



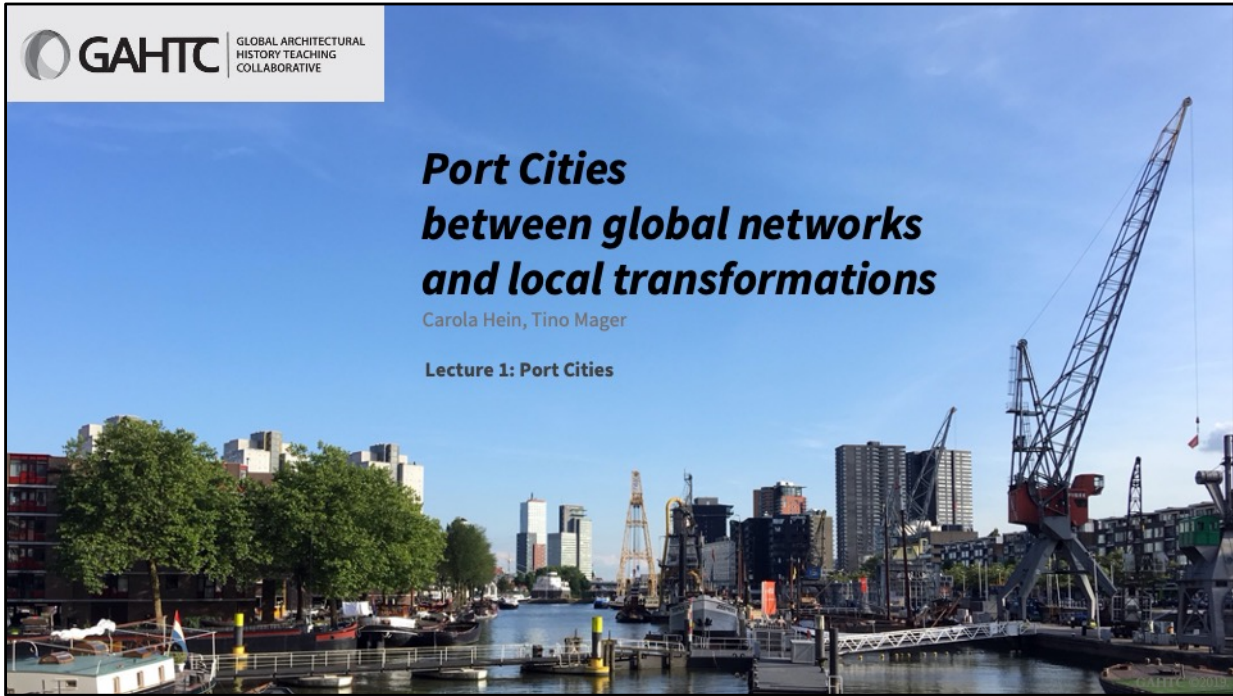
Welcome to the GAHTC lecture on port cities.

My name is Carola Hein, and I am Professor History of Architecture and Urban Planning at Delft University of Technology. Growing up in Hamburg, I have developed a great fascination for the workings of the port and its impact on urban development. This fascination increased further when I lived and worked in Tokyo, Philadelphia and now in the larger Rotterdam area. In my opinion, port cities are a particular type of cities. I would like to use this lecture series, developed together with my colleague Tino Mager, to examine the particular character of port cities through their architectural and urban traces.

Port Cities between global networks and local transformations

Carola Hein, Tino Mager

Lecture 1: Port Cities



Port cities are constantly negotiating the tensions between land and water, between local and global, or between traders and workers or sailors. To do that their major stakeholders need to navigate diverse political, economic, social and cultural frameworks.

Image:

Leuvehaven Rotterdam, The Netherlands (2018), Tino Mager

Port Cities between global networks and local transformations

Carola Hein, Tino Mager

Lecture 1: Port Cities

Part One: What is a Port City?

Part Two: Port City Architecture

Part Three: Port-City Relations

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Lecture Abstract:

The first lecture provides an introduction into the topic by highlighting the role of navigable water for port and city development. It deals with fundamental aspects of port city architecture and its urban planning peculiarities. Moreover, it addresses maritime networks, flows and connectivity between places.

Image:

Leuvehaven Rotterdam, The Netherlands (2018), Tino Mager

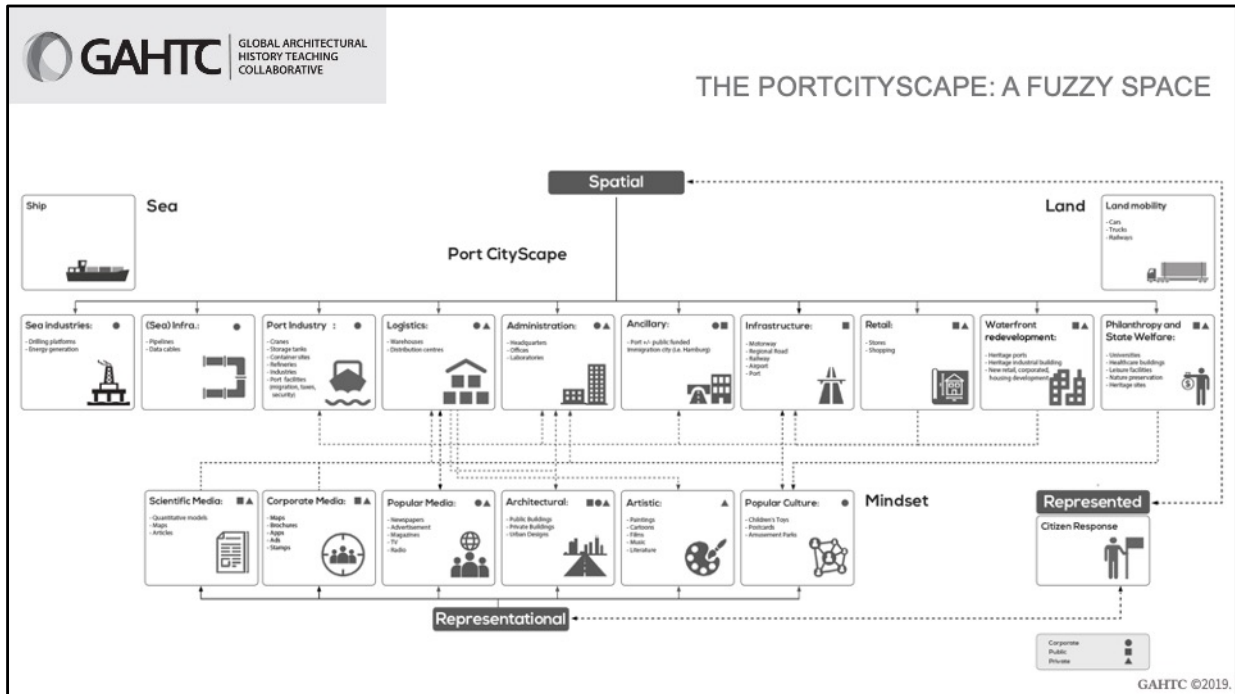


Presenter Note:

The long-term co-creation of ports and cities has led, we argue to a particular port city culture and resilience, that is inscribed in buildings and urban practices and that can facilitate change. The lectures aim to identify and analyze these interconnected structures within one city and among port city regions and show the multiple ways in which port cities have mastered transitions.

