2024/28
BUSINESS PLAN

Ignite National Technology Fund

Ministry of IT & Telecom

Vision

To transform Pakistan's economy into knowledge-based economy by promoting efficient, sustainable and effective ICT initiatives through synergic development of industrial and academic resources.

Mission

To fund and promote the innovation value chain in Pakistan.

Contents

Statement of Corporate Intent

1. Name of State-Owned Enterprise:

   IGNITE

2. Incorporated/established on:

   November 20, 2006

3. Subsidiaries included in this statement of corporate intent:

   NIL

4. Description of the main business of the state-owned enterprise:

   To promote research and development activities in the field of Information Communication Technologies through disbursement of grants to implementing partners, received from the Government of Pakistan and other national and international funding agencies.

5. Summary of the business goals of the state-owed enterprise:

   Ignite's business goals for the 2024/25 financial year focus on advancing Pakistan's technology and innovation ecosystem through strategic initiatives aimed at fostering entrepreneurship and industry collaboration. Key objectives include the establishment of additional National Incubation Centers (NICs) to nurture startups across various regions and sectors. Ignite also plans to launch specialized incubators in the health-tech and ener-tech sectors, as well as an AI and space technology incubator, to capitalize on emerging global technologies and local talent. Further, the organization intends to implement an Industry Research & Education Program to enhance collaboration between academia and industry, ensuring that educational outputs align with market needs. Additionally, Ignite will roll out expanded skill enhancement projects, Digiskills 3.0 and CodiSkills, to equip the youth with necessary digital and coding skills. Finally, the establishment of the Center of Excellence in Gaming and Animation (CEGA) and the Virtual Production Studio (VPS) aims to support the growth of these creative industries while providing tools and training that can benefit wider sectors such as education and defense, ultimately contributing to the creation of a robust knowledge economy in Pakistan.

6. Summary of the performance measures and benchmarks against the state owned enterprises business goals and its primary objective:

   - **Establishment of new NICs**
   - **Establishment of Health-Tech/Ener-Tech Incubator**
   - **Establishment of AI / Space Incubator**
   - **Industry Research & Education Program**
   - **Launch of skill enhancement Projects of Digiskills 3.0 & CodiSkills**
   - **Establishment of CEGA and VPS**

7. Summary of the strategies of the state-owned enterprise for achieving its business goals and primary objective:

To achieve its ambitious goals for the 2024/25 financial year, Ignite plans to strategically extend its operational effectiveness across Pakistan's technology sector through a series of targeted initiatives. The expansion of National Incubation Centers (NICs) will involve partnerships with government institutions, private sector and international ecosystem players for development of program design tailored to regional economic needs and international demands. Specialized incubators for health-tech, ener-tech, and AI/space technologies will be developed by leveraging industry-specific expertise and fostering collaborations with leading companies and academic institutions. The Industry Research & Education Program will be designed with input from industry leaders to align educational programs with market demands, while Digiskills 3.0 and CodiSkills will be enhanced through updated curricula and expanded online access to address emerging technologies. Additionally, the establishment of the Center of Excellence in Gaming and Animation (CEGA) and the Virtual Production Studio (VPS) will focus on investing in advanced technologies and global partnerships to boost local talent and position Pakistan as a key player in digital content creation. These strategies are crafted to ensure the successful realization of Ignite's goals and the broader development of a robust knowledge-based economy.

8. The current or anticipated borrowing of the state-owned enterprise, including

borrowing by a subsidiary: **NIL**

9. The accounting policies that the state-owned enterprise will apply for financial records and reporting:

As per applicable IFRS.

10. Summary indicative balance sheet and profit and loss statement for the state-owned enterprise**:**

Financial plan provided at chapter 9 of the Business Plan.

11. Consolidated summary indicative balance sheet and profit and loss statement for the

state-owned enterprise and its subsidiaries as a group:

N/A

12. The proposed dividend declaration and distribution policy of the state- owned

enterprise:

N/A

13. Description of any public service obligations and their impact on the forecasted

financial outcomes of the state-owned enterprise**:**

N/A

14. Any other matter directed to be included in this statement by the Federal

Government:

NIL

NIL

1 Preamble

Ignite, a State-Owned Enterprise operating under the oversight of Ministry of Information Technology and Telecommunication (MoITT), is dedicated to leading and catalyzing the transformation of Pakistan's Information and Communication Technology (ICT) landscape. Entrusted with the mandate to stimulate a technology-driven ecosystem, Ignite's strategic initiatives are pivotal in leveraging ICT as a key driver of economic development, job creation, and global competitiveness. Over the next years, Ignite will expand its focus beyond supporting startups to include a range of future projects aimed at addressing critical national priorities. These initiatives encompass the establishment of specialized incubators in fields such as health-tech, energy, and artificial intelligence, as well as programs for capacity building, telecommunication training, and promoting digital literacy from an early age. This business plan outlines Ignite's strategic goals and initiatives for the financial years 2024/25, 2025/26, 2026/27 and 2027/28 showcasing Ignite's commitment to driving sustainable technological advancement and fulfilling our national mandate to transform Pakistan into a knowledge-based economy.

2 Background

Information and Communication Technology (ICT) plays a crucial role in improving communication, increasing efficiency and productivity, and promoting innovation. ICT allows for faster and more efficient communication within and between organizations and individuals, allowing for better coordination and decision-making. Additionally, ICT systems and automation can improve the efficiency and productivity of various industries, such as manufacturing, finance, and healthcare. Furthermore, ICT also enables the development of new products and services, which can drive economic growth and competitiveness. ICT is a key driver of economic development and can help countries improve their standards of living.

The Government of Pakistan, in its continuous efforts to modernize the Information Technology and Telecommunication sector in the country, passed a monumental act called the 'The Pakistan Telecommunication Reorganization Act' in 1996. The act aimed to promote competition, improve the quality of services, and attract foreign investment in the Information Technology and Telecommunications sector. The Act was a significant step forward for Pakistan's IT & Telecommunications industry, as it helped to open up the market and bring in new players, leading to increased competition and better services for consumers.

One of the key features of the Act (section 33C, 33D, 33E) was the establishment of the Research and Development Fund, later renamed Ignite – National Technology Fund, to be utilized exclusively for Research and Development activities in ICT. In exercise of powers conferred by clauses (ab) of sub-section (2) of section 57 of the Act, the Federal Government made 'The Research and Development Fund Rules' through a Statutory Notifications (S. R. O) in 2006. The Federal Government commenced with incorporation of a non-profit public limited company. The Rules mandated the board of Ignite to perform functions in accordance with the provisions of the Companies Ordinance, 1984 and the articles of association of the Company. The rules further mandated that the Company shall develop, publish, maintain enforce and implement an operations manual setting out the processes and procedures for applications, appraisals, approvals, solicitations, grants, contracts, disbursements, monitoring, modifications, reporting, commercial exploitation and other matters pertaining to projects contemplated under, or pursuant to, the R&D Implementation Framework.

Over the past years, Ignite has focused on fostering innovation through its strategic funding and support for startups. This includes the establishment of eight National Incubation Centers (NICs) across major cities in Pakistan, which have provided crucial resources, mentorship, and support to numerous technology startups. These efforts have significantly contributed to job creation, economic development, and enhancing Pakistan's global competitiveness.

