15	4 145	2 625		Jean-Pierre Petit
34	35	Turner & Townsend Group	PM,QS	England	15/16	4 034	3 723	521,3	Vincent Clancy
35	36	Ansaldo STS	I	Italy	15	3 772	3 799	1383,8	Andrew Barr
36	38	AYESA	MD	Spain	15	3 657	3 347	232,2	José Luis Manzanares Japón
37	31	Tebodin, Consultants & Engineers *	MD	Netherlands	15	3 600	4 800		Pieter Koolen
38	37	Artelia	PM	France	15	3 500	3 350	405,0	Benoît Clocheret

PM = Project Management, A = Architecture, CE = Civil-/S = Structural Engineering, CT = Certification and testing, Env = Environment, Enr = Energy, E = Electrical, M = Mechanical/HEVAC, I = Industrial, MD = Multi Disciplinary – (*) = lack of conforming figure/proforma/assumed

THE EUROPEAN TOP 200 CONSULTING ENGINEERING AND ARCHITECTURAL GROUPS

2016	2015	Group	Services	Country	Annual report	Average number of employees	(Previous year)	Turnover MEUR	CEO/Managing director
39	14	Antea Group	MD	Netherlands	15	3 377	3 533	363,0	Menno Smits & Rob van Dongen
40	41	Capita Property & Infrastructure LTD	MD	England	15	3 018	2 854	406,7	Richard Marchant
41	45	Norconsult AS	MD	Norway	15	3 000	2 472	444,8	Per Kristian Jacobsen
42	43	Ineco, Ingeniería y Economía del Transporte SA *	CE	Spain	14	2 850	2 531	290,0	Jesús Silva
43	39	CH2M Group Europe (former Halcrow) *	MD	England	15	2 800	3 202	634,1	Mark Thurston
44	40	Semcon AB	I	Sweden	15	2 795	2 887	273,4	Markus Granlund
45	50	Ricardo plc	I	England	15/16	2 725	2 125	458,2	Dave Shemmans
46	46	IDOM Group	MD	Spain	15	2 695	2 457	233,3	Luis Rodriguez
47	48	TYPSA Group	MD	Spain	15	2 502	2 310	235,2	Pablo Bueno Tomás (CEO)
48	49	Iberdrola Ingenieria Y Construccion	CE,Env,PM	Spain	15	2 350	2 283	255,0	Tomás Muruzábal
49	51	PM Group (Project Management Group) *	PM, MD	Ireland	15	2 200	2 100		David Murphy
50	54	Drees & Sommer-Gruppe *	PM	Germany	15	2 150	2 000	300,7	Hans Sommer (chairman)
51	57	Multiconsult-group (acquired Link Arkitektur)	MD	Norway	15	2 110	1 827	285,8	Christian Nørgaard Madsen
52	44	SNC-Lavalin Europe SA *	MD	France	15	2 100	2 500	332,7	Christian Jacqui
53	56	Etteplan Oy	I	Finland	15	2 074	1 859	141,1	Juha Näkki
54	34	Mace Group (consultancy)	PM	England	15	2 062		344,6	Mark Reynolds
55	52	EPTISA	MD	Spain	15	2 000	2 000	110,0	Luis Villarroya Alonso
56	55	ILF Consulting Engineers	MD	Germany/ Austria	15	1 975	1 923	225,0	Klaus Lässer
57	61	Rejler Group	E,I	Sweden	15	1 793	1 690	200,5	Peter Rejler
58	68	Gleeds *	PM	England	15	1 723	1 664	135,5	Richard Steer
59	60	Ingérop S.A (acquired Rendel)	MD	France	15	1 700	1 700	199,0	Yves Metz
60	67	RLE International Gruppe GmbH	I, PM	Germany	15	1 700	1 500	113,0	Ralf Laufenberg
61	59	MWH Europe	MD, Env	England	15/16	1 643	1 723	268,5	Catherine Schefer
62	69	WYG	MD	England	15/16	1 596	1 481	183,1	Paul Hamer
63	58	Fichtner Group	Enr, MD	Germany	15	1 578	1 749	285,0	Georg Fichtner
64	66	Inspecta Oy	I	Finland	14	1 506	1 500	176,0	Kari Aulasmaa
65	250	Proger SpA	MD	Italy	15	1 500	176	130,0	Umberto Sgambati
66	71	AEDAS Architects Group *	A	England	15/16	1 450	1 400		Malcolm Ellis
67	70	NIRAS Group A/S	MD	Denmark	15	1 404	1 405	176,6	Carsten Toft Boesen
68	76	Tyréns AB (acquired Pyramiden & AQ architects and Lindqvist Byggkonsult) *	CE,PM	Sweden	15	1 372	1 250	174,8	Ulrika Francke
69	73	Combitech AB	I	Sweden	15	1 355	1 332	171,3	Hans Torin
70	79	Sogeclair SA	I	France	15	1 354	1 178	127,8	Phillippe Robardey
71	198	Yuksel Proje Uluslararasi AS *	CE	Turkey	15	1 350	250		Celal Akin (ordf)
72	72	Safege Consulting Engineers	Env,S,CE	France	15	1 300	1 400	106,0	Loïc Voisin
73	78	Obermeyer Planen+Beraten GmbH *	MD	Germany	15	1 300	1 200	110,0	Maximilian Grauvogl
74	81	Foster & Partners Ltd	A	England	15/16	1 284	1 113	282,9	Norman Foster & Matthew Streets
75	77	HIQ International AB	I	Sweden	15	1 270	1 237	161,2	Lars Stugemo
76	75	Waterman Group plc	MD	England	15/16	1 253	1 259	125,9	Nick Taylor

