

Plotting a COBOL Course for the Future:

Migrating from HP e3000 Based Applications to New HP Technologies

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Agenda

- Today's IT Landscape
- The New Micro Focus
- Platform Migration With Micro Focus
- What's Involved In An HP3000 Migration
- Potential Approaches

Agenda (cont.)

- Related Micro Focus Products
- Looking To The Future

Setting The Context: Today's IT Landscape



IT Landscape

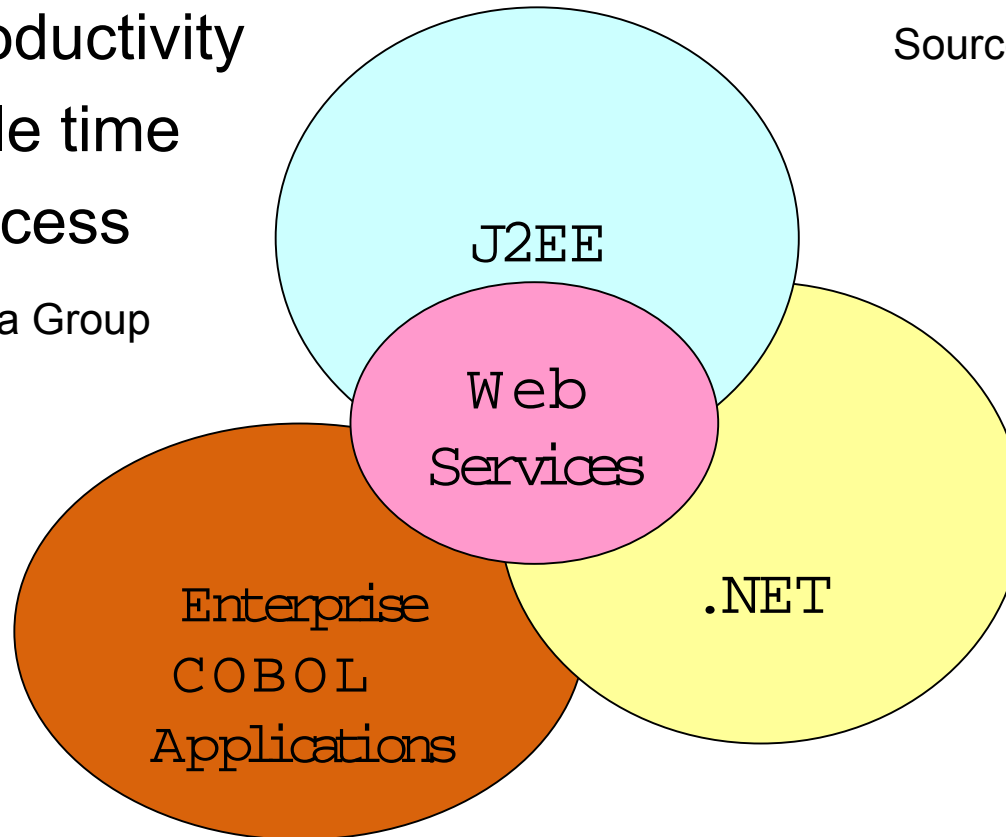
“Back to basics is Key”

- Increase productivity
- Reduce cycle time
- Improve process

Source: Meta Group

“Application Integration is Key”

