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D3.1 Methodology and a list of criteria for the assessment of open data platforms and initiatives across the EU

ENERGIC OD
European NEtwork for Redistributing Geospatial Information to user Communities - Open Data

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Project title	European NEtwork for Redistributing Geospatial Information to user Communities - Open Data
Call identifier	CIP-ICT-PSP-2013-7
Project acronym	ENERGIC OD
Starting date	01.10.2014
End date	30.09.2017
Funding scheme	Competitiveness and Innovation Framework Programme (CIP) - ICT Policy Support Programme - Pilot B
Contract no.	620400
Deliverable no.	3.1
Deliverable name	Methodology and a list of criteria for the assessment of open data platforms and initiatives across the EU
Work Package	Open Data Survey
Nature[1]	R
Dissemination[2]	PU
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Date	30.12.2014

[1] R = Report, P = Prototype, D = Demonstrator, O = Other

[2] PU = Public, PP = Restricted to other programme participants (including the Commission Services), RE = Restricted to a group specified by the consortium (including the Commission Services), CO = Confidential, only for members of the consortium (including the Commission Services).

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France

Global Infotech (NOW)
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France

Depth France Sas (DEPTH)
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ABBREVIATIONS

Term	Explanation
CA	Consortium Agreement
EC	European Commission
EC-GA	European Commission Grant Agreement
TL	Task Leader
WP	Work Package
WPL	Work Package Leader

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1. EXECUTIVE SUMMARY

Open Data and the opening of data vaults, especially of the public sector, is a trend that is picking up speed but is often lacking direction, structure or a common purpose. Unfortunately this leads to a very fragmented picture of the European open data landscape. Many platforms have been launched, initiatives issued and data collected or released without a unified approach. These efforts have created a vast amount of interesting data, but without a consolidated overview it can be extremely tiresome and frustrating for a user or developer to find data suited to his or her needs.

To rectify this situation an exhaustive catalogue of open data platforms and initiatives will be compiled as a valuable foundation for the work in other ENERGIC OD work packages. The compilation of the necessary data will take the form of a two step survey with the project partners and important stakeholders from the participating countries. As the catalogue needs to be more than just a list of platforms and initiatives, the findings of the survey will be examined closely and assessed by the criteria most significant for the project partners. These criteria were collected during the first workshop WP3.1 of WP3 by the attending partners and later refined to take the form of the tables in section 4.

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2. REVISION HISTORY

Version	Date	Modified by	Comments
0.1	18/12/14	Michael Bauer, Julia Ernst	Initial version of draft for final deliverable.
0.2	29/12/14	Annett Frick, Maria Liberti	Small corrections
		Tino Desjardins, Frank Iden	Changes in section 4 (list of criteria to database model)
		Roger Longhorn, Miguel Ángel Latre Abadía, Paolo Mazzetti	General comments and input
1.0		Miguel Ángel Latre Abadía, Julia Ernst	Final version

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3. OPEN DATA DEFINITION

Open Data is the central keyword for ENERGIC OD, therefore a common understanding of the term is necessary and the base for the inventory of platforms and initiatives.

If data can be freely accessed, used, modified and shared for any purpose and by anyone, the term Open Data is appropriate. Open Geo Data as part of Open Data deals with open geospatial data, which is basically applied within ENERGIC OD. Open Data implies data from all possible areas, not just Open Government Data, viz. data from public authorities. Indeed several initiatives in the recent years have brought the open data concept in the world of Earth Observation (see GEOSS Data Sharing Principles), and research data (see Research Data Alliance). Moreover, the European Union is stressing open data support through several measures in the new Horizon 2020 Programme such as the Pilot on Open Research Data.

Principles regarding the term *openness* in relation to data already exist and can be adopted. In particular, the Open Knowledge organization´s principles, called *Open Definition*, can be taken into account[3].

