



The State of the European Consulting Engineering Sector

BAROMETER autumn 2017



EFCA Barometer Task Group

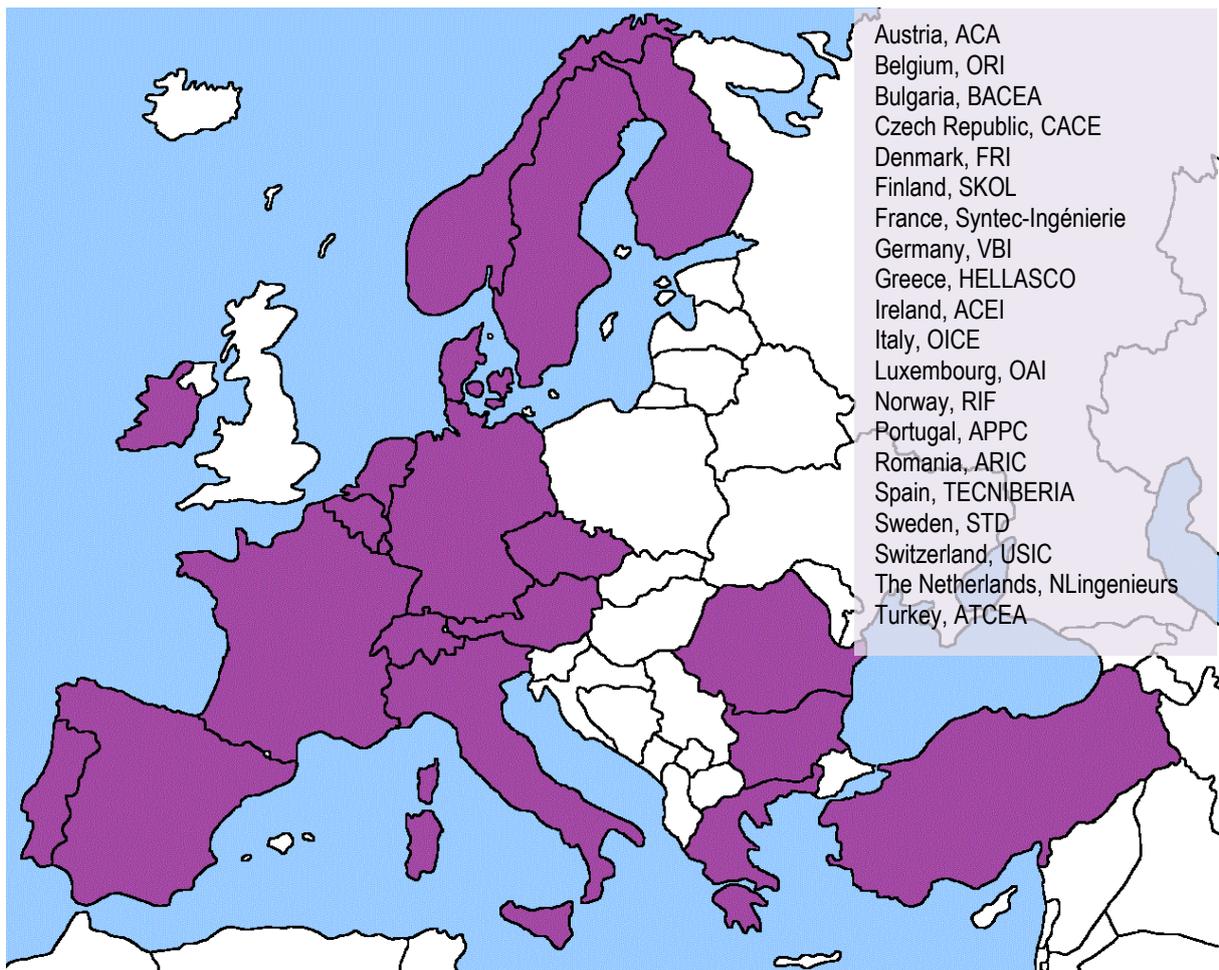
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The Barometer Task Group of the European Federation of engineering Consultancy Associations (EFCA) has been conducting biannual surveys since 2012 to provide an overview of the consulting engineering sector in Europe, detailing developments for the latest six months and expected trends for the coming six months.

The Task Group has produced this report and analysis based on best available information on the current state of business (October 2017) collected through a survey by the member associations of EFCA for their respective countries.

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Participating Associations, in this survey



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Executive summary

State of the European consulting engineering sector; autumn 2017

Market expectations are positive for the coming six months

The global size of the architecture and engineering market in Europe is around 350 billion, according to Eurostat (2015). The survey for this EFCA barometer was conducted in October and resulted in the participation of 20 countries. The signals collected show a consulting engineering sector with either stable or improving market conditions. Profitability is picking up and shortage of qualified staff are among the main challenges facing the industry.

The most significant trend emerging from the 2017 autumn barometer survey of the consulting engineering markets in Europe, is that we can identify a steady general improvement of the markets in the European countries. The northern European countries have had positive growth for several years, and are still growing at a steady level. The southern European countries are also experiencing continued growth, although from weaker market conditions.

In general, the sector is reflecting the growth of the European economies, particularly the level of investment in gross fixed capital formation. The GDP growth in the Eurozone countries is slightly lower than for other European countries. The market for engineering services is affected negatively by budget constraints of the governments across Europe, as the public sector has reduced its investments. However, despite retraction in the public market, the order stocks of many consulting engineering companies are still growing thanks to increasing demand in the private sector. The main challenges facing European consulting engineers are low fees and lack of qualified staff.

Moreover, political uncertainty is affecting the market, because some factors are not predictable such as the Brexit-related uncertainty, self-proclaimed Independence of Catalonia, the geopolitical tensions and security threats in Europe.

Market developments during 2017

Market signals are positive. Twelve out of the 20 countries have seen an increase in the average order stock of the consulting engineering companies.

As a result of growing order stocks, turnover is also increasing. Eleven out of 20 countries expect the total turnover of the consulting engineering industry in their country to increase. Profitability is improving. The average EBITDA-ratio in Europe was 5.1% in 2016. Profitability is expected to improve or remain stable in 2017 and 2018 in all countries except Greece (2017) and Belgium (2018). Finally, there is an expectation that numbers of staff will increase in eight out of 20 countries. In conclusion, activity in the consulting engineering industry in Europe is stable and improving. The market is good or very good in 12 out of 20 countries. Only Greece is expected to face continued difficulties.

EFCA Barometer Task Group, November 2017



Current state of European markets

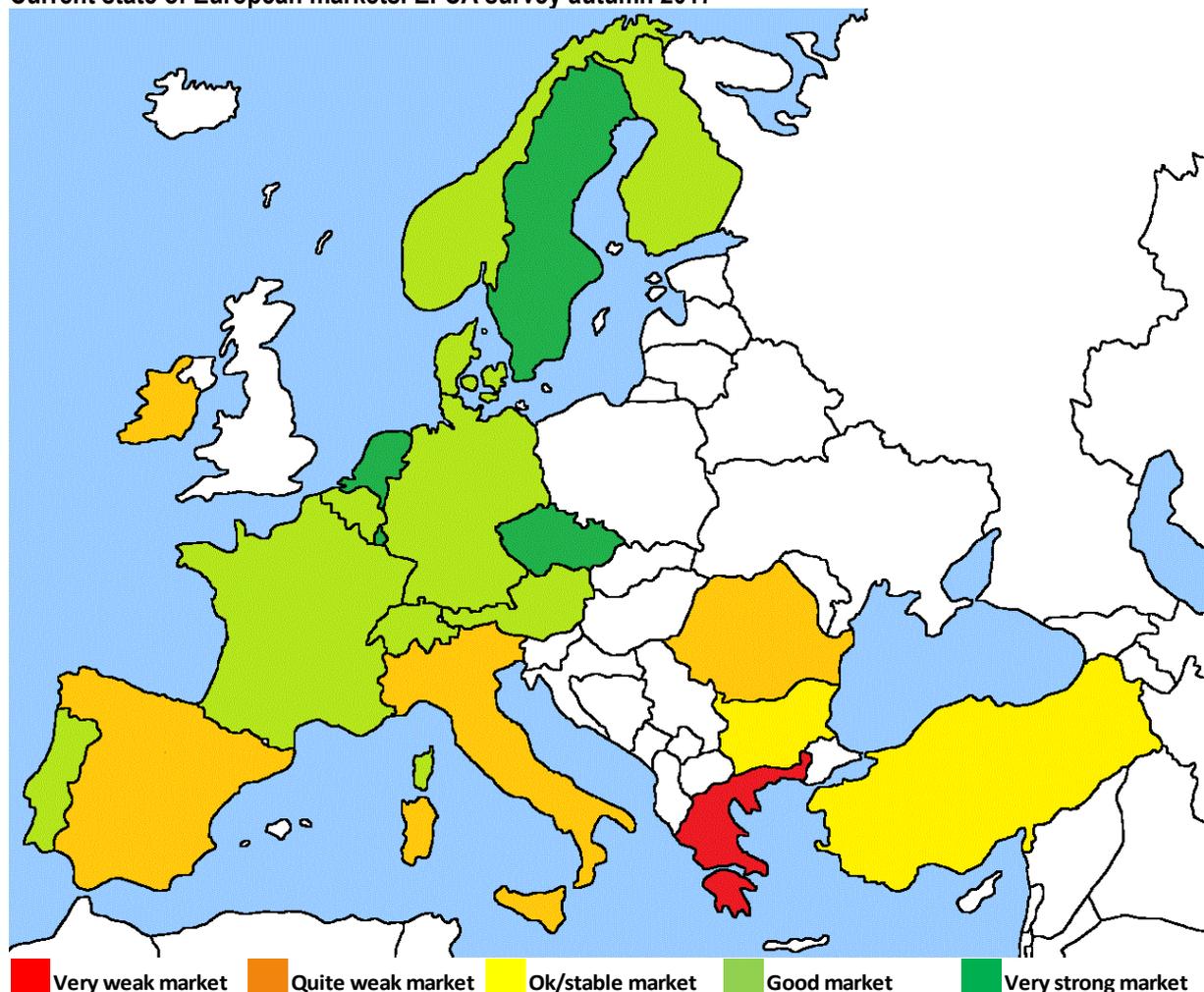
To give an overview of the state of different markets around Europe, Member Associations in each country were asked about the state of the national market. They were offered five options, with short definitions:

- Market is very weak. (Few projects & downsizing staff).
- Market is quite weak. (Difficult to keep everyone busy).
- Market is ok. (Could be stronger, but most staff are busy).
- Market is good. (All staff are busy).
- Market is very strong. (Rejecting projects and lacking staff).

