

BusinessConnect and SolutionsConnect

It's time to make bold moves.

Steps to Cloud Nine

The Cloud Transformation Journey

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The Cloud Transformation Journey



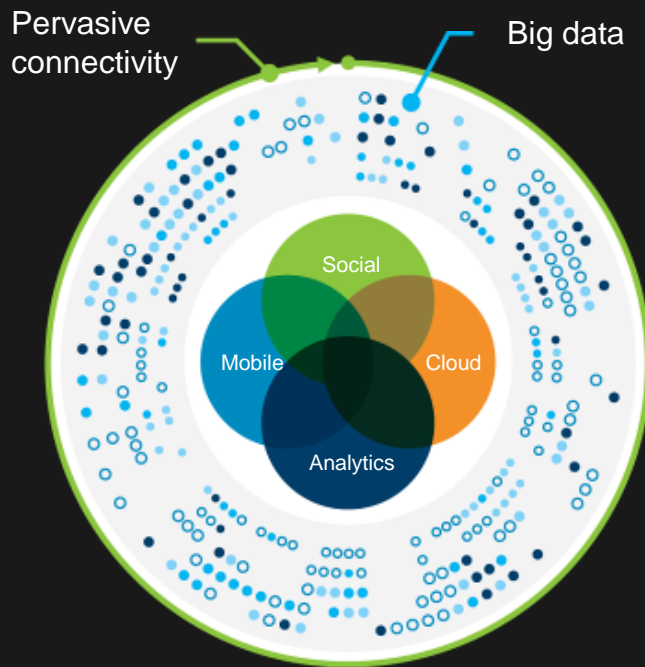
Differences in market capitalisation for sample leaders and followers by 2025.



Over the Next 12 Years the Digital Economy will become the Economy

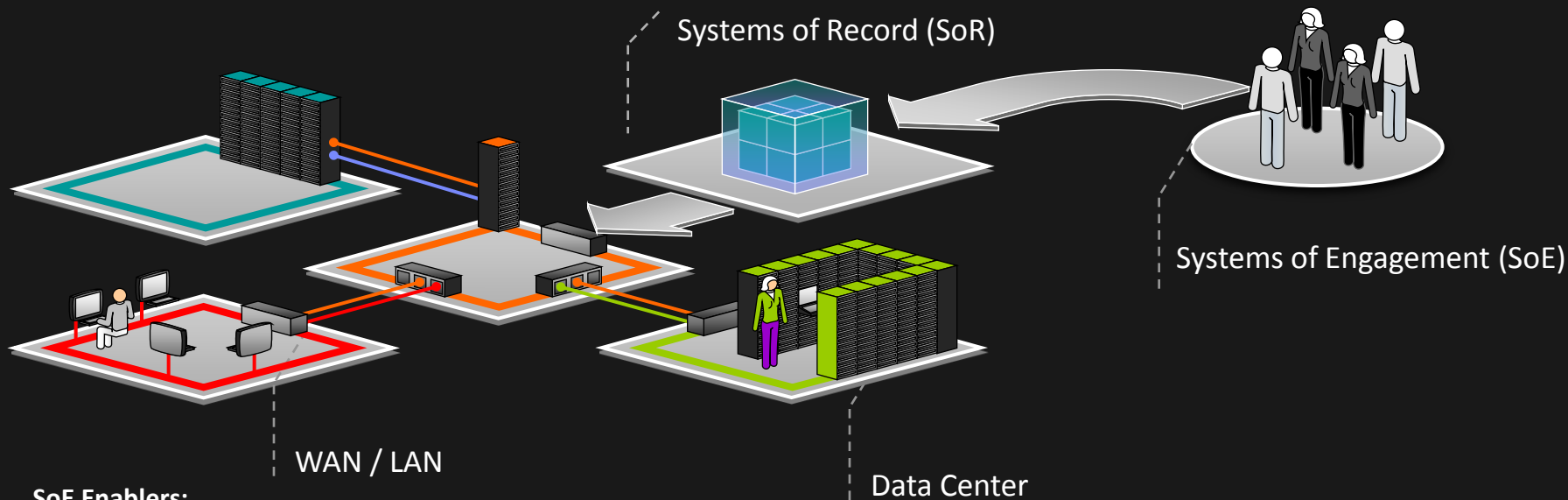
-  **Customers become more connected**
 -  **Consumers and employees will demand more**
 -  **Organisations will get flatter and more agile**
 -  **Enterprises will make faster, more-data-base decisions**
 -  **Enterprises will face more sources of competition**
- Underpinned by a heavy reliance on digital**

