

# Guest Speaker – Case Study

Best practice roster review process, design and implementation – a UK example in a highly volatile, demand-led and service driven organisation

Vicky Court

Ambulance Communications Centre Manager

الإسعاف National  
الوطني Ambulance

# Background

- Personal overview
- Summary of organisation
- Part of wider modernisation project
- Scope affected all front line staff
- Previous attempts to change patterns relatively unsuccessful

## The need for change

- High ambulance utilisation
- 12.5% Increase in Category A Incidents (Life threatening calls) (2012/13) (2014/15 Cat A 6.6%)
- Rosters not matching our 999 call demand
- Regression of Category A performance in the evenings
- Risk of poorer delivery of clinical care
- Poor rest break allocation
- Dependant on overtime uptake
- Training compromised at times of most needs as hours sit within individual rosters
- Poor morale
- Reliant on Voluntary and Private Ambulance Providers

## Objectives of roster review

- Align rosters to match 999 call demand
- Deliver an equitable service throughout the day
- Reduce ambulance utilisation
- Deliver a clinically safe service
- Robust allocation of rest breaks
- Reduce overtime spend
- Training delivered to maintain staff skills
- Improve staff morale & wellbeing

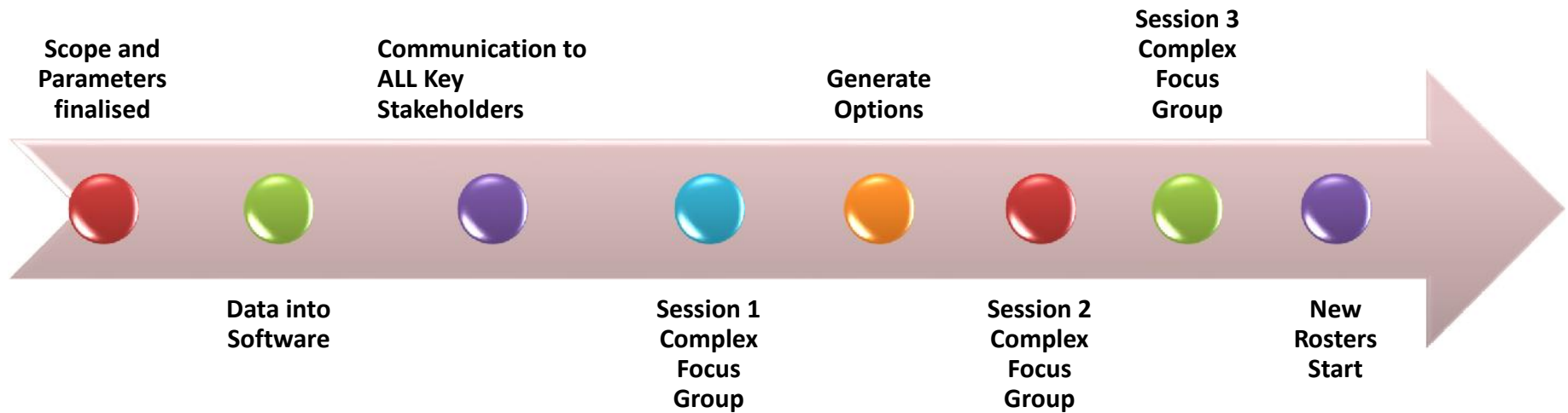
## Criticisms of previous 2010/11 review

- Lack of staff engagement
- Project bias as the Service is dictating the rosters
- No quantitative evidence to substantiate need for change
- No literature or Q&A to communicate and inform staff of progress made or future requirements
- No informative roster packs for staff to study
- Rosters designed on Excel and by hand
- Slow development process
- Not all complexes implemented new rosters
- ORH model misunderstood due to lack of communication

