

Enterprise GIS Integration

What does it mean for pipeline operators
and what are the advantages

Robert Brook

rbrook@esri.com

Question

- Who is recognized as the North American Grandfather of GIS?



Agenda

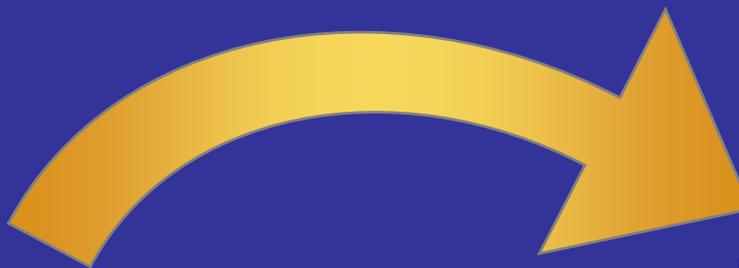
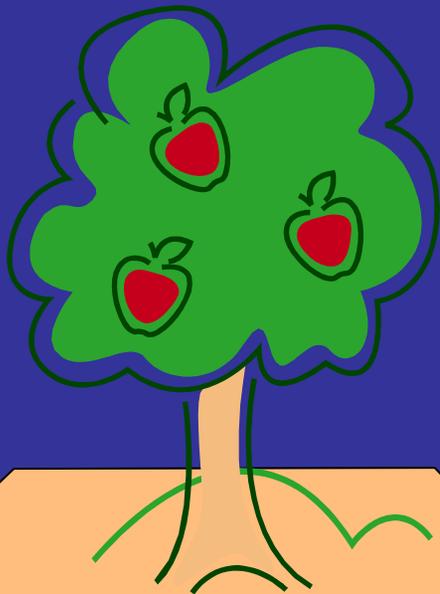
- Start at the beginning
- Enterprise GIS Integration
- Interactive Examples



ESRI

What is GIS?

Start at the beginning



Tree

Apple tree
Height
Age

Location:
Near Ron's house
Lat/Long
UTM
Measure

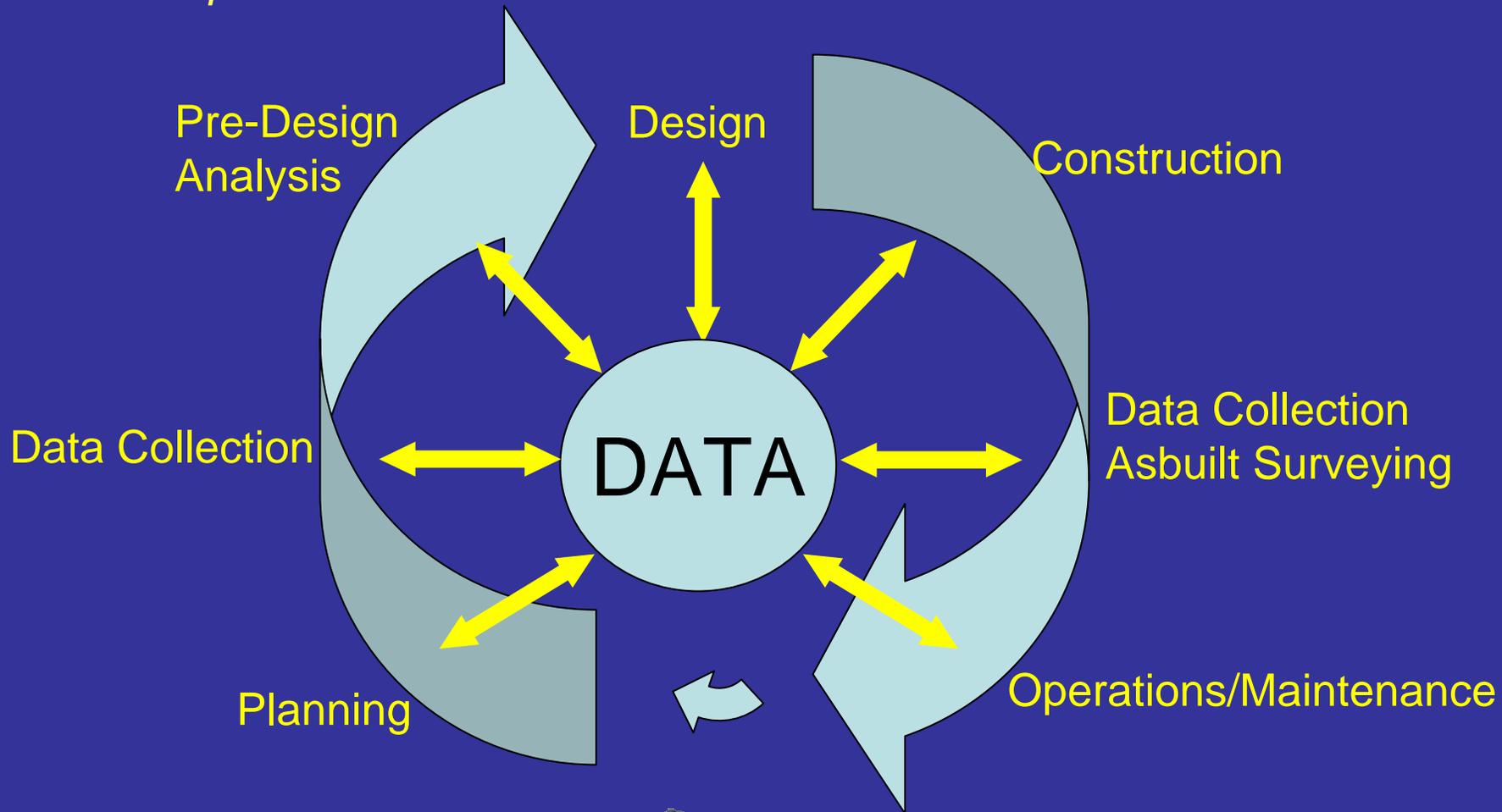
Question

- What is the most commonly used GIS applications?



GIS is a Process....a Workflow

One example



What Drives Us to Use GIS?

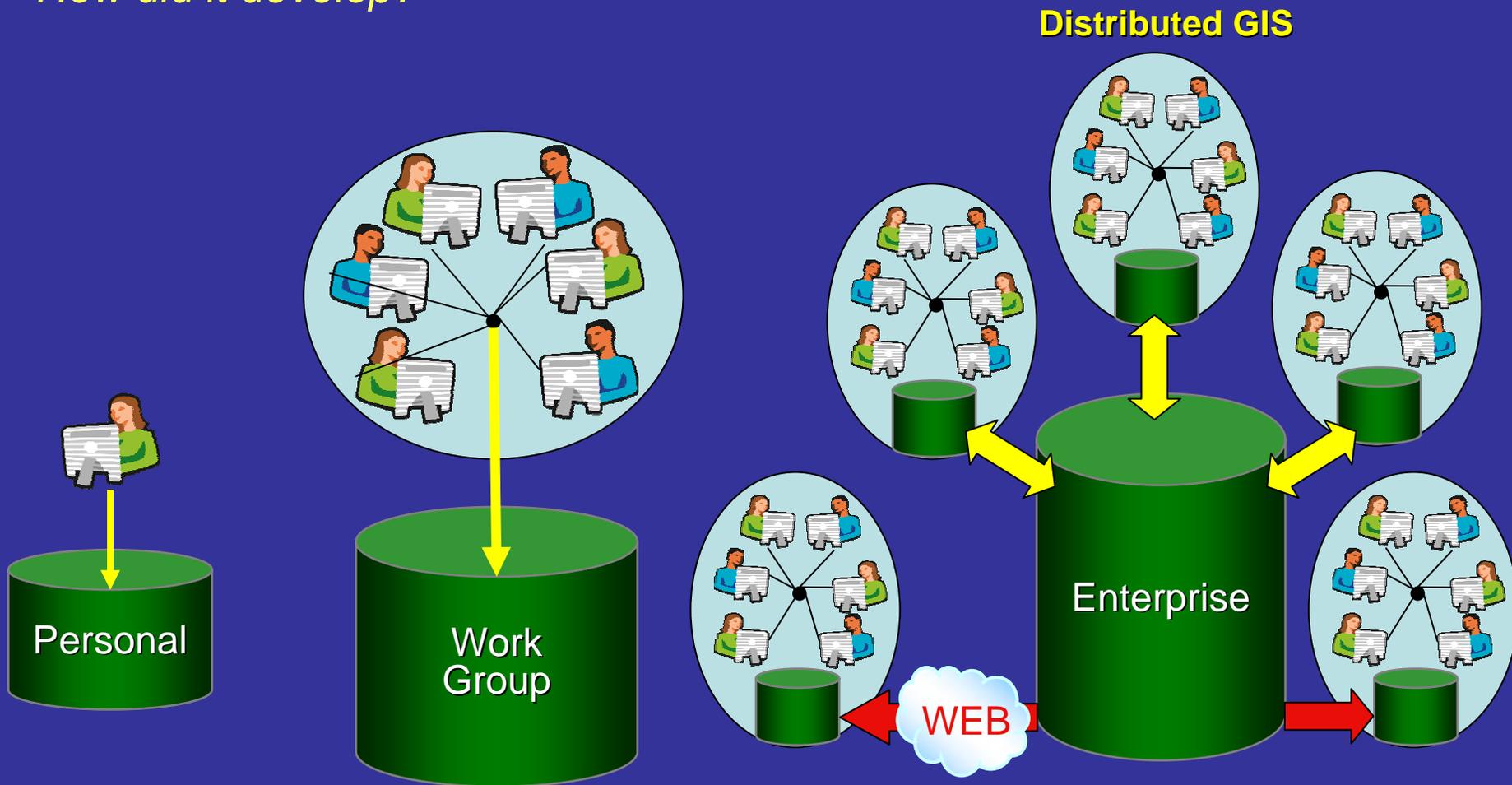
Start at the beginning

Workflow



What is Enterprise GIS?

