



# ***Deliver Your Master Data Store\****

***Don't defer it!***

\* By Steve Hawtin & Lester Bayne. Presented at SMI-2003 London

**Schlumberger**

# Deliver your master data store

- What is a master data store?
- What are the benefits?
- What is required to deliver it?
- How can we do this today?



# The Master Data Store (c 1990)

- It was thought that a master data store would be...
  - Comprehensive
  - Corporate
  - Consistent
  - Consolidated
  - Complete
  - Correct
  - Confidant

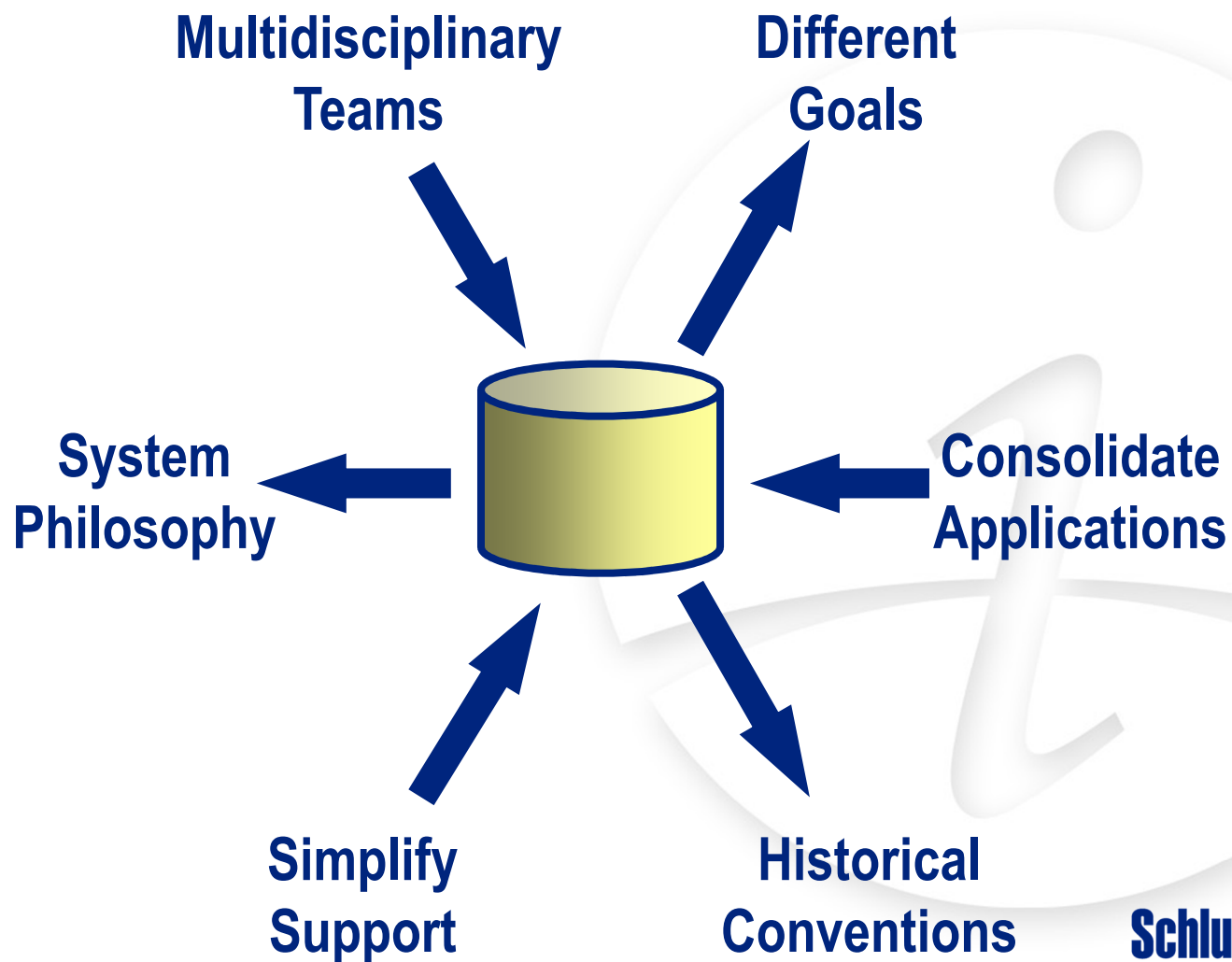


# Consolidation Pressures

- **Reduced Total IT costs**
  - **Amalgamate Support of Application**
  - **Centralize Data Management**
- **Data Quality**
  - **Combine data from many sources**
- **Multidisciplinary Teams**
  - **Achieving common goals**

**A single repository simplifies: data management; the automation of business tasks; and quality checking**

# Balance of Forces



# Separation Pressures

- **Multiple disciplines:**
  - **Different Goals**
  - **Disagreement on data structure**
- **Multiple workgroups:**
  - **Different historical conventions**
- **Multiple regions:**
  - **Region Types (e.g. on-shore, new province)**

