

Inter-American Center of Tax Administrations – CIAT

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“A MODERN VISION OF THE TAX ADMINISTRATION”

Case Study 1.1

**STRATEGIC PLANNING OF THE ICTS: DILEMMAS POSED
BY THE CURRENT ENVIRONMENT**

**Inter-American Center of Tax Administrations
CIAT**

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Case Study 1.1: STRATEGIC PLANNING OF ICTS (INFORMATION AND COMMUNICATION TECHNOLOGIES): DILEMMAS POSED BY THE CURRENT ENVIRONMENT

Abstract

Tax administrations, because of their dual characteristic of simultaneously facilitating and controlling compliance, make intensive use of information and communication technologies and the way in which ICTs are developed within the organizations depends on their level of alignment. One may observe in the tax administrations of member countries how this relationship affords opportunities and limitations. In specific cases, an analysis is made of the way in which this influence determined the availability of electronic channels for filing tax returns, how it determined the very structure of the administrations through the establishment of large taxpayer units, while at the same time exploring less successful results originating from a not as adequate alignment.

Within the framework of the strategic alignment model, an effort is made to align ICTs to the business of the Tax Administration, it being concluded at different times of organizational strategic development, that at least three of the perspectives identified in the model are beneficial for the administrations: the execution of the strategy, the technology as potential and the level of service.

The work explores several challenges faced by alignment: the participation of the tax administrator and the managerial staff in planning and managing the ICTs; the changing nature of the tax administration and the dynamism of the ICTs in the business area; the difficulty for measuring value added resulting from investments; restlessness arising in times of governmental changes and the capacity for recruiting and maintaining IT talent. The work analyzes, by way of illustration, specific cases of member countries such as Argentina, Costa Rica, Ecuador, France, Honduras, Kenya and the United States of America.

Finally, by way of conclusion, the work poses the challenges and opportunities to be faced in the future by the ICT areas, namely: the pressure from reduced investments as a result of the world crisis, the possibility of stagnation of electronic services once they mature to the first generation level, the promulgation of laws for free access to information and simplification of procedures, the use of reference frameworks and good practices developed at the IT international environment, the implementation of service-oriented architectures, potential use of XBRL and the digital gaps.

Case Study 1.1: STRATEGIC PLANNING OF ICTS (INFORMATION AND COMMUNICATION TECHNOLOGIES): DILEMMAS POSED BY THE CURRENT ENVIRONMENT

The State and society impose conflictive challenges on tax administrations. On the one hand, tax administrations are required to take actions to guarantee the correct performance of tax obligations to increase tax revenues and provide the State with the necessary resources for development. On the other hand, society demands fewer taxes, more transparency and less intervention; to sum up: simplification and facilitation, while at the same time increasing control. In such scenario, the tax administration has been long tied to information technologies. Their application has been a possibility as well as a limitation to increase management capacity.

Tax administrators use information technologies to carry out a variety of functions: taxpayer registration, tax return reception and processing, taxpayer's debit and credit account – tax current account– maintenance, controlling performance of obligations, collection, procedures' automation, risk analysis and case selection, generation of statistics and monitoring of management indicators, scenario simulations and management, and the promotion of a tax culture. However, the way such technologies are and have been used affect management's capacity and, sometimes, even the way tax administrations are structured.

During the 90's, and in many cases before then, third parties, generally private banks, were entrusted with the transcription of tax returns file in paper in order to improve tax collection and support the scarce capacity of information systems to timely respond to control requirements, with several tax administrations implementing large or main taxpayer units. Generally, the setting up of such units forced selected taxpayers to submit their tax returns and effect payment at one single geographic location, using a decentralized information system which, at times, kept little symmetry with the one used to manage the largest portion of taxpayers. Given the system weakness, collected information went down considerably, with only tax return and payment control being effectively addressed and generating a significant reduction in tax administrations' capacity to exercise their control functions. This management was so important that some countries even set up standards to penalize taxpayers who opted to submit their tax returns otherwise or elsewhere.

In the current decade, thanks largely to an increase in the available technological facilities, the ubiquity of Internet and a better alignment of information technologies with the organizational strategy, the electronic means are the favorite means to submit tax returns and make payments. Taxpayers are no longer obliged to go to a single place and use one single means. And, as a consequence, some countries have regulated tax filing obligations through electronic means by expanding it to other relevant taxpayer sectors.

The need to align the technology strategy with the tax administration's strategy seems to be an inexorable axiom. The adequate alignment of technology planning with organizational strategy could be defined as the timely application of ICTs to certain situations and the alignment of actions/results with the business' strategy, goals and needs.

