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Consolidate B2B(EDI) on IBM WebSphere and increase its value by applying BPM and BAM

Gijsbert in 't Veld – Covast CTO





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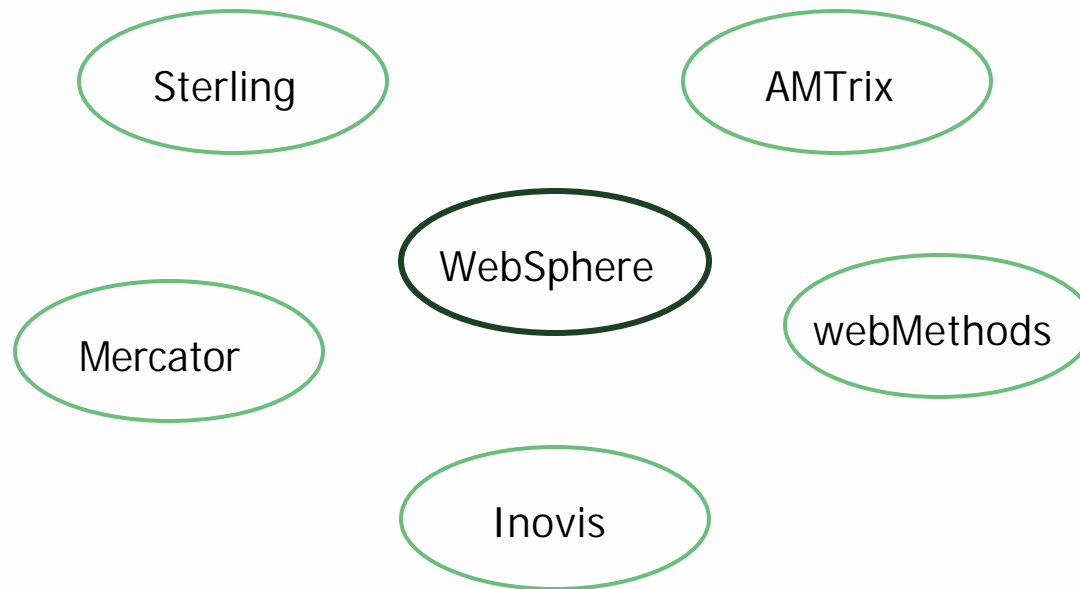
What you have today

The current integration environment



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Integration Islands





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Disadvantages of the current situation

- Multiple different toolsets to master
- Not a single support point
- High maintenance costs
- Not an integrated operational view
- Need integration software to integrate the integration islands



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What keeps you from changing that?

- It is very expensive to manually convert these environments to a new integrated solution:
 - Lots of different document types are implemented
 - Loads of maps are used
 - On average you need to spend 4 days to convert 1 map
 - It is not uncommon to have hundreds of maps
- Bottom line: the costs of manually converting these situations do not outweigh the advantages of having one integrated solution



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What now?

- Covast have a product that automates the conversion of the document definitions and maps from the old environments to the WebSphere environment
- This will reduce the conversion cost from the average of 4 days per map to 1 day per map
- Since this is the area where most man-hours are spent, this takes a way the biggest problem that keeps you from consolidating the integration islands



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Consolidate

*Using the Covast Map Accelerator
for IBM WebSphere Data Interchange/Partner Gateway*



