Strategic Plan : 2015 – 2020

Bannari Amman Institute of Technology, Sathyamangalam

Strategic Plan 2015 – 2020

Background

Bannari Amman Institute of Technology was started in the year 1996 with four branches in UG programmes viz, Computer Science and Engineering, Electrical and Electronics Engineering, Mechanical Engineering and Textile Technology, with 160 students intake. Facilities were gradually planned to introduce additional UG and PG Programmes in Applied Science, Engineering and Technology and Management. PhD Programmes were introduced in all disciplines since 2005 onwards.

Stay Ahead is the motto of Institute and is publicized across the stakeholders by embedding in the Institute logo. Accordingly, BIT strives to stay ahead of its peers and competitors by gaining competitive edge, building capacities and capabilities in terms of faculty, infrastructure and services that can sustain any external demands. BIT provides highly competitive environment for both faculty and students, whose effective engagements are measured objectively using suitable indicators. BIT, an Autonomous Institution since 2007, affiliated to Anna University, stands one among the top 20 Institutions in the State, Accredited by National Assessment and Accreditation Council with A Grade in two consecutive cycles. 9 UG programs are accredited by NBA. BIT has won many prizes and awards that include AICTE-CII Award for the Best Industry Linked Institution, SEED Award and VIT Chancellor Award. BIT has defined vision, mission and quality policies, published and disseminated among all the stakeholders.

VISION
- To reach the highest, the ultimate phase of intellectual development, the zenith of learning - the Omega.
- To walk tall, take on the world with confidence.
- To conquer ignorance and pursue excellence in our goal to always 'stay ahead'.
- To draw the strength from the power of the Omega and to create leaders for tomorrow's world.

MISSION
- To equip students with sound technical knowledge and skill.
- To offer an educational program with a plethora of innovative concepts, for creating a host of talented professionals.
- Foster an open student-oriented culture and perhaps even more important, an understanding of students, their needs, goals and aspirations.
- To develop exceptional opportunities for study & research and a system of industry-institution interaction, through industry-liaison cells, for students to contribute to our nation's economic growth.
- To evolve a friendly face of education with emphasis laid on engineering, technology & research.

QUALITY EDUCATION
- All the departments are headed by experienced professors who are scholars in their respective fields with doctorates. A dedicated team of Professors, Associate Professors and Assistant Professors assist the department heads to effectively carry out the academic programs. This distinguished and enthusiastic faculty forms the backbone of the Institute.
- The Institute has an open culture wherein students interact freely with the faculty.
- The faculty, the excellent infrastructure and the right guidance & counselling result in qualified, skilled, confident students in the field of engineering and technology, ready to take on the world with great vigour.

Core competencies of the Institute include (i) teaching-learning (Engineering Education), (ii) research, (iii) entrepreneurship development, (iv) placement, (v) industry interaction, (vi) composition and contribution from the Governing Council and (vii) in-house e-governance system. These core competencies are mapped with the Mission of the Institution.

BIT has sought the collaborations with other institutions including IIT Madras, IIT Bombay, TTTI – Chennai (now NITTT&R), Foreign Universities (NC A&T, Derby University UK, Cambridge University, Manchester University) for faculty development activities. A team of Professors from Indian Institute of Technology Madras were invited during 2014 for a comprehensive introspection.
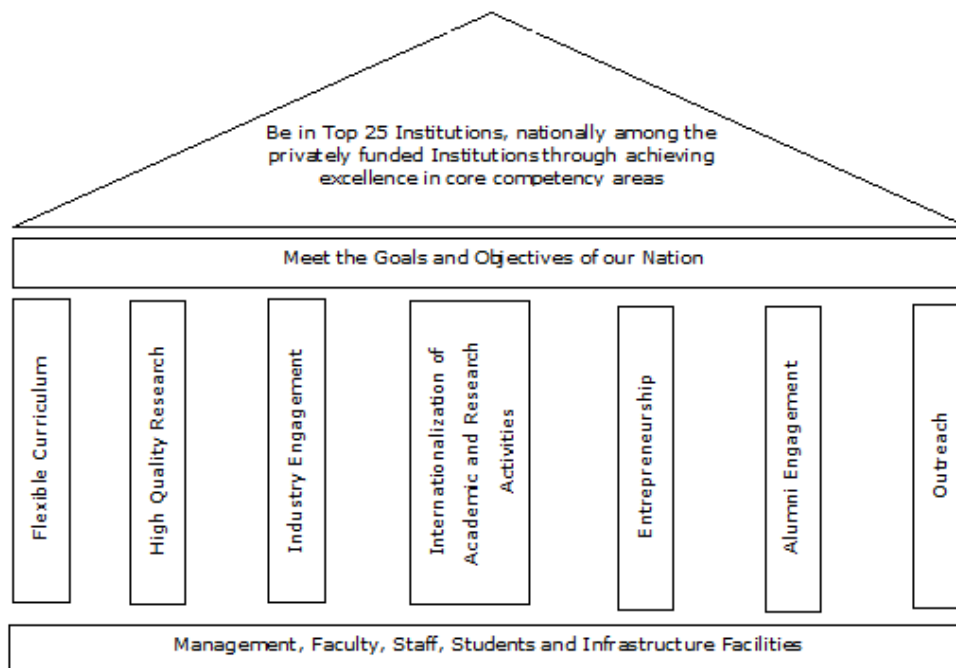
Strategic Plan

