

REDUCE JOB STRESSORS EXPERIENCED BY WHITE COLLAR INFRASTRUCTURE INDUSTRY PROFESSIONALS IN THE CONTRACTOR/DELIVERY PHASE

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Executive Summary

South-West Utd is a team of Roads Australia (RA) Fellows from South Australia (SA) and Western Australia (WA) working on a project focussed on factors affecting the wellbeing of white-collar construction industry personnel. Previous studies have identified that construction industry personnel have a higher risk of mental health and wellbeing issues than the broader population, and that working hours and patterns are key risk factors to be considered.

South-West Utd worked with a trial group currently undertaking a large construction project in SA, the Ovingham grade separation project, to implement a work redesign and measure its impact on the wellbeing of the trial group. The Public Transport Project Alliance Ovingham (PTPAO) Level Crossing Replacement Project provided a highly engaged and diverse team of at least 30 members across six defined professional roles.

Close liaison with the Ovingham Management team was undertaken to formulate options for the work redesign before implementing the primary change, to include a half day off for each member of the trial group each fortnight.

The trial group's working hours, mood and wellbeing were measured before and after the work redesign, with the data showing considerable improvement in the trial group's wellbeing scores on the WHO-5 wellbeing index after the redesign was implemented.

Survey data was collated and evaluated across numerous data sets and combined with feedback from the trial group to establish trends and provide valuable insights into the factors affecting wellbeing of workers in the construction industry.

Based on these findings, South-West Utd has recommended that further trials be conducted on multiple projects concurrently, over a longer time frame with measurements carried on productivity metrics. Ideally these trials would be supported by the principal, with the work redesign included from tender. The trials should utilise existing systems used by the contractors to assist in collecting working hour data, and consideration should be given to amending the work redesign to be a site wide shutdown of suitable direction and at suitable intervals.



Ovingham Grade Separation Project Image (PTPAO)

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1. Introduction

In 2020, RA Fellows conducted a project to address primary interventions (i.e. eliminate or reduce job stressors) for the white-collar workforce, thereby providing a practical solution for industry to take forward.

In 2021, the RA Fellows have taken the best of this work and developed it further by collecting work demand data using qualitative and quantitative data collection tools. This data will help our industry better understand the psychosocial risk posed by work demand and inform on the effectiveness (or otherwise) of a range of job redesign options available to our industry in reducing job stressors associated with work demand.

South-West Utd has achieved this goal by collecting data prior to and post-deployment of a job redesign option and assessing the impact on work demand and whether this measure can potentially reduce job stressors.

2. Scope of the Project

The RA Fellows of 2021 have been challenged with a project to explore the impact that work redesign has on the psychosocial risk of work demand, reducing job stressors experienced by white collar infrastructure industry professionals.

Fellows have been split in to six groups based on location with South-West Utd one of the three groups focusing on the contractor/delivery phase of a project.

3. Background

The top two ranked projects from the RA Fellows of 2020 focussed on primary interventions relating to flexible working, utilisation tracking and work redesign to decrease mental harm. The focus of these projects centred on review of work hours and the impacts of excessive hours.

Review of a number of additional resources (refer Appendix A) has also assisted South-West Utd in gaining valuable understanding of recent studies. These studies have identified that there is a 2.5 times greater incidence of underlying mental health issues experienced by white collar workers in the construction industry compared to other industries and exceeded those reported by psychiatric patients seeking treatment⁵.

Key drivers for mental harm have been identified as excessive workload and the ability to influence that workload, with mood outcomes including depression, anger and fatigue⁶.

Taking on board the mid-year presentation by 2020 Fellows Group 1 and literature outcomes^{3,6}, it is not just the work hours and breaks that impact work demand but how the individual feels about these breaks, the flexibility to work the hours that are demanded, ability to influence the workload, and the perceived reward for effort.

Extensive consultation with specialists and stakeholders has formed the background to this project for South-West Utd to maximise the effectiveness of our data collection tools with an objective to monitor the impact that the work redesign measure has on the trial group. Valuable input has been provided from the briefing arranged by RA with clinical psychologist, Tenneile Manenti from MindLogistics, discussions with WellBeing SA and the trial group Alliance Management Team members, General Manager, Human Resources (HR) and Alliance Leadership Team.

4. The Journey

STH-WEST UTD OUR JOURNEY 2021

Review of 2020 RA Fellows Projects & Literature Review

Focus - primary interventions to decrease mental harm:

- Flexible working
- Utilisation tracking
- Review of work hours & impact on individuals

Key drivers for mental harm:

- Excessive workload
- Ability to influence workload → negative mood outcomes (depression, anger & fatigue)

Review and Refine Quantitative Data Collection Tool

Review of 2020 RA Group 2 highlighted key focus areas:

- Drop off in participation
- Not just the work hours and breaks that impact work demand but:
 - how the individual feels about these breaks
 - the flexibility to work the hours that are demanded
 - the ability to influence the workload
 - the perceived reward for effort

The Quick Response (QR) code based data collector provided by RA used a standard set of questions to collect daily working hours data. This was adopted as the platform with significant modifications made.

Further development was carried out to capture additional data on:

- Work demand
- Daily mood data

Highlights:

- Questions were optimised to reduce the time for participants
- Questions were tailored around flexibility to be appropriate to different possible work redesign options
- Trials were undertaken reporting an average of 1 minute to complete
- Planned communication and incentives were adopted to encourage continuity of participation
- The survey is available via link: <https://forms.office.com/r/9yLxFDDEqy> and copy provided in Appendix B.

Develop Survey to Collect Qualitative Data

Following a briefing arranged by RA with clinical psychologist, Tenneile Manenti from MindLogistics and consultation and advice from WellBeing SA, the WHO-5 wellbeing index developed by the World Health Organisation (refer Appendix A) was selected to assess wellbeing. Although it is relatively simple, the five questions from the WHO-5 capture the depression mood outcome and was seen as the closest existing survey to target the topics we had chosen to impact.

Additional questions, with a focus on the impact that work demand has to mental health and the factors contributing to this impact, were developed and included in order to monitor the impact (if any) that the primary intervention measure had on the trial group.

The pre-deployment and post-deployment surveys are available via links: <https://forms.office.com/r/7yhQqwN37b> & <https://forms.office.com/r/LMpLWpTaL6> respectively, and copies provided in Appendix C.

Identify the Trial Group & Develop Communications

Key considerations/requirements:

- Project to be in contractor/delivery phase
- 20 white collar industry professionals required for trial group
- Trial group contained within one of South-West Utd's organisations and based in SA or WA
- COVID impacts
- Impacts on productivity
- Union influences
- Contract restrictions

Three projects were identified and initial discussions were held with project management to assess against the redesign requirements and determine the willingness to participate.

Public Transport Project Alliance Ovingham (PTPAO) Level Crossing Replacement Project in SA was selected as most appropriate and engaged.

Following selection of PTPAO, a Communications Plan for the trial group (refer Appendix D) was developed to provide:

- Background information on the project including final outputs
- Timeframes for the trial period
- Expectations regarding survey participation
- Information on support services
- Information on post-deployment activities

Identify Work Redesign Primary Interventions for the Trial Group

Literature³ has reported that the primary interventions offering the best results are also the easiest to implement and should focus on flexible working and utilisation tracking. Improved working conditions are realised through reduced job demands, improved job control and improved social support.

Based on this, three primary work redesign options, that aiming to change the impact of work demand impacts were proposed to PTPAO Management: with pros and cons documented, refer Appendix E:

1. Time off in lieu of additional hours worked
2. Restricted meeting time windows
3. After hours IT and phone blackout

Restricted meeting times was thought to provide the least benefit. It does not address the ability to influence workload and is more likely to revert once individual's diaries become full with other meeting commitments.

There was some thought that a forced IT and phone blackout could contribute to an increase in the psychosocial risk of work demand and actually reduce flexibility of work.

It was South-West Utd's opinion that 'Time off in lieu of additional hours worked' would be the most effective work redesign. This takes into consideration the industry norm of excessive work hour demands on construction projects, as well as the 6-day a week construction schedule on the Ovingham Level Crossing Replacement Project.

PTPAO Management advised that, due to existing contract requirements, the 6-day a week construction schedule would need to be maintained during the trial. However, they were supportive of the 'Time off in lieu of additional hours worked' option, provided a schedule was developed to ensure appropriate site coverage across all days.

Several variations to the 'Time off in lieu of additional hours worked' option were then considered and reviewed with PTPAO Management to determine what would be acceptable including:

- Variation 1: Provide 1 day off per fortnight
- Variation 2: Provide half day off per week
- Variation 3: Provide half day off per fortnight
- Variation 4: Provide a late start/early finish arrangement

Variations 3 & 4 were selected as acceptable work redesigns to be implemented, however, it was agreed that the preferred option should be finalised part way through the first stage of the trial, after collation of initial working hours data, to determine what work redesign variation would be most effective.

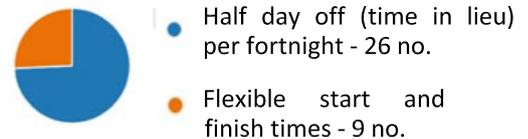
Commence Trial - Deploy Quantitative & Pre-deployment Qualitative Collection Data Tools

2nd August - 28th August 2021 (4 week period)

- The trial was delayed by 1 week due to a COVID lockdown in SA
- Induction for the Trial Group to provide project background and instructions on how to use data collection tools
- Review of results undertaken in week 3 with PTPAO Management to agree on work redesign to be implemented based on results
- Data confirmed expectations that excessive hours are being worked:
 - Average of 10.84 hours worked per day (excluding breaks)
 - 69% not able to work flexibly
- It was agreed with PTPAO Management that the trial group would vote between work redesign options Variation 3 and 4
- A presentation was made to the trial group briefing them on results of the initial working hours data and providing them with a poll for them to vote on their preferred work redesign option
- Poll Results:

Variation 3: Half day off (time in lieu) per fortnight - 74%

Variation 4: Flexible start and finish times - 26%



Deploy Primary Intervention Work Redesign

30th August - 25th September (4 week period)

Whilst RA had suggested a 3-week trial period for deployment of the work redesign, South-West Utd determined that it would be more appropriate to extend this to a 4-week trial period. This allowed the data before and after to be comparative and consider monthly work cycles as well as better supporting the proposed redesign options.

To successfully implement the chosen work redesign, the trial group was encouraged to take one half day off time in lieu per fortnight (resulting in a total of two half days off in the trial period)

Each member of the trial group was required to liaise with their line manager to agree on the half days they would take off in each fortnight. Individuals were also asked to consider their own work responsibilities to determine the planned time off, with the aim of providing individuals with greater flexibility.

As the working hours data from the first part of the trial indicated that individuals were already working excessive hours, over and above what was required, the aim with this work redesign was to try to get individuals to reduce their total work hours - it was not expected that individuals made up any time they had off.

Conclude Trial - Cease Quantitative & Deploy Post-deployment Qualitative Collection Data Tools

27th September - 30th September (1 week period)

The post-deployment qualitative survey was completed by the trial group.

5. Results

Working Hours Daily Quantitative Results

Daily working hours and mood data for each trial participant was collected for a total of four weeks pre work redesign deployment to establish a baseline. This was collected for a further four weeks during work redesign implementation. Data collected post-deployment was analysed against baseline data to assess the impact that the work redesign had on working hours and daily mood.

It should be noted that participation from the trial group completing the daily working hours survey dropped off significantly during the implementation of the work redesign, despite continued efforts and incentives to maintain engagement. A total of 257 surveys were completed post-deployment versus 432 surveys completed pre-deployment. Drop off in participation is viewed to potentially have an effect on the overall result and the true impact the work redesign had on reducing working hours. Similarly, through the daily collection of working hours data and the anonymity of data collection, it was not possible to determine the weekly working hours, therefore potentially not exposing the reduction in hours with the time being time off in lieu.



Figure 1 – Average Hours Worked (Excluding Breaks) Pre-deployment versus Post-deployment

Results show that excessive hours are being worked on the project with the standard workday being more than 10 hours, with average working hours of 10.83 pre-deployment and 10.68 post-deployment. The work redesign had a positive impact, although negligible, reducing total daily working hours by an average of only 9 minutes. This tends to support the literature^{3,6} that it is not just the work hours that impact wellbeing but how the individual feels about the flexibility to work the hours that are demanded and the ability to influence the workload.

This positive impact was also shown for all role types on the project, reducing working hours for all roles except for the project administration/commercial team with working hours increasing by an average of 30 minutes.

Table 1 – Summary of Average Working Hours (Excluding Breaks) Pre & Post-deployment for each Project Role

Role of Trial Participant	Average Daily Working Hours Pre-deployment	Average Daily Working Hours Post-deployment	Did the Work Redesign have a Positive Impact on Total Working Hours?
Engineer	10.58	10.27	✓ - 19 minutes (97%)
Management	11.39	10.98	✓ - 25 minutes (96%)
HSEQ	10.78	10.53	✓ - 15 minutes (98%)
Project Admin/Commercial	9.87	10.38	✗ + 31 minutes (105%)
Other	10.01	9.67	✓ - 20 minutes (97%)
Supervisor	11.75	11.32	✓ - 26 minutes (96%)

Participants were asked how many hours they were going to record on their timesheet to ascertain whether individuals were recording actual hours. Data confirmed that individuals across all role types were not recording true and correct hours worked daily. This suggests a culture of under recording and providing Senior Management and HR a false indication of actual hours worked across the project. This disparity improved marginally post-deployment.

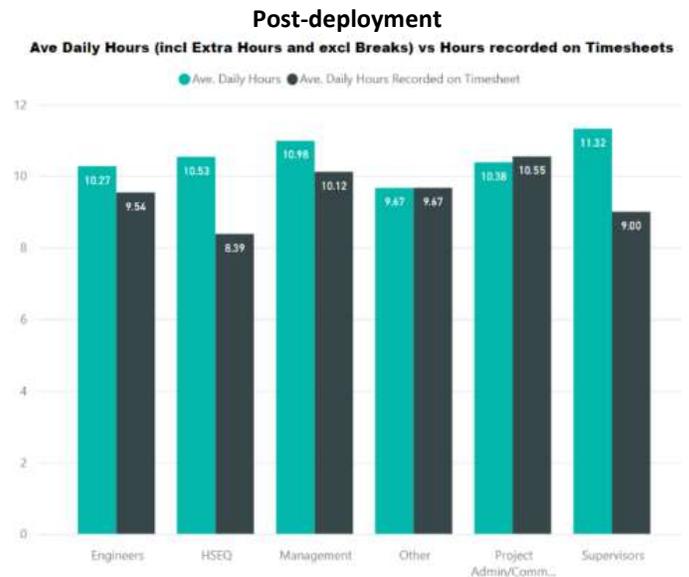
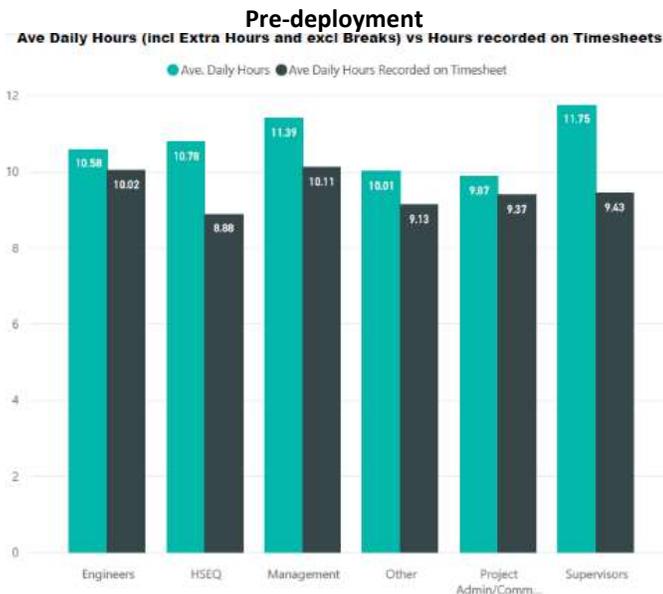


Figure 2 – Average Daily Hours versus Hours Recorded on Timesheets Pre-Deployment

To understand if adequate breaks were taken during workdays, participants were asked their break duration and if breaks were as planned (on time, sufficient duration, or none by choice), ad hoc (fitted them in when they could but not ideal), or they were unable to take any breaks. The data showed that there was negligible change in the average break duration pre and post-deployment with an average break duration of 22.24 minutes taken pre-deployment and 22.40 minutes post-deployment. Data did, however, show that the work redesign had a positive impact with a greater percentage of participants able to take breaks and as planned.

Table 2 – Summary of If and When Breaks were Taken

	Pre-deployment	Post -deployment
Break were as planned	43.0%	52.9%
Breaks were ad hoc	47.8%	40.5%
Unable to take breaks	9.2%	6.6%

Participants were also asked if they were able to switch off after they had finished the day's work with 56% able to switch off pre work redesign deployment and 58% post work redesign, indicating that the work redesign had little impact on those who are unable to switch off from their daily work.

Additional data was collected to ascertain workday flexibility. Participants were asked if they were able to work flexibly, i.e. hours, location. Data was consistent across the trial group pre and post work redesign implementation but this was expected given the chosen work primary intervention.

Participant mood data - how they felt about the day's work, the number hours worked and breaks taken was collected daily both pre and post-deployment. The data showed that participants across the trial were generally satisfied with their workday, fine with the hours they worked and neutral about how the breaks made them feel. However, data showed that post-deployment the overall mood had improved with greater satisfaction for the day worked, an increase in happiness with hours worked and feeling more energised after taking breaks.