The reply for each country is shown in the picture below where very weak is illustrated with dark red and very strong with dark green.

The picture of the current state of each market is giving a general impression of existing differences around Europe and is intended to gain a better understanding of the actual results brought on by changes in order stocks or turnover in a particular country. An expected increase of orders in one country does not automatically imply that the market situation is better compared to a country where order stocks are expected to decline or remain stable.

Current state of European markets. EFCA survey autumn 2017



As shown above, the market situation is stable or good in most countries. Countries with weak markets are Spain, Italy, Ireland, and Romania. Greece has still a very weak market.

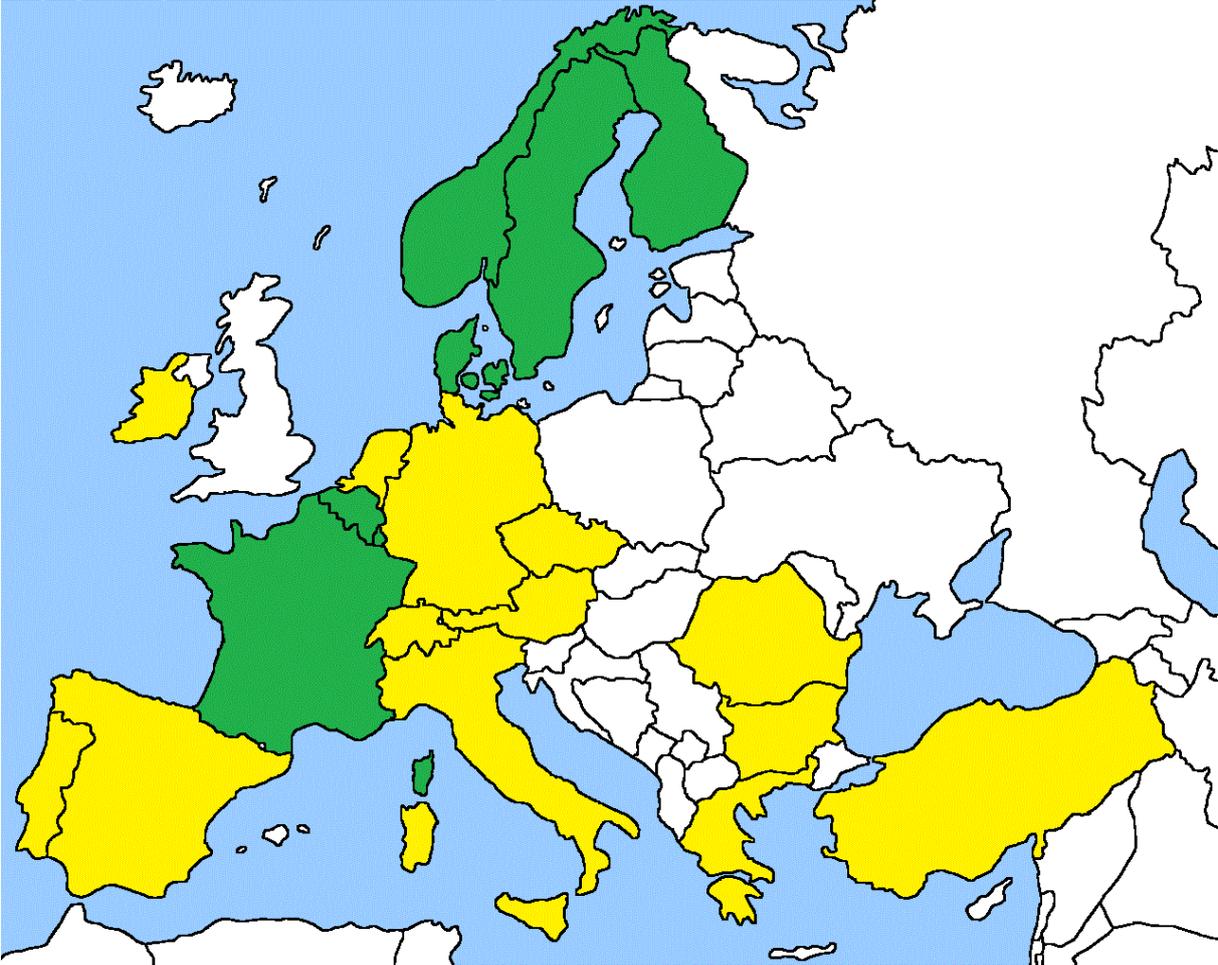
Employment

Actual developments in staffing

The trends in employment vary between the participating countries. Over the six months between spring 2017 and autumn 2017, staff (Full Time Equivalent, FTE¹) increased in 7 out of 20 countries (France, Luxembourg, Belgium, Denmark, Finland, Norway, and Sweden).

In thirteen countries (Austria, Italy, Ireland, Portugal, Spain, Bulgaria, Greece, Czech Republic, Germany, The Netherlands, Romania, Turkey and Switzerland) staff remained stable.

Employment, past six months. EFCA survey autumn 2017



Employment: increase ■ (green); stable ■ (yellow); decrease ■ (red).
Developments in employment for the consulting engineering sector – six-month trends 2017

¹ No. of staff/employees is defined as FTE, Full Time Equivalent, where the total number of hours worked by the staff in a company is divided by the equivalent of a full year's work load. Example: four half-time employees are counted as two employees.

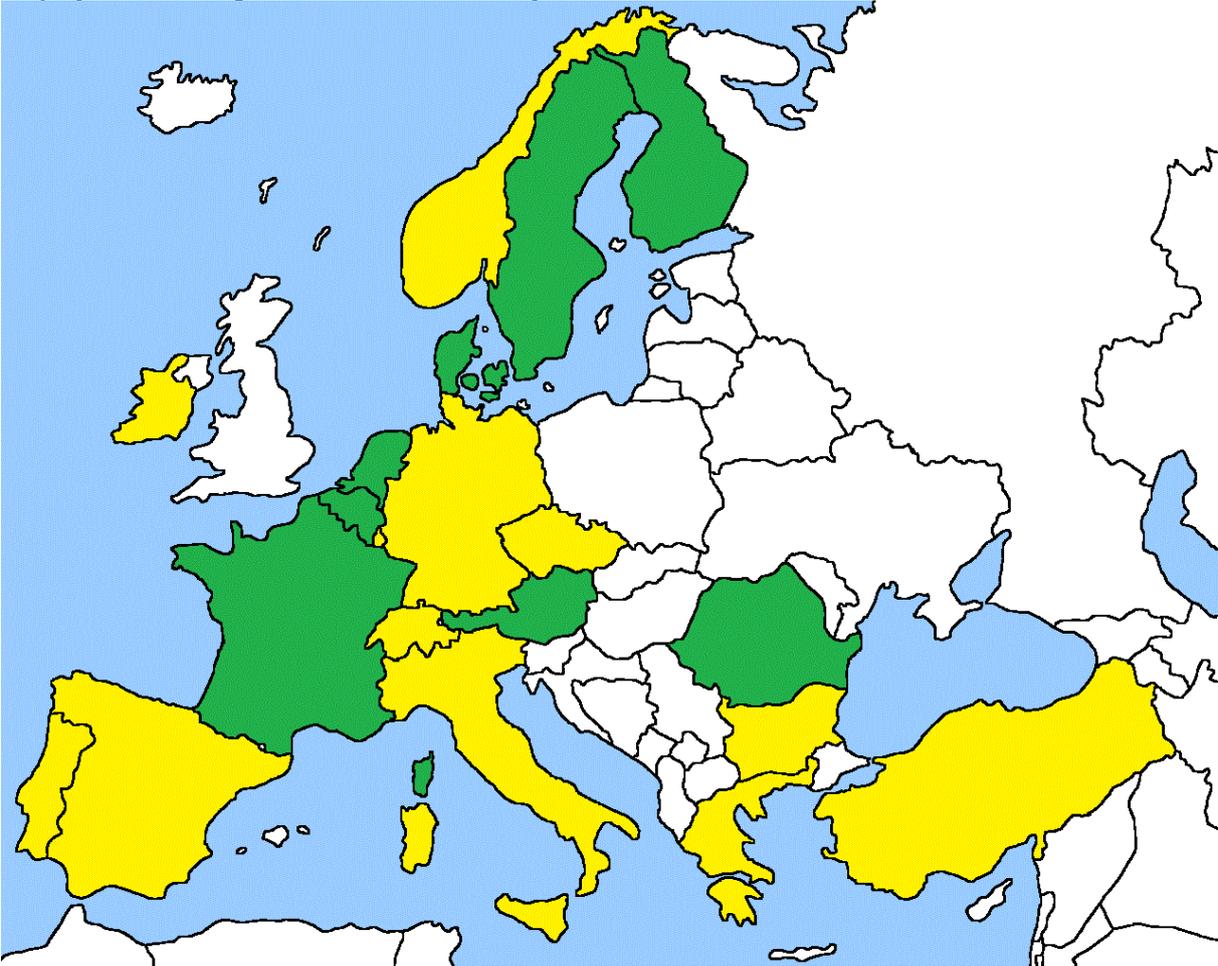
Expected developments in staffing

In autumn 2017, 8 out of 20 of the countries expected an increase in staff numbers in the coming six months while the other 12 out of 20 expected no changes in their staffing figures.

Increasing staff is expected in Austria, Belgium, France, Denmark, Finland, The Netherlands, Norway and Sweden.

Unchanged staff is expected in Germany, Bulgaria, Ireland, Czech Republic, Greece, Luxembourg, Italy, Portugal, Romania, Spain, Switzerland and Turkey. This is a good indicator for an industry in stabilisation or growth.

Employment, coming six months. EFCA survey, autumn 2017



Employment: increase ■ (green); stable ■ (yellow); decrease ■ (red).

