

Telco DWH model

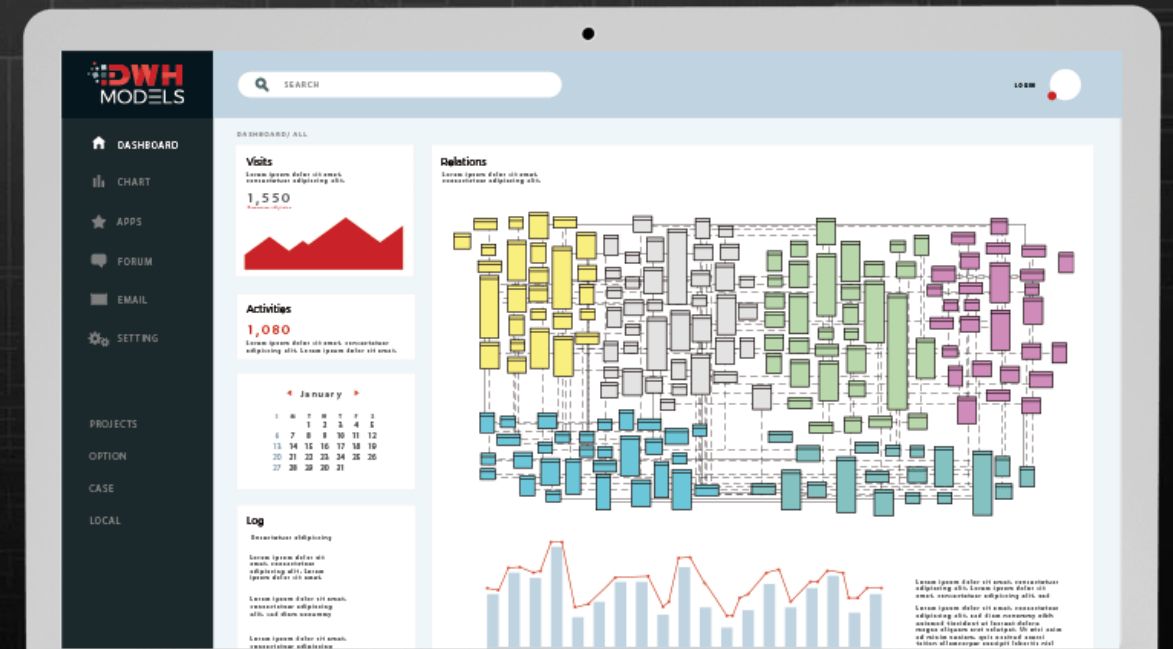
Data warehouse model for telecommunications



Telco

DWH
MODEL

1. PI Telco DWH Data Model® Business Perspective



Model facts

- Developed since 2007
- Used by more than 15 reference customers at three continents
- In current version 4.1, model has more than 600 Entities (Tables) grouped in 43 Subject areas, with 7500+ attributes, 1100+ relationships and 1800+ keys
- TMForum Framework 18.5 Certified Product – logic of the model is following TM Forum's Information Framework Shared Information Data Model (SID), as a common reference model
- Developed with ERWin, but can be exported and used with any other database design tool (ERWin license is not included in model price, but we can provide it)



Model benefits

- Delivers competitive advantage by enabling the consolidation of data across multiple systems
- Supports fast implementation of DWH / BI solutions
- Facilitates structured approach to subsequent customization and extension of the data warehouse
- Enables business users to more effectively control and reduce the time taken to scope their requirements, as well as subsequent customization and extension of the data warehouse
- Provides a basis for management reporting, relationship management, decision support and executive information applications
- Minimize development costs
- Reduce the risk of failure by facilitating an incremental approach to delivering integrated data warehouse solution
- Foster collaboration and approval between business and IT, as necessary, to turn business requirements into actionable solutions
- Support for Enterprise Architecture standards (Data Governance)
- TM Forum SID compliance
- Comprehensive - Content collected from multiple client engagements is turned into a suite of related Subject Areas with a proven methodology and models that require minimal customization

Big Data Analytics Enabled

- PI Telco DWH Model is also addressing new Big Data Analytics requirements, related to data from sensors, Machine to Machine data and Internet of Things
- Model supports location based analytics and content analytics functionalities
- Model provides foundation for integration of structured and non-structured data for unified analytical layer



