

# Implementing a Dynamic Infrastructure

**The Value of System z**



**IBM CICS® User Conference 2009**

## IBM's smarter planet vision



let's build a smarter planet

*The world has become flatter and smaller. Now it must become smarter.*

## Four major IBM initiatives

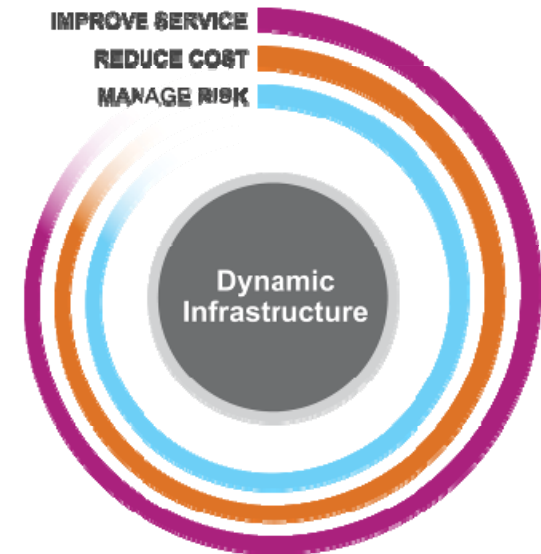
**Dynamic Infrastructure**

**New Intelligence**

**Green & Beyond**

**Smart Work**

## Dynamic Infrastructure



*delivers superior business and IT services with agility and speed*



Globally, systems and infrastructure are reaching a breaking point.

- Explosion of data, transactions, and digitally-aware devices strains IT infrastructure and operations.
- Exponential growth in communications subscribers and services exposes bandwidth limitations.
- Supply inefficiencies and demand spikes tax energy and utility systems.
- Clogged and congested roadways impact productivity.
- Networks, supply chains, and borders face a proliferation of new risks and threats.

Meanwhile, customer expectations and competitive pressures are increasing.

It's time to start thinking **differently**  
about infrastructure.

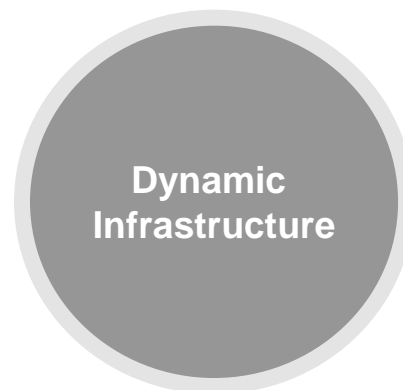
# A dynamic infrastructure addresses today's challenges *and* tomorrow's opportunities.

## IMPROVE SERVICE

Not only ensuring high availability and quality of existing services, but also meeting customer expectations for real-time, dynamic access to innovative *new* services.

