



# The BIRO software

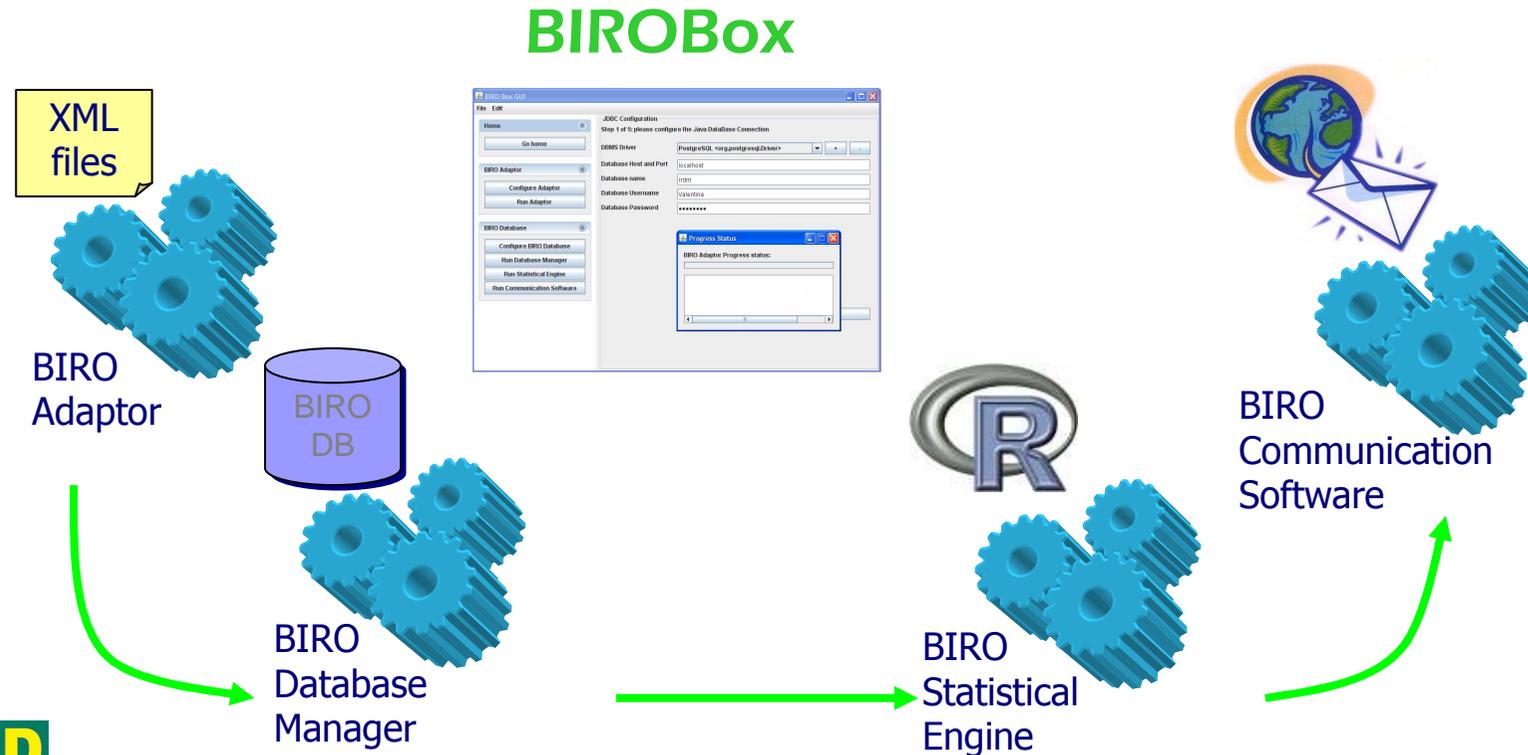
1st EUBIROD Annual Meeting,  
Dasman Centre, Kuwait City



Kuwait City, 2<sup>nd</sup>-4<sup>th</sup> May 2009

# BIROBox

- BIRO Box: a Graphical User Interface to configure and run all BIRO software tools for the local BIRO system



