NEW BLUE/GREEN LIFE in SW Brooklyn
by Angela Licata, Tjite Nauta and Alan Cohn

Environmental sustainability became a common ideal underlying the themes of economic development, transportation, and land and water use planning at the Brooklyn-Rotterdam Waterfront Exchange.

Linking the blue and the green networks: A shared vision quickly emerged from the team of expert environmental professionals, including engineers, planners and architects that environmental sustainability along the SW Brooklyn waterfront will be achieved by linking the “blue network” with the “green network,” or water with land. In the heyday of the maritime industry, the area was defined by this link to the water. However, as the shipping activity that once crowded the harbor shifted away, parts of the waterfront were left to dilapidate.

The opportunity that lies ahead is to once again connect blue and green; to create a welcoming waterfront to bring residents and visitors back to the water. In order to achieve this goal, the environmental quality of the land continues on page 4

WATERFRONT GEMS
Linking Six “Pearls” to form Brooklyn’s Maritime Gateway
by Michiel de Jong

The task assigned to one of the teams during the New York Workshop was to develop a holistic proposition for the transformation of waterfront uses in SW Brooklyn. The team identified six “pearls” as high-potential locations along the SW Brooklyn waterfront.

The six nodes represent opportunities to develop as focal points of the waterfront, but just as important is the “necklace” connecting the pearls and creating an integrated waterfront with a variety of functions and uses. One of the “pearls” identified as a key development node on the SW Brooklyn waterfront is Atlantic Basin and its surroundings. Currently the location is an underutilized port area (as shown on the photos of the site).

Part of the area comprises a new cruise terminal facility, developed to provide additional capacity to the Manhattan cruise terminal and catering to large vessels that are unable to call at the Manhattan facility. The location of the cruise terminal directly opposite Governors Island is outstanding and allows for unobstructed views towards downtown Manhattan.

Unfortunately, the terminal building hands cruise liner passengers, but offers not much more. There is no appealing program connected to the cruise terminal, nor are there additional functions that introduce activities at the terminal when no ship is along the quay.

The cruise terminal is a home port facility, meaning people start or finish their cruise here. Since not everybody arrives just in time, and people often take extra time to visit the city, home port cruise visitors tend to spend quite a large amount of cash during their stay, and should be encouraged to spend it.

Bars, souvenir shops, tax/duty free shops, restaurants, art shops and galleries, museums and hotels are all amenities that serve cruise passengers, crew and interested...
Dutch Urban Solution for a Brooklyn Waterfront
by Luc Vrolijks

As a Dutch urban designer who is based in New York, I have always had a keen interest in the SW Brooklyn waterfront. I got to know New York the first time by bicycle trips, and I liked the wide-open views - “low skies” we say in Dutch - of the massive waterfront buildings, the clear skies and the occasional view of Manhattan in the background, so close and yet so far. And I was surprised how underutilized the waterfront was. Despite the big chunky buildings suitable for just about every use, not very much seemed to be happening in the area. Even now that I understand the complexities of New York waterfront development better, I am surprised at how little of the potential of the area is yet realized.

So I was very keen to be part of a Dutch-American team to think about the area’s future. In my Dutch planning practice I have always worked on the regeneration of waterfronts, and industrial not-working-so-well-anymore waterfronts are my favorite places. I see them as a huge potential for their cities, almost as a promise that new and better futures lie within the boundary of the cities. We came up with a proposition that was close to the Rotterdam Stadshavens “Clean Tech Delta” concept. It is for a working waterfront, focusing on innovation for clean recycling and clean and renewable energy for 21st century New York. We termed it “Green Tech Brooklyn” and the proposal suggests that Red Hook develops into innovative green and clean recycling and energy infrastructure. The team felt that all three development directions could be beneficial for the surrounding neighborhoods as well as the larger New York area. The team was sure that if the infrastructure of the area would be able to support large-scale container shipping and freight handling.

