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ArcGIS Server based Geoportal for Managing the Adriatic Archeological Sites

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Context

- French Program ANR – CNRS “AdriAtlas” (2011-2013).
- Atlas computerized for the antique Adriatic .
- Historical periods: Bronze Age (XI Before JC) - End of the Antiquity (VIII after JC).
- Goal: developing a Geodatabase and a GeoPortal for the Adriatic.

Context

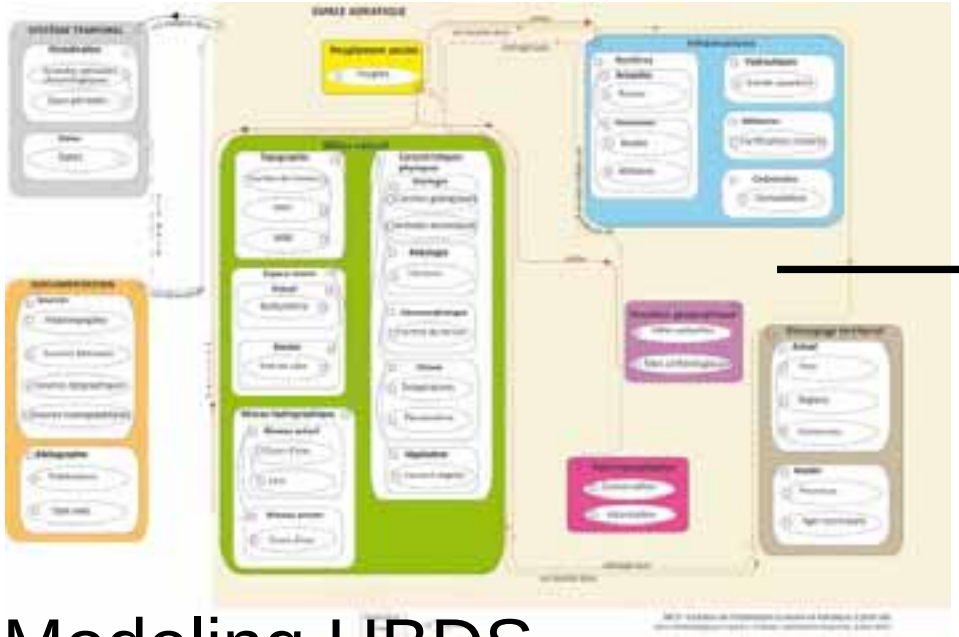
- Archeology is the study of past human culture and behavior.
- The aim of archeology is to reconstruct human society that can no longer be directly observed.
- How can GIS enhances Archeology?

Context

- AdriAtlas Geodatabase: modeling of geographical information about archeological sites.

- We used the modeling method HBDS (Hypergraph Based Data Structure).

