

MARCH 23RD 2021

TECHNOLOGY DRIVEN SOLUTIONS TO DE-RISK ENERGY STORAGE ASSETS

**An innovative business model to ATTRACT INVESTMENTS
for renewable energy & storage projects.**

Vineet Shah

Director, Global Business Development and Strategic Partnerships,
Renewables & Distributed Assets (RDA)

Aazzum Yassir

Sales Director – EMEA
Renewables & Distributed Assets (RDA)

Honeywell



PRESENTER BIO



Vineet Shah

Director, Global Business Development and Strategic Partnerships, Renewables & Distributed Assets (RDA),
Honeywell

Vineet has more than 12 years of experience in energy sector. He has worked in various capacities at major multinational corporations, from being a plant operator for a 4.6GW thermal power plant to business development leader for technology companies selling mechanical & electrical equipment, reliability consulting, enterprise software solutions and more to various nuclear, thermal, renewable and alternative power generation companies and utilities.

Since joining Honeywell in 2017, Vineet has led global business development and strategic partnership programs for their renewables & distributed assets group, including a groundbreaking partnership with Aypa Power – a Blackstone portfolio company, structuring a first of its kind performance guarantee product in the energy storage industry and the largest C&I battery storage program in the world.

He is passionate about energy & sustainability, building corporate new ventures into revenue generating and profitable business and nurturing disruptive thinking for organizational and personal growth. He enjoys coaching and developing new talent in the industry.

What keeps him going: Curiosity, Courage and Effective Communication

I have no special talents. I am only **passionately curious** ~ Albert Einstein

PRESENTER BIO



Aazzum Yassir

Sales Director – EMEA
Renewables & Distributed Assets (RDA),
Honeywell

Aazzum has been involved in the renewables space for over a decade and holds a Master's degree in Mechatronics Engineering from the University of Manchester and is a chartered Electrical Engineer. Over this time Aazzum has developed experience in Engineering (both R&D and project execution), Project Management, Tendering and Sales.

In the transmission space Aazzum was involved in delivering Offshore AC/ HVDC Wind Farms and HVDC interconnectors in the UK and Germany. Initially as a Design Engineer and later as a Technical Project Manager running a team of engineers.

The last 6 years Aazzum has been focussed on the distributed energy sector looking at how technology such as STATCOMs, Energy Storage, Microgrids, MV UPS and Digitalisation will help shape our future networks. Taking on numerous roles from Application Manager to a more Sales focussed role.

Aazzum is now working for Honeywell as Sales Director and is responsible for Honeywell's Renewable Distributed Asset portfolio in the EMEA region.

Aazzum has been at the forefront of 4 major technology changes over the last decade which will help decarbonisation goals. Off shore Wind Farms, HVDC VSC technology, Energy Storage and Microgrids. Aazzum has a mindset for innovation, is passionate about sustainability and providing solutions which add real value to its end users.

