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Evolution Tomorrow's Datacentre

Date : January 2008
Presenter : Gary Barnett



Agenda

- Introduction
- Human Evolution
 - The role of the CIO
 - Business Processes
- Datacentre Evolution
 - Technology trends
 - Data center automation
 - The green data center
- Call to action
 - Three projects you can start today



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Tomorrow's CIO

The evolutionary future of CIO-asaurus
REX



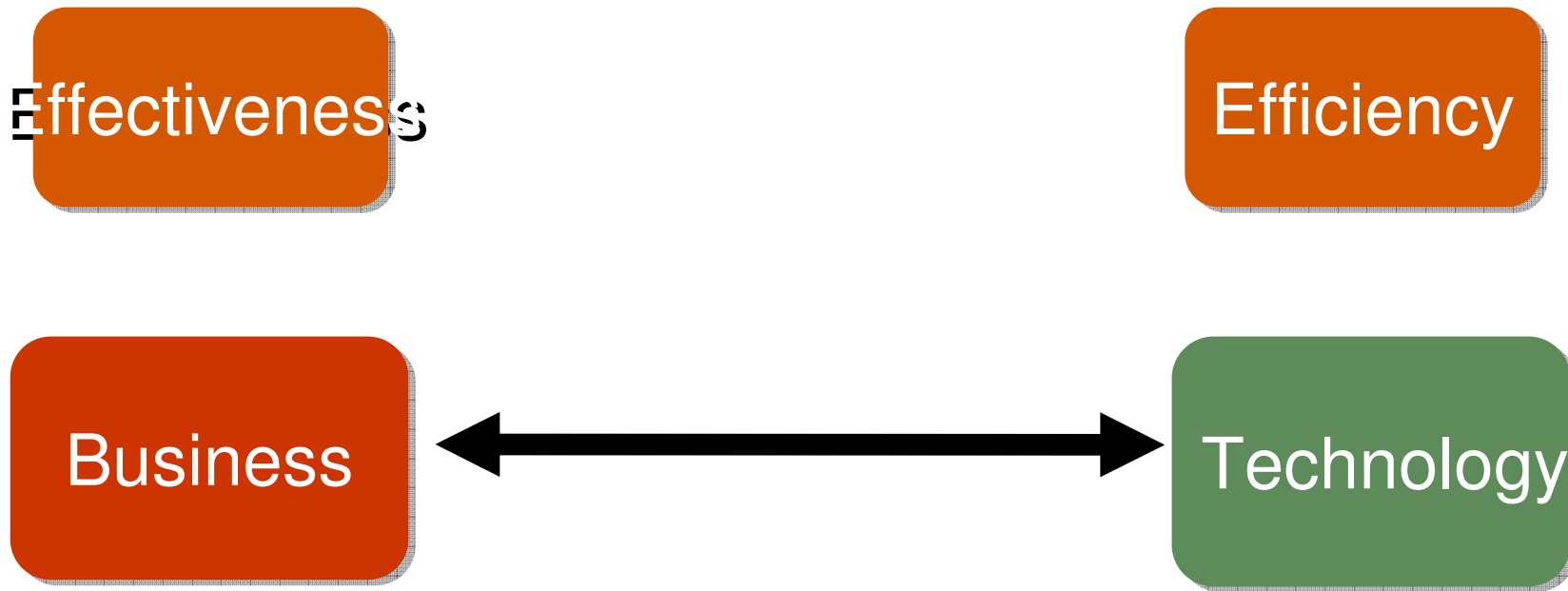
The Evolving Role of the CIO



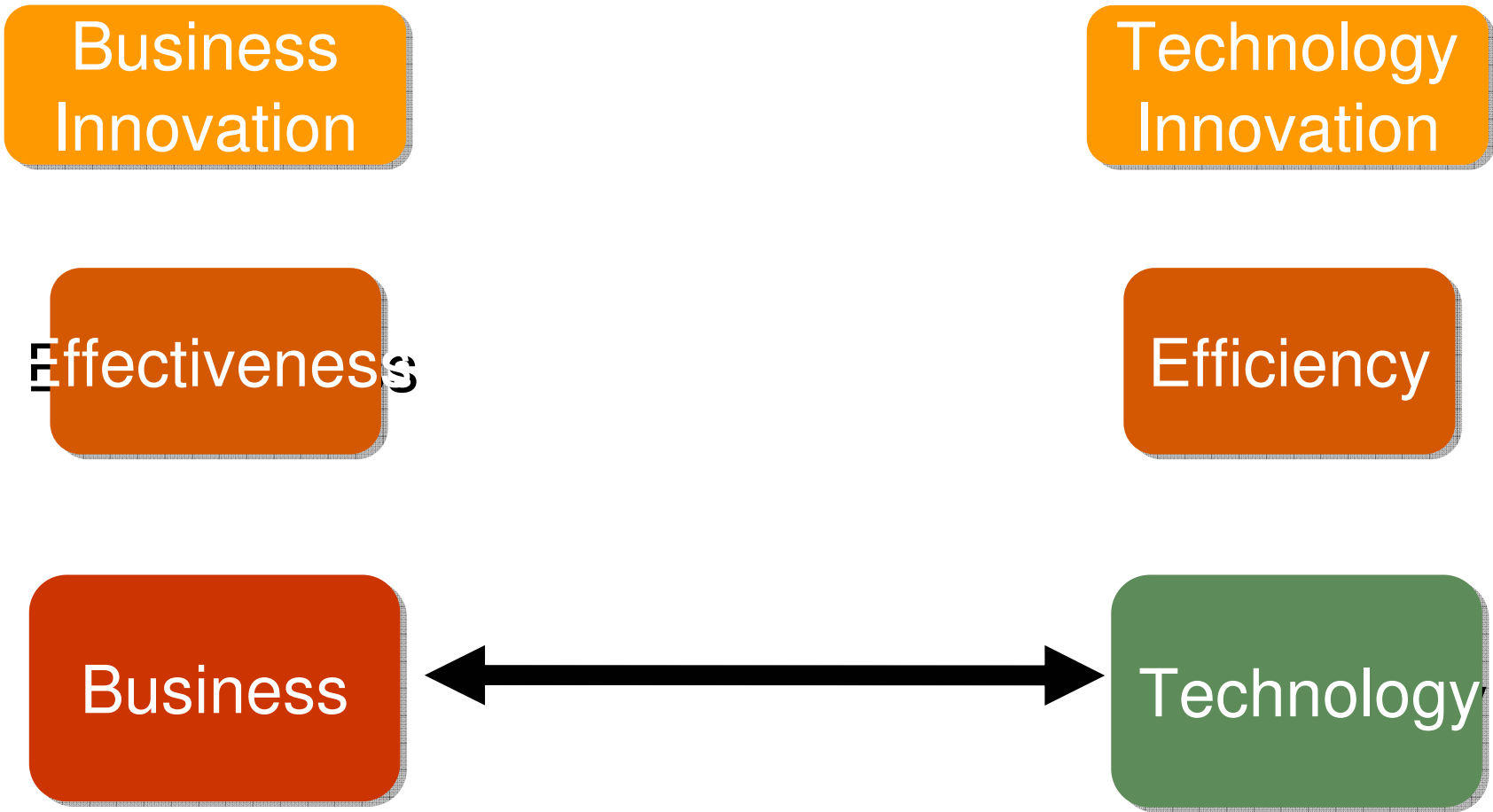
- CIO-asaurus REX is facing extinction
 - The all-powerful “do everything” CIO is being overwhelmed
- There's a spectrum of focus
 - Business at one end
 - Technology at the other
- Two distinct roles are emerging
 - Different skills
 - Different places in the hierarchy



Evolving Roles – With different objectives



Evolving Roles – With different objectives



Evolving Roles – With different objectives



Value

Cost

Business Innovation

Technology Innovation

Effectiveness

Efficiency

Business



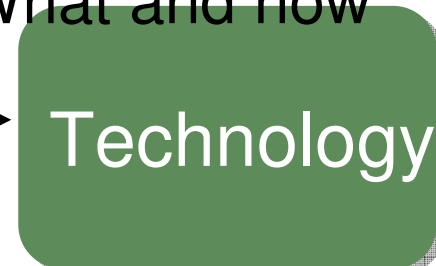
Technology

Evolving Roles – With different skill sets



- Business change
- Program management
- Relationship management
- Negotiation
- Why and when

- Technology change
- Project management
- Service Delivery
- Cost control
- What and how



