

ENABLING THE REGION'S FUTURE SUSTAINABLE BUILDINGS

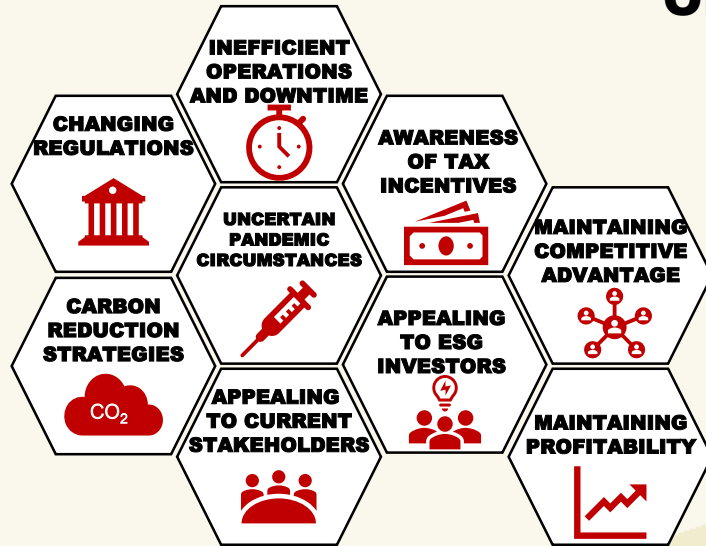


Honeywell

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ONGOING CHALLENGES IN SUSTAINABILITY



BALANCING NEAR TERM GOALS WITH LONGER TERM OUTLOOK

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BALANCING NEAR TERM GOALS WITH LONGER TERM OUTLOOK

HONEYWELL GOALS: COMMITMENT AND ACTION

OUR PLEDGE



01 CARBON NEUTRALITY

Reach enterprise carbon-neutrality by 2035



02 SUSTAINABLE INNOVATION

Help our customers reduce emissions, quantify and report on positive impacts



03 SUPPLY CHAIN EVALUATION

Incorporate our entire value chain into our sustainability pledge



Reduction in greenhouse gas emissions intensity between 2004 - 2019



Gallons of water conserved in "water-stressed areas" since 2013



Improvement in energy efficiency 2004 - 2019



Acres remediated and restored as valuable community assets



Annual equivalent of cars removed from the road to date



Sustainability projects since 2004

MAKING THE WORLD MORE SUSTAINABLE THROUGH PROVEN ACTIONS



SUSTAINABILITY MACROS



BUILDINGS HEAVY CARBON FOOTPRINT

38% of Global Carbon Emissions from Buildings

28% of Carbon from Building Operations |

11% Materials & Construction

70% of Carbon in Buildings from Fossil Fuels

~\$300B Carbon brokerage market



ELECTRIFICATION OF EVERYTHING

+230% Growth in Electrical Water Heaters & Heat Pumps (EU)

+30% Growth in EV Charging Stations

Industrials Electrifying **Equipment & Fleet**



REGULATIONS & NET ZERO COMMITMENTS

140 Countries Covering **90%** of Emissions have a **Net 0** Goal

~20% of 2000 Largest Public Companies Committed to Net Zero

\$1T EU Green Deal | Efficiency, Climate Tech | 10 years

\$1.7T US Fund for Climate Resilience | 10 years



CLIMATE TECH INVESTMENT

+\$87B Invested in Climate Tech from H1 2021

~14% of VC Investment in Climate Tech

+3,000 Startups & **78** Unicorns (mostly in Mobility & Transport)



WELLBEING

\$150-200B¹ Costs due to employee Absenteeism

8%² increase in COVID-19 death rate associated with 1 µg/m3 in PM2.5

2X³ cognitive function test scores conducted in spaces with improved indoor environmental quality

Source: JP Morgan, Deloitte, PwC: 1 – Harvard Business Review 2 – Harvard University Study 3- COGFX Study by Syracuse University

FAVORABLE SUSTAINABILITY MACROS | REGULATION BECOMES A STRONG TAILWIND

WHAT WE HEAR FROM OUR CUSTOMERS

10+ SME Interviews

50+ Customer Interviews

15+ Customer RFQ



CARBON MEASURE

Port of Seattle | Marsh & McLennan |
Howard Hughes | Fedex



ENERGY EFFICIENCY AND CONTROLS + IAQ

Dialog | Benteen Green Oak | LA USD



NET ZERO

McLaren | PGA | NTT



ENTREPRISE LEVEL

DCAMM Comm. Mass | GE Healthcare |
Exxon | Hilton Hotels

Questions



CSO / CEO

- What is my Enterprise carbon footprint?
- What are the regulations? What are the local incentives available?

- How can I reduce carbon without compromising occupant health ?
- How much carbon reduction can I commit on and by when ?
- How do I measure and verify?

