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The Perfect Storm of Convergence

The Pressure to Be Agile – Risks and Rewards of Embracing the NEW

John C. Carrow
Senior Vice President
Unisys Corporation

The Perfect Storm for Convergence

- Global Presence
- Virtual-office
- Knowledge Worker Investments

- Voice and data convergence
- IP networks
- Pragmatic & executable standards

- The IM / SMS / MySpace / iTunes generation
- Demographic shifts
- Visibility requirements

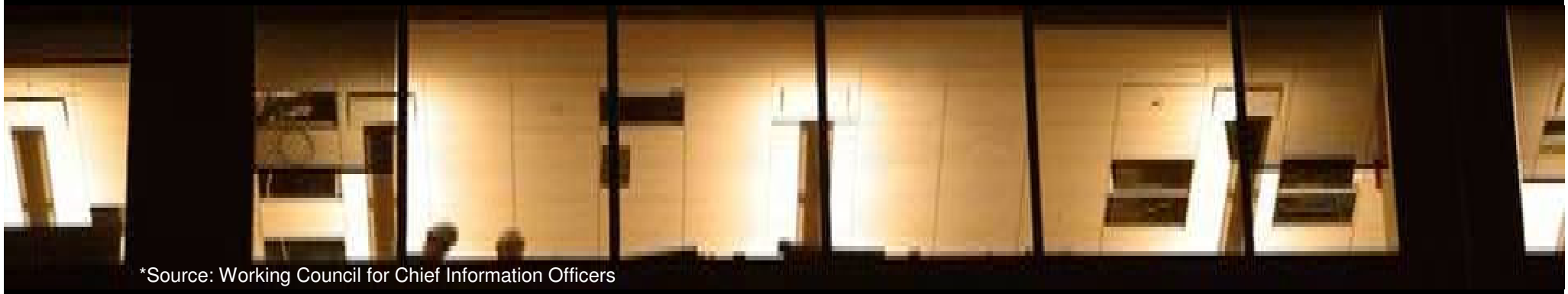
What Keeps CEOs Awake at Night?*

• Top-line growth	37.5%
• Profit growth	36.1%
• Consistent execution of strategy	33.4%
• Speed, flexibility, adaptability to change	33.1%
• Customer loyalty/retention	29.4%
• Stimulating innovation	23.9%
• Corporate reputation	22.9%
• Speed to market	22.7%
• Product innovation	20.8%
• Improving productivity	20.3%

**** Source: The Conference Board CEO Challenge 2006***

What Keeps CIOs Awake at Night?*

- Data visibility across business units, geographies
- Managerial dashboards/early warning indicators
- More rigorous documentation and risk management
- Proactive identification of tech-enabled opportunities to boost business value
- Greater systems flexibility