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Systems supported

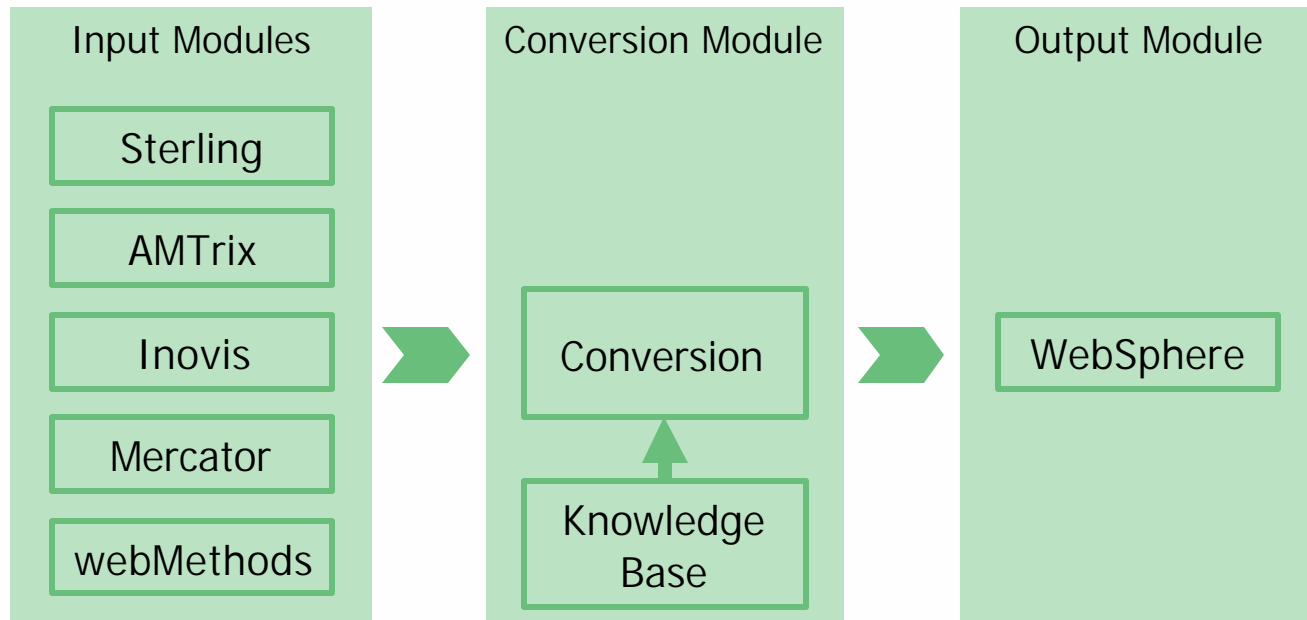
- The following systems are supported:
 - Sterling Gentran:Server for Unix (5.x and 6.x)
 - Sterling Gentran:Server for Windows (2.x and 3.x)
 - Sterling Gentran:Director (Pro) for Windows (2.x, 3.x and 4.x)
 - Sterling Gentran:Basic for Mainframe (6.x)
 - Axway AMTrix – All versions and platforms using Datamapper 3.x
 - Mercator 6.x

- The following will become available later this year:
 - webMethods Integration Server
 - Inovis Trusted Link Enterprise