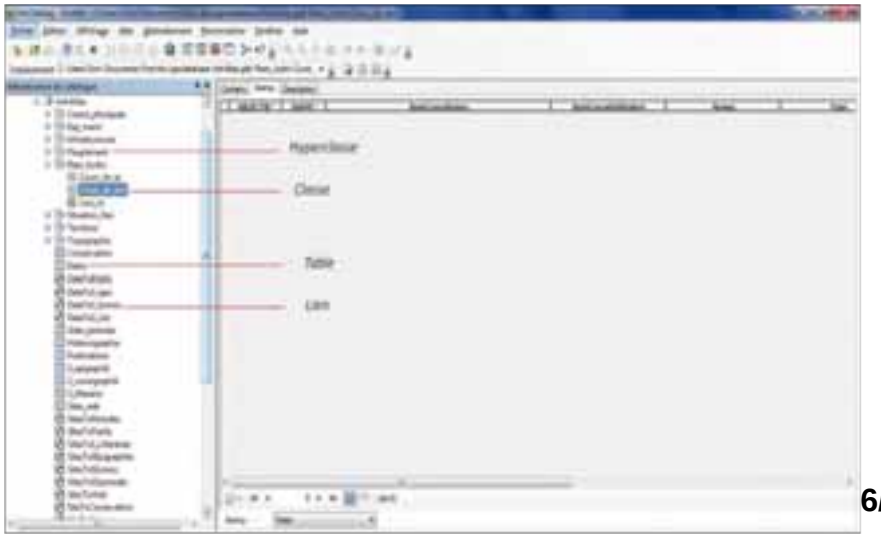
Geodatabase : AdriAtlas



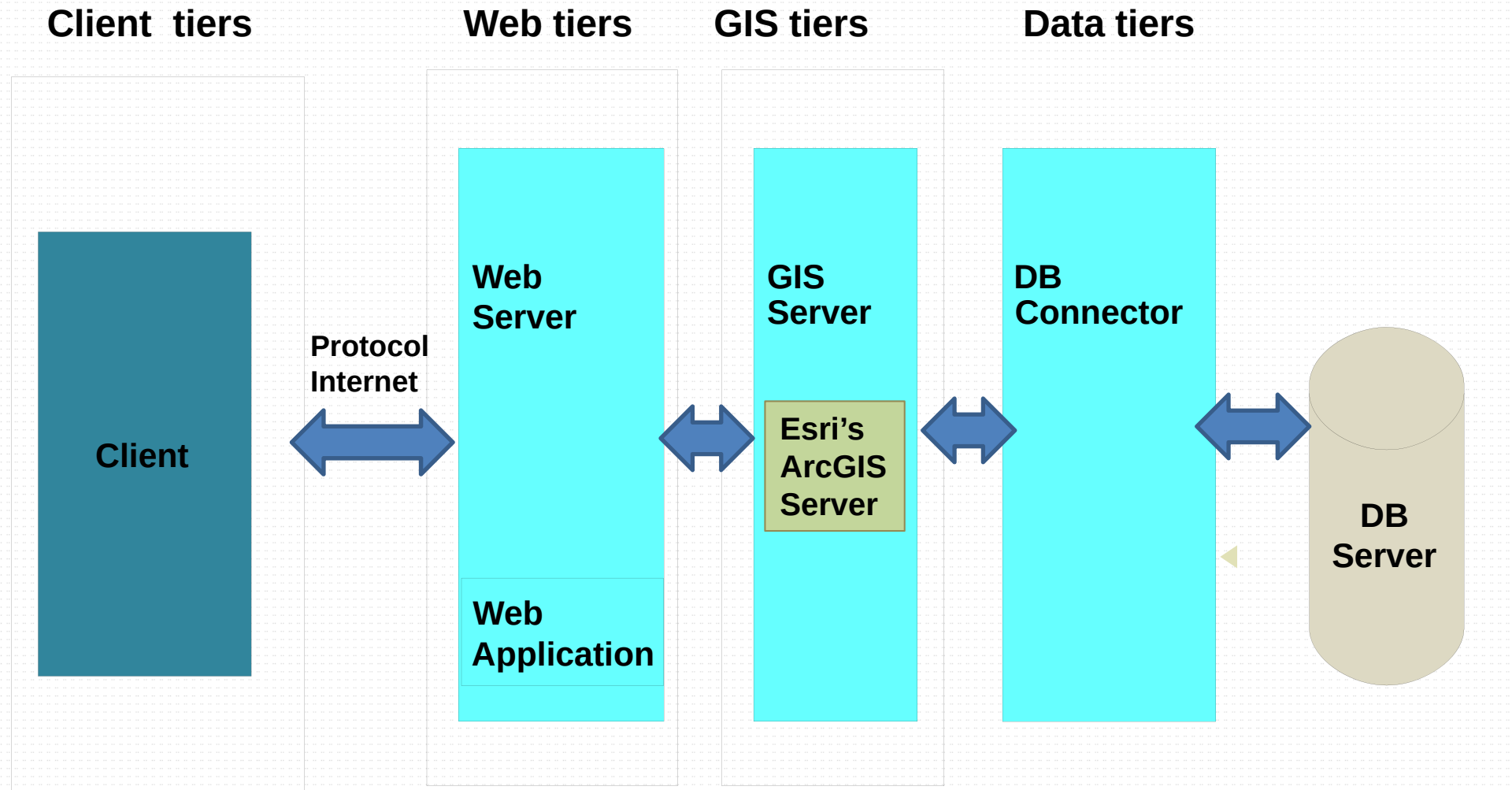
Terminologie HBDS		Terminologie ESRI		
Hypergraphe, Forêt		Géodatabase		*Geodatabase*
Hyperclasse		Jeu de classe d'entité		*Feature dataset*
Hyperclasse		Sous-type		*Subtype*
Classe		Classes d'entités Table thématique		*Feature class* *Table*
Lien, relation topologique		Classe de relation		*Relationship class*
Objet		Objet		*Object*
Topologie		Topologie		*Topology*
Domaine		Domaine		*Domain*
Valuation		Champ		*Field*

