INSTITUTE DEVELOPMENT PLAN (IDP)

2025-2030

NAME OF THE INSTITUTE: N. G. PATEL POLYTECHNIC

ADDRESS: AT & PO.: ISROLI-AFWA, BARDOLI-NAVSARI ROAD, TAL.: BARDOLI, DIST.: SURAT – 394620

DURATION: 2025-2030

DATE OF SUBMISSION: FEBRUARY 2026

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1. Executive Summary

N. G. Patel Polytechnic, Isroli-Afwa, Bardoli (NGPP) is a self financed education institution established in 1997 under Sardar Vallabhbhai Patel Education Society (SVPES) , which was founded in 1996 in the Surat district of Gujarat. The institution is affiliated with Gujarat Technological University (GTU), Ahmedabad and approved by the All India Council for Technical Education (AICTE), New Delhi.

The institution maintains academic and administrative compliance through standardized faculty appointments and infrastructure development as per the norms. Facilities include a digital library with over 16,305 books, journals and e-resources, computer laboratories with 300 computer systems, smart classrooms with interactive boards & LCD projectors, and dedicated spaces for placements and student support services.

Institutional strengths include compliance with regulatory norms, digital infrastructure, industry tie-ups, and an operational placement cell. Weaknesses are identified as delays in government sanction of scholarship disbursement and communication skill gaps in students due to the rural location. Opportunities are present in faculty development, industry-aligned curriculum and placements in regional industries. Institutional challenges include NEP 2020 implementation and reducing interested students for job oriented diploma courses.

The vision and mission focus on delivering education in engineering to contribute to skill development and employability. Core institutional values emphasize Quality Education, Integrity, Skill Orientation, Social Responsibility.

Strategic goals are segmented into short-term (infrastructure and policy enhancements), midterm (community engagement and technology adoption), and long-term (expansion of flexible education and skill impartment). Key focus areas include academic quality, training, faculty development, infrastructure modernization, industry collaborations, student employability, digital transformation and sustainability.

An action plan has been formulated to implement improvements based on stakeholders' feedback, industry collaboration & feedback.

Monitoring and evaluation systems include continuous academic assessment and MoU-based industry reviews. Risk management provisions covers financial contingency for students, digital preparedness, and campus safety.

2. Institutional profile

Involved in imparting technical education since more than 27 years, N. G. Patel Polytechnic, Isroli-Afwa, Bardoli (NGPP) is a torch bearer of technical knowledge, skills and opportunity. Founded under the prestigious Sardar Vallabhbhai Patel Education Society (SVPES) established in 1996 near Bardoli in the Surat district of Gujarat state—the institute is having a proud legacy of academic excellence, placement and societal responsibility.

Being affiliated with Gujarat Technological University (GTU) and approved by AICTE, New Delhi the N. G. Patel Polytechnic (NGPP) demonstrates academic integrity and institutional excellence. As one of leading institutions of South Gujarat region for diploma engineering education, NGPP strives to provide high-quality engineering education and hands on training in the various courses of diploma engineering. Our university curriculum is carefully designed to connect theory and practice, preparing students as future professionals in the areas of engineering, technology, and competency.

At NGPP, we strive to provide a learning ecosystem based on the pillars of knowledge, discipline and integrity. Our esteemed faculty, state-of-the-art infrastructure, and robust focus on industrial interfaces make students well-versed in their field of engineering & technology. Education here goes beyond the confines of the classroom to convert dreams to reality. At NGPP, we empower them to chart the future. NGPP started its academics in the year 1997. This is one of the oldest self-financed institutes in Bardoli region under the banner of GTU. Our college is approved by AICTE and affiliated with Gujarat Technological University (GTU). The institute has deputed more than 30 faculty members for the higher education till date and also motivates them to participate in various faculty development programs, trainings, workshops, conferences etc. The demographic profile of students enrolled in Diploma Engineering programmes based on recent academic year trends includes up to 60% students are from rural areas and remaining are from semi-urban/urban areas, this also includes 25 to 30% female students & remaining are the male students, from all the admitted students are 40% from open category, 25% ST category, 10% from SC category, 5% EWS category & remaining are from SEBC/OBC category. Up to 50% students are from economic weaker sections & also up to 70% students belong to Guajarati medium. The institute is offering five diploma engineering courses as:

Courses offered:

1- Diploma in Chemical Engg. (120 intake) (NBA accredited)
2- Diploma in Computer Engg. (120 intake) (NBA accredited)
3- Diploma in Electrical Engg. (60 intake) (NBA accredited)
4- Diploma in Information Technology (120 intake)
5- Diploma in Mechanical Engineering (60 intake) (NBA accredited)

3. SWOC analysis

3.1 Institutional Strength

- Appointment of faculty as per the norms of AICTE and Gujarat Technological University.
- Good infrastructure confirming with well-equipped Laboratories including Computer Labs, Classrooms, Drawing halls, Workshop, Placement room, Boys & Girls Common room.
- Four computer labs with capacity of 300+ high configured computers next generation equipped with latest software as per the requirements.
- Library with collection of over 14305+ books for students' use along with 20 national and international journals. Our institution has integrated library management software SOUL 4.0 using Inflibnet.
- Provision of smart screens and projectors in classrooms.
- Training and Placement Cell continuously working for 100 % Internship and job placement in the industries with good salary packages and also for further learning opportunities.
- Expert's speeches & Industrial visits are regularly arranged for providing in-depth knowledge of subjects and industrial working environment.
- Promoting faculty development by allowing faculty members further education and to participate in various FDPs, STTPs/Workshops/ Further study etc.

3.2 Institutional Weakness

- As located in a rural area low merit students admitted who are also observed to be of shy & introvert nature along with lack of soft skills/ communication skills which may directly affects the academic performance.
- Due to rural locality and weaker financial conditions, many students are relying on SC/ST scholarships, hence delays in receiving Government scholarship funds affects the financial planning.

3.3 Institutional Opportunity

- Enhanced faculty welfare schemes.
- Collaboration with training partners to impart industry ready skill sets and enhance placements.
- Motivating and providing financial support to faculties for FDPs/Trainings etc.
- Internal Revenue generation through consultancy.
- Strengthening the alumni association.

3.4 Institutional Challenge

- Immediate adaptation of NEP 2020.
- Availing scholarship/funds regularly for development.
- Increasing numbers of seats in diploma engineering and reducing number of interested students.

4. Vision, Mission, and Core values

4.1 Vision

To be an institute of excellence in engineering & technology to play a vital role in the industrial development and economic growth of the nation through young technocrats.

4.2 Mission

Committed to achieve, maintain and continuously improve technical excellence, ethical values and overall development of student's community especially rural area and the nation as a whole.

4.3 Core Values

Our institution is guided by the following core values, which shape our academic culture and institutional practices:

Quality Education

We are committed to delivering academic excellence through a robust curriculum, effective teaching–learning processes, and continuous improvement.

Integrity

We uphold honesty, transparency, ethical conduct, and accountability in all academic and administrative activities.

Skill Orientation

We emphasize hands-on learning, industry-relevant skills, and practical exposure to enhance employability and professional competence.

Social Responsibility

We instill a sense of civic duty, sustainability, and community engagement to contribute positively to society.

Diversity Implementation and Inclusive Learning Systems

We are maintaining equitable access and inclusive academic structures for diverse learner profiles across disciplines and demographic segments.

Collaborative Infrastructure and Knowledge Integration

We are promoting interdepartmental, industry-academic and peer collaboration frameworks to enhance interdisciplinary knowledge transfer and operational efficiency.

5. Strategic Goals and Objectives

5.1 Short-Term Objectives (1–2 Years)

- **Implementation of NEP-2020 Guidelines**

  To initiate implementation of National Education Policy (NEP) 2020 reforms in diploma engineering education, with emphasis on skill-based learning, flexibility, and holistic student development.

- **Strengthening Outcome-Based Education (OBE)**

  To reinforce Outcome-Based Education across all diploma programmes by defining Programme Outcomes (POs), Course Outcomes (COs), and improving assessment and attainment processes.

- **Enhancement of Skill-Based Training (SBT)**

  To effectively implement Skill-Based Training (SBT), internships, and practical exposure as per GTU and KCG guidelines to improve hands-on competencies of students.

- **Faculty Capacity Building**

  To organize Faculty Development Programmes (FDPs), workshops, and training sessions focused on emerging technologies, innovative pedagogy, OBE, and digital teaching tools.

- **Upgradation of Teaching–Learning Resources**

  To improve laboratories, workshops, ICT facilities, and learning resources to support effective practical and experiential learning for diploma students.

