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The Business Portal - an integrated system to collect data and communicate

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Abstract and Paper

To establish powerful relationships with respondents, we need to formulate communication strategies based on interaction and feedback that allow us to fulfill our statistical mandates and, at the same time, to let users know that the information they provided is in their own benefit. Therefore, have we to consider them respondents or data users? Why not partners? They are prime actors in statistics: without respondents or data users Statistics fails its mandate. If we consider respondents and data users our statistical partners, we elevate their status and treat them at par. After all we have to empower interaction and communication with people who want simply know why: Why do I have to answer ? Why me ? Why are you so complicated? The focus is understand our partner needs: only in this way we will be ready to answers.

In the last years the International Community has embraced an ambitious program of modernization of official statistics; standards like GSBPM, GSIM, CSPA, SDMX, DDI and concepts like "business architecture", "silos versus integrated processes", "administrative data", "sharing and cooperation" have been entering in every workshop for four years or more. Each national statistical institute started a path towards modernization and many international cooperation projects were born.

In this whirlwind of ideas and methods, ISTAT embraced a project, the Business Portal, for business statistics, aimed to change the perspective: the Business Portal is a system in which the partner, the enterprise, is in the centre. Business Portal has seen the cooperation of IT, business statistics, business register, communication and dissemination offices. Business Portal is a one-stop shop for enterprises who can view their own individual survey agenda, assess online their own data on the business register, compile web questionnaires in standard formats, receive low and high profile statistical outputs, contact a free telephone hotline. But it is also an integrated system with business register as backbone, a powerful metadata-driven engine that manages design, build and collect GSBPM phases and dismantles the inefficiency of silos, standardized metadata and web services to disseminate data. Business portal is also a source of information useful for measuring and monitoring partner needs that, linked to the results by user surveys, web analytics and interaction with them can be constantly analyzed to guide our communication choices. Basically, at the end, Business Portal is the organization that changes, developing according to a holistic approach, to meet the challenges of the future.

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Workshop on Statistical Data Collection: Riding the Wave of the Data Deluge
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Session: Linking Data Collection and Communication

**THE BUSINESS PORTAL: AN INTEGRATED SYSTEM TO COLLECT DATA
AND COMMUNICATE WITH OUR STATISTICAL PARTNERS**

Contributed Paper

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The overall modernization of the statistical process, currently underway in many NSIs, includes a new approach to data collection and to the relationship with respondents. The need to streamline the process of data collection goes hand in hand with that of reducing statistical burden.
The time is right to overcome the one-way communication system (NSI to respondent), and adopt a respondent-centric, continuous, two-way approach, being ready to listen to the needs and feedback of respondents, considered as special users, real "partners" in the statistical production process. Good communication with respondents also ensures a greater care in the quality of information provided and a new Data collection system can contribute to strengthen such relationship. For this purpose and with these premises, Istat has launched the Business Portal.

I.   Introduction

To establish powerful relationships with respondents, we need to formulate communication strategies based on interaction and feedback that allow us to fulfil our statistical mandate and, at the same time, to let users know that the information they provided is in their own benefit.

Therefore, do we have to consider them respondents or data users? Why not partners? They are prime actors in statistics: without respondents or data users, Statistics fails its mandate. If we

consider respondents and data users our statistical partners, we elevate their status and treat them at par. Moreover, we have to strengthen interaction and communication with those who simply want know why: Why do I have to answer ? Why me ? Why are you so complicated? The focus is to understand our 'partners' needs: only in this way we will be ready to answer.

In these last years, the International Community launched an ambitious program of modernization of official statistics. Each national statistical institute started a path towards modernization and many international cooperation projects were born. In this whirlwind of ideas and methods, Istat, the Italian National Institute of Statistics embraced a project for business statistics, the Business Portal , aimed at changing the perspective: the Business Portal is a system in which the partner, the enterprise, is the focus.

