

Organisation, telematics and public employment: the Italian case study

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Abstract

Telework proved to be a good tool for Business Process Reengineering validation and in general for Innovation Introduction in the Italian Public Administration (P.A.).

As a matter of fact more than 25 telework experiences have been monitored since 2001 and more than 2000¹ teleworkers are part of this survey. The development of this organisational strategy was helped by the 'Bassanini Three' law which stated in 1997 that telework could be a work methodology in the Public Sector, but the incoming Italian E-government investment plan is stressing the relevance of telework in the Public Sector.

The monitoring activity lead to develop several laboratories on planning telework projects, in which best practices from all the experiences, particularly targeted on how to avoid telework criticalities, were transferred to Public Bodies interested in implementing new telework experiences.

Time banks and Peer to Peer (P2P) can simply express a general attitude to teleworking which is present, but not institutionalised, in many small realities of the Italian Public Sector.

1. Innovation and telework in the Italian Public Sector

The modernisation of the P.A. in Italy needs process reengineering interventions which can foresee the application of tools such as telework.

The administrations have invested resources on study and modelling activities, for experimentation and to promote and transfer good practices favouring the comparison among different territorial realities.

Within the activities of the finalised project 'Flexibility in the Public Employment' telework is a process reengineering tool, with relevant implications on flexibility.

Central role in the project assumed the laboratories involving central and regional administrations with the purpose to underline threads and opportunities of telework projects implementation in the Public Sector.

Main activities of the specific laboratories on telework consisted in underlying threads and inherent opportunities in telework implementation. The laboratories have been organised both at a central and regional level.

In particular three laboratories have been activated in the Regions Marche (and particularly the Province of Pesaro), Puglia (Region Puglia and Province of Lecce) and Calabria (Region Calabria) and a central laboratory in Rome has involved Court of the

Accounts, INAIL, INPDAP, INPS, Productive Activity Ministry, Cultural Goods Ministry, Defence Ministry, Foreign affairs Ministry, Infrastructures Ministry, Health Ministry, Economy and Department of Internal Revenue Ministry.

During the of the central laboratory jobs the ex-office of the Treasure, actual Economy and Department of Internal Revenue, asked for assistance relatively to a disabled worker that had applied for teleworking as he needed specific cares and found more and more difficult to come to his office every morning in the established schedules. In the arc of a few weeks, during which three meetings of definition of the particular aspects were planned, the individual telework contract has been prepared and the specifications of the experimentation was determined: the project will last six months.

2. Reasons for teleworking

Telework is a factor and lever of flexibility and process reengineering not adequately applied. Implementing telework needs an investments plan of middle-long term, that can hardly be exhausted in a single financial exercise. The return of the telework investment have to be measured with qualitative and consequential quantitative ratios linked to controlling and auditing activities.

The procedures that determine the daily professional activities must opportunely be analysed, reorganised, verified and validated.

The ITEA case shows that the coherent application of the principles above expressed brought to satisfactory results, resetting some diseconomies and qualitatively improving the procedural flows among similar professional profiles.

The quantitative control and the qualitative teleworker performance verification has been object of different modelling attempts, among which the experimentation of the Region Lombardy emerges, implemented through a system of preventive and consumptive reporting that also measured non recurrent situations (Ex. Work done as from accords with the superior, unexpected, but however produced). Also the Emilia Romagna Region elaborated its own complex and integrated system of evaluation and monitoring of the entire project and for the single performance, with elements of originality.

3. Where to Telework?

Planning a telework project doesn 't mean in every case to transfer a resource near his/her own domicile. The solution isn 't therefore predefined and the variations to the home-based telework standard are numerous and answers to specific demands dictated by the territory, by the involved resources and by the activities that are moved far from the central office. The satellite centres and the telecentres offer advantages in comparison with home-based telework, in the cases in which a strong interaction is demanded with HW and SW structures or a continuous availability is necessary. The inspection activities and investigation on the spot can be developed instead with telematics tools which favours a more rapid insertion of data and acquired information.

Meaningful applications of it are the telework experience in Azienda Farmacie Riunite of Reggio Emilia, in which a resource that managed the invoices data entry and the contentious with the suppliers has been located far from the traditional office near the telecentre

of Castelnuovo dé Monti for one day per week. Particular interest has been attributed to the resource demanded appointment as she lives in Castelnuovo and she needed around a hour and half to come to the central office.