# User Datasets

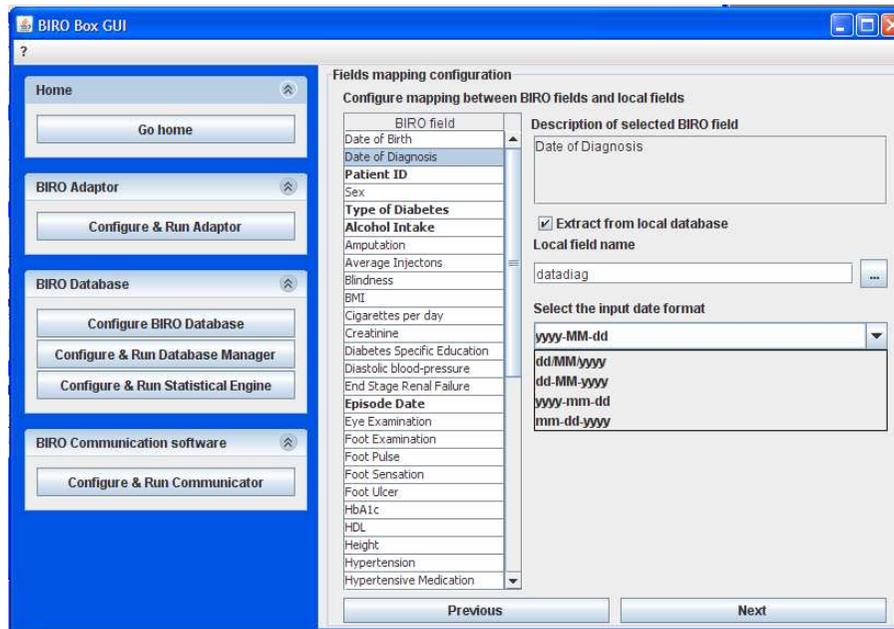
## *Compulsory User Datasets*

- **Merge table:** each row represents a specific clinical episode of a specific patient. Each BIRO field should be mapped to a column; patient\_ID and episode\_date should be primary keys;
- **Population table:** total population and mortality in the catchment area. The number of persons (dead or alive) should be stratified on the basis of years, age bands and gender.
- **Site header and profile** contact details of centre/regional referents (provided directly through a specific form)

## *Recommended User Datasets*

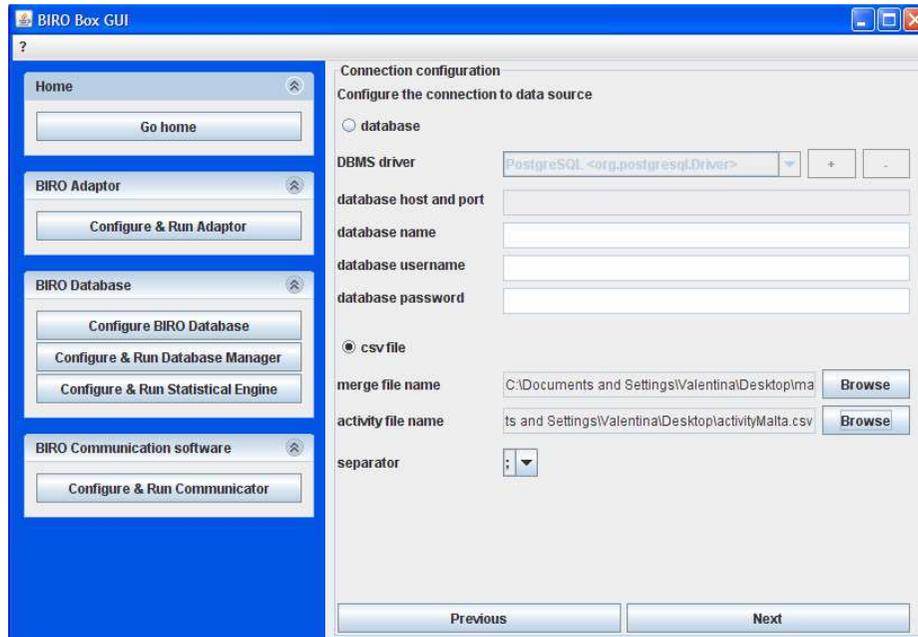
- **activity table:** information about the enrolment of patients to the centre, i.e. dates of entry and exit from the centre and related reasons (birth, diagnosis, transfer toward/from another centre, death, lost to follow-up)
- **diabetic population table:** it is similar to population table but it refers to diabetic patients within the catchment area

# BIROBox



- All main tools of local BIRO System, can be accessed by selecting the appropriate button from the button panel on the left side of the window.
- Each BIRO function can be executed separately from the others. Each step has to be triggered by the user.
- The user may:
  - import XML files even if they are produced somewhere else;
  - skip the execution of Adaptor and Database Manager if he already has a database in the BIRO format;
  - run the Statistical Engine without sending data to central server

# Adaptor configuration



BIRO Box GUI

?