Looking ahead, Ignite's business goals for the next four years are aligned with its core mandate and the evolving needs of the national economy. The upcoming initiatives are designed to address critical national priorities and leverage ICT as a key driver of economic growth. Ignite will focus on several broad areas, including health technology, energy solutions, artificial intelligence, space technology, capacity building, and economic development.

These strategic goals are aimed at driving sustainable technological advancement, creating economic opportunities, and fulfilling Ignite's national mandate to transform Pakistan into a knowledge-based economy. Through targeted initiatives in these key sectors, Ignite will continue to play a critical role in leveraging ICT for national development and economic growth.

3 Sectoral Overview

The Information and Communication Technology (ICT) sector in Pakistan has emerged as a significant driver of economic growth, innovation, and job creation. Over the past decade, the sector has experienced substantial expansion, supported by a young, tech-savvy population, increasing internet and mobile phone penetration, and proactive government policies. The country boasts over 130 million broadband subscribers and over 190 million mobile subscribers, reflecting significant internet penetration and mobile connectivity. The ICT sector's potential is further underscored by the increasing export of IT services, which has grown to around $3 billion annually. The government's vision is to transform Pakistan into a knowledge-based economy, leveraging ICT to enhance productivity and foster innovation across various sectors.

The ICT sector in Pakistan offers numerous opportunities across various domains. The rapid growth of internet users and mobile connectivity creates a fertile ground for digital services, e-commerce, and fintech innovations. There is also substantial potential in areas such as health-tech, education technology (EdTech), artificial intelligence, and cybersecurity. The gaming and animation industry is another promising vertical, with a young and creative population driving demand. Furthermore, the government's focus on digital transformation and initiatives like 'Digital Pakistan' provide a supportive policy environment for ICT growth.

Despite its potential, the ICT sector in Pakistan faces some challenges. These include inadequate infrastructure in rural areas, limited access to capital for startups, a shortage of skilled professionals, and regulatory hurdles. Cybersecurity threats and data privacy concerns also pose significant risks. Moreover, the gender gap in ICT participation remains a substantial issue, limiting the sector's inclusive growth.

The government of Pakistan is actively playing a crucial role in addressing these challenges and unlocking the sector's full potential. Key areas of government intervention include investing in broadband infrastructure, particularly in rural areas, to ensure nationwide internet connectivity. Financial incentives, tax breaks, and grants are being provided to startups and tech companies to enhance their access to capital. Comprehensive training programs are being implemented to build a skilled workforce and bridge the gap between

academia and industry requirements. Additionally, regulatory processes are being streamlined to create a conducive environment for business operations and innovation. The government is also establishing robust cybersecurity frameworks to protect digital assets and build trust in digital services. Furthermore, promoting gender inclusion initiatives encourages more women to participate in the ICT sector, addressing the gender gap and fostering inclusive growth. These concerted efforts by the government are pivotal in enhancing the ICT sector's growth trajectory, ensuring it becomes a cornerstone of Pakistan's economy.

4 Objectives

Ignite National Technology Fund aims to achieve several key objectives over the next four years to drive technological innovation and economic development in Pakistan. These objectives are aligned with Ignite's mandate and the evolving needs of the national economy. The primary objectives include:

1. **Fostering Innovation and Entrepreneurship**
   Ignite will continue to support and nurture startups through its network of National Incubation Centers (NICs), providing resources, mentorship, and funding to foster innovation and entrepreneurial growth.

2. **Advancing Health Technology**
   By focusing on the development and integration of advanced health technologies, Ignite aims to improve healthcare outcomes and efficiencies, addressing critical health challenges in Pakistan.

3. **Promoting Sustainable Energy Solutions**
   Ignite will support the development of innovative energy technologies that promote sustainability and address the country's energy challenges, contributing to environmental conservation and energy security.

4. **Enhancing Artificial Intelligence Capabilities and Technology Development**
   Ignite will invest in the advancement of artificial intelligence technologies and other emerging technologies to enhance national competitiveness and foster technological leadership on a global scale.

5. **Capacity Building and Digital Literacy**
   Ignite will implement programs aimed at enhancing digital literacy and entrepreneurial skills across various demographics, including early education and professional training, to build a skilled and capable workforce.

6. **Economic Development and Investment Promotion**
   Ignite will promote investment in the ICT sector, fostering innovation and creating economic opportunities to drive national economic growth and development.

7. **Supporting Multisectoral Collaboration**
   Ignite will facilitate the use of ICT across various sectors, including agriculture, biotechnology, telecommunications, and international trade, to enhance productivity and innovation.

Through these objectives, Ignite is committed to leveraging ICT for national development, driving sustainable technological advancement, and transforming Pakistan into a knowledge-based economy.

5 Ignite's Strategic Framework

The ultimate objective of the strategic framework of Ignite is the economic prosperity of Pakistan through the contributions of Ignite's strategic programs. The strategic framework comprises of internal and external factors. The external factors are the ones outside the direct control of Ignite but can significantly impact its operations, performance, and success. The external factors affecting the overall strategic direction and ultimately the achievements of strategic objectives include Regulatory Framework, Macro-economic conditions, Security conditions and Political conditions of Pakistan.

The internal factors are the ones under the direct control or influence of Ignite. By assessing and leveraging these internal factors effectively, Ignite can develop strategies aligned with its goals and mandate. The internal factors are further divided into horizontal and vertical layers. The horizontal layers are applicable across all the vertical objectives of the overall strategic framework. The different internal and external factors of Ignite's strategic framework are explained in detail below.
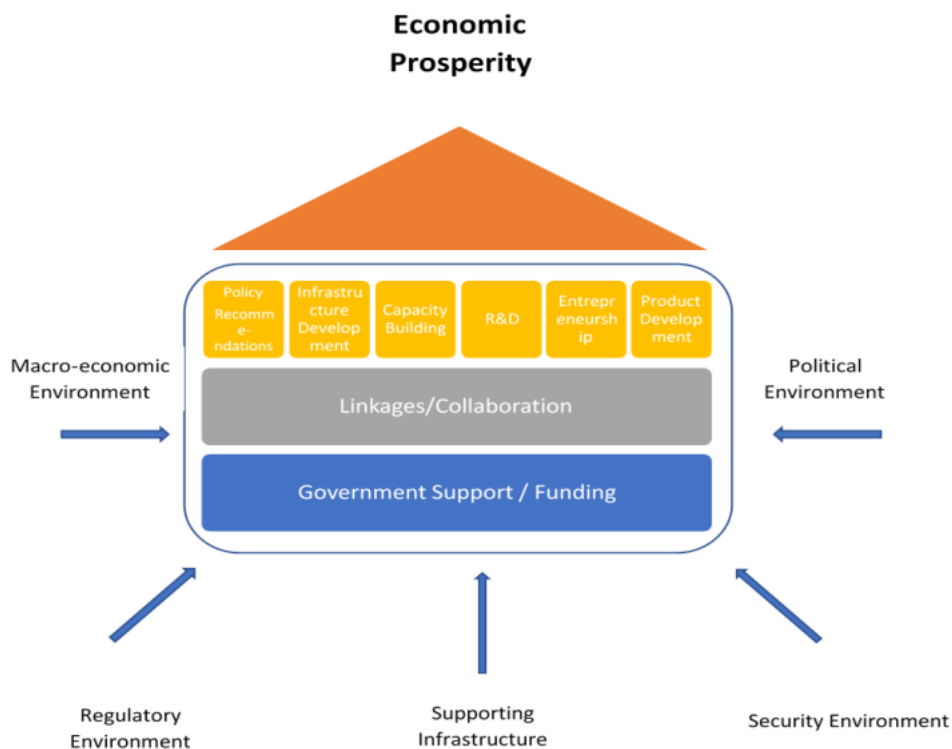
5.1 External Factors

5.1.1 Macro-economic Environment

Macroeconomic conditions, whether domestic or at international level, have a significant impact on the overall objectives of any organization. The state of the economy can affect the availability of investments as well as the market demand for innovative products and services. The governments also reduce spending on developmental projects during economic downturn. Additionally, the economic uncertainties also force the governments to make changes to their economic and fiscal policies and thus can create barriers to investments in ICT.

