



TIRUPATI SMART CITY

TIRUPATI SMART CITY CORPORATION LIMITED (TSCCL)

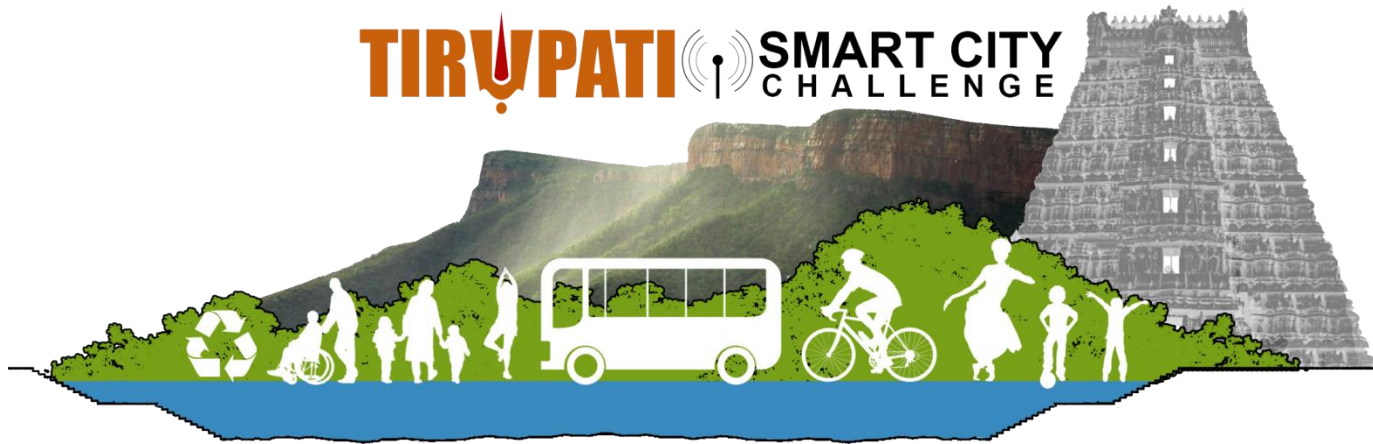
“E – Health Solutions in 4 MCT Schools”

Annexure 1



VISION STATEMENT – Tirupati Smart City

A 21st century **pilgrimage city** that promotes
arts, innovation & sustainable growth



SUSTAINABILITY CHART

VISION, STRATEGIC BLUEPRINT, GOALS & PROJECTS

sustainability chart for tirupati



CITIZEN ENGAGEMENT

Public Transportation
Traffic Congestion

Spiritual Center Safety on Streets

Education hub

Clean & Green Tirupati

Value Based Learning

Safety on Streets

Pilgrim friendly city

Women Empowerment



SWOT ANALYSIS

Mixed Land-Use traffic congestion

Slum Re-development Initiatives unexplored tourism potential

Natural Heritage prone to flooding

Education hub peripheral growth

Religious Center weak public transport system

Best Heritage City for 2012 degrading air quality

Art, Dance, Literature & Culinary Institutions

Health & Educational Hub absence of quality pedestrian environment

Social Sector Stewardship pressure on infrastructure due to high floating population