Table 3 – Summary of Mood Data from Pre and Post-deployment

	Pre-deployment	Post-deployment
General Workday		
Extremely Satisfied	4.3%	13.6%
Satisfied	49.9%	52.5%
Neutral	31.5%	23.0%
Dissatisfied	10.9%	9.7%
Extremely Dissatisfied	3.4%	1.2%
Number of Hours Worked		
Happy	65.5%	68.1%
Ok	20.5%	23.0%
Upset	9.2%	6.2%
Disgruntled	4.8%	2.7%
Breaks Taken		
I was energised	18.4%	22.6%
I felt tired	17.7%	12.8%
Neutral	60.0%	60.3%
N/A	3.9%	4.3%

Qualitative Results

Pre and post-deployment qualitative surveys were created to determine the impact the work redesign would have on the trial group's wellbeing. The WHO-5 Wellbeing Index was adopted for this survey with additional specific questions added to gauge the impact of the primary intervention work redesign option. 32 participants completed the pre-deployment survey and 28 participants the post-deployment survey. The results are summarised in the following table:

Table 4 – Average WHO-5 Score (Out of 100)

WHO-5 Standard	Pre-deployment	Post-deployment	% Change	Significant Change in Wellbeing?
Average WHO-5 Score for Total Participants	53.38	63.00	+18.0%	Yes
I have felt cheerful and in good spirits	3.00	3.32	+10.7%	Yes
I have felt active and vigorous	2.47	3.18	+28.7%	Yes
I have felt calm and relaxed	2.88	3.25	+12.8%	Yes
I woke up feeling fresh and rested	2.25	2.61	+16.0%	Yes
My daily life has been filled with things that interest me	2.75	3.39	+23.3%	Yes

Referring to the WHO-5 Wellbeing Index¹³, a 10% difference in overall score indicates a significant change. The average WHO-5 score from the qualitative pre-deployment survey increased by just over 18%, indicating a significant improvement in the wellbeing of the participants as a result of the implementation of the primary intervention work redesign.

The data recorded also provided an indicator as to the change in wellbeing across each project specific role. Prior to the redesign implementation, it was observed that three role categories fell below a WHO-5 score of 52, indicating poor wellbeing¹³, namely 'Engineers', 'HSEQ' and 'Other'. Following the implementation of the work redesign, the wellbeing by role as measured by the WHO-5 score has improved for all role categories. The positive increase in the WHO-5 score has elevated two of the role categories above the poor wellbeing indicator score of 52, with both the 'Engineers' and 'Other' role scores improving by 41% and 22% respectively. Unfortunately, the 'HSEQ' role remains in the poor wellbeing range and showed only marginal increase as a result of the work redesign trial.

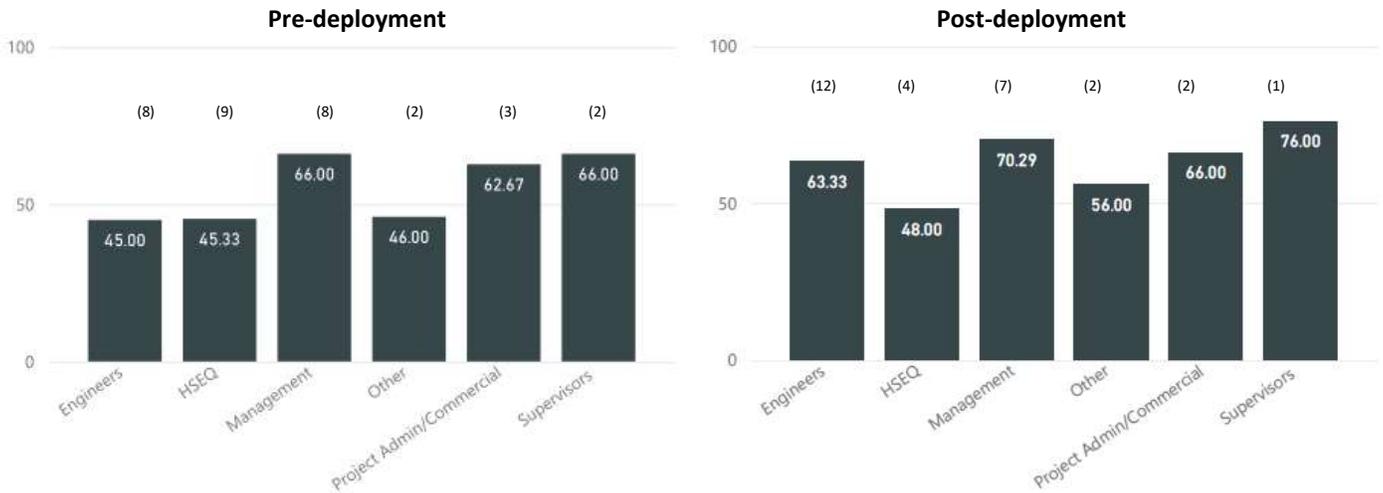


Figure 3 – Average WHO-5 Scores by Role (Out of 100) Pre & Post-deployment for each Project Role
 Note: Score < 52 indicates poor wellbeing¹³
 Note: Numbers in brackets refer to the numbers in each role pre & post-deployment

Following the implementation of the work redesign, 25% of participants presented a score of < 52 (indicating poor wellbeing). On further analysis of the data results from these participants, the following has been deduced:

- 86% had the support of their manager and peers
- 71% said the work redesign has positively impacted their work stressors
- 50% noted a positive change in their productivity (50% noted no change in productivity)
- 100% of their responses to the WHO-5 questions were related to work

On review of the WHO-5 data by category (work, personal or a combination of work and personal), it was found on average that those who selected Category A (work) as the main grounds for their response to the WHO-5 questionnaire, have a lower score than Category C (a combination of both work and personal). Although this trend was also evident post-deployment, it was encouraging to record a significant 19% increase in WHO-5 score post-deployment, removing the average from 'poor wellbeing'.

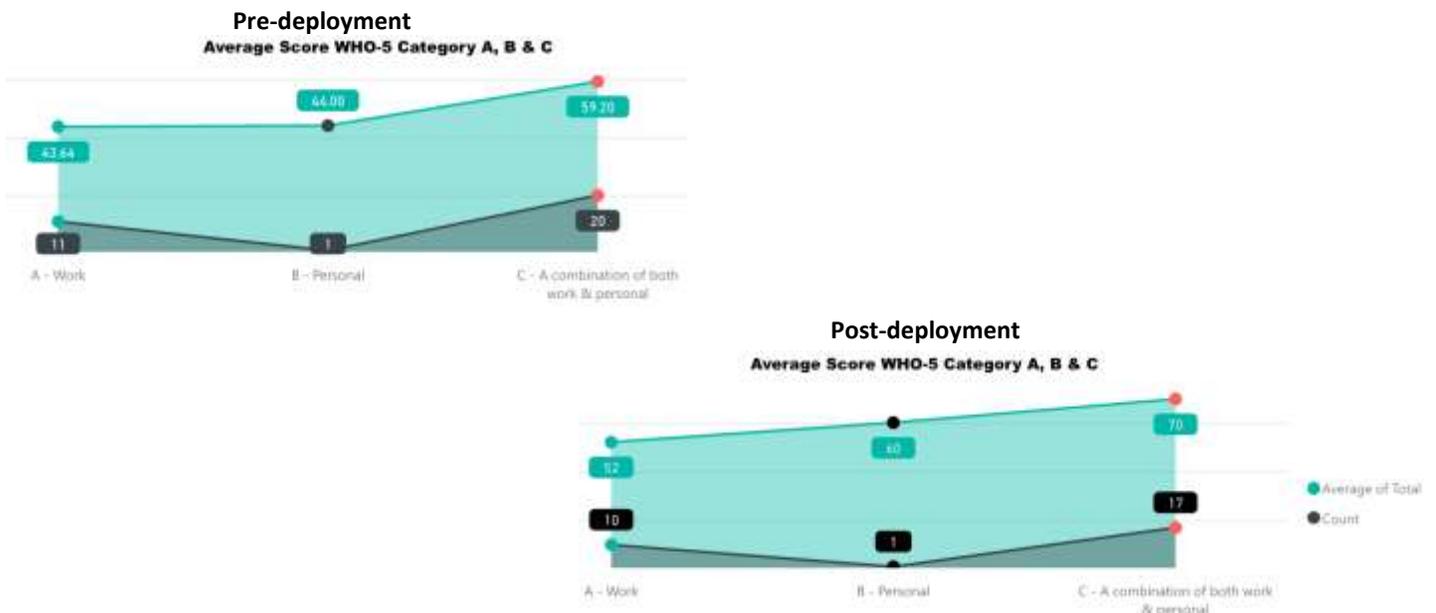


Figure 4 – Average WHO-5 Scores by Category (Out of 100) Pre & Post-deployment for each Project Role
 Note: Score < 52 indicates poor wellbeing¹³

The following additional qualitative questions were surveyed to assess the impacts that the implementation of the primary intervention work redesign may have had on the trial group. The results below indicate that the chosen work redesign was positive.

Table 5 – Additional Questions Summarising the Wellbeing Qualitative Survey Results

Additional Wellbeing Questions	Results
How did the work redesign option impact your overall wellbeing?	Predominantly positive comments
Did you feel supported by your manager/peers?	82% Yes
Do you feel like you have control of the flexibility to meet your work demands?	64% Yes
Were you able to fully implement work redesign?	75% Yes 14% 1 half day 11% No
How has the redesign impacted your work stressors?	64% Positively 32% No Impact 4% Negatively
How has your productivity been impacted by redesign?	46% Positively 50% No Change 4% Negatively
How do you think the work redesign has impacted the productivity of your direct reports?	No discernible change

The ability to control or manage flexibility to achieve a work-life balance did not change appreciably from data collected pre and post-deployment. However, the data does indicate a significant improvement in the level of support individuals receive from their managers and peers, with an 82% success rate showing the support offered to this trial by PTPAO Management. The wellbeing increase can therefore likely be attributed to the support shown within the Alliance to having flexibility of working hours.

6. Reflections, Insights & Feedback

The results of the wellbeing surveys carried out pre and post-deployment show a clear improvement in the ratings of wellbeing under the WHO-5 Wellbeing Index. The improvement of approximately 18% is considered a significant improvement in wellbeing, reinforcing the proposition that introducing more workplace flexibility and time off would have a positive impact.

Further reinforcement of the work redesign having a positive impact was provided by the mood data recorded as part of the daily quantitative survey. Prior to the work redesign deployment, 54% reported being satisfied or extremely satisfied with their workday, with this number increasing to 66% post-deployment, an increase of 22%.

The raw data therefore reinforces the proposition that implementing the chosen work redesign would improve the trial group's wellbeing. Further to this data, South-West Utd gained a number of insights on the trial process, its impacts and potential next steps to develop from this process.

Insights on Wellbeing and Productivity

In working with the PTPAO General Manager throughout, it was clear there was a genuine desire to improve the wellbeing of his team. There were, however, conflicting drivers of productivity, employee equality and profitability to balance with the aims of this trial, as the changes to work practices were being introduced midway through the project.

From South-West Utd's perspective, these aspects of the trial were managed smoothly by the PTPAO team, due in part to the mature approach by the PTPAO Management team and also likely assisted by the short 4-week deployment duration. If the trial was to be run for a longer period of time, or for an entire project, the possible impacts on productivity would need to be incorporated into project planning.

While this trial was unable to record specific information or metrics to measure any impact on productivity, data was recorded on the trial group's perception of any change in individual productivity through the trial. This data overwhelmingly suggested the trial had a positive impact on productivity, with 96% believing that there had either been positive or no change in productivity during the trial period. Many respondents to the post-deployment wellbeing survey also reported a positive impact from the extra time off, with a number commenting that they felt refreshed and productive when they returned to work.

While these perceptions are encouraging, in order to confirm any change to productivity outcomes, measurements of specific productivity related metrics would need to be collected from a project while running a similar work redesign, before productivity impacts could be confidently stated. Further trials could be conducted to specifically measure productivity changes, ideally with a longer duration than the work redesign period (refer Recommendation 3 in Section 7).

Despite an overall improvement in wellbeing, some of the comments provided by participants in the post-deployment survey mentioned uneasiness at taking time off from work while activities were continuing on site. In some cases, individuals reported that they felt this had a negative impact on their wellbeing, as they felt they were not pulling their weight. The conflict that these individuals felt in taking time off is perhaps expected, with the project tendered, won and set up to operate under different conditions. The trial work redesign was provided to the project team part way through, so the dissonance employees felt about what was being asked of them and what was required to get the job done was greater than what would have been expected if the project was set up to run this way from commencement.

Additionally, if the work redesign parameters were mandated by the principal at time of tender, it creates an even playing field for all tenderers in meeting these requirements. This wellbeing approach by a principal such as a state government body, would be a sensible next step to continue the work of RA in driving change in this regard (refer Recommendation 2 in Section 7).

Reflections on the Trial Framework

Working within the scope and timing requirements of the RA project framework enabled the project team to arrive at outcomes in a timely manner, however, it has become clear to South-West Utd that the time constraints and other factors have provided some limitations to the findings.

The 4-week duration of the work redesign trial may not have been long enough for the trial group to fully realise any changes in wellbeing. A large construction project like PTPAO goes through a number of highs and lows in the project lifecycle as the team deals with specific project milestones, seasonal weather, client demands and other external factors like COVID-19. The short period allocated for the trial has the potential for other influences to impact work demand, stress and wellbeing, which may have influenced the responses to the wellbeing questions. A longer term trial would help to give more confidence in the data as the highs and lows in the project lifecycle are averaged out over time (refer Recommendation 1 in Section 7).

Insights from the Trial Group

South-West Utd received questions and feedback from the PTPAO trial group while engaging with them on the project, providing an insight into opportunities that further trials could consider. In providing this feedback, the trial group were clearly engaged in looking at the risk factors for wellbeing and applying them to their own work. This in itself is a positive outcome of the trial as this thought process has helped their awareness of their specific risk factors.

Some of the main points of feedback were:

- A supervisor suggested incorporating an assessment of nightshift as a specific risk area for employee wellbeing, as there had been some recent nightshift work on the project. We were unable to revise our approach at the time, but this could be considered for future trials.
- PTPAO Management explained that it would be difficult to recommend that the work redesign continue after the trial period, for fear of setting precedents for other projects and sites within the larger organisation. It was felt a decision on this should sit above the individual project and at a corporate level. Recommendation 2 below would assist gaining comfort with this decision process.
- As freedom was given to the work group to take the half day off at a time that suited them, the PTPAO Management team noticed unsurprisingly a high number of people opting for a half day in lieu on Friday afternoons and Monday mornings. If the same work redesign were trialled in the future, a better roster system should be set up to spread the time off evenly throughout the week, to maintain core functions on site at all times. Alternatively, the team could all have the same half day off, with full site shutdown (refer Recommendation 6 in Section 7).
- Trial participants noted that having time off during the week enabled individuals to attend appointments and carry out errands that are not always possible at night or on weekends.

Insights on Data Collection

South-West Utd used online survey tools to record both the qualitative and quantitative data throughout the trial. This was an easy and effective way to record the required information, but it was also reliant on the trial group remembering to complete their surveys each day. This was managed through a number of interactions to communicate progress in the trial, and reinforce the importance of

recording the daily data. This process was well supported by PTPAO Management, but there was still considerable drop off in participation in the daily surveys over the trial, which reduced the quantity of data from which trends could be derived.

Further to this, the surveys were made available for people to fill out retrospectively, in case people forgot to complete them on the correct day. In some cases, this made it difficult to interpret the specific data relating to dates, hours and mood, because it was unclear which dataset related to which day, and whether it was a weekday or weekend, for example. This uncertainty, together with the requirement to maintain anonymity, restricted the ability to draw accurate numbers on working hours per week pre and post-deployment.

In hindsight, leveraging the Alliance's existing timesheet administrative processes to incorporate recording of working hour data relevant to this trial could be a sensible way of addressing these concerns. In a longer term trial, a number of other typical site administration processes could be leveraged to assist in gaining trial data (refer Recommendation 5 in Section 7).

South-West Utd was conscious of the need to maintain confidentiality and anonymity of the data recorded. In some cases, maintaining this anonymity inhibited dissecting the data for specific trends in groups of people other than by their role definition. Breaking the categories down by role was not appropriate in some cases where there were only a small number of individuals in the role group. If future trials were run with larger work groups, perhaps across multiple projects, sufficient numbers of people could be incorporated into the trial group to enable greater dissection of data and trends without compromising participant's anonymity (refer Recommendation 4 in Section 7).

7. Recommendations

Following the trial work redesign and data collection process, in order to further the industry's progress in dealing with work stressors for white collar infrastructure professionals in the contractor/delivery phase, South-West Utd has made the following recommendations to RA:

- 1) Conduct a further trial over a longer period of time in order to more accurately measure changes to project productivity, trial group wellbeing, and specific data on role types without compromising participant anonymity. Leverage the longer trial period to roster time off evenly through work periods.
- 2) Engage with project principals, like Department for Infrastructure and Transport in SA and Main Roads WA in WA, to identify suitable upcoming projects where specific work redesign parameters could be trialled over the full length of the project and included in tender information for contractors to base their tenders on, in order for the project programs and budgets to be aligned with the target working hours for the trial.
- 3) Identify and record specific measurements on productivity on a trial run over a project for a long period of time (greater than 6 months) in order to determine any impacts on productivity from the work redesign trialled. It is important to make the commercial case of why wellbeing is important beyond just being a good employer and it is recommended to also measure data on employee retention rates and absenteeism to see if there are additional business benefits.
- 4) Run parallel trials on different projects to increase the trial group size, running the same work redesign and recording data from the same role types. This will also assist to determine any role specific impacts from the work redesign while retaining participant anonymity.
- 5) Where possible, leverage existing processes used by the group involved in future trials to automate the collection of working hours data to ensure consistency of the data obtained. This should address concerns regarding ongoing participation and provision of data by the trial group.
- 6) Consider amending the primary intervention approach to have a full site shutdown for half a day each month that can be communicated well in advance and permit planned activities for the time in lieu.

