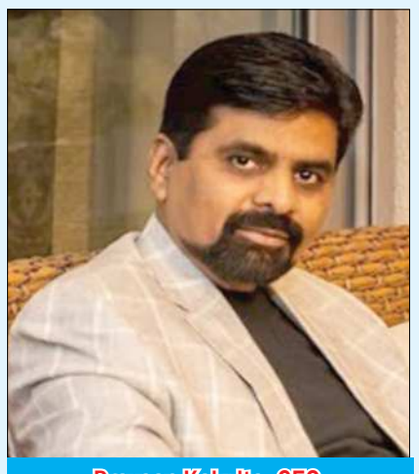
Despite a surge in renewable energy installations, operational efficiency and maintenance levels remain low

Many renewable energy assets underperform due to delayed maintenance and inadequate monitoring, says Praveen Kakulte, CEO, Powercon Group

KUMUD DAS

Right now, India's Renewable Energy (RE) installations are "scaling at an unprecedented pace, but an optimum yield extraction and care of these RE assets hasn't always kept up," says Praveen Kakulte, CEO at The Powercon Group in an exclusive interaction with *Bizz Buzz*. The RE industry has to switch the outlook to 'MWhs of energy delivered' from its current focus of 'MWs of power installed'. That's where the gap lies. A lot of assets are underperforming due to fragmented O&M practices, lack of data-driven decision-making, and insufficient technical training on ground. At Powercon, we see Asset Management as both a challenge and an opportunity to bring in deeper accountability, smarter diagnostics, and most importantly, outcomes that investors, developers, and the planet can count upon



Praveen Kakulte, CEO, Powercon Group

We're not talking about managing a few parks anymore, we're talking about orchestrating a national ecosystem of assets across diverse geographies, OEMs, and performance profiles. As we move toward the 500 GW goal, Asset Management must evolve from the current fragmented O&M to an integrated singular framework serving every aspect of the asset lifecycle, from daily operations to strategic governance for performance, transparency, and long-term value creation

CAN you describe the current landscape of Renewable Energy Asset Management in India?

Absolutely! Right now, India's Renewable Energy (RE) installations are scaling at an unprecedented pace, but an optimum yield extraction and care of these RE assets hasn't always kept up. The RE industry has to switch the outlook to 'MWhs of energy delivered' from its current focus of 'MWs of power installed'. That's where the gap lies. A lot of assets are underperforming due to fragmented O&M practices, lack of data-driven decision-making, and insufficient technical training on ground. At Powercon, we see Asset Management as both a challenge and an opportunity to bring in deeper accountability, smarter diagnostics, and most importantly, outcomes that investors, developers, and the planet can count upon.

What difference does it make when a third party like Powercon manages the asset operations rather than OEM players themselves?

The difference is the goal that each player has. OEM's goal is to deliver great and more products. IPP/Asset Owner's goal is to deliver 'Maximum Electricity'. Third-party Asset Managers like Powercon are synchronised with the IPPs to deliver 'Maximum Electricity' and 'A healthy and longer life-time of the asset'.

We are technology agnostic; we hold the asset performance measureable to output, not just uptime. Our role is to optimise across the entire energy delivery chain, integrate multi-locational data from multiple OEMs, and ensure the investor gets the projected returns. It's not about maintaining equipment; it's about unlocking performance. The goal synchronisation of third party Asset Manager with IPP is greater, deeper and enriching. That's where the real value lies.

Through our Energy Studio, we've integrated AI-driven diagnostics and Machine Learning algorithms that flag anomalies before they become failures. Our partner BaxEnergy's platform 'Farsight' predicts failures by using Machine Learning/ Data Analytics. It also integrates meteorological data to help pre-empt and plan for environmental conditions

How do you see the evolution of Asset Management needs with India targeting 500 GW of non-fossil fuel capacity by 2030?