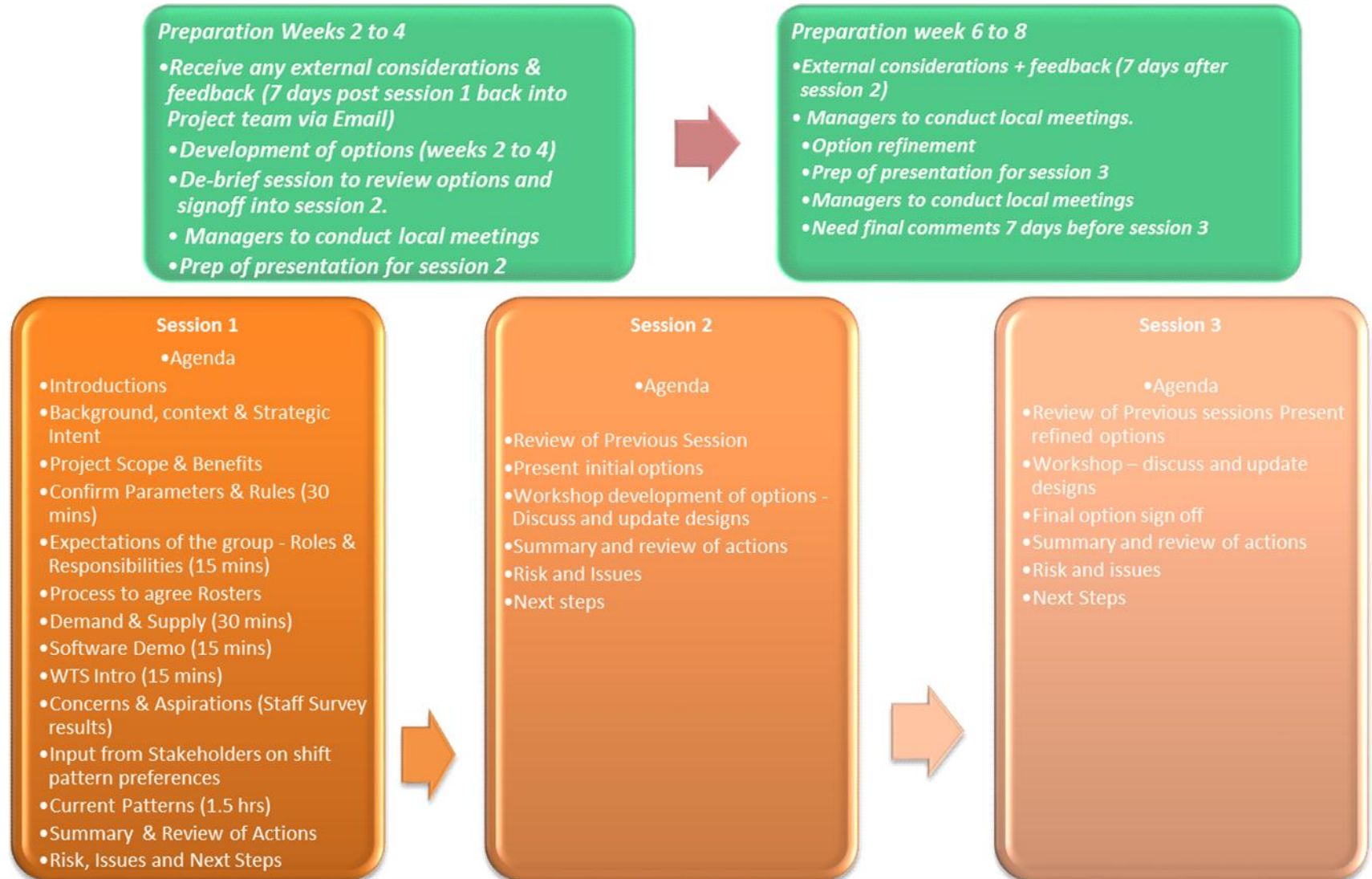
## Learnings from previous roster reviews

- Quantitative evidence utilised as the driver for the project
- Early engagement with unions and staff – regional working party groups established
- Performance packs produced to illustrate Key Performance Indicators by complexes
- Independent consultants, utilised actual Trust demand data to produce a clinical capacity plan (demand requirements)
- Invested in Working Time Solutions as consultants throughout the period for their knowledge and software solutions
- New information packs produced for each group after each consultation meeting
- Dedicated resource - Trust secured uninterrupted time for staff to attend and participate in constructing their rosters

