Microsoft's Professional Developer Conference Announcements: Impact and Insights

November 3, 2008

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Agenda

- What was announced; What wasn't — *0:10*
- Analysis of Microsoft's Cloud Services — *0:15*
- Impact on Enterprise IT — *0:15*
- Windows 7 and Vista Migrations — *0:05*
- Q&A — *0:15*

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Summary of the Microsoft's Most Significant Announcements:

1. Microsoft Unveiled its cloud services strategy based on Windows Azure and the Azure Services Platform

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Windows Azure and the Azure Services Platform

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Summary of the Microsoft's Most Significant Announcements:

2. Demonstrated and released technology preview code for Windows 7
3. Announced a Web-enabled version of Office
4. Released code to build claims-aware applications for use across the enterprise and the cloud
5. Released code for "Oslo" modeling capabilities linking development and operations

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What Wasn’t Announced

1. Pricing for developers & enterprises except for stating pricing will be based on consumption and service level agreements
2. How will SLAs for enterprises, ISVs be specified? Measured? Penalties?
3. How legacy applications will be handled?
4. Will Azure be made available to enterprises to purchase to build ‘private clouds’?
5. Microsoft’s partnering strategy for regional data centers
6. Details on how security and privacy concerns would be addressed
7. Details on how advertising would be integrated into the vision for cloud developers that want to explore this business model
8. Xbox, IPTV and other MS platforms were absent from the vision
9. In what timeframe enterprises might purchase Windows Azure and the Azure Services Platform for building their own ‘private’ clouds?

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An Inflection Point for Microsoft (?)

1. Microsoft has committed to support both SOAP and RESTful protocols for developer access to the services
2. In addition to Microsoft's own platforms (Windows mobile, Windows client and Windows Server), the services can be consumed by non-Microsoft platforms as a service, via a browser/Web protocols or via a browser that supports SilverLight. Further, some non-Microsoft platforms will be supported with a local Live Mesh client.
3. Future commitment to support language neutrality to attract Web 2.0 and other non .NET developers
4. A commitment to support interoperability and standards for the Azure Services Platform, although no specifics were provided.
5. Microsoft finally supports SAML 2.0 with its “Geneva” token services
6. Fully embraces a "hybrid" model where Microsoft services such as Exchange Online can be hosted on-premises, in the cloud, or any combination thereof giving enterprises choice in when, where and how quickly they move to a cloud-based computing model.

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Analysis of Microsoft's Cloud Services

David Smith
Tom Bittman

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Microsoft's Cloud Services Strategy is an Ambitious Attempt to Bridge Many Gaps:

- Enterprise and Consumer
- Development and Management
- Rich Clients and Rich Internet Applications
- On premises and off premises
- Microsoft and third parties
- Multiple business models

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Cloud Computing: Multiple Perspectives, Multiple Origins

From the Enterprise

Data Center Pressures

RTI & Virtualization

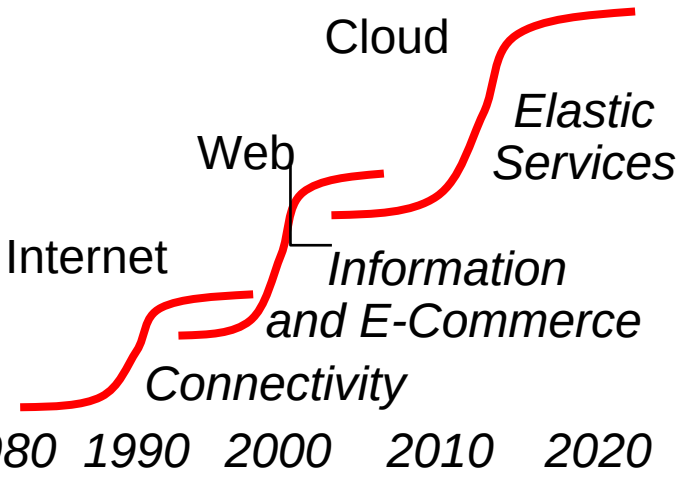
Grid

SaaS & Utility Models

SOA

Alternate Client Devices

Focus on Enablers, "Computing" and "No Hardware



From the Web

Web 2.0 & Mashups

Global-Class Consumer Applications

Browser Delivered SaaS/Sites

Web Platforms

Subsidized Applications

Focus on services, on "Cloud" and "No Software"

Cloud Computing

A style of computing where scalable and elastic IT-enabled capabilities are delivered as a service to external customers using Internet technologies