Modeling HBDS → Geodatabase

Hypergraph Based Data Structure



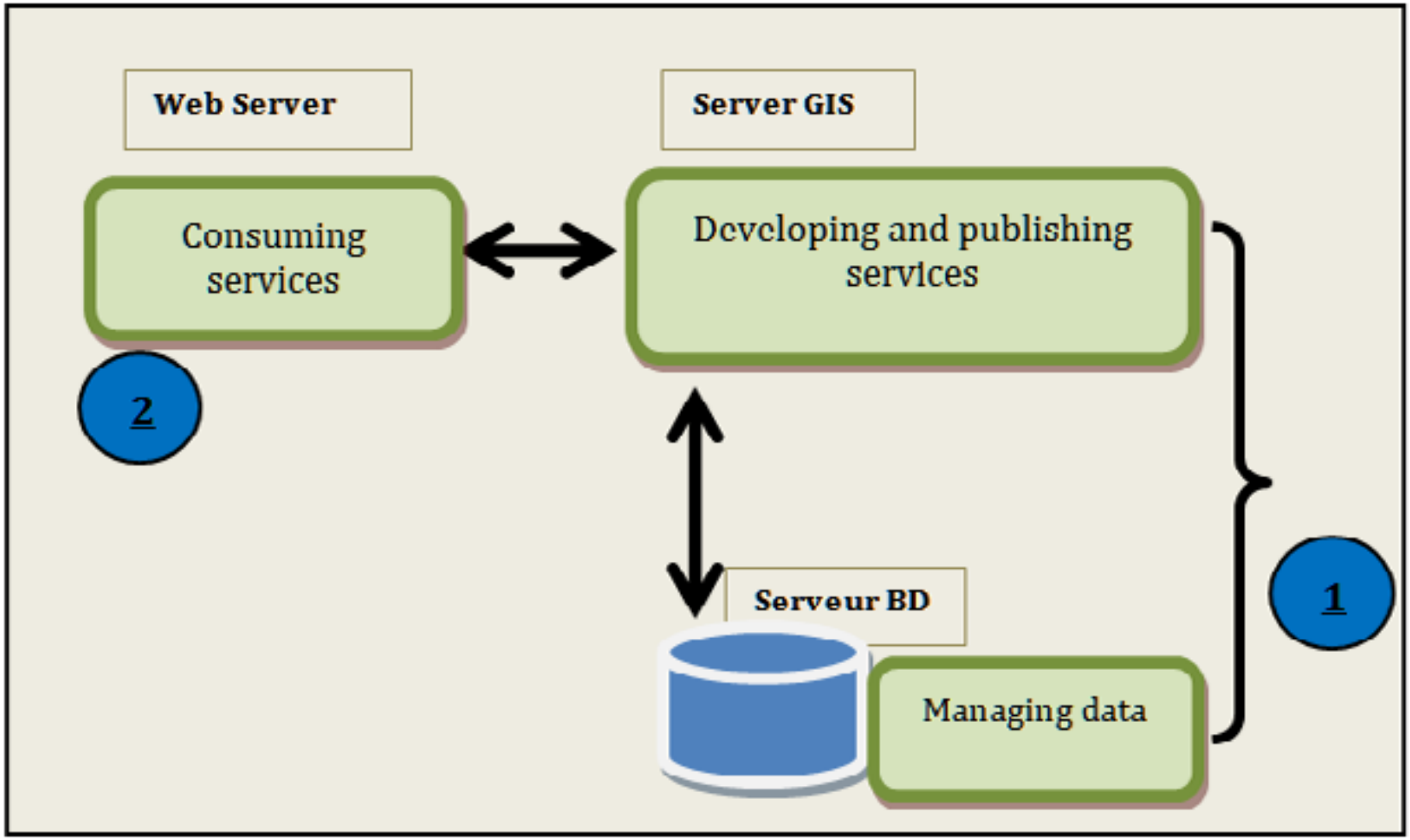
GeoPortal : Architecture



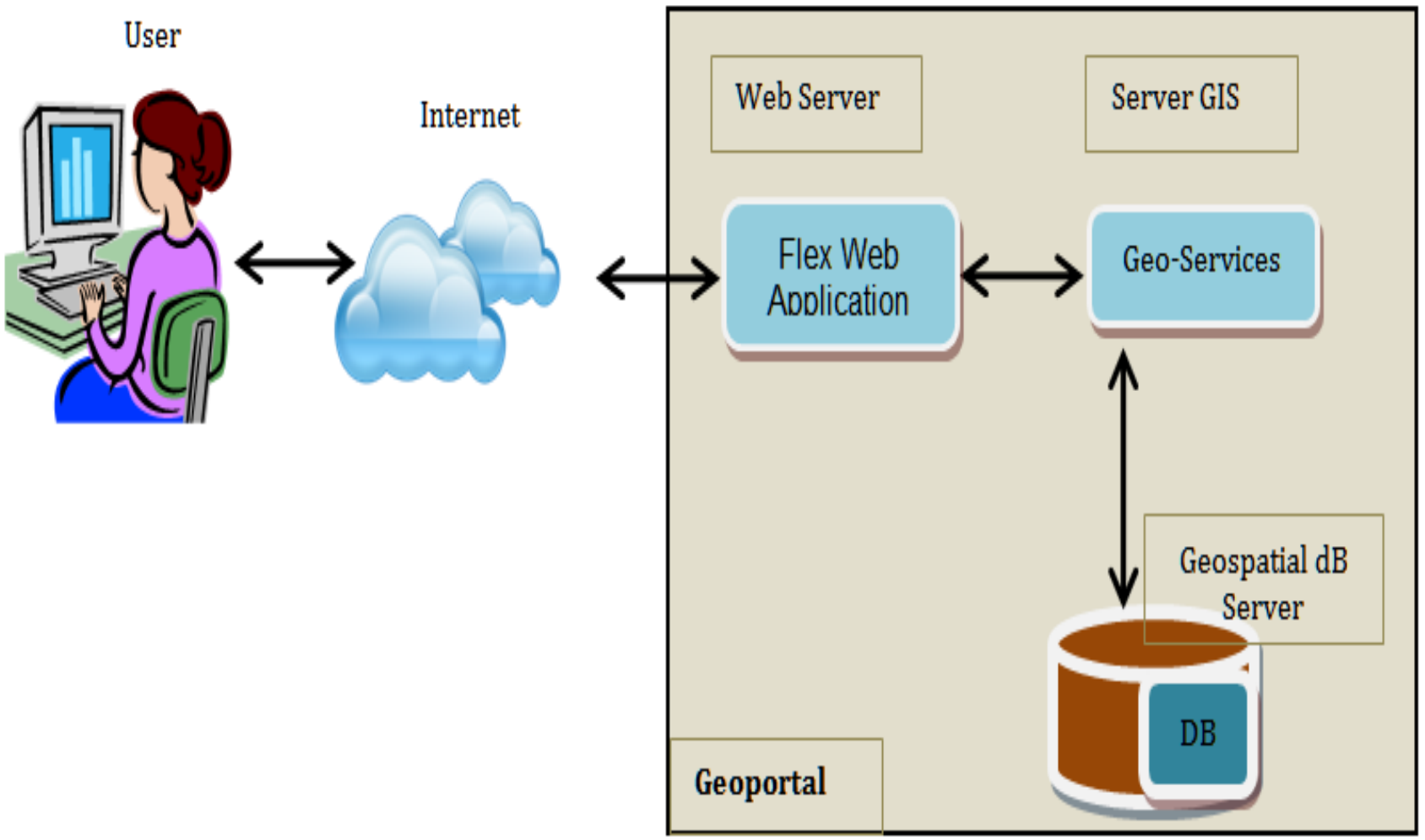
Geoservices

- Developping and publishing a set of Web Geoservices that allows :
  - Mapping archeological sites (WMS).
  - Updating data about archeological sites (WFS).
  - Geoprecessing data about archeological sites (WPS).

