KENDRIYA VIDYALAYA SHAALA DARPAN PROJECT

Kendriya Vidyalaya Sangathan (KVS) is a premier federal school system that operates 1245 schools pan-India and three overseas. It is one of the world's largest group of schools under a single management, with 25 regional offices, catering to 5+ M stakeholders, and 1.4 Million student. It specifically caters to federal employees who are transferrable to a new State every few years.

THE CHALLENGES

While the education system of the Kendriya Vidyalaya was of high quality, the system had grown big over the years making oversight difficult.

1. The KVS lacked visibility into the operations & functions in each school. Saliently it lacked a way by which to streamline and implement standardized processes across its 1200+ institutions pan-India and overseas.

2. Institutional data was maintained in the 120+ registers in each school across departments. This led to data not being available for decision making, reporting and statistics.

3. The KVS Head Quarters and Regional Offices collected data annually from each institution as part of their reporting mechanism & governance processes. Manual processes were making data collection, data integrity checks, and data processing an extremely laborious and error prone. The dire need for integrated "data-from-source" system, coupled with advanced predictive and corrective analytics, was an unmet dream and the next big leap for the KVS System.

4. As the system grew, the number of applicants each year crossed one million, making it difficult to handle the entire cycle manually. It also allowed for lapses in admission processes, leading to court cases at the institution level

5. While KVS teachers are among the best in the nation, the ever-expanding curriculum competed with increasing student activities, necessitating newer methodologies that accommodates student pursuits with academic goals. The need for an advanced learning platform to streamline teaching-learning processes and to actively engage with students, was being strongly felt.

THE SOLUTION

MGRM proposed a unique **M-Star Educational E-Governance Platform** based solution for the Kendriya Vidyalaya Sangathan. Called the **Shaala Darpan** (A Mirror-View (as in, a single-view) of all the Schools under KV Sangathan), it formed a core aspect of **"Digital India Revolution"**, piloted by the KVS schools.

M-Star Educational E-Governance Platform proposed to network all 1245 schools under a single educational Cloud while delivering a suite of advanced products that addressed every aspect of their institutions needs, namely

a. Online Admissions
b. School Management
c. Learning Management and
d. Analytics to the KVS system.

Core Objectives of Shaala Darpan

• Enable Improvement in Quality of Learning

• Improve Efficiency of School Administration and Governance of Schools

• Improve Service Delivery of School Education to key stakeholders – Student, Parents, Teachers, Community and schools

In addition, MGRM undertook to deliver advanced microprocessor cards (smartcards) to key stakeholders, to enable easy and secure access to the M-Star Platform.
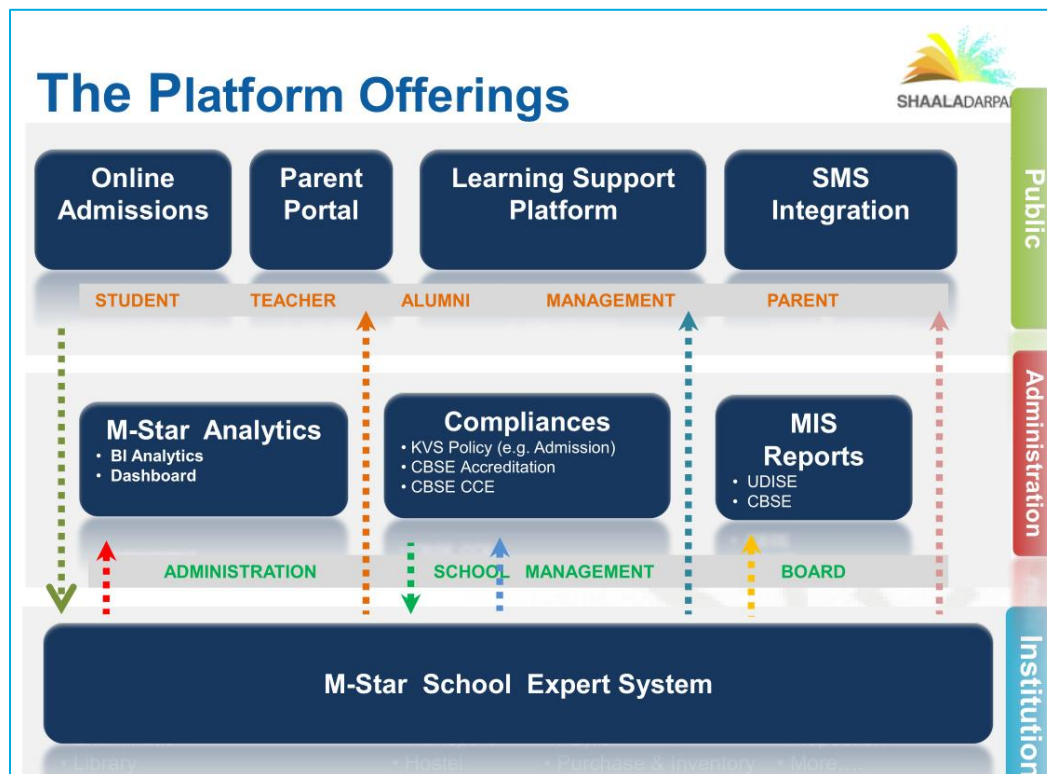
Components of the solution

