The role of ICT infrastructure is to create the operating environment for an information system – which in turn then provides the required functionality to the system’s users. To achieve this objective, an ICT infrastructure is decomposed into several interrelated areas or sets of component parts (see figure). Each area represents a potential or necessary component of the specific ICT infrastructure that is being created and established. Each component needs to be considered and addressed in order to make sure the ICT infrastructure is able to meet the requirements of the to-be-used and operated information systems and applications.

**Infrastructure Component Solutions**

**Virtual Desktop Infrastructure** – We design and implement solutions, the primary objective of which is to unify and virtualize the client’s operating systems. Through the use of a comprehensive ‘virtual’ infrastructure, a large number of end users will have access to their own unified ‘virtual’ desktop. This virtual infrastructure makes it unnecessary to install a large-scale homogeneous hardware infrastructure. Through the use of protocols for remote access, the end user connects to their virtual desktop, where he or she can run their available applications with access to the related available data – the scope and nature of which can be easily managed and modified on the basis of the user and their assigned access roles.
Virtual Server Infrastructure – We provide secure and reliable server virtualization infrastructure solutions that are tailored to meet the needs of each client. Each solution is designed to meet both required availability needs, while at the same time making it to realize – sometimes substantial – cost savings. We offer both commercial and non-commercial options for these virtualization systems and we provide all of the services needed for the successful deployment and operation of such a virtualized infrastructure – including the related migration from a physical hardware solution.

Automated Administration – We deliver and implement tools to automate the administration of a client’s ICT infrastructure to make sure the infrastructure performs as expected without any unanticipated downtime. The setup, installation and configuration of terminal equipment becomes both faster and easier through the automation of the management of repetitive processes. In addition, this automation can significantly reduce the risk of human error.

Business and ICT Solutions – We are able to both take over and provide the ongoing management of the critical competencies of any ICT infrastructure – with a focus on the removal and fixing of any problematic situation and elements. Through our sophisticated methodologies and attention to ICT infrastructure documentation, we are always able to effectively handover the administration of any managed ICT infrastructure to a client or a designated third party. The benefit here is that the ICT infrastructure is independent of the supplier and, as such, there is no need to be concerned about any unwanted interruptions to ICT infrastructure operations and system functionality whenever changes are made.

Use of ITIL Processes for ICT Operations – Into the operations of the infrastructure, we introduce the ITIL (Information Technology Infrastructure Library) process methodology, which includes powerful tools for the systematic management of the ICT areas of the business. This is done through clearly defined roles, assigned and entrusted tasks and responsibilities. The use of the ITIL process methodology is supported by certain related software tools. The comprehensive systematic nature of the ITIL methodology makes it possible to continuously monitor the progress and performance of tasks along with their evaluation. In this way, ICT processes can be more effectively managed, planned and developed.

Configuration Management System (CMS) – To further support the effectiveness of our management of a client’s ICT infrastructure, we make use of a CMS. The CMS is based on the ITIL process methodology and it is used to set up and maintain system records in order to always have available a comprehensive overview of the functioning of the ICT infrastructure. At the same time, it supports the optimization of the available technologies, while minimizing and effectively controlling costs. A CMS makes it possible for clients to create and manage links between various ICT services, technological components and business processes and it is a single unified (or consolidated) source of data for other needs, analyses and planning.

System and Data Migration – We take care of any needs for large-scale and all-inclusive transfers of entire functional systems and data, including the often inevitable migration across different architectures. Our basic focus here is to make sure the migration is both fast and reliable and to make sure the subsequent configuration of the transferred data is easily accessible. This means putting the new system back into service in the shortest possible period of time.

Data Centre Consolidation – Based on a careful analysis of existing conditions, we design both an effective solution for the consolidation of data centres and a solution, which will facilitate the use of data from multiple data sources. This consolidation of data centres increases the portability, transferability and availability of data. The benefits include both easier data access and reduced operating and investment costs associated with the client’s having to operate and invest into a multiplicity of continually changing and developing technologies and their maintenance. The consolidation of data centres significantly accelerates and streamlines the operation of any ICT infrastructure.

Data Storage, Back-Up and Archiving Systems – We provide clients with backup solutions, which are essential for the protection of their valuable data. We arrange for the backing up of all relevant systems, both virtual and physical servers and individual software components (databases and mail servers). We make sure all sensitive and important data is properly and securely archived and, at the same time, that it is also fully trackable and available to users.

