

Industrial Research Proposal – Industrial Based Research

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Introduction

Workload is recognised as one of the most significant contributors to employee stress, burnout, and poor work-life balance within organisations [1]. In many working environments, workload distribution is managed informally, relying on a single person's opinion rather than evidence-based data and information [7]. This can allow imbalances, overworking, and pressure points to develop. Also potential for disproportionate expectations placed on certain individuals or teams. These issues are often only identified once consequences have already occurred like reduced productivity, low morale, extended absence, and quick staff turnover [5].

Current UK evidence from the CIPD 2025 [6] indicates that workload-related stress remains a significant and ongoing issue, with heavy workloads listed as the leading cause of stress-related absence, and average sickness absences per employee continuing to rise yearly. This shows that the issue does not stem from a lack of understanding, but rather from a lack of accessible visibility and actionable insight at both team and individual level.

This project responds to this gap by proposing the design and development of a workload analytics dashboard, intended to make patterns of imbalance, disengagement, reduced productivity, overworking, and other potential risks more visible, supporting a more proactive approach to resolving issues of potential overworking. This project is further supported by discussions with a workplace manager, who confirmed genuine organisational interest in a tool of this kind. This indicates that a tool of this type is a recognised organisational need and may benefit existing employees.

The remainder of this proposal outlines the research into the issue, the methods and materials required for its development, a draft design outline of the dashboard, planning and resource requirements, as well as its anticipated impact, limitations, and potential for further development.

Problem Statement

In professional working environments, workload is a major contributor to employee stress, burnout, and poor work-life balance [8]. Workload distribution often varies across teams within a department, creating pressure points that place a disproportionate burden on specific individuals or groups. Data driven analysis can provide clear evidence of where these pressure points occur, offering organisations the information needed to identify where additional support is required. However, without accessible data, imbalances often remain unseen until they cause negative impacts like reduced productivity, disengagement, or increased staff turnover. This project addresses that gap by proposing the design and development of an analytics dashboard. In doing so, this project aims to support more equitable task allocation, contributing to improved work-life balance and a healthier working environment.

Provisional Aim

To design and develop an analytics dashboard that makes workload distribution across staff visible to managers, to identify overwork risk and support equal task allocation and improved work-life balance within the company.

Objectives

1. To review and analyse academic literature on workload distribution, burnout, and work-life balance, alongside the reviewing of literature on existing wellbeing analytics tools to identify current approaches and gaps in this area.
2. To define a set of measurable workload indicators including hours worked, task volume, tasks completed, and overtime hours - used to identify potential imbalance and pressure points across a team/department.
3. To develop a prototype analytics dashboard that visualises these indicators using a mock representative dataset, enabling comparison of workload indicators across staff members.
4. To evaluate the prototype dashboard against defined success criteria, assessing its accuracy and usability in analysing workload imbalance patterns.

Literature Review

Christina Maslach has been most influential in her research completed on organisational psychology and burnout [2]. Maslach's Areas of Worklife model focuses on and identifies six domains in which burnout can be created: workload, control, reward, fairness, values, and community. The most measurable of the six dimensions is workload, as it can be clearly evidenced with measurable statistics. The JD-R framework also builds on this model, outlining specific situations where job demands may become overwhelming [3]. The JD-R model provides a general explanation for why mismatches between excessive demands and a lack of resources may contribute

towards burnout, while Maslach's model identifies what those mismatches may look like. This pairing of research models is incredibly useful for a project of this kind.

The workload/burnout link extends well beyond a theoretical setting. A theoretical review of burnout research in nursing found that high workload was a common predictor of burnout across multiple studies using the Maslach Burnout Inventory, alongside additional factors including inadequate wellbeing support and personal impacts [4]. This cross-sector evidence suggests that workload is a stable predictor of burnout regardless of the specific industry studied. This supports the use of a workload-based dashboard across a multitude of industries, rather than being limited to any single sector.

