Utilising Agile Project Management for Creating a HR Analytics Application

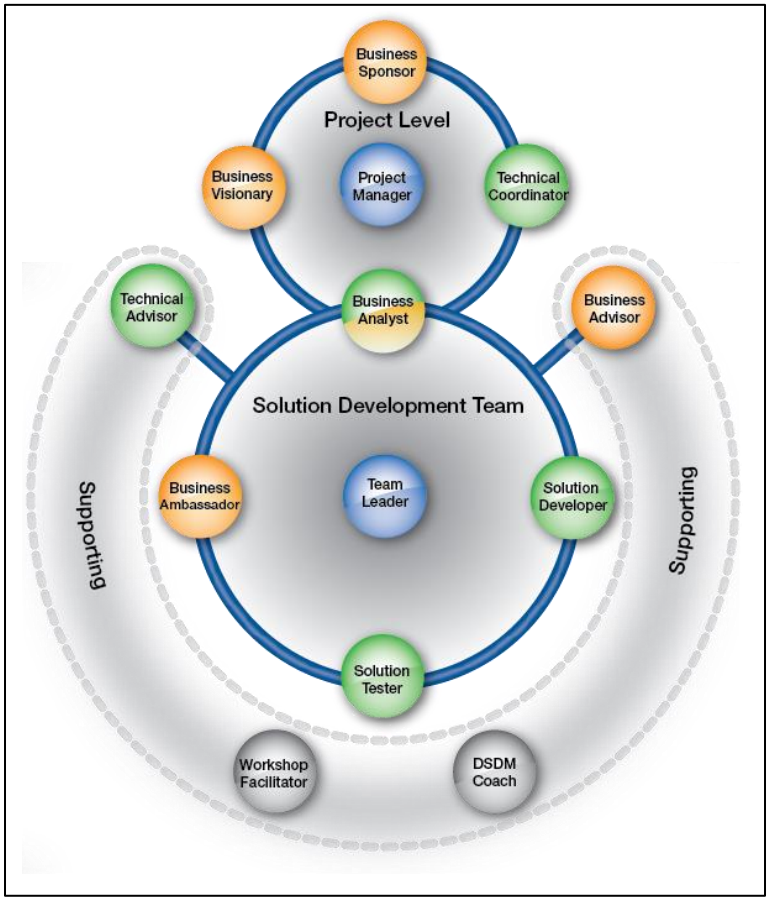
Introduction and Project Background

The company has decided to introduce a HR analytics application hosted in the cloud for the purpose of driving employee engagement and managing long-term talent in the organisation. The data from this application will be sourced from the existing workplace systems. As the project manager of this initiative, I have created this document to explore the potential effectiveness of Agile project management frameworks in ensuring the project's success. In particular, DSDM is used which is an Agile framework primarily centred on iterative project development cycles which prioritise delivering value to the business (Wysocki, 2011, chapter 11).

Project Team Based on DSDM Roles

Forming a team is a pivotal phase when launching a project. In accordance with DSDM, the team structure for this project has been defined with each member having their roles outlined based on their skillset and position in the organisation (figure 1).

Figure 1, The DSDM team model (Agile Business Consortium, 2023a)



Project Level

- Business Sponsor – Fulfilled by the Executive Director of HR since they have the keenest interest in the project, as well as the highest authority in the department to make business decisions.
- Business Visionary – Carried out by the Group Director of People since they work closely with the Business Sponsor while also having active involvement in all areas of HR.

- Technical Coordinator – The Group Director of Technology is assigned to this from having the highest technical knowledge and authority in the IT department within the company.

Project Level and Solution Development Team

- Business Analyst – Assigned to the Director of MIS and Exams based on their existing responsibility of bridging the gap between business and technical requirements.

Solution Development Team

- Project Manager – This position is assigned to myself.
- Team Leader – Also conducted by the Director of MIS and Exams since this member already leads the Reporting & Systems Development team who form most of the Solution Development Team roles.
- Solution Developer – The Reporting & Systems Developer, as they are experienced in transforming business requirements into technical solutions.
- Solution Tester – The Trainee Report Systems Officer will conduct this; they are applicable as they work alongside the Solution Developer and are familiar with software testing practices.
- Business Ambassador – Allocated to the HR Corporate Business Partner, chosen for their proven success in previous HR projects.

