



UFIPOLNET LIFE04 ENV/D/000054



Das Lebensministerium



UFIPOLNET



Prague
Smichov tunnel



Dresden
Schlesischer Platz



Stockholm
Hornsgatan



Augsburg
Friedeberger Str.

UFIPOLNET Progress Report 1

01-12-2004 to 31-12-2005
LIFE04 ENV/D/000054

Freistaat  Sachsen

Saxon State Agency for Environment and Geology (LfUG)



LIFE Project Number
LIFE04 ENV/D/000054

PROGRESS REPORT No. 01 (Website)
Covering the project activities from 01.12.2004 to 31.12.2005

Reporting Date
07/03/2006
LIFE PROJECT NAME
UFIPOLNET

Data Project

Project location	Dresden / Germany
Project start date:	<01/12/2004>
Project end date:	<30/11/2007>; - Extension date
Total Project duration (in months)	<36> months; - Extension months
Total budget	€ 868 639
EC contribution:	€ 397 196
(%) of total costs	45.7%
(%) of eligible costs	46.3%

Data Beneficiary

Name Beneficiary	Saxon State Agency for Environment and Geology (Sächsisches Landesamt für Umwelt und Geologie)
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2 Abbreviations

CHMI	Czech Hydrometeorological Institute (CHMI)
CS	Czech
DE	German
EN	English
GSF	National Research Centre for Environment and Health, Munich
IfT	Institute for Tropospheric Research
LfUG	Beneficiary: Landesamt für Umwelt und Geologie: Saxon State Agency for Environment and Geology
ITM	Department of Applied Environmental Science (ITM), University Stockholm
SV	Swedish
TOPAS	Technologie-orientierte Partikel-, Analysen- und Sensortechnik (TOPAS GmbH)
TSI	TSI GmbH, Aachen (Co financier)
UBG	LfUG Staatliche Umweltbetriebsgesellschaft (dependent on LfUG)
UFIPOLNET	Ultrafine particle size distributions in air pollution monitoring networks
VDI	Verein Deutscher Ingenieure

units

%	percent
°C	Grad Celsius
a	year
d	day
K	Kelvin
m	Meter
mg/m³	milligram per cubic meter
µg/m³	microgram per cubic meter
mm	millimetre
ng/m³	nanogram per cubic meter

3 Executive Summary

The EU Commission published a press release (Reference: IP/05/1660 Date: 21/12/2005) to announce their final proposal for the EURO5. In this proposal you find for the first time in the process of a European regulation the category of "number of particulates" and the statement, that "a number standard will be defined at a later stage".

This underlines the importance of the EU-project UFIPOLNET, which aims to make measurements of number of particulates in ambient air with routine measuring container inside of measuring networks easier, cheaper and more reliable.

To measure number concentrations of particulate matter at different locations over a longer period will be one way of showing the reduction of the number concentrations of particulates in European cities.

The objective of the project is to demonstrate an applicable and affordable measuring device for ultrafine particles that can be implemented all over Europe. The 4 prototypes will demonstrate that reliable and comparable data for various kinds of analysis can be provided with the device.

Project Management:

The project manager organised the 3 days kick off meeting in January 2005 and also several internal meetings at the LfUG, with the assembly team and with TOPAS and IfT. The project was visited by the monitoring team in summer 2005. All partner contracts have been signed until end of February.

Technical development:

Management and Dissemination are running from the beginning until the end of the whole project life. Task Design (T2) was running all threw 2005 and needs 4 month longer as an extension.

A lot of work has been done from TOPAS and IFT with the help of TSI providing more than planed device parts. Finalisation of the first prototype will be in March 2006, instead of August 2005. A test report by IfT will be ready at the annual May meeting.

Problems encountered:

Technical problems occurred in middle to end of 2005 and were tried to be solved by the assembly team partly with success. The particle size distribution of ultrafine particle number concentrations were planed to be specified within a size range of approx. 12 - 500 nm. This objective have to be changed because of technical problems to about 20 – 200 nm.

Last partner contracts were send out in December because of organisational delays. Therefore not all contracts have been signed until end of December. Until the end of February all contracts were signed.

Dissemination:

A dissemination plan for past and future events was created. A homepage was set up and is updated every month. A Flyer in English and German was created in September 2005.

