

**Ionian University- Department of Archives and Library Sciences**  
**Laboratory on Digital Libraries and Electronic Publication**

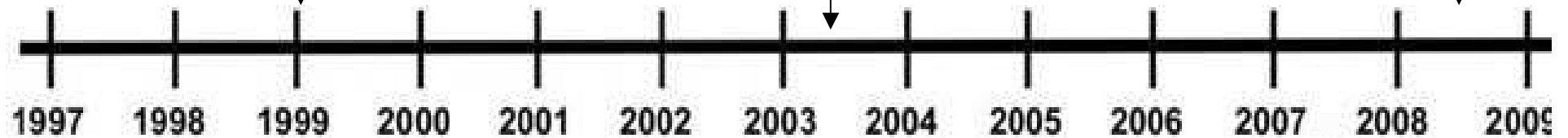
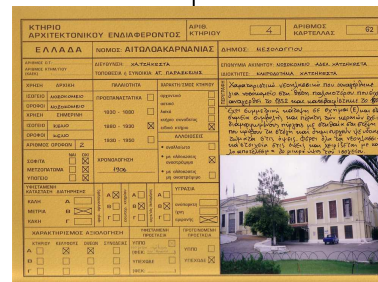


# **DiscOVERing Current Practices for Records of Historic Buildings and Mapping them to Standards**

**Michail Agathos**  
**Sarantos Kapidakis**

March 2011

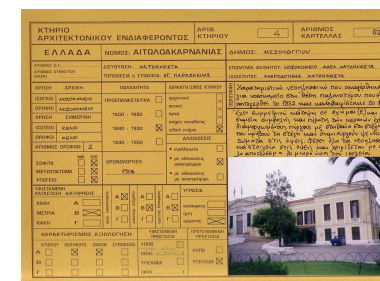
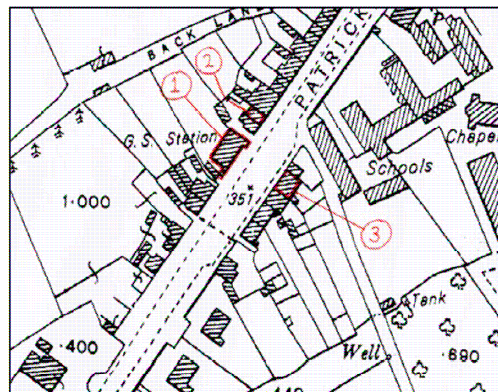
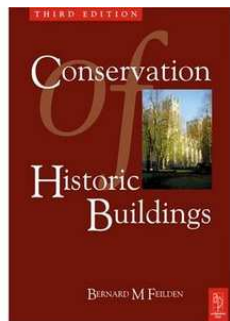
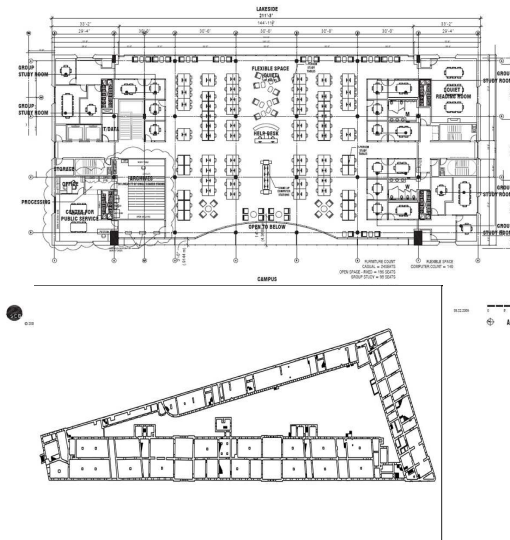






Large amount of information is created in different types of medias:  
written documents, images, photos, sketches, drawings...

The information on built heritage in Greece is dispersed, as at present a  
number of various institution..





Historic buildings usually have  
documentation in form of so-called:

paper fiches

**Inventory Cards**

White Cards

Register Cards

**Forms**

**Inventory Forms**



**ΚΤΗΡΙΟ  
ΑΡΧΙΤΕΚΤΟΝΙΚΟΥ ΕΝΔΙΑΦΕΡΟΝΤΟΣ**

ΑΡΙΘ.  
ΚΤΗΡΙΟΥ

4

ΑΡΙΘΜΟΣ  
ΚΑΡΤΕΛΛΑΣ

62

**ΕΛΛΑΔΑ**

**ΝΟΜΟΣ: ΑΙΤΩΛΟΑΚΑΡΝΑΝΙΑΣ**

**ΔΗΜΟΣ: ΜΕΣΟΛΟΓΓΙΟΥ**

ΑΡΙΘΜΟΣ Ο.Τ.:

ΑΡΙΘΜΟΣ ΚΤΗΜ/ΓΙΟΥ  
(ΚΑΕΚ)

ΔΙΕΥΘΥΝΣΗ: **ΧΑΤΖΗΚΩΣΤΑ**

ΤΟΠΟΘΕΣΙΑ ή ΣΥΝΟΙΚΙΑ: **ΑΓ. ΠΑΡΑΣΚΕΥΗΣ**

ΕΠΩΝΥΜΙΑ ΑΚΙΝΗΤΟΥ: **ΝΟΣΟΚΟΜΕΙΟ ΑΔΕΛ. ΧΑΤΖΗΚΩΣΤΑ**

ΙΔΙΟΚΤΗΤΕΣ: **ΚΛΗΡΟΔΟΤΗΜΑ ΧΑΤΖΗΚΩΣΤΑ**

ΧΡΗΣΗ ΑΡΧΙΚΗ

ΠΑΛΑΙΟΤΗΤΑ

ΧΑΡΑΚΤΗ/ΣΜΟΣ ΚΤΗΡΙΟΥ

ΙΣΟΓΕΙΟ **ΝΟΣΟΚΟΜΕΙΟ**

ΠΡΟΕΠΑΝΑΣΤΑΤΙΚΑ

☐

αρχοντικό

☐

ΟΡΟΦΟΙ **ΝΟΣΟΚΟΜΕΙΟ**

1830 - 1880

☐

αστικό

☐

ΧΡΗΣΗ **ΣΗΜΕΡΙΝΗ**

1880 - 1930

☒

λαϊκό

☐

ΙΣΟΓΕΙΟ **ΚΕΝΟ**

1930 - 1950

☐

κτήριο συνοδείας

☒

ΟΡΟΦΟΙ **ΚΕΝΟ**

ΑΛΛΟΙΩΣΕΙΣ

ΑΡΙΘΜΟΣ ΟΡΟΦΩΝ **2**

• αναλλοίωτο

☐

ΣΟΦΙΤΑ

ΝΑΙ

ΟΧΙ

☐
☒

ΧΡΟΝΟΛΟΓΗΣΗ

• με αλλοιώσεις  
αναστρέψιμο

☒

ΜΕΤΖΟΠΑΤΩΜΑ

☐
☒

1906

• με αλλοιώσεις  
μη αναστρέψιμο

☐

ΥΠΟΓΕΙΟ

☐
☒

ΥΦΙΣΤΑΜΕΝΗ  
ΚΑΤΑΣΤΑΣΗ ΔΙΑΤΗΡΗΣΗΣ

φερ. οργανισμός  
Α ☒  
Β ☐  
Γ ☐

εσωτερ. κτηρίου  
Α ☐  
Β ☒  
Γ ☐

εξωτερ. κτηρίου  
Α ☐  
Β ☒  
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εξωτερ. κτηρίου  
Α ☐  
Β ☒  
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εξωτερ. κτηρίου  
Α ☐  
Β ☒  
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εξωτερ. κτηρίου  
Α ☐  
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Γ ☐

εξωτερ. κτηρίου  
Α ☐  
Β ☒  
Γ ☐

ΥΓΡΑΣΙΑ

ανύπαρκτη

☐

ίχνη

☐

εμφανής

☒

**ΧΑΡΑΚΤΗΡΙΣΜΟΣ ΑΞΙΟΛΟΓΗΣΗ**

**ΥΦΙΣΤΑΜΕΝΗ  
ΠΡΟΣΤΑΣΙΑ**

**ΠΡΟΤΕΙΝΟΜΕΝΗ  
ΠΡΟΣΤΑΣΙΑ**

ΚΤΗΡΙΟΥ ΚΕΛΥΦΟΥΣ ΘΩΡΕΩΝ ΣΥΝΟΔΕΙΑΣ

Α ☐

☒
☒
☐

ΥΠΠΟ

☒

(ΦΕΚ: **Σύμφωνα με το Ν. 1608/81**)

Β ☐

☐
☐
☐

ΥΠΕΧΩΔΕ

☐

(ΦΕΚ: **Σύμφωνα με το Ν. 1608/81**)

Γ ☐

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☐
☐

ΥΠΠΟ

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ΥΠΕΧΩΔΕ

☒

ΠΕΡΙΓΡΑΦΗ

Χαρακτηριστικό νεοκλασικό που αναφέρθηκε για νοσοκομείο επί θέσης παλαιότερου που είχε αναφερθεί το 1852 και κατεδαφίστηκε το 1904. Έχει συμμετρική πρόσοψη σε σχήμα (Ε) και στα δεξιά συμβολής και πέρας των κεραιών έχει διαμορφωμένους πύργους με εστιαία και εστία που κρύβουν τη εστία και δημιουργούν ψευδοαετώματα στις όψεις. Φέρει όλα τα νεοκλασικά στοιχεία στις όψεις και χειρίζεται με καλο αποτέλεσμα το μικρό ύψος του 160χέιαν.





