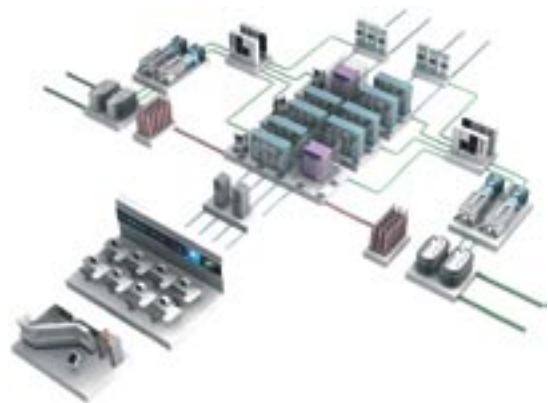# SCHUBERG PHILIS

As your organizations reliance on IT increases, the pressure for performance and availability raises. But do you have the right physical environment and 24x7 service coverage to cope with the increased demands?

Outsourcing of services within a purpose-built data center makes sound business sense, particularly in volatile times, whether due to market uncertainty or rapid growth. Anything other than the core business is an overhead that could potentially be obtained as a service at a predictable cost. It is invariably more cost effective than providing the service in-house, although cost is only one of numerous benefits of an outsourcing decision.

Why use a data center?

The majority of corporate data centers are housed within relatively expensive office space in city locations, not designed for housing computer equipment. When the data room is built, many costly compromises are made due to physical restrictions or landlord regulations. Apart from that, valuable office space on A-class office locations is sacrificed to computer systems.

The economies of scale reached in purpose-built data centers with regards to space, power-cost and network connectivity provide huge cost-, quality- and flexibility benefits compared to an in-house data room facility.

As your organization grows so do the mission critical resources it requires. When a new data room or more space is required it can be a difficult issue to resolve due to limited space and conflicting demands. Our data center measures 30,000 square feet (2800 m²), providing ample space for current and future requirements. Moreover, we can reserve contiguous space — racks, cages and even complete rooms — for future needs.

Likewise, for a company that needs to scale down due to economic slowdown, the use of data center services ensures that it has the flexibility to do so.

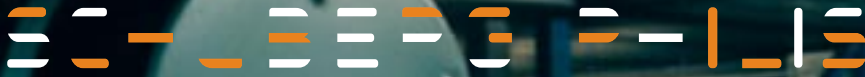In summary, the benefits of using purpose-built data center space are:
• flexibility in the amount of space used
• instant availability
• cost savings and minimized capital investment
• purpose-built environment, no compromises
• superior internet and telecom facilities
• superior physical security

Schuberg Philis

Star Parc, Boeing Avenue 271
1119 PD Schiphol-Rijk
The Netherlands
T +31 20 750 65 00
F +31 20 750 65 50
E info@schubergphilis.com
www.schubergphilis.com

SCHUBERG PHILIS
MISSION CRITICAL OUTSOURCING

Schuberg Philis Data Center Service

Schuberg Philis' data center in Schiphol-Rijk (Amsterdam) is among the best data centers in Europe. The whole building was specifically designed to create an optimal environment to house computer equipment. The facility is specified to the highest standards and based on many years of data center experience. All components are selected for their best-of-breed industry quality.

The center is monitored and controlled by the BMS (Building Management System), which manages the data center's power, humidity, temperature and fire suppression system. Schuberg Philis' technicians are alerted to any potential problems or actual changes in the environment.

