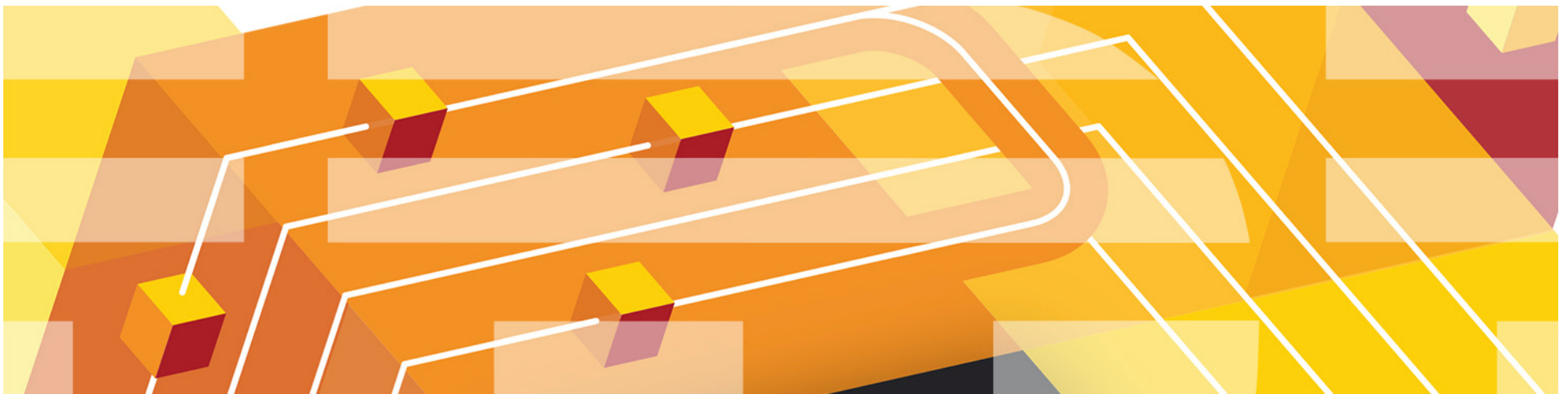


Einsatz von System z, heute und morgen

Wilhelm Mild
IT Architect
IBM Lab, Boeblingen, Germany
wilhelm.mild@de.ibm.com



IBM® Mainframe50

Celebrating 50 years of groundbreaking innovations

Industry Milestones

1964 SABRE – Airline Reservation System	1966 Medicare – Social Security Administration	1969 Breaking Space Barriers – The Apollo 11 Mission	1972 SAP – Real Time Inventory Tracking	1976 NYSE DOT – Stock Trading	1979 UPC – Retail Transformation	1980 CSC's Hogan – First Integrated US Banking System	1983 4730 Personal Banking Machine – A One-Stop ATM	1994 CompStat – Data-Driven Approach to Policing (NYPD)	2000s Mobile Banking	2008 Nationwide Smart Grid – World's First National Smart Utility Grid	2013 Ford: Connected Cars – Real Time Traffic Info
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1965 Time Sharing – Reduced Cost of Computing	1967 IBM 9020 – Air Traffic Control System	1969 Magnetic Stripe Technology – Credit Card Revolution	1970 Relational Databases	1972 VM Virtualization	1976 Business Intelligence with SAS	1981 PROFS – Pioneered Corporate e-mail	1996 DEEP THUNDER – Micro-Weather Modeling System	1999 Open Source with Linux®	2009 Stream Computing – Critical Insights on the Fly	2010 Hybrid Computing with IBM zEnterprise®
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Technology Milestones



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IBM Mainframe – the journey

- From **System/360** in 1964 to today's **zEnterprise System**, we have seen an evolution that has preserved customer investments in a unique way
- From **DOS/360** to **VSE/ESA** to **z/VSE**, we have seen this operating system thrive meeting the needs in smaller environments
- From **OS/360** to **MVS** to **OS/390** to **z/OS**, we have seen an evolution of the operating system that is core to most corporate IT environments
- From **CP/67** as a research project and **VM/370** as a migration tool, VM has evolved to today's **z/VM** as the core of IBM's System z virtualization technology
- And **now with Linux on System z**, we have a truly open operating environment

▪ *“Legacy systems are systems that work!”*

**“[System/360] was the biggest, riskiest
decision I ever made, and I agonized
about it for weeks, but deep down I believed
there was nothing IBM couldn’t do.”**

Father, Son & Co. 1990
Tom Watson, Jr.
IBM President 1952
IBM President and CEO 1956
IBM Chairman and CEO 1961-1971



Mainframe – System z, bestehender 360 Grad Einsatz

LEVERAGE ENTERPRISE DATA



PROVIDE NEW SERVICES

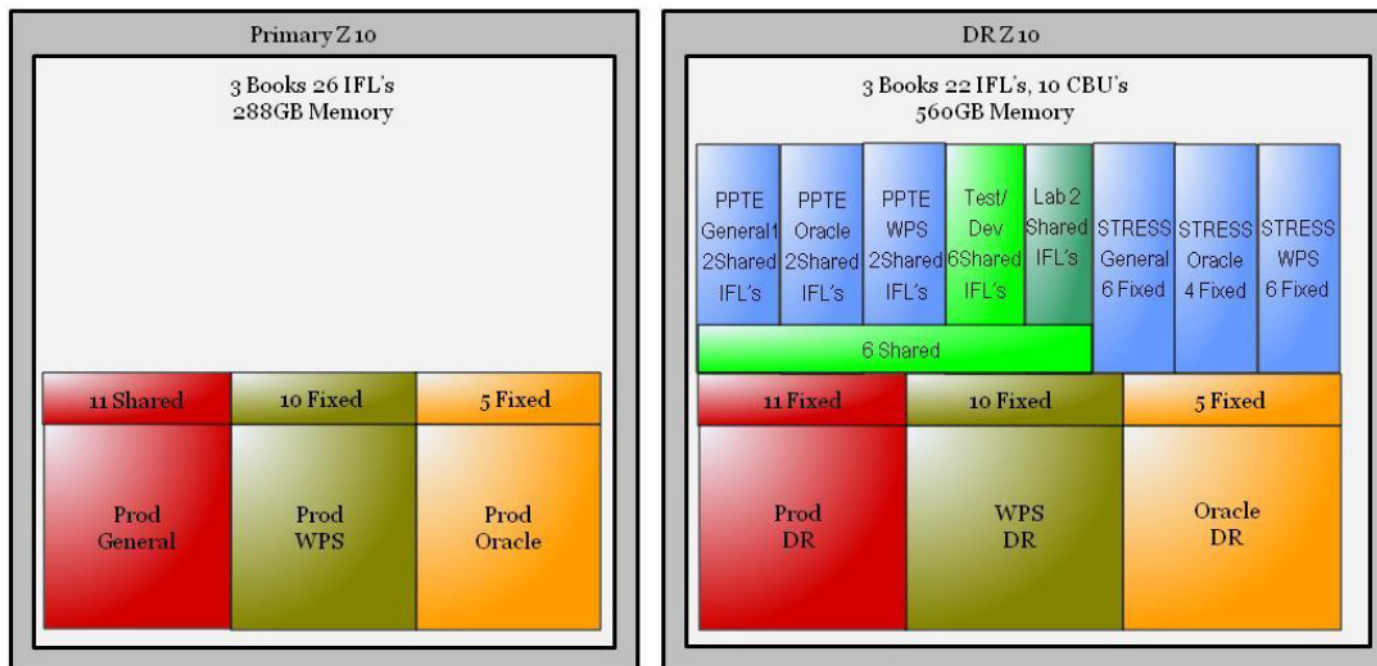
BOOST COMPETITIVE ADVANTAGE

Banking IT-Optimization

Bank of New Zealand



- Consolidated 200 Sun servers down to one System z10 running Red Hat Enterprise Linux
- Reduced data center footprint by 30%, heat output by 33%, and power consumption by close to 40%
- Only one administrator needed per 200 virtual servers
- New environments are deployed in minutes, not days



Banking Fraud-detection

Bank in New Zealand

Real time fraud prevention and detection

Business Challenge

- ▶ Deliver a fraud detection solution that can monitor risky transactions in real time
- ▶ Ensure ACI Proactive Risk Manager can process the transaction volumes and deliver automated fraud detection

Business Objectives

- ▶ Migrate from existing fraud solution provided by the card scheme to ACI Proactive Risk Manager
- ▶ Take an enterprise approach to fraud prevention, combining information from different channels, to identify fraud quickly and accurately

The Solution

- ▶ ACI Proactive Risk Manager for Enterprise Risk running on IBM System z hardware
- ▶ Real Time Rules in use with Near Real Time Rules
- ▶ Monitoring for credit card transactions through ATM and POS initiated through Enterprise Risk

Business Value

Projected savings of up to US\$250,000 a month.

