

Building Insights to Plan for 2045

FUTURE THINKERS BREAKBULK

EUROPE

2026 REPORT

Held in conjunction with Breakbulk Europe,
Rotterdam, the Netherlands





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INTRODUCTION



Leslie Meredith,
Product & Editorial Director

Future Thinkers was designed to create a perpetual industry conversation about the challenges and opportunities ahead as we move toward 2045.

That conversation began in Houston, continued in Dubai and came to Rotterdam with plenty of new material to consider. The industry was still working through the questions raised at our first two meetings, while evolving disruption in the Middle East added another layer.

Twenty-eight industry leaders and academics from 12 countries joined us aboard Port of Rotterdam Authority's Nieuw Maass for dinner, drinks, an interactive survey to get the group's perspectives out on the table, a special presentation on disruption in the Middle East, along with work group discussions on a variety of industry challenges.

The surprisingly warm evening on the water brought out the best in everyone. One of my favorite moments was during the opening survey. As descriptions of today's industry appeared on the screen, one response stood out: *"Too shy."*

I asked the group about it, and Ruediger Fromm of Siemens Energy spoke up. *"That's from me,"* he said. *"We do great jobs, but we are too shy to say it to the public."* He was right.

This industry solves extraordinary problems every day, yet much of that work goes unnoticed outside our own circles.

The same candor carried through the evening as participants talked about where the industry is headed and what companies should be doing now.

Future Thinkers is about solving problems, but it is also about making connections. Marco Poisler, COO of UTC Overseas, told me he had been trying to connect with one of the participants for more than a year. Then he arrived at his work group and found him sitting across the table.

"I don't know how you do it," he said. That is one of the things I value most about this community: the right people often find one another here.

My sincere thanks to the Port of Rotterdam Authority for providing the Nieuw Maass as our meeting venue. I would also like to recognize Marco Poisler and Mohammad Jaber, CEO of Combi Lift Projects MEA, who have attended all three Future Thinkers meetings. Their experience across the full series helped us look at change across regions and over time.

If you read one serious thing while relaxing this summer, make it this report. You will find new perspectives and, most importantly, multiple paths forward.

If you'd like to be part of Future Thinkers, join the community [here](#)

I hope to see you in Houston for Breakbulk Americas and in Singapore as we launch Breakbulk Asia. Together we'll close out 2026 with a pipeline of new business for next year.



HOW TO USE THIS REPORT

Future Thinkers Europe brought together a global cross-section of industry leaders, with a majority representing Europe, along with academics whose work connects to the project cargo and breakbulk industry. The report is useful because it combines regional priorities with global perspectives from participants working across major project markets.

Use the survey section to capture a snapshot of industry sentiment around markets of opportunity, general outlook and major topics. Take the survey first yourself, and see how you compare.

The regional meeting included an update on the Middle East disruption to give you an informed analysis of the current situation as well as for a post-conflict return to normalcy, which may turn into a regional project boom.

This section also asks a critical question that applies to all future disruption across the globe. We see three scenarios and asked which one was the most likely. This is an exercise that may prove helpful in your own company as it prompts thinking about the future in tangible ways.

The majority of the regional meeting was devoted to three work groups organized by sectors. This means you can focus on the sections most relevant to your work. For instance, if you are in the maritime and ports sector, you may want to spend extra time with that work group section.

If your customers are in maritime and ports, the same section offers a useful view of a broad sampling of industry leaders and academics as to what they are seeing today and what the priorities in the sector should be to work toward an optimal future.

Project owners, EPCs, manufacturers, equipment providers, forwarders, heavy transport providers, ports, technology companies, workforce specialists and academics will each find different entry points. Read the section closest to your own work first, then review the other work groups to see how your priorities align with the wider project cargo ecosystem.

You will find areas that need your attention and those that offer opportunities for collaboration with partners to improve outcomes for not only your sector, but across the global industry.

MEET EUROPE'S FUTURE THINKERS

SUPPLY CHAIN & LOGISTICS 1



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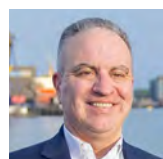


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SUPPLY CHAIN & LOGISTICS 2



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Managing Director
DENZAI Ukraine

Ukraine



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Heavy Transport Consultant & Founder
(OS/OW Software & Hardware)
SolTec Innovation

Canada

Future Thinkers Europe brought together 28 invited participants from 13 countries for a regional working session during Breakbulk Europe in Rotterdam.

The Community Forum brought in two additional EPCs for a discussion open to Breakbulk Europe attendees, held on the event's Voices stage.



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ZOE UPSON

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MARITIME & PORTS 1



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MARITIME & PORTS 2



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COMMUNITY FORUM



DR. SVEN HERMANN

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SURVEY SNAPSHOT

What Industry Leaders Expect From Disruption, Technology and Project Cargo Growth

Future Thinkers Europe used a seven-question live survey to capture how invited industry leaders and academics viewed the project cargo industry today, the conditions likely by 2030 and the longer-term outlook for 2045.

The results show near-term caution, strong confidence in the Middle East, a more restrained view of Europe, continued decarbonization regulation and long-term optimism about the industry's ability to adapt.



TAKE THE SURVEY

Answer seven quick questions,
make your own call on the future,
then compare your view with
Future Thinkers Europe participants.

TAKE THE SURVEY



Methodology and Respondent Profile

The survey was conducted live among 28 Future Thinkers from 13 countries who attended Breakbulk Europe 2026 in Rotterdam.

The survey was administered by Dr. Sven Hermann, professor of Logistics & Supply Chain Management at NBS Northern Business School and Global Future Thinkers Academic Chair.

Participants were invited for their standing in the industry, their area of expertise to provide a balance across work groups and because of their home country to add a global perspective to the group.

They represented maritime, ports, project logistics, heavy transport, equipment, energy and infrastructure, technology, workforce development, talent recruitment and academia. The full participant roster appears separately in this report.

