

Changemakers: Creativity and Value Creation
ACCA5033
Assignment 1: Innovation and Project Management
Sickness-Management Decision Support Tool



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Innovation

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Innovation has undoubtedly shaped the world we live in. From the advent of humans discovering and harnessing fire through to today's innovations in science and technology such as Artificial Intelligence.

GAI and publications OECD supports that advancements in fields such as medicine have increased not only the lifespan of the typical human, but also the quality of life. [1] [10]

Hans Rolsing's data displays that there appears to be a correlation between the wealth of countries and overall lifespan, however this is a broad figure across the country as a whole and further analysis into some countries such as China has displayed that specific areas of high development have higher income and lifespan. [2]

Nikolai Kondratieff's prosperity waves suggests that innovation can create peaks in societies prosperity before returning to normal. The below image displays the impact on innovations on the S&P 500.

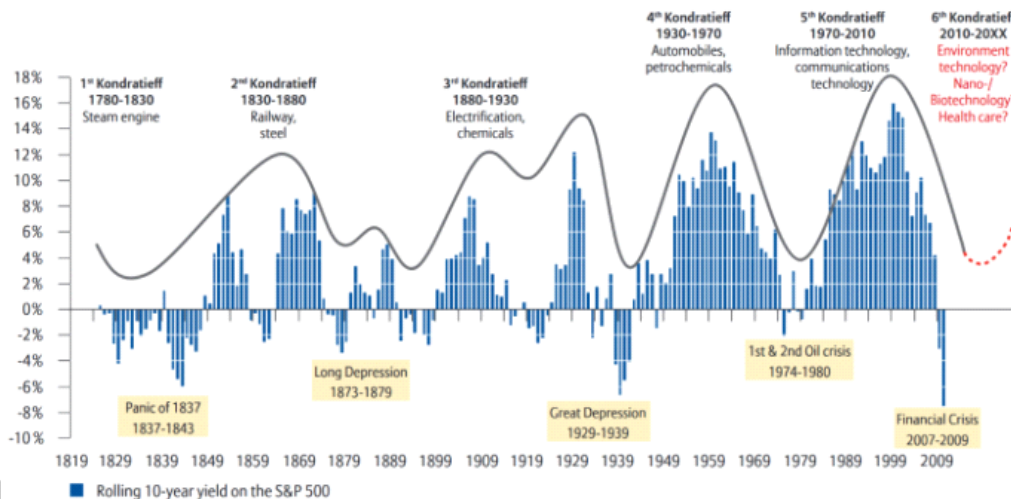


Fig [3] – Kondratieff cycles

When the 3 key industrial revolution end dates (1850, 1915, early 2000s) are compared against the cycles above there appears to be a correlation between these dates and the impact on the S&P which further strengthens the argument of the Kondratieff cycle theory. When looking towards the future, Klaus Schwab suggests that the 4th industrial revolution will be driven by technological innovation and will have a large impact on society and the global economy. [4] It is therefore possible to suggest that a Kondratieff cycle will take place based on this theory and we will see another peak in society over the coming years due to innovation.

Ideation

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Several project ideas are documented below with positives and negatives to advancing the ideas.

HR AI assistant - An AI assistant that allows managers to ask simple questions to AI that will search available sources and provide guidance and referencing

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- Allow managers and staff at all levels to quickly get answers to complex HR queries
- Eliminate the requirement for users to review various documents to find answers
- Reduce demand on HR officers

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- Complex project which may take significant time to complete
- The use of AI in policing is under review and this may not be a solution the organisation is willing to accept

Psychological sickness management assistant - supports managers in managing psychological absence in conjunction with policy/procedure

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- Assist in addressing psychological absence
- Provide direction on steps to protect staff and the organisation
- Reduce demand on HR officers

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- Psychological absence can have a number of variables. System may be too rigid to deal with the variety
- May expose the organisation to risk if something goes wrong with an individual staff member.

