

# INSIGHT



**Prysmian** Quarterly magazine  
Group 01 | 2017

## 2016 RESULTS REWARDED THE GROWTH STRATEGY

On the side  
of shareholders

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First offshore  
connection in France

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Rebuilding America



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# GROWTH STRATEGY REWARDED

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**Editorial Team  
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**2**016 was a record year at Prysmian Group in terms of profitability, as Adjusted EBITDA reached an all-time high of €711 million, with the target achieved in the high-end of the guidance range. But it was also a year of acceleration of a growth strategy based upon four pillars: continuous innovation and R&D investing, engaging talent in the company's future, sustainability as a secular commitment, and acquisition of strategic assets. Valerio Battista, CEO of Prysmian Group, outlined that behind the jump in profit there was the excellent sales performance in higher value-added businesses, while it was also fostered by the company's focus on operational efficiency and manufacturing footprint optimisation.

The Group now looks at 2017 as a year of consolidation of its market leadership and of further improvement of profitability in the Submarine cables business. It will also continue to rationalise its activities with the objective of achieving projected cost efficiencies and greater competitiveness in all areas of business, continuing to build on the achievements of 2016. That is why in the FOCUS ON section, we outline Mr Battista's vision of acting in the interest

of all stakeholders and shareholders by making sustainable decisions, including from a financial standpoint.

In our GLOBAL SCENARIO, we look at the 'new industrial revolution', generated by fibre optics and impacting all sectors of the economy. We also consider the benefits of fully exploiting innovation, from augmented reality to digital holograms, looking at how Prysmian is exploring all possible applications of the digital revolution and how to implement them.

DOING BUSINESS did bear fruit in the last few months as Prysmian Group secured the first-ever French offshore connection, thanks to a contract worth than €300 million. This came alongside the acquisition of the production facility of Shen Huan Cable in China, that will give the Group an independent HV offer in the country, significantly improving competitiveness, flexibility and efficiency.

In this issue of INSIGHT we begin a new session called TRACKING THE FUTURE, sharing ideas and insight from inside the Company on the factors that are driving change in the global markets of power and telecommunications.

# PROFITABILITY AT HISTORIC HIGH

**Fy 2016 results showed the Adj. Ebitda target achieved in high-end of guidance range, up 14.1% Over previous year to €711m, highest ever in the company history. Strong growth by high-tech business.**

**T**he full year results for 2016, approved by the Board of Directors of Prysmian Group, reached an all time high in terms of Adjusted EBITDA, that rose by 14.1% over the previous year to €711 million, with the target achieved in the high-end of the guidance range. “We have closed 2016 on a note of profitability, at highest ever in the company’s history,” commented Valerio Battista, CEO of Prysmian Group. Mr. Battista noted that excellent sales performance in higher value-added businesses has been reflected in a significant improvement in profitability, also fostered by the company’s focus on operational efficiency and manufacturing footprint optimisation.

The technological innovations introduced by the Energy Projects business, like the new 600 kV P-Laser cable and the 700 kV PPL cable, represented milestones for the entire industry. With a view to

providing a turn-key service, significant progress has also been made in developing the project engineering and execution capabilities, also thanks to expansion of the fleet of cable-laying vessels. Driving the performance in Telecom business was the renewed competitiveness in fibre manufacturing and the creation of manufacturing centres of excellence, that allowed the business to make the most of opportunities in a growing market.

Mr. Battista said that the outlook remains positive, both for submarine cables and systems, “where we aim to win new power interconnection and offshore wind farm projects”, and for the Telecom business, “where optical cable demand remains high”. Strong sales performance and improved profitability have helped to further strengthen the financial structure, with a better net financial position than expected.

## A STRATEGY SUCCESSFULLY DEPLOYED

**Last year saw a strong advancement in the Group growth strategy based upon four pillars: continuous innovation and R&D investing, engaging talents in the company future, sustainability as a secular commitment, acquisition of strategic assets.**

Resources employed in R&D amounted to around €84 million in 2016, confirming Prysmian aim to position itself as an energy revolution protagonist, with the development of technologies for efficient and sustainable electricity networks, including the launch of the new P-Laser 600 kV cable. With Fast Forward Operations, the Group launched a major project to improve the competitiveness of its industrial footprint.

Prysmian stands out for the innovative people development policies. In 2016 over

1,000 employees have passed through the doors of the Group Academy and the new Manufacturing Academy. The Graduate Program, now in its sixth year, resulted in the recruitment of 50 new high-potential resources; A new edition of the “Make it” recruitment scheme and the new “Sell It” programme were launched.

Sustainability, driver of growth. The economic value generated by the Group amounted to €1,710 million in 2016, up 8% on 2015. The Group has continued to devote ever more attention to Corporate Social Responsibility, with the adoption of global standards. The Group’s scoring in the DJSI improved to 76 points.

The acquisitions of Shen Huan Cable in China and Corning copper data cables in Germany showed the willingness of pursuing an independent growth strategy. The Group also moved ahead with the integration of past acquisitions, namely Gulf Coast Downhole Technologies (GCDT) in the US and Oman Cables Industry.

Sales grew organically by 1% to €7,567 million, with the most significant contribution coming from positive performances by the Energy Projects segment and by the Telecom segment.

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Adjusted EBITDA was sharply up, +14.1% at €711 million, the highest on record since the company’s birth. Margins improved across all businesses, with the sole exception of Oil & Gas, with Adjusted EBITDA at 9.4% of sales, up from 8.5% in 2015.

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Net Financial Position improved significantly at €537 million as of end December 2016, from €750 million one year earlier. Free cash flow (levered) excluding acquisitions and disposals in 2016 reached €331 million.

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Net Profit posted a strong rise of 22.4% from 2015 to €262 million. The Board of Directors recommended the payment of a dividend of €0.43 per share.

## ENERGY PROJECTS: POSITIVE OUTLOOK AFTER STRONG 2016

**FY results showed a record performance by submarine cables along with strong growth for high voltage underground. New projects expected point to a positive development in year 2017.**

The Energy Projects Operating Segment reported sales at €1,634 million in 2016, posting organic growth of 18.5% on 2015. Profitability also improved significantly, with Adjusted EBITDA climbing 17.6% to €260 million, thanks to constant focus on operational efficiency and improved project execution capabilities.

Sales of Submarine Cables and Systems recorded double-digit growth, driven by progress in the completion of several projects already booked, such as Western Link, Dardanelles Strait, Greece-Cyclades, the Panay and Cebu Negros interconnections and the connections for major offshore wind farms like Dolwin3 and 50Hertz in Germany. The submarine order book stood at a strong €2,050 million as of December 31, 2016, with a positive outlook for 2017 both for interconnections and for offshore wind farm connections. In particular, the Group will be able to leverage on its upgraded installation assets, with a fleet that can now counts on 3 cable-laying vessels and on the development of more and more turnkey-oriented capabilities, from project engineering, to cable design and manufacture, and the monitoring of network operation and efficiency using technology developed by Prysmian Electronics.



Sales of High Voltage Underground transmission cables grew, reporting a slowdown only in the last quarter due to the phasing of certain projects. The biggest impetus came from North America and APAC, while the situation was less brilliant in Europe, except for France, and in Russia,

due to political uncertainties. In China the Group has opted to pursue an independent growth strategy in the High Voltage sector, after divesting the stake in Baosheng HV Cable JV, and acquired the assets of Shen Huan Cable. The order book stood at €350 million as of December 31, 2016.

## ENERGY PRODUCTS MARGINS IMPROVED AMID SLOWING SALES

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**A favourable business mix and OCI consolidation helped profitability to increase with Adjusted EBITDA up 10.9% on 2015 to €280 million. Trade & Installers sales were down while stayed stable in Power Distribution. Among Industrials, Specialties & OEM experienced a troubled performance, with sharp drop by Renewables. Elevators and Network Components were positive.**

The Energy Products Operating Segment overall sales amounted to €4,469 million, posting an organic decline of -3.6%, primarily attributable to challenging conditions on the South American market.

Sales of **Energy & Infrastructure** amounted to €3,016 million, of which €537 million contributed by Oman Cables Industry, while Adjusted EBITDA climbed 20.1% to €154 million, of which €37 million from the additional contribution of fully consolidating OCI, with a margin on sales improved at 5.1% from 4.6%.

Results for **Trade & Installers** were adversely affected by the challenging conditions on the South American market and by the slowdown in Central, Eastern and Southern Europe, while positive performances were recorded in Northern Europe and Australia. Constant attention to optimisation of the manufacturing footprint and the favourable sales mix, combined with the first-time consolidation of OCI, sustained margins during the year.



Power Distribution reported a stable underlying sales trend, with a fourth-quarter slowdown in line with expectations. Positive performances were recorded in North America and APAC, while the scenario remained weak in South America.

**Industrial & Network Components** sales amounted to €1,343 million, posting negative organic growth of -4.6% mainly due to the instability of investment demand in certain industrial sectors linked to the capital goods market. Profitability took

a positive turn, with Adjusted EBITDA improved to €127 million from €122 million with margins rising to 9.5% from 8.1%. Specialties & OEM had a troubled performance, while Elevators enjoyed significant growth thanks to excellent sales performance in North America and EMEA. The Automotive business reported stable volumes, accompanied by a good increase in Adj.EBITDA margins, Network Components recorded a good performance for High Voltage products, offset by soft demand for Medium and Low Voltage accessories.

