Intelligent Energy – Europe (IEE)
- SAVE, ALTENER, STEER and Horizontal Key Actions -
Type 1 Actions

Annex I - Description of the Action

Project acronym: EnERLIn

Full title of the Action: **European Efficient Residential Lighting Initiative**

Contract N°:

Duration: 36 months

IR submission deadline: 20th month

Coordinator name/ organisation/ e-mail/ telephone number:
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0. Abstract

In the context of the Kyoto Agreement, the European Community and individual Member States are looking for cost-effective measures to reduce CO2 emissions and combat climate change. To this end the European Commission carried out the European Climate Change Programme (ECCP) during which it identified, with stakeholders, cost-effective actions that contribute to CO_2 emission reductions. The ECCP identified residential lighting as an important area. To achieve considerable savings in this sector, a coherent strategy is required to transform the lighting market. To ensure a sustainable growth and use of CFL we propose to develop valid promotional arguments and implement coherent promotional campaigns; to train end-users in order to achieve a self-sustained CFL use growth. Concerning energy savings from CFLs, by replacing only one additional GLS lamp by one CFL per household a gain of 22.5 TWh or 4 MTEP per annum corresponding to 1.2 Mtn of less CO_2 per annum can be achieved.

1. Summary

Light is vital for life: Light sources play an indispensable role to daily life of any Human being. Our World cannot be conceived without light. Quality of life, health and, somehow, security, depend on light and on its quality. OECD estimation shows that, in the near future, in western countries, the need for lighting will increase by a factor of 3. In parallel, citizens are more and more demanding for a better quality of light in every day's life. Light production needs energy: nowadays, more than 30 billion electrical lamps operate worldwide every day consuming more than 2,100 TWh per year (10-15% of the global energy production worldwide). Furthermore, the annual greenhouse gas (CO_2) due to this energy production is estimated to be over 1,700 million metric tons.

There are approximately 140 million dwellings in the EU in 1995. It is expected that the number of dwellings will rise to 156 million in 2010. Almost 20% of the energy is consumed in the household sector. The average energy consumption of a dwelling in a country depends among others on many country specific circumstances but the part concerning lighting is comparable from a country to another. Today, for reasons explained in the pervious paragraph there is, in average around 2 CFLs per household. However, this figure has to be verified and this will be one of the first actions of EnERLIn. Of course this number is dependent on the country (in Nordic countries we can find more CFLs per household whereas this figure decreases in southern countries).

To ensure a sustainable growth and use of CFL we propose to develop valid promotional arguments and implement coherent promotional campaigns; to train end-users in order to achieve a self-sustained CFL use growth. An important objective of this project is to identify all possible reasons of pouting CFLs, compile them and provide the good answers and then translate them to a clear and understandable argumentation for the non-specialist. Thus we propose to develop and validate robust scenarios for CFL promotional campaigns in European, national and regional levels. At the same time the project is aiming at promoting to all the stakeholders a quality charter to assure that the CFL that are marketed and promoted can deliver savings which last overtime and meet the customer expectations of high quality lighting. Of course the ultimate objective of this project is to substantially increase the efficiency of residential lighting.

The expected outputs from the project are:

- Innovative methods to promote CFLs. Also innovative consumer communication messages will be developed and mass-media (TV, radio, press…) will be targeted.
- Web based "Energy Conservation Performance Catalogue".
- Scientific validated arguments concerning some technical questions on CFL optimal operating conditions.
- Web based Training modules for all target groups.
- Methodologies to assess the electricity and carbon saving resulting from CFL campaigns.
- Reliable database concerning the CFL market evolution in Western Europe and projections for the next decade will also produced by the using the user-friendly web data base.
- A new version of the EU CFL-Quality Charter standard coupled with a CEN-STAR trend analysis workshop is foreseen in the end of the project in order to apply the "fishbone approach" proposed by the project.
- Recommendations for European and/or National inciting measures for promoting CFLs.

1.1 List of Participants

Partic. Role*	Partic. N°	Participant name	Participant short name	Country
CO	1	Université Toulouse 3	UPS	France
CB	2	Agência para a Energia	ADENE	Portugal
CB	3	Berliner Energieagentur GmbH	BE	Germany
CB	4	e-Ster Bvba	e-ster	Belgium
CB	5	EKODOMA	EKODOMA	Latvia
CB	6	Ente per le Nuove Tecnologie, l'Eergia e l'Ambiente	ENEA	Italy
CB	7	OÜ Energiasäästubüroo	ESB	Estonia
CB	8	Krajowa Agencja Poszanowania Energii S.A.	KAPE	Poland
CB	9	Respect Europe	Respect	Sweden
CB	10	Sofia Energy Centre	SEC	Bulgaria
CB	11	Stredisko pro efektivni vyuzivani energie, o.p.s.	SEVEn	Czech Rep.
CB	12	Universitatea Tehnica din Cluj-Napoca	UTC-N	Romania
CB	13	ELFOR, Dansk Eldistribution	ELFOR	Denmark
CB	14	Central European University Share Company	CEU Rt	Hungary

* CO = Co-ordinator or beneficiary; CB = Co-beneficiary

2. Expected Results

National initiatives concerning CFL promotion campaigns accompanied with inciting measures in various countries shown that it is possible to increase the number of CFLs in households. Our objective in EnERLIn is to provide a coordinated promotion campaign in European level that may lead to an increase of 50% of the number of CFLs per household in the participating countries. Even in the case that, in average, every household in European Union replace one additional 75 W GLS by a 15 W CFL the energy gains are really considerable: Power difference between the two lamp types is 60 W, in average, a lamp in house operates around 2 500 h per annum (it depends on the geographical situation and also on the room type that the lamp is installed), under these conditions the energy gain per household is in the order of 150 kWh. Assuming that there is 150 million households in Europe the energy economy by replacing only one lamp is in the order of 22.5 TWh or 4 MTEP (1 MWh of electrical power is taken to be equal of 0,285 TEP – Tonne Equivalent Petrol). To that it should be add that a good quality CFL displays a lifetime higher than 10 000 h instead of 2 000 h for a GLS.

2.1 Direct outcomes

The major part of the project will design implement and evaluate a common promotional campaigns for CFLs that meet the European CFL Quality Charter. The main direct outcomes from EnERLIn will be:

Innovative methods to promote CFLs (through the bill financing, ESCO financing, part of White Certificates and DSM obligations projects, part of CDM and JI projects) will be also used and experimented. Also innovative consumer communication messages will be developed. Mass-media (TV, radio, press…) will be targeted. In that frame ‘standard’ promotional material will be elaborated and translated to various EU national languages thus it could be experimented and validated directly by the customers. This type of promotional material (CD-Rom, prospectus…) should be produced to at least several thousand copies per participating country. We need also promotion in shops of dedicated luminaries with CFLs. Innovative marketing concepts for CFL products along with dedicated luminaries is a “full product - system” concept that gets people interest from a sensitive point of view.

To these traditional mass media an innovative tool will be used: the modular distant learning methodology set up by the partners to improve the technology transfer will be used in order to provide scientific information to different target users. The distant learning modular approach implies the production of “learning objects” at deeper and deeper levels of technical details in

order to suite the needs of different class of user such as: citizens, student, teachers, vendors, producers, engineers working on building construction; architects; illumination engineers and consultants; policy makers; commercial engineers, etc. These training modules could be integrated to normal initial curricula of the above mentioned disciplines or (and this is a main issue) could be proposed as part of life-long learning process.

Web based "Energy Conservation Performance Catalogue" which focuses not only on energy efficiency or luminaire efficacy, but on quality of the equipment in conjunction with customer satisfaction. For this catalogue, customers should be able to select end use energy-efficient lighting systems and to retails to promote good quality and environmental friendly CFLs.

Reliable database concerning the CFL market evolution in Western Europe and projections for the next decade will also produced by the using the user friendly web data base technology developed by the partners. These projections will be elaborated using input from European, National and International organisms (Eurostat, INSEE, OECD…). These web-based databases should continue to be maintained after the completion of the project thus, the consortium will examine the possibility to create a permanent structure in order to ensure this maintenance and we will present our proposal to relevant National and European organisms. Furthermore, national consumer associations could continue the maintenance of the database: the consortium will give free access to this database after the project completion.

Methodologies to assess the electricity and carbon saving resulting from CFL campaigns, so that the end-results of the promotion schemes could be translated in electricity and carbon savings, as well as offering a common EU methodology to calculate it in future CFL projects. For this specific part of the project software like SIMAPRO coupled with EcoEfficiency database could be used.

Recommendations for European and/or National Inciting measures for promoting CFLs. These recommendations should be addressed to EU council and they could constitute the basis for directives.

Scientific validated arguments concerning some technical questions on CFL optimal operating conditions. This data will be obtained by using enhanced test facilities that consortium members own today.