# The Survey

- Main objective: to explore - **at a national level** - the existence of historic buildings records as their compilation methods
- The degree of syntactic and semantic interoperability in production and management of these Records
- Study on the content and function

**Totally: 45 Organizations Participating**



## Participants - **Public Sector 1/2**

- General State Archives
- General State Archives - District of Corfu
- Municipality of **Heraklion** - Old Town Office
- Municipality of **Corfu** - Old Town Office
- Hellenic Statistical Authority



# Participants – **Public Sector 2/2**

## **Ministry of Infrastructure, Transport and Networks - Depended Services:**

Technical Chamber of Greece - Regional Department of:  
West Crete, Eteoloakarnania, Corfu

- Ministry of Environment Energy & Climate Change - Archive of traditional and listed buildings.
- Ministry of Maritime Affairs Islands and Fisheries - Secretariat General for the Aegean and Island Policy.
- Ministry of Finance, Real Estate Service (District of Corfu)



# Participants – Public Sector 2/2

## **Hellenic Ministry of Culture and Tourism – Dependent Services:**

- Nationale archive of Monuments.
- Directorate of Cultural Buildings and Restoration of Contemporary Monuments - Department for the Study of Modern Monuments.
- Directorate of Modern and Contemporary Architectural Heritage.
- Directorate of Topography, Photogrammetry and Land Register.
- 3<sup>rd</sup>, 6<sup>th</sup>, 9<sup>th</sup>, 10<sup>th</sup>, 13<sup>th</sup> 5<sup>th</sup>, 14<sup>th</sup>, 16<sup>th</sup>, 19<sup>th</sup> and 26<sup>th</sup> Ephorate of Byzantine Antiquities.
- Ephorate of Contemporary and Modern Monuments of Attica, Crete, Thessalia, Central Macedonia, North Aegean, West Greece, Hipirus.
- Directorate of Prehistoric and Classical Antiquities .  
2<sup>nd</sup>, 4<sup>th</sup>, 16<sup>th</sup>, 27<sup>th</sup>, 29<sup>th</sup> and 38<sup>th</sup> Ephorate of Prehistoric and Classical Antiquities.

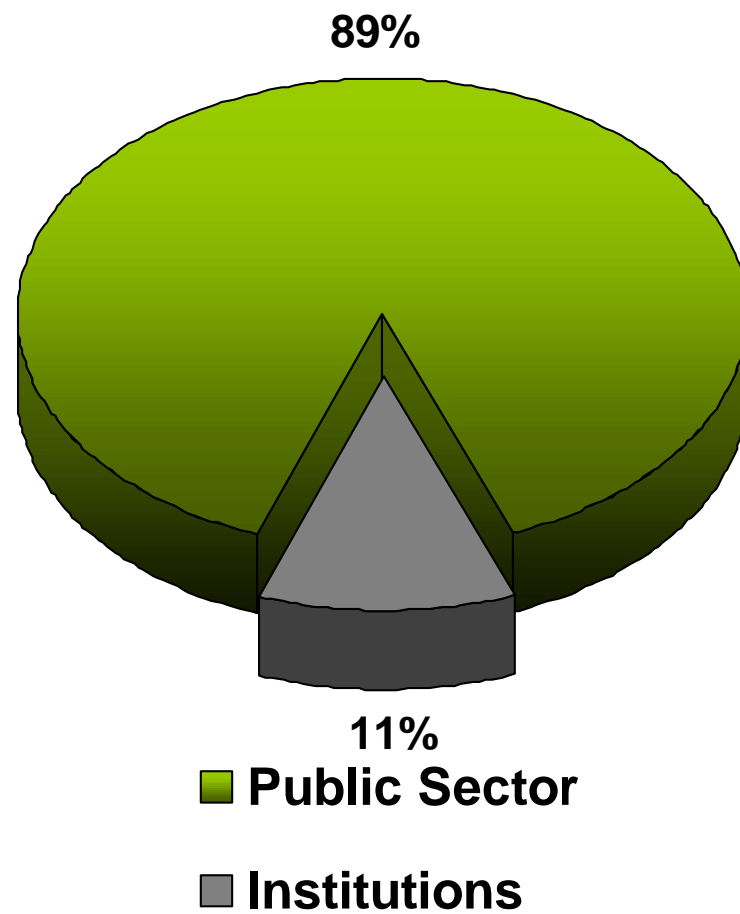


## **Non Government Organizations**

- European Centre for Byzantine and Post Byzantine Monuments
- Hellenic Society for the Protection of the Environment and the Cultural Heritage
- Hellenic ICOMOS (scientific committee)
- Benaki Museum - Neohellenic Architectural Archives



# Participants





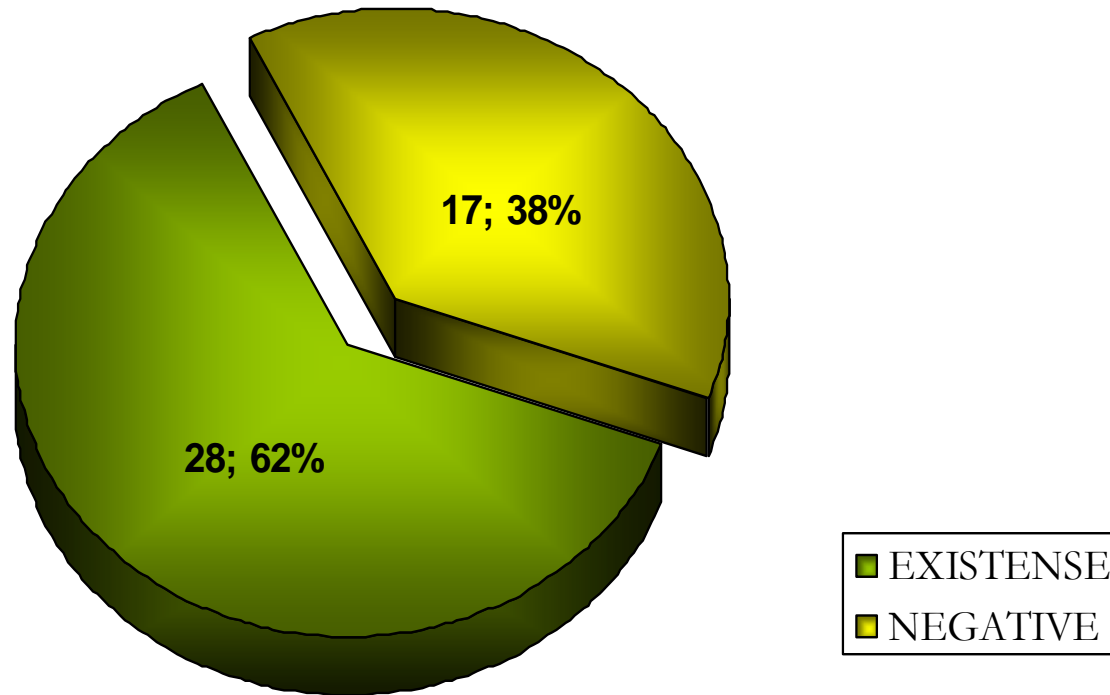
# Method

- Questionnaires / Postal Method
- A total of 18 questions
- Close ended questions
- Open ended - completely unstructured
- Scaled questions: Likert Items - Likert Scale (on a scale from 1 - 10 with 10 being the highest)





