

Towards an integrated EU surveillance system



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EMGM workshop 2007

Summary



- Mission of ECDC in surveillance
- Organisation of surveillance of Communicable Diseases in Europe
- Current activities of ECDC towards an integrated surveillance system

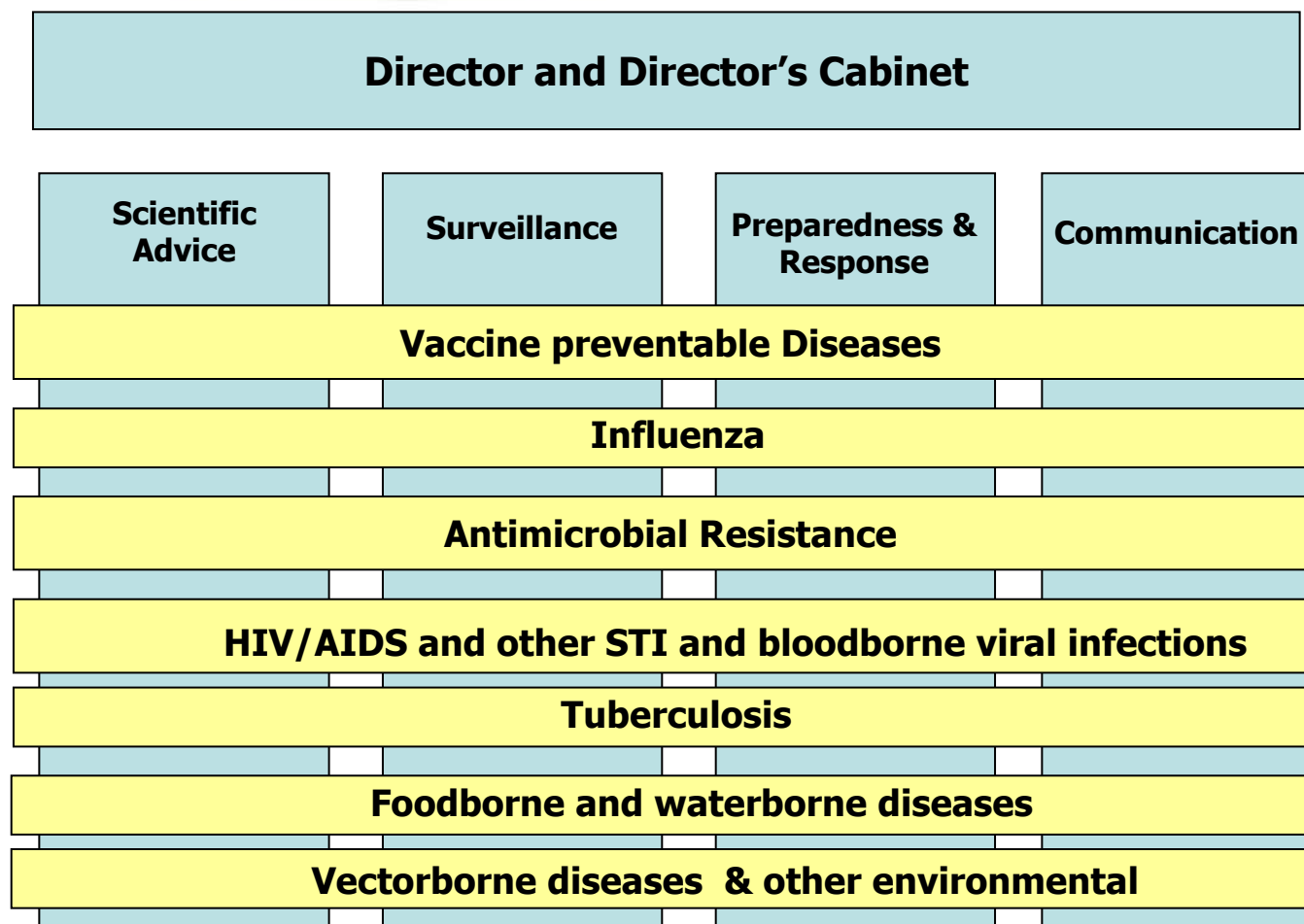
ECDC mission statement

Surveillance



To strengthen the European surveillance
in order to reinforce
detection, prevention and control
of infectious diseases in Europe

