The Scottish IT Directors' Forum

The Four Horsemen of the Apocalypse
Transforming Business Models

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Four fundamental transformations of IT Services business models are reshaping the competitive landscape – for both vendor and client alike.

They are creating new strategic agendas & roles for the contemporary CIO.

In the fifteenth century, four fundamental *change forces* broke up the certainties & constraints of the deeply rooted legacies of the long established mediaeval era, liberating political & social energies to create the Renaissance era that followed: they were

War

Famine

Pestilence

Death

Bloody stuff. But hey – the Renaissance that followed was pretty good news for most!

The Four Horsemen of the Apocalypse

WAR

PESTILANCE

FAMINE

DEATH

Albert Durer, The Revelation of St John: The Four Riders of the Apocalypse 1497-98 Woodcut
Staatliche Kunsthalle Karlsruhe

Four fundamental *change forces* of the 21st century are now breaking up the costly restraints of deeply rooted legacies of tightly integrated & coupled IT, liberating new business opportunities & energies and promising a Renaissance era of new business agilities combined with sharply reduced costs of operation & costs of change: they are

Consumerisation

Commoditisation

Virtualisation

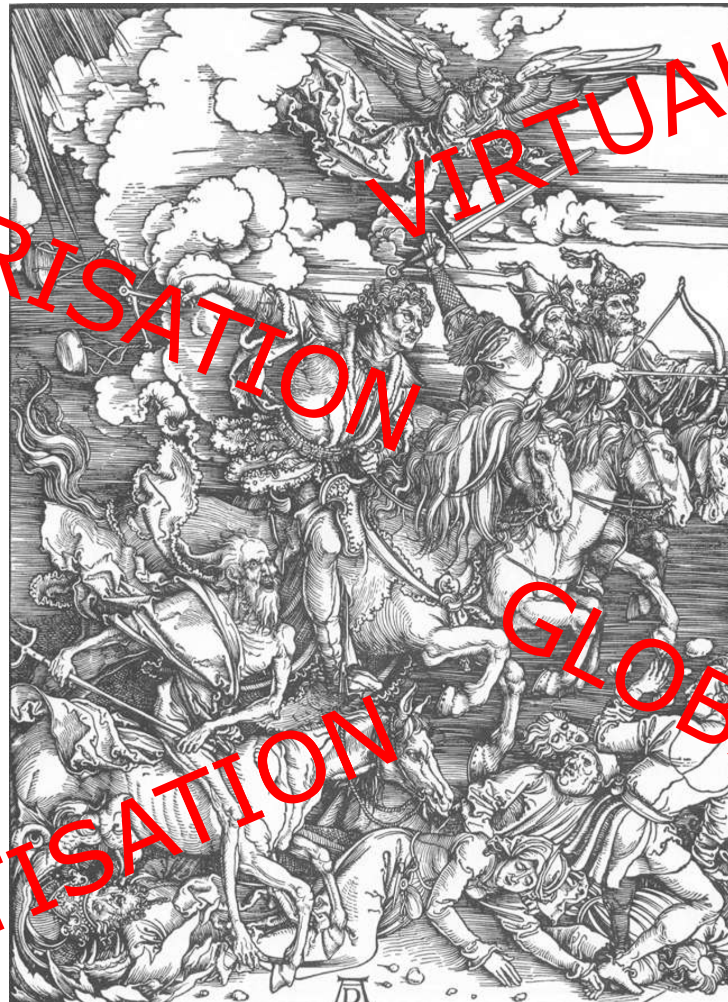
Globalisation

Equally bloody stuff in business terms. But hey – the 21st c. Renaissance stuff looks to be pretty good news as well!

The Four Horsemen of the Apocalypse Revisited

CONSUMERISATION

VIRTUALISATION



GLOBALISATION

COMMODITISATION

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Bechtel Benchmarked itself in 2006

1. Internet traffic cost Bechtel $US500/MB; it was costing YouTube $US10-$US15/MB

2. Bechtel had one sys admin per 100 servers; Google one sys admin per 17,000 servers

3. Storage cost Bechtel $US 3.75/GB/month; could be sourced from Amazon for $US 0.10/GB/month.

4. Bechtel ran 230 apps/multiple versions (total: ~800 app versions) - upgrades & training constant: Salesforce one version of one application for 1 million users, upgraded four times/year with minimal downtime or training required.