## OIL & GAS SHOWED SIGNS OF STABILISATION IN Q4

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**The impact of the drop in oil prices eased somewhat in the final part of the year while the segment continued to focus on optimising manufacturing footprint and supply chain efficiency. Consolidation of Gulf Coast supports Down Hole Technology.**

The **Oil & Gas Operating Segment** was hit hard by the oil price trend in 2016, which affected investment decisions, despite signs of stabilisation in the fourth quarter, particularly in the Core Oil & Gas business. Sales came in at €300 million, down organically 29.3% on 2015. Adjusted EBITDA was also down to €8 million from €16 million, with a margin on sales dropped to 2.7% from 3.8% in 2015.

In the Core Oil & Gas Cables business, the collapse in demand particularly concerned drilling activities, offshore projects and the Electrical Submersible Pumps segment, albeit a stabilisation was reported in the fourth quarter. With the

aim of stemming the erosion of margins, the Group remains strongly focused on optimising its manufacturing footprint and achieving cost efficiencies in the supply chain.

In the **SURF business** (Subsea Umbilicals Risers and Flowlines), the performance of Umbilicals was in line with expectations, reflecting the slowdown in orders from Petrobras in Brazil. The **Downhole Technology business** reported a slight slowdown in sales and profitability in North America, partially offset by the consolidation of Gulf Coast Downhole Technologies, acquired in the second half of 2015.

## TELECOM PROFITABILITY CONTINUED TO IMPROVE

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**Increasing demand for optical cables and positive performance for multimedia solutions led to healthy 8.5% Organic growth of sales driven by Australia.**

The **Telecom Operating Segment** sales amounted in 2016 to €1,164 million, with organic growth of +8.5% driven by healthy demand for optical fibre cables and by strong demand for copper cables in Australia. Adjusted EBITDA climbed to €163 million, posting an increase of +22.0% on 2015 and an improvement in margins to 14.0% from 12.1% in 2015.

In the **Telecom Solutions** business, the positive performance of optical cables

and fibre reported another acceleration in the fourth quarter with excellent results in North America, France and Eastern Europe. Of particular note is how the Group managed to offset the decline in optical cable volumes in Brazil by repositioning its offer to OPGW cables for overhead networks. Demand for copper cables was lively in Australia, where the Group supports the technological choices of its customer National Broadband Network. The



Group's competitiveness has benefited from the investments made to improve fibre manufacturing efficiency and to create new centres of manufacturing excellence.

**Multimedia Solutions** posted a positive performance in Europe, also thanks to the production capacity enlargement for copper data transmission cables, with performance in South America also good. The high value-added business of **optical connectivity** accessories had positive results, fostered by the development of new FTTx networks in Europe, namely in France, Spain and the Netherlands.



## BROKERS APPRECIATED SOLID FY RESULTS

Brokers' comments after the release of FY 2016 results were positive, with all analysts appreciating the solid P&L statement in line with expectations and the better than expected cash generation. All broker houses confirmed their recommendations, with several increases in target price, including JP Morgan (from 25 €/share to 26.5 €/share), Mediobanca (from 23.1 €/share to 26.8 €/share) and Morgan Stanley (from 27 €/share to 27.5 €/share). Bank

of America–Merrill Lynch confirmed its BUY rating and target price, highlighting positive indications on Telecom business and sound order intake expected in energy projects. JP Morgan appreciated Prysmian consistent results confirming its strong track record over the past decade. Equita confirmed its Neutral view after solid P&L and better than expected cash generation, highlighting uncertainties over the impact of production refocusing in China.

## Leadership consolidation expected in Submarines

The macro environment in 2016 saw modest and mixed growth for Europe's major economies, partially eroded by the uncertainty generated by the outcomes of referenda held in the United Kingdom in June and Italy in December. In the United States growth was moderate and less intense than in 2015. Among emerging economies, Russia experienced a progressive stabilization, while Brazil remained challenging. After a slow start, the Chinese economy benefited from the economic stimulus package and growth targets were achieved.

In such a context, the Group's expectation for 2017 is that demand in the cyclical businesses of buildings' and medium voltage cables for utilities will be in line, with a general stabilisation in prices.

With Energy Projects seeing a growing market, the Group expects to consolidate its market leadership and improve profitability in the Submarine business, with a slight decline in the High Voltage underground especially due to phasing of its manufacturing footprint in China. In Oil & Gas, the gradual strengthening of oil prices, if confirmed, should lead to a slight recovery in demand in the second half. In Telecoms, the underlying growth in turnover is expected to stay strong, thanks to North American and European markets, while a gradual stabilisation in volumes is expected in Australia. Prysmian Group is continuing in 2017 to rationalise its activities with the objective of achieving projected cost efficiencies and greater competitiveness in all areas of its business.

# ON THE SIDE OF SHAREHOLDERS

CEO Valerio Battista's vision of being at the helm of an international public company was explained in a recent interview with a primary financial daily.



*Valerio Battista  
Prysmian Chief  
Executive Officer*

**“Act in the interest of all stakeholders and make sustainable decisions, including from a financial standpoint.” With these very clear words, Prysmian CEO Valerio Battista described his vision of being at the helm of an international public company in a wide-ranging interview recently given to *Il Sole 24 Ore*, the most influential Italian financial daily.**

**P**rysmian Group can, in fact, be defined as a truly public company as it has no majority or control shareholder. Only two investors exceed the threshold of 2% of the equity capital, Clubtree and Norges Bank, while the company's employees own an approximate 1% interest, with the remaining spread in the hands of a number of institutional and private investors. But, Battista noted, at Prysmian, “Control is exercised not only on the basis of the number of shares, but also through results and the fact that all shareholders follow you.”

Despite its widely held shares, the company's management has remained stable since its initial listing in the Milan Stock Exchange in 2007. “It is impossible to protect against a possible attempt to take over a company,” Battista explains. “If the interests of all stakeholders are respected, then the problem of sale to third parties is not an issue. A public tender offer would also create value.”

In Italy, family-owned companies represent over 70% of all businesses. When asked about the advantages of being a public, rather than family-owned, company Mr.



Battista noted that this is a very Italian issue: “It poses succession problems that may result in less-than-optimal leadership of the company. If the entrepreneur lacks the foresight to create an adequate succession process within the family, he or she must have the courage to pass the sceptre to someone from outside the family.”

The commitment of Prysmian to Italy was confirmed recently with the decision to stay headquartered in Milan, in a new building located in **the heart of the high-tech district of the industrial capital of the country.**

## A €500 MILLION EQUITY-LINKED BOND WELCOMED BY MARKETS

**The deal confirmed the strength of the Prysmian equity story.**

Investors fully subscribed the issue of a €500 million convertible bond by Prysmian Group, which was zero-coupon and with a five-year maturity. The initial price for the conversion of the bond into ordinary Prysmian shares will be €34.2949, representing a 41.25% premium above the volume-weighted average price of Prysmian ordinary shares on the Milan Stock Exchange between launch and pricing.

“We have successfully completed an important transaction which allows us to carry out a meaningful share buy-back, while retaining full flexibility to pursue potential external growth opportunities,” explained Pier Francesco Facchini, Prysmian’s Chief Financial Officer. He added that “the terms of the transaction are very competitive, confirming the strength that Prysmian’s equity story maintains despite a highly volatile macroeconomic environment.” The bond can be converted into ordinary shares, subject to the approval by the Company of capital increase with exclusion of preferential subscription rights to be reserved solely for the service of the conversion of the bond itself. After such approval by the General Meeting, the Company shall issue a notice to Bondholders. The Company shall then settle any exercise of conversion rights in Prysmian ordinary shares issued pursuant to the capital increase or, at the Company’s sole discretion, existing Prysmian ordinary shares already held.

Should the Capital Increase not be approved and should the Company not publish the notice, each bondholder may request the early redemption in cash. The Company will have the option to call all but not some only of the outstanding Bonds at their principal amount from 1 February 2020, should the value of shares exceed 130% of the conversion price for a specified period of time.

The net proceeds from the Bond issue will be used to: pursue the Company’s potential external growth opportunities, fund share repurchases, or for general corporate purposes. BNP Paribas, HSBC, JP Morgan, Mediobanca and UBS acted as Joint Global Coordinators and Joint Bookrunners of the offering.

# SPREADING THE DIGITAL CULTURE IN ITALY

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**The future prospects generated by fibre optics and the new installation technologies, impacting all sectors of the economy, were discussed at a conference organised by Prysmian and IATT.**

The universe of services and applications that will be developed over the next few years within the digital transformation that Italy needs is so vast as to make their impact difficult to predict. It is for this reason that the broadband network must be designed and deployed so that it is solid and capable of supporting future innovations. This was the central theme, outlined by several top industry and academy speakers, being debated at the conference 'Kairos: digital culture through fibre optics and new installation technologies', organised in Rome by Prysmian Group and IATT, the Italian Association for Trenchless Technology.

