MIND: un distretto di conoscenza e crescita sostenibile

Nadia Boschi,
PhD, Arch., LEED AP, *Head of Sustainability Italy and Continental Europe Lendlease*

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Milano Innovation District (MIND) a LEED for Communities site and best practice COP 26

MIND is built on the idea that if one member of the network advances, the whole community grows and develops, and new opportunities are created

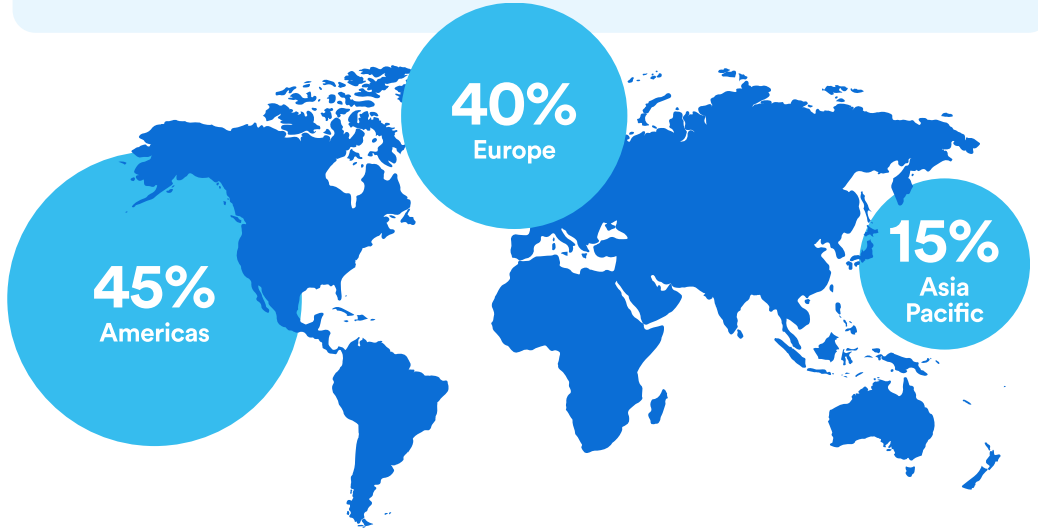
MIND is a digital and physical platform and innovation ecosystem where innovation happens through cooperation between a wide range of people and stakeholder.

- MIND provides access to a specialised network of research-intensive companies, multinationals, SMEs, start-ups, as well as top international researchers and professors, students, clinicians and patients.
- This vast network provides the key to experimenting and testing innovative solutions, all in one place, which could then be scaled up regionally, nationally and internationally to increase the well-being of people and the planet.

“Today, by conservative estimates, there are more than 100 innovation districts emerging around the world”

GLOBAL INSTITUTE OF INNOVATION DISTRICTS

This trend of Innovation Districts is continuing to accelerate as they enable cities to create new products, processes, technologies and firms that drive inclusive growth



Sustainability at MIND

Innovation, science and technology are at the heart of the Milano Innovation District, and this includes its approach to sustainability.

SOCIAL IMPACT

The project will work in partnership to enable the inclusion of individuals who have previously been imprisoned through training and job opportunities at MIND as part of the Program 2121 in partnership with the Italian Department for Justice

SUSTAINABLE BUILDINGS

All buildings within this new precinct will be designed and built to achieve the internationally recognised green building certification striving for LEED Platinum / WELL Gold.

POWERED BY 100% RENEWABLES

The site will be powered only by renewable energy sources. This includes onsite renewable production from solar panels, power purchase agreements (PPA) from renewables and purchasing certified renewable energy with Guarantees of Origin (GO)

ENSURING CLIMATE RESILIENCE

The project underwent a climate risk assessment to ensure resilience against plausible future climate change scenarios.
The impact of two scenarios were investigated using sophisticated climate modelling: RCP 4.5, a scenario compliant with the Paris Agreement, and RCP 8.5, a scenario where temperatures increase by approximately 4 degrees by 2100. Temperature rise and urban flooding were identified as the top two climate risks for the site.
To mitigate these risks, the project has embedded climate resilient solutions in the design of its assets and has committed to being zero carbon to ensure minimal impact on climate change.

OPTIMISING RESOURCES

MIND will use Design for Manufacture and Assembly (DFMA) approach to maximise use of resources and circular economy.

GREEN INFRASTRUCTURE

Green-Blue Park of 120,000 m² is a network of green areas and paths in contact with the pre-existing canals.

DIGITAL TWIN TECHNOLOGIES

Digital twin technologies will assist in the design and construction at the west gate plots to align design efficiency, sustainability, optimized fabrication and safer installation.

SUSTAINABLE NEIGHBOURHOOD

The district is targeting LEED Cities and Communities GOLD certification, aiming for the entire project to be built sustainably with the community in mind.