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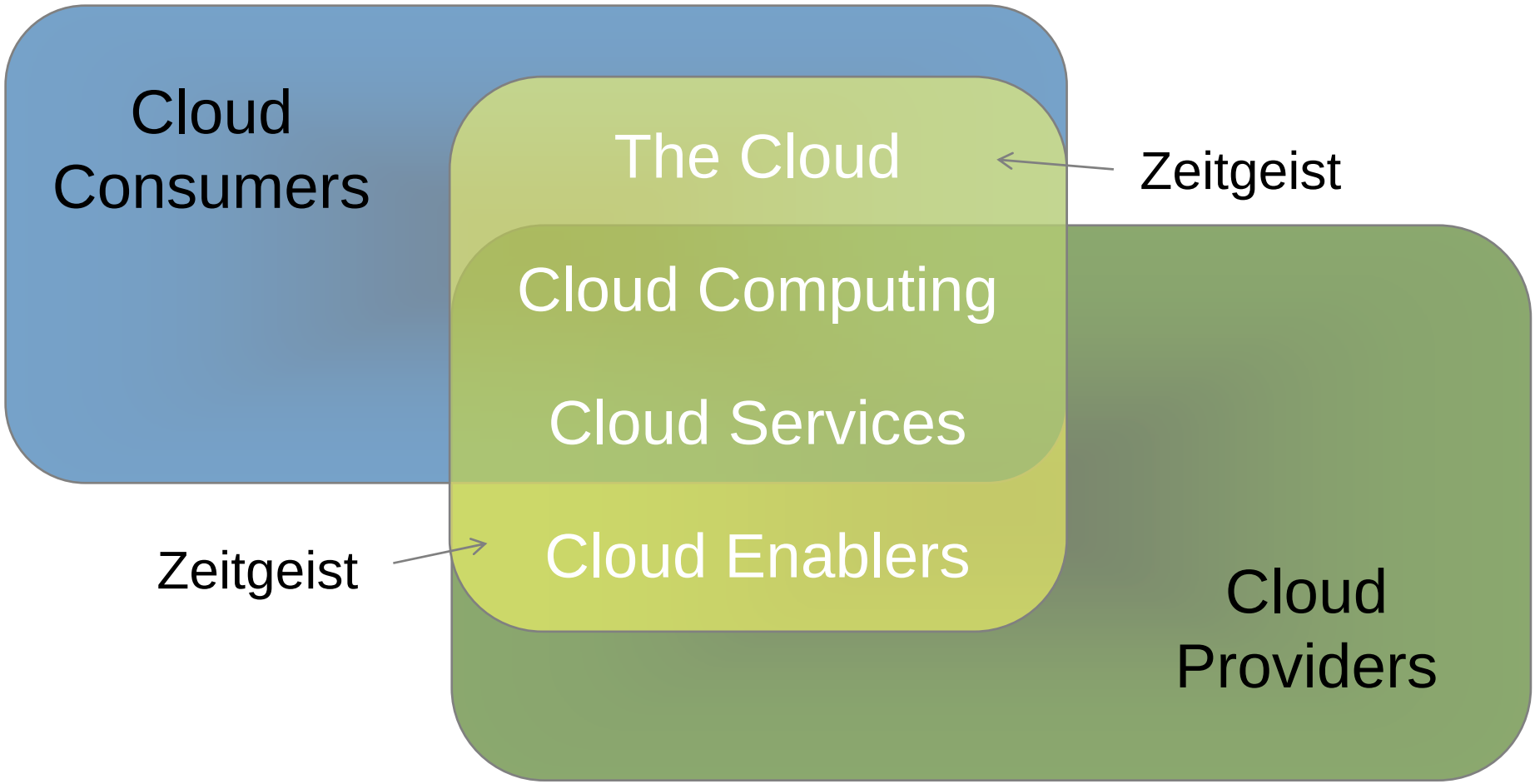
The Basic “Cloud” Terms



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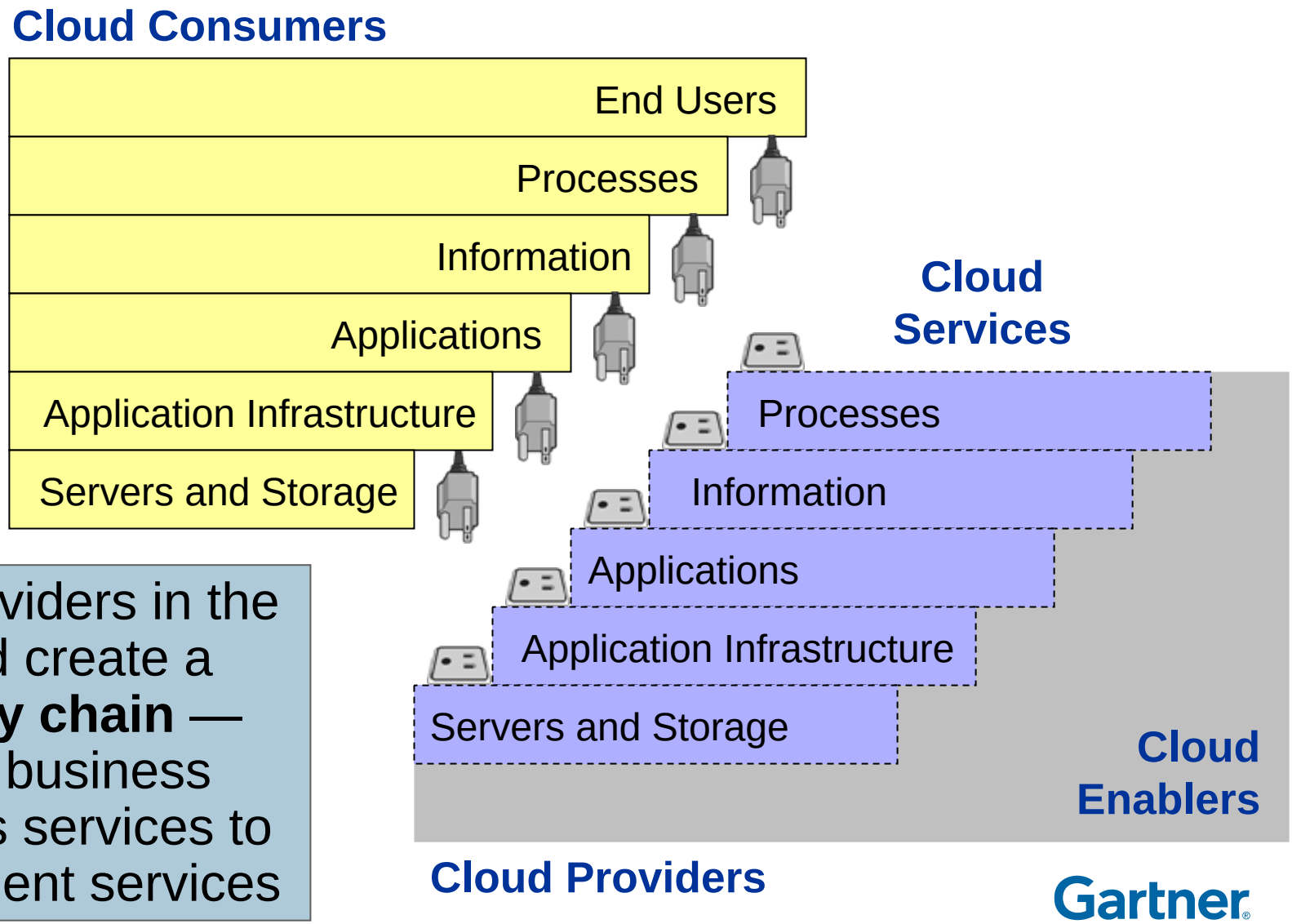
The Structure of Cloud Computing



