



Esri International Developer Summit
Palm Springs, CA

ArcGIS for INSPIRE – An Introduction

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Outline

- **INSPIRE**
- **ArcGIS for INSPIRE**
- **Implementing INSPIRE**

INSPIRE Addresses Pan-European Issues

INSPIRE is a legal framework facilitating the access at spatial data

- Environmental
- Climate change
- Conservation
- Health
- Safety
- Transportation
- Urban planning
- ...and many more



INSPIRE Results in a European Geospatial Infrastructure

- **Authoritative Data and Metadata**
- **Online Services**
 - **Discovery**
 - **View**
 - **Download**



Annex I

- Coordinate Reference System
- Geographical Grid System
- Geographical Names
- Administrative Units
- Addresses
- Cadastral Parcels
- Transport Networks
- Hydrography
- Protected Sites

Annex II

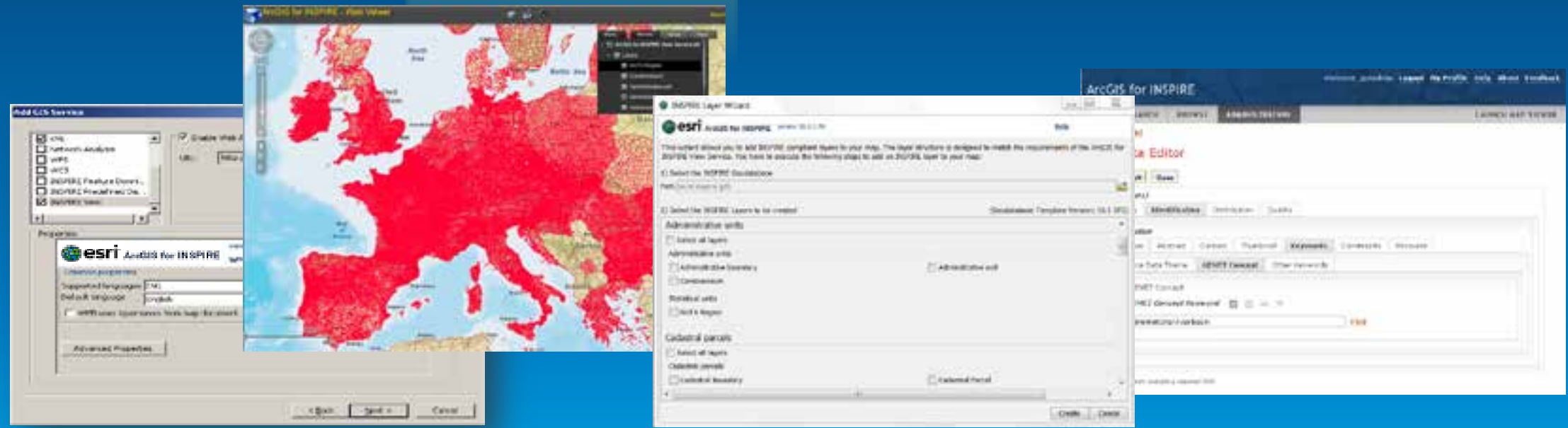
- Elevation
- Land Cover
- Orthoimagery
- Geology

Annex III

- Statistical Units
- Buildings
- Soil
- Land Use
- Human Health and Safety
- Utility and Governmental Services
- Environmental Monitoring Facilities
- Production and Industrial Facilities
- Agricultural and Aquacultural Facilities
- Population Distribution - Demography
- Area Managements/Restriction/Regulation Zones and Reporting Units
- Natural Risk Zones
- Atmospheric Conditions
- Meteorological Geographical Features
- Oceanographic Geographical Features
- Sea Regions
- Bio-geographical Regions
- Habitats and Biotopes
- Species Distribution
- Energy Resources
- Mineral Resources



- Compliant Services
- Data Models
- Integrated Tools
- Desktop and Server Extensions



