NUTECH – Case Analysis HR Office

(Business Project – II)

By

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Fall-2K19-EMBA – 00000318771

Department Of Management & HR

NUST Business School

National University of Sciences and Technology (NUST)

(2024)

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BUSINESS PROJECT ACCEPTANCE CERTIFICATE

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I, Nabiha Khattak hereby state that my EMBA Business Project-II titled "**NUTECH – Case Analysis HR Office** " is my own work and has not been submitted previously by me for taking any degree from National University of Sciences and Technology, Islamabad or anywhere else in the country/ world.

At any time if my statement is found to be incorrect even after I graduate, the university has the right to withdraw my MS degree.

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TABLE OF CONTENTS

ABSTRACT

This project presents a comprehensive analysis of the Human Resource (HR) challenges at the National University of Technology (NUTECH) and the strategic improvements implemented to address these issues. The study identified two major problem areas: Inefficient Training and Development Programs and Outdated Recruitment Processes, which were critically hindering NUTECH's ability to achieve its strategic objectives.

The training programs at NUTECH were outdated, leading to skill gaps and low engagement among staff. To address this, the university developed customized training modules tailored to specific departmental needs and introduced a Continuous Professional Development (CPD) program to foster a culture of ongoing learning. These initiatives resulted in a 40% increase in training participation rates, enhanced employee skills, and higher overall productivity.

Similarly, NUTECH's recruitment processes were slow and outdated, resulting in extended time-to-hire and frequent mismatches between candidates and job requirements. To overcome these challenges, NUTECH adopted technology-driven recruitment tools, including an Applicant Tracking System (ATS), and shifted to a competency-based selection approach. These changes reduced the average time-to-hire by 20%, improved the quality of hires, and significantly enhanced the overall efficiency of the recruitment process.

In conclusion, the strategic improvements implemented in NUTECH's HR functions have laid a strong foundation for the university's future growth.

CHAPTER 1: INTRODUCTION

National University of Technology (NUTECH) officially commenced its operations on April 24th, 2019, under the patronage of Chief of the Army Staff General Qamar Javed Bajwa, NI (M), HI (M), who also served as the Chairman of NUTECH's Board of Governors till his retirement.

Situated in the heart of Pakistan's capital, Islamabad, NUTECH stands out as a pioneering higher education institution dedicated to bridging the gap between academia and industry. With a unique focus on integrating theory with practical application, NUTECH prides itself on embodying the ethos of becoming the "University for Industry."

Established by an Act of Pakistan's Parliament in February 2018, known as the National University of Technology Bill 2017, NUTECH holds federal charter status and is duly recognized by the Higher Education Commission of Pakistan (HEC) and the Pakistan Engineering Council (PEC).

1.1 The Rationale Behind NUTECH

At the forefront of Pakistan's engineering and skills-oriented education landscape, NUTECH is steadfast in its commitment to producing globally competitive applied engineers and skilled professionals. Spearheading this mission was Engineer Khalid Asghar, the first Rector of NUTECH, who envisioned the establishment of Pakistan's premier technology university back in 2015.

Engineer Khalid's vision was born out of the pressing need within the industry for proficient manpower equipped with relevant skills to drive growth and innovation. This imperative underscores the core tenets of NUTECH's Vision and Mission.

1.2 Vision

"Become Internationally acclaimed technology driven research university for producing industry focused leaders of character, solution providers, challenging technologies innovators and developers to revolutionize technology sector by introducing higher education in the engineering and technology streams along with high end technical/ vocational skills to strengthen national economy for real self-reliance."

1.3 Mission

"Produce creative and technically sound engineers and technologists augmented by well-trained skilled workforce; and knowledge creation in a vibrant, innovative and entrepreneurial environment, through modern academic systems and best learning practices, research collaborations and strengthened academia-industrial linkages so as to grow knowledge economy."

1.4 Financial Structure of NUTECH

NUTECH, as a government-chartered university, operates under the purview of the Ministry of Science and Technology (MoST). Similar to other government-affiliated higher education institutions, NUTECH relies on budget allocations from the Government of Pakistan through its sponsoring Ministry to cover both capital and operational expenses.

Presently, NUTECH is entirely reliant on funding from MoST across various budget categories. Revenue generated from student fees is insufficient to meet the university's operational needs, underscoring the significance of meticulous budget management. NUTECH places great emphasis on its budget cycle, involving stakeholders at all levels to ensure thorough scrutiny and deliberation.

With the admission of the 2019 batch in engineering and skill-based programs offered by NUTECH's Skills Development Directorate, there has been an increase in revenue. However, the corresponding rise in operational expenses necessitates the exploration of additional revenue streams.

CHAPTER 2: ORGANIZATIONAL STRUCTURE OF NUTECH

2.1 Functional Organization

NUTECH organizes its staff and faculty into different departments based on their expertise and job roles. Individuals with related tasks and responsibilities are grouped together within a single function, as outlined in Annexure B.

2.2 Promising Trends

NUTECH currently employs all support staff on a contractual basis, providing competitive pay scales in line with market and government standards such as the Basic Pay Scale (BPS) and Performance Pay Scale (PPS). Regarding faculty members, excluding lecturers, they are typically appointed under the Higher Education Commission's Tenure Track System (TTS), with advancements in increments as per policy. However, there is a noticeable departure from this convention. NUTECH is increasingly attracting foreign-qualified and experienced faculty members with impressive credentials by offering them pay packages comparable to those under the TTS, but without the constraints associated with mandatory research paper publications. This approach widens NUTECH's pool of skilled faculty members.