Envisioned progress up to 31.07.2006:

The interim report will be prepared eventually before end of 2006. On 6.3.2006 the assembly team will have a meeting in Leipzig were the last solutions regarding the technical problem will be discussed. The Implementation of the devices at the 4 locations (Dresden, Prague, Stockholm, and Augsburg) will start latest in June 2006. Signboards will be installed at the 4 measuring stations.

Financial issues:

About 21% of the planed costs have been spent. Some small budget modifications have been made.



Progress and planned activities:

The task 2 has to be extended. Therefore Task 3 and 4 have to be shortened. It seems likely, that the project will be in time at the end of 2006.

It is not known yet if an extension of the project duration is needed.

Annexes:

Pictures of the device, leaflets, press releases, press reaction and copies of the contracts are attached to this report.

4 Project management

The **Beneficiary employed the project manager** from January 2005 with 80 % and from Mai 2005 with 100%. The **finance coordinator was employed** in June 2005 for 16 h per week until Dec 2005. From Jan 2006 until Nov 2007 it will be 12 h.

The project manager **trained the new finance coordinator** regarding the LIFE program and especially the project itself.

The project manager organised the 3 days **kick off meeting** in January 2005 (5- 7-01-2005). It was documented by hardcopy and on CD-ROM (Annex). **Inside** the beneficiary organisation (**LfUG**) the project manager organised and documented 5 half days meetings: 14.12.2004; 26.7.2005; 03.08.2005, 11.8.2005 (without minutes), 25.08.2005, 29.11.2005. Other bilateral meetings between project manager and finance coordinator are not documented.

The project manager attended a coordination meeting **between LfUG and UBG** on 15.11.2005 presenting the up to date news regarding UFIPOLNET and to prepare the employment of the Engineer at the UBG. Project manager organised and documented a meeting on 20.12.2005 regarding the Engineer at the UBG.

The project manager organised 2 **assembly team** (TOPAS, IfT and Cofinancer TSI) **meetings** with minutes: at the European Aerosol Conference (30.08.2005) and on 06-12-2005. The **assembly team** also organised telephone conferences on the 27-10-2005 (with minutes) and during spring. The assembly team had a lot of contacts via email and telephone with each other.

The project manager organised with the help of the partner TOPAS the **visit of the project** by **PARTICIP** (Mr. Reisenberger) on the 20-07-2005. (Pictures and the minutes/report has been send to the commission by PARTICIP)

The project manager organised and documented **meetings with IfT** (30-06-2005) and **with TOPAS** (25-05-2005) and 14-12-2005 with TOPAS regarding financial guidelines.

The project manager created and updated the **project time plan**. The project manager helped the finance coordinator respectively its predecessor in producing individual **finance plans for the partner contracts** and to write the **financial guidelines UFIPOLNET**. A **dissemination plan** (past and future events) has been made.

The project coordinator created an **address file, structure of the files** (Aktenplan),), **dissemination plan**, distribution list with postal address, with email address (>250). The **Numbers of Internet hits** are counted and documented since August 2005.

Representatives of the beneficiary:

- **The finance coordinator:** The Predecessor produced individual **finance plans for each partner contracts** (IfT, TOPAS, CHMU, GSF, ITM). The finance coordinator helped the project manager to make the **financial guidelines** based on the SAPs 2003.
- **Sub department 12, 13 and 14** helped to produce the **partner contracts**.
- The **press department** launched a press release end of January 2005.
- The **president of LfUG** attended the kick-off-meeting in January 2005.
- The **desk officer of the LfUG** responsible for **particle measurements** in Saxony attended different meetings, like the kick off meeting and assembly team meetings.

Following **reports have been delivered** since the start of the project to the commission:

- Documentation of the kick off workshop (5 - 7-Jan-2005) incl. CD-ROM
- Short minutes including pictures during the visit of PARTICIP (20-07-2005)
- Financial Guidelines UFIPOLNET (Ver. 12-Oct-2005)

Partner:

The partner contracts have been signed by TOPAS, IfT and CHMU until December. GSF and ITM signed it until end of February.

The beneficiary and TOPAS to provided a declaration from the relevant national authorities that he must pay and may not recover the VAT for the assets and services required for the project. GSF, IFT, CHMU and ITM will have to send this declaration for 2005 the beneficiary.

It is not known yet if an extension of the project duration is needed.