A CEN-STAR trend analysis workshop is foreseen in the end of the project in order to apply the "fishbone approach" where all the key actors are invited to individuate all the difficulties that still arise in order be more effective and efficient and the tools that can be used in order to overcome such difficulties are proposed: Further research and development; Standards; Extra legislation; Complementary measures (education and outreach, for example)

2.2 Potential impacts of the action.

To the energy gain point of view replacing few additional inefficient GLS lamps by good quality CFLs can be considerable in European level. As has been calculated this gain may attain several million "Tonnes Equivalent Petrol" even if only one additional lamp is introduced to all European households. This objective is quite realistic and achievable for several western countries provide an attractive promotion for CFLs. The challenge of the project is to provide all necessary tools for designing successful promotion campaigns that may lead to an increase of the CFL market parts for households by at lest 15% in average for all EU countries. In that case the estimated energy gain should be in the order of more than 15 TWh per annum. This is a significant contribution the EU objectives as fixed by the Green Paper on Energy Efficiency of 22 June 2005. Energy saving is without doubt the quickest, most effective and most cost-effective manner for reducing greenhouse gas emissions, as well as improving air quality, in particular in densely populated areas. The above-mentioned gain corresponds roughly to 800 kTn of CO_2 per annum less in the atmosphere (1 kWh = 0,0536 kg of CO_2 according "Ecoefficiency" database for European countries). This is a non-negligible contribution to the Kyoto's agreement fulfilment.

To the lighting industry point of view, a major factor threatening timely realization of the Lighting systems is the traditionally low rate of technology penetration and product innovation in the residential sector. In any industry, new products gain market acceptance over time by demonstrating a value

superior to that of competing products. Generally speaking, an innovation is not an instantaneous phenomenon. It is created gradually and is constantly being developed. A long learning process was needed to improve the performance of the CFL and enable it to compete with the established technology on a more equal footing. These improvements in performance resulted from cumulative learning in production as well as interaction with users, both essential to the development of the technology: creation of demand requires a learning process on the part of users and changes in the characteristics of the technology to better satisfy user preferences. The success of an innovation process depends on the motivation of the players in the industry. In the present case, the motivation of firms is linked to modification of factor prices, anticipation of changes in consumer preferences, and the existence of unexplored technological opportunities. The gradual challenging of the lighting oligopoly and, more generally, the changes in the selection environment of the firms, can also explain the innovation strategy adopted by the industry. Faced with competition in its conventional technological field, the core of the oligopoly decided to respond to increasing competition by innovating and strengthening its technological lead, EnERLIn can contribute positively to this direction.

CFL quality testing methods elaborated by the consortium using existing facilities that will be enhanced within EnERLIn project may constitute, after the completion of EnERLIn, the first part of a European Testing Facility for Light Sources. The obtained results could also used directly for the creation of new standards passing through CEN. It should be noticed that today only few countries in Europe have national facilities (UK, Denmark). This type of facility is common for lamp manufacturers for justifying their products quality. However, up to now the procedure used by are not really normalized. A European independent facility in this domain should help all actors in this domain to standardize their procedures and it will offer to professional and institutional end users the possibility to test different products to an independent way.

Last but not least, in some regions/countries beside the promotion of integral CFL, the promotion of luminaries for pin-base CFL could be undertaken as an important market transformation activity. In this activity, where it takes place, particular care will be used to seek the collaboration of luminaire manufacturers, their trade associations, the luminaires retail sector, and the interior designers/architects. Methods developed in EnERLIn may extend also to this type of lamps.

3. Target group(s) and key actors

The objective of EnERLIn is to address a large number of target groups and key actors, which are esteemed essential to fulfil the aim of the project. The main target groups for EnERLIn are:

- National Energy Agencies: Many partners in the EnERLIn consortium belong to this category. They are key actors because the have in several case the material possibility to proceed to large-scale promotional campaigns in their countries.
- Energy utilities, energy distribution and energy service companies: Energy gains affect directly the activity of these organisms and it is highly recommended to include them to the reflection.
- Lighting manufacturers: Increase market parts of CFLs in household is an important issue for Lighting Industry because allow them to decrease the importance of GLS lamps considered as “mature products” since several years now. The CFL manufactures will be associated in the project passing trough the European Lighting Companies Association (ELC) that will be invited to join the project advisory committee (AdCom). In addition some key manufactures may be also invited to join the AdCom (Philips Lighting BV, Osram GmbH, GE Lighting, SLI…). In parallel as one of the objectives of EnERLIn is to create a new version of the CFL-Quality Charter, ELC will still continue to be member of this working group linked to the project.
- Consumer defence associations: This group is absolutely necessary because can promote to a very effective way all positive arguments issued from EnERLIn. This type of institutions will be invited to participate to the EnERLIn AdCom.
- Individual consumers: This is the final target of the project because they are the CFL end-users. However, this is the most difficult group to deal with. The proposed way of interaction will be “one way” from EnERLIn to the consumer passing through a “legible” and user-friendly web page. The Consumer defence associations and the retailers that they will participate to the promotional campaigns will ensure the feedback from the consumer. A more direct interaction is possible passing trough Gallup pools and other communication tools (like quizzes…).

- Lamp and luminaire retailers: They constitute the interface between the end-user (customer) and all above cited groups. They will be involved in the EnERLIn work indirectly by testing and using the promotional arguments issued from the Consortium. National Energy agencies have yet privileged contacts with this group.
- Engineers working on building construction; architects: a simple questionnaire will be distributed in order to know the information they need in order to make the best use of the results of the EnERLIn project; these information will be used in order to design the distant learning courses and the web data base. The design will be formally approved at a workshop where all the representatives of the above class of users may be invited to participate to AdCom meetings.
- Policy makers in National, European and International level: National Agencies are privileged interlocutors for Policy makers. Actions will be undertaken in the direction of ELMAPS, CIE, National Illumination Societies and more specifically of CEN passing trough a CEN-STAR workshop.
- Politicians: this is a very important group because they can directly use the results concerning Energy gains and environmental impact of CFL promotion and, in consequence, they can propose new incitative legislation in this domain. This group will be constantly informed about the EnERLIn achievements passing through National Energy Agencies members of the consortium.

The present project has been elaborated in agreement with these “key actors” who will be invited to participate to “advisory committee” during the project operation. Thus ELC (European Lighting Companies Association) will participate to AdCom together with other institutions like Eurelectric and Joint Research Centre in Ispra and national institutions like ADEME in France. It should be noticed that an Italian association (Adiconsum) is present in the project conception and will continue working with us after a successful project evaluation by EU.

It should be noticed that each consortium partner would work in close collaboration with local actors in the domain of CFLs:
In Portugal, ADENE, intends to work with the retail sector and manufacturer and supplier of lighting equipment companies (direct or in site promotional initiatives), as well as the local energy agencies (through the Portuguese Association of Energy Agencies – RENAE), besides the actions targeted to the general and specialised journals and magazines. Preliminary contacts were established with retail sector and manufacturer/ supplier of lighting equipment companies that are expected to have a active (technical) participation in the project. As member of RENAE, ADENE will promote the involvement of local energy agencies, and will take profit of their collaboration with several magazines for promotion purposes. In Romania three other bodies will join this activity: Electric Energy Distribution and Supply Branch "Transilvania Nord", EnergoBit S.R.L. – an electric/lighting company -, PRAGMATIC Comprest S.R.L. – an electric/lighting retail company. In Bulgaria the Ministry of Energy expressed his full support to the project. In France ADEME will be continuously informed by the French partner. In parallel a departmental energy service organism (FEDEL – Federation de l’Electrification du Lot) will participate in the CFL promotion campaign in the frame of an ambitious Rational Energy Use project in departmental level.

Ultimately, the project outputs can be transferable to other countries, but obviously need to be modified to reflect local interests and values. This competences transfer can be done passing trough international organisms like CIE, IAEEL, or national bodies like IESNA in North America, of JIES (Japan Illuminating Engineering Society) in Japan. I parallel COST-529 and Efficient Lighting Initiative (ELI) may be a vector for this transfer. Of course developed nations could implement similar programs and labelling of exports may help savvy companies in developing nations adopt more efficient lighting technologies.