What keeps him going: Innovation, Passion and Net Zero

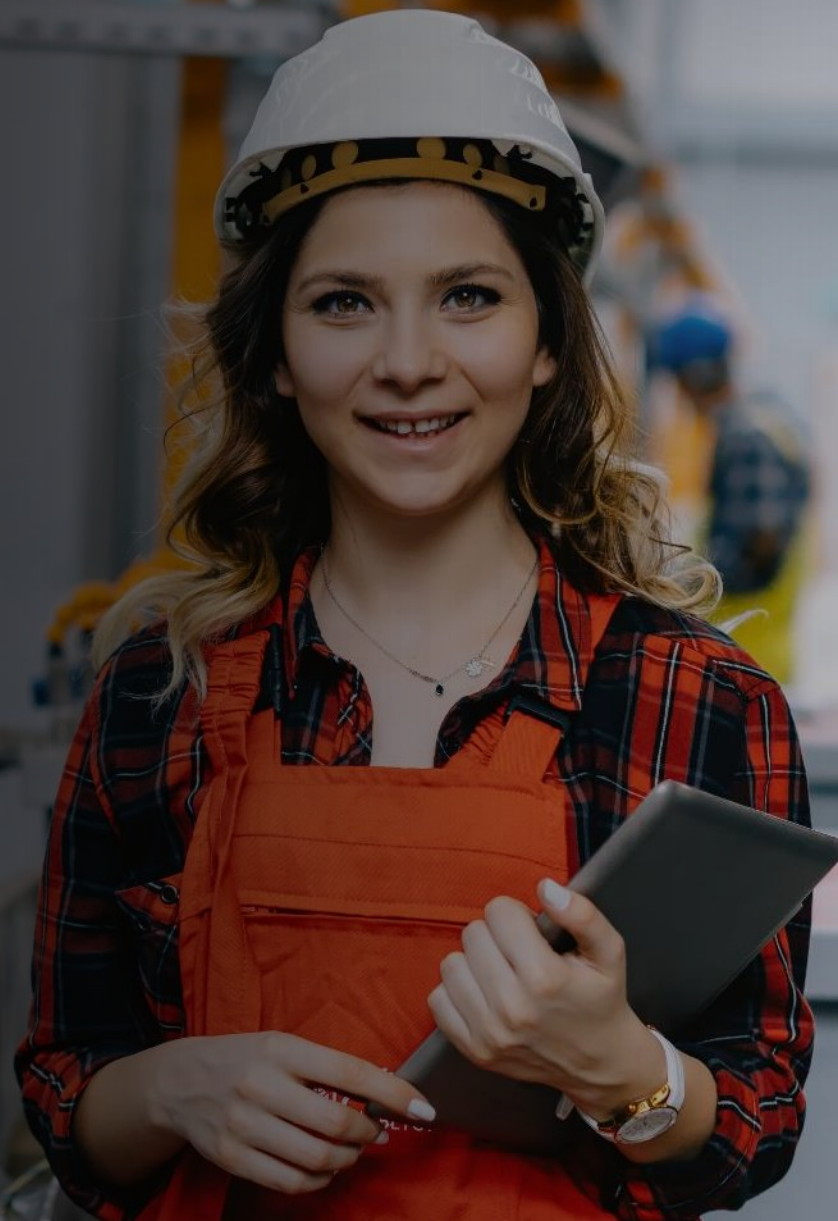
“Don't count the days, make the days count” ~ Muhammad Ali

AGENDA

1. Honeywell Overview
2. Market Trends
3. Energy Performance Contracts
4. Summary



HONEYWELL **OVERVIEW**



HONEYWELL | OVERVIEW

NYSE: **HON** | ~970 sites | ~110,000 employees | **Charlotte, N.C.** headquarters | **Fortune 100**

Aerospace



Our products are used on virtually every commercial and defense aircraft platform worldwide and include aircraft propulsion, cockpit systems, satellite communications, and auxiliary power systems.

Performance Materials and Technologies



We develop advanced materials, process technologies, automation solutions, and industrial software that are revolutionizing industries around the world.

Safety and Productivity Solutions



We improve enterprise performance and worker safety and productivity with automated material handling and voice scanning and mobile computing technology, software, solutions, and personal protective equipment and sensing technology.

