

SUBLIME METRICS

Realize. Visualize. Actualize

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Executive Summary:

A Business Performance Measurement tool has grown in use and has attracted firms as they find important requirements being fulfilled using this tool. Firms use these tools for enhancing the quality they produce. They do this by keeping their employees focused, observing and analyzing performance of their business processes and accordingly planning strategies. This further helps them to be more accurate and perfect for surviving the high competition in their market. Visualization helps them to measure and identify areas that will influence the success of a business or figure out the areas in the business requiring more attention.

What is often missing from this evaluation, however, is the part about making sure that the employee is doing the right thing. After all, you may have a very hard-working and dedicated team member, but if he or she is not working on things that advance the organization's purpose, what is the point?

This is where key performance indicators come into play, and they apply both at the organizational and individual levels. At an organizational level, a **Key Performance Indicator (KPI)** is a **quantifiable** metric that reflects how well an organization is achieving its stated goals and objectives.

In this report, we will introduce a customized tool for measuring business performance, drilled down to each employee. We will show how individualistic targets relate to form business targets. This is done to achieve alignment with organizational goals and objectives.

This tool will aggregate data from multiple sources, analyze it and present it in a form of visualizations and dashboards. Business, Departments, Employees will have their Key Performance Indicators visualized in the dashboard for inspecting their performance and appropriate decision making.



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Project Description:

1. Background and Motivation

Organizations today record a lot of information through different data sources, many of this information is crucial to business success. In order to get the insights, senior management needs to look into various reports, data sources and other sources to evaluate overall business performance.

The purpose of this project is to provide quick information on the Key Performance Indicators of a Business, to evaluate performance and take key decision.

Key Performance Indicators

Key Performance Indicators are based on metrics which are used to determine how you are performing against your business objectives. A KPI must have the ability to provide ideas for necessary strategies which may impact your business and indicates significant changes in the business processes.

For example, Revenue per click, Customer retention rate, Revenue Growth Rate and more.

2. Project Goal

The purpose of this project is to provide quick and required information through the use of Key Performance Indicators and meaningful visualization, to evaluate performance and take key decisions accordingly.

3. Project Requirements

a. Functional Requirements

- The system shall contain an interactive overall business performance measurement dashboard.
- The system shall contain drilled down performance measurement dashboards at department & employee level.
- The system shall contain the functionality of managing all dashboards through an admin login.

b. Data Requirements

- The system shall be able to aggregate data from different sources.
- The data should be stored as KPIs in a warehouse for instant access.

c. Constraints

- Some of the data for the metrics is not usually recorded.
- It is challenging to quantify qualitative information.

d. Objectives

- Measure overall business performance
- Measure department level performance
- Measure performance and score employees
- Visualize the scores and stats obtained

Technical Design:

1. Possible Solutions and Design Alternatives

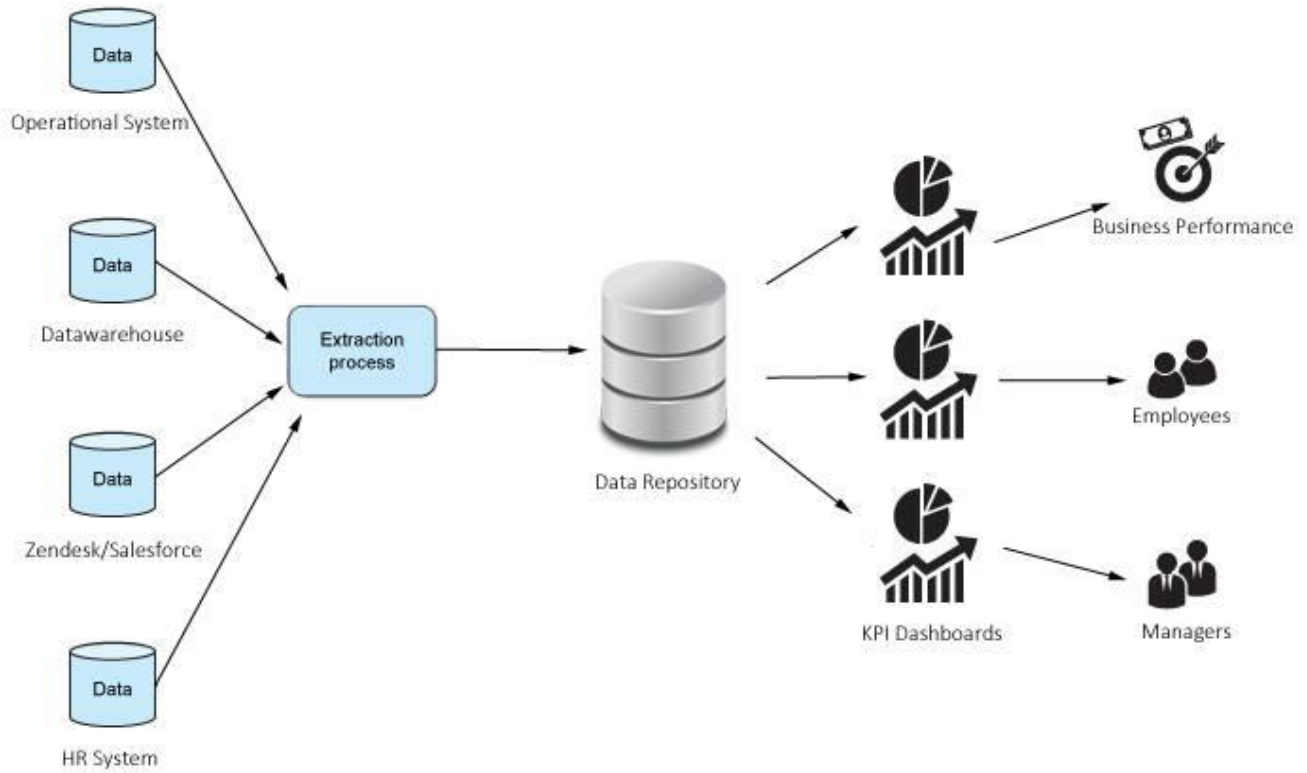
It will be a web based application, built in the .NET environment. Aggregated data will be stored in a warehouse, these metrics will be called upon in each dashboard where and when required.