Surveillance activities in the Horizontal projects



Surveillance tasks of ECDC

(Reg. 851/2004)



- **Identify, assess** and **communicate** current and emerging health threats
- **Search, collect, collate, evaluate** and **disseminate** relevant scientific and technical data
- **Coordinate** and ensure the integrated operation of the dedicated surveillance networks (harmonize and standardize the operating procedures)
- **Maintain** the databases for epidemiological surveillance
- **Communicate** the results of data analysis to the Community Network
- **Initiate** applied scientific studies and projects for the feasibility, development and preparation of its activities
- Closely **cooperate** with the organisations operating in the field of data collection from the Community, third countries, the WHO, and other international organisations

Surveillance in EU, current situation



- List of 47 notifiable diseases + AMR+ nosocomial infections
- 17 disease surveillance networks:
 - Cover 20 diseases (+ 3 not on the list)
 - Different methods for data collection & data transfer
 - Objectives vary widely
- 27 Member States + 3 EEA/EFTA with their own surveillance systems

Existing surveillance systems in MS



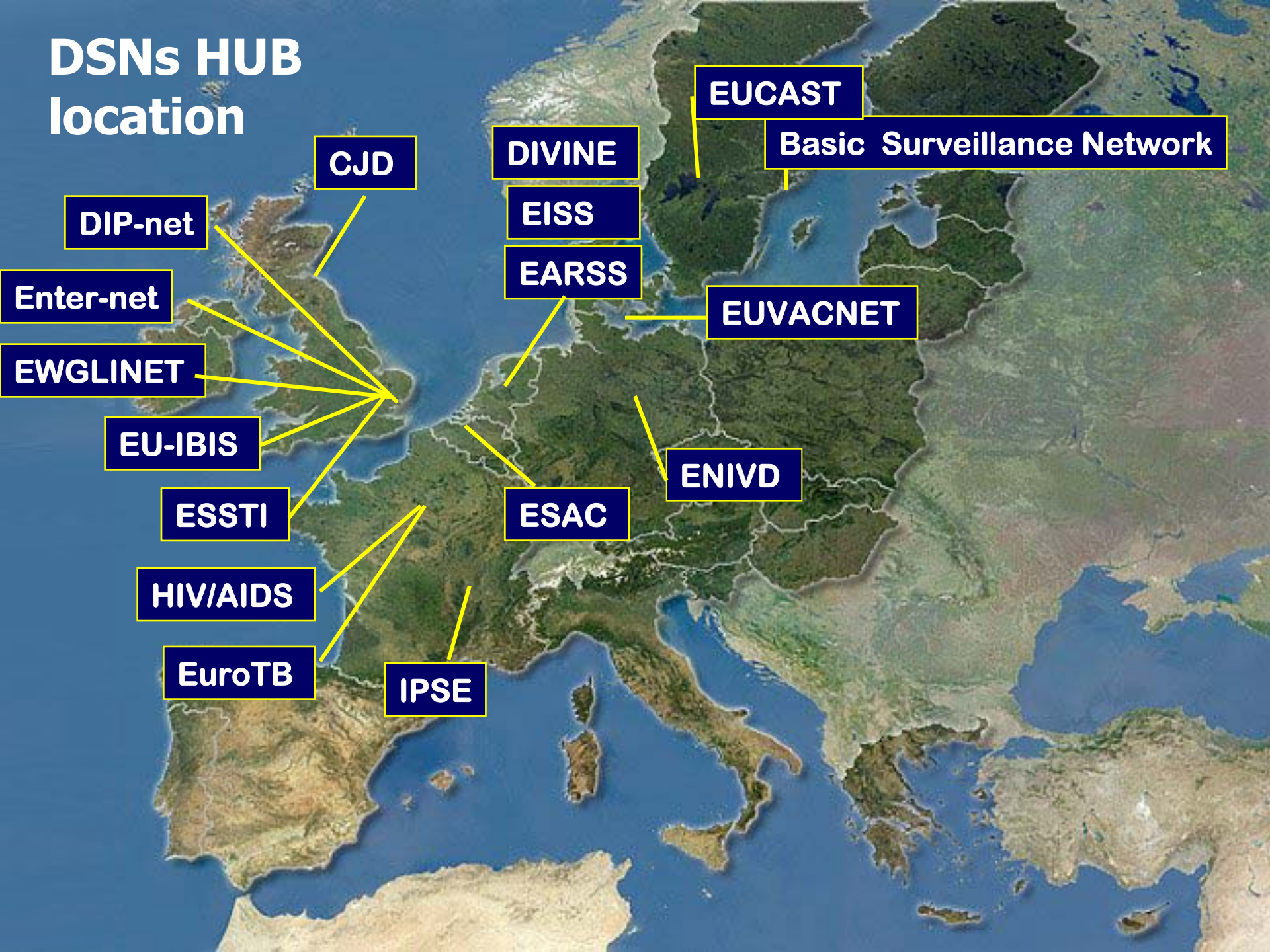
- Difference in
 - reporting systems
 - populations covered
 - case definitions
 - diagnostic methods
- Data are often not comparable or missing
- Small countries have difficulties to participate in EU surveillance
- Capacity in MSs need improvement regarding surveillance methods and practices