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Tomorrow's Business

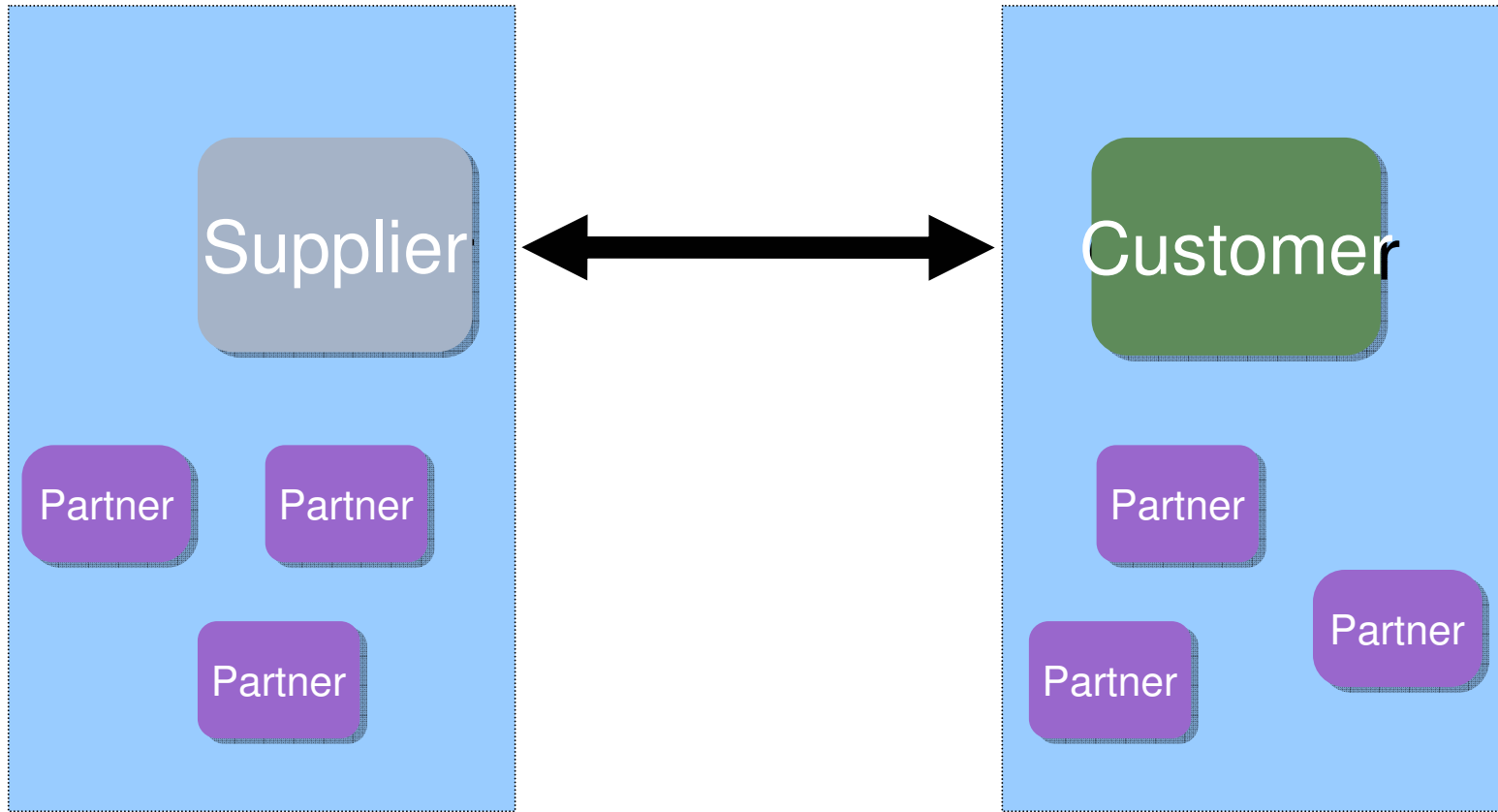
The collapse of traditional
organisational boundaries