Provides rapid implementation of new or adjusted rules to combat new fraud attacks

Collaborates with over 10 other local PRM customers through the ACI PRM User Group

Real Time Rules enables the customer to over ride authorisation and decline transactions that are highly suspicious

Customer intends to extend the enterprise capability to include debit cards, internet and cheque detection

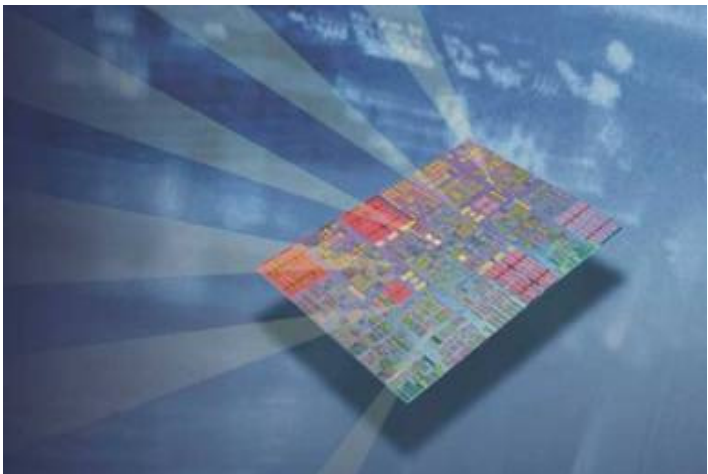
Insurance



Nationwide[®]
*On Your Side*SM

Key Benefits - Skalability

- Expects to save \$16M over the next 3 years
- Initial phase consolidated 250+ Production, Development & Test servers to 6 IFLs
- Nationwide.com runs on WebSphere on Linux for System z
- Superbowl 2006 commercial -- anticipate 22X increase in traffic.
- Rent 1 IFL for 2 weeks.
- Test to anticipated load before superbowl.
- Handle superbowl load for a few weeks.
- After superbowl, returned the IFL.
- Zero downtime during this process. Zero time spent acquiring/provisioning new servers. Zero time spent changing server configurations.



*“Nationwide’s Linux on System z project is currently **estimated to save \$16 million dollars over the next three years**, not including floor space. We also were able to provide a **reduction in server cost of more than 50 percent to our customers**. The Linux on System z system saved significant data center floor space and power consumption.”*

Steve Womer, Senior IT Architect

Retail

The Home Depot with SAP on System z

The Home Depot

Second largest retailer in the United States with over 1800 stores, 300,000 employees and around 1.2 billion customer transactions a year. Revenue 90Billion

Customer Objectives:

- **Very high SLA – for managing the stores**
- TCO equivalent to Unix/Windows systems
- Disaster Recovery
- Automated Management, Provisioning, Administration & Support
- Growth without adding staff
- Replace and Centralize store systems

Solution / Benefits:

- Migrated SAP R/3 to DB2 on z/OS
- Near continuous operations
- Strategic investment to move retail apps to SAP retail
- Moving application servers to Linux on z for provisioning east
- Faster time to market for new offerings in stores
- SAP BW with operational data



Benefits:

- Scalability to support over 1 Billion transactions/year
- Flexible use of resources allows them to add capacity without disruption, and dynamically change priorities based on time of day, or application
- Ability to support SAP and Business warehouse, enables access to P&L, and daily sales targets
- Low TCO
- Low unit cost /work
- Low staffing costs

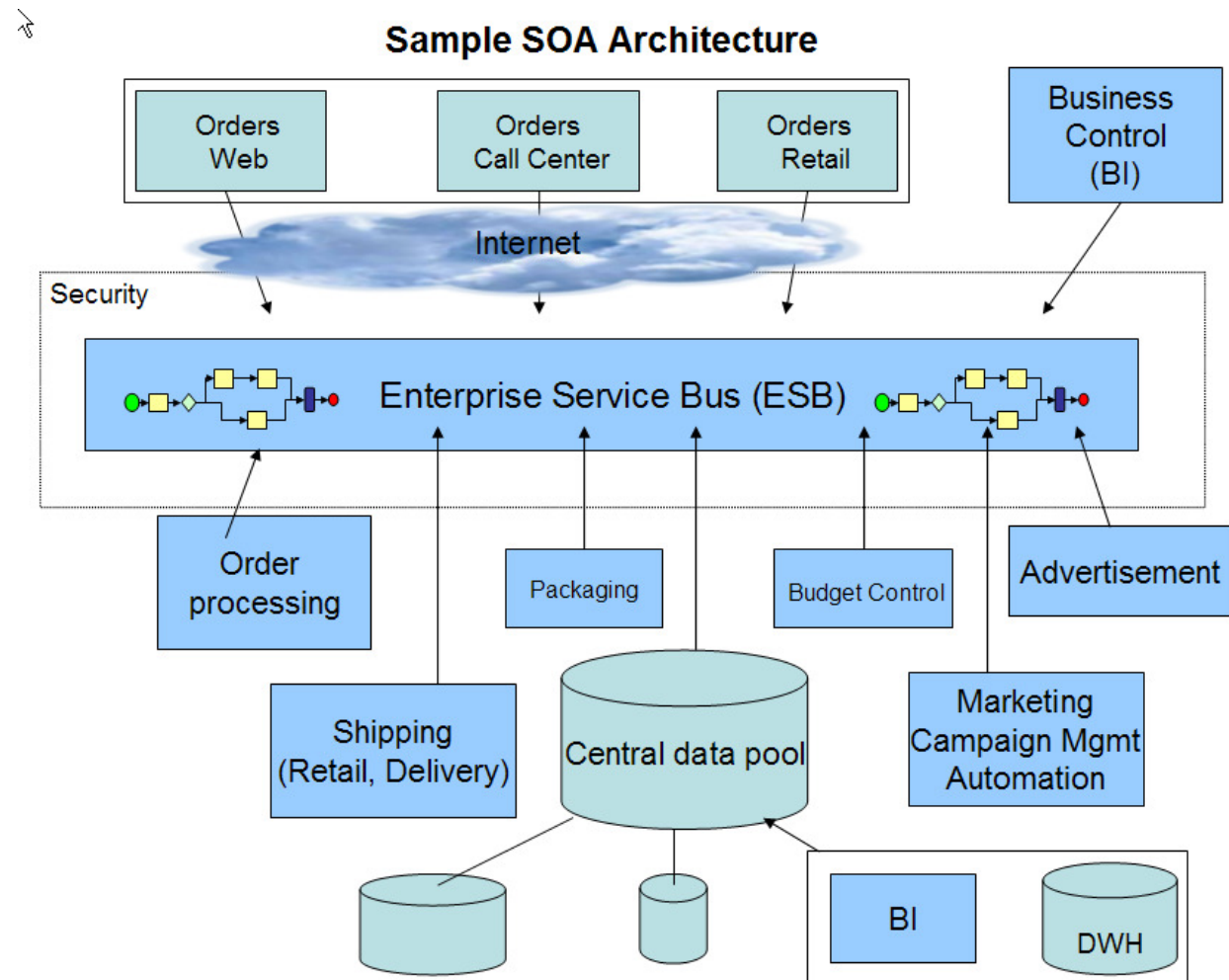
"For The Home Depot, given our size and our requirements, IBM System z is the only choice."
 Jim Fisher, Home Depot

<http://www.ibm.com/systems/z/testimonials/homedepot.html>

Integration mit SOA – jetzt wird implementiert

- Projekt Schwerpunkte:

- Daten
- Business Control
- Cross Integration



Insurance

SOA Infrastructure - Messaging Backbone

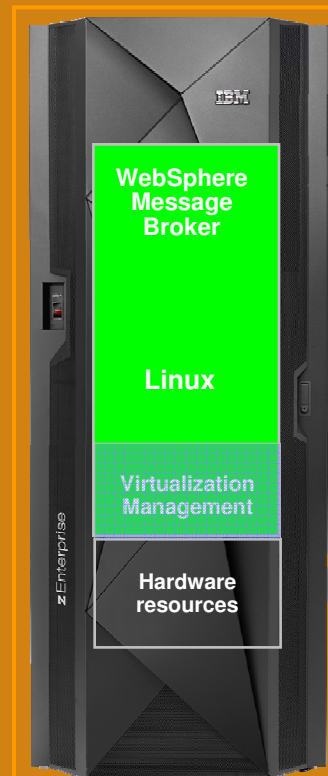
Client case: Bank of Tokyo-Mitsubishi UFJ (BTMU) - Japan

Need:

- Ability to quickly launch products and services and deliver them through new channels
- Banking customers want freedom to execute a full range of transactions anywhere, anytime, and on any device

Solution:

- Service Oriented Architecture (SOA) platform to realize "cloud-banking" concept
- An MQ-based, high throughput messaging backbone was built using IBM WebSphere Message Broker



- SOA platform not only enables service linkage on Linux and other systems, but also scalability
- SOA platform has accelerated the ability to build services in response to business issues
- SOA platform is driving administrative reforms and streamlining branch operations
- Along with the rapid increase in services, BTMU has seen growth in the reuse of existing services, with 18 percent of services currently being reused.

