

Converged Push to Talk

PUSH TO TALK INTERNATIONAL

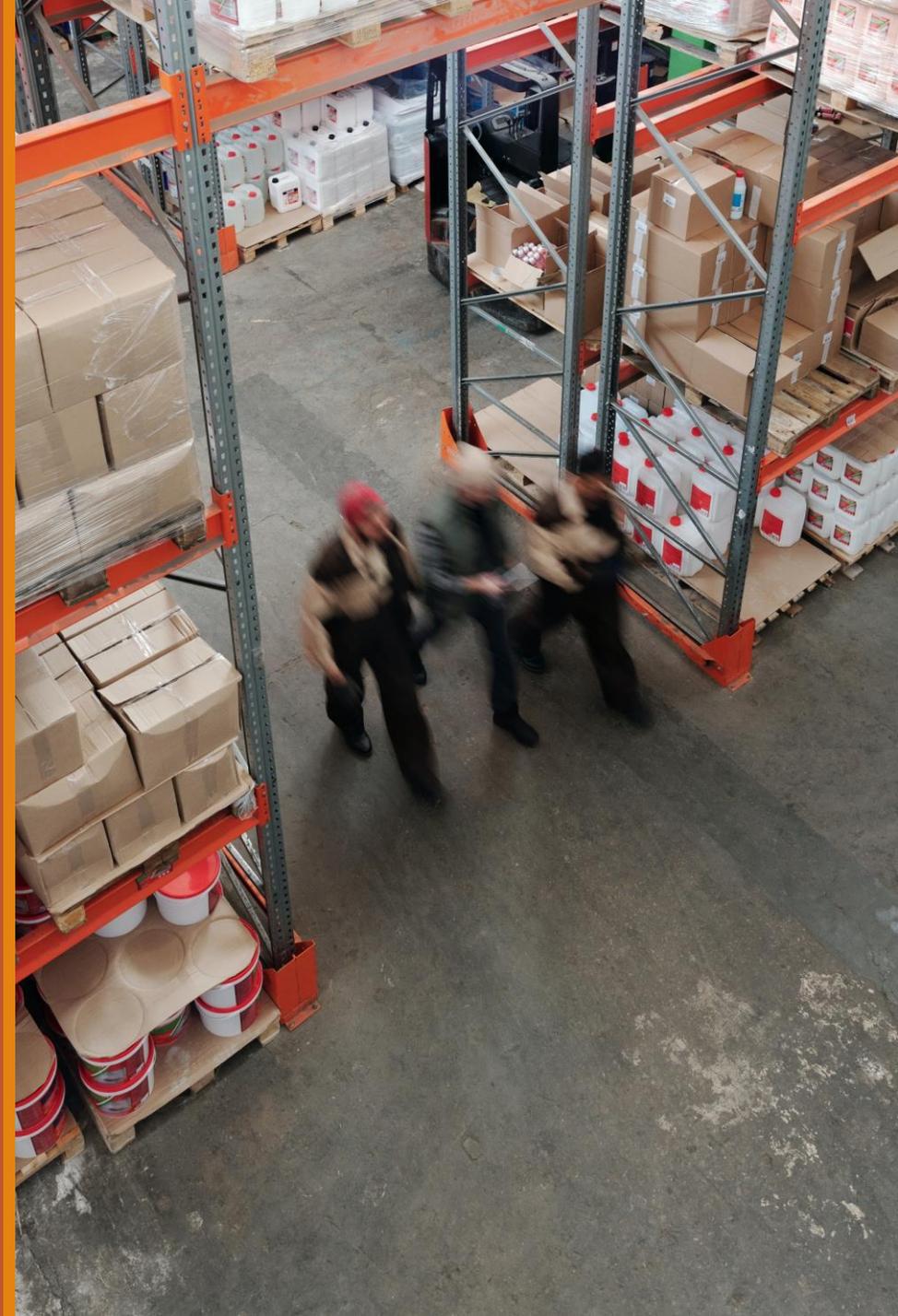
SAFEGUARDING THE OPERATIONAL WORKFORCE

Safety questions for operational businesses

- Does your business have a mobile workforce (driving/walking/standing)
- Do they interact with the public
- Do they work in a fluid environment
- Do they work to tight deadlines
- Are there risks of personal injury either to staff or general public
- Are you finding frustrations with current communications platforms
- Are you looking to implement certain health, safety or legal processes
- Would you like to mitigate against accidents and claims

