



**KALASALINGAM ACADEMY OF RESEARCH AND EDUCATION**

**(Deemed to be University)**

**Anand Nagar, Krishnankoil – 626 126**

**STRATEGIC PLAN**

**2017 – 2026**

**VISION**

**To be a Centre of Excellence of International Repute in Education and Research**

**MISSION**

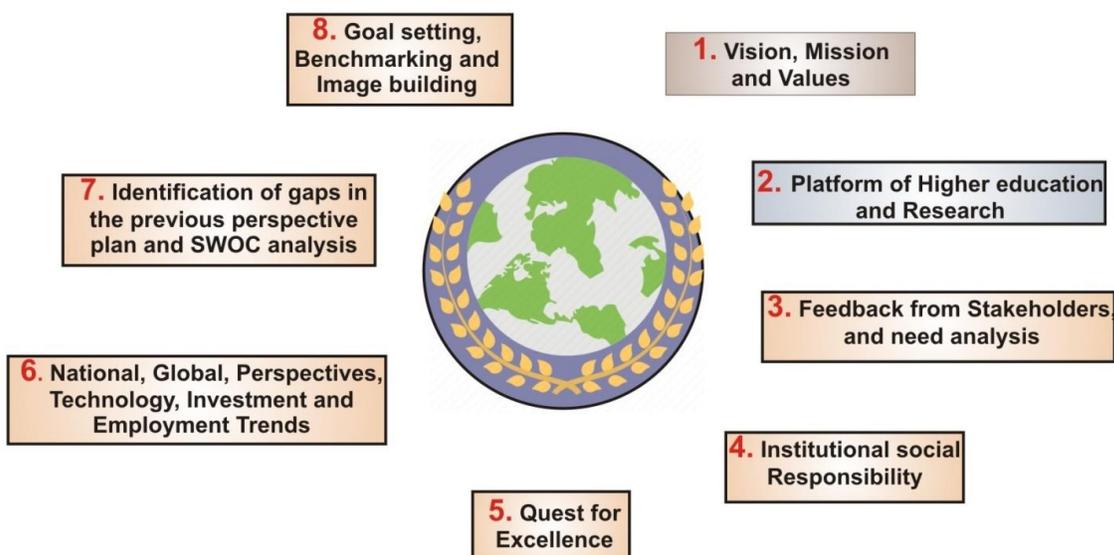
**To Produce Technically Competent, Socially Committed Technocrats and Administrators through Quality Education and Research**

| <b>Prepared by</b>  | <b>Verified by</b>   |
|---|--|
| <b>For Planning and Monitoring Committee</b><br><br><b>Signature:</b><br><b>Name:</b><br><b>Designation</b><br><b>Date:</b> | <b>For Office of IQAC</b><br><br><b>Signature:</b><br><b>Name:</b><br><b>Designation</b><br><b>Date:</b> |
| <b>Approved by</b><br><br><br><br><b>The Registrar</b>  |  |

