

Smarter Planet Solutions Increase Demands on IT



1.2 zettabytes
(1.2 trillion gigabytes) exist in the “digital universe”

- **50%** YTY growth
- **25%** of data is unique; **75%** is a copy



32.6 million servers worldwide

- **85%** idle computer capacity
- **15%** of servers run 24/7 without being actively used on a daily basis



Data centers have **doubled** their energy use in the past five years

- **18%** increase in data center energy costs projected



Internet connected devices **growing 42% per year**



Between 2000 and 2010 ...

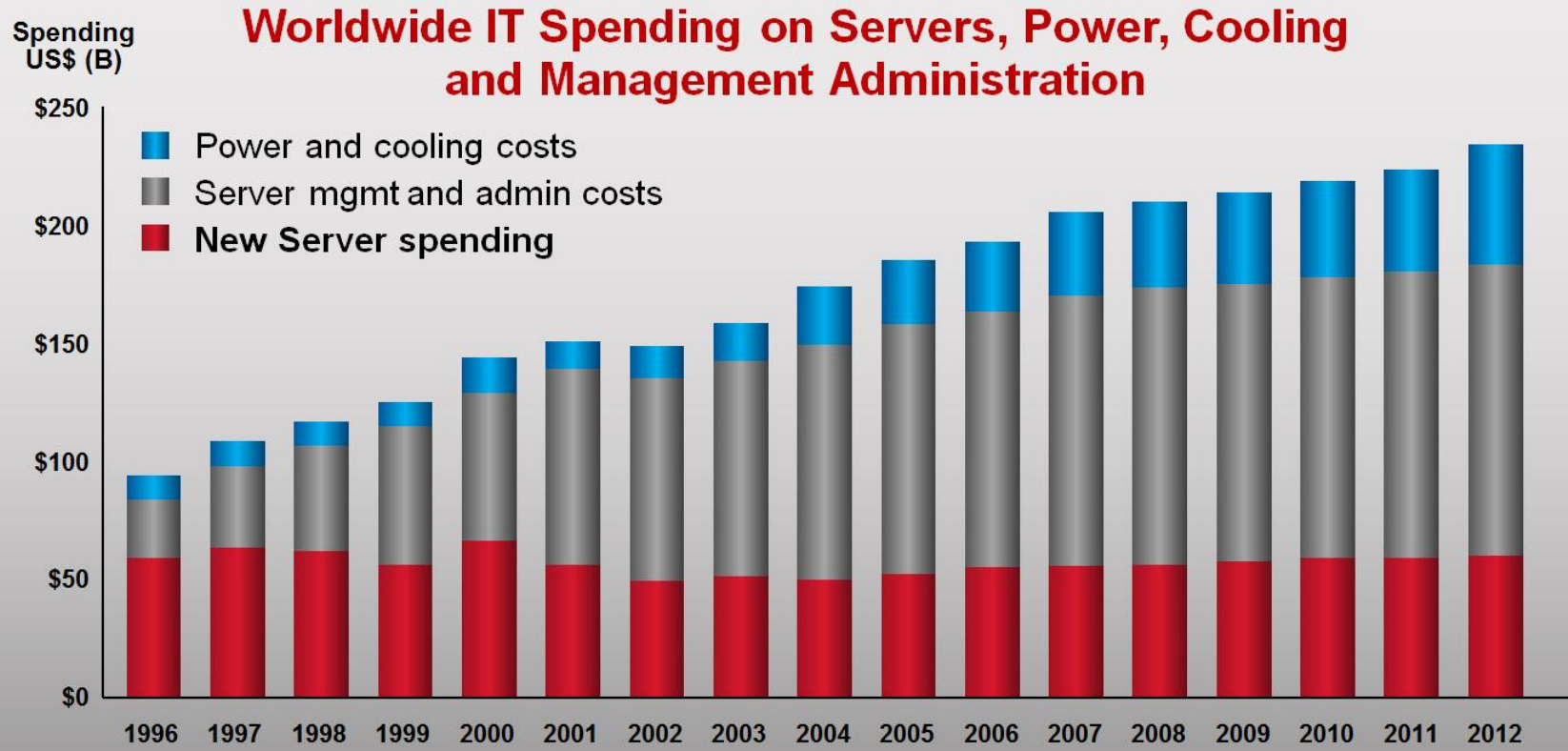
- servers grew **6x**
- storage grew **69x**