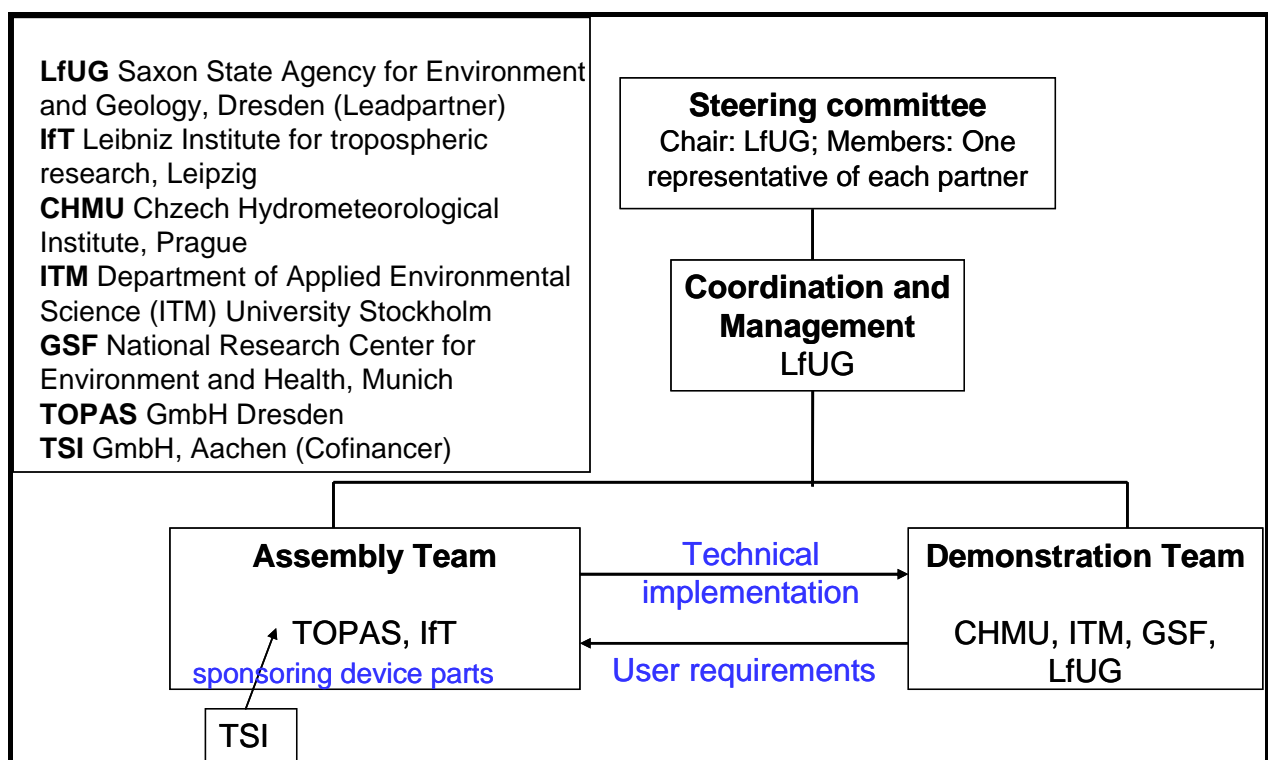


Fig. 1 Organisation of partners

5 Technical development

5.1 General

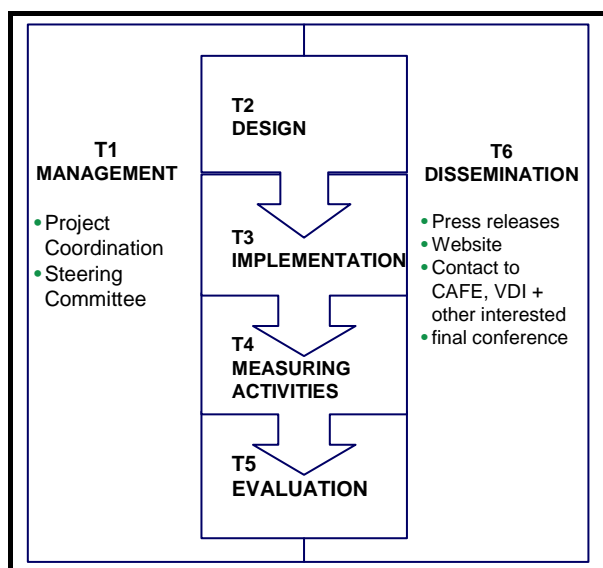


Fig. 2 Organigram of the Tasks in UFIPOLNET

As you can see from fig. 2 Management and Dissemination are running from the beginning until the end of the whole project life. Task Design (T2) was running all through 2005 and needs 4 month longer as an extension (s. fig. 7).

