



Take Control of your Information Assets

Leverage z/OS information for critical business initiatives



TAKE BACK CONTROL

Agenda

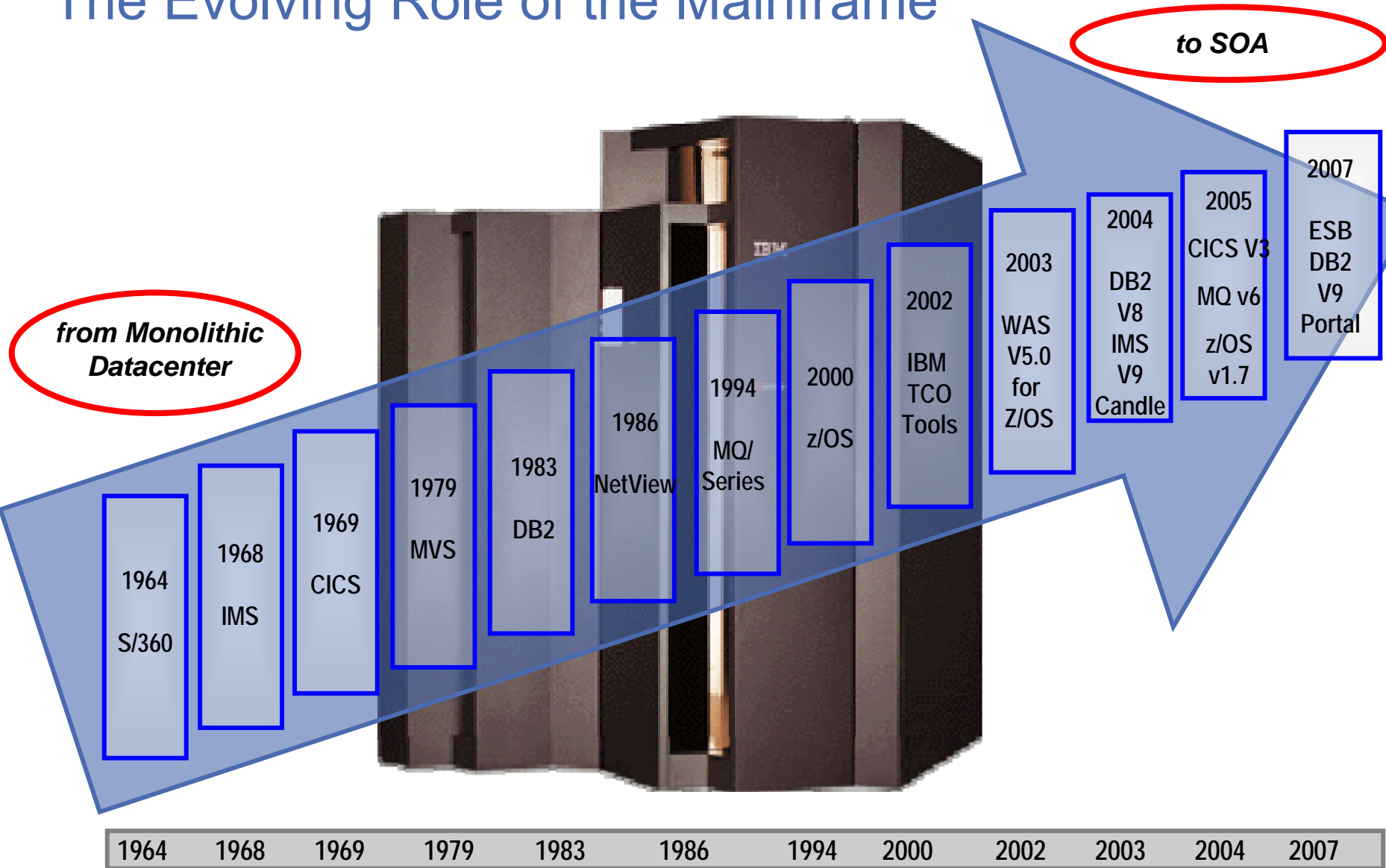
- The Evolving role of the mainframe
 - Where is the mainframe today?
 - Where is it going?

