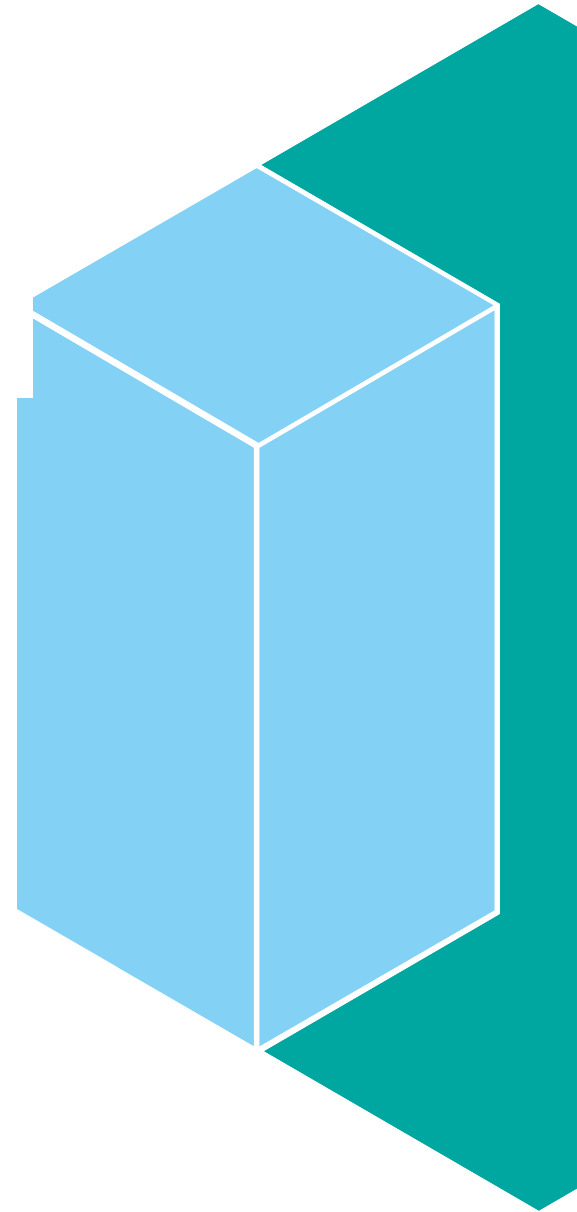


IBM IMS TECHNICAL SYMPOSIUM 2016

IBM IMS Tools – Keynote

Janet LeBlanc

IMS Tools Offering Manager



Sharpen your competitive edge

2016 IMS Technical Symposium

March 7 – 10, 2016

Wiesbaden, Germany

www.ims-symposium.com

Agenda

- Our journey – where we have been
- A couple of products you should see this week:
 - IBM Transaction Analysis Workbench
 - IMS Configuration Manager
- Introducing IMS Tools and..
 - Analytics
 - Security
 - Dev Ops
- IMS Tools CAC
- Sessions this week

IMS Tools Journey

Utilities

Enhanced
Performance

Enhanced
Features

Usability

IMS
Configuration
Manager

IMS Sysplex
Manager

Performance
Reporting

IMS Recovery
Expert

IMS Cloning
Tool

IMS Connect
Extensions

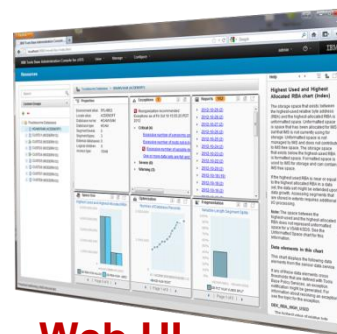
IMS Problem
Investigator

Autonomics
- Passive

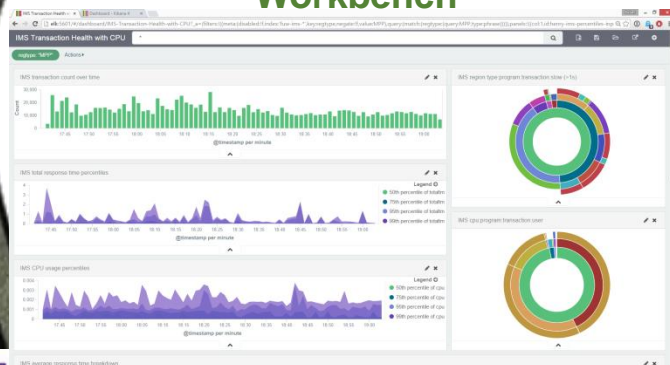
Report
Storage

Autonomics
- Active

IBM Transaction Analysis
Workbench

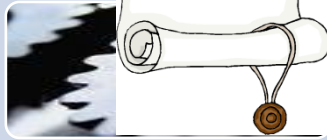


Web UI



IMS Tools Solutions

B13



IMS Database Solution Pack

- ❖ Autonomics
- ❖ IBM Administration Console
- ❖ IMS Online Reorg Facility
- ❖ DB Reorg Expert
 - ❖ Unload
 - ❖ Load
 - ❖ Prefix Resolution / Update
 - ❖ Index Builder
- ❖ HP Image Copy
- ❖ HP Pointer Checker
 - IMS DB Repair Facility
- ❖ IMS Library Integrity Utilities

IMS Fast Path Solution Pack

- ❖ Autonomics
- ❖ IMS Administration Console
- ❖ HP FP Utilities
 - FP Advanced Utilities
 - FP Online Utilities
- ❖ IMS DB Repair Facility
- ❖ IMS HP Image Copy
- ❖ IMS Library Integrity Utilities

IMS Recovery Solution Pack

- ❖ IMS Administration Console
- ❖ DB Recovery Facility
- ❖ HP Change Accumulation
- ❖ HP Image Copy
- ❖ DRF Extended Functions

IMS Performance Solution Pack

- ❖ IMS Administration Console
- ❖ IMS Connect Extensions
- ❖ IMS Performance Analyzer
- ❖ IMS Problem Investigator