## Produce or Use Forms for Historic Buildings? (yes/no)



28 Participants use forms

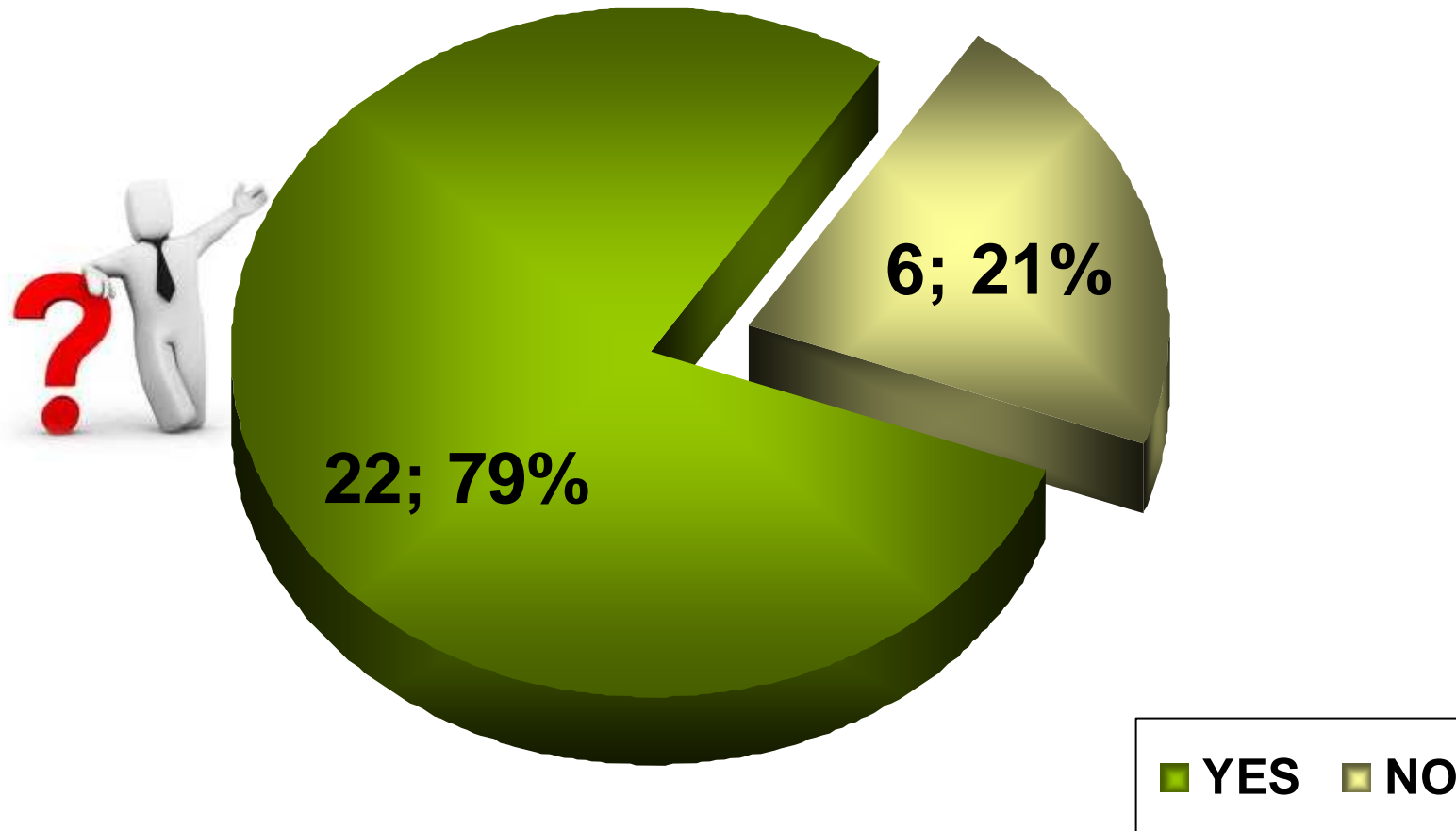
In total ☐ 900.000





**The form has been prepared by your service?**  
(28 Responses)

6 Organization use forms from cognate services

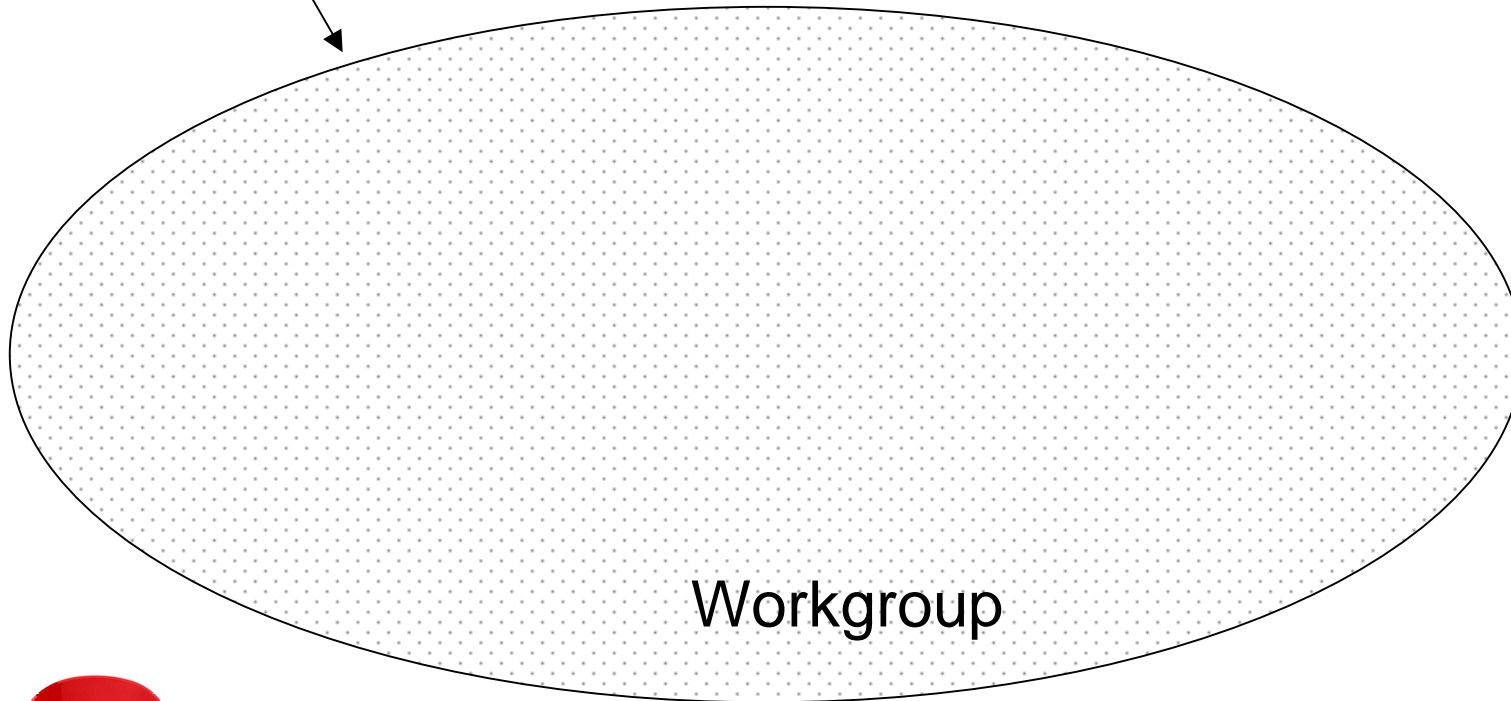




# Who is the compiler of these Records?

22 Responses

Government employee



Workgroup





**Who was the initial aim of their compilation;  
Likert items: Registry creation, service needs, other....**

**For Public Sector:**

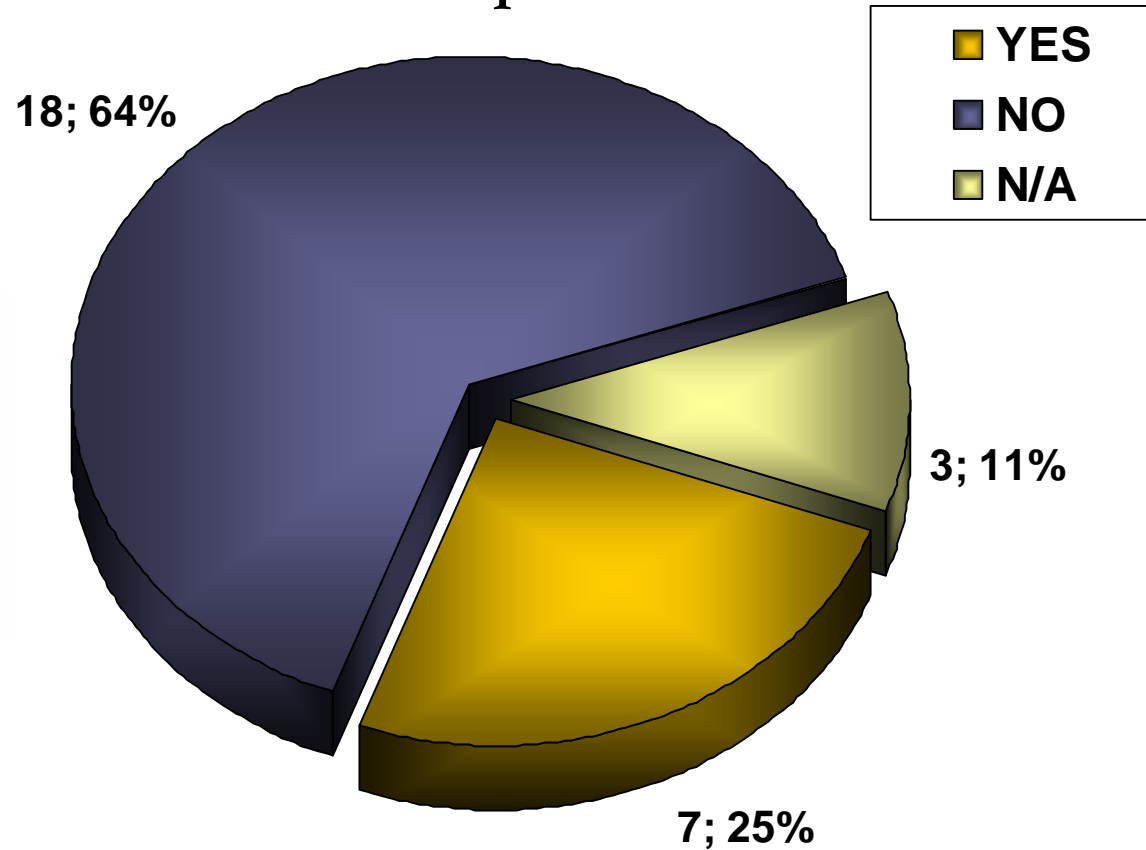
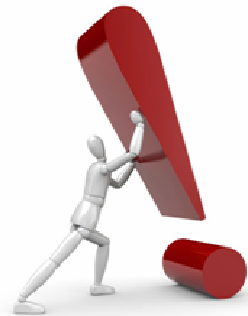
A registry for the Buildings located within the jurisdiction of the  
Organization+  
Service Needs

