

MAVEN REMOTE WORK CHALLENGE.

Alistair Williams

AGENDA.

▪ **Introducing The Maven Remote Challenge**

- About The Dataset
- Crux Of The Problem
- Pen And Paper
- **Part A** - Considering Outcomes And Goals
- Who And What Decision ?
- Overall Outcomes
- **Part B** - Metrics And Comparisons
- Productivity
- Morale
- General Opinion
- **Part C** – Reviewing The Data
- Quick Solution

- Example
- **Part D** - Pull In Data And Develop A Plan
- Storyboard
- Productivity – Self Assessment
- Productivity – Management Assessment
- Productivity – Occupation
- Morale – Barriers
- Morale – Working Times
- Policy – Employee Expectations
- Policy – Retention And Attraction
- Stick It All Together
- **Part E** - Review For Outcomes & Goals & Publish
- Video Walkthrough

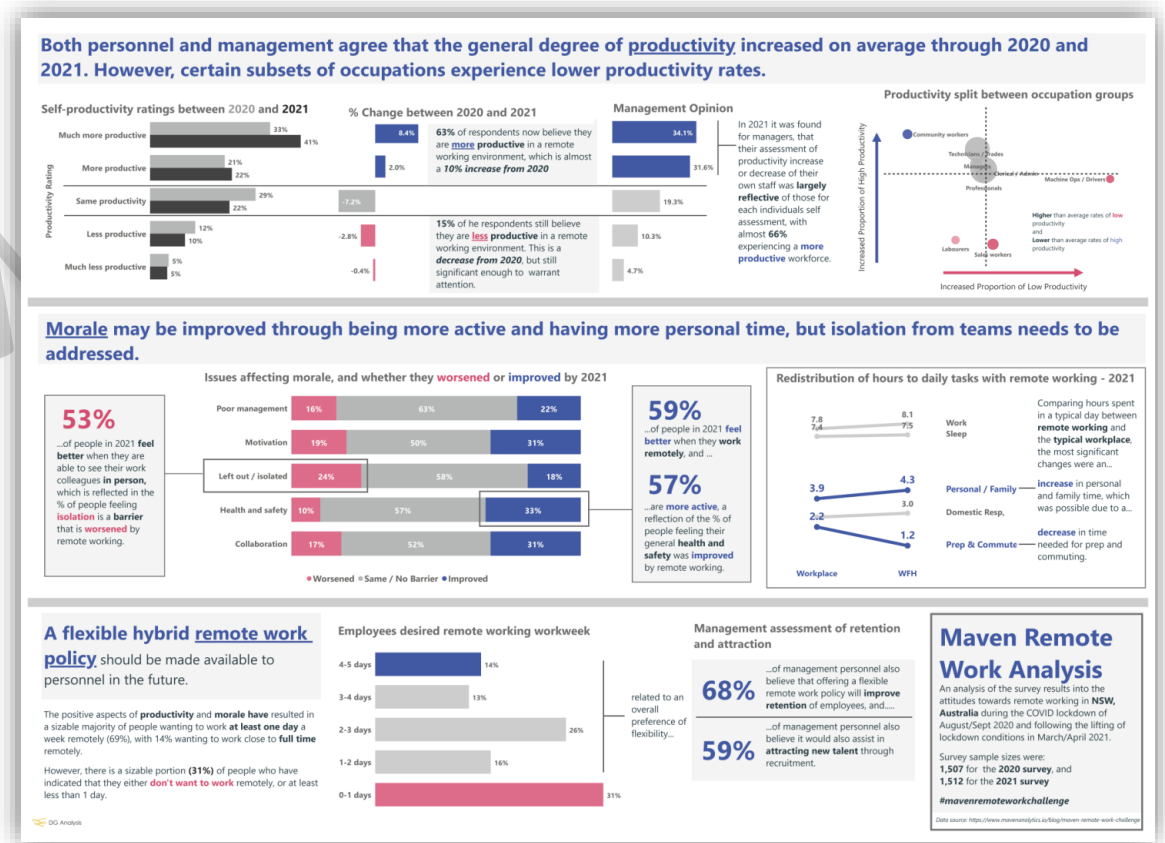
INTRODUCING THE MAVEN REMOTE WORK CHALLENGE.

- Original challenge can be found here.

Remote Work Challenge

Alistair Williams

Maven Challenges – DG Analysis



ABOUT THE DATASET.

- The dataset contains the results of two surveys of 1,500 **remote workers** commissioned by the state of New South Wales (NSW).
- The first took place in August and September 2020 and aimed to capture the remote work **experiences** and **attitudes** at the height of the COVID lockdown.
 - Once health restrictions were reduced and a return to lockdown seemed unlikely, a **similar** survey was conducted between March and April 2021.
- To be eligible, survey respondents had to be employed NSW residents with **remote working** experience in their current job.
- This means that both **unemployed** people and those whose job **cannot be done remotely** were not taken into account.
 - The resulting sample represents roughly 59% of the NSW workforce.

ABOUT THE DATASET.

- The responses are **stored** in 2 (Comma Separated Value) CSV files, one for each survey.
 - Each record represents a **single respondent** and contains answers to questions on:
 - Their employers' policies, practices, and attitudes for **remote work**.
 - Their own **attitude** towards working remotely.
 - The **amount of time** they spent working remotely, and **how** they spent it.
 - The **barriers** they faced when working remotely, and how they have changed.
 - The **best** and **worst** aspects of working remotely.
 - Their **expectations** for working remotely in the future.