The Strategic Plan (SP) of Bannari Amman Institute of Technology aims to leverage the strengths of the Institute that has been developed over a period of time and also the capabilities those that are confident enough to develop in coming years. Effective strategic planning is the lynchpin for successful management of educational institutions (as given in the Figure) in the present rapidly changing world. Strategic planning is often proposed as a key tool for a more rational and systematic approach to bring about the necessary changes for greater internationalization in institutional direction and daily operations. BIT believes in the integration of teaching with research, in the freedom and responsibilities that staff members, in acting with integrity, and the value of an inclusive and diverse community.
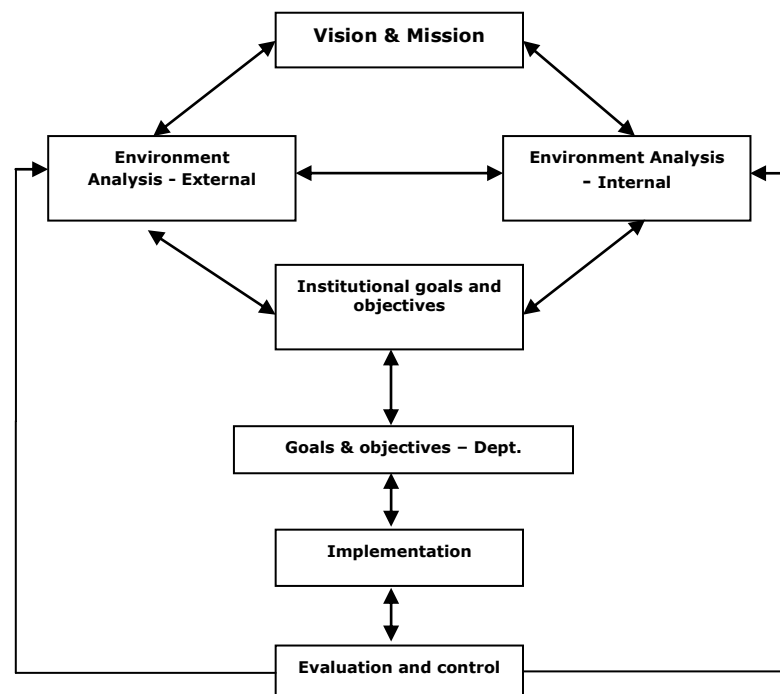
The key focus areas are identified through the gap analysis, with respect to the global developments, Industry requirements performance of the competitors and the perceived status of the Institution. Current position of the Institute is ascertained through the key results obtained in educational objectives and the attainment, teaching - learning, quality of the faculty members, research and consultancy services, student progression, development of necessary infrastructure, interaction with the industries and results published by various surveys and rating agencies. Measures to improve the performance along with the methodology are detailed in the strategic planning process. The action plans are reviewed and modified by the members of the Apex Committee. The key decisions are discussed in

the Governing Council for further improvement in the plan and communicated for implementation. BIT's strategic plan includes seven major factors, given below, linked logically with enablers and final objectives:

The Goals

The objective of the strategic plan is to elevate the status of Bit as a leading Institution with national and international recognition with global ranking in selected disciplines. Efforts are taken, continuously, by all the enablers (Management, Faculty, Staff and Students with enhancement in infrastructure facilities) to become a well-known institution among the customers and other stakeholders. Goals for all the seven parameters are set, in consideration with various developments that are taking place nationally and globally in all the fronts engineering and technology and the competing institutions in this field, while maintaining educational policies and guidelines of MHRD as the periphery of the paradigm within which the Institute operates.

Flexibility in Curriculum

Being an Autonomous Institution, BIT aims to utilize the academic and administrative autonomy extended to such institutions by University Grants Commission and All India Council for Technical Education with the help of Affiliating University. Academic flexibility is enhanced by introducing innovative curriculum and regulations (Regulations 2007, 2011 and

2015) with more focus on self-study, project based learning, open electives, one-credit courses, value added courses, semester-long internship with fast track opening and industry-linked projects (Table 1). All these efforts have resulted in strong customer base in Tamil Nadu and BIT is able to attract majority of its customers within first 7-8 days of counseling of Tamil Nadu Engineering Admission.