Supporting Team

- Business Advisor – The Deputy Director of People can perform this role since their specialist business and Human Resources knowledge can support the project team.
- Technical Advisor – This will be carried out by the ICT Infrastructure Engineer as their knowledge of existing technical solutions will be an asset in providing technical advice, guidance, and support.
- Workshop Facilitator – The HR Corporate Business Partner is also tasked with this since they have often been the liaison between different stakeholder groups for past projects.
- DSDM Coach – This is also assigned to myself, being the most knowledgeable on DSDM in the organisation.

Assessing DSDM Framework Suitability for the Project

Before proceeding with employing the DSDM Framework for any project, it is important to determine the suitability and risks by relating it to the project team and business. To achieve this, the Project Approach Questionnaire (PAQ) can be used to identify these factors (Agile Business Consortium, 2023c); this has been completed for the HR Analytics Application project (table 1).

Table 1, Project Approach Questionnaire (Agile Business Consortium, 2023c)

Project: HR Analytics Application		Name: [OMITTED FOR ANONYMITY]
Date: 02/11/2023		Position: Project Manager

		Indicate the closest collective opinion					*Where appropriate, comment on issues or risks related to a more negative response to this aspect of the DSDM approach*
Ref	**Statement**	**Strongly Agree**	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	
1	All members of the project understand and accept the DSDM approach (Philosophy, Principles and Practices)				✓		Familiarity with DSDM is limited within the project team to the Project Manager. Consequently, a risk associated could be resistance to change for the members that are accustomed to linear project frameworks. Moreover, there is risk of scope creep, meaning requirements of the project may change after the project kick-off (Komal, et al, 2020) due to a lack of understanding on the impact on the project budget and timelines. Although, this factor isn't strongly disagreed upon since there are several employees in the project team who are experienced in working iteratively, albeit without utilising DSDM. These team members are likely to adopt DSDM and promote acceptance of it amongst the team.
2	The Business Sponsor and the Business Visionary demonstrate clear and proactive ownership of the project.	✓					
3	The business vision driving the project is clearly stated and understood by all members of the project team	✓					
4	All project participants understand and accept that on-time delivery of an acceptable solution is the primary measure of success for the project	✓					
5	The requirements can be prioritised and there is confidence that cost and time commitments can be met by flexing the scope of what's delivered.		✓				
6	All members of the project team accept that requirements should only be defined at a high level in the early phases of the project and that detail will emerge as development progresses.	✓					
7	All members of the project team accept that change in requirements is inevitable and that it is only by embracing change that the right solution will be delivered.		✓				
8	The Business Sponsor and Business Visionary understand that active business involvement is essential and have the willingness and authority to commit appropriate business resources to the project.					✓	Historically, key team members have had difficulty in committing business resources due to competing priorities and the fast-paced environment of the workplace. This has previously resulted in delays with decision making, absences from review meetings, or other forms of disengagement from projects. Consequently, the HR Analytics Application Project could experience similar challenges leading to risks of project delays and impaired communication.
9	It is possible for the business and solution development members of the Solution Development Team to work collaboratively throughout the project.		✓				
10	Empowerment of all members of the Solution Development Team is appropriate and sufficient to support the day-to-day decision-making needed to rapidly evolve the solution in short, focused Timeboxes	✓					
11	The DSDM roles and responsibilities are appropriately allocated and all role holders understand and accept the responsibilities associated with their role.			✓			
12	The Solution Development team has the appropriate collective knowledge and skills (soft skills and technical skills) to collaboratively evolve an optimal business solution.	✓					

13	Solution Development Team members are allocated to the project at an appropriate and consistent level sufficient to fully support the DSDM timeboxing practice	✓					
14	Tools and collaborative working practices within the Solution Development Team are sufficient to allow effective Iterative Development of the solution.	✓					
15	All necessary review and testing activity is fully integrated within the Iterative Development practice.				✓		While testing has been conducted in previous projects by the Solution Development Team, it has mainly been informal, purely to ensure the project output works. The aforementioned issues with stakeholder engagement have often resulted in the product not being tested until completion. This would result in the output not meeting all the requirements or low user acceptance. The HR Analytics Application project faces similar risks if DSDM testing practices are unable to be performed.
16	Project progress is measured primarily through the incremental, demonstrable delivery of business value.	✓					
17	There are no mandatory standards or other constraints in place that will prevent the application of the DSDM Philosophy and Practices on this project.			✓			

