

# DATACENTER RHEIN-NECKAR®



**HIGHEST STANDARDS  
FOR DATA SECURITY**

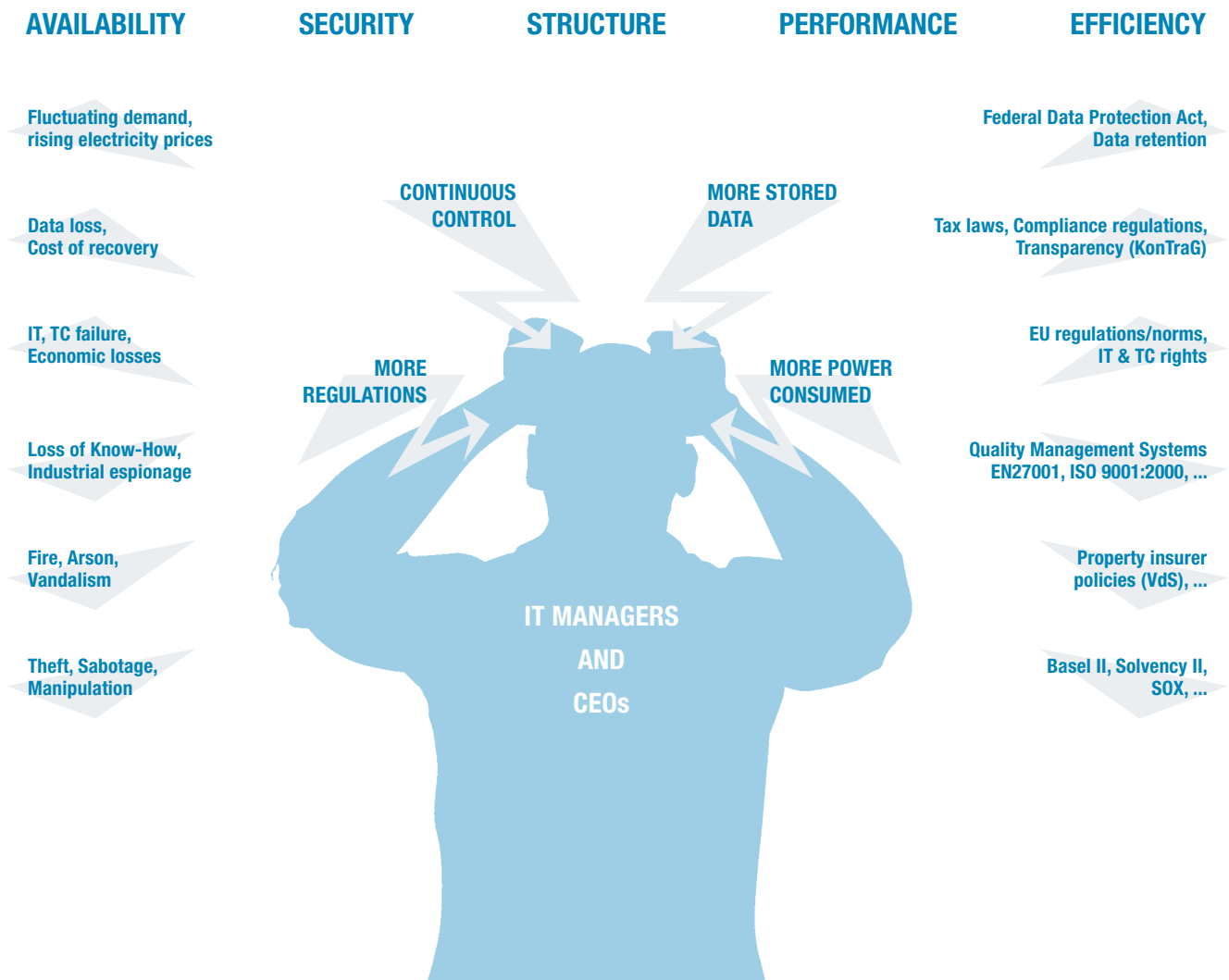


**PFALZKOM | MANET**  
ZUKUNFT VERBINDET

## The problem:

Today data is the primary asset of many companies and government agencies

Today decision makers are confronted with these requirements and issues on a daily basis. Data has to be protected; however, the factors influencing IT security are constantly changing. The protection is subject to many norms, standards, and regulatory statutes that you can read about in our supplements.



