Datacenter Market Trends

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Putting Money Where the Mouth Is

- Our approach
  - No Hype
  - Clear Actionable Advice
  - No Hazy Crystal Ball Predictions
  - Hard Questions and Good Answers

Coverage Areas: Topics of Focus

- Colocation
- Hosting
  - –shared
  - –dedicated
  - –managed
- Datacenter Facilities
  - –power and cooling
  - –eco-efficiency
- CDN
- Messaging
- Utility Computing

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Introduction

Four Key Topics

- What every Enterprise needs to understand about datacenters
- Datacenter Industry Health Report
- Key Customer Issues
- Motivators for Future Datacenters

Enterprises and the Datacenter

- What every Enterprise need to know about datacenters?
  - Third party datacenters are valid options for the enterprise. “Build vs Buy”
  - There are a number of different choices depending on the specific enterprise’s needs
  - Providers of these services are stable and in a stable market segment
  - Those providers understand enterprise issues and concerns

Enterprises and the Datacenter

- What's an enterprise?
  - Not just the conventional Fortune 500
  - Content and entertainment
  - Software and Hosting firms
  - IT-intensive firms – retailing, pharma, energy
  - Mid Tier enterprises
  - All the way to SMBs

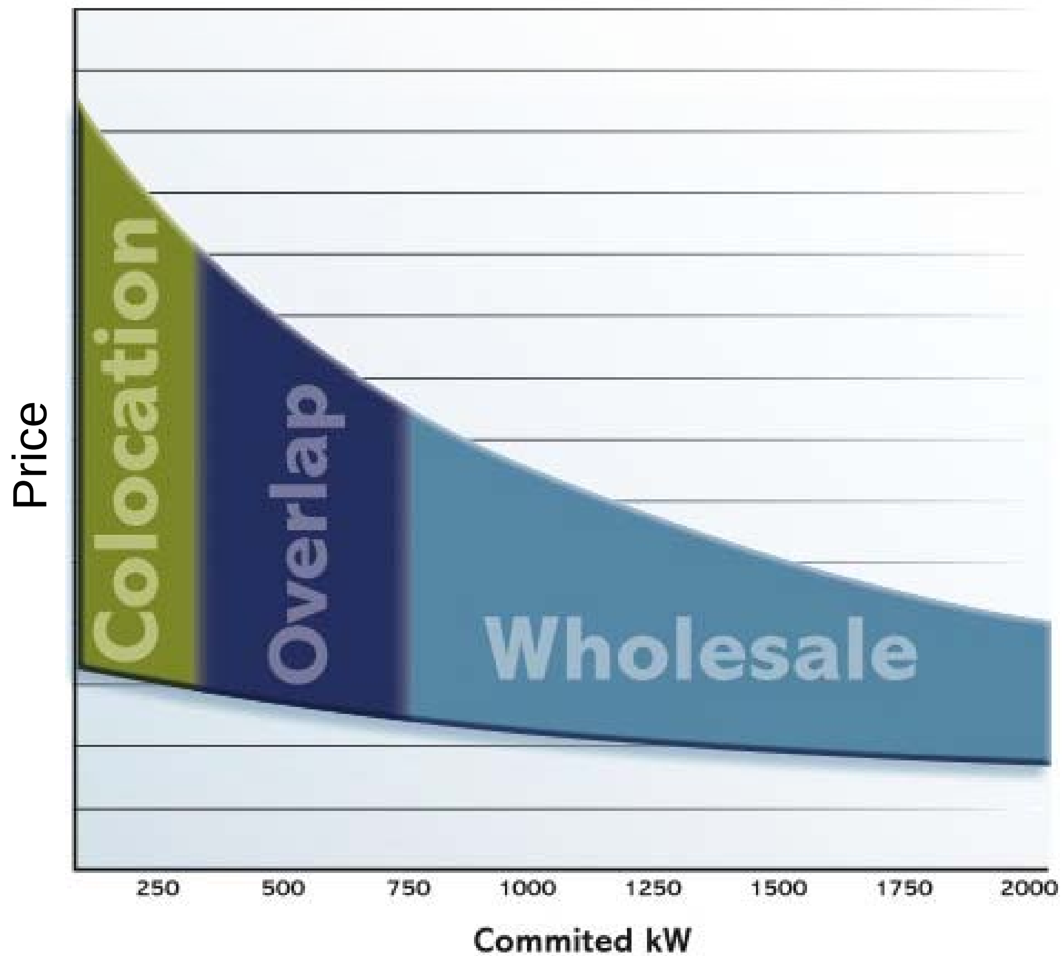
Enterprises and the Datacenter

- Two Primary types of Datacenter
- Colocation –
  - Contract: 1 to 3 years
  - Size: 5 to 50 cabinets
  - Some managed services
- Wholesale Datacenter –
  - NNN Lease: 3 to 7 years
  - Size: 5000 sq ft+ (~ 1MW+)
  - Limited or no services

Power

- This is not traditional real estate
- “Space” is secondary. Power is king.

Wholesale & Colocation



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Q2/Q3 and datacenters

- Datacenter services showed strong revenue
  - 5% Q/Q (over 15% annualized growth)
  - Outpaced 80% of public and private firms
  - Sector for all seasons
- EBITDA margins outpace revenue growth - 15 to 20% annualized growth
- Lack of supply due to pokey capital markets is a big threat to growth

Datacenters and the Recession

- The best of times at the worst of times
- Demand is down slightly, but supply has taken a nosedive
  - Why?
- Inability to obtain construction loans
  - Banks hate datacenters. Really.
  - 2001 is the blink of an eye to a banker.

Demand is still strong - mostly

