



Software Group

CICS Business Event Publisher (BEP) et WebSphere Business Integration Message Broker

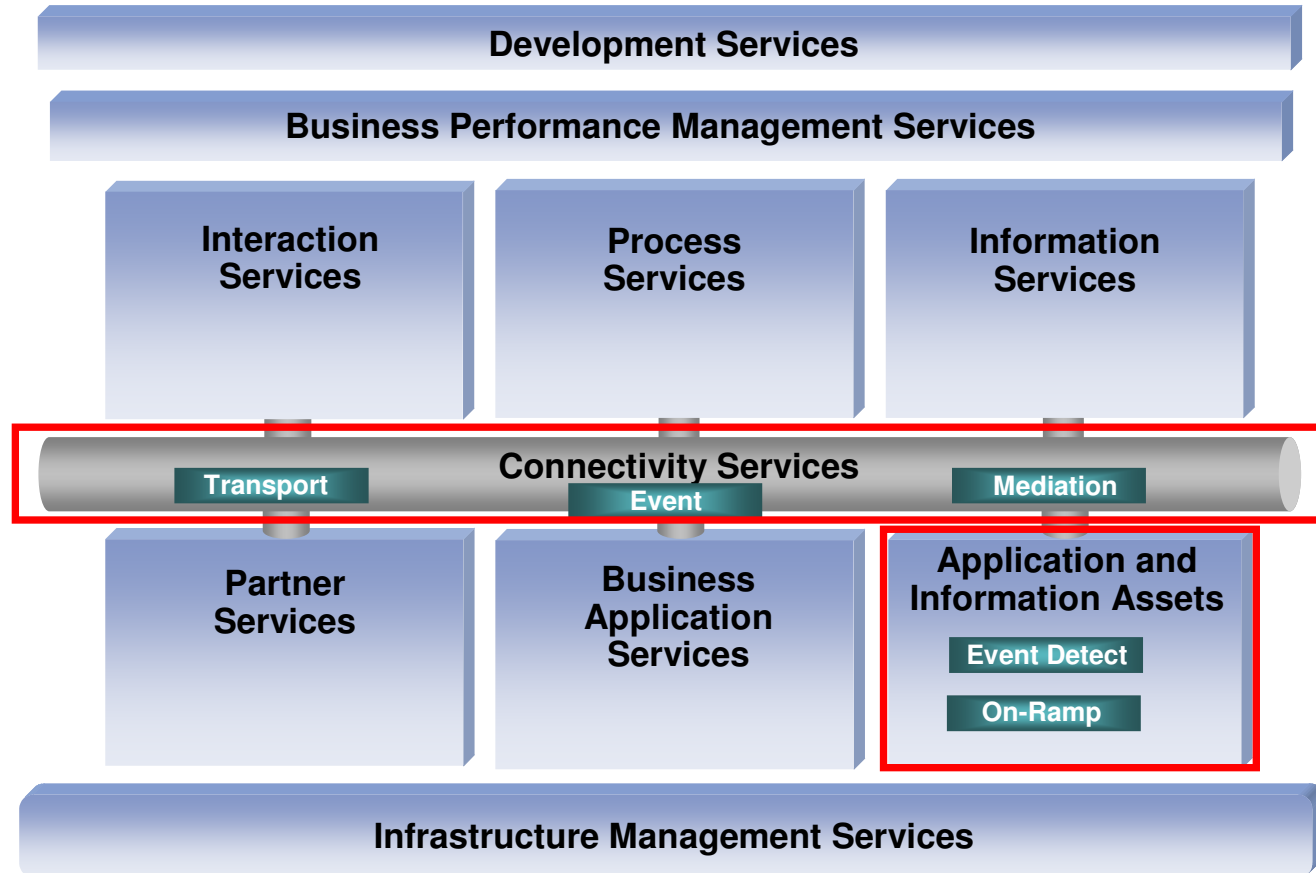
Introduction & démonstration

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CICS BEP - introduction

- Détecter des évènements en CICS (ou DB2 ou IMS/DB !)
 - Manière non intrusive pour exploiter d'avantage vos applications
 - Utilisation des journaux
 - Faible consommation CPU
- Fournir des données concernant l'évènement en forme de message MQ
 - Le « bus » universel pour profiter des informations
 - Traitement des évènements totalement découplé
 - Options pour déterminer les champs à transmettre, la file, gestionnaire de file, priorité, transactionnalité, etc.
 - Hélas, peu de souplesse pour le formatage des données...

