

Tunnelkom

We are digitalizing Your Construction Site

Welcome!

欢迎!





1. Our Team

| | |
|---------------------------|--------------------------------|
| Peter Schmidt | (CEO) |
| Jens Moll | (CEO) |
| Andreas Ratzke | (Project Manager) |
| Sven Moll | (Head of Production) |
| Jörg Keul | (IT-Support) |
| Monika Goll | (Team Assistance) |
| Corinna Schöllkopf | (Production Assistance) |



2. Our Location

Kuhnbergstraße 23

D-73037 Goepfingen / Voralb

Germany

Phone: 07161 / 65319-0

Email: info@tunnelkom.de





3. Our Portfolio

Tunnel Communication and Safety Technology

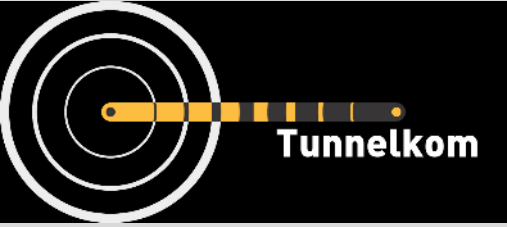
- Design of a customized Communication- and Safety Concept for the Construction Stage
- Support for the Creation of Your Tunnel Safety Concept, IT Security Plan etc.
- Sales and Installation of the entire Tunnel Communication Equipment
 - 70cm Radio, 2/4m Radio, Tetra Radio, Analog Radio, GSM, WIFI, Fixed Phones etc.
- Sales and Installation of the Safety Equipment
 - Tracking and Locating of People, Vehicles etc., Alerting (Sirens, Flashing Lights), Fire Detection, Air Flow Control etc.
- Customized Plant Control
 - Gates and Barriers, Fire Stops, Pumps and Ventilation Control etc.
- CCTV
- Phone System (PBX)



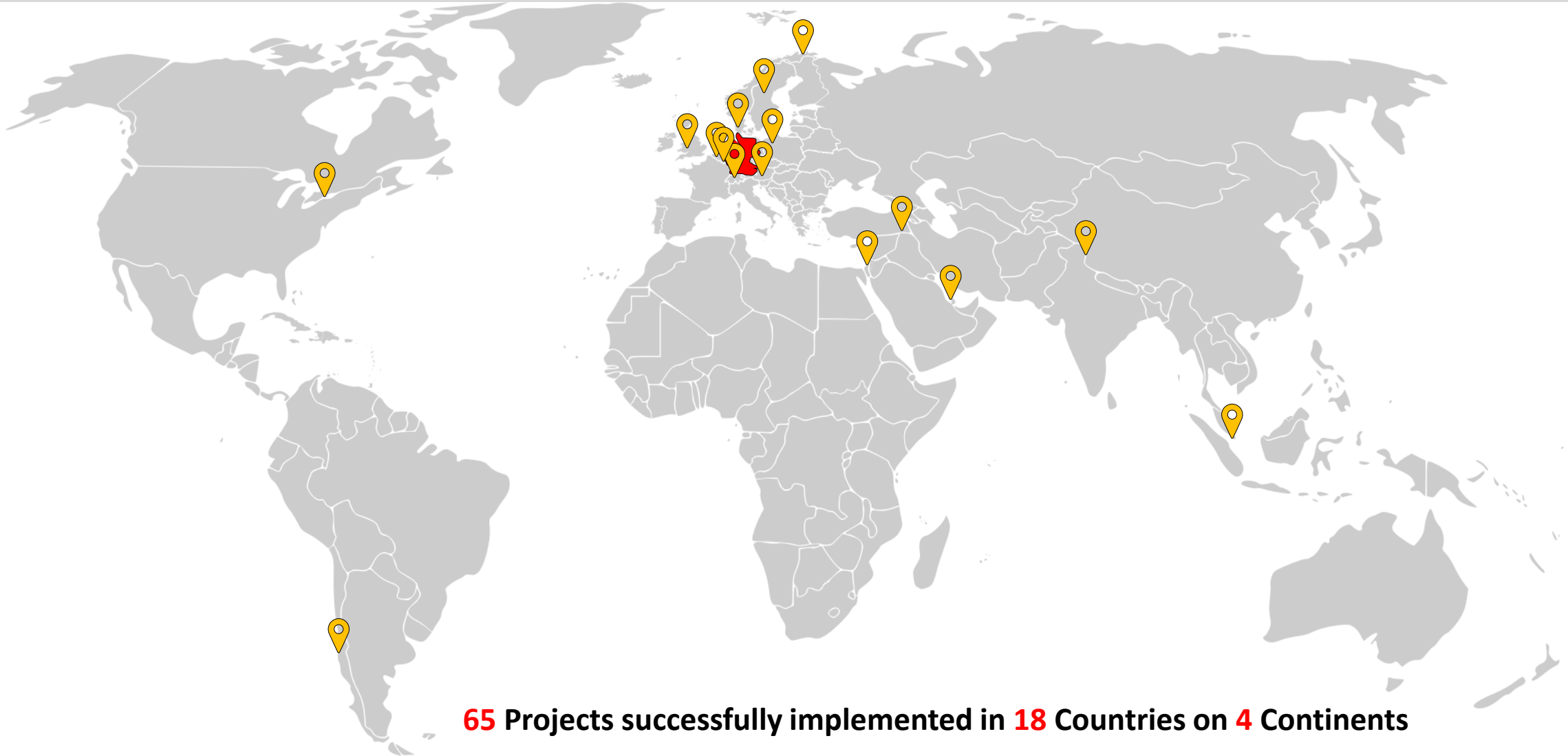
3. Our Portfolio

IT Infrastructure

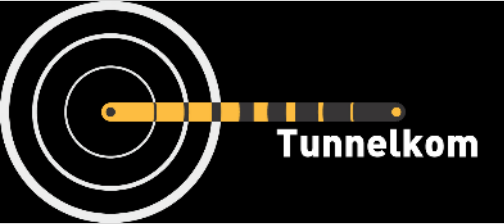
- Design of the IT-Infrastructure for Your Construction Projects - worldwide
- Analysis of your Construction Processes and Support for the Digitalizing of them
- Mediation of suitable, construction-related Software
- Customization / Development / Further Development of construction related Software for your Needs together with our Software Partners
- Configuration of Microsoft Office 365 Environments incl. Customization based on your Needs
- Automation of your Email der project-related Emails
- Flexible IT-Support in case of need (Remote or Onsite)
















