BROADGROUP

INNOVATION IN CONSULTANCY

The data centre market – facing up to the crunch and green issues

Steve Wallage

Managing Director

BroadGroup Consulting

About BroadGroup

Consulting – strategic and customized works for users, operators, vendors, investors and others involved in data centres. From business and financial modelling and commercial due diligence to demand drivers and market evolution.

Research – Focused research reports, multi client studies, Data Centre News (free), country and regional reports, green data centres, power challenges, needs of financial users, dark fibre, country reports, managed services, peering exchanges, telecoms connectivity

Events – Power and Cooling, Data Centre Investment Forum, Data Centres Asia, Dark Fibre, Telecom Finance Middle East, Managed Services

Portals – datacentres.com, wholesaletelecoms.com, tmtfinance.com, darkfibreconvention.com

#1 Data Centre research and consultancy

Technology forces

"We see a neutron star collapse of data centres"

Sun CTO and EVP of R&D

"You need never build another data centre"

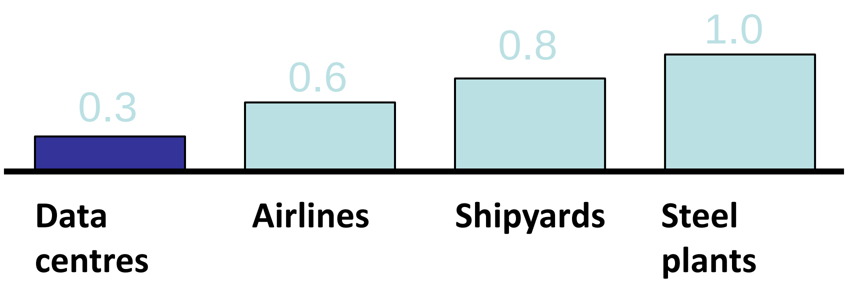
Dell – Reveal your hidden datacenter strategy

Environmental forces

Key points on data centres' greenhouse gas emissions

- Data centre **electricity consumption** is **almost .5% of world production***
- Average data centre consumes energy equivalent to 25,000 households
- Worldwide energy consumption of DC doubled between 2000 and 2006
- Incremental US demand for data centre energy between now and 2010 is equivalent of 10 new power plants
- 90% of companies running large data centres need to build more power and cooling in the next 30 months (Source: McKinsey)

Carbon dioxide emissions as percentage of world total – industries (%)



Worldwide data centres carbon emissions per annum exceed total generated by Italy

*Including custom-designed servers (e.g., Google, Yahoo)
Source:Financial Times; Gartner report 2007; Stanford University; AMD; Uptime Institute; McKinsey

BroadGroup
INNOVATION IN CONSULTANCY

And how are IT budgets looking....

BUT – on the other side - demand drivers

Data growth

Disaster recovery and business continuity

Compliance and regulation (more to come such as MIFID)

