



## EPI-CREM Project Letter

**Energy Performance Integration in  
Corporate Public Real Estate  
Management**

EC Contract: EIE/07/129/S12.467632  
[www.epi-crem.org](http://www.epi-crem.org)

**Title of contact:**

René Leeuw  
Ministry of VROM, RGD  
The Hague, the Netherlands  
Telephone: + 31 (0) 70 339 17 77  
Email: [Rene.leeuw@minvrom.nl](mailto:Rene.leeuw@minvrom.nl)

Intelligent Energy  Europe



# EPI-CREM Project Letter

**Author/s**

René Leeuw  
Ministry of VROM, RGD  
The Hague, the Netherlands  
Telephone: + 31 (0) 70 339 17  
77  
Email:  
[Rene.leeuw@minvrom.nl](mailto:Rene.leeuw@minvrom.nl)

**Editor**

Chantal Tiekstra  
BuildDesk  
Arnhem, the Netherlands  
Telephone: +31 26 3537272  
Email:  
[Chantal.tiekstra@builddesk.com](mailto:Chantal.tiekstra@builddesk.com)

**Date:**

March 6 2008

**EC Contract**

EIE/07/129/S12.467632

[www.epi-crem.org](http://www.epi-crem.org)

**Project co-ordinator**

Ministry of VROM (RGD), The  
Hague,  
The Netherlands

Mr. René Leeuw  
[Rene.leeuw@minvrom.nl](mailto:Rene.leeuw@minvrom.nl)

**Disclaimer**

*The sole responsibility for the content of this publication lies with the authors. It does not represent the opinion of the Community. The authors and the European Commission are not responsible for any use that may be made of the information contained therein.*



# Contents

<b>1</b>	<b>Introduction .....</b>	<b>4</b>
<b>2</b>	<b>Work package 2 “State of the Art CREM” .....</b>	<b>5</b>
2.1	Implementation of the EPBD and Corporate Real Estate Management processes 5	
2.2	Four main functions in CREM	5
2.3	Short description of the four main functions in CREM	6
<b>3</b>	<b>Work package 3 “Strategies for embedding Energy Efficiency” .....</b>	<b>8</b>
3.1	Strategies for the implementation of energy themes in CREM processes	8
3.2	Short description of the need for strategies in the four main functions in the CREM process	8
<b>4</b>	<b>Work package 4 “Elaborate strategies in easy to use approaches” .....</b>	<b>10</b>
4.1	Short description to elaborate strategies into easy to use approaches	10
<b>5</b>	<b>Work package 5 “Development of tools” .....</b>	<b>12</b>
<b>6</b>	<b>Work package 6 “Pilot projects” .....</b>	<b>13</b>
	<b>Project Description.....</b>	<b>14</b>
	<b>Project Partners.....</b>	<b>15</b>



# 1 Introduction

At the moment energy items are rarely integrated into the regular processes of Corporate Real Estate Management. This situation seems to apply on all the EU-member states.

With the introduction of the EPBD as a European legislation, energy was embedded as an operational inspection item in the property and maintenance management process of organizations who are owner and user of public real estate. By means of the obliged EPBD inspections and energy certificates for public buildings, a lot of energy-related information becomes available.

An important question in general is: How to revalue the information of operational EPBD inspections in order to make it fit for use on tactical and strategical level in real estate management?

Energy is not yet an important decision aspect –if yet at all- in real estate management processes. The purpose of the EPI-CREM project is to embed energy themes in the regular real estate management processes. This can be realised by developing an easy to use approach with instruments, guidelines and tools, which can be used in practice by real estate managers, facility managers and policy-makers. The vision of EPI-CREM is to improve energy efficiency and rational use of energy across non-residential building stock within the EU member states contributing to better standards of work processes and global environmental benefits.

During the start meeting of the EPI-CREM project in The Hague, January/February 2008, it appeared the project approach needed some extra explanation. This project letter is meant to make the purpose and outcome of the project and the relations between the work packages more clear to the members of the project team by discussing the aim of the different work packages, in order to make a good start with the content of work package 2 and the following work packages.