Image source

PortCityFutures.org; portcityfutures.nl

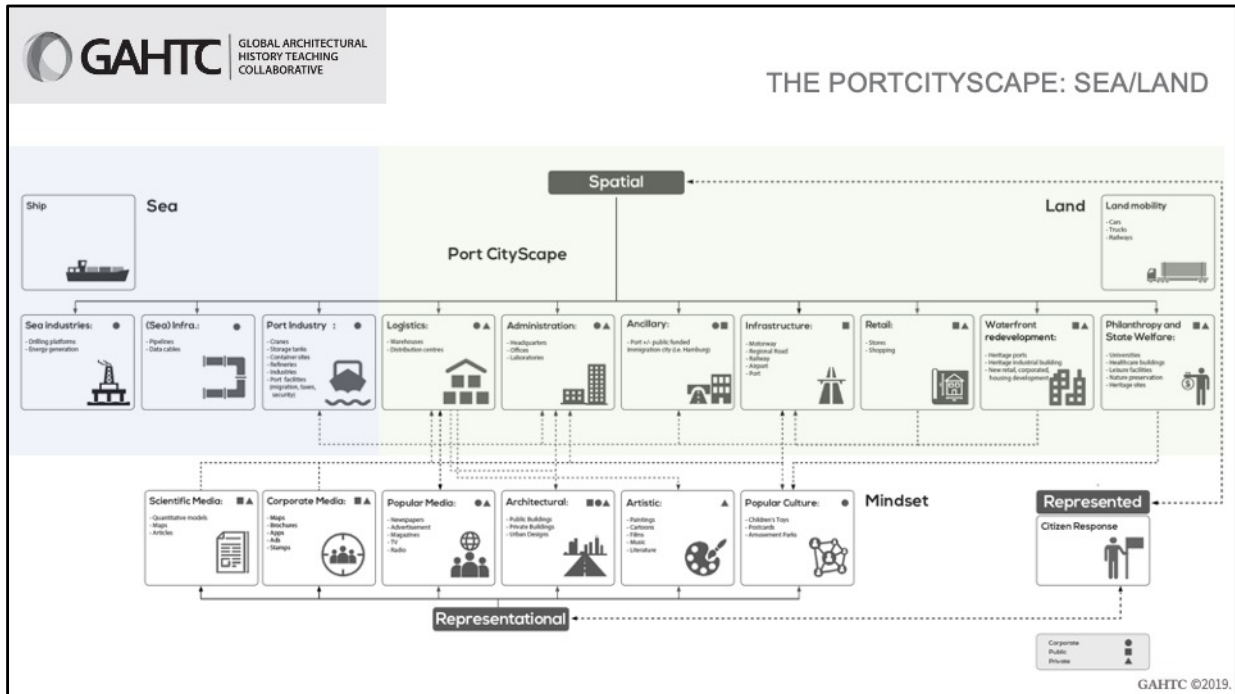


Presenter Note:

Many architectural and urban histories are land-based. That is, they focus on the built environment in one city, region, or nation, often without considering their interconnection through infrastructure or their role beyond national boundaries. The sea as foreland, with its versatile shipping lanes and international waters, has different characteristics than the hinterland with its fixed infrastructure and nationally controlled spaces. The lectures argue that we need to study port city architecture as part of a sea-land continuum that connects diverse architectural typologies and spaces. It reflects the idea that ships shape the port, the port shapes the waterfront, the city and its hinterland. Shipping and associated trade create a port cityscape—a spatial, social and cultural pattern—as defined by Hein (2011, 2016). This port cityscape is not spatially continuous, but that has similar architectural and urban patterns in interconnected port cities. Such an approach does more than compare cities, it studies their development as they respond to collective challenges on the sea-land continuum. That means taking into account new types and sizes of ships—think of the introduction of tanker ships or of the new Panamax or Neopanamax ships. It also means exploring the changing technologies that port cities have to collectively respond to—the introduction of the telegraph that let shippers plan for the arrival of ships, or of containers in the 1960s. Shifting sea routes and transforming

economic, political realms further transformed the workings and the design of cities. The size and longevity of some spaces may be very different from their representation in literature, film or art or in language. These different representations reinforce each other, creating a feedback loop and need to be studied together.

Image Source:
Carola Hein

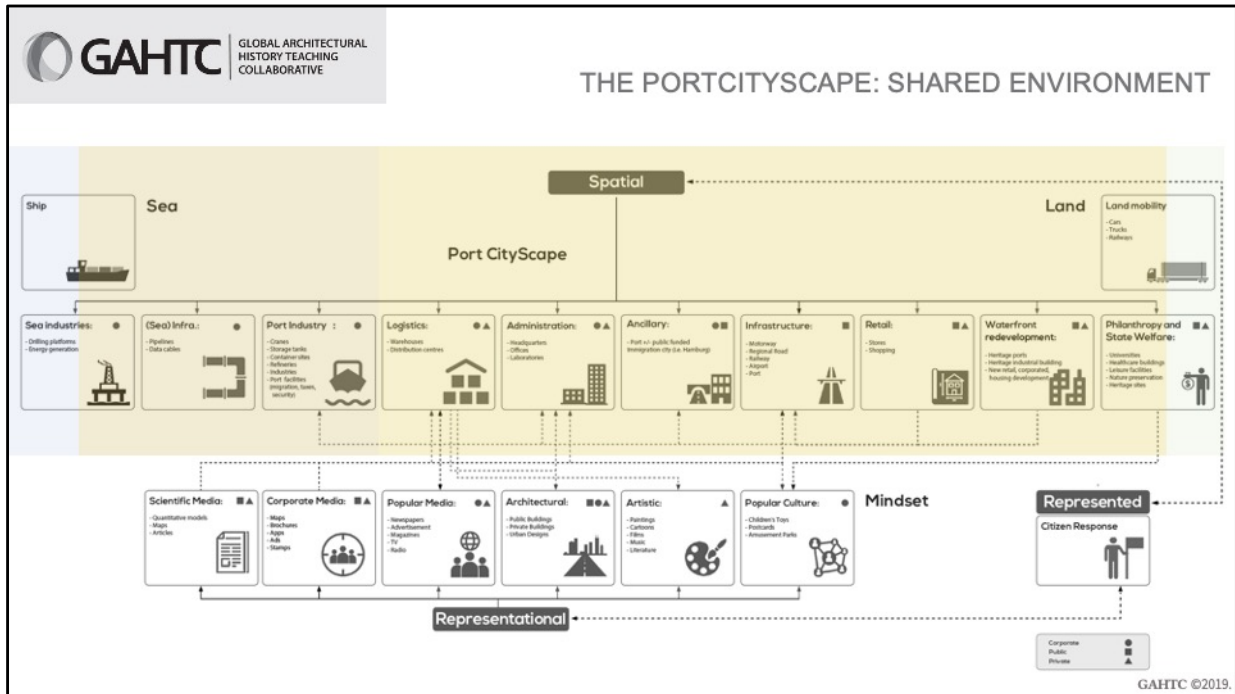


Presenter Note:

The port cityscape considers sea and land spaces as an interconnected spatial network, in which each piece plays an important albeit different role.

Image Source:

Carola Hein

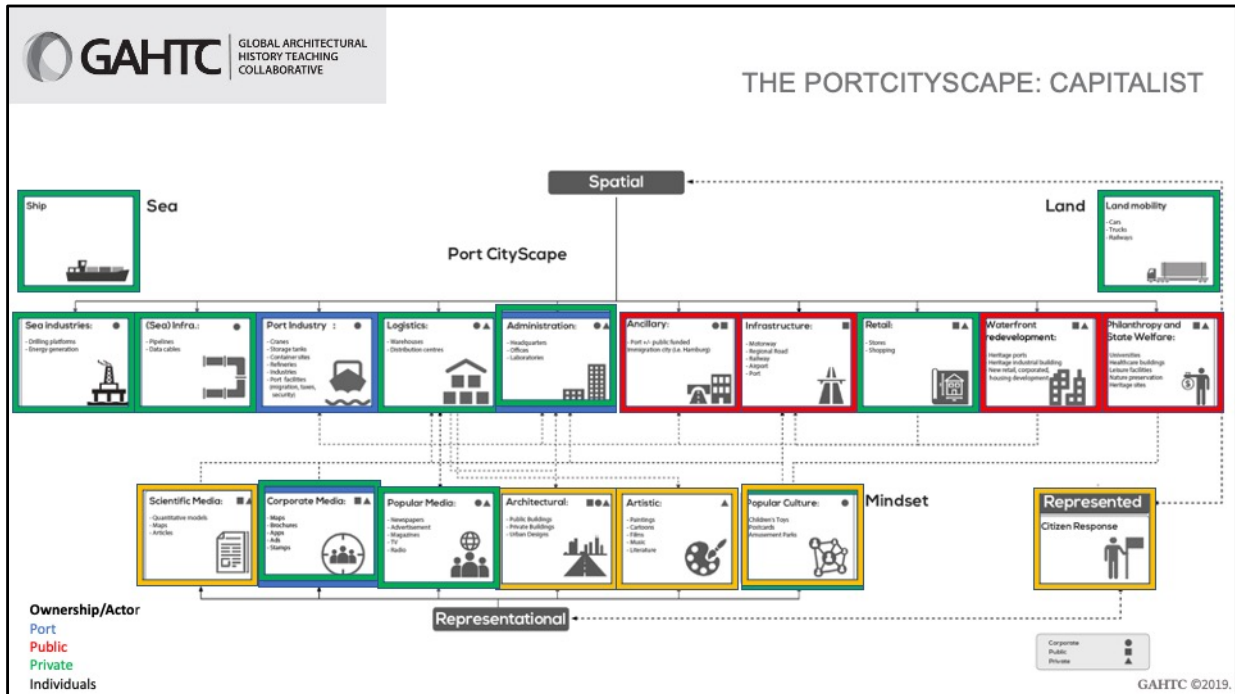


Presenter Note:

However, what may be considered clearly spatially distinct bounded areas—with high fences surrounding the working port—is often interconnected through environmental pollution of the air or the water, through flows of goods, people and information, and through infrastructures. To understand and plan for port-city relationships we need to consider the networks that tie the two functions together.

