



TRANSFORMING DATA CENTRE OPERATIONS

FOCUS ON SAFETY, EFFICIENCY &
SUSTAINABILITY

DATA CENTERS HAVE BECOME THE BACKBONE OF THE DIGITAL ECONOMY, WITH MORE THAN HALF OF GLOBAL INTERNET TRAFFIC ROUTED THROUGH DATA CENTERS, THEY ARE INTEGRAL TO SUPPORTING TODAY'S DIGITAL-FIRST LIFESTYLE, WHERE RELIABILITY, SPEED, AND SCALABILITY ARE PARAMOUNT.

India's data centre market value is expected to increase from US\$ 4.5 billion in 2023 to a projected US\$ 11.6 billion by 2032, boasting a CAGR of 10.98%.

KEY TRENDS RESHAPING THE LANDSCAPE



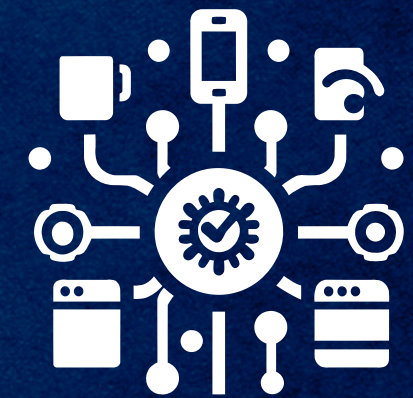
Digitalization

All Industries now require advanced and scalable data centres to handle the rising volumes of generated data.



Cloud Adoption

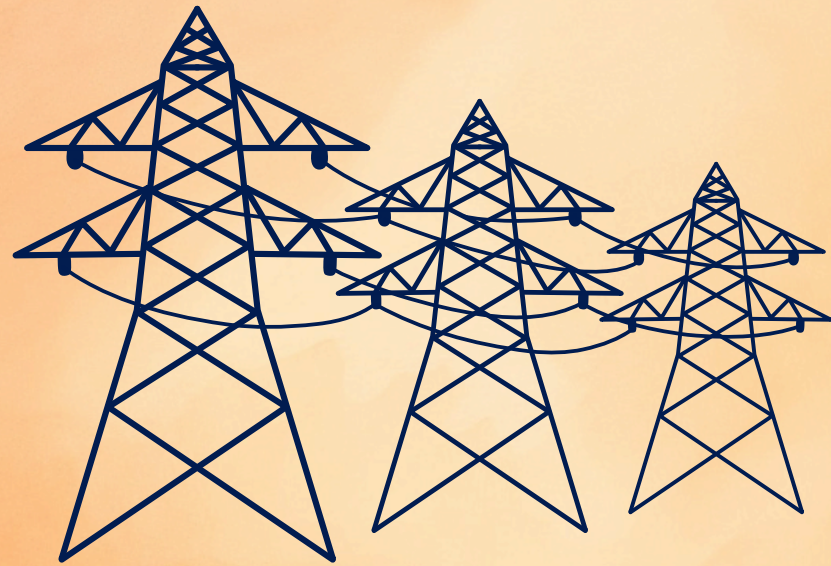
This requires reliable & secure hosting for both private & public cloud deployments.



IoT & AI

This requires more compute, necessitating advanced storage, processing, & management solutions.

DATA CENTRES OF FUTURE WILL HAVE



**MORE
INTERACTION
WITH GRID**



**POWER
VARIATION
WITH IT**



**COMPLEX
COOLING
ARCHITECTURE**

WHY TRANSFORM DATA CENTER OPERATIONS



C-Level Attention

99%

of Large company
CEO's consider
sustainability as an
important business
success factor

Need for Action

49%

of World Annual GDP is
covered by
jurisdictions and
legislations for net zero
emissions

Investor Expectation

75%

of Investors consider
sustainability
performance as
important when
making decisions.

THE ACTION PLAN



Set a Bold Actionable Strategy



Implement Efficient Data Centre Designs



Drive Efficiency in Operations



Buy Renewable Energy



Decarbonize supply chains

SUATAINABILITY IS A JOURNEY

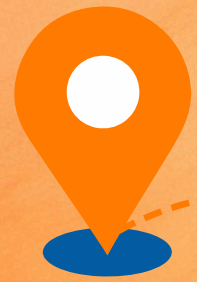


For data center leaders, sustainability is not merely a choice; it is a strategic imperative.