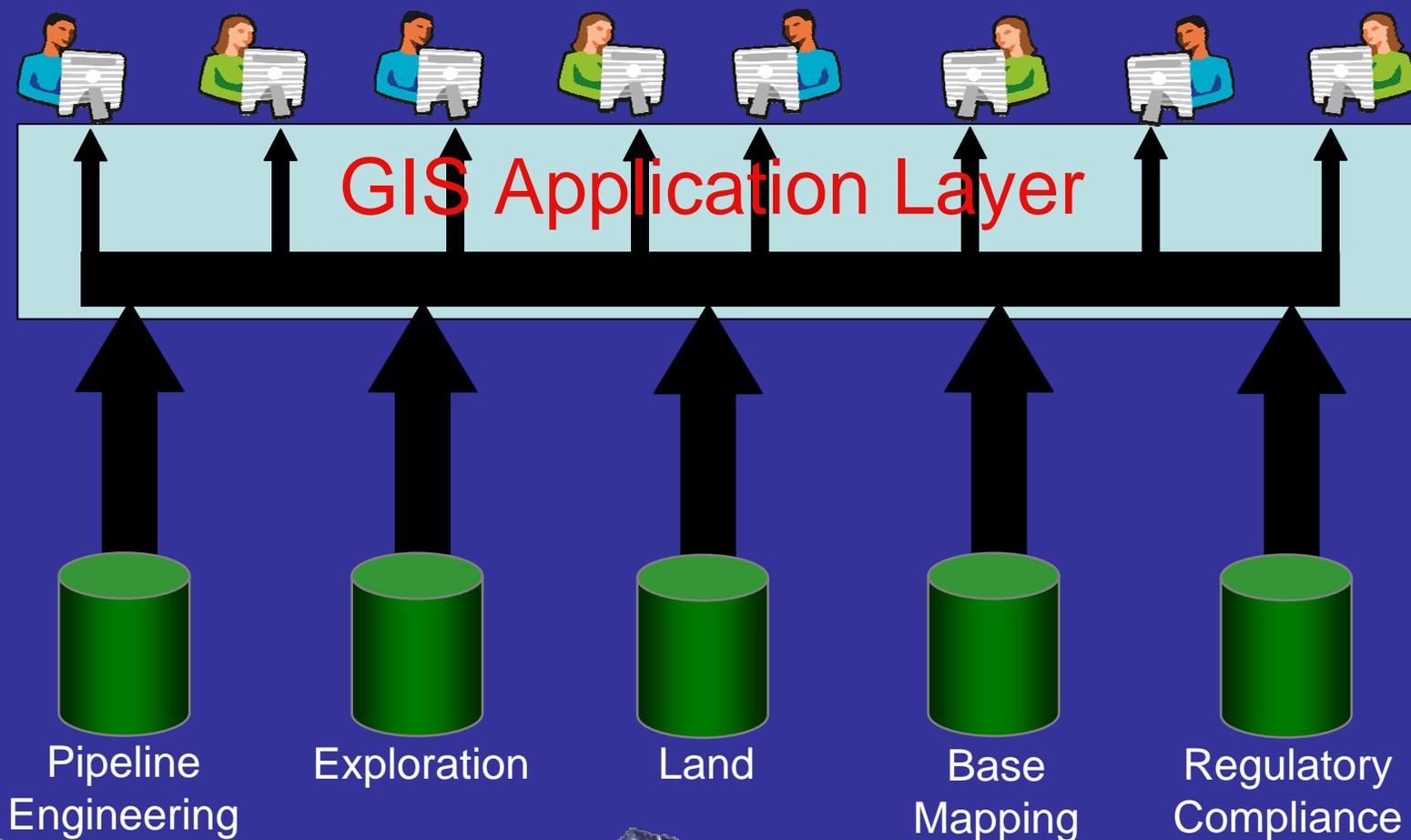
How did it develop?



ESRI

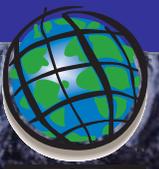
What is Enterprise GIS Based Integration?

What is the advantage?