Image Source:

Carola Hein

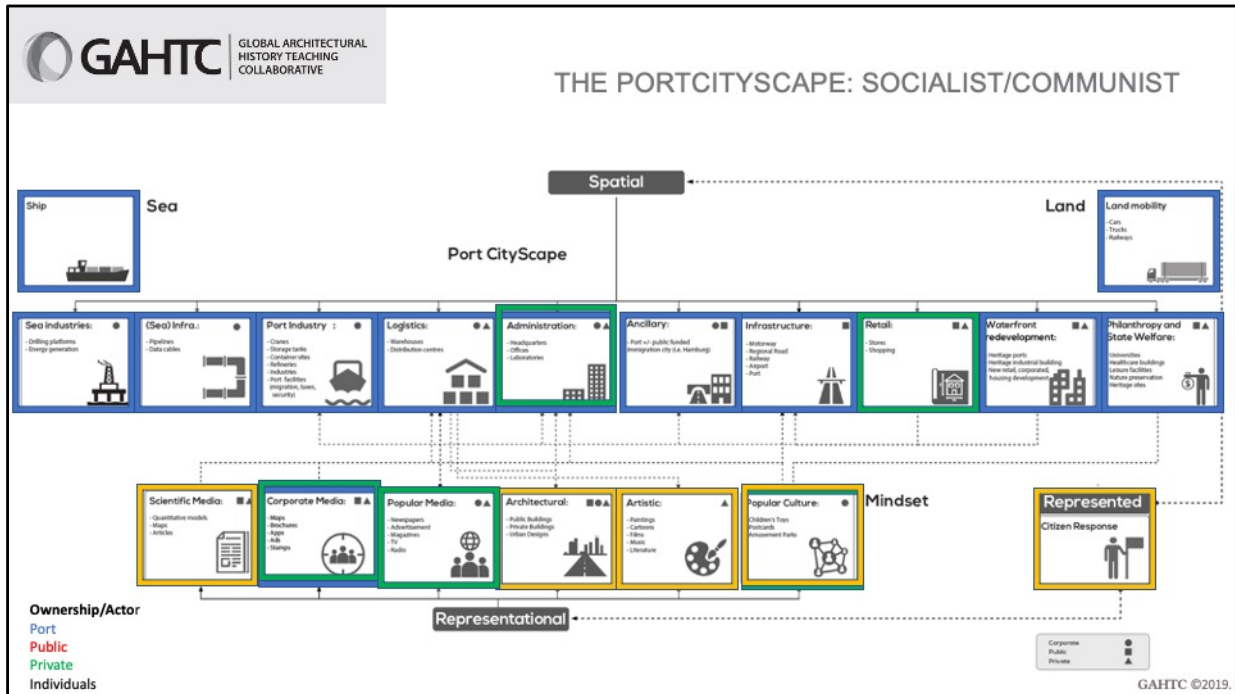


Presenter Note:

The planning of port cities is particularly difficult because of the multiplicity of public and private, local and global actors involved. This relationship changes through time and in different locations. Shipping or logistics companies, traders, national or local politicians, and citizens interact in multiple ways that can be different if a port city is located in a capitalist country,

Image Source:

Carola Hein



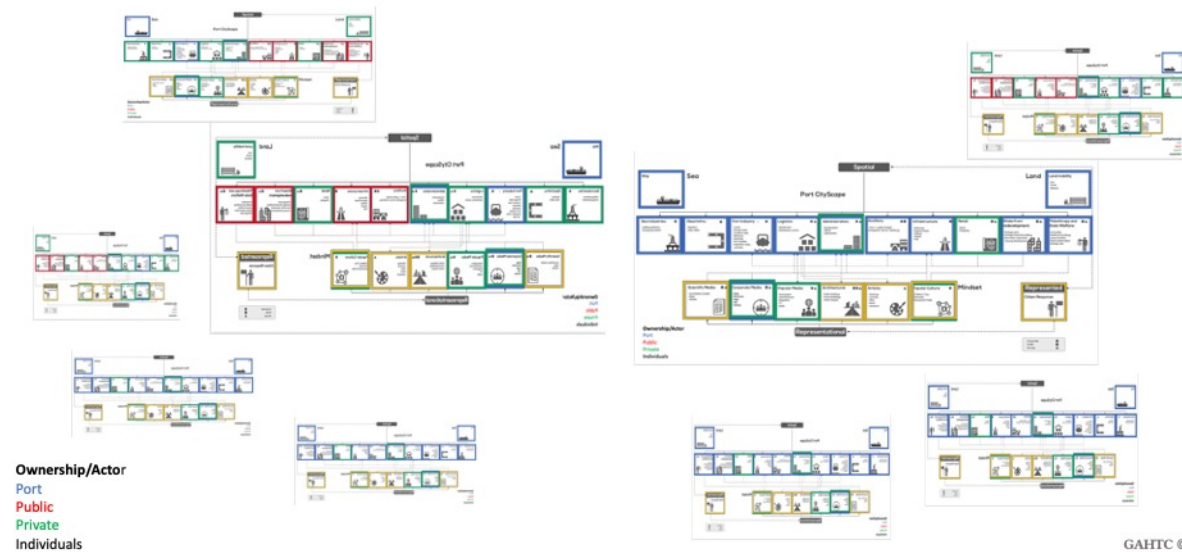
Presenter Note:

or, if it is located in a communist country where the planning control and shipping are in the same hand.

Image Source:

Carola Hein

THE PORTCITYSCAPE: A FUZZY SPACE



GAHTC ©2019.

Presenter Note:

The port cityscape is thus a fuzzy space with a large diversity of political, economic, social, and cultural frameworks, that are closely interconnected through shipping

Image Source:

Carola Hein

What is a Port?

The English term **port** derives from *portus* "entrance, passage" and from *pértus* "crossing (of water)"

"A town or city with a harbour or access to navigable water where ships load or unload."

(Oxford Dictionary)

What does that mean for the built environment of these places?



Port of Palermo, Sicily, Italy (2011) CC3

GAHTC ©2019.

Presenter Note:

A port as a usable interface between land and water is a heterogeneous place, which consists of a multitude of elements. It allows access to water, which provides a direct (worldwide) link to many other ports. The port is a landing stage for fishermen but also a place of transshipment of goods and people. With the goods and people, also ideas go on a global journey. Ports are therefore complex places of exchange that form a worldwide network.

Etymology of "port": from Old English *port* "harbour, haven" from Old French *port* "harbour", both derived from Latin *portus* meaning "entrance, passage," or "place of refuge, asylum," from Proto-Indo-European **pértus* "a going, a passage," suffixed form of root *per-* "to penetrate; to cross (water)".

