



MRS26-254 · Smart Building Technologies

Smart HVAC Systems

A Global Sustainability Due Diligence & Market Research Study

History 2020–2024 · Base Year 2025 · Forecast 2025–2032 · Outlooks 2035 / 2040 / 2050 · Currency US\$

WHY THIS REPORT

Smart HVAC systems pair efficient equipment — VAV, VRF and heat pumps — with intelligent controls that tune heating, cooling and ventilation to occupancy, weather and price. This decision-grade study sizes the global market three ways — value, unit volume and energy saved (kWh) — across system type, intelligence level and application, across seven regions and four scenarios to 2032, with outlooks to 2050.

SUSTAINABILITY & SDG IMPACT — THE ANMD LENS

Sustainability is this report's backbone, not an afterthought. Beyond comfort, smart HVAC delivers measurable HVAC-energy-and-carbon reduction, electrification and improved air delivery, while refrigerant management and equipment circularity strengthen the natural-capital story.

Mapped Sustainable Development Goals:

| | | | | |
|---|---------------------------------|-------------------------------------|---------------------------------------|--|
| SDG 7 Affordable & Clean Energy | SDG 13 Climate Action | SDG 11 Sustainable Cities | SDG 9 Industry & Innovation | SDG 12 Responsible Consumption |
|---|---------------------------------|-------------------------------------|---------------------------------------|--|

Measurable sustainability outcomes assessed:

- HVAC-energy savings from intelligent, ML-optimised control
- Carbon reduction from electrification and heat-pump uptake
- Improved occupant comfort and air delivery
- Refrigerant global-warming potential and equipment end-of-life as material risks

Framework alignment: Double materiality mapped to GRI, SASB, ISSB, TCFD, TNFD, CSRD and the EU Taxonomy, with greenwashing and SDG-washing screens applied throughout.

WHAT'S INSIDE AT A GLANCE

| | | | |
|------------------------------------|-------------------------------|----------------------------------|-------------------------------|
| 53 Chapters | 9 Report Parts | 7 Regions Covered | 40+ Country Markets |
| 2025–32 Forecast Horizon | 4 Forward Scenarios | 25+ Companies Profiled | 5 SDGs Mapped |



MARKET OVERVIEW

From programmable thermostats to autonomous control — where intelligence, not just equipment, drives the savings.

The smart HVAC systems market is read three ways — value, volume and energy saved (kWh) — and forecast under four scenarios, each region reported separately. Demand is propelled by the drivers below, supported by maturing incentives across Europe, North America and Asia Pacific.

- North America is profiled first — United States, Canada — large commercial stock, retrofit demand, ESG reporting
- Europe policy leader — Germany, United Kingdom, France, Nordics — energy codes, CSRD, healthy-building rules
- Segmentation reads the value across the report’s structure, technology and application axes
- Resource-and-outcome economics is the differentiator — increasingly with service and data revenue

REGIONAL OUTLOOK

Across seven reporting regions, the report separates early commercialisation leaders from high-growth and emerging markets — each profiled in full rather than aggregated into Rest of World.

| Region | Stage | Lead Markets & Drivers |
|---------------|-----------------|--|
| North America | Adoption leader | United States, Canada — large commercial stock, retrofit demand, ESG reporting |
| Europe | Policy leader | Germany, United Kingdom, France, Nordics — energy codes, CSRD, healthy-building rules |
| Asia Pacific | Scale engine | China, Japan, India, Australia, Singapore — smart new-build, urbanisation, manufacturing |
| Latin America | Emerging | Brazil, Mexico — commercial modernisation, energy-cost drivers |
| Middle East | High-growth | UAE, Saudi Arabia — smart-city programmes, green-building mandates |
| Africa | Frontier | South Africa, Kenya — commercial estates, efficiency retrofit |

KEY MARKET DRIVERS & RESTRAINTS

| Drivers | Restraints |
|--|--|
| <ul style="list-style-type: none"> • Decarbonisation & building-emissions targets • Energy cost & HVAC-load reduction • Heat-pump electrification • Comfort & indoor-environment demand • AI-control, sensor & analytics technology gains | <ul style="list-style-type: none"> • Equipment & controls CAPEX • Retrofit & integration complexity • Refrigerant & efficiency-standard constraints • HVAC equipment cost inflation • Commissioning & data-quality dependence |