- Are my originals and my back-ups in the same room?
- What if my IT infrastructure fails – how much will it cost me?
- What happens if my business data is destroyed – or falls into the wrong hands?
- My own computer center? – Isn't it wiser to invest in my core business?
- How much space and which equipment do I need for a safe and future oriented IT?
- Is my disaster recovery plan adequate?
- Risk management – Am I liable? What about natural hazards?
- How can I manage my IT processes and compliance issues better?
- My bank rating – will a more secure IT also increase my creditworthiness?
- How can I decrease my IT operating costs, e.g., electricity?
- Am I really aware of my IT-environment?

## THE DATACENTER RHEIN-NECKAR®



The TÜV/tekit-certified DATACENTER Rhein-Neckar® located in Mutterstadt, is one of the most modern, energy efficient and high security computing centres in Germany. It provides both security and power for your IT – all at a nearby location. Moreover, we provide the RHEIN-NECKAR-CLOUD, which is one of the first cloud platforms in the region.

Besides being a cost effective option for you, it also offers an enormous safety factor. The combination of our Cloud Computing and Online Storage services gives you an attractive IT-Outsourcing option that can accompany you safely into the future.

### YOUR ADVANTAGES AT A GLANCE

- Located in the metropolitan Rhein-Neckar region
- Outside the flood zone
- Only 5 minutes away from the freeway – with on-site parking
- 24/7 dedicated access control and video surveillance (interior and exterior)
- Expand your IT security with no investment (combinatorial site)
- Power supplied directly from transformer station (European grid)
- Direct integration in PFALZKOM | MANET Backbone
- Redundancy (all relevant systems redundant to the n+1 principle)
- Two separate fire compartments
- 2011: TÜV/tekit High Availability Level III
- TÜV Süd DIN ISO 9001:2009 & ISO/IEC 27001:2005
- RHEIN-NECKAR-CLOUD: regional cloud platform ensures cost effectiveness and security



ISO 9001:2009

ISO 27001:2005

READ THIS BRIEF OVERVIEW OF THE MAJOR COMPONENTS OF THE DATACENTER. A STATE OF THE ART TECHNOLOGY INSURES EFFICIENT AND ABOVE ALL SECURE MANAGEMENT OF YOUR BUSINESS ASSETS.

## SERVER ROOM



**1** In its final construction stage, the DATACENTER Rhein-Neckar will provide two separate, self-sufficient server rooms, each with 350 sqm TIER III protection classification. The server rooms are continuously monitored by video and security surveillance. Overall, the computer center can accommodate 300 server cabinets (racks). The power consumption per rack is a standard 2 kW and can be increased, as required. The use of so called cooling racks (water cooled racks) is optional as is the use of cages (private suites). All cables have a redundant layout. The high security rooms are optimally supplied and protected against damages from water, fire, and burglaries. 2011 TÜV/tekit High Availability Level III and 2012 TÜV-DIN-ISO-27001 certified.



### **2 DOUBLE FLOORS**

The approx. 1 m false floor design insures optimal air circulation to the server racks. Furthermore, the floor panels in front of the server racks are designed with air vents and have a high load carrying capacity.

### **INSTALLATION SYSTEM/CABLE CONDUCTS**

The entire power supply to the computing center runs under the double floors and over the cable support system in the ceilings. The data cables run through the ceilings to the individual server racks through a lattice design. All wiring is accomplished with a redundant layout.

## POWER INPUT

### **3 TRANSPORTATION ROOMS (MSP)**

The DATACENTER Rhein-Neckar is supplied with power from existing transformer stations of PFALZWERKE AKTIENGESELLSCHAFT by two medium voltage inputs. The power supply is implemented with a fully redundant design. The power input takes place through a multiple secure connection from two different voltage levels (110 kV and 220 kV), connected directly to the European grid system. Two transformers reduce the 20 kV medium voltage down to a 400 V low voltage, each with a nominal output of 2500 kVA.



### **4 BACKUP POWER SUPPLY**

When completed, the two backup power systems will supply a total of 2800 kVA. The diesel generators supply enough electricity to power all systems after just a few seconds. A tank storage unit with a 20,000 liter capacity insures the system can remain operational over a long period of time.



### **5 BATTERY ROOM (USP = UNINTERRUPTED SUPPLY OF POWER)**

In the event of a national power grid outage, system and servers are supplied by a USP buffer unit, which bridges the startup time required for the diesel generators. The batteries are configured with n+1 redundancy and an output of 3 x 400 kVA, expandable to an x 400 kVA.