Attendance management assistant - a program that supports managers in decision making based on attendance data and makes a recommendation on next steps

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- Will provide managers with a program that provides support in decision making around support plans
- Will assist in developing a consistent approach to attendance management
- Continues to allow managers to have autonomy over decision making

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- Limited in function
- Investment may not produce desired outcome

The project which will be progressed from the above is the **attendance management assistant**. This project will be titled “**Sickness-Management Decision Support Tool**”. The rationale for progressing this project is primarily due to time constraints however, in addition, the attendance management assistant has scope to expand to include psychological sickness management and other HR processes in future iterations if the initial project is successful.

The aim of this project is to provide a tool which will support to managers in managing sickness absence by considering existing policies and procedures to inform their decisions.

SMART objectives

Feedback

S – Garner feedback from relevant stakeholders to better understand the feasibility and appetite to progress the project

M – Surveys will provide qualitative feedback to understand the stakeholder's feelings towards the project

A – The survey will be brief and therefore a high completion/engagement is anticipated

R – This objective is important to understand the needs and wants of the customer

T – Completed within 2 weeks as the feedback is critical to future development of the project.

Proof of Concept

S – Deliver a proof-of-concept program to allow for testing

M – Gather feedback from at least 5 testers

A – Use measurable feedback metrics along with qualitative feedback

R – Ensures the program is fit for purpose

T – Pilot program to be completed with improvements by 31st July.

Overall absence management improvement

S – Improve the overall compliance of support plans in place for those hitting the organisation sickness/absence triggers.

M - A baseline of support plans that are in place already exists within the organisation and as such benchmarking the data post implementation of the project will be easily achievable.

A – The first version of the project requires little financial or time investment and as such should be achievable.

R – The objective clearly aligns with the organisation's desire to improve overall management of attendance.

T – Impact can be measured 4 weeks post implantation.

Research

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The impact of ill health on organisations and the economy is worsening. A report from DWP shows there has been a 40% increase in the number of working-age individuals that are economically inactive due to ill-health since 2019. [5] Findings published by the CIPD also states that UK employees have reported sick from work for on average 9.4 days in 2025 which has increased from 7.8 days in 2023. [6]

Managing attendance is important to ensure that colleagues are present in the workplace and that relevant support is put in place to support attendance. While policies and procedures can be put in place to protect staff, it is important to consider that stringent enforcement of policy could result in "presenteeism". This could have a detrimental impact on organisational performance and may be more impactful on certain groups of individuals, such as those with chronic illnesses. [7]

CPD has been carried out in MS Visio and Python programming to aid the completion of the project. This is evidenced in the appendices.

Project Scope

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Justification

Within Heddlu Dyfed Powys Police, there is an appetite to improve the overall management of sickness/attendance of individuals in the organisation. While there are policies and procedures in place to assist managers, analysis of data has displayed that there are significant inconsistencies and failings in attendance management.

Description

The project which is being undertaken is to create a program to aid managers in their decision-making process on how best to deal with attendance management in line with current policy.

Desired outcomes

The project will deliver:

- Improve consistency of the application of current policy
- Improve performance of managers in attendance management
- Simplify attendance management decision making