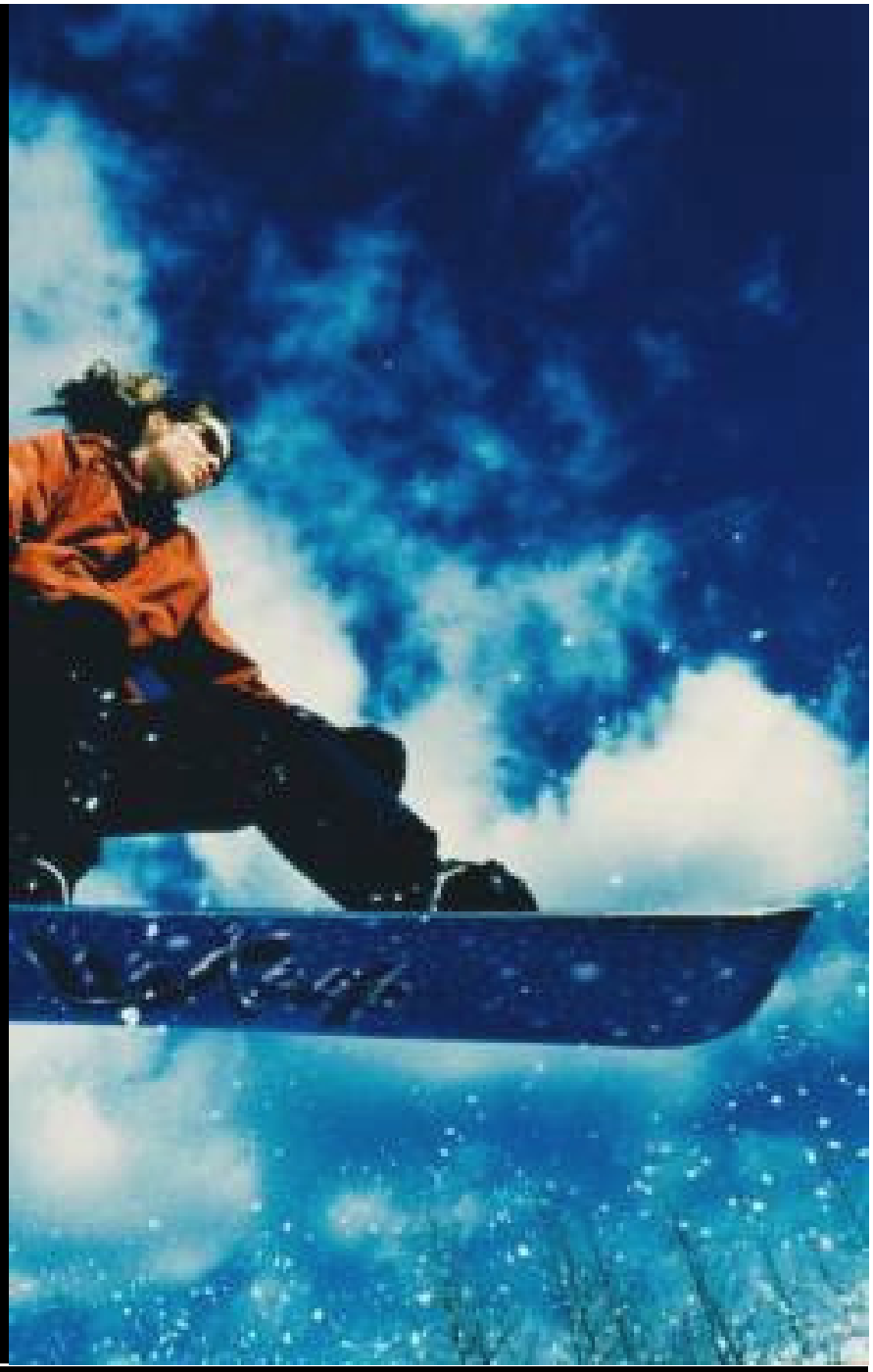
*Source: Working Council for Chief Information Officers

What Is Business Agility?

Business Agility is the power to change quickly – based on a view of your special world in the context of your competition and customers.

Long-Term Strategic Issues That Drive "Business Agility"

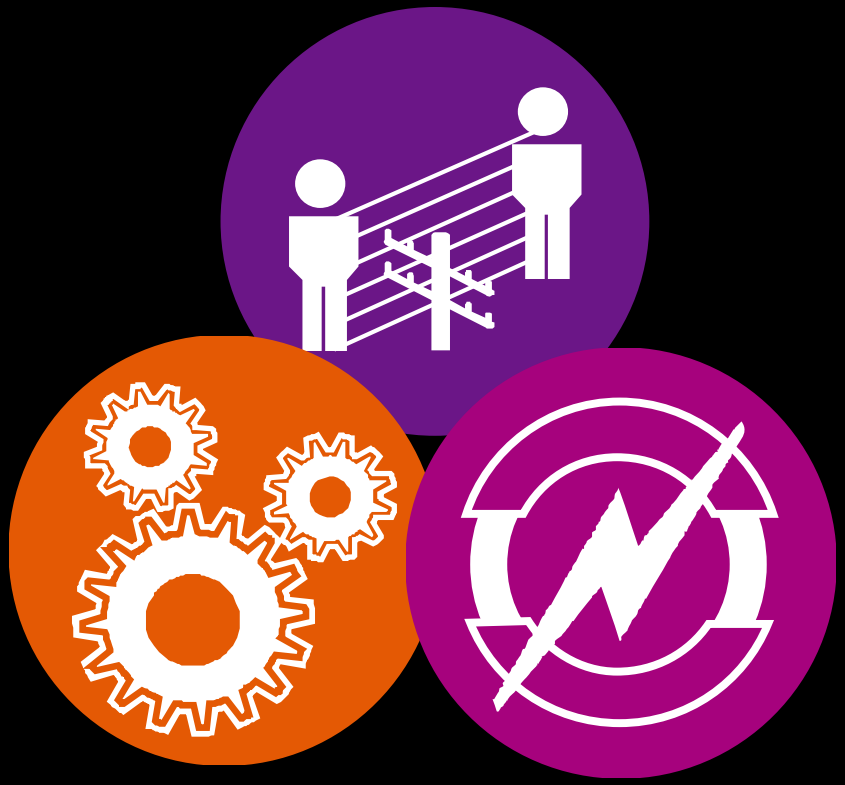
- Improved Technology Providing Better Information
- Regulatory Oversight Pushing Transparency
- The "Extended" Enterprise is today's business
- Globalization is a Way of Life
- Competitive Focus on Cost & Value




