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Geoservex provides hot kiln alignment services worldwide. The company pioneered the technology and patented the first method of rotary kiln survey under normal, ‘hot state’ operating conditions. It is for this reason that the term ‘hot kiln alignment’ is used today.

Currently, Geoservex is the leader in comprehensive kiln inspections, offering a service that combines traditional and modern measuring technologies with the latest software solutions in order to optimise the geometry and mechanics of rotary kilns. After 40 years of improving the service, Geoservex promotes a comprehensive approach, with alignment, adjustment, and balancing as the most effective preventive maintenance tools.
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In the US, for example, the Portland Cement Association (PCA) recently handed out a series of awards that celebrated safety innovation at a number of US cement producers. The awards, which were presented at the PCA’s Spring board meeting in Washington DC, recognised Ash Grove Cement’s Montana City plant in Montana, CEMEX USA’s Baldones plant in Texas, CalPortland’s cement terminal in Portland, Oregon, and LafargeHolcim US.

The Montana City plant won in the milling/grinding category for the design and construction of a grinding media hopper that is loaded on the ground with a skid steer, then lifted into place by hoist, discharging the grinding media directly into the mills. “This new hopper has eliminated the uncontrolled release of grinding media, while charging the mills, and decreased the total amount of time for this operation,” PCA said.

In the pyroprocessing category, CEMEX USA was recognised for its work to upgrade the personal protective equipment used for hot work, which identified several new types of materials that performed better when protecting workers, who come into contact with kiln feed, while working around preheaters.

CalPortland’s Portland cement terminal and Lafarge US were both winners in the distribution category: CalPortland for developing a new approach to bucket elevator mechanical inspection and Lafarge US for a programme that encouraged contract haulers to switch to pneumatic tankers, which are both safer (in that they eliminate the need for the driver to mount the truck) and more efficient (reducing loading time by six minutes).

These examples of innovation also highlight a wider point: that innovation – even innovation not directly tied to process optimisation – often benefits the company’s bottom line. At least three of the PCA’s safety innovation award winners were projects that improved both safety and process. Beyond that obvious link, however, is the idea that worker contentment – which would include their workplace safety – has a causal link to worker productivity.

In a 2015 study, economists from the University of Warwick found that happiness in a workforce made people around 12% more effective. As Dr Daniel Sgroi, one of the report’s authors, explained: “happier workers use the time they have more effectively, increasing the pace at which they work without sacrificing quality.”

“The cement industry is dedicated to the safety of our plants and the people who work in them,” said PCA Chairman and President of CalPortland, Allen Hamblen. It might sound something of a truism, but shouldn’t be. Safe plants – plants that show they value their employees – will breed happier workers, who will make for more productive plants. They will also help attract new talent into an industry that needs it. It’s a win-win situation that should be celebrated and emulated through the industry.
The world’s population is expected to reach 9 billion people by the year 2050. Of this total, 70% – or approximately 6.3 billion human beings – will reside in cities. In the face of such a shift in the distribution of the world’s population, it is easy to predict that the demand for infrastructure will be even greater than today; more homes, schools, hospitals, and roads will be needed.

Consequently, there will be an expanded use of building materials, especially cement, which is one of the most consumed raw materials in the world. This new scenario of great urban concentration poses an even greater challenge to the cement industry, whose production accounts for about 5% of the world’s carbon dioxide (CO₂) emissions.

It is worth noting that the matrix of energy that is used to supply both construction material plants, and increasingly populous cities, is still far from ideal. In developed countries, this energy matrix is composed of only 13% of renewable sources, while in developing countries this figure is as low as 6%.

For some time now, companies in the construction production chain have been trying to combine efficient and environmentally responsible production, aiming, above all, to offer products, processes, and services that are more eco-efficient. According to the World Green Building Trends survey, published in 2016, the number of sustainable buildings has also been growing: between two and six times every three years, depending on the country.

Aware of its responsibility to minimise the impacts of its production process, the cement industry signed an agreement during COP21, which took place in Paris, France, in December 2015. The agreement includes a commitment to reduce carbon emissions by 20% to 25% by 2030.

