NITTE EDUCATION TRUST | NMAM INSTITUTE OF TECHNOLOGY

STRATEGIC DEVELOPMENT PLAN

2021-2026

Message from President, NET

Nitte Education trust was formed in the year 1979 and the NMAMIT was established in the year 1986 under the Mangalore University and affiliated to VTU since 1998.

The college started with four disciplines and grew in to well recognised institution for imparting quality technical education. The college has attained autonomous status in the year 2007 and has set its sights very high with a logical aspiration to be the best among its peers.

Towards realising this, NMAMIT has set in motion number of forward-looking initiatives. Right now, the college has 07 engineering departments, more than 300 committed faculty and 11 research centres under the aegis of VTU. Two more Engineering Departments will be started during 2021-22 namely Dept. of Artificial Intelligence & Machine Learning and Dept. of Computer & Communication Engineering and another Department of Robotics and Artificial Intelligence will be started during 2022-23. The Institute is NAAC accredited with A grade and all its undergraduate programmes are NBA accredited. During 2020 NIRF ranking, the Institute stood at 133rd position. This strategic Development plan would act as guiding documents for the next six years to take the institution towards delivering high quality technical education there by earning recognition of best technical institution of repute. SDP's main focus would be on good governance, best in class teaching-learning, research & innovation and highly employable students who act as brand ambassadors for the institution. I congratulate and commend the high-quality work done by the Principal, Deans, HOD's, Faculty and staff in this regard.

Wishing all the success!

Place: Nitte   **Vinay Hegde**

Date: 01 April 2021

Principal's Message

NMAMIT is one of the well recognised engineering college in Karnataka. Congratulations on lunching second editions of Strategic Development Plan of NMAMIT. It is heartening to note that Deans, HODs, Faculty and Staff have participated in formulating well defined strategic plan 2021-2026.

NMAMIT has 09 disciplines with 4514 students in undergraduate, 610 students in PG and 110 research scholars in 10 disciplines. The theme for this strategic development plan covers all good governance aspects of the institution.   NMAMIT will achieve the status of most preferred institution for pursuing technical education. The strategic development focuses in formulating institutional goals, strategies, and departmental long, mid & short-term goals. The key performance indicators of SDP are its implementation and evaluation aspects.

I place on the record, committed management support, Deans, HODs, Faculty and Staff's active participation in making this SDP possible.

With Best Wishes !

Place: Nitte   Prof Niranjan Chiplunkar

Date: 01 April 2021

Message from Dean(Academics)

Institution has been continuously working to meet objectives with main focus on improvement of infrastructural facilities, modernization of all laboratories with state of art equipment and training the faculty through faculty development programmes and organizing International / National Conferences and Workshops. Faculty members are encouraged to upgrade their qualification and efforts are made to improve learning outcomes and employability of graduates.

The Institute has implemented good governance initiatives at all levels focusing on the improvement of the quality of learning, teaching and research outcomes. Good governance focuses on effective leadership, planning, ethics, responsibilities, and accountabilities, both within and outside the institution. To achieve this, an attempt has been made with the involvement of management, all heads of the departments and senior faculty members to prepare a second edition of Strategic Development Plan ie., for the term 2021-2026.

I am sure SDP will definitely give us direction & confidence in accomplishing vision and mission of our Institution.

Wishing all the best !

Place: Nitte   Dr. I.R.Mithanthaya
Date: 01 April 2021   Vice Principal & Dean (Academic)

Message from Coordinator of IQAC

At the outset, I am very much thrilled to be a part of the preparation of this edition of Strategic Development Plan for the year 2021-26. This work would not have been possible without the support from all the senior functionaries of the Institute. Data has been collected from all the departments and discussions were held before arriving at this document. I wish to thank our advisor Prof. Gopinath and Director IIC Prof. Parameswaran for the timely inputs in preparing this document.

Wishing all the best !

Place: Nitte   Dr. Subrahmanya Bhat
Date: 01 April 2021   Coordinator, IQAC

Acknowledgements

       We place on record our deep appreciations and thanks to the Management, Deans, HODs, Faculty, Staff and students for their valuable inputs and active participation towards formulating this edition of "Strategic Development Plan 2021-2026".