“The species that survived were not the most intelligent.
They were the most adaptable to change.”
Charles Darwin

The Emerging Technology Framework

Collaboration and Communications



Real-Time Infrastructure

Application Modernization (Open Source)

The Emerging Technology framework

Collaboration and Communications

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What is Real-Time Infrastructure?

A future-state infrastructure where IT assets are virtualized, self-managed, and business-driven, producing greater enterprise agility and lower IT costs

Key Elements Defined

Future-state infrastructure
- An idealized target architecture, achieved incrementally through a series of transformation steps

IT assets
- Computing, data management and application resources

Virtualized
- Physical assets treated as a shared pool of resources

Self-managed
- Deployed, allocated and healed with little or no people intervention required

Business-driven
- Resources allocated dynamically based on current business priorities

Journey to Real-Time Infrastructure

Agility, Economics, Quality of Service

	Basic	Standardized	Rationalized	Virtualized	Service-Based	Real-Time
	React	*Reduce complexity*	*Economies of scale*	*Flexibility*	*Service-level delivery*	*Business agility*
Agility	Months to weeks	Weeks	Weeks to days	Weeks to minutes	Minutes	Minutes to seconds
Economics	Subsidized	Cost center	Static usage	Flexible usage costing	Variable usage costing	Variable business investment
Quality of Service	No SLAs	Basic SLAs	Class-of-service SLAs	Flexible SLAs	End-to-end SLAs	Business SLAs

Applying Virtualization

- **Server Consolidation and Containment**
  Eliminate server sprawl by deploying systems into virtual machines
- **Infrastructure Provisioning**
  Reduce the time for provisioning new infrastructure to minutes
- **Business Continuity**
  Reduce the cost and complexity of business/service continuity by **encapsulating entire system files**
- **Enterprise Desk Top**
  Secure unmanaged PCs – or provide standardized enterprise desktop environments on servers.
- **Legacy Application Re-hosting**
  Migrate legacy operating systems and software applications to virtual machines

Collaboration and Communications

Real-Time Infrastructure

Application Modernization (Open Source)

Open Source – what is it?

Open Source

- **Internet-enabled distribution** of software
- **Services and support** business model rather than licenses
- **Visibility – Not a Black box**
  - Free enterprise quality products that ship with the source code
- Innovative **distributed** software development process – New Innovation
  - **Collaborative** Worldwide developer-led **grassroots movement**

Bottom line

- No-cost license, high-quality, global Open Source is reshaping how software and IT companies do business
- Separates the application from being tied to the underlying infrastructure
- Change Agent

Application Stacks

- **CRM Stack (Sugar CRM)**
- **ERP+CRM Stack (Compiere)**
- **CMS Stack (Alfresco, Plone)**
- **ELearning Stack (Sakai, Moodle)**

Developer Stacks

- **Eclipse, Spring, Struts, Ant, Maven, CVS**
- **Java, EJB 3.0**
- **Linux, Apache, JBoss, MySQL**

Production Stacks

- **Linux, Apache, MySQL, Open SSL**
- **JPortal, OpenLDAP**
- **PHP/Perl/Python**

Open Source – Expectations & Challenges

"Within four years from now we could have more Linux in data centers than Unix, certainly in Europe."