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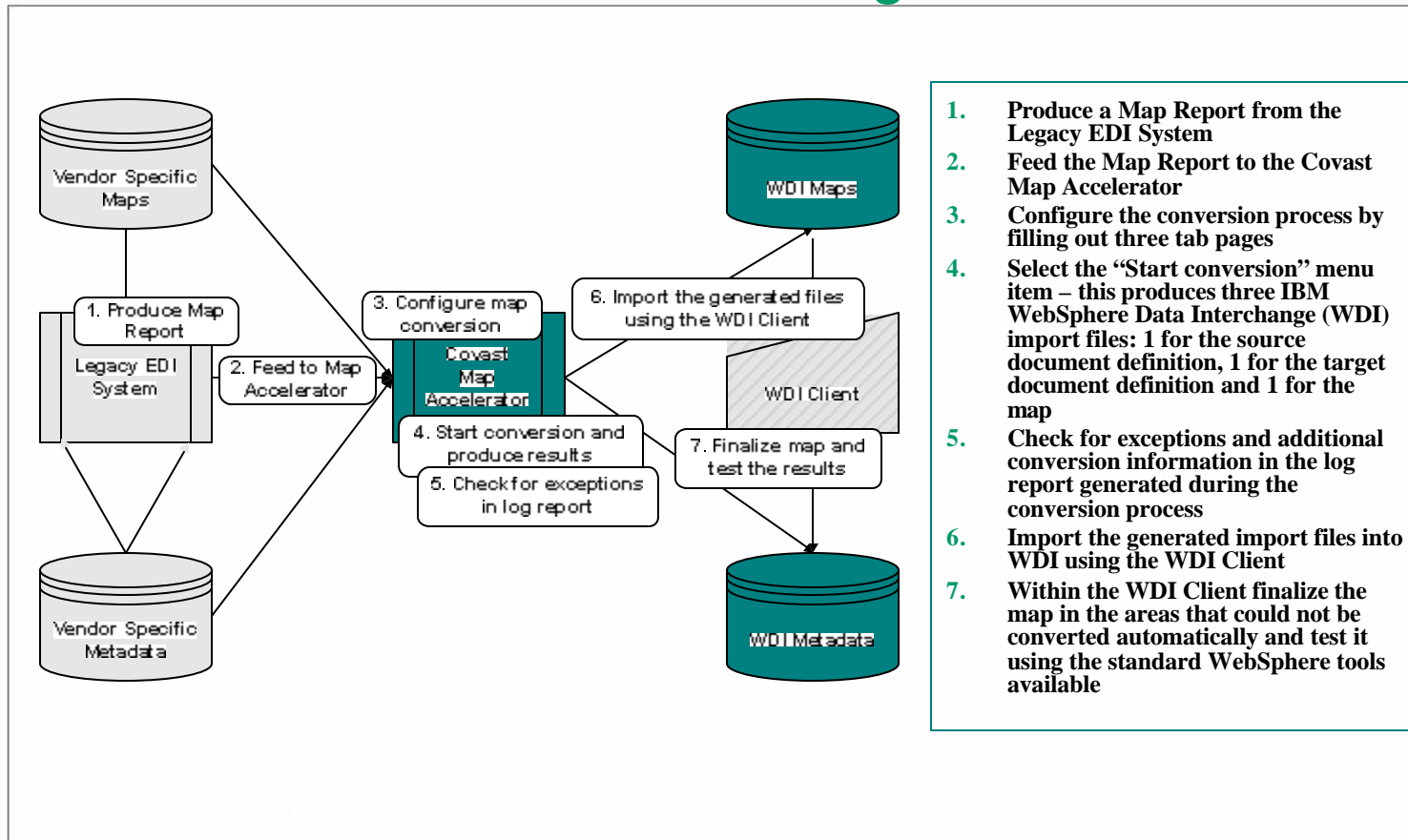
Covast Map Accelerator Architecture





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High level overview



1. Produce a Map Report from the Legacy EDI System
2. Feed the Map Report to the Covast Map Accelerator
3. Configure the conversion process by filling out three tab pages
4. Select the “Start conversion” menu item – this produces three IBM WebSphere Data Interchange (WDI) import files: 1 for the source document definition, 1 for the target document definition and 1 for the map
5. Check for exceptions and additional conversion information in the log report generated during the conversion process
6. Import the generated import files into WDI using the WDI Client
7. Within the WDI Client finalize the map in the areas that could not be converted automatically and test it using the standard WebSphere tools available



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To what extent can it be automated?

- 100% migration of source and target documents
- 70% - 100% automatic migration of the maps, on average only 20% needs to be done manually
- All info on the remaining 20% of the maps will be present in the WDI Mapper – made easily accessible for the consultant to facilitate the manual adjustments
- Focus on finalizing the remaining 20% within the WDI Mapper
 - Documentation
 - Hotline



