# RESQmatic®

**IMAGINE DIGIT**

# THE FORWARD-LOOKING SOLUTION IN FIRE PROTECTION

**THE CORRECT INFORMATION**

**AT THE RIGHT TIME**

**IN THE RIGHT PLACE**

COOPERATION PARTNERS

CS | acer

# INHALT

**IMAGINE DIGIT**

**Imagine Digit**
The Hamburg start-up, founded in 2019, develops and sells digitization concepts.

A special focus is on the area of digital security systems. The innovative fire protection solution RESQ.matic® establishes the systematic connection between an information system and a dynamic wayfinding system. The added value lies in the safer and more flexible use of buildings.

**imagine-digit.com**

# THE FUTURE
# OF FIRE PROTECTION
## THE SOLUTION

**RESQ**matic®

Fire protection is an essential and integral part of buildings planning. An optimal fire protection solution helps save lives and facilitates effective fire fighting. Clearly visible information about what to do and where to go in the event of a fire – including signage displaying the nearest escape routes – are key components. Currently, however, these typically remain totally static.

**Dynamic escape route marking**
**RESQ**matic® offers a completely new, digital approach to fire protection. **RESQ**matic® is a dynamic information and guidance system for human rescue for use in buildings. The system calculates the shortest and safest escape and rescue routes depending on the source of the fire, and includes details of its vicinity for assisting the fire brigade in guiding people to safety.

The relevant information is transmitted to large screens depending on the fire's location, while the escape routes are clearly marked using dynamic escape route markings. This eliminates time-consuming and often inaccurate fire protection updating.

The digital solution works intuitively. The optimal emergency plan is implemented for every hazardous situation. Therefore, with the help of the system the building is evacuated more safely in an emergency situation.

**Always safe**
The digital solution works intuitively. The optimal emergency plan is implemented for every dangerous situation. With the system's help, the building is evacuated more safely in an emergency.

photo credits: Luca Bravo

# THE FUTURE
# OF FIRE PROTECTION
## THE SOLUTION

**RESQ**matic®

The safety of people is always the top priority. On the one hand, **RESQ**matic® guarantees visitors the shortest route to safety. At the same time, the rescue services gain quicker access to the source of the fire. For this purpose, in the initial phase of an emergency, all tactical information is transmitted in real-time to the operations manager in the command vehicle and to the fire brigade operations center. This ensures rescue workers are immediately up to date with the latest information and can plan their deployment accordingly.

**A safe investment**
The digitization of fire protection opens up new possibilities for the use and architectural design of real estate. For example, fire protection can be digitized during the course of building renovation. The possibilities enabled by **RESQ**matic® compared to conventional fire protection approaches leads to fewer interventions in the building structure, allowing significant cost savings.

**Digital escape route control with high information content**
Thanks to the integrated digital signage technology, the building operator can use the RESQscreens flexibly. In an emergency, these display emergency information while in normal operation location-based or commercial content such as advertising can be shown. This offers further value-add opportunities in a wide range of commercial meeting places.


photo credits: Ryan Stefan

**Further examples:**
Museums
Points of sale
Train stations
Industrial plants
Office complexes
Universities
Stadiums
Laboratories
Public buildings
Airports
Hotels
Schools
Hospitals
Sports facilities
Universities
Ships
Offshore installations
and much more

# SYSTEM DESIGN
## MODULAR AND SCALABLE

**RESQ**matic®

Due to the future-proof modular system structure, further modules and components can be integrated or exchanged. **RESQ**matic® can be controlled both locally and remotely. The system can be individually adapted to each building or scaled for building extensions, thus allowing maximum flexibility at different levels.

automation

**RESQ**center
**Intelligent control unit**

**RESQ**portal
**Intuitively operated platform**

orientation

**RESQ**halo
**Dynamic escape route marking**

**RESQ**sign
**Digital escape route light**

information

**RESQ**screen
**Large screen with real-time information**

**RESQ**box
**Industrial media player**

**Fail-safe with permanent availability**
All components are monitored continuously and tailored to the specific area of application in security technology – and protected from power failure and loss of communication.