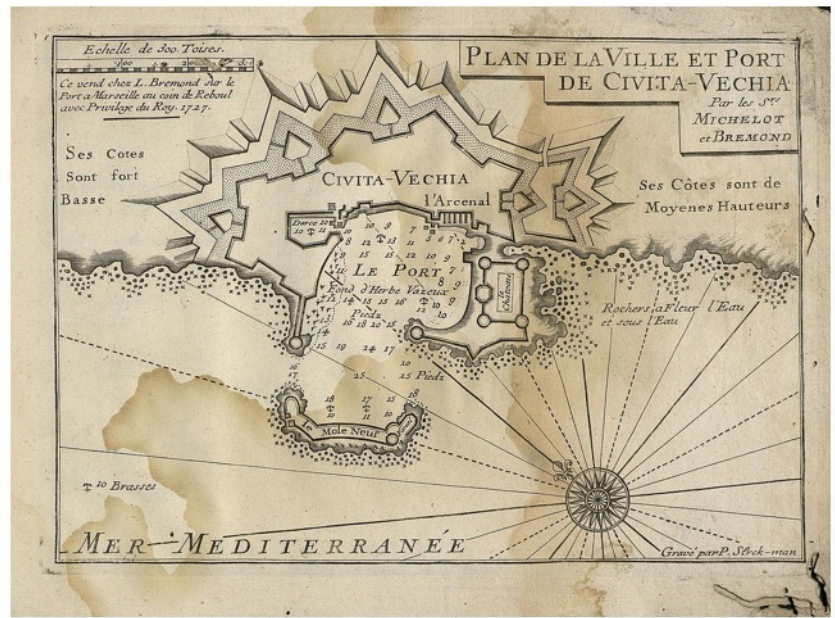
The *Oxford Dictionary* defines 'port' as: "A town or city with a harbour or access to navigable water where ships load or unload." URL: <https://en.oxforddictionaries.com/definition/port> (access: 19 June 2018).

Image Source:

https://commons.wikimedia.org/wiki/File:Porto_e_bacini_palermo_dall%27alto.JPG

What is a Port?

A convenient connection point between land and water



Plan of the City and Port of Civitavecchia, Italy (1730) CCA 2.0

GAHTC ©2019.

Presenter Note:

Many factors determine the suitability of a location as a port. For example, it must have a meaningful link to sea-based trade routes and a sea-based foreland. They need a certain depth of water and offer sufficient protection from the open sea as well as access to the hinterland. Strategic considerations and the possibility of defending the port city also played an important role.

In Civitavecchia a natural bay served as protection from the sea. This was further improved by a mole. Defensive systems to the inland served as protection against attackers.

Image Source:

[https://commons.wikimedia.org/wiki/File:%22Plan_de_la_Ville_et_Port_de_Civita-Vechia%22_\(21623587953\).jpg](https://commons.wikimedia.org/wiki/File:%22Plan_de_la_Ville_et_Port_de_Civita-Vechia%22_(21623587953).jpg)

What is a Port?

This depiction of Amsterdam from the 16th century reflects the close intertwining of people, land and water.



Port of Amsterdam, Netherlands (1567) CC3

GAHTC ©2019.

Presenter Note:

Ports have grown in relation to their shipping foreland. In the 17th century Amsterdam became a world power, a position it owes primarily to its trade relations with the Far East. This contemporary portrayal is part of the series *Civitas Urbis* by Georg Braun and Frans Hogenberg of the city shows that the city and the port were one unit. Large ships connect the city to the world, small ships take the wares through the canals to distribute the goods to the warehouses that are traditionally attached to the living and working spaces of the traders. These traditionally multifunctional buildings could be reached from one side by ship, while their other side was on a road. This simplified the handling of goods. Other urban depictions in the *Civitas Urbis* series--of Hamburg, London, or Venice--shows similar ships and patterns, demonstrating the interconnectedness and similarity of port cities in a system, such as the Hanseatic trading networks. These networks were left architectural traces around the world, such as the city of Deshima in Japan, where Dutch ships were the only ones to arrive during the Edo era from 1600 to 1835, giving Dutch knowledge a particular weight in the Far Eastern country.

Image Source:

Woodcut admitted to Guicciardini, 1567 after woodcut of Cornelius Anthonisz, 1544 |
Project of the Historic Cities Center | <http://historic-cities.huji.ac.il/netherlands/amsterdam/amsterdam.html>

What is a Port?

The lively activity of the skippers was an everyday phenomenon in the interior of the pre-industrial port cities.



Port of Bristol, UK (ca. 1850) public domain

GAHTC ©2019.

Presenter Note:

Until the 19th century, long-distance trade was easier and faster by sea than by the land. Many cities near the coast and on rivers were dependent on shipping as the most important means of transport. Their hinterlands depended on them to get goods from around the world. In the port cities, particular types of architecture and urban form emerged together with select political and social structures at the intersection of global trade and local implementation. Warehouses and storage areas grew near the landing stages. Maritime trades were located in the vicinity. Areas for foreigners grew near the port. Pleasure districts served the constantly changing population of the port. Housing for the port workers had to be in waling distance of the ships and wharfs. Public and private maritime institutions and housing for rich traders and shippers grew. A whole shipping-specific microcosm emerged. Its architectural elements have become icons of maritime traditions.

Image Source:

[https://commons.wikimedia.org/wiki/File:Bristol_Harbour_\(St_Stephen%27s_Church,_St_Augustine_the_Less_Church,_Bristol_Cathedral\),_BRO_Picbox-7-PBA-22,_1250x1250.jpg](https://commons.wikimedia.org/wiki/File:Bristol_Harbour_(St_Stephen%27s_Church,_St_Augustine_the_Less_Church,_Bristol_Cathedral),_BRO_Picbox-7-PBA-22,_1250x1250.jpg)

What is a Port?

A cruise ship terminal for touristic purposes



San Diego, USA (2012) CC2

GAHTC ©2019.

Presenter Note:

In many countries, ships and boats still play an important role in passenger transport. However, longer distances and intercontinental journeys are mainly covered by other means of transport. Boat trips mainly serve touristic purposes, luxurious cruise ships take passengers with time and money to various places. Cruise ships as tourist bubbles that promise a feeling of home and safety and of amusement and commerce while traveling the seas and visiting exotic places are an architectural form in themselves. They have come to represent the pressure of the global foreground on small, often historic, cities that have trouble absorbing thousands of tourists who arrive at the same time and, often, have to be shuttled off in buses creating transportation problems. Current protests in Venice, Dubrovnik, Barcelona or Amsterdam about the negative impact of cruise ships stand exemplary for the clash between transforming ships and travel patterns and cities that can't (or don't want to) adapt. The transmission of COVID-19 through cruise ships and the consequent closure of ports for example in Australia, highlights the potential impact of global flows on local development.

Image Source:

https://de.wikipedia.org/wiki/Datei:Cruise_Ships_Visit_Port_of_San_Diego_005.jpg

What is a Port?

The port city of New York was the first destination for settlers from the Old World.

Here, they and their belongings as well as their ideas and visions went ashore.



Immigrants arriving in New York (1887) public domain

GAHTC ©2019.

Presenter Note:

Ports were and are not only used for the exchange of goods. They are also hubs of migration. For centuries, travellers were dependent on ships and thus on ports. Until today many migrants reach their new home by ship.

The role of ports and their architecture in the imagination of politicians, traders and people is particularly clear in the architecture of migration. The impact of migration on port cities on both sides of a trip is evidenced in places like the Ballinstadt in Hamburg where the Hapag shipping company gathered emigrants from 1850-1930 before their departure to the United States, so that they would be healthy and not rejected on arrival.

The Statue of Liberty and Ellis Island stand like no other symbol for the view of the city from the sea, the hardships of sea voyages and the hopes associated with them. The port city of New York was the most important point of contact for transatlantic entry into the New World. She has retained this status to this day.

Image Source:

https://commons.wikimedia.org/wiki/File:Welcome_to_the_land_of_freedom.png

What is a Port?

An industrial port outside the city



Porvoo, Finland (2011) CCA3

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Presenter Note:

This multifunctional spatial and spatial microcosm has disappeared since industrialization and most importantly after containerization in the 1960s. Shipping still remains a key mode of transport for many goods around the world. Most flows of petroleum, for example, are shipped. The interconnection with the city or the territories near the port, has, however, largely disappeared. Today, ports look and function very differently than their predecessors: Ports have become highly specialized areas for rapid transshipment from sea to land. They are distribution hubs connected to large infrastructures that link to the hinterland. Their role is often transnational rather than global. They often host important industrial areas—many refineries are located in port areas. Few people work there, and the ones who do have often specialized tasks. Fences around port areas speak to security and safety concerns. The environmental impact of the port—for example, through air and noise pollution—on its neighboring city and region is huge, albeit largely unseen.