Home

Go home

BIRO Adaptor

Configure & Run Adaptor

BIRO Database

Configure BIRO Database

Configure & Run Database Manager

Configure & Run Statistical Engine

BIRO Communication software

Configure & Run Communicator

Connection configuration

Configure the connection to data source

database

DBMS driver PostgreSQL <org.postgresql.Driver>

database host and port

database name

database username

database password

csv file

merge file name C:\Documents and Settings\Valentina\Desktop\ma... Browse

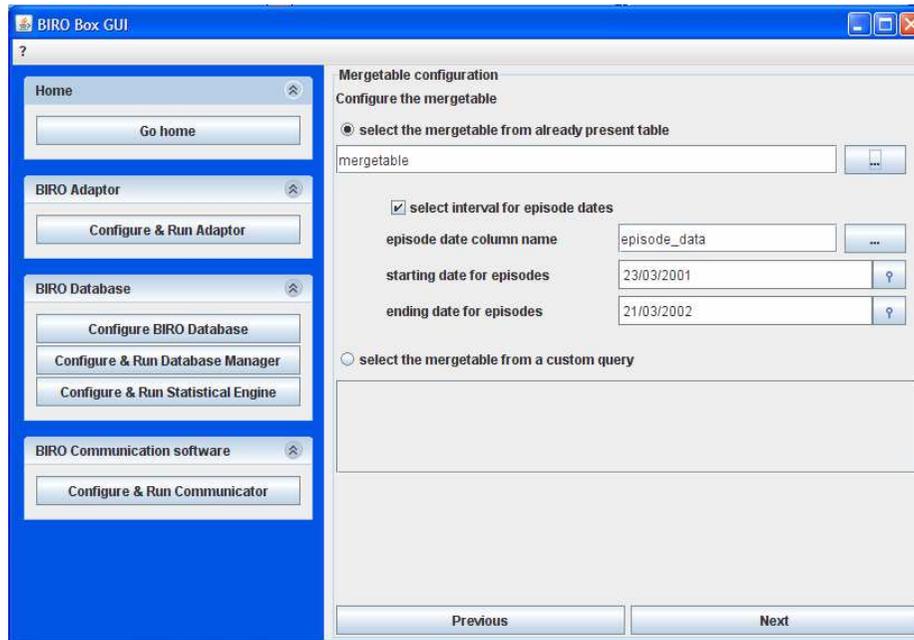
activity file name ts and Settings\Valentina\Desktop\activity\Malta.csv Browse

separator

Previous Next

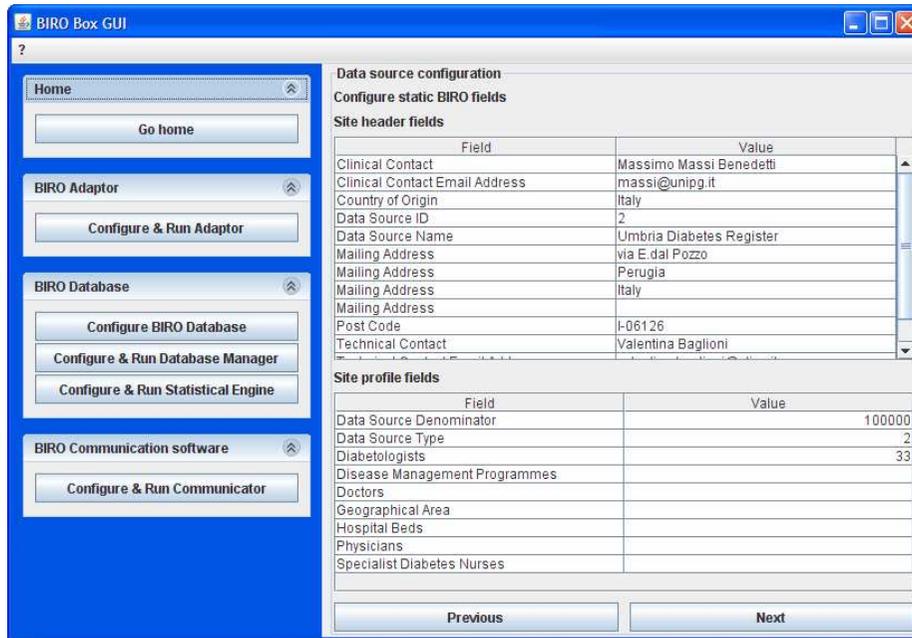
- The first step of the Adaptor configuration is the setting of the connection to the local data source.
- This can be a database or a CSV file.