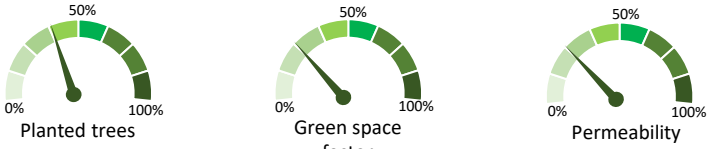
HEATING & COOLING INFRASTRUCTURE

New generation low temperature and high efficiency district heating and cooling network for MIND.

DRIVING ABSOLUTE ZERO

1. Environmental legal framework

Compliance with PAUR requirements including permeability, biodiversity, Green space factor, trees (See plan per plot)



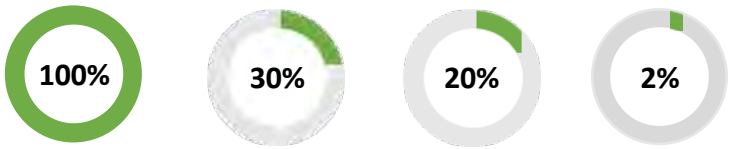
2. EU Taxonomy compliant

Compliance with EU Taxonomy requirements and beyond

NZEB				
Buildings will be class A3, A4	GWP ≤ 675 kg CO2eq/kg	Water appl. 2 – 6 l/min	High recycle content (30% at least)	Biodiversity gain (10% at least)

3. All site is benchmarked at the urban level with LEED for communities

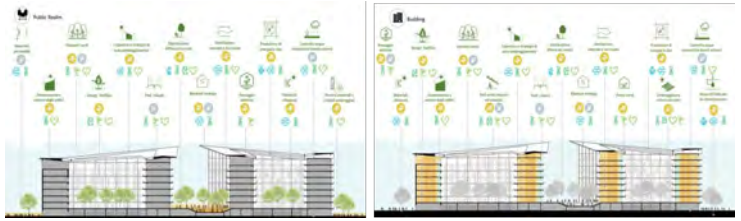
> 82 SRI				
Solar Reflectance Index	Invasive vegetable species	Bicycle parking	2% PV mandate	Smart meter



100% Buildings & Precincts LEED certified	30% Outdoor water use reduction	20% Indoor water use reduction	2 % PV mandate

4. Resilient site

Assets need to be resilience to climate change to be 1.5 °C aligned considering a RCP 8.5 scenario @2050 (buildings) and @2090 (infrastructure). Renovations, maintenance and repairs should take into account these evaluations



5. Social innovation program P2121

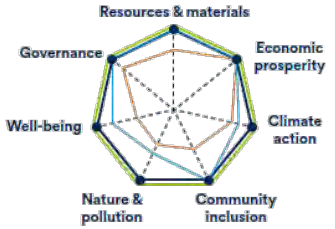
Partecipation to social innovation program such as Programma 2121 which is a partnership with Italian Ministry of Justice extended to 2026

www.programma2121.org

PROGRAMMA 21
A Shared Value Partnership

6. Sustainability minimum standards

Lendlease Sustainability Minimum standard per asset class which assure achivement of carbon zero through (see specific Sustainability Minimum standard):



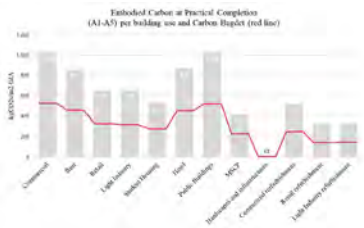
EPC		
Comm. B Resi. A	Certified 2 top level	Green leases
Electrical charging station	100% from renewable sources	Operational data sharing

6.1 Circular Economy: DFMA

Spaces are designed using a Design for Manufacture and Assembly approach and spaces such as above ground parking are ready to be re-purpose to foster flexibility and resource optimazation sustainable approcach