# Planning critical milestones

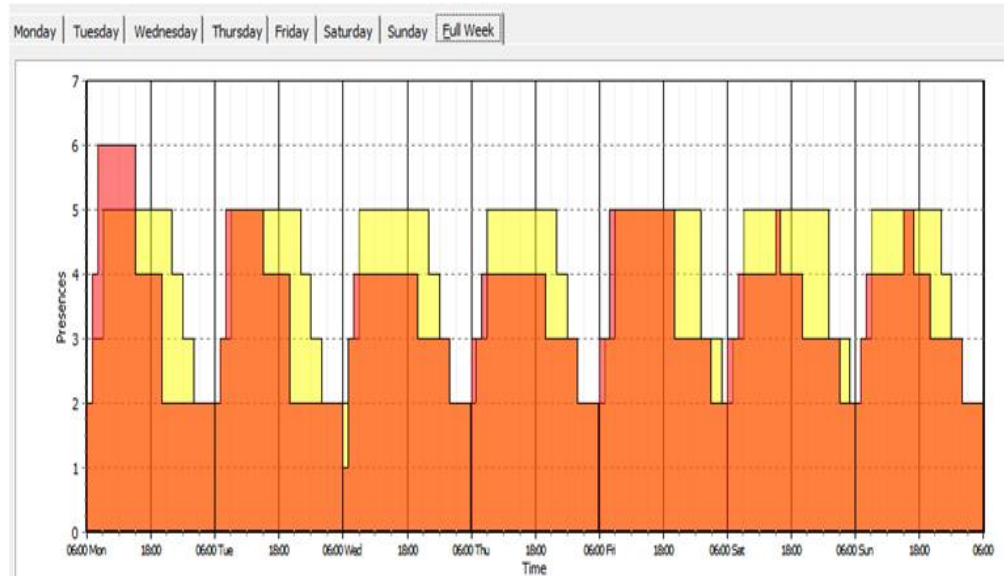
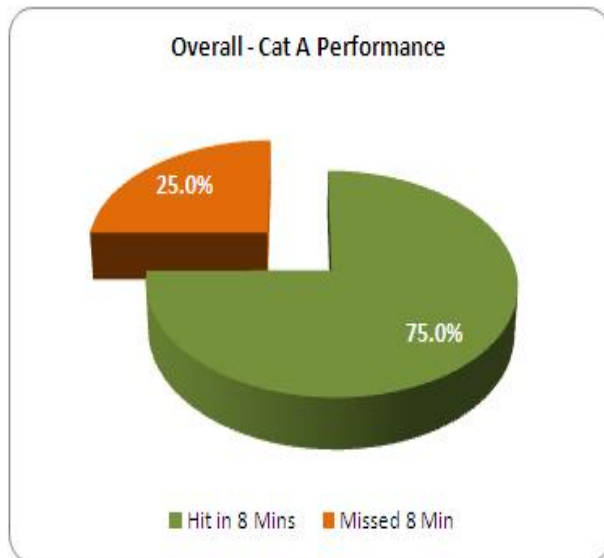
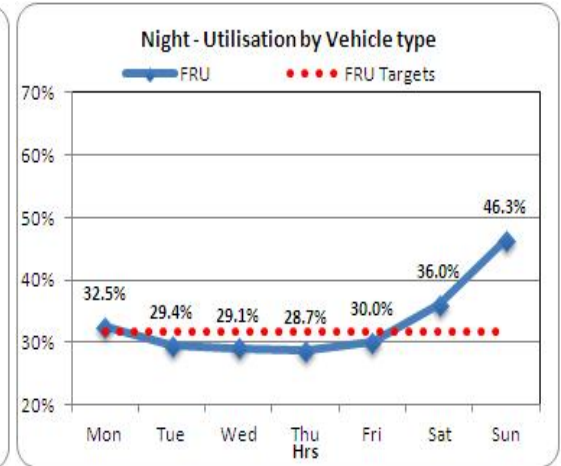
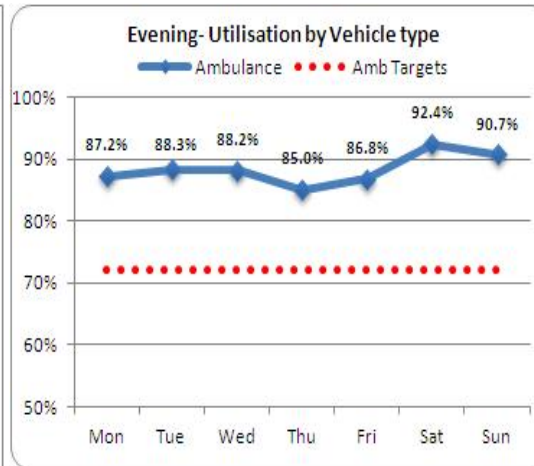
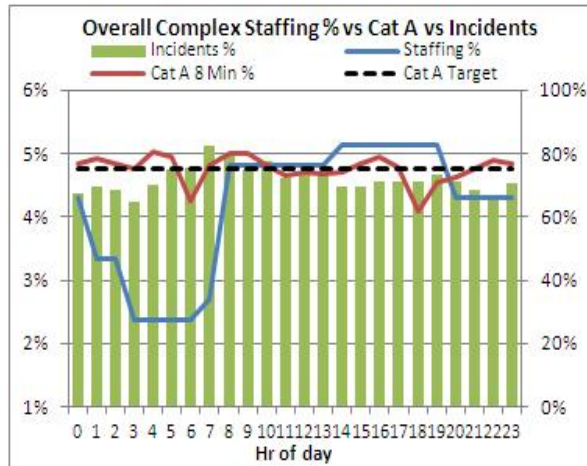


