

IBM zEnterprise

The Modern Mainframe

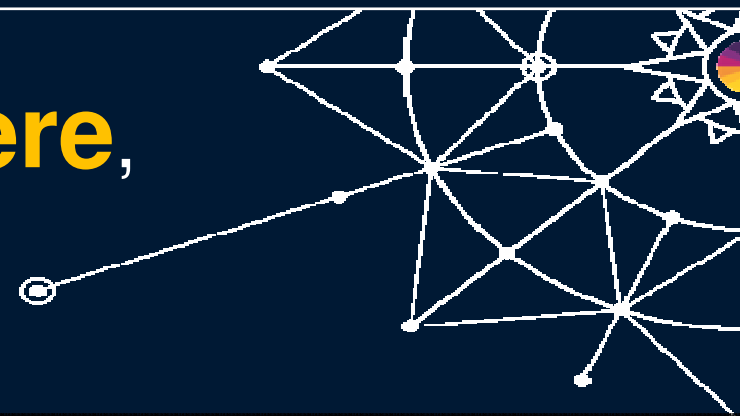
Reinvention, transformation & growth for the future

John Birtles

Director,
Business Line Exec, System z Platforms



The mainframe is **everywhere**,
at the heart of enabling global
commerce.



Up to **3 Billion** passengers take flight a year; with
2x that expected **by 2030**

Over **\$6 Trillion** in card payments to
execute annually²

23 Billion ATM transactions processed a year;
worth more than **\$1.4 Trillion**



It all started with a
\$5 billion dollar bet

Reshape industries
making the world work better






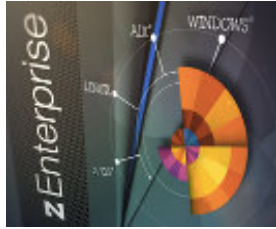

Reinvent and transform business
for competitive advantage

Build trust and confidence
through secure transactions & data

“This is the beginning of a new generation—not only of computers—but of their application to business, science and government.”

–Thomas Watson, Jr.

Constant evolution driven through co-creation with our clients

IBM System/360™ 	PR/SM Virtualization 	CICS, DB2 & IMS 	Parallel Sysplex 	Bipolar to CMOS 	Capacity on Demand 
Linux 	Java 	Hybrid with zBX 	IBM DB2 Analytics Accelerator 	IBM zEnterprise EC12 & zBC12 	

The Modern Mainframe

Continuous evolution for leadership in the new era of IT



The ultimate **Analytics** engine for instant insight

The foundation for a **Mobile** and **Social** enterprise

Superior service at lower cost through **Cloud**

A robust and **Trusted** infrastructure



Enable better, faster decision-making

with the ultimate analytics engine for insights in an instant

72% of respondents
plan to analyze transactional data
from enterprise applications

80% of world's corporate
data resides or originates
on mainframes

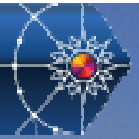
The greatest value
occurs when you
execute analytics
where the data originates

Avoid the high cost of ETL

Centralized data security
and governance

Enable in-transaction analytics

Engines of
PROGRESS



Enabling industry and society
to take the risks that drive progress



MOBILE

The smart phone's ultimate accessory enables growth through optimized engagement

Big opportunities
for business growth
through small screens

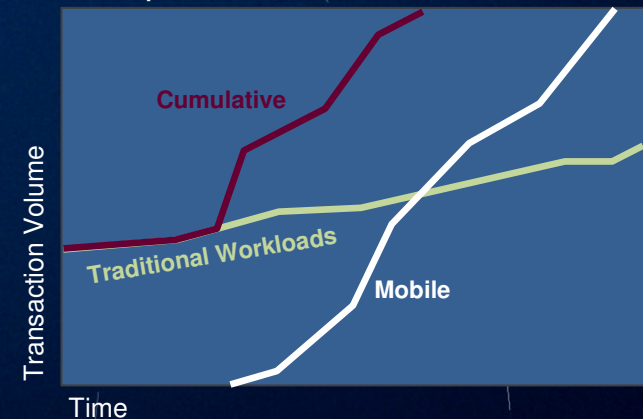
10 billion+
devices accessing
information

70 percent
increase in mobile data
bandwidth usage per year

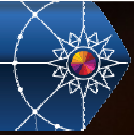
**Bridging Systems
of Record with
Systems of Engagement** as a
foundation for a mobile
enterprise