Model Pilgrim City

Renewable Resources



CITY PROFILE

Total Road Network 225 kms

200 CCTV cameras at 39 locations

NMT share 33% SWM services 60%

Coverage of Sewrage Network 37.6%

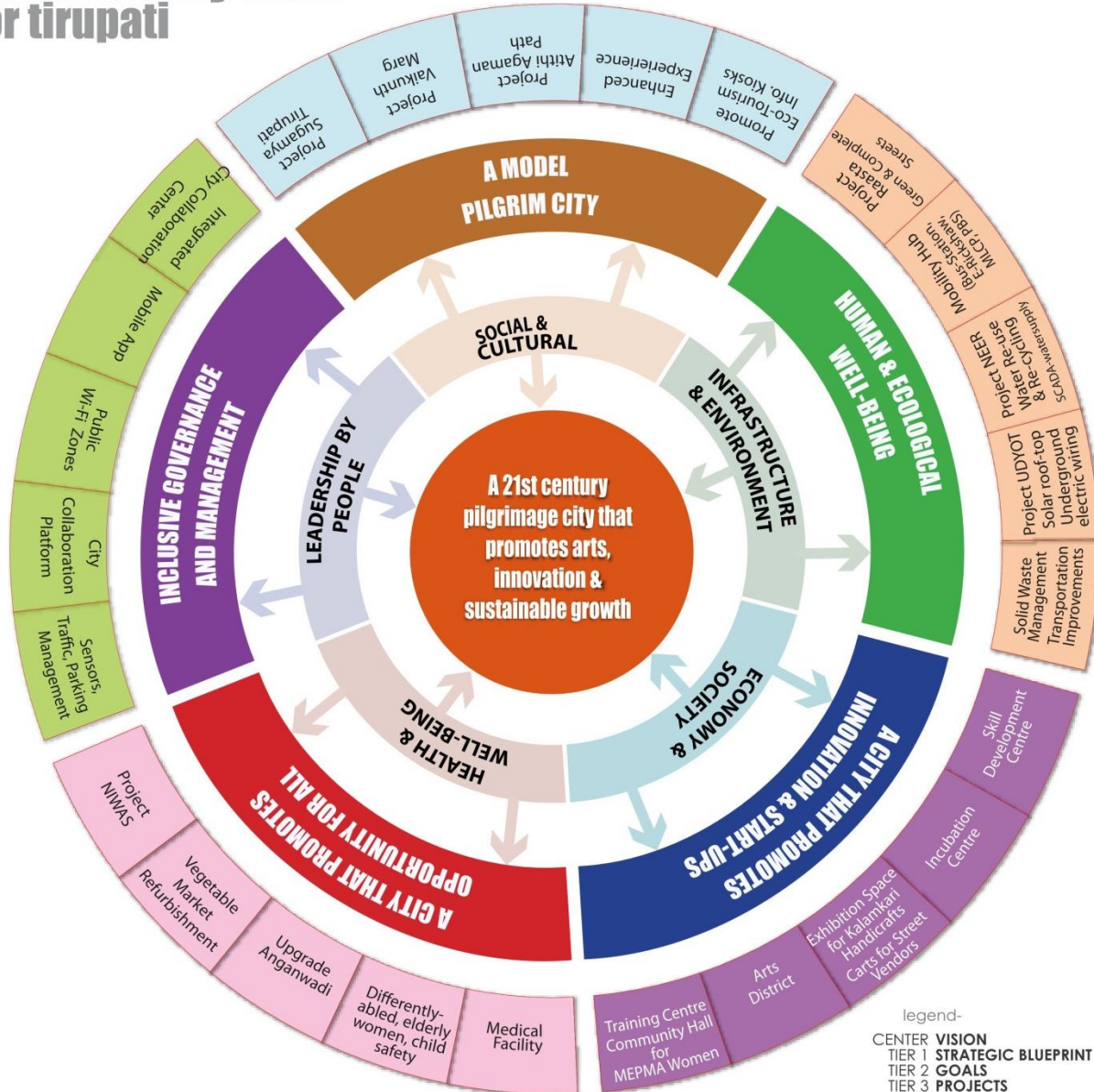
21 lakh pilgrims per month

475 buses carry 40,000 pilgrims daily to Tirumala

Coverage of Water Supply Connections 70.87%

100% coverage of power supply

Road Network with Footpaths 13%



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CENTER VISION
TIER 1 STRATEGIC BLUEPRINT
TIER 2 GOALS
TIER 3 PROJECTS

