



Enterprise Energy Management

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What is an Energy Management System?

- **Term means different things to different people**
 - Power meters networked with a software interface
 - Energy reporting and analysis
 - Building's environmental monitoring and control
 - SCADA (Supervisory Control And Data Acquisition)
 - Utility as well as facility
 - Utility load forecasting, interchange transaction scheduling, accounting
 - Internal processes and procedures + consulting
 - Sophisticated Microsoft Excel spreadsheets

- **Despite the differing methods and techniques, the goals are generally very similar: *Reduce the cost and consumption of energy***



Today's Business Climate

Reduce Energy Usage and Costs



Today's Business Climate



Pressure to be "green"



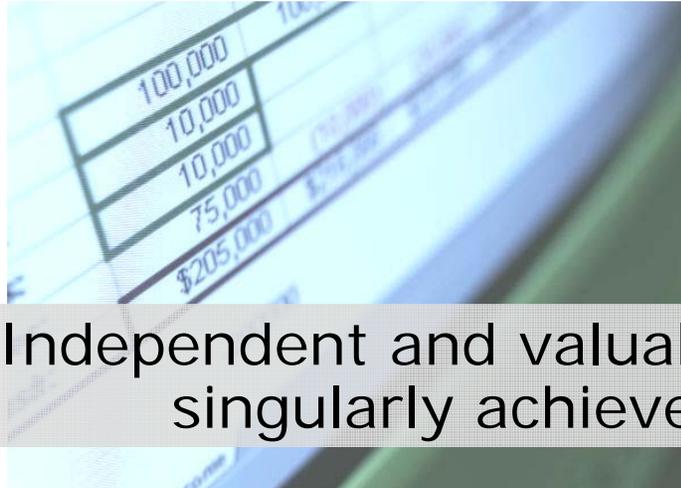
Today's Business Climate



Increasing appetite for information



Islands of Value



Independent and valuable systems, but none can singularly achieve energy savings goals





Islands of Value

Enterprise Asset Management Systems (EAM)

Data tracking, organization and scheduling of physical assets and people resources

- Run-time hours; occupancy rates
- Typically either home-grown spreadsheets or packaged software
- Systems increasingly used to track basic energy usage

Utility Information Sources

External data provided by servicing utility, benchmark sources, weather data providers, etc.

- Utility bills
- Real-time energy prices
- Typically independent functions performed by independent groups

Building Management Systems (BMS)

Active control of physical infrastructure

- Some basic level of reporting
- Typically rich in non-electrical data measurements
- Demand-response controls
- Tasks frequently outsourced

Power Monitoring and Control Systems (PMCS)

Active monitoring and analysis of power infrastructure and energy use

- Typically the AMR system for electricity meters
- Critical for demand-response programs
- Focused on power quality and system reliability



Bridging the Islands

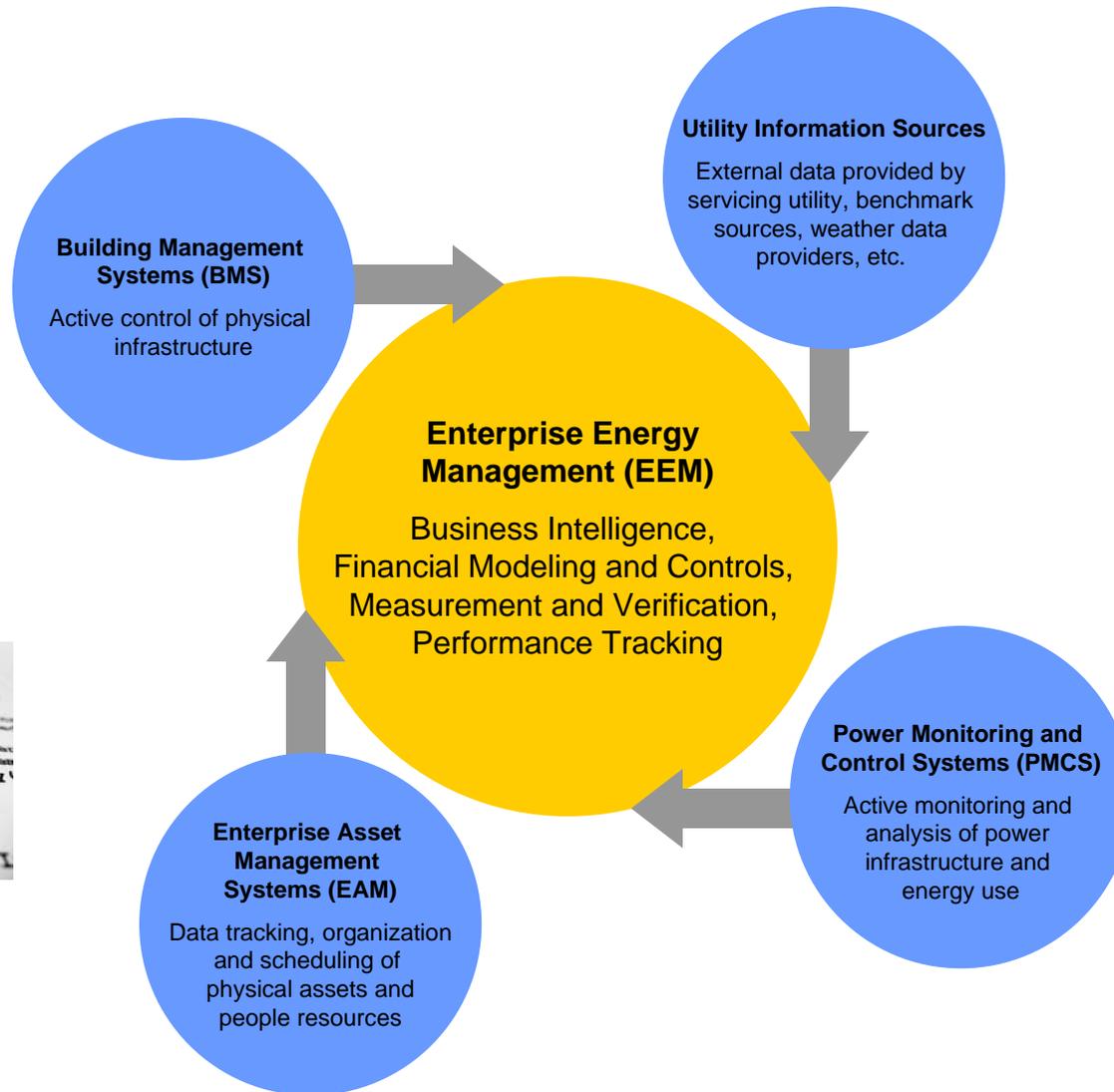


A need exists for a holistic view of all relevant data, a common interface, and strong interoperability





Convergence of Information





PowerLogic ION EEM Demonstration