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2016	2015	Group	Services	Country	Annual report	Average number of employees	(Previous year)	Turnover MEUR	CEO/Managing director
77	111	Italconsult S.p.A *	PM	Italy	15	1 200	600		Antonio Bevilacqua
78	64	Sweett Group PLC	PM	England	15/16	1 176	1 523	81,8	Douglas McCormick
79	86	SLR Group (SLR Management)	Env	England	14/15	1 151	1 066	149,9	Neil Penhall
80	83	Movares Group BV	CE,E	Netherlands	15	1 140	1 109	133,0	Sander Eijgenraam
81	87	RSK Group	Env	England	15/16	1 125	1 015	125,2	Alan Ryder
82	94	Müller-BBM Holding GmbH	MD	Germany	15	1 065	860	112,9	Bittner, Grotz, Hantschk, Ropertz, Schierer & Schröder
83	89	Gruner Ltd. (Gruner-Gruppe AG) *	MD	Schweiz	15	1 035	1 057	141,6	Flavio Casanova
84	93	Asplan Viak group	MD	Norway	15	985	891	120,9	Øyvind Mork
85	92	Witteveen+Bos Consulting Engineers	MD	Netherlands	15	973	899	129,6	Karin Sluis, Henk Nieboer
86	381	MCA Groupe *	I	France	15	950		72,0	Pierre Ebenstein
87	88	Tauw Group bv	MD	Netherlands	15	923	920	102,4	Annemieke Nijhof
88	96	FERCHAU Aviation *	I	Germany	15	900	800	70,0	Harald Felten
89	368	ABMI-groupe S.A *	I	France	15	900		100,0	Philippe Chatron
90	102	Neste Jacobs Group	I	Finland	15	855	705	143,6	Jarmo Suominen
91	98	BDP Building Design Partnership	MD,A	England	15	851	758	114,5	John McManus
92	157	AREP Groupe	MD	France	15	850	376	94,0	Thierry Chantriaux
93	65	Polymont Group *	I	France	15	800	1 500	53,0	Eric Dermont
94	97	Prointec S.A *	MD	Spain	15	800	800	58,0	Jordi Dagá Sancho
95	100	Amstein + Walthert AG *	E,M	Schweiz	15	800	750		Christian Appert
96	91	IV-Groep b.v. *	MD	Netherlands	15	793	915	134,0	Rob van de Waal
97	140	Projektengagemang AB (acquired Temagroup, Aug-16) *	PM	Sweden	15	735	473	93,3	Per-Arne Gustavsson
98	125	Sigma Technology, Industry, IT Connectivity & Civil (acquired Aker Solutions)*	I	Sweden	15	734	519	73,1	Edlund, Persson, Wickström, Malmros, Freese et al
99	103	D'Appolonia S.p.A *	MD	Italy	15	700	700		Roberto Carpaneto
100	121	Cundall Johnston & Partners *	CE,S,Env	England	15	700	530		Tomás Neeson
101	139	CSD Group	Env, PM, CE, S, E	Schweiz	15	700	550	77,8	Jean-Pascal Gendre
102	105	Alectia Group	MD	Denmark	15	675	657	90,2	Jesper Mailind
103	101	GETINSA-PAYMA S.A	CE, Env, PM	Spain	15	668	714	44,8	Pedro D. Gómez González
104	104	ÚJV Řez, a. s.	Enr,I	Czech Republ.	15	665	682	44,0	Karel Křížek
105	106	Benteler Engineering *	I	Germany	15	650	650		
106	114	White Architects AB	A,PM, Env	Sweden	15	632	583	88,1	Monica von Schmalensee
107	117	Emch + Berger Gruppe *	MD	Schweiz	15	610	560	85,3	Urs Schneider
108	135	Peter Brett Associates	MD	England	14/15	603	486	77,9	Paul Reilly
109	107	AIA – Architectes Ingénieurs Associés *	CE,A	France	15	600	610		Christian Bougeard
110	108	Gauff Gruppe *	MD	Germany	15	600	600	73,0	Gerhard H. Gauff
111	109	Acciona Ingenieria Sa *	I	Spain	15	600	600		Pedro Martínez
112	110	Basler & Hofmann AG *	MD	Schweiz	15	600	600		Dominik Courtin
113	120	ATP Architects Engineers	A,CE,E,M	Austria	15	600	550	73,0	Christoph M. Achammer
114	115	BG Bonnard & Gardel Groupe SA (BG Consulting Engineers)	MD	Schweiz	15	598	566	84,2	Pierre Kohler (CEO)