Table 1 Flexibility in the Curriculum (UG Programme)

Flexibility in Curriculum	Regulation 2007	Regulation 2011	Regulation 2015
Total No. of Credits	228-240	192-193	175-180
Assessment Pattern	Not Specified	Bloom's Taxonomy	RBT with 2D Mapping
One Credit Courses	No Provision	Introduced	Continued
Self Study Electives	No Provision	Introduced	Continued
Special Courses	No Provision	Introduced	Discontinued
Open Electives (interdisciplinary)	No Provision	Optional	Mandatory
Physics & chemistry Electives	Not available	Introduced	Continued
Language Electives	Not available	Introduced	More Electives
Management Electives	Not available	Introduced	Included
Mathematics Electives	Not available	Not available	Introduced
Fast Track System	Not available	Not available	Introduced
Life Skills Courses	Not Available	Not Available	Introduced
Number of Elective Courses	5	6	9
Comprehension Course	Not Available	Not Available	Introduced
Choice Based Credit System	Not Available	Not Available	Introduced

All the courses are prepared with stated objectives and outcomes which are in turn linked with Program Outcomes, Program Educational Objectives and finally Vision and Mission of the Institute. Innovative measures are continuously introduced in all the courses, to the maximum possible extent, to attract more customers and industries into the campus for various engagements.

Specific Objectives and Targets

a) To offer more courses (~ 1000 every year) to attract heterogeneous students in various programmes offered in the Institute
b) To enhance the experiential learning of the UG students through higher proportion of practical components in terms of laboratory sessions (40%), industrial visits (5%) and internships (15%), while not compromising on contact hours in classroom learning (40%)
c) To promote on-line courses like NPTEL, Coursera and other recognized MOOCs

d) To make PG Programs more attractive with higher research components in the curriculum (20 - 30%) and learning contemporary practices followed in the industry (10 - 20%) along with significant theoretical inputs

e) To develop independent centres, to offer more interdisciplinary courses, including Centre for Materials Science, Centre for Artificial Intelligence, Centre for IoT, Centre for Sustainable Development, Centre for Cloud Computing, 3D Printing, Communication Technology and Networks and Autonomous & Green Vehicles

High Quality Research

BIT has standard policies for Faculty Development, engaged in different operations, to provide common platform to perform better and enhance their own satisfactory levels. Members are encouraged to utilize their potentials to the highest levels (high performance) in core competency areas and other support and value added services. Incentive schemes are available for (i) visiting / interacting with industries, (ii) presenting research papers in India and abroad, (iii) grants for research, (iv) pursuing higher studies, (v) organizing workshops / symposia / conferences and (vi) high performance. In order to achieve the high level of research outcomes, a multi-pronged strategy will be adopted with new measures, while some of the measures are implemented already.

Specific Objectives and Targets

a) To be known as one of the best research institutions so as to attract good scholars and faculty (at least 40% of faculty with Ph D and one Ph D graduation per faculty for every two years)

b) To Contribute technology needs of the country through research outcomes, reports (Sponsored Project Grants – Rs 2 to 3 Crores per year) and patents (40 to 50 per year)

c) Flexibility in working load for faculty members with higher research engagement (teaching:research/consultancy:services – 50:40:10)

d) To publish more research papers / reports in the SCI Journals with high Impact Factors and contribute chapters in books (500 per year and minimum on an average one publication with high impact factor per faculty)

e) To implement Performance based incentives and career advancement to faculty members (indicators specified in the Academic Performance Indicators of UGC / AICTE)

Industry Engagement

Currently, industries and representatives from various higher learning research organisations are engaged in developing vision and mission of the Departments, curriculum development, invited lectures, delivery of courses, workshops, evaluation, student-projects, placement, faculty research / consultancy and providing solutions to industry defined

problems (IDP). Besides, internships to students arrangements are also made to make up training on need-basis during summer and winter vacations, thereby the students become readily employable and suit the needs of the industries. The students are trained adequately from the beginning of the programme for getting placement as per their choice / interest to attain 100% placement.

