# Generalized Cross-Industry Data Model

The Generalized Cross-Industry data model is a template of entities and relationships found in all commercial enterprises. Usage of the Generalized Cross-Industry data model allows an IT development project to drastically reduce the time to do data analysis while significantly improving quality of the data model. This data model incorporated the use of "name value pairs" for handling attributes. This is a unique technique that allows a model to accommodate situations where an entity has a large number of highly variable types of attributes. The data model also resolves recursive relationships in a way that allow easy implementation by an application developer. Most data models tend to treat data modeling as a analytical activity that is an end in itself. This makes for a difficult transition from logical to physical data design.

The model provides a framework which includes the following features:
- ► Entities and relationships that are inherent in business across industries.
- ► Sample attributes (attritubes tend to be company specific)
- ► Normalized form rather than a star schema for two reasons:
  - ● To better reflects the nuances of the data for the business analyst.
  - ● To facilitate building the data staging layer or an ODS if necessary or desired
- ► Many-to-many relationships resolved into associative entities
- ► Place holders for derived data to illustrate concepts to the application developers.
- ► Relationships that can be open ended are modeled as recursive.
- ► Created in ERWin compatible format

The Generalized Cross-Industry data model contains the following subjects and activities:

| Subjects | Activities |
|---|---|
| Parties | Agreements |
| Resources | Orders |
| Locations | ResourceMovements |
| Dates and Times | Accounting |
| Composite View of Parties | Events |
| Locations and Resources | Claims |

## Industry/Sectors

The Generalized Cross-Industry Data Model can be applied in the following Industries/Sectors:

| ☒Financial Services | ☒Communication | ☒Industrial | ☒Distribution | ☒Public |
|---|---|---|---|---|

## Asset Inventory

IBM Business Intelligence (BI)"Innovations" can be made up of 6 types of assets. The inventory of assets available with this "Innovation" have been created by IBM research and consultants but may be linked or combined with a number of other BI innovations.
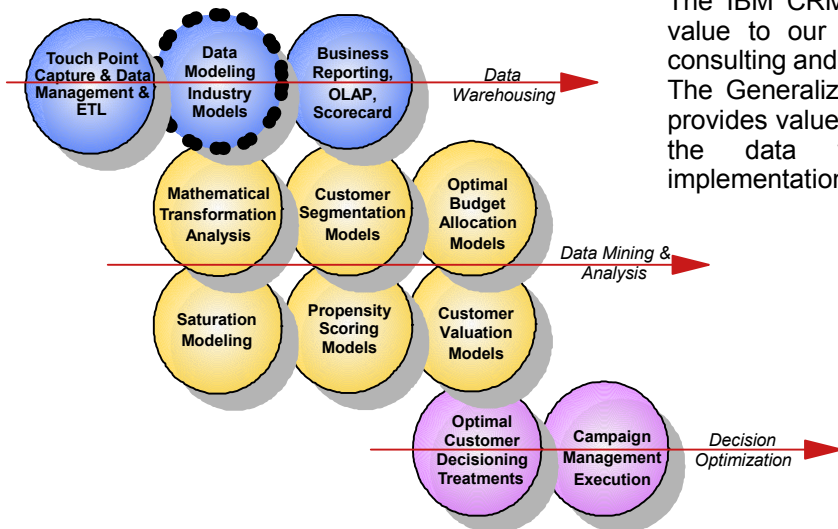
| Asset Type | Generalized Cross-Industry Data Model Assets |
|---|---|
| Data Warehouse Management | |
| Extract / Transform / Load (ETL) | |
| Data Models | 1) Normalized Data Model - ERwin Ready<br>2) Overview Presentation |
| Display | |
| Analyze | 1) IBM EasyModeler |
| Services | 1) Readiness Assessment<br>2) Implementation & Customization |

**An IBM Business Intelligence *Innovation***

IBM Global Services

Patent pending

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## Client Issue: Customer Relationship Management (CRM)

IBM's CRM Value Chain is a roadmap for helping our clients maximize their relationship with their customers. When linked together, the pieces of the value chain describe an end-to-end solution that includes data capture from customer touch points, data modeling to store and organize information to support traditional reporting as well as advanced analytics and decision making.

### CRM Value Chain for Business Intelligence



The IBM CRM value chain provides special value to our clients through deep analytic consulting and a wealth of intellectual property. The Generalized Cross Industry Data Model provides value to our customers by expediting the data warehouse development / implementation portion of the value chain.

## The Generalized Cross-Industry Data Model is a template …

The Generalized Cross-Industry Data Model is a template that has evolved from customer engagments in a variety of industries. The template provides a framework:

- ► Focuses on the entities and relationships that are inherent in business across industries.
- ► The model only contains attributes for illustration since they tend to be company specific.
- ► The data model in normalized form rather than a star schema for two reasons:
  - ● It better reflects the nuances of the data for the business analyst.
  - ● It is often necessary for building the data staging layer or an ODS.
- ► Design points:
  - ● All many-to-many relationships are resolved into associative entities.
  - ● The model contains derived data in many places to illustrate concepts to the application developers.
  - ● Relationships that can be open ended are modeled as recursive.

## Related IBM Software Products

DB2 Universal Database

## Related Information

White paper available soon

IBM Global Services