CRUX OF THE PROBLEM.

- *For this challenge, the task is to assess the **productivity** and **morale implications** of working remotely and outline an ideal **policy** for the post-pandemic future, presented in the form of a **single-page report** or dashboard.*

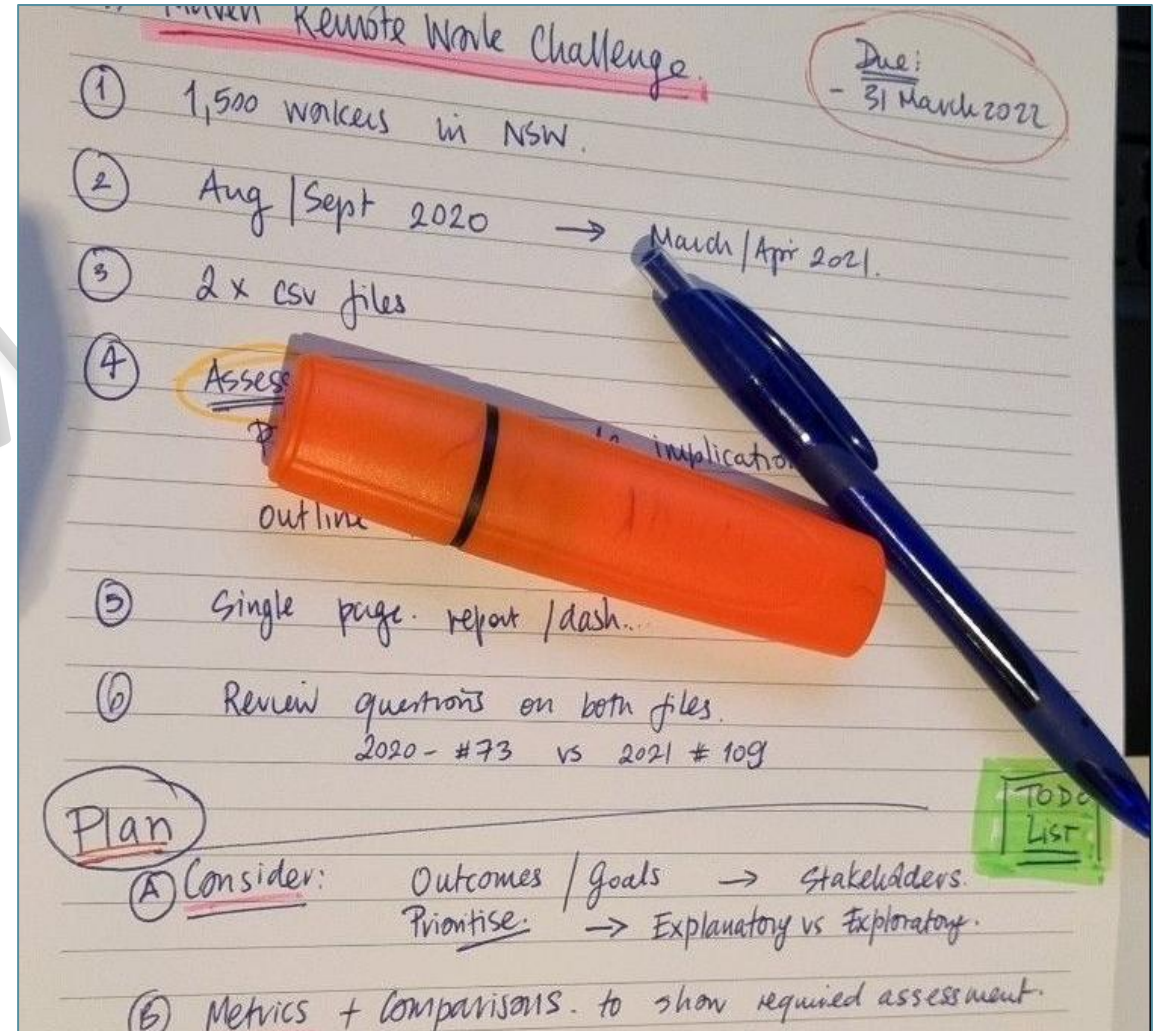
Alistair Williams

PEN AND PAPER.

