Assignment Brief and Front Sheet PGT

This front sheet for assignments is designed to contain the brief, the submission instructions, and the actual student submission for any WMG assignment. As a result the sheet is completed by several people over time, and is therefore split up into sections explaining who completes what information and when. Yellow highlighted text indicates examples or further explanation of what is requested, and the highlight and instructions should be removed as you populate 'your' section.

This sheet is only to be used for components of assessment worth more than 3 CATS (e.g. for a 15 credit module, weighted more than 20%; or for a 10 credit module, weighted more than 30%).

To be completed by the student(s) prior to final submission:
Your actual submission should be written at the end of this cover sheet file, or attached with the cover sheet at the front if drafted in a separate file, program or application.

Student ID or IDs for group work	**5569029**

To be completed (highlighted parts only) by the programme administration after approval and prior to issuing of the assessment; to be consulted by the student(s) so that you know how and when to submit:

Date set	22/4/2025
Submission date (excluding extensions)	19th May 2025
Submission guidance	To be submitted electronically via Tabula
Late submission policy	If work is submitted late, penalties will be applied at the rate of **5 marks per University working day** after the due date, up to a **maximum of 10 working days** late. After this period the mark for the work will be reduced to 0 (which is the maximum penalty). "Late" means **after the submission deadline time as well as the date** – work submitted after the given time even on the same day is counted as 1 day late. For **Postgraduate** students only, who started their **current course before 1 August 2019**, the daily penalty is **3 marks** rather than 5.
Resit policy	If you fail this module and/or component, the University allows students to remedy failure (within certain limits). Decisions to authorise resits are made by Exam Boards. These will be issued at specific times of the year, depending on your programme of study. More information can be found from your programme office if you are concerned. If this is **already a resit** attempt, this means you will not be eligible for an additional attempt. The University allows as standard a maximum of two attempts on any assessment (i.e. only one resit). Students can only have a third attempt under exceptional circumstances via a Mitigating Circumstances Panel decision.

To be completed by the module leader/tutor prior to approval and issuing of the assessment; to be consulted by the student(s) so that you understand the assignment brief, its context within the module, and any specific criteria and advice from the tutor:

Module title & code	ES968-15 Project Planning Management & Control
Module leader	David Pontin
Module tutor	David Pontin/Tilimbe Jiya/Dennis Chapman
Assessment type	Essay Assignment Part A
Weighting of mark	50%

Assignment brief
Q1. "Systematic identification, analysis and assessment of risk and dealing with the results contributes significantly to the success of projects". (Cooper et al 2005) Choose a sector or industry and by applying a typical project lifecycle for the chosen sector consider each stage and critically evaluate why during every stage it is always necessary to be thinking about risk and how this contributes to better project performance.

Word count	Recommended Length 2000 words (excluding references, tables etc). No penalties are applied directly for word count if the discussion is all relevant to answering the question, is written as succinctly as possible and provides sufficient depth to the discussion.
Module learning outcomes (numbered)	1. Interpret the requirements for the effective management of projects of different types, scale, complexity, and risk within the organisational environment. 2. In a group setting select, apply and critically evaluate appropriate project planning, management and control approaches and techniques used in different circumstances. 3. Critically evaluate team performance in a group work setting and contribute to the formulation and management of project teams throughout the project life-cycle. 4. Deliver small projects effectively and contribute to the delivery of larger projects.
Learning outcomes assessed in this assessment (numbered)	1 and 4
Marking guidelines	https://warwick.ac.uk/fac/sci/wmg/ftmsc/postmodulework/marks/
Academic guidance resources	Further help may be received through links to a reading list, face-to-face sessions, feed-forward, workshops, seminars, Q&A sessions during the module etc.

Where to get help:

1. Talk to your module tutor if you don't understand the question or are unsure as to exactly what is required.
2. Study, Professional and Analytical Skills (SPA) Moodle site – we have a lot of resources on this website with workbooks, links and other helpful tools. https://moodle.warwick.ac.uk/
3. There are also numerous online courses provided by the University library to help in academic referencing, writing, avoiding plagiarism and a number of other useful resources. https://warwick.ac.uk/services/library/students/your-library-online/
4. If you have a problem with your wellbeing, it is important that you contact your personal tutor or wellbeing support services https://warwick.ac.uk/services/wss