• Transaction Manager Solutions



IBM Transaction Analysis Workbench

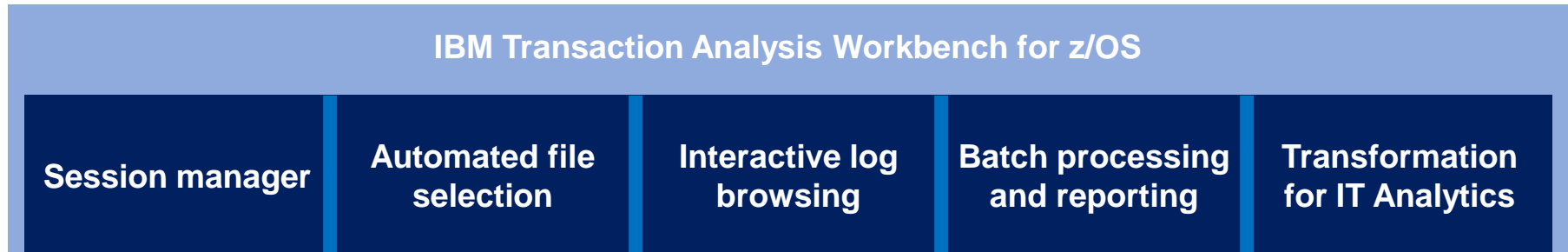


Bringing it all together: the TAW mission

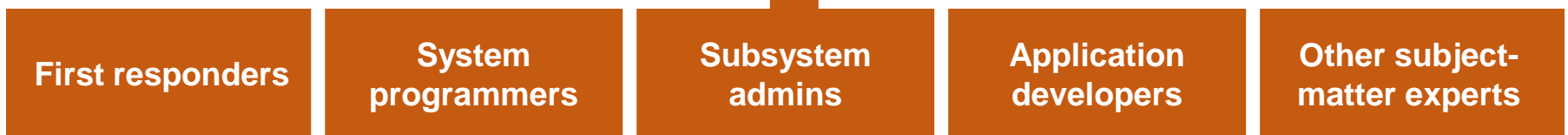
Coverage across z/OS subsystems



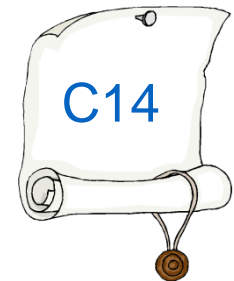
Consolidation of different logs for consistent analysis



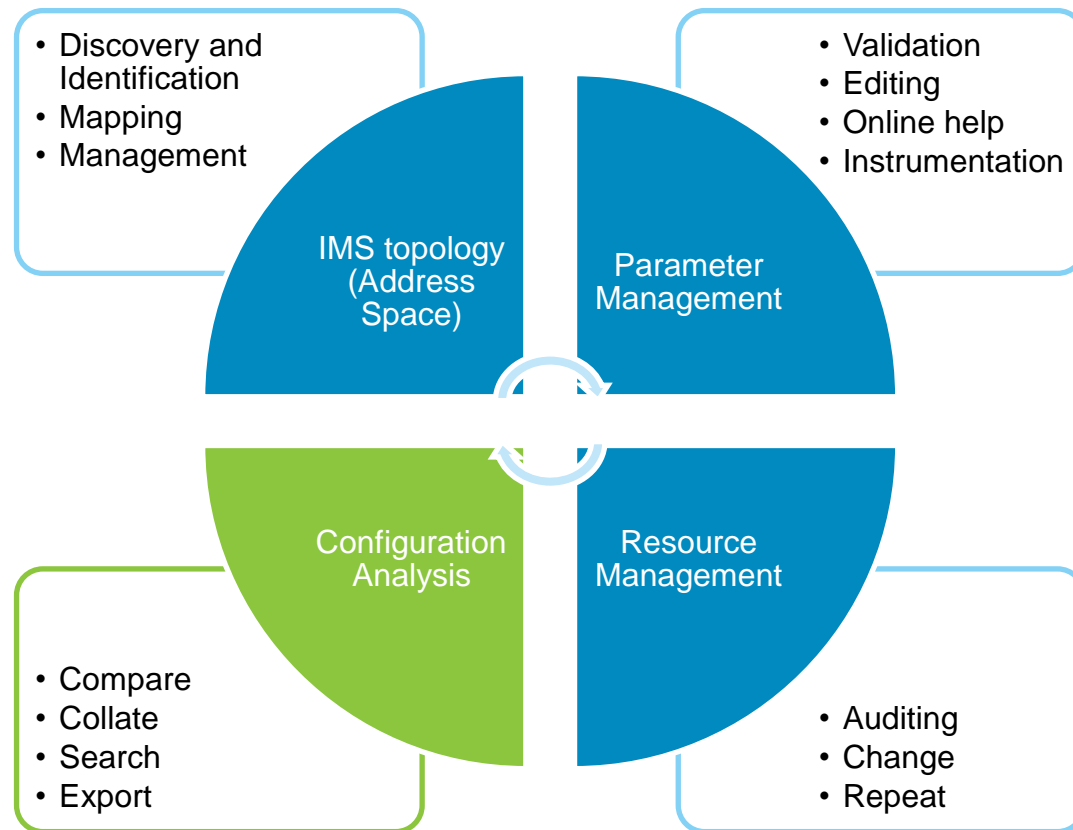
One tool useable by many



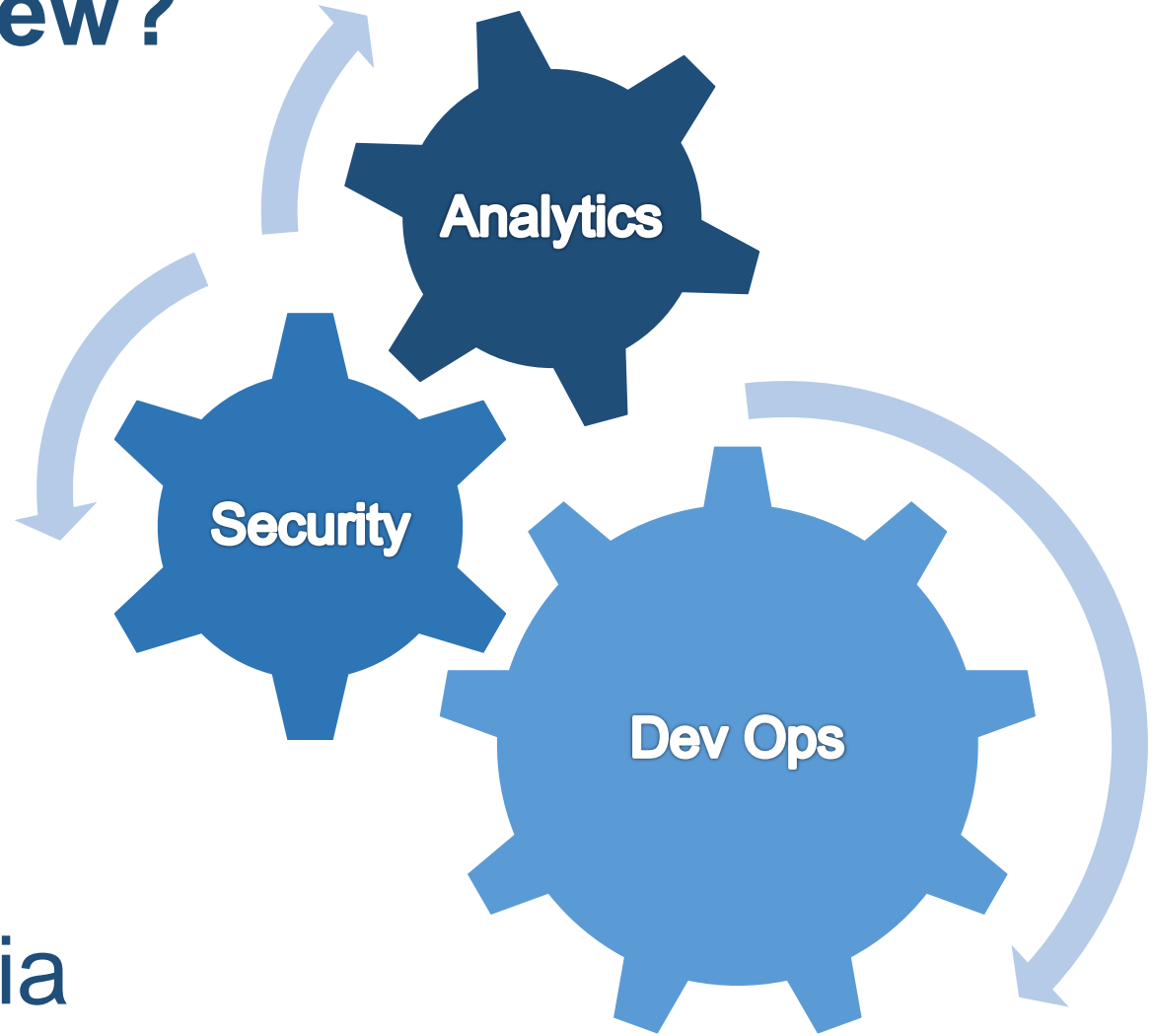
IMS Configuration Manager



Enterprise-wide IMS discovery, parameter and resource management made easy



So what is new?