Source: Gartner Group



Micro Focus Helps In All Key Areas

The New Micro Focus



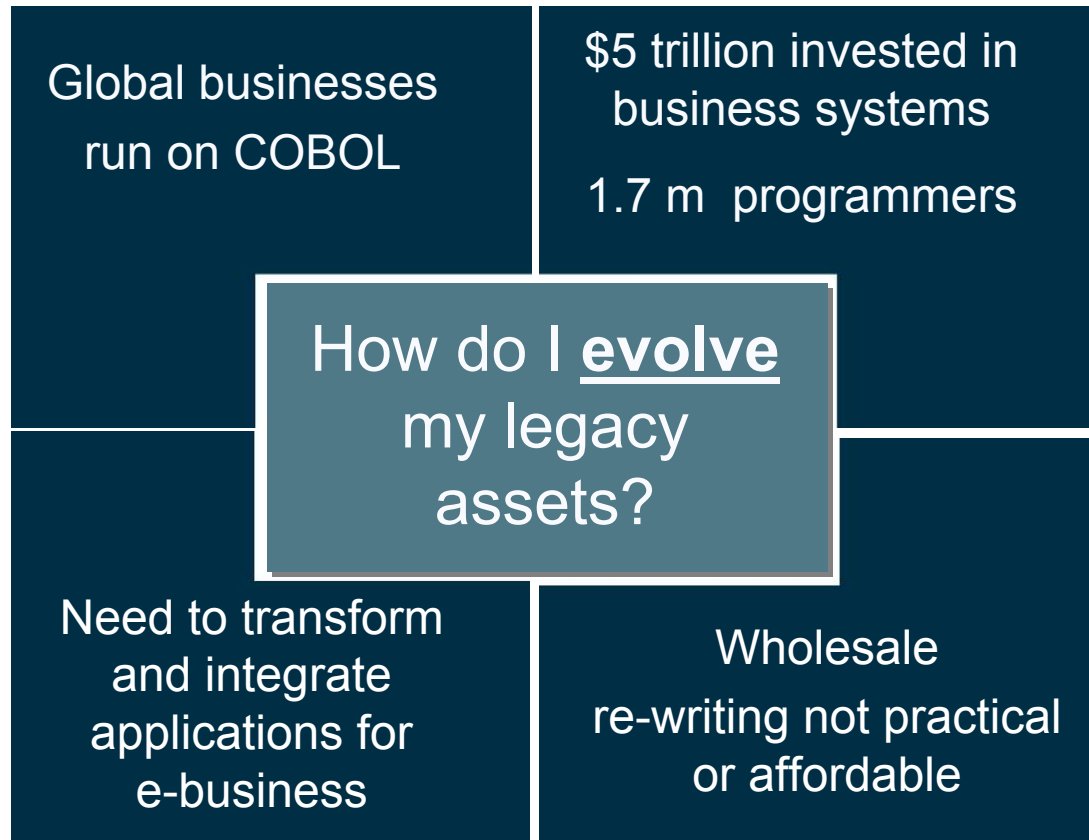
Micro Focus: a 26 Year Old Start-up



- Leader in COBOL development solutions
- Founded in 1976 - independent again in 2001
- Global company with over 450 employees world-wide
- Principal offices in the UK, US & Japan
- Over 10,000 customers

Track Record of Success, Renewed Focus

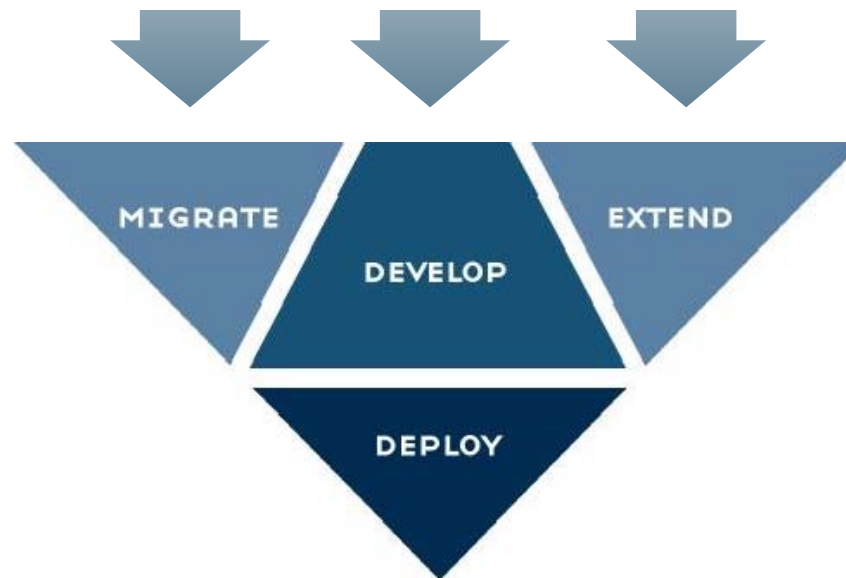
COBOL is Alive and Well



...To Meet The Needs of the Business

Micro Focus

Enterprise Application Assets



New Applications on New Platforms

“The fastest, most effective way to migrate, develop, extend and deploy enterprise applications”

Where We Specialize

IBM Mainframe System Evolution

1. Application Development

4. Web-enablement & Integration

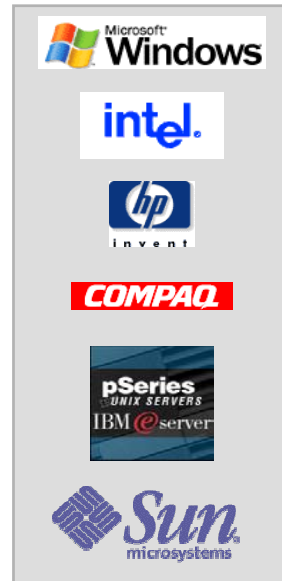


IBM zSeries
S/390



Open System Application Evolution

2. Application Development, Extension & Deployment



Platform Migration

3. Application Migration



Migrations from Wang,
UNISYS, Data General,
HP3000, DEC, etc.

IBM zOS & DOS/VSE
Re-hosting

5. System Renovation

6. Application Re-engineering & Replacement

Interoperability: WebSphere, XML, J2EE, .NET and Web Services

Why Migrate with Micro Focus?



- Clients Migrate to MF COBOL because
 - We offer the de-facto COBOL for Windows/UNIX
 - All major OEMs license our COBOL technology
 - We offer breadth and depth of COBOL products and expertise
- We focus on
 - Facilitating cost effective migrations
 - Maximizing development team productivity on new platform
 - Future proofing COBOL applications

Why Migrate with Micro Focus?



