



Ministry of
Industry, Mine and Trade
Geological Survey of Iran

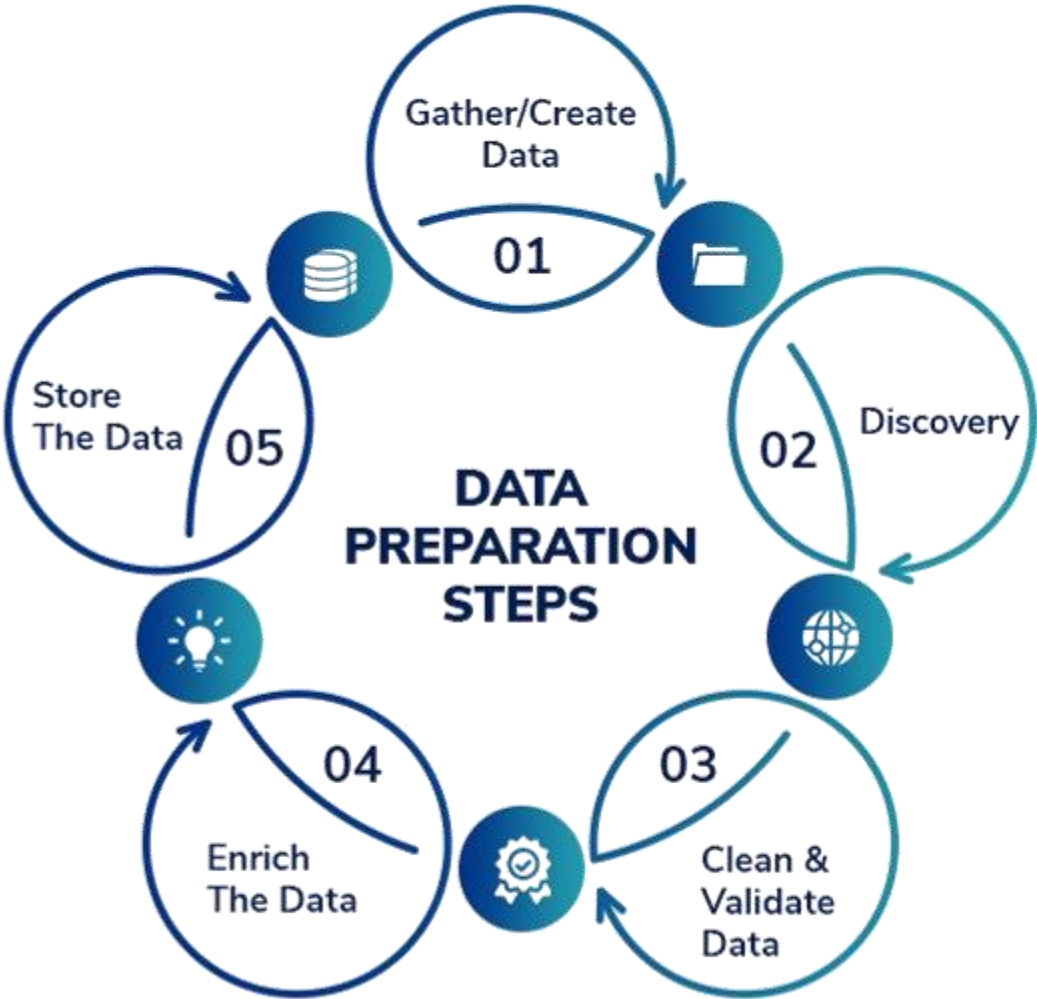
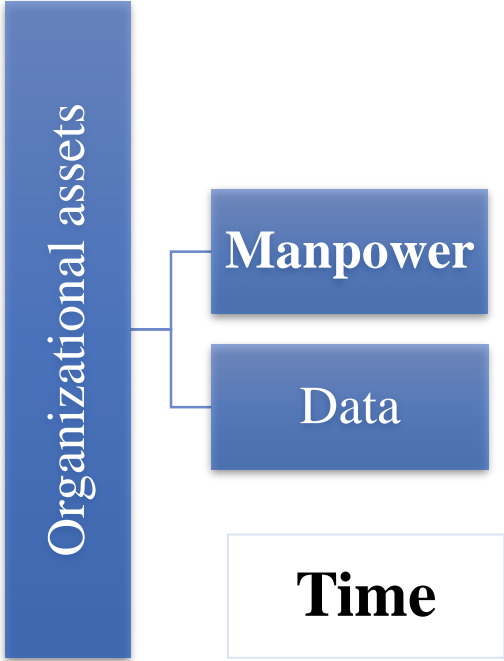


Economic Cooperation
Organization



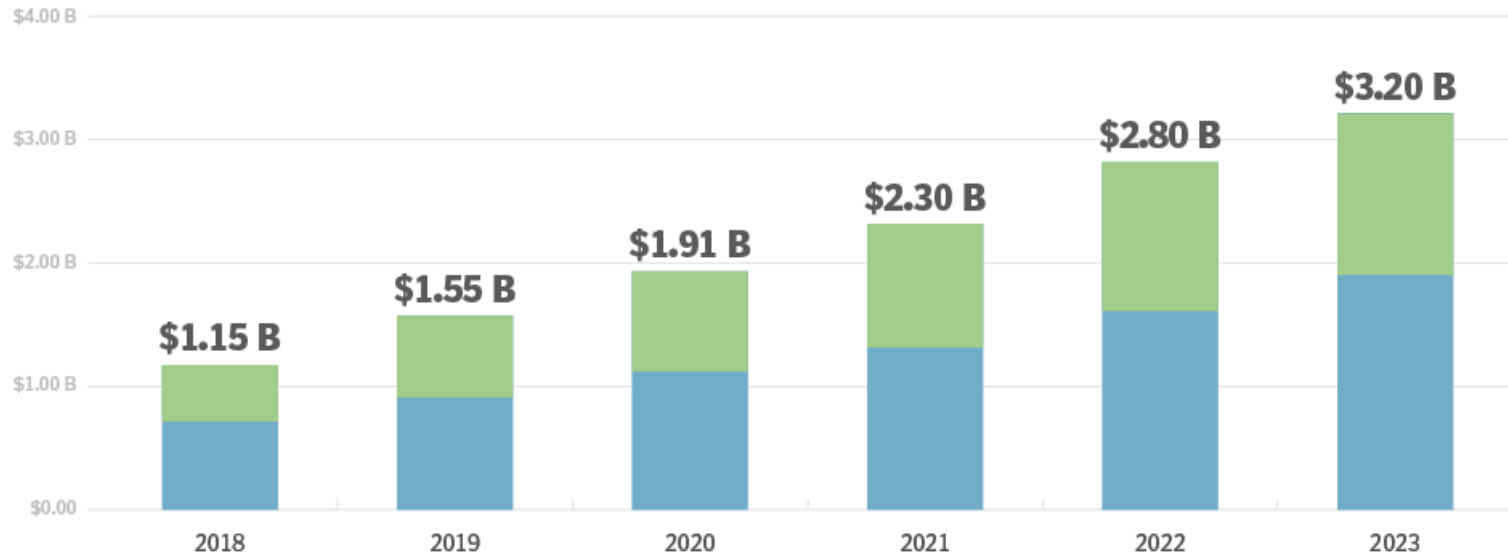
MINISTRY OF INDUSTRIES, MINES & TRADE
GEOLOGICAL SURVEY OF IRAN
NATIONAL GEOSCIENCE DATABASE OF IRAN
www.ngdir.ir
info@ngdir.ir

Catalog Service and Metadata System for Geospatial data in ECO Member States



Data preparation market size

INTERNAL DEVELOPMENT THIRD PARTY SOLUTIONS



Projected worldwide spending on data preparation

Cost

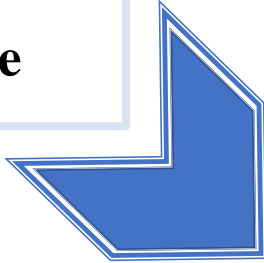
Organizational assets

Manpower

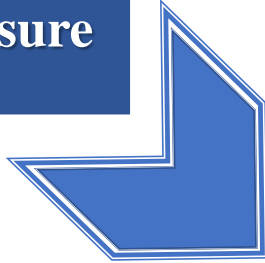
Cost

Data

Time

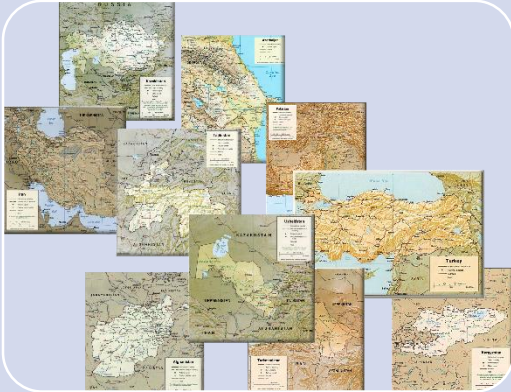


National Treasure



Data Management

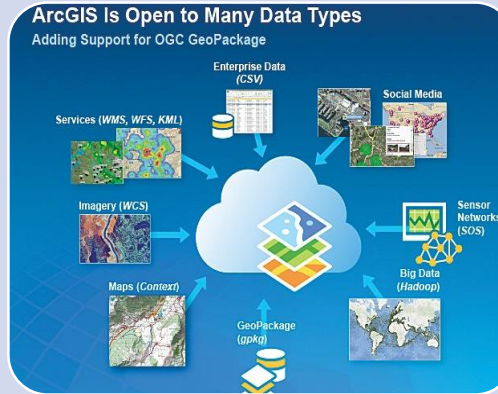
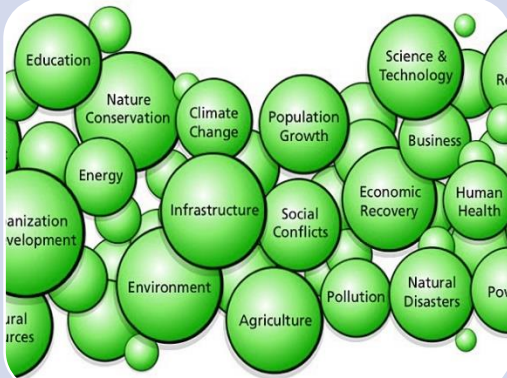
Large Amounts of Complex Data