Appendix A

Reference List

1. Beyond Blue, 'Anxiety and depression checklist (K10), <https://www.beyondblue.org.au/the-facts/anxiety-and-depression-checklist-k10>
2. The Hive, 'Wellbeing Collaboration: How we might identify technology that proactively supports wellbeing?', April 2020
3. LaMontagne A., Keegel T. & Vallance D., 'Protecting and promoting mental health in the workplace: developing a systems approach to job stress', Health Promotion Journal of Australia 2007
4. Petrie K., Joyce S., Tan L., Henderson M., Johnson A., Nguyen H., Modini M., Groth M., Glozier N. & Harvey S., 'A framework to create more mentally healthy workplaces: A viewpoint', Australian & New Zealand Journal of Psychiatry 2018
5. Roads Australia, 'Roads Australia Submission to the Royal Commission into Victoria's Mental Health System', July 2019
6. Roads Australia Fellowship 2020, 'Fellowship of the Roads', Redesigning Work to Reduce Mental Harm, Group 1
7. Roads Australia Fellowship 2020, 'MHTake5', Redesigning Work to Reduce Mental Harm, Group 2
8. RMIT University, 'Triple Wins: Work Hour Cultures for Health, Safety and Gender Equality in Construction', April 2021
9. Swinburne University, 'Measuring the psychological impact of work related stress and related occupational factors in the Australian infrastructure construction industry', Study Outcomes, 2018
10. Topp C., Østergaard S., Søndergaard, S. & Bech, P., 'The WHO-5 Well-Being Index: A Systematic Review of the Literature', Psychotherapy and Psychosomatics, 28 March 2015
11. University of NSW, 'DASS – Depression Anxiety Stress Scales', 2018
12. Ware J. & Davies A., 'Monitoring health outcomes from the patient's point of view: a primer', 1995
13. WHO Collaborating Centre for Mental Health, 'WHO (Five) Wellbeing Index', 1998
14. WHO Regional Office for Europe, 'Wellbeing Measures In Primary Health Care/The Depcare Project', Report on a WHO Meeting 1998

Appendix B

Quantitative Data Collection Tool

Working Hours Survey RA SAWA REV

D.2

The survey will take approximately 2 minutes to complete.

* Required

* This form will record your name, please fill your name.

1. Today, I was able to work flexibly (hours, location)... *

Yes

No

2. Today, I started work at... (Must use 24 hour clock)

3. Today, I finished work at... (Must use 24 hour clock)

4. Today, my breaks in total were... (mins)

5. How many 'extra' hours did I work in excess of the above questions? (i.e: after hours, last night or over the weekend)

6. How many hours am I going to be recording on my timesheet today?

7. How did I feel about the hours I worked today....

😊

😐

😞

😡

8. My Breaks today were....

as planned - i.e on time, sufficient duration or none by choice

ad-hoc - I fitted breaks in when I could but not ideal

I was not able to take any breaks

9. Today, How did I feel about my breaks?...

- 😊 - I was energised and was able to focus
- 😐 - Netural
- 😞 - I felt tired and worn out
- 🚫 - I couldn't have a break

10. Today, How did I feel about my day's work?...

- Extremely Satisfied
- Satsified
- Dissatisfied
- Extremely Dissatisfied

11. Today, I will be able to go home and switch off from work...

- Yes
- No

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Appendix C

Pre-deployment and Post-deployment Qualitative Surveys

Well-being Survey

The first section of the survey is a questionnaire that has been developed by The World Health Organisation - Five Well-Being Index (WHO-5).

The WHO-5 assess subjective psychological wellbeing focussing on quality of life based on positive mood, energy and general interests.

Please indicate for each of the next five (5) questions which is closest to how you have been feeling over the past four (4) weeks:

** Please be aware all information collected from this survey is anonymous.*

* Required

1

I have felt cheerful and in good spirits... *

- 5 - All the time
- 4 - Most of the time
- 3 - More than half of the time
- 2 - Less than half of the time
- 1 - Some of the time
- 0 - None of the time

2

I have felt calm and relaxed... *

- 5 - All the time
- 4 - Most of the time
- 3 - More than half of the time
- 2 - Less than half of the time
- 1 - Some of the time
- 0 - None of the time

3

I have felt active and vigorous... *

- 5 - All the time
- 4 - Most of the time
- 3 - More than half of the time
- 2 - Less than half of the time
- 1 - Some of the time
- 0 - None of the time

4

I woke up feeling fresh and rested... *

- 5 - All the time
- 4 - Most of the time
- 3 - More than half of the time
- 2 - Less than half of the time
- 1 - Some of the time
- 0 - None of the time

5

My daily life has been filled with things that interest me... *

- 5 - All the time
- 4 - Most of the time
- 3 - More than half of the time
- 2 - Less than half of the time
- 1 - Some of the time
- 0 - None of the time

6

My response to the above (WHO-5) can be related to... *

- A - Work
- B - Personal
- C - A combination of both work & personal

My role is one of the following categories... *

- Project Admin/Commercial
- Engineers
- Supervisors
- Management
- HSEQ
- Other

The additional questions below have been developed for the survey to provide an understanding of the impact your current work environment has on your wellbeing

8

What stressors do you have at work that impacts your mental health... *

9

Do you feel like you have control of your flexibility to meet your work demands... *

Yes

No

10

If you answered no to question 9 - why not...

11

Do you have an appropriate work life balance... *

Yes

No

12

Do you feel supported by your peers, managers and clients to maintain a healthy work life balance... *

Yes

No

If you answered no to question 12 - why not...

Available Support

Your wellbeing is important and there are many organisations that can provide support and information to help you achieve your best possible mental health:

- Converge International **1300 687 327**
- Beyond Blue **1300 224 636** or www.beyondblue.org.au (<http://www.beyondblue.org.au>)
- Mates in Construction **1300 642 111** or www.mates.org.au (<http://www.mates.org.au>)



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Well-being Survey - Post Deployment

The first section of the survey is a questionnaire that has been developed by The World Health Organisation - Five Well-Being Index (WHO-5).

The WHO-5 assess subjective psychological wellbeing focussing on quality of life based on positive mood, energy and general interests.

Please indicate for each of the next five (5) questions which is closest to how you have been feeling over the past four (4) weeks:

** Please be aware all information collected from this survey is anonymous.*

* Required

1

I have felt cheerful and in good spirits... *

- 5 - All the time
- 4 - Most of the time
- 3 - More than half of the time
- 2 - Less than half of the time
- 1 - Some of the time
- 0 - None of the time

2

I have felt calm and relaxed... *

- 5 - All the time
- 4 - Most of the time
- 3 - More than half of the time
- 2 - Less than half of the time
- 1 - Some of the time
- 0 - None of the time

3

I have felt active and vigorous... *

- 5 - All the time
- 4 - Most of the time
- 3 - More than half of the time
- 2 - Less than half of the time
- 1 - Some of the time
- 0 - None of the time

4

I woke up feeling fresh and rested... *

- 5 - All the time
- 4 - Most of the time
- 3 - More than half of the time
- 2 - Less than half of the time
- 1 - Some of the time
- 0 - None of the time

5

My daily life has been filled with things that interest me... *

- 5 - All the time
- 4 - Most of the time
- 3 - More than half of the time
- 2 - Less than half of the time
- 1 - Some of the time
- 0 - None of the time

6

My response to the above (WHO-5) can be related to... *

- A - Work
- B - Personal
- C - A combination of both work & personal

My role is one of the following categories... *

- Project Admin/Commercial
- Engineers
- Supervisors
- Management
- HSEQ
- Other

The additional questions below have been developed for the survey to provide an understanding of the impact the work redesign option has had on your work environment and wellbeing.

8

Were you able to fully implement the work redesign... *

- Yes - was able to take 2 half days off
- No - was only able to take one half day off
- No - didn't take any time off

9

If you answered no in question 8 - please explain...

10

How has the work redesign impacted your work stressors *

- Positively
- No Impact
- Negatively

11

Please elaborate on your answer to question 10... *

12

How did the work redesign option impact your overall wellbeing... *

13

Did you feel that the implemented work redesign gave you the flexibility to meet your work demands... *

Yes

No

14

If you answered no to question 13 - why not...

15

How has your productivity been impacted by the work redesign... *

- Positively
- No Change
- Negatively

16

Please elaborate on your answer to question 15... *

17

How do you think the work redesign has impacted the productivity of your direct reports... If you do not have direct reports please enter N/A. *

18

Did you feel supported by your peers and manager to implement the work redesign... *

Yes

No

19

Please elaborate on your answer to question 18... *

20

Please provide any general feedback for the Roads Australia team... *

Available Support

Your wellbeing is important and there are many organisations that can provide support and information to help you achieve your best possible mental health:

- Converge International **1300 687 327**
- Beyond Blue **1300 224 636** or www.beyondblue.org.au (<http://www.beyondblue.org.au>)
- Mates in Construction **1300 642 111** or www.mates.org.au (<http://www.mates.org.au>)



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Appendix D

Communications Plan



Roads Australia - 2021 Fellowship Project Trial Group Induction Pack

Group 6: WA & SA

Project: Reduce job stressors
experienced by white collar
infrastructure industry professionals





Group 6 – WA & SA:



Group Six - Team Leader

Thilanka Silva

*WA Highways Business Leader
Arup
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Ellen McInerney

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Nathan Shaw

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Ana Bos

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Darren Hastings

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Erica Smith

*Bridge Lead - WA
BG&E
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Why are we here?

In the Construction Industry:

- Average levels of depression, anxiety and stress exceeded population norms by 40% for depression, 38% for anxiety, and 37% for stress
- Levels of “mood disturbance” were 2.5 times higher than the normal population and exceeded those reported by psychiatric patients seeking treatment
- Levels of physical health complaints were observed to be 50% higher than the normal population

(Downey & Stough 2019)



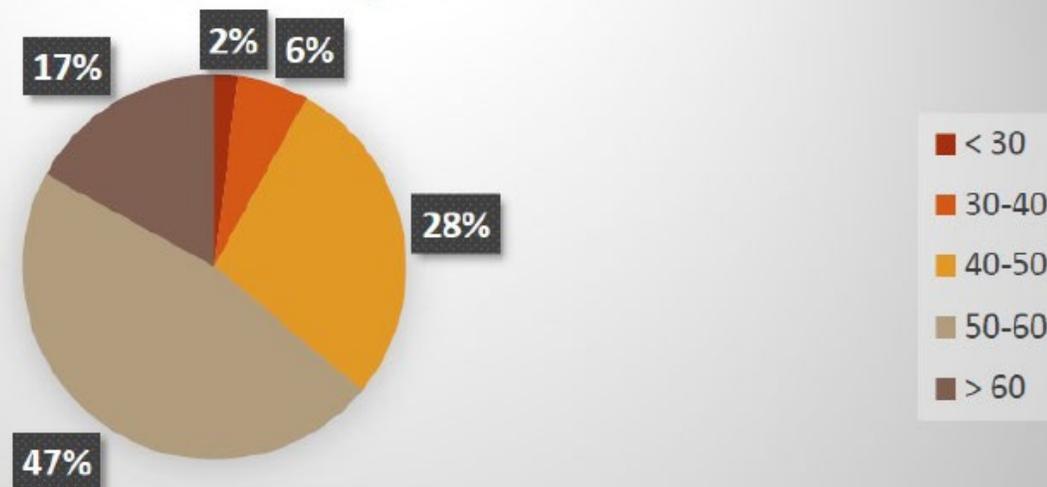


Why are we here?

- 47% of respondents reported working 50-60 hours per week
- A well-established contributor to workplace stress and mental illness is the average hours people work every week

(Downey & Stough 2019)

Hours worked per week





What are we doing?

Topic: “Reduce job stressors experienced by white collar infrastructure industry professionals by exploring the impact **work redesign** has on the psychosocial risk of work demand”

- Undertake a Trial on the Ovingham Level Crossing Replacement Project to collect data on working hours and wellbeing
- Implement a Primary Work Redesign Intervention that changes the impact of the work demand





A systems approach to job stress

LaMontagne et al (2007)

Relative effectiveness	Intervention level	OH&S hierarchy of controls	Examples of intervention objectives	Example activities
Most	PRIMARY Goal: to eliminate or reduce job stressors (eliminate or reduce risk factors for job stress)	Control at the source or inception of the hazard in its path from source to worker through eg: <ul style="list-style-type: none"> Hazard elimination Substitution 	<ul style="list-style-type: none"> Reduce work demands Improve work control Improve social support 	<ul style="list-style-type: none"> Flexible work Provide breaks from client based work IT blackout systems Increase role clarity Increase participation in work planning
Mid	SECONDARY Goal: to alter the ways that individuals perceive or respond to stressors	Control at the worker level through: <ul style="list-style-type: none"> Administrative controls Training and education 	<ul style="list-style-type: none"> Alter individual responses to job stressors Improve individual ability to cope with short term stress responses Detect stress related symptoms and intervene early 	<ul style="list-style-type: none"> Mindfulness training Resilience / cognitive behavioural training (CBT) Coaching and mentoring Physical activity programs
Least	TERTIARY Goal: to treat, compensate and rehabilitate workers with work stress related illness	Control at the level of illness through: <ul style="list-style-type: none"> Treatment Workers compensation Return to work programs and rehabilitation 	<ul style="list-style-type: none"> Treat work stress related illness Compensate work stress related illness Rehabilitate work stress affected workers 	<ul style="list-style-type: none"> Include modification of work stressors in return to work plan Medical care Counselling EAP



Trial Program Overview

Week	Dates	Steps
Week 1 – 4	2 nd Aug – 28 th Aug 2021	Complete Daily Working Hours Survey
Week 1	4 th August 2021	Complete Wellbeing Survey 1
Week 5	30 th August 2021	Deploy Work Redesign to Trial Group
Week 5 – 8	30 th Aug - 25 th Sept 2021	Complete Daily Working Hours Survey
Week 8	22 nd Sept 2021	Complete Wellbeing Survey 2
Week 9 – 10		Collate Data & Present Findings to Trial Group



Daily Working Hours Survey

To be completed daily (work days only) from Weeks 1-8 (2nd August – 25th September 2021):

<https://forms.office.com/r/9yLxFDDEqy>

Please be aware that all information collected from this survey is anonymous.

For survey support please contact Nathan Shaw
Email: nathan.shaw1@dmroads.com.au





Total Surveys
15

Total Hours Worked
143.00

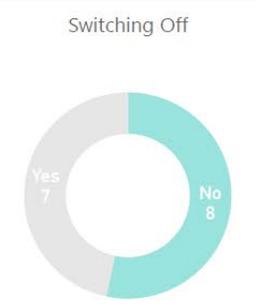
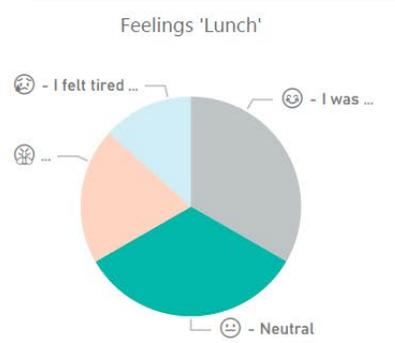
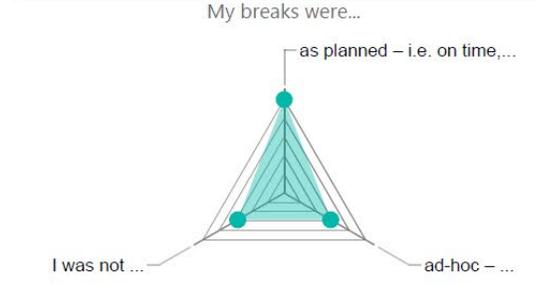
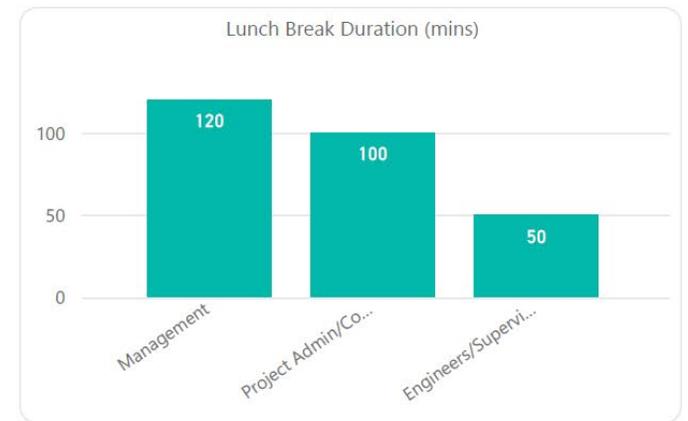
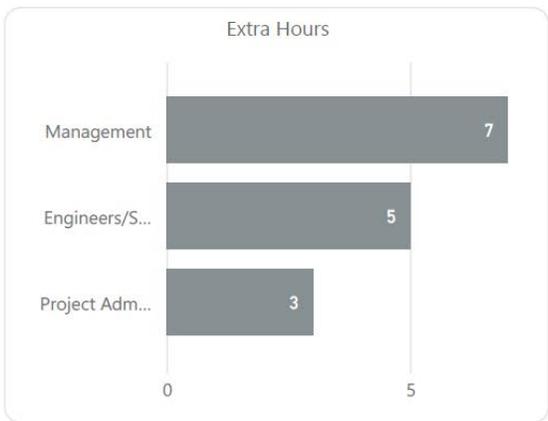
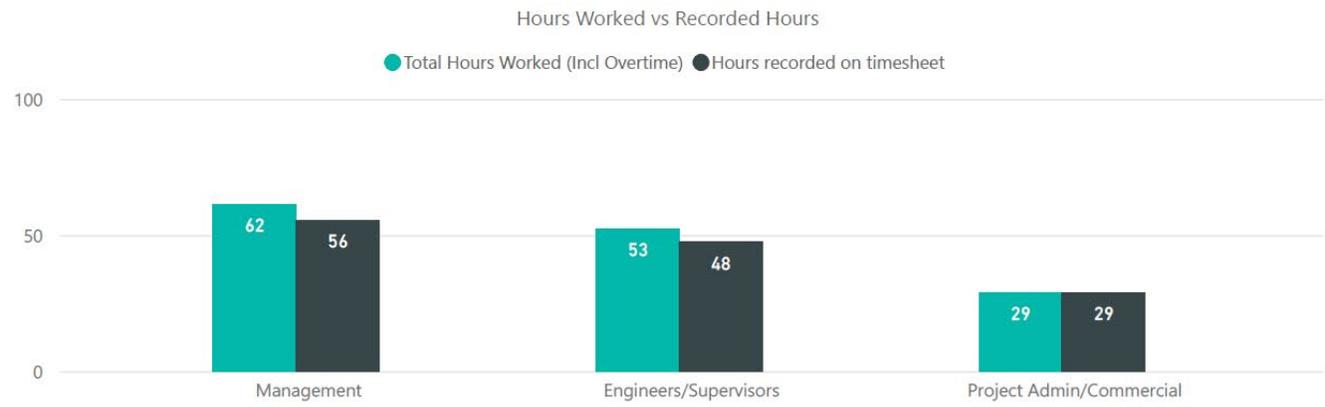
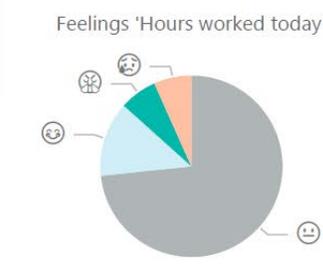
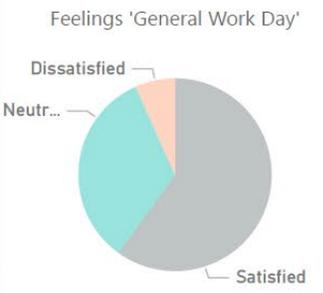
Total Hours Worked minus breaks
138.50