Digital transformation forces



Moving to a New World

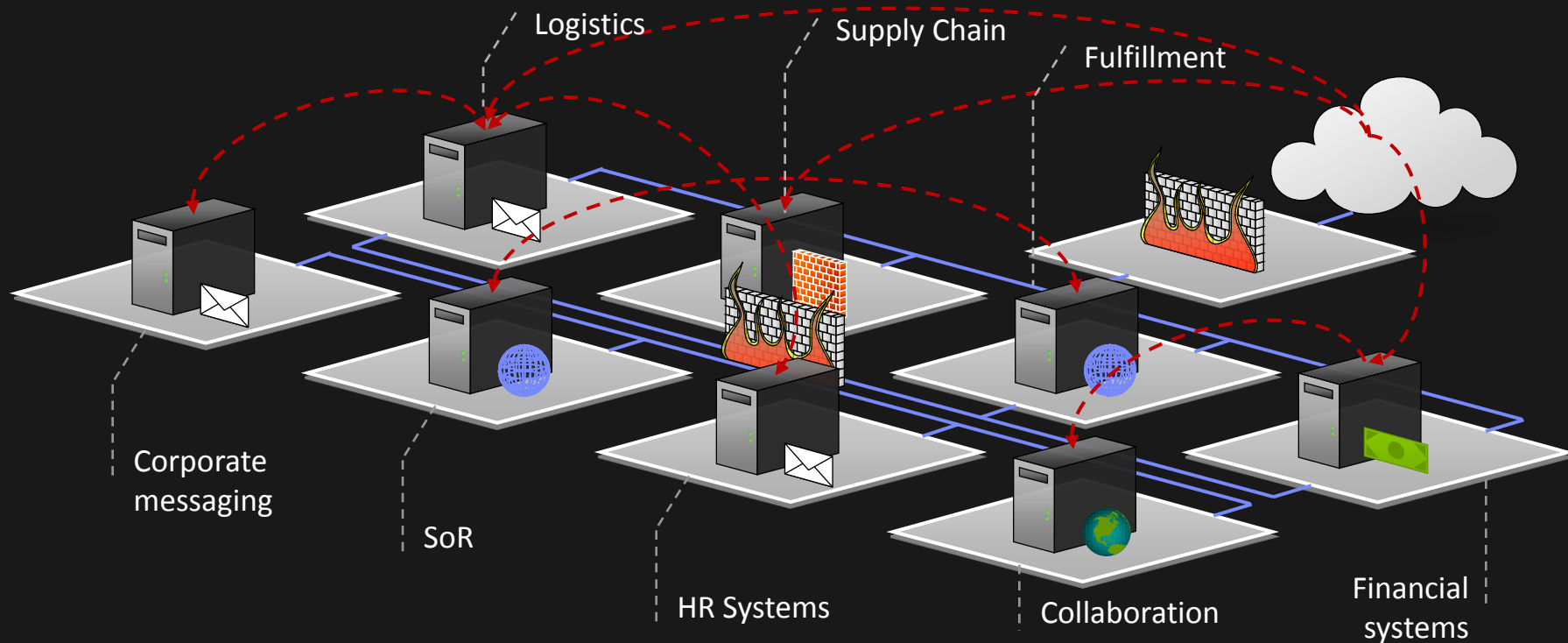
Systems of Engagement are delivering user-centric services into the enterprise



SoE Enablers:

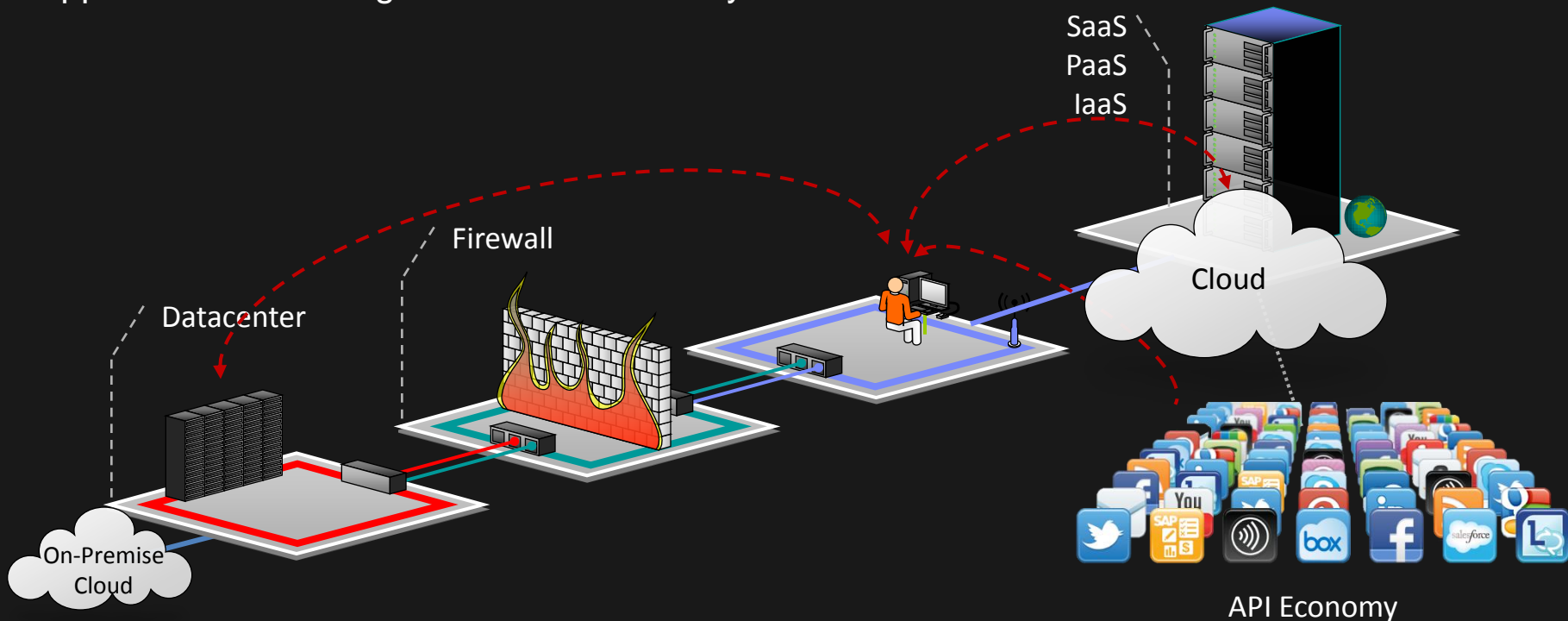
- **Social** drives agility
- **Mobile** enables a 24x7 connected, engaged workforce
- **Analytics** enable data-driven insights for faster, smarter decision making
- **Cloud** enables ubiquitous access to resources and applications, and workload flexibility

But the Reality is we Have Legacy Apps to Deal With...