## 2 Work package 2 “State of the Art CREM”

### 2.1 Implementation of the EPBD and Corporate Real Estate Management processes

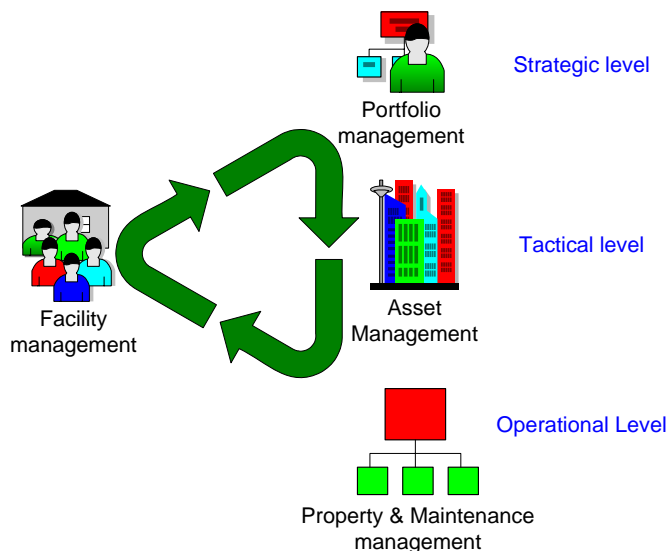
To embed energy issues it's important to know how the CREM processes work in general and in the specific partner countries involved in the project (France, Austria and The Netherlands). The main aim of Work package 2 is to develop a state of the art and simplified description of the CREM process for non-residential buildings in the partner countries. This information will be used to point out the different places in the CREM process on the different levels where the energy-efficiency theme has to be embedded. For the description of the state of the art of CREM it is important to consider the main functions of Corporate Real Estate Management.

### 2.2 Four main functions in CREM

In the vision of RGD, as experienced real estate managing organization, the field of Real Estate Management processes is occupied with four specialized management fields (four main functions in the CREM-process):

- Facility Management
- Portfolio Management
- Asset Management and
- Property & Maintenance Management.

These management fields are related to each other, as shown in the scheme below.



**Figure 1:** The four main functions in CREM and the different organizational levels

## 2.3 Short description of the four main functions in CREM

The four defined management fields are described as follows:

### **Facility management**

Facility Management is closest to the “end-users” or tenants in the Real Estate process. Facility managers take care of the facility services related to the use of buildings. They often have to deal with the energy costs.

### **Portfolio management**

A portfolio manager makes decisions about a property on three main aspects:

- does the property make profit;
- do we have to invest for profit and how much;
- do we have to dissolve a property when the profit is not enough.

Also decisions to buy or develop Real Estate are made in the field of Portfolio management.

### **Asset management**

Asset Management is concerning with decisions on tactical level in the existing building stock. An Asset manager has to make decisions on the aspects of Energy & Environment, Quality & Functionality and Safety & Health on the complete stock.

### **Property & Maintenance management**

This is carried out by managers who are responsible for a group or groups of buildings; as part of the entire building stock. They take care of (long and short term) maintenance planning, and realisation of maintenance by contractors.

**Note 1:** *This simplified organizational structure is appropriate for (complex) organizations with a huge building stock. Not all stock owners have this complete CREM organization. Depending on the amount of buildings and specific building types a stock owner needs a complete CREM organization or a part of it. Facility, asset and property & maintenance management are often combined in one way or another, or are outsourced. The strategic function of portfolio management (making decisions in investing in, or dissolve buildings) is mostly separated from the tactical/operational functions. The bigger the diversity and amount of buildings, the more it will be profitable (from a financial, technical and organizational point of view) to incorporate all these functions in your own organization.*

**Note 2:** *in work package 2 the situation in the partner countries concerning the CREM schemes, processes and statements has to be investigated and described.*



To make energy an issue for facility-, asset-, portfolio- and property & maintenance managers we have to look for natural connections with the interests of other relevant themes. For example with Safety & health, Quality & functionality and Energy & Environmental aspects. Another practical link is linking energy as an important theme to “**natural moments**”, such as inspections, consideration, decision making, and realisation of maintenance or renovation.

