

MAHINDRA CONSULTING ENGINEERS LTD. (MACE)

• Background

MACE offers consulting solutions in line with the sustainable development goals and function as a knowledge hub to development agencies and Multilateral Financial Institution (MFIs) operating across sectors and geographies offering inclusive – innovative – integrated and sustainable solutions.

The company offers knowledge based solutions in the field of sanitation; water and wastewater; sustainable urbanisation; sustainable communities; rural development and infrastructure; sustainable agribusiness; agri and food infrastructure; industrial infrastructure; eco industrial clusters; area development; social infrastructure; sustainability studies; urban infrastructure; institutional studies; renewable energy; marine infrastructure; tourism related projects etc.

Right from its inception in 1995 the organization identified sustainable sanitation solution as one of its growth engine. The company focused attention on providing sustainable environmental solution including sanitation; treatment of domestic wastewater; industrial water and wastewater; recycling and reuse; solid waste management; urban and rural water supply; and other sub sectors of sanitation. The company has rendered services in the field of the sanitation to several Governments, public sector, corporate and industrial association over the period in India, neighbouring countries and Africa.

Health, Environment and Education are the three main pillars of the Mahindra Group CSR initiatives. But to support the Hon'ble Prime Minister's Clean India campaign through the '*Swachh Bharat Swachh Vidyalaya programme (SBSV)*', which is the national campaign driving '*Clean India: Clean Schools*', the Mahindra Group committed to SBSV also falls under the mandatory 2 percent CSR rule under Companies Act. MACE, on behalf of the Mahindra Group was entrusted with the responsibility of accomplishing this challenging task of building and maintaining 4597 toilets primarily for girls in government schools, spread over 1171 locations, 11 states and 104 districts in India.

Education especially for girl child and public health has been central to the Mahindra Group CSR activities for many years now. In fact, the Mahindra Group's SBSV initiative through MACE is a perfect blend of all these three elements. Good sanitation promotes prevention of health hazards and diseases – eliminating open defecation ensures non-polluting environment – awareness creation and training on personal hygiene. Further the Mahindra Group CSR programme focuses on girl's education and thus building & maintenance of toilets in girls' school augers well with the Mahindra Group overall CSR policy.

The Mahindra Group SBSV initiative is an integrated programme which comprises of intervention in areas of physical infrastructure, hygiene awareness and capacity building, upkeep and maintenance.

• Location, Date

Andhra Pradesh; Assam; Bihar; Chhattisgarh; Gujarat; Haryana; Jharkhand; Karnataka; Meghalaya; Rajasthan; and Telangana; 2014

- **Areas**

Rural

- **Stage/Scale**

Fully Implemented

- **Objective of the assignment**

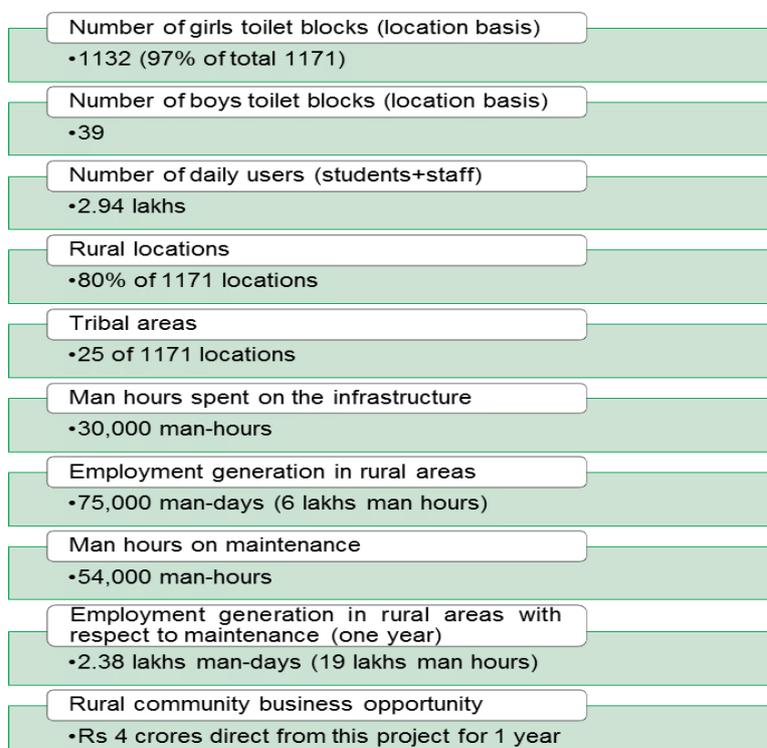
- To address the sanitation and development needs of girl children, adolescent children, the differently abled and children in rural parts of India
- To ensure attendance of children going to schools
- To ensure good health, clean schools, to prevent water borne and sanitation borne diseases and MHM not just by providing infrastructure but also by empowering them by training them and creating awareness; and
- To address the specific needs of girl children especially adolescent menstrual requirement

- **What was done**

The project was implemented in two phases. Physical infrastructure of building toilets were done in first phase and second phase included awareness, training, capacity building, daily upkeep and maintenance of the constructed toilets.

- **Impact**

4597 toilets primarily for girls in government schools; across 11 states; 104 districts; 404 admin blocks; and 1171 locations which benefitted 2.94 Lakhs (students + staff)



• Challenges and Issues

The various risks and challenges involved in this initiative happened to be the foundation of the innovative tools and process devised during the project cycle.