- Major Industry Initiatives and their importance for z/OS
 - How are customers leveraging their z/OS Information Assets?
 - Data Quality
 - Data Governance
 - Decision support & data warehousing
 - Service Oriented Architecture

- Conclusions



The Evolving Role of the Mainframe



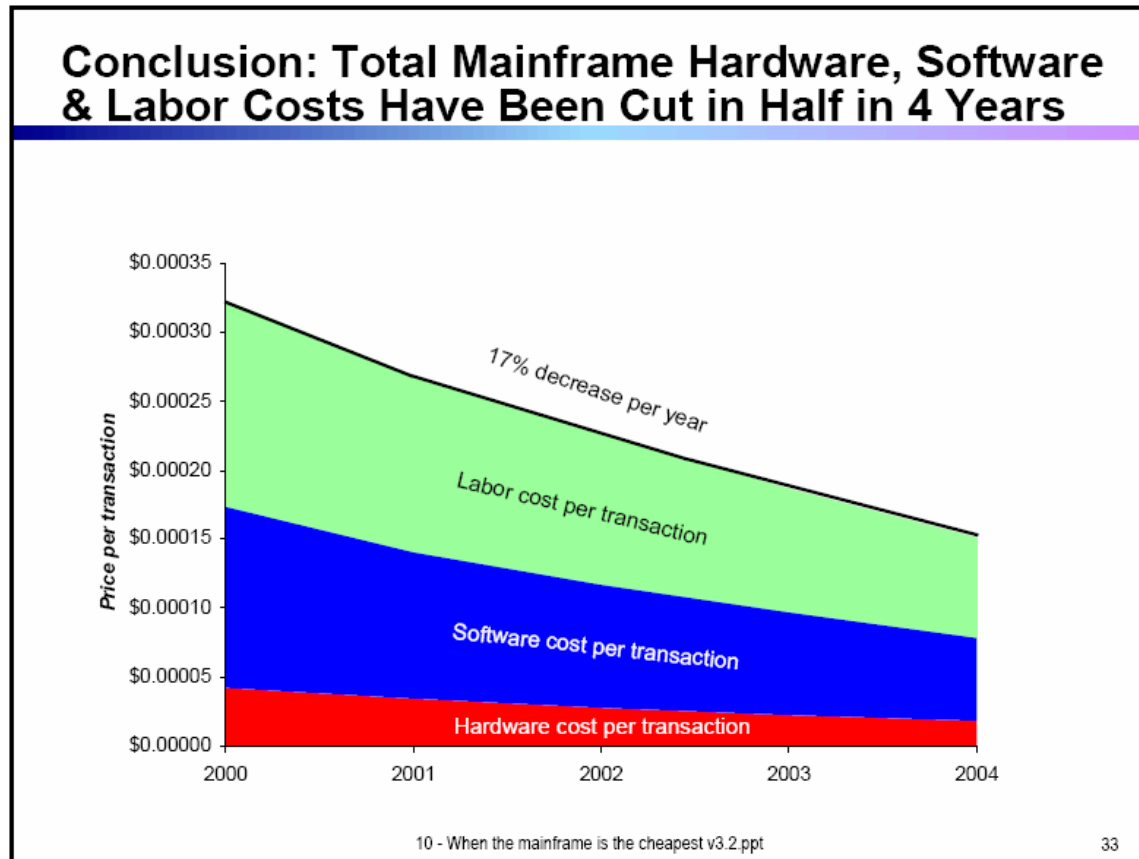
What is driving the Mainframe Evolution

- Decreasing cost of mainframe processing
- Maximize workforce experience
- New specialty engines
- New technologies
- The world's largest data store



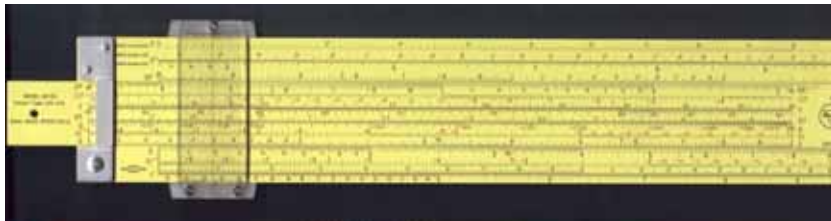
Driving the Mainframe Evolution

- Decreasing cost of mainframe processing



Driving the Mainframe Evolution

- Decreasing cost of mainframe processing
- Maximize workforce experience



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alloc f(finance) da('qrb.tlo50.prod.data') new using (finspec)



Driving the Mainframe Evolution

- Decreasing cost of mainframe processing
- Maximize workforce experience
- **New specialty engines**
 - Linux for zOS, zIIP, zAAP



Driving the Mainframe Evolution

- Decreasing cost of mainframe processing
- Maximize workforce experience
- New specialty engines
- New technologies
- **The world's largest data store**
 - Today the mainframe is still home to 60 – 80% of all corporate data!