5.1.2 Regulatory Environment

The regulatory framework refers to the set of laws, regulations, and guidelines that govern the conduct of activities related to innovation. The impact of the regulatory framework can be both positive and negative, depending on how the regulations are designed and implemented. Among other things, regulatory framework can impact compliance costs, Intellectual Property, access to funding and the market size. Regulatory framework can have a significant impact on the overall speed of innovation. Regulations that are overly restrictive can limit the ability of researchers and companies to quickly develop and bring new products and technologies to market. On the other hand, regulations that are too lax can lead to safety and ethical concerns and undermine public trust.

5.1.3 Political Environment

Political conditions can foster or hinder innovation in a country. A stable and supportive political environment can encourage investment in research and development (R&D), create favorable conditions for entrepreneurship and risk-taking, and provide the legal and regulatory framework necessary for innovation to flourish. Conversely, political instability, corruption, and policy uncertainty can stifle innovation and limit economic growth. Governments and policymakers can play an important role in fostering innovation by creating a supportive political environment that encourages investment in R&D, promotes entrepreneurship and risk-taking, and provides the legal and regulatory framework necessary for innovation to flourish.

5.1.4 Security Environment

A secure and stable security environment is crucial for fostering a conducive atmosphere for innovation. It provides the necessary conditions for innovators to take risks, protect their ideas, collaborate, attract funding, and ultimately drive economic growth. By addressing security concerns effectively, a necessary foundation can be provided for a thriving innovation ecosystem and entrepreneurial culture.

5.1.5 Supporting Infrastructure

The objectives of Ignite are very much dependent on the availability of supporting infrastructure to drive innovation and foster a culture where research and developmental activities can take place. Innovation in today's age cannot prosper without the availability of internet, cellular network and smart devices. The reach and impact of Ignite's programs will enhance with increased connectivity in all parts of Pakistan. Supporting infrastructure creates an ecosystem that facilitates access to resources, collaboration, market opportunities, funding, skills development, and supportive policies, thereby accelerating the pace of innovation, driving economic growth, and addressing societal challenges.

5.2 Internal Factors

5.2.1 Policy Recommendations

Ignite has been given a crucial mandate for facilitating an environment of innovation and entrepreneurship. It can play an important role in supporting innovation and entrepreneurship by providing policy recommendations and implementing programs that create a supportive environment for businesses and startups. These policies can help to promote economic growth, job creation, and the development of new technologies and products.

In 2023, Ignite initiated a comprehensive ecosystem assessment conducted by Arthur D. Little and Iconsult to thoroughly evaluate Pakistan's startup and innovation landscape. This study was aimed at identifying the critical factors that could foster or hinder the growth of technological entrepreneurship within the country. Based on the findings of this assessment,

Ignite has put forward several key policy recommendations to relevant authorities. These recommendations target crucial aspects such as taxation, company registration, access to funding, and regulatory compliance. By advocating for these changes, Ignite aims to create a more supportive environment for innovation to flourish, which is integral to the successful execution of its strategic projects and the overall enhancement of Pakistan's digital and entrepreneurial ecosystem.

5.2.2 Infrastructure Development

Infrastructure development is a pivotal internal factor that significantly enhances the efficacy and reach of Ignite's initiatives. By investing in state-of-the-art facilities and technological resources, Ignite not only bolsters its operational capacity but also ensures that innovative projects and programs can be implemented effectively. These infrastructural enhancements include the establishment of well-equipped incubation centers, specialized labs, and advanced training facilities across Pakistan. Such robust infrastructure provides the necessary foundation for fostering a dynamic and sustainable tech ecosystem, enabling startups and entrepreneurs to access the tools and technologies needed to develop, test, and scale their solutions. Furthermore, robust infrastructure facilitates deeper collaboration between stakeholders, aids in the seamless execution of projects, and enhances the overall impact of Ignite's initiatives on Pakistan's digital economy. Through strategic infrastructure development, Ignite aims to create a conducive environment for technological innovation and entrepreneurship, positioning Pakistan as a leader in the global technology landscape.

5.2.3 Capacity Building

Capacity building stands as a core internal factor for Ignite, critical to achieving its strategic objectives and enhancing the overall effectiveness of its initiatives. Through comprehensive training programs, mentorship, and skills development efforts, Ignite seeks to cultivate a highly skilled workforce capable of driving innovation and supporting the growth of the digital economy in Pakistan. These capacity-building efforts are designed not only to empower individual entrepreneurs and tech professionals but also to strengthen institutional capabilities within startups and tech companies. By enhancing technical skills and business acumen, Ignite enables these entities to compete effectively in both local and global markets. Additionally, capacity building facilitates the adoption of new technologies and methodologies, ensuring that the workforce and businesses are well-prepared to meet the challenges of the rapidly evolving tech landscape. Ignite's focused investment in human capital development is essential for sustaining innovation and securing the long-term success of Pakistan's technological sector.

5.2.4 Research and Development

Research and development (R&D) is an important internal factor that underpins Ignite's capacity to foster innovation and drive technological advancements within Pakistan's digital ecosystem. By prioritizing R&D, Ignite ensures that cutting-edge, scientifically validated technologies and methodologies form the basis of its initiatives. This focus on R&D allows Ignite to stay at the forefront of technological evolution, anticipate future trends, and respond proactively to the dynamic needs of the industry. Moreover, R&D initiatives facilitate the creation of original, locally-developed solutions that can address specific challenges faced by Pakistan's businesses and public sectors. By investing in R&D, Ignite not only enhances its project outcomes but also contributes to the global body of knowledge, promoting Pakistan as a hub for innovation and high-tech research. This strategic approach helps bridge the gap between theoretical research and practical, market-ready products,

driving economic growth and positioning Pakistan as a leader in the international technology arena.

5.2.5 Entrepreneurship

Entrepreneurship is a foundational internal factor that drives the core mission of Ignite, embodying the spirit of innovation and risk-taking that is essential for the development of a vibrant tech ecosystem in Pakistan. By fostering entrepreneurship, Ignite catalyzes the creation of startups and supports scalable business models that contribute to economic diversification and job creation. This focus on entrepreneurship empowers individuals and teams to transform novel ideas into sustainable business ventures, utilizing Ignite's resources such as funding, mentorship, and network access. Ignite's commitment to entrepreneurship also involves building a conducive environment that nurtures young businesses through policy advocacy, reducing barriers to entry, and facilitating easier access to domestic and international markets. Such efforts ensure that entrepreneurs not only launch their ventures but also thrive in a competitive landscape, thereby fueling technological innovation and economic growth across the nation. Through these strategic actions, Ignite aims to instill a robust entrepreneurial culture that is integral to achieving long-term success and resilience in Pakistan's digital economy.

