A Central Market System for the Utilities Industry

March 3rd, 2016

Presenter



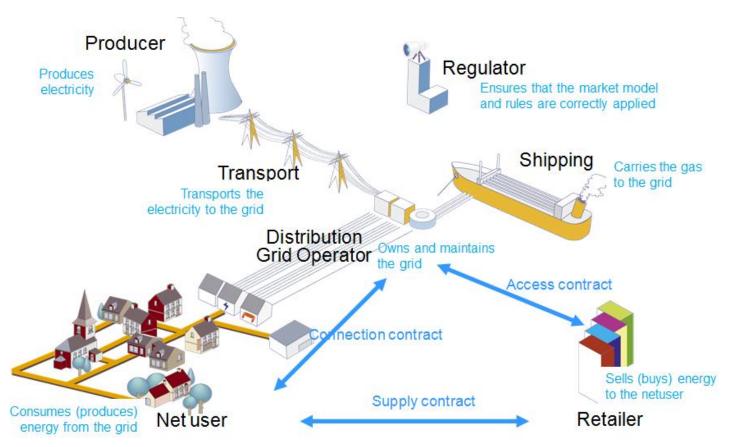
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- Atrias' Business Challenge
- The Industry's Strategic Intent
- Our Transformation Vision for Atrias
- How Did a Platform Make the Difference?
- Questions and Answers

Atrias' Business Challenge 1/4

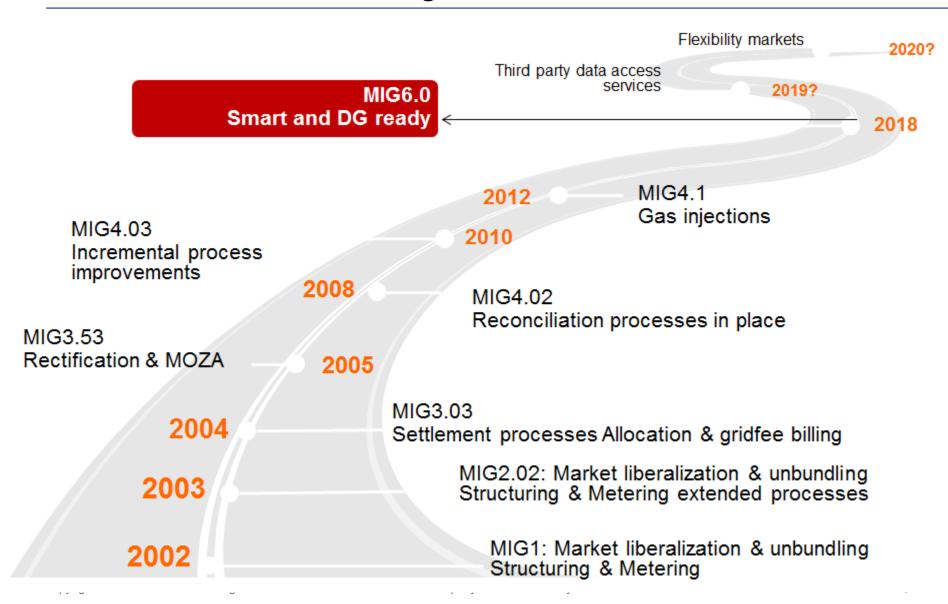
- Belgian utilities market started has been deregulated between 2002 and 2007
- The grid component is regulated, only the retailer component of the value chain has been liberalized



Atrias' Business Challenge 2/4

- Since 2002, the market modeling has been based on Market Implementation Guide (MIG)
- The MIG is a commonly agreed set of business rules and market processes for information exchanges between Utility market actors:
 - The Business Requirements describes the Market Processes that govern interactions between the market actors, e.g., customer switch, supplier switch, new connection, etc.
 - The Business Information Model, based on a common Data Model, is used by the market actors when they need to communicate between each others
- There have been several waves of MIG, constantly elaborating on the previous set of rules: however, given the new disruptive trends in utilities (decentralized generation (DG), smart meters), there is now a need for a completely new market model