To ensure **RESQ**matic® functions even in the event of a power failure, the system is part of the network-independent safety lighting. In an emergency, like all other safety lights, it is operated via the central battery system.

If there is no structural connection to the emergency lighting, the system is equipped with an uninterruptible power supply (UPS). In addition, the RESQsign has its own battery which guarantees operation for at least one hour in the event of a power failure.

**Full flexibility**
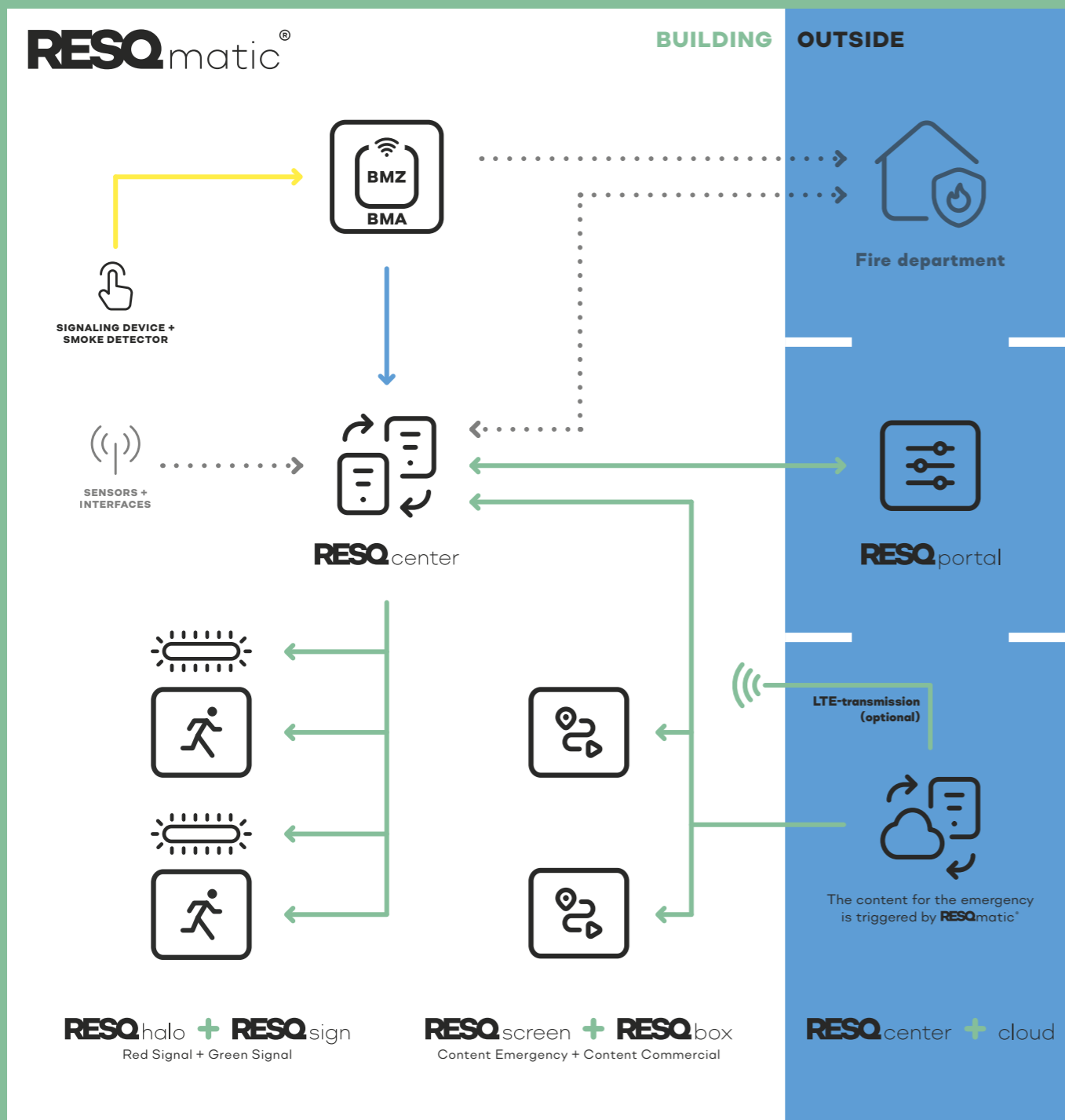independent of hardware

**Total control**
management of all buildings and facilities

**Rescue planning**
developed by fire protection experts

**Operational tactical information**
fast transfer of time-sensitive information to the emergency services

# SYSTEM DESIGN
## MODULAR AND SCALABLE

**RESQ**matic®



**RESQ**matic®

BUILDING   OUTSIDE

BMZ
BMA

Fire department

SIGNALING DEVICE +
SMOKE DETECTOR

SENSORS +
INTERFACES

**RESQ**center

**RESQ**portal

LTE-transmission
(optional)

The content for the emergency
is triggered by **RESQ**matic®

**RESQ**halo **+** **RESQ**sign
Red Signal + Green Signal

**RESQ**screen **+** **RESQ**box
Content Emergency + Content Commercial

**RESQ**center **+** cloud

## Escape route calculation in under a second

As soon as the fire alarm system detects an emergency, it alerts the RESQcenter to the area where a fire has broken out. The system calculates the optimal rescue plan within milliseconds and transmits this information to all system modules. The RESQscreens, RESQsigns and RESQhalos immediately switch from „Safety and Public Mode" to „Rescue Mode" and guide visitors to the next available rescue exit. At the same time, the RESQcenter reports all tactically relevant data to the fire rescue services and the police for ensuring an efficient rescue operation.

**This schematic representation visualizes the entire solution and explains the inter-action of the entire RESQmatic® system.**

## function | legend:

Input:
alarm device and
smoke detector trigger

Processing:
comparison with
configuration – determine
rescue plan

Output:
playback of situational
and location-dependent
emergency content,
switching the escape route
markings to red or green

