

PROGRESS
REPORT

2018



Entrepose is an international EPC contractor that designs, builds and operates infrastructure throughout the energy value chain. We deliver onshore, offshore and underground projects. We respect the environment and the communities around our projects.

Welding of a 48-inch steel tube
made by Spiecapag



Content

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A PIVOTAL YEAR

2018 was a pivotal year for Entrepouse, which continued to suffer from the sluggishness of the oil and gas infrastructure market and the difficulties experienced by several of its subsidiaries, such as VINCI Environnement and Entrepouse Contracting. With the completion of Yamal LNG and Shalapa's flagship projects, Group turnover decreased by 15% in comparison with 2017, for a total of 689 million euros, and its profitability remains delicate.

Despite a gloomy economic climate, Entrepouse's rich portfolio of expertise has facilitated great successes. Spiecapag has achieved an admirable year, driven by the construction of the Trans Adriatic Pipeline. This project was also the theatre of operations for its subsidiary HDI, culminating in the crossing of the Axios River (Greece), a world record!

While VINCI Environnement continued to upgrade the Charleroi (Belgium) energy recovery unit, Geoclean demonstrated its mastery of complex logistical and environmental constraints, with the delivery of the FSRU fixed infrastructure in Bangladesh. Geostock, for its part, benefited from an upswing in exports, particularly to the Middle East.

The subsidiaries of Entrepouse International Network (EIN) have also recorded several successes, particularly Entrepouse DBN, for which a new era is beginning through the merger with the Nigerian company Shoreline. Integrated multi-sector solutions are also being implemented in a supply line project for an oil depot in France, in which Entrepouse Contracting heads up a consortium of five VINCI Group entities.

In 2019, the outlooks of some of the subsidiaries, supported by an excellent order book, such as Entrepouse Algérie and Spiecapag, are promising. Good prospects for VINCI Environnement, combined with the pending renaissance of LNG, also herald well for business growth, particularly in the Group's core businesses.

BENOÎT LECINQ – Entrepouse CEO

Diverse expertise that’s been bolstered and creates value, to reach our customers right where they are

As a unique contractor in the energy sector, Entrepose is recognised for the excellence of its speciality expertise and its mastery of turnkey projects in the most complex environments. It relies on the diversity of its know-how and complementarity to offer its customers services in line with their needs and propose solutions that create value.

The wealth of its business portfolio allows it to reinforce the cross-sector approach developed over the past several years amongst its various subsidiaries, accentuated by an integrated management system (IMS) which is now fully operational. It also enables its transversal capabilities to be strengthened within the VINCI galaxy, through consolidation afforded by the convergence of digital solutions and administrative software. Testimony to this are the fruitful collaboration of Entrepose Contracting, Geocean and Spiecapag Régions France, alongside VINCI Construction and VINCI Energies companies in an oil complex in France, and the participation of Entrepose Industries in a micro-refinery project headed by Entrepose Istana Karang Laut in Bangladesh. A key asset of the Group, its proximity and network of skills increase its ability to meet the most demanding technical challenges worldwide.







This capacity to deploy its expertise on a global scale is also the result of a policy of reinforcing its local commitment and anchoring in territories, in particular embodied by the division of local subsidiaries Entrepose International Network (EIN) since its creation in 2016. Going beyond its determination to expand its network in regions with high potential for the energy sector, underlined by the creation

of Entrepose Ghana, this sustainable geographical presence strategy, a vector of growth, echoes Entrepose’s desire to invest sustainably in the development of the territories in which it operates. The arrival of Shoreline, a Nigerian company and major player in Oil & Gas in Sub-Saharan Africa, into the capital of Entrepose DBN gives it the chance to strengthen its roots in Nigeria and consolidate its presence in the country. Integrated directly into the heart of the economic fabric, geographical subsidiaries benefit from both the responsiveness of a decentralised system and the pooling of Entrepose’s technical and logistical resources.

The growth of their order book and their increased competitiveness are also rooted in the expansion of the Group’s offering, which has made it a major factor in recovering its profitability, beyond EIN. In addition to its operational excellence in the design and implementation of greenfield projects, Entrepose indeed boasts some amazing assets to deploy in the areas of maintenance and operation. Like Geostock, which was awarded the operation of the underground LPG storage site in Shalapa, Mexico, and VINCI Environnement, which has mastered the art of revamping in the field of energy recovery and whose experience is now on evidence in Charleroi, Entrepose DBN and Intech are consolidating their positions.

This diversification is also among the innovations contributed by Entrepose and its ambition to devise solutions for the markets of the future, embodied for instance by Geostock in the underground storage of carbon-free energy, and continue supporting its customers in an ever-changing energy industry.

The Entrepose Group is organised into five business lines, plus a network of cross-cutting, regional subsidiaries.

ONSHORE			OFFSHORE	UNDERGROUND		NETWORK OF REGIONAL SUBSIDIARIES WITH CROSS-CUTTING EXPERTISE
ENERGY RECOVERY	OIL & GAS AND INDUSTRIAL INFRASTRUCTURE	ONSHORE PIPELINES	OFFSHORE WORKS	UNDERGROUND STORAGE		
						
VINCI ENVIRONNEMENT	ENTREPOSE CONTRACTING	SPIECAPAG	GEOCEAN	GEOSTOCK	ENTREPOSE INTERNATIONAL NETWORK (EIN)	
	Entrepose IKL	Spiecapag Régions France		Geostock Sandia	Entrepose Algérie	
	-	-		-	-	
	Entrepose Industries	Spiecapag Australia		Geostock Asia	Entrepose DBN Nigeria	
	-	-		-	-	
	Entrepose CMPEA	HDI		UGS	Intech Brazil	
	-	-		-	-	
	Entrepose de México	HDI Latam		Geogreen	Entrepose Ghana	
				-		
				Stonorgaz		
				-		
				Entrepose Drilling		
				-		
				Geostock de México		

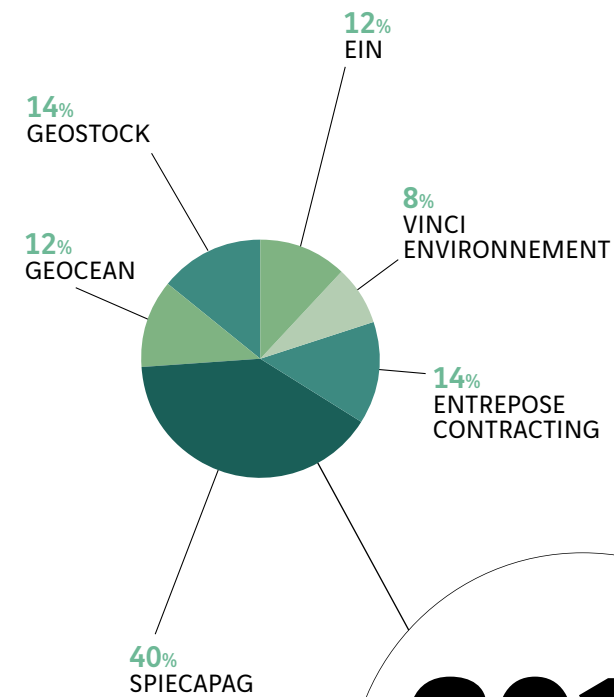
Entrepose Group Executive Committee



FROM LEFT TO RIGHT :

