

# 15 core ideas for the port of the future



# 15 CORE IDEAS FOR THE PORT OF THE FUTURE

Port of the Future is a project by Vigla expressed in this publication and a web platform.

[portdelfutur.info](http://portdelfutur.info)

# Vigla

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The task of 21st century cities is to leave behind the port view of the 20th century and look at city-port relations in the 21st century in a radically different way. All cities in the world face similar problems and the key is to develop territorial solutions.

Jorge Sharp

Port of the Future (Port del Futur) is a reflection on one of the most important and complex areas of the economy and territory, that of waterfronts and port infrastructures. Ports are functionally the nodes of international exchange and trade networks. They are the points through which the production and consumption system is connected to other transoceanic territories. Spatially, they have been the main points of contact between society and the sea. They form a protective space to facilitate this relationship, facilitate the activities of seafarers and serve as a gateway for people, innovations and knowledge.

In light of the above, a consideration on the topic of ports must be based on a broad context in order to understand the duality that prevails in port systems as points of contact between global and local realities. This dual reality is the main element of tensions in this system. Currently, ports mainly operate as free zones that do not require uniform regulations to maintain their competitiveness and the flow of traffic in world trade. However, their operation is associated with high pressure on the territory, with negative impacts such as pollution, traffic congestion or artificial land use.

In addition to the inherent conditions of port activity, the current situation of fragile equilibrium in the global context brings with it other variables that mark the present as the right time to open a dialogue for joint reflection on alternatives. The climate crisis and the difficulty in predicting changes in global dynamics affect the planning of major infrastructures, including transport. As we have seen in other contexts with the halting of road building in Wales or the debate around the expansion of Heathrow Airport, the future viability of major infrastructure developments is being questioned and requires a comprehensive and complex consideration, which this project seeks to provide.

The main objective of the work is to study the approaches and alternatives to create a port that reconciles local interests with the profitability of its commercial and logistical activity at the service of the economy rooted in its surroundings. Our starting point is to define proposals that reconcile the development of the port with the principles of general and public interest. This means that we need to look for alternatives that ensure its redistributive potential, the model's ability to be equitable and, of course, its responsibility towards the environment and the people who inhabit it.

Port of the Future arose in the context of the debate on the development of the Port of Valencia and the conflict over the proposed extension of the northern terminal. Beyond this specific conflict, the lack of a shared vision for the future has become evident, making dialogue between the parties and the elaboration of mutually agreed solutions difficult.

We want to create a framework that allows us to have a constructive conversation, to develop consensus and shared visions with the different actors of the city-port-territory ecosystem. ●





The definition of the fifteen core ideas has been approached with an exploratory perspective supported by academic research and semi-structured interviews with nine leading figures in management and research on port infrastructures and city-port relations. The academic research has been designed as a documentary review of specialised literature defining the main challenges and current trends in port realities. Semi-structured interviews have been used to qualitatively deepen these challenges and trends.

As a general structure, four blocks of conversation have been designed with each of the testimonies (interviewees): (1) the challenges and current situation of the ports, (2) the actions or proposals that are currently being implemented, (3) the wishes for the future and (4) a final summary of the main ideas. You can read the documentation of the individual interviews in the “Experts” section of the website [www.portdelfutur.info](http://www.portdelfutur.info).

The results obtained were combined to create the fifteen main ideas for the overall work of *Port of the future*, illustrating the ideas for each of the areas with the quotes from the interviews that support them. ●





























# Table of contents



# Core Ideas

## Shipping And Economic Development

P. 23

I

Optimising the use of port infrastructure

P. 25

II

A port at the service of the local and regional economy

P. 27

III

An asset of social and economic progress

P. 29

## Innovation And Work

P. 31

IV

Expanding the possibilities for quality employment and personal development

P. 33

V

Committing to gender equality and the dignity of port work

P. 35

VI

Developing the maritime innovation ecosystem

P. 37



City And Territory

P. 39

VII	VIII	X
Removing the barriers to an ecosystem of city, port and territory	Introducing compatible uses for public access	Giving new meaning to coastal ideas
P. 41	P. 43	P. 45

Environment And Health

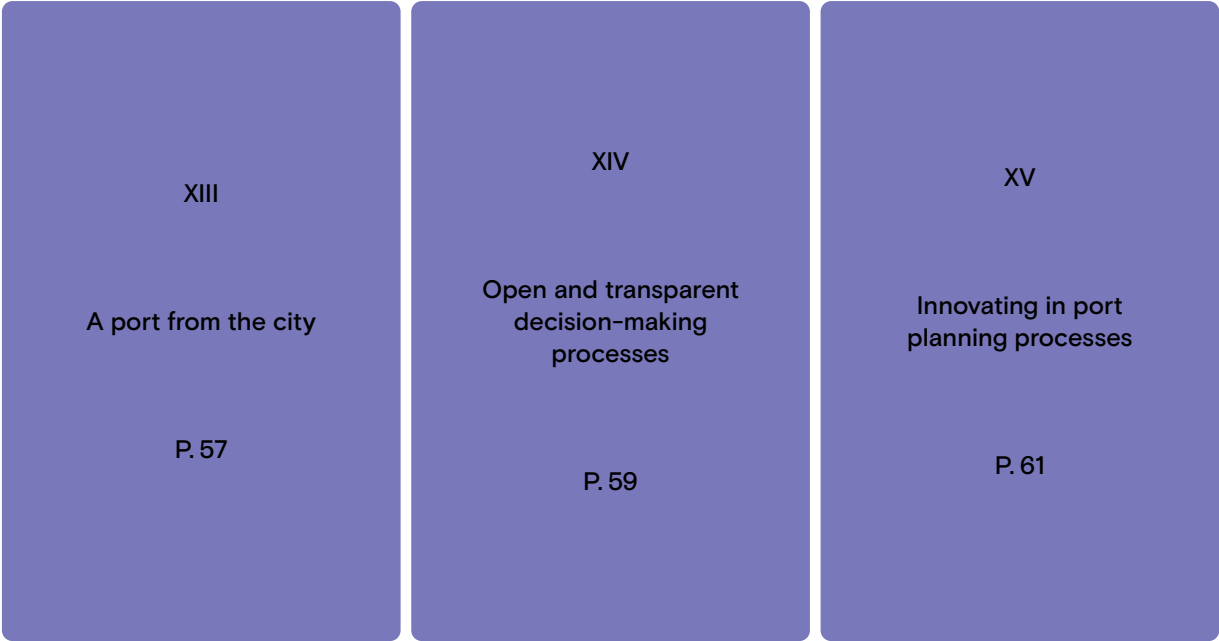
P. 47

X	XI	XII
Living with water	Reducing the ecological footprint	Understanding the waterfront as a resource for health and wellbeing
P. 49	P. 51	P. 53

# Core Ideas

## Government And Participation

P. 55



# Experts

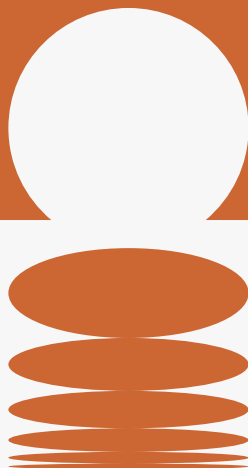
Laleh Kalili	Keller Easterling	Miriam García García
P. 73	P. 77	P. 81
Gabriella Gómez-Mont	Stefan Al	Katy Fox-Hodess
P. 85	P. 89	P. 93
Diane Oshima	Fredrik Lindstål	Jorge Sharp
P. 97	P. 101	P. 105

# Core Ideas





# SHIPPING AND ECONOMIC DEVELOPMENT







# Optimising the use of port infrastructure

We promote the maximum use of existing infrastructures in the city-port-territory ecosystem and the optimisation of commercial activities through technological and managerial improvements while reducing the environmental footprint.

<sup>1</sup> Source: The World Bank (2021). The Container Port Performance Index 2020: A Comparable Assessment of Container Port Performance. Washington, DC: World Bank.

<sup>2</sup> UN Environment and International Energy Agency (2017). Towards a zero-emission, efficient, and resilient buildings and construction sector. Global Status Report 2017.

Shipping is still the most economical, reliable and least energy-intensive way to transport goods over long distances<sup>[1]</sup>. It is the backbone of global trade and production chains. More than four-fifths of global logistics volume is transported by sea. Consequently, the proper functioning of port infrastructure facilitates investment in industry and logistics by enabling job creation and promoting prosperity.

“ Ports are roughly the same as they have always been. Technology has changed to make [sea transport] more efficient and more accurate, but the idea is still the same.

Fredrik Lindstål

At the same time, the main activity underpinning the economic model of ports today is the attraction and concentration of this maritime traffic and the various related activities. This need to concentrate and sustain traffic is challenging as the current operational and infrastructure system has detrimental sustainability implications that may ultimately challenge its viability in the future.

The challenge for port activity is to develop alternatives that reduce these impacts while ensuring reduced emissions and effects in the ecosystem. In areas where the density of hard infrastructure is already high, the focus is shifting from massive investment in new hard infrastructure to making the best use of what exists. Reducing the construction of new infrastructure and buildings (which currently account for 38% of carbon emissions<sup>[2]</sup>) is critical to achieving the goal of zero emissions.

“ [Ports] should push themselves to innovate and not blame technology. Plan for what you hope to do in the future, not just in 2040, but in the near future: work together with the municipality, but also from a national point of view, and with the EU.

Fredrik Lindstål

This optimised use must be based on the implementation of technological upgrades and management improvements, which must be carried out through operational coordination at all levels. Two lines of work related to this are the digitalisation and automation of port activities, which are key tools to improve the efficiency of the current infrastructure. In this case, digitalisation and improved management reduce the queues of vessels waiting to dock, while also reducing pollutant emissions. The automation of the terminals improves the use of the available docks and allows activity to be maintained without creating

new infrastructure.

In short, taking into account the existing infrastructure density and the need to prioritise sustainability, it is advisable to moderate the horizontal expansion of port infrastructures and commit to making the most of existing infrastructures by using digitalisation, improved management and coordination at metropolitan, regional, state and European levels and avoiding destructive competition between ports.

