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Successfully Selling Business Resiliency for zSeries

Course #: Z15

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ON DEMAND BUSINESS™

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Agenda

- **Business Resiliency**
  - What does Business Resiliency mean?
  - Why is it important to our customers?
- **zSeries Role in BR for the On Demand Operating Environment**
- **Why GDPS?**
  - Recent Enhancements
  - 2005 Directions and plans
  - GDPS Value Proposition
- **Customer Experiences**
- **Open Panel Discussion**

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Learning Objectives

- At the end of this training, you should be able to
  - Describe the benefits of the new GDPS offerings and new target audience
  - Identify the steps to drive an opportunity to closure
  - Explain how to overcome inhibitors from IBM organization
  - Position GDPS/PPRC HyperSwap Manager against the competitive solutions

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Suggested Definition for Business Resilience

Research Participants preferred a *shortened version* of *definition 3* with the addition of the word "risk." "*Adaptable*" and "*Continuous*" were considered important elements.

Suggested Definition:

Business Resilience is the ability to adapt and respond to risks, as well as opportunities, in order to maintain continuous business operations, be a more trusted partner, and enable growth.

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Customers want to know…
What Business Problem(s) does Business Resilience Solve?

1. **Continuity of Business Operations -** help our business become more anticipatory, adaptive, and robust, from IT to all business processes (takes orders, ship, manufacture, etc.).
2. **Regulatory Compliance -** help our business comply with new government rules and regulations more quickly and cost effectively.
3. **Reduce the cost of Risk Management -** help us stay competitive by managing risk more efficiently and cost effectively.
4. **Security, Privacy & Data Protection -** help me protect our business against threats both internal and external, and develop a critical information management strategy.
5. **Expertise and Skills (Outsourcing or Training) -** help us obtain and program manage the expertise and skills necessary to maintain continuous business operations.
6. **Maintaining Market Readiness -** help us stay competitive by anticipating and quickly responding/adapting to changes in market requirements, and accelerate R&D to ensure that we have the right products, at the right place, at the right time.
7. **Becoming a more attractive Partner -** help us partner more quickly and effectively within our industry by becoming a trusted and reliable business partner in my Supply Chain or Value-Net. (Not an IBM Business Partner)

Findings clustered into…a VERY diverse set of business problems.

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IT Message vs. Business Message

Resonates with IT Execs	Resonates with Business Execs
▪ Infrastructure Availability ▪ Responsive ▪ Highly Available ▪ Scalable	▪ Continuity of Business Operations ▪ Business Process Availability ▪ Trustworthy, Prepared, Flexible, Responsive
▪ Regulatory Compliance ▪ Training & Certification ▪ Consulting	▪ Regulatory Compliance ▪ Informed ▪ Adaptable ▪ Responsive
▪ Integrated Risk Management ▪ Disaster Recovery, High Availability, Business Continuity, and Insurance managed together.	▪ Integrated Risk Management ▪ Simplification, Mature Governance Model, Effectiveness, Efficiency & Potential Cost Savings
▪ Security, Privacy, and Data Protection ▪ Solutions ▪ Best Practices	▪ Security, Privacy, and Data Protection ▪ Trustworthiness
▪ Expertise and Resources ▪ Contract Management ▪ Skills Consulting and Training	▪ Expertise and Resources ▪ Capabilities ▪ Flexibility- lower fixed cost
▪ Market Readiness ▪ Business Intelligence ▪ Scalability ▪ Cost reduction	▪ Market Readiness--Staying Competitive ▪ Flexible, Informed, Responsive ▪ Market Share/ Margin Protection ▪ Accelerated R&D ▪ Able to seize opportunities

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Aspects of Availability

High Availability
Fault-tolerant, failure-resistant infrastructure supporting continuous application processing

Continuous Operations
Non-disruptive backups and system maintenance coupled with continuous availability of applications

Disaster Recovery
Protection against unplanned outages such as disasters through reliable, predictable recovery