## REDUCE COST

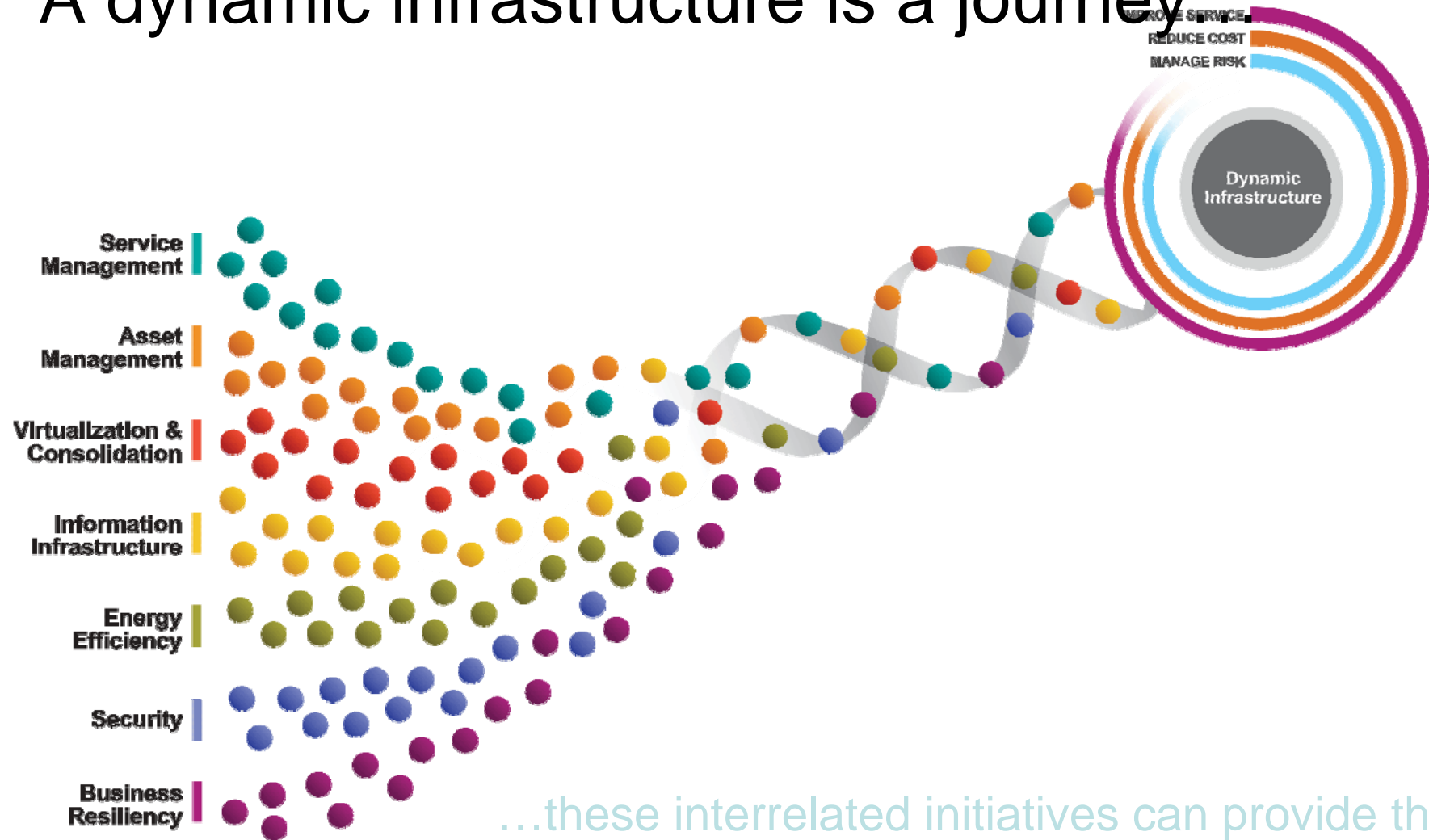
Not just containing operational cost and complexity, but achieving *breakthrough* productivity gains through virtualization, optimization, energy stewardship, and flexible sourcing.



## MANAGE RISK

Not only addressing today's security, resiliency, and compliance challenges, but also preparing for the new risks posed by an even more *connected* and *collaborative* world.

# A dynamic infrastructure is a journey

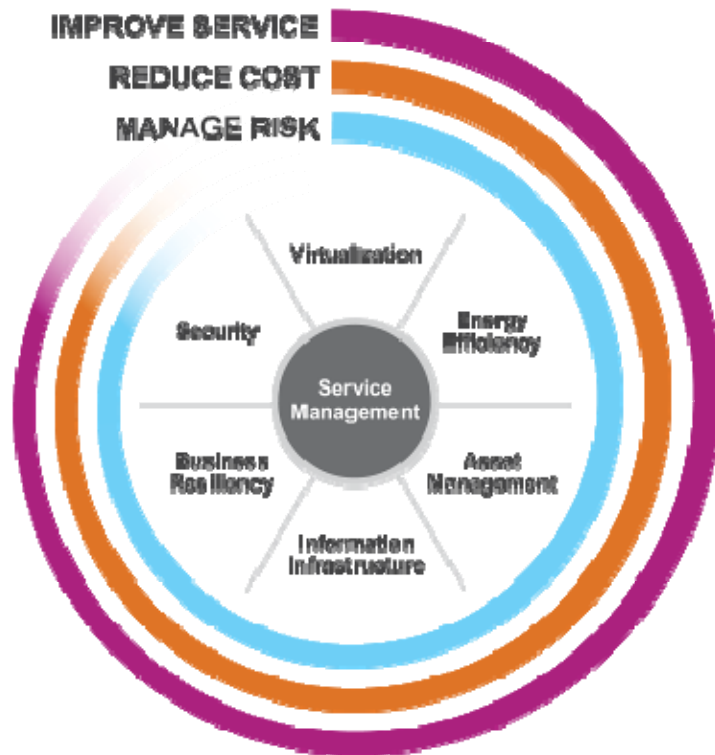


...these interrelated initiatives can provide the DNA needed to thrive in a smarter planet.