# Adaptor configuration

The screenshot shows the "BIRO Box GUI" window with the "Mergetable configuration" dialog box open. The dialog has a left sidebar with navigation buttons for "Home", "BIRO Adaptor", "BIRO Database", and "BIRO Communication software". The main area is titled "Mergetable configuration" and "Configure the mergetable". It contains two radio button options: "select the mergetable from already present table" (which is selected) and "select the mergetable from a custom query". Under the first option, there is a text field containing "mergetable" and a browse button "...". Below this, there is a checked checkbox "select interval for episode dates". Underneath are three text fields: "episode date column name" with "episode\_data", "starting date for episodes" with "23/03/2001", and "ending date for episodes" with "21/03/2002". Each of these three fields has a browse button "...". At the bottom of the dialog are "Previous" and "Next" buttons.

- In the second step the user has to configure the merge table.
- If the merge table is not present in the local database, the user may create it by writing the appropriate SQL query in the text area.
- The user may choose to import the whole merge table or just a subset of records, by defining start date and end date for episodes.
- A similar configuration is required for activity table

# Adaptor configuration



**BIRO Box GUI**

**Data source configuration**

Configure static BIRO fields

**Site header fields**

Field	Value
Clinical Contact	Massimo Massi Benedetti
Clinical Contact Email Address	massi@unipg.it
Country of Origin	Italy
Data Source ID	2
Data Source Name	Umbria Diabetes Register
Mailing Address	via E. dal Pozzo
Mailing Address	Perugia
Mailing Address	Italy
Mailing Address	
Post Code	I-06126
Technical Contact	Valentina Baglioni

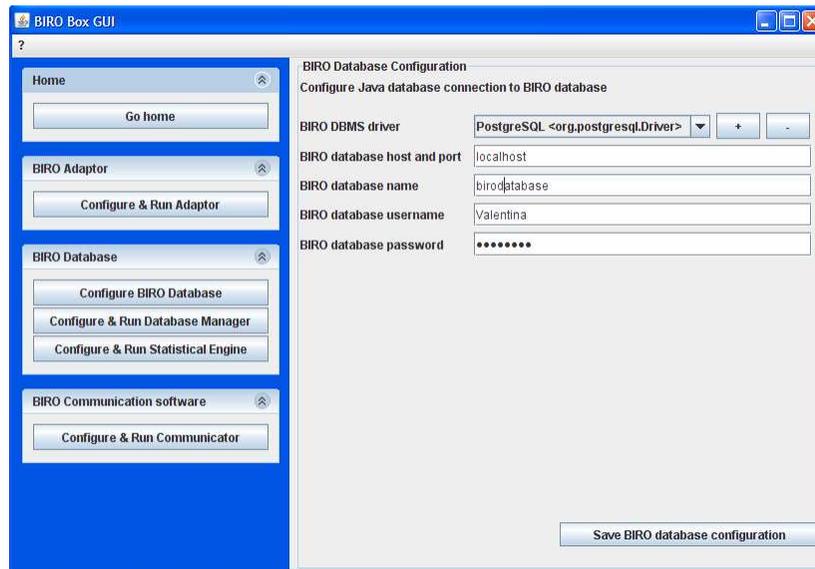
**Site profile fields**

Field	Value
Data Source Denominator	100000
Data Source Type	2
Diabetologists	33
Disease Management Programmes	
Doctors	
Geographical Area	
Hospital Beds	
Physicians	
Specialist Diabetes Nurses	