Location of 4 Schools in Context of MCT Boundary



ABD Boundary

01

Municipal Corporation
Primary School,
Singalagunta

02

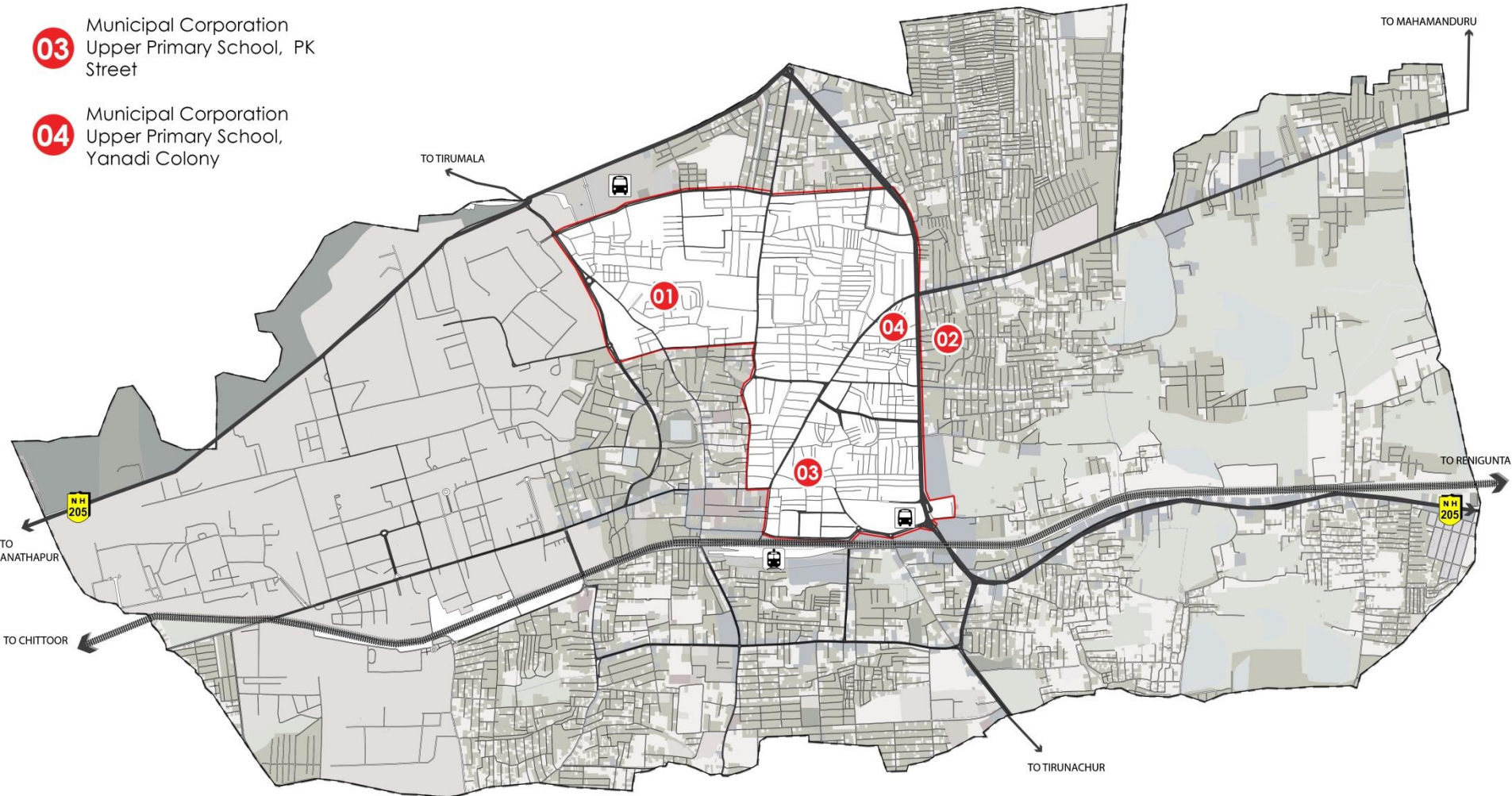
Municipal Corporation
Upper Primary School, S.G.
Colony

