

**Project Design Phase-II**  
**Solution Requirements (Functional & Non-functional)**

Date	03 October 2022
Team ID	PNT2022TMID41261
Project Name	Project – signs with smart connectivity for better road safety
Maximum Marks	4 Marks

**Functional Requirements:**

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	LCD Display	An LCD display minimum size of 80" x 100"(inches- Nominal size to current static board)
FR-2	Weather API	Update the weather through the Openweathermap
FR-3	Cloud connection	An proper network & cloud connection to the IOT device should provided from IBM cloud to obtain the information we designed.
FR-4	Cloud services	Requires some extra cloud services such as IBM Watson cloud platform ,nodeRed and an Web UI.
FR-5	Standard operators	This system should have the operators to perform this whole system maintenance
FR-6	IOT	An IOT Device should adaptive to change the default sign if any information received from the cloud.

**Non-functional Requirements:**

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	<b>Usability</b>	The signs boards should be easier to implement & empathizable.
NFR-2	<b>Security</b>	All this functions are related to Roads & transport department and so standard procedures are required.
NFR-3	<b>Reliability</b>	Signs are updated by only realtime & less probability of technical errors.
NFR-4	<b>Performance</b>	Start-up time should be very low (<10 sec)& easily recoverable after abrupt interruption
NFR-5	<b>Availability</b>	Capable of display information for the whole time
NFR-6	<b>Scalability</b>	Able to implement all over the place & must suitable to all kind of road condition