Previous Next

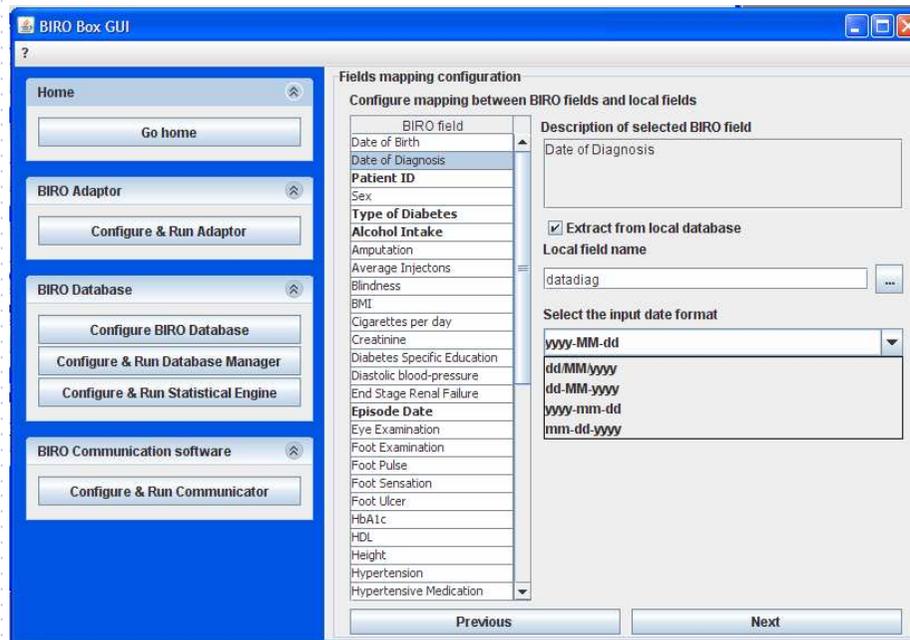
- In the data source configuration panel the user has to input static information about the centre (data source ID, clinical and technical contacts...) and about the catchment area of the centre (total population, number of diabetologists, nurses, doctors...).

# BIRO DB configuration



- The user needs to configure a database which will be considered the local BIRO database and will be used as basis for analysis by Statistical Engine
- URL details (DBMS Driver, database name, host and port) and login details (username and password) of chosen database are requested to the user.

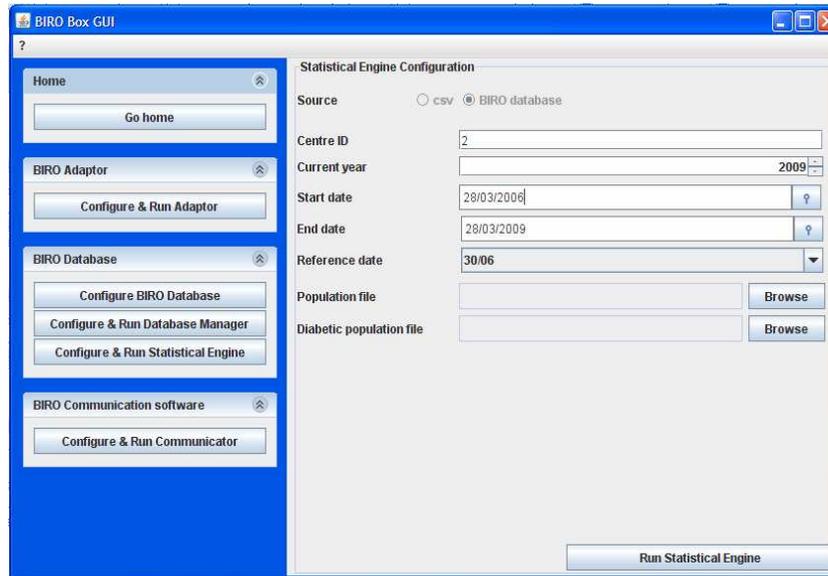
# Adaptor configuration



- The most complex configuration step of Adaptor is the mapping between local fields and BIRO fields.
- For each BIRO fields the user must specify if the field can be extracted, the local name and data format. There are four types of field:

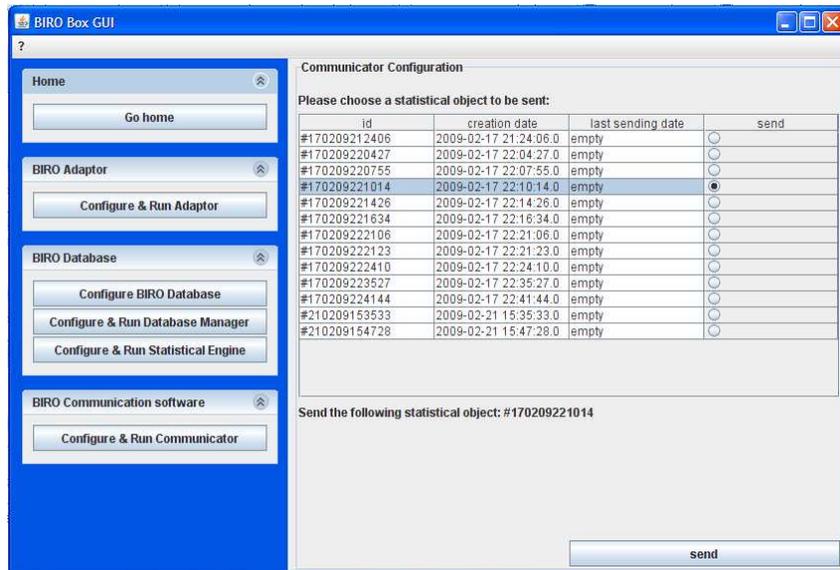
- **Date fields:** the mapping is done by choosing the date format in use locally
- **Enumerated fields:** for each enumerated value the user has to write the correspondent value in local data source.
- **Numeric fields:** the user has to choose the unit of measurement adopted in the local data source
- **Simple fields,** like patient ID and BMI, don't require any mapping

# Statistical Engine configuration



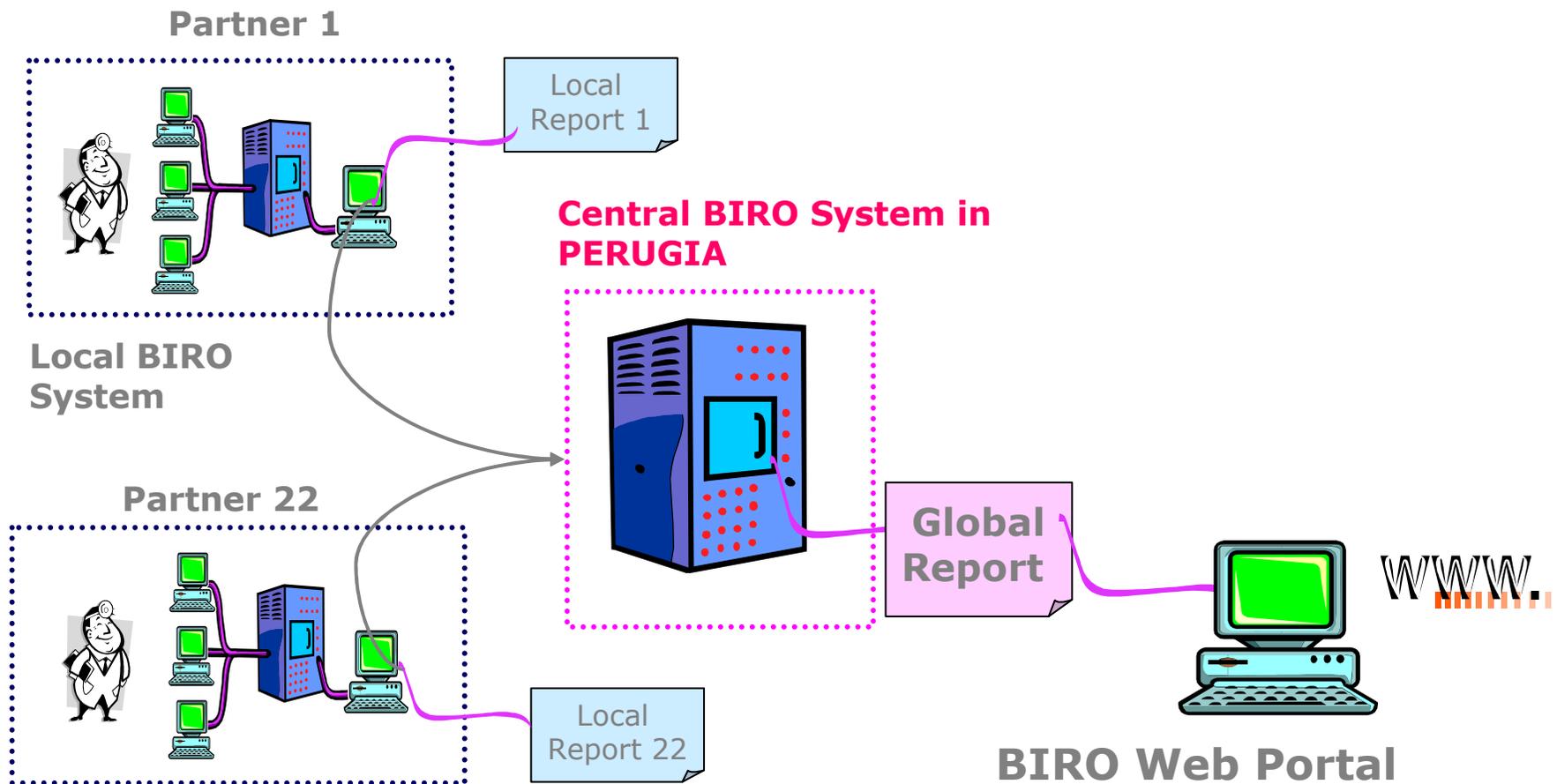
- The Statistical engine requires few data to be configured
  - centre ID
  - current year
  - start date and end date (time interval for data analysis)
  - reference date
  - population file and diabetic population file (CSV)
- Every time the user runs the Statistical Engine, a statistical report is produced in html and PDF format, stored in folders named with the current timestamp

