

# Emergency call service outages in Jersey during early 2020: a decision to give a Direction to each of JT (Jersey) Limited and Sure (Jersey) Limited

Non-confidential

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## 1. Executive summary

- 1.1 Everyone who lives on, or visits, Jersey relies on 999/112 services being available if they need to get help in an emergency.
- 1.2 During the period from January to April 2020 (the “**Relevant Period**”), 999/112 services in Jersey failed – not just once, but multiple times, and in at least one incident affecting one operator (on an intermittent basis) for a period of nearly two weeks. At one time or another, these outages affected all customers in Jersey on every network. Some of the failures were identified at the time; others were only identified in hindsight.
- 1.3 Taken in the round, the availability of 999/112 services in Jersey during the Relevant Period fell far short of what the Jersey Competition and Regulatory Authority (“**JCRA**” or the “**Authority**”) considers to be an acceptable level of reliability and safety.
- 1.4 As soon as it became aware of the issue, and once service had been restored, the Authority launched an investigation to understand how and why these problems occurred, and what steps would be necessary to prevent them from happening again. The Authority has also taken into account an investigation undertaken by the Justice and Home Affairs Department in Jersey (the “**JHAD**”), which directly oversees the operation of the emergency services. The findings of that investigation are set out in a report (the “**JHAD Report**”) that forms part of the evidence considered by the Authority.
- 1.5 The JHAD Report found that the most significant underlying problem has been the failures on the part of JT (Jersey) Limited (“**JT**”) when implementing a new IT system. These failings were not a single incident but a pattern of failure and avoidable problems. JT knew that its system was a source of risk in 2019. It adopted an approach that it now accepts did not meet relevant international and industry standards. Knowing of the risk to 999 services specifically, it adopted a ‘ring-fence’ arrangement that was designed to protect those calls, which failed to achieve its objective. JT did not test the system properly or to realise, when problems arose, that 999/112 services were likely to be affected. Months after initial problems, changes were still being adopted in an uncontrolled and untested way that resulted in further outages. The JHA found that the reasons provided by JT for the cause of faults “*range from configuration errors, human error, poor change control, interconnect issues between JT and Sure and poor testing following platform changes being made*”. Any one of these errors would be a source of concern and a trigger for remedial action. Taken in the round, and especially recurring in sequence, they imply deeper failures of rigour and approach during the Relevant Period.
- 1.6 The JHAD considers that JT’s failures reached the point of being “*completely unacceptable*”. We agree. JT’s failure to manage its systems properly and safely put people in Jersey at risk of finding that they could not reach an ambulance, police, coastguard or fire service when they needed it. Only the availability of the Jersey Police to step in and take on call handling duties protected users from an even greater degree of risk.

- 1.7 For its part, Sure (Jersey) Limited ("**Sure**") ought to have known that a failing interconnection link was a single point of failure for its 999 traffic, meaning that Sure customers may have been unable to access 999 calls reliably for nearly two weeks. This type of avoidable error is unacceptable in relation to these vital services. So is Sure's failure to realise there was a problem for so long (12 days). Indeed, the lingering problem was only identified and resolved when it escalated into an outage affecting all Sure customers.
- 1.8 The Authority has determined that JT and Sure each failed to comply with their licence conditions in important respects. This Decision sets out the steps that Authority is requiring those licensees to take to help avoid future incidents and restore confidence in emergency services.
- 1.9 Regardless of the way they choose to support that service, every licensee is accountable for the reliability of the emergency calls access provided to its own customers. For the reasons set out in this Decision, the Authority has today issued Directions to each of JT and Sure. The Authority is also holding discussions with the other two operators (Airtel-Vodafone and Homenet) to make sure the implications of this Decision for all licensees is understood.
- 1.10 Although every operator is accountable for their own services, as a critical supplier of Call Handling Agency ("**CHA**") services to all operators (under the current arrangement of services in Jersey), JT has a particularly important role to play. Although JT's role as a CHA is not directly licensed by the Authority, the Authority considers that the problems with the CHA service have created substantial risks and difficulties for Jersey's operators and consumers. The Authority expects all the operators to work together and with JT to fix those problems and to make sure that they do not recur.
- 1.11 This Decision sets out Directions which form part of a coordinated approach which the Authority is undertaking to restore reliability and confidence in 999/112 services in Jersey. This approach includes the following additional actions:
- (a) Revised guidelines setting key performance indicators for 999/112 services; and
  - (b) Further steps that the Authority expects all operators to adopt, including regular monitoring and annual audits of resilience and stability of 999/112 services.
- The Authority anticipates that it will be in a position to publish these guidelines and further steps for consultation either in later 2020 or the early part of 2021.
- 1.12 This Decision is not the final step in the Authority's investigation. The Authority also has the power to impose a financial penalty on a licensee, in addition to a Direction. The Authority has not yet taken any decision whether or not to impose a financial penalty on either or both of JT or Sure.
- 1.13 This Decision does not address a further incident that occurred on 12 July 2020, in which the JT network suffered an outage affecting all JT services, including access to emergency services by JT customers. The Authority's investigation into that incident is ongoing.

## 2. Regulatory framework

### Summary

- 2.1 This section briefly sets out the main elements of the legal framework relevant to the Authority's investigation. It addresses the regulatory obligations that apply to licensed telecommunications operators in Jersey in relation to 999/112 services, and that are relevant to this Decision.
- 2.2 The key points are that:
- (a) Each licensee's obligation to provide 999/112 services is set out in licence conditions. Those conditions require that each operator provides 999/112 services available '*at any time*' (Condition 14) and also that operators must notify the Authority about any fact or event that might affect their services (Condition 2.4(a));
  - (b) If an operator contravenes a licence condition, the Authority can enforce that condition by issuing a Direction and/or imposing a fine; and
  - (c) The Authority has other relevant powers to enable it to enforce and improve the regulatory regime, including to gather information or modify licence conditions.

### Telecoms in Jersey is regulated primarily via licence conditions

- 2.3 In Jersey, telecommunications are governed by the Telecommunications (Jersey) Law 2002 (the "**Telecoms Law**"). Pursuant to Article 2(1) of the Telecoms Law, a licence is required to run part, or all, of a telecommunications system.
- 2.4 JT and Sure (together, the "**Licensees**") each have licences authorised by the Authority. JT's renewed licence was issued on 30 June 2017 (the "**JT Licence**"). Sure's renewed licence was issued on 1 September 2015 (the "**Sure Licence**").<sup>1</sup>
- 2.5 Condition 14 of each of the JT and Sure Licences (hereafter, "each Licence") is entitled '*Public Emergency Calls*'. In each case, it provides that:

*14.1 The Licensee shall provide a public emergency call service, being a Telecommunications Service that enables a User at any time and without incurring any charge or using any coin or token, to communicate with the police, the ambulance or fire services or the marine search and rescue services and to notify them of an emergency by using Customer Premise Equipment lawfully connected to the Licensed Network at any place in the Bailiwick of Jersey.*

*14.2 The Licensee shall ensure that codes 112 and 999 and other codes which may be designated as emergency access codes are exclusively reserved for calls to emergency services.*

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<sup>1</sup> Other licensed providers offering voice services (and hence 999/112 services) are Jersey Airtel Limited ('Airtel-Vodafone') and Homenet Limited ('Homenet').

*14.3 The Licensee shall make such emergency call services available, at reasonable cost, to other Licensed Operators within the Bailiwick of Jersey.*

2.6 Condition 2.4(a) of each Licence provides that:

*Subject to Condition 8 [Force Majeure] the Licensee shall notify the JCRA of the occurrence of .....any fact or event likely to materially affect the Licensee's ability to comply with any Condition including any change to the Licensed Telecommunications System which may detrimentally affect the permanence, availability or quality of the Licensed Telecommunications System or Telecommunications Services.*

The Authority can enforce licence conditions by issuing a Direction

2.7 The Telecoms Law provides that:

*where, in the opinion of the Authority, a licensee is in contravention of a condition contained in a licence, the Authority shall give a direction to the licensee to take steps, or specified steps, to ensure compliance with that condition.<sup>2</sup>*

2.8 A direction shall:

- (a) specify the licence to which it relates;*
- (b) name the licensee or specify the class of persons to whom the licence has been granted; and*
- (c) specify the condition contravened.<sup>3</sup>*

2.9 Article 19(4) sets out that a direction:

- (a) Shall require the licensee to act or not to act, according to the nature of the condition and the contravention, in a manner specified in the direction;*
- (b) May require the licensee to take steps, or specified steps, to remedy the effects of the contravention; and*
- (c) May be modified at any time by the Authority, but only by giving a new direction in accordance with this Article.*

2.10 Article 19 also provides for instances in which the Authority should refrain from issuing a Direction. Specifically, Article 19(2F) stipulates that:

*the Authority shall not give a direction or notification under this Article if it is satisfied that its duties under Article 7 [Duties of Minister and Authority] preclude the giving of a direction.*

2.11 Article 19(2G) allows that:

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<sup>2</sup> Article 19(1) of Telecommunications (Jersey) Law 2002

<sup>3</sup> Article 19(3) of Telecommunications (Jersey) Law 2002

*the Authority shall not give a direction under this Article [19] if it is satisfied that –*

- (a) The contravention of the condition is trivial; or*
- (b) The licensee is taking reasonable steps to comply with the conditions and to remedy the effects of the contravention.*

2.12 The Authority's view of Article 19(2G)(b) is that in assessing the reasonable steps that the licensee "*is taking*", the Authority can, and should, consider the steps that were taken before, during and following the contravention – in other words, the words "*is taking*" are not to be constructed narrowly as relating solely to the point in time when the decision to issue a Direction is taken (although steps being taken at that point are also likely to be relevant). Instead, what Article 19(2G)(b) requires is that the Authority to consider the steps taken by the licensee at each of the relevant points in time considered in the investigation, and assess whether, in the round, those steps fulfil the statutory purposes that would otherwise be served by issuing a Direction, so as to render such a Direction inappropriate.

2.13 Condition 5.1(b) of each Licence provides that, in addition to complying with the conditions of their respective licences:

*.... the Licensees shall comply with any direction duly issued by the JCRA....*

### **The Authority can modify licence conditions**

2.14 The Telecoms Law provides for the Authority to modify licence conditions. Article 18(1) of the Telecoms Law specifies that:

*the Authority may, of its own motion or on the application of any person, modify any condition contained in a licence ...*

2.15 As set out in Article 18(3):

*the power to modify a condition contained in a licence includes the power to insert a new condition or amend or delete an existing condition ...*

2.16 Condition 6.1 of each Licence provides that:

*the JCRA may from time to time modify, delete or add to any Condition in this Licence. Any modification, deletion or addition to the Conditions shall be made in accordance with Article 18 of the Telecommunications (Jersey) Law and any other requirements under any applicable Law.*

### **The Authority's power to gather information**

2.17 Article 23 of the Telecoms Law provides the Authority with the statutory basis upon which it is able to request information. Article 23(1)(a) allows the Authority, by notice in writing to:

*require any person to produce to the Authority, or any person appointed by it for that purpose, any documents specified or described in the notice that are in the*



*custody, or under the control, of the first-mentioned person and specify the time, manner and form in which those documents are to be furnished.*

2.18 Condition 4 of each Licence stipulates that the Authority is authorised to gather information from any licensee.

(a) Condition 4.3 states that:

*the JCRA may require an examination, investigation or audit of any aspect of the Licensee's business relating to the Licensed Telecommunication System or its compliance with the Conditions and the Laws, and the Licensee shall provide any assistance requested by the JCRA in relation to any such examination, investigation or audit. The JCRA may issue directions with regard to the manner in which such an examination, investigation or audit is carried out, including the creation of financial and/or technical specifications or documentation.*

(b) Condition 4.4 states that:

*in particular, the JCRA may authorise a person to carry out an examination, investigation or audit or may require the Licensee to arrange for an examination, investigation or audit of any aspect of the Licensed Telecommunication System to ensure compliance with the Conditions. The Licensee shall allow the JCRA's authorised representative to attend at, enter and inspect any premises under the Licensee's or any of its Subsidiaries or Joint Ventures control, and to take copies of any documents and to acquire any information in the control of the Licensee or any of its Subsidiaries or Joint Ventures, as may be required in order to carry out the examination investigation or audit.*

(c) Condition 4.5 states that:

*the Licensee shall bear all reasonable costs associated with any examination, investigation or audit conducted under this Condition 4.*

## The Authority can fine operators who have contravened licence conditions

2.19 Article 19A of the Telecoms Law provides that where a licensee has contravened or is contravening a licence condition, the Authority may, in addition to, or in place of a Direction or other remedies,

*Make an order imposing a financial penalty on the licensee for the contravention.<sup>4</sup>*

2.20 The maximum penalty that can be imposed is 10% of turnover.<sup>5</sup>

<sup>4</sup> Telecoms Law, Article 19A(2).