#### Key actions

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- **Include netzero alternatives in expansion and investment proposals**
- **Maximise productivity rates by dock and berth**
- **Promote coordination between port systems to optimise joint efficiency**
- **Design digitisation and open source strategies**

# A port at the service of the local and regional economy

The port infrastructure should focus on logistical activities serving the regional production and distribution economy and allow for compatible economic uses.

Population stagnation in Europe, a growing preference for local consumption, reindustrialisation policies, self-production technologies such as 3D printing and greater ecological awareness –what is generally referred to as the “regionalisation of globalisation”– have made moderate growth forecasts for seaborne trade in the European Mediterranean in the coming decades, even though it is likely to increase worldwide. This process makes it necessary to define the role of port infrastructures in relation to their local and regional context.

In parallel with the recognition of the ecological value of coastlines and their importance for health, their economic potential has been discovered, linked to the possibility of accommodating complementary uses alongside purely logistical ones, ensuring that the needs of the environment in which they are embedded are better met. Moreover, we must not forget that the main function of port infrastructures is to serve the population in order to satisfy their basic needs as a priority.

“ Seaport operations and

infrastructure have a fundamental role to play in providing for and reproducing the lives of people and communities. The port needs to be looked at from the perspective of people. This does not mean that port activity is not an extremely fundamental activity for the economy and economic development in general, as well as for global economic exchange –but it is not only that.

Jorge Sharp

“ You have to find realistically what your strengths are to be able to host a wide variety of activities and work within a dense urban setting.

Diane Oshima

“ While there had been an interest in turning the waterfront into urban uses, there was also a concern that we would abandon maritime uses altogether and that this voter measure said you must give first priority to maritime uses. But then, if you give first priority to maritime uses, you can look to see what other kinds of compatible uses would be acceptable.

Diane Oshima

Special care must be taken with integrated city–port–territory systems. These have a high ecological, urban and human value and the negative externalities of commercial activities have an even greater negative impact on them. There is a need to balance commercial activities that serve the metropolitan and regional

economy with respect for human life and the ecosystem.

The port of the future will have to abandon trading activities that can be easily relocated, such as the exchange of containers from ship to ship without leaving the port. Instead, it will have to focus on trade activities that serve the regional manufacturing and distribution industries. At the same time, ports must use their ability to attract diverse and complementary activities to become a spatial asset in these densely populated systems.

“ Ports create a lot of jobs in different sectors. One trend we are seeing is the growth of logistics centers and logistical parks in indirect proximity to the port.

Fredrik Lindstål

“ Cities, especially cities in developing countries, might make a better bargain with their [port] assets. [...] In exchange for access to labor or some other asset, might require an offset investment in something else the city needs, like transit, housing, or a special industry. That give and take might be productive for many cities.

Keller Easterling

Finally, the performance of port infrastructure for the local and regional economy must also include economic compensation for the negative externalities that cities generate. Using the margins from port activity to boost the local economy is key to deepening the redistributive and value-adding capacity of the port.

## Key actions

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- Design programmes for economic activities and compatible sectors.
- Facilitate administrative processes for the implementation of new activities.
- Densify with industrial, technical and innovative economic activities rooted in the region.
- Evaluate the benefits generated by the port activity by defining a system of compensation in the area.

# An asset of social and economic progress

Port spaces need to be rethought to remain active assets of progress. While maintaining their basic characteristics as open spaces of exchange, they need to be able to adapt to future changes in supply and demand. Therefore, their priorities need to be established with the involvement of different representative voices.

<sup>3</sup> Source: Eurostat (2011) Eurostat Regional Yearbook 2011. Coastal Regions, 13, <http://www.efta.int/eea/eu-programmes/marco-polo>. Brussels, Luxembourg: Publications Office of the European Union.

Many of the world's most prosperous cities are coastal and port cities that have benefited from their geographical advantages by providing space for the import of products, innovations, people and ideas. Today, 205 million Europeans, 41% of the EU population, live near the sea. <sup>[3]</sup>

Port cities are traditionally dynamic and creative places. They need to harness their innovation potential to develop new ideas and projects that protect them and other areas from rising sea levels and storms. They must also be able to reinvent themselves and rethink their economic functions and policies in order to remain hubs of prosperity and benefit from their status as open and innovative ecosystems that redefine what it means to be a port city today.

“ It's interesting to take a look at our models of progress. One specific

project we are tackling as a society has to do with creating innovation ecosystems. How can we create spaces in a port, for example, that don't assume that our ideas about that infrastructure are stable over time, but allow for gaps where the infrastructure is constantly reinventing itself. That's why I think conversations about gaps as space for future possibilities are necessary. [...] Attract people to think from different angles about what globalization means, transportation, maritime, our relationship with the rest of the world, the gateway to these global conversations, the movement of ideas, the mobility of bodies, etc., and then just creating a little internal engine that also needs external ones, where reinventing yourself as infrastructure, as a city, becomes possible.

Gabriella Gómez-Mont

We need to anticipate the possible economic and social changes of the future – such as the increase in local production or the possible disruption of the Arctic route – while facilitating the adaptation of infrastructures without compromising environmental and territorial assets. The immediate benefits should never outweigh the long-term costs.

The resilience of the model will be based on the ability to adapt infrastructures and their institutions in a creative and collective way. Therefore, the economic functions of infrastructures must also be democratised, involving diverse

representative perspectives to ensure their services to the economy and the city.

If the port of the future is to become an asset of prosperity, it must define its economic function in a participatory way by building alliances between the different actors of the port ecosystem. This includes the inclusion of different and complementary perspectives, such as the blue economy or the circular economy. Incorporating other perspectives into the ecosystem is one way to accommodate multiple functions that enhance and bring greater benefits to the port city.

“ Given the particularities of our moment, with the danger of climate change, there needs to be a lot of thinking around how ports can be involved in the processes of recycling, repurposing, reusing.

Laleh Khalili

“ These hybrid multifunctional solutions present ways to cross-subsidize the infrastructure. Because you can let the real estate piece help pay off a piece of the infrastructure. So there are many benefits, not just in terms of fitting it into the city, but also having multifunctional uses, around-the-clock activity, and being able to cross-subsidize the infrastructure.

Stefan Al

## Key actions

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- Create a culture of policy evaluation with a triple impact perspective (social, economic and environmental).
- Integrate economic and social cost-benefit analysis into planning processes.
- Evaluate alternatives from a citizen science perspective.

# INNOVATION AND WORK





NORDOCK





# Expanding the possibilities for quality employment and personal development

The city-port region ecosystem needs to consolidate existing jobs, provide new employment opportunities, improve the situation of workers in the port community with worse conditions and ensure the overall quality of life as an asset for job creation.

All thriving cities have one thing in common: they offer people the opportunity to work together. There is no successful city that does not allow people to thrive within it. The most prosperous cities house people with different skills and knowledge and offer those who start with less the opportunity to end with more.

At the same time, improving the quality of life has become necessary to create quality jobs. There is an increasing link between the factors that promote this quality of life (air quality, health system, education, public space, mobility, culture, opportunities for socialisation) and the possibilities to attract, create and consolidate jobs, which depend on the ability of an economic system to integrate knowledge and regulate effectively. We define quality work as safe, healthy, respectful work activities with those who do them and enabling their personal development.

Labour in the logistics and port sector, which is highly dependent on external demand factors, is also affected by automation that increases productivity per worker. Recent waves of European deregulation have worsened the quality of port workers' labour conditions.

“ Within Europe, the biggest threats to dockers in the past 10-20 years have come from states and from the European government, rather than from employers.

Katy Fox-Hodess

It is important to improve the quality and opportunities of port workers, but also of all those who are part of the distribution chain, such as seafarers, truck drivers or workers in the storage areas.

This should mean consolidating existing quality jobs by extending decent work opportunities to the entire port community. Since the port is an asset for prosperity and wealth, the remuneration of the professionals who work there should be proportional to the economic return they themselves generate through the port.

“ A really important theme that I think is often not examined is thinking about labor holistically at a port, not just in terms of the dock workers, but in terms of all of the workers who are

dealing with the cargo, especially the truckers and warehouse workers, who often are immigrants or racialized, and would have very poor conditions.

Katy Fox-Hodess

“ The port authority must have decent working conditions and salaries for workers proportional to the economic movement they generate [...] without producing a caste of workers far from the reality of the city and the labor world.

Jorge Sharp

Infrastructure planning and investment with a high opportunity cost of public funds should be the result of a rigorous impact analysis. This analysis should measure not only the direct financial return but also the ability to create quality jobs.

“ There is a chance to make everybody much more aware of the real cost of these global trading networks. What are they costing your treasury, or what are they costing in terms of jobs.

Keller Easterling

The creation of employment opportunities must not compromise the quality of life of the people in this environment, which is necessary for the full development of citizens. If the quality of life is compromised, this will ultimately lead to a reduction in equal long-term professional opportunities. Understanding the port as a welfare factor (idea 12) is also key to the economic success of the city-port-territory ecosystem.

## Key actions

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- Assess the quality and quantity of jobs potentially created and include them in cost-benefit analyses.
- Take into account the impact on the whole port community in assessments and forecasts of job creation through port infrastructure.
- Facilitate the organisation of workers in trade union structures and the mechanisms of dialogue with them.

# Committing to gender equality and the dignity of port work

Gender equality must be ensured at all levels of port enterprises, the inclusion of women in decision-making processes and the improvement of conditions for essential work.

4 As of March 2022, according to the organigrams of the following Port Authorities: Algeciras, Barcelona, Pasaia, Bilbao, Santander, Gijón, Balears, Coruña, València.

5 Source: Madgavkar, A., Ellingrud, K. & Krishna, M. (2016). The economic benefits of gender parity. Stanford Social Innovation Review

6 Source: International Maritime Organisation (2022). Women in Maritime. Available online.

There is growing evidence of the positive impact of gender equality on environmental, social and economic sustainability. It has been shown that a greater proportion of resources are invested in social spending and corruption is reduced when women have a voice and participate in public administration. Companies with a proportional share of women in leadership positions have higher productivity. It is therefore important to achieve gender balance at all levels of work and especially in management and decision-making positions.