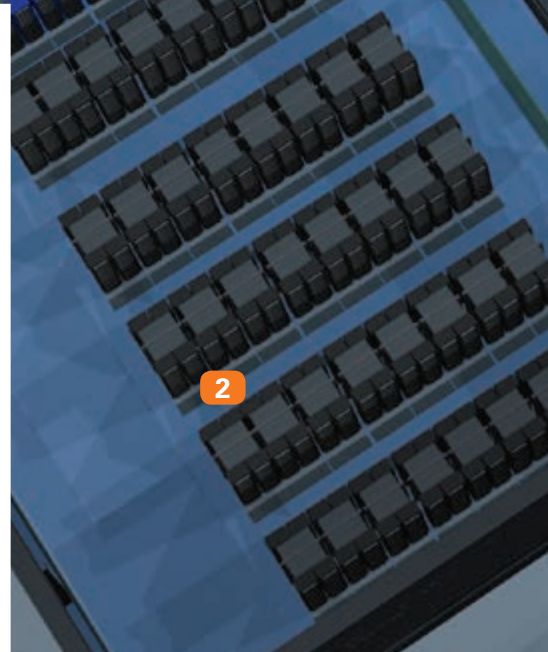


### **6 MAIN LOW VOLTAGE DISTRIBUTIONS (NSHV)**

The low voltage distribution unit is located in a separate fire lobby (compartment). Digital universal measuring devices with a data interface for remote readings are used to monitor the grid.

## WE PRESENT: THE MODULAR HIGH-AVAILABILITY DATA CENTER FOR OUR REGION – DATACENTER RHEIN-NECKAR®

- 1 SERVER ROOM
- 2 DOUBLE FLOORS
- 3 TRANSFORMER ROOMS (MSP)
- 4 BACKUP POWER SUPPLY
- 5 BATTERY ROOM (USP)
- 6 MAIN LOW VOLTAGE DISTRIBUTIONS (NSHV)
- 7 IT CONFIGURATION ROOM
- 8 RECEIVING DOCK
- 9 TELECOMMUNICATIONS ROOM
- 10 COLD WATER UNITS