Survey Setup

Dr. Hermann introduced the survey as a short seven-question exercise before the work groups began. The format gave the group a quick read on where participants agreed and where they differed, and provided the foundation for the discussions to come.

The questions were designed to separate future expectation from industry readiness. The 2030 questions revealed where participants expect near-term change to show up first, based on today's operating environment: geopolitics, regional growth, permitting, cargo demand, AI, jobs and decarbonization regulation.

The 2045 questions focused on the longer horizon: whether participants were optimistic or pessimistic and how they expect the industry to change over the next two decades.

RESULTS

AI readiness lags across the industry in your view, how will global geopolitical tensions develop by 2030?



Result: 3.6 average on a 1–5 scale, with 1 equal to “ease significantly” and 5 equal to “escalate sharply.”

Participants expected global geopolitical tensions to worsen by 2030. That gave the survey a cautious starting point. They expected a more unstable global environment to remain part of project cargo planning through the end of the decade.

How will the economic importance of the Middle East for our industry change by 2030, given the ongoing conflict and the logistical disruption?



Result: 3.3 average on a 1–5 scale, with 1 equal to “decline significantly” and 5 equal to “grow significantly.”

Participants expected the Middle East’s importance to grow by 2030. The positivity is telling given the current situation: respondents were asked to consider the region in the context of ongoing conflict and logistical disruption, and still pointed toward significant growth.

For project cargo, that signals confidence in the Middle East as a source of project opportunities tied to energy, infrastructure and industrial development. It shows that participants see the region’s project pipeline and industrial investment as resilient enough to increase in importance despite upheaval.

How will the economic importance of Europe for our industry change by 2030?



Result: 2.8 average on a 1–5 scale, with 1 equal to “decline significantly” and 5 equal to “grow significantly.”

Participants were more cautious about Europe than the Middle East. The ensuing discussion would reveal the reasons behind the group’s response and uncover specific areas of opportunity.

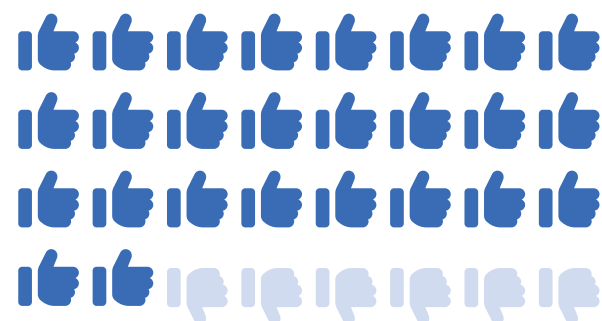
Do you agree or disagree with the following statements for 2030?

- 4.1** Support and measures for decarbonization and net-zero emissions will continue to increase through 2030.
- 3.3** Heavy-haul permits in Europe will be issued digitally and in a standardized manner across national borders.
- 3.3** AI will boost productivity in the industry faster than the skills shortage can erode it.
- 3.2** AI will significantly reduce the number of entry-level jobs in the industry by 2030.
- 3.1** Power grids, data centers and semiconductor factories will be among the biggest drivers of breakbulk cargo in 2030.

Result: Strongest agreement on continued support and measures for decarbonization and net-zero emissions.

Scale: 1–5, with 1 equal to “strongly disagree” and 5 equal to “strongly agree.”

When I look ahead to 2045, am I more of an optimist or a pessimist?



Result: 82% of respondents identified as optimists.



What three words describe the industry today?

**VOLATILE,
UNCERTAIN,
RESILIENT**

Participants described difficult market conditions, but not a defeated industry. Volatile and uncertain characterized the environment. Resilient, agile and dynamic described the way the sector continues to operate through disruption.



What three words describe the industry in 2045?

**AUTOMATED,
DIGITAL,
PEOPLE-DRIVEN**

The 2045 word cloud shifted toward technology and transformation. By 2045, they expected the industry to be digital, lower-carbon and more automated, but not hands-off. People remained central because project cargo still depends on judgment, relationships and the ability to solve problems.

KEY TAKEAWAYS

- Geopolitical disruption will continue to escalate.
- Today’s project environment is dominated by uncertainty.
- By 2045, participants are optimistic about a digital, decarbonized and automated future with people at the center.
- The Middle East remains the most promising project market, despite upheaval.
- Europe will experience slower growth compared with the Middle East.
- Decarbonization regulation will continue to increase through 2030.



MIDDLE EAST DISRUPTION REPORT

Geopolitical disruption dominated industry conversations once the conflict between the U.S., Israel and Iran began in earnest on Feb. 28, just a few weeks following Breakbulk Middle East.

With the closure of the Strait of Hormuz, a primary corridor for the shipment of oil and gas from the Middle East to markets around the world, those operating in the project cargo sector were quick to feel the impact.

Like a chain of dominoes, the closure affected not only energy supplies, but the shipments of oversized cargoes in and out of the region. Ships were stuck in the strait, while air service was constrained.

The situation called for quick decision-making and flexibility. Media reports were not always reliable, travel was curtailed, leaving companies operating in the region reliant on their own people on the ground as well as industry chatter.

That's why Mohammad Jaber, a global member of Future Thinkers, was asked to provide an update on the conflict and an assessment of how it would impact the industry in both the short-term and longer term.

Jaber has 25 years of experience as a logistics expert in the Middle East, and serves as chair of the Abu Dhabi Chamber of Commerce Supply Chain committee. He has been in weekly meetings to discuss the current disruption and how business can work with the government.

The purpose of this report is to explore how geopolitical developments may reshape global supply chains, project logistics, energy markets and investment decisions, with a focus on project logistics.

"Over the last several years, supply chains have become increasingly efficient, but also increasingly interconnected and vulnerable," Jaber said. "We will discuss whether current disruptions represent a temporary challenge or the beginning of a new operating environment."

The future belongs to those who anticipate, adapt and act decisively.