Ron Bisceglia
IMS Tools Architect

IMS – Relevant & Critical in the World of Analytics



Use Case

- Apply Analysis everywhere, all data, in Real-time
- Real-time BA with interactive dashboards & graphical reports of IMS Data
- Analyze IMS data with unstructured data
- Enabling real-time analytics against IMS data (and other non-DB2 data sources) as a single, integrated system
- Visualize all data assets including IMS data

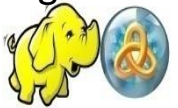
Solution



IBM DB2 Query Management Facility



InfoSphere Big Insights



IDAA



Watson Explorer



IBM z13 and Analytics Accelerator

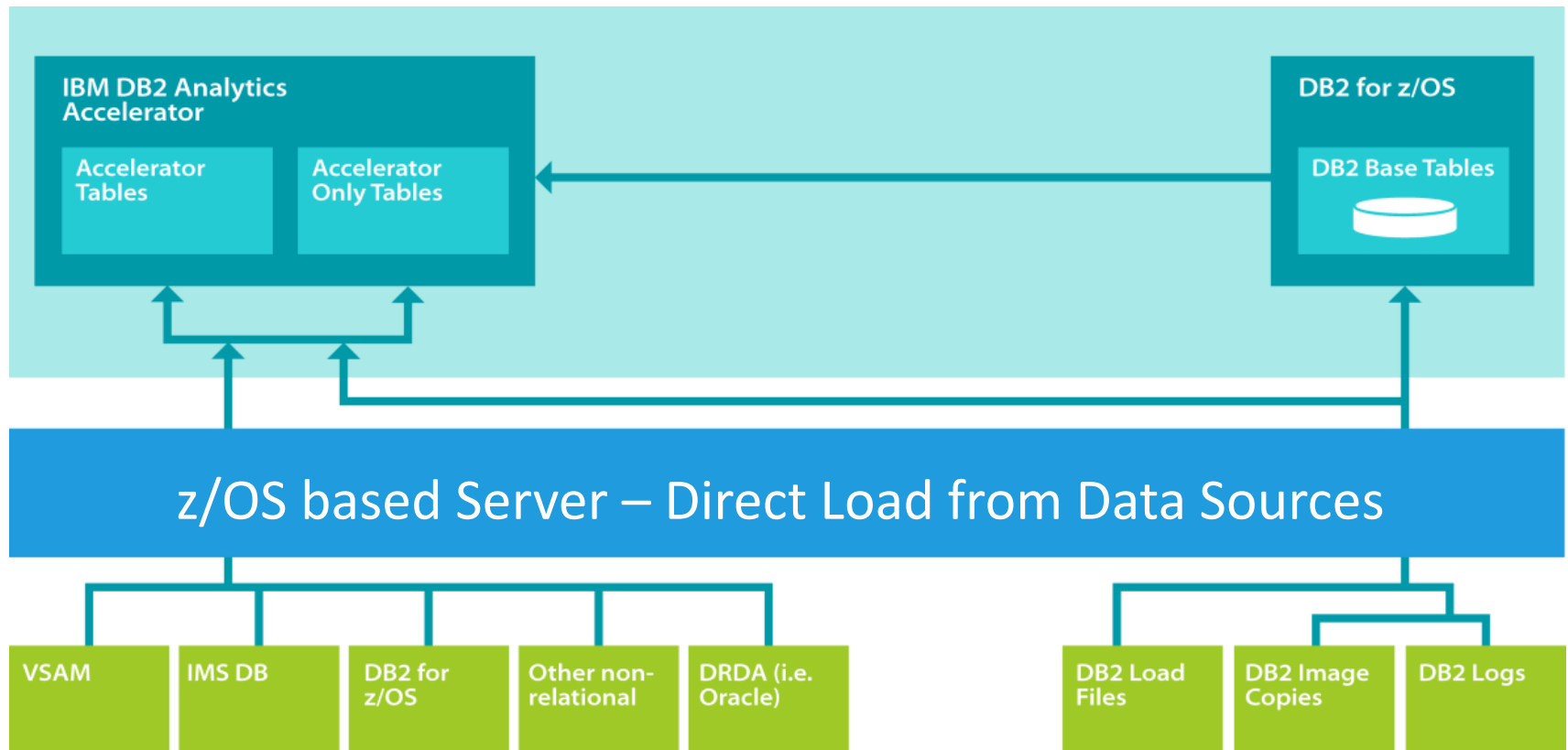


IBM DB2 Analytics Accelerator and DB2 for z/OS

A self-managing, hybrid workload-optimized database management system that runs query workloads in the most efficient way, so that queries are executed in the optimal environment for greatest performance and cost efficiency

IBM DB2 Analytics Accelerator Loader for z/OS v2.1

– *Just GA'd!*



Loading non-DB2 Data Sources into Accelerator

- **Accelerator Loader V2.1– Automates entire process:**

- User builds select statement from data source(s) (IMS, VSAM, SMF, ...)
- Automatically creates the DB2 table
- Automatically adds table to Accelerator
- Automatically extracts specified source data
- Automatically converts data to necessary DB2 format (in memory)
- Automatically loads data to Accelerator
- Automatically enables table for acceleration