Guided by the experiences of Rotterdam, in particular in the recent development at Stadshavens where the formation of “Clean Tech Delta” kick-started the transformation of the Vierhaven harbor area, the team concluded that an economic proposition in the form of “Green Tech Brooklyn” had the best chance to deliver a viable economic future for the area and its surrounding neighborhoods. Green Tech Brooklyn would address New York’s regional future needs including clean energy, dealing with climate change and, most importantly, the need to recycle and reuse waste. The team emphasized the need to enhance transportation infrastructure (in particular, water-in/water-out) and highlighted opportunities for using available commercial space and sites as commercial incubators and start-up spaces, including for light manufacturing and creative industries.

In terms of the Road Map for implementation of the economic proposition, the team suggested the need to build partnerships across the whole platform of stakeholders. Government organizations at city, state and federal levels have to work with community leaders, technical innovators, private companies, and educational institutions. From the “lessons learned” in Rotterdam, the team suggests building an organization that is small, flexible and strategic. The team also considers it important to start early with the implementation of pilot projects; it encourages the involved parties not to wait until all problems are resolved, but to develop and test prototypes almost from Day One.

* “Water-in/water-out” means bringing goods in and shipping them out by water, rather than by rail or truck.
FLOATING AN IDEA: 
Erie Basin Showcases Sustainability 

by Rolf Peters

Erie Basin is a unique area of some 90 acres (36.4 hectares) of water situated at a key location in SW Brooklyn between Red Hook and Sunset Park. With the skyline of Manhattan and downtown Brooklyn as a backdrop, it offers numerous possibilities for attractive developments that respond to both the city’s housing needs, as well as promoting public awareness by showcasing New York City’s sustainable policy.

Due to the unpredictability of the effects of climate change, normal land use or landfill programs are hardly sustainable solutions to guarantee that New York “keeps its feet dry,” as the Dutch say. Raising houses by constructing on stilts may seem a logical adaptation to avoid the problem, but living 10ft above the water certainly spoils the special attraction that contact with the water has in terms of living quality. Direct experience of the water is a potential waiting to be utilized: boating, canoeing, and lounging on a terrace at the waterfront. Using the water could provide unique selling points for branding the Erie Basin development.

The true significance of such a floating development, however, would depend on its educational potential. Imagine a floating development where school buses from all over the country would come to see about climate change and NY’s solution to deal with that change. People would come to learn about taking responsibilities for preventing climate change by seeing the necessity of adapting our built environment to rising water levels, as well as solutions to do so. And all of this is outside with the water right there at your fingertips, not framed in a slideshow under the protective roofs of a dusty museum.

Floating developments could consist of walkways, parking garages and even roads, ranging in total size from 500,000 to approximately 2,000,000 ft2 (185,806 m2). On top of these structures apartment buildings, single houses, offices, and leisure up to 5 stories high can be realized, all exactly the same way as usual in Brooklyn and according to actual demand. All designed based on technology that is tested and approved by certification institutions on Marine Safety with guaranteed insurance and mortgage possibilities.

Currently, the world’s largest development of this kind is the project called “The New Water” in former greenhouse area near Rotterdam, the Netherlands. In this high level development, a total of 1,200 houses will be built within 2 to 8 years, of which some 600 will be floating. Going even another step further, the Erie Basin project could be fully self-supporting, meaning that all power, clean water and climate control utilities are fully provided for within the developments themselves, without needing additional external resources. Electrical power can be generated using tidal energy; heating and cooling by means of heat exchanging systems using the surrounding water; and potable water can be made on the spot by desalination.

By combining the living quality of the waterfront with the latest environmentally-friendly technologies, Erie Basin could be a world leading education center demonstrating sustainable solutions for adapting to climate change, as well as actively contributing to preventing further climate change.

Rolf Peters is a partner at Waterstudio.NL, and small restaurants.

On the northern side of Atlantic Basin, currently the premises of the Red Hook Container Terminal, new facilities can eventually be established. A potential new use is the extension of the cruise terminal with another berth and terminal building, potentially focusing more on port-of-call services to large cruise liners, including transportation facilities and passenger amenities. The remainder of the area can be developed in a flexible way, tailored to the needs and situation. Hotels for cruise passengers and also related to the new R&D initiatives and educational and recreational facilities on Governors Island is an option; residential and park developments could complement this setting.