**STRATEGIC PLAN FOR THE NEXT 10 YEARS**  
**(June 2017 – May 2026)**

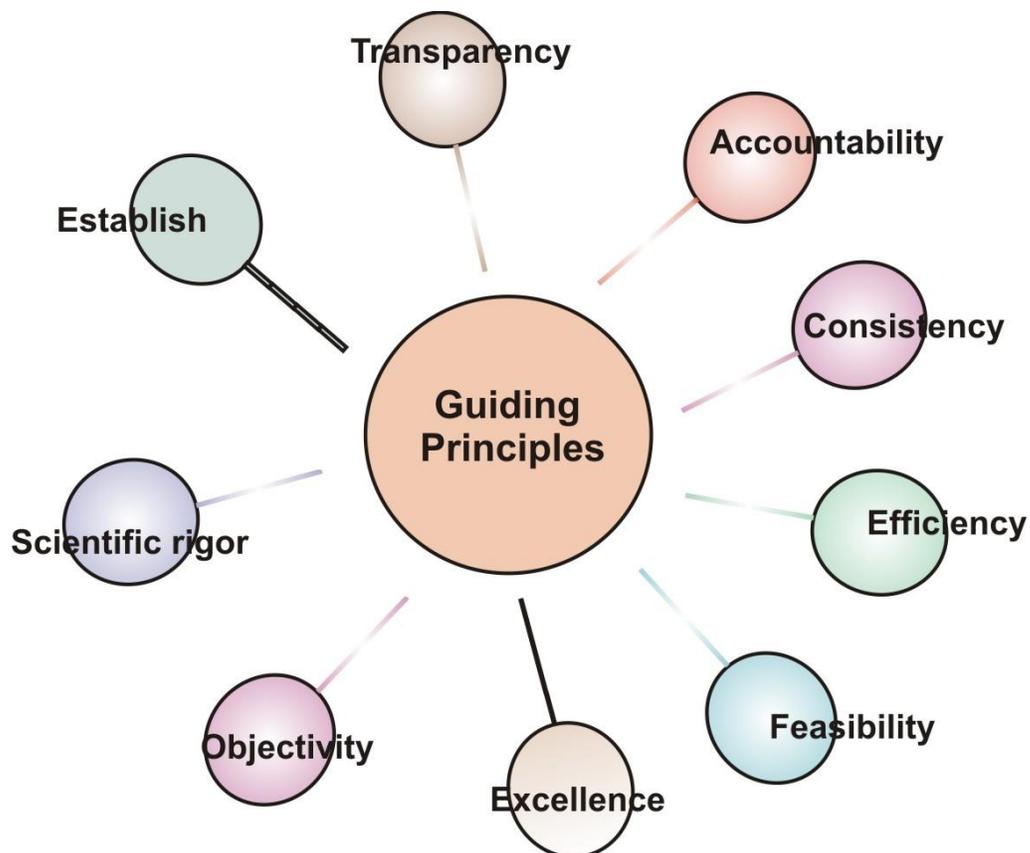
**KARE reflects its commitment to:**

- ❖ Conserving, advancing and disseminating knowledge through teaching, learning, research and creative work of the highest standard.
- ❖ Creating a diverse, mutually respectful academic community with rational and high ethical standards.
- ❖ Placing a strong emphasis on serving our student body.
- ❖ Working to advance the intellectual, cultural, environmental, economic and social wellbeing of the people of state, country and abroad.
- ❖ Providing equal opportunities to all who have the potential to succeed in an Institution of international grade.
- ❖ Engaging with national and international scholars for both education and research to enhance intellectual development, educational quality and research productivity.
- ❖ The development and commercialization of enterprise based on the University's research and creative works.



**KARE aims to:**

- ❖ Be a community of highly accomplished and well supported academic and professional faculty and staff.
- ❖ Attract students of high academic potential and give them an outstanding Institution experience so that they become successful and influential graduates and loyal alumni.
- ❖ Benefit society by conducting and applying research of the highest quality.
- ❖ Develop strong partnerships with key organizations and communities, nationally and internationally.
- ❖ Be an Institute of global standing that serves India, Asia and the World.



## **Objective 1: FACULTY and STAFF**

**A work environment with clear expectations, development of potential, extensiveness, high achievement and rewarding performance**

We have to use innovative employment practices to attract and retain outstanding academic and professional staff from India and internationally experienced staff. We need to provide staff with an environment that develops rewards their talents, and community responsibilities. These things must be achieved in the face of intense national and international competition for staff. However, we will be better placed to do this as the Institute becomes more successful through the achievements of its staff.

### **Measures:**

- Student: academic staff ratio.
- Academic: Professional staff ratio.
- Increasing Postgraduate students
- Introduce many Postgraduate Research program
- Increasing Doctoral students with KARE fellowship.
- Increasing Peer-reviewed publications
- Citations per Scopus.
- Number of prestigious awards held by staff.
- Number of national teaching excellence awards held by staff.
- Proportions of equity group staff in academic and professional positions by expertise and seniority.
- Equal opportunity to women employees
- Creating corpus fund for supporting the young faculty members

### **Key actions:**

- Use innovative employment practices to recruit and retain high performing academic and professional staff, including those from diverse backgrounds.
- Ensure that all staff has clear performance expectations aligned to their roles and prospects of career development in the context of the University's strategy.

