

# PROFILE OF MAHARASHTRA KNOWLEDGE CORPORATION LTD.

## 1. Incorporation of MKCL :

Maharashtra Knowledge Corporation Limited (MKCL) is a Public Limited Company promoted by the Department of Higher and Technical Education, Government of Maharashtra. It was incorporated on August 20, 2001, under the Companies Act, 1956.

Its main mission is to create a new paradigm in education and development by bridging the Digital Divide. It strives to achieve this mission objective through universalization and integration of Information Technology in teaching, learning, and skill development in particular and socio-economic transformative processes in general.

In order to make the capabilities of MKCL available to all the Departments of Government of Maharashtra, governmental coordination of the affairs of the company has been handed over from Department of Higher and Technical Education to the General Administration Department (GAD) w.e.f. January 05, 2018. Subsequently, it was allocated to the Directorate of Information Technology under GAD.

## 2. MKCL's Transformative Agenda :

World is witnessing rapid emergence of knowledge-based society and knowledge-led economy on the global scale. Actionable knowledge is increasingly becoming synonymous to wealth, welfare, wellness and progress of individuals, communities and nations. Livelihoods, self-employment, jobs, careers, enterprises, industries, etc. are all becoming increasingly knowledge-centric. The prices of more and more products and services are being determined based more on the basis of core knowledge content in producing them than on their material, energy, labor or financial capital inputs. Knowledge-giving products and productizing knowledge are becoming new economic megatrends.

Keeping this in view MKCL is dedicated to the cause of bridging the Knowledge Divide and thereby bridging the Development Opportunity Divide faced by the common people in general and youth and school students in particular. MKCL's agenda is, therefore, focused on creating knowledge-based and value-based paradigm of Transformations in Education, Development, Governance, and Empowerment (Transformative EDGE) of common people leading to creation of individual and social wealth and ensuring individual and social welfare.

Most of the new actionable knowledge is being digitally born often through borderless digital collaborations. It is multiplying every day. It is also being digitally stored, digitally presented, digitally communicated and distributed, digitally accessed, digitally archived and managed and in many cases even applied digitally for socio-economic progress.

By assimilating the fruits of Artificial Intelligence revolution, the digital technology is increasing its global impact in all aspects of human endeavor by geometric progression. It is unleashing novel developmental opportunities for those who enjoy digital access. However, it is simultaneously creating new survival challenges for those who are deprived of the digital access.

Information Technology (IT) is a grand confluence of digital computing, communication and content. It is transforming almost all aspects of daily life of common people rather rapidly from the early years of 21st century. The applications of IT are penetrating deeply into all facets of daily life such as agriculture, manufacturing and services such as tele-communication, media, banking, stock markets, accounting, financial services, insurance, business and commerce, marketing, wholesaling and retailing, management, education, healthcare, legal affairs, design, fashion, beauty, arts and entertainment, home-appliances, transportation, construction, aviation, tourism, hospitality, governance and administration, utilities and facilities, safety and security, disaster management and climate resilience, work from office and work from home, etc.

As a result, vast majority of common people in India who are acutely suffering from socio-economic divide have to additionally face the new and equally severe challenges due to digital divide, digital deprivation and digital exploitation. As they are not digitally literate, they are being treated as illiterate. They are thereby threatened to lose the survival and developmental opportunities. The Digital Divide between those who can enjoy the fruits of rapidly advancing information technology and those who are digitally deprived and, therefore, left out and left behind has to be bridged effectively and on an urgent basis. Unless these sections of society can bridge the Digital Divide successfully, they will not be able to overcome disastrous consequences not only in knowledge economy and job markets but also in daily life.

It, therefore, becomes absolutely essential to pursue a transformative agenda of helping the common people in bridging the Digital Divide. Bridging the Digital Divide will enable them to bridge the Knowledge Divide and Development Opportunity Divide.

The vision of MKCL, therefore, is to develop education, development, governance and empowerment systems which are flexible, world-class and value-based and which are responsive to the newly emerging individual and social developmental needs of common people by bridging the Digital Divide.

### 3. Unique Identity:

The major challenge before MKCL in pursuing this agenda of bridging these new divides is to offer appropriate solutions and services for accessing education, development, governance and empowerment opportunities appropriate to emerging knowledge era by a large and diverse population, with world-class quality, at a very affordable cost, with widest accessibility from metros to rural, tribal and hilly areas and in a just-in-time manner, with a deeper personalized service experience on a mass-scale.

In other words, these six simultaneous challenges or mission objectives of MKCL for transformation in the fields of digital literacy, education, development, governance and empowerment may be summarized as **Bigger, Better, Cheaper, Faster, Wider and Deeper!**

MKCL strategically developed two solvers for effectively responding to these six simultaneous challenges viz. “Be Smarter” i.e. make imaginative, appropriate and pervasive use of information technology and state-of-the-art actionable knowledge and “Be Wiser” i.e. forge appropriate partnerships so as to avoid wasteful reinvention of essentials and for optimization of resources through networking.

In order to grow ‘smarter’ in solving these challenges, MKCL, right from its inception, has recognized the transformative role of the appropriate use of Information Technology as an equalizer, economizer, mass-scale enabler, accelerator, quality enhancer, mass-personalizer and a partner in the form of Artificial Intelligence (AI). MKCL, therefore, has been continuously designing, developing and successfully deploying very imaginative, pervasive and appropriate applications of Information Technology in universalization of digital literacy as well as in developing knowledge-driven digital skills and enhancing digital employability and entrepreneurship among the youth in addition to various fields of sustainable development, governance and empowerment. As a result, MKCL has attained a unique identity as an organization capable of universalization and integration of Information Technology in all walks of life.

In order to grow ‘wiser’ in avoiding duplication of expenses and reinvention of essentials, MKCL decided to forge strategic partnerships with organizations having complementary strengths so as to network all available resources such as infrastructural, financial, human, intellectual, educational, developmental and organizational resources.

As a result, MKCL has attained a unique identity as an organization capable of universalization and integration of Information Technology for effective transformations in various walks of life.

MKCL designs, develops and deploys state-of-the-art eLearning, eGovernance and eEmpowerment innovations, strategies, models, frameworks, technologies, products, processes, solutions and services at affordable costs for the common people. All of them are comparable to the globally best available options in terms of architecture, price-to-performance, outreach, customer delight and environmental sensitivity.

With its range of products and services, MKCL has emerged as a Fast-track IT Enabler or IT Integration Partner or Business Process Re-Engineering Partner and Knowledge Partner or Digital Transformation Catalyst of the educational institutions ranging from schools to universities as well as of the government, semi-government and private organizations, and also of the community development organizations and charitable foundations as well as mission mode project organizations.

Based on this unique expertise and experience, MKCL has forged joint ventures and state-wide projects with Governments of Rajasthan, Odisha, Haryana, Bihar, Assam, etc.

#### 4. Equity Profile:

The Government of Maharashtra and ten public Universities in the State of Maharashtra are among the major equity holders of MKCL. While the Government of Maharashtra has 37.13% equity, the Universities have 33.91% and autonomous bodies, educational institutions, training centers, social organizations, SMEs, etc. have remaining 28.96%.

#### 5. Board of Directors:

The Board of Directors of MKCL normally consists of three nominees of the Government of Maharashtra, two Vice-Chancellors from among the shareholding Universities, six eminent experts from various sectors of knowledge as directors and the Managing Director serving as the whole-time director. The Board normally meets once in a quarter and reviews the quarterly performance of the company, offers feedback, decides on policies and offers guidance for the future development of the company.

#### 6. Strategy Advisory Committee:

MKCL's Strategy Advisory Committee (MSAC) consists of Chairman of MKCL, Chief Mentor of MKCL, Managing Director of MKCL and eminent experts from various disciplines such as IT and non-IT industry, agriculture, environment, research and development, education, psychology, art and culture, finance, etc. All the Board Members, Chief Mentor of MKCL Knowledge Foundation as well as a few members of MKCL's Apex Coordination Team as selected by the Board are invitees to MSAC. MSAC meets normally once in six months and reviews the major accomplishments of the Company and offers strategic inputs for the future development of the Company.

#### 7. Financial Sustenance:

Although the Government is a major stakeholder, MKCL does not receive any funding, grant-in-aid or financial assistance, loans or monopoly business contracts from the government. It has been established as an unaided organization. Over the last 21 years, MKCL has been able to maintain an unbroken record of a self-sustaining and wealth-creating enterprise.

It has also maintained an unbroken record of paying decent dividends every year to the Government and other shareholders right from its inception. So far MKCL has cumulatively paid Rs.3,002.07 million (Rs.300.21 crores) to Government of Maharashtra in last 20 years by way of dividends, fees, taxes, etc. and Rs.2,473.72 million (Rs.247.37 crores) to Government of India by way of taxes.