The Atlantic Basin Pearl Location in the New York harbor (Image by DHV Consultancy and Engineering based on Google Earth)

As a conclusion, it is clear that there is high potential for the development of the Atlantic Basin area, with a focus on tourism, both international and local. The competitive edge of this area is the opportunity to use the water at the waterfront and the beautiful views from the site, providing a “Door to Brooklyn” and a gateway to New York.

Michael de Jong is a Senior Project Manager at DHV Consultancy and Engineering and teaches at Delft University of Technology.
New Blue/Green Life in SW Brooklyn

continued from page 1

and water must be restored. Residential and recreational opportunities will need to be created in formerly industrial areas while spurring innovation and jobs in existing and new industrial facilities. Water quality has improved considerably in recent decades and will continue to improve with added investments by a number of environmental initiatives. These new offshore habitats have also provided opportunities for new livelihood programs making use of recycled materials. The restored areas and ecological initiatives will become a new waterfront park. Creating new habitat for plants and animals: In addition to current and planned remediation, restoring the natural ecological functions of the waterfront can be achieved through eco-engineering concepts introducing new plant and animal life. Species can be introduced to improve water quality and provide habitat for the rich biodiversity of the New York harbor between and under piers, and attached to quay walls or other structures. A shallow area just south of Red Hook and west of Sunset Park, known as the Bay Ridge Flats, may also provide a base for creation of a new reef. “Floating wetlands” can provide an additional platform for wetland growth at the surface of the water, supplementing new growth below. Recent initiatives also provide opportunities for new livelihood programs making use of recycled materials.

The restored areas and ecological initiatives will become an attraction, beckoning people to the waterfront for wildlife viewing and onto the water for an even closer perspective by canoe or kayak. These new offshore habitats have the added benefit of providing protection to landward areas from the direct effects of storm waves, which may impact the waterfront more frequently as climate change increases vulnerability to sea level rise and extreme weather.

Easing the transition from land to water: Traditionally, New York City has created “hard” shorelines, such as bulkheads, at the waterfront in order to protect buildings and infrastructure from storm-induced flooding. This new “soft” approach creates a more natural buffer between land and water. Additional buffering will be created along the waterfront by enhancing the land’s capacity to absorb and drain water. Areas that are often covered with impervious surfaces, such as parking lots, roads, and trails, can become permeable with the use of innovative materials and design techniques. Trees, shrubs, and grasses can also absorb water as they enhance the appearance of the shoreline and provide additional wildlife habitat. These features can gradually transition to the aquatic vegetation providing ample space for agriculture and aquaculture while using electricity and heat from local sources. These environments can even be used to generate algae for biofuel and oysters that can be transplant- ed to the Harbor.

To capture the maritime past, present, and future of SW Brooklyn and attract more residents and visitors, the waterfront will be lined with educational features that highlight the area’s history as well as the vision for a sustainable future. Visitors will be guided to sites of historical significance and descriptions of the restoration work that brought new life and prosperity. In addition to markers along the waterfront, this maritime center, nestled within the sustainable technology and climate innovation lab, will become a launching point for a day at the water’s edge.

The proposed Brooklyn Waterfront Greenway will provide a link from neighboring communities to each other and to the water, and create a network of destinations ranging from parks to historical sites to sustainability demonstration projects. Co-locating a network of permeable surfaces and vegetation along the Greenway will help capture stormwater and make it more green and enjoyable. In addition, roads and from SW Brooklyn can utilize similar practices to absorb water and create greenery. Visitors coming by water can also arrive in an environmentally sustainable fashion using boats powered by renewable energy sources.

Ultimately, SW Brooklyn can embrace its past while becoming a showcase of sustainability for New York City and for the world. In keeping with the region’s maritime history, the water can once again become a part of the land and life of SW Brooklyn.
5: BEING PROACTIVE ABOUT CLIMATE CHANGE

Waterproofing Brooklyn
continued from page 1

By proactively redeveloping SW Brooklyn's waterfront into climate-resilient communities, this green innovation will also stimulate the local economy. These climate resilient communities will be able to recover quickly from climate impacts while maintaining their economic and social viability.

