



Hamburger Hafen
und Logistik AG

140 Years

WORLD IN MOTION

The HHLA
Magazine

One for all

A standardised
steel box has not only
revolutionised logistics worldwide

→ *Page 18*

Trains in our veins

Success from Hamburg
to the European hinterland

→ *Page 30*

Kaispeicherphilharmonie

What do Hamburg's
HafenCity and Elbphilharmonie
have to do with HHLA?

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WAREHOUSES WITH A FUTURE

Work began on Hamburg's Speicherstadt in 1885, and the historical warehouse district has been further developed by HHLA. Today's UNESCO World Heritage Site attracts tourists as well as cultural entrepreneurs and start-ups.

INTERMODAL PIONEERS

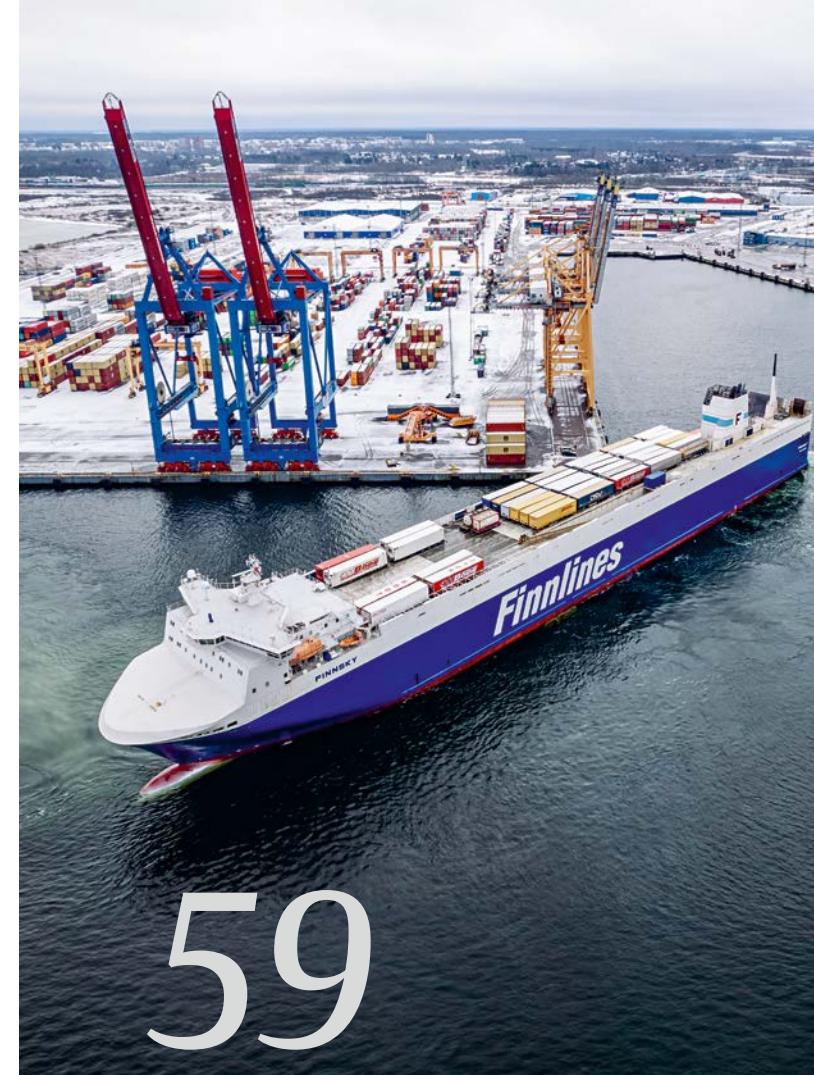
Hamburg is the largest rail port in Europe, thanks in part to clever solutions for European rail transport from HHLA and its subsidiaries.



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AGE OF THE CONTAINER

How did HHLA help shape modern handling? It is always at the forefront of technology like container gantry cranes, which were revolutionary at the time.



A NETWORK FOR EUROPE

HHLA operates terminals in Muuga, near the Estonian capital Tallinn, as well as in Trieste in Italy and in the Ukrainian port city of Odessa.



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INTERVIEW

For Angela Titzrath, sustainable and profitable development do not contradict one another. Her view of the future is one of pragmatic optimism.

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Logistics has its attractive side, and we are happy to show it off in large-scale format.

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The container has revolutionised ports all over the world, with the Burchardkai leading the way.

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The iconic form of Hamburg's Elbphilharmonie can be traced back to HHLA.

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The history of HHLA, summarised in a completely unique way.

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Once the world's biggest logistics centre, now a cultural heritage site and vibrant district.

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Its first subsidiary successfully aimed for faraway places; today HHLA has a European character.

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Logistics is becoming simpler, more digital and more sustainable. What solutions are pointing to the future?

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Hamburg brought the banana to Germany. What did it have to do with colonialism?

72 Man and machine

In the port, too, more brain work than manual work is called for these days.

80 Constant change

Founded as a stock corporation, merged with a public authority and successful as a group.

83 Imprint

On the right track in Hamburg!

This photo of Chilekai shows how the ideal quay layout looked for the best part of a century. The advantage was the short distance between the ship and storage sheds. Ideally, gantry cranes removed the goods from the railway wagon and loaded them directly onto the seagoing vessel

(as seen here in 1930). The pictured Class 87 tank locomotive was specially designed for the requirements of Hamburg's narrow quays. Hamburg was able to build on its good reputation as a "rail port" and is now the second biggest in the world. Find out more about the subject of railways on page 30.





Success bears fruit

Hamburg became one of the main European fruit trading centres early on, with 750,000 boxes of various citrus fruits, the most important “tropical fruits” at the time, arriving in Hamburg in the 1897/98 season. Bananas soon became the most important fruit. HHLA specialised in these goods and inaugu-

rated its fruit and refrigeration centre with 720,000 m² of storage space in 1978. In 1991, the fully automated banana facility at O'Swaldkai with its green and yellow box elevators handles a ship belonging to the Danish shipping company Lauritzen. Find out more about the subject of bananas on page 69.



The next technological leap ...

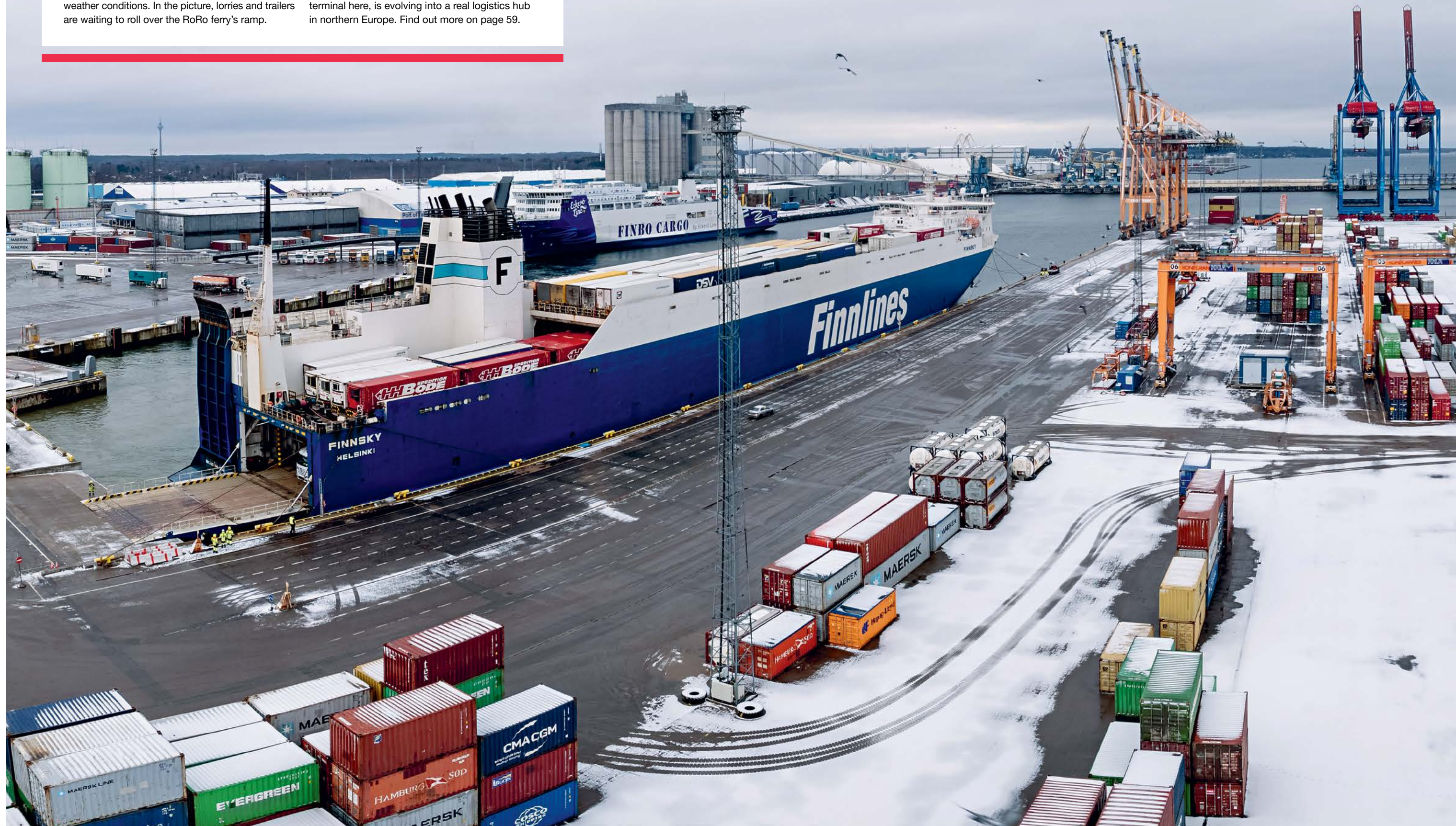
... is being prepared here at HHLA Container Terminal Altenwerder in December 2024. A special ship has delivered the latest generation of container gantry cranes from Ireland. It is unique in that there is no operator's cabin to be seen in the picture. That's because the cranes will be operated from a remote

control room in the future. Over the coming years, the 14 container gantry cranes on this Hamburg quayside are set to be completely replaced by remote-controlled models. Assembly, testing and, of course, employee training measures are already under way. Find out more on page 72.

The cargo keeps on rolling in the far north

A little snow doesn't bother anyone in the universal port of Muuga in Estonia. Experienced crane operators swiftly handle the cargo ships even in harsh weather conditions. In the picture, lorries and trailers are waiting to roll over the RoRo ferry's ramp.

In summer, the route is often used by holidaymakers with motorhomes or motorcycles to travel between Finland and Estonia. HHLA TK Estonia, the largest terminal here, is evolving into a real logistics hub in northern Europe. Find out more on page 59.



ANGELA
TITZRATH,
Chairwoman
of HHLA's
Executive
Board since
2017, is
looking to the
future with
confidence.



“We will further consolidate our position.”

HHLA is one of Europe's leading logistics groups. Angela Titzrath, Chairwoman of HHLA's Executive Board, outlines how the company intends to continue growing in the coming years. A conversation about milestones, special moments and the power of networks and employees.

The path has not always been easy and straight, but it is heading in the right direction. Over the past 140 years, Hamburger Hafen und Logistik Aktiengesellschaft (HHLA) has played a key role in supplying Germany and Eastern and Central Europe with goods. And its importance continues to grow in a dramatically changing world. That's because HHLA has long been more than just an operator of container terminals in the Port of Hamburg – it has significantly expanded its locations, its network and its business areas. The signs point to growth.

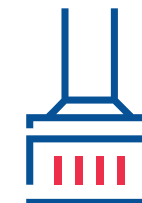
Angela Titzrath, how do you view HHLA today?

With pride. Over the course of its 140-year history, HHLA has played a constant role in Europe's industrial development. The past 35 years in particular have been characterized by considerable dynamism, not just in terms of the economy as a whole, but also for the company itself.

And there have been some milestones in the course of this more than eventful period.

Which ones do you remember in particular?

The rise of the container boosted growth from 1968 onwards – something that we at HHLA recognised early on. Not only was the first container handled in Hamburg – at Burchardkai – but the facility at the heart of standardised



HHLA transports around **six million** standard containers via its seaport terminals and a further **1.8 million TEU** by rail and road.

container handling was also built here: the Container Terminal Burchardkai. The fall of the Berlin Wall gave us access to Central and Eastern Europe; the free port made many things easier.

This also changed HHLA.

What defines it today?

We see ourselves as a company going through constant change – almost like a big start-up. 140 years ago, we started with an idea that was revolutionary at the time: by bringing together transport, storage and handling in one place – here in Hamburg's Speicherstadt historical warehouse district – markets could be supplied more efficiently. For me, this logistical change is the blockchain of the 19th century – an innovation that optimised and networked processes.

Talking of networking. This plays a key role in HHLA's strategy, doesn't it?

It certainly does. We are committed to “The Power of Networks”, with our networks intertwined on various levels: our logistics hubs are spread throughout Europe, on the coasts and in the hinterland. They are connected by water, rail, road and now even by air with the drones operated by our subsidiary HHLA Sky. This enables us to offer customers complete transport solutions through our own network. End to end. →

→ **How resilient is this network that you talk about here?**

Let me give you an example. Due to the war in Ukraine, there was a blockade in the Black Sea. Within a matter of days, we got a land bridge up and running – by rail from our terminal in the Port of Trieste via Budapest into Ukraine and onto our port in Odessa. That is only possible with a strong, resilient network.

But even the best network is only as good as the people who operate it...

That's right. They are the most important part of our network. Our employees network with one another, come up with ideas together, master challenges – across different locations and borders. That is how innovation happens. Probably the strongest link a company can have is the one that exists between its employees. I am convinced that this is HHLA's most valuable asset.

And do the employees also share your start-up philosophy?

Innovation is an attitude that calls for a spirit of openness and a curious, questioning mind. Anyone who possesses these qualities is in the right place at HHLA. With this attitude, people needn't fear going in other directions. This is what we count on when searching for new talent – people who go the extra mile, across all our European locations. It is also a network characterized by motivation, a network of all-embracing experiences. Thanks to its successful expansion, HHLA can also offer employees exciting career prospects internationally. That makes us more attractive as an employer.



More than 6,800 people work for **HHLA**, at four European seaports, at rail and freight forwarding companies and at highly innovative HHLA Next start-ups.

How do you pursue your strategic goals?

We have a clear strategy. With the “Power of Networks”, we will continue to successfully establish sustainable and digital logistics in Europe. We are pursuing our plans with a consistent approach, but we must be ready to adapt at any time in a volatile market environment that is changing ever more rapidly. That is why a willingness to change is so essential. It is important to me to draw on the strength of our employees and reinforce the sense of personal responsibility. I am a great believer in the idea of employees thinking and acting like entrepreneurs running their own business.

You have been Chairwoman of HHLA's Executive Board since 2017. What moments have left an impression on you personally?

Well, there have been many. On the one hand, there is the openness with which I was welcomed – in an industry that has historically been very much a man's world. Then there is the energy that I sensed from the beginning. Together we are heading in a new strategic direction – and have come a long way. I am mainly thinking about the numerous acquisitions abroad.

There could be even more. Do you want to expand further?

As a European logistics group, we are very well positioned with our seaport terminals in Hamburg, Trieste, Tallinn and Odessa along with our 20 intermodal terminals inland. And we are open to further acquisitions, but at the moment



HHLA'S HEART BEATS IN THE PORT OF HAMBURG, but its business model links the European economy.

we are very much concentrating on our own development, not least the expansion of our European network and the further modernisation of our terminals in Hamburg. There is currently a focus on Burchardkai, which we are turning into a state-of-the-art and particularly sustainable facility. Incidentally, this redevelopment work during ongoing operations is the largest brownfield project of its kind in the world – so it is highly challenging in both technological and operational terms.

But HHLA is also active away from the familiar container handling and transport business...

We have set up a unit dedicated to the development of new ideas and business models. This has led to the establishment of HHLA Next, which develops solutions and standards that can be scaled beyond our existing business. These include “passify”, an app for lorry drivers that gives them access to our terminals. Our aim is to embed HHLA Next's various clever ideas even more firmly in the industry.

Considering HHLA's importance to the flow of goods, the question arises:

Is HHLA essentially a supply company?

During the coronavirus crisis in particular, many people learned that a logistics network is a kind of lifeline, that supply chains can also be disrupted or even broken. In essence, we logistics specialists made sure that goods continued

“It is thanks to all the teams, that HHLA did not grind to a halt at any point.”

to flow towards Central and Eastern Europe and, of course, within Germany during this difficult time. It is thanks to all the teams that HHLA did not grind to a halt at any point.

Against this background, would you also like to see more support for the ports from the policymakers?

Most German exports pass through the German seaports and thus via Hamburg. This also applies to the energy transition, by the way, with 80 per cent of solar panels, for example, coming from Asia and reaching Germany by container ship. And our defence capability, which we want to and must strengthen, depends more than ever on reliable, safe flows of goods in the logistics sector. This puts the ports in a key position not only economically, but also politically. I believe that this insight is slowly reaching the political decision-makers, even if I would like to see things move more quickly. →



ELPHI TALK

Journalist Stefan Westendorp met Angela Titzrath at the Elbphilharmonie for the interview. A highly symbolic place because the Hamburg landmark stands on HHLA foundations: the former Kaispeicher A.



LIVELY DISCUSSION
During the interview, Angela Titzrath provided insights into HHLA's strategy and position, explaining how she draws on the strength of the employees.

“The Elbphilharmonie stands on the very foundations of HHLA.”

→ You have a new shareholder on board in MSC. What is the significance of this in terms of HHLA's future?
The fact that the world's largest shipping company has secured a stake in HHLA reveals how attractive our company really is. In addition, MSC has a great deal of experience and engages in a lot of networking on the customer side. We can benefit from this on many levels. Among other things, our subsidiaries will have a strong partner in MSC for their new developments and solutions.

Where will the company be in ten years' time?
We have only exploited a fraction of our “Power of Networks” so far – and we still have plenty to do. Take Hamburg, for example. Today, it is not the size of a port that matters, but the best networks with the European hinterland. It's not about counting containers, but rather about adding value. Sustainability and digitalization are two key drivers here.

The subject of sustainability appears to be a matter close to your heart. Is that the case?
Yes, absolutely! At HHLA, we want to prove that economic success and sustainable business activities go hand in hand. We also have a responsibility as a society and an economy that we should not simply delegate to the political sphere. You cannot separate sustainability from economic thinking, otherwise financing will be very difficult.

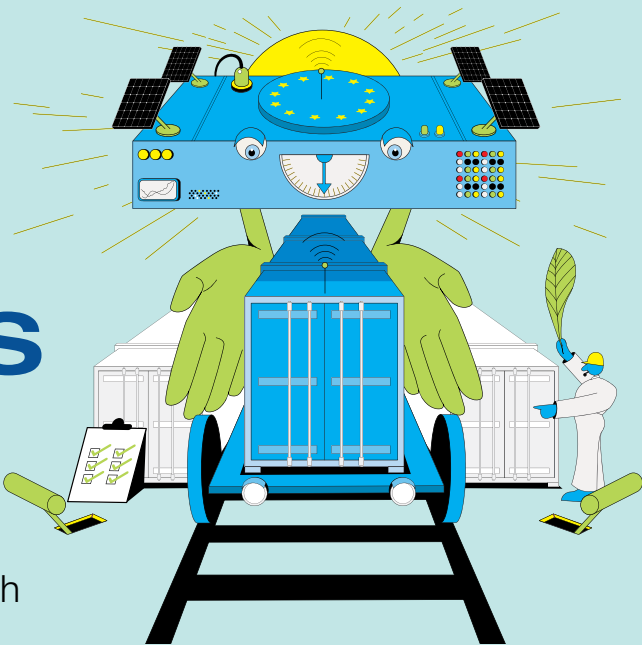
How much progress has HHLA made in terms of sustainable logistics?
I don't think there is any need to hide our achievements. In fact, we are setting standards with climate-friendly terminal handling processes, which are already established at Container Terminal Altenwerder in Hamburg, with Burchardkai now following suit. Back in 2017, we switched to battery-powered vehicles. Now we are trialling the use of hydrogen. We are combining the handling of goods from Europe's largest rail port with environmentally friendly transport operations by rail. Ultimately, sustainability is of major importance for the medium- and long-term future viability of this company, particularly since our customers are increasingly choosing their logistics partners based on the extent to which they can reduce their carbon footprint. That is why we subjected our entire chain to close scrutiny – from the handling process in Hamburg to the end customer – and had it certified as climate-friendly by TÜV. In this respect, we have been pioneers in our industry for a number of years.