Developments in employment for the consulting engineering sector – expectations for the coming six months

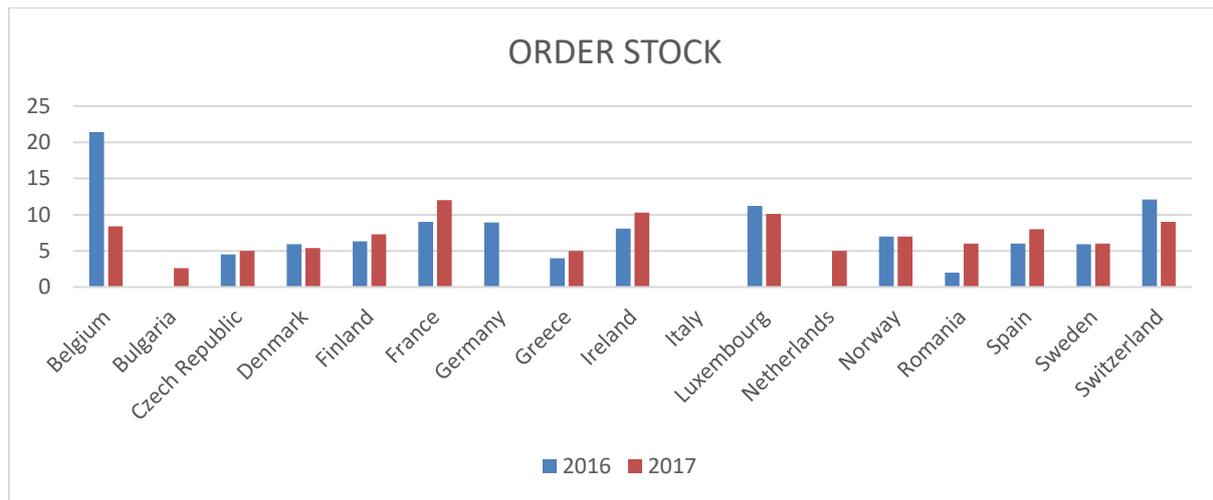
Order Stock

Average order stock²

In autumn 2017, the average amount of work consulting engineering companies in Europe had 'in stock' (order stock) was 6,7 months' worth.

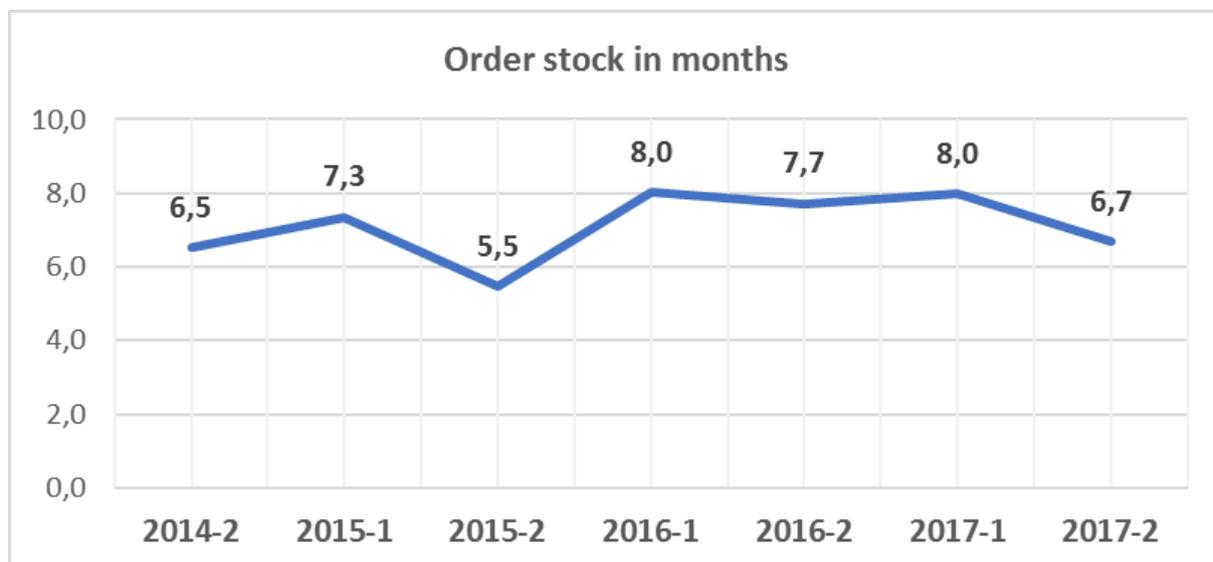
Data is not available for all countries or previous surveys, but over the past five years' there is a general trend towards growing order stocks for the European market overall.

Average order stock held by consulting engineering firms, 2016-2017 autumn survey– by country



Overall, average order stocks are stable in Europe in the past year. Only in Belgium, Luxembourg and Switzerland the average order stocks have diminished since autumn 2016.

Average order stock, European average 2014-2017



The data in the figure above shows the development of the order stock in months on a European level. A European average is here calculated by weighing the national averages by the respective market size (in

² The order stock in the survey is defined as 'the total work that a firm has agreed to do in the future'. Example: The order stock is €1 million and the firm has 20 employees. The average annual turnover/employee is €100,000 and the current order stock/employee is €1 million/20 = €50,000/employee. The current order stock therefore represents €50,000/100,000 = 0.5 * 1 year = 6 months' work for the firm.

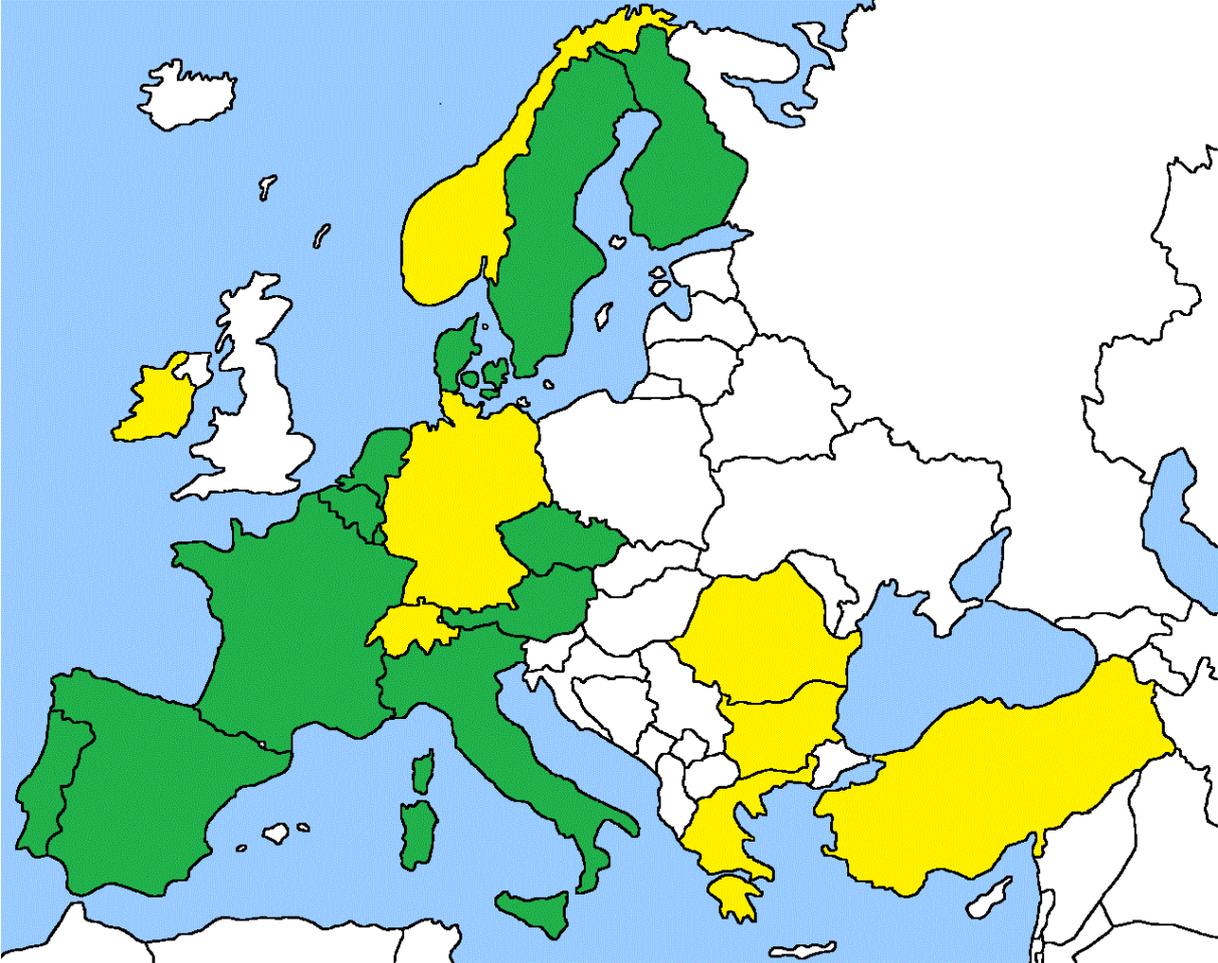
employees) according to the most recent Eurostat-figures. It appears the average order stock is actually lower now than it was in the spring survey. This is explained by the difference in countries that provided answers in the different surveys. Among those countries that replied to both surveys there is a growing trend.

Actual developments in order stock

The actual order stocks grew in twelve countries between spring 2017 and autumn 2017 (Austria, Belgium, Luxembourg, The Netherlands, France, Italy, Czech Republic, Finland, Denmark, Portugal, Spain, and Sweden).

In the remaining eight countries (Bulgaria, Ireland, Germany, Greece, Switzerland, Romania, Norway and Turkey) order stocks were unchanged.

