THE BREAKTHROUGH SERIES

from
Thought
Rock

The Presentation Will Begin At 3PM EST

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How Green is Your ITIL?

Most organizations are fighting the environmental impact of technology with more technology! What is need is improved processes and workflow that embeds sustainability into what every one does, everyday in everything that they do. IT Service Management and the best practice guidance of ITIL provides you with a framework to do that.

HOW GREEN IS YOUR ITIL?

How Green Is Your ITIL?

CO_2 Emissions

Carbon Footprint

Sustainability

Global Warming

Environmentally Friendly

Climate Change

Green IT

Corporate Social Responsibility

How Green Is Your ITIL?

Agenda

- What is the problem?
- Is ITIL green?
- Does it concern Service Management?
- How green is ITIL?
- What do we need to do?
- Questions

The Problem

- ICT contributes 2% of CO_2 emissions (Gartner 2007)

- Growing at 6% a year (Climate Group 2010)

- Comatosed equipment can account for as much as 15-30% of the total IT equipment in many data centres (Brill and Stanley 2009)

- <u>One</u> Google data centre located in the United States consumes as much energy as the entire city of Geneva, Switzerland (ITU Director, Malcolm Johnson 2010)

- <u>One</u> Google search for "soylent green" produces the same amount of CO_2 as driving a car 3 inches (Wordstream 2011)

3,942 kWh per year
5.3 tonnes CO_2

20000 km/per year
4.4 tonnes CO_2
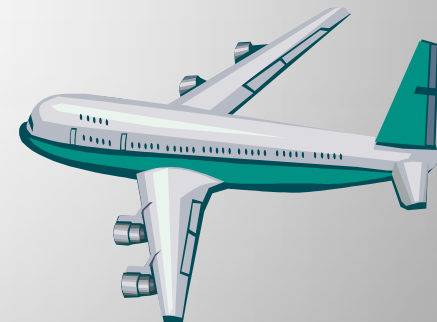
London to LA (return)
4.4 tonnes CO_2

Predictions

- 2011 - suppliers to large global enterprises will need to provide their green credentials via an audited process to retain preferred supplier status (Gartner)

- If IT power consumption continues to grow at 15% a year it will represent 40% of all global electrical consumption by 2030 (International Energy Agency 2010)

- Legislation: leading companies will say 'bring it on' (Global Sustainable Business 2011)

- 2011 - 37% organisations rate green IT as upper organisational priority - expected to rise to 54% in 2013 - a nearly five-fold increase from 9% in 2009 (CompTIA 2011)

How Green Is Your ITIL?

Is ITIL Green?

The NO

- "Whilst providing the tools and processes required to determine IT's true corporate value, Version 3 failed to address arguably this decade's greatest corporate challenge, regardless of industry - the environment, and therefore represents a missed opportunity".

- "As a growing number of organisations are now recognising carbon equals cost; reducing landfill, increasing recycling and reuse and driving down power consumption provide clear opportunities for financial gain".

- "It is, therefore, unfortunate, that the latest version of ITIL, Version 3, fails to address the environmental impact on IT service delivery".

BCS 2009

Is ITIL Green?

The YES

- Capgemini :

  "ITIL service management offers an adaptable method for making use of existing processes to deliver sustainable IT today"

  "IT managers make use of the ITIL lifecycle to integrate environmental targets into the performance measures of new and existing services"

- Kalm and Waschke:

  "IT organisations can tackle their energy consumption challenges as part of their existing ITIL implementations rather than some additional management burden"

Does It Concern Service Management?

How
Green
Is Your
ITIL?

CIO

> I am concerned about reducing the carbon footprint of my organisation as part of my Corporate Social Responsibility.