Project Admin/Commercial
29.00

Engineers/Supervisor
52.50

Management
61.50

Month	Count of Completion time
June	15
21	3
22	6
23	4
24	2
Total	15



Surveys Completed by Category

Role Category	Count of Role Category
Management	7
Engineers/Supervisors	5
Project Admin/Commercial	3
Total	15



Wellbeing Survey 1

To be completed in Week 1 on Wednesday 4th August 2021:

<https://forms.office.com/r/7yhQqwN37b>

Please be aware that all information collected from this survey is anonymous.

For survey support please contact Nathan Shaw

Email: nathan.shaw1@dmroads.com.au

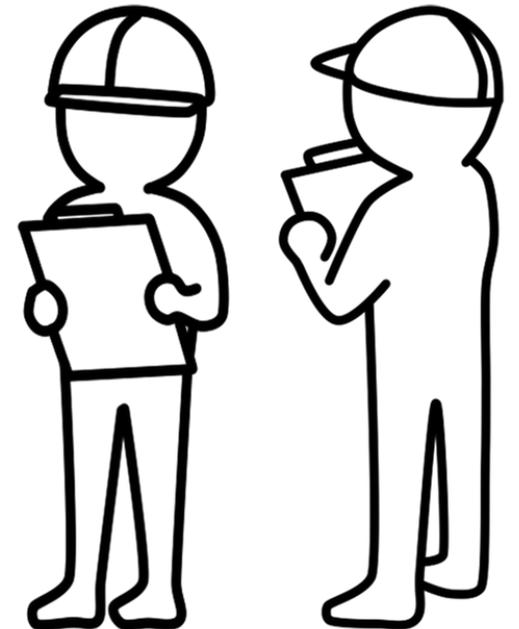




Trial Group

Trial Group – White Collar Construction Staff, which will include:

- Site Administration & Commercial
- Site Engineers & Project Engineers
- Supervisors
- HSEQ Staff
- Management
- Other Site Office Staff





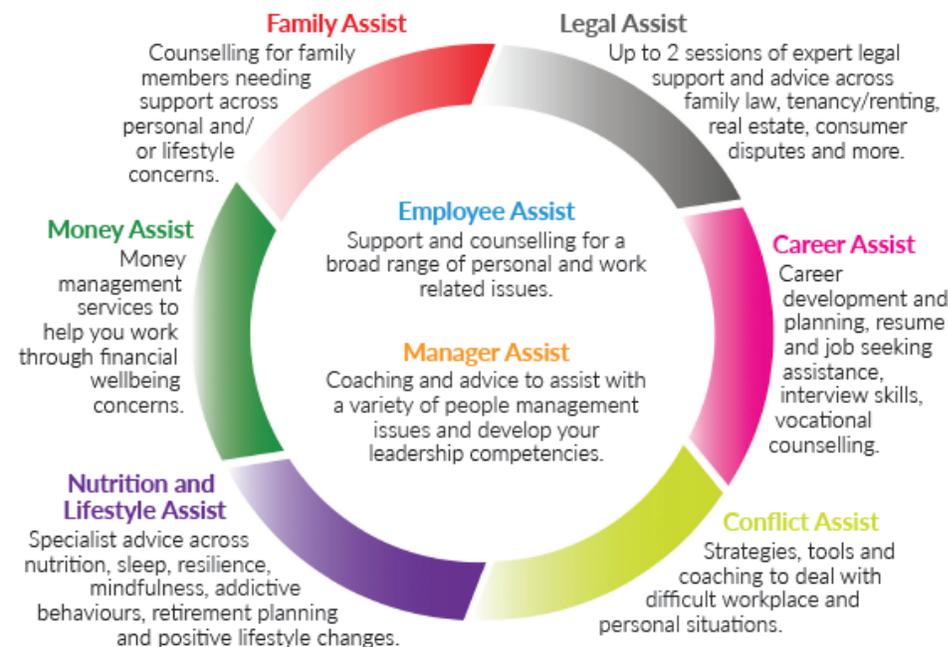
Available Support:

Employee Assistance Program which is free and available to McConnell Dowell Staff:



For Non-MCD employees, please refer to your company EAP.

Your wellbeing is important



Free

Confidential



Available Support:



Website: www.beyondblue.org.au

Ph: 1300 224 636



Website: www.mates.org.au

Ph: 1300 642 111



Next Steps

From Today:

- Start completing the Daily Working Hours Survey
- Complete the Wellbeing Survey 1 on Wednesday
- Review Data & Agree on Work Re-design
- Follow-up session in Week 4 to Implement Work Re-design

At End of Trial:

- Report on Findings to the ALT and Roads Australia
- Promote Long Term Improvements to Mental Health in the Industry





Frequently Asked Questions?

Q. How long does the Trial go for?

A. *8 weeks (4 weeks with normal work conditions and then 4 weeks with a work re-design implemented)*

Q. When do I fill out the Daily Working Hours survey?

A. *At the end of each day that you undertake work.*

Q. If I miss filling in the Daily Working Hours survey, what should I do?

A. *Complete the survey the next day for the day that you missed as well as for the current day. However, don't wait until the end of the week to catch up as we need to ensure the data collected is relevant to the day worked.*

Q. What happens if I can't remember if I filled in the Daily Working Hours survey?

A. *Missing a day is not catastrophic and it is better that you do not repeat a day, so perhaps just leave that one out (but please book in for a test of your memory!?!).*

Q. What happens if I go on leave or have a day of personal leave?

A. *Unfortunately you will not be able to complete the Daily Working Hours survey for any days you are on leave as it is a reflection of that day's work.*

Q. How often do I fill out the Wellbeing survey?

A. *Complete once in Week 1 – a second link will be sent out for another Wellbeing Survey to be completed in Week 8.*

Q. Who do I contact if I need help with the surveys?

A. *Contact Nathan Shaw, Email: nathan.shaw1@dmroads.com.au*

Q. Can the data entered in my survey be traced back to me?

A. *No – both surveys are completely anonymous.*

Q. What happens at the end of the Trial?

A. *The work re-design will stop and the findings of the trial will be summarised in a Report which will be provided to the ALT and Roads Australia. Roads Australia will use these findings to promote long term improvements to mental health within the Industry.*

Appendix E

Work Redesign Selected Option 1 - Time Off in Lieu of Additional Hours Worked

Acknowledging that people are already working in excess of the minimum required hours, this strategy aims to ‘given back’ time to individuals by providing time off in lieu by either allowing a block of time or flexible start/finish times. This strategy mitigates the negative impacts of long work weeks by redistributing the hours, providing employees with an ability to influence their workload and improve job control.

Variation	Total	Description
1	1 day off per fortnight	Reduce working fortnight by 1 day
2	½ day off per week	Reduce working week by ½ day
3	½ day off per fortnight	Reduce working fortnight by ½ day
4	Flexible start/finish	Have the opportunity to start later/finish earlier

Requirements	Description
Schedule	Schedule of time off to be agreed with line manager to allow for backfill if required
Project Requirements	Leadership team to outline any critical reoccurring meetings and days where staff must be present to avoid gaps
Communication Plan	Detailing scheduled days off and rules regarding communications on those days

Pros	Cons	Mitigation Strategies
<ul style="list-style-type: none"> • Additional time for exercise/non-work activities • Increased wellbeing leads to greater productivity • Gives employee some control over their work • Gives others the opportunity to take added responsibility (to cover other roles) • More productive/efficient in less hours 	<ul style="list-style-type: none"> • Lack of supervision on site • Workers may not be able to complete role in reduced days/requiring additional catchup work • Additional stress for individual • Accessibility for team (i.e. not being able to communicate with this person) • Day off may not align with family time off 	<ul style="list-style-type: none"> • Engineer/Leading Hand available to cover the loss of supervisor during time off • Look at resources: <ul style="list-style-type: none"> ○ are they at 100% capacity? ○ opportunity to upskill to support shortfall • Employer EAP for short trial period duration

Work Redesign Selected Option 2 - Restricted Meeting Times:

Adopting the PTPAO suggested 9 am to 3 pm meeting times to align with school drop-off and pick-up times and preventing meetings from being booked between 12 noon and 1 pm to provide a fixed window of opportunity to take a break in the middle of each day. Within the Alliance there is a perceived opportunity to hold formal meetings only for critical items and to shorten the duration of meetings to make them more efficient.

Pros	Cons	Mitigation Strategies
<ul style="list-style-type: none">• Mitigate time wasted in unproductive meetings – lower engagement• Meeting free time to focus on normal workload – control of work hours• Enables a degree of flexibility for employees to align with school pick up/drop off• Meeting agendas more focused for key discussion points	<ul style="list-style-type: none">• May not be beneficial as does not address ability to influence workload• Most likely to revert back to old habits once diaries become full with other meeting commitments• May not align with client/external party meeting schedules	<ul style="list-style-type: none">• Communicate intention of trial with client in advance to get their buy in

Work Redesign Selected Option 3 - Blackout After Hours:

IT supported cut-off for after-hours emails and project phone calls (unless for an emergency situation) to provide a distinct break from work.

Pros	Cons	Mitigation Strategies
<ul style="list-style-type: none">• Ability to 'switch off' once the workday is over• Focus on family/personal time• Work/family conflict avoided• Make plans for the weekend• Time for exercise/non-work activities• Team expectations – lead by example	<ul style="list-style-type: none">• Could contribute to an increase in the psychosocial risk of work demand• Reduces flexibility of work• May not apply to everyone in the trial group	<ul style="list-style-type: none">• Employer EAP, Beyond Blue, WellBeing SA resources available to support during trial

Appendix F

Quantitative Data Results

WORKING HOURS PRE-DEPLOYMENT OF THE WORK REDESIGN

Month	#Surveys completed
August	435
2	19
3	29
4	25
5	26
6	13
7	5
8	1
9	24
10	27
11	19
12	17
13	16
14	7
16	27
17	22
18	16
19	24
20	15
21	4
23	21
24	27
25	20
26	16
27	11
28	4
Total	435

Total Surveys
435

Total Hours Worked
4872.93

Total Hours Worked minus Breaks
4711.91

Average Hours (All Roles)
10.83

Average Daily Hours by Role (Incl Extra Hours and excl Breaks)

Engineers
10.58

HSEQ
10.78

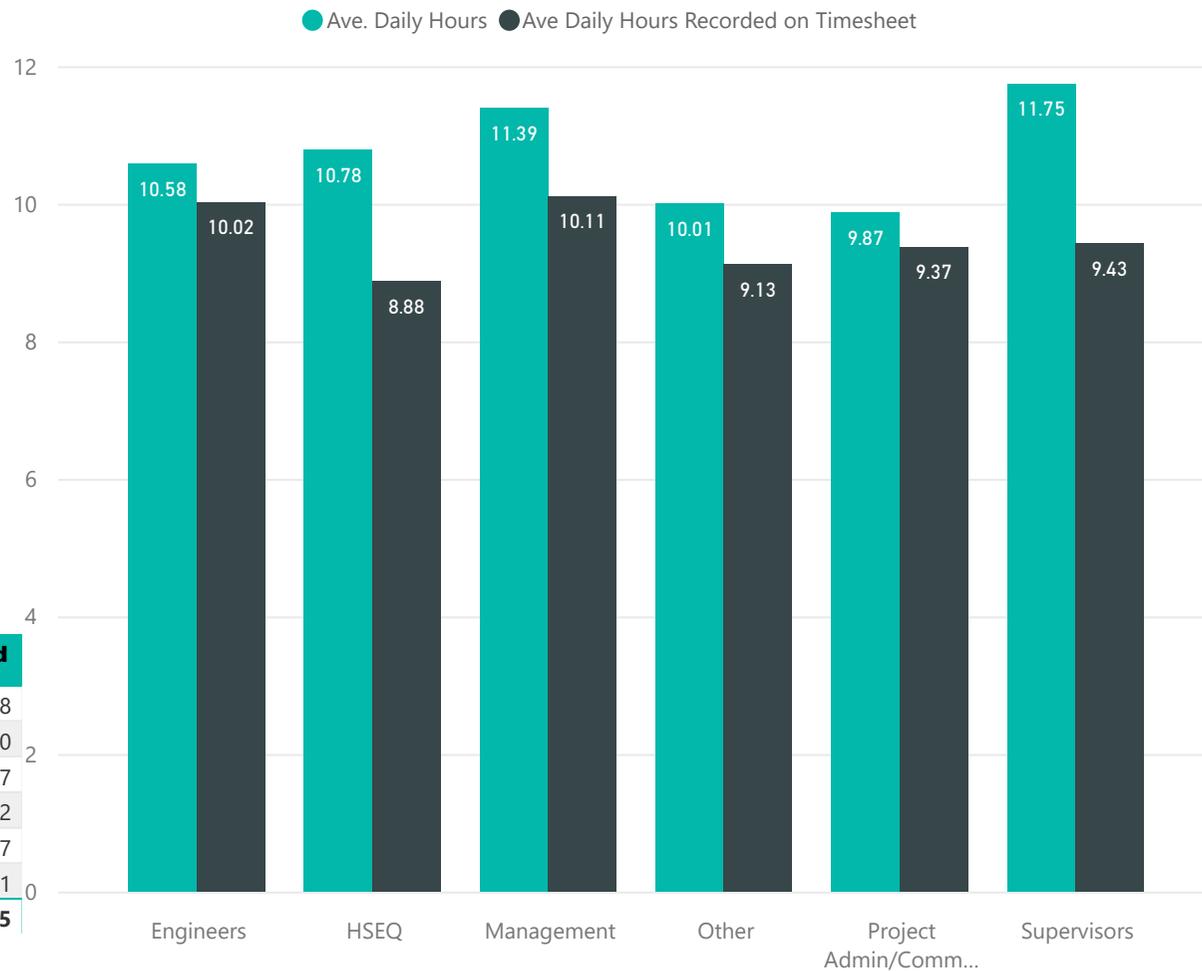
Management
11.39

Other
10.01

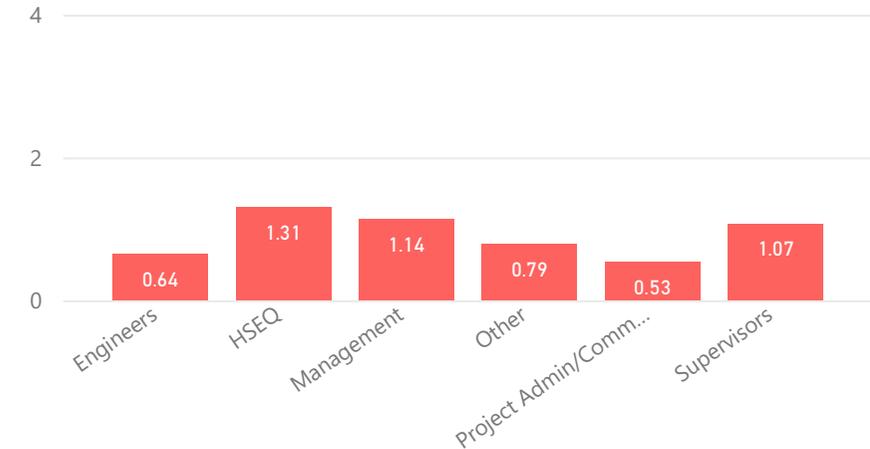
Project Admin/Commercial
9.87

Supervisors
11.75

Ave Daily Hours (incl Extra Hours and excl Breaks) vs Hours recorded on Timesheets