The ambition for EPI-CREM is to develop a mix of measures and tools to achieve incorporation of energy in the CREM processes on natural moments. From this point of view, a number of tools are defined in Work Package 4 and 5.

## 3 Work package 3 “Strategies for embedding Energy Efficiency”

### 3.1 Strategies for the implementation of energy themes in CREM processes

The intention of Work Package 3 is to describe the possible strategies that are needed to embed energy issues in the four real estate management functions in the CREM process.

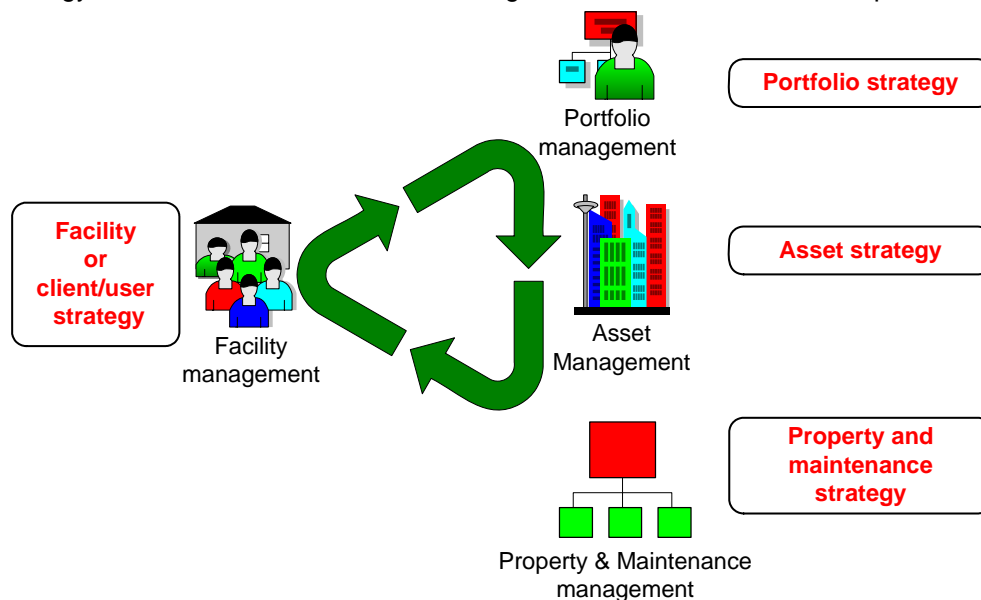


Figure 2: Strategies to embed energy issues in the CREM process

### 3.2 Short description of the need for strategies in the four main functions in the CREM process

On the various levels in the CREM process information is needed for consideration, decision making, to execute inspections etc.

The asset and facility managers need information from property and maintenance management. On the side of the property & maintenance management there is information generated due to inspections for fire safety, maintenance, energy and law enforced inspections on the one side and information on drawings and information due to breakdown reports on the other side. To prevent energy themes staying a separated item of non-importance, which “only causes extra work”, it is very important to embed EPBD and energy management into the CREM process.



In this Work package it has to be defined which strategies can be developed and implemented to facilitate this embedding.

When there are four main functions of management in CREM processes on three levels (strategical, tactical and operational) it is important to embed energy issues in these four functions through their strategies.

The information flow between these four functions of management and the three organization levels is crucial for the process of embedding. The following points of attention are relevant to keep in mind:

- Strategies are needed on the different functions and organization levels in the CREM process;
- Information about the different stages of the CREM process about Quality & Functionality, Safety & Health and Energy & Environment is important;
- Information in the CREM process is generated due to inspections, consideration due to risk management and decision making on several organization levels;
- All these aspects must be considered on a natural moment in the Life Cycle (Costs) or on special request of the portfolio or facility management.