The providers in the cloud create a **supply chain** — from business process services to component services

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Windows Azure and the Azure Services Platform

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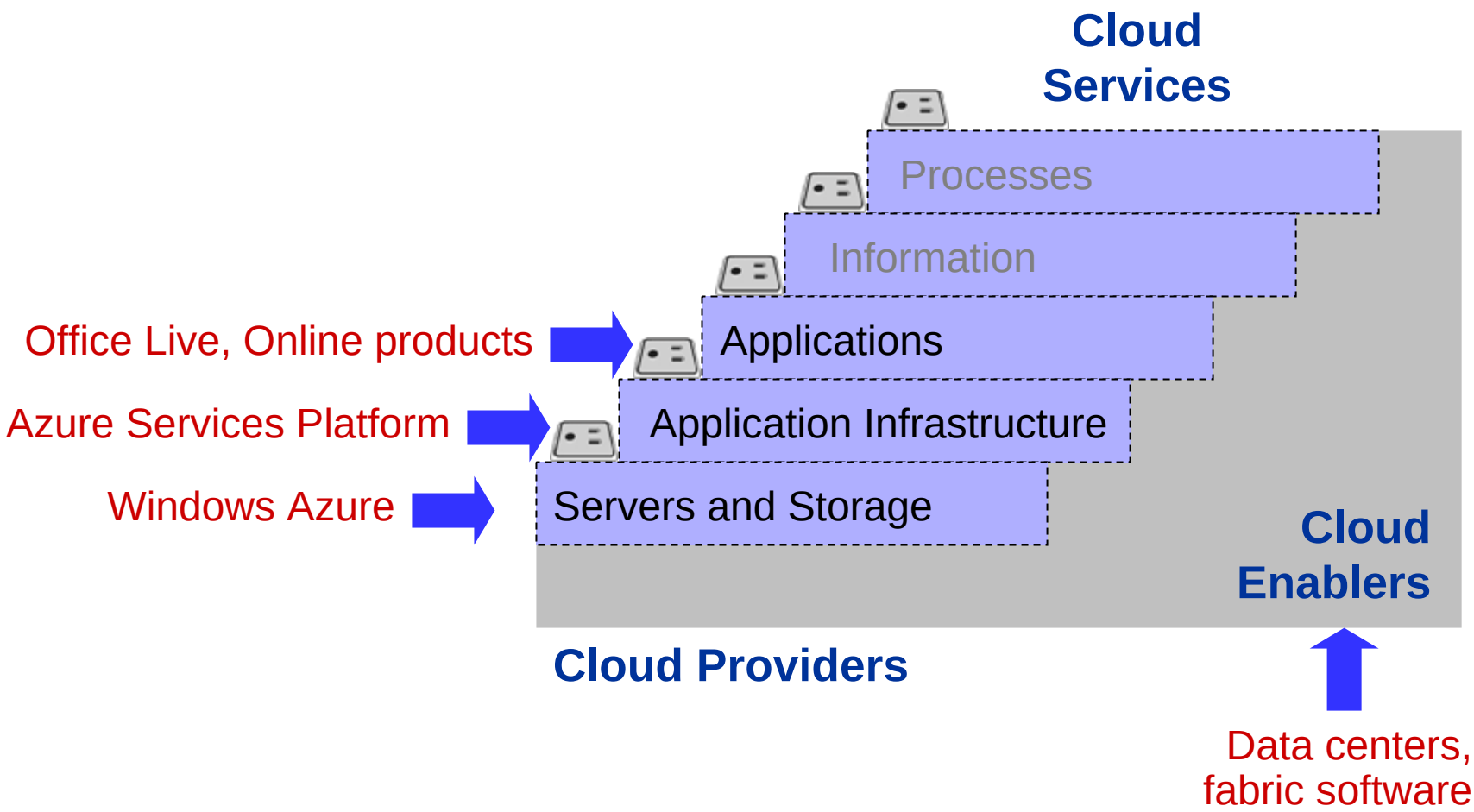
Microsoft Cloud Services Offerings: Live, Online, Azure



