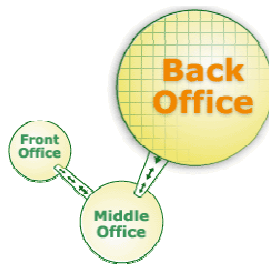


## FRONT – AND BACK-OFFICE INTEGRATION IN SOCIAL SECURITY

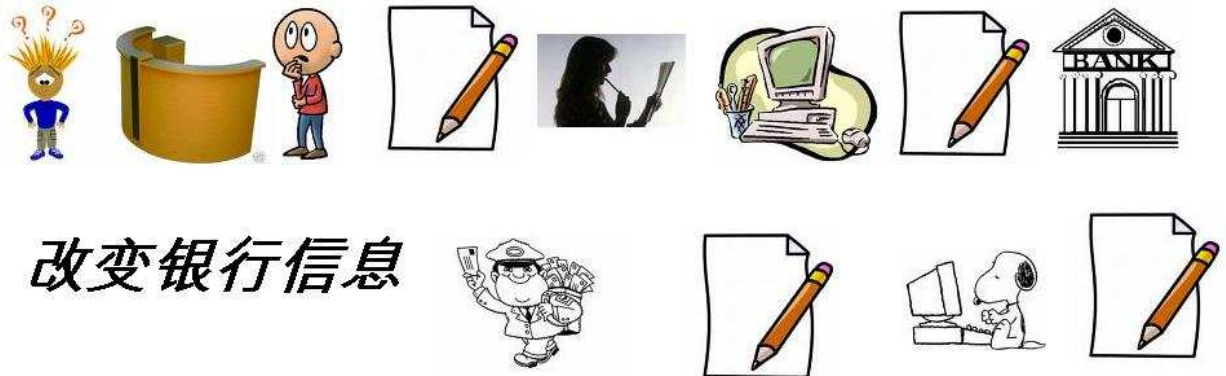
### A CONCEPT NOTE

1. **Front office** is basically handling relations with clients. There are different types of clients (insured persons; beneficiaries; enterprises; other administrative units) which call upon front office for a variety of reasons/operations (registration, payments, account updates, information, exchange of data ...).
2. **Back office** refers to the supporting operations that make the system work, in particular in response to requests from clients transmitted through front office.
3. In some instances, one has to establish what is called a “*middle office*” in charge of transforming information received via front office into something understandable by back office.



4. Back office refers to the IT and infrastructure support services which handle operations like workers or employers registration, processing claims, payment of benefits, cashing contributions, recording, handling office supplies, running software, maintaining hardware, etc.
5. Whereas front-office refers to the functions of an organization that interact on a daily or normal basis with outside entities such as clients and intermediaries or the general public, back-office systems handle the day-to-day administration of a company. Examples of back-office functions include processing claims, accounting, human resources and keeping the information and communication systems running.
6. **Integrating front and back office in social security** refers to a situation where the clients directly access information or input changes affecting their personal situation regarding social security.

7. The diagramme below illustrates as a kind of “worst case scenario” how separation from front and back office functions may generate cumbersome operations and delays for relatively simple action – in that case change in bank account for a pension in course of payment. The pensioner reports new account number to social security clerk who, after recording it on paper, passes it on for input into the Fund’s computer system, then transmitted via paper form to the bank, where an official fills it the relevant paper form to subsequently be inputted into the IT system, with printout finally being mailed to pensioner to acknowledge the fact that henceforth his/her pension will be payable through the bank account he/she had designated.



8. Conversely, the integration of front and back office functions would allow the pensioner to directly input from home, via internet, the new coordinates of his/her bank account, transmitted to the social insurance agency processing the payment, which will practically simultaneously inform the bank that will henceforth receive pension amounts.



9. Integration, in the sense of direct input by clients of changes affecting their situation, may occur either for selected or for all applications – e.g. for registration of newly insured persons only or for all relevant social insurance elements -, and may be limited to social insurance or involve an array of Government agencies with access through a portal of administrations.