#### 8. Compliance to Standards:

The Company is certified for ISO 9001:2015 Certification, ISMS Certification (ISO 27001:2013) and CMMI Level 3 Certification.

## 9. Organizational Structure:

MKCL's transformative agenda driven by its well-defined vision and mission is implemented by organizing its functions under various programs. These programs specialize in certain domains of expertise vis-a-vis customer requirements. They enjoy reasonable autonomy in their functioning. However, they maintain strong collaborative relationship and complementarity among themselves for the overall benefit of all stakeholders.

Intra-program and inter-program financial transactions are regulated and properly accounted regularly in order to monitor the sustainability and profitability of each individual program and of the company as a whole.

Each program consists of a set of certain time-bound projects and related continuing operations. Normally only such projects and operations are brought under one program which, if coordinated together, will ensure optimum resource utilization and maximum customer delight.

Each program has a Program Leader, Program Coordinator, Program Manager and Team Members.

The programs are divided into two groups viz. Enabling Programs for back-end developmental work and Business Development Programs for front-ending with customers. Both groups of programs are enlisted below. The various functions under the Corporate Management Program as well as certain Teams and Committees functioning at the corporate level are also enlisted below:

### ***Enabling Programs:***

1. Corporate Management Program (CMP)
2. IT Infrastructure Development and Management Program (IT Infra-DMP)
3. Learning Innovations Program (LIP)
4. Artistic Creations Program (ACP)
5. Network Partnerships Management Program (NP-MP)

### ***9.1. Business Development Programs:***

1. Knowledge-Lit Careers Development Program (KLC-DP)
2. Mission-Mode Skill Development Program (MMS-DP)
3. School Education Transformation Program (SETP)
4. Higher Education Transformation Program (HETP)
5. eGovernance Business Development Program (eGov-BDP)
6. International Business Development Program (I-BDP)
7. Products in New Exponential Technologies Business Development Program (ProNExT)
8. Community Development and Empowerment Program (CDEP)

## **9.2. Corporate Management Functions:**

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1. Managing Director's Office
2. Joint Managing Director's Office
3. Chief Executive Officer's Office
4. Corporate Matters, Legal Affairs and Statutory Compliances
5. Infrastructure Development, Center Management and Facilitation for all Offices
6. Human Resources Development
7. Materials and Services Procurement
8. Stores
9. Accounts and Finance
10. Audits
11. Government Interface
12. Interface with Joint Ventures
13. Quality Management Systems (QMS, CMMI, ISMS)
14. Business Promotion, Publicity and Public Relations
15. Central Library
16. Archival of Records

In order to devolve powers and responsibilities, ensure participative democratization, collective thinking and decision making, improve transparency in operations and develop future managers and leaders, certain corporate, managerial, coordination, technical and business functions are regulated or supported by special purpose Teams and Committees enlisted below:

### **• Special Purpose Teams:**

1. Key Management Team (KMT)
2. Apex Coordination Team (APEX)
3. Center Management Team (CMT)
4. Materials & Services Procurement Team (MSPT)
5. Business Excellence Team (BET)

### **• Committees:**

1. Investment and Compliance Committee (I&CC)
2. Infrastructure Development and Maintenance Committee (IDMC)
3. Network Partnerships Management Committee (NPMC)
4. Software Engineering Process Group (SEPG)
5. Disciplinary Committee (DC)
6. Internal Complaints Committee (ICC)
7. Health, Safety and Welfare Committee (HSW)

A detailed report of business activities undertaken by the company under its various Business Development Programs (as enlisted in Section 4.9.2 above) is presented in Sections 4.10 to 4.18 below while also covering the contributions of the Enabling Programs (as enlisted under Section 4.9.1 above) in the context of related business activities enabled by them.

## 10. Knowledge-Lit Career Development Program (KLC-DP):

A brief background and accomplishments of this program under its various offerings such as MS-CIT, MS-ACIT, KLiC, LiveDemy, Mastering, MKCL Finishing School are given below:

### 10.1. MS-CIT – Bridging the Digital Divide

The emerging information technology revolution has given rise to a globally connected society. This society is generating exceeding 90% of the new actionable knowledge digitally and collaboratively. As explained in Section 4.2 above viz. MKCL's Transformative Agenda, the ability to use digital technologies is critical for developing and accessing new actionable knowledge and accessing new careers and new development opportunities in emerging knowledge society.

Those who are denied the access to the information technology shall, thus, be deprived of the opportunities of the new world and shall face the crisis of **Digital Divide** in addition to economic divide, social divide, gender divide, etc.

In order to bridge the digital divide, bring the common people closer to the ethos and opportunities of the knowledge society and knowledge-led economy and to bring the real fruits of Information technology in the daily life of the masses for their survival, development and empowerment, MKCL conducts **Maharashtra State- Certificate in Information Technology (MS-CIT)** course in the state of Maharashtra, since 2002.

MS-CIT curriculum attempts to propagate **IT Awareness, IT Literacy, IT Functionality and IT Applicability** among the common people to bridge the Digital Divide and thereby bridge the Knowledge Divide and Development Opportunity Divide. MS-CIT has thus emerged as a gateway to careers and local and global developmental opportunities to the common people. MS-CIT learning experience attempts to introduce the blend of 21st century mega-trends such as **digitization, digitalization, virtualization, mobilization, mass-personalization, glocalization and hyper-localism**.

MS-CIT curriculum has been structured on following **pillars of most essential digital skills** for smart and wise use of digital devices, system software, application software (including Apps), connectivity, bandwidth, digital content, internet resources, etc.:

#### MS-CIT Curriculum-Pillars:

1. Basic Computer and Smartphone Skills
2. Smart Typing Skills
3. Digital Skills for Daily Life

4. Digital India Skills (eCitizenship Skills)
5. Cyber Security Skills
6. 21st Century Office Productivity Skills
7. 21st Century Job Readiness Skills
8. 21st Century Work-From-Home Skills
9. 21st Century Study Skills
10. 21st Century Scripting Skills
11. Netiquettes
12. Ergonomics
13. Go Green

Even though MS-CIT curriculum is expressed in the form of above-mentioned skills being imparted to the learners, the curriculum unfoldment also attempts to develop learners' abilities to move confidently in the rapidly emerging digital world. It also attempts to imbibe knowledge, attitudes and values essential for succeeding in personal, professional and social life in 21st century's connected society and cultural ethos.

The implementation of MS-CIT is not only a mission to bridge the digital divide but also a large-scale and unique educational transformation. It has been the result of continuous blend of pedagogic innovations, technology innovations, partnership innovations, entrepreneurial business innovations and social accountability innovations.

During last 20 years, more than 15 Million (1.5 crores) Learners have registered themselves for this course and have become **smart users of IT**. This is perhaps the world's highest record in bridging the Digital Divide among the masses and promoting Digital Citizenship among them through a single program. MS-CIT brand has thus become synonymous with **digital empowerment of common people** of Maharashtra.

MS-CIT learners include school students and college youth, job seekers and first job aspirants, next or better job seekers and second inning aspirants, parents and teachers, employees and officers from government, semi-government and private sector, cooperative and joint sector, voluntary and social sector, teaching and non-teaching personnel, academicians and researchers, doctors and engineers, architects and designers, lawyers and accountants, writers and poets, artists and craftsmen, journalists and media persons, professionals and businessmen, entrepreneurs and industrialists, farmers and workers, home-makers and senior citizens, police, servicemen and ex-service men and representatives of public, etc.

Government of Maharashtra has issued a Government Resolution in the year 2001 making MKCL's MS-CIT, as one of the essential eligibility criteria for recruitment to the posts of Grade A, B and C in all the government departments and semi-government organizations in the Maharashtra. Government of Maharashtra has given equivalence of more than 80 other courses to MS-CIT through various GRs for eligibility for entry into government service. However, MS-CIT has been the most preferred choice of lakhs of learners across the state over last two decades.



MKCL's IT literacy program has spinoffs outside Maharashtra such as BS-CIT in Bihar, HS-CIT in Haryana, OS-CIT in Odisha, RS-CIT in Rajasthan, KLIC-IT in rest of India, MICIT in other countries, etc. All these courses put together have an enrolment of exceeding 16.5 million (1.65 crores) learners in last 20 years.

## **10.2. MKCL's Network of Authorized Learning Centers (ALCs) – Expanding the Outreach**

In order to facilitate such a large number of MS-CIT learners in various parts of the State, MKCL has established about **5000 Authorized Learning Centers (ALCs)** and their authorized satellite learning centers under its unique public-private-community partnership framework. This network is coordinated by District and Regional Lead Centers, Training Provider Agencies or Master Franchisees, Strategic Business Unit (SBU) Coordinators, District Marketing and Placement Executives, Train-the-Trainer Fellows, etc. With the help of these ALCs and their satellites, MKCL offers its services with wider accessibility to the masses in metros, cities, semi-urban areas as well as rural, tribal and hilly areas of the state.