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Microsoft’s Opportunities and Threats

Opportunities:

- Dynamics CRM Services (formerly code-named ”Titan”)
- Deliver services that span both the enterprise and the Cloud
- Leverage Hybrid environments and bring cloud technologies to the enterprise, as well as enterprise technologies to the cloud.
- Protect investments in expertise through Visual Studio and .NET

Threats:

- Fragmentation
- Credibility via Demonstration
- Security. Privacy, SLAs
- Unproven Business Model

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Recommendations

- Windows Azure and the Azure Services Platform at this point are a technology preview, not a final offering. Don't expect a production-ready release of Azure and applications that support it until YE2009.
- .Net developers - experiment today. Short term, explore how on-premises applications could be improved with the use of cloud-based application services (such as the .Net service bus). Longer term, look for transformational use of cloud-native applications.
- Don't wait to evaluate. Exchange hosted services and SharePoint hosted services will be available this year, are not dependent on the Azure Services Platform and offer the potential for significant cost savings for enterprises today.
- For support of existing workloads, consider Amazon EC2 and similar services. Pressure Microsoft to support existing Windows applications through Azure-hosted Virtual Machines or via partners.

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Impact of Microsoft's Azure Services Platform on Enterprise IT Organizations

Tom Bittman
Neil MacDonald

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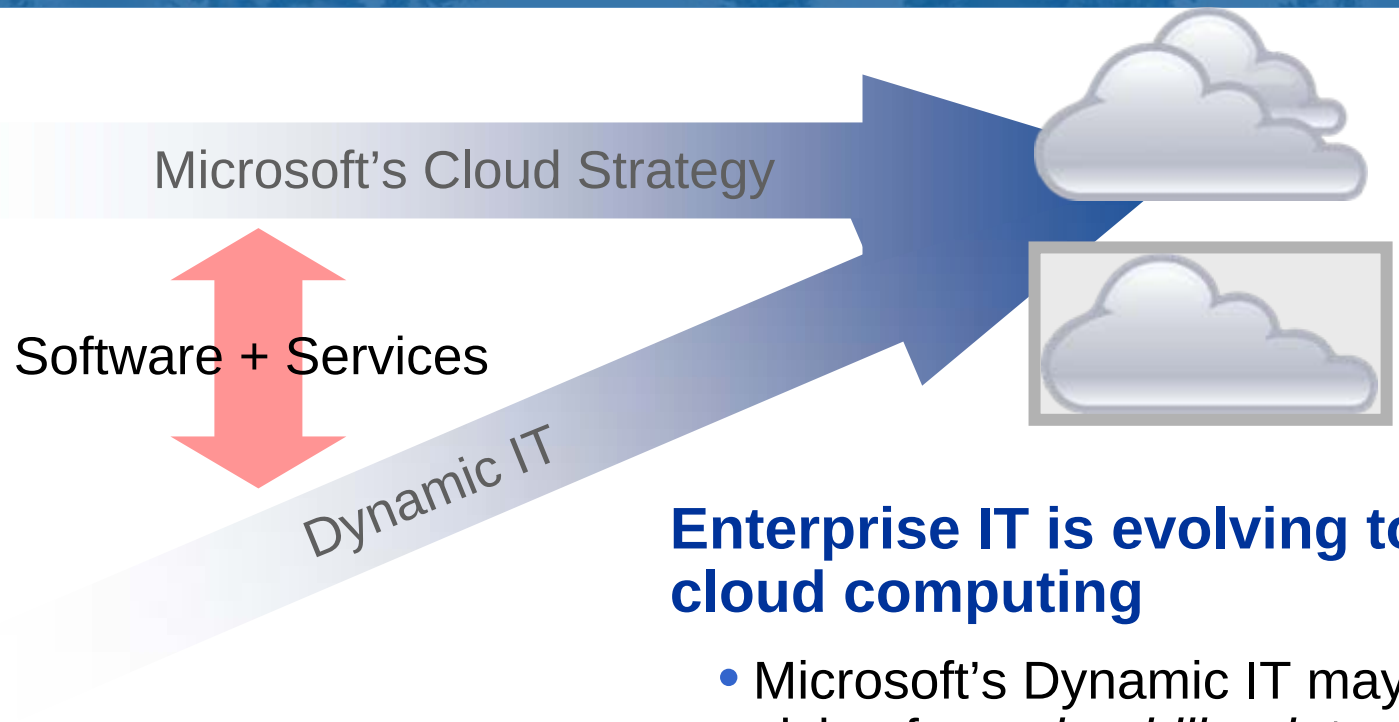
Convergence Between Microsoft's Enterprise Strategy and Cloud Strategy



Enterprise IT is evolving to *emulate* cloud computing

- Microsoft's Dynamic IT may become a vision for a *cloud-like data center infrastructure*

Why should users care?

