

## Consorzio Operativo Gruppo MPS Corporate Banking



CONSORZIO OPERATIVO GRUPPO MPS is a company within the Monte dei Paschi di Siena group which, in total, serves 4.5 million customers and employs 28,000 employees. Set up as a consortium by companies belonging to the group, it manages information technology systems and administrative services for companies within the group.

### Background

The Consorzio Operativo Gruppo MPS is responsible for the operation and management of the telematic systems used for communication between members of the group and also with corporate clients.

The volumes of data movements within the group is significant, typically 100,000 records in 20 minutes, with individual records up to 300MB in size.

Maximum performance is required to cope with such volumes, and there is also the requirement that the systems be scalable in order to handle the peak data movements typical of end of month operations.

What was required was to create a conversion and regularisation structure to deal with generic data movements such as those relating to client data. The creation of a new regulating structure requires a number of consecutive phases be accommodated. It was also necessary to verify operational effectiveness at the processing stage as well as to reduce the organisational impact of such a project to the minimum.

The first phase of reorganising the corporate banking service focuses on receiving, converting and normalising the data that arrives from the branches, from the consortium banks and from the public networks.

### Solution

In collaboration with the personnel of the Consorzio Operativo Gruppo MPS, Avanade and Microsoft Consulting Services have investigated how best to implement a conversion service capable of managing incoming data from the banks, and how to normalise and transmit data to the central system mainframes.

A design architecture has been defined that, for the phases of the conversion and normalisation of bank data movements, assumes the use of Microsoft BizTalk Server – which is already an integral part of management applications developed on *framework* .NET.

The approach taken breaks data movements down into the smallest units (records). It passes the records to a suite of software tools capable of taking data that has been input in a particular structure and then outputting it in a different structure. This suite of software tools can be applied in a general way to any data movement, even to a very complex one that requires a number of normalisation and transformation steps.

Avanade consultants defined the objective and scope of the project and project-managed and implemented the conversion service.

## Architecture

The projected solution works on a Microsoft technology platform and in particular on:

- Windows 2000 Server
- BizTalk Server 2000
- SQL Server 2000

The conversion service is a Web-based service (consisting of a number of discrete services) that processes incoming data according to a pre-planned conversion scheme. The interaction with the Conversion service is effected by the Web Service using the SOAP protocol on HTTP.

It includes the following services:

*Decompiler:* this subdivides the flow in order, numbers it, and stores the record on the database SQL Server. It sends this record via *send http* to the transformation steps.

*TP Monitor:* this coordinates the conversion process. It secures integrity in the operations, data consistency and the durability of the modifications carried out.

*Transformer:* this consists mainly of a *IhttpAsyncHandler* (asynchronous ISAPI extension in .NET) that receives the records passed on by a previous processing step, and sends them to a *BizTalk Server* for the execution of a transformation step or a workflow step.

*Compiler:* this receives the records processed in the transformation steps and stores them on the SQL Server.

*Serialiser:* this consists of all of the steps required to produce the outward data movements arising from the records received.

*Garbage Collector:* this consists of all of the processes responsible for keeping the various information repositories used inside the Conversion process as consistent as possible.

*Administration Interface:* this has the aim of checking and administrating both input and output, and the definitions of *mapping* and *workflow*

## Benefits

The architectural solution allows:

- Flexibility in the acquisition of new data movement typologies
- A unique system for the normalisation of data movements and formal controls, and processing to meet the new standards
- A unique engine for all the banks – with multi-bank/multi-company functioning
- Faster data transfer rates to the services
- Scalability of architecture
- High performance guarantee
- Capacity for transferring data between departmental and host systems
- Modular structure that allows external components to be plugged in
- Rapid implementation of new functions