Image Source:

https://commons.wikimedia.org/wiki/File:Porvoo_refinery_from_air.jpg

What is a Port?

Some ports have survived the times almost unchanged.



Boccadasse, Genova, Italy (2010) CCA SA 3.0

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Presenter Note:

At times, a historic port is left in its old form, if the modern needs of transport are shifted elsewhere. Boccadasse, a small village near Genoa, has hardly changed in the course of time. Like centuries ago, fishermen come and go here in and out of their small boats. The port is only a small beach, which makes the landing possible. There was no demand for other functions, these were taken over from the nearby industrial port of Genoa.

Image Source:

https://commons.wikimedia.org/wiki/File:Genova_Boccadasse-panorama.jpg

What is a Port?

A failed port



Bay of Zhalanash, Aralsk, Kazakhstan (2014) CCA SA 3.0

GAHTC ©2019.

Presenter Note:

Some ports have silted up over time and lost their importance to others. Therefore, today we find former port cities in places that are no longer suitable for ships. These places have lost their function as a port city.

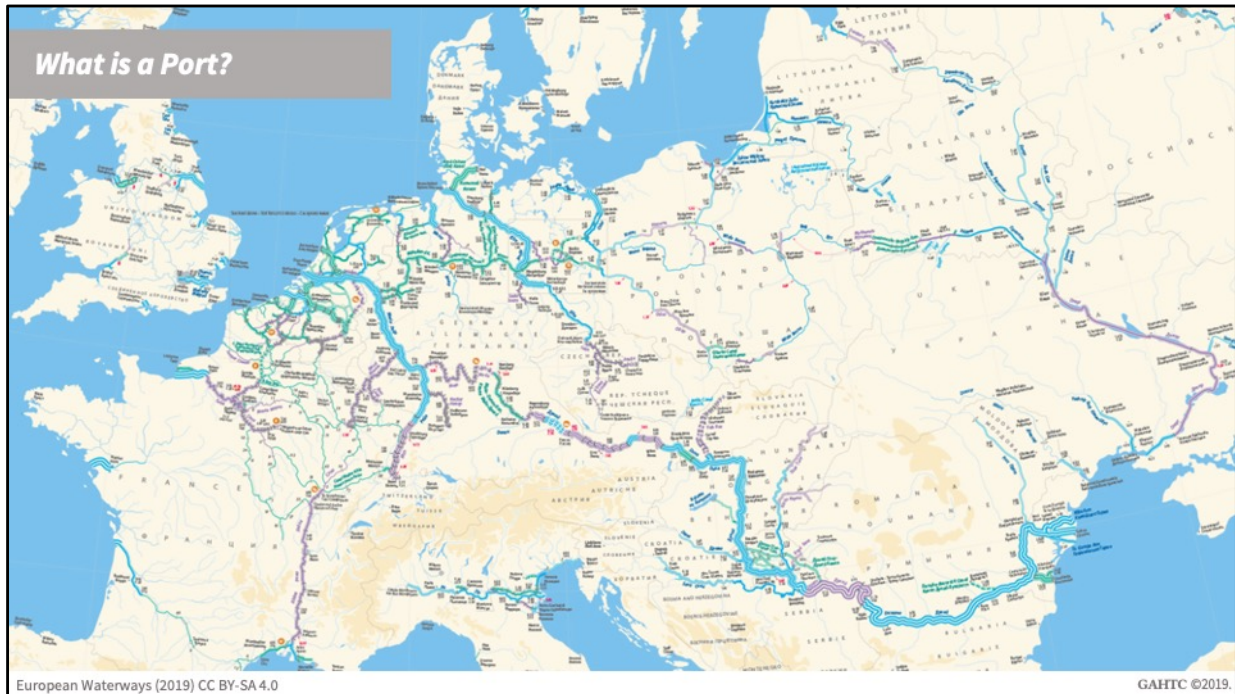
Aralsk is a particularly drastic example. The drying up of the Aral Sea - a man-made disaster - has moved the coast many kilometres away from the city.

Ports on smaller rivers could also no longer do justice to the development of ships that became larger and had more draught.

At times, ports such as Bruges have extended their municipal area to keep a port running. This is contemporary Zeebrugge

Image Source:

https://commons.wikimedia.org/wiki/File:The_Aral_sea_is_drying_up._Bay_of_Zhalanash,_Ship_Cemetery,_Aralsk,_Kazakhstan.jpg



Presenter Note:

This map shows that ports do not necessarily have to be on the coast or near the coast. Rivers and canals also allow transport on water. The Vikings already made use of this, they came by boat to attack Germanic cities, which lay many hundreds of kilometres inland.

River ports and their architecture are an under researched topic. Historical ports and waterfronts on rivers are waiting for redevelopment. At a time of climate change, rivers are a key challenge for architecture. The height of many river bridges above water will no longer be sufficient for current ships and certainly not for growing ones.

Image Source:

<https://commons.wikimedia.org/wiki/File:UNECE-European-waterways-2012.jpg>



Presenter Note:

What is port city architecture?

With Hein, we argue that there is a port cityscape and that examining this network of built structures provides insight into the history of architecture and urban form. The built elements that ports have generated form a system of specific structures: warehouses, quays, ramparts, lighthouses, administrative buildings, religious and leisure structures etc.. that evolve in an interconnected way. This port cityscape port does not end not a few meters behind the edge of the water. It determined and determines the economic and cultural fabric of the entire city, which houses administrative buildings and commercial offices, the harbor workers live in it and here the seafarers find accommodation, the city offers the infrastructural connection to the inland and is home to shipowners and shipyard workers. These port and maritime trade related objects combine to form a port cityscape, but not each element is present in the same way in each port city. Thus, while port cities resemble each other, they are not identical. Each of them has developed in response to its particular geographical, political, social, economic conditions and the particular functionalities it faces, such as military, trading, industrial production, migration, or fishing .

Image Source:

https://commons.wikimedia.org/wiki/File:Port_of_Cape_Town.jpg

Port City Architecture



Conquest of Constantinople By The Crusaders In 1204 (15th C) public domain

GAHTC ©2019.

Presenter Note:

Port cities, as hubs of trade and migration, or as military defense systems of larger territories, were particularly vulnerable to raids and attacks. Depending on the status of the city, a military outpost of a colonial or foreign power, or a maritime entrance for a nation, port cities were under risk from attack from land and seaside. Ships could carry heavy cannons and were easy to manoeuvre, making them dangerous weapons in armed conflicts. The architecture and urban form of many port cities developed to protect the riches of these cities. The defences, as depicted in this image of Constantinople in the 15th century, are still there today and bear revealing witness to its turbulent history. Fortresses overlooking ports, such as the ones built by the Venetians in the Mediterranean overlook large sea and land-areas and helped protect important trading routes. Other port cities still have the remains of their former defences.

Ports and their cities not only hosted defensive but also aggressive forces. Military ports are one, often overlooked, aspect of ports and their cities. To secure their trading power, or to respond to the political aspirations of their home nations, military bases have been part of some port cities, often capitals.

Image Source:

<https://commons.wikimedia.org/wiki/File:ConquestOfConstantinopleByTheCrusadersIn1204.jpg>

Port City Architecture

Technical facilities



Crane Gate, 1442–1444, Gdansk, Poland (2010) GNU

GAHTC ©2019.

Presenter Note:

To defend their trading networks, many cities gathered their forces and build up their own fleets to defend their ships, routes and interests. The Hanseatic League and the architecture and urban form of its member cities is a good example: The cities defended their ports and citizens with military defenses and built generally tall multifunctional buildings for warehousing, living and administration. To Crane Gate in Gdansk is an outstanding example for a specific piece of port architecture. It is strategically located and served not only as a crane but also as a defensive structure for the city centre. The gate is six-storeyed and consists of two stone towers with a wooden central section. The wooden part is the crane, behind it are two pairs of treadmills. All treadmills have a diameter of 6.5 meters, this makes them probably the largest treadmills ever used for a hoisting installation. Prisoners were usually used to operate the treadmills. It remained in use until the middle of the 19th century.

