# Our Solution

## Addressing your Business Needs

The overall mission of the app is to help people feel (and be) more secure knowing that a friend is aware of the itinerary he/she is following when alone.

The app provides a way:

* To share the planned itinerary
* To share continuously the user’s GPS coordinates, so the angel always know the user’s actual position
* To trigger some automatic alerts if, for instance, the user ‘s phone stays in the same position too long or strays from the planned path too much
* A chat-like interface both for fun and to provide insights in case of changes along the itinerary.
* An emergency alert feature, to trigger an alarm immediately with a gesture. This feature is optional and can be configured by the user
* An auto-alert feature to send automatic alarm if the user does NOT reset a countdown. This feature also is optional

## Technical Solution

Here is graphical representation of Technical Solution Overview.



### Enterprise Application Layer

* BackMeUp Core

BackMeUp core functionality will be developed using Node.js runtime environment. Core functionality and core logic will be developed using JavaScript to deploy and run within Node.js environment.

Node.js standard modules (like express, http, fs, passport etc.) will be used to develop different service based functionality.

* Service Manager

Service Manager Component will be developed to expose application functionality as REST service, Data will be exchanged in JSON format. REST service end point will be protected using implementation of passport and cors module of node.js

* Notification Sender

Notification Sender component will be used to communicate with Google/Apple Push Notification Service (APNS/GCM). Node.js module node-gcm and node-apns will be used for smooth communication with Cloud Based Push Messaging Services

* Utility Manager

Utility manager is a custom module to provide utility functionality to BackMeUp core. This will provide centralised database connection features, application constant files, security configurations etc.

* Database Manager

Database manager is an application functional module to support database connectivity with Mongo Database and at the same time this will deliver the Mongo Database document management using node.js module like mongoose.

* Socket.io

Socket.IO enables real-time bidirectional event-based communication.  
It works with different platforms and focusing equally on reliability and speed. This will be used to develop chat application between end users from respective device.

* Cloud based push notification layer

This is standard messaging service provided by Google (GCM: Google Cloud Messaging) and Apple (APNS: Apple push notification Service) to implement push notification layer. Notification sender will send message with registered mobile key to GCM / APNS. And cloud system will be responsible to deliver the message to end user device.

* GPS (Global Positioning System)

Global positioning system will be used to track mobile position with co-ordinates. And that co-ordinate will be used to display the device position on device using google map.