



National Standards Authority of Ireland

STANDARD

**I.S. CWA 14947:2004**

ICS 35.240.99

National Standards  
Authority of Ireland  
Dublin 9  
Ireland

Tel: (01) 807 3800  
Fax: (01) 807 3838

**EUROPEAN ECONSTRUCTION  
ARCHITECTURE (EEA) - BLUEPRINT FOR AN  
ICT SYSTEM IN CONSTRUCTION**

*This Irish Standard was  
published under the  
authority of the National  
Standards Authority of  
Ireland  
and comes into effect on:  
May 12, 2004*

**NO COPYING WITHOUT NSAI  
PERMISSION EXCEPT AS  
PERMITTED BY COPYRIGHT  
LAW**

© NSAI 2004

**Price Code J**

Údarás um Chaighdeán Náisiúnta na hÉireann



**CEN**

**CWA 14947**

**WORKSHOP**

March 2004

**AGREEMENT**

---

ICS 35.240.99

English version

## **European eConstruction Architecture (EeA) - Blueprint for an ICT System in Construction**

This CEN Workshop Agreement has been drafted and approved by a Workshop of representatives of interested parties, the constitution of which is indicated in the foreword of this Workshop Agreement.

The formal process followed by the Workshop in the development of this Workshop Agreement has been endorsed by the National Members of CEN but neither the National Members of CEN nor the CEN Management Centre can be held accountable for the technical content of this CEN Workshop Agreement or possible conflicts with standards or legislation.

This CEN Workshop Agreement can in no way be held as being an official standard developed by CEN and its Members.

This CEN Workshop Agreement is publicly available as a reference document from the CEN Members National Standard Bodies.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**Management Centre: rue de Stassart, 36 B-1050 Brussels**

## CWA 14947:2004 (E)

# Contents

Foreword.....	3
Introduction .....	4
1 Scope.....	5
2 Normative References .....	6
3 Definitions and abbreviations .....	7
3.1 Definitions.....	7
3.2 Abbreviations .....	7
4 Methodology.....	8
5 The ICT Architecture .....	10
5.1 The Global ICT Architecture.....	10
5.1.1 Resulting Scope for ICT Architecture .....	13
5.2 The ICT Architecture .....	15
5.2.1 Knowledge Management Trend.....	15
5.2.2 Model-based Trend.....	17
5.2.3 Information Sharing & Object Orientation Trend .....	19
5.2.4 Resulting ICT Architecture.....	21
5.3 ICT Architecture Component Characteristics.....	23
5.3.1 Open Standards Trend .....	23
5.3.2 Web-based Trend.....	24
5.3.3 Ambient Access Trend .....	26
5.4 ICT Architecture Key-Components.....	27
5.4.1 Language.....	28
5.4.2 Ontology.....	29
Bibliography .....	30

## Foreword

The present CWA contains the description of an ICT Architecture and it is based on the more global and generic CWA on an European eConstruction Framework. It provides a common, global ICT "blueprint" for the Construction industry sector (positioned in Figure 1).

The present CWA is the second of a set of five CWAs describing ICT in the construction industry and produced by the CEN/ISSS Workshop eConstruction:

- 1) European eConstruction Framework
- 2) European eConstruction Architecture
- 3) European eConstruction Metaschema
- 4) European eConstruction Ontology
- 5) European eConstruction Software Toolset

It aims at setting the scene for innovation in the Construction industry sector.

This CWA has received inputs from many sources consolidating a great amount of views and perspectives on ICT in Construction. Acknowledgements to input received from various European R&D activities: FP5 IST eConstruct, e-Cognos, OSMOS, Divercity, E-CORE-network [E-Core], ICCI-cluster, ROADCON-roadmap [ROADCON] and ProdAEC [PRODAEC].

The content of this CWA was endorsed by members of the CEN/ISSS Workshop in eConstruction. The endorsement round started on 12 November and was concluded on 14 December 2003.

## eConstruction Architecture Context & Scope



Industry (Sub)Sector ▼		
Large Scale Engineering (LSE)	Construction	<b>Buildings</b> - residential - utility (offices) - industrial / technical
		<b>Constructions</b> Civil Infra etc. i.e. all non-Buildings
	Urban Regions & Cities	
	Process Plants	
	Ship Building	

Figure 1: ICT Architecture Context

## Introduction

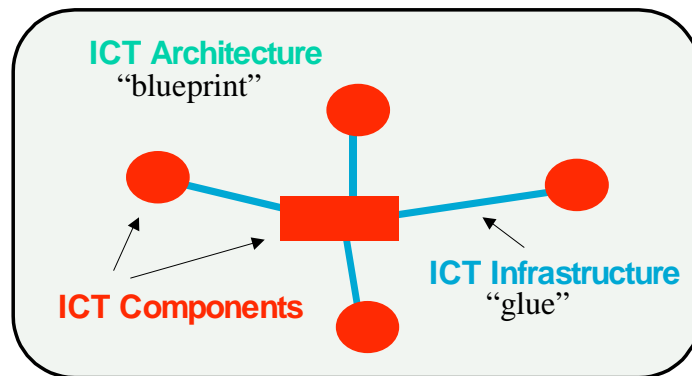
In a world where ICT components and their underlying technologies come and go there is a need for some stability in the form of a logical ICT architecture. This architecture can serve as a backbone providing overview and transparency that is sustainable in time and can identify ICT components and the infrastructure needed for linking and integrating these ICT components in the right way (*Figure 2*).

# eConstruction Architecture

## An Architecture, What is it ?



- ICT-oriented Blueprint
- A functional / logical view: no implementation details
- Things (“components”) and their Interrelations (“infrastructure”) gluing these things together



*Figure 2: ICT Architecture, Components & Infrastructure*

One of the underlying assumptions/paradigms is that, like any other company, a software vendor has to concentrate on his core business/competence. He can be good in one or some ICT application type(s) but he cannot be best at everything. For an end-user this often means that his complete 'ICT System' will be assembled of software components (applications, tools, data bases, ...) coming from different vendors preferably communicating via non-proprietary interfaces based on open standards for flexibility.

The architecture in this CWA essentially provides on a global/generic (and moreover, modest) scale a reference for an overview of such a heterogeneous ICT system in its context.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

- 
- Looking for additional Standards? Visit Intertek Inform Infostore
  - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-