4. Our Projects

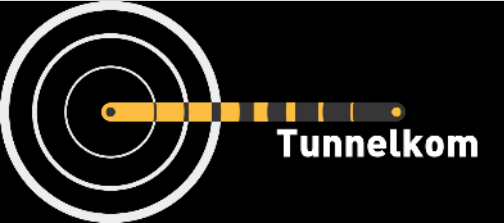


65 Projects successfully implemented in **18** Countries on **4** Continents






















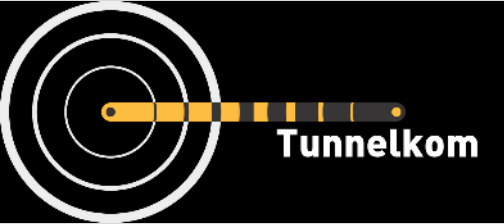
4. Our Projects

| | | | | | |
|--|---|--|---|--|---|
| Project  | JV Tunnel Blessberg Sued/Nord | Project  | PSK Vianden, Luxembourg | Project  | Exploration Tunnel Kramertunnel |
| Services | Site Area and Tunnel Infrastructure, DECT, 70cm Radio, Alerting, IT-Equipment, Phone System (PBX) | Services | Site Area and Tunnel Infrastructure, 70cm Radio, Alerting, Phone System (PBX) | Services | 70cm Radio, GSM |
| Project  | JV Tunnel Schwaebisch Gmuend | Project  | Soedermalmstunnel, Stockholm | Project  | Tunnel Fleckberg |
| Services | Site Area and Tunnel Infrastructure, DECT, 70cm Radio, Alerting, IT-Equipment, Phone System (PBX) | Services | Site Area and Tunnel Infrastructure, Feste Telephone, Phone System (PBX) | Services | 70cm Radio, GSM |
| Project  | Tunnel Rehberg and Masserberg | Project  | Ayalon Sewage Tunnel Tel-Aviv | Project  | Buehltunnel Siegen |
| Services | Site Area and Tunnel Infrastructure, DECT, 70cm Radio, Alerting, IT-Equipment, Phone System (PBX) | Services | Site Area Infrastructure, IT-Equipment, Phone System (PBX) | Services | Site Area and Tunnel Infrastructure, GSM, 70cm Radio, Alerting, IT-Equipment, Phone System (PBX) |
| Project  | JV U4 Hafencity, Hamburg | Project  | JV Tunnel Reitersberg | Project  | Branichtunnel Schriesheim |
| Services | Site Area and Tunnel Infrastructure, DECT, 70cm Radio, Alerting | Services | 70cm Radio | Services | Site Area and Tunnel Infrastructure, GSM, 70cm Radio, Alerting, People Tracking, IT-Equipment, Phone System (PBX) |
| Project  | Branch Office Ankara/HEPP Ilisu | Project  | Rohtang Pass Highway Tunnel | Project  | SEC Toronto |
| Services | IT-Equipment, Phone System (PBX) | Services | Application-Server | Services | Phone System (PBX) |
| Project  | JV SATURN X, Metro Amsterdam | Project  | Tunnel Rennberg/Feuerfelsen | Project  | U12 Stadtbahn Stuttgart |
| Services | Site Area and Tunnel Infrastructure, DECT | Services | 70cm Radio | Services | Site Area and Tunnel Infrastructure, GSM, 70cm Radio, Alerting, People Tracking, IT-Equipment, Phone System (PBX) |
| | | Project  | JV Tunnel Hohnberg/Füllbach | | |
| | | Services | Site Area and Tunnel Infrastructure, DECT, 70cm Radio, Alerting, Phone System (PBX) | | |






















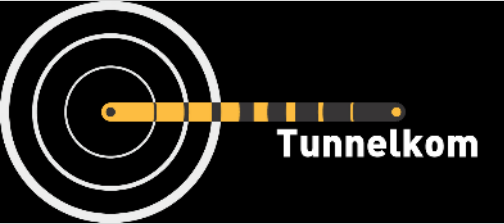
4. Our Projects

| | | | | | |
|--|--|--|--|--|--|
| Project  | JV ATCOST21 Fildertunnel, UT-Tunnel | Project  | Koralmtunnel KAT3 | Project  | JV Tunnel Rastatt |
| Services | Site Area and Tunnel Infrastructure, GSM, 70cm Radio, Alerting, People Tracking, IT-Equipment, Phone System (PBX), Video | Services | 70cm Radio, GSM, People Tracking | Services | Site Area and Tunnel Infrastructure, GSM, 70cm Radio, Alerting, People Tracking, Phone System (PBX), Video |
| Project  | JV Tunnel Feuerbach | Project  | JV Bypass Schwarzkopftunnel | Project  | Tunnel Imberg |
| Services | Site Area and Tunnel Infrastructure, GSM, 70cm Radio, Alerting, People Tracking, IT-Equipment, Phone System (PBX), Video | Services | Site Area and Tunnel Infrastructure, GSM, 70cm Radio, Alerting, Phone System (PBX) | Services | Site Area Infrastructure |
| Project  | JV ATA Tunnel Alaufstieg | Project  | JV Tunnel Hirschhagen | Project  | Gemeinschaftskraftwerk Inn (GKI) |
| Services | Site Area and Tunnel Infrastructure, GSM, 70cm Radio, Alerting, People Tracking, IT-Equipment, Phone System (PBX) | Services | Site Area and Tunnel Infrastructure, GSM, 70cm Radio, Alerting, People Tracking, Phone System (PBX) | Services | Site Area and Tunnel Infrastructure, GSM, 70cm Radio, Alerting, People Tracking, Phone System (PBX) |
| Project  | Kaunertal TVM Druckwasserstollen | Project  | JV Tunnel Alabstieg Ulm | Project  | Tunnel Nordnes Samuelsberg |
| Services | 70cm Radio, GSM | Services | Site Area and Tunnel Infrastructure, GSM, 70cm Radio, Alerting, People Tracking, IT-Equipment, Phone System (PBX), Video | Services | GSM, People Tracking |
| Project  | S10 Neumarkt Mühlviertl | Project  | Großglockner DWS Bärenwerke | Project  | MetNord Copenhagen – Cityringen |
| Services | GSM | Services | 70cm Radio, GSM | Services | Site Area and Tunnel Infrastructure, GSM, Tetra-Radio, Alerting, People Tracking, Phone System (PBX) |
| Project  | JV ATC Tunnel Cannstatt | Project  | Lehnenstollen Scheibbs | Project  | JV Tunnel Trimberg |
| Services | Site Area and Tunnel Infrastructure, GSM, 70cm Radio, Alerting, People Tracking, Phone System (PBX), Video | Services | GSM | Services | Site Area and Tunnel Infrastructure, Alerting, People Tracking, Phone System (PBX) |
| | | Project  | JV Tunnel Rosenstein | | |
| | | Services | Site Area and Tunnel Infrastructure, GSM, 70cm Radio, Alerting, People Tracking, Phone System (PBX) | | |



