

# ***Data Center Infrastructure Management Creating The Efficient Converged Data Center***

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- How to manage IT and facilities infrastructure
- Advantage of a holistic approach
- Architectural requirements
- Trellis – a new concept and solution for DCIM

February 2013



# Today's DCIM Solutions

## DSView 4

- Remote management of IT (access & control)
- Universal Management Gateway
  - Next generation KVM/Serial/SPM in one appliance
  - Access and control for the data center
- ACS advanced Console Servers
- MPU KVM-over-IP Switches
- Open framework: scalability and standards support

## Data Center Planner 4

- Plan and manage data center inventory
- Real power values, Spanish language support

## Aperture

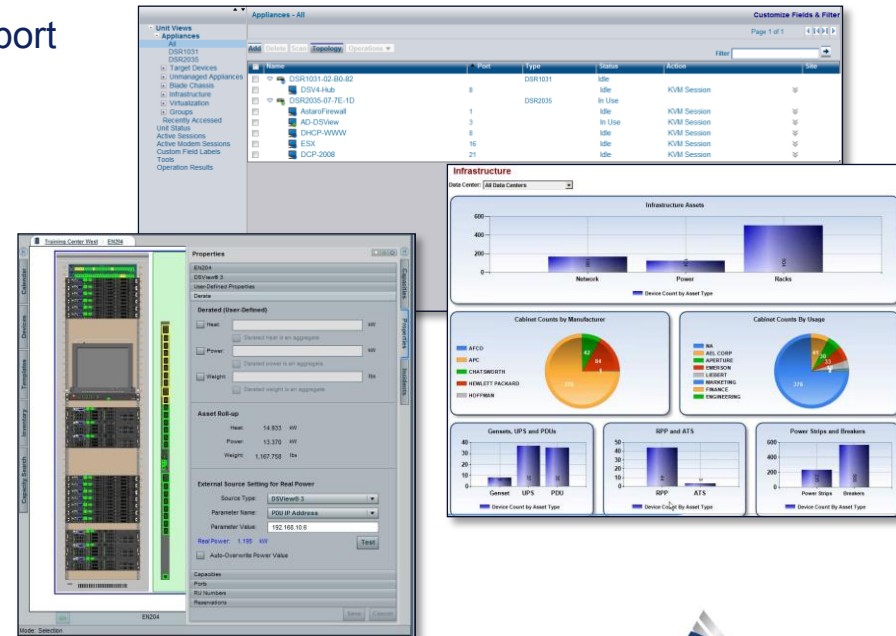
- Manage data center inventory and processes
- New functionality for capacity planning, dashboards and reporting

## Rack Power Manager

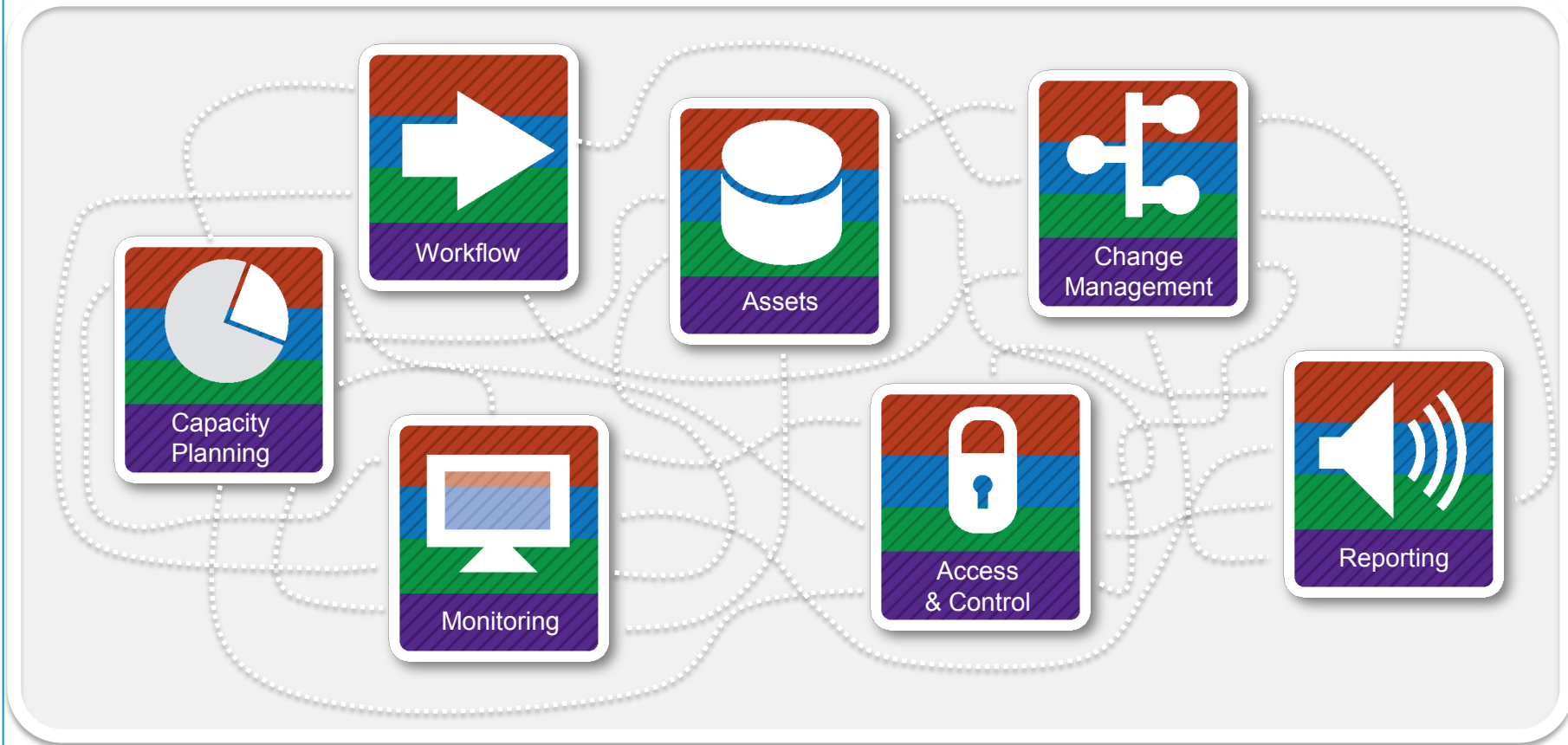
- Monitor & manage real time data center power
- Dashboard, history, and trend views