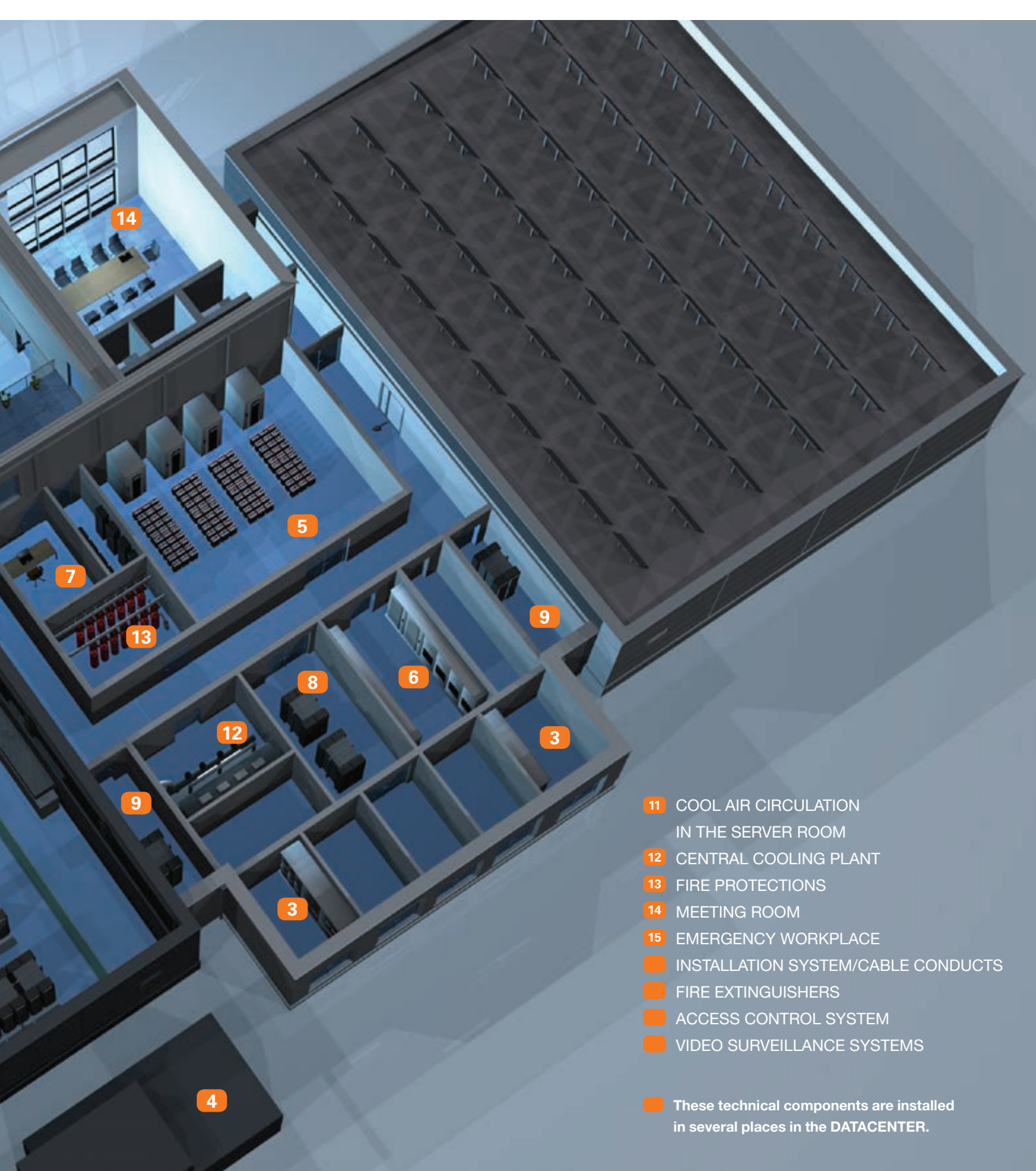
### SERVICE

#### 7 IT CONFIGURATION ROOM

This is where systems are prepared and inspected prior to installation in the server racks. In addition, this room is available for major repairs to the systems.

#### 8 RECEIVING DOCK

The secure receiving dock provides easy access for the delivery of the server racks and other materials. The dock is subject to a dedicated control access.



- 11 COOL AIR CIRCULATION IN THE SERVER ROOM
- 12 CENTRAL COOLING PLANT
- 13 FIRE PROTECTIONS
- 14 MEETING ROOM
- 15 EMERGENCY WORKPLACE
- 3 INSTALLATION SYSTEM/CABLE CONDUCTS
- 7 FIRE EXTINGUISHERS
- 9 ACCESS CONTROL SYSTEM
- 9 VIDEO SURVEILLANCE SYSTEMS

These technical components are installed in several places in the DATACENTER.

## TELECOMMUNICATIONS

### 9 TELECOMMUNICATIONS ROOMS

The NGN/WDM connection, the backbone of the PFALZKOM | MANET grid, takes place in separate telecommunications rooms. Multiple independent LWL house lead-ins insure a redundant network. There is also an optional network coupling to all major carriers as well as redundant lines to the data hubs in Frankfurt and Karlsruhe.



## CLIMATE AND TEMPERATURE CONTROL SYSTEMS

Our air conditioning systems use the latest energy saving technologies and rely on the concept of indirect air cooling. The cooler outside air is used to cool the computing centre, although it is not introduced directly. Additionally, solar panels are installed on the flat roof.



### 10 COLD WATER UNITS

A hybrid cooling unit located on the roof in n+1 configuration insures cool return temperatures – 2 x 780 kW, when complete, the total will be 3 units à 780 kW. The cold water supply is self-sufficient by means of a cold water unit with supplemental cooling registers to benefit from the indirect outside air in the winter and the cooler transition months.

### 11 COOL AIR CIRCULATION IN THE SERVER ROOMS

Cooling of the server racks is achieved with the cold/warm air flow principle. Each server room has up to 8 climate control devices with a total of 850 kW for optimal temperature control:

- The mode of operation is achieved through air circulation. The blower openings lead down into the false floor and the warm air exhaust fan is in the ceiling.
- There are no conduits in the server room because the cooling effect is achieved by a free intake of cool air which then circulates around and cools the equipment in the room.



### 12 CENTRAL COOLING PLANT

The central cooling plant controls the cool air intake through a piping system, which guarantees a requirement based cooling of the neural nodes such as the server and USP rooms. The facility is also equipped with a cold air accumulator.

## SAFETY SYSTEMS

All IT and technical rooms are built as separate fire lobbies having a uniform F90 grade. All room enveloping components are built using non-combustible building materials and no PVC parts are used.

### ■ FIRE PROTECTION

Installation conduits and pipe lines as well as the wiring running through the fire lobby walls or ceilings are sealed using authorized fire protection systems and partitioned to the same F90 quality as the walls, flooring, and ceilings. All wall passages for the air intake are equipped with automatic fire protection flaps, which close when there's an emergency.