THE EUROPEAN TOP 200 CONSULTING ENGINEERING AND ARCHITECTURAL GROUPS

2016	2015	Group	Services	Country	Annual report	Average number of employees	(Previous year)	Turnover MEUR	CEO/Managing director
115	127	INROS LACKNER	MD	Germany	15	593	502	48,0	Uwe Lemcke
116	113	Elomatic Group Oy	I,MD	Finland	15	587	583	48,1	Patrik Rautaheimo
117	123	Granlund Oy	E,M	Finland	15	577	523	54,7	Pekka Metsi
118	118	Deerns Consulting Engineers BV	E, M, PM, I	Netherlands	15	569	560	75,0	Jan Karel Mak
119	112	GHESA Ingeniería y Tecnología	CE,Env,Enr	Spain	15	563	600	76,4	Javier Perea
120	119	PCG-Profabril Consulplano Group	MD	Portugal	15	559	551	44,2	Ilidio de Ayala Serôdio
121	124	Tengbomgruppen	A	Sweden	15	558	522	56,4	Johanna Frelin
122	122	Broadway Malyan Ltd	A	England	14/15	530	525	68,8	Gary Whittle
123	129	Gmp Architekten von Gerkan, Marg und Partner *	A	Germany	15	515	500		Meinhard von Gerkan, Volkwin Marg
124	136	CDM Smith Europe GmbH *	CE, Env	Germany	15	513	485	49,6	Hans Martin Gaus (chairman)
125	126	HPC AG	Env,PM,CE	Germany	15	512	505	61,0	Josef Klein-Reesink, Andreas Kopton
126	132	Ingenieurbüro Dipl.- Ing. H. Vössing GmbH	MD	Germany	15	512	497	44,0	Rudolf Vienenkötter, Heiko Borchardt
127	116	Benoy Architects Ltd	A	England	15	508	561	72,8	Tom Cartledge
128	147	Krebs und Kiefer Beratende Ingenieure	CE,S, PM	Germany	15	507	435	45,2	Hans Gerd Lindlar
129	128	MOE A/S	MD	Denmark	15	506	502	57,3	Christian Listov-Saabye
130	130	Ernst Basler & Partner Ltd *	MD	Schweiz	15	500	500		Daniel Schläpfer
131	131	EMAY International Engineering & Consultancy Inc.	CE,A	Turkey	15	500	500		Mehmet Kaba
132	145	Fairhurst *	MD	Scotland	15	500	450		Robert McCracken
133	138	SITO Group Oy	CE, Env, PM	Finland	15	495	475	47,9	Tapio Puurunen
134	134	Orbicon A/S (acquired Henrik Larsen) *	MD	Denmark	15	486	492	65,7	Jesper Nybo Andersen
135	137	Hoare Lea & Partners *	E,M,Enr	England	15	482	482	82,6	Brian Clargo (Partner) mfl.
136	144	Wardell Armstrong LLP *	MD	England	15/16	480	452		Keith Mitchell
137	141	FCG Finnish Consulting Group	MD	Finland	15	477	464	54,7	Ari Kolehmainen
138	150	Knightec AB	I	Sweden	15/16	474	413	48,9	Dimitris Gioulekas
139	146	A-Insinöörit Group	S, CE, PM	Finland	15	466	437	51,3	Jyrki Keinänen
140	82	Citec Group	I, Env	Finland	15	456	1 110	51,7	Martin Strand
141	149	Pick Everard Ltd *	MD	England	15	450	425		Duncan Green
142	156	Clafis Engineering *	I	Netherlands	15	450	382		
143	181	Arkitema K/S	A,PM	Denmark	15	450	288	44,2	Peter Hartmann Berg
144	165	PBR Planungsbüro Rohling AG *	MD	Germany	15	435	343	47,9	Heinrich Eustrup
145	133	Assmann Beraten + Planen GmbH	MD	Germany	15	429	494	49,3	Peter Warnecke / Martin Fecke
146	142	Rapp Gruppe	MD	Schweiz	15	429	460	66,6	Bernhard Berger
147	143	Herzog & de Meuron Architekten AG *	A	Schweiz	15	420	460		Pierre de Meuron; Jacques Herzog
148	154	Zaha Hadid Architects	A	England	14/15	402	390	68,5	Zaha Hadid, Patrik Schumacher
149	151	Amberg Group *	CE,S,PM	Schweiz	15	400	400		Felix Amberg
150	152	Opus Joynes Pike (Opus International) *	CE,S,Env	England	15	391	400		David Prentice
151	160	Structor Group	CE,PM	Sweden	15	391	365	60,3	Fladvad, Hulthén, Texte

