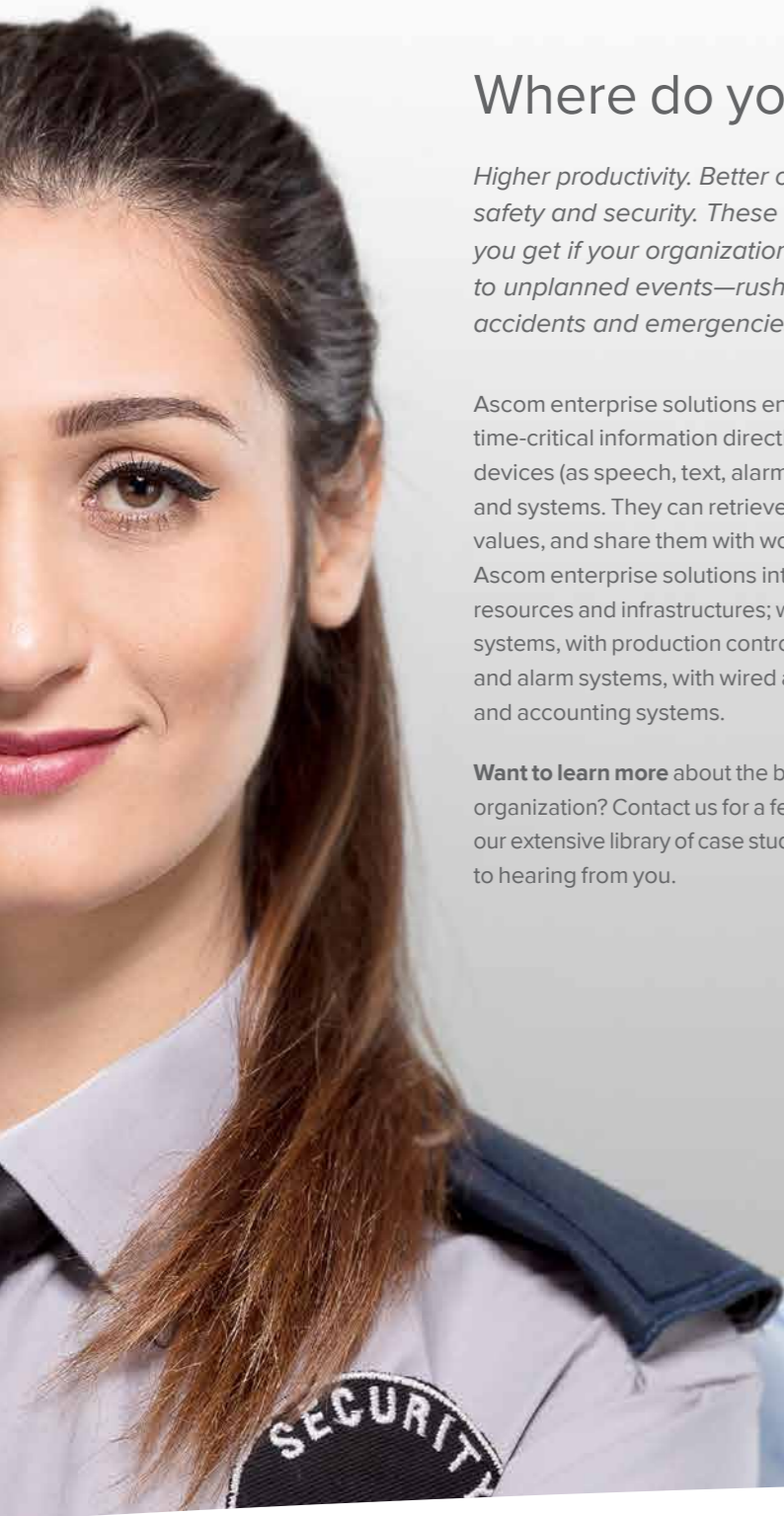


Where do you go from here?

Higher productivity. Better customer satisfaction. Enhanced safety and security. These are the three main benefits you get if your organization responds quickly and smartly to unplanned events—rush orders, technical failures, accidents and emergencies.

Ascom enterprise solutions ensure key mobile people receive time-critical information directly to their smartphones or mobile devices (as speech, text, alarms, data) from colleagues, machines and systems. They can retrieve or automatically receive critical values, and share them with workmates and external responders. Ascom enterprise solutions integrate with your existing ICT resources and infrastructures; with facility management and security systems, with production controls and equipment, with telephony and alarm systems, with wired and wireless devices, with business and accounting systems.

