



**MOTOROLA**  
SOLUTIONS

**Drivers and Challenges in Achieving Business Goals**

# **Workforce Communications in Commercial Operations**

**Survey conducted by IDG Connect on behalf of Motorola**

IDG Connect is the demand generation division of International Data Group (IDG), the world's largest technology media company. Established in 2006, it utilises access to 38 million business decision makers' details to unite technology marketers with relevant targets from 137 countries around the world. Committed to engaging a disparate global IT audience with truly localised messaging, IDG Connect also publishes market specific thought leadership papers on behalf of its clients, and produces research for B2B marketers worldwide.





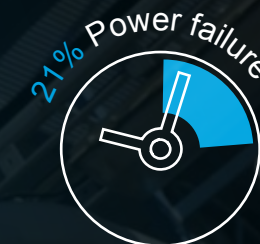


**MOTOROLA**  
SOLUTIONS

Infographic Summary

# Infographic summary

## Top causes of downtime



**Half or more** said meeting business goals could be helped with



Collaboration and communication



Streamlined processes



Faster unplanned maintenance resolution

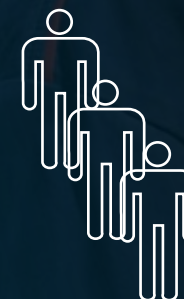
**Businesses suffer an average of 22 days unplanned downtime every year**



**Over 90%** say it's important to be able to



Communicate in power outages and emergencies



Connect people and collaborate

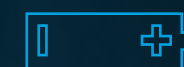


Transfer data securely



Communicate instantaneously

**Key worries about mobile devices**



55% battery life



52% lack of coverage



44% noisy environments





**MOTOROLA**  
SOLUTIONS

Who, What, Why

# Who did we ask?

Intelligent productivity is key to profitability and competitiveness in many commercial sectors. While some businesses are driving to produce more, others have sufficient supply but want to bring more intelligence to their processes.

Those aims are affected by many factors. Do they have the right skills? Are they using the optimum technology? Do they have specific challenges that take precedence over operational efficiency?

As leaders in communication solutions we wanted to understand more about the barriers to intelligent productivity facing organisations with complex operations and how they believe that mobile communications are helping, or hindering, them to overcome those issues.

We know, for example, that health and safety is paramount, especially in hazardous industries such as oil and gas. We understand that here and in many manufacturing organisations noisy and dead areas can impede continuous communication. We've seen that being out of range on a regular basis can isolate employees in transport and logistics when they need to be in touch at all times.

For this research we've focused on these industries because they have many common core challenges but share the goal of generating revenues with lower costs through greater and more intelligent productivity and operational efficiency.

In our wide-ranging survey across two continents we discussed key aspects of day-to-day business such as workplace practices, what causes downtime and its effects, and the problems and wished-for features of communication networks in use today.

We talked to people in both IT and operational roles to ensure we achieved a rounded view of how employees and managers see room for improvement in the way they address today's productivity and efficiency challenges.

## The research focused on industries with similar goals and challenges







**MOTOROLA**  
SOLUTIONS

## Business Goals

# The road to meeting business goals

While just about any commercial organisation will talk about generating profitability through higher revenues and lower costs, different industries face different challenges in achieving that.

Each of the sectors that we surveyed is aggressively competitive. To reach their goals they need to increase performance, optimise processes and reduce delays. At the same time operating environments can be difficult and even hazardous and employee safety is paramount.

We talked to key IT and operations professionals about their approaches, current practices and aspirations that they believe will help them towards corporate goals.

To start with, we wanted to know what improvements in the workplace they believed would make the greatest impact.

Responses showed that there are plenty of areas with room for improvement, though some will be easier to manage than others.

The largest vote (62%) was for more skilled staff. If lack of skills is an issue now then it's going to get worse as the baby boomers now approach retirement age.

Running a close second (59%) was better collaboration between employees across the organisation. Technology to support communication isn't in short supply and with

increased optimisation, could be the answer to sharing increasingly scarce knowledge.

