

<b>Audit</b>	<b>Patch Management</b>
<b>Assurance Opinion</b>	<b>Limited Assurance</b>
<b>Overall Risk</b>	<b>Medium Risk</b>
<b>Introduction</b>	
<p>The force relies on the integrity of systems to operate their applications and to be in alignment with business goals and stakeholder expectations. A robust change management process provides management with the assurance that only authorised and tested changes to systems are implemented.</p> <p>Change management ensures that all changes are processed in a controlled manner, including standard changes and emergency maintenance relating to business processes, applications, and infrastructure. Its main purpose is to enable fast and reliable delivery of change to the business and mitigation of the risk of negatively impacting the stability or integrity of the environment. The objective of the audit was to perform a review of the change management process with an emphasis on providing management with assurance that the process is controlled, monitored and is in compliance with good practices. Information Services is a shared service between Humberside Police &amp; South Yorkshire Police, consequently the audit applies to both force.</p> <p>Due to resourcing pressures within the IS team and an imminent organisational review the scope of the audit was more restricted than originally planned. It was agreed that the issues identified as a result of the work we were able to undertake would be reported to the management team. Where relevant the findings have also been cross referenced the ICORE Report findings as detailed below.</p>	
<b>Main Findings</b>	
<p><b>1.1. Good Practice</b></p> <p>During the audit, elements of good practice were identified, including:</p> <ul style="list-style-type: none"> <li>• The Application Support Team Leader functions as the IS Change Manager (CM) for Humberside and South Yorkshire Police. The CM appears suitably qualified and experienced for the role, stating they hold an ITIL Change Management Practitioner qualification, Prince 2 Practitioner qualification and various technical and non-technical qualifications. The change manager has been in role within the IS Shared service for 6 years, with a further 4 years' experience in Humberside prior to the collaboration.</li> <li>• The IS Service Delivery Manager commissioned ICORE to perform an IT service maturity assessment, with the respective report delivered to IS in May 2018. The objectives of the assessment were to assess IT Service Delivery capability and performance (people, process, tools) and associated strengths, weaknesses, opportunities and threats, document the findings and observations made by ICORE and provide a roadmap for a strategic Service Improvement Programme (SIP).</li> </ul> <p><b>1.2. Force Policy &amp; Procedure</b></p> <p>The force has a comprehensive documented procedure covering change entitled 'Change Management Process Activities'. The document had not been reviewed and/or updated for nearly 5 years ago, thus may not reflect best practice or be used as a tool to drive continual improvement. Inconsistent adherence across teams to the policy &amp; procedure was also noted in a review performed by ICORE in early 2018. Internal Audit were unable to test adherence to policy and procedure as the information required and requested for testing was not made available.</p> <p><b>1.3. Performance Management</b></p> <p>Effective IT Change Management requires visibility into many aspects of the change process such as what is being changed, why &amp; when, how efficiently &amp; effectively the changes are made and the benefits provided amongst many others.</p> <p>ICORE noted an absence of the use of metrics and SLAs to drive continual service improvement, inform decision making and provide accountability. Internal Audit found that the situation remained unchanged albeit there was recognition within the service of the issue and an apparent desire to improve.</p> <p>Internal Audit were advised that much of the infrastructure for utilising SLAs and Metrics is in place, the CM having discovered that the IT Service Management System was calculating various SLAs in the background from its original implementation. However, these were neither utilised nor reported.</p> <p><b>1.4. Change Advisory Board (CAB)</b></p> <p>An effective CAB delivers support to a change-management team by approving requested changes, assisting in the assessment and prioritisation of changes, monitoring the change process, and providing managerial feedback. The board consists of IT and Business representatives including a change manager, user managers and representatives, technical experts and third parties</p>	

as appropriate with required attendance dependent on the changes to be covered.

ICORE noted in their review an absence of minutes recording decisions taken, poor and inadequate attendance and a lack of pre-meet information such as an agenda with detail of the changes to be covered which are not issued sufficiently in advance to allow questions to be formulated.

Internal Audit attended a CAB, making the following observations:

- Inadequate Segregation of Duties: The change manager was sometimes logged as a change sponsor, therefore in effect assessing and approving a change they were also sponsoring,
- Sponsor Change Awareness: Sponsors on the CAB were sometimes unaware of their sponsored changes. It was apparent they had not been liaised with nor approved the change placing limitations on the effectiveness of their sponsorship,
- CAB attendees were seeing several changes for the very first time due to an absence of pre-meet information, thus had not had an opportunity to formulate any queries,
- Inadequate information on the Information Technology Service Management System led to assessment of changes on limited information in a very short timeframe due to the volume of changes reaching the CAB, thus increasing the risk of sub-optimal outcomes.

### **1.5. Change Manager Dependency**

The Application Support Team Leaders role includes that of IS Change Manager (CM) for both Humberside and South Yorkshire Police. Additionally the CM also functions as a Major Incident Manager providing the co-ordination, ownership, and escalation of Major IT Service outages in and outside of core business hours on a rotational basis.