Order stock, past six months. EFCA survey, autumn 2017



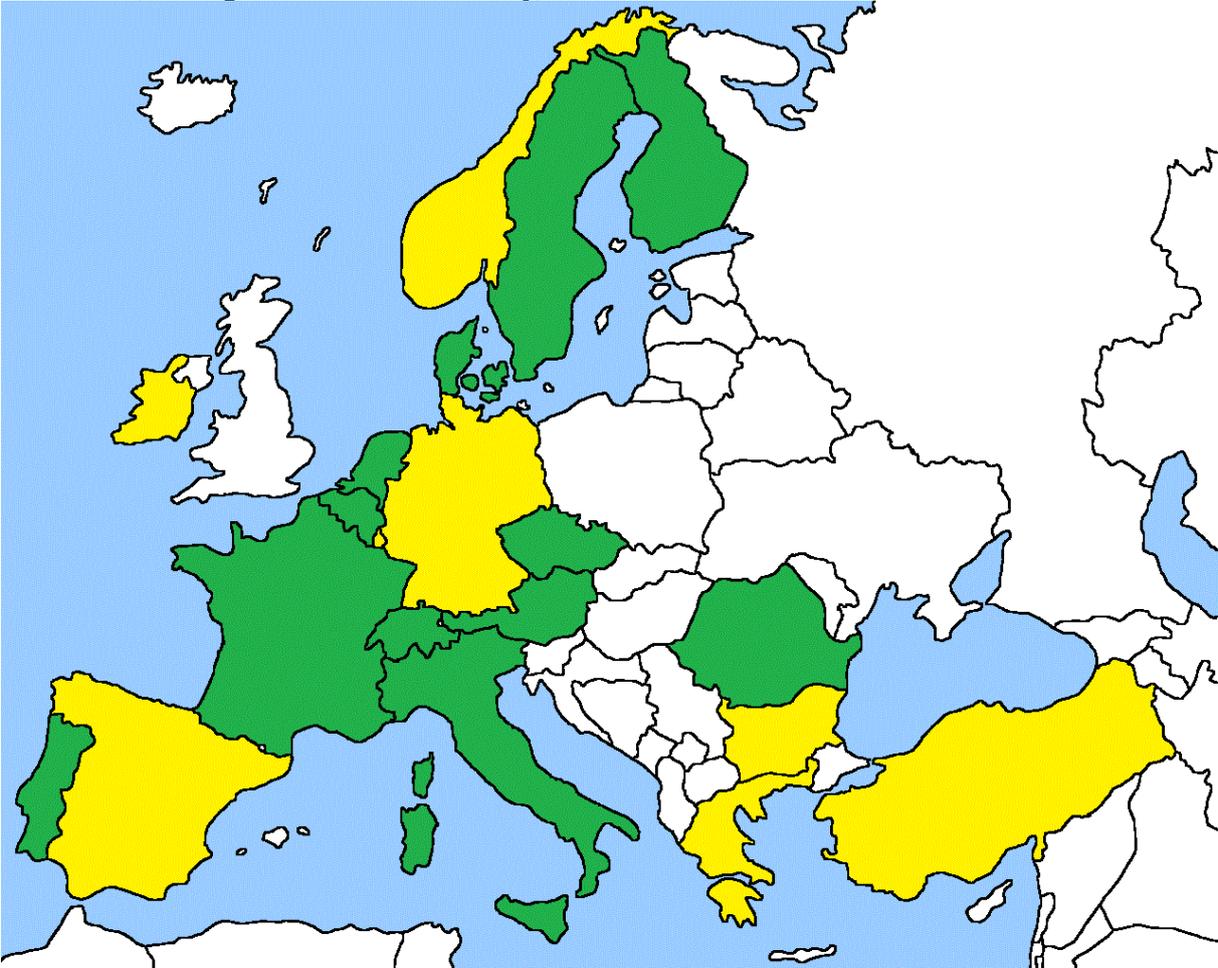
Order stock increase (green); stable (yellow); decrease (red)

Expected developments in order stock

Order stocks are expected to increase over the coming six months in twelve countries (Austria, Czech Republic, Belgium, France, Denmark, Italy, The Netherlands, Finland, Portugal, Romania, Sweden and Switzerland).

Eight countries (Bulgaria, Germany, Luxembourg, Ireland, Greece, Norway, Spain and Turkey) are expecting unchanged order stocks for the coming six month-period.

Order stock, coming six months. EFCA survey, autumn 2017



Order stock increase (green); stable (yellow); decrease (red)

Turnover

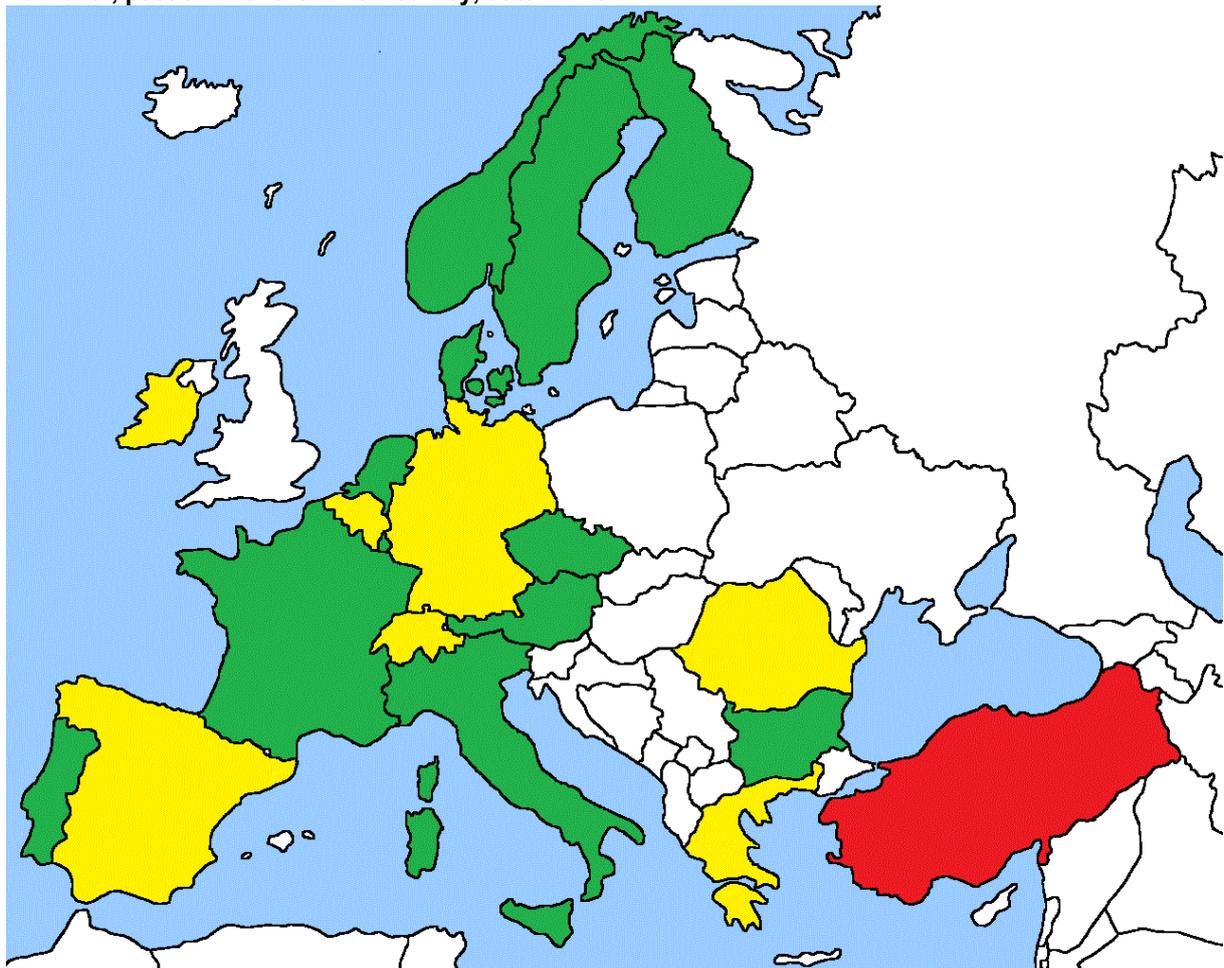
Actual developments in turnover

As a direct consequence of growing order stock, turnover is also increasing in most European markets. Twelve countries reported growing turnover for the past six months (Austria, Czech Republic, Bulgaria, Denmark, Finland, France, Italy, Norway, Luxembourg, The Netherlands, Portugal, and Sweden).

Seven countries reported a status-quo in turnover (Belgium, Greece, Germany, Ireland, Romania, Spain and Switzerland).

Only Turkey reported that turnover had fallen since spring 2017.

Turnover, past six months. EFCA survey, autumn 2017



Turnover: increase ■ (green); stable ■ (yellow); decrease ■ (red).

Turnover for consulting engineering sectors – six months' trends spring 2017 to autumn 2017.

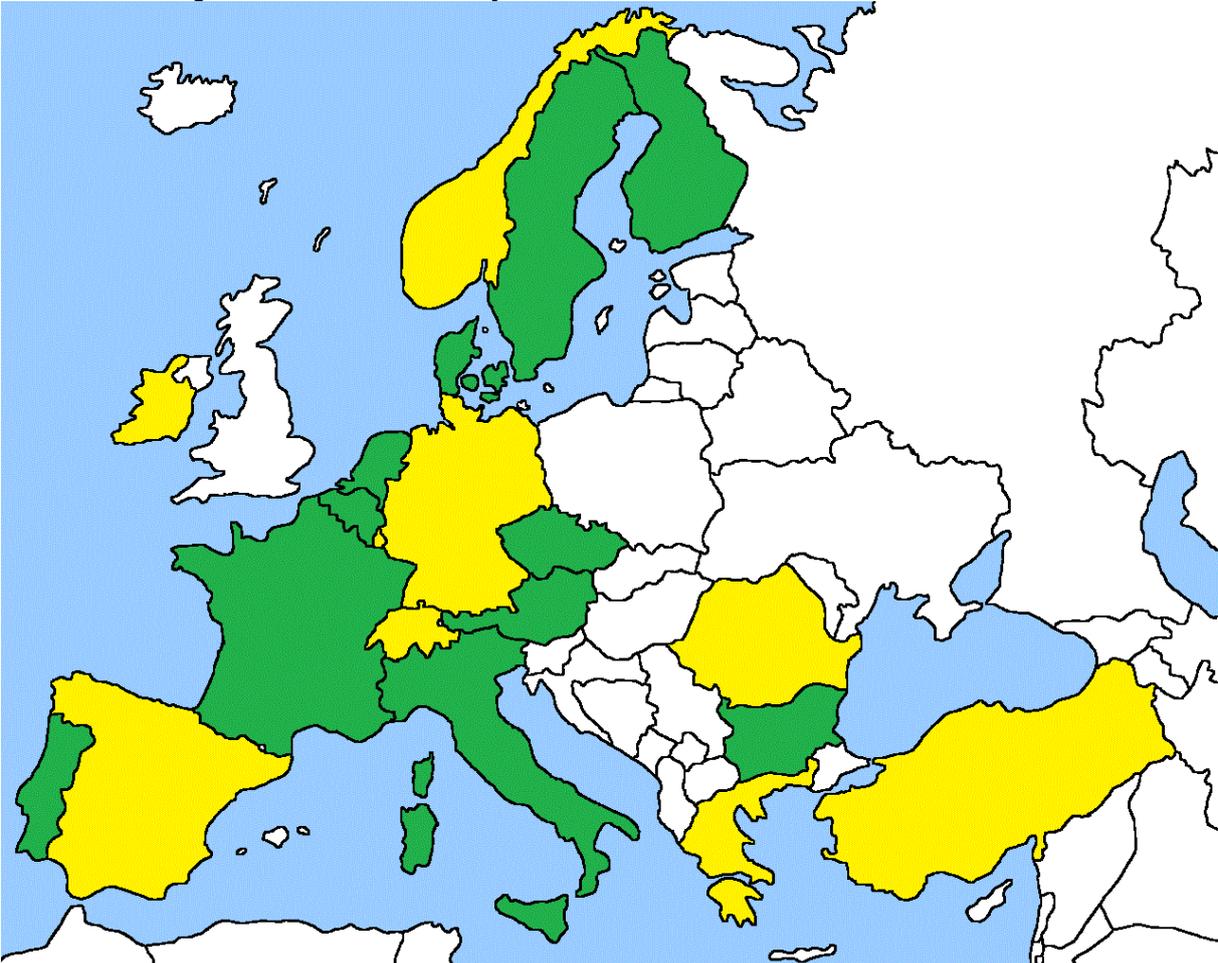
Expected developments in turnover

11 out of 20 participating countries are expecting an increase in turnover for the coming six months (Austria, Czech Republic, Italy, France, Belgium, The Netherlands, Bulgaria, Denmark, Finland, Portugal and Sweden). For Portugal, a more uncertain international market is being compensated by more domestic growth.

