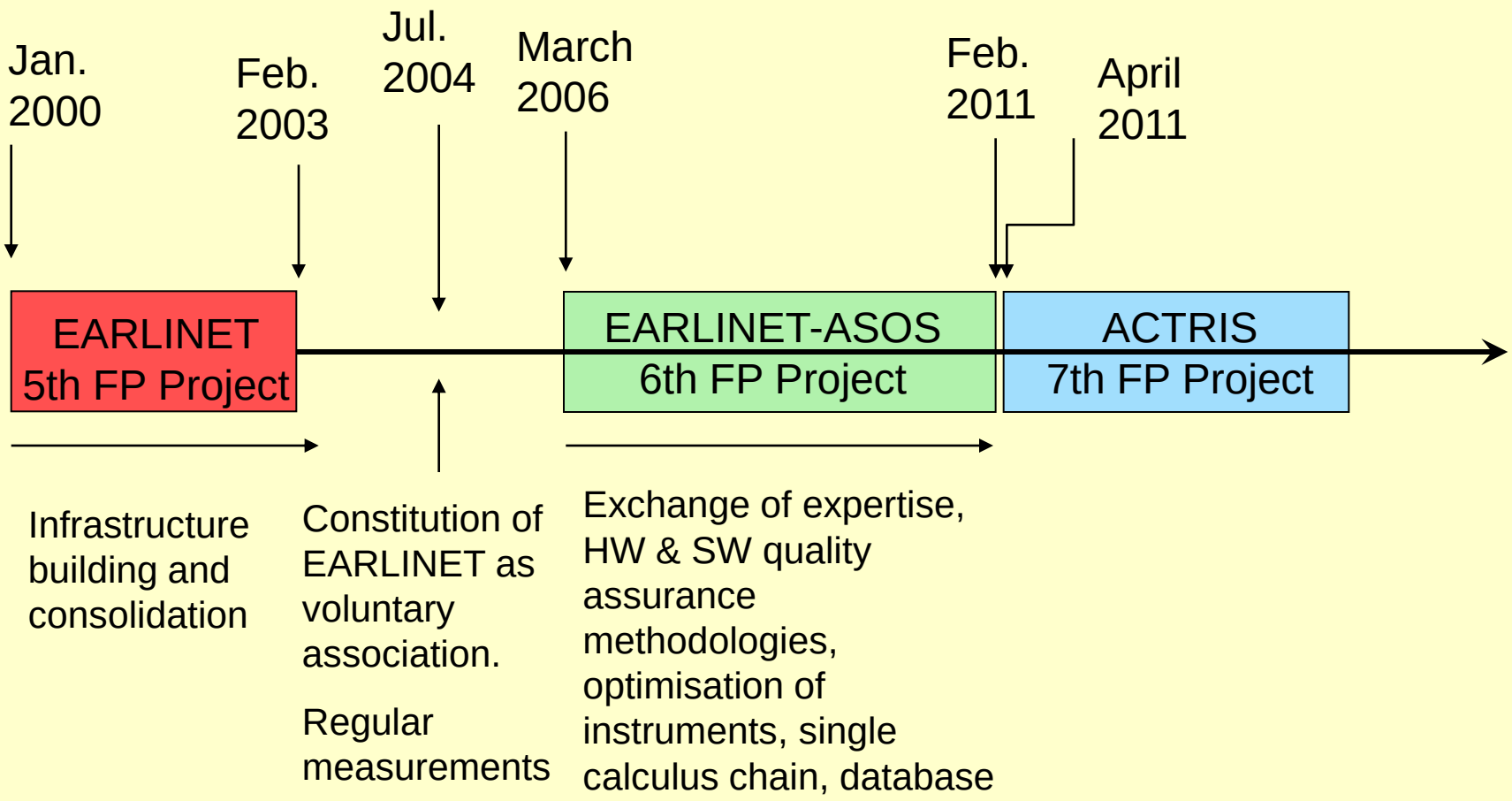
EARLINET future plans

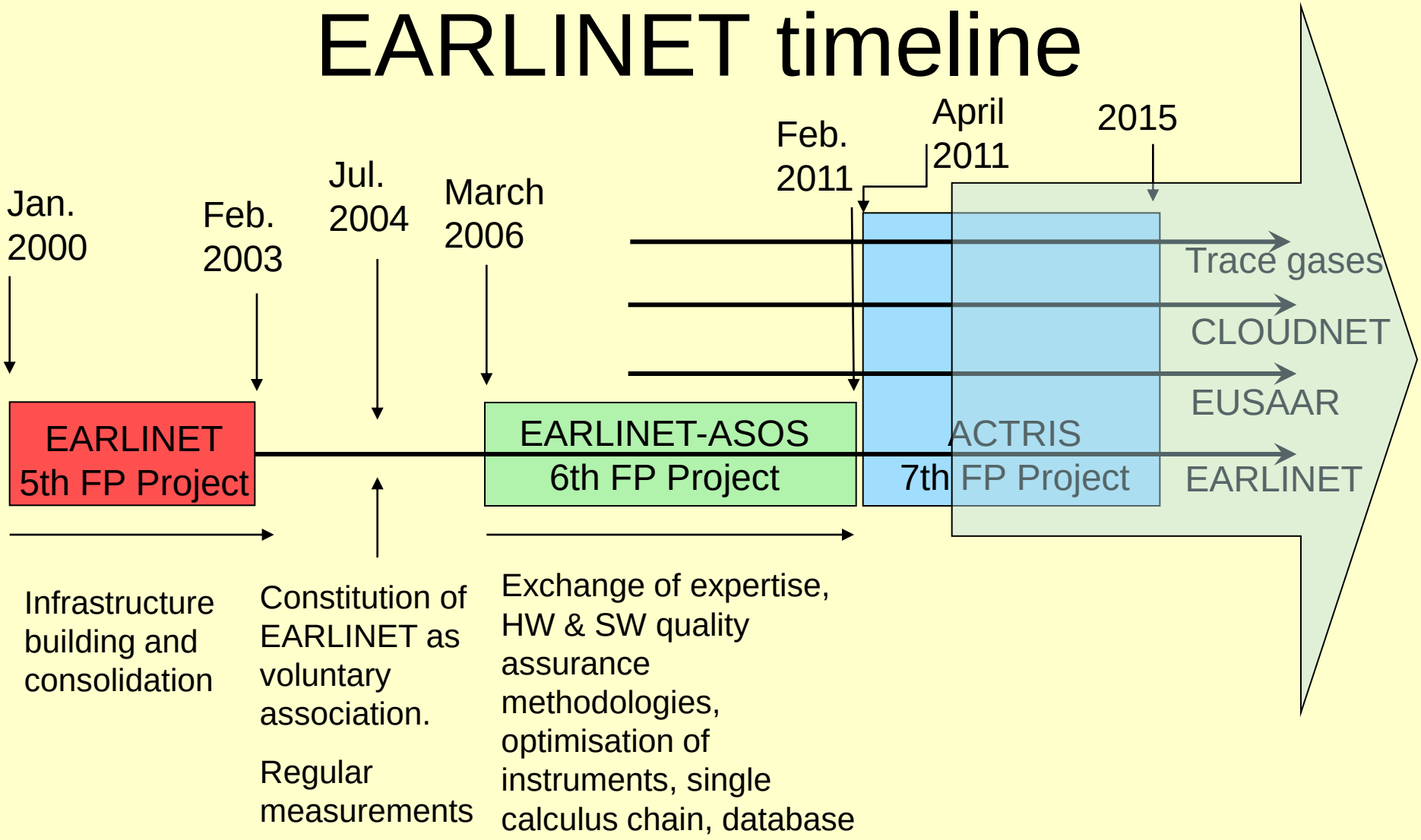
EARLINET future plans

EARLINET within ACTRIS and GALION

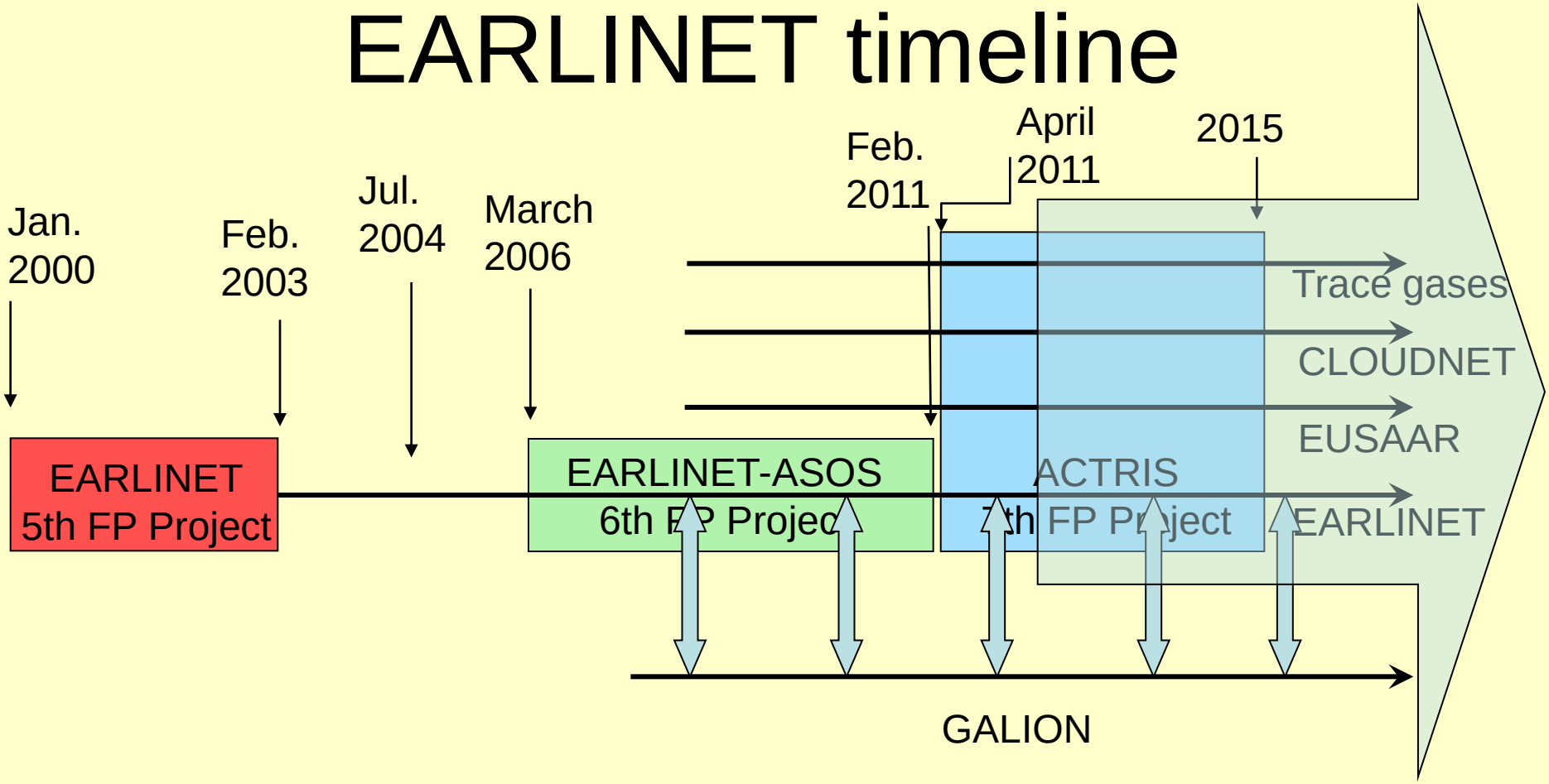
EARLINET timeline



EARLINET timeline



EARLINET timeline



EARLINET in ACTRIS

- All EARLINET stations participate in ACTRIS either as beneficiaries, associated partners or third parties
- EARLINET is the core of Networking Activity 2 (NA2): “Remote Sensing of vertical aerosol distribution”
- EARLINET measurement data are made available to scientists through Service Activity 1 (SA1): “The ACTRIS Service Centre: Access to observations and service products of the infrastructure”
- EARLINET participates through some of its members in:
  - Joint Research Activity 1 (JRA1): “Lidar and sunphotometer – Improved instruments, integrated observations, and combined algorithms”
  - Joint Research Activity 3 (JRA3): “A framework for cloud-aerosol interaction studies”.

EARLINET in ACTRIS NA2

- Goal of ACTRIS NA2:

  "To **blend the EARLINET infrastructure**, from a scientific and structural point of view, to the **whole ACTRIS** community an provide means to reinforce it for remote sensing of **vertical aerosol profiles on continental scale**"

EARLINET in ACTRIS NA2

- Networking activities (from Guide for Applicants):

- joint management of access provision and pooling of distributed resources;
- strengthening of virtual research communities;
- definition of common standards, protocols and interoperability; benchmarking;
- development and maintenance of common databases for the purpose of networking and management of the users and infrastructures;
- spreading of good practices, consultancy and training courses to new users;
- foresight studies for new instrumentation, methods, concepts and/or technologies;
- promotion of clustering and coordinated actions amongst related projects;
- coordination with national or international related initiatives and support to the deployment of global and sustainable approaches in the field;
- dissemination of knowledge; internal and external communication;
- promotion of long term sustainability, including the involvement of funders and the preparation of a business plan beyond the end of the project.

EARLINET in ACTRIS NA2

- Organisation: 3 main tasks
- Tasks:
  - 2.1 Exchange of expertise
  - 2.2 Quality assurance
  - 2.3 Improvement of lidar techniques and data analysis for aerosol characterization

EARLINET in ACTRIS NA2

- Organisation: 3 main tasks

- Tasks: draw on past successful methodologies but aim to bringing aerosol lidar measurements to better quality standards and to integrate them into comprehensive atmospheric observations.

EARLINET in ACTRIS NA2

- **Task 2.1 Exchange of expertise**
  - Intra-EARLINET, intra-ACTRIS and external outreach. Special connection to GALION
  - Annual technical workshop around a defined topic
  - Training and critical insight, technological developments

EARLINET in ACTRIS NA2

- **Task 2.2 Quality assurance**

Improvement of aerosol lidar techniques and quality of lidar products, worldwide knowledge base for quality-assurance techniques. Connection with GALION

  - **Task 2.2.1 Intercomparison campaigns.** Non EARLINET ACTRIS-partner lidars and lidars having undergone significant upgrading.
  - **Task 2.2.2 Internal quality check-ups**
  - **Task 2.2.3 High-level quality check on lidar data and products.** Raw data and final product quality standards, procedures for quality check according to established standards.

EARLINET in ACTRIS NA2

- **Task 2.3 Improvement of lidar techniques and data analysis for aerosol characterization**

Addition of significant parameters to the existing EARLINET standard set of aerosol parameters

  - **Task 2.3.1 Definition of new aerosol parameters to be included in EARLINET standard set.** Depolarization ratio, aerosol layer geometrical and optical properties, product uncertainties, cloud masking...
  - **Task 2.3.2 User-friendly web graphic interface for Single Calculus Chain**
  - **Task 2.3.3 Detailed documentation for both internal and external users on exploitation and use of lidar products**