

# Unum's Mainframe Transformation Program

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# Unum

Unum is a Fortune 500 company and one of the world's leading employee benefits providers to more than 170,000 businesses in the United States and the United Kingdom.

As a leader in financial protection benefits, Unum provides disability, life, accident and critical illness insurance, helping protect the livelihood of millions of working people and their families in the event of illness, injury or loss of life.



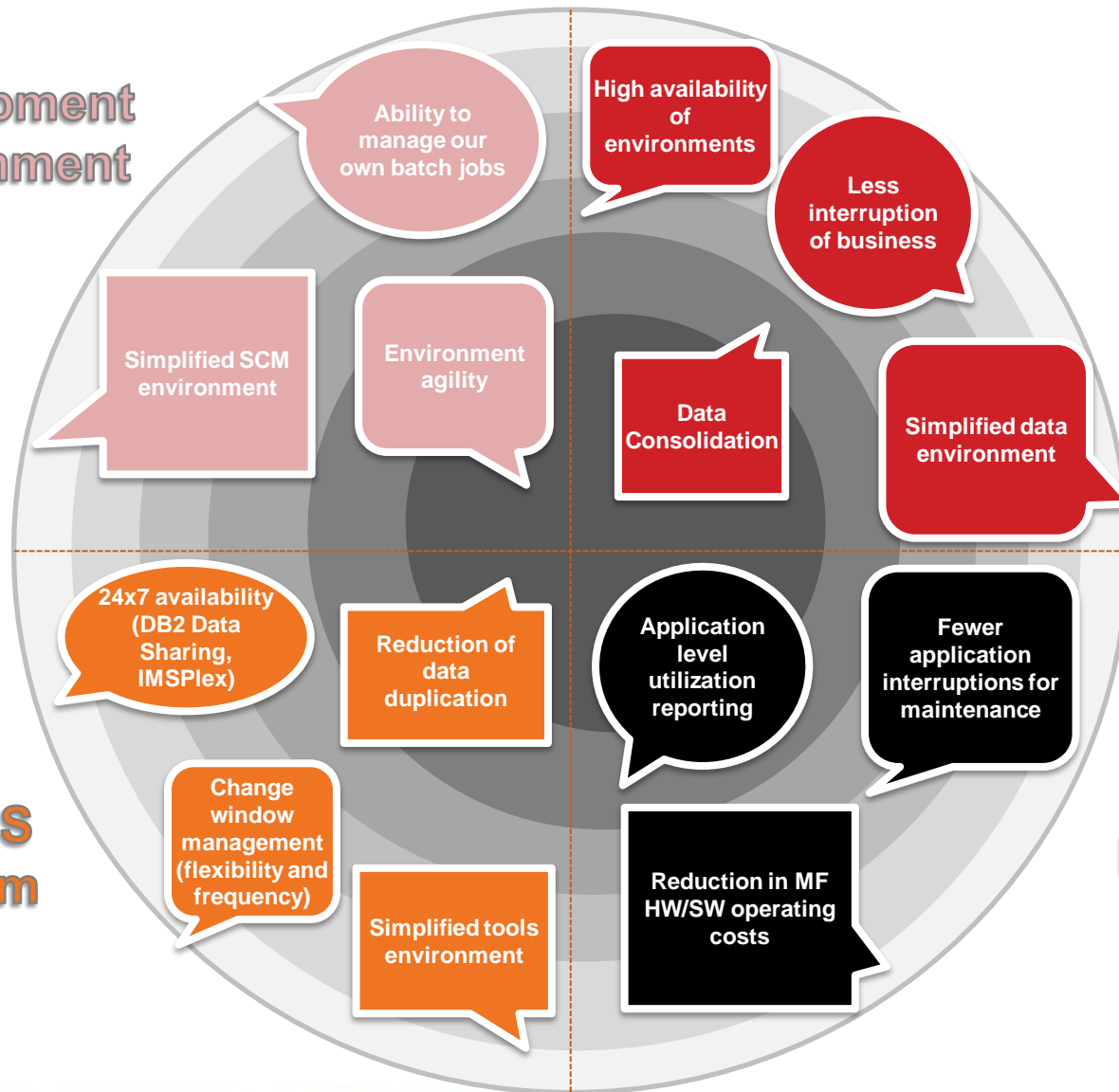
# Unum's Mainframe IT Infrastructure

- Supports U.S. and U.K. Business Units
- 4 Servers – 3512 MIPS, not including DR
  - Z10 EC 2097-406
  - Z10 EC 2097-504
  - Z114 BC 2818-P04
  - Z/EC12 2097-501 (Recovery MF)
- 2 Datacenters
- z/OS 1.13
- DB2 V9 & V10 (21 DB2 Subsystems)
- CICS 4.2 (45 CICS Regions)