Architecture de Référence Business Integration



Augmenter la qualité de services pour répondre aux besoins métier

Enterprise Service Bus - ESB

- **Pour se parler, vos applications doivent s'y connaître !**

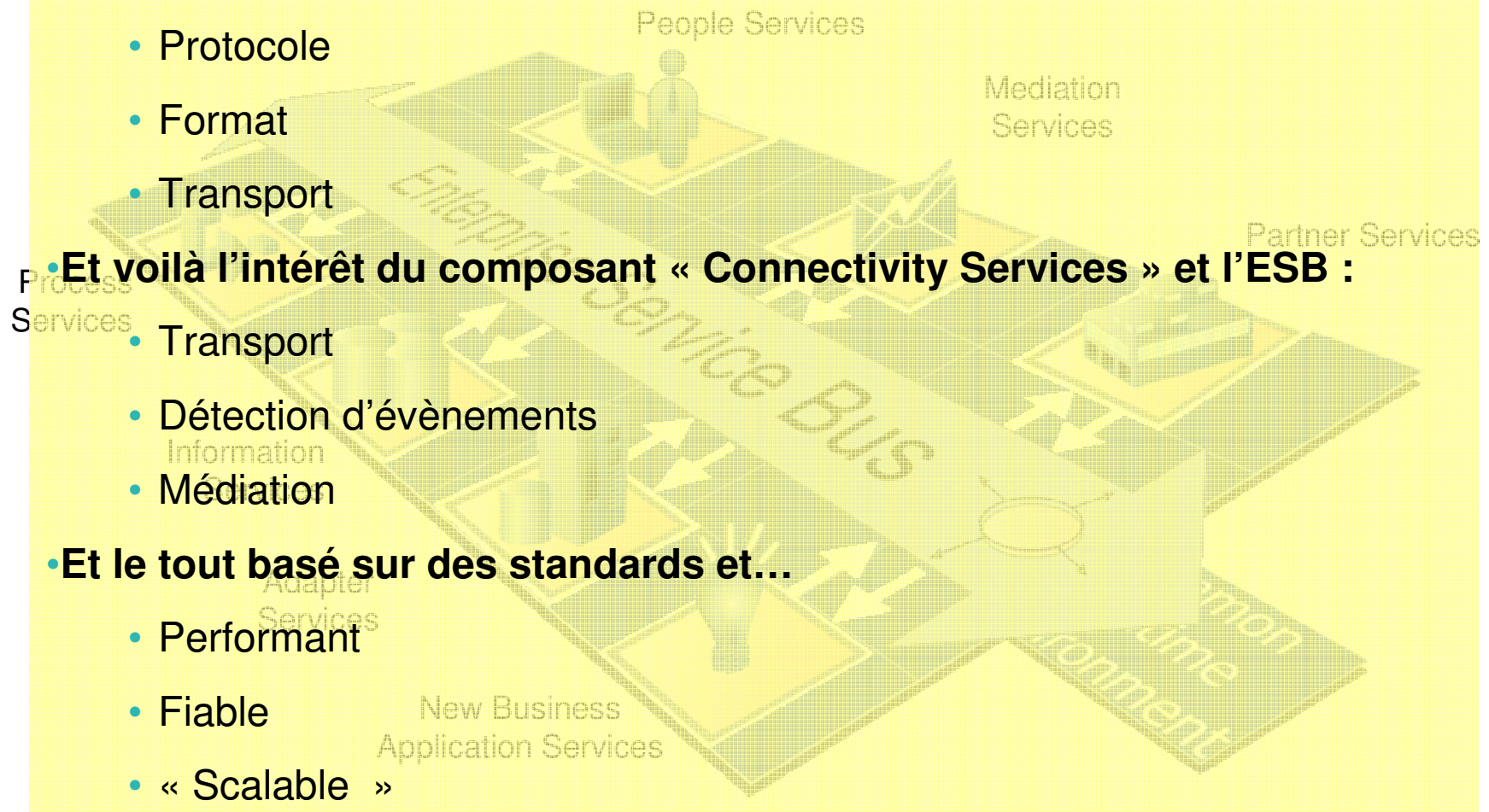
- Protocole
- Format
- Transport

- **Et voilà l'intérêt du composant « Connectivity Services » et l'ESB :**

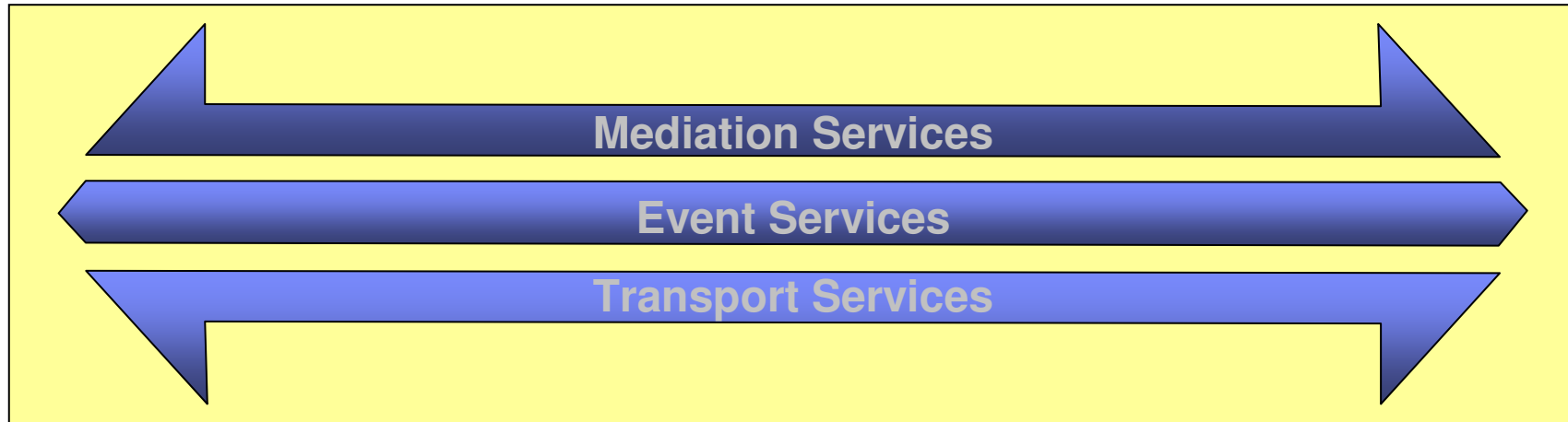
- Transport
- Détection d'évènements
- Médiation

