


The role of tools in urban infrastructure projects, plans and programs, PETUS outcomes

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What's a tool ?

- A tool is a procedure, guidance, method, evaluation or assessment to accomplish an objective or achieve a result.
- In the PETUS research project, tools included **assist in incorporating sustainability** into urban infrastructure projects.
 - **How ?** What tool to develop within PETUS ?
 - **How** to find a pertinent source of knowledge to act in a sustainable way ?

Typology of tools

PETUS web site

- Different type of tools have been identified
 - the **stage** when the type of tool could be used,
 - the **type of output** that is produced
 - and some comments on experiences

PETUS project

www.petus.eu.com

3a Multi-Criteria Assessment tools

Short summary of characteristics

Multi-Criteria Assessment (MCA) tools are used to weight different aspects of a situation to aid decision-making between alternatives. The purpose of

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July 20

PETUS project

www.petus.eu.com

1a Frameworks

Short summary of characteristics

A Framework is defined as a support structure in which other information is organised and developed. Frameworks provide a set of information. Within PETUS, a Framework is a portfolio of documents of different features that aims to support actions relating to specific matters such as social implications of a project. Frameworks describe how to manage a project or a policy on sustainability; the phases to go through, how to involve stakeholders, types of tools to be used, how to analyse the situation, etc. Different types of end users are addressed depending on the sector covered and the point of view of the Frameworks developer.

Two different types of Framework have been identified through PETUS investigations:
1) Frameworks that are developed in a specific local context to guide and frame actions in a sector. These Frameworks organise existing references, such as analysis, legal text, benchmarks, case studies, assessment methods, other experiences, etc. to outline a policy of actions. Drivers for this kind of Framework development are usually public authorities. They are commonly available on a paper or computer format.

2) The second type of Framework is less dependent on the local context. It gathers existing tools, methods and recommendations in specific matter. Sometimes called toolkits, they nevertheless include examples and cases studies illustrations. These Frameworks are often developed by international consortium including researchers. These Frameworks, a set of tools, are often provided in a website format and provide ways of searching through the database depend on the goals of the Framework.

Stage that the tool is used

Frameworks tend to cover the whole process of an action. The idea lying behind Frameworks is to document all the steps from the inception of a project to the operation stage.

Output from the tool

The format of output is not defined. Frameworks tend to support the whole process of a project, providing a set of tools, methods, recommendations and illustrations at different space and time scales.

Experiences of use

The main benefit of a Framework is to provide a panel of tools that are organised and documented. It enables the user to create an internationally referenced background. Often, the way of searching information through Frameworks are different and well adapted to the sector covered.

July 2005

Typology of tool

PETUS web site

Process Guides

1a Frameworks

1b Environmental Impact Assessment and Strategic Environmental Assessment procedures

1c Schemes and policies

1d Checklists and guidelines

Calculation Tools

2a Life Cycle Analysis

2b Other environmental calculations

2c Economic and social evaluation tools

2d System Simulation tools

Assessment methods

3a Multi-Criteria Assessment tools

3b Evaluation procedures

3c Surveys

Monitoring tools

4a Indicators and benchmarks

4b Accounting tools

Reviewed tools

within PETUS

Come from

- Cases studies
- Literature Review
- From literature review final report
 - 126 tools reviewed using the data extraction sheet!

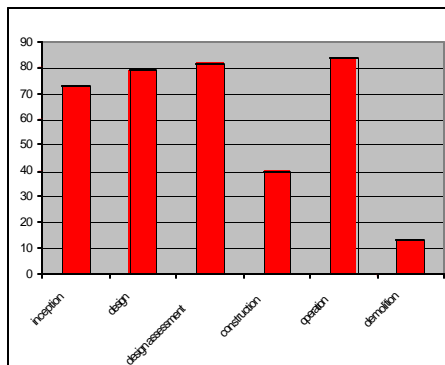


Figure 5.3 - Stage at which sustainable development tools are applied

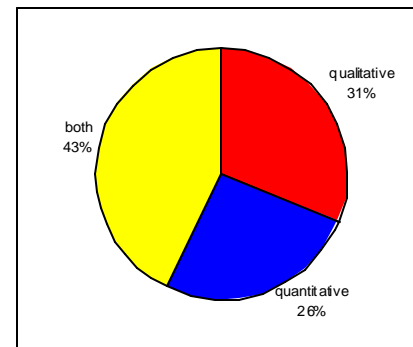


Figure 5.5 - Type of data collection method used in the evaluation tools identified