Current UK Evidence - Workload as a current organisational problem

Recent UK-based industrial evidence indicates that workload-related stress remains a significant and ongoing organisational issue. The CIPD's Good Work Index 2025, based on a survey of 5,000 UK workers, found that a quarter of employees reported that their job had negatively affected their mental and physical health, with this being closely linked to excessive workloads and pressure. This is reinforced by absence data. Heavy workloads were identified as the most common cause of stress-related absence, cited by 41% of organisations reporting any absence. Additionally, average sickness absence per employee rose to 9.4 days, up from 7.8 days in 2023 and 5.8 days in 2022 [6], which had many recorded causes being burnout.

Together, this data clearly illustrates a gap between established theory and organisational practice: despite decades of burnout research clearly identifying workload as a primary risk factor, UK workplace data shows the problem is worsening rather than being effectively managed. This suggests that the issue is less about a lack of theoretical understanding and more about a lack of accessible, actionable data. This project's proposed dashboard is intended to address this gap and support organisations in putting their employees' wellbeing first.

Existing Tools and their Limitations

Several commercial tools already exist which attempt to use data analytics to make workplace wellbeing and workload issues more visible. Microsoft Viva Insights is among the most established examples. It aggregates data from emails, calendar, chat, and employee survey responses to produce privacy-protected workplace analytics. This system is designed to support better resource planning and workload distribution decisions by analysing potential stressors, including meeting load and focus time [9].

However, Viva Insights has notable limitations relevant to this project's scope and aim. Personal-level insights remain private to the individual, while manager and leadership-

level dashboards only display aggregated and anonymised data - a privacy-conscious design choice, but one that limits the tool's use for identifying specific individuals who may be at risk of overload. As this project specifically addresses potential burnout risk for individual employees, this level of data would need to be accessible and visible.

This represents a meaningful gap that exists in currently existing tools. This project's dashboard will be purpose-built and focused specifically on individual-level workload visibility, rather than broad organisational analytics, offering direct visibility. This dashboard is intended for organisations that want to prevent overworking and burnout proactively, rather than responding to it only once absence or disengagement has already occurred.

Summary and Existing Gaps

This literature review demonstrates: a well-established theoretical link between workload and burnout, strong current UK evidence that this remains an ongoing unresolved organisational problem and commercial tools that display broad workplace analytics but do not provide visibility at the individual employee level. This project's proposed dashboard is positioned to address this gap by combining Maslach's workload dimension as a theoretical foundation with a purpose-built, lightweight visualisation tool aimed at making workload imbalance clearly visible to management and people-support departments.

Methods and Materials

This project will adopt a mixed-methods approach, starting with a literature-informed dashboard design, followed by a practical build methodology to create and develop a functioning dashboard prototype.

Research Approach

This project follows an iterative development approach. The initial build of the dashboard will be based on specific workload indicators identified through the literature review. Next, a representative mock dataset will be constructed to simulate realistic workload patterns, as real data from my workplace could not be used due to data sensitivity restrictions. The dashboard will then be built, tested against defined success criteria, and finally refined. A successful project would display all data insights correctly, display information with clear understanding and flag set anomalies or outcomes correctly within the dashboard. This aligns with standard practice in

analytics tool development, where design and structure are shaped by early testing rather than being fixed in advance. This iterative structure also allows the project to remain responsive to any future changes in data access.

Data Collection

Due to organisational restrictions on handling sensitive employee data, particularly within the insurance sector, this project will use a synthetic dataset designed to realistically represent team workload and scheduling patterns, rather than real employer data. The dataset will be constructed to include 30 fictional staff members across two teams over a 10 -12 week period, capturing hours worked, task volume assigned and completed, overtime hours, and meeting load. Variation will be deliberately built in, including at least one overloaded and one underutilised individual per team, to ensure the dashboard displays realistic, accurate, and meaningful patterns.