- **Et le tout basé sur des standards et...**

- Performant
- Fiable
- « Scalable »



Services de connectivité : Enterprise Service Bus



Transport Services

- ✓ Assured delivery
- ✓ Secure delivery
- ✓ Transactional delivery
- ✓ Manageable delivery
- ✓ Delivery replay
- ✓ Modifiable qualities of transport.

Event Services

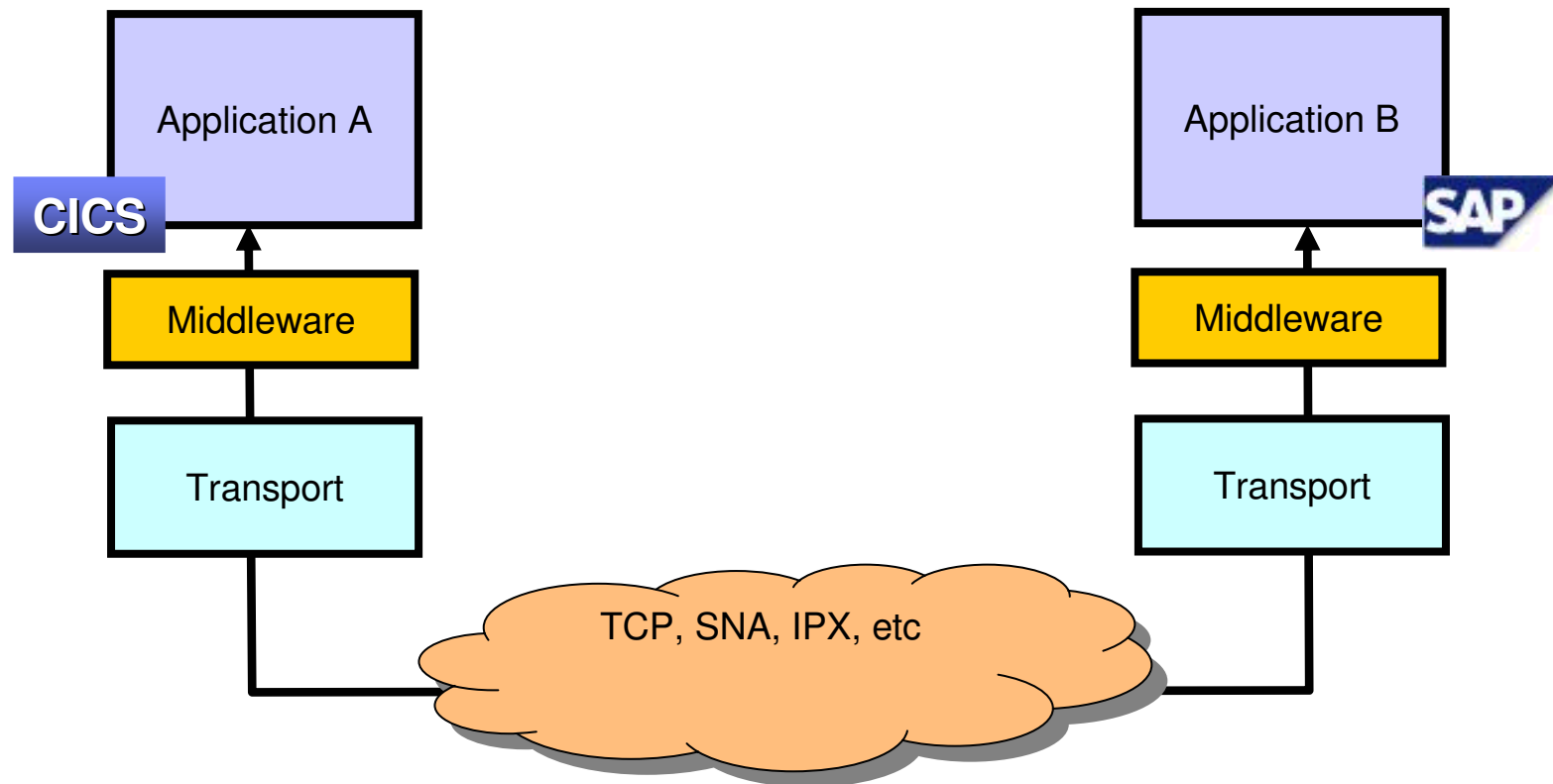
- ✓ Event detection
- ✓ Event triggering
- ✓ Event distribution
- ✓ Complex Event Processing (CEP).

