

Applications of RS-GIS and its future scopes

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APPLICATIONS OF REMOTE SENSING AND GEOGRAPHIC INFORMATION SYSTEM

Introduction

Remote sensing, at its application end, is the tools and techniques of deriving information about the objects on the earth's surface without physically coming into contact with them.

GIS is a set of tools for capturing, storing, displaying, updating, manipulating, and analysing, in order to solve complex management problems.

The use of RS and GIS gave scope for immense opportunities in the field of large-scale mapping, updating of existing geographical maps, project planning, decision-making and natural resource management.

Major Roles



What are the application areas?

Agriculture

###

Urban studies

Hydrology

Cartography and mapping

???

Land-use/
land-cover

Ocean and coastal

Forestry

Geology

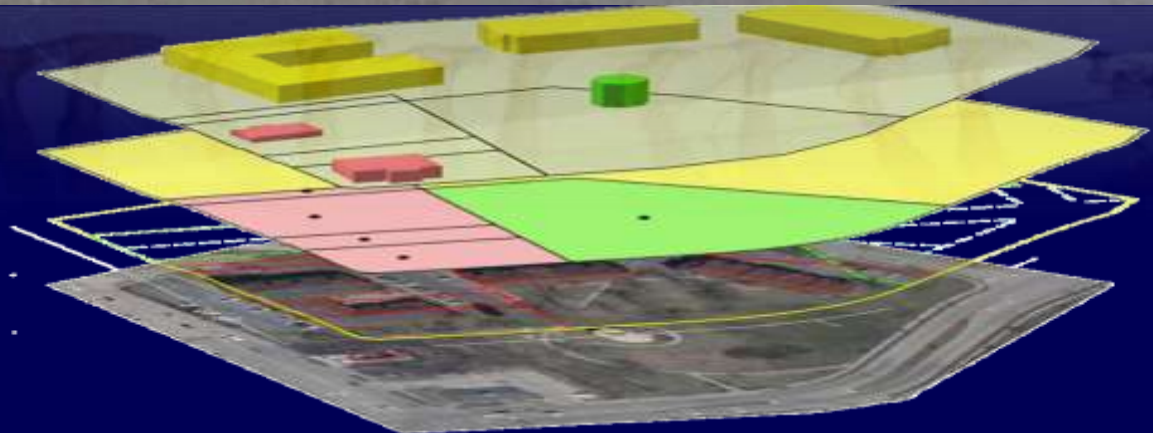
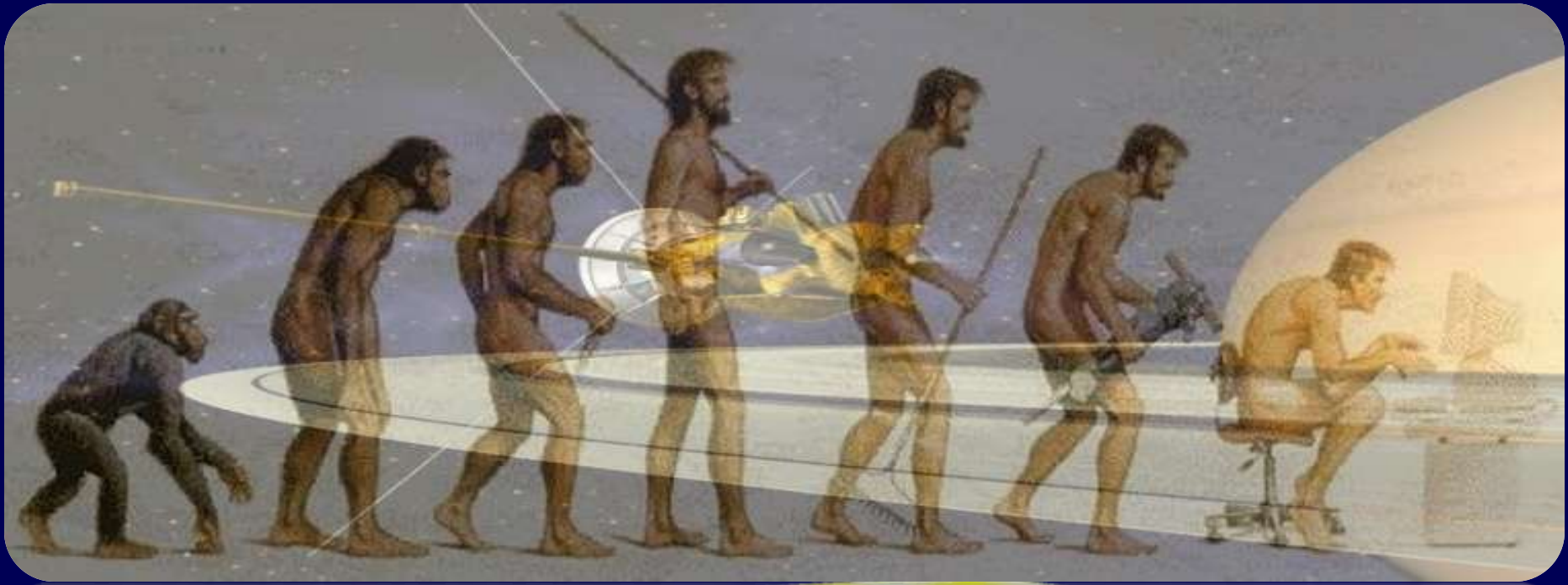
Atmospheric