All these ALCs are equipped with state-of-the-art computing infrastructure on LANs with their own proxy servers backed up by **MKCL's formidable, scalable and secure server infrastructure** in cloud with server virtualization and dynamic load balancing technologies. A total of about **75,000 personal computers at ALC's** are equipped with state-of-the-art operating systems, antivirus software, application software and broadband internet connectivity. They are backed-up with inverters and/or diesel generators. Bio-metric finger-print recognition devices have been deployed at all ALCs for **learner identification-authorization-cum-attendance management**. All the personal computers at all ALCs are also equipped with web-cameras for operationalizing the **MKCL's Black-Box System** for enabling evidence-based learning and assessment management. All the personal computers at ALCs are also equipped with the good quality headphones for effective eLearning experience. **Microsoft Licenses** are regularly distributed free of cost to all ALCs.

All the machines in the network and software and content installed on them are managed online and supported remotely through MKCL's IT Assets Management Framework viz. **WORM** and Unified Call Assistance and Support Tracking (**UNICAST**) system.

The paperless management of ALCs is facilitated by MKCL's home-grown web-based software framework- viz. **SOLAR**. This framework seamlessly facilitates a complex management of inter-related **learner administrative life-cycle, center life-cycle, channel partner life-cycle and course or business offering lifecycle** including the management of financial transactions with ALC net-banking accounts and ALC wallets. It also has now started functioning as business advisory framework for ALCs.

SOLAR is available to the ALC Coordinators and other network partners on their smartphones through Android App. A **Center Visit App** built on SOLAR framework helps monitor (a) the monthly ALC visits of about 100 SBU Coordinators, each one looking after smooth functioning of a cluster of about 50 neighboring ALCs, (b) the promotional events carried out in cooperation with the ALCs by about 50 District Marketing and Placement Executives and (c) the satisfactory compliance of eligibility conditions by the applicant organizations desirous of registering as a new ALCs.

Apart from participating in marketing, promotion, counselling, sales and academics and assessment in an agreed protocol, all ALCs try to ensure compliance to brand specification guidelines so as to achieve **MS-CIT Brand Persistence and Brand Enhancement**. All the network partners also participate in **frequent online polls** for taking various crucial business and academic decisions in an open, transparent, democratic and participative manner.

MKCL regularly invests in **Capacity Building of the ALC Coordinators** and that of the Learning Facilitators appointed in ALCs by conducting live lecture series and hands-on workshops by experts in areas such as ongoing course curriculum and its upcoming revisions, Digital Marketing, Effective Counseling, Rational Emotive Behavior Therapy (REBT), English Speaking, Soft Skills, Advances in Information Technology, etc.

MKCL is constantly and carefully nurturing this network of ALCs for last 20 years. As a part of the nurturance activities, **PPF Awards** are given to consistent performers of the decade. Similarly, all ALC coordinators have been covered under **Medical Insurance and Accident Insurance**.

We at MKCL believe in 'Transformation' and it starts from within. While reaching out to about 1 million learners each year with the help of 5000+ ALC Coordinators and their staff, the Network Partner's mindset plays a very crucial role. Rational thinking, on the part of every concerned individual helps to serve the learners better. In order to develop and intensify rational thinking and optimistic behavior, MKCL decided to appoint **a few** psychologists as trainers. They are called as ALCs '**Samvadak Mitra**'.

Appointment of 'Samvadak Mitra' was the starting point of this expedition. We have on-boarded highly qualified and experienced psychologists. They offer personalized guidance to the interested Network partners. The first part of this mission was to sensitize our ALCs about **Rational Emotive Behavior Therapy (REBT)**. We started to conduct these trainings at Regional Training Centers under the campaign 'Mission Happiness'. We followed these trainings with 'Samwad-Satra' where personal interviews were conducted to understand their thoughts and actions, risk taking abilities, adaptability to change, service orientation and other significant competencies for personal, professional and social growth. We continuously measure the success of this program from the feedback of the participants and their shared experiences.

In addition to these welfare measures, many **Academic and Business Excellence Awards** are given annually to deserving ALCs in the **Annual Regional Meets**. All these initiatives of MKCL have built an atmosphere of confidence and mutual trust between MKCL and the ALCs spread over the entire state.

A rigorous definition of **ALC Performance** has been synthesized through series of discussions and brainstorming sessions at various levels. A continuous, comprehensive and online assessment of ALC Performance is carried out on the basis of **Critical Performance Indicators (CPIs)** and Sub-indicators in each financial year.

### 10.3. MKCL's ERA – Taking eLearning to the Grass-roots:

MKCL's home-grown eLearning platform viz. ERA (eLearning Revolution for ALL) is a light-weight quasi-online as well as online Learning Management System (only 9 MB). ERA LMS Platform contains following modules:

- Course Designers' Paradise - Distributed Factory for eContent Development
- eContent Distribution System
- eLearning Content, Environment and Process Management System for Learning Life-cycle Management
- eAssessment Management System
- Instant eEvaluation and eCertification System for diagnostic, formative and summative assessments
- High-stake, evidence-based and AI proctored final Online Examination System
- Learner Performance Analytics for further improvements in content, environment and processes deployed for learning and assessment

MKCL's ERA perhaps, is the largest eLearning facility with largest user-base in India operating in a stable manner at the grass-roots for over 20 years. It is a center-based eLearning system (quasi-online) running on 1 gbps LAN inside the ALC. It uses internet, when available, only to upload learners' scores and learning and assessment evidences. It has overcome the barriers of unreliable connectivity and paucity of bandwidths on one hand and traditional and difficult-to-break "teaching is equal to lecturing" mindsets on the other. ERA platform today is not just accepted but highly sought after by millions of learners across all age groups and backgrounds because of the unique underlying pedagogy of Inform to-Perform and Perform-to-Transform approach as against the traditional emphasis on only inform type of lecture centric system. The success of ERA lies in the uniqueness of its engaging **eLearning Content** and challenging **eLearning Assessment** through a pedagogically sound **eLearning Process** in a stimulating and supporting **eLearning Environment**.

Owing to the implementation of technologically facilitated and personalized but **strictly sequential and guided process of learning**, ERA has also emerged as a framework for global and local monitoring of every step of academic progression of millions of learners. The vast amount of continuously logged and securely maintained academic progression data of learners (with the IP addresses of the computers being used by them at that time) has emerged as a rich and trustworthy repository for **learning data analytics, research, reporting and continuous improvement of quality of learning and assessment**. It has also improved the traceability, verifiability, falsifiability and overall transparency in learning and continuous assessment of each learner across the state-wide network.

The uniqueness of MKCL's IT Literacy and Functionality skill building approach is in its emphasis of not just imparting differential skills but in its periodic punctuation of hundreds of non-obvious "**Take-a-Challenge**" situations and then imbibing integral skills with global best practices. The learner is then exposed to several real-life "**Take-a-Bigger Challenge**" situations and "**Take-a-Grand Challenge**" situations with ab-initio step-by-step creation of hundreds of simple and complex **socially useful and**

**productive outputs** by gradually using and mastering preliminary as well as advanced features of various office productivity software tools and other IT applications and Apps.

#### ***10.4. MS-ACIT (IT for Teachers) – Developing 21st Century Teachers***

Empowering Teachers with 21st Century teaching skills is main purpose behind this initiative. Offerings include the skills which will transform a School Teacher to eSchool Teacher with effective and efficient use of Information Technology. The course gives exposure to different digital skills and new ways of Teaching-Learning-Assessment and Student support by using digital technology. The course is designed in order to make sessions interactive and interesting. The engaging eLearning learning and assessment content not only makes the sessions interactive and interesting but also makes the teachers competent and confident in meeting the educational challenges of 21st century.

#### ***10.5. KLiC – Enabling youth for Knowledge-Lit Careers:***

Knowledge-Lit Careers (KLiC) series of courses serve as a **bridge from colleges to careers**. MKCL, under its KLiC brand, offers employability and entrepreneurship enhancement courses or KLiC Certificate Courses at **2500+ ALCs** in the state.

The focus of KLiC Courses is on developing learners for Decent, Delightful and Dignified jobs (New 3D Jobs) of 21st century rather than for dirty, dangerous and demeaning jobs (old 3d jobs) of previous centuries.