# System z innovations for a dynamic infrastructure

*... System z delivers extreme business value through industry leading security, availability, scalability, virtualization and management capabilities*

## IBM System z



- REDUCE COST**
  - Industry-leading virtualization, energy efficiency, and scale
- MANAGE RISK**
  - Secures your business, reduces risk, builds trust and confidence
  - Superior qualities of service allows clients to run their businesses reliably
- IMPROVE SERVICE**
  - Dynamic, policy based, and automated SOA infrastructure
  - Adapt and respond quickly to changing business imperatives



## Reduce cost through industry-leading virtualization

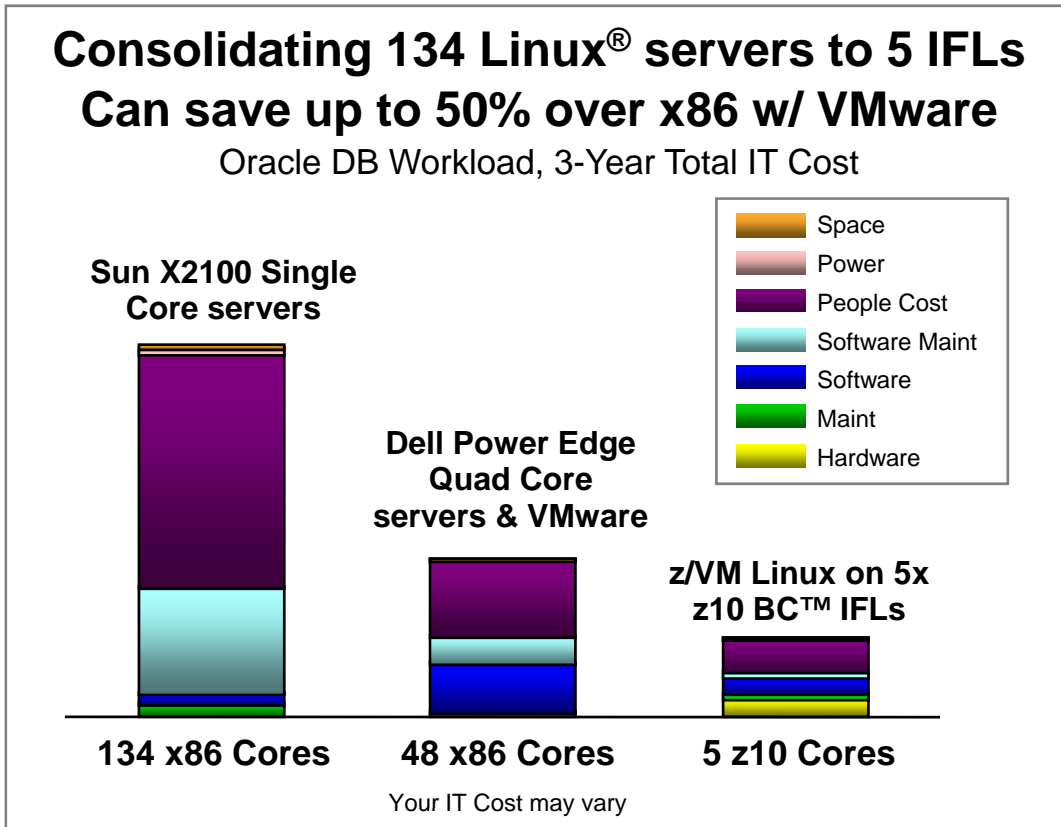
- Run 10s or 100s of application instances on a single System z server
- Drive hardware utilization rates near continuously at 85%+
- Dynamically optimize resources according to business priorities
- Deliver extra capacity for Linux virtual servers typically at no extra cost with z10 specialty engines



**... System z delivers large scale consolidation capabilities for savings of up to 80% in total cost of ownership compared to distributed platforms**



# Reduce cost through consolidation on System z



*Here's a cool example:  
IBM will consolidate 3,900 servers to about 30  
System z servers with expected reductions in  
energy consumption of over 80%*

