

IT trends in 2014 and how the new IBM System z software announcements fit

Matt Eastwood, IDC, Group VP and GM of IDC's Enterprise Platform Group

Ray Jones, IBM, VP Worldwide System z software sales





System z in the 3rd Platform Era

Matt Eastwood

Group Vice President and General Manager

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What's Different With IT In 2014

Business Transformation

A Shift To Business Services
The Rise Of 'Things'
Everything Seems Faster
Innovation Everywhere
Supply Chain Transparency



Business Priorities

Grow *Align* *Risk* *Cost*

■ Grow the Business

■ Align with the Business

- Accelerate Innovation
- Mobile/Social Enablement

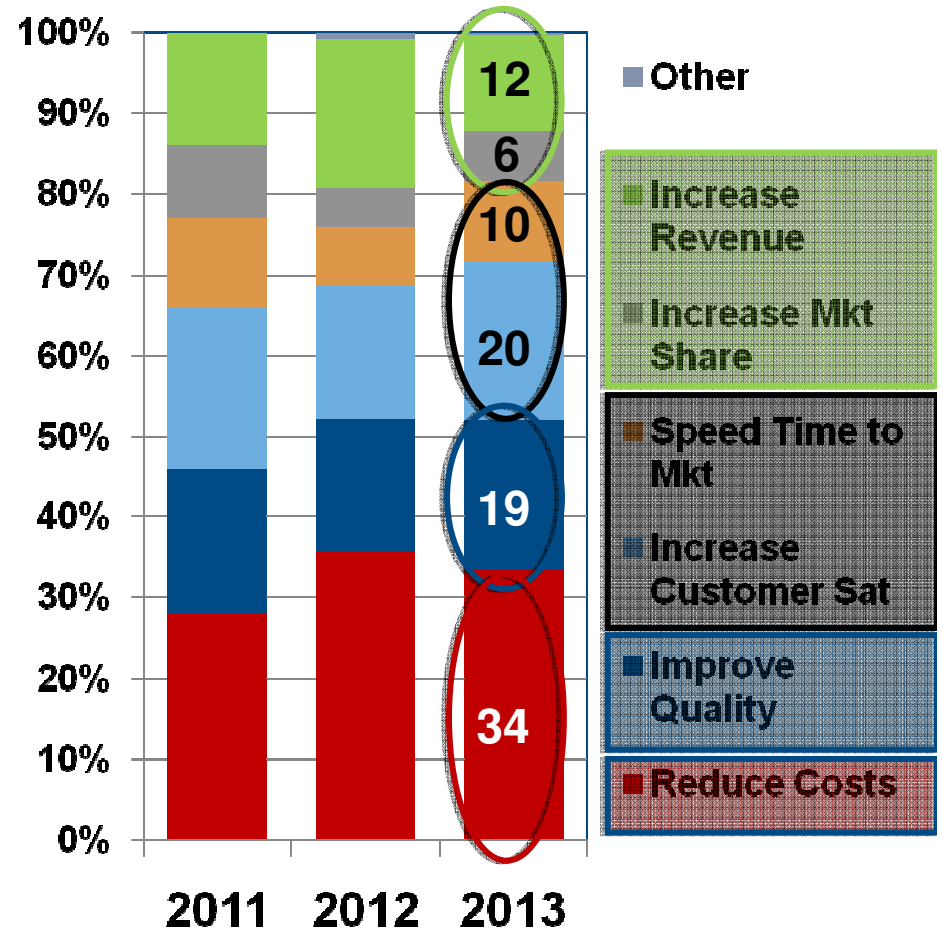
■ Manage Risk

- HA/DR
- Security
- Governance/Compliance

■ Reduce Costs

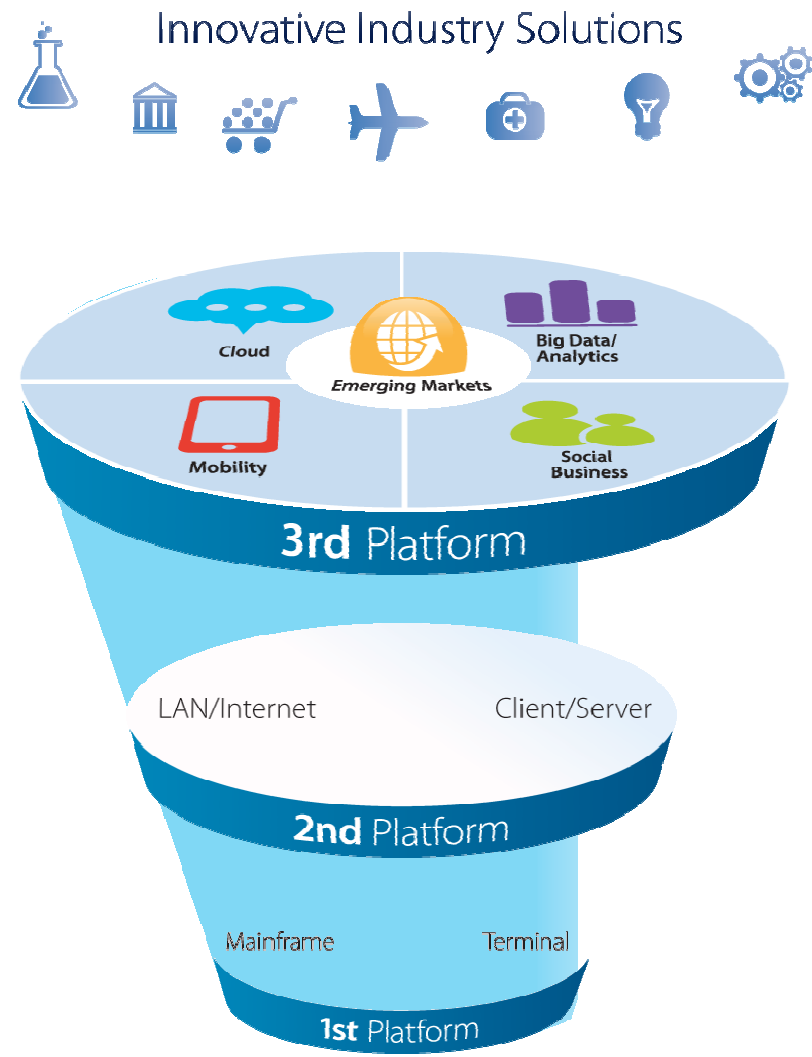
- Consolidate/Virtualize
- Automate/Integrate
- Cloud Sourcing