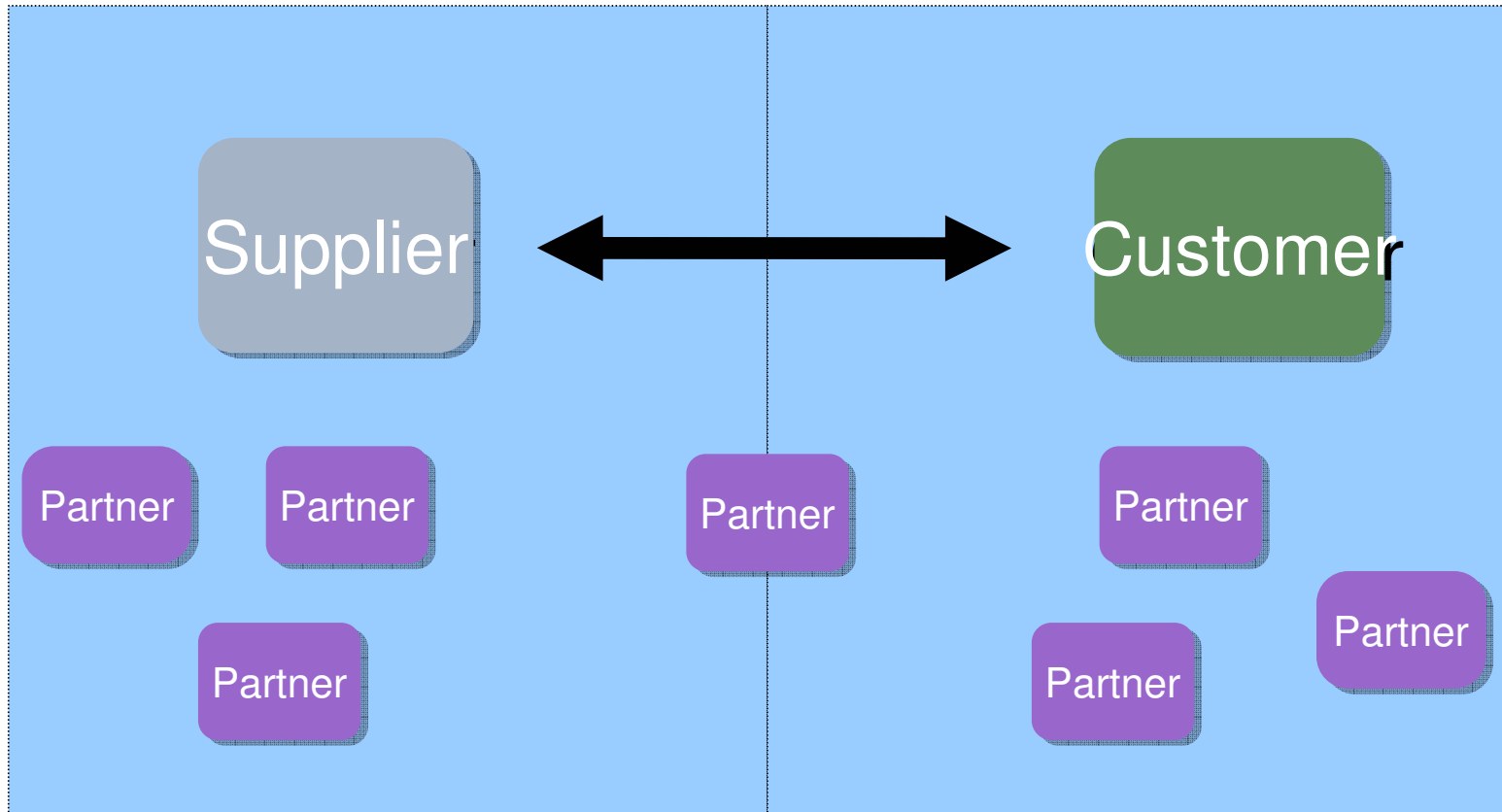
Classical Markets



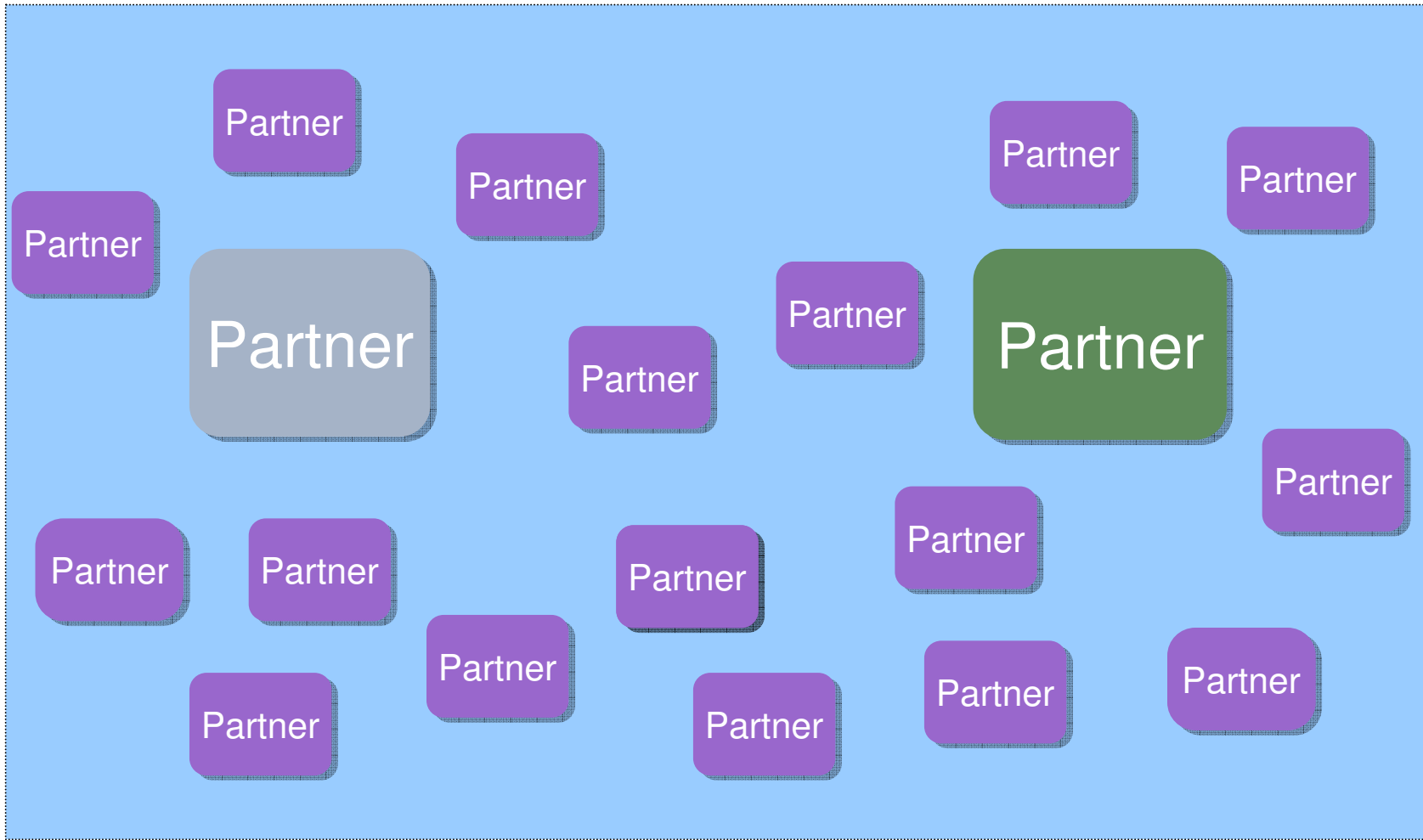
Today's Markets



Today's Markets



Tomorrow's Markets



Tomorrow's business requires radically different IT

- Connection
 - Martini-style
- Collaboration
 - On every level
- Distributed computing
 - For real this time
- Flexible
 - Relationships might exist for a few hours



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The Evolution of the data center

Technology trends, Automation, and
Green



Technology Trends - Performance



- Smaller, quicker, cheaper.....
 - Will continue....
 - But in increasingly depend on technology being “Smarter” too
- Multicore
 - A clever side step
 - How many of your applications are optimised for multi-core processors?
- More creative “system design”
 - Need for flexible architectures
- Collaborative design around open / public standards
 - Power.org
- Cloud and Grid computing
 - Exploiting low cost hardware for super computing performance

Technology Trends – Open Standards / Integration



- A number of technologies and drivers are converging to transform the datacenter
 - Service Oriented Architecture
 - Making integration easier
 - Web 2.0
 - A return to host-based computing
- The role of standards and standardisation
 - Web services, TCP/IP, protocols
- Even the mainframe is embracing the world of “Open”
 - Linux and Java
 - RSS feeds for IMS
 - Web Services for CICs
- Software as a service....

Technology Trends – Open Standards / Integration



- If all your software is provided as a service, maybe all you will need in your data centre is this...



