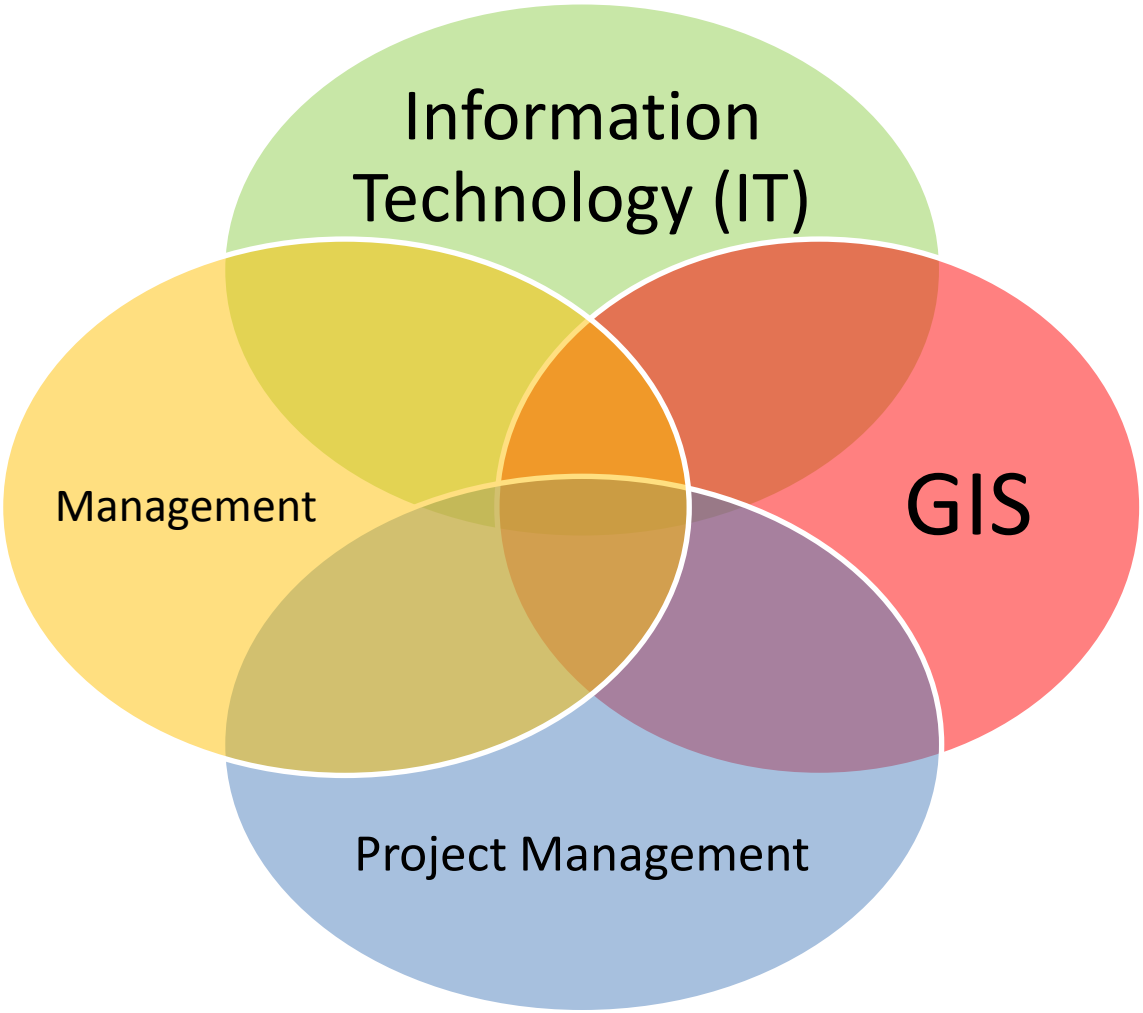
GIS management

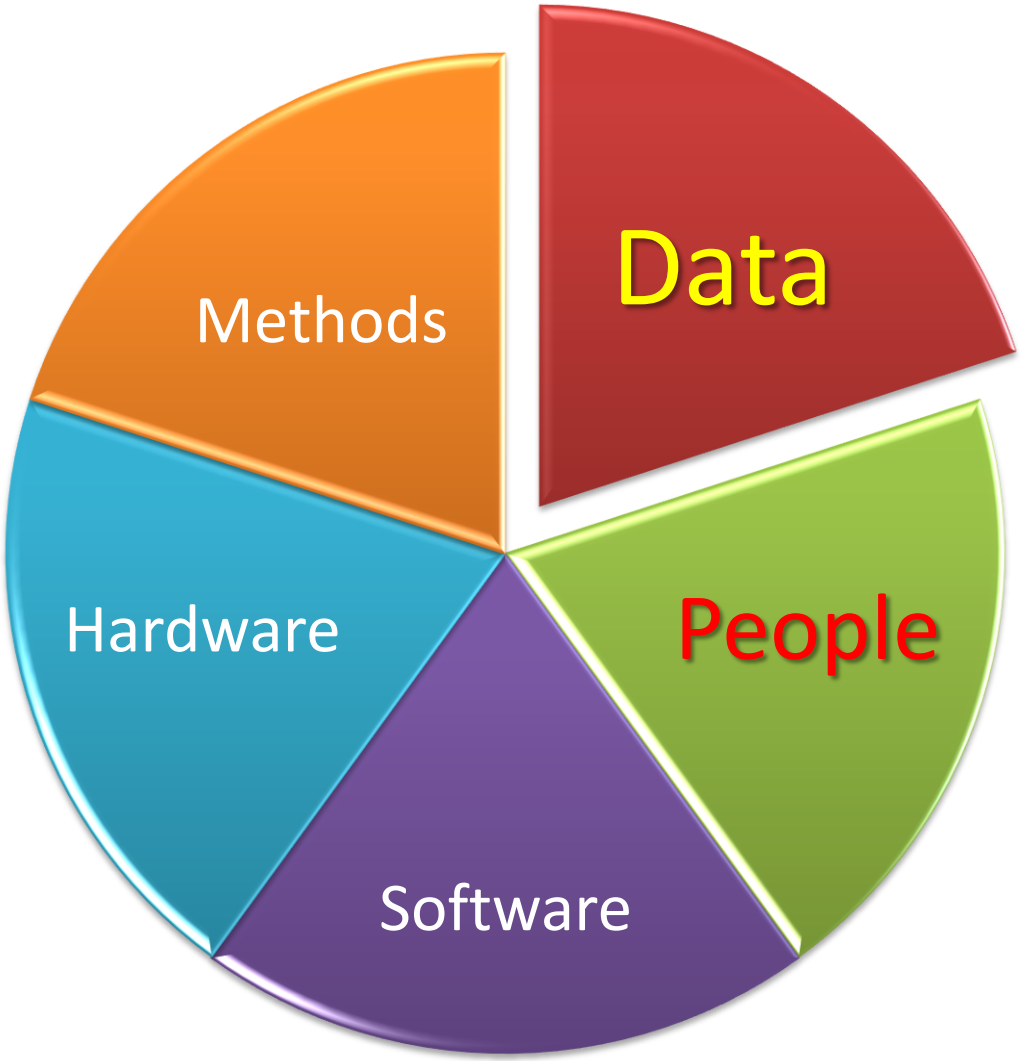
Essential elements

GIS - funtamentals

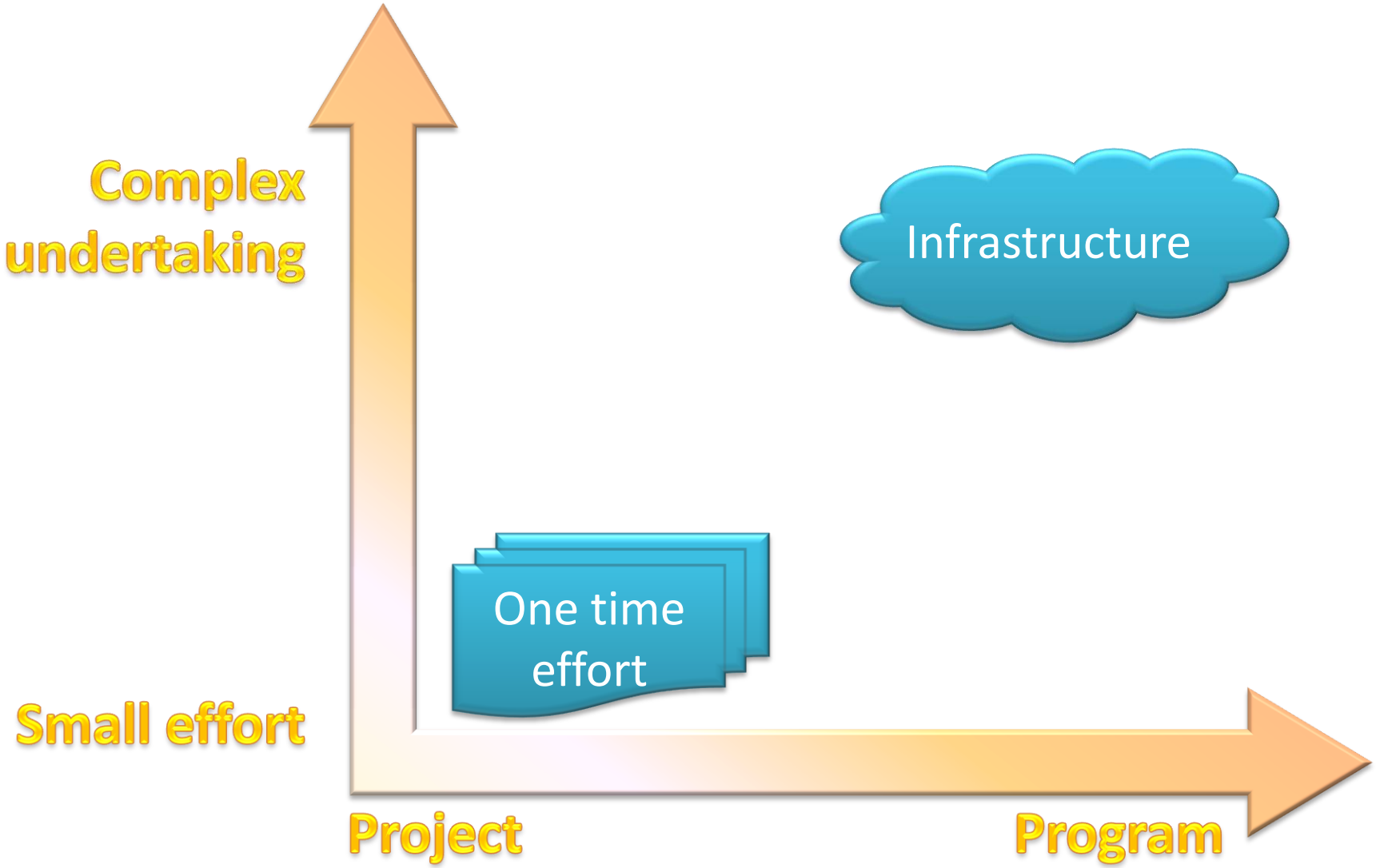


- Geography
- Cartography
- Spatial functions
- Geodata
  - Data capture
  - Data quality
  - Data type
- Remote sensing
- Spatial analysis

GIS - elements



GIS – type of


Complex undertaking
Small effort
Infrastructure
One time effort
Project
Program

GIS – type of

A GIS project or program may be small and simple, involving limited software, data, and users; it may be large and complex, involving myriad data sets, applications, and users and complex systems and databases; or it could fall anywhere in between

GIS - type of

A GIS project or program may be small and simple, involving limited software, data, and users

- Small/large: effort, know how, time
- Simple/complex: output, internal and external relationship, SDI
- Software: new applications, web-based, new methods/process, IT, HW
- Data: data mart, multi-scale, multi-data format, data quality, standards
- Users: number, distribution, profiles