Health Care

Aurora Health Care...

sees a bright new dawn with a Service Oriented Architecture on IBM System z

Business Need

- Drive greater internal process efficiency
- Improve patient experience
- Simplify delivery of management information
- Provide self service to patients

Solution

- IBM WebSphere technologies to deploy and host portal system for internal staff running on System z
- New “my Aurora” portal will enable patients to input information and book appointments

Benefits

- Easy access to browser-based information enables staff to share information
- Quicker deployment of new and changed business functionality
- Streamlined workflows and less paper contribute to cost savings
- High reliability, scalability and performance of mainframe supports 24 x 7 working environment



Customer Quote

"By moving to a service oriented architecture on System z, we have gained the ability to think more about business problems and work through business solutions. At Aurora Health Care, we no longer talk about the technical challenges; we talk about what is possible."

User Mgmt

Ball State University creates cool Web 2.0 Facebook mashup based on the strength of IBM System z System z delivers cutting-edge applications

Business challenge:

Ball State University, Muncie IN, wanted to position itself as a leader in innovative new media. Class schedules took fully a day to distribute.

Coordinate 40 name and address systems to streamline administrative processes and ensure information integrity for users

Solution:

Created a cool Web 2.0 presence as a Facebook application (by far the most popular site with students) for class scheduling and much more, re-using secure data and CICS applications on IBM System z.

Benefits:

- Real-time class schedules published on Facebook improves course attendance and student interaction
- Existing application and data investments can be re-used at low cost
- Secure, reliable new Web services can be created in hours

So, the advent of SOA and Web services is not just an evolutionary step, to me it's a revolutionary step.

—Fred Nay, IT Director, Ball State University

“With Web services [on IBM System z], we feel we can integrate any data and systems.”

*—Fred Nay,
Director of University Computing
Services,
Ball State University*

Solution components:

- IBM System z
- IBM z/OS
- IBM CICS
- IBM DB2



Energy Management

National Grid Utility

Optimizing Energy and Utility applications with SOA and WebSphere

Business Challenge

National Grid recently acquired KeySpan Energy, the largest gas distributor in the Northeast United States and the largest electric power generator in New York state, owning 6,650 Megawatts of electricity generation and providing 25% of the power for New York City. National Grid now delivers to some 3.3 million customers in Massachusetts, New Hampshire, New York and Rhode Island

Solution

The company turned to IBM and Edge Information Group, Inc. The solution included Edge Portfolio Analyzer and features SOA running with IBM CICS, IBM DB2 Universal Database and IBM WebSphere MQ.

The SOA solution stresses modularity and reusability of code in building of applications, resulting in more adaptable and less costly applications.

Benefits National Grid now can provide:

- A single front-end user interface
- Improved collaboration among users
- Dependable service for customers



"When you're in the midst of a power outage, our software systems are there to support our teams." - Don Stahlin, director of IT technology operations, National Grid



"When you're in the midst of a power outage, our software systems are there to support our teams." - Don Stahlin director of IT technology operations, National Grid.

Logistics

Con-Way Freight delivery with Web services and SOA based on IBM System z



Con-way Freight is the industry's leading less-than-truckload (LTL) freight transportation company, providing guaranteed, day-definite regional and transcontinental service with exception-free delivery, through a single, unified network of **more than 300 service centers in the United States**, Canada, Mexico and Puerto Rico.

Business challenge:

Customer satisfaction is key for Con-Way Freight, which means providing on-line booking, payment and tracking among other services. Core business applications and databases had not been designed for the internet world and were perceived as hard to develop and refresh.

Solution:

Native handling of XML, standard messaging protocols and CICS on System z10 allow existing business logic to be rapidly re-used as Web services components to create new customer-focused applications.

Benefits:

- Pickup, delivery, tracking, payment and more are available online based on secure, reliable data managed by IBM System z
- Existing application and data investments can be re-used at low cost
- More than 40 re-usable components available for fast development

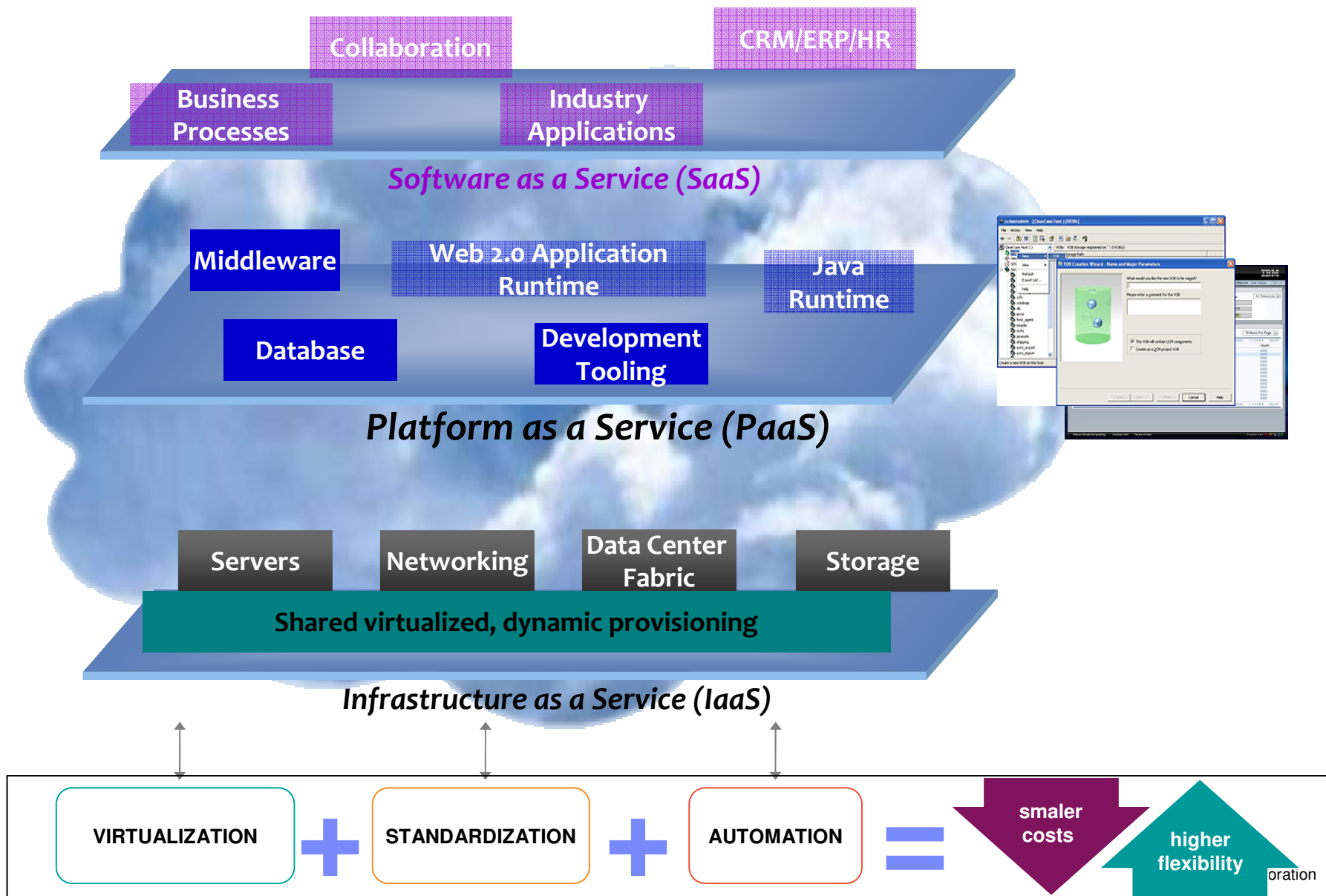
“Con-Way’s use of the System z proved that the same capabilities that made the System z its core production workhorse make it ideal for SOA.”