The ITEA of Trento included telework in its development investment plan to improve the management of its own resources. It defined a project for the realisation of a telecentre in connection with public and private partners in the Rovereto Municipality, to which the ITEA teleworkers will have access too.

Besides the home-based and the telecentre way of carrying out telework projects mobile telework experiences are been implemented and often consist in the institutionalisation of a working routine already used in the past by the same institution. It 's the case in particular of the INPS, with its 1950 actual mobile teleworkers endowed with electronic handbag. Experiences of mobile telework are been experimented in Emilia-Romagna and Veneto Region, on professional profiles different, but characterised by a commune inspection.

4. Who should telework?

A distortion in reading telework experiences is determined by the exclusive attention it turns to the teleworker neglecting the contribution of the colleagues and of the project responsible. The interaction of all the actors in each project determines the failure or the progression of an experimentation.

The interaction is also realised through training modules, that don 't simply have to precede the experience implementation, but have to follow the whole arc of realisation, involving both the teleworkers, the colleagues and executives.

The Perugia Province has predisposed an educational plan complex and articulated for the future teleworkers, the executives and the colleagues as well. The Naples Municipality has even defined a distance learning platform with general and specific training contents, adequate to the teleworker before the experimentation, but also during the implementation of the experience.

The Emilia Romagna Region has foreseen training modules including organisational, normative and technological aspects, and also the correct use of the working tools (D.Lgs. 626/1994), behavioural and problem solving aspects, with the purpose to face and to anticipate unexpected situations.

5. The telework boom

The debate related to the experimentation inside the Italian Public Administration has widened in the last 30 years of the XX century. In Italy the project TRA-DE in Rome Municipality (mid nineties) inaugurated a series of heterogeneous experiences in qualitative terms and with different trends and inspirations. Besides SIP (now TELECOM Italia) tried to develop in late eighties its own project, but failed due to the trade unions opposition.

The Bassanini law wanted to conform the application formalities, even if some administrations had already tried to implement a telework experience before the presentation of

the specific rule. However the number of telework experiences has sensibly increased after the legislative intervention, allowing the implementation of new planning experiences.

6. Telework in the Italian Public Sector

6.1 How was telework in the Italian Public Sector born

Telework has sometimes been proposed for its ability to attract the attention on a corporate body showing the innovation rate of the institution as well as its friendliness and therefore operating on channels of institutional communication.

In other circumstances the original planning idea was born from tied up specific demands of single teleworkers (for problems connected mainly to logistics and health), and therefore the interventions have been limited to single cases and not to the general organisational context.

The promotion of politics of equal opportunities or of improvement of the quality of life of disabled personnel has been the boost for several projects. The leading experience, as it picks up both the issues, is the one developed by the University of Verona with the project Iride, that involved disabled personnel (one of the disabled resources have besides taken care of the Iride project site and the one of the National Portal on Telework in the Public Sector [Http://www.funzionepubblica.it/telelavoro](http://www.funzionepubblica.it/telelavoro)).

The most complex projects have sprung from the wish to verify the possibility of the organisational structure of the Institution to make through activities of efficient process reengineering.

6.2 Who develops telework projects

Telework experimentation projects are managers ' or more frequently public executives ' responsibility. The project layout involves both the teleworkers and the responsible; the responsible elaborates the general project and the future teleworker will develop the realisation specifications, also including in the workgroup the informatics structure, for the verification of the technical aspects.

6.3 Critical aspects to be avoided

The elaboration of a training plan that involves every subject inside the telework project reduces the possibility of 'rejection' tied up to scarce flexibility of the organisational system. The knowledge of the real potentialities tied to the experimentation, avoids the negative evaluation from those people that develop with efficiency their own role inside the institution.

Furthermore training allows to delineate in a non evaluative context roles and responsibilities, as well as decision and communication processes to be validated. The communication modalities have to avoid the isolation and the sense of distance from the decision-making centre which were cause of difficulties in the first telework experiences both in the Public and in the Private sector.

Through activities of organisational analysis and the application of monitoring indicators from the project leader side the optimal planning methodologies with regard to practices delivery times and daily or weekly work loads can be established. A deepened initial analysis, integrated by periodic ratios revisions avoids the creation of conditions that bring to overwork (workaholic syndrome).

A critical point is often related to the first technological equipment set-up period. There are, in particular, delays as the server doesn't recognise the remote pc or because the connection speed is slower than expected. The technical mistakes can be contained and helped by the involvement of external services, but they will always be verified.

