16th European Construction, Engineering & Infrastructure Roundtable
Madrid, Spain
13 December 2017
Program and speakers

Opening remarks: Federico Linares, CEO of EY, S.L.

Opening session on infrastructure projects in Spain: José María Piñero, Managing Director of the Spanish Sociedad Estatal de Infraestructuras del Transporte Terrestre (SEITT, State Company for Land Transport Infrastructures)

Introduction: Mark Grinis, EY Global Real Estate, Hospitality & Construction; Ad Buisman, EY Global Engineering and Construction Leader

Situation and prospects of the Spanish construction and infrastructure sectors: Julián Núñez, President of SEOPAN (the Spanish business interest association for the construction sector)

Macroeconomic overview of the European and Spanish economies: Pilar Más, Managing Director, Macroeconomic Analysis and International Economy of the Spanish Ministry of Economy, Industry and Competitiveness

Panel 1

Trends in M&A and project finance in the global infrastructure markets

Moderator: Javier García Seijas, EY Mediterranean Leader of TAS Infrastructure and Construction

Panelists: Alberto García, CFO of Globalvia; Scott Kolbrenner, Managing Director of Houlihan Lokey; Mike Lucki, Strategy Consultant and Board Member of Balfour Beatty; Gideon Tilburgs, Managing Director of John Laing

Financial Challenges of the Infrastructure and Construction Sectors: Ernesto López Mozo, CFO of Ferrovial
Panel 2

Megatrends for the construction sector

**Moderator:** Erin Roberts, EY Americas Engineering and Construction Leader

**Panelists:** José Freitas, CFO of Mota-Engil; Carlos Mijangos, CFO of Sacyr; Wouter Remmelts, Managing Director of Royal BAM

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**EY Digital Survey:** *disrupt or be disrupted.* Menno de Jonge, Director Digital Construction of Royal BAM interviewed by Bert Bardoel, EY Oceania Engineering and Construction Leader

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**Summary of the day and closing remarks:** Ad Buisman, EY Global Engineering and Construction Leader
It was a great pleasure for EY to once again host its yearly European Construction, Engineering & Infrastructure Roundtable on 13 December 2017, for the third time in Madrid. The Spanish capital remains a very appropriate venue for our flagship event. Spain feels like home for infrastructure and the Spanish construction sector has started to grow again. Over the last three years, the Spanish economy has been expanding at a healthy 3% rate annually. After a steep fall, the Spanish engineering and construction sector has rebounded. Spain currently also has the largest pipeline in Europe when it comes to availability-based public private partnership (PPP) projects for building, maintaining and managing infrastructure.

We also discussed several European and global developments in our sector. “Cautious optimism” is the best way to describe the mood prevailing at the conference. With the modest growth rate of our sector in Europe of 2% to 3%, we still have a long way to go to make up for ground lost over the last decade or so. The global growth rate is not much higher: the compound annual growth rate of the world’s top 30 construction companies between 2014 and 2016 was over 3%.

Optimism was further tempered by “four worries,” two of which are political: the uncertainties represented by both the Trump presidency and Brexit. Two other worries are money supply – it is an illusion to think that reversing quantitative easing (QE) by the central banks will not have a negative impact – and technological development. Are we underestimating the negative effects on employment in our sector, of digitization, robotization, automation? Long-term growth in unemployment may cause more economic, social and political problems than we currently allow for.

We analyzed more specific issues, too. Various speakers, for example, expressed their views on the trends in project financing and infrastructure M&A. They stressed the need for timely refinancing and for flexibility in bank financing, especially in the case of PPP deals involving long-term commitments for building, maintenance and management of large infrastructure projects. In the area of M&A, various specialists predicted a further increase in activity during 2018, as companies will tend to compensate with acquisitions for still relatively modest organic growth rates.

We also discussed various chronic issues and megatrends such as the skills shortage, low productivity and margins, a persistently high rate of project failures, the challenge posed by competition from Chinese companies, digital disruption and increased political volatility. One of the conclusions was that Europe needs to shape up when it comes to embracing digital technologies, as we are at risk of falling behind Asian competitors. A recent study by EY on the impact of technology on the global engineering and construction sector confirmed that Chinese and Japanese companies in our sector tend to spend a significantly higher percentage of revenues on innovative digital solutions than their European counterparts.

