

# COMMAND CONTROL CENTRE & DATA CENTRE SOLUTION

*No two command control centres are the same*

Command Control Centre will bring all the key data one needs to know, to the organization. Nothing gets lost, but we filter out the background noise, triage, prioritize and analyze data and turn it into knowledge you can act upon.

The ECC will allow operators to react quickly, in the right manner, but also allow the opportunity to be proactive in improving the enterprise infrastructure.



# COMMAND CONTROL CENTRE SOLUTIONS

The creation and development of Command Control Solutions is collaborative. It's about discovering what matters and what works. And what works for one person may not for another. In addition to System Dashboards, we have Personal Dashboards set up the way people want to visualize and interpret their data, based on their roles and personal preferences. This is a modular system. Operators don't need to learn a complete system, and they certainly don't need to learn the modules they won't be using. Operators get to learn and become experts in their particular modules within the Command Control Software.



### MSI MODEL RFP : ICT components

#### Smart Solutions



City back bone Network



City Wifi



City Surveillance



Smart Lighting



ICT Enabled Solid Waste Management



Smart Traffic



Smart Parking



Environmental Sensors



City Bus Intelligent Transport System



Smart Governance and Citizen Services

#### Key ICT components

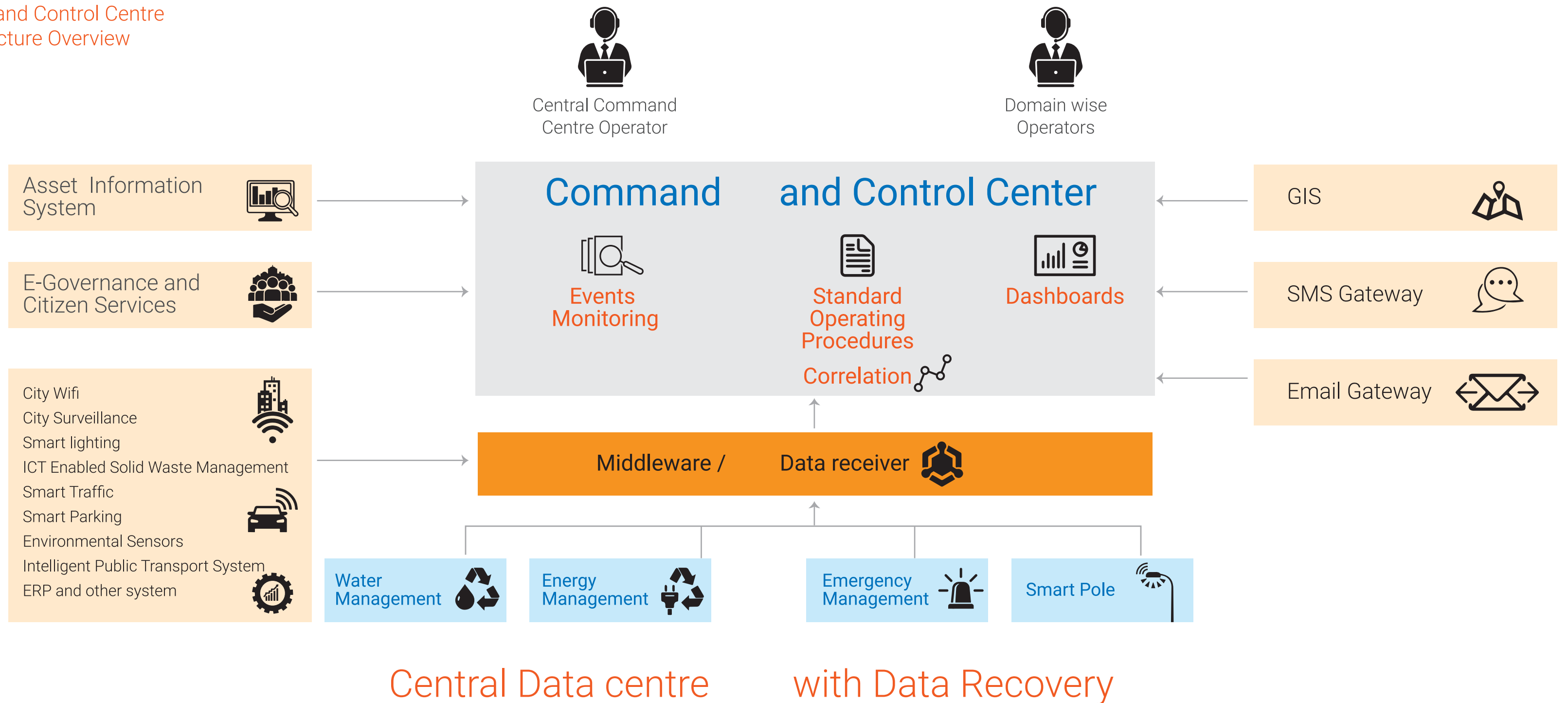
- Data center
- Disaster recovery site
- High availability of DC
- Integrated command and control center