GIS - type of

Examples – outbreak map

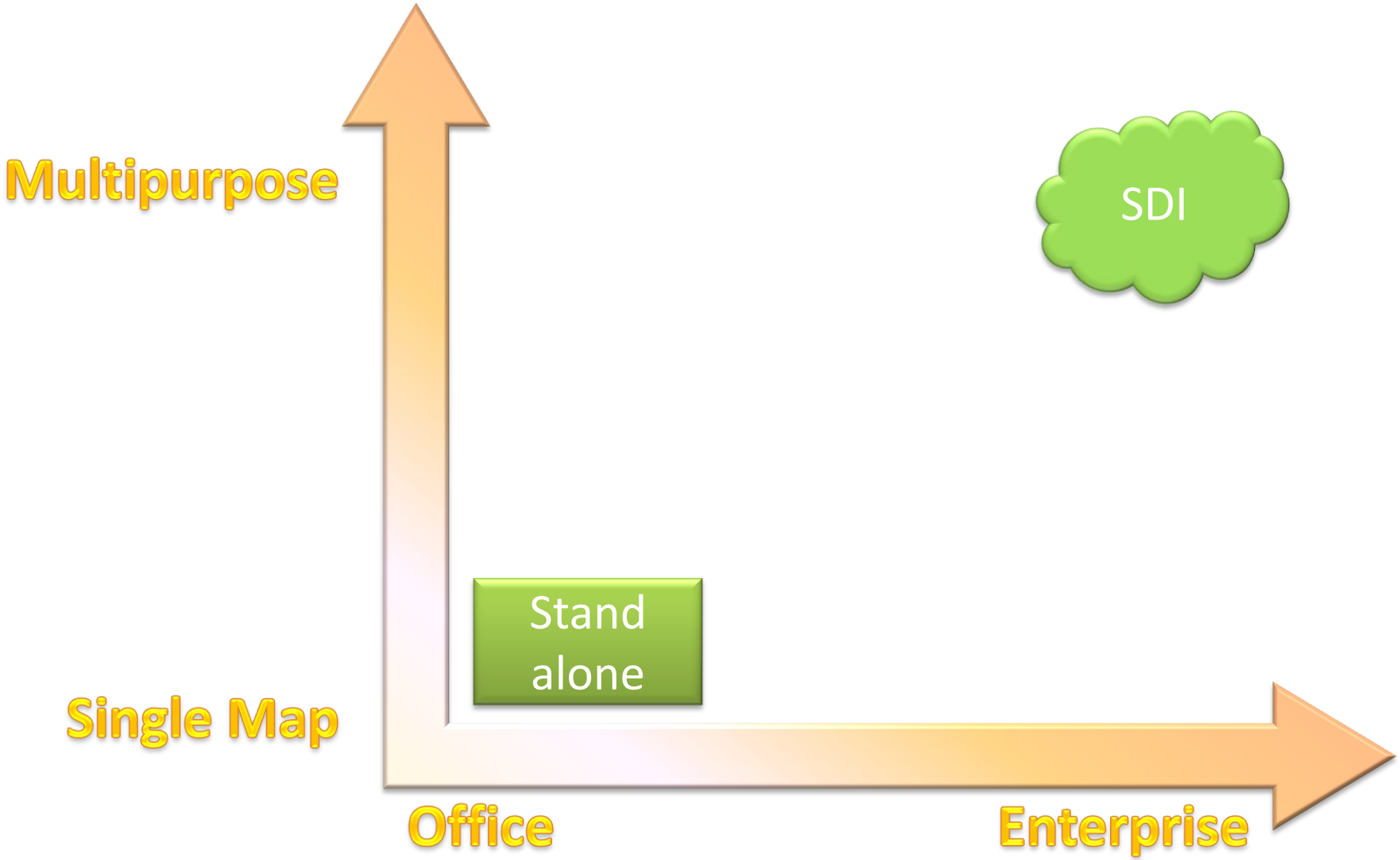
- Small: the framework is well established and the amount of time to produce the outcome is quite small
- Simple: the output is composed of 2/3 maps with a well established input/output data flow
- Software: a desktop application is usually used
- Data: the amount of data is relatively small. Some problems concerning the data quality must take into account
- Users: a GIS technician is enough to manage the process.