Place: Nitte   **Prof. Niranjan Chiplunkar**

Date: 01 April 2021   Principal

Overview

Strategic planning is a continuous process with a specific focus on accomplishing short, mid and long-term goals in this highly competitive world. Strategic Development Plan (SDP) analyses current situation and future scenarios and envisages the direction of the Institution towards achieving its vision and mission.

The first part of SDP is revisiting vision, mission and working on bringing out a good quality policy along with core values. These are achieved through many deliberations with all the stake holders (management, leadership, HODs, faculty, staff, industry, students and parents). Scientific scanning of internal and external environment is done through SWOT exercise. After scanning the environment, institutional goals were set up and strategies to achieve them are arrived at for the institution. Based on institutional strategic goals, departmental goals are drawn by holding brainstorming sessions with HODs. Twelve Institutional strategic goals and strategies are formed with action plans. The process of implementation is worked out and circulated to all the departments. Financial budgets and allocations are worked out along with time lines which are maintained separately by the Head of the Institution. SDP evaluation and committee to monitor the effectiveness has been clearly spelt out. The final out comes are discussed and approved by the Board of Governors (BOG).

It is highly exhilarating to note that most of the inputs are drawn from stake holders through active participation and collective inputs. The SDP enhances the capability of the Institution in delivering results to all the stake holders. NMAMIT will no doubt grow and be a torch bearer in technical education for many decades to come thereby leading to accomplishing its mission and vision. During the formulation of the first SDP 2016-21, we had put in lots of effort in bringing out a quality plan document, which came to us very handy in preparing this second edition. Careful evaluation of the implementation of plans put forth in SDP manual 2016-21, reveal that about 70% of the set targets were achieved. New programs in emerging areas have been started. Industry interaction has improved. More research papers are getting published every year. Institute obtained NAAC A grade. Good rankings in NIRF is also an achievement. This is a great sense of satisfaction to all of us. With this accomplishment, we have now prepared the SDP manual 2021-26.

About the Institution:

NMAM Institute of Technology was founded in 1986, in memory of **Nitte Mahalinga Adyanthaya**, a distinguished engineer of the district. The institute is located at NET Campus at Nitte, 53 kms. away from Mangalore. The campus is spread over a sprawling area of over 110 acres. Nitte is easily accessible by road, rail and air.

NMAMIT is one of the Institutions under Nitte Education Trust, Mangalore affiliated to Visvesvaraya Technological University. Nitte Education Trust was founded by late Justice K. S. Hegde, a well-known judge of Supreme Court and former speaker of Lok Sabha. Nitte University, a NAAC A+ accredited University runs about 25 Institutions in various areas of education from primary school to post-graduation, including professional courses like Medical, Nursing, Dental, Paramedical, Engineering, Management, and others.

NMAMIT was affiliated to Mangalore University from 1986 to 1998 and was brought under the umbrella of Visvesvaraya Technological University (VTU) Belgaum 1998 onwards. In 2007 the Institution obtained the Autonomous Status under VTU Belgaum.

Under Graduate Programmes	Post Graduate programmes
Civil Engineering	Master of Computer Application
Mechanical Engineering	Master of Business Administration
Electrical & Electronics Engineering	M.Tech in Energy Systems Engineering
Computer Science & Engineering	M.Tech in Computer Science & Engineering
Information Science & Engineering	M.Tech in Construction Technology
Biotechnology Engineering	M.Tech in VLSI Design & Embedded systems
Artificial Intelligence and Machine Learning	M.Tech in Machine Design
Computer and Communication Engineering	M.Tech in Structural Engineering
Electronics and Communication Engineering	

