



**Broadband Push-To-Talk**  
in new dimension with



This brochure shows a general overview on how i.safe MOBILE and Motorola Solutions' WAVE PTX™ can be used in hazardous areas and industrial environments. Together they enable a direct connection between classic Push-to-Talk (PTT) radios, mobile phones and smartphones.

## Why and where to choose an ATEX i.safe MOBILE device

Communicate safely in potential explosive areas with i.safe MOBILE communication devices. Working in hazardous area environments of the oil/gas, the chemical and pharmaceutical industry places very specific demands on the mobile communication devices used.

These robust and intrinsically safe devices must not only meet international Ex-standards like ATEX and IECEx, but also have to ensure smooth, secure and user-friendly communication in the IIOT environment. i.safe MOBILE devices are designed for hazardous environments in zone 1/21, zone 2/22, mining and rough work situations in non-Ex industry areas. The Android-based smartphones and tablets are equipped with Bluetooth and WIFI and offer a wide range of additional functions like individually assignable buttons, a SOS button, are ready for Push-to-Talk and Loneworker Protection (LWP), NFC and have displays that can be operated with gloves and wet fingers. The dedicated Push-to-talk button, an amplified loudspeaker, RSM and PTT headsets enable secure and trouble-free group calls – even in noisy work environments.





# Intrinsically safe

## Difference between “flameproof” / Zone 1 / Zone 2

### Use of the term „flameproof“

In the context of explosion-proof devices, the term „flameproof“ is often used synonymously with the term „flameproof enclosure“.

The term „flameproof enclosure“ is defined in the standard EN 60079-1: Explosive atmospheres – Part 1: Equipment protection by flameproof enclosures, d'. Devices certified to this standard have an enclosure that can withstand the pressure generated by an explosion of an explosive mixture inside, preventing the transmission of the explosion to the surrounding explosive gas atmosphere.

Some manufacturers label their devices as „flameproof“ to suggest that their devices are suitable for use in explosive atmospheres.

In most cases, however, these devices are only heat-resistant for a certain period of time, but in no way prevent an explosion, as required by the ignition protection type flameproof enclosures, d' according to standard EN 60079-1.

**Only devices certified in accordance with the ATEX 2014-34-EU directive and the EN 60079 standards guarantee safe use in potentially explosive atmospheres.**

i.safe MOBILE devices are designed intrinsically safe and certified according to directive ATEX 2014-34-EU. The essential health and safety requirements are met through compliance with

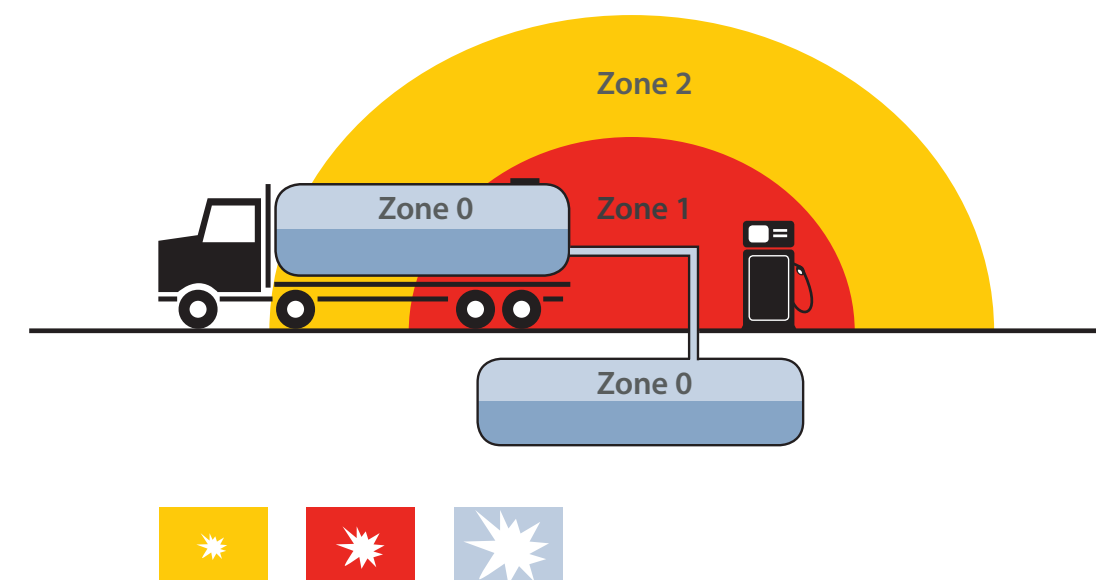
- IEC/EN 60079-0: Explosive atmospheres – Part 0: Equipment – General requirements
- IEC/EN 60079-11: Explosive atmospheres – Part 11: Equipment protection by intrinsic safety, i'