Votorantim Cimentos, in particular, aims to reduce CO₂ emissions per tonne of cement by 25% by 2020 (compared to 1990 levels). This goal is supported by four main drivers:

- The replacement of fossil fuels with alternative fuels (AFs) and biomass in the generation of thermal energy. R&D aiming at finding alternative raw materials, and raw materials with less CO₂ footprint for cement production.
- Investments in energy efficiency and the implementation of carbon capture and storage projects.

**Attested products**

In mid-2016, as a result of an initiative still new to this industry, Votorantim Cimentos obtained, through the international Environmental Product Declarations® system, environmental declarations for five products of its portfolio in Brazil: three types of cement, one type of ready-mixed concrete, and one type of mortar.

The possibility of evaluating the environmental impacts of our products throughout their entire life cycle, from the extraction of raw materials to their final destination, with the endorsement of a third party, results in certifications that guarantee transparency to the market. This first step, which placed the company in a pioneering position within the cement industry in Brazil, is one step in the long journey to guaranting more eco-efficiency in the products that we offer to the market.

**Co-processing as an alternative**

As part of its sustainable practices, which is one of the company’s four strategic pillars, Votorantim Cimentos created a new business in 2015, to look for alternative fuels and raw materials to be used as a source for thermal energy for the cement production process. Through a massive investment portfolio, together with a detailed long-term business plan, the company is moving towards higher thermal substitution rates, enabling the use of several types of wastes and byproducts, and reinforcing a circular economy.

To illustrate the importance of this practice, the volume that was co-processed in 2016 was enough to reduce CO₂ emission by 213 000 t, an amount equivalent to that emitted by a truck when driving 1700 times around the Earth. When compared to other alternatives for waste disposal, co-processing is certainly the most cost-effective option, considering the environmental and social aspects related to waste management. Moreover, although it is a very advanced technology, which allows
companies to replace up to 60% of the fossil fuels they use, co-processing is still an underutilised process in Brazil.

**Black mud**

When it comes to seeking alternative raw materials for the production process, innovation and sustainability need to go hand in hand. A good example is a recently awarded case study in Brazil.

Black mud, also known at Caron tailings, is a residue from the nickel processing business. In Niquelandia (Goias), Companhia Brasileira de Aluminio, part of the portfolio of Votorantim S.A., generated an important amount of black mud residue, stored in the Jacuba dam. When analysed, this residue was found to meet, in natura, hydraulic properties, allowing it to be considered a natural pozzolan. This meant it could be used as an additive to cement and, therefore, could partially replace clinker. From an environmental point of view, the use of black mud reduces clinker in cement, in addition to providing a use for a residue disposed in tailing ponds. In terms of product, the addition of pozzolan resulted in a type of highly-durable cement.

**Algae-based carbon capture**

St Marys Cement, a Votorantim Cement company in North America, is leading a project that is still embryonic but already shows potential in the management of industrial carbon emissions. A partnership with the National Research Council of Canada’s (NRC) Algal Carbon Conversion (ACC) programme and Pond Technologies, resulted in a demonstration project of an algae biorefinery to recycle CO₂ and other industrial emissions, rapidly transforming them into biomass by means of photosynthesis, using a 25 000 l photo-bioreactor. (Editor’s Note: For more on this project, see Chris Mason’s recent article “The Search for Global Solutions” in *Cement Plant’s of the Future: A Supplement to World Cement* (April 2017), pp. 29 – 33.)

**Conclusion**

The industry of the future is therefore one that seeks sustainable solutions for the planet, for today’s society and for the generations to come. Cement will continue to be an essential raw material for urbanisation. For this reason, Votorantim Cimentos operates with a long-term vision, prioritising increasingly clean processes and environmentally responsible products. After all, life is made to last.
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Canada McInnis Cement welcomes rebuilding of Gaspesie railroad

McInnis Cement has welcomed the Quebec Government’s confirmation that it will be rebuilding the Gaspesie railroad between Matapedia and Gaspe. Once the infrastructure is restored to McInnis’ cement plant site, the annual number of railcars delivering cement to the company’s customers will potentially rise from 300 to 2000.