- Building a sustainable business case
- Alignment to Internal Expertise
- Alignment to Corporate Strategy



EKAGA'S ROLE IN DATA CENTRE LIFE CYCLE



PHASE 1

Plan

Groundwork for a future-proof data center

PHASE 2

Design

Resilience and cost efficiency through design

PHASE 3

Build

Timely delivery through a seamless integration of digital solutions

PHASE 4

Monitor

Managed Services for optimizing performance & ensuring reliability

PHASE 5

Improve

Continuous improvement through state of the art solutions from global partners

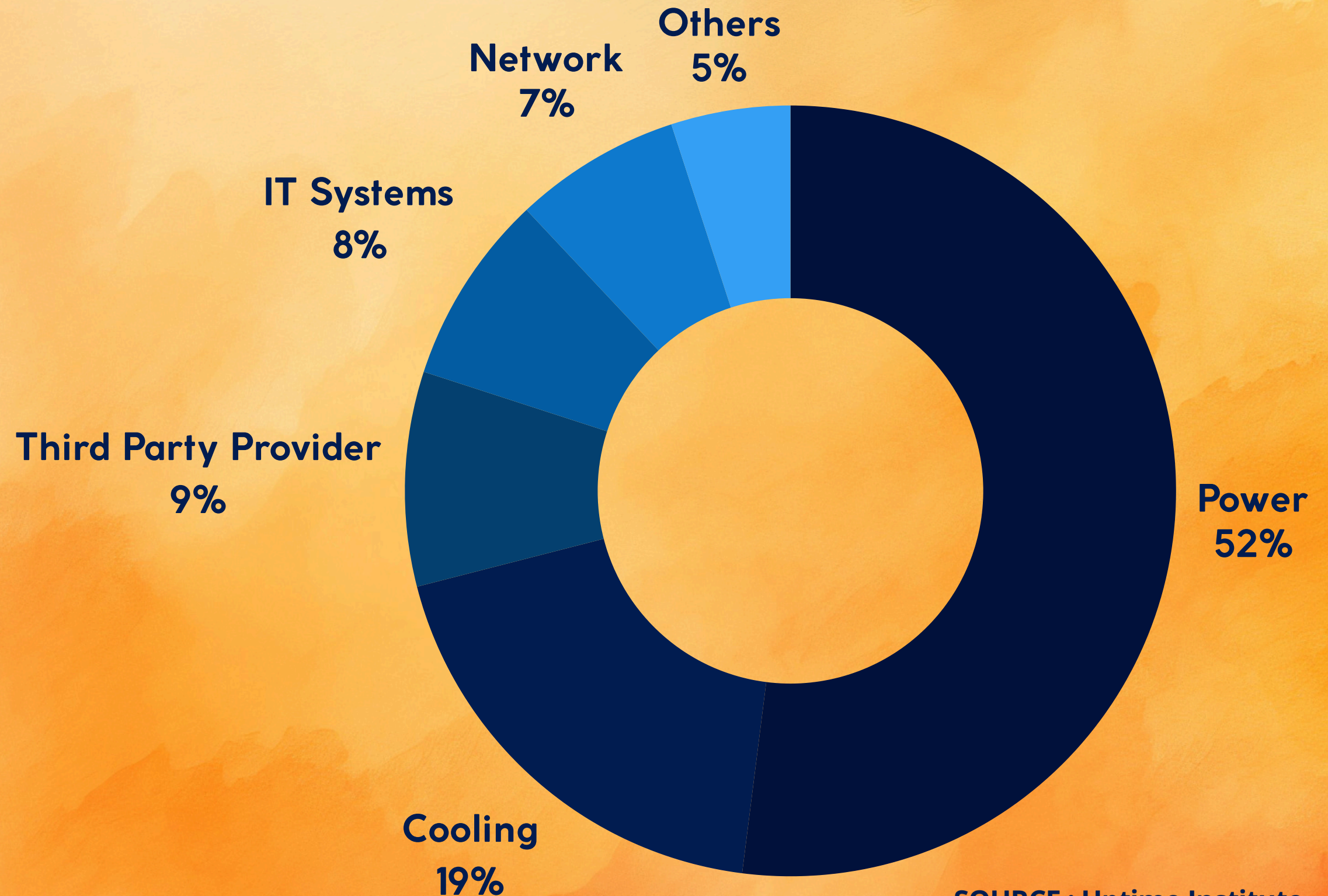
DATA CENTRES ARE TOO THIRSTY FOR POWER



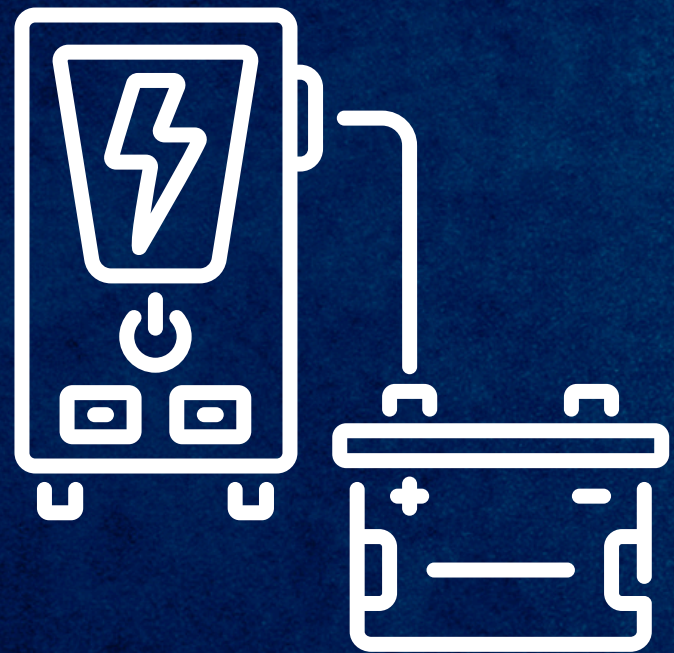
It is estimated that 8–10% of the planet's electricity production will be needed to sustain the relentless growth in data centres.

UNPLANNED OUTAGES

Power remains the
primary cause of data
centre outages



THE REAL CULPRIT