Given these facts, we find ourselves in a port context where there are strong deficits in the actual implementation of the principle of gender equality. In none of the main port authorities in Spain does a woman hold the chair or general management.<sup>[4]</sup> In Barcelona and Valencia, 25% and 30% of manager positions are women respectively, while in the port of Algeciras only 8% are women. Gender inequality has a high economic cost: it is

estimated that if there were full equality, global GDP would grow by 26%.<sup>[5]</sup>

“ Dockworker unions are overwhelmingly men. So the Spanish Union, the English union and the Swedish union have made efforts to bring women in. In different ports, they might have 10 or 15% women. So still very, very low. And in some ports, in some countries, it's entirely male dominated.

Katy Fox-Hodess

The participation of women in technical occupations has improved in recent years, due to better training and higher skill levels. Although in Spain they represent 28.13% of the workforce, globally they represent only 1.2%,<sup>[6]</sup> showing that participation is unequal from country to country. Gender barriers are still a reality in port ecosystems, as their removal is not a priority action of the competent authorities.

Strategies need to be developed to reduce gender inequalities at all levels of work in the city-port ecosystem. For example, harnessing the power of automation, while challenging to maintain employment, can be key to bringing more women into technical positions. In addition, strategies of visibility and specialised training should be deepened to promote advancement and inclusion, including in leadership positions.

“ The more the job requires automation and higher skills, actually, the higher the possibility of women being able to engage in [port] jobs, [...] But on the other hand, the entry of women into the labour force often comes at the expense of massive reduction in the number of jobs in the first place. And also the removal of some categories of jobs altogether from operations.

Laleh Khalili

Apart from the high-tech occupations, the city-port-territory ecosystem requires that all work, regardless of skill level, is decent. Given the vital importance of issues such as utilities, energy and distribution, it is necessary to socially and conditionally value the essential occupations that were previously considered low-skilled.

“ We really need to rethink what jobs we consider to be low-skilled. Because, as we have learned in the pandemic era, there are no low-skilled jobs, there are only low-paying jobs. [...] We need to think about re-education for the public. And also a demand for an increase in the wages of those jobs that we consider low-skilled, which are actually only lower-paid.

Laleh Khalili

The understanding of equality in the world of work must go beyond the gender barrier to become intersectional. This means addressing structural inequalities in access to decent working conditions for people who are systematically vulnerable (e.g. because of their social class or religion). This point is a key challenge for the conceptualisation of ports as a pole of inclusive prosperity.

## Key actions

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- Promoting a gender-sensitive assessment of potentially emerging jobs.
- Developing and implementing gender equality plans.
- Diversifying jobs and services.
- Improving conditions for occupations considered low-skilled.

# Developing the maritime innovation ecosystem

To drive innovation, it is necessary to connect port agents with new activities, educational institutions, business support organisations and the availability of public spaces and cultural infrastructure.

City-port spaces are places of creative destruction and experimentation, hubs for migrants and travellers, seafarers and the cultural diaspora, places of capital accumulation and circulation of common goods, centres for new social movements, socio-cultural entrepreneurship, community initiatives, etc.

Understanding the port city as an ecosystem means that the actors involved should be able to reconcile economic and social values in an environmentally sustainable way. The economic actors located there have the opportunity to exchange and strengthen themselves while building a common vision.

“ So how can we make sure that when something so crucial comes up that triggers a reinterpretation of the cityscape, we can simultaneously deal with all these parallel issues where talking about city positioning and competitiveness is no more or less important than talking about environmental issues, mobility issues,

participation issues, cultural issues, civic participation issues, etc.?

Gabriella Gómez-Mont

Recent projects in port cities have sought to create innovation ecosystems in coastal areas, with programmes to accelerate blue economy businesses, use industrial heritage buildings, and create new infrastructure and regulations for experimentation and testing. Old ship-yards would be transformed into training facilities, educational institutions would be located in the old docks, special measures for entrepreneurship and social innovation would be designed, spaces would be opened to the public, and social and cultural infrastructure would be created.

“ Large operators are actually thinking in these terms [of new innovation spaces] and see the synergy of sharing space with like-minded companies. It doesn't just have to be [sharing a space in a] physical aspect, it can be about the intellectual aspect as well.

Fredrik Lindstål

The attractiveness of seashores grows with the coexistence of activities related to maritime transport with other uses and public facilities. The key lies in the possibility of cross-fertilisation and exchange between all these activities: traditional port activities and innovative and creative activities related to the blue

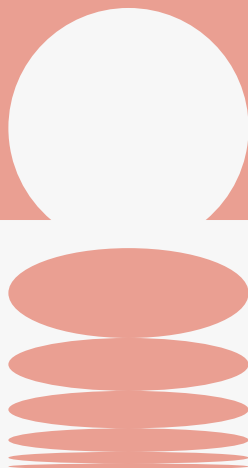
economy; the integration of educational and economic development facilities; and the availability of public spaces and cultural infrastructure. These are the ingredients to transform port areas into innovation districts that have the potential to reinvent and change.

#### Key actions

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- **Mapping of environmental actors with a focus on the quadruple helix: administration, science, businesses and citizens.**
- **Creating spaces for formal and informal dialogue and exchange between actors.**
- **Defining social, technological and economic innovation strategies at the level of the port district.**

# CITY AND TERRITORY







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# Removing the barriers to an ecosystem of city, port and territory

We blur the boundaries to consider the space that connects the port with the territory as a living, changing and permeable space that manages to create enriching situations in each of the sides.

The process of growth and heavy industrialisation in response to global trade networks has led to a disconnection between ports, cities and the areas in which they are located. Their development is no longer symbiotic and has led to an unsustainable situation where both parts seem to have nothing to do with each other and are no longer connected.

However, the weight of port infrastructure today exerts pressure and externalities on cities and their surroundings, and has an impact on the hinterland that stretches for miles from the coast. Therefore, restoring the relationship between the infrastructure and its surroundings is key to the sustainability of the infrastructure and the recognition of its responsibility for the environment.

“ The port is a place connected to the interests of other countries with which it trades. And so it's there and not there. The port attracts labor that may require new infrastructures in the center or periphery. Port logistics have also formatted all kinds of manufacturing and agricultural landscapes.

Keller Easterling

The main objective is to create a city-port ecosystem. This requires a comprehensive view of the strategy to reconcile economic, social and environmental values and redefine the reality of the relationship between city and port. It is based on restoring the services of the port infrastructure to the hinterland, as a gateway to the sea and a link to other areas. It is an infrastructure that must serve the industrial and productive ecosystem as an input and output node. In the case of ports located in dense urban environments, serving the area also requires a more complex response.

“ ‘Path dependency’ says that certain basic infrastructures are so powerful that they give cities a very specific direction, and that it is very difficult to get rid of that direction later. [...] What do I see as the challenge for large infrastructures? On the one hand, it's exactly that –that they eat up other possible cities.

Gabriella Gómez-Mont

The reality of the port must be more diverse and promote the city-port-territory ecosystem. In these cases, a key role is played by overlapping space as a space of connection and exchange, able to accommodate the diversity of realities (city, port and territory) of the ecosystem.

It is proposed to work with a diluted boundary that creates a wider and permeable environment where the

relationship between both sides, as equals, takes place. This space of direct, physical relationship where the city-port ecosystem is territorialised is a space of mediation and recognition between the different interests and actors. A space to add functions and infrastructures which promotes cooperation between parties. A dynamic and complex system that is able to adapt and change according to the different situations and demands with which it interacts.

“ The city port of the 21st century is an organically interconnected port. It is so strongly integrated that the barrier is not perceptible from either the port or the city. [...] It should not be forgotten that the ports are a public asset, namely the coastal boundaries, which are fundamental for the development of cities. The coastal border is populated not only by port activity, but also by scientific activities, sports, leisure and cultural activities, fishing bays, fishing terminals...

Jorge Sharp

## Key actions

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- Work in the areas of port-urban integration with a broader strategy beyond planning, integrating the principles and tools of inclusive development.
- Claim and use obsolete port areas and infrastructures as spaces of port-urban relationship.
- Facilitate the coexistence of port activities with urban and public uses in areas and times where this is possible.
- Consider the design of physical boundaries (e.g. walls or fences) that enable the visual relationship between the city and the port. Use materials and designs that are characteristic of the public space.

# Introducing compatible uses for public access

The connection with the city must be to find spaces where the port is also a city. It is therefore necessary to connect the port infrastructure with social and cultural infrastructure: uses must be created to connect citizens to the docks and the port in a real and symbolic way.

“ There is a way in which [the embedding of the port in the city] can be monitored or that can be addressed. The Port of Rotterdam does that every time they create a breakwater. In order to create a harbor, in order to expand the port, beaches are created on that side of it. [...] So much of it is actually accessible both by cycle, but also by ferries.

Laleh Khalili

“ If we want [the port] to be not securitized, then the ships that are coming into port have to be safe. And so you need a much stronger inspection regime for a municipally in order to ensure that the ships that are coming in are in better shape, you need to have [an active participation] in all of the processes of port planning: by the governance of a particular city or by the port management, for civil groups, neighborhood groups to be involved, but also small business groups to be involved in the planning around the ports.

Laleh Khalili

The transformation and development of the transitional spaces between port and city of the main port cities in the second half of the 20th century and the beginning of the 21st century is characterised by revitalisation processes. These are characterised by changing the use of obsolete port spaces according to private interest, as in most cases capital is needed for their development. This process has led to two models that can be found all over the world.

The first leads to a process of outsourcing with leisure and commercial uses, embodied in the model of festivalisation that characterises interventions such as the Port of Baltimore. The second is a hyperdevelopment process of large architectural projects, with intensive real estate development for residential or office use, such as Docklands in London or Southbank in Melbourne.

“ Most of the time, when ports are involved in [waterfront] development, they tend to be constructed and governed by private firms, often the port management, which means that they can dictate who can come into the space of the marina or the port and who can not. [...] And it ends up being like a shopping mall on the water.

Laleh Khalili

“ Large infrastructures can no longer be planned the way they used to be

planned. [They need to be] not monolithic, understood from their dynamics, from a multiplicity of functions, for a world that is much less easily predictable than it was a decade ago.