The annual intake of our UG programmes is 1140 (excluding 5% State SNQ quota, 15% Central NIR quota and 10% lateral entry in some branches). The annual intake of PG programme is 421 (MCA, MBA, M.Techs). All our Under-Graduate Programmes are accredited by National Board of Accreditation (NBA), New Delhi. We have applied for the NBA reaccreditation of MBA programme. The Institute is NAAC accredited with A grade (CGPA of 3.11 out of 4). During NIRF 2020, the Institute is placed at 133 position. QS-I-GAUGE has awarded diamond rating to the Institute during 2019 which is valid up to 2022.
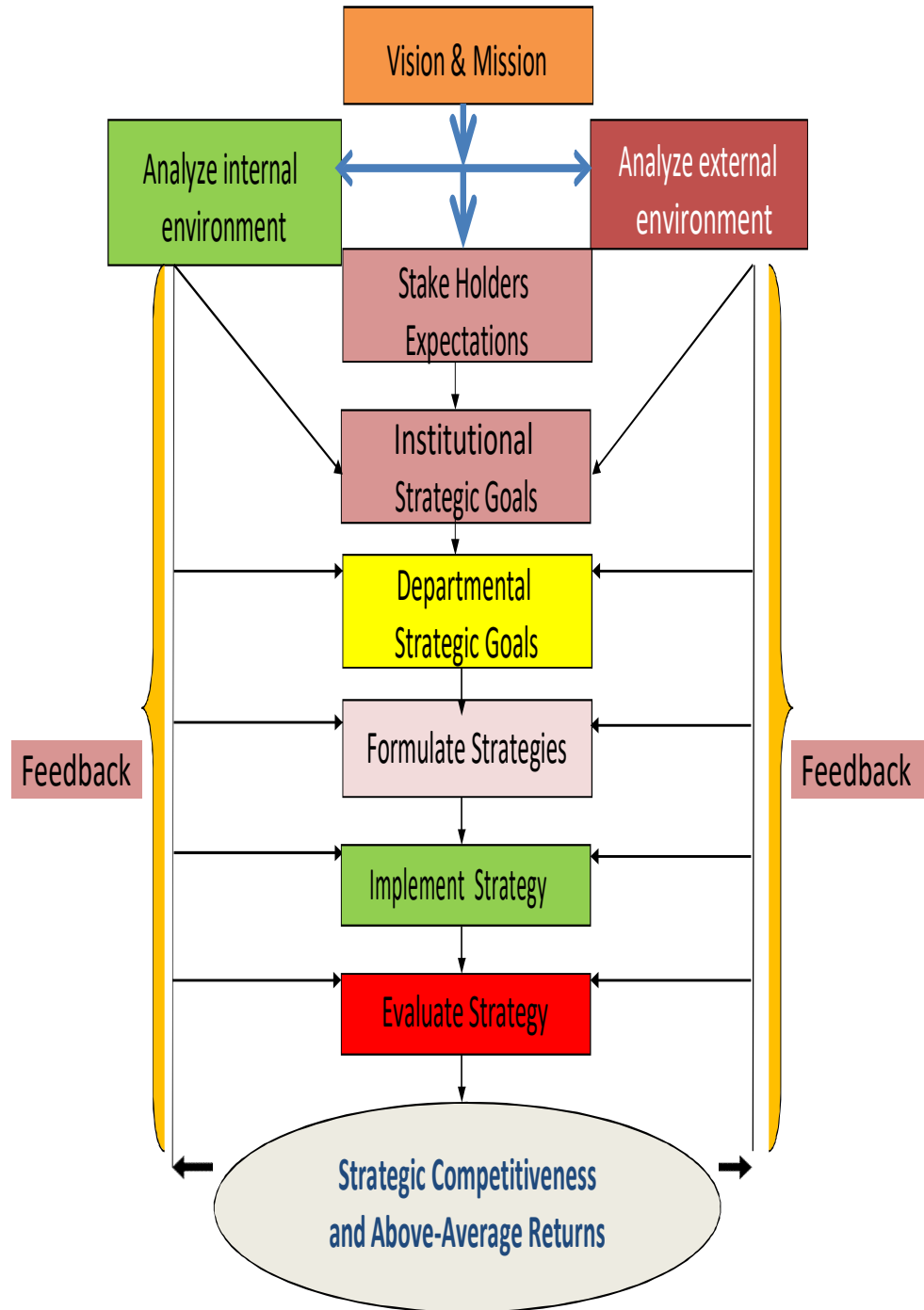
QS-I-GAUGE has also awarded E-LEAD certificate to the Institute considering the online interventions introduced and implemented in the Institute. AICTE-CII has awarded Platinum category recognition to the Institute for successive three years i.e., 2018,2019 and 2020 looking at its Industry connect. Our Institution is certified to ISO-9001- 2015 standards by NVTQC, Bangalore - for the quality education standards.