2.3 Expanding Global Reach

NUTECH is actively seeking to enhance the student experience by recruiting foreign faculty members. Moreover, with the rapid growth of its Skills Directorate, particularly after the introduction of the Prime Minister's Youth Development Program and the

execution of a German industry support program, NUTECH anticipates abundant opportunities for international engagements and work placements for its human resources in the coming five years.

CHAPTER 3 : NAVIGATING STRATEGIC CHALLENGES

3.1 Threats

Like any new university in Pakistan, NUTECH encounters various strategic threats and obstacles. One significant challenge was gaining acceptance as a technology-focused educational institution. Prospective students and parents initially harbored reservations, given the prevailing emphasis on engineering-centric universities in Pakistan. However, NUTECH addressed this concern through extensive awareness campaigns and accreditation from the Pakistan Engineering Council (PEC), emphasizing its focus on future technologies like Artificial Intelligence.

Another notable challenge for NUTECH is posed by established engineering universities in Islamabad, particularly the National University of Science and Technology (NUST). Situated nearby with cutting-edge facilities, NUTECH faces stiff competition in attracting top engineering faculty compared to NUST.

3.2 Exploring Strategic Opportunities

Amidst challenges, NUTECH also identifies opportunities that align with its agile structure. The institution is keen on leveraging available opportunities and seizing the first-mover advantage in Skill-Based Education in Pakistan. While several institutions offer Diploma of Associate Engineering (DAE) and other short courses accredited by the National Vocational and Technical Training Commission (NAVTCC), NUTECH stands out by adhering to international standards and seeking accreditation from global bodies.

This proactive stance positions NUTECH to carve a distinct niche for itself in the educational landscape of Pakistan.

CHAPTER 4 : THE HUMAN RESOURCE OFFICE AT NUTECH

4.1 Establishment and Functions

The Human Resource Office at the National University of Technology was officially established in August 2017 with the aim "to model HR policies that assist in assembling the finest, diversified, and motivated workforce to realize the NUTECH vision." The HR Office at NUTECH primarily operates in two dimensions: Recruitment and Enrolment. Led by a Director of HR and supported by six clerical staff members, a team of four officers manages matters related to employees below Grade 16 (labeled recruitment) and those above Grade 17 (labeled enrolment).

The personnel working in the HR function at NUTECH come from various backgrounds, including military personnel management, corporate FMCG HR functions, and service sector customer care. However, they share a common passion and understanding that an organization's greatest strength lies in its human capital.

4.2 HR Operations and Perspectives

Given the complex environment in which NUTECH operates, especially in its interactions with governments of other countries, the Government of Pakistan, ministries, and international and national institutions, a certain degree of decentralization is required. However, decision-making in NUTECH's HR remains centralized and lies with the Competent Authority.

While centralized decision-making may impede agility in HR processes, the HR team is actively addressing this challenge. A significant step taken by the team is the development and use of an HR module on the user-friendly interface platform called Odoo. This module aims to transition to a paperless environment, with all HR operations such as recruitment, salary management, and appraisal cycles accessible and managed with a simple click. This initiative will enhance visibility into the structured steps taken by the HR office to address employee feedback and grievances.

Moreover, the HR function at NUTECH believes that with the introduction of this interface (currently latest version has gone into beta testing phase), the organizational significance and role of the HR office will be better understood across different quarters. Relevant stakeholders will recognize the supportive role of HR in enhancing the performance of other primary offices.

4.3 Merit, Diversity, and Legal Compliance

Transparency and merit are fundamental principles for the NUTECH HR Office. Recognizing that the foundation of the workforce must be based on the highest levels of merit and fairness, the HR office ensures adherence to these principles. As a government organization, NUTECH is accountable to various entities, particularly the Ministry of Science and Technology and the Higher Education Commission. Regular audits and updates from these bodies have yielded satisfactory results.

As an equal opportunity employer, NUTECH has eliminated any quota system and conducts all hirings based on competency without bias towards gender, caste, race, or religion. Candidates undergo several rounds of technical and competency-based reviews,

including assessments by external parties to ensure fairness. Results of these assessments are shared in appropriate forums, especially during internal and external HR audits.

CHAPTER 5 : HUMAN RESOURCE NEEDS AT NUTECH

After our initial interactions with the National University of Technology (NUTECH) Human Resource team, it became evident that despite the team's dedication and hard work, there were several critical areas within the HR operations that required immediate attention to enhance overall organizational efficiency and effectiveness. Our discussions revealed that while NUTECH had made significant strides in establishing a robust educational environment, the human resource functions needed a strategic overhaul to support and sustain the university's rapid growth and its ambitious vision for the future.

Understanding the operations in depth, I conducted a series of structured meetings with the HR team. These sessions were designed to uncover the degrees of their daily operations, the challenges they faced, and the impact of these issues on the broader organizational goals. Through these comprehensive interactions, it became clear that the HR team was grappling with systemic challenges that hindered their ability to operate efficiently and deliver on their strategic objectives.

Key problem areas were identified through a methodical approach, combining observational studies, one-on-one interviews with HR personnel, and analysis of HR operational data. This meticulous process helped to pinpoint several areas where targeted improvements could significantly uplift the HR department's performance.