It is worth wondering if, alternatively, it is also inevitable that tax administration's strategy should be aligned with information and communications technology trends. The answer is not necessarily as direct. Especially when there are some companies, mainly those companies working in highly dynamic sectors and with short-term cycle products and services, who believe the alignment could imply a paradox. There is a significant percentage of organizations, 30% according to a study, that have aligned ICT strategy with the organizational strategy, resulting in no added value to the organization and sometimes proving harmful because it created a scheme too rigid for the adoption of emerging technologies.¹

Is it even necessary that information technologies should be limited exclusively to the implementation of the administration's strategies? Is it essential that ICT strategies should become the guiding engine of the organization's strategy? Do ICTs matter at all?

For instance, filing tax returns through means other than paper is an option available in most member countries, and the use of Internet as a filing means is even favored by tax administrations. Those which implemented these solutions hesitated little in incorporating electronic filing as a strategic objective in their respective plans. Those which have not yet implemented such facilities plan to do so in the short term. But some years ago, when the only tax return filing means was paper, when there were no countries allowing filing even through magnetic means, the implementation of online filing was probably more in response to proposals originating in technological areas than in administrative areas, intended largely to demonstrate the utilization of technologies in other business areas or the Tax Administrations of other countries. In this sense, the CIAT has played a relevant role in facilitating that exchange.

Despite the clear benefits of using software to prepare tax returns, including: better data quality, greater availability of information in a shorter time and reduction in data-capturing-related problems, some mission areas of tax administrations opposed to the implementation of these mechanisms on the grounds that they were uncertain about the evidentiary validity of submitted tax returns or the incapacity to register taxpayer's signature in the tax return and a resulting lack of validity. Even in such cases, the new manner of operation prevailed. In some cases the flexible disk was submitted together with a printed version of the tax return prepared with the software, along with the signature; or one case in Spain, which used a printing format and reading of bi-dimensional codes printed on the tax return printed paper.

¹Further analysis of this issue can be found in an article by Nicholas Carr published in the Harvard Business Review: "Information Technology Doesn't Matter"

On the other hand, one example of the problems resulting from an insufficient alignment was the implementation of OCR/ICR² character mechanisms to automate value capture paper tax returns and thus substitute the way to capture tax return data, rather than the manner tax returns were prepared. The investment made on this type of technologies was not consolidated because its use was aimed at addressing an operating problem, tax return capture; but its implementation was not aligned with the main organizational strategies: improving control and facilitating compliance.

Technology strategy and organizational strategy

There is abundant literature in support of the need to align the technology strategy with the organization's strategy. However this relationship is not clear and without difficulties, not only in tax administrations.

The "Strategic Alignment Model"³ – SAM proposed by J. Henderson & N. Venkatraman, identifies four domains incidental upon the alignment of ICTs with the business:

1. Tax administration strategy

This includes the scope and competencies set forth by the laws, in particular tax laws, and their regulations; governmental policies and their vision of the relationship with taxpayers; simplified systems; the geographic distribution of the administration and the concentration of the economic activity; the demand of taxpayer services; the society's perception of the transparency of tax administration's actions; the risk perception; double-taxing agreements; cooperation alliances and agreements signed between the tax administrations and other regulatory bodies; and the relationships between the organization's political and technical levels.

2. Organizational processes and infrastructure

This includes the organizational structure, tax administration processes, particularly key processes (taxpayer registration, tax return and payment processing, compliance control, collection, examination, studies, etc.) and those related to foreign trade, for the administrations integrated with Customs.

In general, the Tax Administrations of CIAT's member countries have adopted mixed structures with well differentiated regulatory and operating areas. The organization structured around taxes evolved into an organization structured around functions, and continues evolving into organizations structured around taxpayer type.

This quadrant also includes human resources working at the Administration.