Finally, a personal question. How do you manage to switch off and relax?
With friends and family, of course. And with music. I especially like to enjoy it at the Elbphilharmonie, with which I have a special connection, not least because it was built on the site of our former Kaispeicher A – on the very foundations of HHLA. Where workers once shaped the sound of the port, musicians now play. A very nice image, I think.



GREEN ENERGY from hydrogen filling stations like this one is how HHLA wants its terminals to be climate-neutral by 2040.

Assessed and rated as very good



The EU taxonomy is a regulatory framework with provisions for audits to ensure compliance. The results reveal how sustainably companies operate.

Responsible for around 23 per cent of all greenhouse gas emissions, the transport sector is one of the world's most significant contributors to man-made global warming. According to the EU, freight traffic accounts for a good third of these transport-related emissions.
The logistics sector is therefore one of the main focus areas of the EU's Green Deal, which aims to reduce transport emissions by 90 per cent by 2050. The major logistics companies are subject to strict requirements of the so-called EU taxonomy. This complex European system of reporting obligations assesses the sustainability of companies based on six environmental objectives.
The logistics sector in particular can play a key role in mitigating climate change. As a port logistics and intermodal company, HHLA is very well positioned here. With a high proportion of goods handled on environmentally friendly rail

services and extensive electrification of terminal processes, it is helping to decarbonise the logistics chain. This is reflected in HHLA's taxonomy figures, with 80 per cent of its sales revenue and 85 per cent of its capital expenditure assessed as taxonomy-compliant and thus sustainable in the 2024 financial year. These are unusually high figures for the industry. HHLA achieved similarly results the previous year. Investment in modern electric locomotives and lightweight flat wagons as well as in new electric cranes and battery-powered transporters across the port facilities play a key role in these taxonomy figures. HHLA's good performance also has a positive effect on its customers. “We provide particularly low-emission or emission-free transport and handling services. In turn, these low emission figures indirectly have a positive impact on our customers' carbon footprints,” explains Jan Hendrik Pietsch, Head of Sustainability at HHLA.



“Good taxonomy figures send a signal to lenders that their investments are in very good hands with us.”

Annette Walter, Chief Financial Officer at HHLA, is responsible for finance and controlling, investor relations, internal auditing and real estate.
“More importantly, however, the sustainable focus of our business model delivers a long-term competitive advantage, improving HHLA's economic stability and creating a solid basis for further growth. Our excellent EU taxonomy performance is the logical consequence of this strategy.”



Containers are the 'cubic measure of all things', having changed trade, business and society. Closely linked with this success story is the HHLA Container Terminal Burchardkai in the Port of Hamburg, currently one of the most fascinating 'rebuilding sites' in Europe. Its modernisation during ongoing operations is akin to open-heart surgery.

A steel box, the world and us

Today

REALITY This photomontage illustrates the quantities transported by modern container ships like the Evergreen Ever Ace when compared to the origins of container shipping. In the background: the Burchardkai terminal.

1968

HISTORY On 25 April, the *American Lancer* came to Hamburg, the first fully containerised ship. When it docked at the Burchardkai terminal, few people could have guessed that it would mark the beginning of an incredible success story.



THE FUTURE IS FIRMLY IN SIGHT ...
... for terminal developer Gesa Witte. She plans, calculates, simulates and communicates with her team to make the CTB more efficient.

We are driving with Gesa Witte around the HHLA Container Terminal Burchardkai (CTB), which she calls her 'second home'. 'I have been working here for 22 years and just love this place. The port is a unique place and it has to function 24/7,' she says. 'This also means that it is continually evolving so that it can hold its own in the face of tough competition.'

And this is precisely her task. In her role as terminal developer, Gesa has her hands full, not least because she is involved in the world's largest 'brownfield' project in the industry. The term is used to describe the redevelopment of an existing site. In this case, it is the CTB, Hamburg's largest and oldest container terminal.

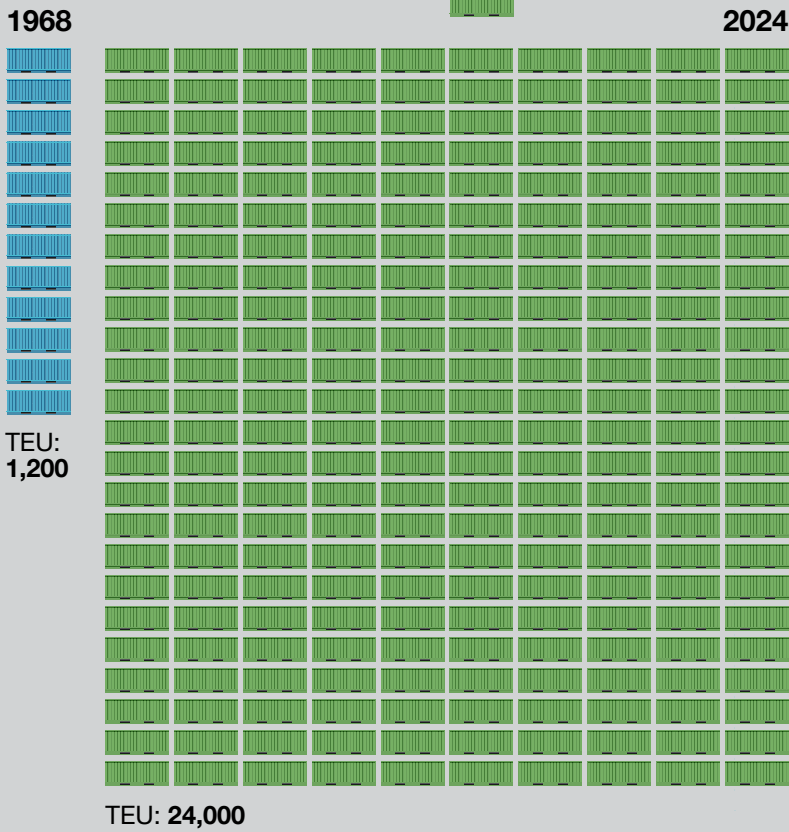
Ever since containers have been handled here on the Elbe, new, state-of-the-art technology has constantly been used. A total of 23 container gantry cranes currently stand on several quay walls. In order to be able to unload and load the largest ships in the world even faster, semi-automated processes are being trialled alongside new, customised software.

Intuition and coordination

All this and much more besides happens during ongoing operations at full capacity wherever possible. More than 200 large ships and about 2,000 smaller vessels, so-called feeders, are handled here every year. The redevelopment work is thus akin to open-heart surgery. It calls for a great deal of intuition and a high

degree of coordination because of the numerous and complex requirements. 'Throughout the redevelopment measures, we have to contend with the existing conditions that were put in place years and decades ago. That is why there is always an element of having to come to terms with the past when we are planning for the future,' says Gesa. She is currently the team member responsible for 'anything to do with earth and asphalt'.

The upgrading project has been led by Oliver Bold since 2020, who compares himself to a spider in a web: 'I have to pull the strings in a communicative sense to make sure everyone is on board. We can only achieve this mammoth task if we talk to one another and pull together.'

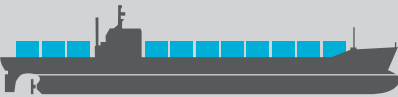


Rapid growth

By a factor 20 – in just 56 years: While the *American Lancer* had capacity for 1,200 TEU, a record-breaking mega freighter like the *Ever Ace* can transport 24,000 TEU, twenty times the amount. TEU stands for twenty-foot equivalent unit, a standard unit of measurement for containers.

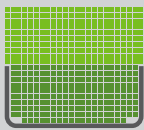
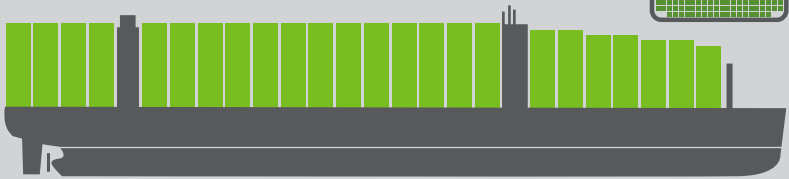
United States Lines AMERICAN LANCER

Length: 213 m | Width: 25.9 m | Capacity: 1,200 TEU



EVERGREEN EVER ACE

Length: 400 m | Width: 61.5 m | Capacity: 24,000 TEU





TIGHTLY PACKED
A fully automated block storage system makes more efficient use of the space. It stacks the steel boxes higher and more densely so that more containers fit into the limited space at the Burchardkai terminal.



Evolution From the beginnings to automated processes

→ Gesa is also focused on the bigger picture, but is so familiar with every detail that she could probably steer her small, white car blindfold around Burchardkai, although this wouldn't exactly be the best idea in view of the countless straddle carriers that can reach speeds of up to 30 kilometres per hour. They move containers between the ships and the block storage area. Their drivers sit at a height of about ten metres, from where they sometimes only have a restricted view.

Yet it is not only these long-legged straddle carriers that people need to watch out for. The entire CTB operation runs like clockwork, with everything constantly in motion and each cog intermeshing perfectly with the next. Ships of all sizes, various container transporters, lorries, trains – they all want to get the brilliant containers from A to B as quickly as possible. Because while on the other side of the Elbe life calmly goes on in the picturesque Elbe suburbs, here in the port, Hamburg's heart beats raucously but cordially, not only resupplying the logistical

blood vessels throughout Germany, but also conveying goods to large parts of Europe. Containers are indispensable to the functioning of supply chains and the economy. To name but one trivial example, almost one in three bananas consumed in Germany passes through HHLA terminals in the Port of Hamburg. Not to mention all the other necessities of life that travel across the world's oceans in steel boxes.

Maritime logistics must keep on functioning

This is another reason why it is so important to carry out the redevelopment work without shutting down operations. 'Keeping everything running is actually the biggest challenge in a brown-field project. Our aim is to ensure that no ship, no train, no lorry is turned away,' says Gesa, recalling the coronavirus period. Entire ports in China were closed at the time, leaving supply chains out of sync. Many of the normally available goods that people took for granted in their everyday lives suddenly became scarce commodities. She soon realised: 'If the globally organised logistics operation, of which our terminals are a vital part, does not work, then we all feel the effects.'

The CTB, named after the former Mayor of Hamburg, Johann Heinrich Burchard, plays a special role in HHLA's history. On 25 April 1968, the *American Lancer*, the first fully containerised ship in the Port of Hamburg, docked here →

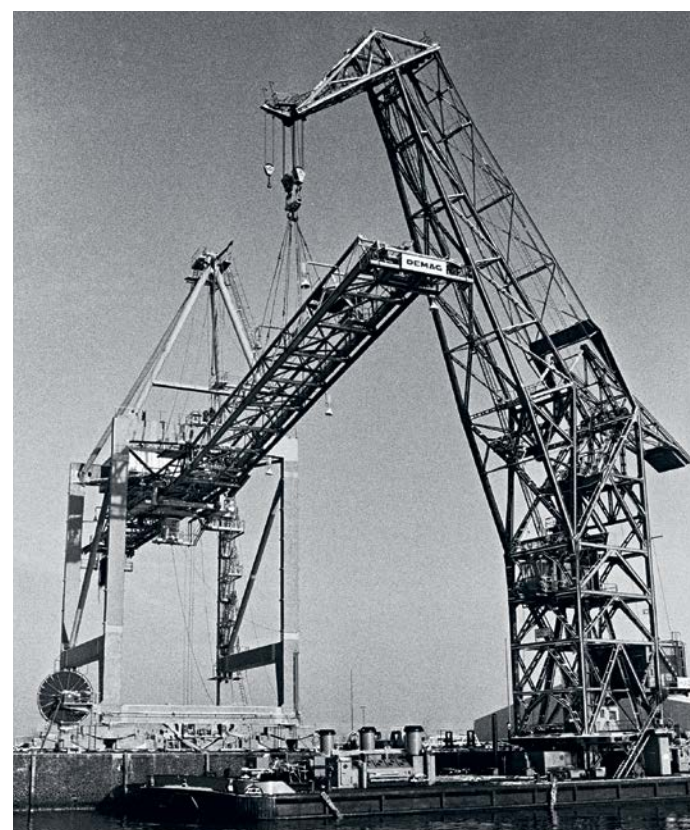
180 million
TEU were handled across the HHLA Group between 1967 and 2024: lined up end to end, they would stretch around the globe about 27 times.



EXPRESS SERVICE The Elbe Express shuttled between Europe and North America with a maximum of 730 TEU. The Hapag-Lloyd Container Line was established for this service.



DOUBLE ACT In 1974, 30 straddle carriers – then called 'Peiners' after their manufacturer – worked at the Burchardkai terminal. Nowadays they are known as 'van carriers' in Hamburg.



FINAL ASSEMBLY At the end of 1967, a floating crane helped to build the first container gantry crane at the Burchardkai terminal.



CEREMONY The HHLA Chairman Helmuth Kern (r.) presented Captain Chung Yen San (l.) from EVERGREEN with a souvenir of Hamburg. HHLA has a long-standing partnership with the Taiwanese shipping company, through the 'round-the-world service' established in 1984, for example.

'If we don't build this facility, we won't bring any containers to Hamburg.'

These are the words Helmuth Kern used to appeal to the then Mayor Herbert Weichmann. And he was proved right. By autumn 1968, four to five fully containerised ships were docking at the Burchardkai terminal every week. But why did Kern, SPD Senator for Economic Affairs, fight so hard for the container? By his reckoning, if the box invented by the Americans caught on, Hamburg's general cargo port would not have a good hand. In order to prepare the Hanseatic city for this important development, he appeared before the Senate in the spring of 1967. He presented a proposal for (at the time) a sizeable sum of 35 million marks, which was to be used to expand the Burchardkai and turn it into a container terminal.

Kern later remembered all too well how Mayor Herbert Weichmann reacted: 'Mr Kern, you are asking for 35 million marks here. You have neither a shipping line, nor a shipping contract, nor a single container. And you expect the Senate to build a container facility?' Kern countered: 'Mr Mayor, if we don't build this facility, we will never get one.' It then made sense to his boss.

One year later, HHLA did indeed succeed in convincing United States Lines of the advantages of the Elbe. It was now becoming clear just how necessary the construction of the specialist terminal really was.



HOME DELIVERY SERVICE
Impressive: On 14 December 2024,
the special ship **ZHONG REN 121**
transported three new, highly
automated container gantry cranes to
the Container Terminal Altenwerder.

Modernisation

The container gantry cranes also come along the Elbe, the Port of Hamburg's main artery

→ at the Burchardkai terminal. The starting signal for the new era in transport logistics was given by Helmuth Kern, Hamburg's Senator for Economic Affairs and later Chairman of HHLA's Executive Board. He saw the steel box not just as a practical transport container, but as a driver of global trade. In fact, he and his fellow campaigners in Hamburg had the right instinct: the unremarkable box would ultimately bring countries around the globe closer together.

By the autumn of the same year, four to five fully containerised ships with a capacity of 780 to 1,000 TEU (the new standard size for 20-foot containers) were calling at the Burchardkai terminal every week. This would completely change the facility many times in the years that followed. Containerisation continued to make an impact with

the aid of HHLA and the technologies it helped to develop. Conventional port cranes, which laboriously hauled general cargo on and off the docking ships in a time-consuming process, soon gave way to the much more efficient container gantry cranes. Other links in the transport chain were also constantly evolving.

Bigger, better, faster – all made possible by technical developments

In 1971, the first 'Peiner straddle carriers' were used for container transport. Known in Hamburg as van carriers or VCs, they took off around the world as straddle carriers. And it was little wonder: the vehicles developed by Peiner AG in conjunction with HHLA were not only able to transport the containers, but also stack them,

significantly increasing the capacity of the space. Data processing (see also page 68), data communications and a new radio data transmission concept that guided and coordinated the VCs were milestones in the 1980s. In 1995, there was even a world premiere at the CTB when the satellite-based Differential Global Positioning System, or DGPS for short, was used for the first time. HHLA then even went on to improve certain details of it, making it possible to fully schedule activities throughout the entire container store from a computer screen.

The CTB is constantly expanding and now occupies an area measuring 1.4 square kilometres. In order to accommodate more containers (the current capacity is around 45,000 TEU), a new kind of block storage system is being built. →

From muscle power to mega power

Once upon a time, dockers hauled sacks of coffee around with only the aid of a handcart, but today huge container gantry cranes load hundreds of tonnes per hour. Port logistics has changed radically, firstly through mechanisation, then through automation. But how much can each type of equipment actually lift?

Average figures for the various options in an eight-hour shift



Container gantry cranes:
5,200–7,400 t

Efficiency wins: Modern container gantry cranes have revolutionised the port. Instead of loading boxes and cargo individually, they lift containers weighing several tonnes holding all kinds of goods in a matter of seconds. This reduces logistics costs and improves occupational safety.

Mobile and level luffing cranes:
500–1,200 t

For decades, they dominated the port landscape, including in Hamburg. Nowadays, they are mainly found at terminals that load project cargo and general cargo. They handle loads ranging from 80 to 300 tonnes.



Forklift trucks:
160–320 t

Forklift trucks were not only able to transport larger and heavier loads, but also lift and stack the packages vertically. At HHLA, for example, they load and unload fruit containers.

Handcarts:
6–28 t

That is how much a docker would haul until the 1960s in the course of an eight-hour shift. The stevedores and their muscle power were indispensable at the port until the middle of the 19th century. Hundreds of the sturdy handcarts were used to handle a single ship. The work was not only hard, but also dangerous.



CONTAINERS – ALL-ROUNDERS AND EYE-CATCHERS
The container was involved in the draw for the matches played at the UEFA EURO 2024 Football Championship, with boxes designed in national colours stacked by HHLA's subsidiary UNIKAI. Architects have also recognised the versatility of the steel boxes. They use them to build eye-catching structures – even in remote places like Antarctica (below right).



The multitalented steel box A strong performer in many disciplines

→ Three automated gantry cranes store and retrieve the highly and tightly stacked boxes. The station also has to be relocated to increase the number of tracks and extend them. Today, more than 10,000 so-called block trains with a maximum length of 740 metres are handled annually. More and more new container gantry cranes belonging to the largest and most powerful generation are coming along the Elbe on special ships. Employees use them to handle the record-breaking mega freighters, which now hold 24,000 TEU.

A model of sustainable, certified seaport logistics

Even though the focus is currently on the CTB due to its redevelopment, HHLA is also constantly modernising its Hamburg facilities at Tollerort (CTT) and Altenwerder (CTA). The CTA, which commenced operations in 2002, became an international model of sustainable seaport logistics and was the first in the world to receive climate-neutral certification. For a long time, it was considered the most modern container terminal and is now serving as a model for the redevelopment of the CTB. 'We are adopting aspects that have proven themselves in operations over the course of many years, like transporting contain-

ers using AGVs,' says Gesa. AGV stands for automated guided vehicle. In the future, these will be controlled solely by software and work with the other machinery to handle the containers. The first of these vehicles are currently 'practising' for their future role in a fenced-off area. A total of 116 AGVs will later play their part in the automated container ballet.