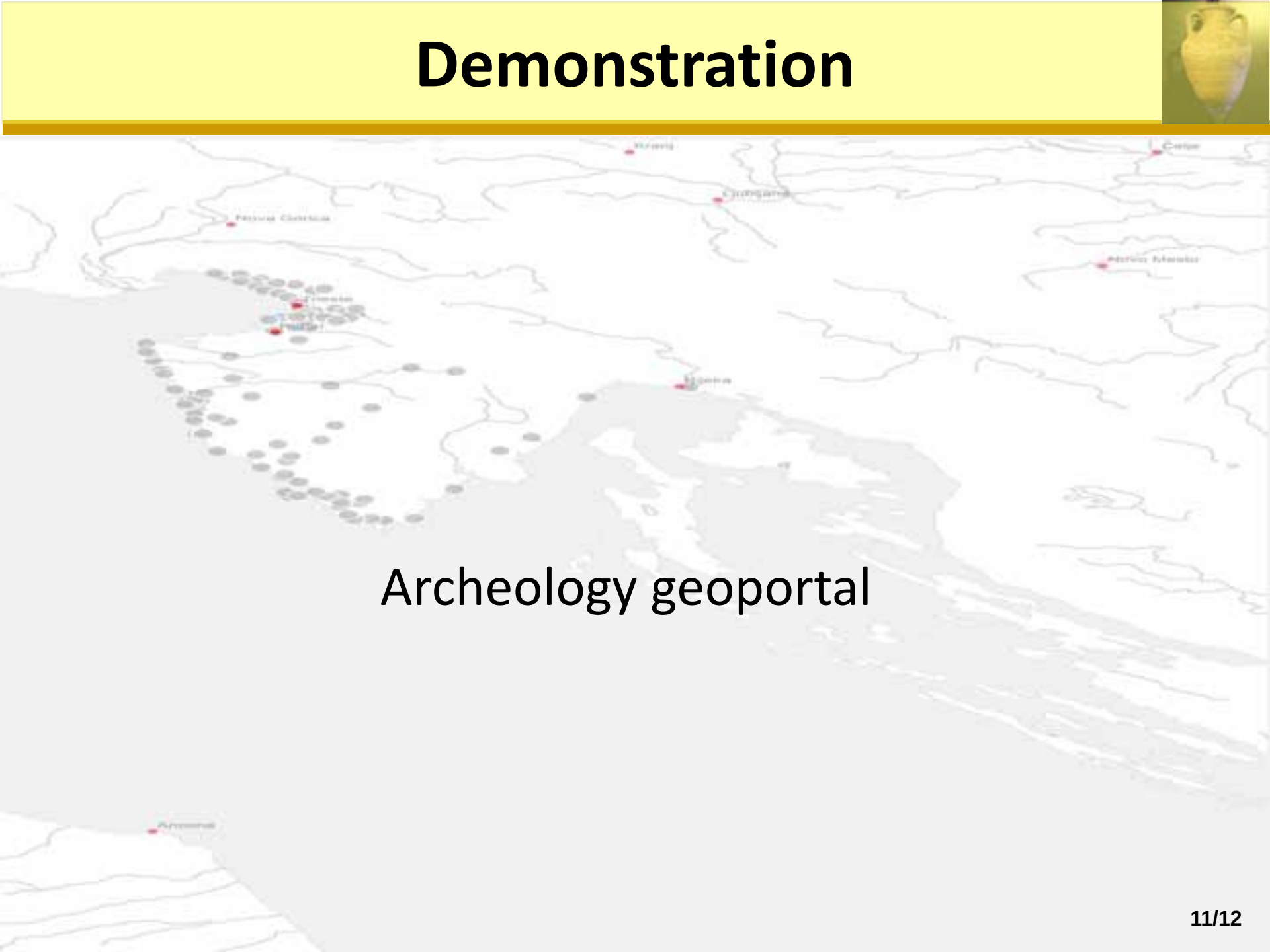
Geoservices



Geoservices



Demonstration



Archeology geoportal

Conclusion

- A geodatabase and a geoportal for archiologiical sites of the Adriatic.
- Based on Esri's ArcGIS Server:
  - A container of archeological Web Services.
  - Possibility of using an API to develop Web application (e.g., API for Flex).
- What is next:
  - Developing more services.
  - Implementing ArcSDE.

Thank you