—Alan Radding,
Independent Assessment

Solution components:

- IBM System z10, IBM z/OS (multiple Linux LPARs), IBM CICS, IBM DB2, IBM Rational Application Developer, IBM WebSphere Application Server, IBM WebSphere Everyplace

Cloud Computing environments with System z – Infrastructure, Platform or Software as a Service



Financial



Guaranteed application uptime to SaaS customers



Triple digit growth

Transaction volume

69,000 users

6800 Companies

SaaS customers

BENEFITS to Clients

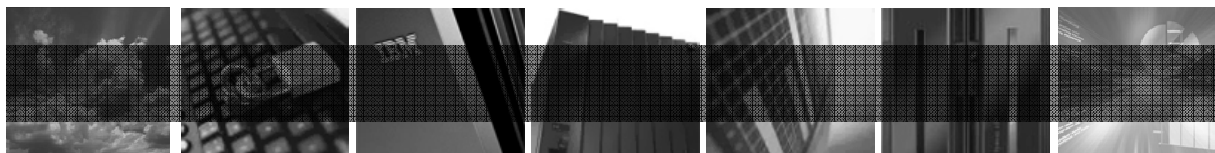
Comparison to Distributed



"Our business and reputation rest on promising a fast, reliable and secure service to our clients," said Peter Flanagan, CEO of Transzap. "We're a small company but our transaction data volumes are growing upwards of 100 percent, annually. We couldn't trust our business to any competitive product other than the IBM System z."

Superior Scalability and Availability

Transzap offers its customers a suite of financial tools delivered via [Software-as-a-Service](#) model. It operates Oildex, an ePayable system and digital data exchange.



**Smarter
Commerce**

Universita di Bari

Innovative Cloud Solutions for Local Businesses

Fish Market

*Electronic fish auction for
fishermen while on boats*

Wine Market

*Support for 60 wineries to
determine demand and
get best market price*

MoniCA

*Logistics solution tracks
and collects data real-time*

BENEFITS to Clients

*Using cloud computing to
allow multiple entities to tap
into heavy-duty computing
power at minimal cost and
lowers the barrier to help local
businesses to benefit from this
technology.*

[http://www.youtube.com/
watch?v=xEaEw5MaPrU](http://www.youtube.com/watch?v=xEaEw5MaPrU)



Solution Edition for Cloud Computing



**UNIVERSITÀ
DEGLI STUDI DI BARI
ALDO MORO**

Universita di Bari, established since 1924, is developing cloud-based solutions for a consortium of companies and universities from five regions of southern Italy.

Wine Production

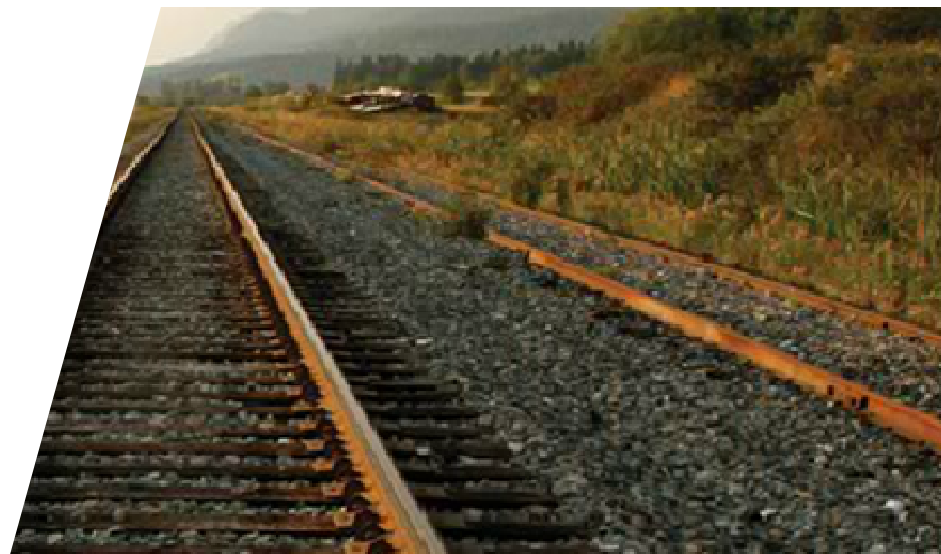
Renfe achieved Smarter Computing

Leading **Spanish wine** producer tackles business risk and rising costs with resilient and efficient IBM technology

renfe

Transform to deliver:

- Reduced number of servers by more than 70 percent.
- Cut hardware footprint by 75 percent.
- Decreased monthly costs by more than 20 percent.
- Boosted staff productivity by introducing automated solutions.



Public Relation

Supreme Court in Virginia

protect public safety with IBM WebSphere Software

Business Challenge

- State Supreme Court needed centralized system to provide magistrates and other agencies with up-to-date and around-the-clock access to offender information

Solution

PaaS

- **Environment for courts that hosts the infrastructure and Operating System with database**

SaaS

- **Online system for processing offenders and reviewing records of previous arrests**
- **WAS on the mainframe fields queries from users and retrieves information from a new centralized database of offenders across the state**

Benefits

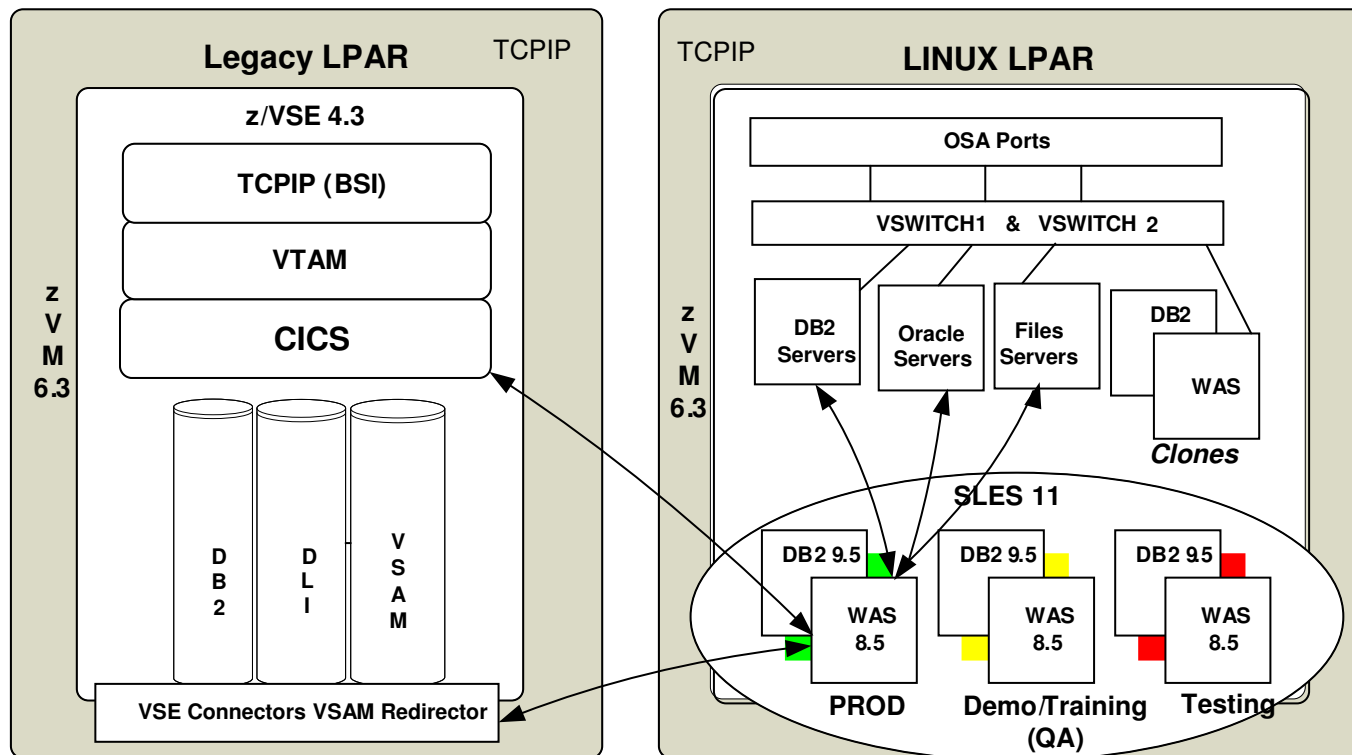
- Improved public safety through more informed magistrate decisions and better ability to track and identify suspects across the state
- Increased productivity among court staff
- Reduced application development time



Customer Quote

“WebSphere Application Server scales quickly and easily while also supporting the Java-based applications that represent our future direction. It gives us the foundation we need for new applications and services to come.”

Supreme Court of Virginia



- 1 + 1 zBC12 (M01/M02)
- 2 + 1 CPs
- 8 + 8 IFLs
- 240 + 240 GB memory
- 4 z/VM V6.3 LPARs
- 12 z/VSE V4.3 guests
- 156+ SLES 11 guests
- WAS V8.5
- DB2 V9.5
- Oracle on z (10g)

▪ **2x zBC12 (M01/M02), 1x production, 1x development**

- Serves 325 courts, 5.000+ users (3.8 million new cases in 2013)
- Integrating z/VSE, DB2/UDB and WebSphere applications
- eMagistrate system serves 125 locations, 3100 trans per day
- eCommerce* applications integrating z/VSE and WebSphere apps

*VJEFS- Virginia Judicial Electronic Filing System

Winner of the Governor's 2013 Commonwealth Technology Award



Lottery System

Industries: Banking, Financial Markets, Government

URL: www.caixa.gov.br

“The new lottery system allows us to extend our banking services through our lottery offices. In fact, more than 60 percent of bills paid in Brazil are now paid at our lottery offices.”

