

Cargo co-ops

Booming heavy transport demand driving new project partnerships

By Keith Wallis

ONGOING STRENGTH IN the energy, process engineering, and infrastructure sectors is leading heavy transportation and engineering companies to pool their expertise and form joint ventures to work on specific projects or pursue new business, senior industry executives tell *The Journal of Commerce*.

This comes even as the Russia-Ukraine war is driving investment

Russian projects, and...new projects across the world are being developed to compensate for the energy needs that were planned to be fulfilled by Russia,” Yannick Sel, group commercial director for projects at heavy-lift transport specialist Sarens, told *The Journal of Commerce*. “With the ongoing energy transition and the situation in Europe — with the region less dependent on Russian gas — we will

“The way work packages and scopes are being combined means joint ventures and partnerships are required.”

in alternative energy projects, especially wind energy, liquefied natural gas (LNG), and potentially nuclear power. Many countries are seeking to bolster their energy security by diversifying their energy infrastructure as well as their sourcing, the executives said.

“We have seen a shift away from

see some LNG projects developed that had been on hold, as well as a further push for renewables.”

Sarens is continuing to work in Ukraine despite Russia’s ongoing invasion. Last month, the firm helped repair war damage, installing 54-foot, 18-ton beams to create a temporary bridge across the Zdvizh

River in Borodyanka, near Kyiv, and removing bomb-damaged roof elements at a glass factory in Gastomel.

“As long as Sarens can conduct operations safely while keeping employees safe, we will continue to support our clients everywhere in the world, including Ukraine,” Sel said.

‘Partnerships required’

Sarens, headquartered in Belgium, and Italy-based Fagioli are among the heavy transport operators that have tied up with other companies to strengthen existing capabilities or help develop new markets.

“Projects are getting larger, and the way work packages and work scopes are being combined means joint ventures and partnerships are required,” Sel said. “Each partner is bringing their added value.”

“It also depends on the approach end clients have to combining or splitting work scopes,” he added.

Sarens’s partnership with PSG Marine & Logistics merges the company’s heavy haulage and lifting capability with PSG’s marine experience. “Having access to Sarens’s heavy crane and self-propelled modular trailer [SPMT] fleet, engineering capability, and giant ring crane fleet will enable Sarens PSG to provide clients with the most comprehensive heavy-lift, transport, assembly, load in/load out, and port marshaling services currently available in Scotland,” Steve Clark, managing director of Sarens PSG, said in a statement.