GIS Based Integration

Expert GIS System



ESRI

GeoGathering 2007

Work Order



Construction



CAD Drawing



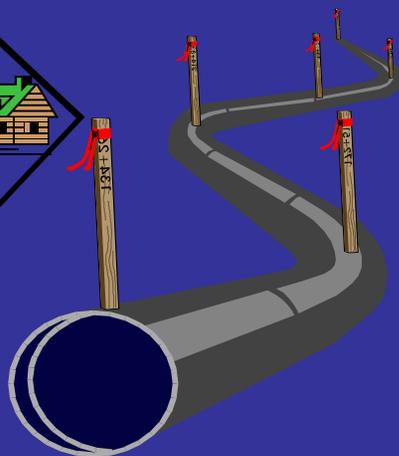
Regulatory



Purchase records



Houses



Environment



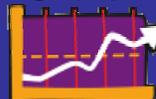
Wells



Survey



Cost



Plants



Leases

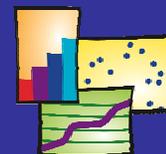


Workers



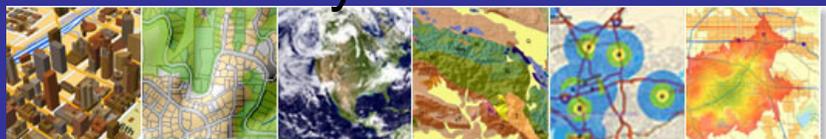
Valve

Documents



Field Equipment

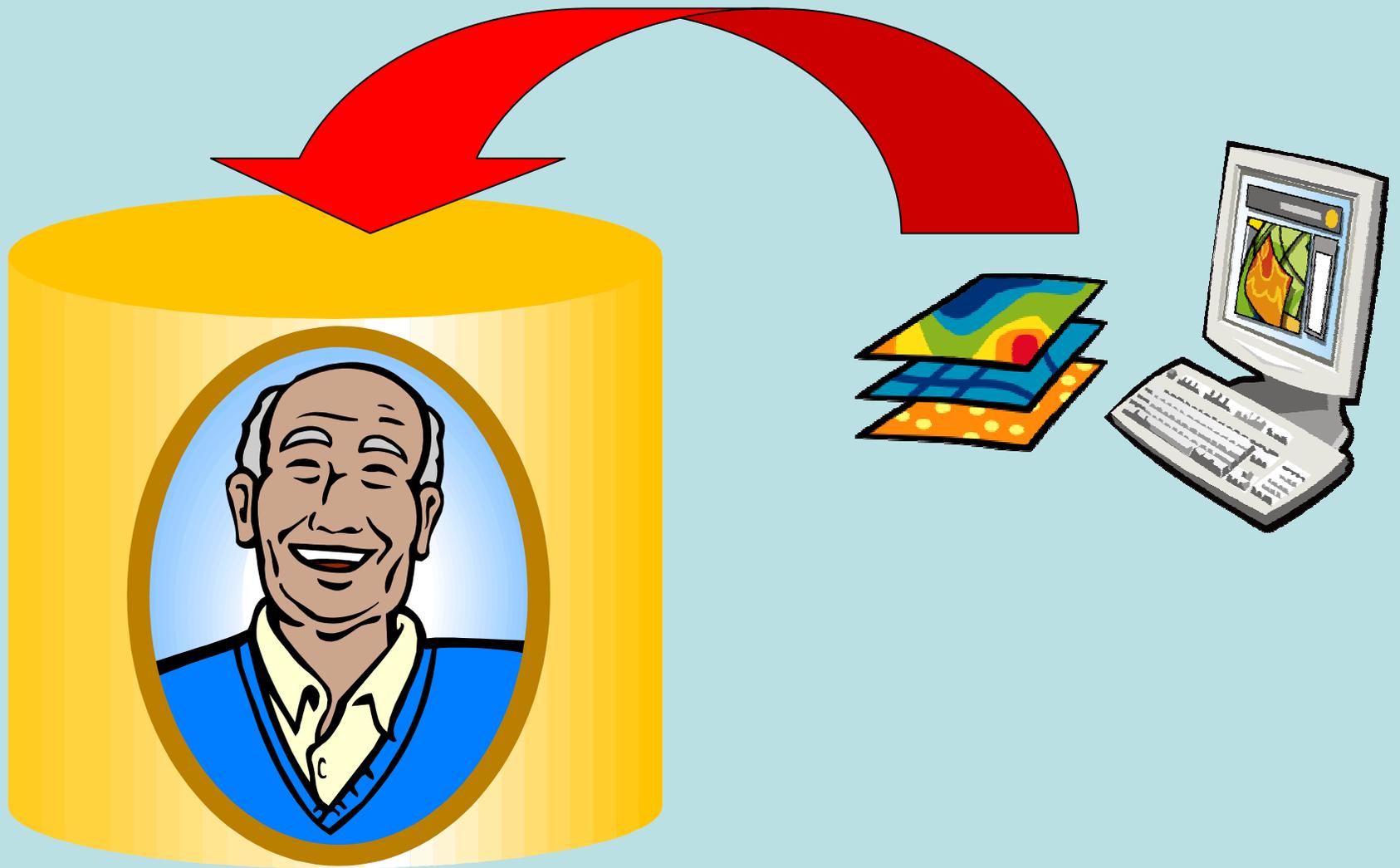
Tee



Analysis Results



ESRI



Production
Engineering

TEXAS

WYOMING

BUSINESS AFRICA
NEEDS

COLORADO

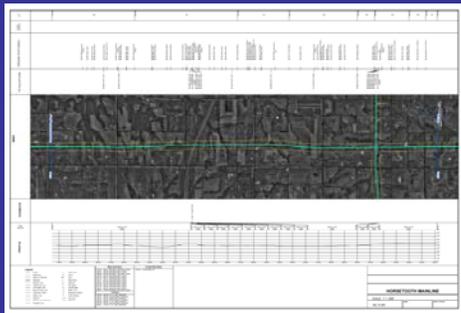
CALIFORNIA

Facility
Engineering



ESRI

Alignment Sheet Generation



In-Line Inspection

Risk Assessment

One Call

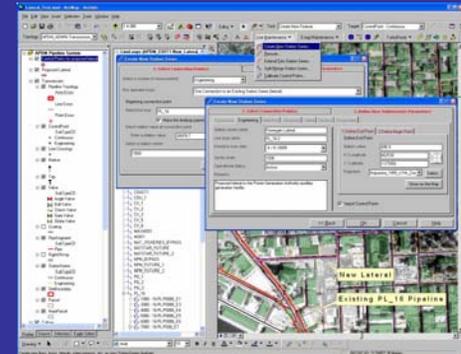
Integrity Management

Routing

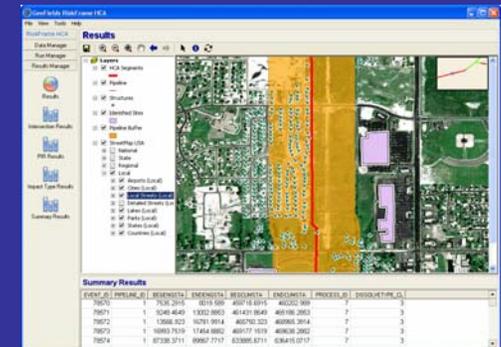
Schematics

Inter/intranet mapping

Pipeline and Asset Maintenance



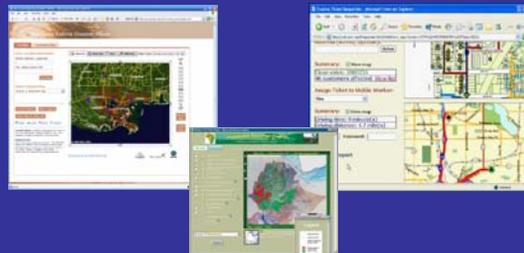
High Consequence Area

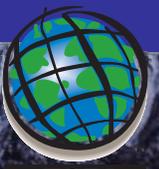
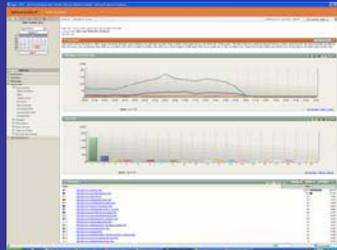
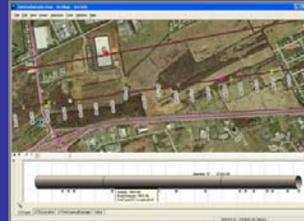
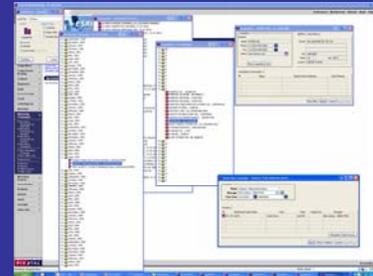
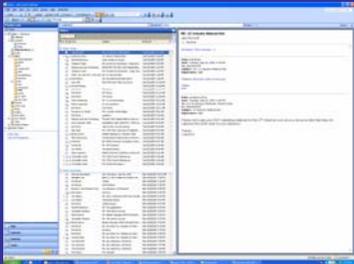
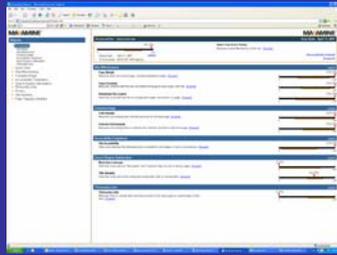
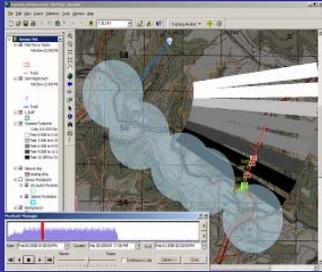