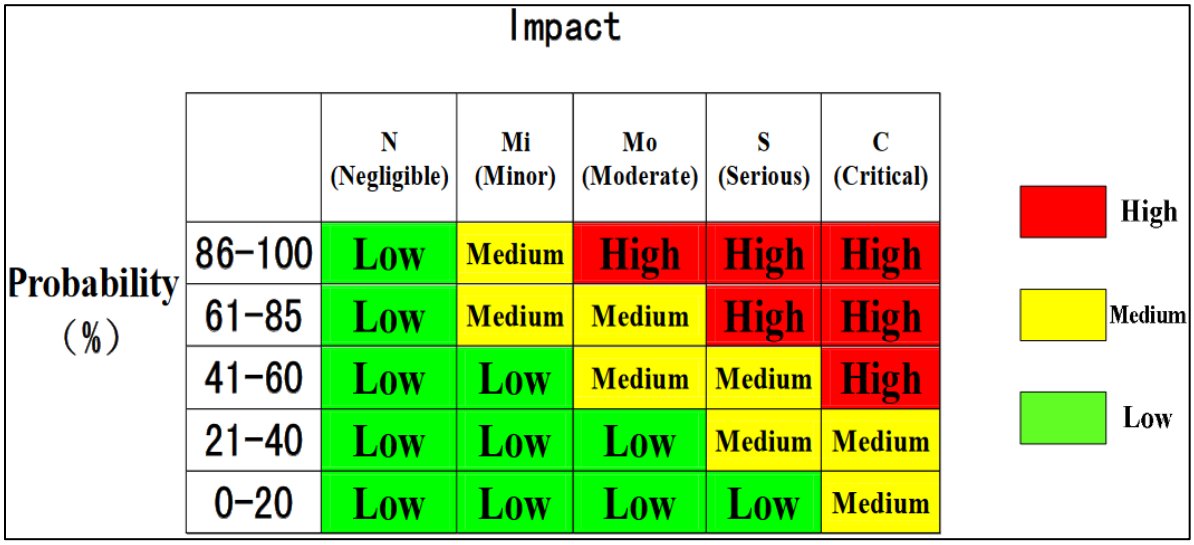
General comments on suitability or risk associated with the DSDM approach:
On the whole, the factors identified making DSDM suitable for this project are that the vision and business benefits of the HR Analytics Application are clear which should drive and empower the team. Conversely, there are notable risks found which should be addressed before project commencement. Namely, these are that the team are inexperienced with DSDM, meaning this could pose a significant learning curve. The nature of the workplace has also often prevented projects from proceeding due to competing commitments of key stakeholders.

Mitigating Risks Identified to Improve Project Success

Various risk management frameworks exist for minimising the negative impacts of risks on projects (Raz and Michael, 2001). In alignment with this objective, the risks identified from the PAQ (table 1) have undergone risk management using the following methodology:

1. Assessing the risk likelihood and impact on the project. The risks were ranked from low to high by employing a risk matrix (figure 2).

Figure 2, Risk matrix (Xiaosong, et al, 2009)



2. Developing mitigation strategies to address high risks. The strategies created were categorised, based on their outcomes, as: avoid, accept, transfer/share, or reduce, (Xiaosong, et al, 2009).
3. Formulating plans for controlling and overseeing the risk factors throughout the project lifecycle.

One of the risks identified from the PAQ was scope creep and resistance to change due to limited knowledge on DSDM within the project team. Considering that both issues could significantly impede the project deadline and team collaboration, the impact on the project matrix is classed as 'S (Serious)'. Since few members are familiar with DSDM, this makes the risk quite likely to occur, meaning the probability would be in the '61-85%' row of the risk matrix. Therefore, the overall risk rating for this factor is 'High'.

Since this threat poses a significant risk on the project's success, a mitigation strategy has been developed to avoid this risk altogether. Firstly, during one of the initial meetings in the pre-project stage, the team should be briefed on this risk and how DSDM will perform a pivotal role in project completion. An assessment should then be conducted to fully comprehend each team member's familiarity with DSDM. Based on the results of the assessment, workshops should be arranged, through coordination between the Workshop Facilitator and DSDM coach, to fill in the knowledge gaps of DSDM concepts in the project team. To measure the effectiveness of counteracting this risk, continuous feedback and further assessments can be performed as part of the workshops to reevaluate understanding of DSDM within the project team.

Another risk identified from the PAQ was the potential of key stakeholder disengagement, primarily due to competing business resources. Due to the potential of this halting project activities, the impact can be classified as 'S (Serious)'. Based on the frequency of this for workplace projects historically, the probability can be assigned to the '86-100'% row of the risk matrix, thus making the overall risk assessment of this factor: 'High'.