4 Work Programme

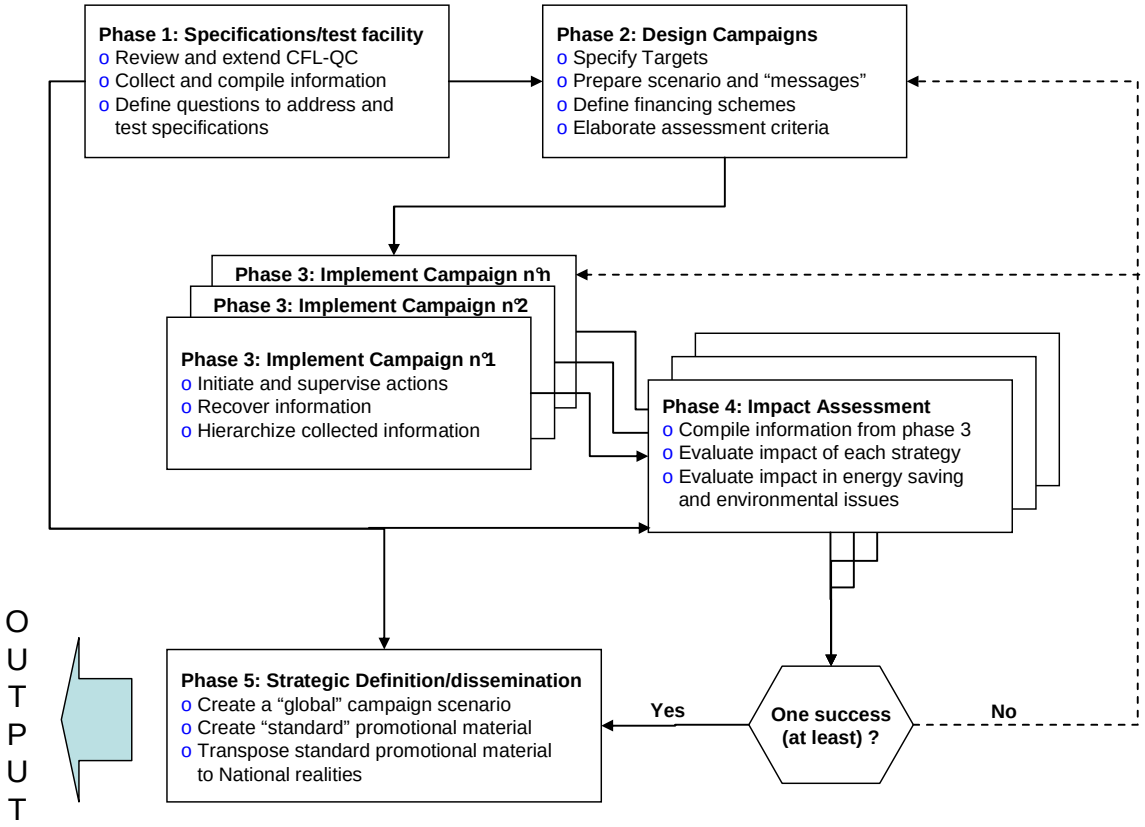
4.1 Overview

In recent years, CFLs have moved front-and-centre in sales-and in the regulatory ring. Manufacturers now package CFLs to emphasize an optimized system. Furthermore, energy conservation can be encouraged by regulation, incentives, and/or awareness campaign. Spurred by cost savings, utility rebates, and demand-side-management incentives, household owners will retrofit existing inefficient lighting systems with more energy-efficient ones. Utility rebates will prompt many end-users to upgrade their lighting systems. Later, despite the reduction in utility incentives and energy rebates, retrofits should continue to happen. And it will be no longer necessary for energy users to wait-and-see because they will be "trained" to recognise the advantages of efficient lighting. Many retrofits can be financed in such a way that the energy savings more than pay for the cost of the new lighting system; in some cases household owners even experience a positive cash flow.

The project should have the following phases:

- Phase one: to review the current European CFL Quality Charter, and to investigate quality and efficiency issues to arrive to a new version; [possibility to develop a similar charter for pin-based CFLs]. In this phase the consortium should also collect existing information and define the questions to be addressed by the test facility.
- Phase two: design of a common CFL promotion campaign: target areas, customers, promotional messages. The design will include the development of common and well-structured information and dissemination material (e.g. correct user guidelines) and innovative financing schemes (ESCO, DSM, utilities). All these products will be freely available in the website of the project.
- Phase three: implementation of national/regional promotion campaigns
- Phase four: Collection of the campaign results and general assessment concerning the efficacy of the campaign. In this phase will deal also with development of methods to assess the "real" energy and carbon value of the CFL campaigns to assign it to the regional/national CFL campaign promoter (utilities, private companies, etc.) for possible exchange with carbon credits or, where existing, white certificates. The project shall gather all information about residential penetration of CFL, and market potential in order to develop the baselines (BaU scenarios)
- Phase five: creation of dissemination package to allow countries/regions/stakeholder not participating in the project to benefits from the results and experience made in the project to design, carry out and evaluate CFL promotion campaigns. The project will create printed material, CD-Rom… However, a very important output from the project will be a comprehensive website with downloadable documents and with distant learning courses for different target users. This web page will be accessible at least in 3 levels: individual consumers, retailers and other institutions like ESCOs, Lighting industry, Energy agencies.

  The most critical step of the project is situated in between phases 3 and 4. There exist some risks that the promotional campaign designed in step 2 and implement in step 3 can be less successful than expected. This can arrive due to various reasons, some internal of the project and some external. The internal reasons are mainly linked to the fact that the concept of the campaign itself is targeting a less interested population or selected arguments are less attractive. The campaign may also be less fruitful event if it is well designed due to less efficient dissemination or disagreements with local retailers or even funding problems. Both situations are possible and they should not neglect. The way that EnERLIn consortium selects in order to bypass the problem is the following: In phase 2 we will design several campaigns (minimum 3). This multiple campaign concept has several advantages. First guarantees that some of the selected scenarios will be as successful as expected and this will allow continuing with phase 5 without delays in the project timetable. Second, this allows the validation of various concepts and messages. Third, this concept allows selecting the most preferment for the phase 5 or combining elements from successful trials in order to have a global and optimised approach for the phase 5.

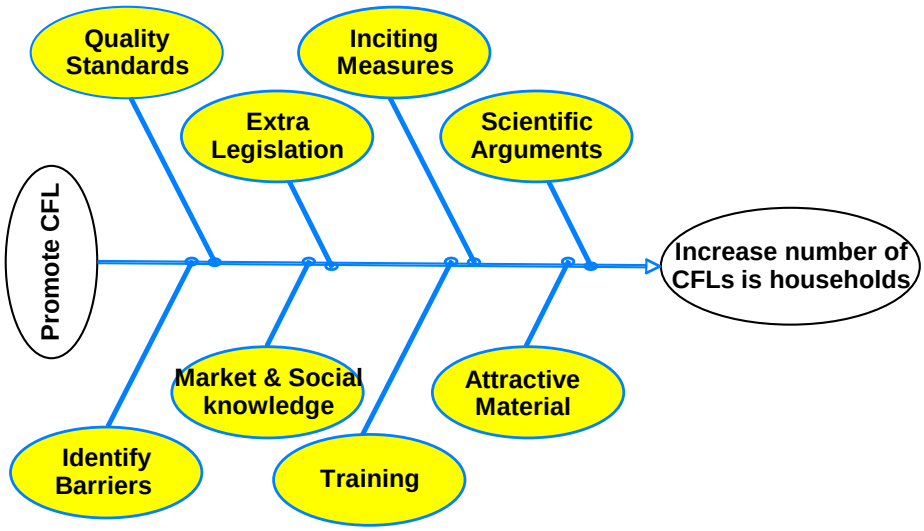


Project flow chart

Another, minor, point of fail can be identified in phase 1 if desirable data are not available. It exist two cases, or the data aren't available or they are confidential. In the first case we should check if the missing data could be obtained within the project timetable by the test installation. In the second case some negotiation should be conducted between the EnERLIn consortium and the data holders. In any case this type of problem can be treated without penalising the full project evolution.

4.2 Work Packages

To achieve this ambitious objective we need to perform effective promotion of good quality CFLs (recognised by a quality standard) based on scientific but widely accessible arguments, training, socio-economic knowledge, standardization, inciting measures, extra legislation. The following "fishbone" graphics illustrate all the above issues.



From the problem (how to promote CFLs) to the objective (Increase number of CFLs in households)

Of course EnERLIn can't address directly all the above issues and this is for various reasons: the time is limited to 36 months, some issues require competences beyond that is available in the present consortium (especially legislative issues…). Thus EnERLIn will use the maximum of the consortium competences in order to address some of the issues:

Quality standard: The output from the European CFL Quality Charter will be used, in addition several consortium members are National Energy Agencies and they have the possibility to transpose CFL-QC standard in their countries.

Identify Negative arguments that potential individual users may oppose to CFLs, this issue is perfectly addressable in EnERLIn by passing trough surveys and questionnaires individual users as well as to professionals that they are in contact with clients and collect "complaints".

Scientific Arguments: The consortium includes some academic institutions that will contribute to the elaboration of unified protocols that should be used in test centres. In parallel, some consortium members have yet CFL test installations that may be used for the project aims. Finally a unique test facility will be created under the coordination of the academic institutions and with the collaboration of National Energy Agencies.

Training: The consortium has all necessary competence in this domain. Academic institutions can help to the creation of curricula and test them in local scale. The definition of these curricula will be done jointly with all other members of EnERLIn consortium who are aware of real needs in the domain. ENEA will create the e-learning modules supervised by academic institutions.

Attractive material for promotional campaigns for CFLs: The consortium will use all collected material and experience in order to define promotion campaign scenarios. The consortium will define the type of promotion media that will drive each campaign. Some preliminary tests-campaign may be executed in small scale in order to test a concept before use it in a real scale operation. Once all parameters concerning the campaign will be tuned the promotional material creation will be outsourced to communication professionals.

Concerning the remaining issues (Inciting measures, extra legislation) the consortium partners will interact strongly with local authorities and commercial organisms in order to create a "friendly" environment for the campaign. Of course this may lead to permanent measures but this is beyond of the consortium capabilities. Furthermore, concerning Market and Socio-economy knowledge the consortium will collect any available data that will critically compile in order to extract useful information. This can be done by recovering existing information that each consortium member have, by getting new data for external players (industry, consultants, international organisms) by purchasing or by signing non-disclosure agreements with third parties. The web site itself will be a channel, for any user to express their concern about the proposed solutions and, for the experts to give answer to

the most frequent asked questions. Some of these answers will be incorporated in the distant learning courses in order to increase the awareness in any class of users.