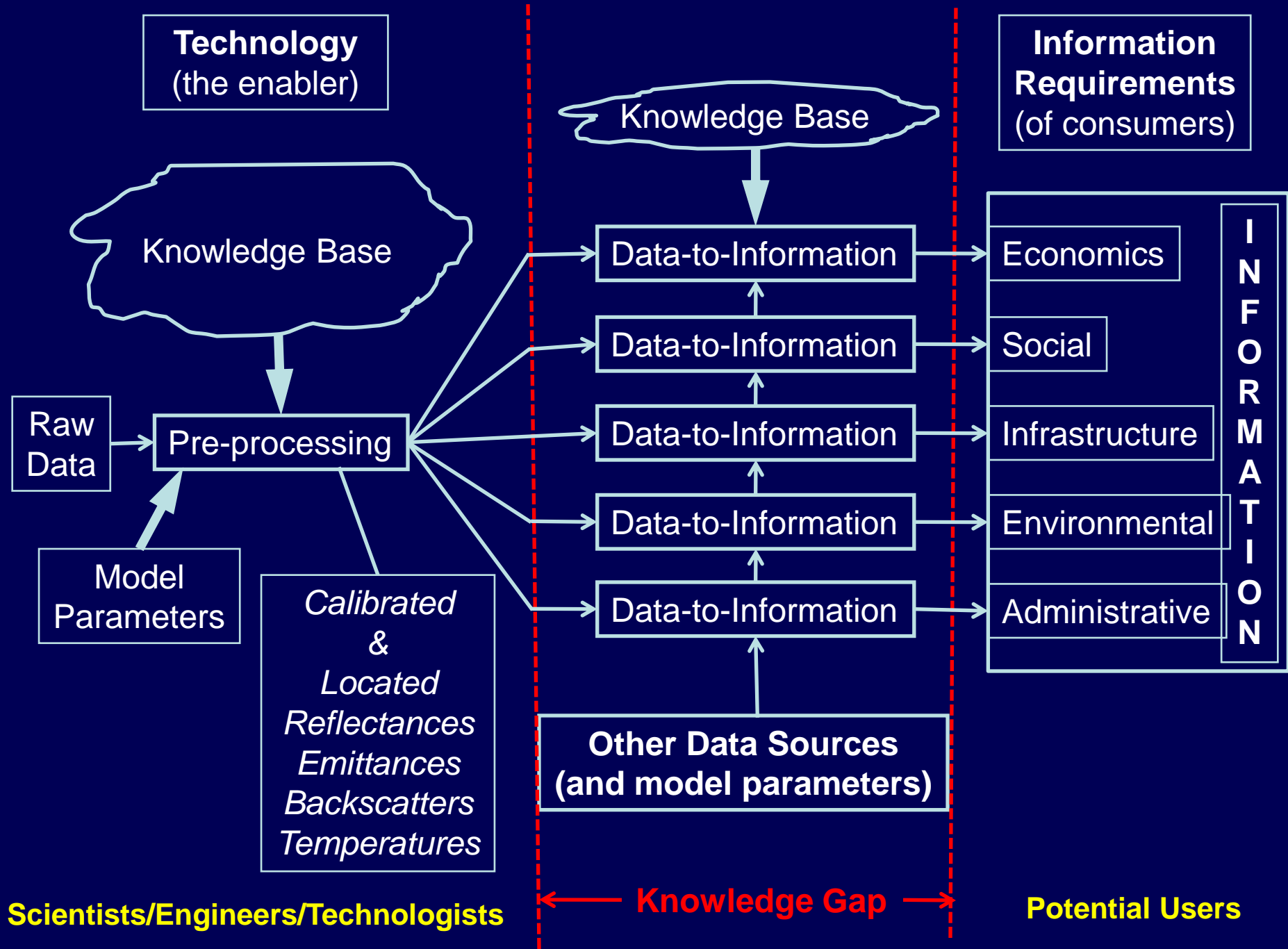
Geomorphology

!!!