**The goal of the event was to analyse** the opportunities and future prospects generated by fibre optics and the new installation technologies, emphasising the importance of a real digital culture involving all sectors of the Italian economy, from manufacturing to health, moving through the Internet of Things to communications and entertainment. The industry's main players gave their contribution: Italtel, Sirti, Infratel Italia

and the Department of Management and Technology of Milan's Bocconi University. Carlo Scarlata, CCO at Prysmian Italia, stated that the innovation that can be brought into the fibre optic field and in which Prysmian Group continues to invest is crucial, just as trenchless technologies are essential for ensuring high standards of quality, eco-sustainability and cost effectiveness. Paolo Trombetti, Chairman at IATT, predicted that over the next few years, the investments by the Government and private operators will enable our local communities to engage in a major infrastructure scheme that will have a significant impact on the daily lives of millions of people.

**The use of trenchless solutions** puts Italy ahead of other European countries in terms of care for the environment and social costs in the telecommunications sector, while the dissemination of optical fibres is opening-up the era of the Gigabit Internet right at the start of the greatest infrastructure race in the history of mankind, summarised Professor Francesco Sacco, Bocconi University's Department of Management and Technology.

## The economy of reputation

Biblioteca Bilancio Sociale, Italy's most important social reporting organisation, has recognised Prysmian with an award for its reputational value as an expression of **sustainable governance within the company's core business**. The award was assigned at a ceremony at the Milan Stock Exchange. According to BBS, **sustainable thinking has a predisposition to become pandemic if well structured**. Two kinds of companies were allowed to take part in this competition: big companies, like Prysmian Group, and companies with up to 500 employees. Among the other winners, Costa Cruises and Kellogg, as well as EcoPneus, a small business committed to the recycling of worn-out tyres.

# Fully exploiting the digital transformation

**From augmented reality to digital holograms: Prysman is exploring all the possible applications of the new innovative tools and implementing them.**

Over the years, Prysman Group has developed major projects on themes such as ERP and business intelligence, using typical waterfall methodologies. As the results of this strategy are now consolidated, the company is focusing on more agile approaches, with a number of pilot projects in the CRM field. “We have applied scrum methodologies in the CRM area and limited the technical documentation as much as possible, seeking to be leaner than usual although still a long way from an agile approach as such,” explained Stefano Brandinali, Prysman Group CIO. Thanks to this approach, Prysman can also rethink the design of its digital touchpoints, and

is in fact finalising a project involving 29 websites revamped using a glocal philosophy.

**In this way, a project is considered successful** the more it deviates from the initial forecasts, which is exactly the opposite of traditional methodologies. Given the company’s manufacturing purpose, Prysman is deepening its digital focus primarily on two significant areas: Digital for Operations, which is part of Industry 4.0, and the world of Smart Office and Smart Working. “In the Digital for Operations area, we are assessing the use of drones for automating warehouse inventories. There are still no industrialised solutions. We are interfacing with a startup to develop a pilot project,” explained Brandinali. At the same time, Prysman is evaluating the proposals of a number of potential partners on the themes of augmented reality for plant training and remote assistance processes.

**At the centre of the Industry 4.0 concept is innovation.** And that has led to many interesting possibilities. One consists of digital holograms, that can play an important role in the training of line personnel: Prysman Innovation Lab is currently approaching this pioneering theme. Other possible applications include 3D printers, to be used in design activities or for moulding line components, or Chatbots that enable specific customer segments to be reached in a targeted manner, exploiting the potential of artificial intelligence and cognitive computing.

## Compliant to Internet of Things

Prysman has recently finished moving the entire HQ workforce to a new building, built with the most advanced eco-sustainable technologies and based on the critical importance of the human factor and the pillars of digital transformation: paperless, collaboration, digitalisation of working spaces and tools. 2017 will see Prysman focusing on developing the new Manufacturing Execution System, that will be innately ‘Internet of Things-compliant’, with the long-term objective of being able to sensorise the various production lines so that valuable on-site information can be obtained through access to the big data world.





# HOW R&D DRIVES GROWTH AND CREATES VALUE

**Marcelo Andrade, Head of R&D at Prysmian Group, told the international high-tech magazine Wired how the company is working to develop the most advanced technologies, while also taking care of sustainability and enhancing people's talent.**

In the cable industry, innovation primarily means designing and manufacturing constantly better and more competitive products and systems. But innovation is also the work that Prysmian carries out daily as part of the efforts to improve other connected areas, such as logistics or accounts. But Marcelo believes there is still much to do both in the design and the materials used to manufacture cables. "Our commitment to innovation is high, as demonstrated by our significant R&D expenditure: some €83 million last year in 17 research centres across the world," he stated.



Nowadays, Prysmian Group can boast technology leadership in the High Voltage Direct Current cable systems, a fact confirmed by the record recently

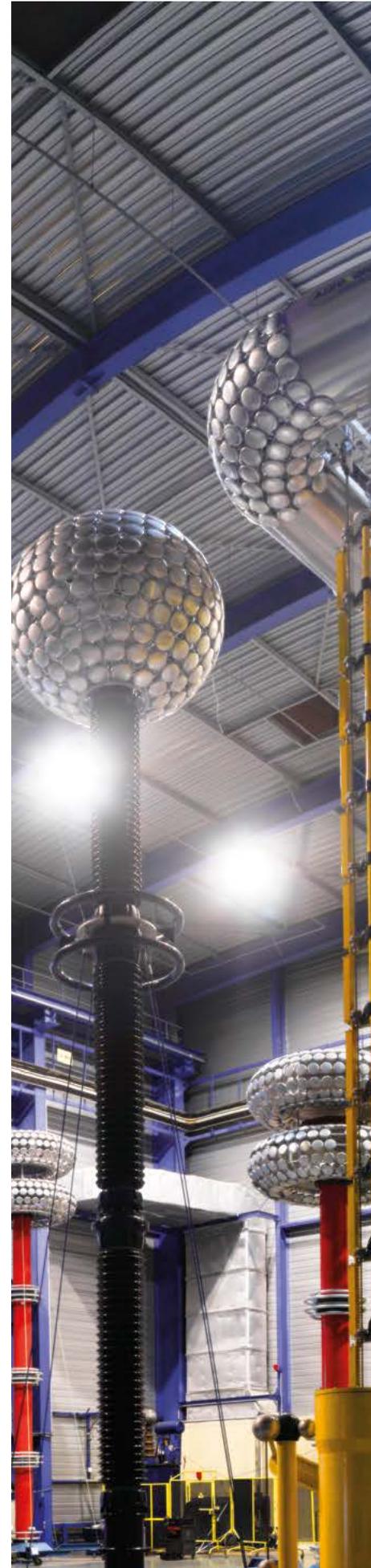
announced of 600 kV, while in the submarine power connections it works to lay cables even at record depths.

Andrade states that, "In the power transmission products and systems, we are working on reaching an increasingly higher voltage, and in these fields materials can make the difference: they have to be lightweight, but also exhibit the highest mechanical performance."

For Prysmian a cable is not just the medium to connect point A to point B: "We develop solutions," points out Marcelo, "In terms of control and monitoring of cables as a system, moving towards the idea of a cable as an active product, such as the recent Pry-Cam Grids system, devoted to the online testing and monitoring of networks."

## Projects that try to imagine the future of the cable and energy market.

Marcelo explains that Prysmian has adopted a long-term perspective, which includes exploring the nanotechnologies field with the aim of obtaining new materials with extremely high performance: "We are working with graphene, carbon nanotubes, nanofillers, to mention but a few: all these materials, just as a special spice in a gourmet recipe, give a sort of special taste, and allow us to distinguish ourselves from our competitors."



## A CALL TO STRENGTHEN MANUFACTURING IN EUROPE

### Giants in action

Between 2000 and 2014, the share of manufacturing in total EU output fell from 18.8% to 15.3%, while 3.5 million manufacturing jobs were lost between 2008 and 2014. Meanwhile, countries around the world are putting industry at the very top of their agendas. The 'Make in India' strategy aims to ensure India is "the next manufacturing destination" and 'Made in China 2025' seeks to turn China into the "leading manufacturing power". The recent US shift towards 'America First' will inevitably have a strong impact on their industrial policy.

Europacable, the voice of leading European cable producers, has signed a call together with 91 other European associations for Brussels to take action to ensure the EU remains a competitive industrial power.

Europe is the cradle of the manufacturing industry and has been at the forefront of industrial revolutions and technological innovations. The industry directly employs over 34 million people across all Member States, in supply chains comprising hundreds of thousands of SMEs and larger suppliers. It also indirectly accounts for millions of additional jobs in related sectors.

Yet, as other countries around the world put their industries first, the time has come to raise the alarm about considerable challenges the European manufacturing industry is facing.

Together with 91 European manufacturing industries, representing a diverse range of sectors, Europacable calls on the European Commission to:

- reaffirm its commitment to reaching the target of 20% of GDP from industry, with an ambitious and realistic timeline;
- adopt an Action Plan to tackle the challenges that the industrial sectors are facing, in the framework of a Communication that would include concrete steps and milestones; and
- commit to implement this Action Plan in a timely manner and regularly report on progress.

