

B01 Breaking the Integration Barrier

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Integration is the new imperative. Whether you want to build a CRM system or web-enable your order entry, you cannot do it without considering integration. There are as many definitions of integration as there are consultants to tell you how to do it. But what does it really mean? Is it possible? And most importantly, how do you go about it? This presentation provides a simple and memorable map of all of the important aspects of integration - from the business level to technology, from information to process. As the map becomes clear, so too do the positioning of the different types of integration and what type of integration is needed to address any specific business or technical need. We look at examples of some common business needs, from business intelligence to operational efficiency, and show the role played by integration techniques and how the solutions can be defined.

B01

Breaking the integration barrier

Dr. Barry Devlin

A decorative graphic consisting of a horizontal green bar with rounded ends, outlined in purple. The bar is surrounded by several green circles of varying sizes, some solid and some with a white outline, creating a bubbly effect.

IBM Data Management Technical Conference

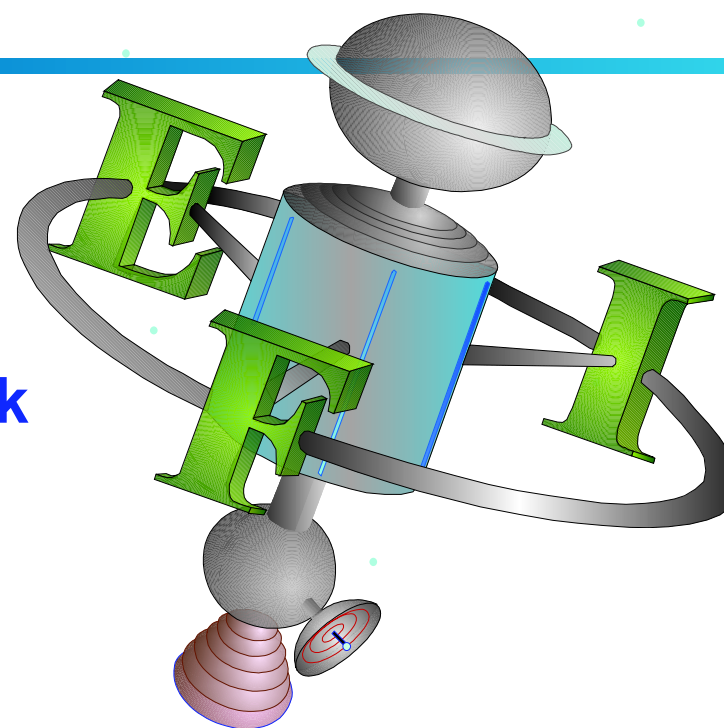
Anaheim, CA

Sept 9 - 13, 2002



Agenda

- ▶ **Business drivers for integration**
- ▶ **Inhibitors in today's environment**
- ▶ **An Enterprise Integration Framework**
 - ▶ The information aspect
 - ▶ The component aspect
 - ▶ The process aspect
 - ▶ Business integration view
 - ▶ Design view
 - ▶ Implementation view
- ▶ **Putting it all together**
 - ▶ IBM Industry Models
 - ▶ Software components
 - ▶ Services





The rapidly changing business environment poses difficult questions for all enterprises.

Expense

How can I significantly improve my expense ratios and still move quickly?

Society

What do changing customer needs and regulations mean for my business?

Customers

In a world of suspect loyalty, how do I enhance my customer base?

Products

What new products will I need to be a leader?

Marketing

How do I manage my brand(s)? Do I need a new one?

Regulation

How do I satisfy reporting needs at minimum cost?

Organization

Have I got the right structure and people?

Revenue

How do I compensate for lack of growth in the core business?

Technology

Which technologies will benefit me most?

M&A

What's the right M&A play for me? How can I make it pay off?

Risk

How can I manage my exposure to the next crisis?

Value

What is my new value-proposition for my profitable customers?

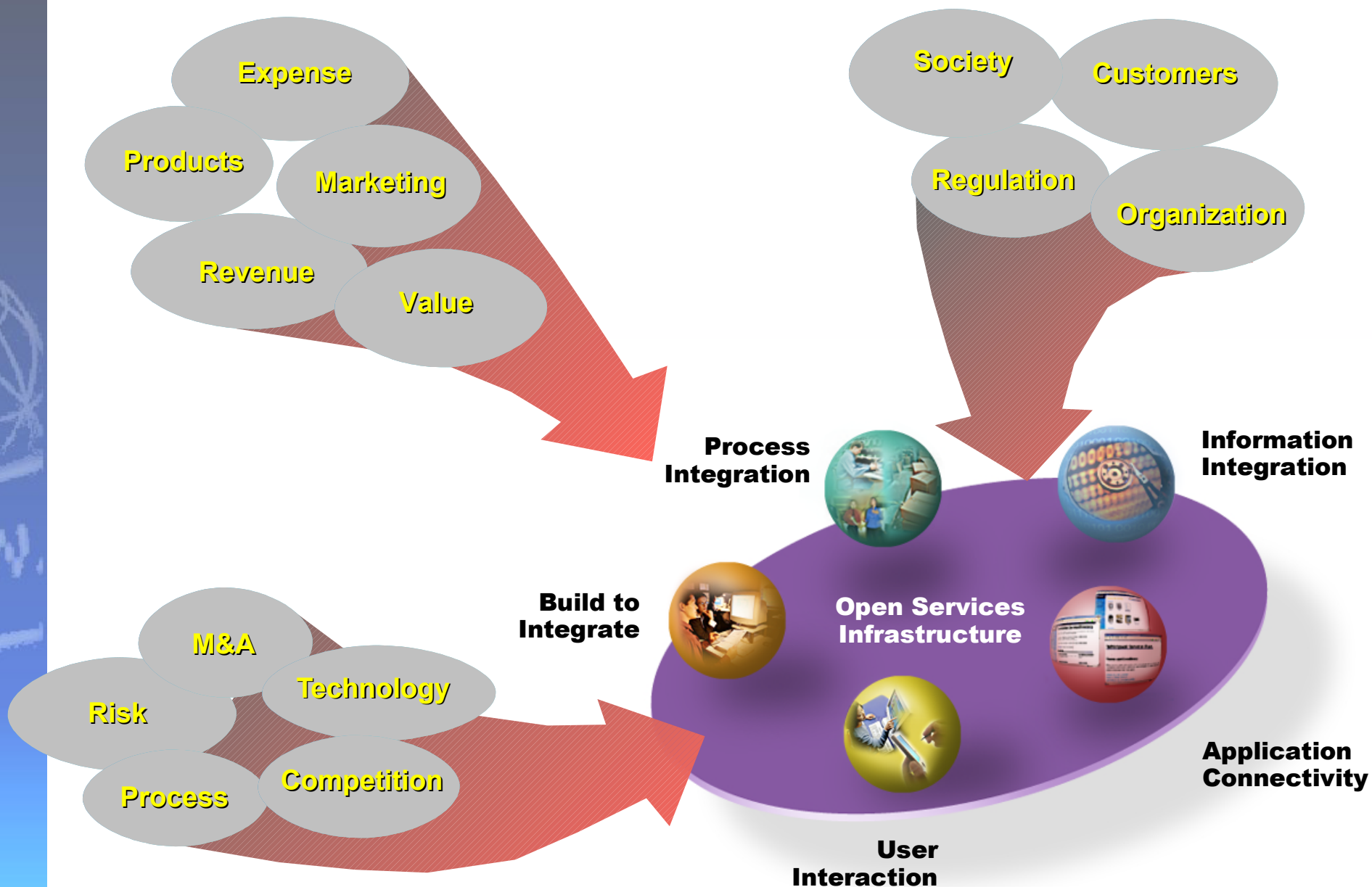
Process

How do I become an e-business?

Competition

How do I compete with new entrants?

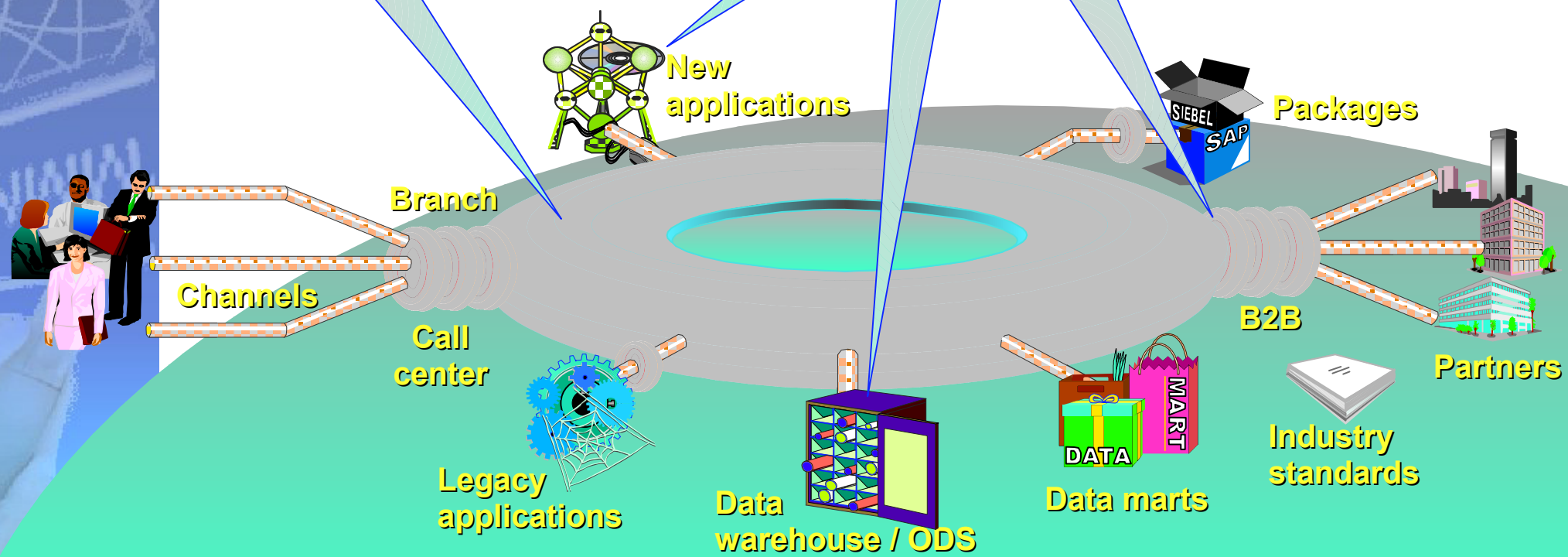
@ Each of these issues demands extensive integration of existing and new systems in the enterprise.