Spill Assessment



Class Definition



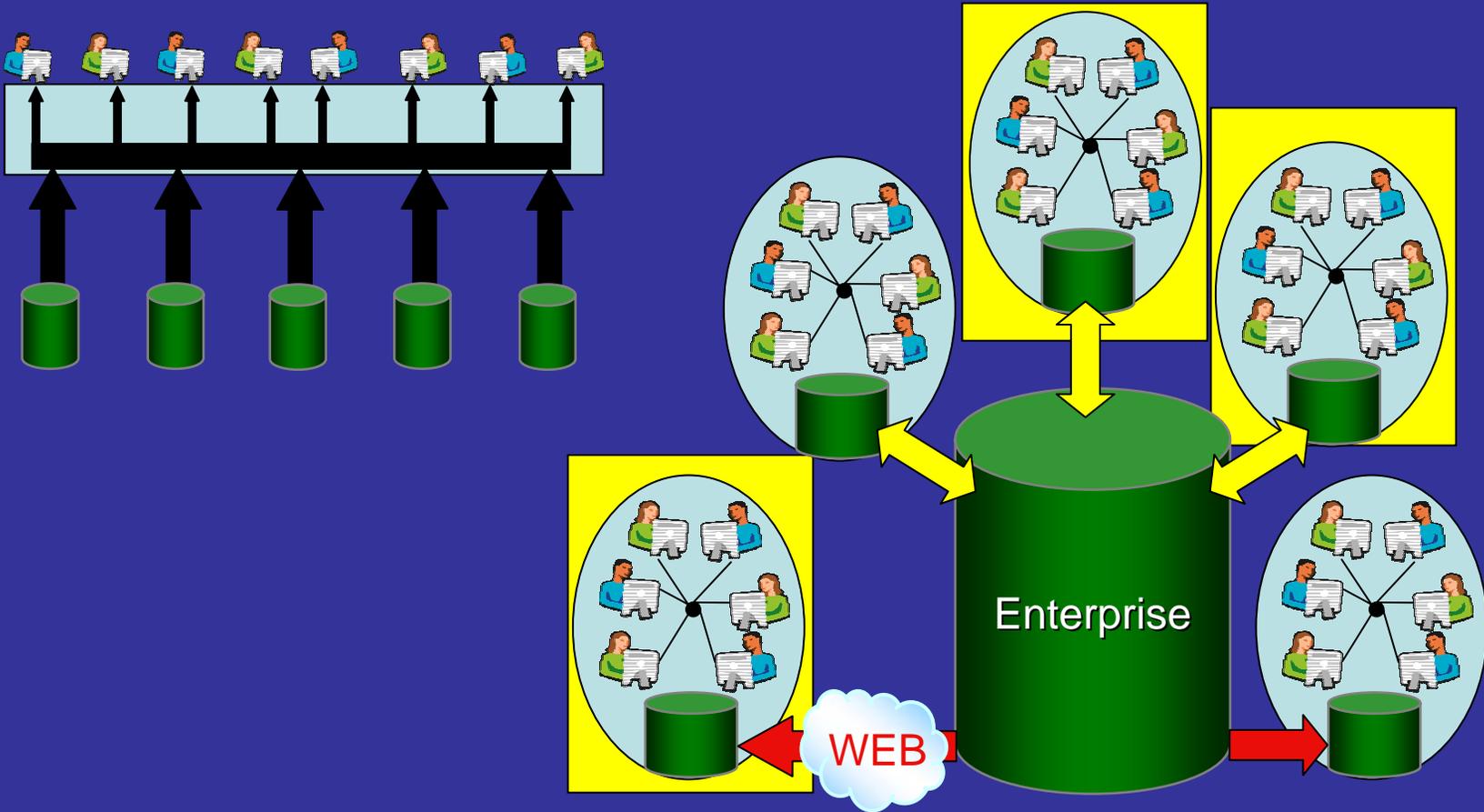


ESRI

GeoGathering 2007

What is Effective GIS Integration

Gathering has an advantage



Integrated Enterprise GIS



GeoGathering 2007

Implementing Integrated Enterprise GIS

A different view of the organization

- That geography is pervasive
- It can be used every where
- GIS is more than a technology
- It is a critical Business System
- It is not “mine” we are a team
- My Manager / my Executive need information
- Create / View / Analyze / Publish



Perfect Time!

GIS Is Evolving and Converging with IT

Web Services are Becoming a New Platform

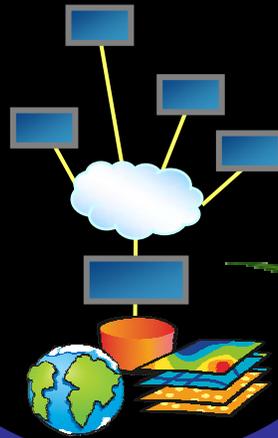
Many Services

- Interconnected
- Interoperable
- Integrative
- Dynamic

Distributed Collaboration

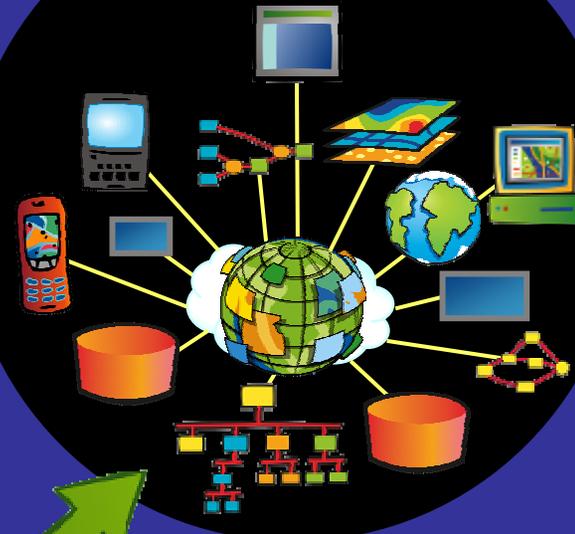
Mapping & Visualization

Today



The Near Future

Services Oriented



Supporting

- Distributed Data Management
- Collaborative Computing
- Application Integration

Legacy

Client/Server



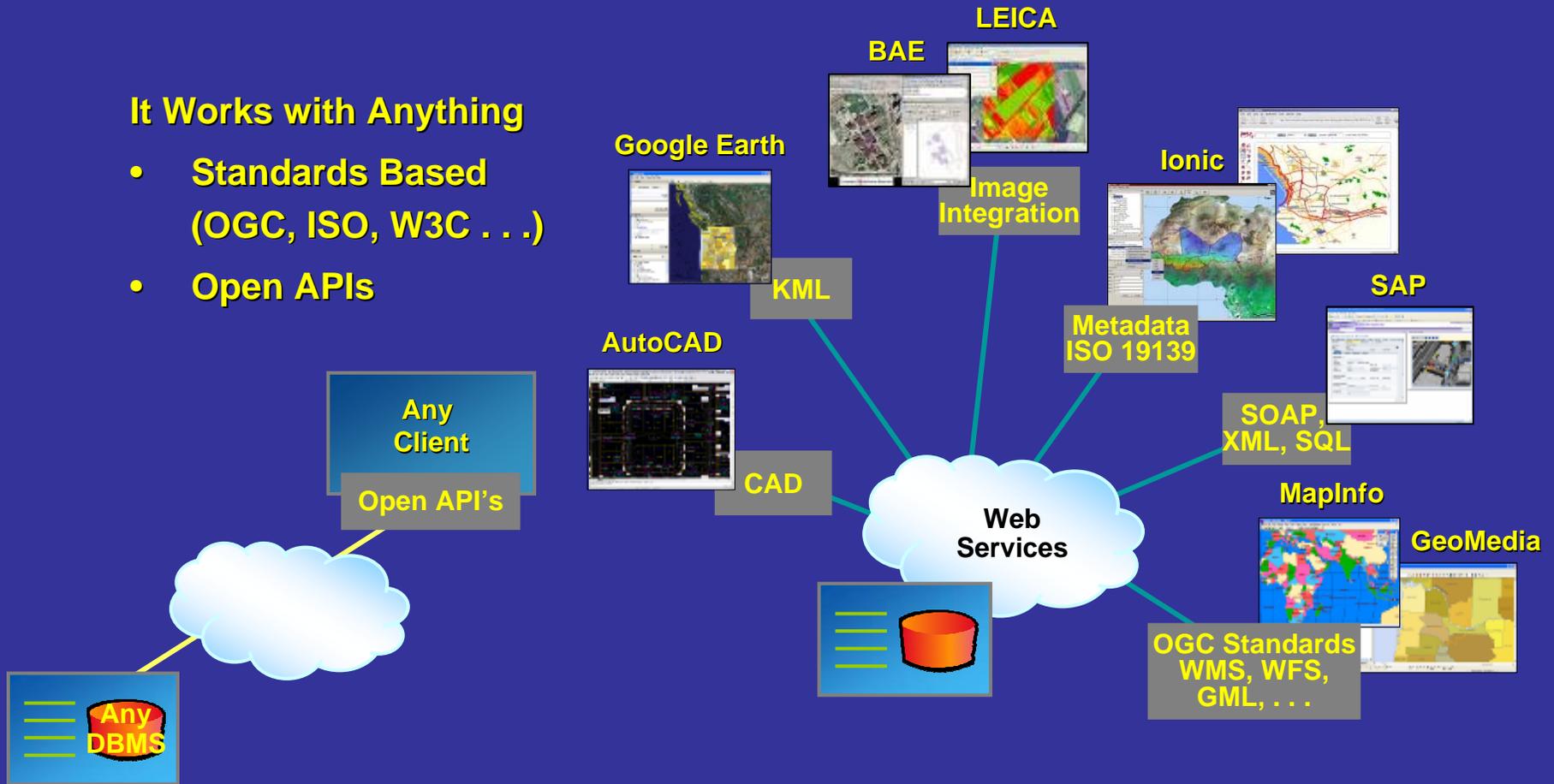
... An Agile Framework for Collaboration & Integration of Systems