Throughout the audit the high demand on the change manager was evident. Following an outage that occurred in part due to the incorrect assessment of a change level by the Service Desk a decision was made whereby all changes, averaging 60-80 per week, would require assessment by the change manager. This level of demand that was stated as sustainable only in the short term.

The Change Managers experience is evidently key to the performance of the existing change management process. However, this has resulted in a dependency, representing a risk associated with a potential single point of failure.

### **1.6. Information Technology Service Management (ITSM) System Usage**

The force use Sunrise Sostenu as their ITSM. Internal Audit compared the available functionality to that utilised by the force, noting that it appears the system is not used to optimal effect:

- Change Sponsor: The system can be configured to require change sponsors to formally approve a change for it to advance through the process, this functionality is not utilised,
- Incomplete Usage: Not all applicable information is recorded in the ITSM with some recorded outside and some not at all. This limits the potential to use ITSM data for performance management and monitoring of adherence to policy and procedure,
- Resource Incurred: The time and cost incurred through change can be logged helping the service plan resource and cost its work, however, this functionality is not utilised.

The service should consider reviewing the full change management functionality available with a view to adopting those aspects that would add value, improve the service, and help the process achieve closer alignment to ITIL guidelines.

### **1.7. Change Freezing**

IT assets are easiest to manage and control when there is no pressure to implement or deliver change. For example, during freeze periods: service levels and availability are typically at their highest allowing the IT department to spend a greater proportion of time on planned work.

IS may find they are required to undertake less firefighting and unplanned work by defining, scheduling and enforcing longer maintenance and change freeze periods, when no changes are allowed. These periods of operational stasis would provide greater stability, allowing the service to be more productive.

### **1.8. Change Batching**

Every change brings with it associated risks. When changes must be implemented, they should be scheduled into large batches. Variance creates risk, and variance can be reduced by packaging multiple changes so they can be tested and implemented simultaneously. This has the added benefit of longer periods of preserved operational stasis and shorter, more productive change implementation times.

It was observed from attending the CAB that proposed change implementation dates were often within a few days of the CAB, with changes seemingly made independently of others and without being scheduled into a larger batch. This leads to almost constant change occurring throughout the forces, increasing the risk of issues occurring and unplanned corrective work.

### Recommendations and Management Action

Thirteen significant recommendations were raised, 12 received management responses agreeing these, including:

- Policies and procedures should be periodically reviewed and updated so that they remain fit for purpose, continue to reflect industry best practice and drive continual improvement.
- **Direct ICORE Recommendation:** Active publication of the Change Process and ways to engage in the Process along with the benefits to Service of doing so.
- Consideration should be given to better enforcing the change process to help ensure that the process is adhered to. Retrospective and automated assessment of adherence levels could be achieved against aspects of the process through setting up metrics against data held on the ITSM. Once established these metrics could be used to assess progress over time as well as to identify areas of concern for corrective action.
- The ICORE report made multiple recommendations around using metrics, SLAs, Continual Service Improvement and utilising the ITSM to produce meaningful reports. Rather than raise additional recommendations and/or repeat these Internal Audit recommend that IS implement the recommendations in the ICORE report, whilst giving consideration to the points raised in this report.
- **Direct ICORE Recommendation:** Creation of a new CAB attendee list including key stakeholders from other teams along with Deputies if the primary person is unavailable.
- **Direct ICORE Recommendation:** Define an agenda and ensure items for CAB review are distributed before the meeting to allow questions to be formulated.
- The Change Sponsor process should be amended so that where change sponsors are recorded that they are required to approve the change on the ITSM before it progresses through the process.
- ICORE made several observations around dependencies on key individuals, making multiple recommendations around knowledge management to reduce these dependencies and mitigate the impact of losing such personnel. Rather than repeat these Internal Audit recommend that IS implement the recommendations in the ICORE report, whilst giving consideration to the points raised in this report.
- Consideration should be given to the training needs of service desk personnel to enable them to adequately assess change level, challenge requestors, and perform the required aspects of their role. This would have the added benefit of enabling the change manager to focus more of their time on major changes and other aspects of their role.
- Information Services should consider reviewing the functionality available in Sostenuutu with a view to adopting those aspects that would improve the service and help achieve closer alignment with ITIL guidelines.
- Consideration should be given to utilising Sunrises Change Management User Guide and tweaking it to reflect force processes and aspects of Sostenuutu utilised.
- The force should consider increased batching of changes that would facilitate holistic testing whilst also extending periods of stability. This approach will reduce the likelihood of issues occurring and where they do occur may enable issues to more readily be tracked back to respective changes, improving the efficiency and effectiveness of the incident response.

However the IS Management team disagreed with one recommendation, see below:

- The force should consider greater utilisation of change freeze periods. Periods should be defined, scheduled, and enforced with no changes other than emergencies allowed. These periods of operational stasis will provide greater stability resulting in less firefighting and unplanned work, allowing the service to be more productive.