“The flexibility of the railway, combined with our maritime distribution mode, allows us to improve our logistics chain and reach certain markets more efficiently, in all seasons,” said McInnis Cement CEO Herve Mallet. “I am proud that, even before our production began, our company’s presence in the region already positively contributes to improving the operating conditions of other Gaspesian companies. The economic vitality of the Gaspésie is gaining strength and confidence thanks to the contributions of companies such as ours, as well as LM Wind Power, whose growth and dynamism I salute.”

Last December, McInnis Cement confirmed its use of rail for a volume of approximately 28 000 tpy over five years, through a transhipment facility in New Richmond, fed by truck from Port-Daniel–Gascons. Railway repairs towards the east will result in the transport of at least 200 000 tpy of cement by rail.

Egypt Arabian Cement invests in cost-saving efforts

Arabian Cement Co., an Egypt-based cement producer, is to invest in three new projects this year, according to local news reports. The company will spend EGP130 million (US$7.2 million) on projects to reduce costs and increase production efficiency, CEO Sergio Alcantarilla said in a recent interview.

The projects will allow the company to continue to provide products at relatively low prices in the face of high inflation. Inflation has been running around 30% this year, following the floatation of the Egyptian pound.

“We know very well how inflation affects purchasing power, and we try to control our production costs and provide the product at relatively low prices,” Alcantarilla said.

The Arabian Cement executive added that current cement prices in Egypt were still much lower than neighbouring markets, opening up an opportunity for export, if bureaucratic hurdles could be overcome.

The new projects include the construction of a mechanical crane, which will feed the kiln on the first production line and the replacement of the current pneumatic conveying system, along with the installation of a new coal mill.

UK Tarmac’s Dunbar site upgrades kiln

Tarmac has recently completed a large-scale engineering project to upgrade the cement kiln at its Dunbar plant. Located around 50 km east of Edinburgh, the Dunbar plant is Scotland’s only cement manufacturing plant. The project was undertaken during a five-week shutdown period earlier this year.

In total 50 contractors were onsite, alongside the Dunbar plant team, clocking up over 65 000 man hours in a five-week period. The culmination of this very busy period was the removal of a giant 5 m dia. kiln tyre, as well as two sections of the steel kiln, weighing 74 t in total. Once removed, the replacement sections were lifted into place using a 500 t crane.

The work to replace the section of the 60 m long cement kiln is part of a larger, two-year project that focuses on achieving enhanced reliability and improved customer supply.

Sri Lanka Tokyo Cement inaugurates new biomass plant

Sri Lankan cement company, Tokyo Cement, has inaugurated its second biomass power plant in Trincomalee in the northeast of the country. The plant was officially opened by Sri Lankan President, Maithripala Sirisena.

Construction of plant began in 2015. It represents an LKR2.5 billion (US$16.4 million) investment by the company.

According to Tokyo Cement’s Managing Director, S.R. Gnanam, the company is now the largest generator of renewable energy in Sri Lanka with 23 MW of generating capacity. In addition to powering operations at the Trincomalee cement plant, the company has surplus capacity of 2.5 MW that can be fed into the national grid.

Tokyo Cement is Sri Lanka’s largest cement company with an installed capacity of nearly 2 million tpy, according to the company’s website.
Germany New kiln burner starts operations at Burglengenfeld cement plant

HeidelbergCement is in the process of extensively modernising its cement plant in Burglengenfeld, a project that will continue to 2018. In the course of this work, A TEC GRECO was contracted to install a kiln burner within the existing 1970s kiln line. The scope of this project included the engineering, design, and manufacturing of a tailor-made combustion system, as well as the required peripheral systems for an efficient and reliable operation.

