



# Retrofitting Telehouse South

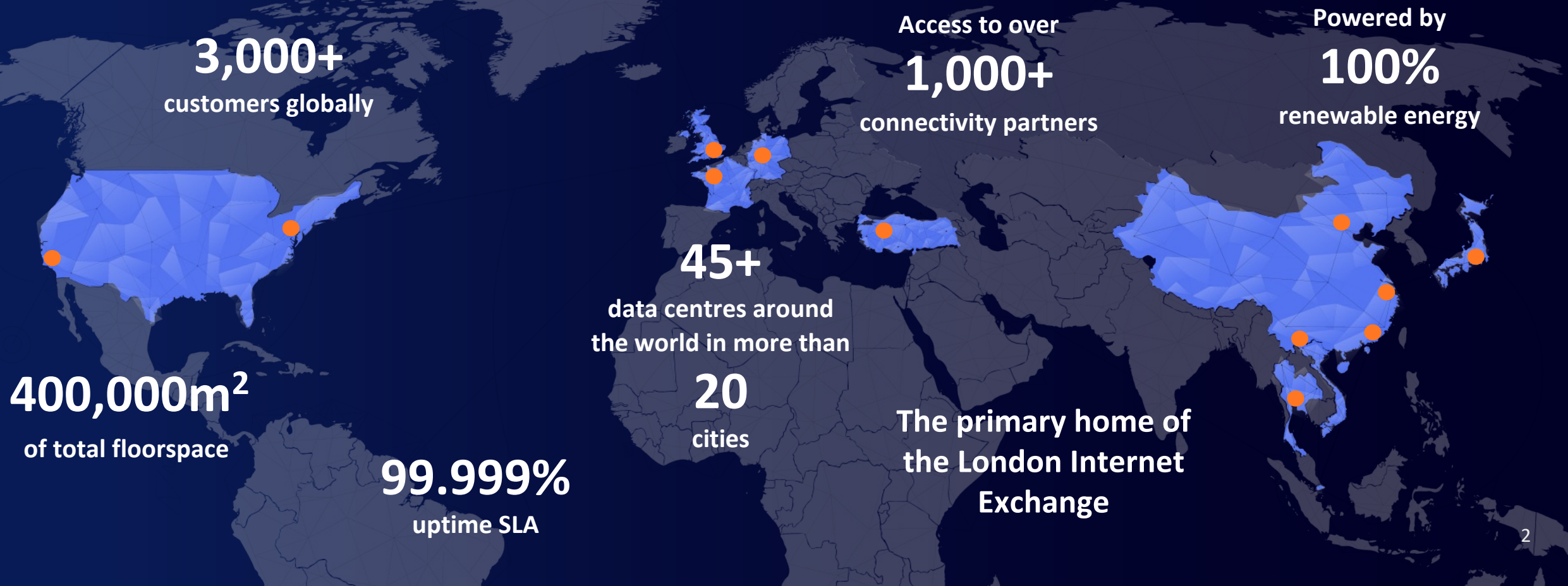
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Construction, Telehouse Europe**



# About Telehouse

Established in 1988, Telehouse provides reliable, secure and flexible colocation services, enabling organisations to accelerate speed to market and create business opportunities through fast, efficient and secure interconnections.





# Telehouse South

Opened in 2022, Telehouse South will provide a maximum of 18MW of IT power on full development. Integrated with the main Docklands campus via a diverse dark fibre network, our new data centre provides access to one of the world's densest networks, with over 1,000 carriers, ISPs and ASPs.

From summer 2024, two additional floors with a total power capacity of 5.4MW will come online, bringing the total building IT power capacity to 7.4MW.

## Spaces

|                    |                          |
|--------------------|--------------------------|
| Gross area         | 31,000 sqm               |
| Rack count         | 688 footprints per floor |
| Standard rack size | 600mm x 1,200mm          |

## Power

|                      |                                                           |
|----------------------|-----------------------------------------------------------|
| Total power capacity | 30MW, up to 2.7MW per floor                               |
| Design PUE           | 1.24 (annualised)                                         |
| Power feeds          | Dual redundant, Diverse route                             |
| Generators           | N+1 Redundancy, 24hr Fuel Storage                         |
| UPS configuration    | Distributed redundancy (2N resilience for customer loads) |

