# SPECIAL REPORT ON ARGENTINA

A Global Business Reports publication, presented with IHS Chemical Week


GBR
GLOBAL BUSINESS REPORTS

IHS Chemical Week

# A dynamic potential

***This research has been conducted by Harriet Bailey, Laura Brangwin and Alice Pascoletti of Global Business Reports. For more information, contact info@gbreports.com. Cover photos courtesy of Bolland, Refinor and YPF.***

## *INTRODUCTION*

### The petrochemical and agrochemical industries are the first of Argentina's downstream industries to revive following Argentina's recent change in government

Argentina in 2016 is a very different place than Argentina in 2015. In what has been dubbed his "Macri-economic shock treatment," newly elected President Mauricio Macri of the Cambiemos coalition government used his first two months in office since his election in December 2015 to implement a number of major economic reforms.

These include promising to resume publication of credible economic data, after the previous government was censured by the International Monetary Fund in 2013 for allegedly manipulating the figures to cover its poor record, as well as removing controversial taxes on agricultural exports such as corn and beef and lowering taxes on soybean exports. Macri's biggest move was to lift artificial currency controls. With the peso allowed to float, it saw an immediate one-third devaluation, falling into line with its street value of around 13 pesos to the U.S. dollar.

Argentina is deceptively large; the eighth-biggest country in the world, it is almost 3,700 kilometers (km) from north to south, and only around 620 km shorter than mainland United States is wide. Vaca Muerta, located in Neuquén province in the west and the largest shale deposit in the country, covers an area the size of Belgium and means Argentina has the third largest shale reserves in the world. According to consultancy IHS' senior director of Latin America, Rina Quijada: "Investors looking at Latin America will find Vaca Muerta in Argentina much more attractive today than in previous years. The biggest advantage Argentina has today, aside from its feedstock, is its new administration and proposed reforms."

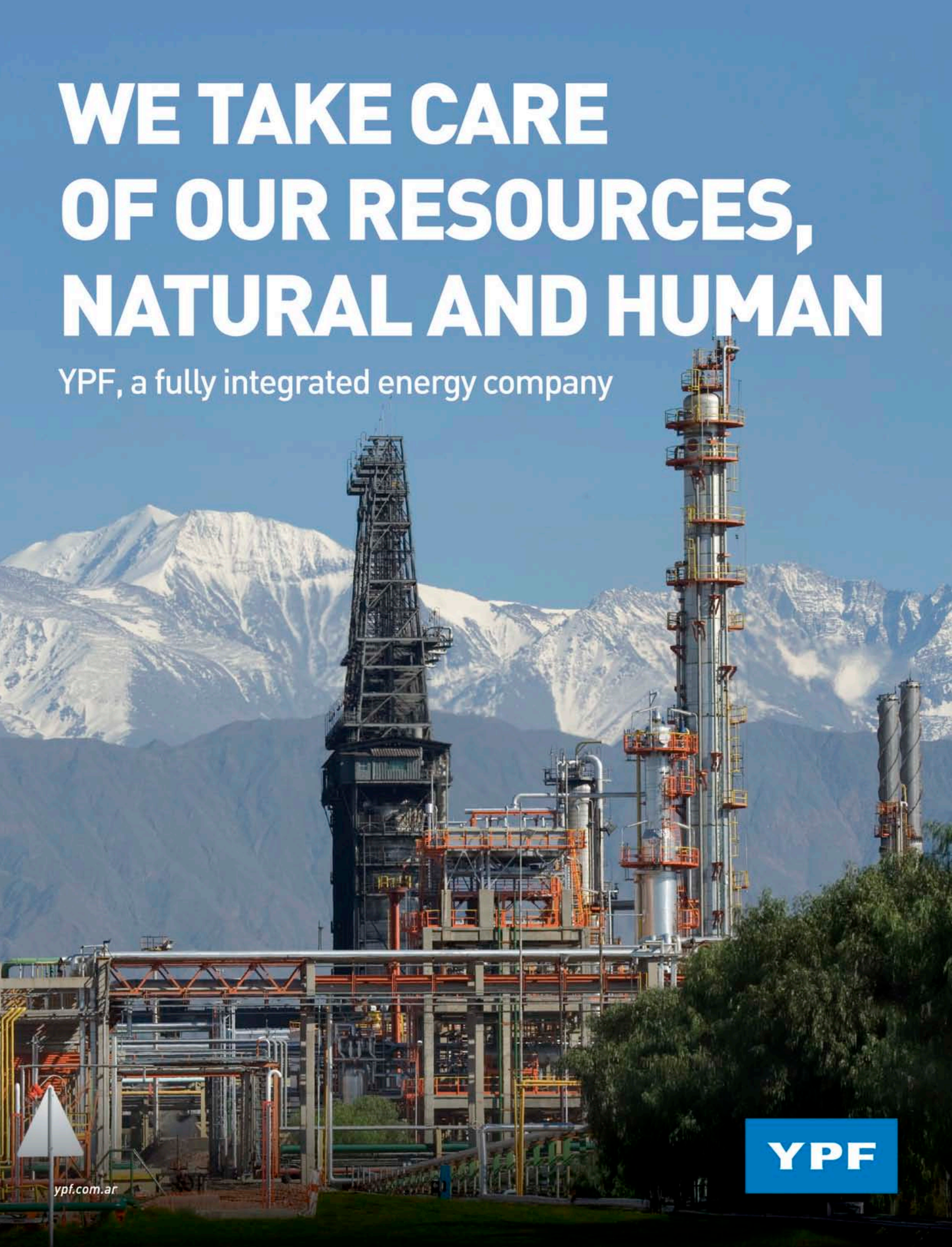
It is not just in the petrochemicals space where positive feeling abounds, as the agrochemical industry also believes it has become easier to work with the government since the change in administration in December 2015. Rotam Argentina, the Argentine subsidiary of a large China-headquartered agrochemical company, sees great potential for its long-term operations in the country and expects to grow by more than 20% during 2016. "We now have greater access to ministers, which improves their understanding of our industry when making policy decisions. We also believe this government will be easier to predict in areas such as importing. The clear messages we are receiving from the government have improved our planning abilities and we now have clearer goals for the future," confirmed country manager Javier de la Rua.