While this approach may limit real-world validation, within the scope of this proposal, it allows the prototype's design and logic to be developed and demonstrated without compromising confidential organisational data. Additionally, a discussion with a management-level employee confirmed genuine organisational interest in this type of tool. Although this reflects one individual's perspective, they have held managerial roles across multiple organisations and felt this project could supply a reusable analytical framework (subject to appropriate data protection permissions in line with UK GDPR).

Workload Indicators

Informed by research into Maslach's Areas of Worklife model, which identifies workload as one of six measurable domains contributing to burnout, this project will use the following indicators as the main basis of initial analysis:

- Hours worked per week per staff member (in comparison to their contracted hours)
- Task volume (assigned, completed, moved on, untouched)
- Overtime hours
- Meeting load

These indicators were selected as they are directly evidenced and quantifiable, aligning with the literature review's findings.

Analysis Techniques

Workload indicators will be analysed using descriptive statistics, including mean, range, and variance across staff, to establish baseline expectations within each team. Where relevant, comparisons will also be drawn between the two teams to identify whether workload imbalance is isolated to specific individuals or reflects broader team level differences. Threshold-based flags will highlight individuals whose values fall outside an expected range, prompting managers to arrange supportive discussions with the employee concerned. This enables the dashboard to surface potential overload risk automatically, rather than requiring manual review of raw data.

Tools and Technology

The prototype will be developed using Microsoft Power BI, selected for its native compatibility with the organisation's existing Microsoft 365 environment, and for its accessibility as a low-code analytics tool that could be adopted by other organisations' systems with relative ease. The synthetic dataset will be constructed in Excel before being imported into Power BI, where Power Query will clean and shape the data, and DAX (Data Analysis Expressions) measures will calculate comparative workload metrics and threshold-based risk flagging. Visualisations will include comparative charts across team members, time-based trend analysis, and colour-coded indicators to highlight individuals who may need closer review.