Respondents could see several areas of operation where greater speed in how tasks are tackled would reap benefits:

- Workers who are employed need protection, yet 29% of our respondents believed there was room for faster resolution of health and safety issues.
- Regular maintenance is unavoidable if businesses want their operations to run smoothly and safely. Yet 50% of respondents pointed to unplanned maintenance as a key issue, agreeing that faster resolution would help to achieve business goals.
- Over half of respondents believed that streamlining operational processes could produce positive results and 43% said the same about more efficient inventory management.

Lowering total cost of ownership was also a concern for a quarter of those questioned. Our study shows that to make an impact on business goals organisations need to look right across their operations to increase skills, improve communications, and bring new efficiency to how daily operations and unforeseen circumstances are managed. Every organisation is well advised to review their own operations and plan for improvement where they can.



Collaboration and communication **59%**



Streamlined processes **54%**



Faster unplanned maintenance resolution **50%**

## What would help meet business goals?

**62%** say they need more skilled staff





**MOTOROLA**  
SOLUTIONS

Productivity

# The challenge of raising productivity

Drilling down from looking at overall business goals, we wanted to focus specifically on how businesses believed they could improve productivity. Is working longer and faster feasible and how can you deal well with disruption?

As with business goals, our respondents put the need for skills high on the list of factors that can make a difference, with 60% mentioning that improved skills would improve productivity. This is clearly an issue that organisations will have to address, potentially by actively recruiting and training people to replace those retiring and by ensuring staff are always well versed in current technologies and processes. Meanwhile looking after current employees has to be important too and nearly a third of respondents cited better

health and well-being for employees as a route to improved productivity.

Retaining skilled workers is going to increase in importance as well and 40% of respondents said that improving employee engagement would be valuable. By giving employees voice in the business, skills and a career path, organisations can benefit from greater loyalty and desire for success.

With people skills becoming a scarce resource it's no surprise that organisations recognise they need ways to share knowledge effectively. Even without a skills shortage, the ability to get information to the people on the ground dealing with issues will have a significant effect on the speed of resolution. Many of our respondents agreed.

## Communications are key



Better collaboration across the enterprise



Instant access to decision-making information



Remote data collection





**MOTOROLA**  
SOLUTIONS

Productivity

# The challenge of raising productivity

Half of those questioned wanted to see faster and more streamlined collaboration with colleagues across the enterprise. That makes sense for dealing with safety alerts where organising people to be in the right place taking the right actions is vital. It's important too for managing any operational issue quickly. The people with specialised knowledge may be some distance away from where the problem has occurred so easy collaboration will make a real difference here.

It's not just talking to experts that can help resolve issues faster. In the 21st century the information to help diagnose and fix faults for example is at the fingertips of any employee, but they need the knowhow and the technology to reach it. Just under half of respondents

said that instant access to decision-making information would help intelligent productivity. Remote data collection was mentioned by 22% as well.

At the heart of many of these activities is communications technology. Networks and devices all have a role in enabling people to connect with other people and with information, to feel closer to the business and to learn. We'll explore how organisations are using technology for collaboration later in the paper.

Looking after the workforce and enabling employees to work better together are the focus points for our respondents in improving productivity. Is your business considering all the factors that could make a difference – the people, the processes and the technology?

**People are important too**



**60%**



**40%**



**31%**





**MOTOROLA**  
SOLUTIONS

 **IDG**  
CONNECT

Downtime

# Causes of unplanned downtime

Downtime is the enemy of productivity. And unexpected downtime can have a significant effect on profitability.

We already know from previous research that as much as 30-40% of manufacturing profits can be lost annually in this way. Now we wanted to know how much of an issue this is for commercial operations across Europe and South Africa and where they believe the challenges lie.

On average our respondents reported a significant 22 days a year lost to unplanned downtime.

For an organisation working 7 days a week that's more than 3 weeks and equates to 6% of production and therefore revenues. Organisations operating 5 days a week lose even more as a percentage.

Why is this happening? We wanted to get to the root causes of unplanned downtime. Our respondents pointed to a range of causes.