Q. Prioritize the following business goals as they relate to your co. by allocating **100 points** among them.



Enterprise IT is Transforming

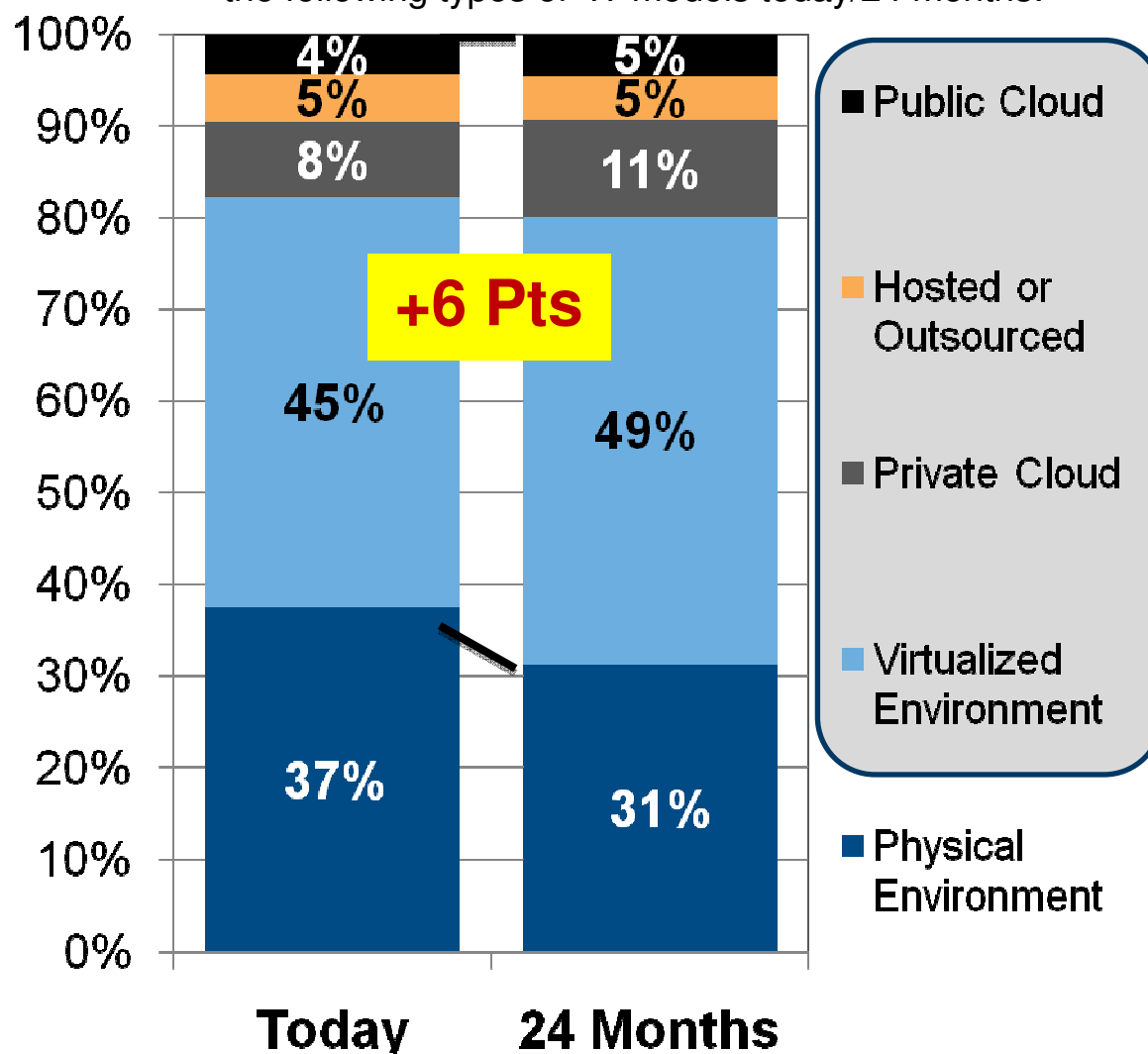
- New Enterprise IT Platform Emerging
 - Virtualization
 - Cloud
 - Mobility
 - Big Data Analytics
- Continuous delivery and new app architectures accelerate rate and pace of change
- Number and diversity of devices proliferates
- Datacenters and computing continue to transform
- Security and trust matter more than ever



IT Delivery Continues to Evolve

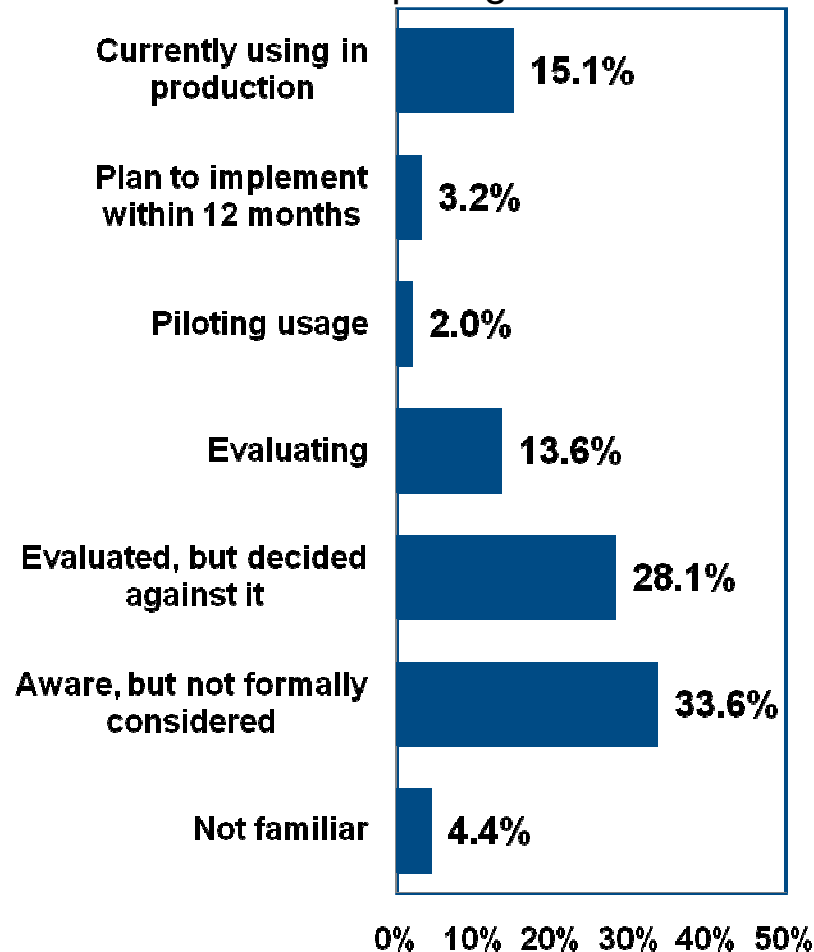
- Private cloud is viewed as the onramp to cloud
- Highly virtualized orgs favor private
- The focus is shifting to management, automation and elasticity
- Consolidation remain critical

Q. Estimate percent of IT budget that is allocated across the following types of IT models today/24 months:



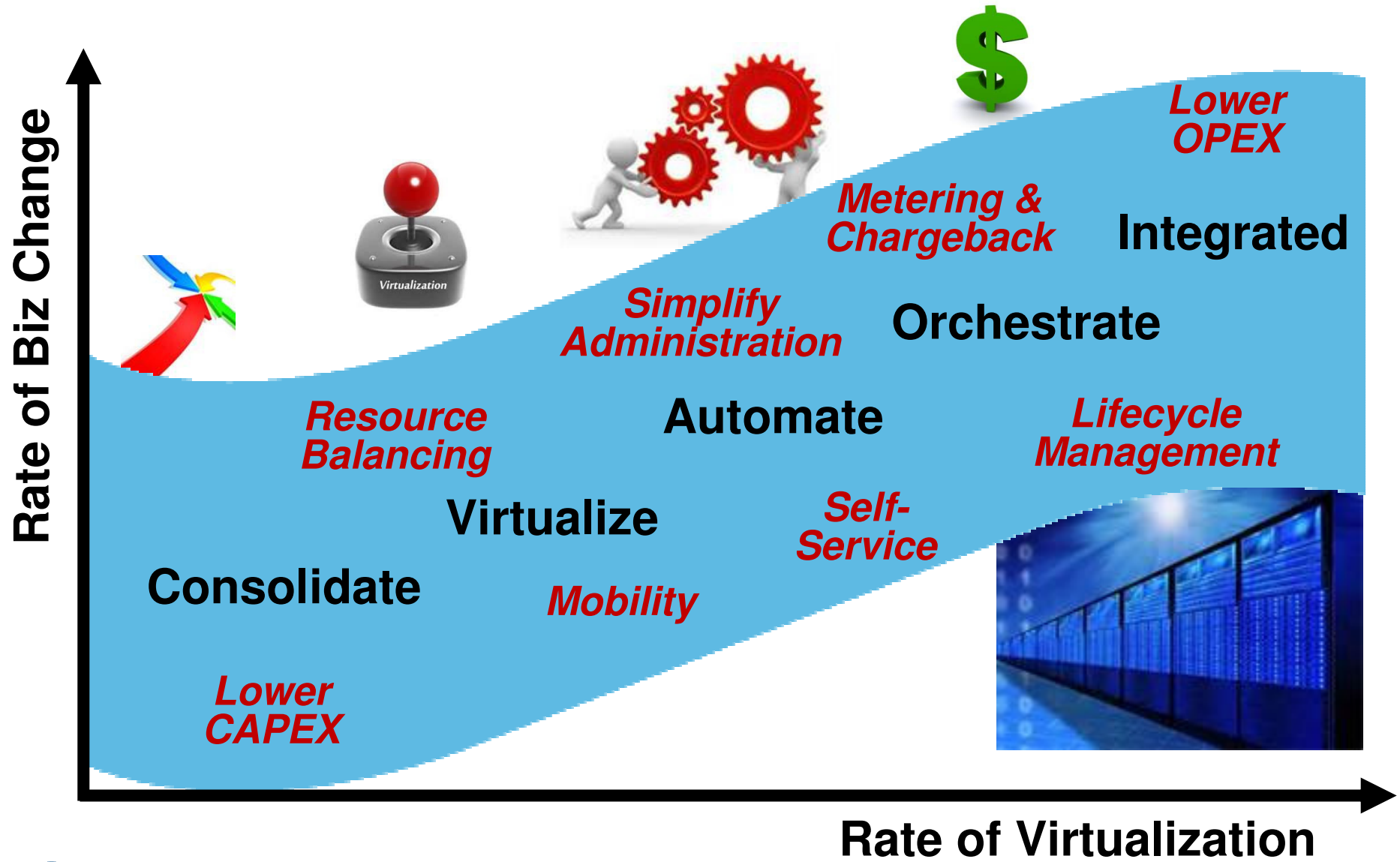
Public Cloud Not For Everyone (or Everything)