6.4 What opportunity can be put to profit

Process reengineering is an opportunity to verify the real effectiveness of an organisation. Telework allows the elimination of dead times, activities with no added value, lack of competence and responsibility, and favours the activation of a faster information circulation and a good use of communication.

Back office and front lines merge with greater facility and activities connected can be efficiently managed by remotely located resources. The Public Relation Office can for instance be managed in its on-line version by means of telework.

The office often represents a possible cause of distraction, both for the colleagues presence, and for the arrival of 'emergency' practices that must be delivered with precedence in comparison with the normal course of the working activities.

One of the projects of the Veneto Region, tied up to the Forests sector, have allowed to realise a meaningful performance qualitative improvement, as declared by the teleworking resource. The improvement of the work climate and the drastic reduction of casual variables of interruption or decrease of the concentration have been underlined as elements valorising the experience.

6.5 Strengths to valorise

Some telework projects have foreseen only the involvement of the resource to an intermediary stadium of the project elaboration, even if the willingness principle has always been granted. In some cases the feasibility study has preceded the teleworker involvement, in others instead a demand coming from the workers themselves motivated the experimentation. The resource involved before the feasibility verification phase has provided a decisive contribution to the definition of the used technology and of the telework procedures to be experimented. In a case, the disabled resource has furnished the auxilia (which he already owned) for the telework experimentation to his own domicile.

When the demand originates from the managing structure the teleworker is normally involved after the general planning lines have been well defined. The verification of the availability of the teleworker becomes part of the general feasibility study and the choice of the resources is determined by verifying the characteristics of a sample.

6.6 Reduce weaknesses

In general every experience showed an increased resource involvement in its work performance. In some cases the greater involvement brought to forms of overwork, and to the increase of the working performance anxiety. The distance from the decision-making centre has been cause of complaints and isolation, when the communication flow from the central center resulted not sufficient. The use of a weekly activities scheduling can help, if also accompanied by a daily verification of the projects advancement state. The development of alternative communication transfer systems such as mailing-list is a possible success factor as well as the predisposition, on an intranet or on the institutional site, of one or more specific newsgroups.

The teleworker selection can avoid future criticalities, if planned with homogeneous criterions. The involvement of aged people, such as employees over 50 years, can prove to be an error as it involves personnel next to retirement and not keen to modify a working methodology, already consolidated. Also the 'singles' can result, after a first rush of enthusiasm, not suited for teleworking.

An intermediary solution as a satellite center or a telecentre can guarantee the maintenance of an adequate level of social life involvement, by means for instance of a 2/3 days home/office ratio.

The Lombardy Region was to select 12 teleworkers from around 700 reached candidacies. The selection criterions adopted have been carefully studied, ascertained a 1 to 60 ratio. An articulated set of technical and environmental variables was taken into consideration: the interaction level with colleagues and superiors; the degree of independence and working autonomy; the necessity to have to access resources, information and documentation only available in the office; the level of knowledge and the general opinion on telework; the characteristics of the home-office transfer; the availability of space for a working posting at home (although the possibility of teleworking had been foreseen also in satellite centres, the 12 selected teleworkers preferred to telework from their domicile).

7. How expensive is telework?

The telework costs definition is an important element in the planning phase, but is not the decisive variable. It is necessary to analyse other variables to verify which ROI can produce a telework project.

The temporal horizon is a relevant factor for the evaluation: which form of investment (short, middle or long term) is more adequate?

The decisions can derive from a constant and methodical in itinere verification of the experimentation, or from the feedback collection (no matter where they are from), or from good practices from homologous structures verification.

In the budget definition phase a specific investment voice was foreseen as for instance in the Cuneo Municipality and Province of Lecce cases (this last has not yet started).

The investment has to foresee in particular the followings cost voices:

- general management costs: connectivity, electricity, heating and widening of the work injuries insurance;
- costs tied to the equipment: HW and SW both from the teleworker and server sides;

- specific organisation costs: periodical visits of safety and hygiene responsible, etc.

The economic return can be valued in quantitative and qualitative terms.

The appeal to remote working practices can quantitatively be determined in the case in which a disabled worker is unable to do his/her own activity near the office of competence and this involves a diseconomy from the public institution point of view (this situation has been avoided in the former Department of the Treasury – SINIT experience in which the teleworker has been offered to keep on working from home without bringing economic damage to the administration for the missed disbursement of the employee performance, stated that the resource involved is a highly specialised official).