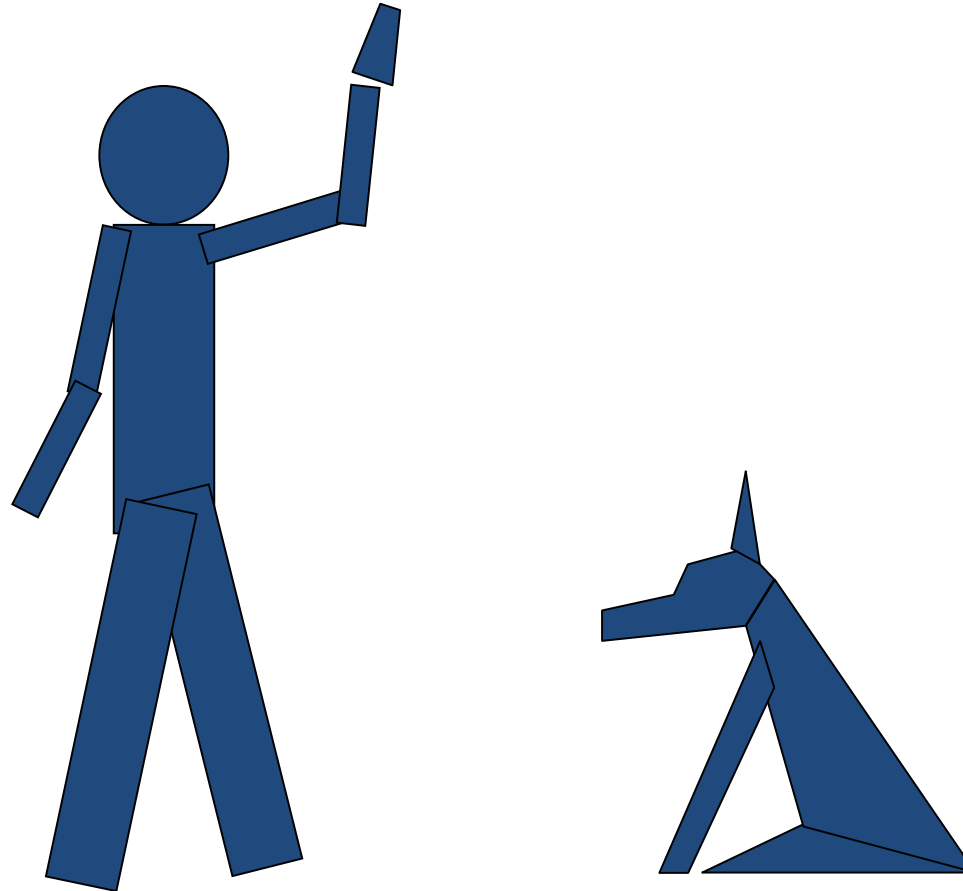
Technology trends - Data center Automation



- Has been promised for many years...

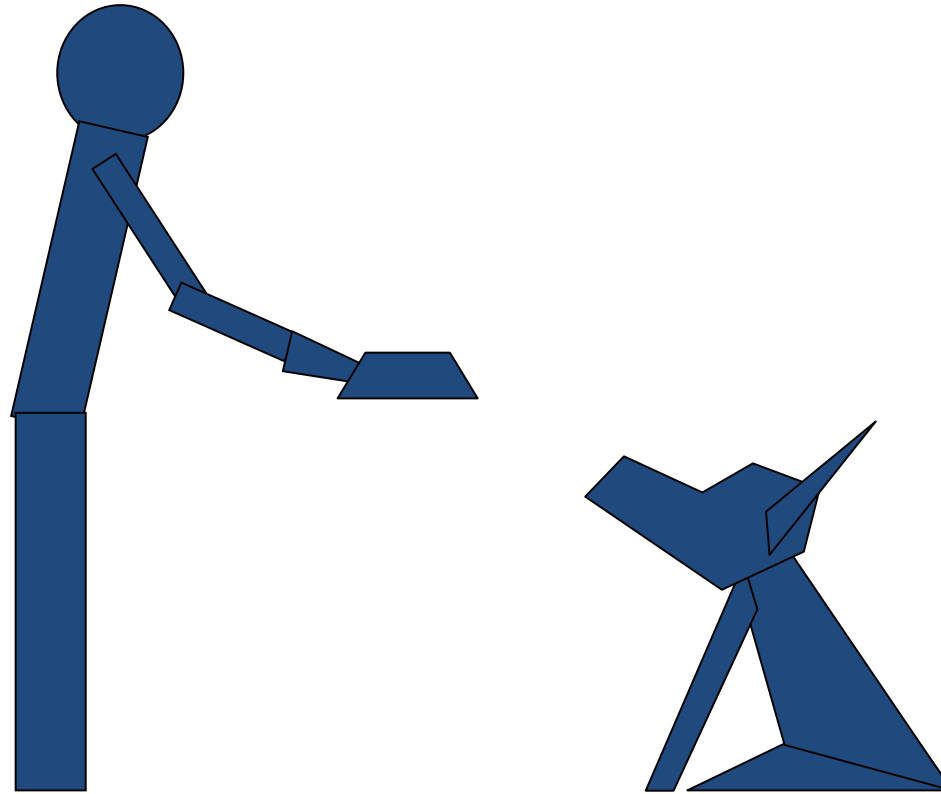
In 5 year's time... There will
Be only two living things
Inside your datacenter