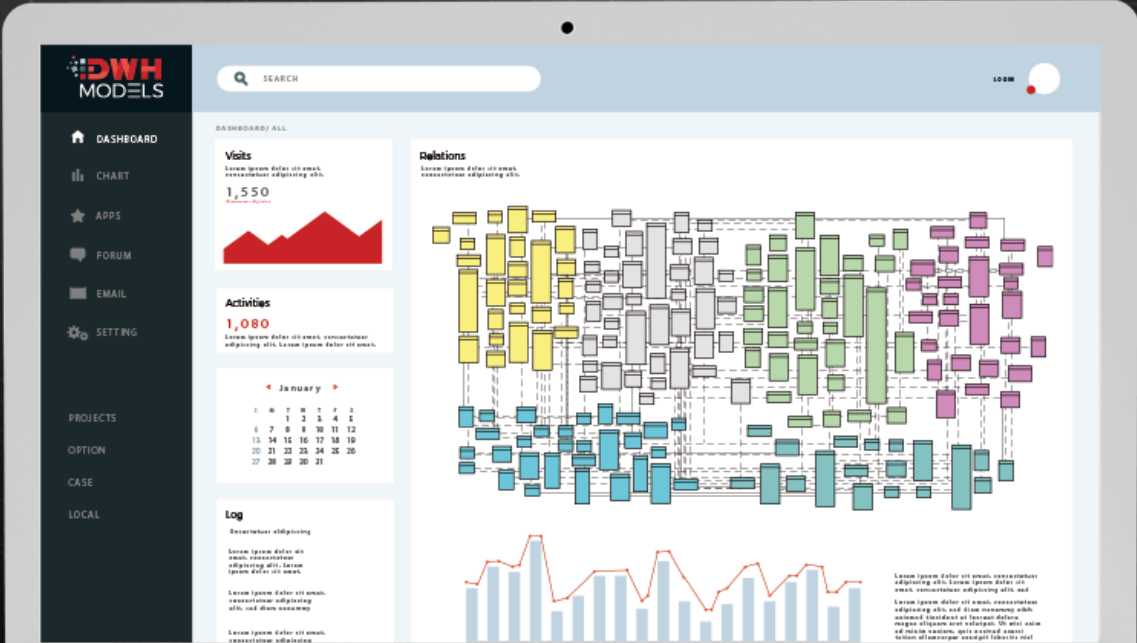
Model Roadmap

- **Major release (X.0) available every 2 years**
 - New Subject Areas and related supported Analysis and KPI's
 - Everything included in Minor releases
- **Minor release (4.X) available 2-3 times a year**
 - New tables in existing Subject Areas
 - New attributes in existing tables
 - Other minor enhancements

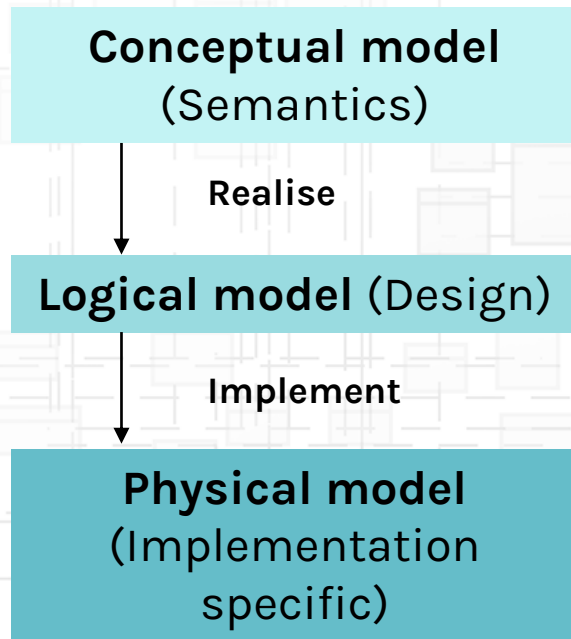
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2. PI Telco DWH Data Model® Technical Perspective