Protection of critical Business data

Operations continue after a disaster

Recovery is predictable and reliable

Costs are predictable and manageable

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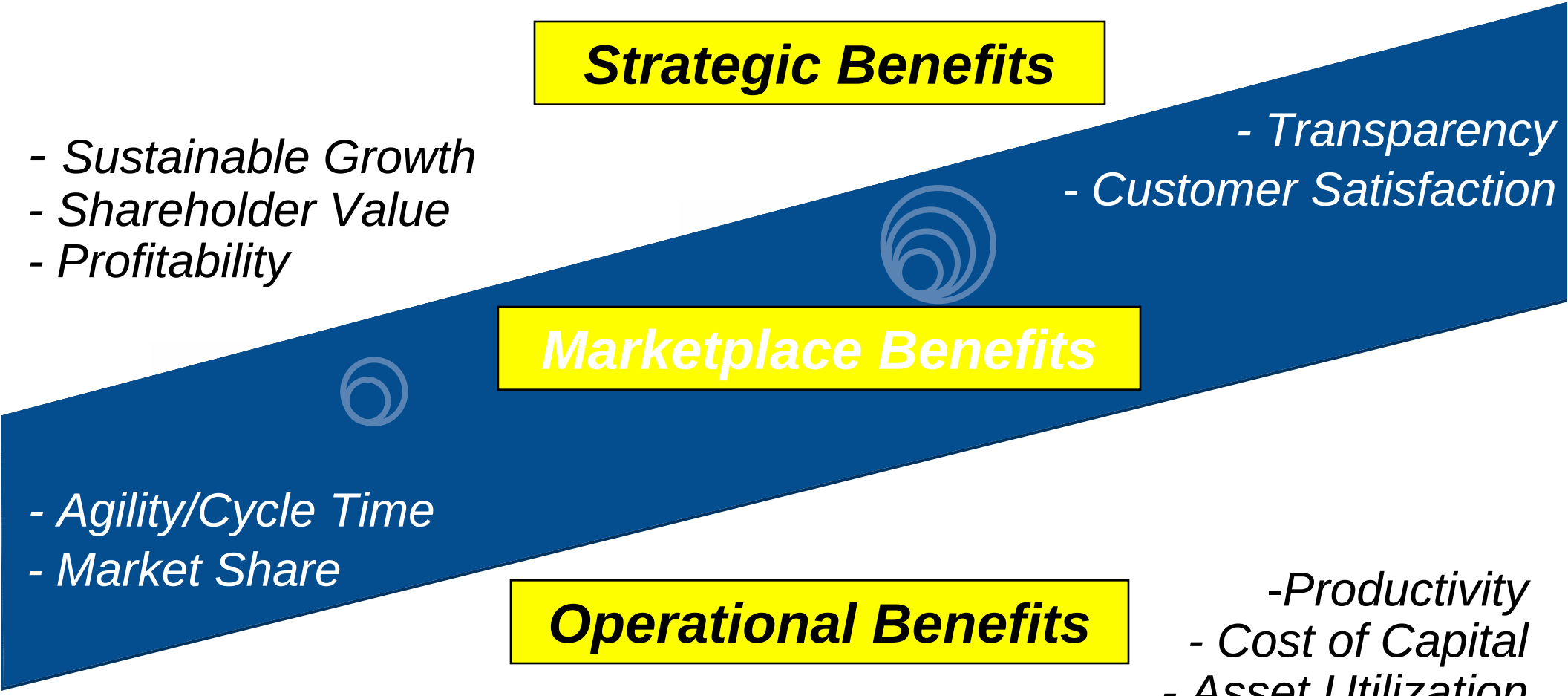
A Resilient Company is able to Increase Certainty, Lower Risk, Capture Business Opportunities, and Drive Growth



Strategic Benefits

- *Sustainable Growth*
- *Shareholder Value*
- *Profitability*

- *Transparency*
- *Customer Satisfaction*

Marketplace Benefits

- *Agility/Cycle Time*
- *Market Share*

Operational Benefits

- *Operational Effectiveness and Efficiency*
- *Differentiated Value Proposition*
- *Single Version of the Truth*

-*Productivity*
- *Cost of Capital*
- *Asset Utilization*
- *Business Continuity*
- *Customer Experience*
- *Sustained Compliance*

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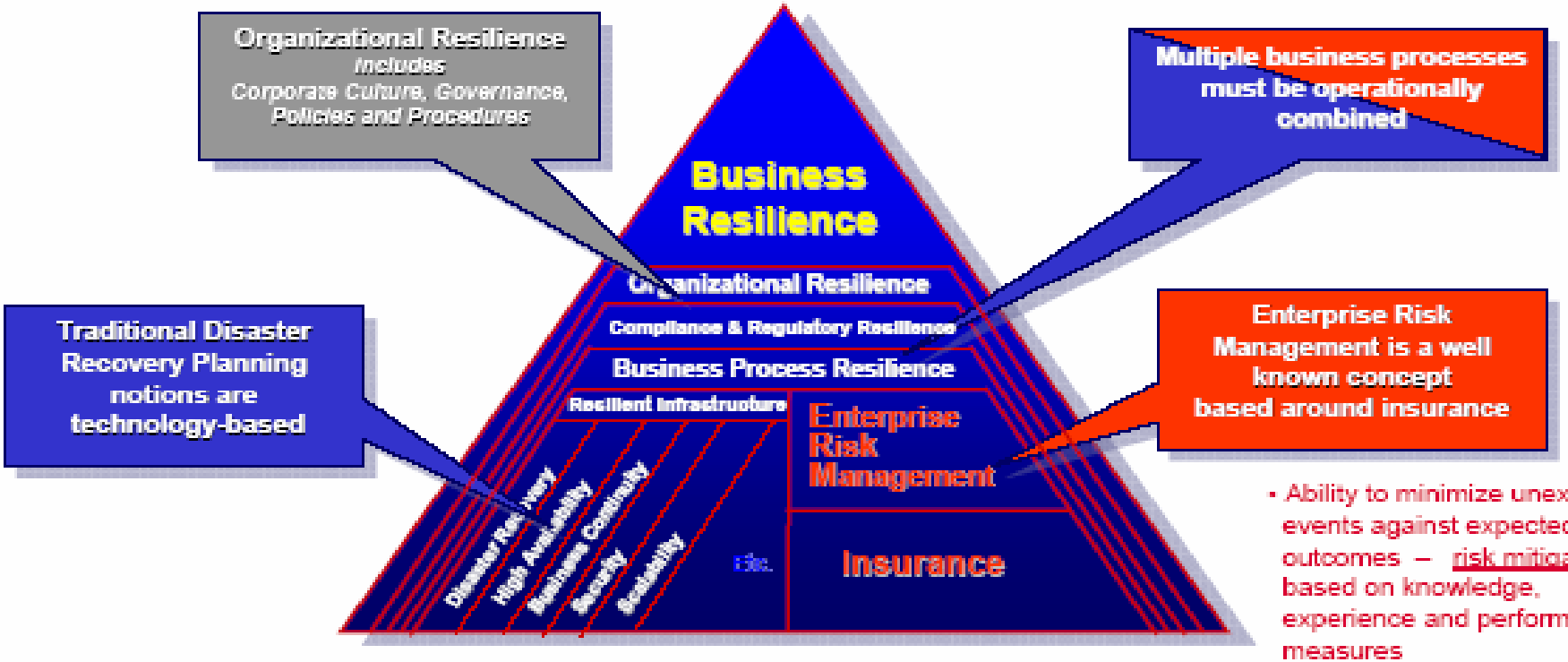
It's more than just availability, recovery, continuity, security or scalability… it's the holistic approach to risk management that provides optimal enterprise agility and protection.