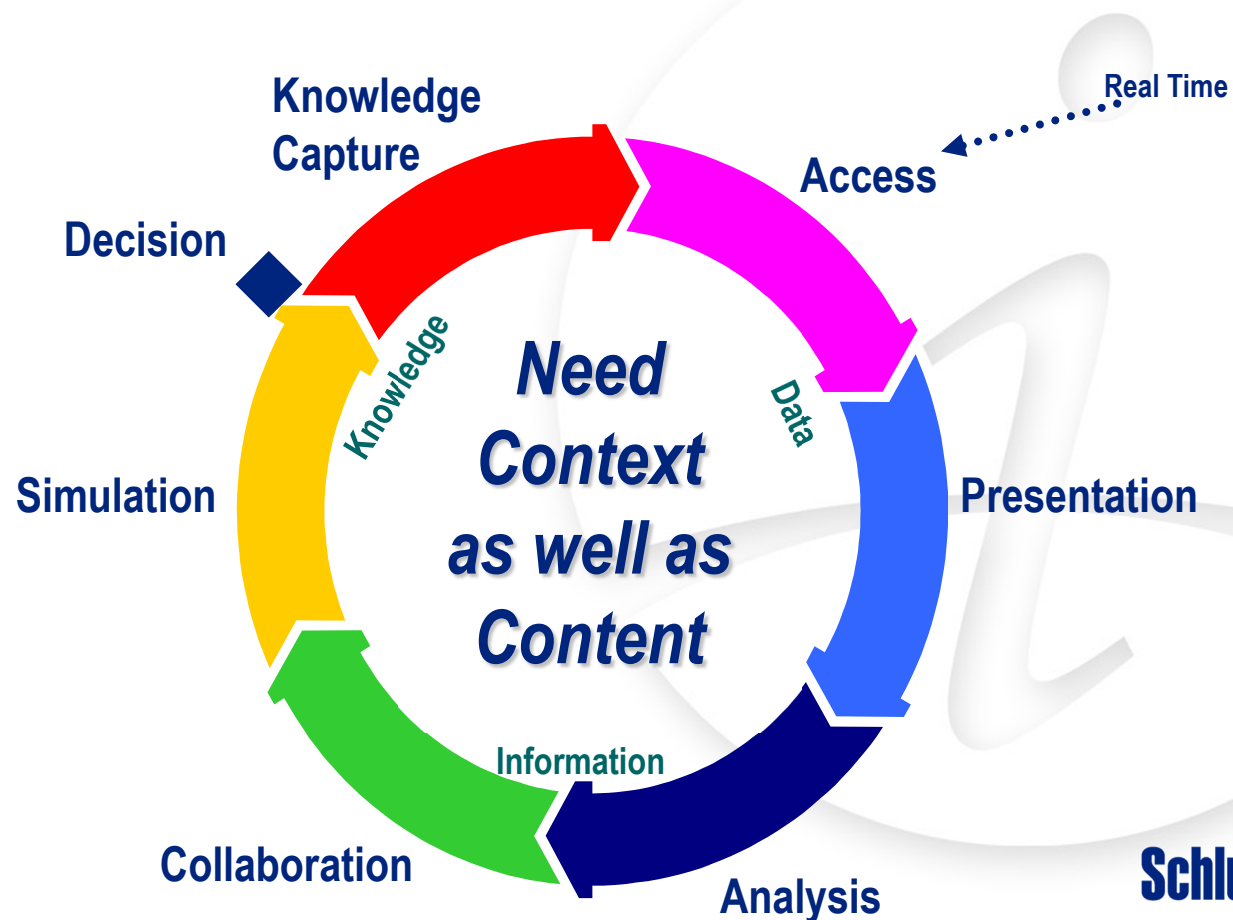
**If the cost to overcome issues is not justified by the benefit  
a consolidated repository will never be agreed**

# The Current Situation

- **Embrace today's reality**
  - **Many conventions**
  - **Multiple in-house repositories**
    - **Inconsistent data representations (e.g. identifiers)**
  - **External Data Centers**
    - **Data Entitlements, Quality and Management**
- **Understand the approach that works for you today**
- **Define the long term goal, how it should work**

