Mobile Site Planning Guide
All InHealth Mobile Units

Together, delivering excellence in healthcare
Due to the nature of the information contained in this document it is subject to change without notice, so before preparing for any installation of an InHealth mobile unit, please contact your Business Development Manager for the latest information. InHealth cannot be held responsible for any work undertaken which has not been clarified with your Business Development Manager first.

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Mobile units currently available

InHealth’s fleet of mobile unit systems puts advanced medical scanning capability within easy reach of healthcare managers, enabling them to quickly establish a service without long-term costs.

The trailer mounted units contain complete diagnostic equipment and give staff plenty of room in which to work, whilst creating a comfortable patient experience.

InHealth is able to provide an expanding number of services through mobile units, which now include:

• MRI
• CT
• PET/CT
• DXA
• Ultrasound
• X-Ray
• Mammography
• Audiology
• Mobile Cardiac Catheterisation Laboratory

This booklet will give you an overview of what is required for the siting and installation of an InHealth mobile diagnostic unit, but each unit has a different specification, such as size and layout, so please check with your Business Development Manager if you have any specific questions.
Pad requirements

Each mobile unit varies slightly, so below is an indication of which pad may be needed for a mobile unit to visit your site.

Concrete support pads will be required but as site conditions vary you should consult a local contractor for their advice on what is required. Listed below is a guide to the requirements.

Potential pad designs

Support pad - This will take the main weight of the unit. A full pad measuring 2.54m wide x 13.68m long must be laid. The pad must be level and have no more than 500mm variation over the full length and 150mm over the full width. If this is not correct, the unit will not be able to be sited.

Service pad - The measurement of 6.40m wide x 15.51m long is recommended to provide full service access to the unit. Please note that the side pull outs to the unit will vary. The side expansions on the trailer will vary from 0.5m to 1m wide.

Weight

<table>
<thead>
<tr>
<th>Mobile</th>
<th>Weight of support pad (in tonnes)</th>
<th>Mobile</th>
<th>Weight resistance of support pad (in tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ultrasound</td>
<td>5</td>
<td>DXA</td>
<td>27</td>
</tr>
<tr>
<td>Mammography</td>
<td>12</td>
<td>Cardiac</td>
<td>30</td>
</tr>
<tr>
<td>Support</td>
<td>12</td>
<td>CT</td>
<td>30</td>
</tr>
<tr>
<td>Audiology</td>
<td>17</td>
<td>MRI</td>
<td>30</td>
</tr>
</tbody>
</table>

For clarification on any pad concerns, please contact your Business Development Manager, who will ensure that all issues are resolved.
Vehicle access requirements

All mobile units require a firm level surface surrounding the unit, which provides good access to the trailer, enables patient access, servicing of the unit and handling of all clinical products. It is the responsibility of the hospital to ensure that all access and egress routes for the mobile unit remain clear for delivery and removal of the unit.

Turning access required

All mobile units will need space to turn around in to enable siting; the turning circle specification is detailed below.
Power requirements and other service connections

A single electrical power source is required for operation of the system. Please see the table on page 7 for the power requirements for each mobile unit.

The configuration is 3-phase 5-wire, wye connection, with neutral and ground. (5 wire 3/N/PE AC 400V). The frequency is 50 Hz +/- 1Hz. The maximum voltage variation is + 5% from a nominal steady state (under the worst case conditions of line voltage). The mobile unit is supplied with a 10m 35mm or 70mm power cable with male connector. The power box must contain a 250 amp Marechal female connector (as pictured below).

The hospital will be responsible for the provision, installation and maintenance of the requested electricity mains power supply. We recommend that a residual current device is in place for all mobile units.

Configuration
3-Phase 5 wire, 35mm or 70mm multi core cable, wye connection including ground and neutral conductors 3/n/pe ac 400v + 5% max / FREQUENCY 50 Hz +/- 1Hz.

3-Phase / standard rotation 1,2,3 - Brown, Black, Grey, 240 between neutral and phase to phase 415v.

RCD settings
100 ma with 0.5 time delay.

Power quality
Line Voltage Variation:
 +/- 5% Max
Line Voltage Balance:
2% Between Phases
Frequency Variations:
 +/- 1Hz
Line Transients:
+2.5% <5Hz <10Hz per hour

Ideally the power supply should be on the hospitals essential power supply but we understand that this is not always possible and a non-essential supply will not cause any inconvenience for a mobile unit.
If a customer installs a 200 amp supply as in table above, it will be able to power all modalities. Please set RCD’s (Residual Current Device) to 100 ma with 0.5 time delay. IP rating for the distribution box - no less than IP 67.

### Generator power source

If a suitable power supply cannot be made available, we are able to provide two types of standalone generator and fuel tank to power the mobile units at an additional cost. Additional space will be required for the generators and diesel tanks and access for regular fuelling must be provided.