Within intrinsically safe devices manufactured by i.safe MOBILE, current and voltage are limited to maximum permissible values. This prevents ignition of explosive fuel-air mixtures both by sparks as well as by heating.

## Classification of Zones

According to Directive 2014/34/EU, a potentially explosive area is a space in which the atmosphere could become explosive on account of the local and/or operational conditions. An explosive atmosphere is defined as a mixture with air, under atmospheric conditions, of flammable substances in the form of gases, vapors, mists or dust in which, after ignition has occurred, combustion spreads to the entire unburned mixture.

Hazard – gas / vapor / mist	
<b>Zone 0</b>	A place in which an explosive atmosphere consisting of a mixture with air of dangerous substances in the form of gas, vapor or mist <b>is present</b> continuously or for long periods or frequently
<b>Zone 1</b>	A place in which an explosive atmosphere consisting of a mixture with air of dangerous substances in the form of gas, vapor or mist <b>is likely</b> to occur in normal operation occasionally
<b>Zone 2</b>	A place in which an explosive atmosphere consisting of a mixture with air of dangerous substances in the form of gas, vapor or mist <b>is not likely</b> to occur in normal operation but, if it does occur, will persist for a short period only





# Guaranteed safety

## Approving agencies

Our devices are certified by the most renowned test centres for international approvals according to the following standards and directives.

### European Union harmonization legislation:

**2014/53/EU:** Radio Equipment Directive

**2014/34/EU:** ATEX (Explosive Atmosphere Directive), including all amendments

**2012/19/EU:** WEEE (Waste Electrical and Electronic Equipment)

**2015/863/EU amending 2011/65/EU:** RoHS Directive (Restriction of (the use of certain) Hazardous Substances in electrical and electronic Equipment)

### MIL-STD-810

US military technical standard that specifies environmental test conditions for military equipment. (Environmental Engineering Considerations and Laboratory Tests).

The current version of this standard is **MIL-STD-810H**.



### Regulatory standards:

**EN 50566:2019-04:** Product standard to demonstrate the compliance of wireless communication devices with the basic restrictions and exposure limit values related to human exposure to electromagnetic fields in the frequency range from 30 MHz to 6 GHz: hand-held and body mounted devices in close proximity to the human body

**EN 55032:2022-08:** Electromagnetic compatibility of multimedia equipment - Emission requirements

**EN 301489-1:2020-06:** ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 1: Common technical requirements - Harmonised Standard for ElectroMagnetic Compatibility

**EN 301489-3:2019-08:** ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz - Harmonised standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU

**EN 301489-19:2020-02:** ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 19: Specific conditions for Receive Only Mobile Earth Stations (ROMES) operating in the 1,5 GHz band providing data communications and GNSS receivers operating in the RNSS band (ROGNSS) providing positioning, navigation and timing data - Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU

**EN 301489-52:2022-03:** ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 52: Specific conditions for Cellular Communication User Equipment (UE) radio and ancillary equipment - Harmonised Standard for ElectroMagnetic Compatibility