The remaining nine countries are expecting a status-quo when it comes to turnover (Spain, Ireland, Norway, Germany, Switzerland, Romania, Greece, Luxemburg and Turkey).

The picture of the European consulting engineering market shows a positive and stable industry, even though there are differences between national markets. Some are very strong and others are still struggling.

Turnover, coming six months. EFCA survey, autumn 2017



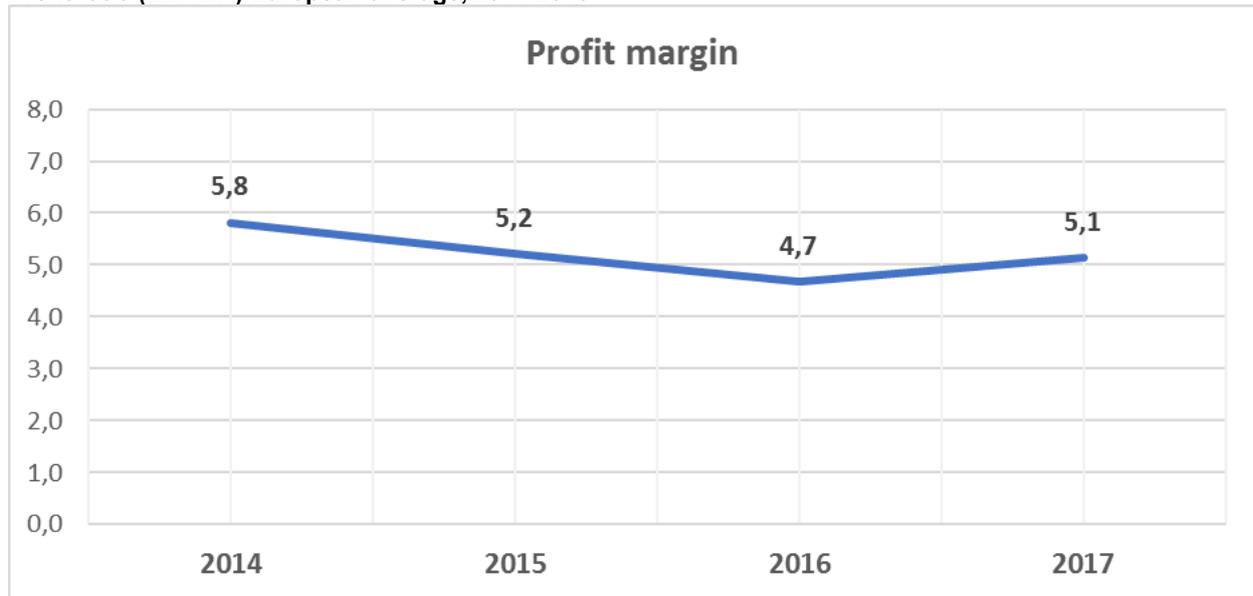
Turnover: increase ■ (green); stable ■ (yellow); decrease ■ (red).

Turnover for consulting engineering sectors – expectations for coming six months

Profitability

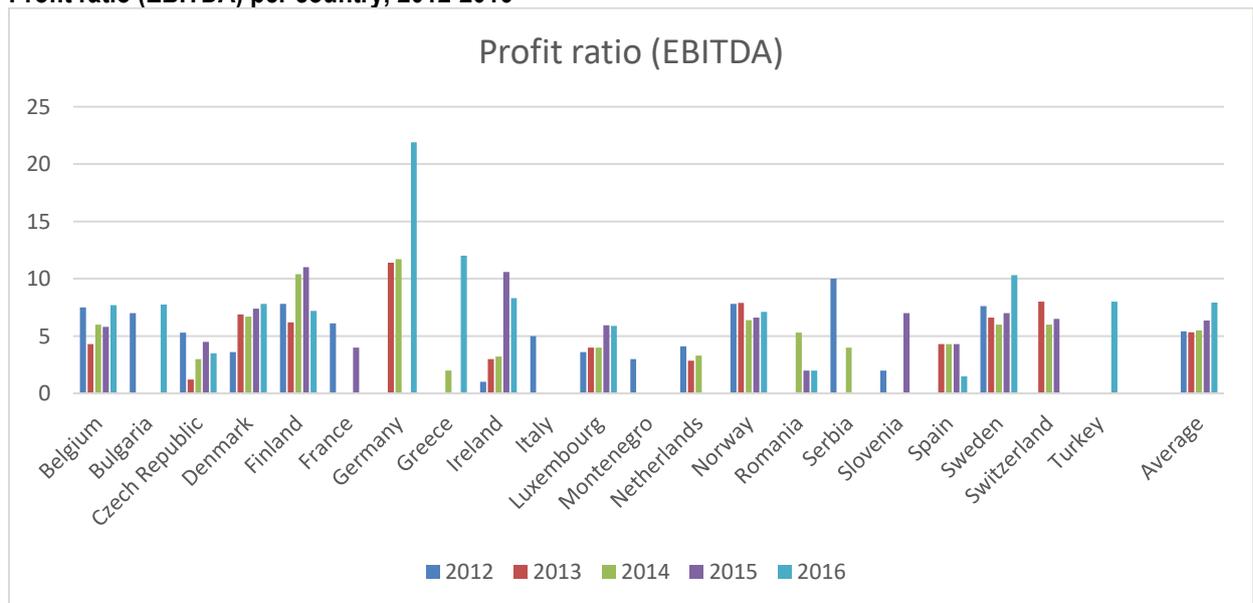
Once a year, EFCA member associations are asked for the average profit ratio in their country based on the results of the previous financial year. Profit ratio is measured as EBITDA, 'earnings before interest, taxes, depreciation, and amortisation'. The average weighted European profit ratio in 2016 was 10.7% of total turnover (5.1% without Germany, that presented an unusually high figure in this survey). The development of the profit ratio, on a European level, is shown below. It is calculated the German figure from this survey since it seemed unusually high. The trend is positive and profitability is increasing. It must be said, though, that participating countries between surveys influence the average profit ratio figures.

Profit ratio (EBITDA) European average, 2014-2016



Profit ratios (EBITDA) on a national level are presented in the diagram below. There is not figures available for all countries and surveys, but on a general level profitability is improving.

Profit ratio (EBITDA) per country, 2012-2016



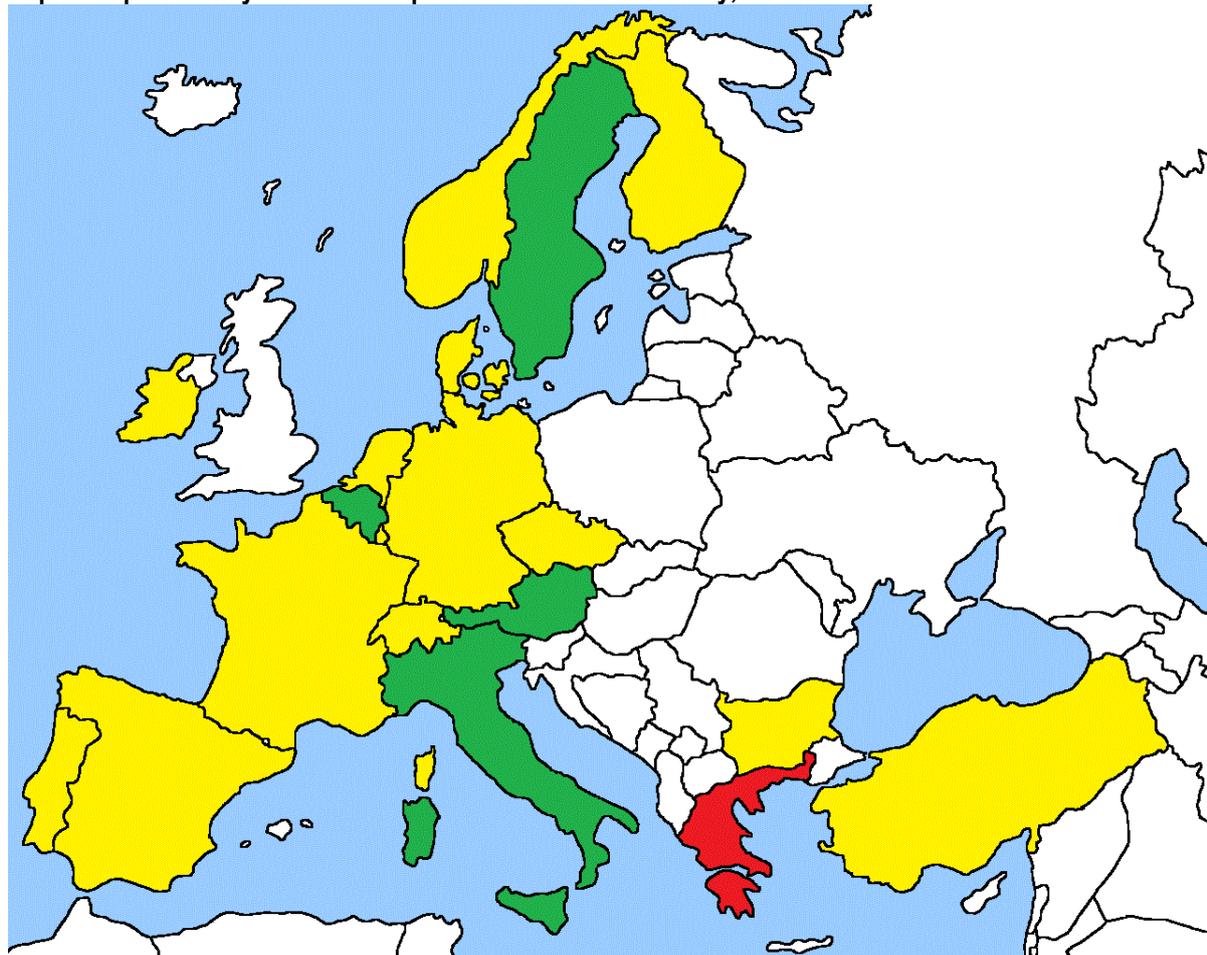
Expected developments in profitability in 2017 compared to 2016

Four countries expect profitability to increase in 2017, compared to 2016: Austria, Belgium, Italy, and Sweden.

