SISTEMA AMBIENTE

A WAY TO FOLLOW AND TO SHARE: ENVIRONMENT BUDGET SYSTEM

URGENCIES

The necessity to take into account all the financial and economical aspects of every enterprise has been accompanied by an objective undervaluation of its environment implications for the world.

The speedy process of next decade that will see the radication of industrial poles in the most different areas of the southern part of the world (and the correspondent social and civil upsettings either in developping countries or in industrialized ones) will be determinant in the reaching of a dangerous point of no return in the environment or in the creation of the bases for a maintainable development.

After the first and the second industrial revolution (that pointed at the technologies for resolve the quantitative productions objectives) the productive apparatus has nowadays the instruments to make technologies and materials consistent with the maintainance of environment conditions requested for the ecosystem. So are born worldly objectives of reduction of pollution forms (Rios's Conference), laws intended to containment of the risks for the safety for both workers and populations, parametrers for valuation and rules of environment management of production precesses and of products (Audit and Label).

So the problem sets itself as a speedy reconversion of industrial consolidate appartus and as a necessary diffusion of technologies in their «clean» and «consistent» versions, in order to avoid self-destruction caused by globally «lethal» and incontrollable instruments.

This concerns either great firms; or the huge archipelago of underequipments constituted by middle and little firms; or, most generally the long winded apparatus of little and very little firms situated everywhere and moving everywhere in search of markets.

ENVIRONMENT COMPETITION

The cultural limit (with important actual implications) has been since now the inclination to consider the safety and environment consistency parameters either to be "administrative duties" or "image calls": namely, to worth purposes, appearences, and not the essence of environment quality in processes.

On the other hand, States' direction has often been in the terms of "political smoke", or of sanctions systems without a programming direction provided with economical and structural instruments.

The positive feature of willingness of control systems may perhaps be speedier and its results more effective: if environment reconversion becomes a wanted thing, the market allows to prime a competition in which the reaching of objectives (as technological quality) may condition the simple element of economical and financial strength.

INSTRUMENTS

It is necessary, for this to happen, to weigh heavily on management systems and on self-control ability of the firms (not only big or middle, but also the smallest ones): this means methods and instruments of management, innovation of technologies and of processes.

Digitalis, in its little mission has chosen, has strained to contribute to this process, by the means of informative service "I. R. I. D. E.", that will mark a new stage; and with the development and the offer of management instruments (especially "Sistema Ambiente" as a programme for the informed management of the prevention on work places and of environment quality of the firm).

A PROPOSAL

"Sistema Ambiente" has consolidated itself during these three years in Italy and is preparing itself for other european states versions.

The only indicated and not still developped part is the one of the elaboration of firm environment budget. Environment budget instrument (fruit of self-control and of right management of all parameters) will not be a simple "economical computation", but a qualitive and effective "account" of the adjustment objectives and of the reached results.

The way to reach the environment budget and to make it a consciously acquired means is the proposal Digitalis offers to all its interlocutors who employs "Sistema Ambiente". It is a way we want to be really interactive and full of all available competences.

The business "environment budget" is the base for a new reading of States social budgets, not only connected with monetary and fiscal movements, but to the patrimony of material and social resources to protect and to increase: a way as that we propose allows to make this purpose sharable and shared.

SAFETY AND ENVIRONMENT MANAGEMENT
a real impulse for a sustainable future

Different pushes have walked through business world since the approval of Dir. 391/CE.

We have first to distinguish at least three main kinds of realities between 1995 and 1997.

- The first, most limited, where prevention is still not borne, in 1995, and where low of safety has been an actual occasion of qualification;

- The second one, larger, where the use to work with method and responsability has helped a serious application;

- The third one, unfortunately the largest, where too many things are done without conviction, and where also 391/CE has had formal characteristics.

The first stage, still well known and surpassed, has been that of alarmism, and of the urgency to fulfil beureaucratically to the "document" duty.

This stage, though throwning light on its impreparedness, has produced some important results:

- To emphasize, with the prevention problem, the huge non fulfilment that could be found everywhere, also in the laws and in the elder rules;

- To underline the great deficiency of competences and resources engaged in the control of installations safety.