CFO

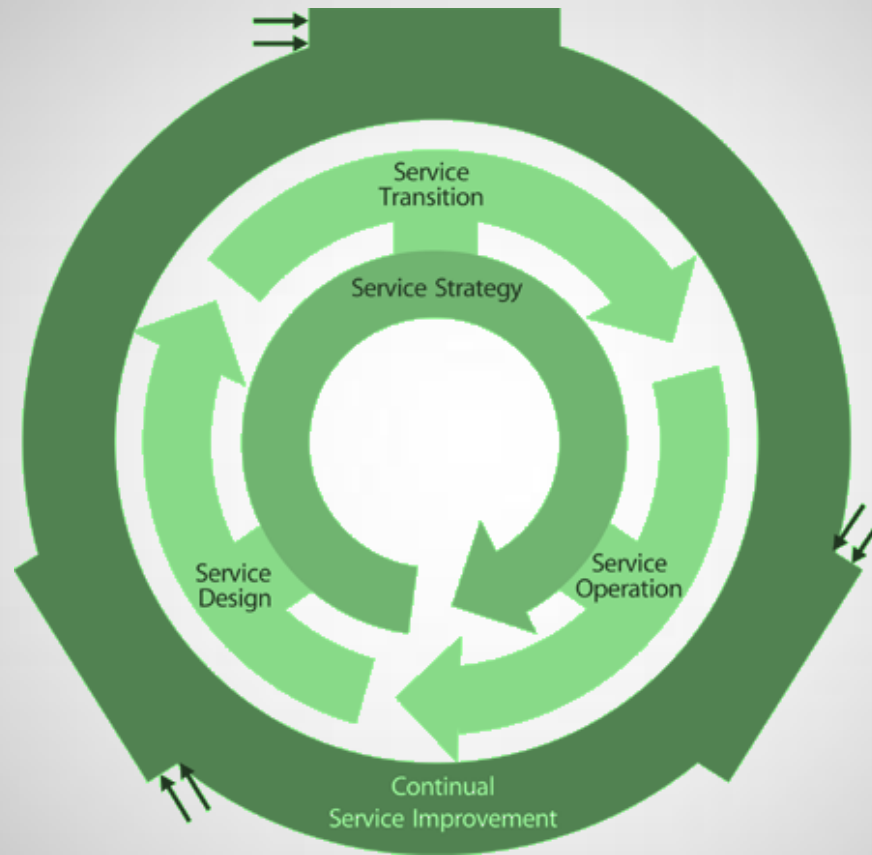> I need to reduce my power bills

Operational Manager

> I need to reduce my power bills and I need to be able to implement new systems as soon as I can to meet business demand whilst I am already running out of space, power and cooling capacity. Therefore I need to be more efficient and use less space, energy and power.

How GREEN is ITIL?

SERVICE STRATEGY

- Strategy Generation – sustainability approach

- Corporate Social Responsibility (CSR)
  - Strategy targets
  - Feedback mechanism to senior stakeholders
  - CSR balanced scorecard

- Service Portfolio
  - Business outcomes and financial targets
  - Environmental targets
  - Predict performance targets against environmental policies before agreeing to commission a new service
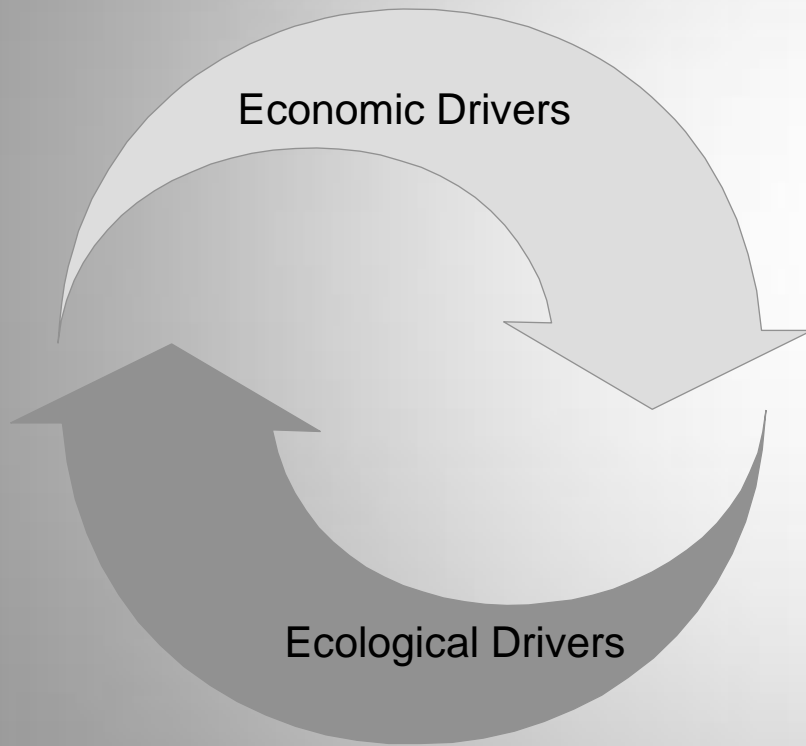
SERVICE STRATEGY (2)

Financial Management

Economic Drivers

Ecological Drivers

Demand Management

SERVICE DESIGN

- Service Level Management

  – Joint CSR policy

  – Negotiation guided by the CSR policy

  – Business impact, price AND environmental impact

  – Identify idle services and challenge the business to reduce energy consumption

  – Apply financial pressures – surcharges

  – Service Level Management & CSI responsibility to identify opportunities to make IT services more sustainable

SERVICE DESIGN (2)

- Service Catalogue Management
  - Power output & consumption
  - Power metering
    - Asset level
    - Service level
    - Business level
  - Power hungry business units
  - Poorly designed services
  - Influence customer behaviour
    - Environmental information on goods and services

- Availability Management
  - Resources available when they are needed
  - Resources need for peak periods do not need to be there all the time
  - Functionality
    - CUoD
    - On/off capacity on demand
    - Backup capacity

SERVICE DESIGN (3)