**Consolidation:  
Save up to 50% over x86  
virtualization**



## Reduce cost through energy efficiency

- Do the workload of up to hundreds of distributed servers in a single energy efficient System z10
- z10 technology delivers improved performance per KWh
- Active Energy Manager and Mainframe gas gauge to help manage energy consumption



**“the IBM System z platform can be configured to require 1/12th the electricity as a distributed server farm with equivalent processor capability.” (1)**

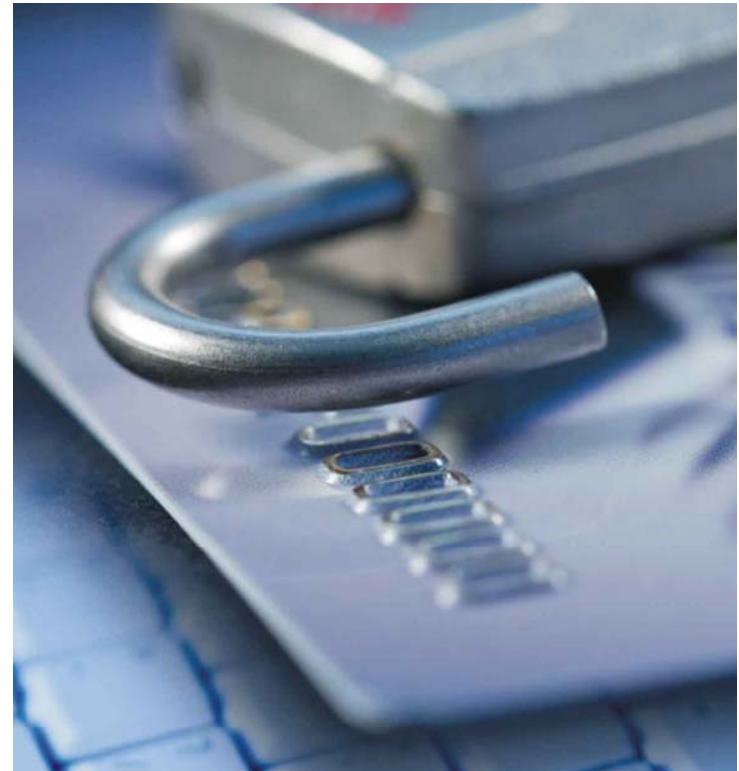
1 IBM System z: Platform Star for Linux and Open Source Software, Ptak, Noel & Associates.

# Manage risk with System z security

## ***Leadership technologies for peace of mind***



- Comprehensive protection:
  - User authorization and access control
  - Encryption to secure data
  - Protection from viruses and malware
- Industry leadership capabilities and certification - (EAL5)
- Dedicated cryptographic processors



✓ ***Mitigating the risk of security breaches***

✓ ***Helping to protect your organization's brand image – and bottom line***

✓ ***Helping to address compliance needs***

# Manage risk with System z resiliency

## *Availability built in across the system*



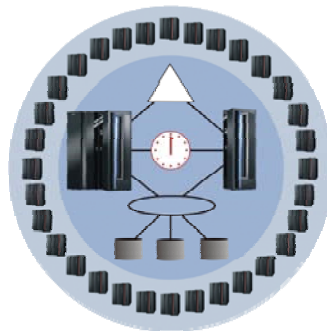
Designed to deliver availability at the application level

### Single System z



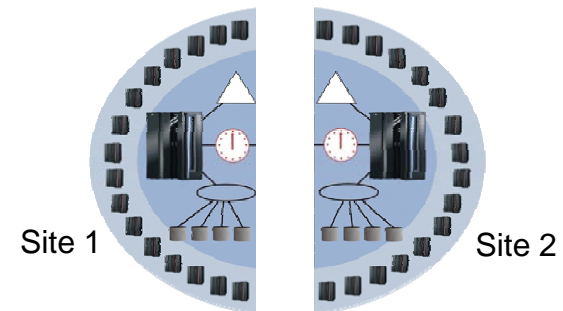
Where mean time between failure is measured in decades

### Multiple System z



Designed for application availability of 99.999%

### Multiple Data Centers



Industry-leading solution for disaster recovery

- ✓ *Avoiding the cost of downtime*
- ✓ *Ensuring access to critical applications*
- ✓ *Maintaining productivity of users*
- ✓ *Open to clients 24/7*

The right level of business continuity protection for your business  
– **GDPS family of offerings**



