WellPoint, IBM and IMS Tools - A Collaborative Partnership

Session Number 1438

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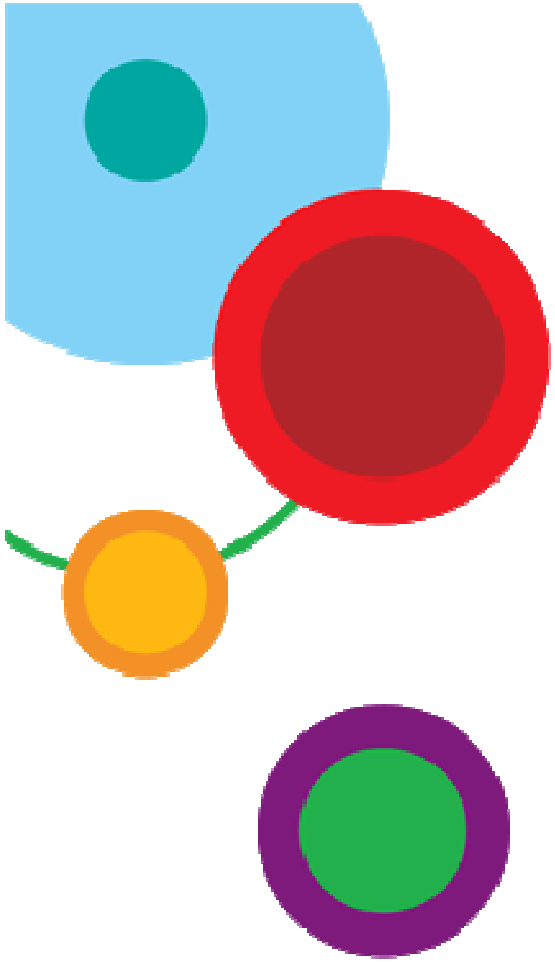
WELLPOINT



PRESENTATION OVERVIEW

Approximately eighteen months ago, representatives from WellPoint and IBM met to evaluate the WellPoint IMS environment.

A proposal was developed that eventually became known as the:

“IMS IMPROVE PROJECT”

This is the Success Story of “IMS IMPROVE”.

Our Story consists of the following topics

Team Introductions (Members present at Information On Demand)

Overview of The WellPoint Corporation

Overview of the WellPoint IMS environment

Transaction Growth at WellPoint

A Shared Challenge

Our Approach – The "IMS IMPROVE" Project

View from the Project Manager

Our Results

Our Story – Continued

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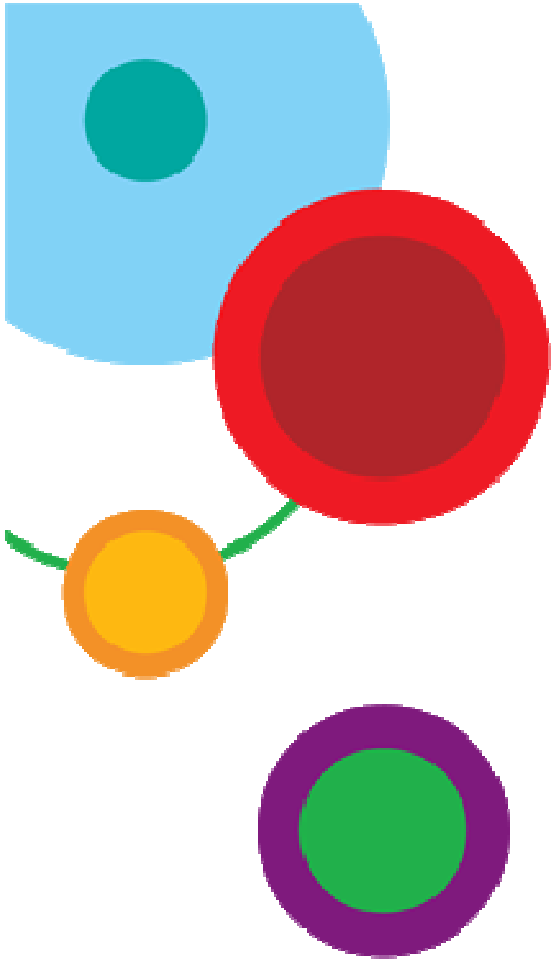
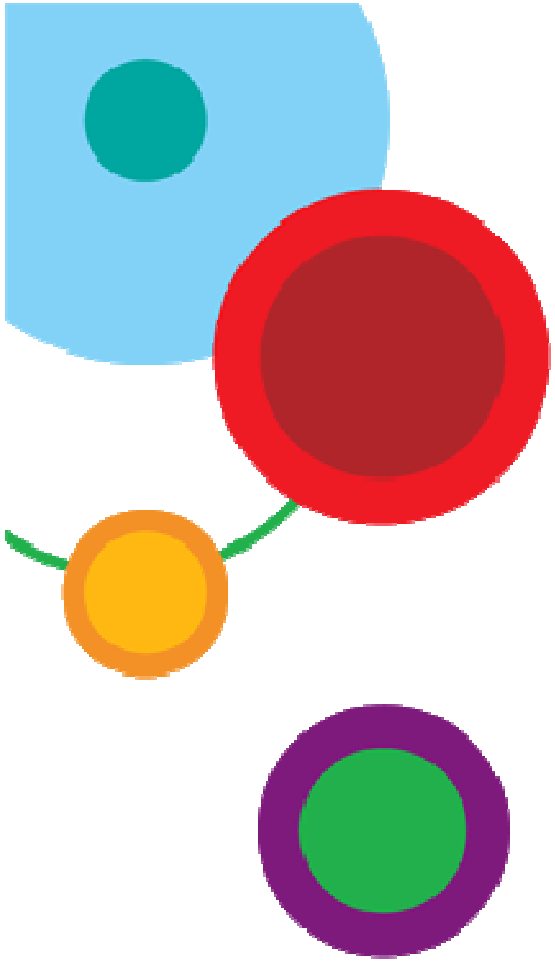