Want to learn more about the benefits of an Ascom solution for your organization? Contact us for a feasibility and ROI study, or to browse our extensive library of case studies and testimonials. We look forward to hearing from you.



Ascom is a global solutions provider focused on healthcare ICT and mobile workflow solutions. The vision of Ascom is to close digital information gaps allowing for the best possible decisions – anytime and anywhere. Ascom's mission is to provide mission-critical, real-time solutions for highly mobile, ad hoc, and time-sensitive environments. Ascom uses its unique product and solutions portfolio and software architecture capabilities to devise integration and mobilization solutions that provide truly smooth, complete and efficient workflows for healthcare as well as for industry and retail sectors.

Ascom is headquartered in Baar (Switzerland), has subsidiaries in 15 countries and employs around 1,200 people worldwide. Ascom registered shares (ASCN) are listed on the SIX Swiss Exchange in Zurich.

Ascom
Grimbodalen 2
402 76 Gothenburg
Sweden
Phone: +46 31 55 93 00
www.ascom.com

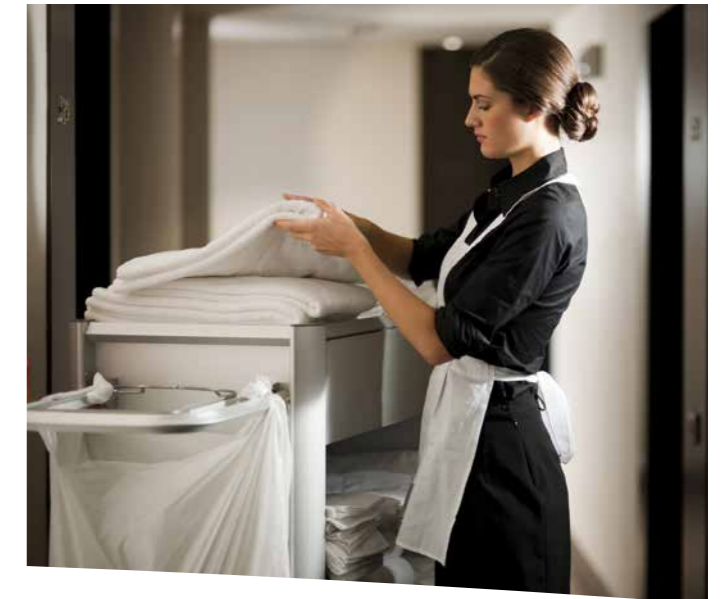
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Ascom enterprise solutions.

Optimize on-site communications for higher productivity, better customer satisfaction and enhanced safety.

ascom



Productivity. Safety. Customer satisfaction. Three key benefits from one solutions platform.

Meeting the mobility challenge

A lone worker falls and loses consciousness before managing to send an alarm. A critical pump is showing signs of failure... but the duty maintenance engineer cannot be reached. A supermarket's staff are constantly interrupted to deal with arriving 'click-and-collect' customers.

As the examples above show, workplace mobility poses special challenges. To be truly productive and safe, mobile workers need truly mobile communication solutions—solutions that seamlessly connect them with colleagues, machines, alarms, management, outside specialists, customers, and other ICT systems.

Ascom enterprise solutions provide such seamless connectivity. Working together with you, our enterprise specialists can identify weak spots and bottlenecks in your mobile workflows and communication channels. More importantly, they can design cost-effective solutions, and ensure their long-term and enterprise-wide integration with your existing resources.

What benefits can you expect?

Ascom enterprise solutions enable interactive, multi-directional and targeted communication of time-sensitive, mission-critical information. Machines and processes communicate with mobile workers, informing them of deviations and glitches *before* they escalate into serious problems. Key workers communicate with one another, with processes and with support systems—within systems, across systems, and while on the move.

The benefits of such communication can be summarized under three headings: improved productivity, enhanced safety, higher customer satisfaction.

■ Improves productivity

Ascom enterprise solutions enable staff and systems to react quickly with appropriate actions to unplanned events. Messages and alerts are filtered: the right messages go in the right format to the right recipient at the right time. Over time, these incremental improvements will benefit your Overall Equipment Effectiveness (OEE)—minimizing availability, performance and quality losses.

■ Enhances safety

Ascom has decades of experience developing customized accident and safety solutions for the industry, retail, hospitality and secure establishments. The specifics of each solution may vary, but the underlying aim remains the same: the swift delivery of clear alerts and messages from people and equipment to designated recipients.