Mediation Services

- ✓ Routing
- ✓ Transport switching
- ✓ Programming model switching
- ✓ Transformation & content augmentation
- ✓ Customized communications.

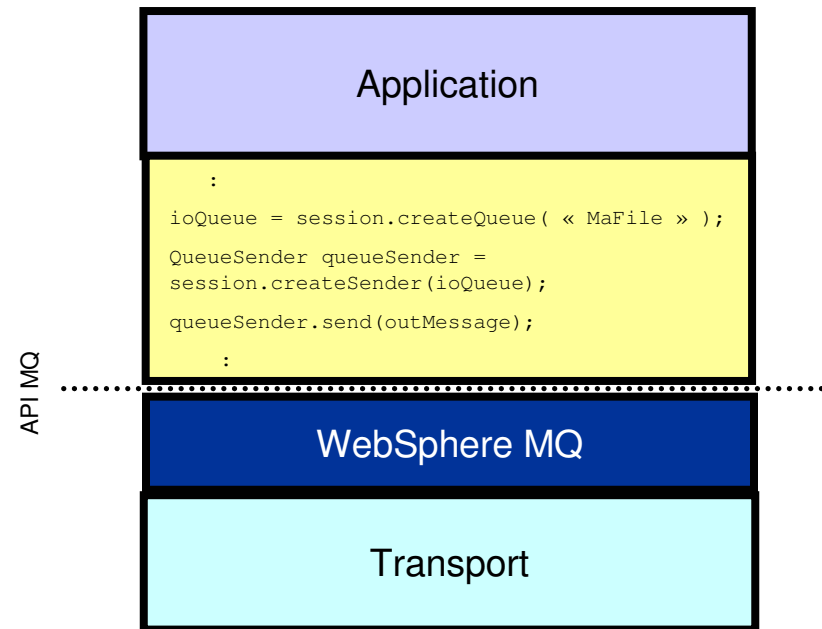
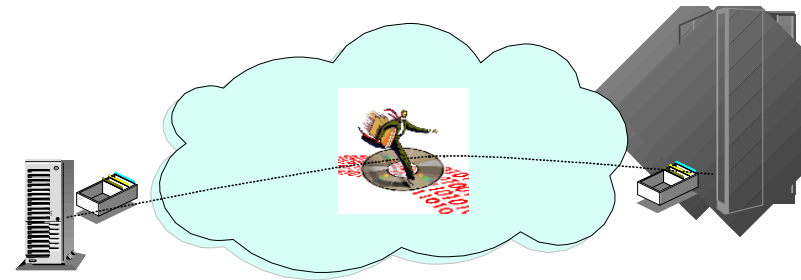
Un support souple, hétérogène et standard pour assurer le pérennité

