The provision and delivery of a product is not sufficient alone; in addition the customers expect value adding service around the product. The delivery of value adding services imposes a strong need to create networks and various forms of collaboration to deliver integrated product-services configurations.

This chapter describes the problems encountered in industrial services and explains how Virtual Organisations in the service business can help to tackle these problems. The highlight is a special case of VO, the Service Virtual Organisation whose characteristics are analysed in detail.

1. INTRODUCTION

The European engineering industry represents a quarter of the total European Union manufacturing output and in 2001, its total EU production value was € 1208 billion. In total the industry comprises some 140,000 companies employing about 7.5 million people. The European engineering industry is highly specialised and strong in niche markets. However, the industry now operates in a highly competitive market, with smaller profit margins and changes in both internal and external customer expectations. The provision and delivery of a product is not sufficient alone; in addition the customers are expecting value adding service around the product to an increasing degree. Enterprises are concentrating on their core competence, which is another noticeable trend. Thus, the delivery of value adding services imposes a strong need to create networks and various forms of collaboration to deliver integrated product-services configurations.

In an attempt to remain competitive and to strengthen its position in the world market, the engineering industry is undergoing a transition from being the product provider into being the provider of value added services.

2. INDUSTRIAL SERVICE OFFERINGS

Usually the services are traditional and closely related to the delivered products. Industrial companies often strive for knowledge-intensive services, which usually requires deep understanding of the customer processes. Figure 1 gives examples of industrial service offerings.

Industrial services are often regarded as merely after-sales services, not dealing with the entire life cycle of the products. When looking at the life-cycle as a whole, various service types can be grouped as follows (Kalliokoski et al. 2003):
- **Basic services**: spare parts, consumables, maintenance and repair, installation and start-up, removals and re-installation, local support.
- **Advanced services**: project engineering, troubleshooting, inspections, performance guarantees, refurbishment, renewals, financing.
- **Knowledge services**: process consultancy; training, (remote) operation, simulation, securing return on investment.

Through their service offerings and operations, the enterprises position themselves differently in relation to their customers. In (Kalliokoski et al. 2003) five different supplier positions or “roles” relative to the customer are identified (list below). The first two of these roles focus the supplier’s activities on the customer’s investment decision, with limited involvement in the remaining life cycle of the delivered product. The three others extend also to the operational phase.

- **Machinery supplier**: The focus of the business relation is on delivering a piece of machinery or equipment that fits the customer’s technical specification.
- **System supplier**: The focus of the business is on delivery of a system, e.g. a production line, which is usually designed for a specific customer process and comprises a wider scope of supply than only one piece of equipment.
- **Maintenance partner**: The focus of the business expands to include also continued supplier involvement during the remaining life cycle of the delivery. This role adds contractual after-market elements, such as spares and consumables agreements, to the supplier-customer relationship.
- **Performance partner**: In this role, the supplier is closely involved in operating the customer’s technical process by taking partial responsibility for the performance of the system, e.g. through availability warranties. This role requires the supplier to maintain at least a minimum of continuous on-site presence. The focus of the customer relationship is on securing effective operation of the unit or production line.