

TrafikSol® DPR Progressive Web App

FUNCTIONAL REQUIREMENT SPECIFICATION

Table of Contents

1. Acronyms and Glossary.....	2
2. Business Requirements.....	3
2.1. Overview	3
2.2. User Stories.....	3
3. Reports.....	10
3.1. Report name and Purpose.....	10
4. Appendix A.....	10

1. Acronyms and Glossary

A list of definitions, acronyms and abbreviations used in document, are given below.

Term	Definition
DPR	Daily Progress Report
ATMS	Advance Traffic Management System
US #	User Story
UOM	Unit of Measurement

2. Business Requirements

2.1.Overview

This document details out the requirements related to the TrafikSol® ATMS site daily progress report to client. The site engineers/ coordinators on daily basis need to update the TrafikSol management and Client management about the progress of work done on the site. This has to be shared with the client to ensure the transparency of the work and provide them with the regular updates of the work done on the site.

TrafikSol has its own DPR template in which TrafikSol site coordinators are currently sending the DPR to clients. This process is however manual and sometimes the timing of sending the report lead to missing out of report to client.

TrafikSol look forward to create a progressive web app that would allow site engineers/ site coordinators to create the DPR and share it with the management in single click. TrafikSol also wants to create an alert system on situations where the DPR is not filled on time, or not share with client or management.

DPR approval/ rejection systems would also be part of this progressive web app.

There are various integration touch points which are discussed latter in the subsequent section.

2.2.User Stories

Frontend User Stories

1. Login Page: The user authentication on login page.

S. No	I Need	Because	So That
1.	A login screen to input user name and password	The web application user requires authentication to login	Unauthenticated user can be avoided to use the DPR web application. Authenticated users should be allowed to enter and file the DPR based on their progress

2. Site selection: The user should be able to select the site from the list of sites available to fill and submit the DPR

S. No	I Need	Because	So That
2.	A toast list of all the projects for which the user is assigned on DPR application dashboard	A site coordinator can be associated with multiple sites	The authenticated user can select the site name for which he wants to fill the DPR
3.	On selecting the site name, Client logo along with site name and details should be visible on the App	It would confirm the site engineer/ site coordinator about the client details	The correct DPR is filled for correct client. Also it would provide a better look and feel for showcasing it to client

3. DPR Look and feel: The DPR should have 4 sections of today's activity, tomorrow's activity, expenses and Total activity.

S. No	I Need	Because	So That
4.	The web app should have four different sections as: <ul style="list-style-type: none"> • Today's Activity • Tomorrow's Activity • Expense Details • Total Activities 	These are the header required in a DPR format	It would allow the site engineer to fill in details of progress report easily and categorically.

4. DPR Header: The DPR header should have the client name, logo, date and site engineers name with TrafikSol logo.

S. No	I Need	Because	So That
5.	User name to appear on top of DPR below Site name	It will show on report who has submitted the DPR	The site engineer would be in the ownership of any details that is filled in the progress report.
6.	Date to be mentioned on top of the report	It's a daily progress report and it should have date mentioned	The reviewer can detect and check any DPR from the history based on the dates.

5. Today's activity section: The today activity section should have work, location, UOM, quantity and RFI number as input. It should show the predefined activity list that a site engineer can select and the fill in the details.

S. No	I Need	Because	So That
7.	In the today's activity section, it should have activity details, location, UOM, Quantity and RFI Number.	It should help the site engineer to fill in details for each header	The DPR is filled in proper detailing. (Please refer to Attached excel in Appendix A for reference).
8.	The activity details should be predefined and preapproved list of task to be selected from a dropdown list	The list of task are almost predefined	The site engineer can easily select the task category from the drop down list and fill the DPR accordingly.
9.	The activity list on selection should have a text box for providing the description of the task done	It will allow site engineer to provide details of task	The site engineer can fill in the details and remarks of the task done.

10.	The location should have a list of all the chainage from the selected site (US #3) and user should be able to select the location from the drop down	It will allow user to provide details of the location on which the particular task is done	The site engineer can provide the exact locations of the completed activities
11.	The UOM should be auto filled based on the category of dropdown selected for activity (US #8)	The UOM do not change for a particular category and it's easy to manage the inventory if it is entered in a standard fashion	The site engineer can easily and accurately provide the details of material used in an activity.
12.	The quantity field should be numeric	The quantity of equipment used will always be in numbers	The site engineer can provide the quantity details as per the UOM (US #11)
13.	The RFI number should be a text field	The site engineer need to fill the RFI number for the equipment used	The inventory should have details of which RFI is used.

6. Tomorrow's activity section: This would be similar to today's activity section but will fill in the details for tomorrow's activity.