- Migration & Transformation Consortium (MTC)
 - Vital to Micro Focus and our customers success
 - We do NOT focus our resources on doing actual migrations
 - This is a key reason why we are a “trusted advisor” to clients

Migration is the Beginning, Not the End

Service Providers and Levels of Involvement

Strategic Consulting	Other Partners
Project Management	MTC
Code Modification/Testing Staff	MTC
Specialist Consulting	Micro Focus & MTC
Analysis & Migration Tools	Micro Focus & MTC
Platform	Micro Focus

Service Providers Are Key

The HP OEM Partnership

- HP and Micro Focus partnership has delivered Micro Focus COBOL for all HP UNIX platforms for nearly two decades
 - COBOL Developer Suite
 - Object COBOL developer suite
 - Server Express
- HP Provide Equipment
- Micro Focus now develops whole product working with appropriate HP labs
- HP, Oracle and Micro Focus work together to ensure Micro Focus Cobol on HP boxes supports latest releases of Oracle

what's Involved In HP300o Migrations



User Interface (CSS 1)

HP3000 System Component	What's Involved In Migration?
VPLUS Screen Form Management System	VPLUS emulator on target platform OR VPLUS to Browser or GUI conversion technology OR Re-engineer to new client using Java or VB.Net
HP3000 Intrinsic Functions Called from Forms	Intrinsic Function emulation libraries on target platform OR Rewrite necessary functions in new client language as part of re-engineering

Application Code (CSS 2)

HP3000 System Component	What's Involved In Migration?
Business Logic	Automatically convert the HP COBOL II proprietary language syntax to supported ANSI standard or Micro Focus COBOL dialect OR Re-engineer code to remove duplication and to modularise it before it is migrated to new target platform
HP3000 Intrinsic functions called from COBOL source	Intrinsic Function emulation libraries on target platform OR Rewrite necessary functions in COBOL or another language called from COBOL making use of native OS capabilities

Data stores and Data (CSS 3)

HP3000 System Component	What's Involved In Migration?
Data I/O Database KSAM Files	Database I/O stays intact if - IMAGE or TurboIMAGE emulator is used - IMAGE call to RDBMS mapping utilized OR Is removed if re-engineering to RDBMS. KSAM file I/O stays intact as it uses standard ANSI COBOL file I/O syntax
HP3000 Intrinsic functions called from COBOL source	Intrinsic Function emulation libraries on target platform OR Rewrite necessary functions in COBOL or another language called from COBOL making use of native OS capabilities

System Functions (CSS 4)

HP3000 System Component	What's Involved In Migration?
OLTP capabilities within MPE	Provide using OLTP system on target platform
Batch Control, Scheduling and JCL	Utilize JCL emulation capabilities on target platform OR Convert or Rewrite JCL in UNIX script or .Bat scripts for Windows OR Re-engineer batch programs to provide a set of application service components for the new target environment
3 rd Party System Aids like Print Spoolers etc.	Utilize emulation capabilities OR Convert, Replace or Re-write

Three Basic Approaches

Re-hosting is making the minimum changes possible and utilizing HP3000 emulation technology on the target platform to replicate existing application functionality.

Native Migration is making the necessary changes to fully exploit native technology on the target platform, rather than utilizing HP3000 emulation technology, to replicate existing application functionality.

Three Basic Approaches

Re-engineering is making whatever changes are required to fully exploit native technology to provide existing application functionality and deliver incremental improvements.

Which Approach(es) is/are Best For You?

Which Is The Best Approach?

- Will depend on your particular organizations
 - Business drivers
 - Budget
 - IT strategy
- Using different approaches can make sense
 - All three in three different phases
 - Using different approaches on different applications based on their importance to the business
 - Using different approaches on distinct elements of the application

Which Is The Best Approach?

- Micro Focus can help by ensuring you
 - Have all the information you need to develop a sound strategy
 - Know what will be required to implement your strategy within budget
 - Understand how we can supplement your internal skills to deliver on time