**Different
Countries**

**Several Data
Producer**

**International
Projects**



**Various
Subjects**

**Several Data
Types**

**Different
Scales**

GeoPackage (Standard-Based)

Unstructured & Semi-structured Text-based Formats



Publication



Document



Presentation



Notepad Text



Standard Reporting Form



Statistical Data



Email



Website Content



Economic Cooperation Organization

Statistics



Finance

Economics

Report 2006-07



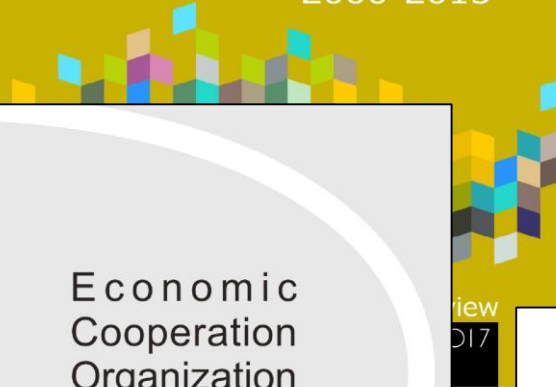
Prepared: August 2008



ECO

Economic Cooperation Organization

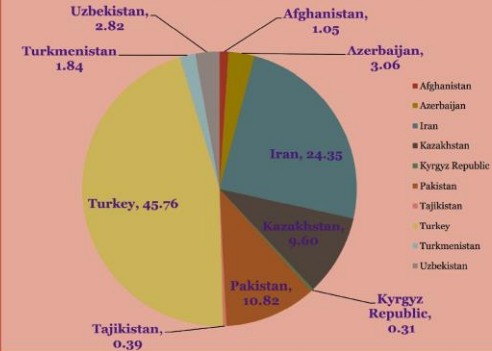
Fifteen Years of Economic Cooperation and Development 2000-2015



Economic Cooperation Organization

ECO Annual Economic Report 2014

Percentage Shares of Member States in ECO-GDP in 2014



Economic Cooperation Organization

2008

ECO Economic Report

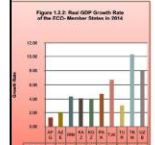


ECO Annual Economic Report

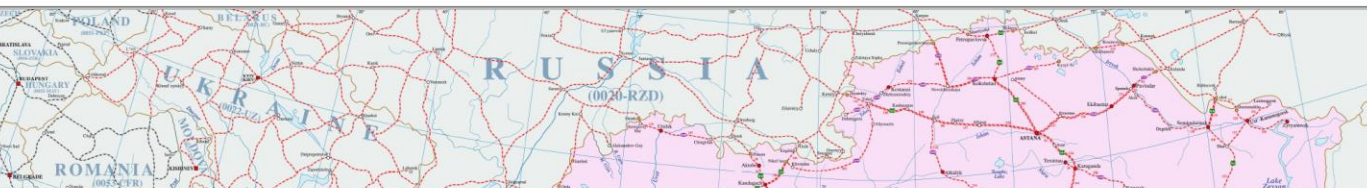
2020

The present report reflects main economic development highlights of the ECO region and country reports of the ECO member economies

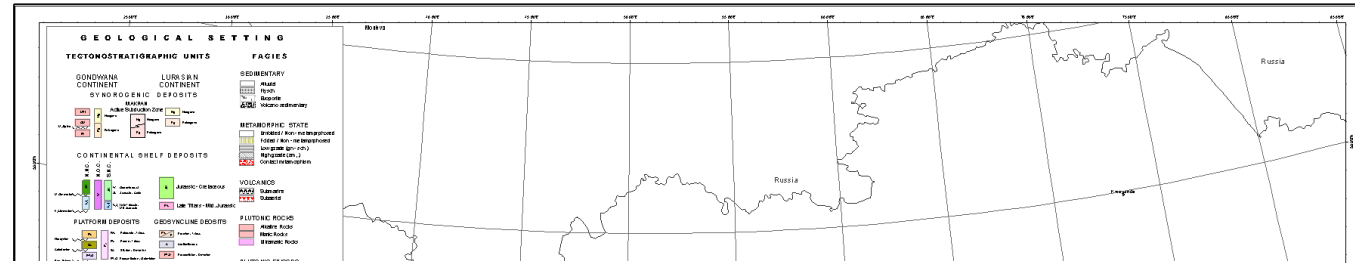
EAER



Thematic Maps



METALLOGENIC MAP OF ECO COUNTRIES
 Compiled by: A. GHANBARI
 Published by: Geological Survey of Iran



GEOLOGICAL SETTING

TECTONOSTRATIGRAPHIC UNITS

SYROGENIC DEPOSITS

CONTINENTAL SHELF DEPOSITS

PLATFORM DEPOSITS

OROGENIC DEPOSITS

PLUTONIC ROCKS

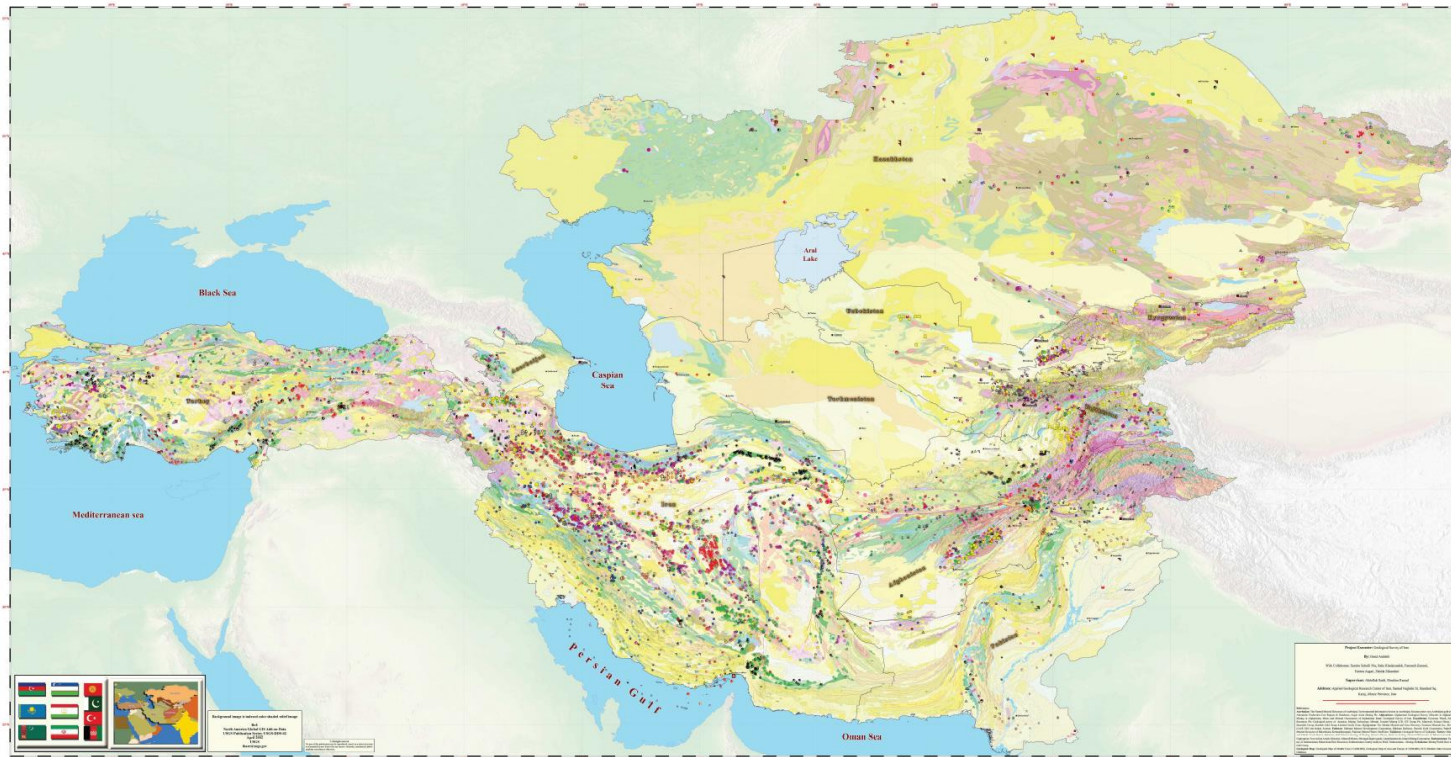
FACIIES

SECONDARY

METAMORPHIC STATE

VOICANOR

PLUTONIC ROCKS



Mineral Distribution Map of ECO Member States

Scale

Minerals

Ag, Silver	Al, Aluminum	As, Arsenic	Barite	Bismuth	Coal	Copper	Cr, Chromium	Fluorite	Gold	Iron	Lead	Lithium	Manganese	Mercury	Molybdenum	Nickel	Oil	Phosphorus	Platinum	Pyrite	Quartz	Rock Salt	Selenium	Sn, Tin	Tungsten	Zinc
------------	--------------	-------------	--------	---------	------	--------	--------------	----------	------	------	------	---------	-----------	---------	------------	--------	-----	------------	----------	--------	--------	-----------	----------	---------	----------	------