Of course EnERLIn consortium should develop and validate internal procedures for assessing the results form each campaign in phase 4. The development of this assessment procedure will be done during phase 2 and using input from existing experiences that will be analysed in phase 1 of the project.

WP Summary

WP n°	**Title**	**Leader**
1	Management	UPS
2	CFL Quality Charter and Specifications	BE
3	Campaign Design	Respect
4	Implementation	ADENE
5	Impact Assessment	UTC-N
6	Strategic Definition and web page	ENEA
7	Common Dissemination Activities	UPS

4.2.1 Work Package 1: Management

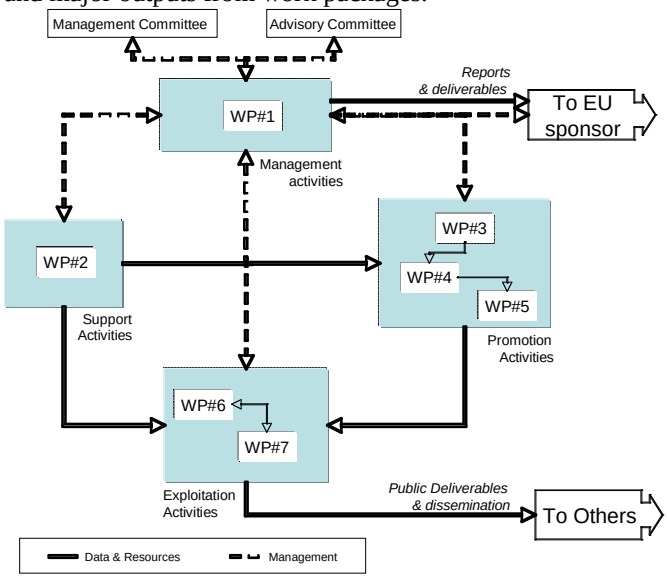
N° of work package: 1	**Name of the work package:** Management
Duration in months: 36	**Leader of the work package: UPS (Coordinator)**
Total person-hours of work: 400	**Total costs in EUR: 34 000**

Description of the work:

UPS who is responsible for the overall project management coordinates the project. A Management Committee (MC) will support the coordinator to this task. One representative member from each partner institution will constitute the Management Committee. The project will have also an Advisory Committee (AdCom). The role of AdCom is double: advice the consortium and validate the work and solution proposed in EnERLIn. The members of this AdCom will be co-opted by consortium institutions and should be external stakeholders. Each consortium member will submit proposals and the MC will decide the final composition. Potential AdCom members are: ELC (European Lighting Companies Association) and/or Lighting Industry (Philips, Osram, GEL, SLI), Architects (passing trough national associations), Retailers (IKEA, Carrefour…), National Energy Agencies (Danish EST, Eurelectric, ADEME) and Joint Research Centre in Ispra. Finally, EnERLIn may collaborate with other IEE projects in similar subjects, in that case the coordinator of the affiliated project will be invited to the AdCom.

Each Work Package (WP) will be co-ordinated by a Work-Package Director (WPD) designated in common agreement with all partners. The duty of these persons is to co-ordinate the work of the participating teams. Each WPD will propose, in agreement with the general coordination, specific guidelines to achieve the results of each task. These guidelines, including detailed description of subtasks and timing will be proposed to the working group, and further discussed and approved during the kick-off meeting. In addition the WPD will collect the results from the teams participating in a WP and will report on the progress of the project to the coordinator.

The central idea is that with the right people doing the right tasks and with the right communication and support structure, project management becomes an issue of inclusion, support, communication, circumscription and organisation. We have carefully structured our project and the management of our project, with this in mind. The WP structure follows two tracks: one project management and one concerning the “technical” activities. In the following Figure the dot and solid lines denote management and data flows respectively; the thicker lines denote the flow resource and major outputs from work packages.



The Project management scheme

The organisational track consists of project management including financial and reporting to both EU sponsor and any other third party that may be interested by the results of the project. WP#7 deals with common dissemination from the project.

The risks are all clearly located in the “technical” track (WP#2…WP#6). To the extent possible, this keeps separate the tasks and any risks associated with management from these associated with leading edge work development and deployment. Again, in keeping with the proper division of risks; these non-technical risks are also cleanly circumscribed and assigned to members that have the requisite focus and skills. All partners have a clear role in the conception of the project. In this way, we have clearly partitioned the risks; reduced the risks and motivated each consortia member to be highly involved in the overall success of the project. Now that the

right consortia members have been assigned the right tasks (synergistic activities between both technical and organisational responsibilities), the project needs to be executed and realised. Appropriate communication, development publishing and archiving mechanisms, which we describe below, support this right tasking. Behind 6-month face-to-face meetings programmed for MC and AdCom members regular teleconferences between the partners and an internal webpage will be used to assure the communication between project meetings.

An important web-based mechanism we will use is the Project Page. Project Page (PP) is a web site and associated web-based tool. The overall methodology supports: project communication (individual and group email; full team access to web pages, including development); project requirements development (using an archived and threaded news group); system integration and development (with support for bug reporting and tracking using the GNATS system). The main idea is that one paradigm (the PP web and its communication mechanisms) supports both project management (including reports gathering and reports generation and publication) and the more technical aspects of requirements and system development. Finally, the use of a web site with multi-layered accessed and security, allows our team to make all necessary aspects of the project continuously available to the team and the public and, importantly, to the IEE sponsors (EU Commission). A typical project management web will initially contain sections for General Information (including contact information) Discussion Groups, Change Management, Resource Library and Software Engineering (SE). The SE section typically supports Requirements Definition, Design Implementation, Testing and Documentation, also bug reports and tracking. This PP page in conjunction with the final web page accessible from all interested parties (see WP Dissemination) requires a very important computer power in terms of CPU and disc capacity. This is necessary in order to ensure a continuous service to web users and handle an important simultaneous access to the tool. On the other hand the server should be able to host important searchable databases including high-resolution photos. The PP directly managed by ENEA, through the usability lab, will ensure a continuous management, monitoring and implementation of the results in real time whether a consortium member (Respect) can help us substantially to this task. ENEA usability lab has a very large experience on the development of web site for the project management. The web site is always developed starting from the users requirements. The web site is then validated by the partners and by the end users before and during the services. The user-friendly interface ensures the accessibility to any class of users. The web site will have the following services:

- Partners presentation
- Project outline
- Registration for both partners and different class of users
- Web data base for the collection and the exploitation of the experimental results
- News
- News letters for the registered users
- Distant learning courses
- Forum
- Quality document management system
- Chat for the partners
- FAQs
- Contact point
- Calendar of the events
- Virtual Meetings & Seminars
- Target Groups (Users Groups, FAQs, Forum)
- Technical Services (FTP, DB Visual Interface, Utilities &Tools)
- Multimedia Information (Interviews, Trailers, Flash Demos)
- Links

The PP will migrate at the end of the project to a permanent web site for CFL promotion at this stage the web will be translated in the national languages of the partners and the maintenance will be continued after the EnERLIn project end.

Outcome of this work package:

Project management and web page

Deliverable(s) of this work package:

- Reports (Progress, Interim, Final) and Financial Statements
- Project page (D1a: used by the consortium for communication purpose)

Role and contribution of each partner in this work package:

Coordinator is concerned by this work package. But as ENEA has a long experience in web page construction, thus will create this web page with the intranet access as described in the above paragraphs, this will avoid EnERLIn consortium to use an external service provider. It should be noticed that the Project Page (D1a) will migrate at the end of the project in a multifunctional web page (see deliverable D1b) from Work package 6.

Major other specific costs:
For ENEA, partial covering of the web server and Project page fees including the software tools, see detailed justification in WP6.

For the coordinator UPS 6 000 Euros for software licences & maintenance are budgeted for coordination of all CFL actions.

Major subcontracts: None

4.2.2: Workpackage n°2

N° of work package: 2	**Name of the work package:** CFL Quality Charter and Specifications
Duration in months: 36	**Leader of the work package: BE**
Total person-hours of work: 7 805	**Total costs in EUR: 438 488**

Description of the work:

Task 1: Review and extend CFL-Quality Charter

Task 2: A trend analysis CEN-STAR workshop will be organised in order to further develop and sustain the project results. This CEN-STAR workshop is subject of a final agreement between CEN, the EnERLIn consortium, the EU sponsor and other external actors (lighting industry that may join us). At the present state an amount of money is "reserved" exclusively in the project budget for this action. If EnERLIn management committee decides in common agreement with EU sponsor to give-up from this task the required amount can't be reallocated to other tasks. The decision "stop or go" should be taken before the Interim Report of the project.

Task 3: Define questions to address and test specifications, define users requirement

Task 4: Collect and compile information using data-mining technique

Task 5: Test performance of CFLs (lifetime, cycling, colour coordinates under dimming)

Outcome of this work package:

- Data for promotional campaign designs
- Data for critical assessment of each campaign success
- Questions addressed to the test facility
- Users requirement for the information need
- Report on users requirements
- Data concerning quantitative information concerning existing market for CFL, type of existing CFLs, characteristics of existing CFLs, luminaries, general bibliography.
- Data on CFL performance for lamps respecting the CFL-QC requirements.