Introducing:

The “IMS IMPROVE” Team

OVERVIEW

FIRST LET'S LOOK AT:



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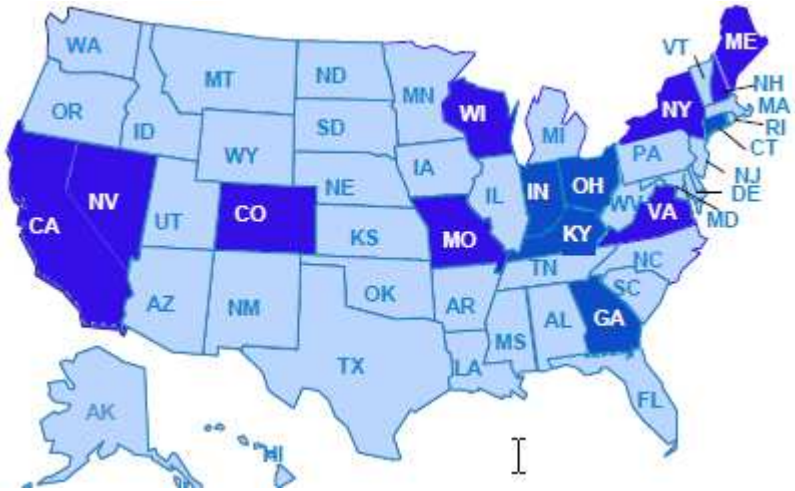


The WellPoint IMS Environment – Part One

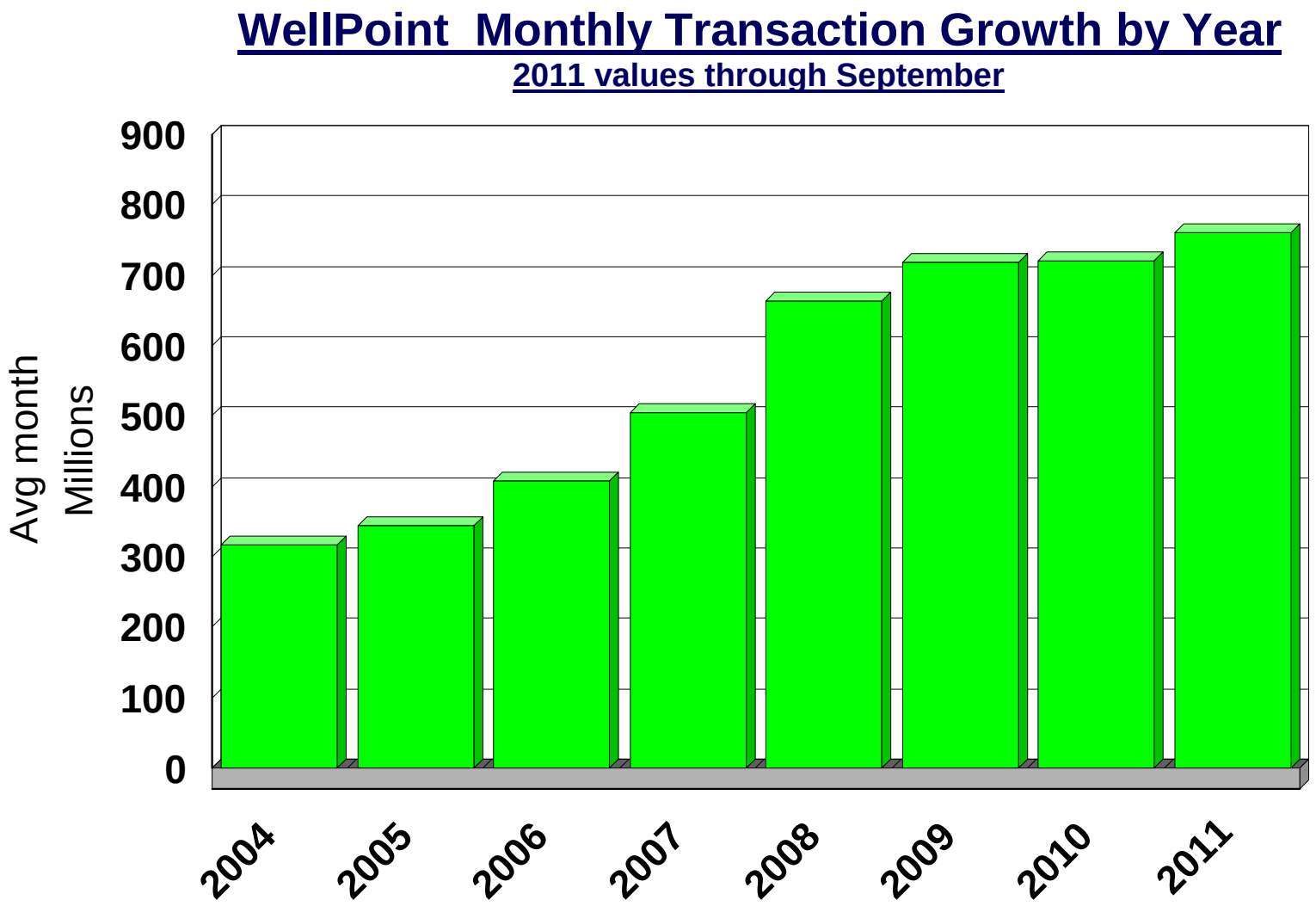
The primary application is WellPoint Group Systems (WGS).