- Ability to minimize unexpected events against expected outcomes – risk mitigation based on knowledge, experience and performance measures

- Ability to deliver core business functionality – availability
- Ability to adapt to planned and unplanned change, i.e., demand or disruption – scalability, agility and adaptability
- Ability to deliver a productive business solution with minimal errors – performance
- Ability to maintain customer satisfaction with services – systems management

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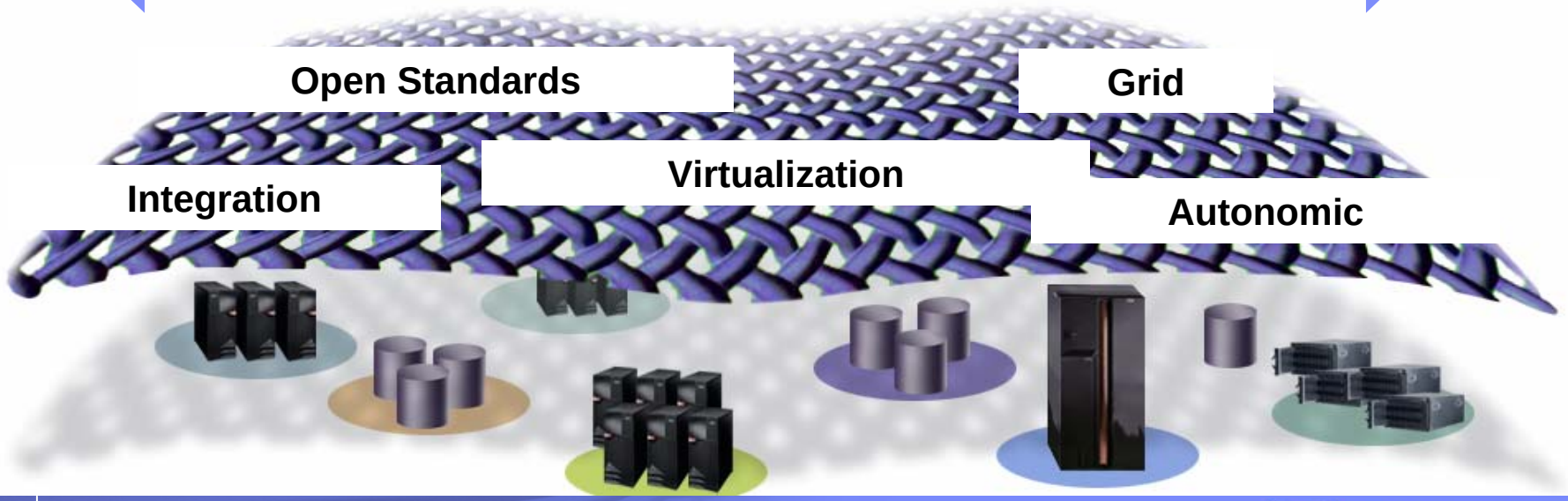
The On Demand Operating Environment

*Think of it as a **Global Fabric***

Where everything enterprise-wide becomes:

- Reusable, connected and integrated…
- Resilient and highly secure…
- Scaleable and responsive..
- Simplified and optimized…
- Virtualized and cheaper to run…
- Unified and flexible to support the business model

All Managed by Business Priorities



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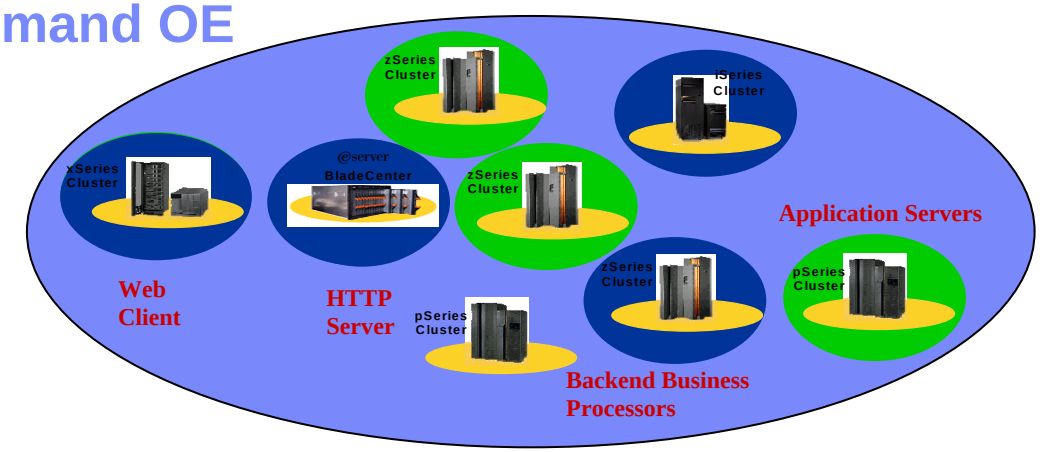
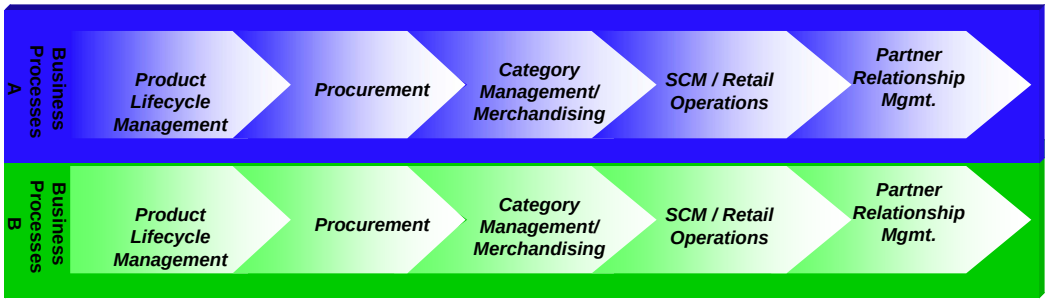
Islands of Computing Evolve to On Demand OE