A quantitative return is normally gotten by the procedures analysis and by the consequent process reengineering of the public institution. In this phase repeated activity and general incoherence can be noticed, the elimination of which guarantees time saving and therefore the possibility to use the resources in a more efficient and economic way.

Relatively difficult is the measurement of some consequential qualitative aspects from telework practices, hardly economically quantifiable.

The services performance quality or the production of goods (projects), but also the reactivity in answering to the citizens demands, can sensitively improve; more rarely an increase of the quality of the social and family life of the teleworker is perceived. The return in terms of satisfaction of the citizen-consumer or of the same teleworker are appreciable through complex models that refer to systems comparable to the ones in use in the assurance and banking world, and only in the case of the ITEA of Trento an effort to deepen these aspects has been produced.

8. Perspectives and conclusions

Peer-to-Peer (P2P) is a system of sharing of information (i.e. Napster, Winmx and Morpheus), that allows the transfer of whatever file from a pc to another: every user can allow the access to a third person to the place in which he shares his resources and can authorise its downloading.

It is a many to many relation, which aims to assume a mobile structure, with so many communities of specialised consumers that know each other, give advises and exchange experiences and, more concretely, also file. Without the central server, nevertheless, the computers and the resources are not able 'to see' neither to exchange anything. The P2P model allows the exchange of resources, but has to centrally depend on an institution, the server, that guarantees and allows the transfers.

The reality of the small Italian town administrations is characterized by an archipelago structure where few resources have to manage applications and tied up necessities to different interests. This has brought to a non institutionalised resources sharing from administrations even not linked by a partnership. The example can be the verification of the instructions related to complex surveys such as the ISTAT ones (Italian statistical data institution) that is divided among employees of many municipalities on the base of a first transversal reading made by an employee that knows the competencies and the general interests of his colleagues. When competencies have to be shared on a specific problem the resources are activated or from the first 'reader' or from a colleague that is able to turn his need to the proper interlocutor, thanks to the spontaneous and not encoded spontane-

ous collaborative climate, which has ample potentialities. The equal and two-way interaction system inside this virtual organisation is necessary condition, even if not compulsory, to bring a process of joined and synergetic action to realisation among different interests potentially gathered in a dynamic network, and with a common goal. Sharing the same goals can bring to competitiveness growth and the central pivoting point has to know how to manage and to maintain every action as equal as possible.

The infrastructure conditions to reduce the dispersion of competences or to obviate to lack of resources in decentralised realities, which have punctual and periodic necessities, are guaranteed by the telematics applications.

Telework assumes therefore a fundamental role to guarantee the possibility to work, under efficiency conditions, in an organisation that uses practices of active groupware.

The successive mental passage is that of the shared use of resources in the moment in which these have a smaller work load through 'Time Banks'. In this, the role of the executive or the responsible official assumes a new meaning as the performance monitoring and the employment of all of the resources must be developed in a continuous way and the activities planning has to be clear and participated.

Another possibility can be the usage of distributed HW and SW resources. In this case the human resources rotates on a weekly or biweekly base as each of them has been taught to use the teleworking machinery. HW are normally portable PCs, therefore for specific projects each manager can 'rent' from his Institution as many PCs as they need from the computer 'fleet devoted to telework'. A spontaneous dynamic networked Organisation.

As the monitoring activity goes on, telework projects increase their quality and improve the success rate of the experiences. New demands keep on arriving to the Italian Portal of Telework and several new laboratories are going to be activated. Know-how transfer is encouraged and we wish to enlarge our network to non Italian experiences.

Annex

The Cuneo Municipality experience

The Cuneo Municipality is structured in 14 sectors. Innovation has been considered one of the priority lines of intervention. The Personnel sector has training office that guarantees the development of basic computer courses. The management group of the Cuneo Municipality appraised that different professional profiles among those presents in the institution are teleworkable, and therefore proposed the experimentation of telework to all its managers for diffusion. The most interested managers were those of the Personnel sector, of the General Secretary office, and of the Accounting sector. In the next step the executives directly informed their employees of the possibility to present candidacies to experiment telework inside their own sector. Then there was the collection and selection of the employees candidacies. The interested sectors reduced to two (Personnel and General Secretary office) even if, at least in its experimental phase, the project involved two employees of the Personal sector.²

Through the use of telework practices the Cuneo Municipality intends to widen the sectors integration and the access to the services of the disadvantaged subjects, employing

simple flexible work forms (part-time, temporary job etc.), to improve the life quality of the town employees, increasing productivity, reducing absenteeism.