Corporate View of Information Architecture Changing

- Information is the key to Business Innovation
 - Organizations highly effective at driving information integration are five times more likely to drive value creation
 - Information architecture can't exist in a vacuum – it needs to be tied to enterprise architecture



*87% of CEOs believe fundamental **change** is required in next two years to drive innovation*

Over 60% of CEOs believe their organizations need to do a better job leveraging information

Source: 2006 IBM Global CEO Survey



Customer Business Issues



- **Too much information and not knowing what's important**
 - Not using demand signals to drive supply chain
 - Not using customer analysis to tailor marketing and sales
 - Not leveraging valuable unstructured information



- **Multiple versions of the truth**
 - Problems managing customer, product and partner interactions
 - Regulatory compliance inhibited by poor transparency



- **Lack of trusted information**
 - Incomplete, out-of-date, inaccurate, misinterpreted data
 - Difficult to understand or control how information is used



- **Lack of agility**
 - Inability to take advantage of opportunities for innovation
 - Escalating costs due to inflexible systems and changing needs



Data Quality and Mainframe Data Assets



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Importance of Data Quality

- Low data quality impacts an organization in several ways
 - It might lead to misguided marketing promotions
 - Missing cross sell opportunities because same customer appears several times in slightly different ways
 - Makes data mining very difficult because related items can't be detected as related
 - ...
- What is good data quality?
 - Two percent of “bad” data doesn't sound that bad?
 - Two percent of 10M rows means that you have 200K errors
 - → 200K errors add up to big problem for analytics!



Data Quality and Mainframe Data

order_amount numeric 143☺!--24 **Good or Bad ?**

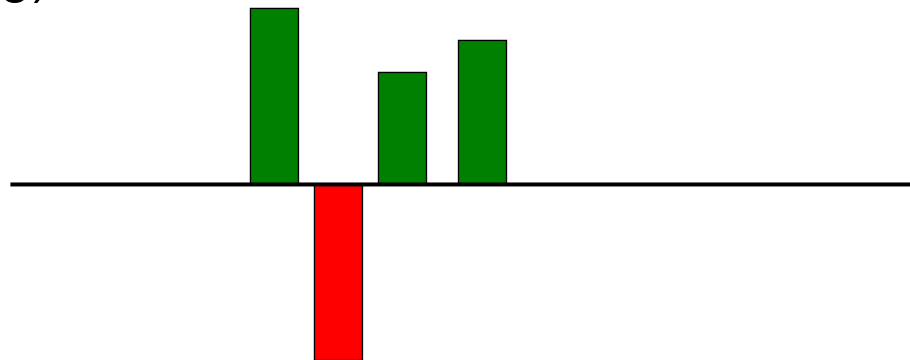
order_amount numeric 143.7124 **Good or Bad ?**
14371.24

Cardinality: “Report shows **53** distinct STATE_CODES.” **Good or Bad ?**



Quality of Information

- Do you trust the data that you are delivering (or receiving)?



- Does everyone agree on the model? What is a “customer?”

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Example of Data Quality at DHL



Challenge

Multiple mergers and acquisitions is preventing DHL from providing globally consistent, 7x24 customer service, SLA, performance metrics, contracts, etc.

Business benefits

- **Merged regional silos of data into a single view of the customer**
- **Integrated Airborne's land operations into DHL**
- **Implemented Global SLAs, tracking and reporting for NA customers**
- **Established firm base for additional acquisitions**





Data Governance and Mainframe Data Assets



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What is Data Governance?

The formal orchestration of people, processes, and technology that enables organizations to leverage data as an enterprise asset.

- Why is it needed?
 - Existing definitions of corporate data are often non-standard and conflicting
 - Confidence in data is lacking because of poor quality and inaccuracy
 - Data whose value is *truly* critical or valuable is not protected
 - Enterprises are unable to take maximum advantage of data that is under their control, but unmanageable.



Benefits of Data Governance

- More confident decision making
- Agreement and consistent understanding of concepts throughout all of IT and parts of the business
- Better management of privacy
- More attainable Regulatory Compliance
- Improved customer loyalty and revenue enhancement



How is Data Governance Achieved?