5.2 Task 1 Coordination activities (Management)

See Chapter 4 Project Management.

Administrative management and quality control: Project time plan and structure plan was made. This will be continuously updated.

Coordination of project activities: Several emails, contacts by Minutes of workshops + meetings.

Financial plan has been made and sub plans attached to the partner contracts. The financial plan will be updated continuously.

The first Workshop (kick off) took place in January 2005.

The first progress report should be ready end of February 2006.

5.3 Task 2 Designing and planning, assembly and calibration of the prototype

This is the main task in the beginning of the project. A lot of work has been done from TOPAS and IFT with the help of TSI providing more than planned device parts.

Objectives according to the proposal	Outcome
Definition of user requirements	Took place during the kick off meeting and later by emails. They are documented in the minutes of the kick-off workshop Feb-2005
Planning of the prototype	A Report with blue prints of the prototype and software is in a draft version. Pictures from the designed prototype are available (attached pictures). A well documented paper will be available from TOAPS as discussed at the kick off meeting at the end of the project in middle 2007, and then all changes will be taken into account.
Assembly of first prototype Tests	TOPAS will assemble it in March 2006, instead of August 2005
Calibration of first prototype	A test report by IfT will be ready at the annual meeting at 16-17-May.
Assembly of the other three prototypes	Instead of December 2005 in May 2006 all 4 Prototypes will be available from TOPAS
Tests and calibration of the other 3 prototypes	They will be tested during May 2006 by IfT
Delivery of the prototypes	About June 2006 by TOPAS

The Design of the device will be like:

- 19 inch wide, 20 height units high, frame rack included, wheel away with 2 bars
- HEPA –Filter inside
- There will be different electronically interfaces available, like USB and RS232
- In the back stationary things: Power supply, Aerosol inlet (upper part)
- In the front: power switch, Sheath air and Aerosol flow have to be measurable from external device
- It should be possible to be operating in the front and accessible from the back
- Relative humidity sensor will be integrated in front of the filter in excess air, including a status signal when RH will fall below a certain value (50%)
- No butanol and no radioactive source will be used
- 20 – 200 nm with 8 channels



Fig. 3 *Prototype at TOPAS Jan-2006 (Photo: C. Peters)*

5.4 Task 3 Implementation at the test sites / training for the participants

Task 3 will start in June 2006, not in January, as it was planned in the beginning.

5.5 Task 4 Measuring activities and demonstration

Task 4 will start in August 2006, not in June as it was planned in the beginning of the project.

5.6 Task 5 Evaluation

Task 5 will start in September 2006.

5.7 Task 6 Dissemination

See for details: 7 Dissemination.

A dissemination report and plan for past respectively future events was created. A homepage was set up and is updated every month. A Flyer in English and German was created in September 2005.

6 Problems encountered

Technical problems occurred in middle to end of 2005 and were tried to be solved by the assembly team partly with success. This problems cause a temporarily delay of about 4 months inside Task 2 Designing. The delay will be compensated by a shorter Task 3 Implementation and one month shorter Task 4 Measuring Activities. The Task 5 Evaluation will not be delayed.

The particle size distribution of ultrafine particle number concentrations was planed to be specified within a size range of approx. 12 - 500 nm. This objective have to be changed because of technical problems to about 20 – 200 nm.

Last partner contracts were send out in December because of organisational delays. This was caused by a delay in employing the finance coordinator (June instead of February 2005). All contracts excepting ITM have been signed until end of February. ITM will sign the contract in March.

It seems likely, that the project will be in time at the end of 2006.