- How can I be resilient from power outages?
- How can I pay for net zero solutions ?

- How can my carbon management solution integrate with my ERP?



Property
Owner / REIT

- How do I allocate carbon emissions and energy bills to my tenants?
- How do I compare and Benchmark my portfolio

- How can I improve my building P&L?
- How can I allocate my Capex budget across my portfolio?

- What premium can I charge for a net zero leased space?

- How can I manage carbon emission across my portfolio without rip and replace all the different BMS?



Facility /
Energy Manager

- What is my Building carbon footprint?
- How can I proactively manage my building energy consumption?

- How can I reduce carbon within my budget /approval ?
- How can I improve occupant health without increasing energy consumption?

- How can I get my building net zero certified?

- How my building is performing against other building of my company ?

A MODULAR SOLUTION THAT PROVIDES A COMPLETE CARBON MANAGEMENT AND NET ZERO AT ENTERPRISE LEVEL

WE BELIEVE IN ...



CARBON TRANSPARENCY

Carbon as a new CEO metric that needs to be reported at enterprise level and measured at building and asset level in real time



ENERGY EFFICIENCY & CONTROLS

Continuous and ROI driven recommendations of improvement & execution initiatives across enterprise portfolio



CARBON AND IAQ

Carbon should not compete with other critical outcomes such as healthy / comfort.



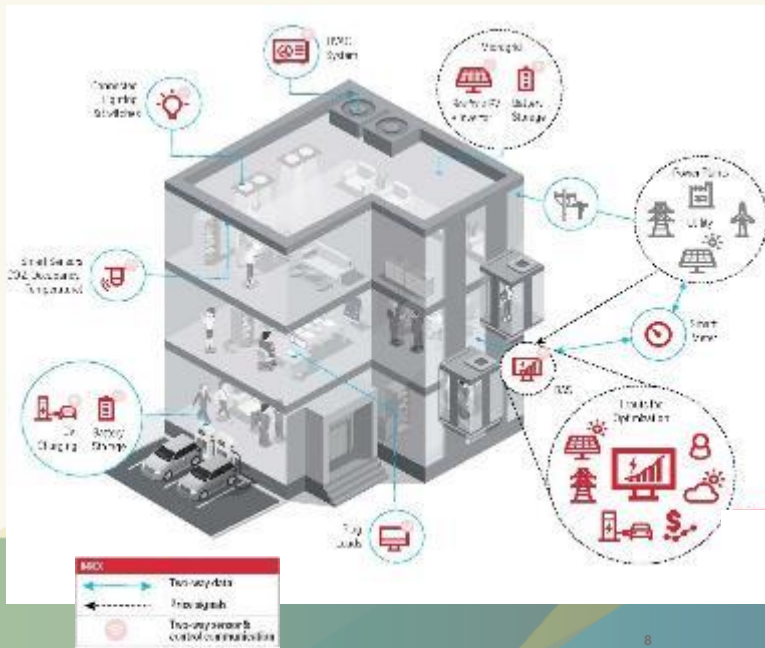
NET ZERO BUILDING

Buildings make up 40% of carbon footprint and we can help slash it from energy supply and energy demand across all verticals



OUTCOME SERVICES

As more CEOs are committing to Net zero targets and occupant health, access to outcome guarantees as a service is rising



HONEYWELL ENERGY & SUSTAINABILITY EXPERTISE

Proven Global Experience

- More than 5000 sites
- Executed major projects with Gov't & private UAE & GCC entities
- Accredited and certified with Gov't of Dubai/RSB, Tarshid, SEWA and other major bodies
- Certified Local Energy team with various certification such as **Certified Energy Auditors, M&V Professionals & Managers** with worldwide accreditations

Regional Based References



Jafiliya RTA, Dubai
VFD retrofit



Crowne Plaza, Yas Island
Delta T retrofit



Paris Sorbonne Univ, Abu Dhabi
AHU retrofit – IAQ & Rh improvement



Fairmont, Abu Dhabi
Mechanical retrofit



NCB - Jeddah
Web Dashboard



Movenpick, Dubai
Data analytics



Dubai Mall
AHU retrofit



Mall of the Emirates - Dubai
Smart Metering



Mashreq Bank HQ - Dubai
Data Analytics



J W Marriott – Dubai
Web Dashboard

Strong Global Partner Eco-system

OEMs



Software



HEALTHY BUILDINGS IAQ | HAMDAN BIN MOHAMMED SMART UNIVERSITY

CHALLENGE

As pandemic restrictions eased, facilitating building health and supporting a safe return to campus for staff and students became a strategic priority for the facilities team. This has evolved into a longer-term goal for HBMSU: ensuring occupant well being, business continuity, while achieving sustainability targets for the 215k sq ft single campus building.