Next to summary (but very expensive) risks analysis, we have so to certify that in most situations the first stage has produced considerable fulfilments to the rules, an important strengthening and a significant qualification of the firm cadres engaged in the safety division. All this would not happen without 391/CE.

The information and formation action and, most generally, the workers' envolvement, part that is basic for 391/CE, has been feebler and surely more formal.

If the action carried out in the analysis stage has been bureaucratic, in the same way the election (and very often rather a "designation") of the workers' representants for Safety and the characteristics they assumed in firms have been bureaucratic. Also the booklets and in some cases the short courses on 391/CE have been bureaucratic.

Another feature of the problem has shown a basic weakness too: too often the staff devoted to watchfulness is completely insufficient and devoid of the means to carry on an organic action able to urge the fulfilment to rules and to direct prevention actions and methods.

We think, however, that 391/CE has, in a short period, weighted more heavily (perhaps also for the duties imposed by a law) than "quality certification" (it too in too many cases only apparent and superficial).

But now reality has changed, and in a positive way:

- A part of firms has "detected" or "redetected" 391/CE great resource that flows positively on all the firm features and represents an indication of method of work and management too;

- Another part (nowadays much more consistent) that is ready to "accomplish again" the course to make it more concrete and incisive, by involving more and more directly firm resources;

- A part, that unfortunately remains the majority, that carries on, besides an undervaluation of qualitative features, an improper "competition" towards the most engaged firms.

We must give a similar valuation if we watch to environment engagement of firms, that is another great bet for all european industry.

If we turn to public administration, we must unfortunately observe that the will and the engagement of public administrators has not been different: here too, except for a good important field, a great quantity of local organizations and public companies have delegated outside (as it were really possible and useful) all the matter.

In the firm task we have chosen (the one to help information and to offer means for the good management of safety and environment), we emphasize as this stage appears to us crucial for a larger quality jump in order to face the very reality and not only the appearance of the problem.

All the subjets directly concerned in the matter (and they are really all) after these last years experiences and controls, know that the attention payed to the work condition and ways is a (if not "the") mean resource: it is so even if the method, the one of the concrete

involvement to prevention in the work place, become effective.

THE NEED OF SHARED METHODS AND PARAMETERS

Legislation quality still clash with a too large differentiation of analysis methods and valuation parameters. Anybody, in every place he may be, has found a way of analysis and prevention organization on the basis of his experience and of his acquired competence. Reality shows that, also with a high competence, methods and parameters are not only produced by an individual stress, but are individual in the resolutions too.

ISPESL (Italian Department of Industrial Hygiene) has strongly helped to provide elements of knowledge and means as a basis of a common culture of prevention, and it goes on producing a very large documentation wealth.

However, an availablility turned to provide knowledges, to communicate experiences of credit, capable to increase intervention ability of everybody is still not enough and is equally important.

Digitalis, in the objective limits of its rule and its action, has strengthened in these years to provide a method that has got much history, to catch experiences and indications, and to give them back in the programme "Sistema Ambiente".

The aim of the programme is mainly the one to give a directed system of informations collection and of organized proceedings that give to consumer a base of starting and of work in which is condensed the experience of a hundred safety operators.

How, How much and who uses "Sistema Ambiente"

From a world of words and papers, safety and environment management are becoming behaviours, proceedings and knowledges: "Sistema ambiente" is the means for this aim.

"Sistema Ambiente" has become in the time a nearly complete programme and, above all, by improving its informatic motive force, has quickened and made more direct its functions.

"Sistema Ambiente" can pratically be used by all the firm functions that will be able in this way to work and particularly "contribute" positively to safety.

But it would be wrong if many people utilize "at once" the programme. The programme must be put into motion gradually, starting from work and knowledges that the Director S. P. P. transfers in it, to put into motion other functions by degrees afterwards.

The programme may be very well used for separate fields. The advantage of the gradual starting is that as soon as we put specifications into it, they are just ready and shared with others, without need to repeat them.