End User Devices and Platforms

Bring Your Own Device (BYOD) – BYOD is a modern approach to the introduction of new technologies into the workplace and it is an approach that we encourage our clients to take maximum advantage of using. Basically, BYOD is built around allowing employees to use their own terminal (smart) devices for certain workplace tasks and activities. We do this by permitting certain employees to access corporate data and software through their own devices. In providing such access, we make sure all necessary security protocols remain in place to keep control over sensitive data, important applications and processes.

Supply of PCs and Workstations – We are able to provide our clients with a comprehensive range of personal computers and workstations along with the required installation of the software necessary for the equipment to be put to use into routine workplace operations. The specific configuration of all such computers and workstations is based on the specific needs and requirements of the client. Together with the manufacturers, we provide a high level of required technical support and assistance in problem resolution.
Notebooks, Tablets and “Smart” Devices – We supply a full range of mobile devices – such as laptops, tablets and smart phones. All supplied equipment includes the required operational setup, installation and configuration associated with the use of the equipment for the company’s operations. In selecting the best equipment for a client’s identified needs, we emphasize ease-of-use and long-term reliability.

Data Networks

Design and Implementation of Wired Networks – In the area of network infrastructure, we specialize in the supply and installation of active network elements (switches, firewalls, routers, security gateways, etc.), as well as the installation of complete cable network systems. We design and install the cable network and supply the components (based on high reliability). Our professional network installation team takes care of both the installation itself as well as the configuration and commissioning of the network.

Design and Implementation of Wireless Networks – We design and install a wide variety of different types of wireless networks. These range in size from smaller networks for single offices up to much larger Wi-Fi networks for use in large industrial buildings. All of our wireless networks make use of the right components for the specific installation. Again, our emphasis is on long-term performance and reliability. Our professional network installation team takes care of both the installation itself as well as the commissioning of the network. This includes paying particular attention to the security of the wireless network.

Voice over Internet Protocol (VoIP) – We supply the phones and PBXs needed for a VoIP system. Our delivery includes all the required operational set up and commissioning.

Server Infrastructure

Database Systems and Middleware – Databases form the basis of most information systems and they are a necessary part of the installation and operation of many other types of software application products. We deliver and deploy database platforms from a number of different leading manufacturers. Upon installation, we are available to make sure all such systems operate at an optimal level. We also provide integration tools for the interconnection of different information systems and diverse data sources from within the enterprise.

Application and Web Servers – Servers are a basic operational component of information systems – including both the presentation layers and business logic layers. For a specific information system, we recommend the best application platform for the particular need (including both Java and .NET platforms). We take care of all related server deployment, debugging and operation. We supply many different types of application servers from a wide range of the world’s best known major manufacturers, many of whom are our long-term business partners.

Physical Servers and Storage Devices – We deliver server solutions for all types of applications, from servers designed for use by smaller businesses and offices to the largest, most comprehensive units designed to deliver high availability. We offer blade, rack and tower products from the world’s leading manufacturers. Along with the respective category of servers, we supply the related type(s) of storage devices – Direct Attached Storage (DAS), Network Attached Storage (NAS) and Storage Area Network (SAN).

The goal of ICT infrastructure is to create an environment for the operation of information systems, which then provide the required functions to users.
Data Centres

Design and Supply of Data Centre Equipment – We design functional solutions for data centres using quality components from leading manufacturers. We also take on the full responsibility for the proper installation of such equipment. In the design and implementation of such data centre equipment, we take into account the specific needs of the client, as well as the ever-increasing requirements for security. All of our mounting racks supplied have their own backup power supplies and required cooling and fire suppression systems.

Access Systems – For our clients, we are able to supply and put into operation all-inclusive electronic access systems, which are designed to monitor and record all parties’ access to both open corporate systems and applications as well as those that are specially restricted. With the sophisticated and interconnected structure of our access system, all access to the server room is monitored and recorded and it is possible to arbitrarily control the access rights of individual persons. Such access control systems are a modern and effective way of protecting buildings and plant operations.

Uninterruptible Power Supply (UPS) – One of the most important elements of a server installation is to make sure the servers and related network infrastructure components are protected with some type of backup power source. This is often referred to as an “uninterruptible power supply” (UPS). There are a number of different ways in which this can be accomplished. However, the basic goal – whenever there is a prolonged power outage – is to at least assure a safe shutdown of servers and other equipment in order to prevent the loss or corruption of data.

Closed Circuit Television (CCTV) – We supply comprehensive camera monitoring systems to protect client property and facilities. These closed circuit cameras are an ideal way to monitor and supervise access to facilities and operations. The information from these cameras can be sent to 24/7 live monitoring along with the option to have all such information archived to data storage.