Q. What is your organizations' approach to Public Cloud computing?



- IT bullish on private cloud
- Public cloud security remains overwhelming concern
- Lower TCO is primary cloud benefit
- HA and lower IT cost also drivers
- One quarter don't see ANY benefit
- But....
- 3rd Platform is about business transformation, not migration
- Cloud is about a new class of workloads
- Reinvention with a focus on trust and security become more critical

Stages of Datacenter Transformation

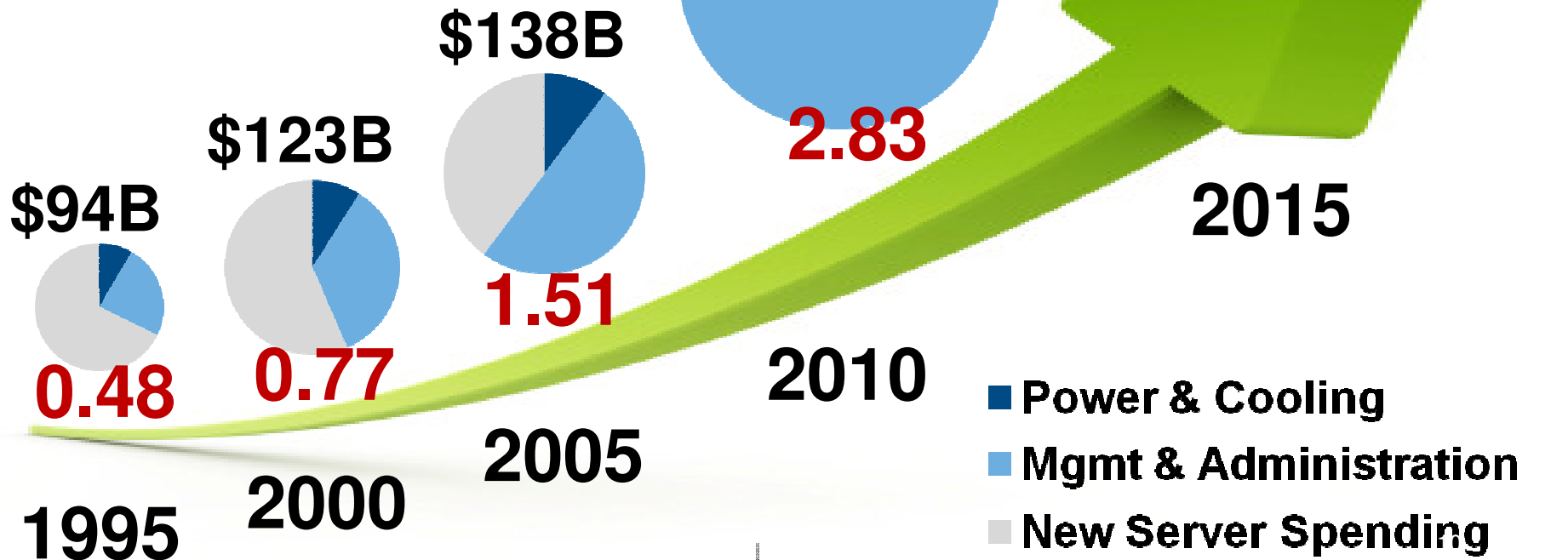


Why OPEX Matters

IT Efficiency? IT Effectiveness?

WW Server, P&C and Administration Spending

OPEX/CAPEX Ratio



Why OPEX Matters

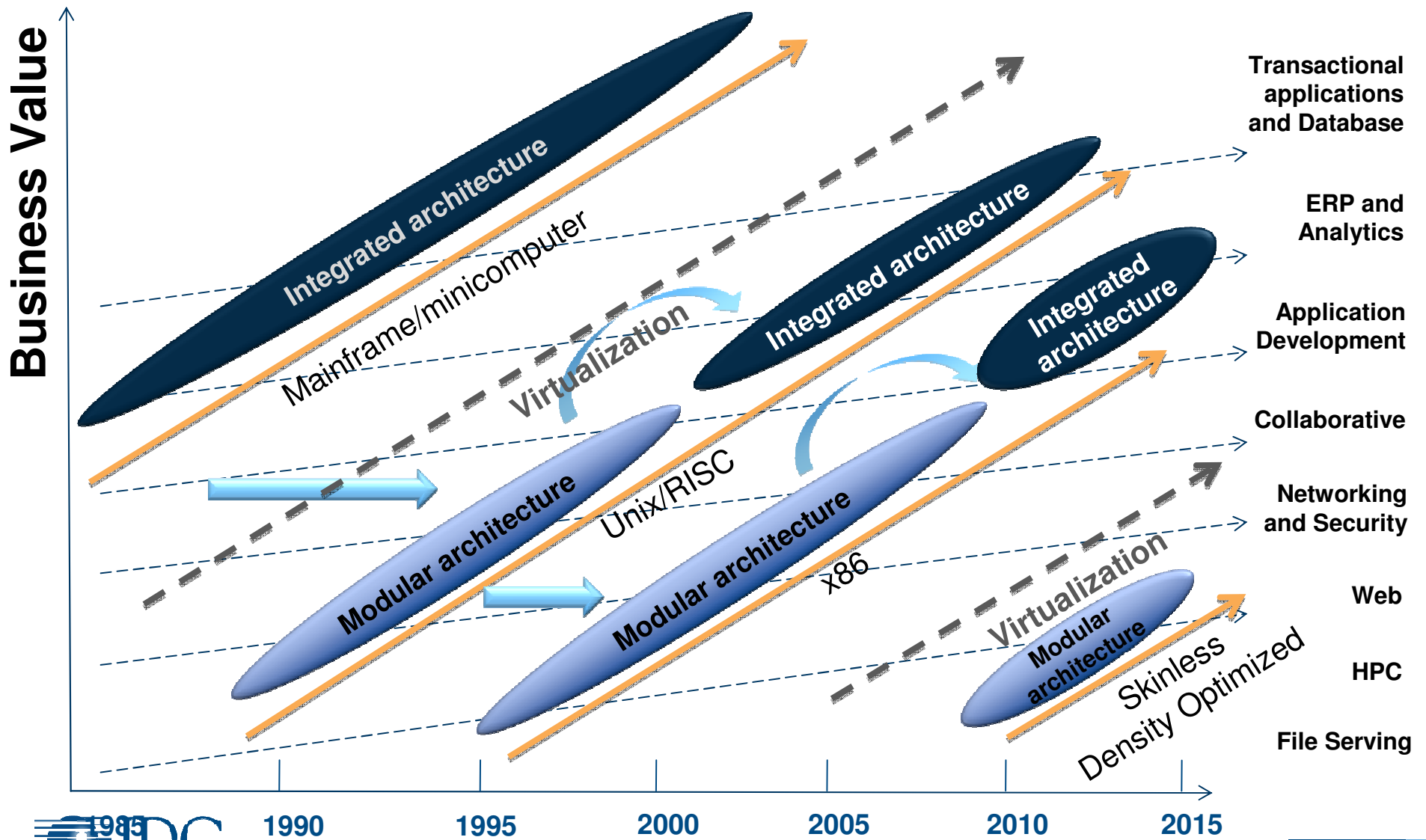
IT Efficiency? IT Effectiveness?