10. Web access may be organized through terminals accessible on social security premises for those insured persons or beneficiaries not connected from home or their enterprise. Interaction and direct access may also intervene via other media such as the telephone.
11. It has to be noted that direct access is to be considered as an alternative to front desk operations, that will have to remain accessible for those clients not familiar with computer utilization, or confronted with special, non standard situations. Further, integration has to start with front desk operation itself, through organizational patterns that allows for all transactions concerning one client to be conducted at one single window.
12. Front- and back-office integration in social security is a component of, generally speaking, **e-government**, which refers to the use of information and communication technology to provide and improve government services, transactions and interactions with citizens, businesses, and other arms of government.
13. Since 2003, the United Nations conduct e-government readiness surveys and reports allowing for cross country comparisons on how governments use Information and Communications Technology (ICT) to provide access and inclusion for all. The UN systemic assessment results in the elaboration of an E-Government readiness index, composed of three sub-indexes, viz. Web measurement index (offer of e-services by Government), Infrastructure index (accessibility of e-services) and Human capital index (citizen's capacity to access and use internet). The 2008 Report<sup>1</sup> estimates that the e-Government readiness in China is only slightly above world average – 0.502 as against 0.454, a rank of 65 out of 183 assessed member countries –despite relatively strong Government presence on the web (0.508 compared to 0.354), because of relatively weak infrastructure (0.160 compared to 0.210) and an average human capital index (0.837 compared to 0.783).
14. However, China's quite high e-participation index, i.e. the "quality and usefulness of information and services provided (...) for the purpose of engaging (...) citizens in public policy making through the use of e-government programs", established by the UN at 0.477 as against a world average of 0.191 makes it likely that e-government will rapidly become prevalent across the country for a growing number of G2C (Government to citizens) operations, and social security will indeed be requested by tutelage authorities as well as by its clients not to be absent from this evolution.
15. **Why is integration of front and back office worth launching?** Reasons most commonly advanced in support of front and back office integration are productivity gains, decreases in errors owing to decrease in intermediaries, clients' satisfaction
16. Although obviously highly desirable, **integration of front and back office is not a simple operation.** It requires first integration in concerned data bases – identification of records should be homogenous and unambiguous. Second, it requires strict supervisory measures to ensure security

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<sup>1</sup> English version : <http://unpan1.un.org/intradoc/groups/public/documents/un/unpan028607.pdf>



and confidentiality of transactions. Third, it requires the development of specialized software. And fourth, hardware requires upgrading and generalization to enable transactions, including the question of uploading only the relevant portion of huge and ever growing databases and that of having made available ATM type machines in all social security offices for clients who cannot connect from home.

17. **Where to start from when considering integration of front and back office?** One first step is to review others' experience, in country and out of country, in social security and out of social security – e.g. the banking system has been operating integration of front and back office for a number of years (ATM machines). Then, it is very useful to check customers' desires and expectations, not to launch expansive and complicated reengineering that would not correspond to what actually is needed and expected. Another important step is to test data reliability, since integration of front and back office requires a perfect recording of individual data – once the entry have been validated, there is no further control over their value. Thereafter, pilot procedures may be designed, starting with the simplest transactions – e.g. registration of new employees, or changes in bank domiciliation for beneficiaries.
18. **What are the most important prerequisites for entering into front and back office integration procedures?** Those prerequisites are technical – notably the availability of accurate and exhaustive data; political – there is a need for a strong political endorsement of the project and a solid financial backing for the project: and, managerial – management should secure a full support and commitment from staff, at all levels and throughout the procedures, which should be participatory, since without staff understanding of the process and perfect mastering of its difficulties, nothing may really happen.
19. Areas where integration of social security front and back office was most commonly implemented in European countries are: Registration and changes (employers and employees); Contributions collection and recording; Compliance and enforcement; Award and payment of benefits<sup>2</sup>. Further, there are several cases of inter-agency integration which allow for broad data sharing and subsequent increased efficiency in individual Agency operations. It has to be noted that other systems provide integrated services to their clients for a long time, such as the UnionPay network of the Chinese banking system<sup>3</sup>.
20. **Registration and changes** - Social security numbers are at the core of the architecture. They are required to identify both employees and employers – and for the latter establish system allowing for link between HQ and outlets. Further, the numbers have to be the same in all administrations part to the integration process, or a special software has to be designed and operated to ensure

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<sup>2</sup> Source : ISSA, 2007 General Assembly, Moscow - **Internet and Communication Technologies – ICT – and social security transformation.**

<sup>3</sup> Founded in March 2002, China UnionPay is an association for China's banking card industry, operating under the approval of the People's Bank of China. It is also the only inter-bank network in China linking the ATMs of some fourteen major banks and many smaller banks throughout mainland China.



compatibility among the various numbering systems. Security considerations make delivery of pin in addition to social security number a key for reliability. The pin may be delivered under sealed envelope either at the desk counter, or sent via post office. This practice is used by a number of foreign administrations – integration also requires paper ...

#### 21. Country examples:

- **Bulgaria**, where Employers and insured persons can manage their social security status via Internet. The system uses PIC – personal identification code – to authenticate users.
- **Belgium**, where when a worker leaves an employer, the latter can communicate information via phone, internet, electronic file transfer and even GSM/SMS.

22. **Contributions collection and recording** – Front and back office integration in contributions collection and recording has to take into account cases where one employee may have several employers. Automatic processing may help detecting cases where an employer decides to register an employee for certain risks only (adverse selection). It facilitates electronic transmission of data by employers, who are still too often required to physically come to social security front office, sometimes quite far away from their enterprise location. Integration may also help labour inspectors prepare their controls, and allows for employees to check data entered under their name by employer.