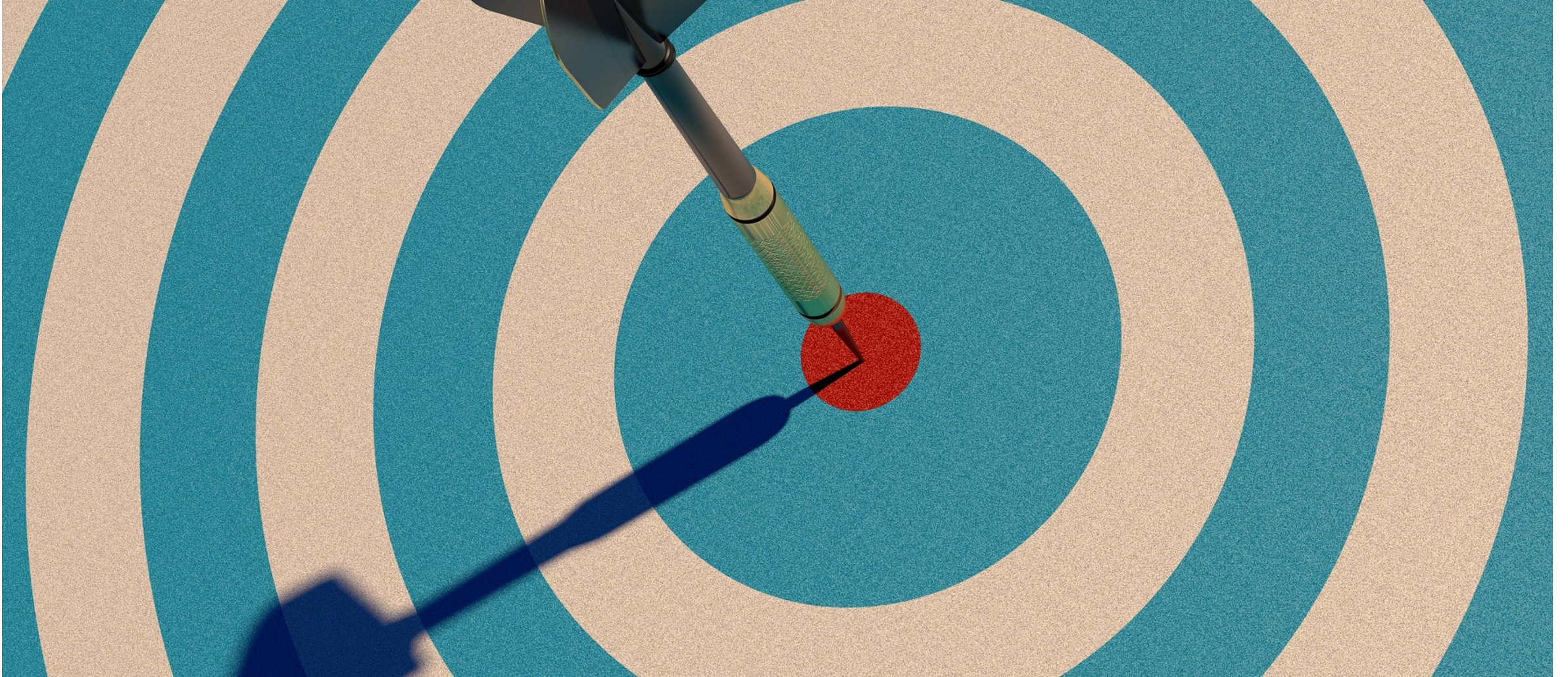
Plan

- **Consider** – outcomes / goals / stakeholders.
- **Prioritise explanatory vs exploratory.**
- **Metrics & comparisons** to show required assessment.
- Prioritise.
- **Review data.**
- A lot of text **qualitative** vs **quantitative.**
- Pull in data & **develop** visualisation **plan.**
- **Review** for outcomes & goals & publish.

- Time to put the plan in to motion.



PART A - CONSIDERING OUTCOMES AND GOALS.



CONSIDERING OUTCOMES AND GOALS.

- When **reviewing** the brief, ask yourself a **few questions**, that will **dictate** the **outcomes** and **goals**.
 - **Why** am I creating this report / dashboard ?
 - **Who** is it for ?
 - **What** decision needs to be made as a result of it ?
 - **What** can I do by way of design to facilitate that decision process ?
- We are creating this report to **summarise a large amount of survey data** and **analyse** how remote work impacts **productivity** and **morale** among workers.

WHO AND WHAT DECISION ?

- Consider the key **stakeholders** to be the **senior management**.
- They will require a **high-level assessment** with a **summary** of the **positive** and **negative** affects of remote working on mainly productivity, morale, and how this will shape how employees **felt** about remote work.
- This will, in turn, help the company decide on what **plans** they will need to enact in a post-COVID world.

Alistair Williams

OVERALL OUTCOMES.

- **Overall Outcomes might include:**

- **Outlining** the basis for an ideal future remote working *policy* for a company.
 - **Considering** any **implications** (**positive** or **negative**) on worker *morale* and wellbeing.
 - **Measuring** how *productivity* was impacted during remote working.
 - **Summarising** the above in a high-level explanatory report.
 - These aspects, as well as the fact the requirement was for a **single page static report** / dashboard infers analysing at a *high* level rather than a *granular* level.
 - The only reason to go to a granular level would be to analyse a **specific** industry or demographic which is not considered part of the brief.
- Secondly, we would also be looking to produce an **explanatory** set of visuals rather than an **exploratory** set.

PART B - METRICS AND COMPARISONS.



METRICS AND COMPARISONS.

- Now a **general** approach has been defined, we will look for potential **comparisons** and metrics that would be used to determine company policy.
 - Keep in mind that if a company is going to base their policy on these, they need to be **robust** enough to allow a **decision** to be made.
- You may think it's strange that we **haven't mentioned** looking at the **data yet**, so how would we know what metrics or comparisons we will be able to make ?
- While this is true, it is good to have an **idea** of what the most appropriate **metrics** could be in order to fulfil the brief, even **before** you look at the data in any kind of detail.

PRODUCTIVITY.

- There are two sets of data, one for 2020 and one for 2021.
 - The obvious metrics would be to try and measure **productivity** in each separate year and then do a **year-over-year (YoY) comparison**.
- If the data is also available, we could also look at a further **comparison** with “**normal working**” productivity.
- This will tell us whether remote working has had a **positive** or **negative** effect and whether that was sustained between 2020 and 2021.

MORALE.