**For Institutions:**

Collecting, Organizing, Publishing Data



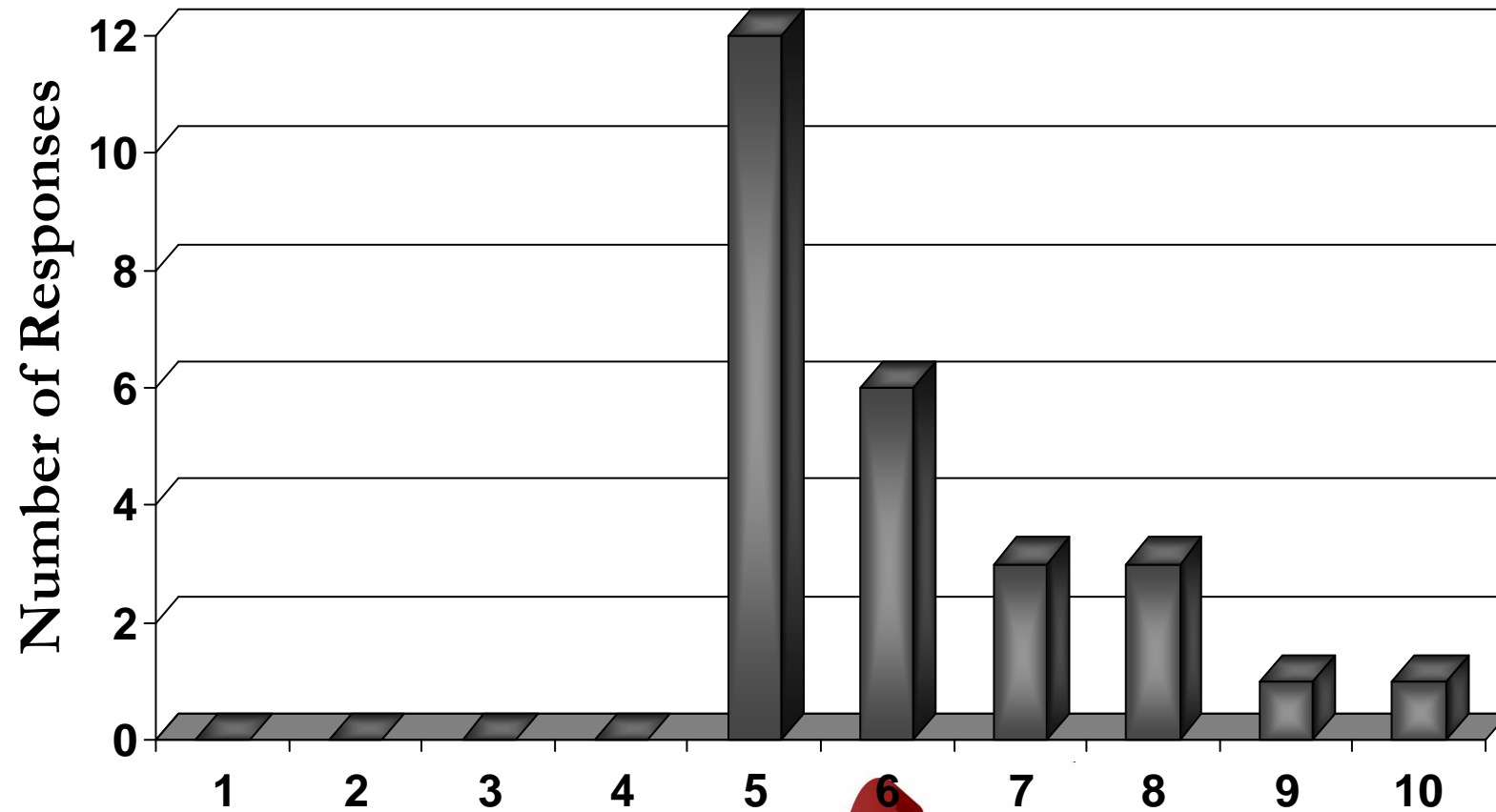
## Compliance with standards or guidance 25 respondents



CIDOC –CRM(ISO 21127:2006) (2 Participants)  
General guidance's of recording historic buildings (1)  
Other Forms (UNESCO - DOCOMOMO) (2)  
Guidance of Hellenic Ministry of Culture (2)



Histogram  
Coverage of your service needs  
(26 responses)



Average: 65%





# Needs for more data

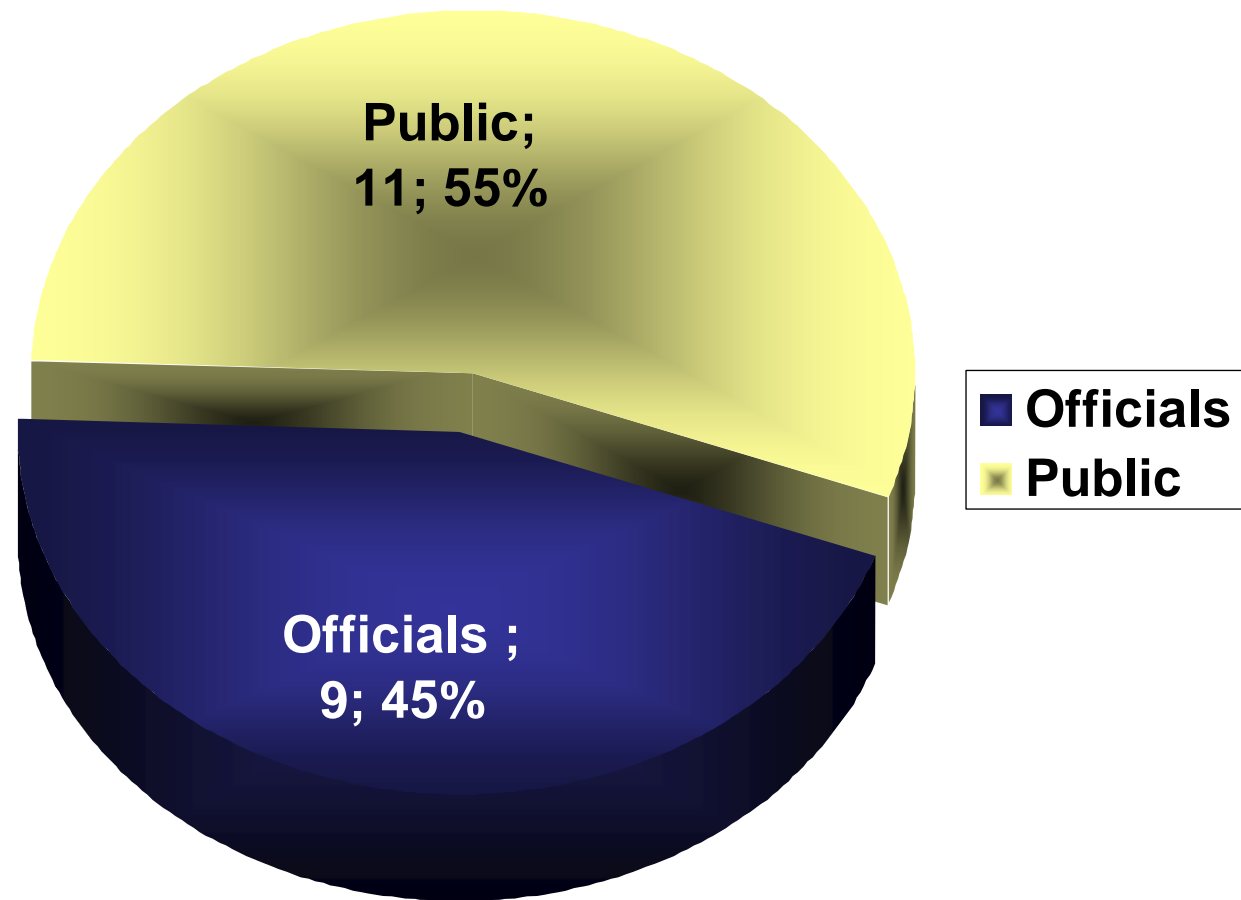
## 20 Responses

- Documents/ Correspondence
- Regular Photography
- Marking on digital maps
- Dimensions
- Analysis on materials
- Conservation – Restoration Info
- Interventions
- Buffer Zone
- Land Registry info (Volume Number, documents of titles e.t.c)
- Drawings
- Description of decoration – Morphological Elements