Business Portal has seen the cooperation of IT, business statistics, business register, communication and dissemination offices. It is a sort of one-stop shop for enterprises who can view their own individual survey agenda, assess online their own data on the business register, compile web questionnaires in standard formats, receive low- and high-profile statistical outputs, contact a free telephone hotline. But it is also an integrated system with business register as its backbone, a powerful metadata-driven engine that manages design, build and collect GSBPM phases and dismantles the inefficiency of silos, standardized metadata and web services to disseminate data. Business portal is also a useful source of information for measuring and monitoring partners' needs that, along with the results of user surveys, web analytics and interaction with them, can be constantly analyzed to guide our communication choices. In a word, Business Portal is the organization that changes, developing according to a holistic approach, to meet the challenges of the future.

This paper will provide an overview of key aspects and features of the adopted solution for a bidirectional communication with our partners - the enterprises - the steps taken to support organizational changes, a project status update and future developments.

II.   Business Portal Project

Business portal project stemmed from a Memorandum of Understanding between Istat, Union of Chambers of Commerce and Ministry of Public Administration. The aim of the project was to create a portal for acquisition of statistical data in order to reduce costs and statistical burden for businesses, simplifying the procedures for the provision of statistical information and optimize the processes of delivery of public services for businesses.

Basic idea was getting in enterprise's shoes and developing an enterprise-centric system, based on a perspective in which the company was seen as a major player in interfacing to official statistics. First truth about businesses is "they do not want be annoyed on their business". Second truth is "they can be very collaborative under specific circumstances", for example if they realize you do not want to waste their own time. Useful services for enterprises are: a) administrative transparency, i.e. the possibility for the company to know the status of compliance in respect of official statistics; b) a contact center for every statistical need; c) efficient statistical

system to avoid duplication in data requests and reduce statistical burden; d) improve internal firm organization in performing statistical fulfilments by means of a delegation facility e) return of statistical information of low and high profile (customized to the company).

Design a new organizational system of statistical production with the company in the center requires some elements: a basic idea that is expressed in a strategy; a top management that supports it; a group project to translate the strategy in planning, design, analysis, implementation of the solution; a dash of tactic to manage risk and "resistance to change". The project has seen the cooperation of IT, business statistics, business register, communication and dissemination offices and, for some aspects, external stakeholders. It is clear, it was not all a bed of roses, the business architecture in Istat is still partially based on a product stovepipe model, but awareness of the right solution for enterprise, a prototypal and iterative incremental approach to envisage possible simplifications in production processes and convince doubters (quick wins), an international statistical community that invests in modernization and standardization and supports and encourages efforts by national statistical offices have allowed to take the project forward.

The decisive step was taken with the design and implementation of an information system, the Business Portal that includes in itself all the key ideas of an enterprise-centric system, unique channel of communication between businesses and official statistics, able to become technological driver to organizational change. It includes a front office for business and a back office system that facilitate standardization, industrialization, knowledge sharing and so economies of scale inside the statistical office.

III.   Business Register as backbone

To undertake an effective collaboration with our partners we consider branding, authoritativeness, efficiency mixed with a customer relationship approach the key words. Efficiency is eliminating redundancies. Without efficiency, authoritativeness and branding lose their value, putting at risk the relationship with the company. Streamlining of the production processes, overcoming traditional "stovepipe" model (Vision 2009 [2]) is one of the main steps to gain in efficiency. It is a difficult path but it can be dealt with gradually. To begin, a solid base is necessary. In business statistics the backbone is the business register, so synchronizing each business survey to the business register was the first step.

Business register (BR) managed according consistency and quality principles guarantees coherence of estimates from different register surveys and quality assessment of statistical surveys based on micro data comparisons with other surveys in the production system. In the ongoing programme of modernization of Istat, the use of micro data from administrative sources has received the highest priority and the industrialization of production process foresees the implementation of a system of statistical registers. As NSIs of northern Europe experience demonstrates, optimize use of administrative data can reduce dramatically response burden.