Mobile transactions can quickly
outpace traditional transactions



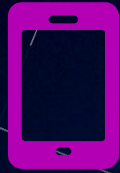
Engines of
PROGRESS



FNB
First National Bank

Delivering mobile banking that promotes
upward mobility for the 80% unbanked
population of Africa



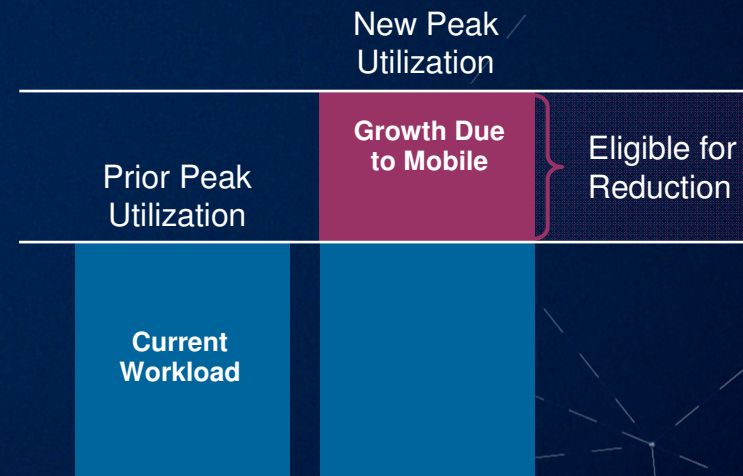


MOBILE

New System z Mobile Workload Pricing

enables IT investments to scale with growth & business returns of mobile

Improving the economics
of mobile computing



No infrastructure changes required
Available on zEnterprise EC12 & zBC12

**Up to 60% reduction in incremental
growth from mobile transactions**



SOCIAL

Drive innovation & productivity through social business on the strength of the mainframe

71% of CEOs

rate their employees as their
most important source of
sustained economic value

**Drive enterprise-wide
collaboration**

**Design and implement
social strategies**

Empower every employee

400,000+

IBMers generating
vast amounts of
information

50 million+

instant messages
per day

75%

lower cost

Scalable

to accommodate rapid growth
and enable non-disruptive change



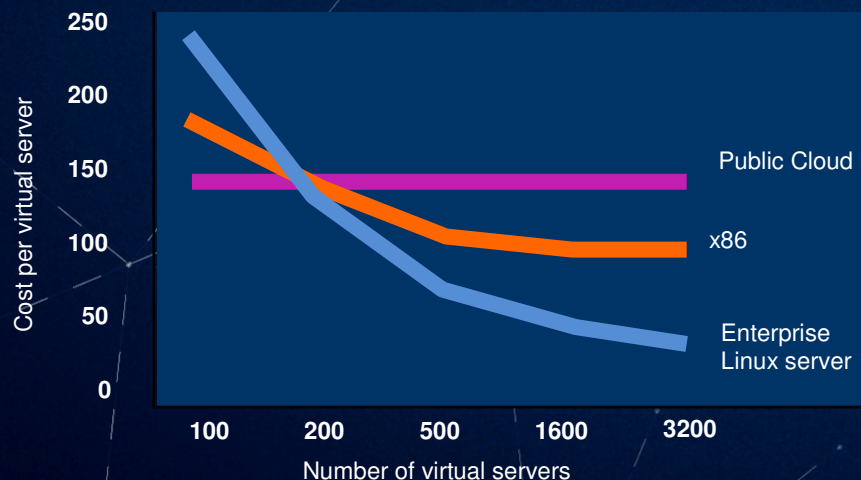
CLOUD

zEnterprise redefines efficiency & economics of IT enabling new levels of business agility

Economics will continue to be #1 driver of cloud adoption through 2016

80% view **security** as #1 challenge to cloud; 48% concerned with **reliability**

Delivering **superior service at lower cost** than legacy x86 or Public Cloud vendors



Saved **\$46 million** through consolidation

Cut data center costs by **70%**





Enriching communities by making the impossible possible, through technology



SECURITY

A trusted infrastructure is essential for a cloud, analytics, mobile & social-enabled business