Physical security is addressed as well. We offer the most comprehensive procedures and systems available, including extensive CCTV and 7x24 on-site security guards.
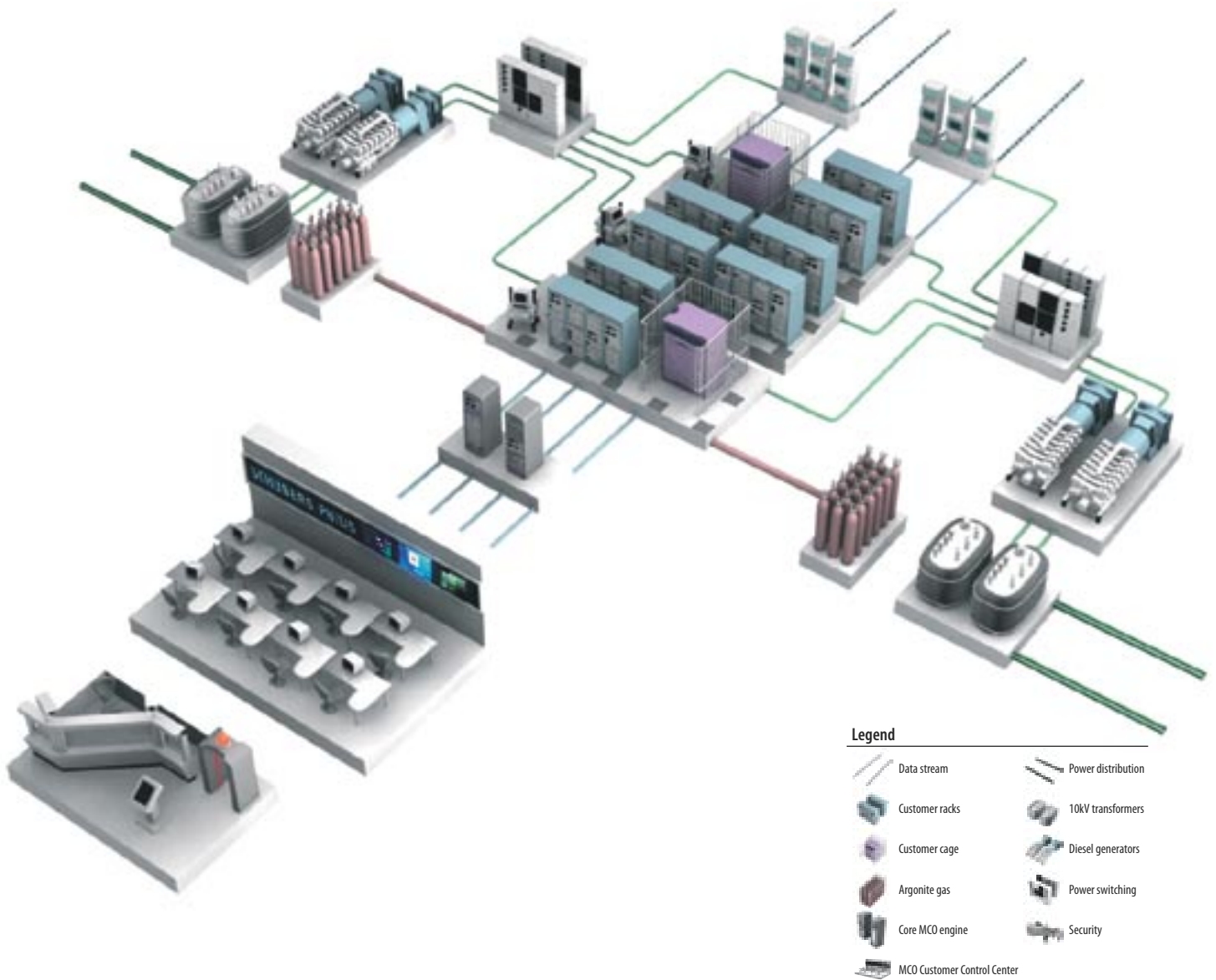
Our data center services include:

• Provisioning of secured, carrier-grade and scalable space for equipment, 2800 m2 in total
• Provisioning of scalable and reliable access to the telecommunications and internet infrastructure
• Provisioning of physical and network security
• Professional monitoring and alerting for all critical systems

In addition, in line with Schuberg Philis' core focus, as our customer you can take one step further and fully rely on us to manage your mission critical application infrastructure, including network, security, servers, storage, operating systems, databases and middleware applications. The Mission Critical Outsourcing Platform (MCO-Platform™) relieves our customers from the need to be involved in infrastructure-and technical application management, so that they can fully focus on the functional part of their IT environment.

About Schuberg Philis

Schuberg Philis is a privately owned highly flexible IT company, with dedicated customer teams that design and watch over infrastructures tailored to meet companies' unique needs.