Within SW Brooklyn, three remarkable areas can be distinguished: Gowanus Canal, Red Hook and Sunset Park. These areas were the maritime port industrial backbone of the greater New York area throughout the 19th and 20th centuries. Containerized shipping has resulted in a fundamental shift to these areas' economies, making them the perfect place to integrate a green industry into the existing fabric of the neighborhoods.

The climate vulnerabilities in Red Hook, Gowanus and Sunset Park include increased precipitation and temperature, and flooding due to sea level rise and storm surge. Of particular concern is toxic runoff when industrial neighborhoods are flooded. Flooding can also cause considerable damage to existing housing stock and industrial buildings and infrastructure. Additionally, portions of the waterfront are on landfill, and flooding may cause increased degradation of waterfront infrastructure. Increased rainfall intensity can impact stormwater systems and cause additional sustained flooding following a rain event. With higher temperatures, these neighborhoods will experience increased heat stressors due to heat island effect and lack of green space.

Each area of SW Brooklyn provides different and unique opportunities for climate resilience and showcasing and producing strategies for adaptation. These details are discussed below. Representatives from the Netherlands brought their expertise and real life experiences on how climate adaptation can transform neighborhoods.

Gowanus Area: This area divides two residential neighborhoods and is defined by its waterfront, the Gowanus Canal, which has recently become an EPA Superfund National Priorities List site. The opportunities for climate change adaptation include a small flood barrier (vertical lifting gate type), suitable also as a bridge at the mouth of the canal, which can be an important connection between the Gowanus and Sunset Park communities. The green spaces along the Canal can be formed as a linear park and will serve as a neighborhood-friendly storm water retention and treatment facility. Due to the low elevation of the area surrounding the Canal, the existing housing stock will be retrofitted and floodproofed.

Red Hook: The Red Hook area's vulnerability to flooding creates a storm water storage areas that double as ornamental water parks and provide environmental education to youngsters in the area. In Rotterdam, a similar innovation lab has been created to revitalize the local community at the RDM Campus in Stadshavens, or City Harbors, a redeveloped, former dock area. RDM now stands for "Research, Design and Manufacturing." Rotterdam University for Applied Sciences is developing RDM, with support from the City of Rotterdam and the Port of Rotterdam, as an innovation lab for "moving, powering and building" in cooperation with innovative, young and small companies. Workforce education for "blue collar" scholars can contribute to innovations, from new innovative water transport, floating homes and hydrogen-driven green, racing cars in the reconstructed old warehouses and dock buildings. In Red Hook, a comparable campus, the heart of the Climate Innovation Lab, could be developed.

Sunset Park: Sunset Park, with its existing industrial infrastructure, is an ideal location to provide manufacturing support for the Climate Innovation Lab. Additionally, this neighborhood could benefit from the existing highway becoming a superlevee to protect the neighborhood from flooding. This superlevee with the highway hidden inside could provide needed green space and, acting like a bridge, would allow safer access to the waterfront for neighborhood residents and visitors. The levee is not a barrier but an important connection between two areas and invites residents and tourists alike to walk along its crest and enjoy the views of the skyline.

In Rotterdam, these strategies for climate resilience are already under construction or in place. People from the local community at the RDM campus and other nearby waterfronts study there, have their jobs here, enjoy the waterfront, use new public water transport, and visit recreational facilities in the lively surroundings of the campus that attract restaurants, bars and other facilities.

In Brooklyn, a similar transformation can happen where water retention basins are now water parks, superlevées connect residents to the waterfront, and floating apartments have become the hottest real estate. Through knowledge sharing between Rotterdam and SW Brooklyn, these effective strategies can be integrated into a planning effort that will protect against the inevitable effects of climate change while preserving and stimulating viable communities. Proponents of this plan hope to show how SW Brooklyn can become the first planned waterfront climate resilient community.

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BEING PROACTIVE ABOUT CLIMATE CHANGE

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**Multi-Modal Mobility by Lou Venech**

Achieving a successful and sustainable future for the SW Brooklyn waterfront depends on developing improved and carefully integrated multi-modal transportation connections. Transportation decision-makers must step up efforts to coordinate planning on separate projects and work together to create an arena-wide strategic framework to support and guide the proposed redevelopment effort.