@ An integrated infrastructure that can seamlessly interconnect systems and support long-term needs is required.

Ideally, what is needed is a hub architecture for all application intercommunication...

...based on interface standards to allow communication between disparate applications. Internally and externally.



@ However, existing IT environments are a complex, unintegrated mix of old and new systems.

This won't be easy! Any new integrated system will need links to almost everything. For example...

...to access a brand new loan application system, which in turn has to...

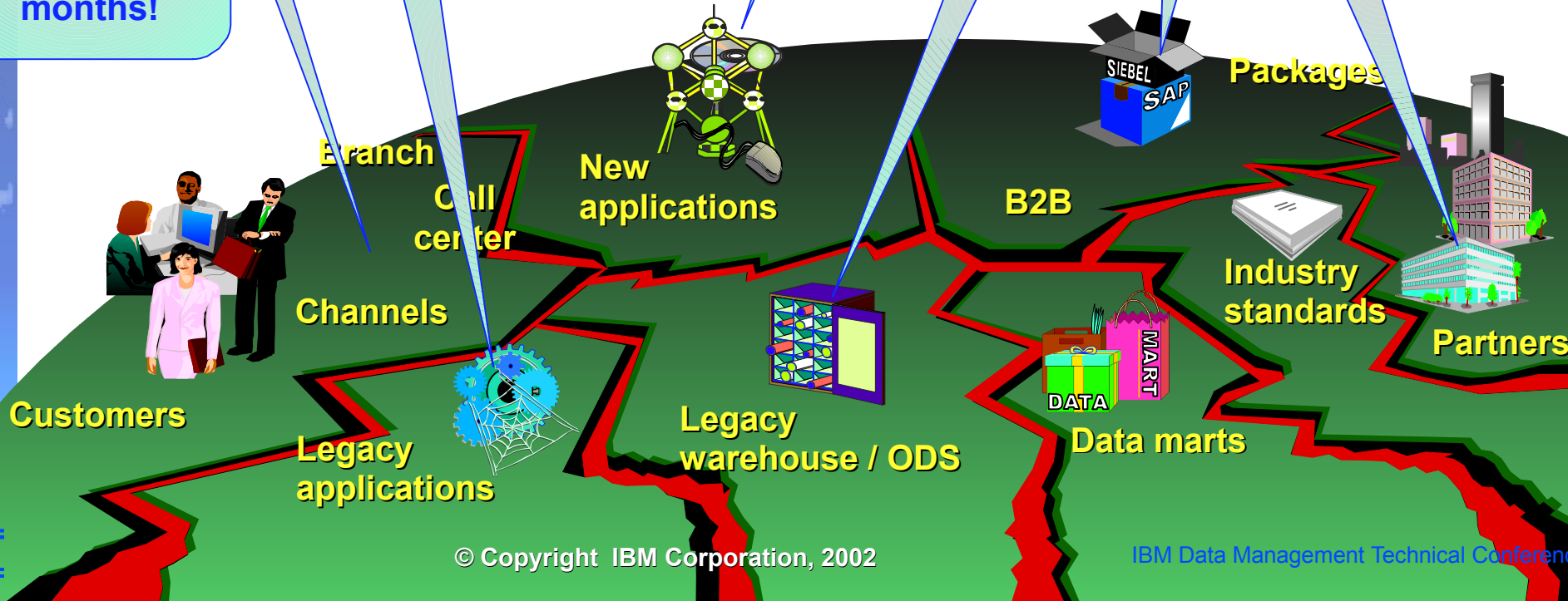
First, we need to enhance our web channel for PDA support...

...as well as provide data to our warehouse and SAP Financials, and then ...

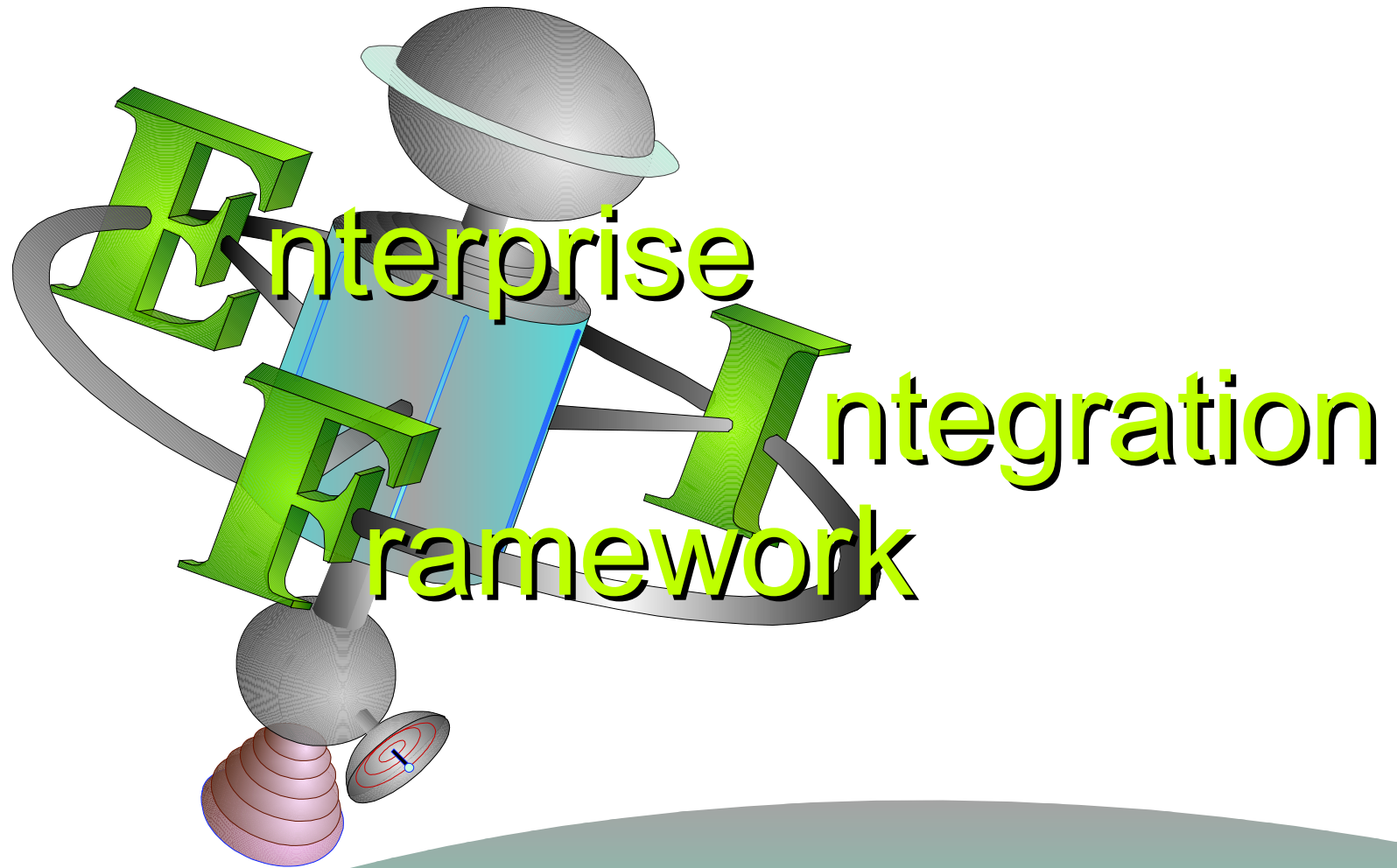
...link to our credit agencies using industry standards for interchange.

Not to mention, deliver in 6 months!