<sup>5</sup> Article 19A(4) provides that 'A financial penalty imposed on a licensee or, if more than one financial penalty is imposed, the total of those penalties, must not exceed 10% of the turnover of the licensee during the period that the licensee was in contravention of the condition contained in the licence, to a maximum period of 3 years.'

2.21 The Authority has made no decision whether to exercise its power under Article 19A in relation to the contraventions set out in this decision.

### 3. The Authority's investigation

#### Summary

- 3.1 This section explains the steps that the Authority took in conducting its investigation, including the draft decisions that were issued to JT and Sure.

#### Prior to the investigation

- 3.2 As discussed in section 4, the Authority's predecessor, the Channel Islands Competition and Regulatory Authority<sup>6</sup> ("CICRA") was informed on 10 April by Sure that there had been an outage on 9 April 2020. At the time, Sure notified CICRA of a 30-minute outage and that service had been restored. A week later, Sure further assured CICRA that the problem had been fixed.
- 3.3 Based on the information available to it at the time (that the outage was limited and that the problem had been promptly and conclusively fixed), CICRA opted to take no further action at that time.

#### The Authority's Investigation

- 3.4 Following receipt of the JHAD Report on 13 May 2020, and after a short delay at JT's request to allow it to undertake further short-term efforts to address the service problems, the Authority notified all of the licenced operators in Jersey on 12 June 2020 that it planned to launch an investigation.<sup>7</sup> This included notifications to Airtel-Vodafone and Homenet (the other two licenced operators in Jersey aside from JT and Sure).
- 3.5 The notifications indicated that the objective of the investigation was to:
- (a) consider the problems experienced with emergency calls in Jersey since the beginning of 2020; and
  - (b) identify the root cause of the issues of the end-to-end 999/112 service provided by each licensee to its customers.
- 3.6 Reflecting the findings of the JHAD Report and on the basis of Authority's duty to allocated its limited resources in a manner which accords with the efficient use of public finances, the scope of the investigation was limited to JT and Sure. Nevertheless, the Authority has also considered the implications for the other licensed operators offering number-based voice call services in Jersey – see section 6.
- 3.7 To progress its investigation and to seek specialist technical advice on the issues relating to 999/112 services, the Authority exercised its right under Condition 4 of each Licence and engaged Cognitio Consultants Limited ("Cognitio"). Cognitio was given the following terms of reference:

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<sup>6</sup> CICRA exercised the authority of each of the JCRA and its counterpart in Guernsey.

<sup>7</sup> Letter from JCRA to JT dated 12 June 2020; Letter from JCRA to Sure dated 12 June 2020.

- (a) What caused the issues that have affected the end-to-end emergency call handling services in Jersey since 1 January 2020?
- (b) On which operator's network did the fault(s) occur?
- (c) How did the issues impact on the emergency call handling service?
- (d) What actions have been taken to resolve the issues?
- (e) What testing was carried out to ensure that the issue identified was resolved satisfactorily? Was testing required with any interconnected party? Was such testing carried out successfully?
- (f) Are any issues still remaining or are any issues still seeking a permanent solution? If so, what issue, what is the current work-around and what is the timescale for a permanent resolution of the issue?
- (g) Were the JCRA notified regarding each and every issue that affected the emergency call handling service during the period under investigation?
- (h) Did all licenced operators comply with their relevant licence conditions?<sup>8</sup>

3.8 On 18 June 2020, the Authority issued each of JT and Sure with a questionnaire. The responses to these questionnaires were included as annexes in Cognito's report entitled 'Incident Report and Recommendations 999/112 in Jersey During 2020' (the "**Cognito Report**"), which was issued on 7 July 2020.<sup>9</sup>

#### The Authority's Proposed Directions

- 3.9 Having considered the findings of the Cognito Report, the Authority wrote to each of JT and Sure on 22 July 2020. In each case, the Authority:
- (a) Set out its opinion that the relevant licensed operator had:
    - (1) failed to manage and provide the public emergency call service; and
    - (2) failed to notify the Authority of all the network issues contrary to Condition 2.4(a) of their respective licences.
  - (b) Set out the analysis behind its conclusions (and included the relevant evidence, including material from the JHAD Report) and the Cognito Report in full, as well as the material received from each licensee.<sup>10</sup>
  - (c) Gave written notification to the relevant licensed operator of its provisional decision that the relevant licensed operator had contravened Condition 14 of its licence.

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<sup>8</sup> JCRA brief to Cognito Consultants.

<sup>9</sup> The Sure response had certain material Sure considered to be confidential redacted. This report was the first report commissioned by JCRA from Cognito in relation to this matter, and dealt with an initial investigation of the root cause of 999/112 failures in the first half of 2020.

<sup>10</sup> In the case of Sure's response, certain specific confidential information was redacted to avoid disclosure to JT.

- (d) Gave written notification to the relevant licensed operator of its proposal to issue Directions to the relevant licensed operator pursuant to Article 19(1) of the Telecoms Law and Condition 14 of its licences.
- (e) Set out proposed Directions applicable to the relevant licensed operator (see paragraphs 3.10 below).
- (f) Indicated that the relevant licensed operator was entitled to provide the Authority with written representations by 5 August 2020 concerning the proposed Directions in accordance with Article 11(3), 19(2) and 19(2B) of the Telecoms Law.

3.10 The Authority set out three proposed Directions in relation to each of JT and Sure:

- (a) Direction 1: Provide access to independent auditors appointed by the Authority to carry out an audit on the governance and project management that led up to the issues and incidents identified in the Cognitio Report.
- (b) Direction 2: Provide access to independent auditors appointed by the Authority to carry out an audit of processes and especially governance that would ensure no future incidents of this nature occur. This audit would be cross-domain and focused on the key issues identified in Section 8.2 of the Cognitio Report.<sup>11</sup>
- (c) Direction 3: To carry out 30-minute cycle testing of networks for the foreseeable future or until such time that a method of assurance for 999/112 services are agreed by all parties.

3.11 Further to this, the Authority's letters to JT and Sure of 22 July 2020 each indicated that the Authority considers that it will be necessary for appropriate Key Performance Indicators ("KPIs") to be put in place to monitor and ensure that all licensed operators operating in Jersey comply with Condition 14 of their respective licences going forward.

3.12 In addition, the Authority also set out the requirements it intended to issue to all licensed operators operating in Jersey to ensure that the high standards of emergency call services are supported by robust operational and business practices:

- (a) Common requirements for the emergency call service; and
- (b) Auditing and review requirements.

JT's response

3.13 JT provided a written response to the Authority on 5 August 2020.

3.14 In summary, JT maintained that it has taken reasonable remedial steps following the failures in the provision of emergency call services in Jersey during the period under investigation and indicated that it had taken on board the recommendations of the Cognitio Report. Nonetheless, JT welcomed the Authority's investigation and accepted each of the Authority's proposed Directions.

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<sup>11</sup> Cognitio Report, Section 8.2 - Recommendation 1 – Process and Governance Audit

- 3.15 JT also welcomed discussion with the Authority to ensure a clear understanding of the emergency service KPI requirements. In particular, JT:
- (a) sought further clarification on the measurement of the Authority's proposed network availability KPI; and
  - (b) raised some objection to the proposal that JT's Emergency Call Handling ("ECH") call centre should be expected to provide sufficient network, system and human resources such that, in any 24-hour period, 99% of incoming calls wait less than five seconds before being answered. JT instead favoured a target of 95%.

#### Sure's response

- 3.16 Sure provided a written response to the Authority on 5 August 2020.
- 3.17 In summary, Sure accepted that there had been an issue with emergency call services in Jersey during the Relevant Period and that this could never be considered a trivial matter. As regards an alleged contravention of Condition 14 of the Sure Licence, Sure maintained that it was not accountable for Incidents One, Two, Five and Six as set out in the JHAD Report (see paragraph 4.18 below) on the basis that these related to the CHA function within JT.
- 3.18 In relation to Incidents Three and Four as set out in the JHAD Report (see paragraph 4.18 below), Sure responded that, in so far as it bore responsibility for these, it acted immediately to rectify the issue and continued to take action to ensure that measures are in place to prevent a reoccurrence.
- 3.19 Sure disputed that it had contravened Condition 2.4 (a) of the Sure Licence, on the basis of the emails that it had sent to CICRA on 10 April and 17 April 2020.
- 3.20 In relation to the Authority's proposed network availability KPI, Sure expressed concern that a target which required all licenced operators in Jersey to maintain network availability such that in any given calendar month the service will be available at least 99.999% of the time, may be disproportionately high.
- 3.21 Sure also raised a procedural point in relation to the period for representations to be made on the Proposed Directions. In relation to that issue:
- (a) Sure contended that, based on Article 19(2A) of the Telecoms Law, the Authority should have provided Sure with a period of 28 days to make representations, rather than the 14 days afforded in the Authority's 22 July letter. Sure acknowledged the Authority's view of the need for urgency given that access to emergency services is a paramount concern.
  - (b) Apart from its view of the statutory period, Sure did not advance any substantive argument or evidence as to any disadvantage it had in fact suffered as a result of the shorter period.

- (c) In any event, on 19 August 2020, the Authority granted Sure an additional 14 days - until 2 September 2020 - to make any further additional representations it wished to make in response to the proposed Directions.
- (d) Sure wrote to the Authority on 1 September 2020 indicating that it had neither any further comment to make, nor any further evidence to present in response to the Authority's 22 July 2020 letter to Sure.

#### Confirmation of factual material and evidence considered

- 3.22 During the period when it was considering the JT and Sure responses to the proposed Directions, the Authority provided each of JT and Sure with a copy of an earlier draft of Section 4 of this Decision and a copy of Annex 1, setting out the evidence considered by the Authority.
- 3.23 The Authority received feedback from each operator, which has been considered and taken into account, where appropriate, in this Decision.

#### Sure's additional submission

- 3.24 During the process of confirming factual material and evidence, it became apparent that (contrary to the Authority's understanding), Sure had not seen the full JHAD Report. The Authority therefore provided Sure with an additional opportunity to make any points that it wished to make in response to the full version of that Report ("Sure's additional submission").
- 3.25 Sure's additional submissions were, in summary that:
  - (a) The JHAD Report in full reinforced the points that Sure had made in its earlier submission.
  - (b) Sure questioned whether Cognitio had seen the full JHAD Report and took issue with what it characterised as 'equal weight' given by Cognitio *'to what it describes as the failure in network connectivity (the issue on the JT and Sure interconnection) and the failure of the call centre functionality (that is, the platform used for the ECH Service, or Part B)'*. Sure considers that such 'equal weighting' is 'carried through to the recommendation (R1) that both JT and Sure should be subject to an independent audit of certain aspects of their operations.
  - (c) Sure repeating Sure's argument (discussed in section 5) that Sure *'cannot and will not be held responsible for JT's poor project management'* and that *'it would be disproportionate and unacceptable to Sure if the Authority's Final Decision were to apply the remedies to Sure that are focused on addressing issues that were – and continue to be - completely outside Sure's control'*.
  - (d) Noting that JT had not notified Sure of any of the Incidents One, Two, Five or Six, and that had Sure been aware, *'This may have also made us more alert to the interconnect failure'* that led to Incidents Three and Four.

- (e) Emphasising that the failure in Incident Four was an intermittent, not a continuous, failure.
- (f) Providing some further detail on the calculation of the number of calls recorded as having failed in respect of each network – in summary, *‘the JT number is ... an underestimate’*, as it relies on customers reporting their failure to reach 999.

3.26 These additional submissions are discussed where they arise in section 5.

### Cooperation with the investigation

- 3.27 Both operators have cooperated with the Authority’s investigation, responding in a timely way to requests for information and generally being available to assist the Authority to complete its work. Notwithstanding our findings, we acknowledge the prompt and professional engagement of the teams from both JT and Sure throughout the investigation.
- 3.28 We specifically acknowledge the cooperation of specific licensees at key moments in the investigation:
- (a) JT’s decision to commence implementing the Authority’s proposed directions ahead of this decision;
  - (b) Sure’s willingness to provide any additional comments on the JHAD Report promptly (to a timetable nominated by Sure), at a point when it became apparent that, contrary to the Authority’s previous understanding, Sure had not seen the JHAD Report in full.
- 3.29 The degree of cooperation by a licensee is not relevant to the question of whether a contravention has occurred, nor does it affect directly the decision about what remedies to impose in any Direction. It is likely to be relevant to take into account as one factor (amongst others) in any subsequent decision to impose a fine.