Reflecting the Dutch experience, the Multi-Modal Transportation team reported that a comprehensive mobility strategy would include standards for sustainable transportation and adequate multi-modal capacity to move people and goods. This in turn would help define the scope and limits of redevelopment plans and support phased implementation of improvements through the next 20 years. This was such an interpersonal challenge as a planning problem. Transportation agencies and others planning projects in SW Brooklyn include multiple divisions of both the New York State and City transportation departments, as well as the NYC Economic Development Corporation and City Planning Department, Port Authority of New York and New Jersey, Metropolitan Transportation Authority transportation planning and Empire State Development Corporation.

Several national government agencies also play roles that generally emphasize compliance with various federal laws rather than implementation. This development tendency creates a particular concern for SW Brooklyn, since separate divisions of the US Department of Transportation are sources of essential funding support used to adapt local transportation facilities and services, also bound by regulation and funding limits. In contrast, the national governments of the Netherlands and Canada, as well as the local authorities, play roles that generally have a more active role in directing and supporting waterfront development projects. Thus, a stronger intergovernmental and local agencies are part of this process.

**SW Brooklyn Transportation: Achieving a Balanced Coordination**

Coordination: Among the transportation and planning agencies serving SW Brooklyn, separate efforts and specific projects and their intersection with others’ jurisdictions. Chronic budget constraints hinder efforts to integrate the scope and schedule for transportation improvements.

An essential early step towards a SW Brooklyn mobility plan was creating an interagency group including the major transportation and planning agencies. This inter-agency group would provide a forum to coordinate mobility and development strategies involving government decision-makers for zoning, transportation development, and transportation. An organized process also would foster effective community input and help attract private investors.

Building on Historic Assets: SW Brooklyn

- Presenter: Theodore Wright

While other local waterfronts in SW Brooklyn requires a transformation to support and guide the ambitious goals for economic and community benefits, sustainability, and management of climate-change impacts.

The major transportation corridors into and through the area are overlaid here. Black lines highlight the primary vehicular routes as well as the rail car float line and Bay Ridge rail line extending into Brooklyn. Red lines show the main routes for internal circulation and recreational use. Orange lines show ferry links extending into Brooklyn Bridge Park and Bush Termi-

Rail freight transfer at the car float terminal, is highlighted in brown, links the cross-harbor large barge service with transfer inland as well as along the existing avenue rail freight line to support the working waterfront. The planned Brooklyn Waterfront Greenway route promises attractive bicycle and pedestrian access throughout the area.

By deploying this range of transport options across SW Brooklyn, it becomes possible to support a more diverse and varied range of uses.

Within the study area, transportation planning for each redevelopment zone would depend on the access needs of the area. For example, the traffic and pedestrian uses already in SW Brooklyn, the network real challenges to transportation agencies in safely and efficiently managing auto, truck, bus transit, bicycle, and pedestrian needs.

Other key transportation improvements include extension of a “greenway” for cyclists through the entire study area, modernization of freight rail car service for cross-harbor goods, and enhanced public access to working waterfront sites in Sunset Park. To attract more diverse activities to the dense mix of uses already in SW Brooklyn, presents a real challenge to transportation agencies in safely and efficiently managing auto, truck, bus transit, bicycle, and pedestrian needs.

The overall workshop’s vision for SW Brooklyn requires a transformative strategy for mobility. A mix of modes for commuter, recreational, and freight transportation.

The team identified four main layers for the mobility strategy (see Diagram). Each of these layers can provide both internal circulation within SW Brooklyn, and external or regional connectivity to and from the area. This multi-modal framework also provides more alternatives to auto and truck dependance than most parts of the region.

Supporting the Overall SW Brooklyn Vision: Many details remain to be defined, but the transportation agency team agreed that its conceptual strategy offered the capacity and flexibility to support the ambitious goals for economic and community benefits, sustainability, and management of climate-change impacts.