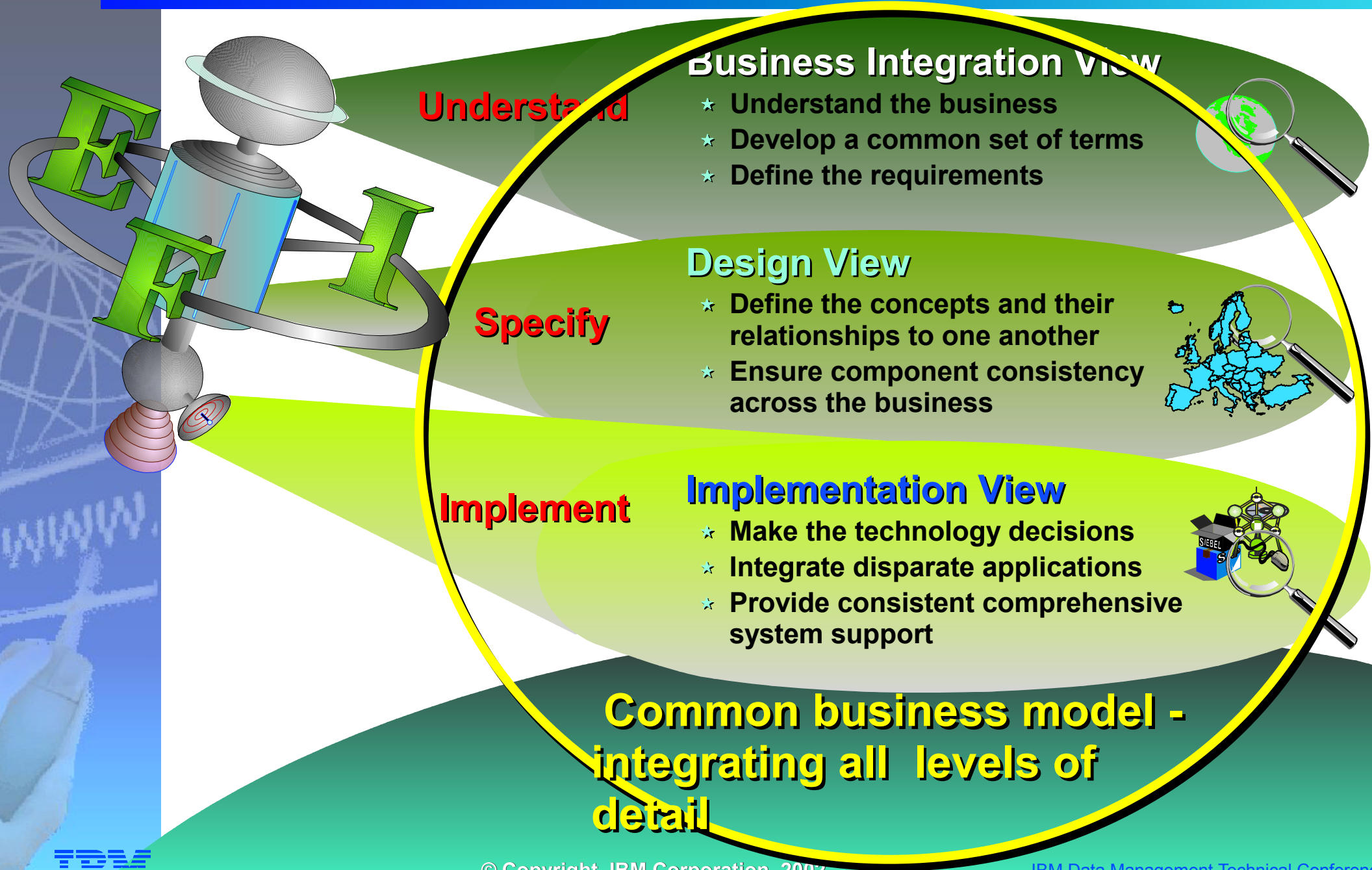
...link to our legacy sales scoring system - critical but difficult to upgrade...



@ An Enterprise Integration Framework (EIF) is the basis for defining how to integrate existing and new systems.

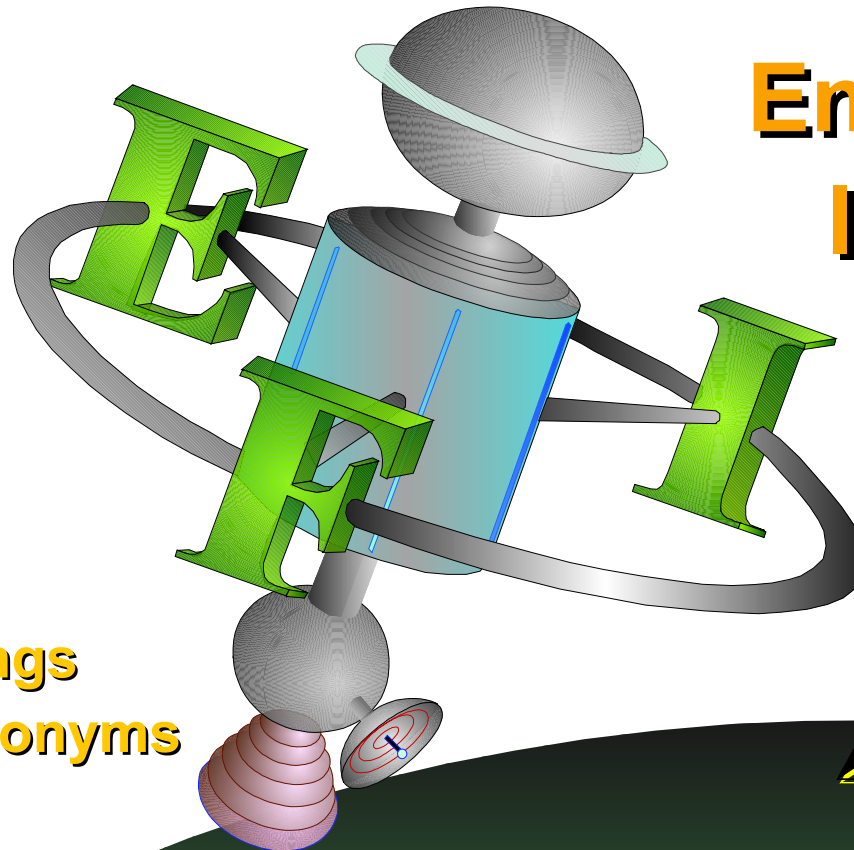


@ An EIF supports all aspects of implementing business initiatives through technology.



@ An EIF is also the basis for innovation through the three related areas of information, function and workflow.

Enterprise Integration Framework



Information

- ▲ Business meanings
- ▲ Synonyms / homonyms
- ▲ Relationships
- ▲ Basis of business analysis

Processes

- ▲ Business processes
- ▲ Workflows
- ▲ Activities

Component

- ▲ Functionality
- ▲ Interoperability
- ▲ Objects and messaging

@ These two dimensions of integration are brought together in a simple matrix.