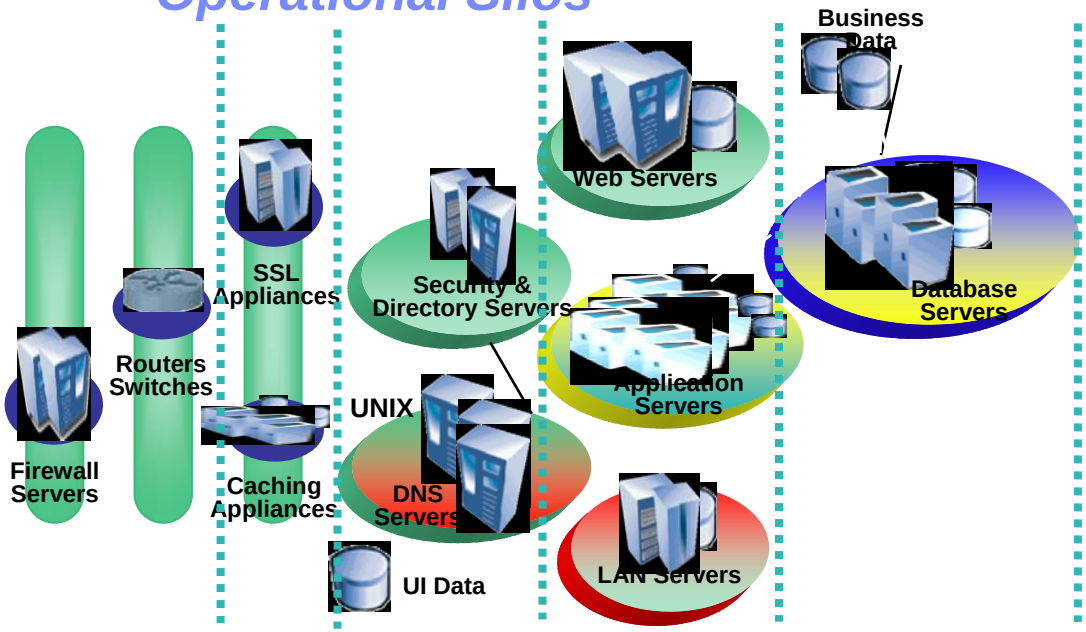
Before:

- **Managed by operational silos**
- **Multiple Disaster recovery plans**
- **No balancing of resources across enterprise**





Operational Silos



After:

- **Managed by business process**
- **Extend business resiliency throughout the enterprise**
- **Workload managed by priorities across the enterprise**

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Extending zSeries Business Resiliency Strengths

Creating a "Secure Vault[1]" for Heterogeneous Environments

Today's Capabilities

- Up to 99.999% availability[2] across all zSeries resources to avoid planned and unplanned outages
- Minimizes interruption through intelligent management of system resources based on business priorities
- Enables End-to-end integrity of zSeries data with capability to secure at granular user level

Initial Focus*

- **Enable asset and resource associations to be mapped by business function.**
- **Extend GDPS to heterogeneous environments and single site environments.**
- **Extend zSeries ability to provide seamless integration of Security through utilization of open technologies.**

Extension of on demand value*

- **Provide capability to monitor business functions and identify appropriate recovery actions.**
- **Extend zSeries resiliency into heterogeneous environments through utilization of common interfaces.**
- **Position zSeries to lead in managing heterogeneous assets and resources.**

Future Vision*

Become the "secure vault" across the enterprise.

- **Become the "world's most resilient enterprise" through zSeries autonomic management based on business policy support for heterogeneous assets and resources.**
- **Become the enterprise trust authority through integration of zSeries Security leadership with the ODOE.**

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Note 1: Secure Vault Represents the role and ability of zSeries to provide a highly resilient and security-rich enterprise-wide environment for enterprise data and transactions
Note 2: Based on Parallel Sysplex implementation

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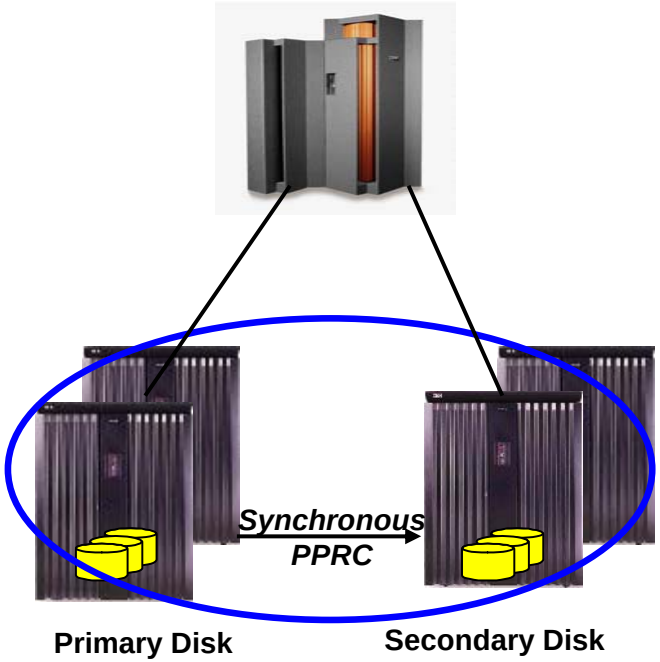
GDPS - The World Class Disaster Recovery and Near Continuous Availability Solution for z/Series Now Extended to Storage and Linux

