

**Re-focusing the Competitive System in a Public Utility Company:
a Feedback-Oriented Approach**
The case of AMIA

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Abstract

During the last decade, environmental issues have been taken into a serious consideration from both public institutions and private organisations. Also in Italy, lawmakers have been addressing their activities towards a more severe regulation of the urban waste sector, trying to create the structure of a competitive market within which business organisations could compete to offer all the environment-related services required. This reform was addressed to those organisations, whose internal culture was characterised by the tendency to survive mainly relying upon contributions from the public administration.

This paper analyses the case of **AMIA S.P.A.**, the municipal waste management company of Palermo. Until 2001, **AMIA** was only managing the service in the area of Palermo as public agency. Since 2001, it was turned into a joint-stock company, and acquired a commercial structure in order to compete in other markets. Now, the company aims to enlarge its existing market share and, according to its mission, to increase the service level delivered to the customer community. Its potential market could consist of the whole Sicilian region, however, the company's managers consider it more reasonable to narrow the focus on the western part of the island. In order to increase company's competitiveness, the managers judge it necessary to deepen their knowledge about the structure of the potential markets. Five years ago, the company's management introduced a business accounting system to fulfil the information gap about the financial aspects of the internal processes. Currently, the company information system provides managers with detailed data on the unit costs of business processes, which present an appreciable level of accuracy.

Although the managers seem to be confident on their knowledge about company's internal processes, they are aware of their weakness in understanding the structure of their competitive system, since the "*municipality*" way of thinking is still ingrained in the company's culture.

A preliminary qualitative SD model was built in order to involve **AMIA**'s managers to critically review the assumptions on the business competitive system and to gradually introduce the SD approach in the company context.

With this purpose, the chief financial officer – who is also currently responsible of the commercial structure – was involved in a feedback analysis, which focused on:

- services offered by the company;
- main policy levers;
- competitors.

Therefore, our main goal was demonstrating how systems thinking principles and SD could support **AMIA**'s managers in their learning process oriented to the increase of company knowledge about the structure of the new market segments the company will serve.

Through the elicitation of managers' mental models and, then, their representation into causal loop diagrams, a qualitative analysis of the system structure was carried out. The analysis was structured in two levels of aggregation:

- A general view of the whole company's system;
- A particular focus on differentiated waste collection sectors.

Some empirical findings coming from discussions with key-managers based on feedback loop diagrams are presented. In particular, since company's managers planned to use their service price as means to increase their market share, we used a casual loop diagram to analyse, in qualitative terms, how price could impact on the overall performance of the company and, hence to poin out potential side-effects linked to this lever. Some results concerning the differentiated collection of Urban Solid Waste (USW) are also presented. Basically, the SD approach allowed the chief financial officer to broaden his view about the potential policies company could adopt in this field.

Critical policy levers have been identified in:

- Price of the different services the company provides;
- Level of the service in the differentiated USW collections;
- Mix of services supplied by the company.

A qualitative analysis of the influence of such levers on the managing system has been reported and illustrated.

A feedback perspective is likely to enhance a deeper understanding on:

- Potential relationships between **AMIA**'s performances – both in financial and qualitative terms – and the market structure;
- Investment planning according to several potential scenarios;
- Price setting under different market conditions.

Based on the preliminary qualitative SD model, a quantitative model will be built and validated in order to enable **AMIA**'s key-managers to test their policies based on different possible scenarios.