- Capacity Management
  - Plan how capacity is introduced in a more sustainable way
  - Provide most energy and cost efficient services
  - Capacity Manager
  - Trend analysis, planning and modeling
  - Proactive Capacity Management
    - Plan the introduction of sustainable IT services
    - Forecast and understand future business capacity needs
  - Reactive Capacity Management
    - Influencing demand today
  - Capacity, Demand &Service Level Management
    - Influence demand via Service Level Management
    - Include environmental service capacity requirements in SLM process

SERVICE DESIGN (4)

- Capacity Management cont.
  - Data centre servers operate at 15% capacity
  - IT equipment accounts for 30%
  - 70% to cooling, power, infrastructure, lighting etc.
  - Planning for power is important too
  - As utilisation levels of electrical systems goes down so does the efficiency
    - UPS running at 50% utilisation v 90%
  - **Over sizing to "play it safe" = Higher energy costs**
  - More deliberate management approach
  - Review and formalise Capacity Management process

- Supplier Management
  - Green products and greener suppliers

SERVICE TRANSITION

- Service Asset and Configuration Management
  - Complete inventory of servers, software and applications and interdependencies
  - Remove, refresh or virtualise

  - 15% - 20% of servers are orphaned
  - SWITCH THEM OFF!

  - Attributes – energy labels
  - Choice of infrastructure using energy label rating
  - Measureable environmental target
  - Measure – number of CIs in the CMDB with energy efficiency data
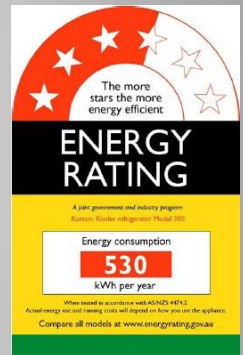
SERVICE TRANSITION (2)

- Change Management
  - Potential impact of new or changed services – initial implementation and over time
  - Environmental impact
  - Change Validation
    - Scoring system
  - Change Advisory Board
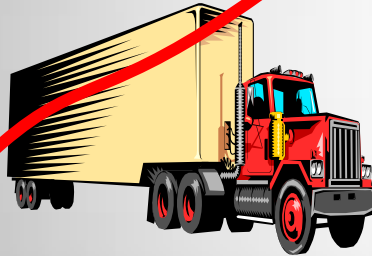 - Change Reporting
  - Measures
  - Lifetime energy footprint

ENERGY

LIFETIME ENERGY FOOTPRINT

Energy used to disassemble / recycle and remanufacture server components

Energy used by the server in operation over it's life cycle

Energy used to transport a server to a customers data centre

Energy used to manufacture a server

| Manufacture | Transport | Service Life | Recycle |

TIME

SERVICE OPERATION

Incident Management

Problem Management

Knowledge Management

CONTINUAL SERVICE IMPROVEMENT

- Seeks to make gains on financial and **environmental** performance

- Feedback into every stage of the lifecycle identifying better ways to be sustainable

- Identify improvements in process or performance

- Plan improvements that result in desired outcomes for existing services as well as new services

People

- Remote working
- Drive behaviours
  - Policies
  - Performance Management
  - Employee competency and maturity model
- Training
  - "How to be Green"
  - Training options e.g. CBT, Train the Trainer
  - Demand management for training
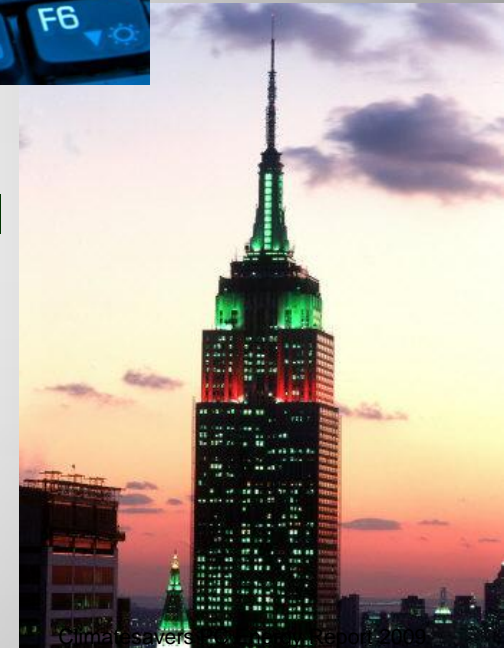
Virtualisation

Increase in server efficiency from around 15% to 75%

Will be eaten up by the need to do more!

Increase in complexity for Configuration Management by 10%

Carbon Offset

What We Need to Do

How Green Is Your ITIL?

- Embed GREEN into the service lifecycle

- Embed GREEN into the organisational culture

- Measure, monitor and improve

- Include environmental considerations

- Quick Wins – TURN IT OFF!

- Remember economic and ecological gains go hand in hand

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ACT DIFFERENT.

THE **BREAKTHROUGH** SERIES

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