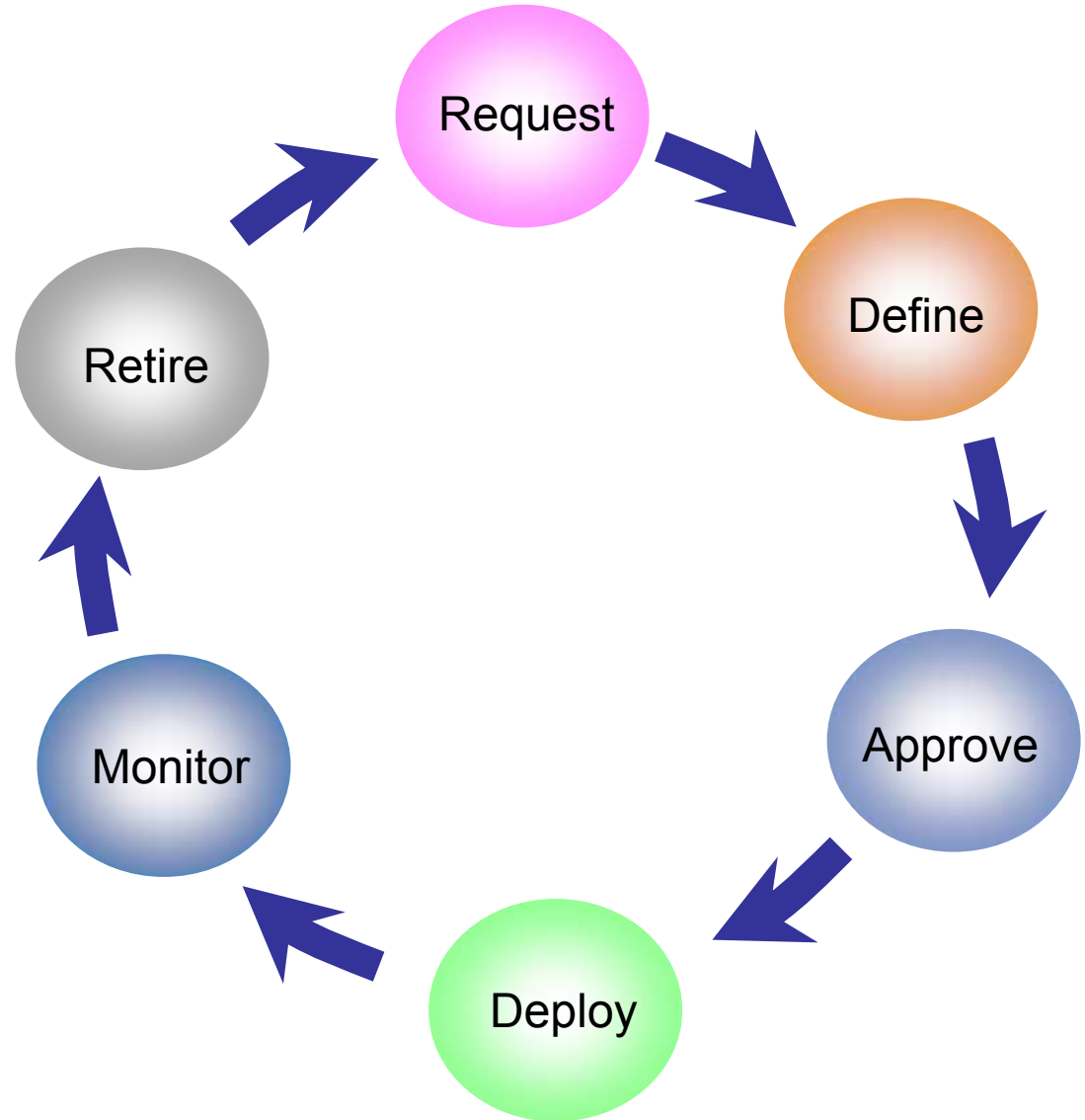
- Confirm executive sponsorship
- Perform a data governance assessment (how are we doing right now?)
- Identify data stewardship hierarchy
- Design classification and “states” for managed entities
- Define policies and procedures

Establish a “culture” and dedicated commitment to enterprise Data Governance



The Data Governance Life Cycle

- Entities are managed through various “states”
- All levels (*and systems*) of the enterprise have a vested interest in the cycle and “states” of data entities



Data Governance: Lessons learned and summary

- Data Governance is difficult and requires:
 - Sponsorship at executive levels
 - Hierarchy of “stewardship” that identifies key “owners” where data is defined and used
 - Methodology and policies that manage the data governance life cycle
 - Acceptance and “belief” in the methodology, policies, and best practices that are implemented





Data Warehousing and Mainframe Data Assets



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New generation in data warehousing...

3rd Generation
Information On Demand
– Optimize Each Transaction
– Call Centers, Field Ops



*Dynamic
Warehousing*

2nd Generation
OLAP & Data Mining
– Merchandising, Inventory,
Operations



*Traditional Data
Warehousing*

1st Generation
Query & Reporting
– Financials, Sales



zOS is ready for the Dynamic Warehouse!

“As a direct effect of the mixed workload, with continuous loading and the increase in automated transactions from the functional analytics in OLTP, the transactional DBMSs have an edge that challenges the DW DBMSs”

Gartner Data Warehouse Magic Quadrant, 2006



OLTP

Benefits of a transactional data server foundation

Optimized for real-time access,
High availability and reliability
Scalable, secure and auditable

DW DBMS

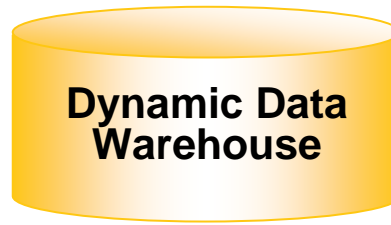
Dedicated warehousing

Advanced data partitioning
Workload management






zOS is ready for the Dynamic Warehouse!