#### ***Desired learning outcomes of KLiC Courses are enlisted below:***

1. Enhancement of competence and confidence of youth to obtain employment (immediately after the course or after completing college education) in workplaces requiring state-of-the-art digital skills,
2. Enhancement of potential of the youth to pursue local and global freelancing occupation in digital domain on various freelancing portals in 'work-from-home' or 'work-from-hometown' mode, especially for those pursuing part-time jobs or girls, married women and others unable to leave homes or native places,
3. Greater ease to the youth for smooth ascent to aspirational workplaces with high employment opportunities after getting initial work-experience in local enterprises,
4. Better retention at formal workplaces in the digital world with rapid progression in employment,
5. Continued success with better bottom lines in youth-owned enterprises,
6. Rigorously skilled manpower availability in various digital domains in adequate numbers for variety of MSMEs as well as government offices, large enterprises and corporates

An aesthetically rich and engaging eLearning experience in KLiC courses is due to highly informative and interactive content full of animations, videos, various work-based case studies, activities and interactivities, take-a-challenge tasks, mini-projects, mock aptitude tests, resume writing, interview practice, etc.

enhancing his/her employability and/or entrepreneurship in emerging economy. **KLiC Diploma** will be awarded to candidates completing two mandatory foundational courses followed by elective courses together totaling at least 360 Hours.

### ***Mandatory Foundational Courses:***

#### ● ***Track – 1: Career Readiness***

1. KLiC Certificate in Information Technology (KLiC-IT)
2. KLiC Certificate in English Communication and Soft skills (KLiC English)

### ***Elective Courses: (Each of 120 Hours)***

#### ● ***Track – 2: Accounting Careers***

1. KLiC Certificate in Financial Accounting with Tally GST [KLiC Tally Prime (with GST)]
2. KLiC Certificate in Advanced Tally ERP [KLiC Advanced Tally Pro (with GST)]

#### ● ***Track – 3: Back Office Careers***

1. KLiC Certificate in Data Entry and Data Management
2. KLiC Certificate in Office Assistance (KLiC Office Assistance)
3. KLiC Certificate in Advanced MS Excel (KLiC Advanced MS Excel)

#### ● ***Track – 4: Designing Careers***

1. KLiC Certificate in Desktop Publishing with CorelDraw [KLiC DTP (CorelDraw)]
2. KLiC Certificate in Desktop Publishing with Adobe [KLiC DTP (Adobe)]
3. KLiC Certificate in Advanced DTP (KLiC Advanced DTP)
4. KLiC Certificate in Web Designing (KLiC Web Designing)
5. KLiC Certificate in Photo Editing (KLiC Photoshop)
6. KLiC Certificate in Content Illustration (KLiC Content Illustration)
7. KLiC Certificate in Graphic Designing (KLiC Graphic Designing)
8. KLiC Certificate in Video Editing (KLiC Video Editing)

#### ● ***Track – 5: Programming Careers***

1. KLiC Certificate in C Programming (KLiC C)
2. KLiC Certificate in C++ Programming (KLiC C++)
3. KLiC Certificate in Mobile Apps Development (KLiC Mobile App)
4. KLiC Certificate in Python (KLiC Python)

#### ● ***Track – 6: Digital Arts Careers***

1. KLiC Certificate in 3D Modelling (KLiC 3D Modelling)
2. KLiC Certificate in 3D Texturing and Lighting (KLiC 3D Texturing & Lighting)
3. KLiC Certificate in Art Teacher (KLiC Art Teacher)

● **Track – 7: CAD/CAM Careers**

1. KLiC Certificate in AutoCAD (KLiC AutoCAD)
2. Track – 8: IT Hardware & Networking Careers
3. KLiC Certificate in IT Hardware & Network Support (KLiC Hardware)
4. KLiC Certificate in IT Desktop Support (KLiC Desktop Support)
5. KLiC Certificate in IT Security & Cyber Security (KLiC Cyber Security)

● **Track – 9: Digital Freelancing Careers**

1. KLiC Certificate in Digital Freelancing (KLiC Digital Freelancing)
2. KLiC Certificate in Advanced Digital Freelancing (KLiC Advanced Digital Freelancing)

● **Track – 10: IT Enabled Services Careers**

1. KLiC Certificate in Banking, Financial Services and Insurance (KLiC BFSI)
2. KLiC Certificate in Retail Management, Selling, Customer Service (KLiC Retail)

● **Track – 11: Services Management Careers**

1. KLiC Certificate in Management Basics
2. KLiC Certificate in Services Marketing
3. KLiC Certificate in Customer Focus
4. KLiC Certificate in Service Designing and Operations
5. KLiC Certificate in Managing Service Operations
6. KLiC Certificate in Service Entrepreneurship
7. KLiC Certificate in Service Quality

● **Track – 12: Smart Teaching Careers**

1. KLiC Certificate in Smart Teaching (KLiC Smart Teacher)
2. KLiC Certificate in Home Tuition Management (KLiC Home Tutor)
3. KLiC Certificate in IT for Art Teaching (KLiC Art Teacher)

**Elective Courses: (Each of 60 Hours)**

● **Track – 13: Industrial Revolution 4.0 (IR 4.0) Careers**

1. KLiC Certificate in Internet of Things (KLiC IoT)
2. KLiC Certificate in Robotics (KLiC Robotics)

● **Track – 14: Grooming for Careers**

1. KLiC Certificate in Language Learning (KLiC Language)
2. KLiC Certificate in Communication Skills, Soft Skills and Personal Effectiveness Skills (KLiC Workplace Readiness)

● **Track – 15: Computational Thinking for School Students**

1. KLiC Certificate in SCRATCH Programming (KLiC SCRATCH)
2. KLiC Certificate in Blockly (KLiC Blockly)
3. KLiC Certificate in MIT App Inventor (KLiC MIT App Inventor)
4. KLiC Certificate in TinkerCAD (KLiC TinkerCAD)

***KLiC Placements:***

Initiatives have been taken to identify job-vacancies at local level with the help of Marketing and Placement Executives. The placement drives have started from January 2022 and within first 3 months, placements have been given to 500+ KLiC Learners in various local enterprises.

***EASY – Earning Assistance Services to Youth:***

In order to encourage especially the rural and semi-urban youth to pursue careers in the knowledge-based economy, MKCL awards KLiC Diploma Certificate to KLiC learners who successfully complete 3-4 KLiC Certificate Courses, preferably in a particular track.

The KLiC Diploma holders are being further developed in the area of Digital Freelancing so as to ensure decently rewarding, locally pursuable and globally relevant careers with earning opportunities in the virtual freelancing space. This is a modest step and yet another experiment of MKCL in bridging the opportunity divide.

Instead of indefinitely waiting for a placement in a company, a KLiC learner can start modest earning through freelancing if s/he is adequately trained and facilitated. In case of especially meritorious women from rural and semi-urban areas, this may prove to be an empowering boost in the context of their inability to leave homes and travel daily to workplaces or leave native places and migrate to big cities for a job.

In order to accomplish this ambitious objective of **Earning Revolution for All** (a new full form of ERA!) a software framework called **EASY (Earning Assistance Services to Youth)** has been developed to train these KLiC learners to actually perform in a mock freelancing digital market place and earn money as well as self-confidence to enter into digital freelancing.

Meritorious learners are being given digital freelancing opportunities by MKCL through EASY and they are suitably rewarded by MKCL subject to actual delivery of artifacts strictly meeting the stipulated quality standards and delivery periods. A facilitation and fulfillment team has been created for guiding KLiC Learners spread across the state and for handholding with them for their successful entry into the exciting world of digital freelancing.

In addition to EASY framework for self-employment through freelancing, **MKCL's Career for You** framework is used for placement of learners in industry.

***10.6. Learning Facilitators – Enriching High-Tech Learning with Human Touch:***

Over a period of time, our **25,000+ trainers / learning Facilitators** have realized that they do not get displaced by eLearning technology provided they play a creative role of an interactive coach where this technology reaches its limits. This offers them more meaningful and satisfying co-existence with

technology and sets them free from traditional drudgery of information memorization and reproduction in lectures. This also makes overall learning process more affordable and self-replicable. A creative involvement of more than 25,000 certified and periodically re-certified learning facilitators helps MKCL's education system assume a desirable blend of high-tech with human touch. The eLearning technology and the human touch of learning facilitators together achieve incredible results!

### ***Training Workshops for LFs in ALCs:***

The network partners are our brand ambassadors. The experience delivered at MS-CIT or KLiC ALCs plays crucial role in learners' delight. With this thought, LFs in ALCs are trained so as to make them confident about the continuously evolving series of courses. The basic objective of this training was to groom LFs technically and academically. "Train the Trainer" program is implemented by well-qualified and experienced subject matter experts and master-trainers for respective tracks or courses at MKCL's eight Regional Training Centers. Training is also being provided using virtual classroom sessions as well. This training has resulted in increase in KLiC admissions significantly. The LFs are also rigorously trained in creating eLearning content on locally relevant case studies of applications of various IT tools. These case studies and assignment thereon are then added by them in their interaction sessions.