- Demand is still strong, which is driving utilization higher
- What's driving demand?
  - Lack of enterprise CapEx
  - Continuing "same store" sales
  - Demographic move to cloud is unstoppable
  - Strong verticals like Health Care
- New interest from…
  - Financial vertical, traditional big enterprise

Pricing Dynamics

- Steady, today
- 7 to 10%+ annualized price increases by Q1
- This is good for providers, but enterprise should lock in pricing ***now***.

Looking ahead

- Growth will pick up….
- Datacenter outlook sunny….
  - Colocation has seen 5% Q/Q growth in Q4/Q1
  - REIT growth slower
  - Biggest threat: Insufficient inventory on hand for eventual recovery due to lack of capital
  - Largest providers have significant advantages in cash flow

The Bottom Line

- Datacenter firms
  - Cash flow positive
  - Positive and growing EBITDA
  - Revenue growing and moderate debt levels
- Datacenters
  - Utilization levels high
  - Prices set to climb
  - Minimal impact from cloud computing, virtualization

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Typical Customer Issues

- Loss of control – server hugging
- Enterprises need far more education than other colocation users
- Network issues can be paramount and controlling
- Demand for enterprise level support

Understand Enterprise Issues

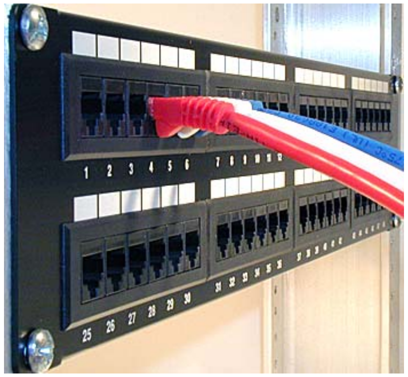
- Server hugging is a real phenomenon
  - A result of training, not irrationality
  - Starting to abate, but the change is generational
  - The "Internet Generation" has a higher comfort level with the cloud
  - Control issues are valid and practical
    - Remote management isn't always up to snuff
    - Integration of ticketing systems and security
    - Regulatory compliance is a huge plus

Understand Enterprise Issues

- The "education problem"
  - Most significant issue in datacenter provider penetration is education
- Most enterprises don't know services exist!
- Early customers needed less education
  - Willingness to educate and make resources available – key selection criteria
  - Selling isn't enough

Understand Enterprise Issues

- Networking issues are paramount
- First question- are you on-net to X?
  - Enterprises have strategic networking relationships



- IDC providers think of Internet
  - ..but enterprises frequently have non-Internet WANs
  - Many times xeroxed list of network providers is not going to do it, post or pre sales