- 35 Million claims transactions generated from members in WellPoint's affiliated health plans are processed each business day - 180 Million Weekly
- Average host response time is .05 seconds.
- The Peak Transaction Rate is 1,200 per second.
- 200 Master HALDB's There are 1,906 Total HALDB partitions
- IMS downtime scheduled thirty minutes per week.

The WellPoint IMS Environment – Part Two

- IMS is at Version 11 on 37 IMS Systems. As a member of the Quality Partnership Program, WellPoint adopted IMS Version 11 before it was generally available.
- 16,000 available MIPS on IBM z10 family processors.
- There are 450 IMS Message Regions. The bulk of the WellPoint online work is processed on two resource sharing plexed IMS Control regions.
- Storage: 129 Terabytes of IBM DASD storage. 2,820,660 GB of data on IBM virtual tape.

Transaction Growth at WellPoint



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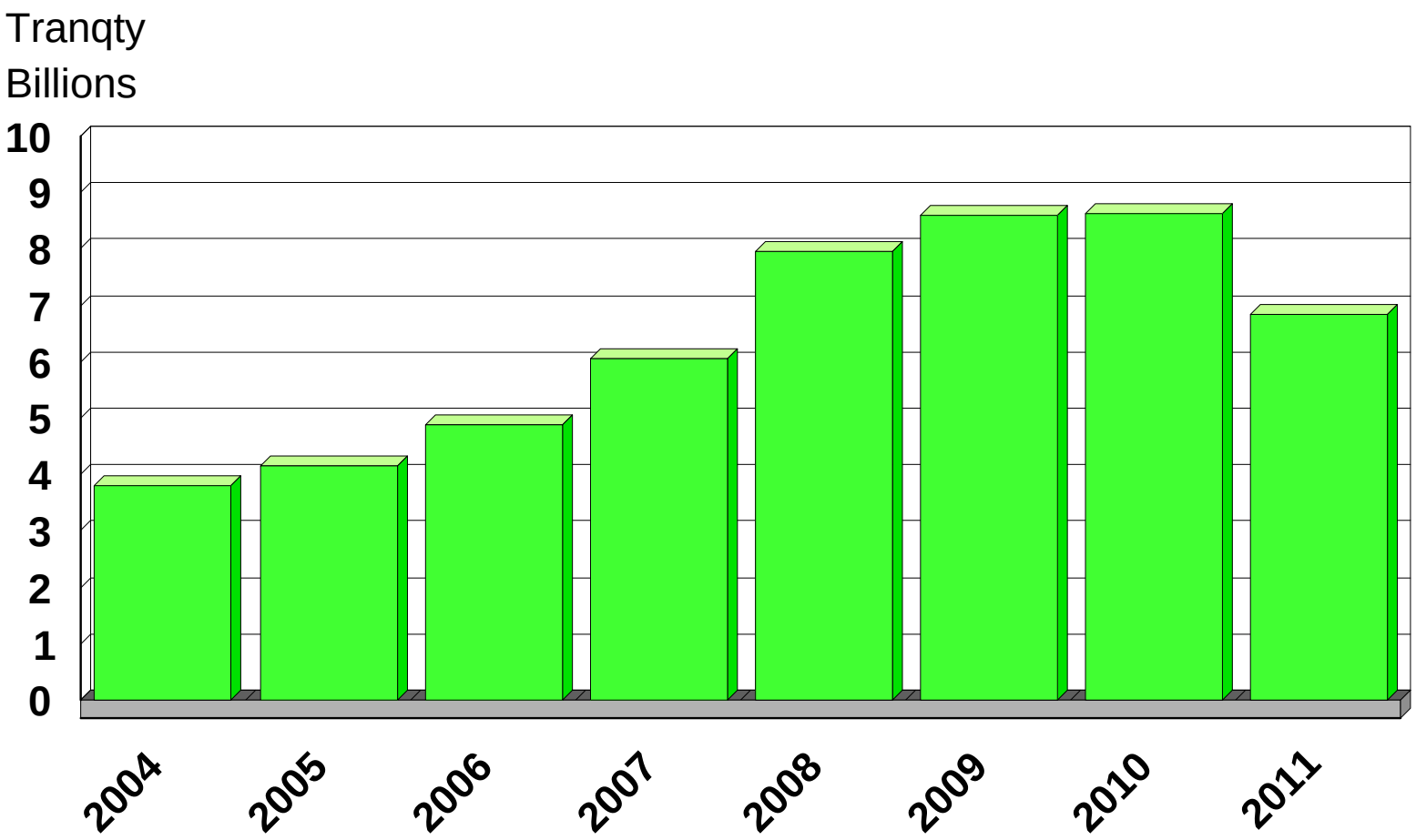
Transaction Growth at WellPoint