ArcGIS for INSPIRE Mission

help meeting INSPIRE compliance and leveraging the ArcGIS Platform

INSPIRE - Implementation Options

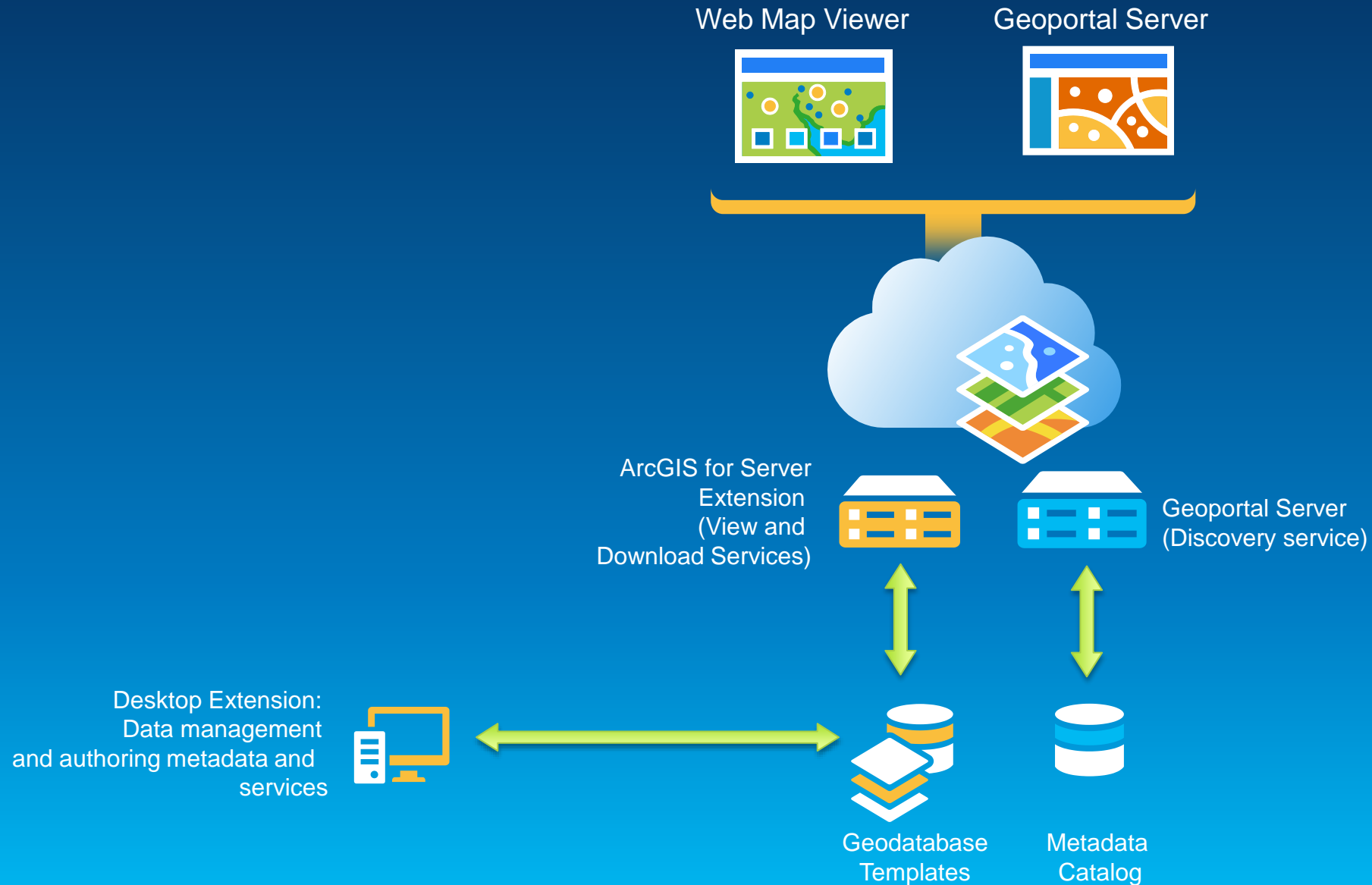
- **INSPIRE Metadata and Discovery Service**
 - Extension of OGC CSW, ISO 19115/19119/19139
- **INSPIRE View Service as extension of**
 - OGC WMS
 - OGC WMTS
- **INSPIRE Download Service as extension of**
 - OGC WFS 2.0
 - ATOM + OpenSearch (predefined dataset download)
- ... with or without harmonized data