Building Technologies



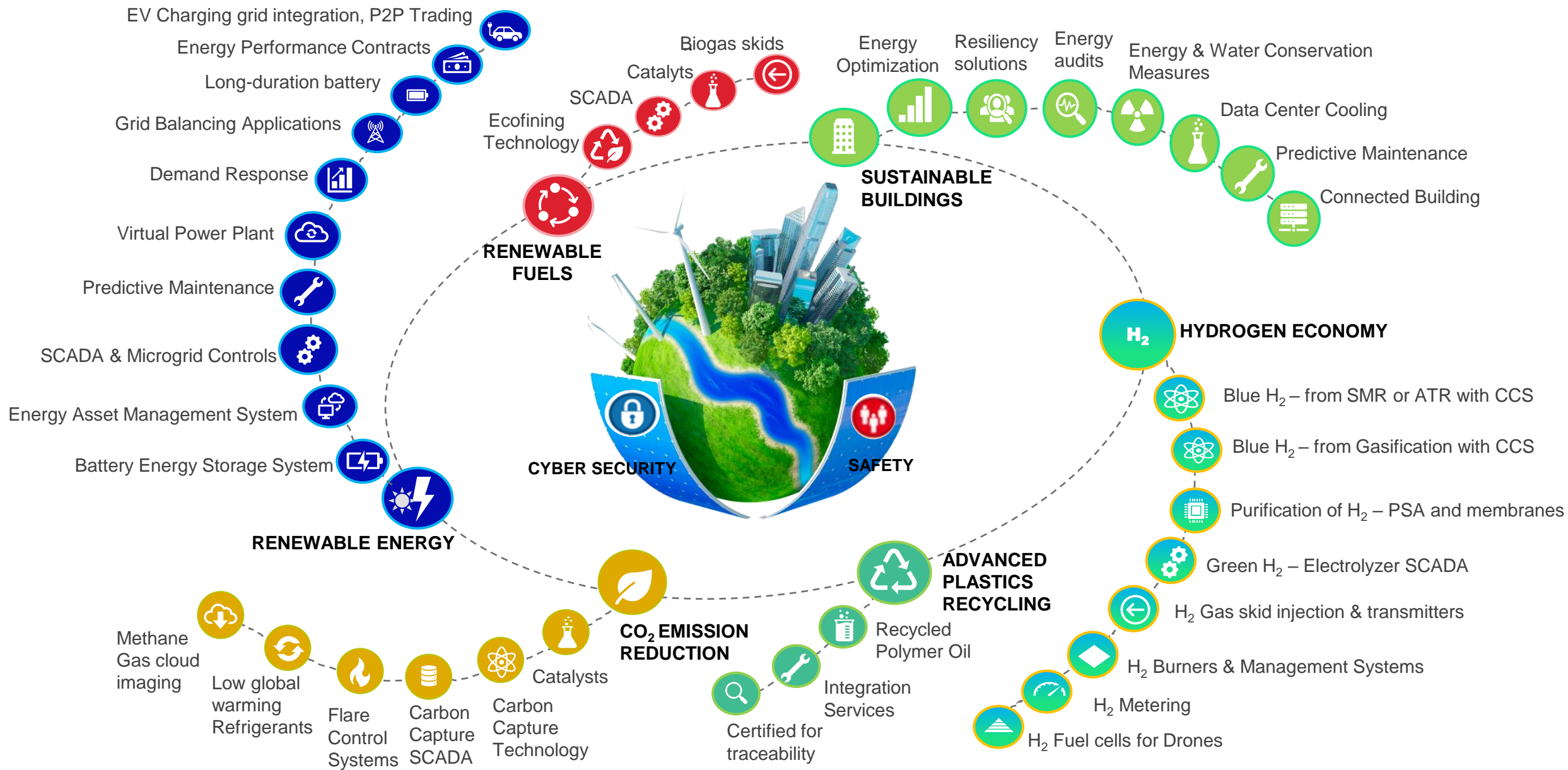
Our products, software, and technologies are in more than 10 million buildings worldwide, helping customers ensure their facilities are safe, energy efficient, sustainable, and productive.

Honeywell Connected Enterprise

Honeywell Connected Enterprise (HCE) was established in 2018 to accelerate software development and IIoT solutions. We focus on software development, from the gateway to end-user applications, bringing scale and capability across all of Honeywell. These new offerings are then commercialized through Honeywell's businesses.