By 2009 Bechtel created a *Private* Cloud

1. Three super-efficient data centres placed strategically around the globe: raised storage utilization rates to 70 per cent: server utilization rates grown to 70 per cent

2. Its own fibre optic connectivity to major Internet junction points – sharply reducing data comms costs

3. Revised its 50 most heavily used apps into single-instance software-as-a-service apps run from a Google-like portal.

Consumerisation

'Consumer technologies are invading corporate computing'

The Economist December 2006

Virtualisation

The Technological

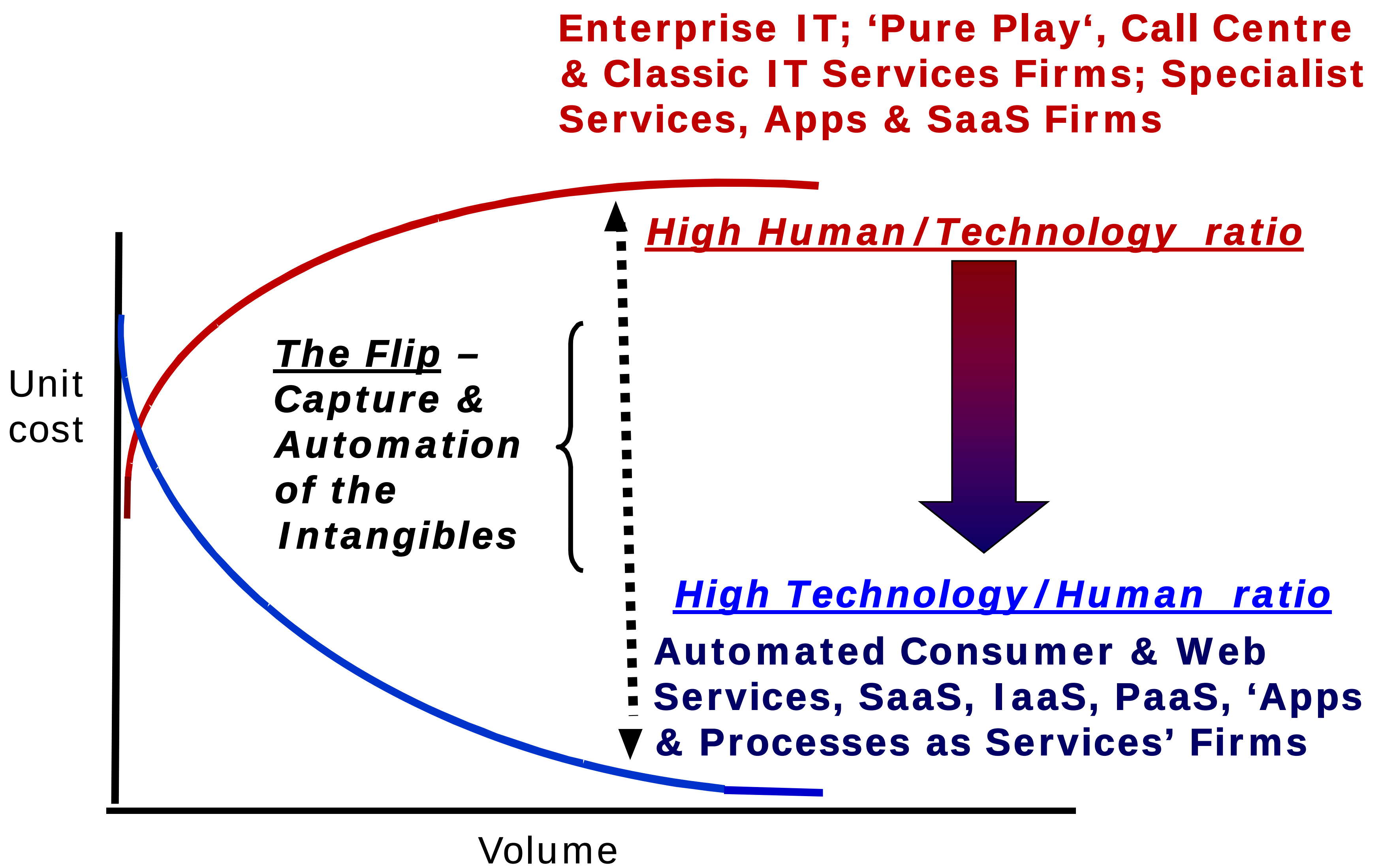
Virtualisation is enabling the automation of the manufacture of (technology-enabled) services – *arrival of the Services Factory*