- Ensure that all staff has effective and regular performance feedback that links to reward, recognition and future development planning.
- Enhance staff research through fund generation, guiding graduate students, and peer publications.
- Provide career development opportunities and practices that support the aspirations of staff.

## **Objective 2: Distributed leadership**

### **An environment in which distributed leadership is developed and valued**

As a complex and highly devolved organization, the Institute relies on staff providing excellent leadership in relation to a number of activities, academic and administrative, in all parts and at all levels of the organization. It is also important to the University's role as a leading organization that staff provide leadership in their professional capacities outside the Institute and to the wider community, nationally and internationally.

### **Measures:**

- Proportion of staff positive about leadership in staff surveys.

### **Key actions:**

- Develop a clear understanding of leadership expectations at all levels in the University.
- Embed leadership expectations in processes for appointment of staff.
- Determine professional development needs of those progressing to leadership roles and invest in appropriate leadership development opportunities.

## **Objective 3: Student**

### **A diverse student body of the highest possible academic potential**

Leading universities must attract students who have high academic potential, are prepared for Institute study, have the ability to take advantage of degree study

involving critical thinking, problem solving, and research-based teaching, and have a desire to learn and be challenged intellectually.

**Measures:**

- Proportion of school levels entering with 80% of minimum marks and secured scoring of Kalasalingam engineering entrance examination (KEEE).
- Scholarship from Institutional, national (State and Central) and private bodies (including first graduate, Sports quota students).
- Students will be admitted from other state and abroad
- Proportions of domestic students from equity groups at undergraduate and postgraduate levels.
- Numbers of students successfully transitioned into Institute through student equity support initiative.

**Key actions:**

- To provide KARE student fellowship of highly successful of both education and athletes.
- Ensure that the characteristics, aspirations and expectations of the students of high academic potential we wish to attract and retain within the Institute are well understood.
- Ensure that our processes for promoting the Institute to such students and for securing their interest and enrolment respond to their needs and are based on sound research.
- Ensure that we provide the kind of environment, both academic and extracurricular, that is particularly attractive to students of high academic potential.



#### **Objective 4: Student community**

**A substantial increase in annual completions of taught undergraduate, masters, research masters and doctorates**

As the major national center of higher education, universities have a particular role in UG, PG and graduate education. As one of the largest and highest ranked Research Institute in the country, KARE will be a pre-eminent place in this regard. The number and achievements of our graduates have a significant bearing on the University's reputation and ranking, and on our contribution to society.

#### **Measures: The following targets**

| <b>Programs</b> | <b>2017</b> | <b>2026</b> |
|-----------------|-------------|-------------|
| Undergraduate   | 6,000       | 12,000      |
| Postgraduate    | 1,000       | 2,000       |
| Doctoral        | 125         | 700         |

**Key actions:**

- Enhance processes for staff-student enthusiastic interactions such as faculty advisory system / training mentors and allocating students to them so as to maximize the quality of supervision and probability of student success.
- Provide students with clear expectations as to the scope and duration of their studies.
- Support proper mentoring of both undergraduate and postgraduate students to ensure that they complete their programs within the allotted time.

**Objective 5: Teaching and learning environment**

**A high-quality learning environment that maximizes the opportunity for all our students to succeed and provides them with comprehensive, intellectually challenging and transformative educational experience**

Our reputation with students, their parents and families, and our communities rests significantly on the quality of our teaching and learning. We expect our graduates to be independent and critical thinkers, open to new ideas, possessing intellectual curiosity and integrity, and to have a mastery of a body of knowledge and professional skills. Our distinctive learning environment, we bring different insights into our classrooms, drive innovation in learning and research, and ensure our society remains open to the experience of other countries.