■ Increases customer satisfaction

Customer satisfaction depends on multiple factors. Production, order processing, personnel, supplies and budgets—each area has its special communication needs. Then there are the front-end factors that are especially important in retail and hospitality. Guests, for instance, have zero patience for faulty lifts and slow service. As one of the world's largest mobile on-site information specialists, Ascom has modules and answers for virtually every enterprise communication challenge.

Which technology is best?

The answer depends on the nature of your enterprise, the functions you want, and the extent of integration with existing systems and infrastructures. But an Ascom enterprise solution typically comprises infrastructure, Ascom Unite middleware, and mobile devices such as the Ascom Myco smartphone or Ascom DECT and Wi-Fi handsets.

Ascom solutions are technology agnostic, vendor-neutral and future-ready. Examples of the technologies we employ are DECT, Wi-Fi, 3G/4G and on-site paging. In short, we can extend the working life of virtually any existing communication infrastructure.





Ascom solutions for industry. Working to keep things working.

Ascom enterprise solutions are smart business tools for industry. They ensure quick responses in critical situations, helping to secure maximum equipment uptime, reduced production losses and lower risk levels for personnel, property and the environment.

Enabling the Industry 4.0 revolution

Industry 4.0 refers to the transformation in manufacturing and industrial productivity made possible by advanced digital connectivity. In short: people, machines and processes connect and interact—with sensors and Manufacturing Execution Systems (MES) continuously collecting and analyzing data from multiple points in a facility in order to optimize decisions and signal pre-emptive interventions. The end result? Maximum equipment availability, performance, and product quality, which combine to deliver an improved Overall Equipment Effectiveness (OEE).

An Ascom solution helps ensure the delivery of such data to designated staff. Moreover, feedback is continuously routed back to the MES, helping to improve your organization's knowledge base of incidents and their resolutions.

Fewer production losses

Filtered and prioritized communications can speed up responses to disturbances that might otherwise stop or slow production, or cause defective products. Designated staff receive alerts and/or messages to their smartphones or handheld devices. Messages are routed along pre-defined chains until there is an acknowledged response.

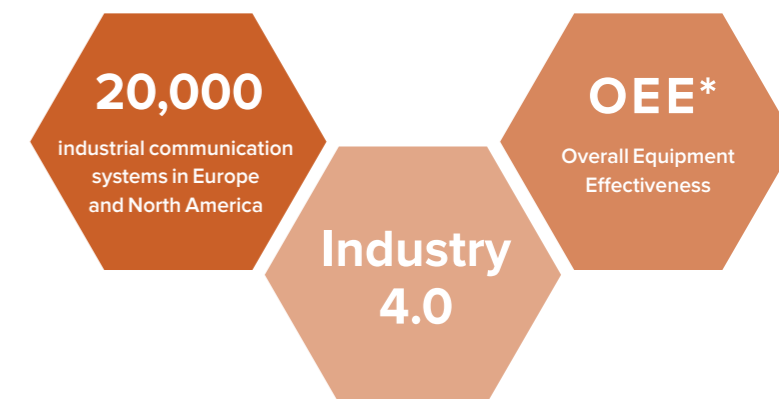
Clear information helps staff take the best possible actions. They can request further information. They can access and control critical equipment (close a valve, open a pump), and communicate with colleagues one-on-one or in conference calls. They can communicate in noisy, dusty, wet, hazardous or explosive environments.

Empowerment made mobile

Context-rich communications encourage staff to use their full abilities. Being able to share information simplifies delegation, and accelerates decision-making and feedback. Personnel are better equipped to predict, think, take the initiative and cooperate. An Ascom solution can help foster a team spirit among staff. Information is easily shared among all team members. No one need be left out of the flow of information.

Customize and integrate

Ascom systems support all industrial processes and departments. Whatever your existing communications infrastructure, we can devise a solution to transfer time-critical information between personnel and processes in order processing, materials supply, scheduling, production, quality control, maintenance, security and building services.



Ascom has to date integrated more than 20,000 industrial communication systems in Europe and North America. We specialize in erasing boundaries between different technologies and legacy systems—letting you extract maximum value from your existing resources.

OEE (Overall Equipment Effectiveness)

OEE refers to the overall performance of a single piece of equipment or even of an entire factory. It is a measure that embraces and quantifies all losses to good-quality output that can occur in a process. Losses are grouped into three categories: (1) Availability losses (downtime), (2) Performance losses (speed losses), and (3) Quality losses (rejects, rework). These measurements are multiplied in order to establish overall performance.



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Ascom solutions for retail. From high street to hypermart.