An important "collaboration" is the one with the firm informatic files, from which the programme can import many specifications and to which it can give back many processed and organized data.

❖• Firm structure

Every firm, industrial, administrative, for services, little or of big extent, has a structure that from the point of view of dangers detection can be divided in:
• Settlements;
• Work places (premises or areas);
• Working stages carried out ;
• Engines / Equipments / Means used.

The first task of the one who makes analysis is exactly to define the firm lay-out, the detection of homogeneous risks and the flow of working activity.This development is often different from the administrative one (departments, services, divisions, etc.).

"Self-analysis" (the part of the programme for the risks analysis) allows to keep the parallelism between the two ways to divide the firm, by using the administrative variables.

❖• The analysis method

For performing the analysis, the System provides some qustionaries that can be used by the directors of each unity, in order to obtain a collection of informations as deep as possible and above all real. The questionaries questions are numbered as the questions we find in the different visual display units.

The correct method to perform analysis with the aim to feed a safety culture (not a bureaucratic and expensive "document") is exactly the one to involve the firm functions distributed in the activity, to whom give back afterwards the results and from whom to obtain in real time the reportings of problems and changes.

The System especially allows to monitor all (and not only to find out what at a fixed moment seems not to function); this for two main reasons:
• Every aspect in that moment "seems" to function, can change in the time, so it must be monitored;
• Aspects "seem" to function, can afterwards appear to controllers or to workers, of a different nature, so we must underline that we watched them in all their features;
• The ones who control must be able to have analytical vision of all, in order to be able to expose in full quiet their judgments; to be

ignorant of some aspects is not a favourable fact.

Probably the analysis is in a first time a bit more careful, but it allows by the time few labour to monitor conscientiously the reality to which we must answer.

➢ **Work places (premises and areas)**

The programme allows a directed analysis from questions and answer lists, that are used for what concerns the reality we are analysing.

The System can, after a just three years esperimentation in every field, suite to the most different situations and permits the adding of elements of knowledge reputated useful.

Work premises are analysed in a wide way and particularly there are references to lows of safety (for example in Italy : Dpr 547 and L 46/90) and Fire prevention.

Work places are connected with specific forms for:
• Fire prevention management;
• Planned control of furniture;
• Management of buildings upkeep;
• Management of the specific authorisations, dealing with the place;
• Files of maps, drawings, specific photos.

➢ **Working stages**

In working stages we can analyse all the risks for the workers considered by 391/CE, subdivided for items.

Risks analysis is surely referred to to lows of safety (for example in Italy :Dpr 547, Dpr 303, DLgs 277, DLgs 77, etc.), but studies risks even in the 626 view, that considers to be a risk every feature, may affect workers' health.

The risks can be esteemed by texts (sentences of CE file or created by the compiler) that define the argument followed for valuation. Automatic or arithmetic formulas are absolutely excluded, though they seem to be objective, for they are actually arbitrary and problematical.

Working stages are connected with:
• Files for recording of instrumental observation data;
• Files to read again the analysis data according to the subjective item of the four groups of risk factors historically used by workers;
• Files for an ergonomics analysis of work placements, from the point of view of position, of labour, of backbone strain, of stress;
• Management of specific authorisations connected with the activity;
• Files of maps, drawings, photos, specific films.

➢ **Engines / Installations / Equipments / Means**

Engines are analysed with a question. The System however allows us to produce the whole safety file of the engine, particularly:
• By introducing the description of working process that must be known by worker;
• By putting direct questions to a database about safety;
• By consulting (from 3.5 version) wide files of laws about safety;
• By adding to analysis the indication of requirements of All. I from Engines Instruction taken into account.

The safety file is then connected with:
• Files for the management of components to keep under control;
• Files and proceedings for the management of maintenances, of controls and of observation of indicators measures;
• The management of particular authorisations;
• The possibility to fill the technic file for CE marking;
• Files of drawings, photos, specific films.

❖• Materials cycle

➢ **Energy**

The control over energy use (electric energy, gas, water) allows to act by technologic changes, of proceeding and of organization, in order to reduce them or to recover them.

