This paper aims to present the activities, performed by the Department of Museums and the Cultural Estate of the administration of Regione Lombardia, in order to solve the long-standings problem of cataloguing the cultural heritage, using new technologies, and, mainly, new methodologies for the collection of data.

Since 1861, the year of Italy's unification, one of the most important problems, in managing the Italian archaeological and artistic heritage, has been the absence of complete documentation about its estate. From 1907 onwards, the responsibility for making plans for the inventory and cataloguing was conferred, by law, to the National Ministry. Its activity came to an end, during and after the Second World War, due to the general crisis in the country.

A new recovery started in 1969, with the creation of a central office, which had the aim of promoting and co-ordinating the methodology and the plans. During the seventies, the process of administrative decentralisation partially gave the possibility of intervention to the Regional Administrations; at the same time, the largest local museums developed their own data banks. Despite this, the present situation of cataloguing the cultural heritage is still unsolved, and the lack of real knowledge makes it difficult to make significant plans, for the protection and exploitation of the national heritage.

Now, in 1993, the Department of Museums and the Cultural Estate of the administration of Regione Lombardia, started work on the SIRBeC strategic project (acronyms of Sistema Informativo Regionale per i Beni Culturali - The Regional Informative System about Cultural Heritage in Lombardy), the purpose of which, was to create a complete inventory of the Lombardy heritage.

When the SIRBeC project was created, several bodies were already developing cataloguing activities:
- the National administration, through its peripheral branches, the Soprintendenze;
- the museums, which in Lombardy are mainly municipal and private;
- the dioceses, since most of the cultural assets of this region are found in churches, or in buildings, subject to the jurisdiction of the church.

Despite the existence of standards for cataloguing, which were set forth by the National Ministry for Heritage, many institutions, such as museums and the church, have developed their own data banks, using different methodologies, and thus, producing a lot of heterogeneous data. Most of the data collected were stored only on paper.

The Regional Administration set itself up as a co-ordination centre, to homogeneously rearrange all these experiences and to further develop the communication among the different bodies, involved in this activity. It goes without saying, that the use of information technologies was critical for this.

The SIRBeC project came out with the following aims:
- to inventory the regional cultural Heritage, in accordance with national provisos, on the safeguard of the archaeological and artistic estate;
- to supply the institutions, that either own or are responsible for the cultural estate, with data banks and image banks, as well as to promote their modernisation, and to enable them to supply new information services;
- to create a regional network on cultural Heritage;
- to support all kinds of promotion of the cultural Heritage in Lombardy.

Four points lay behind the creation of this system:
- the strong connection and collaboration among institutions, in order to integrate the resources; SIRBeC has carried this out and joined together all the subjects involved, which traditionally used to work independently (and this is a critical problem in Italy!);
- to give museums an outstanding role in the scientific direction of the project: according to the particular aim, that the law has given to the Region, the scientific staff of the most important museums in Lombardy are involved;
- to acquire all the data banks, which already exist, through the potential, that information technologies offer;
- to develop communications among the data banks.

Now, we can see how SIRBeC really works. At present, it is composed of:
- an integrated system of local data banks;
- a central bank of data and images;
- a regional network for the transmission of information.
a. The integrated system, of local banks of data and images, is the base of the system. It is there, that the data are collected, both in the museums and outside them, by means of the cataloguing projects, that are carried out by museums, municipalities, dioceses and provincial administrations.

Our aim, in developing local data banks, was to create databases, which would serve the needs of the different administrative branches storing and processing the data, with regard to the assets they were managing.

It was essential to create a database, in such a way, that all users could work on a standardised system, with a varied typology of assets. In this way, all the users can "talk together" and pass information to one another.

We have created specific software, following the indication of both the scientific staff of the major museums and the National Ministry. This software was made using CSD/ISIS, an information retrieval system, developed by UNESCO; it was very important for us to use a product, which is outside of the commercial circuit, internationally widespread, and periodically updated, as well.

Every year, the institutions involved may present a funding request, to carry out cataloguing projects.

The region may deliver the computer software along with financial funding, and may organise lectures and courses, concerning its use.