## 4. Relevant facts

### Summary

4.1 This section summarises the facts relevant to the Authority's investigation. It includes:

- (a) Some information explaining how calls to emergency services are provided in Jersey;
- (b) Brief information about JT's decision to move to a new system (the "Avaya" system) for its CHA platform in 2019;
- (c) The information available to public agencies in Jersey during early 2020 (which led to the JHAD Report and the launch of the Authority's investigation);
- (d) Details of the six incidents referred to in the JHAD Report, each being an outage or instance during the Relevant Period when access to emergency calls in Jersey was impaired for at least some consumers; and
- (e) The findings of the Cognito Report.

### Background: Calls to emergency services in Jersey

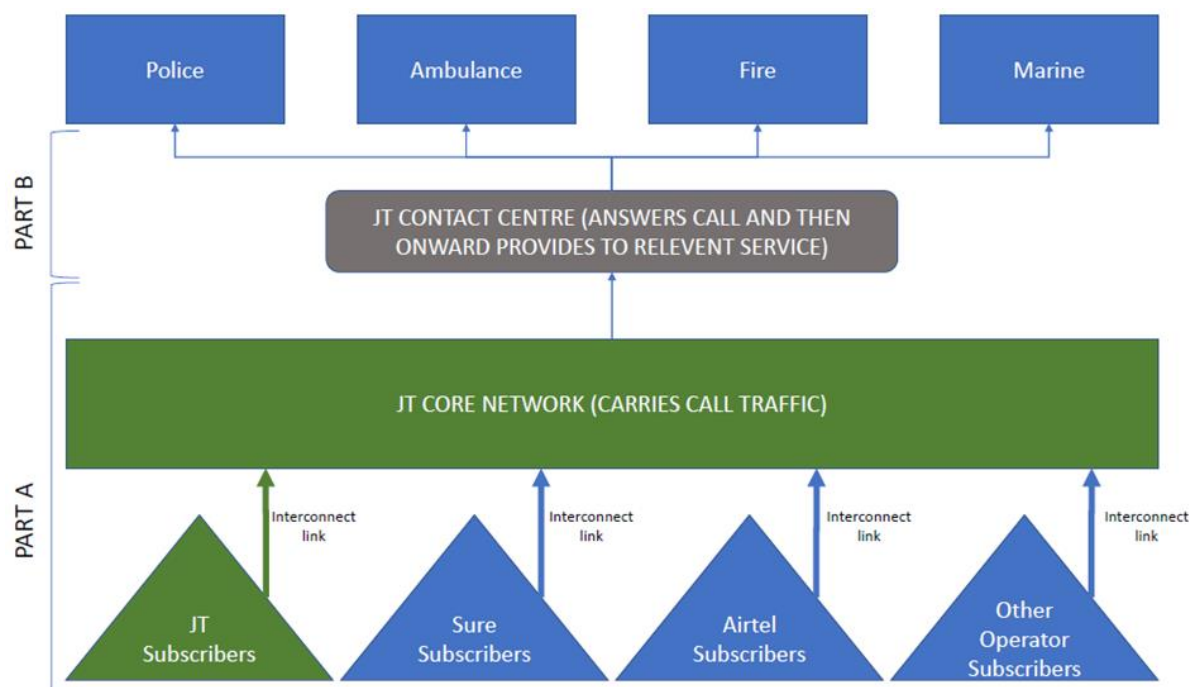
4.2 As noted in section 2, each licensed operator has an obligation under their licence to ensure that they offer 999/112 calls at any time, and at no charge. Each licensed operator in Jersey that operates an access network (that is, a network that offers fixed line services or mobile services) uses their infrastructure to allow 999/112 calls to be made free of charge on their network. But this is only one of three elements needed to provide a full end-to-end 999/112 service. The other two elements are:

- (a) The role of the CHA; and
- (b) The role played by the emergency services themselves in receiving and dealing with the calls. There is no dispute (as far as the Authority is aware) by the licensees that, at all times, the emergency services in Jersey have played their role fully and without interruption or incident.

4.3 Currently, JT undertakes the function of CHA for the provision of public emergency call services for all licensed operators in Jersey. 999/112 calls which originate from another licensed operator (i.e. other than JT's own directly connected customers) are passed over an interconnection circuit connecting that operator's network to the JT core network. These interconnect links are governed by separate commercial arrangements between JT and each of the other licensed operators. The terms of those arrangements determine the service provided by JT with its associated interconnection charge (the service is charged in relation to the duration of the 112/999 call).

4.4 When the service is operating properly, all 999/112 calls – whether they have originated on the JT or another licensed operator's network - are answered by JT's call centre, referred to as the ECH team, which is staffed by a small number of operators.

- 4.5 The ECH team answer the calls and redirects them, together with limited handover information, to the relevant emergency service. The ECH team also undertakes call centre work separate to this function when there are no 999/112 calls to be dealt with.
- 4.6 This diagram, taken from the draft Code of Conduct proposed by JHAD, illustrates these relationships<sup>12</sup>:



- 4.7 As a result, the ability of each licensed operator (other than JT) to offer 999/112 calls to its own customers depends on that licensed operator successfully delivering or purchasing:
- (a) An effective interconnection with JT; and
  - (b) Call conveyance to the Contact Centre
  - (c) Call handling by the relevant CHA (in this case, JT).

### Background: JT's decision to adopt the Avaya system

- 4.8 Prior to 2019, JT's CHA relied on a system known as Interactive Intelligence ("ININ"), which was reaching the end of its useable life. As JT's evidence to the Authority's investigation states:

*Historically, the JT Emergency Call Handling Agent (CHA) function utilised the Interactive Intelligence call handling platform to handle all calls into JT's call centre, including 999/112 ES calls. By the end of 2019 the ININ platform was out of support and noted as a risk on JT's corporate risk register. A project was started to replace the ININ platform and new supplier, Avaya was chosen to*

<sup>12</sup> The Authority acknowledges that while this diagram is taken from draft Code of Conduct, it should be noted that the diagram was originally provided to States of Jersey Police by JT.

*install their Oceana product set. During the Avaya platform deployment and following reliability issues with the ININ platform (including the loss of call recording), JT took the cautious decision to move the CHA 999/112 services to a simplified, ring-fenced Avaya solution to minimise exposure to the Avaya implementation and ongoing development. This work was carried out on 6th December 2019 and key members of JHA were notified.*

- 4.9 At the time, JT did not notify the Authority about the risks arising from ININ being unsupported, the loss of call recording capabilities nor the decision to move to a new platform for emergency services.<sup>13</sup>
- 4.10 The Authority understands the reference to ensuring that 999/112 services should be structured so as to “*minimise exposure to the Avaya implementation and ongoing development*” refers to the fact that JT was also adopting Avaya’s Oceana platform to support its call centres for commercial purposes.

### Information available to public bodies in Jersey during 2020

- 4.11 The Jersey police were aware of service outages on 20 January 2020 and 7 April 2020 and worked with JT to restore service. JT did not notify the Authority about either service outage.
- 4.12 On 10 April 2020, CICRA received an email from a senior executive at Sure reporting that Sure had discovered that some emergency calls from Sure numbers in Jersey had failed during the latter part of the previous evening (9 April 2020). Sure stated that it had been made aware of the issue at 23:00 on 9 April 2020, allowing its engineers to “*trace the problem to a fault on one of JT’s interconnectors.*”<sup>14</sup> Sure reported that the problem had only been sustained for 30 minutes and that it had been resolved by 23:30. It also noted that it had informed the States of Jersey Police, other emergency authorities and the Jersey Digital Policy Unity of the issue, as well as liaising with JT.
- 4.13 Subsequently, at 18:31 on 10 April, Sure confirmed that the solution that had been put in place at 23:30 on 9 April was “*fully resilient*” and that it had no plans to return to the link to JT which had failed.<sup>15</sup>
- 4.14 On 17 April 2020 Sure emailed CICRA again, assuring CICRA that the solution which had been in place since 9 April 2020 continued to be effective and that Sure had confidence in the resilience of the solution going forward.<sup>16</sup> Sure confirmed that JT was still in the process of investigating the technical reason for the incident at that point and that lessons learnt were being progressed between JT and Sure.
- 4.15 In May 2020 the JHAD commissioned a report into the resilience and future operation of emergency call services in Jersey. This was published as the JHAD Report. This was in response

<sup>13</sup> Sure notes in its evidence to JCRA that JT did not inform Sure of any of these risks.

<sup>14</sup> Email sent from Sure to a senior executive at CICRA at 11:27 on 10 April 2020

<sup>15</sup> Email sent from Sure to a senior executive at CICRA at 18:31 on 10 April 2020

<sup>16</sup> Email sent from Sure to a senior executive at CICRA at 16:41 on 17 April 2020

to the “*higher than normal number of recent failures*”<sup>17</sup> during the period from January to April 2020, which the JHAD had been alerted to by the States of Jersey Police.

- 4.16 The JHAD Report included a completed 999 Failure Timeline for the period from 20 January to 30 April 2020 setting out six incidents referred to at paragraph 4.18 below.
- 4.17 The Authority received the JHAD Report (v1) on 13 May 2020.<sup>18</sup> It was also provided by the JHAD to JT (who also subsequently received a copy of a further version (v2.2.) of the Report.<sup>19</sup> Sure received a copy of the full JHAD Report (both versions) on 9 October 2020.<sup>20</sup>

### The six incidents

- 4.18 Six specific incidents of failure were identified in the JHAD Report (based on information provided by Jersey Police) as occurring during the Relevant Period. These were as follows (as reported in the JHAD Report):<sup>21</sup>

(a) **Incident One:** 20 January 2020 - 16:21 –19:46 (3 h, 25 m)

- (1) During this period all 999/112 calls made in Jersey by-passed the ECH team at JT, resulting in the failover of those calls directly to the controllers at the States of Jersey Police.
- (2) These failovers were caused by unforeseen issues arising during configurations of JT’s Avaya system being undertaken by personnel in JT London based team. Specifically, media servers had been configured for high availability, but had not been set-up correctly.
- (3) As a result of the failure calls were diverted to the police, no missed 999/112 calls were identified.

(b) **Incident Two:** 7 April 2020 - 11:50 – 13:47 (1h, 57m)

- (1) During this period there was an outage in relation to 999/112 calls made in Jersey, resulting in no individual caller being able to get through to the emergency services upon dialling either number.
- (2) The States of Jersey Police subsequently contacted 9 individuals who had attempted to reach the emergency services during this period of outage but had been unable to do so. It was confirmed that these individuals had been able to reach the emergency services via another channel (for example, by calling the police station directly via its telephone number). However, it is not known exactly how many actual 999/112 calls were attempted during this outage period.

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<sup>17</sup> JHAD Report, page 1

<sup>18</sup> This was version 2.1 of the JHAD Report.

<sup>19</sup> For the purposes of this decision, there are no material differences in the versions of the Report.

<sup>20</sup> The JCRA had previously understood that the JHAD Report had been provided to both operators by JHA, but in fact-checking for this Decision, it became apparent to JCRA and to Sure that this had not occurred. Although the core facts concerning the outages were extracted in the Proposed Direction, JCRA provided Sure with a further opportunity to make any additional points it wished to make in light of that Report. Sure responded with additional comments on 23 October 2020 however these brought no new substantive material to light beyond that which had already been considered by the Authority.

<sup>21</sup> Except where otherwise indicated, the information in this section is drawn from the JHAD Report.

- (3) The outage was caused by human error and a Citrix glitch on the part of an engineer at JT's London premises. This error arose in a context where there had been insufficient governance, as well as a lack of peer review benchmarking on the part of JT. The outage also demonstrated that the correct alarm mechanisms were not in place.
- (c) **Incident Three:** 9 April 2020 - 14:50 – 23:30 (8h, 40m)
- (1) During this period there was a failure in the interconnect between JT and Sure.
  - (2) This resulted in all 999/112 calls made on the Sure network during this period being unable to connect with the JT 999/112 operators.
  - (3) Subsequent to the interconnect failure, the States of Jersey Police requested call data of each of the licenced operators in Jersey. In doing so, it became apparent that 15 individuals had attempted to make a total of 47 calls to the emergency services via 999/112 during this 8h 40m period. The States of Jersey Police directly followed up with each of these 15 individuals.
- (d) **Incident Four:** 29 March – 9 April 2020 (12 days)
- (1) On further investigation in the aftermath of Incident 3 it became apparent that the same issue which had caused it had in fact been a much longer running problem than first assessed.
  - (2) Over the course of a period of 12 days from 29 March to 9 April 2020, intermittent failure in the interconnection between JT and Sure resulted in 127 calls from individuals who were subscribers to the Sure network being unable to reach the emergency services.
  - (3) The States of Jersey Police undertook a call back process in the case of each of the 127 calls. 36 calls were to the police, 34 to the ambulance service and 2 were to the fire service. 49 calls were accidental, 1 was a hoax and 5 were made for unknown reasons.
- (e) **Incident Five:** 16 April 2020 - 13:00 – 15:30 (2h 30m)
- (1) All 999/112 calls made in Jersey during this period failed to reach the ECH team at JT, instead routed straight through to the controllers at the States of Jersey Police.
  - (2) Given that the system routed calls through to the Police when the issues was encountered, no missed 999/112 calls were reported as a result of this incident.
- (f) **Incident Six:** 17.39 on 29 April - 08:30 on 30 April 2020 (14h 41m)
- (1) For a period of 41 minutes between 17:39 - 18:20 on 29 April, there was a 999/112 outage across Jersey, resulting in no individual caller being able to reach the emergency services upon dialling either number.