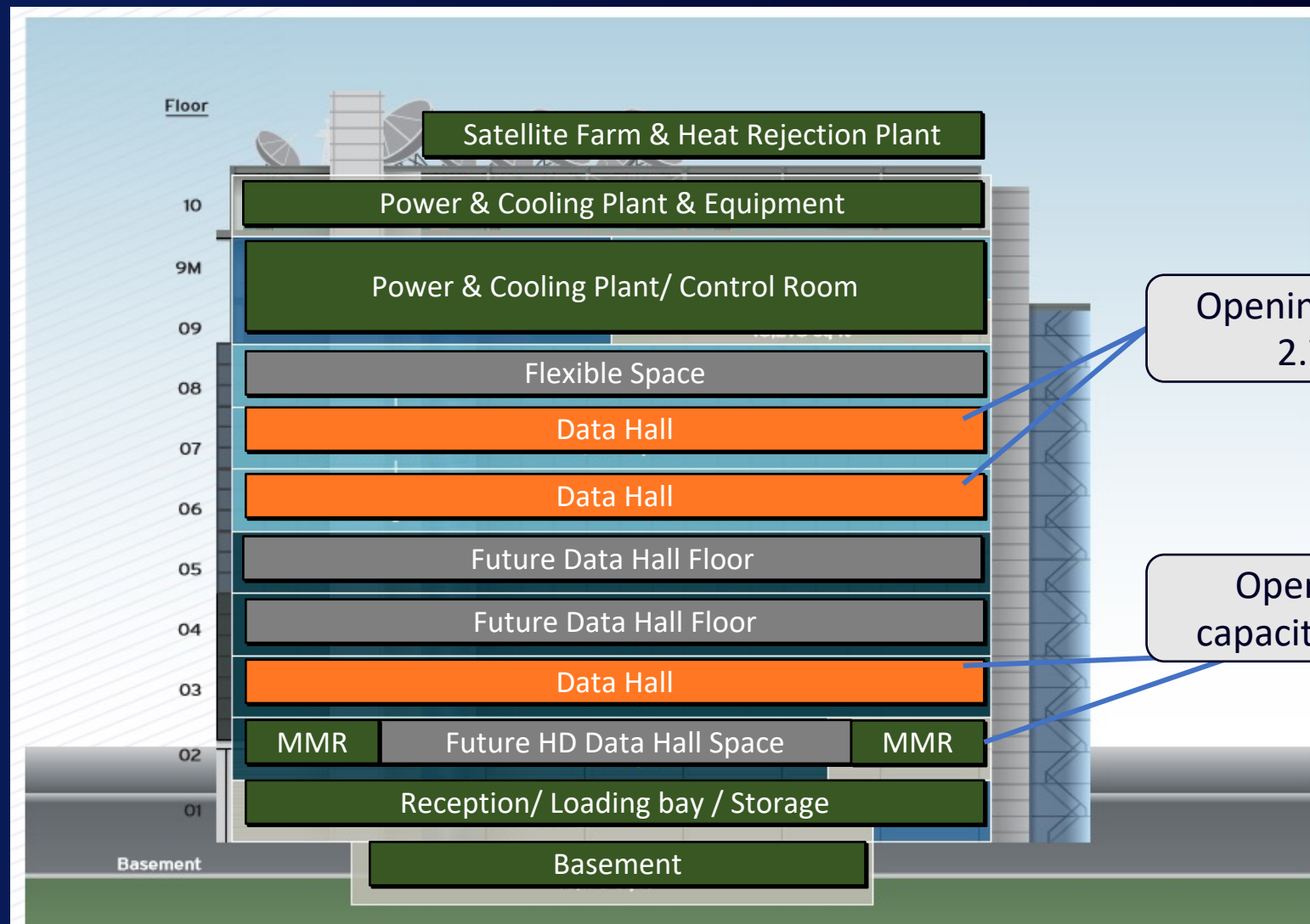
## Environment and Air Conditioning

|                |                                         |
|----------------|-----------------------------------------|
| Cooling system | N+1 Heat rejection, N+20% on floor CRAH |
|----------------|-----------------------------------------|



# Building Overview

11 floors including 6 data hall levels, each offering up to 2.7MW of IT power capacity.