Unlike other cloud services providers, Microsoft benefits by bringing cloud-like capabilities to internal enterprise IT (Windows Azure, Hyper-V modifications, Hyper-V metadata for management, fabric software, etc.)

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Significant Microsoft Differentiator: Hybrid "Enterprise / Cloud" Services

- Enables an evolutionary approach and customer choice
- Cloud services on-premises, in the cloud, or both
- Customers can move services back and forth

Applications:

- Movement
- Integration between local and cloud

Management:

- Local vs. cloud-based management of cloud-based services
- Cloud-based management of local services
- Ecosystem: management tools and human-based management

Security:

- Seamless authentication (claims-based, federated identity)
- Consistent security policy model for authorization

Data Center Infrastructure:

- On-premises, integrated with cloud-based, or cloud-based only
- Temporary capacity, disaster recovery

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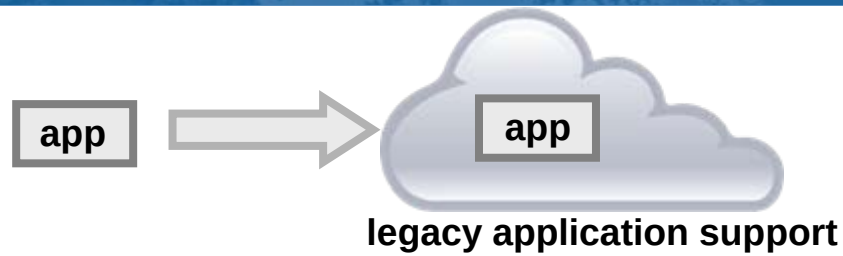
Interim Steps Needed: Supporting Legacy Applications

Legacy Applications:

- Provide a run-time environment in Azure

Azure-Ready Applications:

- Design enterprise apps for enterprise AND Azure



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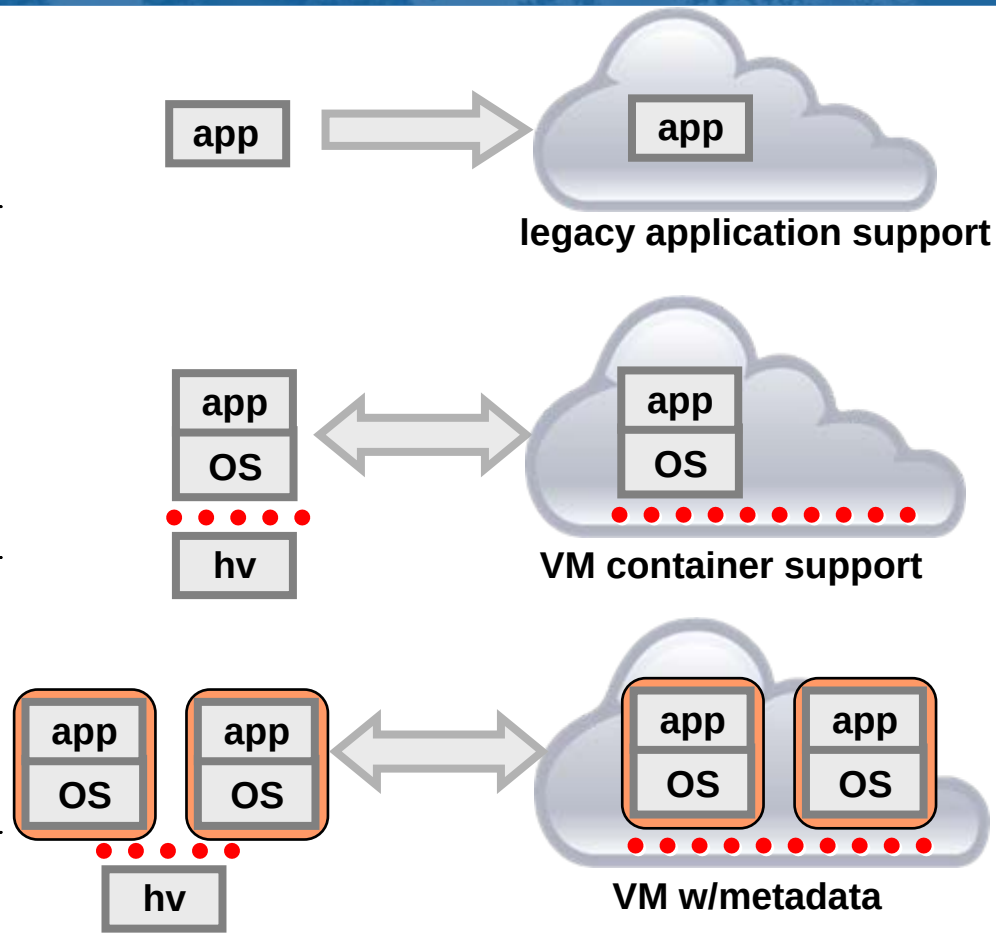
VM Containerization:
- Run legacy apps within Hyper-V VMs and move them to/from Azure

