

# Delivering the data center of the future

**Eva Beck**

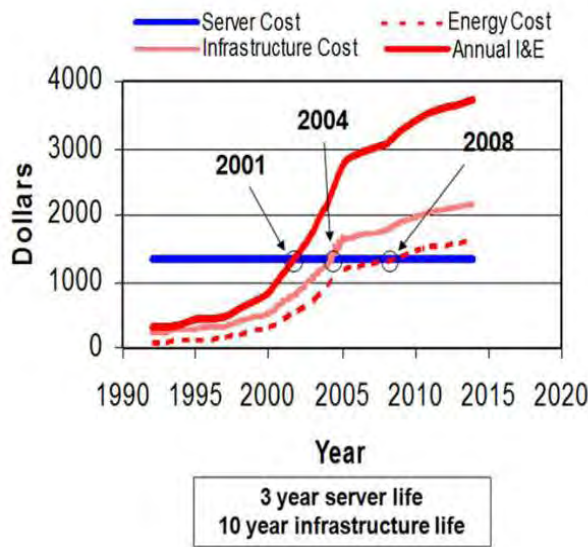
**Business Development Manager SCI**

**EMEA**



# Data Center Challenges

Annual Amortized Costs in the Data Center for a 1U Server



Belady, C., "In the Data Center, Power and Cooling Costs More than IT Equipment it Supports", Electronics Cooling Magazine (Feb 2007)

- **Datacenters constraining growth**
  - Density, power, and cooling demands outpacing capacity in many data centers
- **More energy efficiency needed**
  - Increasing energy costs driving focus on improving power efficiency
- **Faster capacity expansion required**
  - Companies outgrowing data center capabilities and need immediate expansion space
- **Increased focus on capital expense**
  - Pay as you grow enables capex postponement, and more efficient procurement
- **Shortage of in-house expertise**

# HP Green Data Center Strategy

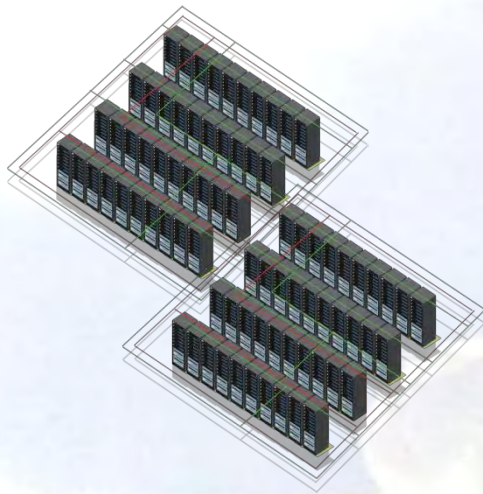
Balancing efficiency + sustainability + TCO & business service Levels

Data Center and  
Primary Energy  
Strategic Planning

Energy/Thermal  
Distribution, Mgmt  
and Performance

Infrastructure Energy Optimization and Control

Global Business  
Technology  
Optimization



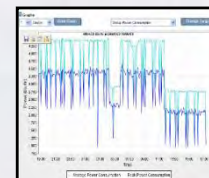
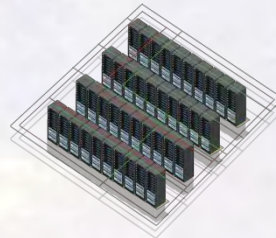
Cooling Energy  
Provisioning

Virtual Machine  
Provisioning

Critical Load  
Demand  
Management



Aligning workloads to lowest  
energy impact and cost



IT Asset Lifecycle and Recycling

# HP POD Complements Brick-and-Mortar



PUE of <1.25



1,800+ W/sq.ft.



600kW+ Capacity



A few weeks to ship

Maximum Security

IT Flexibility

Max Redundancy

Power density

Energy Efficiency

Geographic Flexibility

Speed of deployment

Brick-and-mortar



Container



# Extending Adaptive Infrastructure with the HP POD

## The HP open POD advantage – IT without limits

- IT Flexibility:** Supporting HP and 3<sup>rd</sup> party IT
- Serviceability:** Normal IT access, both front and back; overhead POD components
- Deployment:** A few weeks from order to shipment, with global deployment & support
- Management:** Standard remote IT management, standard BMS compatibility

# HP POD Key Features

## Industry-standard Flexibility

22 x 50U, 19" full-depth industry-standard racks support HP, Dell, IBM, Sun, Cisco, etc.