Mixed workload performance will become the single most important performance issue in Data Warehousing



Examples of Dynamic Warehousing in Action

Enabling Information On Demand for Business Advantage

Traditional warehousing		Dynamic warehousing
Insurance fraud analysis and reporting		Identifying potentially fraudulent claims prior to approval and payment ----- <i>Transforms healthcare</i>
Historical sales analysis and reporting		Dynamically change coupon and advertising specials based on individual buying patterns or location in-store or on website. ----- <i>Transforms sales effectiveness</i>
Crime statistics and reporting		Identifying related incidents and potential suspects prior to arriving at the crime scene ----- <i>Transforms crime fighting</i>



SOA and Mainframe Data Assets

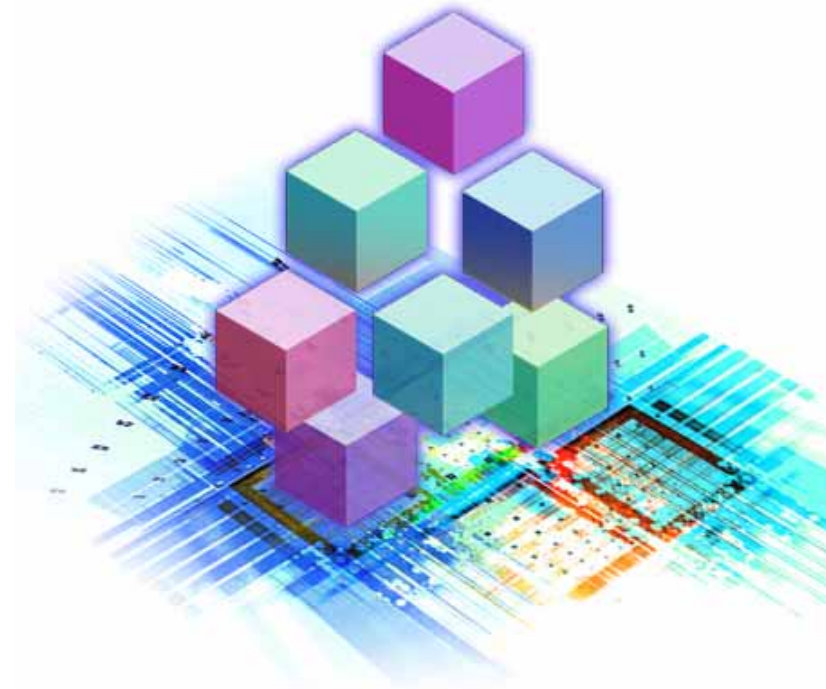


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Service Oriented Architecture

Services are the Building Blocks enabling Innovation

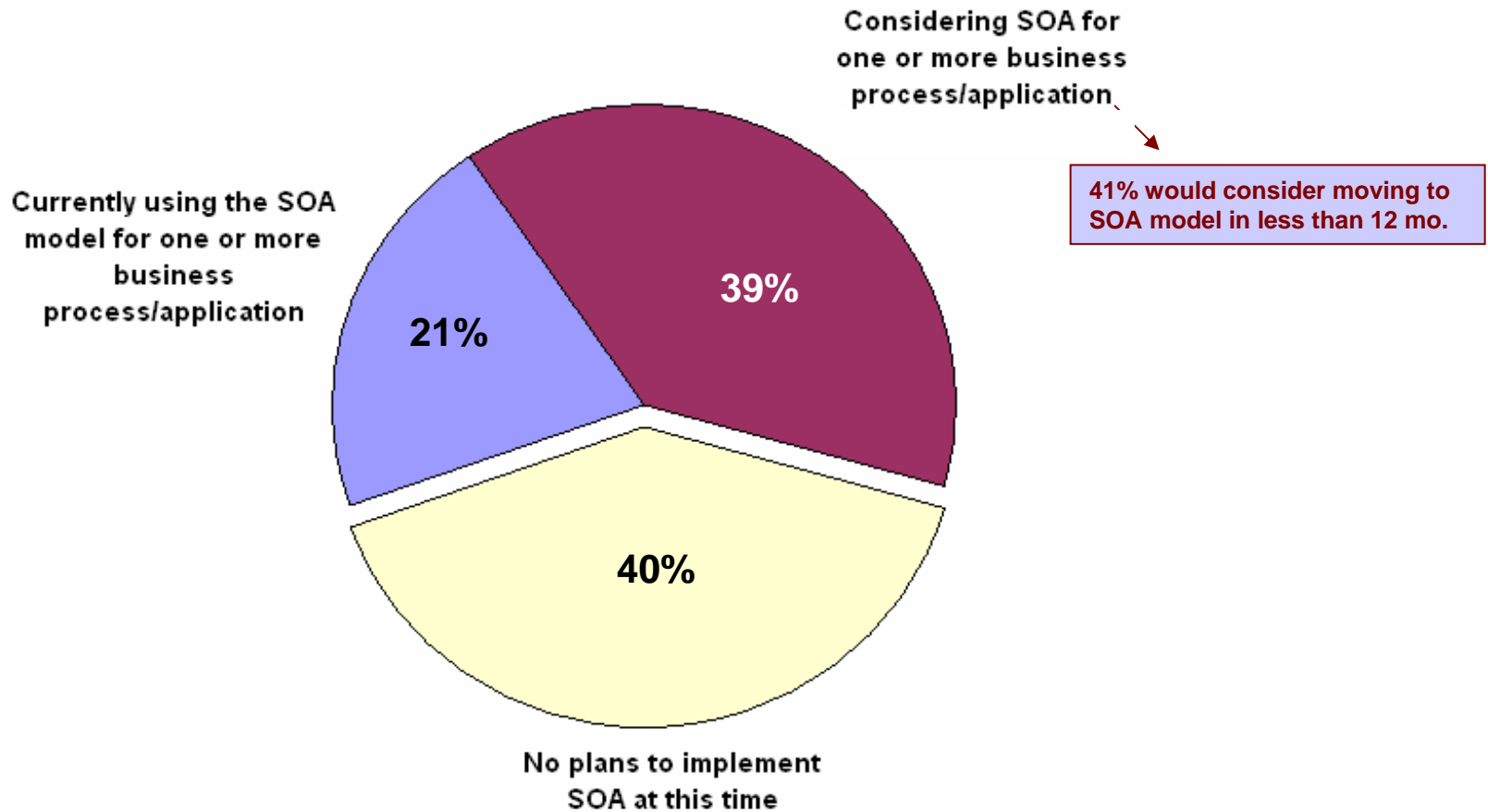
- Packaging business functions from new and existing applications in a simple and standardized way creates services that are available for use
- Services are used to help get the right information to the right people at the right time
- Services can be reused and combined to deploy composite applications to address new opportunities
- Increasing use of “Web” services based on open standards complements existing services technology



