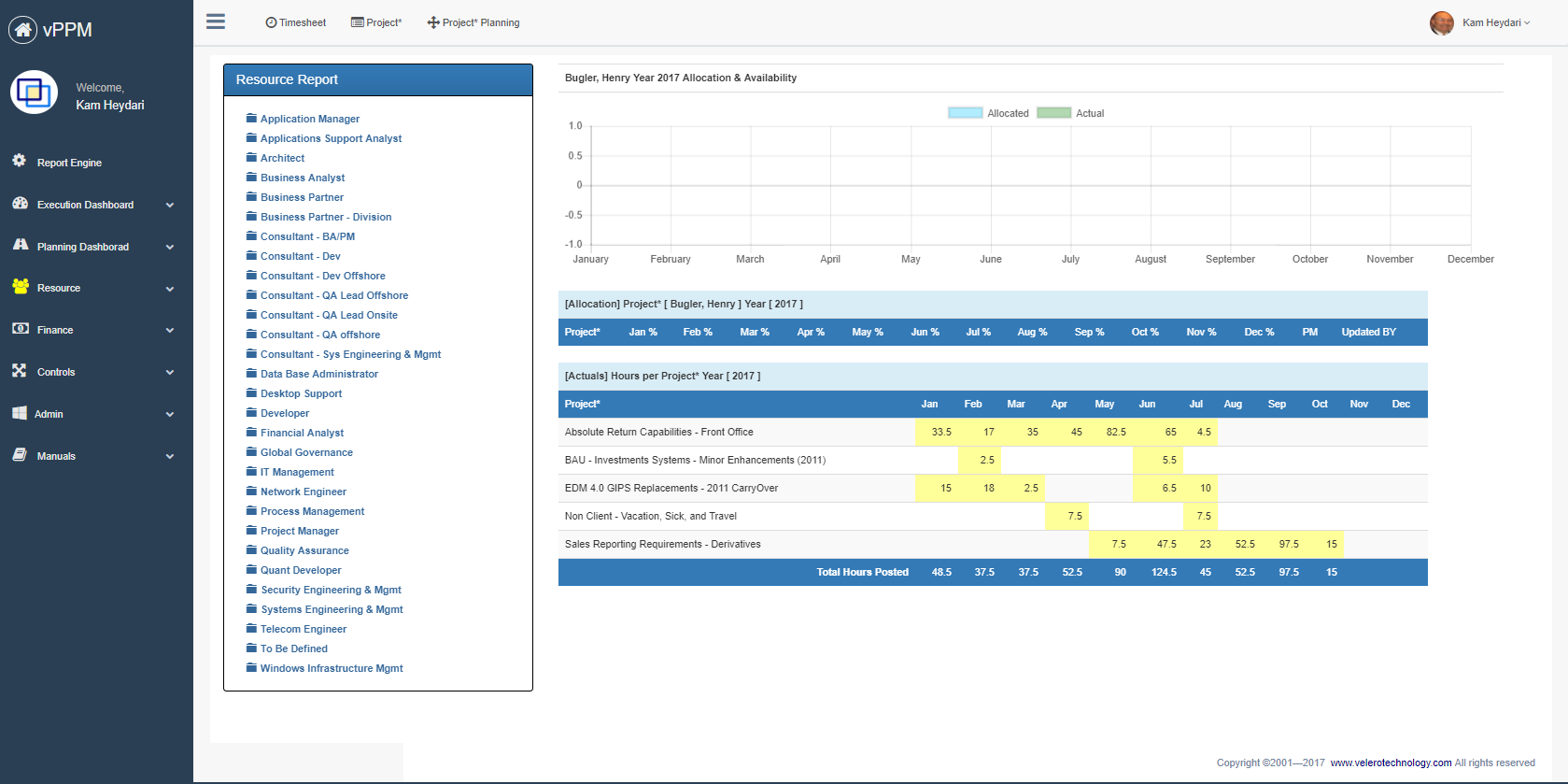
2023

Planning & Management



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**Assignment Name:**

Project Name : Uber

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# Background

In 2009, Garrett Camp and Travis Kalanick established the transportation firm Uber in San Francisco. The business, which was once known as Uber Cab, unveiled a brand-new app-based platform in 2011 that allowed customers to order rides using their cellphones. Since then, Uber has experienced fast growth and has broadened its offerings to include a variety of transportation services and technology, including carpooling, bike sharing, and self-driving vehicles. In 69 countries and over 10,000 locations now, Uber is transforming the transportation sector.