Various representatives of large European companies explained how they are trying to embed innovation in their business models, focusing on the conditions necessary to make digital innovation work inside a company. In addition, we also analyzed developments in non-European markets, especially the US.

All in all, the event provided some great insights and we are delighted to share some of them in this EY publication. We would like to take this opportunity to thank everybody involved in making the meeting a great success – organizers, speakers, panelists and guests – and we are already looking forward to the 2018 edition of the EY European Construction, Engineering & Infrastructure Roundtable, which will be held in Paris.
Delivering on promises

The 2014 edition of the European Construction, Engineering and Infrastructure Roundtable also took place in Madrid. At that conference, predictions of Spanish officials that their country’s GDP would grow at an annual rate of 3% over the next few years were greeted with some skepticism. However, Spain delivered. Since 2014, Spain’s GDP growth has been around 3% a year and consistently higher than the average in the Eurozone. Pilar Más from the Spanish Ministry of Economy, Industry and Competitiveness explained that in 2018, too, a healthy growth rate of 2.3% is expected. Más stressed the fact that economic growth in Spain is now propelled by two engines: internal demand (both consumption and investment) and also external demand. Spain’s current account of its balance of payments has been positive over the last five years, something unique for Spain. According to Más, “the steady growth in exports as a percentage of GDP is structural: Spain has augmented its export base, penetrated in international value chains and diversified its export destinations.”

Challenges ahead

Spain has gone a long way in the reform of its once-rigid labor markets and has reduced macroeconomic imbalances generated by the deep economic downturn of 2008-2012. Over the last five years, Spain has significantly reduced the government budget deficit (according to expectations, it will fall below 3% of GDP in 2018), the stock of private debt as a percentage of GDP and the unemployment rate. In the words of Gideon Tilburgs of John Laing: “Spain is a good place to be at the moment; the economic figures give a boost to our confidence in the country.”

However, as acknowledged by Más, Spain has some important challenges to deal with. Although the unemployment rate has fallen sharply from a staggering 26% in 2013, at over 15% it is still much higher than before the onset of the crisis and well above the average for the Eurozone. Furthermore, the Spanish economy is still characterized, on average, by a low rate of productivity which, according to Más, should be raised by efforts in the areas of education, innovation and general business climate. She also insisted that Spain should continue its reduction of both government budget deficits as well as stock of public and private debt.

At the political level, the biggest threat to economic growth is the uncertainty with respect to Catalonia. According to Más, without this uncertainty, the economic growth rate of Spain in 2018 could be 2.6% or 2.8% instead of 2.3% envisaged when the conference took place.
Recovery at last

In Spain, the construction and engineering sector is finally climbing out of a deep hole. After the construction bubble burst, the number of people employed in the sector and its contribution to GDP roughly halved between 2007 and 2015. Investment in construction and engineering plummeted, as did real estate prices. Only recently, a modest but encouraging recovery has set in. According to José María Piñero from SEITT, in 2016 investment in the sector in Spain increased 2%, compared with 2015, and this increase is continuing in 2017.

As documented by Julián Núñez from SEOPAN, the total value of tenders by national, regional and local public authorities crashed after 2007 and has only started to recover some of the lost ground in 2017. The tendering of new public private partnership (PPP) projects all but disappeared from the Spanish picture until recently.

After these long years of under-investment, the need for significant investments in public Spanish infrastructure is high. Núñez stressed that this is not only true for the road and rail networks in Spain, but also for other infrastructure, e.g., the treatment of solid waste and sewage water. In these areas, Spain is still lagging behind the European average significantly. For example, 60% of all solid waste collected by local authorities in Spain ends up being spilled without treatment. This percentage is more than double the European average.