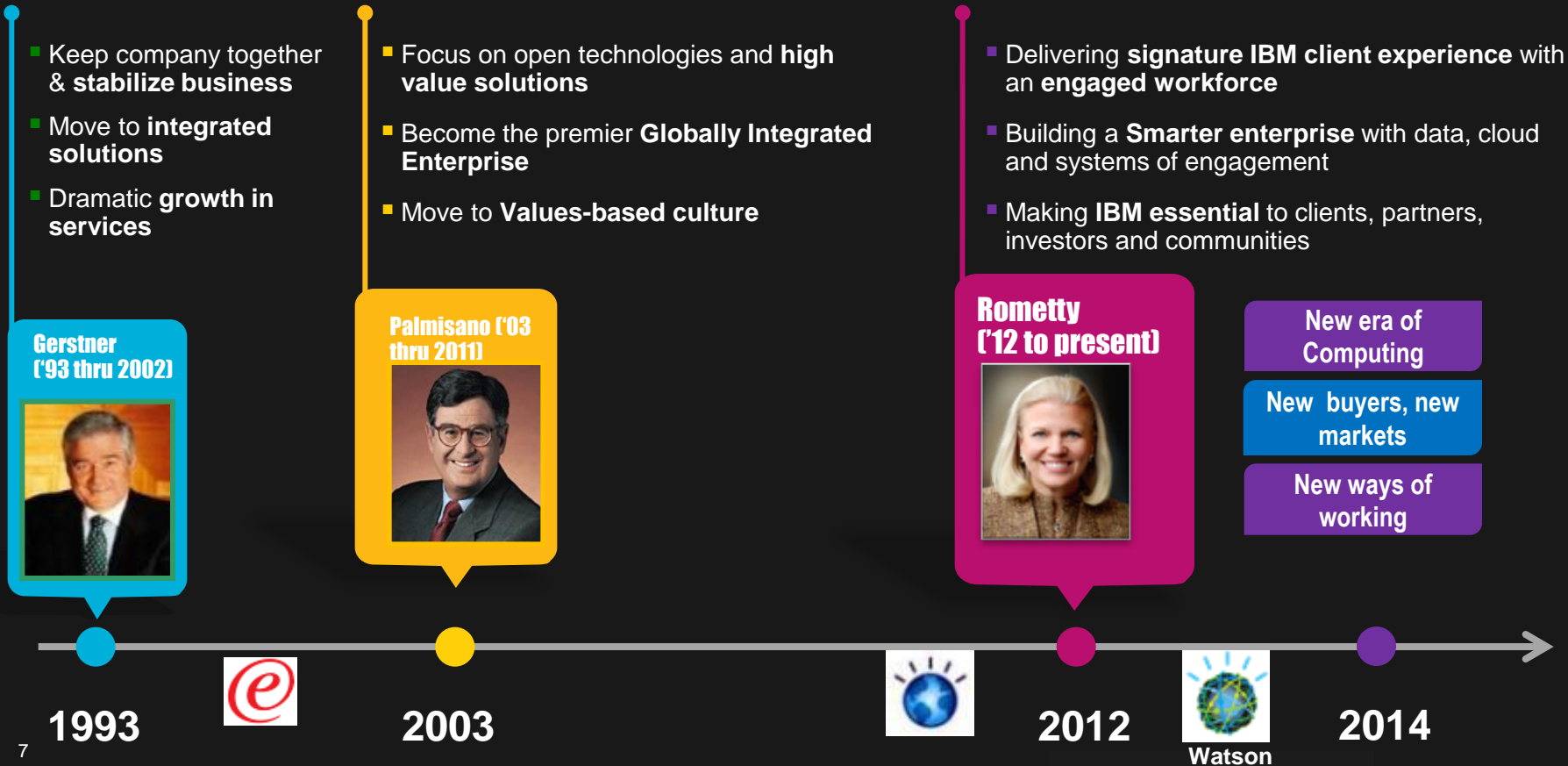


Cloud Offers A New Way To Bring In User-Centric, SoE Services

A Cloud Operating Environment allows us to construct apps from APIs ... regardless of where they reside



IBM's Transformation: An Ongoing Journey



IBM's approach to transformation

IBM Strategy

IBM Values

Transformation Framework

*Business
Process
Excellence*

*Organizational &
Culture Change*

*Information
Technology
Enablement*

5 Principles of Smarter Transformation



Create a movement



Build a platform for continuous improvement



Pursue growth as well as productivity



Apply technology for smarter transformation



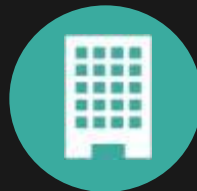
Establish an enterprise change capability

Technology: a catalyst for innovation and growth

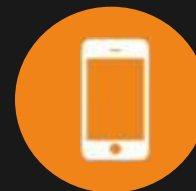
The transformation of IBM's IT Organization Pervasive Consolidation



CIOs
128 to 1

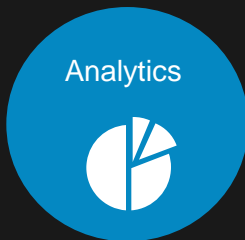


Data Centers
155 to 5



Applications
16000 to 3800

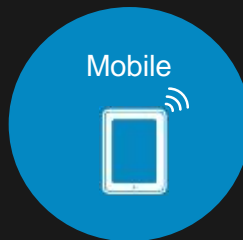
More than **\$1.5B in IT savings** since 2005. Now we're reinvesting these savings in our future.
Using IT not just as a productivity tool, but as a catalyst for innovation and growth