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2016	2015	Group	Services	Country	Annual report	Average number of employees	(Previous year)	Turnover MEUR	CEO/Managing director
152	148	Hifab Group AB	PM	Sweden	15	390	425	47,5	Patrik Schelin
153	158	Insta Automation Oy	I	Finland	15	378	372	26,5	Timo Lehtinen
154	155	Vahanen Oy	CE	Finland	15	375	389	26,5	Risto Vahanen
155	173	GPO Ingenieria, S.A.	MD	Spain	15	374	320	22,7	Xavier Montobbio
156	159	Steer Davies Gleave Ltd	CE	England	14/15	370	338	52,2	Hugh Jones
157	164	Bengt Dahlgren AB	M,Enr	Sweden	15	364	346	45,8	
158	180	DOLSAR Engineering Inc. Co.	PM,CE,Env,E,M,MD	Turkey	15	352	298	18,1	H. Îrfan Aker
159	161	Insinööritoimisto Comatec Group	I, Enr	Finland	15	350	353	24,2	Aulis Asikainen
160	162	Temelsu International Engineering Services Inc.*	MD	Turkey	15	350	350		Demir Inözü
161	163	Technital SpA	CE	Italy	14	350	350	44,3	Alberto Scotti
162	166	IPROconsult GmbH *	CE, Env, A	Germany	14/15	350	340		Lutz Junge
163	167	HENN Architekten *	A	Germany	15	350	340		Gunter Henn
164	169	JBA Group Limited	CE, Env	England	15	344	333	25,6	Marc Pinnell
165	168	Burckhardt+Partner AG *	A	Schweiz	15	335	335		Philipp Bruhlmeier
166	171	Verkís hf	MD	Iceland	15	329	321	32,4	Sveinn Ingi Ólafsson
167	170	Grimshaw Architects Llp	A	England	14/15	324	246	49,8	Jolyon Brewis
168	174	HPP Hentrich-Petschnigg & Partner	A	Germany	15	322	314	28,0	Joachim H. Faust
169	178	UAB "Kelprojektas" *	A	Lithuania	15	320	301		Algimantas Medziausis
170	175	ABT Holding BV	MD	Netherlands	14	313	358	35,8	Gerard Doos and Walter Spangenberg
171	177	BAC Engineering Consultancy Group *	MD	Spain	16	310	306	16,7	Joan Franco Poblet
172	172	Arkitektfirmaet C.F.Møller	A	Denmark	15	309	320	40,8	Klaus Toustrup
173	218	INBO Architects/Consultants *	A,PM	Netherlands	15	308	210		Aaron Bogers
174	183	Barton Willmore Group	A,PM	England	14/15	306	281	49,1	Stephen Toole
175	202	Sheppard Robson *	A	England	15	306	247	29,6	Andrew German
176	200	Curtins Group	CE,PM	England	15	303	249	32,0	Rob Melling
177	214	Chapman Taylor LLP	A	England	14/15	301	218	42,9	Chris Lanksbury
178	179	Allies & Morrison Architects Ltd *	A	England	15	300	300		Bob Allies
179	249	Aveco de Bondt BV *	CE	Netherlands	15	300	176		Gerrit Paalman