Atrias' Business Challenge 3/4



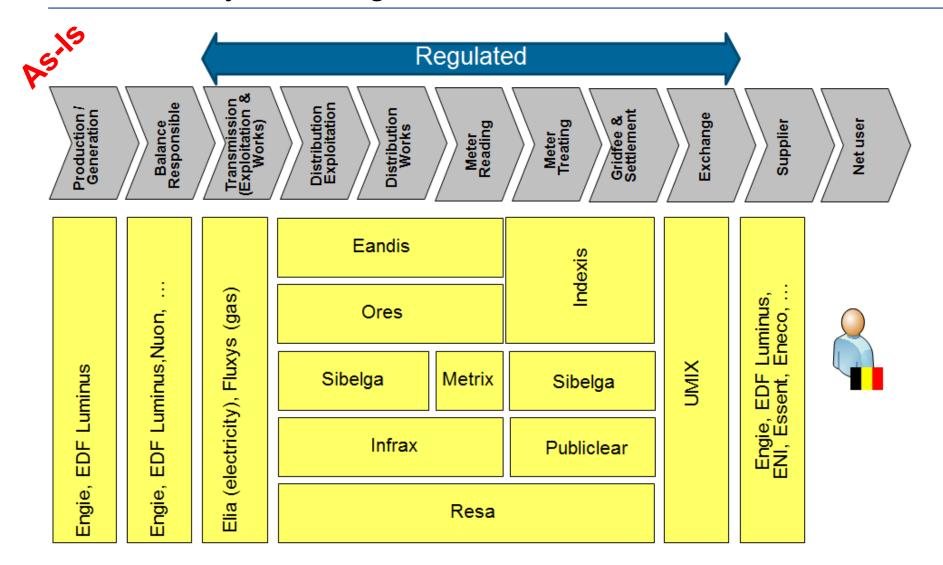
Atrias' Business Challenge 4/4

- Atrias has been set up in 2011 by all (5) grid companies in Belgium to achieve 2 missions:
 - Facilitate the market discussions with all market parties (regulators (4), retailers (30+), distribution grid companies (5), transport grid companies (2)) to come to an agreement called MIG6 which will be the new start of the utilities market in Belgium, tackling the new energy paradigm
 - Build the new federal Central Market System (CMS) that will implement this new market model and serve as market hub for all market data exchanges

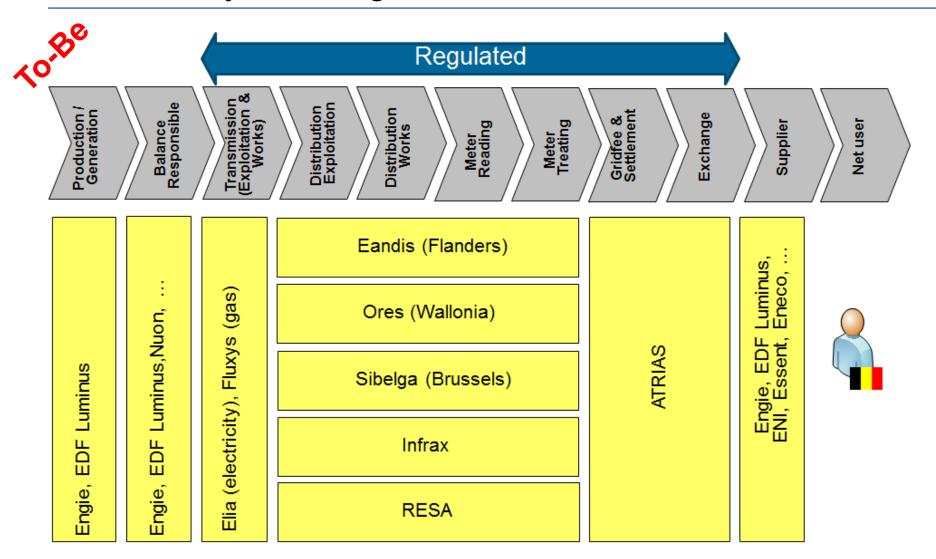


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The Industry's Strategic Intent 1/4



