

Serious Incident Review: Follow-up report to the Accounts, Audit and Risk Committee

Recommendation 1

That officers consider and report back to the Accounts, Audit and Risk Committee on the implications of providing/not providing an out of hours call-out service from a risk based perspective in light of the organisations increasing use of IT and customer out of hours use of web based services and models of future IT service provision.

Out of Hours (OOH) ICT Support Provision

Current Situation

The ICT Service Desk offers customer support between 08:00 and 18:00 hours. To enable this, the Service Desk team voluntarily operates a split shift rota:

The early morning engineer (08:00) is responsible for ensuring that all services are available through the completion of the “early morning checks” this includes checking that the previous night’s data backups have completed; if not an incident is raised against the failure.

The late engineer (10:00) provides customer support (1st & 2nd line) until 18:00.

In recent weeks the infrastructure team have voluntarily adopted a similar arrangement so that there is always someone to whom the early morning engineer can refer issues arising from the early morning checks that fall outside his or her remit.

Internal support does not match the published flexible working day of a total 37 hours worked at any time 07:00 – 22:00, Monday to Sunday, therefore standard support to CDC staff does not allow for the published policy

After 18:00 and from 18:00 Friday to 08:00 Monday there is no support of CDC services or access to support. Current job descriptions within CSIS do not allow for Out of Hours Working other than scheduled overtime.

We do not currently event-monitor, which would help us pre-empt failures and be more pro-active than currently; this would have the added benefit of fewer overnight incidents rolling into the working day.

Planned work is done out of hours and paid as overtime or recouped as flex, but due to the size of the team, overtime is preferred. Because lots of planned work is done OOH, staff are often either on site or connected to the council’s systems and therefore may become aware of an operational problem outside of the specific reason that they are present. If they become aware of an operational failure they have always looked to fix the issue, even to the extent of calling in other staff that may be required to fix the issue. In short, the risks accruing from an absence of

formal out of hours standby have been mitigated on an ad hoc\goodwill basis by ICT staff.

Current Risk scenarios

CDC has no systems, procedures or role descriptions in place to capture events out of core hours that affect CDC operational services. Of all our customer groups the most identifiable internal group of people using CDC IT Services outside of core hours are senior managers and councillors. In recent months there have been a number of instances:

Example 1: a server fails leading to the loss of a key business system such as Uniform or Agresso, impacting the delivery of services. The failure would be identified at 08.00 but could take all day to restore, re-run the overnight backups, with service not fully resumed until the following day.

Example 2: The mail service was unavailable during the weekend of 3 & 4 October. Directors and Councillors were aware of this service failure but had no recourse to try and get it fixed. It was identified at 08.00 Monday morning and repaired by 09.00.

Example 3: Loss of power to a cabinet in the server room on Wednesday 16 September at 21:00 led to a major outage of services. This outage was not discovered until 08:00 the next day and services not fully restored until 09:30.

Reducing the risk in a resilient way – event monitoring

The Council's computer systems can be enabled to automatically alert via sms if something goes wrong. There are also simple technological approaches to automatically alerting environmental problems such as excessive heat or moisture in the various computer rooms and cabinets. But for event-monitoring to work, staff have to be available to receive and act on those alerts, and decisions about which systems, what events, actually sent those alerts. It is not foolproof either: power or phone failures will mean alerts don't get out; the person on standby may be temporarily in a phone blackspot and not receive the alert.

Standby and out of hours provision is expensive and difficult whether provided in-house, or bought externally!

In-house

If we introduced standby the rota would have to include at least three of the team at any one time due the specialisms of the teams – there is no predicting if the cause of the event is communications, infrastructure, storage, applications... If just one engineer was on standby there is no guarantee that the reason for the callout would fall into his or her area of expertise and they would have to callout someone from the infrastructure or applications teams. So the minimum number of staff that would have to be on standby any one time will be three. Given that there are only two

people in the infrastructure team and two in the applications, then they would be on standby every other week.

Standby payments elsewhere in the Council are in the region of £150 per week with an hourly rate paid if there is a callout of around £22.

Given our recent experience we can forecast 10 events resulting in callout each year. Of course, if automatic alerting is enabled, this number will inevitably rise as every alert will need to be investigated even if no immediate action is required.

So we can estimate on 30 callouts, half of which require two engineers for more than three hours. But the high instance of any one person on that rota is currently unacceptable, Even if all members of the team were trained and experienced to the same level there would still only be two infrastructure specialists and two applications specialists. We could end up with one engineer working at night and being unavailable for work in the morning so disrupting the daytime rota.

Standby cost three staff	15 x callout one engineer one hour	15 x callout two engineers three hours	Total additional cost per year
£5400	£330	£1980	£7710

External provision

It is possible to “buy-in” external out of hours support, although this cannot wholly do away with internal input - certainly in the first year we would need to retain two staff on standby - as the knowledge of the council’s systems resides in-house, not in the external provider. However, it could provide the initial triage service – the standby role of responding to the alert, diagnosing, and determining whether to call out CDC staff there and then or report the alert as something to pick up first thing in the morning. This would require the Council to quantify precisely what service continuity level is acceptable for every aspect of the IT service provision: the service does not currently have a documented SLA with the business.

Taking a typical industry standby rate of £250 per week plus a £50 hourly charge for the diagnosis work, we can recalculate the forecast above thus:

Standby cost two CDC staff plus one external standby	30 x one hour external triage @£50	10 x callout two CDC engineers three hours	Total additional cost per year
£6600	£1500	£1320	£9420

While this route is more expensive it has the merit of being practicable which the wholly in-house provision is not due to the small size of the team.

It also requires the council to be absolutely clear about the level of service provision it wants and is willing to pay for rather than the current situation where everything is assumed, nothing is agreed.

It would be possible also to seek external provision of the whole service-desk/client support function and thus have access to as much or little cover as we deem necessary. Decisions of this type will be in the remit of the Member/Officer Service Review Group being convened as a result of the Executive Report of December 7 2009.

Impact of future changes

Two main things impact on our need for, and cost of out of hours support and standby arrangements. First, the introduction of service delivery by an external third party. Capita is delivering our benefits service now, using our computer system, and are asking for ICT support 7.30 am – 7.00 pm. Second, the decision taken by Executive in December 2009 to virtualise the whole ICT estate.

If we are asked in the future to support Capita for the full period they are providing a service to us (7.30am – 7pm) this would need additional resources. We have just two applications specialists able to support the application i-world, and having them work 7.30 – 3 and 11.30 – 7.00 each day will not give adequate support to the daytime work.

Virtualisation will greatly reduce the risk of a physical server failure leading to loss of service, and so greatly reduce the need for out of hours and standby cover.

Recommendations

Accept the risk of service loss between 18.00 and 0800 Monday evening to Friday morning for the time being, but ask the Member/Officer review group looking at the future delivery of ICT to consider the question more widely. There are significant contractual consequences of introducing change like this on which staff will need to be consulted. If we go down this route full involvement of HR will be needed to establish an appropriate weekend standby rate and the scope there is for requiring a different working pattern across the team.

In particular the review group should be asked to look at:

1. weekend standby cover only reducing both the standby payment costs and the likely number of callouts. There is no “weekend only” standby rate applied at the Council currently to base estimates on, but if we say £50 per person per weekend, then our annual cost for three on standby is £1800. It would reduce

further post-virtualisation, as the range of error reasons will reduce so the range of skills needed, will reduce.

2. the possibility of changing the working patterns of the support service to cover an extended day in order to both meet the (current) needs of the Capita contract and give a longer period first thing in the morning to put right anything that broken overnight.
3. potential for external supply of out of hours cover