The key features of openness are briefly summarized as follows:

- ***Availability and access:*** *the data must be available as a whole and at no more than a reasonable reproduction cost, preferably by downloading over the internet. The data must also be available in a convenient and modifiable form.*
- ***Reuse and redistribution:*** *the data must be provided under terms that permit reuse and redistribution including the intermixing with other datasets. The data must be machine-readable.*
- ***Universal participation:*** *everyone must be able to use, reuse and redistribute — there should be no discrimination against fields of endeavour or against persons or groups. For example, 'non-commercial' restrictions that would prevent 'commercial' use, or restrictions of use for certain purposes (e.g. only in education), are not allowed [Open Foundation].*

The full *Open Definition* can be accessed through: http://opendefinition.org/od/

Operational definitions

Most of the data served by the Virtual Hubs and used by the innovative applications will be free of charge but not all of them. Therefore it is important to be clear that Open Data, according to the ENERGIC OD context, is data that is:

- ***Freely and generally accessible but not exclusively free of charge:*** *not all data will be free of* charge *but preferably affordable by reasonable reproduction cost, without any arbitrary access conditions.*

[3] see also *Implementation Guidelines for the GEOSS Data Sharing Principles* [Group on Earth Observations, 2009]

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4. CRITERIA COMPILATION

The following list of criteria was created by the combined effort of all WP3 participants during the first workshop W3.1 (see APPENDIX A and D3.4) and further refined later on. Now, it takes the form of a database model with three database tables (*platform*, *service* and *dataset*) and corresponding criteria, assigned as attributes. The relation between *platform* and *service* as well as the relation between *platform* and *dataset* refer to a one-to-many (1:n) relationship. All open data platforms and initiatives identified in T3.2 will be assessed by these attributes, where attributes coloured in grey seem to be less significant.

PLATFORM		
ID	*Description*	*Type*
Name	Name or title of the platform or initiative	String
Online Address	Online address (URL) leading to the website of the platform or initiative	String
Country	Country of publisher of the platform or initiative Intl. country codes (ISO 3166)	Varchar
Federal State	Federal State (or subnational entity) of publisher of the platform or initiative	String
Host	Host of the platform or initiative	String
Scale	Hierarchy level of the platform or initiative *(Municipal, Regional, Federal/National, European, Global, Thematic)*	List[4]
Language	Language or languages of the platform or initiative website Intl. language codes (ISO 639)	Varchar
Start Date	The launch date (ISO 8601) of the platform or initiative	Date
Ongoing	Is the platform maintained and the data provided updated regularly? (ISO 8601)	Boolean & Date

[4] Entries of the different "list" types do not have a fixed number of list items: items will be added to the list according to the findings of the survey, in order to create a comprehensive picture of the properties of open data platforms.

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Standard Compliant	Standards and regulations applied by the platform *(ISO, INSPIRE, etc.)*	List
General Licence	Does the platform use one licence for all datasets?	Boolean
Registration	Is a registration required in order to use all functionality of the platform	Boolean
Search	Search functionalities available to search for data *(Metadata, Full text, Keywords, Topics)*	List
Single access point	Presence of a web portal through which all datasets of the platform can be accessed	Boolean
API	Link to a developer interface, if provided	String
Usability	General assessment of the platform *(excellent, good, moderate, poor)*	List
Transformation Service	Transformation services offered by the platform?	List
Data Upload	Upload possibility of new or altered data for the users	Boolean
Openness	Openness of platform (open, accessible and reusable) grading. (grade: 1-5)	Integer
Geospatial Server	Which geospatial service software is used by the platform? (Geoserver, MapServer, ArcGIS, Deegree)	List
Metadata Server	Which metadata service software is used by the platform?	List
No. of Datasets	Number of datasets included in the platform or initiative	Integer
Steps to Download	Number of steps necessary to get from the entry point to downloading a dataset	Integer
No. of Users	Number of unique users during the course of a month	Integer

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SERVICE		
ID	***Description***	***Type***
Service Address	Machine to Machine (M2M) address of central data or metadata service	String
Protocols	Supported web protocol services like e.g. OGC services and others	List
Topic	Thematic coverage of the service (layer name) *(environmental, agricultural, traffic, etc.)*	List
OGC-Service	Type of OGC services provided by the platform	List
SRS	Name and/or EPSG identification of spatial reference systems provided by the service	List
Monitoring	Are the services of the platform continually monitored concerning availability, usage and quality of service?	Time
Language	Supported languages of the service Intl. language codes (ISO 639)	Varchar
Version	Version of the service	String

DATASET		
ID	***Description***	***Type***
Geographical Extent	Geographical area (Bounding Box) covered by the platform's datasets	ENUM (Float)
Data Publisher	Name of the main responsible person/organization responsible for publishing data on the platform	String
Data Creator	Name of the main responsible person/organization responsible for the data acquisition or processing	String