From Conceptual to physical model

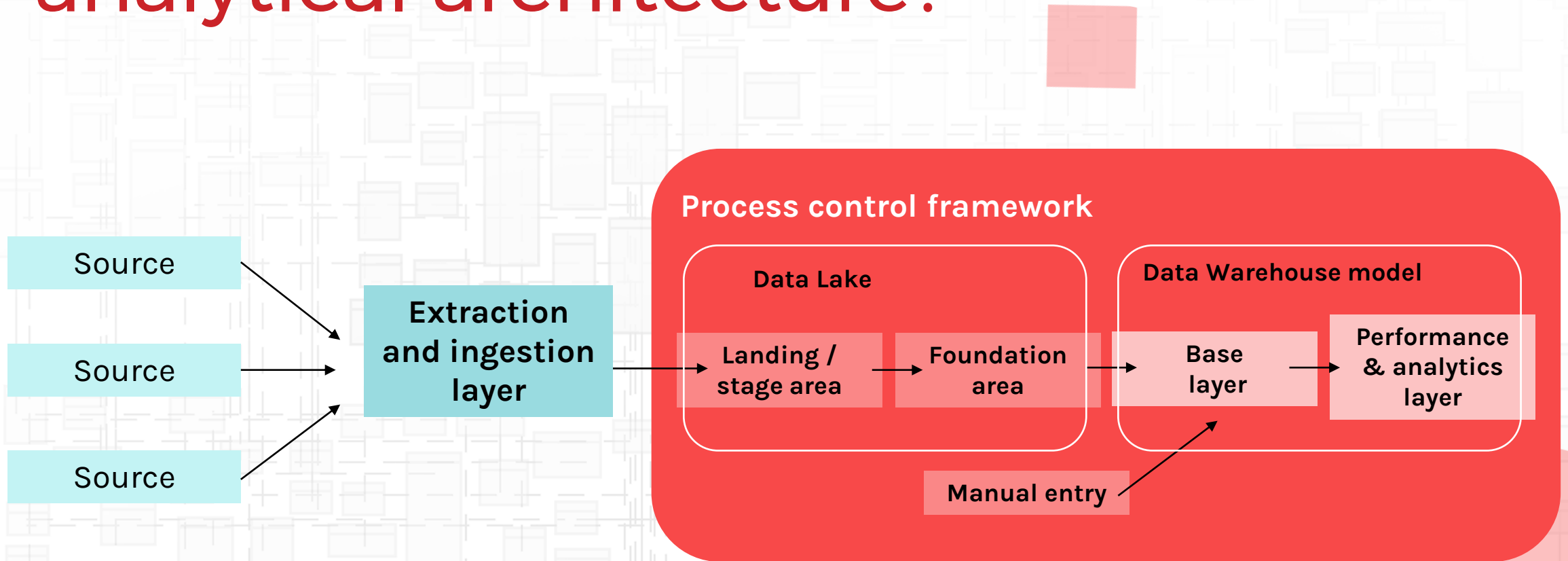


TM Forum SID

Pi Telco DWH Model

Customer implementation

Where our model fits in analytical architecture?