Re – Use of Information  
20 Responses



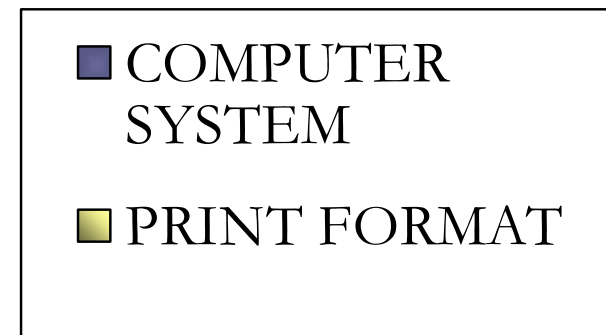
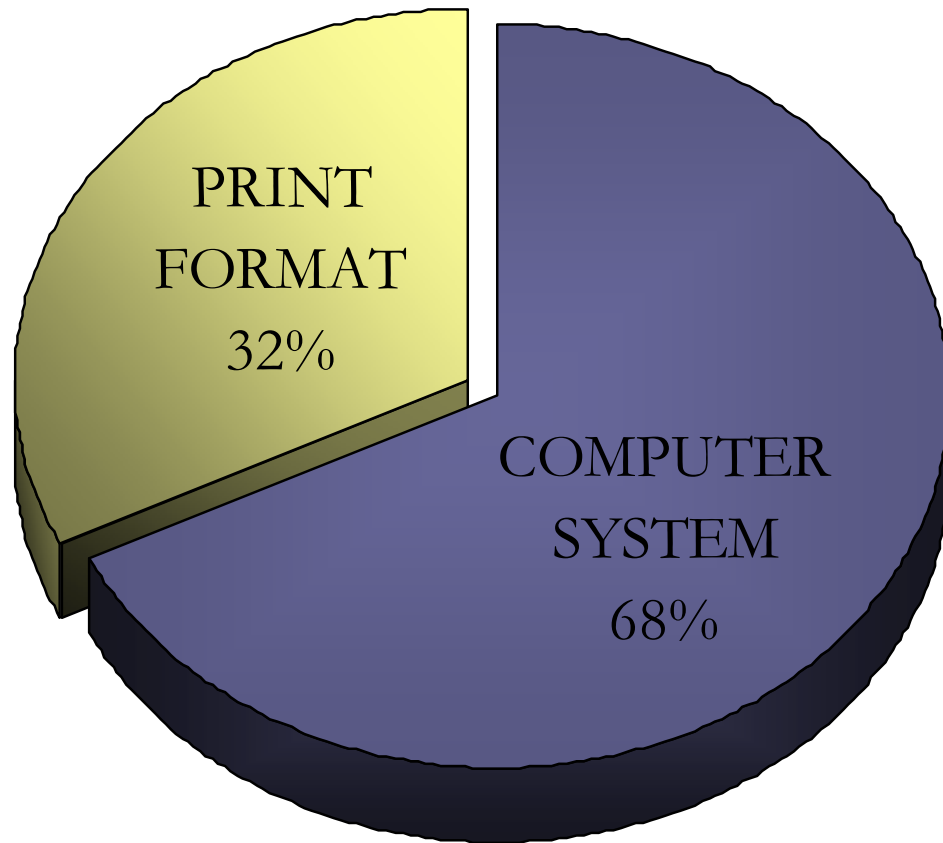
Available to the Public 55%

Available only to officials 45%



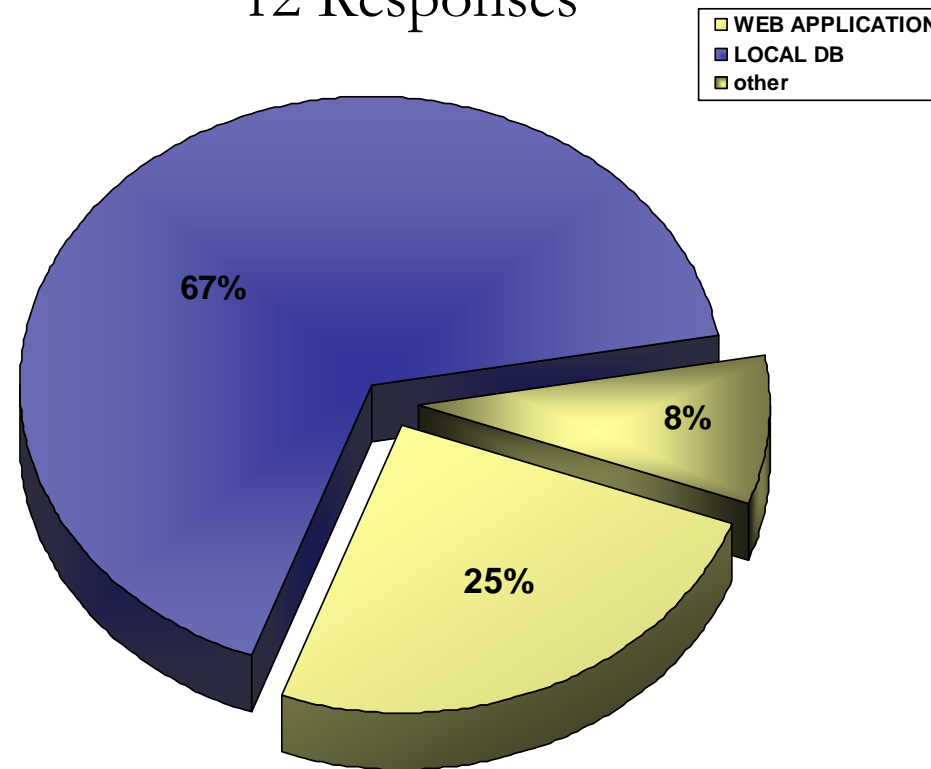
# Records in a Computer system

28 Responses





# Applications Development 12 Responses



3 Web Database Applications

8 Local DB (Access, Oracle)

1 Other



## But Why



# Information Systems for the documentation of Immovable Cultural Heritage

- CLIO a cultural documentation system **FORTH -Hellas**
- Deltos (1991-1993) - Documentation system for the administration of site monuments and preserved buildings of Crete - Needs of administrative documentation of site monuments and preserved buildings, including cartographic, geometric and photographic representation **FORTH -Hellas**
- Polemon (1994 -1997) Information System for the National Monuments Record + Integrated Museum Information System 66 Ephorates + Museums / 140.000 records for immovable monuments / lack of financial resources / staff / essential skills. **FORTH -Hellas**
- MAESTOR (1996-1998) **FORTH -Hellas**
- EMERIC II (2004-2005)
- POLIS.xsd