Rina Quijada, Senior Director Latin America, IHS

Jorge de Zavaleta, Executive Director, Cámara de La Industria Química y Petroquímica (CIQyP)

Argentina's chemical industry is the third largest in Latin America after Brazil and Mexico, accounting for almost 1% of the global chemical industry in 2010 and directly employing more than 100,000 people. Chemical production in the same year totaled almost $25.5 billion and, of this, basic chemicals made up around one quarter, with agrochemicals & fertilizers and specialty chemicals accounting for 13% and 15% respectively. The remaining 50% of production came from paints and coatings, cosmetics and pharmaceutical products. According to Jorge de Zavaleta, executive director of the Chamber of the Chemical and Petrochemical Industries (CIQyP): "The chemical and petrochemical industries in Argentina represent 12% of total domestic industrial production, and their exports represent 25% of total industrial exports. The chemical and petrochemical industries have a bright future thanks to the quality and size of the country's infrastructure, market, technology, an extensive history in hydrocarbons and refineries."

The petrochemical sector has not seen an industry-changing investment in almost two decades and, despite Macri's reforms, new petrochemical complexes are unlikely to be in the pipeline for another ten years. Although the door has been opened to foreign investors looking for the next shale revolution, much-needed transportation and infrastructure projects failed to win political support in the previous government; such issues


WE TAKE CARE
OF OUR RESOURCES,
NATURAL AND HUMAN
YPF, a fully integrated energy company
ypf.com.ar
YPF

will need to be addressed quickly in order to attract the high volumes of foreign capital required.

In 2011, as a result of the last government's interventionist policies, Argentina became a net importer of energy for the first time since 1984. Raw material availability was severely depleted and, as such, petrochemical complexes have not been operating at capacity for more than half a decade. As this import/export trend inverts, Argentina will rapidly be able to absorb an increase in the availability of feedstocks, while simultaneously investing in the expansion and modernization of plants for further growth.

Argentina has all the ingredients required to become an attractive investment destination for multinational petrochemical players: world-scale reserves, a new government bent on normalizing the economy and the capacity for rapid production increases. According to Rodolfo Perez Wertheim, director general at chemical manufacturer Meranol, there is no time like the present for the government and the energy industry to come up with a strategy for future growth: "The chemical industry depends on oil and gas and, at present, Argentina has a deficit in this matter. If the government agrees to supply energy to the whole industry, it will encourage the chemical industry to invest in different products. We believe that this is going to happen, therefore we think that the right moment to invest in the market is now."

# *PETROCHEMICALS*

## Vaca Muerta's shale reserves signal the growth potential of the downstream industry

Only five years ago, Argentina became a net importer of energy for the first time since 1984 thanks to dwindling oil and gas reserves. Then, in November 2011, Argentina's national energy company, Yacimientos Petrolíferos Fiscales (YPF), announced a major find in the Vaca Muerta shale play in Neuquén province. The U.S. Energy Information Administration (EIA) estimated there was around 16.2 billion barrels of shale oil and 308 trillion cubic feet of shale gas in an area the size of Belgium; the eighth-biggest country in the world now had the third largest recoverable shale resources after the United States and China.

However, Argentina has been unable to capitalise on these findings as quickly as the North Americans for a number of reasons. A closed-door policy to foreign investment from the previous populist government, combined with regulatory uncertainty and high taxation on new explorations, was far from attractive to foreign investors. Furthermore, much-needed transportation and infrastructure projects failed to win political support; bottlenecks in pipelines need to be addressed and industrial rail transportation is all but non-existent in the country.

Miguel Galuccio, former CEO, YPF

In this regard, however, new president Mauricio Macri is aware of the need for action: "I know there is an enormous pending debt on infrastructure. We can develop not only the roads, but also the trains and waterways. There has been a huge lack of investment," he stated in his native Spanish to the press in March 2016, "but working side-by-side with governors and mayors we will begin collaborating on solutions as soon as possible."

Argentina has not seen any investment in its petrochemical industry since the early 2000s, when several new plants were built to provide capacity for the growing supply of natural gas feedstock. The chamber sees Argentina at the start of a new wave of investment: "The chamber defined a chemicals and petrochemicals outlook that looked to 2025. CIQyP explained to the Ministry of Industry that the development of the petrochemical industry would hinge on the development of the country's hydrocarbon industry, which would likely occur in earnest no earlier than 2020," stated de Zavaleta.

Nobody is more aware of this than the petrochemical companies themselves. YPF owns two petrochemical complexes in Argentina: the La Plata Industrial Complex (CILP) in Ensenada, Buenos Aires province, which has both a refinery and a petrochemical plant, and one in Plaza Huincul, to take advantage of the raw materials at Vaca Muerta. It also owns a 50% stake in Profertil, one of the largest urea and fertilizer plants in the world, located in Argentina's chemical heartland, the port town of Bahía Blanca. YPF's most recent investment was spending $463 million on a new aromatics unit at CILP: "The continuous catalytic reforming unit started operating in June 2013, increasing by over 50% the aromatics production, which is used for generating a higher production of naphthas and petrochemical products," said CEO Miguel Galuccio.

But YPF knows there is much more to be done to fully capitalise on the opportunities offered by the Neuquén gas reserves. By ramping up the production of unconventional hydrocarbons, the company can achieve its goal of obtaining 50% of its gas production from the new formations by 2020, leading to an expansion in its petrochemical production. "There is an important opportunity to create a regional hub for petrochemical production in Argentina led by polyethylene, polypropylene (PP) and other polyolefins and derivatives," he continued. "This will make it possible to replace imports and become a net exporter of petrochemicals."

Marcos Sabelli, Chemical Executive Manager, YPF

As Argentina's national energy company and the third largest petrochemical producer in South America, YPF wants to lead Argentina to energy self-sufficiency. A ready supply of hydrocarbons would also allow for the country to be self-sufficient in terms of petrochemicals and improve its manufacturing base. YPF's chemical executive manager, Marcos Sabelli, recognises the building blocks required to achieve YPF's plan: "The success of YPF and Argentina's petrochemical business rests on four pillars: abundant feedstocks, a strong market, a world-scale plant, and a world-class partner."

By developing Argentina's unconventional oil and gas industry, a steady supply of raw materials can be ensured, while the wider South American market has the demand. A world-scale plant has yet to be built but, in order to do so, it seems likely that companies will need to work together. In August 2015, YPF announced its intention to acquire a 46% stake in Petroquimica Cuyo and 50% of LyondellBasell's Petroken for a total of $122 million. By the end of the year, however, the deal had fallen apart; the Argentine Central Bank's lack of physical dollars meant YPF could not complete the transaction. The acquisition would have not only allowed YPF to gain synergies, with Petroquimica Cuyo and Petroken having facilities in close proximity to YPF's plants in Lujan de Cuyo and Ensenada respectively, it could also have paved the way for the world-scale plant YPF wants and Argentina needs. "The economies of scale fostered by such a consolidation could facilitate the development of a project for the construction of a new PP plant that would ensure the supply of domestic demand and generate export availabilities," said Jorge R. Sampietro, general manager at Petroquimica Cuyo, on the merger's advantages.