All the above-mentioned data will be collated within a user-friendly web based database that will constitute the Deliverable of WP#6.

Deliverable(s) of this work package:

- D2: CFL-Quality Charter including new issues that have been neglected in the first version of the document (eg dimming situations…) and considering pin-based CFL
- D3: CEN-STAR workshop on the CFL Quality Charter

Role and contribution of each partner in this work package:

UTC-N and ADENE will work with UPS to establish the technical, energy efficiency and lighting (photometric and colorimetric) requirements to be fit by both luminaires and lamps, and to exemplify with the best products by the European market. ENEA will work also with UTC-N and UPS to establish the technical, energy efficiency and lighting (photometric and colorimetric) requirements to be fit by both luminaires and lamps. A selection of architect and other professionals will contribute to define the users requirements. ENEA will be involved to define questions to address and test specifications, Furthermore, ADENE in Portugal will elaborate, in collaboration with the main equipment manufacturers and suppliers, an inventory of available lighting equipment (lamps and fixtures), will collect data about national market penetration of CFL and suitable fixtures that will allow us to create a database for further use in the project activities. e-ster will make a database of CFL-dedicated luminaries, designed for the intimate household sphere. In that task it should defined categories for luminaries; make an inventory of existing databases in Europe of energy-efficient luminaries; ask to all luminaire manufacturers with sales in Europe with the request for catalogues, digital pictures… Then we should proceed to a selection by advisory board of architects, and other concerned professionals of the 150-500 "best" luminaries. BE will build up a technical committee in Germany in which partners from test institutions, wholesalers and public authorities with experiences in specific campaigns are involved. In Germany a long-lasting test for CFL has been running by Stiftung Warentest. This institution is planned to implement in this committee. Additionally the Free and Hanseatic City of Hamburg (GreenLight-partner) is involved to bring in their experience in incentive campaigns for efficient luminaries. In cooperation with this committee the strategy for tests and campaigns is coordinated. SEC, on the base of a prepared questionnaire, addressed to retailers and end-users, will collect data and information on the existing

market in the country for CFLs, luminaries, etc. SEC will, as well, collect information on the main conditions and barriers to increasing the application of CFLs on the Bulgarian market. Energy Saving Bureau in Estonia shall make a market research on availability and quality of CFLs in Estonia, on purchase trends and annual selling volumes. Also will conduct an inquiry on suppliers and retailers of CFLs in order to analyze the scope of local implementation actors of CFL—Quality Charter.

It is important to be able to validate the CFL-Quality Charter statements passing trough scientifically proved arguments. To do that task it is necessary to be able to distinguish between fabrication parameters that affect the CFL quality and end-user action that may compromise this quality. This can be achieved by performing some quality tests. These tests are absolutely necessary in order to validate the CFL-Quality Charter and avoid any negative debate on its validity. UPS will use an existing lamp ageing experimental set-up based in Toulouse. This set-up will be enhanced in order to host more lamps operating under different conditions. All partners will have access to this test installation in order to check various solutions. ENEA in Italy has a lighting laboratory and will participate to the experimental study on the long-term performance of CFLs, compared to other type of lamps. ENEA, will also build the users friendly web data base on the basis of the users requirements. The database will be filled with the data coming from the laboratories. ADENE in Portugal will develop efforts to get from the equipment manufacturers useful information regarding technical results of the performance evaluation test. In Germany the test results of Stiftung Waren test will be evaluated and an adaptation of further test procedures in adaptation to the CFL Quality Charer will be proved. SEC will collect the necessary data for the types of CFLs utilized in Bulgaria, and their characteristics, in order to determine the tests that should be performed on CFLs. Energy Saving Bureau in Estonia is working on energy monitoring Demo project for Tallinn ARTE High-School, where all lamps are intended to be changed to CFL. After implementation of successful local CFL test facility, the continuous energy consumption monitoring shall be part of the overall project. Results and monitoring data shall be included to the EnERLIn database. ENEA will dedicate a large amount for working hours (equivalent of 40 000 Euros) for testing CFL quality in their test facility. However, this facility needs to be enhanced in order to respond to the new quality requirements as proposed in the actual GreenLight program (an amount of 8 500 Euros is reserved for that activity)

Major other specific costs:

- 6 000 Euros are budgeted by UPS in order to cover consulting fees. This will be used mainly in order to define the CFL failure mechanisms that will be used for validating the CFL Quality Charter.
- 37 300 Euros are budgeted (3000 or less for each partner) in order to cover the CEN-STAR workshop fees imposed by the CEN organism in order to “host and follow” (secretariat by AFNOR, publication of standards…) the CEN-STAR standardization. As have been mentioned previously this task is subject of an agreement before the IR of the project. If EnERLIn management committee decides in common agreement with EU sponsor to give-up from this task the required amount can’t be reallocated to other tasks.
- 8 500 Euros are budgeted by ENEA in order to extend an upgrade the CFL-Quality measurements set-up that exists yet in ENEA. CFL Quality measurements (lifetime, flux, colour, rise time…) are fundamental for guarantee to the end use a good quality lamp that complies with the CFL Quality Charter. However, as very little work is done concerning the methodology for quality characterisation it is absolutely necessary to proceed to some experimental verification of the principles that will be included in the CFL-QC.
- 3 000 Euros are budgeted by UPS for upgrade the existing equipment for CFL quality measurements in situ. As has been mentioned in the above paragraph ENEA will make with testing in a fix excremental set-up whereas the UPS partner intends to proceed with remote in-situ measurements. The two approaches are complementary and necessary for the CFL-QC validation and argumentation.
- 6 000 Euros are also budgeted by Respect in order to acquire and maintain specific software dealing with the end-of-life issues and global environmental impact of CFLs. This issue is fundamental for Energy economy and can’t be neglected. This software will allow quantifying the global CO2 and other toxic materials (eg Hg) released in the environment during the lamp lifespan and at its end-of-life.
- 5 000 Euros are budgeted by BE for national CFL website & databases (on basis of homespeed)

Major subcontracts: None

4.2.3: Workpackage n°3

N° of work package: 3	**Name of the work package:** Campaign Design
Duration in months: 26	**Leader of the work package: Respect**
Total person-hours of work: 3 430	**Total costs in EUR: 236 428**

Description of the work:

Task 1: Specify Targets. The targets are of two types: lamp retailers and lamp end-users (customers). The targets should have an adequate geographical and socio-economic distribution in order to cover a large panel of situations and adapt each scenario. This will allow taking into account specificities of each group of targets for the final promotion campaign.

Task 2: Prepare scenario and "messages": each campaign should be adapted to a target but it should also used in order to validate a "concept" or "argument". Thus each camping should have a specific scenario and a "simple and readable" message addressed to the target.

Task 3: Define financing schemes: This is necessary in order to create attractive conditions for the target in order to push him buying the CFL. The validated financing schemes could serve afterwards as basis for elaborating inciting measures for the future.

Task 4: Elaborate assessment criteria: This task is absolutely necessary because each campaign result should be evaluated using a predefined procedure and criteria. Both procedure and criteria should be specific to each particular campaign but they should be compatible each other in order to draw general conclusions.

The target information that partners will seek is the electric power consumption due to lighting, number and type of lamps, CFLs on household – number, type and power, manufacturer; knowledge about CFLs parameters and advantages; behaviour of electric designer to implement CFL lamps in their projects; behaviour of retailers concerning CFL promotion and quality.

Outcome of this work package:

- Evaluation criteria for individual campaign
- General evaluation procedure for all campaigns
- Full scenario for each "test" campaign including targets and evaluation criteria

Deliverable(s) of this work package:

D4: Promotional campaign definition documents and strategy: This deliverable is constituted by documents that will describe each promotional campaign documents. This include the description of the media that will be used (press, Consumer inquires, TV or radio broadcast), the methodology of the campaign and the result evaluation as well as CFL-Questionnaires for market players and consumers (these questionnaires will be distributed as widely as possible and will be also accessible in the Project Web Page)

Role and contribution of each partner in this work package:

All partners will be equally involved to this workpackage. For the design of a common CFL promotion campaign shall be taken into consideration the different conditions in the countries and included in two main directions.

Issues concerning the customers, as:

- Are the customers aware of the qualities of CFLs and do they dispose with the necessary information?
- What purposes are the CFLs mainly used for (for general or local lighting of living rooms, kitchens, etc.)?
- What are the barriers for the wider introduction of CFLs: high price, discrepancy of CFLs with the already existing luminaries; necessity from wider variety of new ones?
- What is the opinion of the customers from their experience with CFLs (life expectancy, warm colours, etc.)?

Issues concerning state institutions and economic stimuli, as:

- Through a social policy, encourage the utilization of CFLs
- Through custom's barriers, e.g. limit the import of CFLs from non-EU countries.
- Through questioning of market players on above-mentioned topics.