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Intro to Live Demo

*Migrating an EDI Map
to IBM WebSphere Data Interchange/Partner Gateway*



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The current situation

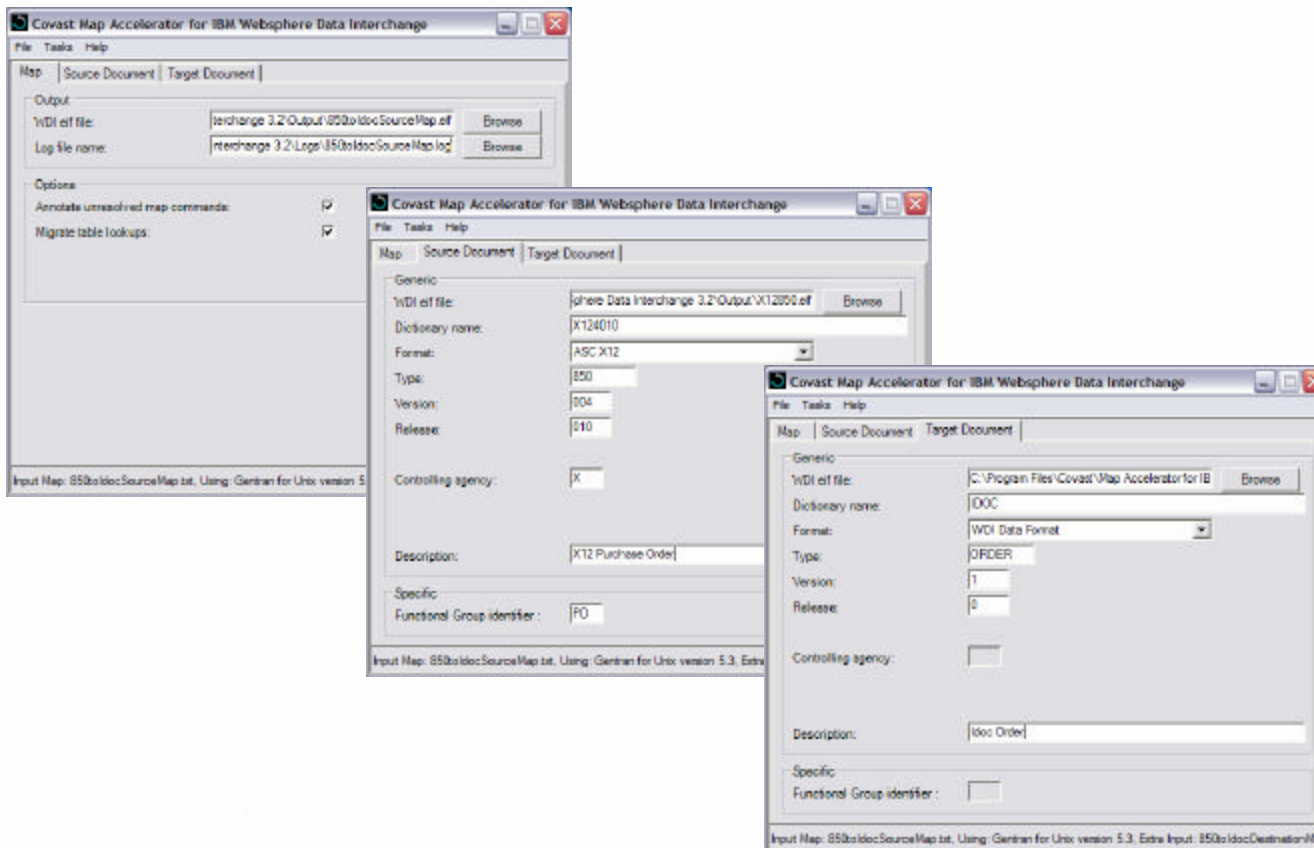
The screenshot displays the Legacy EDI System interface. The main window shows the EDIDC (IDOC Control Record) structure with various segments and loops. The right pane shows a list of segments and their corresponding EDI control numbers. The bottom pane shows a mapping table between SAP segments and EDI control numbers.