- **Compute Costs Drop in Half Every 2 Years**
- **Data Volumes Double Every 18 Months**
- **Applications Double Every 4 Years**
- **OPEX Costs Double Every 8 Years**



Next IT Cycle:

The Mainframe Set The IT Agenda



Some Benefits Of Wide Scale Consolidation



Flexibility: System Resource Utilization **2-3x**



Time: Time to Market for New Services **2x**



Reliability: Reduced Incidents/Downtime **50-75%**



Cost per User Reductions Span:

Server



50%

Storage



25%

Network



50%

Facilities



25%

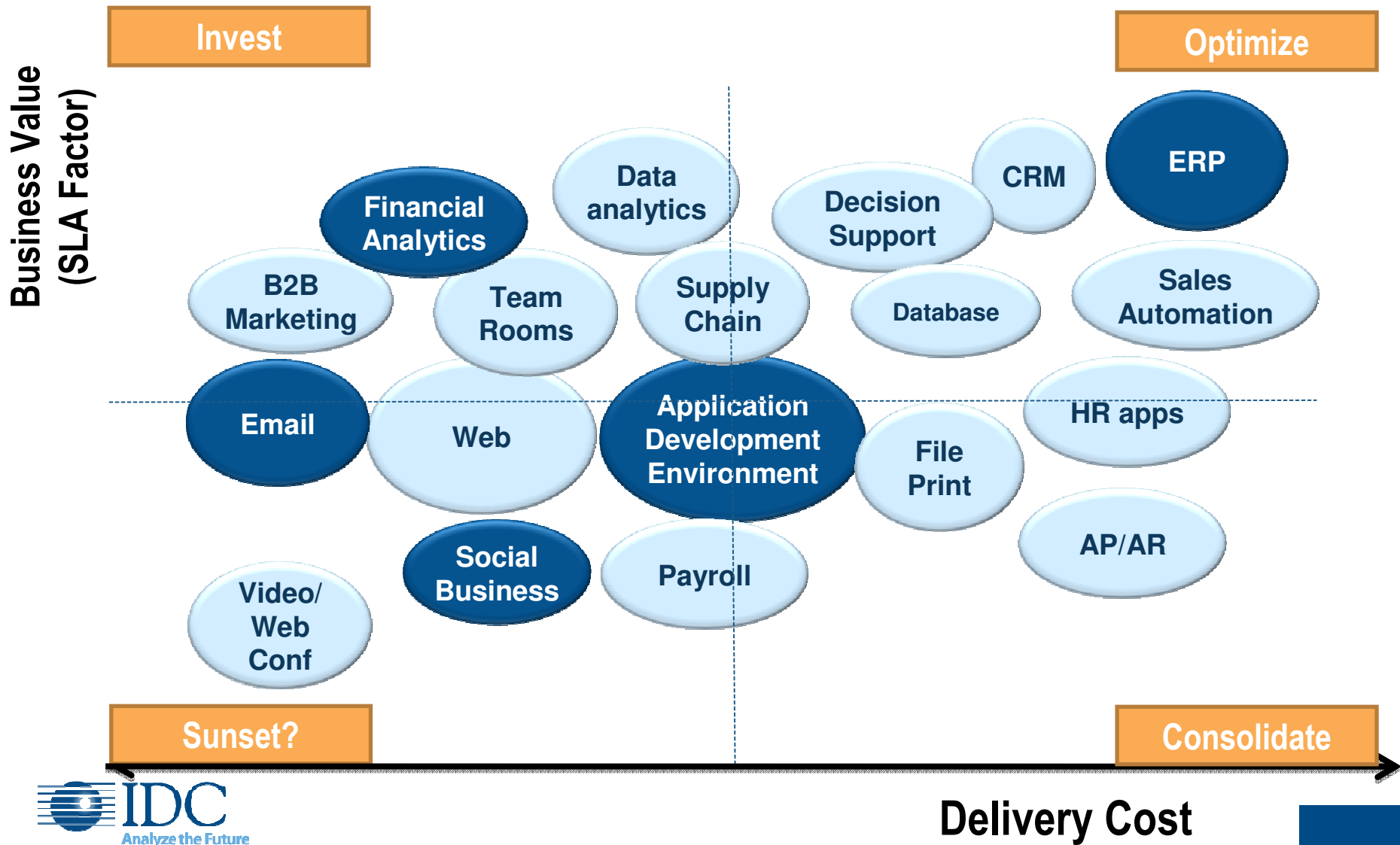
Power & Cooling



50%

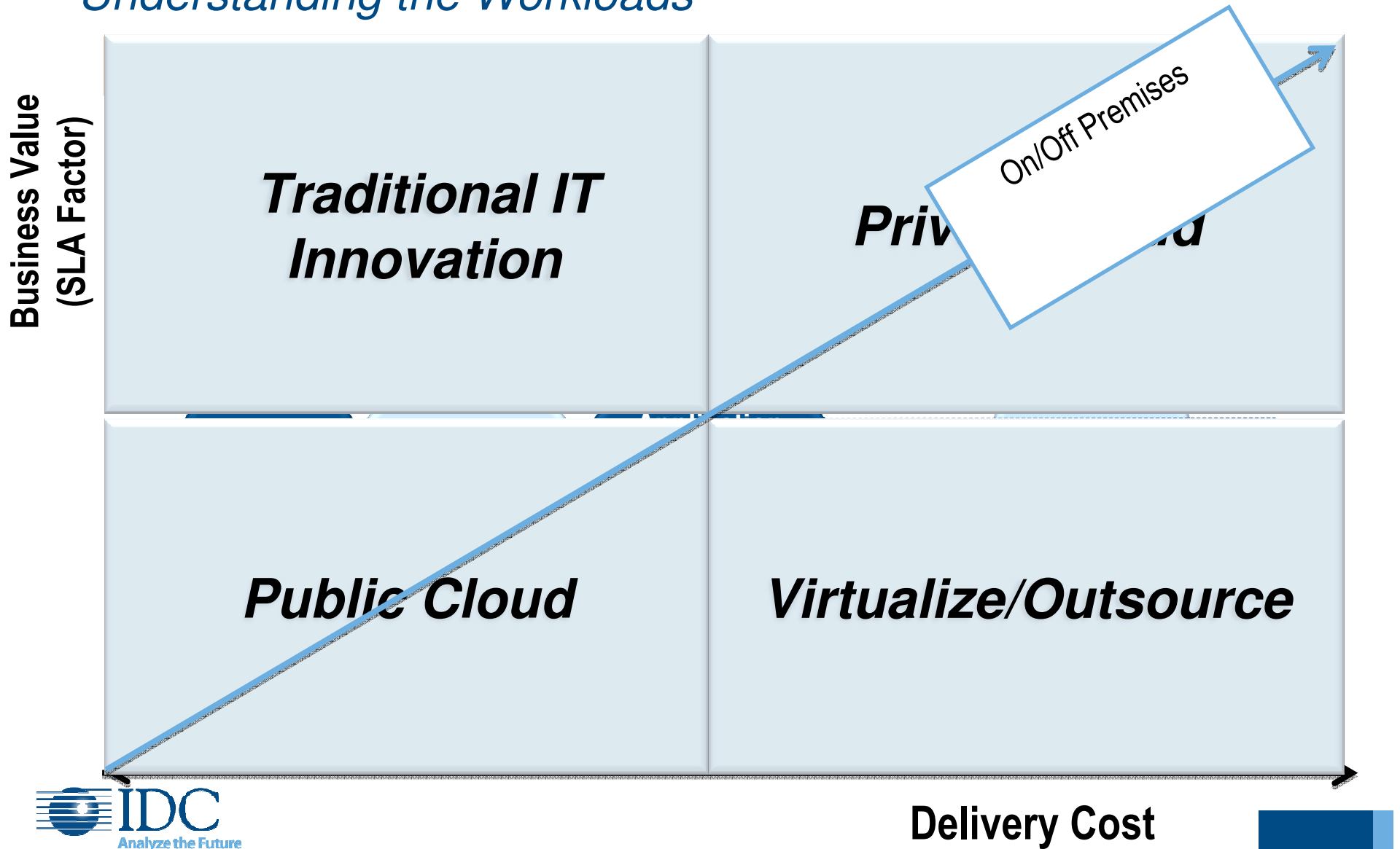
Portfolio Rationalization:

Understanding the Workloads



Portfolio Rationalization:

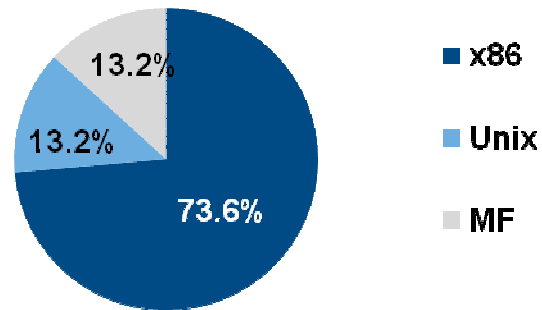
Understanding the Workloads



System z: A Competitive Overview

WW Server Shares

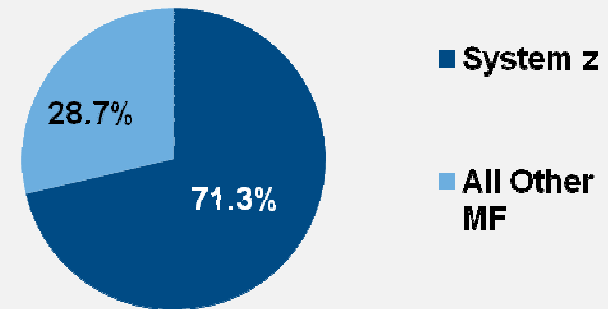
Annualized Spend: \$50.4B



Source: IDC Quarterly Server Tracker, Dec. 2013

System z Leads Mainframes

Annualized Spend: \$6.5B



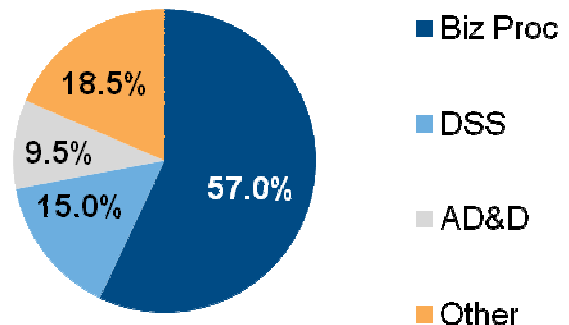
Source: IDC Quarterly Server Tracker, Dec. 2013

System z Summary

- System z drives 9.2% of all compute spending
- 16.1% of System z spending is in emerging markets. This is increasing.
- System z represents 17.5% of all mission critical compute spending
- System z represents 17.7% of all business processing spending

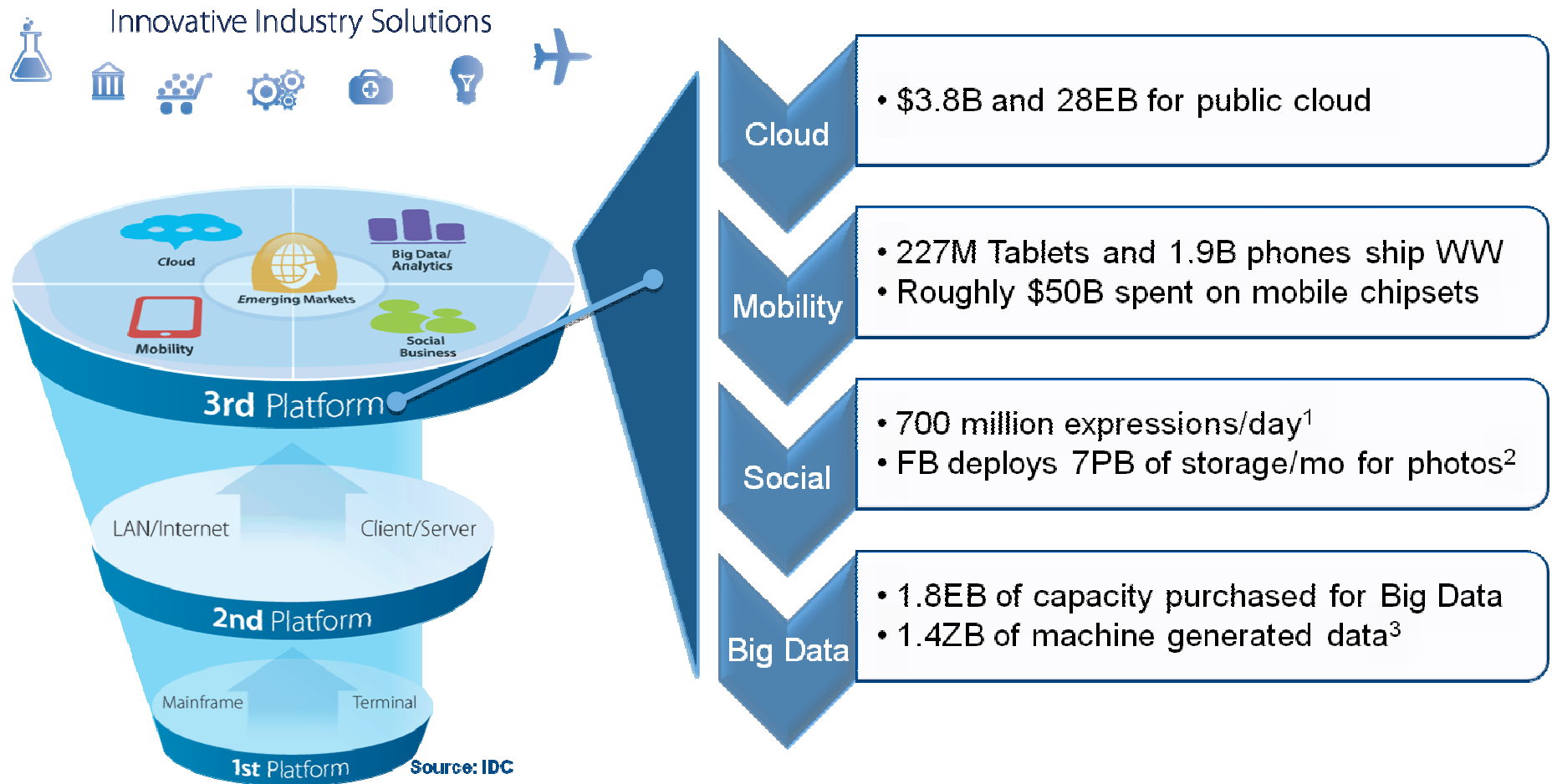
System z Workloads

Total Spend: \$4.6B



Source: IDC Server Workloads, June 2013

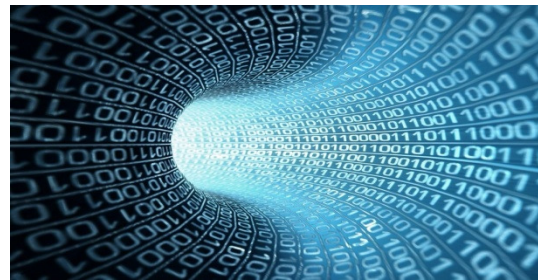
Some Early Results.....In 2013



1. Sept 2013, Executive Panel at Oracle World
 2. <http://www.datacenterknowledge.com/archives/2013/01/18/facebook-builds-new-data-centers-for-cold-storage/>
 3. Source: IDC White Paper, "The Digital Universe in 2020: Big Data, Bigger Digital Shadows, and Biggest Growth in the Far East" Sponsored by EMC, Dec. 2012

In 2014...We Think That ..

- There Will Be Over 1M Intelligent Systems Shipped Every Day To Manage Over 9B Smart Connected Things (IoT)
- The Digital Universe Will Reach Almost 8 Zeta Bytes (or 8 Million Peta Bytes) of Content Created
- There Will Be 87 Million Virtual Machines Installed, Managed By 1.1 Million Systems Administrators, Costing IT \$97B In Management Costs



How Fast Do We Think Transformation Will Occur?



