



www.aceupdate.com

# ACE

ARCHITECTURE CONSTRUCTION ENGINEERING

# UPDATE

MAHENG/2011/38968

Vol 15 Issue 03 • Pages 64

April 1, 2025

₹ 200/- • ISSN 2456-7965

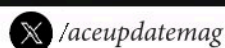
- 
- 16 *Aerodynamically optimised profiles offer fire-resistant, climate-responsive roofing systems*
- 
- 22 *Acclimatisation and moisture assessment, the key to laminate performance*
- 
- 56 *Why is daylight integration important in roof lighting?*
- 

Pg.58  
**NEW  
PROJECTS  
INSIDE**

## AR. LUCIO MUNIAIN

# HUMANISING SPACES THROUGH ARCHITECTURE

At the core of our design philosophy is the belief that architecture must transcend functionality and become an extension of the environment. The human connection to materials should remain timeless—whether in a traditional hand-carved wooden beam or an innovative prefabricated panel.



# Smart technologies & facade designs

“Smart facades are transforming design by increasing energy efficiency, boosting comfort, and allowing buildings to adapt to changing conditions.”

**T**his interaction focuses on tech-driven facade solutions that promote energy efficiency, occupant comfort, and long-term building resilience.

**How has the demand for facade solutions evolved recently, and how is Metalia seeing the opportunity?**

The need for facade solutions has increased dramatically in recent years due to increased material choices, architectural innovation, and greater attention to aesthetics and functionality. Modern architecture has advanced to the point where visionary ideals can become practical realities, so the possibilities for how facades function have become limitless. The industry is currently led by a comprehensive approach that considers numerous perspectives while anticipating the needs of homeowners and end users.

Metalia has established a new standard in the AEC industry, especially in the luxury facade ecosystem, by taking a comprehensive approach

to facade solutions. We continue to collaborate with designers, specifiers, and contractors while being flexible to change and reinventing facade solutions.

**Can you discuss how integrating smart technologies into facade systems enhances building performance?**

Smart materials enable facades to respond dynamically to climatic conditions, optimise energy use, and lower carbon footprints. These facades function by collecting real-time data from an extensive network of sensors, measuring environmental impacts like wind, temperature, and sunlight, and transmitting the data to a central control unit. Automated shading, ventilation, and temperature control systems improve occupant comfort while lowering the need for artificial heating and cooling.

Gateways, which enable communication between networked devices via cable or wireless connections, make interconnecting sensors, actuators, and facade components feasible. Smart facades improve energy efficiency and help create sustainable and resilient buildings by responding to different climates and urban environments, thereby setting new standards for architecture in the future.

**What solutions do you provide to ensure indoor occupant comfort and safety while using your facades in high rises?**

Each system is meticulously built in our facade designs to perform consistently in tough urban conditions, merging functionality and smart design. To ensure structural stability, we work with expert structural engineers to meet stability and wind loads. We use perforated panels and screen patterns that block direct sunlight and glare to increase indoor comfort. Our kinetic facades and perforated systems promote natural airflow while providing shading and privacy.



We prioritise durability by choosing corrosion-resistant metals and coatings that can withstand extreme weather conditions and avoid rust and material degradation. Furthermore, our compliance with fire safety standards and building codes has protected inhabitants from hazards like falls, structural failures, and weather-related damage.

**How do you ensure the aesthetic appeal of your facade solutions while meeting functional requirements?**

A facade should define the building’s identity and accomplish its function. Our facade designs are tailored to strike a compromise between form and function, which ensures that the facade complements the architectural language while meeting practical requirements such as shade, ventilation, and longevity. Often, this can be accomplished by employing a contrasting colour scheme or even a material palette (think wood and metal). Our other approach uses kinetic facades, which make the facade lively, distinctive, and well-ventilated. 🏡



**Kartikeya Batra**  
*Founder,  
 Metalia.*



Now you can read this story online by scanning the QR code