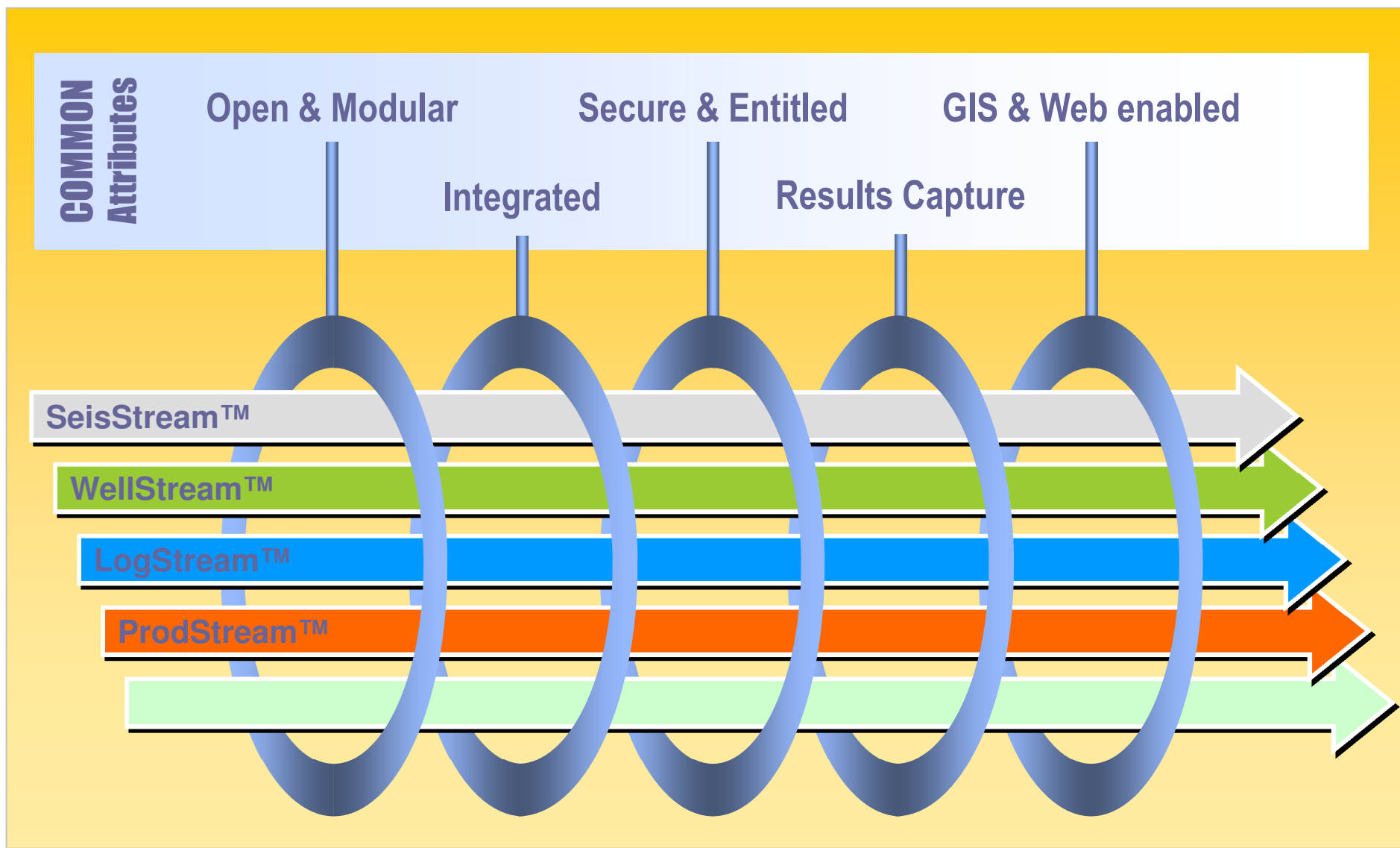
# Data cycle

“often it is not good enough to get just the data, need to also know what the data is related to, who, when, and why... “