Requirements

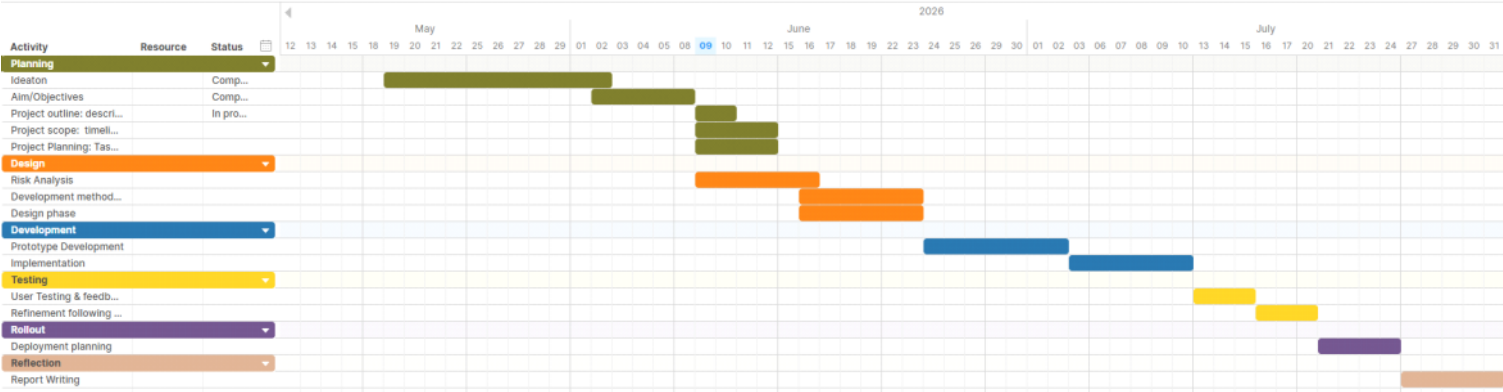
Hardware and software is already readily available within the organisation however there will be a requirement for IT and Learning and Development (L&D) resources given the scale of the organisation. This will include IT assistance in physically rolling out the software to devices within the organisation, coupled with further investment from the L&D department to provide training on the program.

Project Timeline

Project Stage & key tasks	Start Date & End Date
Ideation	19/05/2026 – 02/06/2026
Aim and Objectives	02/06/2026 - 08/06/2026
Project outline: description & Key sources	09/06/2026 - 10/06/2026
Project scope: timeline & resources	09/06/2026 - 12/06/2026
Project Planning: Task schedule & Gantt chart	09/06/2026 - 16/06/2026
Risk Analysis	09/06/2026 - 16/06/2026
Development methodology selection	16/06/2026 - 23/06/2026
Design phase	16/06/2026 - 23/06/2026
Prototype Development	23/06/2026 - 07/06/2026
Implementation	07/06/2026 - 14/07/2026
User Testing & feedback	14/07/2026 - 17/07/2026
Finish development work	18/07/2026 - 22/07/2026
Deployment planning	22/07/2026 - 24/07/2026
Reflection and Report writing	24/07/2026 - 30/07/2026

Gantt Chart

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The above is a Gantt chart which displays the timeline of tasks in the management of the project and was created using Tom's Planner. GAI suggests that Gantt charts can provide a visual representation of tasks within a project coupled with timeline to improve the efficacy of project management. [8]

Risks and Challenges

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Bannerman identifies common risks in IT project management as requirement issues, technical, scheduling, organisational and external factors. [11]
While these are common, the risks noted below have been identified due to the high impact they would have on project development.

Change management – There may be a reluctance to adopt the new program and way of working by members of the organisation. To combat this there will be a requirement to have a robust training plan alongside side with the benefits clearly explained to users of the program.

Governance – As this will be a new program used in the organisation there will be a requirement to understand who is responsible for the use, maintenance and overall system ownership. To mitigate against this, the creation and amendment of policy/procedure will need to take place to provide clarity on ownership and use.

Data protection – In in initial stages of development the program will not retain sensitive data, however, as there is scope to enhance the program there is the possibility that personal data and/or medical information could be input. Clearly defined policies alongside engagement with Data Protection Specialists within the organisation can ensure that the project is compliant with required legislation.

Over-reliance – The program will be designed to give a clear outcome based on policies. There may be instances where the right thing to do does not fit with current policy and as such managers may make decisions based on the program without considering the “human element” of decision making. To minimise this risk, as part of the rollout of the program training will be provided to users to explain that this is a tool to aid them and not a definitive decision maker.