Image Source:

https://commons.wikimedia.org/wiki/File:Żuraw_in_Gdańsk.jpg

Port City Architecture

Warehouses



Trondheim, Old Port, Warehouses, Norway (2017) CC0

GAHTC ©2019.

Presenter Note:

Trade systems, like that of the Hanseatic League implied that the same type of goods and storage forms was available in all the cities of the system. Traders and their families were present in the various cities of the networks, and ideas about architectural and built form often traveled with them. As a result, warehouses—erected to store and protect goods— resemble each other within one system. The warehouses of the Hanseatic League make its former members identifiable until today, even as it adapted to local conditions and influences. For the Trondheim example here in the picture, the wood and the red paint are typical of Scandinavian architecture. The individual houses show that they were built by different private shipowners. Nonetheless, similar types of warehouses can be found from Tallinn to Hamburg and other cities of the Hanseatic League.

Image Source:

<https://pxhere.com/en/photo/487264>

Port City Architecture

Warehouses



Speicherstadt Hamburg, Germany (2018) Tino Mager

GAHTC ©2019.

Presenter Note:

With industrialization the traditional multifunctional warehouses were replaced by monofunctional complexes around the world, usually surrounded by fences to prevent theft. The introduction of new building techniques—iron—allowed for large open floor spaces. Land infrastructures—road and rail—were often built up to the quays and the warehouses, creating a tied-knit network to connect the fore and hinterland with warehouses as storage and distribution nodes in between.

Hamburg's Speicherstadt, the world's largest historical warehouse complex, is a key example of a monofunctional warehouses district where both water and rail linked to the buildings. The district was built after 1888 with funding obtained from the German Reich to entice the city to join the Empire while preserving its status as a Free and Hanseatic city and the rights of a tax-free port.

The Speicherstadt also stands exemplary for the importance of iconic architectural design in port cities before containerization. While being part of a global system of warehouses districts, the architects of the Speicherstadt choose red bricks to reflect the North German building tradition. The unified façade points to an urban construction initiative. The neo-Gothic warehouses are founded on thousands of wooden piles and are connected to the water on one side and to the road on the

other. Packaged goods and above all coffee, tea and spices were stored on five storeys and can be reached via a cable winch mounted on each of the house gables. The warehouses were mostly unheated and had wooden floors, guaranteeing relatively even climatic storage conditions.

Image Source:

Speicherstadt Hamburg, Germany (2018) Tino Mager



Presenter Note:

Less architectural and iconic, but even more important in terms of functionality are the logistics that cross and surround the port. In addition to roads and railway lines, these also include pipelines and supply channels. Parts of this network is dedicated to select (industrial) use and flows, other parts are shared with everyday traffic and use—such as highways. It is particularly along the road and rail infrastructure that crosses the region that conflicts between port and city users occur. Who gets to determine whether a street serves the interests of long-distance traffic or the needs of the local population in need of crossing this street? (Some of the conflicts between port and city are explored in the project portcityfutures.org)

Image Source:

https://cs.m.wikipedia.org/wiki/Soubor:Dover_Harbour_panorama.jpg

Port City Architecture



Maersk headquarters in Copenhagen, Denmark (2012) CCA SA 3.0

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Presenter Note:

The port cityscape also includes administrative and decision-making functions. In fact, the most successful port cities are the ones that also host administrative functions. Traditionally, administrative, warehousing and living functions were integrated in one building, but with the creation of monofunctional warehouse districts, new headquarter districts emerged. Headquarters of trading and shipping companies, including the buildings of Hapag Lloyd in Hamburg, or iconic buildings such as the Chilehaus in Hamburg are just some examples of well-known architecturally designed maritime headquarters.

Oil companies, shipyards and freight forwarders also have headquarters near the port. These buildings can also represent an important link to the city and its people as they are part of the urban imaginary. Their presence in the city makes it clear that it is hardly possible to draw a sharp border between port and city.

Image Source:

https://commons.wikimedia.org/wiki/File:Copenhagen_A_P_Möller_hq_IMG_5507.jpg

Port City Architecture



De Wallen, Amsterdam, Netherlands (2009) CC BY-NC-SA 2.0

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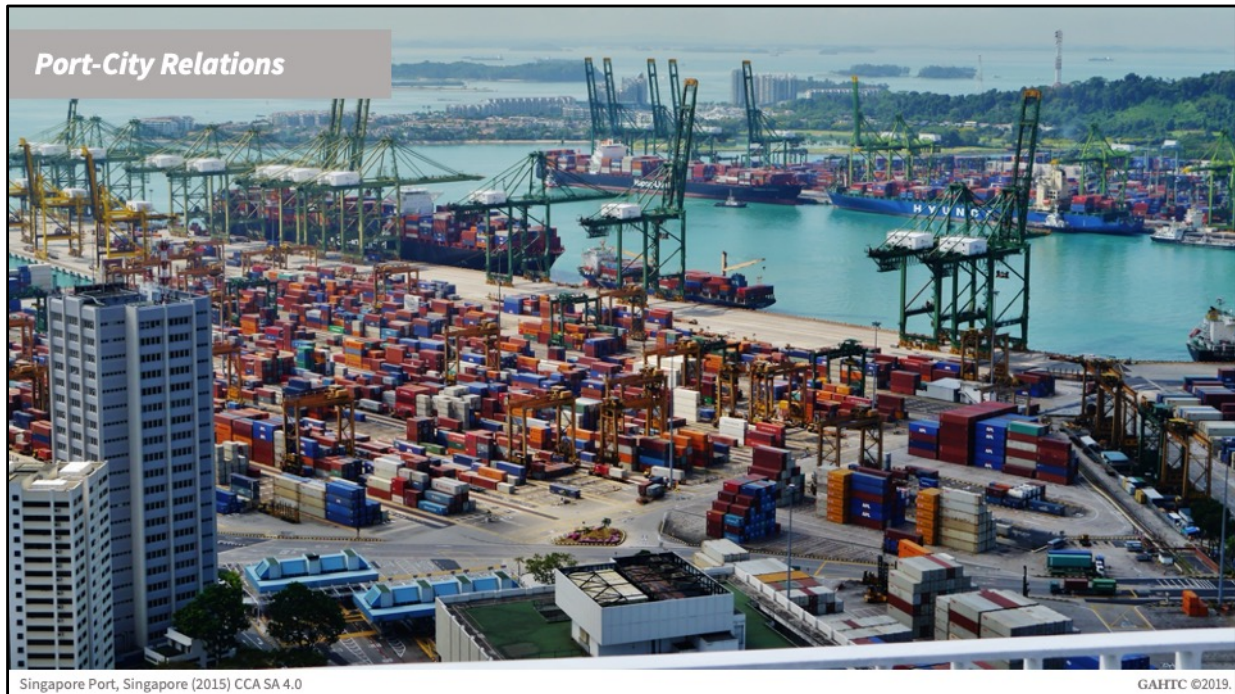
Presenter Note:

The concept of the port cityscape, and the influence of the port extends even further. The port also has cultural influences on the city. Sailors and migrants reached these cities through the port. Their influence is evident in migrant towns such as Chinatowns, but also in the presence of red light districts. Since the 15th century or earlier, brothels and other prostitution facilities have been found in the Wallen area in Amsterdam.

As a location in connections around the globe, port cities have also been hubs for the introduction of illnesses. As a result, many tropical institutes were founded there. The special mixture of people from many different backgrounds, the economic wealth and the need to be able to react quickly to innovations have created a typical and very resilient culture in port cities.

Image Source:

<https://www.flickr.com/photos/fromthenorth/3809452312>



Presenter Note:

With containerization in the 1960s, the intricate relationship between port and city changed. The physical integration dissolved, and the port city imaginary disappeared at the same time. The modern container port or the huge refinery areas have hardly any visible connection with the city. Its scale and technology are very different from traditional architectural forms. However, architectural historians have recently started to recognize the need to explore the architecture of logistics and to find theoretical and conceptual frameworks to discuss the relation between port and city and their surrounding region. Port and city have grown together over thousands of years. The spatial and architectural connection between port and city has changed, but the need to understand the spatial impact of their proximity remains. The port and urban spaces of Barcelona provide one example for the viscous spaces between water and land, and the changing relationships and occupation of port city areas over time.