S. No	I Need	Because	So That
14.	The Tomorrow's activity section would also have the similar field as in today's activity section (US #7 – 13)	US #7-13	US #7-13

7. Expense section: The expense section would have the list of expenses on daily basis with TrafikSol's and Vendor's manpower along with vehicle running status. The Expense can be categorially predefined categories then the user enters the details of expenses. The manpower details are for providing the list of people on site o basis of designation. The vehicle running status provide the details of daily vehicle run with the fuel consumptions with daily and monthly total.

S. No	I Need	Because	So That
15.	The third section is expense section, it should have expense details, rate, quantity, amount and remarks section	It should help the site engineer to fill in details for each header	The DPR is filled in proper detailing. (Please refer to Attached excel in Appendix A for reference).
16.	The expense details should be categorical and should be predefined in fixed category	The generic category for showing expenses is a better format and helps in filing the ledger in better way	The expenses on the site are managed and reported in better way.

17.	The expense category selected from dropdown should have a details text box to allow user to provide details of the expenses	The general categorisation is only for major categories but the expenses at site need more details for accounts department	The user can enter the details of the expenses made during the day at the site.
18.	The daily expense should be totalled in the total for daily expense section	The report should have total of complete expenses of the day	The reader/client representative can just look at the extra expenses of the day on site.
19.	The total expense of the month should also be available on the month expense section	The report should have total of complete monthly expenditure on the site	The reader/client representative can just look at the extra expenses of the month on site.
20.	The section should also display if any advance is taken for the site.	The report should show if any advance is provided.	The admin can have report of how much expenses can be taken care off.
21.	The following subsections should be available under the expense section: <ul style="list-style-type: none"> • TrafikSol's Manpower on site • Vendor Manpower on site • Vehicle Running details 	Having details of manpower and vehicle running status are part of site expenses	The admin/ supervisor can have record of the manpower availability on site and vehicle running status.
22.	TrafikSol Manpower details should have Name, designation, Attendance, and remarks column	This will allow to provide details of manpower available on the site based on the experience level	The admin can create report of the site resources.
23.	Vendor Manpower details should have Name, designation, Attendance, and remarks column	This will allow to provide details of manpower available on the site based on the experience level	The admin can create report of the site resources.
24.	Vehicle running details should have input box for entering the details and then UOM for KM the vehicle run in a day and remarks column	The driver at site has to manage the logs of the daily running of site vehicle along with how much fuel is consumed	The admin can create report of the vehicle usage.

25.	The vehicle running details should calculate the total run in a day	The driver at site has to manage the logs of the daily running of site vehicle along with how much fuel is consumed	The admin can create report of the vehicle usage.
26.	The vehicle running details should calculate the total run in a month	The driver at site has to manage the logs of the monthly running of site vehicle along with how much fuel is consumed	The admin can create report of the vehicle usage.
27.	The vehicle running details should also have entry for the refuelling of vehicles in the day	The driver at site has to manage the logs of the daily fuel consumption	The admin can create report of the vehicle usage.
28.	The vehicle running details should also have entry for the refuelling of vehicles in the month	The driver at site has to manage the logs of the monthly fuel consumption	The admin can create report of the vehicle usage.

8. Total Activity Section: the total activity section would have equipment list, UOM, Quantity and list of finished activities. The equipment section also has the section divided into two for foundation and installations.

S. No	I Need	Because	So That
29.	The forth section in the web app for DPR should be total activities	The record of total activity has to be logged in DPR	The admin/ supervisor has the list of completed activities on the site
30.	The total activity section should have equipment, UOM, Quantity and finished activity fields	The details of total completed activity need to be reported based on the count of equipment	The admin/ supervisor has the list of completed activities on the site
31.	The list of equipment would be predefined list defined at the backend by the site admin	The equipment for the site do not change without management decision	The site engineer can report the completion status for each and every equipment on the site
32.	The equipment list will be divided in two parts – Foundation and Installation	The equipment completion can be reported in two sections – foundation and installations	The site engineer can report the completion status for each and every equipment on the site
33.	If the number of finished activity increases in the total activity list the quantity of total activity equipment decrease	The management of inventory of total activity is required	The site engineer can report the completion status for each and every equipment on the site

	automatically and hence maintain the inventory details		
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9. Submit: The user will have to submit the DPR using the submit button after filling the details. On Submit the user's managerial hierarchy would get an email notification of submission of DPR. If the user forgets to submit the DPR latest by 10 PM daily, the user and his managerial hierarchy would get a notification alert for non-submission of DPR.