7 Dissemination

Deliverables as stated in the proposal under Task 6 Dissemination

Deliverables / Event	Lang.	Date	Audience	Contribution from
Homepage http://www.umwelt.sachsen.de/lfug/luft-laerm-klima_ufipolnet.html ; changed address, links to other projects/institutions, English; Newsletter	DE, EN	17-01-2005; 16-09-2005; 3-Feb-2006	scientists, network-managers, public in general interested in fine particles	LfUG
Flyer (Leaflets) in the languages of all partners: - German, English done (800 first circulation); - Czech and Swedish planned until end of 2006	DE, EN	Sep-2005	scientists, network-managers, public in general interested in fine particles + general public	LfUG
Leaflets at congress/event: - 500 "In motion visions for urban mobility and clean air" in London; - 20 copies Kick-off LIFE Projects in 2005; - 200 leaflets "PM 10 - Challenge or fait ?" in Graz; - 10 VDI AG Partikelmessungen	EN	15-16-Sep2005; 26-27-Oct-2005; 17-18-Nov2005; 30-09-2005	Air Quality Experts and authorities and media; VDI Working group Particle counting	EU Commission / Mr. Kaschl; Astrale GEIE - Particip GmbH Mr. Reisenberger; LfUG in cooperation with LIFE 04 project KAPA GS; LfUG/Dr. Löschau
Press release: - Kick off meeting: 3 articles in the web and in 2 newspapers and 2 press agencies	DE	26-Jan-2005;	general public in Dresden, Saxony and Germany	LfUG
Newsletter: UFIPOLNETnews No. 1+ 2	EN	27-Sep-2005; 3-Feb-2006	About 450 experts and authorities, other persons	LfUG
kick off meeting minutes with next actions to follow + Documentation CD_ROM + Booklet	EN	5-7-Jan-2005	LfUG officials, employee of partners	partners

Planned deliverables as stated in the proposal under Task 6 Dissemination

Deliverables / Event	Lang.	Date	Audience	Contribution from
Flyer (Leaflets) in the languages of all partners: - Czech and Swedish	CS, SV	end of 2006	scientists, network-managers, public in general interested in fine particles + general public	LfUG
Brochure with short version of final report: Layman report	DE, EN, SV, CS, FR, ES	2007	general public	LfUG
Scientific papers: preparation begins after of 6 months measurements	DE, EN	2007	scientists	IfT, all partners
Report with recommendations for the expert groups	DE	2007	scientists, network-managers	LfUG, all Partners
Report of the final Congress	EN	2007	scientists, network-managers	LfUG, all Partners

Indicators

Description	Outcome
Use of the homepage: Number of hits	200 – 450 per month (s. below for details)
Published releases: Number of published press releases	1 in 2005
Brochures available in the languages of all project partners	1 German, 1 English Leaflet
Newsletter	1 in 2005, 1 in 2006
Participation at final conference Number of participants	(-)

Additional Deliverables not mentioned in UFIPOLNET proposal

Deliverables / Event	Lang.	Date	Audience	Contribution from
HTML and PDF-File in Database	EN	End of 2004	Internet user, LIFE-Programme interested people	EU COM
PDF-File introducing LIFE 04 Projects	EN	End of 2004	LIFE-Programme interested people	EU COM
Bulletin board messages: EU-project INTEGAIRE ; Werkstatt Feinstaub	EN, DE	27-9-2005	readers of web-sites: scientists, network-managers, public in general	Sergio Ferreira; LfUG
short description on website + weblink from: Feinstaub-Werkstatt Berlin; NANOSAFE 2 ; ITM ; GSF	DE, EN	17-10-2005; 18-11-2005; 30-11-2005	scientists, network-managers, public in general interested in fine particles	Berlin authorities; EU FRP6 Project NANOSAFE2; partner ITM and GSF
announcing UFIPOLNET: 88th Meeting of LAI-Unterausschuss "Luft/Überwachung", Minutes; European Aerosol Conference contact to Mr. (CAFE)	DE	22 until 23-Feb-2005;	Air Quality Experts of federal and national authorities; CAFE	Ministry of Environment Saxony; LfUG (Gerwig)
oral presentations: 1 hour during a professional training: "Managementlösungen im transnationalen LIFE-Projekt UFIPOLNET";	DE	31-1-2006;	20 coworkers at Saxon Ministry of Environment;	LfUG (Gerwig)
VDI AG Partikelmessungen		14 15-Feb-2006	Members of VDI AG	LfUG (Gerwig)