Average Extra Hours Worked Daily



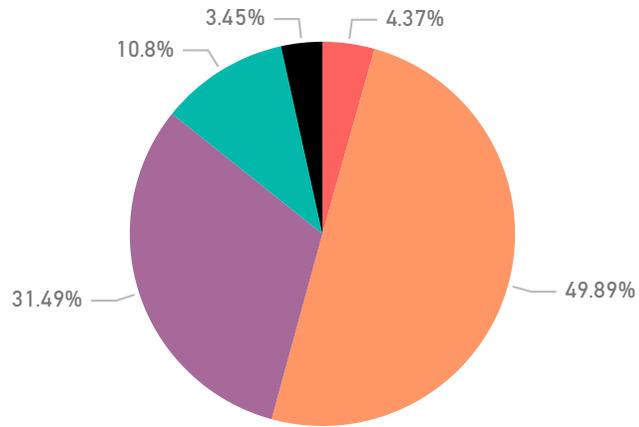
Average Lunch Break Duration (mins)



Role Name	# Surveys completed
Engineers	148
HSEQ	70
Management	137
Other	12
Project Admin/Commercial	47
Supervisors	21
Total	435

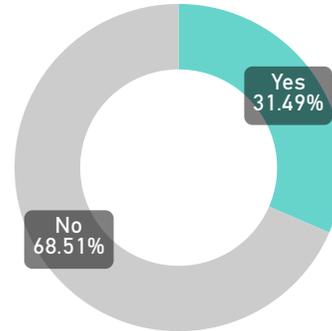
WORKING HOURS PRE-DEPLOYMENT OF THE WORK REDESIGN

Feelings 'General Work Day'

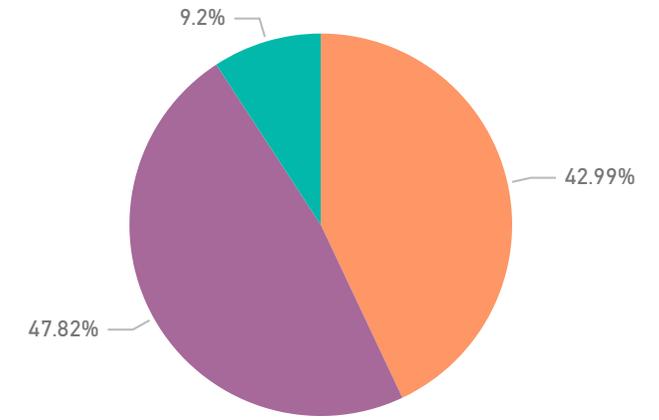


● Extremely Satisfied ● Satisfied ● Neutral ● Dissatisfied ● Extremely Dissatisfied

Work Flexibly

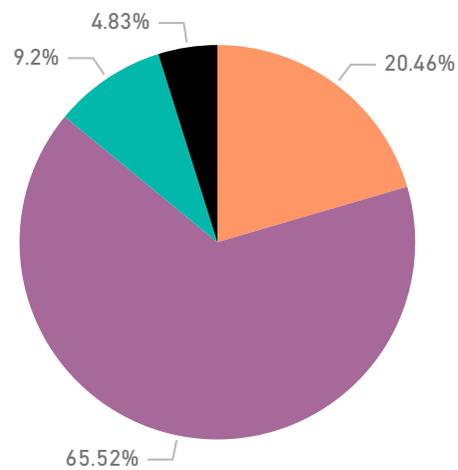


My breaks were....



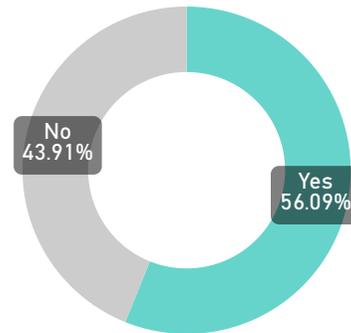
My breaks today were... ● as planned ● ad-hoc ● I was not able to take any breaks

Feelings 'Hours Worked Today'

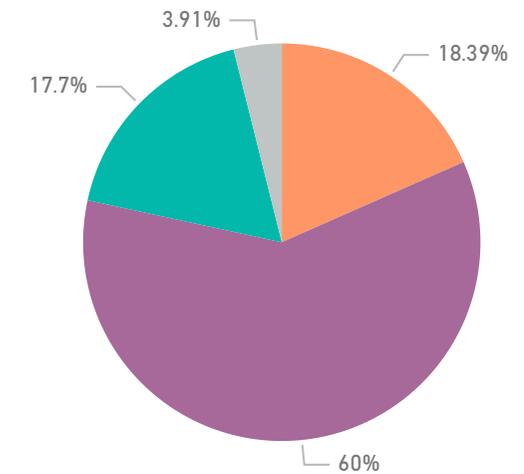


● 😊 - Happy ● 😐 - Ok ● 😞 - Upset ● 😡 - Disgruntled

Switching Off



Feelings 'Breaks'



● 😊 - I was energised ● 😐 - Neutral ● 😞 - I felt tired and worn out ● 🚫 - N/A - didn't have a break

WORKING HOURS POST DEPLOYMENT OF THE WORK REDESIGN

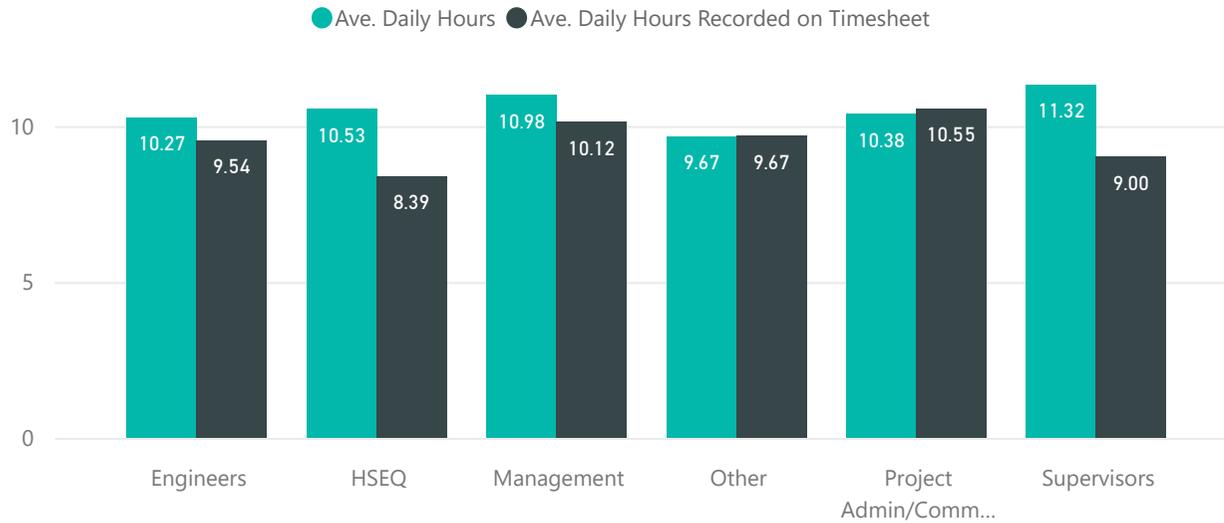
Month	# Surveys Completed
August	30
30	15
31	15
September	227
1	19
2	15
3	12
6	19
7	14
8	12
9	13
10	7
11	1
13	11
14	13
15	13
16	9
17	7
19	7
20	12
21	15
22	12
23	9
24	7
Total	257



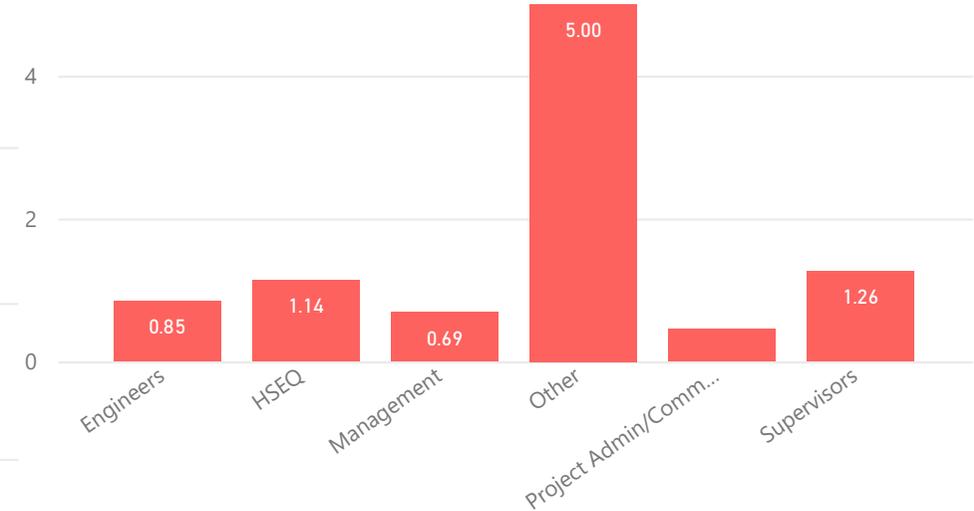
Average Daily Hours by Role (Incl Extra Hours and excl Breaks)



Ave Daily Hours (incl Extra Hours and excl Breaks) vs Hours recorded on Timesheets



Average Extra Hours Worked Daily



Count (by role) Days worked < 7hrs



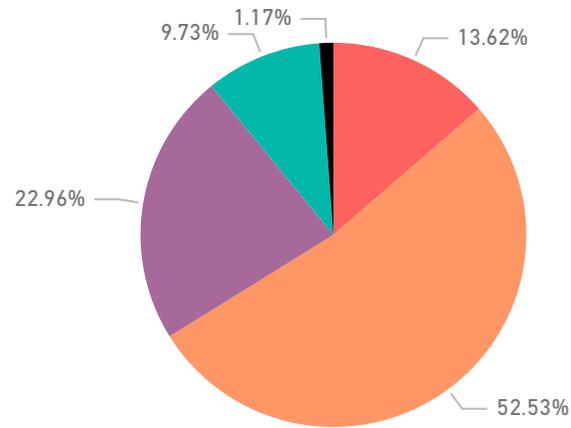
Average Break Duration (mins)



Role Name	# Surveys completed
Engineers	81
HSEQ	48
Management	93
Other	1
Project Admin/Commercial	11
Supervisors	23
Total	257

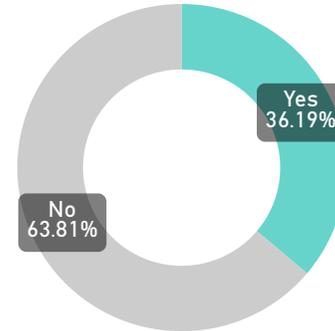
WORKING HOURS POST DEPLOYMENT OF THE WORK REDESIGN

Feelings 'General Work Day'

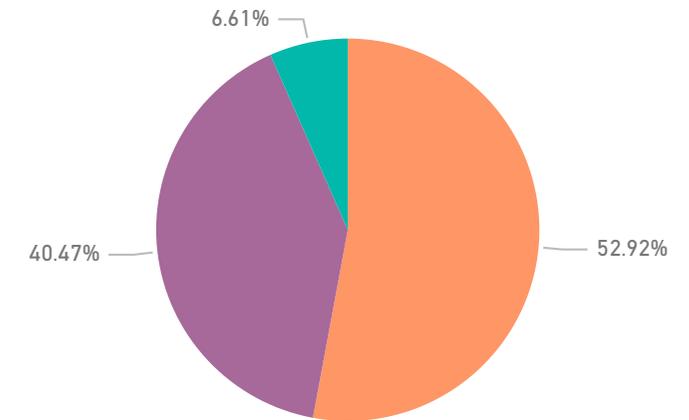


● Extremely Satisfied ● Satisfied ● Neutral ● Dissatisfied ● Extremely Dissatisfied

Work Flexibly

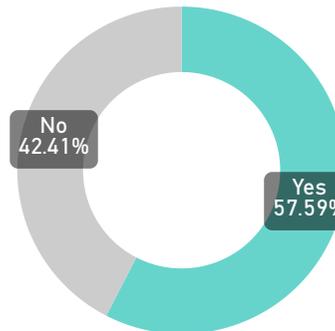


My breaks were....

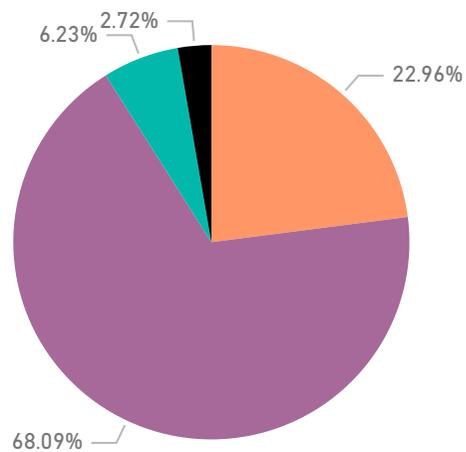


My breaks today were... ● as planned ● ad-hoc ● I was not able to take any breaks

Switching Off

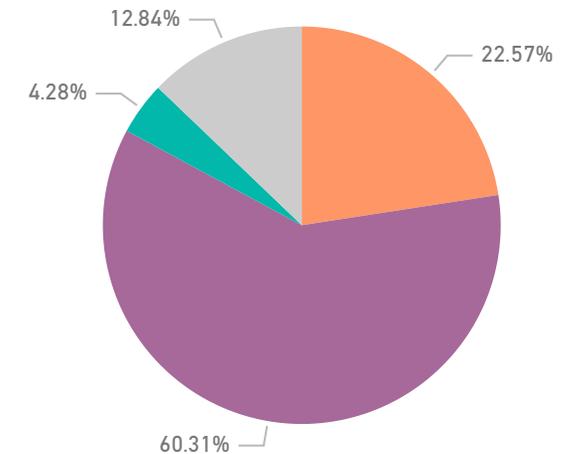


Feelings 'Hours Worked Today'



● 😊 - Happy ● 😐 - Ok ● 😞 - Upset ● 😡 - Disgruntled

Feelings 'Breaks'



● 😊 - I was energised ● 😐 - Neutral ● 🚫 - N/A - didn't have a break ● 😞 - I felt tired and worn out

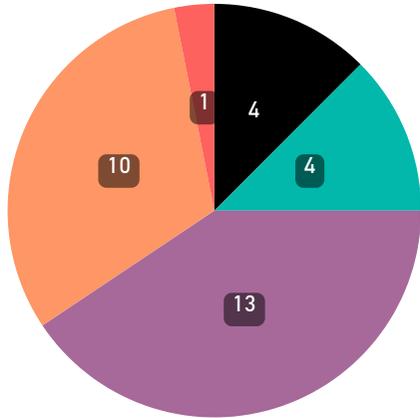
Appendix G

Pre-deployment and Post-deployment Qualitative Data Results and Comparison Results

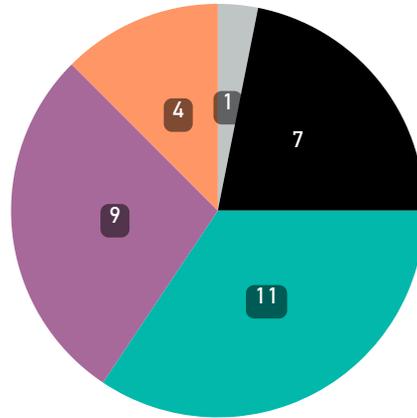
Pre-Deployment Qualitative Survey Overview

Completed Surveys 32	Engineers 8	HSEQ 9	Management 8	Other 2	Project Admin/Comm 3	Supervisors 2
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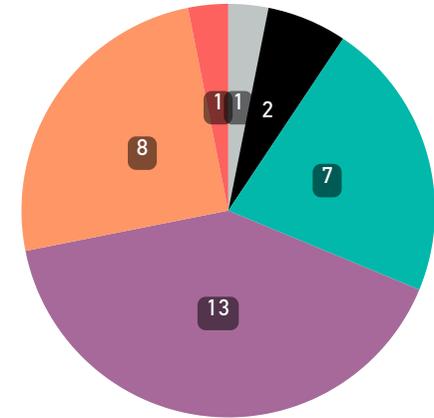
Felt Cheerful and in Good Spirits



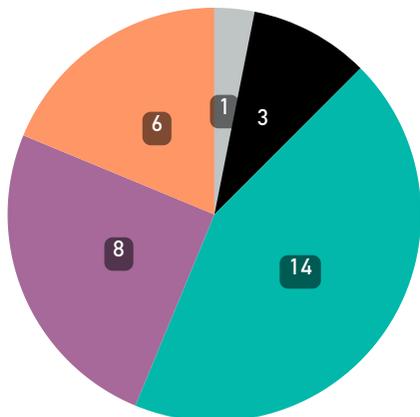
Woke Up Fresh and Rested



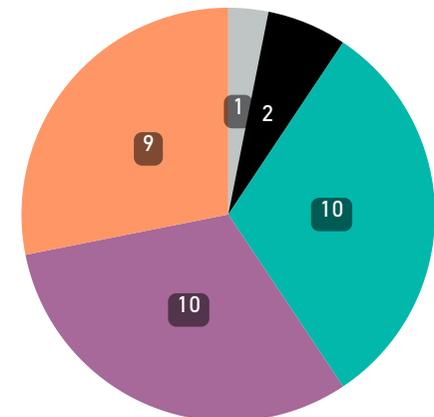
Felt Calm and Relaxed



Felt Active and Vigorous



Daily Life filled with things that Interest Me



- 0 - None of the time
- 1 - Some of the time
- 2 - Less than half of the time
- 3 - More than half of the time
- 4 - Most of the time
- 5 - All the time