Incidentally, the CTA was built on a greenfield site, which, of course, is an easier undertaking than the brownfield project at the Burchardkai terminal. Yet some challenges are similar. When it comes to behemoths such as the 2,400-tonne container gantry cranes, for example, stability is generally the key factor. 'In Altenwerder, the soil had to be massively compacted,' says Gesa. 'Here at the Burchardkai terminal we have different conditions. Our two oldest berths, for instance, were built many years ago – and I exaggerate somewhat here – with cobblestones.' In the 1990s, the quay wall was extended about 20 metres further into the water. Back then, HHLA and the port management – the HPA – had made a joint prediction as to how big the container gantry cranes could one day get. It was all about the size of the load acting on the ground. 'But it was already virtually obsolete upon completion,' says Gesa regretfully. The ships had →



98.4

per cent
of all cargo in the
Port of Hamburg
is containerised.

**ALLOTMENTS**

It's hard to believe today, but around 50 years ago, there were still garden plots here.

STATION

In the beginning, goods transported by rail had to be handled on only two tracks.

QUAY SHEDS

All general cargo was temporarily stored in the typical storage sheds right by the quay wall.

BURCHARDKAI 1971

Back then, some areas lay fallow or were used for other purposes. Expansion was still under way, with a manageable number of containers being handled.

Mission world class among terminals

→ grown yet again in the meantime, making it necessary to order even more massive container gantry cranes with 70-metre-long jibs. 'Their foundations had to be even wider,' explains Gesa, 'so that their mass could be distributed over a larger area.' This example shows how important it is to look ahead to the future when undertaking any construction project. After all, the plans should not only be suitable for the here and now, but also consider future use wherever possible. Gesa draws a comparison here: 'There is a big difference between just building my house and also thinking about the fact that a tower block could stand there later.'

Other factors also play a role in a brownfield project. The site is located on an island with tight outer boundaries. Other boundaries are set in the course of consulting with authorities, seeking permits and meeting regulations. The

Approx.
8,000
tonnes of
carbon emissions
will be cut by
electrifying
the container
store alone.

financing for the measures must also be secured and approved.

All work is scheduled to be completed by 2030. The CTB will then have a total of 29 container gantry cranes. New software, developed in conjunction with the CTA, is set to manage key areas of the facility. But will everything then really be finished? Who knows what quantum leaps the industry will witness by then? In any case, HHLA's terminals will never stop evolving, and Gesa Witte will never be bored. She now takes everything in her stride as she looks ahead. After all, she has found what many people seek: her own personal '*Hamburg Hafen Lieblings Arbeitsplatz*', which translates as 'Port of Hamburg, my favourite workplace'. As far as she is concerned, that is what the abbreviation HHLA stands for. Anyone who knows her will also know that she means it.



**'Our strategy is clear:
We are making *this facility*
fit for the future!'**

Jens Hansen has been a member of HHLA's Executive Board since April 2017, where he is responsible for operations, technology and IT.

We have been investing heavily in the modernisation and automation of our facilities in Hamburg for a number of years. One area of focus is the Container Terminal Burchardkai, which we are currently redeveloping during ongoing operations to turn it into one of the most modern terminals in Europe. This will not only make Germany's largest container terminal significantly more productive, but also more climate-friendly.

Burchardkai 2030: Safer, more efficient and sustainable

OVERLAND TRANSPORT

The modern station has ten tracks, where entire block trains with a length of up to 740 metres can be handled.

SEABORNE TRADE

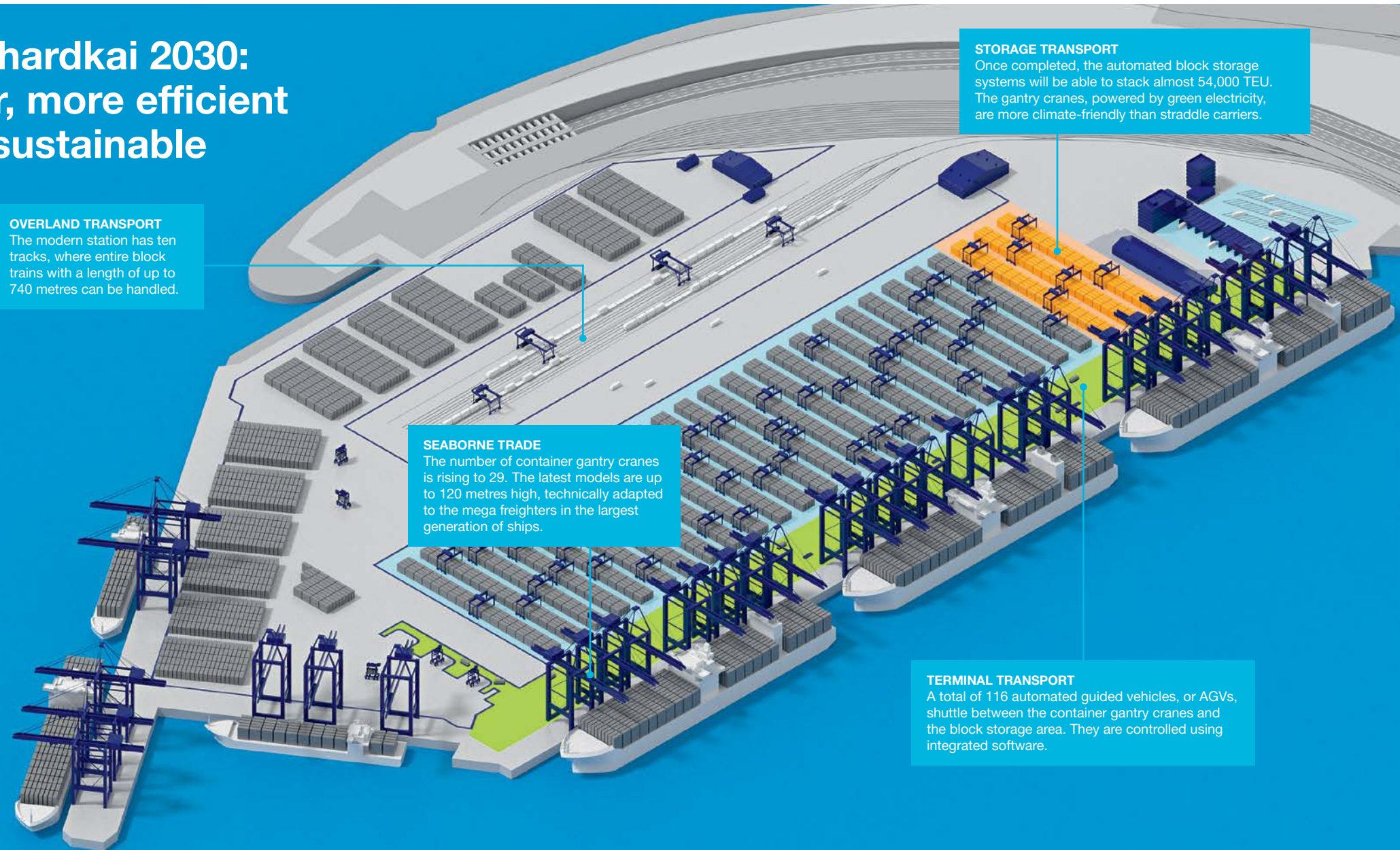
The number of container gantry cranes is rising to 29. The latest models are up to 120 metres high, technically adapted to the mega freighters in the largest generation of ships.

STORAGE TRANSPORT

Once completed, the automated block storage systems will be able to stack almost 54,000 TEU. The gantry cranes, powered by green electricity, are more climate-friendly than straddle carriers.

TERMINAL TRANSPORT

A total of 116 automated guided vehicles, or AGVs, shuttle between the container gantry cranes and the block storage area. They are controlled using integrated software.



Leading the way through the hinterland



LEAVING FOR POLAND
Raising the green despatch baton for the first container block train to Eastern Europe.

Hamburg's rail port has an enormous geographical advantage: its huge catchment area thanks to the continental rail networks. The gradual opening of Eastern Europe from 1989 onwards helped HHLA rise to become the leading European player in intermodal container traffic.

At the beginning there were traffic jams. Although the Iron Curtain fell in 1989 and Europe's trade barriers gradually disappeared, in practice the trucks sat in endless queues – at the completely overstretched handling facilities on the German-Polish border, for example, making it difficult for freight traffic to flow between west and east.

The railway network appeared to have the solution. Especially the “rail port” of Hamburg, whose European hinterland was suddenly huge again. The opening of the borders presented opportunities that were now being seized. At the end of the 1980s, HHLA began encountering converging interests in Eastern Europe. There was a desire to expand eastwards, while the Polish State Railways PKP wanted to move into the west. A business idea was floated that began to take shape in 1991.

The EU liberalised the rail market in this year, granting free access to the rail network, including for the state railways. A joint venture between HHLA, PKP and the freight forwarder Egon Wenk soon emerged.

Private trains on state-owned rails

On 29 January 1992, Polzug Polen-Hamburg-Transport GmbH became the first non-railway company to run freight trains on state-owned rails. A regular “container block train service” between the Port of Hamburg and Warsaw began to take off. At around the same time, a visionary businessman was also planning similar services in what was then Czechoslovakia: Jiri Samek. The logistics manager left the Czechofracht transport company to found METRANS on 25 May 1991. The new company wanted to make the most of its key logistical advantage. →



ARRIVING IN EUROPE
Today, 30,000 METRANS trains travel through Europe every year, crossing 19 national borders.

HIGH AVAILABILITY METRANS maintains its own locomotives and operates the Dyko Rail Repair Shop in the Czech town of Kolin.



TERMINAL POWER METRANS has not only technically optimised rail handling operations at its 20 own terminals. The facilities, which are largely electrically powered, are also particularly climate-friendly.

A concept with real power

→ METRANS not only ran container trains, but also operated handling terminals to increase the reliability and efficiency of the transport chain.

The first rail terminal was located in a suburb of Prague, from where shuttle trains would soon run at regular intervals to seaports such as Hamburg and other container logistics hubs. Prague was developed into one of the so-called hub terminals, of which METRANS currently operates seven. METRANS created connections between these hubs, where containers were also stored, and smaller rail terminals with “antenna trains”. They were given this name because the routes extended into the hinterland like antennae. Trucks then transported the goods “the last mile” to the customer. It was the first time that Jiri Samek applied the “hub & shuttle” principle to container transport, including rail, creating a dense, reliable and high-frequency transport network for Europe. The concept generated such a dynamic response, which in turn attracted the interest of HHLA. In 1995, it initially acquired a 25 per cent stake in METRANS. DB also temporarily held a stake in Polzug and METRANS, but this

partnership was later wound up in a redemption deal. HHLA got back its shares in Polzug and METRANS. In 2018, Polzug’s activities were systematically integrated into the METRANS network under the umbrella of HHLA.

By rail to China

At the beginning of the new millennium, Hamburg regained its leading position as Europe’s most important rail port. There have also been routes to China, the world’s largest growth market, since 2008. Around 100 international guests welcomed Deutsche Bahn’s first freight train from Beijing amidst great fanfare. The Beijing–Hamburg Container Express completed the roughly 10,000-kilometre journey in less than 15 days, providing an increasingly interesting alternative to container ships for certain goods. METRANS was soon also able to gain a foothold in this market and some ten years later was already handling 900 trains coming from or going to China. The intermodal company was quickly aiming to reach the top of the European market. HHLA’s initial stake in METRANS →



JIRI SAMEK
The “father of METRANS”
was also an innovator in rail
freight logistics.

“A great idea like METRANS simply has to be made reality.”

This quote reveals a man of action, but also a visionary of the railways: Jiri Samek, who in 1990 was still logistics manager at the state-owned transport monopoly Czechofracht, no longer wanted to take a back seat. He wanted to put his money where his mouth was, start his own rail freight company and take on the role of CEO. No sooner said than done: On 25 May 1991, he founded METRANS, rented a handling terminal in the Czech capital of Prague and began life as a business owner with ten employees.

He was just 37 years old at the time. He proved his strategic vision with the distinctive nature of his logistics concept: “From the outset, we have been a one-stop shop for container transport services from the seaport to the customer.” That’s because METRANS not only operates the trains, but also the handling facilities in the hinterland and takes care of the onward transport of goods to the customer. That was an innovative model at the time.

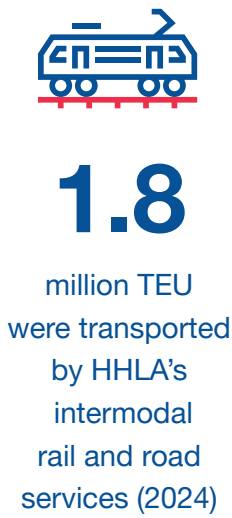
Jiri Samek began a long and successful partnership with HHLA in 1995. HHLA initially acquired a 25 per cent stake in METRANS before becoming sole owner of the company, with Polzug being merged into the now sole METRANS brand in 2018. When Jiri Samek died on 27 April 2018 at the age of 63, the “father of METRANS” left behind a legacy as an innovator in rail freight logistics.



CLOSELY LINKED NETWORK Between the North Sea and the Baltic Sea, the Adriatic Sea and the Black Sea, METRANS has built up a growing rail network with around 650 routes per week.

Systematically expanded in 2018

→ followed by the complete takeover in 2018 unlocked dynamic growth with greater financial strength and a clear intermodal strategy. Joint investments drove the expansion of the terminal network and the acquisition of its own “rolling stock”. State-of-the-art railway hubs were brought into operation in Ceska Trebova in the Czech Republic, Dunajska Streda in Slovakia and the Hungarian capital Budapest, among other places. There are now seven of these hub terminals, in addition to 13 end terminals and depots in eight European countries. Today, around 2,500 employees manage more than 650 container trains per week and organise many other services for their customers. They provide reliable and flexible customer service that is closely linked to the high availability of the company's own locomotive and wagon technology, which is serviced and repaired in



places like Kolin in the Czech Republic, where the METRANS Dyko Rail Repair Shop also offers its services to many other railway companies.

Eco-efficient and reliable

METRANS even develops its own wagons in co-operation with manufacturers. Its eco-efficient lightweight flat wagons weigh around four tonnes less than conventional ones, saving energy and protecting the environment, just like the latest electric locomotives, which shuttle between seaports and METRANS terminals on many routes. They recover up to 18 per cent of the braking energy – and feed it back into the power grid. Hybrid shunting locomotives are already being used at the terminals, which generate fewer harmful emissions. The end-to-end electrification of transport chains is an important part of HHLA's strategy. The Group wants

its production operation to be completely climate-neutral by 2040.

Climate-neutral by 2040

The product known as HHLA Pure was developed to help the company achieve this goal. Customers can use the climate-friendly service for handling their containers at the port and transporting them by rail through Europe. While HHLA's rail subsidiary METRANS already offers certified climate-neutral transport on the majority of its routes, the “last mile” concept needs to be reworked.

This involves the trucks that transport and deliver the containers. Most of them still have diesel engines, even though METRANS already uses electric and hydrogen-powered trucks. HHLA's forwarding company Container-Transport-Dienst (CTD) also purchased the first two battery-powered trucks in the summer of 2024. They are initially being used for transporting containers around the Port of Hamburg and will be extensively tested. The idea is to collect and evaluate data in order to provide HHLA with important insights for the potential procurement of further electric trucks.

In addition to developing more environmentally friendly solutions, part of HHLA's strategy also includes expanding its network. To this end, HHLA is acquiring a majority stake in Roland Spedition, one of Austria's largest owner-managed container operators. HHLA's inter-



PETER KISS, CEO OF METRANS, is developing new logistics solutions for the countries in south-eastern Europe.

modal companies Roland, METRANS, CTD and Ukrainian Intermodal Company (UIC) transported more than 1.8 million standard containers across Europe in 2024.

At METRANS in particular, all signs point to further expansion in the huge European hinterland. It is establishing and acquiring railway companies throughout Europe – like the Croatian Adria Rail in 2024, for example. Terminals in Romania and Serbia are set to consolidate even more rail traffic to and from south-eastern Europe in the future, while two more terminals are currently being built in Hungary. “The countries of south-eastern Europe are experiencing dynamic growth, with new logistics solutions needed to keep pace with it,” says METRANS CEO Peter Kiss.



TOTALLY ELECTRIC CTD's climate-friendly e-trucks will cover the last mile to the customer in the future.



DIRECT LOADING
A steam locomotive has pulled wagons into the harbour. They will now be loaded with the coal cargo from a ship that has moored next to it.

On the fast track to progress

In the 19th century, the railway became one of the key factors in guaranteeing the future viability of the Port of Hamburg. As a highly efficient “rail port”, Hamburg remained on its long-term growth course – even with the dawning of the container age.

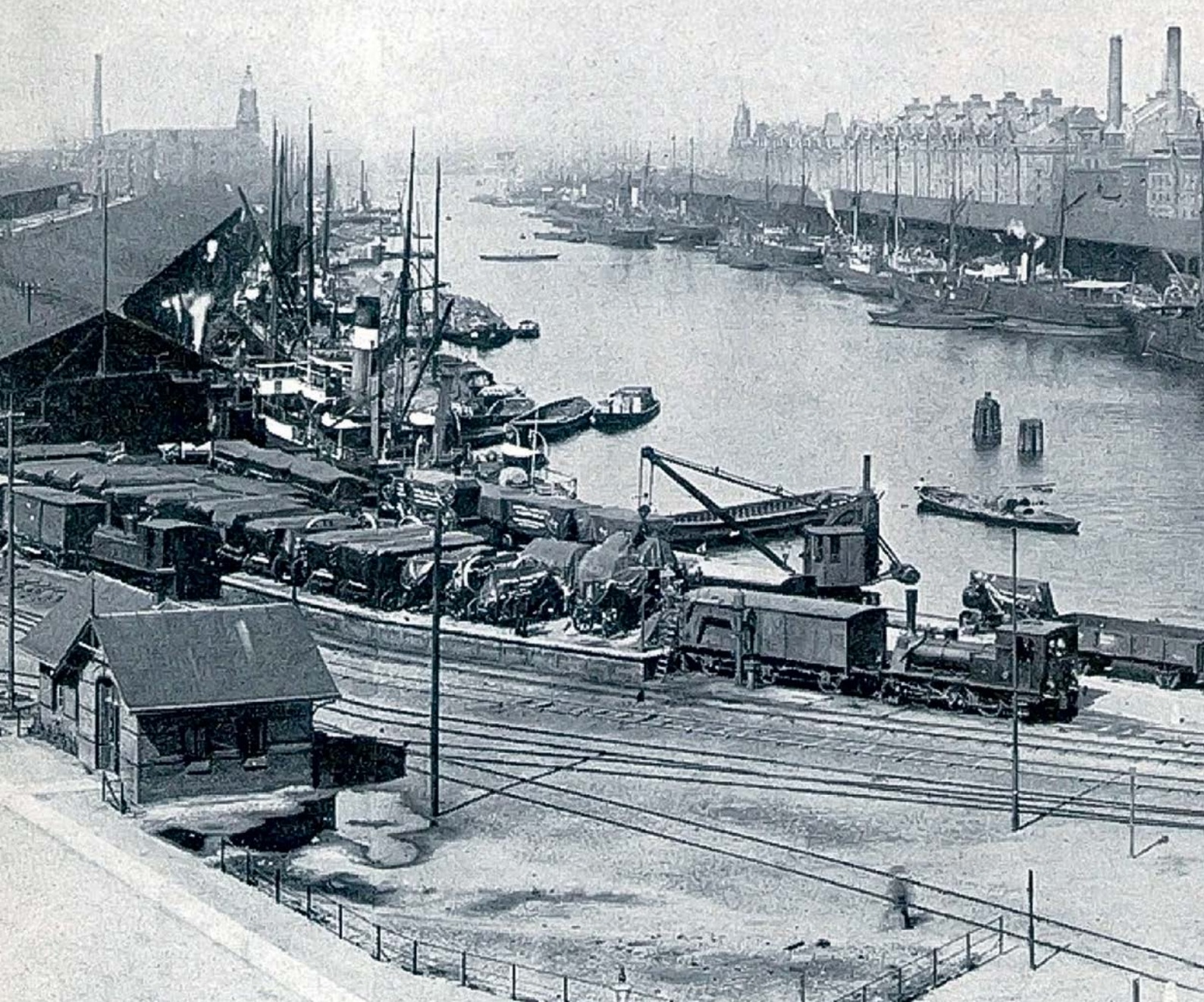
Around 1840, goods landed in the Port of Hamburg were transported to the hinterland of the North German Plain by horse-drawn carts or barges. The port still had no rail link that could make handling tasks much easier and more efficient. At the same, the rise of the “steam engine on rails” was under way in northern Germany. The 1838 edition of the “Brockhaus Bilder-Conversations-Lexikon” – a German encyclopedia – said the following about Hamburg: “It is intended to run railways from H. to the important trading centres in the interior of northern Germany.”