GIS Servers Are Open & Interoperable

Connecting and Integrating and client & and DBMS

It Works with Anything

- Standards Based (OGC, ISO, W3C . . .)
- Open APIs



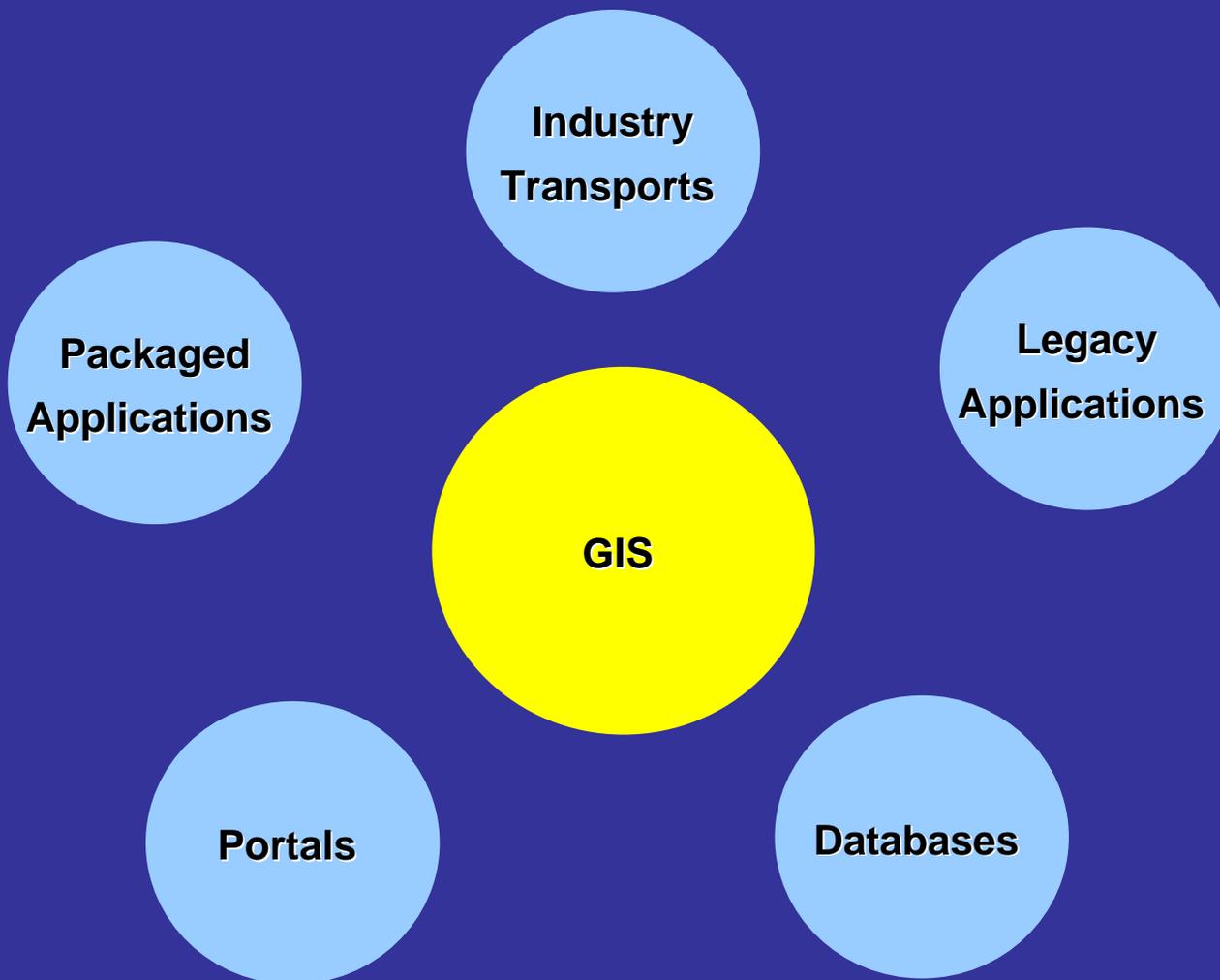
Implementing Integrated Enterprise GIS

What do you need?

- **Understanding**
- **Management Support**
- **Understanding of Business Processes**
- **Planning**
 - **Technical Architecture**
 - **Data Models**
 - **Organization**
 - **Implementation Work**
- **Good People**

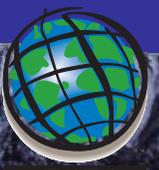
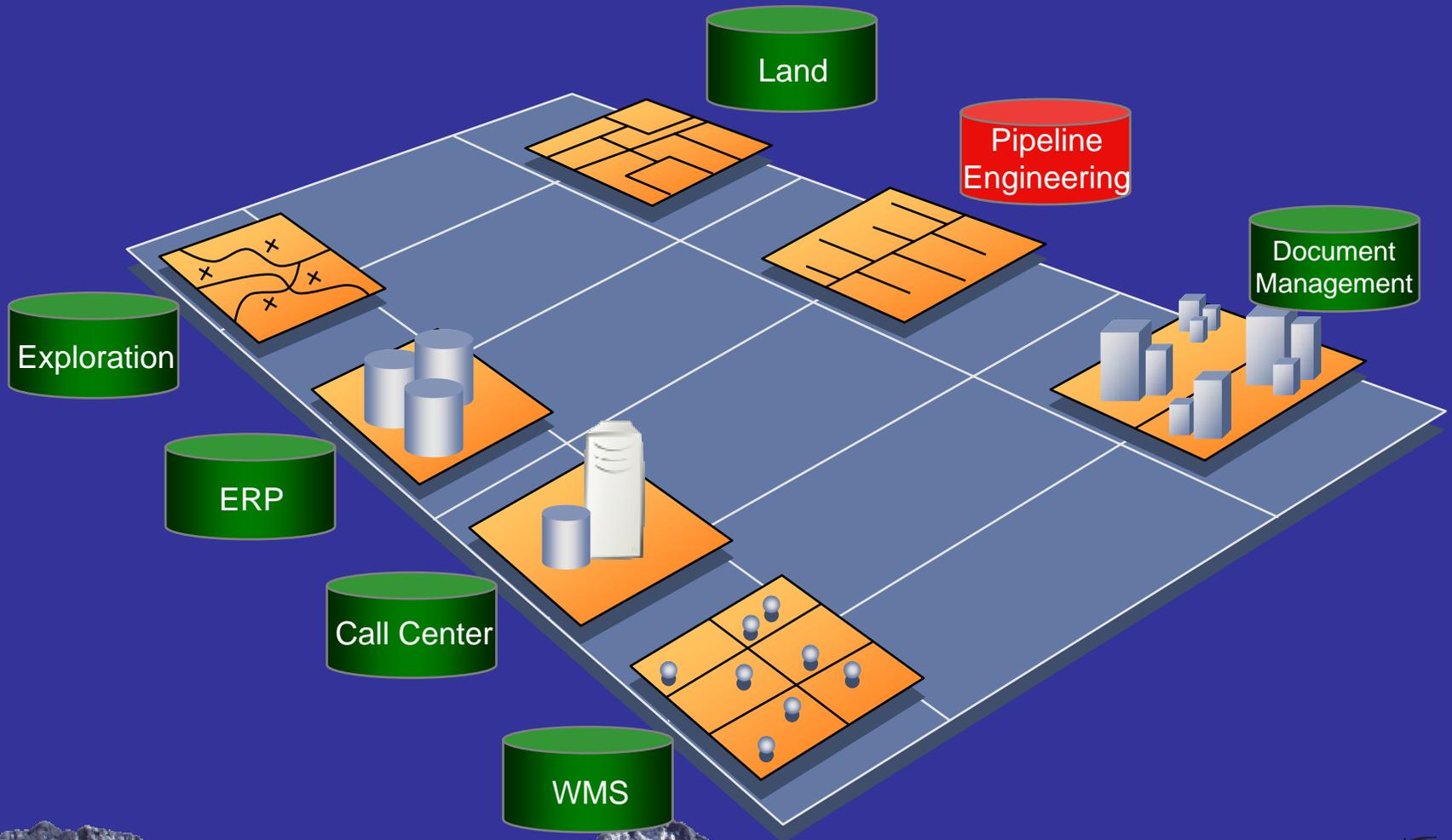


... a **METHOD**



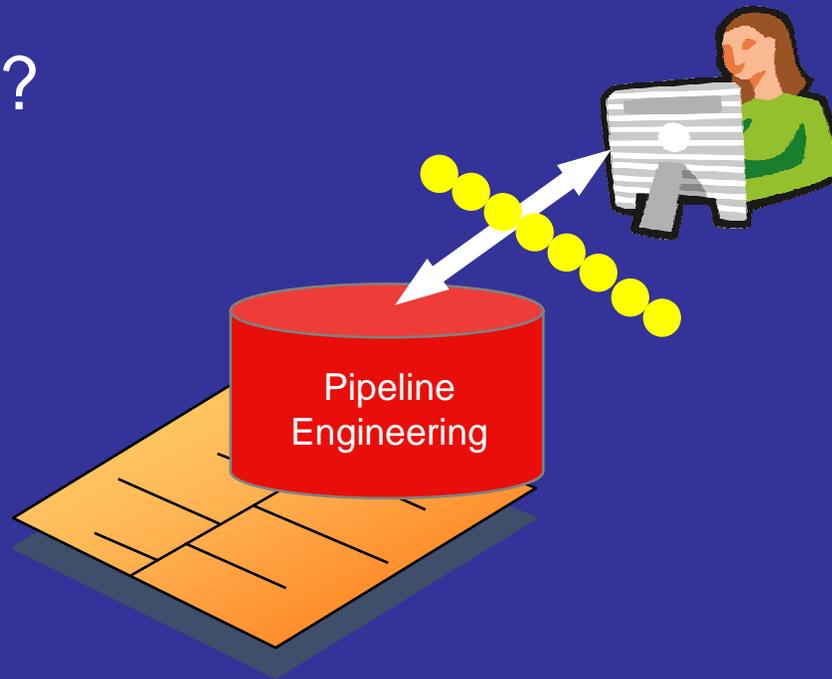
ESRI

What is the Services Oriented Architecture?