Mohammad Jaber



Strategic Corridors Under Pressure

The Middle East sits across several of the world's most important maritime corridors: the Strait of Hormuz, the Red Sea, Bab el-Mandeb and the Suez Canal, all of which have been or are subject to closure.

These disruptions could happen anywhere. *"Could be Panama, could be Taiwan"* Jaber said. *"Regardless, you need to be ready."*

When corridors are stable, goods, energy and capital flow efficiently around the world, but when they are disrupted, the effects ripple far beyond the region where the disruption occurs, Jaber said.

Further, once a chokepoint has been cleared, it takes time to get cargoes moving again. *"Port congestion is often viewed as an operational problem,"* he said. *"In reality, it is a multiplier of supply chain risk."*

It can result in a laundry list of problems: vessel bunching and berth delays, storage and yard congestion, increased demurrage and detention costs, equipment shortages, trucking bottlenecks, and reduced schedule certainty.

All that upheaval affects the cost of project logistics, a concern that affects everyone in the business. *"It touches all your pockets here, in the U.S. and South America"* he said. *"Still we are surviving. We are resilient."*

Why Delays Impact Project Cargo Harder

Project logistics operates under very different constraints than container shipping. *"We move cargo that is often irreplaceable, highly specialized and tied to critical project milestones,"* Jaber said. *"A delayed container is an inconvenience; a delayed turbine, transformer, reactor, can stop an entire project."*

That's why disruption hits project cargo harder; it acts as an amplifier, causing port congestion, forcing rerouting, and in the case of Hormuz, raising fuel prices.

"Energy volatility is no longer just an energy market issue," Jaber said. "It directly affects freight rates, supply chain resilience, project economics and investment decisions across global industries."

FACT: Energy prices are expected to rise 24% in 2026 due to ongoing disruption in the Middle East.

Source: World Bank Commodity Markets Outlook, April 2026

Taken together, disruptions like those we are seeing today, can cause:

- Route disruptions leading to missed project milestones
- Cost escalation from rerouting, demurrage and expediting
- Risk to project integrity when equipment arrives late and can stall an entire project
- Limited alternatives for oversized and specialized cargo
- Reputational impact when delivery failures affect stakeholder confidence
- Margin compression
- Inflationary pressure
- Delayed investment

Of course, containerized cargoes (a part of every project) have also suffered during this crisis. According to Jaber, Jebel Ali and Abu Dhabi were trading more than 20 million TEUs before the conflict. There are now no ships coming in. *"A container imported to Abu Dhabi from China or Europe at \$1100, is now \$10,000"* he said. *"Shipping becomes more expensive than the cargo itself."*

THREE FUTURE SCENARIOS: WHICH DO YOU CHOOSE?

The future of global trade is uncertain, but preparing for multiple outcomes allows the industry to make better decisions today. Jaber proposed three distinct scenarios that trace the paths global trade and the Middle East could take in the years ahead.

Scenario 1: Stabilization

Under a stabilization scenario, geopolitical tensions ease and enable smoother trade flows. Global economic growth remains steady and inclusive. Energy markets stay well balanced with adequate supply, and sustainability and innovation accelerate transformation across the industry.

The outcome is resilient supply chains and sustainable growth. The winners are companies that are well prepared, collaborative and agile.

Scenario 2: Managed Volatility

Under managed volatility, geopolitical tensions and regional flashpoints persist. Inflationary pressures continue alongside uneven economic growth, and energy price volatility and supply disruptions carry on.

Supply chains adapt, but costs remain elevated. The outcome is higher costs and complexity for businesses. The winners are companies that are agile, diversified and risk-aware.

Scenario 3: Structural Shift

Under a structural shift, geopolitical realignment leads to fragmented blocs. Protectionism and trade barriers alter global flows, and the energy transition accelerates even as supply constraints persist.

Supply chains are restructured around security and sovereignty rather than efficiency alone. The outcome is a new trade order in which established players are disrupted. The winners are companies that are strategic, innovative and forward-looking.

Which scenario is most likely?

According to Jaber, there is no single answer. *"Actually, no one knows,"* he said. *"We could see different outcomes in different parts of the world, which brings us to the most important advice of all: plan for all."*

ACTION PLAN

Regardless of which paths materialize, five actions apply across all three scenarios.

1. Companies should build resilience by strengthening supply chains, diversifying risk and enhancing operational agility.
2. They should invest in innovation by using technology, automation and data to stay ahead.
3. They should strengthen partnerships by collaborating across borders and sectors to unlock shared value.
4. They should plan for multiple futures by using scenario planning to navigate uncertainty and capture opportunities as they arise.
5. Focus on sustainability by embedding ESG principles to drive long-term competitiveness.



THE WORK GROUPS

Supply Chain & Logistics

The Supply Chain & Logistics work groups used the worksheet discussion and group presentations to connect early logistics involvement, pricing pressure, AI and data quality, and workforce training into one project cargo risk agenda.

Early Logistics Is Becoming a Project Requirement

The two Supply Chain & Logistics groups reached the same conclusion from different directions: project cargo risk is being created too early and discovered too late.

The group presentations turned those answers into a clear operating message: logistics must enter the project while sourcing, engineering and commercial assumptions can still change.

Dennis Devlin, presenting one supply chain group, identified earlier involvement in project logistics planning and sourcing strategy as the central requirement for 2030. Group members described a common pattern: logistics teams are brought in after procurement has fixed the supplier, route or fabrication plan, then expected to manage whatever risk remains.

One participant said owners often add a percentage to logistics and call it risk mitigation, instead of planning the logistics strategy from the start.

The sourcing example that brought the issue to life involved Kandla, India. Devlin warned that a sourcing decision can look attractive on purchase cost while ignoring berth access, vessel waiting time, anchorage delays and the cost of a ship waiting at ballast. His point was direct: “No one’s taking that into account.”

This was a planning failure. The purchase decision had already shaped the logistics outcome before the logistics team had a chance to test whether the project could absorb the delay, cost and route constraints.

The second supply chain group brought the early planning discussion into wind. Jean-Francois Prince said wind project engineering used to begin five or six months before the first move.