4. Our Projects

| | | | | | |
|--|---|--|---|--|---|
| Project  | JV BL 60.3/60.5 St. Kanzian | Project  | Humber Pipeline Tunnel Project | Project  | Baltic Pipe Project, Polen & Dänemark |
| Services | GSM, 70cm Radio, People Tracking | Services | Tunnel Infrastructure, WLAN, IP-Radio, Alerting | Services | Site Area and Tunnel Infrastructure, WLAN, IP-Radio, Alerting, People Tracking, Phone System (PBX) |
| Project  | Neuer Pforzheimer Tunnel | Project  | DTSS2 T-07, Sewer Tunnel Singapore | Project  | Tunnel U5 Europaviertel Frankfurt |
| Services | Site Area and Tunnel Infrastructure, GSM, 70cm Radio, People Tracking, Phone System (PBX) | Services | Site Area and Tunnel Infrastructure, WLAN, IP-Radio, Alerting, People Tracking, Phone System (PBX) | Services | Site Area and Tunnel Infrastructure, Tetra, WLAN, IP-Radio, People Tracking, Phone System (PBX) |
| Project  | Tunnel Oberau | Project  | JV Tunnel Wolframstrasse | Project  | JV Erneuerung Kuckuckslyatunnel |
| Services | Site Area and Tunnel Infrastructure, GSM, 70cm Radio, People Tracking, Phone System (PBX) | Services | Site Area Infrastructure, IT-Equipment | Services | Site Area Infrastructure, Phone System (PBX) |
| Project  | Perjentunnel, Landeck | Project  | Nordstream 2 Pipeline Project | Project  | York Potash |
| Services | GSM, Radio, People Tracking | Services | Site Area and Tunnel Infrastructure, WLAN, IP-Radio, Alerting, People Tracking, Phone System (PBX) | Services | Site Area and Tunnel Infrastructure, WLAN, IP-Radio, Alerting, People Tracking, Phone System (PBX), Video |
| Project  | Tunnel Scharnitz | Project  | Mesaimeer Pump Station a. Outfall Tunnel, Doha | Project  | Alto Maipo |
| Services | GSM | Services | Tunnel Infrastructure, WLAN, IP-Radio, People Tracking, Phone System (PBX), Video | Services | Tunnel Infrastructure, WLAN, IP-Radio, Alerting, People Tracking, Phone System (PBX) |
| Project  | Sanierung Gräberntunnel | Project  | JV ATH, VE10 2. Stammstrecke München | Project  | JV A26 Danube Bridge Linz |
| Services | Phone System (PBX) | Services | Site Area and Tunnel Infrastructure, WLAN, IP-Radio, Alerting, People Tracking, Phone System (PBX), Video | Services | Site Area and Tunnel Infrastructure, GSM, WLAN, Alerting, People Tracking, Phone System (PBX) |
| | | Project  | JV Flughafentunnel Stuttgart | | |
| | | Services | Site Area and Tunnel Infrastructure, WLAN, 70cm Radio, Alerting, People Tracking, Phone System (PBX), Video | | |



4. Our Projects

| | | | | | |
|--|--|--|---|--|--|
| Project  | Restructuring Engelbergtunnel | Project  | BTO Stuttgart 21 | Project  | Große Wendlinger Kurve |
| Services | Site Area Infrastructure, Phone System (PBX) | Services | Site Area and Tunnel Infrastructure, WLAN, Alerting, People Tracking, Phone System (PBX), Video | Services | Tunnel Infrastructure, WLAN, Alerting, People Tracking, Phone System (PBX) |
| Project  | Tunnel Swinemünde | Project  | Aubergtunnel | Project  | U5 Hamburg Lot 1 |
| Services | Site Area and Tunnel Infrastructure, WLAN, IP-Radio, Alerting, People Tracking, Phone System (PBX) | Services | Site Area Infrastructure, Phone System (PBX) | Services | Site IT-Infrastructure |
| Project  | Lövstakken Tunnel | Project  | Tunnel Ostelsheim | Project  | Tunnel Rastatt – Slab Track System |
| Services | People Tracking | Services | 70cm Radio, Tunnel Infrastructure, WLAN, Alerting, People Tracking | Services | Tunnel Infrastructure, WLAN, Alerting, People Tracking, Phone System (PBX) |
| Project  | Tunnel Boyneburg | Project  | GWK Ibbenbueren | Project  | U5 Hamburg Lot 2 |
| Services | Tunnel Infrastructure, WLAN, Alerting, People Tracking, Phone System (PBX) | Services | Site Infrastructure, Tunnel Infrastructure, WLAN, Alerting, People Tracking | Services | Site IT-Infrastructure |
| Project  | AP2 Toronto | Project  | Tunnel Maintenance S-Bahn Stuttgart | | |
| Services | Site Area and Tunnel Infrastructure, WLAN, IP-Radio, People Tracking | Services | Alerting, People Tracking | | |
| Project  | Kandersteg Restructuring Lötschberg | Project  | Tunnel Maintenance Elleringhauser Tunnel | | |
| Services | People Tracking | Services | Alerting, People Tracking | | |
| | | Project  | Coire Glass Exploratory Works | | |
| | | Services | Tunnel Infrastructure, WLAN, Alerting, People Tracking, Phone System (PBX) | | |

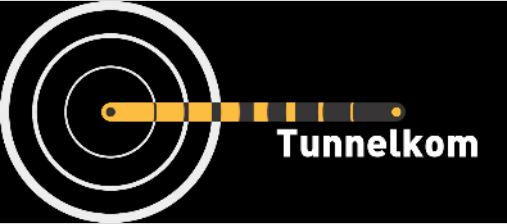
5. Tunnel Communication and Safety Technology

Sales and Installation of the entire Tunnel Communication Equipment

70cm Radio, 2/4m Radio, Tetra Radio, Analog Radio, GSM, WIFI, Fixed Phones etc.