The Sarens PSG joint venture aims to serve Scotland’s offshore



Yannick Sel
Group Commercial Director, Projects, Sarens



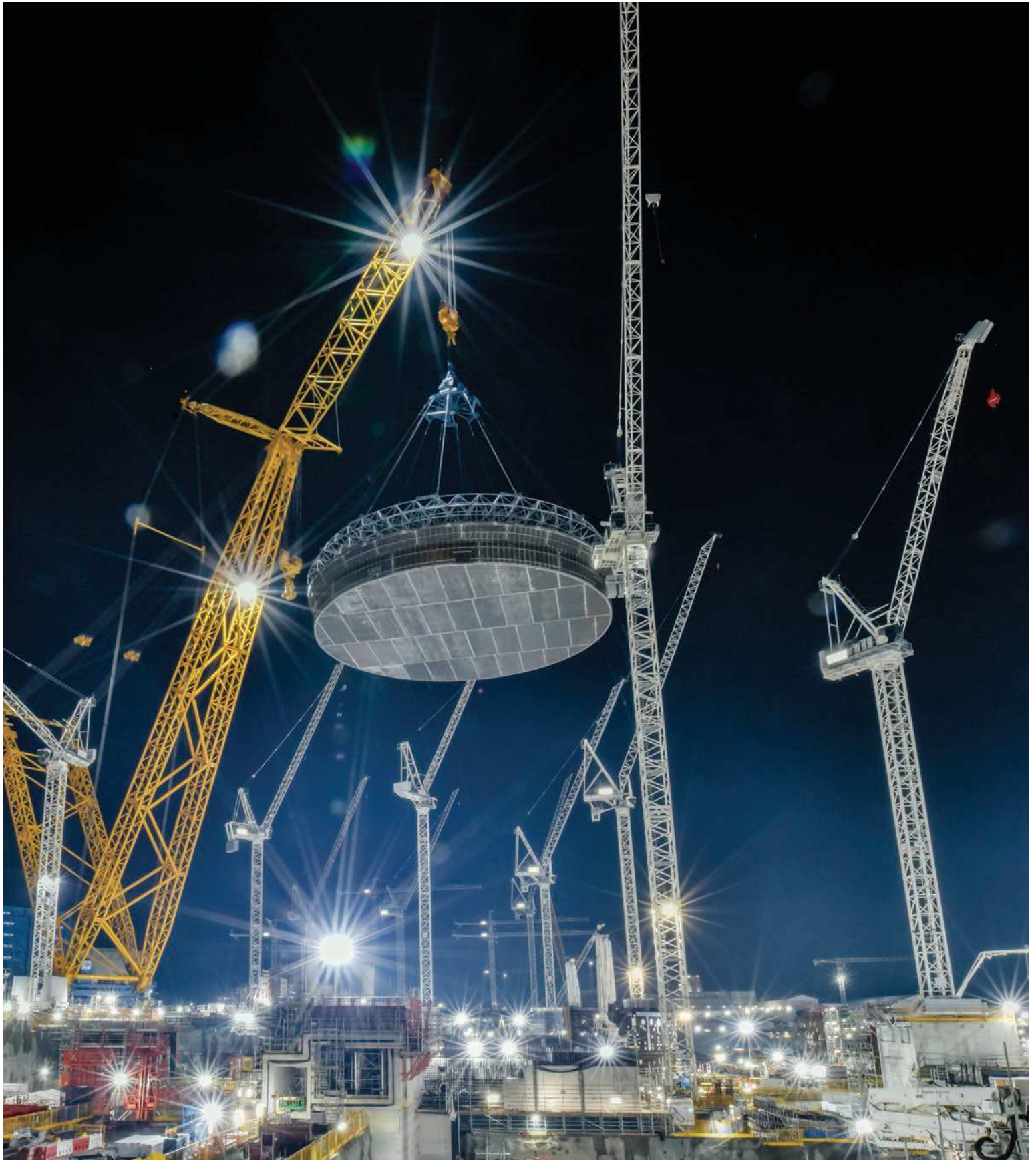
Ricardo Tippman
Consultant



Fabio Belli
CEO, Fagioli



Sarens



wind and renewable energy market. There are 17 offshore wind farm projects, potentially worth a total of \$29 billion, planned in the first round of licensing in the United Kingdom's ScotWind initiative, according to UK government figures.

"Sarens PSG has been specifically incorporated to support the rapidly developing offshore wind market and assist in solving some of the current issues around heavy-lift capacity, deployment, and wind turbine generator integration, as the

services company Baker Hughes.

Fagioli CEO Fabio Belli told *The Journal of Commerce* that although G4 Logistics will initially be focused on Baker Hughes, "the partnership is open to new adventures."

In a second partnership, Fagioli has tied up with Monadelphous, an Australian engineering group focused on the resources, energy, and infrastructure sectors, to form joint venture company Alevro.

The Alevro joint venture was formed five months ago with the

of the petrochemical plant construction boom 12 years ago.

Belli, who is also president of the European Association of Abnormal Road Transport and Mobile Cranes, said Australia, Southeast Asia, Africa, and the US are key targets for Fagioli's overseas growth.

Nuclear resurgence

Countries seeking energy security due to the impact of Russia's war with Ukraine are showing increasing interest in developing

Fagioli provided SPMTs, jack-up systems, barges, and associated equipment for the San Benedetto Po Bridge (pictured) in Mantova, Italy.

Fagioli



Scottish market scales up to floating wind commercialization and the ScotWind project build-out," the company said in the statement.

Fagioli is also entering into new partnerships to develop new opportunities in the rapidly changing project market.

The first sees the creation of G4 Logistics, an alliance between Fagioli, MVN Logistics, and Fratelli Foppiani, all Italian companies, and Switzerland-headquartered Medlog, a subsidiary of Mediterranean Shipping Co. (MSC). G4 Logistics, which launched in October, is developing a multifunctional logistics base in Tuscany, northern Italy, for oil field

"Supply chain capacity will dictate the pace of the market."

aim of creating a single entity capable of selling the partners' engineering expertise to project owners tackling highly complex projects, as well as to enable Fagioli to "reenter the Australian market, especially the mining, oil and gas, and civil engineering sectors, supported by a local/international, well-known company," Belli said. Fagioli left the Australian market following the end

nuclear energy, according to Sel.

For example, the US State Department confirmed on Nov. 2 that Poland will use Westinghouse as its technology partner to construct three US-designed nuclear reactors in a \$20 billion project planned for Choczewo, about 50 miles northwest of Gdańsk. The plant, Poland's first nuclear station, will reduce the country's dependence on coal and specifically its reliance on Russian coal and gas, the Polish government said in a statement.

Sarens is a partial owner of NuScale, a small modular reactor design, and has deployed "Big Carl," the world's biggest crane, a Sarens

SGC-250 that can lift up to 5,000 tons, to help build Britain's Hinkley Point C nuclear station, Sels said.