Software/Virtual Appliance:
- Enable on-premises SAS, that can later move to Azure

VMs with Operational Metadata:
- Including relationships, instrumentation for management



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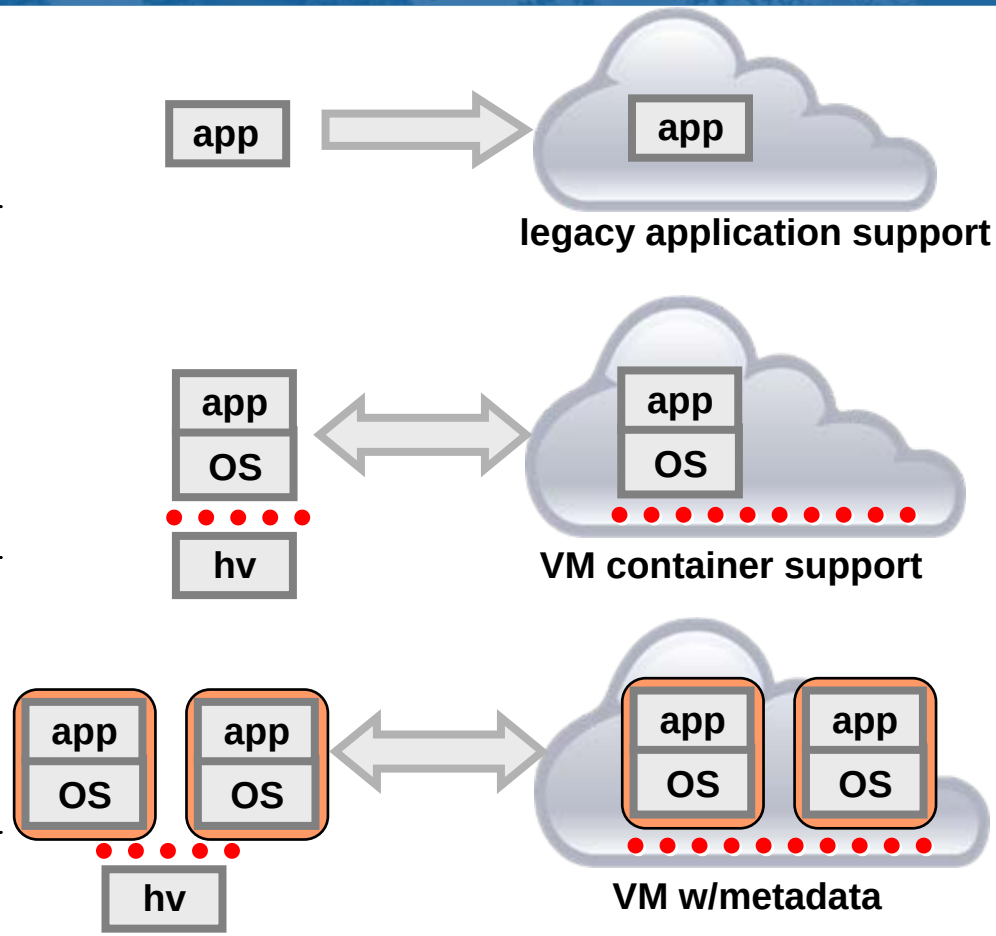

Why should users care?

Your migrations will take time. ISVs will take time. Some sw vendors will use appliances as a stepping-stone to SaaS. Virtualization vendors will use them to control cloud plumbing (e.g. VDC-OS).

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The Evolution of the Cloud Computing Supply Chain

Monolithic (Early)

- Early cloud computing services will be based on a proprietary/internal architectures – islands of cloud services delivered by megaproviders.

Vertical Supply Chain (2+ Years)

- Over time, some cloud providers will leverage cloud services from other providers (for example, ISVs moving into SaaS on top of Microsoft's Azure Services Platform).
- *Within five years, Microsoft will begin to divest their data centers – shifting their investment focus to software and services.*

Horizontal Federation (4+ Years)

- Smaller providers will federate horizontally to gain scale – also, enterprises will leverage horizontal federation for peak capacity (overdraft protection, cloudbursting).

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Azure Futures?

Who gets to run Azure internally?

- Microsoft only **(currently)**
- Limited to a few partner providers (geographic reach, etc.)
- Limited to all service providers
- Limited to a few customers
- Available to anyone (Microsoft updated?)

How can users manage their workloads in Azure?

- Uniformly – standard QoS **(currently)**
- User-determined, Microsoft managed
- User-determined, third-party managed
- User managed

What workloads are supported in Azure?

- Azure-ready applications **(currently)**
- .NET applications
- Any application in a Hyper-V VM

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Key Competitors

Amazon

Leveraging VMs to capture broader application base

Cisco

Building their own cloud infrastructure, SaaS (WebEx and email)

Google

Building out Google App Engine on infrastructure supporting search

IBM

Potential Google partnership, Blue cloud, ISV and enterprise “help”

Salesforce

Microsoft is late and doesn’t fully understand the potential of its Dynamics CRM Services (formerly code-named “Titan”)

VMware

A competitive ecosystem based on VM architecture, broader cloud support for legacy Windows applications.