Image Source:

https://commons.wikimedia.org/wiki/File:Singapore_Port_viewed_from_The_Pinnacle@Duxton_08.jpg

Port-City Relations



Barcelona Port, Spain (1804) public domain

GAHTC ©2019.

Presenter Note:

Barcelona, originally a Roman foundation, lies on a bay that protects ships from the open sea. Right there, surrounded by mountains, and nurtured by sea trade the city developed. The picture shows the city center just above the bay and the port. For a long time, until the 19th century, Barcelona retained its city walls and, accordingly, its medieval expansion. City and port formed a unity.

Image Source:

https://commons.wikimedia.org/wiki/File:Map_of_the_port_of_Barcelona_-_Roux_Joseph_-_1804.jpg



Presenter Note:

Today we see a completely different picture, but it is understandable how it developed. On the lower right you can still see the bay, directly above the medieval town center. To the left you can see the extension of the port. Parallel to this, the city expanded. The new chessboard-like districts (Eixample) were built after the city walls had been taken down. With its new functions (container terminal, oil port, refinery), the port increasingly moved out of the city. The old port decayed and initially left abandoned industrial areas. Intensive planning created a new waterfront in the old harbor. Urban functions occupied former maritime spaces and created an attractive place within the city towards the end of the 20th century. This renewal also attracted new maritime functions: notably a marina and tourist destination.

Image Source:

<https://www.google.com/maps/@41.3418029,2.1589287,10655a,35y,270h/data=!3m1!1e3>









Presenter Note:

This development from historic port to new waterfront is a global phenomenon. As ports change their function, neighboring cities are required to revitalize these areas. Many of these spaces have since become home for architectural lighthouse projects. From Baltimore harbor redevelopment to the Docklands in London, the waterfronts of Osaka or Sydney, waterfront redevelopment has taken multiple forms and functions. Commercial areas, housing, or multifunctional districts have supported the revitalization of central areas. The aerial view of Cape Town shows the ways in which port and city relationships have changed over time. The old port is located near the city centre. Over time it has grown out of the city and is interwoven with a complex infrastructure.

Image Source:

<https://www.google.com/maps/search/cape+town+port/@-33.9109195,18.4283506,3737m/data=!3m1!1e3>

Port-City Relations

Phase	Period	Symbol ○ City ● Port	Spatial Characteristics Economic characteristics
I Phase	Ancient/medieval to 19 th century		Primitive port/city <i>Preindustrial stage</i>
II Phase	19 th – early 20 th century		Expanding port/city <i>Rapid industrial/commercial growth</i>
III Phase	mid–20 th century		Modern industrial port/city <i>Fordism/Economies of scale</i>
IV Phase	since 1960s–1980s		Retreat from the waterfront <i>Post-Fordist stage</i>
V Phase	since 1970s–1990s		Redeveloping of waterfront <i>Flexible accumulation</i>
VI Phase	since 1990s–2010+		Renewal of port/city links <i>Globalisation</i>

Phases of port city development, Dirk Schubert based on Brian Hoyle (2011)

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Presenter Note:

Many scholars, notably geographers and planners have tried to capture the various phases of the development of port to city relations over time.

Going beyond the visualization of global networks, many scholars, notably in the field of geography, have also zoomed in further on the territory and analyzed patterns in the shifting relationship of port cities and their regions over time (to name just some: Hoyle, 1989a). These models have attempted to capture similarities and dissimilarities of global patterns in abstract forms. They are highly important for the understanding of changing patterns in global shipping flows, in identifying leading cities and in understanding evolving port city region relationships. These abstractions help understand spatial or temporal development, but they are also abstract and often unrelated to physical spaces, their locality, form, function and use in specific cities.

Perhaps the most influential model was made by Brian Hoyle (Hoyle, 1989b). His analysis of VI steps in port-city development focused on the evolving port city interface. It shows how ports and cities first intersected, then detached and more recently reconnected. This model emerged in the late 1980s, at a time when waterfront development became a theme for many cities dealing with abandoned

inner-city port areas. It has been picked up, refined and expanded by numerous scholars, including Dirk Schubert. Each of them, aimed to add new temporal, spatial or other information to the model. An analysis of what these models mean for architecture and urban space, however, is missing.

The following six slides give first impressions of the changing port city relations and the changing urban and architectural implications that will be further developed in the lectures.

Image Source:

Dirk Schubert based on Brian Hoyle

Port-City Relations

I Phase: Primitive port/city
preindustrial stage



Depiction of a simple 'port' in a Flemish city (16th C) public domain

GAHTC ©2019.

Presenter Note:

The only basic requirement for a port is a place where boats can land. The most primitive ports have no buildings and are only a place to load goods or people from land into a boat or vice versa.

Image Source:

[https://commons.wikimedia.org/wiki/File:Sea_Port_\(Port_de_Mer\)_after_the_painting_in_the_collection_of_Madame_la_Comtesse_de_Verrue_MET_DP825776.jpg](https://commons.wikimedia.org/wiki/File:Sea_Port_(Port_de_Mer)_after_the_painting_in_the_collection_of_Madame_la_Comtesse_de_Verrue_MET_DP825776.jpg)

Port-City Relations

I Phase: Primitive port/city
preindustrial stage



Bonaventura Peters: Southern Port (1641) public domain

GAHTC ©2019.

Presenter Note:

Organised ports have to meet more conditions than just offering small boats a landing stage. They are like a city that opens up into the water and maintains trade relations and transport routes to other places via it. In the picture you can see a quay, fortifications, defences and larger structures. The port remained within the city fortifications that provided protection against the rough sea and invaders.

Image Source:

[https://commons.wikimedia.org/wiki/File:Bonaventura_Peeters_\(I\)_-_Southern_Port.jpg](https://commons.wikimedia.org/wiki/File:Bonaventura_Peeters_(I)_-_Southern_Port.jpg)

Port-City Relations

II Phase: Expanding port/city

Rapid industrial/commercial growth



Darling Harbour, Sydney, Australia (ca. 1900) public domain

GAHTC ©2019.

Presenter Note:

Colonization has led to an expansion of trading networks, industrialization has brought motorized ships made of new materials and a connection to railway lines. As a result, the ports have developed into specialized locations with their own economic weight. The construction of new docks brought with it the reorganization of urban areas. Warehouses were built and the offices moved to the city center.

Image Source:

https://de.m.wikipedia.org/wiki/Datei:Darling_Harbour,_1900.jpg

Port-City Relations

III Phase: Modern industrial port/city

Economies of scale



Montreal, Canada (ca. 1900) CC BY-NC-SA 2.0

GAHTC ©2019.

Presenter Note:

The ships grew and with them the volume of goods to be handled increased. After the Second World War, oil consumption demanded new transport, processing capacity and storage possibilities.

Image Source:

<https://www.flickr.com/photos/archivesmontreal/26963757202>

Port-City Relations

IV Phase: Retreat from Waterfront

Post-Fordist stage



Container terminal Barcelona, Spain, CC0

GAHTC ©2019.

Presenter Note:

Containerisation completely changed sea transport and port spaces. Warehouses and various loading facilities gave way to standardized cranes and open areas for the storage and organization of containers. Huge facilities were installed outside the city and with new infrastructural connections. At the same time, the old inner-city port facilities fell into disrepair.

Image Source:

<https://www.goodfreephotos.com/spain/barcelona/port-of-barcelona-spain.jpg.php>

Port-City Relations

V Phase: Redeveloping of Waterfront

Flexible accumulation



Old Port Barcelona, Spain, CCA SA 3.0

GAHTC ©2019.

Presenter Note:

Over the last three decades, cities have begun to rediscover their old port areas. Chic marinas arise and tourist areas prosper. Old port buildings are being renovated for new leisure purposes, other remnants of port activity are disappearing and new buildings are being replaced. Events often serve as incentive for transformation.

In the course of the Olympic Games (1992), Barcelona took care of its waterfront.

Image Source:

<https://pl.wikipedia.org/wiki/Plik:Barcelona-port.JPG>



Presenter Note:

The sixth phase is characterised by the re-occupation of former port areas by urban functions. The contemporary parts of modern ports are now located outside the city centre and their image has fundamentally changed. The historic working port, often associated with crime and pollution, gives way to the image of a cosmopolitan place with environmental awareness.