UPS system failure, including UPS and batteries, is the No. 1 cause of unplanned data center outages; accounting for 40% of power failure events.

DATA CENTRE DOWN TIME COST



70 percent of data center outage incidents cost \$100,000 or more, with 25 percent costing more than \$1 million

BATTERY FACTS



A cell can fail in as little as 2 (Two) days

Any battery string is only as good as its weakest cell

One weak cell can damage other cells in the string

Battery connections can loosen over time with heat

The life of a lead acid cell halves every 10°C over 25°C

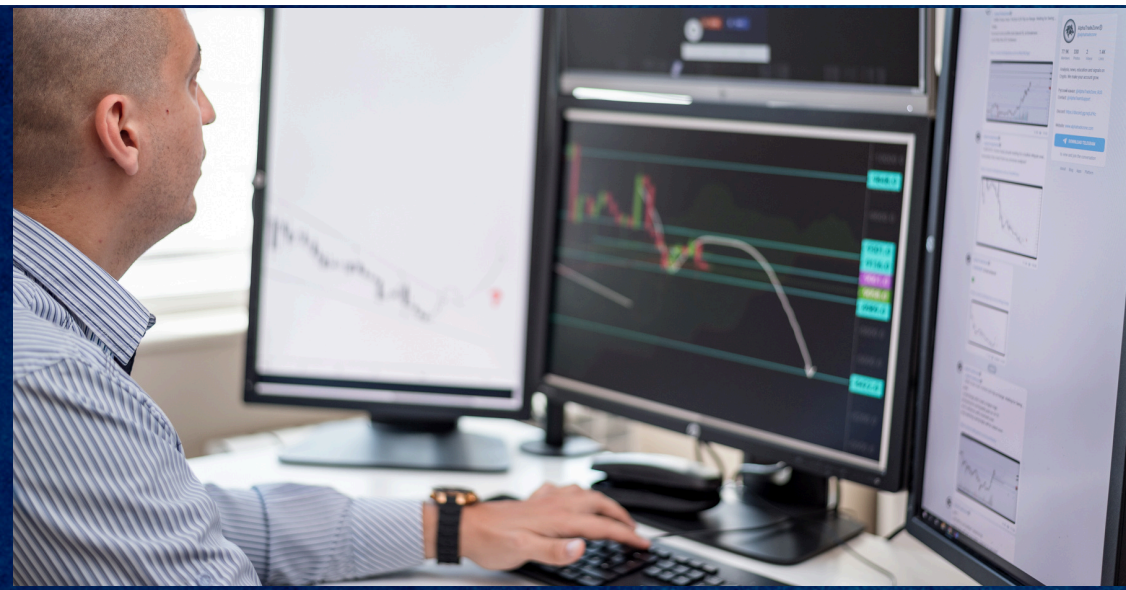
Battery failures follow bathtub curve

WHAT IS BATTERY MONITORING



- Trending of battery parameters over time
- Reference to alarm limits
- Peer to peer comparison
- Look for exceptions
- Consider multiple parameters
- Understand within the context of your facility