² Optical Character Recognition/Intelligent Character Recognition

³ Strategic Alignment Model

3. Technology strategies

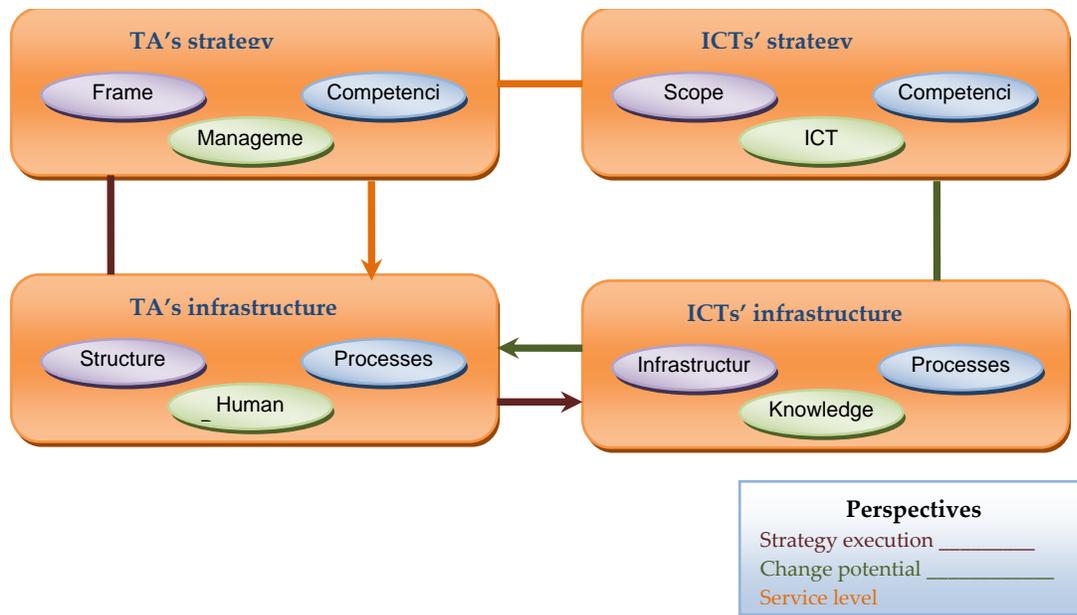
These comprise information systems and their deliverables to the Tax Administration, but in particular include ICTs that create opportunities or possibilities for the Tax Administration to improve existing services, implement new services, expand communication and provision channels; implement customer service platforms or automated means for the relationship with taxpayers; or improve controls: determination of taxes, systematic reception of information from third parties, identification of inconsistencies through cross-reference information, risk analysis or a closest control of certain Administration's auxiliaries, such as accountants and agents, who assist taxpayers in preparing their tax returns.

The quadrant also includes the existing policies regarding the way ICTs are implemented (wholly in-house, total or partial outsourcing of services, use of off-the-shelf tools, open-code software or limitation of suppliers, open competition); the methodological standards and other benchmarks adopted by the Administration or the State in a general scenario.

4. ICT processes and infrastructure

This quadrant includes solutions architecture: policies and guidelines ruling the integration of hardware, software, communications and network platform, and data management; processes for the development and maintenance of applications, equipment provision, maintenance of hardware and equipment technical support, software, applications and networks and, of course, the human resources of ICT areas. The SAM model establishes four dominant perspectives extended at least to eight perspectives. Tax administrations have used at least three of them:

Strategic Alignment Model



- Strategy execution

The Tax Administration's strategy drives both the technology strategy and the infrastructure development. It pertains to a hierarchical vision where ICT executives assume the responsibility for implementing the institutional strategy. External technological factors have little weight on the ICT development internally. The fundamental goals of this perspective are minimizing errors and cutting down time. This perspective consists in sorting out operating processes weaknesses through the use of information systems. A marginal result of this perspective could be information systems achieving a high degree of maturity and stability, despite being supported by "outdated" technologies.

- Technology as a potential for change

This perspective is concerned with the opportunity of using new technologies to provide new services. It is aimed at achieving a potential flexibilization of the organization's strategy to accommodate new technological capacities. The top management's role is to visualize the administrative impact of the use of new technologies and the challenges imposed by the necessary cohabitation with the existing solutions. But the person responsible for ICTs within the organization is a catalyst that facilitates the understanding by the administration of such technology potentialities. The provision of services through non-conventional channels, including the Internet and other telephone services and the proliferation of self-management applications, are an example of this type of alignment.

- Service level

This alignment perspective moves slightly away from the organization's strategy. It is aimed at creating a high-quality ICT area supported by the adoption and the implementation of benchmarks, methodologies, standards and good practices making an impact on the organization's processes thanks to the effective use of the technology and the manner that solutions are implemented and managed. The recent implementation of iterative methodologies, such as RUP⁴, and agile methodologies; the creation of scalable supporting mechanisms for internal and external users service; the implementation of high-availability systems or alternative data centers; information technology security measures, including single-access authentication systems; are all examples of the results of this type of alignment perspective.

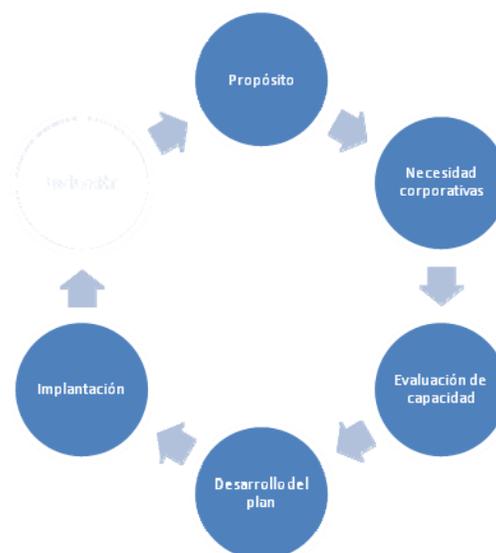
We believe that for any model to be useful, both in practice and in concept, it must be formed as a dynamic model that allows the administration to exploit the potential uses and thus capitalize these three alignment perspectives, the strategy execution being the dominant one.