The scale alone demands a fundamental shift. We're not talking about managing a few parks anymore, we're talking about orchestrating a national ecosystem of assets across diverse geographies, OEMs, and performance profiles. As we move toward the 500 GW goal, Asset Management must evolve from the current fragmented O&M to an integrated singular framework serving every aspect of the asset lifecycle, from daily operations to strategic governance for performance, transparency, and long-term value creation. A shift from reactive maintenance to predictive/ insight-led operations as well as the enforcement of forecasting, scheduling and regulating power dispatch for optimum gain necessitates IT enabled energy management. That's where Powercon's Energy Studio plays a crucial role, it acts as the nerve centre for real-time diagnostics, performance benchmarking, and remote optimisation.

Combined with AI-driven analytics and a future-ready workforce trained through our in-house training academy, we're building an ecosystem that's beyond maintaining energy assets, it maximises their life and output. In the next phase of India's renewable journey, Intelligent Asset Management will be as critical as energy generation itself, and Powercon is geared to lead that shift.

Are you integrating predictive maintenance through IT or AI technologies? How effective has it been?

Yes, and we wouldn't be future-ready if we weren't. Predictive maintenance isn't a buzzword for us, it's embedded in how we operate. Through our Energy Studio, we've integrated AI-driven diagnostics and Machine Learning algorithms that flag anomalies before they become failures. Our partner BaxEnergy's platform 'Farsight' predicts failures by using Machine Learning/Data Analytics. It also integrates meteorological data to help pre-empt and plan for environmental conditions.

The results speak for themselves: we've seen up to 16% reduction in downtime and a measurable improvement in asset life and generation consistency. The key is combining on-ground insights with digital intelligence, and that's where our tech stack and experienced teams complement each other. For IPPs and asset owners, this translates into higher PLFs and fewer surprises.

Can you tell us about your current asset portfolio in India, including capacity under management, project types, and key geographies, and how it has evolved over the years?

Today, Powercon manages over 2.5 GW of Renewable Energy assets across India, spanning wind, solar, hybrid, and exclusive BoP projects. Our portfolio covers the key renewable belts in Tamil Nadu, Gujarat, Maharashtra, Madhya Pradesh, Rajasthan, and Karnataka, where we support a diverse mix of utility-scale, IPP, and captive installations.

We started with wind O&M nearly a decade ago, and since then, our evolution has been strategic, from technology-specific services to multi-OEM, multi-technology Asset Management, powered by our Energy Studio and Advanced Analytics. Our differentiator from Day 1 has been to keep turbines spinning optimally, remote diagnostics, and predictive maintenance, and that's where we bring real value.

Which major developers or IPPs do you currently work with, and how are you planning to expand your client base as India's renewable capacity scales up rapidly?

We work with some of the most trusted names in the Renewable Energy sector, including Tata, ReNew, Apraava, O2, Serentica, CIP, Adani, SJVN, Sembcorp, Aditya Birla, NTPC, and other leading IPPs and infrastructure funds. These long-standing relationships are a testament to our delivery, transparency, and ability to adapt to evolving industry needs.

As India races toward its 500 GW target, our growth strategy is centered on innovation, application specific offerings and Difficult To Get (D2G) solutions.

With our global footprint across 22 countries, we bring international best practices to India, while Powercon's RE ecosystem ensures we're future-ready.

As countries race toward Net-Zero targets, what role can Hybrid Renewable Energy models (e.g., combining wind, solar, and storage) play in building energy resilience?

Hybrid Renewable Energy models are the backbone of a resilient, low-carbon future. By integrating wind, solar, and storage, we smoothen the intermittency challenge and maximise generation across timeframes and weather conditions. AI-enabled Energy Management System not only ensures grid stability but also enhances asset productivity and land-use efficiency. As storage becomes more cost-effective, hybrid systems will play a key role in peak load management, frequency regulation, and ensuring round-the-clock renewable power, critical for both national energy security and energy independence!