Cheikh Daff: Vice President Human Resources, Entrepose Group – **Pascal Baylocq:** Managing Director, Geostock – **Vincent Boillot:** Chief Financial Officer, Entrepose Group – **Fabrice Novel:** Managing Director, Geoclean – **Alain Panhard:** Managing Director, Entrepose International Network – **Benoît Lecinq:** CEO, Entrepose Group – **Jacquelin de la Porte des Vaux:** Senior Vice President Development, Entrepose Group – **Bruno Guy de Chamisso:** Managing Director, Spiecapag – **Frédéric Peigné:** Managing Director, VINCI Environnement – **Gaël Cailleaux:** Managing Director, Entrepose Contracting

BUSINESS LINES



2,544
permanent
employees

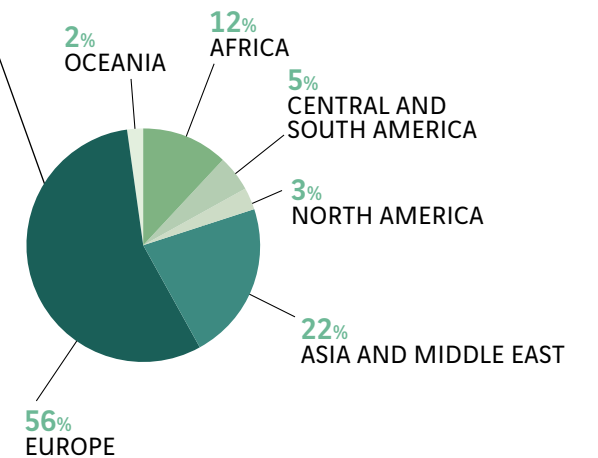
876
order book (in €m)

2018
a year
in figures

689
turnover (in €m)

275
worksites
in progress

GEOGRAPHIC ZONES



A WEALTH OF CROSS-FUNCTIONAL AND COMPLEMENTARY SPECIALITIES AT THE HEART OF ENERGY MARKETS

Globally, Entrepose entities combine their expertise and perform their onshore, offshore and underground activities to builds infrastructure for production, transport and storage in the energy industries.

01

Onshore

A global player in onshore infrastructure for the energy value chain, Entrepose relies on its resources in engineering, manufacturing and construction that, combined with its expertise in project management and its mastery of logistics and procurement, have made it a top-ranking reference for the most complex turnkey projects.

Energy recovery

Through its subsidiary VINCI Environnement, which specialises in waste treatment and energy recovery, Entrepose designs and performs turnkey projects worldwide. Its business this year has suffered from the delay to several of its major projects, and has mainly focused on works in France and Belgium. It represents 8% of the Group's turnover.

Oil & Gas and industrial infrastructure

Entrepose is a key player in onshore infrastructure dedicated to the production, processing, storage and transport of oil and gas. Through projects undertaken by Entrepose Contracting, mainly in France

and in Asia, and the growth of local subsidiaries grouped within Entrepose International Network (EIN), this business line accounts for 26% of the Group's activity.

Onshore pipelines

The development of major projects in Europe has contributed to the success of Spiecapag, which has shown, along with its subsidiary HDI (horizontal directional drilling), its ability to furnish an innovative offer and to master the most complex environments. Its excellent performance has allowed it to provide 40% of the Group's turnover.

02

Offshore

The subsidiary Geoclean, with its know-how in the construction of offshore works for the transport of oil products or the capture, transfer or discharge of water (pipelines, outfalls, landfalls and other coastal developments), consolidated its business in 2018. In particular,

it deployed its expertise within the context of its first two FSRU projects and the installation of their fixed infrastructure in Bangladesh, through which it generated 12% of Entrepose's turnover.

03

Underground

A global leader in the underground storage of liquid, liquefied and gaseous hydrocarbons and associated processes and surface facilities, Geostock offers a wide range of services, from feasibility studies to construction management and operations. Combined with Entrepose Drilling's expertise in deep drilling, its know-how permits the Group to offer its customers a complete package in the underground sector. Driven by strong international momentum and contracts in the Middle East and Asia, Geostock is securing its positions, with its business representing 14% of total turnover.

03

01

02



Convergence of management systems and proactivity

The primary value of the Entrepose Group, safety is at the heart of the company's culture. The I Care! safety program launched in 2012, continues to promote and develop safety through various initiatives such as the HSE Challenge, International Safety Week, the QHSE Committee, and the *Safety leadership* training.

A culture with a solid footing

Over the past six years, the Group has made noticeable strides in its safety performance, with a significant reduction in the number of work-related accidents and an ongoing focus on risk prevention by all of its stakeholders.

Entrepose encourages its employees and subcontractors to adopt a proactive approach by referring risks and best practises to their HSE lead so that these can be dealt with as quickly as possible. In 2018, the number of spontaneous reports increased by 17%, reflecting the generalisation of this participative approach.

In addition, systematically holding a Prestart meeting with site teams before each working day has made it possible to apply safe working practises as closely as possible to production operations. The *Safety in Design* process initiated by VINCI Construction and adopted by Entrepose provides support on integrating and taking risks into consideration, from the engineering phase onwards.

Because Entrepose considers training to be an essential component of its safety culture, the company invests heavily in training its managers, supervisors and teams. The portion of training dedicated to safety this year reaches 1.4% of the total number of hours worked, an increase of 8% compared to the previous year. All of Entrepose middle management had a chance to discover and follow the new training module

All Group entities rallied around a range of initiatives during the International Safety Week

Safety Leadership initiated by VINCI Construction, which introduces organisational and human factors, and more particularly individual risk management mechanisms.

These positive results stem from management's continued involvement in risk prevention and the active participation of employees in managing risks and improving working conditions.



Geocean celebrated five years of operating the Protis barge without accident

A token of performance and continuous improvement

The implementation and certification of the Group's Integrated Management System (IMS), obtained in December 2018, confirm the high level of performance and the successful integration of safety, protection of the environment and quality into all of the company's mechanisms.

2018 also witnessed the launch of *BeSafe*, a shared incident management and reporting tool, able to ensure tracking and sharing information. Rolled out at each of the subsidiaries by summer 2019, it will simplify the daily lives of users and establish appropriate measures to address the major risks that the company encounters. In addition, a systematic search for root causes is carried out on all high potential events.

Sharing experiences brings us closer

The year was notable for two key events, highlighting employees' involvement in safety issues and the initiatives they take in their environments.

At Entrepose, the fifth annual VINCI Construction International Safety Week honoured lifting and handling operations and gave a voice to those who take part in these actions every day, sometimes under exceptional situations. This week is a great opportunity, on site, to exchange and promote safety in all its forms.

Now a company tradition, the Health, Safety and Environment Challenge is a showcase of the best initiatives and best practises implemented on our sites. In 2018, the event covered some thirty initiatives put to the vote of participants, who were ever more numerous. Worth noting this year was the creation of a new category for Corporate Social Responsibility, with five submissions filed. The awards ceremony, held on 12 February 2019, was a forum for discussions between influencers, representatives of the executive committee and was attended by more than 200 people gathered at the Cité de l'Eau in Colombes (France). Some initiatives have been adopted by other subsidiaries to be disseminated throughout the Group.

For example, Spiecapag has systematised documented interviews of each supervisor in order to organise specific times dedicated to sharing ideas and take stock of the tools available and their implementation. They also offer the opportunity to evaluate, over time, the actions carried out after management visits, and to take concrete measures promptly. For its part, Spiecapag Australia has digitised its Observation & Intervention reports using a mobile app called *Stop, Look, Assess and Manage (SLAM)*, to centralise and facilitate processing. This initiative has also been promoted by Entrepose Algérie, which has compiled all feedback in a digital database.