To administer ICTs within the organization, tax administrations should ideally have a technology strategic plan aligned with the organizational strategic plan. Of course, this requires an organizational strategic plan. In this case, and particularly in the case of investments, the size matters: factors such as performance, availability and opportunity of services force the Administrations of geographically more scattered countries with a larger number of taxpayers to include additional considerations in their plans.

⁴ Rational Unified Process

ICTs' strategic planning process must be an ongoing task that should be subject to permanent revision. The result of this process is a plan that must be established and spread in order to be implemented, but which in no case should it stand as a limitation to adapt to the changes arising in relevant areas.

One approach to Grupo Forrester's proposal for ICT executives within the frame of Tax Administrations can follow five planning phases: 1) definition of the plan purpose that will eventually accompany the organization's strategic planning process as a whole, 2) identification and recognition of corporate needs, 3) assessment of the ICT area's capacity to address such needs and identification of existing gaps, 4) development of plan with a focus on closing identified gaps, 5) wrap up plan and begin its propagation for implementation purposes.



On the other hand, the control objectives established by the Government Institute of Information Technologies and the Association for Audit and Control of Information Systems, Common Objectives for Information and Related Technologies– COBIT provides as one of their control objectives the process of technology strategic planning, which comprises the following activities:

- **Administration of IT value**
It refers to the work conducted along with the substantive areas to establish the required investments in technology and to determine the impact that such investments will have directly or indirectly on tax revenues and TAs' actions efficiency.
- **Alignment of ICTs and the substantive area**
It focuses on educating tax administrators on the potential benefits of applying new technologies, making sure that the development direction of ICTs is understood and shared by the organization.
- **Assessment of current capacity I**
Information systems and related services provided by ICT areas and the communications platform must be assessed to determine their stability, operating costs and complexity in order to sustain them over time.
- **Development of ICT strategic plan**
The strategic plan must be developed along with the areas involved and responsible for the Administration's mission processes, including budget frames, source of financing, acquisition strategy and schedule.

The development of the technology strategic plan should have at least the engagement of the Administration's maximum authority, financial executives, regional administrators and line executives.

- Development of operating plans

The need to formulate annual budgets in most administrations calls for tactical plans intended to implement defined annual strategies.

- Project portfolio management

Challenges for ICT planning aligned with the Tax Administration's strategy

There are several challenges posed onto aligned ICT planning process, among which are, without any particular order, the following:

- The tax administrator's engagement in the ICT planning process may be inexistent, either because all the inputs necessary to transmit the strategy are assumed to be included in the organization's strategic planning, or because such strategy is transmitted only to the ICT responsible. This problem may be aggravated by ICT officers' perception of the importance of the engagement of the business areas in planning "their" business.

- Tax administration and information technologies are very dynamic areas.

The Tax Administration is required to permanently watch the environment in order to identify and, better yet, foresee any changes in the main variables involved in their mission, which include foreseeing potential wrong practices by a group of taxpayers. This reasonably calls for an ongoing process of reforms to the regulations frame, either through amendments in the tax laws, or the creation of new taxes, or administrative amendments targeted at solving problems detected in previous years. Usually tax return forms, and the logic immersed therein, are modified on an annual basis.

The Administration's control actions are also modified by the specialization of taxpayer type-oriented actions (natural persons, exempt taxpayers, small and medium sized companies), actions targeted at specific economic sectors, the increase in capacities as a result of a better risk management and the use of external information.

This dynamics puts the pressure on technological areas to develop solutions or adapt the existing information systems on a timely manner.

On the other hand, information and communications technologies have an even greater dynamism. On the one hand, the measurement of capacities is affected by Moore's Law⁵, which establishes a duplication of the computing capacity every eighteen months; Nielsen's law on bandwidth, which provides that the bandwidth for any *premium* user

⁵ The so-called Moore's Law provides that the number of transistors that can be integrated in a low-cost circuit duplicates approximately every two years.

grows 50% per year. On the other hand, technological trends vary notably. For example, from centralized solutions of computing centers based on big sized computers, tax administrators migrated to decentralized client/server topology solutions with work stations consisting of personal computers and smaller departmental teams in some cases engaged in specific tasks such as, for example, assisting a group of taxpayers (special taxpayers, Argentina's sistema 2000) etc., to a new centralization supported by IP networks with access to external users through HTTP protocol on the Internet.