WellPoint Yearly Transaction Growth

(2011 projected transaction total is over 9.1 Billion)



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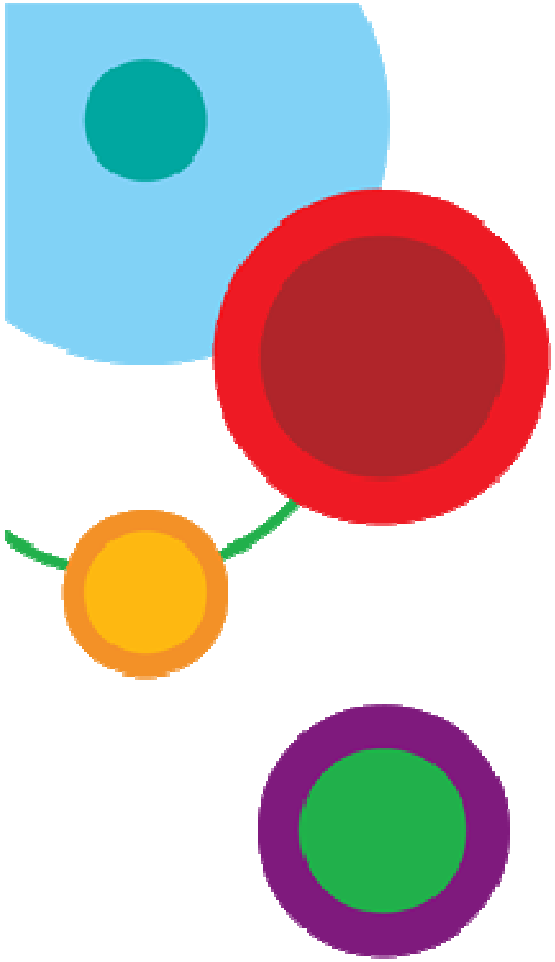


A SHARED CHALLENGE

- ***Objective***
- ***Compelling reasons for action***
- ***Proposed work streams***
- ***Anticipated Benefits***

A Shared Challenge: Improving the WellPoint IMS Environment

Objective:

- Improve scalability, stability, efficiency, maintainability, and availability while lowering the costs of WellPoint's IMS environment.

- This is to be accomplished by moving to an IBM Best Practices approach and leveraging IBM's IMS tool set and IMS enhancements.

A Shared Challenge: Improving the WellPoint IMS Environment

Compelling Reasons to Act

- WellPoint Membership is growing.
- Membership growth results in commensurate increases in
  - Transaction Volume
  - System Loads
  - Batch Processing times and online delays
  - Database Contention.
  - Individual Database growth and maintenance
  - Multiple Batch Check pointing methods in place
- WellPoint had reached the boundaries of existing architectural limits for partitioned databases.
- Identified opportunities to lower the cost of ownership.