In other areas, Geostock has limited workers' exposure to the risks involving pressure and gas on a site where an underground LPG storage cavern is being dismantled, with the use of remote-controlled robots when cutting well heads connected directly to the cavern.

1.4%

THE SHARE OF TRAINING dedicated to safety out of the total number of hours worked

The projects

that have shaped
the Group's year

The Protis barge,
Geocean's centrepiece for
FSRU fixed infrastructure
projects in the Bay of Bengal
(Bangladesh)





Onshore / France

VINCI synergies in the spotlight at an oil port

Leader of a consortium bringing together several VINCI Group entities, Entrepouse Contracting was awarded a contract to build a new oil depot supply line in Frontignan (France) by its client BP France. Associated with VCMF, VINCI Energies, Geoclean and Spiecapag Régions France (SCRF), it leads this EPC project that should mobilise its teams for almost 18 months. The works involve construction and installation of a subsea pipeline and an onshore pipeline, including a passage under SNCF railway tracks, and installation on the platform of process and pump networks and metal structures. This contract emphasises the synergies which have been developed within VINCI, and the relevance of its combined solutions.

Underground / France and Germany

Geostock exploits its expertise in the dismantling of storage sites

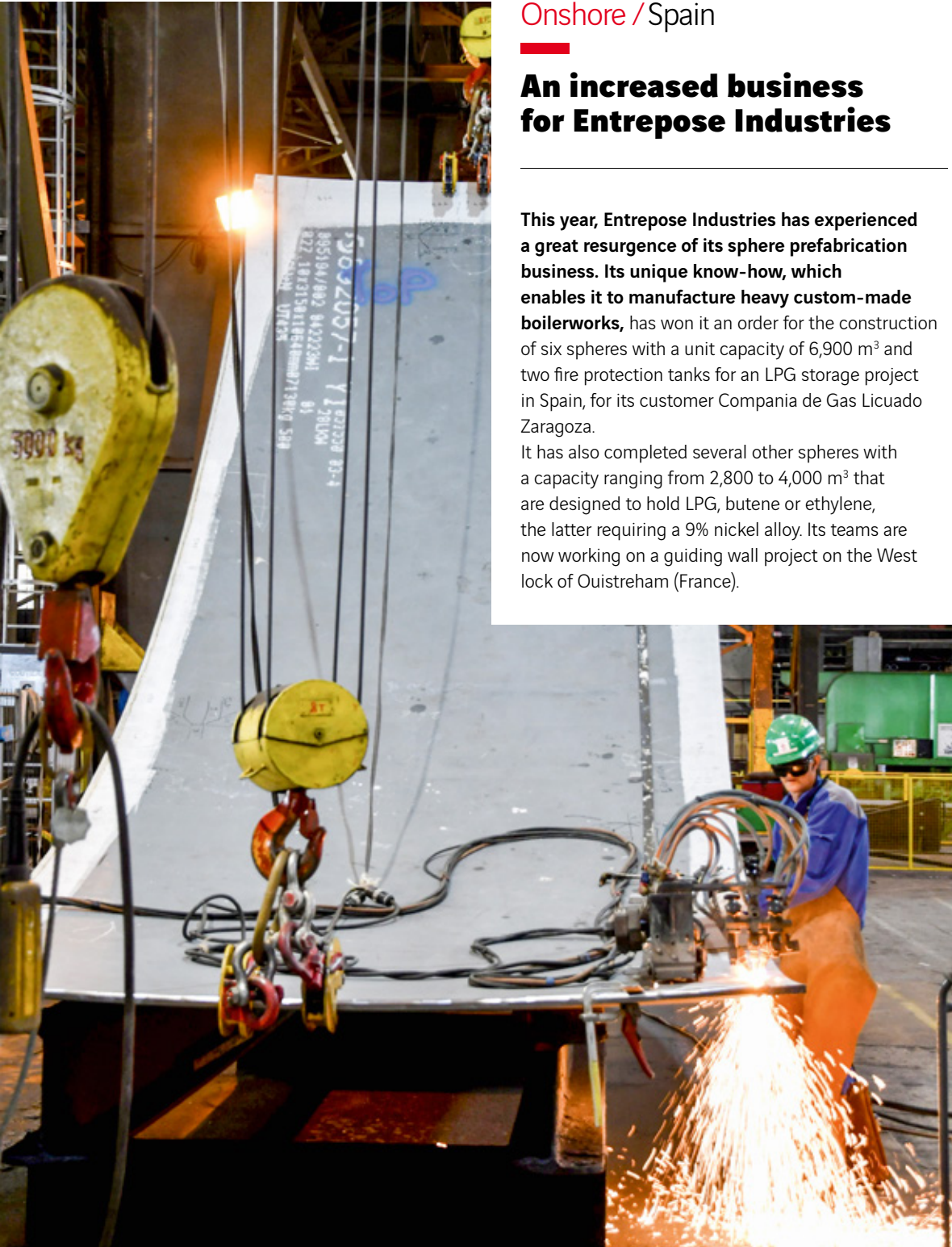
Under the supervision of its subsidiary Stonorgaz, Geostock continued work on the closure of the two mined propane and butane caverns on the Shell site in Petit-Couronne (France). The phase to dismantle surface facilities and asbestos removal was completed at year-end, while drilling to access the cavern and to monitor the successful filling of the wells began at the end of November. This work, entrusted to a temporary joint venture headed by Solétanche, is a prime example of synergy between VINCI Construction subsidiaries. This project highlights the perfect control of safety issues by the Group, in compliance with Shell's HSE standards, on a pilot site of their *Visual Safety Leadership* program. Similarly, UGS, a subsidiary of Geostock, carried out the backfilling of one well and the completion of another well to remove the borehole gas from the storage, in the context of a contract for the gas operator BES. This contract entailed dismantling the underground part of a natural gas storage facility in Berlin, Germany, in the heart of a residential area. The performance of the UGS's part of the project, which required state-of-the-art technology and equipment, has given the subsidiary a solid reputation in the European gas market.



Onshore / Spain

An increased business for Entrepouse Industries

This year, Entrepouse Industries has experienced a great resurgence of its sphere prefabrication business. Its unique know-how, which enables it to manufacture heavy custom-made boilerworks, has won it an order for the construction of six spheres with a unit capacity of 6,900 m³ and two fire protection tanks for an LPG storage project in Spain, for its customer Compania de Gas Licuado Zaragoza. It has also completed several other spheres with a capacity ranging from 2,800 to 4,000 m³ that are designed to hold LPG, butene or ethylene, the latter requiring a 9% nickel alloy. Its teams are now working on a guiding wall project on the West lock of Ouistreham (France).



Onshore / Greece and Albania

Extraordinary challenges on the Trans Adriatic Pipeline

The Trans Adriatic Pipeline (TAP) project led by Spiecapag on the borders of Europe has reached a turning point, with the completion of the work in Greece in mid-September, which was the culmination of the efforts and commitment of its teams working on 185 km of gas pipelines of 48-inch diameter between Kipoi and Kavala. As for the Albanian section, it continues through steep terrain, mobilising up to 1,300 people. It is a complex project due to extreme conditions, with operations offering a major technical challenge in crossing the highest point at an altitude of 2,000 m, with the implementation of an unprecedented double cableway. A successful initiative. Full delivery of the project is expected to occur mid-2020. Once completed, the pipeline will deliver gas to Europe from the Shah Deniz II field in Azerbaijan.