Virtual machines growing **42% per year**



But IT budgets are growing less than 0.8% per year

IT Operating Costs



Source: IDC

Sprawl Drives Cost

**Cost to Manage Growth
of Inventory Consumes
IT Budget**



The Scale of Smarter Computing at IBM

92% servers virtualized in strategic hosting environments



1.2M MIPS across System z, p, x and i



1.9M annual Help Desk calls
92K annual changes



570K Notes seats
50M daily instant messages



110 petabytes of storage including production and back-up



Endpoint Security Compliance for 850K workstations/
mobile devices



Transformational Change Drives a Smarter Infrastructure

Virtualization and Consolidation



Project “Big Green”

*Demonstrating the power of **consolidating distributed workloads** using IBM’s integrated capabilities.*

IT Service Management



**Service Catalog –
Standardizing, Centralizing,
Streamlining**

*Providing knowledge and capability to deliver a specified outcome when it needs to occur and **within the time and cost parameters.***

Cloud Computing



**On-demand
IT delivery solution**

*Implementing cloud across the landscape is imperative to enable **ongoing optimization.***

Standardizing, Consolidation and Virtualization

Servers consolidated:

5,700+

Current year total cost take-out:

\$50M

Total cumulative savings project, 2008 to date:

\$100M

Reduction in software licenses:

93%

Reduction in floor space [square feet]:

47,000

Reduction in physical network connections:

55%

Energy savings

20K MWh

Reduction in application portfolio # of applications

1997

15,000

Today

4,500

Increased storage utilization

from

50%

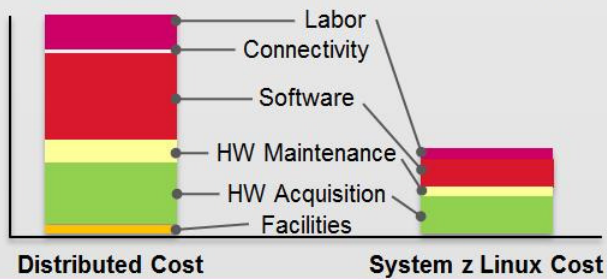
To

90%

with storage virtualization, thin provisioning, and pooling

TCO Comparison for Similar Distributed Workload vs. System z Linux Results

Operating Cost: Distributed vs. Mainframe

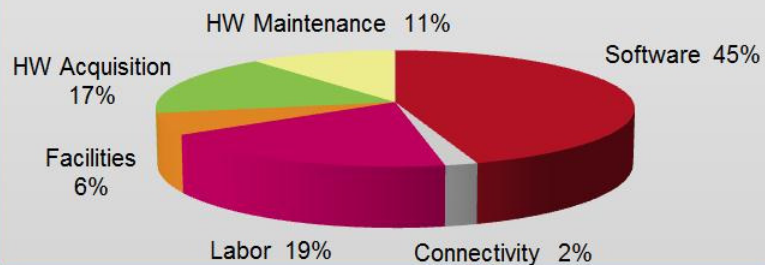


Dramatic Simplification

Unit	Distributed	System z Linux	% Reduction
Software Licenses	26,700	1,800	93%
Ports	31,300	960	97%
Cables	19,500	700	96%
Physical Network Connections	15,700	7,000	55%

Results will vary based on several factors including number of servers and work load types.