## Liebert SiteScan Web

- Quick equipment assessment and corrective action
- Trend reporting and capacity management
- Reduce risk of downtime and staffing requirements through centralized monitoring and control



# *Traditional Model: Integrate Products*



# New platform

## Real Time Fabric

Ability to sense, detect, and respond to changes in the Data Center in real time.



## Whole Product Design

Hardware and Software engineered together to maximize performance and availability.



## Context Driven Applications

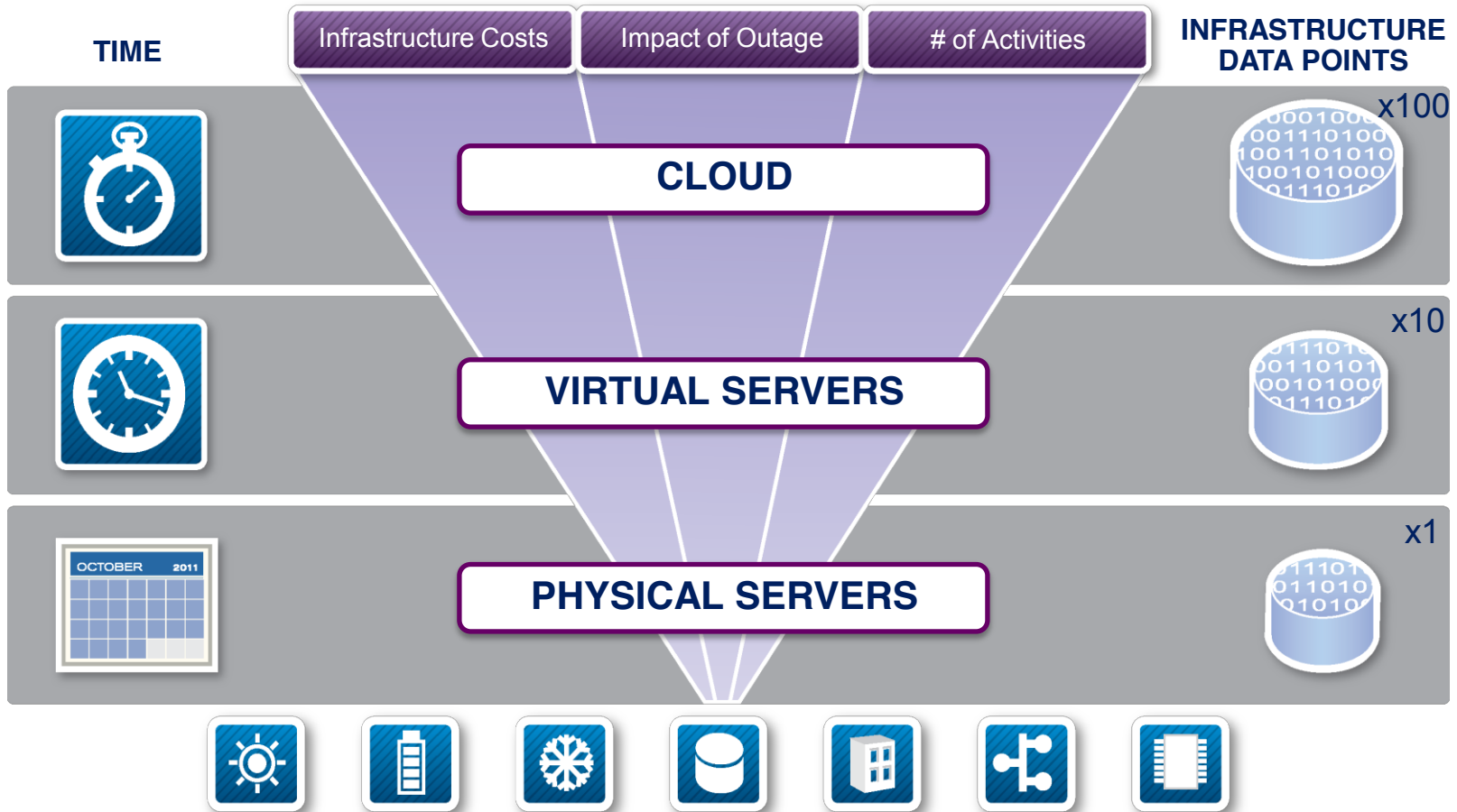
Role based applications providing an integrated view into IT and Facilities Assets.