However, the infrastructure was not yet suitable for this project aimed at modernising port traffic. Large sections of the banks of the Elbe in the city area had barely been straightened and there was no systematic reinforcement. There were no flexible crane systems or storage sheds running parallel to tracks. So where were heavy railway wagons supposed to receive their cargo from the ships? In addition, Hamburg’s nascent railway system suffered two major setbacks in the form of the devastat-

ating city centre fire of 1842 and the great economic crisis of 1857.

The “Hamburg pier” directly connects ship and rail for the first time

It would be 1866 before the railway as a mode of transport for carrying freight achieved its breakthrough, when Hamburg’s first artificial harbour basin, Sandtorkai, went into operation. It was a triple premiere. Firstly, a wooden bank reinforcement allowed the largest steamships of the day to moor directly at the edge of the basin. Secondly, onshore mobile cranes on the quay could be used to hoist goods onto the seagoing vessel and unload them from it. Thirdly, and most importantly, railway tracks ran parallel to the storage sheds and quayside. For the first time, the freight train as the inland means of transport was brought together with the ship as the seagoing means of transport. This new combination of rail, storage shed and mobile crane – the “Hamburg pier system” – would revolutionise port logistics in the decades that followed. The rail port was taking shape. ➔



THE SANDTORHAFEN served as a model for the port facilities in Hamburg in the 19th century.

Expansion and the “standard locomotive”

There remained one final natural obstacle to railway tracks towards the south in 1866: the Elbe. At a hefty 28.5 million marks, the bridge spanning the river would cost the Hamburg Senate dearly, but the Hanseatic city needed the southern connection at almost any price. It was the only way of competing with the high-capacity hinterland route out of Antwerp, which was still the leading rail port at the time. Construction work began in 1870, and the Elbe bridge was opened in December 1872. The simultaneously built railway junction with its sidings and loading points was given the name “Hannoverscher Bahnhof” (or Hanover Station). Now that the route towards the south was finally open, things were on the right track: at the time

of the customs union in 1888, the new Speicherstadt was the largest and most modern integrated port logistics centre of the day – complete with railway links based on the pioneering Hamburg pier system. The Deutsche Reichsbahn-Gesellschaft spent until 1926 developing the Class 87 “standard shunter locomotive” specifically for the port railway’s special shunting needs. It was then built from 1927 onwards. This soon-to-be ubiquitous Hamburg steam engine could transport 670 tonnes of goods on a flat track at a speed of 25 km/h, replacing various obsolete locomotive types with too much wear and too little power. The Class 87, of which a total of 16 were built, continued shunting on the tracks at the Port of Hamburg until the 1950s.

From sheds to open spaces

Then, however, a logistical innovation conquered the world and supplanted the tried-and-tested pier system. When the first fully containerised ship was handled at Burchardkai in 1968, most of the other harbour basins still had their pre-war face: long, finger-like quays where the cargo of seagoing vessels was transferred by crane to barges, trains or trucks. These harbour basins were now being filled in to create large, open spaces. “Terminals” were the future with their outdoor container stores. They would soon have their own stations instead of simple spur tracks.

It was also thanks in part to its unique rail network that the port became an upstream import yard for inland industry as early as 1970. Raw materials such as ores were kept here until they were ordered by a steelworks, whereupon the port trains would set off with the right mixture of different types of ore. They would then arrive at the blast furnace just in time for steel-making. Thanks to rail freight, warehousing has become the port’s second mainstay alongside handling.

THE CONTAINERS ARE COMING

In 1972, only a handful of the new steel boxes stood by the railway tracks, but huge container rail terminals would soon be built for their onward transport.



A box changes everything

At the start of the 1970s, a huge, largely automated shunting yard was connected to the rail network near Maschen. The Deutsche Bundesbahn had thus created a highly efficient connection between the port and its national rail network. The newly opened freight yard in Maschen, the largest of its kind in Europe, centralised the shunting operations of five old port stations. Only through the efficient formation of “direct” freight trains was it possible for 95 per cent of all German freight terminals be reached from Hamburg within 36 hours.

Another major project got under way in the Port of Hamburg in 1977: the “Hansaport”, a joint project between Salzgitter AG and HHIA. It was specially designed to transport ore arriving by ship via rail freight or barge over 200 kilometres south to the blast furnaces of the Salzgitter works in Lower Saxony. Deutsche Bahn thus helped to ensure that the Port of Hamburg could keep pace with its competitor in Antwerp over the course of many years when it came to growth in bulk cargo handling – while remaining attractive as a container port in Europe. A complete realignment of rail logistics would ultimately be necessary following the fall of the Iron Curtain in 1990, which marked a watershed in European history.



BREAK-BULK CARGO DISAPPEARED gradually from the quaysides in the 1970s, followed shortly after by the tracks on which the fruit train pictured here stands.

In harmony with the port

HHLA helped to write the story of the **Elbphilharmonie** and HafenCity. More than most Hamburg residents know.



FROM THE KAISPEICHER TO THE ELBPHILHARMONIE was a long way. The building bearing HHLA's logo has not been used for port handling since the 1970s. The old structure is still clearly recognisable in Hamburg's new landmark.

The tip of the Kehrwieder, which marks the northern boundary of the Speicherstadt historical warehouse district, had always shaped the water side of Hamburg. For a long time, a building stood here with a so-called time ball towering above it, enabling navigators on board the ships to set their chronometers. It was badly damaged in World War Two and demolished in 1963. The architect Werner Kallmorgen, who played an instrumental role in the reconstruction of Hamburg, came up with the purist cube design for a new quayside warehouse known as Kaispeicher A. He had designed the roughly 30,000 square-metre space entirely for the storage of break-bulk cargo. However, such bags, crates and barrels had barely been handled since the container conquered the port on the other side of the Elbe.

The semi-gantry cranes, which still stand refurbished outside the concert hall, no longer handled many ships, and the storage areas were not used to capacity. It stood empty for a long time before even longer discussions were held about the highly attractive location. It was not until the end of 2003 that the Hamburg Senate backed the concept of an "Elbphilharmonie", which today sits spectacularly atop the former HHLA warehouse.

Urban development in the port

After the fall of the Wall, Hamburg grew at an unimaginable speed. But where else could the city expand? Even though certain areas belonged to it, they were anything but freely available. The land around Sandtorhafen, for example, where the free port extended to the fringes of the city centre. Long-standing tenants sat there and →



SECRET PREPARATIONS: When Hamburg's Mayor Henning Voscherau presented the plans for a "HafenCity" on 7 May 1997, the public was surprised. Only a few associates at HHLA had known about it.

→ successful logistics specialists worked there. The task of acquiring this land for the construction of a HafenCity was taken care of by the specially founded Gesellschaft für Hafen- und Standortentwicklung (GHS). This wholly owned HHLA subsidiary bought up usage rights and real estate in the years that followed. In fact, it was able to bring all the properties in question under its – and thus municipal – control. It is astonishing that the "secret state action" remained concealed from the public for six years. This prevented speculation and price gouging. It was only when the urban development "master plan" was ready that Hamburg's Mayor Henning Voscherau presented the concept of a HafenCity on 7 May 1997.

Only a small group around the then HHLA Chairman of the Executive Board Peter Dietrich had known about it. As part of the secret deal, HHLA finally got the opportunity to build a new container terminal. It swapped the land acquired for urban development for an extensive site in the former fishing village of Altenwerder. The port expansion had been planned for around 40 years, and now it could finally become reality.



FREE PORT IN THE HEART OF THE CITY: Many logistics companies still worked here until the end of the 1990s; the free port bordered directly on busy city districts. It is also thanks to HHLA that HafenCity now offers attractive apartments on the waterfront.



Forklift ballet

Since 1952, forklift trucks have been performing many of the handling and storage tasks at HHLA. They are more agile than their predecessors, such as electric pallet trucks, and relieve the quay workers of the heavy manual work with their handcarts. These ground-handling vehicles are not only capable of transporting loads weighing up to one tonne, but also lifting them to heights of up to three metres. The top picture shows particularly

small forklifts suitable for the tight spaces in Kaispeicher A. They set down coffee sacks to be weighed on yet to be standardised skids. Today, standard pallets are the norm, on which large quantities of boxes, bales or drums are secured with tape or strapping. In the bottom picture, a colleague at the HHLA Frucht- und Kühl-Zentrum removes two pallets loaded with banana crates from a container and takes them to the cold store.



Highlights of an eventful history

HHLA has overcome huge historical challenges, shaping the history of Hamburg and the world of logistics.

1866 Founding of the quay administration and opening of Sandtorkai
The opening of Sandtorkai marks the beginning of modern cargo handling by the quayside in Hamburg. The quay administration is founded to support port operations, later merging with HHLA.



7 March 1885 Founding of HFLG and construction of the Speicherstadt
HHLA's predecessor, the Hamburger Freihafen-Lagerhaus-Gesellschaft (HFLG), is founded to build the Speicherstadt. By 1888, the first construction phase of what was for a long time the most modern and remains the largest integrated warehouse complex in the world is completed.

1888 The world's largest free port
Following the customs union with the German Empire, Hamburg is home to the largest free port area in the world. Goods are handled, stored and refined without customs controls.

1910 The world's third largest port must be expanded
By 1910, the Port of Hamburg is the third largest trading centre in the world in terms of volume of goods handled, after New York and Liverpool. In order to continue growing, the areas of Waltershof and Neuhoof are developed.

1914–1923 First World War / Inflation
Following the outbreak of the First World War, work in the port comes to an almost complete standstill. After the war, hyperinflation further weakens foreign trade and the port.

1935–1939 HFLG takes over quay management and becomes HHLA
HFLG's trade surpluses are needed to offset the deficits of the state quay administration, resulting in both entities merging and, in 1939, being renamed "Hamburger Hafen- und Lagerhaus-Aktiengesellschaft" – today's HHLA.

1939–1945 Forced labour during the Second World War
Following the start of the war, there is a shortage of workers across the entire port. Forced labour and concentration camp prisoners are deployed. The port operating company centrally organises the workers and their accommodation, including for HHLA.

From 1945 Reconstruction of the port and Speicherstadt
During the Second World War, 90 per cent of the quay sheds in the Port of Hamburg and two thirds of all warehouses are badly damaged, while 70 per cent of the rail network is impassable. HHLA launches a massive reconstruction project.

1952 New forklifts at the port make work easier
Until 1952, many handcars were still being used at the port. The commissioning of modern forklifts for break-bulk cargo (heavy-duty forklifts were already in use) makes it possible to stack goods faster and higher.

1960 Finally a new handling record
With 30.8 million tonnes of goods handled, the Port of Hamburg finally

surpasses the pre-war level (1928: 29.3 million tonnes).

1961 Fruit logistics grows
HHLA builds the most modern banana warehouse in Europe. Elevators transfer the bananas to the storage halls while protecting them from the weather. Further innovations follow, establishing Hamburg as one of the world's leading fruit ports.

1966 The arrival of rolling cargo
HHLA converts a former British Army roll-on facility into the first RoRo (roll-on roll-off) facility at the Port of Hamburg.



1968 Start of the container age
Burchardkai is the first special facility in Hamburg to handle the new container ships. To this end, innovative handling and transport technology is developed, tested and very soon put to efficient use.

1970 New port regulations
Completely new port regulations for Hamburg puts HHLA on an equal footing with other port competitors. The city of Hamburg remains the owner of HHLA.

From 1972 First subsidiaries
Since 1972, CTD Container-Transport-Dienst, HHLA's first subsidiary, has been transporting goods to the hinterland and around the port. In 1976, Hamburg Port Consulting HPC begins providing international consulting services, and more and more subsidiaries are added.

The tides of time



Chronicle
If you fold out these inner pages, you will find our illustrated chronicle, enhanced with historical events.

1975 Data speeds up work processes
Electronic data processing (EDP) is expanded from 1975 as planned. It makes most processes easier and faster by using a system for screen dialogue.

1975 Stake in Hansaport
HHLA acquires a 49 per cent stake in Hansaport Hafenbetriebsgesellschaft. The facility for coal and ores now handles up to 15 per cent of the total amount of cargo handled at the Port of Hamburg.

1982 All-rounder O'Swaldkai
Hamburg gets a multipurpose facility: the HHLA O'Swaldkai Terminal. It is equipped to meet all port handling requirements.

1991 Expansion of rail services to Eastern and Central Europe
Polzug and METRANS, rail subsidiaries that will later merge with HHLA, establish the first rail routes to the former Eastern bloc and experience dynamic growth.

1992 Involvement in Ukraine
HHLA's involvement in Ukraine begins with a consulting project in Odessa. Its subsidiary HPC starts it as part of an EU programme. A management contract is added and, in 2001, the licence to operate today's Container Terminal Odessa (CTO).

From 1994 Redevelopment of the Speicherstadt
In the Speicherstadt, the first warehouse blocks, which have long ceased to be used for goods storage, are converted into attractive office spaces.

1996 The second container terminal in Hamburg
HHLA acquires the Container Terminal Tollerort (now CTT) from Gerd Buss Lager- und Speditionsgesellschaft.

2002 CTA opening ceremony
Following a planning and construction period lasting just four years, the Container Terminal Altenwerder (CTA) is inaugurated with a grand ceremony. At the time, it was considered the world's most modern facility, while today it is one of the most sustainable of its kind.



From 2004 Huge development project
Marking the start of greater productivity and more sustainable processes, the entire Container Terminal Burchardkai (CTB) is completely redeveloped over a number of years during ongoing operations.

2005–2007 Going public with a new name
In 2005, HHLA renames itself "Hamburger Hafen und Logistik AG" as it prepares for its initial public offering. On 2 November 2007, 30 per cent of HHLA's nominal capital is traded on the stock exchange for the first time.

2012 Intermodal focus
HHLA and Deutsche Bahn restructure their intermodal stakes. DB transfers its shares in METRANS and Polzug to HHLA, allowing HHLA to focus its activities more on efficient rail connections to the hinterland.

2015 Speicherstadt World Heritage Site
Hamburg's Speicherstadt, the historical warehouse district developed and managed by HHLA Immobilien, is designated as a UNESCO World Heritage Site alongside the neighbouring Kontorhausviertel.

From 2018 HHLA goes more international
HHLA acquires Estonia's largest terminal operator (now HHLA TK Estonia). This is followed in 2021 by the PLT multipurpose terminal in Trieste, Italy. The Austrian container operator Roland is added to the international network in 2024.



From 2021 Driving innovation
HHLA Next is founded to promote digitalisation and sustainability in maritime logistics. There is investment in start-ups such as HHLA Sky, which is setting new standards in drone logistics.

2024 MSC stake in HHLA
The MSC Group, one of the largest shipping and logistics companies in the world, acquires a stake in HHLA.

2025 Mitigating climate change
The HHLA Group sets itself the goal of making its production operation climate-neutral by 2040. According to EU taxonomy figures, it is on the right track. Research is also being conducted into the use of hydrogen for operating power.

The tides of time

A potted history of HHLA: political and technological change are constants throughout this chronicle.



1888
Kaiser Wilhelm II opens
the world's largest free port,
which includes the
Speicherstadt facilities.

1910
The third largest port
in the world is Hamburg,
after New York and Liverpool.
The economy in
Germany booms.

1885
The Speicherstadt is built
The newly established
HFLG starts building a huge
warehouse complex.

1866
Sandtorhafen
is built by the state
quay administration as
a modern port facility.

1914–1923
**The First World War
and inflation**
bring global trade and
Hamburg's port to
a long standstill.

1939–1945
In the Second World War
90 per cent of the
quay sheds and two thirds
of all warehouses are
badly damaged.

1935–1939
HHLA is formed
by the merger between
the state quay administration
and HFLG.



1958
The HHLA IV floating crane
can lift 200 tonnes
and still works to this day
(having been overhauled) at
the Port of Hamburg.

1952
The first forklift
in the port is used
by HHLA. Goods can now be
stacked higher and faster.

1962
A severe storm surge
devastates parts of Hamburg
where the dikes are too
low. The port suffers minimal
damage.

1966
RoRo rolls across the ramp
from the "MS Alster". The
universal Port of Hamburg can
now finally also "roll-on roll-off".

1961
Bananas
become the favourite
fruit of the Germans.
HHLA builds the most
modern facility for them.

1968
The first container ship
arrives at the redeveloped
Burchardkai thanks to
the commitment of Senator
Helmuth Kern. It marks the
rise of the steel box.

1972
Container-Transport-Dienst
CTD is founded, HHLA's first
subsidiary for transporting
goods to the hinterland.

1975
Data processing
arrives at the terminals,
initially simplifying
and speeding up
administrative processes.

1975
Hansaport
is developed together with
HHLA as the largest German
port facility for coal
and ores.

2004
Expansion programme
for HHLA's terminals:
they are made fit
for the world's biggest
container ships.

1989
Reunification
Following the fall of the Wall
and the "Iron Curtain", Hamburg
gets its hinterland back.

2005
The initial public offering
brings 30 per cent of
HHLA's nominal capital to
the stock exchange, but the
city of Hamburg retains
its majority stake.

1991
Container trains head east
for the first time. HHLA
is among the founders
of the specialist Polzug.

2015
**Speicherstadt World
Heritage Site**
By awarding this title, UNESCO
underlines the unique
character of the ensemble.

2022
Deepening the Elbe
opens up new perspectives
for the Port of Hamburg.
More mega freighters can
navigate along the Elbe.

2021
Innovations
are at the heart of HHLA Next.
Start-ups like the drone
logistics specialist HHLA Sky
are founded.

2024
New partner in MSC
The world's biggest
shipping company acquires
a stake in HHLA.

2025
Mitigating climate change
HHLA's is aiming for a
climate-neutral production
operations by 2040.
The use of hydrogen for
operating power is researched.

2012
The intermodal focus
takes off: HHLA acquires
a majority stake in the rail
company METRANS.

2002
New container terminal
Altenwerder (CTA) sets
new global standards
in automation and
sustainable processes.

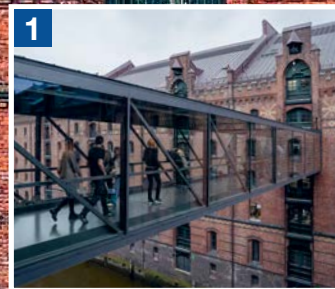
2021/2024
HHLA's logistics network
grows through the
acquisition of terminals in
Tallinn, Estonia, and
Trieste, Italy.



Discover more
and scroll through
140 years of highlights
at HHLA.

Where Hamburg stores the future

The eventful history of the Speicherstadt began in the 19th century. Today, 140 years later, the world-famous historical warehouse district is much more than just a monument. Future capital is piled up on stylishly restored floors.