SAP Segment	EDI Control Number
BGM/e02 (1004 - Document/message number)	E2EDK02/MANDT (Client)
BGM/e02 (1004 - Document/message number)	E2EDK02/DOCNUM (IDoc number)
BGM/e02 (1004 - Document/message number)	E2EDK02/SEGNUM (Number of SAP segment)
BGM/e02 (1004 - Document/message number)	E2EDK02/SEGNAM (Name of SAP segment)
BGM/e02 (1004 - Document/message number)	E2EDK02/PSGNUM (Number of higher-level SAP segment [parent segment])
BGM/e02 (1004 - Document/message number)	E2EDK02/HLEVEL (Hierarchy level of SAP segment)
BGM/e02 (1004 - Document/message number)	E2EDK02/QUALP (IDOC qualifier reference document)
DTM_137/cmp01/e01 (2005 - Date/time/period qualifier)	E2EDK02/BELNR (IDOC document number)
DTM_137/cmp01/e01 (2005 - Date/time/period qualifier)	E2EDK03_012/MANDT (Client)
DTM_137/cmp01/e01 (2005 - Date/time/period qualifier)	E2EDK03_012/DOCNUM (IDoc number)
DTM_137/cmp01/e01 (2005 - Date/time/period qualifier)	E2EDK03_012/SEGNUM (Number of SAP segment)
DTM_137/cmp01/e01 (2005 - Date/time/period qualifier)	E2EDK03_012/SEGNAM (Name of SAP segment)
DTM_137/cmp01/e01 (2005 - Date/time/period qualifier)	E2EDK03_012/PSGNUM (Number of higher-level SAP segment [parent segment])
DTM_137/cmp01/e01 (2005 - Date/time/period qualifier)	E2EDK03_012/HLEVEL (Hierarchy level of SAP segment)



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The Map Accelerator





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The Result

WebSphere Data Interchange for Multipatforms V3.2.1 - [WINLOCAL - Data Transformation Map - SOURCE_856]

Source: Data Format (APP856_L01APP856)

- EDI_DC_CONTROL_RECORD
- EDI_DS_STATUS_RECORD
- LOOP_E2EDK07001_SEGMENT
 - E2EDK07001_SEGMENT
 - TADNAM_-_NAME_OF_TABLE_STRUCTURE
 - MANDT_-_CLIENT
 - DOCNUM_-_IDOC_NUMBER
 - SEGNUM_-_NUMBER_OF_SAP_SEGMENT
 - SEGNAM_-_NAME_OF_SAP_SEGMENT
 - PSGNUM_-_NUMBER_OF_THE_HIGHER-LEVEL_-_HIERARCHY_LEVEL_OF_SA
 - DTINT2_-_BLANK_FIELD_FOR_EDIT_D
 - ACTION_-_DELIVERY_ID
 - BOLNR_-_BILL_OF_LADING
 - VOELN_-_DELIVERY
 - TRAITD_-_SHIPMENT_ID

Target:

- 4 C PO4 [Ten Physical Details]
- 5 C TD1 [Carrier Details quantity And]
- 6 C TD3 [Carrier Details routing Sequ.]
- 7 C TD3 [Carrier Details equipment]
- 1 C 0040 [0040_Equipment Descript]
- 2 C 0206 [0206_Equipment Inital]
- 3 C 0207 [0207_Equipment Number]
- 4 C 0187 [0187_Weight Qualifier]
- 5 C 0081 [0081_Weight]
- 6 C 0355 [0355_Unit Or Basis For M]
- 7 C 0102 [0102_Ownership Code]
- 8 C 0407 [0407_Seal Status Code]
- 9 C 0225 [0225_Seal Number]
- 10 C 0024 [0024_Equipment Type]
- 8 C REF [Reference Identification]
- 9 C DTM [Date,time Reference]
- 10 C F08 [F.o.b. Related Instructions]