The Commercial

Innovation from the commerce of Consumer Services is being exploited to challenge long established IT Services business models

These two fundamental transformations are in turn bringing about major transformations in the costs of service delivery, in how services can be best exploited, in the processes and costs of procurement: **and** in vendor/supply side business models.

Commoditisation



Courtesy of The Leading Edge Forum .

Globalisation

In the language of outsourcing, offshoring speaks of the 'loss of UK jobs overseas' .

In the language of *services* the picture is very different.

A UK company offshores technology work, it sources back a technology service. Recorded in trade stats as a services import.

In *Computer & Information Services (C&IS)* the UK has run a major & growing trade *surplus* through the whole decade 1998-2007. In 2007, UK C&IS exports ($13.9bn) exceeded UK C&IS imports ($5.7bn): a trade surplus of $8.2bn. That trade surplus is supporting a lot of UK jobs!

Fast Growing International Trade in Services

‘The Cloud’ (at its most fundamental)

A *Competitive* & *Global* Market Place of Discrete & Directly Sourceable (Technology-Enabled) Business & Consumer Services Available On-Demand and Paid For As Used

A Very Different Commerce

The Cloud Sourcing Model

The IT Services sector has classically developed business models that are:

- *people intensive*
- based on face-to-face *direct supplier/client engagement*.
- significantly based on term contracts

✓ delivery of *Business Assurance* contractually embedded

Cloud Sourcing business models are:

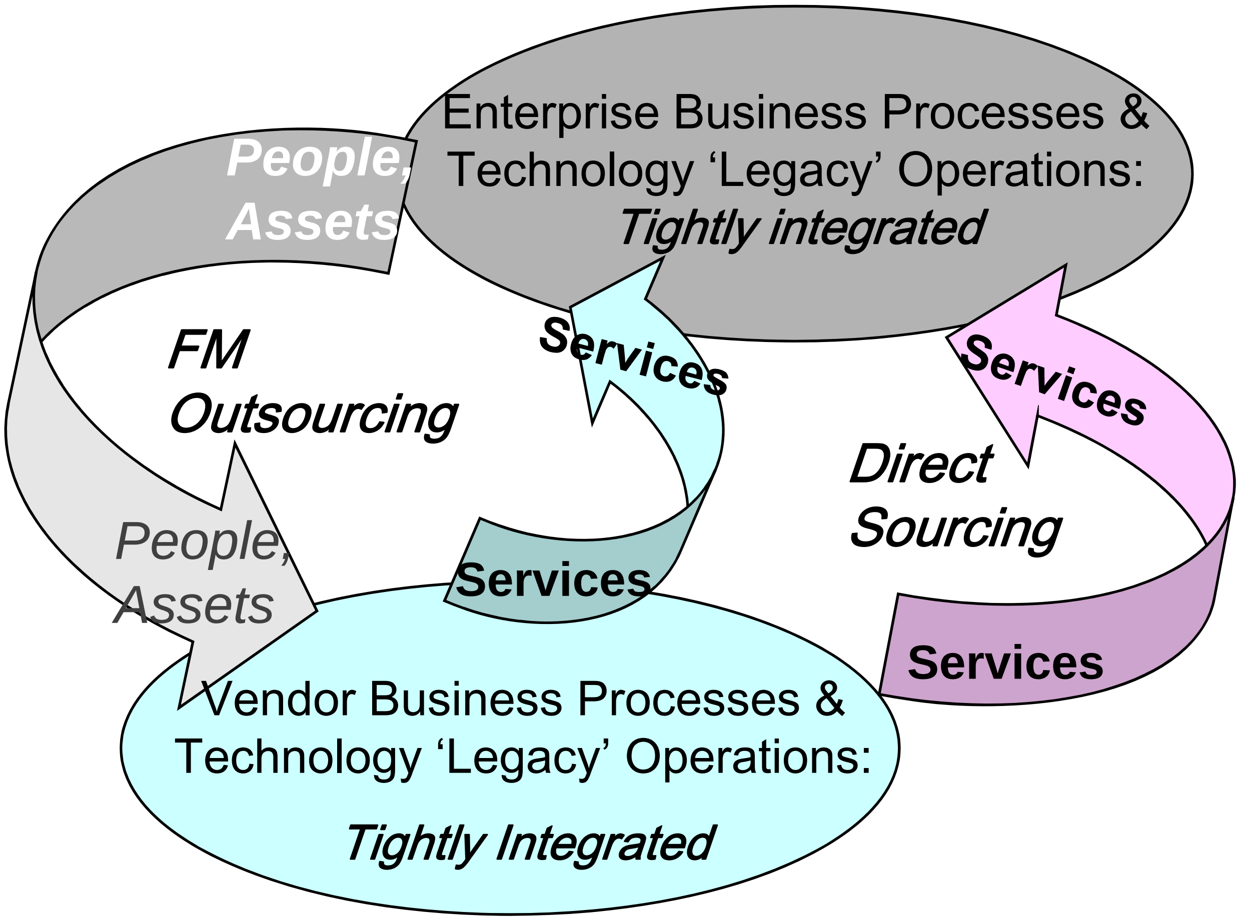
- *technology* (rather than people) *intensive*
- significantly based on *on-line & automated* supplier/client engagement.
- significantly do not require term contracts
- ?delivery of *Business Assurance* in the virtual world?