Development Method

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To implement this project, the Agile methodology for project planning will be utilised. While the Waterfall methodology was considered there are drawbacks to using this framework in this particular project, most notably the rigidity and linear framework associated with this project management technique.

Agile is a modern methodology which has greater flexibility and would be better suited to this project owing to changing requirements that are anticipated through the project life cycle. Studies have shown projects that utilise the Agile methodology over the Waterfall are more likely to be successfully delivered on time, with greater satisfaction and within budget. [9]

Design

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The initial requirements specification has been designed based on anticipated client needs and as such is likely to change. It clearly defines the purpose, scope and requirements of the project. The Agile framework will allow for differing aspects of the project to be delivered using sprints. Client feedback can be obtained and the specifications can be adjusted to suit the customer's needs more effectively. The initial specification is detailed below:

Requirements Specification: Sickness-Management Decision Support Tool

1. Introduction

1.1 Purpose

The purpose of this system is to support consistent, policy-aligned decision making for sickness-management processes by guiding users through a program and producing clear outcomes.

1.2 Scope

The software will:

- Collect user inputs
- Apply organisational policy rules
- Produce a recommended decision or outcome
- Provide administrative controls, testing and auditability
- Support multiple account levels and corporate branding

2. Stakeholders

- **End Users:** Managers
- **Administrators:** HR policy owners, system administrators
- **Organisation:** Compliance, governance, workforce management teams

3. Functional Requirements

A001 – Decision Making (High Priority)

Description: The system must generate a clear decision or outcome based on user responses.

Requirement:

- The system will process user inputs and produce a decision aligned with configured rules.

A002 – Decision Rules (High Priority)

Description: Outcomes must be based on current organisational policy and procedure.

Requirement:

- The system will apply rules that reflect up-to-date policy.

A004 – Ease of Use (Medium Priority)

Description: The system must be easy to use, considering varying levels of digital literacy.

Requirement:

- The interface will be simple, intuitive, and accessible to users with limited technical skills.

A005 – Audit Trail (Medium Priority)

Description: The system should record when users access or use the program.

Requirement:

- The system shall maintain an audit log of user activity, including timestamps and actions.

A006 – User Input (High Priority)

Description: User inputs must be restricted to True/False or other controlled responses.

Requirement:

- The system will restrict user inputs to predefined, validated options (e.g., True/False).

A007 – Testing Feature (Medium Priority)

Description: Administrators must be able to test the system to ensure correct outputs.

Requirement:

- The system will include a testing mode that allows administrators to simulate inputs and verify outcomes.

A008 – Flexibility to Update (Medium Priority)

Description: Administrators must be able to update parameters when policies change.

Requirement:

- The system will allow authorised administrators to modify rules, thresholds, or parameters without developer intervention.

A009 – Account Levels (Medium Priority)

Description: The system must support multiple account levels for users and administrators.

Requirement:

- The system will provide role-based access control with at least two levels:
 - **User** (standard access)

- **Administrator** (configuration, testing, audit access)

4. Non-Functional Requirements

A003 – Branding (Low Priority)

Description: The system should follow corporate branding guidelines.