**an end-to-end disaster recovery solution to enable:**

- Automated recovery removes people as Single Point of Failure
- A single point of control for heterogeneous data across enterprise

**Continuous  
Availability of Data  
Within a Data Center**

Single Data Center  
Applications remain  
active

Near-continuous  
availability to data

**GDPS/PPRC  
HyperSwap Manager**

**Continuous  
Availability /  
Disaster Recovery  
Metropolitan Region**

Two Data Centers  
Systems remain active

Automated D/R across  
site or storage failure  
No data loss

**GDPS/ PPRC  
HyperSwap Manager  
GDPS/PPRC**

**Disaster  
Recovery  
at Extended  
Distance**

Two Data Centers

Automated  
Disaster Recovery  
“seconds” of Data Loss

**GDPS/GM  
GDPS/XRC**

**Continuous  
Availability  
Regionally and  
Disaster Recovery  
Extended Distance**

Three Data Centers

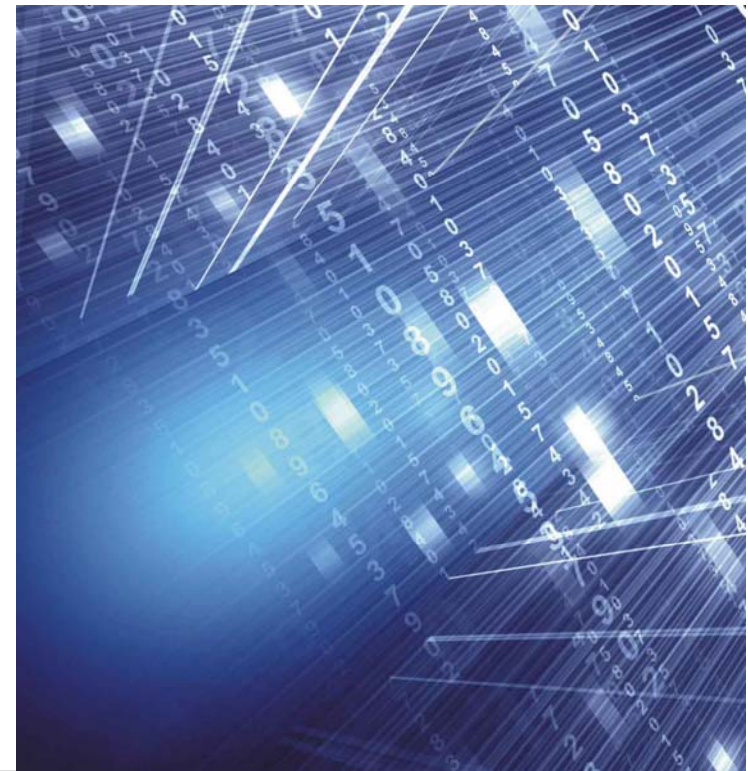
Data availability  
No data loss  
Extended distances

**GDPS/MGM  
GDPS/MzGM**

# Improve service with System z flexibility *Optimize IT resources to your business needs*



- A wide choice of operating environments delivers flexibility and choice to the business
- Hugely flexible deployment options to optimize use of IT resources
- Huge scalability and leading provisioning technologies to respond to changing business demands