Understand Enterprise Issues

- Enterprise-level support
  - Sink or swim approach doesn't work with the enterprise
- Datacenter firms raising their game in the post-sale period
  - More sophisticated implementation management
  - Better web portals and ticketing systems
  - Technician support still needs work
- Providers doing a good job, can improve

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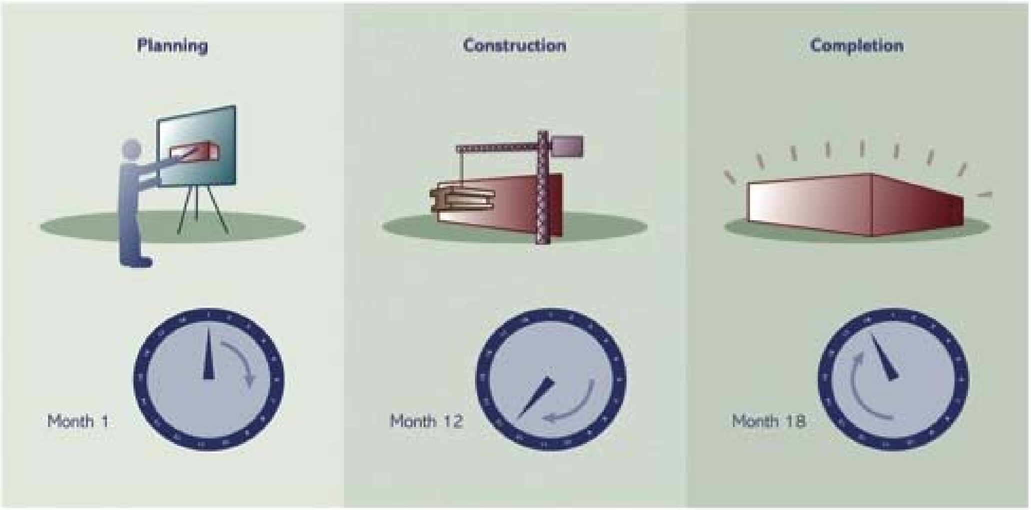
Motivators for Future Datacenters

- Speed to Market
- Reduced Cost
- Improved Reliability

Speed to Market

- Persisting supply / demand imbalance to drive faster delivery of datacenters
    - Modularity
        - Process Refinement & Smaller “Phases”
    - Standardization vs Customization



Reduced Cost

- Initial cost somewhat reduced from modularization and component pre-fabrication
  - Ideally, reduced labor and construction time (not necessarily a given just yet)
- "Pieces" will come down in price
  - Mass Production
  - More Competition
- Operational Costs / Efficiency
  - "Green" initiatives
  - Hedging bets on power prices

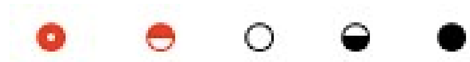
Quantifying Efficiency

EFFICIENCY IMPROVEMENT ANNUAL COST SAVINGS FOR VARIOUS LOADS					
Load (kW)	1%	2%	3%	4%	5%
250	$2,190	$4,380	$6,570	$8,760	$10,950
500	$4,380	$8,760	$13,140	$17,520	$21,900
750	$6,570	$13,140	$19,710	$26,280	$32,850
1000	$8,760	$17,520	$26,280	$35,040	$43,800
1250	$10,950	$21,900	$32,850	$43,800	$54,750
1500	$13,140	$26,280	$39,420	$52,560	$65,700

Assumes $0.10 / kW-hr *Source: Tier1 Research*

Improved Reliability

- There is no "Consumer Reports" for datacenter infrastructure equipment



- Redundancy, maintenance practices, and the almighty human element
- Improved reliability for future datacenters will come from datacenter-wide integration
    - Increased intelligence and instrumentation

- Content-rich and contact-heavy
- Substantive analysis and insight
- High level networking
- Agenda
  - Leadership Perspectives
  - Datacenter Operations
  - Technologies & Architectures
  - Build vs Lease
  - Datacenter Regulation
  - … and more

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Questions?

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