Develop Your Strategy Before Starting Migration

Related Micro Focus Products



Application Migration Products

■ Net Express

- Desktop COBOL IDE

■ Revolve

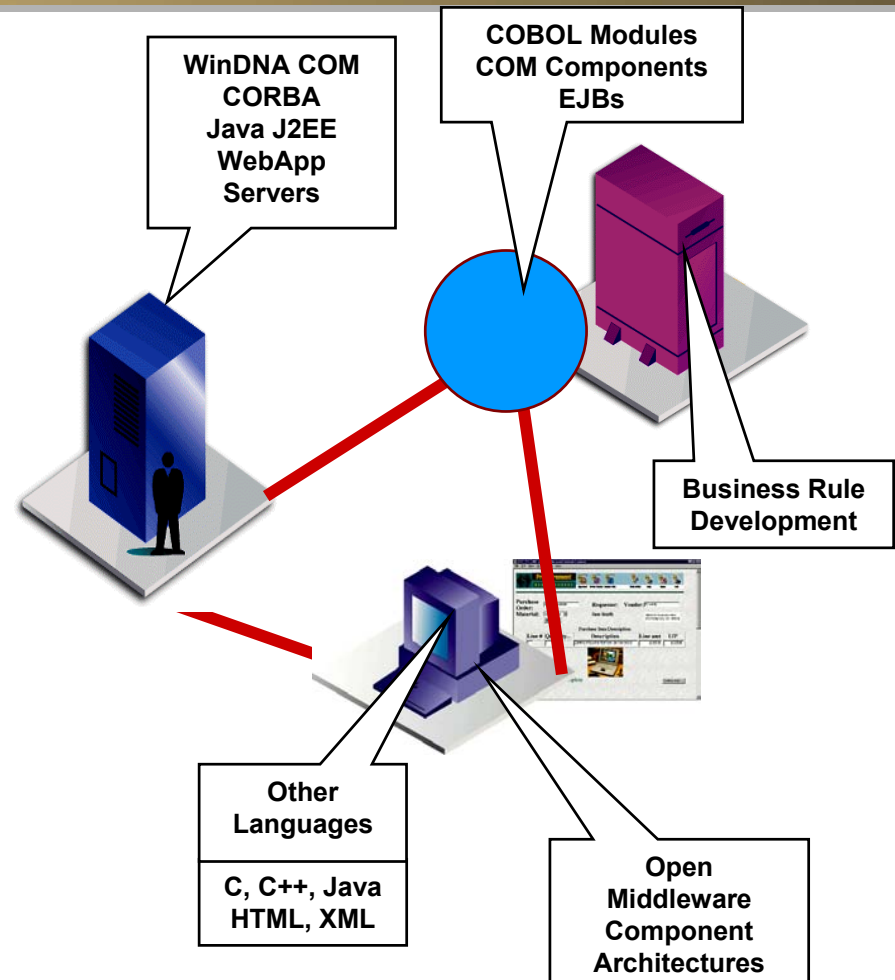
- COBOL analysis and understanding

■ Server Express

- UNIX COBOL development environment

■ Application Server

- Enables write once, run anywhere



- Sophisticated IDE including data tools
- GUI Screen Painting with Dialog System

- Re-use existing COBOL assets
- Integrate with e-business systems
- Accelerate time to market



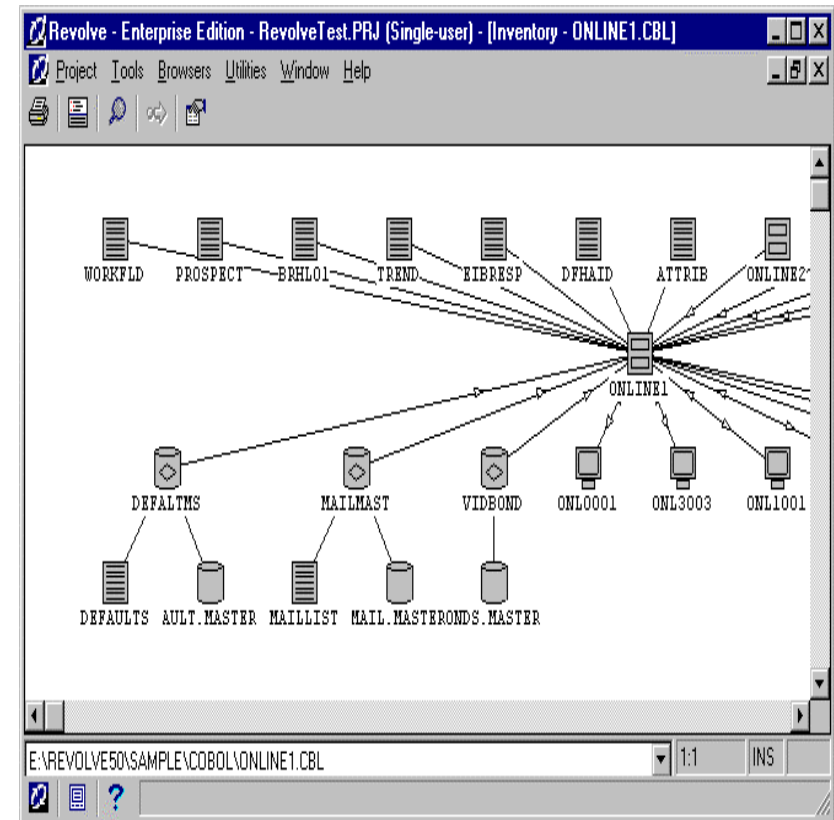
Revolve

■ Application Understanding

- Inventory/missing components
- Visual views/unused elements
- Documentation

■ Local change analysis

- Eliminate unused code
- Impact analysis/scoping effort



Market Leading COBOL Analysis Product

Server Express

- **Powerful UNIX development environment for COBOL**
 - Tight coupling with Net Express
 - Rapid edit, compile, debug
 - Utilise full power of chosen platform including 64-bit
 - Production debug/monitoring facilities