A Shared Challenge: Improving the WellPoint IMS Environment

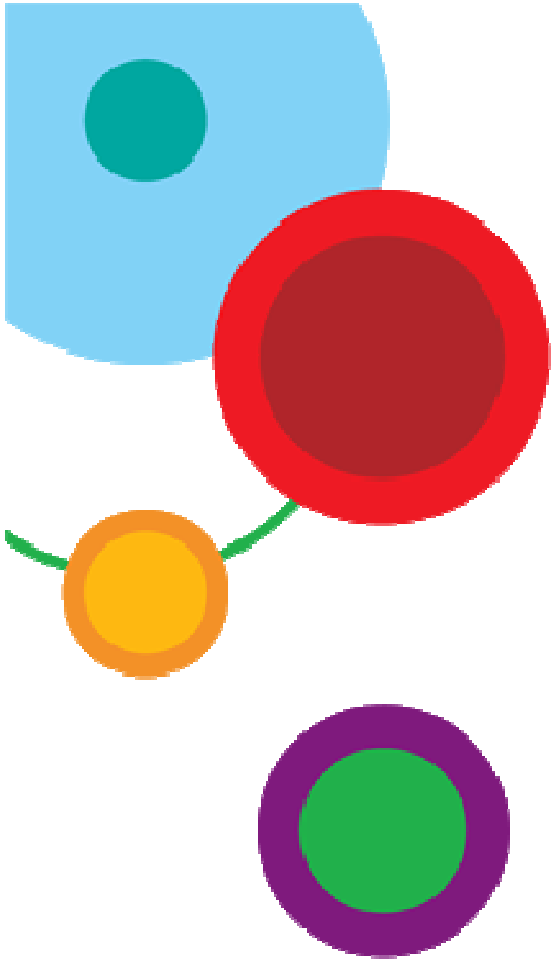
Project Objectives for WellPoint

- Accelerate the migration to HALDB for improved scalability, availability, stability, performance, and efficiency.
- Implement an IBM Best Practices approach for checkpoint / restart.
- Leverage the IBM IMS Tools, thereby delivering substantial savings.
- Provide IBM Toolset knowledge transfer throughout the initiative.

A Shared Challenge: Improving the WellPoint IMS Environment

Benefits

- Standardization of tooling aligns with WellPoint's Infrastructure Strategy. This simplifies operating environments and provides consistency across WellPoint.
- Improved application scalability, performance and mitigation of risks associated with the current state.
- Migrated to IBM proven approach for best in class IMS scalability and availability.
- Development of a substantial partnership with the IMS Lab as IMS applications are enhanced to bolster the future of WellPoint.



OUR APPROACH

THE “IMS IMPROVE” PROJECT

- ***Tools Migration and Conversion services for IMS Toolsets***
- ***The HALDB and CHECKPOINT Conversions***
- ***Lists of IBM IMS Tools installed***
- ***Challenges***

Our Approach – The "IMS IMPROVE" Project

Project Scope Summary: IBM provided project management and technical resources to support the IMS Improve Project. The main components of the project were:

- **IMS Tools Migration services**
  - Replacing existing IMS tools with IBM IMS tools
  - Installed and customized software in 4 separate configuration environments, those included: Development, System Integration Testing, User Acceptance Testing, & Production.
  - Customized software and tested in 14 separate regions

- **Provided Conversion services to help convert the existing IMS Utilities to IBM IMS Utilities**
  - Tested and converted 3,410 objects (JCL and PROC's)

Our Approach – The "IMS IMPROVE" Project

- HALDB conversions
  - 1022 Databases converted to HALDB
    - 168 Production Databases (6 full function; 62 to HALDB - 2 with partition selection exits)
    - 954 Test Databases (786 full function; 168 to HALDB - 6 with partition selection exits)
- Application Changes
  - Approximately 4,000 JCL and PROC / PSB changes
- Checkpoint remediation
  - Replaced automated check pointing utility with IMS extended checkpoint restart for 39 COBOL programs
  - Tested 2,500 jobs that were converted to use the IMS Program Restart Facility (PRF)

Our Approach – List of Installed IBM IMS Tools - Part One

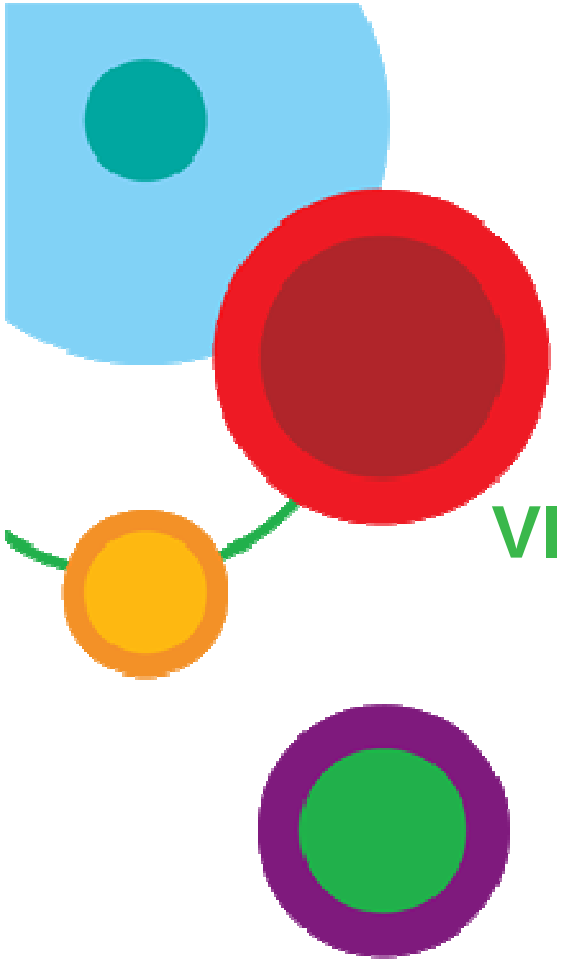
	IMS TOOLS	
	IMS Cloning Tool for z/OS	5655-U91
	IMS High Availability Large Database (HALDB) Toolkit for z/OS	5655-N46
	IMS Program Restart Facility	5655-E14
	IMS Online Reorganization Facility for z/OS	5655-H97
	IMS Batch Backout Manager	5697-H75
	IMS (CCF) Command Control Facility	5655-R58
IMS Database Solution Pack for z/OS		**5655-S77**
	IMS HP Load	5655-M26
	IMS HP Unload	5655-E06
	IMS High Performance Image Copy for z/OS V4R2 (HPIC)	5655-N45
	IMS Library Integrity Utilities for z/OS V2R1 (LIU)	5655-U08
	IMS HP Pointer Checker	5655-U09
	IMS HP Prefix Resolution	5655-M27
	IMS Index Builder	5655-R01
	IMS Database Reorganization Expert	5655-S35