Everyone thinks they know it, but it always has plenty of new surprises in store: the Speicherstadt historical warehouse district. Opened in 1888, the coherent red-brick ensemble that stretches for miles is a hit with tourists visiting Hamburg from all over the world. They stroll along the canal through Hanseatic history and yet encounter the future on every corner. That's because the sympathetically renovated and converted Speicherstadt is now also a magnet for creatives, company founders, start-ups and future technologies. There is the 'Digital Hub Logistics', for example, where young companies with innovative business

models for port logistics converge. The start-up 'Wildplastic' is committed to establishing a circular economy that preserves resources by recovering plastic waste. This is processed into granules and then transformed into new plastic products. Just a short walk away is the company 'Stadt Land Frücht', which supplies the offices in the surrounding districts with fresh and healthy organic snacks. And Block H on Sandtorkai is currently even being converted into a 'climate-friendly storage block': with specially developed high-tech solutions, energy experts are exploring how the entire Speicherstadt could one day be supplied with carbon-neutral energy.

THE IMAGES

1 | The sympathetically designed yet highly modern glass bridge for Miniatur Wunderland.

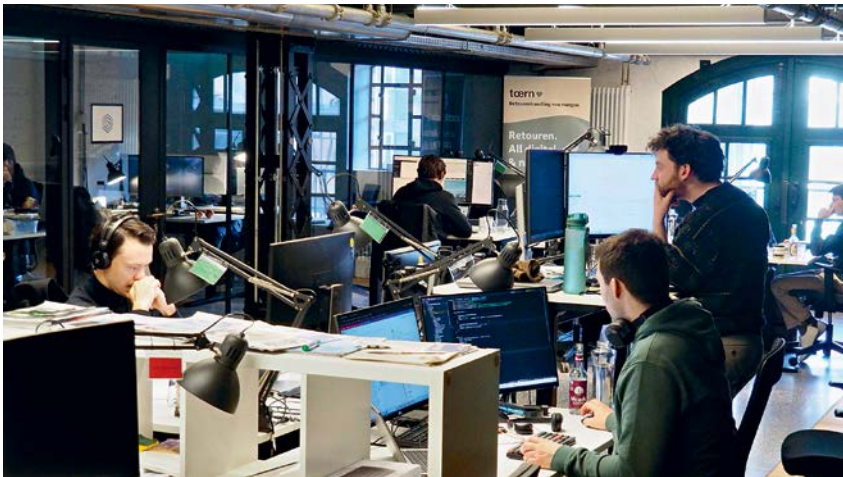
2 | Built as the world's largest logistics centre, the Speicherstadt formed the foundations for an economic upturn in Hamburg.

3 | Start-up founder Jan Lampe with some samples of collected 'Wildplastic'.

4 | Workers, known as 'Quartiersleute', once shaped the Speicherstadt, but other specialists now keep operations running. (Page 58)

A vibrant cultural heritage

In 2015, UNESCO, the cultural organisation of the United Nations, declared the Speicherstadt historical warehouse district a World Heritage Site, together with the neighbouring Kontorhaus district and the Chilehaus, taking the listed status awarded in 1991 to a new level as a testament to a building culture worthy of preservation. The container, which began changing the face of logistics at the end of the 1960s, had long since replaced the warehouse blocks as a storage location. The metal box itself became the warehouse. Only certain types of goods, carpets in particular, are still stored and traded in the Speicherstadt to this day. The district had otherwise already lost its old function and yet was by no means just standing there with no purpose. The old, magnificent warehouses were far too coveted for that to happen. As landlords and managers of the Speicherstadt, HHLA's real estate specialists have been finding new, modern and groundbreaking uses for it since 1994. Thanks to the full-scale renovations and clever redesign, completely new tenants have now moved in next to the remaining trading companies. At first, museums and leisure attractions such as Miniatur Wunderland, with the biggest HO scale model railway in the world, or the Hamburg Dungeon delighted new visitors. Then came fashion and advertising agencies, followed by a growing number of companies from the start-up ecosystem.



A FAVOURITE AMONG ENTREPRENEURS: More and more innovative spirits, start-ups and their backers are drawn to the spaces with warehouse flair.

Trading and port history up-close

At Sandtorkai 36, the past is brought to life. The Speicherstadtmuseum, supported by HHLA, takes visitors on an impressive journey through time in the authentic ambience of a warehouse dating back to 1888. Equipment, stories and the all-pervading aromas of coffee, tea, cocoa and spices provide an idea of how people used to work here. The focus here is on the so-called *Quartiersleute* (which roughly translates as 'district people' and refers to the warehouse workers). Visitors learn about their typical tools, such as *Griepen*, or hooks for handling the packages, or the lances used to take samples from the sacks. The coffee trade is a common theme running through the exhibition, while the architectural history of the Speicherstadt is also vividly illustrated. On loan from the Hamburg Senate, the silver trowel and hammer used by Kaiser Wilhelm II and Chancellor Bismarck to symbolically lay the keystone for the Speicherstadt can still be seen here.



All information

on opening times, events and exhibitions at this fascinating museum can be found here.



SPEICHERSTADTMUSEUM: What products were stored in the Speicherstadt and who worked here? Visitors get a good impression of what it looked like in the time following its foundation.

INNOVATIVE SYSTEM

The optimal heat transfer mixing ratio for the storage block's energy system is managed at the central distribution point – supported by the ice storage tanks (right) in the basement.



Finding flexible solutions

The sympathetic development of the venerable Speicherstadt is always setting its sights on new goals. A glass bridge was built to enable Germany's most visited museum, Miniatur Wunderland, to continue to grow. It links the original exhibition space with the extension on the other side of the Kehrwieder canal, providing a nice example of the Speicherstadt's ability to transform and make connections. Not far away, in the Kontorhaus on Pickhuben, construction specialists from universities are working with experts from HHLA Real Estate to research into a 'climate-



93 %
of the heat
needed could be
generated by the
storage blocks
themselves.

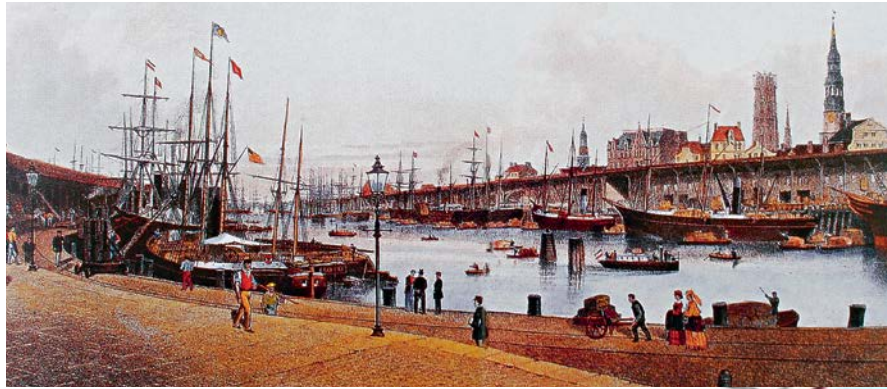
friendly storage block' that is attracting attention across Europe. They are investigating how it might not only be possible, but also economically attractive to carry out an energy-efficient renovation of existing properties under the strict conditions governing listed buildings on the UNESCO World Heritage Site. As soon as the combination of innovative solar tiles and cutting-edge heat storage media is ready for mass production, the model can lead the way for the energy-efficient conversion of commercial properties throughout Germany – and beyond.



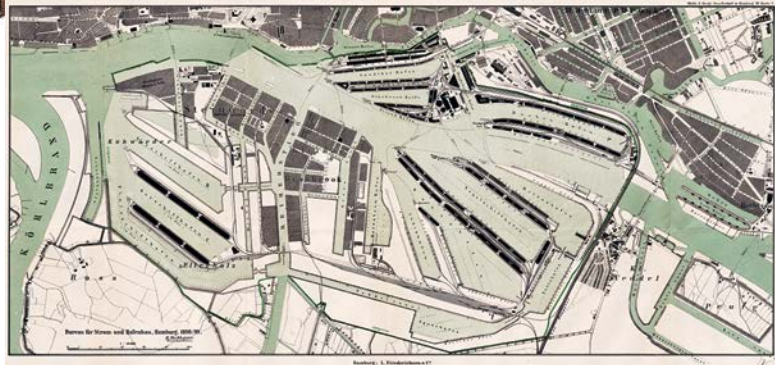


OLD HOUSES
on Brooksgaben: They were demolished from 1883 onwards to make room for the free port and the Speicherstadt. There were about 1,100 houses in the Kehrwieder and Wandrahm districts, which were home to 17,500 people.

SANDTORHAFEN
is a harbour where steamships and cargo sailing boats docked. It was built in 1866 and considered revolutionary because the ships were readied on the quay. Back then, barges usually brought the cargo along the Elbe, where it was dropped in the stream of the freighters.



HISTORY
The Speicherstadtmuseum exhibits job profiles and testimonies from the building's history. Which goods were stocked here and how were they stored?



HUGE FREE PORT The Free Port of Hamburg built in 1888 was the biggest in the world, extending over an area of 10 km². Those who put down roots here could take advantage of discounted imports when trading with the German Empire.

CLIMATE-FRIENDLY STORAGE
The future is being researched on Pickhuben. How can existing properties be climate-neutral under the strict conditions governing listed buildings?

TOWN HALL
Externally modelled on Hamburg's town hall, 'Bei St. Annen 1' has been HHLA's imposing headquarters since it was built in 1904.

WASSERSCHLOSS
Those who seek out 'Dienereihe 4' will find one of the most popular photo spots. Unfortunately, it isn't a *Wasserschloss* (or 'moated castle'), but a former workshop.

DESIGN HOTEL
The 'Hotel Speicherstadt' is located in a new building from the 1950s designed by the renowned architect Werner Kallmorgen. The style of this era is also reflected in the hotel's exquisite furnishings, which are well worth seeing.



FOR THE KEYSTONE LAYING CEREMONY on 29 October 1888, most Hamburg residents were given time off work or school to hail Kaiser Wilhelm II. Here, the dignitaries await his arrival by the decorated Brooks Bridge to inaugurate the first construction phase of the new Speicherstadt.

A child of the customs union

Without Hamburg's accession to the German Empire's custom union in October 1888 the Speicherstadt mega construction project would not have been necessary at all. But to compensate for the fact that Hamburg was set to lose its privilege as a free trade city, the Hanseatic city wrested a 'free port' from the Empire government. In this separate part of the port, goods could still be handled and stored without any customs controls. The traditional office buildings along the canals in the city centre were outside this zone, so warehouses had to be built in the area of the new free port. To this end, the Norddeutsche Bank founded a public limited company in 1885 at the request of the Senate: the Hamburger Freihafen-Lagerhaus-Gesellschaft (HFLG), now known as HHLA. The Hanseatic city retained a vital, regulatory influence within this construct. However, a huge obstacle stood in the way of the so-called


17,500
people
were
forced
to leave
their homes.

'customs union buildings'. The designated site was already occupied by densely populated residential areas where around 17,500 people lived – predominantly middle class in the Wandrahm district, while the people in the Gänge district on the Kehrwieder lived in cramped conditions and often in extreme poverty. This did not prevent the planners from presenting it as a fait accompli. Within 24 months, more than 1,000 residential buildings were demolished without the city allocating new housing to the people who lived in them. The main section of the Speicherstadt had to be completed by autumn 1888, and the planners adhered to the tight schedule. On 29 October, Kaiser Wilhelm II laid the keystone, ceremoniously marking Hamburg's accession to the German Customs Union. Extending over a total area of some ten square kilometres, the newly built free port was now considered the biggest in the world.

Cathedrals of work

The red-brick buildings built on thousands of piles were not only functional, but also an expression of the Hamburg merchants' pride. The planners and builders around the chief engineer of the building committee, Franz Andreas Meyer, were influenced by the 'Hanoverian school of architecture' and the sacred North German Brick Gothic. A crown jewel of the Speicherstadt is the 'town hall', which was inaugurated in 1904. The headquarters of the HHLA Group came up with this name because its cornices, oriels and decorative elements looked almost palatial. 'Bei St. Annen 1' was joined to the adjacent warehouses in 2001/2002 by the award-winning architectural practice gmp (von Gerkan, Marg and Partners). They combined modern offices, meeting rooms and lifts with historic beams and staircases. Since the conversion, a striking glass roof curves over the formerly open atrium.

FOR MORE THAN 120 YEARS, the ever-growing HHLA has been managed from the majestic administrative building overlooking by the canal.



Ultra-modern from the outset

From the very start, the newly built Speicherstadt was nothing less than the biggest and most modern port logistics centre of its time. Even then, it was multimodal, meaning it was designed for various carriers. Particularly important was the good link to the adjacent harbour known as Sandtorhafen. Rails ran through the complex, there were many good streets for horse-drawn carts and later lorries, while barges were able to moor on the waterside of the canal, where they were unloaded with hydraulic cranes and winches. There were lifts and pneumatic tube systems, and even the still relatively uncommon electric light had been installed everywhere. A specially built power plant supplied the entire complex with electricity.

CUSTOMS BOUNDARY
Fences and barriers separated the duty-free Speicherstadt (here in the 1930s) from the city of Hamburg.

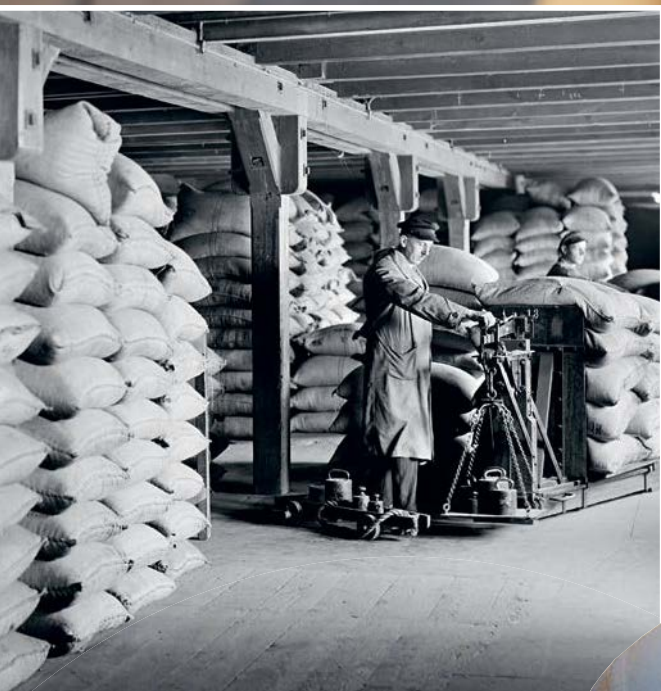

300,000
square metres
of space are
now rented out
by HHLA in the
Speicherstadt.

Coffee exchange and tea traders

The oldest and most loyal tenant in the Speicherstadt is undoubtedly the tea trading Hälssen & Lyon: joint founders Alfred Moritz Lyon and Gustav Vincent Hälssen moved into their newly constructed premises at Pickhuben 9 in 1887, even before the official inauguration of the 'customs union buildings'. After a few years, the company passed into the hands of a Hamburg merchant family named Ellerbrock, the fourth generation of which still runs the company to this day. The internationally successful company's headquarters have remained unchanged. It embodies the Speicherstadt's living tradition of storing and refining goods. Even though barges have not been moored here for a long time and the tea is no longer mixed on the clinker-brick floors, Hälssen & Lyon celebrated its 145th anniversary in 2024 – in the Speicherstadt, of course. Besides tea, precious coffee was also a major business field in Hamburg. Warehouse Block O became the centre of the international coffee trade following the founding of the coffee exchange in the Speicherstadt in 1887. For decades, it remained the world's most important commodity futures exchange for green coffee. At the turn of the century in 1900, 38 per cent of European coffee imports reached the continent via the Port of Hamburg. Today, the former coffee exchange at Pickhuben 3 has become a popular location for functions and major events.



HÄLSSSEN AND LYON moved into an office and warehouse building in 1887, which remains the headquarters of the famous tea company to this day.



Quartiersleute then and now

In the Speicherstadt, people worked in professions that have now virtually disappeared. So-called 'Quartiersleute' (or 'district people', a name given to the warehouse workers) supervised the entire operation of importing goods into the warehouse blocks. Their day began with quality control, which involved 'taking samples' from a bag of coffee beans, for example. They then put the goods into storage, repackaged them if necessary and loaded them for onward transport.

Today, someone works at the World Heritage Site whose profession sounds similar: **district manager Danny Maskow**. As one of a number of real estate specialists, he is responsible for management and communication in the historical warehouse district. 'We work at the point where the preservation of historical buildings meets innovative development in the Speicherstadt,' he says, describing the mission of HHLA Immobilien. 'Besides being valuable from a cultural and historical perspective, it is also sustainable. That's because most of a building's emissions are generated during construction. The longer a building is used, the better its carbon footprint.' As part of the HHLA Real Estate team, Danny Maskow's job thus involves making sure that the historical brick buildings remain attractive to tenants both now and in the future. 'Our aim is to preserve the buildings in the historical warehouse district, while continuing to develop the Speicherstadt into a totally unique business district.'



ESTONIA
HHLA TK Estonia's universal terminal in Muuga, near the capital Tallinn.

It takes hubs to form a network

How HHLA is pursuing a clear strategy to strengthen the hubs in the European logistics network



UKRAINE
In Odessa, the largest port, HHLA CTO mainly handles containers.



ITALY
HHLA PLT Italy works in Trieste on the Adriatic Sea.

Back in 1976, HHLA founded its second subsidiary, the consultancy firm HPC Hamburg Port Consulting. The idea was for other ports to initially benefit from HHLA's knowledge and experience, later also transport and logistics companies. The HHLA Executive Board at the time primarily saw opportunities in developing countries, but also sensed a duty to share its knowledge on how to operate and manage a modern port. HPC immediately began its work around →



UKRAINE
HHLA Container Terminal Odessa is helping to keep supplies flowing in the country despite Russian attacks.



HPC: Sharing knowledge on modern port operations

→ the globe. The first project was the Nigerian port of Lagos; other projects in Africa followed. Another focus was Latin America, where Torsten Neubert also began his career. The engineer, who is now IT Director at HHLA International, was involved in the development of HPC's own "Container Terminal Information System" (CTIS) in the late 1990s. It has been installed in Cartagena (Colombia), for example, where HPC has been advising the management for more than 20 years.

Consulting boosts economic development

Today, the South American port ranks third in S&P Global Market Intelligence's global efficiency ranking. "When a port is helped to flourish in this way, it has a real positive impact on the regional economy," says Neubert, looking back on his experience with pride.



THRIVING PORTS
As a consultant for HPC, Torsten Neubert wants to "help the ports to flourish".

Such successful consulting projects managed by HPC have helped HHLA to establish valuable relationships with terminals and governments. HPC's consultants also made an impression in the Ukrainian port city of Odessa as part of an EU modernisation programme. A management contract soon followed and, in 2001, the licence to operate today's Container Terminal Odessa (CTO) was awarded.

HHLA has invested in Odessa over the years, developing the Black Sea facility into the most modern in the country. About 40 per cent of Ukraine's container handling activities were moved here before Russia's invasion of Ukraine interrupted almost all of the country's shipping routes. However, the CTO's inventive staff and managers found ways of keeping supplies flowing in their country. They established a land bridge when sea-borne handling operations were temporarily

interrupted. The railway company METRANS and the Adriatic terminal HHLA PLT Italy in HHLA's network proved to be very helpful in this regard.

Another of the HHLA Group's terminals is located in the far north, on the Baltic coast. The universal port of Muuga, not far from the Estonian capital Tallinn, is home to the country's largest terminal: HHLA TK Estonia. Riia Sillave, company CEO, has a clear goal: to develop the terminal and raise its profile. For her, one of the ways to achieve this is fast digitalisation: "We want for our terminal what Estonia achieved after independence, making the leap from analogue technology to the age of the fibre-optic cable." In fact, Estonia, one of the three Baltic States, ranks first in the EU for digital public services. Where else would it be possible to find better digital solutions for logistics?