Business Assurance

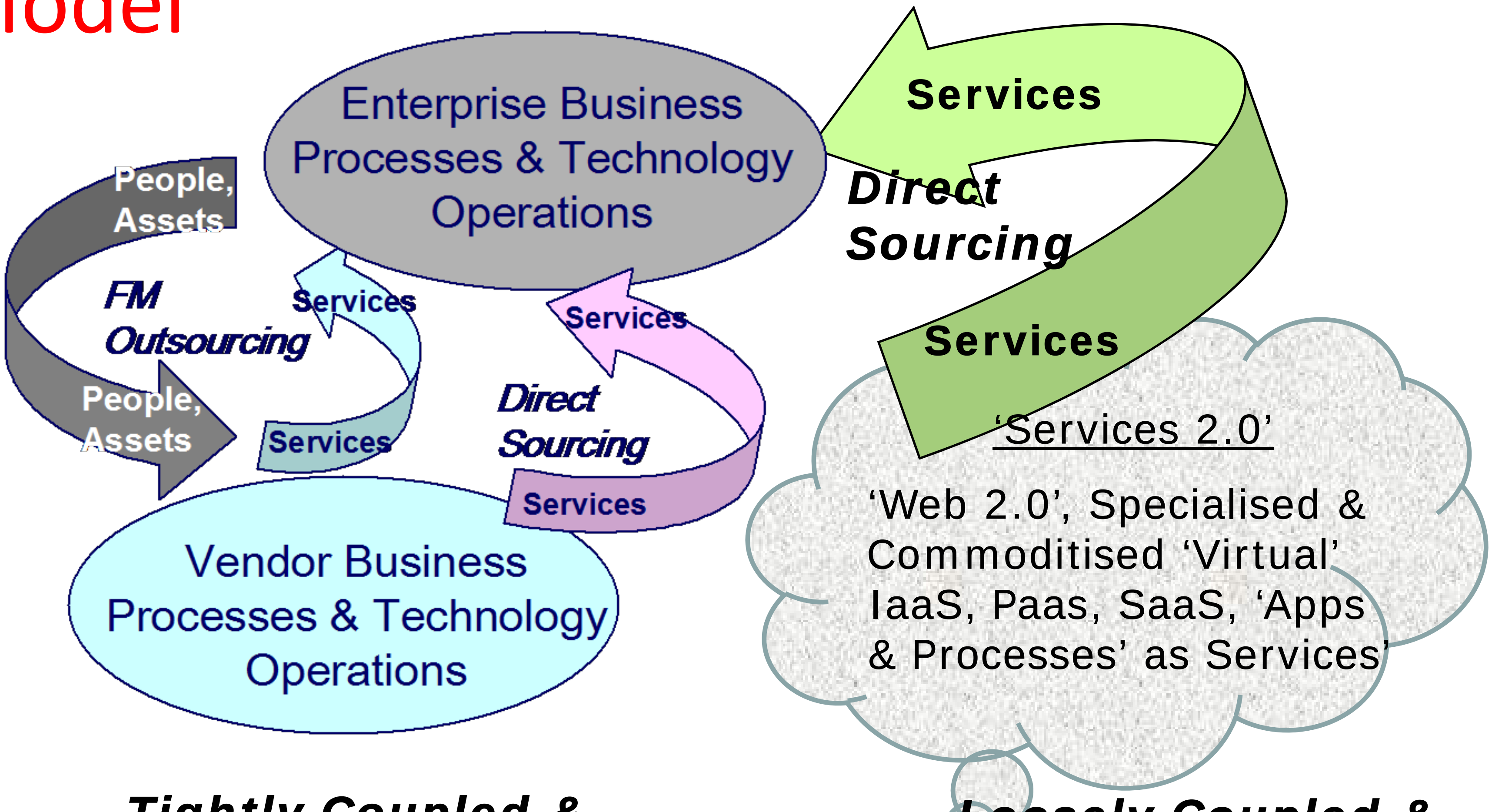
Security
Continuity
Contractual Protections
Regulatory Compliance
Legal Compliance
IP Protection