6 KEY PAST PROJECTS BY IGNITE

Ignite has historically spearheaded a range of transformative projects that have significantly advanced Pakistan's technological landscape. These initiatives, ranging from the establishment of National Incubation Centers to pioneering digital literacy programs like DigiSkills, have laid a robust foundation for innovation and entrepreneurship across the country. Through these endeavors, Ignite has not only fueled technological advancement but also facilitated substantial economic growth, reinforcing its commitment to driving Pakistan into a new era of digital excellence.

Some of the key projects of Ignite are as following:

6.1 National Incubation Centers

The establishment of National Incubation Centers (NIC) in different cities of the country is one of the most important projects of ignite and unarguably among the most successful projects with substantial impact. The establishment of NIC have brought a disruptive change in the entrepreneurial ecosystem of Pakistan. Pakistan is a country with majority of its population comprising of youth. With limited employment opportunities, a major portion of the population has been on the lookout for an alternative to traditional employment. NIC have introduced the concept of entrepreneurship as an alternate profession for the youth of the country. In addition, the startup ecosystem of Pakistan has also attracted handsome foreign investments.

The first NIC by Ignite was established in 2016. In the past 7 years, Ignite has established eight NICs in Islamabad, Karachi, Lahore, Peshawar, Quetta, Hyderabad, Faisalabad and Rawalpindi. It is in the process of establishing a Center of Excellence in Gaming & Animation and, a Virtual Production Studio.

Year	Event
2016	• 1 – NIC ISLAMABAD
2017	• 2- NIC LAHORE 3 - NIC PESHAWAR
2018	• 4- NIC QUETTA 5- NIC KARACHI
2019	
2020	
2021	
2022	• 6- NIC HYDERABAD 7- NIC FAISALABAD 8- NIC AEROSPACE TECHNOLOGIES
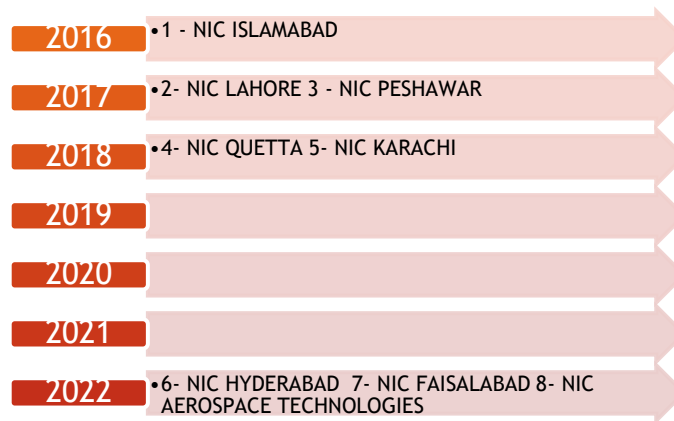
NIC Timeline
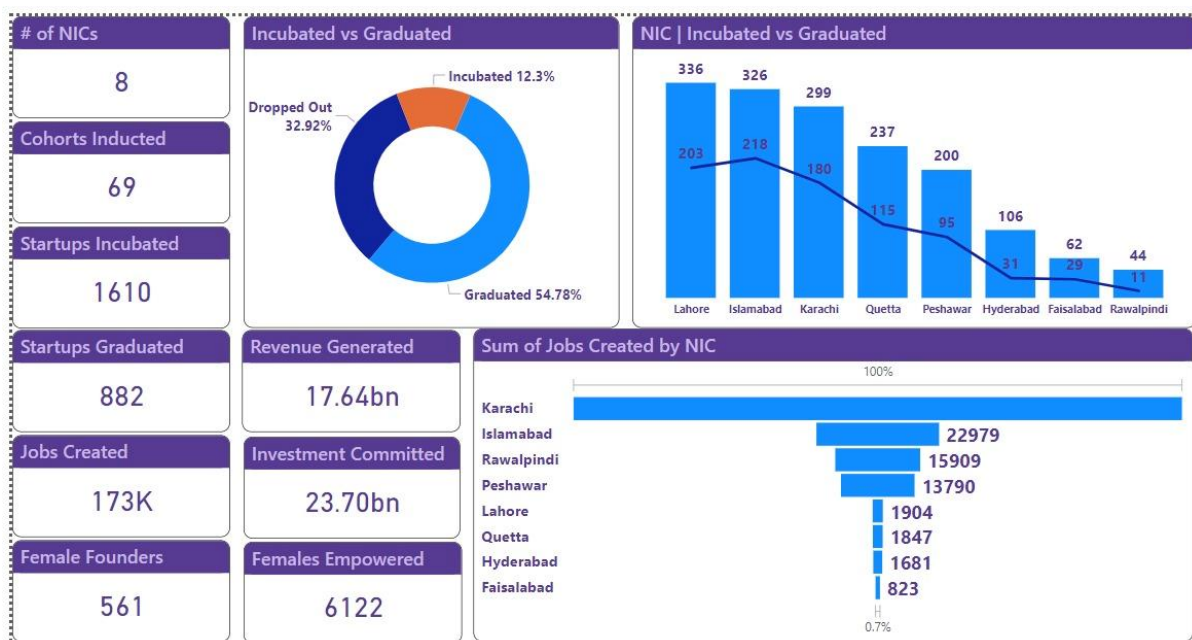
NIC Statistics

Induction into these NIC is through a process that involves submission of proposals and pitching. The successful startups are provided a host of services through these centers. These services include mentorship, skills trainings, business idea refinement, target market analysis, coworking space, access to free of charge ICT services, networking opportunities and sponsorship to participate in international exhibitions.

The establishment of NIC has ignited the startup ecosystem of Pakistan. These NIC have attracted investment of worth PKR 37 Billion, generated a revenue of PKR 14 Billion and have created more than 120,000 jobs across Pakistan. These centers and their affiliated programs have provided the youth of the country with an alternative to traditional employment. All of the NIC are funded by Ignite but operated by industry experts in partnership with Ignite. The establishment of NIC is one of Ignite's biggest success story and have a significant impact on the entrepreneurial ecosystem of Pakistan.