Onshore / Belgium

Completion of the Charleroi ERU revamping

VINCI Environnement continued modernising the Energy Recovery Unit (ERU) in Charleroi, on which it has been working since late 2017.

In addition to the installation of flue gas treatment structures and equipment, its teams assembled the boiler and the oven. The cold tests successfully carried out at the end of the year will allow the Work Acceptance Certificate mid-2019, for industrial commissioning in the autumn of 2019. This revamping will thus lead to a substantial improvement in the ERU performance, which processes both household and industrial waste.



Onshore / Greece and Albania

Hellenic land, site of the record set by HDI

At the heart of the Trans Adriatic Pipeline project, Greece and Albania were also the theatre of operations of subsidiary HDI, which completed thirteen 48-inch crossings. During performance

of the 2nd work package operations in Greece, its teams won a world record by installing a 1,820 m pipe using horizontal directional drilling in a single shot under the Axios River, completed in February 2018.



Onshore / France

Start-up of the Gazteam methanisation unit

Launched last February, the assembly work for the agricultural waste methanisation unit in Combrand (France) run by VINCI Environnement on behalf of their client Gazteam is entering its final phase.

Start-up of facilities, which began in October, will be complete by the end of the first half of 2019. Each year, the 'digestion' of 45,900 tonnes of input (manure and straw) will produce 35,000 tonnes of digestate intended for agricultural fertiliser, namely fertilisation of lands for subsequent crops,

and 2.5 million m³ of biomethane, producing enough to power 3,000 homes.



EUROPE

Onshore / France

VINCI Environnement launches work on a new ERU

Getting the building permit and receiving the service order prior to the construction phase in late 2018 paved the way for the construction of the future ERU in Ivry-sur-Seine. Realised for the household waste treatment and recycling Syndicate (Syctom), this extraordinary project has been launched. VINCI Environnement teams, assigned to preparatory work on the existing municipal waste incineration plant until December, have erected the relay tanks intended to temporarily receive demineralized water throughout the next 61 months, before the delivery of this building in 2023.



Onshore / France

Expertise at the service of clean energy production

Work on section 3 of the renewal of the flue gas system of the Saint-Ouen incineration plant, carried out by VINCI Environnement, began in June. Within the framework of a general project to revamp the site commissioned in the 90s, this renovation, in addition to better capturing pollutants, will increase energy production. The commissioning and training teams of future operators have now been mobilised, with the end of operations scheduled for mid-2019.

ASIA-OCEANIA

Onshore / Singapore

A key contract for the creation of HDI Lucas

In 2018, Spiecapag Australia acquired the HDD business of Lucas Engineering and Construction, its long-time partner. This increased its operational capabilities in the region, and allows it to add a new string to its bow, with recognised expertise in horizontal directional drilling. Combined with the know-how of its specialised subsidiary HDI, this new business line opens the Southeast Asian markets to the Australian subsidiary. Testimony of this are the three first crossings of 16 and 40 inches in diameter and a length of 2,065 m respectively, completed in October on the Tangguh LNG project for British Petroleum in Indonesia. Within the framework of a new treatment plant for the management of waste water in New-Zealand, teams completed in last September the construction of a 800mm HDPE pipeline, 1600 m in length, whose complexity lied in the unexpected presence of a 50,000 year old petrified Totara tree along the designed HDD drilling profile. They were also mobilised for the installation of two 400 m landfalls, part of the Tuas Mega Port project in Singapore.



Underground / China

A major propane storage project

In Yantai, in the Shandong Province of China, Geostock completed the review of Basic Design for two mined caverns with a total capacity of 1.2 M m³ on behalf of the Wanhua Chemical Group. Within the framework

of the development of this underground LPG storage for which the subsidiary had previously performed the review of reconnaissance surveys, in 2019 it will undertake the review of Detailed Engineering Design documents.



Installation of the riser
from the Protis barge



Connecting the riser
to the plug

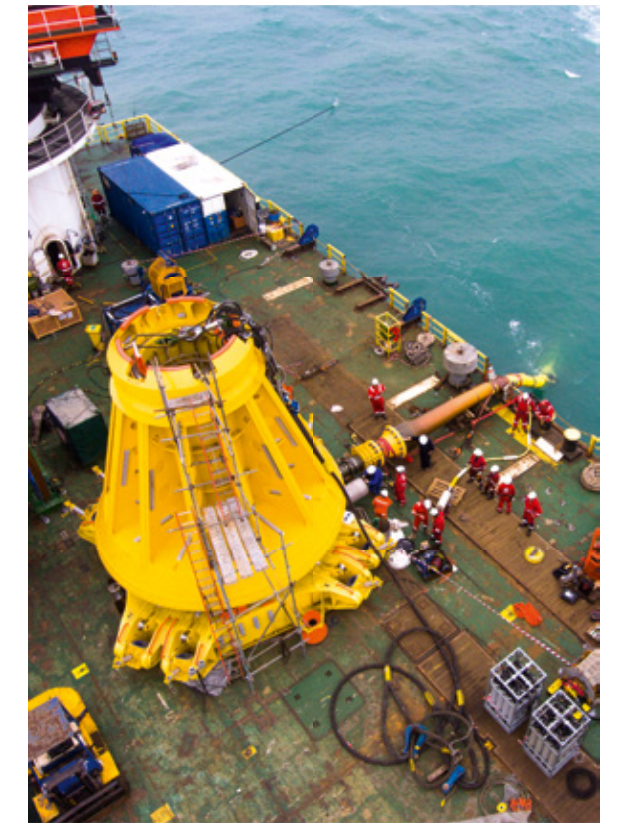


Teams on deck, before
installing suction piles

Offshore / Bangladesh

Geocean off to a good start in the FSRU infrastructure market

The first LNG floating storage and regasification terminal (FSRU) in Bangladesh was commissioned on 18 August, off the island of Moheshkhali, in the Bay of Bengal. Within a consortium led by Geocean, its teams, on site since October 2017 to build its fixed infrastructure, knew how to manage the logistics constraints (non-existent access to the site, requiring construction of a provisional wharf on site and transporting equipment and staff via Singapore, risk of pirate attacks, tight deadlines) and environmental constraints (tidal currents over 5 knots, risk of cyclones, underwater dune movement and unstable onshore areas at risk of flooding) to deliver the project on time, to the great satisfaction of the client, Excelerate Energy Bangladesh. Beyond the engineering and procurement phases, and following the initial dredging works (1,600,000 m³) and manufacturing equipment in China and in Spain, these shallow-water operations included pulling and laying of 24" diameter pipelines over a total length of 7,500 m, aiming to transport gas to the coast, installation of vessel anchoring equipment (PLUG, suction piles, mooring lines), of the PLEM and the risers and umbilicals to connect the FSRU with the existing network. This work has been followed up by tests, finished in July 2018. This success demonstrates Geocean's ability to come up with innovative solutions and seize opportunities offered by the development of this new market. At the start of November, the Protis barge arrived on the second FSRU project site and remained there until the end of the work for its client Summit LNG Terminal, in February 2019. Commissioning these two FSRU intends to increase the country's electricity production by 30% and thereby support the diversification of its available energy resources.