Meta, November 2004

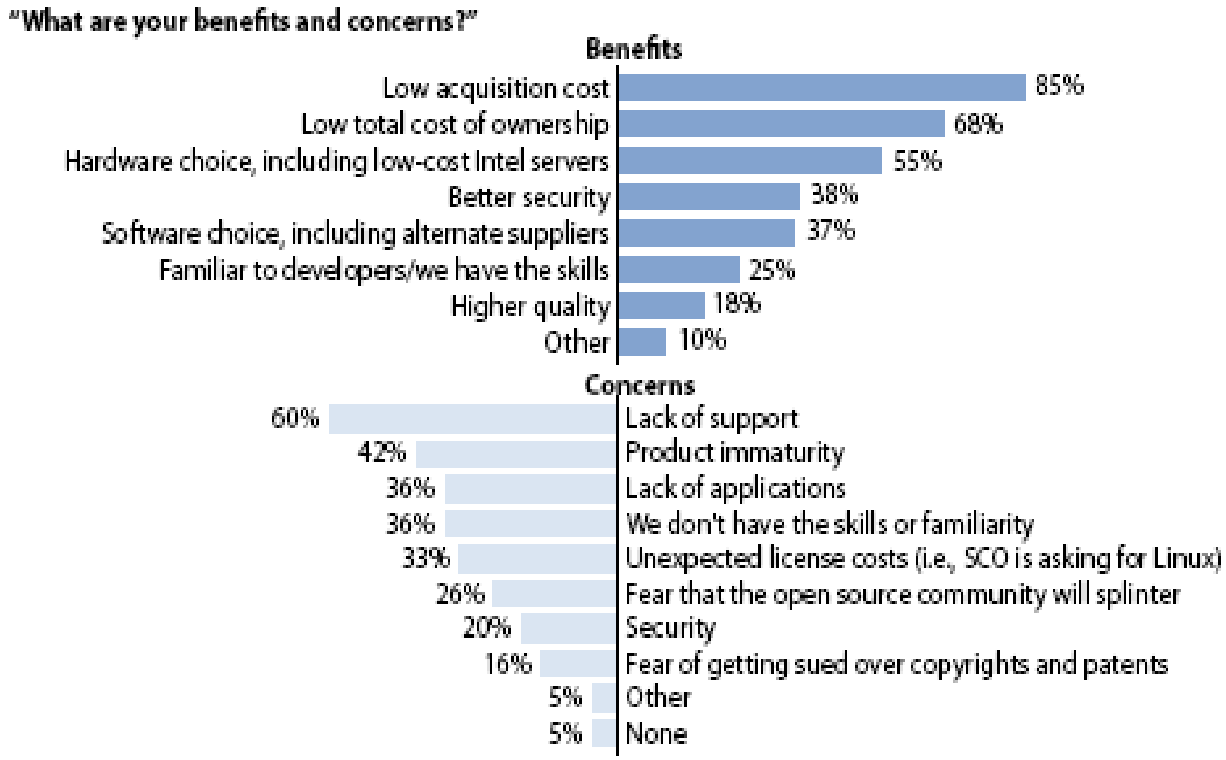
Linux is the fastest-growing server OS. Gartner Dataquest expects Linux shipments to increase from 1.4 million units in 2005 to 2.4 million in 2010, representing a compound annual growth rate (CAGR) of 11.7 percent.'

Gartner, January 2006

"Consider Linux safe to deploy not only for network edge and simple Web servers, but also for mid-tier and moderate database applications."

Gartner, November 2005

Figure 6 Cost Is The Biggest Benefit, But Support Is A Big Concern



Base: 95 IT decision-makers using or planning to use Linux or open source in the next 12 months (multiple responses accepted)

Forrester Research, June 2005

Where Would Organizations Use Open Source?

- Migration/re-platforming from UNIX infrastructure
  - Cost, licences, maintain SLA, retain closed applications (Oracle, SAP….)
  - Standardisation, virtualisation included in the target environment
- New application development
  - Web based, open standards, access to innovation pool, Java/J2EE…
- SOA (Service Oriented Architecture)
  - Open standards wrapped around legacy apps, connectors, portals…
- Open Source applications
  - Databases, business applications…
- Bottom Line – cost, flexibility, choice, innovation, competitive advantage