WHO-5 Index Scores

Average WHO-5 Score for Total Participants (Out of 100)

53.38

Average Score I have felt cheerful and in good spirits... (Out of 5)

3.00

Average Score I have felt calm and relaxed... (Out of 5)

2.88

Average Score I have felt active and vigorous... (Out of 5)

2.47

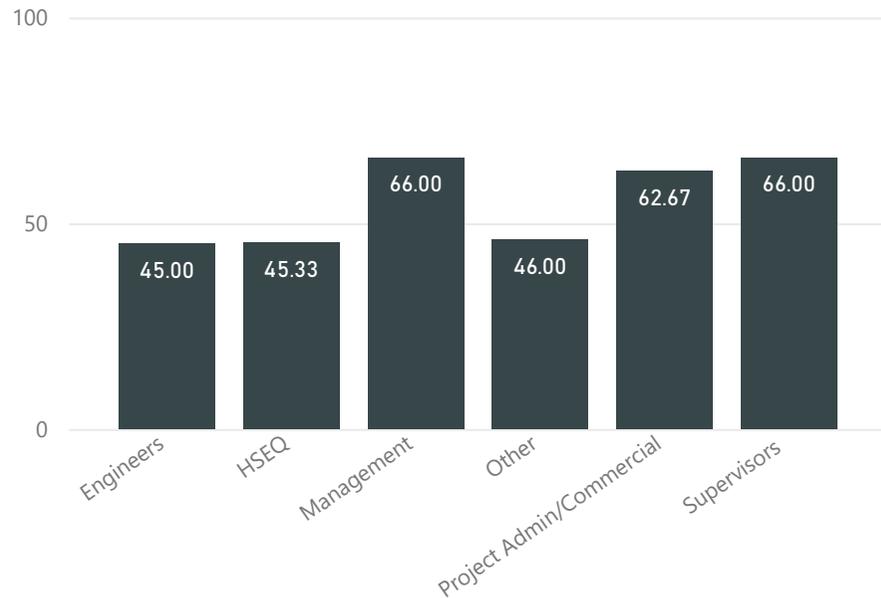
Average Score I woke up feeling fresh and rested... (Out of 5)

2.25

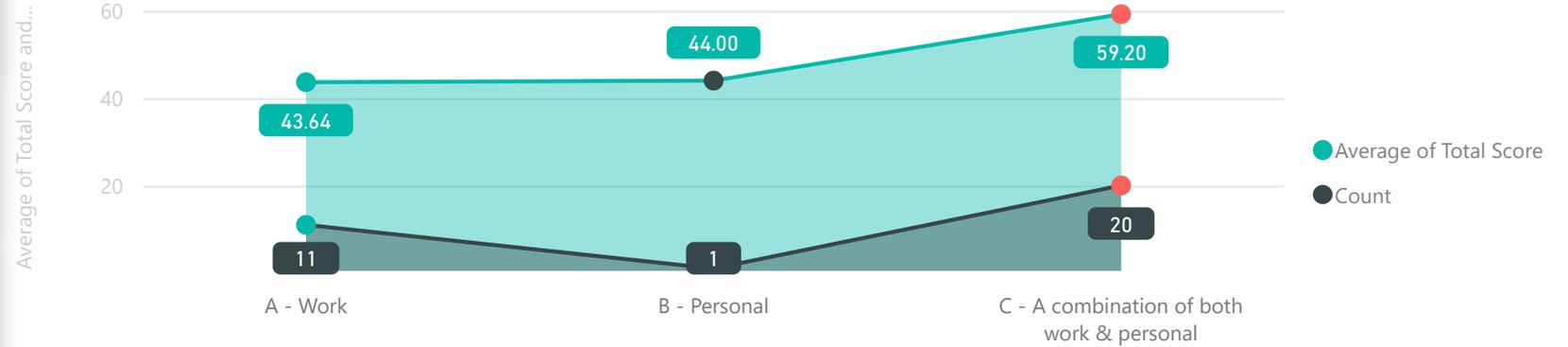
Average Score My daily life has been filled with things that interest me... (Out of 5)

2.75

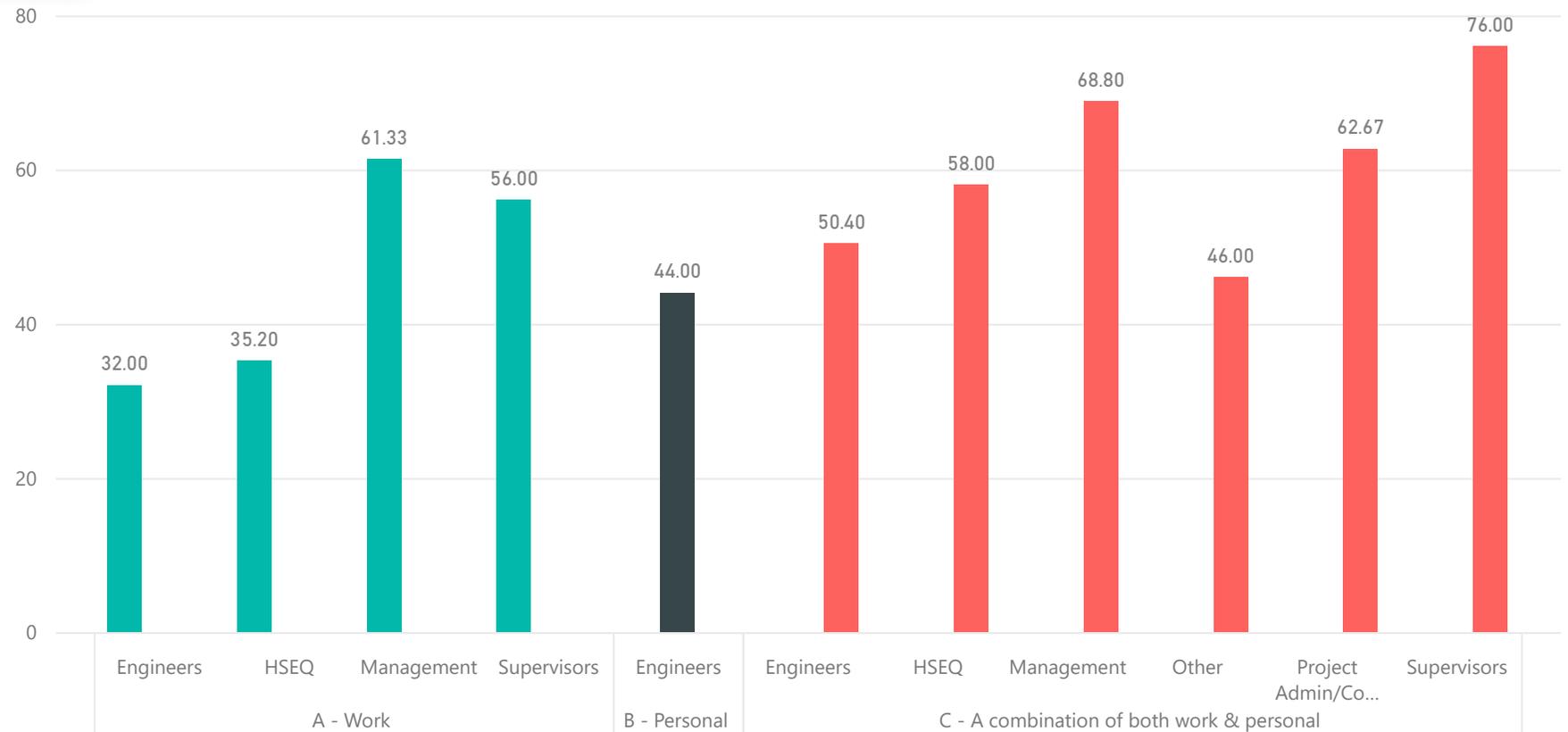
Average WHO-5 Score by Role (Out of 100)



Average Score WHO-5 Category A, B & C

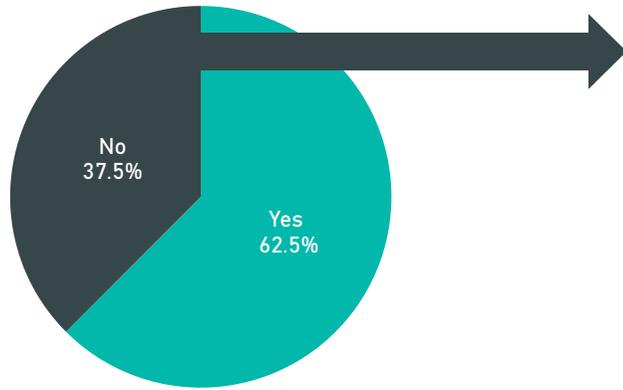


Average Score by WHO-5 Category and Role



Control, Support & Balance

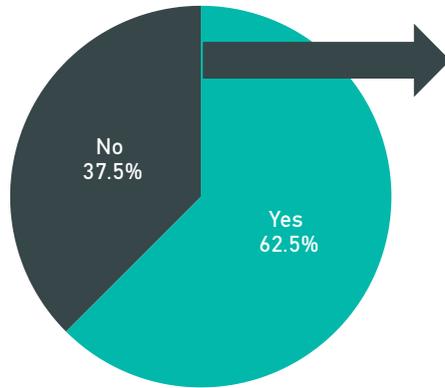
Do you have control of flexibility to meet work demands



If you answered no, why?

- You can't be flexible when your the person expected to be at work to pre-start the crew and stay there until they have left work dictates when meetings are set and also workload demands mean that flexibility is not really an option
- Site based work, meetings, deadlines.
- No flexible hours.
- Minimal support from managers.
- It's driven by contractors
- It is not encouraged to take time off and leave will be rejected.
- It has to be done and it has to be done now.
- Hours of work are extreme
- Due dates
- 10 hour work days are the normal in this industry, anything less is ludicrous and often people work more than 10 hours as it is almost expected.

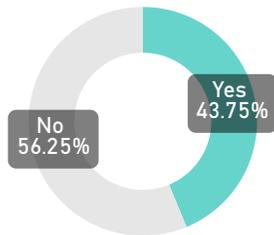
Do you feel supported to meet Work/Life Balance



If you answered no, why?

- Expected to work additional hours + weekends
- No defined working hours on site
- I feel supported by peers and managers as they are generally in the same boat. I'm not sure what the client is doing to support work life balance?
- In theory a work life balance is promoted and encouraged. In reality it feels as if it's frowned upon and an unspoken rule that you need to go well above and beyond your contracted hours.
- Lack of openness and acceptance of peoples responsibilities outside of work.
- Long hours and COVID restrictions
- More could be done to help and encourage people in many roles to work from home and work flexible hours once the job role is fulfilled and obligations discharged.
- Night shift,
- no proper direction
- Saturday shifts are required (impacts ability to play Saturday sports, go to Friday night events). Traffic Switch / Occupation Weekends have increased hours without compensation. Not enough engineers to manage workload so hours are long, particularly if one goes on leave. Annual leave requests have been rejected.
- Support is not given from upper management to work less hours/weekends etc, I feel bad even leaving at 5pm.
- Work 120 hours per fortnight, get paid for 80 hours. No previsions for single parents.
- Working 7am til 5pm with an hr drive to and from work. Also having to work Saturday's does not leave time for anything other than work. You're tired when you get home and tired when you're at work.
- When asking management why we have to work Saturday and long hours is met by a laugh and saying this is construction.

Do you have an appropriate Work-life Balance?



Stressors

What stressors are at work that affect mental health?

Deadlines (8)

Work Drama (1)

Personal Health (1)

Things not going to plan (1)

Minimal Breaks (1)

Covid-19 (1)

Colleagues (3)

Clients/Contractors (2)

Individual Competencies

Contractors not meeting obligations

Priorities (1)

Work Load (4)

Programs/Projects (3)

Long Hours (3)

Conflicting priorities (value of priorities between different colleagues)

Work with little notice given

Design not ready, but site team are

Reduced time with family/home

Not being able to meet set goals

Budget, Forecasting, Finances and Procurement

Out of Hours emails

Too much work to complete it always to optimum standard

Post Deployment Qualitative Survey Overview

Completed Surveys
28

Engineers
12

HSEQ
4

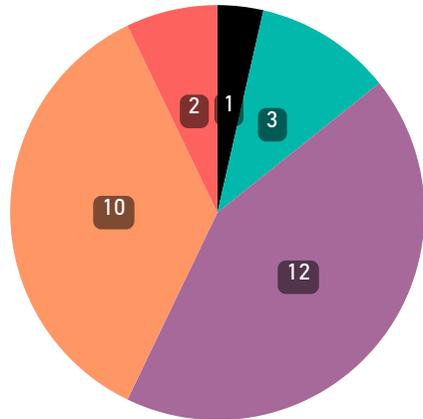
Management
7

Other
2

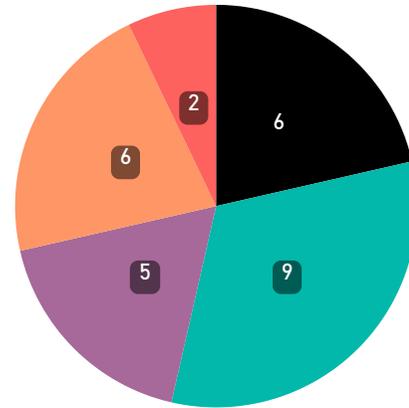
Project Admin/Comm
2

Supervisors
1

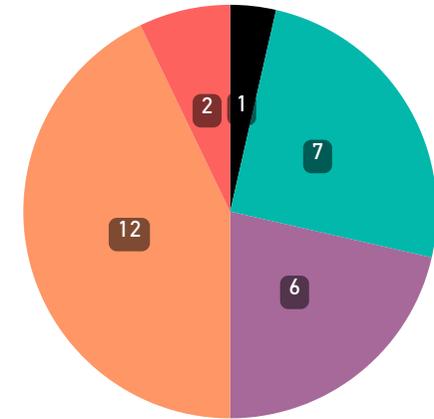
Felt Cheerful and in Good Spirits



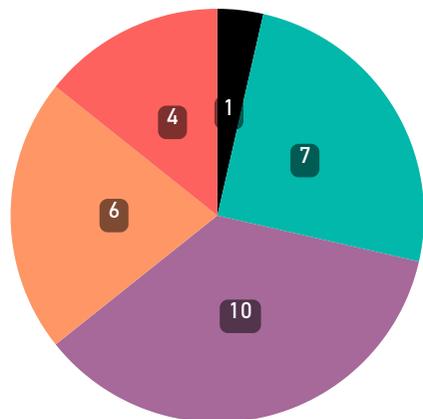
Woke Up Fresh and Rested



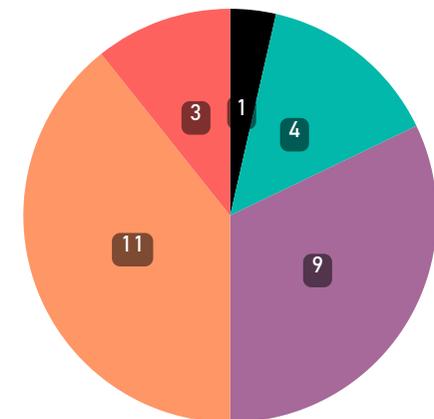
Felt Calm and Relaxed



Felt Active and Vigorous



Daily Life filled with things that Interest Me



- 0 - None of the time
- 1 - Some of the time
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- 3 - More than half of the time
- 4 - Most of the time
- 5 - All the time

WHO-5 Index Scores

Average WHO-5 Score for Total Participants (Out of 100)

63.00

Average Score I have felt cheerful and in good spirits... (Out of 5)

3.32

Average Score I have felt calm and relaxed... (Out of 5)

3.25

Average Score I have felt active and vigorous... (Out of 5)

3.18

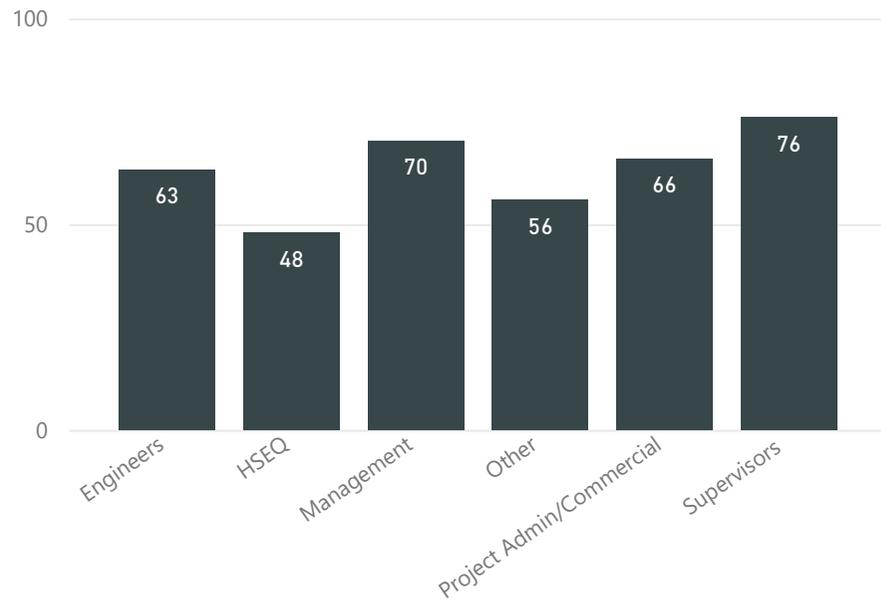
Average Score I woke up feeling fresh and rested... (Out of 5)