Technology trends - Data center Automation



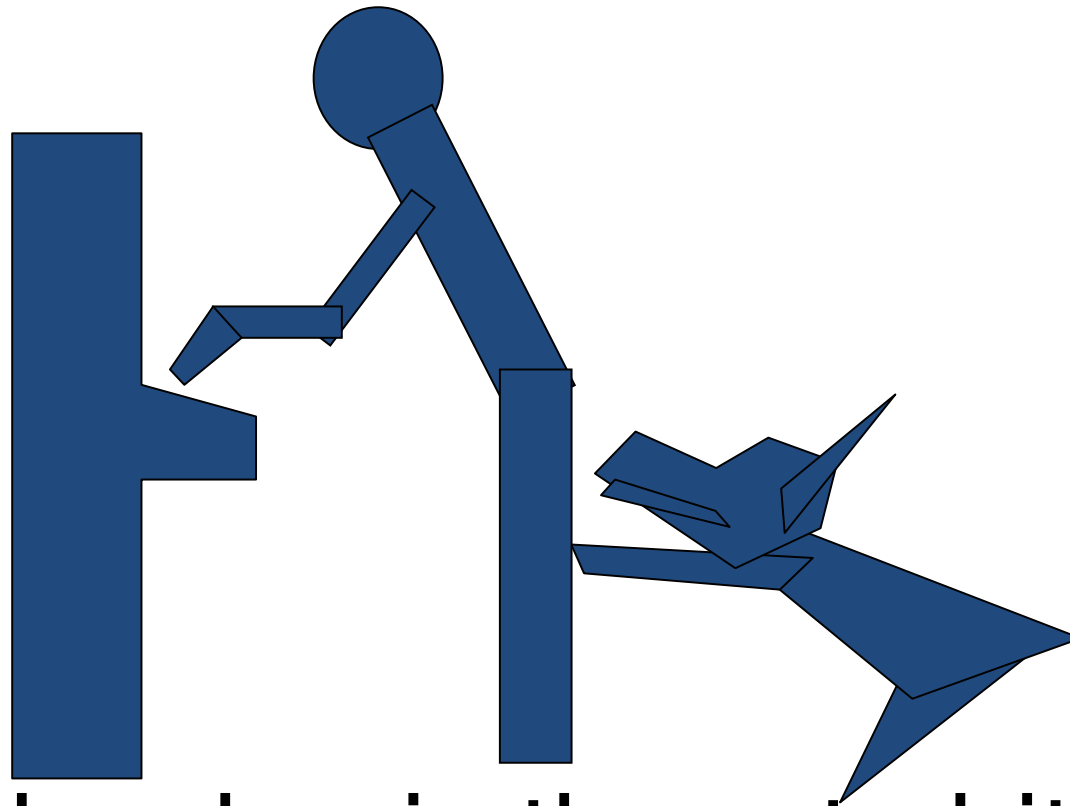
A man, and a dog

Technology trends - Data center Automation



The man is there to feed the doc

Technology trends - Data center Automation



And the dog is there to bite the man if he touches anything

Technology trends - Data center Automation



- Virtualisation
 - Many small machines pretending to be one large one
 - One large machine pretending to be many small ones
- Emergence of “portable images”
 - A standardised “virtualised” machine
 - That can run on a very wide range of hardware
- Distributed systems management
 - Increasingly accepted as essential
- Software as a service
 - Changing the nature of automation

Technology trends – Automation and business flexibility

- Faster deployment
 - Better control over resource utilisation
- More responsive
 - Better management of peaks in demand
 - Better control of quality of service
- Distributed computing environment more “mainframe like”
 - In terms of utilisation, reliability, security
 - Although the mainframe continues to improve...
- Workload density increasing
 - Huge opportunity for consolidation