## Company Background

**Company Name:**

Initially known as Uber Taxi, the transportation firm Uber was established in 2009 by Garrett Camp and Travis Kalanick. Camp was motivated to develop a cheaper service by allowing numerous users to split the cost after renting a private automobile for New Year's Eve. As the company's first worker and CEO, Ryan Graves was given a salary of between 5% and 10% of the stock. Uber X, which enables anyone to work for Uber using their own vehicle, was introduced in 2011 along with the company's name change to Uber. Since then, Uber has grown to include a range of transportation services and technologies, including a helicopter service, carpooling, and self-driving vehicles. The business has operations in 300 cities across six continents and has gross sales of $20 billion in 2016 despite a $2.8 billion loss. The recognizable Uber logo is one of the factors that contributed to the company's success

## SWOT Analysis

|  |  |
| --- | --- |
| Strength   * Strong brand recognition and market presence in over 10,000 cities worldwide * Convenient and easy-to-use platform for both riders and drivers * Diverse range of transportation services, including ride-hailing, carpooling, and bike-sharing * Advanced technology, such as GPS tracking and in-app payments * High scalability and potential for growth and expansion * Ability to leverage big data to optimize operations and improve user experience | Weakness   * High competition in the ride-hailing industry, with competitors such as Lyft and Didi Chuxing * Vulnerability to legal and regulatory issues in various countries and cities * Dependence on a large network of independent contractors (drivers), which can lead to legal and operational issues * Concerns over safety and security, especially in relation to incidents involving drivers or riders * High costs associated with R&D and expansion efforts |
| Opportunity   * Expansion into new markets and regions, especially in emerging economies * Diversification into related industries, such as food delivery or package delivery * Development of new technologies, such as autonomous vehicles, to improve efficiency and reduce costs * Partnerships and collaborations with other companies, such as car manufacturers or public transportation providers * Increased focus on sustainability and environmental impact, through initiatives such as electric vehicles or carbon offsets | Treats   * Intense competition from existing and emerging players in the ride-hailing industry * Legal and regulatory challenges, such as restrictions or bans on ride-hailing services in certain jurisdictions * Economic downturns and fluctuations, which can affect consumer demand and driver supply * Safety and security concerns, including incidents involving drivers or riders * Disruptive technologies or business models that could challenge or replace the traditional ride-hailing model |

## Strategy Scorecard

## Reference information

1. Uber's official website: <https://www.uber.com/>
2. Uber's investor relations website: <https://investor.uber.com/home/default.aspx>
3. Uber's press room: <https://www.uber.com/newsroom/>
4. Uber's blog: <https://www.uber.com/blog/>
5. Uber's company profile on Bloomberg: <https://www.bloomberg.com/profile/company/UBER:US>
6. Uber's company profile on Yahoo Finance: <https://finance.yahoo.com/quote/UBER/>
7. Uber's company profile on Crunchbase: <https://www.crunchbase.com/organization/uber>

# Project Definition

Project Name: To develop Automatic dispatch system for Uber

## Problem

Uber is facing a problem with their current driver allocation process, which is fragmented and lacks visibility. This leads to inefficiencies, bottlenecks, and delays in providing reliable and efficient service to riders. The COVID-19 pandemic has highlighted the need for an efficient and reliable dispatch system to allocate drivers in real-time, especially in times of high demand, such as during rush hour or special events.

## Action

* The efficient allocation of drivers is crucial for the success of ride-sharing platforms like Uber. To optimize the driver allocation process, we need to consider various factors such as rider demand, traffic patterns, driver availability, and geographic location. This requires a systematic approach that involves the development of algorithms capable of analyzing real-time data to inform the dispatch system's decision-making.
* To achieve this, we can design and develop a custom software application that integrates with the Uber driver and rider apps and backend systems. This will enable real-time data processing and analysis, providing the necessary information for effective driver allocation.
* The implementation of this dispatch system will be done in a phased manner, starting with a pilot program in one market and expanding to other markets based on its success. During this phase, we will provide training and support to drivers and riders on how to use the new dispatch system to ensure a smooth transition.
* monitor and analyze the performance of the dispatch system and adjust as needed to ensure optimal driver allocation and a positive user experience. This will involve ongoing feedback mechanisms, data analysis, and decision-making processes to ensure that the dispatch system is operating efficiently.
* Overall, the successful implementation of the dispatch system will require a management approach that is focused on developing and implementing efficient and effective systems, monitoring performance, providing support and training, and continuously improving the system based on feedback and data analysis.