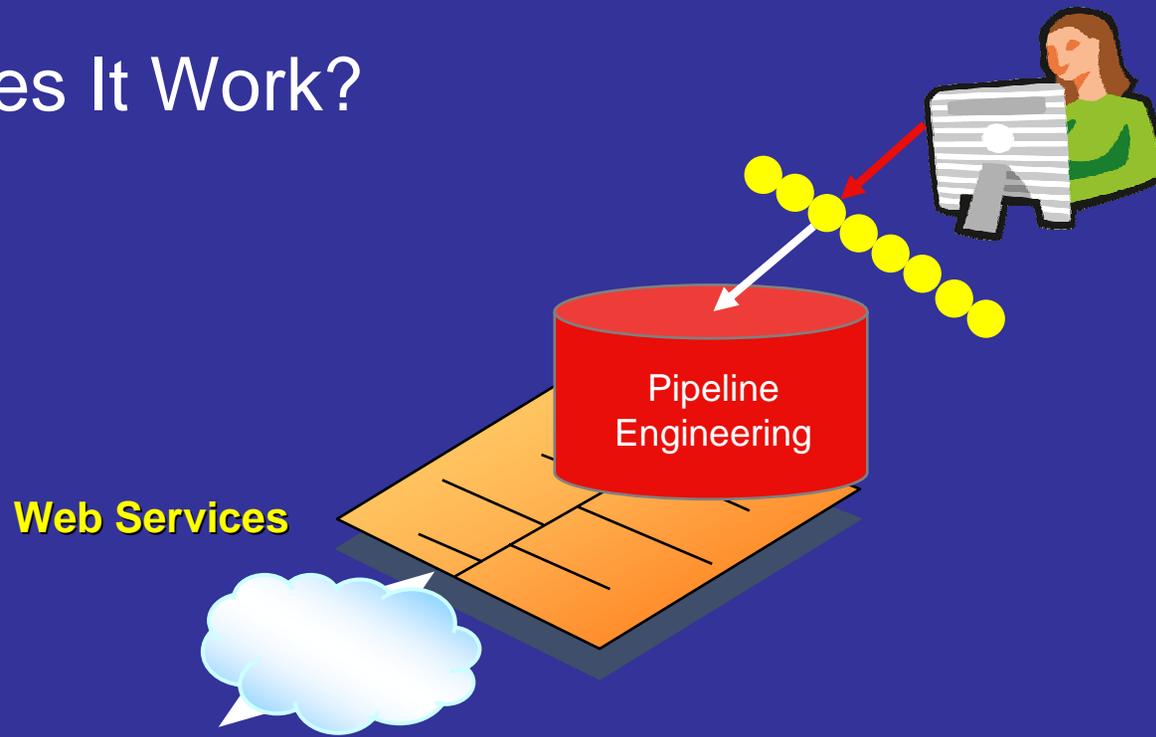


ESRI

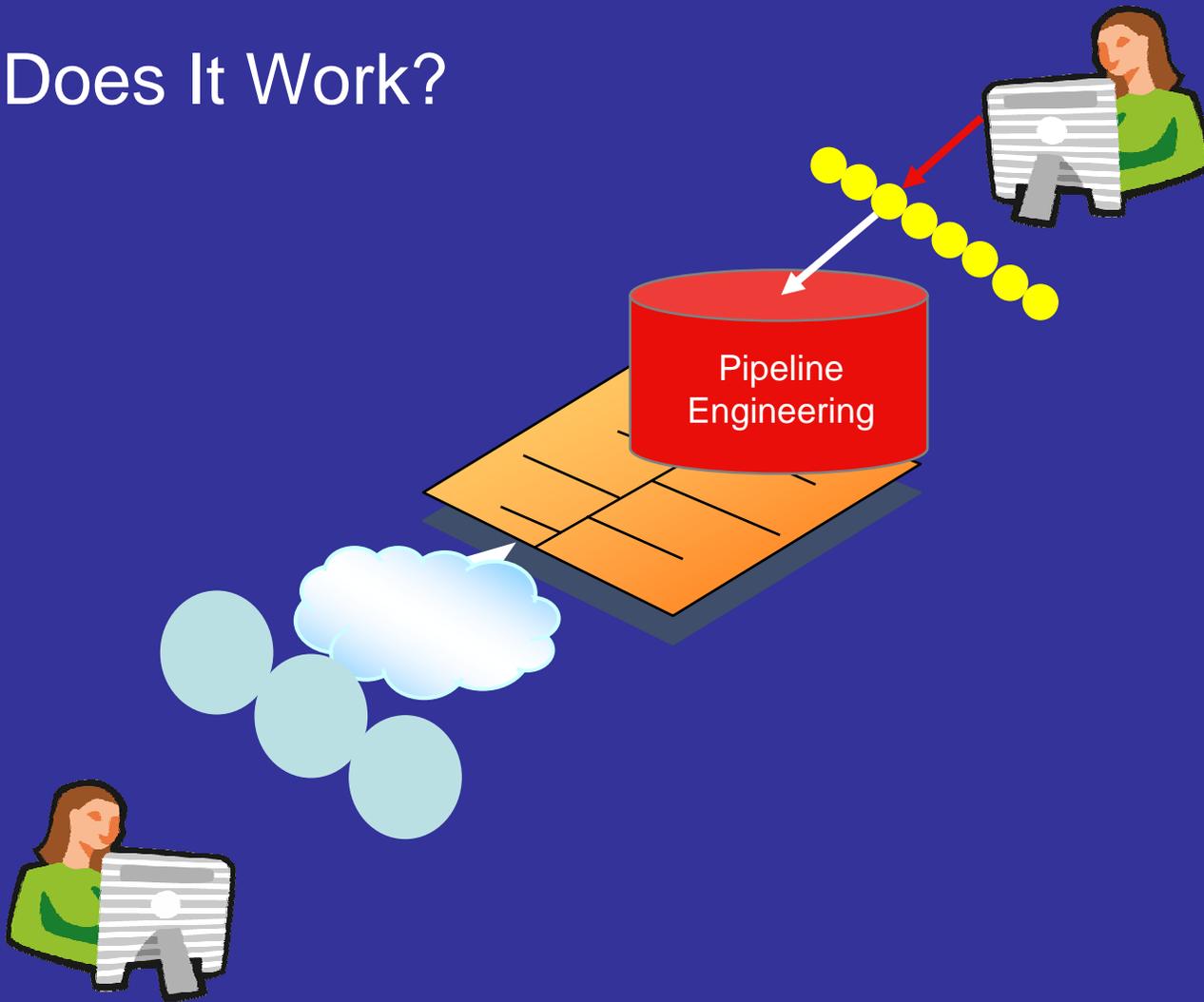
How Does It Work?



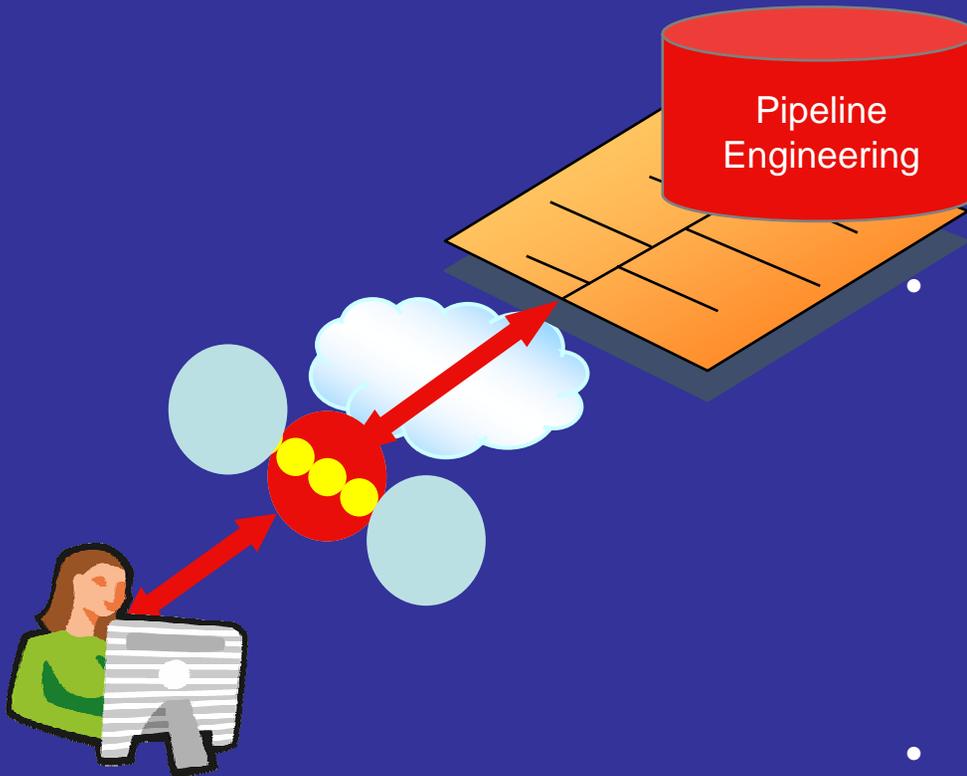
How Does It Work?