Product Design

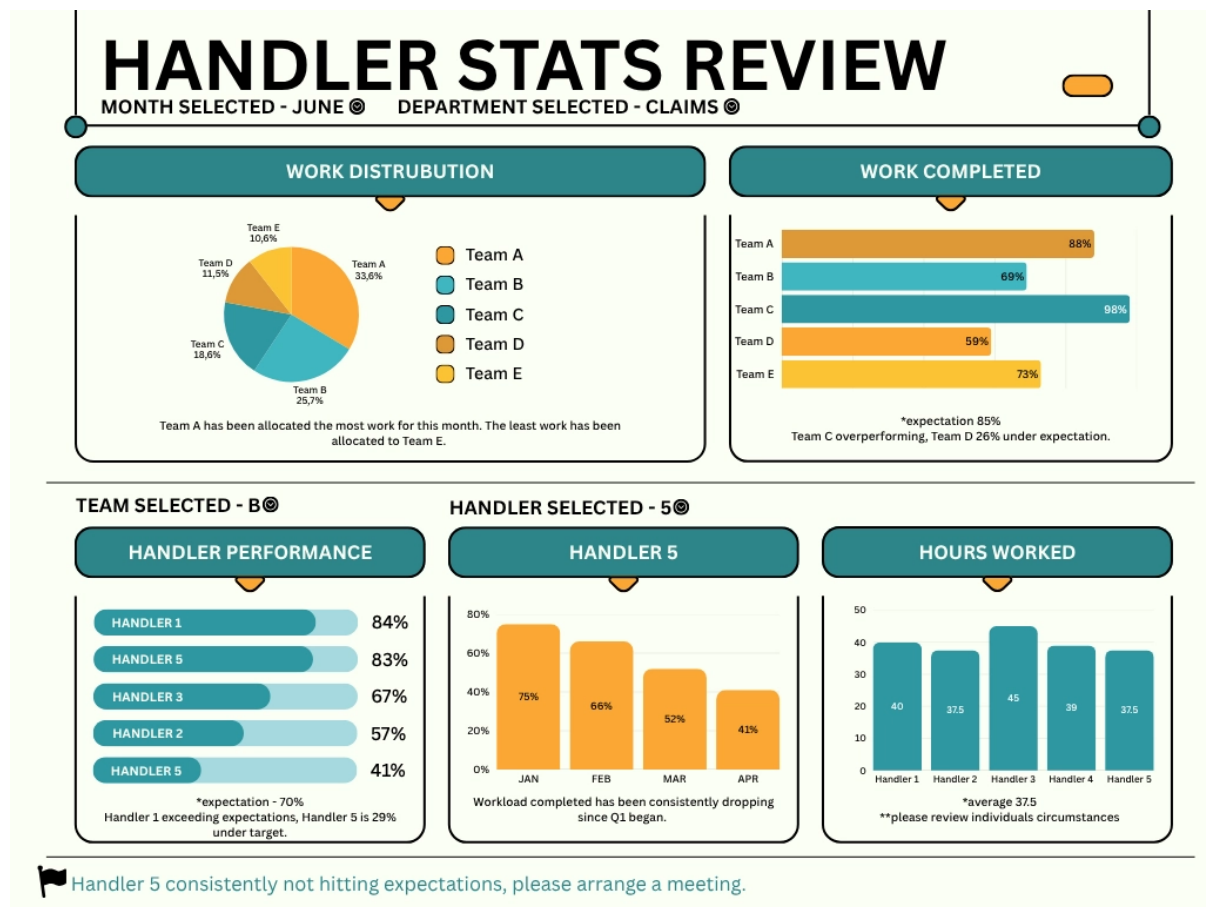


Figure 1 – Database Layout Draft

The dashboard is structured into three main sections: an initial team/department overview, which can then be filtered down to team or handler specific data.

At the top of the dashboard, the title bar includes filtering options for a specific month and department, meaning the dashboard's design can be extended across organisations and departments rather than being limited to a one team per dashboard structure. This enables managers to review either a specific reporting period or a full dataset to easily see an overview of current and past statistics.

Section 1 - Two panels sit side by side beneath the initial filters. The first, *Workload Distribution*, uses a pie chart to show the proportion of total task volume allocated to each team. This clearly highlights which teams are carrying more work, and therefore potentially experiencing greater strain than others. The second, *Work Completed*, uses a horizontal bar chart to compare completion rates across teams. A defined threshold (85%) is applied for ease of use, giving a clear and consistent benchmark against which team performance can be judged.

Section 2 - Individual team and handler information. Below the team-level view, a panel on the left allows a specific team to be selected, displaying each handler's completed work. To emphasise, this dashboard is intended to support quality review processes rather than replace them and should not be used as the sole measure of an individual's performance. The three panels beneath this, outline specific handler statistics on work completed, performance, and hours worked, allowing managers to identify both over and under worked individuals clearly and quickly.

Section 3 - Flags and recommended actions are listed at the bottom of the dashboard, clearly marked and easily visible so that the most important insight(s) stand out immediately. Each flag is paired with a direct, context-specific recommendation based on the section of the dashboard it originates from. This ensures the dashboard provides an actionable next step, rather than leaving interpretation entirely up to the manager.

This tiered structure was chosen for ease of use. Raw workload data can be difficult to interpret and, as a result, difficult to act on. This structure is intended to translate that data into a format that is quick to read and easy to act upon. Managers and employees responsible for supporting others can therefore engage directly with the underlying facts, without needing to decode raw figures themselves.