Information Component Process

Aspects of representation

Common Business Terminology

Common
Business
Data Model

Common
Business
Object Model

Common
Business
Process Model

Data
Models

Interface
Design
Models

Process
Templates

Databases:
*ODS /
Data Warehouse*

Messages and
Interfaces:
XML, Java

Process
Flows

Levels of detail

Business
Integration
View



Design
View

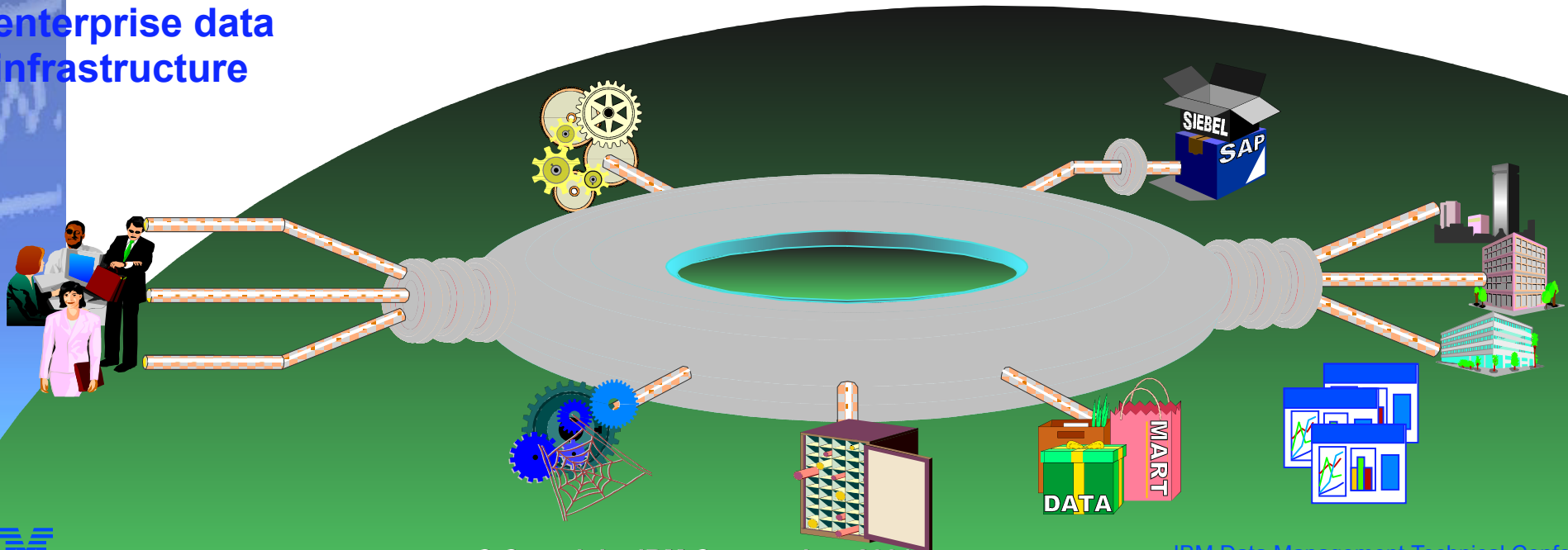
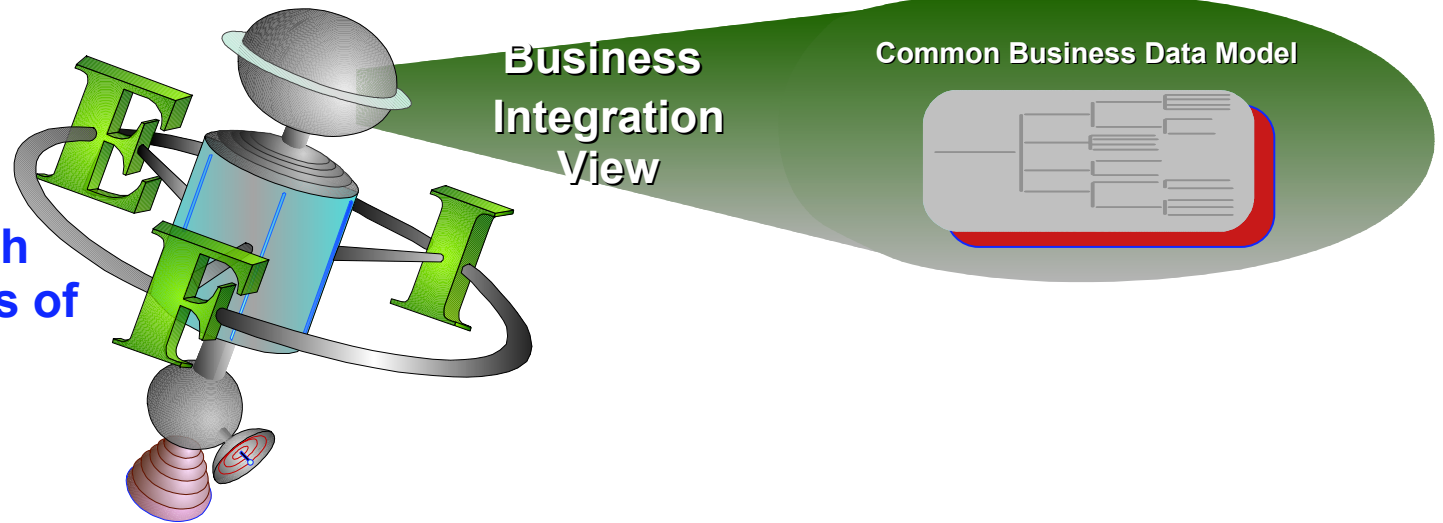


Implementation
View



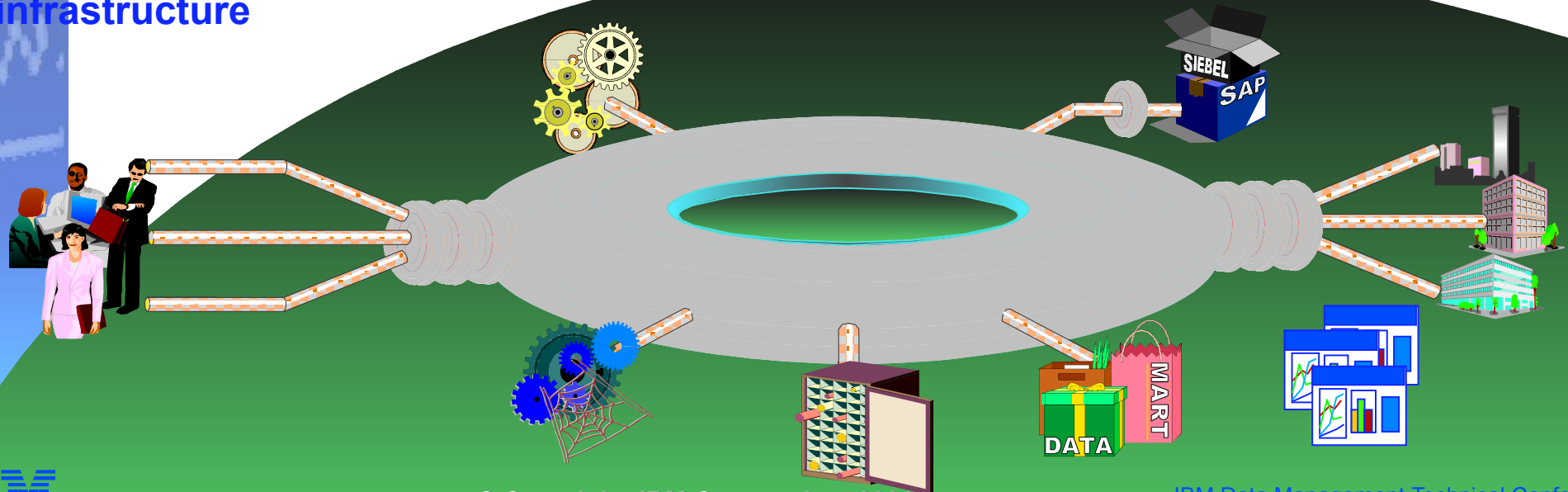
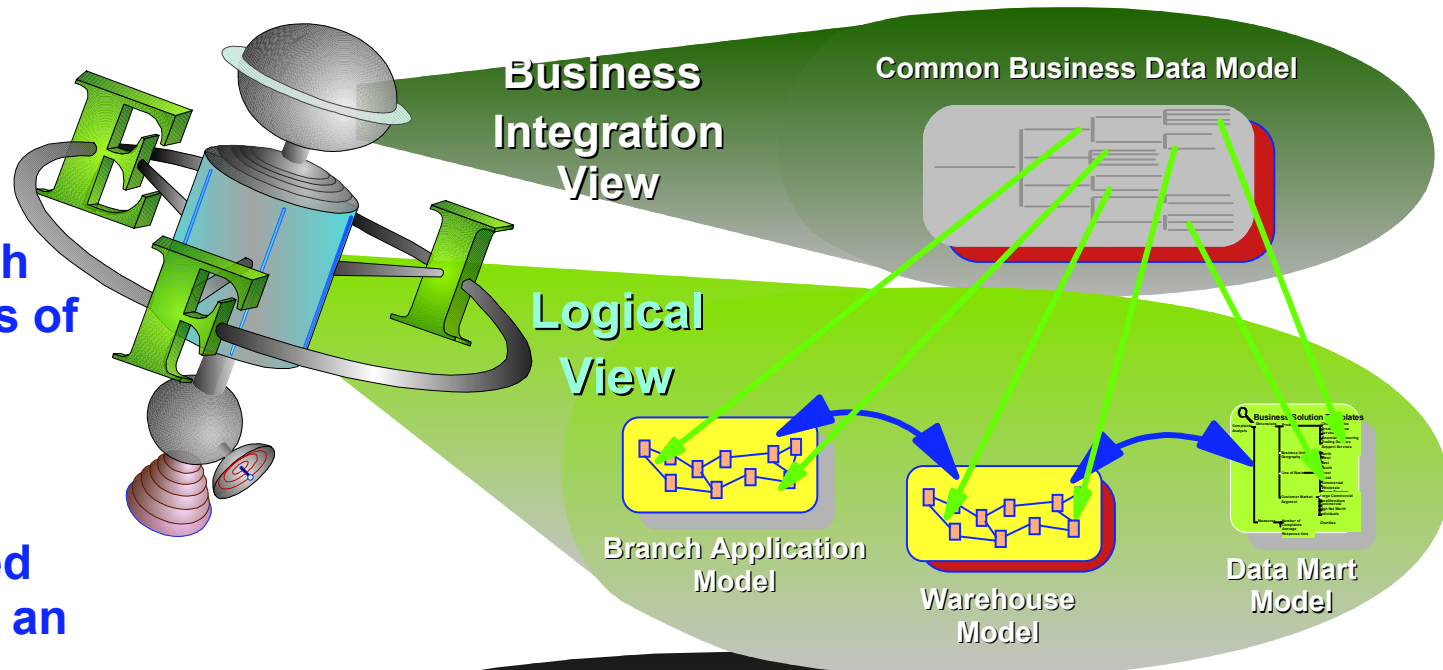
@ The **Information** aspect first describes the entire business' information at a unified conceptual level...