Reviewed tools

within PETUS

PETUS

Energy Water Waste Transport

- AMP 3 Process map
water and sewage
- BEAT 2002 (Building Environmental Assessment Tool)
buildings and land use
- BRE Sustainability Checklist for developments: A common framework
local authorities
buildings and land use
- BREEAM (Building Research Establishment Environmental Assessment designs)
all sectors
- Cardiff County Council Sustainability Appraisal Matrix
buildings and land use
- Contract Evaluation (Contractor Selection Matrix)
all sectors
- Cost-benefit-analyses (CBA)
transport
- Design Guidance/Design code
buildings and land use
- Dispute Resolution Ladder:
all sectors
- EiEonline planning-map
energy
- Environmental Impact Assessment (EIA) and Environmental statement (ES)

Sustainability Checklist

What is the Sustainability Checklist? It is a tool to help you assess the sustainability of a development. It is a checklist of 100 criteria, grouped into 10 categories. It is a common framework for all sectors.

SEEDA

EnEffex

Search for tools

Feedback form
+352 2 9411110
www.eneffex.lu

2008 | 0 00

Projektor

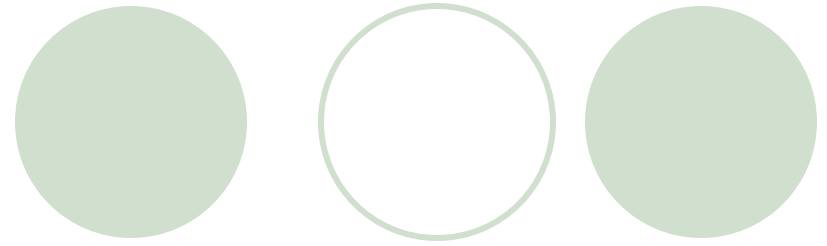
Grant System for NGOs

Projektor is a tool to help you find funding opportunities for NGOs. It is a common framework for all sectors.

○ Around 40 tools already available on the web site!

Tool Summary	Tool Characteristics	Tool Application	Source of Tools	Opinion of Tools
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Frameworks ...



- What's a framework?
 - Within PETUS, a *framework* is a **portfolio** of documents of different features that aims to support actions relating to specific matters.
 - *Frameworks* tend to **support the whole process of a project, p,p** providing a set of tools, methods, recommendations and illustrations at different space and time scales.
 - The main benefit of a *frameworks* is to provide a **panel of tools** that are **organised and documented**. It enables the user to create an (internationally referenced) background.

Frameworks ... collection of tools

available within PETUS

- existing tools, methods and recommendations in specific matter.
- toolkits + examples and cases studies illustrations
- often developed by international consortium
- often provided in a website format

- ways of searching through the database depend on the goals of the *framework*
- different types of end-users addressed depending on the sector covered and the point of view of the *frameworks'* developers

○ **18 frameworks reviewed are available on the web site!**

Frameworks' findings

within PETUS

Practical Evaluation Tools for Urban Sustaina.


Adresse <http://u001.arch.cf.ac.uk/petus/>

PETUS

Energy Was

- Instrumentenpaar buildings and land use
- Integrated Water Resources Management (IWRM) TOOLBOX water and sewage
- INTELCITY buildings and land use
- Livelihoods Connect buildings and land use
- LOCAL EVALUATION 21 buildings and land use
- METREX buildings and land use
- PROSPECTS transport
- SIGMA : Sustainability Integrated Guidelines for Management buildings and land use
- The Strategic Environmental Framework (SEF) buildings and land use
- TOOLBOX for Mobility Management Measures in Companies transport
- Toolbox for Regional Policy Analysis transport
- Urge: Interdisciplinary Criteria Catalogue (ICC) green blue

Framework summary




Name of the Framework
BEQUEST

Brief description of the framework and tools within it
The framework, here called toolkit, demonstrates a system to support decision makers concerned with Urban sustainability.

Diagram
It can be taken toward sustainable urban mass attract, and is illustrated by case studies to...