Workplace Communication environment

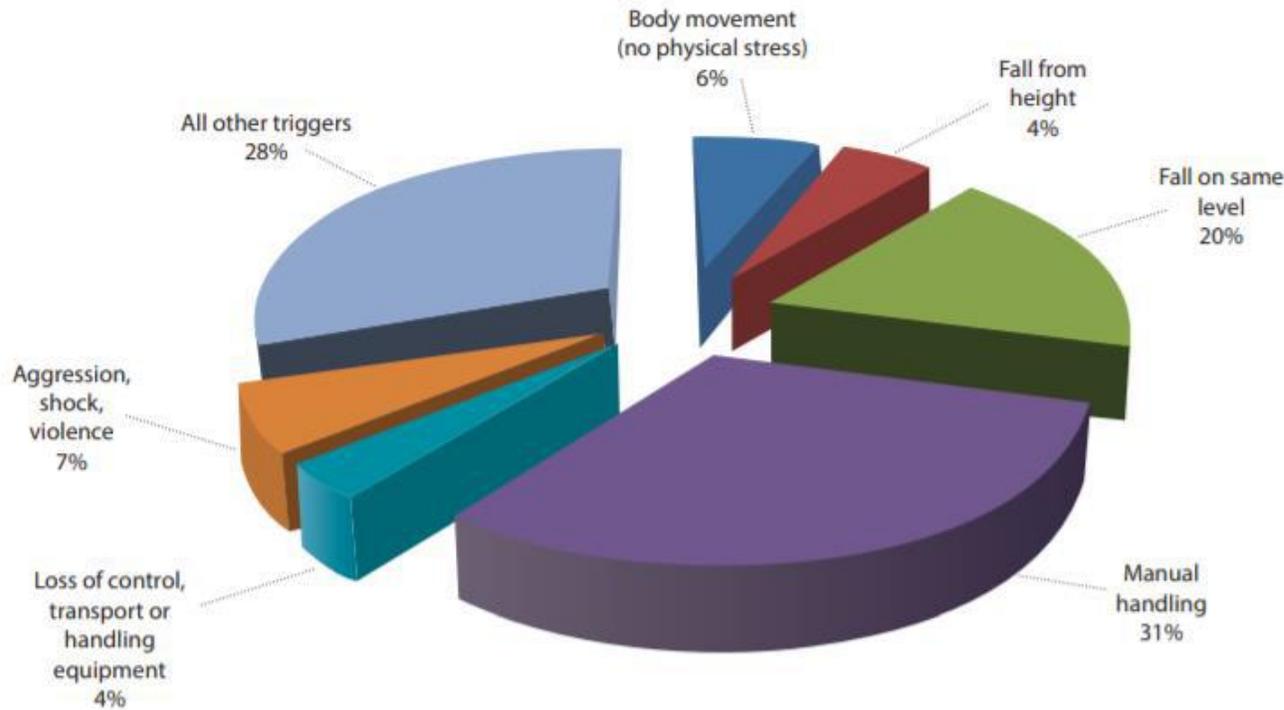
- ❑ The workplace is becoming more dynamic
- ❑ 2.3 million people employed in Ireland
- ❑ 800 thousand have company mobile phones or computers
- ❑ 1.5 million unconnected workers with little or no access to digital communication devices
- ❑ Risks around GDPR and intrusion with BYOD initiatives
- ❑ Innate barriers due to the robust operational environment



How is this lack of connectivity affecting business

- ❑ 96% of business leaders cite lack of collaboration or ineffective communication as the main sources of worksite failures
- ❑ 60% of companies don't have a long-term strategy for their internal communications.
- ❑ 80% of voice calls are not answered and go to voicemail.
- ❑ Majority of Operations Workers only receive verbal instruction and direction
- ❑ COVID-19 specific issues
 - Employees working remotely and not coming into the premises
 - Employees practicing social distancing while on site
 - Employees working alone and not in pairs/teams etc both on and off site

