

The background is a solid teal color. Scattered across the page are various white geometric shapes, including rectangles, squares, and trapezoids, some of which are partially overlapping or cut off by the edges of the page. The shapes are arranged in a way that suggests a modern, industrial aesthetic.

INDUSTRIAL REHAB

A NEW SPACE OF
OPPORTUNITY






Above: The Smederij on the NDSM campus is an example where rents exceed the local submarket and attract anchor tenants like Green Peace, Pernot Ricard or Red Bull.

Left: Comparison of construction costs. Source: JLL Building Consultancy.

These buildings are attractive, perform well in their submarkets and offer greater volumes and lower densities at lower costs than comparable new build projects

The image features a solid orange background with several white geometric shapes scattered across it. These shapes include vertical rectangles of varying heights and widths, some with irregular, stepped edges. There are also trapezoidal shapes and a few smaller squares. The shapes are arranged in a way that creates a sense of depth and movement, with some appearing to overlap others. In the center of the composition, the words "CASE STUDIES" are printed in a bold, black, sans-serif font. The text is positioned between two vertical white bars, one to the left and one to the right, which appear to be part of the overall graphic design.

**CASE
STUDIES**

THE SELECTION PROCESS

At the outset of our research we looked at 30 projects around the globe where large scale former industrial buildings had been successfully transformed into office spaces. Building size was top of our long list criteria.

The focus of our study is the opportunities and challenges of designing within large volumes with tall ceilings. Of our 30 projects, we found the most inspiring aspect for contemporary workplace design was the intelligent use of 'air space'. With this in mind, we selected 12 of the 30 projects for detailed analysis.

To add variety and enable us to examine how large volume space is handled within different spatial settings, we then categorised the case studies into big sheds, multi-level warehouses and mixed spaces. In each case study these categories help us to focus on the scale of the original building, rather than its original architectural qualities.

BIG SHEDS

Big sheds are 'mono-spaces' with large spans and as little structure as possible, i.e. no vertical or horizontal separations obstruct the internal volume. The most simple form of this building type is the industrial box with a steel structure and a corrugated steel façade, as seen in the offices of TBWA\Chiat\Day in Los Angeles; more elaborate versions include the iconic shed of Station F in Paris.

MULTI-LEVEL WAREHOUSES

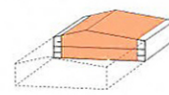
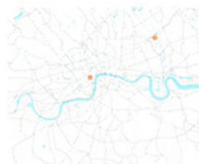
Multi-level warehouses are typically flatted factories or storage units. The conversion of this typology into office space gathered pace in the early 1980s as a result of de-industrialisation. We selected case studies that were of significant scale and versatility due to their robust structures, for example the original ceiling heights of Factory Lisbon and the Post Building in London allowed for interesting vertical connections.

MIXED SPACES

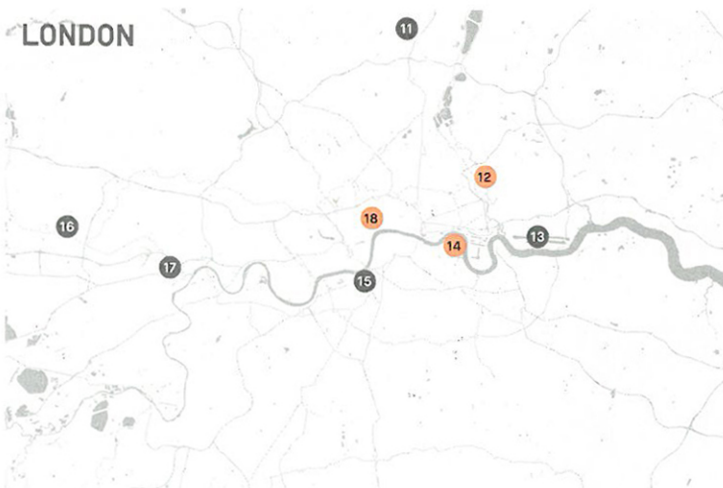
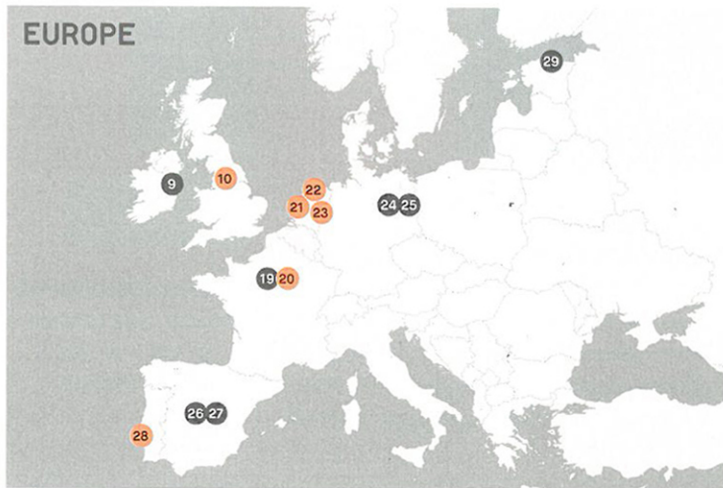
This is the broadest category which we have used to identify former industrial complexes that originally incorporated areas with large floorplates and large volumes. In this category our case studies are The Printworks in London, which includes a former press hall, and Strijp S in Eindhoven, which was originally a manufacturing space. These projects are particularly interesting in terms of spatial and functional diversity.