# Approach





# Quantitative evidence shared with staff



# Roster Template

File Edit Rotas Shifts Tools Help

New Project Open Project Save Project MANX™ Generator Rota Analysis Show Shift Library WORK Suite™ modules: Admin Console WORK Management™

Shortcuts

**Rota Design**

Core

Rota Design  
 Period Duration (weeks): 52.18  
 Shift Formatting: Display Shift Times ie '0600-1400'  
 Selected Rota Design: FINAL TEMPLATE  
 Number of Teams/Cycles: 16

Rota Designer

Week/Team	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Totals
1	0630-1830	0630-1830	0630-1830	0630-1830	0630-1830	0630-1830	0630-1830	80.5
2	1830-0630	1830-0630	1830-0630	1830-0630	1830-0630	1830-0630	1830-0630	80.5
3	0700-1900	0700-1900	0700-1900	0700-1900	0700-1900	0700-1900	0700-1900	80.5
4	1900-0700	1900-0700	1900-0700	1900-0700	1900-0700	1900-0700	1900-0700	80.5
5	0845-1900	0700-1900	0700-1900	0700-1900	0700-1900	0900-1900	0900-1700	72.92
6	0700-1600	0700-1600	0710-1600	0800-1600	0800-1600	0700-1800	0650-1540	60.18
7	1100-2220	1100-2220	1100-2200	1100-2200	1100-1900		1540-2200	56.33
8	1600-0200	1600-0200	1600-0200	1600-0200	1600-0100	1800-0100	1700-0200	62.00999
9					1900-0515	1900-0500		19.25
10								0
11								0
12								0
13								0
14								0
15								0
16								0
<b>Totals</b>	84.75	86.5	86	85.17	91.25999	82.17	76.84	<b>592.69</b>

Provisional Statistics

**This Period**

Total hours per cycle: 592.69  
 Average hours per cycle: 37.043  
 Period hours per Team: 1,933  
 Target hours per Team: 1,957  
 Hours variance: 24

**All Periods**

Average hours per cycle: 37.04  
 Total duration of Periods: 52.18  
 Target hours per Team: 1,957  
 Project hours per Team: 1,933  
 Traditional equivalent: 37.04  
 Total hours variance: 24