- (2) The JT ECH service remained out of operation from 18:20 on 29 April to 08:30 on 30 April. All 999/112 calls during this period were failed over to ring straight through to the States of Jersey Police controllers.<sup>22</sup>
- (3) The JHAD Report noted the JHA's understanding that that the original 41 minute outage was due to system changes implemented by Avaya in Poland which were replicated in the JT system without being tested.
- (4) There were 60 attempts to call 999/112 during the 41 minute outage period, with the majority of these being attributed to test calls. The States of Jersey Police undertook a call back process in each of the other instances. Two individuals were identified as having tried to contact the emergency services. One of these was an accidental dial, and the second related to an individual who had attempted to reach the ambulance service and was subsequently hospitalised.

### The findings of the Cognitio Report

4.19 The Cognitio Report found that there were several areas where each of JT and Sure had failed to apply best practice in dealing with emergency calls in Jersey, resulting in each operator failing to ensure that their public emergency call service was available to the public at all times.

4.20 The Cognitio Report noted that:

*The report finds that there were several areas where both operators have failed to apply best practice in dealing with 999 calls. Some Sure staff were unaware of the traffic it was carrying (which should be a matter of concern for management) and JT allowed changes to be made to an in service call handling system. Both operators have taken steps to remediate the immediate fault and these steps are liable to prevent such problems occurring again.*

*The investigation has exposed deficiencies in the change management and project management in both operators and we recommend a further audit, within this context of the recent incidents and a broader audit of the technology management function at both operators. To be clear, the broader audit should be conducted to ensure that new technology can fulfil the requirements of 999 call handling and that there is governance in place to prevent such future incidents and to ensure risk management mitigates any potential issues of similar nature. The intent and purpose of the latter audit should be to ensure a more proactive approach to managing critical communications infrastructure and communication of incidents to the JCRA and agencies.*

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<sup>22</sup> JT confirmed to the Authority on 8 October 2020 that this "out of operation" state was intentionally applied by JT as a precaution as part of a decision made by operational management. If required, calls could have returned to JT overnight as the incident itself was resolved but not closed.

4.21 The Cognito Report also indicated that there were deficiencies in each of JT's and Sure's change and project management functions and recommended that the following should be undertaken in relation to each of JT and Sure:

- (a) a further audit to *"ensure a more proactive approach to managing critical communications infrastructure and communication of incidents to the JCRA and agencies."* (the **"Further Audit"**)
- (b) a broader audit to *"ensure that new technology can fulfil the requirements of 999 call handling and that there is governance in place to prevent such future incidents and to ensure risk management mitigates any potential issues of similar nature."*<sup>23</sup> (the **"Broader Audit"**)

4.22 More specifically, the Cognito Report made the following findings:

- (a) Both JT and Sure *"have remediated the immediate technical issues"* which gave rise to the failures in the public emergency call service during the Relevant Period.
- (b) Cognito found that *"Sure staff should have known that the failed link was carrying emergency traffic,"* and that *"Sure management should have proactive measures to mitigate such potential issues."* Cognito indicated that this *"latter point was not dwelt upon"* in its investigation but that it *"should be the subject of follow up work."* Cognito also noted that it understood that *"in future emergency traffic will be better prioritised"* by Sure.
- (c) With respect to JT, the Cognito Report found that it *"should not have allowed potentially disruptive configuration changes to affect emergency service call handling and as a minimum should have had mitigations ready as a part of good project governance."*
- (d) Cognito noted that *"despite both JT and Sure making reference to their adherence to ISO27k and standard project methodologies, these methods are not universally applied nor is governance functioning correctly."* Cognito stressed that *"this should be cause for concern"* and be *"the main subject of the recommendations"*. It found that while *"some measures have been put in place at both operators,"* these *"should be verified separately and independently as a matter of good governance for JCRA."*
- (e) Both JT and Sure *"had learnt and embedded change as a consequence of the call failures."*
- (f) Cognito welcomed the fact that *"JT is deploying regular 30-minute testing of its 999 service to ensure it is operational"* given that this is an *"easy to understand method of assurance."*<sup>24</sup>

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<sup>23</sup> Cognito Report dated 7 July 2020, page 5

<sup>24</sup> Cognito Report dated 7 July 2020, page 18

- 4.23 During fact-checking, Sure made a number of other submissions about points of factual detail in the Cognitio Report that Sure considered to be incorrect or misleading.<sup>25</sup> These are discussed as they arise in relation to specific contraventions in section 5.
- 4.24 One specific point that Sure raised is to question whether Cognitio had seen the full JHAD Report. As the Cognitio Report itself makes clear, the primary evidence upon which it is based is the material provided directly by JT and Sure to Cognitio.

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<sup>25</sup> Sure letter to JCRA, 12 October 2020 and the Sure additional submission.



## 5. Analysis and evidence of breaches

### Summary

5.1 This section sets out the Authority's analysis in support of its decisions concerning contraventions of JT and/or Sure's relevant licence conditions.

### Breakdown of the six incidents into three categories for regulatory analysis

- 5.2 The six incidents are described in section 4. In order to understand what contraventions may have occurred, the Authority has grouped the incidents in the following way – in order, from highest to lowest, in terms of their impact on users and hence, seriousness:
- (a) **Cases where JT's CHA failed, leading to a total outage.** This describes what happened in Incident Two, and also for 41 minutes during Incident Six. These cases resulted in all customers on Jersey having a complete loss of 999 service.
  - (b) **Cases where the interconnection between JT and Sure caused problems.** This relates to Incidents Three and Four (Incident Three was a short outage that was discovered at the time; Incident Four is the longer intermittent outage that preceded it but was not discovered at the time).<sup>26</sup> These cases involve some customers (that is, customers on the Sure network) having a complete (or intermittent) loss of 999 service, leaving other customers (on other networks) unaffected.
  - (c) **Cases where JT's CHA failed and the States of Jersey Police stepped in take the burden.** This is what happened, in summary, in Incident One, Incident Five and for the majority of the time in Incident Six. In these instances, emergency calls came through to JT's CHA but could not be dealt with by JT. Instead, those calls were funnelled to the Police call centre, where those police call centre operatives took on an additional responsibility to filter and re-direct calls that should have been done by JT's CHA. These cases did not result in any customers having a complete loss of 999 service.
- 5.3 Before discussing each of these three categories, we deal with a preliminary issue raised in Sure's written representations to the Authority.

### Responsibility vs accountability

#### Sure's submission

5.4 In its written response to the Authority dated 5 August 2020, Sure argued that it could not be held liable for any failures set out in Incidents One, Two, Five or Six, nor for any failure to notifying the Authority of them. This was on the basis that Sure regarded JT as bearing sole responsibility for the provision of the CHA function on Jersey and that Sure only became aware of these incidents "*when JT's response to Cognito Consultants was shared with Sure by the JCRA.*"<sup>27</sup>

<sup>26</sup> The Incidents are numbered in order of their discovery, not chronologically.

<sup>27</sup> Sure's letter to the Authority dated 5 August 2020, page 3

5.5 In relation to Incidents Three and Four, Sure argued that it can only be held responsible for the provision of a public emergency call service up to the point at which it hands the call off to JT.

5.6 Sure challenged paragraph 14 of Annex 1 to the Authority's 22 July letter to it (Notification of a Proposed Direction) in which the Authority stated:

*All Licensed Operators have a duty to provide a public emergency call service for all emergency calls that can originate on their respective networks. Putting that in clear terms, as a Licensed Operator your customers or users of your network must be able to dial 112 or 999 in the case of an emergency and promptly be connected with the correct emergency service.<sup>28</sup>*

5.7 In contrast, Sure maintained that it is only responsible for ensuring that its customers can dial 999 or 112 in the case of an emergency but that the responsibility for them being promptly connected to the correct emergency service lies with JT.<sup>29</sup> We refer to this as the “**Limited Responsibility Argument**”.

5.8 The Limited Responsibility Argument was put again by Sure in correspondence and reinforced in the Sure additional submissions (responding to the full JHAD Report). In that final submission, Sure noted that:

*In fact, the JHAD Report could not be any clearer that all recent failures have originated in the platform used by JT for the Emergency Call Handling (ECH) Service (referred to by the JHAD as Part B of the 999 service) and further, that the issues have been due to JT changing its Avaya system. (Where the JHAD Report states that the cause of one of the issues is still unclear, it has since been established that this issue also originated with a fault in Cisco equipment on JT's network.)*

*[...]*

*As we have said repeatedly, Sure cannot and will not be held responsible for JT's poor project management, and it would be disproportionate and unacceptable to Sure if the Authority's Final Decision were to apply the remedies to Sure that are focused on addressing issues that were – and continue to be - completely outside Sure's control. That is, we see absolutely no justification for any audit of Sure's project management and change control procedures as the failures that occurred in the changes to the ECH platform were entirely due to JT's mismanagement of a JT project.*

The Authority's analysis

5.9 Condition 14 imposes an obligation on the licensee to make available an end-to-end service to members of the public. It is not an obligation to provide any inter-operator or wholesale

<sup>28</sup> JCRA letter to Sure dated 22 July 2020, Annex 1, Notification of a Proposed Direction

<sup>29</sup> Sure letter to JCRA dated 5 August 2020

service, such as conveyance of calls to a point of interconnection or call origination. This is clear from the text of the obligation (which specifies that the service is a “Telecommunications Service”, which is itself defined in the licence as a service “to the public”) and the fact that the service must enable a “User” (i.e. a consumer) to communicate with the relevant emergency services and, critically, to notify them of an emergency:

*... to communicate with the police, the ambulance or fire services or the marine search and rescue services **and to notify them of an emergency** by using Customer Premise Equipment lawfully connected to the Licensed Network at any place in the Bailiwick of Jersey.*

- 5.10 This obligation can only be met by an end-to-end service, meaning that the licensed operator’s responsibility is only discharged when the 999/112 service is working properly. If users can’t speak to the emergency services, for any reason, then Condition 14 is engaged and a contravention is likely to have occurred. For this reason, the Limited Responsibility Argument is wrong.
- 5.11 Given that Sure chooses to contract with JT for a CHA service, Sure’s duty under Condition 14.1 extends to monitoring and enforcing that contract in order to ensure that 999/112 calls successfully reach the JT network and that those calls are subsequently handled appropriately by the JT ECH team and passed expediently to the appropriate emergency service. Through its contract, Sure maintains control over the elements necessary for its users to be able to reach the emergency services, and Sure remains therefore accountable for failures in those elements, where those are avoidable or otherwise fall within its control. JT’s evidence was that:

*It should be noted that JT has provided the call handling service using its reasonable endeavours without any formal service level agreement in place or code of practice.*

- 5.12 If the inability of Sure to secure clear information or sufficient robust performance from JT’s CHA arises in part from this lack of any formal arrangements between the companies, that is a collective failure, but accountability for that failure in relation to Sure’s customers trying to call 999 rests with Sure.
- 5.13 On this basis, we reject Sure’s submissions that:
- (a) The fact that the source of failures affecting Sure’s customers’ ability to call 999 was JT’s CHA (in relation to Incidents One, Two, Five and Six) or may include amongst its causes equipment issues within the JT network (in relation to Incidents Three and Four) absolves Sure or means that it cannot be or should not be held accountable for those failures, as the licensed operator subject to those obligations; and
  - (b) JT’s performance of its obligations under agreements with Sure (for example, in providing Sure with CHA services), upon which Sure chose to rely for the delivery of vital aspects of its 999 service, are outside Sure’s control.