# Communicator configuration



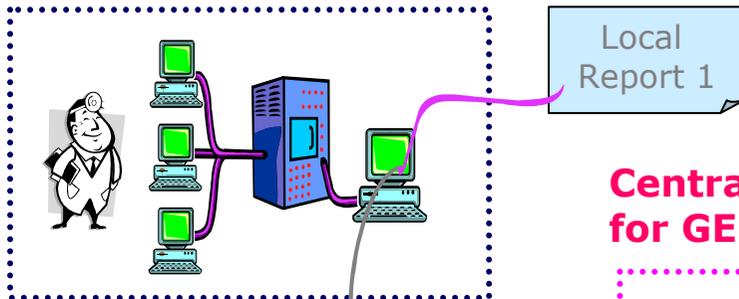
- The Communication Software panel shows the complete list of statistical objects created by the Statistical Engine to be transferred to the central engine
- For each statistical object, the creation last sending date are duly specified
- When the user selects one of the statistical objects from the list and clicks the “send” button, the Communication Software creates a compressed folder and sends it to central server where it will be decompressed and permanently stored in the central database

# Discussion



# Discussion

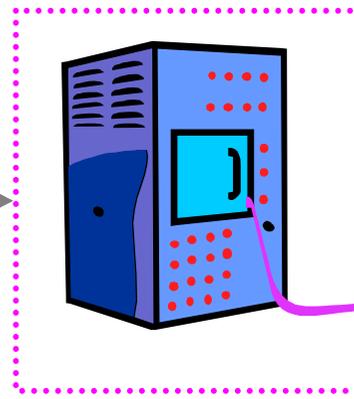
German DMP 1



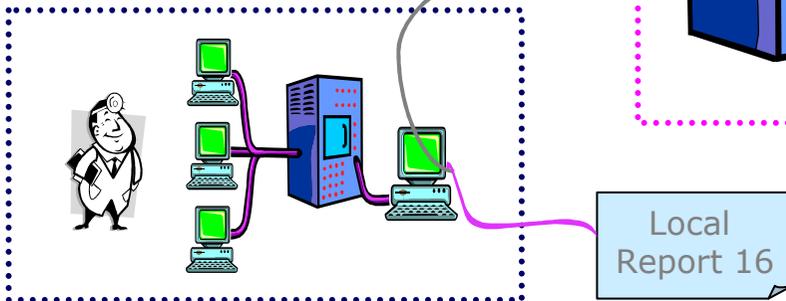
➤ replication of BIRO System at the local level

Local BIRO System

Central BIRO System for GERMANY



German DMP 16



Global German Report



WWW

local German web site