In fifteen countries profitability is expected to remain at the same level as in 2016: Denmark, Finland, The Netherlands, Czech Republic, Bulgaria, France, Germany, Ireland, Luxembourg, Norway, Portugal, Switzerland, Romania, Spain and Turkey.

Profits are expected to decrease in Greece.

Expected profitability for 2017 compared to 2016. EFCA survey, autumn 2017



Profitability increase ■ (green); stable ■ (yellow); decrease ■ (red)

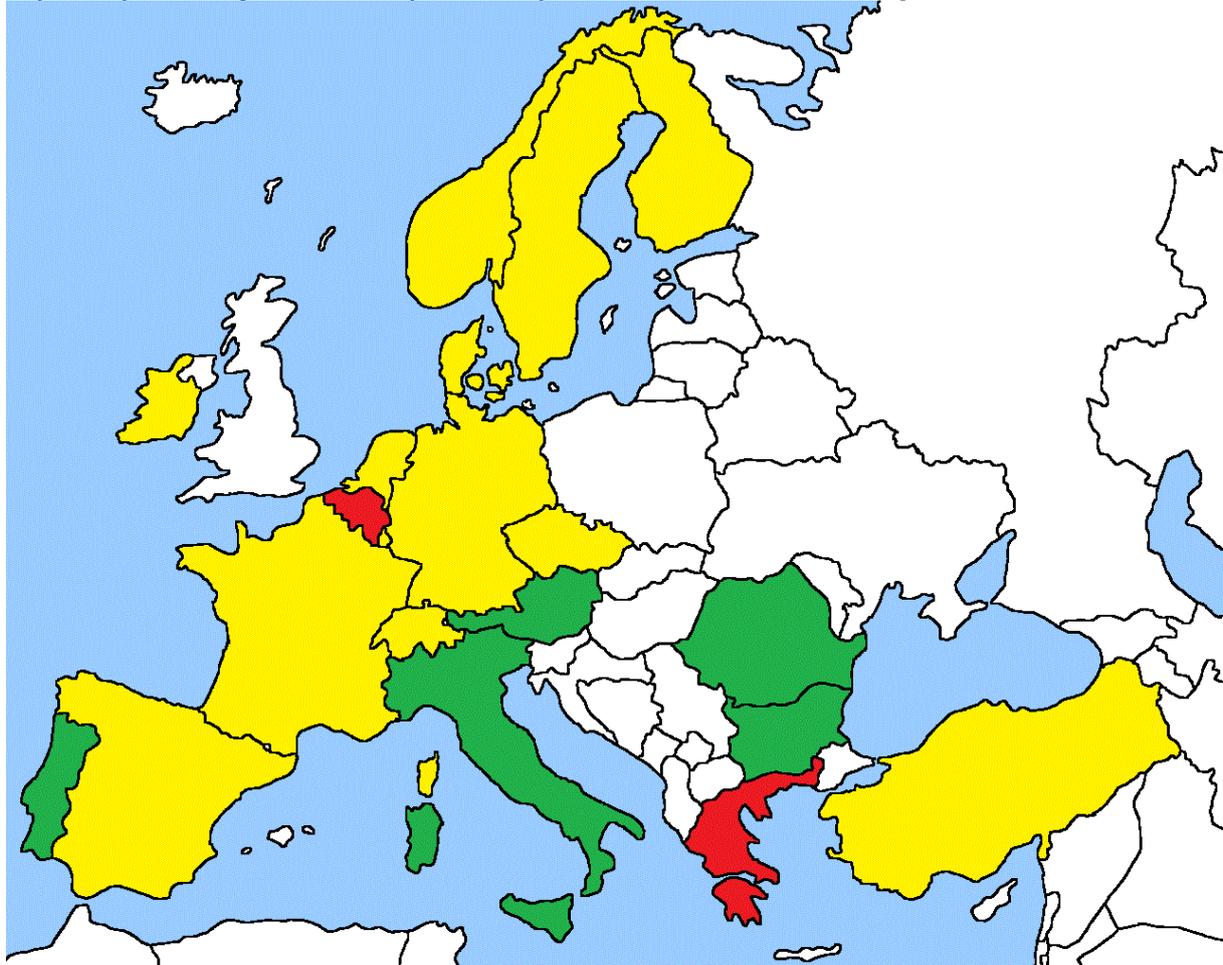
Expected developments in profitability in 2018 compared to 2017

Five countries are expecting profitability to increase in 2018, compared to 2017: Austria, Italy, Portugal, Romania and Bulgaria.

In thirteen countries profitability is expected to remain unchanged in 2018: Finland, France, Czech Republic, Denmark, Germany, Ireland, Luxembourg, The Netherlands, Norway, Spain, Switzerland Sweden and Turkey.

Only Belgium and Greece expect a decrease in profitability in 2018.

Expected profitability for 2018 compared to expected 2017 result. EFCA survey, autumn 2017



Profitability increase ■ (green); stable ■ (yellow); decrease ■ (red)

Challenges for the consulting engineering industry in Europe

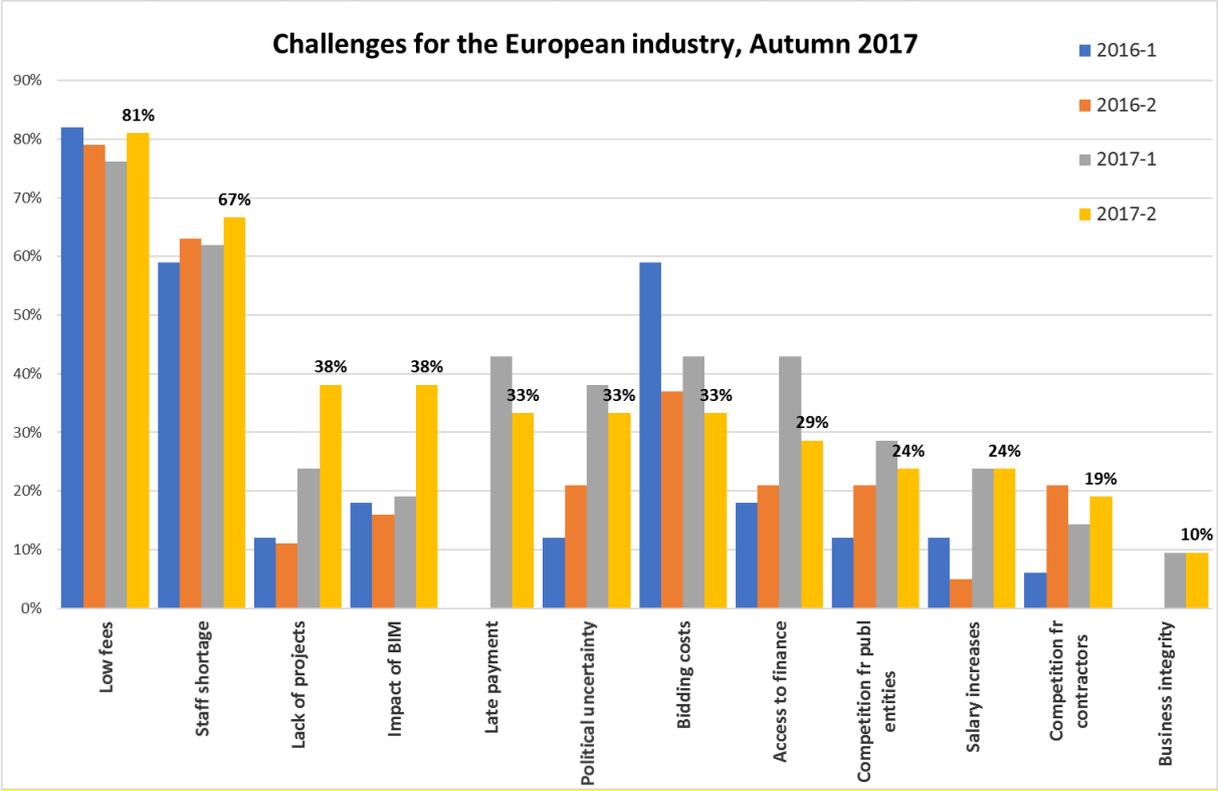
The participating associations were asked to select the five main challenges the sector is facing in their respective countries.

The results in this survey are in line with previous surveys; low fees remain the main challenge that the industry is facing, followed by staff shortages.

Lack of projects is the third largest challenge; salary increase is at the same level as is the competition from public entities

The chart below shows the development of the main challenges on a European level between the spring of 2016 to this survey, autumn of 2017.

Main challenges faced by companies, on a European level. Development Spring 2016 – Autumn 2017



The fact that staff shortage is among the two main challenges is a clear indication of an industry with a lot to do. There is work available for more staff, if the companies could find them. Salary increases is a direct consequence of staff shortages, as higher salaries are a way to attract more staff to the industry. However higher costs challenge the earnings. Moreover, this is also the case with the challenge of “Low fees”. And the combination of higher costs and lower fees is a serious challenge and a threat to growth and profitability for the industry across Europe. If profit margins are too low there is no financial room for innovation and investment in the education of personnel.