5.14 We accept that the CHA's role is critical, and that in relation to Incidents One, Two, Five and Six, the elements in the end-to-end service that failed occurred within JT's CHA operations, not Sure's operations. However, contrary to the position taken by Sure, this does not mean that it is not accountable for the performance of the service at all. Instead, as Ofcom has described it in the UK regulatory scheme (which has the same structure of obligations as Jersey):

- 1.4 *Ofcom ... [sets] General Condition 4 ('GC4'). Under GC4.1, [operators] must ensure that any end-user can access the emergency organisations using the emergency call numbers 112 and 999.*
- 1.5 *Although it is a matter for [operators] to determine how best to meet their obligations under GC4 [the rule analogous to Condition 14], as a matter of industry practice they have chosen to contract with an "Emergency Call Handling Agent" ('CHA') to route their calls (and to provide accurate caller location information) to the emergency services on their behalf. A CHA effectively acts as a "call centre", providing a point of interconnection for calls that are being made over the [operator]'s network to the emergency organisations.*
- 1.6 *Irrespective of whether the 'CHA function' is provided 'in-house' by the [operator], or contracted out to a third party (i.e. the CHA), in order to ensure the overall effectiveness of the emergency calling system Ofcom would expect that any CHA operation is designed, implemented and managed to suitably high standards.<sup>30</sup>*

5.15 The implication for licensed operators' obligations is clear. It is operators who bear the burden of ensuring 999/112 service is available. It is for operators to choose the approach that they take to delivering 999/112 calls, including whether to have an in-house CHA or whether to contract with a third-party for that service. In any event, contractual arrangements between an operator and a CHA may affect who, as a matter of contract, is responsible for various tasks to support 999/112 calls, but those contracts do not affect the underlying position that the operator is accountable, as a regulatory matter, if those tasks are not performed adequately. Thus, it is for the operator to assure itself that the CHA that handles its traffic is sufficiently stable and robust in its business systems so that the operator remains compliant with its regulatory obligations.

5.16 But it is also a matter of concern to the regulator to do whatever it can to ensure that CHAs have operations that are designed, implemented and managed to (as Ofcom put it) "*suitably high standards*". We adopt the same approach in Jersey.

5.17 It is relevant, of course, to consider the facts of each specific incident or contravention on their merits. There *may* be cases involving an outage at a CHA which does not result in a

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<sup>30</sup> Ofcom, *GC4 and the performance of emergency call handling agents – Statement regarding the handling of emergency calls by emergency call handling agents*, June 2013 ([link](#)).

contravention by the supported licensed operator. We have considered the facts of each incident individually.

5.18 We now deal with each of the three categories of incident described above

### Island-wide 999 outages

5.19 During the whole of Incident Two (1 hour, 57 minutes) and for a portion of Incident Six (41 minutes), 999 services on Jersey failed entirely as a result of failure of JT's CHA.

#### Incident Two

5.20 In relation to Incident Two, the JHAD Report concludes that outage was caused by *"human error and a Citrix glitch on the part of an engineer at JT's London premises, which resulted in all 999/112 calls failing to be diverted through the ECH team at JT"*.

5.21 This assessment was put to JT in the Draft Decision. JT did not dispute this characterisation of the facts.

5.22 It is not known exactly how many individuals attempted to call 999/112 during this period and were unable to reach the emergency services. However, 9 individuals did contact JT subsequent to the incident to confirm that they had been able to reach the emergency services by a channel other than via the ECH team at JT.

5.23 None of the licensed operators in Jersey, including JT or Sure, appears to have realised at the time that this outage occurred. None of the licensed operators, including JT or Sure, notified the Authority of the incident. Failure to realise that outages were occurring was a particular concern identified in the JHAD Report, which noted that the lack of automatic testing by the operators meant that there was a *"lack of clarity ... Urgent reassurance and clarity is required in this area"*.<sup>31</sup>

5.24 Although JT notes in its evidence that *'The specific nature of the incidents which occurred highlighted the fallibility of standard platform monitoring in detecting the lack of presence of small call volumes such as 999/112'* (in relation to the CHA incidents generally), we think that this failure to realise that the outage occurred comprises information that JT ought reasonably to have known, given that JT had taken steps to protect 999 service specifically on the platform just a few weeks' earlier, and that, as the CHA provider to all networks, JT was best placed of any operator on Jersey to know the anticipated volumes of 999 calls.

#### Incident Six (outage)

5.25 From 17:39 to 18:20 on 29 April there was an outage in relation to all 999/121 calls made in Jersey. This resulted in no caller in Jersey being able to access the emergency services upon dialling either number during this period.

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<sup>31</sup> JHAD Report, page 2.

- 5.26 There were 60 attempts to call 999/112 during this 41 minute outage.<sup>32</sup> The States of Jersey Police undertook a call back process. Two individuals were identified as having tried to contact the emergency services during the 41 minute outage period. One of these was an accidental dial, and the second related to an individual who had attempted to reach the ambulance service and was subsequently hospitalised.

#### The Authority's analysis

##### *Outages – condition 14*

- 5.27 These outages are the worst-case outcome for 999 services in Jersey and hence, the most serious contraventions that can arise under condition 14.
- 5.28 Although both JT and Sure were in contravention of condition 14, these contraventions are especially serious in the case of JT, given that it was best-placed to exercise direct control over the problems with JT's CHA and the Avaya platform. More easily than any other party, JT could have taken the steps needed to avoid these outages. However, it did not take those steps.
- 5.29 It was not simply that JT had the misfortune to have bought a system that turned out to have problems. As the JHAD Report explains, the failings that led to the Incidents were not outside JT's operations, but related to the way in which new service elements were tested and introduced. JT knew in advance that there were problems with the Avaya system – for example, it had already taken actions specifically designed to protect emergency calls from being affected, just weeks before the first of the six Incidents:

*By the end of 2019 the ININ platform was out of support and noted as a risk on JT's corporate risk register. A project was started to replace the ININ platform and new supplier, Avaya was chosen to install their Oceana product set. During the Avaya platform deployment and following reliability issues with the ININ platform (including the loss of call recording), JT took the cautious decision to move the CHA 999/112 services to a simplified, ring-fenced Avaya solution to minimise exposure to the Avaya implementation and ongoing development. This work was carried out on 6<sup>th</sup> December 2019 and key members of JHA were notified.*

- 5.30 JT's evidence also notes that its system overall did not meet relevant international standards or did it adhere to relevant Ofcom Guidelines but merely '*aim[ed] to align*' with them, on a qualified basis:

##### ***Question 6: Does your organisation use ETSI standards for ES (Y/N)?***

*Yes, however due to the historic absence of an agreed code of conduct, the end-to-end emergency call services across CP, CHA and EA have not been improved to be fully compliant with the ETSI ES standard.*

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<sup>32</sup> As highlighted in the JHA report

*JT are open to exploring opportunities to improve the end-to-end emergency call services to align with or exceed the ETSI standards.*

**Question 7: If your organisation does not use ETSI as reference for ES, then which standards does it use?**

*JT also aim to align with OFCOM Guidelines applied to a localised context.<sup>33</sup>*

- 5.31 In relation to Incident Six, JT bore direct responsibility for the failure since the outage was due to system changes implemented by Avaya in Poland which were replicated in the JT system without being tested, notwithstanding there had been at least four separate incidents leading to problems with 999 in the past three months.
- 5.32 It was this failure specifically that the JHAD Report singles out as being “*completely unacceptable*”. We agree. What exacerbates the seriousness of this incident is the fact that it comes after JT had already had (a) the knowledge that the service was at risk, leading to the changes implemented in December 2019 and (b) experience of multiple previous failures involving the Avaya platform. It had every reason to be cautious, and yet even after months of problems, careless new errors resulted in risk to safety of life services. Given that history, this contravention in relation to Incident Six specifically seems to us to have been reckless.
- 5.33 On the face of its own evidence, JT appears not to grasp fully its own role as the key player in controlling the CHA and taking responsibility for coordinating its own emergency services calling infrastructure, as well as underpinning the services offered by other operators. JT’s final answer to the questionnaire (essentially, ‘do you have anything to add?’) characterises JT’s role in unduly passive terms, and does not engage with the fact that it is JT, not ‘*all parties*’ or ‘*JT and the JHA*’ or JT ‘*jointly with other stakeholders*’ who has the important obligation set under condition 14 of the JT Licence:

*JT aim to be a world leading Communication Service Provider, and have invested in network technology to provide some of the best services possible to our subscribers. That said, the current Jersey emergency call services can only be described as lacking due to a failure across all parties to formalise and maintain the services in line with changing requirements, and now fail to meet the best practice guidelines and directives that would be expected of a European state. JT and the JHA have an opportunity to follow the current best practice, and take the opportunity to implement world leading technologies and services in emergency call handling to ensure that our Islanders are safe and secure.*

*JT welcome the opportunity to jointly work with the JHA and other stakeholders in the establishment of a code of practice, and the development of the emergency service improvements.<sup>34</sup>*

<sup>33</sup> JT’s response to questionnaire, questions 6 and 7.

<sup>34</sup> JT response to questionnaire, answer to q50.



- 5.34 This evidence makes it clear that JT accepts that its services (both its own emergency services calls service provided to its subscribers, and/or the services it provided as a CHA to itself and other operators), during the Relevant Period:
- (a) *'fail[ed] to meet the best practice guidelines and directives that would be expected of a European state'*
  - (b) Did not *'follow the current best practice'*
  - (c) Did not ensure that *'our Islanders are safe and secure'*.
- 5.35 In relation to outages that resulted in complete failure of 999 service across Jersey (i.e. the most serious sort of incident), these admissions mean that it is absolutely clear that JT's conduct constitutes a contravention in relation to its own emergency services call service and that that contravention is of a very serious nature.
- 5.36 But we do not consider that the JT CHA was outside the reasonable control of the other licensees, for the purposes of their obligations. The licensees are each free to contract with JT on whatever terms they wish for the supply of CHA services. They have no regulatory obligation to use JT. Sure could have, and did not, exercise that control in a way that might have prevented the outages from affecting its service, or at all. We note that Sure's evidence is that it had a right under its agreement to be notified of those failings, and that (in Sure's view) that obligation was not met by JT. That does not change our analysis. For example, sole reliance on a right to be informed of a problem falls short of the level of vigilance and control that we anticipate would be appropriate in the case of an operator outsourcing a key element of their 999 service.<sup>35</sup>
- 5.37 As a result of the outage, every licensed operator who relied on JT's CHA (that is, all of them) found themselves unable to comply with condition 14. Specifically, during these two periods, and within the scope of this investigation:
- (a) JT was in contravention of condition 14 of the JT Licence; and
  - (b) Sure was in contravention of condition 14 of the Sure Licence.
- 5.38 We do not consider that Sure could be said to have taken "*reasonable steps*" such that its contravention could not be the subject of a Direction. In any event, although we consider that these two Incidents each give rise to a robust legal basis for our Direction, we would issue the same Direction even if we were relying solely on the analysis in relation to the Sure-specific concerns about Incidents Three and Four.

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<sup>35</sup> We note that precisely this issue arose in relation to Ofcom's KCOM investigation, in which the operator under investigation (KCOM) had outsourced substantial activities to another operator (BT). In that case, it was accepted by Ofcom that the failures that occurred were by BT, in the BT network, and that KCOM had secured rights to monitor BT's activities that went substantially further than the right to be informed that Sure identifies in this case. It further accepted that KCOM had in fact exercised those rights, pushing to ensure errors were not made, but was still not successful in preventing the problem in BT's network. Those included, for example, regular risk assessments and specific commitments to design its network so as to avoid a single point of failure (the problem in that case). In that case, Ofcom considered that *'Given all of the above, we are not satisfied that the actions that KCOM took in setting the terms of the Horizon contract, and in monitoring BT MSL's performance of its contractual obligations were sufficient to demonstrate that KCOM took all of the steps in its reasonable control to ensure the diversity of its emergency call routing'* (at paragraph 5.116). Whilst recognising the facts and law are not identical, we think the same type of reasoning applies in this case: Sure's contractual rights or JT's failure to meet its obligations do not displace or obviate Sure's requirement to meet its regulatory obligations.



5.39 We do not consider that JT could be said to have taken “*reasonable steps*” such that its contravention could not be the subject of a Direction. As noted above, it is clear that JT failed to exercise due care in relation to the transition to the Avaya platform.

#### *Outages – condition 2.4(a)*

5.40 We also consider that in relation to these outages:

- (a) JT was in contravention of condition 2.4(a) of the JT Licence; and
- (b) Sure was in contravention of condition 2.4(a) of the Sure Licence.