Do mega-sporting events like World Cup football pay off? Here's economic reality behind them

FREDERIC DIMANCHE/ KELLEY A MCCLINCHEY

Mega-events can also generate significant reputational benefits for host cities and countries, including heightened global media exposure, enhanced national branding and greater confidence among international investors who see the city as capable of managing large-scale events. These intangible outcomes can translate into sustained tourism growth, increased economic vitality and a lasting "feel-good" effect that boosts civic pride among residents and visitors

WHETHER it's the World Series, the FIFA World Cup, or the Olympic Games, the hope for hosting mega sporting events is that the economy will emerge as the true winner. A quick search shows how expensive World Series tickets are, or how much it costs for accommodations, food and transportation. Similar spending patterns can be predicted for the 2026 FIFA World Cup, which Canada is hosting with Mexico and the United States. Visitor spending provides direct economic benefits, generating revenue for businesses and providing jobs. There are also indirect benefits through suppliers and staffing, and induced benefits as staff spend their wages locally. Mega-events can also generate significant reputational benefits for host cities and countries, including heightened global media exposure, enhanced national branding and greater confidence among international investors who see the city as capable of managing large-scale events. These intangible outcomes can translate into sustained tourism growth, increased economic vitality and a lasting "feel-good" effect that boosts civic pride among residents and visitors. While hosting large sporting events appears to be great for communities, research suggests the actual financial outcomes are often more modest than anticipated. Nonetheless, many politicians remain eager to host them.

The math doesn't always add up

Tourism and event scholars suggest being cautious about the so-called multiplier effect. This is the idea that mega-events ripple throughout the economy, providing benefits for others. Meta-analyses of such events show highly variable economic outcomes and frequent overestimation of long-term benefits. A lot of spending is lost due to export leakage, where additional gain goes to non-local businesses, event organisers and ticketing agencies instead of local businesses. Often, mega sporting events cause tourism displacement, as regular tourists avoid the destination due to crowds and high prices, sometimes even after the event finishes. Politicians, tourism offices and event organisers are quick to claim large economic benefits when bidding for and hosting events. Yet some academics warn that "most economic impact studies are commissioned to legitimise a political position rather than to search for economic truth." In other words, government-commissioned studies are often biased toward positive results.

A World Series boost — but for how long?

The Toronto Blue Jays' post-season run and the World Series have produced a concentrated burst of spending: sold-out home games, fuller hotels at higher prices, restaurants and bars crowded for watch parties and heavy merchandise sales. Local media and business surveys commonly report measurable upticks in hospitality and retail during playoff runs, and small business owners cite increased footfall and merchandise revenue. Sports economists, however, urge caution in extrapolating short-term spikes into lasting gains. They describe playoff-driven forecasts as "overstated," pointing to limited duration, substantial leakage and limited job creation beyond temporary hospitality shifts. While people may spend more on a game night, they often spend less elsewhere, meaning net spending is usually smaller than headline numbers suggest. A World Series may be excellent for civic morale and a short retail bump, but it rarely transforms a city's economic trajectory on its own.

FIFA World Cup moment

The FIFA World Cup is a multi-week, globally televised event with millions of spectators and huge international attention. For Canada's co-host role in 2026, official and municipal assessments project substantial economic benefits. A City of Toronto impact assessment projects roughly $940 million in positive economic output for the Greater Toronto Area, including hundreds of millions in GDP and several thousand jobs from June 2023 to August 2026. British Columbia also estimates significant provincial output and thousands of roles tied to hosting in Vancouver. These are significant short-term impacts that reflect visitor spending and operational expenditures. But will hosting the World Cup add much to cities that are already well-known? Some are doubtful, but the visibility can help achieve tourism marketing objectives and support bids for future international events, often central to destination strategies.

Counting the real costs

Mega-events often come with significant financial and environmental costs. While they can create jobs, these are typically short-term, low-wage positions concentrated in hospitality and service sectors. Public funds directed at event staging or stadium upgrades could finance affordable housing, transit or health services with potentially higher social returns for local residents. There have also been repeated cases where promised mega-event legacies failed to materialise. Environmentally, mega-events produce significant carbon footprints from global fan travel, temporary construction, energy use and waste, with many events having more negative than positive environmental outcomes.

This is particularly relevant for transnational tournaments that attract long-distance travellers and temporary stadium retrofits. Cities seeking to maximise gains should prioritise local community benefits and measure net economic impact, not gross receipts, by accounting for displacement and export leakage. For the World Series, that means leveraging short-run enthusiasm into repeat visitation and accrued local spending habits. For FIFA 2026, the focus should be on converting global attention into long-term tourism and business flows while ensuring community benefits and limiting environmental costs. Only then will the reputational windfall translate into durable economic value.