Gabriella Gómez-Mont

The challenge, then, is to understand the necessary transformation of port infrastructures as a relationship strategy with the immediate environment, focusing on the general interest and reality of the port as a public good, and its commitment to multifunctionality. In this sense, the port infrastructure must be profoundly diversified to include other functions of the city, recognising its potential to become part of the social and cultural infrastructure of the area in which it is located. This overlapping of functions allows it to be flexible and increase the capacity of interaction between the port and the city, filling spaces while waiting to introduce other logistical, port or new activities resulting from unexpected changes. At the same time, it is a guarantee that the development of the port will be balanced with the improvement of the quality of life in the maritime neighbourhoods.

“ No one would have ever thought of walking along the waterfront, and people would not have experienced the waterfront as a walkable area because it was seen only as an industrial wasteland with many obsolete piers. But once there was [the Giants ballpark] that attracted so many people from so many different backgrounds to enjoy an American sport, it helped to democratize the waterfront in ways that few other uses could do.

Diane Oshima

The proposed overlap of compatible public access uses is related to the challenge that dense cities face to improve the efficiency of developed areas and avoid unnecessary expansions. The intensity of activities involved in

this overlap also promotes the creation of synergies and innovations within the city-port ecosystem. The key is to promote compatible spatial and functional solutions that maximise public access to the coast through technology and improvements in port security.

“ [In Stockholm] these massive port areas that used to be the old container port are changing. Some hurdles that had to be overcome were to figure out which functions need to be there today, from a port perspective, and which functions need to be there tomorrow. [...] We had to find a mix, for instance building offices to work as noise barriers to build housing behind them.

Fredrik Lindstål

#### Key actions

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- Create access points and public spaces along the harbour extension where people can reach the sea.
- Facilitate access to facilities through sustainable mobility mechanisms: more public transport lines and frequencies, better connections for pedestrians and bicycles.
- Design use plans and activities that include criteria for quality public and mixed use. This means creating the possibility for different things to happen, attractively and for all target groups.
- Introduce public facilities and cultural and social uses that bring residents closer to their daily lives.

# Giving new meaning to coastal ideas

We are building a history of the future that connects us as a city to the port and the sea and honours the memory and identity of seafarers.

“ Some ports end up becoming really important destination ports and some become transit ports. [...] Hubs of transit, they do not necessarily generate sets of social relations that bind the ports very intimately to their own hinterlands, to their own cities, to their own regions. What they end up doing is actually, because they are outward looking, they act as a kind of a hub between different countries, between different [often] transnational spaces.

Laleh Khalili

Major commercial ports have prioritised transnational dynamics and the servicing of international trade networks, jeopardising society's support for these infrastructures. This rupture of a collective narrative that no longer sees the port as an asset serving the territory is a weakness that threatens societal consent and the public investment needed to sustain port activities.

The process of territorialisation and connectivity of the port infrastructure must be accompanied by the construction of a new history and social recognition to ensure its continuity in the future. In

this sense, it is important to recognise the links between the fundamental symbols of the port's history: the port as an element of exchange between one's hometown and other worlds, and the link between land and sea. This cultural heritage needs to be understood in a dynamic way so that it can be redefined for the future. The proximity to water is a very powerful symbol that can tell broader stories that make it easier for new ideas to take root in an increasingly diverse society.

“ The moment we have the possibility to activate an important symbol for the city, the more there is a multiplicity of possibilities to belong to this symbol, to use this space. How do we come back to the need for these infrastructures to be antimonolithic, and somehow break the path dependency in forms that are also civic, participatory and so on?

Gabriella Gómez-Mont

This aspiration is directly related to opening up and maximising public access to the harbour infrastructure, as activating the space and allowing it to be used by a greater number of people will facilitate the appropriation and resignification of the space both individually and collectively. Opening up provides the opportunity to develop the waterfront and harbour infrastructure as an educational environment that is transparent, accessible and dependent on the other parts of the ecosystem. In short, it is



about nurturing everyday relationships in port infrastructures and rooting them in the social and community fabric that surrounds them.

“ People like to do things, they like to eat things, they like to play. And that’s what holds them in public access places – not just walking through and passively sitting. We have a beautiful vista [in San Francisco Bay], you can sit there, enjoy and take in the views. How you enrich the public’s use and experience of those public access spaces is something that every community needs to figure out.

Diane Oshima

“ Public access doesn’t have to be continual, there can be breaks in places where you don’t have access to the shoreline, and you can still have a wonderful waterfront experience. It’s what you do with those public access spaces that will really make that experience.

Diane Oshima

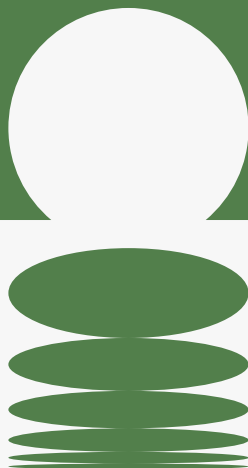
## Key actions

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- Restore and enhance the maritime and port identity of the surrounding towns and districts through the memory of work and daily life.
- Integrate collective and popular celebrations in the city-port spaces, such as parties or regular events that can add symbolic value to the space shared by the community.
- Refer to broad cross-cutting themes that can combine the contemporary with the traditional – such as gastronomy or music – and work to incorporate diversity in creative and active ways.



# ENVIRONMENT AND HEALTH





**Adapting to climate change requires a new approach to infrastructure: we need to move from control to coexistence with the dynamics of water. We need to activate resilience strategies and pay attention to slow variables in order to live with the change in river flows and sea level rise.**

The future of the city-port-territory ecosystem will fully depend on the impacts of climate change. Coastal areas are among those most exposed to the negative impacts of climate change: Sea level rise, salt intrusion, risk of flooding, storms and high water.

Ports also play a central role in this situation. On the one hand, they represent a change in the coastline that amplifies some of these risks, but they are also the frontier where solutions can be applied to protect urban communities and some of their key infrastructure from these risks.

“ These three aspects – ecosystem impacts, erosion, and saltwater intrusion – are three of the consequences of coastal climate change. And ports amplify the natural dynamics of climate change on the coast.

Miriam García

“ There are a number of city departments that are very engaged in sea level rise adaptation because they have assets that are at risk. There are also some other city agencies that are working together to develop a framework of principles to coordinate what are the assets that the city needs to upgrade and adapt. And now, we’re also getting into discussions with the businesses and private property owners to start educating them about investments that they’re going to have to plan for as well.

Diane Oshima

To ensure adaptation to the upcoming changes, an approach of interdependent and solidary systems is required, where port infrastructure participates as part of the open socio-ecological system at the coastal zone. Adaptation measures to climate change must be designed taking into account all externalities and impacts of the ecosystem configuration.

“ To assess the impact of change, we must consider these open environments as open social-ecological systems. [...] Without understanding these dynamics and the environment of this system, we will not be able to meet the challenges of adaptation.

Miriam García

The development of ports must also be influenced by this view, not only the

adaptation of existing infrastructure. Any transformation project must be considered as part of the ecosystem to be resilient. This includes incorporating changes and projections of slow variables into the design process to assess climate change risks. For example, the ability to assess future changes in coastal drift and their long-term impacts, or the impact of rising sea levels on infrastructure.

In addition, the port of the future will require the adaptation of current technical solutions to incorporate less harsh ones that are based on nature and its regenerative capacity and inherently have greater adaptive potential.

“ Methodologically, one of the criteria for resilience to the impacts of climate change is to consider the slow variables of climate change, i.e., gradual sea level rise, erosion, saltwater intrusion, or ecosystem degradation must be considered, for example, by 2045 and by 2100. Any work that is not addressed in this way cannot be called resilient or adaptive because it does not consider the long-term impacts.

Miriam García

“ I think what’s interesting about these soft solutions, instead of hard solutions, is that it’s not binary. When you’re thinking about, for instance, a barricade or a dam –it’s either open or it’s closed. But [soft solutions] are very gradual. They can help attenuate the waves that kind of absorb some of the impact. And when they are being damaged, it’s not that they’re fully broken, the system is still alive, it’s a living system, and it will regenerate itself.

Stefan Al

## Key actions

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- Have a coastal resilience plan that includes measures to adapt port infrastructure to climate change impacts.
- Assess the environmental and transformational impacts of ecosystems derived from port infrastructure over long time periods to include slow variables, e.g. in 2045 and 2100.
- Research and develop new biotechnological solutions for climate change adaptation. Collaborate between university, public sector and private sector to develop innovative solutions with positive impacts.

# Reducing the ecological footprint

We advocate for the sustainability of logistics and transport and strengthen our commitment to mitigating climate change. We decarbonise our own activities and activate strategies to accompany improvements in the environment.

<sup>7</sup> Source: European Environment Agency (2020). 2019 Annual Report from the European Commission on CO2 Emissions from Maritime Transport. Brussels: European Commission.

Port infrastructure has an impact on climate change and the environment related to its activity and the emissions it generates. Maritime transport is currently responsible for 3% of global CO2 emissions.<sup>[7]</sup> In addition, port activity bundles other transport and activities that add to the impact, such as land transport connections by truck, internal logistics activities, etc.

Therefore, the port of the future must be geared towards the challenges of climate protection and decarbonisation of its activities, both in terms of infrastructure and the various transport systems that interact in the logistics sector.

“ The ships that are flags of convenience tend to dump a lot more pollution in the waters, tend to have much worse working conditions, tend to have much worse health and safety issues. And often, they also tend to be ships that are in worse shape. [...] There needs to be both at the national level, but especially at the municipal

level, a much harder line taken around regulation of flags of convenience and blacklisting of some flags or blacklisting of some shipowners in order for there to be a better enforcement mechanism.

Laleh Khalili

The measures that need to be implemented as part of decarbonisation are threefold: technological measures, such as innovations in materials or design conditions; the adoption of regulations to reduce the size or speed of ships and their impact on the port environment; and energy-related measures, to switch to green energy sources. In addition, international regulations are key to ensure that targets are set and met.

“ There’s been a lot of citizen interaction and education in developing the [San Francisco Port] master plan goals and policies. [...] The port, our tenants, and our development partners are accountable to those goals and policies. And to the extent that the citizens have had so much involvement, and influence on the plan, it also holds them accountable.