Due to the multitasking nature of the workplace, this risk cannot be avoided completely and so a mitigation plan has been created, focused on reducing impact on the project. For starters, prior to project commencement, a discussion should be arranged, centred around the future business commitments amongst the members of the project team. This way, potential conflicts can be identified and planned around. Meetings should be scheduled in advance, with the option to attend both in-person or virtually, for enhanced flexibility.

To prevent project delays from awaiting business decisions, designated 'backup' employees could be utilised when decision makers are unavailable. Additionally, a workflow can be implemented using Microsoft Forms for digital signoffs, with automatic reminders to decision makers, and notifications of completion via Power Automate. To oversee this risk throughout the project's lifecycle, status updates on engagement and workload should be provided during review meetings. A Microsoft Teams channel can also be created so the project team can be alerted instantly to any unexpected circumstances that may impact availability.

User Stories of Project Requirements

With Agile project management, a prominent approach in gathering project requirements is the creation of User Stories (Lucassen, et al, 2016, p1). This method is effective in fostering understanding of the user's expectations of the project's output (Lucassen, et al, 2016, p14). Using this format, three User Stories have been created for the HR Analytics Application project to outline project requirements (tables 2, 3, and 4).

Table 2, User Story – HR Business Benchmarking

HR Business Benchmarking	
User:	As an Executive Director
Requirement:	I need to benchmark HR metrics against internal key performance indicators (KPIs) and the business sector national rates.
Business outcome:	So that I can make data-driven business decisions based on the company's HR performance.
Acceptance criteria:	**Functional** • Pages with easily interpretable visuals and filters should be included for presenting the information in meetings. • The option to drill-down all the way to individual employees is needed for focusing on specific areas of the organisation. • The ability to compare data measures against internal KPIs and the business sector is needed to benchmark company performance. **Non-Functional** • The data currency should be near real-time to ensure business decisions made are from the most relevant information. • The application should be accessible from any device on the VPN. This enables Executives to view the metrics from any location.

Table 3, User Story – Training Monitoring & Compliance

Training Monitoring & Compliance	
User:	As a Learning & Development Coordinator
Requirement:	I need to monitor the success and compliance of the training programmes orchestrated by the business.
Business outcome:	So that I can measure the effectiveness of training and ensure regulatory compliance is maintained.
Acceptance criteria:	**Functional** • The system needs to draw data from all training platforms used and centralise it within the application. • The functionality to see training completion percentage by business area should be added to monitor progress. • The application should allow notifications to be sent to managers to inform their employees of upcoming training sessions.

	Non-Functional • HR should be able to see all information pertaining to training reporting, while managers should only see this for their respective business area. • Exportable reports shouldn't take more than a minute to generate to enable efficient reporting. • The training section of the application should be user-friendly and require little-to-no guidance so all users can immediately benefit from the system.

Table 4, User Story – Absence Trends Reporting

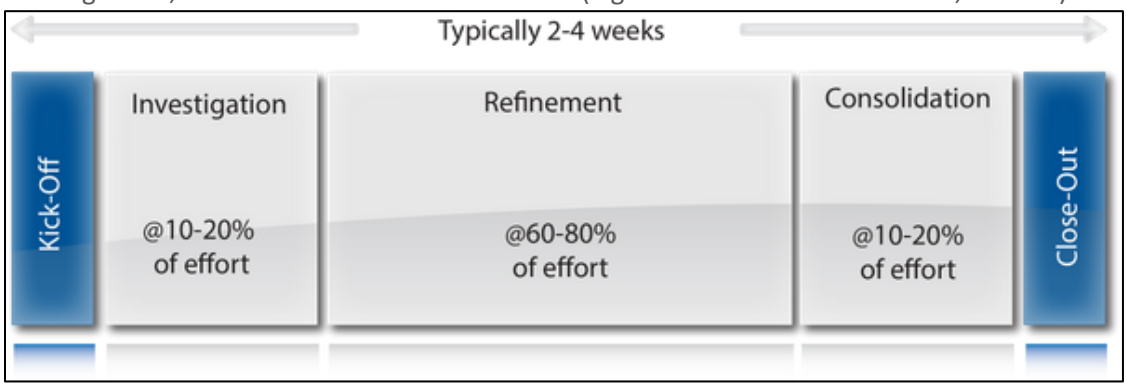
Absence Trends Reporting	
User:	As a Human Resources Employee
Requirement:	I need to track absence trends within the organisation to identify patterns and monitor the wellbeing of the workforce.
Business outcome:	So that I can use the trends to prepare the business for expected periods of absences and drive wellbeing initiatives for staff.
Acceptance criteria:	**Functional** • The application needs to graphically visually trend patterns of absences over several years to represent the peaks and troughs. • Information sections should be incorporated to provide documentation on the methodology used in absence measures. **Non-Functional** • Security should be employed to ensure confidential employee data is only accessible by authorised personnel. • Data should automatically be deleted from the application once it exceeds the acceptable retention period in accordance with data legislation. • The system should perform efficiently, even during periods of heavy usage.