2. System Level Overview

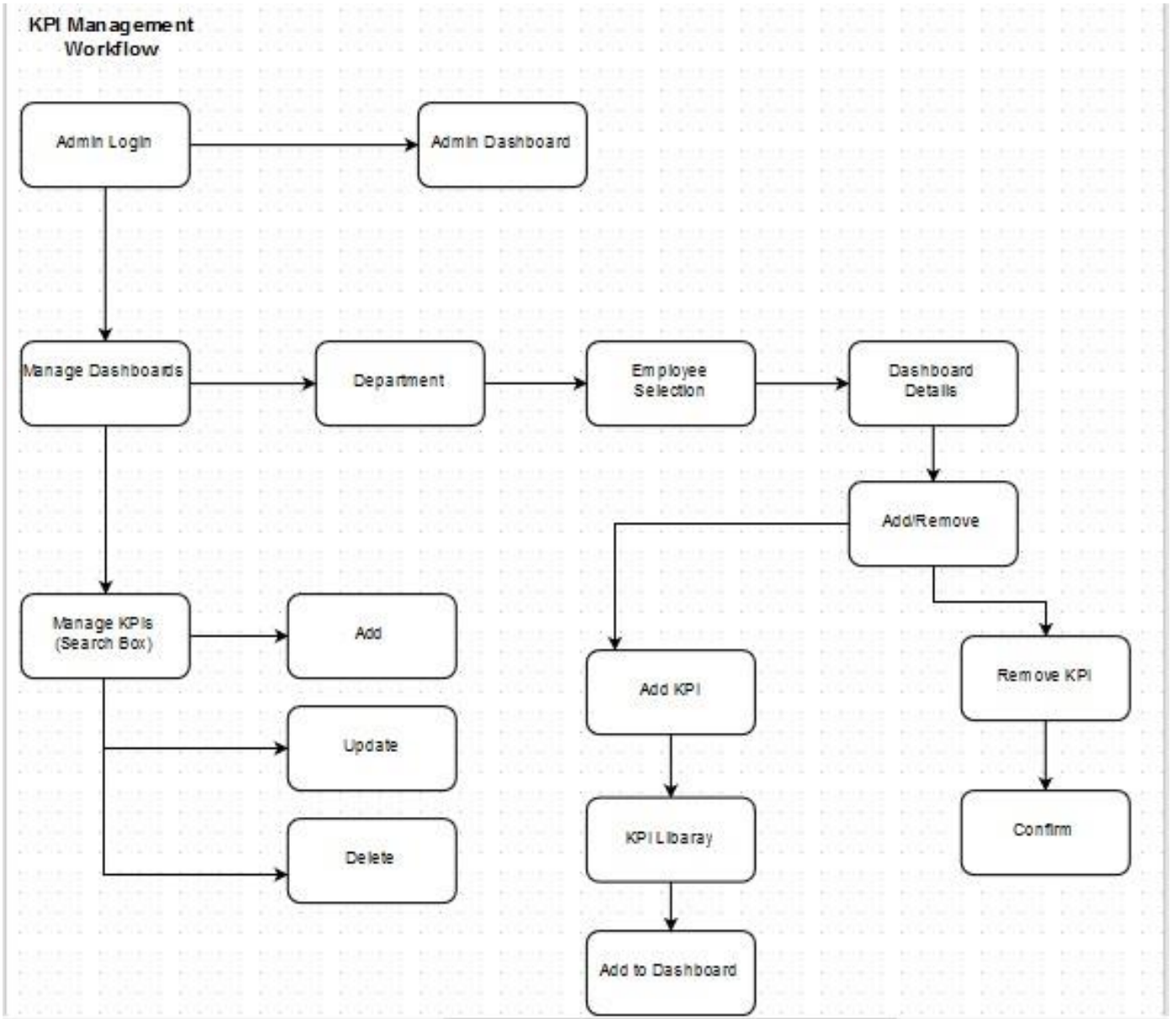
The system level overview along with the work flow of the whole project is illustrated in the diagram below.