This analysis aims to go beyond superficial observations and looks deep into the fabric of NUTECH's HR operations. I wanted to focus on defining these challenges in a structured manner, followed by a detailed exploration of the solutions implemented and the outcomes

of these interventions. My goal is to present a holistic view of the situation that combines theoretical frameworks with practical, actionable insights.

The challenges identified were multifaceted, impacting various aspects of HR functions from recruitment and training to performance management and employee engagement. These challenges were not just operational but strategic, indicating a need for a paradigm shift in how the HR department aligned its functions with the university's overarching goals.

In the subsequent sections, we will detail the specific problems we identified through our initial assessments. For each key issue, we will outline the strategic improvements that were undertaken and discuss the outcomes of these efforts in transforming NUTECH's HR operations. By doing so, we aim to provide a comprehensive blueprint that can guide similar institutions in their efforts to refine and enhance their HR functions.

CHAPTER 6 : IDENTIFIED MAJOR PROBLEMS

From our comprehensive review and detailed discussions with the HR team at the National University of Technology (NUTECH), we identified four major problems that significantly impacted HR efficiency and effectiveness. These challenges are critical barriers to the HR department's mission to support the university's strategic objectives and ensure a high-performing and motivated workforce. Below, we delve deeper into each issue, exploring the underlying factors and the broad implications for the university.

6.1 Inadequate Talent Attraction and Retention

NUTECH faced significant challenges in attracting and retaining high-quality talent, particularly in specialized roles that are crucial for achieving the university's technology-oriented goals. The university's ambitious vision to become a leading technology institution requires a strategic approach to talent management, which was lacking due to several key issues:

- **Non-Competitive Compensation and Benefits:** The salary packages and benefits offered by NUTECH were often not competitive with those offered by other leading universities and tech industry employers. This discrepancy made it difficult to attract top-tier candidates who could contribute to cutting-edge research and teaching.

- **Limited Career Development Opportunities:** Potential and current employees found the career progression opportunities at NUTECH limited and unclear. The lack of a structured path for professional growth led to frustration among staff and

faculty, contributing to higher turnover rates, especially among the most talented and ambitious individuals.

- **Ineffective Employer Branding:** NUTECH's employer brand did not effectively communicate the unique opportunities and benefits of working at the university. This lack of a strong employer value proposition failed to attract the diverse and innovative talent needed to drive the university's strategic initiatives.

- **Work-Life Balance Challenges:** The demands placed on faculty and staff often led to work-life balance issues, which further deterred potential employees and contributed to the dissatisfaction and departure of current employees.

6.2 Inefficient Training and Development Programs

The existing training and development programs at NUTECH were not adequately aligned with the strategic needs of the university, resulting in significant gaps in skills and knowledge among staff and faculty. This misalignment hindered the university's ability to adapt to rapidly changing technological landscapes and diminished the overall effectiveness of its educational offerings.

- **Outdated Training Content:** Many of the training programs offered by NUTECH relied on outdated content that did not reflect the latest trends and developments in technology and pedagogy. This gap left employees underprepared to meet the demands of their roles.

- **One-Size-Fits-All Approach:** The training programs often adopted a generic approach that failed to address the specific needs of different departments and

individuals. This lack of customization made the training less effective and failed to motivate employees to participate actively.

- **Lack of Integration with Academic Goals:** There was a noticeable disconnect between the training programs and the academic goals of the university. Training was not seen as a tool to enhance teaching quality or research output but rather as a compliance requirement, leading to missed opportunities for strategic enhancement.

- **Insufficient Support for Continuous Learning:** Continuous learning and upskilling are crucial in a technology-driven institution. However, NUTECH's programs did not encourage ongoing learning, nor did they provide the necessary resources or support for staff and faculty to pursue such initiatives.

6.3 Outdated Recruitment Processes

NUTECH's recruitment methods were traditional and time-consuming, which led to delays in filling key positions and frequent mismatches between candidate skills and job requirements. The inefficiencies in these processes were a major hurdle in maintaining a workforce capable of achieving the university's objectives.

- **Lengthy and Inefficient Hiring Procedures:** The recruitment process at NUTECH was bogged down by bureaucratic procedures and unnecessary steps that extended the hiring timeline significantly. This sluggish process caused the university to lose potential candidates to faster-moving competitors.

- **Poor Utilization of Technology:** There was a lack of utilization of modern recruitment technologies, such as applicant tracking systems (ATS) and data analytics, which could streamline the recruitment process and enhance the quality of hires by matching candidates more accurately with job profiles.

- **Inadequate Candidate Experience:** The candidate experience during the recruitment process was often neglected, leading to a negative perception of NUTECH as an employer. Poor communication, lack of transparency, and an overly complicated application process discouraged top candidates from pursuing opportunities at the university.

- **Limited Outreach and Networking:** NUTECH's recruitment efforts were often limited to traditional channels, which failed to tap into diverse talent pools. There was a significant need to expand recruitment efforts through strategic partnerships, professional networks, and innovative platforms to reach a broader audience of potential candidates.

6.4 Poor Performance Management and Appraisal Systems

The performance management and appraisal system at NUTECH was not effectively motivating staff or aligning their efforts with the university's strategic objectives. This issue was detrimental to fostering a high-performance culture and undermined efforts to drive university-wide improvements.

- **Lack of Clear and Measurable Objectives:** Performance appraisals often lacked clear and measurable objectives that were aligned with the university's strategic

goals. This ambiguity prevented effective assessment of individual contributions and hindered the ability to provide constructive feedback and support for improvement.