According to Núñez, it will be very difficult for public authorities to meet these investment requirements, as they total several billions of euros over the next five years. Between 2007 and 2016, government investments as a percentage of GDP have fallen from 4.7% to 1.9%. During the same period, public spending on education, health and the social safety net increased from 22.5% to 27.0% of GDP. Despite this effort, Núñez explained, spending per capita on health and education is still significantly lower in Spain than in other major EU Member States and it is unlikely that any government will reduce its spending in these areas. Therefore, Núñez concluded, if government continues its policy of reduction of the budget deficit, “there is not much room for a dramatic increase in government investment in infrastructure and the necessary investments will have to be made by the private sector via PPP projects.”
PPP for Spanish roads

José María Piñero from SEITT agreed: “We have to go towards PPP, there is just no room in the budget for enough public investment in infrastructure. We should seize the opportunity now that interest rates are very low and we get more tailwind from the European Investment Bank and its role in the Junker Plan.” Piñero explained the details of just such a major PPP infrastructure project in Spain being currently launched by the central government. In its Plan Extraordinario de Inversión en Carreteras (PIC, Special Plan for Road Investments), the Spanish Government is looking for EUR5 billion of investments between 2017 and 2021 in a total of 20 road projects covering more than 2,000km. According to Piñero, “Spain has got one of the best road networks in Europe, but we need to keep it first-rate, if only because 18% of the tourists visiting Spain every year enter our country by car and because of the high usage of roads in Spain for both passenger and freight transport.”

PIC will focus on four goals: completion of the Transeuropean Road Transport Network in Spain, increasing capacity of the current road network, adapting existing highways to new standards and – last but not least – ensuring conservation of the roads during the 30 years of the concession contract. The prime objectives of PIC are to increase safety and reduce both air and noise pollution.

According to Piñero, PIC illustrates a fundamental change in infrastructure thinking in Spain: from “more roads” to “better roads.” He also indicated that, with PIC, the Government will go for the “pay for availability” model and not for the (toll-based) “pay for use” model. Over the last 10 years, “pay for availability” has clearly become the option of choice for PPP infrastructure projects in Europe.

Gideon Tilburgs from John Laing was upbeat about PIC: “With PIC, Spain now has by far the biggest pipeline for availability-based infrastructure PPP projects in Europe, ahead of Germany and the Netherlands and even further ahead of countries such as Belgium, Ireland, Norway and the UK. We like the short bidding period and the combination of short construction time and long operation. We will be a player in PIC, although we will look carefully at risks remaining with the developer in areas such as expropriation.”
Privatization of Spanish motorways

In the second part of his talk, Piñero explained another PPP project currently being finalized by the Spanish Government. Spain will put up for tender the operation and maintenance of various bankrupt private motorways, mainly in Greater Madrid and along the Mediterranean Coast. These “pay for use” motorways went bankrupt mainly for two reasons: the number of users in recent years was much lower than expected due to the economic crisis, whereas expropriation costs preceding construction were almost six times higher (EUR2.2 billion in total) than anticipated.

The Government will take control of the bankrupt operators, paying off the compensation established by law, and plans to put the motorways out for tender again in June 2018. According to Piñero, “this is a very attractive proposal. Due to the economic recovery, traffic figures are clearly on the increase and bidders can base their estimates on real traffic data. There are no more construction-related risks such as expropriation. We will put them up for operation during a 25-year period, maybe as one block, maybe in two blocks: Madrid and Mediterranean. Bidders will probably have to go through a pre-qualifying process to prove their economic and technical prowess. We see a lot of interest, we have already heard from more than 20 interested parties."

Mark Grinis, EY Global Real Estate, Hospitality & Construction Leader, added that he was not surprised by this keen interest for the tender of the Spanish motorways: “Worldwide, we see a lot of capital – including private equity – looking to obtain meaningful returns. From our experience at EY, we know that construction, infrastructure and real estate are certainly among the sectors under consideration by investors.”