Framework summary



Name of the Framework
Euroscoop

Brief description of the framework and tools within it
The Euroscoop green planning toolkit provides information on how to balance the requirements in the cities with the urban green areas. It is based on impressive 1000 case studies with green planning in very different situations. They include both urban areas that have been done and about the context for the activities. It has also been different aspects on planning and performance. The report contains theoretical ideas are presented to the toolkit and related to the practical experience from the studies. The framework contains planning as a spatial process with two reports being in 2008 coordinated their planning theory, and it is based on the relevant changes in the urban planning, the spatial structure.


Framework summary



Name of the Framework
CEIAP

Brief description of the framework and tools within it
The main objectives of CEIAP is to:
• define a European set general methodology for assessment and the related sustainability indicators;
• gather and update indicators within a database forming international indicators; defining set of items of use

Framework summary



Name of the Framework
SIGMA : Sustainability Integrated Guidelines for Management

Brief description of the framework and tools within it
The main objective of SIGMA is to provide clear, practical advice to organisations to help them make a meaningful contribution to sustainable development.
The purpose of the SIGMA Guiding Principles is:
• to help organisations understand how they can contribute to sustainable development
• to provide a framework that focus organisations principles that they can then follow
Sigma is designed to effectively meet complex economic dilemmas, threats and opportunities

Framework summary



Name of the Framework
TOOLBOX for Mobility Management Measures in Companies

Brief description of the framework and tools within it
The toolbox is a search facility to help companies to help them promote effectively the use of public transport, car-pooling, walking and cycling for home-work journey. It is a consortium of European specialists in mobility management.

Framework summary



Name of the Framework
Integrated Water Resources Management (IWRM) TOOLBOX

Brief description of the framework and tools within it
The IWRM TOOLBOX is a comprehensive source of knowledge, experience and guidance for sustainable water resources development and its effective regional planning process. The IWRM TOOLBOX aims to help decision-makers plan, coordinate, and implement water resources management. The IWRM TOOLBOX draws together information and data accessible to developing Integrated Water Resources Management (IWRM) activities.
The IWRM TOOLBOX contains a set of tools (M, S, EA) and contains a general methodology, including the 'Sustainable' and 'Economic' activities to other tools.

Frameworks' findings

within PETUS

- Huge amount of tools

A European Thematic Network on Construction and City Related Sustainability Indicators



Database

Systems list :

- 18-indicator system for CCRSP and choice (demolition or renovation)
- Architectural quality (Success of principles of architecture)
- DECost
- Ba01
- BREEM
- BUILDING DIAGNOSTICS
- Colour quality
- Demolition or renovation in a social housing neighbourhood : a 4l
- Pressure indicators system
- Ecodec
- EcoEffect
- Ecological performance of building products and structures
- EcoProP - Eco-efficiency indicators for buildings
- Eco-Quantum
- Ecosistema urbano - Urban Ecosystem
- ENVEST and ENVEST II
- French standard system XP R03-010 : environmental characteristics of building products
- Green Building Challenge (GBC)
- Green Guide to Specification; Green Guide to Housing Specification
- Hammarby Sjöstad
- Healthy Buildings
- IRDI Model
- ISDIS Model : Indisputable Sustainable Development Indicators System
- LEED
- LifePlan
- Monitor Urban Renewal

Navigation menu:

- Home page
- What's new
- Presentation
- Newletters
- Events
- R & D Works
- Bad Users
- Links
- Library
- Database**
- Question & Comments

- The way tools are organised



Central squares

- Front page
- Main stories
- The 14 cases
- FAQ
- Guide-Info
- Practice
- Tools
- Practice concepts
- Theory
- Lessons learnt
- Growth/green
- Planning
- Communication
- Governing

Cross Roads

- Guide to the toolkit •

Road signs

Information

- Statistics - Pages and links
- The authors - - and the reports
- The green planning toolkit - Introduction
- The Greenscom project •

Guided tour

Why this form of tool-kit

- A tool is not just a tool
- What is a tool
- The character of this tool-kit

Free search

Set waypoints

Path behind

Previous pages

GREENSCOM

What type of tool PETUS will developed?