Technology Trends – The Green Data Center



Technology Trends – The Green Data Center



Technology Trends – The Green Data Center



Technology Trends – The Green Data Center

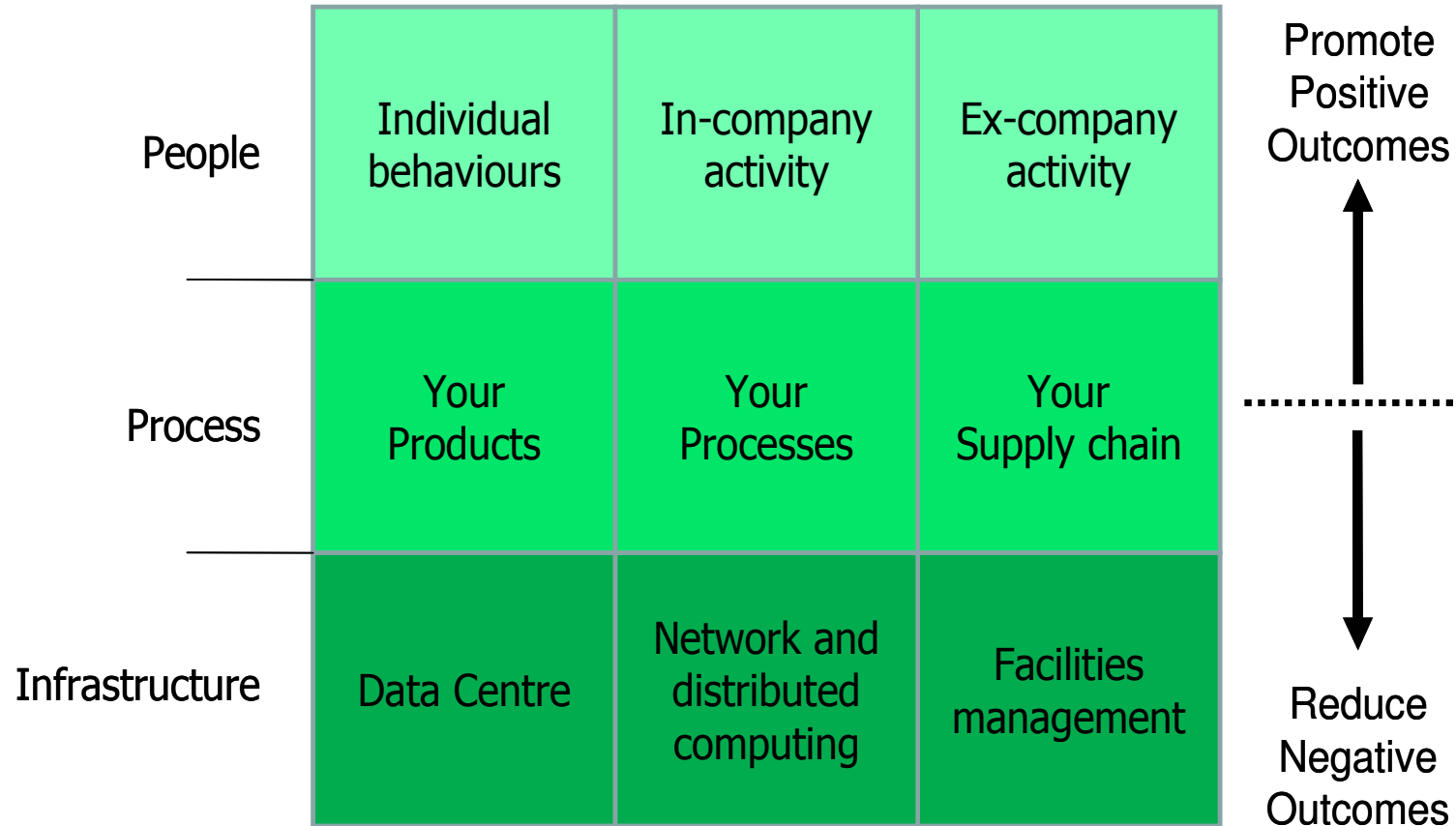


Technology trends – The Green Bandwagon



- Everyone is making “green” promises
 - Make sure you’re comparing like with like
- The environment is important
 - To Consumers
 - To regulators
- Green is about more than just “heat and power”
 - It is a much broader issue
 - And technology has a role to play across the board
- “Making the world a better place” isn’t the only reason you should have a green agenda
 - Green = \$\$\$\$\$

Technology trends – A holistic view of Green



Technology trends – Focus on the Green Data center



- Major areas of cost / resource constraint
 - Heat and power
 - Major challenges with “legacy” cooling systems
 - Issues around power density
 - And of course cost
- Key focus areas
 - Cooling
 - Consolidation
 - Systems management
- But you will soon have to consider the whole lifecycle
 - Dust to rust
- Many “green” initiatives bring other business benefits
 - Cost reduction, improvements in flexibility

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Call to action

Three projects you can start today



1 – Manage your evolution



- Choose the direction that you want to take
 - And remember “what and how” people will continue to be in as high demand as “why and when people”
- Look at your own skills
 - Relationship management
 - Sales and Marketing
 - Technology application
- Remember that the the best businesses have IT that is Efficient and Effective
 - And it's hard to have one without the other

2 – Prepare for the future

- Create a roadmap
 - So you're ready when the technology evolves
 - Begin “impact analysis” to determine what you need to do in order to reap the benefits
- Manage your assets
 - Applications
 - Infrastructure
- Don't spend too much time imagining the future
 - There are practical things you can do today



3 – Go Green!

- Because it makes BUSINESS sense
 - Cost reduction
 - Marketing
 - Carbon Credits
- Simple projects
 - Application and Server consolidation
 - Systems management infrastructure
 - Data center survey
- Then look at all of your infrastructure
 - Your distributed computing environment
 - Facilities
 - Measurement
- Then look at the business as a whole
 - Supply chain management
 - Teleworking



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Thank-you

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