# Word on the Streets of Global Mainframe

Development  
Environment

Business  
Partners



**zMIS  
Team**

**Management**

# Global Mainframe Growth – Best Kept Secret



27% growth in year-to-year Mainframe MIPS sales, 7% Revenue Growth

- \$3B invested annually in the technology
  - $\frac{3}{4}$ + of the top 100 enterprises have installed IFLs
  - 195+ New Accounts new customers to System z.
  - 1000+ schools in 67 countries are part of the IBM Academic Initiative for System z
- 
- Since this is a secret and not communicated in International Business Time, The Wall Street Journal, Financial Times, etc., we need to work hard at learning what our business partners needs are and communicate how System z will provide the business solutions they are looking for

# Building Support

- Ask your local IBM Account team to engage IBM Sr. Executives to meet with leadership at your company
- Attend an IBM Design Center Workshop
- Invite executives to your staff or off-site planning meeting:
  - Ask them to provide an update on the business priorities as well as their challenges
  - Give them an overview of your strategy and directions
  - Hire non-mainframe staff, yes distributed, to join your teams with business analyst, data warehouse and applications skills
- Build your strategy and communicate it based on the business needs – not technology
  - Your communication will change, we did and even learned a new ways to communicate, e.g., DB2 Data Sharing

# Tailor Your Communication

Communication Before	Communication After
Eliminate Planned and Unplanned Outages	Provide a High Available Environment for Mainframe Applications
Batch Window	Batch and On-Lines Co-Exist
Parallel SYSPLEX	Clustered Mainframe Virtual Servers
DB2 Data Sharing	Clustered DB2 Subsystems

# Why The Mainframe Transformation Program

- Current State
  - Unexploited mainframe environment
    - Environment complexity resulting from acquisitions and mergers
    - Three disparate companies – 3 DFHSMS, DFHRMM, 3 OLTP environment (CICS, IMS and IDMS), etc.
    - Time to market pressures; aggressive business delivery schedules
    - Outsourced management and resources
- Forward Driving Factors
  - Enterprise Data Center (EDC)
  - IBM Design Center Engagement
  - Mainframe Collapse – Migrated from 5 mainframes to 3
  - Consultant Technical Readiness Assessment for Unum
  - zMIS In-sourcing



Mainframe Transformation Program



# Communicating Your Vision - zMIS Trek



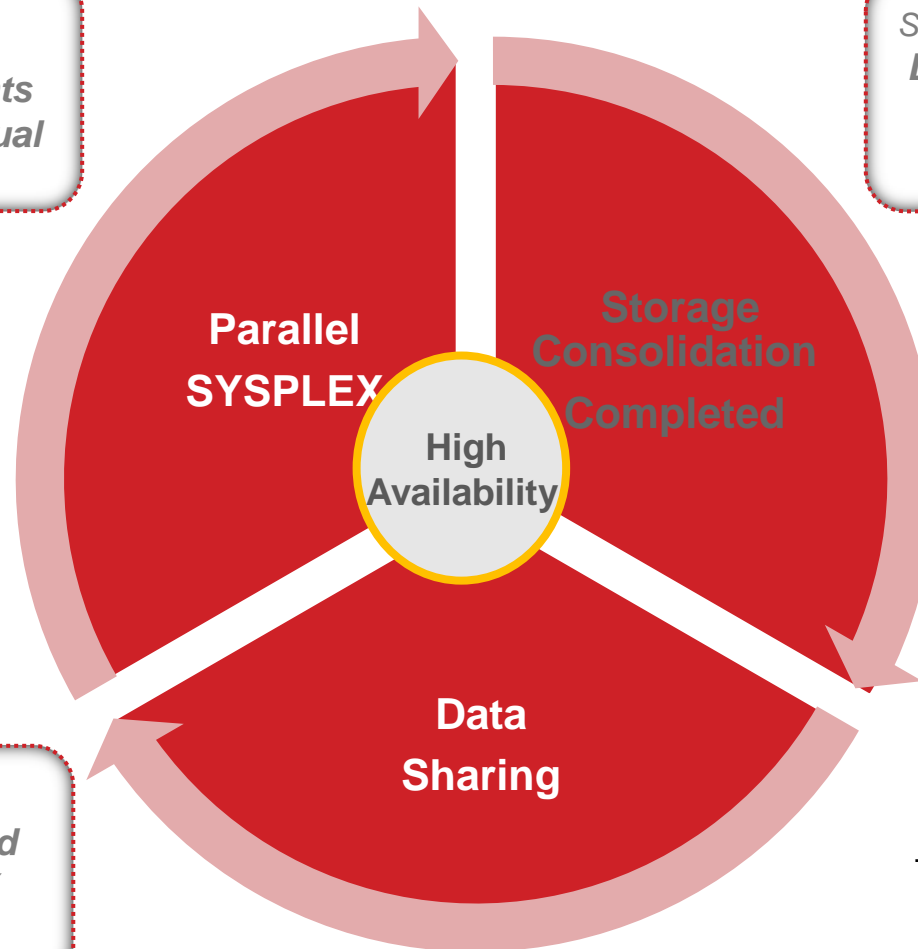
ZMIS Trailer - [Shortcut.Ink](#)