- **Insufficient Recognition and Rewards:** The link between performance outcomes and rewards was weak, leading to a lack of motivation among employees. High performers often felt undervalued, while underperformers were not adequately encouraged or supported to improve.

- **Overemphasis on Quantitative Metrics:** There was an overemphasis on quantitative metrics for performance evaluation, neglecting the qualitative aspects of teaching, research, and service. This imbalance led to a narrow view of performance that failed to capture the full range of contributions made by employees.

CHAPTER 7 : FOCUSED CASE ANALYSIS AND STRATEGIC IMPROVEMENTS

In our analysis of the HR challenges at NUTECH, we specifically chose to focus on "Inefficient Training and Development Programs" and "Outdated Recruitment Processes" due to their foundational impact on the university's strategic goals and their potential for transformative change. These areas were prioritized because they directly influence the core capabilities and growth potential of the university's workforce, which are critical to achieving NUTECH's mission of becoming a leader in technology-driven education.

The training and development programs are essential for preparing a highly skilled and adaptable workforce that can keep pace with rapid technological changes and evolving educational needs. By addressing the inefficiencies in these programs, we aimed to enhance the competencies and productivity of both faculty and staff, thereby directly boosting the overall quality of education and research at NUTECH.

Similarly, modernizing the outdated recruitment processes was identified as a priority because the ability to attract and retain top-tier talent is crucial for fostering innovation and academic excellence. Streamlining these processes not only improves the efficiency and effectiveness of hiring but also ensures that the university can compete more effectively in the global market for academic and research talent. By focusing on these recruitment improvements, NUTECH is better positioned to quickly and effectively fill key roles with candidates who are not only qualified but also fully aligned with the university's strategic objectives.

While the other issues identified — "Poor Performance Management and Appraisal Systems" and "Quality of Hire Concerns" — are also important, they are, in many ways, subsequent layers of the overarching problems addressed by improving training and recruitment. By concentrating on these critical areas, we set the foundation for more holistic improvements across all HR functions, leading to a more robust and strategic HR framework that supports NUTECH's ambitious goals.

CHAPTER 8 : CASE 1: INEFFICIENT TRAINING AND DEVELOPMENT PROGRAMS

8.1 Problem Detail

The training and development programs at the National University of Technology (NUTECH) were identified as a critical weak point in the HR structure, lacking strategic alignment with the broader goals and vision of the university. This misalignment led to several substantial issues that directly affected the operational effectiveness and the development of staff and faculty across the university.

8.2.1 Skill Gaps:

NUTECH's workforce, including both academic and administrative staff, frequently found themselves ill-equipped with the necessary skills to effectively perform their roles. This was especially problematic given the rapidly evolving technology standards that are fundamental to NUTECH's educational and research missions. Faculty members struggled to incorporate the latest technological advancements into their curriculum, while administrative staff lacked the necessary skills in data analytics, digital communication, and project management, essential for supporting the university's operations.

The skill gaps were not just limited to new technologies; there was also a noticeable deficiency in essential soft skills such as leadership, communication, and critical thinking. These gaps undermined the ability of staff to engage effectively with students and peers, hampering collaborative projects and lowering the overall quality of education and service provided by NUTECH.

8.2.2 Low Engagement:

The existing training sessions were often generic, off-the-shelf programs that failed to address the specific needs and challenges of different departments within the university. This one-size-fits-all approach led to low participation and engagement among faculty and staff, who felt that the training offered little value or relevance to their specific needs.

Surveys and feedback from staff indicated that the lack of tailored training content resulted in a pervasive sense of disconnection from the university's strategic initiatives. Many employees felt that their personal and professional growth was not a priority for the university, leading to decreased motivation and a lack of ownership in participating in training programs.

Additionally, the timing and format of the training sessions contributed to the low engagement. Sessions were often scheduled without considering the academic calendar or workload of the staff, making it difficult for them to attend without disrupting their primary responsibilities. The predominantly lecture-based delivery was also seen as outdated and unengaging, particularly when compared to the more interactive and participatory methods that are considered best practice in professional development.

8.2 Strategic Improvements

Recognizing the critical nature of these issues, NUTECH embarked on a comprehensive strategy to overhaul its training and development programs. The aim was to realign the university's training efforts with its strategic goals and to address the specific needs of its diverse staff and faculty. The following targeted improvements were implemented:

8.2.1 Development of Customized Training Modules:

NUTECH introduced specialized training programs that were meticulously designed around the specific needs of different departments and their strategic roles within the university. This initiative began with a thorough needs assessment, involving detailed consultations with department heads and a comprehensive review of job descriptions and performance data to identify the precise skills and knowledge gaps in each area.

Based on this assessment, a range of customized training modules was developed. For instance, faculty in the computer science department received advanced training in the latest programming languages and cybersecurity practices, while administrative staff were trained in new software tools for student data management and digital communication platforms.

These training modules were developed in partnership with industry leaders and academic institutions to ensure they were cutting-edge and directly applicable to the challenges faced by NUTECH staff. For example, NUTECH partnered with a leading software company to create a series of workshops for administrative staff on using cloud-based collaborative tools, which were crucial for improving the efficiency of university operations.

8.2.2. Implementation of Continuous Learning Culture:

To foster a culture of continuous learning and development, NUTECH established a Continuous Professional Development (CPD) program. This program was designed to support ongoing learning and skill development, with the goal of keeping staff at the forefront of their respective fields.

