







Innovation Dock, Rotterdam (left) is a technology and education hub covering 23,000 m². Tenants rent a plot and furnish it with partitions or miniature buildings such as pods or greenhouses; the original steel structure and large staircases create vertical connections at Smederij (above and below) a former dockyard building in Amsterdam.





New Lab, New York City (top) is part of the redeveloped Brooklyn Navy Yard, which is now home to 300 businesses employing approximately 7.000 people and generating more than \$2bn per year in economic impact for the city; nearly 4.000 people work and study on site at Here East, London (above)



alking around Here East, on the edge of London's Queen Elizabeth Olympic Park, students chatter excitedly as they explore their new learning environment, the vast "groundscraper" that once housed the broadcast centre used by the world's journalists during the 2012 Games.

Few, if any, of the 850,000 ft² (79,000 m²) building's current occupiers could possibly have been envisaged when it was designed a decade ago. As well as three universities, it is now home to digital broadcaster BT Sport, a dance studio, Ford's smart mobility arm, the V&A Museum's collection and research centre, luxury retailer MatchesFashion, and a host of other large and small tech and creative businesses.

Here East CEO Gavin Poole says that despite pressure to tear the facility down and build houses, developer Delancey could see that the enormous building represented a rare chance to create an innovation campus. "Scale was the opportunity. That allowed us to do something really special. No-one has done what we have done anywhere else in the world in the history of the modern games. The International Olympic Committee has flagged this as a case study of how you make something that is a necessity for the Games work once they are over."

As such, it exemplifies a growing trend within the built environment sector: the creative reuse of large, often former industrial buildings, which are reborn as premises for a new generation of businesses who view such spaces as more conducive to evolving workplace practices than conventional office buildings.

Offices converted from former warehouses have been commonplace in cities such as London and New York for decades, but it is the sheer size of the new generation of conversions that sets them apart from many of their predecessors.

In the book *Industrial Rehab: A New Space of Opportunity*, co-author Michael Davis MRICS, head of JLL's London Unlimited team, identifies three themes crucial to the success of creative reuse projects: volume, versatility and value. "Occupiers are telling us that they want buildings with character that are versatile and relatively cost-efficient. Traditional office working is quickly becoming a thing of yesteryear. You see companies doing research and development mixed with office space — or doing fashion design, so they also have a photographic studio and a bit of distribution space or a showroom. Volume lets you capture all of that," says Davis.

Co-author Nicola Rutt, partner and head of workplace at architect Hawkins/Brown, responsible for transforming Here East, argues that there is a strong sustainability benefit for creative reuse. "These are generally huge, heavy structures, which invariably have deep foundations with a lot of embodied energy and carbon within them, so to tear them down and dig up tons of concrete only to put tons more concrete back down is clearly the wrong approach. The first principle should always be to ask how we can reuse what is there already."

Furthermore, she adds that old industrial facilities have characteristics that can be an advantage: "The volume of the building adds to the character. Also, industrial buildings tend to be top lit and you might have shafts of light streaming through small roof lights that add to the drama of the space. They have a repetitive structure and high loading capacities on the floors, so there is the possibility to move partitions around and add floors."

In some reuse projects, such as Here East and New Lab, in New York, scale allows the creation of an ecosystem of businesses and organisations that can reap the benefits of collaboration in a space laid out to encourage cooperative working. New Lab, a former shipbuilding machine shop located on the city's former naval dockyard in Brooklyn, features prototyping labs and workshops in enclosed spaces arranged around a central street at ground level with open desk space on the upper floor.

"Part of the design approach was to retain the open and airy feel with the enclosed spaces on the edge of the building while the central core is clear," says designer Scott Demel of Marvel

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Michael Davis MRICS
London Unlimited. JLL



OPEN FOR BUSINESS?

MAJESTIC FORMER INDUSTRIAL
BUILDINGS LOOK INSPIRING, BUT
DO THEY MAKE GOOD WORKPLACES?

Although most modern offices are open-plan, the format still struggles to gain acceptance in some quarters, and there are plenty of studies claiming that it impedes concentration, lowers motivation and increases stress.