30%

THE INCREASE
of electricity production by Bangladesh
that the FSRU projects should enable

Onshore / Turkmenistan

A production unit on the shores of the Caspian Sea

In 2018 Entropose Istana Karang Laut (IKL) completed the new BOPP polypropylene film production unit installed in the heart of the Turkmenbashi refinery (Turkmenistan), inaugurated at the end of July by Turkmenbashi Oil Processing Complex.

As part of an EPCC contract, the Indonesian subsidiary of the Group worked on the construction and commissioning of the technological line under ESOPP licence (France), two slitting machines and a metallizer, handling equipment and associated facilities (cooled water, industrial water and compressed air systems) beyond the administrative and production buildings, covering 9,000 m² of floor space. This unit, the first ever produced in Turkmenistan, should allow manufacturing of 21,000 tonnes of BOPP film each year, used in particular in the textile and food industries. Its success emphasises Entropose PT Istana Karang Laut's ability to adapt and its agility and opened up new perspectives for it on this market in the region.



Underground / Vietnam

Exploration works in mined caverns

Within the framework of an underground LPG storage, consisting of a propane cavern of about 340,000 m³ and a butane cavern of about 140,000 m³ in southern Vietnam, in Cai Mep, in 2018 Geostock continued to provide its services concerning exploration surveys as well as overall design engineering. At the end of the year, its customer Hyosung Vietnam Co. Ltd entrusted it with providing construction assistance services (assistance with detail engineering, supervision of the construction, tests and commissioning), starting in 2019.

Onshore / Australia

Completion of a gas pipeline

Spiecapag Australia completed the construction of a 142 km section of pipeline that Jemena, the owner and manager of a diversified portfolio of energy and water transportation assets on the east coast of Australia, had awarded it within the framework of the Northern Gas Pipeline (NGP). The project involved the installation of a 12-inch high-pressure steel pipeline and associated services on facilities from the western border of Queensland to the end of the pipeline at Mount Isa. Launched mid-2017, work continued until June 2018, allowing the commercial commissioning of the NGP to be performed in December. This 622 km long pipeline now connects gas fields in the Northern Territory to the gas market of the east.



Onshore / Bangladesh

Condensate Refinery Projects

Two contracts that were awarded in 2017 by Entropose Istana Karang Laut (IKL) in Bangladesh, confirming the development of its regional base, took shape this year.

The Indonesian entity therefore began the construction of a 3,000 BPD catalytic reforming unit and associated facilities for its customer Sylhet Gas Fields Limited (SGFL), a subsidiary of the national oil company Petrobangla. It also continued work on the project for a 10,000 BPD condensate refinery located in Chittagong on behalf

of Partex, which awarded it the engineering and procurement phases as well as construction supervision. It is within this framework that IKL called upon Entropose Industries, which carried out, before year-end, the design and manufacture of a R-303 chromium-molybdenum steel reactor intended to convert naphthenes and alkanes into aromatic hydrocarbons. This fruitful partnership once again illustrates the Group's ability to mobilise a range of diversified and complementary expertise to provide its customers with high added-value solutions.

AMERICA

Onshore / Canada

Spiecapag announces its return to Canada

The award of a contract related to the Coastal Gaslink project provides Spiecapag teams with sustained activity for years to come in Canada. The subsidiary is responsible for the construction of sections 5 and 8 of the gas pipeline developed by TransCanada Corporation, representing 166 of the project's total 670 kilometres. As the planning phase prior to construction is now complete, work began in 2019, and will last 36 months.

Underground / Canada

At the vanguard of carbon-free energy storage

Illustrating of its range of expertise and willingness to enter a market of the future, Geostock has provided an initial study of the cost of evaluation of civil works and a schedule for the underground part of an advanced compressed air storage facility (A-CAES), a carbon-free energy storage technology, for Hydrostor, a Toronto-based company (Canada) and industry leader. It also calculated the critical atmospheric pressure in the cavern, with and without a "water curtain", for various geological conditions.



Onshore / Mexico

HDD in Mexico and first direct pipe are a brilliant success

In the heart of the State of Tamaulipas (Mexico), HDI Latam has successfully completed the South of Texas Tuxpan project's six horizontal directional drillings. With a 42" diameter, and a length between 600 and 782 m, these very thick HDD were carried out at shallow depths in sandy-clay soil. The project's intrinsic complexity also lies in restricted available space, obliging teams to perform pulling in two sections. Despite these difficulties, the subsidiary demonstrated perfect risk management, particularly due to the HSE training and techniques taught to the Mexican drilling technicians on site. At the same time, its teams have installed a 56", 671 m long landfall using the direct pipe method, a first for HDI Latam and Entropose! This innovative trenchless drilling technique boasts many appealing features, and its environmental impact is radically limited. Launched on 12 June, the drilling finished with a trip out to sea in the Gulf of Mexico on 5 July. The success of the project, praised by its client TransCanada, emphasises the spirit of initiative and operational mastery that has been characteristic of HDI since its inception.

AMERICA

Onshore / Brazil

A promising market in Brazil

Intech won several maintenance contracts early in the year with its customer Nova Transportadora do Sudeste (NTS), a subsidiary of the Brookfield Canadian investment fund which operates pipelines in south-eastern Brazil, for the inspection and repair of Gasbel, Gasvol and Gaspal gas pipelines. This is a path that it intends to take in order to speed up its development.

It was thus awarded contracts for the inspection and repair of Gasbel gas pipelines between Rio de Janeiro and Minas Gerais in 49 points, and on the Gaspal gas pipeline between São Paulo and Rio de Janeiro in 17 points, after the passage of pigs carried out within the framework of a Stress Corrosion Cracking Management campaign. These new projects, which mobilised its teams over a 12-month period and continued in early 2019, strengthen the relationship with NTS and reward the Brazilian subsidiary's diversification strategy that began in 2012, in search of new vectors for growth. In 2018, maintenance accounts for 50% of its turnover.



Onshore / Brazil

A resilient core business for Intech

A pioneer in horizontal drilling in Brazil, Intech has earned an unrivalled reputation among industry players since it was created 20 years ago. In 2018, it completed a 300 m crossing within the framework of the drilling of the Summit Canal in the state of São Paulo between August and September. In addition, it won several contracts for 2019, which include 8 HDD, for a project of high-voltage lines, or for example, 7 HDD in rocky soil, related to the construction of a gas pipeline in the north east.

Underground / Argentina

Preliminary studies for the conversion of the depleted field of Cupen

Geostock was asked by its client Yacimientos Petrolíferos Fiscales (YPF) to carry out a preliminary study to convert the depleted Cupen field, located in the Neuquén basin in Western Argentina, into underground gas storage. The review of static and dynamic modelling for the tank, which began mid-2018, has been completed by the end of year. The site development is linked to upgrading schist gases from the giant "Vaca Muerta" formation that constitutes one of the largest discoveries in the world in terms of non-conventional resources.

Offshore / Nigeria

Hook-up of a non-standard FPSO

Within the offshore Egina project, a consortium run by Total has called on Samsung Heavy Industries to build an FPSO (Floating Production Storage and Offloading), with a production capacity of 200,000 barrels a day and storage for 2.3 million barrels.

For this deepwater project (1,500 m), the Korean giant's subsidiary chose Entrepose DBN to run the offshore hook-up, considering its proven expertise on similar projects in the country. Its teams carried out preparatory studies at the Samsung yard in Geoje, in South Korea, before performing the hook-up in Nigeria.