The CPD program included several key components:

- **Personalized Learning Paths:** Each staff member was given access to a personalized learning dashboard that suggested courses and materials based on their specific needs and career goals. This approach empowered employees to take charge of their own development and ensured that they had access to the resources most relevant to their roles.

- **Digital Learning Platforms:** NUTECH leveraged digital platforms to provide flexible learning options. This included online courses, webinars, and interactive workshops that staff could participate in from anywhere, making it easier to fit training into their busy schedules. These platforms featured content from global educational institutions and industry experts, providing high-quality learning experiences that were both effective and convenient.

- **Learning Communities:** The university facilitated the creation of department-specific learning communities, where staff could share knowledge, discuss challenges, and collaborate on solutions. These communities were supported by online forums and regular meetups, enhancing peer-to-peer learning and fostering a collaborative environment.

- **Rewards and Recognition:** To motivate staff and reinforce the value of ongoing development, NUTECH introduced a system of rewards and recognition for active participation in the CPD program. This included professional development credits, awards for completing key training milestones, and public acknowledgment in university communications.

8.3 Outcomes

The strategic improvements in NUTECH's training and development programs yielded significant positive outcomes, enhancing the capabilities of the workforce and aligning their skills more closely with the university's strategic objectives.

8.3.1 Enhanced Employee Skills:

The introduction of customized training modules led to a measurable improvement in the skills relevant to employees' roles. Post-training evaluations showed that over 85% of staff reported increased confidence in their ability to perform their job duties effectively. Faculty members noted particularly significant improvements in integrating technology into their teaching, while administrative staff reported enhanced skills in data analysis and project management.

The skills enhancement was not just technical; there was also a notable improvement in soft skills. Communication, teamwork, and problem-solving skills saw substantial development, contributing to a more collaborative and effective work environment.

8.3.2 Higher Engagement and Productivity:

The tailored approach and the introduction of a continuous learning culture led to a 40% increase in training participation rates across the university (Participation Rate Analysis attached in Annexure C). Staff and faculty were much more engaged in the training process, motivated by the relevance and quality of the content and the flexible, accessible formats.

This increased engagement translated into significant improvements in job performance and overall productivity. Departments that had particularly high participation in targeted training programs reported better teamwork, more innovative approaches to problem-solving, and higher levels of staff satisfaction and morale.

Moreover, the positive feedback loop created by the CPD program and learning communities led to sustained engagement in professional development activities. Staff were more proactive in seeking out learning opportunities, and there was a notable increase in collaborative projects and initiatives that drew on the new skills and knowledge acquired through the training programs.

CHAPTER 9 : CASE 2: OUTDATED RECRUITMENT PROCESSES

9.1 Problem Detail

NUTECH's recruitment processes were identified as a significant bottleneck in the university's quest to position itself as a leading technology institution. The traditional and cumbersome hiring practices were out of sync with modern, agile recruitment methods, leading to several critical issues that impeded the university's ability to attract and onboard top talent efficiently.

9.1.1.Extended Time-to-Hire:

One of the most pressing issues was the extended time-to-hire, which averaged around 90 days to fill a vacancy. This lengthy process was detrimental to the operational efficiency and responsiveness of the university for several reasons:

- **Operational Delays:** Each unfilled position meant delayed projects and initiatives, which cascaded into broader operational inefficiencies across departments. Critical research projects, academic programs, and administrative functions were all hindered by the lack of essential personnel.

- **Resource Drain:** The extended hiring process consumed significant HR and departmental resources, including time spent reviewing outdated applications, conducting lengthy interview processes, and managing communication with numerous underqualified candidates.

- **Lost Talent:** High-caliber candidates often lost interest or accepted alternative offers due to the protracted recruitment process, leaving NUTECH with a diminished pool of applicants and forcing the university to often settle for less optimal candidates.

9.1.2 Quality of Hire Concerns:

The outdated screening methods compounded the issues, leading to frequent mismatches between candidate skills and job requirements. This misalignment had several direct implications:

- **Skill Mismatches:** Often, the candidates hired did not possess the necessary skills or fit for the role due to the inadequate screening processes. This resulted in employees who were ill-prepared for their positions, affecting the overall quality of education and service NUTECH aimed to provide.

- **Training and Development Strain:** More resources had to be diverted to train these mismatches, which could have been more effectively used in developing existing staff or more strategic hires.

- **Turnover and Morale:** Misfit hires often led to early turnover, which not only added to recruitment costs but also affected team morale and productivity. Teams constantly adjusting to new, often underprepared members found it challenging to maintain momentum and focus.

9.2 Strategic Improvements

Recognizing the need for a fundamental change in the recruitment process, NUTECH implemented a series of strategic improvements designed to modernize their approach and align it more closely with the university's strategic objectives.

9.2.1 Adoption of Technology-Driven Recruitment Tools:

To streamline the recruitment process and make it more efficient, NUTECH adopted several technology-driven tools and practices:

- **Applicant Tracking System (ATS):** NUTECH implemented an ATS to automate many aspects of the recruitment process. This system was chosen for its robust features which included:

- **Automated Candidate Screening:** The ATS could screen candidates based on predefined criteria, such as education, experience, and specific skills, significantly reducing the time spent on initial resume reviews.

- **Analytics and Reporting:** The system provided valuable insights into the recruitment process, allowing HR to monitor metrics like time-to-hire, cost-per-hire, and applicant sources, enabling continuous improvement of recruitment strategies.