6.2 Digiskills

DigiSkills.pk is the largest Training Program in Pakistan offering free online courses in freelancing skills with E-Certificates issued by Ignite and Virtual University (VU). It is the flagship project of Ignite. More than 3 million trainings have been imparted to over 850,000 individuals in 10 Digital Skills across the country through the program since 2018. Five additional skills have been added to the trainings in the most recent batch for which enrollment opened in June 2022The program is aimed at equipping the youth, freelancers, students and professionals with the knowledge, skills, tools and techniques necessary for the online market places locally and internationally. Digiskills trained individuals earn from multiple freelance marketplaces. According to a third-party study in 2022, freelancers trained through Digiskills had earned $290 million till June 2022.
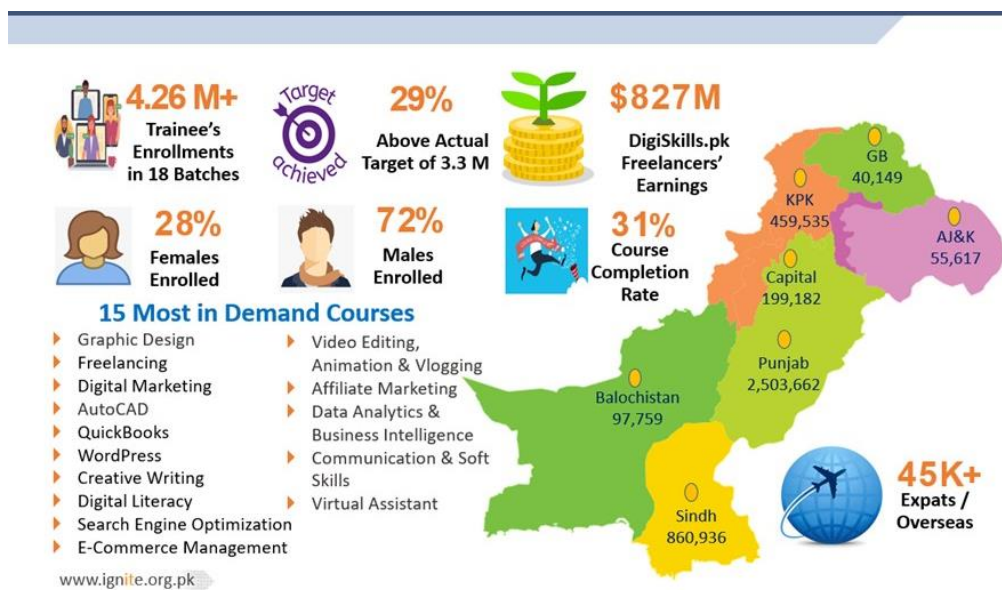
Digiskills Statistics

6.3 National Grassroots ICT Research Initiative (NGIRI)

The National Grassroot ICT Research Initiative (NGIRI) is a program by Ignite which aims to provide financial support to the selected Final Year Projects (FYP) of undergraduate students enrolled in ICT related disciplines to promote R&D and innovation. Support is provided to these students

The program aims to assist final year undergraduate students of ICT related disciplines studying in the Institutions by providing them financial assistance for developing prototypes / working models of their Final Year Projects (FYP) in order to increase creativity, innovation and hands on engineering and development

Program Highlights (2012-2023)

29,034 FYPs Submitted (2022-24)

8,429 FYPs Shortlisted

7,115 FYPs Funded

PKR 388 M+ Disbursements

21,000+ Beneficiaries (Students)

KPK 25

AJ&K 05

Capital 41

Punjab 57

Balochistan 05

181 (in 2022-23) Participating Institutions

Sindh 48

NGIRI Statistics

6.4 Prime Minister National ICT Scholarship Program (PMNICTSP)

Prime Minister's National ICT Scholarship Program has been a flagship HRD initiative of Ignite (Formerly National ICT R&D Fund). Program's out-reach to talented students of underserved areas has made it a true success story. This story reached its climax when the talented youth from marginalized areas outshined their urban peers in different areas of academic as well as extracurricular activities. Ignite is proud of all such heroes who have kept the grace of their respective native towns through their sheer hard work and dedication. Ignite has successfully executed this program from 2007 to 2014.

The program has been executed under the ambit of Ministry of IT & Telecom initially with the partial funding from the Government of Pakistan through public service development projects (PSDP) since February 2008. The project was initially approved with total budget of PKR 2,414.84 for five (05) years i.e. FY 2007-2011. The project concept was inherited from the Outreach Scholarship Program (OSP) of MoITT. Later on, the project has been continued FY 2012-14 and approved through funds from Ignite -National Technology Fund (formerly National ICT R&D Fund Company). About 4,761 fully-funded 4 year ICT-related undergraduate degree scholarships have been offered to the talented and deserving students of Pakistan under this program in top universities of the country. More than 2100 students have successfully graduated from top universities in various ICT related disciplines. 1580 scholars were studying under the program during FY 2016-17. Out of these, more than 1000 scholars have successfully graduated during the 2016-17 and contributing in the economy or pursuing their higher qualification in national and international universities.
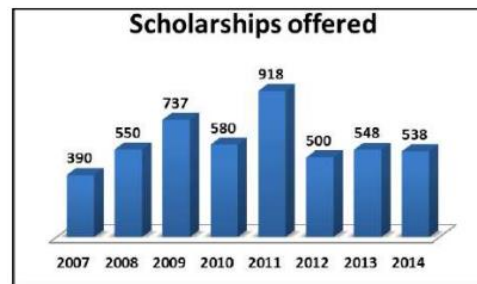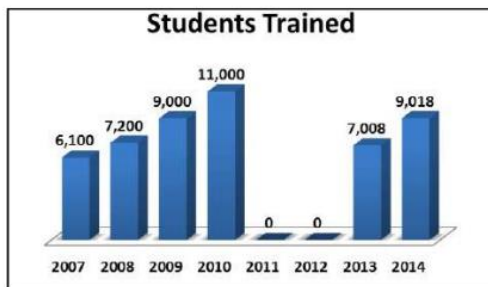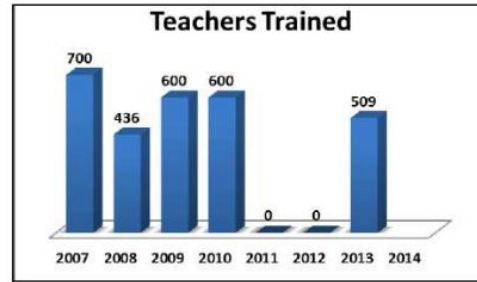
6.5 Prime Minister's Scholarship Program for Talented Students of Balochistan

Ignite funded Prime Minister's Scholarship Program for the talented students of Balochistan from class 8th to class 12th. Scholarship covered tuition fee, boarding and lodging, bi-annual travel charges, stipend, books and stationary, uniforms and miscellaneous expenses. The scholarship award was applicable only to the students of 30 districts of Baluchistan. Through this scholarship, Ignite provided fully funded scholarships to 425 students from Balochistan with an approved budget of PKR 625 million during 2011-12 to 2018-19.

6.6 Management Capacity Building for Telecom Operators

Ignite launched a program called "Management Capacity Building for Telecom Operators" in October 2011 in which the aim was to facilitate the Telecom Operators to train their employees in specialized management areas like Sales, Marketing, Project Management, Financial Management, Human Resource and allied fields. Ignite facilitated the employees of the telecom operators by bearing the expenses of the training. The first phase of the program started in 2011 in which more than 50 executives were trained. In second and last phase, Ignite funded the trainings during 2013-14.

6.7 Establishment of Virtual University (VU) Campuses in Remote Areas of Pakistan

In order to reduce the gap between students of rural & urban areas, Ignite approved funding for establishment of VU Campuses in remote areas of Pakistan during 2011-12 to 2015-16. Under this project, Ignite provided funding to VU for establishment of its first purpose built campus at Jilalpur Pirwal. Whereas, funding for 3 more rental campuses at Bahawalnagar, Makhdoom Rashid and Qadirpur Raan was also provided.