# Streams of Information



**COMMON  
Attributes**

Open & Modular

Secure & Entitled

GIS & Web enabled

Integrated

Results Capture

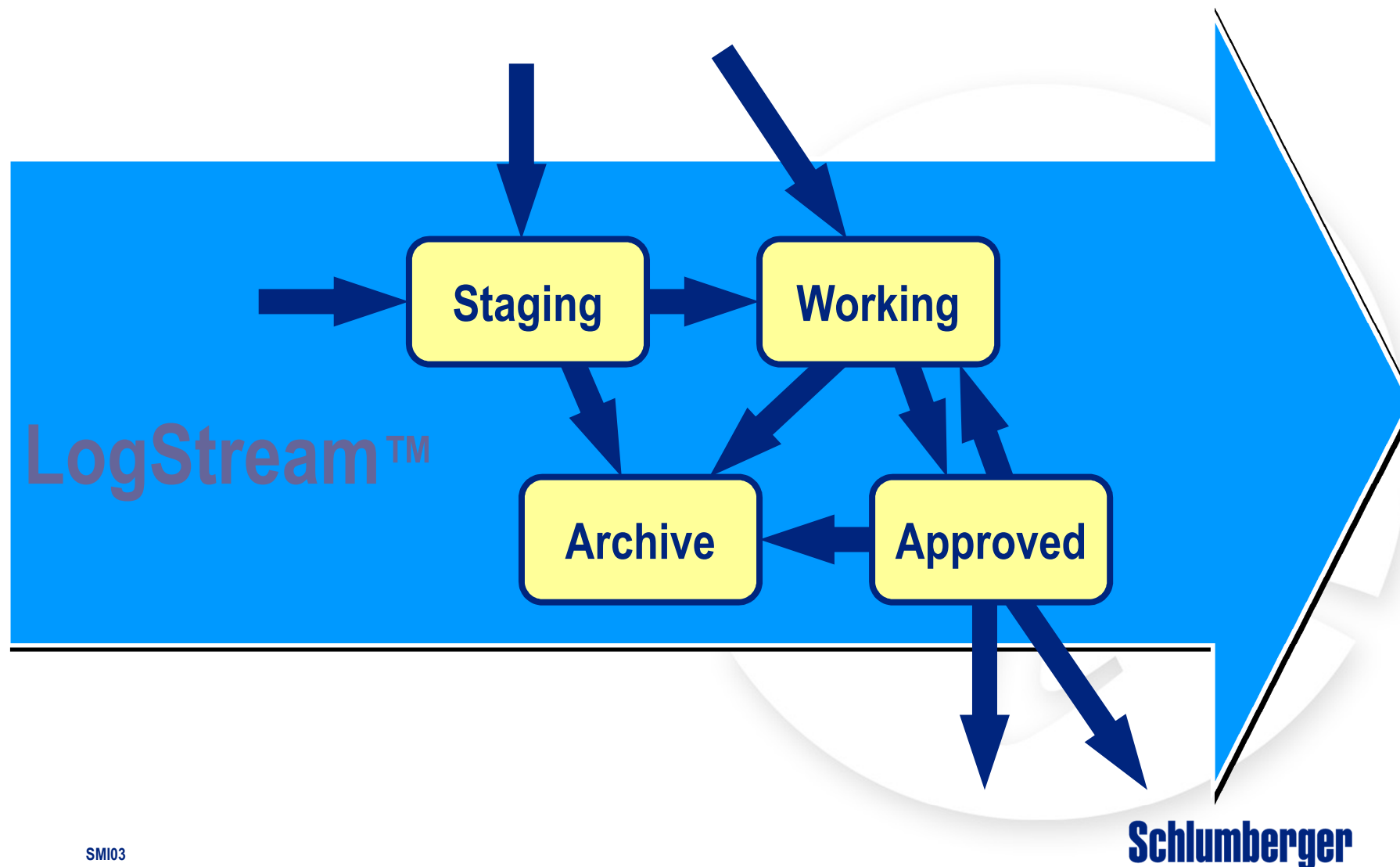
SeisStream™

WellStream™

LogStream™

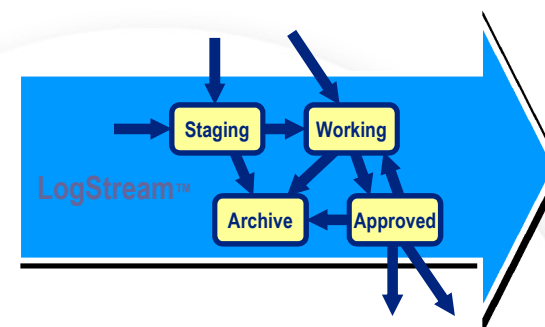
ProdStream™

# Data Roles within a stream

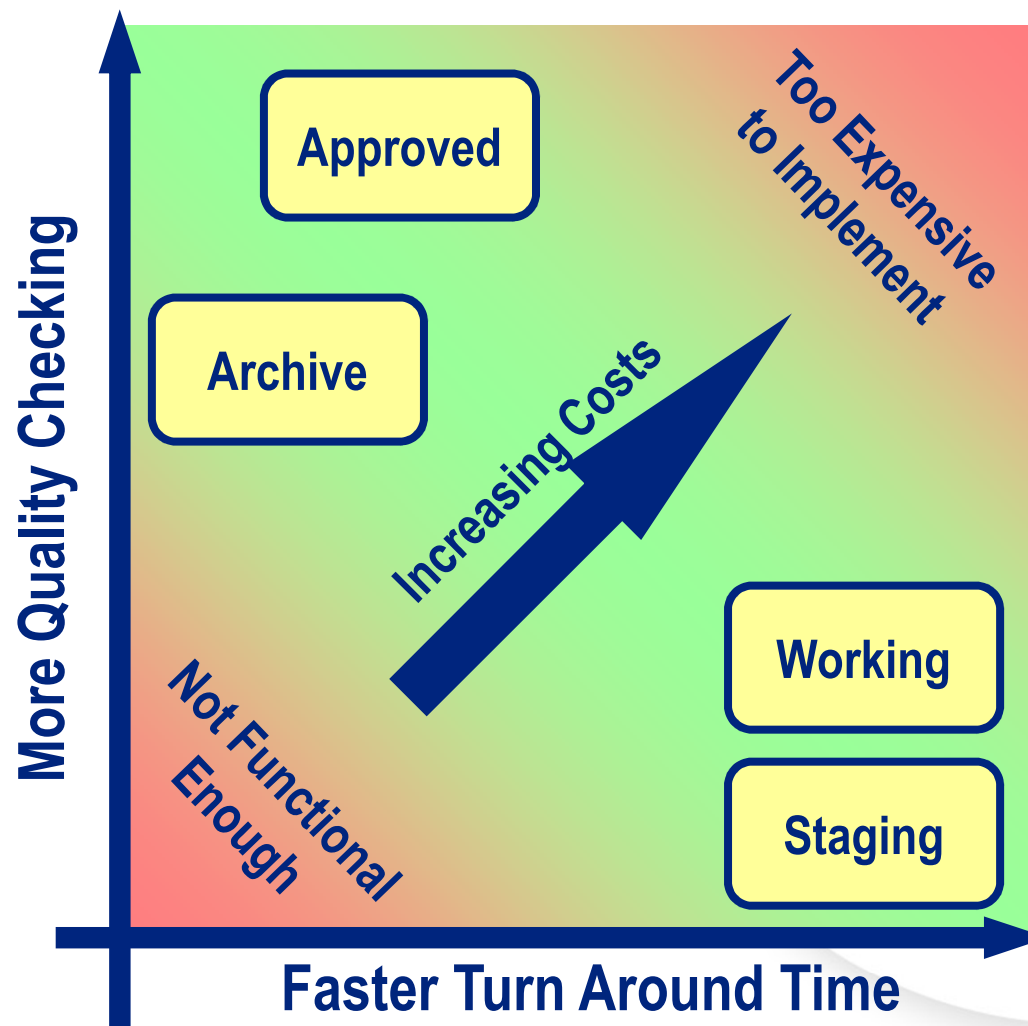