GDPS/PPRC HyperSwap

- Designed to keep data available
- **Provides dynamic failover** to secondary storage devices
- Swaps large numbers of disks – **Fast!**

GDPS/PPRC HyperSwap
Estimated to eliminate over 90% of application outages due to storage subsystems failures



New – Lower cost offering provides near continuous access to data within a Sysplex

- ***GDPS/PPRC HyperSwap Manager***
- Proven component of GDPS/PPRC with a migration path to full GDPS/PPRC

Legendary z/OS availability extended to Linux

- ***GDPS/PPRC Multi Platform Resiliency for zSeries***
- Exploits GDPS/PPRC HyperSwap function to switch to secondary disks using z/VM

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zSeries Business Resiliency – 2005

GDPS - The World Class Disaster Recovery and near Continuous Availability solution for z/Series now extended to storage and Linux.

- And to now support new remote copy technologies

GDPS Global Mirror - 2 Sites

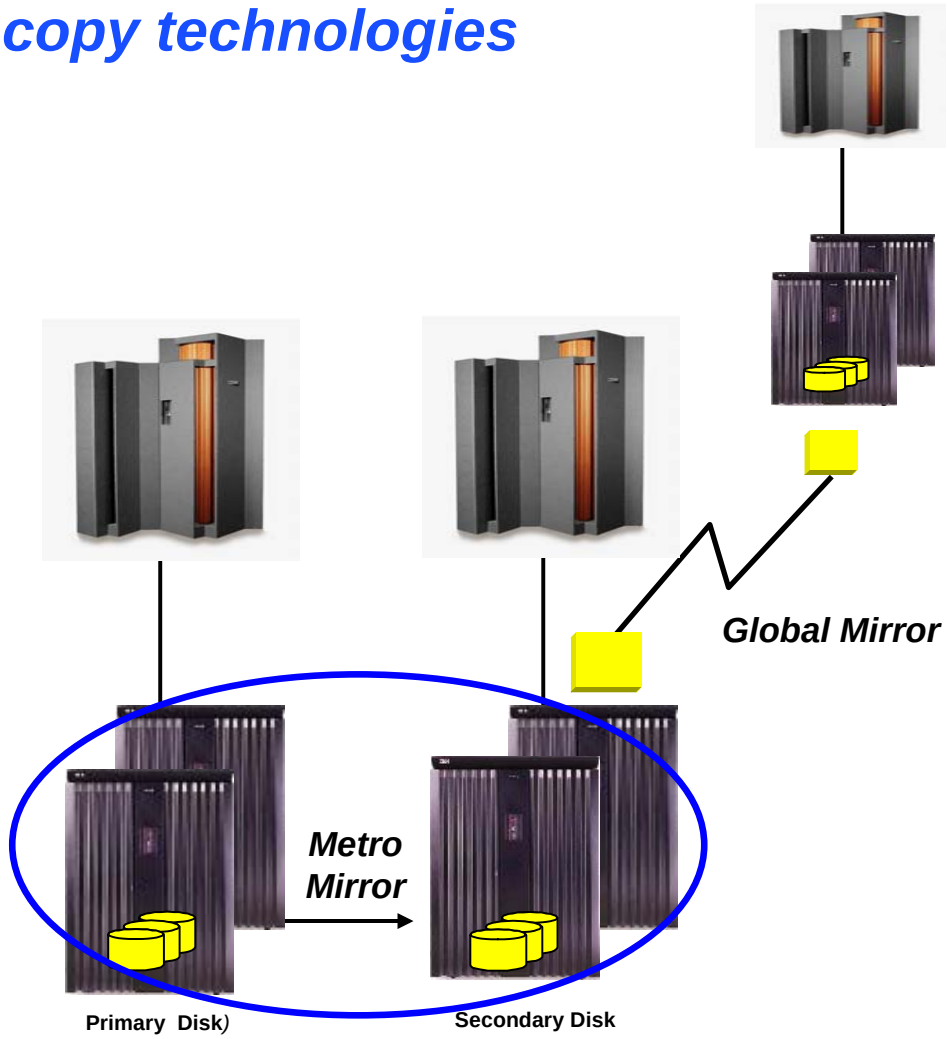
- Unlimited distance Disaster Recovery for zSeries data 2/2005
- Heterogeneous Open Systems data 2Q/2005

GDPS Metro/Global Mirror - 3 Sites

- Combines metro distance near continuous availability with regional disaster recovery
- zSeries and open systems data – 2H2005

Metropolitan Distance CA solution enhancements

- System managed CF structure Duplexing
- Faster application restart and predictable recovery times with no operator intervention required



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GDPS Solutions

Continuous Availability (CA) of Data

Solution	Target Customer	Value
GDPS/PPRC HyperSwap Manager **(1)**	Parallel Sysplex	CA of zSeries and Open Systems data

Metropolitan Distance CA/DR 2 sites

Solution	Target Customer	Value
RCMF/PPRC	Disk mirroring	PPRC management Ease of use
GDPS/PPRC HyperSwap Manager **(1)**	Entry Level Disaster Recovery / zSeries and Open data	Ease of use; disk & site failure protection; RPO<1 min. RTO = 4 to 6 hrs
GDPS/PPRC **(4)** Sysplex/PPRC across 2 sites - Single site or Multi site Workload	DR for zSeries and Open data - Continuous zSeries data availability	Unplanned/Planned reconfig RPO=0; RTO < 2hrs
GDPS/PPRC BRS configuration Sysplex in one site PPRC across sites	Disaster Recovery - zSeries and Open data	Unplanned/Planned reconfig RPO=0; RTO < 4 hrs

