1. INTRODUCTION
   1. PURPOSE

Our intention is to create a software that allows the users to easily manage their meetings and commitments, by providing them some useful features such as the best means of transport to reach the appointment place, the quickest route available to be punctual and so on.

Hence, more in depth, our goal consists in realizing a product which automatically computes and accounts for travel time between appointments to make sure that the user is not late for them.

* 1. SCOPE

Tired of setting up appointment reminders, opening maps and personally estimating the best route and mean of transport by considering road congestions, forecast and other factors?

With Travlendar+ having appointments has never been so easy.

Travlendar+ is your personal assistant, it provides you everything you need in a single app, analysing all the aspects for you and giving you solutions according to your preferences.

Even if we are very confident about the success of our idea, initially, Travlendar+ will have a restricted domain, indeed we will experiment it only in the Italian region of Lombardy.

In order to provide the most complete assistance, Travlender+ will suggest different paths and a wide range of transports such as bike, even shared, your car or a shared one, taxi, bus, and also…your feet!

* 1. Definitions, Acronyms, Abbreviations
  2. Revision History
  3. Reference Documents
  4. Document Structure

The RASD Document is organized following a strict schema.

In the first introductory section, we give a short description both of the goals and of the environment which our app has to deal with. Moreover, we explain some notes useful to understand and read the whole paper.

The following part consists in an overall description of the software, presenting all the functions more in depth and showing the possible interactions between the user, the system and the world itself.

The third part concerns the analysis of the requirements, from the technological ones, through the functional, up to design details and constraints.

Finally, we express the requirements through the Alloy model, which allows to define the interactions, the functions and the constraints that characterize Travlendar+ using a formal language.

The document ends with a short note about the effort spent in producing it and at last you can find also useful references.

1. OVERALL DESCRIPTION
   1. Product Perspective
   2. Product Functions

* Signup and Login: Travlendar+ users must signup themselves the first time they intend to register a meeting, further usages of the app will require a login to access all its functionalities.
* Create Meeting: This is the most important function of the app, it allows to generate an event related to an appointment. It requires the user to define all the details such as date, time, location, starting point, preferences etc.
* Select Preferences: An important feature of Travlendar+ consists in allowing the user to filter out specific routes depending on some constraints about the travel, or to set break-dedicated time slots.
* Manage Warnings: In case the user seems to be in late, the app generates a warning to alert him. Hence, he can deactivate it or postpone the appointment, in this case the app automatically notifies the others involved in the meeting via e-mail.
  1. User characteristics

Users interested in dealing with Travlendar+ services must have an e-mail address, primarily due to register and authenticate themselves.

In addition, app usage requires them to have an active internet connection, in order to retrieve up to date information about traffic, forecast, travel means and also the global time.

Finally, to ensure an efficient navigation system, it is important that users have access to GPS services on their device, to use the satellites instead of the web data in case of lags or connection failures.

* 1. Assumptions, dependencies and constraints
     1. Assumptions
* Signup and Login

Considering that the information provided talk generally about users without any reference to a possible signup or login, **we assume that the registration is mandatory to create the first meeting, then every access to the app requires the login to manage each event saved.**

* Meeting management

According to the requirements, we want to develop a system which allows the user to set his preferences with regards to the travel. **Moreover, we decide that he also can cancel or anticipate/postpose an event, assuming a previous agreement among who is involved in the meeting. It goes without saying that an appointment can also be modified, this means that an user can change either the starting location or the arrival location, the hour, the date and the other details selected during the creation of the meeting, always making the same assumption among the appointment participants.**

* Warnings

Our assumptions about the warning are the following: **when the syste°çvb- the app allows the user to modify the related event that could be cancelled or delayed. In case of the user postposes the meeting, if he provided the email addresses of the other people involved in the appointment, Travlendar+ automatically will notify them that a change occurs.**

* Routes

Concerning the routes, we decided to manage them in this way.

**The system generates different routes according to the user preferences, it will be the user itself to decide which itinerary fits better with him among the alternatives.**

* + 1. Dependencies
    2. Constraints