The overall vision includes an interagency group that could deliver the services most critical to support the preferred mix of land uses and community needs at each location. The conceptual transportation plan also builds in flexibility to evolve as new land uses and new opportunities for improved regional access unfold over the next 20-30 years.
Global Solutions / Local Innovations

By Hans Scheepmaker

If we look at things from a bigger perspective, it might be justified to assume that the impact of the challenges facing us is so enormous that any country can solve these on its own. The climate and energy issues are global challenges that require us to adapt ourselves to a new, more sustainable society.

But these solutions have to be invented and implemented locally. The transfer of collaboration between deltas with main- ports might be of great value in securing our future. We face the same challenges, and we could greatly benefit from joining forces with each other. Together, we can make these right solutions.

There's no doubt that the combination of global warming and the shortage in energy supply will drastically change the way we organize our energy system. Currently our energy system is completely dependent on fossil fuels: to generate electricity, to manufacture products, to transport products and people, etc.

If we want to reduce the effects of climate change, we will have to fundamentally restructure our economic system: reduction of CO2 emissions through the use of clean energy technologies and design climate-proof constructions, and establish clean transportation systems. The bigger the areas where a socially and economically sustain- able transition area that will be employed as a liveable delta is shared by the business community, the greater the likelihood of making this happen and having the technology to do so.

Rotterdam has set an ambition to be able to achieve the sustainability targets. The importance of our harbor for the Dutch econo- my and, therefore, for the attraction to this harbor, is a strong basis for making this happen. In order to make this happen, we will have to make the right choices. Together, we can bring about a complete change in the way we live and work.

The Clean Tech Delta aims to invigorate the region economically and socially, while offering solutions for the protection of the environment. The lowest lying industrialized delta in Europe is a perfect test bed for the development and realization of clean tech solutions that can be applied anywhere else in the world.

Rotterdam has the space available to make this happen: Stadshaven (City Har- bors) is a 4,000 acres (1,600 hectares) trapezoid that will be employed as a testing ground for the application of clean tech solutions and will be made into a paragon of sustainable and climate-proof urban design.

Of course we realize that this can be done in other regions. But, in the future, the world will be organized in clusters. The important question is how this can be achieved.

The Clean Tech Delta has created innovation clusters in the fields of energy, water, mobility and materials to create a sustainable and resilient delta.

For New York and New Jersey ports, the advice is to create an integrated master plan covering at least a 20-year period in which holistic planning of future functions and optimized layouts can be developed and benchmarked against the competition. I am confident that the conceptions of that study would show an interesting result for the development proposition of CleanTech Delta.

Future of the South West Brooklyn Waterfront

by "Born in Brooklyn"

I was born in Brooklyn in 1949 and my Mom was born in Brooklyn in 1925. My grandfather ran his medical practice on the first floor of his home, as was a common prac- tice by "family doctors" in those days. My uncle worked in the Brooklyn Navy Yard and many of his friends, and my grandfather’s ballerinas, worked on the passenger car- rying cargo, as did many Brooklyn residents in those days. Most of them walked to their workplaces, much simpler and a return to the simplicity of those days is a nice thing to dream about. But, let’s face it folks, this is one vision that is not too many years away. Too much has changed over the past 50 years, economically and structurally, in the shipping, inland transport and the distribution/logistics industries. Times have changed. Our streets, our neighborhoods are already too con-gested. We don’t need 5,000 more trucks a day fprintfing to or out of South Brooklyn. There is no more chance of bringing back an arm of family doctors to the South Brooklyn neighborhood, than there is to bring back the huge flow of ocean-borne cargo that once crossed our docks.

Both of these things might be physically possible, yes. It’s just that they are not economically possi- ble in today’s competitive world that focuses on speed, efficiency, and low cost. We need a new vision and future generations.

CLEAN TECH DELTA : Innovation in the Rotterdam-Delft Region

Clean Tech Delta delivers innovative solutions to climate and energy challenges. It is the New Green Deal for innovation and clean technology in the Rotterdam-Delt region; a collaboration of trade and industry, education and government to stimulate innovation and clean technology - and then implement it. Clean Tech stands for clean technologies, i.e. technologies that optimize the use of natural resources and minimize their environmental impact. To achieve this, it is essential to combine increased economic value with environmental benefit. Furthermore, the Clean Tech Delta focuses on innovative, future-proof solutions in the low-land river delta.