Hafencity Hamburg can be seen as a showcase. Maritime life is placed in the focus of the development of the new district. The charm of renovated industrial buildings is complemented by prestigious objects. Water and ships are just as much a part of the cityscape as cultural buildings and a well thought-out ecological concept.

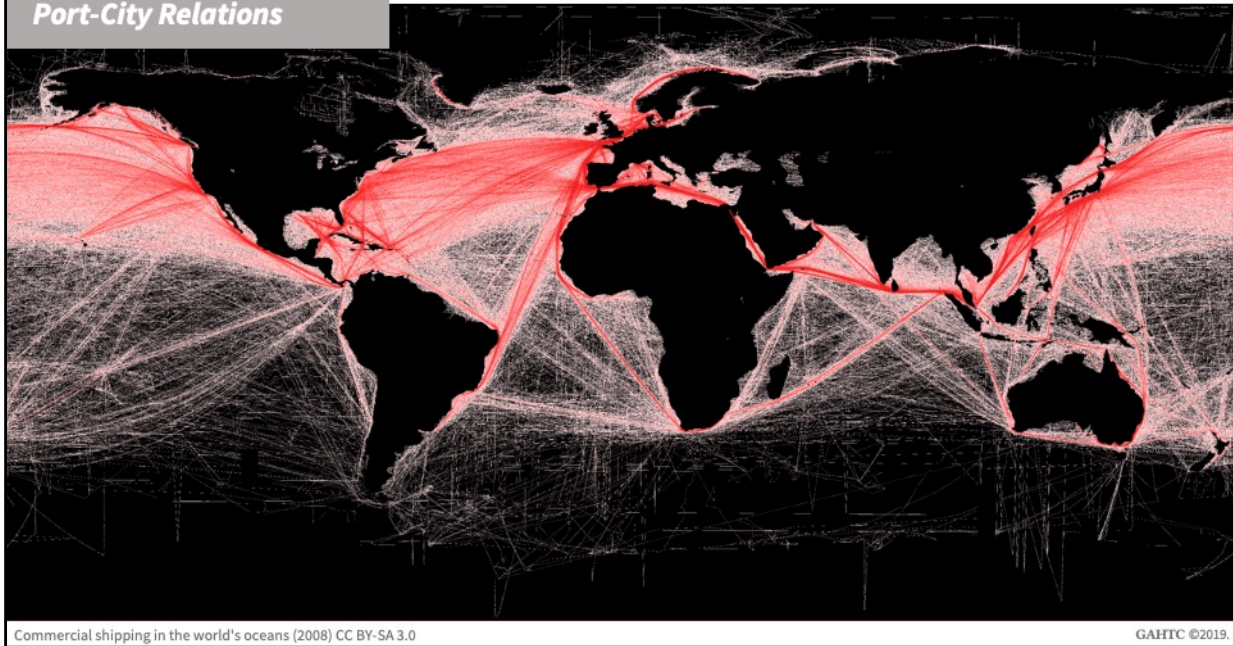
The modern port itself is relegated to the south side of the river.

Image Source:

https://en.wikipedia.org/wiki/File%3ARechts_Mitte%2C_die_Elbphilharmonie_am_Kaiserkaai_und_I._davon_der_Hanseatic_Trade_Center_Turm._im_Hamburger_Hafen_das_englische_Feuerschiff_%28ein_schwimmender_Leuchtturm%29%2C_ist_jedoch

_ein_Hotel_mit_Restauraunt_und_Bar_-_panoramio.jpg

Port-City Relations

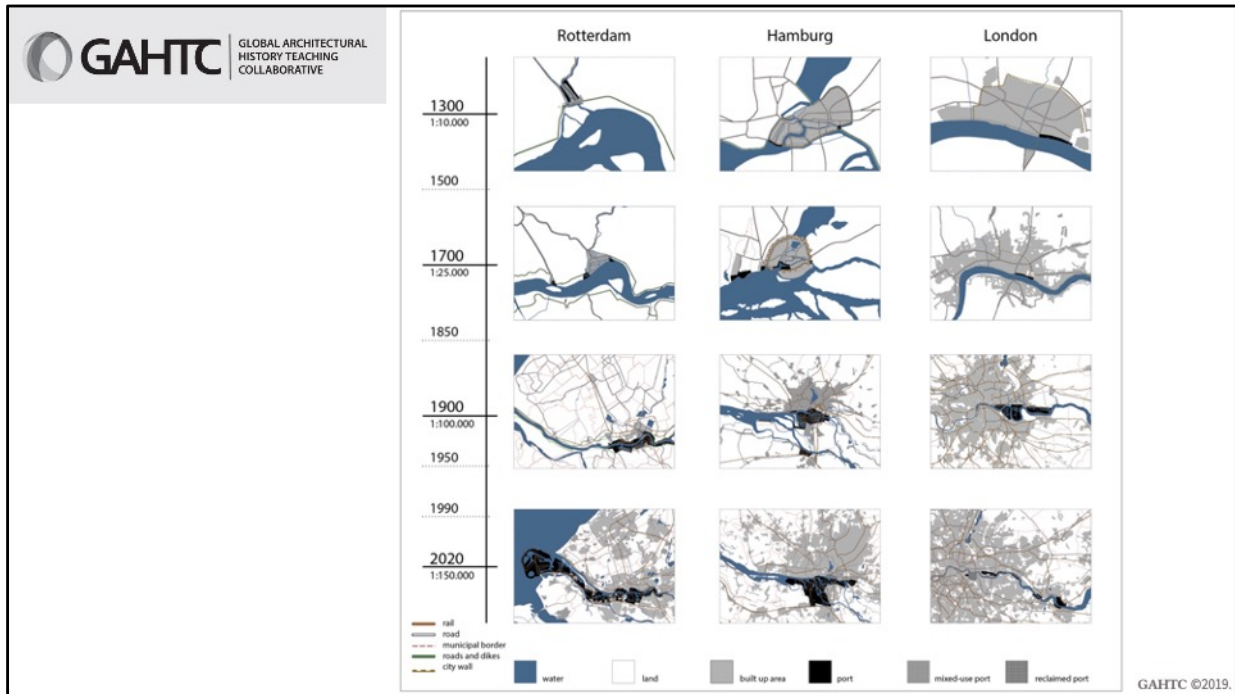


Presenter Note:

The map of global overseas trade relations illustrates the multitude and simultaneity of phenomena. The close interdependence of the locations and their interdependence ensure that there can be neither isolated developments nor opposing trends. Of course, strong changes in this network have occurred over the course of time. Some port cities have made the wrong decisions or could no longer withstand development for other reasons. However, the entire network is in a permanent exchange that also leaves its architectural mark.

Image Source:

B.S. Halpern (T. Hengl; D. Groll) / [Wikimedia Commons](#) / [CC BY-SA 3.0](#)
https://de.wikipedia.org/wiki/Datei:Shipping_routes_red_black.png



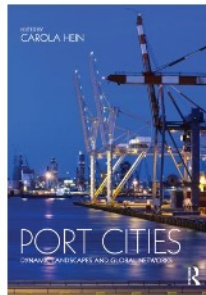
Presenter Note

To fully understand the intersection of space, society and culture in port cities, we need a more localized form of mapping the spaces, institutions and representations of port city regions.

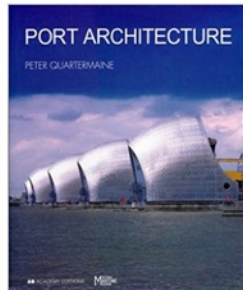
Source:

First draft for comparative geo-spatial mapping methodology, with case study of London, Hamburg, and Rotterdam. Figure by Carola Hein, Yvonne van Mil, Blanka Borbely, and Batuhan Özaltun based on Global Administrative Boundaries (2018) CORINE Land Cover (2016) and EuroGlobalMap (2017)
Published in: Carola Hein, and Yvonne v. Mil. "Mapping as Gap-Finder: Geddes, Tyrwhitt, and the Comparative Spatial Analysis of Port City Regions." *Urban Planning* 5, no. 2 (2020): 1-15. <https://www.cogitatiopress.com/urbanplanning>

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GAHTC ©2017

See also:

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