2.61

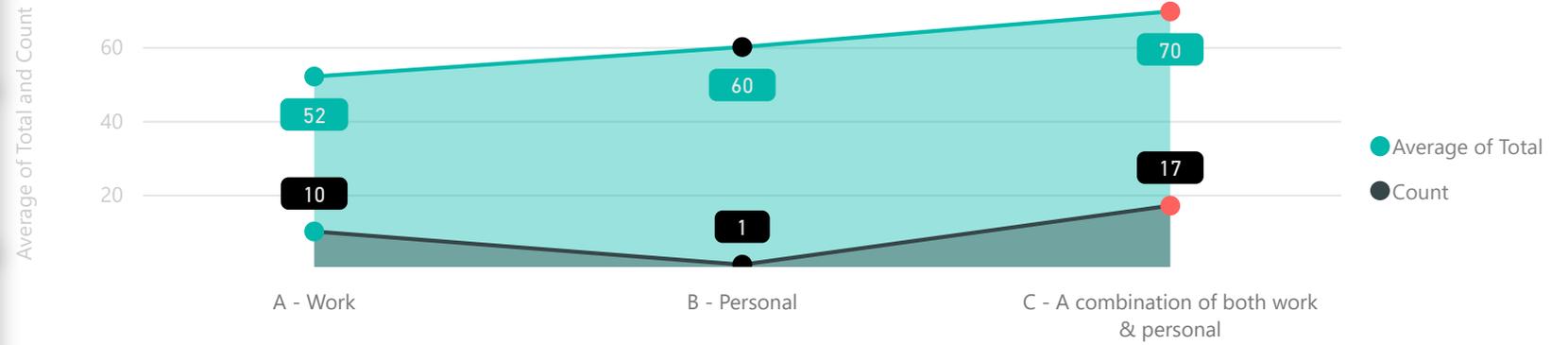
Average Score My daily life has been filled with things that interest me... (Out of 5)

3.39

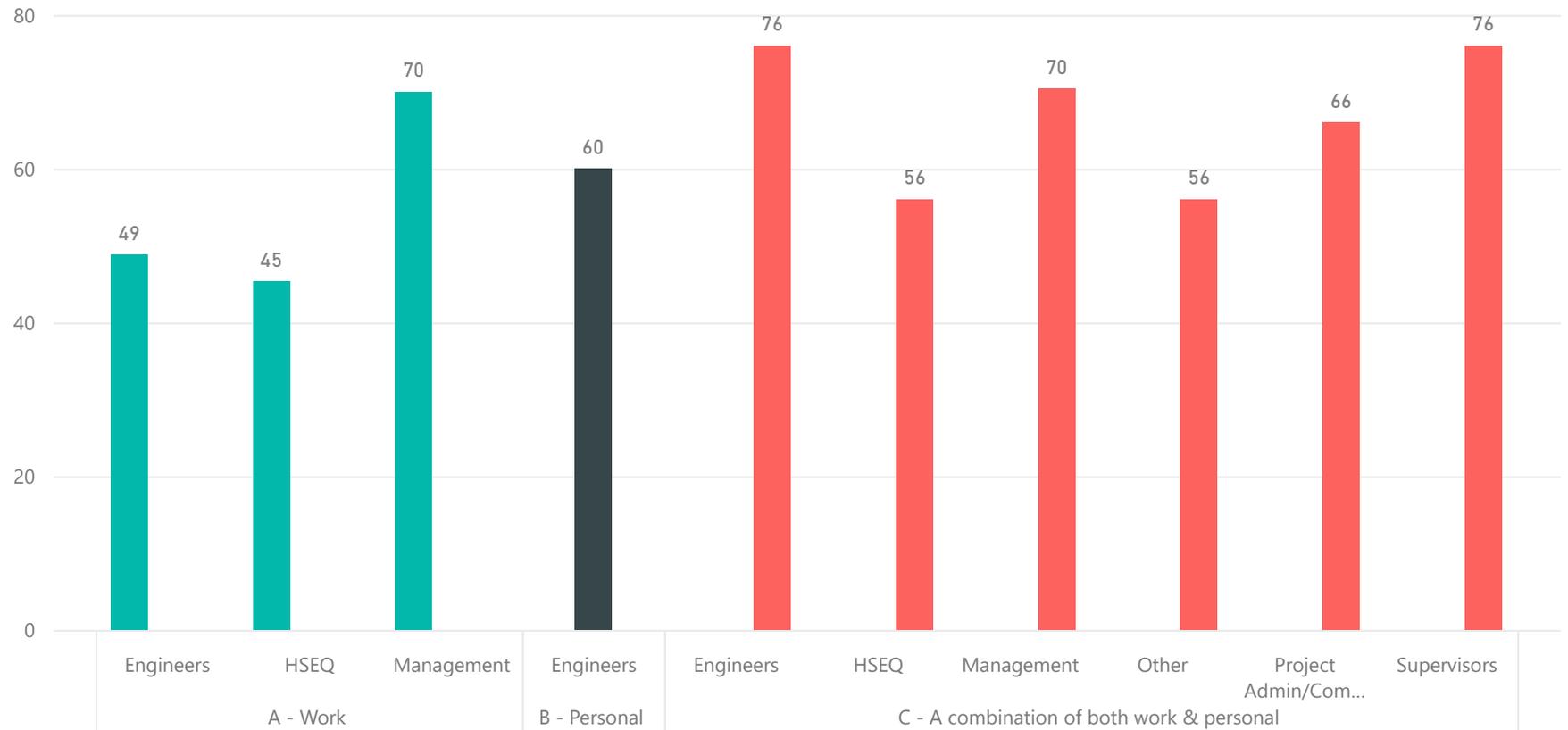
Average WHO-5 Score by Role (Out of 100)



Average Score WHO-5 Category A, B & C



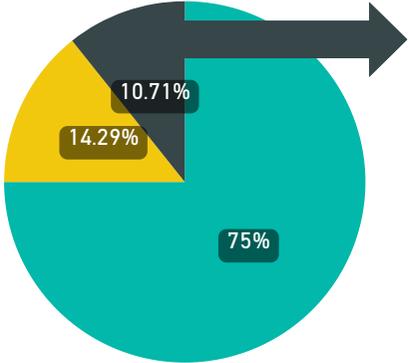
Average Score by WHO-5 Category and Role



Implementation of Work Resdesign

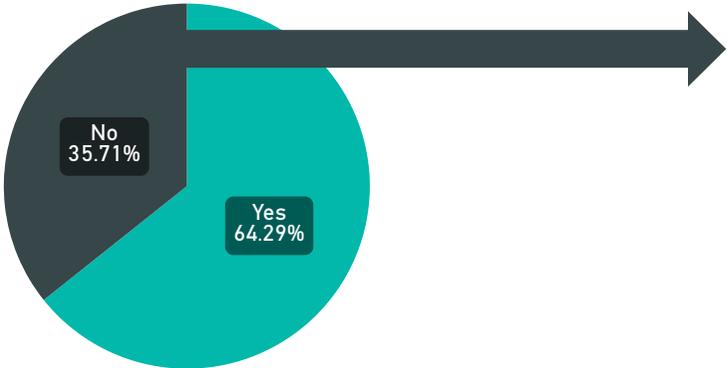
Were you able to fully implement the work redesign?

Were you able to fully implement the wor... ● Yes - was able to take 2 half days off ● No - was only able to take one half day off ● No - didn't take any time off



- If you answered no, why?**
- Busy and left a few hrs early last Friday instead of half day
 - Full of meetings and it was approved by line manager
 - I feel that i already have a reasonable ability to take time as it is required and didn't feel the need to take more than one half day during the duration of the trial
 - It wasn't offered to me
 - No spare time in my calendar to take half a day
 - The Community Engagement team are already able to work flexible hours/locations so did not take a half day.
 - work balance and lack of resources did not allow for time off

Did you feel that the implemented work redesign gave you the flexibility to meet your work demands?



- If you answered no to question 13 - why not...**
- As per comments in item 11. Almost felt as though you had to work harder to make up for the time you had to take off.
 - Design tweaks are ok but not redesign
 - Didn't take the time off
 - i feel that i have the flexibility to conduct my role in a manner that suits both my time and the needs of the role.
 - No difference for me
 - My team did enjoy the half days
 - Nothing has changed
 - The Community Engagement team are already able to work flexible hours/locations so did not take a half day.
 - The work load just got pushed to the next shift so did not really help overall
 - The work was still there the next day and I felt like I needed to play catch up.
 - would like to be able to work from home and ability to drop off and pick up kids when re

Work Redesign and Stressors

Elaboration

2x half days off has allowed 'free time' away from work but i feel it is too regimented. Sometimes feel as though you are forced to take time (even if not wanted/needed). Also doesn't stop the phone ringing or having to pick up the slack when other members of the team were off.

Better mental health

By having the two half days off I have been coming back to work feeling less stressed and I feel like I am more productive when I am at work, which results in a better work ethic and culture around the office.

didn't take the time off so it cant really change any impact.

Felt completely revitalized and ready for work. Didn't feel burnt out or completely stressed to get meaningful tasks completed in my brief time away from work ever second Saturday.

felt much more refreshed for the weekend and not so sluggish and exhausted for the weekend. allowed time for life admin that i dont usually have tine for

Fit some personal stuff in and give my find a refreshing break

Flexibility reduces the stress of getting things done in all areas of life

Had time to resolve personal issues / appointment etc

Having time off to do work around my house and go to appointments

I experienced no change during the trial - although refer to answer to question 9

I had more time for myself. Felt refreshed after the 1/2 day off

I took the opportunity with my half day to take kids to appointments to help with their well being, which was great for me as I never had or felt that I could the time in the past to do so.

I was able to recharge when I needed. It resulted in better wellbeing which helped my focus on work

I was initially concerned that it would just be a half day of work that I would need to catch up on, however, I worked much more efficiently the morning of my half day to ensure I was on top of my work and was able to switch off from work for the remainder of the day.

It gave a temporary relief to the stress allowing me to catch up on house chores and nap when needed

It had both a positive and negative effect. Taking time off allowed me to do things that I save for weekends, so gave me more tome to either do other things or actually rest. While taking time off, I was constantly aware of phone calls and emails and still had to attend to some of these.

It's enabled me to get personal business done during the week at locations not open on weekends without the stress of trying to achieve it after work

Late design doesn't extend my program, just increased urgency to get it done

Nothing has changed

Redesign was too short to identify the change

Taking half day means that I need to work later to catch up

The Community Engagement team are already able to work flexible hours/locations so did not take a half day.

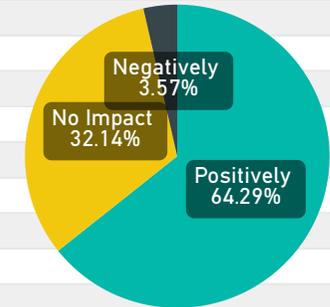
the time off allowed me to catch up on minor personal things that detract from my weekend off, and it increased my overall feeling of work as I recognise that MCD is trying to make a positive difference to the work environment

There's never a good time to take leave

Was encouraging to have a half day off when desired. Some days can be really long due to work demands that are part of the job so the half day helps break it up.

You need enough people to cover the work zones which we had.

How has the work redesign impacted your work stressors ?



Work Redesign and Wellbeing

How did the work redesign option impact your overall wellbeing...

▲

Again positive and negative as described above, Could not detach from work while away but freed up weekend time by getting a few little chores done.

Allowed to switch off from work and help ease the pressure of home life.

answered in Q11

better

Cant answer as didn't take it

Definitely had a positive impact on personal well being reducing stress

I felt less pressure and better mood

I felt more energised in my position and less pressure relating to needing to complete a certain amount of hours in a week to feel like I satisfy my role requirements. I was able to use the time to also fit in any work or personnel day to day things without it impacting my regular hours of work

improved overall wellbeing

It has been so nice to be able to take the two half days off, this has made getting to appointments easier and being able to spend quality time with family. This takes the stress from home life away so that when I am at work I can focus on work only.

It honestly really really helped especially when my manager was flexible to let me take the half day when I needed it at short notice

It's nice to look forward to but hasn't changed too much outside of that

My half day RDO provided an opportunity to be well rested when the weekend started and allowed me to have a more fun filled and social weekend rather than feeling run down by the time the two day weekend finally arrived and using the weekend time to catch up on rest and sleep.

The half day RDO also acted as a reward intensive to work hard and have some acknowledgment for the additional hours put in on top of the required 7-5 which adds up over the space of two weeks.

Negatively ultimately

no impact

Not at all - still working 12hr+ per day in the week

Not good and also not good for subcontractors

Not really made any impact

Positive

Positively - Better work life balance

Positively, it was something to look forward to every fortnight.

Positively. It's great to see MCD involved in this trial to see how wellbeing can be improved

Refreshed and ready to work at a higher level.

Some people don't really care about the work and are happy to take the time off and hope for the best on the work fronts.

While off work all I could think of was not meeting my targets

would much prefer to work reduced hours if that was an option

Productivity and Work Resdesign

Elaboration

Any time off is appreciated.

As per answer above, I feel better rested and less stressed about home life which lets me work better when I am at work, and focus 100% on work.

As per question 11 response. It is incentive to work much more efficiently and reduces presenteeism. I was not impacted by other staff members not being available or contactable during their half day RDO period

Being in a positive state of mind helps to keep you focused during work hours

Better mental health, more invigorated at work

Change is in the added energy boost and that encouragement from the workplace on importance of having a work life balance. I believe that Flexi hours would work a little better as it gives a bit more flexibility in time and can also be used for the half days if desired.

didn't take the time off

Enjoyed and helped me to regain work life balance. I got more works done

feeling more relaxed and still achieving required productivity

Have had to maintain the same amount of work completed. The day following a half day off was busier as I was catching up on what I missed.

Highlights that no one can fulfil my role in its entirety if I'm away

I still get the work done

I still need to be on the phone and over emails during the one half day off

I think I'm a productive worker but a half-day off sometimes just makes me busier the next day

I'm doing what I can in the hrs I'm here if that's not good enough I'm not fussed about getting another job and more than likely in a totally different industry as every job is the same deal

I'm inspired to get more done so I can take the half day off and enjoy iy

More focused when at work

neither positive or negative change to my productivity

Nothing has changed

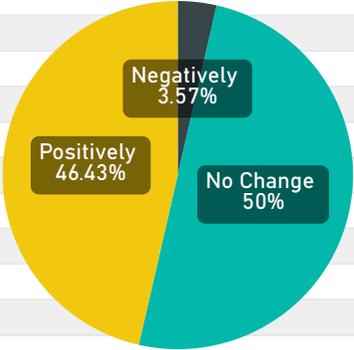
The Community Engagement team are already able to work flexible hours/locations so did not take a half day.

The expectation is that you still have to full fill your role at work. And having sub-contractors on both day and night shift, means that you are always on call as such and need to have a presents on day and night.

The extra time off during a regular day which most other industry have, allowed me to not feel overly stressed to complete general chores after 5pm or every second Saturday.

The team continue to work hard

How has your productivity been impacted by the work redesign?



How do you think the work redesign has impacted the productivity of your direct reports?

They want the time off, it would easier with out the option.

There has been lacking of urgent responses, planning and support due to the half day off. Productivity has dropped

no noticeable change to productivity observed

no negative impact

No change - continued with their work

It simply makes no sense pricing or programming without a design that's sufficiently developed or reviewed and many knock on effects for everyone

I think we are currently swamped with so many issues that my direct report is too busy to notice the effects

Being in the company longer than the team there is always a lot of pressure

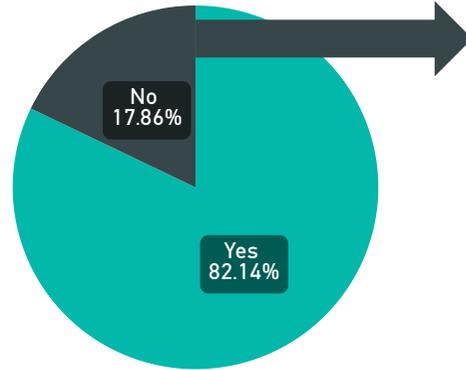
As per question 16, shared between the direct reports between days and nights.

As per above is been noticeably better for everyone.

All people understood and attempted not to contact me. They worked as usual, as I made sure that everything was in place before I took my afternoons off.

Support for Work Redesign

Did you feel supported by your peers and manager to implement the work redesign?



Implementation	Elaboration
▲	All management and team members on-board with the work re-design. If anything, they were overly keen to ensure the time off was taken.
	Didn't take the time so therefore, its not a relevant question
	Encouraged me to make sure that i produced a spreadsheet to ensure that all took the half days allowed
	Flexibility to take time when I need it
	Half and half. Manager was hesitating to approve the half day off, peer supports it, how find it is very difficult to implement as there are so many routine meetings to happen
	half day leave was implemented
	I am still not sure if management are convinced that this system will work into the future, I feel supported during the experimental period. But I do worry that once this period is over that it will not continue into the future.
	I get full support for the actions taken
	I have not been offer the chance to have a half day off
	I was asked when I was taking my half day and they trusted me to manage my work appropriately
	I was encouraged to take half day off
	It felt like, because it was agreed by upper management than it was accepted by all, Therefore it felt that the decision of taking a half day off was well supported.
	It wasn't frowned upon. None tried to contact me if they knew about it. Field crews unaware of the re-design rang when they needed to.
	Manager was flexible with time taken
	Manager was very supportive and taking half day RDO was never questioned. No concerns with peers were experience. Peers were always happy to talk about what a good impact the half day RDOs were having on them and always supportive when people were taking them.
	manager wasn't interested in the trial, peers were supportive though
	Managers and peers were talking about how great it was and what they're half day was going to be spent doing. Encouraged conversation and bought a positive energy to the work space
	No issues
	Reminded by manager to take the allocated time off
	Somewhat? No one busting my chops to hard but also want all the paperwork done properly along the way, not always in alignment
	The Community Engagement team are already able to work flexible hours/locations so did not take a half day.
	The redesign allowed an amount of flexibility for all involved
	They helped me with works
	Time was booked in advance and worked around major events and scheduled so at least one of us was here at all times
	Yes, we had a excel spread sheet that we all nominated when were going to take our half days. I felt encouraged to take them.
	Yes, we shared the work load.