- Like productivity, we can look at **changes** in any issues that may affect morale or working conditions **between “normal work”** and the periods of **remote work** in 2020 and 2021.
- Again, if possible, see if the stats **change** over time.

Alistair Williams

GENERAL OPINION.

- We can guess that the survey will ask for peoples' opinions of working remotely, and whether they are generally in **favour** of it and whether they would like to **retain** it as a **benefit** long term.
- If so, we could measure any **change over time**, or the **ratio** of people in favour versus those not in favour, and this could also feed into the overall **future policy** to be developed.

Alistair Williams

PART C – REVIEWING THE DATA.



REVIEWING THE DATA.

- With ultimate goals and an idea of the **type of metrics** to fulfil the brief, it is time to **look at the data** itself.
- This can be a little **daunting** at first.
 - It's not the fact that each survey had around 1,500 respondents, rather that the 2020 survey had 73 questions, and the 2021 survey had 109 questions.
 - Add to that, many of the questions are **quite lengthy**, and are the headings of each column.
 - This makes it **quite difficult** to know exactly what you are looking at !

QUICK SOLUTION.

- **Copy** and **transpose** the head row from each file into a **new table**.
 - This makes it much **easier** to **read**, and easier to see how many of the questions are actually **grouped** together.
- It also allows us to **add** a few columns to each table aligned to the metrics.
 - As we **review** each years' questions, we can tick whether particular questions may be **related** to **assessing** morale, productivity or an overall policy.
 - Having this list will also come in very handy as a **reference** when the data is eventually loaded.

EXAMPLE.

- An **example transposed table**.

- To the right is a sample of a few questions from the 2020 and 2021 files that will touch on productivity.

Transposed Table

2020 Survey	Morale	Productivity	Policy
This question is about your productivity. Productivity means what you produce for each hour that you work. It includes the amount of work you achieve each hour, and the quality of your work each hour. Please compare your productivity when you work remotely to when you work at your employer's workplace. Roughly how productive are you, each hour, when you work remotely?		Y	

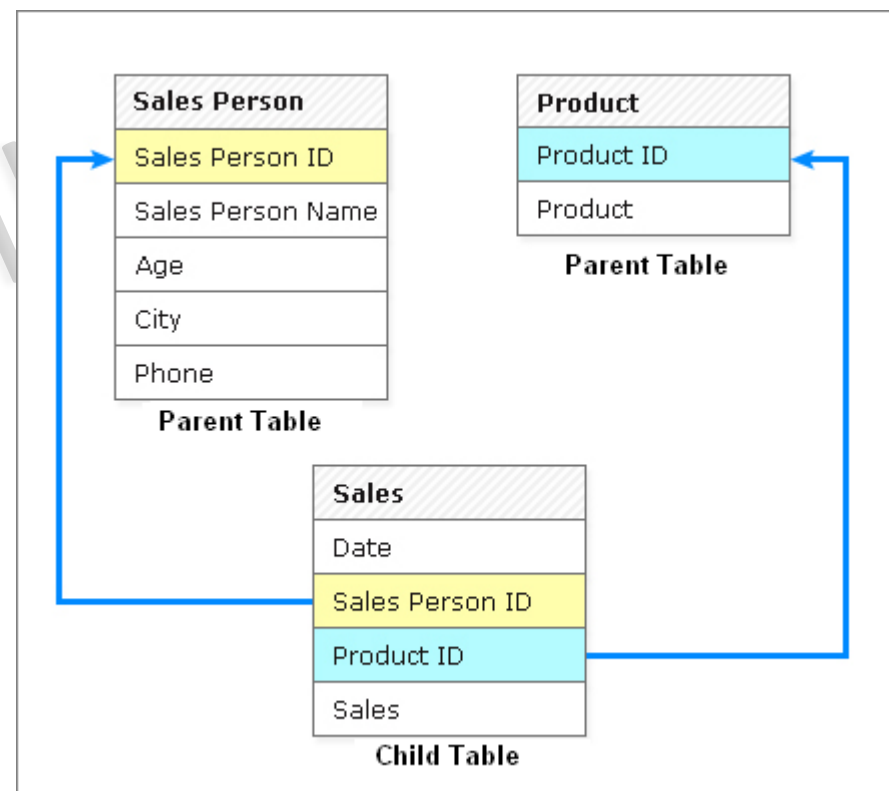
- Once all the questions have been reviewed and listed that were applicable to the **goals**, we move onto the next step and start some **provisional review** and **analysis** of the survey results.

Maven Remote Work - Dashboard Walkthrough - YouTube

2021 Survey	Morale	Productivity	Policy
This question is about your productivity. Productivity means what you produce for each hour that you work. It includes the amount of work you achieve each hour, and the quality of your work each hour. Please compare your productivity when you work remotely to when you work at your employer's workplace. Roughly how productive are you, each hour, when you work remotely?		Y	
Now think about the productivity of the employees you manage. Roughly how productive are the employees you manage, each hour, when they work remotely?		Y	