Equipment failure is the biggest problem at 37%. In the long term and with the necessary budget, organisations can invest in the most reliable equipment. In the heat of the moment though the emphasis has to be on getting the equipment up and running again. That requires

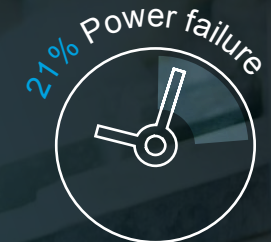
collaboration between the people with the right skills. With insufficient headcount also being cited as an issue, there's a need for people to collaborate on-site and potentially with remote experts. Central to that collaboration is the ability to communicate well when needed.

Communications failure itself is also a key problem. If you can't talk to colleagues you can't manage an incident well and you can't share information. Everything will take longer and if the solution isn't perfect the incidence could recur. We'll explore later why communications fail and what can be done to ensure greater robustness.

Health and safety issues in hazardous environments are a key concern on their own. Respondents told us that a tenth of downtime is due to health and safety alerts and accidents alone. Clearly any potential problems here have to be taken seriously. So there's a delicate balance between dealing with alerts fast and managing them safely.

The bottom line is that unplanned downtime could make all the difference to how intelligently productive an organisation can be. Do you know how much planned and unplanned downtime there is in your organisation, where it happens, and how much it costs the business every time it does happen?

**Downtime has multiple causes**



22 days unplanned downtime every year





**MOTOROLA**  
SOLUTIONS

## Communications

# The imperative of good communications

So far we've established that communications technology is vital to the tasks of increasing productivity, reducing downtime and thus achieving business goals. Our next task was to understand more clearly what businesses need from their networks and devices.

To that end we proposed a range of capabilities and asked our respondents to rate them as extremely important, very important, important, somewhat important or not important.

The number of "not important" responses to any feature were negligible leading us to believe we are on the right track with the type of capability that both IT and operations staff would like to see.

Overwhelmingly respondents said that each of the areas highlighted was at least important. If we look at the percentages of respondents who considered each area to be important, very important or extremely important, the numbers are very high:

- Communicate during power outages and emergencies 95%

- Connect groups of people for collaboration or coordination 95%
- Private and secure communication 92%
- Secure transfer of data 92%
- Instantaneous communication 91%
- Reach workers at any time, any location 88%
- Communications in noisy environments 84%

If we break those figures out a little, it's secure transfer of data that was considered extremely important by the largest number of respondents (49%). Communication during outages and emergencies was considered extremely important by 35%, and private and secure communication was held in the same regard by 32%.

There were a few regional variations of interest. Respondents in Italy and Spain gave most weight to instantaneous communication. In South Africa being able to reach workers at any time was considered particularly important.

>90% want to.....



Communicate in power outages and emergencies



Connect people and collaborate



Transfer data securely



Communicate instantaneously





**MOTOROLA**  
SOLUTIONS

Communications

# The imperative of good communications

We can take from these results that organisations want a great deal from their communications. They want to be readily and securely connected to transfer data, collaborate and communicate instantly when needed. And they want to stay connected to each other even when the power is out and, not surprisingly, during emergencies. These demands call for a robust and reliable form of communication, which, as we are about to explain, is unlikely to be provided by regular mobile networks and phones.

It is well worth considering what you would truly want your communications network to deliver and whether your current strategy is able to deliver on those needs.

Can you face down the challenges of hostile environments, power outages and sudden emergencies to keep employees talking? And even in the quiet times, are you sharing information as securely as people would like?

>80% want to.....



Reach workers wherever they are



Communicate whatever the noise levels





**MOTOROLA**  
SOLUTIONS

Devices

# Ensuring mobile devices deliver maximum benefits

Having learned what organisations need from their communications, we wanted to know whether the tools they currently use are up to the task.

Not entirely surprisingly, when we asked which devices employees are currently using it was the ubiquitous smartphone that was most mentioned. Some 85% of IT respondents and 73% of operations staff reported their use in the workplace. Standard mobile phones are there too, although they are less popular, with their use noted by 40% of IT staff and 48% of operations staff.