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Origin	Source of data *(public, private, crowd)*	List
Topic	Thematic coverage of the dataset *(environmental, agricultural, traffic, etc.)*	String
Language(s) Data	Language or languages of the data Intl. language codes (ISO 639)	Varchar
Update Cycles	Time interval (ISO 8601) data is updated	Timespan
SRS	Name and EPSG identification of spatial reference systems used by the provided data	Integer
Metadata Profile	Applied standards for geospatial metadata *(Dublin Core, INSPIRE, etc.)*	List
Metadata Link	Does a machine navigable link between the metadata and datasets exist	Boolean
Structure	Concept the data is structured by – especially relevant for crowd sourced data	String
Type	Type of dataset *(Coverage, vector data, etc.)*	String
Interface	Interface to get dataset *(WMS, WFS, WCS - publish-find-bind)*	List
Format	Format of dataset *(GML, PNG, JPG, JSON, etc.)*	List
Licence	Which licence is applied to the dataset	String

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5. METHODOLOGY

As a starting point the output (platforms) of D2.2 will be included into WP3. The next steps will consist of conducting first an internal survey with the project partners to identify the most prominent open data platforms and initiatives initially (but not restricted) in their respective countries as well as the most important stakeholders there. Interviews will be carried out with these stakeholders to identify further platforms and initiatives. Information and data, compiled in this way will be further enriched by an internet research and then be assessed according to the criteria defined in T3.1.

Through the internet research, surveys and interviews with decision makers and enablers, all relevant existing and planned open data platforms and initiatives in the countries of the consortium will be incorporated in the resulting catalogue