# RESQmatic® **MODULES**
## AUTOMATION

**RESQ**center – **Intelligent control unit**
The RESQcenter is the heart of the digital fire protection solution. Depending on the location, it comprises several servers which are connected from at least two systems in a redundant network. They form the communications bridge between the fire alarm system, the RESQhalos, RESQsigns and the RESQscreens.

The complete building configuration, all seating options, rescue plans and other information relevant to rescue are stored on the RESQcenter. In an emergency, the system calculates the optimal rescue plan within milliseconds and forwards the information to the RESQscreens, RESQsigns and RESQhalos. At the same time, all time-critical, tactical information is transmitted directly to the rescue services.

**redundant**
communication

**Permanent monitoring**
of all components

**Remote maintenance**
control and maintenance
of all components

**365 | 24 | 7**
continuous operation

**The servers are installed on premise so the system keeps running even in the event of an internet failure.**

# RESQmatic® **MODULES**
## AUTOMATION

**RESQ**matic®

**RESQ**portal – **intuitive operation**
The operator controls the entire system via the RESQportal which is easy and intuitive to use. Time-consuming training and lengthy familiarization are not necessary. Comprehensive rights management with assignment of user

IDs and access rights ensure optimal use with maximum system protection.

**Intuitive**
usability

**Rights management**
assignment of user IDs and access rights

**RESQ**matic®

LOGIN

**System operation is simple and intuitive. This means that employees are not dependent on complex training courses.**

**RESQ**matic®

LOGIN

**RESQ**matic®

LOGIN

# RESQmatic® MODULES
## ORIENTATION

photo credits: Benjamin Reiter | vor/reiter.design



photo credits: Benjamin Reiter | vor/reiter.design

**RESQhalo – Dynamic escape route marking**

The RESQhalo consists of two high-performance LED strips installed in U-profiles above doors or door frames. The RESQhalos are very easy to see from a long distance even when there is a lot of smoke. They operate two display states and show people the way out of the building with red (blocked) and green (free) illuminated LED strips.