3rd Platform will dominate growth: up by 15%, driving 29% of 2014 IT spending, and 89% of growth

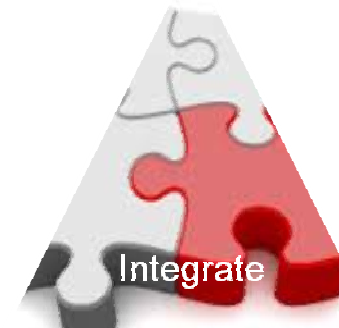
3rd Platform will cannibalize 2nd Platform: 40-50% of 3rd Platform growth in 2014 will come at the expense of 2nd Platform

Value migrating within 3rd Platform: Up the 'Stack', towards customers' competitive advantage



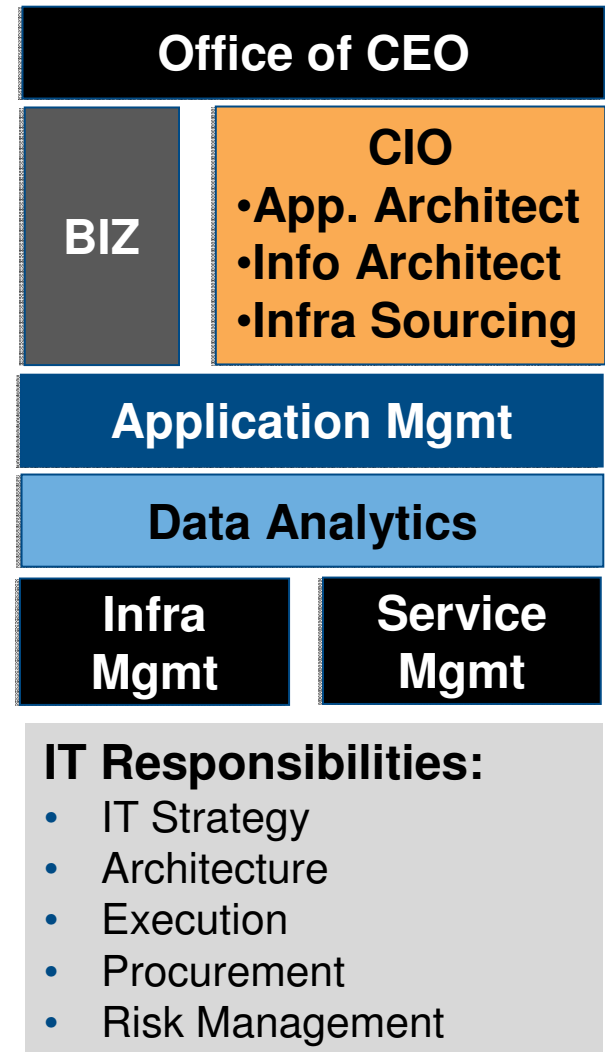
What Will Infrastructure Need To Do To Respond To Business Transformation?

1. Process Workloads In The Same Time Envelope
2. Process Massive Amounts Of Structured & Unstructured Data
3. Process In Safe Environments For Mission Critical Workloads To Be Managed



The Evolving IT Organization

	IT Efficiency	IT Effectiveness
	Traditional IT Organization	Dynamic IT Organization
Responsibility	Create and Operate IT	Create Capabilities Supporting Biz
Challenge	Managing Internal Resources	Deliver Value Thru Dynamic Multi-Sourced Org
Technology	Owned & Operated by IT	Leverage IT Both On/Off Premise
Organization	Hierarchical with Functional Skills	Leverage IT and Biz Skills PLUS Partner Capability
KPI	IT Efficiency (ROI/TCO)	IT Effectiveness (Time to Service/Revenue)



Final Thoughts ...The Infrastructure Still Matters...Because...

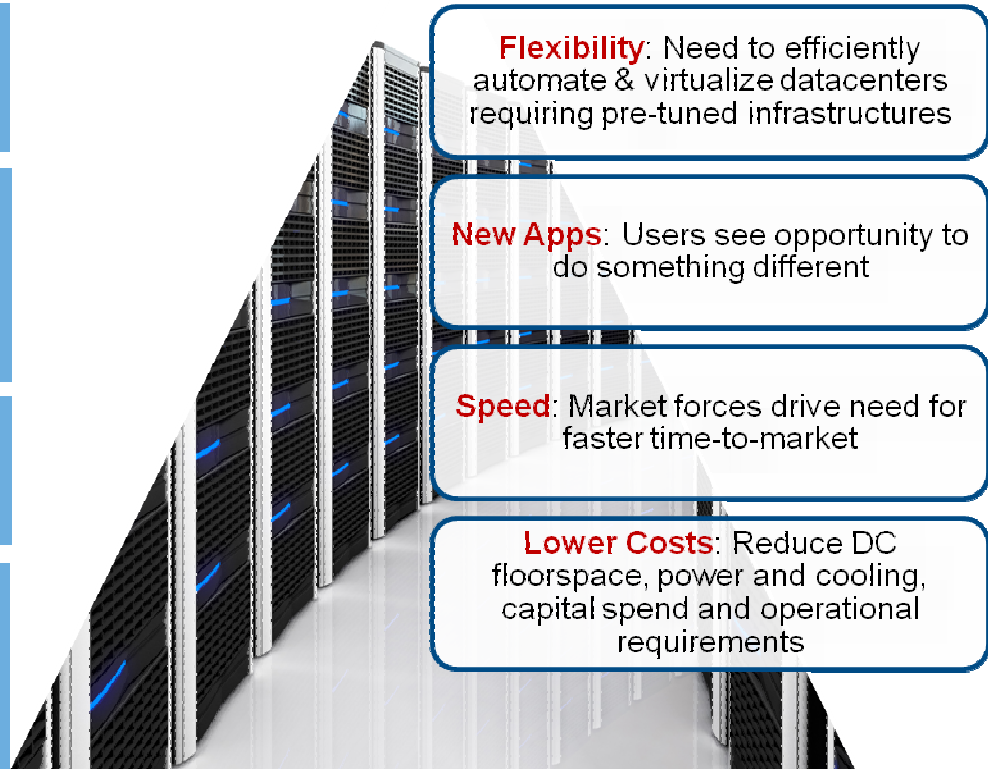
The explosion in applications, data, devices and users challenges CAPEX and OPEX in traditional IT driving need for 3rd Platform-based Infrastructure:

CIOs pay attention to time, money and people

Workloads are the critical pivot point for consolidation decisions

Private cloud thrives in an off-premises SaaS world

Complex application portfolios impact infrastructure decisions and datacenter design



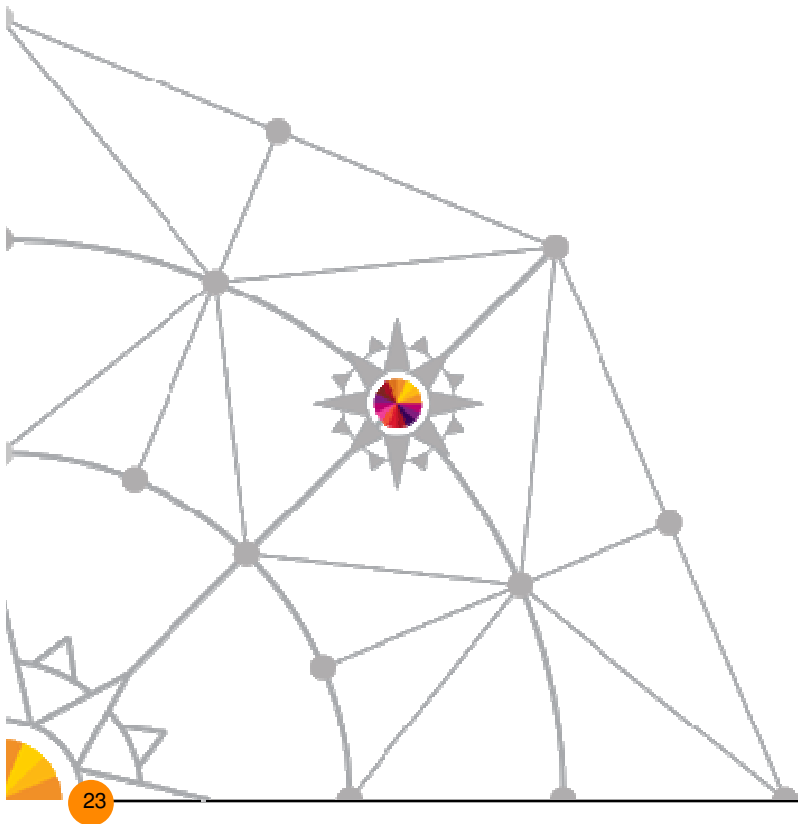
Flexibility: Need to efficiently automate & virtualize datacenters requiring pre-tuned infrastructures