## Best-in-class Density

Support for 3,520 compute nodes, 12,000 LFF drives, or any combination

## Shipped in a few weeks, deployed WW

Pre-integrated, configured and tested before shipment; shipped in six weeks from order.

## Energy Effectiveness

PUE ratio <1.25 (1.07 excluding chiller)

## Infrastructure Services Portfolio

Full lifecycle support services combining technology and facilities expertise



# Interior view

Serviceable high efficiency heat exchangers (HEX) from HP MCS

Serviceable high efficiency, variable speed blowers from HP MCS

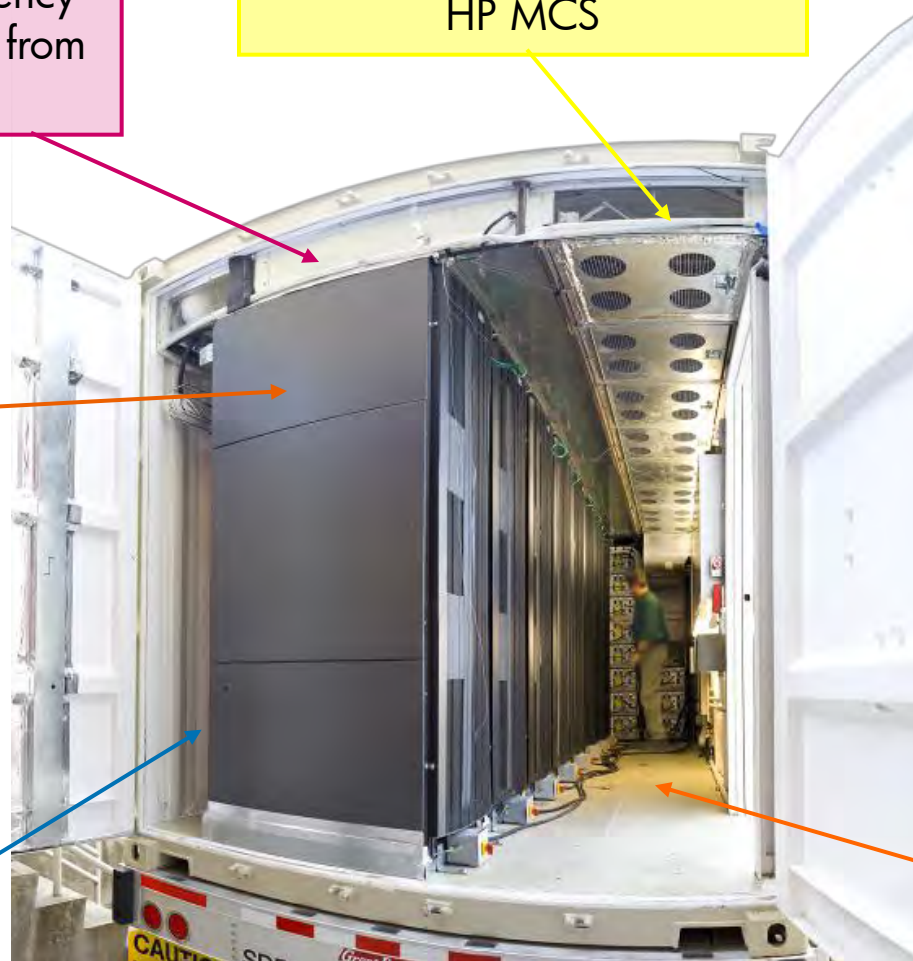
Separate Utility module segregate IT/UPS security access and environmentals

22 Standard 50U racks

Facilities management on exterior of cold aisle

Hot aisle with rear access through doors in the container

91 cm cold aisle can run at  $>32^{\circ}\text{C}$



# HP POD Infrastructure Services

- Services for the complete lifecycle of your POD Solution
  - Data center integration and planning
    - Critical Facilities Services delivered by EYP MCF
  - Tailored Factory Express POD
    - Build, integrate test and ship
  - Onsite implementation
    - Deployment, commissioning, acceptance testing
  - Ongoing maintenance and support
    - Options include proactive and critical service named services account team