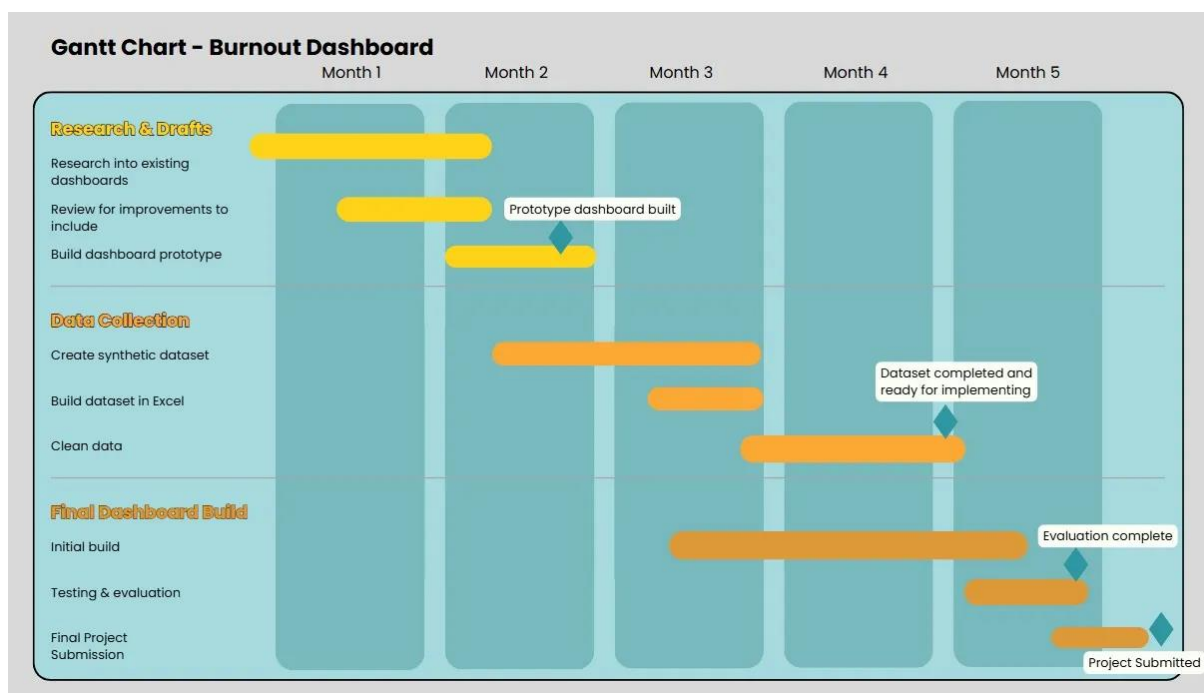


Figure 2 - Gantt Chart

Budget

This project does not require major financial investment, as the core tools needed are either free or already covered by existing licensing. Microsoft Power BI Desktop is free to download and use for prototype development, and Excel is available through the organisation's existing Microsoft 365 licence at no additional cost. Should the project be taken further and require Power BI Pro licensing, the current price is approximately £8.20 to £10.80 per user per month, though this would only become relevant if the tool were implemented more widely within the organisation. No specialist hardware is required beyond a standard laptop capable of running Power BI Desktop and Excel.

Tools

The tools required for this project are as follows:

- Microsoft Excel
- Microsoft Power BI Desktop
- Google Scholar and university library databases
- Microsoft Word

Time

Time allocation for this project is reflected in the Gantt chart provided in Figure 2, spanning approximately five months to complete initial research, construct and clean the synthetic dataset, build the dashboard, implement the data, and ensure the final output meets a high standard. Time is split across three main phases: Research and Drafts, Data Collection, and Final Dashboard Build. As this project will be completed alongside work commitments, time will be allocated during designated study time, with additional personal time used as needed to meet set targets.

The minimum viable project (MVP) for this project would be section 1 and 2 functioning correctly and still displaying valuable static insights, and section 3 being something that can be developed or added if more time were allocated to this project.

Training needs

While I have a working understanding of Power BI, this project will require developing deeper proficiency in Power Query and DAX to build a dashboard that functions as

intended, including calculated measures and threshold-based flags. To address this, I plan to use Microsoft Learn alongside other freely available online tutorials during the early stages of the project. No costed or formal training is required, as sufficient learning material already exists online at no cost.