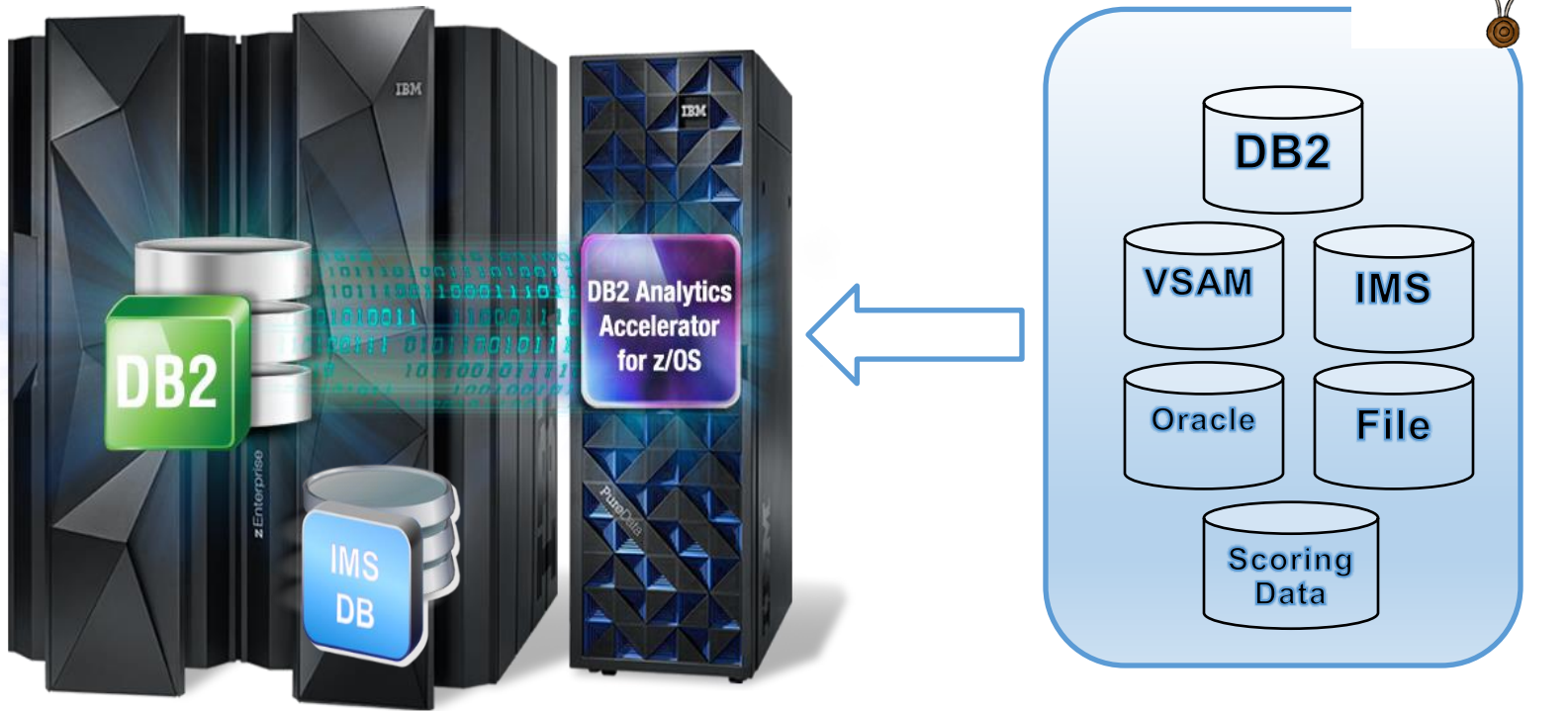


Single
batch job!

- **Accelerator Only Tables (AOTs)**

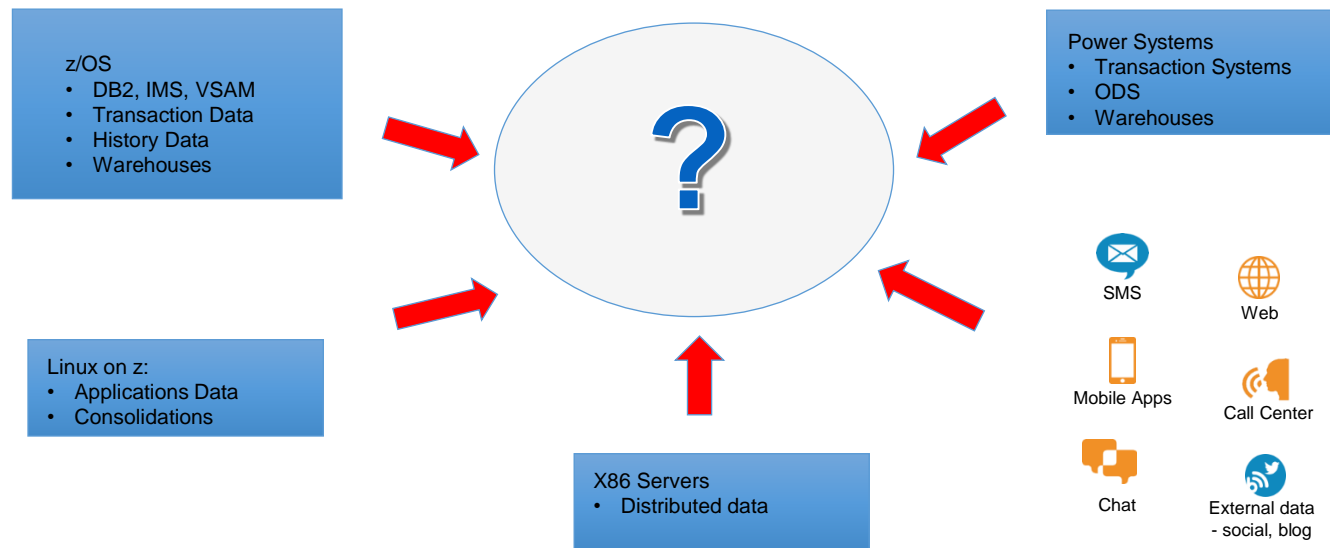
- New type of table - data does not reside in DB2
- All queries routed to Accelerator
 - Schema managed by DB2 z
 - DB2 z provides security
- Perfect container for NON DB2 data!
 - No storage consumed on Z
 - Eliminates processing of maintaining the data on DB2 z

In Transaction Analytics



- Relevant data loaded using IBM DB2 Accelerator Loader
- Processed for predictive scoring
- IMS In-Transaction analytic queries provide real time insights