Mobile phones and networks are certainly not the whole story though. Nearly half use two-way radio, which, as we'll explain shortly, offers a number of benefits over mobile phones. Breaking that number down into job function, we found that 36% of operations staff compared to 18% of IT staff reported use of radios, suggesting that they have a clearer place in the more demanding work areas. We were interested to see that nearly half of radio users are still working with analogue systems and have yet to upgrade to the more superior digital offerings.

DECT phones were in use at 29% of organisations, especially in Germany (45%). Overhead paging/tannoy are surprisingly still operational in 26% of those businesses questioned.

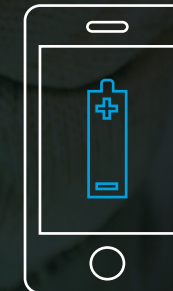
Now that we know what communications technology organisations use, the obvious question is – does it work? Given that conditions can be far more demanding than in an office environment we were curious about whether a smartphone could really deliver. The answer seems to be no, given the hindrances our respondents reported they are finding to communications.

Top of the hindrance list was battery life, with 55% saying this is a problem. It's a well-known issue with any mobile phone, whether smartphone or not. They need charging regularly and can lose power at hugely inconvenient times. That means that while they may be fine for day-to-day non-urgent work, they're potentially not sufficiently reliable for business-critical and emergency communications.

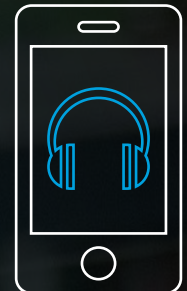
Lack of coverage was a problem for over half of respondents. This is likely to be more than the usual complaints about black spots on trains or around the countryside.

Production and distribution facilities are built to be robust and in the industries we questioned sometimes in remote locations, this can result in no-go areas for standard mobile networks. Again, that's not ideal when you want to stay connected both for efficiency and emergencies.

**85% say they use smartphones for communication but...**



**55%** are worried about battery life



**44%** fret about noisy environments



**52%** are concerned about lack of coverage



**45%** use radio  
But nearly **half** are not benefitting from the latest digital technology





**MOTOROLA**  
SOLUTIONS

Devices

# Ensuring mobile devices deliver maximum benefits

Environments can be harsh too. Some 44% agreed that mobile phones are problematic if you want to communicate in a noisy environment, 22% were concerned about hazardous environments, and 26% were concerned that devices would fail in bad weather.

On top of that the device itself is doubted. Insufficient robustness and durability were quoted by 29% of our respondents.

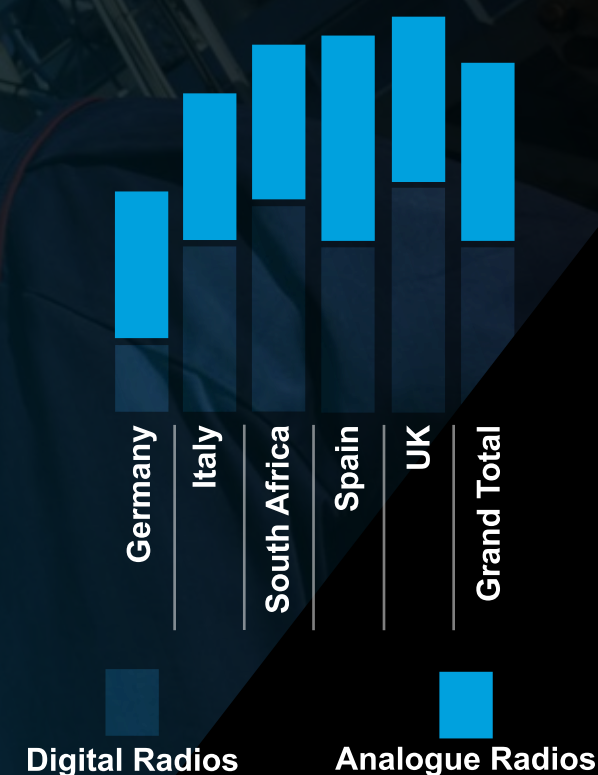
The truth is that none of this is surprising. Consumer-focused mobile phones aren't designed to cope with challenging environments. Standard mobile networks do have blind spots and those are exacerbated in the sort of facilities that our respondents operate. Moreover, in times of widespread emergency, mobile phone networks can be the first to go down under pressure.