Couches d'intégration, leçon 1 : transport



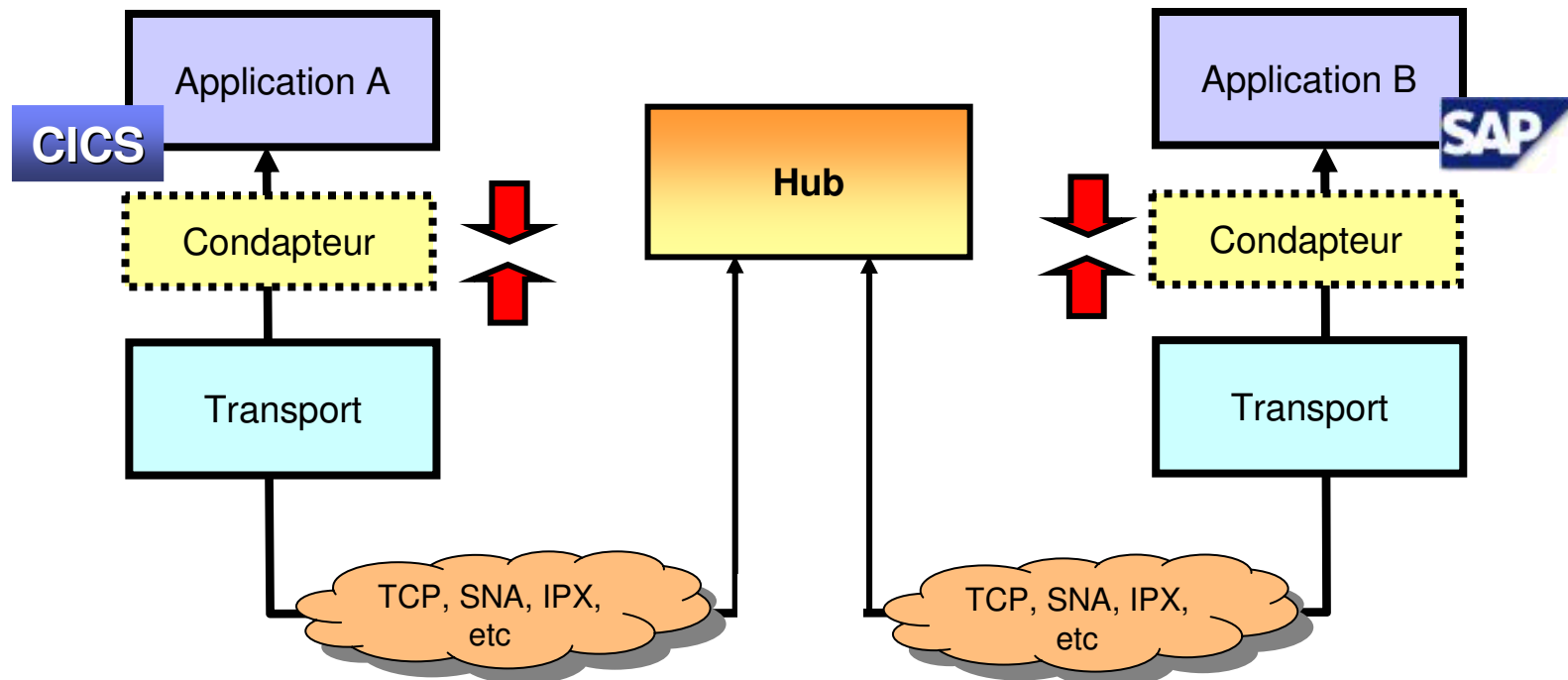
Qu'est-ce que WebSphere MQ ?

- Une interface de programmation (API) pour envoyer/recevoir des messages
 - Disponible sur plus de 40 plates-formes (Windows, Unix, zSeries, AS/400, etc.)
 - Disponible depuis tous les langages classiques (C, C++, VB, COBOL, Java, GAP, etc.)
 - Facile à apprendre; facile à développer
- Un gestionnaire de files ("Queue manager")
 - Assurer le transport des messages jusqu'à leur destination
 - Simple à mettre en oeuvre et gérer
 - Performant et fiable
- Le standard du marché MOM depuis 1993 avec plus de 65% du marché
 - Plus de 450 produits "MQ ready" sur le marché
 - Plus de 2000 consultants « certifiés MQ »