Aligned to Key Global Macro Trends

HONEYWELL | SUSTAINABILITY SOLUTIONS



*Includes both commercial and in development

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MARKET TRENDS



HONEYWELL | TRENDS DRIVING THE NEED FOR ENERGY STORAGE & DIGITALISATION



Climate Emergency



- Urgent action is needed globally to prevent a climate disaster.
- Government Net Zero Targets
- Large corporations Net Zero Targets



Increasing Renewables and Demand for Clean Energy



- The UK alone has increased their renewables penetration to almost 40% of total capacity in 15 years. And plans to add a further ≈40GW of wind by 2030.
- Further demand for clean energy will be driven by decarbonising transport and heat sectors



Greater Flexibility Needed



- Increased renewables and decreasing synchronous machines on the grid.
- Alternative models for utilities to procure flexibility services



Technology Advancements



- The cost of Li-ion batteries has fallen significantly over the past 10 years. Making it possible to deploy the technology at scale.
- Alternatives to Li-ion batteries are gaining more traction especially for longer duration solutions.
- Software key to unlocking real value and flexibility from assets



Reliability/ Resiliency



- In 2021 alone there have been three major black out events. Europe, Texas, Mexico

Sophisticated Controls and Remote Operations

HONEYWELL | END USER CHALLENGES IMPLEMENTING ENERGY STORAGE

BANKABILITY

A bankable company with deep expertise in deploying large scale projects worldwide.

MICROGRIDS

Maturity of energy storage.
Sophisticated controls a must.

PERFORMANCE

Solid operational philosophy backed by proven technology is key to maintain high uptime.

LCOS

Biggest opportunity is operational costs.

SUBSIDY FREE

Long duration battery systems needed to capture excess and or curtailed energy.

REVENUE STREAMS

Operations of BESS assets is key to ensure project returns are met or exceeded.

EMERGING C&I

Sophisticated software platform to support complex applications.

LOCAL JOBS & TRAINING

Competency management and remote monitoring key to ensure high uptime.

Energy Storage and Digitalisation is Key to Enable the Modern Grid

ENERGY PERFORMANCE CONTRACTS

Honeywell

HONEYWELL | WHY HONEYWELL?

Selecting the right technology for the right application.

Technology Agnostic



Help support key KPI's which de-risk cash flow and make the projects bankable.

Energy Performance Contracts



Developing our own long duration BESS vital for co-location markets.

Long duration BESS



Deployment and maintenance supported by local engineers and backed by global experts.

Local Presence



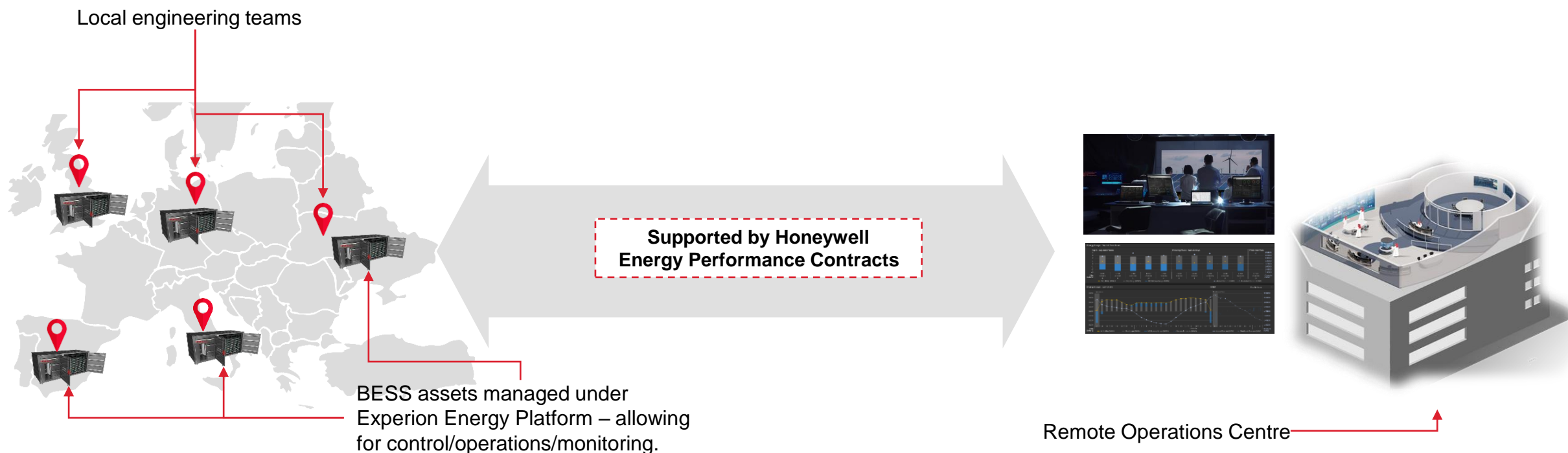
SaaS platform for future advancements to ensure you don't end up with a stranded asset.