Potential Savings: Categories as a % of Gross Savings



IBM's Integrated Service Management Program

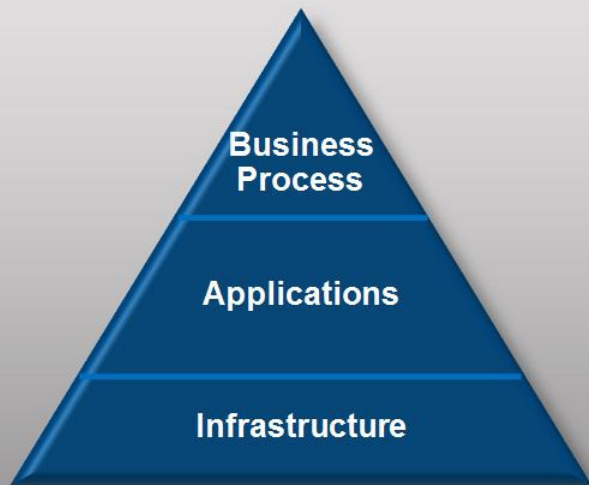
Service Catalog		
	Business Drivers	Business Value
Standardize	<p>Rationalize Services</p> <ul style="list-style-type: none"> Align Drive consistency Standardize 	<ul style="list-style-type: none"> Minimize spending Lower costs Increase coverage
Centralize	<p>Optimize Supply/Demand</p> <ul style="list-style-type: none"> Priority-driven Planned Simplified 	<ul style="list-style-type: none"> Address highest priorities Drive by forecast Reduce wait times
Streamline	<p>Manage Fulfillment</p> <ul style="list-style-type: none"> Process-driven Focused Automated 	<ul style="list-style-type: none"> Provide faster service Deliver higher quality Reduce expense



Apply Appropriate Service and Support to Each Workload

With 80% of applications in Tiers 3 and 4, service and support cost are dramatically reduced with this managed approach

Application Classification



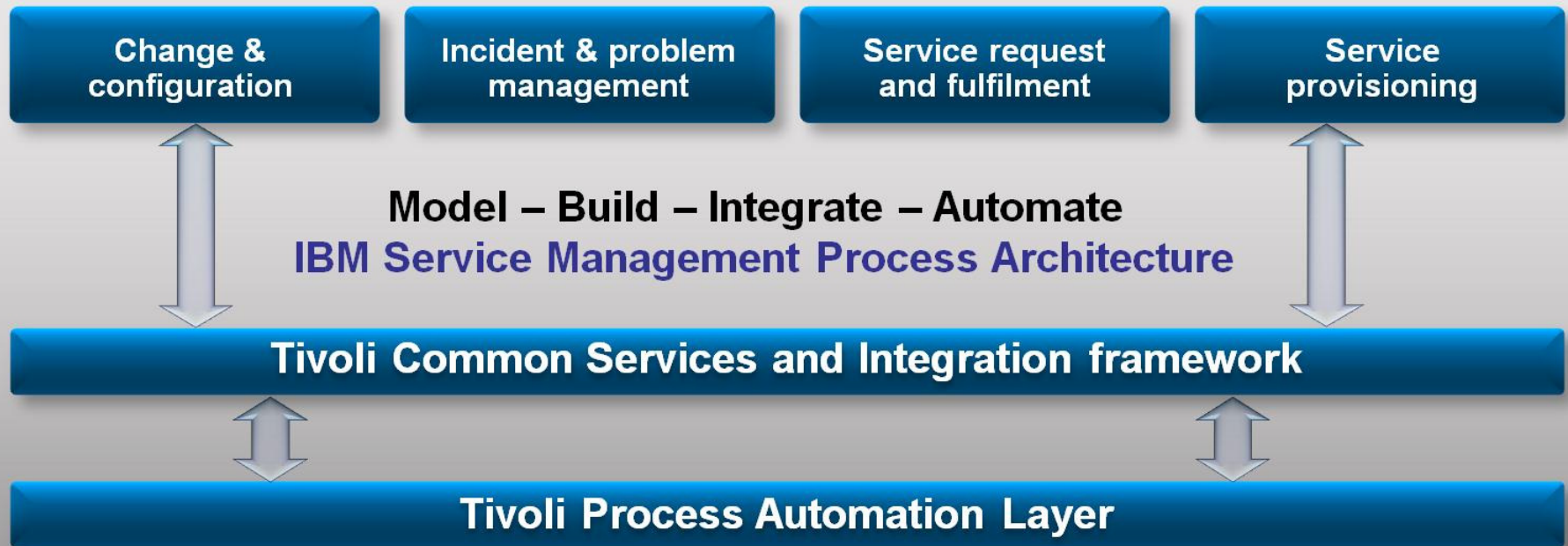
Service Classification

	Tier 1	Tier 2	Tier 3	Tier 4
Applications	Most Critical Gold and Silver	Gold, Silver multi country	Bronze, silver single country	Blue
Portfolio Coverage	3 %	16 %	16 %	65 %
Availability	Near Continuous			Best Effort
Support	24/7 Sev 1			Best Effort
Redundancy	Multi-site			None
Monitoring	Fully Monitored			Minimal / none
Cloud	Fully managed			Self-managed allowed