- **Student mentoring and Academic Support**

  To strengthen mentoring systems, remedial classes, and bridge courses for academically weak students and first-generation learners.

- **Industry Interaction and Exposure**

  To initiate MoUs with nearby industries and MSMEs for industrial visits, guest lectures, internships, and short-term training programmes.

- **Digitalization of Academic Processes**

  To adopt digital tools for attendance, internal assessment, learning resources, and academic monitoring to improve efficiency and transparency.

- **Quality Assurance and Compliance**

  To ensure strict compliance with AICTE, GTU, and KCG requirements and strengthen internal monitoring mechanisms for academic and administrative quality.

5.2 Mid-Term Objectives (3–4 Years)

- **Strengthen Skill-Based and Outcome-Based Education**

  To fully implement Outcome-Based Education (OBE) across all diploma programmes by integrating Skill-Based Training (SBT), industry-relevant practical modules, and competency-based assessments as per NEP 2020 and GTU guidelines.

- **Enhance Industry–Institute Collaboration**

  To establish strong and sustainable partnerships with local industries, MSMEs, and service sectors through MoUs, enabling internships, industrial training, guest lectures, joint projects, and improved placement opportunities for diploma students.

- **Upgradation of Infrastructure and Laboratories**

  To modernize laboratories, workshops, and computing facilities with industry-standard equipment and software to support practical learning, applied skills, and emerging technologies relevant to diploma engineering disciplines.

- **Faculty Capacity Building and Industry Exposure**

  To continuously enhance faculty competencies through FDPs, industry internships, certifications, and training in emerging technologies, innovative pedagogy, and NEP-2020-aligned teaching–learning practices.

- Improve Student Employability and Soft Skills

  To strengthen communication skills, professional ethics, teamwork, and problem-solving abilities of students through structured training programmes, mentoring systems, and career guidance initiatives.

5.3 Long-Term Objectives (5 Years and Beyond)

- **Establish the Institute as a Centre of Excellence in Diploma Engineering**

  To position N. G. Patel Polytechnic as a leading polytechnic institute in the region by consistently delivering quality, skill-oriented, and industry-relevant diploma engineering education.

- **Achieve High Employability and Entrepreneurship Outcomes**

To ensure sustained improvement in placement rates, self-employment, and entrepreneurial ventures among diploma emgoneers through strong industry partnerships and innovation support systems.

- **Sustainable Industry–Institute Ecosystem**

  To build long-term, mutually beneficial collaborations with industries, MSMEs, and professional bodies for curriculum enrichment, advanced training, consultancy, and applied projects.

- **Continuous Faculty Excellence and Leadership Development**

  To develop a highly competent and motivated faculty team through continuous professional development, leadership training, industry exposure, and adoption of advanced pedagogical practices.

- **Advanced Infrastructure and Digital Campus Development**

  To develop state-of-the-art laboratories, smart learning environments, and a fully digitalized campus supporting blended learning, automation, and academic excellence.

- **Environmental Sustainability and Green Campus Development**

  To transform the campus into an environmentally sustainable and energy-efficient green campus through eco-friendly practices, renewable energy use, and environmental awareness initiatives.

6. Key Focus Areas

6.1 Academic Excellence and Curriculum Enrichment

- Strengthening outcome-based and competency-based education in diploma programmes
- Enriching curriculum through industry-relevant modules, practical exposure, and value-added courses
- Promoting project-based, experiential, and hands-on learning
- Continuous academic review and improvement aligned with GTU and AICTE norms

6.2 Skill Development and Employability

- Effective implementation of Skill-Based Training (SBT) and internships
- Development of technical, professional, and workplace skills
- Structured training in communication skills, teamwork, ethics, and safety practices
- Enhancing placement readiness and self-employment capabilities

6.3. Faculty Development and Capacity Building

- Regular Faculty Development Programmes (FDPs) on emerging technologies
- Training in innovative pedagogy, OBE, and digital teaching tools
- Industry exposure and certification programmes for faculty
- Encouragement of faculty participation in consultancy and applied projects

6.4. Infrastructure and Learning Resources

- Modernization of laboratories, workshops, and equipment
- Development of smart classrooms and ICT-enabled teaching facilities
- Strengthening library and digital learning resources
- Maintenance of safe, accessible, and student-friendly campus infrastructure