Experion Energy Platform

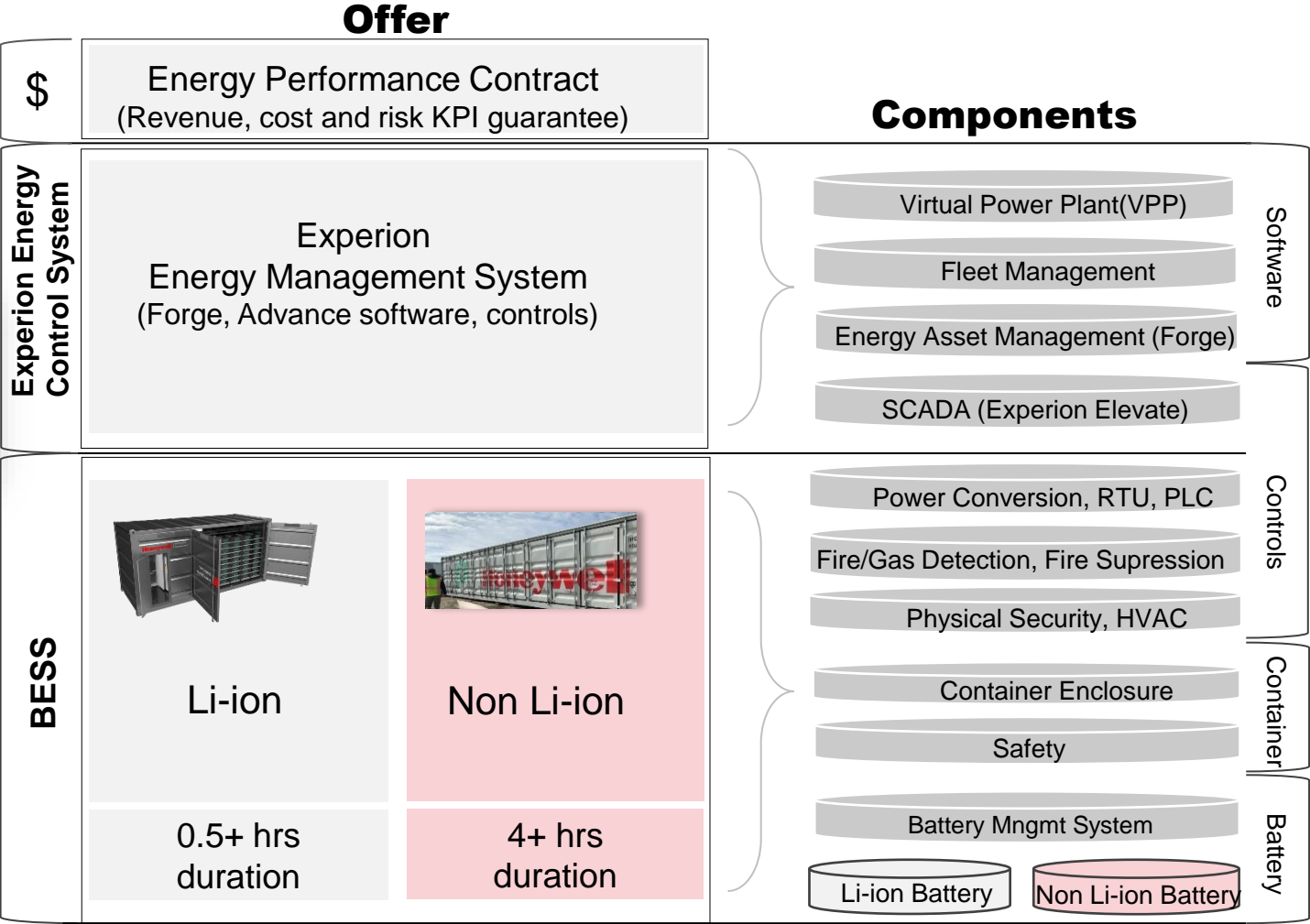


Provide a route to market to monetise battery assets.