On some occasions, the high speed of technological change makes that a proposal, and the plan and the technology therein contemplated, put forward in a technology plan that was already published and spread, become highly likely to be rendered obsolete. This is particularly the case when technology acquisition processes are framed within acquisition procedures having minimum, long, extendable and inexorable terms.

Therefore, ICT planning must include a continuous process of revision and evaluation.

- The difficulties encountered in the planning process of ICTs in a tax administration, and particularly when there is no alignment between the ICT strategy and the organizational strategy, are increased when the technology officers lack knowledge on tax administration matters. And even more when the officers responsible for relevant areas are not sufficiently knowledgeable of the issues inherent in tax administration. This could result from the political nature of the top management of tax administrations and the time these appointed officers need to master tax administration matters.

In this same sense, organizations' executives may lack knowledge of the current capacities brought about by technology, the opportunities for the organization arising therefrom and what organizations need to do to profit from that technology. The ICT executive must communicate the benefits for the tax administration originating in such potentialities.

The ICT responsible in any tax administration must see to it that he, and the main members of his team, obtain training on tax administration matters, manage basic concepts and terms in order to make dialogue possible.

- Measuring the direct benefits from technological investments is highly complex, in terms of the increase in tax revenues, collection effectiveness and the increase in voluntary compliance. This complexity may be perceived as a costly service center in the eyes of the administrators.

In this sense, a proposal has been made to establish an integral management frame⁶ for the information and communications technology area, which should follow the following design principles: filing simplicity; the existence of explicit links with the technology strategic plan and the goals set in the annual operating plans; the existence

⁶ *Balanced Scorecards*

of corporate metrics based upon standard criteria. This allows evaluation meetings to focus on decisions targeted at solving problems and corrective actions, instead of analyzing the relative importance of indicators; and the extendable nature of indicators, which should allow an aggregate vision apt to expand and include details.

Metrics should be aimed at determining: 1) the financial execution of the area according to the services, the project advancement, the investments in platform and strategy implementation; 2) the execution and traceability of technology projects and deviations from the activity planning and requirement fulfillment; 3) the provision of services from the aggregate vision of technology service internal and external clients (response time, service availability, data accuracy); and 4) users' satisfaction, by way of independent surveys and other evaluation means.

ICT investments should be less appraised in terms of the possibilities resulting from the technology and more in terms of the possibilities originating from the information obtained, processed and managed with such technology.

- One of the greatest difficulties observed in several tax administrations of member countries when implementing an ICT aligned strategy is the possibility that the strategic planning process may remain incomplete, in view that plans may fall short of: measurement of total costs of ownership and implementation; identification of risks; project advancement indicators and alerts on deviations in the light of timeliness and budget execution.
- Another variable to be considered in the planning process is the existence of a sort of turbulence that may be generated in any tax administration upon the occurrence of a change in management. This variable could be accentuated by changes in government, but may also occur within the same government tenure.

Investment projects in full execution are particularly sensitive to this situation, which are sometimes cancelled, postponed indefinitely or delayed.

At times, a change in authorities may trigger an important change in the organization's strategy, generating, for obvious reasons, a lack of alignment between the technology plans and the new strategy.

The technology areas may face the new executives' tendency to "start all over again".

- Another important element is the so-called "ICT government"; in particular, the aspects related to the prioritization criteria within tax administrations, already complex between them.

Some tax administrations have subjected their technology areas to a specialization on tax administration specific areas, so that, for example, one area addresses collection requirements and compliance mass control, another addresses the requirements of examination and control areas, another is responsible for customs processes (in

integrated administrations) and a different area deals with administrative requirements, such as human capital management, fixed asset control and budget control. In these cases, project prioritization is carried out along with the business area and their consolidation is sometimes determined, or limited, by the available resources for new investments.

Other administrations have established institutional prioritization mechanisms through the activation of Committees or other collegiate bodies, which globally determine the viability of projects and the allocation of resources. In this case, priorities will probably be more aligned with the interests of the organization as a whole. This type of ICT government may generate some difficulties in the adoption of fundamentally technological projects.

When the prioritization process is not properly assimilated by the Administration, the area responsible for ICTs may face an additional problem arising from the arrival of ICT-based solutions developed directly by user areas independently from ICT planning. This problem could be aggravated if there is disconnection between the Administration's regulatory and operating areas, which may be developing solutions in a decentralized fashion. This hinders the standardization of processes and diagnosis processes, increases the demand for maintenance of diverse solutions to address the same problem and evidences greater resistance to change at the time of implementing new solutions.

These difficulties have been observed particularly in areas related to compliance control, especially collection, and in the treatment of the resources put forward by taxpayers in response to tax administration's actions.