GIS - type of

Examples – GIS for fish farming (new system)

- Large: new resources and know-how on GIS techniques is required. A project design is required
- Complex: the integration of fish farm into the river-network analysis is required. An interactive type of output is required.
- Software: a specific application must be developed.
- Data: new type of data (river-network data) are required. A large amount of environmental data are available.
- Users: a GIS technician and a GIS analyst are required. The end user must be clearly identified and trained on the usage of the new system.

GIS - organizational approaches



GIS - organizational approaches

Business-tools approach:

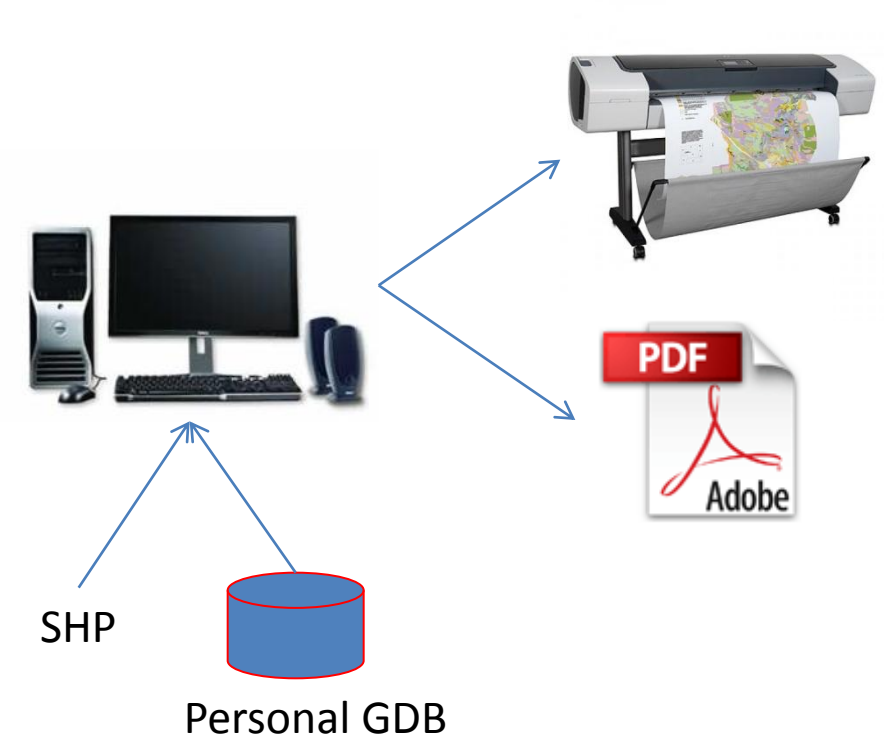
GIS to serve specific projects or clients

- Data and applications developed for each project may have no relation to those developed for other projects
- GIS business units are independent
- Lack of coordination on data and software maintenence