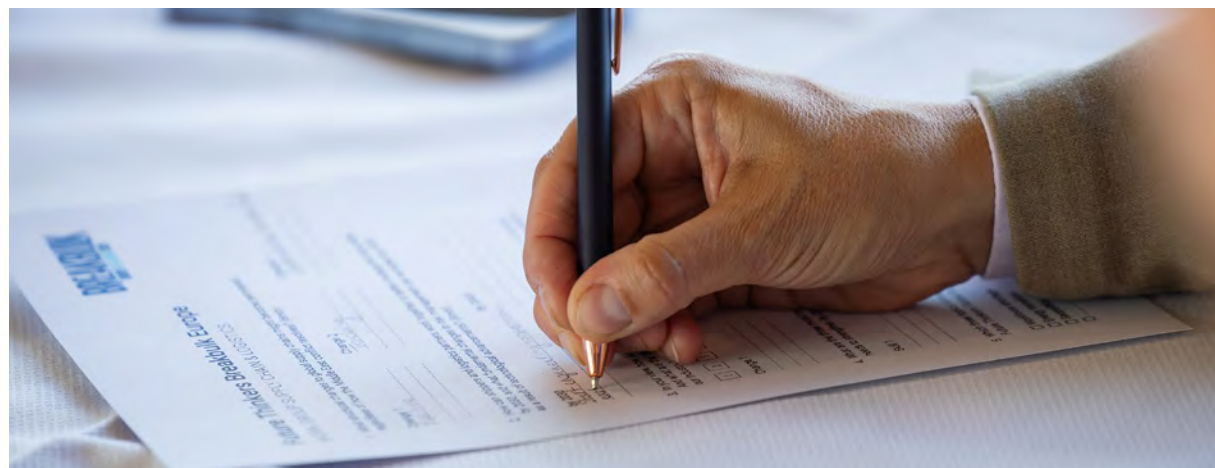
Now, the work may start two years ahead because the cargo is more complex, and problems have to be fixed before transport begins. In his group presentation, he summarized the change as logistics becoming “*more involved in the preparation of projects.*”

In practice, engineering, transport and execution are no longer separate phases for complex cargo. Route feasibility, transport equipment, permits, handling methods and site access can influence whether the engineering plan is realistic. If transport companies are hired late, the project may already be locked into assumptions that are expensive or impossible to correct.

Pricing Pressure

Another driver of earlier involvement by logistics teams was pricing, both for the project and for fuel. Devlin’s group cited the impact on pricing models and the speed of projects. Prince’s group raised bunker fuel contracts and surcharges, noting that customers had seen invoices rise quickly and then challenged the increase.

The group said today’s pricing fluctuations require earlier transparency. Shippers and logistics partners need enough trust, data and commercial structure to understand what can change, who carries the exposure and when a project needs a different option.





We need to find solutions that AI is going to provide real accurate data and not hallucination.

Jean-Francois Prince,
presenting Supply Chain & Logistics Group 2



AI Readiness Is Low Because Data Is Scattered

The supply chain groups gave low AI-readiness scores, ranging from 2 to 2.5 on the 1-to-10 worksheet scale. In the presentations, both groups described AI as a major force.

Devlin said AI can improve visibility, productivity and safety, remove tedious work, and increase job satisfaction, but certain conditions must be met.

Prince was more blunt about the prerequisite: the industry needs data sharing, accessibility and reliable outputs.

The biggest problem in AI adoption is the inconsistent state of data. Data exists across provinces, states, OEMs, EPCs, logistics providers and digital platforms, but people do not know where to find it, and systems are rarely connected.

Participants described many digital solutions operating independently, with none of it synced. Until that changes, AI will remain more promising in conversation than useful in project execution, the groups agreed.

Training and Culture Decide Whether AI Helps

The group presentations added a stronger people message. Prince's group said people are leaving the industry, new entrants often lack knowledge, so the transfer of knowledge has been missed.

Devlin's group identified technological expertise as a future skill, but also warned companies to be careful about the culture created by AI.

AI may change the employment model and remove some tedious work, but the industry still needs people who understand cargo, routing, clients, international differences and the consequences of a wrong answer.

Training is therefore part of risk management, not an HR afterthought.



We have to be very wary of the culture we create by using AI.



Dennis Devlin,
presenting Supply Chain & Logistics Group 1



KEY TAKEAWAYS

- Bring logistics into sourcing and engineering decisions before procurement locks the project into a route or supplier.
- Review purchase price with the full transport consequence, including berth access, waiting time, inland route limits and schedule risk.
- Create project structures that allow shippers and logistics partners to share risk information earlier.
- Prioritize data accessibility and system interconnection before expecting AI to improve execution.
- Use AI first in areas where better visibility, productivity and safety can be measured.
- Invest in training that transfers operational knowledge while building digital competence

THE WORK GROUPS

Maritime & Ports

Treat Ports as Risk Infrastructure, Not Only Cargo Infrastructure

The Maritime & Ports worksheet asked the groups to consider permanent structural changes, infrastructure investments by 2030 and 2045, AI readiness, future skills and priorities for the next summit.

The group presentations show two related concerns. One group focused on digitalization, flexible project planning and changing trade patterns. The other focused on continuous risk awareness, regionalization and the danger of losing craft knowledge as AI enters port and maritime work.

Risk Management Has Moved Into Daily Operations

Claudia Beumer, presenting the second Maritime & Ports group, said risk awareness and preparedness have become part of daily work because the risks themselves are changing. Group members compared today's risk function to a 24-hour fire department where monitoring conditions is a round-the-clock function rather than waiting for a crisis to escalate a few times a year.

The risks are also more complex. Members discussed geographic risk, geopolitical risk and the way freight behavior changes

immediately when cargo moves into a higher-risk area. Ports have to understand the specific risk profile of their region and the most common exposure points in that operating environment.