Mapping Code Snippets:

```
DELNUM = Concat(LOOP_E2EDK07001_SEGMENT'E2EDK07001_SEGMENT'VOELN_-_DELIVERY\Concat(' ',SHIPLOC))
Endif
TRAITD_-_SHIPMENT_ID
If (IsEmpty(LOOP_E2EDK07001_SEGMENT'E2EDK07001_SEGMENT'TRAID_-_SHIPMENT_ID))
Table 1(3 M HL3 Loop(7 C TD3)(3 C 0207)) = '000'
Endif
If (IsEmpty(LOOP_E2EDK07001_SEGMENT'E2EDK07001_SEGMENT'TRAID_-_SHIPMENT_ID))
Table 1(3 M HL3 Loop(7 C TD3)(3 C 0207)) = Substring(LOOP_E2EDK07001_SEGMENT'E2EDK07001_SEGMENT'(TRAITD_-_SHIPMENT_ID)\, 1, 10)
endif
TRATY_-_TRANSPORTATION_CATEGOR
MapTo (Table 1(3 M HL3 Loop(6 C TD3)(3 C 0067))
There was a problem parsing the mapping/line number in source map: 154/MAP 'TL' TO D782 WHEN 574 = 'UPS1' AND WHEN data found in 574
If (LOOP_E2EDK07001_SEGMENT'E2EDK07001_SEGMENT'TRATY_-_TRANSPORTATION_CATEGOR) != 'UPS1' AND IsEmpty(LOOP_E2EDK07001_S
Table 1(3 M HL3 Loop(7 C TD3)(1 C 0040)) = 'TL'
```



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Zoom in – Unresolved Map Logic

- Unresolved conditions, map rules and proprietary scripts will surface in the WDI Map as comments, placed in the right context whenever possible; the consultant can interpret these comments and create the appropriate WDI equivalent logic

The screenshot shows a hierarchical tree view of a WDI Map. The root is 'Table 1', which contains a '1 M BEG Loop [Beginning Segment For Purchas]'. This loop contains three map rules: '1 M 0353 [Transaction Set Pur]', '2 M 0092 [Purchase Order Type]', and '3 M 0324 [Purchase Order Numb]'. The '3 M 0324' rule is selected, and a 'MapTo' rule is applied to it: 'MapTo ({E2EDK01005_SEGMENT}\DOCNUM_-_IDoc_number{})'. A yellow warning icon is next to the 'MapTo' rule, with a tooltip that reads: 'This condition could not be resolved an needs to be manually changed:'. A 'Comment Editor' dialog box is open in the foreground, with the same warning text in the comment field. The dialog box also contains the following text:

```
Condition: $noTaxFlag_i  
Expression: $client  
FIRST: 001 IF DataTree.GetCountOf($INPUT__LIN_LOOP__TAX_LOOP) = 0 {  
FIRST: 002 $noTaxFlag_i = 1;  
FIRST: 003 }
```

The dialog box has 'OK' and 'Cancel' buttons at the bottom right.



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Zoom in – Table lookups

- Table look ups are automatically converted to the appropriate WDI map logic: the “Translate” function

The screenshot displays a mapping tool interface. On the left, a tree view shows a hierarchy of geographic locations:

- 43 C N3 [Address Information]
- 44 C N4 [Geographic Location] (selected)
 - 1 C 0019 [City Name]
 - 2 C 0156 [State Or Province C]
 - 3 C 0116 [Postal Code]
 - 4 C 0026 [Country Code] (selected)
 - 5 C 0309 [Location Qualifier]

The selected item, 4 C 0026 [Country Code], is highlighted with a blue circle. Below the tree view, a text box contains the following command:

```
{\LOOP_E2EDPA1003_SEGMENT\E2EDPA1003_SEGMENT\COUNC_-_County_code\} = Translate ("COUNTRYCODES", "TARGET", \Table 1\1 M BEG Loop\42 C N2
```

Overlaid on the bottom of the screenshot is a dialog box titled "Mapping Command Editor". It contains a text area with the following command:

```
\LOOP_E2EDPA1003_SEGMENT\E2EDPA1003_SEGMENT\COUNC_-_County_code\ = Translate ("COUNTRYCODES", "TARGET", \Table 1\1 M BEG Loop\42 C N2 Loop\44 C N4\4 C 0026\, True, "USA")
```