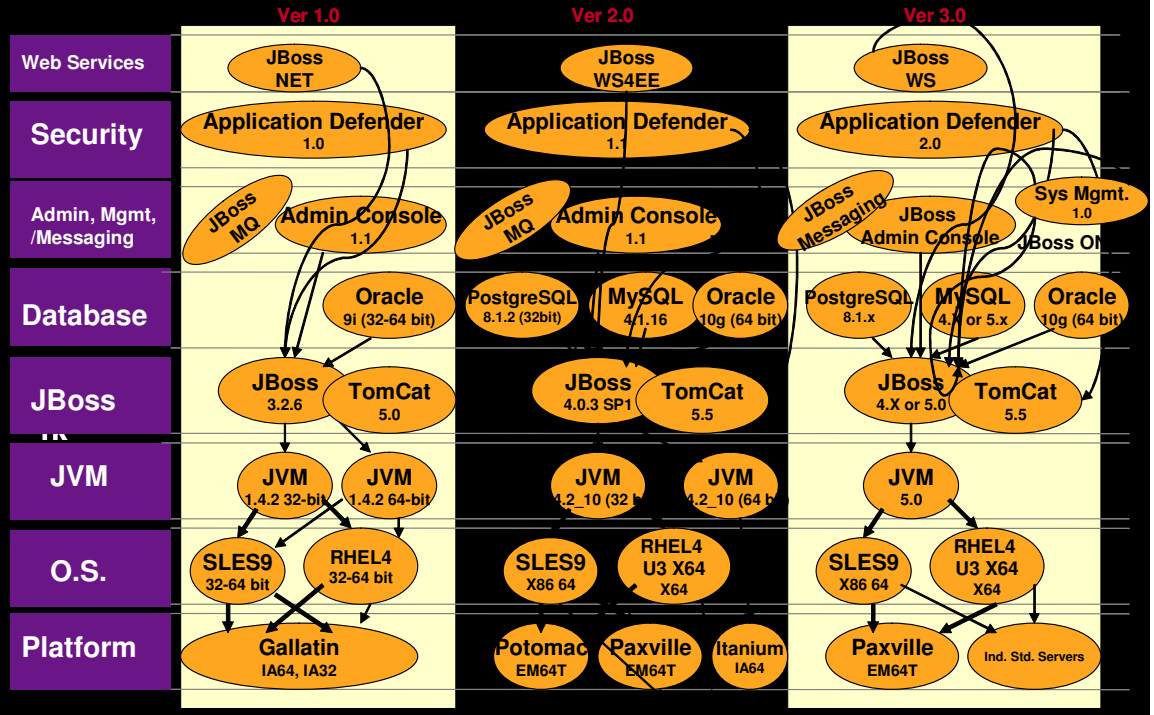
Moving to a Hybrid Stack

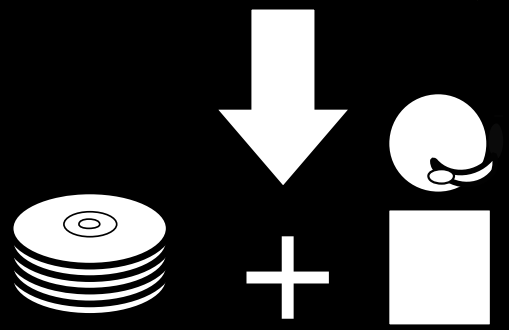
Components	Proprietary	Pure Open Source
Browser	Internet Explorer	Firefox
Web Server	MSFT Commerce Server or Netscape	Apache, PHP/Perl
Middleware	BEA WebLogic IBM WebSphere	JBoss
Database	IBM DB2, Oracle	MySQL PostgreSQL
Operating System	Solaris, HP-UX, AIX	Red Hat Novell SUSE
Hardware	Typically RISC	Open – Intel/AMD

Some of the Issues with Stacks

The *complexity* and *cost* of managing stack component releases, patches and revisions is significant

The ideal – one point of contact & someone to sort out what works with what





Provides subscription packages for plug-n-play convenience with enterprise software and support options

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Architecture: Functional User View

End User:

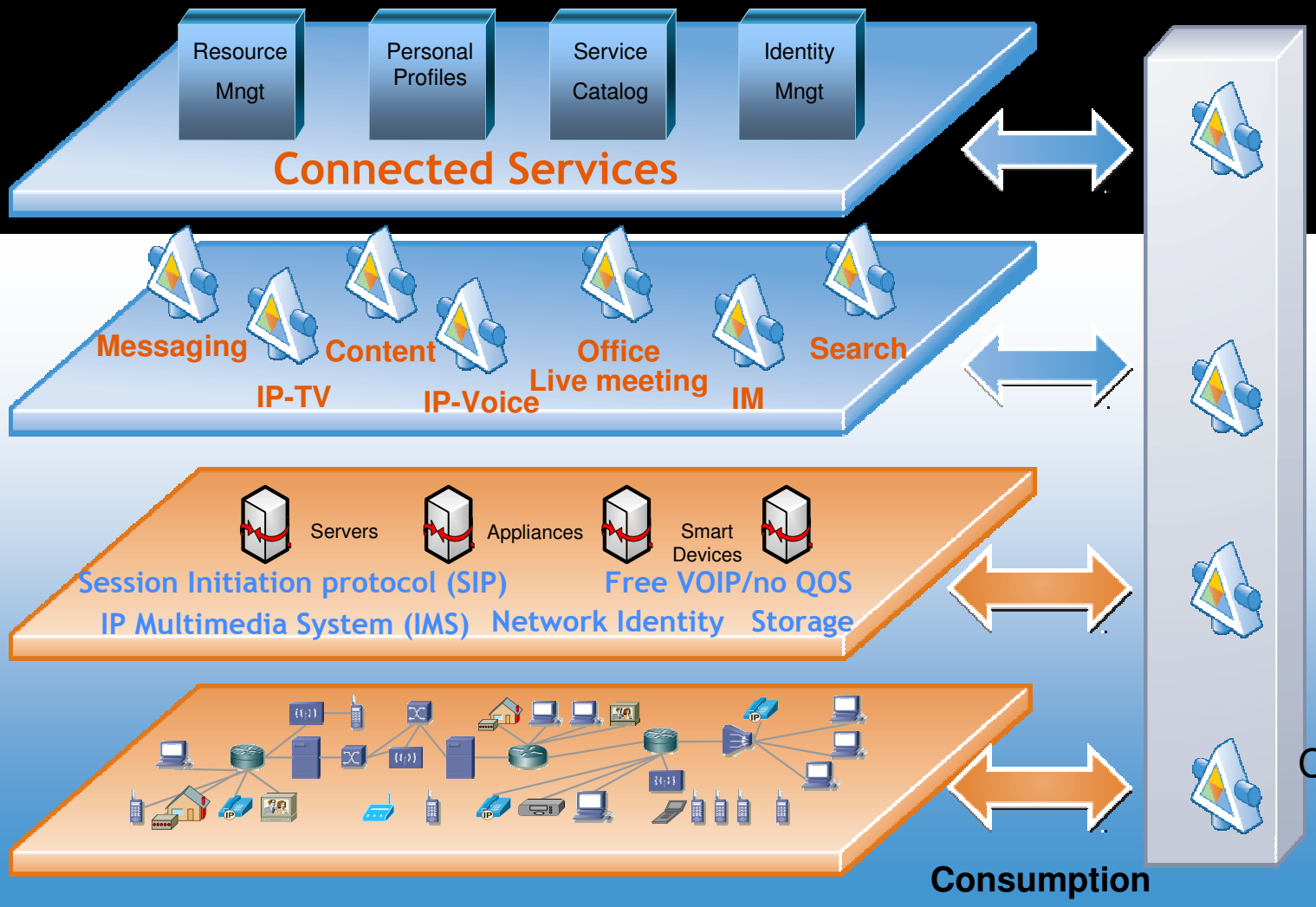
- Unified familiar experience
- Find & connect with people
- From any device, any application

IT & Developer:

- Manageable
- Fast time to solution
- Low TCO

Person centric: call someone vs. phone number

Service View



Business Productivity and Service Network

Infrastructure and Network Control

Devices and IP Network

ERP

Office Systems

Voice and Data Systems (eg. VM)