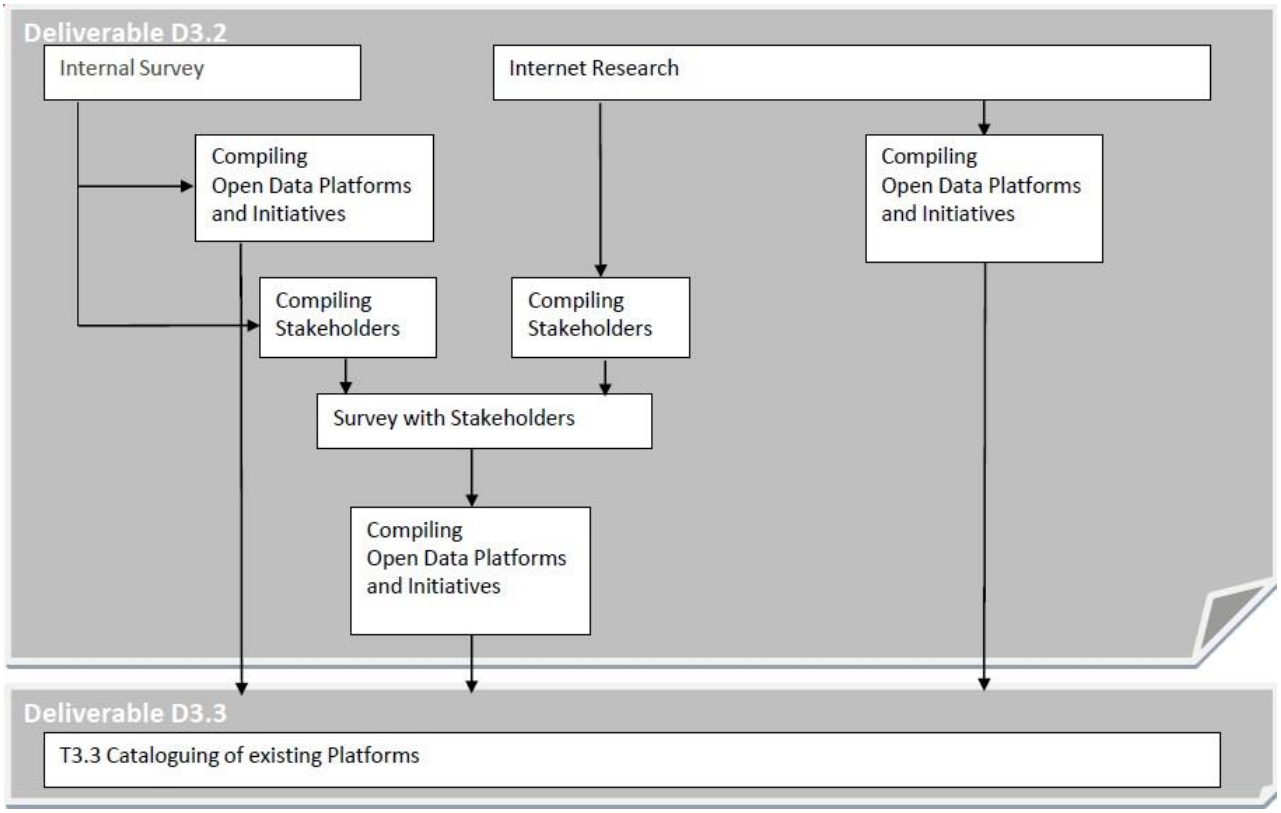

Figure 1: Survey Methodology

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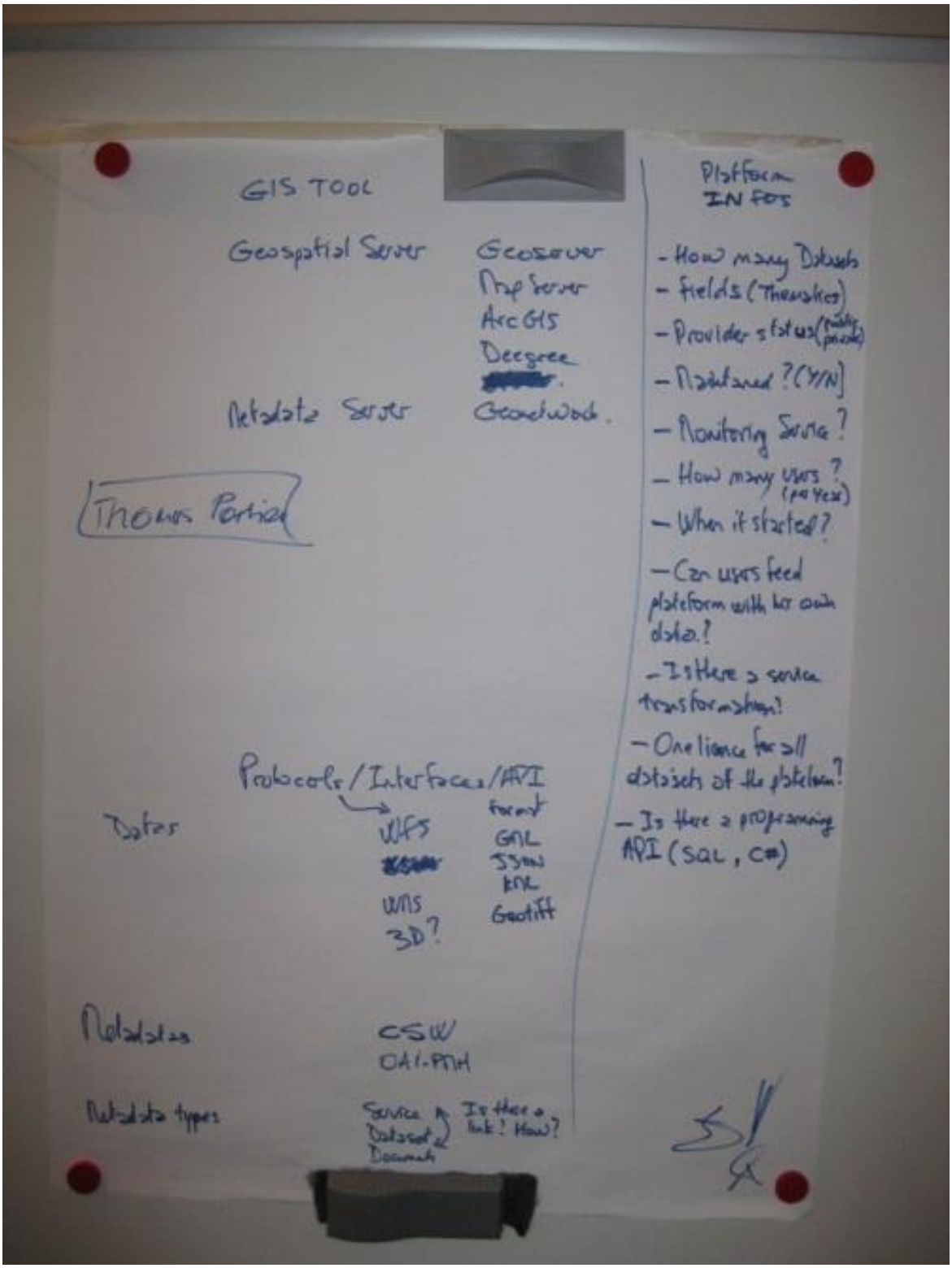
APPENDIX A: CRITERIA COMPILED IN WORKSHOP SESSION W3.1