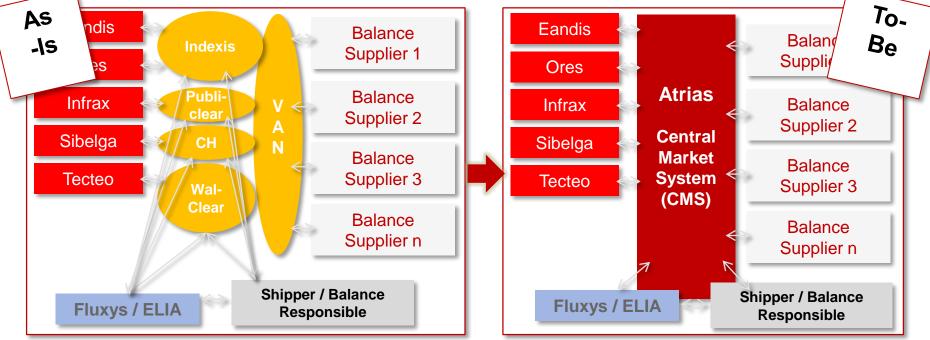
The Industry's Strategic Intent 2/4



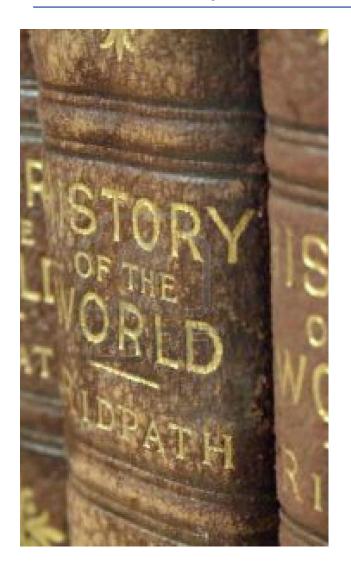
The Industry's Strategic Intent 3/4

- Atrias will build and operate (IT-wise) a new federal Central Market System to support the new market model, replacing all existing clearing houses
- Central Market System will support information exchange between the different market actors

 This CMS will replace the existing Clearing Houses and VAN and will allow a complete harmonization of market information exchange



The Industry's Strategic Intent 4/4

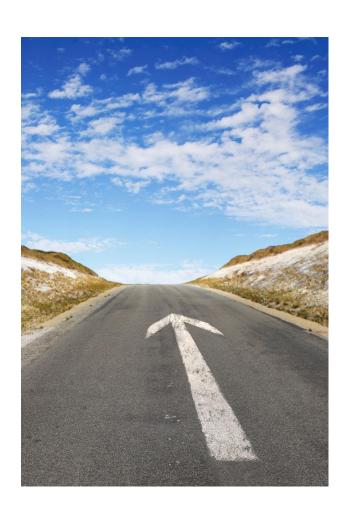


- Founded in 2011, Atrias has published the MIG6 in 2013, while the subsequent MIG DGO 1.0 has been published in 2014
- In April 2013, an RFI has been published to design, build and run the application and underpinning infrastructure of the CMS: 6 companies were shortlisted
- In December 2013, the RFP has been launched for a start of the project in July 2015
- 1 year of market integration testing was foreseen
 first with DGO (DIT) and then with Retailers (MIT) –
 before going live in January 2018

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Our Transformation Vision for Atrias 1/4

- Utilities market process knowledge to secure stretched design planning
- 2. **Tailored governance** to support discussions between Atrias and its shareholders
- 3. Strong **delivery track record** to ensure timely delivery for Atrias tests (SAT), Grid companies integration tests (DIT), Retailers tests (MIT) and eventually go-live
- 4. Solid **local partnerships** to support one-stop shop principle (IO, software vendors, SME, etc.), during Build as well as Run
- 5. Combination of industry packaged solution to integrate natively new market trends (Smart, local production, etc.), and proven technology stack (SAG's BPM, MS big data, etc.) to secure evolutivity as well as TCO over 7.5 years