Connection

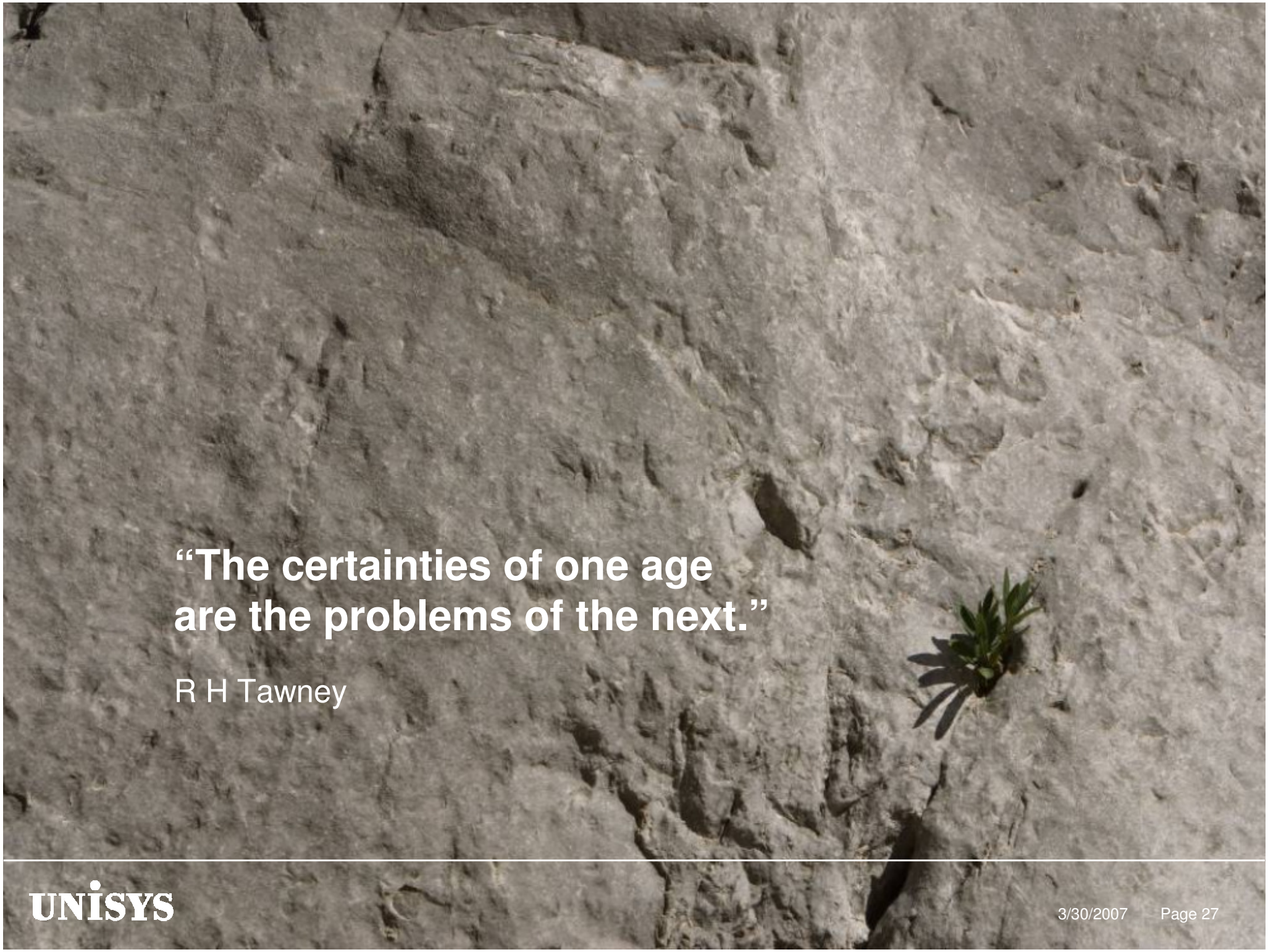
Architecture: IT Stewardship

In most large organizations, application, voice, video and data infrastructures are supported by different teams.

Who has the authority, the capital, the support structures?

In pulling these items together, there is always a battle with inertia… who wants to give up their budget and potentially their domain?

This is perhaps one the largest challenges in taking advantage of CnC


“The certainties of one age
are the problems of the next.”
R H Tawney

What Do You Think?

We have tremendous innovation and great technology moving at us faster and more integrated than ever. The biggest barrier to absorption of this technology is the massive amount of installed base.

The issues are:

- **Organizations are stove-piped**
- Depreciation impacts the business case
- Technology requires up-skilling IT end users in tough times
- New technologies must be driven from the top
- We have so much already, it is hard to absorb more…. a key issue with the industry as a whole

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