Video and new media

Greater usage of broadband and Internet

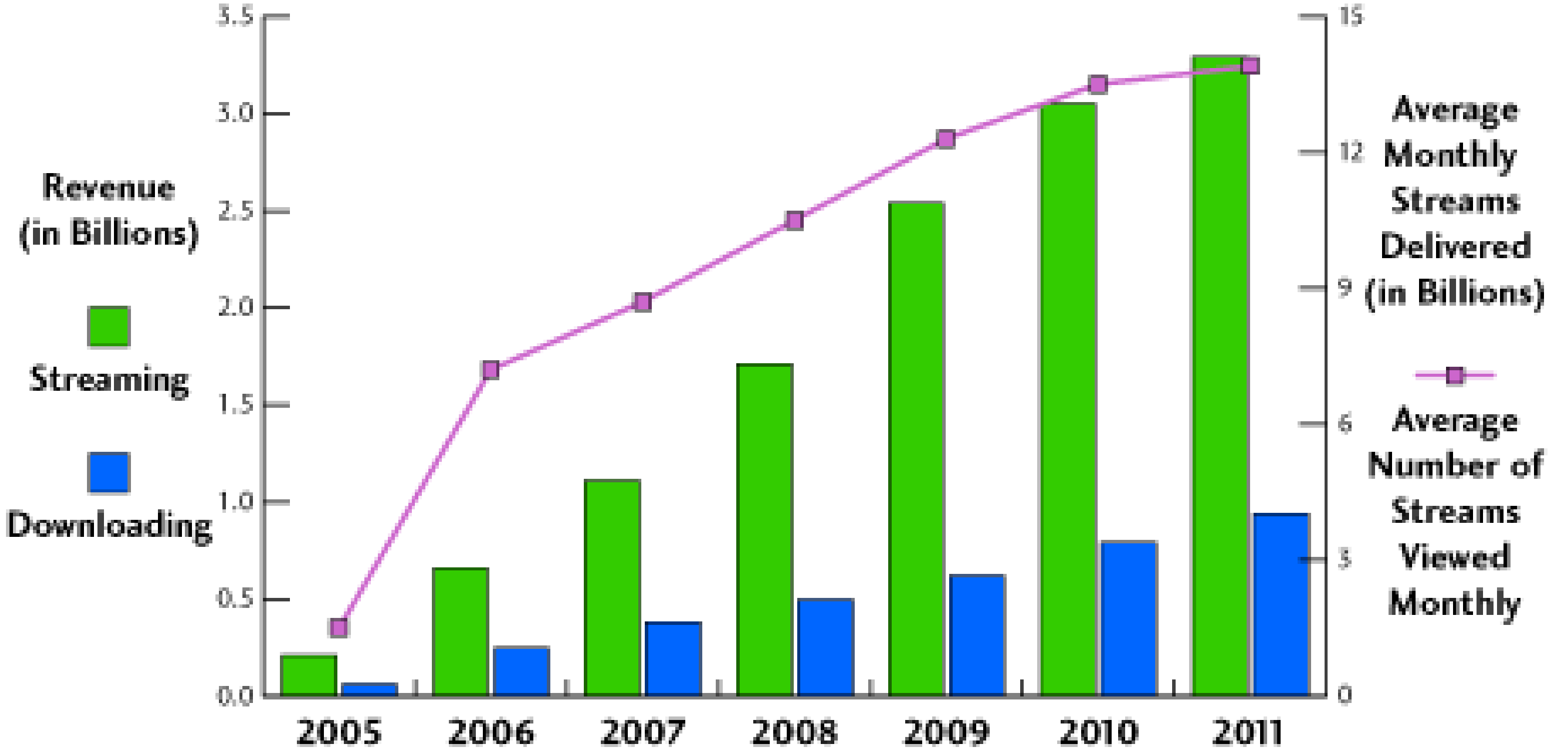
More complex software

Blade servers

Lack of power, low utilization rates and upgradeability of data centres

Vertical specific factors

Global market for Internet video ($ bn)



Source: Yankee Group

Cisco: Internet traffic growing 61% a year 2007-2012

BroadGroup research - demand

• Banks seeing 50-100% annual growth in data requirements

• YouTube accounts from anything from 2-10% of all Internet traffic – BBC iPlayer 3-5% of UK Internet traffic

• Disaster recovery and business continuity – driven by standards such as BS25999