**EN 301489-17:2021-03:** ElectroMagnetic Compatibility (EMC) standard for radio equipment and services - Part 17: Specific conditions for Broadband Data Transmission Systems - Harmonised Standard for ElectroMagnetic Compatibility

**EN IEC 60079-0:2018:** Explosive atmospheres - Part 0: Equipment - General requirements

**EN 60079-11:2012:** Explosive atmospheres - Part 11: Equipment protection by intrinsic safety „I“

**EN IEC 62368-1:2021-05:** Audio/video, information and communication technology equipment - Part 1: Safety requirements

## Warranty for devices

i.safe MOBILE warranty its products to be free from major defects in design, material and workmanship at the time of their original purchase and for a subsequent period of twenty-four (24) months or, with regard to batteries and accessories, six (6) months.

If during the warranty period the product fails to operate under normal use and service due to defects in design, material or workmanship, i.safe MOBILE or its authorized service partners in the country/region where you purchased the product will within a maximum turnaround time of ten (10) working days repair or replace at their sole discretion.

### Services covered under warranty

- Acknowledgement of receipt
- Incoming & outgoing inspection incl. explosion protection check
- „No fault found“ service
- Online support/technical service hotline

## Third party insurance cover from handset provider

Our products meet the highest quality and safety criteria – we naturally comply with all statutory requirements.

Corresponding measures such as the conclusion of product liability insurance are obligatory for us.



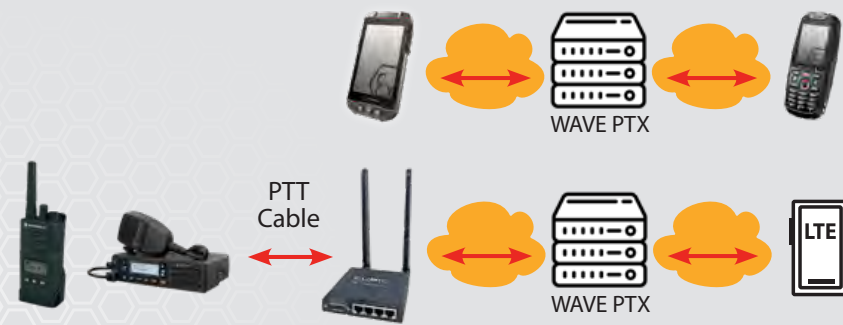


# Motorola Solutions

## Voice - WAVE PTX

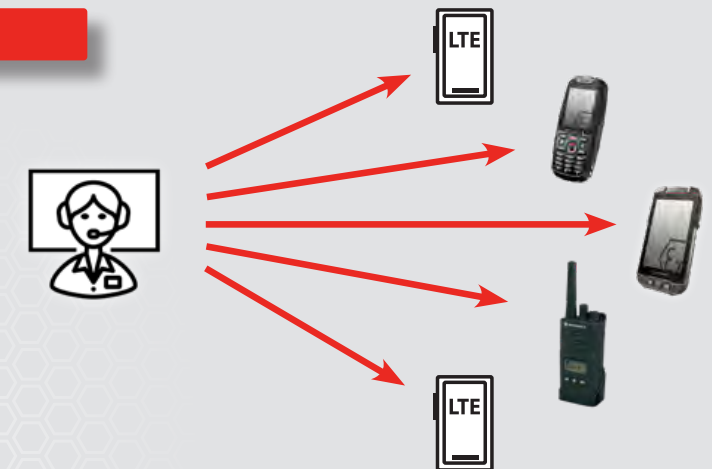
### One-to-one call

Confidential conversation between two devices.