Our Transformation Vision for Atrias 2/4

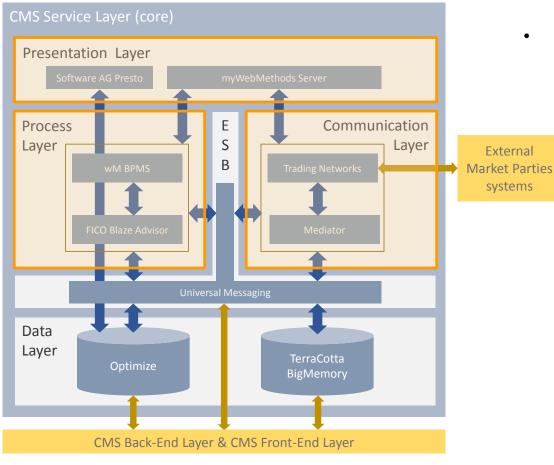
The CMS application is constituted by 3 layers: a supporting Back-End Layer, a operating Service Layer and an exposing Front-End Layer. Provides access to the CMS functionalities/data for external APPLICATION LAYER Orchestrates the market users (retailers, DGO, ...) processes between the CMS Front-end Layer B2B and the Back-End Layers CMS Service Layer **Process** Layer **Business Reusability Layer** B2B Operates ESB logic Layer between the Back-End and Task Laver **Entity** Layer the CMS Service Layers IT Integration Layer Operates the B2B communication between the CMS and Supports the Back-End other market parties logics and rules needed to CMS Back-end layer run the market processes

Our Transformation Vision for Atrias 3/4

The CMS Service Layer consists in a set of application components integrated together and build using the Software AG product suite.

External

systems



- Five main blocks can be distinguished:
 - A **Presentation Layer** offering a Dashboarding tool (Presto) that will used for monitoring general purposes and a portal (My management webMethods Server);
 - 2. A **Process Layer** constituted by a Business Process Management System (wM BPMS) and a Business Rules Management System (FICO Blaze Advisor);
 - 3. Communication Layer supporting the communication with external market the parties (Trading Networks and Mediator)

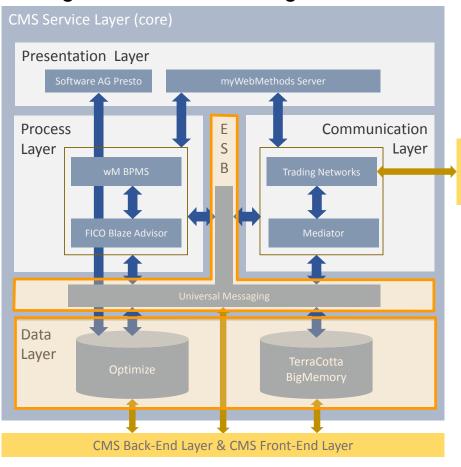
Our Transformation Vision for Atrias 4/4

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External

Market Parties

systems



- Five main blocks can be distinguished:
 - 4. An **Enterprise Service Bus** (Universal Messaging) integrating the different CMS layers with each other and with the front- and back-end layers.
 - 5. A **Data Layer** containing data used to run the Business Processes, the Business Rules and the monitoring analysis (Optimize and Terracotta BigMemory).



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How Did a Platform Make the Difference?

A platform enables the Belgian Utilities to:

1. Integrate with agility the **new market trends** in the processes (smart, local productions, etc.)

- 2. **Simplify** the market functioning to reduce market TCO (start/stop, etc.)
- 3. Increase **market efficiency** and competition (pre-switching, etc.) through real-time information exchange
- 4. Kill batch processes to increase **data quality** (gridfee on the fly to avoid rectification, etc.)
- 5. Create federal implementation for the DGO to **synergize** and reduce the implementation costs

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Questions and Answers