03

Municipal Corporation
Upper Primary School, PK
Street

04

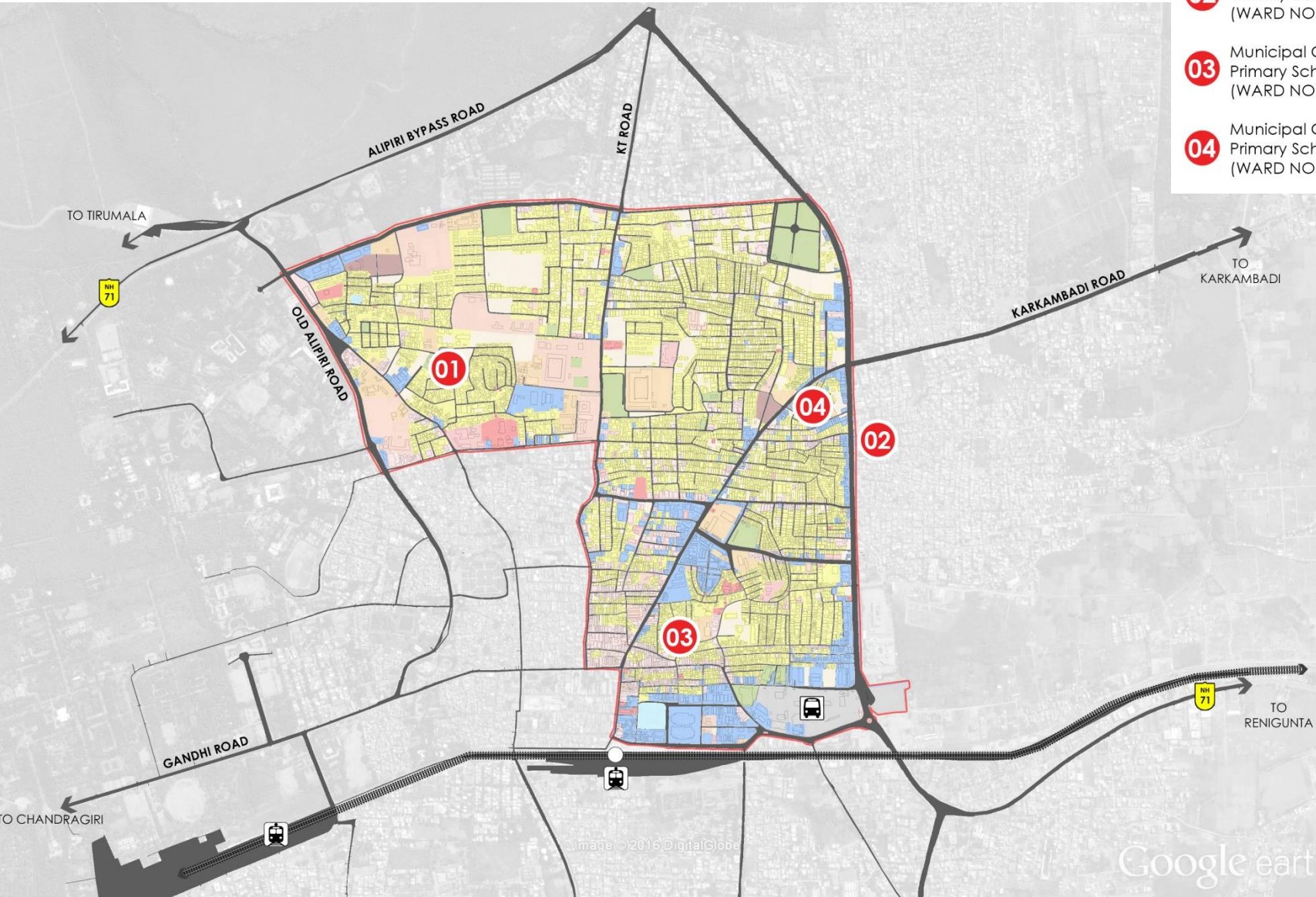
Municipal Corporation
Upper Primary School,
Yanadi Colony