The flexibility to treat elements of business processes and the underlying IT infrastructure as secure, standardized components (services) that can be reused and combined to address changing business priorities



SOA Use & Adoption



Q. Which of the following best describes your company's use of SOA today?

% of Responses. N=1077

Source: AMR Research, September 2006



SOA & Mainframe: Made For Each Other

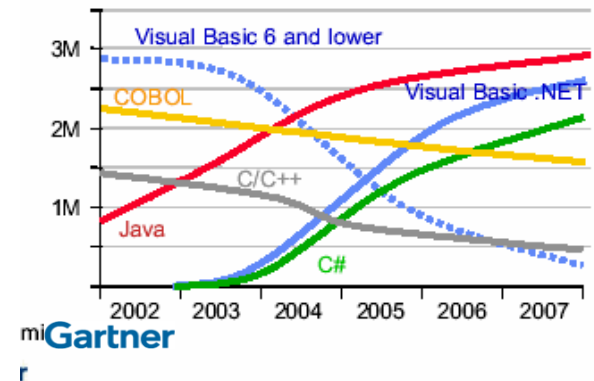
Leverage What You Have vs. Rewrite

- Significant business intelligence exists in legacy
 - "200 Billion lines of COBOL code in existence"
 - "5 Billion lines of COBOL code added yearly"
 - "Between 850K and 1.3 Million COBOL developers"
 - "Majority of customer data still on mainframes"
 - "Replacement costs \$20 Trillion"
- Rewriting -- is it an option?
 - How long will it take (lose strategic benefit)?
 - Who will do it (who has the business knowledge)?
 - Is the business model still accurate?
 - How much will it cost, and what's the risk?
 - Performance?