The respective kiln line has a capacity of 2000 tpd of clinker. The unique axisymmetric design of the A TEC GRECO burner, which uses three airflows, allows optimisation of the combustion process and, therefore, maximising alternative fuel (AF) injection. The burner has a maximum combustion performance of 75 MW and is suitable for lignite, sewage sludge, refuse derived fuels, diesel, and solvents. During the commissioning, it was tested successfully with 100% lignite, and a mix of fluff (60%) and lignite (40%).

Individual adjusted momentum air flows outside, while inside (dispersion air) the burners, gaseous, and solid fuel channels are responsible for mixing the primary air, secondary air, and fuels, to ensure a fast and stable ignition. Dispersion air, with its radial direction, creates a swirl effect, which gives the flame a high stability (providing superior flame control) and results in rapid flame formation (flame ignition point close to the burner). Through simple procedures, such as as natural gas and airflow regulation by valves, kiln operators can optimise firing conditions.

Kiln process studies, combined with burner optimisation measures, have shown that the fundamental combination of lower primary air rate and higher momentum (higher primary air pressure) has the beneficial effect of reducing the NOX generation. The setting of the radial air channel (dispersion air) has a significant influence on NOX emissions. The burner observably reacts to a reduction of the internal recirculation zone with a decrease in NOX generation. With their water content, AFs may decrease the flame peak temperature due to the necessary demand of evaporation energy, which results in a further decrease in NOX emission.

A TEC GRECO also supplied an overhead, motorised burner trolley with a specific system to ensure the adequate positioning of the burner into the kiln, on the axial, vertical and horizontal planes.

Algeria Fives installs cement mill at Chlef

French engineering company, Fives Group, has installed the first FCB B-mill for the cement grinding plant at the 6000 tpd clinker production line in Chlef, Algeria. The mill installation follows the erection of the 82 m long, 5.1 m dia. FCB kiln at the site in February.

The installation of the first of three cement grinding mills began in early April and required a heavy lifting rail-mounted crane system. The mill’s shell measures 4.8 m x 17.8 m, while the gearbox weighs in at 98.5 t.

The second and third grinding mills will be installed soon, the company said, completing the cement grinding plant. The finished plant will feature three 160 tph FCB B-mills with their associated FCB TSV 4500 HF classifiers.
Designed with the same proven technology and modular design as our standard OK™ cement mill, FLSmidth’s OK™ 54-6 raw mill has successfully been installed at Semen Padang, Indarung 6, in Indonesia. With a capacity of 750 tph and an 8,700 kW MAAG® WPV 5000 three-stage gear, it is the largest raw mill in the world. For more information, contact us on: info@flsmidth.com
**UK** Hanson Cement to install new VRM at Padeswood cement plant

Hanson Cement, part of HeidelbergCement, is planning a £20 million upgrade project to its Padeswood cement plant in Flintshire, north Wales, to secure the long-term future of the plant and its employees.

At the heart of the project is the installation of a new vertical roller mill (VRM) for cement grinding, which will improve efficiency, reduce energy consumption, and increase output. The company also plans to invest in new rail loading facilities to allow cement to be delivered by train, reducing lorry movements.

Currently, the plant has four operational mills, but they are old and inefficient, and do not have the capacity to grind the volume of clinker made by the kiln. This has created a production imbalance, meaning that some of the clinker must be transported elsewhere for grinding.

The project also includes the construction of new cement silos alongside the existing railway line to load trains for delivery. Presently, the rail link is used to bring in coal for the kilns. In the future, three trains a week will be dispatched to Hanson’s depots in London, Bristol, and Scotland.

“The plan is to mothball three of the old mills and install a new VRM capable of grinding up to 650,000 tpy of clinker,” said Plant Manager Steve Hall. “The new mill will be fully enclosed in a building, minimising noise and reducing the potential for escape of cement dust.”

A panning application will be submitted to Flintshire County Council in the summer, with work beginning later this year, if it is approved. The new mill aims to be fully operational by early 2019.