3 PRIMARY ROLES OF BATTERY MONITORING



**Ensure the battery bank
is maintained in an
optimum environment**

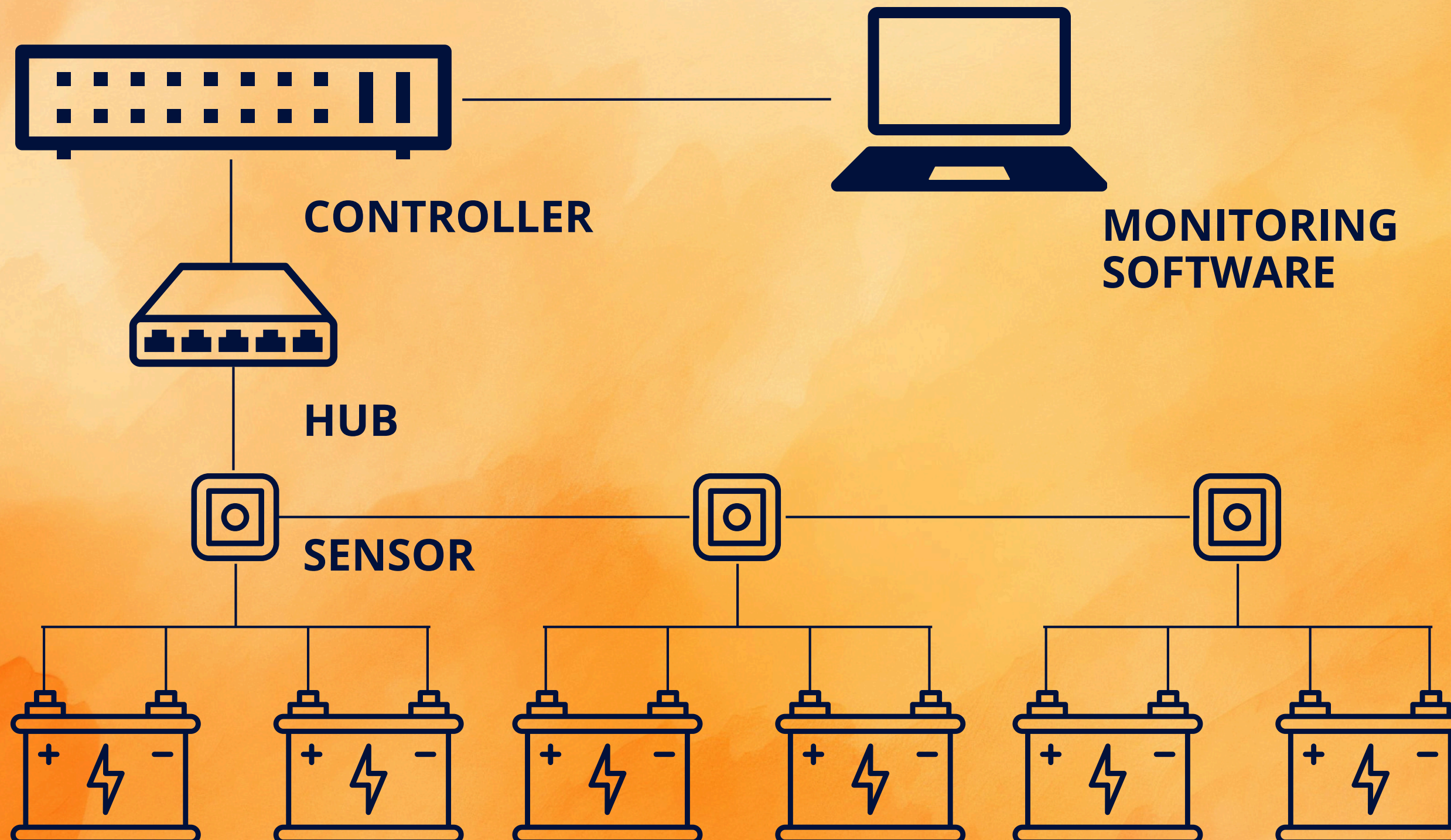


**Identify faults and
weaknesses in the
battery bank early**



**Provide confidence that
here is sufficient battery
capacity for systems**

SOLUTION OVERVIEW



WHAT IS MEASURED

- Individual Battery Voltage & Ripple Voltage
- Individual Battery Impedance (Ohmic Value)
- Individual Battery Temperature
- Ambient Temperature and Humidity
- String & Ripple Current
- String Voltage

REAL TIME VISIBILITY, AUTOMATED ALARM & DATA HANDLING

SAFETY AGAINST DATA CENTRE FIRES



THERMAL RUNAWAY PROTECTION



IEEE 1881 defines thermal runaway as: “A condition that is caused by a battery charging current or other process, which produces more internal heat than the battery can dissipate.”

- Occurs over a period of weeks or months.
- BMS Isolates the Battery String to protect against fire hazard

KEY FEATURES



UPS AGNOSTIC

Works with all UPS Systems
irrespective of make or type



FLEXIBLE

Modular Design for Custom
Configuration



BATTERY AGNOSTIC

Works with VRLA, VLA, NiCad &
Li Batteries



PROVEN TECHNOLOGY

Trusted by Industry Leaders
across the Globe



EASE OF INTEGRATION

Integration options with 3rd
party BMS & DCIM

LOOKING INTO THE FUTURE

At Ekaga, we help our clients to achieve digital transformation as a strategic advisor and delivery partner.

We provide a full range of services to help clients respond to disruptive technology trends, implement innovative digital products, and deliver technology-enabled change across their organisation.



THANK YOU

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