Our Approach – List of Installed IBM IMS Tools - Part Two

IMS Tools Base for z/OS	**5655-V93**
Generic Exits	
Policy Services	
IMS Tools Online System Interface	
Tools Knowledge Base	
Distributed Access Infrastructure	
IMS Hardware Data Compression Extended	
IMS Recovery Solution Pack	**5655-V86**
IMS Database Recovery Facility for z/OS	
IMS Database Recovery Facility: Extended Functions for z/OS	
IMS High Performance Change Accumulation Utility for z/OS	
IMS Fast Path Solution Pack	**5655-W14**
IMS High Performance Fast Path Utilities (HPFPU)	
IMS Database Repair Facility (DB Repair)	

Our Approach – The “IMS IMPROVE” Project

- There were changes required across many products. This added some complexity and required coordination across multiple teams (application code, databases, JCL, software products, security, and libraries).
- HALDB conversions were performed as part of the monthly maintenance window. The conversions were concurrent with the implementation of more than 400 other infrastructure and application changes.
- IBM labs worked closely with Delivery on deployment of the tools.
- The IMS environment was enhanced as part of the project. Security was updated for database access; while 100 unused databases were removed.

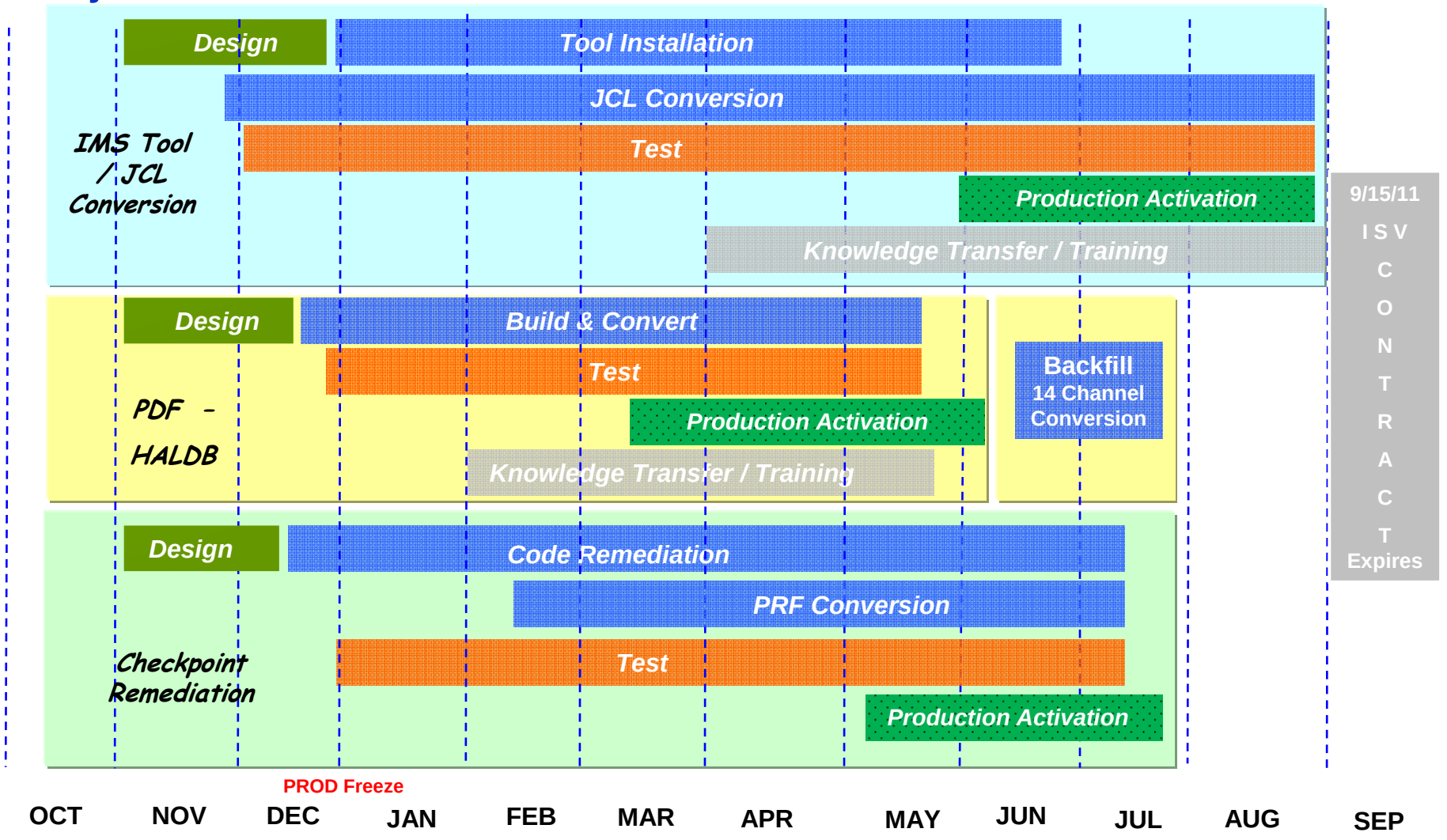


VIEW FROM THE PROJECT MANAGER

- ***Project Schedule***
- ***Resources and Time Expended***
- ***What methods of communication were used?***
- ***What were the lessons learned?***
- ***Changes to Approach?***

View from the Project Manager – Project Schedule

Project Schedule



View From the Project Manager – IBM Resources and Time

Category of Resources	# of resources Min	# of resources Max	Length of time (wks)
Project Management	2	2	48
Work Stream 1 - IMS Tools			
PM	1	1	46
SME (tool / JCL)	1.5	8	46
MakeIT (3rd party provider)	2	6	34
Work Stream 2 - HALDB			
PM	0.5	0.5	35
SME	1	2	35
Work Stream 3 - Remediation			
PM (onshore / offshore)	2	3	46
SME (code / test)	3	12	46
Service Delivery Support *(significant contributors not tracked as part of the project)*			
Tech Support			
Cutover Delivery Support			
IBM Standard Support			

View From The Project Manager - Method of Communications

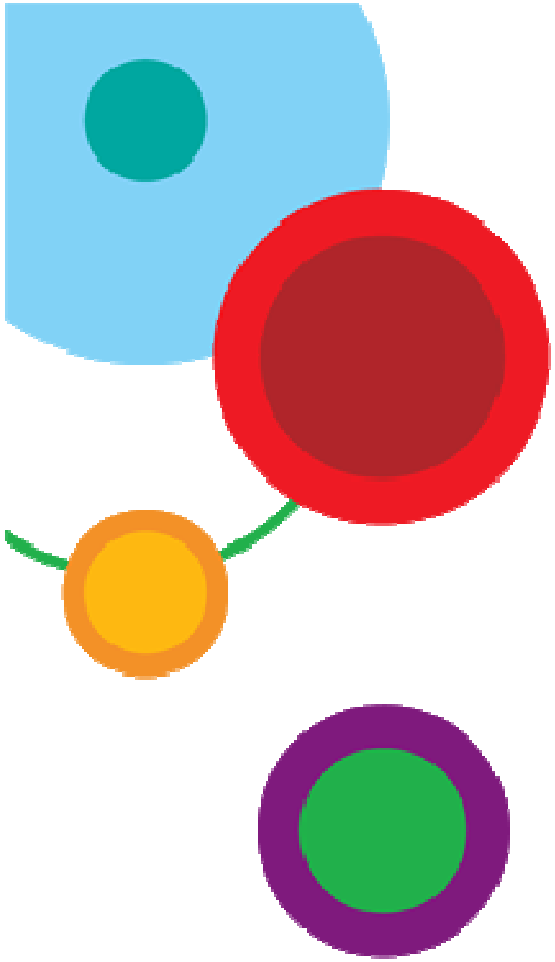