Specific Objectives and Targets

a) To offer industry-driven curriculum with high level of flexibility and also to explore industry-need based programs (at least two programs before 2020) and industry based student projects (30 to 40%)

b) To offer Professional Certifications / Diploma / PG Diploma programs to students through industry associations or approved agencies

c) To increase the number of faculty members involved in consultancy assignments and industry sponsored research (20 to 30% of faculty members)

d) To commercialize the technology / products that are relevant to industry (at least 5 – 10% of projects / consultancy works before 2020)

e) To establish an Industry-Institute Interaction Centre to facilitate the interaction

Internationalization of Academic and Research Activities

BIT's efforts to make a stride into international academic community started as early as 2004, with academic collaboration with North Carolina Agriculture and Technology University of USA, which resulted in joint conference in the field of materials science. Since then, many coordinated efforts were made to bring-in more international academic community into the campus for developing curriculum, laboratory, research, student and faculty exchange programs. Many voluntary organizations, international academies and alumni contacts are explored to rope-in the international programs in the campus. In order to enhance employability of students in international organizations, foreign languages such as Germany, Chinese, French, Spanish and Japanese languages are taught as a part of the curriculum, which is also expected to enhance international scholars in the campus.

Specific Objectives and Targets

a) To recruit Graduates with international exposure (15% in every Department)

b) To establish a Centre for International Collaboration

c) To collaborate with foreign Universities for research in new areas, joint conferences and publications (Minimum one collaboration per Department)

d) To encourage the students pursue GRE, GMAT and IELTS to seek admission into foreign Universities (5% per Batch of Graduates)

e) To implement student and faculty exchange program with foreign Universities (Minimum1 per Department) and exploring the possibilities of international internships

Entrepreneurship

Bannari Amman Institute of Technology has already set up a DST-sponsored Technology Business Incubator (TBI) to nurture the entrepreneurial culture among the students and the eligible individuals from nearby areas. BIT also received a bulk grant from DST and AICTE to establish Entrepreneurship Development Cell (EDC) in the Institute and every year receives grant from EDI to host awareness programs. A significant part of the students inherit their family business after graduation and a sizeable students venture into new projects.

Specific Objectives and Targets

a) To get affiliated to NGOs that promote entrepreneurship among students (NEN, TiE) and develop a mechanism to create more student-entrepreneurs
b) To support the students to establish campus-companies to identify the needs and provide the services to community inside the campus
c) To induct students as incubatee in the TBI and provide seed grant for start-ups
d) To enhance the activities and outcomes of TBI (by 2020) in terms of start-ups (at least 50), number of IPRs (25), graduating incubate (at least 75) and idea generation camps (2 per year)
e) To start entrepreneurs wing in the Alumni Association to provide network among themselves, mentor the students and mutually benefit through exchange of ideas and businesses

Alumni Engagement

BIT has an alumni network with 15000 plus alumni members, spread across 58 countries in the world. Different modes of engaging alumni members with Institute are explored and implemented across the Departments for the mutual benefits. Also, steps are taken to increase the presence of alumni in campus and engage with students and faculty. Alumni will be encouraged to support the activities of BIT in multiple ways including industry relations, interactions with students and faculty, entrepreneurs, funding agencies, providing financial assistance to needy students, identifying suitable collaborators and partners to BIT.

Specific Objectives and Targets

a) To establish an exclusive website to alumni members and strengthen the Association with full-time employees

b) To establish more alumni chapters to enhance the network among the members, at national and international level

c) To facilitate annual conclave and chapter level meetings with dedicated themes

d) To fund students welfare activities through alumni sponsorship

e) To Facilitate curriculum development, industry-linkage, sponsored research, consultancy assignments and solving socially related issues jointly with students and alumni members

Outreach Programs

Over the two decades, BIT has been very much associated with the Local Communities, State and Central Government agencies to implement various outreach initiatives. Some of the activities include providing basic amenities to local communities, orphanages, old-age homes, schools and adopting villages for enhancing the livelihood, organizing health camps, blood donation to needy and emergency situations. Large number of students and faculty members are involved in these activities and offer their services, with the support from the Management.

Specific Objectives and Targets

a) To design and offer courses / projects related to sustainable development of the society and the nation as a whole and supplement with clubs and societies to roll-out more societal programs

b) To encourage the students and faculty members to spend significant amount of time in outreach programs (at least 10%)

c) Providing technical and technological solutions (and implementation) for issues and schemes floated by State and Central Governments

d) To improve the livelihood of nearby villagers by improving their family income, comfort and other amenities

e) To create an awareness among nearby villages for their development and social issues using community radio

Review Mechanisms

Plans are executed by all the Departments and Centers for the inclusive growth. Reviews are conducted periodically to achieve the goals so that activities are implemented without any hurdle. Reviews of implementation and achievement of the plan are entrusted senior faculty members along with the Heads of the Department The action plans are guided and supported by the members of the Apex Committee. The Governing Council also reviews the

plan of action and gives suggestions towards improvement and communicates to the relevant stakeholders for implementation.

Specific Objectives and Targets

a) To effectively implement the strategic plans
b) To review the outcomes using independent agencies
c) To continuously upgrade the plan at regular intervals to attain higher level of growth
d) To find out the blind spots and bridge the gap in implementation of the plan
e) To encourage high performing faculty member(s) with suitable incentives