6.8 Establishment of ICT Blocks in Pre-existing Universities/Institutions of Pakistan

The project "Establishment of ICT Blocks in pre-existing Universities/Institutions" was approved with the objective to benefit the students and faculty of the respective university/institution through crowd sourcing and related ICT activities that would

ultimately enable them to develop and enhance the ICT knowledge to become active resource for the R& D initiatives in the country. The approved budget for each ICT Block in following universities/institutions was Rs. 20 Million. a. ICT Block at The Islamia University of Bahawalpur b. ICT Block at Lahore College for Women University, Lahore c. ICT Block at Aitchison College, Lahore. The construction of ICT Block at The Islamia University of Bahawalpur was completed during the year. However, procurement of ICT equipment is in progress. Whereas, establishment of ICT Blocks at Lahore College for Women University and Aitchison College, Lahore was not started till Jun 2014.

6.9 Funding Technical Innovative Products (ICT)

Technology startups are considered to be the epicenter of innovation and are fueling the growth of economies worldwide by creating new jobs, contributing to the GDP and raising the standard of living. Some of the success models around the world are India, Israel, South Korea, Singapore etc. The Government of Pakistan has also realized the importance of supporting an innovation and entrepreneurship culture in the country and has taken major strides in the past few years. This includes supporting cutting edge R&D and product development through supporting startups and joint industry-academia collaborations.

Through Tech Innovation Grants, Ignite funds startups and innovative projects that utilize 4th Industrial Wave Tech to solve local problems and target global opportunities in health, education, agriculture, energy, telecom, finance, security and other verticals.

Ignite has funded a diverse range of technical R&D projects within the ICT spectrum since its inception. Under these funded projects, individuals including professional engineers, researchers, software developers, project managers, finance and accounts professionals, undergraduate and graduate students are being trained to perform state-of-the-art R&D activities in their respective fields.

R&D/INNOVATIVE PROJECTS

154 Proposals worth PKR 2,636 M Approved for Funding

43 Excellence Awards at Scientific Forums

PKR 1.136B Investment Raised

29 International Patents Filed

PKR 346M Revenue Generated

520+ Journal & Conference Publications

Key Achievers:
Electrocure: AI/IoT based tool that has saved up to 90% of line losses and prevented electricity theft in KPK province. Military Engineering Services (MES) is already using it in 23+ Cantts.

Byonyks: Pakistan's first Bloodless Peritoneal Dialysis Machine aims to reduce cost, time and pain of kidney patients. In collaboration with Tangible Design and Fatima Memorial Hospital Lahore 50+ devices produced so far.

WonderTree: Improving cognitive, motor and functional skills of special children with AR based therapeutic platform. 800+ patients served in 3 hospitals, 3 clinics, 12 Special Schools including Agha Khan, Ziauddin Hospitals. Also came 3rd in a startup competition at Stanford University in 2016.

Bakhabar Kissan: Improved farmers' access to knowledge base in agricultural and livestock production including crop, weather, and disease updates. More than 2 million farmers are registered with this mobile application.

6.10 Competitions / Hackathons

Cleantech Innovation Challenge 2022:

In January 2022, Ignite launched Cleantech Innovation Challenge, an AI/Big Data based competition to solicit prototypes/ solutions from the Innovators, Researcher, Startups and others around the country. The participants were asked to submit their ideas for how they could use AI to help address societal challenges. Cleantech Challenge has proven to be a successful tool to crowdsource and generate innovative solutions to sustainability challenges facing our country.

Agrisurge Innovation Challenge:

Agrisurge Innovation Challenge (AIC) was planned by Ignite to transform agriculture sector through new ideas from innovators to meet the growing challenges of this sector. The competition was open for all with no age limit.

The AIC portal was launched for public registration on 26th June 2020 and inaugurated by Secretary IT on the same day. Despite the COVID-19 situation, teams actively participated in the challenge. 570 participants registered on the AIC portal and 258 projects were submitted. FAO and Ignite teams evaluated the projects and 75 projects were selected for second phase of the AIC Challenge. Ignite team conducted 4 webinars with the participants for engagement and to address their queries.

A group of 15 judges evaluated the projects and shortlisted 15 projects for the final pitching round in front of the judging panel in December 2020. Four teams were declared winners after thorough pitching sessions. To motivate the winners, cash prizes worth PKR 12.5 lac were awarded by Secretary IT and CEO Ignite to the winning teams in a ceremony at Ministry of IT & Telecom on April 12, 2021.

Challenging The Geeks Of Balochistan

Ignite organized a speed programming contest for the Geeks of Balochistan on October 24-25, 2022. The event was held at National Incubation Center at Balochistan University of Information Technology, Engineering and Management Sciences (BUITEMS), Quetta.

Challenging the Geeks of Balochistan (CGB) was a provincial competition in which teams of Startups, Computer Science/Engineering Students, Professionals (beginners, mid-careers) and Freelancers from Balochistan competed against each other to solve programming assignments in a prescribed time span. A total of 86 teams had contested the preliminary online phase to qualify for the first round of the competition. After the online test, 24 best teams were selected for the final round held at National Incubation Center Quetta.

CGB was a team-based programming competition that fosters problem-solving, programming and team work skills amongst the participants. The competition was held in phases – online as a preliminary phase, and on-site as a competition for those who qualify from the online phase.

A panel of seven judges from the ICPC Asia Topi team presided the contest including members from GIKI, FAST-NUCES, University of Lahore, University of Central Punjab along with a member from University of Birmingham who monitored the competition online.

7 FUTURE ROADMAP

Over the next four years, Ignite National Technology Fund will enact a transformative agenda to revolutionize Pakistan's ICT landscape, driven by its own strategic vision. Ignite plans to expand National Incubation Centers in key economic hubs, focusing on emergent sectors such as health-tech, artificial intelligence, and renewable energy to foster innovation and drive sustainable economic growth. This expansion, coupled with a substantial enhancement of training programs, aims to significantly improve digital literacy and professional skills across the workforce, preparing them for the future.

In formulating this ambitious roadmap, Ignite has also incorporated insights from a comprehensive study conducted by Arthur D. Little and Iconsult. These studies have supported Ignite's strategic decisions by identifying scalable opportunities and potential bottlenecks, ensuring that the initiatives are aligned with global best practices and the specific needs of Pakistan's startup ecosystem. Through this integrated approach, Ignite not only advances its mandate to transform Pakistan into a knowledge-based economy but also ensures that the nation is well-positioned to compete globally in the technology sector. The plan reflects Ignite's commitment to leveraging empirical insights and expert consultation to drive impactful, data-driven decisions that will catalyze innovation and economic growth across the country.

7.1 NIC Sialkot

Sialkot is the 12th most populous city of Pakistan, located in Punjab. Sialkot is one of the cities of "Golden Triangle" of industrial cities with Gujranwala & Gujrat as the two other cities. The golden triangle is known with its export-oriented economies. Sialkot is contributing almost $ 2.5 billion annually through exports that makes almost 10% of the total exports of the country. Being one of the largest industrial zones of the country, Sialkot has a GDP of $13 billion that has ranked Sialkot at No. 4 in terms of district wise GDP listing. There is a critical need to improve the effectiveness of variety of industries particularly sporting goods, surgical instruments & leather goods etc. of Sialkot. To transform traditional business approach into an innovative tech-oriented form, establishment of National Incubation Center Sialkot has become a dire need for youth and businesses of Sialkot and its surrounding rural & urban areas.