Along the length of a virtual services supply chain?

The Facilities Management (FM) Outsourcing Model



The Direct Sourcing of Services (DSS) Model



Tightly Coupled & Systems Integration

Infrastructure

Loosely Coupled & Services Integration

Exostructure

Why Cloud Sourcing?

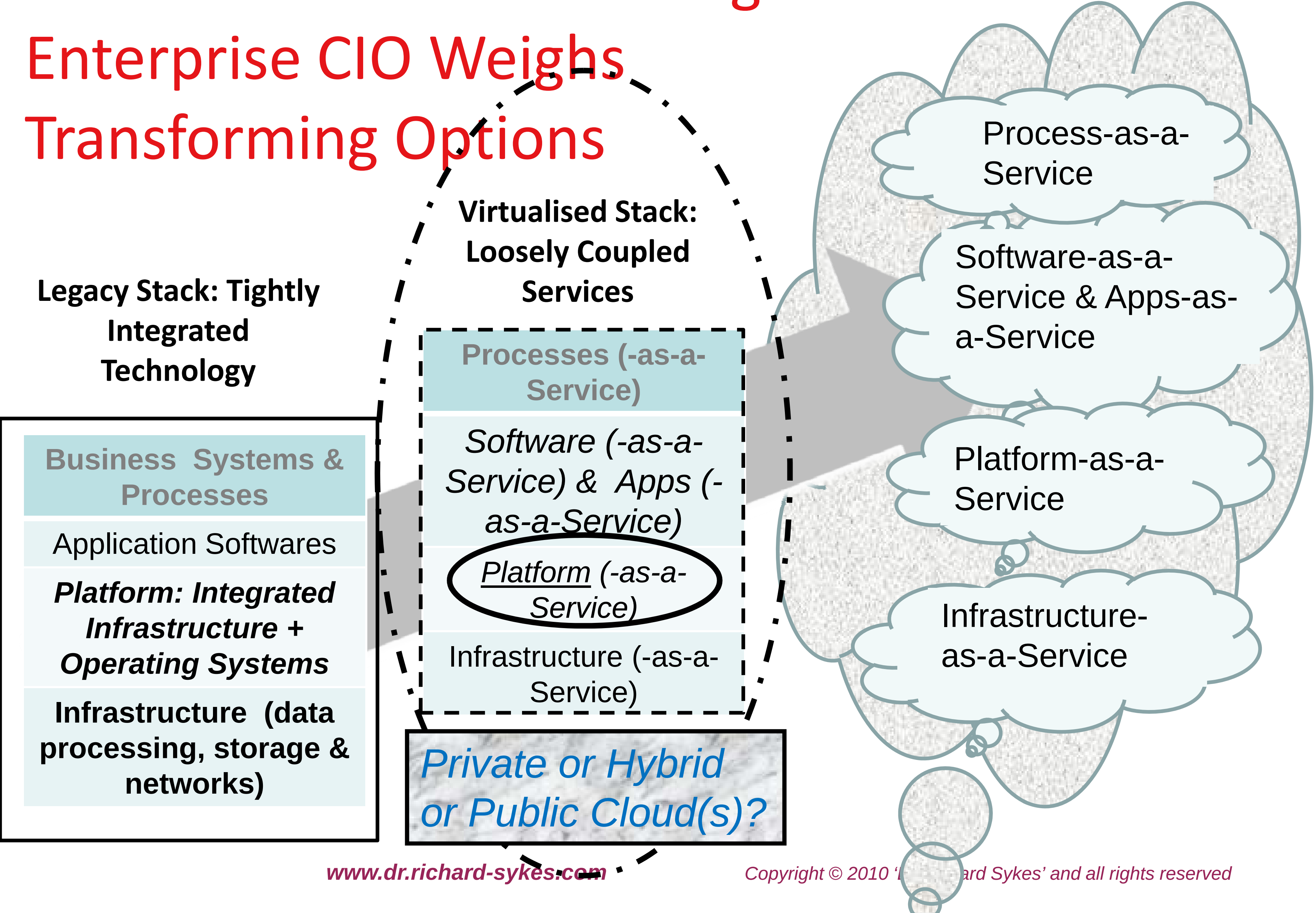
Cloud Sourcing potentially allows a business to sharply reduce its operating costs while gaining new degrees of operational flexibility & agility - and simultaneously reducing its demand for capital.