Petroquimica Cuyo's current PP plant in Lujan de Cuyo was built in 1980 using BASF technology, with a production capacity of 60,000 tons per year (mt/y). This has more than doubled to 130,000 mt/y in 2016, using almost 100,000 mt of propylene from YPF's neighbouring refinery as a feedstock on an annual basis. Petroquimica Cuyo began manufacturing commodity propylene products branded as Cuyolen in 1988 and specialty polyolefins branded as Cuyotec a year later. "Customers associate those brands with the assurance of high-quality products and technical services, as well as with the company's commitment to the development of product grades that meet the industry's ever-changing needs," continued Sampietro.

YPF does, however, have several partners in the energy sphere already. As well as U.S.-based Chevron and Malaysia's national energy company Petronas, with whom it is already working on oil and gas projects in the Neuquén basin, YPF's latest collaborator is American Energy Partners. The two companies signed a $500 million, 50/50 agreement at the start of 2016 to conduct exploration and development projects in Vaca Muerta. "We believe that our new partner, American Energy Partners, will contribute expertise of the highest level to develop shale oil and gas in Argentina. This partnership will definitely accelerate YPF's unconventional learning curve," explained Galuccio. "After the first stage is completed by mid-2018, the project would enter into the full field development phase in "U.S.-style shale manufacturing" mode," he continued.

Gastón Remy, President, Dow Argentina

## PARTNERS FOR GROWTH

Such partnerships should ensure an ample increase in production to supply YPF's partnership with Dow Chemical, in which the former supplies the latter's gas demands, among others. Dow's presence on the Argentine petrochemical scene is, at around six decades, almost as long and prolific as YPF's. Despite recent feedstock challenges, the country remains disproportionately represented within Dow's global strategy. "Dow's subsidiary in Argentina is the country's sixth largest in the world, even though Argentina is the world's 24th largest economy," said Gastón Remy, president at Dow Argentina. "Dow has been recognized as the leader of Argentina's petrochemical industry for the last 60 years."

Dow's main production site is its 120-hectare petrochemical complex in Bahia Blanca, in which it invested 450 million pesos for expansion in November 2014. In a shock move upstream, Dow signed a $350 million joint venture agreement with YPF to explore the El Orejano gas field in Neuquén eighteen months previously. "[Its] advantages include abundant water resources, a century-old hydrocarbon industry, connection with pipelines and, unlike some areas in the United States, relative under-population," explained Remy of the decision to invest in exploration. "Dow has often been a first-mover within the industry and is deeply committed to supporting Argentina's development and to the company's sustainable growth in the country."

Dow and YPF reaffirmed their commitment to Argentina in late 2015, adding a further $500 million to their exploration fund for the El Orejano site. Estimates suggest production could reach an average of two million cubic meters per day by the end of 2016 - three times current levels. Ignacio Millan, president at the Argentine Institute of Petrochemicals (IPA) believes Argentina's petrochemical industry is worth the investment: "Investors should recall the first mover advantage. Those that take the risk in heavily investing in an opportunity before others are those that later reap significant profit."

Dow and YPF, together with Brazil-based energy company Petrobras, began their work together in 2001, when they invested $720 million in Compañia Mega. YPF has a 38% stake in the company and supplies the plant's raw materials; Petrobras holds a 34% stake and receives LPG and natural gasoline from its investment; while the remaining equity belongs to Dow, which secured an additional ethane supply from the company. "Compañia Mega is a producer of ethane, propane, butane and natural gasoline," explained general manager Hugo Tormo. "We have two complementary plants connected by a pipeline; our natural gas separation plant is located in Loma La Lata in the Neuquén basin, while our fractionation plant, storage and loading facilities are in Bahía Blanca."

Although only 16 years old, and therefore comparatively new in terms of Argentina's petrochemical infrastructure, the company still has plans for expansion and upgrades: "We need to invest in expanding our processing capacity so that the company can expand its operations in line with increasing production in Neuquén," said Tormo. "We are currently analysing a plan to increase our production capacity by 50% by installing a third turboexpander train at our Loma La Lata site and to eliminate bottlenecks."

Representing the interests of the petrochemical and chemical industries in Argentina and Latin America as a whole is the Association of Petrochemicals and Chemicals Latin America (APLA). The association is connected to more than 100 companies and provides its members with the opportunity to network as well as gain relevant industry information. "Our most important event is the Latin American Annual Meeting, at which attendees can meet and interact with different companies from all over the world to develop business and share ideas," explained president Jose Luis Uriegas. "Although

Jose Luis Uriegas, President, APLA

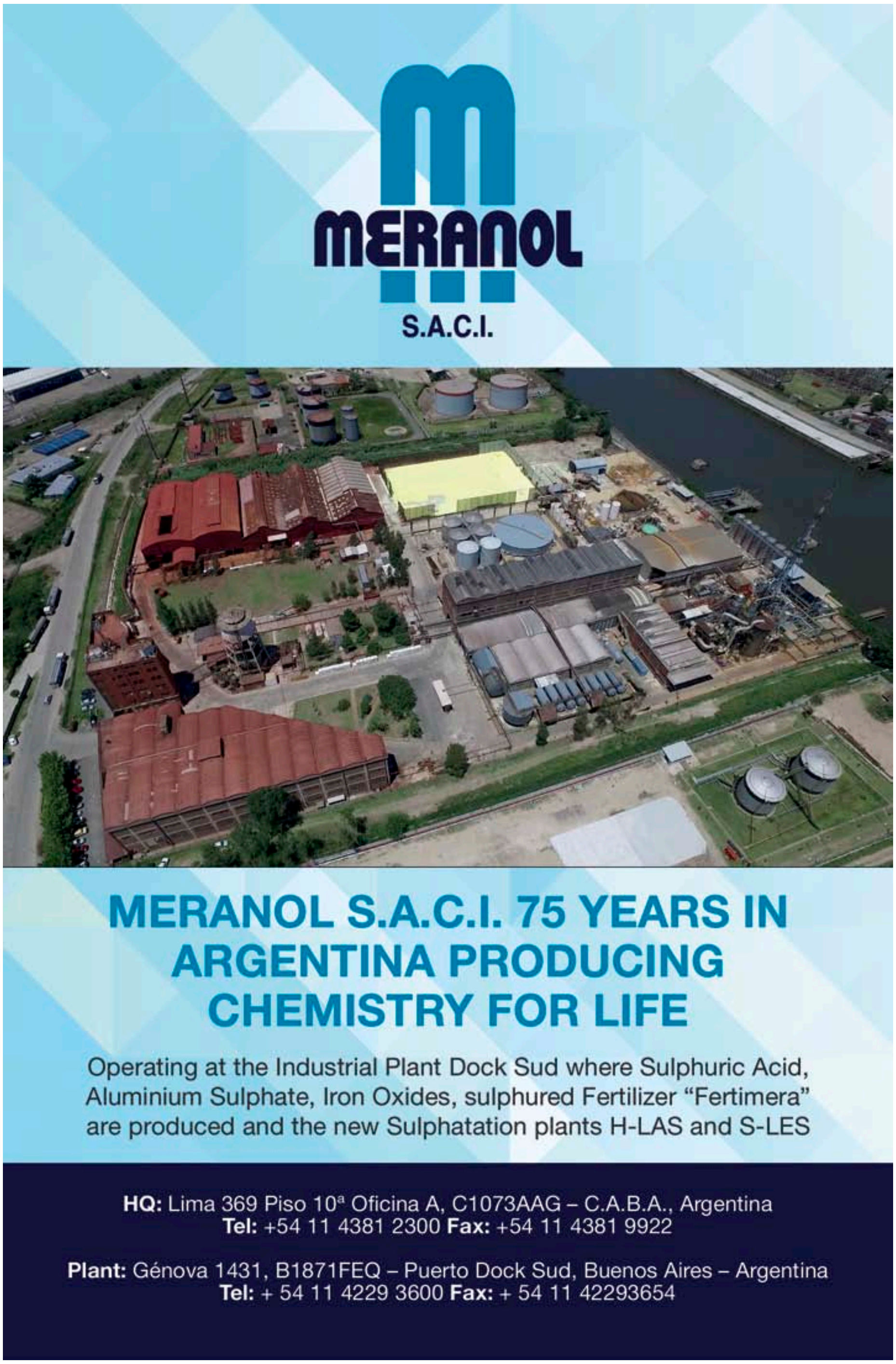
our annual meetings have a focus on Latin America, we also receive attendees from outside of the region who are looking for opportunities here."