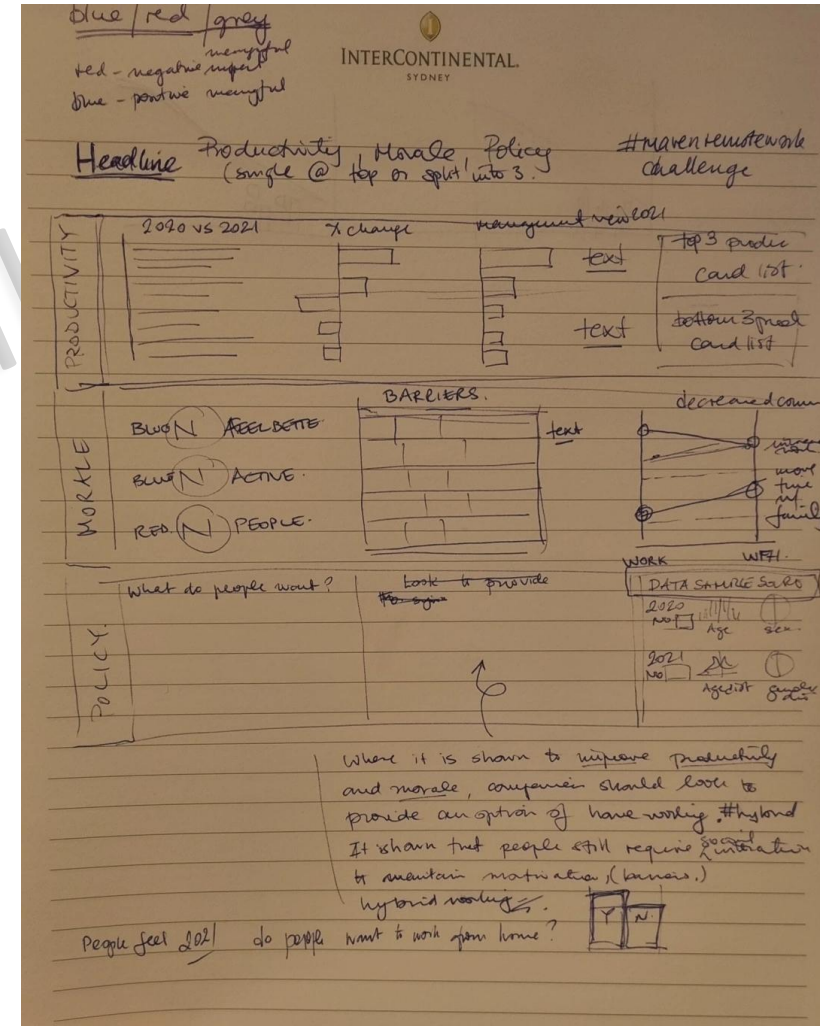
PULL IN DATA AND DEVELOP PLAN.

- There are **two distinct** csv files for the surveys.
 - The respondents in each survey are **not linked**, therefore there is **no immediate need** to link the files via **a model**.
- On reviewing the questions and answers for each data set, we can **narrow our focus** to a limited set that we can build a **plan** around.
 - This allows us to create a **storyboard** and then further detail each aspect.



STORYBOARD.

- Now that we have reviewed the data and have a general idea about what we want to **show** and how to **structure** the **flow** we will try and sketch out a **storyboard**.
- There are usually a few changes along the way, as we will see in the final product.
 - However, note here that we want to show a **main headline** to capture productivity, morale and the policy, and then **expand** on each aspect in separate sections.



PRODUCTIVITY – SELF ASSESSMENT.

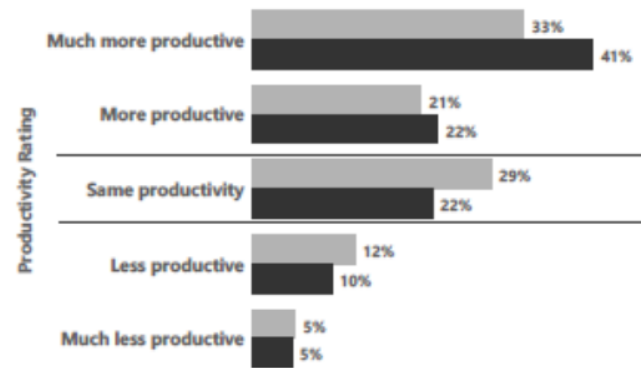
- We want to calculate the *productivity ratings in 2020 and 2021* and **compare**.
 - Both surveys had a similar question to ask how the employee rated their own productivity when **compared** to working in the workplace.
 - As such, we **can use it** as an **effective comparison**.

Alistair Williams

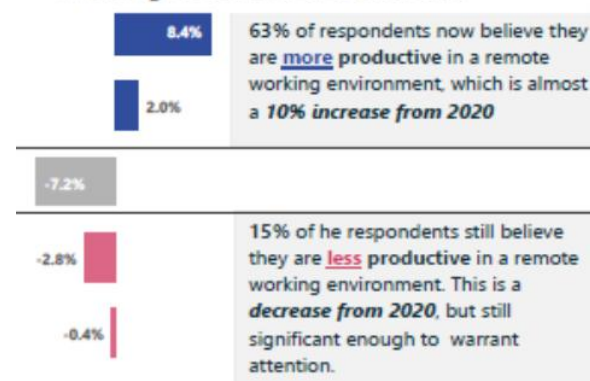
PRODUCTIVITY – SELF ASSESSMENT.

- The answers are categorised in a large number of % values displaying degrees of **more, less or the same** productivity.
 - The number of categories has been **combined** and reduced to 5, as shown in the sandbox draft version.
 - It also shows the % change for each category to emphasise the **increase** in productivity between the two years.
- Text is further added to summarise and explain the point.