# zMIS Strategy - MTP

*Exploit Capacity:*

*Multiple physical mainframe environments execute as a single virtual environment.*

*Simplify Storage Management:  
Data files shared across a single virtual storage environment.*



*High Availability to Data:  
Data availability managed by the Parallel SYSPLEX environment.*



...and no application changes!\*

\*To date, no application changes have been identified and we strive to keep this goal. As project details are developed, changes may be identified.

Complete your sessions evaluation online at [SHARE.org/BostonEval](https://www.share.org/BostonEval)

# Program Details – zMIS Operational Direction



- The **Mainframe Transformation Program** is a collection of mainframe projects which will deliver on a common high level set of goals/objectives.
  - Business drivers will result in a cutting edge mainframe environment with fully leveraged assets.

## Parallel SYSPLEX Exploitation

SYSPLEX Distributor  
(SD)

SYSOUT classes  
standardized

JOB classes  
standardized

VSAM RLS  
Implemented

## Storage Consolidation

Share all data within the  
Parallel SYSPLEX /  
RMMPLEX / HSMPLEX

## Database Data Sharing

DB2 Data Sharing

IMSPLEX Data Sharing

CICSPLEX Data Sharing

WMQ Queue Sharing

# Program Framework

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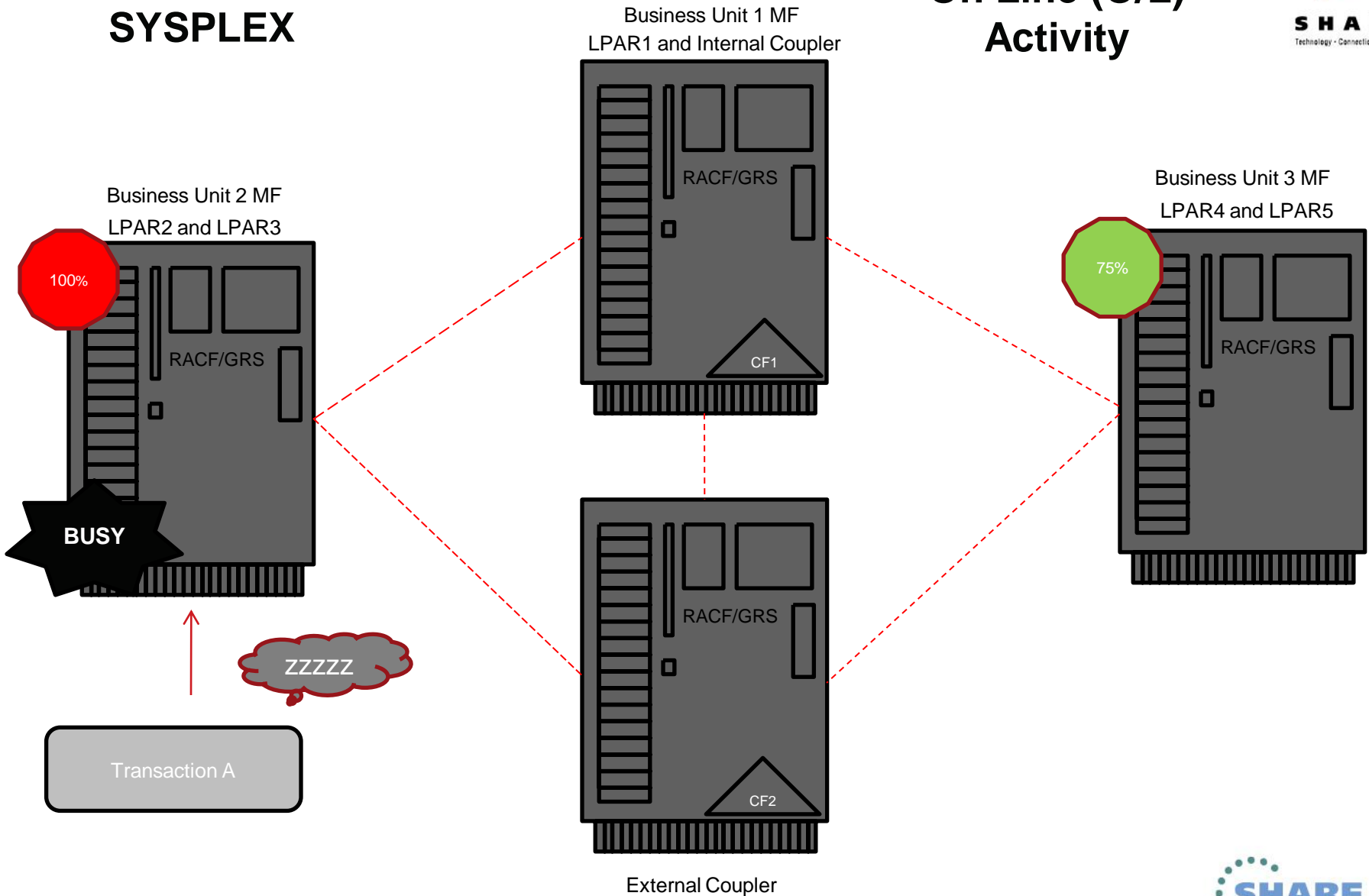
VSAM RLS  
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# What is parallel SYSLEX