The association's 2016 annual meeting will take place in Buenos Aires, due to the current economic and political situation in Argentina. The new government is far more open than its predecessor to welcoming foreign investment into the country, much of which could be directed towards the petrochemical industry. "The petrochemical industry has a long history in Argentina and the extent of the Vaca Muerta reserves will rejuvenate this. With this feedstock, we can invite foreign investors to allocate capital to Argentina and develop future world-class projects," said executive director Manuel Diaz. "I hope to see important, world-class investment in Argentina over the next decade."

# PLASTICS AND SPECIALTY CHEMICALS

## A varied industry with green fingers

The specialty chemicals industry in Argentina manufactures a vast array of products from solvents and surfactants, to performance polymers and polyester resins. Such products have a wide variety of applications across a number of industries, including personal care, paints and pharmaceuticals, among others. Despite Argentine know-how in a number of these areas, however, much of the country's chemical trade deficit is due to imports of chemicals from this sector. "In general, we export our thermoplastics at a lower capacity than we import, resulting in a yearly trade deficit. Thermoplastics are strongly linked to GDP and, as this is expected to rise, so too will the demand for these products. Internal thermoplastic manufacturing could easily replace the requirement for import; however, the manufacture of thermoplastics, such as polyethylene, requires an improvement in our ethylene infrastructure," explained Dr Alfredo G. Friedlander, executive director at the Argentine Institute of Petrochemicals (IPA).




Specialty chemical company Meranol exports around 10% of its product to neighbouring countries Brazil, Bolivia and Paraguay, but expects to expand its export market to Chile and Uruguay in the near future. It has a leading 45% share of the aluminium sulfate market as its competitors Arquimia and Faisan both import sulfur and are not vertically integrated. The company experienced 60x growth over the last two decades, and increased consumption of aluminium sulfate for water treatment plants, combined with competitor BASF closing its sulfation plant in late 2015, should ensure the success of Meranol's growth strategy. "Over the last two years, Meranol invested more than $20 million in new products in the surfactants line, oriented towards production of H-LAS and S-LES. The aim with these new products is to double the present turnover and develop markets in the health and personal care sectors," explained director general Rodolfo Perez Wertheim.

An area which Argentine companies may be able to capitalize on is in green chemistry. European markets in particular are exploring sustainable options as a result of consumer demand, but lack the space to grow crops for plant-based chemicals. Argentina's high levels of soybean production suggests it could be a key competitor in the space, while clients would feel confident in terms of sustained availability of the product. "We identified the chance for Varteco to grow in the bio-based plasticizer market because some companies are interested in non-phthalate and "green" options at competitive prices. We established a commercial affiliate in Barcelona and started to sell this bio-based plasticizer in Europe," explained Diego Garcia Touza, director at Reagens Varteco.

Reagens Varteco was formed in 2014 from Argentina-based Varteco and Italy's Reagens, combining the former's knowledge of the regional market with the latter's advanced stabilizers technology. The company is now working on building a plant to manufacture propylene glycol from glycerol, in partnership with Y-TEC and INCAPE, but it also sees the opportunity to create this chemical from bio-based chemicals. "Based on Varteco's commodity chemicals business profits, we could develop new interesting bio-based chemicals businesses," continued Touza. "I believe we could develop other interesting businesses from these chemicals, such as propylene and ethylene glycol based on glycerol use."

Fellow plastics company Plaquimet, which produces polyester resins and gel coats, aims to be a market referent for sustainable chemical use. It currently manufactures around 80 different resins for end markets including construction, infrastructure, transportation and energy, with its flagship product being the Polymet line of resins. The company is constantly looking for new applications for its products, as well as promoting the use of green chemicals among its clients. "We believe in a green world and take sustainability very importantly. We are following the policies being developed globally and the government is also implementing responsible practices in terms of the environment," explained director Eric Engstfeld. "Although there is not a strong market for green resins at present, we know the future is created in the present and are trying to push the usage of green products."

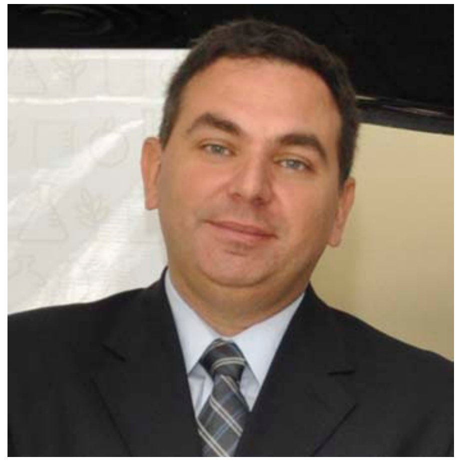
# AGROCHEMICALS

## Supporting the foundation of Argentina's economy and the expectations of a president

Argentina is the world's third largest producer of soybeans, fifth largest producer of corn and tenth largest producer of wheat. In a speech to farmers following the official announcement of the removal of agricultural levies in December 2015, President Macri showed his awareness of Argentina's potential to be the supplier for the increase in world food demand: "We have to go from being the breadbasket of the world to the supermarket of the world."