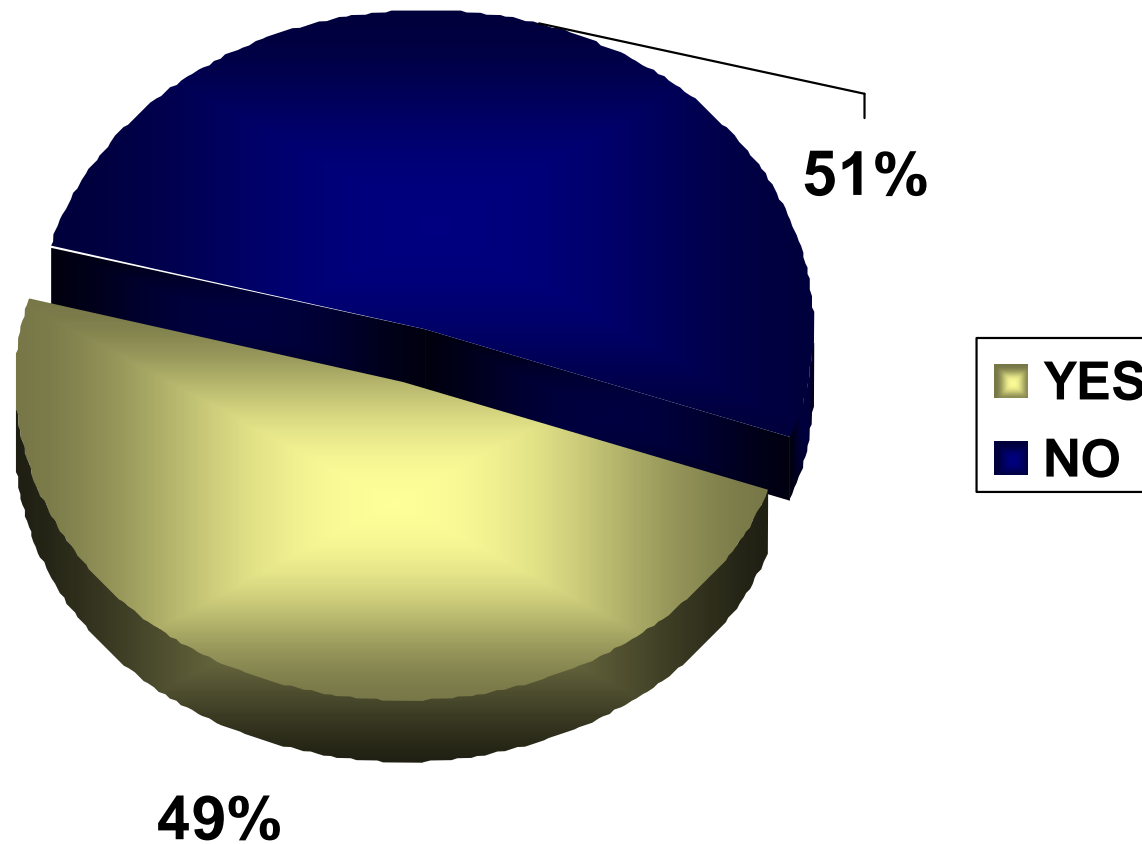
*95% of all cultural heritage institutions in Europe are not in the position to participate in any kind of digital cultural heritage venture (**DigiCULT Report:2002**)*





# Production of Digital Content

35 Responses



17 Participants produce digital Material



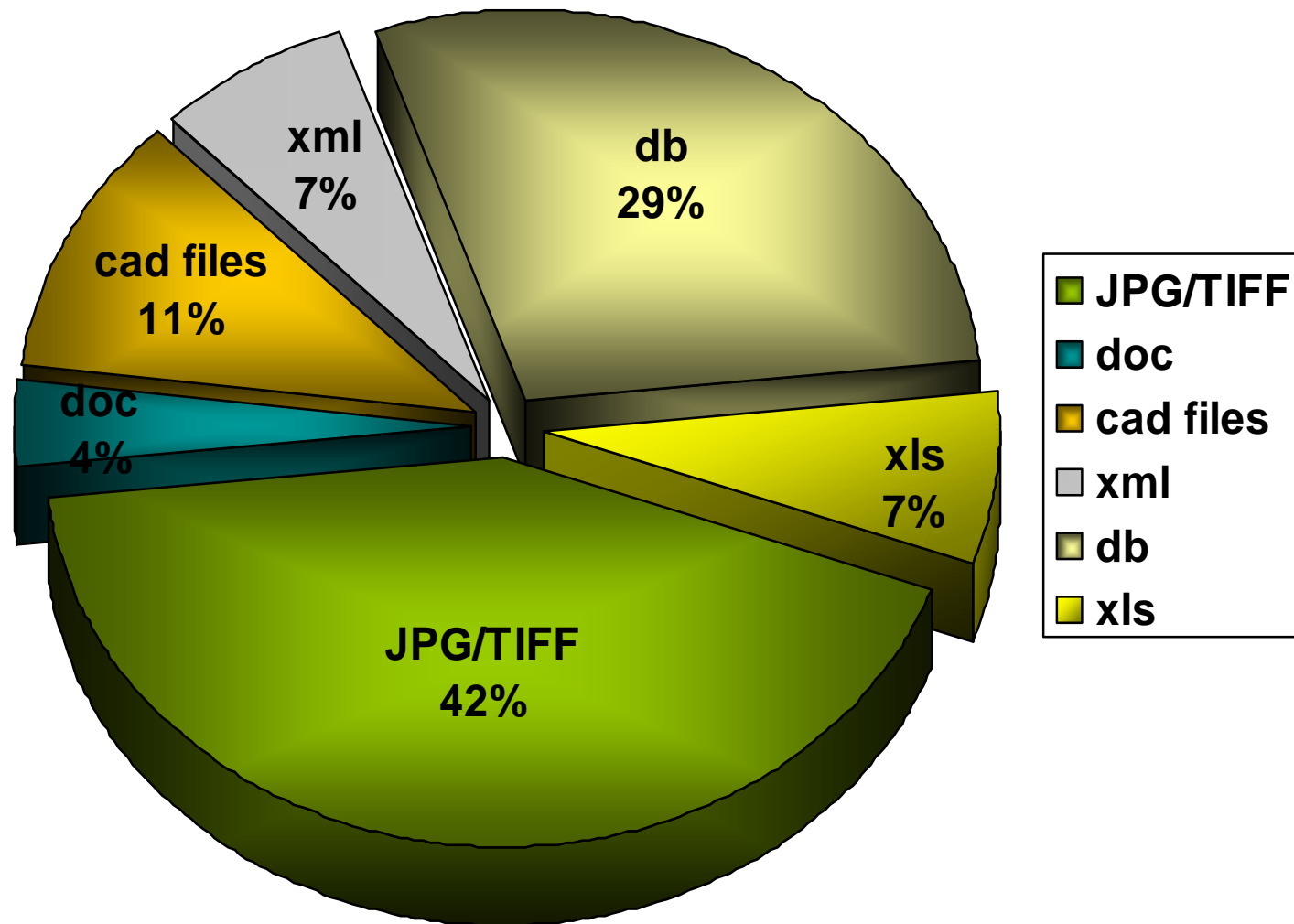
# Types

- Photographic Material
- Drawings
- Scanned Maps / Plans
- Orthophotographies - Digital Orthophoto Mosaic
- Topographic backgrounds
- Excel Files, .doc, e.t.c