Central hubs and hub terminals for the HHLA network

"We are skipping a few stages of development, which is giving us the edge," says Riia Sillave, explaining her vision. "This enables us to offer a better and more flexible service than our competitors." In some areas, this has already been achieved. Estonia's largest container port continues to grow, which has also been made possible with the help of container gantry cranes acquired from Burchardkai, its sister terminal in Hamburg. New warehouses have been built for handling bulk goods, while an efficient double ramp has been installed for the RoRo ferries.

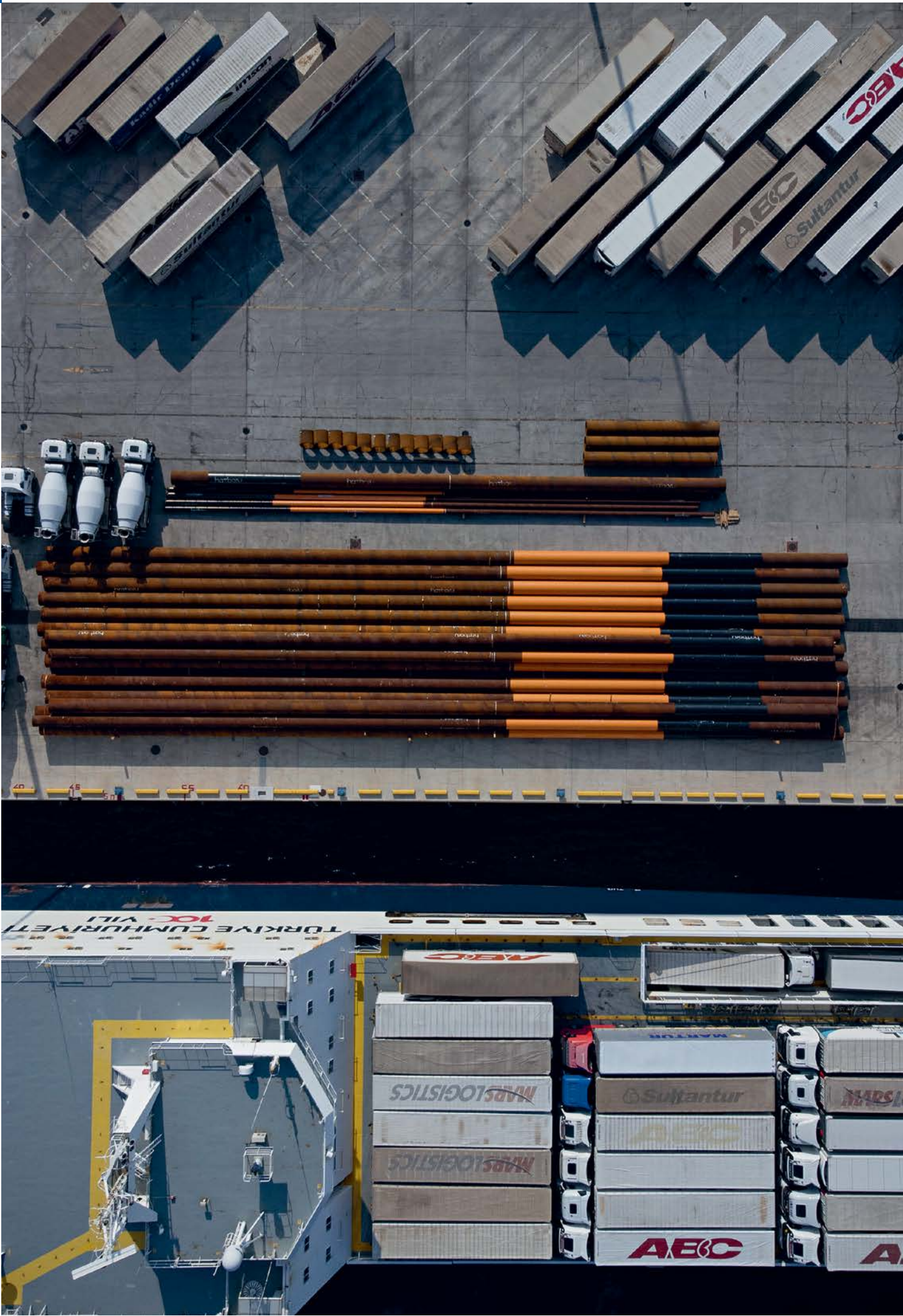
Tallinn and Muuga play a key role in the EU's Trans-European Networks (TENs) because they connect Finland to the European mainland with their busy RoRo services. Rail Baltica is set to form a key element of this infrastructure in the future. This new railway line with the standard Central European gauge is currently being built as a matter of the highest priority to strengthen the region's logistics connections with Europe, helping to boost "The Power of Networks" – the underlying principle guiding the efficiency of the HHLA network. It features centrally located hubs and hub terminals that connect carriers via water, road and rail. The company firmly embedded this focus area in its strategy at an early stage.

HHLA's first subsidiary – Container-Transport-Dienst (CTD), founded in 1974 – transported goods to the hinterland for its customers in Hamburg. Immediately after the fall of the Iron Curtain, HHLA ventured into Eastern and Central Europe. It launched its own intermodal projects and, from 1995, acquired a stake in METRANS – the rail subsidiary now wholly owned by HHLA.

A key success factor in the cooperation between HHLA and METRANS was the targeted development of its own self-operated terminals in the hinterland. They make the difference when it comes to reliability, resilience and speed. The network now boasts seven central hub terminals, in addition to 13 end terminals and depots in eight European countries. Most of the imports and exports they handle still pass through the Port of Hamburg. But overseas transport – across the Mediterranean and into the European hinterland – is becoming increasingly important. This is where the strategic advantages of the Italian port city of Trieste come into play.



ESTONIA HHLA TK Estonia in Muuga (top) handles much more than RoRo cargo. CEO Riia Sillave is guiding it into the digital age.



ITALY
In the traditional trading centre of Trieste, HHLA PLT Italy handles a wide range of goods.



Trieste: A new gateway for East-West trade

→ Trieste has an international customs-free zone and sufficiently deep water to accommodate the largest container ships in the world, which travel across the Adriatic Sea to Trieste. The traditional trading centre enjoys historically close links with Central Europe, where numerous European companies are building new production facilities. In addition, Trieste is considered one of the westernmost end points on the New Silk Road and is directly connected to China and the Central Asian markets by land via Turkey.

For HHLA, it was a straightforward decision for the future to invest here. In 2021, the company acquired a majority stake in what is now HHLA PLT Italy. Antonio Barbara, CEO of



VISIONARY
CEO Antonio Barbara sees “huge potential” in the development of the Adriatic terminal.

the HHLA subsidiary, has a clear vision: “We want to turn the port into a new gateway for East-West trade. I see huge potential here,” he says enthusiastically, pointing to detailed plans. Where the rusty remains of a steel factory once stood, one of Europe’s most modern and sustainable container terminals is set to be built.

By developing a cross-border network, HHLA is creating connections that will ensure the smooth flow of goods in Europe. Its efficient transport solutions are facilitating trade, bringing markets closer together and unlocking new growth opportunities. With HHLA as a reliable partner, Europe will be made more competitive together.



SNAPSHOT
Shipping and maritime logistics produce huge amounts of data. How can it be structured and better used?



Enrico Ramming,
Director Information Systems at HHLA,
on the new era:

"We are seeing exponential growth in the digitalisation of processes in terms of innovation, complexity and networking effects. Driven by the opportunities arising from digitalisation, we can automate more and more things, but also develop products and monetise certain data. This is a completely new era that affects every aspect of activities in the social and economic sphere.

By way of example, a data lakehouse is currently in the initialisation phase at HHLA. This represents a consistent approach to the ongoing development of our existing data warehouse and business intelligence structure, creating a central data pool across the entire Group and beyond. The data lakehouse can be used to optimise our operations and create AI solutions. In addition, we can use a platform ecosystem to deliver services and benefits to HHLA customers or introduce digital products."

Connected data, better solutions

AI and start-ups are driving the maritime transformation. HHLA wants to help shape the process and is trialling various concepts here

Around the globe, the digitalisation of maritime logistics is making headway – and data is now an indispensable part of the process. In South Korea, the Port of Busan manages a growing number of containers with its “Chainportal” blockchain platform, making it possible to share vessel details, berth statuses and truck locations, link terminal and forwarder data and allocate transport in advance. In Canada, the Port of Halifax relies on artificial intelligence to monitor emissions in real time using the AI platform “Data Enhancement

Framework 2”. For greater resilience and energy savings, information constantly flows back and forth between the quay walls and ship decks.
These are but a few examples of how well connected the maritime industry is. It shares more and more data in real time, enabling better coordination of ships that call at numerous ports in succession or routes in container logistics that are planned across borders. Cosco freighters on the Asia-North Europe service from China, for example, dock at up to seven other ports before reaching Hamburg. With around

7,000 seagoing vessels arriving and departing every year, Hamburg is one of the best-connected ports in the world as a hub for the flow of goods from all international shipping routes. When it comes to digitalisation, Germany’s largest seaport is among the pioneers in automation, AI and data-driven processes.
As early as 1982, Hamburg’s port industry jointly initiated what was then a groundbreaking Port Community System (PCS), helping many players to collect data simultaneously and only once wherever possible. PCS platforms are now →



Wiebke Kropp-Büttner,
Managing Director at HHLA Sky, on digital solutions in drone logistics:

“Digitalisation will not only determine the future viability of drone logistics. Digital technologies are revolutionising the industry, making processes smarter and safer.

Data and artificial intelligence are connecting all relevant players in real time, facilitating automated fleet management, intelligent route planning and real-time tracking. With our end-to-end approach, the HHLA Sky Integrated Control Center becomes a process management and digitalisation tool for mobile robot management. Through multi-drone operations, we are creating economic added value for our customers in the areas of transport, inspection, security and monitoring.

Our aim is to establish HHLA Sky as an open standard for mobile robot management – based on our control centre as an automation platform for industrial Internet of Things devices and unmanned traffic management.”

→ commonly used everywhere. Today, such digital solutions are developed by HHLA’s subsidiary HPC Hamburg Port Consulting – including PCS platforms for ports in Brazil, Georgia, Romania and Thailand. Then there are successful HPC projects in Europe and Asia for Maritime Single Windows, which serve as central platforms for the real-time exchange of regulatory, nautical and customs data.

In the Port of Hamburg, the HVCC Hamburg Vessel Coordination Center coordinates data from ships, terminals and other stakeholders via its port collaboration platform, the first of its kind in the world. Founded in 2004 as the Feeder Logistics Center (FLC), the HVCC has been a limited liability company since 2009 with HHLA as the majority shareholder. The next step in the digitalisation process is the web-based platform



heyport. This scalable solution for straightforward ship calls and optimised berth planning can serve many ports. It provides information in one central place and establishes a digital handshake between shipowners, agencies and terminals. The start-up is part of the portfolio of HHLA Next, the investment and venture-building unit founded in 2021 that specialises in digitalisation and sustainability in maritime logistics. “We look for innovative business ideas and then found companies or invest in existing interesting start-ups,” says Simone Lode, Managing Director of HHLA Next. In 2024 alone, there were three spin-offs: besides heyport, there is also RailSync for rail management and the passify app for digital truck handling.

Hamburg is one of the best locations in Germany for start-ups

Start-ups are considered drivers of the digital transformation process. The young companies use disruptive technologies to develop innovative solutions and can react in an agile manner to changing requirements and unlock future markets. According to the “Hamburg Start-up Monitor 2025” produced by the German Start-up Association and the Hamburg Chamber of Commerce, there are 1,594 active start-ups in the Hanseatic city, placing it in the top three in the ranking of German cities.

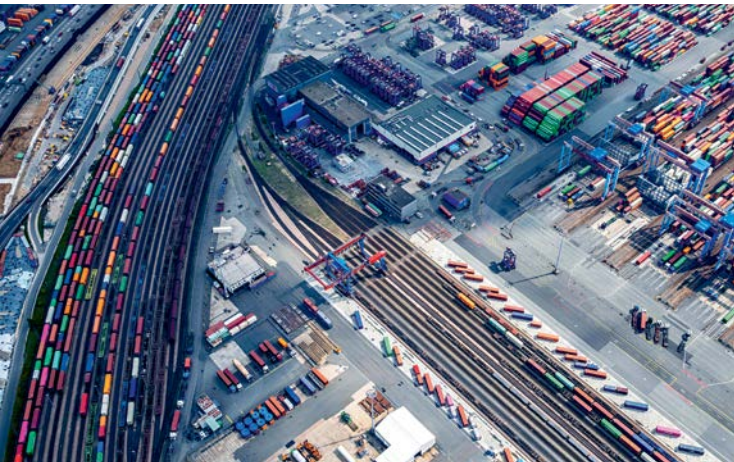
Another successful example is HHLA Sky. It has not only developed its own, safe industrial drones, but also the first scalable – and now multi-award-winning – drone control centre.

The digital platform can also be used to control autonomous mobile robots in various locations around the world. HHLA is also testing AI applications, especially at its Container Terminal Burchardkai. As an example, Daniel Beck, a team leader specialising in data intelligence at HPC, mentions how forecasting the container dwell time can influence the stacking strategy: “If we know that a container will stay in the yard for several days, it can be stacked further down than one that will only be there for a few hours.” This saves a lot of manoeuvring and thus improves the carbon footprint. The carrier forecast for the onward transport of containers also determines the storage location and has the same effect.

“The focus in the future will be on further optimising the connection between maritime and continental logistics flows,” says Enrico Ramminger, Director Information Systems at HHLA. In the early years of IT, individual stand-alone solutions were developed for financial accounting, purchasing or operational processes. Nowadays, the emphasis is on consolidating, networking and evaluating data on a completely new scale, according to Ramminger. His department is currently testing the technology of a “data lakehouse” as part of a research project. This is a new kind of data architecture that facilitates machine learning while promising faster business intelligence and predictive analytics.



FORECASTS
With the aid of AI, complex logistics scenarios can be better predicted, making it possible to optimise processes.



AUTONOMOUS FLIGHTS
HHLA Sky is not only developing safe industrial drones (photo below). Customers can also control them in large numbers with the Integrated Control Center.



Daniel Beck,
Team Leader Data Intelligence at HPC, on AI:

“At Burchardkai, we are running an AI pilot project for volume forecasting at the rail terminal until the end of 2025 in order to optimise resource planning. We are taking into account internal movement data from the past to make a forecast for the next shift. We are enhancing it with external data.

In the current pilot phase using generative AI, we are expecting the first results soon. We are examining how the ordering process at HHLA’s rail subsidiary METRANS can be optimised by automatically processing emails. In Hamburg, a project has been set up to assign voyage numbers to ship calls with the aim of populating automated databases.

In addition to the HHLA projects, we are building a data intelligence suite for logistics. Simulation applications and agents should be able to manage the process steps. The general trend is towards multi-agent systems in the office workspace. Shipping companies, freight forwarders and rail operators can use it to generate orders or complaints as well as draw up or check supplier contracts.”

From the lottery ticket to radio data transmission

1960

Punched cards

There has always been a need to perform lots of calculations at HHLA. Working out the wages for the dockers was once a particularly tricky task. Nobody wanted to argue with them on payday about whether the various bonuses and supplements had been entered correctly. A sophisticated system of “lottery tickets” was therefore devised back in the 1960s. The name was derived from the many holes in the cards that the so-called **Hollerith machines** read. Thirty punch card operators (who, incidentally, were all women, as this kind of work was considered their domain) punched the 80 possible positions on the cards marked by the foremen and thus helped to ensure that the correct salary was paid. Container data was still stored on the somewhat easier to use IBM 029 card punch until the 1970s.



1968

Mainframe

At the same time, HHLA purchased one of the first real computers. It was an **IBM mainframe**, which was the size of a living room. Only two of them existed in the whole of Hamburg. Back then, data transport involved a courier collecting the magnetic tapes with the data written on it from one facility and delivering it to the next.



1975

Individual processing

In their technical language, the IT pioneers took the step from “batch processing” the same orders to “event-driven individual processing”. With the aid of the **PDP 11/70 octal computer**, which was actually specially developed for use in hospitals, they were able to access a common database for the first time and write or adapt programs themselves.



1984

Wireless communication

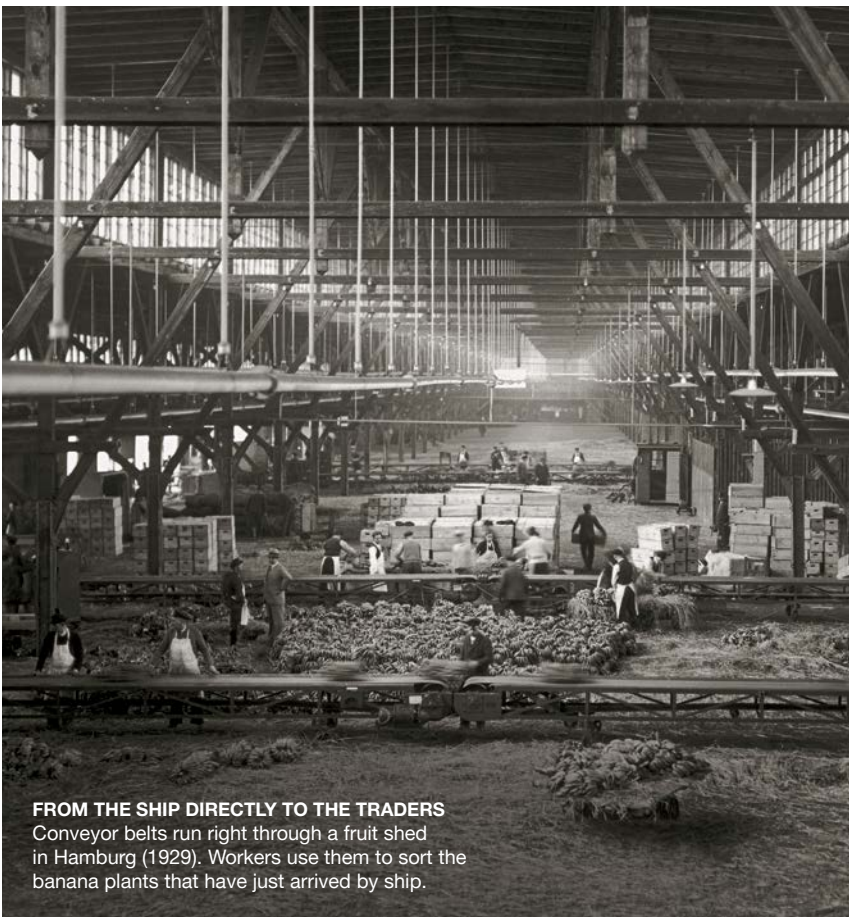
The computers massively simplified the complex task of creating of stowage plans for the safe loading of ships. Data on container movements in the yard could also soon be captured and optimised using programs. This in turn was the basis for the introduction of **radio data transmission**, a quantum leap in operations. From 1984 onwards, orders were “radioed” to a small screen in the straddle carrier that was closest to the container that needed to be transported.



1997

Real-time data

In most cases, customer wishes were behind the developments. In order to meet them quickly, dedicated lines were set up to major customers such as Hapag Lloyd. From 1997 onwards, they were able to request information about the current status of containers at HHLA's terminals at any time using the web application **COAST**.



FROM THE SHIP DIRECTLY TO THE TRADERS
Conveyor belts run right through a fruit shed in Hamburg (1929). Workers use them to sort the banana plants that have just arrived by ship.