## Cloud Enabled

Multi-Tenant Architecture provides relevant information to all users.

# Scale Aggravates Everything



# Visibility Requires an Integrated Approach

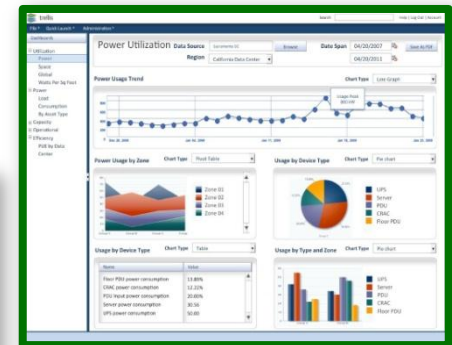


## Universal Management Gateway

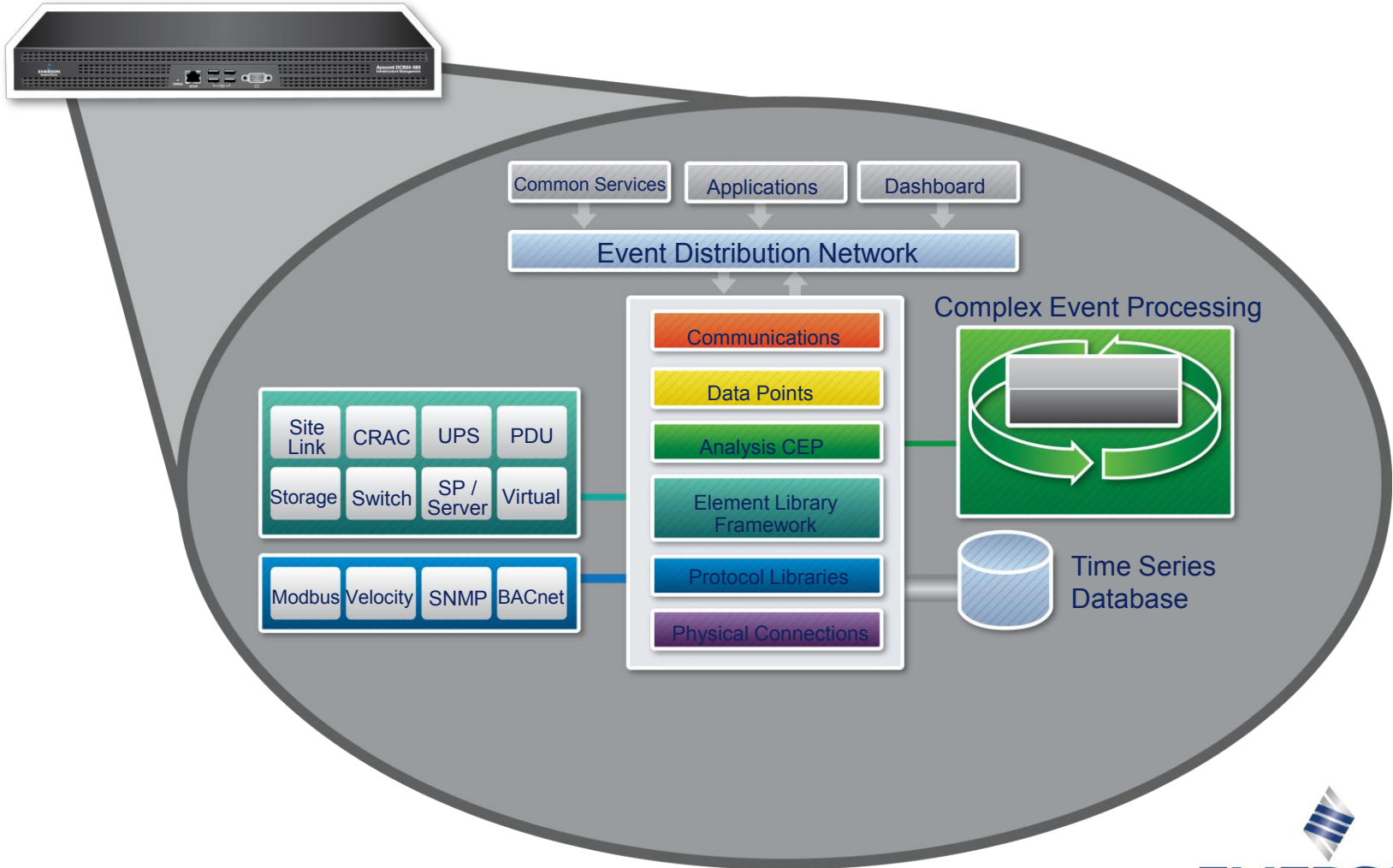
- Heterogeneous Communication
- Bi-Directional Communication
- Collect data from devices
- Multiple Protocol Support
- Real-Time Collection
- Support Environmental Sensors
- Connect to Service Processors
- Thresholding and raising alerts
- Aggregation of data values