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Introduction

Every project faces some level of uncertainty which cannot be properly managed and can turn into serious problems like project delay, increased cost of the project and affects project's overall quality. In simple terms, risk is something that can affect the successful completion of the project. Risk is basically an unavoidable part of any project. According to (Gachie, 2019) risk in a project is not only about the problems, it is also about the opportunities as well. Effective risk management means identifying the potentials risks early, understanding their impact, and putting plans in place to handle them. When it is done well, the chances of projects success increase and decision making is improved. In the automotive industry, managing risk is extremely important due to the complexity and scale of the projects involved. Automotive projects include developing new vehicle models, implementing automation, or adapting to strict environmental regulations. These projects involve large investments, tight deadlines, and coordination with suppliers and stakeholders across different countries. Without proper risk management, even small issues can lead to big delays, cost overruns, or safety concerns.

This is where the importance of risk management comes in play. This report will examine each stage of the project lifecycle. Initiation, Planning, Execution, Monitoring and Closure in the context in auto Industry. It will critically evaluate the importance of risk awareness at every stage of project life cycle and how it contributes to project performance. Real industry examples will be used to support the analysis.

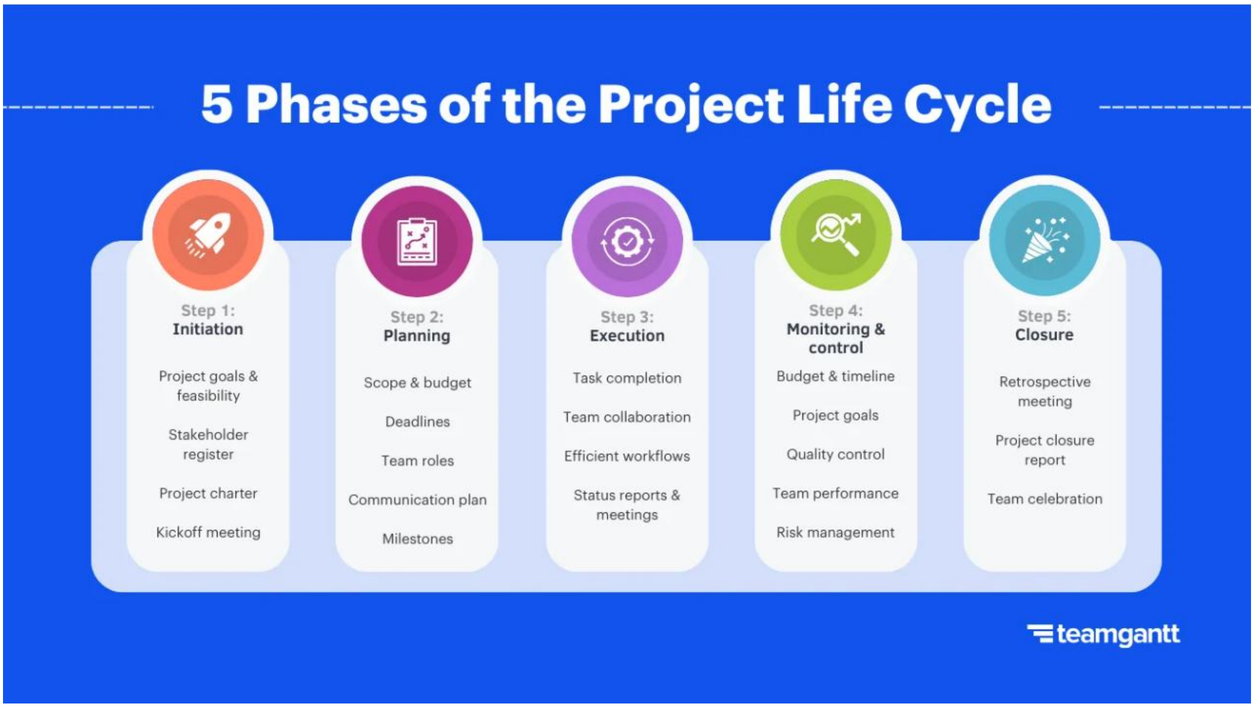

Fig. 1 Phases of Project Life Cycle (Vaida and Șerban, 2021)

Risk Management in Project Lifecycle

Initiation Stage

The initiation stage is where the project actually begins. In the automotive sector, this phase often involves proposing a new product development, equipment upgrades or may be process automation initiatives. The main goal of this stage is not to just approve a project but also to determine if the project makes business and technical sense and if it aligns with company's strategy. It typically includes creating a **business case**, **conducting a feasibility study**, and **drafting a project charter** (Sima, 2022). These documents help top management and stakeholders understand what exactly the project is and how it will be implemented. In car manufacturing this stage is really important because the projects are generally of large scale and high capital and under the umbrella of regulatory requirements.