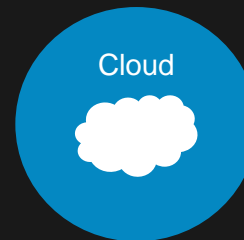
Projecting savings of
\$100M+



Supports
428,000 bloggers
86,000 public comm



Over 185,000
mobile devices









Reduced server
provisioning from 5
days to one hour



Helps contact center
agents answer client
questions

Six initial workloads chosen by the IBM CIO for Cloud

| Analytics | Develop/Test | Collaboration | Storage | Prod Support | Self-Service |
|---|---|---|---|---|--|
|  <p>Blue Insight</p> <ul style="list-style-type: none"> Standardized BI/analytics capabilities 300K users, 500 ported/ boarded apps Predictive modeling (SPSS) and data mgmt 50K peak reports/day |  <p>Develop/ Test Cloud</p> <ul style="list-style-type: none"> Server setup from 5 days to 1 hour 95% of new server reqs via this cloud 13,000 VMs provisioned for 2,100 users |  <p>SmartCloud Meetings</p> <ul style="list-style-type: none"> 85% of web conference minutes > 50M meeting minutes per month |  <p>Storage Cloud</p> <ul style="list-style-type: none"> File storage cloud used by > 130K users & applications Block storage cloud w/ automated tiering (50% reduction \$/GB) |  <p>Production Cloud</p> <ul style="list-style-type: none"> Private cloud for lower tier/ departmental applications First apps migrated and operating Refining platform, expanding use on best fit basis |  <p>Self-Service App Env</p> <ul style="list-style-type: none"> Platform for composite app development and execution Programmer-less app development Example: >200 forms-based internal process apps |
| SaaS | IaaS | SaaS | IaaS | IaaS | PaaS |

The IBM CIO cloud experience

Key lessons learned

- **Cloud adoption comes with benefits and risks**
 - Benefits of Cloud are real, but require careful planning & execution
- **Private cloud is a viable first step**
 - Presents an opportunity to transform internal processes and organization for increased efficiency
- **Think small and agile with targeted workloads**
 - Small steps with tactical/point solutions, not sweeping infrastructure change
- **Cloud is the foundation for transformation to a Smarter Enterprise, by enabling -**
 - Systems of Engagement (Social & Mobile)
 - Systems of Insight (Data & Analytics)
- **Meaningful & sustainable transformation requires a combination of**
 - Process excellence
 - Cultural change management
 - Technology enablement.

Ready for cloud

New growth workloads made possible by cloud

Analytics

Collaborative Care

Healthcare Payments

Infrastructure Storage

Information intensive

Banking & Financial Markets Solutions

Wealth Management

Isolated workloads

Collaboration

Risk Management

Sensitive Data

Highly customized

Mature workloads

Workplace, Mobile, Desktop & Devices

Not yet virtualized 3rd party SW

Pre-production systems

Business Processes

Disaster Recovery

Evaluate: May . . . or may not . . . be ready for Cloud based on their attributes or maturity

Complex processes & transactions

Batch processing

Development & Test

Regulation sensitive

Infrastructure Compute

Identifying the Most Appropriate Cloud Service Model

The Right Cloud for the Right Workload

Will your operating environment need to rapidly change or require ongoing customization?

IaaS

- Foundation of Cloud computing
- sometimes referred to as Hardware as a Service (HaaS)
- service provider owns & runs the equipment. Client typically pays on a per-use basis.
- Dynamic scaling
- Shared or dedicated physical infrastructure

Can your workload function with a given PaaS stack's standard offering?

PaaS

- Platform as a Service (PaaS) is a way to rent hardware, operating systems, storage and network capacity over the Internet.
- Shared platform
- Shared phys infrastructure
- Access limited to platform software

Will out of the box functionality work for your business/process?

SaaS

- Software as a Service (SaaS) provides On-Demand software
- All users will have the same version of software
- Application level multi-tenancy
- Shared physical infrastructure

Where to from here in your cloud journey: Here are some steps to consider:

Business

- Undertake a Cloud Assessment - infrastructure, platform software or combination
- Cloud computing transformation advisory
- Access new capabilities via IBM Marketplace eg. analytics tools, marketing tools, financial tools
- Leverage IBM Marketplace to monetize company value

Developers

- Access PaaS catalogue - Bluemix on SoftLayer
- Access SaaS catalogue - customise Software offerings

IT Operations

- Dev and test
- Storage
- Disaster recovery
- Infrastructure refresh to cloud (eg. to SoftLayer using Racemi)
- Collaboration eg. SmartCloud meetings
- Packaged apps to Cloud (CAPEX to OPEX)
- On-Premise / Off-premise / Hybrid



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