Unlimited Distance D/R 2 sites

Solution	Target Customer	Value
RCMF/XRC	Disk mirroring	XRC management Ease of use
GDPS/XRC	zSeries Disaster Recovery	Site failover RPO=< 2 min; RTO 1-2 hrs.
GDPS/Global Mirror **(2)**	zSeries + Open Disaster Recovery	Site failover RPO=minutes RTO <2 hrs

CA/DR 3-sites (Metro + Unlimited dist)

Solution	Target Customer	Value
GDPS/PPRC+ GDPS/XRC (zSeries data only)	Economically essential businesses, Ultimate in BR	Metro distance CA for zSeries data + Unlimited distance DR
GDPS Metro/Global cascading (zSeries+Open data) **(3)**	zSeries + Open Economically essential businesses, Ultimate in BR	Metro distance CA for zSeries data + Unlimited distance DR

(1) Not announced - Feb 2005 target

(2) Not announced - z/OS data Feb 2005 target
- z/OS & Open data 2Q05 target

(3) Not announced - 4Q05 target

(4) Multi Platform Resiliency for zSeries - GA Sep 2004

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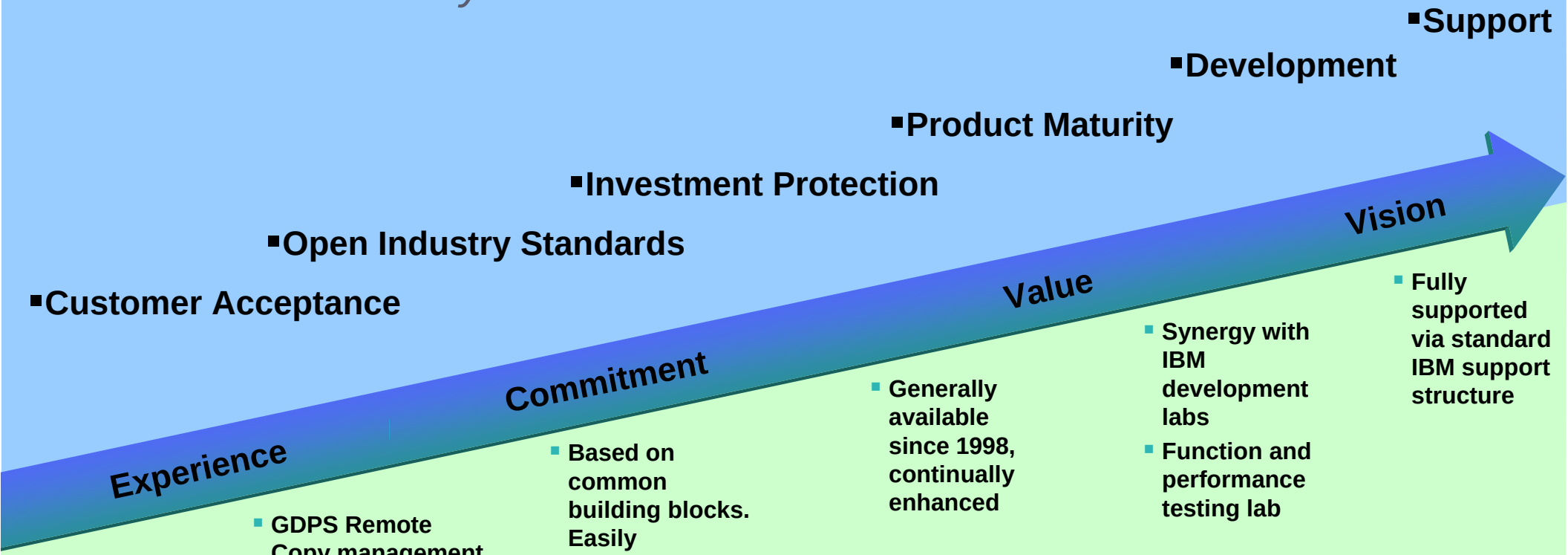
GDPS Value Proposition

The Ultimate Availability Solution



- 250 GDPS Licenses sold in 23 countries worldwide
- GDPS Remote Copy management based on IBM's PPRC and XRC architecture.
- Technology purchased by all major storage vendors
- Based on common building blocks. Easily upgradeable
- Generally available since 1998, continually enhanced
- Synergy with IBM development labs
- Function and performance testing lab
- Fully supported via standard IBM support structure

"Using the GDPS/PPRC hyperswap technology is a significant step forward in achieving continuous availability. The benefits in our GDPS environments are that a site switch by means of hyperswap (i.e., dynamic switching of the disk configuration) ***takes only a few minutes without application outage****. Without hyperswap we had to shutdown the GDPS/Sysplex, switch the disk configuration, and restart systems and applications. The elapsed time was almost two hours for our largest GDPS with 11 systems and over 11,000 PPRC volume pairs."*

Wolfgang Dungl, Manager of Availability, Capacity and Performance Management

Wolfgang Schott, GDPS Project Manager ***iT-AUSTRIA***

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Customer Experiences

- Real World examples from the field
- Open Discussion

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Qualification Questions

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Qualification Questions

- **Is Business Resilience and Disaster Recovery a current business focus?**
- **What level in the client organization is driving this? (Business or Technical)**
- **Is your BR/DR solution driven by business competition? Regulation/Litigation? Reputation and brand loyalty? Productivity?**
- **What does your Enterprise do for Business Resilience/DR today?**
  1. **Do you currently subscribe to a DR off-site solution?**
  2. **Do you currently have multiple data centers today?**
     - **If so, is there value in bringing DR in-house?**
     - **What is the distance between the two data centers?**
     - **Do you currently have network communications between the two data centers?**