- Comprehensive and timely information is key to success
- Multiple systems with individual collections of overlapping data elements
- Data Models enable consistent, integrated solutions leveraging an enterprise data infrastructure



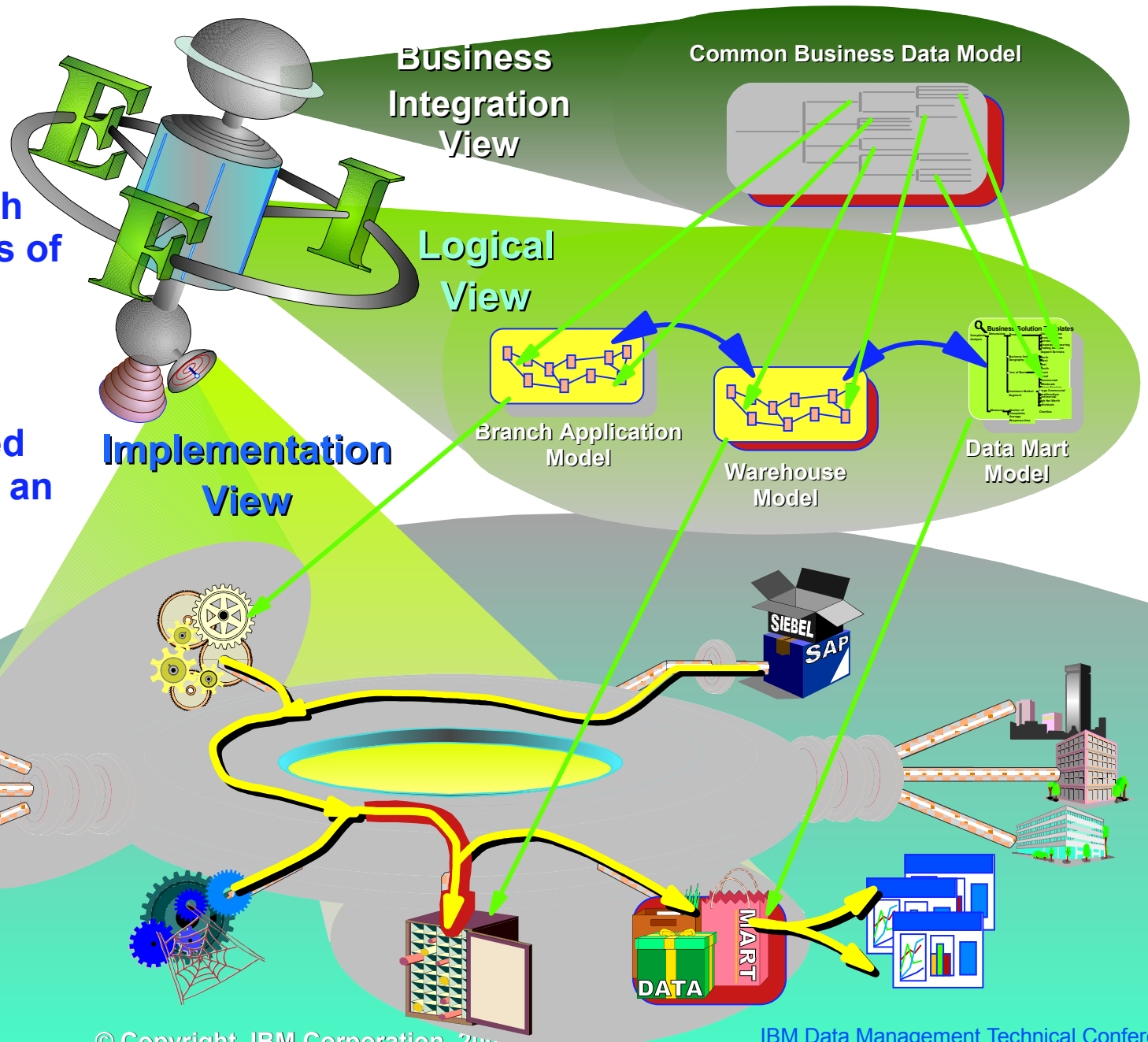
@ The **Information** aspect then provides an integrated logical view of all data components...

- ▶ Comprehensive and timely information is key to success
- ▶ Multiple systems with individual collections of overlapping data elements
- ▶ Data Models enable consistent, integrated solutions leveraging an enterprise data infrastructure



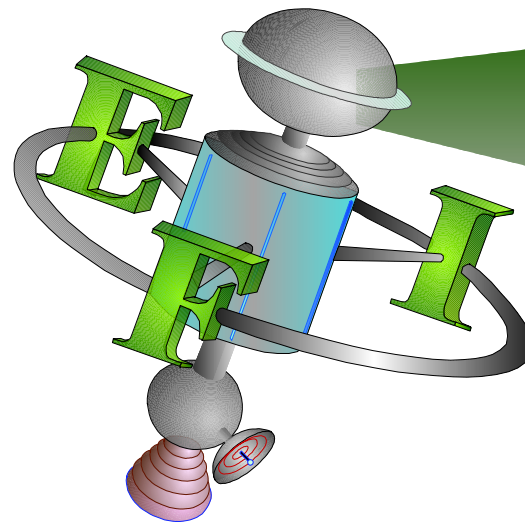
@ The **Information** aspect lastly provides a detailed and cross-referenced linkage to implementation.

- Comprehensive and timely information is key to success
- Multiple systems with individual collections of overlapping data elements
- Data Models enable consistent, integrated solutions leveraging an enterprise data infrastructure

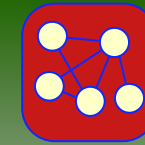


@ The **Component** aspect integrates information with the way in which business actions are performed.

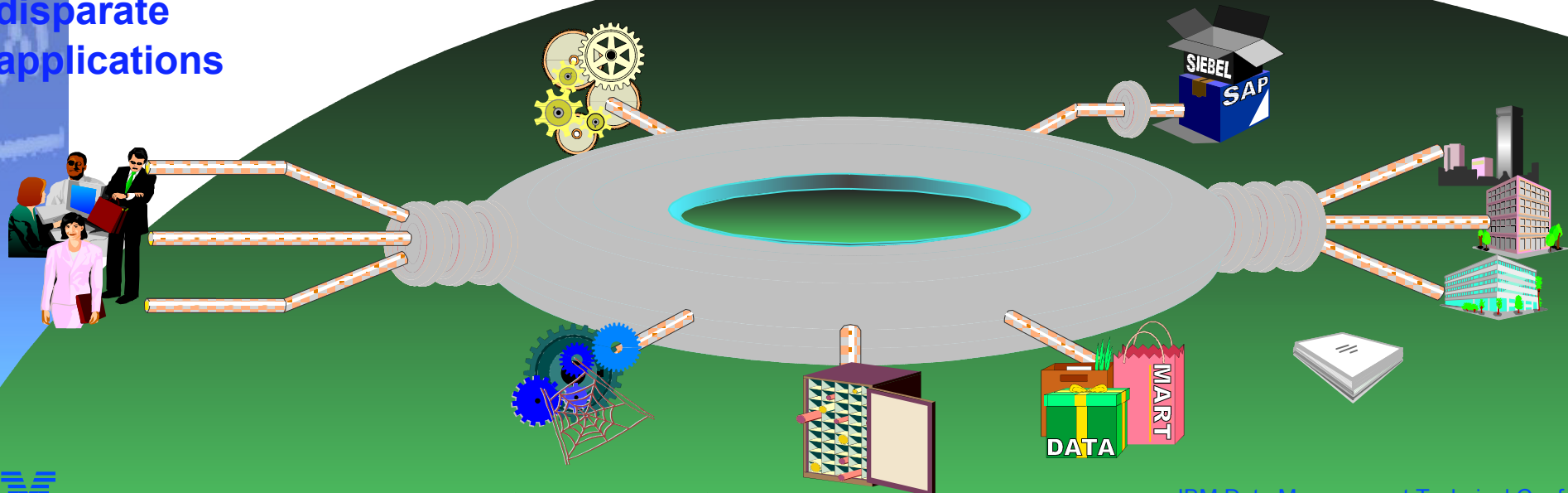
- ▶ Allows the combination of existing and new packaged solutions to be integrated logically
- ▶ Models provide a component-based approach
- ▶ XML provides the 'glue' between disparate applications



