

# RESILIENT TELECOMMUNICATIONS STRATEGY

## TELECOMMUNICATIONS SUB-GROUPS:

### A note of the Workshop for TSG representatives held in London 1 February, 2008

#### Purpose

1. The purpose of the workshop was threefold:
  - A. To provide an update on the delivery of the Resilient Telecommunications Strategy;
  - B. To identify what a Resilient Telecommunications Plan should contain and
  - C. To identify how the Plan might be developed by the Telecommunications Sub-Group by the deadline of September 2008.

#### **A. Update on the delivery of the Resilient Telecommunications Strategy**

2. See the attached update note<sup>1</sup>.

#### **B. Overview of a Resilient Telecommunications Plan**

3. The Plan ought to contain at least the following sections:
  1. An assessment to identify key local responders and resilience partners, their communication requirements and their arrangements for telecommunications.
  2. A 'gap analysis' to identify shortfalls in the resilience of the arrangements for telecommunications when viewed against the requirement for communication and the local risks to telecommunications.
  3. Steps to be taken to enhance the resilience of telecommunications and a timetable for undertaking any remedial actions.

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<sup>1</sup> Resilient Telecommunications Programme: Update, February 2008. CCS, Cabinet Office

4. Arrangements for liaising with neighbouring LRF areas.
5. Arrangements for testing and exercising telecommunications.

4. The Plan is to be used to capture local knowledge about arrangements for telecommunications of local responders and their resilience partners and identify how the resilience of these arrangements is to be improved to ensure that local responders and their resilience partners are able to communicate effectively even when faced with the most challenging circumstances. The Plan is to be used as a means for co-ordinating the approach taken to enhance resilience and to ensure that arrangements across responders and their partners are complementary and consistent.

5. The initial focus ought to be on what is essential and practicable to achieve in the way of early improvements. The priority should be local strategic-level inter-organisation communications. The Plan should be informed through the Community Risk Register.

6. The plan is to be a living document, updated as experience is gained through testing and exercising the arrangements and as circumstances change. The improvement process is to be continuous, issues that are identified but not pursued in the first pass of developing the Plan should be recorded with the view to them being revisited later.

### **1. An assessment of what is currently in place**

7. The local Multi-Agency Response Plan ought to be used to identify the organisations that will be involved in the response to and recovery from an emergency and their roles. This provides a key starting point, identifying how responses to different emergencies are organised it should enable critical activities to be identified that are dependent on communication for their execution.

8. **Tip:** For the range of emergencies covered by the response plan it may be helpful to identify key organisations (not just the Emergency Services) that are involved in a broad range of emergencies. Other organisations, not included in your plan at this stage, should be considered for inclusion at a later revision.

9. **Note:** Further advice is available on [UKResilience.gov.uk](http://UKResilience.gov.uk)<sup>2</sup>
10. The assessment of the means used to communicate should start from a clean sheet, namely a requirements-driven assessment should be undertaken to establish the communication requirements for different response scenarios without, at this stage considering technical solutions. These requirements could usefully be split into:
  1. Those which are internal to one organisation, and are therefore the responsibility of that organisation to improve, and
  2. Those which involve more than one organisation and therefore will involve a degree of co-ordination by the TSG.
11. The next stage is then to consider what technical solutions and non-technical procedures are currently in place to meet the communication requirements underpinning the critical activities to emergency response.
12. **Tip:** For a first pass, a quicker but less rigorous way forward could be to map the technical means used by each organisation for different response scenarios. The mapping will establish what technical means are currently in use<sup>3</sup> and what gaps might exist for different response scenarios. This establishes a back-drop for interoperability between organisations. However, it is important that a 'base line' assessment is considered at a future review.
13. **Tip:** The assessment could usefully start with arrangements that are in place for 'business as usual'.
14. **Note:** further advice is available on [UKResilience.gov.uk](http://UKResilience.gov.uk)<sup>4</sup>:
15. Telecommunications systems are not always available, systems may be out of service for maintenance, and equipment failure or severe congestion can result in loss or severe degradation of services. The assessment should identify:
  1. Fall-back arrangements to other means that are used by organisations when 'every day' arrangements either fail or become severely degraded and
  2. The circumstances in which other arrangements would need to be used.

