



# MEDELLIN COVID 19 SUSTAINABLE CONSTRUCTION ACTIONS: MOBILISING THE VALUE CHAIN TOWARDS CIRCULAR ECONOMY



Global Alliance  
for Buildings and  
Construction



In collaboration with:



Alcaldía de Medellín

# Sustainable Construction in Medellín: New Challenges and Prospects

## Green Buildings Regulations and Actions in Urban Planning:

- ✓ **GB Regulations** for residential, commercial, services and industrial buildings. Public works infrastructures, public space. **INTEGRAL APPROACH**
- ✓ **GB ACTIONS:** Electric mobility,, Solid waste management – demolition, compost for green terraces. Comfort Indices Management. **Priority in Passive Design: Natural illumination and ventilation. hygrometric, noise index. Using raining and gray Waters,** Materials recycling and reusing, shading with greenery and trees for COeqv absorption. Architectural Heritage. Specific regulations for microclimate or heat áreas.
- ✓ **BIG Challenges:** Retrofit existing constructions: 650.000 Houses: 78 Millions M2 and 250 educational centers. **Public Private Alliances. Energy Transition . Research with Academic sectors**
- ✓ Official Buildings. Administrative, educational, health, recreation centers, Goals of 50% in 2030, 100% in 2050 Neutral Carbon.  
Medellin has 7 big green buildings: 3 Hospitals, 4 Administratives. 12 Privates: Hotels, Comercial centers, Banks, termic district. **Many partial innitiatives** are not registered



# Innovation in Green Building Management. Researching



## **FACING COVID 19 GB ACTIONS IN MEDELLIN CITY:**

- ✓ **Development Plan 2020-23:**  
Retrofitting Houses: 9237 (Covid 2260). USD \$ 33.2 Millions  
New Housing Complex GBC: 125 houses. 3252 M2  
34700 New Employments. 19.527 PP New Houses. Public Invest.: USD \$56 Millions
- ✓ **Health buildings adaptation and recovery Buildings: New Covid Urgences Hospital 150 Beds. 90 CIUs**
- ✓ **Termic Distric Expansion: Connecting +4 buildings (Nat. gaz)**
- ✓ **Using Artificial Intelligence and DATA: Internet for the people. Housing internet free connections in poor districts. Equity in Communication Connectivity. Applications. Intelligent Public Services. NEW CONCEPT: DIGITAL CONNECTIVITY IN GBC!!!**
- ✓ **Researching In Microencapsulated materials for energy conservation. Nanotechnology and COeqv fixation in building materials. Anti Bacterial funci painting**

# Economical aspects in City Green building planning

## Public Incentives - Certifications and Levels in MEDELLIN CITY



- ✓ **Tax incentives** and public substitute incomes: Impacts in **Urban Economy**: 195000 New houses, 15.60 Million/M2 2027. Incentives (V2020): **USD 552.000** (Equivalent value USD \$ 4 Millions)
- ✓ **Green Public and Private Credits Systems.**
- ✓ **Cost evaluation:** Urban metamorphosis in Latin America. Restructuring, financing and commercialization in relation to sustainable construction. Carlos de Mattos. ILPES UN ECLAC. **Latin American network of researchers on Globalization and Territory.** –
- ✓ **Certifications and level costs.** Impacts of sustainable construction. **5-10% of the total costs.**
- ✓ **Own levels** vs LEED, Green –USGBC., PASSIVHAUS EDGE, CASA Colombia.  
**Co Work in Guides lines 13 and others, with LEED V3 –V4:** Transportation, cycling and electrical vehicles parking, toxic material exclusion. Waste management 2015.





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# Thank you

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