#### 23. Country examples:

- **France**, where employers have access to the following services via the internet: declare recruitment, declare and pay contributions, access enterprise account. A special certificate is issued also via internet to registered employers allowing for secure performance of operations.
- **Belgium**, where multifunction declarations by employers provide data to different social security branches from one single input. The private sector was slow to adapt, which required an extensive complete business process reengineering – BPR.

24. **Compliance and enforcement** - Back office integration, which is a prerequisite for efficient Front- and Back Office integration, allows for cross-checking of data among the various schemes, and in particular to raising questions as to why a given worker is registered under old-age and not accident injury, medical care or unemployment insurance – or to identify cases where aged pensioners registered under medical insurance do not make use for a long time of medical facilities, which may point to a demise not declared by family members. Cross checking of data is even more powerful tool when several administrations are part to the information pooling. Establishing direct automatic links with banks, tax authorities, postal offices, civil affairs administration, etc. is also a kind of front- and back- office integration, in the sense that it minimizes the need for paper exchange, hence the



risk of errors or omissions in transaction with these Agencies. Respect for rules governing privacy of data concerning workers and citizens have to be fully taken into account when proceeding to such automatic exchanges<sup>4</sup>.

25. Country examples:

- **Italy** - Multi channel virtual front office common to various schemes have been established, integrating front and back office functions. Shared contact centres have been developed.
- **The Netherlands** - “Labour and Income Centres” have been created to decrease social security managerial costs through grouping in one place the 3 pillars of social protection – employment, social security, social welfare. This grouping facilitates cross checking via use of one single computer network and shared data.

26. **Award and payment of benefits** – Direct access to records by insured persons, employers, beneficiaries allows for a proper checking of accuracy and completeness in records. It has to be expected that access to records by clients will raise numerous questions at least at the inception of the scheme, hence the need for strengthening the pool of desk officers in charge of investigating the cases and taking remedial action. Clients may also use direct access for making changes in their personal contact points (address, bank account) or enquire in advance about the amount of long term benefits they would be entitled to under certain circumstances (automatic calculation). The above is subject to what was said above concerning data security (see § 20).

27. Country examples:

- **Czech Republic** – The social security institution has passed from the storage of image documents to electronic submission of forms. A portal for mass transfer of data between organizations with systematic use of electronic signature key – PKI (public key infrastructure) system and chip cards has been established.
- **Spain** - The Services for Pensioners website allows for online application for benefits – including those involving other organizations, e.g. for migrant workers. Website also includes an auto-calculator of benefits, as well as a virtual office accessible after issuance of a digital certificate.

28. Examples of multi agencies collaboration:

- **Portugal** – Lojas do cidadão, Citizen’s shops have been established in all cities, and group under one roof or even with one desk services initiated by a number of public agencies, such as water,

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<sup>4</sup> See notably Protection of Workers’ Personal Data, and ILO Code of Practice, Geneva 1996



- electricity, gas, telephone, driving licenses, justice, social insurance, health, retirement schemes, , taxes, employment, vocational training, notaries, migration office, etc.
- **Belgium** – The CBSS, Crossroads bank for social security, implements a network for mutual electronic service delivery. All actors connected to the network can mutually consult their databases and exchange different types of electronic messages in a secure way. A social security portal is available containing integrated services (information and transactions), organized along life events of citizens (birth, employment, occurrence of a social risk ...) or business episodes of companies (starting a company, recruiting personnel ...).
29. **Possible steps ahead** – Some successful experiments of integrating front and back offices have been conducted in individual Chinese social security Agencies; others are under testing and experimentation. It is therefore recommended that those experiments be fully documented and their results and processes shared among all interested social security bureaux for possible replication or adaptation. It is also recommended that studies be conducted of full fledged integration procedures conducted in other areas of the service industry, such as the banking system or the civil aviation passengers' booking, ticketing and seat reservation.
30. Social insurance Agencies interested in launching integration of front and back office operations should carefully design their respective plans, and limit themselves, during an inception phase, to relatively simple, precisely targeted operations, in order to fully master all implications of such techniques. A number of European social security systems have a relatively long and broad experience in social security front and back office integration. It is therefore highly desirable that interested Chinese SIB make use of the relations developed with foreign institutions in the course of previous, on going or planned project activities to benefit from direct feedback n the techniques used abroad, difficulties met, safeguards installed, and results achieved.
31. The International Social Security Association – ISSA – of which MOHRSS is a member, has on a variety of occasions reviewed the issue of the use of modern ICT in support of social security management upgrading and transformation<sup>5</sup>. It is therefore suggested that the project as such approaches the ISSA Secretariat under Ministry's cover, to request support in contacting other ISSA members among the most advanced in this subject area.

JV Gruat, October 2009.

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<sup>5</sup> Among the most prominent ISSA studies, 2002 ISSA ICT International Conference in Valencia on e-government/e-administration in social security; 2007 World Social Security Forum, Moscow – Information and Communication Technology as an instrument of transformation for social security.