Diane Oshima

The European ports ecosystem has already recognised this challenge. One of its goals is to decarbonise 90% of its ports by 2030 and proposes a tax on maritime transport depending on its emissions. However, we recognise that the port of the future must also aim to



reduce emissions in its surroundings. For example, by developing a positive energy infrastructure that produces green kmO energy at a scale sufficient to supply the surrounding area. Another improvement would be to promote intermodal rail and maritime transport to consolidate pan-European green logistics corridors.

“ The ports of Stockholm will be carbon free by 2030 and emission free by 2040, completely. But we can do more. This is a mission that we can embark on together with the other ports of the Baltics. The real game is to look beyond your borders. And if you can have that. For instance, if you collaborate with the shipping industry for electrification and for a sustainable fleet [of your own], you can have a fully electrified fleet in the Baltics, quite a lot sooner.

Fredrik Lindstål

## Key actions

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- Promote the projects and infrastructure necessary for the energy transition in the ports, including the electrification of the ports and the generation of their own renewable energy.
- Ensure intermodal connectivity of ports with a clear commitment to rail as the most sustainable mode of transport.
- Identify new needs and infrastructures resulting from the application of new energy sources, also in terms of services for the logistics sector such as power lines or hydrogen tanks for trucks.

# Understanding the waterfront as a resource for health and wellbeing

If we consider the coastal front as a public space in the city, it must be accessible, inclusive and healthy. Therefore, its realisation must promote the reduction of health inequalities in its surroundings and ensure air quality, connection with the water and citizens' ownership.

The identified environmental impacts also have a direct impact on the health and well-being of individuals and groups living in close proximity to port infrastructure. The process for assessment, transparency and reporting of emissions has improved in recent years, but it has also become apparent that pollution levels in port environments are unsustainable and in many cases exceed the requirements for maintaining healthy levels.

“ The environmental impacts in ports is definitely something that dockworkers are very concerned about. Because the people who are most affected by the contamination that's put out by idling ships or idling trucks are the workers of the port. [...] The rates of asthma and the rates of various cancers [is higher], the lifespan or the projected lifespan is much lower for dockers in Europe.

Katy Fox-Hodess

“ There are some interesting examples of coalitions between unions and

environmentalists. The main one I would point you to is in the Port of LA Long Beach, the Blue-green Coalition, which was between the unions for the Dockers and the truck drivers with environmentalists, and they got some new regulations put into place there.

Katy Fox-Hodess

Our health and well-being are also influenced by the spatial conditions in which we live every day. The proximity of accessible public spaces and the quality of the natural environment are directly related to improved health and perceptions of comfort and quality of life. Port infrastructures, when part of a coastal frontage, play a crucial role in creating a territorial network of continuous and uninterrupted health benefits. Linking port infrastructure with green and blue infrastructure strategies improves ecological connectivity and thus the health of our ecosystems and the people who inhabit them.

“ When we think of infrastructure, like gray infrastructure, it only has one purpose. So you think about a seawall, it can only block, or a concrete pipe can only move water. But if you have the green infrastructure solution, like a dune, it becomes much more than that. It becomes part of the landscape, it can become a public space that people can enjoy and walk through, it becomes an opportunity for ecosystems to thrive.

Stefan Al

“ The border between the ocean and land is extremely fertile for ecosystems. So, if you turn that into the gray border, they have no chance of surviving, but if you turn it into a green edge, there's lots of opportunity for different species to thrive.

Stefan AI

Promoting coastal ecosystem connectivity, together with the decarbonisation measures already proposed, offers a range of positive benefits and externalities to mitigate the impacts of ports on human health. Some of these are the quality of water and marine ecosystems, the conservation of biodiversity and, directly related to this, the improvement of the quality of life in the surrounding area.

“ [In] New York, instead of concrete pavers, there are custom-built or custom-cast stones that are designed in such a way that they can accommodate the oyster population. And oysters are wonderful for harbors because they clean the water. So they help purify the water and, at the same time, people in New York really love oysters to eat, so it stimulates the economy. And they use it as an educational tool. So school children, they go there and see how you know oysters are grown, and how they're how they're being harvested.

Stefan AI

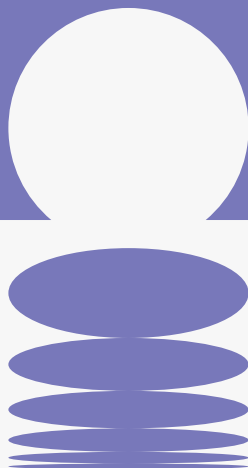
The relationship between the city and the port as a permeable, accessible and public boundary is an important tool for promoting healthy habits such as physical activity, culture and social interaction in the city. Therefore, the need to create fair, safe and diverse spaces that do not promote inequalities between population groups and to accommodate traditionally vulnerable groups must be taken into account.

## Key actions

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- Guarantee compliance with healthy emission levels and seek to reduce emissions until they disappear altogether.
- Complement and overlay port infrastructure with spaces that include vegetation and water cycle treatment.
- Assess existing health inequalities in cities, particularly in port areas, to take measures to reduce them in an equitable manner. For example, where there is a shortage of jobs in a particular sector of the population, create employment mechanisms under decent conditions for that sector; provide facilities and places where there is a shortage of healthy recreational spaces; etc.
- Create a network of public spaces that allow access and use in healthy ways – sports, play, cultural activities, and meetings. Keep these spaces in good condition, safe and accessible.

# GOVERNMENT AND PARTICIPATION







# A port from the city

A governance model that approaches, recognises and focuses on the city-port-territory interdependence is the first step in aligning the development of the port, the city and the territory and achieving the goals set.

Ports are connecting nodes and demonstrate the tensions at work in the development processes of our society. As noted in the area of the territory and the city, development in recent decades has tended towards deterritorialisation, guided by servicing the global dynamics of production, trade and consumption. Moreover, the unbundling of their service in the host country is exacerbated by the tendency towards a corporatist management model that bases decision-making processes on their service to the transnational economy.

“ There is a kind of tyranny in global trade—demands for regimented, universally applied logistics and behaviors that can be oppressive.

Keller Easterling

This situation means there is a loss of connection between the ports and their managing bodies with the territory and cities in which they are located. It is also impossible to guarantee the realisation of the sustainable development agenda, with which we must be able to reconcile the pursuit of growth with a comparable

increase in comprehensive social and environmental benefits.

“ The intentions about how you use this precious area, to balance the interests of the most number of people, particularly on waterfronts that are publicly owned, should be sought.

Diane Oshima

“ Public access to the shore is a principle that's very important. However, in my time working in San Francisco, I've come to think that it's not so much about physical outcomes necessarily, but it really gets down to people, and how people collaborate and come together to have functional conversations.

Diane Oshima

There is a need for new management and planning models that effectively balance interests to ultimately promote the development of the port and its core service function in the host country. In this sense, the most successful models facilitate collaboration with the city and regional stakeholders, with more horizontal governance models.

“ Global capital [dictates] the terms in which infrastructures, whether it's extractive infrastructures, or productive ones, or circulatory ones like ports, are located. And I think that is actually one of the more interesting spaces of struggle [...]. When we're looking at a port, there has to be an enormous



amount of say by the local authorities on the parameters in which global capital operates in that particular location.

Laleh Khalili

The port of the future will have to update its management in order to be able to achieve the complex and multidimensional objectives required of it. The goal is to maintain its status as a territorial asset that accompanies transition and adaptation to new realities. Therefore, its leadership must be strategic and its governance model must be defined in an open and mediating way.

“ When the positions are not dialectical but protective, confrontation occurs. What the study, analysis and development of the environmental impact assessment allows is dialectics, a mechanism to reach agreements. But if you anchor yourself in the idea that something doesn't need to be done, the result is confrontation: it can't grow.

Miriam García

## Key actions

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- Amend the laws and legal framework of the ports to include the powers of municipalities and local governments in management and decision-making.
- Establish a common management framework harmonised with urban and territorial development criteria and prioritising the general interest.

# Open and transparent decision-making processes

Looking to the future and the desired governance model requires new guarantees and instruments. Opening democratic information and decision-making channels to a wider port community is one of the most important guarantees for good management and sustainable development.

As previously remarked, the intense diversification that the port of the future is aiming for and the densification of links with the host environment both require rethinking the governance and management model of the infrastructure. One of the fundamental objectives of this model must be to create a framework for action that is coordinated with all the actors of the city-port ecosystem. This community must be understood as extending not only to port activities but also to the general public and stakeholders of the local and regional area in order to increase the representativeness of the infrastructure and the recognition of the various interests.

“ We should not try to avoid public discussions about these points, but rather go deeper into them. We need to open [the conversations about infrastructure] up to public discussion and form equally active layers of experts and citizens to understand what the weak, tenuous, and even

dangerous points are, and what we can do to work around them and develop other alternatives.

Gabriella Gómez-Mont

“ You have to have civic groups that are involved with the port itself so that they can decide, for example, in which direction do the roads go? What sorts of amenities are provided to the drivers or not? What sort of rules are there around these big trucks that are going to go through town, or the trains that are going to go through town?

Laleh Khalili

This approach is a commitment to the inclusion of social innovation processes as a complement to the expected technological innovations. Creativity and co-creation of responses deepens the resilience of the port of the future by incorporating scientific, technical and local knowledge into the decision-making process and thus the ability to respond to the uncertain and complex changes associated with climate change.

“ I would instantly change the process from kind of this single-focus, single-disciplinary kind of engineering, a hard approach to something that is multidisciplinary, multistakeholder, a collaborative approach that looks at the opportunity holistically. [...] It pays off to improve the process and to get various viewpoints, and see how this infrastructure could have more than one benefit, rather than this very

single focus, this narrow-minded way of building infrastructure.

Stefan AI

To ensure the success of this change, it is essential to create an environment of trust and legitimacy in deliberative and decision-making processes. Ensure transparency, access to information and accountability as democratic principles and good governance. Finally, ensure that the design, implementation and evaluation processes that enable these interactions are defined in a way that allows creativity and innovation to flow into them.

“ [The success of the participatory process] depends on what your setting is and on the sensibilities of the people in that setting, and how the government and the community construct a dialog that shares desires and meets the realities of fulfilling those desires and values. And that you [as a port] are on the ground floor of the discussions, so that you can build some trust and shared motivation to try and implement something that reflects what those shared values are.