BESS Trading/Operations



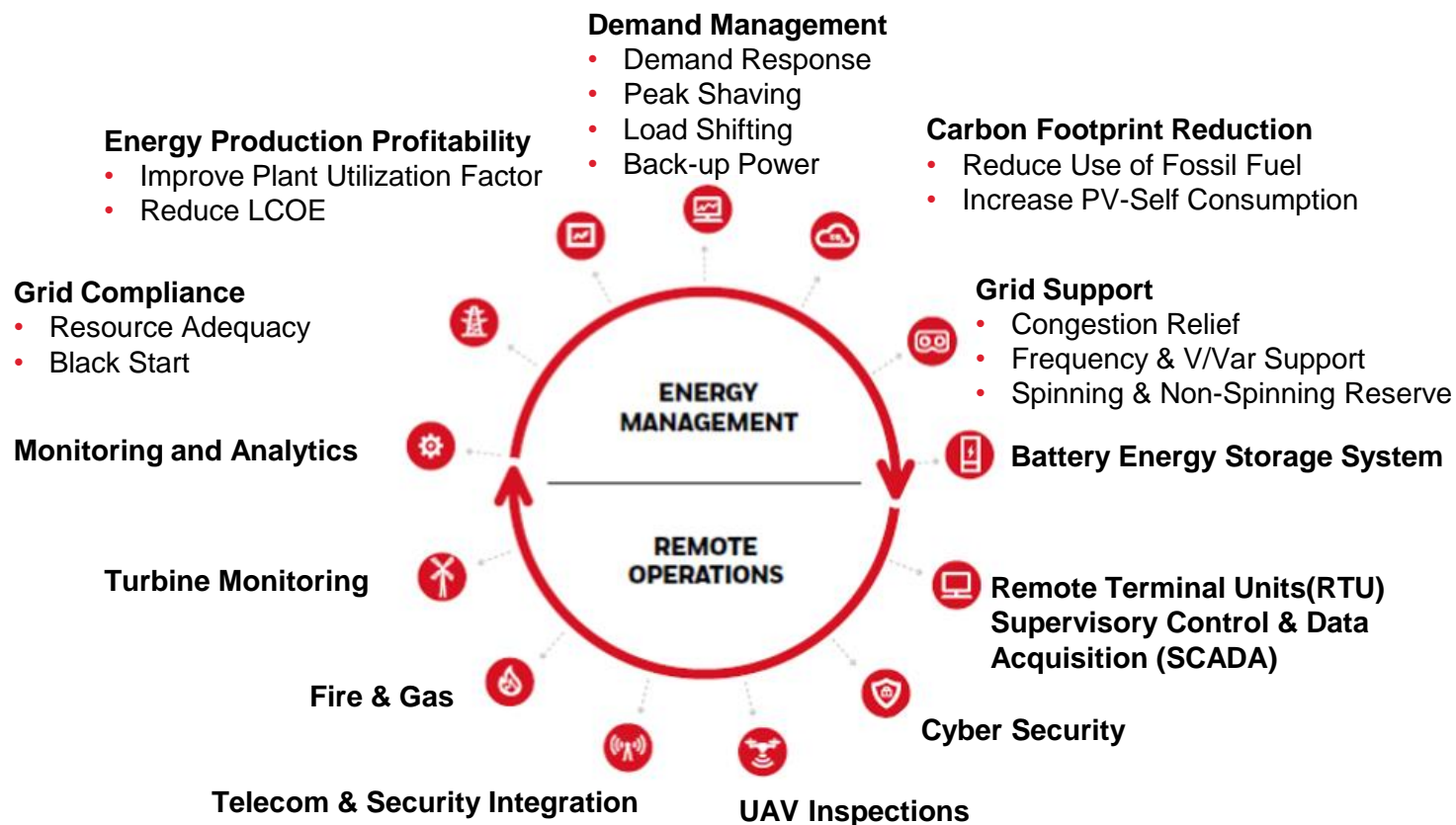
HONEYWELL | END TO END BESS OFFERINGS








Drive Profitability through Energy Performance Contracts

HONEYWELL | ENERGY PERFORMANCE CONTRACTS

Key Performance Indicators (KPI) Driven Guarantees

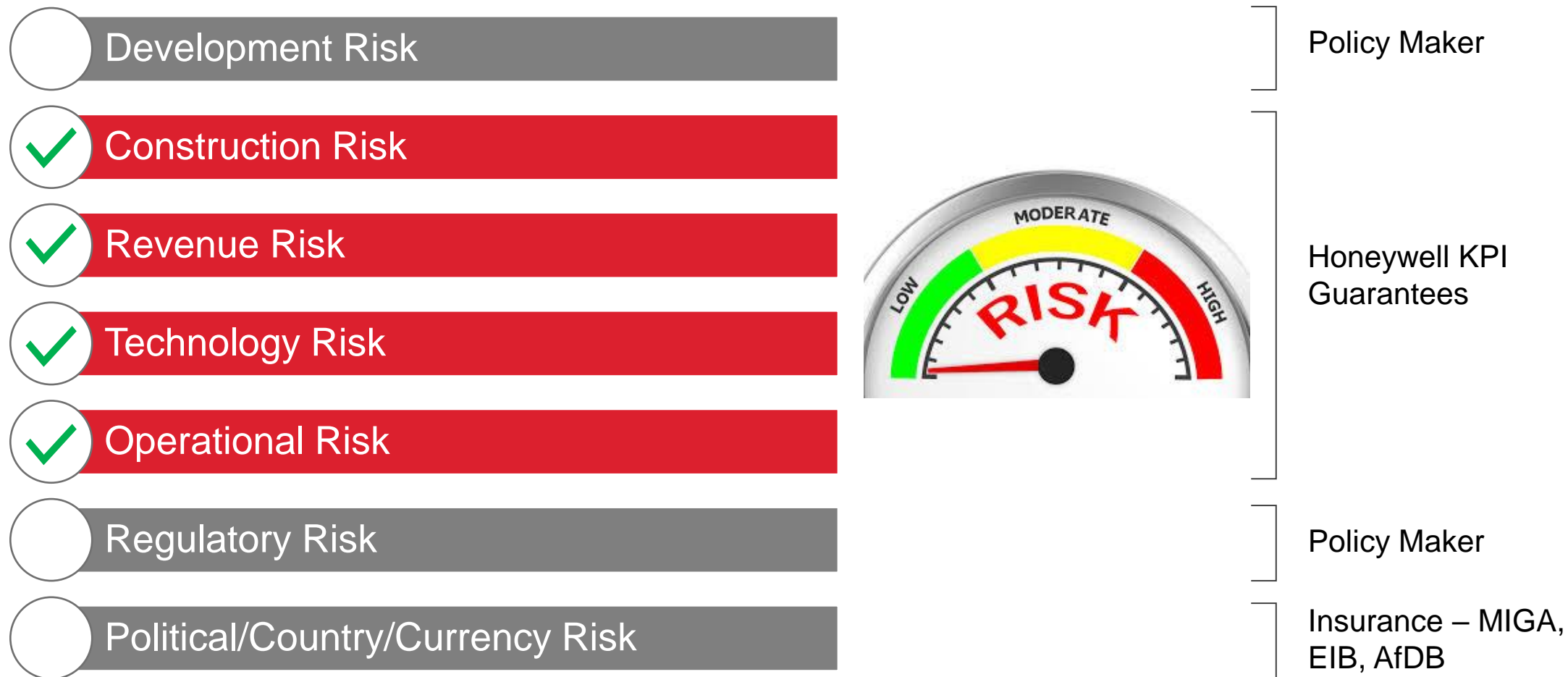


Honeywell Differentiation

<u>KPI Category</u>	<u>KPI Focus</u>
 Asset and O&M	Cost Savings, MTTI, MTTC
 Revenue/Cost	Energy Production & Capacity, Availability, Reliability, Facility Uptime, Peak Shaving, Ancillary Service, Energy Arbitrage
 Technology & Security	Data Reliability & Availability, Cyber Security
 HSE	Safety & Compliance
 Workforce	Competency Management