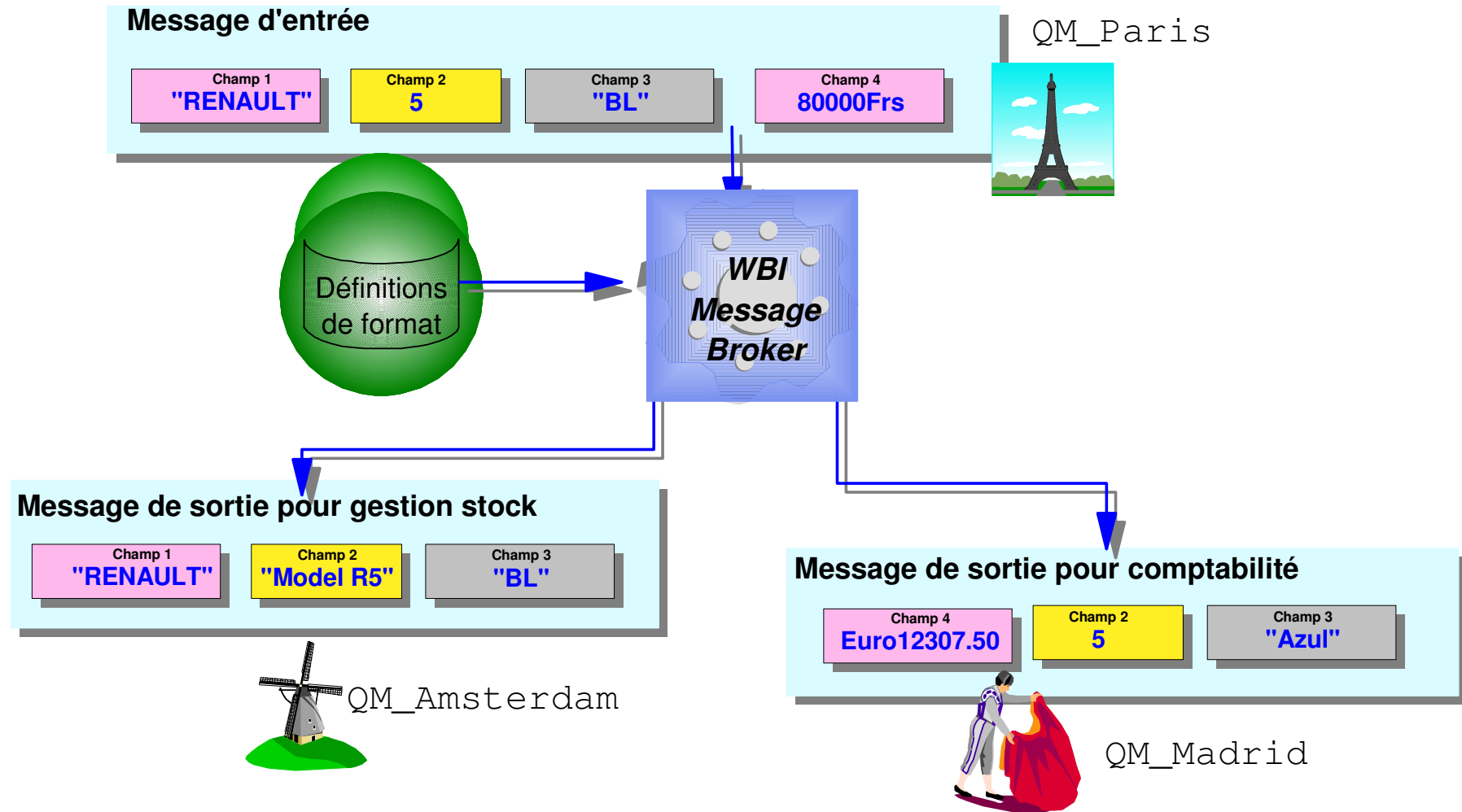
Couches d'intégration, leçon 2 : hubs

"Gartner estime que jusqu'à 30% des coûts de mise en oeuvre d'une application est lié au développement des interfaces."
(Gartner, janvier 2000)




- Le « hub » (ou « serveur » ou « broker » ou....) est le point central
- Il s'occupe typiquement du routage, de la transformation et de l'automatisation de processus
- Optimiser le travail de transformation entre les applications diverses

Routage et transformation



Atelier de développement - Toolkit

The screenshot displays the 'Broker Application Development - Message Brokers Toolkit for WebSphere Studio - Message Broker' interface. The Resource Navigator on the left shows a project structure with message sets and schemas. The main area shows the 'C_FIRSTNAME' message definition with its properties hierarchy and details. The details panel shows physical representation settings like 'Fixed Length String', 'Length Count' (20), and 'Length Units' (Bytes). An Outline window at the bottom shows the message structure.

- Interface basée sur  pour les définitions de...
 - Séquence de traitement
 - Format de messages
 - Contrôle d'accès
 - Définition logique et physique de message
 - Support des messages en XML, champs fixes, délimités, taggés, etc.
 - Saisie à la main ou par importation (C, COBOL, DTD, schéma, etc.)

Définition de traitements

The screenshot displays the Message Brokers Toolkit interface. The main window shows a message flow diagram with nodes like 'Demo.Commande.Trace', 'Ajouter modèle', 'Strasbourg usine?', 'Make Legacy', and 'Demo.Ligne'. A dashed line highlights a path through these nodes. Overlaid on this is the 'MQInput Node Properties' dialog box, which is used for configuring message processing. The dialog has several tabs: 'Basic', 'Default', 'Advanced', 'Validation', and 'Description'. The 'Default' tab is active, showing fields for 'Message Domain', 'Message Set', 'Message Type', and 'Message Format'. Below these fields is a 'Resource Navigator' showing a tree view of project resources, including 'DemoCommande.esql' and 'DemoCommande.msflow'. To the right of the dialog is a 'Source' and 'Target' tree view showing a mapping between a source schema and a target schema. Below this is an 'Overview' table:

Target	Source	Target value
DEMOLOG (**Default Data Source Sch...	MultiCommandes (MultiCommandes)	
DATE	Type	CURRENT_DATE
HEURE	Type	CURRENT_TIME
COMMAND	Type	s_MultiCommandes.Commande.Type