S. No	I Need	Because	So That
34	A submit button on bottom of screen	The DPR needs to be submitted by end of the day	The DPR goes to user's managerial hierarchy for approval
35	An email notification to all managerial hierarchy of user on submission of DPR	The managerial hierarchy needs to get notified for any DPR submission	The manager can forward it to client.
36	An email notification to all managerial hierarchy of user and user if the user fails to submit the DPR latest by 10 PM everyday	The managerial hierarchy needs to get notified for any non-submission of DPR.	The manager can take actions on repeated offence.
37	An email notification for user if his DPR is rejected by his manager	The manager have the authority to reject the DPR is it is not filed correctly	The user refill the DPR again and submit it back.

10. Photographic Proofs: Daily, weekly and monthly photographs of activities need to be added for various regular activities.

S. No	I Need	Because	So That
34	A photograph upload mechanism to few activities that occurs daily as a required parameter	We need to ensure that the regular activities are happening in a correct way	The site engineers would be more careful and ensure that the regular activities happens on time
35	A photograph upload mechanism to few activities that occurs weekly as a required parameter	We need to ensure that the regular activities are happening in a correct way	The site engineers would be more careful and ensure that the regular activities happens on time
36	A photograph upload mechanism to few activities that occurs weekly as a required parameter	We need to ensure that the regular activities are happening in a correct way	The site engineers would be more careful and ensure that the regular activities happens on time
37	A photograph upload mechanism to few activities that occurs	We need to ensure that the regular activities are happening in a correct way	The site engineers would be more careful and ensure that the regular activities happens on time

	as an event and need photograph as a required parameter		
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Backend User Stories:

1. Admin Panel: The admin login with user authentication. The admin panel should have a dashboard to list all the DPR's created and downloadable in PDF/ excel format. The admin can approve or reject any DPR for any site. On rejection the site engineer will get an email notification and would have to refill and submit it again.

S. No	I Need	Because	So That
1	A login screen to input user name and password	The web application user requires authentication to login	Unauthenticated user can be avoided to use the DPR web application. Authenticated users should be allowed to enter and file the DPR based on their progress
2	An admin panel dashboard	The list of DPR's can be seen on the dashboard	An admin can list off all the DPR's with help of filters
3	An approve or reject button in front of DPR list	The admin needs to approve or reject the DPR	The correct DPR can be shared to client.
4	An email notification to site engineer on rejection of DPR	The site engineer need to know if the DPR is rejected	The site engineer can refill the DPR again.

2. Admin panel will have filters based on site name, and site engineer's name, and client name and date of DPR. The admin can filter and list DPR's based on the available filters.

S. No	I Need	Because	So That
5	The dashboard should have filters for <ul style="list-style-type: none"> • Date • Site Name • Client Name • Site Engineer's Name 	An admin needs to filter the DPR's based on various filters	An admin can get the specific DPR's for a client, date or site engineer's name

3. The admin side will have section to add/ edit/ delete site details, add/ edit/ delete users (site engineers and vendor team members), Upload/ change/ remove client's logo, Add/ edit/ delete expense category list, add/ edit/ delete equipment list, add/ edit/ delete UOM list.

S. No	I Need	Because	So That
6	The admin section should have an add/ edit/ delete section for site details	An admin can add/ edit/ delete site details	The client site details are once added and can be added/edited/ deleted anytime a new site is added in TrafikSol's kitty or any change in the site details
7	The admin section should have an add/ edit/ delete section for users (site	An admin can add/ edit/ delete users (site engineers/ Vendor team members)	The users (site engineers/ Vendor team members) are once added and can be added/edited/ deleted anytime a new site is added in TrafikSol's kitty or any change in the site details

	engineers/ Vendor team members)		
8	The admin section should have an Upload/ change/ remove client's logo	An admin can Upload/ change/ remove client's logo	The client logo are once uploaded and can be change/ removed anytime a new site is added in TrafikSol's kitty or any change in the site details
9	The admin section should have an add/ edit/ delete section for expense category list	An admin can add/ edit/ delete expense category list	The expense category list are once added and can be added/edited/ deleted anytime a new expense category is in the site details
10	The admin section should have an add/ edit/ delete section for equipment list	An admin can add/ edit/ delete equipment list	The client site equipment list are once added and can be added/edited/ deleted anytime a new equipment list is added in the site details
11	The admin section should have an add/ edit/ delete section for UOM list	An admin can add/ edit/ delete UOM list	The UOM list are once added and can be added/edited/ deleted anytime a new equipment list is added in the site details

3. Reports

3.1. Report name and Purpose

Dashboard Reports:

Report Name	Available OOB (Y/N)	Description

4. Appendix A

The following attached is the sample DPR for reference.



Sample DPR.xlsx