Trade Patterns Require Flexible Port Planning

Jolke Helbing's Maritime & Ports I identified three structural changes: digitalization, flexibility in project planning and changing trade patterns. Helbing explained that original destinations may change over time, so planning has to remain flexible and include a plan B.

That is especially relevant for project cargo because a change in destination or routing may require different port capacity, inland connections, permits, equipment and local expertise.

Ports often know where constraints will appear before the cargo owner does. Land availability, quay capacity, multi-user facilities, reliability, hinterland links and local labor are all part of whether a port can support project cargo when routes change.

“
The risks are changing, and it becomes part of our daily work.”

Claudia Beumer,
presenting Maritime & Ports Group 2



Infrastructure Means Fuel, Space and Hinterland Connections

Beumer's group separated near-term and long-term infrastructure priorities. For 2045, the group pointed to flexible fuel infrastructure and clean hinterland connections.

For the shorter term, it highlighted space for offshore projects. While future fuel capability affects vessel deployment and routing, offshore wind and energy transition cargoes require immediate land, quay and assembly space.

The work group discussion also treated people as part of infrastructure. Participants raised schools, training centers and upskilling because project cargo competence depends on people who know how to handle unusual cargo, work across partners and make operational judgments under pressure.



Digitalization Cannot Erase Craft Knowledge

Both maritime groups were cautious about AI. The first group rated industry readiness at 2.5, while Beumer's group rated it 3. The difference was less important than the shared concern. AI may improve efficiency and support decision-making, but maritime and port work still depends on experience, problem solving and client interaction.

Beumer also warned that the industry must safeguard necessary skills as AI is implemented. The first maritime group framed the skills issue through prompting and judgment. People need to know how to ask AI the right question, challenge the answer and decide whether the result is realistic.

The second group raised a larger concern: if AI does too much too early, the industry may weaken the experience base it needs to judge the technology.

“
The original destination will change over time. It has to be very flexible and have a plan B.



Jolke Helbing,
presenting Maritime
& Ports Group 1

The Need for Increased Visibility and Innovation

The discussion also touched on recruitment and public understanding. Participants said ports can be too quiet about their importance. In Rotterdam, one participant noted that people outside the city often do not understand what the port does or what maritime careers involve.

That has consequences for workforce development, public support and the ability to attract younger people into project cargo, port operations and maritime services. Beumer's group named the ability to turn innovation into daily use as one of the most important future skills.

A port innovation program has limited value if it does not improve berth planning, cargo handling, customer coordination, risk review, hinterland movement or workforce capability.

“
The fear and the resistance to these kinds of solutions [AI and automation] really needs to be turned into adoption

Claudia Beumer,
presenting Maritime & Ports Group 2



KEY TAKEAWAYS

- Bring ports into project planning early enough to identify land, quay, equipment, hinterland and local-capability constraints.
- Make continuous risk monitoring part of port and maritime operations, especially where geopolitical or regional risk affects cargo flows.
- Plan alternative routes against project cargo requirements, not only general freight capacity.
- Prioritize offshore project space and hinterland connections while longer-term fuel infrastructure decisions mature.
- Invest in training, maritime education and career visibility as part of port infrastructure.
- Use AI to support efficiency while preserving the experience needed to judge exceptions and operational risk.

THE WORK GROUPS

Energy & Infrastructure Projects

Plan for the Corridor, the Cargo and the Next Constraint

The Energy & Infrastructure Projects worksheet asked the group to consider permanent supply chain changes, trade lane shifts by 2030 and 2045, AI readiness, future-oriented skills and priorities for the next Future Thinkers summit.

Diversification and nearshoring, uncertainty as a standing condition, multimodal options, changing project corridors, low AI readiness and the continuing role of people received the most attention.

Diversification Is Moving From Theory to Project Planning

The discussion began with resource exposure. Japan was cited as a country heavily dependent on Middle East resources and now looking for additional options in Central Asia, the U.S. and other regions.

The group connected that example to diversification, regionalization, nearshoring

and bringing some value closer to the market where possible.

The group recognized that every supply chain can be regionalized. Some resources and manufacturing capabilities remain tied to specific geographies. The more practical conclusion was that project teams need to understand where they are exposed to a single source or corridor, then determine where optionality is possible.

Multimodal Planning Is Becoming Part of Energy Security

Margaret Kidd, academic member and presenter for the group, summarized the third structural change as a multimodal shift away from the traditional 80% dependence on sea transport, with more focus on rail and road.

The discussion added pipelines, trucking and major cable infrastructure to the mix. Participants noted that after disruption in the Middle East, regulations that had not changed in years shifted in weeks because inland and pipeline alternatives suddenly became critical.

For energy and infrastructure cargoes, this means project planners will reduce dependence on a single mode or corridor when justified by the potential for disruption.



Uncertainty is the new normal

Energy & Infrastructure Projects work group participant



Energy Investment Will Pull Cargo Into New Corridors

The group presentation identified 352 renewable projects at FID and connected them to a broader corridor discussion, including pipelines and rail across Asia,

India, the Middle East, Turkey and Europe. The discussion also raised CCS, noting that Europe often focuses on the North Sea while major capacity is also developing in the U.S. because of reservoir conditions.

The trade lane discussion included India, Southeast Asia, the Middle East, Brazil and parts of Africa. Kidd added nuance from project data, suggesting Indonesia, India and the Middle East may be more central to near-term project growth than a simple Africa growth narrative.

The Cargo Will Decide Whether the Corridor Works

The group used a modular reactor produced in China for an energy project in Canada as a route-planning example. The investment and manufacturing points may be clear, but the route is less obvious.

Traditional lanes may compete with emerging northern or multimodal alternatives depending on dimensions, weight, timing and access.

The group also discussed hybrid sea-air models for speed-sensitive cargo.

One participant described cargo moving partway by sea, then shifting to air for the final leg, reducing China-to-Europe transit time from about 58 days to about 24 days at roughly half the cost of full air freight.