— CAIXA Econômica Federal



CAIXA Econômica Federal- Brasil

Cutting infrastructure costs and boosting convenience with IBM

Business Challenge

- **Gain control of its national lottery system** by bringing the system in-house
- Increase the scalability and technical independence of its infrastructure while reducing costs

Solution

- Teamed with IBM Global Business Services and IBM Global Technology Services to design and implement a scalable and efficient lottery system
- Deployed two IBM System z™ Enterprise Class servers to provide the backbone of the solution and adopted an IBM DB2® for z/OS® data server to support lottery system data
- Implemented a suite of IBM DB2, IBM Rational®, IBM Tivoli® and IBM WebSphere® applications to run the new lottery system efficiently
- Leveraged several IBM service groups to provide training for employees and to configure the solution

Benefits

- Slashed its infrastructure acquisition costs by over US\$330 million
- Increased lottery participation nationwide by 7 percent
- Helped it deliver enhanced convenience and efficiency to its customers by extending its banking services to its lottery offices

Olive Oil Production

Fratelli Carli: Innovation through bringing heritage forward *Integrating legacy applications on System z with VSE*

Business need:

Carli customers mainly want quality from us. We strive to achieve that level of quality from the moment customers place their orders—for example, by calling our call center. Such quality level continues – well, must continue – through the delivery process, when the independent driver from our network arrives to the customer's doorstep. In the event customers have any questions or concerns after delivery, we want to be there to assist and solve any issues they might have.

Solution:

All the core functions within Fratelli Carli are managed by the IBM mainframe, in particular through the z/VSE. „We integrated the pricing web service, and installed a new version of the accounting and inventory software on the Linux mainframe.“ - Marco Gardini. We're talking about managing the customer database, orders, and shipments. Everything revolves around this.

Benefits:

- The greatest capability of the mainframe is its ability to increase power, memory, and number of processors without requiring any changes within either the programs or the operating system. This is a big breakthrough compared to other systems. This protects your investments.

“We integrated the pricing web service, and installed a new version of the accounting and inventory software on the Linux mainframe. So at that point we were able to recall – and we're still able to recall – all the services available on this platform.”

- Marco Gardini, Operations
IT Manager, Fratelli Carli

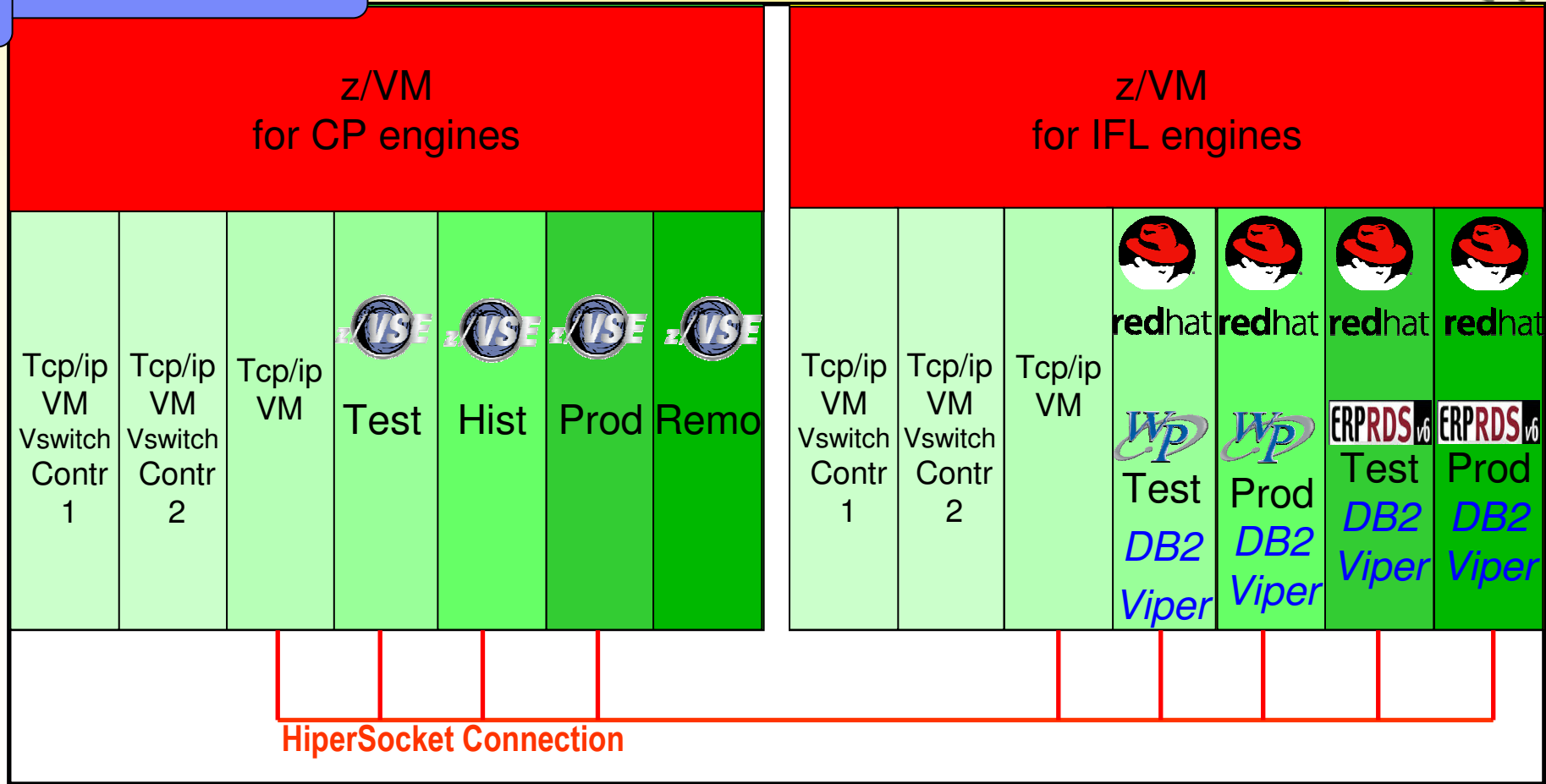
Solution components:

- System z running Linux
- System z10
- DB2 for Linux
- z/VM
- z/VSE
- Linux

[Video](#)

Olive Oil Production

Fratelli Carli, Italy Internal Connections



Olivo Carli

the leading producers of premium olive oil sold directly to consumers

Petrol stations

Creating a Competitive Advantage with System z

Business Need

Slovenia's leading energy business, operating 370 service stations and energy utilities across 5 Balkan countries, needed to centralize its IT infrastructure and leverage System z for new workloads and competitive advantage.

Solution

Consolidated IT infrastructure and centralized platform for new workloads. Strategic plan to maintain currency for competitive advantage.



PETROL

Key Benefits (Value Proposition)

- ✓ **Simplified management and lower total costs**
- ✓ **Consolidation and integration of IT components to drive business more efficiently than competitors**
- ✓ **Able to run mobile “wireless” Java solutions and support business processes in real time.**
- ✓ **SOA to enable new business opportunities quickly**
- ✓ **Operational databases under one umbrella**
- ✓ **Implemented Data Warehouse, Business Intelligence, and Corporate Performance Management solutions to improve competitiveness.**

Software

- **DB2 for z/OS**
- **WebSphere Application Server for z/OS**
- **Enterprise Generation Language**
- **WebSphere (Rational) Developer for System z** (supporting Enterprise Generation Language)
- **CICS**