ArcGIS for INSPIRE implements different options meeting INSPIRE requirements

Implemented guidelines

INSPIRE Implementing Rule	Implemented in ArcGIS 10.2.1 for INSPIRE
Regulation on INSPIRE Network Services - INSPIRE View Service	Technical Guidance for the implementation of INSPIRE View Services 3.1
Regulation on INSPIRE Network Services - INSPIRE Download Service	Technical Guidance Download Services 3.1
Regulation on INSPIRE Network Services - INSPIRE Discovery Service	Technical Guidance for the implementation of INSPIRE Discovery Service 3.1
Regulation on INSPIRE Metadata	Technical Guidelines based on EN ISO 19115 and EN ISO 19119 (Version 1.2)
Regulation on interoperability of spatial data sets and services	Technical Guidance on Annex I data themes (Administrative Units, Cadastral Parcels, Geographical Names, Hydrography, Protected Sites, Transport Networks, Addresses, Coordinate Reference Systems, Geographical Grid Systems) 3.0.1

ArcGIS for INSPIRE: what's included



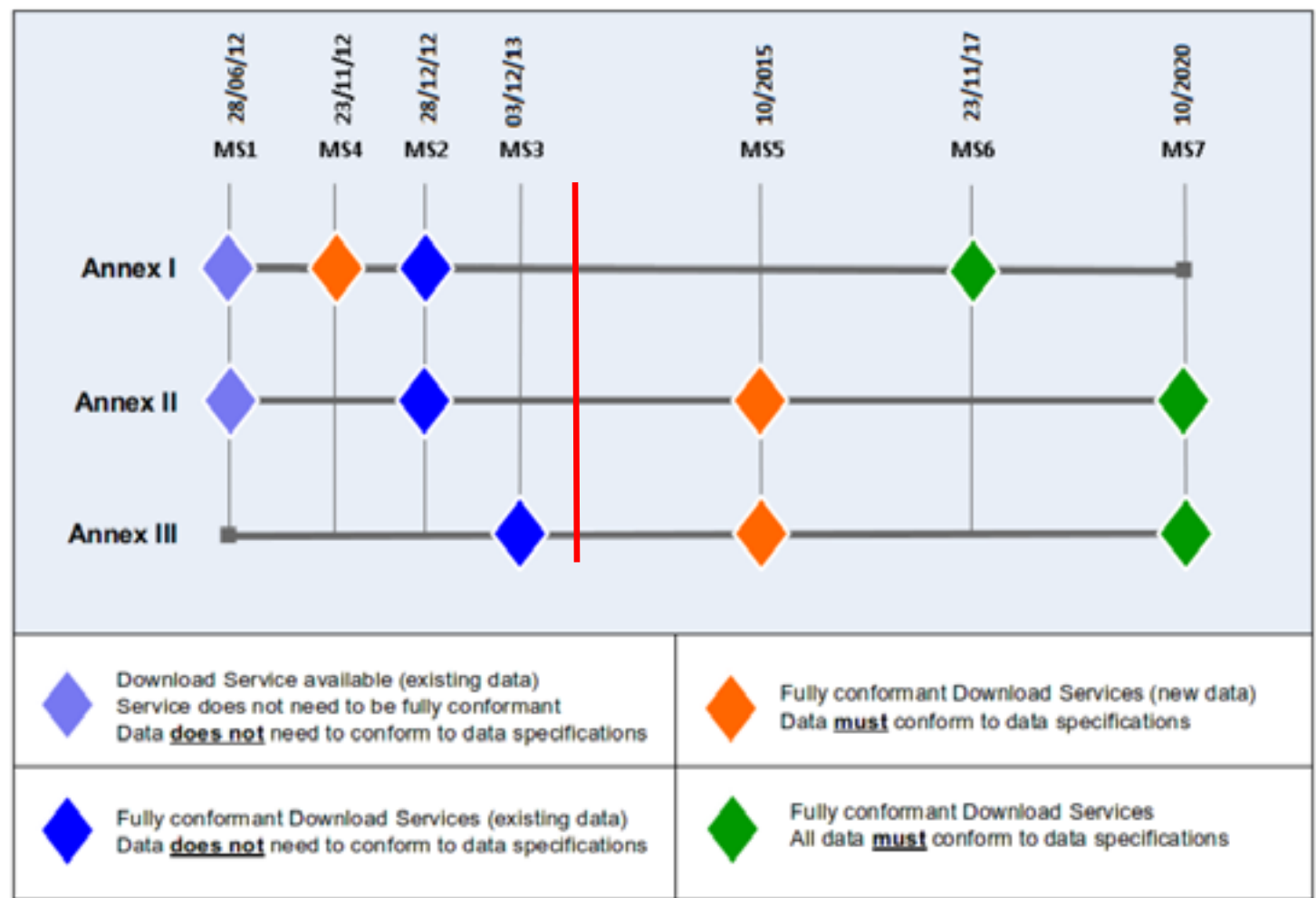


Figure 4: Illustration of Implementation Roadmap*

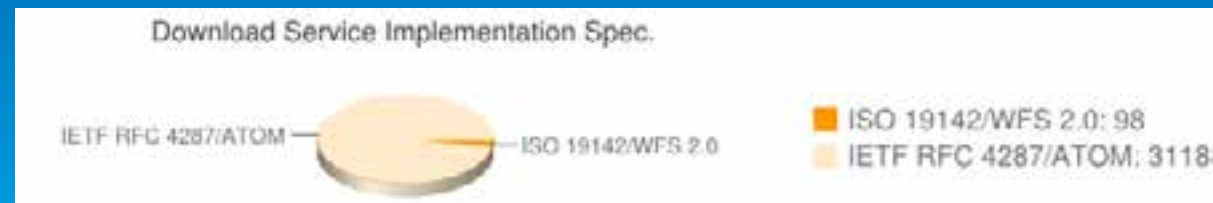
*Dates in this figure are accurate at the time of publication. For definitive dates refer to the roadmap published on the INSPIRE website: (<http://inspire.jrc.ec.europa.eu/index.cfm/pageid/44>)

INSPIRE Implementation Roadmap

Multi-phase plan

What have we learned?

- More options to meet INSPIRE compliance
- Need to be flexible and meet individual deadlines
- Complex GML application schemas
 - Limited support in clients
 - It is “just” organized in a more structured record
- Simpler solution is not a “less compliant” solution
 - Largely used
 - Easy to implement in a very short time



<http://inspire-geoportal.ec.europa.eu/GeoportalProxyWebServices/resources/INSPIREResourcesReport>



