

FRAUNHOFER INSTITUTE FOR TRANSPORTATION AND INFRASTRUCTURE SYSTEMS IVI





Fraunhofer Institute for Transportation and Infrastructure Systems IVI

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OPERATIONAL COMMAND ACROSS ALL LEVELS

The MobiKat[®] technology provides effective support for complex operational and strategic decisions in hazard prevention.

MobiKat[®] was developed in close cooperation with end users. The modularly designed system integrates highly efficient calculation and optimization algorithms, user-friendly control and visualization modules as well as database components. The system has been applied in everyday use for several years, supporting the management of large-scale disasters. The technologies are constantly being enhanced and developed.

MobiKat[®] can be applied flexibly in many application areas. The freely configurable system is used as a planning aid in administration, civil protection agencies and fire departments as well as in operativetactical areas on mobile command vehicles, control rooms and mobile devices. Furthermore, fuctionality modules can be provided for other existing operational command and disaster management systems.

Operational planning and command

- Integration of various data sources (hydrants, critical infrastructure objects, flood areas)
- Completely offline-capable, can run from USB stick
- Real-time data: positioning of staff and resources, current water levels and prognoses, traffic data
- Integrated documentation (digital operation diary, video)
- Decision support for process optimization in planning and operational command (e. g. calculation of long distances fire hoses and water pumping)



Common operational picture

- Continuous command for all levels
- Connected operational command with automated information aggregation (currently under preparation)
- Consideration of roles and authorizations
- Specialized task assignments and administration
- Summary views for units, personnel and harms
- Tageted administration of resources and individual staff management
- Suitable for the use in situations of various dimensions (local, area-wide) and for securing large-scale events
- Integration of specially developed camera modules
- Interfaces with other IT systems

Master data portal

- Simple administration of data on local level
- Master data incl. vehicles, equipment and level of training
- Data administration on site via Internet, immediate availability for higher levels
- Preparation of fire department statistics
- Data transfer to integrated control rooms possible

User groups

- Fire and civil protection offices
- Fire departments
- Responsible bodies of emergency services
- Relief organizations and THW (Federal Agency for Technical Relief)
- Command and control centers (fire departments and emergency services)
- Operational managers, incident coordinators
- Command vehicles
- Operations managers (mobile devices, tablet PCs)
- Staff in charge of training responders and command staff

Selected application areas

- Planning of fire safety requirements
- Planning of rescue service zones
- Object-related and event-related planning and optimization of operations
- Disaster management flood, extreme weather situations
- Firefighting
- Planning of large-scale operations
- Hazard and risk analysis
- External emergency planning
- Operational planning and optimization
- Evacuation planning
- Decision support in command and control rooms
- Mass-casualty incidents

Application in practice

MobiKat[®] successfully passed its »baptism of fire« during the 2006 flood of the river Elbe. Since then, the technology has been regularly applied in practice:

- Floods 2011, 2013
- Dresden city festival, Tag der Sachsen (anually since 2011)
- German Evangelical Church Assembly and women's soccer world cup 2011
- German Unity Day 2016

MobiKat[®] has been applied permanently, both in stationary use as well as in mobile use on tablet PCs. Emergency command and control rooms use MobiKat[®] every day.

The system has also proven itself useful in large-scale operations such as hospital relocations and firefighting trainings.

MobiKat[®] is used for the planning of fire safety requirements and rescue service zones, for instance in the Sächsische Schweiz-Osterzgebirge and Meißen districts as well as in the state capital Dresden.

In addition, optimized operational strategies and measures for hazard prevention and emergency response plans can be developed with MobiKat[®].

> Exchange between different points of application.
> Entering master data in the web portal.