Diane Oshima

## Key actions

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- Complement the modification and administrative updating with the design and formalisation of the various advisory and consultative bodies involved in the design of the infrastructure.
- Ensure the principle of transparency and open data in port management.
- Provide the necessary resources for the participation and consultation processes and ensure that they are sustainable in relation to the economic activities carried out.
- Integrate monitoring and evaluation mechanisms to produce citizen audits that ensure continued interest in meeting the general interest.

# Innovating in port planning processes

The system of planning and managing port infrastructure must respond to the development of the economy and the demands and rights of people. This requires a multidisciplinary and innovative perspective.

The foreseeable obsolescence of many port infrastructures highlights the need to introduce participatory rather than rigid planning processes that incorporate complementary voices to those of logistics and engineering.

“ Even if the institutions are not formed around the holistic approach, you can still begin small. Organise a competition or some other type of event in which you bring people around the table to discuss things collaboratively, conduct charrettes in which common visions are being formed, and try to get to more long-term, and more sustainable and holistic solutions.

Stefan Al

The goals of optimising management, opening to participation and moving from a model of mass construction of hard infrastructure to a more innovative and sustainable model with green and blue solutions require multidisciplinary planning models. Mono-disciplinary and technocratic perspectives are unable to respond to the growing complexity of new social rights and climate challenges,

and have failed to consider port infrastructure at a human scale.

“ There needs to be a recognition that the ports need to be at a human scale. And so in order for them to function, we can't demand constant growth. We have to think about the trade-offs there. And the trade offs might be that the port won't be the biggest in the region. It might be that it won't be the richest port in the region. But if it is a more humane, more equitable, better integrated port, then that again, that's the job of educating, and it's not just educating the public, it's also educating the politician.

Laleh Khalili

It is then necessary to design the mechanisms of governance and participation for changing ports, cities and territories to respond to the evolution of the economy, demands and rights.

“ Laws and public policies are designed for static cities, a city that does not change. [...] How can we see ourselves in our diversity and in a less dictatorial, less modernist relationship with our environment and instead, from now on, every time we build new infrastructures, think about the necessary flexibility that these infrastructures must have because our old way of dealing with natural and climatic processes is no longer sufficient and cannot be sustained.

Gabriella Gómez-Mont

- Give preference to prevention principles over substantial changes that require public capital investment and do not positively impact the general interest. Form multidisciplinary teams that allow the inclusion of strategic perspectives to develop societies and common challenges.
- Engage opinion polls and co-design tools with citizens to explore alternatives to port infrastructure development.
- Give preference to prevention principles over substantive changes that require public capital investment and do not have a positive impact on the general interest.

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## Govern i participació

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# Experts





# Laleh Kalili

LINK



POSITION

Professor of International Politics at Queen Mary  
University of London  
United Kingdom

Dr. Laleh Khalili is a professor of international relations at Queen Mary University of London. She received her PhD from Columbia University. Her primary research areas are logistics and trade, infrastructure, policing and incarceration, gender, nationalism, political and social movements, refugees, and diasporas in the Middle East. Her latest book, *Sinews of War and Trade* (Verso, 2020), is an account of how shipping and maritime transportation have become central to global capitalism.

5:35 Anywhere between 80 to 90% of the world's goods today, whether raw or processed, now travel by ship. And so maritime transport continues to be enormously important, especially over long distances, and over long sorts of temporal periods.

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Shipping and economic development

49:18 Given the particularities of our moment, with the danger of climate change, there needs to be a lot of thinking around how ports can be involved in the processes of recycling, repurposing, reusing.

24:09 The more the job requires automation and higher skills, actually, the higher the possibility of women being able to engage in [port] jobs, [...] But on the other hand, the entry of women into the labour force often comes at the expense of massive reduction in the number of jobs in the first place. And also the removal of some categories of jobs altogether from operations.

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Innovation and  
work

44:59 Regulations around labor have to be really enormously strengthened. So that you have workers not only on the docks, but also on the ships that are arriving with access to sets of rights.

47:37 We really need to rethink what jobs we consider to be low-skilled. Because, as we have learned in the pandemic era, there are no low-skilled jobs, there are only low-paying jobs. [...] We need to think about re-education for the public. And also a demand for an increase in the wages of those jobs that we consider low-skilled, which are actually only lower-paid.

7:48 Some ports end up becoming really important destination ports and some become transit ports. [...] Hubs of transit, they do not necessarily generate sets of social relations that bind the ports very intimately to their own hinterlands, to their own cities, to their own regions. What they end up doing is actually, because they are outward looking, they act as a kind of a hub between different countries, between different [often] transnational spaces.

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City and territory

42:10 Most of the time, when ports are involved in [waterfront] development, they tend to be constructed and governed by private firms, often the port management, which means that they can dictate who can come into the space of the marina or the port and who can not. [...] And it ends up being like a shopping mall on the water.

54:51 There is a way in which [the embedding of the port in the city] can be monitored or that can be addressed. The Port of Rotterdam does that every time they create a breakwater. In order to create a harbor, in order to expand the port, beaches are created on that side of it. [...] So much of it is actually accessible both by cycle, but also by ferries.

45:00 The ships that are flags of convenience tend to dump a lot more pollution in the waters, tend to have much worse working conditions, tend to have much worse health and safety issues. And often, they also tend to be ships that are in worse shape. [...] There needs to be both at the national level, but especially at the municipal level, a much harder line taken around regulation of flags of convenience and blacklisting of some flags or blacklisting of some shipowners in order for there to be a better enforcement mechanism.

12:07 Global capital [dictates] the terms in which infrastructures, whether it's extractive infrastructures, or productive ones, or circulatory ones like ports, are located. And I think that is actually one of the more interesting spaces of struggle [...]. When we're looking at a port, there has to be an enormous amount of say by the local authorities on the parameters in which global capital operates in that particular location.

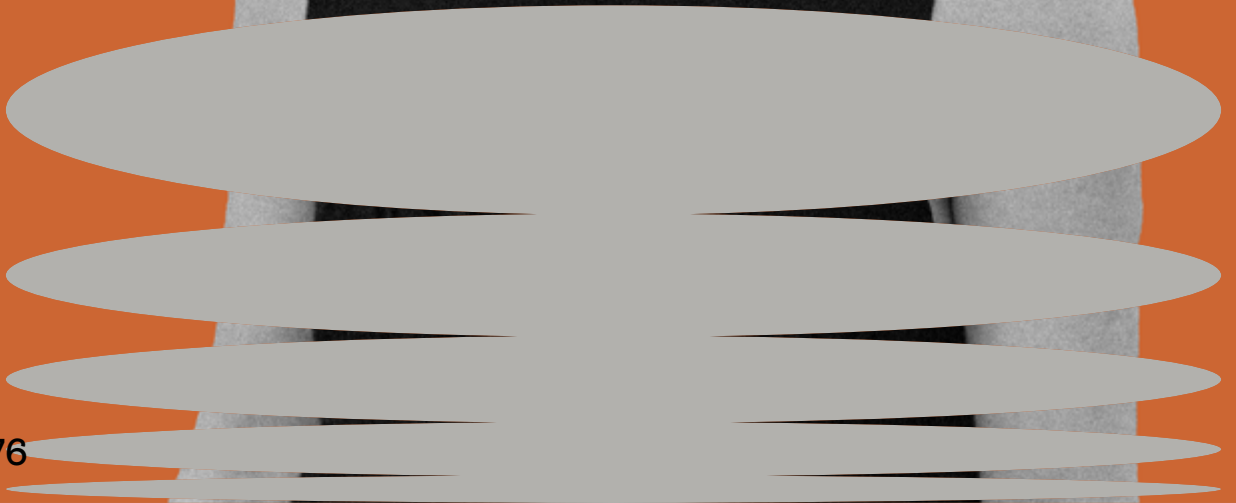
46:06 If we want [the port] to be not securitized, then the ships that are coming into port have to be safe. And so you need a much stronger inspection regime for a municipally in order to ensure that the ships that are coming in are in better shape, you need to have [an active participation] in all of the processes of port planning: by the governance of a particular city or by the port management, for civil groups, neighborhood groups to be involved, but also small business groups to be involved in the planning around the ports.

47:15 You have to have civic groups that are involved with the port itself so that they can decide, for example, in which direction do the roads go? What sorts of amenities are provided to the drivers or not? What sort of rules are there around these big trucks that are going to go through town, or the trains that are going to go through town?

48:30 There needs to be a recognition that the ports need to be at a human scale. And so in order for them to function, we can't demand constant growth. We have to think about the trade-offs there. And the trade offs might be that the port won't be the biggest in the region. It might be that it won't be the richest port in the region. But if it is a more humane, more equitable, better integrated port, then that again, that's the job of educating, and it's not just educating the public, it's also educating the politician.







# Keller Easterling

LINK



POSITION

Designer, writer and professor at Yale  
USA

Keller Easterling is an designer, writer and professor at Yale. Her books include, *Medium Design* (Verso 2021), *Extrastatecraft: The Power of Infrastructure Space* (Verso, 2014), *Subtraction* (Sternberg, 2014), *Enduring Innocence: Global Architecture and its Political Masquerades* (MIT, 2005) and *Organization Space: Landscapes, Highways and Houses in America* (MIT, 1999). Easterling is also the co-author (with Richard Prelinger) of *Call it Home a laserdisc/DVD history of US suburbia from 1934-1960*. Easterling lectures and exhibits internationally. Her research and writing was included in the 2014 and 2018 Venice Biennales. Easterling is a 2019 United States Artist in

A new kind of entrepot of global trading, usually a freezone world city, is also attached to both inland and maritime ports. [...] And the free zone is often also incubating other spatial products within its boundaries. These freezone world cities are the engine rooms of neoliberalism. They are distinct from small states and territories or other kinds of enclaves in that they have a particular role in the 20th century that involves exemptions from labor law and environmental law, and the streamlining of customs and deregulated logistics.

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Shipping and  
economic  
development

Free zone jobs are often low-paid, unskilled jobs in industries attached to ports. Many of these jobs are about “materials handling,” the sorting of things in warehouses or containers. Some are manufacturing jobs in warehouses making things to be shipped by container.