Is RS & GIS a real technology for mankind?





Technology
(the enabler)

Information Requirements
(of consumers)

Knowledge Base

Knowledge Base

Raw Data

Pre-processing

Data-to-Information

Economics

Data-to-Information

Social

Data-to-Information

Infrastructure

Data-to-Information

Environmental

Data-to-Information

Administrative

I
N
F
O
R
M
A
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N

Model Parameters

*Calibrated & Located
Reflectances
Emittances
Backscatters
Temperatures*

Other Data Sources
(and model parameters)

Scientists/Engineers/Technologists

Knowledge Gap

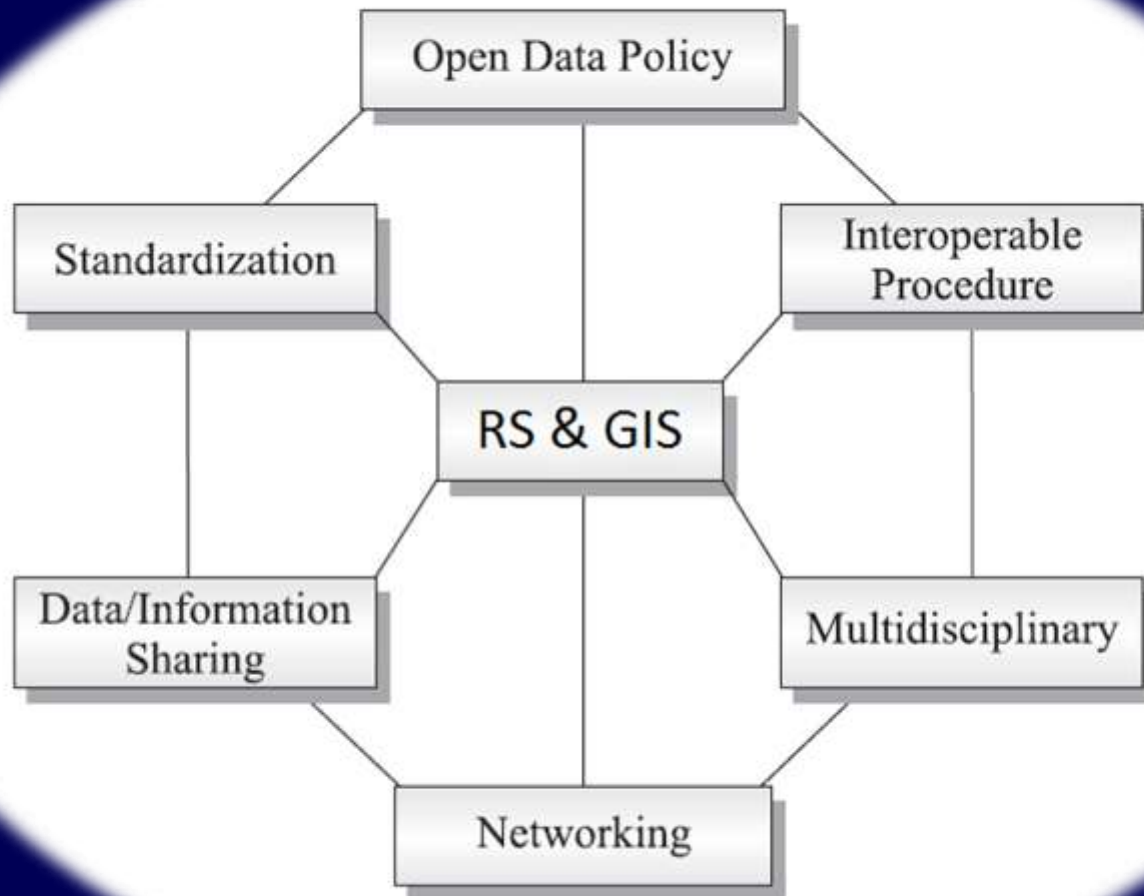
Potential Users

RS/GIS—is it a tool or a distinct field of study?