**Turkey** Bedeschi SpA to supply clinker and cement export terminal

Bedeschi has been awarded a contract to construct a clinker and cement export terminal for Sönmez Çimento, an integrated cement plant in the Adana Yumurtalik TAYSEP Free Zone. The plant is a joint venture by Sönmez Holding, Kutlucan Holding, and Türkün Holding and is the first cement plant to be constructed in one of Turkey’s free zones.

The plant is in close proximity to the harbour, allowing vessels to be loaded quickly. Under the terms on the contract, Bedeschi is to install a slewing, luffing, and travelling shiploader, equipped with a telescopic chute, at the plant’s port terminal. The slewing shiploader will perform efficient loading under heavy-duty conditions for vessels up to 55 000 DWT. The nominal loading capacity of the machine is 1000 tph, with a peak flow rate of 1100 tph.

According to Bedeschi, the equipment conforms with current environmental legislation and includes high technology dedusting systems, such as filters, installed onboard to reduce the dust pollution caused by material flow between conveyors. The belt conveyor installed on the shiploader has also been partially designed to reduce the belt speed and belt inclination as much as possible. These improvements will help to avoid spillages and reduce dust generation at each belt conveyor transport point.

The Sönmez Çimento plant was commissioned in 2012. According to the company’s website, the plant has a capacity of 1.7 million tpy of clinker and 2 million tpy of cement. The new port facility is expected to come online this year.

**Uzbekistan** DAL Teknik Makina orders second Gebr. Pfeiffer mill


“Due to the innovative technology and the sophisticated maintenance concepts, as well as the very positive market reception of the new Pfeiffer mill type, the customer has this time opted for a Pfeiffer MVR mill,” the German engineering company said in a statement.

The mill offered is an MVR 5000 R-4 with a drive power of 3700 kW, producing 400 tph of cement raw meal. A material with a feed moisture of as much as 7% will be ground to a fineness of 12 % residue 0.090 mm.

The MVR mill will be ready for dispatch before the end of this year.
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**IN BRIEF**

**Germany**

NORD Drivesystems presented two new gearboxes at this year’s Hannover Messe

NORD Drivesystems presented two new gearboxes for nominal torques of 15 and 20 kNm at this year's Hannover Messe. With these latest additions to the line-up, the series now comprises 11 gearbox sizes that deliver output torques up to 250 kNm.

The NORD industrial gear series offers a variety of configuration options for application-specific drive solutions. The modular product range includes dual-gear setups, auxiliary drives, brakes, torque arms, backstops, swing bases, and – as the latest special feature – extruder flanges.

In addition, there are a variety of sealing options and solutions for monitoring and temperature management. The gear units can be mounted on all six sides. Gear ratios can be configured in fine increments from 5.54:1 to over 30 000:1 – with two, three, or four gear stages, and with an auxiliary primary gear stage if so required.

All NORD industrial gear units feature a single-piece UNICASE housing, ensuring longevity, a very high power density, compact dimensions, and high overload capacities.

Combining industrial gear units with motors and drive electronics, the company configures complete drive systems for heavy-duty operation in conveying systems, pumps, and agitators. Designated major application fields for these units include bulk handling, the cement industry, steel industry, process engineering, woodworking, sugar processing, and wastewater management.

NORD manufactures drive technology for mechanical and electronic solutions. Its range of products includes geared motors, motors, industrial gear units, frequency inverters, motor starters, and frequency inverters for decentralised drive control. Hannover Messe 2017 took place 24 – 28 April.

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**Poland**

New management for Geoservex

Geoservex, a provider of hot kiln alignment services, has been assumed by the next generation of the Krystowczyk family, after Zbigniew Krystowczyk, who has held the position of managing director of many years, acquired all shares and reorganised the company.

Currently, Geoservex is not only continuously working with its existing clients across 64 countries, but has also entered the Chinese market and is expanding there. The company has already provided test services for CNBM and Conch Cement through its local branch. The negotiations for a maintenance service contract with a possible technology transfer are ongoing. Such cooperation has previously been undertaken in Russia and India.

Geoservex was established in 1991 by Boleslaw Krystowczyk and Wieslaw Pauszek, following Krystowczyk's development of technology allowing hot kiln alignment in 1983.