Disease Surveillance networks (DSNs)



- Basic Surveillance Network
- Vaccine preventable diseases (DIPNET, EUVAC-NET, EU-IBIS)
- Respiratory diseases (Euro-TB, EISS, EWGLINet)
- Sexually/blood-borne diseases (Euro-HIV, ESSTI)
- Zoonoses/food-borne diseases (Enter-net, DIVINE, EuroCJD)
- Antimicrobial resistance/nosocomial infections (EARSS, ESAC, IPSE, EUCAST)
- Other diseases (ENIVD)

DSNs HUB location



CJD

EUCAST

Basic Surveillance Network

DIP-net

DIVINE

EISS

EARSS

EUVACNET

Enter-net

EWGLINET

EU-IBIS

ENIVD

ESSTI

ESAC

HIV/AIDS

EuroTB

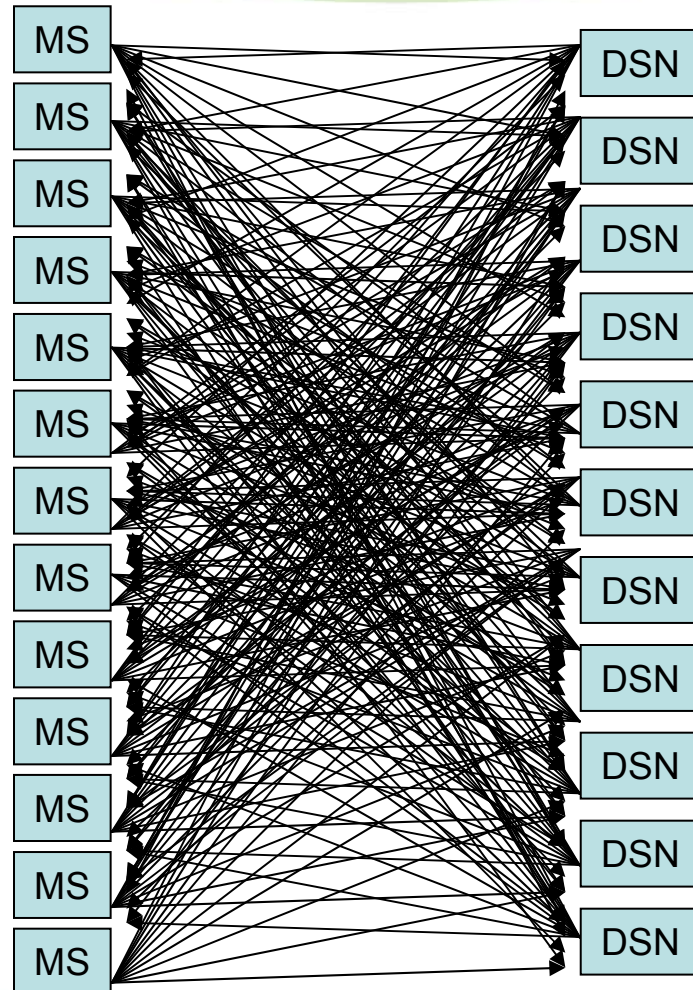
IPSE

Benefits from DSNs



- Cooperation and information exchange between network members
- Support and service for network members
- Interdisciplinary collaboration (epi-lab)
- Earlier detection of events involving more than one MS
- Capacity building

Current information flow MS DSNs



- Each DSN has a HUB which hosts the coordination of the activities and have the functions of maintaining databases, QA of lab methods, data analysis, reporting
- Some DSNs have EPI and LAB components
- MSs have specific gatekeepers for each DSN
- Some DSN have more than 1 gatekeeper in each MS
- The competent body involved at MS level varies according the DSN strategy and the MS capacity

Added value of an integrated surveillance system coordinated by ECDC



- Coverage of all diseases
- Coordinated approach to surveillance: SOPs, database, outputs
- Sustainability of funding
- Synergistic effects
 - Overarching issues affecting more than one disease
 - Integrated work on “New” modes of transmission
 - Economically more efficient
 - Agenda setting according to European priorities
- Work towards better comparability of all surveillance data
- EU training

Surveillance Long-term strategy

(7 years, 2007-2013)



- future surveillance aim and objectives
- The organisational structure to meet the objectives
- Prioritisation of diseases for surveillance
- Support for MS to meet the demands (needs assessment, strengthen national systems)