Fig. 4a UFIPOLNET www front page, flyer in English

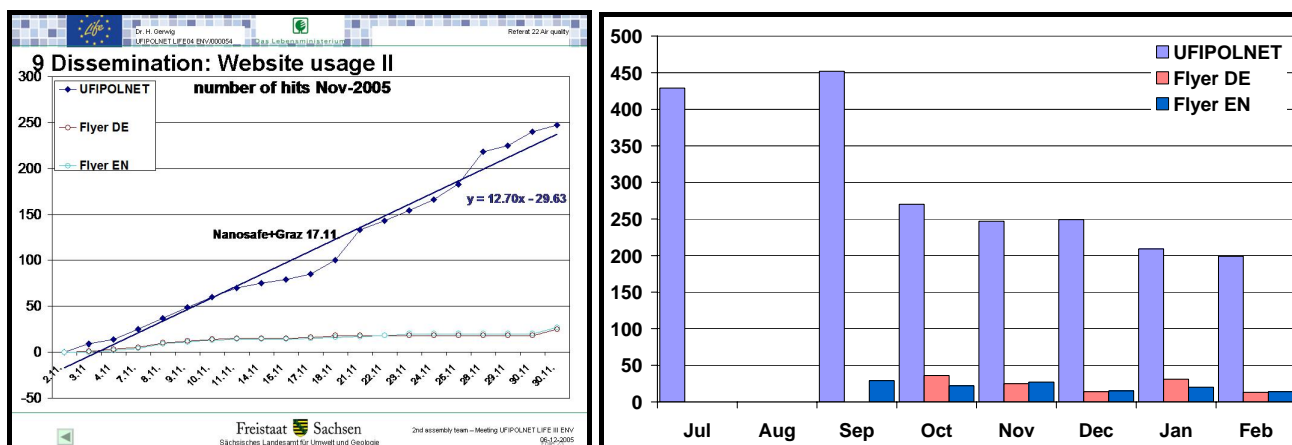


Fig. 5a, b Number of hits UFIPOLNET homepage in November and since July 2005

Use of the homepage is monitored via the number of hits since July 2005. Between 200 and 450 hits per month were monitored. The announcement of the website by leaflet at conferences in September and November or UFIPOLNETnews 2 in February showed a positive effect.

8 Envisioned progress up to 31-07-2006

Task 1 Management

The interim report will be prepared eventually before end of 2006 because EU-contribution money will be needed in time by partners.

The LfUG-Engineer for the prototype in Dresden will be employed from May 2006 on.

Milestone:

From 16-17-May-2006 the second annual meeting will be at the IfT Leipzig with all partners.

Task 2 Designing

Finalisation of the first prototype will be in March 2006, instead of August 2005. A test report by IfT will be ready at the annual meeting in May.

All 4 Prototypes will be available in May 2006 instead of December 2005. They will be tested during May 2006.

Milestone:

On 20-03-2006 the assembly team will have a meeting in Leipzig where the last solutions regarding the technical problem will be discussed.

Task 3 Implementation

The Implementation of the devices at the 4 locations (Dresden, Prague, Stockholm, and Augsburg) will start:

- Devices will be transported to those places.
- IfT will help to install the device in the measuring station and will give hint how to operate the device on a 2 – 3 days trip.

Milestone:

- 30-06-2006 Devices fully implemented

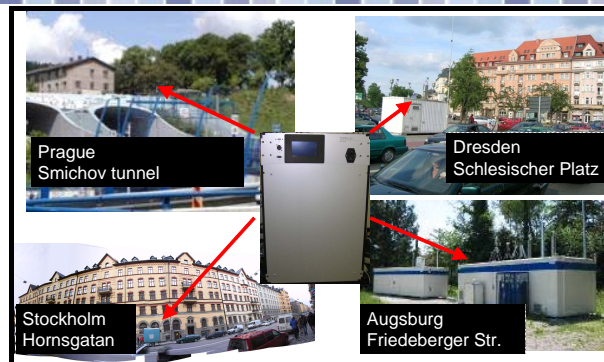


Fig 6 Places where device will be implemented

Task 6 Dissemination

Homepage will be updated.

Begin to create leaflets in different languages of all partners.

06/2006 signboards on the container with the Life-Logo + UFIPONET and the statement:

DE: Dieses Projekt wird mit Unterstützung des Finanzierungsinstruments LIFE der Europäischen Gemeinschaft gefördert (LIFE04 ENV/D/000054),

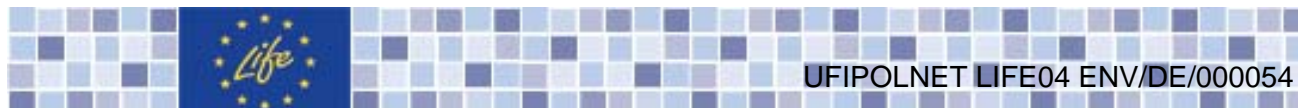
EN: This project is financed with the contribution of the LIFE financial Instrument of the European Community (LIFE04 ENV/D/000054)

and **CS:** ...

and **SV:** ...