Legend

Capital, City, Country Boundary, Road, River, Sea, Lake, Large

Geological Setting

TECTONOSTRATIGRAPHIC UNITS

SYROGENIC DEPOSITS

CONTINENTAL SHELF DEPOSITS

PLATFORM DEPOSITS

OROGENIC DEPOSITS

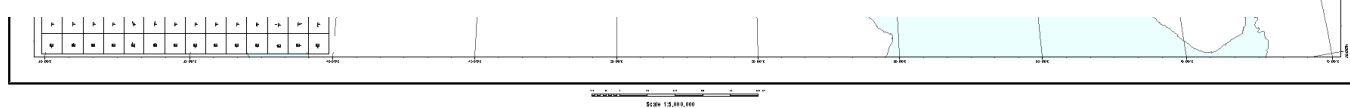
PLUTONIC ROCKS

FACIIES

METAMORPHIC STATE

VOICANOR

PLUTONIC ROCKS





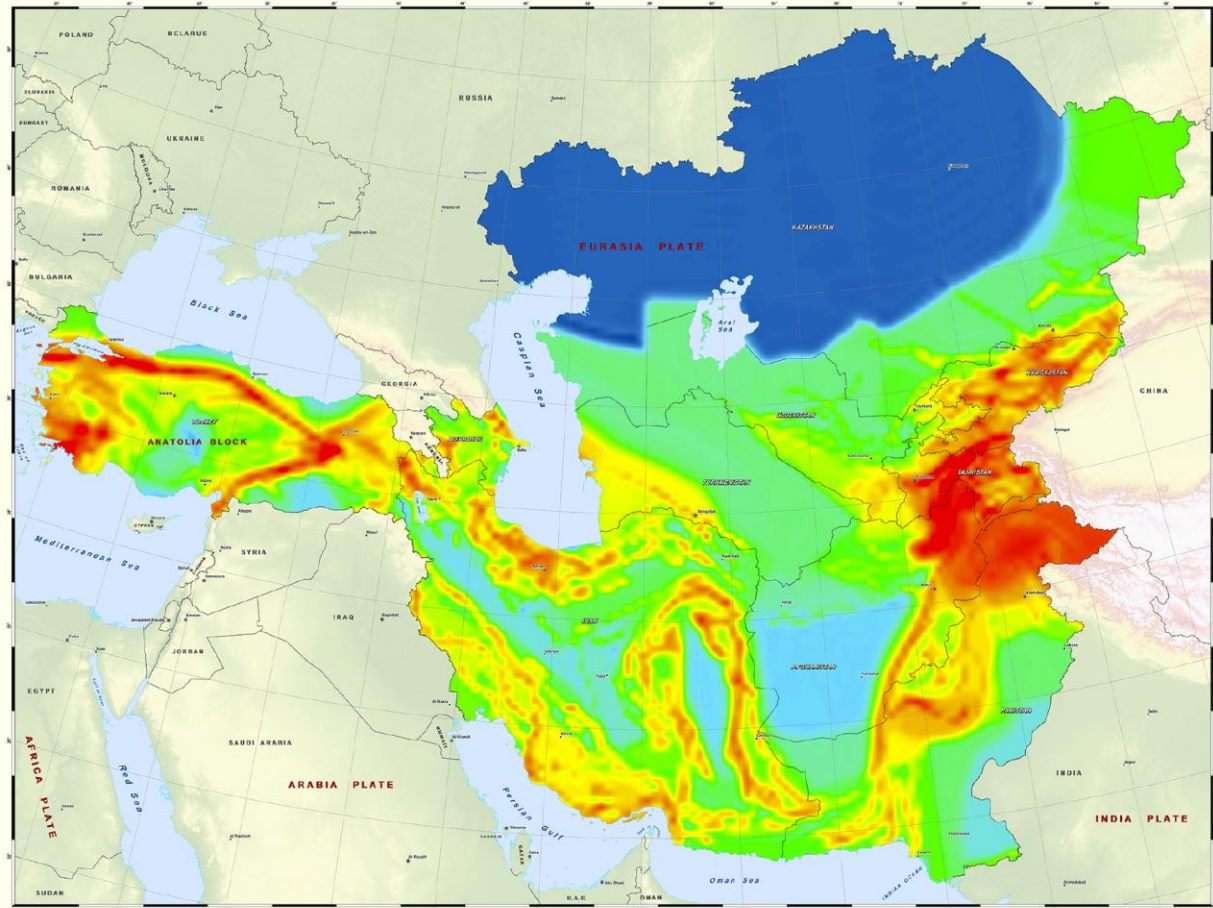
Seismotectonic Map of the ECO Member States Region

Compiled by: Behnam Oveis, Reza Akbarzadeh, Omid Ardebil, Nourdin Sabaeaini, Azra Hassantou, Mohammad Saleghi, Shahyar Soleymanfar
 Geological Survey of Iran
 Report No. 015-ECO-02
 Version: 2, February 2016



Seismic Hazard Map of the ECO Member States Region

By: Reza Akbarzadeh, Anoshirvan Ansari, Hossein Hamzoteh, Behnam Oveis, Erfan Firoozi, Mohammad Saleghi
 Geological Survey of Iran
 Report No. 015-ECO-02
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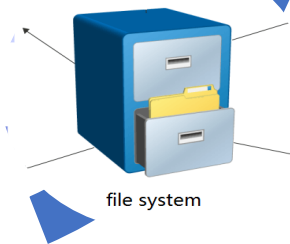
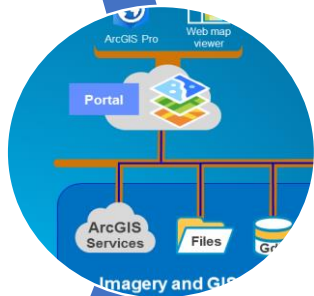


Seismic Hazard Map of the ECO Member States Region

By: Reza Akbarzadeh, Anoshirvan Ansari, Hossein Hamzoteh, Behnam Oveis, Erfan Firoozi, Mohammad Saleghi
 Geological Survey of Iran
 Report No. 015-ECO-02
 Version: 2, February 2016