Risks Associated in Automotive Project Initiation Phase and how they are managed

The very first and probably the unavoidable risk is **Regulation**. Rules about vehicle safety, emission norms and taxes often change. If these changes are not considered at the earliest stage, project may get in trouble and if the project is about new car or engine it might become outdated or illegal even before its launch (Best and Gerard de Valence, 2013). Apart from that, there is also a **technology risk** associated with the project. Sometimes, auto companies include new or untested technologies in their project like a solid-state battery and old or new but untested technologies to make their project happen (Russell, Pferdehirt and Nelson, 2018). **Market** is also one of the major risks in initiation phase, since **customer preferences keep changing** and the diversity of thoughts can make company guess wrong about the customers' requirements (Peled and Dvir, 2012). For example, if auto manufacturers invest in hydrogen car project but the customer is not ready to adapt this change, then the project might fail in the future.

How and why these risks are managed

To manage these risks early on, auto companies use structured tools and processes to support their decision. Initiating a **risk register** also enables a systematic tracking of potential risks which may appear in the future. A **feasibility study** checks whether the company has the required equipment, workforce and all the other resources. Company's also look after the **technology risk assessment** like FMEA (Failure Mode Effect Analysis) to identify early design or safety concerns specially adopting the new technologies or autonomous features (Bahrami, Bazzaz and Sajjadi, 2012). The **Project Charter** then further defines the goals, major risk and who is responsible. Finally, **Stakeholder Mapping** is performed to identify key players such as regulators, plant heads and core suppliers (Alladi and Vadari, 2011). When these tools and techniques are applied properly, they help to improve the project performance by establishing a clear and achievable roadmap and also help to reduce costly errors and increase the chances of projects success.

Case Study: Tata Nano missed the risk in initiation stage

The Tata Nano was launched in India in 2008. It was launched as the world's cheapest car aimed at Indian two-wheeler users. While the idea was great, but key risks were missed during the initiation phase (Mukherjee, 2021). Company was focused on the price factor hence they promoted their car as "cheapest car" and not as most affordable car. This created a negative perception within customers and later it hurt the sale. Tata also faced external risks like public protest over land which forced them to shift their factory which caused delays and increased cost of the product. These problems could have been avoided if they had done better stakeholder analysis and feasibility checks (Mukherjee, 2021). This example shows why early stage planning is important.

Fig.2 Tata Nano Project (Shrivastava, 2020)

Planning Stage

Although planning in any project is done to reduce uncertainties, this phase also come up with significant risks. One of the major risks is **scheduled overoptimism**. Teams often underestimates how long tasks will take, especially when integrating technologies or working with new suppliers while overestimates the benefits of the project (Kerzner, 2017). **Budget inaccuracies** are also common risks particularly when cost estimates do not fully account for supplier variability, regulatory testing costs, or logistics challenges (Hillson and Simon, 2020a). In automotive projects, where a single delay in tooling or part delivery can halt an entire production line. **Supplier and capacity risks** are crucial in this stage. If an auto manufacturer is over relied on a single supplier without validating their ability to scale, it can result in delays or quality issues. Additionally, the regulatory compliance risk is still present in this stage. If this risk is misinterpreted or ignored during planning, it may lead to serious issues (Project Management Institute, 2021).

These risks are common but it is also important to look after them in order to successful completion of the project. One key approach is **Work Breakdown Structure** (WBS) which breaks down the project into smaller and manageable tasks. This improves clarity, assigns responsibility and gives room to change the plans if required in the future, without disturbing the subsequent tasks (Norman, Brotherton and Fried, 2008). In addition to that **Gantt Charts** and **Network Diagrams** are used to visualise the defects and detect where the delays might occur in the planning stage.

In order to reduce the risk associated with the suppliers, auto company's perform supplier audits and supplier risk register. These methods examine supplier capacity, financial health and previous performance. In large projects, dual sourcing strategies are also used to avoid relying on a single supplier. Cost and time risks are managed using **PERT** (Program Evaluation and Review Technique) and **Monte Carlo Simulations** to test current plans of the project against various risk scenarios (Hendradewa, 2019). This helps prepare for delays or cost overruns before they happen.

Case Study – Impact of weak risk planning of a Spanish automotive company.