+ press release + press meeting at locations, when installation over at local sites, especially Dresden.

Newsletter about implementation of the device at 4 sites.



9 Financial issues

Contents not published in the public website version.

10 Progress and planned activities

The overall project development of UFIPOLNET is presented in the following time table chart:

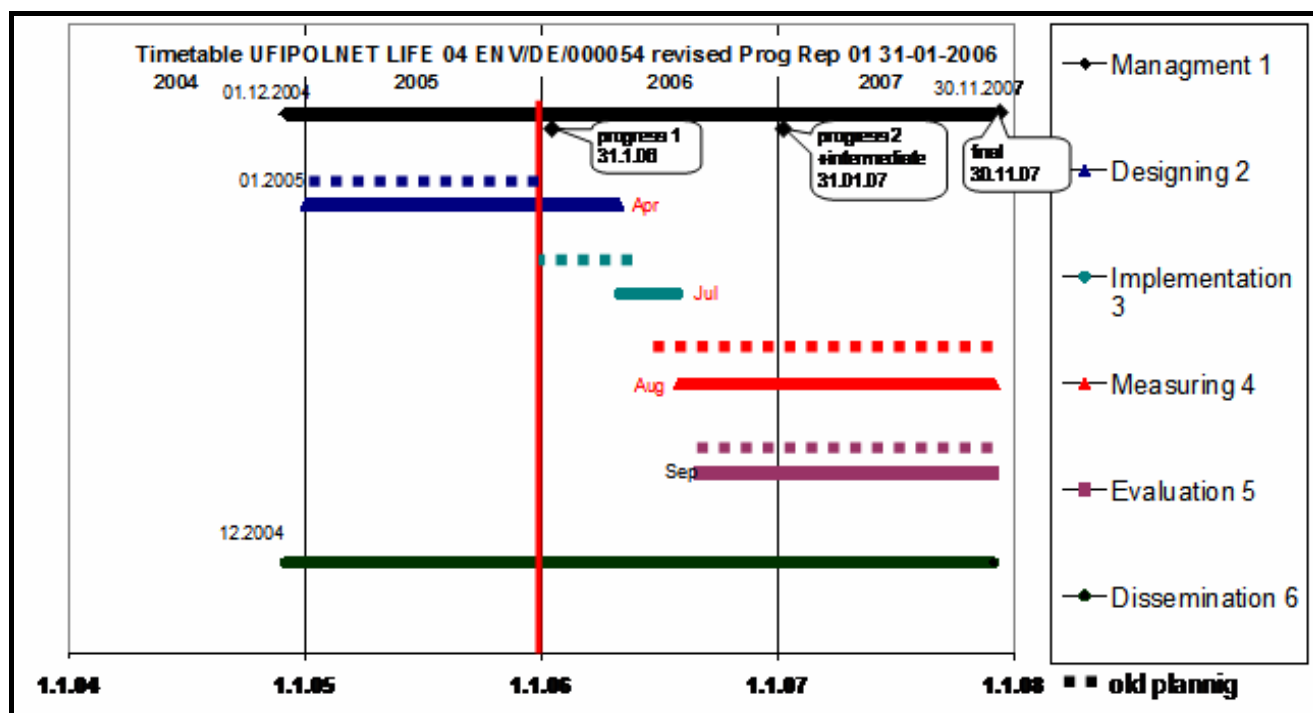


Fig. 7 Progress and planned activities

11 Annexes

- *5 Partner contracts with: TOPAS, IfT, GSF, CHMU and ITM*
- *Pictures of the new device (Jan-2006) + Drawing of the new device (UFP)*
- *UFIPOLNET Flyer in English and German*
- *press release and articles Jan-2005*



Imprint

UFIPOLNET Progress Report 1 / 2006

Cover picture:

4 measuring stations Prague, Dresden, Stockholm, and Augsburg

Photos: J. Novak, C. Johansson, J. Cyrys, H. Gerwig and photo composition H. Gerwig

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