Business
Integration
View

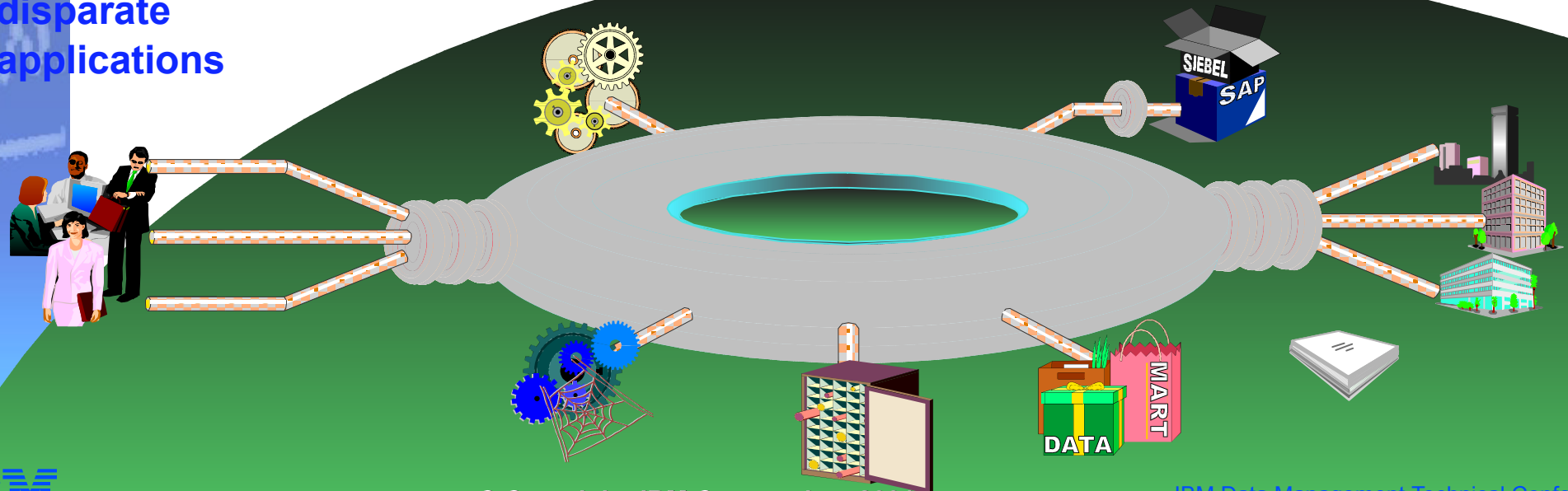
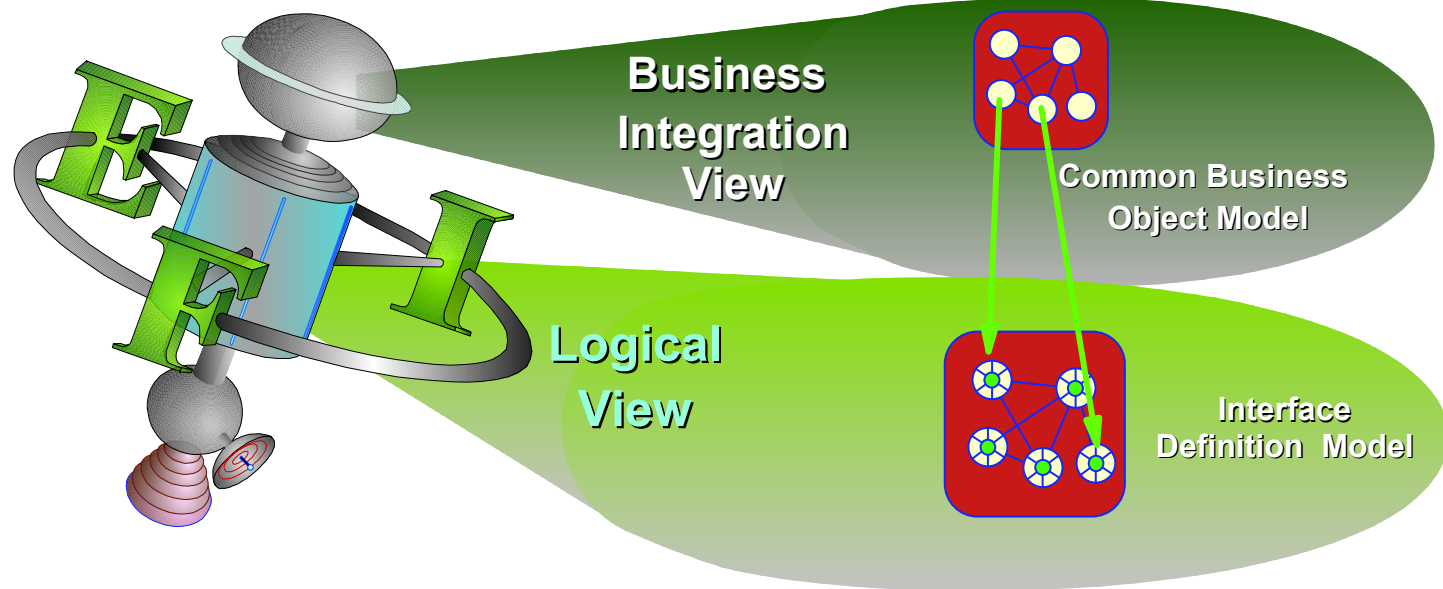


Common Business
Object Model



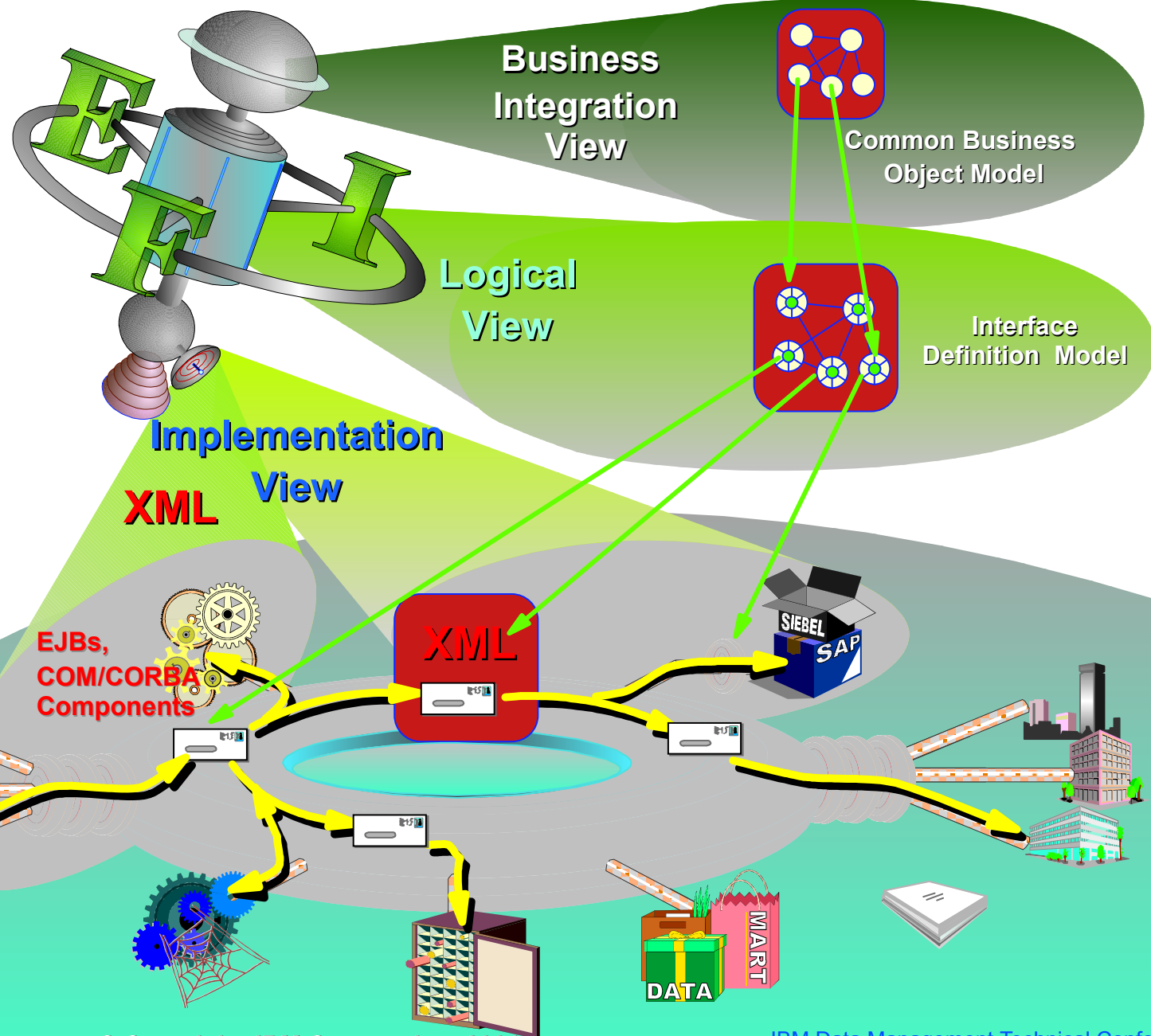
@ The **Component** aspect then defines the interfaces through which business actions are linked.