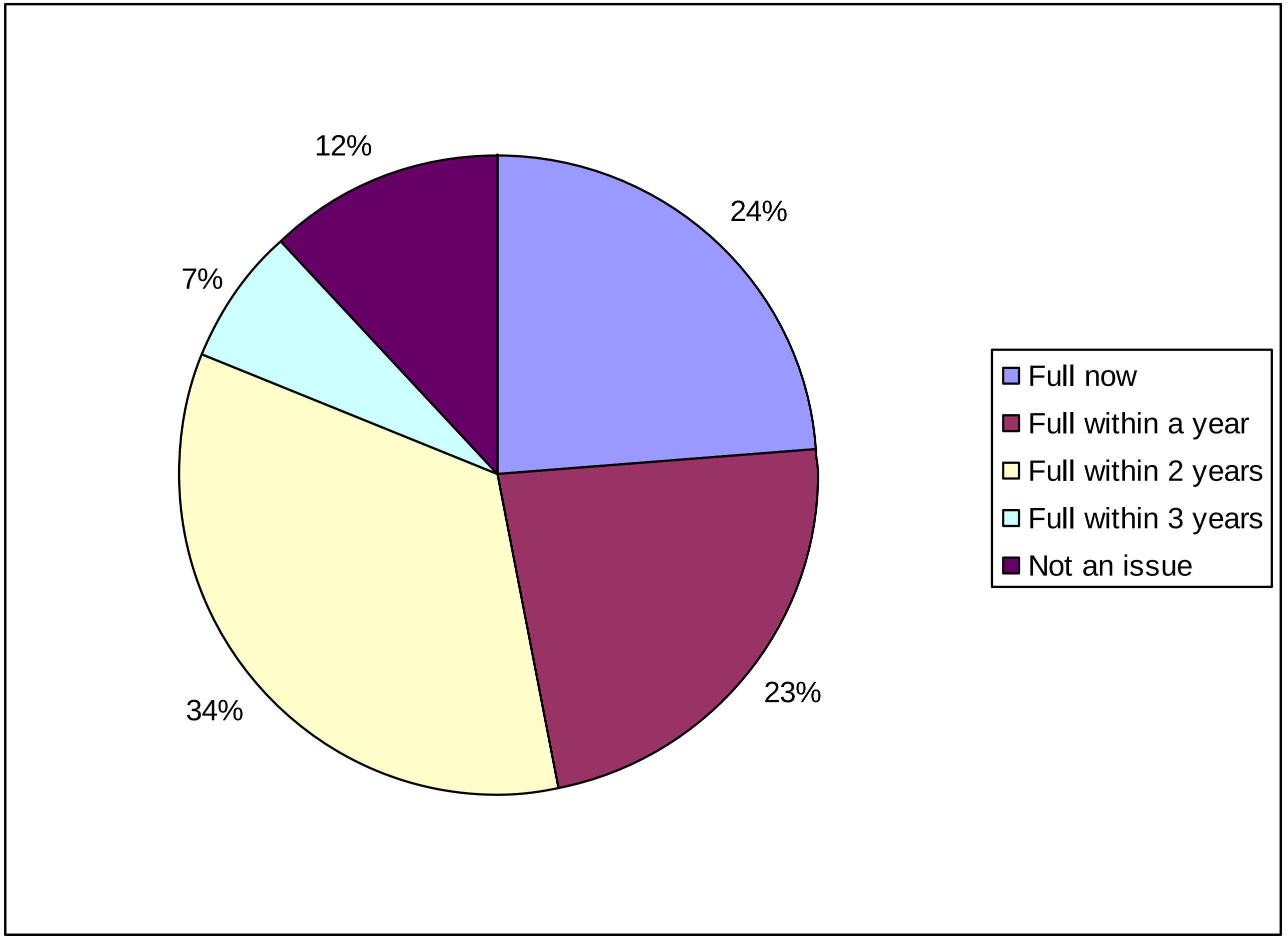
• Divisions remain between facilities management, buildings and IT