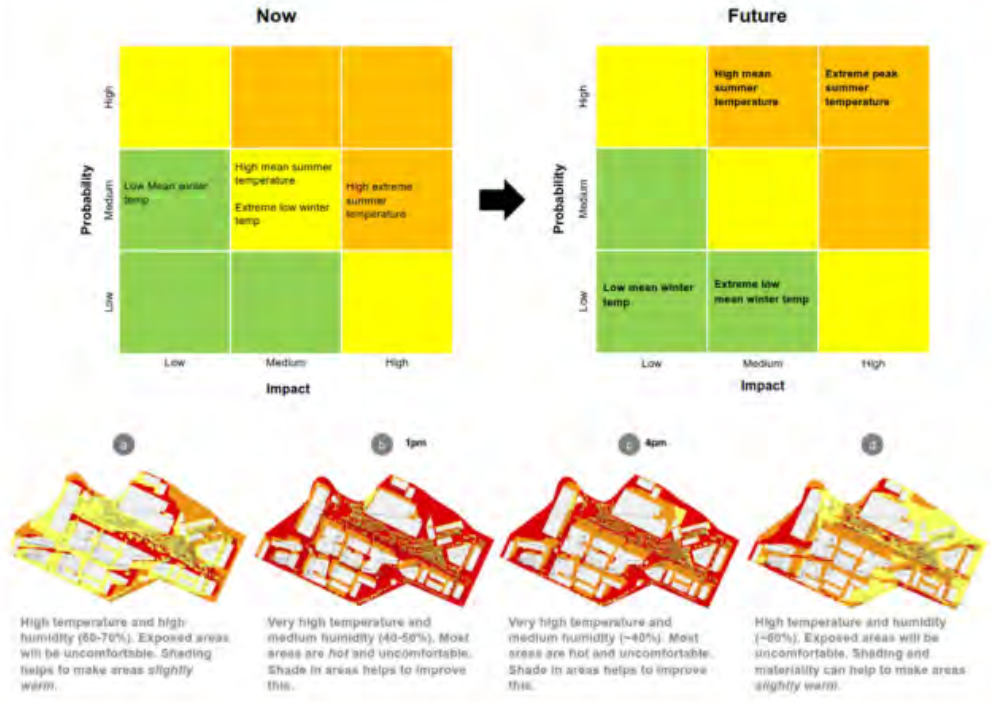
6.2 Carbon budget

All asset classes be designed with a minimum 50% carbon budget reduction compared to RICs baseline determined by their A1 to A5 lifecycle modules. B1-B5 modules could also have a carbon budget includes allowances for usage, maintenance, repair, replacement,and refurbishment



Modelling to mitigate risk by aligning urban design

Climate change projection data has been used to make an informed assessment which looks specifically at how climate change will impact the microclimate and urban health island effect. This assessment examines the probability of climate events occurring against the potential impact for the present day and in the future. This allows the level of risk to be examined. Higher risk parameters will need an appropriate design response which should be integrated into the microclimate design strategy.



The assessment led to climate change resilience design guidelines to mitigate cliamate impact based on identified outdoor functional uses (see appendixes)

NEW Processes and Innovation: DFMAD & the perception of timber project to foster decarbonization

DESIGN FOR MANUFACTURING, ASSEMBLY, AND DISASSEMBLY

DFMA

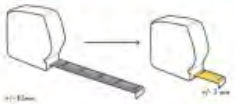
Design for Manufacture and Assembly

100% WOODEN MATERIALS

EFFICIENT
Kit of standard parts

MORE SUSTAINABLE
Reduced waste, flexible and reusable components

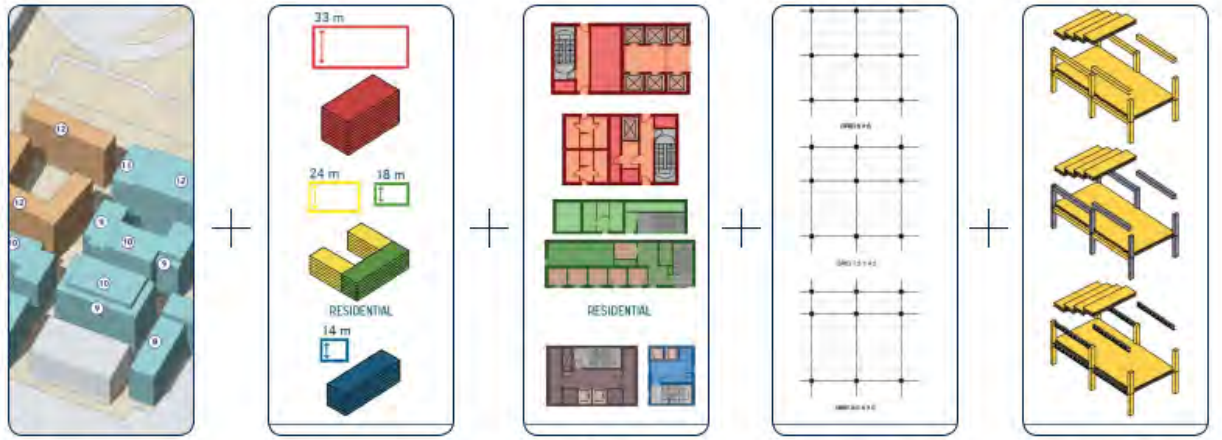
IMPROVED ACCURACY
Fabrication in clean and controlled environments



SPEED
Time on site is reduces

FLEXIBILITY
Family of mix and march structural solutions

SAFETY
Reduction of trades on site



MASTERPLAN + SUITE OF BUILDINGS + SUITE OF CORES + SUITE OF GRIDS + SUITE OF SYSTEMS

Programma 2121 aims to facilitate the social inclusion of the inmates in Milan prisons by providing training and work experience

A shared value partnership with a dual motivation:

- **Create safer communities through social innovation**
- **Promote the social inclusion of offenders through soft skills and fairly paid internships.**

www.programma2121.org

www.programma2121.org in numbers – a UNODC best practice

Grazie

nadia.boschi@lendlease.com