Alberto García confirmed that Globalvia is clearly interested in the assets: “They fit perfectly with what we are most interested in: a mature project, no construction-related risks and financial parameters that can be predicted with a reasonable amount of certainty. Furthermore, we could integrate these assets nicely into our existing portfolio in Spain, obtaining some extra return.”
Financing projects and valuing assets: prepare now for a less bright future

Rfinancing at low rates

When the economy is going relatively smooth, even seasoned business leaders sometimes seem to forget that upswings in the economic cycle are necessarily followed by downswings. A good example of “smooth going” is the current ease of financing construction and engineering projects: there is an abundant supply of cheap funds. García of Globalvia emphasized that investors and companies should seize this situation to refinance their long-term commitments at historically very attractive rates, before the financial going gets tougher again. Referring to PPP, he said: “Getting financing of 22 or 23 years for concessions that run 25 years is now relatively easy. Seven years ago, it was very different, and it may be different in the future. Central banks are already changing their tune. Refinancing now should just be part of the best practice in business of minimizing the risks that are beyond your control.” García added that, in this endeavor to reduce risks, companies should also insist on

flexible conditions in the financing offered by banks or other financial institutions: “Infrastructures are living animals. During the 25- or 30-year lifetime of a PPP concession, political, social or economic conditions may alter radically. Therefore, we need to be flexible, but so should the financial institutions offering us financing.”

While García was mainly referring to PPP infrastructure projects, his call for cautiousness seems to be heeded at least partially when it comes to M&A activity in our sector. According to Scott Kolbrenner of Houlihan Lokey, when valuing construction and engineering companies, “buyers are focusing on which companies are going to ride out the next recession in the best way. In their due diligence, they look at the exposure of a company to the next downturn, e.g., how dependent is a company on new construction as opposed to the more sustainable repair and maintenance work.”
M&A on the rise

M&A activity in construction and engineering has been on the rise, and Kolbrenner expects it will continue to rise in 2018: “Listed share prices in the construction and engineering sector have gone up significantly. Sometimes the multiples supporting these prices have outpaced a particular company’s organic growth prospects, so they look to M&A to augment organic growth. In addition, there is a significant influx of private equity looking to put money to work by investing in the sector.”

Some speakers warned against seeing M&A as an easy answer to challenges the sector is facing, such as the competition of giant Chinese companies. According to Carlos Mijangos of Sacyr, “mergers may give you the size to bid for bigger projects and may bring you economies of scale, but cultural issues may haunt a company after a merger, especially if it is an international one. In Europe and Latin America, I don’t see that we need more size to compete.”

José Pedro Freitas from Mota-Engil, on the other hand, expressed the view that “many non-specialist construction companies will have to merge to survive.”

As for valuations, Kolbrenner stressed the differences between various subsectors: “While we have seen some engineering firms sell for high single to low double digit multiples of EBITDA (or more), some construction companies may sell for half that, depending on their growth, margins, endmarkets, services and backlog.”

Mike Lucki, a non-executive director at Balfour Beatty, stressed the availability of a “cushion” of assets as another way for cautious construction and engineering companies to be prepared for lean and difficult times: “A few years ago, Balfour Beatty went through a rough patch, with a lot of write-offs. The fact that the company could draw upon various assets it could sell definitely helped it to survive. Now, of course, it is clearly a seller’s market; there is big demand for assets out there. The best way to go about it as a seller is selling asset by asset. The same holds true for buyers: buying packages of assets tends to be more risky.”

Regarding the phase of the cycle of the construction and engineering industry, according to Lucki, “we are at the peak of the market for vertical building; the downswing has already started. On the other hand, civil infrastructure is growing strong and will continue to grow. Both in Europe and in the US, there is a clear perception among public authorities that more money needs to be invested in infrastructure. Many state authorities in the US are raising gas or sales taxes, all for infrastructure investments. They do not want to rely on federal funding.”
More growth in the US?

“Go West!” is currently the motto for many European construction and engineering companies. In recent years, we have seen more investment and M&A activity by European players in the US than the other way around. According to Kolbrenner, this trend will continue: “The perception is that the US offers a greater number of growth opportunities, compared with the EU. This attracts European capital to the US, whereas US firms tend to focus ‘internally,’ before looking towards Europe.”

Ferrovial is a company that clearly prioritizes the US market when it comes to PPP projects for roads. In the words of Ferrovial’s Ernesto López Mozo: “In the Americas, one of our competitive advantages vis-à-vis other European companies is our knowledge of the US market. We continue to see the US as a great opportunity. If we have a choice of where to deploy our limited capital resources, we tend to go for the US.”