#### Key features

- Technology neutral and vendor independent
- Performance linked features like payment plan, Outcome based schedule
- Integrated and scalable solutions provisioning
- Optimum use of resources like sharable infrastructure
- Qualification criteria suggestion for better technology evaluation
- RFP vetted and reviewed by C-DAC and DEITY



## Command Control Centre Architecture Overview





# DATA CENTRE SOLUTIONS

Continuous and comprehensive monitoring and management of constantly changing and expanding facility and IT infrastructure is key to ensure uptime and safeguard uninterrupted operations round the clock

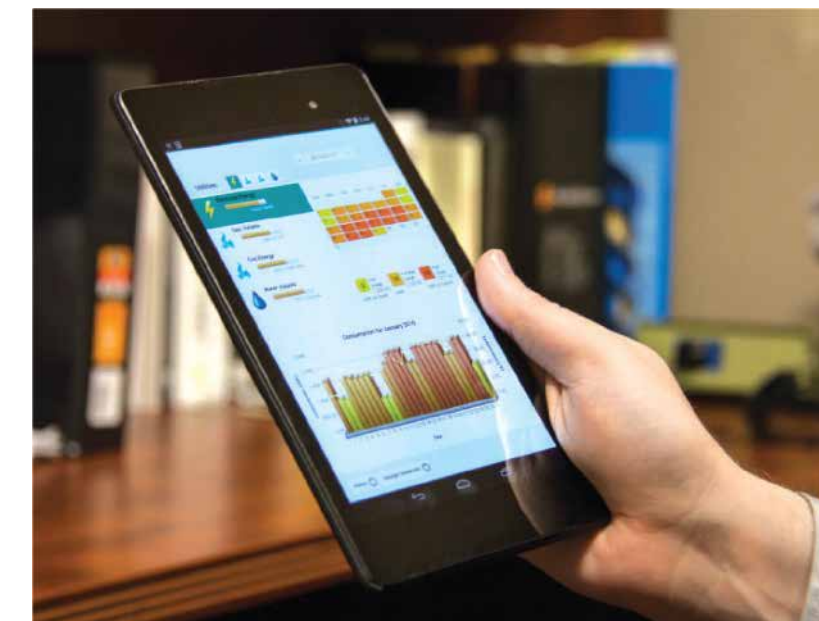
Keeping environmental conditions in a defined range and minimizing energy consumption at the same time is one of the major ongoing challenges in a data centre.

To meet these requirements, the design for such solutions requires a comprehensive consideration of all operational processes in a structured approach.

### Increase Flexibility - with Data Centre Management, Automation and Control

Bajaj Electricals' building automation and control system (BACS) portfolio offers a complete range of field devices, controllers and an integrated building management system (BMS) that set new standards for technology, efficiency and user-friendliness. Energy Monitoring Software (EMS) combined with low voltage protective devices provide a complete energy management solution. The EnOcean range of wireless and battery - less sensors ensures that we can have movable racks which is the need of the hour.

Our data centre management solutions will help you anticipate the future - to guarantee uptime and stay one step ahead of the competition. This ensures safe, secure and reliable operation of your data centre.

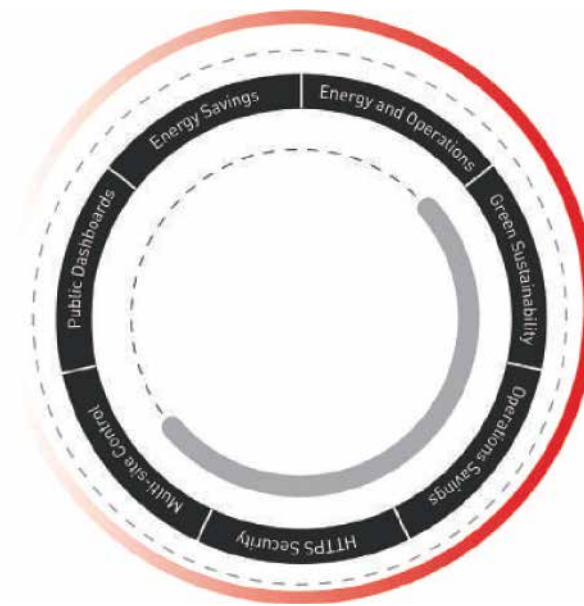


#### Benefits

- **Wireless and battery less sensors ensures flexibility and helps to design movable racks**
- Complete data centre management solution offering
- Use of latest technologies and open standards protects your investment
- Minimization of human errors by automating processes
- Automatic alarms, emails and applications notify you of critical failures
- User-friendly supervision with the help of 3D visualizations
- All critical functions can be placed in one visualization
- BMS and EMS applications for reliable facility infrastructure management
- Create heat maps of your data racks and view it in graphical form for predictive analysis to identify possible hot/cold spots