- At a technical level, regular meetings (WLP & IBM) for each of the Work Streams (WS) were occurring daily and in some cases multiple sync points during the day.
- At a project level, PM meetings occurring firstly with the IBM WS leads and then with the WLP PM on a weekly basis.
- Being onsite with the WLP PM facilitated impromptu meetings throughout the project on an as needed basis.
- At a management reporting level, there was a weekly Project Status meeting for the joint WLP & IBM management team.
  - In addition, there were weekly call's that our project status was reported to the WLP IPO.
- At an executive level, monthly project review meetings for the joint WLP & IBM executive team were scheduled.
- As the project neared completion, we instituted 2 daily calls. One for a technical nature and the other covering all open project related items, both being attended by WLP & IBM.
- Communication also included emails and the incident reporting process (WLP's – IM tickets and IBM's – PMR's).
- Both a Teamroom (Lotus Notes) and Sharepoint (WLP internal) repository were established and maintained throughout the project.

View From The Project Manager – Lessons Learned

- Don't underestimate the importance of existing processes specifically change requests, production implementation, and trouble reporting.
- Maintain a single authoritative source for requirements, decisions, and action items.
- Manage the email traffic (# of, distribution lists, email strings).
- Face time with project members is invaluable, providing clarity, expedited decision making, process and issue resolution, and keeping an overall pulse on the project.
- Even among technical folks not all "tech" jargon means the same or is understood. We need to share, clarify, and confirm project anomalies.

View From The Project Manager – Changes to Approach

- The work streams would have been prioritized differently.
- Communicate agreed upon project expectations and understandings across all levels. This includes technicians, managers, and executives.
- Utilize formal sign-offs on project requirements. Approved requirements would then be referenced throughout the project.
- Establish a better balanced work schedule between the offshore team and the onshore team.