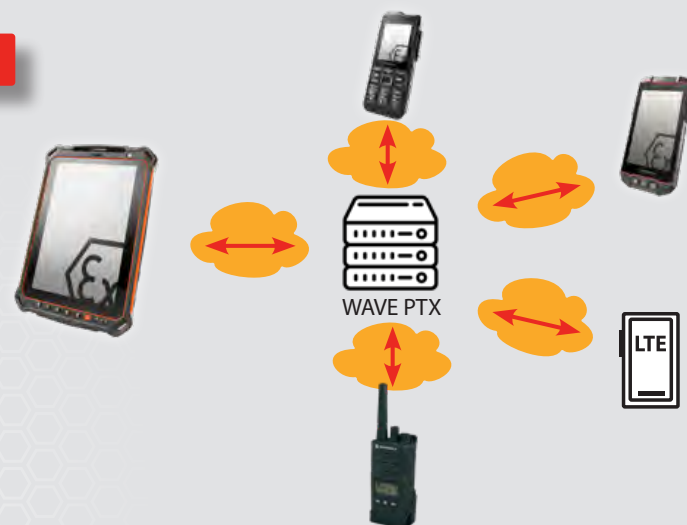
### Broadcast call | Dispatcher call

Only one person speaks and everyone listens.



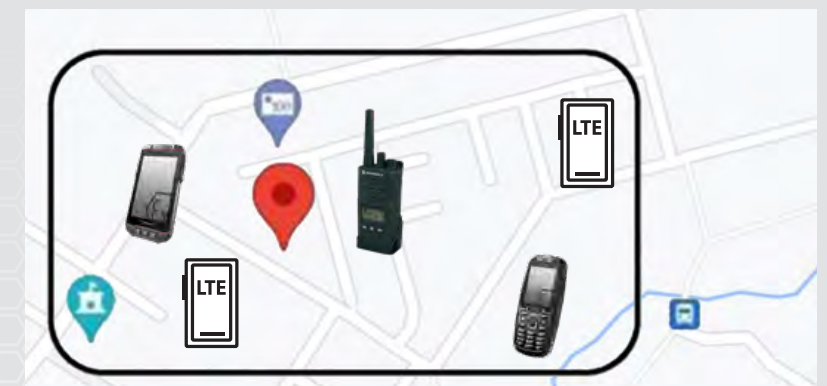
### Group call

One person of a group speaks and all listen.



### Dynamic group call

Select group members on the fly from contact list or map location.