- ▶ Allows the combination of existing and new packaged solutions to be integrated logically
- ▶ Models provide a component-based approach
- ▶ XML provides the 'glue' between disparate applications



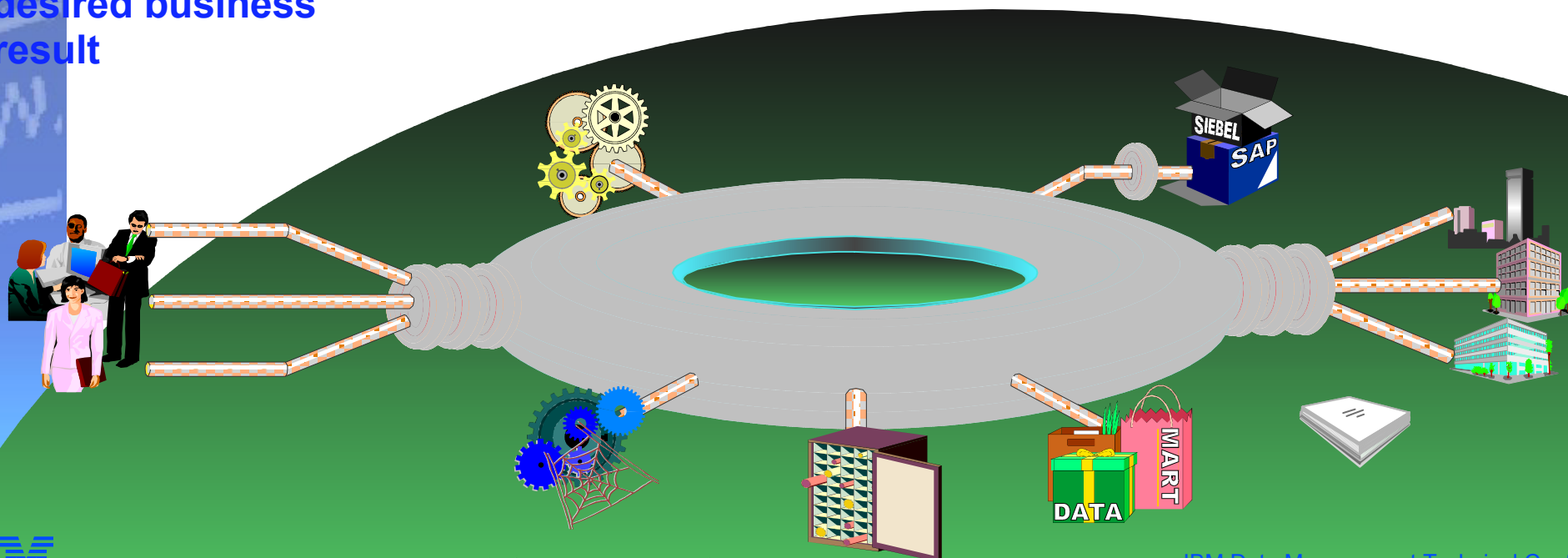
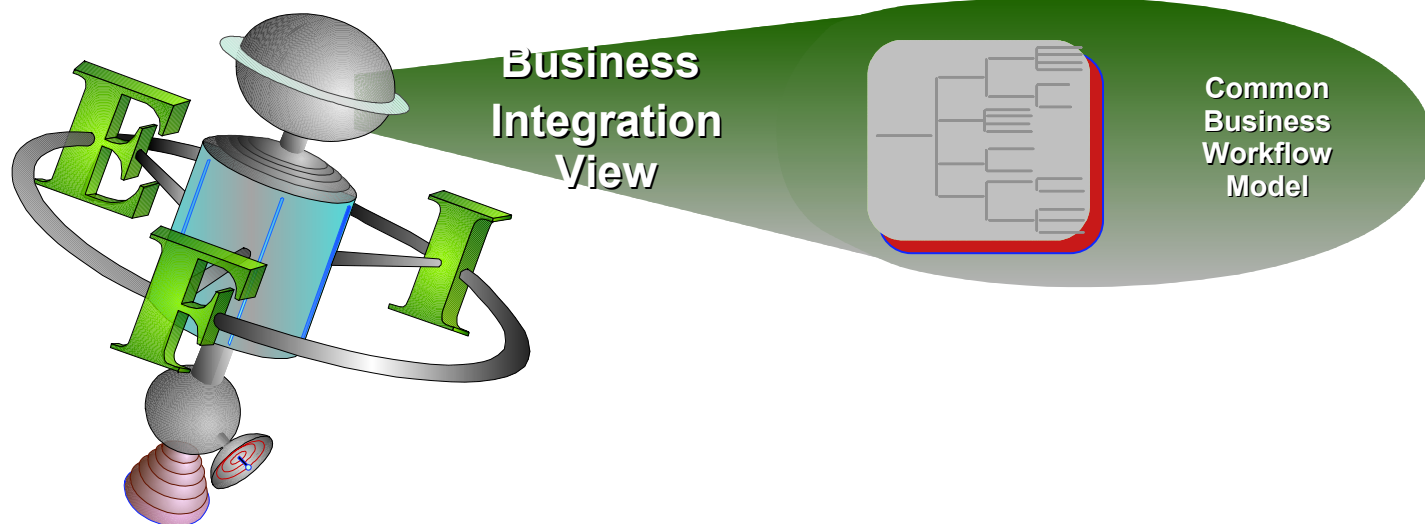
@ The **Component** aspect lastly defines the messages through which applications communicate.

- ▶ Allows the combination of existing and new packaged solutions to be integrated logically
- ▶ Models provide a component-based approach
- ▶ XML provides the 'glue' between disparate applications



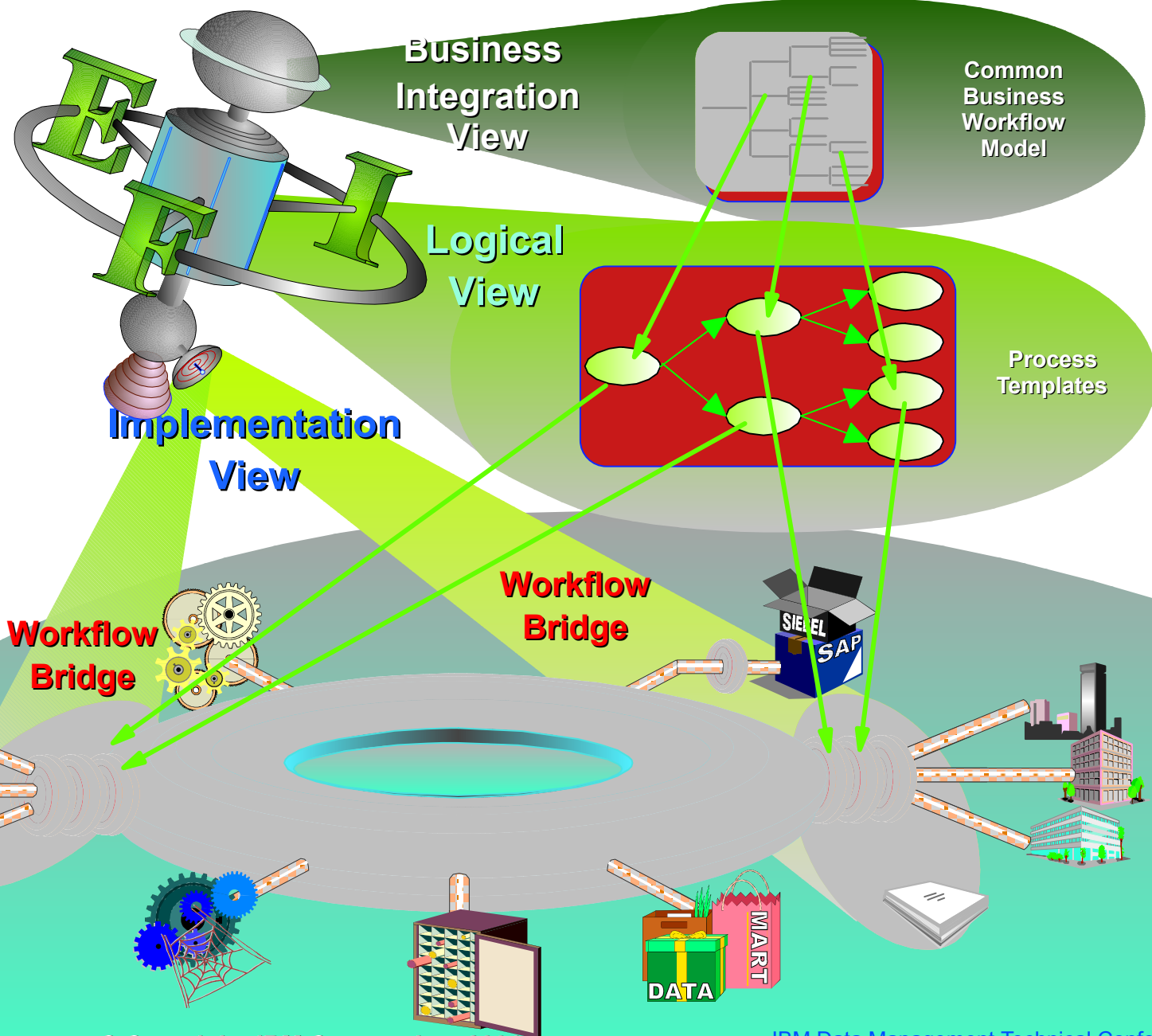
@ The **Process** aspect integrates and streamline the overall order of business activities...