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On 1 March, Klaus Paul was appointed Technical Managing Director of SCHADE Lagertechnik GmbH. His appointment is in response to the impending retirement of Karl-Heinz Fiegenbaum, who has been Managing Director of the company since July 2011, responsible for sales and commercial activities. Fiegenbaum will be replaced by Dr Christoph Seifert, who moves across to this position after having started with SCHADE as Technical Managing Director in February 2015.

N+P has announced the appointment of Neville Roberts as Managing Director UK for N+P Alternative Fuels Ltd, alongside the opening of a new UK office. The company’s expansion strategy has already led to several new contracts for supply of refuse derived fuels, solid recovered fuels, and Subcoal into the UK domestic and European market, with several new large contracts to be closed and announced in due course. Roberts will be based in the new N+P office in Melton Mowbray in Leicestershire.

Breedon has purchased Pro Mini Mix, which specialises in delivering loads of ready-mix concrete and seeds, up to four cubic meters, to commercial and domestic customers. Breedon Southern already operates a successful mini mix business, 1stMix, which has a strong presence throughout the East Midlands and East Anglia. Pro Mini Mix, which will be based at Breedon Southern's new ready-mix concrete plant in Walsall, will enable the group to extend its coverage across the central belt of England, taking advantage of the buoyant markets in and around Birmingham.

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REBUILDING BRAZIL
MICHELLE KARAVIAS, BMI RESEARCH, USA, OUTLINES EXPECTATIONS FOR THE BRAZILIAN CONSTRUCTION SECTOR AS IT EMERGES FROM RECESSION.

Introduction
BMI Research expects Brazil's construction sector to emerge from a three-year recession in 2017, albeit at only a marginal rate. Base effects, combined with a nascent recovery in investment, will support growth. With public sector spending remaining constrained, pivotal to Brazil's recovery will be the continued success of the country's new concessions programme, which got off to a solid start with airport auctions in March.

2017: slow recovery for growth
BMI Research anticipates growth will slowly return to Brazil's construction sector in 2017. Brazil's construction sector remained in recession in 2016, reporting a 5.2% real contraction for the year. This marked a third year of recession for an industry that has been decimated by the Lava Jato scandal. The scandal, initially related to contracting prices at Petrobras and later centering on Brazil's largest construction company, Odebrecht, involved the majority of Brazil's construction industry and had political implications to the highest levels.

Growth will return at just 0.7% in 2017, most likely in 2H17. This will be supported by a resumption of Minha Casa, Minha Vida (MCMV) projects, following the programme's restructuring in March, some improvements in industrial construction related to the oil and gas sector,
The programme has been complemented by several reforms that will help address some of the longstanding and structural challenges to developing infrastructure in Brazil. Specifically, 18 measures have been passed to improve the business environment. Some of the key improvements include increases to the minimum bid time (from 45 to 100 days), the publication of bidding documents in English, Spanish, and Portuguese, and an exchange rate hedging mechanism for airport auctions. In addition – and of huge significance to the oil and gas sector – local content requirements have been reduced, and Petrobras’ mandatory participation in deepwater projects was eliminated.

Another notable factor is that the scale of the programme is much smaller than those proposed under former President Dilma Rousseff. This should allow the programme to create small successes and potentially be ramped up once business confidence has returned. Already, a new batch of projects was added in March/April. In keeping with this, the programme has largely stuck to the timelines set out (which is significant compared to previous programmes) and has provided transparency on the projects included, as well as on the status of those projects.

These improvements go a long way to addressing some of the key structural barriers to entry for international companies; however, a major area still to be overhauled is financing. Tackling the financing side of the equation has been proposed, although BMI Research expects this to prove challenging given the high potential cost to investors. Brazil’s development Bank (BNDES) has dominated the infrastructure financing landscape, crowding out commercial lenders by offering heavily subsidised loans, often for up to 80% of the capital needed. This has placed a huge burden on BNDES and prevented commercial banks from developing instruments to fund infrastructure. Attempts to complement BNDES lending with other sources, such as commercial debt and infrastructure debentures, have proved unsuccessful in recent years due to a lack of liquidity and the cost of lending.