7.2 NIC for Women

Ignite's commitment to broadening Pakistan's innovation landscape recognizes the untapped potential of women entrepreneurs. Establishing a National Incubation Center (NIC) specifically for women is a strategic move to empower a significant but underrepresented segment of the workforce. This initiative will focus on nurturing women-led businesses and innovations, providing them with tailored support, resources, and mentorship. By creating an environment that encourages female participation in technology and entrepreneurship, the NIC for women will address gender disparities in the business sector and unlock new economic potential. This incubator not only promotes inclusivity but also diversifies Ignite's

portfolio of specialized vertical incubators, strengthening its role in fostering comprehensive national development and innovation.

7.3 Health-tech Incubator

As Pakistan continues to evolve its technology sector, Ignite recognizes the transformative potential of integrating advanced technologies into healthcare. With health-tech rapidly becoming a cornerstone for modern medical innovations worldwide, it's essential for Ignite to establish a health-tech incubator. This initiative will not only advance medical research and healthcare services in Pakistan but also ensure that the nation keeps pace with global health innovations. By focusing on health-tech, Ignite can facilitate the creation of cutting-edge solutions ranging from telemedicine to AI-driven diagnostics, greatly enhancing public health outcomes and economic efficiency. This move will diversify Ignite's engagement from generalist to more specialized vertical incubators, directly addressing critical national health priorities and fostering a new generation of tech-driven healthcare entrepreneurs.

7.4 Enertech Incubator

Ignite's strategic vision to invigorate Pakistan's technological landscape includes tackling the urgent energy challenges that constrain both economic growth and environmental sustainability. Establishing an Enertech Incubator addresses this imperative by fostering innovations in energy technology, particularly focusing on renewable energy solutions that can reduce dependency on imported fuels and preserve foreign currency reserves. This initiative will catalyze the development of sustainable, local energy sources such as solar, wind, and bioenergy, which are crucial for enhancing energy security and supporting Pakistan's commitments to global environmental goals. By prioritizing energy technology, Ignite not only addresses a critical national need but also reinforces its role in leading specialized, vertical incubators that drive sector-specific advancements and entrepreneurship.

7.5 Artificial Intelligence (AI) Incubator

Ignite has been mandated to spearhead innovation in Pakistan. Recognizing the pivotal role of Artificial Intelligence in contemporary technological advancement, it is essential for Ignite to focus on AI to maintain and enhance national competitiveness. Establishing an AI incubator is a strategic move by Ignite to cultivate a robust ecosystem for AI development, empowering local talent and startups to innovate and thrive in this critical field. For Pakistan, such a program is particularly significant as it offers an opportunity to leapfrog traditional stages of development and position itself as a leader in the burgeoning global tech industry. By nurturing AI startups, providing access to cutting-edge resources, and facilitating industry partnerships, the incubator ensures that Pakistan not only keeps pace with global technological advancements but also enhances its competitiveness. This initiative supports the transition of theoretical AI research into market-ready solutions, fostering economic growth and positioning Pakistan as a hub for technological innovation.

7.6 Space Incubator

Technological development in space technologies extends its utility beyond mere space exploration, influencing advancements in fields like avionics, telecommunications, and even climate sciences. Establishing a space incubator is a strategic step by Ignite to nurture a thriving ecosystem for space technology, enabling local innovators and startups to develop and leverage advanced space-related technologies across various sectors. Establishing a space incubator not only nurtures a thriving ecosystem for space technology but also enhances Ignite's portfolio by moving beyond traditional incubators towards specialized, vertical incubators. This strategic expansion allows local innovators and startups to develop

and leverage advanced space-related technologies across various sectors, positioning Pakistan at the forefront of global technological advancement.

7.7 Industry Research Centers

Ignite has planned to launch an initiative to bridge the gap between academia, startups, and industry through the establishment of Industry Research Centers. This strategic development is designed to foster collaboration and enhance the translation of research into market-ready products that meet specific industry needs. By focusing on partnerships with industries, these centers will drive product development and innovation that align with the 'Make in Pakistan' initiative, promoting indigenization and reducing reliance on imported solutions. Such collaboration not only solves local problems by leveraging homegrown technologies but also stimulates economic growth by creating a new cadre of local entrepreneurs and technologists. Furthermore, engaging with industry partners increases the potential for funding, ensuring sustainable growth and impactful technological advancements across various sectors. This approach not only strengthens Pakistan's industrial base but also enhances its innovative capacity to compete globally.

7.8 Investor Education Programs

Ignite has planned an Investor Awareness Program tailored to shift the focus of Pakistan's traditionally oriented investors towards the burgeoning field of technology investments. This initiative aims to enlighten established and emerging investors about the dynamic potential of tech-based ventures, contrasting sharply with the conventional preference for passive investments in real estate. By highlighting the substantial returns and transformative impact of investing in technology startups, the program seeks to encourage a pivot from real estate to innovative technology sectors. This strategic shift is designed not only to diversify investment portfolios but also to attract new generations of family-owned businesses to tech opportunities, fostering a modern investment culture that supports sustainable economic growth and technological advancement in Pakistan.

7.9 Telecommunication Training Programs

Ignite has planned a comprehensive Telecommunication Capacity Building Training Program, recognizing the pivotal role of the telecom sector as one of Pakistan's largest employment providers and a major contributor to the nation's tax revenue. Despite the significant financial contributions from telecommunications service providers to Ignite's funding, there has historically been minimal focus on tailored programs for this sector. This new training initiative aims to address the growing technological demands and human resource needs within the telecom industry. The program will offer specialized training for existing telecom employees on emerging technologies, enhancing their skills and adaptability in a rapidly evolving market. Simultaneously, it will prepare technology graduates for immediate employment within the sector by equipping them with relevant telecom-specific knowledge, thereby making them valuable, billable resources. This dual approach not only supports the immediate needs of the telecom industry but also fosters a sustainable talent pipeline, aligning with national economic and technological advancement goals.

7.10 K-12 Entrepreneurship

The proposed K-12 entrepreneurship program by Ignite aims to instill entrepreneurial skills in students from a young age, addressing the cultural gap in entrepreneurship within Pakistan. Traditionally, the importance of entrepreneurship has not been emphasized within the younger population, and the existing educational curricula do not support entrepreneurial development. This initiative aims to fill this gap by integrating entrepreneurship training across K-12 education levels. The program will introduce students

to the fundamentals of entrepreneurship, including innovation, risk-taking, and problem-solving, which are essential skills in today's dynamic economy. By instilling these values early, Ignite aims to develop a future generation of entrepreneurs who can contribute to diversifying and strengthening the national economy. This strategic effort not only addresses immediate educational deficiencies but also aligns with long-term economic development goals, ensuring that young Pakistanis are prepared to lead and innovate in the global marketplace.

7.11 Early Age Programming

Introducing early age programming education is pivotal for equipping the next generation with critical digital literacy skills, essential in today's technology-driven world. This program will impart trainings to early age students on various programming skills. By imparting programming knowledge at an early age, we ensure that children not only become proficient in computational thinking but also develop problem-solving, logical reasoning, and creativity. This foundation is crucial as these competencies are increasingly required across all industries, supporting long-term career readiness and innovation. Early exposure to programming also democratizes technology education, preparing all students—regardless of future career path—to participate effectively in a digital society, thus contributing to a tech-savvy workforce that can propel national development forward.