### ***LiveDemy - Short Courses for Digital Enablement of MSMEs:***

The fourth industrial revolution is gathering momentum. We are witnessing a world-wide consolidation of certain megatrends such as Connected Society, Ultra-automation, Artificial Intelligence and Robotics-Penetration, Digital Transformation, Ambient Computing, Self-organization, Social Mediation, De-intermediation, Creative Disruptions, Uberization/Business Aggregation, Geo-Locationing, Unique Identification, Online Freelancing, Productization of Knowledge and intensive Knowledgization of Products and Services, etc. More than 3 billion people on the planet are living their daily lives increasingly in emerging ecologies such as smart systems ecology, sensor ecology, data ecology, new media ecology, social media ecology, etc.

These emerging megatrends and emerging ecologies are posing new challenges as well as opening up new opportunities for employment or entrepreneurship for the youth in 21st century. It is, therefore, necessary to develop urban as well as rural youth life-long learning. They have to 'keep learning on the fly' smart use of new and inexpensive digital tools and technologies as well as in communication skills, soft skills, people skills, social intelligence with adaptive thinking and new-collar job skills so as to succeed in new careers by riding over these megatrends and thriving in these ecologies.

The year 2020-21 saw Digital Acceleration across all sectors and walks of life. With a view to providing digital enablement for especially college students, employed people and entrepreneurs, short courses required in various professions were launched under the banner – LiveDemy.

This year LiveDemy Platform has been built. A large number of trendy but short courses will be hosted on it and promoted from next year.



### 10.8. MKCL's Mastering Series

MKCL offers a truly online as well as an ALC-based quasi-online mock test series with instant online assessment and automated personalized feedback service under its brand viz. **MASTERING** for competitive examinations preparation. It is a facility available almost anytime, anywhere.

These mock eTests series have chapter-wise tests, combo-tests as well as full-paper tests for various competitive examinations for admissions and recruitment such as **Banking Selection, National / State Teachers' Eligibility Tests, Computer Typing, Mahabharati Preparation Test**, Subject wise Practice Tests for 5th to 12th standard students, Practice Tests for Scholarship Exam, MTSE, etc.

The Mastering series of tests helps students better prepare because of Personalized Feedback, Chapter-wise tests and Multiple Choice Question (MCQ) Tests giving instant results. The questions are set by experts in the field.

Mastering series is not just a low cost but a high academic quality offering. Each of the multiple choice options in the answers of thousands of questions is a well-designed conceptual distractor rather than an option being either appearing to be obviously correct or arbitrarily wrong. All options are non-obvious, all of them appear to be correct and the wrong ones among them point out the conceptual gaps of the learners erroneously selecting them. The learners can, therefore, be counselled by the system for improvement by providing necessary academic inputs. The test series is thus not just formative but diagnostic and corrective as well.

### **MKCL Finishing Schools – Mainstreaming Work-Based Learning:**

Since 2013-14 MKCL has been working on a Work-based Learning model through MKCL Finishing Schools (MFS). MKCL in partnership with some of the leading corporates in the IT Enabled Services (ITES) / Business Process Management (BPM) sector and large number of MSMEs implements '**Role based and Work & Performance Centric**' Degree Programs recognized by Yashwantrao Chavan Maharashtra Open University and Indira Gandhi National Open University. Currently two such 3-year degree programs are conducted. They are Bachelor of Business Administration i.e. BBA for ever-growing service sector, BSc. In Computer System Administration i.e. B.Sc. (CSA) for Hardware and Networking sector.

These are very innovative "**learning and earning through working**" and "**more profound working and earning through learning**" type of degree programs in which normally students from rural and economically disadvantaged sections of the society are selected on merit basis and given internships in enterprises in the area of Business Process Management / Computer System Administration. They are acquiring knowledge through actual work in the company and applying this knowledge to make the work more profound and wholesome. It is recognized by giving them work credits in the degree program. End-of-the-day reflection sessions by senior members or industry mentors are integral part of the educational process and have proven very effective for the students to derive knowledge from the work done during the day. The students / interns earn knowledge credits through learning and continuous assessments on MKCL's eLearning Platform viz. Nai Talim ERA.

MFS Work-based Learning model attempts to solve the problem of attrition in the corporates, problem of unemployment among the youth, problem of relevance of degree program in the universities vis-à-vis the needs of industry and problem of social unrest among the educated but unemployed youth as faced by the government and society.

MKCL's Knowledge Lit Careers Development Program (KLC-DP) ensured reach of MFS – Work-based Degree Programs to youth at local level by forging partnerships with more than 100 Industry Partners across the state. This led to a pool of over 10,000 internship / entry-level job opportunities in companies across the state cutting across various sectors.

MFS Graduates have been effortlessly receiving relevant and rewarding jobs and careers in well-known industries with higher starting salary by getting due weightage to their 3 years of work experience while pursuing the degree program.

MFS has also focused on development of new curriculum in the areas of Livelihoods and Sustainable Development, Natural Resources Management, ICT Education Coordination, etc. The BBA through the pursuit of livelihoods has been approved by YCMOU this year and registration for the same has started.

## 11. Higher Education Transformation Program:

Digital University is a software framework for seamless management of life-cycles of millions of students, thousands of institutions and tens of thousands of courses/credits. The digitally empowered students' life-cycle management is the core of this framework. It offers eServices at affordable costs to millions of students at all stages throughout their university life-cycle right from the student online admissions up to the award of degrees and assistance.

It is one of the most scalable, integrated, seamless and end-to-end Educational eGovernance Framework in Indian Higher Education Sector and has applicability to Open and Distance Learning (ODL) Sector as well involving Open Universities and Distance Education Directorates / Departments of traditional Universities as well as Autonomous Colleges.

The higher education space saw an expansion of the adoption of Digital University and Digital College software frameworks in additional Autonomous and Junior colleges. With these additions, MKCL now offers direct student facilitation services to 19 universities and 3 Autonomous Colleges encompassing over 1+ Crore students engaged in pursuit of higher education in State Universities, Private University, Autonomous Colleges, 7000+ Affiliated Colleges, University Departments, and Study Centers. The footprint of Digital University has spread in Gujarat and Haryana as well. MKCL's Digital University is recognized as a reform in Learning and Assessment and MKCL Experts are regularly invited to present the same at UGC sponsored workshops.

The lockdown due to pandemic forced all University services to be provided online. The Student Life Cycle starting with Online Applications to Online Document Submissions to Online Document Verification to Online Fee Payment to Online Certificate Distributions were handled through these Frameworks.

MKCL's work in making these features possible with their characteristic student-friendliness received appreciation from the Heads of the Educational Institutions and from the student and teacher community.

During pandemic period though the services of the Universities were provided online, MKCL has taken enormous efforts to add to its client list two more universities viz. Gondwana University, Gadchiroli and Rashtrasant Tukadoji Maharaj (RTMNU) Nagpur University from Vidarbha Region. Huge data from old system was ported in DU Framework and the results were successfully declared of 1 Lakh+ students of Gondwana University. For RTMNU results processing of 70000+ students are in progress. Also, for Savitribai Phule Pune University results were successfully declared for about 13000+ students of distance education.

MKCL has been playing the role of Knowledge Partner to Universities by helping them improve their Gross Enrolment Ratio, by providing them frameworks to prepare for Accreditation, etc. MKCL hosts a comprehensive Institute Profile Management that captures 800+ attributes related to institute profile to cater reporting requirements of UGC, AICTE, NIRF, NAAC, University, DHE, DTE, etc. Along similar lines, MKCL developed Employee Profile Management that captures 500+ attributes related to employees.

Continuously for last 15 years, MKCL is the biggest player in Digital University market segment in India due to its integrated approach, technological excellence, and future-readiness through continuous innovations through research and proactive and empathetic dialogue with all stakeholders.