It is one of the main points in 1836/CE Rule linked about environment audit that connects in a visible way the aim to limit the use of environment resources to the aim to reduce costs.

Energetic management is a part of 1999 bringing up to date.

➢ **Files of matters safety**

The System automatically works out the data put in safety files to 16 points of the matters employed, that have to be at disposal for several subjects.

➢ **Compatibility between matters (stocking and processing)**

The System allows to check possible additive risks that can derive from the contact between different matters.

➢ **Supplies**

The System allows to fill in a safety file for no chemical matters, half worked ones, productions and consumer products that are used in the firm (D. P. I. included).

➢ **Residues**

The System allows to point out the residues nature for each proceeding and to act on them an elaborated management, by compiling their characteristics and producing an advice file for management.

➢ **Products**

The System consents to fill in safety file of the products provided by the firm; every product deserves this consideration, an immaterial product too (how much security or insecurity has produced, for instance, an immaterial activity like the consultation or the formation for Dir. 391/CE?).

➢ **Purchases**

Purchases proceeding allows to verify if what we want to buy has been analized from the S. P. P. Director and if it has been given his approval.

➢ **Storeroom**

Storeroom management permits to note on the file of each worker the materials he has received (for instance D. P. I.).

❖• Outside companies and moving enterprises

It is possible to fill in, by using the analysis data included in the programme, the document of risk analisys to control, with outside companies, and to produce the united check file.
It is also possible, by using both analysis data of the firm and specific files, to insert the stages of a moving enterprise (either a firm or a building site), to effect a safety planning, to produce the possible notification and the check files that the coordinator for the work execution have to record.

❖• Workers

➢ **Register file**

The worker register file, besides all the requested data, is suitable for:
• recording working history;
• producing the file of indivual risk;
• producing the individual course of health management;
• recording the eventual accidents;
• calculating the individual lep.d and lepw expected about noise;
• verifying the worker formation;

• verifying the D. P. I. received.

➢ **Accidents**

It is possible to fill in the accidents report according to the INAIL item, to produce the accidents register according to the item in force, to pull out reasoned statistics on the base of the variables and the working situation.

➢ **Judgment files about workers**

The Programme offers a paper file and an informatic file for subjective description of risks for the workers' groups; the item used is the one of four factors groups.
The function allows to provide important knowledges, that often remain not expressed, to the qualified doctor and to the S. P. P. Director, but especially offers an instrument and a work method to the workers representative for safety, who generally has nowadays an actual rule nearly formal.

➢ **Reports**

The System allows the formal recording of reports on meetings, expected by 391/CE and, if wanted, secretary compilation in real time, giving to this important fulfilment of 391/CE an actual certification.

❖• Work organization

➢ **Duties**

Duties require at first a specific description of work organization. The System takes into account the variation it can have in the time; duties in their stages of working put in evidence their beginning description and the actual changed one.
Same duties from the risk point of view do not exist (the same duty carried on in different environments involves different risk values), and the System allows a reading of the duty in the different realities where it is carried on.
It is possible for each duty:
• To fill in the required formative planning;
• To fill in the health file that will be applied for workers who carry on this task;
• to indicate requested D. P. I.;
• to produce and bring up to date Lep.d and Lep.w expected about noise.
Indeed a worker can carry on at the same time several duties and this will be contained in his working history.
The System allows finally to verify if the worker has received the formation required for the duty.

➢ **Duties risks**

Each duty can be read in the separate context of risk and can be verified with the party concerned.

➤ **Formation**

It is possible to define the formative plannings for duty, to manage formative forms planning, to record workers' partecipation to courses or to formative forms.

➤ **Responsabilities diagram**

The System produces and brings up to date in real time the diagram of responsabilities at different levels to refer to for safety management.

❖• Outside environment risks

➤ **Rubbish**

The Programme, on the base of the recent European legislation, allows:
to fix rubbish for each settling;
• to define and bring up to date its characteristics;
• to bring it into line by percentage with the working stages that produce it;
• to fill in quickly registers with present and very complete data;
• to produce the form for transports;
• to keep under control stocks.