5.41 Again, the contravention is especially serious in relation to JT, who appears simply not to have realised that it was failing to meet its regulatory obligation to inform the regulator following an important impairment to its service, despite having all the information at its disposal.

5.42 In its response to the Authority, JT “*accept[s] that it failed to notify the JCRA that the 999 service was not available*”.

5.43 Contrary to its submissions that its lack of awareness means it cannot be held accountable, Sure’s position is not assisted by the fact that it did not know about these outages. Whilst accepting Sure’s submission that JT did not inform Sure of these Incidents, we consider that Sure (and other licensed operators) ought reasonably to have known:

- (a) That JT’s CHA service was experiencing problems – for example, by securing and exercising contractual rights that operated effectively to ensure that it was updated or notified by JT of problems when they arise, or to be kept apprised of any sources of material risk to the service; and
- (b) That its 999 service offered to its customers was failing – for example, by having monitoring in place.

5.44 Because Sure ought reasonably to have known these facts, its failure to notify the Authority of them is a contravention of condition 2.4(a).

#### *Sure/JT interconnection failure*

##### *Incident Three*

5.45 During this incident there was a failure in the interconnection link between JT and Sure, resulting in all 999/112 calls made on the Sure network during the period 14:50 – 23:30 on 9 April 2020 being unable to connect to the JT ECH team. Those calls were consequently not connected to the emergency services.

5.46 Subsequent to the interconnect failure, the States of Jersey Police requested call data of each of the licensed operators in Jersey. This revealed that 15 individuals had attempted to make a total of 47 emergency calls on the Sure network during this 8h 40m period on 9 April.

5.47 The States of Jersey Police made direct follow up calls to each of these 15 individuals in the aftermath of the incident.

## Incident Four

- 5.48 During this incident there were intermittent failures in the interconnection link between JT and Sure, resulting in at least some 999/112 calls made on the Sure network during the period 29 March - 9 April 2020 being unable to connect to the JT ECH team.<sup>36</sup> Those calls were consequently not connected to the emergency services.
- 5.49 This resulted in 127 calls from individuals who were subscribers to the Sure network being unable to reach the emergency services over the course of the 12 day period. Sure was not aware this incident at the time.
- 5.50 The reason that Sure was unaware of that failure of 999/112 services was that (as Sure noted in its evidence to the Authority) *"there was an oversight on Sure's part in that the engineer that logged the fault was not aware that the link was carrying emergency calls traffic"*.
- 5.51 The States of Jersey Police undertook a call back process in the case of each of the 127 calls. 36 calls were to the police, 34 to the ambulance service and 2 were to the fire service. 49 calls were accidental, 1 was a hoax and 5 were made for unknown reasons.

## The Authority's analysis

- 5.52 Incidents Three and Four resulted in subscribers of Sure's network being unable to access 999/112 services. As such, this incident engaged Condition 14.1 of the Sure Licence. It is common ground that during at least Incident Three, Sure's customers were entirely unable to reach 999/112. During Incident Four, the full extent of the impairment is not precisely known but appears to fall short of the service being available *"at all times"*.
- 5.53 Sure made disclosures to the Authority on 10 and 17 April 2020 in relation to the unavailability of the public emergency call service caused during Incident Three. This notification related to a 30 minute period and did not address the entire extent of the 8h 40m during which the emergency call service provided by Sure was unavailable.
- 5.54 The evidence gathered by the Authority is consistent with Sure reporting, promptly and (based on the information in knew at the time) accurately, in relation to the 30 minute outage that comprises part of Incident Three.
- 5.55 But it appears not to have been aware that there was a much longer outage arising (the 8:40 outage comprising the full extent of Incident Three) nor that the lengthy intermittent fault with interconnection link was impairing its 999/112 services (Incident Four). Sure ought reasonably to have known of both of these facts (for example, it had all the relevant

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<sup>36</sup> In their response to question 39 of the JCRA questionnaire (as collated in the 7 July Cognitio Report) Sure refers to a specific list of times when, upon investigating after the 9th of April outage, they found the link carrying emergency calls had gone down in the previous 14 days on the Jersey Sure-JT link. On that basis, the Authority concludes that the fault was at least intermittent (and may have been more prevalent than that). It is not necessary to resolve this issue for the Authority to reach a decision about Sure's compliance with Condition 14 in relation to Incidents Three and Four, since intermittent failure constitutes a sufficient ground to conclude that on at least some occasions, callers were unable to reach the emergency services when they dialled 999/112.

information within its operations, but failed to put that information together to realise the impact on end-users' services).

#### *Sure's submissions*

- 5.56 As noted, Sure argued that as a result of the Limited Responsibility Argument, it was only responsible for ensuring that its customers could dial 999 or 112 in the case of an emergency but that the responsibility for them being promptly connected to the correct emergency service lay with JT.
- 5.57 Sure accepted some degree of responsibility in relation to Incident Three in so far as the member of its engineering team that logged the fault in the JT/Sure interconnection was not aware that the link was carrying emergency traffic calls. However, it referred to this as a "secondary issue" and argued that the root cause of fault of the interconnect link lay solely with JT:

*Of the remaining two issues identified in Annex 3 (as shown as the third item in the table, which occurred on the 9<sup>th</sup> April and the fourth item, which occurred between the 29<sup>th</sup> March and 9<sup>th</sup> April) [i.e. Incidents Three and Four], these were issues that were due to a problem on the Sure-JT interconnect. We have readily accepted that there was an oversight on Sure's part in that the engineer that logged the fault was not aware that the link was carrying emergency calls traffic. Despite the extenuating circumstances of this happening during the COVID-19 lockdown period, we are very concerned that this did happen given the potential risk to life and have put measures in place to ensure that all relevant personnel within the Sure organisation are now aware of the nature of the traffic carried on our individual interconnect links so that this cannot happen again. We understand that the root cause of the fault on the interconnect link, however, lies with JT although we are aware that JT's supplier, CISCO, would not establish this with absolute certainty as the CISCO kit had exceeded its support period in 2019. As a result Cisco were unable to allocate the required R&D resource to review the logs and help JT to reach a definitive root cause analysis. Certainly none of this can be attributed to Sure.<sup>37</sup>*

*We would also note that in terms of the previous incidents between the 29<sup>th</sup> March and the 9<sup>th</sup> April (the impact of which only came to light following the discovery of the 9<sup>th</sup> April incident), we had actually logged an issue with JT on the 30<sup>th</sup> March regarding a fault with the interconnect link. Under the terms of the Sure-JT interconnect agreement, JT should have responded within 60 minutes of us logging the fault with details of the services affected but the log we previously shared with Cognitio Consultants shows that we had not even had an acknowledgment from JT to our trouble ticket some four hours later. More importantly, under the interconnection agreement, JT should have rectified that fault within 8 hours if it believed that it was service affecting and within 24 hours if it believed the fault to be non-service affecting. So even if we concede that*

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<sup>37</sup> Sure letter to JCRA dated 5 August 2020

*Sure's engineer did not convey to JT the critical nature of the services conveyed over the link and the need to rectify within the 8 hour timescale, JT clearly did not adhere to the 24 hour timescale for rectification either. Instead, the fault continued until the 9<sup>th</sup> April at which time the impact of it was highlighted to Sure by the Jersey police.*

#### *JT's submissions*

#### 5.58 JT's evidence in relation to the same incident notes that:

*A single incident with the Sure interconnect occurred on Thursday 9th April 2020. The issue with emergency call traffic between JT's CP network and the Sure CP network was resolved by Sure engineers moving traffic to an alternative interconnect. JT had no involvement in resolving this issue other than to carry out some test calls at the request of Sure to confirm the traffic was flowing across the alternative interconnect in the intended manner.*

*JT provided a reason for outage report on this matter which was subsequently submitted to the States of Jersey Police and Sure with the information JT knew at the time of the outage. An updated reason for outage report was provided to Sure on 12/06/20 with further detail after further route cause investigation took place. Sure confirmed to JT on 15/06/20 that they were going to close their trouble ticket on this incident and would include the information provided by JT.*

*The root cause of the Sure interconnect issue was related to an IP link flapping within two nodes in JT's CP network. This single IP link problem should not have resulted in an interconnect outage but during the investigation it was discovered; a) Sure interconnect to JT's CP network was not resilient preventing the use of an alternate route and b) the resiliency mechanism within JT's CP core network did not work as expected. Further, there was no indication neither on Sure nor JT's side that this interconnect was carrying 999/112 traffic.*

*In addition, some of the involved routers on the JT CP network were reaching an End of Support date and the Sure interconnect was in the process of being migrated to a fully resilient new architecture –these works were completed on the night of 10<sup>th</sup> April and resolved the problem.*

#### 5.59 The Authority considers that even on its own terms, these accounts reveal failures on the part of each of the operators:

- (a) Sure's engineer knew there was a fault in late March and raised it with JT, but Sure did not have robust processes in place to avoid a single human error from leading to a critical aspect of that interconnection link – that it was carrying 999 services – from being recognised. Hence, the problem was not appropriately identified at the time, nor was the Authority notified of the presence of a failure affecting 999 services, notwithstanding that Sure had the relevant information within its organisation but failed to grasp its significance.

- (b) Perhaps as a result, Sure's follow-up actions failed to have due urgency, and the subsequent exchanges between Sure and JT reveal that neither operator appears to have treated the issue as being serious.<sup>38</sup> Sure's response to the Authority's questionnaire sets out a list of times, that were discovered after the event (i.e. when investigating after the 9 April incident) that Sure found that the link carrying emergency calls had failed in the previous 14 days. That list shows that there were:
  - (1) Failures on 3, 4, 5, 7, 8 and 9 April;
  - (2) Multiple failures on multiple days (for example, 7 distinct periods of failure on 3 April); and
  - (3) Failures with durations that range from a few minutes through to several hours.<sup>39</sup>
- (c) JT's various failures are in relation to promptly resolving the fault and also in having network equipment in operation that was no longer supported and hence, exposed those who relied on JT – including, in this context, Sure – to additional risk. There also appears to have been an additional failure of resilience within the JT network (*'the resiliency mechanism within JT's CP core network did not work as expected'*).

5.60 While we have not sought to pin down the question of which account of these events is correct (since it is not necessary for the Authority's reasoning as to the contravention), what is clear is that the problem identified on 30 March remained unresolved for 12 days. This appears to be (in Sure's view) a failure by JT to meet a contractual commitment for restoration. But:

- (a) By its own submission, Sure had failed to correctly identify how important fixing the problem was; and
- (b) Sure did not follow up in a way that reflected the seriousness of the situation or take other action in a way that would have created urgency towards resolving the issue, meaning that the problem was unresolved for that 12 days period.

5.61 Perhaps the simplest point to make about these events is that the steps taken by each of the operators each fails (in different ways) to constitute the type of "*reasonable steps*" – well-informed, decisive, proportionate to the risk to consumers and likely to be successful in resolving the problem – that would come close to meeting the standard necessary to avoid a Direction in relation to any such contravention.

5.62 In any event, these matters do not affect the question of whether, during Incidents Three and Four, Sure was in contravention of condition 14. During that time, Sure's 999/112 service was either subject to a complete failure for all customers (during Incident Three), or some form of intermittent failure (Incident Four). In either case, it was not a service that was available '*at any time*', and so Sure was in contravention of condition 14. The fact that the root cause of

<sup>38</sup> See Sure draft decision at page 40 (Sure questionnaire response, answer to Q39).

<sup>39</sup> See Sure draft decision at page 39 (Sure questionnaire response, answer to Q39).

the problem may have been a failing component within the JT network, or linking the two networks, does not change that analysis.

5.63 Because it failed to report information that it ought reasonably to have known (or more accurately, that it knew, but in respect of which it failed to ‘join the dots’ and connect relevant information in its operations), the Authority also considers that Sure was in contravention of condition 2.4(a) in relation to:

- (a) The unreported portion of Incident Three; and
- (b) Incident Four.

5.64 The Authority accepts that JT’s failures may well have contributed to Sure’s contravention, albeit not in a way that absolves Sure. However, there is no basis for concluding that JT itself was in contravention of condition 14 in relation to Incidents Three and Four. The Authority’s understanding is that it is common ground that there was no impact on JT’s own 999/112 service as a result of the problems with the JT/Sure interconnection.

### Failover incidents

5.65 Finally there were three ‘failover’ Incidents – Incident One, Incident Five and, in part, Incident Six.

5.66 In each of these cases, JT’s CHA service failed, but the position for callers was far less serious because, in the event, the States of Jersey Police call centre handled the calls instead.

