Chapter XX
The Syngenta Architecture Story

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ABSTRACT

We share the experiences of an enterprise architecture (EA) practice within a young global company, Syngenta. We will see how EA within the company has evolved and matured. We will reveal our general architecture experiences, plus insights gleaned from case studies in widely differing business areas. EA nowadays aspires to cover all aspects of the enterprise—particularly business process and information. A theme that we emphasize is that architects can no longer dictate to the organization by reason of analytical/technical superiority, but need the skills to affect strategic decisions and directions by influencing. This leads to the conclusion that effective EA is as much a social activity as a technical one, where personal skills are clearly as important as analytical. In addition, we have found that considering architecture challenges through the lens of business efficiency, growth, and innovation provides a framework for a deeper understanding of the issues, constraints, inevitable trade-offs, and potential architecture solutions to particular business problems.

INTRODUCTION

We will tell the Syngenta architecture story, starting with a general introduction to Syngenta as a company, its business, and its aspirations. We will briefly review the IS organization. With this as context, we report on the evolution of our EA practice and its development to its current relatively mature state. We will highlight people, process, and technology aspects. We give particular emphasis to the softer issues such as skills, culture, and communication.

We will then consider a number of our key architecture initiatives in the form of case studies, analyzing the business problem, the architectural challenges, and the decisions taken. Through the course of this discussion, we will provide a summary of key do's and don'ts.

In addition, we consider a simple architecture framework that allows us to classify our activities and provides guidelines for further understanding.

In conclusion, we look at where we, as enterprise architects within Syngenta, would like to be heading, identifying the key EA challenges that we are facing, and pinpointing where we need academia and industry to help others and us.

The specific objectives of this chapter are:

- Share EA experiences, learning, and insights from a global company.
- Highlight the social aspects needed for successfully implementing EA in a multinational business environment.
- Discuss actual architectural experiences within a simple framework.
- Provide suggestions for areas of EA research via our experience and needs.

We hope that our wide experiences and findings will provide assistance for other companies on a similar journey.

BACKGROUND

In order to provide an overall context for the subsequent architecture discussions, we will provide a brief background to Syngenta as a company. In addition we will present an overview of the IS department, including the position of the global strategy and architecture group (the custodians of EA), the reporting line, and the information technology used within the company.

The Company

Syngenta (www.syngenta.com) is a world-leading agribusiness committed to sustainable agriculture through innovative research and technology. The company is a leader in crop protection, and ranks third in the high-value commercial seeds market. Syngenta employs some 20,000 people in more than 90 countries.

The company was founded in the year 2000 by a merger of Novartis Agribusiness and Zeneca Agrochemicals; it has its headquarters in Basel, Switzerland.

Syngenta has a substantial research and development function with some 5,000 employees working in research, technology, and development.

The company business strategy is summarized inFigure 1, which focuses on three broad major market areas—Agri, consumer-led, and new.

Another way of labeling these areas would be *efficiency, growth,* and *innovation*, terms, which we will be using later in the discussion.

The IS Organization

In order to support our 20000 end users, situated at about 420 sites world wide, Syngenta IS is organized as shown in Figure 2.

The global strategy and architecture group is part of global IS and is responsible for the development, maintenance, governance, and communication of the EA. Of the approximately 450 IS people, there are 11 full time enterprise/IS architects. It should be highlighted that the Global IS Shared Solutions is our services organization. The IS organization mirrors the Syngenta business structure.

IS change management follows a well-established lifecycle methodology that is based on a strong portfolio review process, which in turn is closely linked to the Syngenta business strategy and financial review processes.

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