GIS - organizational approaches

Stand alone

- Single purpose project
- Project-specific output
- One time effort

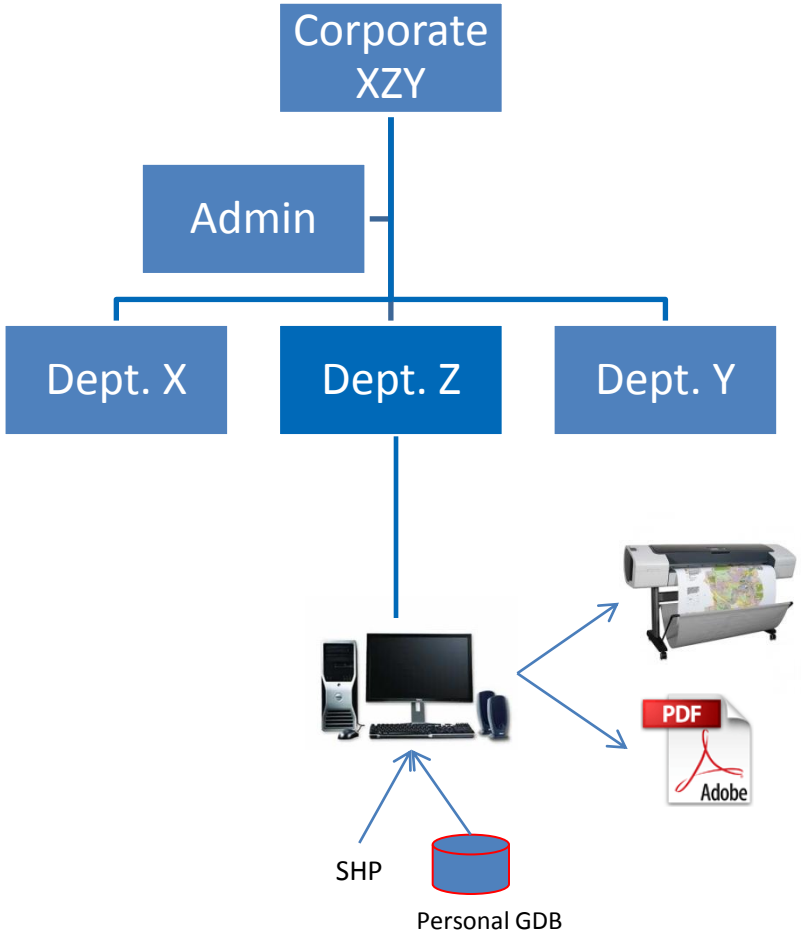


GIS - organizational approaches

Departmental

(based on existing business unit)

- Epidemiology dept. typically the starting point
- Project-specific output
- Satisfy dept. needs
- Minimal data sharing

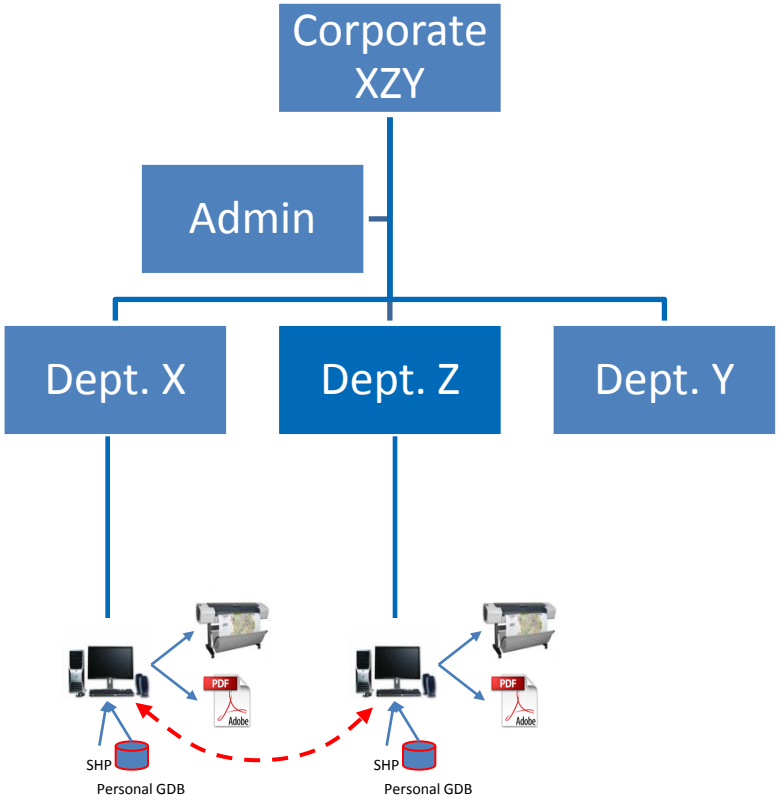


GIS - organizational approaches

Multi Departmental

(based on existing business unit)