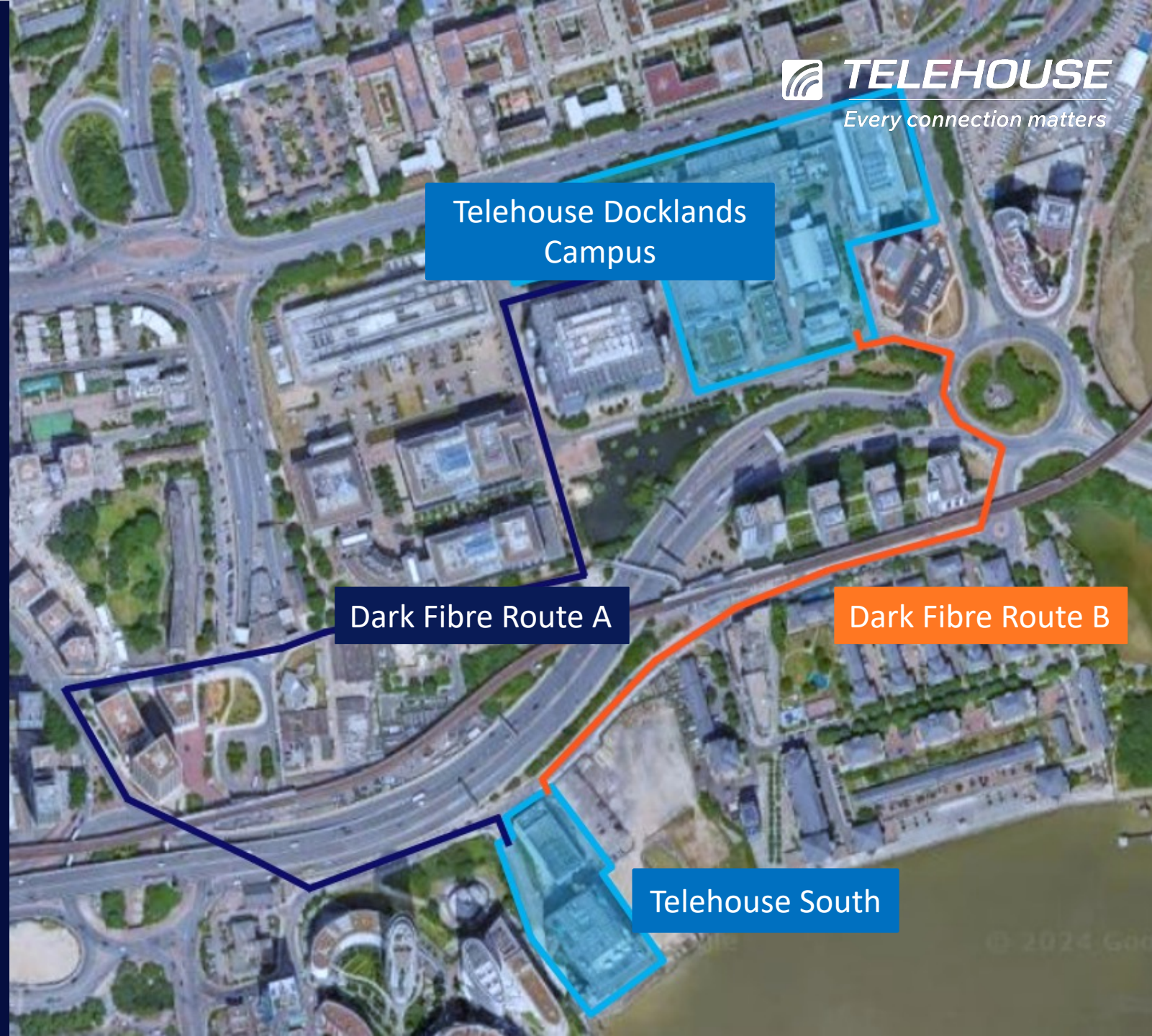


Opening in summer 2024 achieving  
2.7MW capacity per floor

Opened in Q1 2022 with 2MW  
capacity (Future update to 2.7MW)



# Location and Connectivity





# Sustainability Approach During the Design Stage

## New cooling system including;

- High efficiency free-cooling air cooled chillers
- Annualised PUE of 1.24 vs existing of 1.68
- Improved acoustic levels
- Reduction on Natural Resources

## New heating system which provided;

- Complete removal of inefficient gas fired equipment from site
- Local waste heat recovery to feed water source heat pump for building heating
- Improved air quality

## Upgraded Generator Strategy;

- Removal of all existing aged generator sets
- Installation of new high efficiency sets
- Introduction of SCRs
- Introduction of Urea system
- Exploring use of HVO with manufacturers

## Overall facility Improvements;

- Full replacement of façade from level 5 – 8
- Roof Replacement with improved insulation thickness.
- General improved fabric performance.
- Removal of fossil fuels from the main building.
- Strip out of all floors available to remove outdated inefficient equipment.