**z/OS®**

**z/VM®**

**z/VSE™**

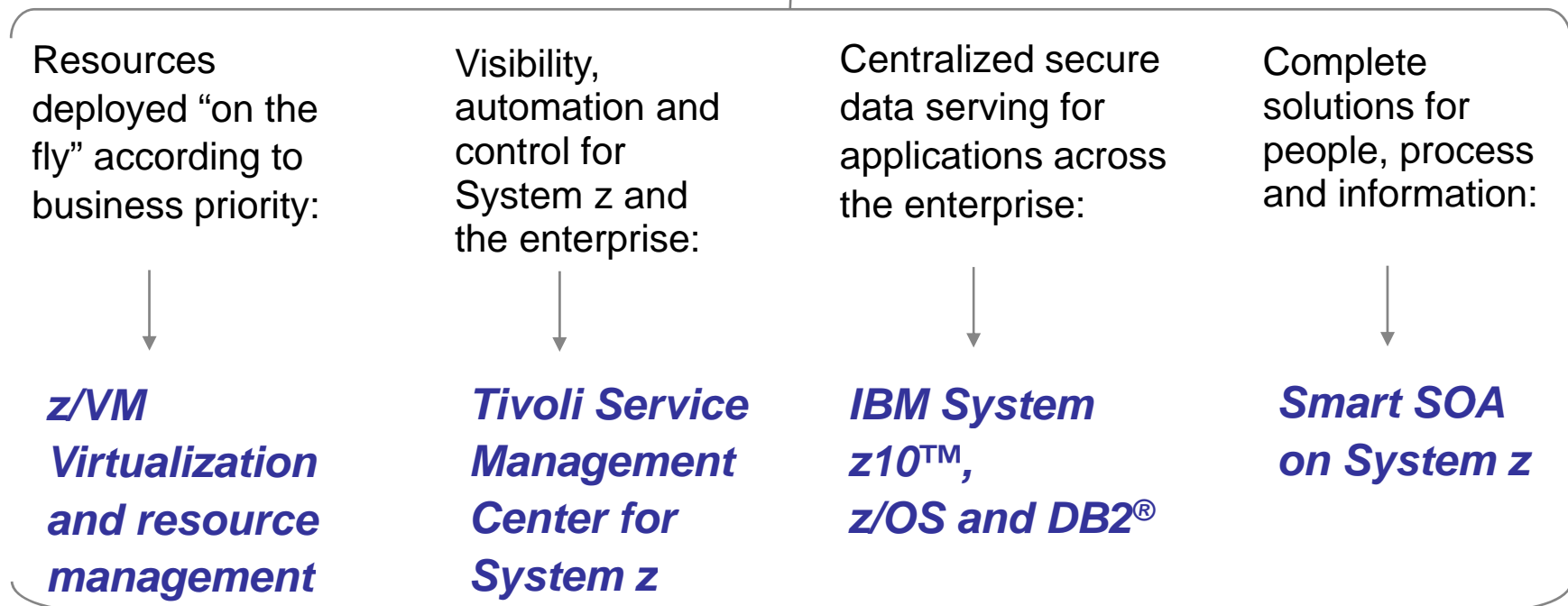
**z/TPF**

**Linux**



# Improve service with System z

Integrated, enterprise-wide, hub for the efficient management of business and IT services



**...Underpinned by System z performance, security and resiliency to provide continuous high speed service to users**

# New System z solution offerings

## ***Better service, more value, lower price***



### System z ecosystem: *The growing zCommunity*

- One Scalable platform
- 5 Operating environments
- 100s of business partners
- 1000s of applications



- **IBM System z Solution Edition for ACI Applications**
  - Lowering the cost of ACI deployment on System z



- **SAP on System z**
  - Deliver high quality of services SAP solution





## Getting the most value out of your System z IT resources **GTS Services to deliver capabilities for a dynamic infrastructure**



### Healthcheck Services for system z

- **Utilizing z/OS health Checker for an in depth review of the z/OS environment to:**
  - Help ensure critical business resources are available and reduces outages
  - Leverage best practices and experience to get a holistic view of your server environment
  - Help maintain compliance with Business Availability Regulations

### IT Process automation

- **3 modules to help you to automate system management processes, to:**
  - Help ensure faster adoption of new System z technologies
  - Automate key processes to enhance efficiency and system performance
  - Reduce total cost of ownership



### IBM Data Mobility Services

- **Non-disruptive data migration with Heterogeneous support across Windows, UNIX and z/OS storage environments to:**
  - Improve service level delivery
  - Reduce risk, cost, complexity and planning effort required data migration
  - Simplify data migration after storage technology refresh

## IBM System z10: Proven results in a dynamic infrastructure



**SMART IS:  
IMPROVE SERVICE**



### Häfele GmbH & Co KG

*Deployed IBM System z technology resulting in a reduction in transaction processing and online response times of 50 percent for customers in over 150 countries.*



**SMART IS:  
REDUCE COST**

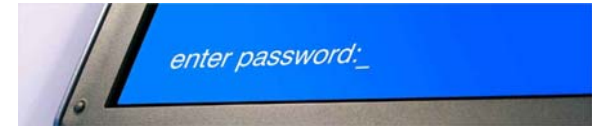


### Nationwide

*“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.”*



**SMART IS:  
MANAGE RISK**



### Bank of Montreal

*Deployed System z and is now recovery providing a recovery point of zero and a time of 2 hours, reducing operational risk, increasing client trust, improving availability, and addressing stringent regulatory compliance requirements*