Figure 2.5: Proportion of reported non-fatal injuries by trigger, 2018 (HSA)



Accident Statistics

- ❑ 22,500 people experienced work injuries requiring an absence from work of four or more days
- ❑ 43% of all personal injury claims are workplace related
- ❑ An SME with 200 staff face average indirect costs of €66,000 per year and smaller business with 20 staff face indirect costs of €6,600
- ❑ Days lost to injury rose from 481,612 in 2016 to 884,400 in 2018

Figure 2.9: Reported non-fatal injuries by work environment, 2018 (HSA)

	All		Workers only	
	Number	%	Number	%
Production area, factory, workshop	2,399	26.1	2,383	27.2
Shop, sales, service activity area	1,792	19.5	1,578	18.0
Hospital & other healthcare	1,524	16.6	1,501	17.1
Other	1,451	15.8	1,368	15.6
Public thoroughfare*	941	10.2	864	9.8
Construction site	581	6.3	579	6.6
Area for storage/ loading	344	3.7	341	3.9
Farming, Forestry, Fishing (not on vessel)	162	1.8	153	1.7
Unknown	5	.1	5	.1
Total	9,199	100.0	8,772	100.0

* Including land or rail transport (for example train, bus or car).

Risk verticals

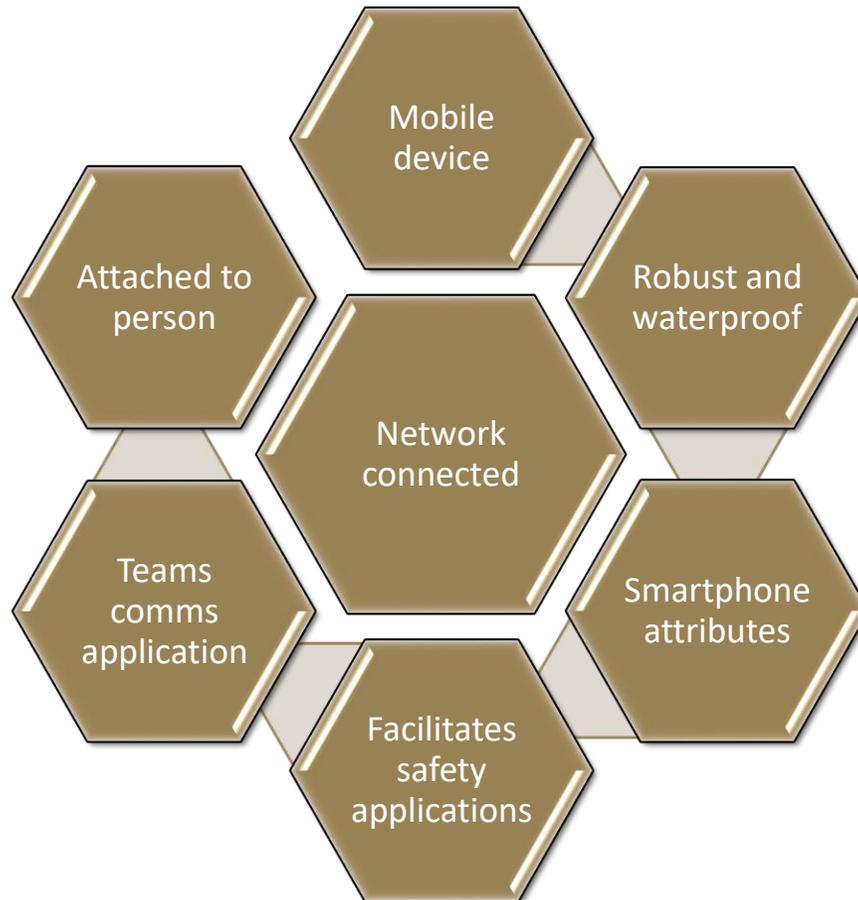


Communication mitigations around workplace accidents

HOW INDIVIDUAL WORKERS COMMS CAN HELP

Recommended platform: Push to Talk over cellular (PoC)

Prerequisites



Improved comms in general with PoC

- Instant 1 to 1, 1 to many communication
- No geographical limits, Cloud service
- Private and secure (OMAPOC 3GPP)
- User Friendly minimal training
- Ability to create contacts lists
- Dispatcher Manager (Controller)
- GPS location
- HD video devices & capture
- Converged with Google Apps(device dependant)