Several macro-phases were individuated. The project team was composed by the General Secretary and by the executives of the Personnel and Data processing Sectors.

The first phase of the project aimed at defining the 'telework-ability' ratios, tools able to give a measure of telework applicability inside the organisational and managerial internal system. Tightly tied to this activity came the profiles individuation. Trade unions were involved in this feasibility phase since the beginning.

The following profiles were individuated: personnel administratives, data entry employees, phone operators, planners, informatics advisors and executives.

With the deliberation of December 1999 the third phase, that of budgeting, started.

The technological infrastructure was studied so that the teleworker could do the same activities that would have done in the office, at home. Not a simple system of home work therefore, but a solution that allows to turn easily in the future a telework station into an usable mobile station that can be used in missions far from the town centre.

Training needs of the employees involved in the project were evaluated. This allowed the teleworkers to operate in a known context without traumas and specific difficulties, and to executives to acquire those skills necessary to favour the model experimentation.

No particular problems and obstacles were detected during the experimentation phase. The teleworker noted only initial difficulties related to the first connections with the specific software, and to the connections slowness before the activation of the ISDN line. Other aspects such as the distance from the working structure and the risk of social isolation did not occur thanks to the strong involvement of the manager which trusted the teleworker and kept an adequate communication flow while the resource was teleworking, and also because the resource had a 2/3 days home/office telework ratio.

Some technological problems occurred, as for example the conflict between the antivirus SW and the network plugin of the teleworker portable Pc: the problem was resolved within 2-3 days.

Forecasts respect to the results and future development of the experimentation are encouraging. The Cuneo Municipality thought about gradually extending telework up to 10-15% of the total work force.

The original project foresaw that during 2002 a second telework station was to be activated and a second employee, a disabled woman, was selected.

The second posting will be activated thanks to the financial contribution gotten with the approval by the Piedmont Region of a project introduced on the axle 'equal opportunities and telework' of the FSE.

References

- Bertin I. and Denbigh A., *The teleworking handbook*, TCA, Kenilworth, 1998
 Bibby A., "Trade unions, teleworking and the twenty-first century: notes of the presentation "Telework '97", Stockholm
 Contaldo A., "Il telelavoro nel Pubblico Impiego: prospettive di politica del diritto", in *Informatica e Diritto*, vol. 24, 1998
 Di Martino V. - Wirth L., "Telework: A new way of working and living", *International Labour Review*, Vol.129, 1990, No.5

- Di Nicola P., *Il nuovo manuale del telelavoro*, Roma, Edizioni SEAM, 1999
- Ettighoffer D., *L 'entreprise virtuelle, nouveaux modes de travail, nouveaux modes de vie ?*, Éditions d 'Organisation, Paris, 2001
- Fontana R. and Mazza B., *E-job*, Milano, Guerini e Associati, 2001
- Kastern Gareis and Werner B. Korte, "Telework in Europe, Status Quo and Potential, Good Practice and Bad Practice", *e-Work 2000 proceedings*, 2000, pag. 24-46
- Golz A. and Hofmann J., "Does E-work really pay off?", *E-work and E-commerce*, edited by B. Stanford-Smith and E. Chiozza, IOS Press, Amsterdam, 2001 pag.191-196
- Gordon G.E., *Turn It Off: How to Unplug from the Anytime-Anywhere Office Without Disconnecting Your Career*, Three Rivers Press, New York, 2001
- Ichino P., "I problemi giuridici del telelavoro", *Notiziario del Lavoro* n.75 November 1995
- Nogler L., "Il telelavoro a domicilio", in *Lavoro a domicilio*, Milano, Giuffrè, 2000, pag.511-620
- Poti U. - Cordella C., "Il telelavoro nella pubblica amministrazione: aspetti organizzativi e riflessi sull 'occupazione", in *Diritto del mercato del lavoro*, 1999
- Rullani E., "La rivoluzione post-fordista e il virtuale made in Italy", in *Ingenium* n.1, 1999
- Scarpitti G. - Zingarelli D., "Il telelavoro. Teorie e applicazioni", Milano, Franco Angeli, 1999
- Viscomi A., "Telelavoro e pubbliche amministrazioni", in *Studium iuris*, n.10, 1999

Notes

- 1 The INPS experience has more than 1950 teleworkers involved. The sample of the remaining experiences monitored shows that each experience vary from 1-2 teleworkers (small local bodies) to 10-15 (Regions and Universities).
- 2 Of the two selected only a woman started the experimentation.