Curriculum design, enrichment and academic flexibility

**Measures:**

- Course completions.
- Qualification completions.
- Outcomes of student satisfaction and engagement surveys (academic).
- Number of UG and PG degrees accredited by professional associations/ NBA, and ABET accreditation bodies.
- Increase learning environment in the campus.
- Teaching and Learning Process

- Students Participation in Research Projects
- Summer fellowships
- Earning an International Certification
- Internships in industry
- Appearance and securing scores in GATE, GRE and other standardized tests

**Key actions:**

- Ensure that our curricula reflect the relevant graduate profiles and deliver high quality programs that meet national policy needs and international standards in an efficient manner.
- Enrich teaching, learning and outreach activities by drawing on international best practice in the use of new technologies.
- Provide all students with the opportunity at each level of study to interact with senior staff and researchers, and ensure that they gain the educational benefits of research informed and research-based teaching and learning.
- Develop a coordinated, research-informed suite of programs to support equity students to succeed in their studies at all levels in the University.
- Develop objective measures and benchmarks of an outstanding teaching and learning environment and review.
- Start new programs in emerging areas

**Objective 6: Extra curricular**

**A distinctive, high quality extracurricular experience that maximizes the value to our alumni of their Institute experience**

As well as achieving world-ranked qualifications, our students acquire increased independence, lifelong friends, a much-broadened world view and – if we get it right – an enduring interest in and affection for their university. These are critical components of the student experience as a whole, and we must be very aware of their importance not only to our students and future alumni, and to the communities they will serve, but also to the reputation and standing of the University. The ability to access University-

supported accommodation and to participate in shared extracurricular activities is crucial to the engagement of students with the University, as well as to their academic success. Engagement will in turn lead to lifelong, reciprocal relationships with alumni that connect them to the Institute and to one another.

**Measures:**

- Outcomes of student satisfaction surveys (extracurricular).
- Outcomes of graduate destination surveys.
- Proportions of graduates who have participated in international learning and research activities abroad and in India.
- Alumni with whom the Institute is actively engaged.
- Philanthropic support per alumnus.

**Key actions:**

- Ensure that we have graduate profiles which clearly lay out the desired attributes of graduates and the value that students will obtain from their extracurricular, as well as their academic, university experiences.
- Encourage activities and events that engage students in campus life, and in the unique cultural attributes of Tamil Nadu, India and the Asian Pacific region.
- Collaborate with undergraduate and postgraduate student representatives as requirements for facilities and services that support the social, recreational, cultural and spiritual needs of students are determined.

- Actively engage with alumni to seek their financial, political and societal support for the Institute to benefit future generations of students.



### **Objective 7: Research**

#### **A growing output of excellent research across all our disciplines**

High quality research which is reflected through guiding graduate students, peer-reviewed publications, and grant in full range of disciplines. This recognition of research excellence will in turn support the recruitment and retention of high-quality staff and students, and enhance Indian's international standing and connectedness.

#### **Measures:**

- Increasing number of PhD students with URF, CSIR, UGC - JRFs/SRFs
- Number of peer-reviewed research and creative outputs.
- Consecutive increase in high-impact research articles every year
- Proportion of publications authored jointly with international colleagues.
- Increasing the success rates of research grants from both national and international funding agencies such as DST, SERB, DBT, CSIR, DHR, DRDO, ICMR, IEDC, NIH, WHO etc.,

- Increasing community service-based research and enhances betterment of both students and state community.

**Key actions:**

- Establishment of new Research Centers and modern research laboratories
- Ensure that research quality and productivity are key attributes evaluated when academic staff are employed, continued or promoted.
- Invest in professional development activities that will enhance the quality and quantity of research performance across the University.
- Ensure that the importance of maximizing citations and impact is recognized across the Institute and is reflected in publishing behaviors.
- Ensure that our infrastructure is appropriate for the support of research.



## **Objective 8: Create vibrant and unique research group**

### **Establishment of New Research Laboratories**

The establishment of International Research Center at Kalasalingam University has greatly increased our identity and reputation as a research institution. To further strengthen our research activities, in the next five years we will establish at least four more research centers besides strengthening the existing centers.

- Energy particularly alternate energy and Smart Grid
- Water Technology
- Drug Design and Development
- Computing Sciences with a focus on Security and Big Data Analytics

### **Center for Energy**

As Energy is the need of the hour and the country and the world are looking for alternate source of energy. The thrust areas of the center would be:

- Development of Technology for Performance enhancement of Solar PV System
- Development of Embedded Processor based Smart meter
- Energy Auditing and Energy Management
- Modeling and Controller Design

### **Center for Water Technology**

The existing Center for Water Technology would be further strengthened. The research at this Center will focus on water resources and waste water treatment.