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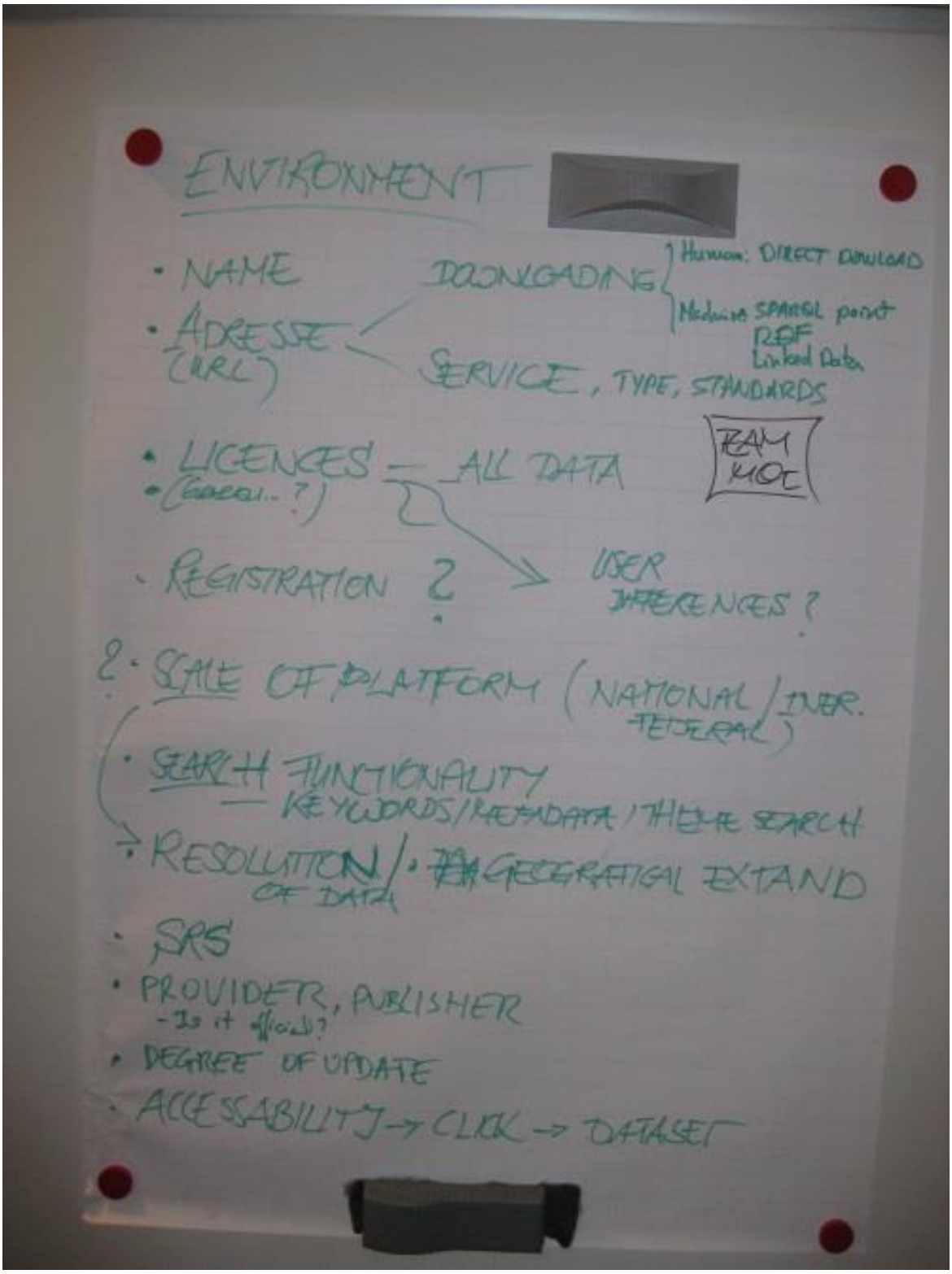