- **Digital Onboarding Processes:** Alongside the ATS, NUTECH introduced digital onboarding to streamline the transition of new hires into their roles. This platform ensured that new employees could complete paperwork, receive training materials,

and connect with their teams before their official start date, enhancing the overall onboarding experience.

9.2.2 Introduction of Competency-Based Selection:

Moving away from traditional, qualification-focused selection processes, NUTECH adopted a competency-based approach that aligned more closely with the needs of each role and the university's strategic direction.

- **Competency Framework Development:** A comprehensive competency framework was developed for all roles within the university. This framework identified the key competencies, both technical and soft skills, required for each position and was integrated into the job description and recruitment criteria.

- **Structured Interview Processes:** Interview panels were trained to conduct structured interviews that focused on assessing candidates against the established competencies. This approach minimized subjective biases and ensured that the focus remained on identifying candidates who were not only qualified but also a good fit for the university's culture and values.

- **Candidate Assessments:** In addition to interviews, a variety of assessments were introduced to evaluate candidates' competencies in realistic job scenarios. These included problem-solving exercises, technical tests, and situational judgment tests, providing a more comprehensive view of candidates' abilities and potential.

9.3 Outcomes

The strategic changes implemented in NUTECH's recruitment process had a profound and positive impact on the university's ability to hire effectively and efficiently.

9.3.1 Reduced Time-to-Hire:

The adoption of the ATS and the streamlined recruitment processes led to a significant reduction in time-to-hire. The average duration to fill a vacancy decreased by 20%, (VA/NVA Analysis attached in Annexure D) a substantial improvement that enhanced the HR department's efficiency and agility.

- **Immediate Operational Benefits:** This reduction in hiring time allowed departments to initiate and proceed with their projects faster, minimizing delays and improving overall university productivity.

- **Resource Optimization:** The HR team was able to allocate their time and efforts more effectively, focusing on strategic HR development rather than being bogged down by administrative recruitment tasks.

- **Attracting Top Talent:** The shortened hiring cycle made NUTECH more attractive to high-quality candidates who sought efficient and responsive recruitment experiences. This helped the university compete more effectively for top talent in academia and research.

- **Improved Quality of Hires:** The shift to a competency-based selection process and the improved screening methods resulted in significantly better alignment of hires with job requirements. The impact of this improvement was multifaceted.

- **Higher Performance and Productivity:** Employees hired under the new system were better suited to their roles and could contribute more effectively from the outset. This alignment led to a 50% reduction in early turnover due to misfit issues, enhancing team stability and performance.

- **Increased New Hire Satisfaction:** New employees reported higher job satisfaction ratings, as they found their skills and competencies well-matched with their roles. This satisfaction was reflected in lower turnover rates and positive feedback in new hire surveys.

- **Enhanced Reputation:** The more effective recruitment process improved NUTECH's reputation as an employer. The university began to be recognized for its innovative and candidate-friendly hiring practices, which further attracted a broader pool of qualified applicants.

- **Developmental Leap:** For those hires who did require further development, the precise matching of competencies meant that training could be more targeted and effective, leading to quicker integration and productivity.

CHAPTER 10 : CONCLUSION

This analysis has demonstrated a transformative journey within the Human Resource Office at the National University of Technology (NUTECH). By focusing on "Inefficient Training and Development Programs" and "Outdated Recruitment Processes," they aimed to address foundational challenges that were pivotal in aligning HR practices with NUTECH's strategic objectives. The necessity of this focus stems from their understanding that the core strength of any educational institution lies in its people — the faculty and staff who foster an environment of learning and innovation.

The redevelopment of NUTECH's training programs has led to a more skilled and confident workforce, ready to embrace and drive the university's vision forward. By implementing customized training modules and fostering a continuous learning culture, they have seen significant improvements in employee skills and engagement. This strategic enhancement has not only boosted productivity but also enriched the educational quality, ensuring that NUTECH remains at the forefront of technology-oriented education.

Similarly, the overhaul of the recruitment processes has streamlined the way NUTECH attracts and retains top-tier talent. The adoption of a technology-driven Applicant Tracking System (ATS) and a shift to competency-based selection have reduced the time-to-hire by 20% and improved the quality of new hires. This has resulted in a more dynamic and responsive workforce, capable of contributing effectively to NUTECH's ambitious projects and research endeavors.

Overall, these strategic improvements have laid a strong foundation for future growth and innovation at NUTECH. The HR Office's enhanced functions are now better aligned with the university's mission, driving strategic initiatives that will cultivate a thriving academic community.

This project not only reflects a significant leap towards operational excellence but also demonstrates a commitment to nurturing talent that will contribute to the broader goals of national and global technological advancement.

APPENDIX A: INTERVIEWS

A combined and summarized transcript of the interactions and discussions held with the members of the Human Resource Office and other support staff at NUTECH is reproduced as under, along with other relevant information:

A.1 HR Office Team

Director HR: Mr. Nauman Pasha

Members: Moiz Muneer, Irfan Ali, Allah Ditta, Waqas Ahmed, Malik Junaid (Remote)

Office Address: 4th Floor, Admin Block, NUTECH, I-12, Islamabad

Dates and Time of Interviews: 20th Dec 2024 at 1400hrs, 24th Jan 2024 at 1500hrs

Telephonic Interview: 6th Feb 2024

Question 1: Can you please tell us a little about NUTECH?