- Based on many years' experience we can offer you any kind of Communication Technology
- Consulting for Choosing the right Communication Technology and Equipment
- Installation onsite worldwide





5. Tunnel Communication and Safety Technology

Sales and Installation of the Safety Equipment

People Tracking and Monitoring of the onsite IT-Equipment

- Use of Bluetooth-TAGs for People and Vehicle Tracking
- Customized Visualisation based on the Needs of the Construction Site




Customized Bluetooth / RFID-Bluetooth Combi-TAGs based on Your Requirements:

- Price
- Battery Life
- Additional Features (Push Button)

5. Tunnel Communication and Safety Technology

Sales and Installation of the Safety Equipment

Alerting (Sirens, Flashing Lights)

- Modular equipped Tunnel Units (self-build)
- Customization to the Requirements from the Rescue and Safety Concept

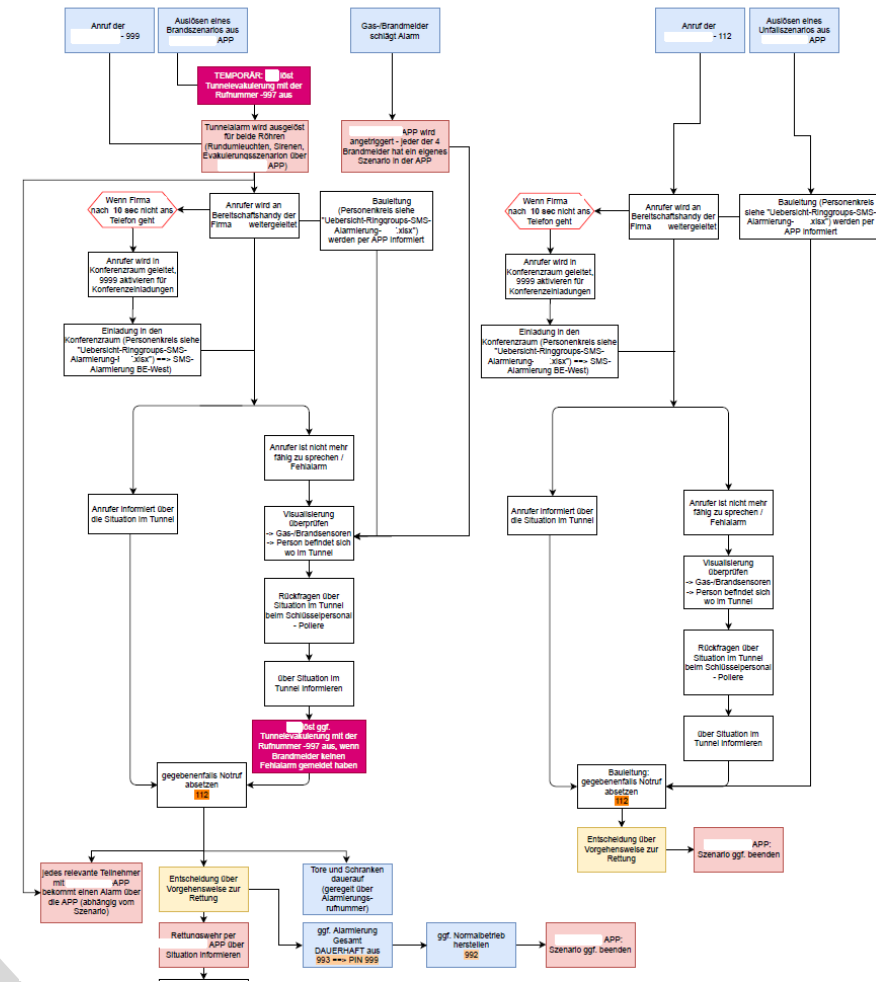


5. Tunnel Communication and Safety Technology

Sales and Installation of the Safety Equipment Alerting (Sirens, Flashing Lights)

- Central managed Tunnel Alerting via Sirens and Flashing Lights as well as via Smartphone APP
- Implementation of complex Alerting Scenarios with our Alerting and Automation Software TACOS
- Visualisation of Tunnel Alerts incl. Tracing of the Person / Sensor who announced the Alarm
- Integration of local Rescue Forces into all Scenarios

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5. Tunnel Communication and Safety Technology

Sales and Installation of the Safety Equipment

Customized Plant Control

- Control of Gates and Barriers, Fire Stops, Pumps and Tunnel Fans etc.
- Customization of the TBM Control Cabin (Visualisation of Cameras, Integration of Phones, Analysis of Sensor Alerts etc.)



5. Tunnel Communication and Safety Technology

Sales and Installation of the Safety Equipment

Integration of Third-party Systems

- **Fire Alarm System**
 - Integration of the Fire Alarm System “MOBS” of Company Heim (Interface to TACOS available)
 - Wireless Fire Detectors flexible utilisable
 - Transmission of Alerts to TACOS
 - Reset of Alerts of the Fire Alarm System



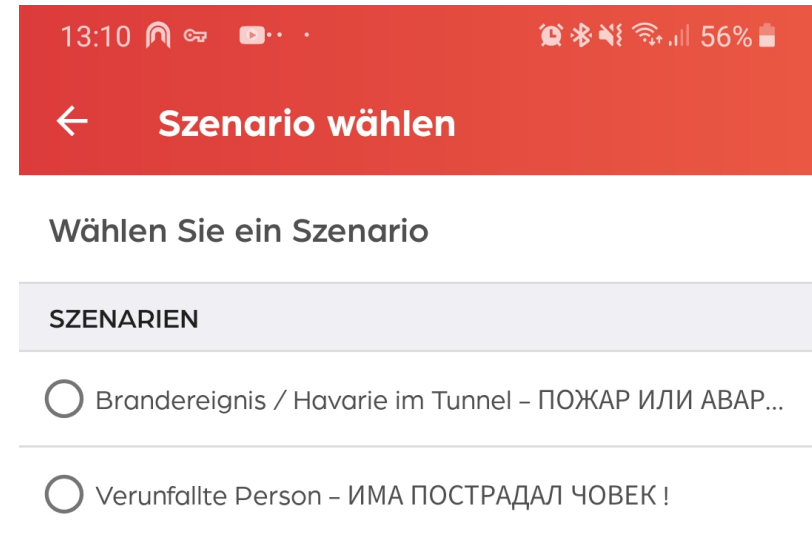
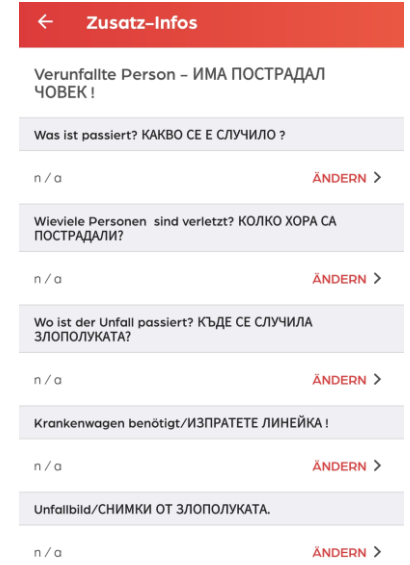