The case study shows that the company's planning process suffered from several key weaknesses in risk management. They directly impacted project performance. Risk management activities were not fully integrated into the planning phase, which led to inconsistent identification and evaluation of potential threats (Lamas et al., 2012). The risk categories used were unclear and general, which made it difficult for teams to identify specific, relevant risks. Additionally, the process lacked proper depth, omitting key techniques like qualitative and quantitative analysis as outlined in PMI guidelines. This limited the organisation's ability to fully understand the likelihood and impact of risks. Response strategies were also unclear, particularly in finding opportunities, which meant teams were often reactive rather than proactive (Lamas et al., 2012). As a result, risks were only managed after problems emerged, reducing the project's ability to prevent delays or cost overruns. This example clearly shows that without a structured and forward-looking approach to risk planning, automotive projects are more likely to face major risks.

Execution Stage

In the execution stage, project moves from planning into action. In auto manufacturing sector, this includes setting up and **running assembly lines**, installing or modifying production systems, **procuring the material** and beginning of the manufacturing. Common risks associated with the Execution stage are supply chain disruptions, equipment breakdown and quality failures. Due to the tight integration between tasks and systems, a delay or defect in one area often impacts the other (Hillson and Simon, 2020b). Also, human related risks such as **undertrained workers**, resistance to adapt the change and improper or **lack of communication within the teams** can lead to costly errors. One of the frequent issues in automotive projects is **false sense of control** where teams stop updating risk logs during execution and rely on informal communication (Thamhain, 2019).

Successful execution requires continuous risk oversight. Most of the automotive company's use tools like **Statistical Process Control** (SPC) and **digital production dashboards** to monitor the quality and process stability of the project in real life. Techniques such as **Failure Mode Effect Analysis** (FMEA) further help identify issues in the process before they occur (Kerzner, 2017). System such as **Andon Alerts**, first popularised by Toyota, allows workers to flag and stop production when any problems are found as the system provides real time alerts. The execution also heavily depends on experienced personnel and cross functioned teams. This simply means, involving a skilled engineer, machine operator who are able anticipate the technical issue before they affect the process (KASHIF, 2023). To support the strong execution and avoid risks, auto manufacturers implement clear documentation system, escalation paths to ensure the risk responses are not delayed by confusion or miscommunication.

Case Study – Ford and BMW C-HuD Project

During the execution of Ford and BMW's C-HuD (Combined Heads Up Display) project, risk management practices failed to keep pace with the real-world challenges. Although, risk register was created during planning stage, they were not actively used once production began. The risk discussions became informal, undocumented and lacked ownership (H, Tereso and R, 2021). This led to missed supplier delays and unresolved quality issues. Which further caused major rework and timeline overruns. This explains the importance of risk management at execution stage of the product. Given below image shows different risk management processes suggested by PMI with respective percentage of team members within the project.