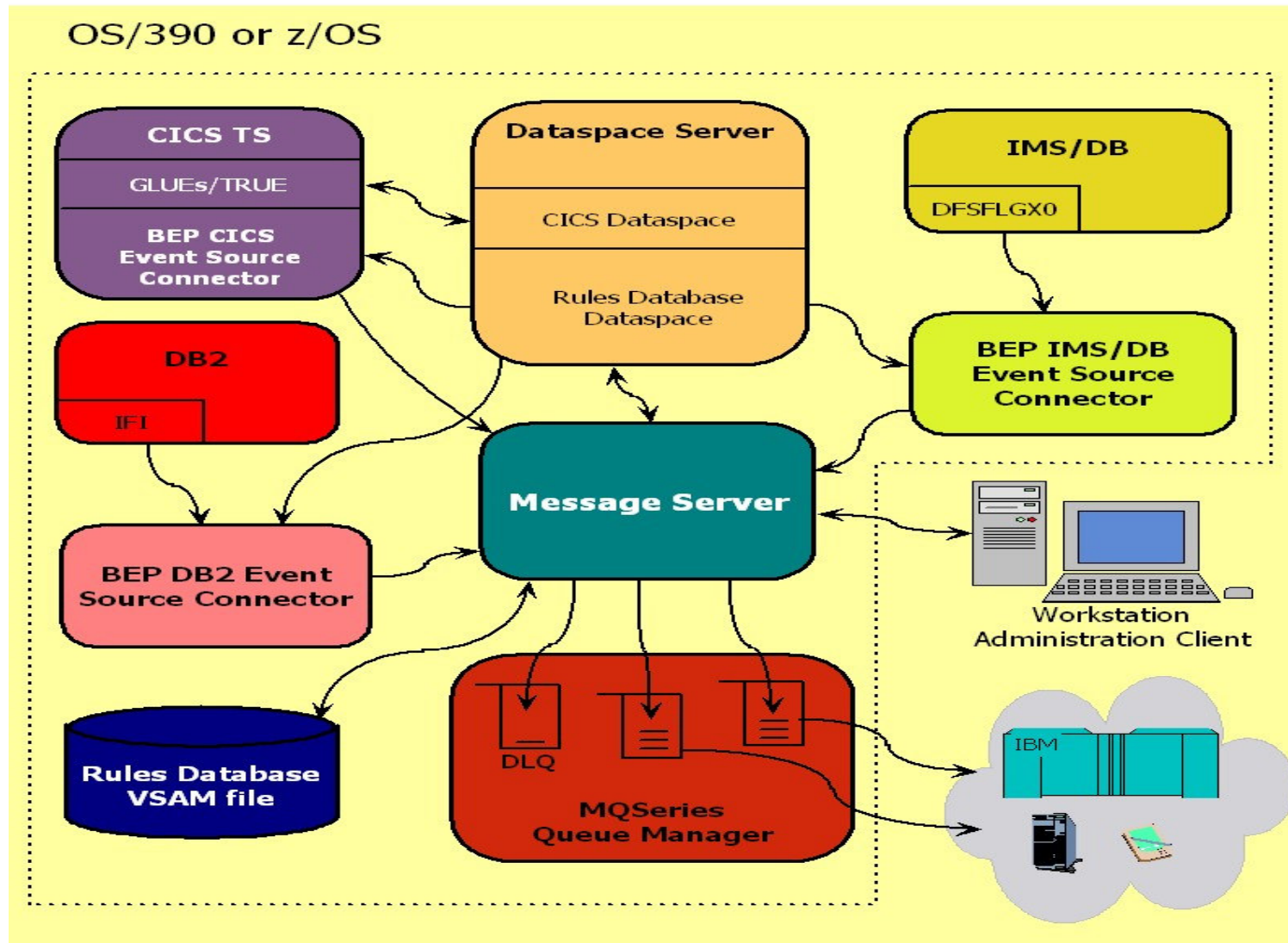
At the bottom of the dialog, there is a 'Tasks' section with a table:

C	I	Description	Resource

Buttons for 'Cancel' and 'Apply' are visible at the bottom right of the dialog.

manipuler les messages ou DB

Architecture BEP



BEP Configuration

The screenshot displays the BEP Configuration interface. The primary window, titled "The current rule is RULE1", is in the foreground. It features a menu bar with "File" and "Help", and a toolbar with icons for Save, Cancel, Clear, User ID, Set Host, and Help. Below the toolbar, the title "CICS Business Event Publisher for MQSeries" is displayed. The main area contains several tabs: "Rule Type", "Selection Criteria", "Message Options", "MQPUT Options" (which is selected), and "Return Options".

Under the "MQPUT Options" tab, there are two main sections:

- Queue Name:** Includes a radio button for "Enter a Static Queue Name Here" (selected) with a text input field containing "BEPQ". Below it is a button for "Use a Dynamic Queue Name" with a sub-button "Define the Layout for a Dynamic Queue Name...".
- Queue Manager Name:** Includes a radio button for "Enter a Static Queue Manager Name Here" (selected) with an empty text input field. Below it is a button for "Use a Dynamic Queue Manager Name" with a sub-button "Define the Layout for a Dynamic Queue Manager Name...".