IT Service Management with Tivoli

One Platform

Integrating Service Processes – Optimizing Service Delivery



Tivoli in Action in IBM



Security

Security Patch Management with *Tivoli Endpoint Manager (TEM)*
78% reduction on workstation issues; support costs reduce \$ 10M



Availability

Business Process Management with *TBSM, ITCAM, ITM*
Reduced business process outage time by 50%



Cloud

Production / Dev't / Test Cloud Mgmt. with *TSAM, ISDM, TUAM*
Reduced provisioning time from 5 days to 1 hour



Asset

Software License Management with *TSRM, TAMIT*
\$ 20M savings over 3 yrs from re-use of 3rd party software licenses



Service Management

Service Desk / Change Management with *TSRM, CCMDB*
Processed over 1 million tickets in 1Q11

Cloud Technologies in Action

Development / Test



- Server provisioning reduced from **5 days to 1 hour**
- Configuration, operations, management and monitoring **labor reduced by 50%**
- Internal IaaS offering on **Power Systems & x86**

Blue Insight



- Federating **100 information sources** and more than **1 PB of data**
- Analytics accessed by **>200K IBMers**
- Private SaaS offering on **zLinux with Cognos BI and SPSS**

Collaboration



- More than **300 million meeting minutes**
- Supports **> 85% of web conferencing**
- **LotusLive** services – Smart Cloud for Social Business

Insight-Driven with Business Analytics @ IBM



Information-Centric Decision Making



BT / IT Management

- **CIO Dashboard** supporting strategic and operational agendas
- Enables **sharper performance** and 6:1 transformational ROI
- Provides **transparency** for targets, outcomes and risks



Workforce Modeling

- Facilitates training for **426K employees in 170 countries**
- Instrumented to align **learning investments** and deliver required resource capacity
- Focuses **skills development** in the right place at the right time



Sales Expansion

- Identifies **opportunity for growth** in emerging markets
- Integration of global data and **360 client view** brings science to the art of selling
- Utilize facts to improve analytics and **strategic and pipeline** planning

System z Plays a Critical Role in IBM's Journey

Tuned to the task

Migrations to System z have delivered almost 60% of the project's total cumulative savings to date

Designed for data

IBM Blue Insight is making possible more than \$20M savings over 5 years

Managed with cloud technologies

IBM Collaboration cloud hosted over 300 million meeting minutes in 2010



IBM zEnterprise offers further opportunities for cost reduction and for new service delivery with its hybrid computing model

Nationwide Insurance

- By consolidating workloads onto its virtualized infrastructure, Nationwide replaced hundreds of stand-alone servers running several different operating systems
- ~ 680 Linux system images
- **\$15M cost savings** over three years
- 85% – 90% server utilization
- 80% reduction in environmental costs



Nationwide[®]
Insurance

Technische Universität München

- Server virtualization has enabled the University to replace 150+ Sun servers with two IBM Power servers combined with two BladeCenter systems, cutting 13 full racks to just 4 half-full racks, **a saving of 85%**, with energy consumption reduced by 80%
- The Power Systems host more than 100 SAP Business Suite 7 instances powered by DB2
- Able to provision a new server in 30 minutes, a 90% reduction in time, and provision a new SAP instance in less than a half day