New Apps: Users see opportunity to do something different

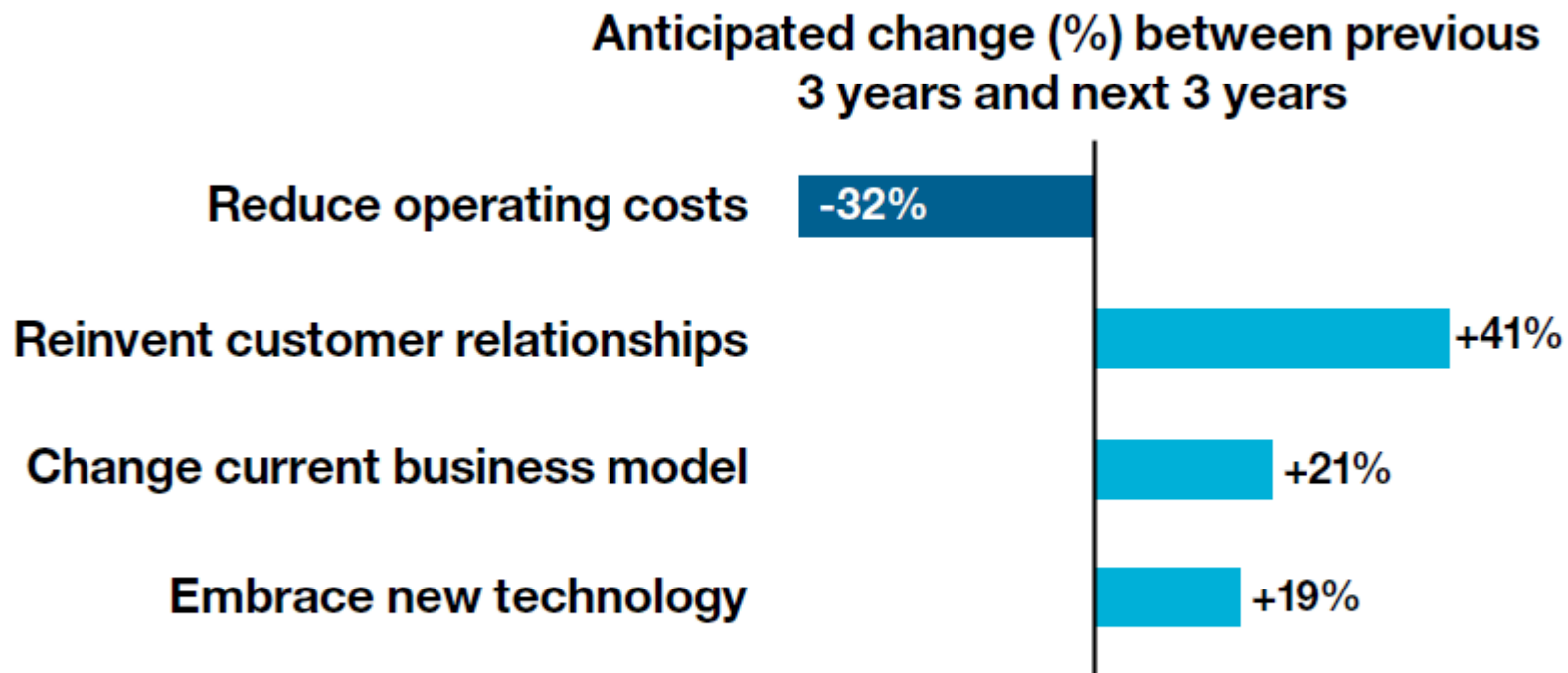
Speed: Market forces drive need for faster time-to-market

Lower Costs: Reduce DC floorspace, power and cooling, capital spend and operational requirements

Ray Jones, IBM, VP Worldwide System z software sales



CEOs are looking for new technology and a changing business model



Source: IBM Global C-suite Study, CEO question: "What are the top priorities in your business strategy?"

Linux solutions for a cloud environment on a modern platform

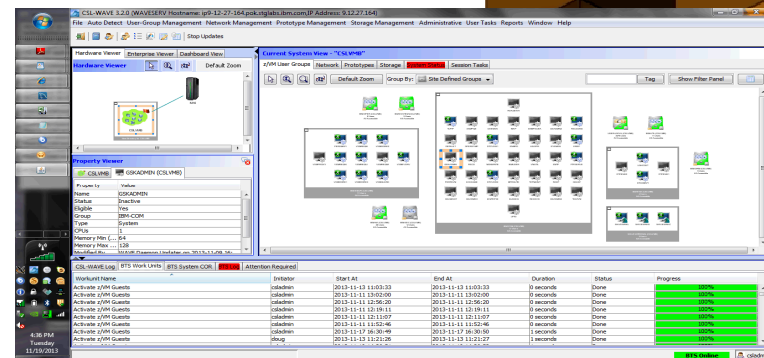
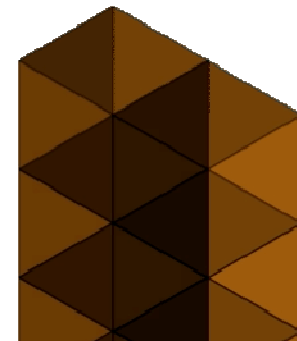
ENHANCED! Enterprise Linux Server

- Database simplicity with optimized CPU utilization, minimize energy use and simplified virtualization management
- Industry leading security features with built-in capacity on demand for instant scalability
- Simple consolidated design to easily enable new workloads

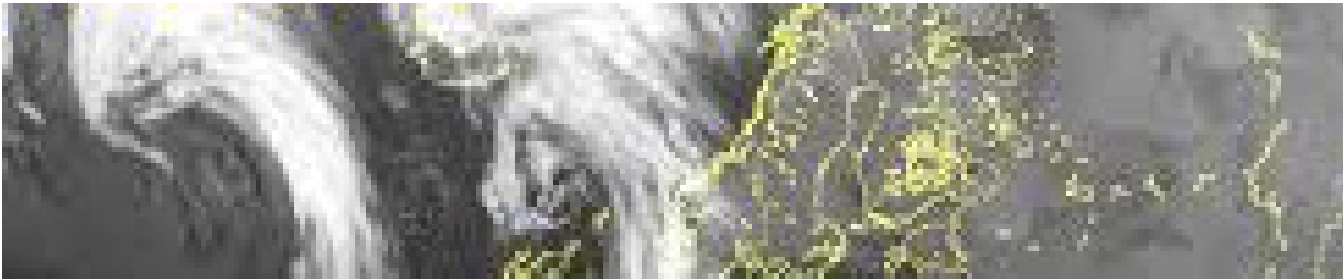
Over 45%
Of our Enterprise systems use Linux on System z

NEW! IBM Wave for z/VM

- Enable a private cloud with simplified virtualization management
- Maximize the value of Linux consolidations
- Gain insight into performance and status of resources



The Met Office: forecasts a bright outlook for Linux on zEnterprise



Need:

Consolidate its distributed infrastructure to tailor its weather forecasts for specific client needs

Solution:

Migrated its distributed 204 x86 processor cores (Linux landscape) onto a pair of zEnterprise 196 servers with 17 IFLs lowering hardware lifecycle costs

Factor of 12

reduction in licensing costs

Manageable

Linux landscape

“The amount of money you spend on distributed systems can be staggering. You’re not only looking at licensing costs, but also the lifecycle and resilience aspects.it just made sense to move the workload to the mainframe.”

Simplified zEnterprise support with enhanced analytics and cloud workload management

Up to 75%
savings in time to find
problems

90 mins to 2 mins
to fix problems on CICS
transactions



**zEnterprise
wins Tech
Innovator
Award for
Cloud
Solutions**

**NEW! OMEGAMON
Performance
Management Suite v5**

Improved visibility and management for z/OS and subsystems, including support for IBM zAware

**NEW! Cloud Management
Suite for System z**

Easily moves cloud services to System z with standardized, open orchestration by provisioning workloads to zLinux from SmartCloud Orchestrator running on x.

NEW! Tivoli Workload Scheduler for z/OS V9.2

Enhanced automation, monitoring and control of composite workflows, including support for Cloud

Deliver more strategic insights at unprecedented speeds and cost efficiency

**Extremely
fast**

Query results

Extensive

Predictive analytics
platform on Linux on z

Big Data and Analytics

**NEW! IBM Smartcloud
Analytics Family : IBM
Log Analysis zOS
Insight Packs V1.0.0**

*Valuable information from
z/OS logs to decrease risk of
outage and increase
productivity*

NEW! SPSS Modeler 16

*Easy-to-use-interface with
expanded analytical
capabilities and sophisticated
data simulation to discover
patterns and trends in
structured and unstructured
data*



**Accelerated
queries
resulting in
increased
sales**

A true mobile enterprise solution for business growth

10 billion+

Devices scaled to
access information on
System z

End-to-end

Mobile solutions from
development to
deployment

Mobile

**TECHNOLOGY
PREVIEW ! Secure
Mobile Enterprise
Connectivity**

*Rapid and
secure integration of mobile
applications with enterprise
or cloud based APIs &
services*

**NEW! Mobile Quality
Assurance Open Beta**

*Ability to instrument apps for
continuous delivery of high quality
mobile applications*