This all adds up to the need to look more closely at the alternatives. Today's digital two-way radio overcomes these barriers to effective communication. This technology offers clarity in difficult environments, group communication, wide coverage, and the ability to bridge different devices and networks across multiple sites.

Additionally, digital radios offer the robustness, reliability and security that many other devices fall short on. At the same time radio still provides the business-type applications that mobile users enjoy – such as texting – as well as a very broad range of third-party industry-specific apps.

Mobile phones are obviously a familiar tool for employees and in some organisations staff may even bring their own to work. The question is – can they meet the requirements of your working environment? If not they could be costly in the long run in terms of delays and loss of productivity, not to mention the fall out from emergency situations. If you want to communicate at all times in all places, the answer is likely to be no, and it would be a cost-effective plan to consider alternatives.

## Where is Digital Radio being adopted today?







**MOTOROLA**  
SOLUTIONS

Functionality

# Required functionality in workforce communications

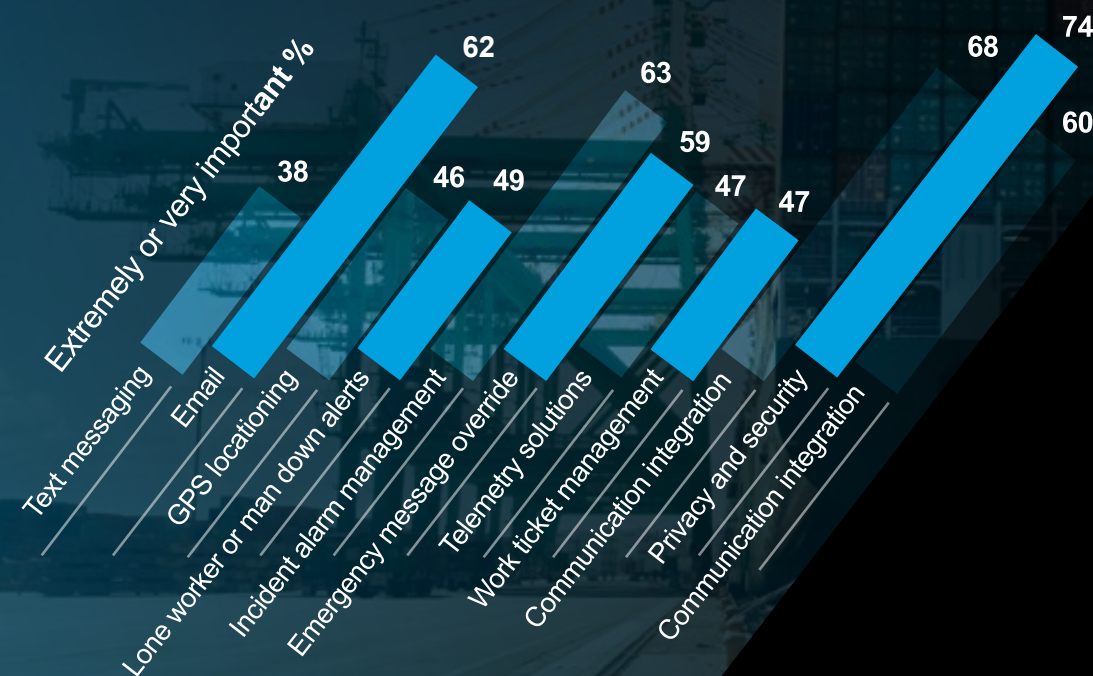
Our study so far has shown us what organisations believe can help them increase levels of intelligent productivity, and why standard mobile communications may not help them achieve their goals.