- ▶ **Common terminology** allows enterprise understanding
- ▶ **Process Templates** define how data and function building blocks are used to effect the desired business result

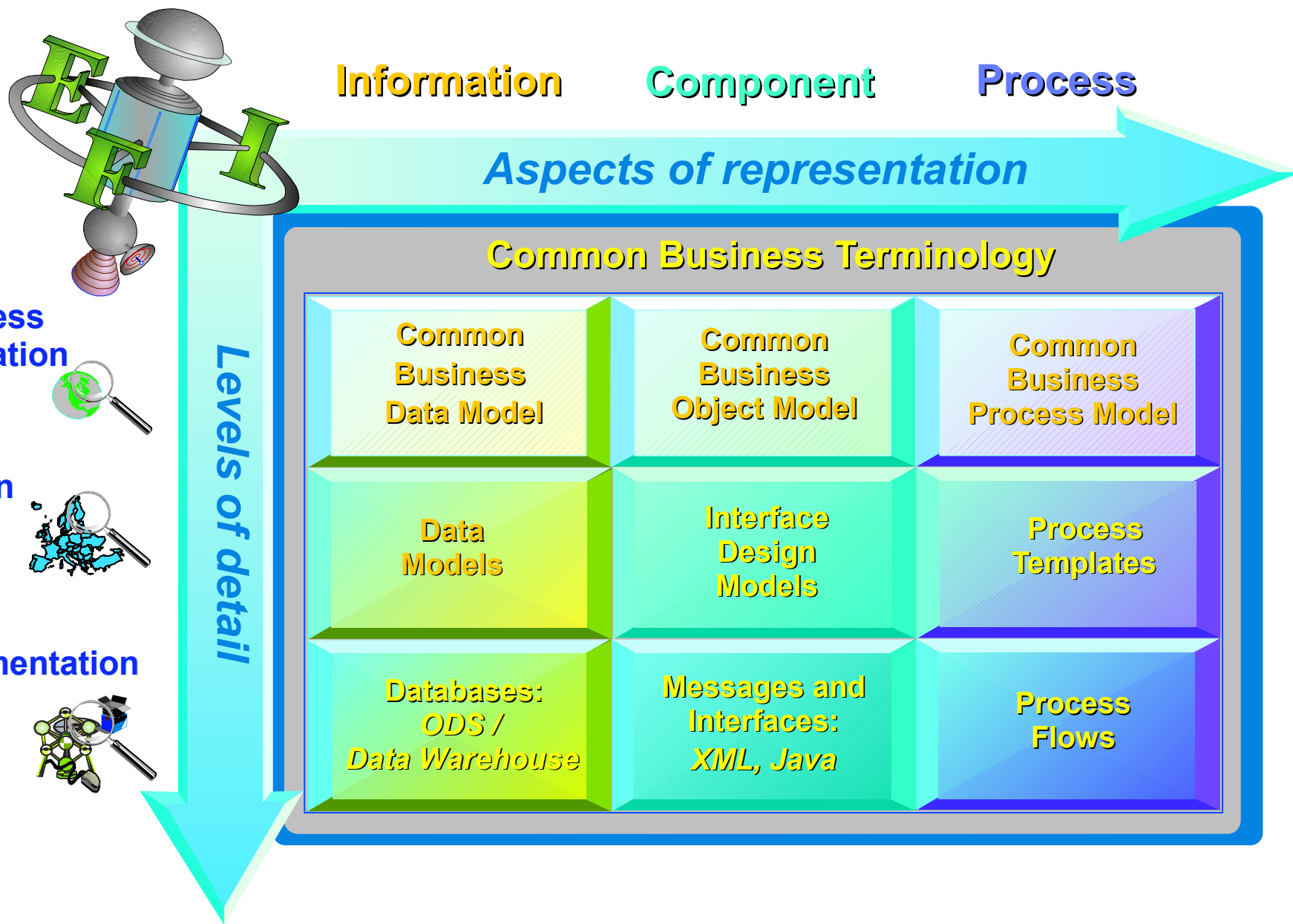


@ The **Process** aspect then defines the sequence, flow and interactions required to implement business activity.

- ▶ Common terminology allows enterprise understanding
- ▶ Process Templates define how data and function building blocks are used to effect the desired business result

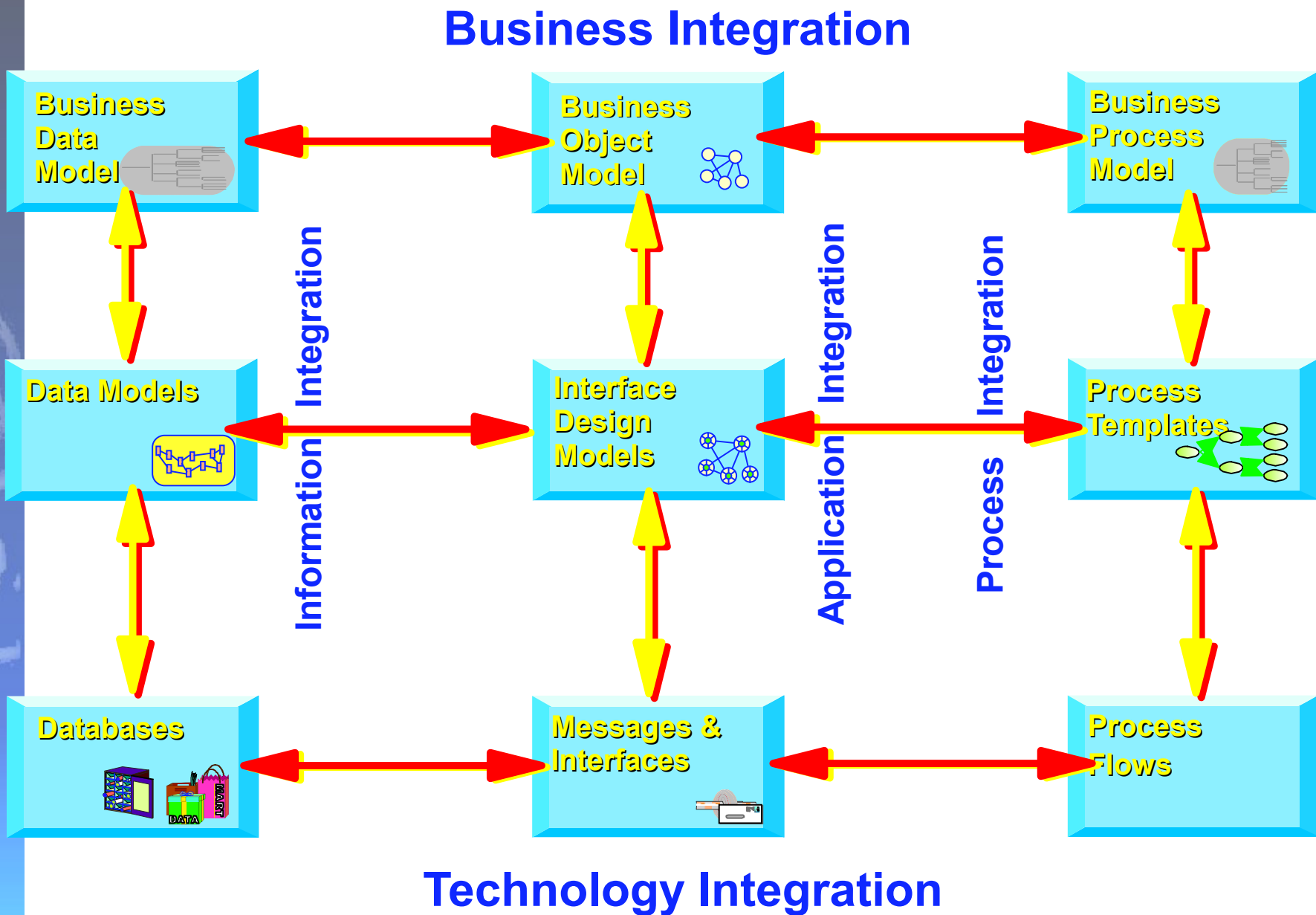


@ Together, these aspects and levels provide a comprehensive integration framework across business and technology.





The nine cells of the framework describe all aspects of integration.



@ An integration roadmap is built on industry models, integration middleware and implementation expertise.

Information Integration

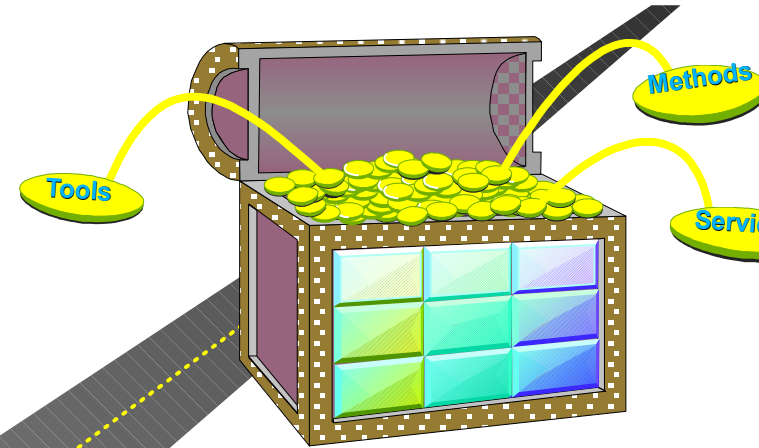
- Federation
- Propagation / ETML
- Metadata

Process Integration

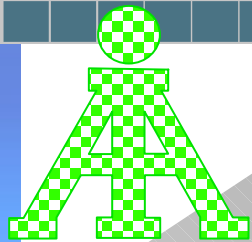
- Workflow
- Metadata

Application Integration

- Messaging
- Hub
- Metadata



I	N	F	O	R	M	A	T	I	O	N
F	R	A	M	E	W	O	R	K		



 **With proven models and emerging infrastructure, the time is now right to break the integration barrier.**

**Integrated, enterprise-wide
content models**

Extensive integration middleware

A solid base of real experience

**Extending existing, valued
systems to support e-business**