\$11 million

average cost of a security breach

\$7,900

average cost per minute of downtime



zEnterprise delivers trust and confidence with **unmatched security & reliability**

Highest

level of security with Common Criteria certification (EAL 5+)

Enterprise Key Management across mainframe and distributed

Encryption

of data at rest, in flight, and in use

IT Analytics

to spot potential failures and capacity needs before they occur

99.999%

design point for application availability

Zero Second

recovery point objective across thousands of miles

Engines of
PROGRESS



VISA

Redefining and securing global commerce at the rate of
150 million transactions every day

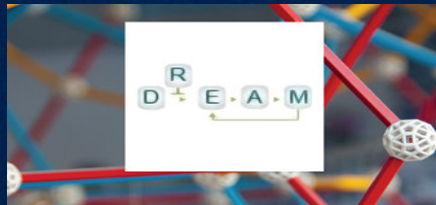
Visionary endeavors to transform and improve lives through new Research Projects

New York State Municipal Cloud



Enabling research to meet the challenge of sharing uniform data between government departments

Rheumatoid Arthritis DREAM Project



Cutting edge research to help millions with chronic pain

IBM-Ghana-Yale Partnership



Creating a System of Insight to eliminate HIV transmission from Mother to Child in Ghana

The future of next-generation mainframe systems

Cognitive systems

Atomic level storage

Neurosynaptic chip

Optical circuits

Hybrid computing 2.0

Greater parallelism

Hybrid clouds

Natural intuitive interfaces

Advanced, open KVM virtualization

Self check-pointing and invisible failover

Tamper-proof processing



Technology is essential for leadership

LEAD

your industry
through differentiation

GROW

through new markets,
services, business
opportunities

INNOVATE

with disruptive
technologies

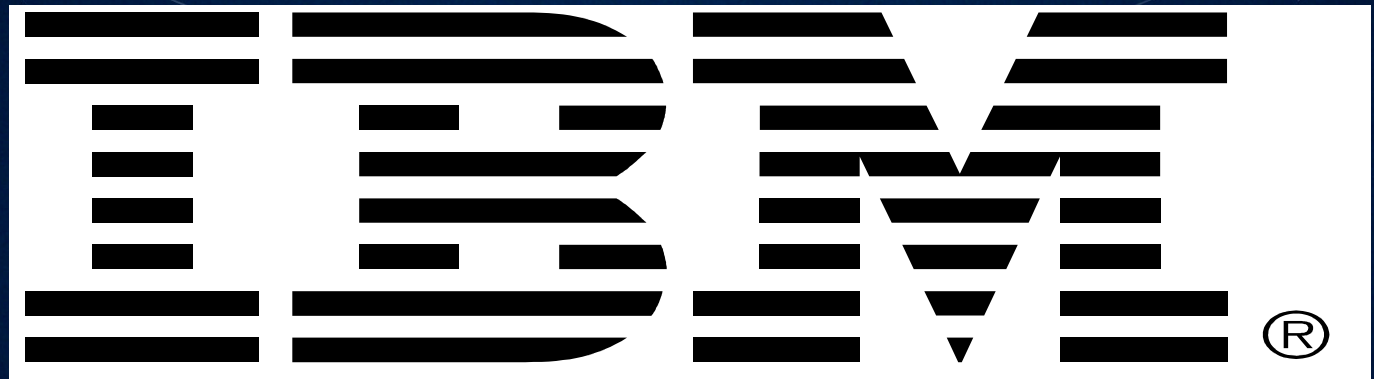


Innovative technology

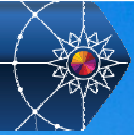
for the next generation of business leadership

“This is the beginning of a new generation—not only of computers—but of their application in business, science and government.”

–Thomas Watson, Jr.



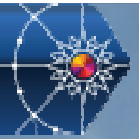
Engines of
PROGRESS



**citi**

Enabling progress for individuals,
communities, institutions and nations

Engines of
PROGRESS



Building the most resilient infrastructure in
the world for the biggest bank on the planet

Reinventing & transforming for competitive advantage



Serving **2.6 million** people while supporting rapid business growth with robust, secure and efficient mainframe technology



Enabled growth of:

600% in mobile, **200%** in internet, **60%** in in-branch transactions,
24% increase in tariff revenue through analytics,
and avoids **USD 1.5 million** in electricity costs annually through the cloud