File system



file system



Hardcopy

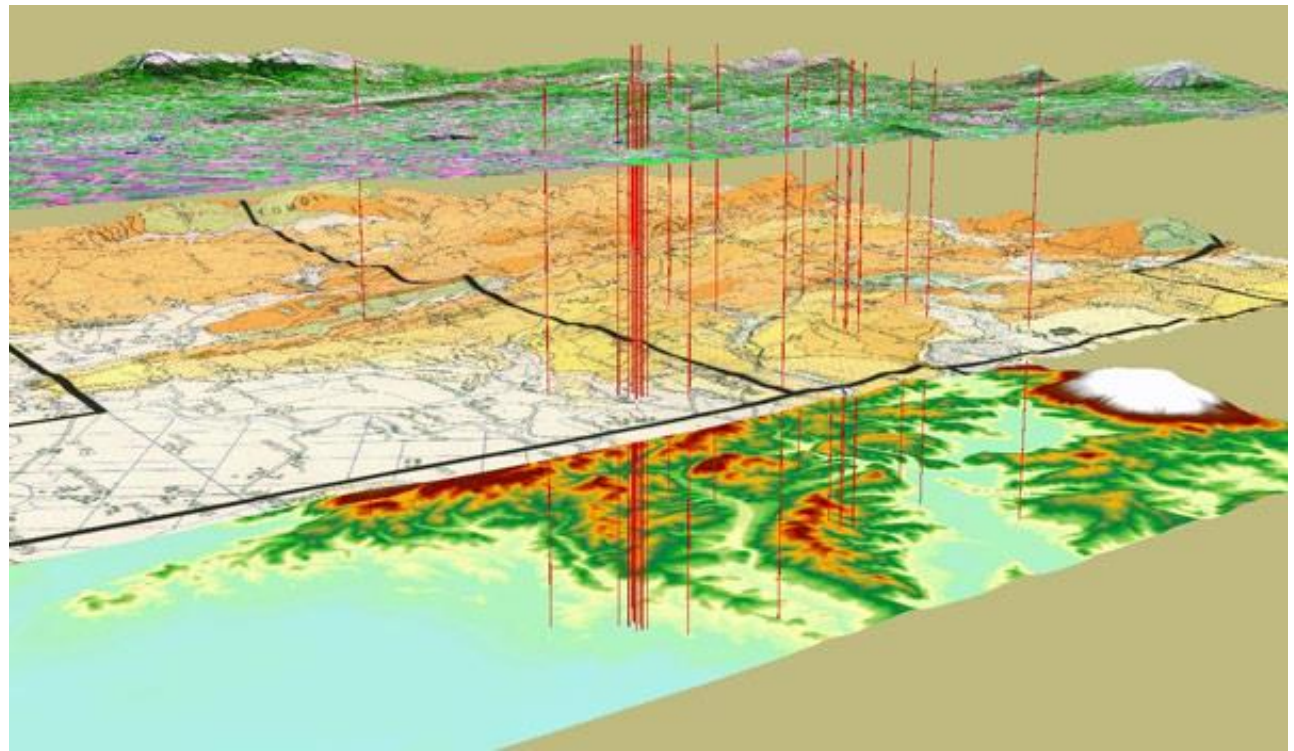
Location-based Data

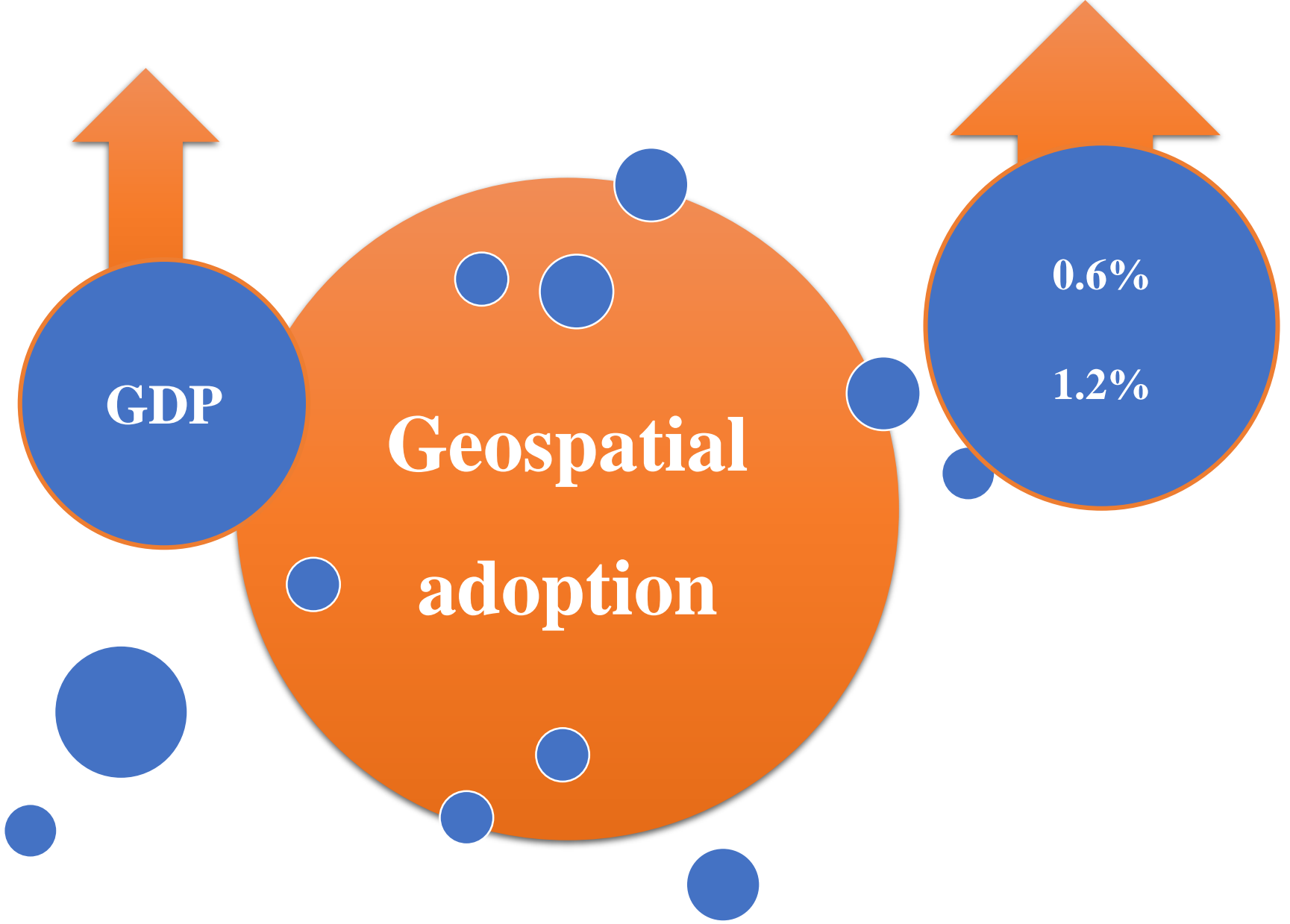


Geographic Information



Geospatial Data



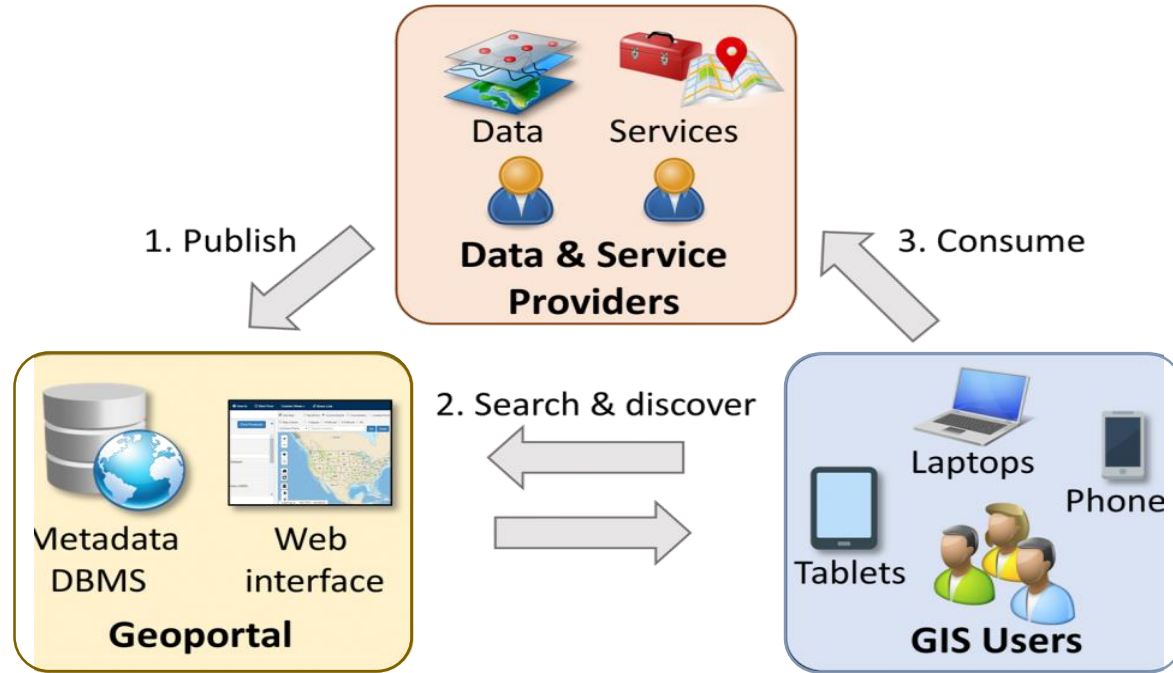


Based on studies in New Zealand & Canada

Challenges



- ✓ Lack of awareness of geospatial applications and benefits
- ✓ Secure sharing of data between departments
 - ✓ Safe storage spaces
 - ✓ Acceptable formats
 - ✓ Data availability (Data access)
 - ✓ Notices about generated data
 - ✓ and in fact, Optimizing data management



