FUTURE-ORIENTED IT

AT THE SWISS POST

**Daniel Beffa,
Key Account Manager for
Poststellen und Verkauf
(Post Offices and Sales),
Swiss Post**

The Swiss Post has been processing payment transaction data at its post offices digitally for ten years. Customers at the post office counter can have deposit slips entered and paid using the counter application und their bank transfers are instantly released for further processing. Since then, dozens of other services, such as paying using a Postcard, checking a post office account balance and tracking registered post, have been offered at post office counters by the PostFinance, PaketPost, PostMail, ExpressPost and Swiss Post International divisions.

In 1992, the digital era began in over 400 post offices as SCHAPO (Schalter-applikation Post – post office counter application) was introduced. Then in 1999, a simpler version of the counter application (Electronic Counter or ECO) was developed for over 1,600 smaller post offices. In the 21st century, the Swiss have become accustomed to having a computer-controlled environment and expect support in fractions of a second even in a village with just 500-odd residents.

Such high demands give rise to a huge pressure to cut costs. Ambitious expansion plans that had been made in a thriving economy have now been replaced with survival strategies. Following the speed at which automation and technology made

people's lives easier, the pressure exerted by the basic law of economic existence is all the greater. This law can be summed up in the words "survival of the fittest," meaning that only those who are well prepared for the future and are able to adapt will survive.

The Swiss Post can no longer take its survival for granted. It does have a good chance of surviving in the future, however, if it adapts to the changed circumstances. Over the next few years, the plan is to transform the Swiss Post into a competitive enterprise that finances itself.

This article presents the contribution made to the DUPLEX project by Information Technology Services, a division of the Swiss Post, in cooperation with BSI Business Systems Integration AG (referred to as BSI below). IT reinforces customer retention with the help of new technologies and methods for modernising the range of services on offer. The DUPLEX project is concerned with technically merging the two applications, SCHAPO and ECO, to form a modern, future-oriented, cost-effective and flexible information system that can be used at the counters of the Swiss Post.

Further development of the counter application is based on the following cornerstones:

Daniel Beffa (38), from Business Development at Information Technology Services, is the key account manager for Poststellen und Verkauf (Post Offices and Sales). He recognized a customer need in September 2001 and consequently started the DUPLEX project. In coordinating the DUPLEX application with the Swiss Post he has provided the enterprise with a strategically important product that is well equipped for future services in all its business areas.

Cost-cutting

Current costs can be cut directly by making architectural changes in order to reduce the number of system components (for instance reducing the number of servers). In addition, costs can be cut indirectly through simplifications in the system itself, for instance by merging functions (configurable client), enhancing modularity and therefore decreasing interface expenses (delimiting sub-applications), as well as standardizing shared components (harmonizing master servers and integrating peripherals).

Standardization

Maintenance work and the task of further developing system functionality are made a great deal easier, and therefore also less costly, if the system contains clear modularity. Such modularity cannot be achieved from two existing systems without certain investments. This includes spending money on separating various functions so that each individual function is located in a clearly defined area in the ideal place, rather than being scattered over the entire system landscape (minimizing data storage on central systems, W2K rollout). Further purging (for instance of master data) leads to additional savings thanks to the resulting standardized services. However, extensive changes (W2K) create the need for subsequent modifications

(new Oracle DB version), and this can increase costs in the short term (system modifications, tests, rollout) or in the long term (higher license/maintenance costs).

Risk minimization

Another important means of cutting costs is to rectify system errors and reduce the downtime that occurs during operation. By implementing appropriate measures (i.e. making investments) it is possible to minimize long-term operating risks (disaster-tolerant operation, cluster server as 3*2 node, client independence). Other investments need to be made in this area to meet clearly formulated availability requirements (Service Level Agreements, SLAs).

Function expansion

The SCHAPO and ECO counter applications and the technical combination of the two, DUPLEX, generate revenue for the system operator (Poststellen und Verkauf, PV) through their functionality that can be charged to the end user. It makes good business sense here if, in connection with DUPLEX, measures are taken to allow profitable new functions to be implemented in a timely manner, which can be easily maintained and are cost-effective (at least one function purge is planned in an initial release, user changeover with security requirements).

THE DUPLEX PROJECT HAS EXTENSIVE GOALS, WHICH ARE INTERRELATED IN A COMPLEX WAY...