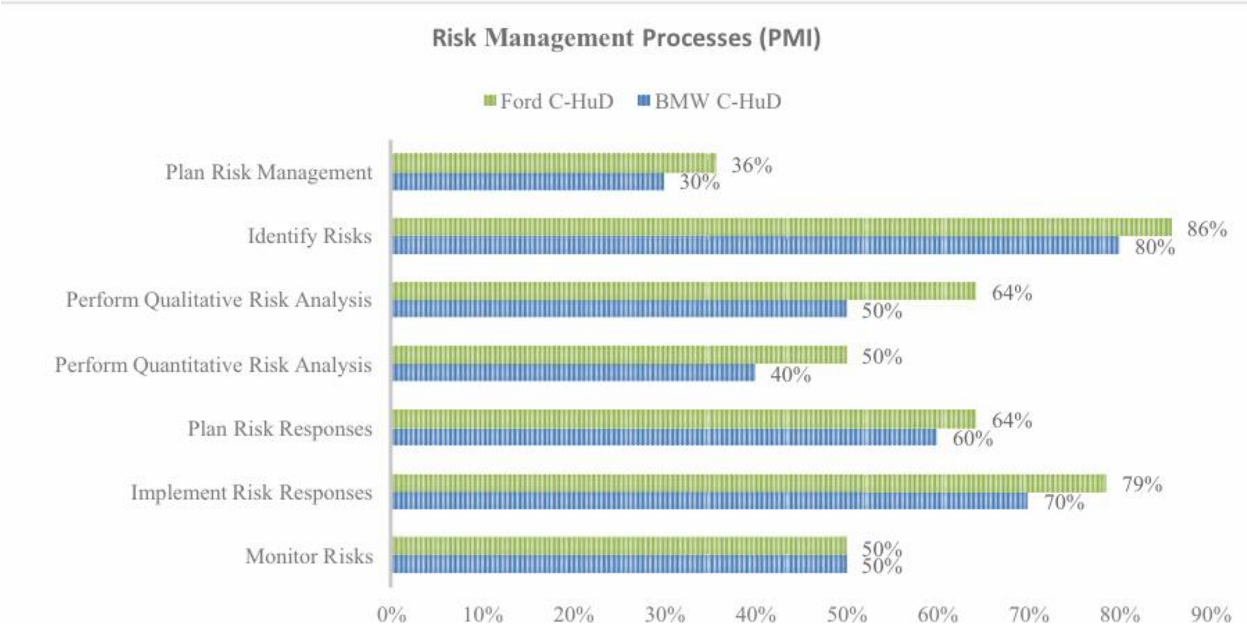

Fig. 3 Risk Management Processes Suggested by PMI (H, Tereso and R, 2021)

Monitoring and Control Stage

This stage runs alongside the project execution stage. It primarily focuses on whether the project is on the right path and managing any risks that appear. In the auto industry this stage includes monitoring production timelines, cost variances, quality performance, safety standards and supplier delivery.

A major risk at this stage for auto industry projects is **risk response failure** when the actions planned to control a risk don't work because they are not being updated as the project evolves (Bychkova, Gogua and Butina, 2019). In auto industry this can result in late stage failures like vehicle recalls, part calls or production stoppages. Another major risk included is a static checklist. If risk actions are not reviewed or adjusted according to real time performance, risk grows silently. Most auto companies use project reviews at phase gates to decide if a project should move forward or should it be reviewed. Additionally, **periodic risk assessment workshops** are conducted at key phase. In this, the old risks are reviewed and closed if they're no longer harmful while new risks are added. This makes the risk register stay relevant and reflects the current project reality. Lastly, Change Control can be performed if a risk turns into an issue (Thamhain, 2019). For instance, if a vehicle fails emission test, teams use structured change processes to decide whether to change the timeline or switch to technologies. These decisions are based on real time risk data.

Project Closure Stage

The Closure stage wraps up the project completion. It mainly involves physical handovers, financial and legal documentation, final stakeholders' approval. A proper and structured project closure makes sure that no important step or risk is remaining which can stop the completion of the project. However, there are still major risks associated with the closure phase. The very first risk is Unresolved technical or safety issue. If all problems not are captured and solved, there are chances of vehicles could go to market with some critical defects. Additionally, risks like supplier claims, pending legal checks are also key risks. Another major risk which often overlooked is poor knowledge transfer. These risks could lead to costly recalls or warranty problems (Project Management Institute, 2021). There's also a chance that contracts with suppliers are closed without proper checks which can result in disputes or financial loss.

To overcome these risks, companies use structured closure approach. This includes, technical closures, legal and financial closure. Automotive companies often conduct handover workshops at the end of the major projects to review open issues, check that all risks are either closed or reassigned and confirm that key information is documented in project database
(H, Tereso and R, 2021). According to (Wen and Qiang, 2019), there are four major areas of competence that support effective closure: contract management, stakeholder coordination, risk control, and team leadership. These all areas are highly relevant to auto sector's projects (Wen and Qiang, 2019). A good closure process ensures all the departments which include procurement, engineering, compliance and finance confirm completion of their parts. This avoids risk of unsolved issue which could cause a serious problem post launch.

Conclusion

Managing risk at every stage of the project is extremely important. Automotive industry, where projects are large, complex, and involve many people and processes. Each phase, starting from Initiation to planning, execution, monitoring and then closure brings different types of risks. If these risks are not addressed carefully then they can cause serious operational issues like product delays, increased cost of the product, reduced quality. During execution phase, it's important to check if risk plans are actually working and change them if needed. Monitoring the project through regular reviews and dashboards helps teams stay on track. In the final stage, closing the project means making sure all remaining risks are handed over or resolved, and key lessons are recorded. The case studies discussed including, Tata Nano, Ford and BMW HuD, and a Spanish automotive company, all of the case studies show serious consequences of poor risk management at different stages of project lifecycle.

By Managing risks in a structured and proactive way, by using proper tools and techniques, automotive companies can make better decision to stay on budget, and deliver safer and more reliable vehicles. Overall, risk management is not about avoiding problems, it is about building stronger and more reliable products.

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