➤ **Emissions**

A programme function permits to create the file of each single chimney and to manage both the authorisation and renewal procedure, recording recurrent analyses too, and producing, moreover, a register of emissions.

(The five following functions are a part of next two years bringings up to date).

➤ **Drainages**

The control of water drainages and of pollution risks of water layers.

➤ **Environment impact**

The check of compatibility the settlement and its activity have with environment and population, in order to point out eventual corrective interventions.

➤ **Participation to territory risks and to emergency**

The risks present in the area, that could have negative effects in the case of a calamity, or provoke accidents. Means and competences recources the area can put at disposal in case of calamity.

➤ **Environment budgets**

Environment objectives have to implicate all firm subjects; each of them, for his own competence, is able to control or to reduce risks gravity.

➤ **Environment balance**

It will be possible, in real time and only when we will have a full utilization of the programme, to extract the data that a function will elaborate in the terms of environment budget and control of the attainment of the viewed compatibility objectives.

❖• Health management

The System allows the qualified doctor to see in real time all the risk data and risk files of workers.
A qualified doctor has a wide responsability on the base of 391/CE, that is not limited to the execution of periodical controls and to definition of general fitness. The doctor must know specifically risks, must intervene in cases of specific insuitability and even elaborate "anonymous and collective health data".
Informative systems in real time, wide documentation the employer must put at disposal, and timely reports to direct the prevention action the firm needs, are required.
The item of biostatistics data register accidents statistics management, ability to link workers' subjective judgments to objective data, the continual risks check and their chronological arrangement, are characteristics of the programme for the ones want to work well and consciously.
Following managements are then simplified:
• Visits of work examinations medicine (that arranges historically data in the time);
• Health file;
• Expiries of clinical analyses and of vaccinations;
• Management of communications to the firm and to the worker.
Database characteristics allows the doctor to obtain any kind of statistics or of elaboration for risk groups.

❖• Organization

All interventions that have to been kept under control and that are concerned with executive responsabilities that have to be granted, are recorded in an expiries motor:
Authorisations;
Building maintenance;
Furniture maintenance;
Engines maintenance;

Installation components to replace;
Visits of work medicine;
Clinical analyses;
Check up of outside firms and of moving enterprises;
Emissions management;
Planning of any other kind of expiry
(formation meetings and any other action we want to recorder).
Expiries motor allows an expiries search extremely selective, the printing of expiry lists and, above all, the automatic planning of the periodic expiries for all the present year.

❖• Registers

All the law registers can be produced automatically by the Programme:
• The accidents Register;
• The exposed ones to Noise Risk Register;
• The exposed ones to Biological Risks Register;
• The environment Data Register;
• The biostatistics Data Register (anonymous collective data);
• Rubbish Registers;
• Emissions Registers.

❖• Usefulness

In the compilation:
➢ **Questionaries and proofs**

It is possible to obtain on paper the check lists for risks analysis, for the observation on engine board of engines Directive, for the recording on engine board of maintenance and of measures, for the version of safety and emergency manuals.
➢ **Typologies**

It is possible to create premises, work proceedings and engines typologies, in order to fill in automatically and at once a not definited number of similar situations, and then to modify the different data only.
It is also possible to modify at once and automatically on lists of files one or more data with tipologies.
Tipologies are used too to compile services and building sites stages.
➢ **Files**

There are files, partly provided with the System and partly to compile by consumer, from which one can take sentences or texts without writing them anew or only by partially modifying them.
For messages:
It is possible to send letters to Workers, to Firms and to Suppliers, by compiling them or by taking from file elaborated standard letters; it is possible moreover to keep the files of all letters sent.

❖• Documentation

The documentation supplied by the System is very wide:
Present laws ;
Regional direction lines;
The engines Directive commentary;
Information files of I. S. P. E. S. L..
The whole material is easy to look for and to print, partly in Word form and partly on database.

A WEB site of Firm for safety and environment

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