The Dynamic ICT Standardisation Model (DISM): Service Headquarters (SHQ)

Lesley Hollis, Mark Jones, Mark Rice

10.07.2017

Dynamic ICT Standardisation Model (DISM): Service Headquarters (SHQ)

Purpose

The purpose of this report is to recommend the optimal Information and Communication Technology (ICT) resources for MFRS to use at Service Headquarters (SHQ). This report should be read in conjunction with the **Role-based Resources report**[1], the **main report ('The Dynamic ICT Standardisation Model')** and the **spreadsheet ('DISM', AKA Appendix 1)** which contains the DISM model/calculator.

Overview

Building upon the previous report ('Stations'), this report investigates the provision of ICT resources at SHQ. SHQ is the largest location in terms of staff presence, it has no operational role in terms of literal appliance deployment, but it does house the control room. It also houses critically important departments within it, including – but not exhaustively – ICT, Estates, Legal, Finance, Strategy and the Joint Control Centre (JCC). SHQ also hosts a significant Merseyside Police (MP) presence, but this is not included in this study. **Correctly functioning and resourced ICT at SHQ is of paramount importance**.

The method to determine how many resources are available at SHQ is very similar to that used when determining resources at stations. Recall from the Stations report that:

> "Using an Excel-based model created specifically for this task, called the Dynamic ICT Standardisation Model (DISM), the user is able to select a station of their choice from a drop-down list and the appliance (read 'pump') numbers, shift types, staff numbers, staff types, current ICT provision, projected ICT provision and the gap analysis between current and projected provisions in terms of numbers and GBP (£)[2] are immediately displayed. The model works by referring to a master data source, which was populated from numerous sources including Station Managers (SMs), Time and Resource Management (TRM), telent and face-to-face/telephone contact with other MFRS staff. This master source interacts with a data source which dictates not only what type of role is present in various situations, but also which role gets which ICT resource and how much of each. The model is sophisticated enough that operational staff are limited in their impact of how much ICT is subsequently provided, by the number of full-time appliances on-station. This is because appliance numbers typically dictate operational staff numbers actually on-station at any given time. Headline staff numbers are misleading when it comes to operational staff. The model is also sophisticated enough to divide different operational staff types on-station as a proportion of their total numbers (e.g. although unrealistic, 40 firefighters and 10 WMBs on a station with a single appliance would result in the model calculating enough ICT for four firefighters and one WMB on the basis that a single appliance holds five crew). The model cannot choose specific operational staff on-watch from a pool of staff above the number of

[1] M. Rice, Role-based Resourcing, MFRS, 02.02.2017.
[2] (£) Figures are based on telent pricing.

appliances multiplied by five. The ratio calculation does not apply to non-operational staff present on stations.

The model (or calculator) also allows the user to enter hypothetical data into the spreadsheet so that they can observe how much ICT would be required. The 'MASTER DATA DISM' source enables the user to find the current mean, median and mode characteristics of all the stations (e.g. the mean number of firefighters at two-pump stations on a WT shift pattern). This is useful if the user wants to enter hypothetical data of a 'typical' station so that if they are planning to set up a new station it would not have grossly superior or inferior numbers of staff, appliances and/or ICT[3]: it would 'fit' with the rest of the stations on the MFRS estate."

The difference between stations and SHQ when calculating ICT is subtle. Unlike stations and incidents, appliances are not typically present. Operational staff will not be present (in an on-watch capacity) either, nor the tablets – which will be – assigned to appliances. Moreover, there is only one SHQ, unlike stations, of which there are many, which means some statistical analysis is not possible (e.g. mean, median and mode).

Both DISM calculators (hypothetical and actual) allow the user to see hypothetical and actual SHQ resource situations respectively. By choosing 'SHQ' from the drop-down on the **actual** calculator the results will show the **current** situation followed by **projected** resources deemed suitable for SHQ. Again, the reader can then see the gap, and attendant costs/savings, between the two situations. This is a simple but accurate measure of ICT resources at SHQ.

Results

In summary, the data on the following pages represents, predominantly, the **current** and **projected** ICT provision at SHQ, with staff numbers, and associated **gap analysis**:

[3] Meaning ICT on the new projected matrix, not the current situation, which is deemed to be incorrect.