# Typical data roles

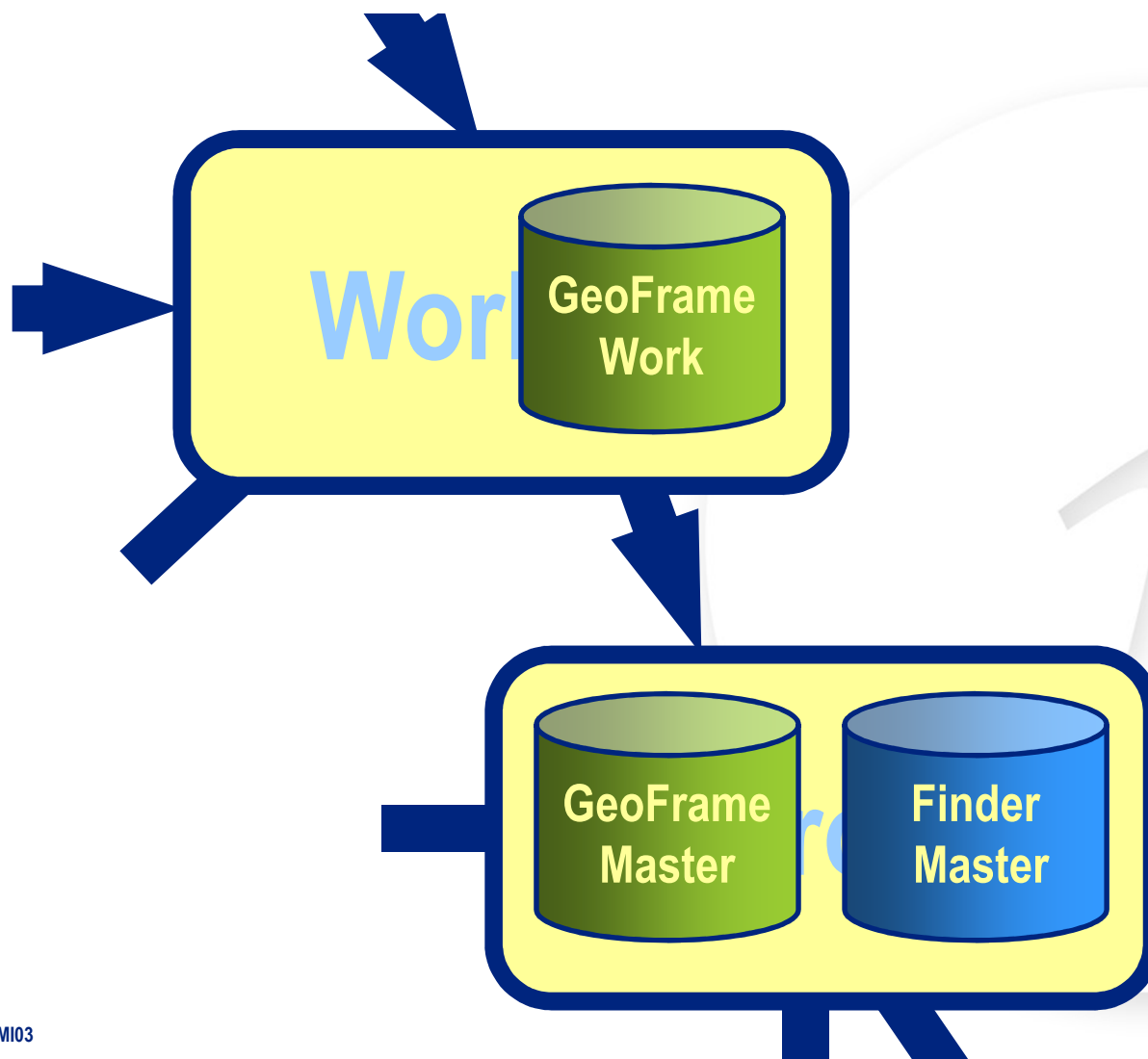
- **Staging**
  - Rapid availability, fidelity rather than quality
- **Working**
  - Suitable, convenient, easy to manipulate
- **Approved**
  - Trusted, quality checked, accountable, results rather than raw
- **Archive**
  - Long term, recoverable