KEY TO MAPS AND DIAGRAMS

- 1 Map showing the case study in relation to the city centre (refer to the location section on page 025 for more definition on this).
- 2 Map showing the case study in relation to the surrounding urban environment.
- 3 Axonometric section of the case study highlighting the larger volumes.



- Project featured
- Project reviewed



USA

- 1 TBWA\CHIAT\DAY, LOS ANGELES
- 2 GOOGLE SPRUCE GOOSE HANGARS, LOS ANGELES
- 3 MHUB, CHICAGO
- 4 URBAN OUTFITTERS, PHILADELPHIA
- 5 NEW LAB, BROOKLYN NAVY YARD, NEW YORK
- 6 BUILDING 77, BROOKLYN NAVY YARD, NEW YORK
- 7 INDUSTRY CITY, NEW YORK
- 8 BROOKLYN ARMY TERMINAL, NEW YORK

EUROPE

- 9 AIRBNB, DUBLIN
- 10 THE SHARP PROJECT, MANCHESTER
- 11 MERIDIAN WATER WORKS, LONDON
- 12 HERE EAST, LONDON
- 13 MILLENIUM MILLS, LONDON
- 14 THE PRINTWORKS, LONDON
- 15 BATTERSEA POWER STATION, LONDON
- 16 OLD VINYL FACTORY, LONDON
- 17 SKY HQ OSTERLEY, LONDON
- 18 THE POST BUILDING, LONDON
- 19 LES MAGASINS GENEREAUX, PARIS
- 20 STATION F, PARIS
- 21 RDM INNOVATION DOCK, ROTTERDAM
- 22 NDSM SMEDERIJ, AMSTERDAM
- 23 KLOKGEBOUW / STRIJP S, EINDHOVEN
- 24 FACTORY, BERLIN
- 25 AMPERE, BERLIN
- 26 RED BULL ACADEMY, MADRID
- 27 MEDIALAB PRADO, MADRID
- 28 FACTORY, LISBON
- 29 AERIPAEV AS, TALLINN

OTHER

- 30 CITY WORKS DEPOT, AUCKLAND

FOOTPRINT

N.I.A.

VOLUME

**STATION F
PARIS**

Volume/NIA: 7.55m

19,051 sq m

34,034 sq m

257,075 cb m

**STRIJP S
EINDHOVEN**

Volume/NIA: 6.81m

11,168 sq m

45,000 sq m

306,344 cb m

**TBWA\CHIAT\DAY
LOS ANGELES**

Volume/NIA: 6.60m

11,148 sq m

11,100 sq m

73,206 cb m

**CITY WORKS DEPOT
AUCKLAND**

Volume/NIA: 5.77m

6,729 sq m

7,200 sq m

41,574 cb m

**THE POST BUILDING
LONDON**

Volume/NIA: 5.67m

4,000 sq m

28,000 sq m

158,636 cb m

**NDSM SMEDERIJ
AMSTERDAM**

Volume/NIA: 4.67m

1,719 sq m

4,500 sq m

21,016 cb m



Station F, Paris [p.040]



Here East, London [p.046]