Dr Peggie Rothe, development director at workplace analyst Leesman, argues that no workplace type is necessarily better than another. "If we look at our database, the worst 10 workplaces are some sort of open-plan environment, but the top 10 are also open plan. It's a very broad term. Open environments can be really bad, but they can also be really good."

In 2018, all of the 28 workplaces that the company surveyed that achieved the highest "Leesman +" rating were some sort of open environment, and only 2% of respondents in those buildings worked in private offices.

Variety is an element that all of the highest-performing workplaces have in common, says Rothe. "The difference between the best and poorest open environments is whether you can perform your focused tasks and whether people are satisfied with the variety of space. The worst case would be an old warehouse building with endless rows of workspaces that lacks variety, areas to socialise, meet or concentrate."

Good acoustic design is also essential for a productive open-plan workplace. However, that does not necessarily mean that it should be quiet, she adds: "Depending on the organisation it can be the environment that is meant to be quiet and people go somewhere else to make noise, but it can be the opposite, and the open environment is meant to be 'buzzy' so you go elsewhere to do quiet work."

Architects. "We are trying to have interaction between the prototyping resources and the different companies working within the facility, as well as visitors from outside. A couple of weeks ago a group of investors was touring the building and some of the start-ups approached them to try to pitch their products."

Architect Janne van Berlo of Atelier van Berlo also sought to encourage collaboration between businesses in her design for the "Innovation Powerhouse", a transformed power station on the edge of a former industrial district the Dutch city of Eindhoven, which is now home to 14 office occupiers with a business-to-business focus. "We did a lot of research into the difference between a multi-tenanted building and an ecosystem to see what works and what doesn't," says van Berlo. "In transformational buildings, the companies could see each other, which was the main reason why we decided to make a clear cut through the building and make a large transparent atrium where they could meet. The offices have glass partition walls and they are all open to the shared hallway. They put furniture there and sip coffee and have impromptu meetings when they run into each other."

Not all reused former industrial buildings are home to communities of start-ups, however. Some accommodate a small number of tenants, or even a single big occupier, seeking a large space that provides flexibility while also making a statement about their corporate image. For example, US fashion brand Urban Outfitters established its headquarters at a former military shipyard in Philadelphia, and in 2018 Google moved into a Los Angeles aircraft hangar built in 1943 by filmmaker and aviator Howard Hughes to house his "Spruce Goose" seaplane.

"Volume, light, space and character are critical in terms of helping occupiers attract, nurture, and retain talent, as well as increase the productivity of their teams," says Alex Wright, associate partner at investor-developer Brockton Capital. "An inspiring workplace with volume and light facilitates modern occupational approaches. A key part of the design is to build in flexibility so you give businesses an adaptable blank canvas for activity-based working or whatever other approach they choose to take. The ability for the space to be continually reinvented is part of what makes a great building."

Together with Toronto-based investor Oxford Properties, Brockton Capital has recently completed the redevelopment of the Post Building, a former Royal Mail sorting office in London's West End, retaining and reusing elements of the original structure and preserving its generous ceiling heights. The building was prelet to tenants such as management consultant McKinsey & Company and Nationwide Building Society for its digital-innovation centre.

Distinctively designed space in repurposed buildings can also help to reflect and reinforce companies' corporate identity, says Oxford Properties' head of UK, Henry Shearer MRICS. "Occupiers are becoming more and more focused on how a building relates to their brand, both in terms of their customers and their employees. There are lots of buildings in London that make a strong statement externally, but because of the volume, the Post Building provides occupiers with the opportunity to make a differentiated architectural statement internally in a way they would not be able to in more conventional office space," he says.

Although high ceilings make for a smaller lettable area, Davis believes that greater volume is "a smart way of differentiating your product in a crowded office market". Furthermore, he suggests that tenants may be willing to pay higher rents than they would for standard accommodation because the space is more flexible and a greater overall volume allows for denser occupation. The appeal of the best industrial reuse projects transcends such prosaic considerations, however. "If you map these projects out initially on a spreadsheet, you never do them," says Davis. "The value creation in terms of attracting companies and achieving higher rents happens because there is a magnetic effect; everybody wants to be in these amazing buildings."