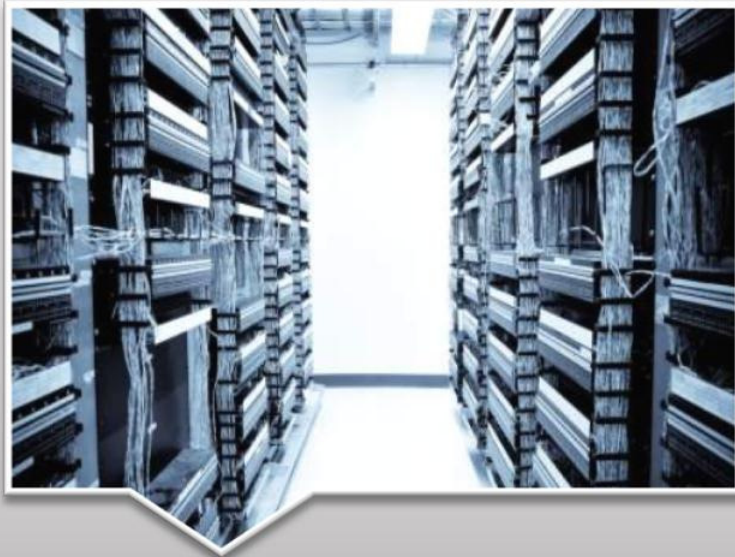




삼성화재

Samsung Fire and Marine Insurance Co.

- Consolidated 50 HP and SUN servers onto three IBM Power 570 platforms running IBM AIX
- Reduced energy consumption by 92%
- Reduced floor space by 80%
- Reduced IT resource delivery time from three weeks to two hours
- **Reduced TCO by USD 1.9M**



ZUCCHETTI GROUP
SOFTWARE & ICT SOLUTIONS

Zucchetti Group (Italy)

- Zucchetti, a leader in the ICT sector, replaced 700 physical servers with 16 IBM BladeCenter HX5 blades, IBM XIV Storage and IBM Tivoli software
- Automatic provisioning of processing and storage capacity has resulted in a **94% reduction in rack space**, from 587U to 32U
- Energy costs have been cut from over €300,000 to around €10,000 annually, a 97% improvement

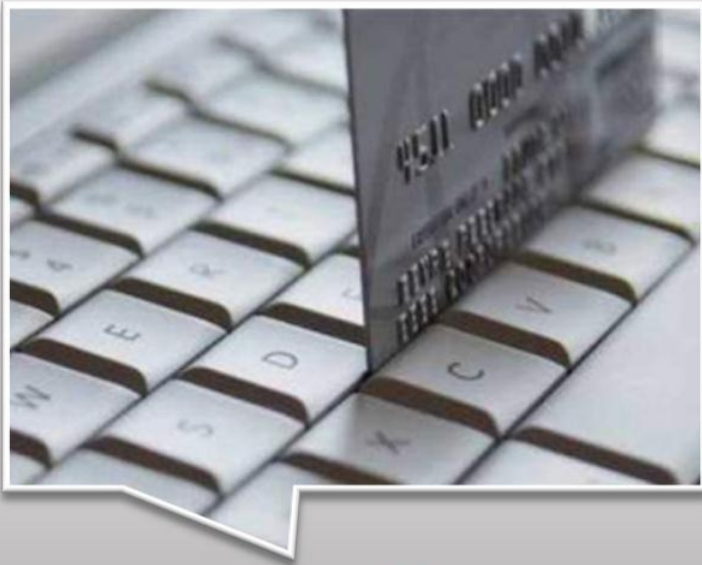


ACXIOM[®]

Acxiom Corporation

- Acxiom, a leader in marketing services, created a cloud environment based on IBM's eX5 enterprise portfolio
- eX5 platform has delivered **5 times the performance** of the previous dedicated servers – **and at 15 times less cost**
- Virtualization ratios as high as 35:1
- Added 2,700 new servers without expanding data center footprint

Citigroup Financial Services



- Citigroup accelerated time-to-market of new innovations by implementing a private cloud based on IBM WebSphere Cloudburst and Tivoli software
- Reduced provisioning time of development servers **from 45 days to 20 minutes**
- Tivoli software enabled automated administration, patch management, and usage accounting
- Administrators who supported 50 physical servers now support more than 600 servers in the cloud