Timeboxing of Project Activities

An important feature of the DSDM framework is Timeboxing of activities. The purpose of this practice is to encapsulate deliverables from project requirements and User Stories into two-to-four-week iterative cycles. During these cycles, the team collaborates to deliver the agreed requirements (Agile Business Consortium, 2023b). The following first iteration of a Timebox is proposed for the Absence Trends Reporting User Story (table 4) to demonstrate how this may work for the HR Analytics Application Project:

A 3-week, DSDM Structured Timebox is used, in which the phases are separated into investigation, refinement, and consolidation, with kick-off and close-out reviews at the start and end of the Timebox respectively (figure 3).

Figure 3, A DSDM structured timebox (Agile Business Consortium, 2023b)



Kick-off

A kick-off meeting will be held between the Solution Development team, Project Manager and Technical Coordinator to determine which requirements from the Absence Trends Reporting User Story will be included in the Timebox, using MoSCoW to prioritise them (Agile Business Consortium, 2023b). This can be a 2-hour session on the first day of the Timebox. Considering the size of the Solution Development Team and the 3-week timescale, 2 requirements can be accommodated. These could be the graphical visuals of absence trends, and the security of employee data, as both are must-have requirements.

Investigation

During this phase, the Solution Development Team reviews the deliverables specified in the kick-off with the objective of forming comprehensive plans for achieving these during the Refinement stage (Agile Business Consortium, 2023b). This should take two to five days for this Timebox.

To achieve this for the requirement of securing employee data, the team should investigate which method will be most effective for implementing security, such as integration with Active Directory Groups. The method(s) considered should then be tested on non-confidential data to ensure correct functionality.

Similarly, during investigation of the requirement for graphical visuals of absence trends, the team could brainstorm on which visualisations most effectively represent the data. Additionally, research could be performed on past approaches used to visualise absence trends within organisations.

Refinement

The Refinement stage is when the Solution Development team focuses on developing and testing solutions in alignment with MoSCoW prioritisation and the availability of stakeholders (Agile Business Consortium, 2023b). This should last twelve to seventeen days for this Timebox.

Due to compliance and legislative ramifications, the data security requirement should be prioritised. The Solution Development Team should collaborate with the Technical Coordinator to ensure this solution meets the acceptance criteria of the User Story.

Afterwards, the visualisations of absence trends can be worked on. Reporting specialists in the Solution Development Team can develop the visuals with guidance and feedback from the Business Visionary to ensure they effectively represent trend patterns of absence data.

This should end with a review involving the Business Ambassador, Business Visionary, Technical Coordinator, and the Solution Development Team to ensure the solutions are close to completion.

Consolidation

During the Consolidation phase, all tasks, including testing and quality checks, are finalised (Agile Business Consortium, 2023b). This should take two to five days for this Timebox. To execute this, the Solution Development Team should copy all completed work from the development environment to live, once tested. Subsequently, the team can determine which deliverables met the acceptance criteria of the User Story and document these accordingly.

Close-Out

In the Timebox Close-Out, finalised deliverables are signed-off and decisions are taken are regarding any uncompleted items, such as moving them to a future Timebox. A reflective workshop is held to enhance the efficiency of future project Timeboxes (Agile Business Consortium, 2023b). This can be achieved by arranging an hour-long meeting at the end of this Timebox between all relevant project team members.

Concluding Remarks

In summary, the DSDM Framework shows promise as an effective tool for managing the HR Analytics Application project, providing well-defined team roles, proficient risk management, clear project requirements and streamlined timeboxing. However, the risks identified in assessing DSDM suitability need addressing using the proposed mitigation solutions to ensure successful adoption of the framework. This should enable the business to fully capitalise on DSDM's potential and maximise project success.

References

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