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Innovation and  
work

There is a chance to make everybody much more aware of the real cost of these global trading networks. What are they costing your treasury, or what are they costing in terms of jobs.

Within a narrative of progress, municipal leaders sometimes make projections that the next mall or the next aerotropolis is going to be incredibly productive. But it would be good to be able to substitute another narrative.

The port is a place connected to the interests of other countries with which it trades. And so it's there and not there. The port attracts labor that may require new infrastructures in the center or periphery. Port logistics have also formatted all kinds of manufacturing and agricultural landscapes.

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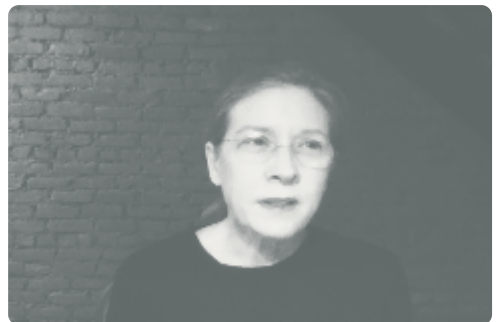
City and territory

There is a kind of tyranny in global trade—demands for regimented, universally applied logistics and behaviors that can be oppressive.

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Government and participation

Cities, especially cities in developing countries, might make a better bargain with their [port] assets. [...] In exchange for access to labor or some other asset, might require an offset investment in something else the city needs, like transit, housing, or a special industry. That give and take might be productive for many cities.





# Miriam García García

LINK



POSITION

PhD Architect, landscape architect, urban planner and  
director of LAND LAB  
Spain

Miriam García García (Sama-Langero, Asturias, 1971) architect (1989) and PhD Extraordinary Award (2017) by the Polytechnic University of Madrid (UPM). She is also a landscape architect, urban planner and director of LAND LAB, laboratorio de paisajes, an office based in Barcelona. Currently she teaches at the Master's Degree in Landscape Design at the Universidad Pontificia Bolivariana (UPB), the Master's Degree in Urban Planning and Territorial Studies at the National Institute of Public Administration of Madrid and at the Department of Urban Planning and Spatial Planning of the Polytechnic University of Catalonia (DUOT, ETSAB, UPC). Likewise, he is a Member of the Assembly for Neutral Climate and Smart Cities of the European Commission and of the Scientific Committee of European Europe.



MIN. 2:36 The territory and the port must have territorial solidarity. It is neither an autonomous nor a foreign organism. In many cases it is the origin of the socio-cultural wealth of an area, in others a driving force. This means that the external effects and impacts it generates are as great as its ability to propel the area. The most important thing to understand is that it is not an object in itself, but part of a system.

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City and territory

MIN. 25:00 Societies change and adopt different values: environmental, cultural, social, and what they value is what they pay attention to. In today's society, as inhabitants of the Anthropocene, our greatest value is caring for the environment, humans and non-humans. We have learned that we cannot inhabit a planet without non-humans.

MIN. 5:26 To assess the impact of change, we must consider these open environments as open social-ecological systems. [...] Without understanding these dynamics and the environment of this system, we will not be able to meet the challenges of adaptation.

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Environment and health

MIN. 7:46 These three aspects - ecosystem impacts, erosion, and saltwater intrusion - are three of the consequences of coastal climate change. And ports amplify the natural dynamics of climate change on the coast.

MIN. 13:43 Methodologically, one of the criteria for resilience to the impacts of climate change is to consider the slow variables of climate change, i.e., gradual sea level rise, erosion, saltwater intrusion, or ecosystem degradation must be considered, for example, by 2045 and by 2100. Any work that is not addressed in this way cannot be called resilient or adaptive because it does not consider the long-term impacts.

MIN. 29:45 When the positions are not dialectical but protective, confrontation occurs. What the study, analysis and development of the environmental impact assessment allows is dialectics, a mechanism to reach agreements. But if you anchor yourself in the idea that something doesn't need to be done, the result is confrontation: it can't grow.

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Government and participation





# Gabriella Gómez-Mont

LINK



POSITION

Founder, Experimentalista  
Mexico

Gabriella Gómez-Mont is the director and founder of Experimentalista, a new urban and creative studio that works with Mayors, cities and organizations around the world. Gabriella founded Laboratorio para la Ciudad, the experimental area of civic innovation and urban creativity of the Mexico City government from 2013 to 2018. In addition to her fascination with all things urban, Gabriella is also a journalist, visual artist and documentary filmmaker. She has been awarded several international recognitions for her work in different fields, such as the first prize in both the Audi Urban Future Award and the Best Art Practice Award given by the Italian government, as well as the TED City 2.0 Prize, among others.

MIN. 30:13 It's interesting to take a look at our models of progress. One specific project we are tackling as a society has to do with creating innovation ecosystems. How can we create spaces in a port, for example, that don't assume that our ideas about that infrastructure are stable over time, but allow for gaps where the infrastructure is constantly reinventing itself. That's why I think conversations about gaps as space for future possibilities are necessary. [...] Attract people to think from different angles about what globalization means, transportation, maritime, our relationship with the rest of the world, the gateway to these global conversations, the movement of ideas, the mobility of bodies, etc., and then just creating a little internal engine that also needs external ones, where reinventing yourself as infrastructure, as a city, becomes possible.

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Shipping and economic development

MIN. 11:07 Both in general infrastructure issues and in thinking about spatial equity, it is important when we address issues of innovation, culture, and creativity. Accommodating many types of energy and populations and somehow helping to democratize the imagination at different scales and forms.

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Innovation and work

Having some infrastructure already in place – libraries, public markets, innovation centers, universities, public space – I think we need to go to the micro level, to the neighborhood, the block, to create these kinds of opportunities that often provide a flexibility that large infrastructures don't have.

MIN. 1:10 'Path dependency' says that certain basic infrastructures are so powerful that they give cities a very specific direction, and that it is very difficult to get rid of that direction later. [...] What do I see as the challenge for large infrastructures? On the one hand, it's exactly that –that they eat up other possible cities.

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City and territory

MIN. 5:25 Large infrastructures can no longer be planned the way they used to be planned. [They need to be] not monolithic, understood from their dynamics, from a multiplicity of functions, for a world that is much less easily predictable than it was a decade ago.

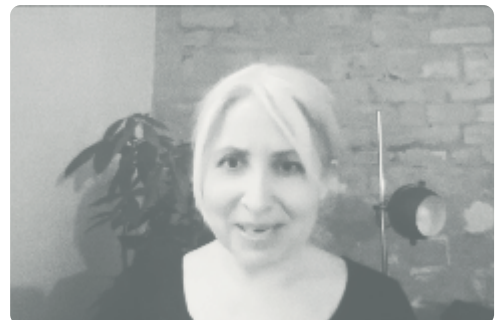
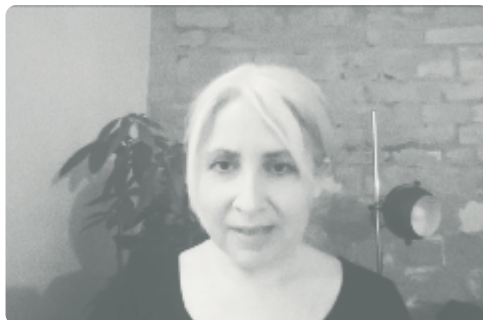
MIN. 18:27 The moment we have the possibility to activate an important symbol for the city, the more there is a multiplicity of possibilities to belong to this symbol, to use this space. How do we come back to the need for these infrastructures to be antimonolithic, and somehow break the path dependency in forms that are also civic, participatory and so on?

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## Government and participation

MIN. 19:07 We should not try to avoid public discussions about these points, but rather go deeper into them. We need to open [the conversations about infrastructure] up to public discussion and form equally active layers of experts and citizens to understand what the weak, tenuous, and even dangerous points are, and what we can do to work around them and develop other alternatives.

MIN. 47:55 Laws and public policies are designed for static cities, a city that does not change. [...] How can we see ourselves in our diversity and in a less dictatorial, less modernist relationship with our environment and instead, from now on, every time we build new infrastructures, think about the necessary flexibility that these infrastructures must have because our old way of dealing with natural and climatic processes is no longer sufficient and cannot be sustained.







# Stefan Al

LINK



POSITION

Architect, urbanist and professor at Columbia University  
The Netherlands / USA

As a Dutch architect and urban designer based in New York, Stefan Al works on the design of mixed-use developments, master plans, and high-rise towers across the world. He has focused on pressing issues related to designing large-scale projects within the contemporary city, including high-density, sustainable mobility, and urban resilience. In this work, he is able to draw from his extensive research and eight books which have been widely acclaimed including by the Wall Street Journal, Architectural Record, The Times and NPR. In addition to his work as a practicing architect, he served as a TED Resident, a professor at various institutions such as Virginia Tech and Columbia University, and an advisor to various city governments, including Hong Kong.

MIN. 27:03 These hybrid multifunctional solutions present ways to cross-subsidize the infrastructure. Because you can let the real estate piece help pay off a piece of the infrastructure. So there are many benefits, not just in terms of fitting it into the city, but also having multifunctional uses, around-the-clock activity, and being able to cross-subsidize the infrastructure.

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Shipping and economic development

MIN. 16:57 When we think of infrastructure, like gray infrastructure, it only has one purpose. So you think about a seawall, it can only block, or a concrete pipe can only move water. But if you have the green infrastructure solution, like a dune, it becomes much more than that. It becomes part of the landscape, it can become a public space that people can enjoy and walk through, it becomes an opportunity for ecosystems to thrive.

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Environment and health

MIN. 17:30 The border between the ocean and land is extremely fertile for ecosystems. So, if you turn that into the gray border, they have no chance of surviving, but if you turn it into a green edge, there's lots of opportunity for different species to thrive. [In] New York, instead of concrete pavers, there are custom-built or custom-cast stones that are designed in such a way that they can accommodate the oyster population. And oysters are wonderful for harbors because they clean the water. So they help purify the water and, at the same time, people in New York really love oysters to eat, so it stimulates the economy. And they use it as an educational tool. So school children, they go there and see how you know oysters are grown, and how they're how they're being harvested.