Major other specific costs:

- 1600 Euros are budgeted by UTC-N for purchasing a laptop and a screen projector in order to be able to present to general public and also to professionals some promotional clips that

the EnERLIn consortium will create. This may have a significant impact to end-users and retailers and will used in order to "measure" the efficacy of each clip before proceed to diffusion by mass-media (Radio, TV…)

- 2000 Euros are budgeted by CEU for focus group and mall intercept research costs (meals, incentives, etc.). This corresponds to a large-scale phoning and mailing campaign to contact a large number of key people in the illumination domain. On the other hand incentives/gifts will be used to attract a representative focus group that participants need to be not acquaintances. This will help meetings that will allow EnERLIn to test promotional campaign tools into professionals. It should be added that all that "sessions" would be recorded for further analysis that may lead to new ideas or more effective promotional tools.
- 6 000 Euros are budgeted by BE for producing the campaign documents (leaflets & brochures & guidelines.

Major subcontracts: None

4.2.4: Workpackage n°4

N° of work package: 4	Name of the work package: Implementation
Duration in months: 22	Leader of the work package: ADENE
Total person-hours of work: 7 140	Total costs in EUR: 507 051

Description of the work:

Task 1: Initiate and supervise actions: Once the scenario defined in WP#3 the promotional material for each campaign should be prepared and transfer to the executives who could be external from the consortium. Each campaign will have a predefined duration and during this period the consortium should supervise the evolution on regular basis. The supervision guaranties the good execution and final success of the campaign.

Task 2: Recover information: Information collected from the executives should be recovered on regular basis. The consortium had to define before the initiation of each campaign what information is required and on what format. This will avoid any waste or useless information.

Task 3: Hierarchize collected information: This operation will done according a predefined procedure (WP2) and it is assumed to facilitate the final treatment of large amount of information

The main three objectives of this information campaign are: (1) to offer information and to present comparatively the parameters of different type of CFLs; (2) to determine the electric designers and architects to promote CFLs in their projects, and (3) to get a CFL with high quality into every home, so that people can experience this type of light. The campaigns will focus on information about the advantage of CFLs. For fulfilling that objective seminars with electric designers, architects, sales managers, leaflets and local mass media campaign – newspapers, radio and TV will be used according the possibilities offered to each partner. The methodology of the campaign survey will based on the following items (according to the country):

- an on-site survey to identify the type of lighting installed both in design projects and in homes;
- a questionnaire included to the electric bills, customers advertising flyers and web-based questionnaires.

Outcome of this work package:

- Data for evaluation of the campaign. The data will be available in the web-based database

Deliverable(s) of this work package:

D5: Campaign critical evaluation and associated data: Reports and publications describing each campaign from designing to the final results obtained. All collected data will be included to this report and will be used for the evaluation. The data will be included in the project database (see deliverable D6)

Role and contribution of each partner in this work package:

Each project partner will deal with the implementation of the campaign to his own country. He will follow the strategy defined in WP#3.

For Instance, UTC-N in Romania will deal with the implementation of a regional promotional campaign. They will collaborate with our Local Electric Energy Distribution and Supply Branch, and two electric/lighting retail companies. In Romania three other bodies will join this activity: Electric Energy Distribution and Supply Branch "Transilvania Nord", EnergoBit S.R.L. – an electric/lighting company -, PRAGMATIC Comprest S.R.L. – an electric/lighting retail company. The Bulgarian national promotion campaign conducted by SEC will be structured and applied in accordance with the common CFLs promotion campaigns and taking into consideration the specific conditions in the country. It will be implemented in collaboration with state institutions, lamp manufacturers, retailers, environmental organizations and mass-media. Since the aim of the project is to increase the efficiency of residential lighting, the campaign is aimed mainly at the customer and therefore shall reach him to the maximum. One of the main directions of the campaign should be wider connection with the mass-media (articles in newspapers and magazines about the qualities of CFLs, Radio and TV broadcasts). It is advisable to assess the inclusion of the hotel sector and

municipalities (boarding houses for old man, orphans, socially weak people) in the campaign. Secondly, preparation of advertisement leaflets and brochures, which shall reach the customers. Another main direction of the promotion campaign should be the economic stimuli, as the main barrier in Bulgaria is the high price of the qualitative European CFLs. As an innovative financing scheme could be included a scheme for granting a space out payment from large producers. Organization and participation in exhibitions and seminars is the third direction of the promotion campaign in Bulgaria. The public part of the web site will be translated in Bulgarian in order to further promote the outcome of the project. ENEA will ensure the stability of the portal also at the end of the project in order to give sustainability to the campaign for at lest one more year

ADENE in Portugal, besides the preparation of a package of ads in the main newspapers and magazines, will elaborate, in collaboration with the key actors above mentioned (retail sector, lighting equipment companies, local energy agencies) the most suitable initiatives to reach the target group (customers). These initiatives will include the edition and dissemination of promotional material (leaflets), exhibition (small stands) in selected places (shopping centres, etc.) and training workshops. If viable, agreements to facilitate the buying of CFLs, will be discussed with the main retail companies.

In Germany there are two different campaign strategies planned. On the one hand municipalities and whole sellers are approached to implement in a win-win-strategy a local campaign, which improve directly the distribution of high quality CFL. On the other hand ESCOs for light contracting will be involved in a campaign with a standardised offer of high quality CFL (probably in combination with other luminaries) to approach especially SMEs and the tertiary sector.

UPS in France will collaborate with FEDEL in order to setting-up promotional campaigns to departmental level (Lot, 46).

Energy Saving Bureau in Estonia shall conduct leaflets campaigns in Estonian central supermarkets where the CFLs are sold. Articles written in local newspapers and wider promotional campaign carried in a local broadcast. The schooling of retailers on CFL quality shall be organized.

All partners will be involved to the data pre-processing (Task 4.3), they will try to recover existing information in their countries on yet performed operations. However these last data need a very critical evaluation and all consortium members should be involved on that. In addition we will invite to the project AdCom (Advisory Committee) external experts who participated to these “previous” campaigns in order to get more precise information.

Major other specific costs:

- 20 000 Euros are budgeted by ADENE in order to create high quality promotion material like leaflets, posters, brochures and searchable CD-Roms that will be distributed to retailers, architects, lighting designers and also end-users. This action will constitute a “real scale” test of promotional campaign that will proposed as EnERLIn project output at the end of the project.
- 7 000 Euros are budgeted by BE for workshops/events (rooms, catering, audiovisual, proceedings, etc.). BE will proceed also to similar campaign (like ADENE) in Germany; this will allow EnERLIn to compare the tool in different countries with different tradition and mentalities.
- 6 000 Euros are budgeted by Respect for producing the campaign documents.
- 2 000 Euros are budgeted by UTC-N for campaign promotion at conferences such as Right Light.
- 1 000 Euros are budgeted by ESB in order to purchase high quality selected CFL lamps that will be distributed for free to the ATRE high school students and staff. This is a way to promote good CFL to future lighting designers and push them to advice they future clients to use this type of lamps. On the other hand, we will ask to ARTE school to create for EnERLIn some innovative lighting projects for residential lighting using CFLs, the best of those projects will serve to the final strategic definition of the promotional campaigns (see WP5)
- 3 500 Euros are budgeted by ENEA budgeted for getting some instruments in order to be able to do CFL Quality verification in situ as well as to be able to collect campaign information from remote places.
- 10 000 Euros are budgeted by KAPE for materials, translations and workshops dedicated to the CFL promotion campaign

Major subcontracts:

UTC-N will subcontract the ELECTRICA Transilvania Nord, EnergoBit, PRAGMATIC Comprest for the campaign execution in Romania. Estimated cost: 15 000 €. Each subcontractor will perform an independent promotional campaign in destination of his or her clients. This campaigns will consist on sending to each customer information about CFL utility and associate to that information promotional offers for acquiring CFLs in privileged conditions (this last point is subject on previous agreement between campaign performers and lighting industry)

The sub-contractors identified were selected following the provisions of Article II.9 of the Grant Agreement on competitive grounds on the basis of best value for money.

4.2.5: Workpackage n°5

N° of work package: 5	**Name of the work package:** Impact Assessment
Duration in months: 27	**Leader of the work package: UTC-N**
Total person-hours of work: 4 089	**Total costs in EUR: 219 824**

Description of the work:

Task 1: Compile information from WP4: All data input from the previous step should be collected and compiled according to the procedure defined in the WP2. This should be done for each individual campaign. Then representative data should be extracted from the full set and they will serve in WP6 for defining the global promotional strategy.

Task 2: Evaluate impact of each strategy: this should be done in both quantitative (number of CFLs acquired, variation of CFLs per household…) number of people that has been trained and their opinion on the learning materials and qualitative (reaction of targets, change in mentalities…).

Task 3: Evaluate impact in energy saving and environmental issues: This should be done using the data from Task 2. It is then possible to translate the campaign results to achieved energy savings (and associated environmental impact). These results will be used then by WP6 in order to evaluate the overall efficacy of each successful campaign.

Outcome of this work package:

- Experience on each elaborated scenario and a clear view of success/failing reasons.
- Recommendations for future campaigns.

Deliverable(s) of this work package:

D6: Campaign results and associated treatment

Role and contribution of each partner in this work package: (tasks and foreseen amount):

This is one critical point of the project. All partners will be very actively involved. Their experience will be combined to that coming from external persons participating to the project AdCom. The objective is to use all this cross-disciplinary experience and knowledge in order to get a realistic evaluation of each promotional campaign impact and get clear ideas on the used methodology.