5. Tunnel Communication and Safety Technology

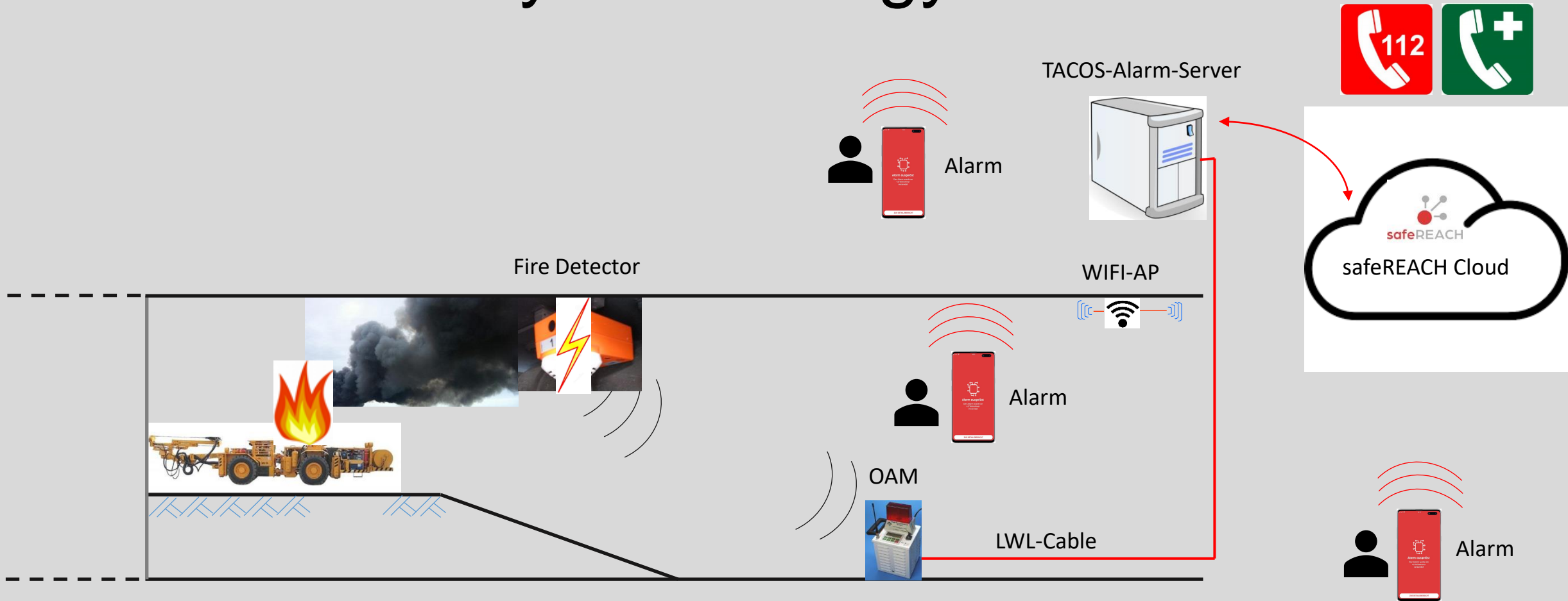
Sales and Installation of the Safety Equipment

Alerting via Smartphone APP

- Use of “SafeReach” APP for Alerting in the Tunnel
- Interface to TACOS available – Exchange of Alerts
- Multilingual Alert Workflows
- iOS and Android APP



5. Tunnel Communication and Safety Technology

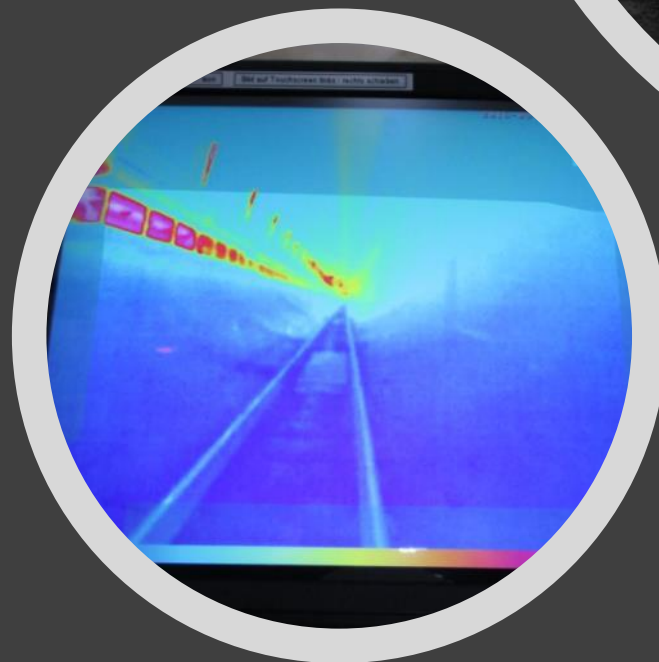


5. Tunnel Communication and Safety Technology

Sales and Installation of the Safety Equipment

CCTV

- IP-Cameras from Mobotix
- Cameras with Dual- and Single-Lens, as well as Thermal Sensor Cameras available
- Easy Integration into the IP-Network of the Construction Site
- Cost free Control Room Software
- Alerting and Event-based control via Cameras possible
- TACOS Interface
- Central or decentral Recording of Videos and Pictures possible



5. Tunnel Communication and Safety Technology

TkImageProcessor – Face Blurring

- In-House Development
- Various Sources possible (Cameras, manual Selection of Pictures etc.)
- Individual Choice of Picture Sources for Face Blurring
- Automatic Upload to Client-Platforms etc.
- Delayed Upload of Pictures in Case of Need



5. Tunnel Communication and Safety Technology

Sales and Installation of the Safety Equipment

Central Control Centre

- Installation and Configuration of a Central Control Centre
- Video Wall
- Event-based Camera Views

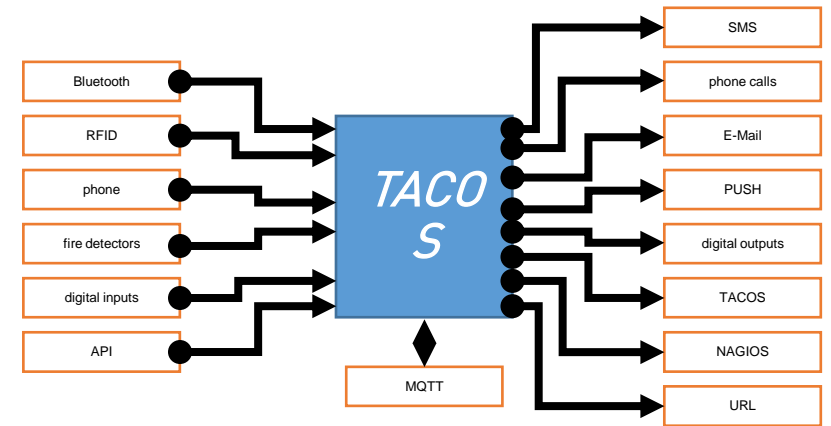


5. Tunnel Communication and Safety Technology

TACOS ... **T**unnel **A**larm and **C**ontrol
(**C**ommunication) **S**ystem

TACOS is an in-house developed Software Solution, based for:

- People Tracking and Localization
- Entrance Control
- Alerting and Messaging
- Rule-based Actions and Events
- Interface to other Systems
 - e.g. IoT-Interface



5. Tunnel Communication and Safety Technology

Radio over IP (VOIP) - Radios

ICOM „Advanced Radio System“

- Communication via the Standard WIFI-Network of the Construction Site
- Central Management and Configuration
- Unlimited User-Groups and “Channels” (Talk Groups)
- Full-Duplex
- Status and Short Message Service
- Communication with Mobile Phones possible
- Network Coverage based on the Quality of the WIFI-Network on the Construction Site
- Interface to TACOS available (People Tracking)





5. Tunnel Communication and Safety Technology

Voice over IP (VOIP) – Phone Systems (PBX)

- Asterisk-based IP Phone Systems
- Running Virtualized on Standard-Hardware or in the Cloud
- No license fees
- No User-Limits
- highly flexible utilisable



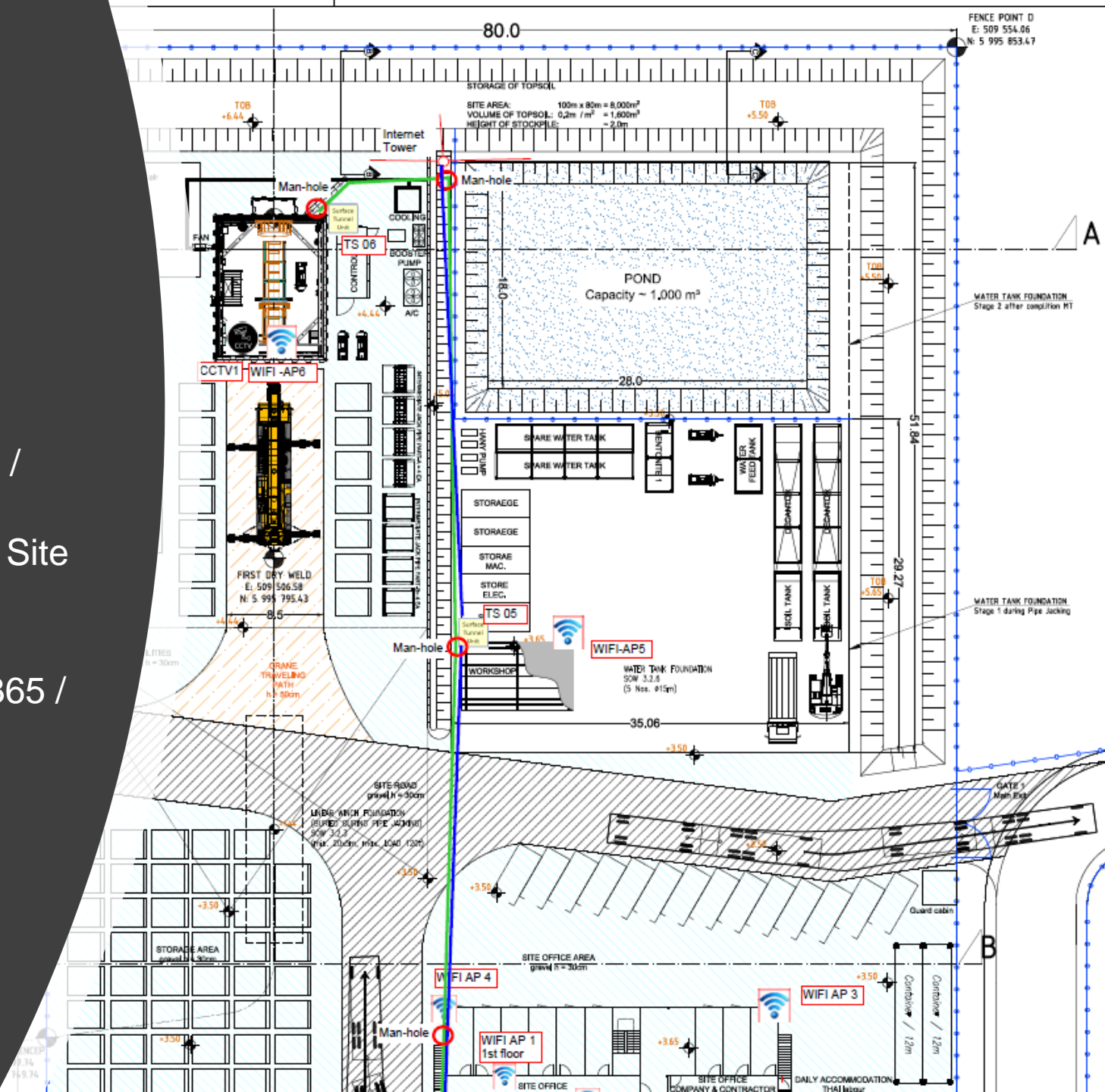
5. Tunnel Communication and Safety Technology