At the beginning of his mandate, European Commission President Jean-Claude Juncker identified the reindustrialisation of Europe as one of his top priorities and confirmed the objective of increasing the share of industry in the European GDP to 20% by 2020. As we approach the preparation of the next Multiannual Financial Framework, it is vital for the European Commission to act and help the EU remain a competitive global industrial power playing in a fairer world market.

# REBUILDING AMERICA

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**The massive infrastructure package promised by President Trump was welcomed by the markets but has still to overcome several problems. First of all, that of financing it.**

**T**he market is betting hard on one of Donald Trump's biggest promises: revitalising US roads, bridges and airports. The president is committed to deliver a massive rebuilding package that is expected to create jobs in the millions, while capital expenditure could top one trillion dollars over a multi-year horizon. The programme, that sparked enthusiasm in Wall Street in the first few weeks of the new presidential tenure, is to be handled by Elaine Chao, a Taiwanese-American who was Trump's pick to lead the Transportation Department.

She is now working to establish an infrastructure 'task force' and is expected to present before Congress a to-do-list to be converted into legislation as soon as before the August recess.

Although the contours of the proposal have yet to emerge, President Trump has called for massive transportation investments, with proposals ranging from \$500 billion to \$1 trillion. Some legislators fear that the federal budget simply can't afford such a huge amount of money, but the plan is to involve mainly private financial resources that would be attracted, thanks



to a tax-curbing scheme. Trump and his team have shown a strong preference for drawing-in money from the private sector to pay for infrastructure priorities with the idea to offer financial incentives to private companies that want to back transportation projects.

Under that model, known as a ‘public-private partnership’, firms would bid on a project, build and maintain it for a set period of time and recover costs through tolls or set state payments. One proposal that Trump has floated would provide \$137 billion in federal tax credits to companies that finance transportation projects, which he claims would unlock \$1 trillion in investment over 10 years.

But Chao has not ruled out some direct federal spending on transportation. Still, even if the package requires the government to contribute some public funding for infrastructure, Trump is almost certain to rely heavily on private financing — especially since that funding mechanism is far more likely to garner the support of Capitol Hill Republicans. Some legislators also pointed to regulatory reform as an important component of

any infrastructure plan, saying there are “hundreds” of regulations that should be rolled back.

However, there is certainly a broad consensus that American infrastructure needs an upgrade. The American Society of Civil Engineers is already complaining that a 13-figure investment might fall short of the \$3.6 trn required to bring roads, airports, pipelines and the like up to par. But the core of the issue is not the amount that will be spent; it is how that money will be allocated. The answer appears to be that it will be spent by private companies on projects where they can turn a profit. Private investors fix roads to get a return on their investment. That means the projects undertaken will be ones that make money through user fees—in most cases, tolls. But if there are tax incentives to investors, that could bode well for more investments in new toll facilities, according to the International Bridge, Tunnel and Turnpike Association. The plan might appear to save Americans money because it doesn’t require taxpayer funding, or at least not much of it, even if people would still have to pay later on, when they actually use the facilities.

## Major listed projects

A document provided last month to US governors offers an early glimpse of the wide array of projects that could be funded by a big infrastructure package. Projects listed include rehabilitation of some major airports and rail stations, such as Union Station in Washington, highway and bridge projects, such as an overhaul of the Arlington Memorial Bridge in Virginia, and mass-transit projects, such as the proposed Purple Line light-rail system in Maryland. There are also potential overhauls of the nation’s air traffic control system, hydroelectric plants and energy grid, as well as ports and waterways. The preliminary list also includes the overhaul and expansion of several airports, including in St. Louis, Kansas City, and Seattle. There are several potential repairs to major highways, including Interstate 95 in Pennsylvania, North Carolina and Florida.



# GETTING READY TO REDESIGN ENERGY

**Energy market drivers are rapidly changing. How are new developments affecting demand, infrastructure, distribution, storage and sales?**

**How can the energy industry and the companies that supply it with solutions keep up?**

**S**ystems for generating, storing and transporting electrical power, initially developed in the nineteenth century, are ready for redesign. But which factors determine the changes that need to be made? First, some statistics: global population continues to expand, the average human lifespan is increasing and energy demand in non-OECD countries is rising. All of these factors are changing the way we need to generate, distribute and store power.

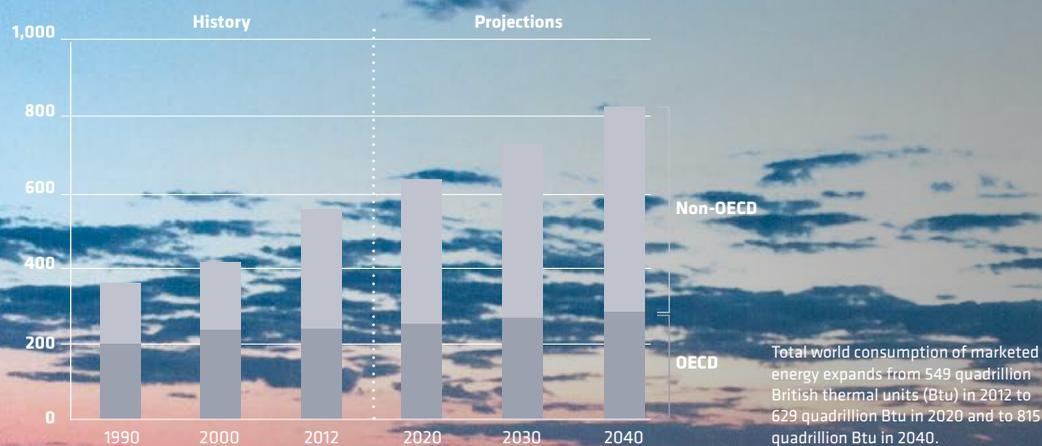
The US Energy Information Administration's International Energy Outlook 2016 (IEO2016) predicts a 48% increase in worldwide energy demand from 2012 to 2040. Economic and population growth in developing non-OECD nations will result in a 71% increase in demand between 2012 and 2040. Half of the expected global energy consumption increase during the same period is expected to occur in non-OECD Asia, including fast-developing China and

India. In OECD economies, energy usage is expected to grow by 18%. Global net electricity generation is predicted to rise 1.9% per year on average. As a result, the need may arise to transport energy to more regions than before, some of which are far from existing grids and routes.

"By 2050, we will be twice as rich as we are now, in terms of GDP, but we cannot afford to use twice the energy we use today," says Hans Nieman, Senior Vice President Energy Products, Prysmian. "The amount of energy required for data processing is already greater than the energy consumed by air traffic. This will only increase further. Furthermore, the diffusion of electric vehicles will exponentially increase electricity demand and infrastructure requirements. Globally, I see two key trends affecting the energy markets, which have far-reaching consequences for both power transport and communications cabling and hardware: decarbonisation and digitalization."

Figure 1-1. World energy consumption, 1990-2040

quadrillion Btu



## Megatrend number one: Decarbonisation

Decarbonisation is, basically, diminished dependency on fossil fuels. Other sources of power have been around for some time, but new (technology) developments are making these sources more attractive thanks to greater yield and reliability. Improved power converter semiconductors and high-efficiency graphene solar cells are just two examples. According to the US Energy Information Administration, hydropower and wind will account for two-thirds of the total increment in increased global electricity generation from 2012 to 2040, making them the two largest contributors.

Hans Nieman states: "In the EU, for example, we have seen the mix of power generation sources shifting towards renewables and a decline of electricity generation from solid fuels and nuclear power. There have been significant developments in renewable energy, mostly solar and wind onshore. Investments in new plants are dominated by renewable energy. Renewables are becoming competitive, notably solar photovoltaic technologies in southern Europe. Onshore wind is close to being competitive, with limited potential for additional cost reductions."

Higher-yield solar power could lead to homes that are not only self-sufficient, but also feed surplus energy into the electrical grid. Data collection and analysis will allow for optimisation of energy usage,

making homes and business far more energy-efficient. This means storage won't be limited to a few vast facilities, but that power will be stored in enormous numbers of smaller batteries and transported across small distances. Energy used to be mainly generated in power stations and transported to local end users through a one-way system.

## Megatrend number two: Digitalisation

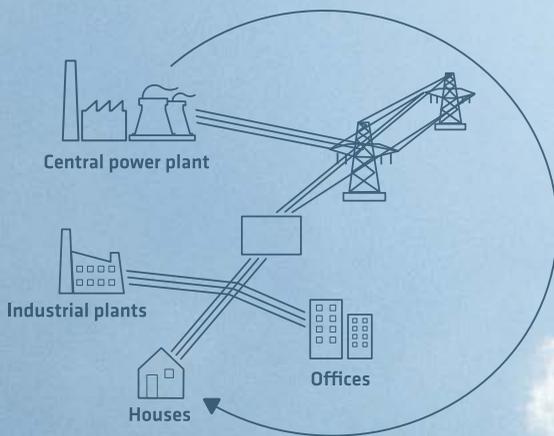
Ongoing and ever-faster digitalisation is expected to optimise many aspects of power generation, storage and distribution. As buildings increasingly act as energy sources (albeit with relatively low and strongly varying yields) there will be increasing need to organise and scale power networks to fit current needs. Measurement and distribution rely on real-time information, collected and analysed using smart metering and smart grid solutions. Integration of power and fiber-optic data cabling is essential to supporting optimisation of energy usage, storage, transport and billing. Convergence of ICT solutions with in-building devices and systems, from lighting to heating, will further enhance efficiency and help manage demand. Eventually, they will probably manage and optimise themselves. However, the introduction of more technology into power systems may potentially raise the risk of cyber attacks.