Riccardo Tippmann, a heavy haulage, lifting, and project forwarding consultant, agreed that many countries are seeking alternative power generation options to offset the reduction in Russian gas supplies. While many European countries have chosen to exit nuclear power, it's a power source now seeing serious reconsideration, he said.

"All industries related to energy and power are growing," Tippmann, a former senior executive at Fagioli, told *The Journal of Commerce*. "In the mid- to long term this will increase opportunities for the heavy transportation and engineering sector."

US expansion

In the US, heavy transportation and lifting specialist Barnhart Crane sees a similar expansion in energy and infrastructure, though the 2023 outlook is more uncertain. "Certainly, wind energy is the leader" in generating growth in the US heavy haulage industry, Jeff Latture, senior vice president at Barnhart Crane, told *The Journal of Commerce*.

"Heavy process industries are spotty as owners weigh out the political headwinds against oil and its downstream products," he said. "The exception is liquefied natural gas projects in the US, which are likely to expand due to the situation in Europe and global demand for LNG."

Latture said 2022 "has been a strong year as the heavy industrial and energy sectors catch up on major projects post-COVID-19, as well as try to keep up with the general demand spike. However, 2023 is a bit more tenuous given the Fed's program to slow the economy."

"It seems they will be successful and cause some amount of recession," he added. "This will likely put a 'bubble' in the US project pipeline, but we are expecting the impact to be short lived."

In the larger picture, Sel said, "Supply chain capacity — ranging from fabricators all the way to equipment availability and finding enough qualified personnel — will dictate the pace of the market." ●

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Antonov Airlines

Packed flights

Demand for heavy-lift air transport outstripping supply

By Keith Wallis

BOOMING INVESTMENT in energy and aerospace projects, coupled with a capacity crunch caused by the Russia-Ukraine war, are fueling strong demand in the heavy-lift and oversized air cargo market, senior industry executives say.

"From 2040 onwards, there will be a scarcity of 747 capacity in the market."

The buoyant environment has led heavy-lift and project cargo freight rates to surge, bucking the trend in the general air freight market, where overcapacity and lack of demand have caused rates to plunge, according to Vadym Budzynskyi, director of Ukrainian heavy-lift air carrier Antonov Airlines, and Andriy Blagovisniy, former commercial director at Antonov.

But the current buoyant conditions also come with a warning that airplane capacity in the oversized airfreight sector could tighten further in the medium term as aircraft are retired. Replacement aircraft lack the flexibility of the current fleet, Richard Forson, Cargolux president and CEO, told *The Journal of Commerce*.

New entrants to the sector — such as European aircraft manufacturer Airbus, with a fleet of five BelugaST Super-Transporter aircraft — may not be enough to ease tight capacity.

Before and after

A sharp line delineates the heavy-lift air cargo market: before and after Feb. 24, when Russia's invasion of Ukraine began.

"Up until Feb. 23, project cargo volumes were continuing to increase from the sharp decline since 2020 due to the coronavirus pandemic," Blagovisniy, who is now a project cargo consultant, told *The Journal of Commerce*. "This increase was seen especially from the aerospace and oil and gas industries. Since Feb. 24... the availability of air cargo capacity has decreased significantly even as oversized and heavy-lift demand continued to increase."

Russian heavy-lift air carrier Volga-Dnepr Airlines and its subsidiaries AirBridgeCargo and ATRAN largely suspended operations when Western and Asian governments

imposed sanctions on Russia following the Ukraine invasion. Until the sanctions, Volga-Dnepr was the largest global carrier for oversized and heavy-lift cargo with 35 aircraft, including 18 Boeing 747 and 12 Antonov AN-124 freighters, according to Blagovisniy and Budzynski.

These two aircraft types are the main workhorses of the project cargo and heavy-lift air cargo sector, with the latest Boeing 747-8 capable of carrying up to 130 tons and the AN-124 about 150 tons, they said.

Even as available heavy-lift air capacity has shrunk due to the war, many oil, gas, and renewable energy projects have accelerated as Western nations, especially those in Europe, are reducing or ending their dependence on Russian gas. This pivot is fueling demand for heavy-lift air capacity, Blagovisniy and Budzynski said.

The Volga-Dnepr ban has left Ukraine's Antonov Airlines as the only AN-124 operator, with five AN-124-100M Ruslan aircraft that are capable of transporting loads up to 150 tonnes.

Antonov's aircraft have been temporarily relocated to Leipzig's Halle airport in Germany after the airline's main base at Kyiv's Hostomal airport was attacked and occupied by Russian forces in the early days of the war, Budzynski said. The six-engine AN-225 Mriya, the largest commercial freighter aircraft ever built and the only one of its kind, and at least one AN-124 Ruslan were destroyed in the Russian attack, the carrier said.