Limitations

There are several limitations that should be acknowledged. Most significantly, this project relies on a synthetic dataset rather than real employer data, as access to real data was not possible within the scope of this project. While the mock dataset has been designed to realistically reflect plausible workload patterns, it cannot capture the real life complexity and nuance of genuine data. This means that the outputs from this prototype should be treated as indicative rather than accurate.

Related to this, the dashboard's threshold-based flags rely on fixed thresholds which may not account for legitimate variation between roles, employees and absences unrelated to workload or work-related stress directly. Without real data and manager review, it is difficult to set these thresholds with confidence at this stage.

There are also ethical and practical considerations around the use of workload monitoring tools. Visibility into individual-level data carries a risk of being perceived as surveillance rather than support if not implemented sensitively. Any real world implementation would need to be supported with clear communication to staff about how data is collected and used, alongside compliance with UK GDPR and the company's data protection policy. This project's current use of synthetic data avoids these concerns directly, but they would become highly relevant should the project progress to real-world deployment.

Finally, as this project develops only a prototype within a limited timescale, its scope is necessarily narrow. It implements a small number of workload indicators rather than the full range of factors that may be equally relevant to burnout, such as those relating to fairness, reward, or values. These may be developed in future projects of this kind.

Further development

Future work extending beyond this project's proposal could include validating the dashboard against real, anonymised employee data with appropriate permissions, incorporating manager and employee feedback to refine thresholds, layout, and areas for development and exploring additional indicators. This could include a qualitative wellbeing survey component to capture dimensions of burnout not reflected in

quantitative workload metrics alone, while avoiding the additional privacy complexity of monitoring more sensitive data sources such as one-to-one conversations.

Personal Reflection

Undertaking this project as my final project feels significant, both academically and professionally. I feel excitement and nervousness in equal measure, as this project is entirely up to me to complete. Working independently is something I don't do often, as my day-to-day role is in a team so I am excited to produce something from myself, while also nervous about how that process will go. Choosing a topic rooted in burnout and workload was important to me, as I have first-hand experience, both personally and among my peers of seeing how work is distributed within a team and the impact that may have on one's wellbeing. When one colleague is unhappy or overwhelmed, it affects the wider team and department. I want to be part of a new wave of putting mental health first and working to live; not the other way around.

The process of creating this proposal has already taught me a great deal, particularly how academic theory translates into practical tools that organisations can use. Reviewing existing research, such as Maslach's work, gave me clear insight into the data around workload and its connection to burnout, confirming to me that this is a genuine, evidenced problem rather than just an opinion. It showed me why workload matters, backed by clear metrics rather than assumption. Additionally, researching existing tools such as Viva Insights demonstrated both the value and the limitations of existing analytical platforms, and gave me clear reasoning for why I am developing my own dashboard.

The most valuable lesson I have learned so far is how to adapt my project around a real existing constraint - being unable to access real organisational data. I understand why this restriction exists, but it felt like a setback at first. This experience taught me how to work around uncertainty and find ways to keep my project progressing through it. Certain aspects that would have been straightforward with real data instead had to be adapted to suit synthetic data. For example, creating realistic human-like information involving absences, holidays, and meetings. This is a skill I expect to rely on again in future; including when working on the main project itself.

Looking ahead to the full project, I feel a mixture of confidence and worry about certain aspects, mainly around my limited experience using Power BI. I have confidence in my ability to learn new applications, as I have demonstrated throughout my apprenticeship, but I am unsure how quickly I will adapt to the system. Another

potential concern is ensuring I have enough time to complete the project with the level of detail I am aiming for. I will need to draw on my organisational and time-management skills to their fullest to ensure the project is completed to the high standard I set for myself. I am particularly excited to build the dataset and design a dashboard that is useful and easy to understand.

Overall, this project is an opportunity for me to combine my technical and design skills with something I find genuinely important; wellbeing. This project is just the beginning of my future, and this kind of work is what I intend to continue to develop and apply in my professional and personal life.

Citations

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