At the moment, specific software is available to catalogue archaeological, ethnographic and naturalistic assets, as well as paintings, engravings, medals, photographs, and buildings.

There is also software to catalogue the cultural assets, which are not housed in museums.

Even if these products are different, according to the specificity of the projects, their setting is unitary and modular.

Nevertheless, it isn't necessary to use the software of Regione Lombardia. We have established methods of data exchange, such as plans and basic informative modules, which have become the standard for the transmission of data, to the central bank of the SIRBeC. This is the case for organisations, which have already developed specific experience in data processing, and prefer, therefore, to continue using their own products.

The standard size, for the production of the image banks, is Kodak PCD.

Since the conclusion of the projects, the data have been controlled by a filtering process, which makes it possible to examine the data, in order to prevent the entry of incorrect data into the central data bank, and to be transferred to the central data bank of the SIRBeC.

At present the central data bank uses the STAIRS operation system, but we are transferring all the data onto a new server, which uses an UNIX operation system, with the ORACLE database.

The central data bank manages several functions: it preserves and guarantees the safety of the data, it sets up the regional inventory of the cultural heritage, and it provides access to the information through the regional network.

The regional, integrated digital network is the third part of the system.

All the data collected, from the various local databases, are sent from the central data bank to the peripheral stations. Access to the central, multimedia data bank is now permitted only to the partners, involved in the building of the system; today, the availability of some data on the Internet is being discussed and is expected, within a short time.

Some information about the progress of the work is presented here:
- the most important bodies which co-operate with the SIRBeC are:
  all 11 provincial administrations
  9 dioceses
  58 museums;
- the local data banks, financed from 1993 to 1997, contain:
  260,000 records and related images;
- in the central data bank it is possible to consult:
  11 files
  49,000 records
  15,000 images.

The files contain data about:

1. Archaeological Finds, 2. Paintings, 3. Engravings, 4. Drawings, 5. Medals, 6. Japanese Painting (a special collection from the Municipal Museum of Brescia), 7. Ethnographic Assets, 8. Cultural Assets, not located in museums (for example, in churches), 9. Listed Buildings, which are bounded by the National Ministry, 10. The so-called "Inventory of Inventories", a list of all the inventories that already existed, when the SIRBeC started. With the last file, it is possible to cross-check the first 7 files, together and at the same time.

During 1998, the system will be connected to the general, regional GIS.

At the moment, the regional system is implemented, and we are working on developing its potential.

The first aim is now to integrate the regional system with the national system, in two ways:
1) an agreement with the Central Office for Cataloguing (ICCD) to exchange information and carry out common actions;
2) integrating SIRBeC with one of the most important, national projects on the protection of the cultural heritage of
Italy, the "Risk Map of the cultural heritage". This project is being developed by the National Ministry - the Istituto Centrale del Restauro, The Central Institute for Restoration.

It is a system of data banks, both alphanumerical and cartographic, which are able to contain, explore and process information on the potential risk factors, facing the material configuration of the cultural heritage; it allows restoration interventions to be planned and their resources to be optimised.

The Cultural Department of Regione Lombardia is now co-ordinating the entry of our region into this national project, choosing an area, where all the basic databases are available.

SIRBeC is in charge of collecting and furnishing data about the cultural heritage: monumental buildings, museums, archaeological sites, and so on.

To conclude, I think that our experience is a very clear example of how computer technologies may really help us to solve old problems.

First, without this technology it wouldn't be possible to integrate different bodies, as we have done, without obliging people to use exactly the same instruments.

Moreover, our experience shows that it is not necessary to have special funding and the latest software, in order to create such a system. Between 1993 and 1997, Regione Lombardia paid, through ordinary financing, 9.800.000.000 Italian lire - about 5.000.000 US dollars, (i.e., less than 20 dollars for each of the 260.000 records, and the related digital images). If we observe that this price includes all the costs for the creation of the system (planning, creation of the software, management of the central data bank), we can see how the solution to this kind of problems it is not really a matter of money, but mainly a problem of planning and cooperation.

Finally, the result is that we have created a system, which is not only a prototype product and an academic experiment, but also a service that, we hope, will be more and more useful in the tricky question of management of the cultural heritage in Italy.