The screenshot displays a COBOL development environment window titled 'File Edit Terminal Communication Options Script Help'. The main area shows a COBOL program with line numbers 100 through 120. The code includes a 'play-game' section with logic for user input and game state. At the bottom, there is a status bar with function keys F1 through F12, a 'SCO-ANSI' indicator, a clock showing '13:31', and buttons for 'Caps', 'Hold', and 'On Line'.

```

100 play-game section.
101 play-1.
102     perform with test after
103         until char not = "y" and char not = "y"
104         call clear-screen
105         display
106             "To select a square type a number between 1 and 9"
107         upon crt
108             perform init
109             move "Shall I start ? " to question
110             perform get-reply
111             if char = "y" or char = "y"
112                 move 10 to check(5)
113                 perform put-move
114             end-if
115             perform new-move until game not = spaces
116             move "Play again ? " to question
117             perform get-reply
118             end-perform.
119
120 play-stop.
  
```

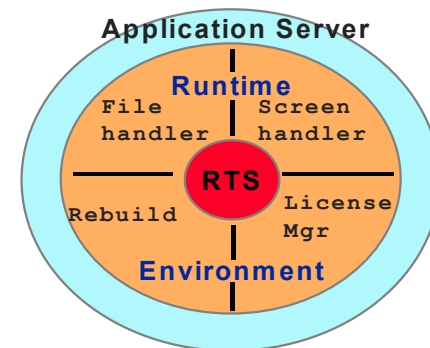
At the bottom of the window, a status bar shows: F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12, SCO-ANSI, 13:31, Caps, Hold, On Line.

Provides RAD for COBOL on UNIX

Application Server

■ COBOL Deployment on Any Platform

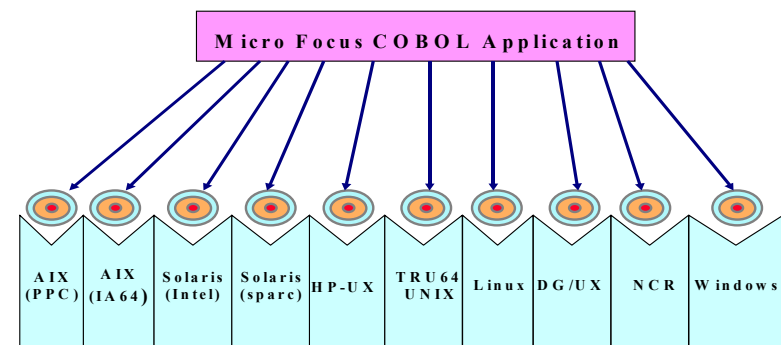
- Single source, multiple deployment platforms
- Insulation from architecture variations



■ Benefits

- Create business processes once
- Optimized application performance
- Increased reliability and scalability

Write 'once' run 'anywhere'



J2EE for COBOL, For 2 Decades

Extend your COBOL Assets

- **Reuse your COBOL Business Logic – No Need to Rewrite!**
- **Chose how to Web enable**
 - Use extensions to the COBOL language
 - Server-Side scripting with HTML from COBOL
 - Componentize your COBOL Logic
 - Use Java to build a Web Front End
- **Deploy Distributed Applications**
 - Deploy with Net Express Application Server on Windows

Bridge “Islands of Technology”