- Quality management and assurance process (including an annual review of the objectives and priorities)
- External evaluation of ECDC surveillance
- Roadmap for implementation of the long-term strategy

Current major activities

...towards an integrated system...



- Case definitions
- Evaluation of DSNs
- Transition plans for DSNs
- Future surveillance objectives
- Integrated surveillance systems with EPI and LAB components
- European Database (Tessy) and IT working group
- Annual epidemiological report

Preparations for EU surveillance system



- **Case definitions:**

- Publication in 2002
- Revision process
- Sent to EU Commission

- **Variables:**

- Core dataset for all diseases
- More detailed for zoonoses/food-borne and vaccine-preventable diseases

Evaluation and assessment of DSN



- 17 networks to be evaluated between 2006-2008
- Basis for decision on
 - What should be carried on, omitted, added?
 - Where should this be done?
- Evaluation
 - External teams, steering group
 - Standard protocol
 - Usefulness
 - Technical performance
 - Fulfilment of grant objectives
- Assessment of compatibility with future surveillance objectives

Evaluation and assessment of DSN: current stage



- EUIBIS hub visited on 11 – 13 April 2007
- Teams for 14/17 networks have been briefed
- For EISS, EARSS, Enter-net, EU-IBIS, EWGLINET (contract end in 2006):
 - 12 month contract „by analogy“
- 4 evaluations finished:
 - BSN => to ECDC
 - ESAC => call for proposals soon
 - EUCAST, DIVINE => discussed in AF 7-8 May 2007

Elements of a transition plan



- ECDC staff (epi + IT) to visit hub and get acquainted with daily work and specifics of the database
- Transfer of database (When & How)
- Transfer of website (When & How)
- Develop a strategy for maintaining the network
- Develop plan for laboratory activities
- Consultancy of hub staff at ECDC

Future surveillance objectives



- Will be developed jointly by ECDC, national surveillance institutes, surveillance networks
- Information for action:
- SMART objectives
 - Specific
 - Measurable
 - Achievable
 - Realistic
 - Time