## Result/ Primary Project Objectives

* Improved efficiency: The new dispatch system would improve the efficiency of the driver allocation process, reducing wait times for riders and increasing the reliability of service.
* Enhanced user experience: The real-time, data-driven dispatch system would enhance the user experience on the Uber platform by providing in-app communication and routing optimization features, among others.
* Increased customer satisfaction: By reducing wait times and providing a more reliable service, the new dispatch system would increase customer satisfaction and loyalty, leading to improved business performance for Uber.
* Better business performance: The real-time, data-driven dispatch system would improve the performance of Uber's business by reducing operational costs and improving driver utilization, among other benefits.
* Continuous improvement: By continuously monitoring and analyzing the performance of the dispatch system and adjusting as needed, Uber can ensure that it remains effective and relevant in an ever-changing market, leading to sustained business success.

## Key Stakeholders

|  |  |  |
| --- | --- | --- |
| Name(title) | Department | Roles |
| Riders | Customers | Use the app to request rides and pay for them. |
| Drivers | Independent Contractors | Use the app to accept ride requests and provide transportation services to riders. |
| Company Management | Executive Management | Make strategic decisions about the company's direction and operations. |
| Developers | Technology and Engineering | Design and maintain the app's software and infrastructure. |

## Project Deliverables/Outcomes/Success Criteria

* Decrease in average wait times for riders: The new dispatch system should reduce the amount of time riders have to wait for their rides to arrive.
* Improved driver utilization and earnings: The data-driven dispatch system should optimize the allocation of drivers to reduce idle time and increase the number of rides per hour, leading to higher earnings for drivers.
* Increased rider satisfaction and loyalty: With shorter wait times and more efficient pickups, riders should be more satisfied with their Uber experience and more likely to continue using the service.
* Improved safety for riders and drivers: The dispatch system should factor in real-time traffic conditions and other safety considerations to ensure that riders and drivers are matched in a safe and efficient manner.
* Reduced operational costs for Uber: By optimizing driver utilization and reducing wait times, the dispatch system should lead to lower operational costs for Uber.
* Scalability and adaptability: The dispatch system should be scalable and adaptable to accommodate fluctuations in demand, new markets, and changing conditions, to ensure its long-term viability and effectiveness.

## Project Interdependencies and Inputs

|  |
| --- |
| Project Interdependencies and Inputs |
| Project Interdependencies   * Compatibility with multiple platforms: The new dispatch system would need to be compatible with multiple platforms, including iOS and Android, to ensure that it reaches the largest possible user base. * User interface design: The design of the new dispatch system's user interface would need to be carefully considered to ensure that it is intuitive and easy to use for both drivers and riders. * Scalability: The new dispatch system would need to be scalable to accommodate growth in the number of users and demand for rides. * Security and privacy: The new dispatch system would need to be designed with strong security and privacy measures in place to protect both user and company data.   Inputs   * User requirements: The app would need to be designed to meet the needs of both drivers and riders. This would involve gathering and analyzing data on user behavior and preferences. * Real-time data: The app would need to be able to access and process real-time data from a variety of sources, including user locations, traffic conditions, and driver availability. * Machine learning algorithms: The app would need to incorporate machine learning algorithms to analyze the real-time data and make optimal dispatch decisions. * Mobile app development tools: The app would need to be developed using mobile app development tools and frameworks, such as React Native or Flutter, to ensure compatibility with multiple platforms and efficient development. * API integration: The app would need to integrate with Uber's existing APIs to access data on driver and rider activity and to send and receive dispatch information. |

## Strategy Matrix

Define the complete strategic matrix for your project using the strategic matrix table – Identify 4 related strategies from the organization scorecard – See lecture material and PMI material.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Project Objectives | Strategies | | | |
| **Increase driver allocation efficiency** | **Improve rider experience** | **Ensure regulatory compliance** | **Maximize cost efficiency** |
| Develop predictive algorithms for driver allocation | Yes | No | No | Yes |
| Provide real-time data processing and analysis | Yes | Yes | No | Yes |
| Collaborate with regulators to ensure compliance | No | No | Yes | No |
| Implement cost-effective, scalable technology | No | Yes | No | Yes |