Usually BR is updated using information from external sources and from surveys. In "silos" model almost every surveys asked information to maintain updated the BR, even if the real purpose was simply to verify a sectorial aspect: "Are you (business) correctly involved in my survey ?". According to our partner perspective, with an oiled administrative data communication network , these information could disappear from questionnaires. But if the system is not too much oiled how to streamline this inefficient process ? An integrated system such as the business portal offers a simple and effective solution: businesses can access and verify its own data from BR in a unique section of the site, so they can send a remark managed centrally by BR office and shared with the whole business statistics department through back-office system of the business portal.

IV.   Istat Data collection development

Istat has a good tradition and expertise in web data collection, especially in business statistics. More than 75 percent of responses are via web and about 70 percent using web surveys. The residual part is almost completely collected by fax-server and telephone. Existing stovepipe model in the organization has, however, also influenced web surveys production process, so in the years different ad hoc solutions have been adopted. Differences were in technology (pdf, excel, php, java), functionalities, interfaces, level of contents. In order to integrate systems web data collection would be a huge challenge.

The need to deal with web data collection was inherent in the design of rationalization of production processes that an enterprise-centric system claims: the issue was not only to implement graphically standardized web surveys, better realize a generalized data collection system able to easy plan questionnaires that, with the streamlining of business statistics, would have to be redesigned. At the same time a new generalized system for data collection would allow an IT rationalization with the disposal of several different obsolete software programs hard to maintain.

GX (Generalized Italian *data* Collection System XML) was born inside business portal project. It is a generalized system for the creation of a survey on the web, its location within the GSBPM model is between "Design" and "Process" phases. Its aim is to facilitate the process of reorganization and streamlining of statistical production processes, starting from metadata and data collection phase. GX uses metadata in XML format to generate a web questionnaire within an architecture that provides a significant amount of services and features in both front-office and back-office covering the entire phase of data collection. GX is integrated to the business portal: a) in front office with the capabilities of completing the questionnaire online, multilingual management, partial rescue, reporting on consistency and completeness, printing, sending the final receipt; b) in back office with the capabilities to create and manage the network, management questionnaires online and in production, comparing different versions of the questionnaire, reporting on line at different levels of granularity, metadata management, contacts management. The aim of the project is to migrate all business surveys into GX system.

Back on the needs of our partners, a custom survey agenda service was implemented on the business portal: the company can control which surveys must respond to, the expiration day before incurring penalties, the state of completion of the questionnaire. Selecting each survey he/she will be able to fill directly GX questionnaire or will be redirect to the right data collection system without authenticating again in the case of surveys not yet migrated in GX.

V.   Business Portal as part of a new communication strategy

The modernization process provides that statistical data should be proactively communicated by NSIs to engage users through a user-centric approach, being aware of user needs and innovative communication tools can help meet increasing and changing user needs. In order to enhance data accessibility and re-usability, statistical information and analysis should be disseminated and communicated through an open strategy of data sharing. In particular, a clear and simple language, the correct use of social networking, user-friendly web tools to browse and visualize data, the focus on re-use and open data are drivers to spread modernization in the statistical business chain, focusing on information demand.

This communication approach is embedded in the Istat modernization programme and is based on some key actions particularly important for the care of respondent target: profiling users to offer customized services/products through dedicated channels and make the information more accessible and usable; leveraging multimedia and digitalization effectively by using a targeted multichannel strategy to offer products and services, especially through new digital communication channels; promoting and sharing innovation through simple messages and tools, maximizing communication flows both inside and outside the Institute; monitoring the communication process through measurement systems of the impact of communication initiatives and actions.

The overall communication strategy of modernization is therefore based on the value provided by accompanying and enriching statistical information with services and tools easing its use and fostering its conversion into knowledge. Under this point of view, listening to feedback is an enriching element in the respondent-oriented communication model . The development of integrated Business Portal, reducing statistical burden, can help access information as a "total care" tool dedicated to respondents . With this aim, the Business Portal offers a balanced mix of communication tools, so that the original message can remain substantially correct and consistent with the corporate communication chain.