Location of 4 Schools in Context of ABD Boundary

SCHOOLS

- 01** Municipal Corporation Primary School, Singalagunta (WARD NO. 38)
- 02** Municipal Corporation Upper Primary School, S.G. Colony (WARD NO. 09)
- 03** Municipal Corporation Upper Primary School, PK Street (WARD NO. 26)
- 04** Municipal Corporation Upper Primary School, Yanadi Colony (WARD NO. 33)



Enrollment Data in 4 Schools

School	Type	CLASS-1		CLASS-2		CLASS-3		CLASS-4		CLASS-5		CLASS-6		CLASS-7		CLASS-8		
		Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Total
MCPS,SINGALAGUNTA	PS	6	9	10	8	11	7	19	13	20	23	0	0	0	0	0	0	126
MCUPS,S.G.COLONY	UPS	10	17	16	16	9	15	19	19	22	19	21	11	11	22	5	7	239
MCUPS,P.K.STREET	UPS	11	12	12	10	16	14	10	16	13	23	10	15	16	13	13	7	211
MCUPS,YANADI COLONY	UPS	6	9	10	12	8	2	6	10	7	7	4	6	3	4	7	7	108
	TOTAL																	684

Vision & Objectives for E-Health Solution



ANNEXURE 2

Bill of Quantities & General Specifications

Bill of Quantities

Total Number of schools under E-Health solution = 4

Below lists the Bill of quantities per school

S.No.	Component	Feature	Specificaton	Qty
1	Health Assessment	Manpower for Operation & Management. The bidder shall submit CVs of the experts illustrating relevant e-Health solution experience (Minimum 3 similar project experience) along with the Bid.	Supervisor	1
			Implementation Managers	1
			Quality Assurance expert	1
		Assessment Set Up Kit	Set Up	
			Labcoats	10
			Badges	10
			Hygenic Table Cloth	5
			Medical Equipment	
			Standard Drop Down Height Scale	1
			Digital Weighing Machine	1
			Snellen's Chart	1
			C Chart	1
			ENT & Ophthamalogy Equipment	2
			Stethoscope	2
			Thermomoter	5
			Consumables	
			Hand Sanitisers - 500ml	4
			Latex Gloves	100
		Facemask	100	
Assessment Sheets	Bar Coded	2 Sheets / Student		
	Scan Enabled			
3	Cloud Telephony System	Call Recording Call Logging Address Book Maintenance Call History		3 Years License For Cloud Telephony
4	Technical Support System			Backend Data Storage Electronic Health Record For Students Online Health Dashboard for Schools Online Health Dashboard for Government Body Unique Identification Numbers Third Party Integration & Public Health System Linkage
5	Health Experts For Tele Consultations. The bidder shall submit CVs of the experts illustrating relevant experience (Minimum 3 similar project experience) along with the Bid.			2 Resources Trained In Medical Conditions & English & Telugu Language
6	Capacity Building of Teacher The bidder shall submit CVs of the experts illustrating relevant experience (Minimum 3 similar project experience) along with the Bid.	Master Trainer		7 Day Training and Monitoring during Stage 1, 2 day Refresher After 3 months and 2 day refresher after 9 months 1
7	Information Education Communication Material	10 Themes Based On World Health Organisation and relevant health issues	Teachers Handout Project Card Video Posters	100 2000 10 200