Key parameter	Challenges and risk faced	Solutions evolved in the Mahindra Group SBSV intervention
Operating model	Mind-set to work in most neglected sector	<ul style="list-style-type: none"> Created social inclusion context in the mind for every thought and action and use of such insight in strategic decision making
	Sensitive areas and restricted operations	<ul style="list-style-type: none"> Execution of the project in certain socially sensitive areas and during restricted working hours Working in extreme climates and sudden natural calamities; and Extremely hot climates of Andhra Pradesh and Rajasthan and flooding in few regions of Andhra Pradesh did pose as a big hurdle
Scalability	Location spread	<ul style="list-style-type: none"> Toilets were required in the hardest to reach locations - facing problems of insurgency and left-wing extremism, remote mountainous terrain, densely crowded slums, forests and jungles
	Site specific issues	<ul style="list-style-type: none"> Each location had its own peculiarities and challenges in terms of accessibility, design, engineering & technical challenges, execution, etc.; and Site specific layout of toilet blocks as per available space and shape
	Accessibility	<ul style="list-style-type: none"> Lack of access for vehicles; and The materials had to be transported manually covering large distances by foot, especially in the North-Eastern region
Social impact	Customer acceptance and concept promotion	<ul style="list-style-type: none"> Erased fear of acceptance to new ideas by demonstrating success stories under similar environment Developed several tools and training program for capacity building and hygiene awareness; and Full understanding of explicitly mentioned need and unstated desires of clients at every touch point
Financial sustainability / operational efficiency	Security	<ul style="list-style-type: none"> Most of the schools are not provided with physical security barriers posing lack of safety threats
	Enhanced efficiency	<ul style="list-style-type: none"> Effective planning and resource utilization
	Working in toilet and sanitation without barriers	<ul style="list-style-type: none"> Created open and supportive environment for boundary less and seamless working of team
Innovation/ unique selling proposition	Agility with process discipline	<ul style="list-style-type: none"> In spite of highly time bound project, development of workable innovative solutions was considered mandatory. Hence innovation in process was conceived; and Managed different kinds of situation in most remote part of India with proactive approach and timely

		delivery with quality adhering to transparent, ethical and process discipline
	Resource optimization	<ul style="list-style-type: none"> • Identification of local resource and execution with desired quality
	Habit of toilet usage	<ul style="list-style-type: none"> • The habit of using toilet should be inculcated right from a young age - thus the need to invest in school-based access and adoption of improved sanitation and hygiene

• Innovation

Innovative tools or approach	Source / inspiration of innovation
Innovation in operating model	<ul style="list-style-type: none"> • The various risks and challenges involved in this initiative happened to be the foundation of the innovative tools and process devised during the project cycle • Issues of gender based needs; physiological conditions; topography; socio-political factors and cultural background of the beneficiary which was overlooked in most 'intervention programmes' formed the fundamental core of the Mahindra Group SBSV innovative solution; and • Social inclusion was identified as a right fit to demonstrate MACE's commitment towards sustainability and inclusive growth
Innovation for scalability	<ul style="list-style-type: none"> • The Mahindra Group recognizing MACE as a path finder for new avenues and markets
Innovation to create social impact	<ul style="list-style-type: none"> • Multiple collateral benefits witnessed through MACE initiatives
Innovation to establish financial sustainability / operating efficiency	<ul style="list-style-type: none"> • Success demonstrate in earlier projects of MACE providing sustenance and operating efficiency

• Lessons learnt

Focus on **building – awareness generation - training and capacity building - upkeep - maintaining** the toilets have to go hand in hand for the sustainability of the program.

• Financials

The Mahindra Group earmarked INR 23 crore for building toilets (physical infrastructure) and INR 6 crore for awareness; training; capacity building; upkeep of the constructed toilet; and maintenance of the constructed toilets (human dimension intervention).

• Economic sustainability/Revenue Model

Stage	Intervention for financial sustainability
Planning, design	<ul style="list-style-type: none"> • MACE ensured extensive usage of locally available materials, skill sets, employing local work force thereby minimizing the cost of development and judicious use of natural resources • MACE ensured long term environment sustainability by creating several 'Green and eco efficiency features', which in turn promote financial sustainability in terms of substantial lower cost of operation, repairs and maintenance, making affordable to the users

<p>Implementation</p>	<ul style="list-style-type: none"> • Develop process and systems to handle large rural development programmes and effective project management without much overhead; and • Develop deep rooted commitment for innovative solution, tight timelines, cost effective rural school specific solutions with passion for quality
<p>Operation stage</p>	<ul style="list-style-type: none"> • Extensive awareness creation on proper usage of the constructed toilet thereby reducing unnecessary damages, structural damages warranting replacements • The Mahindra Group's SBSV integrated maintenance model for consist of: <ul style="list-style-type: none"> ▪ Awareness creation ▪ Dissemination of IEC on WASH and MHM ▪ Reviewing the quality of consumables and sanitary items ▪ Upkeep of the constructed toilets ▪ Maintenance of the constructed toilets and ▪ Performance and monitoring report • These structured intervention imbibes school management and authorities optimized management techniques and effective usage of the constructed toilet over long run, reducing upkeep, maintenance and replacement costs • Encouraging production of the sanitary consumables, sanitary napkins and other consumables at the village level itself by self-help group run unit; including helping, marketing and demand generation; and • The O&M expenses after the Mahindra Group SBSV intervention period can be met through passive advertisement revenues, CSR funding, corporate sponsorship, school expenses budget allocation

- **Implementer Contact Persons**

- **C.S. Narayanan**
COO & President
narayanan.cs@mahindra.com
- **B. Suresh**
CEO & Managing Director
suresh.b@mahindra.com

- **Sources and References**

- Study submitted by MACE