6.5. Industry–Institute Interaction

- Establishment and strengthening of MoUs with industries
- Industrial visits, expert lectures, and in-plant training/internships
- Joint skill development programmes and industry-guided projects
- Regular industry feedback for curriculum and training improvement

6.6. Student Support and Holistic Development

- Mentoring, counseling, and academic support systems
- Remedial teaching and bridge courses for slow learners
- Promotion of co-curricular, extracurricular, and sports activities
- Student participation in institutional governance and committees

6.7. Quality Assurance and Governance

- Strengthening Internal Quality Assurance mechanisms
- Data-driven decision-making and continuous monitoring
- Compliance with AICTE, GTU, KCG, and NEP guidelines
- Transparent, participative, and accountable governance practices

6.8. Social Responsibility and Sustainability

- Environmental awareness and green campus initiatives
- Development of Green campus (Tree plantation, Solar panel installation etc.)

7. Action Plan / Implementation Strategy

7.1 Academic Planning and Curriculum Implementation

- Constitute academic committees to plan and monitor curriculum delivery as per GTU guidelines.
- Integrate outcome-based education (OBE), skill-based training (SBT), internships, and project-based learning into all diploma programmes.
- Conduct periodic academic reviews based on student performance, feedback, and outcome attainment.

7.2 Skill Development and Employability Enhancement

- Identify industry-relevant skills for each diploma programme in consultation with industry experts.
- Organize skill certification programmes, workshops, and hands-on training sessions.
- Implement structured training in communication skills, professional ethics, safety practices, and workplace readiness.

7.3 Faculty Development and Capacity Building

- Organize Faculty Development Programmes (FDPs), seminars, and workshops on emerging technologies and innovative pedagogy.
- Encourage faculty participation in industry training, certification courses, and internships.
- Promote the use of modern teaching aids, digital tools, and blended learning practices.

7.4 Infrastructure and Resource Upgradation

- Upgrade laboratories, workshops, and computing facilities in a phased manner.
- Strengthen ICT infrastructure including smart classrooms, LMS, and e-learning platforms.
- Ensure effective utilization and maintenance of available resources.

7.5 Industry–Institute Interaction

- Establish and strengthen MoUs with local industries, MSMEs, and service organizations.
- Organize industrial visits, expert lectures, in-plant training, and internships.
- Involve industry professionals in curriculum enrichment, assessment, and student mentoring.

7.6 Student Support and Holistic Development

- Strengthen mentoring and counseling systems for academic and personal guidance.
- Conduct remedial classes and bridge courses for slow learners.
- Encourage student participation in co-curricular, extracurricular, and social activities.

7.7 Quality Assurance, Monitoring, and Review

- Monitor implementation of the IDP through Internal Quality Assurance mechanisms.
- Conduct periodic reviews and corrective actions based on performance indicators.
- Maintain proper documentation and upload compliance reports on the institute website as required by KCG and GTU.

7.8 Community Engagement and Sustainability

- Organize community-oriented skill development and awareness programmes.
- Promote environmental sustainability through green campus initiatives.
- Encourage social responsibility and ethical practices among students and staff.

8. Monitoring and Evaluation

To ensure effective implementation of the Institutional Development Plan (IDP), N. G. Patel Polytechnic shall adopt a systematic monitoring and evaluation mechanism focused on transparency, accountability, and continuous improvement.

8.1. Institutional Monitoring Framework

- An Internal Quality Assurance mechanism shall oversee the implementation of IDP objectives and action plans.
- Academic and administrative committees shall monitor progress in their respective domains.
- Clearly defined roles and responsibilities shall be assigned for monitoring activities.

8.2. Academic Monitoring

- Regular monitoring of curriculum delivery through lesson plans, academic calendars, and teaching schedules.
- Continuous evaluation of student performance through internal assessments, practical examinations, and outcome attainment analysis.
- Periodic review of Skill-Based Training (SBT), internships, and project work outcomes.

8.3. Faculty Performance Evaluation

- Monitoring faculty performance based on teaching effectiveness, student feedback, academic contributions, and participation in FDPs.
- Review of faculty involvement in industry interaction, innovation activities, and professional development.
- Identification of training needs and corrective measures for capacity enhancement.

8.4. Infrastructure and Resource Monitoring

- Periodic review of laboratory, workshop, and ICT facility utilization.

- Monitoring maintenance schedules, safety standards, and effective use of resources.
- Evaluation of digital infrastructure and e-learning systems for accessibility and effectiveness.