## **4 Work package 4 “Elaborate strategies in easy to use approaches”**

### **4.1 Short description to elaborate strategies into easy to use approaches**

In Work Package 4 a fit for use description must be made. This Work Package will describe an EPI-CREM Embedding Approach where Energy Efficiency (EE) and Renewable Use of Energy (RUE) issues are embedded into wide ranging public property management / decision making processes.

The EPI-CREM Embedding Approach integrates EE and RUE specifically into the following kind of everyday CREM business planning outputs:

- tenancy agreement;
- long term maintenance and renovation plans;
- specific building related energy saving and efficiency plans (including measures);
- indoor climate considerations;
- technical design and engineering requirements for existing public buildings
- recommendations for introducing Energy Services in accordance with the EE-ESD.

In Work Package 4 the tools are described in terms of demands. These tools are needed to embed energy issues in the CREM process and are going to be developed in Work Package 5.

All technical information gathered due to inspections can be used for technical consideration by a technical CREM consultant. This technical consideration can be used between facility, asset and portfolio management, and linked to financial and facility considerations or considerations of organizational, social or even political kind. These last three are not within the scope of this project

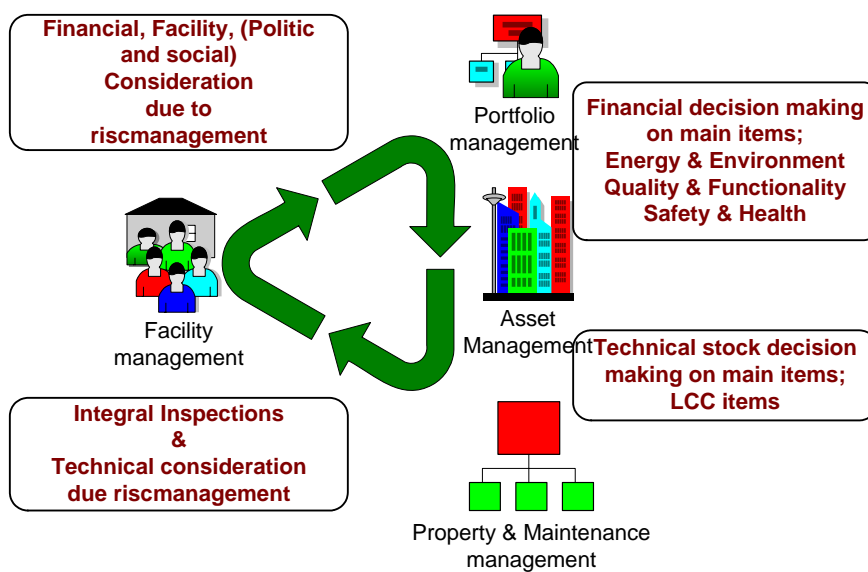
Now the practical problem is, how to compare the interest of decisions on, for example, primary processes (functionality of buildings) like fire safety, maintenance, and energy efficiency in order to make the most optimal decision. Using methods of risk management can be a strong tool, which helps in making considerations and decisions. By “translating” all kinds of decisions to risks (chances and consequences) it will be possible to quantify and compare them.

Also it must be possible to do a consideration due risk management on their specific aspects:

- generate information due to connecting different inspections,
- technical consideration due to risk management
- facility, portfolio, (social and politically) consideration due to risk management,
- decision making between portfolio and asset management
- decision making between asset and property management

Consideration, risk management and decision making will be worked out in Work Package 4 and must be managed due to vision and strategies.

In Work Package 4 it is important to know what inspection methodologies other partner countries use. This information has been part of the output of Work Package 2. Work Package 4 does not describe integral inspections, because of the difference in methods between the partner countries. It describes how to connect information from several inspections to each other. This way, the information can be used for integral consideration due to risk management and later for decision making between the separate functions.