## ALARM SYSTEM

All operational reports are monitored and controlled. This consists of a reporting system that stores all fault reports such as:

- **USP and climate control as well as all ambient conditions in the server rooms**
- **Network interruptions**
- **Backup power systems**
- **Water leakage**
- **Break-ins and access control systems (VDS certified)**
- **Fire alarm system**
- **Room air quality and smoke detection**

### 13 FIRE EXTINGUISHERS

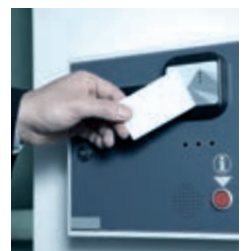
A central fire extinguisher system protects 3 discharge areas, server rooms, and USP room. The extinguishing medium is Novec™ 1230. The following additional requirements are also respected:

- VDS approved loss prevention
- Highly friendly to the environment
- No potential ozone destruction (ODP = 0)
- GWP value = 1 (global warming potential)
- Rapid effectiveness in case of level A and B fires and in electrical systems
- Safe to use, even in areas occupied by people
- Non-corrosive and non-conductive
- Non-residue discharge medium
- Approved medium for fire protection levels A and B



### ■ ACCESS CONTROL SYSTEM

The DATACENTER Rhein-Neckar® is equipped with an access control system and a VDS certified intrusion detection system. The graduated access control is managed using electronic ID-card scanners and all access is documented.



### ■ VIDEO SURVEILLANCE SYSTEMS

To enhance building security, an additional video system is installed to complement the intrusion detection alarm system. Networked cameras are installed for both interior and exterior security for the building. In the outside areas, surveillance is achieved by dual cameras with two separate image sensors for day and night operations. The security of the foyer and the receiving dock is achieved with dual-dome cameras.



## HOW TO FIND US

### Directions:

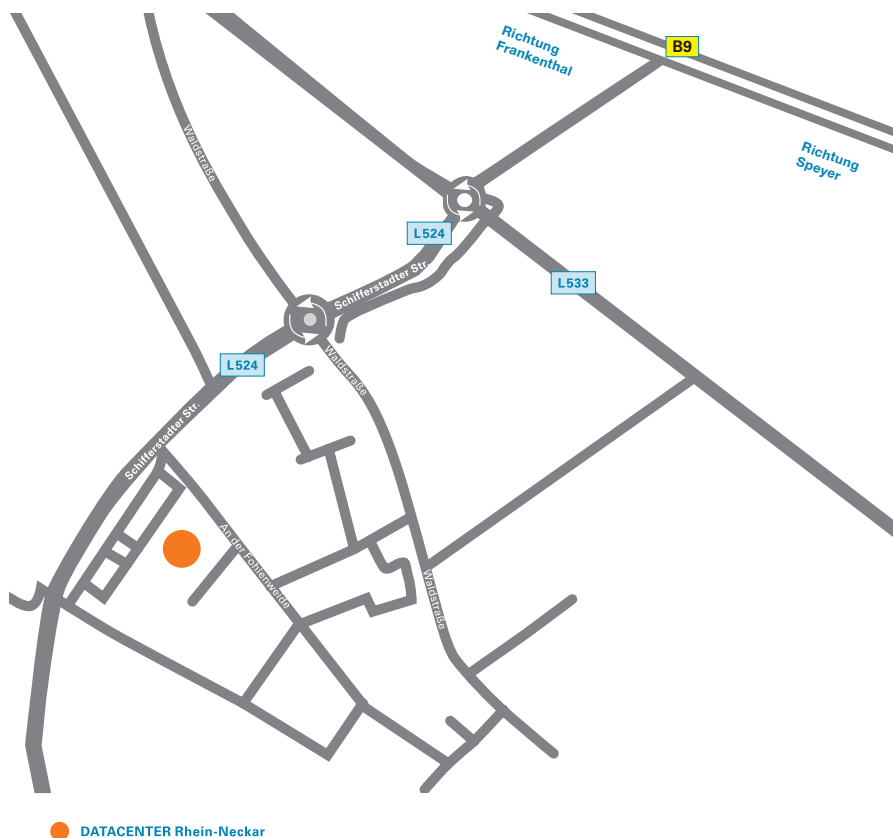
From highway B9, take the „Mutterstadt-Süd“ exit. At the first traffic roundabout, take the second exit and follow the road until you come to another traffic roundabout. Again take the second exit. Stay on that road for approximately 200 meters, then take a left turn into Mutterstadt’s industrial zone.

### DATACENTER Rhein-Neckar

An der Fohlenweide 2  
67112 Mutterstadt

### Parking available:

Directly on the premises, there are several spaces available.



● DATACENTER Rhein-Neckar

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