180	188	Wise Group Finland Oy (acquired Helimäki Akustikot)	CE	Finland	15	293	260	30,7	Aki Puuska
181	176	Mannvit hf.	MD	Iceland	15	290	309	36,0	Sigurhjörtur Sigfússon
182	189	Stride Treglown Group PLC	A	England	15	287	257	31,6	Kevin McDonald & David Hunter
183	370	Henning Larsen Architects	A	Denmark	15/16	281	270	37,8	Mette Kynne Frandsen
184	184	RKW Architekten & Co, KG *	A	Germany	14	280	350	38,9	Wojtek Grabianowski
185	185	Steinbacher-Consult GmbH *	CE, PM	Germany	15	280	280		Stefan Steinbacher
186	197	Iproplan Planungsges. Mbh *	MD	Germany	15	280	250		Jörg Thiele (President)
187	312	BIG / Bjarke Ingels Group	A	Denmark	15	280	122	33,5	Sheela Maini Søgaard
188	191	Bjerking AB	CE,M	Sweden	15	274	254	37,7	Anders Wärefors
189	199	Efla hf	MD	Iceland	15	273	249	34,9	Guðmundur Þorbjörnsson
190	203	Z-Dynamics (Infotiv & Combine Engineering)	I	Sweden	15	272	245	23,6	Alf Berntsson (Infotiv), Peter Karlsson (Combine)

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191	187	Heinle, Wischer und Partner	A,PM	Germany	15	270	260	39,5	T. Behnke, H. Chef-Hendriks, A. Gyalokay, T. Heinle, M. Kill, J. Krauße, C. Pelzeter, E.Schultz
192	194	HR Wallingford Group Ltd *	CE, Env,I	England	14/15	269	250	34,1	Dr Bruce Tomlinson
193	206	Planungsgruppe M+M AG , PGMM *	E,M,PM, Enr	Germany	15	265	240	27,5	Hermann Ott
194	182	WTM Engineers	MD	Germany	15	263	285	25,5	Karl Morgen
195	205	3ti Progetti	CE	Italy	15	262	242	24,9	Alfredo Ingletti
196	241	IBI Group Europe *	A	England	15	260	184	28,4	Paul Hewes
197	190	NET Engineering S.p.A	MD	Italy	14	256	271	25,3	Giovanni Battista Furlan
198	192	DRI upravljanje investicij (DRI Investment Management)	PM	Slovenia	14	254	254	16,9	Jurij Kač
199	193	Dps Engineering	MD	Ireland	14	253	253	69,4	Frank Keogh
200	201	O.M.A. Office for Metropolitan Architecture *	A	Netherlands	14	247	247	47,4	Rem Koolhas

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The architects at C.F.Møller that designed the Alvik tower were appointed Concrete-architects of the year in 2016.

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The Consulting Engineering and Architectural Groups A Swedish and International survey

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