### **Center for Drug Design and Development**

The need for potential new drugs is increasing as there is still a lack of suitable medicines for many diseases. The drug discovery research has taken a new avenue in the post-genomic era. The Center for Drug Design and Development will carry out research in the following dimensions.

- Target Identification and validation
- Lead Identification using Computer Aided Drug Design
- Identification of Lead compounds from natural resources

- Synthesis of novel lead molecules using organic synthesis route
- Lead Optimization

### **Objective9: Partnerships**

#### **Strong partnerships with key organizations and communities which have a positive impact on both parties**

An international, research-intensive Institute has many communities which contribute to and draw upon its research, teaching and ideas. The Institute engages with a variety of communities. Reputed research and academic institutes from both national and international are the key partners for national and local employers and businesses. The Institute must continue to strengthen its links with Asia, and enhance engagement with increasingly important Asian communities.

#### **Measures:**

- Number of engaged MoU with reputed Institute/Industry.

#### **Key actions:**

- Identify key partners with whom the University has or can develop strong relationships from within the very wide group of potential partners (including business communities, professional organizations, artistic and creative communities, and partner universities).
- Make available the expertise of the University to key partners.
- Keep partners well informed of the University's strategic direction and performance, and give them the opportunity to play a part in its future development.
- Develop a comprehensive, University-wide alumni engagement program.

## **Objective 10: Infrastructure**

### **An infrastructure of the highest quality possible to support our teaching, learning, research, and community engagement**

The infrastructural elements that support our core academic and administrative activities – buildings, grounds, plant, equipment, information systems, and libraries – are also crucial enablers of our success. We have committed ourselves to refurbished and new buildings, and of investment in library collections, research and teaching equipment, commensurate with that of the Asia.

#### **Measures:**

- Space benchmarks.
- Utilizations benchmarks.
- Benchmarked construction of buildings

#### **Key actions:**

- Construction of State of the art Lecture theatre complex.
- Construction of 3000 seated Auditorium for campus activities
- Construction of tower buildings for faculty and staff quarters for create vibrant research communities
- Ensure that the University's capital planning is guided by appropriate benchmarks of the nature and extent of physical infrastructure provided by peer international universities.
- Ensure that all existing infrastructure is maintained and used as efficiently as possible.
- Continue investment in buildings, plant and equipment at an appropriate level, allowing for the proper maintenance of existing infrastructure and replacement of assets for teaching and research activities.



## **Objective 11: Extension and extramural Activities**

### **Commitment to Societal up-liftment**

To encourage the students to get exposed to societal problems, “Community Service Project” will be included in the B.Tech. Curriculum. As part of this course, the student groups are expected to offer technical solutions to societal problems through Extension activities and also the Institution adopts five villages under UNNAT BHARAT ABIYAN (UBA).

### **Measures:**

- Community Service Project
- Extension Activities

### **Key actions:**

- Conducts Community Service Project review regularly
- Identification of Nearby societal group issues and address them
- Conduction of Awareness programs.
- To provide financial Support for best CSP Projects for their implementations.
- To convert CSP projects into patents.

## **Budgetary Requirement**

| <b>Sl.No.</b> | <b>Activity</b>                      | <b>Budget Estimate<br/>(2017-2026)<br/>(Rupees in<br/>Crores)</b> | <b>Budget Spent<br/>(2017-2022)<br/>(Rupees in<br/>Crores)</b> | <b>Future<br/>Expenditure<br/>(2023-2027)<br/>(Rupees in<br/>Crores)</b> |
|---------------|--------------------------------------|---|--|--|
| 1.            | FACULTY and STAFF                    | 21.710  | 9.5200   | 12.190   |
| 2.            | Student Admission and<br>Activities  | 4.005   | 1.9350   | 2.070  |
| 3.            | Teaching and learning<br>environment | 2.982   | 1.2975   | 1.685  |
| 4.            | Research                             | 6.300   | 2.9600   | 3.345  |
| 5.            | Collaborations                       | 1.756   | 0.3810   | 1.375  |
| 6.            | Infrastructure                       | 4.590   | 2.2400   | 2.350  |
| <b>TOTAL</b>  |                                      | <b>41.343</b>   | <b>18.3335</b>   | <b>23.015</b>  |

-----