New Lab, New York City [p.052]



City Works Depot, Auckland [p.070]



NDSM Smederij, Amsterdam [p.074]



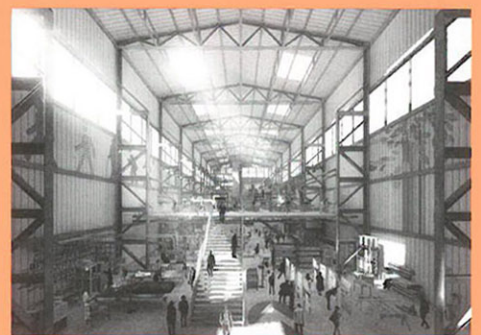
TBWA\Chiat\Day, Los Angeles [p.078]



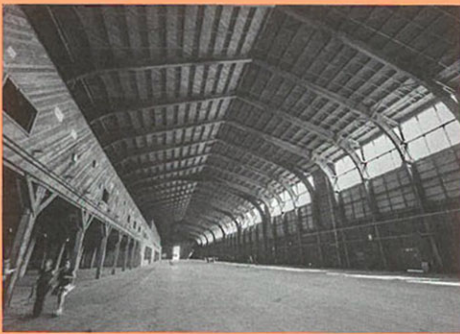
The Sharp Project, Manchester [p.086]



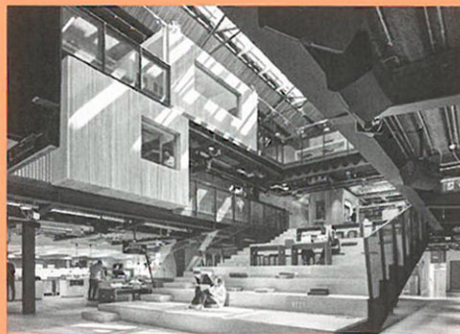
RDM Innovation Dock, Rotterdam [p.090]



Meridian Works, London



Google, Los Angeles



Airbnb, Dublin



Red Bull Academy, Madrid



Sky HQ, London



Urban Outfitters, Philadelphia



Aeripaeev AS, Tallinn

NDSM SMEDERIJ, AMSTERDAM



BASE DATA

Typology:	Big shed
Built:	1927
Original use:	Shipyard forge
Converted:	2014
Ownership:	Public/private
Status:	Complete
Architect:	Group A
Developer:	Mediawharf bv (Biesterbos and Rovobel)

URBAN ENVIRONMENT

Setting:	Central
Sect cluster:	Yes

TRAVEL TIMES (mins)

City centre:	19	34
AMS airport:	31	51

SIZE

Footprint:	1,719 sq m
NIA:	4,500 sq m
Volume:	21,016 cb m
Volume to NIA:	4.67m

USE

Main sector:	Multiple
Tenancy:	Multi-occupancy
Occupancy:	Unknown
Occupant/sq m:	Unknown
Occupant/cb m:	Unknown

COSTS

Construction:	Unknown
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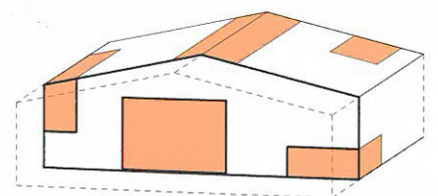
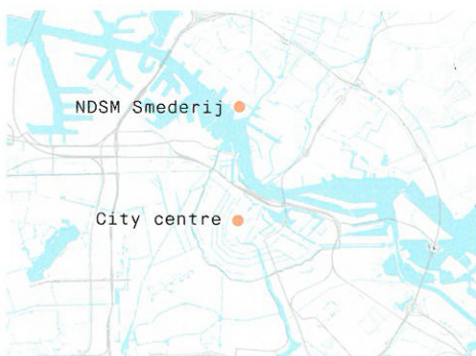
BEAUTIFUL EFFICIENCY

The Smederij is the former forge of the NDSM shipyard in Amsterdam. The newly inserted office floors seem to intersect accidentally with the existing structure. This bold strategy created both a unique design appeal and efficient layout.

WHY? We included the comparatively small NDSM Smederij in this study because of its bold design that combines old and new in a very assertive manner.