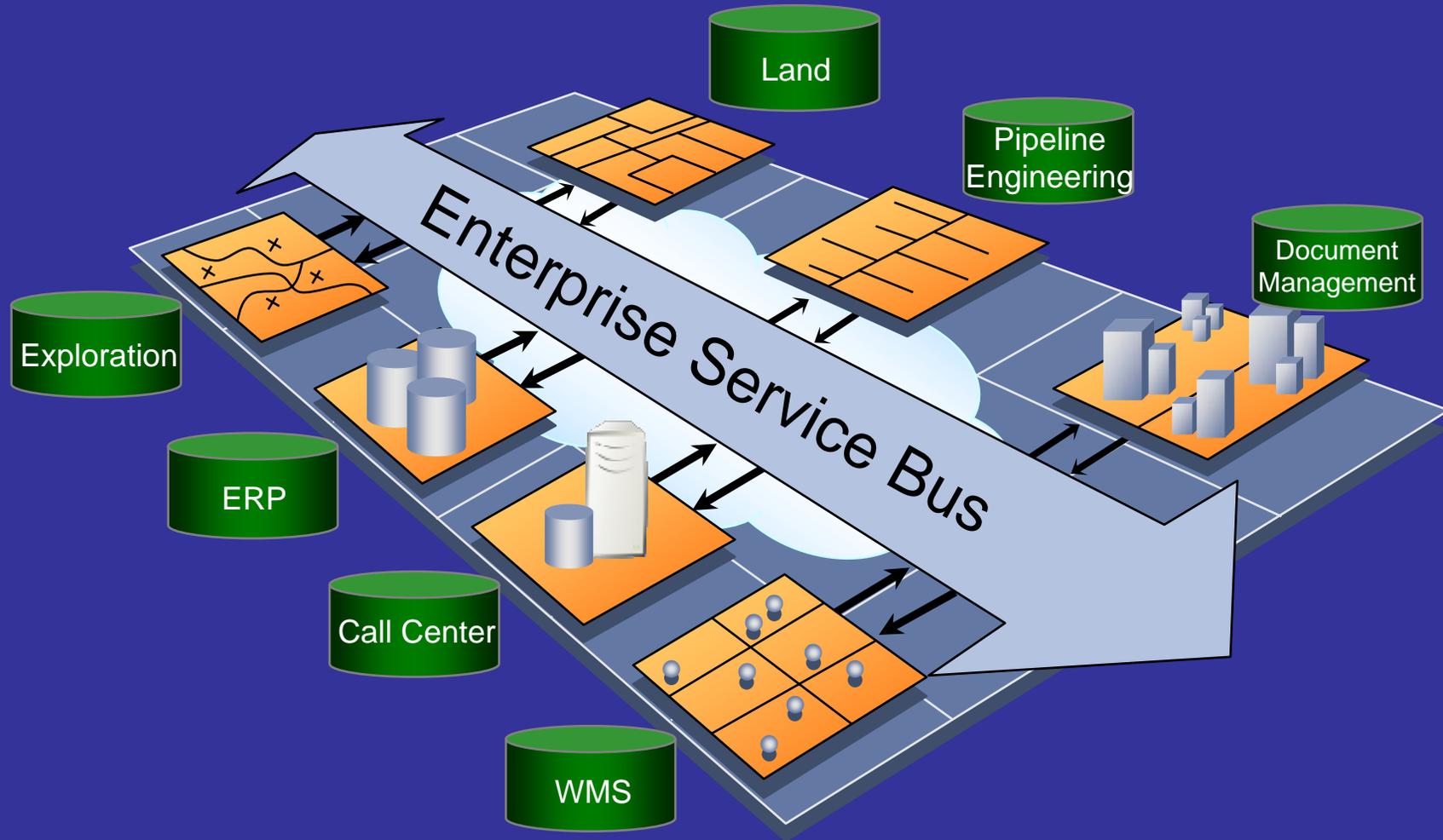
How Does It Work?



How Does It Work?



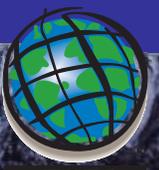
- Organize Around Business Units
 - Applications and Data Focused on Mission Needs and Productivity Requirements
 - Each Unit Manages Its Own Data
 - Data is Shared
 - As Services
- Business Units Are Both Service Providers and Consumers



Integrated Enterprise GIS

GIS Based Integration

Expert GIS System



ESRI

Why Integrate?

One view, one vision, one voice

- **50% of you have GIS somewhere in the organization**
- **Compliance requires better integration**
- **Greater confidence in decision making**
- **More consistent and replicable business processes**
- **Streamlined critical business processes**
- **Superior responsiveness**
- **Decrease operational costs and produce more integrated products**
- **Accelerate the deployment of applications**
- **Improved ability to monitor and manage suppliers and external relationships**
- **Integration of legacy and cutting edge systems**
- **Reduce duplications**
- **Use **New Forms** of data**

ESRI Partner Relationships

- Business Objects
- Cognos
- IBM
- Information Builders
- Microsoft
- SAS Institute
- SAP
- Hyperion
- Microstrategy
- Avencia Inc
- Impress Software
- Cybertech Systems Inc
- GeoTel Communication Inc
- Idea Integration
- Integeio
- Looking Glass Analytics
- Smart Innovation Solutions

Shifting the Corporate Identity

**Knowing what you should know
and
What you don't know you don't know**

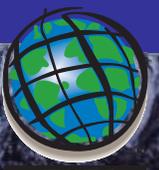
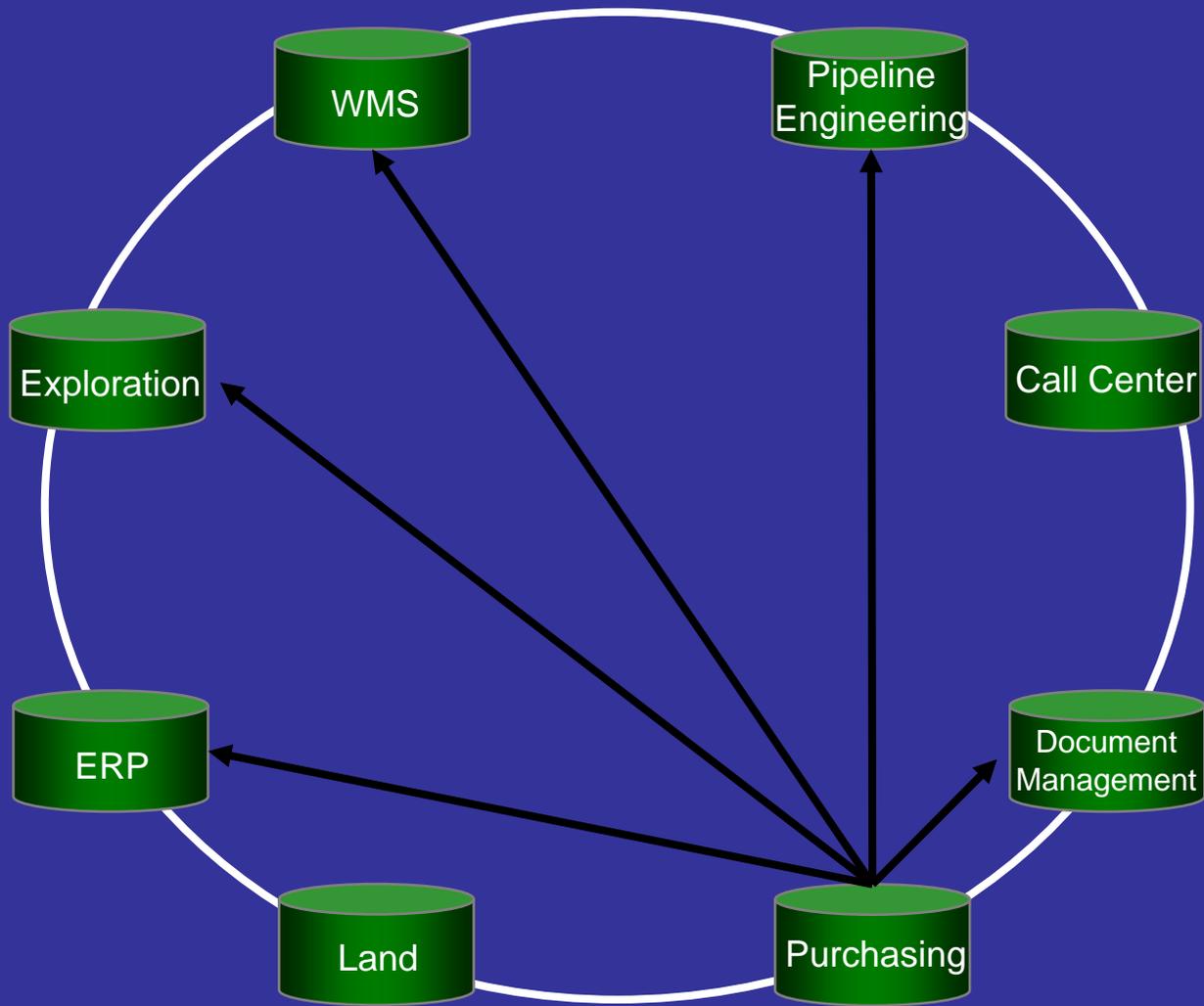
**Knowing what you should know
and
Knowing how to get the rest**