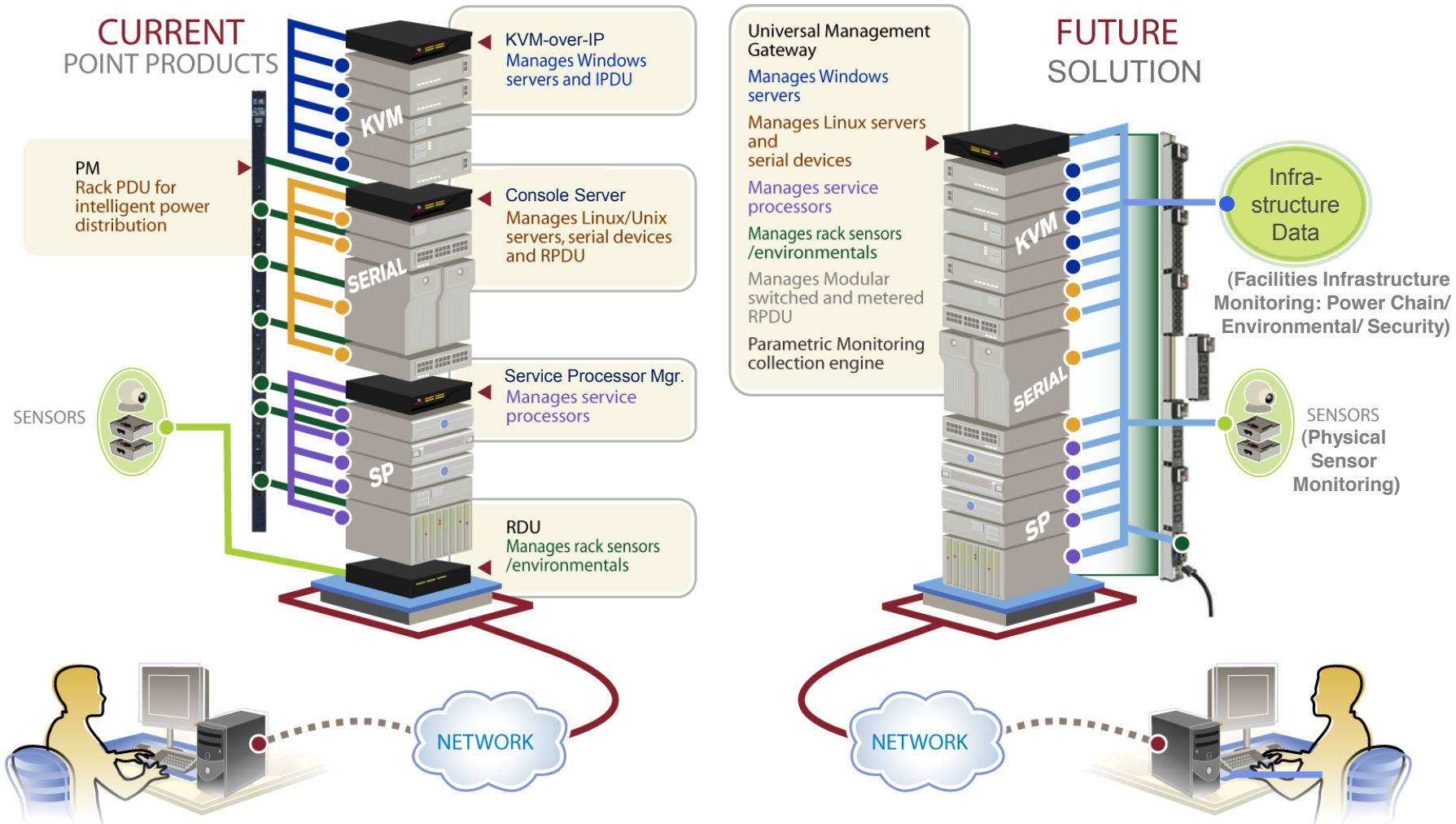
## DCIM Platform Applications



# Universal Management Gateway



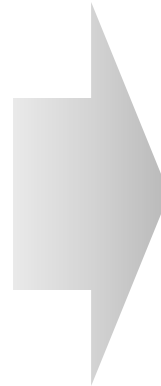
# Add More Value





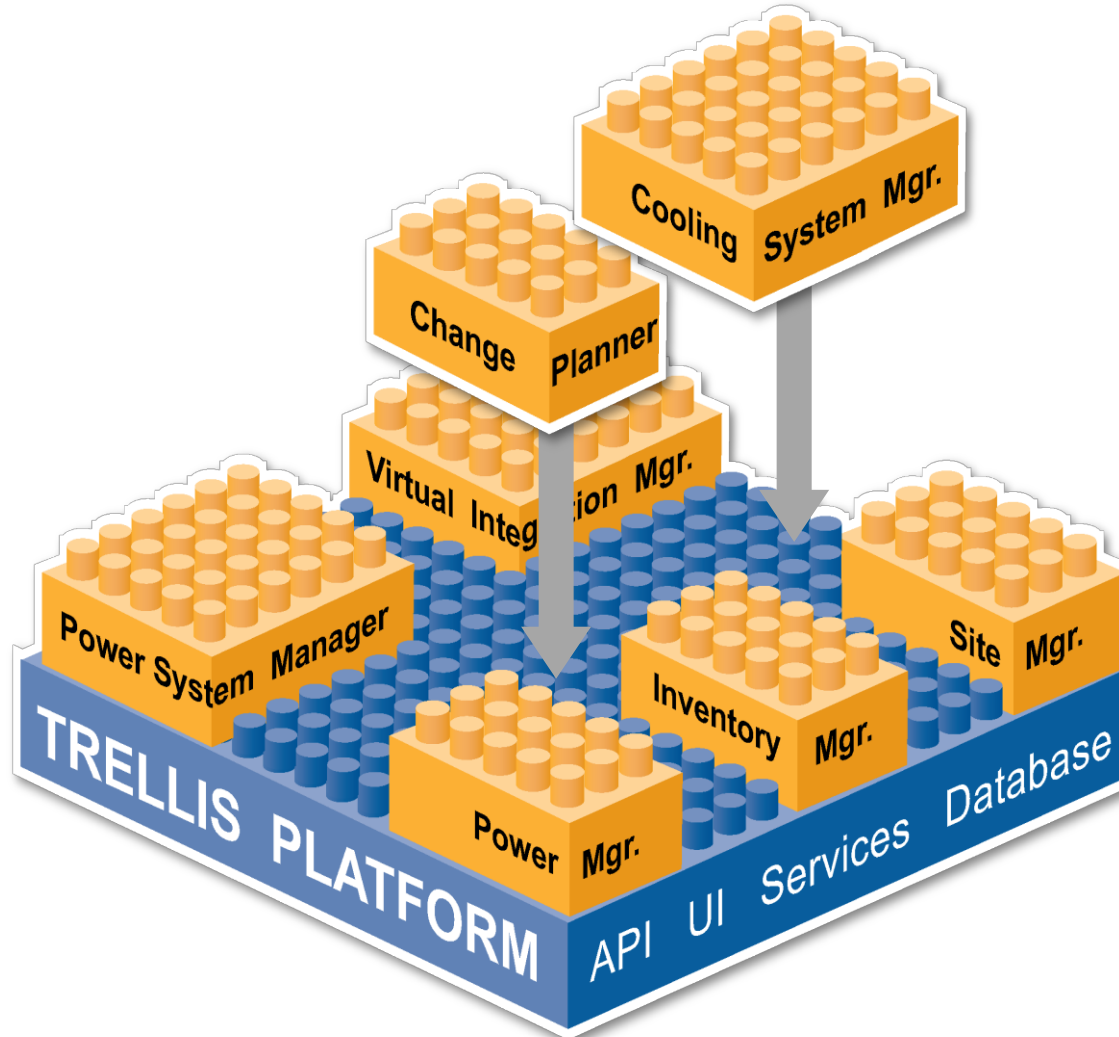
# Heterogeneous Support

- Trellis intelligence engine
  - Device discovery via multiple industry protocol support (BACnet/Modbus/SNMP/Velocify)
  - Bi-directional communication – Facilities device control
- Heterogeneous service processor support
  - Support for a wide variety of SPs
  - Auto-discovery of SPs
  - Embedded KVM
  - Serial over LAN (SoL) traffic logging