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Windows 7 and the Impact on Enterprise Adoption of Vista

Mike Silver

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Windows 7 Features

User/Consumer

- Better home networking
- Device Stage
- Windowing improvements
- Better memory management
- Revised Sidebar
- UAC improvements

Enterprise

- AppLocker
- BitLocker To Go
- Branch Cache
- Integrated SharePoint Search
- VPN-less Access
- Problem determination tools
- “Hard Links” to data for deployment

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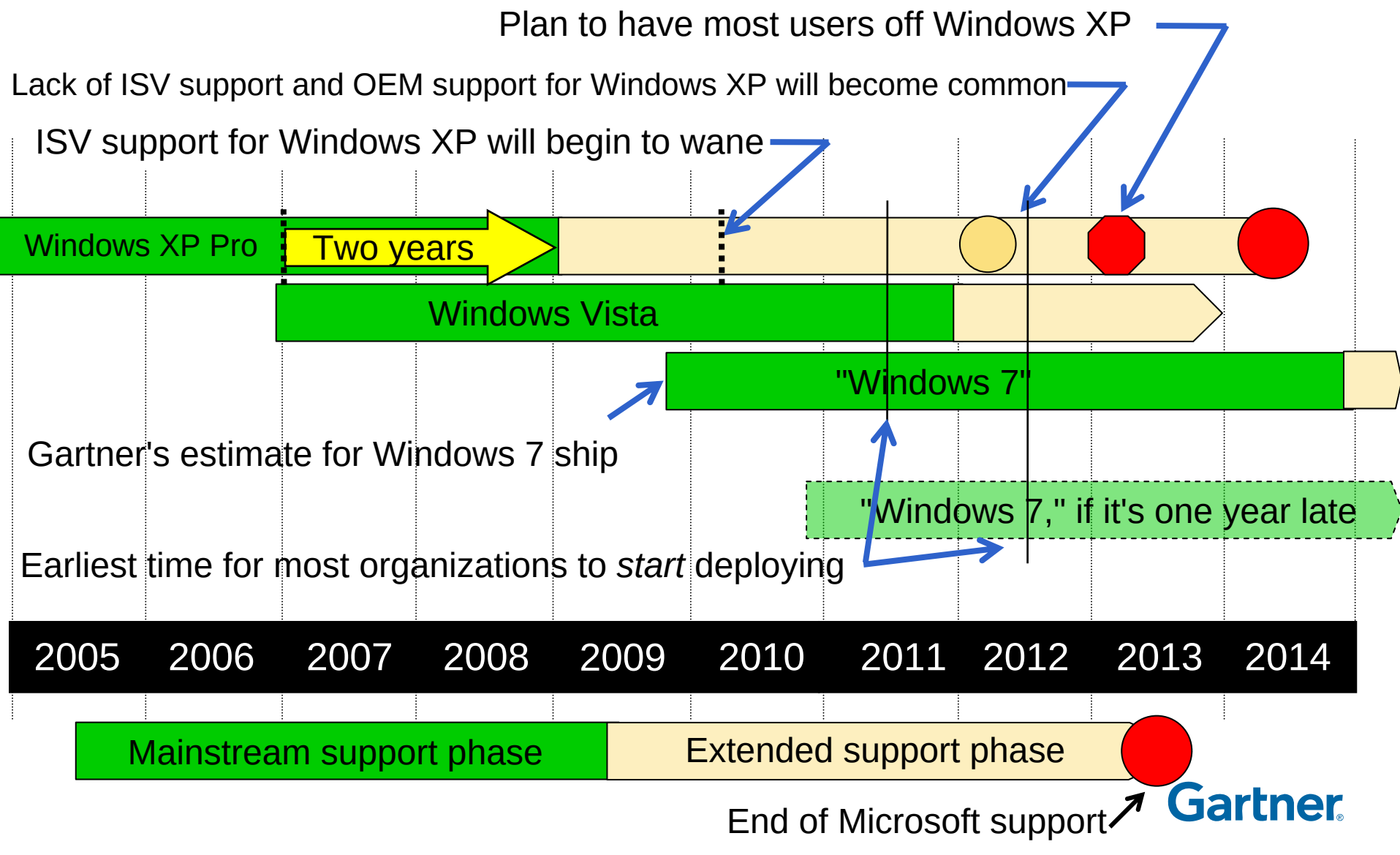
The Risk of Skipping Windows Vista