These operations consisted of connecting the risers with a 14-20" diameter, which link the numerous production wells to the FPSO, and particularly included welding, laying and commissioning operations. Launched in August, the work mobilised up to 200 during peak activity to successfully meet the goal of "First Oil" in late December 2018. The project is not only strategic for Total, but also for the Nigerian State as it alone represents 10% of the country's total production.



Onshore / Nigeria

Entrepose DBN confirms its ambitions

Entrepose DBN delivered its turnkey project for the construction of one 64 MMSCFD⁽¹⁾ train of a gas processing unit, located in the Ogun State at 50 km from Lagos. Alongside with the existing train, these new facilities enable Shell Nigerian Gas Limited (SNGL) to expand its production capacity to meet the country's energy needs. This EPC project included the engineering, procurement, transport to site and construction (including civil works, lifting, structural and piping fabrication, electrical, instrumentation and insulation) and has required 13 months of work with a team of 76 people during its peak period. Following the previous project performed for Seplat, completed in 2017, this first contract with Shell illustrates Entrepose DBN's expertise renowned by its peers and clients, offering a real opportunity to develop its activities on gas plants with a capacity ranging from 50-300 MMSCFD.

(1) Million standard cubic feet per day



Onshore / Algeria

Clear horizons

Entrepose Algérie has a year notable for the awarding and the start of two projects. Upside North, carried out on behalf of JGC, is a Gas, Oil, Separation, Package (GOSP) contract, which includes mechanical work, but also electricity and instrumentation work which will serve to increase the daily production of this separation unit by 4,000 barrels over the next two years. Collectes, carried out for its customer Sonatrach, consists of surface facilities construction at an oilfield and the laying of collection pipes and well manifolds.



Tanks under construction at El Eulma



Lifting operation on the MLN site

The subsidiary also continued its electromechanical assembly and renovation of the satellite units of the Hassi Messaoud oilfield, where it has completed the first phase on one of the seven satellites. The excellence of its teams enabled rapid progress in the setting up of the Mesdar fire protection network and the construction of the three fuel storage tanks of the El Eulma fuel depot, with a unitary capacity of 20,000 m³, on an operational site. In December, it successfully completed the shutdown of the MLN field gas treatment unit in the Berkine Basin. This delicate operation involved the site maintenance and renovation for the Indonesian company Petromina.



Entrepose IKL
moved in its
new offices
in late 2018

The values and commitments

that Entrepose affirms to develop
a sustainable business, and
that make it a responsible player
in the energy sector

Human resources

Employees: the Group's main asset

They are the foundation of the complementarity of its businesses and its ability to deploy its expertise globally. The human resources policy is part of the internationalisation of its business and the development of synergies begun in 2014. A guarantee of innovation, the policy invites the company to reinvent itself and supports the construction of sustainable career paths fit for employees' ambitions.

An ambitious training policy...

The cornerstone of the Group's operational excellence, lifelong learning is of vital importance for employee development and fulfilment. It forges the culture of the company, just as it nourishes the sharing and conveyance of knowledge and expertise. Convinced of its unifying nature, Entrepose dedicated 37,000 hours to training in 2018. To meet their needs,

over 1,500 employees have benefited from it, covering many topics, in particular safety (30%), technique (29%), but also administrative and managerial aspects. This requirement has resulted in further training being offered this year. A counterpart of *Sales+* for sales forces and implemented since 2017, *Project+* training is intended for project managers in the Group's various subsidiaries. Beyond consolidating a common language, it leans towards developing skills for managing complex projects. Likewise, the *Feedback* training aims to fully integrate talent reviews into the human resources development cycle and to make them a veritable act of management. The complementary nature of the training provided to the whole management chain enables the Group to cultivate internal synergies and strengthen a project culture that is part of its DNA.

In 2019, Entrepose will focus on digital learning,



Brainstorming session during Project+ training



Entrepose IKL teams in Jakarta (Indonesia)

to circumvent temporal and geographical limitations and to increase employee independence. Its first mobile application, called *DigiLearn*, will focus on the art of working better together.

... for lasting careers

A key player in the oil and gas industry, Entrepose faces the human resources challenges inherent to growing and performing internationally. Unlocking the potential of employees, providing them with personalised supervision and meeting the challenges of professional development within its subsidiaries or, more broadly, in the VINCI galaxy, is a priority for the Group. It is within this framework that the Entrepose international mobility charter, which entered into force on 1 January 2019, was applied from the last quarter of the year. It addresses the development of resources and is a key element to ensuring optimised career management and strengthening the ties of a common culture. It also provides a reference framework in terms of the conditions for international mobility applicable within the Group.

To help improve the work-life balance of employees, new agreements on teleworking entered into force in 2018 and broadened the spectrum of the entities concerned. 125 Group employees have benefited from it.

A new tool to support employee integration

After a development phase that mobilised the various Entrepose departments throughout the second half of the year, the digital application called *Get on Board* will go live in the first half of 2019. It will represent a cornerstone of the integration process for the Group's new employees and provide them with a 360-degree overview of its activities, organisation, as well as commitments on HSE, CSR and ethics.

Workforce and diversity

Bearing in mind the completion of major projects in late 2017 and early 2018, such as the construction of Yamal LNG cryogenic tanks or Shalapa LNG storage in Mexico, the Group's average workforce is 2,544, down 14% from last year.

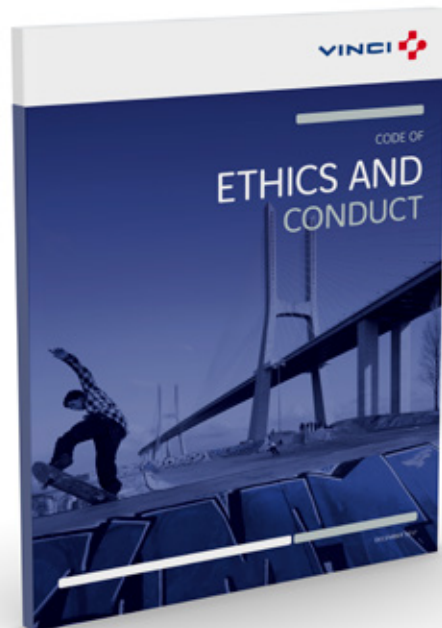
The fruit of its ambition to open its trades up to women and broaden their career perspectives, in November Entrepose launched the "Entrepose au féminin" program, which is aimed at the increased presence of women in the management teams of Entrepose. On 27 November, the company's first women's business symposium was held at Leonard, the VINCI Group's innovation and foresight platform. An action plan will result from this meeting and will be defined before mid-2019. Today, 18% of employees are women, 42% of whom hold a management position.

Ethics

Informing and empowering all employees is a priority of the Group's ethics policy and boosts its ability to meet the requirements common to clients and stakeholders.

It is within this framework that the Guide to preventing corruption, defining the different types of conduct banned for constituting corruption or influence peddling was revised in 2017. This year, Entrepose's dynamic contribution to the action plan launched by VINCI Construction, regarding the harmonisation of the methodologies of its various entities, and the dissemination of the new version of the VINCI Ethics & Conduct Charter and the VINCI Anti-Corruption Code of Conduct, underline its ongoing commitment.

E-learning courses have also been developed, open to all and available on a dedicated platform. They are



intended to become a complementary tool at the service of the workforce, and supplement the direct training provided to the employees who are most exposed to such risks. Pursuant to the legal requirements of the Sapin II Law, the compliance program has also been fortified, making due diligence and risk assessment linked to third parties systematic.