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<sup>2</sup> [http://www.ukresilience.gov.uk/preparedness/resilient\\_telecommunications/enhancing.aspx](http://www.ukresilience.gov.uk/preparedness/resilient_telecommunications/enhancing.aspx)

<sup>3</sup> for example, Airwave (including the Talk Groups used), pagers, Mobile Business Radios etc

<sup>4</sup> [http://www.ukresilience.gov.uk/preparedness/resilient\\_telecommunications/enhancing.aspx](http://www.ukresilience.gov.uk/preparedness/resilient_telecommunications/enhancing.aspx)

## **2. Gap analysis**

16. From the assessment of technical means used to communicate the vulnerabilities in these means should be considered. Starting points for comparing the robustness of communication arrangements should be:

1. Appropriate entries in the Generic Challenges to Business Continuity<sup>5</sup>
2. Augmented by specific risk assessments contained in the Community Risk Register.

In carrying out this process it is useful to identify single points of technical failure in the underlying technologies.

17. **Tip:** For the first pass through the risk assessment process, TSGs may wish to concentrate on the implications of extreme weather, electrical power failure and telecommunications failure, noting that mobile phone networks generally will start to fail after grid distributed electricity has been disconnected from base stations for around one hour.

18. **Note:** Further advice and document downloads are available on UKResilience<sup>6</sup>:

19. A range of fall-back arrangements for communication should be identified.

20. **Note:** Falling back to other means<sup>7</sup> can have implications for the organisation of a response and the communication processes used.

## **3. Enhancing the resilience of communications**

21. The information gathered in the above assessments is used to identify where TSG activity needs to be focussed to make consistent and complementary arrangements to enhance the resilience of telecommunications through:

1. Enhancing the diversity of the technical means to communicate, both for internal requirements and for liaison with partners, and

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<sup>5</sup> [http://www.preparingforemergencies.gov.uk/business/generic\\_challenges/index.shtm](http://www.preparingforemergencies.gov.uk/business/generic_challenges/index.shtm)

<sup>6</sup> [http://www.ukresilience.gov.uk/preparedness/resilient\\_telecommunications/enhancing.aspx](http://www.ukresilience.gov.uk/preparedness/resilient_telecommunications/enhancing.aspx)

<sup>7</sup> For example, an organisation that uses Mobile Business Radios may fall back to using pagers and acknowledgement of the receipt of a message by a call from a fixed-line telephone.

2. Fall-back arrangements that are in place if the solutions of choice become unavailable, for both internal and external requirements, and
3. Ensuring interoperability, especially for requirements to communicate between organisations.

22. In addition, consideration should be given to enhancing resilience through non-technical means such as mitigating the consequences of water damage by having ready for deployment suitable means to prevent ingress of water. Other communications arrangements could be considered such as establishing partnerships with local taxi and courier companies and other organisations with local representation that use mobile radio communications systems (not cellular mobile telephones).

23. A communications directory could usefully be established to collect together the headline information gathered during the assessment and contacts who can be called upon to provide specific information and expertise in the event of an emergency. The directory could usefully identify the roles associated with particular arrangements.

24. The entries in the directory should identify if a privileged access scheme is currently associated with a particular role. For cellular mobile systems the ACCOLC scheme is to be replaced by MTPAS<sup>8</sup> and for fixed systems GTPS<sup>9</sup> is to be replaced by FTPAS<sup>10</sup>. These privileged access schemes will be managed through the TSGs using centrally developed guidance. TSGs will be notified as to roll-out of these schemes.

25. Consideration should be given as to how the privileged access schemes are to be locally managed. Central guidance will be available in due course.