**Project Settings**

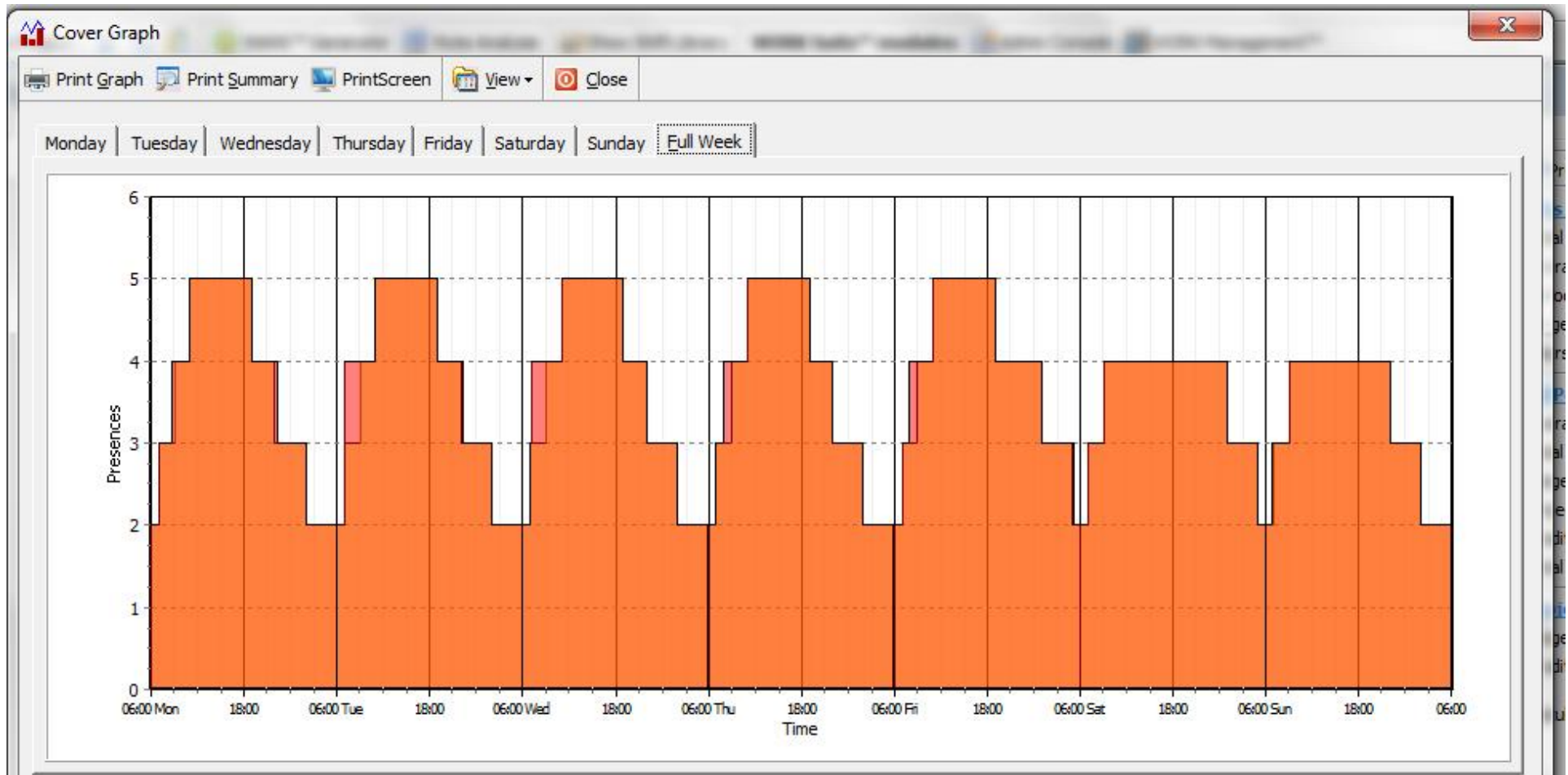
Target hours (gross): 1,957  
 Traditional equivalent: 37.5  
 Calculation Method: W-U

Shift Code	Colour	Start	End	Duration (W)	Unpaid Break (U)	Duration (W-U)	Paid Break (P)	Duration (W-U-P)	Other (O)	Duration (W-U-P-O)
*										