That model will not fit every project cargo move, but it shows how teams are looking for novel ways to adhere to project requirements.

AI Readiness Is Lowest Where Visibility Is Weakest

Kidd reported that the projects group gave AI readiness a 1 out of 10, the lowest score among the work groups. The reasons were practical: dependence on third-party systems, limited digitalization and the need for better data quality standardized across industries.

Shipping has made progress in vessel tracking, but project logistics needs cargo-level visibility, exception management and data that can move across project partners. Government and customs systems may be advancing faster than parts of the breakbulk

sector, while smaller operators often depend on third-party software rather than systems they control.

People Remain the Control Point

The group's future-skills discussion focused on innovation and entrepreneurship, resilience and adaptability, the human element and training for younger professionals.

Energy and infrastructure projects are becoming more digital, more multimodal and more exposed to regional shifts. They still depend on people who can judge whether a corridor works, whether a digital output is credible and whether the cargo can physically move as planned.

The group also identified a gap in the technology conversation: cybersecurity. If AI and digital systems become more central to project planning, cybersecurity cannot remain an afterthought.

“
AI doesn't totally replace humans. You still have to have someone there.

Margaret A. Kidd



KEY TAKEAWAYS

- Test sourcing strategy against project exposure where dependence on one supplier, country or resource corridor could affect delivery.
- Evaluate rail, road, pipeline and hybrid transport options before the preferred route becomes disrupted.
- Separate container assumptions from breakbulk and heavy-lift requirements when assessing corridor feasibility.
- Track energy project demand by geography and cargo type, especially renewables, CCS, pipelines, modular reactors and petrochemicals.
- Build cargo-level visibility before expecting AI to improve project execution.
- Prioritize cybersecurity in digital project planning for energy and infrastructure cargo.
- Invest in people who can combine digital competence with project cargo judgment.



COMMUNITY FORUM ANALYSIS

**Uncertainty, scenario
planning and the future of
work in project logistics**

Future Thinkers Europe began with a practical question: whether current disruption represents a temporary challenge or the start of a different operating environment for project logistics.

The Community Forum returned to that question from several directions, including geopolitical risk, energy security, contracts, sourcing, AI, Europe's changing position and the skills needed to keep project cargo moving through a more volatile market.

Mohammad Jaber placed the Middle East disruption inside a larger pattern. "Those are not going to vanish," he said of today's chokepoint and security risks. "[The next disruption] could be tomorrow somewhere in the district of Taiwan. Could be the Panama Channel. Could be another pandemic. Could be another earthquake."

For Jaber, the question is preparedness.

“ What defines our future is our preparedness.”

Mohammad Jaber



That framing carried into the discussion with EPCs and logistics providers. Daniel Duus of thyssenkrupp Uhde said geopolitical uncertainty now has to be built into the logistics concept and supply chain strategy.

“Geopolitical uncertainties are no exception anymore,” he said. “You have to consider it in your logistics concept and in your supply chain strategy.”

The shift is significant for project logistics because the cargo is often planned years ahead and cannot easily be replaced or rerouted once execution begins.

Jaber described project cargo as long lead, indivisible and irreplaceable, with delays that can affect project integrity, production and feasibility.

The industry is still reacting to uncertainty.

How are we doing as an industry?

The forum discussion drew a clear line between reacting to disruption and planning before the project is exposed.

Danny Barz of SMS Group said companies are still working too often case by case. “For the moment we are not prepared in general for the future,” he said. “We are living in the moment badly, case by case.”

Tariffs appear and companies work through tariffs. Another disruption appears and the focus shifts again.

“Are we prepared to work with the next steps or the next changes? No,” Barz said. “It’s the same with all these disruptions in the world, these geopolitical topics. Do we think two steps ahead? No. We are just seeing what is now and then we are working with this. Is it good? No.”

Jaber reduced the point to its simplest form: the industry is still more reactive than proactive.

Barz’s answer was a call to start developing alternatives before the next disruption lands. *“We have learned now and in the last years a lot of what can happen in a very short time in the world,” he said. “We have the tariffs, we have the spontaneous wars and perhaps the industry has now started to learn, okay, we are not on the safe side anymore. We need to look ahead in the future.”*

A New Mindset

Dr. Sven Hermann then pushed the issue into company structure. It is one thing to say the industry needs to think more about the future. It is another to create the space, meeting culture and procedures to do scenario development on a regular basis.

Barz said the industry has not built that discipline into normal operations. *“We should change our mindset toward the future, to these new scenarios,” he said. “We should have learned from the last few years.”* Some companies are sourcing differently, sourcing locally or avoiding major transport routes.

Barz was careful about what that meant. Those decisions may reduce exposure, but they are often still procurement decisions, not formal risk-mitigation strategies. Jaber described the distinction as *“commercially driven rather than risk.”*

Duus agreed with the need for a more proactive approach and gave a practical example from the bidding stage. His team is

working on a project in eastern Saudi Arabia and is already studying alternatives to direct sea freight into Dammam or Ras Al-Khair. One option is a combination of sea and land through Jeddah, then trucking from western Saudi Arabia to the eastern side.

That analysis goes down to the cargo level: dimensions, weights and what can still move by truck if a maritime route is blocked. Duus described Bab al-Mandab and Hormuz—two of the world's most critical and volatile maritime chokepoints— as “two needle eyes,” referring to the difficulty of passing through these routes like threading a needle.

“This is what we now increasingly have to do proactively,” he said, including alternative routes, sourcing strategy, regionalization and multimodal transport solutions.

Jaber's UAE example showed the same discipline at country level. UAE preparedness came from long-term investment in roads, pipelines and railways, along with ports, government coordination and human capital.

When trade routes came under pressure, authorities and companies formed task forces, updated regulatory frameworks, lifted road bans and road tolls, moved equipment and increased throughput through alternative ports such as Fujairah and Khorfakkan. *“The market did not face any kind of shortage,”* Jaber said. *“We still receive our Amazon at our door, even if you want cosmetics.”*

Contracts are becoming part of risk mitigation

The discussion moved from routing and sourcing to the contract models that decide who carries risk when the market changes. Barz said EPC companies are moving more often toward FCA or FOB to reduce their own exposure, even though logistics teams historically preferred CFR, DAP and DDP.