Answer: National University was inaugurated on 24th April 2019 by Chief of the Army, General Qamar Javed Bajwa, who's also the Chairman of NUTECH's Board of Governors. NUTECH is the first of kind higher education institution, focused on bridging the gap between academia and industry.

Engineer Khalid Asghar, the first Rector NUTECH is the man behind the dream as he was assigned to develop an institute capable of producing world class engineers.

Question 2: Can you please brief us about your roles in specific in the HR department?

(Mr. Nauman Pasha)

Answer (1): I'm the Director of the HR department and I'm responsible for leading the departmental operations and functions wholly i.e the recruitment and enrolment, compensation and other key tasks.

(Waqas Ahmed)

Answer (2): I along with my team report to the Director and ensure that all company policies are ensured in the department.

(Irfan Ali)

Answer (3): I'm the Deputy Assistant Director Recruitment. I mostly look over the data handling and inter-department meetings in the organization with my colleague Moiz Muneer.

(Moiz Muneer)

Answer (4): I am the Deputy Assistant Director. I along with my colleagues manage all relevant stakeholders and all the employee records on a regular basis. As the HR department, we have to be very particular and consistent in our tasks, ensuring high level of performance and secrecy.

(Allah Ditta)

Answer (5): I am the Supervisor HR and I ensure that the all the inter-departmental issues are communicated successfully with my bosses on timely basis.

(Malik Junaid)

Answer (6): Being the Legal Consultant on remote role I am responsible for looking over the legal aspects of the firm and to ensure that as an organization we follow all the legal guidelines provided by the law.

Question 3: How is NUTECH different from other institutes of Pakistan?

Answer: NUTECH promises to produce excellent applied engineers and be a research institute that can help the nation move forward in the realm of applied engineering.

Question 4: What is NUTECH's future vision?

Answer: "Become Internationally acclaimed technology driven research university for producing industry focused leaders of character, solution providers, challenging technologies innovators and developers to revolutionize technology sector by introducing higher education in the engineering and technology streams along with high end technical/ vocational skills to strengthen national economy for real self-reliance."

Question 5: What is NUTECH's finance model?

Answer: The Ministry of Science and Technology sponsors NUTECH hence it receives budget from the Government of Pakistan. As NUTECH is in its infancy phase, it solely depends on the funds it receives from the Government of Pakistan.

Question 6: Please tell us about the functional capabilities of NUTECH and how does NUTECH operate as an organization?

Answer: Just like most companies NUTECH's staff and faculty is grouped in different departments and we have our own pay scales that are market competent.

NUTECH is flexible as an organization as it employees all of its support staff on contractual basis and faculties excluding professors who are appointed on HEC's tenure track system with advance increments as per policy and eligibility; we're also trying to approach foreign qualified experienced faculty to enrich the student experience on campus and in class.

Question 7: Can you please tell us about the HR department of NUTECH?

(Mr. Nauman Pasha)

Answer(1): The Human Resource office of NUTECH was established in 2017 and is divided into two parts i.e Recruitment and Enrollment led by me as the director of the department and supported by 6 x clerical staff. Officers are designated to handle all relevant matters to Grade 16 and below employees (labelled recruitment) and Grade 17 and above employees.

This department is diverse in nature as it employees people from different background i.e military personnel, corporate FMCG and service sector.

(Allah Ditta)

Answer (2): Our working environment involves us interacting at organizational level such as the Government, ministries and other national institutions. I feel that there is a need of decentralization as the decision making of NUTECH'S HR lies with the competent authority and this centralization makes HR processes in our department a little less agile but we are trying to fix that.

Question 8: How are the different aspects of the organization handled by the department?

(Malik Junaid)

Answer (1): I just joined 2 years back so I am making my way in the department but as the legal head, I would say that the NUTECH's HR office regards transparency and merit as one of its guiding principles and if the foundations of the workforce are not established on the highest levels of merit and fairness, then the whole vision and mission of this establishment will collapse.

(Moiz Muneer)

Answer (2): NUTECH being a government funded organization is answerable to many governmental regulatory bodies. Furthermore being an equal opportunity employer, NUTECH has no quota system and all hiring are competency based without any prejudice of any gender, caste, race or religion.

(Waqas Ahmed)