General Specifications

DESIGN STANDARDS

Data Privacy Standards - Protected Health Information

- Protected health information (PHI) is any information about health status, provision of health care that can be linked to a specific individual.
- The Bidder shall be responsible for managing and ensuring the privacy of this information.
- Specific data protection modalities would need to be worked out by the bidder in consultation with TSCCL, schools and other relevant stakeholders
- Data Protection must conform to Government of India Privacy standards
- For all reporting purposes to third parties, data shall be anonymized as per the Govt. standards.
- The data must not leave the geographical boundary of India
- All personally identifiable information must be encrypted on transmission, storage, backup and retrieval
- Any data privacy breach (data leakage) must be notified immediately to the concerned authorities
- Access to personally identifiable information shall be secure and must be accessible only to Authorized personnel. The list of authorized personnel with access to personally identifiable information is always known
- Detailed audit logs will be available to track and trace access to personally identifiable information
- All personally identifiable data must be erased completely upon completion of its life cycle
- No personally identifiable data should be allowed to be downloadable without appropriate protection mechanism built-in (password locked files etc.) and consent.
- No biometric, audio, video, photographic personal data shall be downloadable from the application for offline use or into a storage system or server or backup device.
- In addition to the above, the bidder shall be required to comply with any laws or guidelines pertaining to Information Security, Data Protection, Cloud usage regulation and Data Privacy as may be promulgated or issued by the Authority or by any competent authority under the Government of India or the Government of Andhra Pradesh which may be applicable to this project including but not limited to those issued under the Information Technology Act, 2005

Content Incorporation into E-Health solution

- Healthcare experts appointed by the bidder shall be developing relevant training content and information, Education & Communication (IEC) content for use of Doctors and school staff on periodic bases.
- The bidder shall be responsible for conversion of such content into suitable formats for use in the E-Health solution. Such as, Video Format, Printed Format, Age Curated, WHO specific, CBSE specific, following Govt programs and guidelines.

- The bidder shall be responsible for the content for the following topics (It is mandatory to include these topics but bidder should add more depending upon the medical needs prevalent in the region): vision , healthy lungs , balanced diet , nutrition , awareness of sugar , hygiene and sanitation , immunisation , physical activity and as advised by MOH) and its timely dissemination to the schools and users.

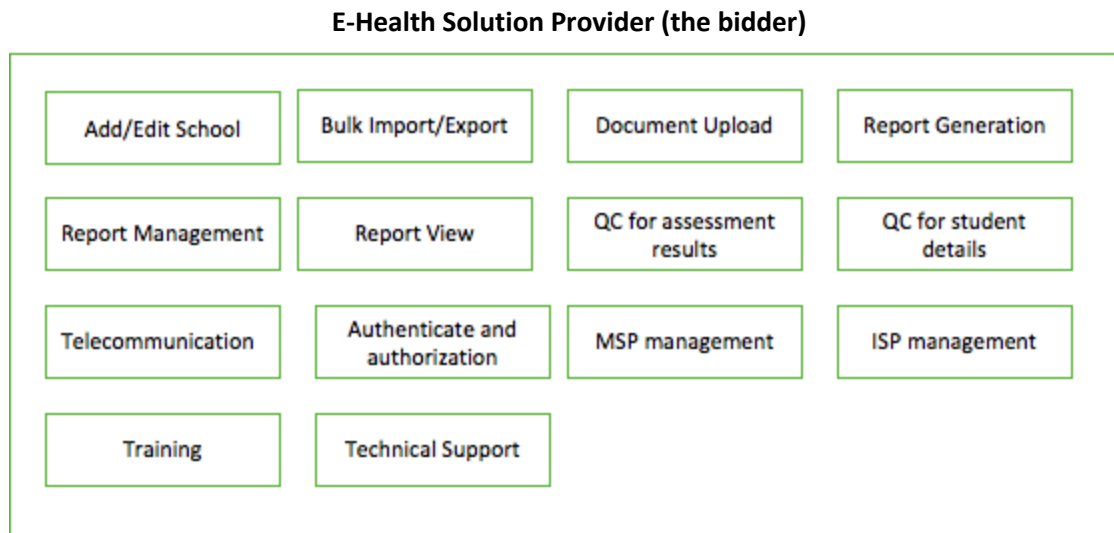
Detail functional and Technical Requirement Specifications