“In the past it's always CFR, DAP, DDP deliveries, something like this, what makes the heart of a logistics guy,” he said. *“We love*



to do it. We don't want to do FOB or FCA, to be honest.”

That preference is being challenged by company risk exposure. *“Now the company is changing their minds to reduce our company's risk,”* Barz said. *“We are turning more and more to FCA or to FOB to put the risk topic on the client side.”*

The market response is uneven. Barz said U.S. companies are often unwilling to accept that shift. *“They are so strong and have so much power,”* he said. *“They said, go away with your FOB. I want to have a DDP. If you cannot accept DDP, I will choose another supplier. Full stop.”* Asian clients, he said, are more likely to accept FOB.

Duus said contract models are changing as well, although some customers continue to push risk back to the EPC. He said some clients *“don't take care about the risks,”* adding, *“Sometimes I think they don't read any newspapers or look in the media at what is going on. So they don't come to the table with any mitigation or with any force majeure.”*

His company is using reimbursable and open-book contracts on some Middle East projects, including Saudi projects, to take out some of the risk. That also changes the discussion

with logistics partners. When the risk is more transparent, he said, it becomes easier to consider cost-plus-fee models and adjust the contract structure.

The question for EPCs is especially difficult when customers still want lump sum pricing for a complete plant. Duus described the problem from the bidding phase, where logistics concepts and calculations may begin for projects that will move two years later. *“You have to think about your question: How will the situation change?”* he said. *“How can I work on my concept when it comes to risk mitigation, and how can I calculate such risks when we as EPCs have to take the full responsibility?”*

Barz was careful about predicting the next five years. *“We still do not know exactly what will be next week,”* he said. *“Our logistics life will change, definitely. AI, different routings, based on the wars or the geopolitical situation in the world, means all the logistics will change.”*

Europe's prospects look different depending on the sector

The forum also tested a question from the Future Thinkers discussion: whether Europe's economic importance for project logistics will grow, decline or remain stable.

Duus answered from the chemical plant side, where thyssenkrupp Uhde sees a clear shift away from Europe in sourcing. *“We will definitely move more and more from Europe to so-called best-cost countries like China, like India,”* he said. *“We have to do it whether we want to or not.”*

The driver is cost competition. *“We can see the fight of prices in the market,”* Duus said. *“And we have to keep our cost competitive. Therefore, we have to change the strategy for sourcing.”*

The project side is more nuanced. Duus said chemical plant demand depends on the technology. Europe still has activity in green

ammonia, green methanol and sustainable fuels, with FEED work underway.

But for his company, the main market remains the Middle East.

“For sure you have a lot of uncertainties in that region these days. But we can still see the investments, the availability of capital and also the fast decision making. And this won't change in my opinion.”

Daniel Duus



Barz gave a different answer from the steel plant market. SMS Group is active worldwide and highly focused on the U.S., but he said Europe is growing for the company because of green steel, modernization and plant replacement.

“In Europe, we are starting to think very green,” Barz said. *“There will be a lot of modernization topics, revamped topics, new plant topics. Shut down old plants, building new plants in green.”*

For SMS Group, the largest recent and future projects are in Europe.

For our business, I would say Europe is growing

Danny Barz



AI readiness still depends on people

The discussion assumed AI will be used. The harder questions were where it can be trusted, how quickly companies can adopt it and what kind of experience people still need when digital tools become more common.

When Hermann asked the room to rate the industry's AI readiness, no one raised a hand for a four or five on a five-point scale. Duus said "2 or 2.5 is very realistic" for the project logistics and EPC environment.

The harder problem is the structure of project work. Each EPC project has different customers, construction companies, global suppliers and logistics partners, including freight forwarders, packaging specialists, engineering providers and equipment suppliers. The data sits across all those interfaces.

"You are not working with the same partners and the same customers," Duus said. "For each large EPC project you are gaining a lot of different data in these kinds of interfaces." That fragmentation limits what AI can do today.

Duus pointed to future uses around risk prediction, pre-alert systems and port congestion, but only if companies can standardize and connect the data needed to support those tools.

Barz was less diplomatic about the gap between ambition and execution. Hermann

noted that SMS Group has looked at pilot projects and built its own GPT inside the company.

"If you say it like this, it sounds very good," he said. "I say it exactly, we are on a good way. Not we have success with this and not we are working in a good way with this. We are on a good way."

Then he gave his score.

"If you ask me to make a scale from 1 to 10 how successful we are in the company with AI, I would say based on what I can do, minus one, minus two," Barz said. "We are recording this, right? Don't share it with my boss!"

His criticism was aimed at the organizational gap around the tools. *"If you see what AI can do and if you see what a lot of big plant companies, EPC companies like us are doing with AI, it's a mess" he said. "It could be much more."*

Companies say they want to invest, Barz said, but then the question becomes who will do the work. *"The people have also some work," he said. "You can do much more, but what we are doing in our business, it's much less than what could be done."*

Duus gave a positive, albeit limited, example from thyssenkrupp Uhde: digital twins for chemical plants. The company is making progress in offering customers a digital twin and complete simulation of process technologies in its plants.

In a cost-competitive EPC market, he said, that capability is becoming a USP. *"This is also where AI can help us more and more to offer such digital twin solutions," Duus said.*

Other parts of the industry are further along. From the audience, Julian Skyrme, vice president commercial, ports cluster at AD Ports Group, said investment in the Middle East is already moving AI into applied operations.

In 2025, AD Ports introduced 205 autonomous AI bots to support vessel planning, manpower

optimization, equipment scheduling, productivity prediction and capacity utilization.