  - Platform sensor monitoring and alerting



HP BladeSystem
iLo
ilo 2
iLO3
iLO4 (under preparation)
DRAC4
DRAC 5
Dell 10G
iDRAC6
iDRAC6 R210
iDRAC6 R410
M1000E Chassis
DRAC/MC
iDRAC M600
iDRAC M605
IBM BladeCenter
RSA II
x3550 M2 (IMM)
x3650 M2 (IMM)
IMM2 (under preparation)
Cisco UCS-C
ALOM
ELOM
ILOM
FSC iRMC
FSC iRMC S2
iRMC S3 (under preparation)
IPMI 1.5
IPMI 2.0

# Platform Strategy

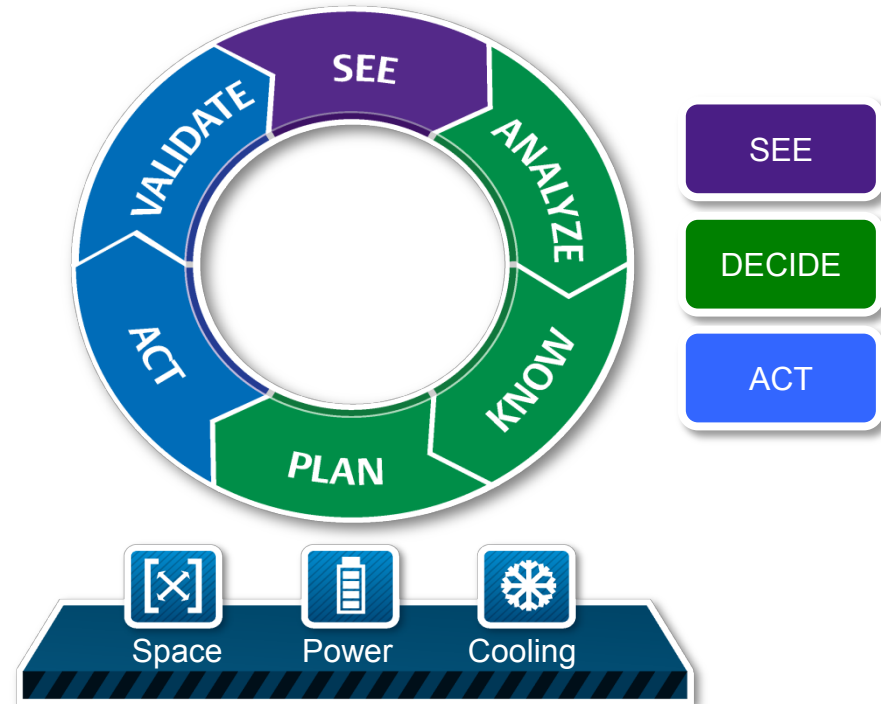


# See - Decide - Act

*Visualize all critical data center information and know the real situation (in real-time or historical trending)*

*Make well-grounded decisions, based on a 360 degree view of the critical infrastructure*

*Take actions with confidence and immediately validate the effects of their actions, assessing the impact on data center infrastructure*



# ***Unique Capabilities***

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- All facilities and IT data in one location
- Real-time analytics
- Intelligent elements (auto characteristic recognition)
- Interactive one-line diagram from generator to rack
- Real-time redundancy evaluation for power infrastructure
- Event timelines (as opposed to single points in time)
- Complex event processing