These initiatives, combined with the continued involvement of senior management, have broadened and enriched collective awareness, and illustrate the creation of a strong ethical culture at the heart of all Group activities.

Quality

In 2018, the project to harmonise and simplify the company's operating practices resulted in the creation of the Entrepose Group's Integrated Management System (IMS).

This new system, which fully meets the quality, health, safety and environmental requirements of current standards (ISO 9001 – OHSAS 18001 – ISO 14001), successfully obtained its first certification in December. As positive points, certifying body emphasised the teams' involvement in continuous improvement as well as the quality of the tools implemented. Already in place within several subsidiaries, it will gradually be extended to the entire Group by the end of 2020. Transition to the new ISO 45001 standard will take place throughout 2019.

Its adoption now enables Entrepose to offer its clients optimised solutions relating to combined offers involving several subsidiaries, affecting the same project.



Innovation

This year, the Group's R & D policy was rooted in the continuity of projects launched in 2017, with the strengthening of synergies both within Entrepose and with VINCI Construction.

Echoing its desire to develop massive storage solutions for carbon-free energy, Geostock benefited from the deployment of the technological partnership between VINCI Construction and the French Alternative Energies and Atomic Energy Commission (CEA), which began last year. The relevance of joint studies on the underground storage of hydrogen in "power to power" is today shown by the operational implementation of the program through a proof of concept (POC). Likewise, heat storage appears to have a promising future, like the studies initiated as part of the energy supply of an eco-district in Gardanne, France. This recent partnership with the CEA also aims to offer carbon dioxide recycling, turning it into liquid fuel (methanol, gas oil) through a co-electrolysis system.

Resolutely committed to the energy transition, Entrepose is once again committed to financing innovative projects, through its involvement in the Citeph, an offshoot of the Evolen association dedicated to providing energy research projects with access to the private financing. Geostock thus ensures the technical

oversight of one of these projects, dedicated to the knowledge of the mechanical characteristics of salt, to optimise the mass storage of energy in various forms of gas, including hydrogen.

The other subsidiaries have not been idle. Spiecapag carried out a study on the integration of photovoltaic panels in its living quarters, to meet its electrical consumption needs. Its conclusions, which will be issued mid-2019, could result in the initiative being opened to the rest of the Group. Like Entrepose Contracting, which has deployed Totem (a tool designed by VINCI Construction France that allows drawings to be viewed digitally), project digitalisation, which is an integral part of the development of the Group's business lines, is ongoing. At the same time, Geoclean is conducting an image recognition project for the Group for equipment references engraved on metal plates (artificial intelligence / machine learning), in order to generate the corresponding alphanumeric chain, and to consult information on a smartphone or tablet such as availability, maintenance program or location.

These initiatives reflect Entrepose's ambition to adapt its methods and processes to support and always improve its operational excellence in the service of projects and, ultimately, its customers.

The new interactive application launched this year highlights Entrepose's specialities and the value created by its projects

A workshop with young pupils from priority education zones (ZEP) middle schools in Colombes, accompanied by the CEO of the Group, Benoit Lecinq



Social commitment

Relying on local resources and know-how

The Group is committed to the economic and social development of the locations in which it operates, with employees of its regional subsidiaries primarily natives of the countries. This approach is echoed by Intech or Entrepose Algérie where only 1% of employees are expatriates. The same logic prevails on projects of all of its subsidiaries, which strive to provide employment and inclusion of local communities, while ensuring continual communications through the use of liaison officers on numerous projects to promote relations between



Spiecapag Australia and its teams have launched a crowdfunding campaign within the framework of their participation in the Brisbane Marathon

stakeholders starting from the tender phase. Along these lines, 81% of Spiecapag's workforce on the TAP project in Albania has been recruited locally. Likewise, 19% of Spiecapag Australia's Northern Gas Pipeline procurement was from local contractors, and 23% of the total workforce mobilised were recruited from indigenous populations. A mentoring program has also helped to develop the competency of unskilled workers throughout the project. Above and beyond Entrepose's proactive policy, which aims to promote the integration of workers, develop their skills and ensure sustainable profits for regions, this year the subsidiaries have again illustrated their commitment through initiatives led directly by teams. In France, on the Aquarius project, they decided, alongside the customer, to support charitable organisations set up in the department. Each month, by joint decision and after consultation with the employees, one of them is awarded a gift correlated to safety results and up to €5,000 to assist with its actions. In early October, Geostock de México, for its part, launched The Big Loser contest in partnership with the IMSS (Mexican Social Security). This 6-month educational program aims to address the issues of a balanced diet and the dangers of obesity, including personalised check-ups by the Shalapa site physician.

Allowing talent to blossom and promoting diversity

Beyond the participation of subsidiaries in many forums and relationships with schools, equal

opportunity and diversity have been the embodiment, in recent years, of the policy pursued by the Group. This is exemplified by Spiecapag, which close links with the Egletons centre (France) specialising in training site managers. Spiecapag also supports awarding scholarships to students seeking to pursue a career in pipeline construction through its membership of the professional association IPLOCA.



Spiecapag helped modernise the Corovode hospital's equipment in Albania

Likewise, Entrepose DBN has continued to finance a digital marketing and project management training program for Nigerian students and artisans, as part of the subsidiary's skills development plan. Rooted in the deployment of the country's Local Content Act, these courses are designed to promote the attractiveness of the Oil & Gas industry. Aware of the challenges of vocational guidance and integration, Entrepose strives to actively participate in initiatives launched by all regional players. In particular, it decided, in partnership with the association "Create Your Future", to host 16 middle school students from priority education zones to its headquarters (Colombes, France) for an internship week. The aim: to give them the opportunity to discover the world of business, organise educational

and entertaining workshops, but also to discuss the underlying theme of a project called *Major projects abroad: how to attract young people*. The Group is also committed to the creation of jobs for the disabled people. Awareness operations have increased, particularly within the framework of the European week for the employment of people with disabilities. In addition to chairing a meeting by a representative of the Maison Départementale des Personnes Handicapées (MDPH) at Entrepose Industries, Geocan has applied for the intervention of Trajeo'h, the VINCI association dedicated to disability in business, and participated in a quiz and an escape game. As for Geostock, it has participated again in the Rueil-Malmaison inter-company solidarity race organised by Special Olympics for the benefit of mentally disabled audiences, and chaired training sessions. In addition, Entrepose is continuing its partnership with Ovale & Sens, an adapted rugby division of the MLSGP 78 club, specifically for people with intellectual or mental disabilities.

Promoting sports and solidarity initiatives

For the first time, nineteen Spiecapag Australia employees took part in the Brisbane Marathon on 5 August. After an internal vote, they chose to support *Mates in Construction*, whose work on the NGP project, focusing on mental health in the construction industry, was unanimously praised. Their commitment raised AUS \$ 20,000 (€ 12,500) for this association dedicated to combating suicide among employees in the construction sector. Inspired by this outstanding mobilisation, the subsidiary intends to repeat the operation next year, but also continue working hand in hand with *Mates in Construction*.

Likewise, almost 75 Entrepose runners joined Odysseya (France) on 7 October, raising € 6,600 for the Institut Gustave Roussy to fund breast cancer research and prevention. Several Geocan employees took part in the 20 km race from Marseilles to Cassis on 28 October, to support the ELA association that fights leukodystrophies.

19%

OF PROCUREMENT made by Spiecapag Australia on the Northern Gas Pipeline project was from local subcontractors.