With WFS and ATOM



With ATOM

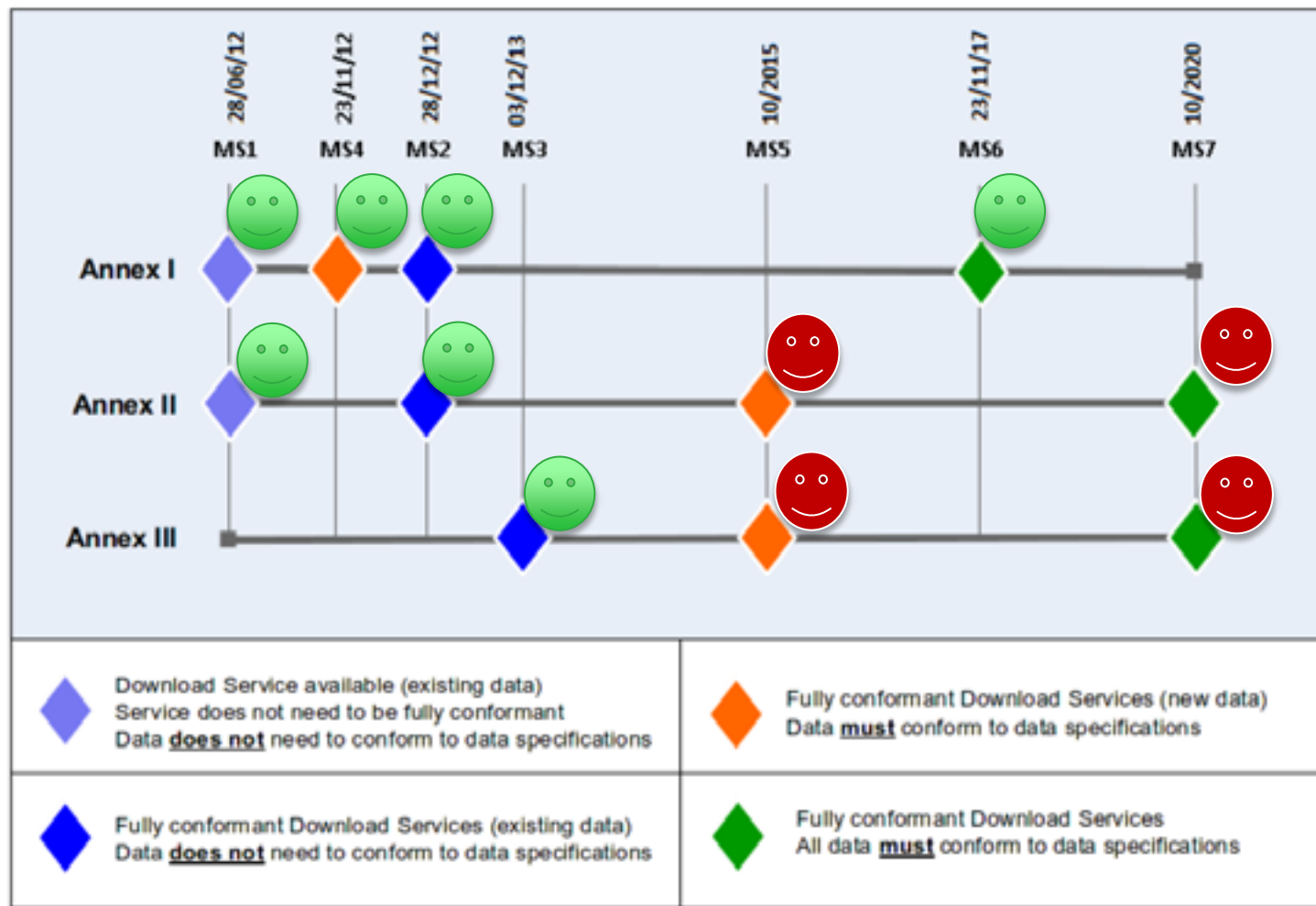


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INSPIRE Implementation at 10.2.1

ArcGIS 10.2.1 for INSPIRE provides a solution for the immediate and long term needs

ArcGIS for INSPIRE extensions

- **Map and service authoring desktop tool**
- **Multi-lingual (Service description, Legend)**
- **Layer and Feature names**
- **Data models**
- **Data encoding**
- **OpenSearch INSPIRE profile**
- **Streaming**