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<sup>8</sup> Mobile Telephone Privileged Access Scheme

<sup>9</sup> Government Telephone Preference Scheme

<sup>10</sup> Fixed Telephone Privileged Access Scheme

#### **4. Liaising with neighbouring areas**

26. A point of contact is to be established in TSGs in neighbouring areas. Contact details are to be found on UKResilience.gov.uk<sup>11</sup>. Arrangements are to be put in place to share plans with neighbouring LRFs with the objectives of:

1. Ensuring that arrangements for communication are resilient across LRF boundaries and
2. Providing a means of identifying, sharing and using good practice.

#### **5. Testing and exercising arrangements contained in the Plan**

27. Arrangements need to be tested to ensure that they function in the manner in which they are intended when subjected to the relevant planning assumptions at appropriate locations and at all times. Organisations should test dependent systems, such as emergency generators and uninterruptible power supplies (UPS) under full-load conditions for representative periods. Additionally, multi-agency exercises should be held to ensure that arrangements for communication between organisations are resilient.

### **C. Developing the Plan**

28. As Telecommunications Sub-Groups (TSGs) mature they will become the centre of knowledge on local resilient telecommunications arrangements. TSGs should involve, representation (at an appropriately senior level) from all organisations that play a role in the local response to and recovery from emergencies. The objective of such involvement should be to:

1. Gather information to be included in the Plan and
2. Identify contacts to be called upon to provide specific information and expertise in the event of an emergency.

29. TSG membership ought to include:

- Emergency Services and Local Authority Emergency planners and others involved in response and recovery arrangements;

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<sup>11</sup> [http://www.ukresilience.gov.uk/preparedness/resilient\\_telecommunications/stakeholder.aspx](http://www.ukresilience.gov.uk/preparedness/resilient_telecommunications/stakeholder.aspx)

- Key Category 1 responders;
- Telecommunications specialists from both fixed and mobile suppliers;
- Utility distribution companies (electricity, gas and water);
- Practitioners who are already active in the area of resilient telecommunications such as: members of the Contingency Communications Group<sup>12</sup>; members of LRF or RRF Utilities Groups and RAYNET<sup>13</sup>;
- Voluntary organisations, where available;
- Military, where available and
- Central Government.

30. Utilities and other organisations should be involved as appropriate for local circumstances. For example, it would appear wise to engage with telecommunications suppliers identified in the assessment as providing services to key organisations and focus engagement with those suppliers on issues that are specific to local circumstances. This should be augmented by assessment of the implications for local communications from critical infrastructures<sup>14</sup>. Detailed assessments of critical infrastructure are to be made available to LRFs as a consequence of the Pitt Review<sup>15</sup>. The resilience of core telecommunications networks and electricity and gas distribution networks is managed nationally.

**Civil Contingencies Secretariat  
Cabinet Office**

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<sup>12</sup> Contained in “bulletin to LRF Chairs (September 2007)” available at [http://www.ukresilience.gov.uk/preparedness/resilient\\_telecommunications/stakeholder.aspx](http://www.ukresilience.gov.uk/preparedness/resilient_telecommunications/stakeholder.aspx)

<sup>13</sup> the Radio Amateurs’ Emergency Network, is the UK’s national voluntary communications service provided for the community by licensed radio amateurs. Visit them at [www.raynet-uk.net](http://www.raynet-uk.net).

<sup>14</sup> For example, during the response to the flooding in Gloucestershire (2007) an electricity grid switching station was identified as also being an important telecommunications hub serving key organisations – loss of the switching station would not only have resulted in wide-scale loss power but also local telecommunications.

<sup>15</sup> Interim Report, urgent recommendation 10. Details of critical infrastructure are to be available by end March, 2008. Learning lessons from the 2007 floods. An independent review by Sir Michael Pitt. December 2007. [http://www.cabinetoffice.gov.uk/thepittreview/interim\\_report.aspx](http://www.cabinetoffice.gov.uk/thepittreview/interim_report.aspx)