This section describes in detail the functional and technical requirements to be met by the bidder in the overall E-Health solution

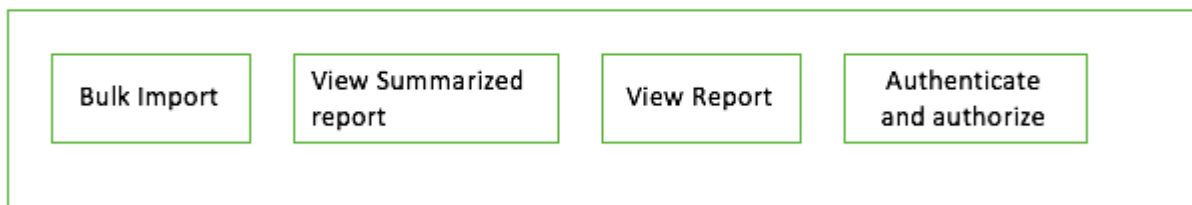
Functional Requirement Specifications

The below diagram depicts the indicative key stakeholders and the modules of E-Health solution system proposed for their usage. The bidder is required to study these requirements in detail and develop them further into software & E-Health solution requirement specifications.

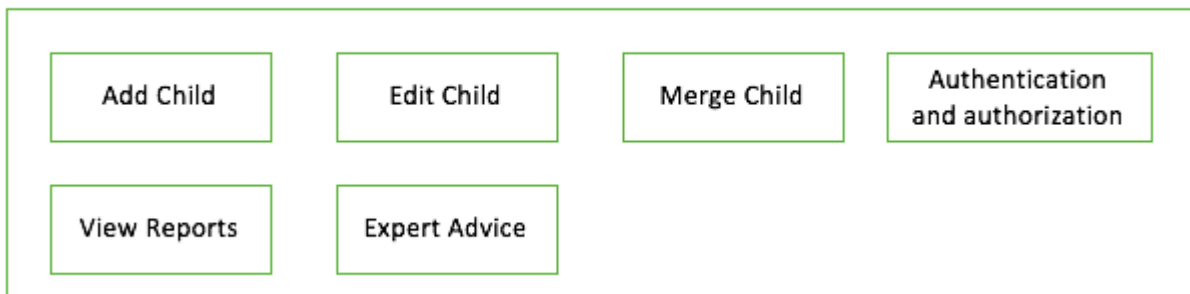
Table 1. E-Health functional Architecture