The Institute has 348 faculty members out of which 52 are Professors, 49 are Associate Professors, and rest are Assistant Professors and lecturers. 116 Faculty members are with Ph.D. qualification. As of now 102 faculty members are doing their Ph.D, There are 330 nonteaching Technical, administration & support staff.

All departments of our institution are recognized Research Centres of VTU, Belgaum. Our faculty have published about 260 technical papers in National/International Conferences/Workshops and Journals during 2020 which are either scopus indexed or WoS indexed. The Institute has received more than Rs1.5crore worth funded research projects in different departments, during 2021-22. Institute has excellent infrastructural facilities which include spacious and air-conditioned class rooms, seminar halls, well equipped laboratories, auditorium, large playground, Indoor stadium, Hostel rooms with twin sharing attached bathroom, 3 bank ATMs, Post office, emergency medical facility & Guest house. All class rooms have LCD Projectors, internet connection & access to Moodle intranet e-learning facility. Wi-Fi facility has been extended to the Hostels. The Institute has 1 Gbps Internet leased line connectivity.

Central library has been equipped with digital library features & subscribes to 500 + online journals through INDEST and DELNET. More than 1900 technical CDs and 800 learning resources (multi media CDs) have been loaded on to digital server to provide access to all students anywhere in the campus. As on date, the Library possesses 55560 volumes in total.

Strategic Development Plan Process Diagram

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                        │ Vision & Mission │
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┌──────────────────┐                      ┌──────────────────┐
│ Analyze internal │◄───────────────────►│ Analyze external │
│   environment    │                      │   environment    │
└──────────────────┘                      └──────────────────┘
                        ┌─────────────────┐
                        │  Stake Holders  │
                        │  Expectations   │
                        └─────────────────┘

                        ┌─────────────────┐
                        │  Institutional  │
                        │ Strategic Goals │
                        └─────────────────┘

                        ┌─────────────────┐
                        │  Departmental   │
                        │ Strategic Goals │
                        └─────────────────┘

     Feedback           ┌─────────────────┐          Feedback
                        │ Formulate Strategies │
                        └─────────────────┘

                        ┌─────────────────┐
                        │ Implement Strategy │
                        └─────────────────┘

                        ┌─────────────────┐
                        │ Evaluate Strategy │
                        └─────────────────┘

                  Strategic Competitiveness
                  and Above-Average Returns
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<u>Strategic Development Plan process methodology:</u>

During our Strategic development planning for the year 2014-2020, we had used a process flow plan which was well appreciated and showed us a clear path in achieving our plans. Hence we thought of retaining the same even during this iteration. The mandate of preparing the SDP for the term 2021-2026 was given to the Principal by the BoG. The management & top leadership team met and brainstormed on stake holders' expectations.

Institutional strategic goals formed main theme for arriving at strategies and sub strategies. Each Strategy was deliberated and sub-strategies were arrived towards implementation plan. Implementation plan worked out all details such as budget, resources needed and leader responsible to implement with time lines. This implementation is separately maintained by the head of the institution.

Departments play a pivotal role for the institution; hence each department worked out on their vision, mission and short, mid & long-term goals. The implementation plan for the departments also reflected all details such as budget, resources needed as well as leader responsible with time lines.

Strategic Development Plan emphasises on evaluation measures, monitoring team along with deviation steps if any over a period of time. The evaluative components for each stake holder are clearly spelt out along with periodicity of performance evaluation reviews.

The final draft document was discussed with BOG and after its detailed review, the suggestions were incorporated towards its effective implementation.

Vision Statement

- Pursuing excellence,
- Empowering people,
- Partnering in community development.

Mission Statement

To develop NMAM Institute of Technology, Nitte , as Centre of Excellence by imparting quality education to generate competent, Skilled and Humane

Core Values

Manpower to face emerging Scientific, Technological, Managerial and Social

Quality Policy

Challenges with Credibility, Integrity, Ethics and Social Concern.