"Since the end of March, the number of requests for the transportation of project cargo has rapidly increased, with requests from the aviation and aerospace industries rising especially," Budzynski said. However, cargoes related to Ukraine's interests are given preferential treatment, he noted.

Commercial requests have included transporting a civilian telecommunications satellite in association with Bolloré Logistics Space from the Airbus factory in Toulouse, France, to the NASA Shuttle Landing Facility in Titusville, Fla., at the end of October. The satellite will be launched by the US aerospace company SpaceX.



A 22-ton piece of project cargo being loaded via the nose cone of a Cargolux 747. Cargolux

Blagovisniy said the shortage of heavy-lift capacity has helped push charter rates for the AN-125s up 35 to 40 percent in the last few months. Rising fuel costs and the costs of transferring the airline from Ukraine to Germany are also factors driving up charter rates, he said.

By contrast, spot rates for general air cargo dropped 9 percent year over year in September, according to data from Xeneta-owned CLIVE Data Services. Global demand for general international air freight fell 9.3 percent year over year in August, the latest month for which volume figures are available, even as capacity rose 6 percent, according to data from the International Air Transport Association (IATA).

Comparing heavy-lift and general air freight costs is not straightforward; general air freight is charged on a per-kilogram basis, while heavy-lift and project air cargo customers charter the entire airplane on an aircraft, crew, maintenance, and insurance (ACMI) basis, Blagovisniy explained.

Airbus joins the game

Airbus's heavy-lift fleet has been dedicated to transporting aircraft components between manufacturing sites with only the occasional commercial transport, but according to an early 2022 statement, the

carrier will be setting up a dedicated outsized and project cargo airline as it adds tonnage. Five A300-600ST Super-Transporter Beluga aircraft that had long been used in its intercompany transport service are being gradually replaced by six larger A330-200 BelugaXL aircraft. The older A300-600STs will form the dedicated heavy-lift airline and the new A330-200s will take over transporting aircraft components between company factories.

"Over the years the BelugaST fleet has occasionally been called upon to transport outsized cargo such as industrial machinery and



Andriy Blagovisniy
former Commercial Director, Antonov Airlines



complete space satellites that are unrelated to its normal day-to-day job of transporting Airbus aircraft sections,” Airbus said in the statement.

The BelugaST can accommodate outsized cargo up to 23 feet wide and 22 feet high. “The Beluga’s wider cross section will open up new markets and new logistical possibilities, which would not be feasible with other current airborne transport means. For example, customers could consider in their future manufacturing process to make larger parts to be transported whole without prior disassembly,” Phillippe Sabo, head of ATI air oversize transport at Airbus, said in the statement.

The BelugaST complements but does not replace the AN-124, Blagovisniy said. “Beluga aircraft can be a solution for the transportation of outsized but not super heavy project cargo,” he said. However, he said additional airlift capacity will benefit the market.

Even tighter capacity

Cargolux’s Forson said the looming retirements of Boeing 747-400Fs and other extended-range freighters, plus the increasing maintenance requirements necessary to keep them flying, will further constrain heavy-lift air capacity.

The B747 has nose-loading

capability that allows it to carry freight that is too long or outsized to load via a side door. This also improves loading and unloading efficiency as the nose and side cargo doors can be used simultaneously, Forson said.

“There has always been demand for the use of the B747’s nose-door capability for project cargo, especially, for example, from the oil and gas and telecommunications industries,” he said.

Neither of the two next-generation cargo aircraft being developed, the Boeing 777-8F and the Airbus A350 freighters, have nose-door capability, he said.

Cargolux currently operates a fleet of 30 Boeing 747s that includes 10 747-400s, six 747-400 ERF extended-range freighters, and 14 747-8 freighters. The airline’s 10 747-400 air freighters will be retired beginning in 2026 and 2027; the remaining 747s will be phased out starting in 2035, he said.

Forson said other cargo airlines flying the Boeing 747, such as Hong Kong’s Cathay Pacific Airways and Silk Way West Airlines, based in Baku, Azerbaijan, will also be faced with retiring their freighters over a similar time span. And industrial customers are beginning to realize the impact that these Boeing 747 retirements will have on the heavy-lift and project cargo market, he said.

Cargolux finalized an order in mid-October for ten Boeing 777-8 freighters, with options for six more aircraft to replace the 747-400Fs and 400 ERFs. However, with no nose door, these aircraft will be less flexible than the 747s. Consequently, Forson sees a capacity crunch facing the heavy-lift and project cargo sector in the future.

“Between 2030 and 2040 a lot of 747s will be retired, and from 2040 onwards, there will be a scarcity of 747 capacity in the market,” he said. “Those that are kept flying will come with a much higher maintenance cost. Cargo rates, including charters, will reflect that increased cost.” Antonov Airlines will face the same maintenance cost issues with its AN-124s, he said. ●

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