Environment

A key component of its activities, controlling environmental impact is at the heart of Entrepouse's operational performance.

To meet the increased requirements of clients, its commitment is also based on a proactive approach through respect for the corporate social responsibility charter published at the beginning of 2015 and the VINCI Manifesto, which reaffirms the Group's desire to devise efficient solutions for reducing its footprint throughout the life cycle of its projects.

This ambition is driven by the strong mobilisation of managers, and is accompanied by an employee awareness policy, which has enabled VINCI Environnement and Geoclean to join Spiecapag, Entrepouse Contracting and Entrepouse Drilling as entities holding ISO 14001 certification. Above and beyond training dedicated to the environment and the preservation or restoration of natural environments, a quarterly report is published that also highlights the efforts of each entity, resulting in particular from the significant fall in overall electricity consumption.

2018 was the opportunity for Entrepouse Industries to commission a biodiversity inventory for the 15 hectares surrounding its Dunkirk plant and to launch, in February, an awareness campaign for plant and animal species present in this area. Geostock de México conducted an awareness campaign with employees and their families on the Shalapa storage site, which resulted



The Vincyclette
set up by VINCI
Environnement for
its employees

in the planting of trees by each child, on 26 May, shortly before World Environment Day.

In Bangladesh, Geoclean teams focused on the preservation of the critically endangered Spoon-billed Sandpiper and purchased a portable mini waste water treatment plant. In France, Entrepouse Contracting is particularly attentive to the preservation of wall lizard nesting sites on the Aquarius project site. Likewise, Spiecapag teams have distinguished themselves in Greece (TAP) through the introduction of 150,000 seedlings of species from local nurseries, combined with erosion control and the establishment of a hydroseeding system, to revegetate pipeline routes. In addition to the distribution of an environmental booklet and regular communication on environmental issues, the subsidiary has also implemented the in-vehicle monitoring system (IVMS), which enables an average drop of 15% of fuel consumption, or 1,200 tonnes of CO₂ over the total duration of the project. HDI, for its part, has invested in a hybrid electric workshop, which will enable it to considerably reduce the resources committed and its greenhouse gas emissions.

Beyond Geostock's innovations in the field of mass carbon-free energy storage (see page 37), VINCI Environnement, whose new baseline "Building the energies of tomorrow", is focusing on energy transition, has continued to develop new renewable



energy offerings, in particular biomass. Its actions have been boosted by the real involvement of employees, especially within the framework of the European Week for Waste Reduction with numerous workshops on everyday topics (food waste, ecological hygiene, reuse and repair, childhood etc.), and a self-service bike system, called the Vincyclette, which has a counterpart in Cassis, at Geoclean, which provides its employees with a fleet of electric bicycles.

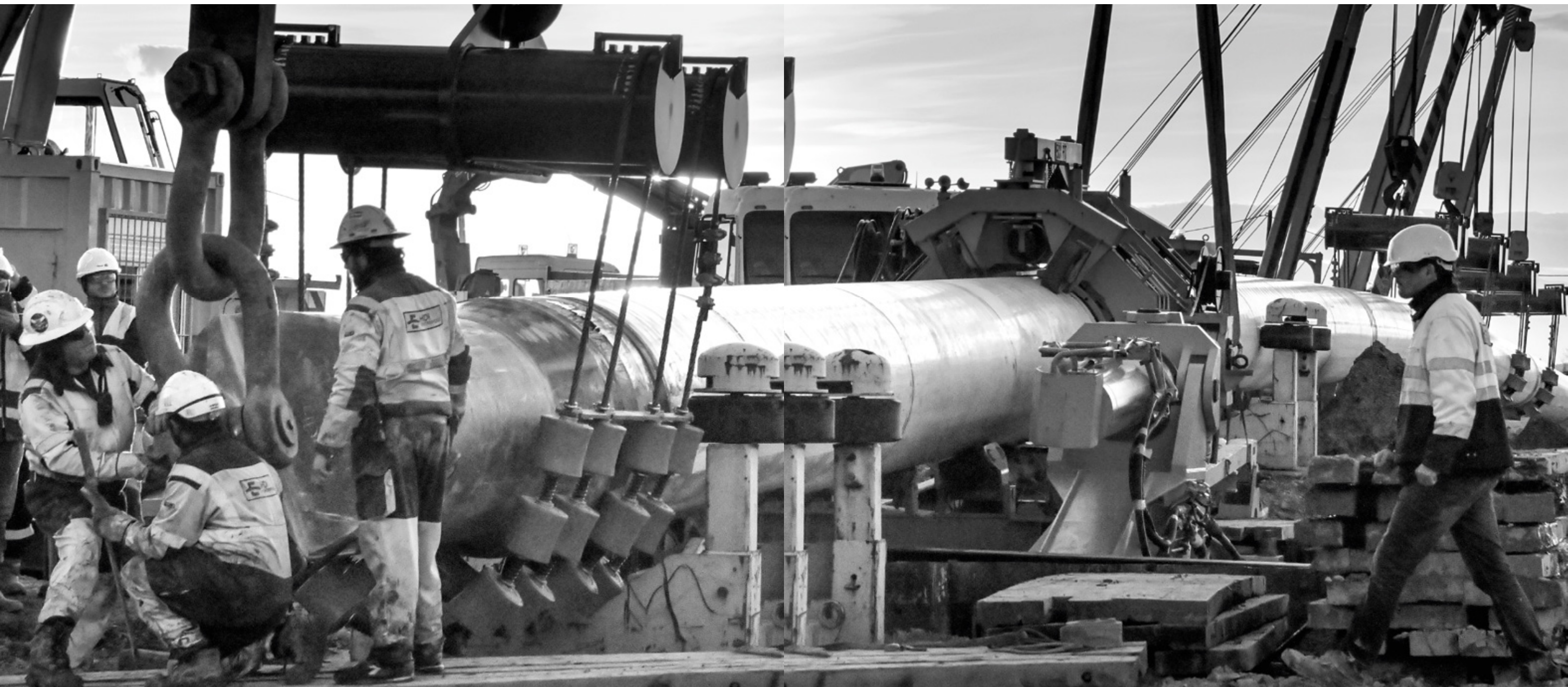
A cross-sectorial approach and harmonisation of processes will be the key words of 2019, with

the birth of the "Environment 2030" plan, which aims to respond to and escalate an initiative launched by VINCI. Its adoption establishes a guideline for Entrepouse's environmental policy, focusing on three priority areas and targets: the circular economy with no waste to landfill, the natural environment and water with zero impact of activities, and energy/carbon, which sets in the desire to achieve a share of renewable energy by 50% by 2030 in stone. As an extension of this approach, the Group has sought to take a further step forward, with the aim of achieving a quarter of its turnover in non-fossil activities by 2022.



World Environment Day
celebrated
by the employees
of Geostock de
México and their
families

**Reclamation
and Revegetation
Operations** on
the Trans Adriatic
Pipeline Project



ENTREPOSE

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Writing: Morgan Galan

Translation: Solten – AMC Traduction

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Photos: Entrepote and subsidiaries photo libraries, photo library VINCI,
Terence Beal, Yves Chanoit, Nicolas Delpeyrou, Frédéric Dorizon –
Agence Real Factory, Amy Farrugia, Samuel Moraud, Julie Nedelec-Andrade,
Francis Vigouroux, Phil Woodhouse.



HDI teams working on the crossing,
in a single shot and 1,820 meters long,
of the Axios river (Greece)

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