So what exactly is on the shopping list for workforce communications and applications that will help to fulfil the need?

We created a list of tasks, based on our knowledge that in an operational environment staff will be on the move regularly and want to collaborate with colleagues, access information, manage safety and emergency situations, and carry out day-to-day work.

Then we asked our respondents to rank the importance of those tasks. Interestingly, all the options we suggested were popular – both standard business applications and more specialised choices. We think this suggests that organisations can already see the potential for mobile communications in helping them to achieve greater and more intelligent productivity and efficiency across their operations.

## Communications Checklist - What businesses want today







**MOTOROLA**  
SOLUTIONS

Functionality

# Required functionality in workforce communications

## Standard business apps

Text messaging. Texting was considered extremely important by 14%, very important by 24% and important by 37%. Texting is a good way to communicate in noisy environments as long as the messages are brief and reception is good.

Email. Email was said to be extremely important by 27%, very important by 35% and important by 31%. It's an effective way to communicate non-urgent information, but difficult to read long emails or attachments on a phone.

## Apps for safety

Automatic man down and lone worker alerts. Knowing quickly that a worker is in potential danger is vital. By managing alerts quickly companies can help protect their employees and reduce the time taken to deal with emergencies and alerts. 84% thought this was important, very important or extremely important.

Automated incident alarm management. Alarm management can reduce incidents and unexpected shutdowns, improve process control and raise levels of safety. 30% said this was extremely important, 33% said very important and 27% said important.

Emergency message transmission overrides. In a crisis the ability to take control of communications is invaluable. 90% said this was important, very important or highly important.

## Apps for efficiency

Telemetry solutions. Telemetry solutions can help managers monitor and control operational processes. 87% said this was important, very important or extremely important.

Work ticket management. Work ticket management introduces new levels of efficiency to production and maintenance. While only 11% said extremely important, 70% said important or highly important.

GPS location tracking of people and assets. 70% considered this feature to be important, very important or extremely important. This type of tracking has the potential to be valuable in keeping people safe, tracking the whereabouts of valuable assets and in improving the efficiency of fleet management, to name a few applications. We see this function becoming more important as managers come to realise its role in the future.

## Mobile management

Data transfer reliability. 39% said this was extremely important, with another 52% saying it was important or very important. That means they need resilient and robust networks and devices capable of managing that data efficiently. Privacy and security encryption. 42% said this was extremely important, and another 49% said very important or important. Different communications systems have varying levels of

security, and clearly for many this is an issue that needs to be considered.

Better integration of radio, telephony systems and mobile devices. Many of our respondents reported using a variety of communications networks and devices, making better integration very important to 39%, extremely important to 21% and important to 27%.

It's useful to compare the various devices that organisations currently use and ask how many of these applications are available on them. Can the workforce communications tools you use now deliver the functionality you desire to enable safety, efficiency and intelligent productivity at all times in any environment? Or is it time to review your communications strategy based on your own organisation's shopping list of capabilities?





**MOTOROLA**  
SOLUTIONS

## Conclusion

# Making the most of workforce communications

Our research shows that organisations operating in the oil and gas, manufacturing and transport and logistics markets are intent on improving productivity and efficiency. While they have clear ideas about how to go about that, they also recognise that they have challenges above and beyond many other businesses.

Collaboration, communication, process improvement and skilled personnel are all considered to be valuable on the road to greater and more intelligent productivity. Speed is of the essence, especially in tackling unplanned downtime and emergency alerts that strike directly at profitability.

Better communications can do much to help connect people to each other and to data. It's clear though that regular mobile phone communications are too limited to be effective in many cases, when loss of network or failure of device just are not acceptable. Organisations will need to look at other technologies if they want robust, reliable and secure workforce communications.

Respondents recognise also that an effective communications strategy must be massively flexible to provide a wide range of business and specialised applications that can support the drive to improved productivity.

To find out more about Motorola solutions for workforce communications in challenging environments, visit:

[www.motorolasolutions.com/mototrbo](http://www.motorolasolutions.com/mototrbo)