Under new management, BNDES has made progress on reducing loan disbursements in 2016 and is also looking to reduce reliance on the long-term lending rate (TJLP). However, without other financing options being developed, infrastructure financing will likely stagnate. This is especially true, as the high cost of capital through commercial avenues will place even greater pressure on return on investment – already a major concern for investors.

More broadly, the underlying political climate could present cause for concern among investors. The corruption scandal continues to be a destabilising factor and could have significant ramifications ahead of – and during – Brazil’s October 2018 elections. The resultant potential for policy uncertainty will be a major factor for investors that are considering entering a market with a long history of regulatory and policy adjustments.

BMI Research’s Risk/Reward Index for Brazil compared to the Latin America regional average, showing Brazil’s biggest area of risk around industry specific risk areas, such as competitive landscape, regulations, and labour market. High score = more attractive market; scores out of 100.

Source: BMI Research.

and the early successes of the country’s new concessions programme.

Overall, there is limited fundamental support for a recovery in construction activity. The public sector continues to oversee budget cuts to infrastructure expenditure, with the Growth Acceleration Programme (PAC) cut by BRL10.5 billion in the 2017 budget. As such, the country is increasingly reliant on the private sector to support infrastructure spending. However, the private sector remains cautious of expanding investments given the uncertain political climate and the poor status of the economy, while Brazil’s infrastructure companies continue to face limited access to capital markets.

Structural improvements support Projeto Crescer success

Projeto Crescer, President Michel Temer’s infrastructure concessions programme, presents the upside to BMI Research’s 2018 – 2021 construction sector growth forecast, currently averaging 1.8% in real terms. With the current government unlikely to expand public expenditure to levels seen under the previous government, the private sector will be the main driver of growth in Brazil’s construction sector.
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A mixed outlook
BMI Research is currently anticipating a mixed take up of the programme. Airports, ports, and power assets were expected to be attractive, given the precedent for private international investors in all areas. Auctions have taken place across all these areas in March and April, and have been largely successful, including four airports, which raised BRL1.46 billion, power line auctions (of which 31 of 35 were auctioned, translating to an estimated BRL12.7 billion in investment), and port terminals. These successes are supporting BMI Research’s expectation of an uptick in construction growth in 2H17 and, more notably, from 2018.

The remaining concessions are due to be awarded over 2017 and 2018. With the less attractive assets yet to be auctioned, however, BMI Research believes that the greatest challenges for the programme are largely ahead of it. Energy auctions will be relatively attractive, especially the pre-salt rounds and, while the mining concessions are relatively untested, the assets should attract some interest.

BMI Research believes the highways and railways will see the greatest potential shift from previous concessions programmes in Brazil and could present the biggest challenge. Highway concessions were almost exclusively the territory of domestic companies under previous rounds; however, with many of these unable to bid due to constraints following the Lava Jato scandal (primarily access to capital), the participation of international companies will be important. A mixed uptake, with the more attractive, higher demand assets likely to be popular, is expected.

The focus on rail to generate the lion’s share of the investment supports the view that the programme will fail to generate the full investment expected. There has been a relatively poor precedent for rail concessions in Brazil, with plans under previous programmes stalling over disputes over right of way, third party cargo, and limited investor interest. Major delays to current rail projects, such as the Transnordestina railway, illustrate the scale of challenges – from permitting and financing to right of way.

Chinese investor interest is expanding in Brazil and could present one of the most viable sources of capital for infrastructure development. Several Chinese companies have expressed interest in the market, with concessions, such as railways and airports, potential acquisitions. Chinese capital has been made available to support this aim. In 2016, a joint US$20 billion infrastructure fund was established by China and Brazil, with the former financing 75% of the fund’s capital and BNDES and Caixa Economica Federal providing the rest.

Notes
1. Minha Casa, Minha Vida is Brazil’s subsidised housing programme, which has been a major driving force behind residential construction of the past decade.

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