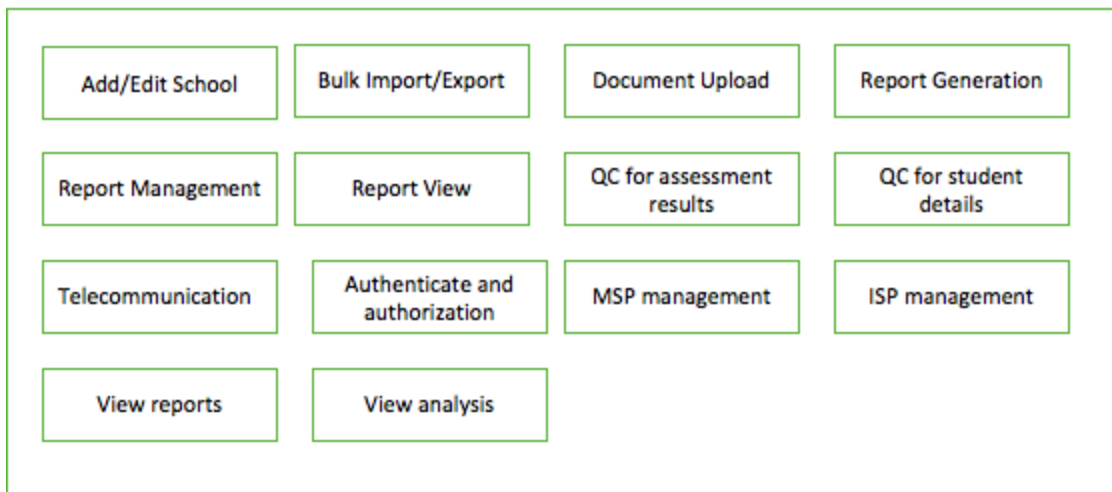
Schools



Parents



District Officials



Technical Requirements

- Security Requirements
 - The E-Health solution shall be configurable to prevent corruption or loss of data already accepted into the solution in the event of a solution failure
 - The E-Health solution shall support protection of confidentiality of all Protected Health Information (PHI) delivered over the Internet or other known open networks via encryption using triple-DES (3DES) or the Advanced Encryption Standard (AES) and an open protocol such as Transport Layer Security (TLS), Secure Sockets Layer (SSL), Internet Protocol Security (IPsec), XML encryptions, or Secure/Multipurpose Internet Mail Extensions(S/MIME) or their successors.
 - The E-Health solution, when storing PHI on any device shall support use of standards based encrypted format using 3DES, AES or their successors.
 - The E-Health solution, prior to access to any PHI, shall display a configurable warning or login banner (e.g. "The solution should only be accessed by authorized users").

- In the event that a solution does not support pre-login capabilities, the solution shall display the banner immediately following authorization.
- The E-Health solution shall ensure that the inbound and outbound data stream on third party data from external data sources shall be secured
- The E-Health solution shall record any change to the registration record in a log with details like name of the user making the changes, timestamp of transaction, etc.
- The E-Health solution shall maintain a log of all user activities related to access - view and printing of the validation of the registration validation list. The log, among other details, shall include the user id, access date and time, and type of accesses made. The log shall be linked to the registration record and available for access for the authorized users
- The E-Health solution shall ensure that registration data is accepted only when submitted by a human and not by an automated program
- The E-Health solution shall provide secure and automatic access to external web services
- The E-Health solution shall provide applications to rely on location information for location awareness

○ **Web Dashboard Requirement**

- Shall have no legal implications of using 3rd party / Open Source software
- All images used in the web application must not have any legal / copyright issues
- Shall be deployed in an appropriate DMZ infrastructure with an internet facing server providing the ability for mobile devices to connect and sync data
- Shall have the ability to detect and defeat Flooding / DoS (Denial of Service) attacks on the portal. Shall be tested with appropriate tools and report submitted for verification as part of User Acceptance Testing
- Shall have appropriate Authentication, Authorization and User management features
- Shall have no screen which is more than 3 clicks deeper in nested site map of the web dashboard
- Shall have ability to backup and restore all data with daily incremental backups supporting data recovery up until past 24 hours at least
- No screen shall take more than 10 seconds to load at stipulated loads. Shall be tested via appropriate tools and report submitted
- Shall support English for data entry and display
- Shall be able to store, search and retrieve data for of past 3 years and archive data for past 10 years
- Web application must support IE, Chrome and Firefox or equivalent browsers
- Web application should be responsive and support form factor for desktop, tablets and mobile phones.
- No password / sensitive information shall be transmitted / stored in clear text anywhere in the communication pathway OR in database

- User interface must have a defined style guide which shall be adhered to during the implementation
- User interface must follow a uniform pattern with a common style sheet across pages
- Shall be built using tools and libraries and protocols that are de facto standards in industry
- Shall be secure at all layers – UI, Application and data
- Choice of technologies should allow quick development, build and deploy cycles
- Shall not require any special plug-ins and privileges on the browser to access the application