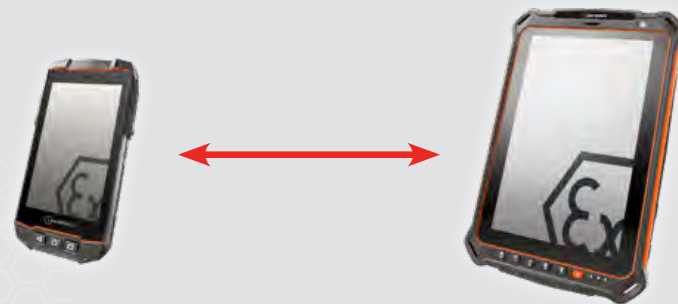


# Motorola Solutions

## Location Tracking

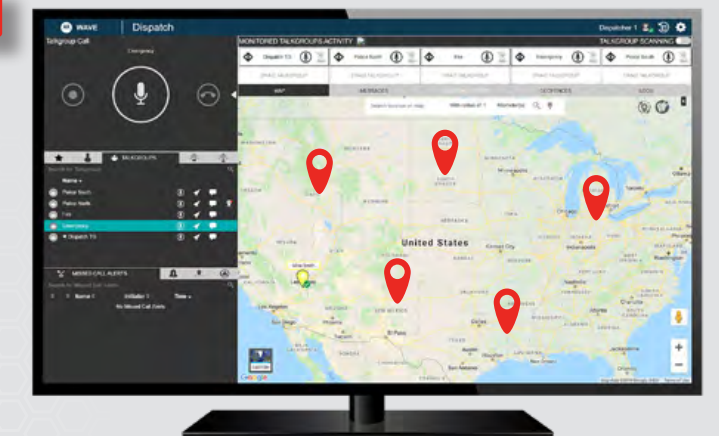
### Local sharing

Between contacts or with a talkgroup



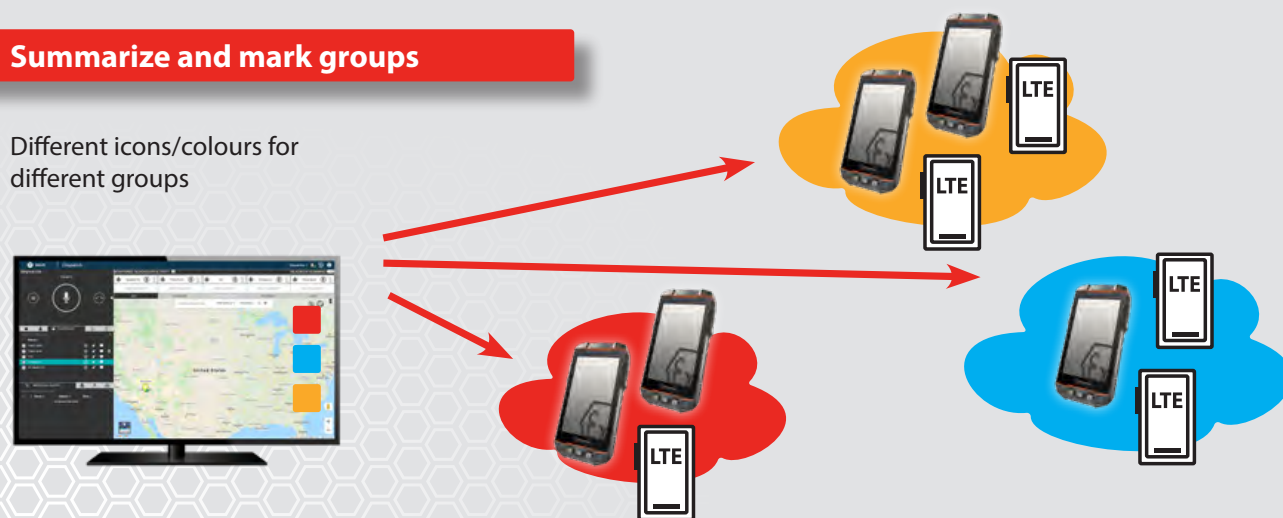
### Dispatcher tracking

Dispatcher can track all users on the map



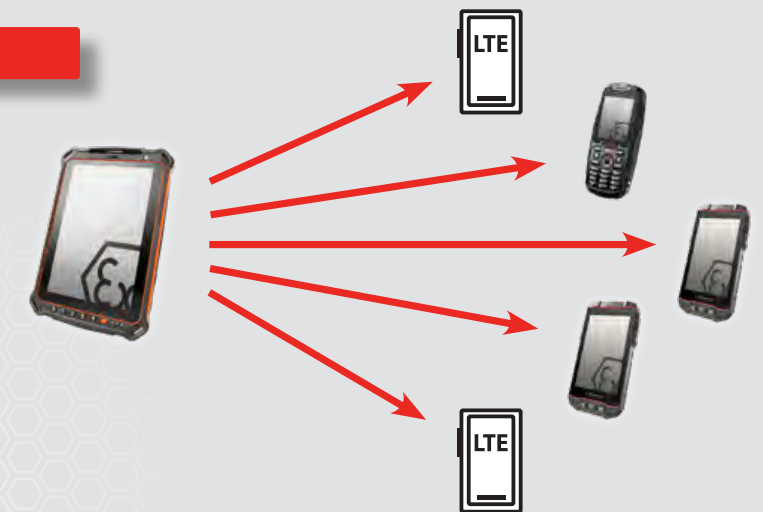
### Summarize and mark groups

Different icons/colours for different groups



### Emergency call

Priority call with users in case of an emergency

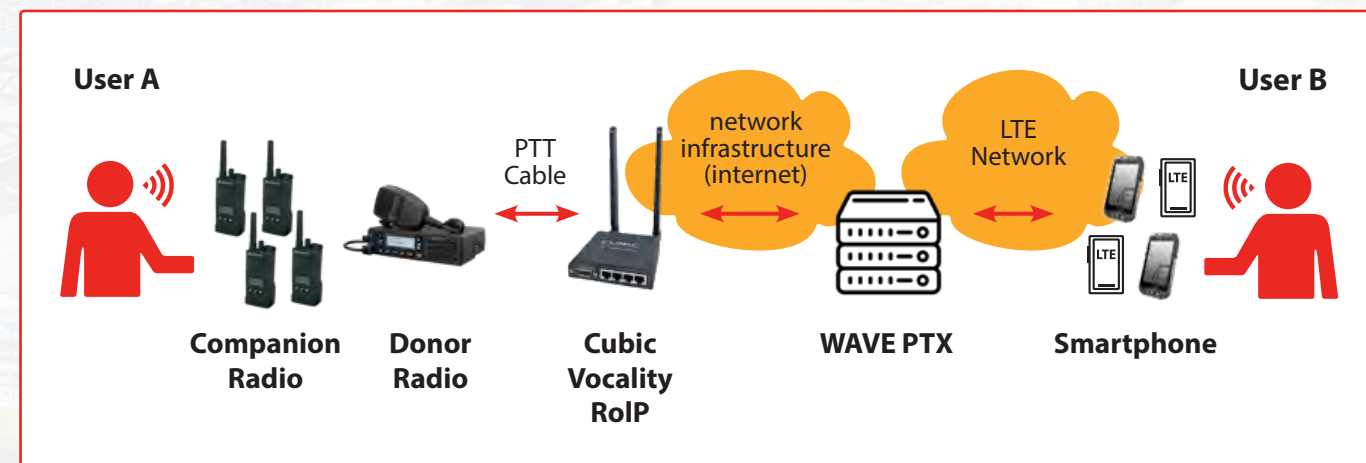




# Motorola Solutions

## How Radio over IP Interoperability Works

- User A speaks into a **Companion Radio**, which transmits to **Donor Radio**.
- Donor Radio extracts audio and provides to **Vocality RoIP Gateway** (Port lights red).
- Vocality RoIP gateway converts the audio to IP packets, sends to WAVE PTX via network infrastructure.
- **WAVE PTX** routes the IP packets to the appropriate talkgroups.
- LTE Network routes the audio packets to **Smartphone**.
- Smartphone plays the audio to **User B**.



## i.safe MOBILE devices optimized for a good communication



### < IS120.1 >

The powerful and extremely robust mobile phone with the main functions of telephony and messaging (SMS). Thanks to the powerful battery, it is ideal for long working shifts and is thus best designed for efficient business communication.



**Push-To-Talk key**  
PTT ready (third party application required, based on country specific approvals)



### < IS330.1 >

The professional cell phone can be used like a radio with its programmable key - with optional PTT. So it is also suitable for special MCPTT communication thanks to its ISM interface for use with other accessories such as an RSM or PTT headsets.



**SOS key** for loneworker protection  
LWP ready (third party application required, based on country specific regulations)



### < IS530.1 >

The high-performance industrial smartphone can be used in a variety of ways thanks to the ISM interface. Additional modules such as an RSM, PTT headsets, the professional IS-TH1xx.1 barcode scanner and the thermal camera IS-TC1A.1 make the IS530.1 a high-performance multifunctional device.



**Amplified loudspeaker**



**Accelerometer, gyroscope, light, magnetic, proximity, pressure sensors**



### < IS930.1 >

The robust and powerful tablet of the Industry 4.0 generation. The 8-inch display, two freely programmable buttons, a long-life battery, a practical hand strap and a separate leather bag with a shoulder/belt or carry strap system are further highlights.