• Continued impact of blade servers

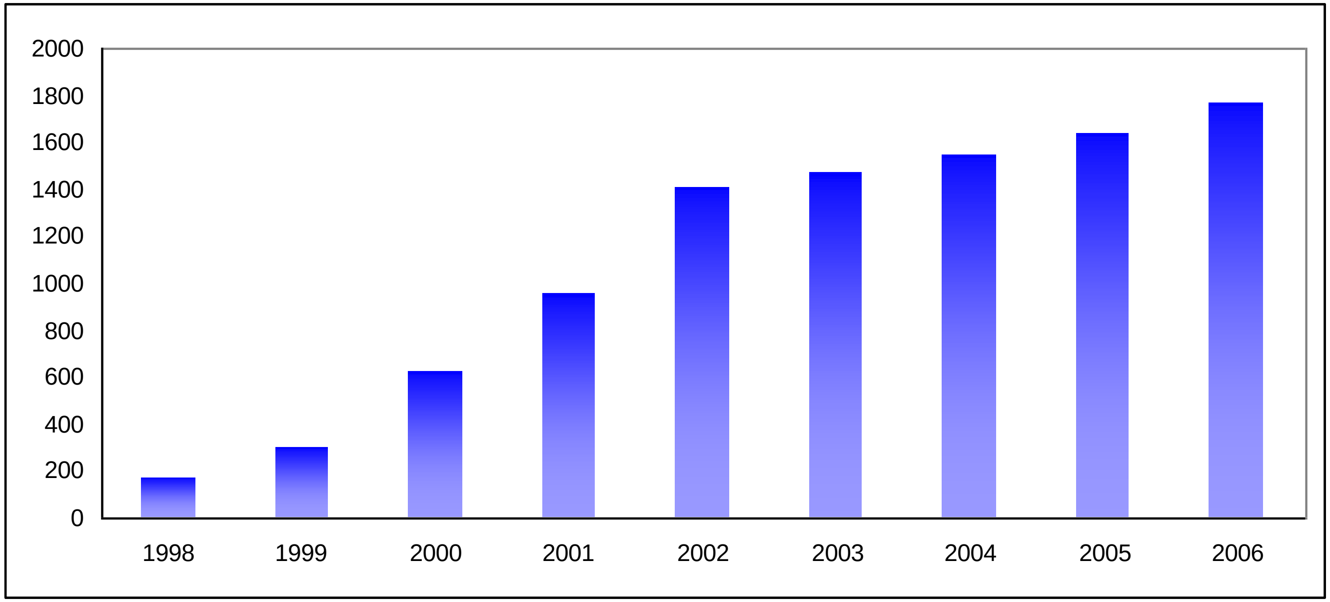
• Power costs can be 40-50% of operating expenditure on data centre

Data centres have become the 'pain point' for many enterprises

State of market – data centres owned by UK banks



Lack of new carrier neutral data centre build in London after dot com



Is credit crunch all bad news for third party data centre operators??

Some operators gain 30-40% revenues from financial services

Some cancellations and postponements

But......

Capex to opex – outsourcing

Systems integrators growing as customer base

Media growing with social networking, new applications

E-commerce growing as retailers cut costs, customers look to save money

Regulation certain to increase

Greater complexity and uncertainty – more desire to outsource

Green issues – the inconvenient truths – green and efficiency

Green  **Efficiency**

- **A car getting 5 mpg running on biomass is 100% green**

- **But the two are clearly interlinked – even the Carbon Trust looks at efficiency first**

Green issues – the inconvenient truths – the spending realities

"I hear a lot about green issues. Our board likes the improved efficiency linked to green issues. But lets be honest, we ain't going to spend any real money on green issues unless we are forced to by legislation"

- Data centre manager at a bank

Green issues are here and varied – BroadGroup user event feedback

1. Ill-conceived regulations and standards
2. Lack of clarity
3. Lack of independent verification and benchmarks
4. Lack of holistic view
5. Lack of education and awareness
6. Recycling concerns
7. Different regulations in differing markets
8. Competing industry groupings and initiatives

The ‘green’ realities

Green involves:

1. **Design/engineering building**
2. **Location considerations**
3. **Engineering to optimal use**
4. **Deployment efficient equipment and systems**
5. **Efficient operations**
6. **Low carbon and renewable technologies and energy sources**

Real focus is rightsizing, efficiency and expertise

New legislation will make this ever more important

Data centre industry needs to ‘stand up’ for itself

Conclusions – users can help themselves

- Understand what is coming down the track

- Do the (relatively) simple things

- Take the holistic view

- Look at best practices and benchmarks (GreenGrid and EU Code of Conduct)

- Fight your corner – internally/externally

Conclusions – the market is still vibrant

- **New build and funding, despite credit crunch**

- **Need for data centres is still growing quickly**

- **Need for third party data centres more vibrant as power/environmental costs soar, and challenges of in-sourcing grows**

- **The UK is still where people often want to be (although long-term power availability and cost is key concern)**

- **But London is no longer the centre of data centre activity**

- **Now: Green = efficiency = cost savings**
- **2009: Green = legislation = forced changes in activity**

Thank you !

Steve Wallage
Managing Director
BroadGroup Consulting
steve.wallage@broad-group.com

www.broad-group.com
www.datacentres.com