At the bottom of this window are two buttons: "Specify Message Descriptor Options (MQMD_*)" and "Specify Put Message Options (MQPMO_*)".

Other overlapping windows include:

- "Build Custom Message Layout for R...": Shows a "Current Message Layout" table with fields like NUMB, NAME, ADDR, PHONE, and AMOUNT. It has "Move Up in Layout" and "Move Down in Layout" buttons.
- "The c...": Shows a "Datamap Fields" table with columns "Level" and "Field name".
- "The": Shows a "Fields by Offset/Length" section with a "Get Data From" dropdown set to "Resource Data" and an "Offset" of 0.

At the bottom of the interface, there is a status bar with the text "Datamap download complete." and a host/connection string "Host: mopzos:51577 CP: French - 1147 Normal Mode". A small dialog box is also visible with "DELETE" (checked) and "UNLOCK" (unchecked) options.

CICS BEP - Configuration

- Use CLIST CBMCCDMP to create “data map” from a COPYBOOK accessible from BEP
 - Import COPYBOOK into WBI MB for mapping

The screenshot shows a terminal window titled 'A - MOP zOS.ws'. The window contains the following text:

```
Command ==> _____ Scroll ==> CSR
V1.02.00          CICS Business Event Publisher for MQSeries          5655-J99
                  COBOL Copybook Conversion Utility
                  More: +
Data Set Containing Copybook:
Project . . . _____
Group . . . _____
Type . . . _____
Member . . . _____
Other Partitioned Data Set:
Data Set Name . . FARKAS.CICSTRAN.COPYBOOK (COPYFILA)
Output Partitioned Data Set (for datamap):
Data Set Name . . CICBEP12.DATAMAPS
(If data set name does not contain a member name, the input copybook member
name will be used for the output member name.)
Extract options:
Command ==> _____
F1=HELP      F2=SPLIT      F3=END      F4=RETURN      F5=RFIND      F6=RCHANGE
F7=UP        F8=DOWN        F9=SWAP      F10=LEFT      F11=RIGHT     F12=RETRIEVE
MA a 17/041
Connected to remote server/host mopzos using lu/pool A6PTG1GA and port 523   frdct1k 24207A/24/DCT A 20-40 on Ne05:
```

BEP message réception sur WBI Message Broker

The screenshot displays the WBI Message Broker configuration environment. On the left, a 'Broker Application' tree shows a project structure with various flows. The main workspace shows a message flow diagram starting with a 'BEPQ' input node. The flow proceeds through 'TraceIn' and 'Log' nodes, then splits into two paths: one leading to 'TestErr' and another to 'BEP_Raw_Out'. A 'Transform to XML' node is connected to the flow, with a red dashed line indicating its output going to 'BEP_XML_OUT'. A 'Set PC code page' node is also present in the flow.

An 'Output Message Properties' dialog box is open, showing the configuration for the transformation. The 'Message Body' is set to 'BEP_AADD' and the 'Format' is set to 'XML1'. Below the dialog, an 'Overview' table shows the mapping between source and target message bodies.

Target	Source	Target value
— BEP_AADD (complexType1)	☑ BEP_AADD (complexType1)	s_BEP_AADD

Intégration – une démarche de bout en bout



Plus d'info ?

- Savez-vous que le groupe GSE (« Guide Share Europe ») a un groupe de travail MQ en France (et WebSphere, et CICS, et IMS, et....) ?



- Réunions tous les deux mois
- Plus de 800 personnes participent aux réunions GSE
- Communauté d'experts
- Voir <http://www.gsefr.org>
- Une échange constante d'idées et de technologie

Bibliographie

- IBM Enterprise Service Bus :
<http://www.ibm.com/software/info1/websphere/index.jsp?tab=landings/esbbenefits>
- Charles Schwab ESB :
<http://www.ibm.com/software/success/cssdb.nsf/CS/BEMY-5UZP3F?OpenDocument&Site=wbi>
- SG24-6346 Patterns: Implementing an SOA Using an Enterprise Service Bus (Redbook)
- GC34-6051 WebSphere MQ for z/OS Concepts and Planning Guide
- SC34-5349 WebSphere MQ Queue Manager Clusters
- GI10-2566 Program Directory for WebSphere Business Integration Message Broker for z/OS
- WebSphere Business Integration Message Broker Concepts and Workbench Reference
- SG24-6995 Migration to WebSphere Business Integration Message Broker V5
- SG24-7090 WebSphere Business Integration Message Broker Basics
- SG24-6088 WebSphere Business Integration Pub/Sub Solutions

La bibliothèque WBI est disponible en PDF depuis
<http://www.ibm.com/software/integration/mqfamily/library/>