# Benefits

## Availability

- Predict outage risks
- Monitor facilities / IT dependencies
- Automate impact analyses
- Reduce MTTR
- Eliminate risk with root cause analyses
- Identify redundancy gaps

## Efficiency & Cost

- Minimize energy consumption
- Understand IT services TCO
- Optimize resource utilization
- Improve process efficiency
- Centralize IT equipment access

## Capacity Planning & Agility

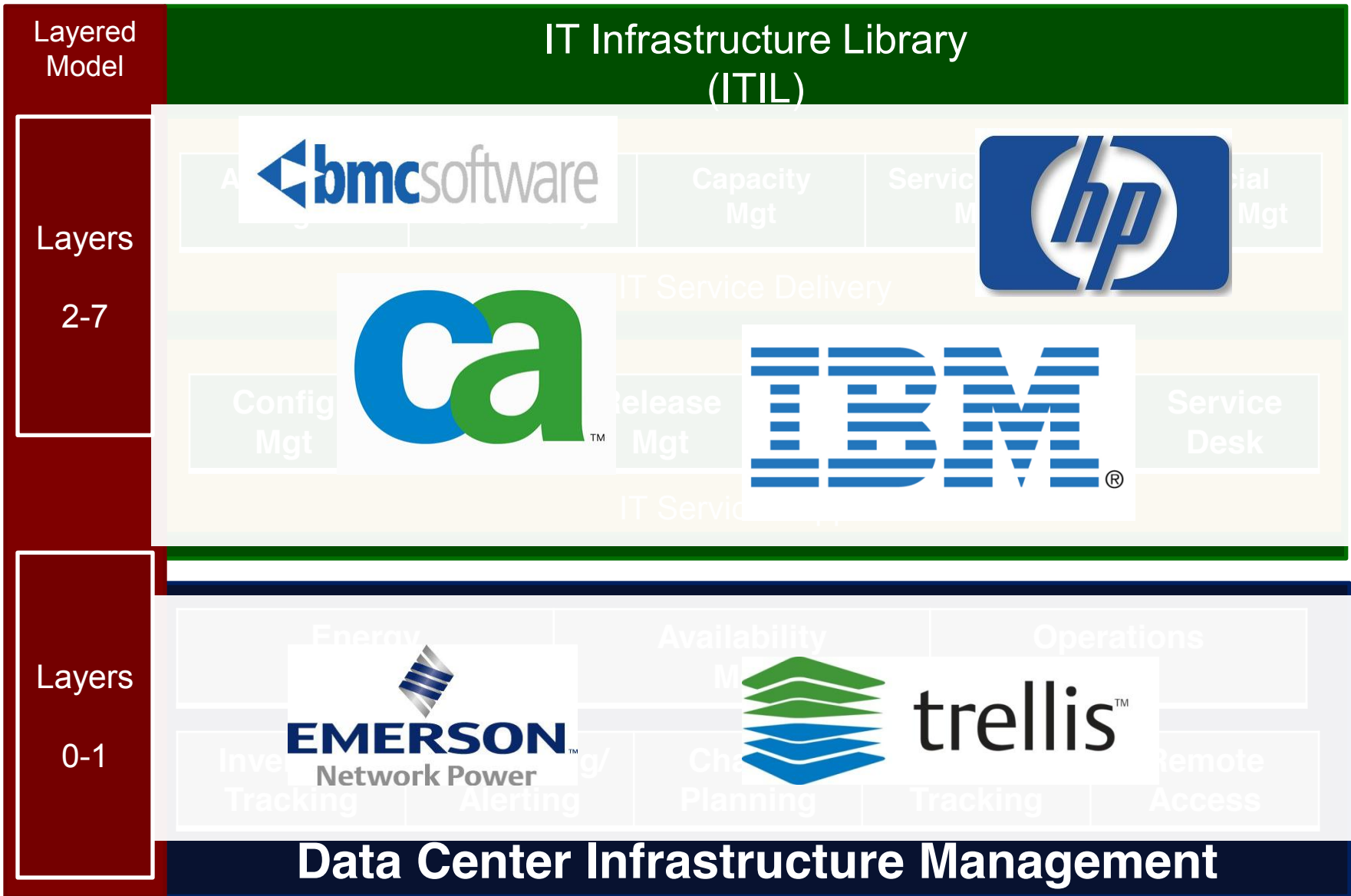
- Understand data center asset inventory
- Plan future IT services
- Optimize IT resource deployment
- Model deployment scenarios
- Reduce vendors

## Compliance

- Control / log IT systems access
- Control physical access to data center
- Meet government / industry energy efficiency standards