Core Values

- ☐ Professionalism
- ☐ Integrity
- ☐ Team Work
- ☐ Innovation

STAKE HOLDERS EXPECTATIONS

Management	• Brand • Expansion • Social Service/ Responsibility
Leadership Team	• Committed Management • Best Faculty • State of the art Infrastructure • Best Results
Faculty & Staff	• Good academic and work ambience • Best compensation & benefits • Good Students input
Students	• Best teaching- learning • Good placements • State of the art infrastructure
Parents	• Best teaching- learning • Disciplined and well developed students • Good placements
Industry	• Highly Skilled – employable students • Character with right values
Society	• Good Citizenship • Society builders

External environment analysis

Economic Factors are analysed. GDP of the country determine job market and number of students getting placement. If Placements get affected; this will have a direct bearing on admissions, particularly management quota.

Social Factors are analysed. Large parenting community is focussing on job-oriented courses only but not on real education. This may pose great danger for pursuing quality learning on the part of the student. Only placement focussed learning may dilute academic standards.

Technological Factors were discussed and use of technology in teaching- learning may have to be extensively used for higher effectiveness, meeting competition and to save time. Syllabus review to match concurrent technologies needs a re-look on the curriculum revision on a periodical basis. Emerging technologies are posing challenges in training faculty with latest changes happening in the industry. E-learning /online learning/online examination may replace traditional class room teaching-learning practice in near future.

Political Factors at the state level looked more stable and not many changes due to this factor. However clarity on admission policy from government could be a challenge. Higher education is getting a big priority from political decision making.

Regulatory Factors are more or less stable. NMAMIT is autonomous, and affiliation to Nitte University may be considered in the near future. New National Education Policy framework demands various growth factors and the Institute has to embark upon many of these.

Market /Competition Factors are posing some challenges as many Deemed /Private state universities- Industry lead universities / engineering colleges are getting started in many states. Other states inflow may be less and may affect admissions.

Institution - Internal Environment Analysis :SWOT

Strengths	Weaknesses
• Good Brand • Committed Visionary Management • Autonomous • Best Faculty • Decades of Expertise • Good placement • Good Campus & Infrastructure • Recognized Research Centers • Rural Location giving very good ambience for studies	• Geographical disadvantage to attract excellent staff and students • No control over selection of students • Even though academically autonomous, No full freedom to frame Industry/research oriented curriculum right from the first year • Township Development • Located far away from industries

SWOT

Opportunities	Threats
• University Status • New campuses / Courses in Engineering • Continual education with industries • Innovative learning & teaching • Global initiatives • Use of latest technology • Collaborative Research & Development activities with industries • Developing more Centers of Excellence • Consultancy Opportunities • Incubation facilities	• New emerging Technologies • Competition – Admission of Quality Students • Faculty retention • Continuation of Industry recession • Too many private universities getting started (industry lead)

Critical Success Factors analysis has been discussed at length and the following factors have been identified.

- Best quality students attraction
- Best teaching- learning practices
- Best placement opportunities
- Attraction and retention of best faculty
- State of the art infrastructure

- Industry-institute interface collaboration
- Research & Innovation
- Starting of interdisciplinary programs

Institutional Strategic Goals

Leadership Team having brain stormed vision, mission, quality policy, core values, environmental factors and SWOT analysis, the following high level goals have been identified (HLG) which are also called Institutional Strategic Goals (ISG)

1. Best Governance & Committed Management
2. Developing as an off campus of Nitte University
3. Best administration and physical infrastructure
4. Attraction of Top talented students
5. Developing students with highly employable skills
6. Placements & internships
7. Attracting talented Faculty, Development& Retention
8. Best Teaching-Learning Practices including blended learning
9. Best Research & Development Infrastructure
10. Institute-Industry Collaboration
11. Global Initiatives
12. Institutional Social Responsibility & Extension activities

Out of the 12 Institutional strategic goals mentioned above, 4 are identified as high priority goals for next five years. All possible efforts will be made to achieve these 4 goals namely:

1. Attraction of Top talented students
2. Attracting talented Faculty, Development& Retention
3. Global Initiatives
4. Institutional Social Responsibility & Extension activities

The intent is to give more focus on these four high priority goals which will help the institution for its further growth.