Clean Tech market sectors are:

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Sustainable mobility

Energy-efficiency

Water and deltatechnology

Efficiency of materials

Sustainable energy generation

Waste disposal and recycling.

Trade and industry, education and government are convinced that the Rotterdam-Delft corridor is becoming increasingly impor- tant to the reinforcement of the socio-economic structure. They need each other to achieve their ambitions and form a coalition to set an example at both national and international levels. They have shaken hands and agreed that the New Green Deal can form associations, speed up processes and make things happen. Their aim is to develop new solutions in relation to energy and quality of life, which will have a direct effect on the region itself, as well as creating a much sought-after international export product with significant economic value.

Innovation and clean technology in the Delt-Rotterdam region are creating sustainable solutions that can be applied at both regional and international levels. The situation and conditions of the region are ideal: a portindustrial complex and a dense popu- lation size and technological environment, with sustainable ways of life. The CleanTech Delta is being fostered in the heart of the Dutch Delta. Development and implementation of innovations for city water management and delta tech- nology create the Clean Tech Delta that is an inspiring example for other delta cities in the world.

Hans Scheepmaker is Deputy Director and Area Development Manager for Stad- shaven Rotterdam.

CLEAN TECH DELTA : Innovation in the Rotterdam-Delft Region

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What is the Brooklyn-Rotterdam Waterfront Exchange?

During this time of urgent global economic and environmental challenges, a central question facing many port cities is how to combine economic development with environmental sustainability - a question with many facets from modernization of industry and innovations in international shipping to reconfiguration of transportation systems and mitigation of climate change. In response to this need, the City of Rotterdam, the Port Authority of New York & New Jersey, and Dutch Government jointly agreed to structure a cross-Atlantic cooperation to exchange waterfront expertise.

The Brooklyn-Rotterdam Waterfront Exchange is a forum for American and Dutch leaders and experts to share experiences, innovative solutions, new strategies, development models, and best practices about the potential of redeveloping port areas for new life. Some of the most strategically positioned waterfronts in many port cities are undergoing redevelopment. Among these districts in Brooklyn’s southwestern waterfront, located in the mouth of the New York harbor, and Rotterdam’s Stadshavens (City Harbors), being redeveloped as newer port areas move farther west into the North Sea.

The Exchange is taking place in both New York and Rotterdam and started with a 3½-day professional workshop from April 14 to 17, 2010 in New York. The first Workshop examined waterfront development in the context of SW Brooklyn with the goal of bringing together and growing cross-disciplinary knowledge about key challenges for port-related areas and applying international best practices to long-range decisions for SW Brooklyn. In June, policy-makers will spend 2½ days visiting the Netherlands to share expertise about public policies that have been instrumental in implementing innovative solutions in both cities. Stadshavens in Rotterdam will provide the counterpoint case study.

The ideas, images and materials generated by the New York Workshop are summarized in this edition of the newspaper. A similar newspaper will be produced after the Rotterdam Workshop and both will be edited into a publication in October or November 2010. The ultimate goal is to uncover concepts and solutions that result in world-class redevelopment of port-related areas in both New York and the Netherlands.

Along the way, we are generating a fresh and lively dialogue and helping forge international business relationships that will grow into meaningful long-term partnerships. The New York delegation in the first Workshop included representatives of both New York City and State public agencies that play major roles in shaping the waterfront - from the Port Authority of New York & New Jersey, Empire State Development Corporation and New York State Department of Environmental Conservation to the New York City Departments of City Planning, Economic Development, and Environmental Protection. In addition, there were leaders from SW Brooklyn, prominent New York non-profit organizations, and top professional consulting firms. From the Netherlands, we were honored to be joined by members of the Dutch Embassy, national government and City of Rotterdam, as well as civic leaders and professionals in architecture, landscape architecture, water management, civil engineering, transportation, and urban planning.

Together, we are exploring how the reshaping of outdated port-related areas can contribute to the economic prosperity and environmental sustainability of the surrounding metropolitan regions.

Bonnie A. Harken, AIA

May 2010