The DUPLEX project has extensive goals, which are interrelated in a complex way. In order to achieve the long-term goal of cutting operating costs it is necessary to make investments in the short term that will allow such savings later. The preliminary measures that need to be taken include simplifying the software structure – therefore also facilitating the tasks of maintenance and further development – as well as simplifying the underlying system architecture. Amongst other things, this affects the system risk, which traditionally plays a role in maintenance costs and in losses caused by downtime. Another task involved in this simplification is to clear up data.
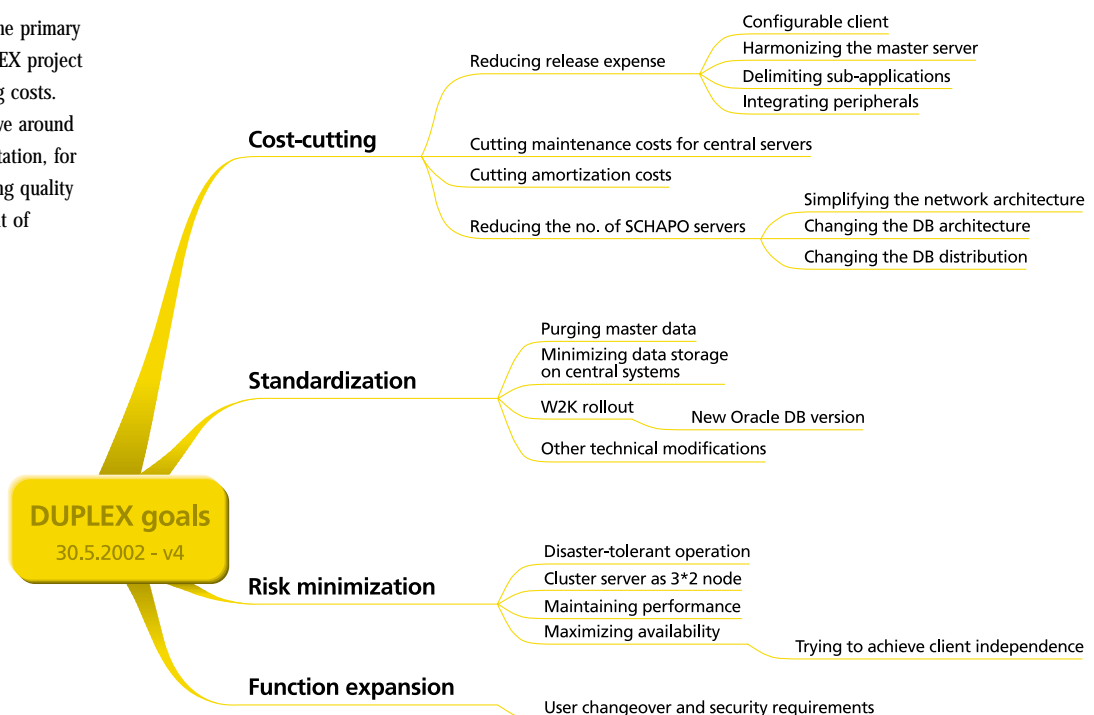
Overview of the value-added hierarchy

Combining SCHAPO and ECO to form DUPLEX results in operating improvements which, as a whole, increase the value generated by the counter applications. The individual contributions to the commercial result can be represented in the form of a hierarchy.
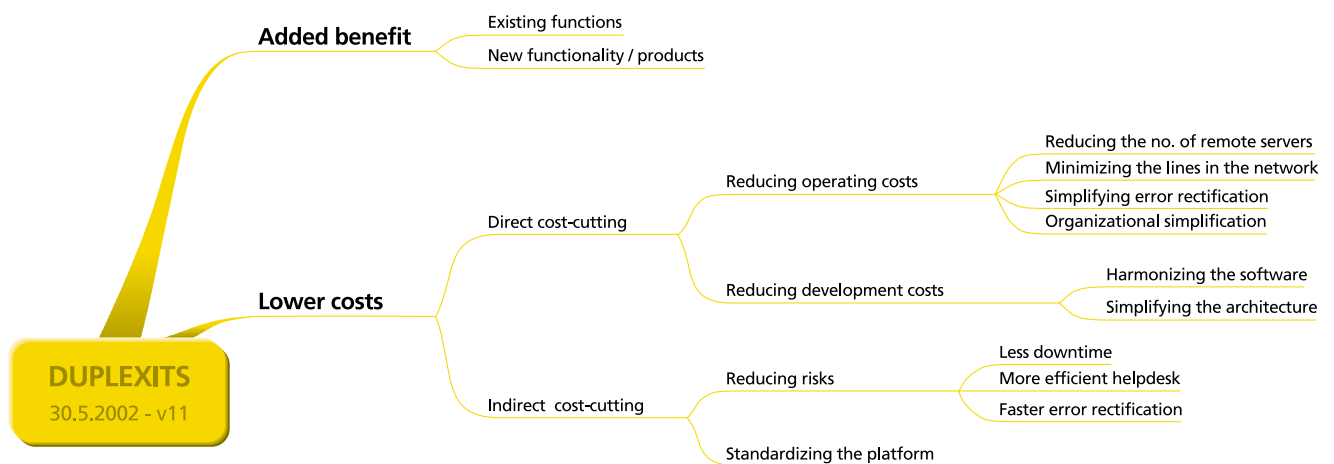
Increased benefits