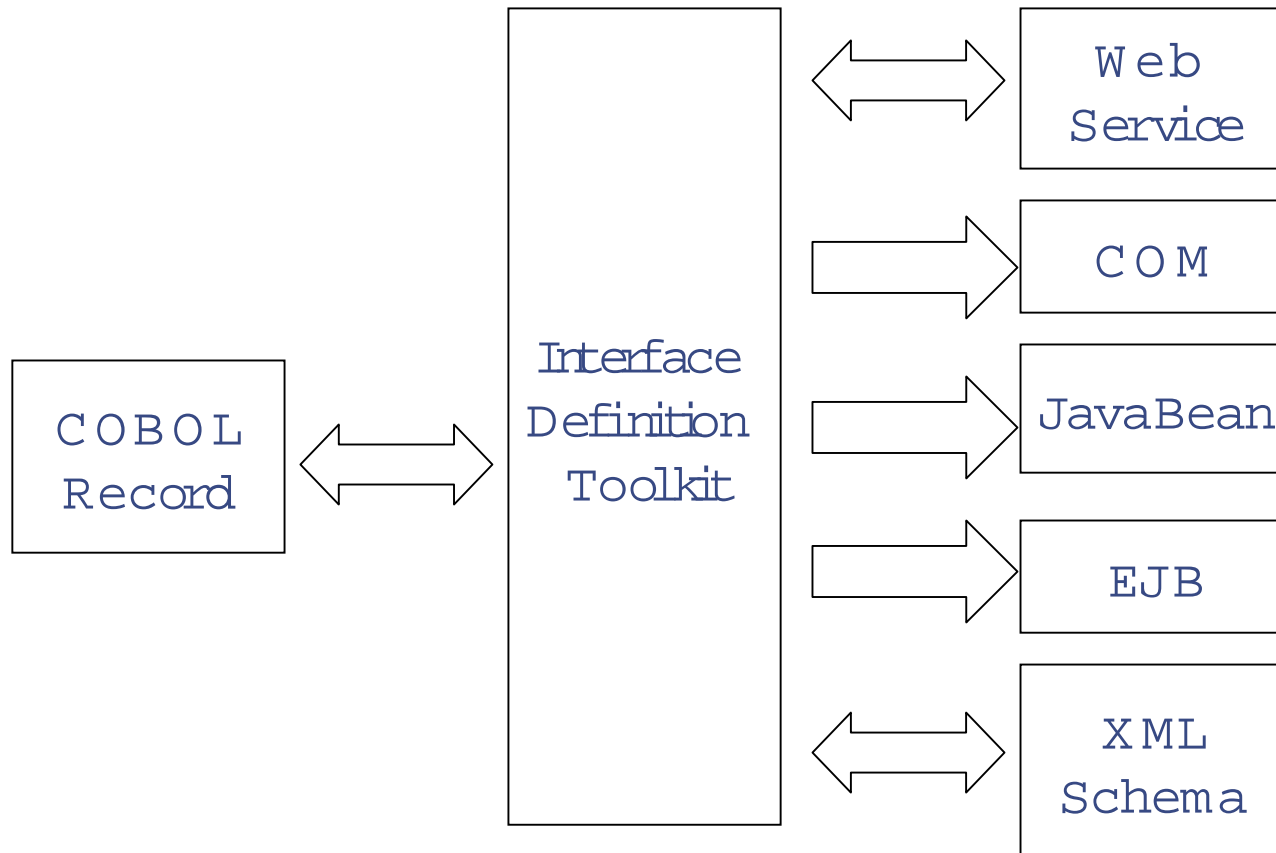
Integrate With Today's Platforms



- **Micro Focus enables organizations to choose your component and deployment architecture**
 - Java/EJB
 - COM/DCOM and MTS
 - Microsoft .NET Interoperability
 - Combine technologies by creating single Java/ActiveX Object COBOL classes

