

BEYOND

SMART CITIES

TECHNOLOGY FOR SUSTAINABLE
DEVELOPMENT
REFRESHER TRAINING COURSE

KRISHNAJI PAWAR, LEED AP BD+C, GSAS CGP, ISO 14001:2015, GCP

SUSTAINABILITY SPECIALIST

BEYOND SMART CITIES

481.79

427.50

427.71

421.50

641.52

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SMART CITIES

MANAGED ENERGY SERVICES
FOR BUILDING SCIENCE PROFESSIONALS

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BUILDING SCIENCE SPECIALIST CURRICULUM

SUSTAINABILITY SPECIALIST

BEYOND SMART CITIES

Less efficient

D

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G

WHAT SHOULD YOU LEARN

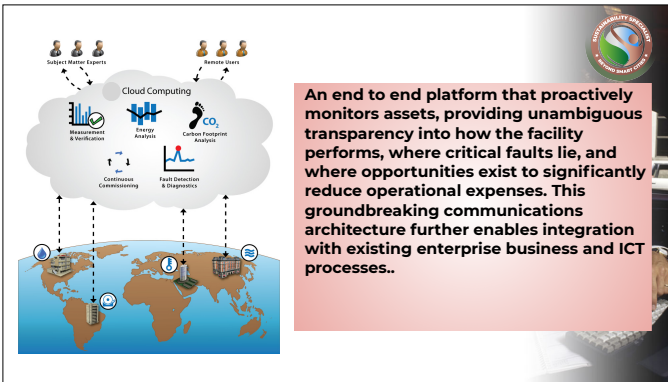
Introduction to Services

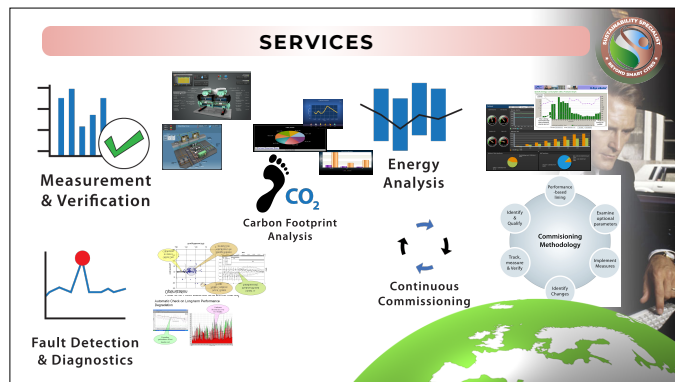
Methodology

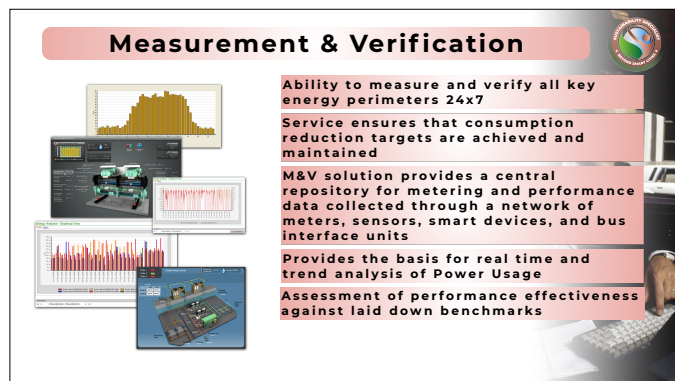
Value Statements

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SERVICE DELIVERABLES



Real-time Monitoring



Data Trending



Monitoring Reports



Alarm Monitoring
& Notification

Energy Analysis



Base Load Analysis

Performance Analysis

Budgeting/Forecasting

Gap Analysis

What If Analysis

**Regular and Customized
Reports**

Contract Analysis

Tenant Billing

SERVICE DELIVERABLES



Benchmarking



Performance
Analysis



Financial
Analysis



Dashboards



Reports

Carbon Footprint Analysis



To address the anthropogenic effect on earth in a quantified way

Sharing and dispensing the sustainability Data

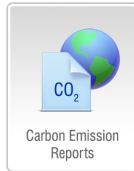
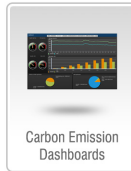
User at an ease to take necessary steps to increase sustainability

Tracking of activities, that impact more in generating carbon foot print

Automated calculations of Carbon footprint against direct and indirect resource depletion

To align work flow with GHG protocol of emission accounting

SERVICE DELIVERABLES



Continuous Commissioning



Develop performance baselines for energy and comfort

Examine the building operational parameters to identify operating and comfort problems, degradation and causes of system inefficiency

Implement Continuous Commissioning measures

Identify changes in operating procedures and document energy savings and comfort improvements

Track, measure and verify energy and comfort performance

SERVICE DELIVERABLES



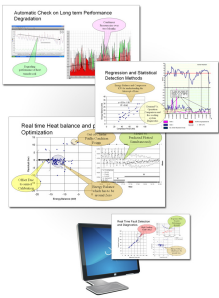
Continuous Adjustment
of System Parameters



Control Logic Development
& Deployment at Site



Fault Detection and Diagnostics



- Identifying fault
- Identifying the cause (s) of the fault using computational information processing
- Identifying degradation in the performance of equipment or systems
- Provide advisory service/ support the operations
- Inbuilt Diagnostics Based On Rule-based Expert Systems



SERVICE DELIVERABLES



Compare actual readings
to expected performance



Rule-based algorithm
to determine possible
errors



Determine most-likely
cause(s) of error from
an array of tests



Report to supervisory
controller or service
provider for further possible
mitigation



SERVICE DELIVERABLES

The Beyond Smart Cities Energy Services Portal is an internet based offering for system integrators using Tridium technology, through which the complete spectrum of energy services is delivered(Coming soon).

SALIENT FEATURES:



Online subscription and payment



Instant accessibility through Wyless global access network.



Multiple service rich content delivery through a single login.



Create and manage multiple projects.



Additional revenue model for the SI.

SERVICE DELIVERABLES

HOW CAN I ASSURE THE PERFORMANCE OF MY APPLICATIONS

HOW CAN I ASSURE MY FACILITY PERFORMANCE...

HOW CAN I ASSURE MINIMIZED BUSINESS INTERRUPTIONS

Unique Solution To Manage It

BUSINESS IMPACTS/APPLICATIONS

There is unprecedented demands to...

- ☑ Constantly reduce costs
- ☑ Improve service performance and support
- ☑ Provide rapid access to new technologies
- ☑ Implement more complex applications
- ☑ Retain and motivate a demanding team
- ☑ Minimise exposure to risk
- ☑ Demonstrate clear return on investment

Managed Services approach will...

- ☑ Reduce total cost of ownership
- ☑ Provide a predictable expenditure model
- ☑ Deliver greater service performance
- ☑ Track performance against SLA metrics
- ☑ Introduce rigorous process efficiency
- ☑ Maximise innovation and technological agility
- ☑ Deliver transparent ROI

VALUE PROPOSITION

Reduce operational costs.

**Reduce design and man
power costs.**

Reduce service delivery time.

**Utilize Beyond Smart Cities
Specialist energy advisory
services at low cost.**

**Outsource engineering and
commissioning services.**



Hospitals



Retail



Shopping
Malls



Educational
Institutions



Banking



Hotels



Commercial
Bldgs



Homes



**BEYOND
SMART CITIES**



THANK YOU

**THE WORLD'S 1ST GREEN TECHNOLOGY
MARKETPLACE**