Integrated surveillance system with EPI and LAB components



Key laboratory issues for surveillance

- **Samples** to be sent for laboratory diagnoses
- **Standardisation** of methods
- **Quality assurance** of laboratory methods
- Use of **molecular sub typing for public health purposes** to enhance
 - detection of outbreaks
 - monitor spread of transmission
 - Serotype replacement

Integrated surveillance system with EPI and LAB components



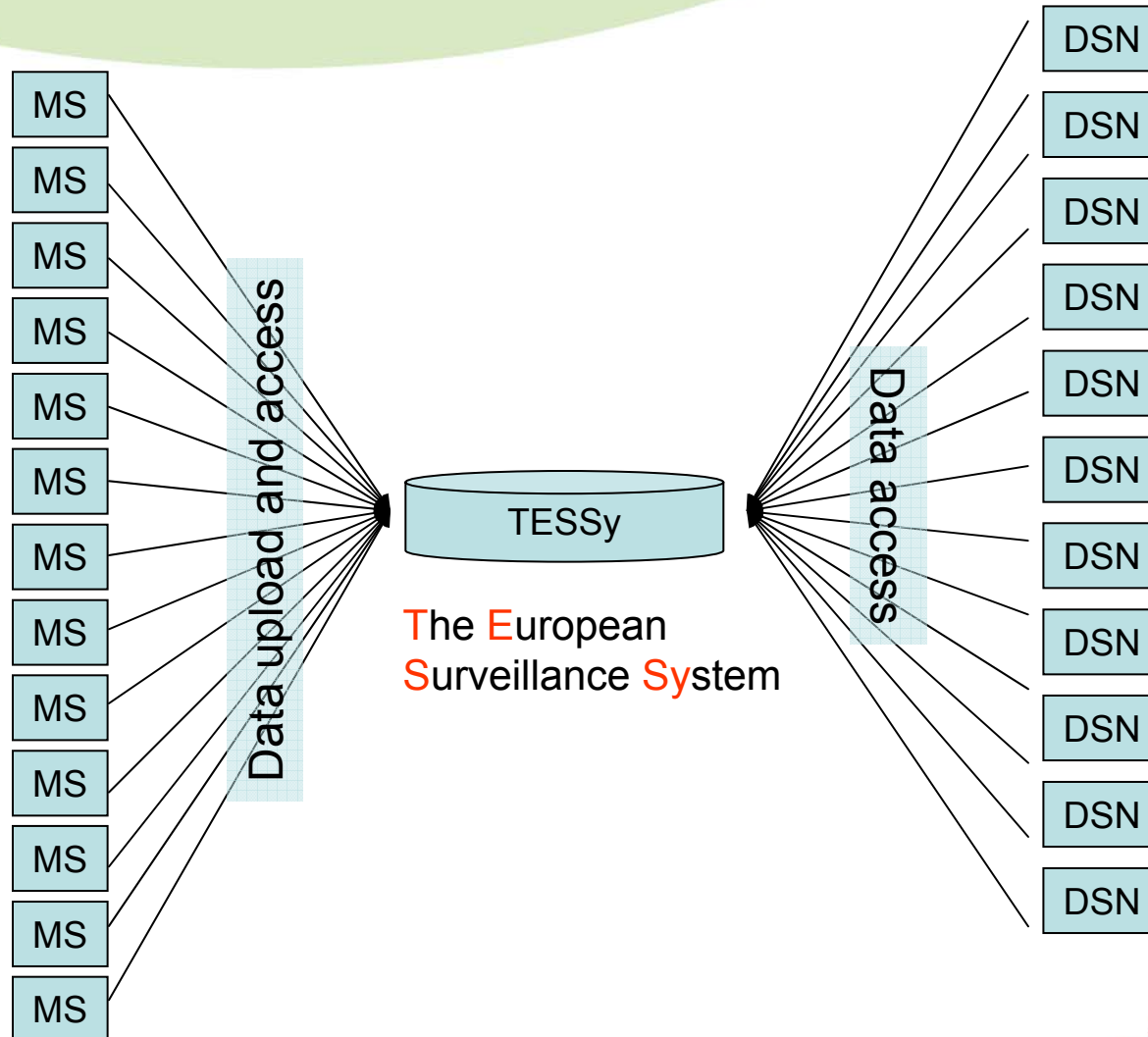
Key future STEPS

- Network of national reference level laboratories (disease-specific)
- Develop strategy for support of EQA
- Evaluation of typing methods for surveillance
- Training of laboratories in these methods