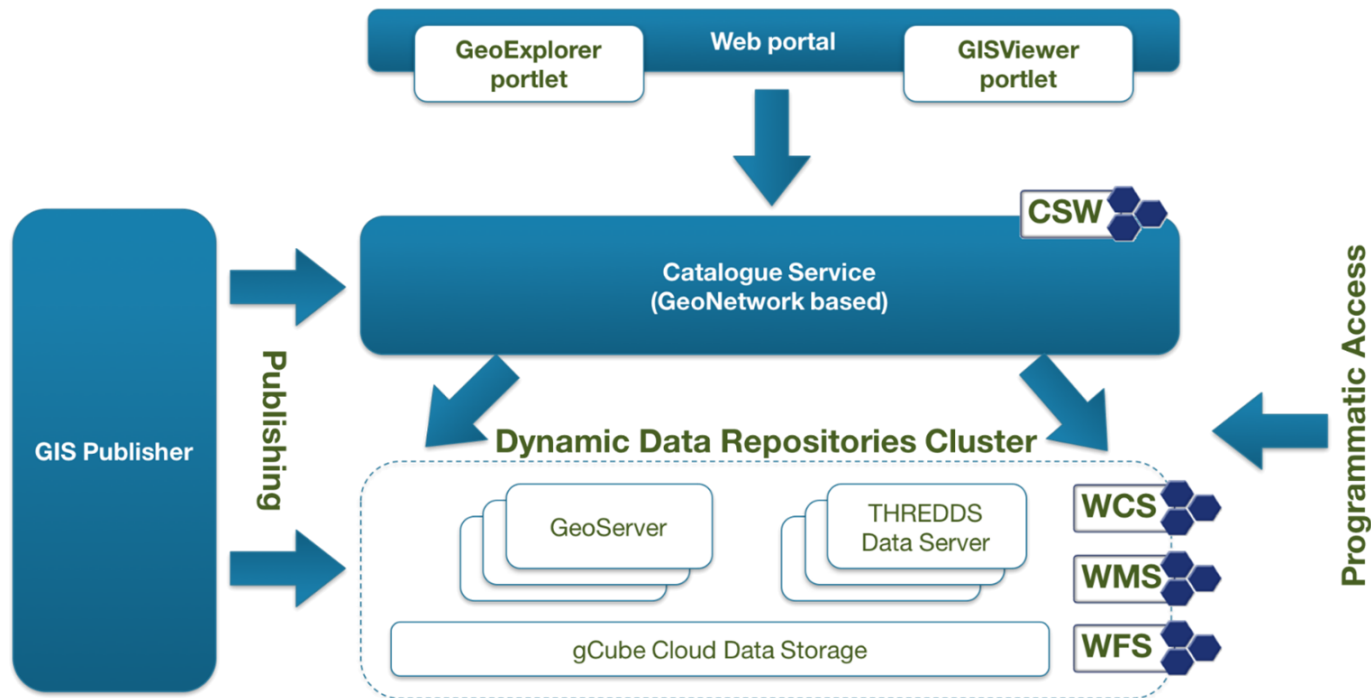
csw.ngdir.ir

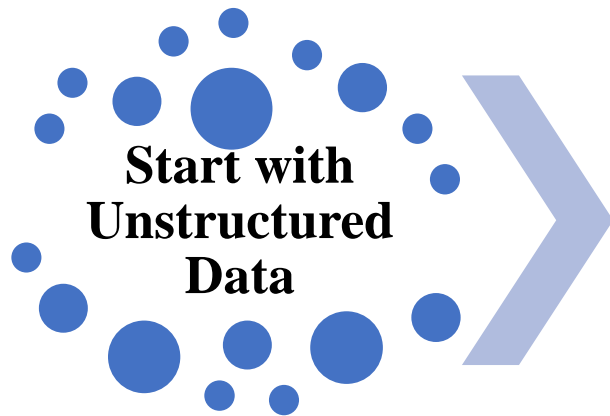


ECO-CSW

Catalogue Service–Web Catalogue Service for the Web (CSW)

- ✓ A standard for exposing a catalogue of geospatial records over HTTP protocol.
- ✓ The catalogue is made up of records that describe geospatial data and services.





CSW



CSW Capabilities

Key technology for locating, managing & maintaining distributed geo-resources

Collect structured information about data by a unified way

Ability to discover and extract geographic coordinates from unstructured-text

Spatial and descriptive search and query tools

Specify a series of dataset query parameters as 'core queryables'

Such as; Resource Identifier, Extent, Edition Date and Resource Edition

Query to find all datasets within a given geographic area

Ability to search in attribute tables of vector data types

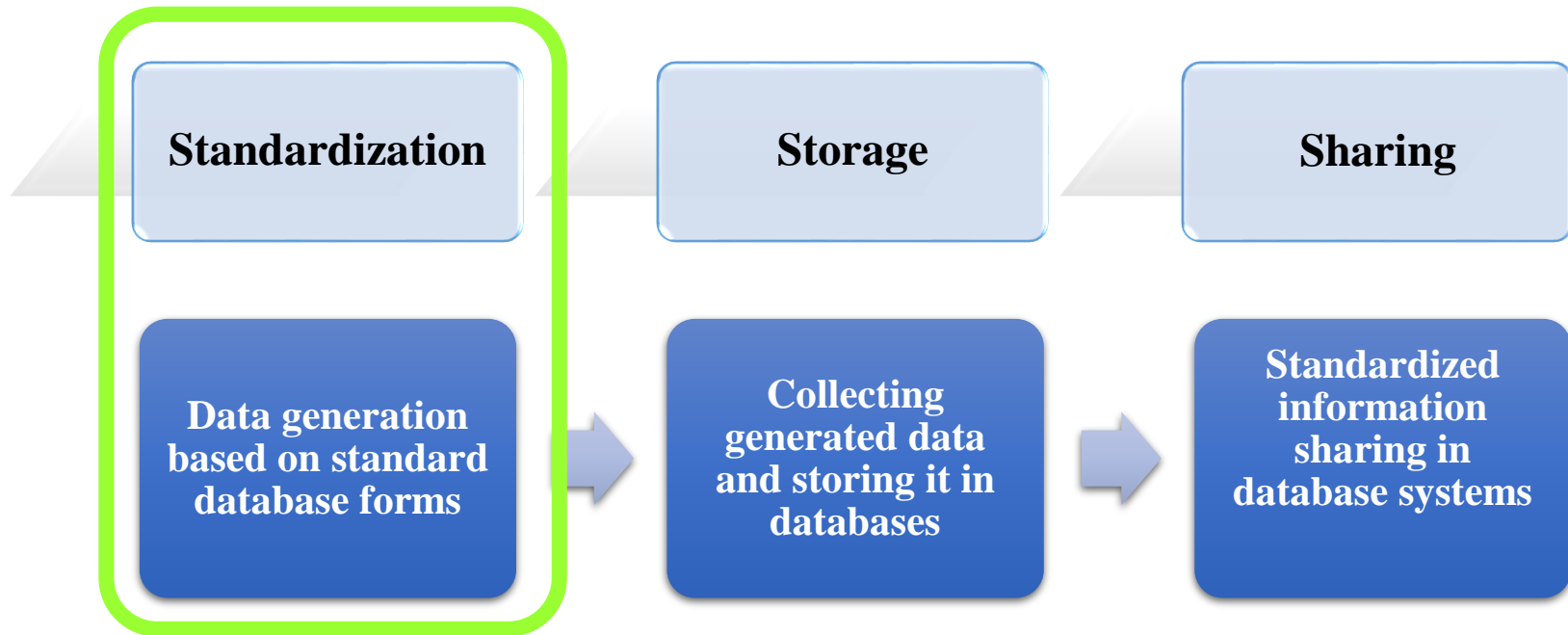
Show results in summary metadata form (metadata record)

Ability to achieve data file

Ability to download or purchase data

Find, look at and evaluate spatial data as well as the services operating on the data

Data management steps in Geological Organization projects



Standardization

1. Data generation standard
2. Data classification standard
3. Data storage standard
4. Information presentation standard

Active fields	explanation	ID information
Project ۱ ۵	The unique identifier of the data item	Unique code
Project metadata form	The title of the data item	Title
	producer organization	Data ownership
	real person/Legal person	executor of plan
	real person/Legal person	Consultant,contractor
	Connection to the database	producers
		start date
		end date
	Search items in the geographic area sec	Geographical area
		project name
	Project ۱ ۵	
		Database project code