**The high-performance LED strips are mounted above the doors and indicate from afar whether this exit can be used as an escape route, even if there is smoke.**

**Clear color spectrum**
red and green

**Aesthetic installation**
blends in with the existing appearance

**up to 550**
lumens per meter

**> 15.000**
switching cycles

**> 30.000**
operating hours

# RESQmatic® **MODULES**
## ORIENTATION

**RESQ**sign – **Digital escape route light**

The RESQsign delivers digitized escape and rescue route information for ensuring the safest escape and rescue route depending on the danger area. Escape routes are thus made visible. In the normal state, the RESQsign displays the standardized escape signs as well as individual content. In the event of a fire, it automatically switches to situation-dependent emergency content so that escape and rescue routes that can or cannot be passed are clearly marked.
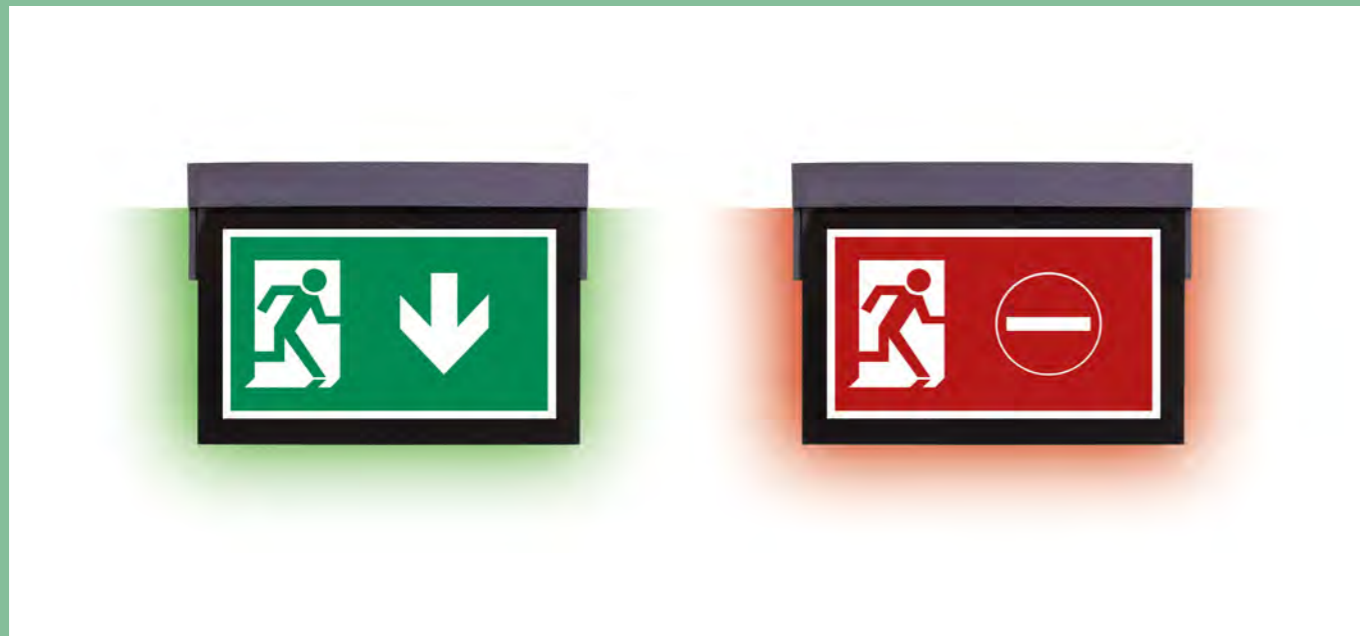


**The integrated high-performance LEDs illuminate the entire area.**
**These enable maximum visibility over long distances – even when smoke is present.**

In addition to „fire" emergency, other safety-related content such as occupational safety measures can be provided via the **RESQ**matic® system. The modular RESQsign design includes a power pack (incl. integrated rechargeable battery for an operating time of one hour), the CPU and an LCD screen.