- Another problem, particularly in some Tax Administrations of developing countries, is the insufficient capacity for recruiting and retaining talents in technology areas. The tax administrations of developing countries which have established levels of administrative autonomy and particularly tax careers seem to be in a better position to counteract this problem.

ICT planning: A practical analysis of the administrations of CIAT's member countries

Apart from the theoretical analysis, it is worth wondering whether there is an expressed identification of the organization's goals with the goals fixed in ICT plans. This implies not only identifying the degree to which the mission and the objectives of the institutional strategic plan are shared and supported by ICT strategies, but also determining whether the innovation processes driven by ICT strategic planning are assimilated by the organization's strategy.

The need of alignment of the organizational strategy with the ICT strategy is clear. The Vision itself established in the Tax Administration's strategic plans mention the relationship with the use of information technologies. The vision of the Office of National

Taxes and Customs – DIAN of Colombia aims to form *“a team of committed public officers dedicated to safeguard the State’s interests, with a sense of service, an integral and continuously updated technological support and a special administrative system typical of a modern entity that responds to the needs of the society, officers, taxpayers and users”*. The DIAN will look forward to *“to basing its management and decision making on reliable and timely information generated by systems developed with state-of-the-art technology”*. In the case of the General Office of Internal Taxes of the Dominican Republic, the vision states the purpose of *“Becoming a prestigious and credible organization using efficient policies, procedures and information systems, with ethical and professionally unobjectionable people who look for ways to sustainably increase tax revenues, and reduce tax evasion and respect taxpayers’ rights”*.

Below is a short summary of specific cases related to strategic planning and ICT planning in some Tax Administrations of CIAT’s member countries.

- Argentina

The strategy 5 of the Strategic Plan is intended to develop new mechanisms for systematically inducing compliance. To this end, the development of IT applications will be promoted intended to provide citizens and companies with information relative to their tax, customs and pension situation. The Federal Administration of Public Revenues – AFIP will try to set up so-called reciprocal systems, which allow taxpayers not only to inquire about their operations and verifying their proper registration by the Administration, but also to initiate claims electronically in the event of any inconsistencies.

Regarding the use of the Internet, the AFIP will conduct a constant revision and adequacy of the body’s web site with a view to using this channel for most interactions between citizens and the Administration. Additionally, the ICT potential will be used to make the regulatory information available to all taxpayers and customs users upon need, and to provide homogenous answers and solutions through all channels. An interesting aspect of the plan is the undertaking to provide web access to sectors of the population who are deprived of it and to set up aid means to facilitate the utilization thereof by citizens not familiarized with it.

In the same line, the plan will try to customize the relationship with taxpayers and customs users. In this sense, the plan implies that customization cannot be achieved through traditional channels, so it will draw on the development of information systems designed to address different taxpayers’ specifics.

In trying to make an intensive use of ICTs, the AFIP will emphasize the mass use of the tax identification code, a single authentication method for users of different systems, with a view to providing more and better services. The use of the electronic signature will allow providing more juridical security to the operations in need thereof.

- United States of America

The document defining the strategic for an electronic tax administration–ETA– states the criticality of such strategy for the IRS’ global mission (providing citizens with maximum quality services through facilities that allow a proper understanding and fulfillment of obligations).

The plan’s strategic goals included accomplishing electronic filing of 80% of individuals’ tax returns and full satisfaction of taxpayers, distributors and officers, in the region of 90%.

The key strategies consist in transforming electronic filing of tax returns and payments into a simple, cheap and reliable process, so that taxpayers may prefer this channel over any other means.

In its plan, the Internal Revenue Service - IRS defines challenges related to taxpayers’ infrastructure, security, privacy and mistrust, and the cost and complexity of products. In this sense, it contemplates strengthening online tax return service to receive, store and deal with XML tax returns containing errors, and expand the on-line services platform to allow taxpayers to perform all their transactions electronically.

The IRS’ modernization process identifies driving forces, among which stand out: a great increase in work volumes, an increasing complexity of tax regulations, financial transactions, the existing expectations of a continuous improvement of services, a demand for answers to the changes in the tax system and the evolution of taxpayers’ behavior.

The strategic vision recognizes the business domains identified through a functional segmentation of the Service: tax return processing, taxpayer’s account management, taxpayer services, report on compliance (includes examination components of large and medium taxpayers, small taxpayers and sole-proprietors, exempt and wage-earning taxpayers), compliance control (includes collection and actions aimed at settling unfulfilled obligations), criminal investigation and internal administration. On the other hand, the technological domains include: the development of applications, corporate services, equipment and services for final users, networks and corporate operations.

- Mexico

One of the plan’s strategic objectives is “To have transparent services”, establishing the duty to create an electronic guide of electronic requirements and commitments comprising the required information, flow charts and sufficient explanations for compliance and expectable service levels.