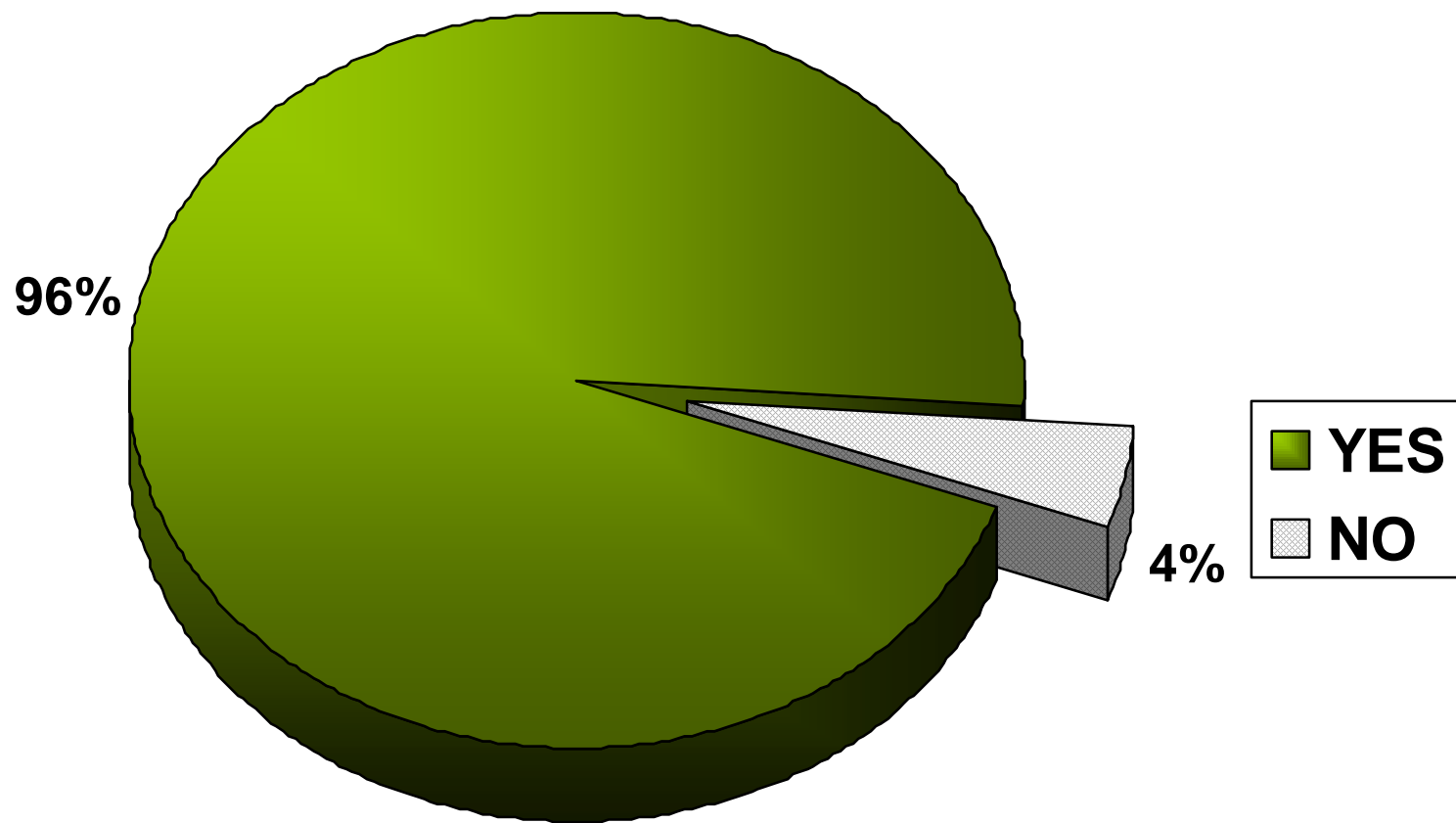


# Formats





# Need for Encoding 45 Responses





# Other Services that product Records

Open ended question – completely unstructured

## A few responses



Many Participants ignore the existence of such records



# Section for general comments

Open ended question – completely unstructured

*“The documentation, with a systematic way, is the basis of any serious scientific research, but also the basis for monitoring the history and interventions for the protection of any historic building. Unfortunately, this approach is not addressed with the expected serious way, of the protection bodies”*

**Hellenic ICOMOS**

most frequently voice requests:

**Common Databases / Forms** - Occasionally there were some attempts with no avail so far.

*Historic buildings – monuments, appears a set of unique characteristics - therefore, a coding would be quite limited only to few general elements*





## **A brief summary of our findings ...**

- Absence of syntactic and semantic interoperability
- The existing system of building recording is based on local inventory forms
- Organizations create “Small Inventory Systems”  
*Inventions rather than Inventories (sykes:1984)*
- Creation of Small DB systems
- There is no legally binding standard / form for the built heritage recording
- A limited access to the information







## A brief summary of our findings ...

- Diversity / 28 different types of forms / Diversity of approach
- Variations in Levels: Optical Records - most of these
  - 1<sup>st</sup> Description Level – 3<sup>rd</sup> Level
  - From Minimum Information (5-6 elements): Location-type-Dating-Legal Status - to a fuller description, visual documentation, in-depth description, bibliography, etc.
- Finally, there is no link between the guidelines of international conventions ratified by Greece (Granada convention 1985)
- Terminological Confusion: Category / Typology/ Type / Characterization/
- Records do not include some information crucial for successful protection and regeneration of historical buildings

### **Principles for the recording of Monuments, Groups of Buildings and Sites (ICOMOS 1996 - 11th ICOMOS General Assembly)**

The format of the records should be standardised, and records should be indexed wherever possible to facilitate the exchange and retrieval of information at a local, national or international level.

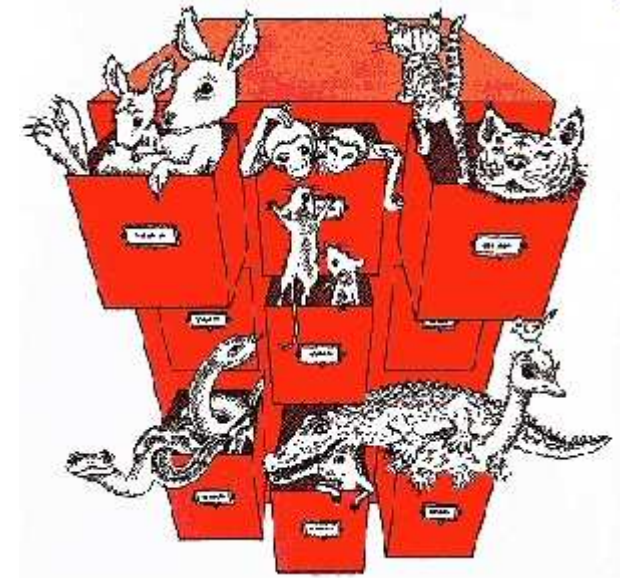




# Classifying The Information

## 12 Categories – 140 Elements

1. Titles
2. Location
3. Functional Type – Use
4. Names and Roles
5. Dating
6. Building Parts: Materials and Techniques
7. Conservation / Treatment History
8. Physical Condition
9. Protection – Legal Status
10. General Notes
11. Illustrative Material: Images/plans/Sketches
12. Record Info





## Protection - Legal Status

Elements	Frequency
<b>Gazette</b>	•••
<b>Number of Ministerial Decision – Statute Number</b>	•••
<b>Proposed Protection by</b>	•••
<b>Protection Body</b>	•••
<b>Gazette Title</b>	•
<b>Type of Declaration</b>	•
<b>Under Declaration</b>	•
<b>Grade of Protection I.P.C.E.</b>	•
<b>Characterization Date</b>	•
<b>Declaration Type</b>	•
<b>Ministerial Decision Date</b>	•
<b>Proposal of conservation</b>	•
<b>Grade of Protection</b>	•
<b>Inspected by</b>	•
<b>Buffer Zone (A or B)</b>	•
<b>Zone Borders / Delimitation</b>	•



## The Standards

- **CDWA (1990)** a data structure standard specifically designed for describing unique works of art, architecture, and material culture - includes 532 categories and subcategories
- **Core Data Index to Historic Buildings and Monuments of the Architectural Heritage (1992)** 9 information groups (sections): 9 sections are supported by sub-sections and a set of 45 data fields
- **International Core Data Standard for Archaeological Sites and Monuments (1995)**  
7 sections contain sub sections, which in turn include a set of 52 data fields
- **MIDAS Heritage (1998)** is a data standard for information about the historic environment  
9 Themes: the broadest level areas of interest, 16 Information Groups, these set the specific standard for what should be included in an entry covering a particular subject and 138 Units of Information  
used to plan the content of a new inventory or to audit the existing content of an inventory,

(Information groups → Themes → Units of Information).

**MIDAS is a set of closely integrated data standards**

- **CDWA Lite (2006) XML** a format for core records for works of art and material culture - has a total of twenty-two top-level elements
- **VRA Core 4.0 XML (2007)** is a descriptive metadata standard for the description of culture works (of 19 elements and 23 subelements.