- Parallel SYSPLEX harnesses the power of multiple mainframe systems to behave like a single, logical computing facility. This complex remains virtually transparent to users, networks, applications and operations
- Processes occurring in the complex will read and write data in parallel across multiple mainframe systems while maintaining full data integrity
- Shared memory is used by the coupling facilities (CF) across multiple systems

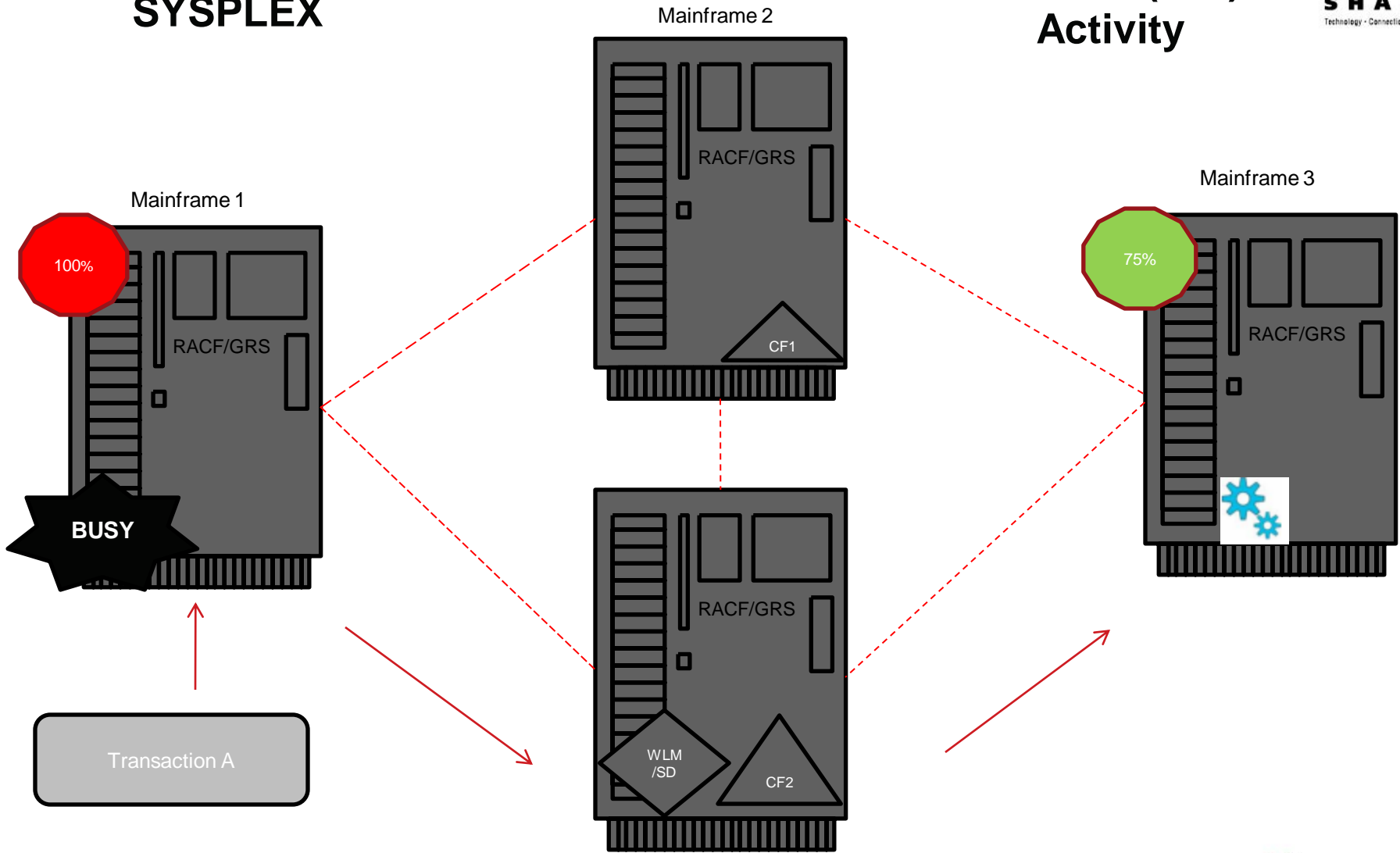
# Current Parallel SYSPLEX

# On Line (O/L) Activity

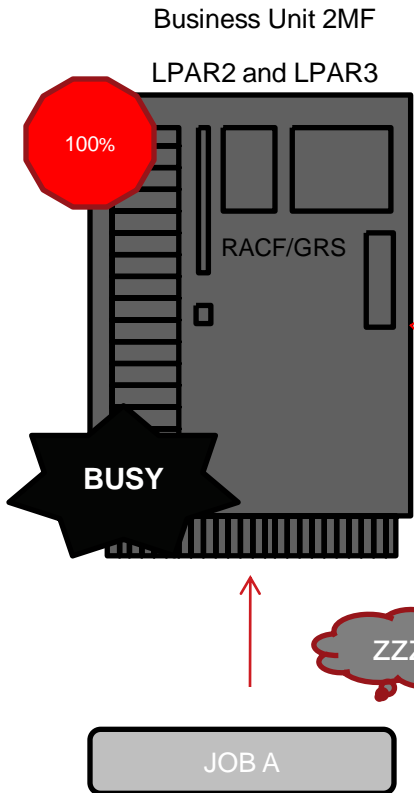


# Future Parallel SYSPLEX

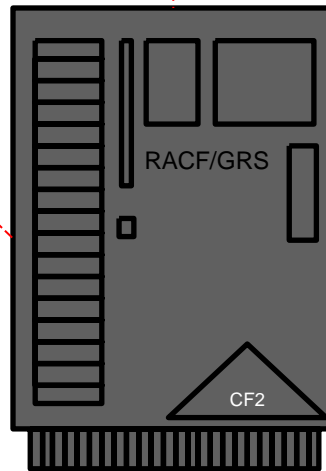
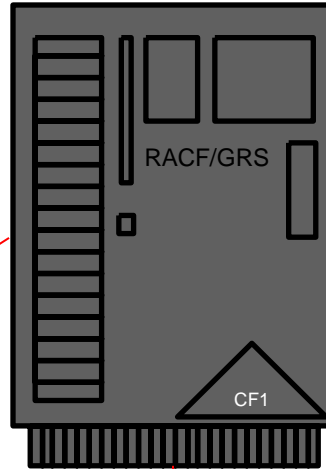
# On Line (O/L) Activity