5.67 Although that outcome changed the impact of those Incidents, the events leading up to them reveal consistent patterns in relation to JT’s failure to manage the migration to the Avaya platform successfully:

- (a) In relation to Incident One, the JHAD Report notes that the failure which led to the incident was caused by issues arising during configurations of JT’s Avaya system being undertaken by personnel in JT’s London based team.
- (b) In relation to Incident Five, JT bore direct responsibility for this incident since it was caused by a failure in the performance of JT’s Avaya system.<sup>40</sup>
- (c) In relation to Incident Six, the fault arose due to a failure by JT to test components before introducing them – this has already been discussed in relation to the resulting complete outages (Incidents Two and (in part) Six).

5.68 As a result of these failures, during these incidents, each of the licensed operators in Jersey who connected into ECH team at JT, including JT and Sure, were no longer themselves providing a service to their users, since the 999/112 service being provided to them was not

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<sup>40</sup> JHAD Report refers to the causation description of this incident as “Unknown – awaiting report”. The Authority has

pursuant to a contractual relationship with JT for CHA services. It was instead being provided by the police on a 'Good Samaritan' basis.

- 5.69 During those periods, the Authority considers that the licensed operators failed to ensure that their subscribers were able to contact the appropriate emergency services via the emergency call service route *provided by those operators*. The role being played by the police in fielding calls was not as agent for, or contractor to, any licensed operator. The fact that a third party stepped forward to deliver the service in an alternative way mitigates the harm that arose as a result of the contravention, but it does not turn non-compliant conduct by a licensee into compliant conduct. Accordingly, the Authority considers that in relation to Incidents One, Five and the remaining portion of Incident Six, both JT and Sure were in contravention of condition 14 of their licences, albeit that the contravention was less serious than the contraventions that left consumers entirely unable to access emergency services.
- 5.70 None of the licensed other operators in Jersey, including Sure, appear to have been aware of these incidents at the time it occurred. None of the other licensed operators, including Sure, notified the Authority during any of the relevant incidents.
- 5.71 JT and Sure were both unaware that these incidents had occurred. Neither took any steps to ensure that the breaches of Conditions 14.1 and 2.4(a) of their respective licences were avoided.

### Summary and conclusions

- 5.72 Fortunately, no injury or loss of life is known to have resulted as a consequence of any of the six incidents referred to above. It is nevertheless evident that the failures which led to their occurrence presented a potential life-threatening risk to the public.
- 5.73 The table on the following page summarises the Authority's view of the contraventions by each of JT and Sure.
- 5.74 In the Authority's view, the most serious contraventions broken down by each licensee were:
- (a) **JT:** JT's failures to comply with:
    - (1) Condition 14 in relation to Incidents Two and Six (I) (the total outages). The key factors here are JT's control over the CHA service that was the root cause of the outage, and the significant impact those incidents had on consumers; and
    - (2) Condition 2.4(a) in relation to the set of all six incidents. This appears to have been a recurrent and embedded failure of processes for escalating and reporting on issues that – as a regulatory obligation – must be reported to the Authority.
  - (b) **Sure:** Sure's failure to comply with Condition 14 in relation to Incident Three and Four.
- 5.75 We note that in all three of these most serious contraventions, the licensee does not dispute the facts that are core to our conclusion that there was a contravention. Whilst the Authority's conclusions as to whether a contravention has occurred is as set out in the table, it is the most



serious contraventions listed above which are the most important in deciding what Directions to issue to each licensee.



TYPE	JHA #	JT		Sure		Harm to consumers
		C14	C2.4(a)	C14	C2.4(a)	
<i>Failover</i>	<b>One</b>	YES	YES	YES	YES	Minimal – SoJP took calls
<i>Total outage</i>	<b>Two</b>	YES	YES	YES	YES	Maximum – No 999 available to anyone
<i>Sure outage</i>	<b>Three</b>	NO	YES	YES	NO	Big impact on Sure customers for short duration
<i>Sure outage</i>	<b>Four</b>	NO	YES	YES	YES	Unclear. Up to significant impact on Sure customers for long duration
<i>Failover</i>	<b>Five</b>	YES	YES	YES	YES	Minimal – SoJP took calls
<i>Failover</i>	<b>Six (I)</b>	YES	YES	YES	YES	Minimal – SoJP took calls
<i>Total outage</i>	<b>Six (II)</b>	YES	YES	YES	YES	Maximum – No 999 available to anyone

Key: YES Contravention (most serious) YES Contravention NO No contravention found

## 6. The Authority's decisions and actions required

### Summary

6.1 This section sets out the Authority's decision in respect of each of JT and Sure.

### Breaches of JT Licence

- 6.2 The Authority concludes that, at various times listed in the JHAD Report during the Relevant Period:
- (a) JT contravened Condition 14.1 of the JT Licence by failing to ensure that JT's users were at all able to access the public emergency call service in Jersey.
  - (b) JT's contravention is exacerbated by the contributing factor that JT's CHA service, which JT knew was relied on by all Jersey licensed operators, was operated during the Relevant Period in a way that resulted in multiple failures affecting other licensed operators and their customers.
  - (c) JT contravened condition 2.4(a) in that it failed to notify the Authority that the public emergency call service was not available during the periods of time referred to in this decision.
- 6.3 As well as being a very serious regulatory failure, the Authority considers that the actions of JT placed the population of Jersey in a position of unacceptable risk as a result of these breaches.

### Breaches of Sure Licence

- 6.4 The Authority concludes that, at various times listed in the JHAD Report during the Relevant Period:
- (a) Sure contravened Condition 14.1 of the Sure Licence by failing to ensure that all 999/112 calls made by subscribers to the Sure network in Jersey were able to access the public emergency call service.
  - (b) Sure contravened Condition 2.4(a) in that Sure failed to notify the Authority that the public emergency call service was not available during the periods of time referred to in Incidents 1-6. The Authority acknowledges that Sure made some disclosure to the Authority on 10 and 17 April 2020 in relation to the unavailability of the public emergency call service caused by Incident Three. However, this only related to 30 minutes out of an entire period of 8h 40m on 9 April during which all 999/112 calls made on the Sure network in Jersey failed. This notification fell some considerable way short of the type that could reasonably be said to be required in order to satisfy Condition 2.4(a). Sure failed to make any notification in relation to the period of 12 days outlined in Incident Four.

## Directions

- 6.5 The Authority considers that it is appropriate to issue directions pursuant to Article 19(1) of the Telecoms Law, requiring JT and Sure to carry out steps to ensure that their respective processes, procedures and governance support their compliance with Conditions 14.1 and 2.4(a) of their respective licences.
- 6.6 Article 19(1) imposes an obligation on the Authority to give a direction to a licensee to take steps, or specified steps, to ensure compliance with a licence condition wherever, in the opinion of the Authority, the licensee is in contravention. For the reasons set out above, the Authority considers that both JT and Sure were in contravention of Licence Condition 14 and Licence Condition 2.4(a).
- 6.7 The duty under Article 19(1) is subject to two express limitations.
- (a) First, by virtue of Article 19(2F) of the Telecoms Law, the Authority shall not give a direction (or a notification) if satisfied that its duties under Article 7 preclude it from doing so. The Authority has considered its duties and is of the view that they favour the giving of a direction in this case.
  - (b) Secondly, by virtue of Article 19(2G), the Authority shall not give a direction if satisfied that the contravention of the condition is trivial or that the licensee is taking reasonable steps to comply with the condition and to remedy the effects of the contravention.
- 6.8 The Authority considers that the first of the alternative limbs of Article 19(2G) has not been met in respect of either JT or Sure. In the Authority's view, the contravention cannot be regarded as trivial. The availability of a public emergency call service is critical to the welfare of the citizens of Jersey.
- 6.9 With respect to the second limb of Article 19(2G), the Authority considers that certain steps have been taken to varying degrees by both JT and Sure in order to comply with Condition 14 of their respective licences and to remedy the effects of the contravention.
- 6.10 However, the Authority does not consider that these steps are sufficient such as to discharge the Authority's responsibility to issue a Direction in relation to those contraventions, either in the case of JT or Sure.

## JT

- 6.11 The Authority is satisfied that JT has taken some steps beyond ensuring that the public emergency call service is available. In particular, further to the Authority's proposed directions dated 22 July 2020, JT has:
- (a) provided access to independent auditors appointed by the Authority to carry out an audit on the governance and project management that led up to the issues and incidents identified in the Cognitio report dated 7 July 2020; and

- (b) provided access to independent auditors appointed by the Authority to carry out an audit of processes and especially governance that would ensure no future incidents of this nature occur.
- 6.12 The Authority also recognises that JT has sought to substantially revise its processes in areas such as governance and project management. For example, the Authority understands that the JT change management process was revised and re-issued on 1 July 2020.
- 6.13 The Authority nevertheless takes the view that JT must complete and maintain the steps that it has already taken (for example, in the event that further access is required) and take further steps to ensure that it robustly complies with the Conditions 14.1 and 2.4(a) in relation to the future provision of the public emergency call service. The Authority therefore considers that it is appropriate to issue Directions under Licence Condition 19(1) in relation to JT as set out at Section 7.

#### Sure

- 6.14 The Authority is not satisfied that Sure has taken sufficient and reasonable action to comply with Conditions 14.1 and 2.4(a) and to remedy the effects of the contravention.
- 6.15 While Sure has taken steps to ensure that the public emergency call service is available, the Authority's investigation has concluded that there may remain some underlying processes and procedures that require assessment within the Sure organisation to ensure that such events do not occur again, causing a similar impact on such a critical service. Notwithstanding that Sure disputes the need for such an assessment, in the circumstances of this case it is not appropriate to (and the Authority could not) simply accept an assertion by Sure that all is well, without arms-length verification to test that position.
- 6.16 In particular, Sure should:
  - (a) provide access to independent auditors appointed by the Authority to carry out an audit on the governance and project management that led up to the issues and incidents identified in the Cognitio report dated 7 July 2020; and
  - (b) provide access to independent auditors appointed by the Authority to carry out an audit of processes and especially governance that would ensure no future incidents of this nature occur.
- 6.17 For the purposes of transparency, the Authority has set out at Annex 2 to this Decision an outline scope of the points which it considers necessary for independent auditors to address in order to undertake the audits into Sure referred to above. This outline scope is merely indicative and in no way confines the extent of any future independent audits.
- 6.18 Sure had made further submissions distinguishing its position from that of JT and arguing that, in relation to Incidents Three and Four, it did not suffer from the same sorts of failings as JT:

*The statement [in the Cognitio Report] “the investigation has exposed deficiencies in the change management and project management in both*

*operators...” ] should not be applied to Sure. It is a factual error to suggest that Sure had any control over the changes that JT made to its emergency services call handling platform or capability; all the more so when we were not even made aware by JT that such changes were taking place. Sure did not have projects associated with emergency services at the time of these failures, only JT did. It was JT’s project management and change process failures, not Sure’s.<sup>41</sup>*

- 6.19 This point was reiterated in Sure’s additional submission.
- 6.20 The Authority accepts that JT’s failures in relation to project management and governance were at the heart of its most serious contraventions, and that each of JT and Sure should be subject to Directions that are appropriate to their individual circumstances.
- 6.21 But on the facts of this case, the Authority does not accept that there was no element of concern over project management and governance in relation to Sure. For example:
- (a) At least one engineer from Sure was not aware of the routing of its 999 traffic and there was not an operational process accessible to the engineer in order to identify that routing;
  - (b) Whilst Sure have emphasised that only a single individual failed to realise that the link was carrying 999 traffic, Sure’s evidence shows that the third-party provided GNOC had raised the fault earlier but that Sure’s processes did not lead to that fault being categorised as high priority as it was carrying 999 traffic;
  - (c) Whilst JT had amended its router (without Sure’s knowledge) there does not seem to have been any routine testing between Sure and JT to ensure that Sure traffic was routed successfully on the primary and back up route to the 999 call handling facility;
  - (d) At a commercial level, Sure did not manage its agreement with JT for the repair and restoration of interconnect services in a way that avoided these problems. For example, the evidence about the interactions between Sure and JT about problems with their interconnection link supports Sure’s submission that JT did not respond urgently or in a timely manner to their issue reports. But nor does that evidence reveal sufficient urgency on Sure’s side, either – both operators appear to have missed an opportunity to realise the seriousness of the problem of which they were both aware.
- 6.22 Without implying any equivalence between the two operators, the Authority’s view is that, notwithstanding Sure’s submissions, there are enough concerns raised over Sure’s outcomes and processes that the audits set out in the proposed Direction remain appropriate, and proportionate to the issues identified in this investigation.
- 6.23 In response to Sure’s submission that JT’s project management and governance failures may be more significant or have caused more harm than any failures by Sure’s, the Authority accepts that this may be true (although it is not necessary for the Authority to reach a definitive view to reach its Decision). That possibility does not affect the Authority’s view that,

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<sup>41</sup> Letter from Sure to the JCRA dated 12 October 2020

in each operator's case, there is a sufficient degree of concern to warrant the conducting of an audit of the type recommended by Cognito. Nor does the fact that Cognito recommended the same diagnostic tool for both operators mean that Cognito is implicitly expressing a view that the underlying problems that might be identified using that tool are the same for both operators. The outcome of two audits with the same broad scope may be very different for two different operators.