FUTURE SCOPES OF RS & GIS

Ideal case



Past, present, and future

**R
E
M
O
T
E

S
E
N
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I
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G**

Computer aided drawing (CAD)

Digital mapping or digital cartography

AM / FM

GIS

Geoinformatics / GIScience

Analysis, Modelling, Presentation, and Decision Making

Single layer multi-data analysis

Overlay operations (multi layer analysis)

Multi-temporal analysis

Spatial metrics and spatial statistics

Multi-agent analysis

Simulations (cellular automata, integration of multi-agent and CA)

Multimedia and hypermedia GIS

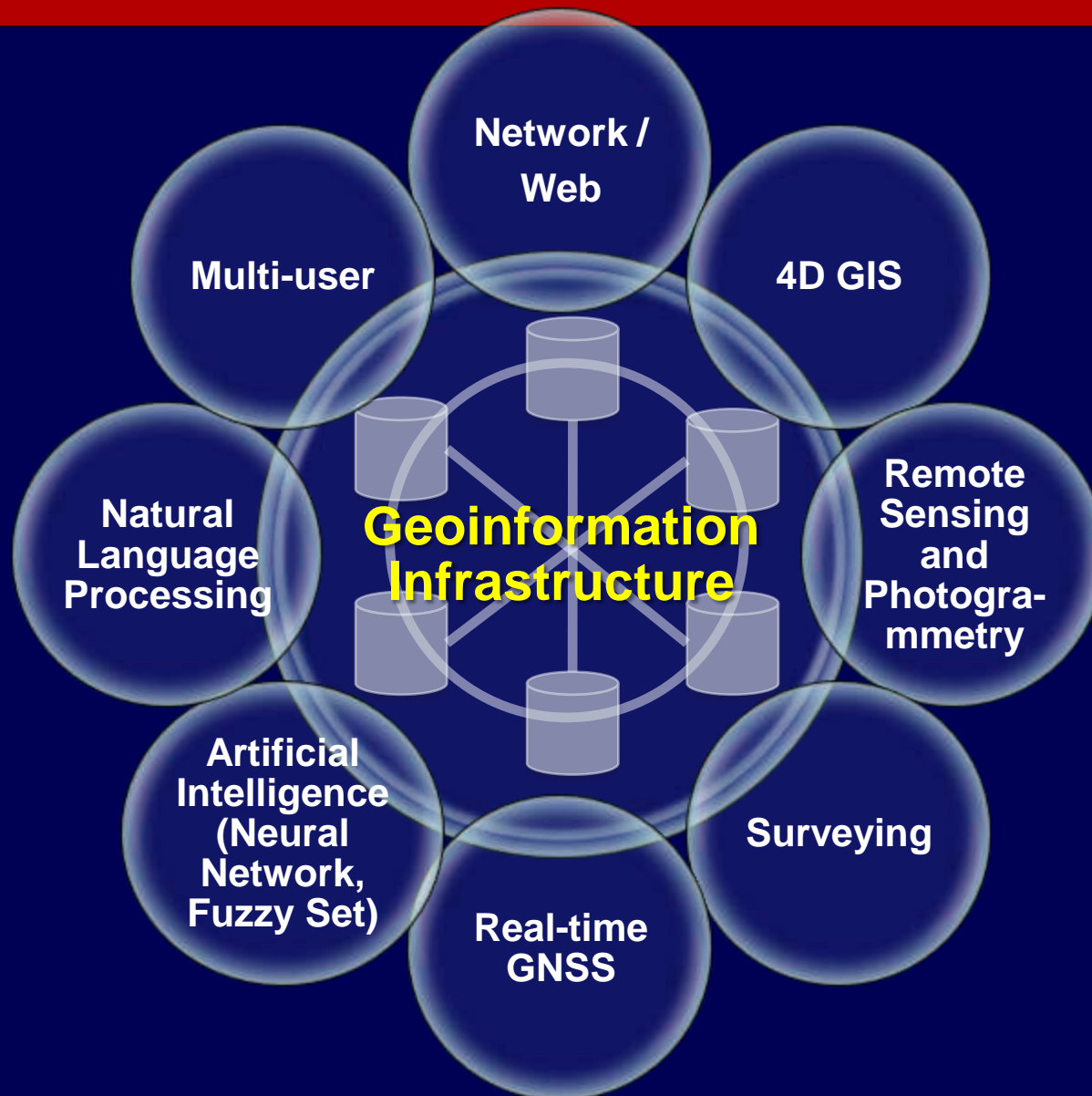
Web GIS

Mobile GIS

Virtual GIS

4D GIS

What is the future?





What will my role involve

Thank You