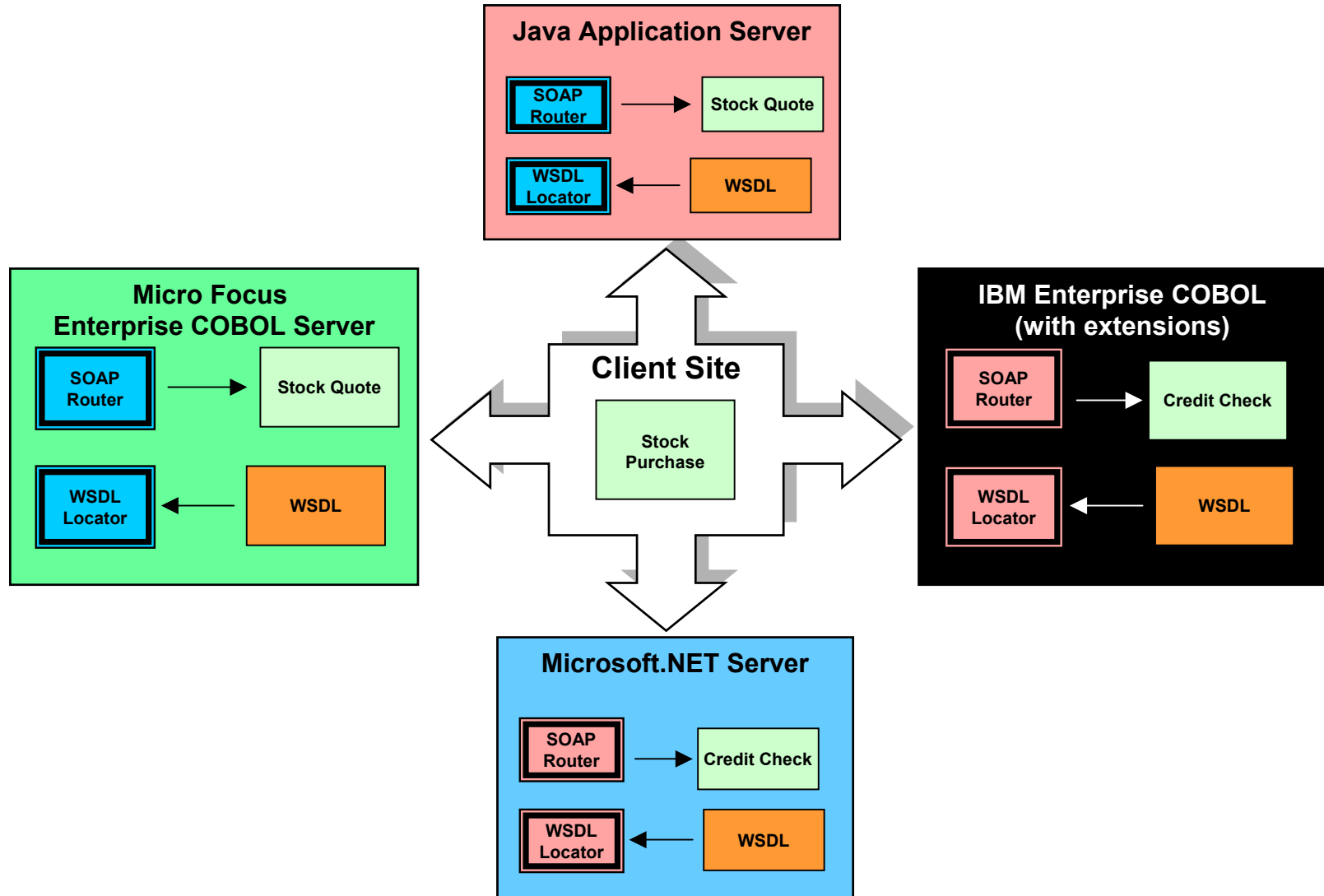
To Deliver On Business Requirements

Looking to the Future

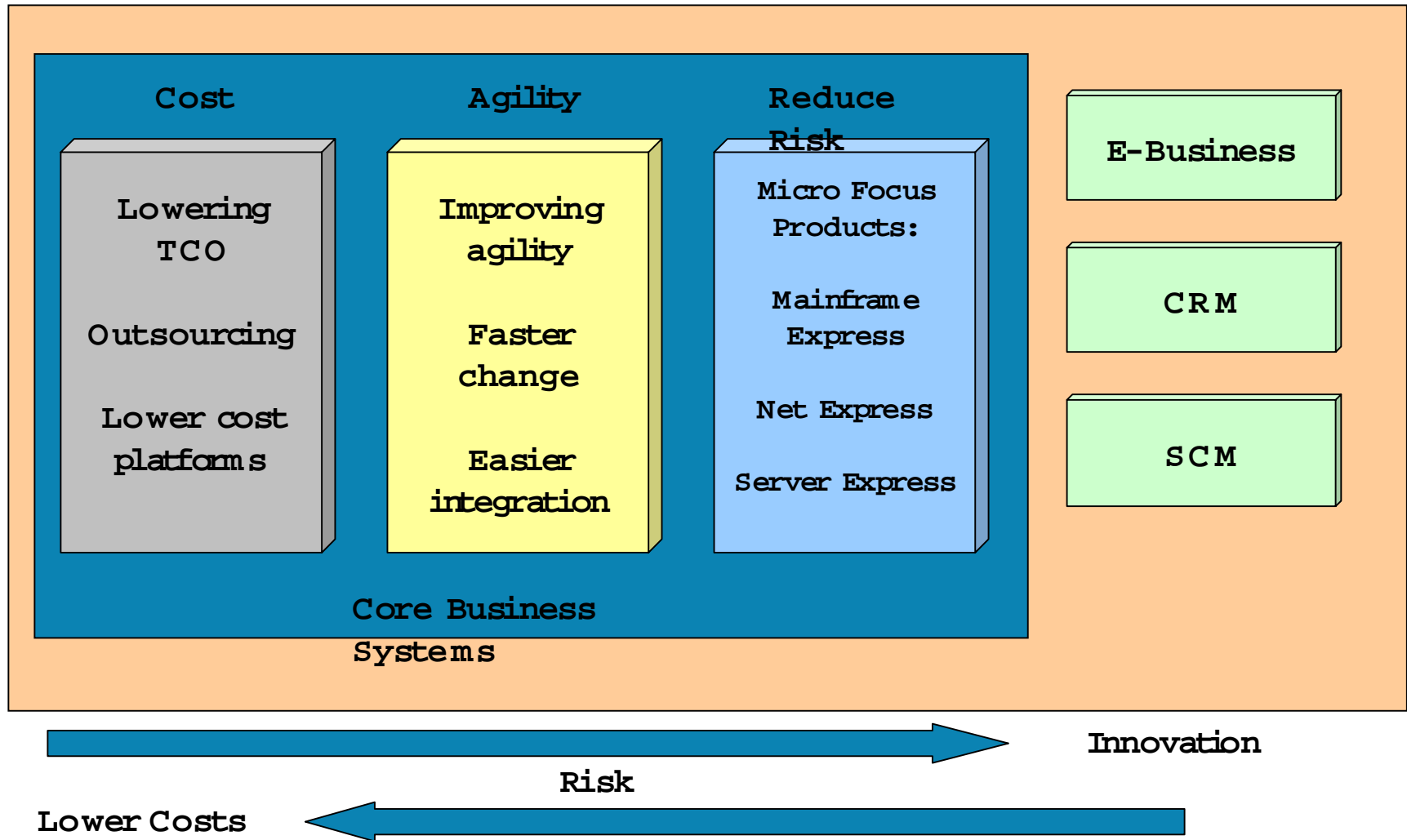


COBOL Meets the Outside World as Never Before!