CAPS NUM Ready... Project Updated 12/03/2015 Maintenance: OK

12:33 12/03/2015

# Roster Template – Cover delivered



# Roster Example – 2 split

Rota Designer								
Week/Team	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Totals
1	0630-1830	0630-1830	0630-1830	0630-1830				46
2	0700-1900	0700-1900			1900-0700	1900-0700	1900-0700	57.5
3	1900-0700				0630-1830	0630-1830	0630-1830	46
4				1830-0630	1830-0630	1830-0630	1830-0630	46
5								0
6			0700-1900	0700-1900	0700-1900			34.5
7		1900-0700	1900-0700	1900-0700				34.5
8	1830-0630	1830-0630	1830-0630			0700-1900	0700-1900	57.5
9	0845-1900	0700-1900			1900-0515	1900-0500	1700-0200	49.17
10								0
11	1100-2220	1100-2220				0900-1900	0900-1700	38.83
12			0700-1900	0700-1900	0700-1900			34.5

Rota Designer								
Week/Team	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Totals
1	0700-1600	0700-1600	0710-1600			1800-0100	1540-2200	38.51
2	1600-0200			0800-1600	0800-1600	0700-1800	0650-1540	43.84
3			1100-2200	1100-2200	1100-1900			28.67
4		1600-0200	1600-0200	1600-0200	1600-0100			37.17

## Advantages of interactive software

- Staff felt engaged throughout the development of their rosters
- The software gave staff the autonomy to make changes to their roster patterns
- Provided actual evidence of any under or over provision
- Allowed the work groups to stay within the set parameters
- Facilitated creative solutions from staff
- Provide all concerned the ability to openly negotiate the use of over production of hours
- Provided staff with reassurance that 37.04 contracted hours meant ILA had been abstracted for protected training
- Independent consultant lead

## Roster review challenges

- Original capacity / demand model incorrect due to estate facilities
- Re-issued new demand keys to fit Trust estate facilities
- Key Framework agreement from 2010 utilised, not fit for purpose, re-written, required support from staff side
- Late changes to roster design principles (maximum 2 rosters to 4)
- Flexible workers, larger problem than the Trust anticipated
- No formal agreement in the movement of staff
- Admin support required (organisation, diaries, meeting rooms etc.)

## What went well

- Ownership of the project from the Top of the organisation
- Trust investment in commissioning independent consultants
- Individual performance packs for each individual complexes
- WTS leading on complex sessions, whilst supported by managers
- Staff engagement, interaction and expressing of views in session.....with robust feedback at the end of the consultation period from staff representatives
- Utilising WTS scheduling tool, proficient and efficient from producing an original template, abstraction of hours and demonstrating roster patterns against the demand profile
- Proactive and innovative team often finding solutions to problems that had not been previously scoped

# Efficiencies

## Required

- 36,500 ambulance hours (Without ILA)
- 11,926 solo hours (Without ILA)
- 2,979 Whole Time Equivalent (WTE) + 5% rosterability = 3,128

## Produced

- 37,728 ambulance hours (Excluding ILA)
- 12,584 solo hours
- Additional 3,414 people hours
- By using overproduced contracted hours smartly on different rosters we only used 3,016 WTE
- Efficiency saving of 112 WTE



## Achievements (1)

- Implemented 200 New Frontline rosters across 70 ambulance stations
- 200 station representatives were engaged
- 68 stations agreed rosters, without joint council intervention
- Reduced multiple attendance of vehicles to incidents, releasing the equivalent of 80 full time staff back onto frontline
- Training hours abstracted from all frontline rosters to stop the unpredictability on production of frontline hours
- Supplementary relief roster now inline with frontline rosters

## Achievements (2)

- Enhanced patient care
- Increasing vehicle availability
- Reduction in utilisation
- Rest Breaks delivered for staff wellbeing
- Protected training time (ILA)
- Reduce the dependency of planned overtime
- Reduction of private and voluntary ambulance providers
- Staff engagement and developing and agreeing solutions
- Increased productivity against original model
- Set a foundation for continuous improvements