OUR RESULTS

- ***Benefits Realized***
- ***HALDB Example***
- ***Benefits Summary***

Our Results: Benefit Realization

Three benefit categories

- **Financial** – Significant savings to WellPoint by removing multiple software licenses (millions)
- **Standardization** - The IBM IMS tools enable…
  - Moving to a 24 X 7 online availability – improved business continuity/availability
  - Consistent toolset and standards across all IMS environments – reduced training and skill requirements
- **Best practices** for IMS workloads as a result of the project implementation:
  - Reduce contention
    - More granular database partitions
    - Smarter checkpoints
    - Reduced contention abends, and therefore, less program restarts
    - IBM IMS SMEs addressing an active database which has the most contention caused failures
  - Better controls for data access for ad hoc users

Our Results: Benefit Realization – HALDB

Reduction of U777 Deadlocking

Average Daily abend count for the month of August

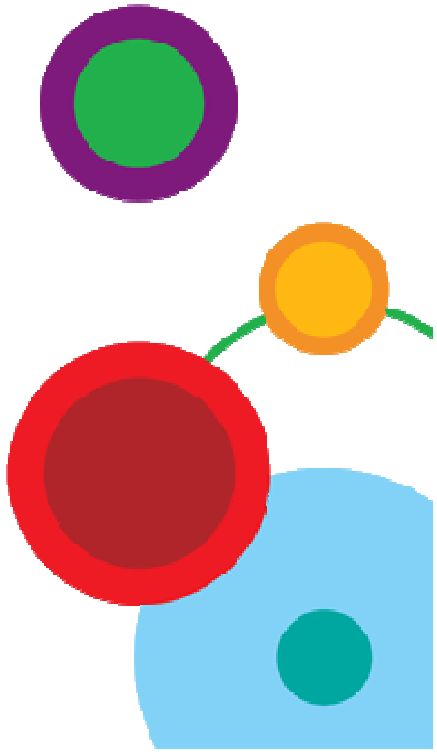
Transaction	Before	After
TX1	450	170
TX2	43	23
TX3	24	7
TX4	9	3

The anticipated benefit is at least a 50% reduction in deadlocking through the use of HALDB (and usage of Partition Selection Exits).

Our Results: Benefit Summary

- **Strengthened the partnership between WellPoint and IBM**
- **Provided the opportunity to evaluate existing processes**
- **Resource utilization reduction through review of current processes**
- **Establishment of tighter controls over access to operational data**
- **Reduction of ABEND 777 thru the use of HALDB and PSE (via even distribution of data in the partitions)**
- **Align with IBM best practices for checkpoint/restart**
- **Identified opportunities for additional tuning and process enhancements**

In this presentation, we described how collaboration between WellPoint and IBM achieved shared goals by completion of the following value added activities:



- Brought together disparate groups into a cohesive team to complete the IMS Improve project within an aggressive timeframe
- Leveraged a major tools migration to improve processes and system efficiencies
- Reinvested Software savings to complete needed enhancements and housekeeping
- Harnessed a strong executive commitment enabling the team to execute effectively. Benefits realized included:
  - Quick resolution of issues
  - Rapid engagement of needed resources.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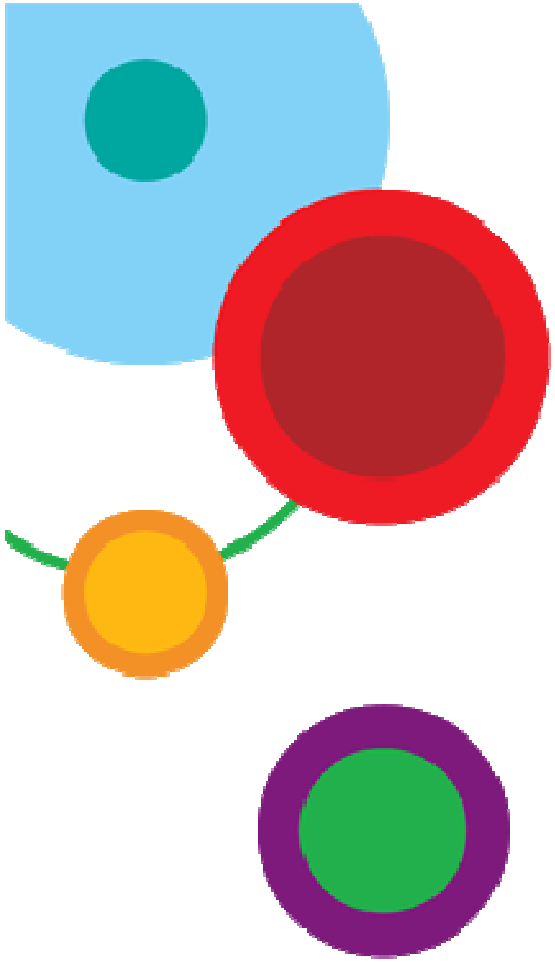

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