During the current government's four-year term, the intention is to intensify production from 100 million mt/y to 160 million mt/y – an increase of 60%. Upon taking office in December 2015, Macri immediately demonstrated the importance of the agricultural industry to Argentina's overall economic might; he removed controversial restrictions on agricultural products, introduced by Argentina's previous administration to bolster government revenue. Making good on his campaign pledge, export taxes on foodstuffs such as wheat, corn and beef – which were at 23%, 20% and 15% respectively – were completely removed. Levies on soybean derivatives, of which Argentina is the world's largest producer and exporter, remain in place, but were lowered from 35% to 30%.

Photo courtesy of YPF.



Federico Landgraf, Executive Director, CASAFE

Argentina's agricultural industry has a healthy relationship with the agrochemical industry, whose products will be key in improving yields. Representing the interests of agrochemical companies across the spectrum, from multinationals including Monsanto and Syngenta to local players such as Chemotecnica and Gleba, are two organizations: the Chamber of Agricultural Health and Fertilizers (CASAFE) and the Chamber of Fertilizers and Agrochemicals (CIAFA).

CASAFE in particular focuses on promoting best practice and the responsible use of crop protection products to both regulatory bodies and the public. It has two programs in place to standardise practices in Argentina and to make good agricultural practices the norm across the industry. Agrolimpio is a program endorsing the globally recognized triple-rinsing protocol of chemical containers and their subsequent recovery. CASAFE is ultimately lobbying government for a nationwide law to enforce the collection of these containers after use. Deposito OK is a program for certifying facilities which store agrochemicals. "We have around 600 to 700 certified facilities in Argentina, which is around 50% of the total facilities in the country. The uncertified facilities are usually smaller, local sites; multinational companies will not sell their products to such facilities," explained Federico Landgraf, CASAFE's executive director.

CASAFE typically represented the interests of multinational companies in Argentina. With the government's recent appeasement of the industry, the opportunity for growth may mean more international players decide to expand their operations in the country. Global corporations also bring with them global standards, which should work in CASAFE's favour when seeking increased governmental, as well as popular, support for more stringent safety regulation.

A third program run by CASAFE is Spray OK, which it hopes to begin rolling out across the country in 2017. Currently, anybody can use spraying equipment without certification. CASAFE, in partnership with the Institute of Standardization and Certification, aims to certify companies, operators and the machinery itself for both ground and aerial application of crop protection products. "Most companies do not own their own spraying equipment, preferring to rent it from larger companies. Our aim is to ensure best practice in the use and maintenance of these machines," said Landgraf.

CIAFA, which has 53 members, is a uniting voice for agrochemical companies in Argentina. It works with regional and national government agencies on legislation affecting the industry, and also works with farming associations to achieve its objectives. Although it has no barrier to membership, CIAFA is known for its work with Argentinian chemical companies: "We can promote local players by price and availability. If you import product from abroad, it could take around three months to arrive. This is not ideal in a market as dynamic as ours, so local products have the advantage," explained Armando Allinghi, CIAFA's executive director.

Armando Allinghi, Executive Director, Chamber of Fertilizers and Agrochemicals (CIAFA)

Member company Gleba, which has been in the market since 1950 and now has an annual turnover of around $40 million, is supportive of the opportunities provided by CIAFA: "CIAFA is a great platform to share ideas, problems and solutions, as well as to network with firms. CIAFA and CASAFE share a good relationship and there are many areas on which we share points of view. However," remarked Gleba's commercial manager Miguel Seara, "it is also beneficial that we are able to discuss different points of view with complete freedom and openness."

For Gleba, one of the main issues affecting the agrochemical industry at present is the rapid opening up of the market and the effect uncontrolled competition may have on local players. Under the previous administration, domestic chemical companies enjoyed import restrictions on formulated products from abroad; with the removal of these restrictions, combined with a lack of investment into improv-

Mauro Piva, General Manager, Nova

Photo courtesy of Profertil.

ing checks on imported products, the industry fears low quality chemicals will make their way into the value chain. "Competition in the agrochemical market is high in Argentina and we need more control over Chinese companies importing into Argentina," explained Seara. "The industry needs to see several stages of checks on imported products, covering areas such as environmental protection, processing and impurities, as SENASA does not conduct 100% checks."

Chile-based company Anasac acquired 80% of Gleba in 1997; a decade later, the new parent finalised the purchase of 100% of the company and made the decision to change Gleba's focus from providing tolling services to formulating its own products. Anasac injected $1.5 million into its plant facilities and Gleba now supplies products to Anasac for export to Latin American countries such as Colombia, Ecuador and Mexico, as well as to markets abroad. "The objective was to quickly formulate products that were going off patent and to build a brand name with a portfolio of specialty, post-patent products. While in 2005 95% of our business came from contract manufacturing, this has now reversed, and 95% of our revenues are generated from our own-brand products," said Seara.

Fellow CIAFA member Chemotecnica has been in the market even longer, having been founded in 1943. The company focuses on the local synthesis and formulation of crop protection and environmental health products, but has also maintained its contract manufacturing services, which now generate 50% of its revenue in its agrochemicals segment. "We have studied and developed formulations specifically for the Latin American market and have registered products from Mexico to Chile. Conditions such as temperature, rainfall and water quality vary so our formulations are specific to particular regions," explained president Alejandro Golfari. "We have already developed a water-based formulation for cipermethrin with very good results."

However, commodity chemicals such as glyphosate, atrazine and 2,4-D still make up the bulk of the crop protection products sold in Argentina per year. The former accounted for 78% of total agrochemical sales in 2013, or around 200 million liters of product. Chemotécnica manufactures more than half of the country's annual nine million liters of 2,4-D production. "Volume is still a main driver for us and therefore we produce the commodity crop protection products," stated Golfari. "We can produce 37 million liters of glyphosate and 4.8 million liters of 2,4-D. The aim of our SC formulations plant is to produce specific herbicides to combat glyphosate and 2,4-D resistance in plants."

Glyphosate alone accounts for $800 million of the $2.5 billion agrochemical industry in Argentina, but is losing ground to specialised formulations as a result of increasing glyphosate resistance in weed varieties. Cañada de Gomez-based Nova, which was founded in 1985, has invested heavily in product development over the last four years, spending 60% of its research dollars on its herbicide segment alone: "We have approximately 70 registered agrochemicals, and our plan is to increase this to 130 registered products in the next three years," said general manager Mauro Piva. "Nova is focusing on reformulating glyphosate-resistant products, as is it a serious problem for our market."