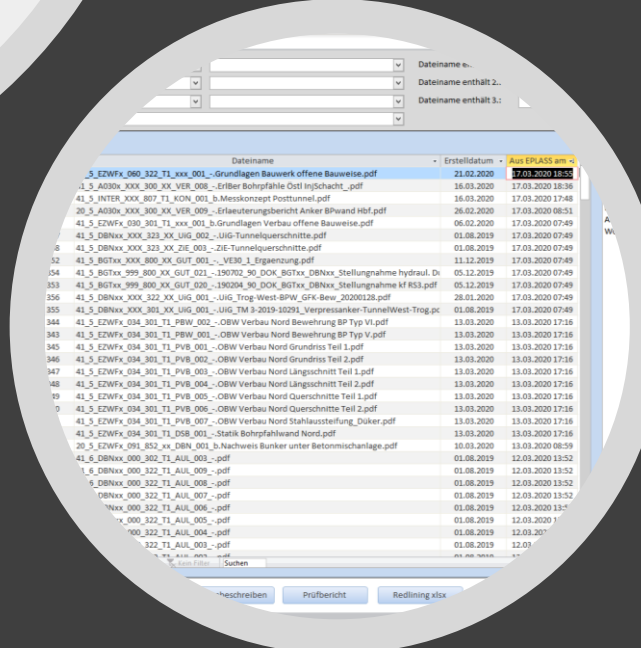
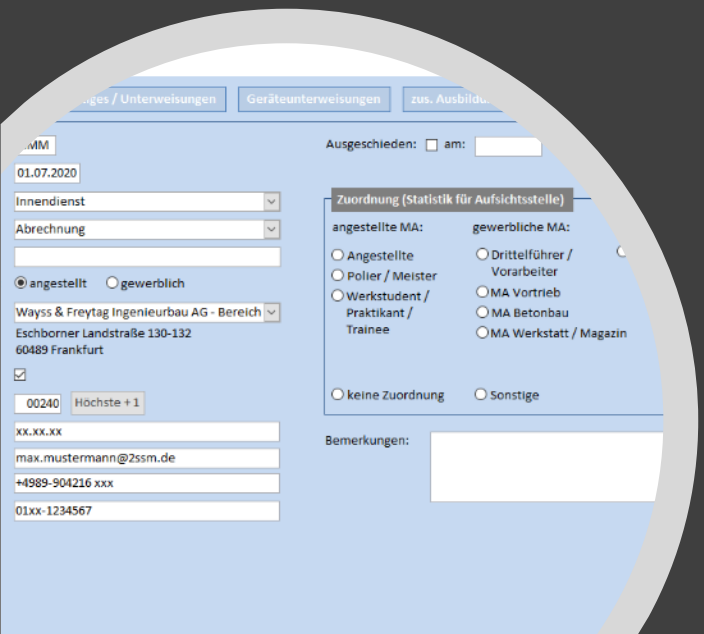
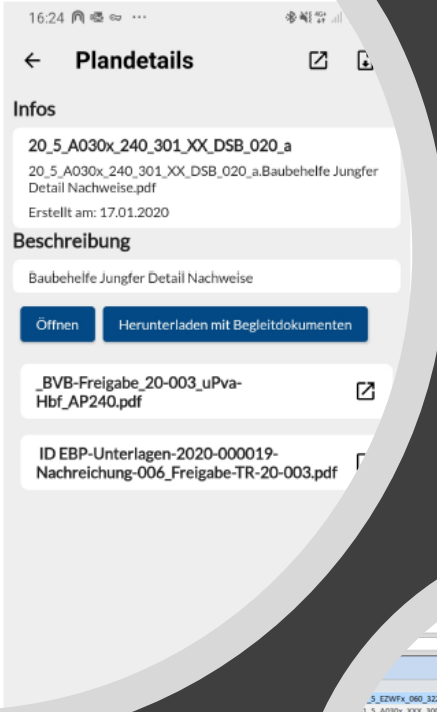
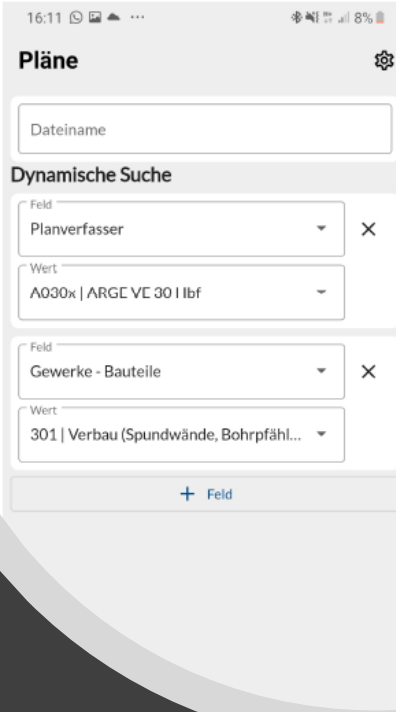
Network-Infrastructure

- IP-Network everywhere (Site Area, Offices, Tunnel, Other Buildings)
- ONE (IP-) Network for All
- Connections via Copper, Fibre, Radio Link, WIFI, VPN
- Network Virtualisation (VLANs)
- Professional, Controller-based, Wireless Lan (WIFI) Systems

6. IT Infrastructure

- Design of the IT-Infrastructure for Your Construction Site
 - Joint Design of the Site Area IT-Infrastructure
 - Cabling Design for the Office Containers / Barracks
 - WIFI Installation in the Office and on the Site Area
 - Internet and Communication Concept
 - Server and Cloud-Infrastructure (Office 365 / local Servers etc.)
 - Site IT-Equipment or „Bring in your Company Device“
 - Remote Access (Connection from Home office / Head Office)
 - IT-Safety Concept



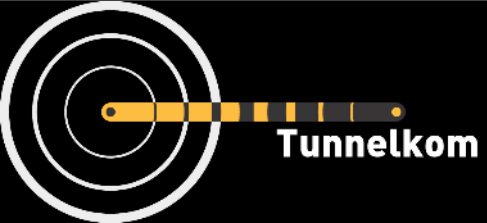


6. IT Infrastructure

Mediation of suitable, construction-related Software

Based on many years' experience with Major Projects we are well versed in construction-related Software

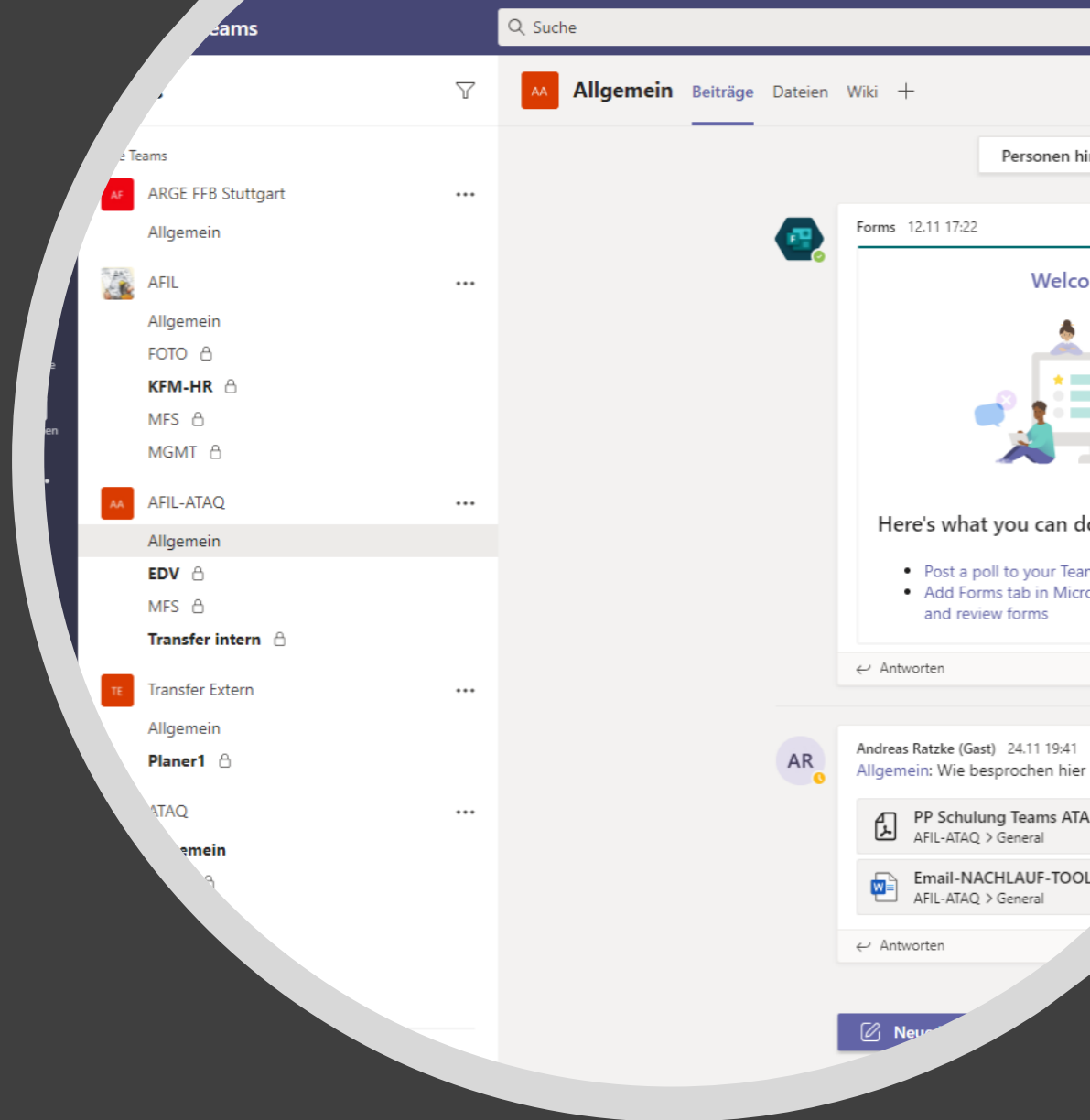
- We are closely linked with many Software Developers and can mediate their Products to You.
- Together with our Software Partners we can customize / develop / further develop the construction-related Software. Therefore, we are analysing your Needs and take care for the further development until the introduction on Your Construction Site