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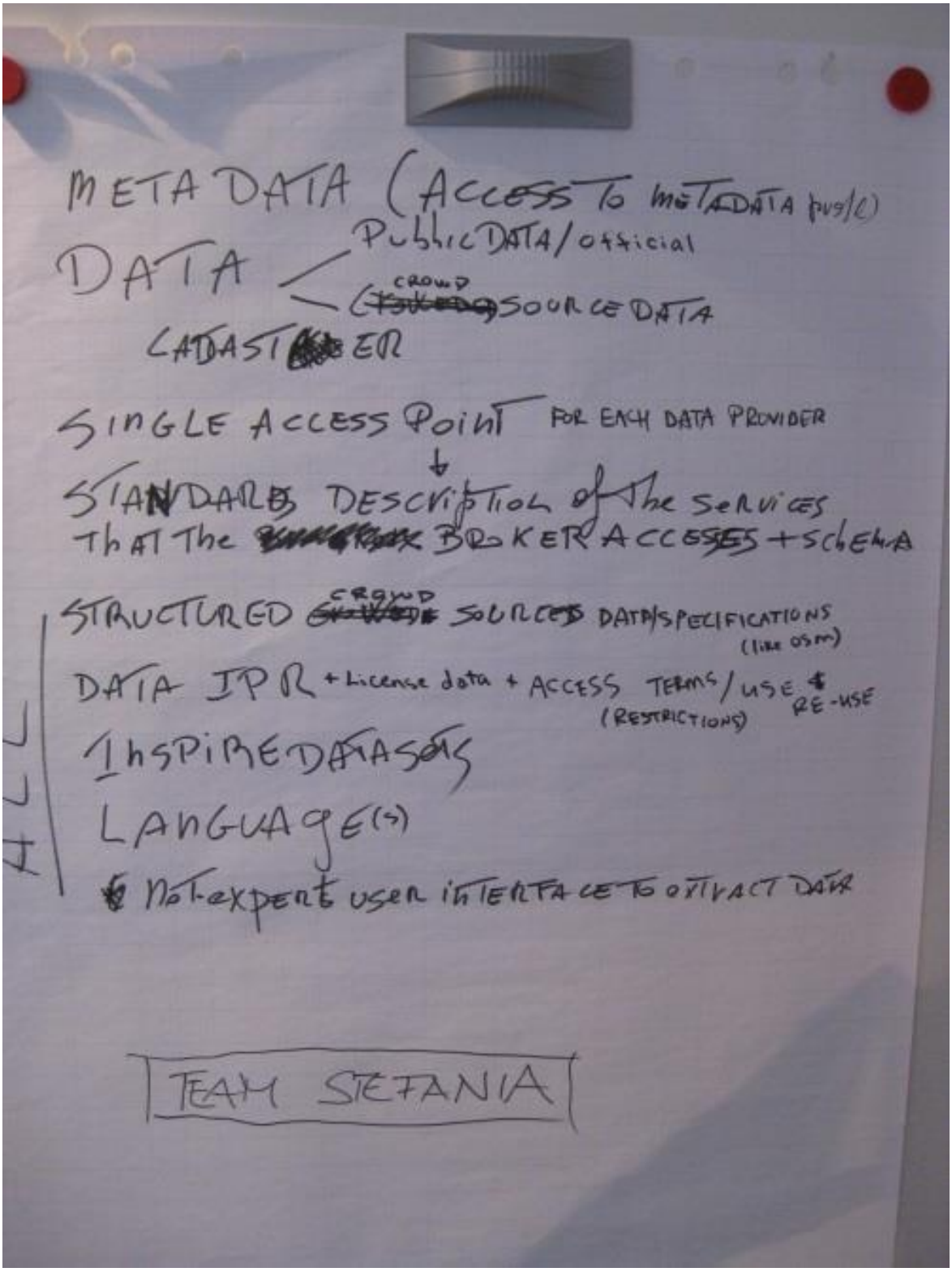

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6. REFERENCES

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(Date of access: 18/12/2014)

Group on Earth Observations (2009): Implementation Guidelines for the GEOSS Data Sharing Principles.

GEO-VI – 17-18 November 2009 - Document 7 (Rev2)