Public opinion surrounding the use of agrochemicals is of concern to companies and growers alike. Both CIAFA and CASAFE focus on the need for education about the benefits of crop protection products, particularly in conjunction with responsible use programs, and CASAFE has also initiated a social media campaign to reach out to young people. "The public has a negative perception of the crop protection industry due to the improper use of agrochemicals," said CIAFA's Allinghi. "By encouraging best practice across Argentina, this will both improve the efficacy of crop protection products and lower the associated risks."

## A CHANGE IN ATTITUDES

The industry as a whole is also feeling the impact of the global trend for sustainable operations and green solutions. This is particularly felt by multinationals and domestic companies working on joint ventures with international players, such as Chemotécnica, which is moving towards a more environmentally friendly portfolio of products with several U.S. companies. "We are seeing the market for solvent-based formulations reduce, while demand for green products and environmentally friendly solutions is increasing," said the company's president, Alejandro Golfari.

Some companies are modifying their entire business model to embrace bio-solutions, such as Brometan, which is the only company in Argentina working on crop-oriented biological controls. Its solutions are typically more expensive than traditional crop protection products, but it claims the return on investment is far higher than normal. Working with global companies on innovative solutions, general manager Pablo Raimondo notices the differences between attitudes towards chemical usage internationally compared with Argentina. "There is not a real consciousness of healthier foods among our local consumers and there is no clear legislation concerning fresh food production. A small number of producers are concerned about how to produce fresh products using sustainable and safe solutions and, for domestic consumption, quality is low and chemical usage is high," claimed Raimondo. "For external demand, buyers establish the rules and production uses greener and gentler chemicals."

However, with external markets leading the way, Argentina and the rest of South America will soon follow. Brometan, which generates an annual turnover of around $22 million, believes it is at the forefront of a change in attitudes and is developing products accordingly. "Our portfolio, with its spread of traditional and greener products, is intended to manage the bridge between current usage trends and the requirements of the future," continued Raimondo.

Around two-thirds of chemical importer InsuAgro's business is providing distribution services for client companies such as Arysta LifeSciences and FMC Brazil, among others. It focuses on high-value, niche products which are not typically manufactured in Argentina, and saw its forays into sustainable products hampered by Argentina's recent import restrictions: "We previously had a special line of micro-granules, which we referred to as our environmentally friendly formulations because they are safer to use and do not contaminate any packaging," explained commercial director José Mrejen. "However, when it became too complicated to import such products, we had to discontinue the line. We are hoping to be able to resume sales of this product soon."

While the opening up of the market should make it easier for companies such as InsuAgro to import chemicals from abroad, it could also mean such companies are bypassed by their suppliers in favour of establishing their own operations in Argentina. InsuAgro was launched in 2002 and distributes for international companies from Europe, China and India. "The only challenge we may face is the potential for foreign players to leverage the low commodity price period and enter the market, which may cause interference in distribution. However, InsuAgro remains a small enough company to be an agile player and quickly respond to change," said Mrejen. "We foresee a good period of growth ahead across all crop areas we supply to, which should improve our revenue stream."

Agrochemical companies are acutely aware of the importance of their industry to Argentina's future on both a domestic and global level. The industry knows it needs to shift focus away from glyphosate and its cousins, atrazine and 2,4-D, to more specialist, sustainable products. "The Argentine farmer is part of a value chain which has incorporated a range of technology in recent years, including in seeds, equipment and knowledge," said Nova's Piva. "Argentina has an incalculable potential in terms of the agricultural sector."

The first improvement in agricultural yield followed the introduction of hybrids in the 1980s, while the second followed the introduction of no-till farming and genetically-modified seeds in the 1990s. Argentina is now long overdue for a third wave of improvement in the sector. Chemotécnica's Golfari believes this will stem from precision chemical use and combining new crop protection technologies with fertilizers: "As yields increase, it will become even more important to protect crops. Farmers may not choose to apply pesticides or fungicides if the difference will only be around 7% of yield increase. However, if farmers can improve the differential to 30% or 40%, demand for crop protection products will rise," he explained. "Focusing on the crop protection and environmental health sectors will enable us to achieve the government's goal."

The aim of the incumbent government is to increase Argentina's agricultural output by 60% by the end of the decade. With farmers regaining around 20% of their profits from the removal of export taxes leading to an increase in agricultural production, agrochemical companies are seeing 2016 as a transition year on the way to an increase of around 20% by the end of 2017. Argentina has the potential to increase productivity, not only by converting up to four million more hectares of viable land into crop fields, but also by increasing its use of biotechnology. Combining better practices and increasing the usage of fertilizers, seed technology and crop protection products should see the sector produce not only enough to satisfy domestic demand, but also create a surplus to dominate the supply chains of such crops across South America.

# PHARMACEUTICALS

## Family-owned businesses dominate Argentina's pharmaceutical industry

The pharmaceutical industry in Argentina is unlike its peers elsewhere in the world. Domestic firms dominate the market, holding 85% of the market's production value and manufacturing 60% of its product volume. Only one company in the top five – Pfizer – is an international player, with family-owned branded generics companies Roemmers and Bagó not only offering their own products, but having a share in many of their smaller competitors. The former has an 8% share of the market alone, but covers around 30% of the market through a further 20 companies.

Maprimed, owned by Roemmers and Chemo in a 50/50 joint venture, is the active pharmaceutical ingredient (API) manufacturer for both parents, working from Roemmers' original pharmochemical plant in Buenos Aires. "Today, Maprimed is the largest pharmochemical company in the market in terms of production and warehouse capacity. It also has the most diverse product basket and 80% of our business is exports," explained general manager Hugo Tierno.

Roemmers and Bagó, alongside Gador and Elea, have shaped the market to their advantage. Branded products are associated with quality and effectiveness and, despite their cost, account for 80% of pharmaceutical sales. "It is difficult to explain to the public that branded and generic products are chemically equivalent and it is only the pharmaceutical companies themselves, via their marketing departments, which have created the value and trust in the brand," stated Dr Federico Montes de Oca, president at the Argentine Association of Pharmacy and Industrial Biochemistry (SAFYBI).

As well as showing a strong preference for branded products, Argentina's over-the-counter (OTC) market accounts for one quarter of pharmaceutical sales by volume; the OTC market in the United States, by contrast, is less than 10%. Biosintex Ofar was established in 2002 and now produces 36 different brands in 50 different forms, including cold and flu treatments, cough lozenges and antibiotics. "Most of our products are over-the-counter or prescription products that can be prescribed by pharmacists. It is crucial to know what a pharmacist needs, as this is the first port of call for many consumers who cannot afford a doctor's consultation fees," explained director of marketing Maricel Levandovsky.