Schuberg Philis manages many companies' mission critical application infrastructures, guaranteeing 100% uptime through a unique way of working.

Data Center Specifications

Area	The usable area of the data center measures 2800m^2 (30,000 square feet).
Physical Security	The AboveNet data center is guarded 24 x 7 by security guards patrolling the building, monitoring the CCTV and other security related systems. The CCTV system records all movements in the data center using more than 140 motion activated camera units. The entrance to the center is guarded by a security guard, day and night, working from a bullet-proof loge. Customers are on an access list and picture identification is required to be granted access to the building. Access to rooms within the data center is monitored and controlled by a badge reading system.
Power Facilities	The data center has redundant private high voltage connections to the nearest power distribution station with a total maximum capacity of six MegaWatt. To provide continuous and clean power to the systems running in the data center, four Hitec® Continues Power Systems (CPS) are installed, one of which is dedicated as a reserve backup to support any of the other three CPS units. A CPS unit consists of an electric motor, electric generator and a 16-cylinder Mitsubishi diesel engine with an inductive flywheel. This flywheel is continuously spinning to 'clean' the power from spikes and dips and to ensure that no phase or amplitude discontinuities occur if the power provided by the electricity company fails. A 30.000 liter underground diesel storage tank guarantees that if the electricity company's service fails we can run undisturbed for over 3 days. The power for all computer rooms is provided by a Busbar® system. AboveNet guarantees 2300 watts per rack through dedicated 10 Amp circuits utilize wiring with independent neutral feeds and dual fed Critical Load Distribution boards. This is more than sufficient for normal server and network equipment. Of course, additional power can be allocated if required.
Fire Protection	In the data rooms a VESDA (Very Early Smoke Detection Alarm) system detects all airborne particles passing through the laser chamber and samples air every 5 seconds providing early alerting of fire threat. Fire suppression in all data rooms is provided by an Argonite® fire suppression system. Argonite extinguishes fire by physically removing oxygen from the atmosphere to a level where in a closed space almost all fires are extinguished in 30 to 45 seconds. The main advantage of Argonite extinguishing is that it is not harmful to computer equipment as it is clean, odorless, non-toxic, non-corrosive and electricity non-conductive.
Ventilation and Airconditioning	Cooling is provided by six roof-mounted Liebert-Hiross Super Chillers which provide chilled water to the ACU's (air conditioning units) in all equipment rooms. Each room has it's ACU's divided into 2 groups, each group is fed by a different Super Chiller and separate power supply. The amount of ACU's in each room is almost triple the amount needed to cool the environment. Temperatures are maintained constant in every equipment room at 20°Celsius and humidity is kept at 50%.

Telecom and Internet Connectivity	AboveNet
	The Data Center itself hosts the Dutch central node of the AboveNet Tier-1 global IP network, providing high-quality IP connectivity. The AboveNet network provides unsurpassed Internet performance (measured by bandwidth, latency and packet-loss), due to the fact that it is based solely on fiber links with high-end backbone routers. No Tier-1 network provider has better real-life performance which is caused by the unique amount of peering connections that AboveNet has installed, resulting in very efficient routing. All Internet connections are based on 100 Mbps Fast Ethernet or Gigabit Ethernet and can use the full bandwidth; no limiting traffic shaping is in place.
	AMSIX
	As for AMSIX connectivity, the center has readily commercially available redundant private fiber connections to AMS-IX (Amsterdam Internet Exchange, where all relevant Internet network providers are connected). Multiple providers offer connectivity to the AMSIX sites (SARA, NIKHEF, TeleCity and Global Switch) ranging from 10 Mbps till 10 Gbps or dark fiber.
	NL-IX
	The AboveNet datacenter hosts the NL-IX network node (Dutch National Internet Exchange, where local ISP's and content parties can interconnect). AboveNet datacenter customers can easily connect to the NL-IX and peer with lots of Dutch ISP's and content players.
	Carriers present
	Apart from the AboveNet network the following commercial network providers have presence in the AboveNet datacenter: • KPN • Priority Telecom • Versatel • Global Voice Networks • Colt • Interoute • @home

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