## 12. Mission Mode Skills Development Program (MMS-DP):

### **MKCL emerging as a Knowledge Partner for State Skill Development Missions:**

In recent past, various state governments in India have established their respective Skill Development Missions for skilling, reskilling and up-skilling the youth on a large scale and in a time-bound manner. In view of its long experience and expertise in the field of managing skill impartment on a state-wide scale by developing and successfully deploying software frameworks for skill development management and administration, eLearning, eAssessments and placements, MKCL is emerging as a:

- Knowledge and Strategy Partner in Skill Development Mission
- Comprehensive Software Framework Provider
- High Quality eContent Provider for Learning and Assessment
- eLearning Management Service Provider
- Single Point Nodal Agency for establishing and operating a state-wide network of Skill Development Centers under the Public-Private-Partnership Mode
- Implementation and Monitoring Support Partner

**MKCL's unique and proven as well as configurable and customizable frameworks for following tasks are proving to be very useful for skill development missions:**

- Skill Development Schemes/ Programs Life-Cycle Management
- Skill Development Service Providers' Life-Cycle Management
- Skill Development Course-Development Life-cycle Management

- Skill Development Course-Administration Life-Cycle Management
- Skill Development Course-Academics Life-Cycle Management
- Skill Development Center Life-cycle Management (Registration to Renewal/Closure)
- Skill Development Center's Continuous Assessment and Accreditation
- Candidate's Administrative Life-cycle Management (Admission to Placement)
- Candidate's Evidence-based eLearning Life-cycle Management
- Candidate's Evidence-based eExamination and Certification Management

**In addition to the software frameworks and eLearning content for skill development in various sectors, MKCL's knowledge base expressed in the form of following models is being recognized as a valuable resource by the skill development missions:**

- Business Models based on Public-Private-Community Partnerships synthesizing the desirable features of Government, Private and Social Sectors
- Governmental Training and Development Schemes Management Model
- Innovative Models for Creation of State-wide Networks of Skill Development Centers (SDCs)
- Brick and Mortar Infrastructure Development and Maintenance Models for SDCs
- Computing and Communication Infrastructure Specification, Provisioning/Sourcing and Maintenance Models for SDCs
- Model for Remote Installation, Commissioning and Maintenance of Software Frameworks at SDCs
- Model for Software Licenses procurement and Distribution to SDCs and Avoidance of Piracy
- eLearning Content Development and Distribution Model
- SDC Assets Management Model
- SDC Human Resource Training and Development Model
- SDC Human Resources Welfare Model
- SDC Support and Grievance Redressal Model
- Model for Change Management
- Supply Chain Management Model for Study Material, Promotional Materials, etc.
- State-wide Network Coordination Model
- Branding, Marketing, Promotion, Events Management and Publicity Model
- Parent Counselling, Candidate Profiling, Counselling and Career Guidance Model
- Candidate Registration and Enrolment Model
- Fee Collection and SDC Performance-based Fee Share Distribution Model
- Revenue Recognition and Reconciliation Model
- Academic Delivery Model
- Learning Progression Tracking and Monitoring Model
- Attendance Tracking, Continuous Assessment, Summative Evaluation and Certification Model
- Placement Assistance and Post-Placement Tracking Model
- Candidate Relationships Management Model
- Model for SDCs' Statutory and Regulatory Compliances

- SDC Vigilance, Disciplinary Actions and Dispute Resolution Model
- SDC Quality Management, Assessment, Accreditation and Monitoring Model
- Performance-based Rewards Distribution Model
- Financial Sustainability Measurement Model
- MIS, Analytics, Business Intelligence and Decision Support Model
- Data Security, Data Archival and Referral Model and many more...

Based on last 20 years of conscious effort of **knowledgizing the products and processes and productizing the knowledge** in the form of above-mentioned models and their software incarnations, MKCL could become the successful bidder and has been recognized as Knowledge Partner of **Bihar Skill Development Mission (BSDM) of the Government of Bihar**.

With the help of MKCL, BSDM is implementing two programs viz. Domain Skilling Program wherein the hard skills course approved by various sectoral skill councils are implemented and Kushal Yuva Program ('KYP'), a flagship program of Bihar Government under its '**Saat Nishchay' (Seven Resolves)**.

The KYP program has also been extended for students of ITI, Polytechnics and Engineering Colleges throughout the state.

Amidst the pandemic and with respect to the wavering situation throughout the year, the Skill Development Centers (SDCs) have remained open as per the guidelines of the State Government during the year since April 2021.

SDCs remained closed in view of 2nd wave of pandemic but we saw a consistent admission flow in all KYP SDCs during the unlocking phase. We have successfully registered over 2,74,840 learners during this period with highest single batch registration of 60,000+ in March 2022. Total number of registered KYP learners from the launch of KYP in 2016 has now crossed 15 Lakh. This shows KYP is a ray of hope for upward mobility. The enrolment ratio of female learners in KYP still remained as high as about 50%. The female KYP Certified students from Bihar have been getting employment in their/near hometown and they are confidently performing roles as a learning facilitator at KYP Center, computer operator at Malls, Super Shops, Hospitals, Medical Shops, contractual jobs in Government, Semi Government offices, etc. and emerging as an earning member of the family. This has led to a modest beginning of a desirable cultural transformation in the state.

MKCL in partnership with BSDM launched the Bihar State Certificate in Financial Accounting (BS-CFA) course under KYP program in July 2019. The BS-CFA course is focused on training learners on Financial Accounting along with Tally ERP. It is planned by the Bihar Government to depute at least one BS-CFA students in all establishments which pay GST. The Chartered Accountancy firms are coming forward to recruit these students as assistants.

MKCL has implemented Aadhaar Enabled Biometric Attendance System (AEBAS) for all the Skill Development Centers under BSDM. The daily attendance and learning are allowed only after daily Aadhaar based attendance.

### ***Job Readiness Program for Youth (JRPY):***

A new 320-hour course viz. 21st Century Job Readiness Program for Youths (JRPY) was conceived for empowering learners to work in the gig economy / freelancing economy by working from home with leisure of completing their agriculture related work. The program is accepted by District Magistrate of Sundargarh, District in Odisha to offer the course for welfare of mining-affected students by signing agreement with MKCL's Joint Venture - OKCL.

The first batch learning of Sundargarh comprising 608 learners commenced. Additionally, the program was accepted by District Magistrates of Jajpur & Angul districts of Odisha to offer the course for welfare of mining-affected students by signing agreement with MKCL's Joint Venture - OKCL. Over 2000 learners took admission in JRPY. Learners have started earning through digital & freelancing skills acquired from the course through roles such as Video editor, Data entry, Web design, etc. Female enrollment in this program is around 50%.

The **Skill Development Mission Management (SDMMS) Framework**, developed by MKCL to manage the State Skill Development Missions, is successfully integrated with Government of India's Ministry of Skill Development and Entrepreneurship's **Skill India Portal**. This integration allows seamless flow of data from the State portal to the national portal and vice versa.

**Assam Skill Development Mission (ASDM)** is implementing its all skill development programs in the state of Assam with the help of MKCL's SDMMS. There are more than 300 training partners, 900 training centers currently on this framework in the state of Assam.

### ***Shramik Panjikan Application:***

An unprecedented year 2020-21 saw a massive reverse migration of workers from different states back to Bihar during nation-wide lockdowns due to Covid-19 pandemic. Upon the request of the state government, MKCL created a single window platform to register the details of the home coming workers. MKCL created a 'Shramik Panjikan' Application in record time and launched on May 28, 2020. The application collected not only basic data but also skill data of the workers with their migration frequency. More than 12,00,000 workers have been registered in the application. A skill gap analysis can, therefore, be done in addition to providing appropriate support to the migrant workers.

## **13. School Education Transformation Program:**

### ***a. Cloud based comprehensive Learning Management System – MKCL's ERA for educational institutions:***

With a focus on empowerment and transformation of school education and after having done in-depth analysis of the challenges faced by the teachers while managing the learning of students during Covid-19 period, MKCL has developed a comprehensive cloud based learning management system - MKCL's ERA to offer meaningful, joyful learning experience to students in coming academic year as well as thereafter.

MKCL's ERA LMS is designed and developed with an objective that the teachers can adapt and implement it easily, the learners find it engaging, the government norms are complied, the parents find it reliable, and the institution management as well as parents find it economically viable.

MKCL's ERA is an integrated system catering to learning, teaching, formative and summative evaluation, learner facilitation and learning management. It offers features that are essential for all the stakeholders in school and college education i.e. the students, parents, teachers, principals, institution administration, government and also the strata of society that is closely associated with the colleges/schools etc.

In post-Covid time, when the physical classroom-based education in institutions resumes, students would be present in the physical classroom. Appropriate blended (physical+virtual) learning would then be needed for effective implementation of educational goals and to respond to the challenges and opportunities of the twenty-first century and this would make appropriate use of ERA inevitable and pertinent.

This year 102 Institutions, with approx. student count 18397 have started using cloud based MKCL's ERA LMS. The institutions include ZP schools, Ashramshala, Junior colleges, Senior colleges, Engineering colleges, Private training institutes, etc.

### ***b. Smart School***

A new educational offering for standard 1st to 8th is launched with 'learning through assessment' approach supported by learning content. With a plan to establish alignment with STEAM, this year, focus has been given to launching of subject-wise offering for Science, Maths, English, and Marathi. This offering gives access to assessments as well as learning content of previous grade to the student in case learning loss due to 2-year school lockdown is identified through the answers attempted by the student for current grade.