To effectively benefit from the new DSS model & Cloud Sourcing requires ***significant systems transformation and a major shift in procurement processes*** for most clients.

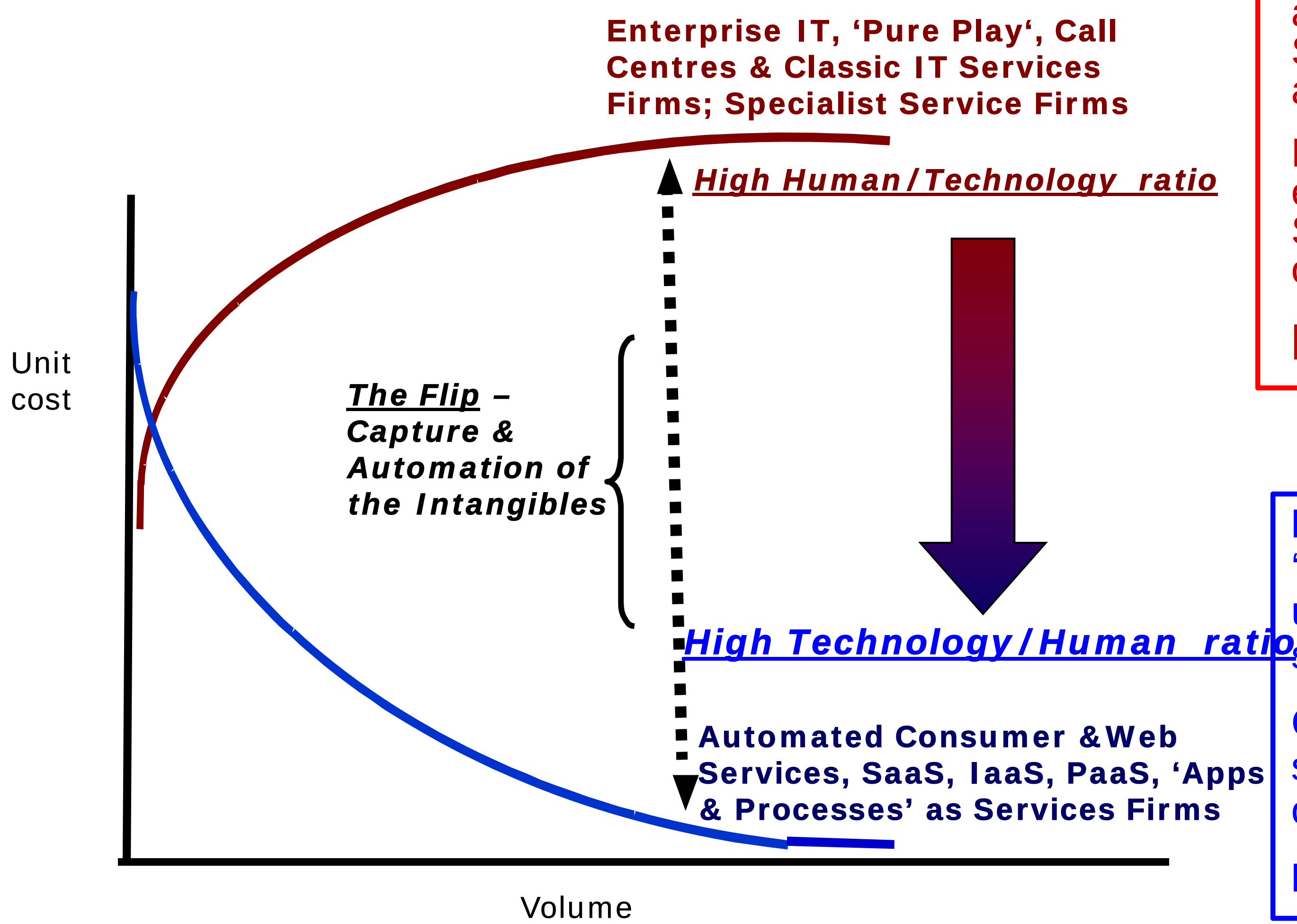
The DSS model and Cloud Sourcing requires most established suppliers to ***(re-)position and transform their business models*** if they are to remain competitive.