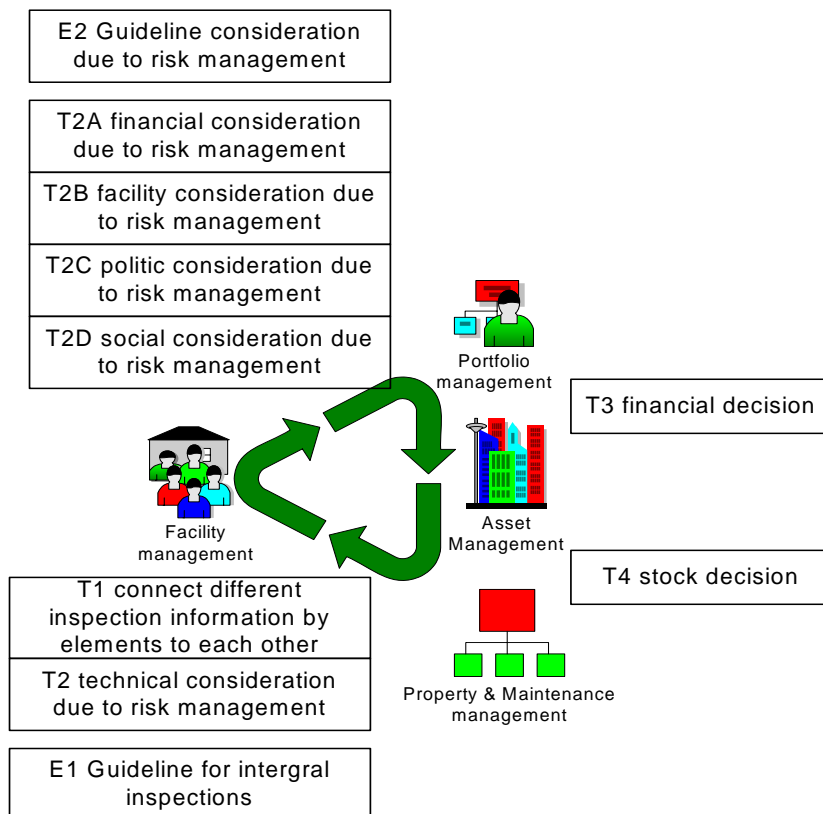
**Figure 3:** Elaboration of strategies in easy to use approaches

## 5 Work package 5 “Development of tools”

In this Work Package some tools are elaborated on in addition to the EPI-CREM approach that is worked out in Work Package 4.

The **EPI-CREM Toolkit** will contain the EPI-CREM:

- Data Acquisition Protocol (to combine and integrate the input and outcome of different inspections; with checklist and handbook); E1 and T1 in the scheme below;
- Database Integrated Information System (software with manual)
- Scenario Analysis Module (method, using Risk Management, with manual, E2, T2, T3 and T4 in the scheme below)
- Quality Control Protocol
- Training program of assessment inspectors and Communication tools
- Embedding Communication Tools – dialogue, decision making process tools to accompany pilot projects



