

Architecting a Carbon- Neutral Future for Hong Kong and Beyond

Digitalising Construction for
Sustainable Residential Living

(AI • DfMA • MiC • VR Innovation)

**August 20
2026**

Hong Kong Buildings exceeding 30 years

Apart from many new buildings developed recently upto new standards, there are many existing residential units and other buildings that require upgrading and improvement, so as to create and guarantee a sustainable liveable, comfortable and green environment for the users.

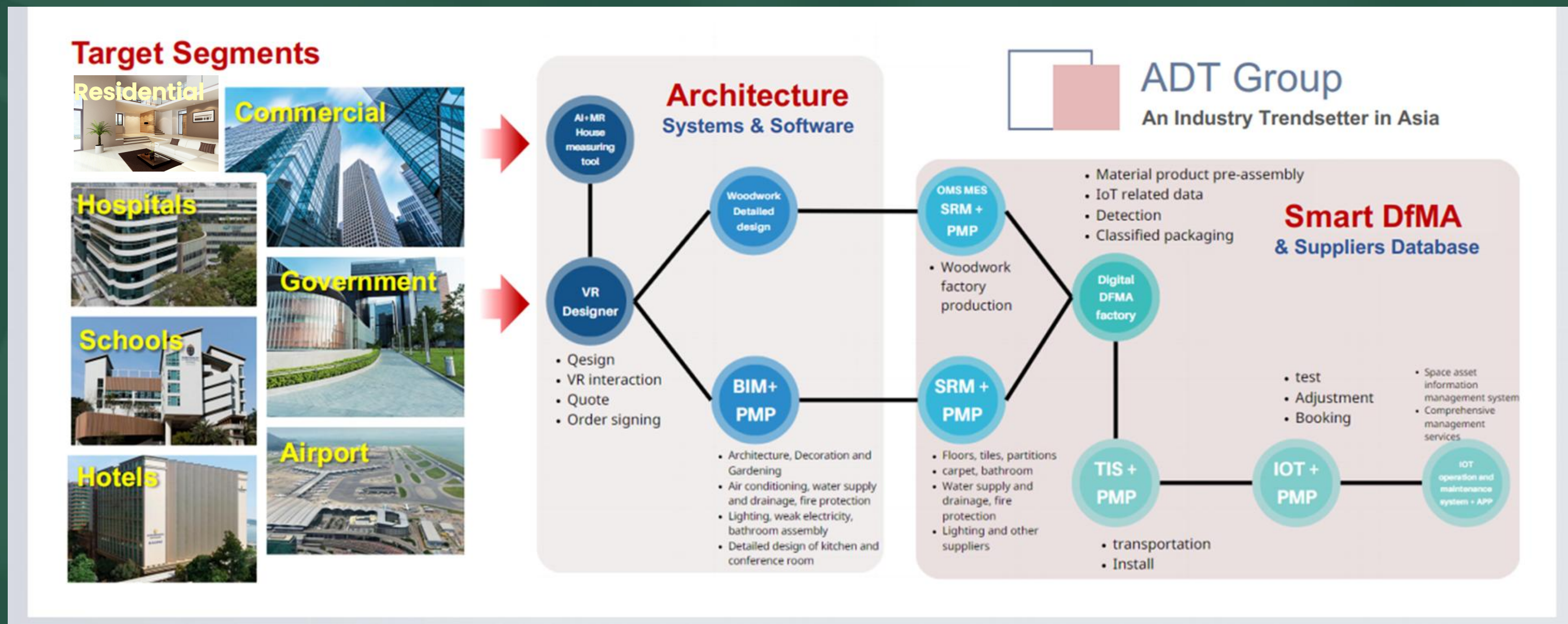
Category	Estimated Count (≥30 years old)	Notes
Residential Buildings	≈ 26,000 buildings	Based on official HK01 / LegCo data (private + sold public housing)
Office Buildings	≈ 2,500–3,000 buildings	Estimated from Rating & Valuation Department commercial stock
Hotels	≈ 120–150 hotels	Based on Tourism Board hotel inventory + age distribution



A&D is targeting to offer sound solutions to these transformation promoting a full sustainable eco-system from design, fabrication, assembly, construction and easy maintenance.

Transforming How Spaces Are Upgraded : *Faster, Cleaner, Smarter*

A&D is a Hong Kong ConTech start-up incubated at HKSTP since 2019. We apply DfMA, MiC, AI design and digitalisation to deliver sustainable upgrades across Residential/Office/Hotel/School



HKSTP Incubated | ConTech | ESG Leader

OUR APPROACH:

AI- Enabled Design

- Intelligent 3D configuration & automated optimisation
- 100% product visibility & 100% traceability
- Digital project management across the full lifecycle

DfMA & MiC Construction

- Up to 60% reduction in onsite waste
- 50% faster installation
- Standardised quality, safer workflows, minimal disruption

Outcome: A cleaner, faster, low- carbon upgrade pathway for residential and community buildings.

AI enabled design and



Digitalization of project management control



onsite waste reduction



Installation faster by 50%



App 100% traceable in production and logistic



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Leader

VR DESIGNER (OUR IN- HOUSE INNOVATION)

Immersive 3D Design & ESG Visualisation
Developed during our HKSTP incubation, VR Designer is a proprietary immersive system that enables:

- Full 3D walkthrough of proposed designs
- Instant visualisation of materials, lighting & layouts
- Interactive movement through the space — walk before you build
- Enhanced decision- making for developers, residents, NGOs & government



Live Demonstration at Our Booth Today

Our mission aligns with CLP's decarbonisation roadmap and HKSTP's GreenTech ecosystem, enabling scalable, low- carbon transformation for Hong Kong's built environment.

Building a Smarter, Greener Hong Kong Together

We invite developers, government departments, NGOs and industry partners to collaborate with us in:

- **Scaling sustainable residential upgrades**
- **Accelerating Hong Kong's 2050 net- zero vision**
- **Bringing digitalisation & AI into everyday building transformation**



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Tel: +852 21142238 / 95221988 / 51308730

Email: isabellazhong@a-d88.com / info@a-d88.com