eWeek
Bill Ulrich, TSG Inc.
IDC
Computerworld
eWeek

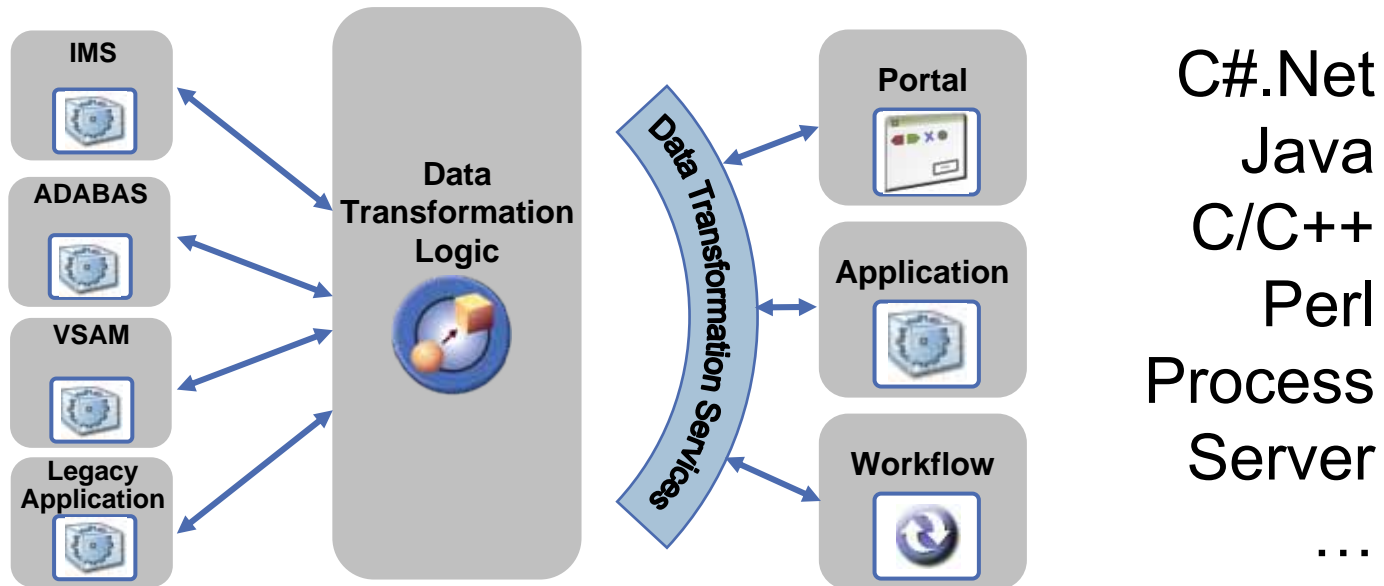
Developers

From an estimated worldwide market size of 7 million "professional" developers

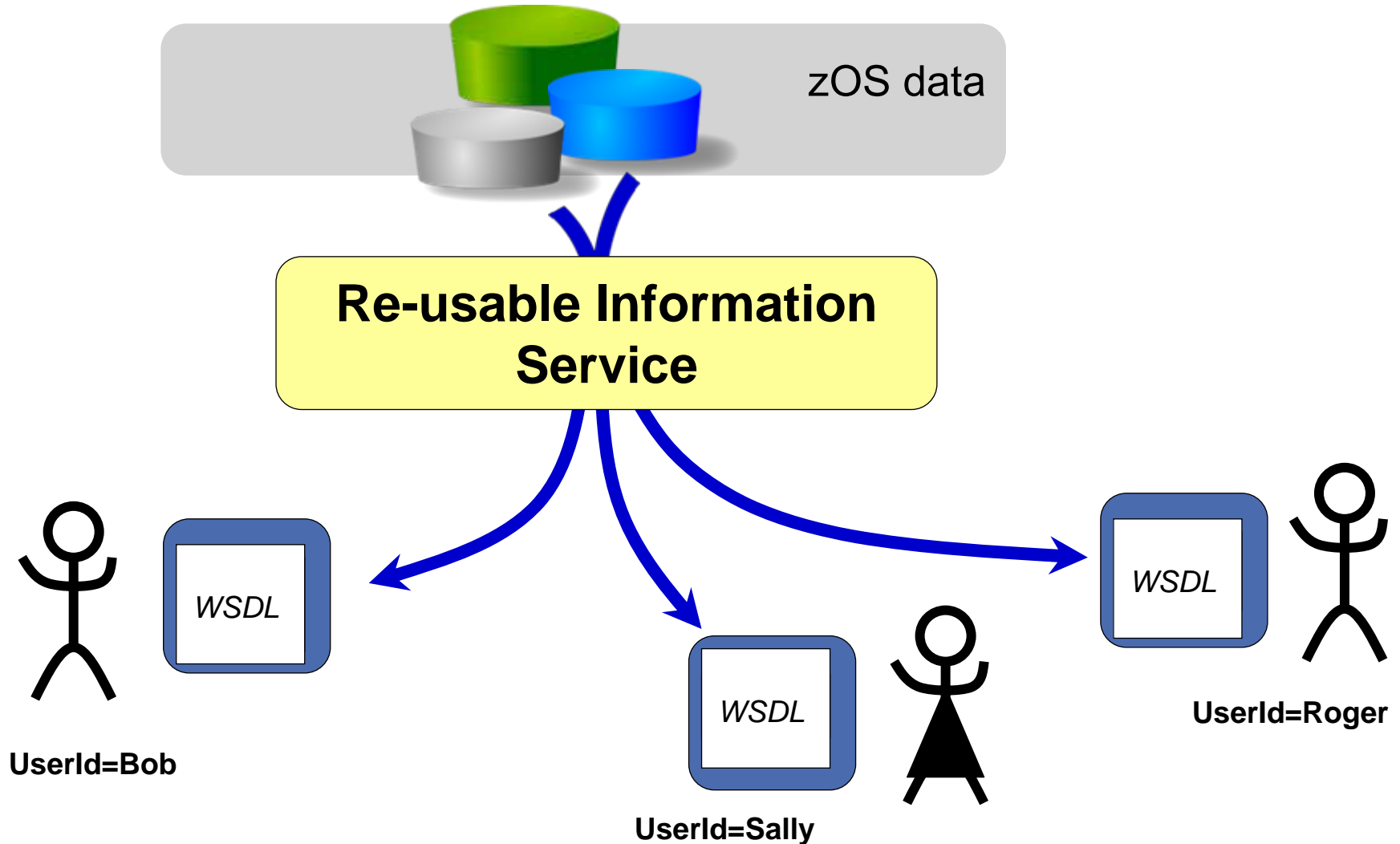


Legacy Data Access Services: Re-use existing data and processes

Language and Implementation Independent !

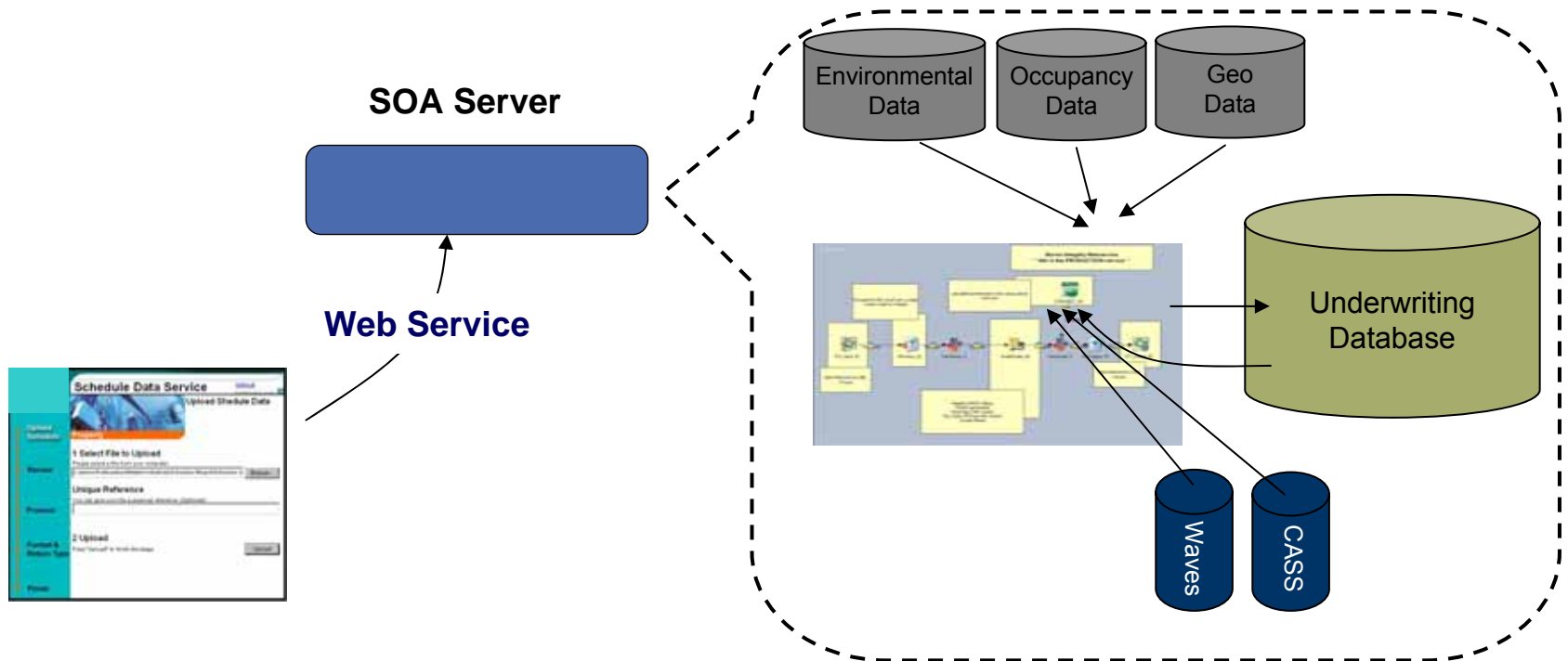


Legacy Data Access Services: Single point of control



Data Quality Services

- Standardization & Matching in real-time
 - Major retail jewelry store enhances customer loyalty
 - Service based rating system speeds up processing and reduces errors



Conclusions

- The Mainframe platform evolves and is taking new roles
 - It is the central hub for data and processes making up the core of many SOA configurations
- The “world’s data store” is shaping industry advances
 - Data Quality initiatives increase the value and confidence of corporate data
 - Data Governance discipline streamlines the understanding and use of that data throughout the enterprise
 - Service Oriented Architecture enables re-use of proven legacy investments in data, processes, and people
 - Your mainframe data is “center stage” and not just an infrastructure “afterthought”



Thank
YOU