APPROACH

Honeywell's Healthy Buildings Solutions have reduced contaminant levels while improving comfort performance. IAQ Multi-Sensors, monitor air pollutant concentration (PM2.5) and provide real-time, easy to understand data, to an occupant facing dashboard.

SOLUTIONS

- IAQ Multi-Sensors
- Monitor temperature, humidity, CO₂, Air Pollutant Concentration (Particulate Matter 2.5), and Total Volatile Organic Compounds (TVOC).
- EAC + UV cleaners
- Dashboard displaying comfort performance measures: temperature, humidity, CO₂

OUTCOMES

Improved Comfort Performance to **98.2%***

66%**

Reduction in Air Pollutant concentration (compared with independent baseline)

- Baseline Air Pollutant Concentration: **15.7 PPM**
- Post EAC Filter installation Air Pollutant Concentration: **5.3 PPM**

HON IMPACT

“The impact of these cutting-edge technologies have been astounding and are instrumental to achieving our goal of supporting well-being and sustainability in the education sector. Through real-time decision-making we’re ensuring building health 24/7, 365 days a year.”
– HBMSU Facilities Director



ENERGY RETROFIT & OPTIMIZATION

ENERGY PERFORMANCE CONTRACT IMPACT

MECHANICAL UPGRADE

- Chiller/ DX AC replacement
- Pump Replacement
- FAHU precooling
- Hot water heater replacement
- Chiller/ DX wet wall system

LIGHTING UPGRADE

- Lighting replacement
- Occupancy/ timer control

RENEWABLE ENERGY

- Solar PV system (long PBP)

CONTROLS UPGRADE

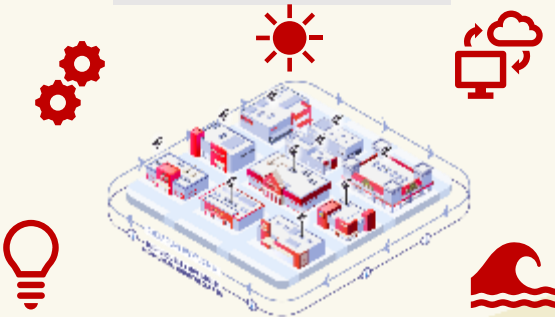
- Chiller Plant optimizer
- Pump optimization
- VFD retrofit
- Temperature controls
- Scheduling

WATER CONSERVATION

- Flow reducer
- Water recycling

INSULATION IMPROVEMENT

- Glazing improvement
- Roof /wall insulation



OUTCOME BASED DEPLOYMENT MODELS

HONEYWELL FORGE: PART OF THE SOLUTION

Performance Analytics

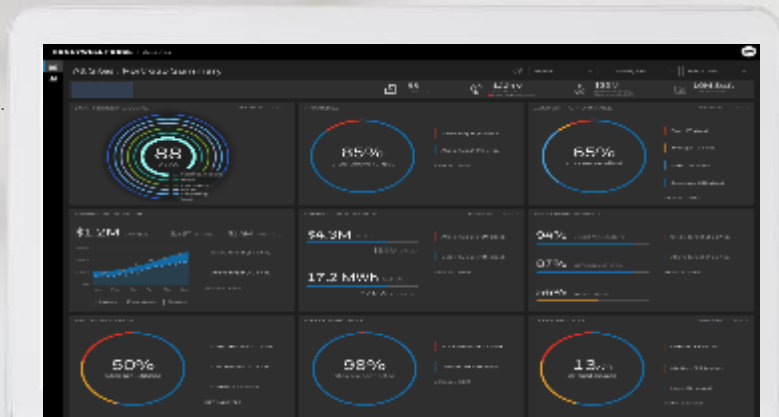
Visibility into Financial, Energy, Space and Comfort performance across your enterprise.

Comparisons & Benchmarking

Compare portfolio performance between buildings, regions and teams.

Investment Prioritization

Data-driven project selection to maximize ROI across portfolio.



Energy Optimization

Energy savings via autonomous control and continuous optimization of assets.

Digitized Maintenance

Just-in-time maintenance model enabled through predictive recommendations.

Critical Asset Health

Predictive Models and continuous Machine Learning that maximizes asset longevity.

ENERGY SAVINGS IN ACTION | RAK BANK HQ



Strategic energy saving projects: improving energy efficiencies, system resilience and carbon reduction goals



Energy optimization project for RAKBANK ROC HQ: over 19,900sqm



EEMs covering **critical building systems:** Heating Ventilation Air Conditioning, Chillers and Building Management System Recommissioning



Delivering **Guaranteed Energy Savings** to achieve double-digit energy saving



SUPPORTING RAS AL KHAIMAH'S EE&R STRATEGY 2040

HOW TO GET STARTED PATH TO SUSTAINABILITY



DIFFERENTIATED OFFERINGS TO HELP ACHIEVE NET ZERO

Thank you

Honeywell

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Energy

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