Self-productivity ratings between 2020 and 2021



% Change between 2020 and 2021



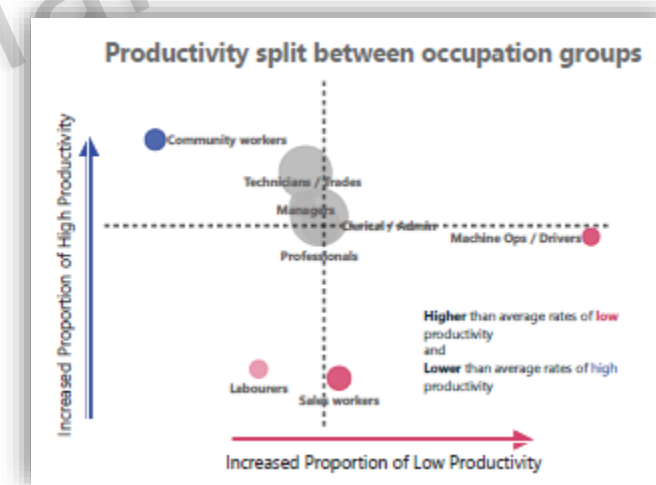
PRODUCTIVITY – MANAGEMENT ASSESSMENT.

- As the above were self-assessments, we can develop the **next level** of narrative and to see if managers saw the **same** impacts on productivity.
- There is a survey question directed to managers, to see how they **rated** the productivity of their own employees.
- This can be seen on the final report.

Alistair Williams

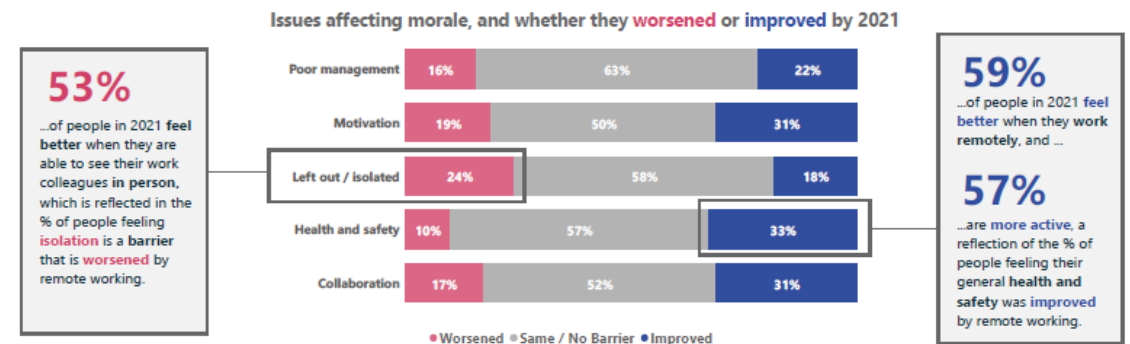
PRODUCTIVITY – OCCUPATION.

- To complete the narrative on productivity, we can go slightly more **granular**.
 - The results so far are showing generally **improved** productivity, but for **balance** we wanted to see if there are **particular occupations** that are more likely to experience **lower productivity**.
- This could allow management to then potentially request **further analysis** if their companies had employees that had occupations with **low rates of productivity**.



MORALE – BARRIERS.

- There are **no questions** in the surveys which **explicitly** deal with morale.
 - However, in 2021 there are a set of questions related to **potential barriers** to remote working, and whether people had **improved**, **worsened** or largely had the **same experiences** for each barrier when compared to normal working.
- The **barriers** included such areas as:
 - **Motivation**
 - **Isolation**
 - **Health**
 - **Collaboration**
 - **Poor Management**
- To **supplement** this, there are **additional standalone** questions related to isolation, health and wellbeing.
- We can bring these all together in an **extended visual** with a **supporting narrative**.
- This is also an opportunity to try out **Gestalt’s principle** of **connection** by boxing around some of the bar chart graphics in an attempt to **connect** them.



MORALE – WORKING TIMES.

- From **looking** at the data and seeing that people were **more active** and **feeling better**, the next level would be to **examine** the **typical** working day to see what **impact** remote work was having on people's general activities.
- There are a set of questions in 2021 related to hours people were **assigning** to daily tasks.
 - There were similar questions in 2020, but there were **significant errors** in the arithmetic, which means we **can not** make an **equivalent comparison**, and therefore we need to discarded them.
- We can **consolidate** the data and find an **average significant drop** in time required for commuting (expected), and an increase in time for personal and family time, which you could potentially relate to **increased** wellbeing and morale.
 - This was in spite of people actually working a slightly longer workday on average.

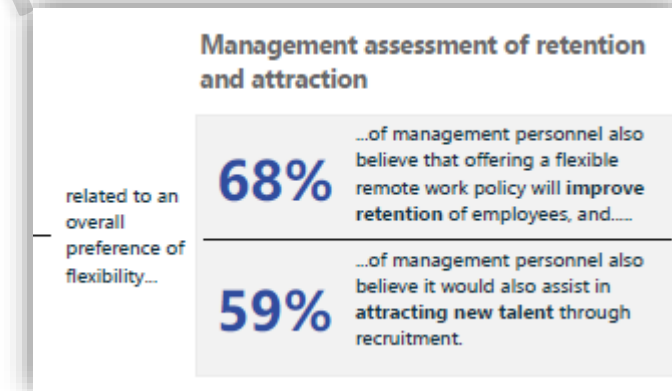
POLICY – EMPLOYEE EXPECTATIONS.