TOOLS

FRAMEWORKS-
collection of tools

The screenshot shows the PETUS website with a navigation bar containing icons for Energy, Waste, and Climate. Below the navigation bar, there are several links to various tools and frameworks, including:

- AMP 3 Process map
- BEAT 2002 (Building Environmental Assessment Tool)
- BRE Sustainability Checklist for developments: A common framework for developers
- BREEM (Building Research Establishment Environmental Assessment Method) for off-site

This screenshot displays the IWRM TOOLBOX page, which features a list of tools and frameworks. A prominent feature is the European Union flag with the text "Building Environmental Quality for Sustainability through Time" and the logo "EQUEST".

The screenshot shows a "Sustainability Checklist" page with a header image of a cityscape and a "Download Checklist" button. Below the header, there are several sections with text and icons, likely detailing the checklist's components.

This screenshot shows a page titled "Projekt" with a sidebar containing a list of items. The main content area features a large image of a stylized eye and text in German, including "Projekt" and "Projekt" repeated.

The screenshot displays the EnEffea website, which has a search bar and a list of search results. The results include "The European Energy Efficiency Fund" and "Energy Efficiency 21".


This screenshot shows the "CRISP" Framework summary page. It includes a circular logo with "CRISP" text and a brief description of the framework and tools within it.

This screenshot shows a "Framework summary" page with a green arrow pointing upwards. It includes a brief description of the framework and tools within it.

This screenshot shows the "ToolBox" page, which features a globe icon and the text "ToolBox". It includes a brief description of the framework and tools within it.

This screenshot shows a "Framework summary" page with a globe icon and the text "The Green Project". It includes a brief description of the framework and tools within it.

This screenshot shows the "TOODBOX for Mobility Management Measures in Companies" page. It features a circular image of a person walking and a brief description of the framework and tools within it.



COM(2004)60

Towards a Thematic Strategy on the Urban Environment

- “ the **knowledge and techniques** needed to bring about significant improvements in environmental performance in urban areas are **already known**. Whilst there are some **gaps in knowledge**, the focus of the Strategy should be on achieving **clear changes** in urban areas **rather than calling for further consideration of the issues**.”

PETUS approach

A complementary, crossing, double approach



- structured and documented data
- comments on practice

- frame : questions but not solutions
- meeting point for stakeholders
- sectors, time and space limits crossed over

PETUS

double complementary approach,
a frame to customize, a database to use...

The screenshot shows the PETUS website interface. The browser title is "Practical Evaluation Tools for Urban Sustaina...". The address bar shows "http://u001.archf.ac.uk/petus/index_p.php". The main header features the PETUS logo and six category icons: Energy, Waste, Water & Sewage, Transport, Green Blue, and Buildings & Land use.

The left sidebar contains navigation links: Favorites, Historique, Recherche, Album, and Garder pages. The main content area is titled "Practical Evaluation Tools for Urban Sustainability" and displays a "Tool summary" for "Key Performance Indicators (KPIs)".

Tool summary
Name of the tool
 Key Performance Indicators (KPIs)
Description of the tool
 The UK Construction Industry Key Performance Indicator national set of indicators against which a project or company benchmark its performance and work towards best practice. The standard construction industry KPI framework consists of 10 topic groups: Time; cost; quality; client satisfaction; cost business performance; Health and safety. Within these of indicators have been developed to analyse either project performance, or both.

Since projects vary, different KPIs will be appropriate for different projects, it is for the projects to identify the relevant KPIs in their context. Constructing Excellence has produced KPIs for environment, respect for people, new build housing and maintenance and refurbishment. These KPIs can complement the Construction Industry's KPIs.

Indicators can assess a range of issues:
 (i) headline indicators: provide a measure of the overall health of a firm;
 (ii) operational indicators: focus on specific aspects of performance and should enable management to identify and focus on areas for improvement;

The right side of the page features a table titled "My accounts" with the following structure:

	1 Project details	2 Tools methods indicators	3 Public / stakeholders participation	4 Decision making	5 Communication	6 Out
A Baseline - gathering information						
B Objectives identify alternatives						
C Key impacts						
D Evaluate alternatives						
E Propose improvements						
F Reporting						
G Monitoring						

Below the table, the text reads: "These questions will help you to answer; What tools or methods have been used or introduced? What was the purpose and field of operation?"

- To which extent are problems and key impacts addressed by indicators, tools and methods?
- Is there a need for new tools and data?

The footer includes the European Commission logo and the text "Community Research Energy, Environment and Transport".

PETUS



double complementary approach,
a frame to customize, a database to use...

<http://www.petus.eu.com/>