López Mozo explained some of the peculiarities of the US market, e.g., the requirement for contractors of certain public projects to post bonds to protect both their clients and their suppliers. He expressed the hope that some of the innovations of financing PPP infrastructure projects in the US – e.g., call options as part of the financing structure, deferral of interest payments if the ramp up is slow – will find their way to Europe: “The tools are there; the challenge is for politicians to bring this to the market in Europe in new PPP projects. Clogged-up roads force us to act, not only in the US, but also in Europe.”

Canada and Chile

Lucki also stressed the attractiveness of the US market, but he did mention some old and new problems: “Regarding PPP, the US is like 50 different countries. All states have their own legislation. In that respect, Canada is an easier market; the same legislation applies across all provinces. In the current plans by the Trump Administration and Congress for tax reform, the tax advantages of private activity bonds used for financing infrastructure projects were initially at risk of being eliminated. That would have changed the financing landscape profoundly. We were highly concerned about it. Fortunately, private activity bonds were included in the final version of the reform legislation.”

Tilburgs also expressed confidence in the US and Canadian markets: “We are not just active in roads in North America, also in light rail, and we are interested in broadband and renewable energy. The current Trump Administration may reduce incentives for renewables, but at state level a lot is being done.”

Further south, Chile was mentioned by various speakers as the most attractive place to be in Latin America. The professional attitude of the Chilean Government and its public employees was highly praised.
Chinese competition

When discussions turned to China, talk was not about opportunities but about challenges. Speakers stressed that Chinese companies tend to have advantages over their European competitors in global construction and engineering markets. The national Chinese political environment allows them to take a long-term strategic view in their business decisions rather than a shorter-term financial one, and their cost of capital is lower. To the extent that size is strategically important, Chinese companies have merged into global giants, and Chinese companies tend to invest a higher percentage of revenues in innovation than their European counterparts. In the words of Wouter Remmelts from BAM: “As European companies, we are losing ground to Chinese competitors, in Africa, but also in other regions. Our answer should not be trying to beat Chinese companies at their own game: growing in size and offering very low prices. We should compete with China on different grounds. We must convince our clients to seriously look not just at price, but also at quality and corporate social responsibility issues as important contract award criteria. I am sure that, as European companies, we can make a difference in that way.”
The EY digital survey

Erin Roberts, EY’s Americas Construction and Infrastructure Leader, led a panel through a discussion of the many megatrends and challenges that are shaping the future of our sector: to name a few, rapid urbanization and the emergence of smart cities; fast technological development and digitalization in our sector, opening the doors to a whole new world of modern construction and engineering; a shortage of skilled workforce; the rise of China; opportunities offered by the greening of our societies and economies; and dramatic political developments such as Brexit.

Many of these and other trends were discussed during the conference. Some have already been mentioned in this report. As for Brexit, some speakers indicated that in their particular case, they see it more as an opportunity than a threat – for example, because the British Government will try to counter the generally expected, Brexit-related national economic slowdown with extra investments in infrastructure. Regarding the shortage of skilled workforce, the digitalization of our sector might further worsen this already chronic and deep problem of our sector. Currently, our sector does not rank very high on the “most preferred list” of the average IT-savvy graduate looking for their first job. It is therefore imperative that we explain to young people how attractive our sector is for young professionals who want to apply their IT knowledge in practical projects outside the world of networked computing.

It would be too much to review in this report all of the megatrends in detail that were discussed during the conference. In this chapter, we will concentrate on the most extensively debated subjects: technological development and digital disruption.

A recent EY survey of the impact of technology on the construction sector – conducted in the autumn of 2017 – found that 64% of respondents believe digital solutions are absolutely vital to their company’s future. At the same time, only 7% of respondents have a well-established strategy in place to define and implement these digital solutions. Digitally enhanced technologies and products already widely used in the sector include state-of-the-art ERP systems (enterprise resource planning), cloud solutions, analytics, drones, robotics, handheld technologies and 3D BIM (building information modeling). Factors most often mentioned as making the adoption of digital solutions more difficult include lack of integration between systems, lack of trained staff in the area of digital technologies, difficulties in obtaining buy-in for adoption of digital technologies (e.g., skepticism regarding the usefulness of new technology among staff) and clients’ unwillingness to pay for the extra costs of digital solutions.
Slowly adopting new technology

At the conference, speakers agreed that the construction and engineering sector is generally late to the party when it comes to adopting new technologies. Various speakers presented their strategies for improvement and for fostering the use of new technologies and in-house innovation in their companies.