**Polycarbonate**
material

**20 W**
power

**IP43**
protection class

**365 | 24 | 7**
continuous operation

# RESQmatic® MODULES
## INFORMATION

photo credits: Benjamin Reiter | vor/reiter.design

**RESQscreen – Large screen with real-time information**
The RESQscreens are large-format monitors that display location-dependent escape and rescue plans in „Rescue Mode", i.e. in an emergency. In „Safety and Public Mode" the RESQscreens can also be used for commercial purposes or other events, news or information. They are operational 24/7 and receive the information coming from the RESQportal via the RESQbox.

**RESQbox – Industrial media player**
The RESQbox is a robust media player for content output on the RESQscreens. It is a reliable and powerful device that works 24/7 in harsh conditions such as high temperatures and high humidity.

**From 43 inch**
display size

**178 degree**
viewing angle

**365 | 24 | 7**
continuous operation

# REFERENCE PROJECT KIEL
## MULTIPURPOSE HALL
## WITH MANY POSSIBILITIES

**RESQ**matic®

The Ostseehalle in Kiel was built in 1951 from the steel construction of an aircraft hangar that was originally built on the Island of Sylt. The multi-purpose hall known today as the Wunderino Arena was modernized in 2000 and is one of the most versatile halls in northern Germany. The history and the flexibility of the hall presents firefighters with a major challenge: The areas separated by fire protection walls result in 60 fire scenarios. Depending on the type of event, the static notices and signage for the escape and rescue routes have to be adjusted manually, Moreover, fire service plans and operational tactics are in place depending on the location of the fire.

**13.500**
visitors

**4**
levels

**34**
seating plans

**60**
scenarios

**57**
**RESQ**halos
two display states

**26**
**RESQ**screens
200 display states

**229.080**
possible
switching operations

**365 | 24 | 7**
continuous operation

# REFERENCE PROJECT KIEL
## IN UNDER A SECOND

RESQmatic®

The 34 seating variants and the 60 fire scenarios paired with three different switching states result in 514,080 possibilities of evacuation. All information and all emergency scenarios are stored in RESQmatic®. In an emergency the fire alarm system transmits information to RESQmatic® about the areas

where a fire has broken out. Within milliseconds, the system calculates the optimal rescue plan from the thousands of options. This information is then played on the large screens and the RESQhalos.

A total of 26 RESQscreens (55 inches) were distributed over four floors in the hall for displaying the appropriate information. Additionally, 57 RESQhalos – LED strips above the exits which light up red (blocked) and green (free) – were installed for clearly marking the escape routes even in smoke. In the event of an emergency this ensures visitors are guided away from the danger zone and safely outside. At the same time, access is kept free for the fire brigade.

**Added value for the Wunderino Arena**
For the Kieler Ostseehalle, when it comes to technical and organizational fire protection the use of RESQmatic® means a minimal invasive implementation of fire protection measures. Expensive structural fire protection measures were avoided while also allowing the arena to use the large format displays in standard operation for commercial purposes.


photo credits: Benjamin Reiter | vor/reiter.design

# COOPERATION PARTNERS
## THE FUTURE IS INTERDISCIPLINARY

**CS.Hamburg** is an IT system integrator with a focus on conceptual design and operation of IT infrastructures. The high level of expertise in the areas of software development and cyber security qualifies the company for digitizers. Whether for new products, solutions or as a companion of its customers during their digital transformation: CS.Hamburg thinks old ways in new ways and transforms the conventional into sustainable, digital concepts.

**cs.hamburg**

**Acer Inc.**, founded in 1976, is today one of the world's largest ICT providers. The company develops and sells ICT products for consumers as well as businesses. In its more than 40-year company history Acer has repeatedly revolutionized the market with innovative solutions, setting standards and making new technologies available.

**acer.de**

IMAGINE DIGIT

# RESQmatic®

## IMAGINE DIGIT

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**COOPERATION PARTNERS**

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