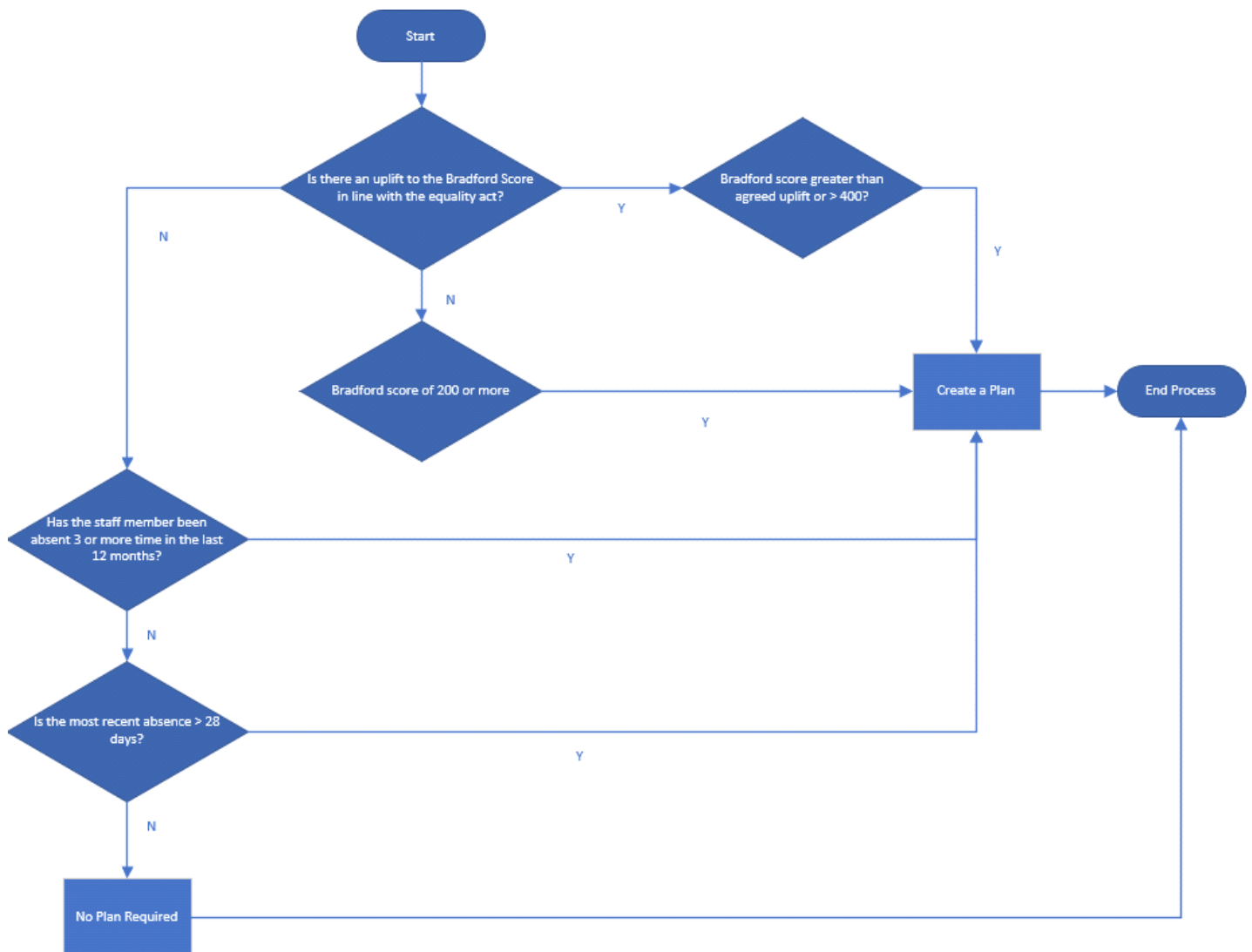
Requirement:

- The interface will support customisation to match organisational branding

5. Summary Table

ID	Title	Priority	Type	Must/Want
A001	Decision Making	High	Functional	Must
A002	Decision Rules	High	Functional	Must
A003	Branding	Low	Non-Functional	Want
A004	Ease of Use	Medium	Functional	Must
A005	Audit Trail	Medium	Functional	Want
A006	User Input	High	Functional	Must
A007	Testing Feature	Medium	Functional	Must
A008	Flexibility to Update	Medium	Functional	Want
A009	Account Levels	Medium	Functional	Must

To create the program there needs to be an understanding of how the outcomes will be generated. The below flowchart (generated through MS Visio) displays the logical decision flow based on the current policies that are in place within the organisation.