# Current Parallel SYSPLEX

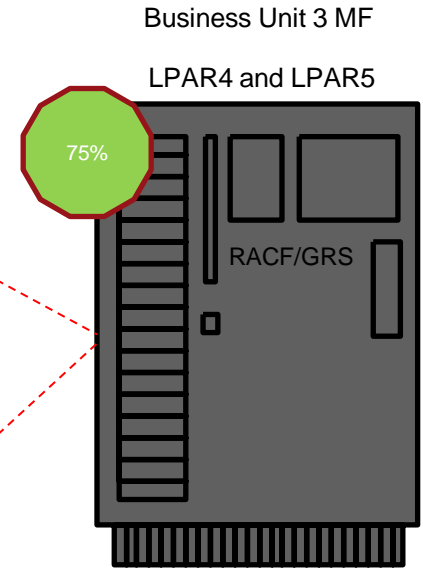


Business Unit 1 MF  
LPAR1 and Internal Coupler



External Coupler

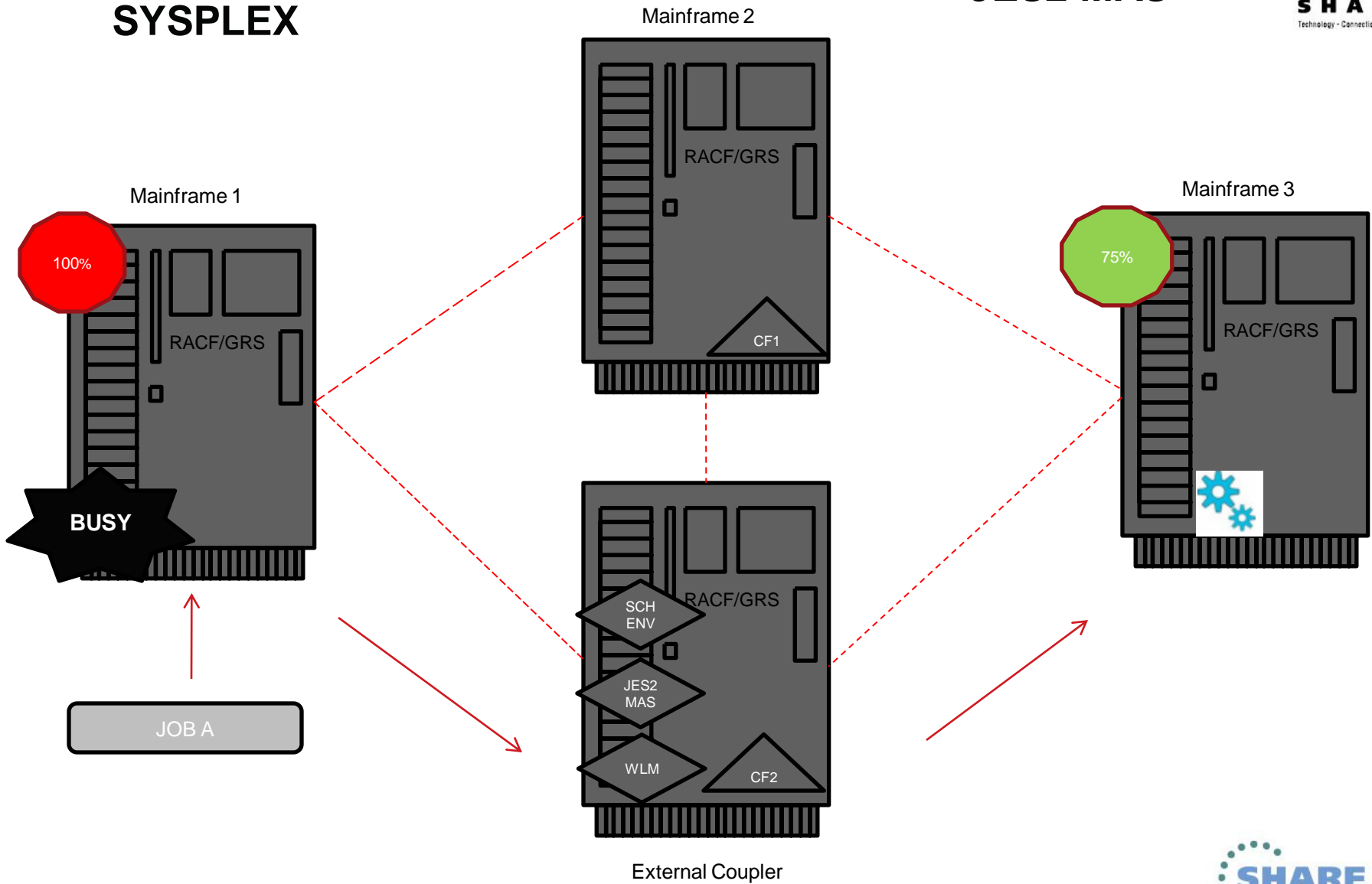
# JES2 MAS





# Future Parallel SYSPLEX

# JES2 MAS



# Parallel SYSPLEX Benefits

- ▶ Batch and On-Line Processing Co-Exist (Unum specific added project scope)
- ▶ No single points of failure (SPOF)
- ▶ Continuous availability for planned/unplanned outages
- ▶ Combine multiple hardware generations into a single processing facility
- ▶ Dynamic workload balancing across SYSPLEX
- ▶ Transparently routing work to another LPAR