8.5. Industry Interaction and Employability Review

- Assessment of industry partnerships, MoUs, internships, and placement activities.
- Feedback from industry partners on student performance and skill readiness.
- Review of placement statistics and employability outcomes.

8.6. Student Support and Feedback Mechanism

- Collection and analysis of feedback from students on academic delivery, infrastructure, and support services.
- Monitoring effectiveness of mentoring, counseling, and remedial programmes.
- Addressing student grievances through established grievance redressal mechanisms.

8.7. Quality Assurance and Continuous Improvement

- Periodic internal audits and reviews of academic and administrative processes.
- Use of data-driven indicators and performance metrics for decision-making.
- Implementation of corrective and preventive actions based on review outcomes.

8.8. Reporting and Documentation

- Preparation of annual progress reports on IDP implementation.
- Proper documentation of activities, outcomes, and best practices
- Updating goals, strategies, and action plans based on emerging needs, policy changes, and stakeholder feedback.

9. Risk Management

N. G. Patel Polytechnic recognizes potential academic, operational, financial, and external risks that may affect the effective implementation of the Institutional Development Plan (IDP). The institute adopts proactive risk identification, mitigation, and monitoring strategies to ensure continuity and quality in academic and administrative functions.

9.1. Academic Risks

Risk: Gaps in learning outcomes due to student diversity and varying academic preparedness.

Mitigation Measures:

- Implementation of mentoring, remedial classes, and bridge courses
- Continuous assessment and outcome monitoring
- Faculty training in innovative and student-centric pedagogy

9.2. Faculty-Related Risks

Risk: Faculty shortage, attrition, or lack of exposure to emerging technologies.

Mitigation Measures:

- Timely recruitment as per AICTE and GTU norms
- Continuous Faculty Development Programmes (FDPs)
- Encouragement for certifications, industry exposure, and skill upgradation

9.3. Infrastructure and Resource Risks

Risk: Obsolescence of laboratory equipment and ICT infrastructure.

Mitigation Measures:

- Phased upgradation and modernization of laboratories
- Preventive maintenance schedules

9.4. Financial Risks

Risk: Delay in government scholarships and limited funding for development activities.

Mitigation Measures:

- Financial planning and reserve funds by management
- Exploring funding through government schemes, CSR, and industry collaboration

9.5. Industry and Employability Risks

Risk: Changing industry demands affecting student employability.

Mitigation Measures:

- Regular interaction with industry experts
- Curriculum enrichment and skill-based training aligned with market needs
- Strengthening internships, apprenticeships, and placement activities

9.6. Digital and Technological Risks

Risk: Technology failures, cyber security threats, or limited digital literacy.

Mitigation Measures:

- Secure IT infrastructure and data backup systems
- Training for faculty and students on digital platforms

9.7. Student-Related Risks

Risk: Dropouts due to academic, financial, or personal challenges.

Mitigation Measures:

- Strong mentoring and counseling systems
- Academic support and soft skill development programmes
- Student grievance redressal and welfare initiatives

9.8. Health, Safety, and Environmental Risks

Risk: Health emergencies, natural disasters, or safety hazards on campus.

Mitigation Measures:

- Compliance with safety norms, fire safety, and emergency preparedness
- Regular safety awareness programmes
- Adoption of eco-friendly and sustainable campus practices

10. Budget and Financial Plan

N. G. Patel Polytechnic is committed to providing adequate financial resources to support the effective implementation of the Institutional Development Plan (IDP). The institute follows prudent financial management practices to ensure sustainability, transparency, and optimal utilization of funds.

The primary sources of funding for implementation of the IDP include: Tuition fees collected from students, Scholarships from the government, financial support from the institute management and trust and Internal revenue generated through training/ consultancy.

Financial resources shall be allocated strategically to support key focus areas of institutional development: a) Academic Development and Skill Enhancement, b) Faculty Development, c) Infrastructure and Learning Resources, d) Student Support and Employability

Financial Planning and Control will be practiced as Annual budgets shall be prepared and approved by the management based on institutional priorities. Expenditure shall be monitored periodically to ensure alignment with IDP objectives. Internal audits and financial reviews shall be conducted to ensure transparency and accountability.

The management of N. G. Patel Polytechnic is committed to provide sustained financial support for the successful implementation of the IDP. The institute shall continuously explore additional funding opportunities and partnerships to strengthen its academic and infrastructural capabilities.