"AI now is being adopted," Skyrme said. Claudia Beumer, Future Thinker and founder of C4 fuels, said the obstacle is whether people trust it. "The technologies indeed are there and it will help us do things more efficiently and smarter and also more sustainably," she said. "But the biggest challenge as I see it is the fear of people for AI. And there is still a lot of distrust in it and that's holding us back in really implementing it."

For AI adoption to accelerate, she said, companies need to build trust and share success stories showing what the technology can do and that it can be used safely.

Digital tools cannot replace physical understanding

The skills discussion followed directly from the AI discussion. Duus said logistics professionals need to understand integrated logistics and end-to-end transparency because "logistics is not execution anymore." It is part of developing concepts, understanding project requirements and managing interfaces before the move reaches execution.

That requires technical knowledge, commercial understanding and the ability to work across the different parties involved in an EPC project. Duus also emphasized that project logistics remains a people business. Networking skills still count because logistics professionals work across many interfaces, often with different partners and customers on each project.

Barz brought the discussion back to field experience. AI may optimize container logistics faster, he said, but breakbulk and project logistics will take longer because the work is more specific. *"Our specific business, our industry, our breakbulk business, it will take much more, much longer" he said.*

That means younger professionals still need to learn the work physically, not only digitally. Barz said the industry has to bring younger

people into the old way of understanding breakbulk and project logistics.

"Really, to go in the port, touch the cargo, climb on a case, whatever," he said. "Be there and just don't be a computer hero."

The risk is a generation that can type instructions into a system without understanding the cargo, the vessel, the crane or the operation. *"No, we must still bring them in the position to understand the reality, not just the computer game," Barz said.*

Scenario planning needs a permanent place inside companies

The forum closed by returning to the question raised at the beginning: whether companies are building structures to think about future disruption before it arrives.

Skyrme said organizations need a dedicated think-tank function inside strategy. Drawing on his time at Sealand in the 1990s, he said the company had what it called a "War Room," essentially a strategic group looking ahead at what could disrupt the supply chain. The name may be dated, he said, but the function is still needed.

"What could be the next disruption in our supply chain?" Skyrme asked. "Is it equipment? Is it manpower? Is it regulation? Is it conflict?"

Most organizations, he said, do not spend enough time, effort or money evaluating those possibilities. AI can support that work, but the company still needs a deliberate internal process.

"Whether it's part of market intelligence or strategy" Skyrme said, "we need to invest more in those think tanks."

10 WAYS TO PLAN FOR THE INDUSTRY'S FUTURE



Future Thinkers Europe identified practical priorities
for companies preparing for project cargo through 2045.

1.

Start scenario planning now

Establish an internal think tank to test disruption scenarios before the next crisis forces decisions.

2.

Position for Middle East growth

Despite upheaval, the Middle East remains the most promising source of project opportunity.

3.

Follow Europe's green industrial projects

Europe's greatest area of project potential is green.

4.

Bring logistics into projects earlier

Bring logistics in before sourcing, routing and delivery risks are locked in.

5.

Build routing flexibility before disruption hits

Know your options and invest, if necessary, in connecting infrastructure.

6.

Align Incoterms with regional practice

Cargo risk tolerance differs by region. Choose the right term or risk losing the business.

7.

Build AI readiness before automation

Better data, connected systems and trained teams come before large-scale automation.

8.

Build decarbonization into project planning

Account for lower-carbon requirements across your project supply chain.

9.

Make the industry visible to attract talent

Show the scale, purpose and importance of project cargo to the next generation.

10.

Keep human judgment at the center

The industry will be more digital and automated, but still require human decision-making

WHAT'S NEXT FOR FUTURE THINKERS

Future Thinkers Europe is part of the 2026 regional cycle following the launch of the program at the first Future Thinkers Global Summit in Houston last October.

The next steps move the community into a public-facing format at Breakbulk Americas, then to Singapore for a major Asia launch, before starting the new year in Dubai at Breakbulk Middle East.

The second global summit will be held in the first quarter of 2027 with details coming soon.

For more information, click [here](#) or contact



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Breakbulk Americas Super Session

Future Thinkers Super Session: Future-Proofing Project Logistics with Industry Leaders
Tuesday, Sept. 22, 2:25 pm to 3:55 pm
Breakbulk Live Stage

Future Thinkers Americas Regional Meeting – Breakfast

By invitation only

Wednesday, Sept. 23, 2026 from 8:00 am to 10:00 am
Houston Maritime Center & Museum

Future Thinkers Asia Regional Meeting – Luncheon

By invitation only

Tuesday, Nov. 16, 2026 from noon to 3:00 pm
Sands Expo and Convention Centre,
Marina Bay Sands

Breakbulk Asia Community Forum

Wednesday, Nov. 17
Voices Stage

Future Thinkers Middle East Regional Meeting – Breakfast

Wednesday, Feb. 3, 2027 from 9:00 am to 11:00 am
Dubai World Trade Centre

Future Thinkers Global Summit

Monday, Feb. 1, 2027
Dubai, UAE

Future Thinkers Europe Regional Meeting – Dinner Cruise

Monday, May 10, 2027 from 6:00 pm to 9:00 pm

Future Thinkers Europe Community Forum

Thursday, May 13, 2027
Voices Stage

Future Thinkers Online Course *Future Thinkers. Forward Movers.*

A Strategic Foresight & Future Leadership Summit for Companies in Uncertain Times

2-Day Online Summit
Nov. 3–4 from 3:00 pm to 6:00 pm each afternoon (CET)

The trends outlined in this white paper aren't abstract, they're already reshaping how markets move, how competitors position themselves, and how leadership needs to operate. The question is no longer whether change is coming, but how early your organization reads it, and how deliberately it acts.

That's the gap our upcoming 2-day online summit addresses. Over two focused afternoons, participants translate megatrends and market signals into plausible future scenarios, build the leadership capabilities to navigate them, and take home a practical Foresight Toolkit to embed foresight thinking directly into their organization.

Built for leaders and teams ready to move from reacting to the future to actively shaping it.

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