Honeywell offers revenue and cost KPI performance guarantees

HONEYWELL | ATTRACT INVESTMENT



Honeywell Makes Projects Bankable

HONEYWELL | AYPa POWER EXPERION ENERGY PROGRAM

BESS for Energy Service Provider

Honeywell Operated ROC Energy Management Optimization Dashboard



Canada

Battery Energy Storage (BESS)

ControlEdge RTU

Cisco IE3000

PaloAlto 220

Typical Architecture

Calgary (HON)

Asset 1

Asset 2

Asset 3

Asset 4

Asset 5

Asset 6

Ontario (Customer ROC)

Asset 20

KPI based Performance Contract

- Energy Capacity Availability
- Peak Prediction
- Data Reliability
- ROC Availability

Outcomes

Customer Need

- Peak Prediction
- Battery Availability
- Remote Operation Center Availability

Segment

- BESS
- C&I via Energy service Provider

Offerings

- BESS
- O&M with ROC (10 Years)

Region & Size

- Canada
- Size : 90 MW/180 MWh

Success Factors

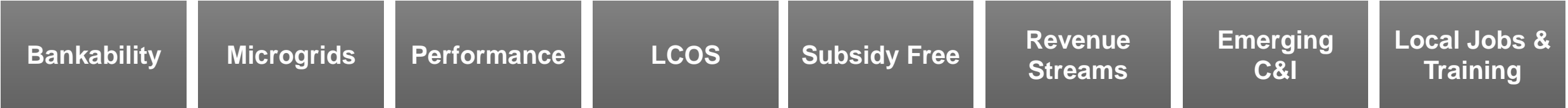
- Turnkey BESS project delivery
- Predictive Analytics for maintenance
- DVM, Access Control, Mobile Access
- Remote Operation Center (ROC) managed by Honeywell
- Asset Management Services
- Peak Prediction

Energy Service Provider is providing energy as a service to end users to reduce their peak electricity costs by supplying energy from on-site BESS.

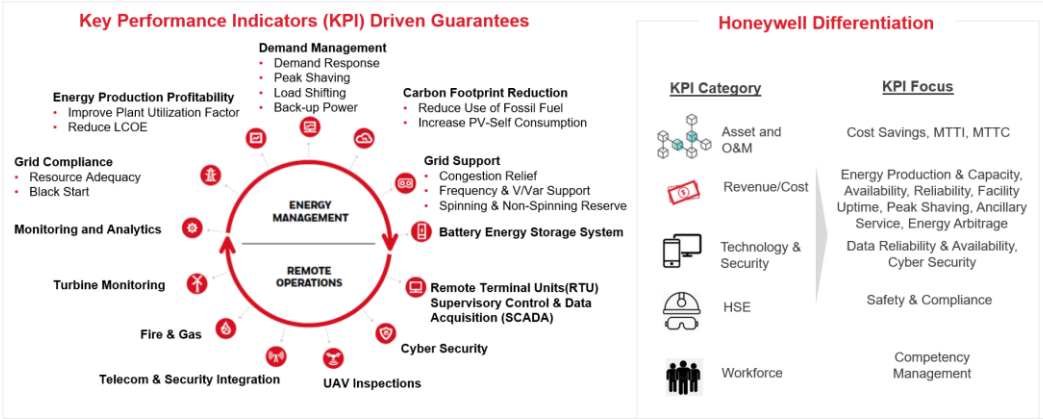
SUMMARY



HONEYWELL | SUMMARY



HONEYWELL | ENERGY PERFORMANCE CONTRACTS*



HONEYWELL | ATTRACT INVESTMENT



Partner With Honeywell



THANK YOU! QUESTIONS?

Honeywell

 **Energy
Storage**
NEWS