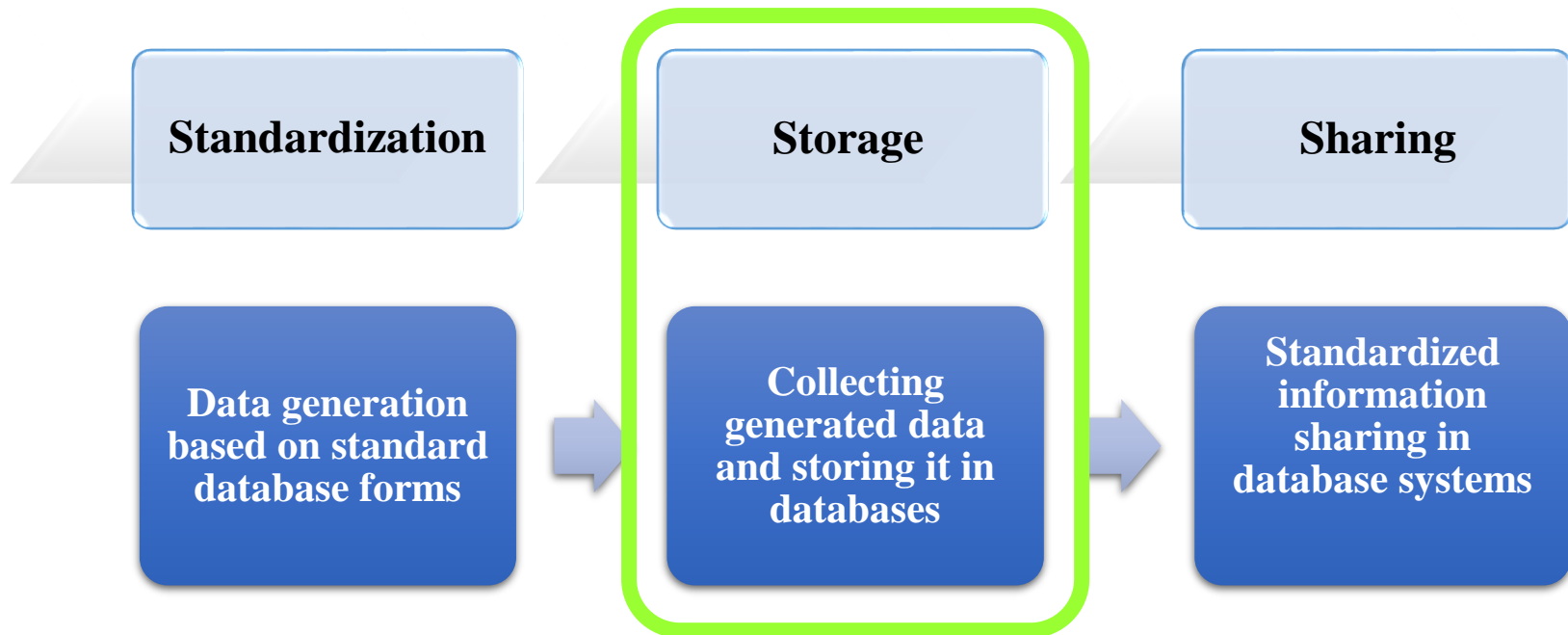
Main category	head branch	sub domain	Area
	Zagros	Structural sedimentary zone	Geographical area
	Alborz		
	Kope dagh		
	Central Iran		
	Makran		
	anandaj Sirjan		
	i zone of eastern Iran	National political divisions	
	Paleotetis		
	Province		
	City		
	county	Index	
	village		
	۲۵۰		
	۱۰۰		
	۵۰		
	۲۵		

Format	The title of the data type	Data type subcategory	data type
pdf,word	Report		Descriptive documents
pdf,word	Book		
pdf,word	Article		
pdf,word	Thesis		
jpg, pdf, psd, ...	map image (scan)		
psd, jpg, tiff, Ai, ...	Catalog		
html, .net, Asp, ...	Web		
pdf, ...	Publications (quarterly, monthly)		
hdf,tiff, img...	Satellite image	raster	Location information
jpg,tiff,nef,raw	Image		
Geotiff, img.....	coordinate image (georf)	vector	
shp, gdb, dwg,grd, kml, gpx...	Spatial layers		
mxd, dwg, ...	Map project file		
xls, csv, dbf, txt...	Attribute Table		
xls, mdb, gdb, sql, dbf....			
exe, msi...		Earth Sciences	Software
ppt, avi, mp4, ...			multimedia