The banana port

For more than 100 years, Hamburg has been one of Europe’s most important ports for importing tropical fruits such as bananas – a delicate operation where importers and wholesalers have to rely entirely on logistics companies.

The steamship *Tropani*, property of the Hamburg-based shipowner Rob. Slo-man jr., moored in the Port of Hamburg in 1897 carrying a cargo of highly sensitive goods: “10,000 crates of citrus” as stated in the freight documents. The most popular of all the “tropical fruits” at the time had to be discharged quickly and sold as soon as possible. If this didn’t happen, a newly built state-of-the-art fruit shed was waiting to provide interim storage at Versmannkai. The double-shell shed, which was thermally insulated and heated with the aid of peat waste, was operated by the state quay administration, which later merged with HFLG to form HHLA.

At the turn of the century, Hamburg quickly rose to become one of Europe’s main fruit trading centres. This was also made possible by close cooperation with customers. When the two-storey fruit shed C was inaugurated in Magdeburg Dock in 1912 – with the

press lauding it as “groundbreaking for Hamburg” – the packing and shipping rooms of the fruit consortium were located on the upper floor. Other special sheds were built, which meant that fruit – and especially apples from the USA in addition to citrus fruit from the Mediterranean region – accounted for an ever larger share of the cargo in the Port of Hamburg. By 1910, their share had tripled to 1.4 per cent of all goods handled.

The Germans get their favourite fruit via Hamburg

Despite interruptions due to the First World War, inflation and the global economic crisis, fruit imports continued to gain momentum. In 1931, the quay administration equipped shed 48 with weatherproof elevators, which transported the bananas arriving in unpacked bunches directly into the halls. By 1934, special sheds had been built for the first time for the curved →



“HIEV AN!” – “HIEVE!”, shouted the dockers once they had readied a “load” full of banana plants for transport by truck.



END-TO-END COLD CHAIN: Elevators once handled reefer ships to transport banana crates directly into the cold store.



FAST AND ACCURATE: Instead of individual plants or crates, entire pallets are now handled and placed into storage at the HHLA Frucht- und Kühl-Zentrum. The importers check the quality of the goods in the port.



→ yellow fruit. They were not spared the destruction of the Second World War, but were quickly rebuilt in a modernised form. They were urgently needed, not least because the banana had become a real staple. The Germans had the highest per capita consumption in the world, and they were mainly supplied via Hamburg.

By 1954, Hamburg's fruit trade had reached a volume of 233,000 tonnes. This was more than double that of its closest competitor Rotterdam, mainly thanks to banana handling, which was approaching the half-million-tonne mark. Without standardisation and early automation, such quantities could no longer be handled at the speed needed for perishable goods.

In the mid-1970s, HHLA therefore started work on constructing a technologically pioneering fruit centre with almost twice as much cold storage space – again in line with the wishes of the fruit trade. The HHLA Frucht- und Kühl-Zentrum was inaugurated in 1978 on the site of O'Swaldkai, now HHLA's multipurpose terminal. It boasted an area of some 720,000 m², making it the second largest handling facility in the entire port at the time.

The race for the most modern fruit logistics operation

The employees had developed the most modern banana shed in Europe, featuring a partially automated system controlled by photoelectric sensors. They also advised exporters in the producing countries and were able to convince them of the advantages of standardisation, soon enabling production to take another leap forward as a result of the palletising of the goods. Mobile cranes working in sync with the forklifts were now able to handle and store much larger quantities at once.

What would provisionally be the last stage in the European race for the most modern fruit logistics operation opened in 2009 at O'Swaldkai. The semi-automated refrigerated warehouse at the HHLA Frucht- und Kühl-Zentrum has four cold stores with separate temperature zones that can accommodate 8,000 pallets (400,000 boxes or 7,600 tonnes of bananas).

Chip-controlled processes, transparent at every stage

The facility also plays a key role in the increasingly important area of comprehensive quality control. Each pallet placed into storage bears a barcode that is scanned in the entrance area of the refrigerated warehouse and “married” to the RFID chip of a pallet. Every pallet movement across five levels – using continuous conveyors and storage and retrieval machines – is tracked by the software. The goods are retrieved for shipping in a chip-controlled process so that the pallet only has to be loaded onto the waiting trucks.

Complete traceability of the goods is guaranteed by scanning them as they arrive and leave the warehouse, which is important for creating a transparent and computer-aided transport chain in the fruit industry. Importers and wholesalers can fully rely on this logistics operation. The fruit forwarding company Ulrich Stein also plays a key role here. Using software developed in-house, the HHLA subsidiary ensures that all customs regulations are met. It also makes sure that the import licences are always up to date and that the necessary samples of goods are presented to the authorities. Everything is done with the aim of ensuring that the Germans' favourite fruits find their way into people's fruit baskets as quickly as possible.

The colonial port

The German colonies and exploitative practices of Hanseatic business people also made Hamburg one of the largest ports in Europe. An interview with Professor Jürgen Zimmerer, who teaches global history with a focus on Africa at the University of Hamburg.



The Port of Hamburg saw a huge increase in the amount of cargo it handled at the end of the 19th century. Was this due to the new colonial trade?

This rise cannot be explained without the growth of global trade at the time. And this in turn is inextricably linked to colonialism. After all, people mainly traded with colonial powers, colonies or newly independent states, and with goods from the colonies.

What role did the business people of Hamburg play in German colonies?

Many of them played a leading role in the decision to establish a German colonial empire. Their main expectation was that the German Empire, which had been newly founded in 1871, would protect their business. They already had large settlements and plantations overseas – in the South Seas, for example, or even in Zanzibar, a centre of the slave trade.

Who did particularly well out of it, and with what?

At the time, simply everything was transported by ship, from the colonial civil servants and their mail to the soldiers and their equipment. There was a great deal of money to be made from transport.

And most of it was shipped via Hamburg?

Yes, it was one of the largest ports in the world. And the people of Hamburg had put themselves in a very unique position in Germany with their new duty-free port and the huge warehouses in the Speicherstadt district. Hamburg and Bremen had a kind of monopoly on the so-called “colonial goods” like coffee, cocoa and tea, which they sold throughout the German Empire as far as the Baltic States or Bohemia. This was of course highly lucrative and made many importers rich.

Have you also examined the banana trade?

No, not in detail, but it is a good example. The Hamburg-based shipping company Laeisz, for example, managed plantations in Cameroon through the African Fruit Company and was an early user of reefer ships to bring fresh



PLANTATION WORK was very poorly paid and generated high profits.

bananas to Germany. Even though the customers in Hamburg were engaging in legitimate business transactions, they still profited from the exploitation in the growing countries. In the mid-nineteenth century, there was still a reliance on slave labour, later on largely disenfranchised and very poorly paid workers.

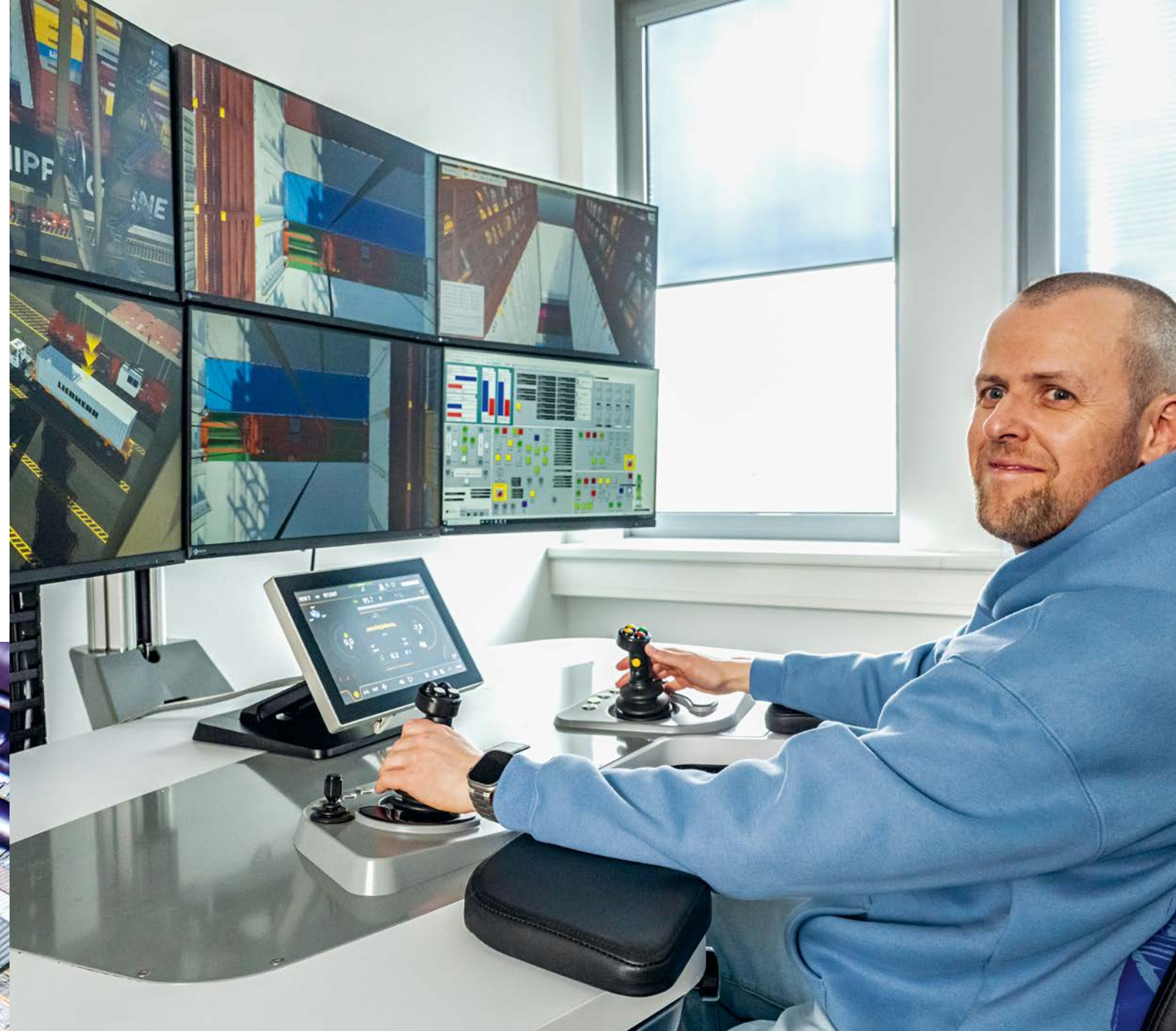
Did people from the colonies also work in the Port of Hamburg?

Chinese, Indian and African people mainly worked on the ships. They were certainly also used for loading goods at the port, but there are hardly any studies on this. We are trying to change this and are advocating further research into the lives of the few Africans in Hamburg at the time.



From the cabin to the remote control

Technical innovations and improved processes have always changed port logistics in Hamburg. At HHLA, employees are preparing for this and are now taking a further **step towards the future**.



KEEPING AN EYE ON EVERYTHING is the task of remote crane operators like Immanuel Konschak (right). He is still training on the simulator but will later become a container gantry crane operator (left). The office-based workspace is more ergonomic than the glass cabin.

The month of March can be quite uncomfortable in Hamburg. With strong winds and temperatures hovering just above zero degrees, Immanuel Konschak is not exactly drawn to the quayside of the Container Terminal Altenwerder (CTA). Instead of sitting at dizzying heights in the cabin of a container gantry crane, he is working in the warmth of an office today – in front of several screens at a modern remote console. Konschak has been working at the port since 2007 and has continuously undertaken further training. Thanks to several certificates of proficiency known as “patents”, he is licensed to operate various kinds of heavy equipment. His next aim: to operate the container gantry cranes via remote control. Konschak is still training on a state-of-the-art simu-

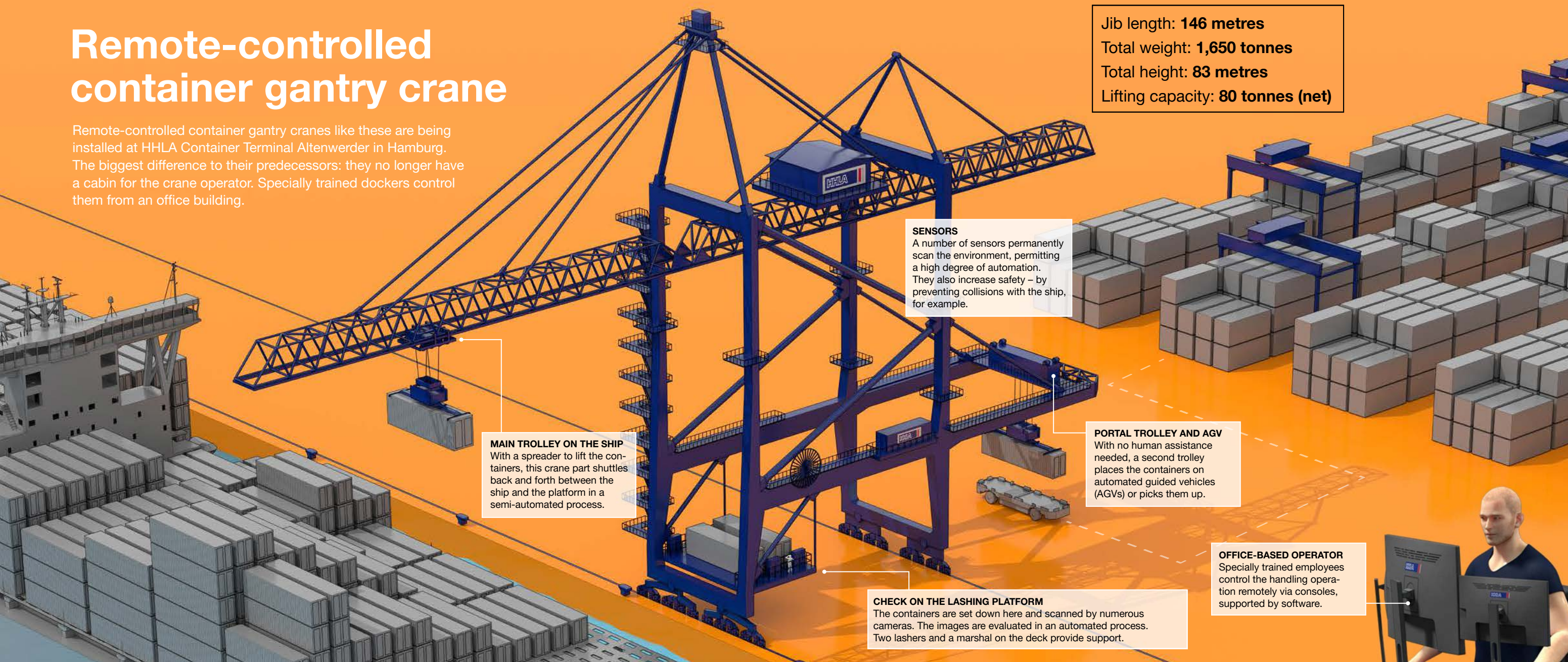
lator in the digital training centre at the “ma-co maritime kompetenzentrum”. But the future is already here: new, remote-controlled container gantry cranes are assembled on the terminal site, almost like an oversized set of building blocks. The biggest difference to their predecessors: they no longer have a cabin for the crane operator. Instead, specially trained dockers control them from the remote console in the office building.

The future is already here

However, this is not exactly a new development for the CTA. As one of the terminals with the highest degree of automation in Europe, more than 100 remote crane operators already work here. Dennis Winzer is one of them. He describes his job as follows: “We remote →

Remote-controlled container gantry crane

Remote-controlled container gantry cranes like these are being installed at HHLA Container Terminal Altenwerder in Hamburg. The biggest difference to their predecessors: they no longer have a cabin for the crane operator. Specially trained dockers control them from an office building.



Jib length: **146 metres**
Total weight: **1,650 tonnes**
Total height: **83 metres**
Lifting capacity: **80 tonnes (net)**

SENSORS
A number of sensors permanently scan the environment, permitting a high degree of automation. They also increase safety – by preventing collisions with the ship, for example.

MAIN TROLLEY ON THE SHIP
With a spreader to lift the containers, this crane part shuttles back and forth between the ship and the platform in a semi-automated process.

PORTAL TROLLEY AND AGV
With no human assistance needed, a second trolley places the containers on automated guided vehicles (AGVs) or picks them up.

CHECK ON THE LASHING PLATFORM
The containers are set down here and scanned by numerous cameras. The images are evaluated in an automated process. Two lashers and a marshal on the deck provide support.

OFFICE-BASED OPERATOR
Specially trained employees control the handling operation remotely via consoles, supported by software.

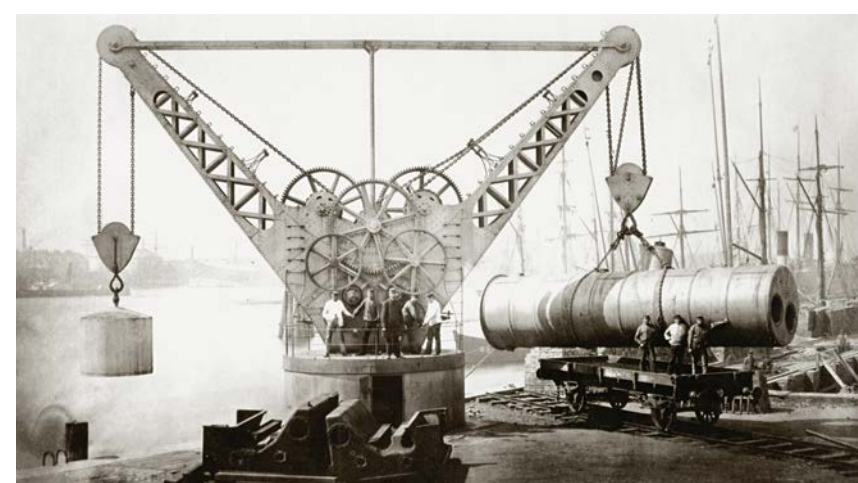
→ crane operators have to keep an eye on everything and intervene quickly in difficult situations. Due to the fact that we have several different licences, or “patents”, we are used for a wide range of tasks. That makes the job varied and interesting.” His colleague Konschak adds: “When you’re constantly bending over on the crane for four hours at a time to see the containers below, then you notice the impact it has on your health. It’s different in the office.” There are clearly some advantages to the job as a remote crane operator. The specialists work in ergonomically designed offices, making the work at the container terminal more inclusive – for people whose mobility is restricted for various reasons, for example.

A safer and more comfortable working environment is also one of the reasons why many

truck drivers apply to FERNRIDE to work as a remote operator. FERNRIDE, in which HHLA Next has a stake as an investor, develops automation solutions for horizontal transport at container terminals. The company relies on a combination of autonomous technology and human control. It could be described as “human-assisted autonomy”.

Remote operator training

“The working conditions for truckers are often difficult. Our technology offers them a more attractive alternative,” explains Günter Schmidmeir, Chief Revenue Officer (CRO) at the company. “Remote operators monitor several autonomous vehicles and intervene when needed. Whenever a vehicle detects an obstacle, for example, and cannot proceed on its own. In



MOVING 40 TONNES in 1875 was still possible with muscle power, thanks to gearwheels and a counterbalance. Despite the transference of force, there was a lot of winding involved.

such cases, the operator solves the problem either by clearing the path or by remotely steering the vehicle around the obstacle.” The vehicles normally operate autonomously and the remote operator only steps in where necessary. The technology has been used in the port of Muuga at HHLA TK Estonia since 2023 to control the tractor units. FERNRIDE is planning to use such solutions over the coming years, initially in the short-haul sector and, in the long term, for long-distance transport throughout Europe.

Lack of qualified workers

Such ideas and new technologies are urgently needed, especially in Germany, where it is estimated that there is a shortage of between 70,000 and 100,000 professional drivers, →



TECHNOLOGICAL LEAP

From 1925 onwards, new electric trucks were used at the port. They were able to move 10,000 sacks of sugar as quickly as ten workers with handcarts.