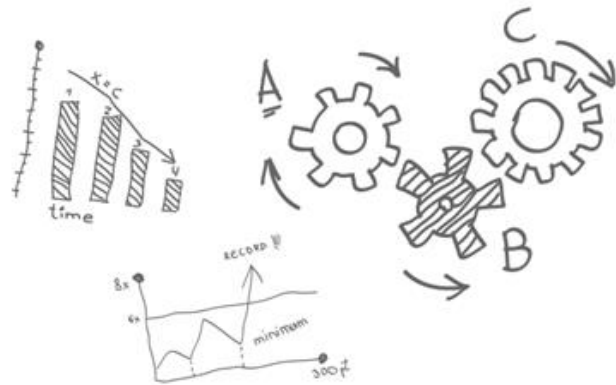


Base Layer and Data Marts

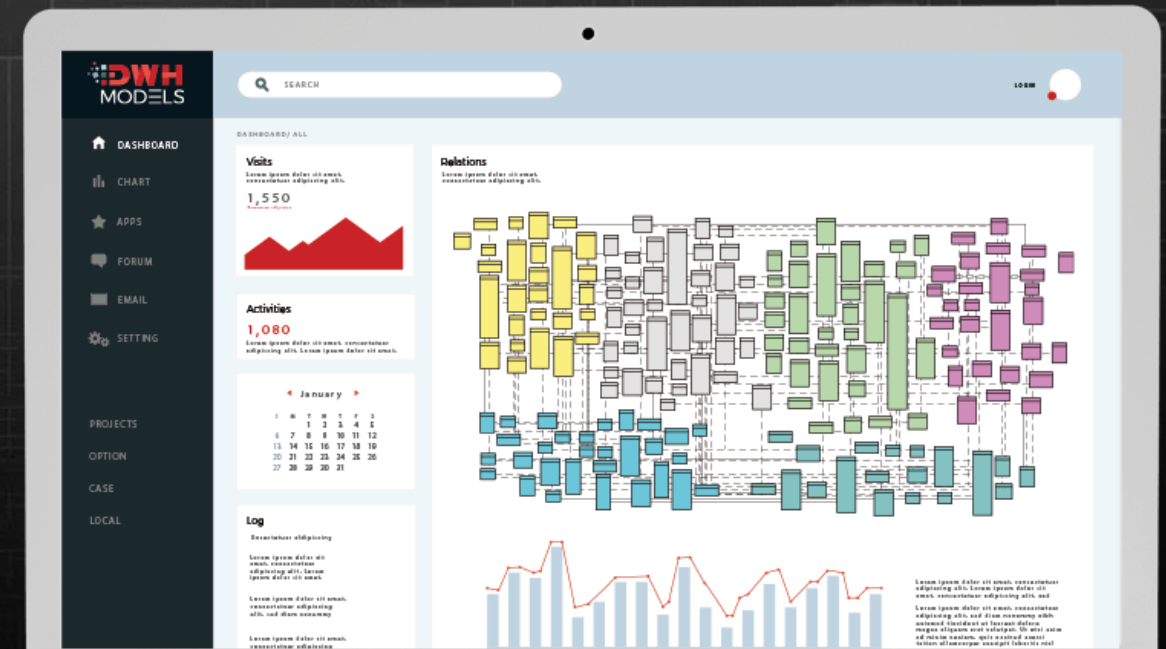
- Base Layer contain tables loaded and transformed directly from source systems
- Data Marts have additional fact tables for analytical purposes based on aggregated data from Base Layer
- Some Data Marts are in separate Subject Areas (Number of Subscribers, Traffic Aggregations, Churn Prediction, Market Share)
- Some aggregate (snapshot) tables are in the same Subject Area as corresponding Base Layer tables (i.e. Open Items in Revenue & Collection, Prepaid Balance in Recharge, Loyalty Account Points History in Loyalty Program)

Main model Functional groups (FG)

- Common Business (CB)
- Customer, Account & Subscriber (CAS)
- Revenue & Usage (RU)
- Finance & HR (FHR)
- Infrastructure, Workflow & Inventory (IWI)

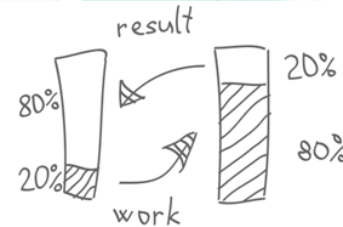
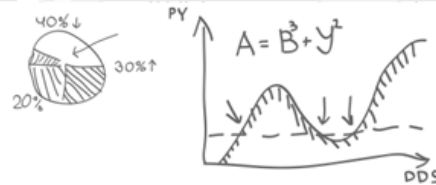


3. PI Methodology & Roles Engagement scenarios



Implementation methodology

- Initial 1-2 weeks of workshops to define overall requirements and to establish expectations and timelines
- Model customization and source-to-target mappings are done based on Functional Groups (FG)
- For each FG customization and mappings may require 4-8 weeks, depending on complexity
- CAS (Customer&Account&Subscribers) always first FG because all other FG rely on it. Order of other FG is defined with customer by priority



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DWH MODEL

Banking

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Banking DWH Model

Gain insight into customer trends and historical data - optimize discounting, improve retention and segment your customer base to effectively acquire new customers. **Data warehouse provides the basis for quality analysis of available data by deriving accurate information.**

Insurance

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Insurance DWH Model

Make informed and data-driven decisions and **transform information into meaningful actions**. Turbulent times of saturated markets and new regulations, highlight the importance of the **availability of the right information at the right time** for the (re)insurance industry.

Retail

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Retail DWH Model

Retail DWH model® is standard industry data warehouse model applicable for retailers and wholesalers, covering traditional Business Intelligence requirements, regulatory requirements and Big Data Analytics requirements.