Another strategic objective is *“To implement an information integral management”* intended to standardize the internal information of the Tax Administration Service - SAT (in the Spanish acronym) and turn it into knowledge of taxpayers. The aim is that information systems and data should become useful to add value to SAT’s operations and tax intelligence. It provides the mission to implement a system for measuring quality (accuracy, relevance, timeliness and truthfulness) of information. On the other hand, the information security strategy should be updated for alignment with SAT’s strategic objectives under ISO-27001 criteria.

Another related strategic objective is *“To guarantee operating continuity and a comprehensive solution that considers the alignment of organizational processes and structure with services”*. In support of this alternative, the plan puts forward projects for platforms, ongoing improvement, strategic management, technological transformation, operating continuity and the alignment of the organizational structure with processes and services.

Finally, the objective of an adequate infrastructure is achieved through the use of state-of-the-art technology intended to modernize the customs infrastructure and promote of a consolidation program of subcontracted services.

- France

Among the objectives of 2003’s governing scheme is the reduction of the existing gaps in the use of ICTs: IDs, multiple users and access means to different accesses; applications gap, redundant information turning simultaneous update not always feasible; geographical gap, taxpayers’ data that may be geographically scattered among the applications installed in local administrations; time gap, the repercussion of a fact in the set of information systems which does not occur in real time; disruption of the information chain, as a result of important disruptions in the automated processes between applications.

The plan’s main objective is the construction of a user-oriented information system: in the area of taxpayers, the system will assist natural or juridical persons under a single operating criterion, attempting to form a tax obligations vector extended over time for all effective fiscal years; and will structure a single tax account, currently dispersed, including lodged tax returns, payments, liquidations, filed demands and claims. This account must be always available for access by authorized officers.

The perspective of customization of systems and services is not only limited to those provided on line to taxpayers, but rather includes DGI’s officers, who must observe an interface adapted to their competences and needs.

The plan puts a special emphasis on investigative activities and the development and execution of pilot programs targeted at different aspects of the Administration, but particularly at improving control processes.

- Costa Rica

Among the strategic objectives of the General Tax Office stand out: *“To develop an integral management model that allows to accomplish institutional objectives”, “to put together a technological platform in support of the business management, with a corporate vision in line with the digital government strategy” and “to enhance the services provided to internal and external clients”*. This will require the consolidation of an organizational and functional structure to strengthen ICTs’ corporate vision, the implementation of a strategic plan for ICTs with annual updates and a centralized, agile and user-friendly technological tool that may allow the operation of a redesigned tax collection portal and a multi-channel management platform for the relationships with clients⁷.

- Kenya

The particular case of the Kenyan administration’s strategic planning is interesting given the incorporation into the plan of fully technological elements.

The second goal stated in the plan of the Kenya Revenue Authority – KRA is the search of integrated solutions and processes apt to assure operational excellence and a unified vision of taxpayers. To that end, it sets the objective of modernization of ICT systems through the development and application of an ICT strategy including: the acquisition and implementation of an integrated tax administration system; the improvement of SIMBA 2005 system supporting customs operations; the acquisition and implementation of an integrated system supporting the administrative management; the implementation of business intelligence facilities⁸ to allow analytical studies from transactional data; the implementation of an Internet portal for the agency; the improvement of the ICT platform including voice over IP⁹, a voice-activated command recognition system¹⁰ supporting basic services to taxpayers and answers to frequently asked questions; the implementation of a database for knowledge management: implementing the recommendations from the Library as to infrastructure for information technologies–ITIL¹¹ intended to manage technology services; and the implementation of a business continuity and disaster recovery plan.

Supplementary, it establishes that ICT services should implement standards and use the benchmarks established in ITIL and COBIT, the security rules provided by standards ISO 17799 and should obtain certification of processes under standard ISO 9002.

⁷ Customer Relationship Management – CRM.

⁸ Data warehouse.

⁹ Voice over IP- VoIP

¹⁰ Interactive Voice Response - IVR

¹¹ Information Technology Infrastructure Library

- Ecuador

The challenges concern the provision of better services integrated to the institutional value chain supported by the new information technologies, which would enhance the capacity for voluntary compliance of tax obligations. Faced with the new challenges, the Internal Income Service must develop call centers, new Internet services and new persuasion and tax collection mechanisms.

One pivotal direction for the technology area is the generation of knowledge through the use of information. This objective is leveraged by the several programs targeted at managing the life circle of available information integrally, generating knowledge therefrom and integrating it to the institution's key processes, so that they may help support and improve the effectiveness of tax compliance facilitation and control programs.

In addition, the strategic plan puts forward the need to improve processes continually and will, to that end, introduce new technologies in what will be a true innovative process.

