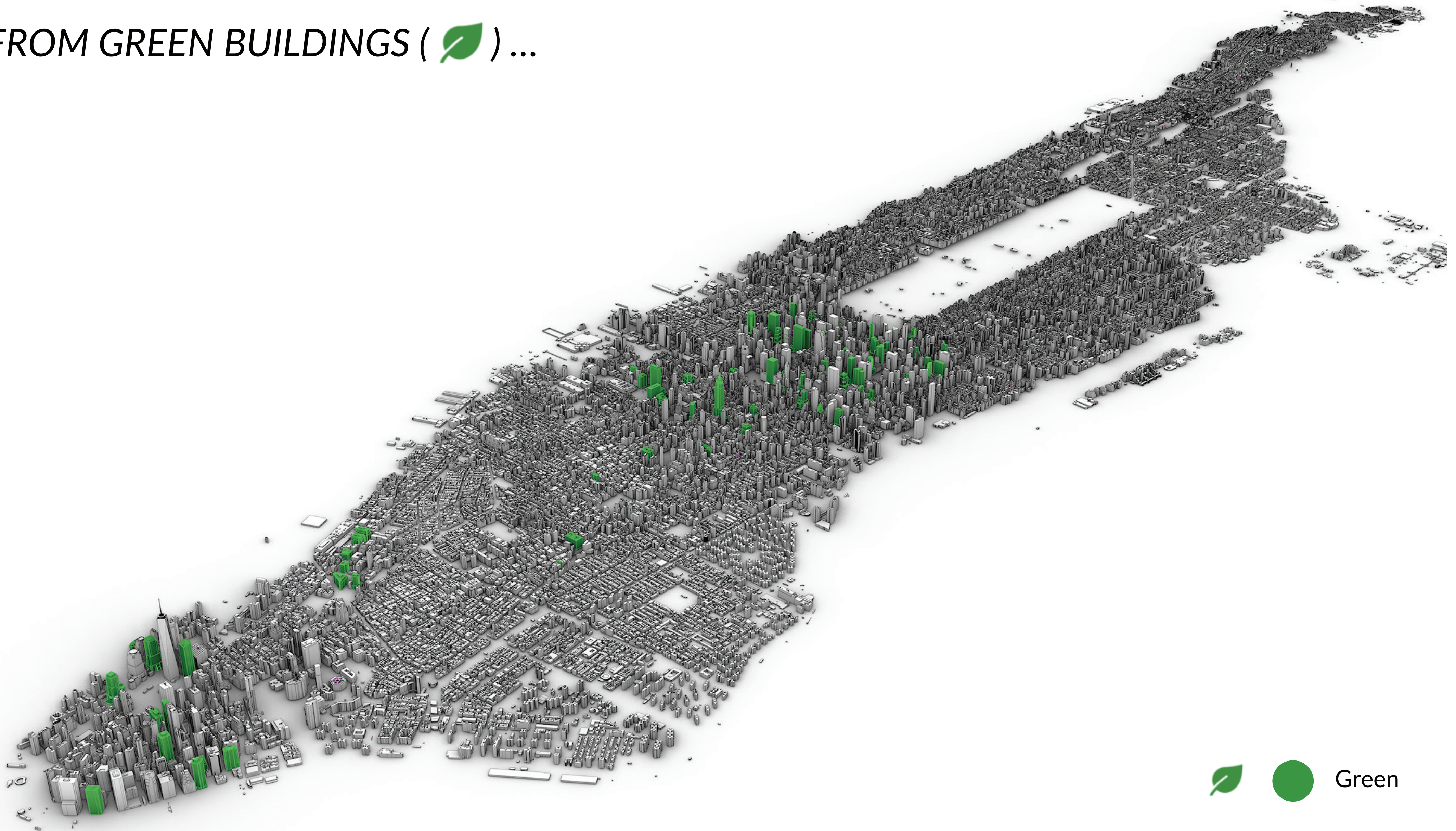# GET SMART, CONNECTED & GREEN

MEASURING THE INCREMENTAL VALUE OF BUILDING PROGRESS

FROM GREEN BUILDINGS (🍃) ...

🍃 ● Green

We measure the economic impact of Smart, Connected and Green buildings upon rents and transaction prices. Using numerous data sources, we identify buildings that offer at least one so-called "smart" amenity and link them with the building's achieved rent and transactions prices as well as to other so-called "innovation" amenities, like greenness and or fiber-lit connectivity. Combined these measures mark the incremental value of technological progress in the built environment. In particular, we measure the impact of smart buildings that have grown from an increase in digital technologies that can sense, recognize and verify the experiences of the building and its inhabitants. Nascent literature has identified what it means to be considered smart. Buildings must respond to all four components of systems, performance, and service and should have the following components: a) smartness and technology awareness, b) economic and cost efficiency, c) personal and social sensitivity, d) environmental responsiveness.

GREEN

Building Systems

HVAC, lighting, energy, access control, video and surveillance systems, digital signage, alarms and safety, cleaning services, water, elevators, parking and waste.

Multiuse Sensors

Occupancy, temperature, light, humidity, infrared, distance, acceleration, sound, force, vibration, etc.