## **14. eGovernance Business Development Program:**

eGovernance Business Development Program continued to design, develop and successfully deploy very imaginative, pervasive and appropriate applications of Information Technology for transforming governance and empowerment opportunities for a large and diverse population with world-class quality, at a very affordable cost, with widest accessibility from metros to rural, tribal and hilly areas and in a just-in-time manner with a deeper personalized service experience on a mass-scale.

### **14.1. Labharthi:**

'Labharthi' is developed to bridge the communication gap between the government and citizens and to make aware poor and deprived citizens about the Welfare Schemes, Subsidies and entitlements. All benefits and entitlements are presented not as a repulsive heap of general and unusable information of schemes but in an absolutely personalized and citizen-welfare-centric manner. The portal generates a comprehensive list of benefits specifically applicable and easily understandable to the user whose

profile has been submitted on the portal. The list gets dynamically updated in case of introduction of new schemes, amendment in existing schemes, and when the profile is updated by the citizens. The portal also guides the citizens on how to access or acquire the benefits. More than 1.8 Lakh citizens have taken the benefit of this portal.

#### **14.2. VanMitra ('वनमित्र'):**

The Forest Rights Act (FRA), 2006 recognizes the rights of the forest dwelling tribal communities and other traditional forest dwellers to forest resources, on which these communities were dependent for a variety of needs, including livelihood, habitation and other socio-cultural needs. The forest management policies, including the Acts, Rules and Forest Policies of Participatory Forest Management in both colonial and post-colonial India, did not, till the enactment of this Act, recognize the symbiotic relationship of the STs with the forests, reflected in their dependence on the forest as well as in their traditional wisdom regarding conservation of the forests.

MKCL has been working on digitizing and expediting the allotment of Individual Forest Rights (IFR) to the rightful citizens under the software product branded as "MP VanMitra" in the state of Madhya Pradesh. Till now Madhya Pradesh government has issued more than 34000+IFR certificates through MP VanMitra and distributed across the state. This activity has led to a logical movement in initiating registration of Community Forest Rights (CFR) on the MP VanMitra portal. The portal shall see a roll out for Community Forest Resource Rights (CFRR) and Habitat Rights (HR) of Particularly Vulnerable Tribal Groups (PVTGs) in a phased manner. Till now more than 5 Lakh tribal people have used MP VanMitra Portal.

#### **14.3. Secured e-Tendering System (SeTS):**

This is a proven solution for e-Procurement and e-Auctioning. The solution is being used by many organizations in public, private and cooperative sectors for over a decade for procurement of goods and services. Till now SeTS processed tenders worth more than **8 Billion+ US Dollars (INR 51,556 Crores+)** collectively in a timely, transparent and secured manner with significant reduction in procurement life-cycle and procurement cost. Over the year SeTS has evolved as state of the art solution for secured online tendering.

#### **14.4. eAuction**

MKCL's eAuction portal allows for bidding, and auctioning online. This portal is used extensively by Government of Haryana for auctioning residential and commercial plots for General / BPL / EBS categories. The product is improved with new features which brings more transparency and speed in the system. Now the department can conduct multiple auctions at a time. The robust framework allows for multiple rounds of auctions for sale of multiple properties. Haryana Government took a decision to process residential and commercial plots auctions under Housing Board using this new improved auction system. This fully automated system allows for auto refund of EMD to unresponsive customers making the entire process user-friendly.



#### **14.5. SugarMart and EduMart:**

Perfect competition is only achieved when there are large number of buyers and suppliers. Providing for such a facility in the Digital Age was made available since sugar factories insisted that newer suppliers must participate in competitive bids. On the other hand, suppliers are always looking for procurement tenders from sugar factories for the items in which they deal. This perfect handshake was made possible by MKCLs SugarMart which is a single eProcurement B2B platform. Till now 4800+ tenders were processed and 1350+ suppliers are registered on this platform. Based on the success of SugarMart, MKCL has also launched the EduMart for Educational Institutions. Till now 97 educational institutes including universities, colleges, autonomous colleges, schools are processing their tenders through this platform and MKCL have made them available pool of 1300+ suppliers.

#### **14.6. Digital Legislature Framework:**

MKCL has conceived, designed and developed a comprehensive framework for automation of key workflows of Maharashtra Legislative Secretariat (MLS). It is being continuously enhanced over a decade.

The Members of Legislative Council and Legislative Assembly submit Legislative Assembly Questions (LAQs) online using their login, MLS staff members processes the LAQs and concerned Government Department submit their replies online. The entire life-cycles of LAQs and other legislative devices take place online by reducing paper work, communication gaps and inordinate delays. All assembly sessions - Budget, Monsoon and Winter - of the Maharashtra Legislative Assembly and Council have been successfully managed through this framework even during the lockdown due to pandemic in the year 2021-22 wherein the sessions could not be conducted physically.

The functionalities of this Digital Legislature Framework were demonstrated to be extensible and adaptable to the rules of business made applicable during lockdown. This especially included starred questions processing, their charts and ballot related processing to function smoothly despite the session period curtailing, cancelling and re-submissions due to postponement of sessions' scheduled dates. MLS have mentioned about the software developed by MKCL in their revised version of मार्गदर्शिका published for Hon'ble members of Upper and Lower house of Maharashtra Vidhan Mandal.

MKCL continues to provide customization and maintenance support for this Digital Legislature Framework during the second decade.

#### **14. 7. Government Employee Online Transfer System (GoOnTransfer):**

This system has been developed to implement transparent online transfers of Government Employees from various departments in a mass-personalized manner by giving them postings based on the fulfilment of certain eligibility criteria and their preferential choices of locations. The system is customizable as per the changing rules of Government Departments from time to time.

The transfer drive operates through several stages as per transfer policy of a particular department. The system seamlessly processes the complex personalized set of rules to transfer the employees

transparently. Employees receive their transfer orders digitally on the declared dates with a completely transparent allocation log. The transfer processing system has a built-in relieving and joining system.

This system is being successfully used for transfers of thousands of teachers in Haryana over last 3 years and has been widely used and acclaimed by the 98,000+ teachers and administrators. While improving the quality of service to all stakeholders, it has not only cut down hassles, cost, delays and communication gaps but also plugged of the sources of age old corrupt practices.

**MKCL has also designed, developed and delivered the following state-of-the-art software frameworks for transformative solutions and services for eGovernance over the years:**

1. MKCL's MyPortal (for developing web portal of any organization)
2. MKCL's Universal Payment System (UPS) for Partners and Customers
3. MKCL's IT Assets Tracking System
4. MKCL's My Society – a Housing Society Management Framework
5. MKCL's eVidyalaya Framework for managing and monitoring large networks of schools
6. MKCL's Statewide School Network MIS Framework for State Governments
7. MKCL's Framework for Document Archiving for Large Public Libraries
8. MKCL's Framework for Document Access Management for Large Public Libraries
9. MKCL's Skill Development Mission Management Framework
10. MKCL's 'Career for You' and 'First Job' Frameworks for Placements Management

## **15. International Business Development Program:**

### **15.1. MKCL's Online Examination System:**

MKCL's products are promoted in the Kingdom of Saudi Arabia and Egypt by its joint venture company, MKCL Arabia Ltd. While MKCL is the knowledge and technology partner, MKCL Arabia is the business promotion and implementation partner.

MKCL's Online Examination System, promoted under the brand name - MKCL's ExamLive, is empowered by MKCL's proprietary Secure Browser and other advanced features such as Black Box for evidence-based assessment and AI-enabled meta-proctoring. The examinee can be appearing for the exam remotely from anywhere in the world. MKCL's ExamLive framework is robust enough to conduct examinations of 4 lakh concurrent users. MKCL's ExamLive supports Bloom's Taxonomy to conduct meaningful objective assessments at different levels. As such the assessment of six levels of hierarchy of educational objectives viz. Knowledge, Comprehension, Application of Knowledge, Analysis, Synthesis and Evaluation can be conducted by using MKCL's ExamLive.

MKCL ExamLive supports various attributes of a question or assessment item such as Learning Ability; Bloom's Taxonomy Level; Learning Objective; Paper/Subject – Unit – Chapter; Difficulty Level; Type of the Objective Question; Author Details; Date of Creation/Revision of the Question, etc.

The objective questions may take the form of: Multiple Choice Single Correct; Multiple Choice Multiple Correct; Comprehension; Match The Columns; Picture Identification; Multimedia; Scrambled Sentences; Sequencing; Hot Spot; Word Cloud, etc. The framework also has the capability to ask questions in 8 languages including Sanskrit and Arabic.