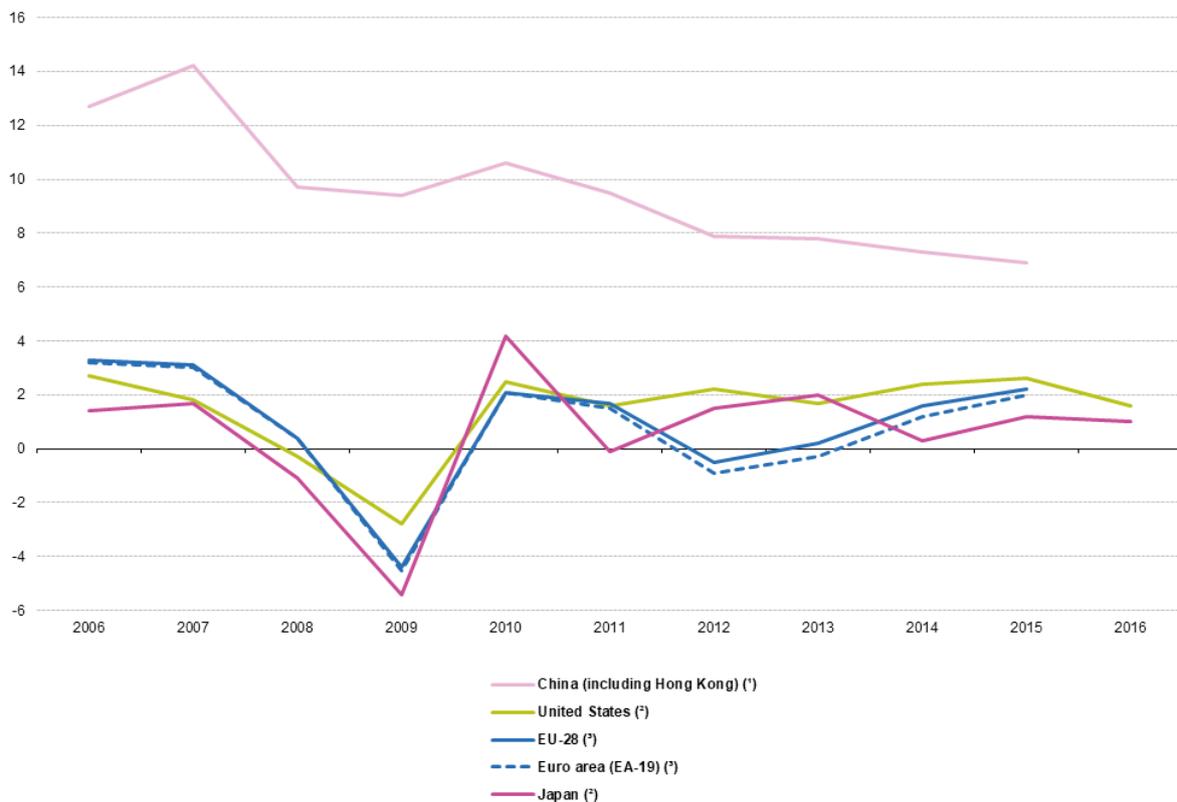
Appendix

The appendix carries information from other sources that could be of interest to the consulting engineering industry, or that explains economic development on a larger scale.

Eurostat statistics relevant for the sector of architects and engineers

Figure 1 - Real GDP growth, 2006–2016

Source: http://ec.europa.eu/eurostat/statistics-explained/index.php/National_accounts_and_GDP



Note: based on chain linked volumes.

(*) 2006-2010: estimates. 2016: not available.

(*) 2016: estimate.

(*) 2016: not available.

Source: Eurostat (online data code: naida_10_gdp), OECD and World Bank

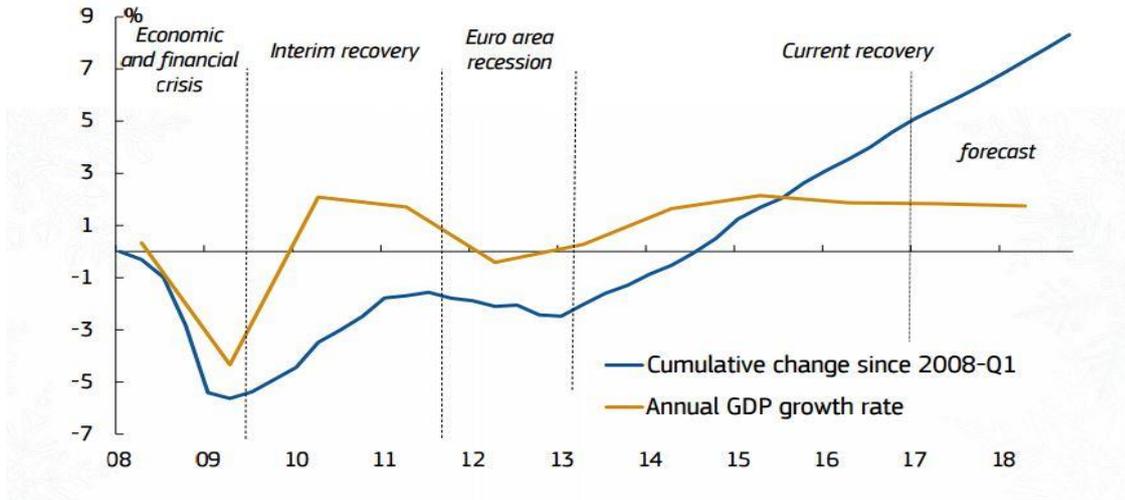
The global financial and economic crisis resulted in a severe recession in the EU, Japan and the United States in 2009 (see Figure 1), followed by a recovery in 2010. The crisis was already apparent in 2008 when there had been a considerable reduction in the rate of increase for GDP in the [EU-28](#) and this was followed by a fall in real GDP of 4.4 % in 2009. The recovery in the EU-28 saw the volume index of GDP (based on chain linked volumes) increase by 2.1 % in 2010 and there was a further gain of 1.7 % in 2011. Subsequently, GDP contracted 0.5 % in 2012 in real terms, before progressively larger positive rates of change were recorded in 2013 (0.2 %), 2014 (1.6 %) and 2015 (2.2 %). In the euro area (EA-19) the corresponding rates of change were very similar to those in the EU-28 through to 2010, while the growth recorded in 2011 was slightly weaker (1.5 %) and the contraction in 2012 was stronger (-0.9 %) and was sustained into 2013 (-0.3 %). In 2014 and 2015, real GDP growth in the euro area was somewhat weaker than that in the EU-28 as a whole.

Figure 2 - EU GDP: annual growth rate and cumulative change, 2008-18

Source: https://ec.europa.eu/info/files/spring-2017-european-economic-forecast-presentation_en

A resilient European economy

EU GDP: annual growth rate and cumulative change, 2008-18

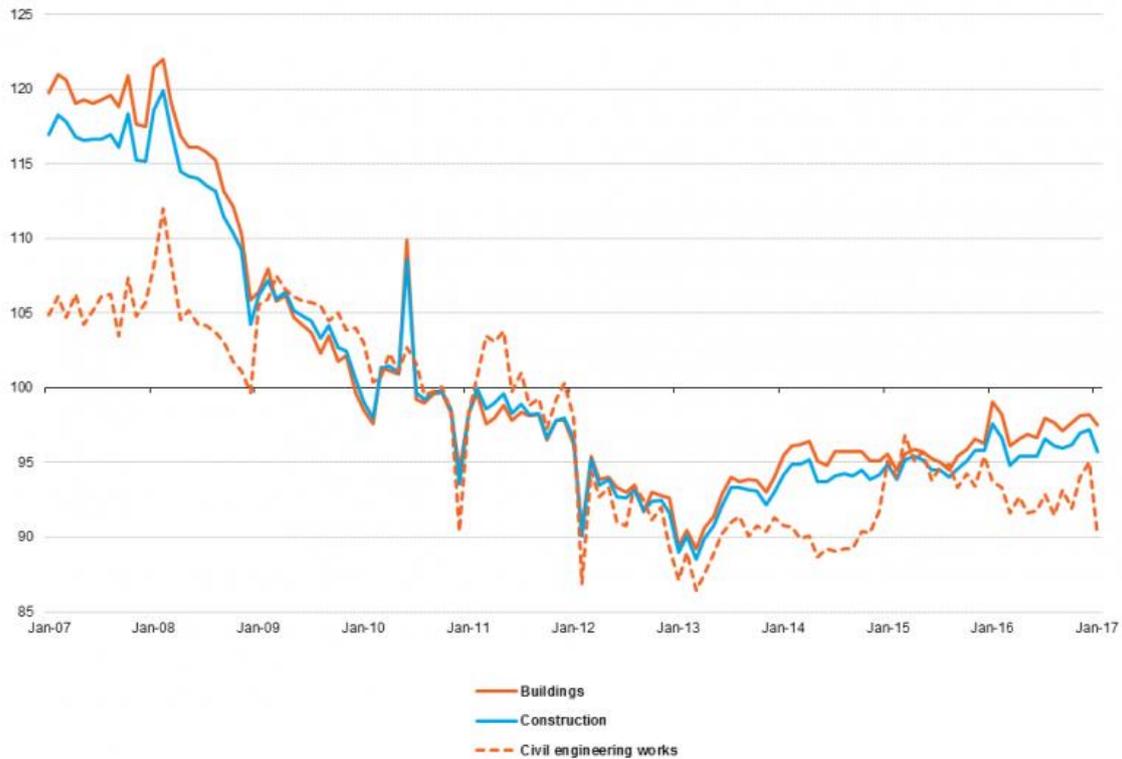


The European economy is performing well despite the political uncertainties and challenges it continues to face. The economic expansion has continued into 2017, thereby completing a period of four years of uninterrupted GDP growth.

Concerns about elevated uncertainty are giving way to improving economic sentiment but this has yet to show up in hard economic indicators. Recent information on the European economy shows growth continuing, despite lingering policy uncertainty but the conditions for a (strong) acceleration of economic activity are not yet present.

Figure 3 - Index of production, construction, EU-28, 2007–2017 (2010 = 100)

Source: [http://ec.europa.eu/eurostat/statistics-explained/index.php/Industry and construction statistics - short-term indicators](http://ec.europa.eu/eurostat/statistics-explained/index.php/Industry_and_construction_statistics_-_short-term_indicators)



The downturn in activity for construction within the EU-28 lasted longer than for industry. Despite occasional short-lived periods of growth, the index of production for construction fell from a peak in February 2008 to a low in March 2013, a decline that lasted in total five years and one month and left construction output 26.2 % lower than it had been. Construction output expanded by a total of 7.6 % during the next 13 months and between then (April 2014) and the most recent period for which data are available (January 2017) output remained relatively stable.