CONNECTED

Integrated Network

Standardized, secure and integrated IP Network

SMART

Internal Data Storage
Secure and internal servers storage. Internal analytics

Integrated Platform
Building Management Systems

Third-party apps / Tenant systems / City systems

Cloud Data Storage
Cloud storage available for external analytics providers

THE REAL ESTATE INNOVATION LAB

RESEARCH AND DEVELOPMENT FOR THE BUILT ENVIRONMENT

GET SMART, CONNECTED & GREEN

TO SMART ( ),
CONNECTED ( ) &
GREEN ( )

Midtown

Chelsea

Chelsea Market

Madison Sq. Park

Union Sq. Park

1 World Trade Center

Financial District
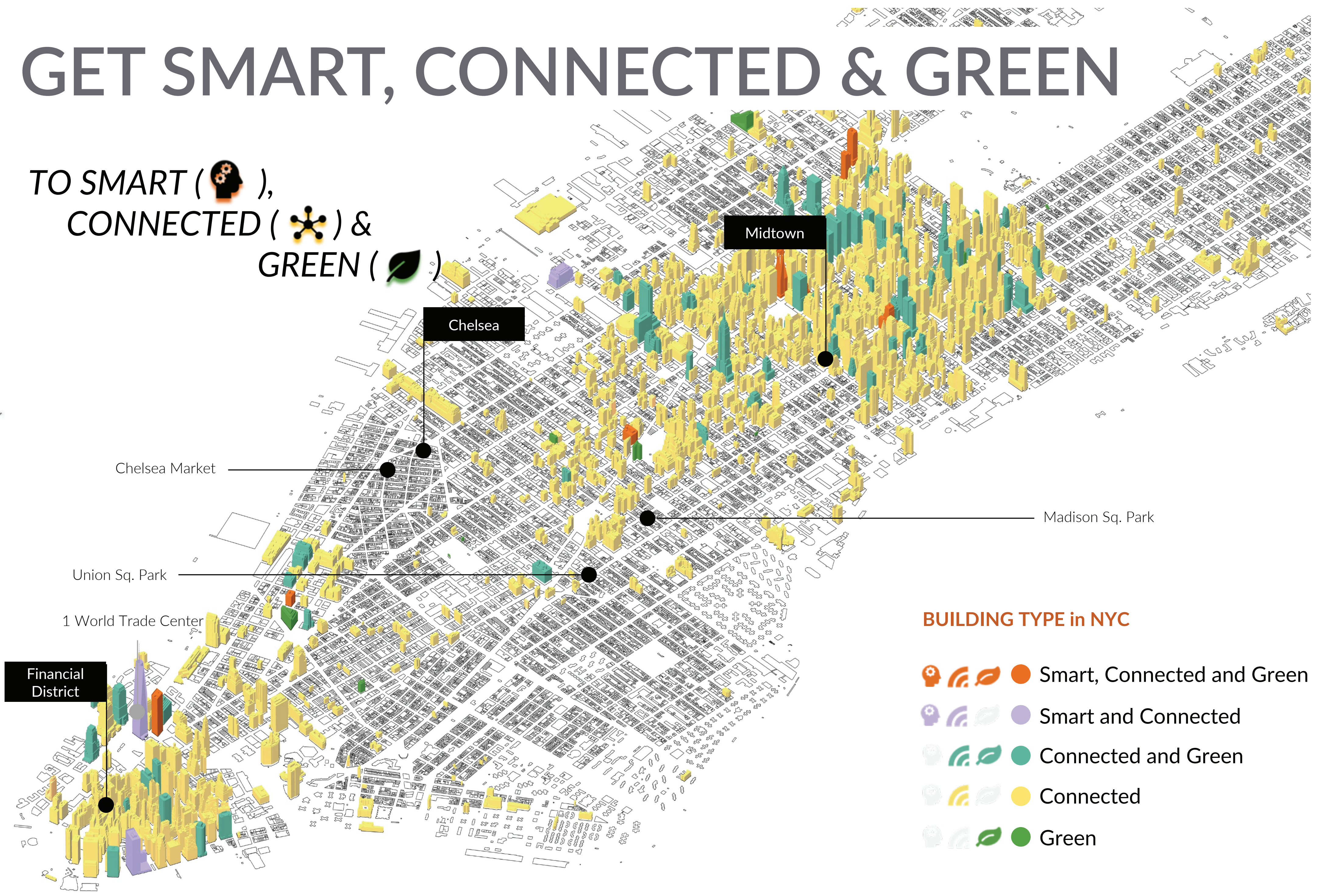
BUILDING TYPE in NYC

- Smart, Connected and Green
- Smart and Connected
- Connected and Green
- Connected
- Green

THE INCREMENTAL VALUE in NYC

Smart, Connected AND Green

		Effective Rents	Transaction Prices
Smart, Connected and Green		8.2%***	23.7%***
Smart and Connected		10.7%***	
Connected and Green		10.0%***	10.7%**
Connected		7.0%***	

Smart, Connected OR Green

	Effective Rents	Transaction Prices
Connected	7.1%***	
Green	2.0%**	12.8%***

LEASE & TRANSACTION SAMPLE

Time		From **2010** onwards	
Rents		**11,128** Leases	**1,155** Locations
Transactions		**2,076** trans.	**1,276** Locations

DATA & METHOD

We use RCA, Compstak, GBIG, Geotel, WiredScore and JLL data-sets for the 2010 to 2016 period. Then we estimate a semi-log hedonic pricing model relating the office rent (selling price) per net square foot to the hedonic characteristics of the lease or building.

DATA PROVIDERS

We are grateful to our data providers for generously providing data for his study

COMPSTAK   REAL CAPITAL ANALYTICS

WIRED SCORE   GBIG

JLL   GEOTEL