# Program Framework

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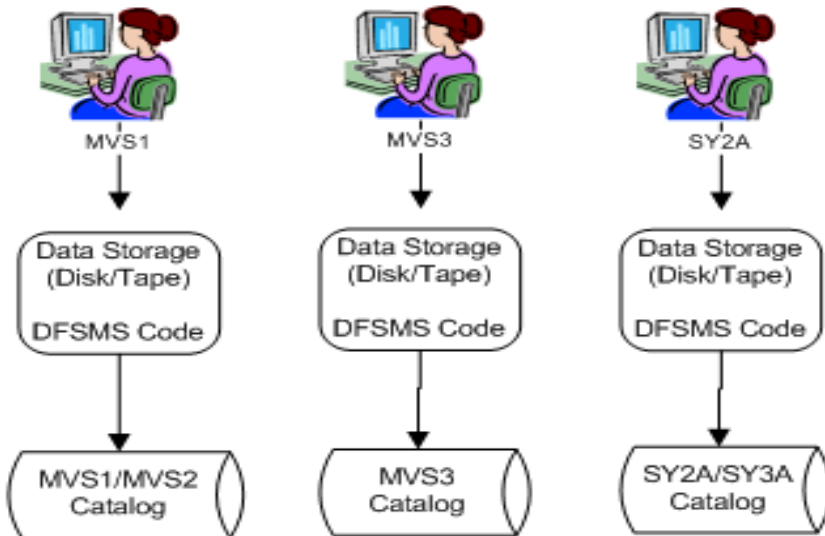
## Storage Consolidation

Share all data within the  
Parallel SYSPLEX /  
RMMPLEX / HSMPLEX

# What is Storage Consolidation: Shared Data

- ▶ A storage environment where data files are shared across the complex and can be accessed from any LPAR regardless of the physical location. For example, a data set that was created on LPAR1 is available from LPAR2.

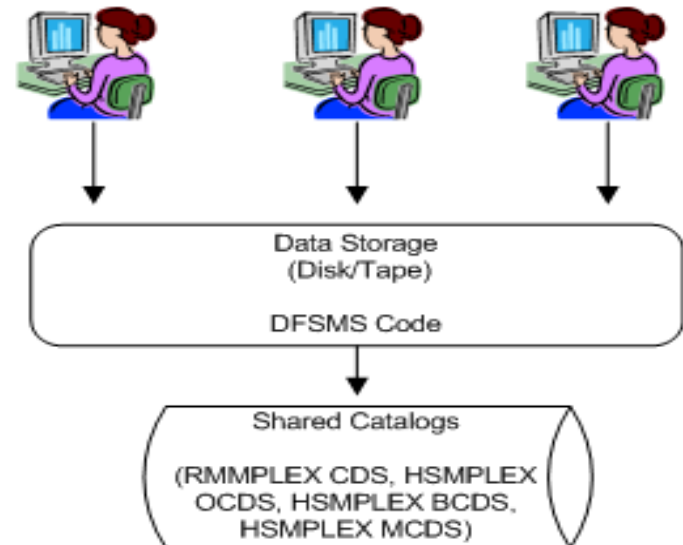
## Today



Partitioned ATL/VTS

ATL/VTS

## Storage Consolidation



ATL/VTS  
Shared Across All Environments

# Storage Consolidation: Shared Data Business Benefits



- ▶ The final state is:
  - Make data more accessible to the business
  - Allow the consolidating of some software products, e.g., SAS
  - Simplify the complexity of the support structure
  - Reduce the need for additional staff as growth occurs
  - Increase the ease of scalability, availability and flexibility to support business growth