“Digitalisation enables data exchange in ways which were never before available, and bring users information in a more secure way,” Hans Nieman explains. “Cisco estimates the IoT will consist of 50 billion devices connected to the Internet by 2020. Gain deeper insight with analytics using our IoT System to enhance productivity, create new business models, and generate new revenue streams. Higher levels of interconnection level and increased possibilities for controlling and interacting mean

there’s a stronger need for connected data in power networks.”

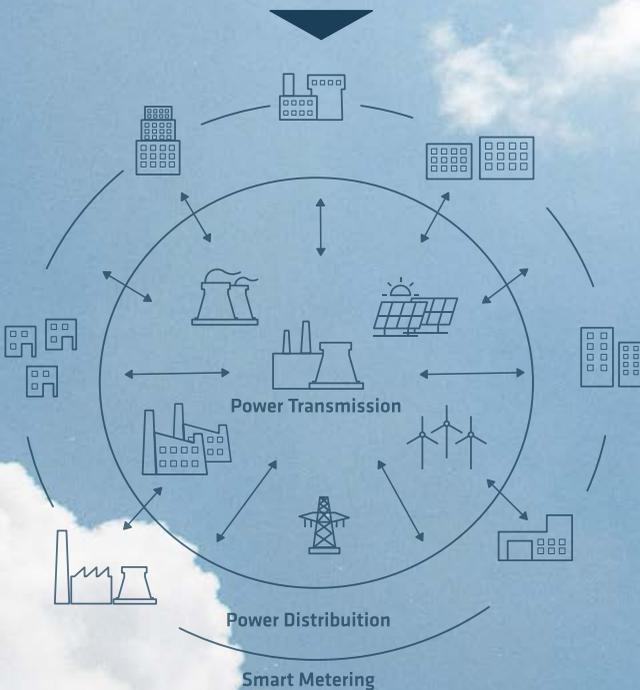
The hybrid power network of the near future will encompass everything from large power plants and long-distance regional power grids to energy-producing homes and offices connected by local micro grids. This will require large-scale grid modernisation to accommodate two-way flow of power and information, as well as integration of mobile devices and smart sensors.

## SMART GRID NETWORK VS. TRADITIONAL GRID



### CURRENT

- Centralised generation
- Monodirectional power flow
- Centralised and limited control
- Manual restoration of failures
- Fixed fares



### FUTURE

- Decentralised generation
- Bidirectional power flow (T&D)
- Decentralised and multilevel control (knots)
- Failure prevention and self-healing concept
- Variable fares

# Designing, building and maintaining networks today

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## What do current technological and societal developments mean for energy and data networks? How will they affect planning, building and maintenance?

For power and data networks, new and more affordable technologies are making design, inspection and maintenance easier and more efficient. To give a few examples, Internet of Things-connected devices, Automated Infrastructure Management and remote inspection drones are all playing a part in this. On the software side, we see increasingly accurate predictive modelling improving design, rollouts and maintenance. These options must be taken into consideration from the outset.

### Cloud, wireless and Internet of Things (IoT)

Looking at data networks, we see more applications and services migrating to the cloud, which has its consequences for WAN architecture. This is resulting in an increase in points-of-presence at colocation facilities. We're also seeing more 'edge data centres', which position bandwidth-hungry content from HD video to autonomous car data closer to the end user in (usually) Tier 2 markets and further from traditional internet hubs.

Growing adoption of wireless across areas such as healthcare, entertainment, hospitality and retail, is playing a significant part in boosting increased bandwidth demand. It is important to note that as speed and bandwidth increase, reach decreases, necessitating more Wireless Access Points (WAPs) to cover a given surface area.

IoT is becoming more widely adopted for everything from enhancing consumer device functionality to facilitating smart building infrastructure and management. Cisco Senior Vice President and General Manager Internet of Things (IoT) and Applications, Rowan Trollope, says that the internet will connect 20 billion devices by 2020. Vast and growing amounts of data generated by the IoT have to be processed, analysed, collated and stored. This

requires a different approach to cabling and networks.

To fully unleash the potential of IoT, many connected devices need to be powered to function as intended and to stay connected to the internet. However, growing, increasingly complex systems are spread across ever-larger geographical areas. A recent report from ABI Research states that IoT market growth depends on adoption of no cellular low-power wide-area networks (LPWANs) that can provide a solution for large, geographically dispersed networks. This, in turn, requires standardisation amongst vendors, stimulating the IoT ecosystem.

A commonly used, increasingly popular solution is Power over Ethernet (PoE), which combines energy and data transmission, allowing network devices to be powered using copper data cabling. The coming generation of PoE can provide 90 Watts, which means increased heat build-up, requiring additional cable management steps.

### The power of data and increasingly intelligent networks

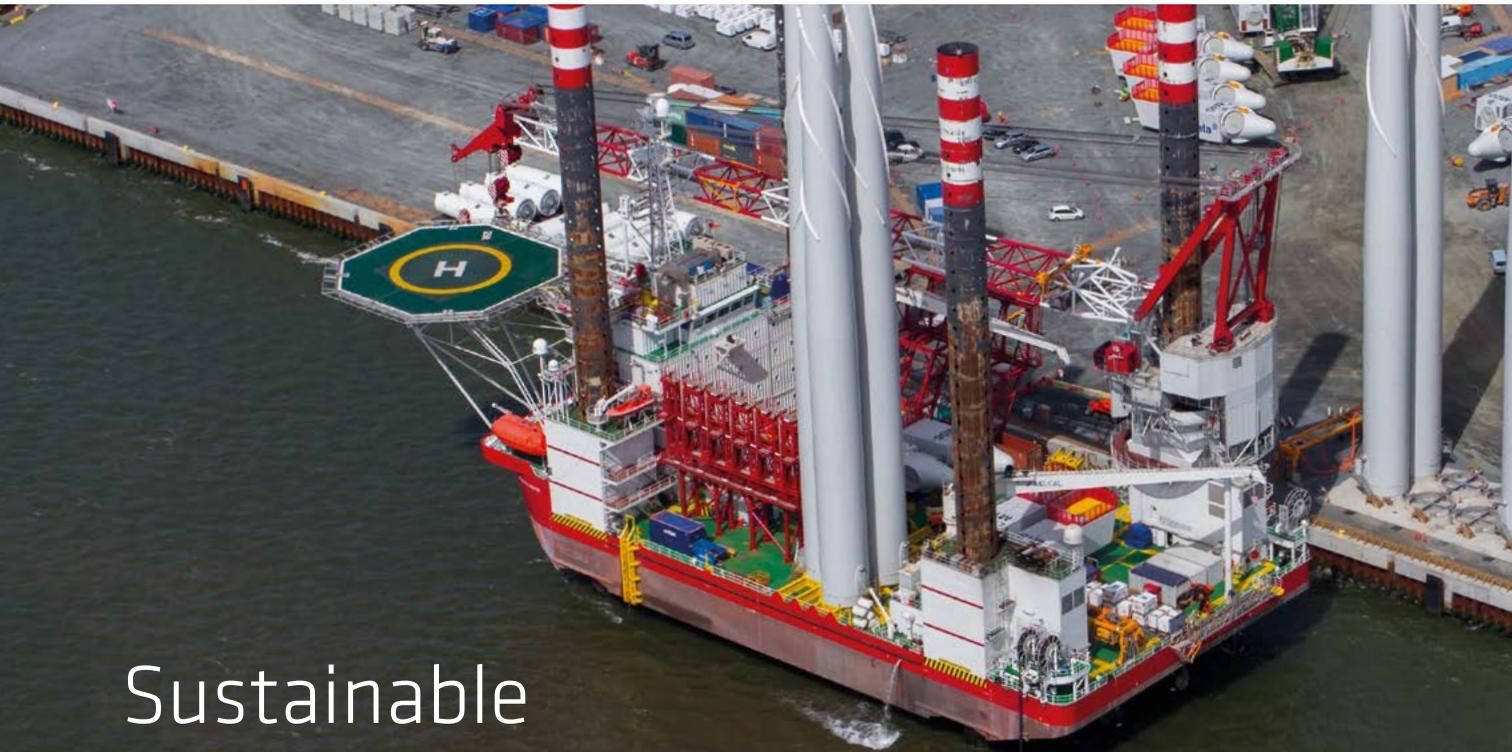
In the world of power networks, new customer expectations and developments in policy and technology are driving change. Two areas that currently stand out

are data analytics and grid modernisation.