## Project Conditions

**To develop dispatch system for Uber**

### Assumptions

| **ID** | **Item** |
| --- | --- |
| A1 | Users and drivers will have access to mobile devices and network coverage that is sufficient to support the use of the dispatch application. |
| A2 | GPS location tracking will be accurate enough to support the dispatch application's functions. |
| A3 | There will be enough drivers available to meet demand during peak periods and to support the dispatch application's functions. |
| A4 | Users will trust Uber to protect their personal information and use it only for the purposes of providing the dispatch service. |
| A5 | Uber drivers will adopt the new dispatch application and find it valuable, leading to increased usage and revenue for Uber. |

### Project ConstrainTs

| **ID** | **Item** |
| --- | --- |
| C1 | Budget constraints: The development of the dispatch application must be completed within the allocated budget and must not exceed the available resources. |
| C2 | User experience constraints: The dispatch application must be easy to use and intuitive, with a user interface that is accessible and user-friendly to a wide range of users. |
| C3 | Network connectivity constraints: The dispatch application relies on network connectivity to function properly, and the development team must ensure that the application can function even in areas with poor network coverage. |
| C4 | Performance constraints: The dispatch application must be designed to operate efficiently and quickly, with minimal delays or downtime. |

### Risks and Issues.

|  |  |  |  |
| --- | --- | --- | --- |
| **Risk** | **Prob** | **Impact** | **Mitigation** |
| Technical issues or system downtime that impact the rider experience or driver allocation efficiency. | High | High | Regularly test and monitor the system to identify and address potential issues and maintain a dedicated technical support team to quickly address any issues that arise. Additionally, provide clear communication to riders and drivers about any issues or downtime, and offer compensation or discounts in cases of significant impact or inconvenience. |
| Poor adoption of the new dispatch system by drivers and riders | High | High | Provide thorough training and support to drivers and riders on how to use the new system and its benefits, and incentivize adoption through rewards programs or bonuses |
| Technical issues with the software or algorithms that impact performance or driver allocation efficiency | Moderate | High | Regularly test the software and algorithms in different scenarios to identify and address potential issues, and maintain a dedicated technical support team to quickly address any issues that arise |
| Non-compliance with regulatory requirements or changes in regulations that impact the dispatch system | Low | High | Collaborate closely with regulatory bodies to stay up to date on any changes or requirements, and implement measures to ensure compliance, such as regular audits and compliance training for drivers and support staff. Additionally, maintain a legal team with expertise in relevant regulations to advise on any issues or concerns. |
| Difficulty scaling the system to meet demand or expanding to new markets | Moderate | High | Develop a scalable and flexible architecture that can accommodate growth and expansion & can handle increased demand. Additionally, maintain a dedicated team to manage and support expansion efforts, and conduct market research and analysis to identify and address any unique challenges or requirements in new markets. |

## Scope

To develop dispatch system for Uber

### In scope

| **ID** | **Type** | **Definition** |
| --- | --- | --- |
| IS1 | Technology | The system should be capable of tracking the real-time location of drivers, passengers, and their destinations. |
| IS2 | Technology | Users in the US and territories can request a ride by providing their pickup and drop-off locations. |
| IS3 | Technology | The system will assign a driver to the ride based on the driver's location and availability. |
| IS4 | Technology | The system will track the location of the driver and rider and provide updates on the status of the ride |
| IS5 | Technology | The system will accept payment from the rider using a credit card or PayPal. |
| IS5 | Customer | Riders and drivers in the US and territories can rate each other after a ride. |
| IS6 | Customer | Users in the US and territories can contact support for assistance with the system. |

### Out of Scope

| **ID** | **Item** |
| --- | --- |
| OS1 | The system will not include any data related to human resources, such as employee salaries, benefits, or performance reviews. |
| OS2 | The system will not include any data related to accounting, such as financial statements, invoices, or receipts. |
| OS3 | The system will not include any data related to legal matters, such as contracts, lawsuits, or regulatory compliance. |
| OS5 | The system will not include any functionality for administrative tasks. This includes tasks such as scheduling meetings, managing travel, and processing expense reports. |
| OS4 | The system will not include any data related to marketing, such as customer surveys, market research, or advertising campaigns. |