Ascom is a world-leader in on-site mobile communications solutions for the retail sector. Each solution is unique—customized to your organization’s specific infrastructure, legacy systems, and plans for future growth. Maintenance, too, is customizable. Service agreements can be tailored to match present needs and future plans. Below are just a few examples from the broad and growing portfolio of retail solutions available from Ascom.

Goods delivery notification systems

As a delivery vehicle nears a store/warehouse, it sends a notification email to the destination. The notice is distributed to mobile workers at the destination who receive it on their smartphones or mobile devices. Staff can now prepare for the vehicle’s arrival and be ready to start unloading as soon as it arrives.

Checkout Communication Solution

The Ascom Checkout Communication Solution helps ensure a fast checkout and excellent customer service. A dedicated Ascom handset—or an application within the Electronic Point of Sale (EPOS) terminal—lets the checkout operator summon assistance directly from designated responders. For instance: restricted product authorisations go to supervisors; replacement product requests go to runners; security alerts go directly to security guards. These alerts can be data-only or speech-enabled—providing the highest degree of flexibility when conveying the actual requirement. The resulting swift responses to problems or queries help provide the best possible customer service and customer loyalty rate.

Product Withdrawal Requests

Product withdrawals are a fact of retail life. But with the right communications solution, it’s possible to minimize their impact—while still acting promptly to ensure safety. Ascom AlertTrac is such a solution. A function within our Ascom Unite software, it lets one person send alert texts to any defined wireless device/handset/smartphone in the Unite system. Ascom AlertTrac gives your Head Office complete control of the withdrawal process, eliminating ad-hoc and inconsistent responses:

- Central HQ decides to issue a Product Withdrawal Request (PWR)
- HQ assigns a priority level and mandatory response/acknowledgment times to the PWR and releases it to pre-defined areas (national, regional, local, and so on)
- HQ can manage a PWR according to various parameters: alter a PWR’s priority, change the list of recipients, escalate the PWR to different management levels, liaise and cooperate with external actors (media, consultants, etc.)

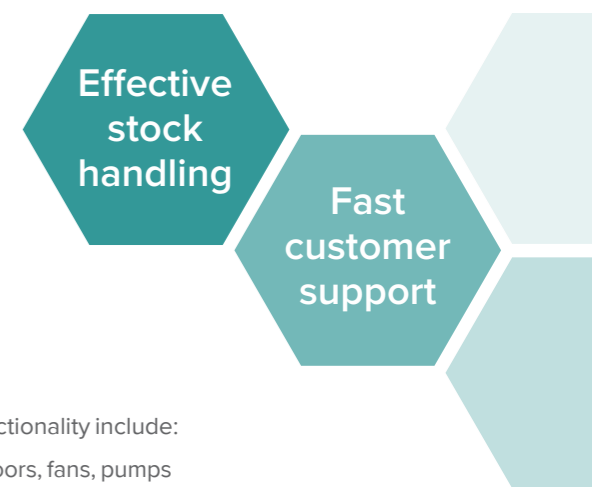
Click-and-collect

The Ascom click-and-collect solution helps ensure smooth, hassle-free order fulfillment and delivery at stores and/or collection points. Once on-site to collect their purchases, customers’ data is sent to pre-defined staff members’ handsets/smartphones. Message-confirmation and -redirection functions help guarantee speedy deliveries—while ensuring staff remain mobile and available for other tasks.

Remote technical and infrastructure alarms

In retail, one technical glitch can threaten actual and corporate health. A single malfunctioning refrigerator, for example, can have serious health and safety implications. While a technical issue such as excessive energy consumption can be a sign of deeper underlying problems.

Your technical alerts solution can be tailored to include virtually any functionality—with alerts going directly to managers’ and technicians’ smartphones or handsets.



Examples of functionality include:

- Control lifts, doors, fans, pumps
- Status checks (temperatures, fans)
- Talk to colleagues—one-on-one or in secure conference calls
- Log all events for future analysis and continuous improvement measures

Many of our technical, utilities and infrastructure solutions use remote monitoring. This lets staff focus on core tasks, while monitoring and telemetry systems keep a 24/7 eye on critical values and parameters, ready to transmit alerts should deviations go beyond pre-defined levels.





Ascom solutions for hospitality.

Keep guests happy. Keep them coming back.

Ensuring alerts from your hotel's critical equipment and systems go directly to technicians' handsets or smartphones takes some expertise—and some advanced software and hardware. Fortunately, Ascom offers all three, and has years of experience devising solutions for every type and size of hotel and leisure facility.