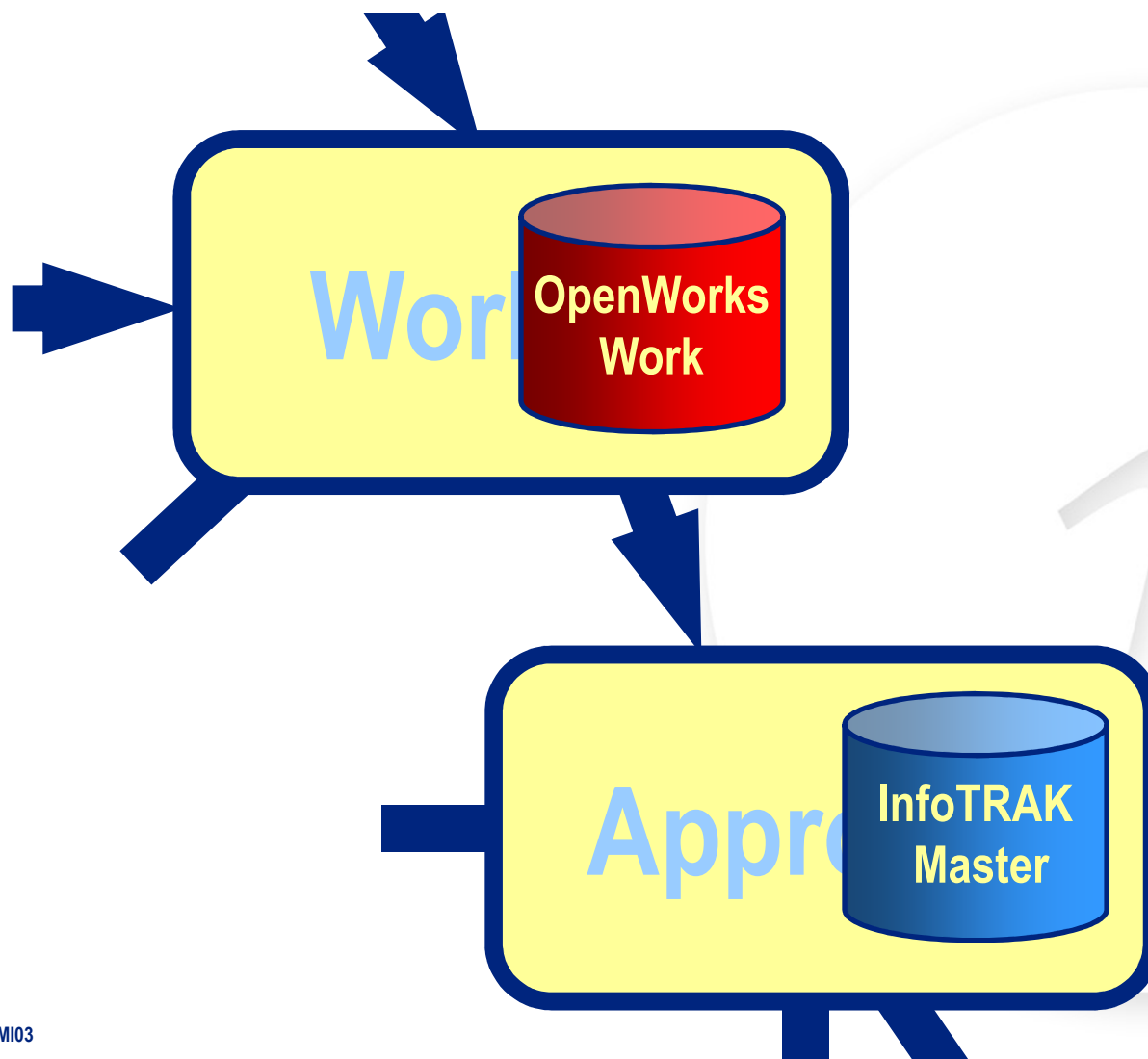
# Understanding the Roles



# Example of Roles v Repositories



# Different Customer's Roles v Repositories



# Documenting the current process

- **Multiple data repositories maintaining “approved” data:**
  - **Need to know which data is stored where (and when)**
  - **Which version (and when)**
- **What is the approval process**
  - **Who can do it**
  - **When is data checked**
- **Publishing to the final consumers**
  - **When? How?**
  - **All high quality or Description of quality?**
- **Many more questions...**

# The Way Forward

- **Consultancy services (e.g. InfoStream™ from Schlumberger)**
- **Document**
  - **Interfaces between disciplines, regional groups, goals, etc**
  - **Unwritten conventions**
  - **Unexpected consequences**
- **Identifies the main issues**
- **Plan for how the process should work**
  - **Today, tomorrow and in the long term**



# Deliver your master data store

- **What is a master data store?**
  - **A defined collection of repositories holding all the approved data and the business processes that connect them**
- **What are the benefits?**
- **What is required to deliver it?**
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# The benefits of a master data store

- **Utilization in the workflow increases**
  - **Everyone knows where the data is**
- **Increasing exposure increases the expertise viewing / manipulating the data**
- **More errors are detected and corrected**
- **Quality and trust increase**
- **Productivity increases**
- **Archiving efforts focus on the best and most important data**
- **Business risk decreases... dramatically**

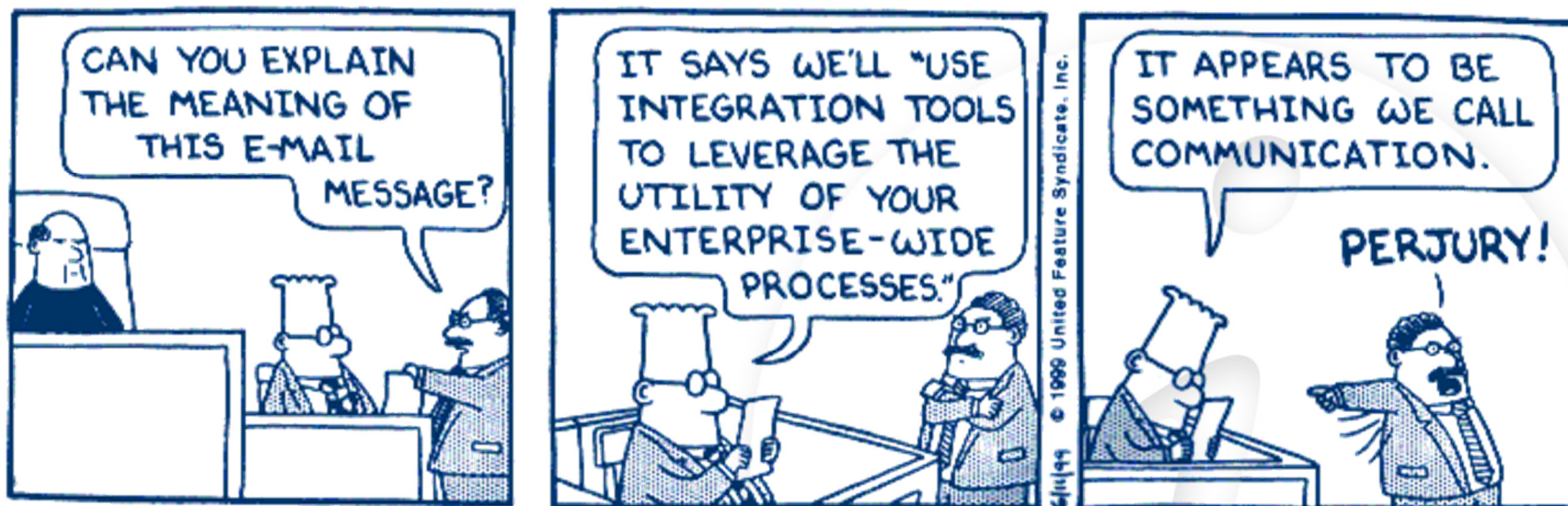
# Deliver your master data store

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# What is required to deliver it?

- **Plan for how the process should work**
  - **Define a clear goal**
  - **How to measure improvements in Cost/Benefit and Quality?**
  - **Evolution not revolution**
  - **Expect changes (regularly review goals)**
- **Integrating the different elements that make up the “Master Data”**

# What is integration?

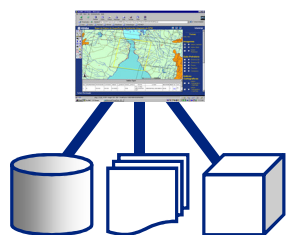


Is the word "integration" so overused that it has lost all meaning?