<table>
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<tr>
<th>Generator Type</th>
<th>Size</th>
<th>Weight</th>
<th>Noise Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard generator for 200 KVa</td>
<td>L3.6m x W1.2m x H 2.4m</td>
<td>Weight full 2.7 tons</td>
<td>At 7m is 65/67 dBA</td>
</tr>
<tr>
<td>Whisper generator for 200 KVa</td>
<td>L5.0m x W2.5m x 2.5m</td>
<td>Weight full 3.0 tons</td>
<td>At 7m is 48/49 dBA</td>
</tr>
</tbody>
</table>

Fuel consumption @ 75% load is 32.33lph, 66% load is 28.45lph, 50% load is 21.55lph.

External fuel tank is approx 2m x 1.5m x 1m containing 3000 litres of fuel.
Data connection

Some mobile units will need a data connection into the hospital. It is recommended to have a twin cat5e available on the wall and that the data line is dedicated. For specific questions regarding RIS PACS, please contact your Business Development Manager, who will ensure that all issues are resolved.

Telephone connection

All mobile units will need to be on the hospital switchboard or a dedicated telephone for CRASH purposes. Please provide a standard BT phone point.

Water supply*

A tap close to the unit’s location is required to provide water for the on-board air-conditioning installation and hand wash basin. A cold water line with 18.9 litres/min flow rate at 0.30Mpa-0.414Mpa (45-60 psi) will be required at the mobile. The water source should be no more than 10m away from the mobile unit to ensure that there is no loss of pressure between the source and the mobile. The mobile unit is supplied with a 19mm (3/4") diameter 10m (20') hose, terminated with a 19mm IPS female threaded connector hose lock. Maximum temperature should not exceed 21.1°C.

Drainage*

Foul water drainage is required.

*Connection specifications noted above may differ between services. For clarification on any service connection concerns, please contact your Business Development Manager, who will ensure that all issues are resolved.

Security

Whilst InHealth ensure that the units, generators and fuel tanks are placed in an agreed location, security of these is paramount. We advise the hospital to provide CCTV which covers all equipment or at least include it in any security patrols whilst it is on site.
Radiation issues

Because of the nature of the scanning processes used, radiation issues have to be taken into consideration by the hospital. It is required for CT, PET/CT and cardiac catheterisation labs to have a minimum 7 metre gap between the mobile screening unit and a multi-story building. The trailers do not have lead protection in their roofs so radiation will be emitted upwards and angled outwards. Your Business Development Manager will be able to advise you on all these issues but the main ones that you need to take into consideration for services involving radiation are:

**Environment Agency Licences**

There are three licences that a hospital needs to apply for from the Environment Agency. Form 1o and 1c - to register premises for open and closed source, e.g. keeping FDG on-site. Form 3 - to apply for the authorisation to accumulate and dispose of radioactive waste, e.g. disposing of any leftover FDG.

For further information on this, contact the Environment Agency on 08708 506506 or at: [www.environment-agency.gov.uk](http://www.environment-agency.gov.uk)

**Administration of Radioactive Substances Advisory Committee (ARSAC)**

Regulation 2 of the Medicines (Administration of Radioactive Substances) Regulation 1978, states that any doctor who wishes to administer radioactive medicinal products should hold a certificate issued by the Health Minister. The applicants, normally of Consultant status, supply information on their training and experience as well as on their services.

For more information call the ARSAC Support Unit on 01235 832421/834925 or application forms are available on [www.doh.gov.uk](http://www.doh.gov.uk)

**HSE**

You need to notify The Health and Safety Executive (HSE) that you are planning to use radioactive material 28 days prior to commencement. More information can be found on [www.hse.gov.uk](http://www.hse.gov.uk)

*Applies to PET/CT units only.*
Ionising Radiations Act 1999

This Act was brought into place to provide a framework for ensuring that exposure to ionising radiation arising from working activities is kept to a minimum. More information on this Act can be found from Her Majesty's Stationery Office at www hmso.gov.uk

Ionising Radiations (Medical Exposure) Regulations (IRMER)

These regulations were brought into place specifically for medical radiation exposure based upon the Ionising Radiations Act 1999. This regulation imposes duties on those responsible for administering ionising radiation with regards to protecting individuals undergoing medical exposure as part of their own treatment. More information on these regulations can be found from Her Majesty’s Stationery Office at www hmso.gov.uk

Magnetic and R F shielding

All InHealth scanning units are equipped with magnetic and R F shielding. The exclusion zone is restricted to the scanning room and appropriate warning signs are displayed.

There should be a 3 metre gap between the trailer and stationary vehicles or buildings.
Site checklist

To help you prepare for the arrival of your InHealth mobile unit, you will have to be able to meet all the requirements listed below:

**Hospital responsibilities**

- Vehicle access clearance
- Support pads in place
- Telephone line available
- Water supply checked and meets required specification
- Electrical supply checked and meets required specification
- Provision of suitable drainage facility checked and meets required specification

**InHealth responsibilities**

- Vehicle access checked
- Support pad checked
- Service access checked
- Electrical supply checked

**Contact us**

For further information contact your Business Development Manager at the Head Office details below.