1:M Relationship



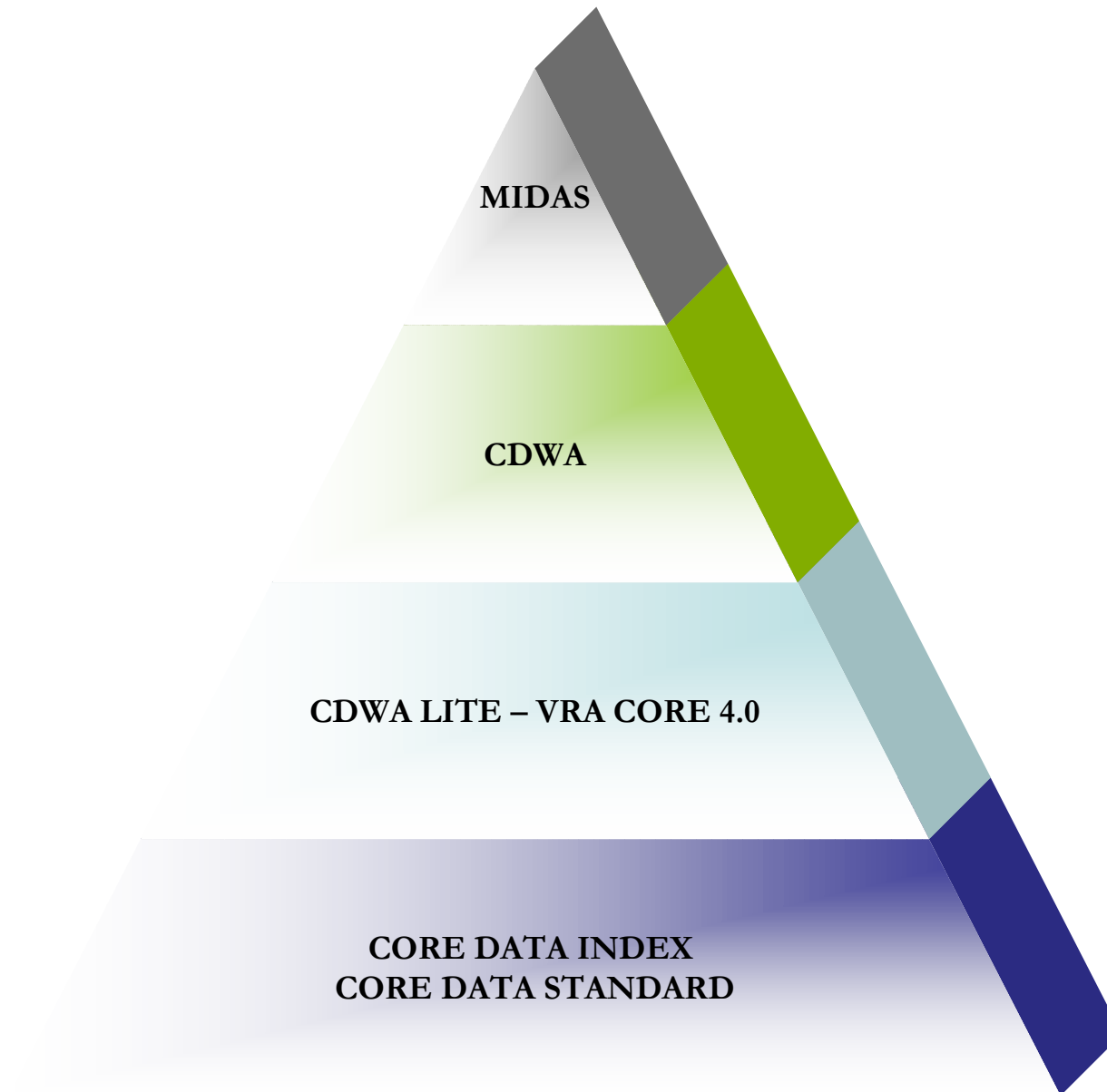
Gazette	CDWA	CDWALITE	VRA 4.0	CDI	MIDAS
Number of Ministerial Decision – Statute Number	No equivalent	No equivalent	No equivalent	No equivalent	No equivalent
Proposed Protection by	No equivalent	No equivalent	No equivalent	No equivalent	Organisation Body
Protection Body	No equivalent	No equivalent	No equivalent	No equivalent	Organisation Body
Gazette Title	No equivalent	No equivalent	No equivalent	No equivalent	No equivalent
Type of Declaration	No equivalent	No equivalent	No equivalent	Type of Protection	Protection Type
Under Declaration	No equivalent	No equivalent	No equivalent	Type of Protection	Management Proposal Type
Grade of Protection I.P.C.E.	No equivalent	No equivalent	No equivalent		Protection Grade
Characterization Date	No equivalent	No equivalent	No equivalent	Date at which Protection was Granted	Protection Start Date
Declaration Type	No equivalent	No equivalent	No equivalent	Type of Protection	Management Proposal Type
Ministerial Decision Date	No equivalent	No equivalent	No equivalent	Date at which Protection was Granted	No equivalent
Proposal of conservation	No equivalent	No equivalent	No equivalent	No equivalent	No equivalent
Grade of Protection	No equivalent	No equivalent	No equivalent	Grade of Protection	Protection Grade
Inspected by	No equivalent	No equivalent	No equivalent	No equivalent	Authorization required
Buffer Zone (A or B)	No equivalent	No equivalent	No equivalent	No equivalent	Buffer Zone Width
Zone Borders / Delimitation	No equivalent	No equivalent	No equivalent	No equivalent	Buffer Zone Width



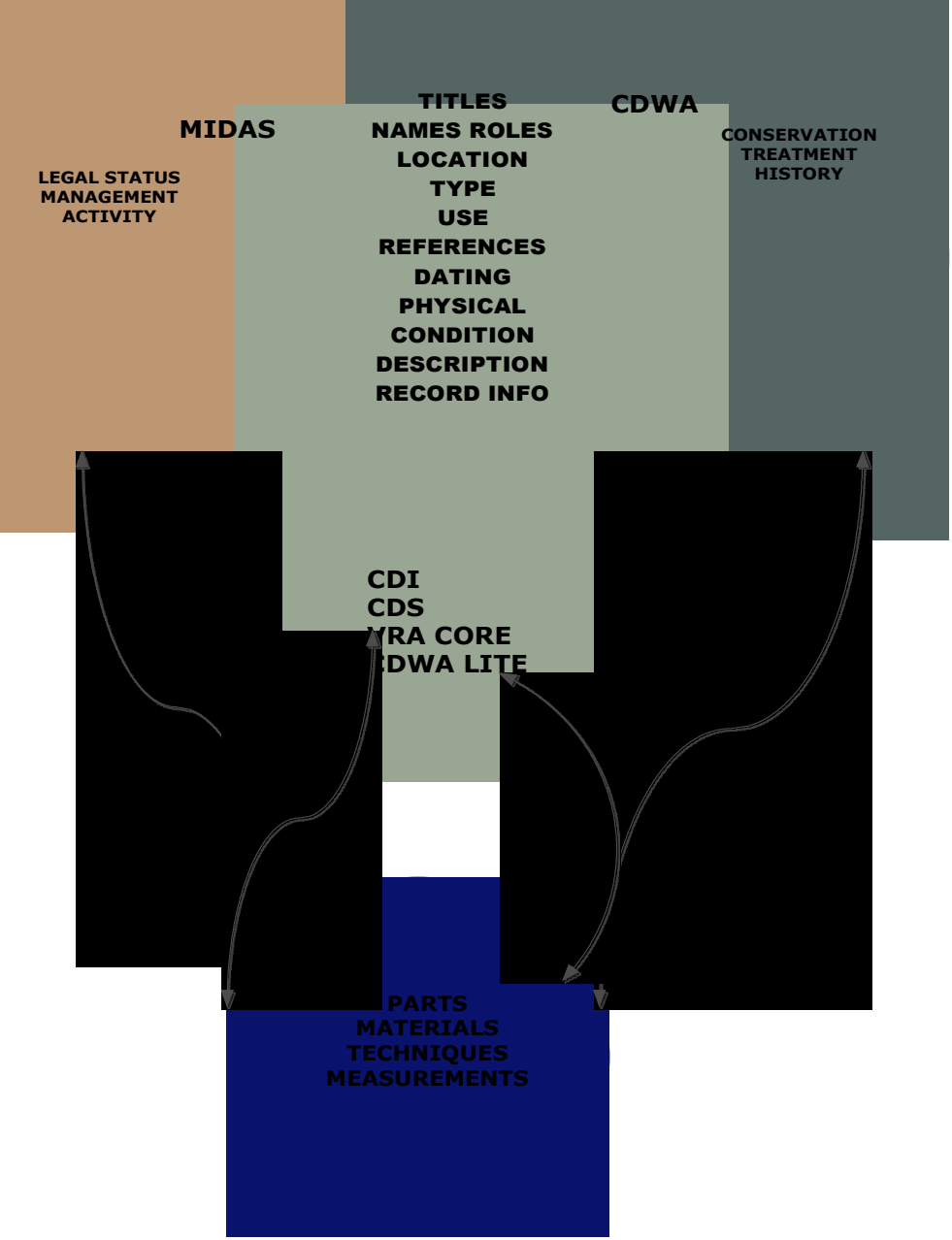
Building Parts: Materials	CDWA	CDWALITE	VRA	CDI	CDS	MIDAS
Roof	Materials/Techniques Extent	<cdwalite: extentMaterials Tech>	<vra: materials extent=>	Covering Materials	No equivalent	Component
Frames	«	«	«	No equivalent	No equivalent	Component
Masonry	«	«	«	Main Materials Structural Techn..	No equivalent	Component
Staircase	«	«	«	No equivalent	No equivalent	Component
Balcony	«	«	«	No equivalent	No equivalent	Component
Floors	«	«	«	No equivalent	No equivalent	Component
Ceiling	«	«	«	No equivalent	No equivalent	Component
Soffit	«	«	«	No equivalent	No equivalent	Component
Building Shell	«	«	«	Main Materials Structural Techn..	No equivalent	Component
Windows – Type of folding shutter	«	«	«	No equivalent	No equivalent	Component
Rails	«	«	«	No equivalent	No equivalent	Component
Bedrock	«	«	«	No equivalent	No equivalent	Component
Coating	«	«	«	Main Materials Structural Techn..	No equivalent	Component



# Rating the Standards according to mapping









## In order to achieve harmonisation

- Specificity – Exhaustivity: agreed depth and breadth - agreed Levels / USER – NEEDS / minimal set of elements
- Published manuals for Recording / Cataloguing immovable monuments
- Controlled vocabulary should be deployed: reduction of terminological confusion by controlling synonyms and nearsynonyms.
- Thesauri creation ( Polydeukis??) / harmonisation with widely recognised controlled vocabularies, Art and Architecture Thesaurus (AAT) / Crucial for providing multilingual access to the resources.



## Further Study...

- The methods of recording sites and buildings and of defining their significance have been developed to a high level of sophistication over recent decades
- Investigation on new categories of information for Historic Buildings
- Standards must be evolved and changed, trying to keep pace with rapid technology changes (see DC)
- A new API for Build Heritage specializing in Buildings





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Kapidakis, Sarantos

Papatheodorou, Christos

*We are grateful to all participants, who took time out of their busy schedules to participate in the study*



**questions**