Answer (3): We're primarily focused on finding the right people for the right job so that we can ensure absolute transparency and efficiency in our day to day tasks.
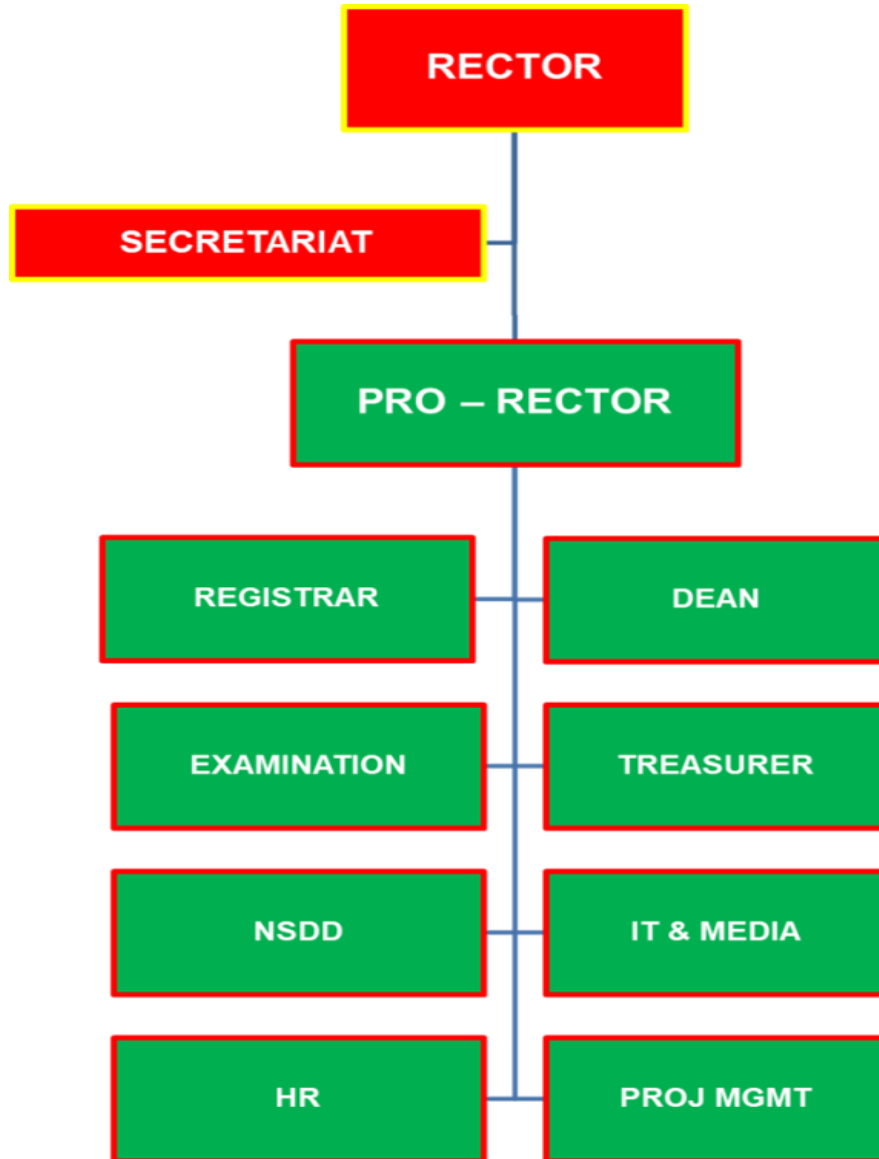
APPENDIX B: NUTECH ORGANOGRAM

Figure B.1: NUTECH Organogram

APPENDIX C: NUTECH ORGANOGRAM

- **Initial total number of eligible participants (NPS 17 above admin staff and faculty):** 238

- **Overall strength of university:** 604 employees

- **Initial Training Participation Rate:** 50% of eligible participants

- **Increased Participation Rate:** 40% increase in the participation rate

C.1 Calculation Steps

Initial Number of Participants:

- Initial Participants=Initial Participation Rate ×Total Eligible Participants

- Initial Participants=0.50×238=119

Increased Participation Rate:

- New Participation Rate=Initial Participation Rate+[(40/100)×Initial Participation Rate]

- = 0.5+(0.4x0.5)%

- =0.5+0.2

- =70%

New Number of Participants:

- New Participants=New Participation Rate × Total Eligible Participants

- New Participants=0.70×238≈167

Increase in Number of Participants:

- Increase in Participants=New Participants−Initial Participants

- Increase in Participants=167−119=48

C.2 Summary of Analysis

Initial Training Participation Rate: 50%

Total Eligible Participants: 238

Overall Strength of University: 604

Initial Number of Participants: 119

New Training Participation Rate: 70% (after a 40% increase)

New Number of Participants: 167

Increase in Number of Participants: 48

C.3 Interpretation

The improvements in the training and development programs at NUTECH led to a significant increase in the training participation rate among eligible participants, rising

from 50% to 70%. This translates to 48 more staff and faculty members actively participating in the training programs, bringing the total number of participants to 167 out of 238 eligible participants. This increase in participation is a direct indicator of the enhanced relevance, quality, and accessibility of the training programs, demonstrating the success of the strategic improvements.

APPENDIX D: VA/NVA ANALYSIS FOR RECRUITMENT

PROCESS BEFORE AND AFTER

Step	Description	Days (Before Interventions)	VA/NVA	Days (After Interventions)	Reduced Days
1. Job Requisition Approval	Approval from department heads	5	VA	3	2
2. Job Posting	Advertising the job	7	VA	4	3
3. Application Collection	Gathering applications	14	NVA	10	4
4. Initial Screening	Reviewing applications for eligibility	10	NVA	7	3

5. **Shortlisting Candidates**	Selecting top candidates for interview	7	VA	5	2
6. **Scheduling Interviews**	Coordinating interview schedules	10	NVA	7	3
7. **Conducting Interviews**	First round of interviews	7	VA	5	2
8. **Technical Review for Faculty**	Conducting technical reviews for faculty positions	10	VA	6	4
9. **Interview Evaluation**	Reviewing interview performance	5	NVA	3	2

10. Final Interview/Assessment	Second/final round of interviews	7	VA	5	2
11. Background Checks	Verifying candidate backgrounds	10	NVA	7	3
12. Offer Preparation	Preparing job offers	5	NVA	3	2
13. Offer Approval	Getting approvals for offers	5	NVA	3	2
14. Offer Extension	Extending the job offer to candidates	3	VA	2	1
15. Candidate Decision	Waiting for candidate response	5	NVA	3	2

16. Onboarding Preparation	Preparing for the new hire's start date	5	NVA	3	2
Total		**90**		**72**	**18**

Table D.1: VA/NVA Analysis Results