In the same way, several Tax Administrations of several CIAT's member countries include in their strategic plans the need to make specific improvements in implemented and productive processes and information systems. So, for example, Chile's Internal Tax Service sets forth the obligation to increase the number of computers allocated to self-services, to have available an online service platform customized by taxpayer type. Honduras' Revenues Executive Office is committed to expanding services available on the Internet through the Institution's webpage, automating communications and interfaces with banking institutions, consolidating already implemented modules, developing a correction module and coupling historical database's functionalities to E-TAX. In Bolivia, the National Tax Service will try to consolidate Da Vinci, Copernicus, Gauss, Pythagoras and Newton systems.

Current challenges. Conclusion.

The world's economic crisis is expected to have important effects on tax administrations, partly due to the pressure to cut down operating expenses and differing investments, as well as the need to put up changes in the tax system aimed at improving revenues with the introduction of new taxes, new rates or tax pardons, or the granting of tax benefits targeted at increasing taxpayers' purchasing and investment power. Apart from the need to accommodate timely the information systems and the electronic service platform to such changes, it is also expectable that technology investments, and in particular the new project portfolio, will see their budget shrink.

In this sense, the technology areas could evaluate the suitability of differing investments in equipment and particularly the use of open-code software products as less costly alternatives for the implementation of projects or as substitutes for license office software products. The utilization of software as a service¹², the virtualization of servers and the outsourcing of services are other variables to be considered.

One concern that the persons responsible for tax administrations' technology areas should have in mind is the possibility that the degree of maturity achieved by the current generation of online services may contribute to a sort of stagnation of the technological innovation process. In this sense, the goals relating to these services, for example the filing of tax returns through the Internet should consist of not only quantitative but also qualitative improvements in the number of tax returns lodged. Downloading of long applications could be avoided with the use of online forms with the same capacities, through the use, for example, of JavaScript and AJAX; electronic tax returns could use the information on operations with third parties, the records of credits from account payments, credits carried forward from previous years or the acquisition of companies, which can all be used to "propose" ever more specific tax returns to taxpayers. In the same way, electronic services can be extended to the full cycle of tax return management, including online revision of tax returns originating in the processes for determination of taxes performed by the Tax Administration (through cross-reference information or examinations), and the filing of motions against such determinations. The integration of existing applications or the update thereof will be aimed at achieving a greater cohesion of the available information, single-access mechanism and filing customization.

Another element for consideration in the short term derives from the fairly generalized enactment of laws that guarantee free access to information and which will encourage any Tax Administration to post online summaries containing all taxpayer information available at one Administration. This could be leveraged with the implementation of rules intended to simplify diligences and forcing the administrations at large, not only tax administrations, to minimize the requirements of information from citizens. The need to establish electronic files compatible with the whole Administration, resulting from the enactment of Act 11/2007 in Spain, is a good example of this.

Security-related problems cannot go unnoticed, on the one hand, because tax administrations are potential targets of attack; and on the other hand, because they are obliged to properly safeguard taxpayers' information. In this sense, the provision of 24 x 7 services, disaster recovery, ongoing service, access monitoring and the use of information by the administration's officers are important concerns that should be addressed in ICT areas' plans. These concerns should be allowed for by potentially new regulations laid down for the execution of Internet transactions involving more than one jurisdiction.

¹² Software as a Service – SaaS.

In defining the strategic planning and its implementation, ICT responsible areas may consider using the frame for process maturity models proposed by COBIT, ITIL recommendations and in particular the subscription of public service level agreements with taxpayers and other online service users, billing generalized support, withholding and tax assessment certificates and other electronic documents, the design and implementation of a service-oriented architecture - SOA¹³ and the use of Extensible Business Reporting Language – XBRL as a standard reporting mechanism of operations, financial statements and inter-administration reports. The generation and sending of information reports through the Internet using XBRL, and the speed of processing and verification thereof, will introduce significant improvements in internal and external control processes. Any company's accounting, financial and operating system will have to produce general sheets, income statements and other accounting and financial reports transparently in XBRL. These reports will be sent to stock exchange operations regulatory bodies, shareholders' meetings, external auditors, the social security administration and the Tax Administration, which will receive, compare and analyze them in a standardized and agile fashion with the level of detail required in each case.

The ICTs' strategic planning process must contemplate its different goals: on the one hand, implementing the organization's strategy; while on the other hand, innovation. The impact of ICTs will continue to be subject to constant changes and will certainly increase its value for the tax administration.

Lastly, an additional factor is derived from the potentiality of tax administrations to become a driving force for the generalized adoption of e- government services and an agent contributing to the reduction of digital gaps.

¹³ Service Oriented Architecture

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