The Dynamic ICT Standardisation Model (DISM):

Vesty 1 (Workshop)

Lesley Hollis, Mark Jones, Mark Rice

10.07.2017

Dynamic ICT Standardisation Model (DISM): Vesty 1 (Workshop)

Purpose

The purpose of this report is to recommend the optimal Information and Communication Technology (ICT) resources for MFRS to use at Vesty 1 (also known as the 'workshop' or 'garage'). 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 Vesty 1. While Vesty 1 is heavily 'practical' it does have back office staff, especially on the upper floors of the building. Moreover, the mechanics use ICT (e.g. laptops) to perform their duties. ICT is essential here to keep the fleet on the road.

The method to determine how many resources are available at Vesty 1 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.
>
> 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.

---

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

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 Vesty 1 when calculating ICT is subtle. Unlike stations and incidents, appliances are not present in a 'usable' context at Vesty 1, rather any appliances present are being repaired or serviced (or 'spare') and so are not counted as resources. Operational staff will therefore typically not be present either, nor the tablets – which will be – assigned to appliances. Moreover, there is only one Vesty 1, 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 Vesty 1 resource situations respectively. By choosing 'Vesty 1 (Workshop)' from the drop-down on the **actual** calculator the results will show the current situation followed by projected resources deemed suitable for Vesty 1. 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 Vesty 1.

Results

In summary, the data on the following pages represents, predominantly, the **current** and **projected** ICT provision at Vesty 1, with 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 Vesty 1, With Personnel Numbers

	TOTAL PERSONNEL	PRINTERS	TOTAL	PCs	TABLETS	LAPTOPS	DOCKING STATIONS	MONITORS	PROJECTORS %	OTHER	USERS
Vesty 1 (Workshop)	43	6	62	22	1	6	1	23	1	8	14

Figure 1: Current Total Personnel and ICT Resources at Vesty 1

PROJECTED ICT	ON WATCH (STATION/INCIDENT ONLY)	OFF WATCH	TOTAL	INCIDENT	EXPANDED	COST(£)
PCs	N/A	26	26			15600
TABLETS	N/A	21	21			37800
LAPTOPS	N/A	0	0			0
DOCKING STATIONS	N/A	5	5			600
MONITORS	N/A	31	31			3720
PROJECTORS%	N/A	1	1			950
OTHER	N/A	0	0			N/A
TOTAL	**0**	**84**	**84**	**N/A**	**N/A**	**58670**
INCIDENT?	**EXPANDED INCIDENT?**					
No	No					

Figure 2: Projected ICT Resources at Vesty 1

Gap Analysis of Vesty 1'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	22	13200	PCs	4	2400
TABLETS	1	1800	TABLETS	20	36000
LAPTOPS	6	4680	LAPTOPS	-6	-4680
DOCKING STATIONS	1	120	DOCKING STATIONS	4	480
MONITORS	23	2760	MONITORS	8	960
PROJECTORS%	1	950	PROJECTORS%	0	0
OTHER	8	N/A	OTHER	-8	N/A
TOTAL	62	23510	TOTAL	22	35160

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 Vesty 1 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 Vesty 1 would be predominantly ruggedised (Panasonic ToughPads) or at least have a case, given that the 'craft' ranks would use them in conditions where they could be dropped or get dirt/chemicals on the devices. However, non-ruggedised devices (Surface Pros) would be used to for the back office staff
- 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)
- Staff distribution depends on the situation under discussion. Predictably, craft staff are exclusively present at Vesty 1 because this role repairs and services vehicles. Vesty 1 also contains non-craft and non-operational staff upstairs. Out of SHQ, the Training and Development Academy (TDA) and Vesty 1, Vesty 1 contains the median (midpoint) number of staff, though still significantly less staff than SHQ and only slightly more than the TDA
- There are cumulatively more PCs and tablets than staff at Vesty 1 because each craft worker need access to 0.25 of a PC in addition to a whole tablet
- 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 Vesty 1 (such as clocking-in, card payment machines [e.g. for MOTs] and Skype). 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 (NWAS) at Vesty 1, such as the Wi-Fi, switches, conference rooms and internet cables. This may equally allow MFRS access to extra ICT resources. A non-ICT collaboration possibility is the use of the garages to service/repair MP and NWAS vehicles, probably on a paid-for-but-subsidised basis
- 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.