IT component

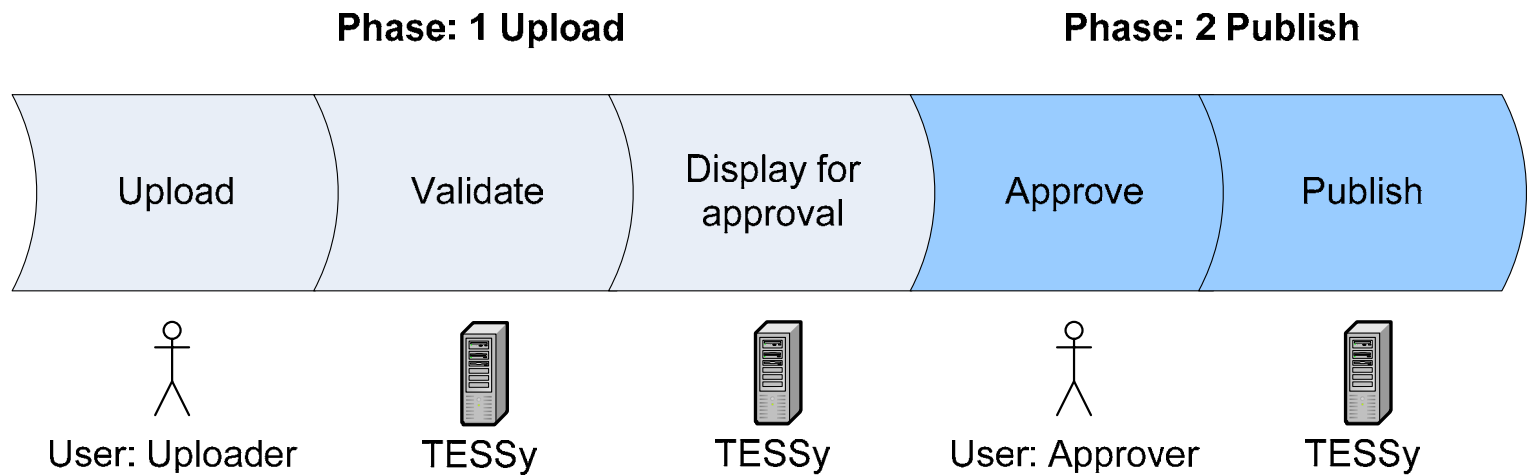
- **Database under construction**
 - Easy and rapid transfer from MS to ECDC
 - Interface with various electronic systems in MS
 - Accommodation of the network databases
 - Generic solution as option to offer for MS
- **Data exchange and access**
 - Agreement with Member States
 - Agreement with Networks

Future information flow via ECDC



Tessy: steps in data collection and collation

- Upload batch



- Approve batch
- View reports
- Download data

Annual report on infectious diseases in Europe



- Aim
 - Provide a basis for decision making and action
 - Identify areas for improvement of surveillance
 - MS support
- Potential users
 - Public health experts (EU, national level)
 - Policy makers
- 2005 data
- Information available from:
 - MS, DSN's, Zoonoses report, Eurostat, TTT, Eurosurveillance weekly
- Roadmap for improving surveillance in the next years

VPD activities 2007-2008



- Surveillance of invasive bacterial diseases
- Measles and rubella elimination
- Best practices for CRS
- Rotavirus surveillance
- HPV surveillance
- Pertussis burden in EU
- Varicella surveillance

Thank you!