- a. Data will be sourced out from different systems into Excel format. Instead of creating a new functionality of data sources management, we are using the Excel file format because it supports variety of data sources.
- b. These excel files will be fed into an extraction process where the data shall be staged. The staging environment typically will be relational database system. Data cleaning & transformations will be done here. All metrics will be calculated here and stored.
- c. The data repository will contain pre-calculated facts & reports that will be selected into different dashboards. The facts are pre-calculated in the stage for faster access in the application.
- d. Admin will create dashboards.
 - a. Select a KPI from repository
 - b. Select the type of visualization Bar Chart, Gauges etc.
 - c. Select a position in the dashboard and save it.
 - d. Publish the dashboard once complete.

System Level Overview



Dashboard and KPI Management Flow (For User: Admin)



3. Module Level Descriptions

a. Modules

Our system works mainly on the following modules:

- **Employee level performance measurement**

The employees will be scored based on certain performance indicators chosen by the organization. The performance measurement done for a particular employee will be different based on the designation and job requirements and tasks assigned to the employee. The managers and senior personnel will be able to view individual employee dashboard and the employees themselves. However, employees are restricted to only see their respective dashboards and scores.

This allows the seniors and managers to evaluate how their team is performing, how well they would serve ahead, are they skilled enough or needs mentoring. The firmness of an organization is largely based on the performance of the employees.

- **Department level performance measurement**

Department level performance measurement is done based on the required performance indicators set to evaluate a particular department. It differs from department to department based on the functionalities required to be performed by the department. The department level performance dashboard can be viewed by managers of the respective department and the seniors.

It is necessary to identify which department is performing up to the mark and which department is lagging behind. For the departments to work to standard is really important, as disturbance from one department may affect other departments. Departments are supposed to be on the same pace as inter-depart collaboration is necessary.

- **Business level performance measurement**

After measuring at department level, there are certain metrics which constitutes to evaluate the performance at an overall business level.

This visualization will be visible to senior executives only.

To know where the organization stands in the market and amongst the competitors is an important information. This helps in identifying for possible decision making and long and short term prospective planning. It allows to move forward from the traditional methods of evaluation and use a more effective method using visualizations.

If you are not able to visualize and make proper use of the data, you will not be able to set targets and see where you stand in the future. Every decision mainly depends on actionable data.

- **Visualization for the above three divisions**

Visualization and using the dashboard to do that is an important technique for having your performance at one place. It helps in putting together the scattered data at one place and display it in a meaningful way. Psychologically, you get more meaning from organized and effectively visualized data than one which is scattered at different places.

- **KPI Management**

This module involves a very important task to be conducted by the Admin. Admin will be able to add and remove visualizations from the dashboards. Not currently applied, but admin will also have the rights to add, remove and update the KPIs in the repository that may or may not be used for a particular term.

Changes made here will affect how the dashboard appears for other users. This will be done under the approval and requests of the executives.

Work Plan:**1. Feasibility Assessment**

This tool can be used at any small-mid size level organization. Owing to the operational profit generated once this tool has been setup, it can get positive response in the market.

One of the major concern of the tool is to input data from different sources, which currently is being done manually through data integration tools. However once the data is in a single format, queries can be formulated representing each metric. Financial requirements for this tool is minimal or no cost.

a. Skill and Resources

- Data Interpretation skills
- Data Warehousing Techniques
- .NET Programming
- Proficient Database Querying
- Strong data Visualization techniques
- Performance Measurement Knowledge

b. Risk Assessment**Potential Risks**

- Unavailability of quantifiable data.
- Rapidly changing trends in the market may affect the accuracy of performance measurement

Future Plans:

1. Development Plan

- a. Data Preparation /Validation (In Progress)
- b. Frontend Development
- c. Application Testing
- d. Deployment
- e. Maintenance & Support

2. Add-Ons

- a. Data Analytics for predicting trends
- b. Self-service BI Reporting functionality
- c. Review based employee analysis and scoring

3. Business Plan

- a. After successfully implementing the tool, we plan to find potential companies interested in using our product, who want to increase their performance and do effective strategy building using a business performance tool.