

The Dynamic ICT Standardisation Model (DISM): The Training and Development Academy (TDA)

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Purpose

The purpose of this report is to recommend the optimal Information and Communication Technology (ICT) resources for MFRS to use at the Training and Development Academy (TDA). 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 the TDA. While the TDA has the least staff out of the three non-station/incident locations (TDA, Vesty and SHQ), it serves two important functions: **training** and **backup** for functions within SHQ (e.g. control). This means that ICT is essential here, as is its reliability.

The method to determine how many resources are available at the TDA 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 appliances multiplied by five. The ratio calculation does not apply to non-operational staff present on stations.

¹ M. Rice, Role-based Resourcing, MFRS, 02.02.2017.

² (£) Figures are based on telent pricing.

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 ICT³: it would 'fit' with the rest of the stations on the MFRS estate."

The difference between stations and the TDA when calculating ICT is subtle. Unlike stations and incidents, appliances are not present in a 'usable' context at the TDA, rather any appliances present are being used for training and teaching and so are not counted as resources. 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 TDA, 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 TDA resource situations respectively. By choosing 'TDA' from the drop-down on the **actual** calculator the results will show the current situation followed by projected resources deemed suitable for the TDA. 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 the TDA.

Results

In summary, the data on the following pages represents, predominantly, the **current** and **projected** ICT provision at the TDA, 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 the TDA, With Personnel Numbers

	TOTAL PERSONNEL	PRINTERS	TOTAL	PCs	TABLETS	LAPTOPS	DOCKING STATIONS	MONITORS	PROJECTORS%	OTHER	USERS
TDA	33	3	61	16	3	9	2	17	12	2	18

Figure 1: Current Total Personnel and ICT Resources at the TDA

PROJECTED ICT	ON WATCH (STATION/INCIDENT ONLY)	OFF WATCH	TOTAL	INCIDENT	EXPANDED	COST(£)
PCs	N/A	32	32			19200
TABLETS	N/A	1	1			1800
LAPTOPS	N/A	0	0			0
DOCKING STATIONS	N/A	1	1			120
MONITORS	N/A	33	33			3960
PROJECTORS%	N/A	12	12			11400
OTHER	N/A	0	0			N/A
TOTAL	0	79	79	N/A	N/A	36480
INCIDENT?	EXPANDED INCIDENT?					
No	No					

Figure 2: Projected ICT Resources at the TDA

Gap Analysis of the TDA'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	16	9600	PCs	16	9600
TABLETS	3	5400	TABLETS	-2	-3600
LAPTOPS	9	7020	LAPTOPS	-9	-7020
DOCKING STATIONS	2	240	DOCKING STATIONS	-1	-120
MONITORS	17	2040	MONITORS	16	1920
PROJECTORS%	12	11400	PROJECTORS%	0	0
OTHER	2	N/A	OTHER	-2	N/A
TOTAL	61	35700	TOTAL	18	780

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 the TDA 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 the TDA would likely be both ruggedised and non-ruggedised/encased, given that they could feasibly be used both for training outside, and within the building by office staff. The rugged tablets are likely to be Panasonic ToughPads while the office tablets are likely to be Surface Pros
- 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
- There are reliability concerns pertaining to some of the data used (e.g. double counting)
- **Although the TDA contains the least number of staff out of Vesty 1, SHQ and the TDA, it has the second greatest amount of role variation, given that operational staff and non-operational staff all attend the TDA to do training, in addition to those staff who work in the back office at the TDA. A corollary of this is that the TDA may have significantly more staff onsite at any given time than the baseline numbers suggest; this is also suggested by the, relatively, very high number of projectors onsite. The TDA also contains the secondary fire control centre. The TDA is as important for backup activities as SHQ is for primary activities; it is not 'just a training facility'. This study only takes into account the *baseline* staff numbers however Projectors could be considered as unique because they are predominantly a shared resource. Allocation formulae is particularly complex for this ICT resource**
- Future innovations need to be considered when thinking about ICT provision at the TDA (such as a Virtual Reality [VR] suite in a dedicated room, clocking-in, card payment machines, Skype and Enterprise Resource Planning [ERP]). Given the focus on collaboration, there is likely to be some usage of MFRS ICT resources by the police (MP), and perhaps even North West Ambulance Service (NWS) at the TDA, 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.