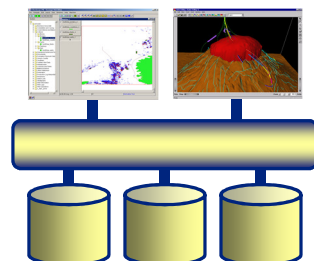
# Information Integration Spectrum

Flexibility

Precision



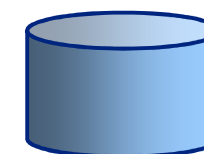
*Visual Aggregation*



*Abstraction*



*Transfer*

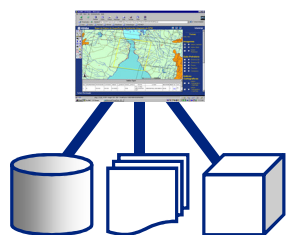


*Consolidation*

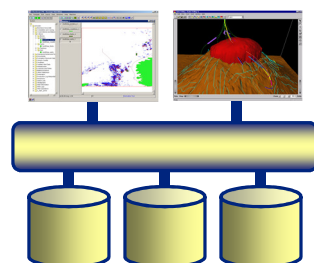
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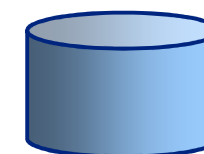
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*Consolidation*

**Increasing cost and value**

# Integration Strategies

- **Different strategies require different tools**
- **Must let the business requirements determine the strategy...  
...and the strategy select the tools**

**“If a man only has a hammer everything looks like a nail”**



# Planning your integration

- **Eventual Goals**
  - Match the business process
  - Document
- **Cost constraints**
  - Match to expected benefits
- **Steps along the way**
  - Limited projects
  - Working system at all times
- **Be aware of the limits of the technology**

# Deliver your master data store

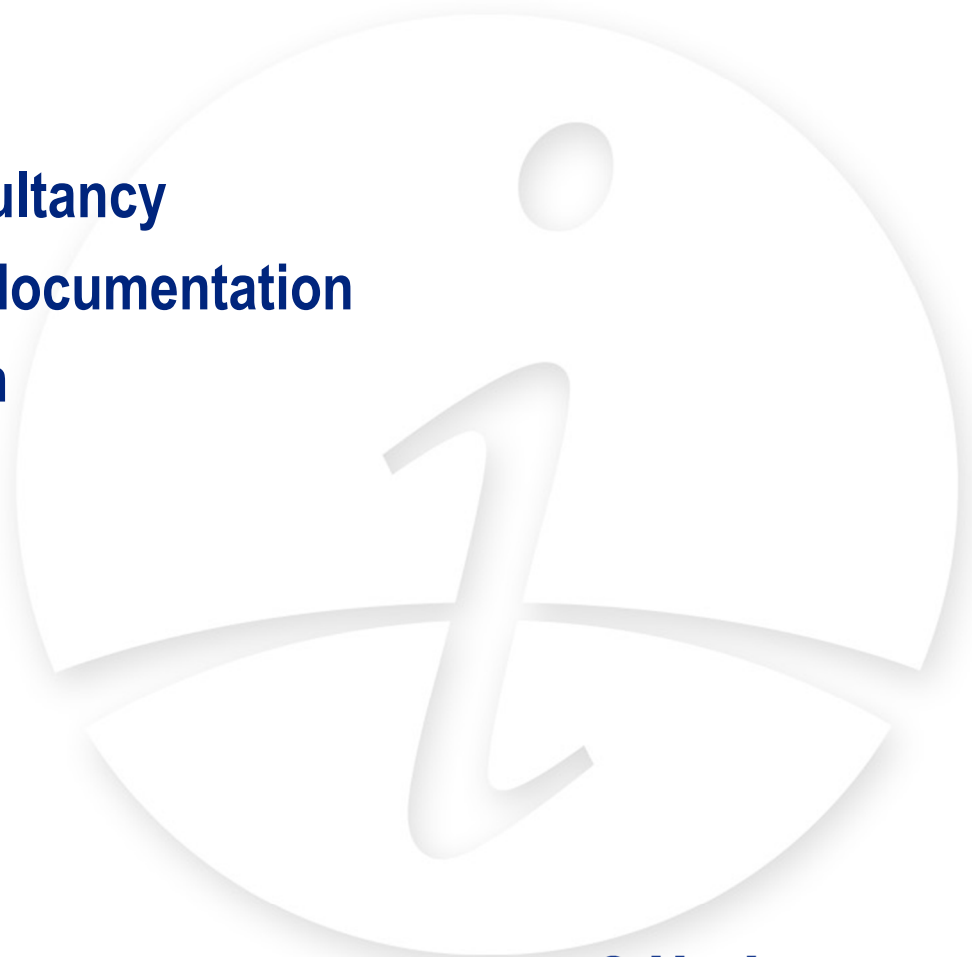
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  - **A planned and conscious vision defining the path of integration and the technologies and processes to get there**
- **How can we do this today?**

# Three Essential Elements



# People

- **Range of skills**
  - **Business process consultancy**
  - **Workflow analysis and documentation**
  - **Solution implementation**
  - **Data management**
- **Locally available expertise**
- **One source or many?**