Considering the new government's decision to embrace foreign investment and pursue a policy of openness and transparency, foreign players could now decide to enter the Argentine pharmaceutical market. However, contract manufacturer Tetrafarm, which began operations in 2004 and now counts companies such as Bagó and Apotex among its clients, believes this will be easier said than done: "International companies will find it difficult to operate here because Roemmers and Bagó dominate the market," said president Sergio Angelucci.

Using tolling services may be a good way for international companies to dip a toe into this difficult market before deciding on further action. According to Montes de Oca, registering products in Argentina can take fewer than 12 months with the country's paperless process. Although Chemo has operations worldwide, including in other countries in Latin America and in Europe, Argentina's high research and development activity means it is one of the biggest contributors to its operations.

# SERVICES

## Long-term and wide-ranging experience is required

Service providers in Argentina, which may have worked on large-scale petrochemical plant projects in previous years, have seen limited activity from the sector during the last decade. However, potential reductions in one market are usually balanced out by growth in other areas, and it is testament to their flexibility that they have been able to maintain strong growth in what has been a challenging time for many of their key clients.

Bolland has been present in the sector for almost 80 years, mainly serving the southern cone's hydrocarbon industry. It provides equipment and services to the oil and gas, refining and petrochemical industries, as well as integral chemical services solutions for operational problems via its Productos Químicos Bolland brand, registered in 1998.

This area of Bolland's business is also one of its most innovative, developing different formulation lines for the treatment of oil, gas and water specific to each client's needs. It has operational bases and research and development laboratories in close proximity to all the oil and gas production areas in the country. "In terms of innovation, the chemical service sector is continuously evolving," said commercial administration manager Adolfo Sánchez Zinny, "not only because of the different needs of mature oil fields, which make up the majority of the fields in Argentina, but also due to unconventional fields such as Vaca Muerta."

With the potential for ramping up Argentina's oil and gas production and ensuring supply of feedstocks until at least 2050, engineering, procurement and construction (EPC) companies will again be in high demand from the petrochemical industry. "As petrochemical investment comes into the country, particularly from players such as Dow and YPF, AESA can be very supportive of EPC projects," claimed general manager Adrian Mascheroni.

AESA is YPF's EPC service provider with more than 65 years of experience operating in the energy industry. It covers four main business lines: engineering, manufacturing, construction and operation and maintenance services. The last few fallow years in Argentina's petrochemical industry have enabled AESA to build on its experience on some of the country's largest projects, such as in Bahía Blanca or on YPF's La Plata refinery. "In order to be able to work on such big projects, we have had to develop a strong engineering department over the last seven years, rather than relying on the knowledge of other engineering companies," stated Mascheroni. "We also developed our knowledge

Adolfo Sánchez Zinny, Commercial Administration Manager, Bolland

Adrián Mascheroni, General Manager, AESA and experience in construction as the complexity of our projects increased….. In order to improve safety and reduce the workload, we have increased project modularization. In the La Plata project, for example, we were able to go from construction to execution without any corrections to the model, which is normally very difficult to achieve."

## INFRASTRUCTURE CHALLENGES

According to APLA executive director Manuel Diaz, one of Argentina's biggest challenges is infrastructure investment, while IPA's president Ignacio Millan believes a focus on the railways, increased storage capacity and port expansion are some of the key infrastructure challenges facing Argentina. The long-awaited expansion of the Panama Canal has seen modernization plans given the green light along the U.S. Gulf Coast; Argentina, meanwhile, has delayed new investment into its ports due to economic uncertainty and a weak oil and gas industry.

Argentina boasts the second-longest river in South America after the Amazon; at 4,880 km, the Paraná River connects the chemical-producing ports of Zárate and Campana with the Atlantic Ocean, but remains an under-utilised resource. Carboclor, the main isopropyl alcohol manufacturer in Latin America, is located on the shores of the Paraná and has a 300 meter dock port to receive offshore vessels. "Carboclor's proximity to a deep river like the Paraná River would allow the company to transport more volumes at lower costs," said general manager Alfredo Fernandez. "The increase of waterway transportation would also significantly reduce freight costs."

However, it is not just port infrastructure that is lacking. According to EPC firm Odebrecht, its discussions with the Chamber of Construction and other development organizations indicate the previous government built up a $6 billion backlog in infrastructure investment. However, in April 2016, President Macri announced plans to inject 150 billion pesos into public works and infrastructure projects in Buenos Aires province, which should go some way to alleviate the issue.

As well as spending money on modernizing the ports, the nation's domestic and industrial gas pipeline network could also do with an update. "It is good, but not good enough," said APLA's Diaz. "It is very easy to add new production to our existing infrastructure but we need to improve the capacity of these pipelines to accommodate the increased production of natural gas that we will see in this country."

Odebrecht is confirmed for a $200 million project from the province of Córdoba to expand its pipeline system, but is awaiting a further $300m in contracts across the country. Rival firm Techint is currently working on one section of the north-eastern natural gas pipeline, but says further expansion of the network into Misiones province, on the border with Brazil, is likely to be suspended. In terms of industrial gas pipelines, the firm looks to the upstream sector to provide answers: "We are analyzing perspectives on how much gas is going to be available in order to evaluate what sort of capacity needs to be developed," said Rubacha. "If the Bahía Blanca petrochemical complex sees expansion, there may be a need to have an additional pipeline to transport gas from Neuquén to Bahía Blanca."

Infrastructure questions then will be addressed only if the requirement is in place. Despite the need for more raw materials in Argentina, a lack of foreign investment and limited dollars in the bank have kept plans for new refineries and petrochemical plants off the table. Low international oil prices have also stifled appetite for growth: "In terms of building a new petrochemical plant in Argentina, the starting point will be the normalization of international oil prices," commented Odebrecht's business development director Pablo Brottier. "The earliest we could see a new world-class plant come online in Argentina – if the oil prices start to recover this year – would be 2023."

Techint, however, takes a different view: "Companies will look at the big picture and make decisions based on their long-term strategies. We will probably see some activity in this regard in late 2016," said commercial director Southern Cone Gabriel Rubacha.

Marcelo Knobel, Director, Arubras

Despite the uncertainty surrounding the issue, Argentina's EPC firms are adamant they are ready for the next wave of expansions and new builds, using the experience they have built up in other sectors and jurisdictions over the past decade.

# DISTRIBUTION

## Players in the space should prepare themselves for consolidation activity

Argentina's chemical distribution market is highly diversified; small-scale distribution firms with fewer than ten trucks comprise 85% of Argentina's logistics services. More than a decade of closed economy prevented full-scale competition from taking place and smaller companies had the opportunity to develop specializations and embed themselves in regional markets. Low barriers to entry and limited regulation on the transportation of dangerous goods also contributed to the current situation.