Practical Implementation

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The following screenshots display the code for the basic function of the program. Issues in data validation have been identified but as a proof of concept, the program runs effectively and produces the desired outcome in line with policy. This satisfies A001 and A002 of the requirement specification.

```
def absence_plan_required( 1 usage
    bradford_score: int,
    uplift_applies: bool,
    uplift_threshold: int = None,
    absences_last_12_months: int = 0,
    most_recent_absence_days: int = 0
):
    if uplift_applies:
        if uplift_threshold is None:
            raise ValueError("uplift_threshold must be provided when uplift_applies=True")

        if bradford_score > uplift_threshold or bradford_score > 400:
            return "Create a Plan"
        else:
            return "No Plan Required"

    if bradford_score >= 200:
        return "Create a Plan"

    if absences_last_12_months >= 3:
        return "Create a Plan"

    if most_recent_absence_days > 28:
        return "Create a Plan"

    return "No Plan Required"
```

```
def get_int(prompt): 4 usages
    while True:
        try:
            return int(input(prompt))
        except ValueError:
            print("Please enter a valid number.")

def get_yes_no(prompt): 1 usage
    while True:
        answer = input(prompt).strip().lower()
        if answer in ("y", "yes"):
            return True
        if answer in ("n", "no"):
            return False
        print("Please enter yes or no.")
```

```

# Interactive input section

print("\nBradford Score Assessment\n")

bradford_score = get_int("Enter Bradford Score: ")
uplift_applies = get_yes_no("Does an Equality Act uplift apply? (yes/no): ")

uplift_threshold = None
if uplift_applies:
    uplift_threshold = get_int("Enter uplifted Bradford Score threshold: ")

absences_last_12_months = get_int("Number of absences in last 12 months: ")
most_recent_absence_days = get_int("Length of most recent absence (days): ")

result = absence_plan_required(
    bradford_score,
    uplift_applies,
    uplift_threshold,
    absences_last_12_months,
    most_recent_absence_days
)

print("\n>>> Decision:", result)

```

Further work will be required to develop the program and achieve all aspects of the requirements specification.

References

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- [1] M. Copilot, *Private communication*, 2026.
- [2] H. Rosling, "World Health Chart," Gapminder, [Online]. Available: <https://www.gapminder.org/fw/world-health-chart/>. [Accessed 08 07 2026].
- [3] "Build back better: In the Winter of the 5th Kondratieff wave," University of Bath, 11 06 2020. [Online]. Available: <https://blogs.bath.ac.uk/iprblog/2020/06/11/build-back-better-in-the-winter-of-the-5th-kondratieff-wave/>. [Accessed 08 07 2026].
- [4] K. Schwab, "The Fourth Industrial Revolution: its meaning and how to respond," p. 40, 2017.
- [5] S. C. Mayfield, "Keep Britain Working Review: Discovery," Department of Work and Pensions / Department for Business and Trade, 2025.
- [6] "Workforce absence," CIPD, 09 09 2025. [Online]. Available: <https://www.cipd.org/uk/about/press-releases/workplace-absence-soars-nearly-two-working-weeks-each-year/>. [Accessed 06 07 2026].
- [7] F. Y. J. & H. C. Munir, "Sickness absence management: Encouraging attendance or 'risk-taking' presenteeism in employees with chronic illness?," *Disability and Rehabilitation*, vol. 30, no. 19, pp. 1461-1472, 2008.
- [8] M. Copilot, *Private communication*, 2026.
- [9] K. Deotighare and S. Bakane, "Agile vs. Waterfall: A Comparative Study in IT Project Success Rates," in *5th International Conference on Emerging Research in Electronics, Computer Science and Technology (ICERECT)*, 2025.
- [10] OECD, "Health at a glance," OECD Publishing, 2023.
- [11] P. Bannerman, "Risk and risk management in software projects: A reassessment," *The journal of systems and software*, vol. 81, pp. 2118-2133, 2008-12.

Appendix

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