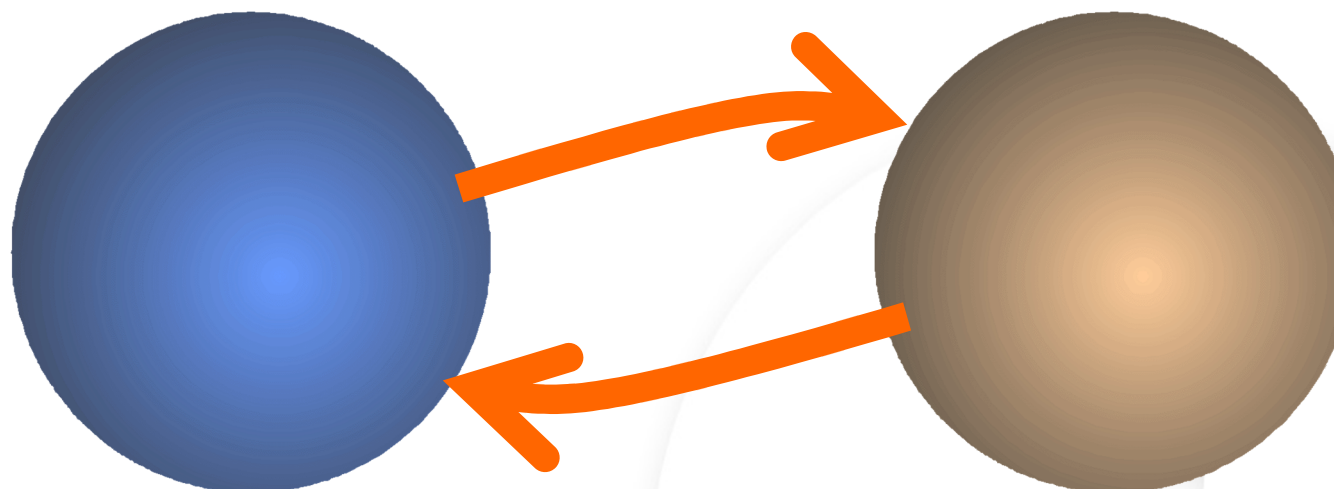
# Process

- **Customer: Understand your business process**
  - Current situation
  - Articulate the goal(s)
- **Customer and Consultants:**
  - Plan the whole solution (“Soup to Nuts”)
- **Consultants: Methodology to deliver your project**
  - Described
  - Tested
  - Relevant

# Technology - a wide range of tools

- **Applications**
  - Relationship with application vendors
- **Integration Services (e.g. Delta™ from Schlumberger)**
  - Appropriate technologies
  - Cover the complete integration spectrum
- **Data Management**
  - In-house data centers
- **Off site Data Centers**

# Technology Push v Technology Pull



## Supplier

Select the business problems that can best be solved with given technology

Requires an understanding of the vendor's solutions, features and functions

## Customer

Select the technology that addresses the customer's most important business problems

Requires an understanding of the client's unique business needs

# Technology Push v Technology Pull

## Integration Challenges:

- aligning information
- quality of information
- quantity of information

**Integration requires more than just software and button-pushing...**

**Require a serious collaboration to configure for a customer's work process... unless customers agree that their operations are the same!**

and functions

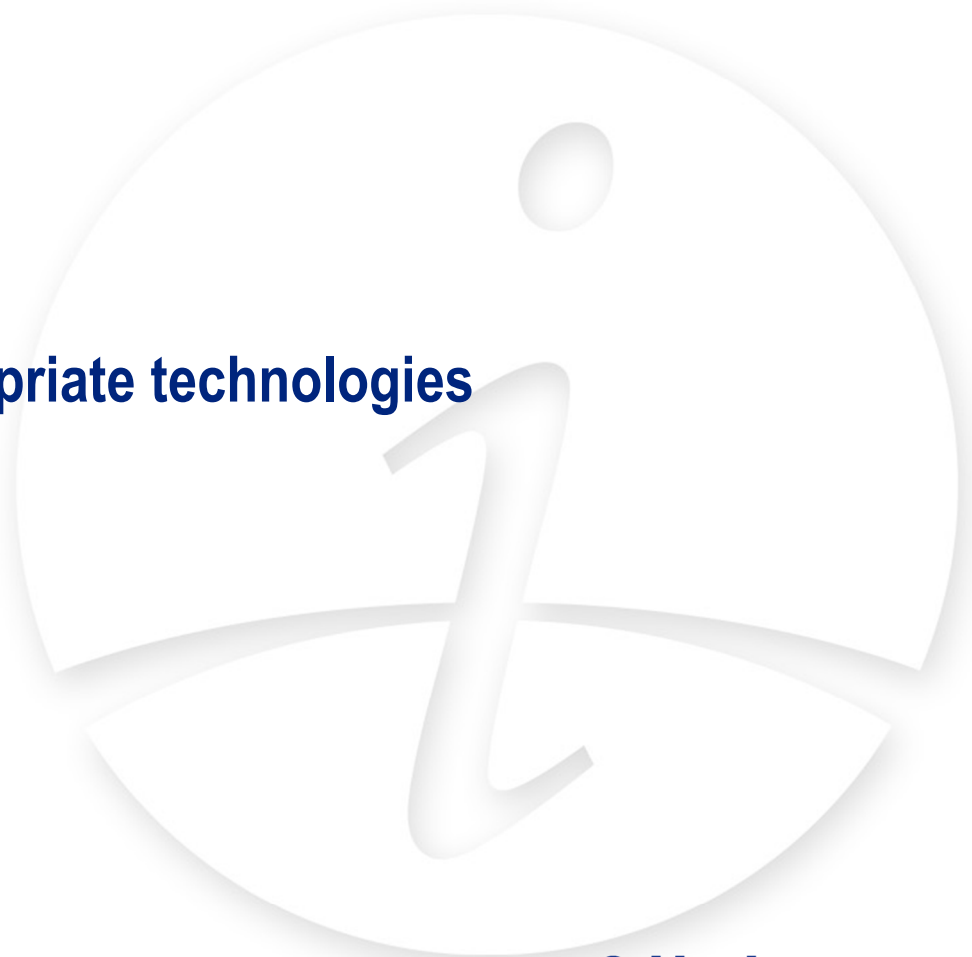
needs





# The Perfect Integration Partner(s)

- Expertise available
- Understands your process
- Well tested methodology
- Select from range of appropriate technologies
- Listen to your needs



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- **How can we do this today?**
  - **Selecting appropriate integration partners in your domain**

# Questions?



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**Thanks!**