**We're seeing growing digitisation of electricity networks, with benefits such as enhanced visibility across the network and data-driven diagnosis and maintenance. Today's integrated power management systems need to be interoperable, allowing the sharing of data between platforms, and they need to be easily scalable and flexible with regard to functionality.**

The availability of advanced, affordable sensors is making it possible for owners and managers of power utilities and assets to collect and analyse data to an extent previously unimaginable. The introduction of these devices as well as smart meters and the fact that more and more homes are capable of generating their own power and feeding it back into the grid have far-reaching consequences for network architecture. For one thing, maintenance will be more strongly based on the condition of hardware and not carried out according to a predetermined schedule.

With more renewable sources and more homes and business generating energy, the structure of electrical grids is also changing. Instead of centralised production and transport over a huge 'macrogrid', we're seeing more microgrids, which group local power sourced. These can operate independently of large-area grids.



# Sustainable systems for renewables

Choosing power and communications solutions for harsh environments.

## **Cabling and hardware intended for use in fast-growing renewable energy projects must offer the longest operational lifetime and the highest uptime. How to guarantee performance in harsh environments without compromising on functionality?**

In 2015, power from renewable sources surpassed coal, becoming the world's largest source of installed power capacity, reaching 153 Gigawatts – a 15% increase over the previous year. Last year, the International Energy Agency significantly increased its five-year growth forecast for renewables, based on policy support and cost reductions. The World Energy Council reported 'explosive average annual growth' of wind and solar power over the last decade – 23% and 50% respectively. As a result of yield and efficiency advances, hydroelectric power now provides almost a fifth of the world's electricity. According to the US Geothermal Energy Association, geothermal power showed sustained strong growth last year, thanks to new policies and investment regimes.

### **Changing requirements**

All such types of power infrastructure require energy and communications networks that can operate under the harshest conditions, in hard-to-reach locations. After all, solar power installations are often found in deserts and wind farms are frequently located offshore and along coastlines. Geothermal and hydroelectric power involves extreme forces, temperatures and chemical reactions. What's more, these systems need to accommodate many different types of equipment. IP Convergence is bringing new types of sensors and controllers to the network. Rolling-out electrical cables all the way to network

devices is expensive and time-consuming. However, Power over Ethernet (PoE) can supply current to network devices in very hard-to-reach places in a smart, relatively inexpensive way, providing power over a hundred meters or so to devices in hard-to-access locations.

### **Potential problems**

Water ingress may cause return loss and insertion loss problems with communications cables and potentially extremely dangerous electrical and fire hazards with (high voltage) power cables. Chemicals such as sculpture, extreme temperatures or high salinity levels that may occur in geothermal applications can



make cables brittle and rigid, and damage the protective sheathing. Mechanical stress is another frequent cause of damage. As cabling is generally packed tightly, movement or crushing can have a negative effect on performance.

Prolonged exposure to UV light can result in mechanical degradation of the sheath. Electromagnetic interference caused by, for example, electric motors, can induce noise or harmonic disturbances. Cable performance is also strongly affected by temperature. Extremely low temperatures, say below 10°C, can lead to degradation of sheathing. Very high temperatures, for example over 60°C, can result in insertion loss.

### Why fibre?

More and more cables are being deployed for digital monitoring, control and safety systems in harsh environments. In these

applications, fibre offers many advantages over copper cables such as resistance to electrical interference from other devices, elimination of the possibility of creating electrical shorts that could create fires or explosions, vastly increased data transmission rates and increased network security.

Copper cables may be somewhat more resistant to abuse during service and installation since optical fibre can only withstand a few percent bending or tensile strain before being permanently damaged. Copper instrumentation and equipment cables, however, can fail due to electrical shorts when the insulation breaks down. An optical fibre may continue to function even if the cable around it totally disintegrates as long as the fibre is not subjected to high-tensile or bending stresses.

Fibre optic cables are normally expected to have a useful service life of more than 30 years. However, although standardised testing of cables for operation under prolonged exposure to harsh conditions is industry standard practice and requirement for electric cables, it is not a current requirement for optical fiber cables.

### Maintenance and management

Energy and data networks in harsh environments usually cover large distances. They tend to be complex and components and cabling are not always easy to reach. Fast and easy tracking and repairing of connection errors or faulty devices is paramount. For that reason, automated documentation and diagnostic data on a wide range of parameters is vital. In addition, it is essential that people that

aren't necessarily highly qualified can carry out a wide variety of installation, maintenance and support tasks.

### Choosing wisely

Of course, many of the negative effects described can be alleviated by good cable management. Hardware and cables especially designed for harsh environments and to manage extreme temperatures, dust, humidity, vibration and so on, will help prevent failure and increase uptime in mission critical systems. Cabling must be regularly checked for armour breakage, flame retardant properties, resistance to high vibrations and chemical damage, environmental impact and safety of those working directly with the material. Being able to strip cables quickly without damaging phase conductors is critical in reducing installation cost. In the event of catastrophic cable damage, this shield, plus the three ground wires, should contain any arcing and effectively conduct system fault current to ground.

How to make sure cabling and hardware performs as intended in harsh environments? The solution may be complex: improving performance in one area, improving fire resistance, for example, will often decrease the performance in another area, such as ease of handling. Step one is to map the environmental factors and exact functionality requirements for each part of the network. This allows the definition of solutions that improve performance where it counts, without compromising more than necessary in other areas. If in doubt with regard to specifications and equipment, don't hesitate to consult the experts.

# First French offshore connection secured

**Prysmian to provide Réseau de Transport d'Électricité with submarine power cable links for offshore wind farms in the first contract ever for connecting offshore wind electricity to the country's mainland grid.**

The contract is framed in three projects, Fécamp, Calvados and Saint Nazaire, that are to be individually triggered. These are the first-ever grid access connections developed by RTE to transmit renewable energy generated by offshore wind farms to thousands of businesses and homes. Prysmian was awarded the contract, worth more than €300 million, with Réseau de Transport d'Électricité to develop submarine cable links to connect the three planned offshore wind farms to the mainland power grid in mainland France.

Massimo Battaini, SVP of Prysmian Energy Projects, stated: "We are proud to support RTE in this important challenge. We are already widely involved in the provision of reliable and more sustainable power connections in France, through the realisation of the France-Spain and

the Italy-France interconnectors. The offshore wind market in France is a new, promising development in this segment, and this contract not only consolidates our relationship with RTE but also reaffirms Prysmian's world leadership in providing HV submarine cable solutions."

Prysmian will be responsible for the design, supply, installation, testing and commissioning of two HV export power cable links for each of the three offshore wind farms covering both the submarine and land connection routes. The links will consist of High Voltage Alternating Current (HVAC) 220 kV three-core cables with XLPE insulation and single wire armouring, and will be produced in the Group's centres of excellence in Arco Felice, Italy and Pikkala, Finland. The cables for the land sections will be manufactured in Gron, France.

## Landing in Chile

**With the establishment of a new affiliate, Prysmian is reinforcing its position in the South American market.**

The new Chilean affiliate of the Group is now fully operational, building on its presence in the South-American market, which is experiencing growth in both the Energy and Telecom sectors. With Chile among the most promising markets, Prysmian has been selling into the local market for many years and decided to open a local legal entity to expand its reach in the country. Initially, Prysmian Chile will operate through a local warehouse, making the Group's entire product range available to the local market. German Aparicio, General Manager, Prysmian Chile, stated: "This is a new milestone that brings Prysmian South America much closer to the Chilean customers, ensuring the availability of our entire product range."





### **Land connection for offshore wind**

Prysmian has secured a contract with East Anglia ONE to supply and install the land cable connection for the East Anglia ONE offshore wind farm – a £2.5 billion wind farm comprising 102 turbines that will generate power for 500,000 households. The Group will supply and install a 220 kV double circuit from the Bawdsey shore landing to a new substation in Bramford – covering a route of some 37 km. Prysmian is responsible for the system design, supply, installation and testing of the cables and their accessories. The underground High Voltage cables will be manufactured by Prysmian and installed by its UK-based installation division, relying on the expertise of its technical design team.

# Independent growth strategy in China

**With the acquisition of Shen Huan Cable, Prysmian Group shifts to an uninvolved HV offer, significantly improving competitiveness, flexibility and efficiency.**

By winning a bankruptcy auction for certain assets of a HV cables factory in China previously operated by Shen Huan Cable Technologies, Prysmian Technology Jiangsu Co. Ltd. has moved to an independent High Voltage offer in the huge Chinese market. The Group recently decided to divest its 67% stake in the joint venture formerly known as Prysmian Baosheng Cable Co. Ltd.

Once the acquisition is completed, Prysmian Technology Jiangsu will be able to count on manufacturing and logistics facilities consisting of an area of more

than 190,000 sqm and 5 production lines (2 VCV lines up to 500 kV, 1 CCV line up to 220 kV and 2 CCV lines for MV cables) with a production capacity of over 20,000 tonnes per year. Prysmian Technology Jiangsu will offer a wide range of cable technologies and products, including Extra High Voltage and High Voltage cable systems as well as Medium Voltage and Fire Protection cables, from 6 kV to 500 kV. Located in the city of Yixing, Wuxi municipality, Jiangsu province, the new facility will be capable of producing all the main designs available in the HV systems sector.