M-Star Online Admissions: MGRM delivered the M-Star Integrated Online Admissions solution that was customized to comply with the Kendriya Vidyalaya Sangathan policies for Admissions, while complying with additional federal and state government policies.

More than 1.1 million applications were processed in just the first year of deployment. For the first time, selection policies were applied transparently across the entire system, bringing in utmost level of satisfaction to the parents and stakeholders of KVS.

M-Star School Expert System (M-Star SES): MGRM deployed institution specific M-Star School Expert System for management of all their functions. M-Star SES includes Scheduling, Fees, Examination, Financials, Library, Human Resources, Payroll, Transfers, Purchase, Inventory, Dashboard, Statutory Reports and others.

Existing processes were re-engineered to reduce administrative burden. Standardized processes approved by KVS and the Ministry of Human Resources Development were programmed into M-Star SES, resulting in uniform policies and procedures being implemented across all 1245 institutions.

Implementation was conducted incrementally and in phases, starting with a small pilot \ just 5 institution to demonstrate live the power of M-Star for the Ministry of Human Resources Development and the KVS system. This was then rapidly ramped up in a month to include all 1245 institutions, followed by hands-on training conducted through 56 workshops, and close to a thousand sessions online.

Just digitization of Master Data by itself was a massive undertaking that included 15+ million active records of each Institution, Teacher & Staff Records, Student Records, Payroll Details, Parent & Family Details, Health Records, Transcripts and more.

KV Shaala Darpan Initiative

Cost & Environmental Impact

Worlds First Paperless School Cluster: this truly mammoth accomplishment, being fully digital and paperless across 1200 schools and regional offices Pan India, has led to digital equivalents of 150X1200 or 180,000 registers per year, and untold hours of manual work that leads to no productive outcome. The trees saved just from registers alone, not counting the reports and circulars, and numerous reports not created due to sheer lack of man-hours, amounts to a conservative 9000 trees / year (@20 registers from a single tree). @545 trees per acre, the register equivalent is about 16.5cres of trees cut in a year. Considering that the trees take an average of 10 years to grow, that's a 165 acre investment and a significant impact on the environment averted.