**Figure 4:** Technical and educational tools

*Note: elaboration of T2C and T2D are not part of the project*

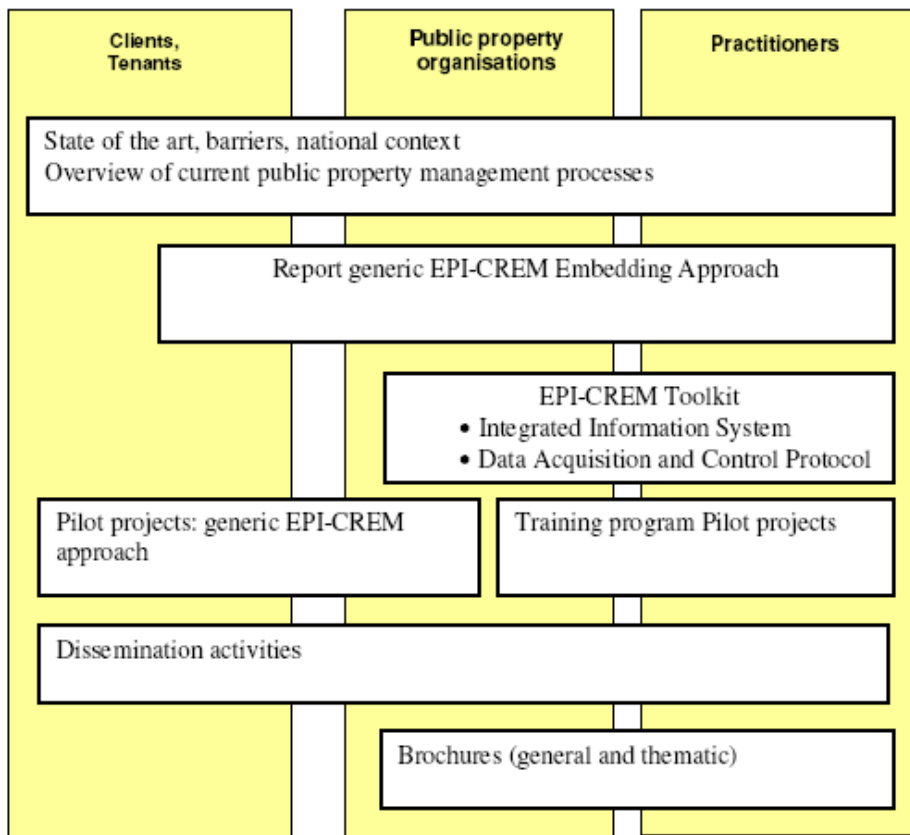


## **6 Work package 6 “Pilot projects”**

The developed EPI-CREM approach and tools are tested in practice in / with the involved organizations and twenty buildings, selected for the pilot projects. Assessors will be trained in technical knowledge and skills to use the tools. After this they will carry out the pilot projects in practical circumstances and generate monitoring data on which the evaluation of the EPI-CREM approach and tools can be executed.

## Project Description

EPI-CREM aims to improve energy efficiency and rational use of energy across public building stock in Europe by embedding energy issues in decision making processes within Corporate Real Estate Management (CREM) at a strategical level, and translating those decisions into tactical and operational levels of building management. This way the decision making process surrounding energy saving measures is embedded in the CREM-process, and is made structural and more cost effective. To reach these goals EPI-CREM provides a strategy and a set of tools enabling building owners and users to make the energy aspect an integral aspect of Corporate Real Estate Management.



### The expected project results are:

1. **The EPI-CREM embedding approach**, where energy efficiency and rational use of energy issues are embedded into public property management processes;
2. **The EPI-CREM toolkit**, which contains an Integrated Data acquisition and Quality Protocol, a Database Integrated Information System, a Scenario Analysis Module, a Training program for assessors and the EPI-CREM Reference Manual;
3. **20 EPI-CREM Pilot Projects**, testing the embedding approach and the developed tools;
4. **Dissemination of the EPI-CREM results** in relevant networks and sectors like the public building real estate sector, consultancies, architects, tenants, umbrella organisations, knowledge providers and national authorities, with special attention to the new European Member States.
5. **A concise overview of current public property management processes**, highlighting institutional barriers for energy saving and sustainable energy strategies. This overview serves as the basis for developing the EPI-CREM embedding approach and the tools.

## Project Partners



**Project Co-ordinator:**

The Ministry of VROM, Rijksgebouwendienst, The Netherlands  
[Rene.leeuw@minvrom.nl](mailto:Rene.leeuw@minvrom.nl)



BuildDesk, The Netherlands



AUSTRIAN ENERGY AGENCY

Austrian Energy Agency, Austria



Energie Bewusst Kärnten, Austria



Centre Scientifique et Technique du Bâtiment, France