SEC will collect information on the Bulgarian campaign and compile it according to WP2. SEC will evaluate the impact in energy saving and environmental issues and will deliver the data concerning the quantitative results from the Bulgarian campaign with recommendations for future campaigns. UTC-N will contribute to all three tasks, in accordance with the parameters of survey – energy consumption of households, changes in the promotion of the CFLs in electric installations projects of new buildings, differences between houses category (homes, dwellings, block of flats) and correlation with number of CFLs per household, energy saving evaluation. The assessment of the results will summarize the impact of campaign. ENEA will collect inquires and customer satisfaction analysis among the users. The main deliverable from this work package will be a report that will use the collected data in order to assess the success of each campaign strategy. The report will include also advices concerning the validity of each strategy adopted and critical evaluation of the campaign methodology.

Major other specific costs: None

Major subcontracts: None

4.2.6: Workpackage n°6

N° of work package: 6	**Name of the work package:** Strategic Definition and web page
Duration in months: 27	**Leader of the work package: ENEA**
Total person-hours of work: 6 066	**Total costs in EUR: 430 159**

Description of the work:

Task 1a: Create a "global" campaign scenario: This task is consist on the compilation all results obtained from WP5 and define the final promotional strategy that all partners (and any other interested external institution)

Task 1b: Create "standard" promotional material: The consortium should prepare all necessary documents in order to proceed to the realization of the "standard" promotional material. Then the realization of the layouts will be consigned to communication professionals. The consortium should decide with these professionals what promotion media will be used (mass-media, web, prospectus…) and it will supervise the creation of the models. All the materials will also be downloadable from the web site. Transpose standard promotional material to National realities: This step is necessary in order to not only translate any material to National languages but also to taking into account National susceptibilities and special cases.

Task 2: Develop simple e-learning courses freely available in the web site in order to give any class of users the basic concepts to understand the different technologies and give them the capability to evaluate the proposed solution.

Task 3: Collate all data obtained inside the EnERLIn project and create CFL-oriented databases.

One of the main objectives of this project is to reach end users. In order the information to reach the end user we consider advisable the:

- Organization of radio broadcasts, TV clips, press releases and any other promotional material like leaflets, prospectus…
- Organization of exhibitions, stand arrangements. Participation in fairs is a very effective mechanism for bringing in direct contact the technology providers.
- Organization of workshops. During the exhibitions, workshops could be organized at the same place.

The exhibitions and workshops will be prepared to facilitate business contacts, better understanding and identification of the local needs. Participants in the exhibitions and the workshops will be European manufacturers and representatives of: municipalities; associations of consumers, utilities and institutions; companies and energy centres and special care will be paid for architects and electrical engineers.

With regard to the printed material we propose a Maxi brochure to be created, which includes: The revised European CFL Quality Charter; General information, like: Lighting and energy; Evaluation of lighting load and consumption, economic appraisal, etc; Different CFLs with their efficiency and application; Luminaries; Case studies. This brochure initially written in English will translated in the languages of the participating countries

In parallel we will organize an international seminar, at which to present the results from investigation of CFLs and an overview of the current EU CFL Quality Charter with respective proposals. Some attention will be paid also to the Science and technology of CFLs.

We will create also CD-ROMs with a selection of 150-500 "good" case studies for CFLs, which are fully documented with excellent pictures; technical description (materials, lamps, luminaires...); price indication; availability.

Another way to reach the different classes of target groups is to provide e-learning courses. All the issues arisen in the previous activity will be studied and learning courses for auto-training will be developed in order to give basic and scientific support to all the questions.

Finally, in this workpackage we will produce CFL-oriented databases using all data recovered to the other workpackages (especially WP#2). These databases will concern all quantitative information about existing market for CFL, type of existing CFLs, characteristics of existing CFLs, luminaries, general bibliography. The data will be collected in a user-friendly web based database. The database will be accessible both to the partners (intranet) and to the general public (internet). The databases can be based on existing inventories, but mainly on the input from the lighting manufacturers and their trade associations in the EU. Crucial will be the excellent quality of the interior pictures of the lamps, in order to have a tool, which can and really will be used by consumers and lighting specifiers to make a selection of lamp-luminaire sets. From this database, a selection of 150 to 500 "most

appealing luminaries" will be made together with an Advisory Board of 10 architects and design professionals from across the EU.

Outcome of this work package:

- Input for communication professionals who will create the promotional material
- Recommendations documents
- Seminar on CFL advantages and promotion
- Multi-functional web page

Deliverable(s) of this work package:

- D1b: Multi-functional web page
- D8: Standard promotional material for several countries
- D9: e-learning tools for different class of users: consumers, retailers, architects, designer, producer.
- D7: CFL oriented databases (web based and CD-ROM)
- D10: CFL seminars

Role and contribution of each partner in this work package:

All partners will participate to this work package. Each participant in the consortium could determine in which of these above-mentioned actions will participate. A detailed dissemination plan will be presented with the interim report.
Each partner will translate in his national language the Maxi brochure and transpose the standard promotional material to National realities. Communication professionals will be consulted on the "standard" promotional material in order to increase the potential impact to end-users. The consortium will release professionals' all-important information and will validate the proposed solutions.
SEC with UPS will organize an International seminar with exhibitions, on which could be presented the results from the investigation of CFLs and the overview of the current EU CFL Quality Charter, as well as the results from the promotion campaigns in the countries. During the seminar will be distributed different promotion materials.
UTC-N will contribute to the common work by (1) offering the presentation space at the International Conference ILUMINAT 2005 – poster, web site and paper, (2) presenting EnERLIn project lines, development and assessment on the INGINERIA ILUMINATULUI journal, (3) participating at the local Ambient Electric Fair (every year in March), and (4) organizing round table at the International Symposium on Energy Efficiency - Electrica "Transilvania Nord".
Energy Saving Bureau in Estonia shall distribute the EnERLIn materials to end-users, institutional buyers, retailers. Shall do an additional thematic broadcasting if necessary.
E-learning courses will be created mainly by ENEA standard methodology, with the supervision of the academic partners, and will be freely accessible from the web site.
Concerning the CFL-oriented databases BE will include the results on the European database www.homespeed.org. BE in Germany in collaboration with ENEA (usability lab) will develop a strategy for a European database for CFLs. E-ster will deal with the creation of the database and will be supported by the BE to coordinate this database with the within a SAVE project developed European database www.homespeed.org.
The D1b deliverable consists on the evolution of the Project page to the "Multifunctional Public Page". ENEA will create and maintain this web page till the end of the project and then they will take care to transfer the page to the institution that will ensure the follow-up in the future. An important action in this web page is the progressive migration of the Project Page (see WP1 "management) to multi-functional web page accessible by both consumers and professionals. This web page will include all collected information correctly "distilled" according to the user-level. It will be used also for making available the e-learning modules (on free use). It will contain moderated forums for end-users (customers) and professionals. These forums (and associated questionnaires) will serve also for collecting new information that will enhance our databases. This procedure should be as automatic and transparent as possible. Realize a such web page with the announced functionalities is heavy task and the associated cost (in human-hours and other resources) ENEA will create and manage the web page during the project, a person will take care of that

important tool on quasi-permanent basis (this justifies the large number of hours dedicated by ENEA in this WP). The project Management Committee will decide how this web page will continue to be maintained after EnERLIn. The most probable solution consists on releasing the usage rights to some consumer associations (like Adiconsum in Italy or Que Choisir in France…)

Major other specific costs:

- 3 000 Euros are budgeted by SEC for the organisation of the CFL seminar
- 1 200 Euros are budgeted by UTC-N for contribution to the organisation of ILUMINAT-2007 conference in Cluj-Napoca. This is a major international conference in the domain of illumination. EnERLIn consortium will take the most of this opportunity in order to disseminate a maximum of information concerning the project output. The expected impact of this dissemination is large because the conference offers the possibility to meet specialists from all Europe and also from non-European countries. This is an excellent forum for presenting European research outcomes and exchange information with major actors in the domain (policy makers, researchers, industry, illuminating engineers and architects…). The requested amount covers a small part of the global organization of the event.
- 14 000 Euros are budgeted by ADENE in order to organize events like fairs and conferences, lectures and demonstrations in order to promote CFL lamps to both general public and retailers. These actions are decisive for EnERLIn because will allow to the consortium the possibility to test the efficacy of this type of tools as "campaign instruments" in comparison to more classical ways like publicity, radio and TV advertisements tested by other consortium partners. Another 7 000 Euros are budgeted by ADENE to promote CFL lamps by advertising in technical/specialised magazines.
- 30 000 Euros are budgeted by ENEA in for the creation and the effective implementation of this multifunctional web page (this amount corresponds also partially to the realization of the project page –see WP1-). The web server requires a very important computer power in terms of CPU and disc capacity. This is necessary in order to ensure a continuous service to web users and handle an important simultaneous access to the tool, especially in the web based learning modules. On the other hand the server should be able to host important searchable databases including high-resolution photos. It should also offer interactive services to the users (learning modules, exercises, on-line energy saving and financial calculations, quiz, end-user impressions and opinions…
- 2 900 Euros are budgeted by SEVEn for producing the Standard CFL promotion material

Major subcontracts: None

4.2.6: Workpackage n°7: Common Dissemination Activities

N° of work package: 7	**Name of the work package:** Common Dissemination Activities
Duration in months: 36	**Leader of the work package: UPS**
Total person-hours of work: 20	**Total costs in EUR: 5 000**

Description of the work:

- Task 1: Contribution, upon request of the Commission, to the development of online information systems under EC management.
- Task 2: Participation, upon request of the Commission, at contractors' meetings and conferences in association with the IEE and other relevant programmes, EU-wide exhibitions, etc.
- Task 3: Contribution, upon request of the Commission, to the preparation of common presentation material related to IEE actions.