Two simultaneous transformations of business models and the systems that underlie them – not a recipe for overnight change. Factors enabling change are very real, so change will happen.

Potential for CloudSourcing: Enterprise CIO Weighs Transforming Options



Very Different Kinds of 'Bums on Seats'!
Vendor weighs Transformation Options



Focus: delivering high application specificity: Specialty end-application-aligned services

Highly tuned to specific end-market requirements. Strong partnership orientation & capabilities

INTIMACY TEST

Focus: making technology 'sweat the assets' (high utilisation, reliability, security & flexibility):

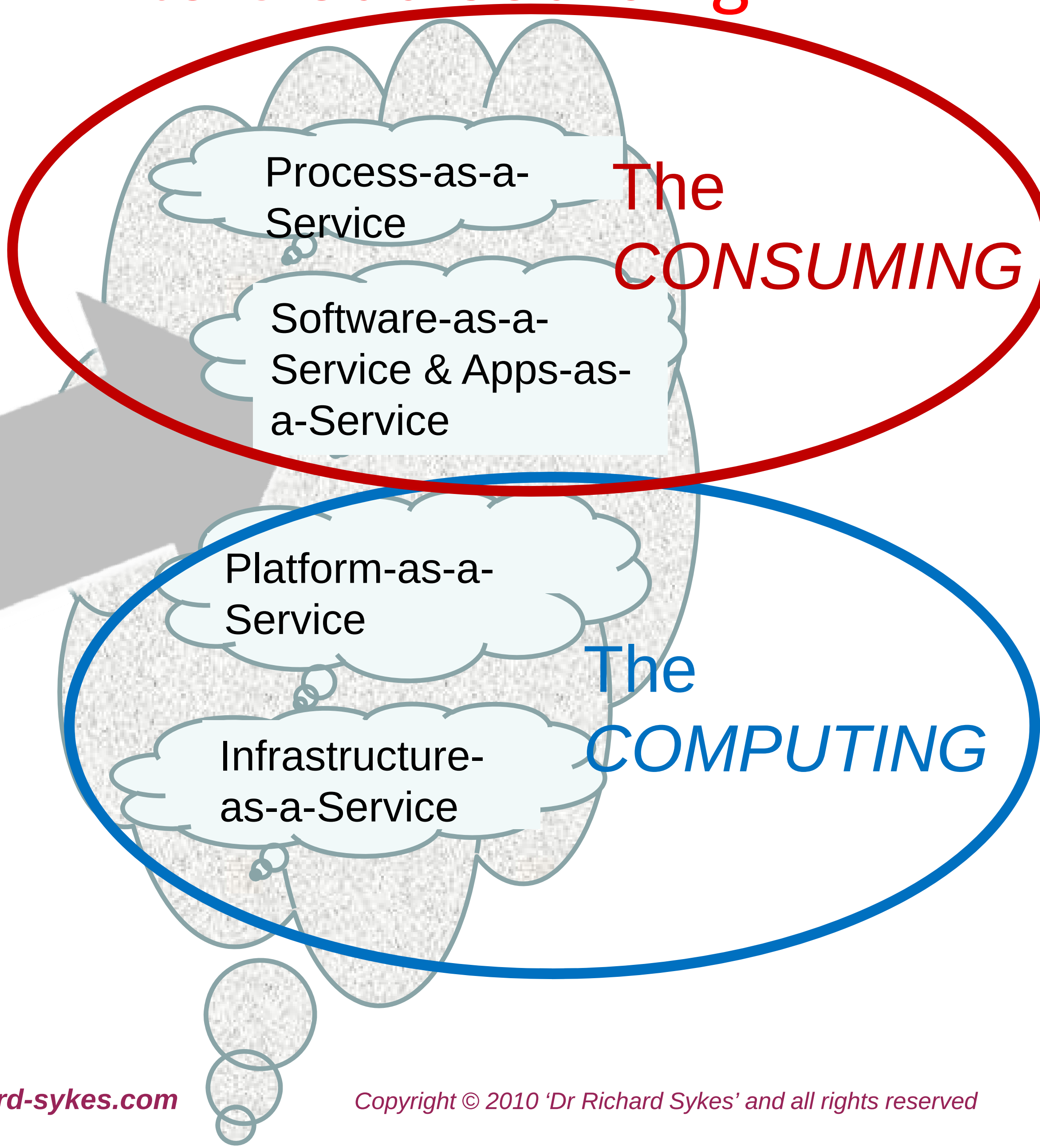
Commodity manufacturing skills plus service orientation & capabilities