- Project-specific output
- Satisfy dept. needs
- GIS crosses departmental boundaries
- Need for increased data sharing, integration of data and applications



GIS - organizational approaches

Service-resource approach

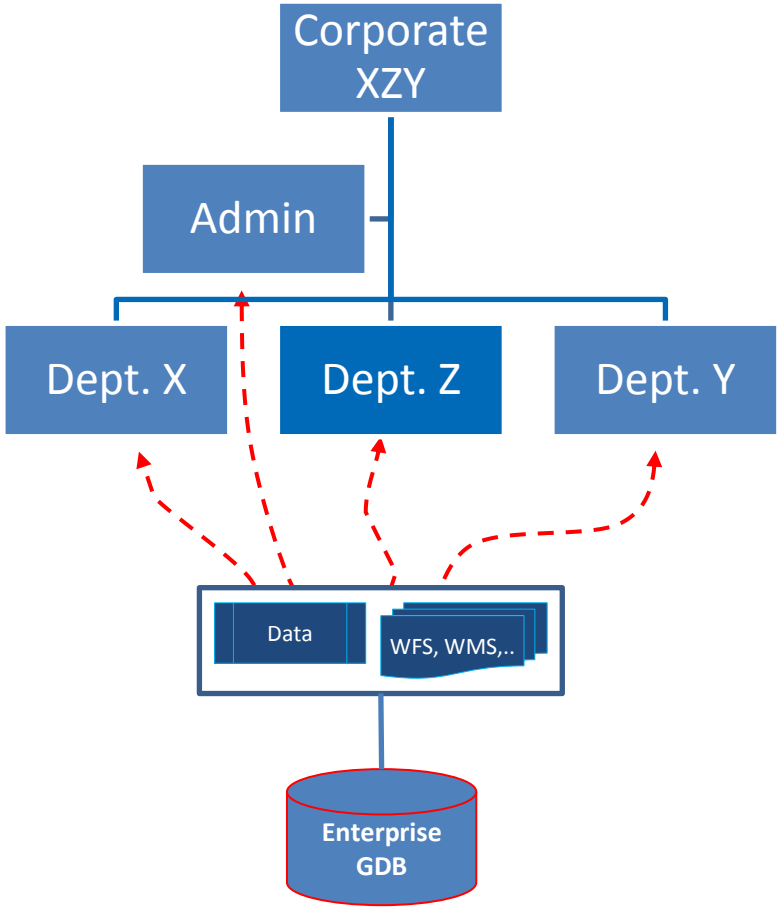
- designed to support services and data resources in order to make them available to the operating units
- GIS business units are independent in their operational choice

GIS - organizational approaches

Centralised

(**new** business unit)

- Focus on everything GIS
- Responds to corporate needs
- Primary staff function able to address workflow and processes
- GIS centrally managed
- Interdepartmental teams are required
- Sharing, coordination across organization



GIS - organizational approaches

Spatial Data Infrastructure (SDI):