For example, Attraction of Top talented students means attracting students with good CET and COMEDK ranks. By getting good placement, NIRF ranking and academic ambience this may be achieved.

Good infrastructure facilities, good pay package and research focus will attract talented faculty to the institute.

The Institution is planning to join Nitte (Deemed to be University), which will help to start new programmes and courses and also to start new global initiatives.

The current trend needs involvement of Institution in social activities and extension activities. The Institute is already active in this regard. But further efforts will be made to improve the same.

1. **Attraction of Top talented students**

Scholarships

- At the time of admission based on entry criteria
- Based on their academic performance semester / yearly
- Based on best placements / internships

Branding

- Advertisement
- Website professional outlook with latest updates
- Students/Alumni as brand ambassadors

Best Teaching-Learning

- Student centric academic ambience
- State-of-the-art Library with online access
- Outcome Based Education equipped with employable skills

Best infrastructure

- Best model classrooms and laboratory facilities
- High speed Internet facility to students
- Good hostel facility

Extra-curricular & Sports

- Best-in-class infrastructure for indoor and outdoor games / sports
- Rewards / recognition for achievements
- Hobby / professional clubs
- Professional associations (IEEE, CSI, IE, ISTE , ISSS chapters....etc.)

Placements & Internships

- History of past placements and internships database
- Vibrant Alumni Association

2. **Attracting talented Faculty, Development & Retention**

Merit based hiring policy

- Merit based hiring policy approval
- Merit based selections for all cadres

UGC /AICTE scales, Rewards & Recognitions

- UGC /AICTE scales implementation for all cadres /designations
- Rewards & recognitions policy formulation & implementation

Conducive working environment
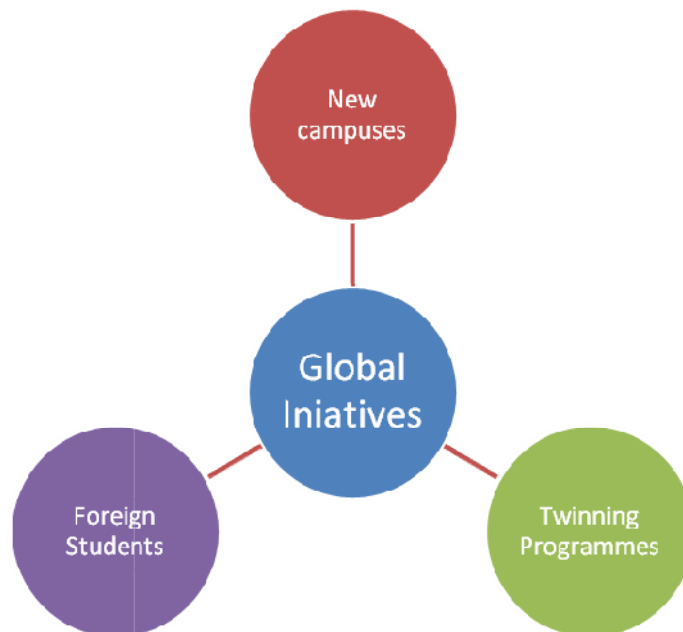
- Best work facilities and infrastructure
- Online access to Library- journals
- Model Township establishment

Career growth & Development

- Sponsorship for higher education with full salary
- Sponsorship to participate in national /international conferences
- Deputation to premier national /international universities/industry

3. **Global Initiatives**

New Campuses / Courses

- Explore opportunities in establishing new campuses in developing countries
- Explore the possibilities of having MoUs with the governments of developing countries

Twinning Programmes

- Twinning programmes with leading universities of developed countries

Foreign Students

- Attracting foreign students from under developed countries

4. Institutional Social Responsibility & Extension activities

![Village adoption icon] **Village adoption**

- Identify nearby villages for adoption
- Explore areas of support

![Vocational training icon] **Vocational training**

- Identify the job oriented courses as per local needs
- Provide vocational training at our institute

![Health and hygiene support icon] **Health and hygiene support**

- Conducting health awareness camps
- Providing free health care to the needy
- Psychological and psychiatric support

![Rural projects icon] **Rural projects**

- Identify societal problems and projects
- Project execution and support services