Towards Digital Governments: Sharing Geospatial Information

Anthony Stefanidis

Dept. of Spatial Information Science & Engineering
National Center for Geographic Information & Analysis
University of Maine

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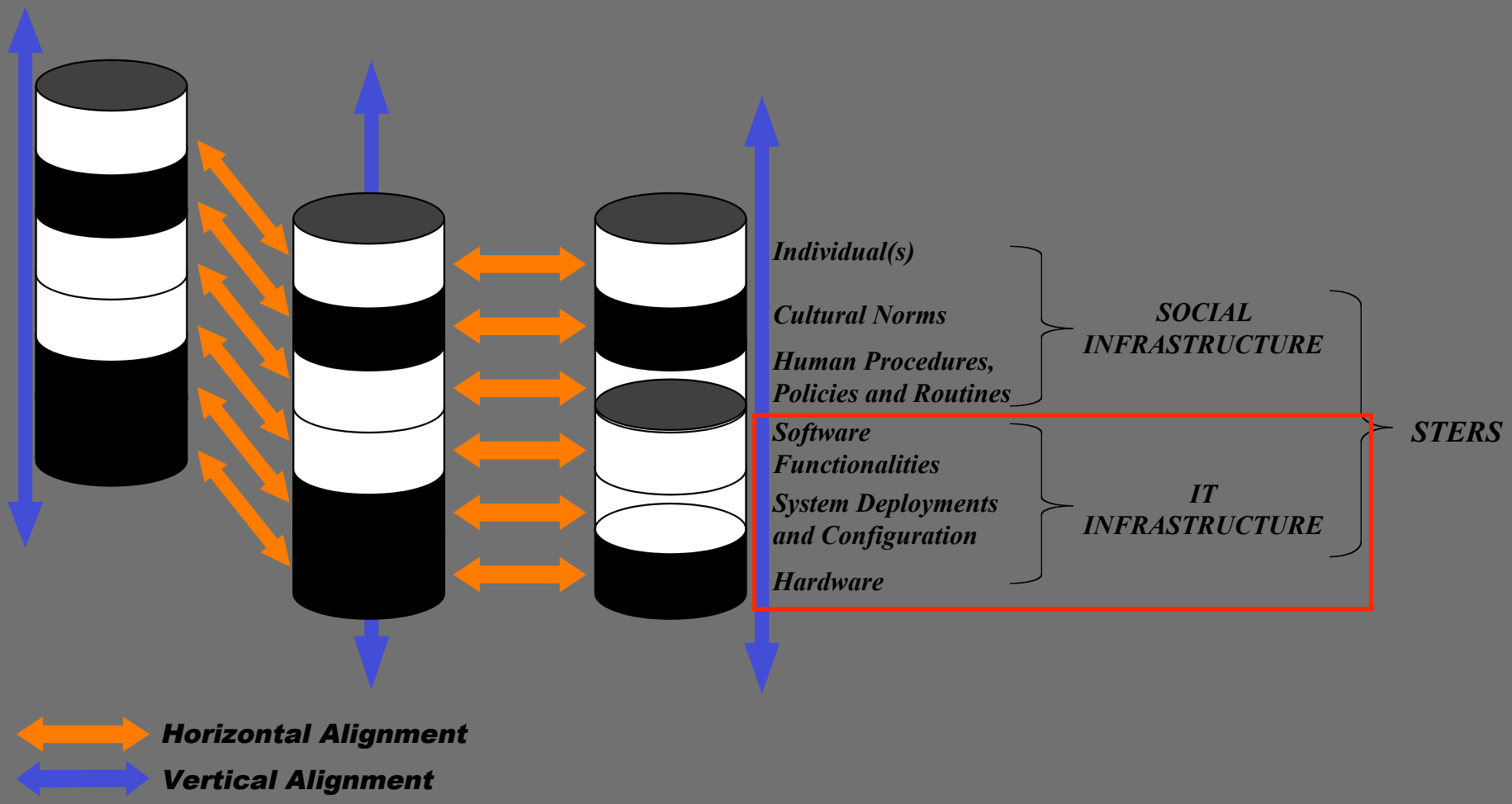
Challenges


Individual(s)
Cultural Norms
Human Procedures, Policies and Routines
SOCIAL INFRASTRUCTURE
Software Functionalities
System Deployments and Configuration
Hardware
IT INFRASTRUCTURE
STERS
Horizontal Alignment
Vertical Alignment

Sharing Geospatial Information

- Standards
- Use modalities
- Models and architectures
- Knowledge aggregation and exchange

Sharing Geospatial Information: Standards

- State data collections (and data collecting techniques) are standards-driven
- Different states, different standards
- Challenge: merging data collections that differ in scale, resolution, accuracy, format.
- Digital Earth.

Sharing Geospatial Information: Standards

- From maps and numbers to VR models

Example IT Challenges: Standards

- Multiscale integration of geospatial information (from satellites to handheld cameras)
- Integration of stochastic information (available at various levels of accuracy)
- Spatiotemporal VR modeling

Sharing Geospatial Information: Use Modalities

- Different levels of public participation (effects of culture on access to and use of data).
- Multilingual communication: Space as a universal language.
- The democratization of data collection: users are also producers (Prod*users*)
- Individuals do not care about standards, they care about information availability

Example IT Challenges: Use Modalities

- Ubiquitous computing
- Field computing
- Information generalization/abstraction
- Visualization of textual and description of visual geospatial information

Sharing Geospatial Information:

Models and Architectures

From

‘Small to be global, large to be local’

To

‘The sky is the limit’

Distributed collections, grid structures.

Example IT Challenges: Models and Architectures

- Access to and distributed data collections, grid structures
- Permitting information contribution to federated datasets
- Information validation
- Redundancy management

Sharing Geospatial Information:

Knowledge Aggregation and Exchange

- Modeling events and phenomena
- Establishing knowledge libraries (e.g. floods, wildfires, traffic patterns)
- Event comparison and correlation

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