- Finally, the policy section should provide the story arc to bring the **productivity** and **morale** factors together.
- A question that could **knot this together** might be:
 - **This is how much time employees wished to work remotely in the future.**
- Again, the answers are categorised into % values in intervals of 10, with some text answers also.
 - These have been **consolidated** into day values to give a more simplified and easier to read view.
 - This will show management that there is **significant appetite** from employees to work remotely, but that there is also a **large** number of people who wanted **very minimal or no** remote work.



POLICY – RETENTION AND ATTRACTION.

- Finally, and to again **supplement** the previous slide with closely related data, there are questions to managers as to whether they believed offering remote working would **improve** employee retention and also **attract** new talent.
- **Instead** of using charts or graphs for these types of supplements we can just use **aggregated** numbers and **supporting** text.



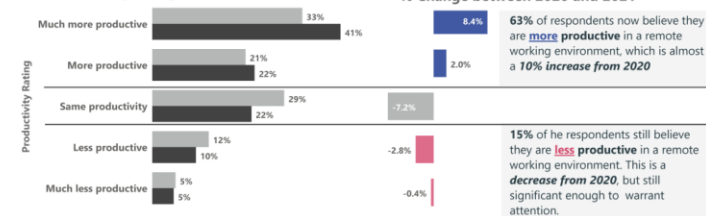
STITCH IT ALL TOGETHER.



STITCH IT ALL TOGETHER.

Both personnel and management agree that the general degree of productivity increased on average through 2020 and 2021. However, certain subsets of occupations experience lower productivity rates.

Self-productivity ratings between 2020 and 2021

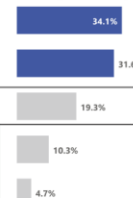


% Change between 2020 and 2021

63% of respondents now believe they are **more productive** in a remote working environment, which is almost a **10% increase from 2020**

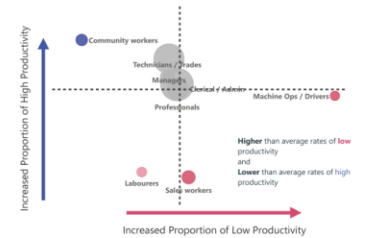
15% of respondents still believe they are **less productive** in a remote working environment. This is a **decrease from 2020**, but still significant enough to warrant attention.

Management Opinion



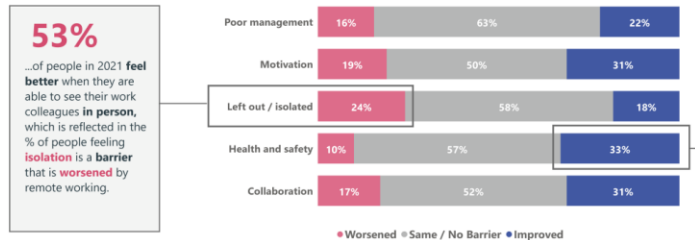
In 2021 it was found for managers, that their assessment of productivity increase or decrease of their own staff was **largely reflective** of those for each individuals self assessment, with almost **66%** experiencing a **more productive** workforce.

Productivity split between occupation groups



Morale may be improved through being more active and having more personal time, but isolation from teams needs to be addressed.

Issues affecting morale, and whether they worsened or improved by 2021

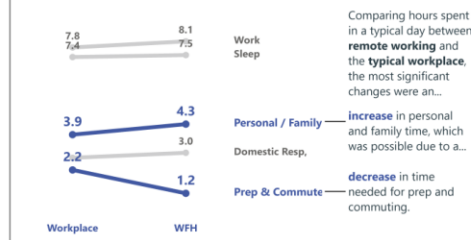


53% ...of people in 2021 feel **better** when they are able to see their work colleagues **in person**, which is reflected in the % of people feeling **isolation** is a **barrier** that is **worsened** by remote working.

59% ...of people in 2021 feel **better** when they **work remotely**, and ...

57% ...are **more active**, a reflection of the % of people feeling their **health and safety** was **improved** by remote working.

Redistribution of hours to daily tasks with remote working - 2021



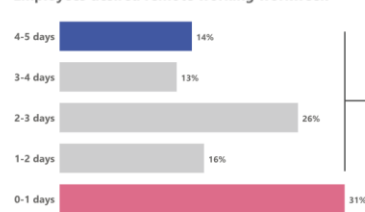
Comparing hours spent in a typical day between **remote working** and the **typical workplace**, the most significant changes were an...
increase in personal and family time, which was possible due to a...
decrease in time needed for prep and commuting.

A flexible hybrid remote work policy should be made available to personnel in the future.

The positive aspects of **productivity** and **morale** have resulted in a sizable majority of people wanting to work **at least one day** a week remotely (69%), with 14% wanting to work close to **full time** remotely.

However, there is a sizable portion (**31%**) of people who have indicated that they either **don't want to work** remotely, or at least less than 1 day.

Employees desired remote working workweek



related to an overall preference of flexibility...

Management assessment of retention and attraction

68% ...of management personnel also believe that offering a flexible remote work policy will **improve retention** of employees, and....

59% ...of management personnel also believe it would also assist in **attracting new talent** through recruitment.

Maven Remote Work Analysis

An analysis of the survey results into the attitudes towards remote working in **NSW, Australia** during the COVID lockdown of August/Sept 2020 and following the lifting of lockdown conditions in March/April 2021.

Survey sample sizes were: **1,507** for the **2020 survey**, and **1,512** for the **2021 survey**

#mavenremoteworkchallenge

Data source: <https://www.mavenanalytics.ai/blog/maven-remote-work-challenge>

PART E - REVIEW FOR OUTCOMES & GOALS & PUBLISH.