- **Configuration options (Identify, CRS, Languages, Scale dependencies, ...)**

Existing Esri enterprise geodatabase



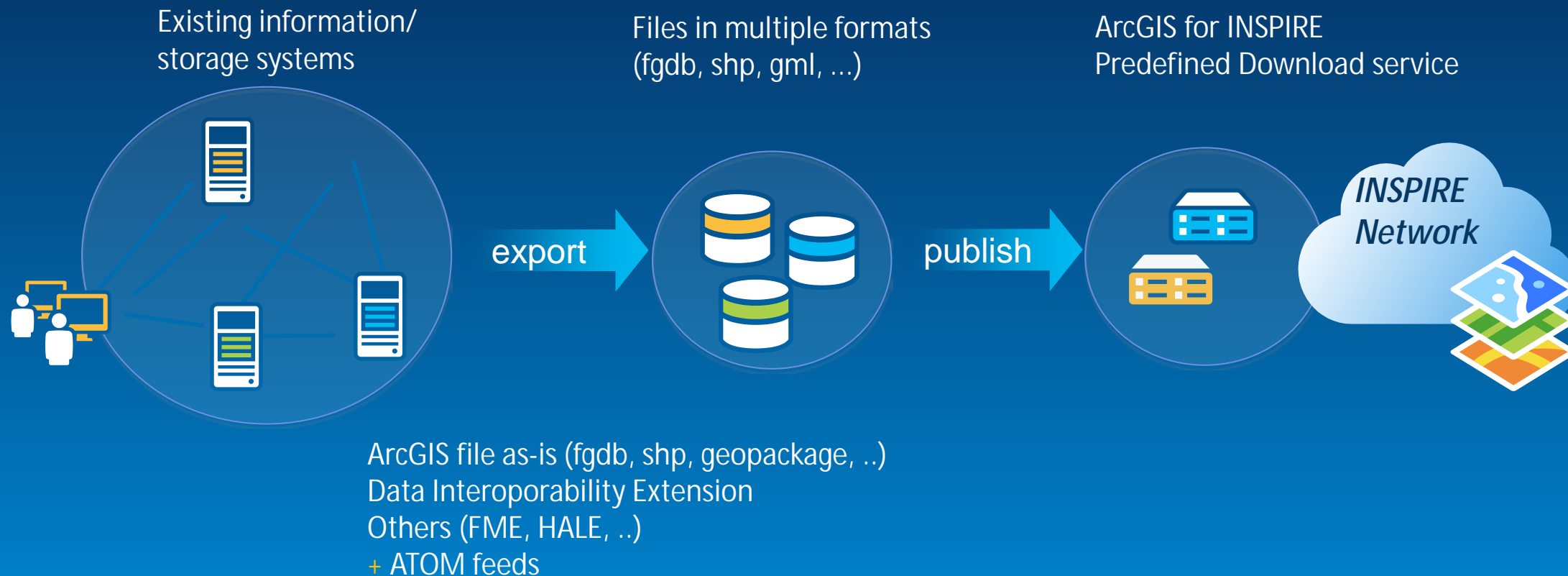
publish

ArcGIS for INSPIRE
View and (WFS 2.0) Download services



ArcGIS for INSPIRE Implementation Pattern (1/3) - **New**

Valid solution for the immediate needs
in Annex I, II and III



ArcGIS for INSPIRE Implementation Pattern (2/3) - **New**

Valid solution for grid/coverage data
and/or limited server capacity in Annex
I, II and III



ArcGIS for INSPIRE Implementation Pattern (3/3)

Most sophisticated solution available
for Annex I

Demonstration

Leveraging INSPIRE in the Cloud - European Location Framework



The screenshot shows the homepage of the European Location Framework (ELF). The page features a navigation menu with links for HOME, GALLERY, MAP, and GROUPS. A search bar is located in the top right corner. The main content area displays the ELF logo and the text "EUROPEAN LOCATION FRAMEWORK". Below this, there are two map thumbnails: one showing a detailed view of a city (Amsterdam) and another showing a broader view of Europe. The text below the thumbnails reads: "The European Location Framework (ELF) is a One Reference Geo-information Source for Europe and provides reference feature data and maps from all over Europe."

elf.maps.arcgis.com



Understanding our world.