DUPLEX supports the same functionality as SCHAPO and ECO, which means that it does not give rise to any potential additional revenue flows. However, investments will be in place that will allow such services to be incorporated

In the overview, the primary goal of the DUPLEX project is to cut operating costs. Other goals revolve around project implementation, for instance optimizing quality from the viewpoint of processes.

DUPLEX goals
30.5.2002 – v4

Cost-cutting
- Reducing release expense
  - Configurable client
  - Harmonizing the master server
  - Delimiting sub-applications
  - Integrating peripherals
- Cutting maintenance costs for central servers
- Cutting amortization costs
- Reducing the no. of SCHAPO servers
  - Simplifying the network architecture
  - Changing the DB architecture
  - Changing the DB distribution

Standardization
- Purging master data
- Minimizing data storage on central systems
- W2K rollout
  - New Oracle DB version
- Other technical modifications

Risk minimization
- Disaster-tolerant operation
- Cluster server as 3*2 node
- Maintaining performance
- Maximizing availability
  - Trying to achieve client independence

Function expansion
- User changeover and security requirements

Financial value drivers and other value drivers in DUPLEX

DUPLEX project.   Start: 1.1.2002   End: 30.4.2003

in the future at a relatively modest outlay (new functionality/products, later implementation).

Lower costs

The DUPLEX project is primarily justified by the reduced costs – a typical target for an infrastructure improvement. The relevant individual contributions can be grouped into direct contributions and indirect ones. Whereas the direct reductions stem from the resulting decrease in maintenance costs (fewer remote servers, network branches, etc. – as well as operational optimizations), savings will also be achieved over time in terms of development costs (a consequence of the simplified system architecture and standardization).

A final contribution towards cutting costs is made by reducing the number of system risks, therefore reducing the amount of downtime. A certain degree of system risk cannot be avoided and the corresponding statistics are known. With a view to minimizing the effects of the remaining basic risk, organizational measures and process improvements are implemented in order to establish effective means of dealing with problems. This shortens system downtime and makes the task of recovery less time-consuming.

At the end of 2001, PV Informatik commissioned Information Technology Services to technically merge the two counter applications, SCHAPO and ECO, to form a modern, future-oriented, cost-

THE SOFTWARE DELIVERED BY BSI EXCEEDED THE QUALITY THAT HAD BEEN DEMANDED...

effective and flexible information system that can be used at Swiss Post counters. As the project was launched, the Swiss Post operated SCHAPO at 412 post offices and ECO at 1,636 post offices to provide IT support for sales activities at its counters. Both applications ran under Windows NT4.0 and with Oracle database versions 7.3.3. (SCHAPO) and 7.3.4 (ECO). Each SCHAPO client was equipped with a database of its own and all the peripherals needed for the purpose of entering and transmitting data electronically; it was proprietary and could only be operated using a keyboard. It was possible to work in offline mode. The ECO client was based on POBA (Postbasis) functionality. Only one database was installed for each post office. It was possible to work in offline mode, but only after switching the database to a different client (which took around 2 hours). Payment documents are coded and physically sent to the relevant processing centres. A great deal of redundant work had to be carried out for development, support and quality assurance.

The decision to use Windows 2000 as the post office's operating system also affected the two counter applications, SCHAPO and ECO. An analysis had shown it to be advantageous to merge the two systems. The operating system was changed on the basis of ECO. The SCHAPO parts were extended in the context of the DUPLEX project, again on the basis of ECO. Porting to Windows 2000 laid the foundations for merging the two systems.

Global goal

The global goal was to technically combine the two applications, thus forming a modern, future-oriented, cost-effective and flexible information system that can be used at the counters of the Swiss Post.

The system was converted/merged in 2 stages (2 software releases):

- ECO (Version 1.4)
  Porting to W2K
  Porting to Oracle 8.1.7
  Integrating SCHAPO peripherals
  Preparing the database for task of merging the systems

- DUPLEX
  Integrating the SCHAPO payment transaction module
  Reducing the number of server sites
  Merging master data

Advantages

- The SCHAPO and ECO applications are combined to form a single system with varying features relating to payment transactions (coding ECO documents, scanning SCHAPO documents).