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ACE

ARCHITECTURE CONSTRUCTION ENGINEERING

UPDATE



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**NEW
PROJECTS
INSIDE**

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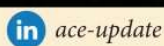
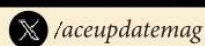
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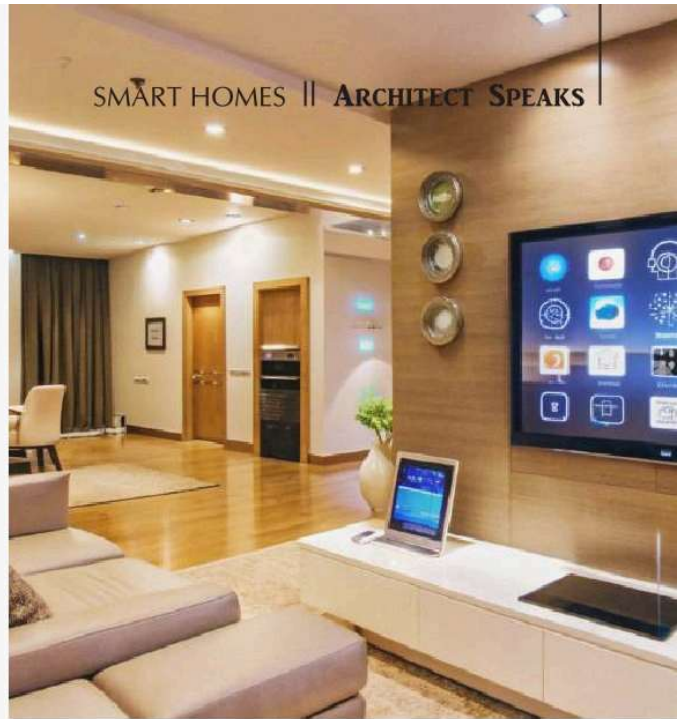
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AR. MARTIN AERNE

REDEVELOPMENT AS SOCIAL REPAIR, NOT SPATIAL REPLACEMENT

THE ETHICS OF REDEVELOPMENT LIE IN RECOGNISING
WHEN TO PRESERVE AND WHEN TO ERASE WITHOUT
SURRENDERING ENTIRELY TO MARKET-DRIVEN PRESSURES.





Smarter homes, made simple

“Successful smart integration depends on coordination, open systems, phased upgrades, robust infrastructure, and climate-sensitive, user-focused, adaptable design approaches.”



Ar. Heena Bhargava
Architect,
Architecture Discipline.



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What are the most persistent challenges you face when integrating smart technologies?

The most challenging aspects include interoperability limitations, disjointed consultant coordination, last-stage integration, and infrastructure gaps. Interoperability issues stem from fragmented protocols and incompatible platforms. Coordination is another hurdle, as MEP, lighting, AV, and automation consultants tend to work in silos, limiting cohesive system design. Smart solutions are frequently introduced too late, forcing compromises in both aesthetics and functionality. Poor infrastructure planning—especially for conduits, power, and data—restricts scalability, particularly in retrofits. Execution can suffer due to limited on-site technical expertise, while heavy reliance on specialised integrators increases costs and reduces overall design flexibility and control.

How can architects use design and technology strategies to make smart home systems affordable and accessible for mid-income and mass housing in India?

The first step is adopting a phased strategy, starting with basic devices like smart plugs, bulbs, and voice assistants, and gradually expanding. Using familiar ecosystems such as Google Home and Apple HomeKit makes use easier. Similarly, it is important to prioritise modular, plug-and-play systems over

costly centralised setups, and to plan enabling infrastructure with accessible ceilings and additional conduits. Choosing affordable brands focusing on essentials like lighting, security, and energy monitoring also helps.

Do you think homes can be designed to remain adaptable and future-proof despite rapid tech obsolescence without frequent upgrades?

Designing systems in layers allows for gradual upgrades rather than rigid, one-time installations. Similarly, incorporating accessible service zones and access panels ensures easy maintenance and adaptability. Avoid dependence on proprietary or closed ecosystems to retain long-term flexibility. Support this approach with hybrid infrastructure—combining a reliable wired backbone with adaptable wireless solutions—so systems can evolve over time without requiring major disruptions or invasive retrofits.

How can smart home technologies be adopted to varying climatic, cultural, and socio-economic contexts at the design stage?

Climate responsive automation can be integrated by refining shading cooling and efficiency in hot climates while improving ventilation and moisture control in humid regions and supporting intuitive non-intrusive systems with manual overrides affordability through phased upgrades and alignment with