Challenges with Moving Data to a Consolidated Point



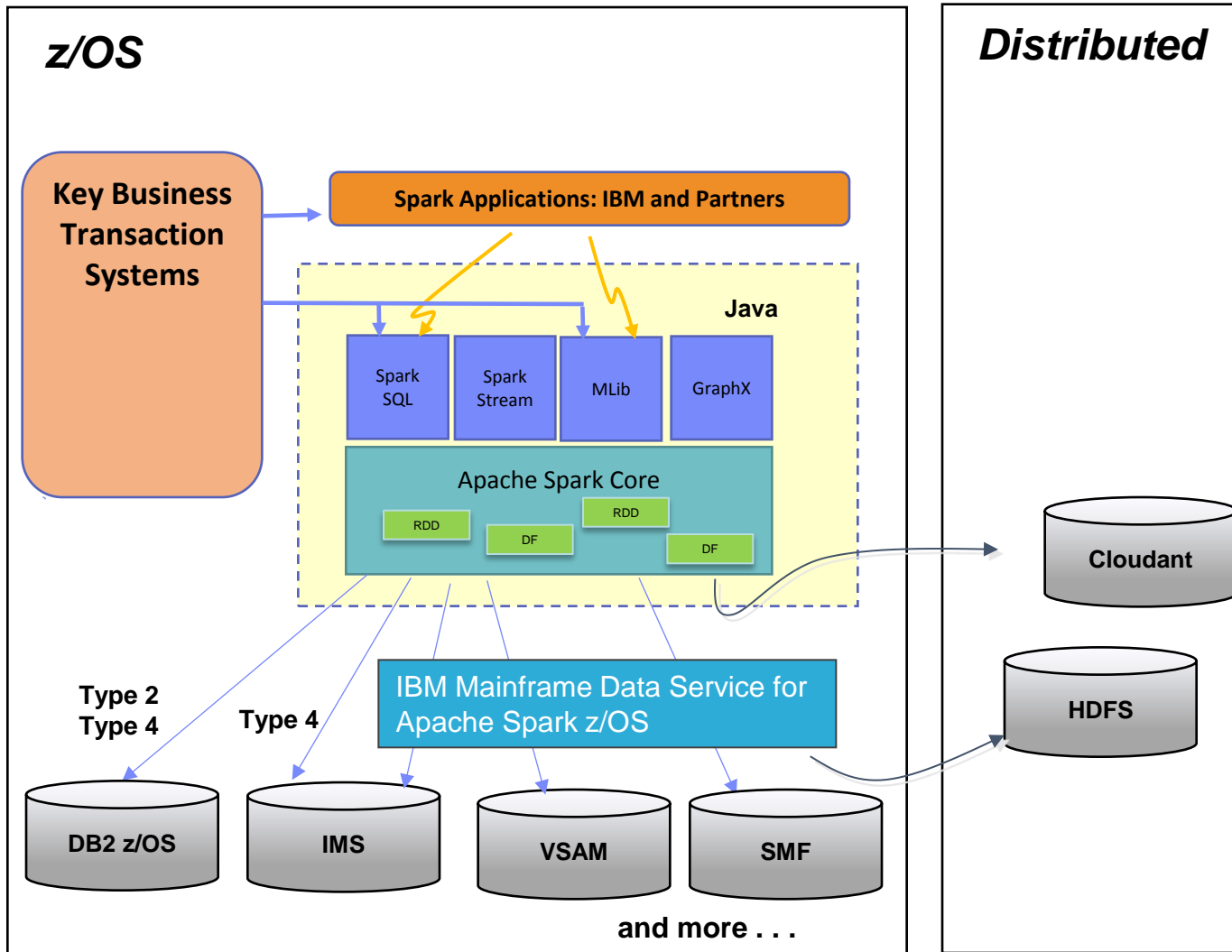
Challenges:

- Wide variety of data, developing & managing physical 'data lake' is challenging
- Results in:
 - Data latency & Analytic latency
 - Security and governance issues for sensitive data
 - Longer ROI for analytics

With Apache Spark:

- Federate the analytics across the data sources with consistent APIs – leave data in origination point
- "Lake" becomes virtualized across multiple environments
- Resulting in:
 - Current data & reduced time to analytic insight
 - Security and governance matched to where data originated
 - Reduced spend on just moving data around

z Systems and Apache Spark



➤ **All Java based and zIIP eligible**

Value:

Data-in place analytics, without need to ETL or move data for analytic purposes

Optimized access and z/OS governed 'in-memory' capabilities for core business data, leveraging open source analytic frameworks

Consistent analytic interfaces for SQL, Graph, Machine Learning across multiple data and system environments

Integration of analytics across core systems, social data, website information, etc.

Operational Analytics

SMF
System Log
Audit Data
DB2 Log / Performance
IMS Log / Performance
CICS Log
WebSphere Log
RMF