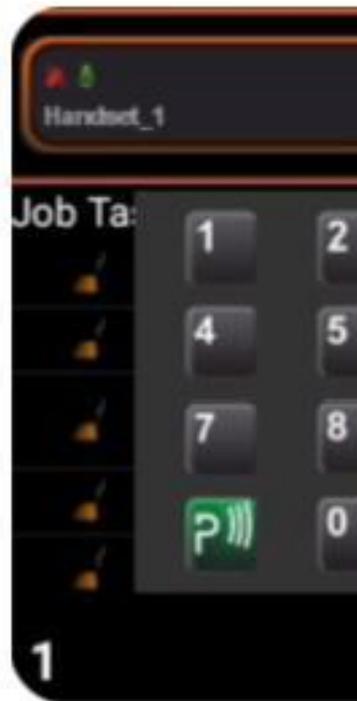
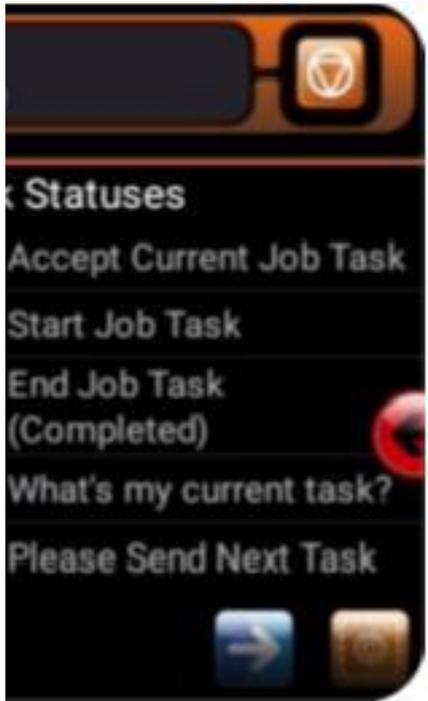
Lone worker

- ❑ More and more operations workers are working remotely. For example facilities, construction even medical personnel.
- ❑ Very often the operations worker may be working in a role where the possibility of an accident is present but the risk is increased by the very fact that they are working on their own.
- ❑ If at the very least both the operative and supervisors/colleagues had a simple check-in process this would drastically reduce the opportunity of an incident becoming worse or prolonged.
- ❑ This is what the lone worker application brings to mitigate against accidents

Lone Worker Alarm call

- ❑ Handsets have a dedicated alarm button
- ❑ An alarm is triggered by holding down a dedicated button or by holding the status bar down for 2 seconds.
- ❑ An alarm call has priority over all other calls, once initiated the initiator's handset will go hot mic.
- ❑ Members of the alarm group will receive a loud alarm and hear everything broadcasted by the initiator.
- ❑ The initiators location will be displayed on the company Pc dispatcher by receiving GPS information and displays it on a map.
- ❑ The dispatcher can select the alarm initiator on the map and initiate PTT session as well as send alarm messages from the map.





Lone Worker short codes timer

- ❑ Short codes are used by workers to send time related work information quickly to colleagues
- ❑ Short codes are a series of agreed job descriptions (climbing ladder, starting hoist etc) which colleagues need to be aware of
- ❑ The Short code timer initiates a preconfigured stopwatch based on the type of Short code and agreed check-in time
- ❑ A pre agreed automatic reminder is sent to both initiator and colleagues prior to end of check-in time reminding the initiator to check-in
- ❑ If check in time lapses without check-in then the initiator's handset will go hot mic and members of the alarm group will receive a loud alarm and hear everything broadcasted by the initiator
- ❑ The initiators location will be displayed on the company Pc dispatcher by receiving GPS information and displays it on a map. The dispatcher can select the alarm initiator on the map and initiate PTT session as well as send alarm messages from the map

Man down

- ❑ As with lone worker the man down application is designed to keep the operations worker who works remotely or in a potentially dangerous environment safe
- ❑ However the man down application brings a heightened protection as it uses sensors within devices to measure such things as impact, velocity and even air pressure
- ❑ Agreed parameters measure the severity of an incident thus alerting and informing supervisors and colleagues as to the level of response needed
- ❑ This is especially relevant when the consequence of an incident can be severe and quick reaction time imperative as it's a matter of life and death