**Simplify complex eco-system management**

# Where does this fit ?



# Innovation Pathway



# Emerson auf einen Blick (2012)

Umsatz: \$ 24.4 Milliarden



Unternehmenszentrale: St. Louis, Mo.  
NYSE: EMR



Diversifizierter globaler Hersteller  
und Technologie-Lieferant

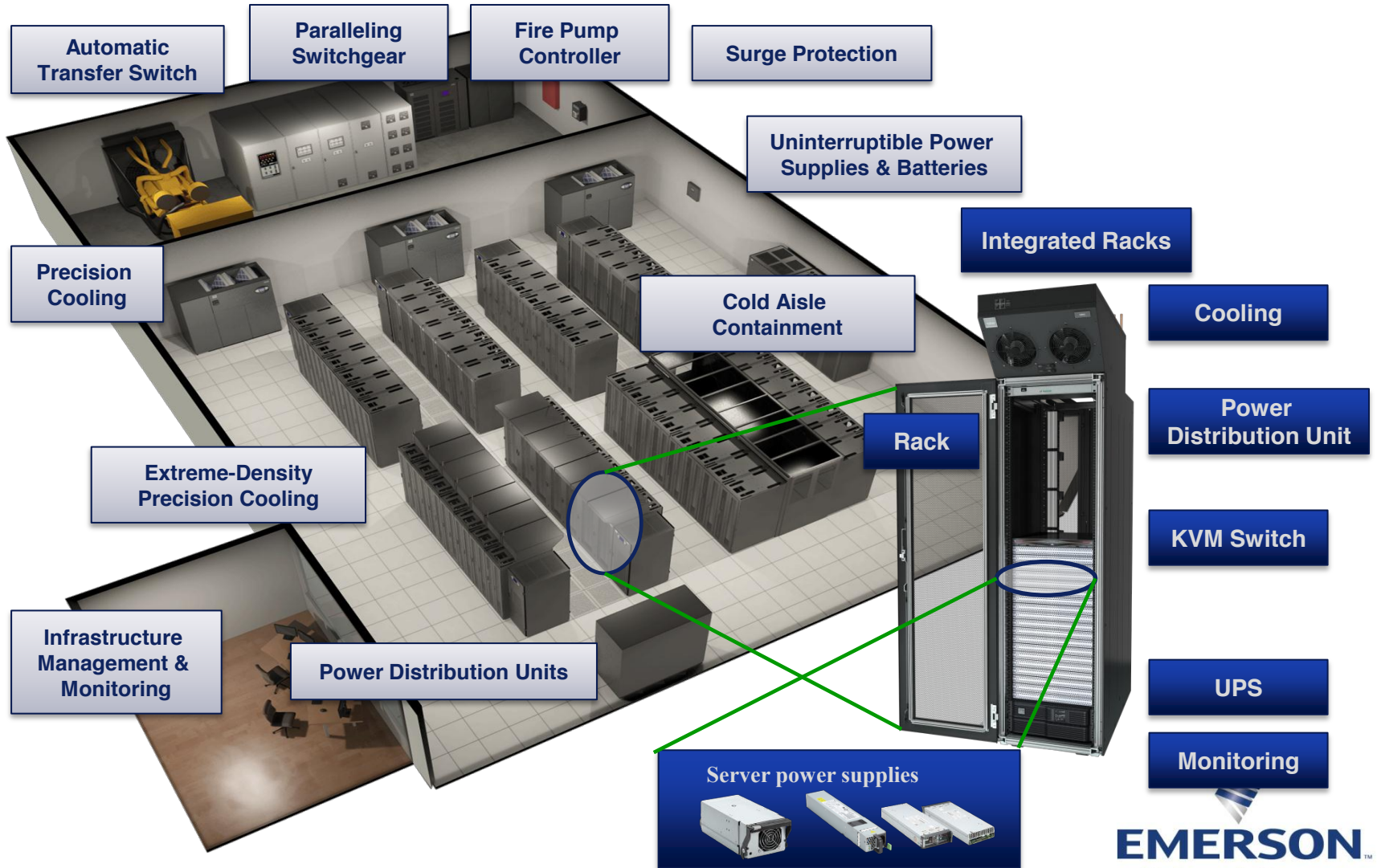


Ca. 135,000 Mitarbeiter weltweit

- Produktions- und/oder Vertriebsstandorte in mehr als 150 Ländern
- 235 Produktions-Standorte
- No. 120 auf der 2011 FORTUNE 500 Liste Amerika's größter Unternehmen
- Gegründet 1890



# Emerson Network Power Portfolio



# THANK YOU !



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