6. IT Infrastructure

Configuration of Microsoft Office 365 Environments incl. Customization based on your Needs

- Configuration of Your customized O365 Environment (Tenant, Licensing, Teams)
- Joint Structuring of Your Project
- Hybrid-Solutions (O365 and Fileserver)
- User Management
- Introduction and Training



6. IT Infrastructure

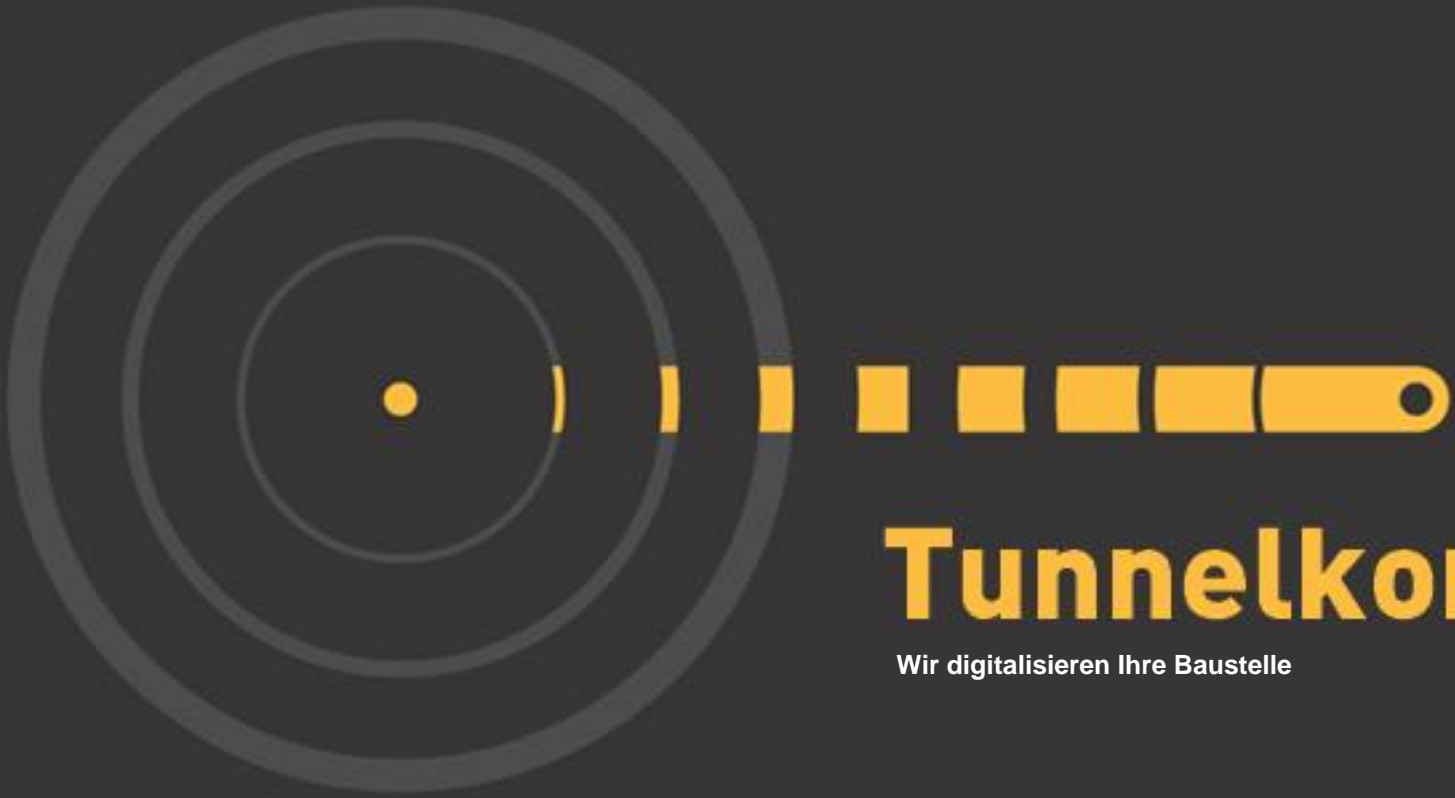
- **Automation of your Email der project-related Emails**
 - Fully Automatic Filing of Emails out of Shared Inboxes and Personal Email Inboxes in Outlook
 - Pre-structuring of Emails based on the Email-Domain
 - Structured Filing of Emails based on central managed Filing Standards
 - Multi-Filing based on Email Addressing
 - File Naming based on QM-Standards
 - Doublette Checks
 - AI-based Creation of an Overall Address list
 - In-house development – Integration into each O365-Environment



6. IT Infrastructure

- **Flexible IT-Support in case of need (Remote and onsite)**
 - Provision of IT-Supports for Your Construction Site (Remote or Onsite)
 - Staff with Site Experiences
 - Flexible Offsetting





Tunnelkom

Wir digitalisieren Ihre Baustelle

**Many thanks for your
attention!**

非常感谢您的关注！