MIN. 40:00 I think what's interesting about these soft solutions, instead of hard solutions, is that it's not binary. When you're thinking about, for instance, a barricade or a dam –it's either open or it's closed. But [soft solutions] are very gradual. They can help attenuate the waves that kind of absorb some of the impact. And when they are being damaged, it's not that they're fully broken, the system is still alive, it's a living system, and it will regenerate itself.

MIN. 42:33 I would instantly change the process from kind of this single-focus, single-disciplinary kind of engineering, a hard approach to something that is multidisciplinary, multistakeholder, a collaborative approach that looks at the opportunity holistically. [...] It pays off to improve the process and to get various viewpoints, and see how this infrastructure could have more than one benefit, rather than this very single focus, this narrow-minded way of building infrastructure.

MIN. 45:13 Even if the institutions are not formed around the holistic approach, you can still begin small. Organize a competition or some other type of event in which you bring people around the table to discuss things collaboratively, conduct charrettes in which common visions are being formed, and try to get to more long-term, and more sustainable and holistic solutions.





# Katy Fox-Hodess

LINK



POSITION

Lecturer in Employment Relations and Research  
Development Director of the Centre for Decent Work at  
the University of Sheffield  
United Kingdom

Dr. Katy Fox-Hodess is a Lecturer in Employment Relations and Research Development Director of the Centre for Decent Work at the University of Sheffield in England. An expert on global dockworker trade unionism, she is a co-founder of the International Labour and Logistics Research Network. Her academic work has been published in the British Journal of Industrial Relations, Work, Employment and Society, and Latin American Politics and Society, among others.



Within Europe, the biggest threats to dockers in the past 10–20 years have come from states and from the European government, rather than from employers. So there was in the early 2000s, the attempt through the port directives to deregulate port labor across Europe and introduce a system where seafarers could unload ships rather than Dockers.

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Innovation and work

Dockworker unions are overwhelmingly men. So the Spanish Union, the English union and the Swedish union have made efforts to bring women in. In different ports, they might have 10 or 15% women. So still very, very low. And in some ports, in some countries, it's entirely male dominated.

A really important theme that I think is often not examined is thinking about labor holistically at a port, not just in terms of the dock workers, but in terms of all of the workers who are dealing with the cargo, especially the truckers and warehouse workers, who often are immigrants or racialized, and would have very poor conditions.

This is something we see really around the world, where these kinds of old heritage maritime cities often become very popular for tourism, like San Francisco [...]. Over time, the kind of value of that waterfront real estate has risen substantially because of tourism. And so the port infrastructure either moves to the outskirts of the city, or just sort of disappears and moves to other cities, which is really what's happening in San Francisco.

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City and territory

The environmental impacts in ports is definitely something that dockworkers are very concerned about. Because the people who are most affected by the contamination that's put out by idling ships or idling trucks are the workers of the port. [...] The rates of asthma and the rates of various cancers [is higher], the lifespan or the projected lifespan is much lower for dockers in Europe.

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Environment and health

There are some interesting examples of coalitions between unions and environmentalists. The main one I would point you to is in the Port of LA Long Beach, the Blue-green Coalition, which was between the unions for the Dockers and the truck drivers with environmentalists, and they got some new regulations put into place there.





# Diane Oshima

LINK



POSITION

Director of Planning & Environment,  
Port Of San Francisco (2017-2021)  
USA

Diane Oshima has 30 years of experience leading waterfront planning, environmental projects and regulatory compliance for the Port of San Francisco. As the former director of the Port's Planning & Development Division, Diane developed and managed the Port of San Francisco Waterfront Plan, which has guided the development of new parks and public access network, rehabilitation of the Ferry Building and the Port's historic piers, and new neighborhoods in Mission Rock and Pier 70. Diane retired in 2021 but continues to work with the Port as an advisor and on special project assignments.

MIN. 2:24 You have to find realistically what your strengths are to be able to host a wide variety of activities and work within a dense urban setting. While there had been an interest in turning the waterfront into urban uses, there was also a concern that we would abandon maritime uses altogether and that this voter measure said you must give first priority to maritime uses. But then, if you give first priority to maritime uses, you can look to see what other kinds of compatible uses would be acceptable.

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Shipping and economic development

MIN. 51:56 There are a number of city departments that are very engaged in sea level rise adaptation because they have assets that are at risk. There are also some other city agencies that are working together to develop a framework of principles to coordinate what are the assets that the city needs to upgrade and adapt. And now, we're also getting into discussions with the businesses and private property owners to start educating them about investments that they're going to have to plan for as well.

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Environment and health

MIN. 1:15:43 The waterfront is like a community. There's certainly the economic and the functional aspect that's particular to the waterfront - ports are places of embarkation, and commerce and economic base for many of their communities. But it's also a place of living and delight, contemplation, and ecology. And it's a great educational place.

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City and territory

MIN. 1:03:02 No one would have ever thought of walking along the waterfront, and people would not have experienced the waterfront as a walkable area because it was seen only as an industrial wasteland with many obsolete piers. But once there was [the Giants ballpark] that attracted so many people from so many different backgrounds to enjoy an American sport, it helped to democratize the waterfront in ways that few other uses could do.

MIN. 1:07:01 Public access doesn't have to be continual, there can be breaks in places where you don't have access to the shoreline, and you can still have a wonderful waterfront experience. It's what you do with those public access spaces that will really make that experience.

MIN. 1:05:40 Public access to the shore is a principle that's very important. However, in my time working in San Francisco, I've come to think that it's not so much about physical outcomes necessarily, but it really gets down to people, and how people collaborate and come together to have functional conversations.

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Government and participation

MIN. 1:08:24

[The success of the participatory process] depends on what your setting is and on the sensibilities of the people in that setting, and how the government and the community construct a dialog that shares desires and meets the realities of fulfilling those desires and values. And that you [as a port] are on the ground floor of the discussions, so that you can build some trust and shared motivation to try and implement something that reflects what those shared values are.

The intentions about how you use this precious area, to balance the interests of the most number of people, particularly on waterfronts that are publicly owned, should be sought.







# Fredrik Lindstål

LINK



POSITION

Chairman of the Board of Stockholms  
Hamn AB - Ports of Stockholm  
Sweden

Stockholm based entrepreneur, placemaker and politician, currently serving as chairman of the board to the ports of Stockholm. My professional mission is to create inclusive, democratic and vibrant cities & regions. At its core, city planning is about connecting people and creating lovable, livable and workable spaces. With an intersectional approach and a primary focus on culture, my ambition is to drive this development forward to curate and create spaces for the future.

MIN. 46:08 [Ports] should push themselves to innovate and not blame technology. Plan for what you hope to do in the future, not just in 2040, but in the near future: work together with the municipality, but also from a national point of view, and with the EU.

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Shipping and economic development

MIN. 25:30 Large operators are actually thinking in these terms [of new innovation spaces] and see the synergy of sharing space with like-minded companies. It doesn't just have to be [sharing a space in a] physical aspect, it can be about the intellectual aspect as well.

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Innovation and work

Ports create a lot of jobs in different sectors. One trend we are seeing is the growth of logistics centers and logistical parks in indirect proximity to the port.

MIN. 21:30 [In Stockholm] these massive port areas that used to be the old container port are changing. Some hurdles that had to be overcome were to figure out which functions need to be there today, from a port perspective, and which functions need to be there tomorrow. [...] We had to find a mix, for instance building offices to work as noise barriers to build housing behind them.

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City and territory

MIN. 43:45 The ports of Stockholm will be carbon free by 2030 and emission free by 2040, completely. But we can do more. This is a mission that we can embark on together with the other ports of the Baltics. The real game is to look beyond your borders. And if you can have that. For instance, if you collaborate with the shipping industry for electrification and for a sustainable fleet [of your own], you can have a fully electrified fleet in the Baltics, quite a lot sooner.

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Environment and health





# Jorge Sharp

LINK



POSITION

Mayor of Valparaíso

Chile

Jorge Sharp Fajardo is a Chilean lawyer and politician. Member of Territorios en Red. Currently mayor of Valparaíso. In 2016, he ran for mayor of Valparaíso in the “citizen primary,” which he won with 1,703 votes. In the elections held on October 23 of the same year, he was elected mayor of Valparaíso with 53% of the vote. Two years after taking office, he managed to reduce the total deficit by Ch\$6,824 million. In the elections of May 15 and 16, 2021, he was re-elected mayor of Valparaíso with a total of 64,766 votes (56%).

MIN. 12:02 Seaport operations and infrastructure have a fundamental role to play in providing for and reproducing the lives of people and communities. The port needs to be looked at from the perspective of people. This does not mean that port activity is not an extremely fundamental activity for the economy and economic development in general, as well as for global economic exchange –but it is not only that.

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Shipping and economic development

MIN. 21:34 The port authority must have decent working conditions and salaries for workers proportional to the economic movement they generate [...] without producing a caste of workers far from the reality of the city and the labor world.

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Innovation and work

MIN. 49:04 The city port of the 21st century is an organically interconnected port. It is so strongly integrated that the barrier is not perceptible from either the port or the city. [...] It should not be forgotten that the ports are a public asset, namely the coastal boundaries, which are fundamental for the development of cities. The coastal border is populated not only by port activity, but also by scientific activities, sports, leisure and cultural activities, fishing bays, fishing terminals...

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City and territory

MIN. 57:29 The task of 21st century cities is to leave behind the port view of the 20th century and look at city-port relations in the 21st century in a radically different way. All cities in the world face similar problems and the key is to develop territorial solutions.

MIN. 15:21 Nowadays, economic development that does not take into account the environmental variable is a truncated economic development that is rejected by authorities and communities. The port activity must always be developed in an environmentally sustainable way, reducing as much as possible the negative impact of pollution on ecosystems and nature.

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Environment and health

MIN. 39:50 When there are no clear public rules, when private corporate interests take precedence over public interests, the port and the city lose. Davant la feblesa de la institucionalitat de governs locals i portuaris, totes les coses valuoses que hem aconseguit a la ciutat les hem fetes barallant. Given the weakness [of the institutions in Valparaíso] in local government and port institutions, all the valuable things we have achieved in the city have been achieved through struggles.

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Government and participation