Rs. 1.4 – 2.0 Crs
($US 0.25-0.3 Million) per year savings just on Registers

9000 mature Trees / year
16.5 Acres of Land

Everest: 8900m
Registers Saved: 4500m
Trade Center: 540 m

@ 1" thickness a Register = 4.5 Kilometers
180,000 Registers each Year

Salient benefits include elimination of duplicate work, going paperless (eliminating close to 200,000 registers that when stacked one over the other, span the height of the mighty Everest Mountain, saving 165 acres of trees each year in the process). In addition to cost and paper saving, the value of Master Data, and timely data for student and teacher analytics are invaluable.
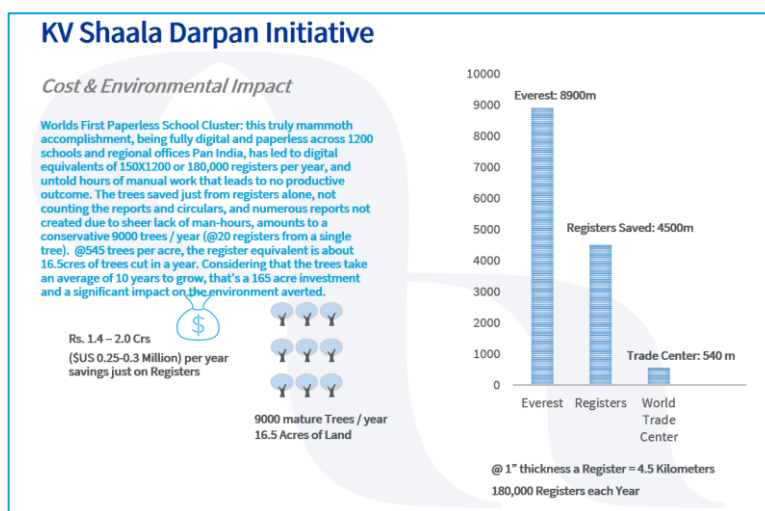
M-Star Learning Support Platform: MGRM delivered a completely customized M-Star LSP to meet the comprehensive needs of the KVS schools, from primary (1-5), to middle (5-8) secondary & higher secondary classes (9-12).

Teachers now conduct online & blended classes, provide online assignments and exams, while students access supplemental lessons, submit homework & assignments. Parents could follow their children's classroom performance and progress. For the first time, a digital learning platform completely enabled with lesson plans and lessons, tools for alternative assessment, formative and summative assessments, discussion forum, social learning and others were rolled out pan India across the entire KVS system. Training and hand-holding enabled teachers to step into the world of digital online learning.

M-Star Analytics: MGRM implemented a comprehensive M-Star Predictive & Corrective Analytics Platform (M-Star Analytics). Institutional data from source were integrated in real-time with a **Regional** Dashboard & Analytics System, which in turn synchronized with a **Federal** KVS Headquarters dashboard. Compliance data (pertaining to maintenance of affiliation, accreditation and others), statistical data, statutory data, MIS & reporting data, along with predictive analytics for student performance, risk of dropout, teacher performance and others were now available to respective KVS Department Officers, and to the Ministry of Human Resources Development, Government of India.

Training & Handholding

Training and capacity development are vital for any projects success, more so for the KSV system that is taking its first steps into advanced institutional management, digital learning and AI / ML driven analytics.

MGRM conducted various types of training for teaching staff, and administrators, as well as for Leadership in regional centers and headquarters. Training was provided to staff, Directors and Secretaries at the Ministry of Human Resources Development, Government of India.

National Launch of Shaala Darpan by Mrs. Smriti Irani, Central Minister for Human Resources Development.

More than 1000 training sessions were conducted including at site training, online-training, special group sessions and others. MGRM went out of the way to proactively engage in training and to deliver adhoc training requests, resulting in widespread success of the Government of India, Digital Transformation *Shaala Darpan* Initiative.

OUTCOMES

1. Digitally transformed the world's largest federal education system, from purely manual processes for admissions, school management, learning and reporting, to completely digital & cloud-enabled processes, through the advanced M-Star Educational E-Governance Platform.

2. The Ministry of Human Resources Development, and the KVS head office & regional centers had complete visibility into activities and operations in each school, allowing for transparency, accountability and good governance.

3. Reengineered and streamlined processes eliminated unnecessary burden and labor, while enabling digital workflows, and approval processes on a anytime anywhere basis.

4. Data pertaining to admissions, school management, and teaching-learning processes are now available in one place, enabling intelligent, data-driven decision making & support

5. Empowered teachers, staff and management through inclusive, system-wide capacity development via the platform.

6. Significant savings in terms reduced administrative burden, paper / files / register costs, and space saved were realized from project inception.

7. Reduced student dropouts and enhanced educational outcomes

8. Higher ranking of KVS system in state and national ranking system

9. Advanced analytics now enabled teachers and institutions to focus on individual students who need attention and remediation, thereby pushing the system towards a higher level of accountability, educational quality and growth.

10. Reduced cost of operation and management to the Ministry of Human Resources Development and the KVS system

BENEFITS

- Transition of more than 100 manual departmental processes to digital workflow enabled processes with enhanced visibility, transparency and accountability

- More than 120+ (annual) registers were eliminated at each institution

- M-Star LSP enabled "Everywhere, Anywhere, Anytime Learning" through personalized learning pathways, individual counselling and guidance.

- Increased Teacher-Student-Parent-Alumni interaction beyond classrooms leading to higher stakeholder satisfaction