MANUFACTURING TEST

Supplier Evolution into Cloud Sourcing

The Virtualised Stack: Loosely Coupled Services

Processes (-as-a-Service)
Software (-as-a-Service) & Apps (-as-a-Service)
Platform (-as-a-Service)
Infrastructure (-as-a-Service)



New Generation Service Factories

Highly *cost/security/service* competitive data centres **integrated into** equally *cost/security/service* competitive & enterprise strength broadband networks;

With the Green Dimension addressed.....
Minimising the carbon foot print of the capital investment in the fabric of the data centre
Minimising the operational PUE of the centre
Access to 'green and renewable' energy
'IT Efficiency' in the operation of the data centre

And with optimised geolocation........
Access to major telecoms trunk capacity;
Close to major supplies of 'green/renewable' energy.
Legal & regulatory requirements/compliance addressed

Five Leading Service *Platforms* based on New Generation Highly Automated Service *Factories* tightly integrated into the Web

Amazon Web Services (The 'Elastic Cloud')

Google App Engine

Microsoft Azure

Salesforce.com's Force.com

Apple iApp Platform

New Strategic Agendas for the Contemporary CIO

Do the 'transformational four' potentially reshape the business' own competitive landscape?

- new markets, new business models, new competitors?
- margins undermined? speedier death of the 'old'?

Re-position in-house resource toward business core competencies, competitive sharp end in key markets, with key clients

- Underlying infrastructural requirements competitively & 'routinely' sourced
- Generic back office / front office transactional requirements competitively & 'routinely' sourced

Re-identify the best aligned future strategic vendor partners in the technology / business services space

- Service Integration vs. Systems Integration

The CIO as Master Operational Strategist*

Service Broker: sourcing, integration & management of the technology-enabled business services that the enterprise requires to operate.
Transformational Leader: escaping the restraints of legacy inheritances, migrating to ICT infrastructure (in-house/on premise, or exostructure - ?'Cloud' sourced) oriented to underwriting the business' supply chain(s).

As Service Broker

- identify, design, source services that are desirable, business valuable
- ensure service delivery is flexible, predictable;
- ensure services are consumable (i.e. 'on-demand, as required');
- organise around these services – including *Business Assurance*.

As Transformational Leader

- break down functional & business silos that restraints of older IT systems make almost inevitable
- re-shape the services landscape the business exploits into a tight alignment with delivery of its business objectives, strategies.

* Acknowledgment to Jamie Erbes, HP Fellow

Thank You!

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