Wholesale Car Parts

High Scalability of System z: Wessels & Müller

WM
FAHRZEUGTEILE

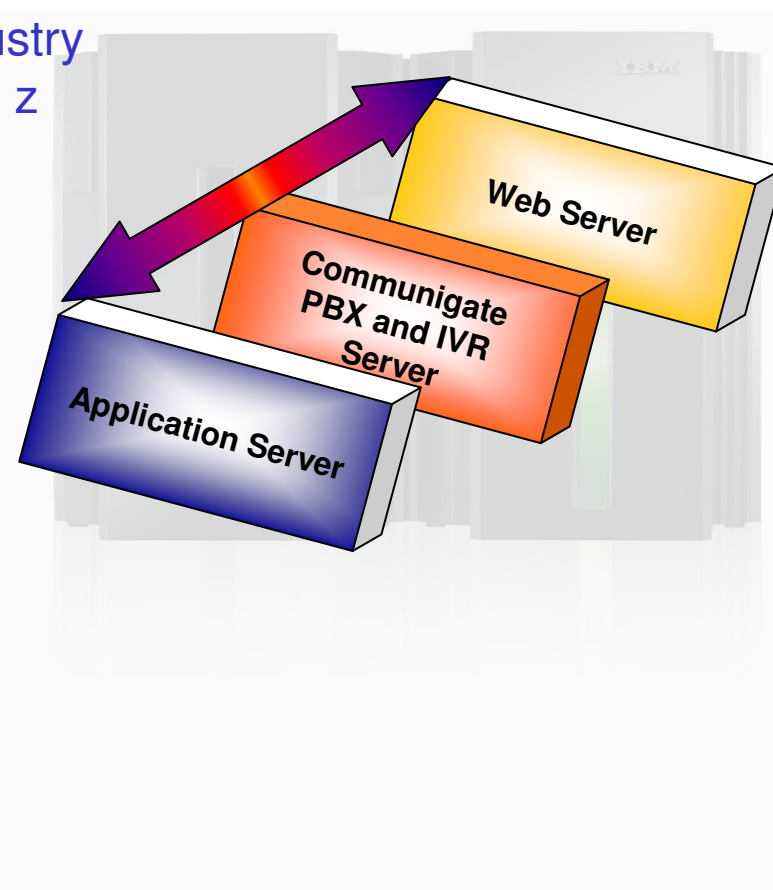
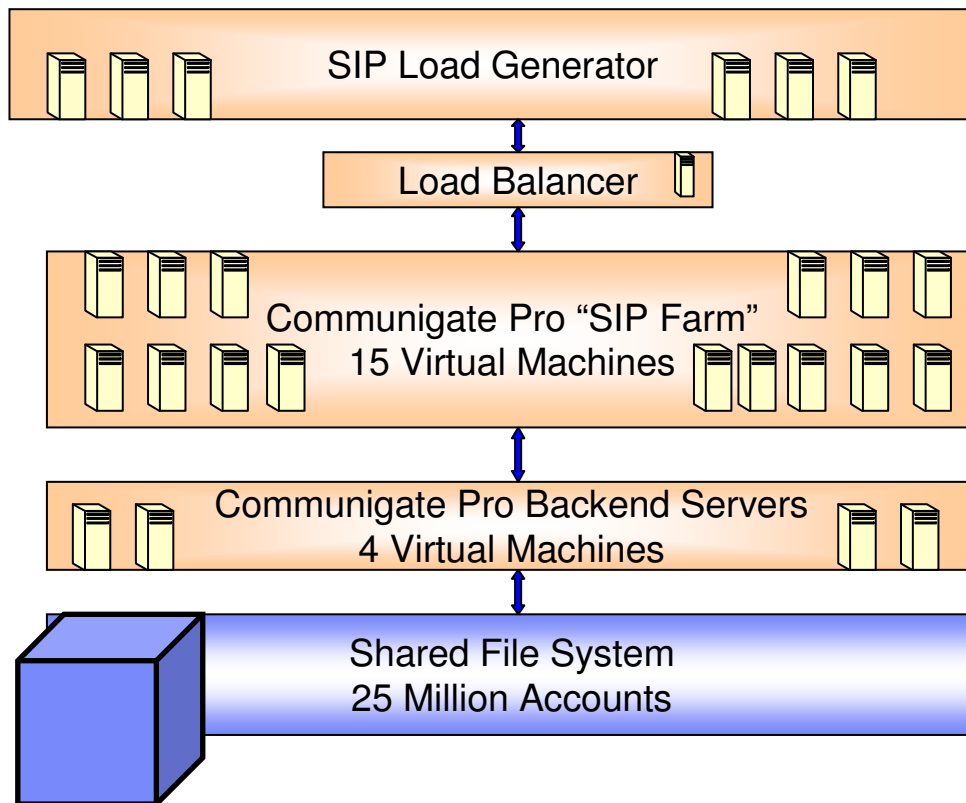
On-demand Kapazität
für Wachstum



Phone VoIP service

Phone VoIP at CommuniGate Pro, running on Linux System z

- Server Test **25 Million Subscribers**
- Largest VoIP Benchmark in Industry
- Brand New Customer to System z



Air Traffic control

Eurocontrol MUAC

Increasing efficiency of air traffic control operations

Before:

Eurocontrol MUAC provides upper airspace air traffic control services for over 1.5 million flights above north-west Germany, Belgium, the Netherlands, and Luxembourg each year – making it the second busiest control center in Europe. The organization wanted to meet the challenge of maintaining safe, secure and cost-effective air traffic control (ATC) services by migrating key applications to a private cloud environment.

Transformation:

Migrated critical applications to a private cloud based on the IBM zEnterprise 196 and integrated IBM BladeCenter servers – ensuring high availability for business support applications. IBM zEnterprise Unified Resource Manager allows all resources to be managed from the same intuitive interface.

Benefits:

- Enabled rapid development of new applications, increasing safety and efficiency of ATC operations.
- Improved overall planning efficiency for operations from 65 percent in 2006 to 85 percent in 2011.
- Shrunk datacenter footprint by 80 percent, reduced energy consumption by 58 percent, cut administrative workload by 50 percent.

“Of all the technologies we investigated, the IBM zEnterprise hybrid solution came out on top. zEnterprise offered the combination of flexibility, high-performance and rock-solid reliability we needed.”

— Kumar Sivakumaran,
Advanced Middleware Engineer,
Eurocontrol

Solution components:

- IBM zEnterprise, IBM zEnterprise BladeCenter Extension, IBM zEnterprise Unified Resource Manager
- IBM z/VM, IBM System Storage SAN Volume Controller



Eurocontrol climbs into the private cloud



The need

Air traffic management organization Eurocontrol MUAC wanted to maintain safe, secure and cost-effective air traffic control (ATC) support services in an increasingly busy airspace.

The solution

Migrated critical applications to a private cloud based on the IBM zEnterprise 196 and integrated IBM BladeCenter servers – ensuring high availability for business support applications.

Benefits

- Enabled rapid development of new applications, increasing safety and efficiency of ATC operations.
- Improved overall planning efficiency for operations from 65 percent in 2006 to 85 percent in 2011.
- Shrunk datacenter footprint by 80 percent, reduced energy consumption by 58 percent, cut administrative workload by 50 percent.

“Thanks to the reliability, flexibility and simplicity of management of our zEnterprise private cloud solution, we spend 43 percent less effort maintaining our infrastructure than before.”

– Huub Meertens, Head of Support Engineering Section, Eurocontrol

Blue Cross Blue Shield of Minnesota

BCBSM improved customer service and IT system scalability when it consolidates 20 Hewlett-Packard servers onto one IBM System z Enterprise Class mainframe using Linux.

Customer Objectives:

- Improve customer service
- Replace existing HP SAP landscape to reach higher levels of availability
- Desired continuous availability of Data – Eliminate planned outages
- Manage growth without server and database proliferation

Solution / Benefits:

- Migrated SAP R/3 to DB2 on z/OS
- Completed the migration on time and within budget
 - ▶ Minimum system down time
- Strategic investment to move retail apps to SAP retail
- Superior Reliability and availability
- integrated disaster recovery



**BlueCross BlueShield
Association**

With SAP on System z, Blue Cross Blue Shield 's service to our customers has improved dramatically.

We have eliminate all the outages that we had been experiencing in our SAP implementation prior to System z. The reliability and continuous operations of this platform for SAP are unprecedented.

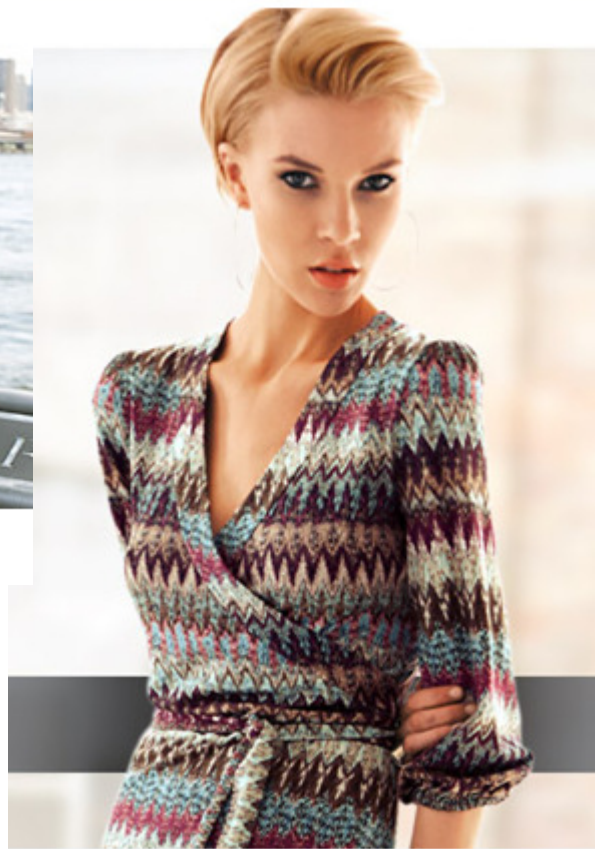
We learned the hard way.....and wish we would have implemented SAP on System z originally.