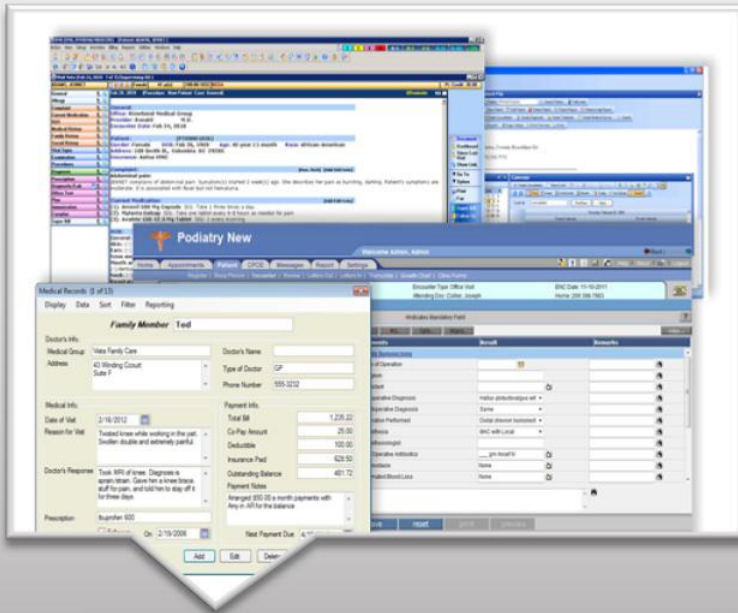
Carter's, Inc.

- Leading children's apparel company in United States **accelerates data backup by 83%** and achieves a **23:1 data compression ratio** when it virtualizes its data storage environment with IBM XIV System Storage devices, IBM ProtectTIER Deduplication Appliances, and Tivoli software
- Reduced data backup from 12 hours to two hours
- Virtualized 68 TB of data onto 3 TB of storage capacity
- Reduced the TCO for data storage



carter's, inc.

HealthNow New York



- By deploying IBM InfoSphere Master Data Management Server software, HealthNow New York is linking member **data from 60 different sources** into a single central system eliminating duplicates and inconsistencies
- Reduced time to create and implement new products from months to weeks
- **\$5M savings per year** attributed to the elimination of duplicate and incorrect mailings



Martin Marietta Materials



Martin Marietta Materials

- Deployed IBM InfoSphere Optim Data Growth Solution to help manage ERP database growth by automatically archiving transactions more than two years old
- **Reduced the size** of production database by 60%
- **Improved performance** of ERP system by 70%
- Database maintenance **costs reduced by 50%**

Bank Negara Indonesia

- Implemented new robust platform, based on a SOA, providing monitoring and management frameworks, as well as design time and runtime governance
- Architected for high availability and scalability
- Reduced effort needed to maintain and manage systems
- **70% faster** IT system development process – from 3 months to 1
- 60% faster introduction of new products
- **50% increase** in resource-utilization efficiency





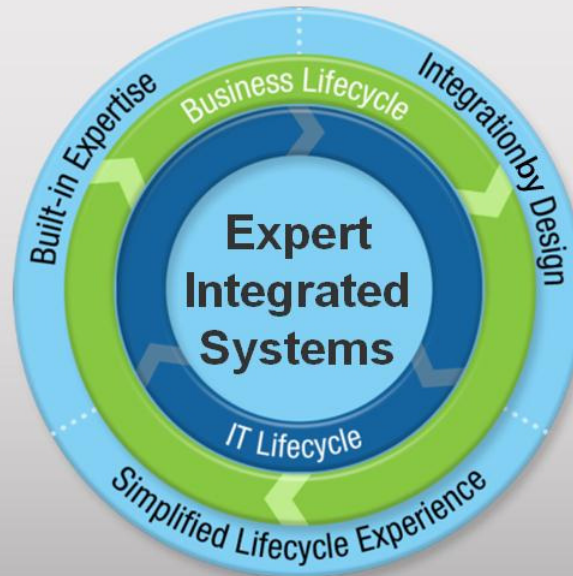
SunTrust Banks

- Uses IBM Tivoli Endpoint Manager, built on BigFix technology, to maintain vigilance over the software running on its computers and previously undocumented IT assets on the network
- Maintains a **99% patch and update compliance rate**
- Decreased update and patch cycle times from 2 – 3 weeks to 2 – 3 days
- Reduced productivity losses and human errors through automation

The Time Has Come for a New Breed of Systems Systems with Integrated Expertise with Unique Attributes

Built-in Expertise

*Dramatically improve
time to value* with
embedded expertise
and client-proven best
practices



Integration by Design

Tune to the task with
an open ecosystem
supported by highly
integrated hardware
and software

Simplified Lifecycle Experience

Drive business innovation by delivering a leap forward in
the IT experience making it easier to deliver essential IT