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## Database Data Sharing

DB2 Data Sharing

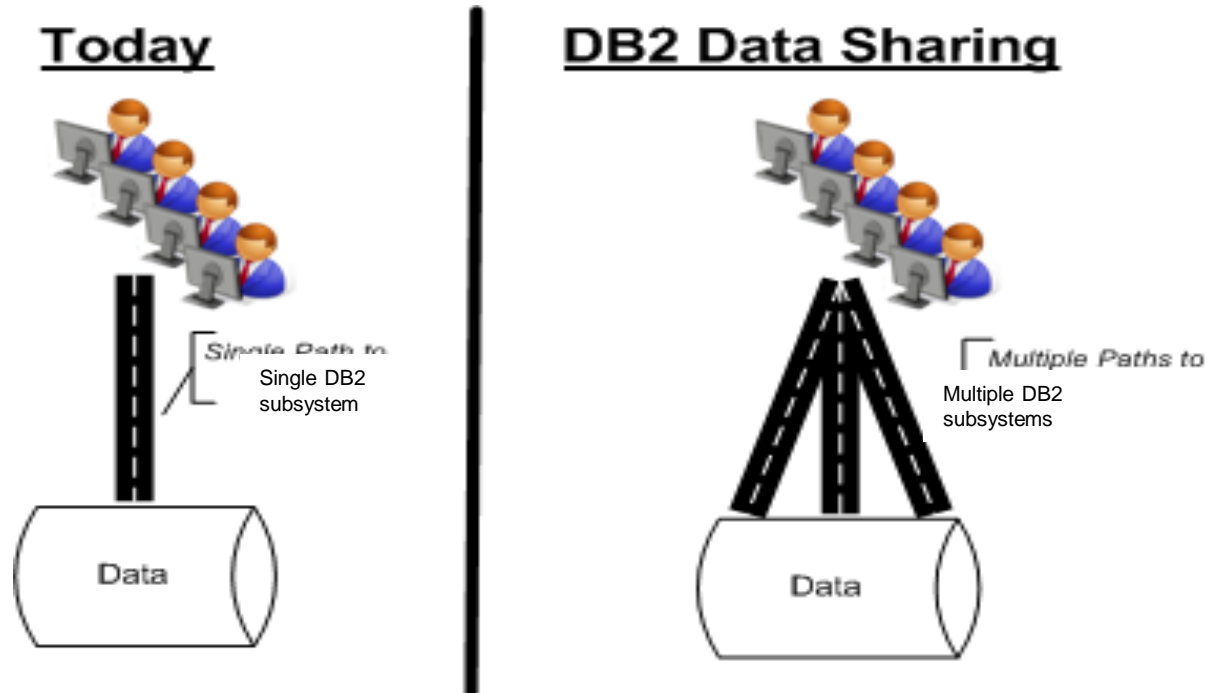
IMSPLEX Data Sharing

CICSPLEX Data Sharing

WMQ Queue Sharing

# What is DB2 Data Sharing?

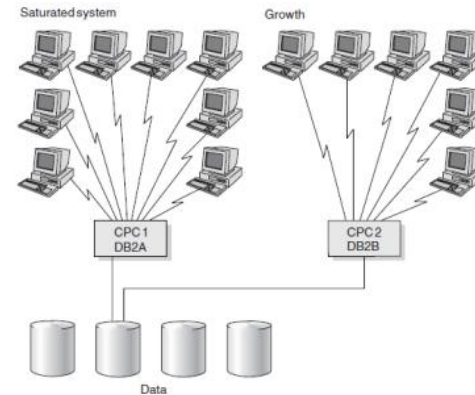
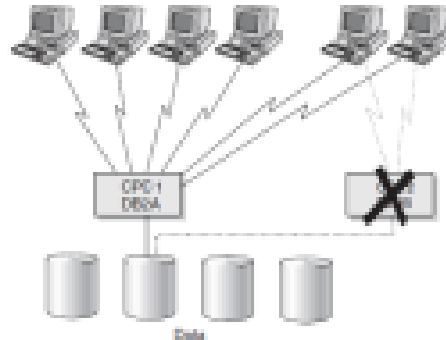
DB2 Data Sharing provides multiple DB2 subsystems to the same data environment with the SYSPLEX selecting the optimal path.



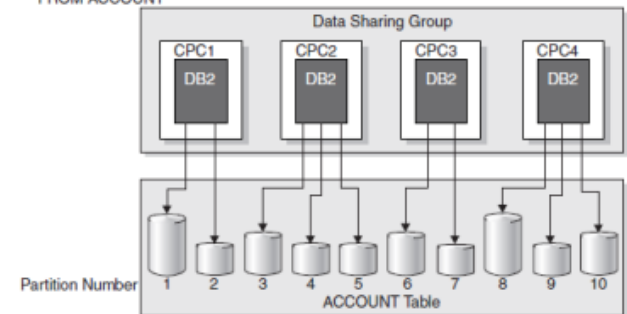
\*Note: The name “Data Sharing” is misleading as it will not provide shared data across current DB2 data environments.

# DB2 Data Sharing Benefits

- **Availability**
- **Capacity & Growth**
- **Workload balancing**
- **Application protection**
  - **Application interfaces require no changes**



SELECT \*  
FROM ACCOUNT





# Database Data Sharing Components

## ▶ IMSPLEX Data Sharing

- The sharing of IMS databases between multiple IMS subsystems.
- Similar implementation strategy as DB2 Data Sharing.

## ▶ CICSPLEX

- A group of CICS regions managed as a single entity.
- An unlimited number of CICS systems and groups can be assigned to a CICSPLEX.
- The multiple instances can span across partitions and mainframe hardware.

## ▶ WMQ Queue Sharing

- A collection of queue managers that share a common namespace.
- Use of dual queuing repositories provides high availability.

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# Unum - Application Impact Assessment

Majority of program projects are LOW IMPACT to the associated application environments.

Not Applicable	Low Impact	Medium Impact	High Impact
SYSPLEX Distributor (SD)	Share all data within the parallel SYSPLEX  JOB Classes  VSAM RLS  DB2 Data Sharing  IMSPLEX  CICSPLEX  WMQ Queue Sharing	SYSOUT Classes	

*\*\*\*Low Application Impact: majority of required changes can be handled via MASS change functionality.*