## IT'S BASEBALL TIME

Prysmian has supplied telecom cables to link communications of the Spirit Communications Park, the baseball park of the City of Columbia, South Carolina. The customer is Spirit Communications, a company headquartered in Columbia, which uses traditional and advanced technologies to connect people, with the most advanced technologies for voice, data, Internet and fibre optic solutions. The Spirit Communications Park opened last spring and can seat up to 9,077 people. The ballpark also serves as an entertainment venue, hosting concerts and community functions. Prysmian Group provided ExpressLT™, a high-capacity cable that delivers services to communities and businesses statewide and combines buffer tubes with enhanced flexibility, a completely dry water-blocking system, and optional ezPREP® armour.



## Export financing to support Prysmian in the North Sea Link

SACE and SIMEST, two Italian government sponsored financial agencies, along with BNP Paribas Corporate & Institutional Banking, announced the finalisation of an export financing facility of \$519 million for National Grid North America, a company of the National Grid Plc Group, the UK's main electricity and gas utility company.

The financing will support the works and supply orders awarded to Prysmian as part of the international project North Sea Link.

The project, which has a total value of €2 billion, involves the construction of a subsea interconnector with a capacity of 1,400 MW between the United Kingdom and Norway. Once completed, it will extend over 730 km, becoming the longest infrastructure of its kind in the world.

The credit facility, provided by BNP

Paribas CIB and a pool of international banks, is backed by the participation of the two agencies that are part of Italian export and internationalisation hub, Cassa Depositi e Prestiti Group. The transaction contributes significantly to the completion of an infrastructure project of strategic importance to the United Kingdom and Norway, which will improve the efficiency of the two countries' power generation systems and transmission networks, thus increasing their energy security and contributing to the achievement of national emissions targets.

Through its participation, Prysmian offers best-in-class expertise and resources, not only in technical terms with regard to the design, implementation and execution of projects, but also in the process of securing the required financial resources.

# THE FIBRE INVESTMENTS EUROPE NEEDS

**Philippe Vanhille, Senior VP Telecom Business of Prysmian and Chairman of Europacable Digital Team, warned that focusing on CAPEX only could mean to re-invest later.**

“When considering which telecommunication networks Europe needs for the future, we have to move beyond the obsession of focusing on CAPEX only.” Philippe Vanhille, Senior VP Telecom Business of Prysmian Group and Chairman of the Europacable Digital Team, launched his warning while addressing a high-level panel debate at occasion of the [2017 FTTH Conference in Marseille](#), to which the Group took part as industry leader.



Speaking at the Marseille 2017 FTTH Conference, Mr Vanhille pointed out that

consumer experience and operational expenditure need more attention: “The future landing point will be an extended fibre network in Europe.” he explained. “Europacable is calling to deploy the right technical solutions with high quality products. Just do it right, so that we don’t have to re-invest later.”

He noted that as the world moves towards a ubiquitous global fibre presence, innovation is key: “There are still many new solutions to develop and new channels to markets to emerge, and we are ready to contribute with our best innovative solutions.”

## World-class products and solutions

**Prysmian Group was in the spotlight at the Conference where it showcased its latest innovations and discussed its plans for the future, as it continues to develop and provide cutting edge products to meet the evolving needs of its customers and the telecom cable industry.**

Prysmian was one of the Marseille conference’s Platinum Sponsors, as it exhibited its latest products and innovations for FTTH solutions and presented some innovative projects for which the Flextube 2112 fo cable was

being used. As innovation driver of the industry, Prysmian continues to lead the way in ultra-dense cable solutions and its record-breaking cable, FlexTube®, that officially debuted to the FTTH Council at the event. With 2,112 fibres, FlexTube® has the highest fibre count for a flexible micromodule-based cable, to be installed to date. It is designed to be extremely compact, lightweight and flexible and also much faster to install, enabling service providers to easily deploy a record number of fibres in difficult or congested areas.

# Successfully commissioned Philippines interconnector

The submarine power cable link to connect Negros and Panay islands in the Philippines has been successfully commissioned by Prysmian Group, concluding the first stage of the Cebu-Negros-Panay 1 (CNP-1) project, awarded by the Filipino grid-operating company NGCP. The project is part of a larger development plan provided by NGCP, aimed at strengthening the country's power transmission network.

"Prysmian was honoured with the award of this project in December 2014 and it has been able to execute the whole works

in accordance with the delivery schedule and budget, thanks to the close cooperation of NGCP," stated Massimo Battaini, Energy Projects Senior Vice President at Prysmian Group.

The CNP-1 cable connection comprises three HVAC (High Voltage Alternating Current) 230 kV single core cables with XLPE insulation and single-wire armouring along a 22 km submarine route across the Guimaras Strait. Cables have been produced in Prysmian's excellence centre for submarine cables in Arco Felice, near Naples, Italy.

## Wind farm and platform in the North Sea plugged-in

The interconnection between the Veja Mate offshore wind farm and the offshore grid connection system BorWin2 in the German North Sea has been successfully plugged-in by Prysmian. The project was awarded to the Group by TenneT, the Dutch-German transmission system operator.

The interconnection consists of two 155 kV High Voltage Alternate Current submarine

cables along a route of 11.4 km and links the Veja Mate to the BorWin beta offshore platform. Here, conversion from alternate current generated by the wind farms into direct current takes place, in order to enable power transmission to the mainland by way of the HVDC BorWin2 submarine cable link. The Global Tech I offshore wind farm is already connected to the Borwin beta platform.

### Showcasing at Middle East electricity

Prysmian showcased its state-of-the-art technologies at MEE 2017, the electrical industry's largest show in the Middle East. The Group's product portfolio was focused on the full range of state-of-the-art power cables including HV and EHV underground and submarine cable systems for applications such as interconnections between power grids, links between natural or artificial islands and the mainland, and connections to, or between, offshore oil production facilities.

### From Kuwait to Cape Town

Prysmian is searching for new opportunities in new markets, and is taking part in local events to present cable products and solutions. Recently, the Telecom Solutions Business Unit was at the FTTH Council MENA 2016 Conference and Exhibition, held in Kuwait City, devoted to 'The Evolution of the Digital Society'.

Prysmian was one of the Gold Sponsors and exhibited its most innovative Fibre To The Home solutions, while Alessandro Pirri, Director Connectivity & FTTx, was a speaker at the session dedicated to 'Latest Trends and Solutions for Passive Fibre Networks – How to Increase Coverage and Save Money'. The Telecom Business Unit also participated successfully in another important event in an emerging country, namely AfricaCom 2016, held in Cape Town, where it met customers, prospects and installers, explaining and presenting telecommunication solutions for the African market.

# Prysmian Academy celebrates

**Five years of activity with over 1,500 people trained, worldwide**

**P**rysmian Group Academy, our corporate university, entered its fifth year of operation proud of its success story of having established a concrete tool for sharing managerial and technical best practice among countries and cultures. Created in 2012, also thanks to a partnership with the SDA Bocconi School of Management in Milan for managerial education, it has allowed over 1,500 people of various nationalities to receive training from 50 SDA Bocconi faculty members. These members represent an equally important group of professors from some of the world's foremost business schools and over 180 senior employees turned teachers, deciding to make their knowledge and experience available to the company.

The Academy is divided into two main areas: the School of Management, aimed at strengthening leadership and management skills, and the Professional School, a technical school whose nine academies and 35 courses are developing and strengthening skills through their transfer from the most senior staff to younger counterparts.

## SCHOOL OF MANAGEMENT: TWO NEW PROGRAMMES

“Senior leadership programme” and “Regional leadership programmes” are the titles of courses recently launched by the Prysmian School of Management. The first, SLP, is aimed at senior managers with the goal of creating a knowledge base for a better strategy implementation and offers a selection of key topics, directly addressed and developed by the participant senior managers. SLP is a world first, decision driven training that in its early stage produced the decision of creating the Prysmian Innovation Accelerator. Markus Venzin, Professor of Global Strategy at

SDA Bocconi, the Milan University that contributes to the SLP program, explains that “we kick-started more radical innovation by creating “Corporate Hangar” - the fly-in zone for pragmatic innovation”. He details that “The Corporate Hangar will have a focus on Business intelligence, scanning for new technologies and business models, Customer intelligence, systematically tracing how customer needs are changing outside the core business, Idea generation and development, a pipeline for even more radical ideas, Business acceleration, to acquire competences



# Making ethics effective

## The new whistleblowing mechanism at Prysmian

The system of values adopted by Prysmian Group refers to the conduct of individuals both within and outside of the organisation. The Code of Ethics establishes the principles for all to follow, and acts as a guide to daily behaviour, and as an effective tool for preventing irresponsible or illegal conduct by those who work in the name and on behalf of Prysmian.

The Group is now going further by adopting a whistleblowing mechanism that complies with the best ethical and compliance practices. Whistleblowing regimes are, in fact, the most effective tool for identifying fraud and misconduct. Employee tip-offs have played a very significant role in uncovering frauds and unethical practice and that's the reason why major international corporations have adopted it.

An external independent company, The Network Inc, will manage dedicated and secure channels with a binding mandate to protect the identity of whistleblowers and to act as an intermediary to relay follow-up questions and answers, as well as information about the resolution of the case. The Group, through a Whistleblowing Committee, will accurately evaluate the reports, perform specific investigations where necessary and adopt coherent and appropriate measures.



and means for successfully implement innovation ideas and, last but not least, Talent development, to integrate Prysmian talents into innovation projects". "Our aim", Professor Venzin says, "is to do all of this in a profitable way."