According to international chemical distributor Arubras: "The number of chemical distributors is too high when compared with the size of the Argentine market. There are roughly 130 companies in operation today; this is mainly due to the fact that companies favour maintain-ing personal relationships," stated director Marcelo Knobel.

With the opening up of the market by the new government, however, this situation is set to change. As multinationals look to establish their global brands in Argentina, local companies could find themselves either out of business or swallowed up entirely. The chemical distribution market could look very different in just a few short years. "We expect the number of distribution companies to reduce by more than half over the next three years, with probably no more than five big distribution companies holding more than 80% of the market," explained Knobel.

Arubras was founded as a small, family-owned company in 1992. A decade later, it bought out a former partner and merged with competitor Treassure. Having moved into new offices in 2010, it then faced a difficult period due to the wider macroeconomic issues affecting Argentina, not least the lack of new chemical production. Its distribution of locally manufactured products therefore increased only marginally, and now accounts for just over 10% of its activity. Arubras is considering partnering with an international player in order to have the best chances of moving forward: "Operating costs for these types of business are fairly substantial, particularly as a result of the changes made by Argentina's new government," said Knobel. "These companies will have to work hard to become effective competition. We are prepared for these changes and are willing to find appropriate partners for this challenge."

Henry Hirschen (HH) is another family-owned distribution company operating in Argentina, though with a slightly longer history. Founded in 1948, it is now in its third generation of the same family and distributes chemical, plastic and steel products for a variety of industries, and claims to be the largest industrial distributor in Argentina in terms of value. "Continued investment in Argentina's conventional - and especially in the country's unconventional - resources since 2012 have largely driven HH's sales from the oil and gas industry, which now constitutes about 25% of the company's sales revenue," said director Tómas Hirschen. "HH has partnered with chemical companies from abroad with expertise in both conventional and unconventional activities."

As a local player with international partners, it has been able to tailor its product offering to the idiosyncrasies of the Argentine market and the services HH and its competitors provide will be difficult for multinational distributors, with their various levels of management, to replicate. Having been locked out of global exchange markets, producers have struggled to access the capital they require and therefore independent transportation providers have been able to plug the gap. "The difficulties that Argentine companies have faced in accessing international financing has made HH's financing services all the more important," said Hirschen. "HH has provided trusted clients with the financing they need, which is especially important in industries with low margins and high financing needs."

## LIFTING RESTRICTIONS

Another way in which local players have been able to provide added value to their clients is through navigating the country's unique customs requirements. Under the previous government, the country was ranked fourth in the world for having the most restrictive measures in place regarding international trade. One of these restrictions was the Advanced Affidavit for Imports (DJAI), implemented in 2012. Companies were required to submit affidavits for imported goods before completing transactions and before the goods could leave their port of origin, severely restricting the freedoms of Argentina-based firms to do business. "In the first six months after the government first implemented the DJAIs, the supply of certain imported chemicals fell and prices naturally rose," explained Hirschen.

DJAI was the subject of a number of complaints from the United States, the European Union and Japan, amongst others, and was subsequently found to be in violation of World Trade Organization rules. With Argentina only having until the end of December 2015 to resolve this issue, it was one of President Macri's first tasks on taking office. "Our new government made these amendments on 23 December 2015, replacing DJAI with SIMI, a new Integral System for Monitoring Exports, which grants automatic licences for all imported products," outlined Sebastian Aversa, country manager for BDP International.

Tomas Hirschen, Director, Henry Hirschen (HH)

BDP International is a third-party logistics firm headquartered in the United States and with operations in 270 cities worldwide. Around 80% of its operations in Argentina are focused on the chemical industry and, like many companies, it has relied on imports for the majority of its business since 2011. "In our Buenos Aires office, 75% of the business covers imports to Argentina, which is the main business of foreign trade today as the export market across the country has dropped off," said Aversa. "Imports decreased by 45% during the period of DJAI and we hope that we can regain these losses during 2016."

As a third-party logistics firm, BDP focuses on delivering the distribution services its client companies do not have internal to their organizations. BDP provides its clients, which include many of Argentina's major chemical companies, with documentation, transportation and local warehousing services. As an international company, it is also able to supply clients with technological services and tools which work across the globe – something for which local competitors do not have the scope. "BDP Smart is a superior tool and really popular with our customers. I'm not aware of a similar product from our competitors. It is not just a track and trace tool, as it also enables our clients to create invoices and P&L statements, run key productivity indicator statistics, and work closely with their data. All the data they need can be extracted from it and they can visualize their operations," outlined Aversa.

Hernán Sanchez, Commercial Director, Celsur Logística

Celsur Logística is a logistics company established by a U.S. investment fund in

1995 and now one of the top ten logistics companies in Argentina. Over the last two decades, the company has grown to more than 1,000 employees, occupying a site of more than 120,000 m2 and generating an annual turnover of 950 million pesos. It serves the multinationals market, with around 40% of its operations dedicated to chemical and petrochemical companies. “The company is composed of a group of educated executives, with specific know-how and global operational standards, which makes us an attractive prospect for the multinationals,” outlined commercial director Hernan Sánchez. “Dow Argentina was looking for a new logistics model and we implemented this with the company in 2010, alongside leading shipping company Log-In.”

Celsur Logística highlights the need for improved infrastructure in Argentina. According to Sánchez, Argentina’s ports will easily be able to double the volumes they handle, as they are currently only operating at 50% capacity; the country’s rail infrastructure, however, requires investment. The company, in a joint venture, has taken matters into its own hands: “Celsur Logística has been working with Ferrosur Roca (a private rail company) and Dow Argentina since June 2012 on a cargo transfer cross-dock station in Abbott. The station itself is 17,000 m2 and enables the transportation of 34,000 tons of polyethylene pellets between Bahía Blanca and Abbott per month,” explained Sánchez.

The train line then continues onto Buenos Aires, on a 700 km journey which takes four days in total. Celsur Logística’s trucking service completes the journey in around a day and a half; a necessary alternative while funding to improve the railway line is approved. The Argentine Association of Logistics Companies (Arlog), of which Sánchez is also president, works with logistics companies and government to increase value in the sector. “The project to improve the railway line along the route was presented to the previous administration and was approved so, hopefully, the new government will follow through on the investment,” said Sánchez. “Considering we have not had this level of communication with previous governments, we are optimistic for the future.”


GET YOUR
ANNUAL
SUPPORT

NOV 19-22, 2016

Buenos Aires, Argentina

SHERATON BUENOS AIRES
HOTEL & CONVENTION CENTER

APLA
ASOCIACION
PETROQUIMICA Y QUIMICA
LATINOAMERICANA