Spark



Forecasting and planning

Security and forensics

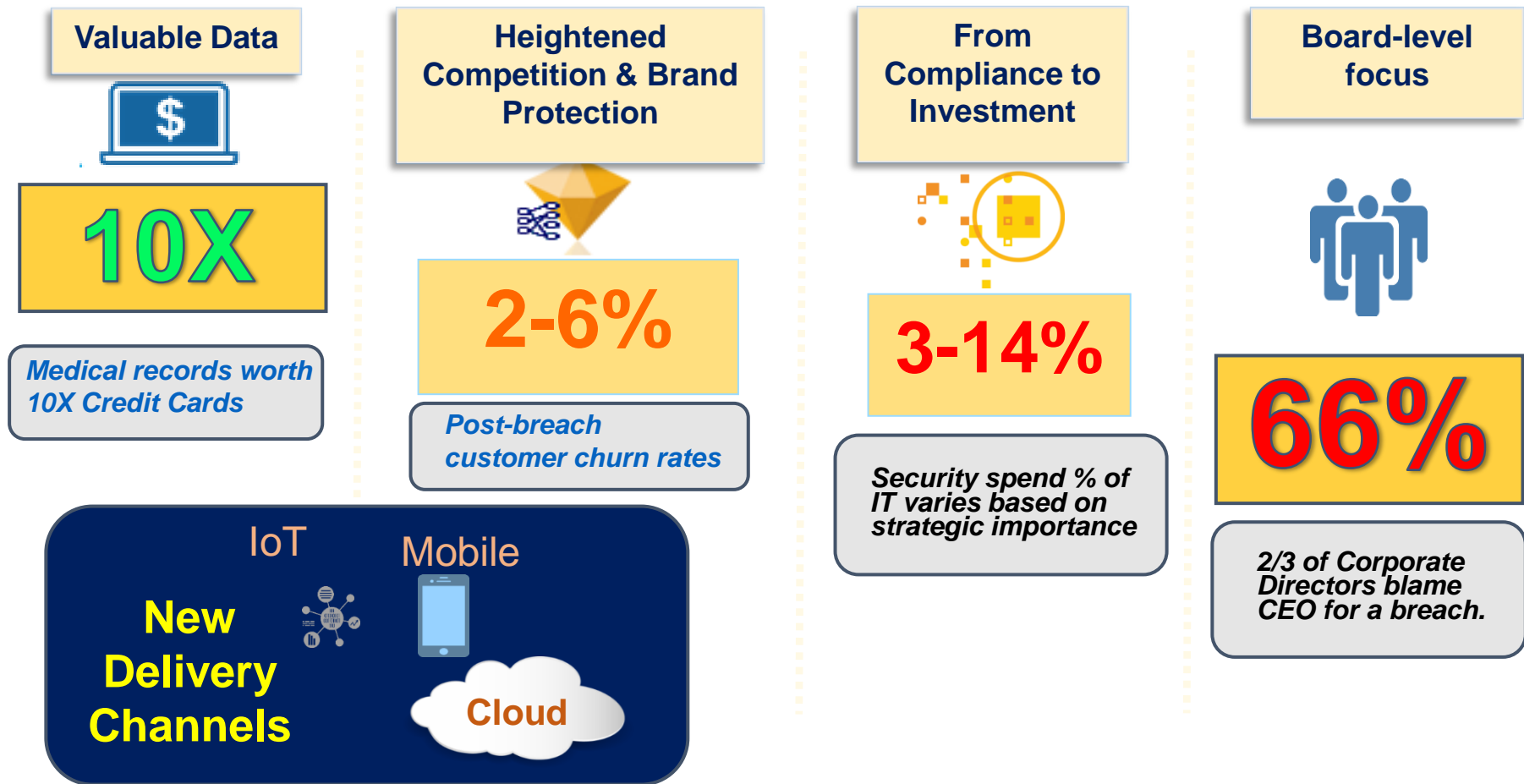
Change monitoring

User/Usage analytics

Proactive alerting

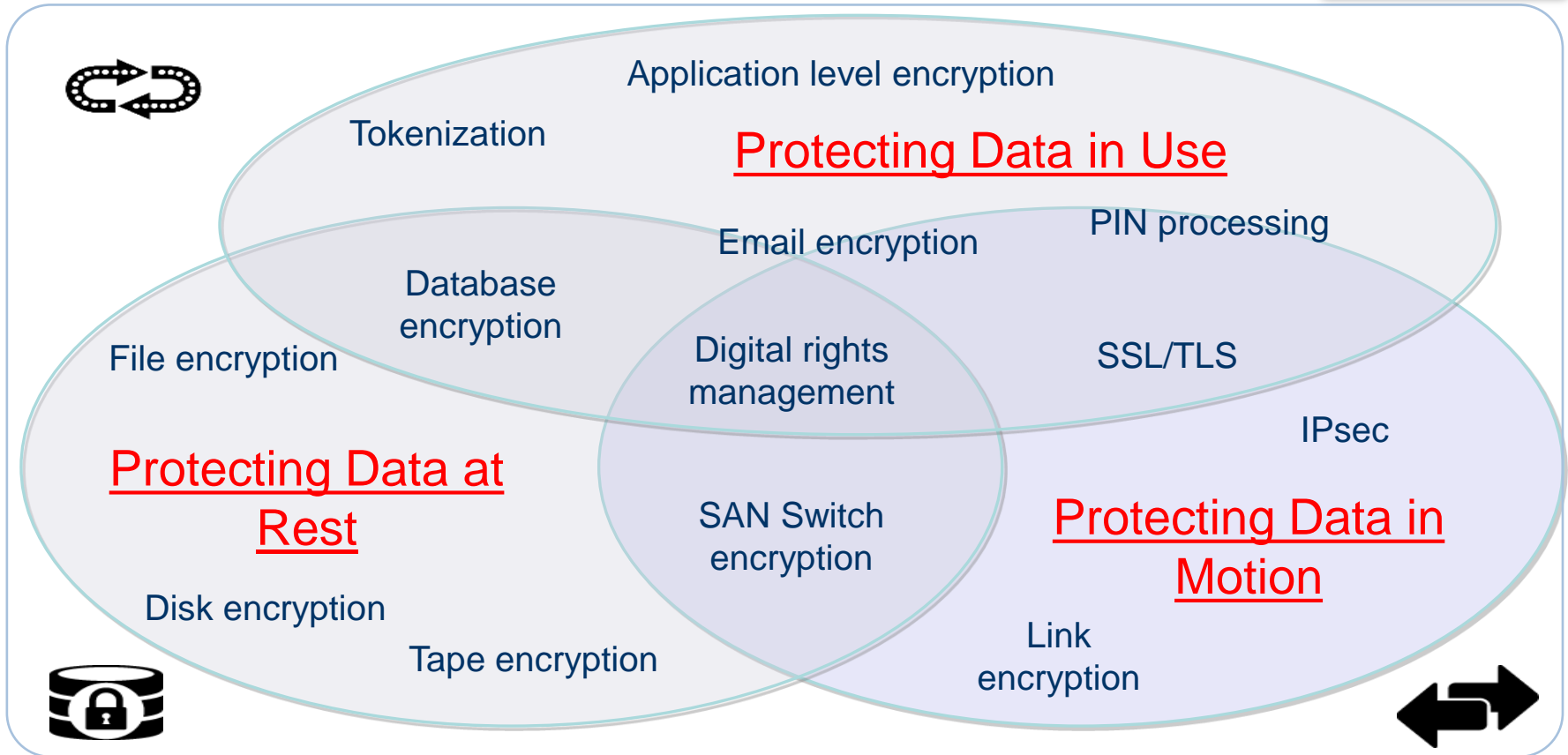
Root cause analysis

Security & Privacy: Strategic Imperative

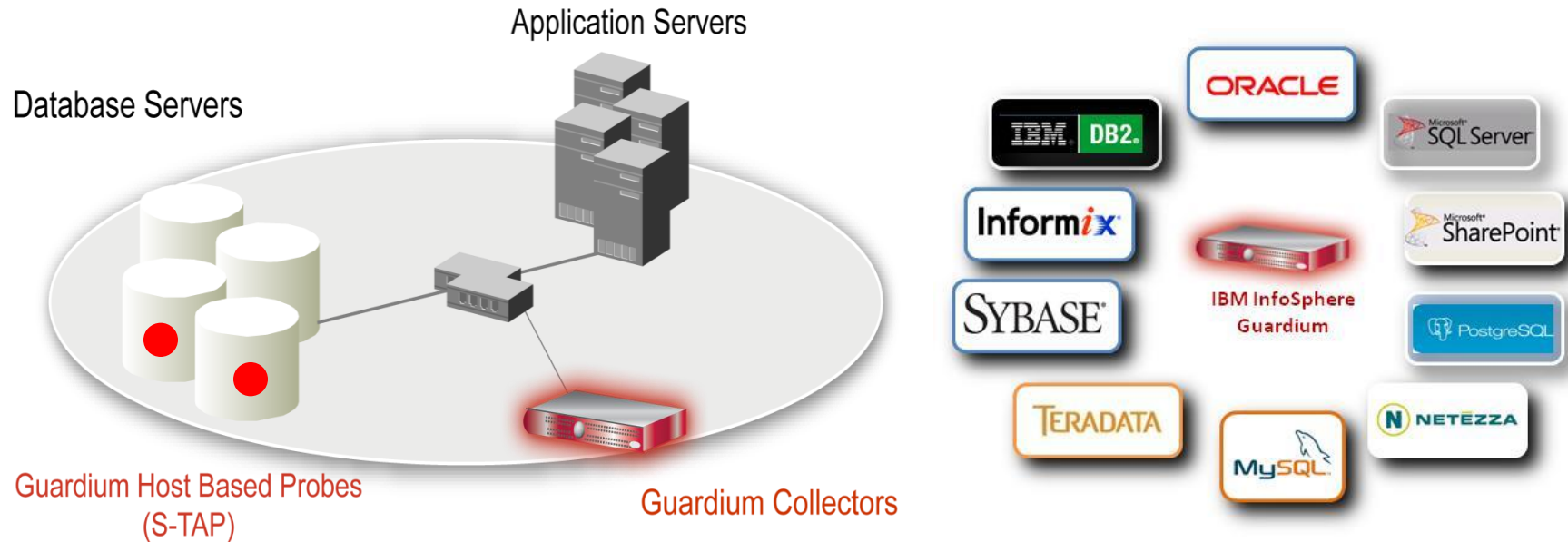


Cryptography has Many Applications

C04
C12



Monitor and Enforce – Database Activity Monitoring



- Non-invasive architecture
 - Outside database
 - Minimal performance impact
 - No DBMS or application changes
- Cross-DBMS solution
- 100% visibility including local DBA access
- Enforces separation of duties
- Does not rely on DBMS-resident logs that can easily be erased by attackers, rogue insiders
- Granular, real-time policies & auditing
 - *Who, what, when, how*
- Automated compliance reporting, sign-offs & escalations (SOX, PCI, NIST, etc.)

Software Delivery Drives Competitive Advantage

Yet few are able to deliver it effectively

86%



of companies believe software delivery is important or critical

But only...