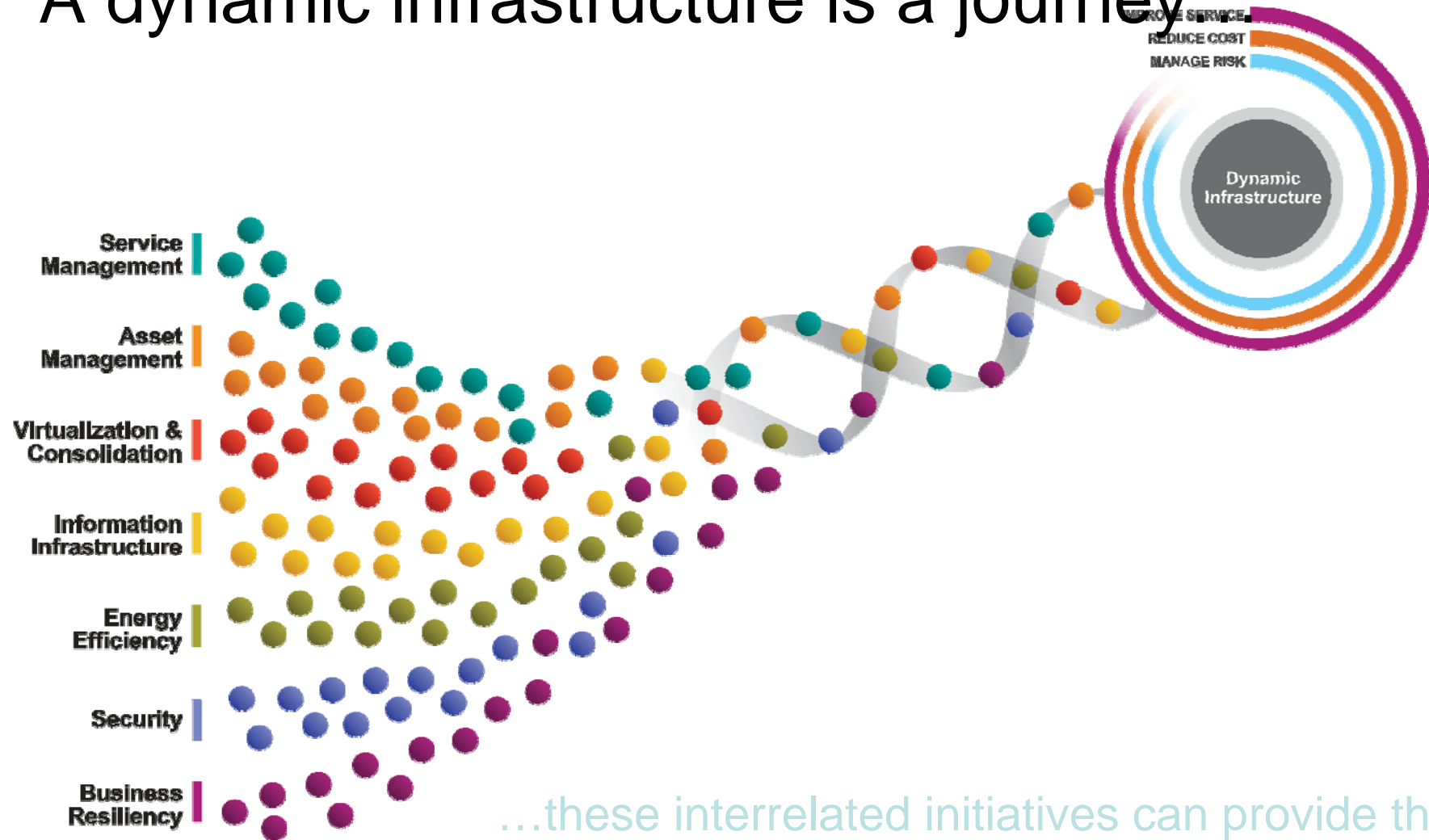
# The Future runs on System z



*Unlike many distributed servers...*

*... System z Delivers extreme business value through industry leading security, availability, scalability, virtualization and management capabilities*

# A dynamic infrastructure is a journey



...these interrelated initiatives can provide the DNA needed to thrive in a smarter planet.

# Thank you....

z Direct Line: 08-2022-0088