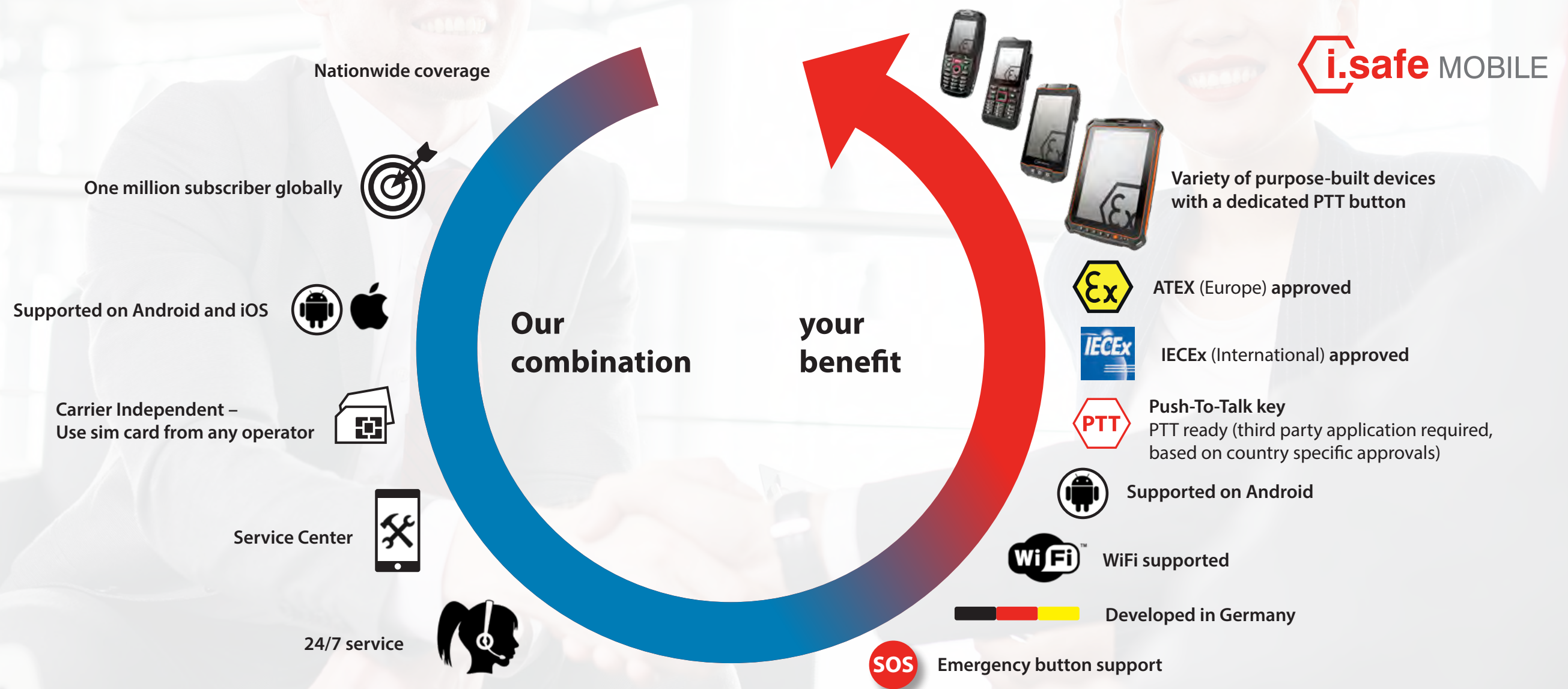
**Long lasting battery**



# i.safe MOBILE and WAVE PTX

i.safe MOBILE explosion-proof communication devices and Motorola Solutions' WAVE PTX broadband PTT service offer a professional communication solution for industrial use.

The combination of high quality, explosion-proof smartphones and tablets from i.safe MOBILE and the Motorola Solutions' WAVE PTX communication software provides companies, especially in the oil and gas sector, safe and interference-free PTT communication. Together, we make it possible for customers to gradually switch their PTT communication from 2-way radios to POC smartphones. In the transition phase, hybrid use is possible, i.e. communication between both types of communication via a special gateway.







**Our goal is to be a value-added solutions provider  
that helps you grow your business profitably,  
securely and efficiently.**