Multipurpose, comprehensive, enterprise-wide systems

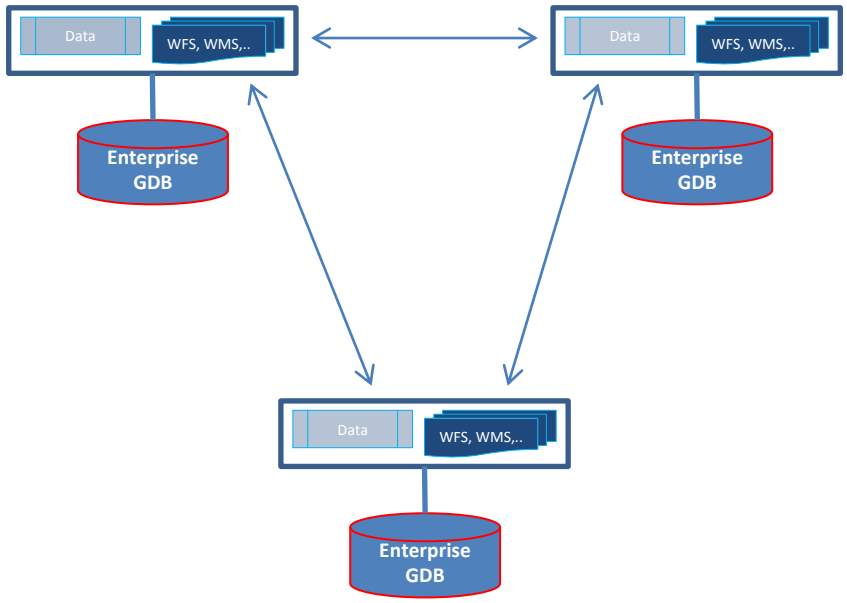
- designed to serve most of the organization's spatial data handling needs
- Integrating spatial data
- Making the data accessible to all users and departments
- Leveraging GIS assets for minimizing redundancy and incompatibilities in data and systems

GIS - organizational approaches

SDI

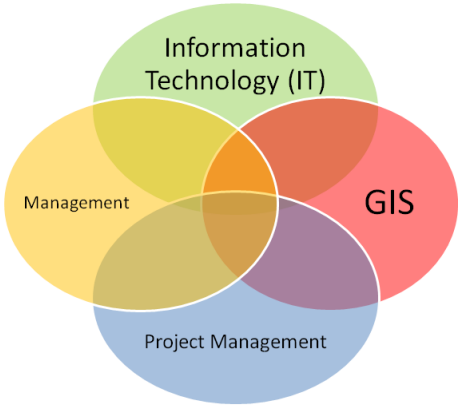
(System of system)

- Fundamental Geospatial datasets
- metadata
- Clearinghouse
- Access Infrastructure
- Standards
- Policies
- Human resources and partnership



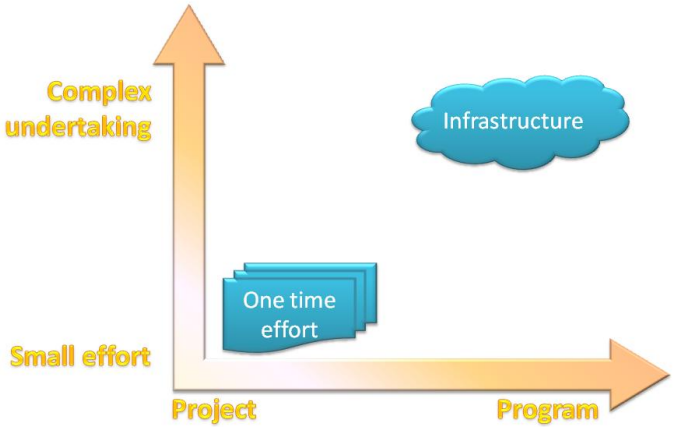
Resume

GIS - funtamentals

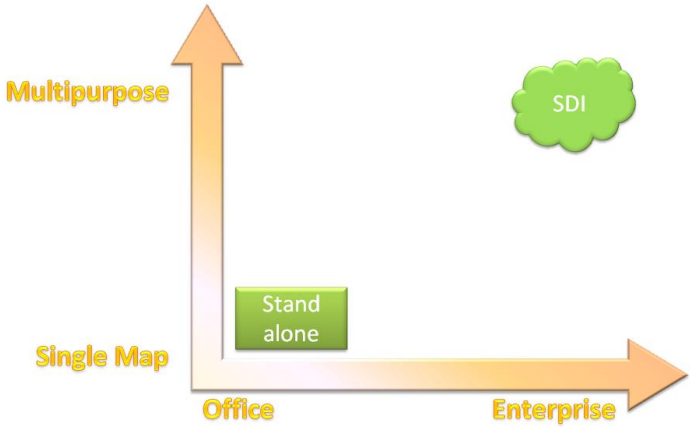


GIS - elements

GIS – type of



GIS - organizational approaches



The end -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