In the last year, several Educational Institutes including Universities (in India and outside India) used MKCL's ExamLive to conduct their high-stake final examinations. The light weight framework made it possible even for rural students having poor bandwidth to complete the exams in a hassle free manner. MKCL's Exam Live made it economically viable for the Examining body and the students because the logistics cost of conducting / appearing for the examination was reduced significantly.

MKCL's ExamLive has been chosen as the official framework to conduct examinations in the public and private educational institutions across Saudi Arabia. MKCL's framework came up as a winner of 4 major country level projects in Kingdom of Saudi Arabia and Egypt. The Ministry of Education (MOE), Saudi Arabia, collaborated with MKCL Arabia Ltd. for implementing MKCL's ExamLive to conduct online exams of 6 Million students annually in 40000+ schools across the Kingdom of Saudi Arabia.

MKCL's Exam Live framework which is white labeled as 'Ekhtibar' for the Ministry of Education in Kingdom of Saudi Arabia, has received a prestigious Award of Excellence at the "World Summit on Information Society" WSIS 2022 for successfully conducting online examination for around 6 million K12 students enrolled in private and public schools in the Kingdom of Saudi Arabia.

MKCL's ExamLive is also used to conduct the online exams in the Government Medical Universities across Egypt under the authority of Supreme Council of Universities and Ministry of Higher Education, Egypt. MKCL's Exam Live is also used to conduct the online exams at Al Azhar University Egypt and Nationwide Online Common Entrance Examination for the National Universities of Egypt for the faculties of Arts, Humanities, Engineering and Medical.

MKCL's ExamLive set international benchmarks by successfully getting load tested by HPs Load Runner Software for concurrent 4 lakh users. It has been certified by the Information Security Department of Ministry of Education, Kingdom of Saudi Arabia by passing the Software Security related Vulnerability Assessment and Penetration Test in March 2021.

## 16. MKCL on MOOCs:

MKCL also reached international learners by releasing its innovative courses on the international online learning marketplace - udemy.com. The statistics for the FY 2021-22 is given below:

- **28 Courses**
- **1,50,000 + Enrolments**
- **Learner Enrolment from 190 Countries and**
- **Learners Speaking 59 Distinct Languages**

The sudden lockdown forced billions of people around the world to work online. In order to ensure seamless transition from “physical” to “virtual”, MKCL propagated courses on Udemy such as “How to be a Smart Remote Worker”. The world also saw millions of educators suddenly having to teach “Online”. MKCL enabled them by offering a course on Udemy on “How to be a SMART Teacher”.

17.

## Products in New Exponential Technologies Business Development Program (ProNExT)

### 17.1. School Management System:

From the educational institute's point of view, amidst the uncertainties posed due to the COVID-19 pandemic, there were many management issues regarding online, offline or hybrid class management. The online learning methodology failed to provide a complete solution for institute management to class management. Institutes are facing difficulties in managing institute data as well as overall class work and digitalizing everything for smooth transition even if the hybrid systems will be used in the future. Educational institutions have already adapted themselves for online teaching using various meeting tools such as Google Meet, Zoom, Microsoft Teams, etc. Teachers all over the country had put stupendous efforts to adapt to these tools while teaching. However, despite these efforts, acute difficulties are being faced in the Teaching-Learning-Assessment processes. Now teachers would have to deal with the challenge of conducting a physical and online class simultaneously.

Consider a teacher using the messaging app for informing the timetable with the students and then using various meet apps for conducting the classes and explaining a concept using a blackboard in front of the class and behind a smartphone. Also, visualize a teacher tracking individual students' progress, addressing their difficulties, and providing inputs when needed. Then again for assignments using other services or messaging apps and collecting all answers through that and keeping track of all every time. Just imagine how difficult it will be! Further, the teacher who is comfortable with chalk, marker, or pen is now given a computer mouse to write and draw.

At the same time, students might have difficulties keeping track as well. As he also has to check multiple apps for multiple things. He might miss out on some things or may lose interest.

MKCL developed a new product MKCL New LMS to address the various challenges being faced by Institutes, Teachers, Students, and Parents. The New LMS bridges the gap between teacher delivery and student learning. It ensures the proper management of the Institute and provides all needed services in one place. It gives single solutions for many other issues like timetable displaying, noticeboard (notifications), tests, assignments, online lectures, and student progress tracking. It makes online institutes unified and manageable in a single place. The New LMS is reaching different institutes and it already reached many this year. New LMS has reached a wide range of the Institutes like colleges, schools, Corporate or ZP schools, University Departments, and even open universities.

## **17.2. Low Code Environment Creation:**

The world has seen the Covid 19 pandemic which pushed the world towards more online working but along with that world is also moving towards low code development which eventually might be transformed into no-code development. Gartner also predicts that 65% of the app activity will result from no-code development by 2024.

The world is moving towards no-code development and technology is advancing day by day. The repetitive mundane tasks that coders do while coding can be eliminated by the use of applications. The IDE increased the ease of the code but that can be made even faster. Which will give the coder time to focus more on the logic.

The Core studio delivers the same. It creates the Low Code environment to prevail on the road towards a no-code environment. It decreases the repetitive tasks and the modules give the ability to reuse the code so that function writing time will be saved. It gives the option to add different functions, the microstructure architecture can be used to do it. Core studio enables collaborative work.

The Core studio is getting ready with different modules which give different abilities to the company. It has multiple databases which cover MongoDB, MySQL, SQL Server, GraphDB, and even File Database. Also, Core Studio comes with 18 plugins to help in faster API creation. It has an API testing tool so no other tools are required for that and it has version control so that the developers can work on their own copy with branch management.

Approx. 253 in-house developers have used Core Studio and they have developed around 144 different software projects which include training, testing and production projects.

## **18. IT Infrastructure Development:**

In order to offer continuity of availability of the servers, accesses to databases during the lockdowns due to Covid-19 pandemic, MKCL's IT infrastructure has modified the Security Enhancements under hybrid working pattern i.e. work-from-home plus work-at-workplaces.

In order to secure the information assets under Work-from-Home conditions, VPN based accesses have been enabled, network access control software has been implemented, and vulnerability of our network and websites have been internally and externally assessed and mitigated. Automated VAPT has also been provided.

Implemented Cloud based Antivirus so that the employees' systems will get automatically updated remotely and ensures the system is protected whenever system is outside the MKCL network.

Now we have our own private cloud with own servers collocated at tier 3 Data Centers in Mumbai and backups are also automated with offsite location. We are also using public cloud like AWS, Oracle cloud, Hetzner cloud with secure connectivity.

For smoother user experience we have moved our CDN servers to Oracle Cloud after study which also helped in saving cost and easy backups due to heavy size of CDN data.

For increased reliability and security, a separate virtualization layer on staging and production servers

was found to be required. The IT Infrastructure team researched on cost saving solution in the form of an open-source virtualization layer (XEN Projects) and implemented the same successfully which allows to deploy latest version of Operating systems in Virtualization layer.

Surprise security audits for various programs: this exercise was carried out for all programs wherein their IT infrastructure related arrangement was given a quick study and audit was performed in term of data security and any non-following of data security related compliances. This particular exercise ensured the programs are following all the compliances.

We are also using AWS cloud wherein we have done cost optimization by changing Storage type from GP2 to GP3 which saved 20% cost on storage part.

## **19. Artistic Creations Program:**

MKCL's Artistic Creations Team (ACT) creates digital artefacts such as illustrations, icons, design templates, landing pages, cover designs, etc. They beautify the websites, presentations, documents and other marketing collaterals. ACP Team also supports content creation for English language communication and soft skills courses. In order to make the content more engaging, ACP team members produce and direct non-fiction and fiction videos. They conduct a photoshoot of the users in their real settings. They creatively edit videos for various eLearning products and advertisements of MKCL.

The digital space is a new landscape for Art Teachers. In order to improve the skills of Art Teachers in their personal and professional life, MKCL has created an eLearning course, KLIC Certificate in IT for Art Teaching. The course also attempts to inspire them to be a life-long learner of art education.

MKCL's Artistic Creations Team (ACT) has also developed the Art Inclination Test.

### **19.1 MKCL's Indian Art Mart (Dezinerootz):**

With a view to improve visibility of Indian artefacts in online marketplaces, MKCL regularly develops Digital Artistic Artefacts such as of illustrations, vector graphics, icons, artistic backgrounds, photographs, etc. related to the symbolism in Indian Art and Culture. These digital artefacts were uploaded on various stock images websites of Adobe stock and Shutter stock for all users across the globe.

Some images were purchased by users on repetitive basis. Some images have been sold more than 80 times on these portals. The sale was about 467 Indian Artefacts in the FY 2021-22.

This is one of the many ways to increase the use of Indian imagery all over the world. It is MKCL's modest effort to propagate Indian arts and its rich cultural heritage all over the world.