WHAT? The Smederij (forge) is a former metal workshop of the NDSM shipyard in Amsterdam. The steel/brick construction is the little brother of the adjacent massive NDSM warehouse which contains the 'art city'; a container village with studios of artists, exhibition spaces, robotic workshops and various other uses.

Group A architects mastered the design challenge of filling a volume with floors without losing its original generous character. The new floorplates intersect – so it seems – randomly with the existing steel structure. Cut-outs and large staircases create vertical connections. Pods in various designs create calm, discrete spaces in this otherwise rather open, messy arrangement. While the new floorplates provide sufficient lettable space, the random intersections of old and new elements magnify the memory of the original volume. The light-filled office space attracted anchor tenants such as Greenpeace Netherlands.



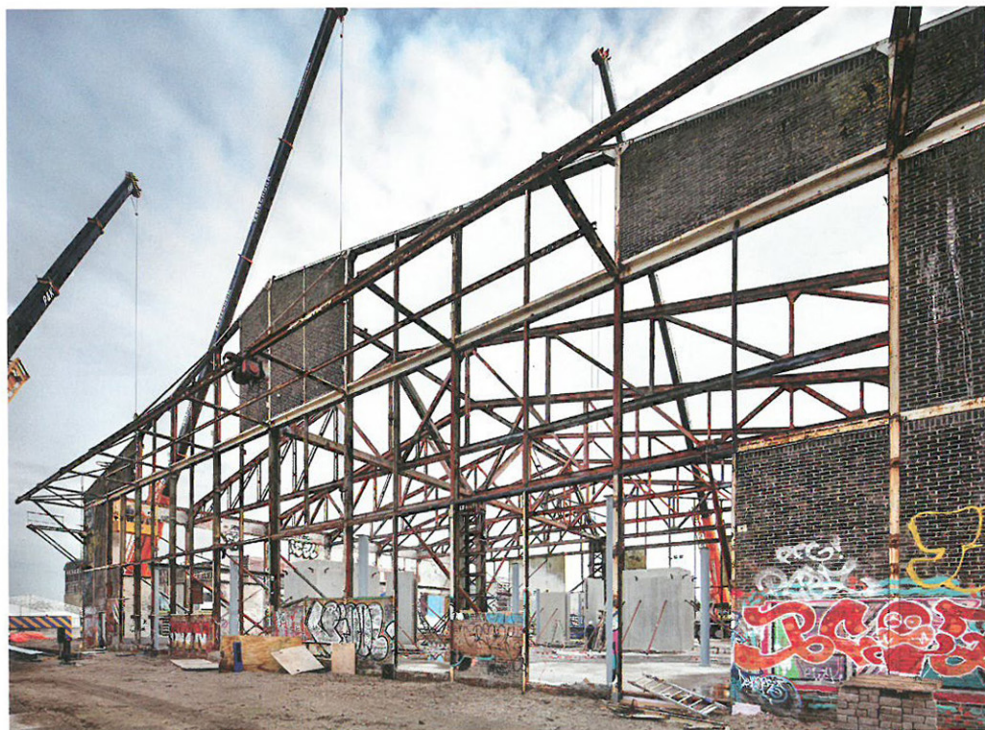
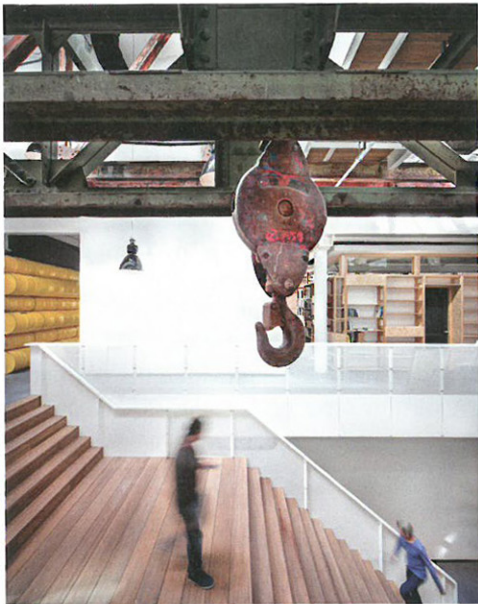
2017



1927







Above: New staircase and cut outs create vertical visual connections.

Left: The exposed steel structure during re-construction.

Opposite page: The clash of two scales creates a playful game between past and present use.