## Work Breakdown Structure.

## Resource and Cost Estimate

To develop Automatic dispatch system for Uber

### Cost

|  |  |  |
| --- | --- | --- |
| Cost Description | Amount | Note |
| ****Hardware**** | $100,000 | The system will require a server, a database, and a load balancer. |
| ****Software**** | $100,000 | The system will require a software license for the operating system, the database, and the application server. |
| ****Cloud services**** | $200,000 | The system will require cloud services for storage, computing, and networking. |
| ****Professional services**** | $20,000 | The system will require professional services for development, testing, and deployment. |
| ****Maintenance and support**** | $50,000 | The system will require maintenance and support for the life of the system. |
| Legal and Compliance | $25,000 | Includes costs for legal and compliance activities, such as data privacy and security |
| Total | $315,000 | Estimated Cost |

### Resource Requirements

|  |  |
| --- | --- |
| Resource Type | Note |
| Project Manager | Responsible for overall project management and coordination. |
| Business Analyst | Responsible for gathering and analyzing business requirements. |
| Application Architect | Responsible for designing the overall architecture of the application. |
| System Architect | Responsible for designing the overall system architecture. |
| Data Engineer | Responsible for designing and managing the data architecture. |
| Application Engineer | Responsible for developing and implementing the application code. |
| Test Engineer | Responsible for testing the application and ensuring quality. |
| Security Engineer | Responsible for designing and implementing security measures. |
| Legal | Responsible for ensuring compliance with legal requirements. |

## Roles & Responsibility Matrix

To develop dispatch system for Uber

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Project Activity** | **Roles** | | | | | | | |
| **Stakeholder** | **PM** | **Data Engineer** | **Business Analyst** | **Application Engineer** | **System Architect** | **Security Engineer** | **Test Engineer** |
| Budgeting |  | R |  |  | C |  |  |  |
| Requirements | C |  | A |  |  | I |  |  |
| System Design |  |  | I | R | A | A |  |  |
| Architecture |  |  | I | C | R | R | R |  |
| App Design |  |  |  | C | A |  | R |  |
| Project Planning |  | A |  | C |  |  | R | I |
| Project Comm |  | A |  | C |  |  | R |  |
| Training |  |  | I | C | A |  | C | I |
| DB Management |  |  | R | C | I | C | I | I |
| Testing |  |  |  |  |  |  |  | A |
| Sign-off | A | I |  | I |  |  |  |  |
| …….. |  |  |  |  |  |  |  |  |

|  |  |
| --- | --- |
| **Responsible** | People or stakeholders who are the "doers" of the work. They must complete the task or objective or make the decision. Several people can be jointly *Responsible*. |
| **Accountable** | Person or stakeholder who is the "owner" of the work. He or she must sign off or approve when the task, objective, or decision is complete. This person must make sure that responsibilities are assigned in the matrix for all related activities. ***Success requires that there is only one person Accountable.*** |
| **Consulted** | People or stakeholders who need to give input before the work can be done and signed off on. These people are "in the loop" and active participants. |
| **Informed** | People or stakeholders who need to be kept "in the picture." They need updates on progress or decisions, but do not need to be formally consulted, nor do they contribute directly to the task or decision. |

## Project Structure

Define your project structure considering your project size and complexity.

## Resource requirement Matrix

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Resource/Month | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Business Analyst | 2 | 2 |  |  |  |  |  |  |  |  |  | 2 |
| Data Analyst |  | 2 | 2 | 2 |  |  |  |  |  | 2 | 2 | 2 |
| Application Engineer |  |  |  | 3 | 3 | 3 | 3 | 1.5 | 1.5 |  |  |  |
| Data Engineer |  |  |  |  |  | 2 | 2 | 2 | 1.5 |  |  |  |
| Project Manager | 1 | 1 |  |  |  |  |  |  | 1 | 1 | 1 | 1 |
| Application Architect |  |  | 2 | 2 |  |  |  |  |  |  | 2 |  |
| System Architect |  |  |  | 2 |  |  |  |  |  |  | 2 |  |
| Test Engineer |  |  |  |  |  |  |  |  |  |  | 2 | 2 |
| Security Engineer | 2 |  |  |  |  |  |  |  |  |  | 2 | 2 |
| Legal | 1 | 1 |  |  |  |  |  |  |  |  | 1 | 1 |

Table, calendar

Description automatically generated with medium confidence

## Project Schedule

Graphical user interface

Description automatically generated with medium confidence

A computer screen capture

Description automatically generated with medium confidence