SEGMENTATION SNAPSHOT

| | |
|--------------------------|--|
| By System Type | Smart controls/thermostats · VAV/VRF · heat pumps |
| By Intelligence | Rule-based · ML-optimized · autonomous |
| By Component | HVAC equipment · controls · sensors · software · compressors |
| By Application | Rule-based · ML-optimized · autonomous control |
| By End User | Commercial · residential · institutional · industrial |
| By Business Model | Hardware sale · SaaS · efficiency-as-a-service |

TABLE OF CONTENTS — PARTS & CHAPTERS

The full report is organised into nine parts across 53 chapters, listed below. Detailed sub-headings, country tables and directories are provided in the full report.

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- › Chapter 3. Executive Intelligence and Decision Dashboard
- › Chapter 4. Strategic Findings, Materiality and Investment Verdict Preview

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- › Chapter 21. Category-Specific Intelligence Module
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COMPETITIVE & INVESTMENT SNAPSHOT

The competitive field spans established building-technology majors, specialist hardware and software vendors, and systems integrators. Deal activity — partnerships, technology licensing and demonstration programmes — signals a market consolidating around bankable, repeatable solutions.

Representative players profiled in the full report:

Johnson Controls International plc · Carrier Global Corporation · Trane Technologies plc · Daikin Industries, Ltd. · Honeywell International Inc. · and 20+ further profiled players across hardware, software and integration.

Investment intelligence: venture, infrastructure, development, climate and blended finance, green bonds and sustainability-linked loans — culminating in a bankability assessment and a Go / No-Go / Conditional-Go investment verdict.



KEY QUESTIONS THIS REPORT ANSWERS

- ? How large is the global smart HVAC systems market, and how fast will it grow to 2032?
- ? Which regions, countries and segments offer the strongest risk-adjusted opportunity?
- ? How do resource-and-outcome economics change returns versus conventional methods?
- ? Who leads, and where is the competitive and patent white space?
- ? Is the investment case bankable — and under what conditions?
- ? How does the technology align with the SDGs and emerging disclosure regulation?

WHY ANMD — THE DIFFERENCE

Most market studies stop at units and revenue. This report is built as a sustainability due diligence instrument — fusing market sizing with ESG, SDG, climate and natural-capital intelligence and a decision-ready bankability verdict in a single architecture.

- › **Triangulated sizing** — every market read three ways so value, volume and area views reconcile rather than conflict.
- › **Region-honest forecasting** — Latin America, Africa and the Middle East reported in full, never hidden inside Rest of World, every forecast resolved to the 2025 base year.
- › **Integrated evidence base** — company, patent and project databases linked to the analysis, with published-filing patents and FTO treated as an indicator, not a legal conclusion.
- › **No-fabrication discipline** — every estimate carries a data-confidence rating and disclosed sources; gaps are flagged for further diligence, never filled with invented numbers.
- › **Anti-greenwashing rigour** — SDG-washing and greenwashing screens plus claim-substantiation checks built into the ESG and project analysis.
- › **Decision-first structure** — 9 Parts and 53 Chapters culminating in stakeholder playbooks and a clear investment verdict.

WHO SHOULD BUY THIS REPORT

Investors, HVAC OEMs, integrators, building owners, facility managers, ESCOs, lenders, research institutions, policymakers, strategic corporate planners and decision-makers.

Access the Full Report

The complete report delivers all 53 chapters in full, with every sub-heading, country table, company and patent directory, forecast model and due diligence checklist.

Purchase at www.anewmarketdynamics.com · Standard & Premium licences · Single-Site (SSL) and Global-Site (GSL) options at checkout.

Want the Complete Detailed Table of Contents?

This prospectus lists the nine parts and 53 chapters. The complete detailed table of contents — every sub-heading, country table, exhibit, company and patent directory and annex — is available on request to registered users. To receive it, register with your official company email at www.anewmarketdynamics.com. The full detailed table of contents will be sent directly to your registered company email address.