25%



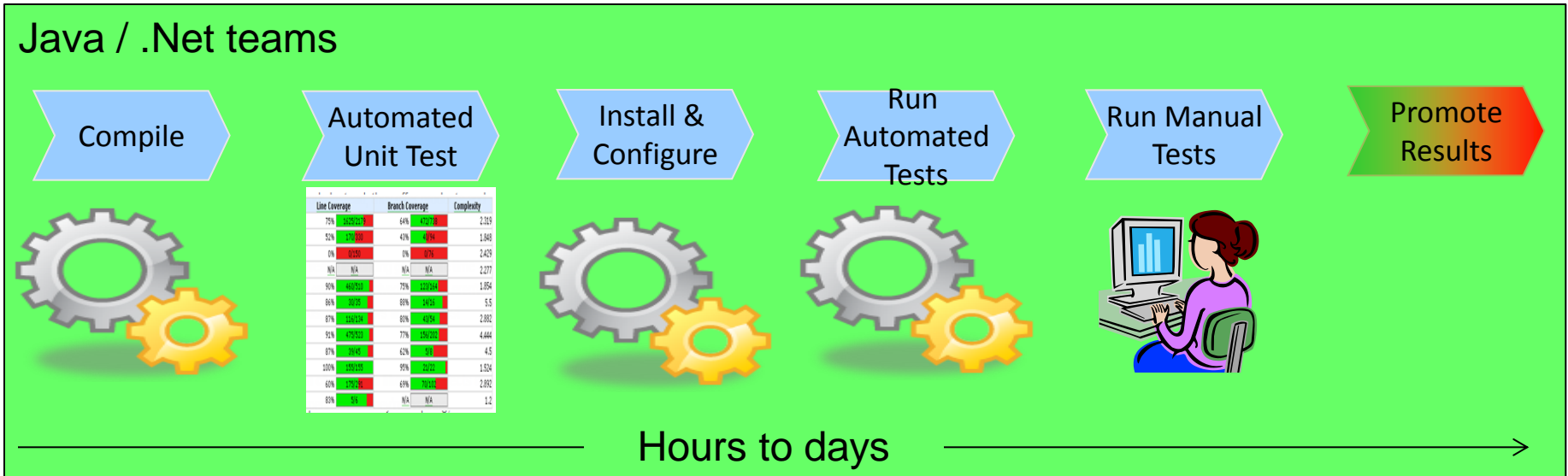
leverage software delivery effectively today



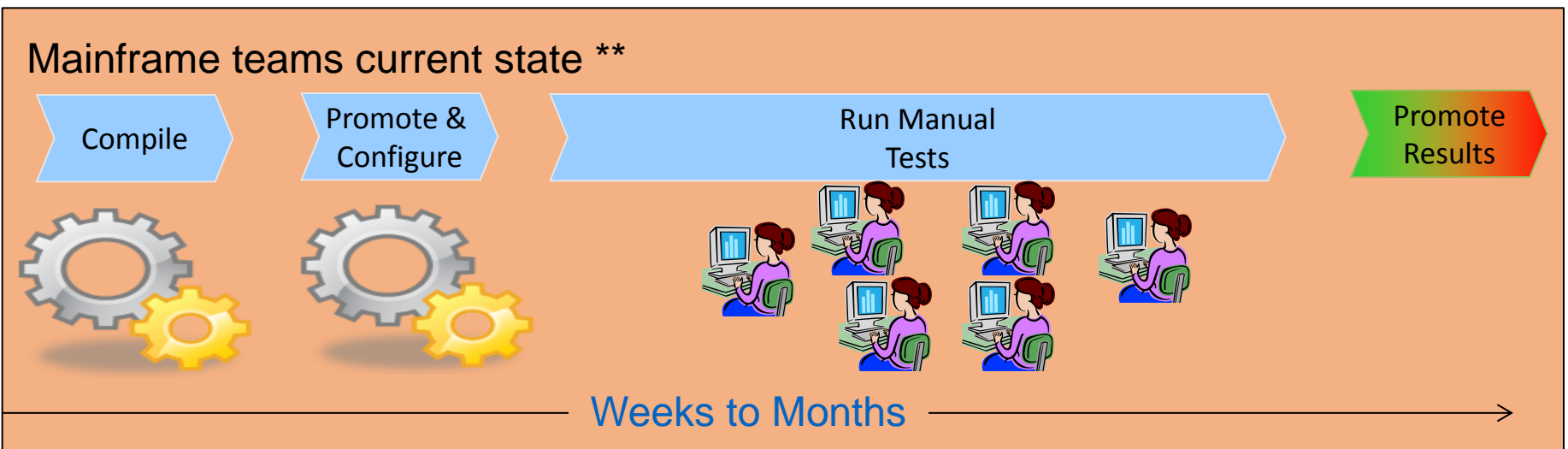
Source: "The Software Edge: How effective software development drives competitive advantage," IBM Institute of Business Value, March 2013

Testing and Delivery – where are customers today?

Java / .Net teams

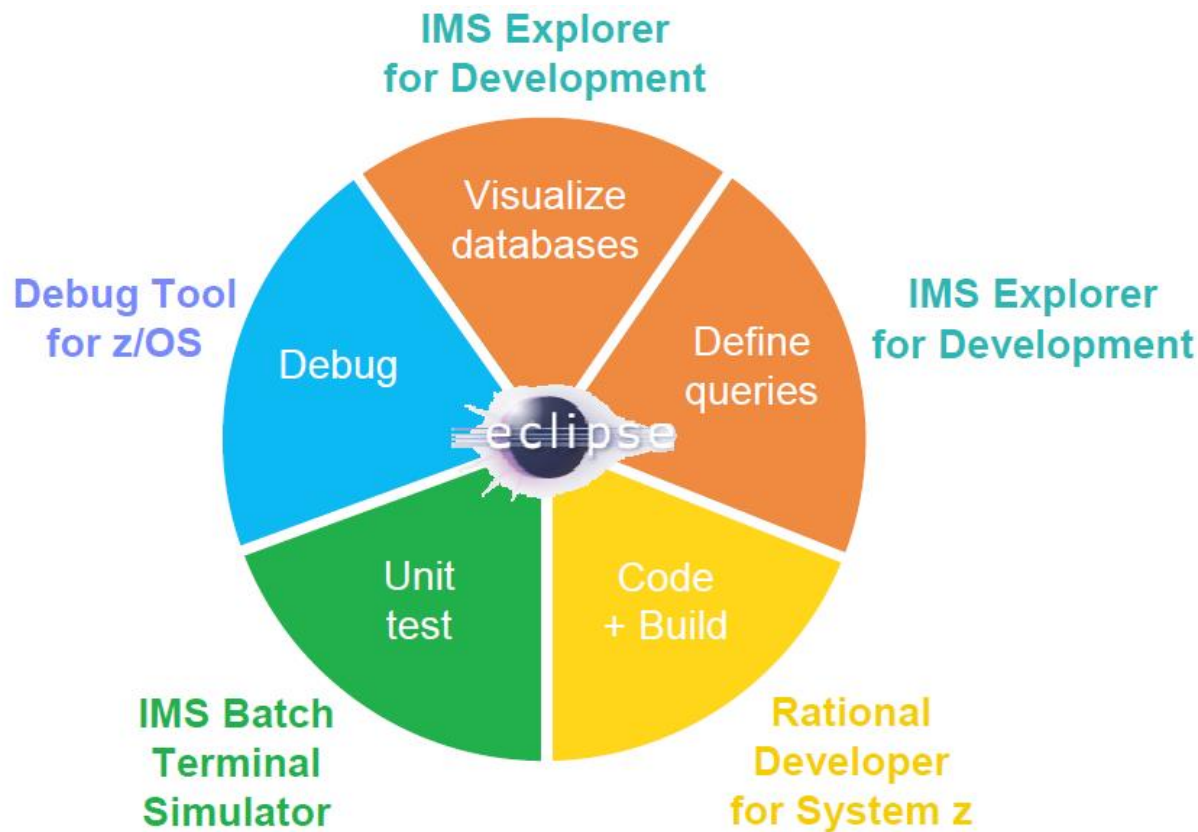


Mainframe teams current state **



** Feedback from mainframe customers

Eclipsed Based Development Tools



Integrated Eclipse Environment for IMS Development, Testing, and Debugging

The screenshot displays the IBM Rational Developer for System z IDE interface, which is used for developing, testing, and debugging IMS applications. The interface is divided into several panes:

- Top Pane:** Displays the source code of the IMS application. The code is written in COBOL and includes sections for data definitions (DATA DIVISION) and program logic (PROCEDURE DIVISION). The code is syntax-highlighted, and the IDE provides real-time error checking, indicated by red squiggly lines under the code.
- Left Pane:** Contains the **z/OS Projects** view, showing the project structure. It includes a **PhoneBook-BMP** project with sub-projects for different IMS components (e.g., DDS1445.IMS.SYSDEBUG, DDS1445.IMS.COBOL, etc.). Below this is the **Properties** view, which shows the configuration for the selected project.
- Right Pane:** Contains the **Remote Systems** view, which shows the connection to the remote z/OS system. It includes a tree view of the remote file system, showing directories like **Local Files**, **My Home**, **Drives**, **Local Shells**, **z/OS UNIX Files**, **z/OS UNIX Shells**, **MVS Files**, **TSO Commands**, and **JES**.
- Bottom Pane:** Contains the **Remote Error List** view, which displays any errors or warnings encountered during development or testing. It shows a table with columns for **ID** and **Message**, listing errors like **IGYDS1168** and **IGYDS1082**.

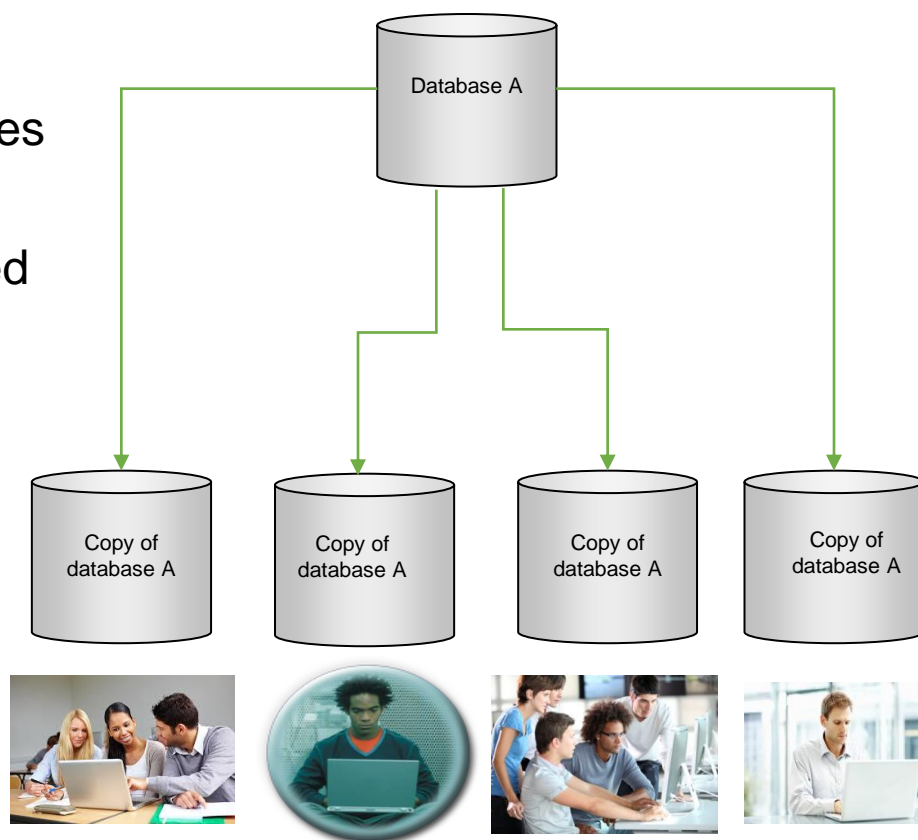
Annotations highlight key features:

- Remote compile, link:** Points to the **z/OS Projects** view.
- Remote editing, Syntax highlighting / checking:** Points to the source code editor.
- Remote z/OS JES MVS files TSO Emulator:** Points to the **Remote Systems** view.
- Program outline:** Points to the **Properties** view.
- Errors and warnings:** Points to the **Remote Error List** view.
- Debug** and **Test** buttons are circled in the top toolbar.

Provisioning Test Databases

IBM IMS Cloning Tool:

- Automated data refresh operations
- Leverage storage fast replication
- High Speed Low Cost cloning
- Can dynamically create new databases
- Can mask or scramble sensitive data
- Can track new databases and be used to cleanup unused databases



IBM IMS Tools CAC



- **Help to shape the future**
- **Hear what we are thinking in the near term and long term**
- **Tell us what you think**

- **Can you participate?**
 - Member of IMS CAC?
 - Signed NDA for IMS? Or IMS Tools?

B04 – Tuesday, 08 Mar, 2016 11:30

IBM IMS Tools Sessions



Unleash the analytic power of your IMS data using IDAA

C01 07 Mar – Monday, 16:00, Timm Zimmermann

How z/OS Connect changes IMS performance and problem Management

A03 08 Mar – Tuesday, 10:15, Rafael Avigad

Database Encryption on z/OS (repeats C12)

C04 08 Mar – Tuesday, 11:30, Tom Hubbard

C12 09 Mar – Wednesday, 14:45, Tom Hubbard

IMS Connect for Enterprise Workloads

C05 09 Mar – Wednesday, 13:30. Rafael Avigad

IMS Transaction Manager Tools

A07 08 Mar – Tuesday, 16:00, Andy Nguyen

B12 09 Mar – Wednesday, 14:45, Andy Nguyen

Making database maintenance tasks simpler and easier

B13 09 Mar – Wednesday, 16:00, Jie Ding

IMS Configuration discover. Audit and Analysis

C14 09 Mar – Wednesday, 17:15, Rafael Avigad

Enable testing environments for today's application developers

C16 10 Mar – Thursday, 11:30, Ron Bisceglia

IBM IMS Tools Hands on Labs



Deep Dive into IBM Analytics Accelerator Loader for z/OS 2.1

HOL3 08 Mar – Tuesday, 16:00, Timm Zimmermann & Rosemary Galvan

IMS Connect

HOL4 09 Mar – Wednesday, 10:15, Rafael Avigad & Alan Walmsley

Analytics and TAW

HOL5 09 Mar – Wednesday, 13:30, Rafael Avigad & Alan Walmsley