Today we enjoy the added security of knowing we have a disaster recovery plan that can cope in any emergency.

Peter Hahn - Die Modemacher im Schwabenlandle



Modische Twinsets
In attraktiven Formen und Farben



Weather forecast

The Met Office forecasts a bright outlook

Company Overview

- United Kingdom, Government, 1,800 people at 60 locations around the world
- UK's national weather service, providing >3,000 weather forecasts for public, government and other businesses, as well as conducting weather- and climate-related research
- 10 million daily weather observations are processed by a supercomputer; results need post-processing handled by an array of database-driven applications, most of which run on Linux®

Situation before

- **A mixture of IBM System z® and distributed landscape of commodity x86 servers**
 - 120 Oracle instances on 204 x86-cores
- **Heterogeneous infrastructure was becoming large, complex and difficult to manage**
 - Due to increased I/O and processing
- “Commodity x86-based systems do cost far less to acquire per unit of capability, ... But the longer-term costs, including support, infrastructure, environmental issues and mirroring for resilience, quickly add up.”

Green financial IT

Green and greenest IT - EFIS

<http://www.youtube.com/watch?v=8fIF9WUx5gA&list=PLa0q5XNFYyOlicdkfvCgXxUnRbIRcfidA8>



Art Gallery

White Cube entertainment: The New Client Experience¹

Company Overview

- United Kingdom, Media & Entertainment, founded in 1993
- **A leading contemporary art gallery with locations in UK, Hong Kong and Brazil**
- They succeed by establishing lasting relationships with artists to help them produce, exhibit and sell works through their galleries, international offices and commissions
- White Cube feels very strongly that despite their commercial nature, they are aspired to go beyond the mechanics of simply selling and provide a richer cultural experience

Situation before

- While White Cube is a relatively small business, their unique needs require that they support a diverse array of IT workloads and requirements
 - These include traditional back-office workloads like email, inventory management and shipping logistics
- **IT needs changed and grew dramatically**
 - Due higher level of service to clients and artists
 - International expansion required a truly 24x7 global business
- **Rising business demands and aging collection of servers**

¹ www.youtube.com/watch?v=Yuz4LSH_Pk

Siccob: The Server that Never Sleeps so You Can



Marcos Vinicius
Manager, Technology Infrastructure
Siccob

We have a pretty interesting story
that actually involves my wife.

0:27 / 2:56

The reliability of an IBM server wins the heart of a Siccob spouse

www.youtube.com/watch?v=E8cdYINr32M

Marcos Vinicius

Manager Technology Infrastructure at Siccob

The Server that Never Sleeps so You Can

- In the past, we had an infrastructure that involved many, many servers.
- **Due to technical limitations, the servers didn't allow us really high availability.**
- **My phone rang all the time. I had to sleep with my phone next to me.**



www.youtube.com/watch?v=E8cdYINr32M

- **The mainframe arrived. We transferred the processing to the mainframe.**
- And out of nowhere my wife ask me, „What happened? The phone doesn't ring in the middle of the night anymore. What happened?“
- So I explained the technological changes, the architectural changes.
- My wife give me a big smile and said „ I want to meet this mainframe. I love the mainframe.“

Marcos Vinicius

Manager Technology Infrastructure at Siccob

What are the decisive arguments for System z

1. HW High Availability, Reliability

- Systems designed for running 24X7
- Components designed to run years and monitor/heal themselves - call home

2. Scalability

- Technology is compatible over decades and scales as needed - w/o new HW
- Grow on demand and without interruption, w/o application change

3. HW designed for High dynamic workload

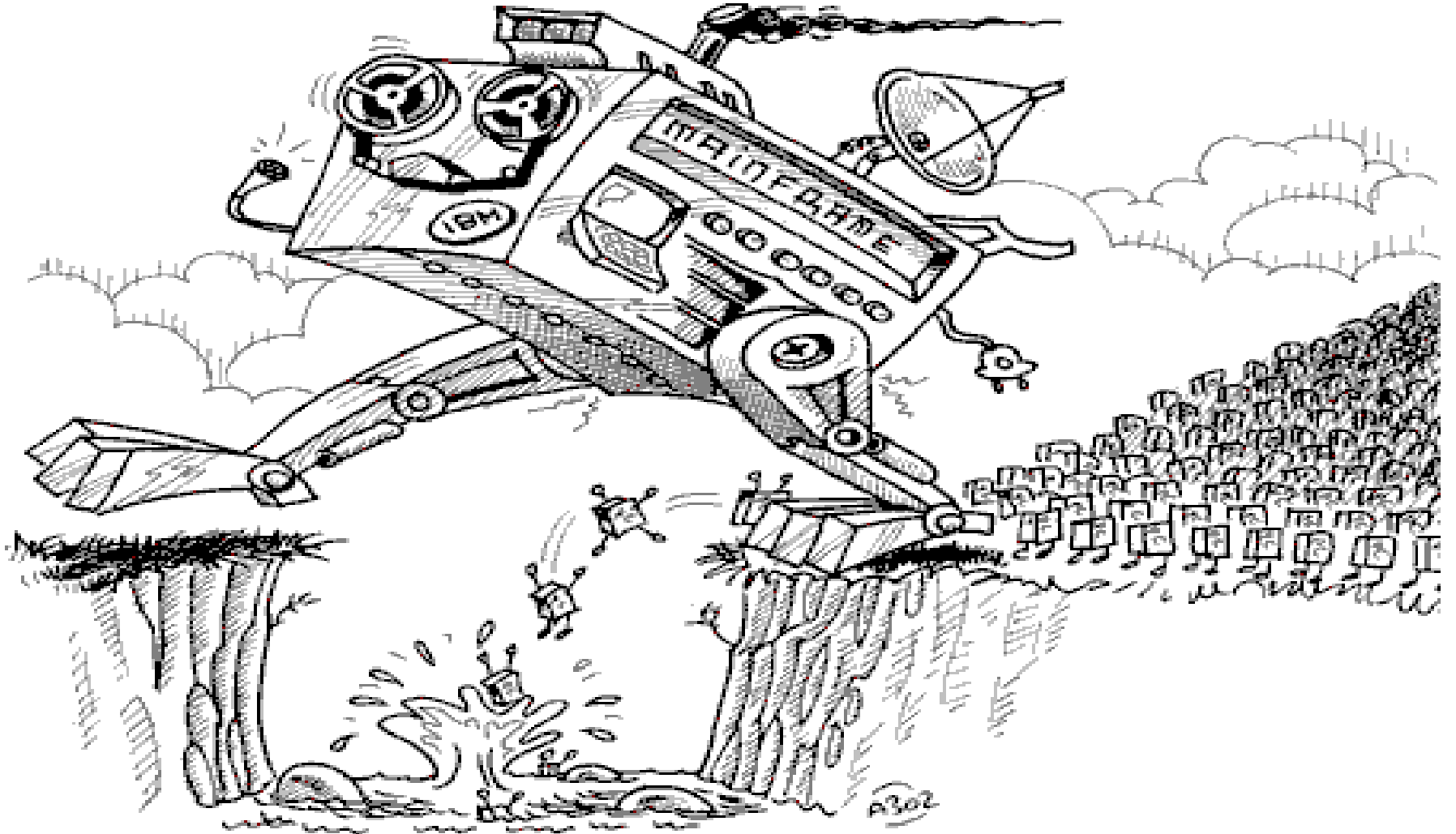
- Massive parallel secure transactions
- With Linux - a standard OS System enhancement
- Sets the bar for global / extreme Virtualization (CPU, Mem, Network, OS, System)
- Multi layer Virtualization and high isolation
- Very effective utilization of shared resources. Memory, CPU, I/O channels