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Qualification Questions

- **What is your current Recovery Time Objective (ie… how long can your business afford to be down?), if you do have a disaster?**
- **What is your Recovery Point Objective (ie… how much valuable data do you lose?) in you were to have a disaster today?**
- **On what platforms do your "mission critical' applications reside? (z platform? Linux? Open?)**
- **How much "mission critical" data would need to be recovered in the case of a disaster?**
- **What is your timeline for implementing a new/revised BR/DR strategy?**
- **Where does your Enterprise currently fall on the attached chart, Tiers of Disaster Recovery?**
- **Where does your Enterprise "need" to fall on the attached chart, Tiers of Disaster Recovery?**

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Qualification Questions

- **Who Are the key decision makers? Internal and External**
- **Describe the details your relationship with the decision makers?**
- **What is the decision making process**
- **Is the project fully funded?**
- **What impending event is driving this?**
- **Which recent external event/s are directly impacting your business?**
- **Are there any business events that will dramatically increase/decrease the size of your infrastructure (planned)**
- **How will you assess and prioritize your defined risk?**

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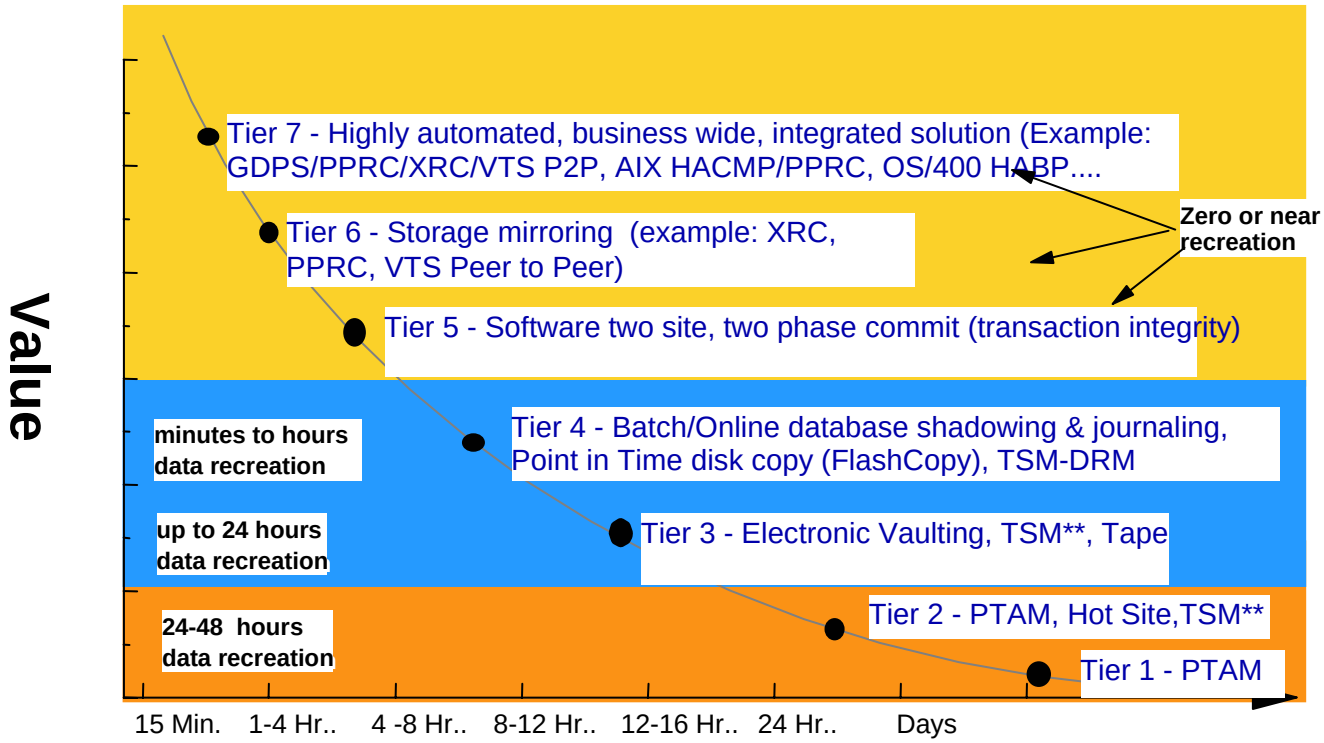
Tiers of Disaster Recovery

One size, one technology, or one methodology doesn't fit all applications.



Applications with Low tolerance to outage

Applications Somewhat Tolerant to outage

Applications very tolerant to outage

Recovery Time

Tiers based on SHARE definitions

*PTAM = Pickup Truck Access Method with Tape
**TSM = Tivoli Storage Manager
*** = Geographically Dispersed Parallel Sysplex

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Glossary and Reference Information