Figure 4 – Labour input indicators, other services, EU-28, seasonally adjusted, quarterly data, 2008 – 2016 (2010=100)

Source: http://ec.europa.eu/eurostat/statistics-explained/index.php/Labour_input_indices_overview

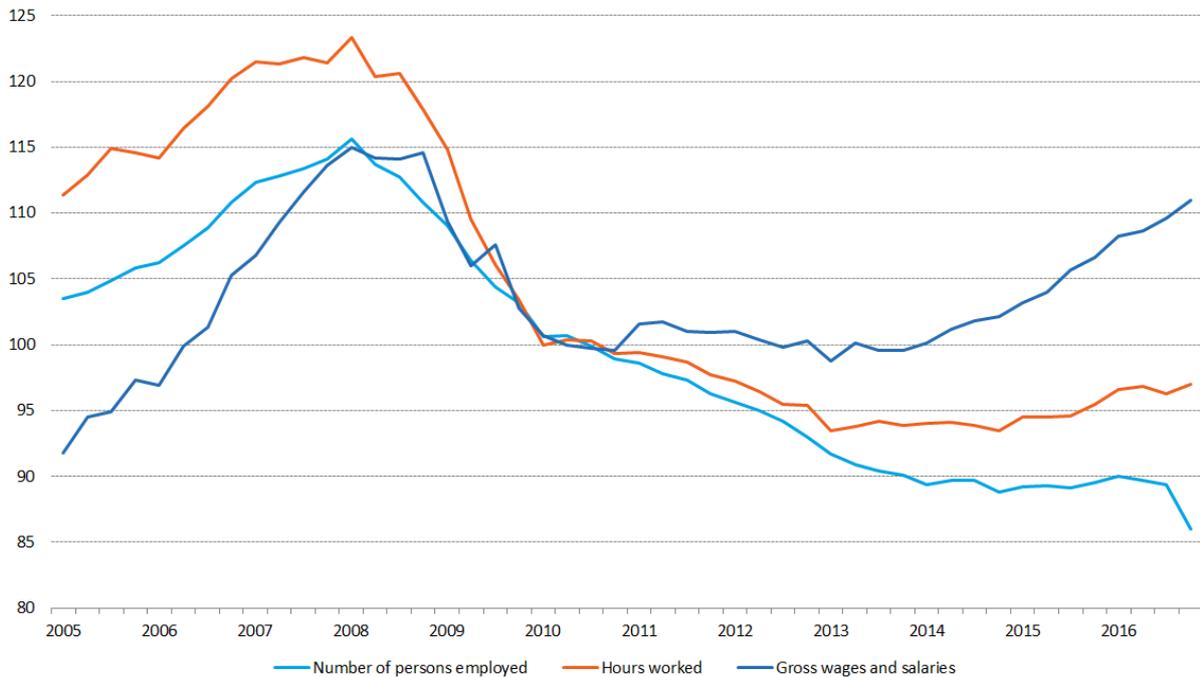


Figure 4 presents the development of the three labour input indicators for construction activities. In both cases the indicators for employment and for hours worked develop in a very similar fashion, although during the crisis the indicator for hours worked dropped a bit faster than the indicators for the number of persons employed which suggests that measures like the reduction of overtime were taken before dismissals or postponed recruitment. There is however a marked difference between these two quantity indicators and the development of the total gross wages and salaries. (Note that that all labour input indicators are based on total numbers and not on average earnings or average working times.)

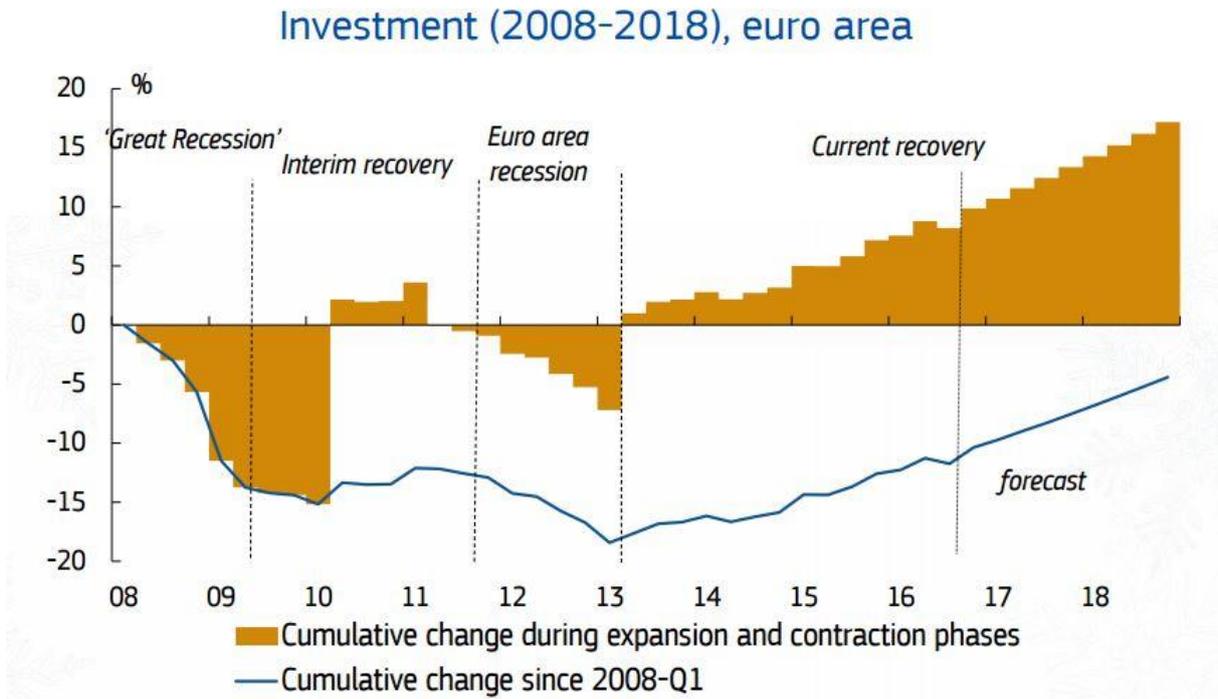
In industry, before the crisis, there was a relatively steady increase in total gross wages and salaries despite an ongoing reduction of employment and hours worked. Following the crisis, the remuneration indicator recovered relatively quickly and increased again despite a constant use of total labour input.

In construction, the indicators for gross wages and salaries steadily increased between 2000 and 2008. With the onset of the economic crisis however wages and salaries declined rapidly like hours worked and employment. Between 2010 and 2014 the indicator stagnated, since then it again displays a continuous increase which is however not as strong as during the pre-crisis years.

Figure 5 - Investment still lacks strong momentum

Source: https://ec.europa.eu/info/files/spring-2017-european-economic-forecast-presentation_en

Investment still lacks strong momentum



In spite of the positive growth momentum, the economic recovery in the euro area remains incomplete. While private consumption has revived, investment is still relatively weak, held back by modest sales expectations, ongoing deleveraging and uncertainty. Weak investment dampens demand in the near term but also affects potential growth by weighing down on the capital stock and productivity growth. Combined with high savings by households as well as firms in some Member States, the investment weakness also drives the euro area's current account surplus of more than 3% of GDP.

In light of the persistent crisis legacy and remaining vulnerabilities, the recovery is not yet sufficiently self-sustained to consider a withdrawal of supportive macroeconomic policies. These need to be flanked by targeted public investment, and by re-prioritising growth-friendly public expenditures.

Forecast European Commission autumn 2017

Source: https://ec.europa.eu/info/business-economy-euro/economic-performance-and-forecasts/economic-forecasts/autumn-2017-economic-forecast_en

EUROPEAN ECONOMIC FORECAST
AUTUMN 2017

What are the drivers ?

- ROBUST WORLD GROWTH**
- IMPROVED ECONOMIC SENTIMENT**
- STRONG JOB CREATION**
- CONSUMER SPENDING INVESTMENT**
- LABOUR MARKET SLACK**
- SLOW WAGE GROWTH & LOW INFLATION**
- REMAINING FINANCIAL & FISCAL FRAGILITIES**

Economic and Financial Affairs



EUROPEAN ECONOMIC FORECAST
AUTUMN 2017

Growth

The euro area economy is on track to grow at its fastest pace in a decade this year, substantially higher than expected in spring.

Year	2017	2018	2019
Growth Rate	2.2%	2.1%	1.9%

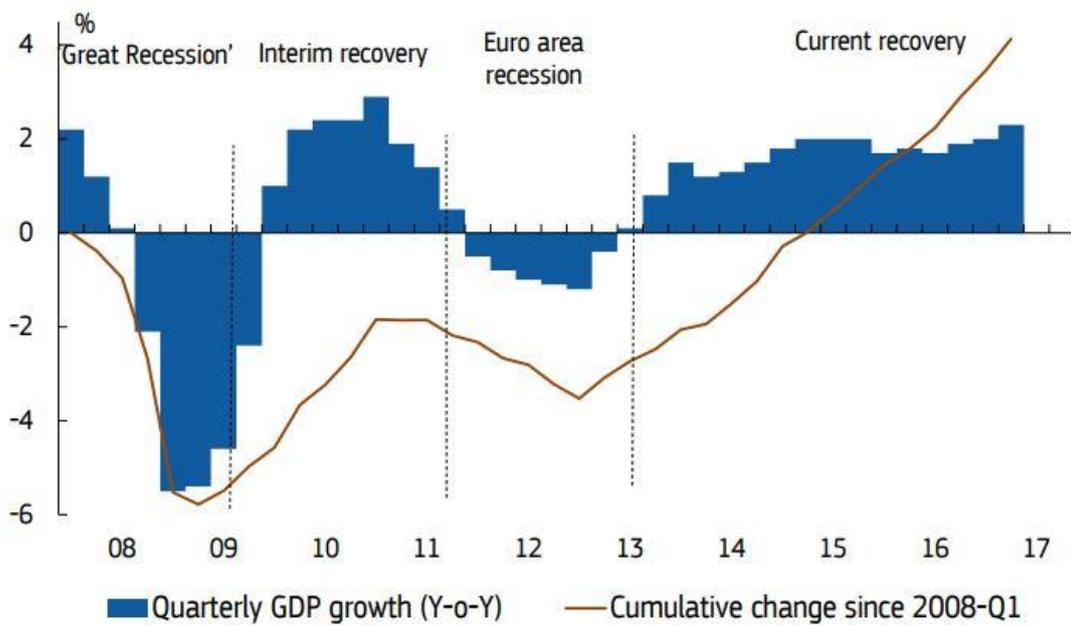
Economic and Financial Affairs



Growth map 2018



Euro area GDP: annual growth rate and cumulative change, 2008-17Q2



Key messages from the Autumn 2017 Forecast

- Accelerating growth in Europe with all Member States participating
- Robust employment growth ahead and lower unemployment
- Deficit and debt ratios continue declining
- But the recovery remains incomplete - the outlook for inflation remains subdued amid sluggish wage growth
- Risks to the outlook are now broadly balanced

Appendix – definitions

EFCA	European Federation of engineering Consultancy Associations – the sole association for the engineering consultancy industry in Europe
ECB	European Central Bank
Turnover	Total revenues/sales
Profit ratio/margin	Turnover divided by profit, measured as EBITDA (earnings before interest, taxes, depreciation and amortization)
FTE	Full time equivalent. Number of staff/employees is defined as FTE, where the total number of hours worked by the staff in a company is divided by the equivalent of a full years work load. <i>Example</i> : four half-time employees are counted as two employees according FTE
Order stock	The total work/assignments that the firm has agreed to do in the future
Order stock in months	Order stock defined by what it represents in time for the firm. How much time, how many months, does the work load of the current order stock represent for the whole firm? <i>Example calculation</i> : The order stock is €1 million. The firm has 20 employees. The average yearly (12 months) turnover/employee is €100,000. The current order stock/employee is: €1 million/20 = €50,000/employee. Order stock defined in months is: €50,000/€100,000 = 0.5 * 12 (months) = 6 months