RLPs are a family of programmes already developed in APAC, North America, Central Eastern Europe and South America and aimed at strengthening the company's market position in key areas of the world, that is now being rolled out to South Europe and North Europe Regions, where already started in Sweden.

RLPs take account of local businesses and market nuances, while establishing a strong regional network of managers aligned with Prysmian Group strategy.

## Drawing on the Group's centres of excellence

The School draws on several of the Group's centres of excellence, such as the Manufacturing Academy inaugurated at the plant in Mudanya (Turkey) in 2016.

Due to Prysmian's international nature, the Academy fosters an innovative, entrepreneurial approach to business and a shared spirit of diversity and integration. In addition, the spread of a common long-term strategic outlook encourages employee engagement from a perspective of sustainable talent growth within the organisation.

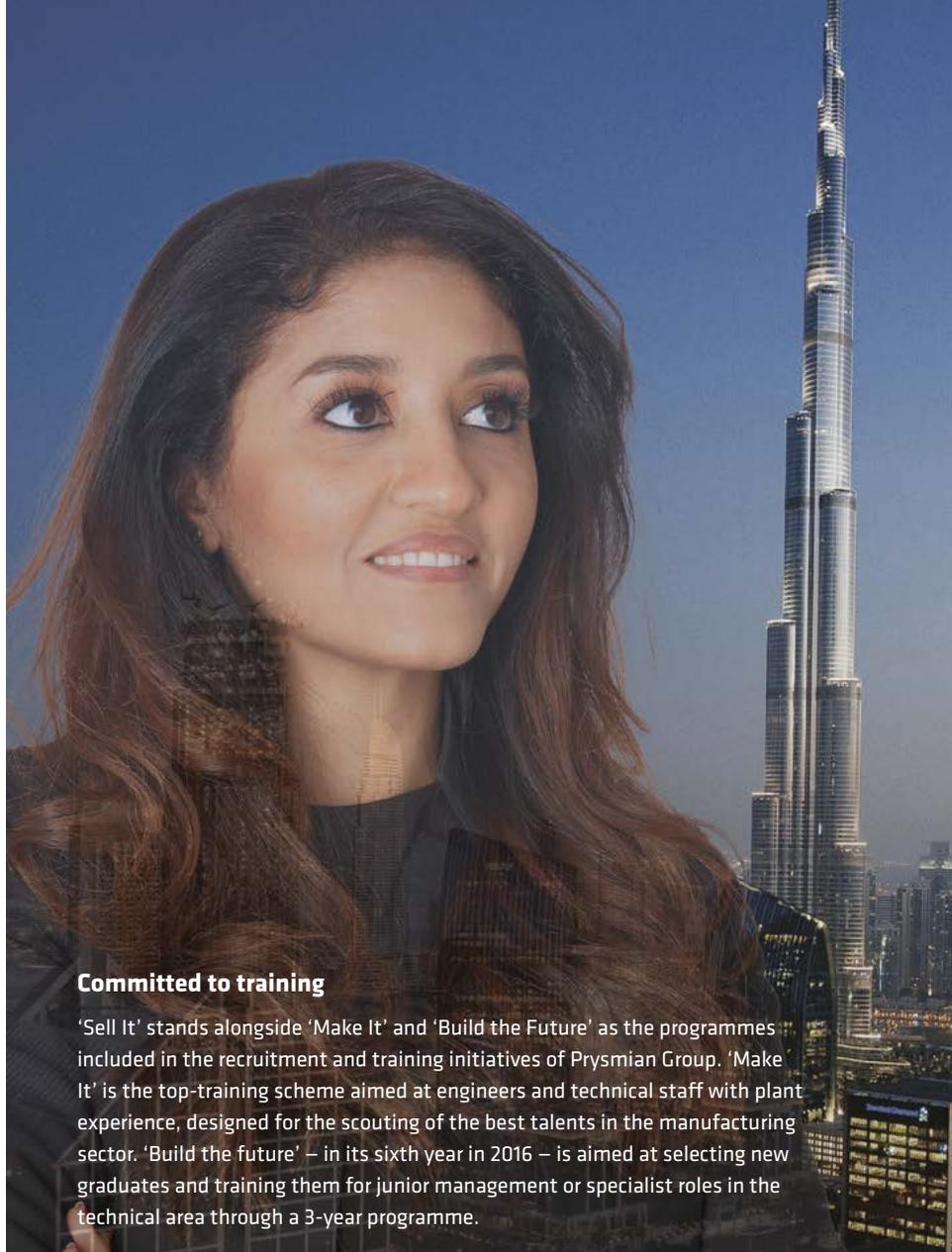
# And now, 'Sell It'!

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**A recruitment programme dedicated to Prysmian sales and marketing area is being launched. 50 talented people will be selected and trained.**

Prysmian Group has decided to launch the first 'Sell It' initiative, an international recruitment programme aimed at selecting young sales and marketing professionals, with a view to providing them with a 3-year professional development path in sales and marketing through dedicated annual training steps. The selection requirements include a degree in engineering, chemistry or economics, and 3-to-5 years' working experience in sales within the industrial manufacturing or consumer goods sectors. The programme is aimed at selecting 50 professionals for the front-end sales, technical sales, key account, customer care and trade marketing areas.

Through 'Sell It', the Group aims at scouting and developing the best sales and marketing talents, offering them the opportunity to make full use of their skills and expertise. The 3-year training programme will be organised at Prysmian Global Sales Academy in partnership with the most renowned business schools worldwide. It will happen in the Group's key plants at global level, with the aim of providing all attendees with a training and development pathway that equips them with the skills essential for their career.



## **Committed to training**

'Sell It' stands alongside 'Make It' and 'Build the Future' as the programmes included in the recruitment and training initiatives of Prysmian Group. 'Make It' is the top-training scheme aimed at engineers and technical staff with plant experience, designed for the scouting of the best talents in the manufacturing sector. 'Build the future' – in its sixth year in 2016 – is aimed at selecting new graduates and training them for junior management or specialist roles in the technical area through a 3-year programme.

## **Access to global, cutting-edge projects**

"'Sell It' is further proof of Prysmian's focus on training and developing young talents," commented Fabrizio Rutschmann, HR & Organisation SVP, Prysmian Group. "Developing human capital is key to our company's long-term success, as well as being a part of the Group's history and philosophy. This is the first time that we have launched a recruitment and development

programme dedicated to professionals in this field, and I am certain that Prysmian's strength and the important international projects we complete with our many partners will prove a concrete factor that ensures the interest of the candidates to whom we reach out. Our ability to grow in the markets is deeply rooted in the quality of our sales and marketing team."

# Only the best equipped will win

**The message was delivered at Prysmian WorldWide Commercial Meeting in Milan, with almost 200 attending. Lorenzo Caruso, Corporate and Business Communications Director, explained how the Group successfully differentiates from competitors.**

The WWCM is the most important internal event for Prysmian’s commercial management. It involves a two-day meeting where the commercial management can listen to presentations and exchange opinions with top managers and their colleagues about the current status of the company and the global economic and social situation.

Lorenzo Caruso, Corporate and Business Communications Director, noted that the meeting gave the chance “to discuss important issues, such as transformation as an opportunity, data and energy revolution, and innovation.” Caruso pointed out: “We were asked to understand how we as a Company can differentiate ourselves from our competitors, leveraging our ability to deliver quality products, and to get to know the ‘innovative Prysmian’, able to respond

to market changes, and sometimes also to anticipate them”. He said the event was also a “unique opportunity to meet with colleagues from all over the world and to feel once again proud to be part of the big Prysmian family.”

This year’s edition was even more important because it was the first event to be organised in the new headquarters building in Milan. So it was a great opportunity to share the new Prysmian home with colleagues from abroad. Almost 200 managers took part in the plenary and breakout sessions, where they had the opportunity to listen to several presentations by Group top management, reviewing results and plans as well as spotlighting the key future trends affecting our industry. Participants were also able to join 11 business breakout sessions with multiple presentations examining every business in depth.

## **‘Make It’ 2 successfully started**

In January 2017 Prysmian launched the second edition of Make It, the career development program for manufacturing engineers with 3-7 years of experience, supported by a 7-weeks digital communication campaign, a dedicated video and a multi-subject adv distributed via social media – such as Facebook and LinkedIn. The outcome was the collection of more than 7,000 applications.

Cristina Nedelcu, Maintenance Engineer at the new Fibre Optic Plant in Slatina, Romania, tells that “The Make It Program offered me the chance to apply for an important position at a time when Prysmian was expanding its site in Slatina”. Usifo Olear, Process engineer at the Claremont plant in North America, recommends “Without a doubt the Make it Program to any young individual who has the potential mind-set to be part of Prysmian, one who aims to keep succeeding and exceed expectations”.

## **MAKE IT**

A manufacturing career at Prysmian Group



**WWCM 2017**  
**When the competition is tough, victory belongs to the best equipped.**

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