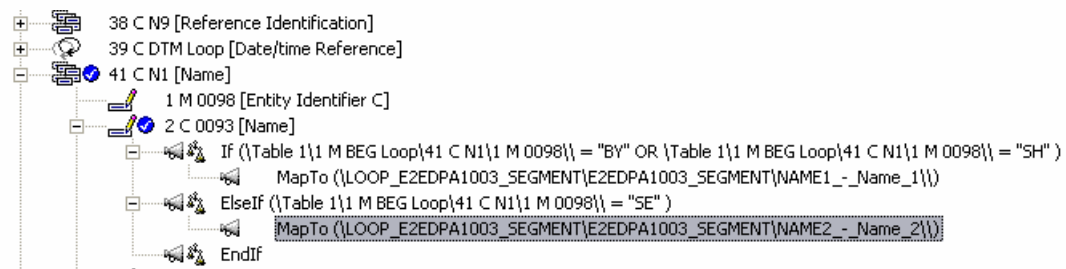
The dialog box also features a question mark icon on the left and "OK", "Insert", and "Cancel" buttons at the bottom.



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Zoom in – Conditions

- Conditional map logic will result in the appropriate if-then-else logic in the generated WDI maps





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Live Demo

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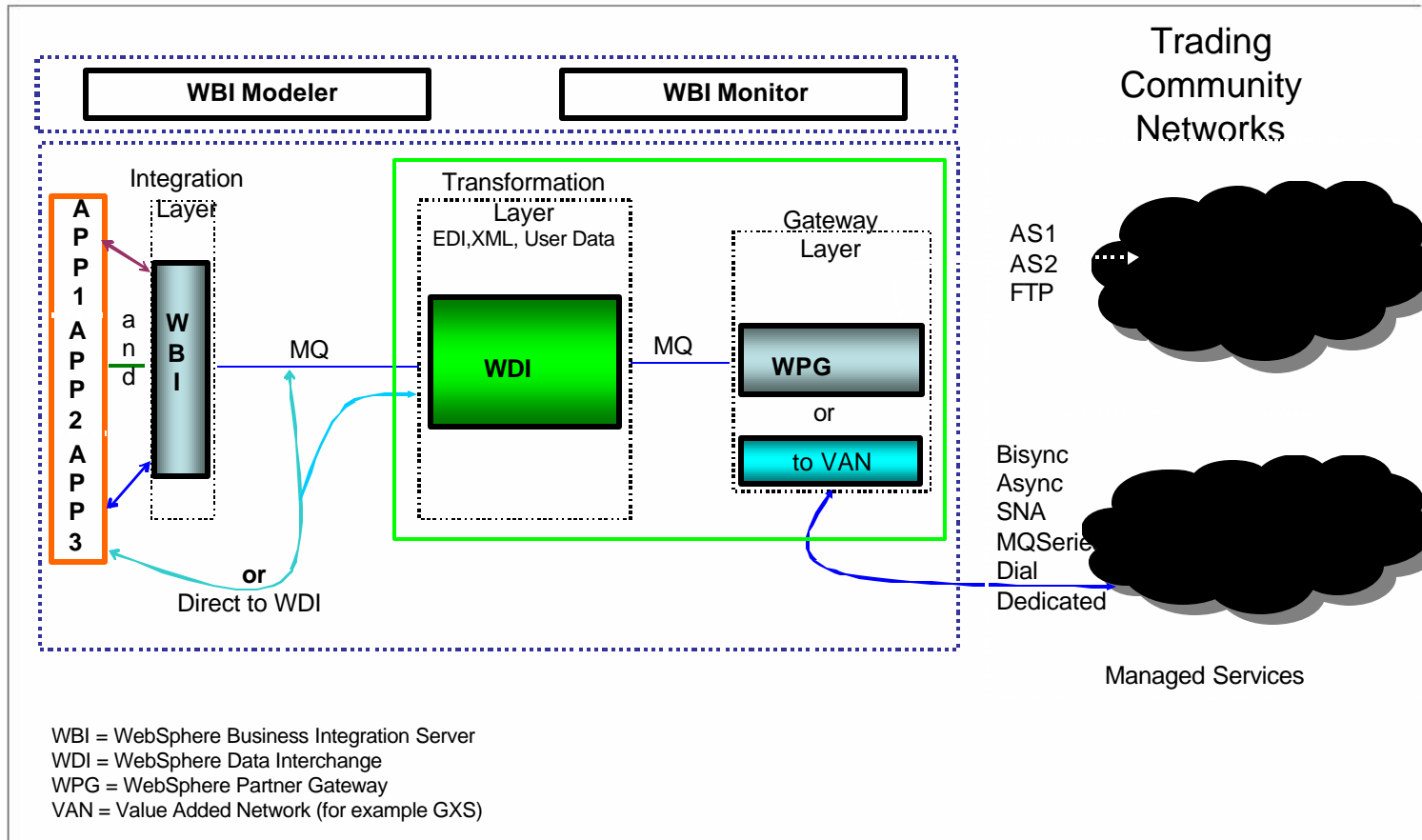
The New Situation