→ with more retiring every year. This means that employers have to fight hard for qualified drivers. A modern working environment and regular working hours are a good incentive, especially for young people.

Günter Schmidmeir was recently speaking to the chairman of a transport union in Japan about the acute shortage of workers: “The ageing population there is almost a dire reality. The trade unions in the country are also having constructive discussions about extensive automation because ever fewer workers have to move even greater quantities in some cases.”

Opportunities and concerns

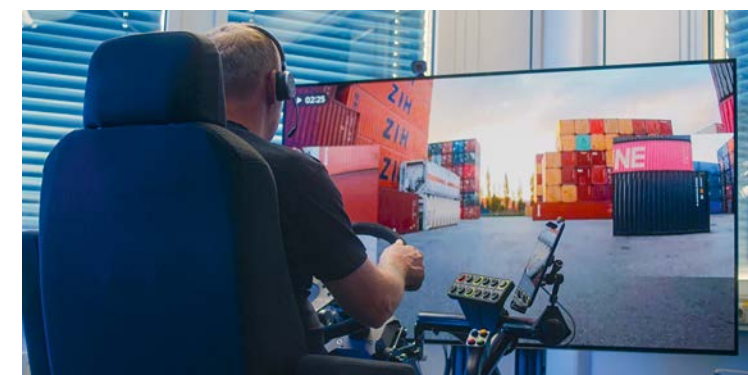
The challenges could become even greater if forecasts by the Global Maritime Forum turn out to be correct. A study estimates that up to four million entirely new jobs could be created in the maritime industry alone by 2050 in order to decarbonise transport processes and technologies and make them more sustaina-

ble. Innovations in robotics and drone technology are also leading to the creation of new job profiles in the logistics sector. But where exactly are all these skilled workers supposed to come from? The current changes due to advancing automation, artificial intelligence and climate change are prompting very different reactions. While many companies and employees view these developments as an opportunity, there are also concerns. After all, progress also means having to learn new skills and adapt. Yet technological change is an inevitable constant of history. The elegant tall ships, which were dependent on the wind, were superseded by steamships, which in turn had to make way for general cargo carriers with diesel engines. At the beginning of the 20th century, up to 12,000 stevedores worked in the Port of Hamburg to discharge them. Between 200 and 500 people were enlisted on a daily basis to handle a single ship, bustling back and forth between the quayside and the storage sheds. They only had a simple handcart to help them do their hard and dangerous



REMOTE-CONTROLLED IN MUUGA
HHLA TK Estonia uses FERNRIDE technology to control tractor units in Muuga, Estonia.

Fewer workers are available to move greater quantities of goods



CONTROL STATION
The workspace of a FERNRIDE operator, whose job is to monitor the vehicles and intervene when necessary.

work, which they pushed around using pure muscle power.

Today, huge container ships manage the global movement of goods, while container gantry cranes dominate the skyline of port cities. The workers and employees have adapted to these changes over the years, acquiring licences for reach stackers and straddle carriers and learning professions such as that of car-

go inspector – some of which have since disappeared again. Those who once wrote out cargo lists with a pen, ruler and the utmost care were soon entering container data into the first computers.

Lifelong learning is becoming the norm

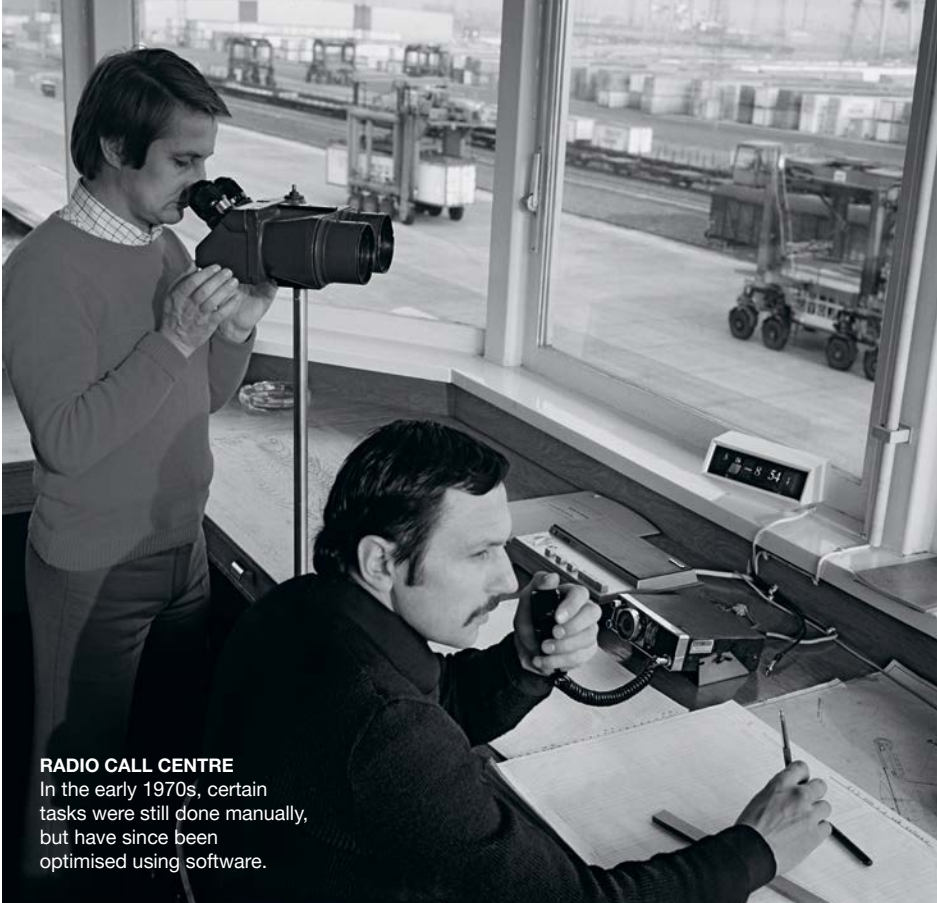
The increasingly automated port terminals are also changing what is required of the workforce. Lifelong learning is becoming the norm, as emphasised by Torben Seebold, HHLA’s Chief Human Resources Officer: “Professional requirements are constantly changing, which is why additional qualifications are becoming more important – maybe even several times over the course of a person’s working life. We have introduced progressive agreements, enabling us to use technological progress to increase our competitive ability while at the same time giving employees the opportunity to get the right training and qualifications. Modern working time systems and flexible personnel planning also play an important role. We can only successfully →



“For us, investing in people is at least as important as investing in future technology.”

Torben Seebold, HHLA's Chief Human Resource Officer, at the opening of ma-co's new digital training centre:

“In several research and practical projects, we are exploring how our employees can continue to get the right training using cutting-edge methods. Making sure they have the necessary qualifications is a critical success factor in maintaining and consolidating our competitive ability. The German port industry has recognised this fact and is setting completely new standards in training and educating its employees.”



RADIO CALL CENTRE
In the early 1970s, certain tasks were still done manually, but have since been optimised using software.

→ manage this huge transformation in cooperation with the employees.

A huge transformation

How can such models be put into practice? What impact do digitalisation and automation have on specific tasks, and what specific, new skills are needed? The PortSkill 4.0 project, to which HHLA is making an important contribution, examines and answers such questions. Its CTA terminal marries state-of-the-art technology with networked learning, and there is also a focus on the analysis of future job requirements. Hand in hand with the “ma-co maritime kompetenzzentrum” and other partners, a pioneering platform aimed at ensuring skilled workers have the right qualifications has been created here. Training and learning content is being tested as part of PortSkill 4.0 and will also be made publicly available once the project has ended.

At the heart of the training centre is a large video wall with six screens, which, together with consoles, serves as a control centre. Remote consoles are also available for container gantry cranes, warehouse cranes and rail gantry cranes, plus a room with virtual reality applications for immersive training. The CTA is connected to the ma-co locations in Hamburg and Bremen, enabling training to be carried out across sites in a shared virtual environment. The IHATEC II research initiative launched by

Humans are still indispensable at the port

the Federal Ministry for Digital and Transport (BMDV) is funding the project, which is set to be available to the German port industry from the end of 2025. Also up and running is the DigiRemote2030 funding programme, with which HHLA has already started training the first 50 container gantry crane operators. They are being prepared for their new role as remote

crane operators throughout 2025. The individual training sessions start after performing detailed job analyses and holding interviews with the employees. Immanuel Konschak from the CTA is among the first.

His example proves that humans are still indispensable at the port. It is also proven by the number of jobs, which, according to the Federal Employment Agency, has remained stable at more than 13,600 for over ten years. When looking back on history, one thing becomes clear: if the Port of Hamburg had not continued to modernise since the middle of the 19th century, it would have long since lost its role as a competitive “global port”.



VIRTUAL REALITY
With virtual assistance (here at HHLA Sky) people can make better decisions.

The only constant in life is change

Since it was founded in 1885, HHLA has reinvented itself time and again. How did a property construction company and terminal operator become a European network logistics specialist?



Public-private partnership

The city of Hamburg, which had been independent since its foundation, became part of the German Empire. In return, the clever merchants now had a free port where they enjoyed the advantages of discounted foreign trade as well as privileges when trading with the German Reich. The idea was for private sector business sense to lead the Port of Hamburg into a new era. However, the expansion of the port and the new warehouses required huge financial resources. When it came to securing the necessary investment, Hamburg chose a unique path that was considered progressive at the time. On **7 March 1885**, the Hamburg Senate, in cooperation with private merchants and the Norddeutsche Bank, founded the **“Hamburger Freihafen-Lagerhaus-Gesellschaft” (HFLG)**. Their aim was to plan, build and operate a modern complex of warehouses, Hamburg’s now world-famous Speicherstadt warehouse district. The business model would turn out to be innovative and visionary. The mix of state influence and private capital is now called a public-private partnership.

The most modern logistics centre in the world’s third largest port

Since Kaiser Wilhelm II personally marked **Hamburg’s customs union with the German Customs Union on 29 October 1888** by laying the keystone on Brooktor Bridge, the volume of goods handled in the Port of Hamburg had been growing. By 1910, it was the third largest port in the world after New York and Liverpool. This was also made possible by the world’s most modern logistics centre at the time. The Speicherstadt was completed in stages under the direction of HFLG, with 24 warehouse blocks containing around 300,000 square metres of storage space having been built by 1927.



HFLG takes over the quay administration and HHLA is formed

By 1928, the city of Hamburg had used HFLG’s dividends to gradually buy back all privately held shares. Despite the state influence, the company retained its economic independence. In 1935, however, HFLG had to take over the loss-making state quay administration. With it came the quay facilities and port handling, but also financial burdens, civil service structures and public administration responsibilities. **In 1939, HFLG was renamed “Hamburger Hafen- und Lagerhaus-Gesellschaft” (HHLA)**. It was allowed to continue to operate the facilities turned over by the city and sublease them to private quay companies. It thus had all the port’s state-owned quays. This put an end to intra-port competition.

National Socialism and war

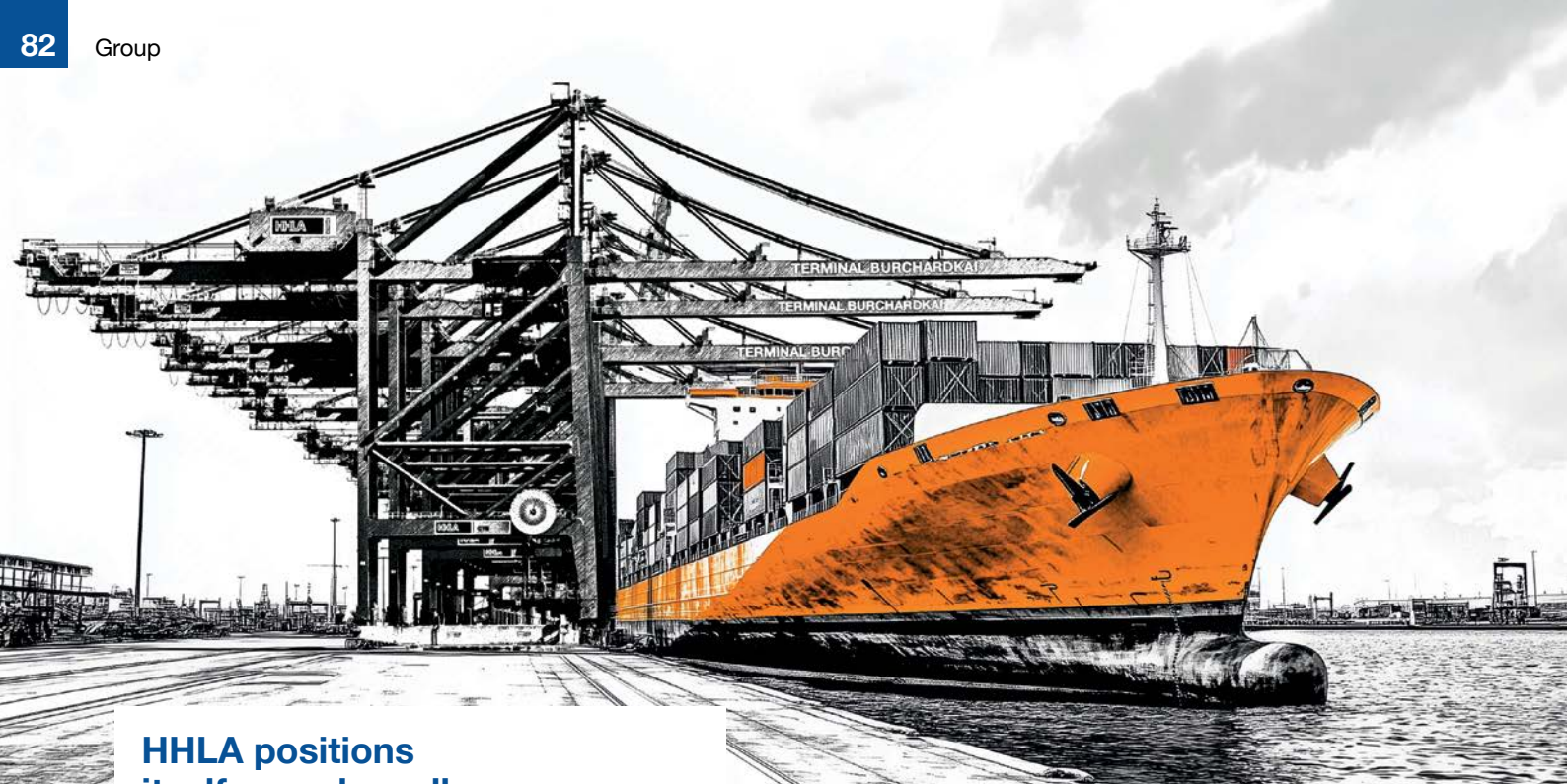
Numerous employees were dismissed for political reasons from 1933 onwards. Public employees of the quay administration were particularly affected, along with trade unionists, Social Democrats and Communists at HFLG. After 1933, NSDAP members were installed on the HHLA Executive Board – as they were in other public companies – and from 1940 onwards, top functionaries of the NSDAP in Hamburg sat on the Supervisory Board. **Overseas transport ceased following the outbreak of war, while more and more workers were sent to the front.** For this reason, forced labour and concentration camp prisoners were used throughout the port, including at HHLA, during the Nazi regime, centrally organised by the port operating company (Gesamthafenbetriebsgesellschaft or GHB).

Reconstruction and modernisation

At the end of the war, the scale of destruction in the Port of Hamburg was immense: 3,000 shipwrecks lay at the bottom of the harbour basins, while eight out of ten quay cranes had to be scrapped. **Ninety per cent of the quay shed area and a third of the quay wall had been destroyed. Two thirds of all sheds and warehouses were no longer usable.** Seventy per cent of the rail network was no longer passable. There was only one berth left in the Port of Hamburg and hardly any shipping traffic. The reconstruction of Hamburg and its port was carried out with financial assistance from the Allies and under British control. The British administration declared the free port zone a restricted area. Sheds and quays – where coveted goods such as coffee and sugar were stored – were particularly guarded. HHLA employees were only allowed to enter the port with special passes. The new facilities embraced state-of-the-art technology – such as newly developed forklift trucks from the USA. Thanks to them, heavy manual work using handcarts gradually disappeared at HHLA from 1952 onwards. Standardisation in freight traffic continued to make progress.

Container revolution and HHLA reorganisation

In the late 1960s, a far-reaching revolution in port handling began almost silently. HHLA quickly recognised the potential of a new standard: the container. In order to be able to react more flexibly to such developments in the future and invest more quickly, HHLA once again became a private sector company. **On 1 July 1970, the new port regulations came into force, granting all port operators equal rights.** Quay operators that previously had to rent space from HHLA were now leasing it again from the city state of Hamburg – as they had done prior to 1935. All handling companies, including HHLA, now enjoyed identical storage and handling rights, operating in competition under the same conditions. This gave HHLA new leeway. It was free to engage in activities across all areas of the logistics business. To this end, its nominal capital was increased almost a hundredfold from just one million marks to 99 million.



HHLA positions itself more broadly

The former authority evolved into a logistics group that started investing in new business areas. As early as 1972, Container-Transport-Dienst CTD was founded as the first subsidiary. This was followed in 1976 by Hamburg Port Consulting HPC, which launched HHLA's international activities with a consulting project in Odessa. **Shareholdings and entire companies were acquired** or – as was the case with the Hansaport terminal for bulk goods – established in conjunction with partners.

Historic expansion of capacity

Global trade was booming, with container ships making this growth possible. They transported goods at low cost from one continent to another. The Port of Hamburg had become one of the most important global hubs, both for exports and imports to Europe. It urgently needed to expand its container handling capacity, which is why a new facility was planned and built very quickly. On 25 October 2002, HHLA Container Terminal Altenwerder began operations and was quickly regarded as the most modern of its kind in the world. Yet the **quantities transported by the ever-larger container ships continued to grow**, which is why HHLA launched the largest investment programme in the company's history in November 2004. The focus was on expanding the capacity of the container terminals in Hamburg and the HHLA transport network.

Successful initial public offering

More than 120 years after its founding as a stock corporation with private shareholders, HHLA returned to these roots. **On 2 November 2007, the city of Hamburg floated around 30 per cent of the company on the stock exchange.** There was considerable investor interest and the IPO was more than ten times oversubscribed at an issue price of 53 euros. The IPO enabled HHLA to consolidate its equity base and create a financial basis for continuing its successful expansion and innovation strategy. One particularly pleasing effect for the city of Hamburg saw the partial sale generating 1.2 billion euros for the further expansion of the port.


The Power of Networks

Shortly after the fall of the Iron Curtain, HHLA began to build up its own hinterland network. The first container trains ran to Poland, and shares in the then Czechoslovakian METRANS were acquired. In the late 2010s, the Europeanisation of HHLA's activities gained considerable momentum: METRANS has been a wholly owned subsidiary of HHLA since 2018 – and is now one of Europe's most successful intermodal companies. At the end of 2018, HHLA acquired Transiidikeskuse (now HHLA TK Estonia), Estonia's largest terminal operator, followed in 2021 by the PLT multipurpose terminal in Trieste, Italy. The international network not only grew in the area of port handling and via the 20 hinterland terminals now managed by METRANS, but also through the integration of the Austrian container operator Roland in 2024. **With its guiding principle – “The Power of Networks” – HHLA is systematically pursuing its successful strategy and continuing to consolidate its position as Europe's leading network logistics specialist.**





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As one of Europe's leading logistics groups, we are driving the sustainable logistics of the future. If you would like to follow us and stay up to date, you are welcome to do so on social media by scanning the QR code for the relevant channel. Or you can subscribe to our newsletter for HHLA updates.





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Connecting Europe
– with seamless logistics solutions.



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