## Safe and Reliable System Integration Monitoring and Controlling

- Unified Platform for building automation, access control solution and lighting controls
- An enterprise platform with multisite management tools
- High level third party systems integration
- Web-based application that combines the power of enterprise dashboards with easy-to-use tools
- Customizable Energy Management dashboards and powerful energy reports give managers the tools to reduce consumption and drive down costs
- Task-driven alarm management and system dashboards allow operators to quickly visualize and prioritize their work, keeping the facility running comfortably and efficiently
- Drilling down from high-level operational views to specific parts of the system is simple and intuitive
- Efficient, comprehensive and scalable: With all systems being interconnected there can be a lot of data. enteliWEB collects and organises this information, displaying it through a custom dashboard. Dashboards can be customized to your needs in every level of enteliWEB. We have more than four types of dashboards available through one enteliWEB solution:
  - Enterprise dashboards allows Facility Managers to quickly evaluate their systems based on KPIs
  - Personal dashboards provide an easy way for operators to view the building the way they want
  - Systems dashboards provide a much richer experience than graphics alone. They combine operational views such as graphics, alarms, point lists, charts and other tools all on one page
  - Energy dashboards allow you to monitor how much energy your datacentre is using in once quick glance. You have the ability to choose the appropriate systems, and have their energy usage displayed in one easy to understand interface
- Power metering and monitoring devices plus energy power monitoring software help detect malfunctions and lower energy consumption. All findings are included in customer specific reports
- The high quality of our products and systems pave the way for smooth data center operation while significantly extending the maintenance and service intervals, which in turn reduce life cycle costs. Tailored to the process requirements of our customers, we develop a system or overall solution that focuses on reliability and availability



### Benefits

- **Controllers with options of POE for better uptimes and hot swappable modules for quicker serviceability**
- **Consistency:** Improved system planning and commissioning, easy integration of building automation
- **One-stop shop:** One contact partner for all products, systems, solutions and services results in considerable cost savings during installation and operation
- **Safety:** Perfect protection of personnel and equipment through optimized protection and switching devices
- **Efficiency:** Higher system availability and maximum energy efficiency thanks to monitoring and protection against overload and short-circuits
- **Scalability:** Can be scaled from a small system of 200 points to unlimited 10 points

## Ensure maximum uptime with Fire Safety

The risk of fire in a data centre is particularly high due to heavy power loads, a constant ignition source, combustible materials, extensive cabling and high air velocity for cooling. Bajaj Electricals' fire safety solutions are precisely tailored to your data centre's requirements and comply with the highest safety standards and regulations.

The solutions offer you maximum safety against all risks of fire and ensure uptime and availability of service. They reduce the risk of wide-spread fire, combining highly accurate smoke detectors with fire panels that have hot redundancy along with aspirating smoke detection with asymmetric piping guarantees the highest detection speed and accuracy, coupled with preventive maintenance, improving the response effectiveness. **The detection technology used is LED based and provides long life and reliability.**

The silent discharge nozzle technology ensures quiet and effective extinguishing, minimizing the risk of data loss due to hard disk drive failure. As in any fire situation, ensuring that people are alerted immediately and know what to do is the top priority. Reliable alarming devices and the voice evacuation system ensure that people are able to evacuate the danger area quickly and safely.



### Benefits

- **Fast and highly reliable fire detection thanks to unique aspirating smoke detectors**
- **Efficient and effective fire extinguishing using clean agents like FHT (Firefite Hypoxic System - Firepass) Novec 1230 & FM 200**
- Complete integration of fire detection, extinguishing and evacuation solutions
- Bajaj Electricals fire safety products and solutions comply with the highest safety standards and regulations
- Reliable alarming and fast evacuation when needed

## Ensure business continuity with Security & Carbon Footprint Analytics

Threats to data centres in this modern day and age come in many forms, from the intruder trying to gain physical access to the facility and ultimately the servers, or safety incidents and natural disasters to cyber attacks and hackers trying to gain access to the network and the data stored on the servers.

Bajaj Electricals provides a layered and integrated approach on data centre security after identifying all the possible threats and their impact on a data centre's infrastructure and assets. From perimeter protection, gate control, intrusion detection to access control and visitor management, incoming and outgoing goods, access to specific security zones, such as power distribution and UPS rooms, and to the computer room itself. Intelligent video surveillance solutions help with event investigation and - in combination with all other security measures - ensure highest protection.

The management system that integrates all security disciplines allows increased visibility, response agility and control and ensures your facility remains secure 24x7. By adopting an integrated approach aimed at protecting all the operational processes of a data centre, our solution ensures business continuity in compliance with customer security policies and procedures. We also offer ROG - Remote Operation Center as a service model.



### Benefits

- As the access control is seamlessly integrated with BMS we can provide carbon foot printing of the data centre
- Data, people and assets remain secure 24/7
- Risk mitigation prevents loss of reputation and business disruption
- Tailor-made integrated security solution following security policies and procedures
- Early detection of unauthorized people on the data centre premises
- Protection of operational processes and data ensures business continuity
- User-friendly security management system supporting security guards and operators