Current and Projected Resources at SHQ, With Personnel Numbers

	TOTAL PERSONNEL	PRINTERS	TOTAL	PCs	TABLETS	LAPTOPS	DOCKING STATIONS	MONITORS	PROJECTORS%	OTHER	USERS
SHQ	273	27	469	95	52	74	45	146	9	48	130

Figure 1: Current Total Personnel and ICT Resources at SHQ

PROJECTED ICT	ON WATCH (STATION/INCIDENT ONLY)	OFF WATCH	TOTAL	INCIDENT	EXPANDED	COST(£)
PCs	N/A	149	149			89400
TABLETS	N/A	115	115			207000
LAPTOPS	N/A	0	0			0
DOCKING STATIONS	N/A	115	115			13800
MONITORS	N/A	259	259			31080
PROJECTORS%	N/A	12	12			11400
OTHER	N/A	0	0			N/A
TOTAL	**0**	**650**	**650**	**N/A**	**N/A**	**352680**
INCIDENT?	**EXPANDED INCIDENT?**					
No	No					

Figure 2: Projected ICT Resources at SHQ

Gap Analysis of SHQ's ICT Provision

The gap analysis then is as follows (projected – current), using telent's hardware request form as the basis for the pricing:

CURRENT ICT	NUMBERS	COST(£)	GAP (PROJECTED - CURRENT)	NUMBER DIFFERENCE (+/-)	COST(£)
PCs	95	57000	PCs	54	32400
TABLETS	52	93600	TABLETS	63	113400
LAPTOPS	74	57720	LAPTOPS	-74	-57720
DOCKING STATIONS	45	5400	DOCKING STATIONS	70	8400
MONITORS	146	17520	MONITORS	113	13560
PROJECTORS%	9	8550	PROJECTORS%	3	2850
OTHER	48	N/A	OTHER	-48	N/A
TOTAL	469	239790	TOTAL	181	112890

DEVICE	UNIT PRICE (EXC. SERVICE, £)
PC	600
TABLET	1800
LAPTOP	780
DOCKING STATION	120
MONITOR	120
PROJECTOR	950
OTHER	N/A

Figure 3: The Gap Analysis of SHQ with telent Price List

Discussion and Additional Information

It is **strongly recommended** that this report be read in conjunction with the **Role-based Resources report**[4], the **main report ('The Dynamic ICT Standardisation Model')** and the **spreadsheet ('DISM', AKA Appendix 1)** which contains the DISM model/calculator, because numerous observations, exceptions, caveats and parameters are discussed which help qualify the results displayed above. In *summary*:

- The tablets used at SHQ would likely be non-rugged but housed in a simple rubberised case, given that they would be used predominantly by office staff within the building and probably as their main computer too (using a docking station). The tablet is likely to be a Surface Pro or similar
- Some ICT is not included in this study or included in discussion but not in the statistical analysis, such as mobile telephones, MDTs, smartboards, CCTV and internet routers
- Projectors could be considered as unique because they are predominantly a shared resource. Allocation formulae is particularly complex for this ICT resource
- There are reliability concerns pertaining to some of the data used (e.g. double counting)
- **Staff distribution depends on the situation under discussion. The roles present at SHQ are as expected. The majority of non-operational staff are present at SHQ, the heads of departments reside here, as do the CFO and DCFO. Operational staff (including appliances) occasionally visit SHQ and so are listed as 'Seldom Present'. By a significant margin, SHQ contains the most staff, the highest role variation and the highest level of ICT, when compared to the other situations. It also has the most visitors on a daily basis (both internal and external), each of whom could bring their own ICT resources and use the building's Wi-Fi, as well as making use of SHQ's conference facilities. SHQ is the hub of MFRS' non-operational activities**
- Future innovations need to be considered when thinking about ICT provision at SHQ (such as conference room provision, Skype, accessibility for the disabled, clocking-in, card payment machines and ERP software). Given the focus on collaboration, there is likely to be some usage of MFRS ICT resources by MP (and perhaps even North West Ambulance Service – NWAS) at SHQ, such as the Wi-Fi, switches, conference rooms and internet cables. This may equally allow MFRS access to extra ICT resources
- The medium of Excel limits the performance of the DISM model
- The main document also gives further information on how to use the DISM model/calculator

[4] Loc. Cit., Rice, Role-based Resourcing.

References

Rice, M., Role-based Resourcing, MFRS, 02.02.2017.