Measuring the real impact of mega-events

Sports events can deliver meaningful short-term revenue, reputational exposure and long-term benefits, but those outcomes are neither automatic nor evenly distributed. Thoughtful policy design, transparent evaluation and binding community and environmental safeguards determine whether a World Series run or a World Cup week becomes a fleeting headline or a lasting city asset. The main benefactor of the World Cup will be FIFA, not host cities. As The Economist noted in its review of economist Andrew Zimbalist's Circus Maximus, there is "little doubt that under current conditions, prudent city governments should avoid the contests at all costs."

(Authors are from Toronto Metropolitan University & Wilfrid Laurier University)

From data to delight: The subtle power of technology in hospitality industry

AKSHAY GUPTA

OVER the past few years, I've watched technology quietly reshape the way the hospitality sector operates. It is no longer about gadgets or automation alone, but about thoughtfully designed systems that enhance guest experiences, improve efficiencies, and help us connect with visitors in more meaningful ways. From reservations to banquets, from kitchens to back offices, I've seen how technology is transforming hospitality without replacing the human touch — as that remains at its core.

Rethinking bookings and revenue

For example, in the past, room pricing was often static, adjusted only occasionally based on broad trends or seasons. Today, many established premium hotels use smart revenue management tools that adjust room rates in real time based on demand, guest behavior, local events, and competitor pricing. This shift has created greater transparency and fairness for guests while also significantly increasing direct bookings. And honestly, these tailored packages and upgrade suggestions make guests feel genuinely understood rather than simply sold to.

Smart guest services

Guest interaction has been transformed even before arrival. Many premium hotels now employ chatbots, virtual concierges, and voice-activated in-room features that provide 24/7 assistance. These tools handle routine inquiries, bookings, and room preferences, freeing staff to focus on creating meaningful, personalized experiences. In my experience, when teams are relieved from repetitive tasks, guests notice the difference in service quality and warmth.

Smart rooms and connected comfort

Hotel rooms have evolved into intelligent, responsive environments. IoT devices and connected systems now adjust lighting, temperature, and entertainment automatically based on guest preferences. I've walked through rooms where guests' habits — lighting, music, even temperature — were anticipated seamlessly. These subtle touches turn a simple stay into a truly personalized sanctuary.

Food and beverage: The data-driven kitchen

In kitchens and restaurants, technology has introduced precision and foresight. Systems now forecast guest orders, optimize menu design, minimize food waste, and automate reordering. I've observed kitchens where meals are prepared faster, waste is reduced, and menus better reflect real-time guest preferences. The combination of efficiency and creativity has never been more tangible.

Reinventing events and banquets

Event planning, once a time-consuming process, is now expedited. Advanced systems analyze client requirements — dates, budgets, guest counts, and cuisine choices — and generate detailed proposals within minutes. Many premium hotels also use tools that suggest layouts, décor ideas, and menu combinations. The result is faster confirmation, more consultative planning, and events that leave lasting impressions.

Behind the scenes: Housekeeping, maintenance, and energy efficiency

Technology quietly supports operations behind the scenes. Housekeeping schedules automatically align with occupancy levels. Maintenance systems predict equipment failures before they occur. Energy management tools analyze occupancy, weather, and equipment usage to optimize consumption while maintaining comfort. These improvements make operations safer, smoother, and more sustainable — all without being visible to guests.

Marketing and personalisation

Even before check-in, hotels can use technology to craft tailored engagement. From curated spa offers to dining recommendations, personalized suggestions based on guest history and lifestyle preferences help build loyalty. I've found that the thoughtful application of these tools enhances the guest experience without ever feeling intrusive.

The balance between tech and touch

From my perspective, the real challenge isn't implementing technology — it's using it wisely. Technology cannot replace the soul of hospitality; it amplifies it. When applied thoughtfully, it allows hotel teams to focus on genuine human connections.

Looking ahead to 2026, the hotels that will be admired most won't be those with the most automation; they will be the ones that use technology to make human service better, more intuitive, and deeply personal. The future of hospitality isn't just smart — it's smart with a human touch at its core.

(Author is Executive Director, Tivoli Hospitality Group)