Outcome of this work package:

- Input to development of online information systems.
- Participation in contractors' meetings, conferences in association with the IEE and other relevant programmes, EU-wide exhibitions, etc.
- Contribution to brochures and other media, web-sites, newsletters etc. on the IEE actions.

Deliverable(s) of this work package:

- Abstracts including regular updates
- Project presentations including slide packages, presentations, written abstracts, posters, dissemination material etc.
- Presentational material including abstracts, visuals including photographic material, interviews.

Role and contribution of each partner in this work package:

All partners, passing trough the project coordinator, will actively collaborate with the EC initiatives and will supply all available and relevant information requested, as well as will participate in events and meetings when requested. In parallel, all partners will publish as much as possible papers concerning EnERLIn work. They will undertake also a large communication in the direction of the media of their respective countries

Other specific costs (tasks and foreseen amount): None

4.3 List of Deliverables and Schedule

4.3.1 List of Deliverables

Deliverable N°	Work package N°	Deliverable name	Type of deliverable	Size and form	Language (s)	Target group	Lead participant	Dissemination level	Sub-mission deadline
D1a *D1b*	1, 6	Project Page, Multifunctional Public page	Web page Multifunctional web page	Web page with restricted Intranet access	EN (during the project, at the end it will be translated at least to FR, IT, CZ, D)	All	UPS & ENEA	PU (RE for the intranet)	7 30
D2	2	CFL-Quality Charter	Publication	Work Document, (approx. 20 pages)	EN and at least FR, BG, CZ, EE, LV	All	UPS	PU	31
*D3 ** *ID3*	2	CEN-STAR workshop with stop or go decision	Publication	CEN document (format specified by CEN)	EN	Policy makers	UTC-N	PU	36 15
D4	3	Promotional campaign definition documents and strategy	Publication, and Questionnaires	Reports (one report per campaign proposal, 10-20 pages per report) Questionnaires: Flyers (min 500/partner) and web based document	For reports: EN For Questionnaires: FR, CZ, PL, RO, P, IT, D	CFL-retailers; Individual users; Architects; Policy makers	Respect	PU	13
D5	4	Campaign critical Evaluation	Publication and data	Report (available in the intranet. Approx. 40 pages). This report will collate individual campaign reports.	EN	Consortium and AdCom	ADENE	RE	31

Deliverable N°	Work package N°	Deliverable name	Type of deliverable	Size and form	Language (s)	Target group	Lead participant	Dissemination level	Sub-mission deadline
D6 *ID6*	5	Campaign results and associated treatment ID: Preliminary not processed results	Report and Data: Number of CFLs sold, associated energy savings and environmental impact	Report: This report will use the collected data in order to assess the success of each campaign strategy. The report will include also advices concerning the validity of each strategy adopted and critical evaluation of the campaign methodology. Data: Web based datasheets (excel format) All collected data will be included to this report and will used for the evaluation. The data will be included in the project database (see deliverable D6)	EN	All	UTC-N	PU	36 18
D7 *ID7*	6	CFL-Database Embryonic Database with PR2	Data	Web based and CD-ROM (min 100 copies)	EN	All	e-ster	PU (CO for com-mercial data including turn-over, production rates…)	25 13

Deliverable N°	**Work package N°**	**Deliverable name**	**Type of deliverable**	**Size and form**	**Language (s)**	**Target group**	**Lead participant**	**Dissemination level**	**Sub-mission deadline**
D8	6	Standard promotion material	Layouts for flyers, posters, demonstration stands, multimedia clips…	Layouts or/and indication on how realize them will be available in electronic format. One prototype of each will be also available in real format.	EN and at least FR, D, CZ, RO, P	Energy agencies; CFL retailers; CFL manufacturers; Electrical Utilities	UTC-N	PU	36
D9 *ID9*	6	e-learning modules ID9: Primary versions for internal testing	Web based interactive material including freeware, educative presentations, video clips	At least 3 web based documents for e-learning. Each module is in destination of a different public. The modules will include presentations with promoting arguments, self-evaluation tests in order to evaluate the user knowledge, educational quiz, CFL and luminaries associations for best rendering exercises, small freeware software for illumination and energy calculations	EN	Consumers; Retailers; Architects	ENEA	PU	31 18

Deliverable N°	**Work package N°**	**Deliverable name**	**Type of deliverable**	**Size and form**	**Language (s)**	**Target group**	**Lead participant**	**Dissemination level**	**Sub-mission deadline**
D10 *ID10*	6	CFL Seminar ID10: Official Seminar announcements (included in IR)	Event	Seminars, (duration 3 days max each, target audience 100 participants). Date: 3rd project year. 5 Seminars will organized in Portugal, Romania, Poland, Bulgaria Germany,	EN	Architects; CFL-manufacturers; Energy Agencies; Policy makers; Electrical Utilities	SEC	PU	31 20

Notes: IDxx designs an interim deliverable (milestone) demonstrating the progress in this direction
*: This deliverable is associated with a stop or go decision that will be taken in common agreement with the EU sponsor

4.3.2 Schedule

Project phase / Duration of the project (in months)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36		
Work package 1: Management																																						
Work package 2: CFL Quality Charter & Specifications																																						
Work package 3: Campaign Design																																						
Work package 4: Implementation																																						
Work package 5: Impact Assessment																																						
Work package 6: Strategic Definition and web page																																						
Work package 7: Common Dissemination Activities																																						
Project meetings	X					X					X							X						X						X					X			
Project Deliverables (D) & Interim Deliverables (ID)							D1a						D4 ID7		ID3			ID6 ID9		ID10					D7					D1b	D2 D5 D9 D10					D3 D6 D8		
Reports to EC							PR						PR							IR					PR						PR							FR

4.4 Performance Indicators

EnERLIn consortium will assess the performance indicators in both IR and FR reports.

Performance indicator	**Quantification**	**Related work package and/or deliverable N°**
Number of access to the project web site	1 000 access in the public part	D1 (WP6)
CFL Questionnaire	2 000 flyers/partner, 15-20% feedback is expected if sent by mail, 70% if collected during promotion events	D4 (WP3)
CFL promotion campaigns and local actors participating	5 campaigns in 3 countries, 7 local actors per campaign in average	D5 (WP4) and WP6
CFL database entries (CFLs, luminaries,…) & CD-ROM	500 entries (quality criteria, photos, energy consumption data, commercial data, …) 1 000 CR-ROMs (all languages)	D7 and WP2
e-learning modules	3 modules for 3 different levels	D9 (WP6)
CFL Seminar	At least 70 participants with at least 60% relevant actors (pub. Authorities, ESCOs, Policy makers, Retailers, Marketing Depts of industry…). 5 seminars will be organized at different countries (see D10 description)	D10 (WP6)
CEN-STAR workshop	CEN-STAR workshop is not a "public event", it is an action leading to the creation of an European Standard. Thus the number of actors is relatively limited. The actors aren't "passive auditors" but they actively participate to the final publication leading to the European Standard. The whole EnERLIn consortium will participate in that CEN-STAR. In addition CEN-STAR will be open to external partners (lighting, ballast and luminaire industry, retailers, etc…) 7 institutional participants apart EnERLIn consortium members are expected to join the CEN-STAR normalisation workshop	D3 (WP2)
CFL-QC workgroup.	The CFL-QC workgroup will be constituted by all consortium partners and at least 5 or 6 external actors from industry, public authorities, EU etc, will be invited to participate in this workgroup. The adoption of CFL_QC by national authorities as standard is also an success indicator (it is difficult to quantify it now, it will be done in the IR report)	D2 (WP2)

Performance indicator	**Quantification**	**Related work package and/or deliverable N°**
CFL Campaign results	Average increase of CFL sales of 10% per participating local actor We expect at least 2 local actors per country to be associated. The energy savings is subject of the number of lamps that will be sold due to the project campaign. Due to the large variety of national regulations, retailers and size of participating retailers, it is very complex to know in advance how may lamps will be sold. We know for sure that each CFL replacing a GLS (incandescence) corresponds roughly to 93 kWh saving per year. The final counting of energy savings will be provided with precision at the end of the project.	D6 and WP4
Result Dissemination	At least, 20 papers in specialized conferences (eg. RightLight, Light Sources) or magazines	WP6
Project promotion	At least, 7 public-media (general press, Radio, TV, web) spot on the project. At least, 10 “papers” on the project in specialized press (J. Illum. Soc., Info. Lett. Energy Agencies…)	WP6