- 6.24 The Authority accepts Sure's submission that it is important only to impose remedies where there is a clear and reasonable basis for doing so. In the case of a direction to conduct an audit, that decision needs to be taken before the results of the audit are known. An independent audit (the cost of which is funded by the operator) is a widely-recognised and accepted regulatory tool to secure compliance with specific technical requirements or in cases involving safety, resilience and risk.<sup>42</sup>
- 6.25 If Sure is correct in its view that its project management and governance are unimpeachable, then the audit will bear that out. But even if that occurs, it does not mean that it would be appropriate for the Authority to take such matters as being accepted without verification, given the events that led to this investigation and in light of the facts set out in this Decision. On the facts of this matter, the Authority finds that it is reasonable, proportionate and necessary to require Sure to conduct both the audits recommended in the Cognito report, to establish whether any further issues or problems remain. In considering the proportionality of that decision, the Authority gives material weight to the fact that if any such problems are found, that discovery might reduce the chance of further incidents or outages occurring and hence, protect consumers from further risk or harm. That benefit to consumers substantially outweighs the savings that would arise from failing to require such an audit be carried out.
- 6.26 The Authority therefore considers that it is appropriate to issue Directions under Licence Condition 19(1) in relation to Sure as set out at Section 8.

### KPIs in relation to JT and all other Licenced Operators

- 6.27 The Authority has already signalled in its notification letters of 22 July 2020 to both JT and Sure its intention to issue the KPIs by way of a Guidance Notice to all licenced operators in Jersey. The Authority intends to do so in due course. The Guidance Notice will set out the Authority's view as to the minimum standards that the Authority will take into account in considering future contraventions of condition 14.
- 6.28 The Authority's proposed KPIs in relation to all licenced operators in Jersey are that they:
- (a) maintain network availability such that in any given calendar month the service will be available at least 99.999% of the time.

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<sup>42</sup> For example, section 105C of the Communications Act 2003 enables Ofcom to 'require a network or service provider to undergo an independent audit of their security and resilience arrangements, at the provider's expense' (see the discussion in *Ofcom guidance on security requirements in sections 105A to D of the Communications Act 2003* at paragraph 5.1).

- (b) provide, or secure, CHA services such that in any 24-hour period, 99% of incoming calls wait less than five seconds before being answered.

### Common requirements for 999/112 in relation to all licenced operators

- 6.29 Beyond these KPIs, the Authority wishes to ensure that the high standards of emergency call services are supported by robust operational and business practices. This will apply to all licenced operators in Jersey on whose network an emergency call can be originated, transited or terminated.
- 6.30 The Authority expects all operators to introduce the following measures for licenced operators (if they are not doing so already):
  - (a) To put in place procedures and business practices that are commensurate with the critical nature of emergency call handling.
  - (b) To conduct appropriate risk and business continuity assessments that consider how best to maintain continuity of service during significant unexpected events which place substantial pressure on call handling activities.
  - (c) Collect and make available reports on call volume and waiting time data to the Authority on a monthly basis.
  - (d) Consistent with existing licence conditions, report immediately any outage or interruption of the emergency call service to the Authority and the appropriate emergency service.
- 6.31 The Authority intends to keep under review whether these expectations are likely to be met through operators' voluntary efforts or whether further regulatory reform is needed to make these mandatory (i.e. via amendments to licence conditions).

### Auditing and review in relation to all licenced operators

- 6.32 In addition, the Authority also expects that regularly, and at least on an annual basis, all licenced operators in Jersey satisfy themselves that they audit and review their processes, networks and systems and that the outcome of internal compliance review and audits are made available to the Authority.
- 6.33 In the case of calls which handed over between networks, the Authority expects that both parties responsible for the handover fully co-operate in joint audits and reviews.
- 6.34 Again, the Authority intends to keep under review the question of whether this ought to be a direct regulatory requirement. However, there is no obstacle to each operator adopting this approach as good practice and we would expect that, for example, the question of whether to adopt such an approach arises in the normal course of good corporate governance and risk management.

## 7. Direction issued to JT (Jersey) Limited

### 7.1 The Authority directs JT to

- (a) **DIRECTION 1:** Provide access to independent auditors appointed by the JCRA to carry out an audit on the governance and project management that led up to the issues and incidents identified in the Cognito Consultants report.
- (b) **DIRECTION 2:** Provide access to independent auditors appointed by the JCRA to carry out an audit of processes and especially governance that would ensure no future incidents of this nature occur. This audit would be cross-domain and focused on the key issues identified in Section 8.2 of the Cognito Consultants report.
- (c) **DIRECTION 3:** To carry out 30-minute cycle testing of networks for the foreseeable future or until such time that a method of assurance for 999/112 services are agreed by all parties.

### 7.2 JT shall ensure that it complies with this direction with effect from **19 November 2020**.

### 7.3 The Authority will provide guidance to JT on the requirements and scope of the audit.

### 7.4 Documentation relating to the outcome of the audits will be made available by the Authority promptly upon completion of the audit.

### 7.5 JT shall cover the full costs incurred for carrying out the audits detailed in Directions 1 and 2 above.



## 8. Direction issued to Sure (Jersey) Limited

### 8.1 The Authority directs Sure to

- (a) **DIRECTION 1:** Provide access to independent auditors appointed by the JCRA to carry out an audit on the governance and project management that led up to the issues and incidents identified in the Cognito Consultants report.
- (b) **DIRECTION 2:** Provide access to independent auditors appointed by the JCRA to carry out an audit of processes and especially governance that would ensure no future incidents of this nature occur. This audit would be cross-domain and focused on the key issues identified in Section 8.2 of the Cognito Consultants report.
- (c) **DIRECTION 3:** To carry out 30-minute cycle testing of networks for the foreseeable future or until such time that a method of assurance for 999/112 services are agreed by all parties

8.2 Sure shall ensure that it complies with this direction with effect from **19 November 2020**.

8.3 The Authority will provide guidance to Sure on the requirements and scope of the audit.

8.4 Documentation relating to the outcome of the audits will be made available by the Authority promptly upon completion of the audit.

8.5 Sure shall cover the full costs incurred for carrying out the audits detailed in Directions 1 and 2 above.

## Annex 1 – Evidence relied on by JCRA

Date	Document	Notes
10 April 2020	Email from Sure (Jersey) Limited to the Channel Islands Competition and Regulatory Authority at 11:27	
10 April 2020	Email from Sure (Jersey) Limited to the Channel Islands Competition and Regulatory Authority at 18:32	
17 April 2020	Sure (Jersey) Limited Major Incident Report (MIR:44984) – Interim Report	
17 April 2020	Email from Sure (Jersey) Limited to the Channel Islands Competition and Regulatory Authority attaching MIR:44984 Interim Report at 16:14	
15 May 2020	Letter from Jersey Competition and Regulatory Authority to Sure (Jersey) Limited	
18 May 2020	JHA 999 Service Report – <i>Current Resilience Level and Related Issues – Future operation of Emergency Call Handling Services</i>	Provided directly by JHAD
1 June 2020	999 Code of Practice Jersey Telecoms + Emergency Services - draft v5	Provided directly by JHAD
12 June 2020	Letter from Jersey Competition and Regulatory Authority to Sure (Jersey) Limited – Notice of investigation	
17 June 2020	Sure (Jersey) Limited Major Incident Report (MIR:44984) – Final Report	
19 June 2020	Sure (Jersey) Limited response to the Jersey Competition and Regulatory Authority Questionnaire on recent Jersey 999 issues – redacted version	Appendix 1 to the Cognito Report
21 June 2020	JT (Jersey) Limited Response to the Jersey Competition and Regulatory Authority to Questionnaire on recent Jersey 999 issues	Appendix 2 to the Cognito Report
7 July 2020	Cognito Consultants Limited report for Jersey Competition and Regulatory Authority: <i>Incident report and recommendations – 999/112 Incident in Jersey During 2020</i>	Annex 4 to Draft Decision
22 July 2020	Letter from Jersey Competition and Regulatory Authority letter to Sure (Jersey) Limited – Notification of a Proposed Direction	
22 July 2020	Letter from Jersey Competition and Regulatory Authority letter to JT (Jersey) Limited – Notification of a Proposed Direction	
31 July 2020	Jersey Competition and Regulatory Authority letter to Sure (Jersey) Limited – Estimate of Costs: Investigations into 999 incidents	
5 August 2020	Letter from Sure (Jersey) Limited to Jersey Competition and Regulatory Authority – Response to Notification of a Proposed Direction	

Date	Document	Notes
5 August 2020	Letter from JT (Jersey) Limited to Jersey Competition and Regulatory Authority – Response to Notification of a Proposed Direction	
19 August 2020	Letter from Jersey Competition and Regulatory Authority to Sure (Jersey) Limited – Extension to Period for Response to Notification of a Proposed Direction.	
8 October 2020	Comments from JT to JCRA regarding checking of factual section of draft Final Decision	
12 October 2020	Letter from Sure (Jersey) Limited to Jersey Competition and Regulatory Authority – Sure response to factual section of draft Final Decision	
23 October 2020	Letter from Sure (Jersey) Limited to Jersey Competition and Regulatory Authority – Response to full JHAD Report	

## Annex 2 – Sure – Scope of Audit

**DIRECTION 1** - Provide access to independent auditors appointed by the JCRA to carry out an audit on the governance and project management that led up to the issues and incidents identified in the Cognito Consultants report.

In assessing the governance and project management which led up to the issues, the audit should pay particular attention to the following specific issues:

1. The cause of why Sure was not aware that a specific interconnection link between JT and Sure was conveying emergency call traffic to JT, including:
  - a. The design and implementation of routing for emergency call traffic;
  - b. The design and implementation of resilience for emergency call traffic;
  - c. The recording of routing information for emergency call traffic;
  - d. The availability of, and access to, routing information for emergency call traffic; and
  - e. Processes and training relating to Sure staff awareness of emergency call traffic including processes to be followed in case of a fault relating emergency call traffic.
2. The cause of why Sure was not aware that calls being conveyed on an interconnection link were not correctly terminating on JT's network, including:
  - a. The design and implementation of call routing on interconnection links;
  - b. The availability of monitoring on interconnection links; and
  - c. The availability of monitoring for the end-to-end provision of emergency call services
3. Sure's monitoring of compliance with conditions of its interconnection agreements, including:
  - a. Processes to escalate failure to meet conditions of interconnection agreements;
  - b. Process to monitor compliance with interconnection agreements; and
  - c. Roles and responsibility relating to monitoring and enforcement of interconnection agreements.
4. The role of the third-party provided GNOC in the monitoring and reporting of network faults and incidents; including
  - a. Process to monitor notifications from the third-party provided GNOC;
  - b. The third-party provided GNOC's access to key network information including network elements supporting emergency call services;
  - c. Process to escalate notifications received from the third-party provided GNOC; and
  - d. The cause of why the notification from third-party provided GNOC did not correctly identify that the fault was service affecting (and specifically affecting emergency call services).

5. The change management process followed and relevant notifications and correspondence between JT and Sure relating to the network changes that JT implemented on the interconnection link prior to the 999 service outage incidents.
6. Sure's provisions for the technical monitoring of the performance of interconnection links.

**DIRECTION 2** - Provide access to independent auditors appointed by the JCRA to carry out an audit of processes and especially governance that would ensure no future incidents of this nature occur. This audit would be cross-domain and focused on the key issues identified in Section 8.2 of the Cognito Consultants report.

In assessing the processes and governance that would ensure no future incidents, the audit should pay particular attention to the following specific issues:

1. An understanding of what measures Sure has put in place since the emergence call failure incidents and the JCRA investigation commenced in order to mitigate any similar outages occurring in the future. This will include an assessment of the following:
  - a. The technical changes that have been put in place in relation to design and resilience;
  - b. The monitoring and measuring processes that have been put in place specifically for emergency calls;
  - c. The changes have been made to the governance of projects as a result of the outages;
  - d. The contractual discussions have taken place with JT to ensure Sure provides an end to end service for emergency calls in line with their licence condition (forwarding calls from the CHA to the correct emergency service).