Man Down Background

- ❑ Man Down alerting functionality is outlined as a critical safety feature for companies for the health and safety of its staff. The benefits of, and assurances for, enhanced employee safety that this feature-set capability can help deliver maximum effective benefit.
- ❑ For the companies team the main risks faced by their staff are environmental and ill health.
 - ❑ Environment: Relates to slips, trips, moving parts, electrocution, release of pressurised gases/fluids at high temperatures, working at height and confined space to name a few.
 - ❑ Ill health: Relates to a lone worker suffering a medical emergency such as a loss of consciousness and requiring medical attention.
- ❑ PTT equipped devices to be additionally capable of having a man down feature activated on them, (either manually or remotely).
- ❑ The man down feature to sense and trigger an alert process timeline and event sequence upon the trigger conditions of a specified and defined man down event
 - ❑ Example (defined as a drop from height or a fall with explicit parameters that are configurable related to sensor inputs on the device)
- ❑ The following of a sequenced process of alerting, firstly alerting the local worker(s) and staff close by that a man down event has been triggered, followed after a specified time period by remote alerting of the control room as well that there has been a man down triggered in the fleet they are monitoring linked in also to the subsequent audio handling and location handling from the device as a result of the lone worker trigger.

SPECIALIST ENVIRONMENT



Ecom Ex-Handy 10 Ecom Smart EX-02

Zone 1 / Zone 2 Zone 1 / Zone 2

Audit trail

Before

During

After



- ❑ What's hugely important to investigations of accidents is not only what happened to make the situation better but also what was happening before during and after the incident
- ❑ This can help interested parties understand what mitigations need to happen in order for this to never happen again but also from an investigation point of view who may be liable or negligent
- ❑ When you have devices on or around the person that record before, during and after you have the audit material which helps in that investigation

Checklists



Building

access/exit
fire
first aid
Utilities
Barriers
Alarms
CCTV



Machinery

Mechanical
Electrical
Safeguards
PPE
environment



Transport

Lights/windows/mirrors
Tyres
Fluids
Instruments
Cab



Personal

Training
PPE
Inspection
Alarm/Comms

Checklist ticked off by the operative and saved to a device ensure process was followed and heighten awareness

Live incident recording

- ❑ We live in a very dynamic world and more often in situations that has a human interaction element, emotions can become heightened.
- ❑ This can lead to verbal and physical assault
- ❑ Unfortunately for some “Front line” workers this has become a daily occurrence
- ❑ Live recording using both voice and video can not only mitigate the occurrence and severity but can record for investigation when it does
- ❑ This can protect both the operative but also the general public in cases of defamation and assault
- ❑ A personnel bodycam device that records voice, data and allows communications with supervisors and colleagues can greatly help in these situations





Case study 1 (Pharma)

- ❑ Multinational Pharma company
- ❑ Irish based
- ❑ Zero accident policy
- ❑ Large site
- ❑ 24 hour operations
- ❑ Staff operating alone
- ❑ Hazardous material
- ❑ ERT team/ Facilities team
- ❑ Man down functionality

Case study 2 (Public transport)

- ❑ UK city public bus company
- ❑ Road traffic accidents
- ❑ Anti social behaviour
- ❑ False claims (drivers and public)
- ❑ Lone worker
- ❑ Audit trail
- ❑ Holistic approach (PoC/CCTV/eyewitness etc)

Overview of Push to Talk International



Founded in 2007 by Tim Allerton ex Motorola and Philips Senior VP and Director of TETRA systems and a Co- founder of the TETRA MoU



PTTi are a supporter, developer and supplier of 3GPP Push to Talk over cellular (PoC) systems



The company is made up of high experienced highly skilled staff, experts in their field, all ex Senior staff from Motorola, Philips, Microsoft and Vodafone



We own our own source code and IP



A PoC system allows without compromise clients to truly converge their communications requirement



Advantages for Mobile network operators looking to add this product to their portfolio

It increases revenue

Decreases churn

Opens unconnected market