Information returned to the respondents under different forms (news, data, visualizations) is deeply linked to the dissemination chain that connects corporate web tools: in particular the centralized data warehouse (.Stat technology) to disseminate aggregated data accessible by a Single Exit Point service that queries the DWH in SDMX.   With a service-oriented

architecture, it has been relatively easy to integrate a personalized return of information to companies in the Business Portal. The added value is that the Portal, reading company structural information, searches automatically all the statistics in the data warehouse in which business is involved and displays them in an attractive graphical mode. In this way, it can be possible to give the enterprise a picture of its economic position in different boundaries, its region, economic sector or dimensional classes. It could be a first help in the positioning analysis of the company in the market. A collaboration with the main business associations, our stakeholders, has been started to investigate a high profile return. The starting point was external trade statistics: the idea was to realize benchmarks to compare a given company with its competitors.

The Business Portal, as part of the corporate chain described above, as a single channel of communication between official statistics and the enterprise, adopts the respondents' point of view towards statistical requirements and achieves a simplification of external relationships: the system collects data and returns them to companies in a continuous exchange.

The explosion of data availability presents opportunities for NSIs but also the risk to loose relevance in a sea of statistical information; that's why is necessary (more than in the past) to build a recognizable brand of "official statistics". That is true in particular for the Business Portal: as a place where users need to feel safe and accompanied by the NSI, brand features guarantee recognizability under different points of view: language and layout, functionalities, choice of news, type of graphics and dataviz tools.

The launch of the Portal has been accompanied by a specific plan of communication. After the first step, the Memorandum with Chambers of Commerce, the Portal was presented in the communication campaign of the last Census of enterprises, on the dedicated website: "In line with the new approach taken in the 2011 Census, the data obtained from the survey will feed not only in the data warehouse for the dissemination of census data, but also in the" Business Portal " web application, through which traders will have access to very detailed and relevant information for their sector of economic activity, to the extent of its class size, etc. so as to analyze its position with respect to the relevant markets."

At the end of June 2013 the testing phase was started, with the participation of 70 companies, for a subset of statistical surveys. In the second phase, Istat contacted via certified email more than one thousand big companies, presenting the services of the Business Portal and the modality to access it, communicating login credentials at the administrator level. The company has the responsibility to manage its own list of contacts each with roles and permissions. To ease the job, all known contacts were preloaded. A free telephone hotline was activated to support users.

VI.   Future Developments

The Business Portal has been online since July 2013.
The project has been realized with internal staff: the availability of a statistics-oriented IT team and T-shaped professionals has been an added value for its success. So far, eight different

surveys have been implemented in GX: four structural economic statistics (Information and communication technologies in enterprises, rail surveys: goods, passengers, accidents), three short-term statistics (industrial turnover and orders, employment, quarter rail survey) and one, the multi-purpose survey on complex units, linked to the census of industry and service. For the latter, Istat interviewers filled in questionnaire face-to-face connecting with the Business Portal. In this last year, respondents to web surveys increased by 8 percent. In the last semester, more than 1300 BR reporting were issued by the Business Portal. By 2015 all companies will enter the Portal and within two years all the economic surveys will be migrated in GX.

In the meantime, a centralized data collection center and a functional model in Istat is becoming a reality, improving efficiency in line with the modernization strategy objectives (that include reducing the respondents' burden for companies and, more in general, the cost of the statistical production process) and IT developments that increase the availability of tools allowing users to access and generate interactively the information needed. In parallel with the use of new sources, a more intensive use of the Portal might gradually reduce the response burden. In general, collaboration with respondents as partners is a big opportunity that can enhance an NSI's value; a better comprehension of their needs is essential to tailor our products and services to their requirements.

In accordance with the objectives of NSI's modernization strategies, focused on the implementation of re-usable infrastructures, the adoption of metadata-driven systems and the development of user-oriented tools to enhance the value creation in official statistics, the Business Portal is facilitating the realization of a service-oriented architecture, streamlining standardization and industrialization of the production processes.

The value of this experience is part of the efforts for NSIs modernization and is very important to share it with the statistical community at international level. At the same time, a common effort is important to standardize concepts and methods and anchor them to their real application.

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