5 Grid Business Models

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5.1 Introduction

A business model (BM) establishes a framework for the transformation of economic inputs (e.g. resources and technological knowhow) into economic outputs (e.g. goods and services) required by customers in a market (Chesbrough and Rosenbloom 2002). In simpler terms, a business model describes the way the business expects to make money by interacting with customers and other players in the market.

Such a model can also be thought of as a mediator between technology development and value creation. The ultimate role of the business model is to ensure that the technological core delivers value to the customer. In order to achieve this, a number of factors and functions must be analysed and specified, such as the value proposition of the new product, the target market, the potential value chain for the delivery of the product or service, an estimation of the cost-structure, and profit potential (Peterovic et al. 2001, Weill and Vitale 2001).

A well articulated BM is the foundation of the company’s business plan. The business plan serves as a decision-support tool and includes the additional level of detail that needs to be identified and proved (as well as can be prior to execution) in order for the business to attract money from potential investors. It specifies measurable goals, the reasons why they are believed to be attainable, and the plan for reaching those goals (Siegel et al. 1993, Wikipedia 2009a). It may also include background information about the company and a marketing plan. As it becomes apparent, both are to a great extent related and equally important; without a good business model, a business plan cannot be brought to effect and vice versa.

If you have developed a business model or plan, you already have a business case established as this is a prerequisite of the aforementioned. That means you have a business idea that once turned into a project (i.e. financed!) can lead your business to a profitable product or service or in other terms you have a value proposition for your customers. For example, when referring to the term “Grid business case” in this document we imply that a company has defined a project where the provisioning of a product or service and/or its value proposition is based on exploiting the benefits of Grid technology. The pathway from that idea to the realisation and sustainability of the actual project is described through a specific business plan.

The purpose of this chapter is to present an overview of the business models adopted by Grid application and services providers in the market based on a study and analysis of Grid business cases. The goal is to provide the reader with an overview of BMs from the perspective of a potential business adopter as well as of a user/customer of Grid technology. To achieve that, we briefly discuss how the Grid BMs evolved from traditional ones; we explain how a business case can be established
for Grid services; and explain the relationship to a BM and business plan. Next, we present the different business cases that can be found in the market today and link them to associated BMs. Finally, a more detailed analysis of particular cases for the market today is presented.

5.2 Setting the Scene

Grid technology promises a new way of delivering services across IP-based infrastructures. These services range from common ones, such as existing mass multimedia services, to more complex and demanding customised industrial applications. The start-up and key drivers behind the adoption of Grid by industry has been the performance advantage this technology promises to deliver, that in business and economic terms is translated into reducing costs, simplifying local infrastructure and speeding up processes. Under rapidly changing IT technologies and the pressure of highly-competitive global markets, the importance of these drivers is particularly high. Besides the aforementioned advantages, the Grid can be even considered as a “Green-IT” technology. Indeed, IT resources can be distributed over the world and be utilised dynamically and interchangeably based on climate and environmental conditions (e.g. by “chase the moon” (Berry 2007)), to minimise the energy consumption and consequently the associated costs.

The notion of Grid and its associated technological and business advantages has further evolved during recent years and the underpinning performance enabler advantage has been complemented by the collaborative benefits of this new technology. The early business models related to Grid have been based on either computing utility provisioning or on software products supported via in-house high-performance Grid facilities. The former case, i.e. the use of computing power as utility, is not a new idea; and some even argue that is actually a backwards move in terms of mainframe and terminal architecture. This approach promises to satisfy (via cost-effective means) the continuously increasing need for more computing resources and scalability by industries, not previously belonging to the IT centric domain. Despite the fact that the core idea, that computing resources should be offered in the future as a utility (like the electrical powerGrids), was broad enough to cover the single home user, this was later abandoned. Eventually, the market clearly showed that the target market should be the research institutions and Small and Medium Enterprises (SMEs), i.e. organisation that had intermittent need for high power computing resources.

The case of software services provided to customers through in-house Grid-facilities was soon demarcated as two correlated very promising business cases. First, the Application Service Provisioning (ASP) one, where a provider hosts, operates and supports applications for his clients in a Grid-powered infrastructure. The aim was to relieve them from maintenance costs and offer them scalability, agility and reliability together with high performance. The second business case was based on the provision of services according to the Software-as-a-Service (SaaS) paradigm. In this scenario, the service is hosted for the provider (which can be an SME)