Feedback

Please provide any general feedback for the Roads Australia team...

From a personal level, it appears as though most people understand that working in the civil industry involves long hours. It's good to see trials like this aimed at improving work conditions. However, I think it's the more flexible solutions that would provide greater benefit. A structured approach (i.e. 2x half days) made it feel like you needed to have time off, when you might not necessarily want it. I would like to see periods of hard work or long hours rewarded with the odd day off every now and then to make a long weekend without using annual leave. That way it doesn't feel as structured and would be easier to manage with the team, as opposed to having a large number of people looking to take the same time off. good work, while the half day is an excellent idea, an alternative could be to introduce Rostered Days Off (RDO's) that other businesses already have and work very well

Great initiative

great initiative - please ensure that there is plenty of feedback from the trials

Great initiative, very short trial period to measure the outcome

Half day off worked to reduce job stressors

I am thinking of having kids soon. As a engineer its practicably impossible to drop them of for school or pick them up given our working conditions. Also Saturday work means little attendance at sports for them will be a further sacrifice. Working Saturdays is a massive sacrifice will little productivity achieved. Given our industry (roads and rail restrictions) if we work a Saturday then don't come in on Monday. Other companies in Australia are doing this and most certainly other countries have been doing this for a while. The common feedback is this what our clients need, its a fairly week excuse. Yes works will take longer but at what cost does current situation mean?

I appreciate the initiative which truly reflect on the company's concern on our care and wellbeing

I definitely support the idea of reducing hours for work/life balance. It's hard to get it right though, when we are working 24 hour days and 7 days a week. Until a fully supported 5 day week can be put in place, I will still feel like my week days and Saturday are dedicated almost completely to work, with maintaining night works. And that my weekends are spent, still working, but doing all of my home maintenance chores. To provide any level of work/life balance, I would need to hire help in the house and garden. I am the sole occupant at my house, so even my spare time gets prioritised to washing, cleaning, mowing, etc., etc. This doesn't leave a lot of time for rest or socialising. I gave worked interstate (NSW) on a number of projects, where Saturday's are left for emergency works, not an extension of the week. Also, on this and the previous project, Saturdays often became a full day and not just a 'half day'. This doesn't give people much time for anything.

I like the half days however I think it should be more of a flexi time which you manage yourself. Managers should be regularly encouraging it if someone is working hard and monitoring their peers work load

I think it was good, If you put the hours in you should be rewarded somehow. As long as everyone puts in and does not abuse the system.

I think this definitely needs to be implemented going forward! It is great to see these trials undertaken but it would be even better to see some permanent change implemented by MCD and believe it would also make MCD an even more attractive place to work. I would like to see a half RDO per fortnight or allow them to be used to form a full day per month and allow more flexibility for staff. Thank you for letting us undertake the survey and trial.

I've left the industry before as I'm over it so I have a chip on my shoulder before this project but it's by and large the same story everywhere. Not enough hrs in a day to get it done properly, combination of reasourcing and late design

If resources are limited but the work levels still exist then no work / life balance can be achieved. I spent a week ill but still had to go to work to get tasks completed as there is currently no plan b

It sounds good in theory...

Survey was too long

Thank you for acknowledging that this is a serious issue and needs to be addressed. I would suggest to talk more to our clients (particularly Government clients) to ensure that this is incorporated into contracts into the future.

Thank you for showing the management team that its not about the amount of hours but the productivity of the workers.

The half day off every fortnight is a great implementation but sometimes you are just too busy for to have an impact

The industry must get rid of regular Saturday working. It's plain bad for families and takes away fathers from their kids on a Saturday morning which is a sports day. Bad for families, bad for kids, bad for the industry and just plain backwards the redesign we chose (half day in lieu once a fortnight) gave us the ability to have a longer weekend or to get personal chores done with out stress

We have extra supervision if we did not have it, it would be risky.

work design was beneficial to overall wellbeing without compromising the project

would like the opportunity to continue reducing work hours (half day fortnight) and/or work from home

Would work better if it was a rostered day off that could be placed in your calendar so that no meetings, site visits etc could be booked during that time. Not enough notice to take half day in the first two weeks.

WORKING HOURS COMPARISON PRE VS POST WORK REDESIGN

-1.39%

% Change Average Working Hours Post Work Redesign

Ave Hours Worked Pre and Ave Hours Worked Post by Role

Role	Ave Hours Worked Pre	Ave Hours Worked Post
Supervisors	11.75	11.32
Management	11.39	10.98
HSEQ	10.80	10.53
Engineer	10.58	10.27
Other	10.01	9.67
Project Admin/Commercial	9.87	10.38

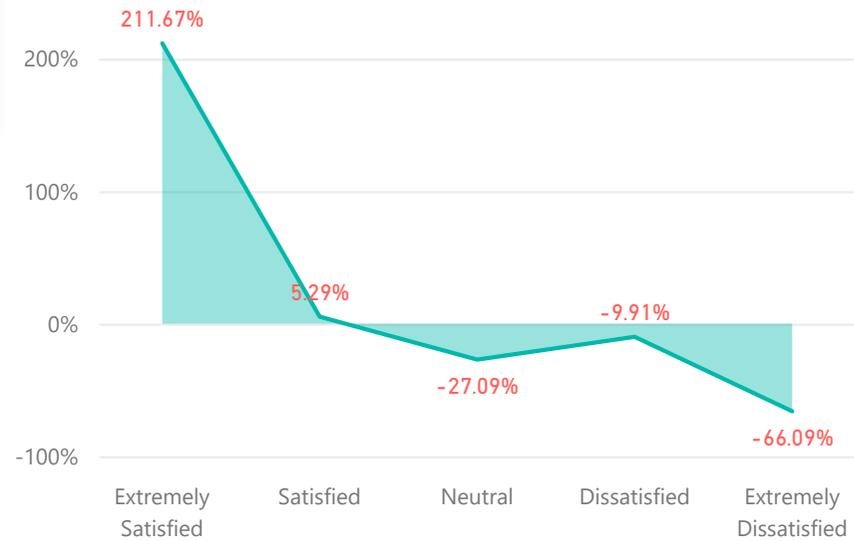
14.93%

% Change - Answered Yes to Work Flexibility

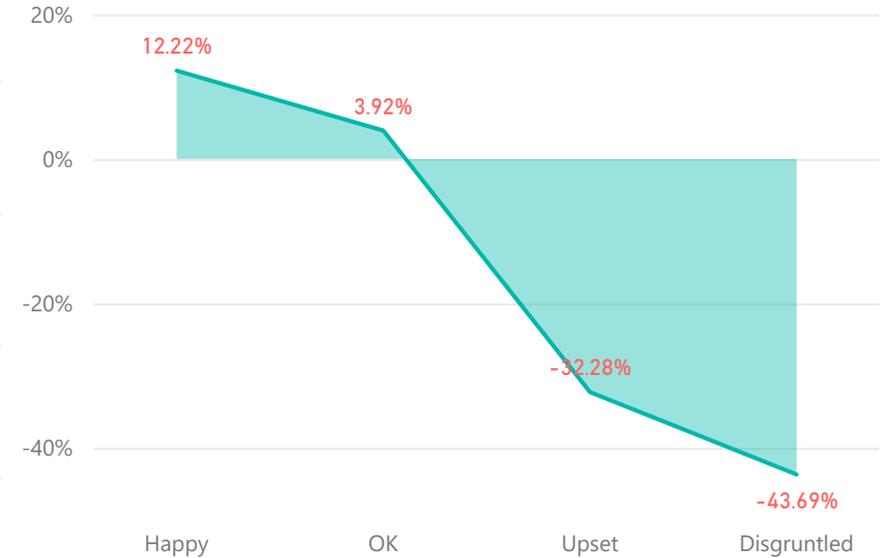
2.67%

% Change - Answered Yes to Switching Off

% Change - How Participants Feel about their Work Day



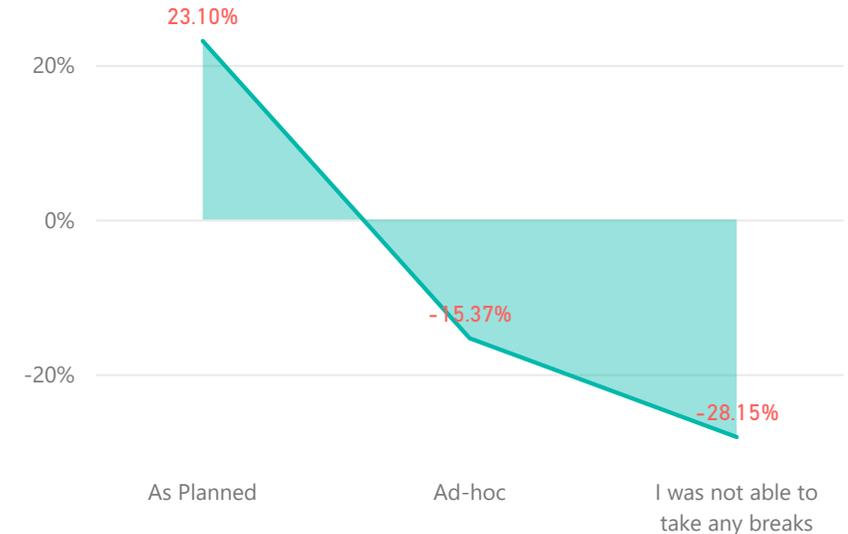
% Change - How Participants Feel about their Hours Worked



% Change - How Participants Feel about their Breaks

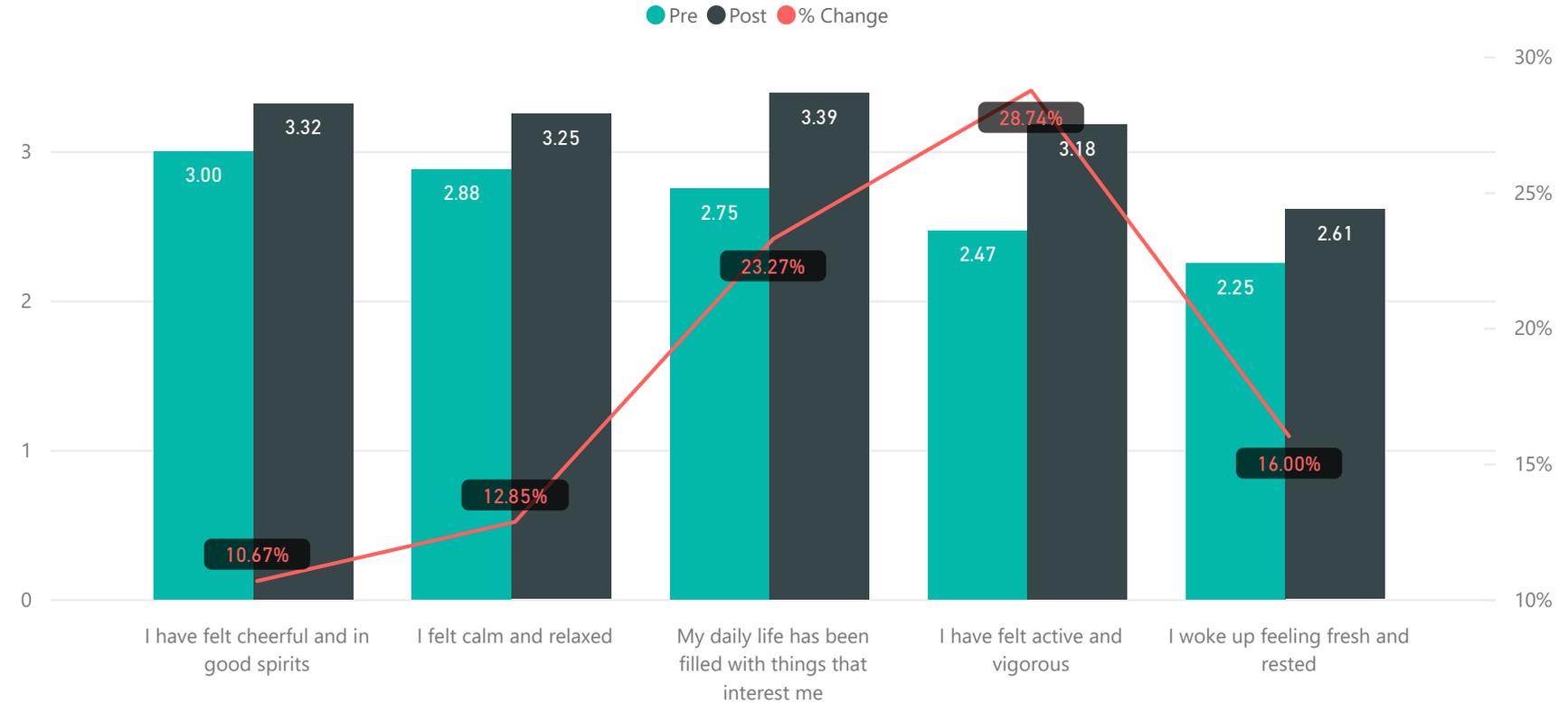


% Change - How Participants had their Breaks



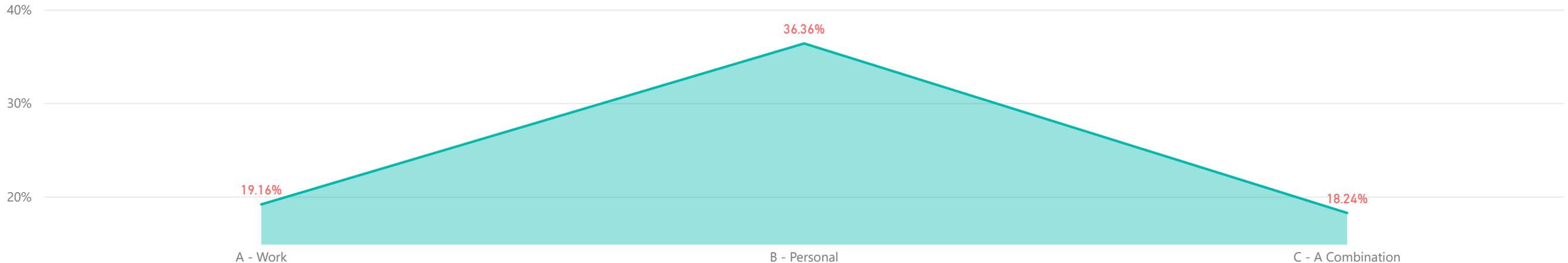
WHO-5 COMPARISON PRE VS POST WORK REDESIGN

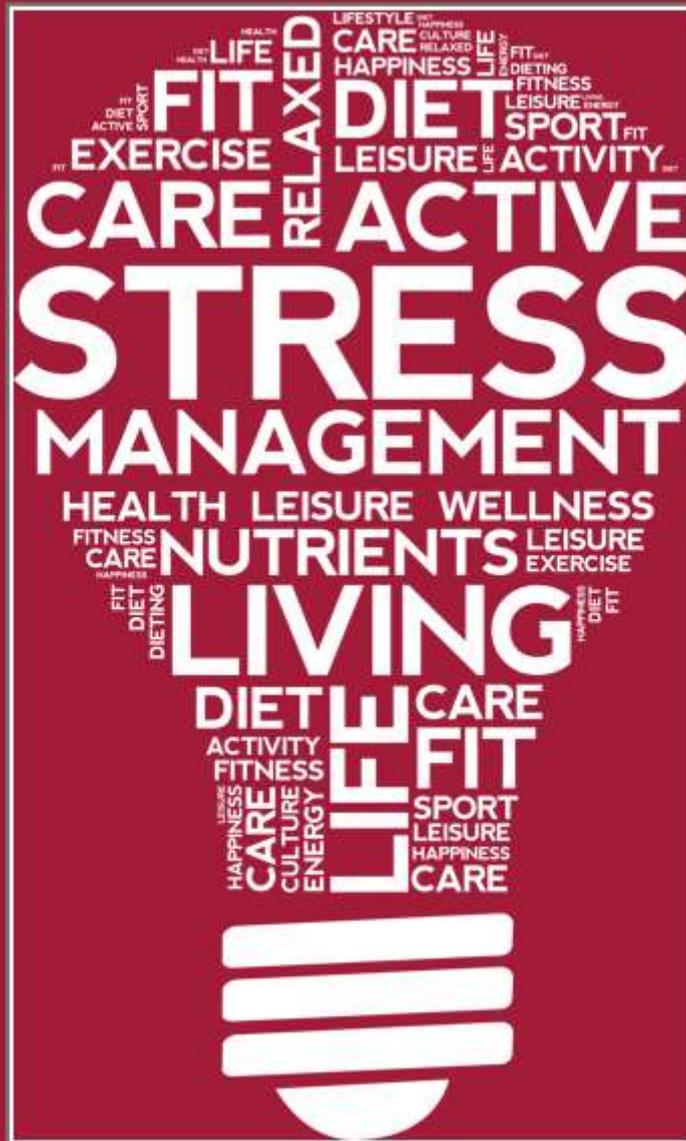
WHO-5 Score Changes Pre & Post Work Redesign



Overall 18.02% improvement in wellbeing for Total Participants

% Change Average Score in WHO-5 Categories A, B, C





Acknowledgment:

Special thanks to PTPAO Management for their support, engagement and commitment throughout the entire process and to the PTPAO Trial Group for their participation in the trial.