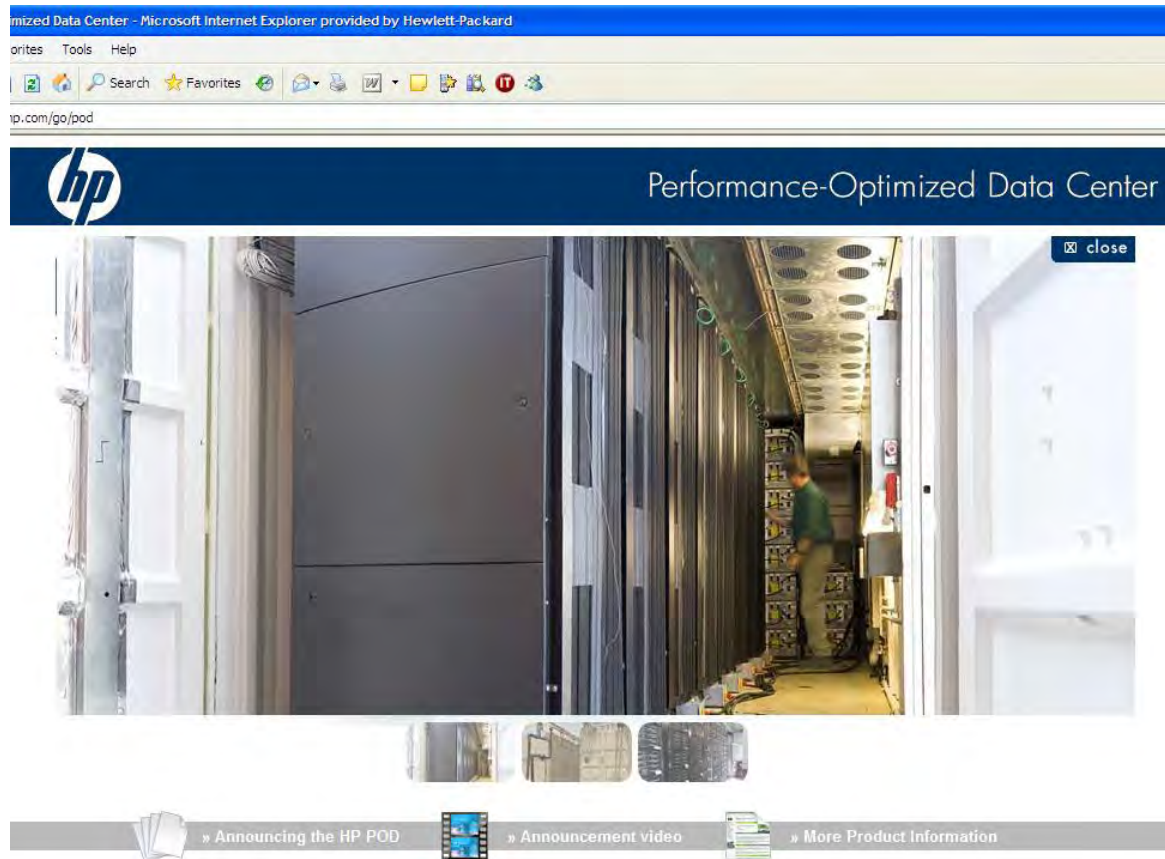


# Key Take aways

- HP is extending our Cloud and Scale-Out portfolio
- HP is delivering an innovative datacenter solution; giving customers additional choice
- HP POD enables rapid capacity expansion
- HP has harnessed its unique expertise in datacenter architecture and design with the HP POD
- HP POD offers greater density, flexibility, accessibility and end-to-end services

# More information

- [www.hp.com/do/pod](http://www.hp.com/do/pod)



Performance-Optimized Data Center - Microsoft Internet Explorer provided by Hewlett-Packard

hp.com/go/pod

Performance-Optimized Data Center

close

» Announcing the HP POD

» Announcement video

» More Product Information

[Privacy statement](#) [Using this site means you accept its terms](#)

© 2008 Hewlett-Packard Development Company, L.P.



Technology for better business outcomes

Business outcomes = Environmental outcomes