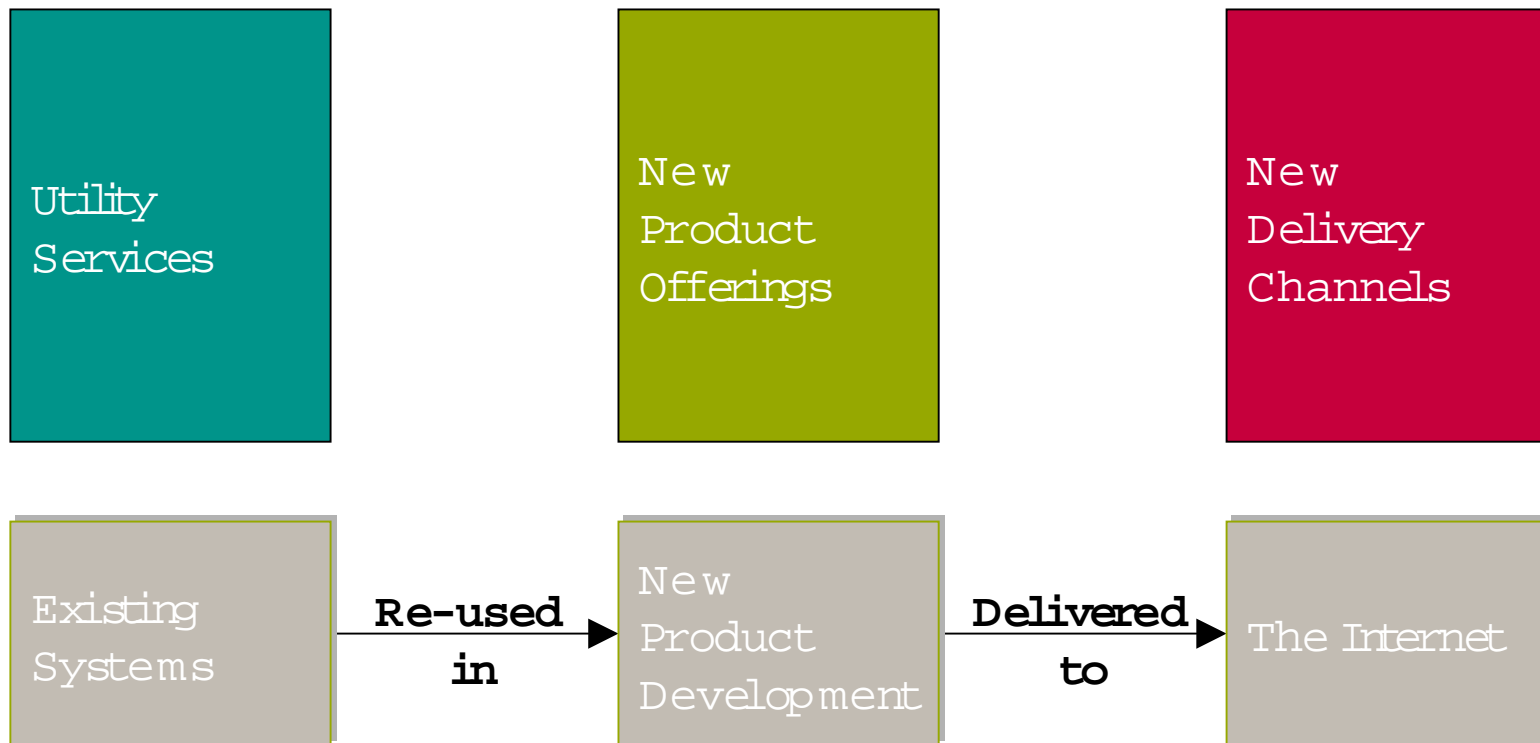
Web Services Integration for COBOL



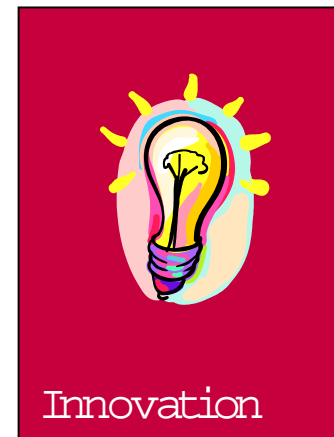
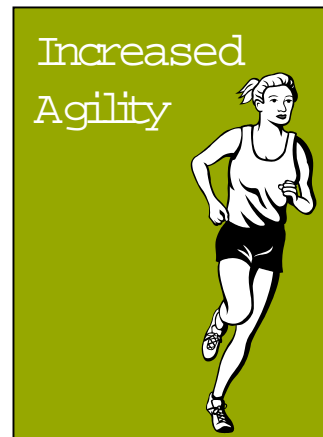
Business Imperatives



Architectural Partitioning



Investment Partitioning



Existing
Systems

Re-used
in

New
Product
Development

Delivered
to

The Internet

Questions and Answers





Interex, Encompass and HP bring you a powerful new HP World.