According to Freitas, projects are getting more and more complex: “Just to manage these complex projects effectively and efficiently, adoption of new technologies is a must. But technological innovation is affecting the whole building chain, of course, from design to maintenance and repair.” Among other initiatives, speakers mentioned drones for physical analysis, modernization of their ERP and smart wearables to improve productivity, and health and safety as some of the initiatives they are working on in their companies.

The stakes are high. As Menno de Jonge from BAM explained, our sector is a huge liability for the world’s environment, with 40% of global energy use, 40% of carbon emissions and 50% of use of natural resources. Technological innovation may help to drastically lower the environmental impact of construction and engineering. As far as the economics in our sector are concerned, digital innovation may also help to escape from the vicious cycle of low productivity, low margins and low asset turnover characterizing construction and engineering. Last but not least, a lot is at stake for individual companies, because they may be blown away by competitors old and new; if a company is not disrupting in time, chances are that it will be disrupted.

De Jonge mentioned the joint venture between US-based solutions provider Flex and leading BIM-provider RIB from Germany as a possible powerful disrupter of the sector. But they are definitely not the only external threat: “There has also been a lot of talk about Ikea expanding into residential building. Google is going to build a whole new smart neighborhood in Canada as the main contractor, subcontracting building work to construction companies.”

Freitas also stressed that construction firms run the risk of being relegated to a position of dependency if they don’t provide the fundamental, smart solutions for the challenges confronted by cities and transport links.
Challenges and opportunities

Digital disruption is a challenge, but an opportunity as well. Mijangos, for example, mentioned the trend of an aging population: "If we can provide the smart solutions such as home adaption and home assistance to an aging population, this may become a whole new, profitable business for us. Another area where we can benefit from providing the solutions that society needs is water and energy delivery. In an urbanizing world, problems with water and energy supply may become very urgent. Let us be part of the solution."

In order to avoid becoming the victim of external disruption, fostering internal disruption may be the only alternative. A wait-and-see approach is not a viable option. The external disruption of the taxi sector by the likes of Uber was mentioned to underline this argument. To disrupt instead of being disrupted, some companies combine internal and external innovation. Mijangos, for example, explained that Sacyr cooperates with various startups: "We are interested in any innovative idea, internal or external, that adds value to our business. We innovate in-house, but we also make economic contributions to various startups, and we cooperate with them, allowing them to test their solutions in our projects. Inside our company, we reward people and try to motivate them in many ways."

De Jonge mentioned the huge opportunities for cost savings offered by digital innovation: "My best guess is that we can reduce costs by at least 20% in our sector by the year 2025 if we really embrace digitalization." His BAM colleague Remmelts specifically mentioned failure costs, the scourge of our sector, as an area where digital solutions may help: "Failure costs constitute no less than 15% of total costs in our sector. Imagine we could reduce these failure costs drastically by better digital planning, designing, operating and monitoring."

Therefore, companies such as BAM are consciously fostering internal disruption by teams focused on digitalization and automation, in order for the company to be prepared for the future. BAM considers itself a front-runner in digital innovation. It has embedded digital innovation in its business in a digital construction section headed by De Jonge. He explained how BAM is trying to introduce digital innovation in the whole construction chain, endeavoring to make it before we make it (first digital, then physical construction). Individual projects and pilots by BAM with advanced digital techniques include the full life cycle BIM implementation across the entire BAM group, a platform for kitchen configuration in social housing projects and augmented reality techniques in hospitals for servicing of sprinkler installations. One of De Jonge’s goals: “I want BAM to be a full BIM company by 2020 at the latest. Whereas many companies only incorporate BIM in the design phase, we incorporate it into the whole life cycle of our projects. Every euro invested in BIM in the construction and operating phase has a much higher return than a euro invested in BIM in the design phase.”