Beyond room service and housekeeping

The hospitality industry is a dynamic sector, with record numbers visiting more and more locations—and expecting ever-higher service levels and in-house experiences. But this dynamism is often not reflected in conventional on-site communications.

Mobility is often underexploited, with staff bound to desks and monitors. Communication systems are often strictly separated: cleaning and chambermaid services are separated from technical systems, which in turn are separated from room-service and security systems. And the hospitality sector as a whole is slow to exploit exciting value-adding innovations such as tracking luggage with Near Field Communication (NFC).

Ascom is committed to expanding the availability of value-adding, on-site communications for the hospitality industry—especially by harnessing the power of directing filtered messages and alerts to specific recipients' mobile devices. Here are three examples:

■ Smoother housekeeping

When a guest checks out, a 'clean the room' message is automatically sent to housekeeping. Supervisors can monitor the progress of open tasks, and receive confirmation upon completion.

■ More responsive guest services

Guest requests can go directly to an employee's smartphone/mobile device, or to their supervisors who can assign and manage the requests.

■ Enhanced security

Fire, window and door alarms go directly to designated staff. Such targeted communications can save crucial time—and make it easier to contain a problem before it escalates. Tracking functionality helps responders quickly locate the source of alerts.

Here, there, everywhere

Hotels and other hospitality venues (multiplexes, amusement parks, arenas, etc.) are by their very nature physically complex. Labyrinthine layouts, underground car parks, sprawling footprints—these are just some of the factors that make it challenging to devise reliable communications networks. To meet these challenges, we often combine various technologies such as DECT, Wi-Fi, paging and 3G/4G in order to achieve full coverage with built-in redundancies.



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Ascom solutions for personal safety. Ensuring help is always at hand.

Correctional and detention facilities. Security guards. Accidents and technical emergencies. Secure hospital units. Lone workers. Hazardous environments. For decades Ascom has developed safety and security solutions for some of the most challenging workplaces imaginable.

Peace
of mind for
staff

Danger never sleeps. Neither does an Ascom safety solution.

Workplaces and industrial facilities are certainly safer than they were even a decade ago. A large part of this improvement is due to wireless on-site communications—an area in which Ascom is a recognized world leader. In fact, Ascom safety solutions are hard at work in virtually every sector and industry, and encompass everything from infrastructure and software to handsets, remote monitoring and tailor-made service agreements.

Ascom safety solutions fall into several broad categories:

Help
is just
seconds
away

Solutions for lone-workers

- For lone-workers in diverse industries and environments such as large power plants, secure facilities, remote locations, etc. These solutions typically include: 'Man down' and 'no movement' functionalities, where an inactive or suddenly tilted handset sends alerts to designated recipients.
- We use the latest location technologies (LF, IR, DECT location, RTLS) to provide accurate handset locations. Knowing the point of origin of a personnel alarm can give responders critical extra seconds and minutes.
- Advanced voice functionality includes a discrete voice channel. In a threatening situation the user simply pushes a button to establish a secure voice link to responders. The handset does not indicate that a channel has been opened. Responders can listen in on the channel as they approach the handset's location.
- Logging of events and actions taken. Provides a solid basis for continuously improving processes and personal safety routines.

Solutions for security staff

Automatic alarms triggered by man-down or no-movement conditions, or by deviations in a guard's planned route. Alerts can be configured to go to selected colleagues, security staff or external agencies (police, fire service, ambulance, etc.).

- Precise location function based on real-time locating system (RTLS) technology.
- Can be configured to trigger a 'soft' alarm that discreetly sends an alert to pre-defined recipients.
- Reassuring acknowledgement messages are automatically sent to staff who trigger a personal alarm from their mobile devices.
- Handsets can feature pull-cords. A personal alarm is automatically triggered should the handset be snatched from its user.
- Unanswered alerts are automatically re-directed to designated responders.
- Can include access-control functionality. NFC and barcode scanning capabilities in the Ascom Myco smart phone mean it can be used to access restricted zones.

Solutions for emergencies and technical alarms

Fires. Gas and chemical leaks. Stalled escalators. Burst water pipes. Jammed doors. No matter the nature of an emergency or technical failure, an Ascom solution enables a timely response to help prevent it escalating into a major event.

- Alerts automatically sent to mobile technical and emergency response staff.
- Critical information can also be sent directly to recipients' handsets: a building's energy consumption, air flows in a ventilation system, water flow in heating and cooling circuits.
- Mobile technicians and emergency responders can remotely control lifts, doors, pumps and fans from their handsets.
- Seamless integration with a facility's Building Management System is available.
- Users' handsets can receive status updates on key values such as pressures and temperatures.



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