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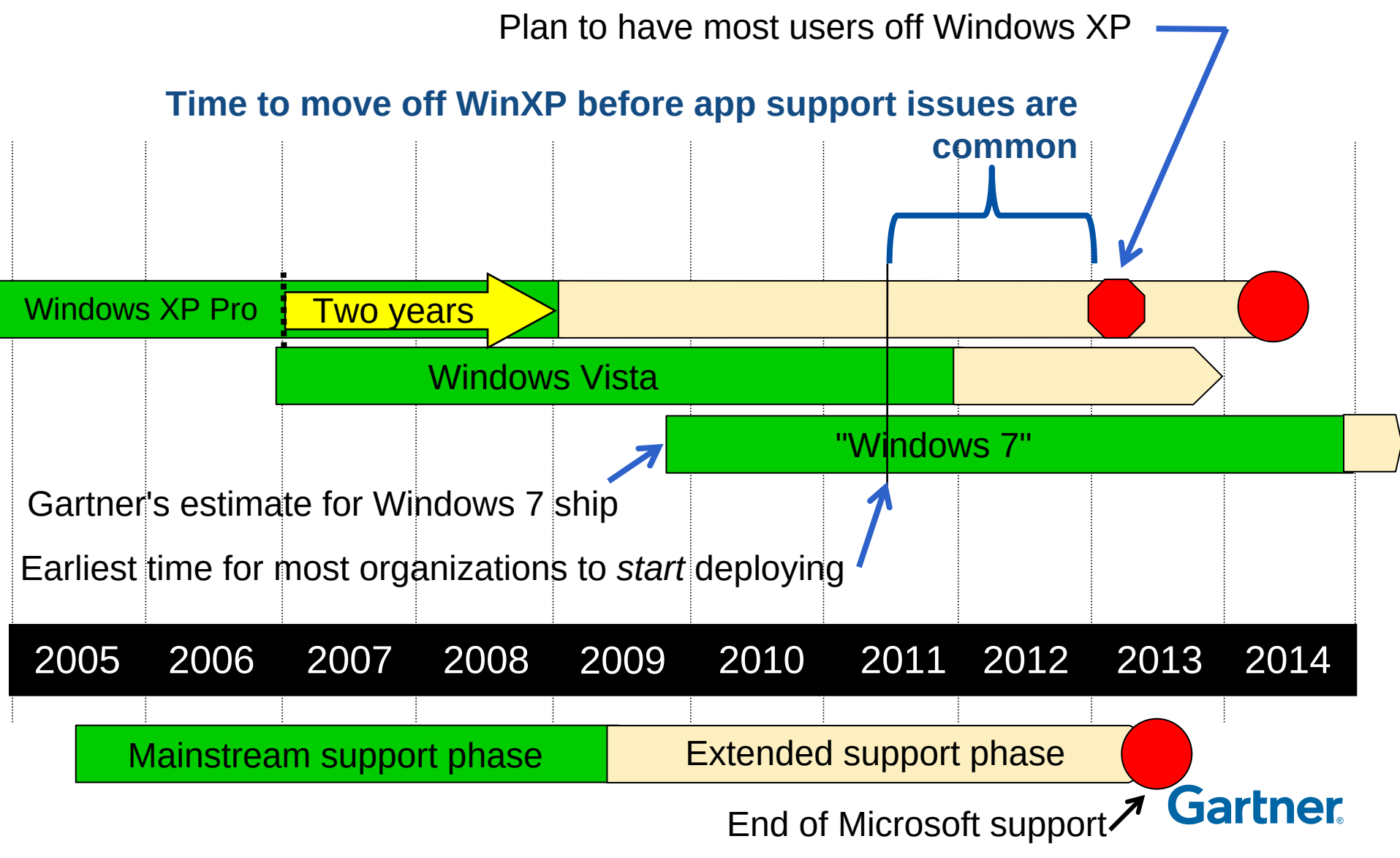

Overall Observations

- ✓ Azure is a significant and coordinated shift in Microsoft strategy. Much like the move to counter Netscape and embrace the Internet in 2006, this is a “turn the battleship” moment for Microsoft.
- ✓ The vision significantly expands Microsoft's "software plus services" vision to encompass all of Microsoft's offerings, and it will impact all of Microsoft's products during the next decade.
- ✓ The offerings announced at PDC lie at various layers within Gartner's cloud platform taxonomy and offer more services than competitive cloud offerings that focus on a single layer (e.g. Amazon's EC2)
- ✓ Several cloud offerings from Microsoft are available today (e.g. Exchange Online) and do not depend on Azure.
- ✓ Gartner believes that the technologies underlying Dynamics CRM Services (previously code named “Titan") represent a significant, but unrealized, opportunity for Microsoft.

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Overall Recommendations

- ✓ Windows Azure and the Azure Services Platform are a technology preview, not an available product. Don't expect a production-ready release until 2H09.
- ✓ Despite the hype, Exchange hosted services and the SharePoint hosted service, which will be available in 2009, are not dependent on the Azure Services Platform. Those services offer the potential for significant cost savings for enterprises today.
- ✓ .Net developers - experiment today. Short term, explore how on-premises applications could be improved with the use of cloud-based application services (such as the .Net service bus). Longer term, look for transformation use of cloud-native applications.
- ✓ In the data center, move forward with virtualization and evolve to manage IT infrastructure as a service (Gartner's RTI). This will position you to move to cloud-based services when & where they make sense.
- ✓ Test applications on Vista and have a remediation plan, even if you plan to skip Vista. Focus on your OS deployment capabilities and target date to eliminate XP before ISV support wanes.
- ✓ Consider bringing in Vista on new PCs. This move is the least expensive and lowest-risk alternative.

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