REVIEW FOR OUTCOMES & GOALS & PUBLISH.

- There were some **general layout** and **formatting** tips, but the crucial comment was to bring the overall outcomes and policy to the **fore**, and put them **top and centre** of the dashboard, rather than at the bottom as in the draft.
- After the review, we can rearrange the running order of the dashboard, which makes the **summary** and **overall** policy the first thing you see, - followed by productivity and morale, with some slight formatting on the headers.

Alistair Williams

REVIEW FOR OUTCOMES & GOALS & PUBLISH.

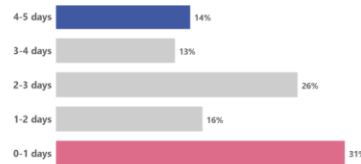
A hybrid remote work policy has the potential to boost productivity, worker morale and retention in the Post-COVID world, and companies need to adapt.

The positive impacts on **productivity** and **morale** detailed below have resulted in a sizable majority of people wanting to now work at **least one day** a week remotely (69%), with 14% wanting to work close to **full time** remotely.

However, there is a significant portion (**31%**) of people who have indicated that they want either minimal or **no remote work at all**.

Companies will need to accommodate this spectrum to **attract and retain talent**.

Post-COVID - Employees desired remote working workweek



related to an overall preference of flexibility...

Management assessment of retention and attraction

68% ...of management personnel also believe that offering a flexible remote work policy will **improve retention** of employees, and...

59% ...of management personnel also believe it would also assist in **attracting new talent** through recruitment.

Maven Remote Work Analysis

An analysis of the survey results into the attitudes towards remote working in **NSW, Australia** during the COVID lockdown of August/Sept 2020 and following the lifting of lockdown conditions in March/April 2021.

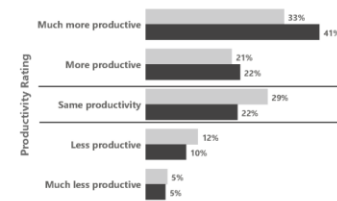
Survey sample sizes were: **1,507** for the 2020 survey, and **1,512** for the 2021 survey

#mavenremoteworkchallenge

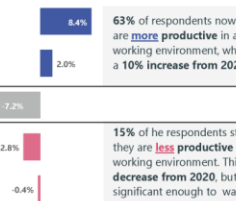
Data source: <https://www.commodities.com.au/maven-remote-work-challenge>

Both personnel and management agree that the general degree of productivity increased on average through 2020 and 2021. However, certain subsets of occupations experience lower productivity rates.

Self-productivity ratings between 2020 and 2021



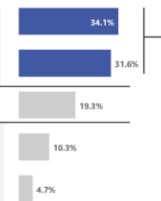
% Change between 2020 and 2021



63% of respondents now believe they are **more productive** in a remote working environment, which is almost a **10% increase from 2020**

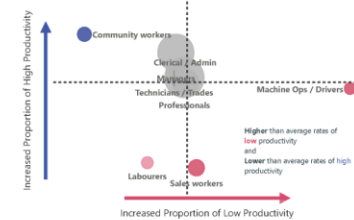
15% of he respondents still believe they are **less productive** in a remote working environment. This is a **decrease from 2020**, but still significant enough to warrant attention.

Management Opinion



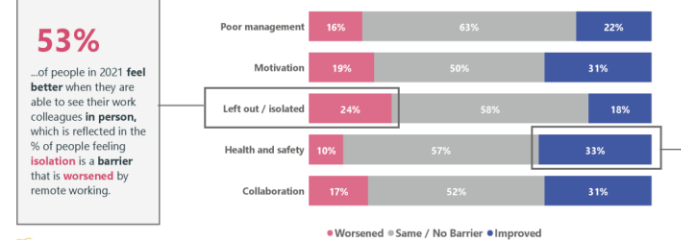
In 2021 it was found for managers, that their assessment of productivity increase or decrease of their own staff was **largely reflective** of those for each individuals self assessment, with almost **65%** experiencing a **more productive** workforce.

Productivity split between occupation groups



Morale may be improved through being more active and having more personal time due to the elimination of the commute, but steps will need to be taken to address the issue of isolation from colleagues.

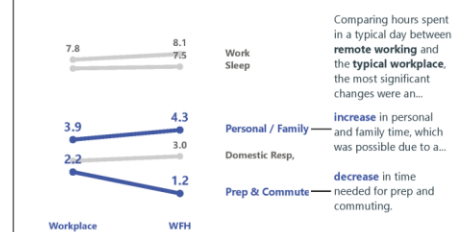
Issues affecting morale, and whether they worsened or improved by 2021



53% ...of people in 2021 feel **better** when they are able to see their work colleagues **in person**, which is reflected in the % of people feeling **isolation is a barrier** that is **worsened** by remote working.

59% ...of people in 2021 feel **better** when they **work remotely**, and ...
57% ...are **more active**, a reflection of the % of people feeling their general **health and safety** was **improved** by remote working.

Redistribution of hours to daily tasks with remote working - 2021



Comparing hours spent in a typical day between **remote working** and the **typical workplace**, the most significant changes were an...
Increase in personal and family time, which was possible due to a...
decrease in time needed for prep and commuting.

VIDEO WALKTHROUGH.

Winners Appraisal

@ 20 minutes

Alistair Williams