4. Heterogeneous workload - on the same platform with internal networks

System z and Linux in a variety of industries

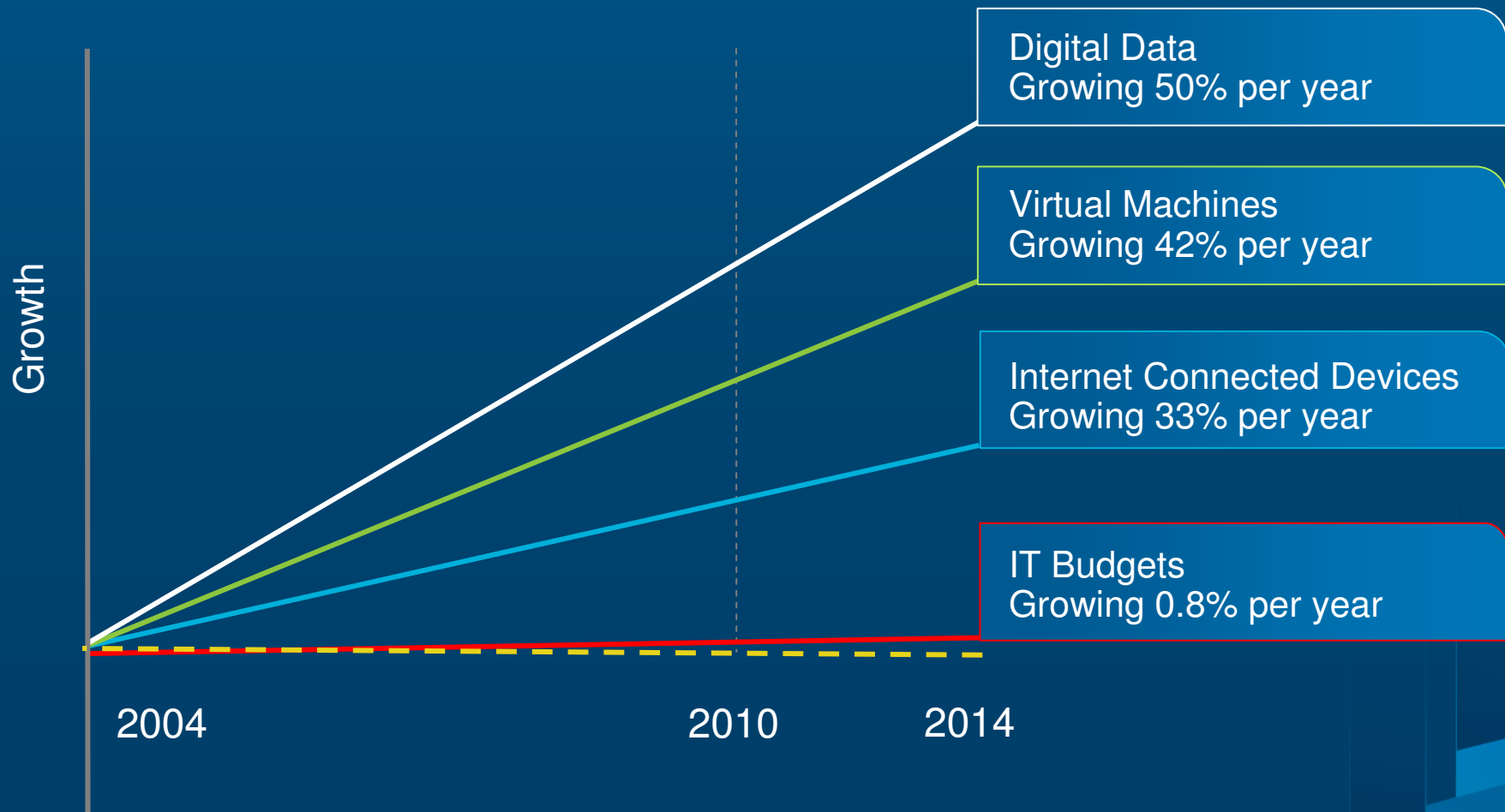
- **Financial Institutes / Insurance**
- **Airlines**
- **Fashion (Mode)**
- **Earth-moving crawler**
- **Hotel chain / Vacation clubs**
- **Health institutes/ Hospitals**
- **Processing systems - Wiederaufbereitungsanlagen**
- **Public Sector / County**
- **Payroll accounting**
- **Whole Sale – Home Articles**
- **Whole Sale – Pharma**
- **Grocery (Frozen Vegetables)**
- **Furniture manufacturing**
- **Horse Racing – Bets**
- **Church administration**
- **Bakery**
- **Sport clubs**

Do the right step !



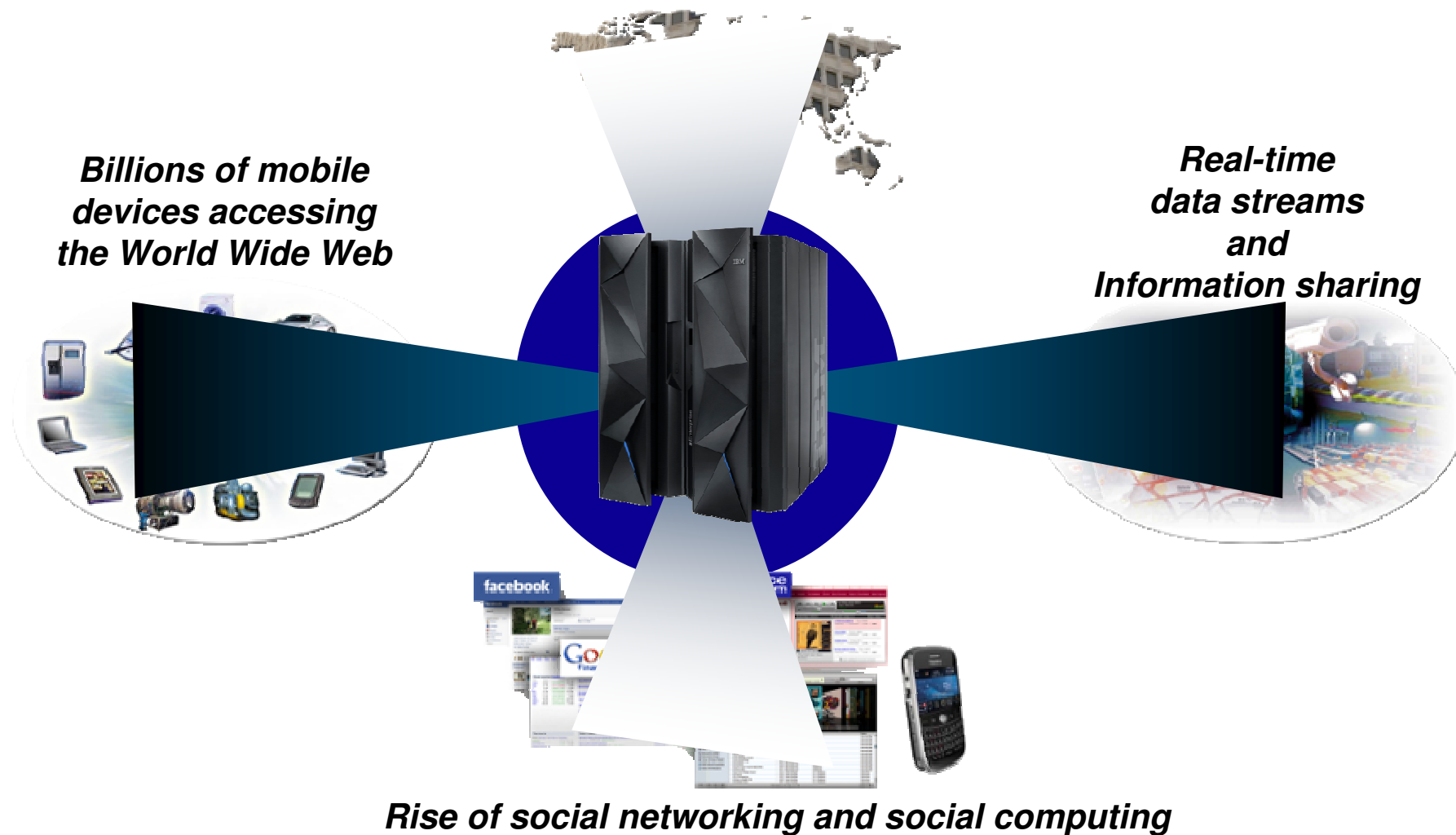


To capture new opportunities, IT organizations must respond to dramatic increases in demand and workload...



The future starts today – and the Mainframe is crucial

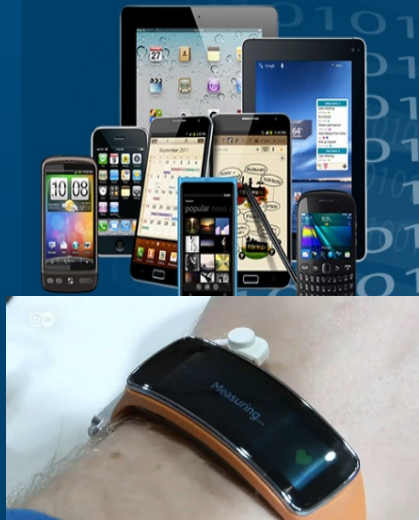
Globalization and Globally Available Resources





Die Zukunft hat begonnen...

Mobile



Social



Big Data



Internet of Things

...und eine neue 'Era of computing' mit System z

Die Zukunft hat begonnen – auch mit Mobile zum Mainframe

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Technology

Telecommunications

Vielen Dank



Wilhelm Mild
IBM Executive IT Architect



*IBM Deutschland Research
 & Development GmbH
 Schönaicher Strasse 220
 71032 Böblingen, Germany*

*Office: +49 (0)7031-16-3796
 wilhelm.mild@de.ibm.com*



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