Try it now -

<https://www.ibm.com/developeworks/community/blogs/mobilequalitybeta/>

**Warehouse
management
capabilities
on mobile
devices**

First National Bank: drives unprecedented growth and performance in mobile banking



Need:

Launch a mobile bank account system that is reliable, secure and highly responsive in a very short time-to-market

Solution:

Integrated a new Java-based mobile front-end directly with tried and trusted business logic and banking services running on IMS and zEnterprise EC12

80M to 158M

mobile transactions

30 ms

response time for mobile users

“At FNB, we don't just think of IBM zEnterprise as the platform for our core banking software; rather, it hosts the core functional layers that allow the channels to create value for our customers”

Unmatched security and availability for trusted computing in the digital era

99.999%

Design point for application availability

Encryption

Of data at rest or in flight

Security

NEW! InfoSphere Guardium V9.1

Enhanced protection of high-value data and automated compliance policies

ENHANCED! IBM zEnterprise Smarter Analytics for banking

Optimized Fraud Detection and Prevention on System z with enhanced fraud detect rules, models & orchestration

vantivTM

Advanced encryption for new payment methods

Continuous delivery of software-driven innovation

Over 50%

of projects are over budget and often lack critical features

45%

experience delays due to troubleshooting and fine-tuning issues in production

DevOps

ENHANCED! Rational Developer for System z v9.0.1 and Rational Developer for the Enterprise *New out-of-the-box debugging capabilities with a new powerful and modern GUI-based debugger*

ENHANCED! Rational Team Concert Enterprise v4.0.6 *Lifecycle automation, collaboration and traceability from conception to deployment*

ENHANCED! UrbanCode Deploy v 6.0.1 *Provides support for deployment of Java and WAS on z/OS, common in multi-tier applications*

Nationwide®

Improved code quality by **50%** over a three-year period

Superior online transaction management and connectivity for mission-critical applications

Up to **19%**
Improvement in
Operational Decision
Management throughput

1 Billion
Transactions
per day

Application Infrastructure

NEW! Java7 Release 1 for z/OS

Exploits System z and enhanced performance with new Java capabilities including Java unique security and JZOS functionality

NEW! CICS TS V5.2 Open Beta

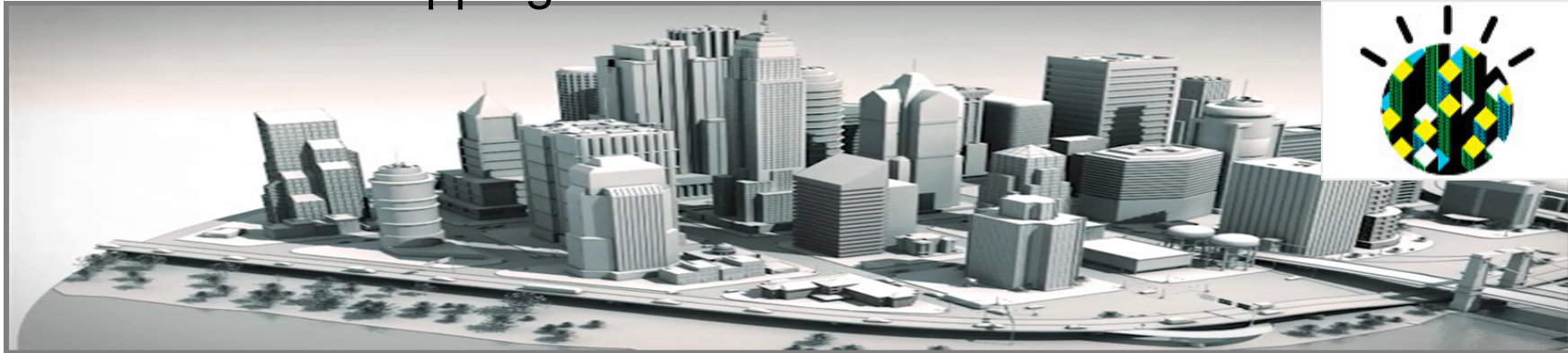
Enhanced CICS service agility, operational efficiency, and cloud and mobile enablement, including integrated JSON and REST support

Sign up now –
www.ibm.com/software/htp/cics/openbeta



33%
improvement
in business
processes

Smarter Cities tapping into the Cloud



NEW! Intelligent Operations Center v1.6

Empowers city leaders to leverage information from across the city to make better decisions by anticipating problems and coordinating resources to operate more effectively

NEW! IBM Intelligent Transportation

Helps improve public transit by delivering citywide traffic management, traffic prediction, transit analytics and transportation operation capabilities through the use of advanced analytics and planning tools

NEW! IBM Intelligent Water

Delivers smarter water management through insights from data to help utilities manage pressure, detect leaks, reduce water consumption, mitigate sewer overflow, and better manage their water infrastructure, assets and operations.

Available on Linux on z



Porto Alegre: a smarter city that keeps its citizen's moving



Need:

Improve quality of life for citizens by increasing the efficiency of its maintenance processes

Solution:

Implemented an asset management solution based on IBM Maximo on Linux on system z to display maintenance activities in near real time on a digital map of the city

50%

reduction in response times

30%

reduction in backlogs

“By consolidating our distributed asset management systems into a private cloud, we benefit from reduced IT operational costs as well as increased security—which is especially important for our mobile Maximo applications.”

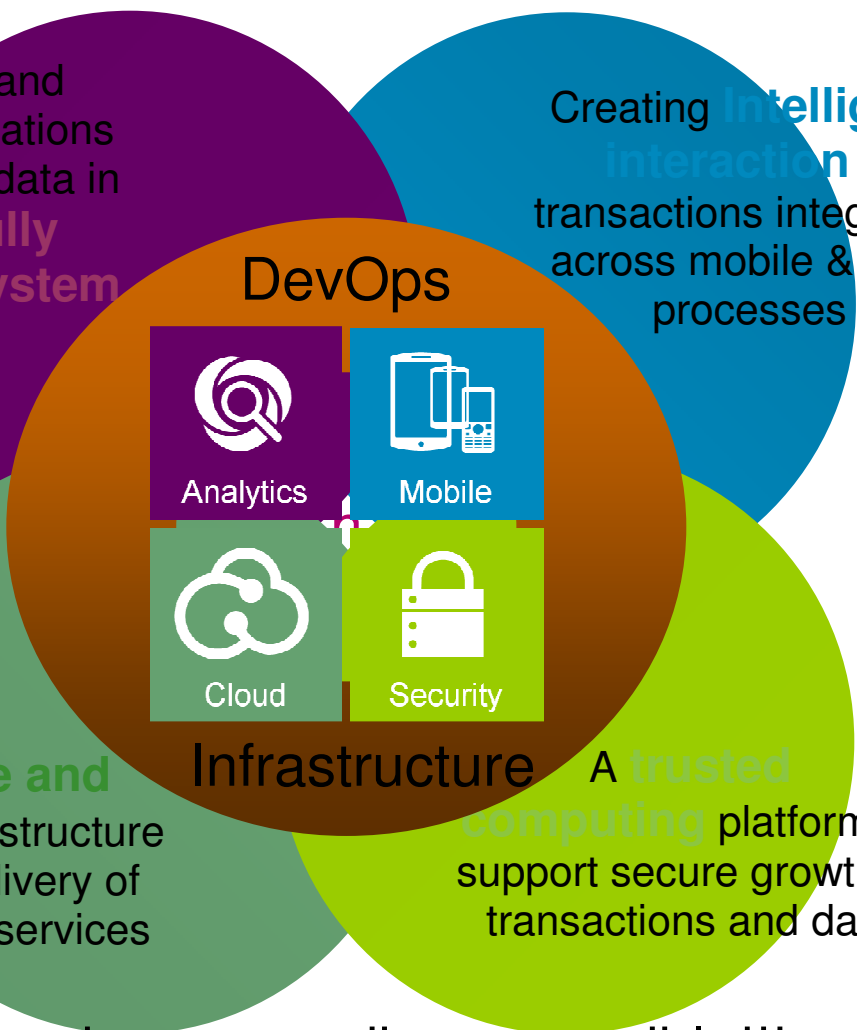
Create a competitive advantage in the digital era

Operational and analytics applications reside with the data in **a single fully virtualized system**

Creating **Intelligent interaction** in transactions integrated across mobile & core processes

A **flexible and robust** infrastructure for rapid delivery of high quality services

A **trusted computing** platform to support secure growth in transactions and data



...make the extraordinary possible!!!

zEnterprise