Moreover, the use of new (digital) technology may help the sector to overcome an old, expensive problem: the fact that we tend to start each new major infrastructure project from scratch. We often act as if we are building a whole new prototype with each new project, as if there had not been similar projects before. With the aid of digital technology, it is much easier to meaningfully store information about practical experiences gained and solutions applied during a large project. Using this information in the first phases of a new project will help to reduce costs and improve the quality of specific solutions. Thus, it should be much easier to benefit from experiences gained and solutions designed in previous, similar projects.
Buy-in needed

According to Bert Bardoel from EY, buy-in from managers and other employees is an essential condition for a successful strategy of digital innovation. As mentioned before, lack of enthusiasm for digitization is considered by many companies to be one of the main roadblocks hampering digital innovation. In this context, it is vital to make the sector attractive for young people who are eager to develop and implement exciting digital solutions in a challenging practical environment. This is a difficult task.

In the words of Remmelts, “there is often a gap between the digital innovation in the office in Europe and its practical implementation on a construction site in Africa.”

This makes motivating people even more important. According to De Jonge, “real motivation comes from sharing successes in your organization. People should talk about their digital successes, communicate what they do throughout the company. It is not just about paying them well, it is about making them feel like forerunners, people that are changing the future by shaping it themselves. Support from the top is important, too, in this context. Management should acknowledge the need for digitalization and support the frontrunners also.”

A complicating factor when promoting digital innovation is that it is difficult to demonstrate the exact financial benefits of each individual initiative. Various speakers expressed this in different ways. According to Mijangos, “you have to assume and accept that some of the money you invest in innovation will be lost, because the solution doesn’t work.”

De Jonge said that the digital revolution in the construction and engineering sector is like the car industry at the beginning of the 20th century: “We know it is going to conquer our world, but we don’t know exactly where it is heading for.” And Remmelts, an engineer himself, said: “I know all the financial people present at this conference are not going to like what I am going to say, but you have to believe in it. You can’t measure all the benefits of each individual project beforehand. If you don’t believe in digital innovation, don’t spend money on it.”
In conclusion: a brief summary of takeaways

At the end of the conference, Buisman summarized the main topics discussed, facts mentioned and conclusions drawn. Our sector is currently growing at a rate of 1% to 2% in the EU and 3% globally, which is encouraging. Margins, however, still remain low; major engineering and construction companies do not exceed 1% to 2% in operating margins, and the sector continues to suffer from low productivity and low asset turnover.

If going digital and embracing new technologies is the future for our sector, it is surprising that investment in R&D is very low in the EU and the US, compared to China and Japan. Taking a proactive stance in the digital innovation of the sector is an important task for all major companies in our sector. Connecting digital innovation in the office and lab with the practical reality in far-off building sites is one of the main challenges, as is the need to get buy-in for digital initiatives.

Spain is doing well; it delivered on its promise of 3% GDP growth. In the construction industry, however, the country still has a long way to go before it reaches pre-crisis level. The Spanish PPP pipeline is seen as an opportunity, as is the reprivatization of a set of motorways. Even taking into account the continuing political uncertainty in Catalonia, Spain is expected to obtain healthy growth figures in the near future.

As for finance, companies should seize the current low interest rate environment to refinance long-term commitments and insist on flexibility from financial institutions. M&A activity will probably continue to increase. In M&A deals, EBITDA multiples are very different for different sectors and normally much higher for engineering than for construction companies.

Among important trends in our sector, the challenge posed by Chinese companies should be answered by trying to level the playing field, e.g., in fair tender procedures across the board. Brexit was seen as an opportunity more than a threat by various companies present.

Skills shortage in the sector has been a problem for 20 years and continues to be so. The sector is still incapable of translating the reality of “prototyping and starting from scratch” in each new project into higher margins. The application of new digital technologies may help to reduce this problem by learning much more effectively from previous, similar projects.

In short, in order to achieve healthy, sustainable growth, our sector must get to grips with old, persistent problems and with the new challenges presented by rapid technological development and digitalization. As inspirational speaker and change agent Jim Lawless recently said at an EY meeting, in the current environment, “the ability to transform and imagine is a core competency.”
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