## External Improvements;

- Improved bunded fuel filling point
- Installation of new fuel interceptor
- Sustainable surface water improvements
- Sustainable travel plan

**100%**  
**renewable energy**





# Sustainability Approach During the Construction Stage



95% construction waste recycling target



Strive for circular economy



Green procurement



Donations to charities from recycled materials



Industry skillset development



Reduction of embodied and on-site carbon





# Carbon Savings from TATA Steel's Pipework:

## Optemis Carbon Lite



**515 tonnes of  
CO2 saved**



**This equates to  
335 direct flights  
from London to  
New York**



**118 average cars  
off the road in a  
year**



**Or heating 234  
homes in the UK  
for a year**



**To capture of 1 tonne of CO2 emissions, you would need approximately 50  
trees to be grown for one year.**

*Source: Sustainable Travel Organisation*



# Level 2 Before & Now





# Level 3 Before & Now





# Level 6 & 7 Before & Now



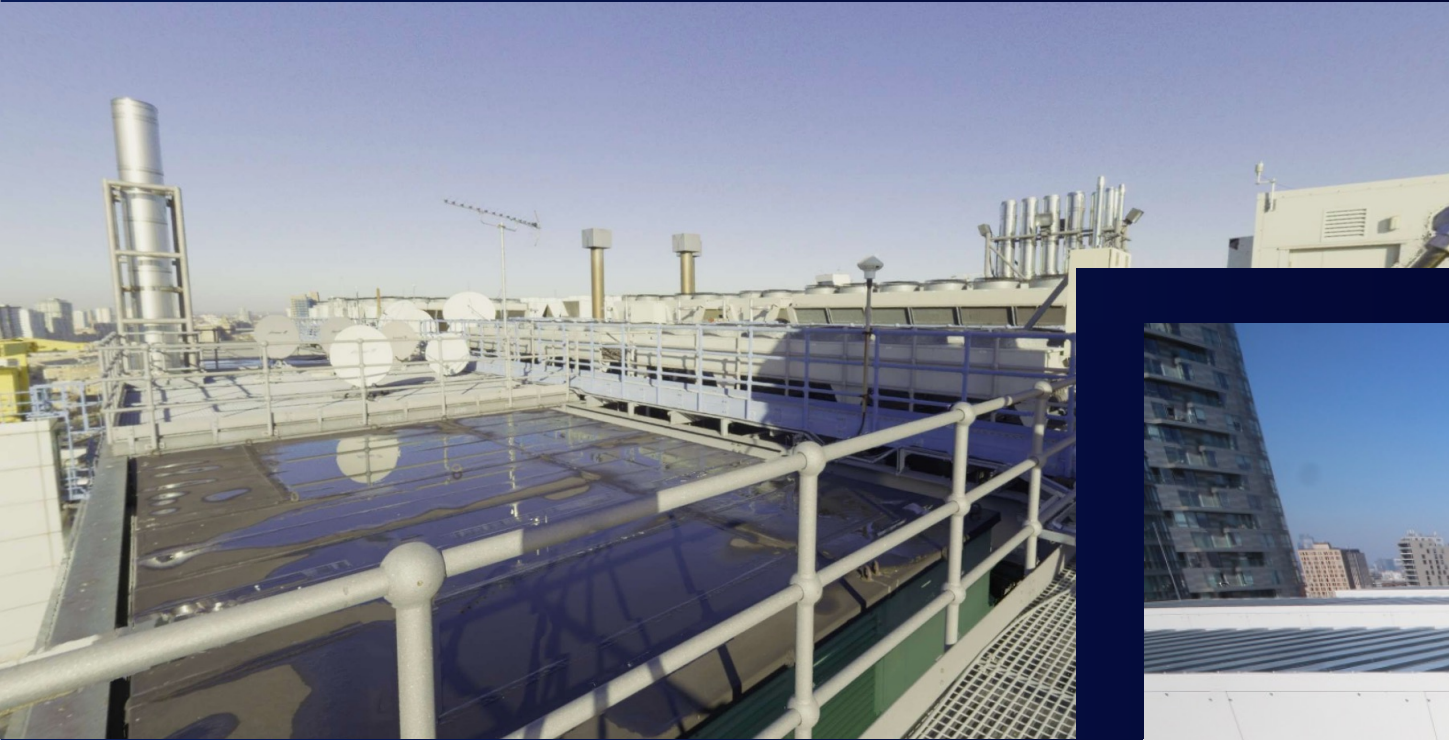


# Level 9 Before & Now





# Rooftop Before & Now







***TELEHOUSE***

*Every connection matters*

# Thank You

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