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Glossary of Terms

- **On Demand Business:** A company whose business processes—integrated end-to-end across the company and with key partners, suppliers and customers—can respond with flexibility and speed to any customer demand, market opportunity or external threat. An on demand business has four key attributes: it is responsive, variable, focused and resilient.
- **On Demand Operating Environment:** An integrated infrastructure, aligned to business goals and processes, that allows a company to resiliently and securely optimize its operations to meet the needs of an on demand business at any moment in time. The on demand operating environment has four essential characteristics: it is integrated, open, virtualized and autonomic.
- **Business Driven Development**: An integrated development platform that increases the effectiveness and efficiency of development teams. Creating a consistent integrated approach to the design, development and deployment of applications, creating a set of callable services, to increase productivity and efficiency of development teams and to accelerate implementation time of new business applications
- **Integration**: Creating an integrated IT environment that is aligned with the business processes connecting people, processes and information, using a reliable foundation, to flexibly and efficiently support changing business objectives.
- **Infrastructure Management**: Discipline of managing and optimizing operational processes and IT services based on business policies by automatically sensing and responding to changes.
- **Global Fabric:** An analogy describing the On Demand Operating Environment infrastructure and the open standards approach to effectively weave today's disparate IT resources together in a common way to enable optimized resource sharing, integration and end-to-end heterogeneous infrastructure management.
- **Secure Vault:** Represents the role and ability of zSeries to provide a highly resilient and security-rich enterprise-wide environment for enterprise data and transactions
- **Enterprise Trust Authority:** A server environment that provides end-to-end security discipline for a collection of heterogeneous resources that make up an enterprise infrastructure. For example, hosting data for a business in such a way that it can be physically secure, accessible only by applications and users with authorized access, is recoverable and resilient across failures, maintains data integrity and ensures that the data is accessible to applications on any other types of servers that may require direct access
- **Intelligent Business Director**: The heterogeneous assets and resources in an enterprise that zSeries can autonomically manage (allocate and realign) to meet business objectives. zSeries makes the container flexible in two ways: 1) It can be increased and/or decreased 2) assets and resources can be moved between business functions to meet the overall business objectives.
- **Ecosystem:** IBM and its extended relationships with IBM Business Partners (ISV's, SI's, BP, Resellers), Open Standard/Industry Groups and Academia. The ecosystem also defines and stresses the key inter-relationships within IBM (STG, BSC, ITS, SWG, Research etc,) to deliver end-to-end solution value.

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Business Continuity Services Offerings

- GDPS Technical Consulting Workshop (TCW)
  - **Designed to enable the GDPS Availability & Recovery solution to address the Client's business requirements as they relate to near continuous availability and recovery. The workshop will look at the site-to-site connectivity necessary to implement GDPS and identify the high level tasks that will be needed to implement.**
- Business Continuity Solution Workshop
  - **This program is designed to introduce the elements of IBM's products and services that form a Business Continuity Solution. Your time will be divided between interactive presentations tailored to your specific requirements and "hands on labs" that allow you to actually experience the capabilities of each element. Over the course of three days at our Washington System Center you will explore topics such as: Disk and Tape Copy Services, Network Options, Server Considerations, System Performance Planning, and Implementation Services.**
- BCRS Business Continuity Health Check
  - **The Health Check is an independent review that creates an action plan addressing continuity issues such as existing capabilities, costs, future technology, and resource requirements.**
- I/O Bandwidth Analysis
  - **IBM will use trace data collected from the customer environment to determine the requirements to configure and implement Remote Copy. IBM will create a written report of the I/O Sizing and Bandwidth Analysis of your existing environment. The report will include an analysis of your full mainframe DASD environment, as well as an analysis of a subset of that environment representing the minimum DASD required to support Remote Copy.**

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Additional Information

- Detailed GDPS Presentation and Information e-mail:
  - gdps@us.ibm.com
- Web Pages References
  - zSeries Business Resiliency Home Page
  - Marketing BuzZ: Business Resiliency -- August 2004
  - GDPS Home Page
  - Installation Services for GDPS
  - Business Continuity and Recovery Services
  - ITS Global Brand Services – GDPS (Internal)
  - ITS GDPS Home (Internal)
  - Customer Reference data base
  - TotalStorage Business Continuance Sales Kit
- White Papers:
  - IBM eServer zSeries: Premier Business Resiliency for the On Demand World
  - *Business Continuity Considerations and the IBM eServer zSeries*
  - *GDPS - The Ultimate e-business Availability Solution*
- Publications:
  - *GDPS 3.2 An Introduction to Concepts - SG24-6374 (Available 02/2505)*
  - *TotalStorage Disaster Recovery Solutions Redbook* – SG24-6547-01
  - *z/OS Advanced Copy Services* – SC35-0428
  - ESS Copy Services on zSeries Redpiece - SG24-5680
  - ESS Copy Services on Open Redpiece – SG24-5757
- Web Lectures:
  - zSeries Innovation - Business Resiliency * BP Access: http://www.ibmweblectureservices.ihost.com/pwu
  - SGU ZS32: Successfully Selling Business Continuity Solutions

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Contacts -

- **GDPS questions and information**
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- **AG Business Continuity Focal Points (Cathy Doran/Cranford/IBM for NA)**
  - East Region - Brian Fallon/New York/IBM, Ian R Wright/New York/IBM
  - West Region - Randy Lem/Oakland/IBM, David Grall/Sacramento/IBM
  - Central Region - Dennis P Roach/St Louis/IBM
- **EMEA**
  - Keith Rankin/UK/IBM, David Uttley/UK/IBM
- **AP**
  - Richard J Pape/Singapore/IBM, Richard E Fuller/Poughkeepsie/Contr/IBM
- **Technical Sales Support:**
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- **ITS GDPS Services:**
  - Brian Teichman/Dallas/IBM – USA Financial
  - George Westerman/Southfield/IBM – USA Distribution
  - Robert Pitcole/Southfield/IBM – USA All Other Sectors
  - Joe Murphy/Markham/IBM@IBMCA - Canada
  - Rudi Rauch/Germany/IBM@IBMDE - EMEA
  - Sumiko Fukaya/Japan/IBM@IBMJP - AP
- **WW Marketing Manager: Travis Smith/Cary/IBM**
- **Opportunity Coding: Solution code of DR**

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NOTES:

Performance is in Internal Throughput Rate (ITR) ratio based on measurements and projections using standard IBM benchmarks in a controlled environment. The actual throughput that any user will experience will vary depending upon considerations such as the amount of multiprogramming in the user's job stream, the I/O configuration, the storage configuration, and the workload processed. Therefore, no assurance can be given that an individual user will achieve throughput improvements equivalent to the performance ratios stated here.

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