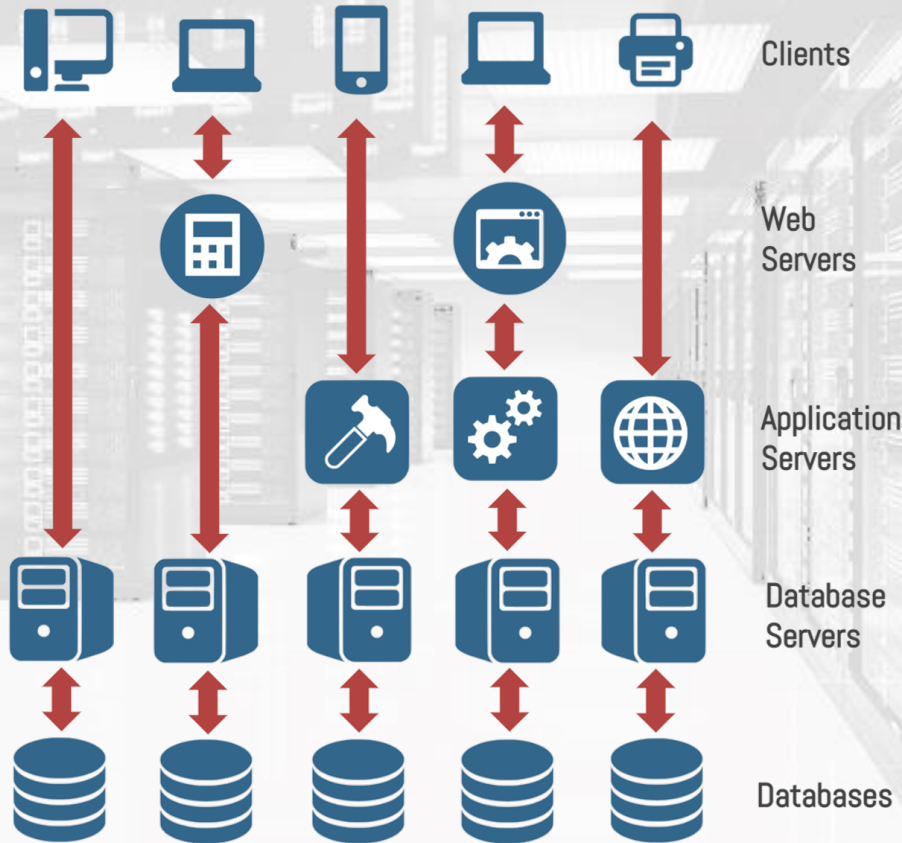
Project

Geographical area

Data management steps in Geological Organization projects

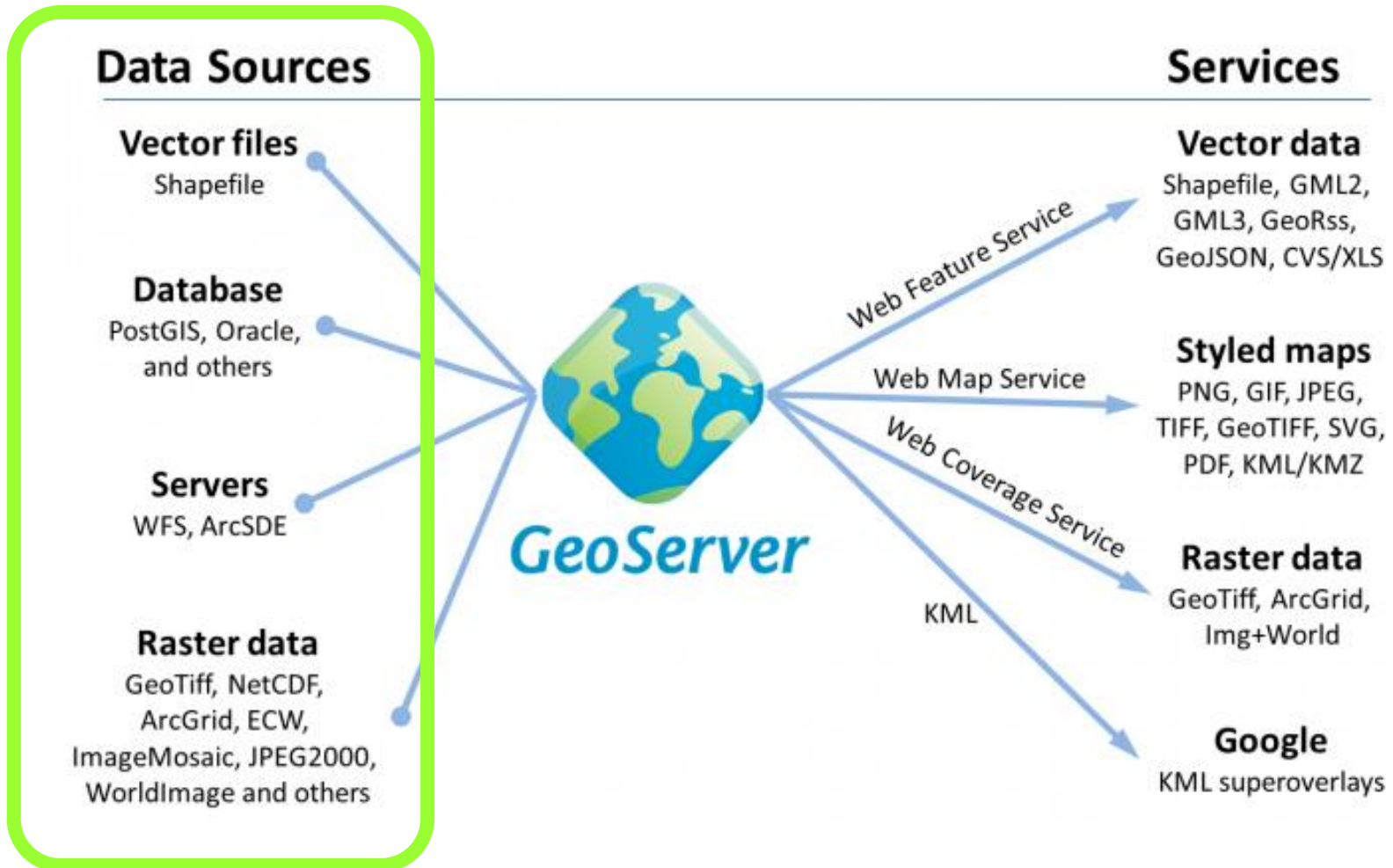


Database Servers in Action

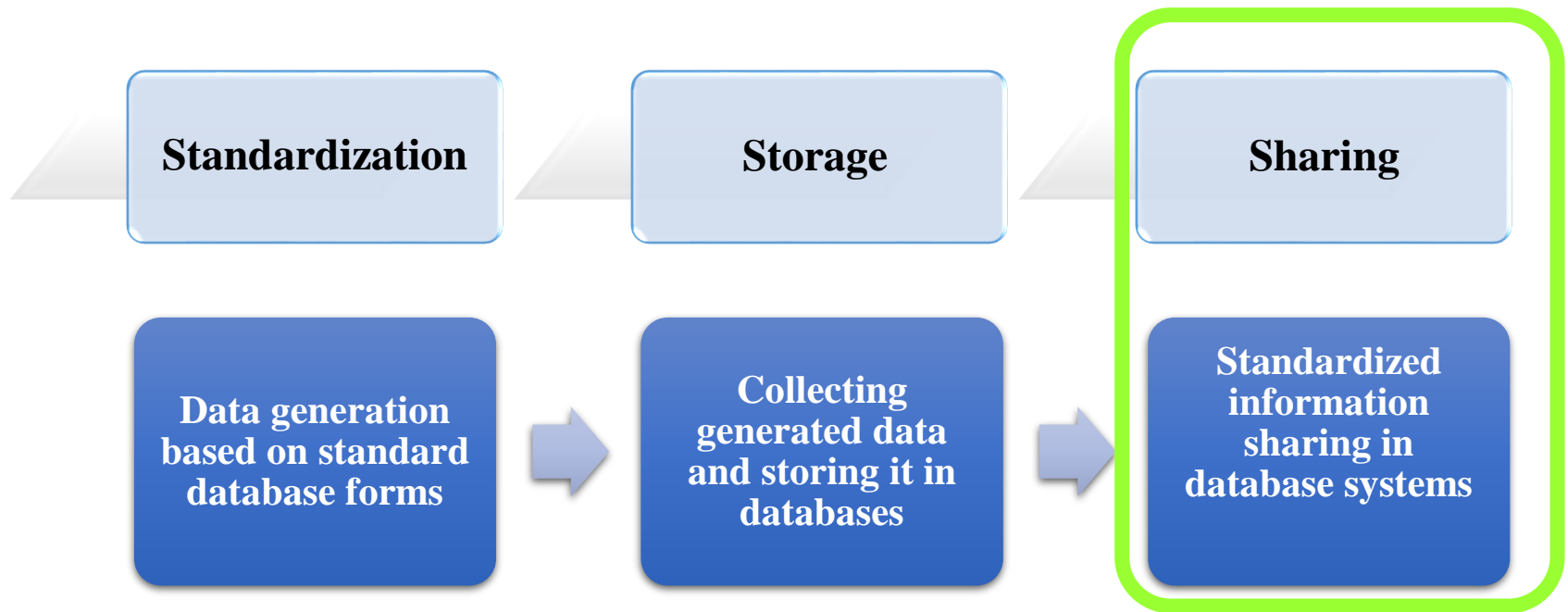


Storage

Designing and setting up a catalog service database

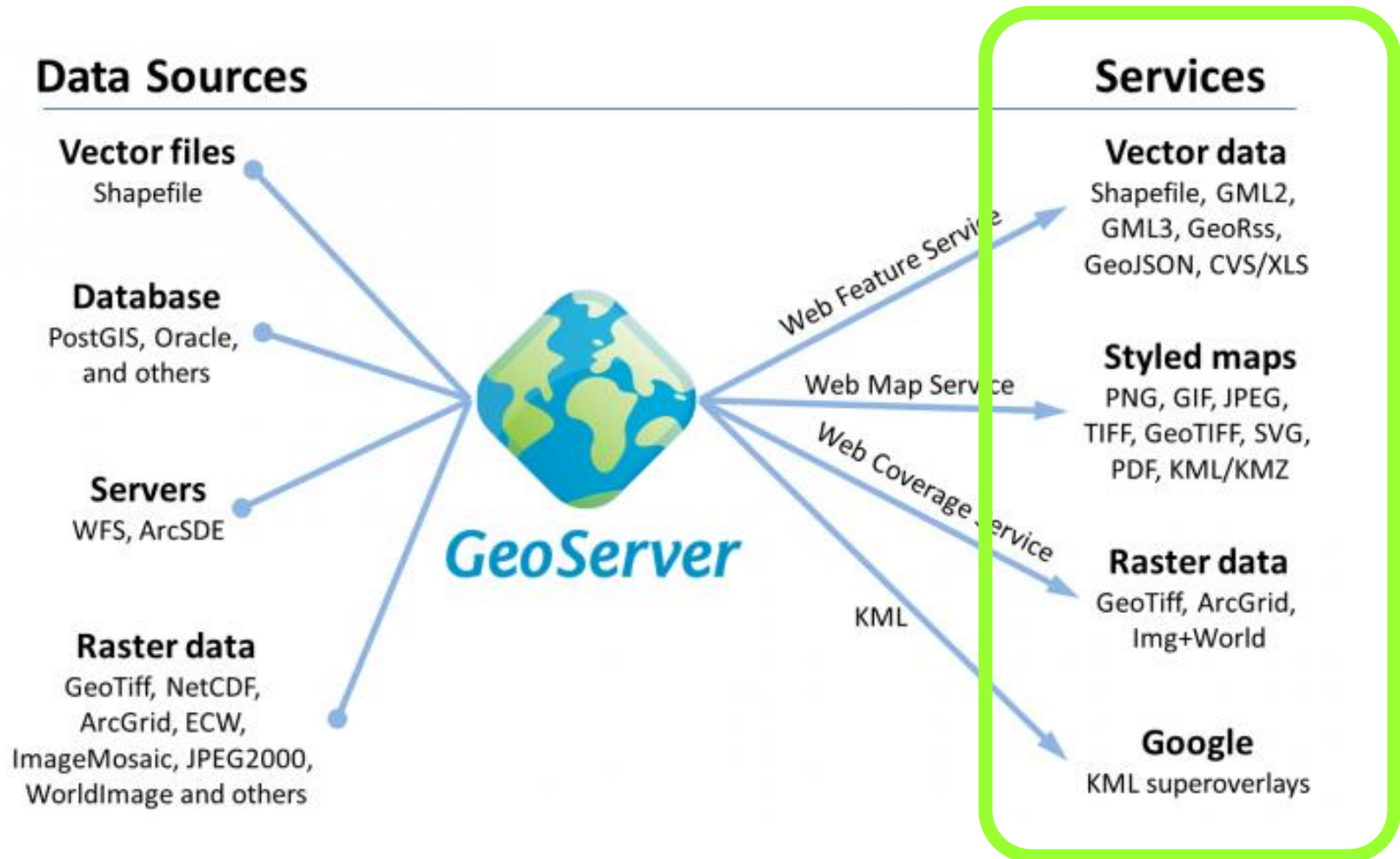


Data management steps in Geological Organization projects



Sharing

Information entry Training according to the prepared instructions



Publishing data in the form of a catalog service

The image displays a web GIS application interface. On the left, a map shows the geographical context of the study area. The main window features a search bar and a list of results. The search results include:

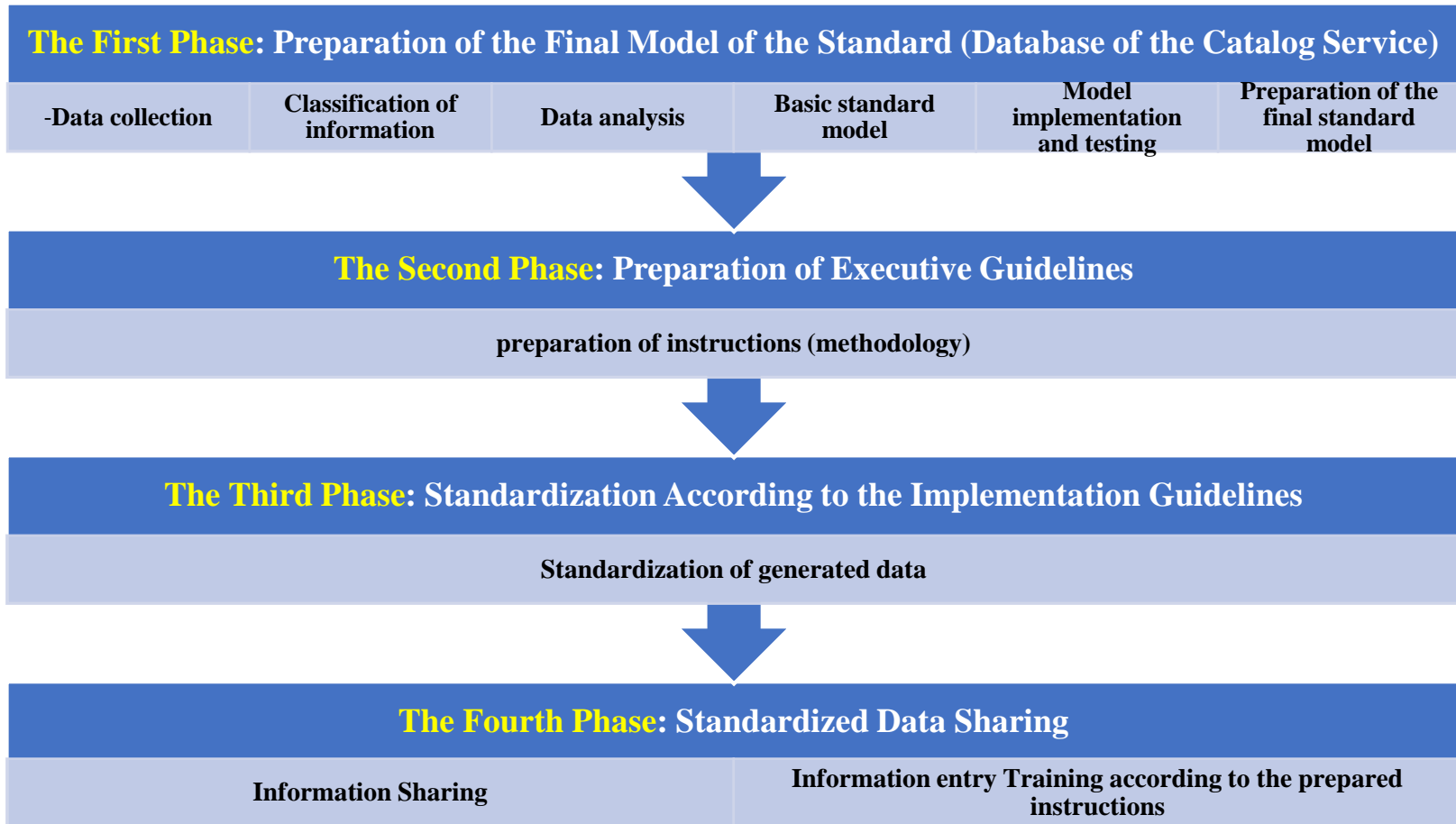
- گزارش اکتشافات ژئوشیمیایی سیستماتیک ورقه تربیت جام در مقیاس ۱:۵۰۰۰۰
- گزارش نهایی پروژه پی جویی به روش اکتشاف ژئوشیمیایی ۱:۲۵۰۰۰ در محدوده رزن ۲

The detailed view on the right shows a list of layers (لیست لایه‌ها) and a search bar (جستجو). The layers list includes:

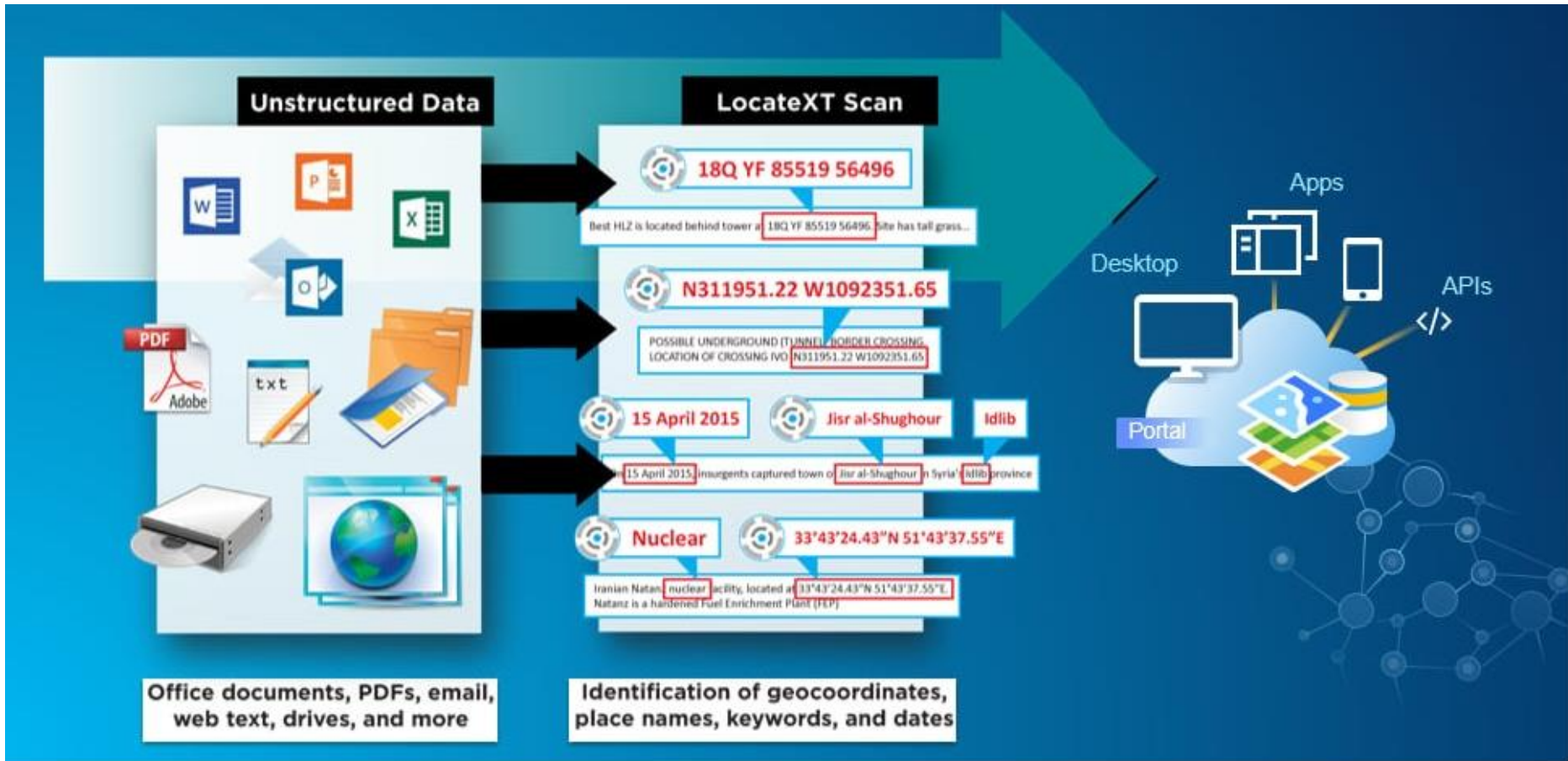
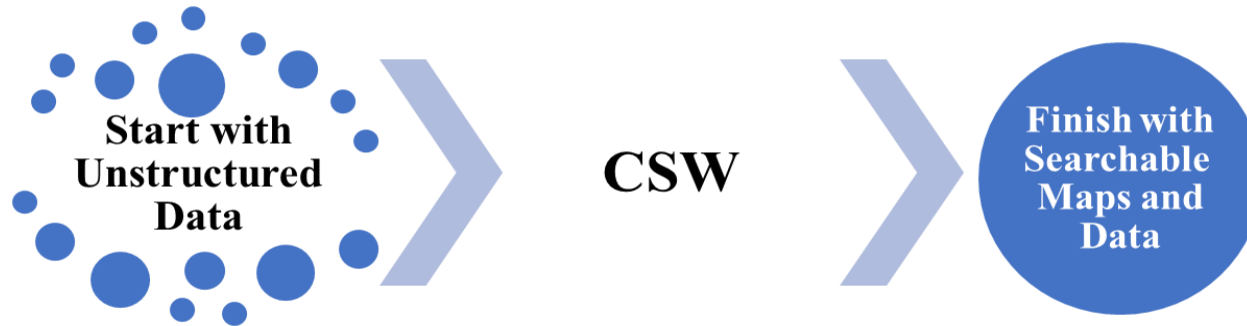
- سیستم اصلی
- اکتشاف
- مقیاس ملی
- پتانسیل مواد معدنی
- ناهنجاری ژئوشیمیایی
- نگاشت کانی (آتراسیون)
- مواد معدنی غیر فلزی
- مواد معدنی فلزی
- زمین شناسی
- مقیاس ملی
- مقیاس ۱:۵۰۰۰
- مقیاس ۱:۵۰۰
- ملاحظات زمین شناسی
- راهنمای نقشه
- لایه های عمومی

The interface also shows a browser window with the URL `webgis.ngdir.ir` and a Bing satellite map view of the same area. The bottom of the screen shows the Windows taskbar with the system tray displaying the date and time as 10:29 AM on 11/7/2022.

Phases of project implementation



Achievements





Thank you for your attention