One integrated environment for B2B (EDI) and A2A



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Architecture – Enterprise on WebSphere BI



BPM and BAM

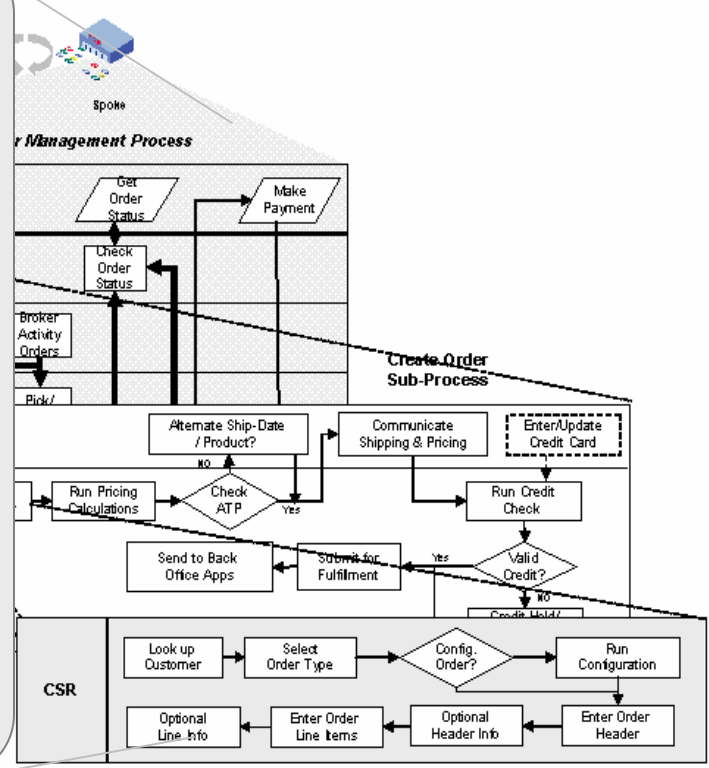
Order Management Milestones of Interest

- Received Order
- Cancelled Order
- Delivered and Confirmed

How many orders are currently processed in our Order Mgmt system that are over \$100,000?

What is the Order trend for product X over the past couple of hours?

What is the average Cycle Time Duration per order?





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Covast Information

- Covast was founded in 1996 and has offices in Rotterdam, Atlanta and Seattle
- We specialize in XML, EDI and Mapping
- We have 300+ customers worldwide – Intel, Nortel, Lyondell, Corning, Siemens....
- To learn more, visit www.covast.com or:
 - Call: 1 866 COVAST1 (US)
 - Call: +31 10 2351022 (Europe)
 - Email: sales@covast.com