1. **Service Oriented Architecture – A New Alternative to Traditional Technology Integration**

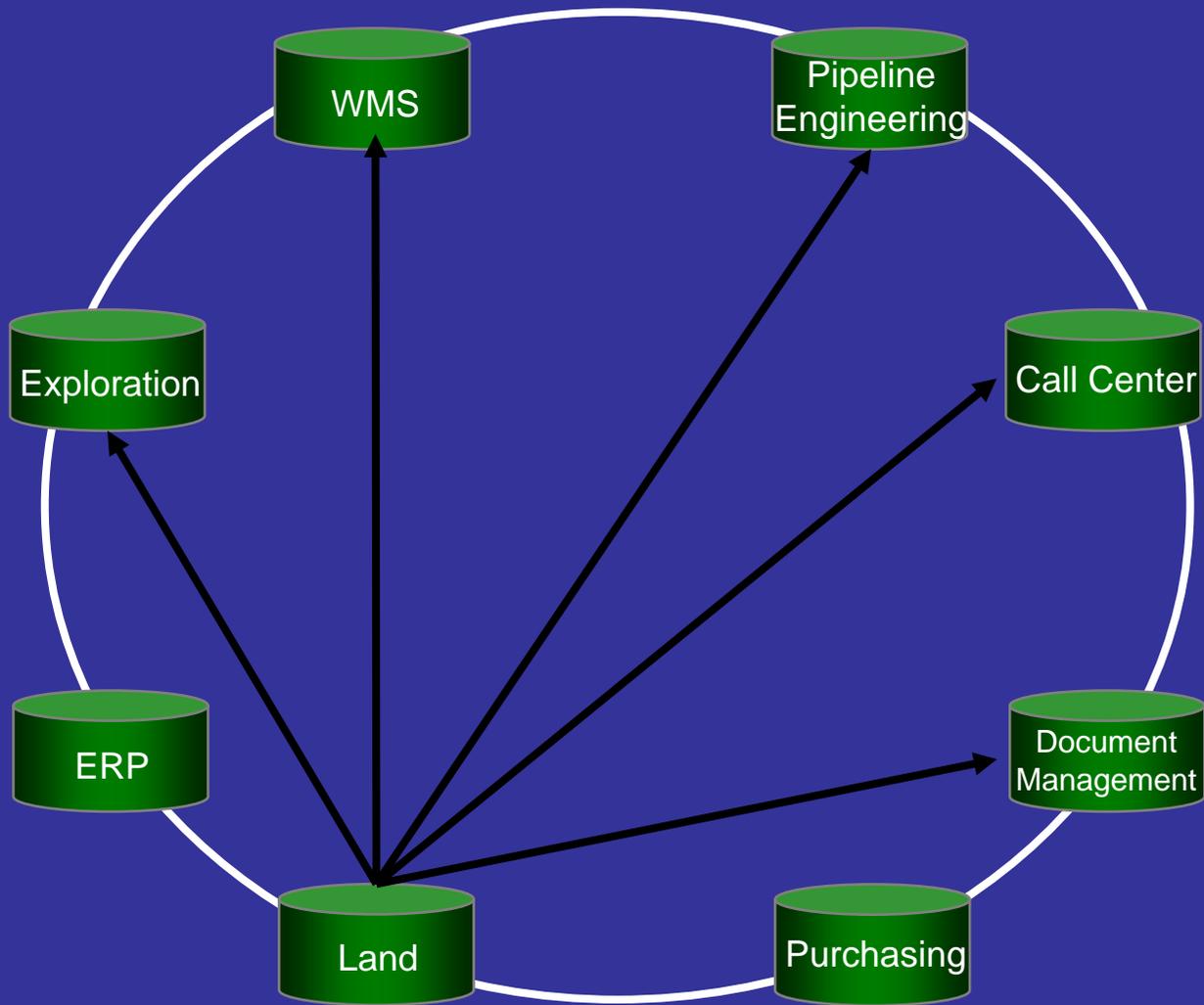
John Senor

2. **How to Explain SOA to your CIO**

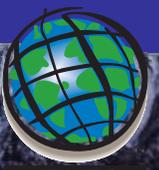
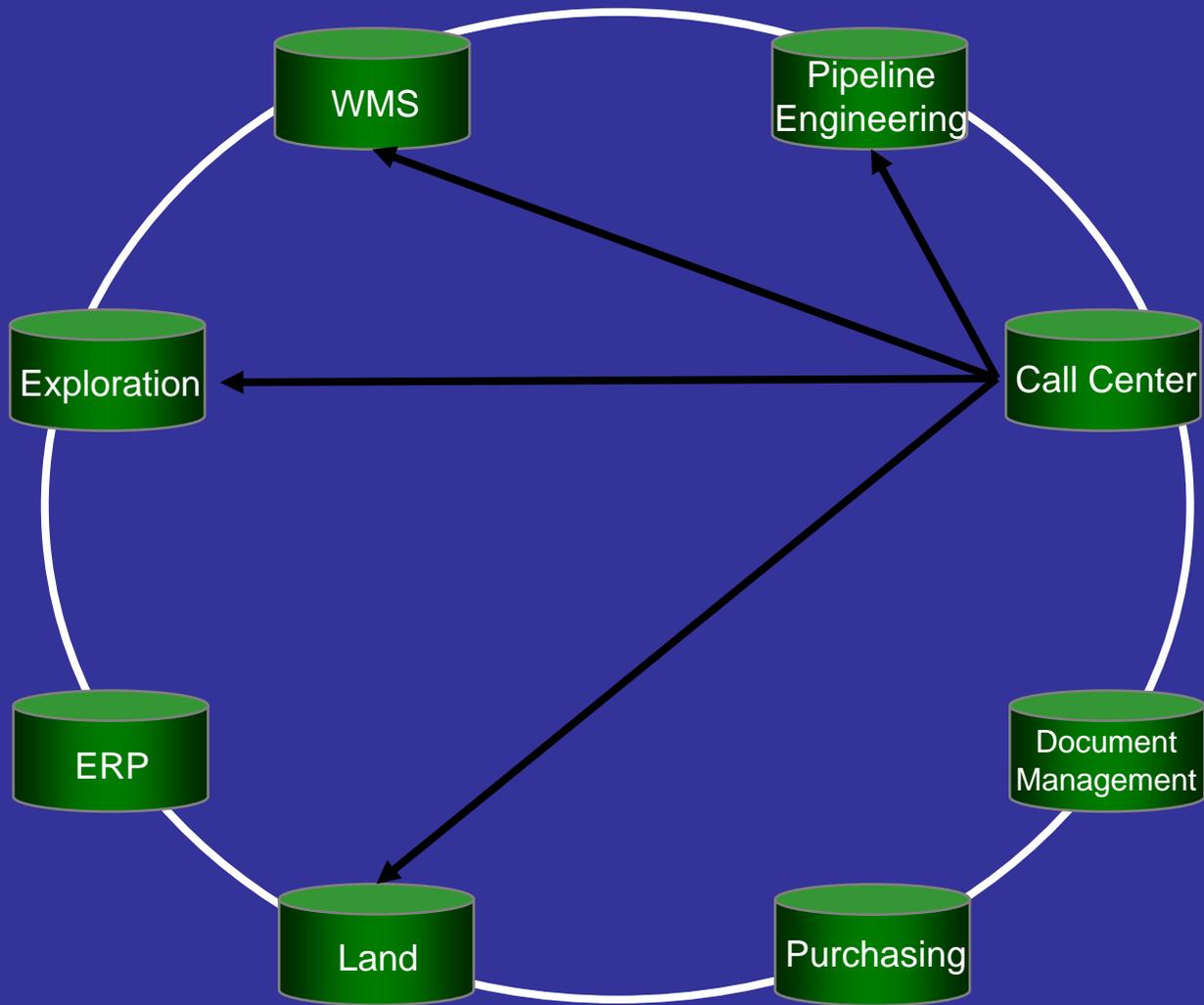
Linda Briggs



ESRI

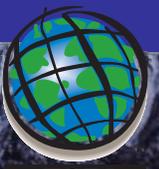


ESRI



ESRI

Questions?



ESRI

GeoGathering 2007