7.12 Freelancers Marketplace

Establishing an indigenous freelance marketplace in Pakistan is a strategic initiative to harness the potential of the burgeoning freelance economy while promoting local talent on a global scale. This platform would serve as a catalyst for economic growth, offering Pakistani freelancers direct access to national and international markets, thereby enhancing their visibility and opportunities. By providing a tailored environment that understands local challenges and strengths, such a marketplace empowers freelancers to compete globally, increases foreign exchange earnings, and supports the development of digital skills across diverse sectors. This initiative not only fosters self-employment and entrepreneurial spirit among the youth but also positions Pakistan as a key player in the global digital services market.

7.13 Open Data Portal

Implementing an open data portal is a transformative initiative that promotes transparency, encourages civic engagement, and fuels innovation by making government data accessible to the public. Such a portal enables citizens, developers, and researchers to freely access, analyze, and utilize vast amounts of government-held data, fostering an environment where informed decisions and community solutions are driven by accurate, timely information. This openness not only enhances government accountability but also stimulates economic development by providing valuable data that entrepreneurs and tech companies can use to create new services and products, ultimately contributing to a more informed, engaged, and productive society.

7.14 Codiskills

Ignite's Codiskills program is designed to propel Pakistan into the forefront of the global technology market by equipping its youth with in-demand coding skills. This initiative aims to conduct intensive bootcamps and hands-on training sessions in major cities including Islamabad, Karachi, Lahore, Peshawar, and Quetta, targeting the education of 10,000 individuals in critical programming languages and frameworks such as Python/Django, Java/React, MEAN/MERN stack, PHP/Laravel, Flutter/Dart, C#, and .NET over the next 2-3 years. Based on industry demand and feedback from P@SHA, the program will engage local

firms in collaboration with top international players through a rigorous RFP process to ensure high-quality training delivery. By fostering these highly skilled programmers, Ignite anticipates adding approximately $300 million annually to Pakistan's IT exports, significantly enhancing the economic impact of the nation's tech sector.

7.15 Digiskills 3.0

Building on the success of DigiSkills 2.0, which expanded its curriculum by adding five new courses and is set to conclude in 2024, Ignite is poised to launch DigiSkills 3.0. This next phase will further enhance Pakistan's digital landscape by introducing cutting-edge online courses in critical areas such as Entrepreneurship and Business Planning, Basics of Cybersecurity, Basics of Artificial Intelligence, and other emerging technologies like Blockchain and Robotics. By updating and expanding the course offerings to include these vital sectors, DigiSkills 3.0 aims to equip the Pakistani workforce with the necessary skills to thrive in an increasingly digital global economy, fostering innovation and bolstering economic growth. This strategic update not only aligns with Ignite's mission to empower the youth through digital knowledge but also ensures that Pakistan remains at the forefront of technological advancement.

7.16 Ignite's Acceleration Fund

Ignite's Acceleration Fund is designed to address the financial needs of early-stage tech startups in Pakistan by providing equity-free grants for product development and marketing. The fund aims to support 30-40 promising startups annually, with accelerators established in key cities like Islamabad, Karachi, and Lahore. Managed by a private firm through a rigorous selection process, this initiative seeks to foster innovation, create jobs, and contribute to Pakistan's economic growth by nurturing high-potential startups.

7.17 Technology Commercialization Fund

Ignite's Technology Commercialization Fund (TCF) aims to support the transition of innovative ideas from the proof-of-concept stage to market-ready products. By providing funding for activities such as licensing, patent filing, and marketing, TCF seeks to commercialize prototypes and R&D products to generate revenue. This initiative focuses on key sectors like automotive, energy, IT, health, textile, and agriculture, fostering economic growth and technological advancement in Pakistan. The TCF is designed to bridge the gap between innovation and commercialization, ensuring that groundbreaking technologies contribute to the country's economic development.

7.18 Virtual Production Studio

In the next three years, Ignite is set to launch a state-of-the-art Virtual Production Studio, an initiative aimed at revolutionizing Pakistan's digital content creation landscape. This studio will harness cutting-edge technologies such as real-time rendering, motion capture, and augmented reality to provide filmmakers, game developers, and digital artists with the tools to create high-quality visual content efficiently. By reducing the reliance on physical sets and locations, the Virtual Production Studio will lower production costs and offer unprecedented creative flexibility. This initiative not only aims to foster local talent and innovation but also positions Pakistan as a hub for international productions seeking advanced virtual production capabilities. Ignite's commitment to this technology underscores its strategic focus on enhancing the technological infrastructure and capabilities within the country's creative industries, driving both economic growth and cultural export.

7.19 Center of Excellence in Gaming and Animation

Ignite's Center of Excellence in Gaming and Animation (CEGA) is poised to become a pivotal force in nurturing Pakistan's gaming and animation sectors. Located in Lahore and Karachi, CEGA will offer comprehensive resources including advanced training programs, incubation services, co-working spaces, and a community center. This facility will serve as a hub for aspiring and established professionals to refine their skills, collaborate, and bring innovative projects to life. With a special focus on fostering industry-academic partnerships, CEGA aims to bridge the gap between educational institutions and the commercial market. The initiative will support the creation of world-class gaming and animation products, thereby enhancing the global competitiveness of Pakistan's creative industries. Ignite's investment in CEGA reflects its strategic intent to stimulate economic development through the cultivation of high-tech creative sectors, ultimately contributing to the diversification and sophistication of Pakistan's economy.

7.20 Digital Economy Enhancement Project

The Digital Economy Enhancement Project (DEEP), funded by the World Bank and executed in part by Ignite, is set to significantly impact Pakistan's digital landscape. As a cornerstone of this initiative, Ignite will develop Civic Innovation and Technology Labs. These labs are designed to enable technology-based startups to create solutions focused on civic technology, facilitating effective liaison between government entities and citizens. By gathering insights directly from these interactions, the labs will drive the development of innovative applications and services that address key public concerns and enhance governmental efficiency. This project exemplifies Ignite's commitment to fostering a dynamic digital economy where technological advancements directly contribute to improved governance and enhanced civic engagement.

7.21 Pakistan Startup Fund and BridgeStart Pakistan

The Pakistan Startup Fund and BridgeStart Pakistan are key components of the government-funded PSDP project titled 'The Prime Minister's Initiative Support for IT Startups, Specialized IT Trainings, and Venture Capital.' Spearheaded by Ignite, these initiatives aim to significantly enhance the entrepreneurial ecosystem within the country. The Pakistan Startup Fund provides crucial seed funding to diverse startups, offering financial assistance without equity requirements, thus enabling founders to maintain control while fostering innovation and attracting further investment. Complementing this, BridgeStart Pakistan specifically offers financial aid to startups that secure admission in international incubators or accelerators. This targeted support helps bridge the gap between early-stage development and global market entry, providing startups with the necessary resources and exposure to scale their operations internationally. This holistic approach not only supports startups through critical growth phases but also strengthens the overall ecosystem, positioning Pakistan as a prime destination for technology investors and entrepreneurs under the Prime Minister's national initiative.

7.22 National eSports Competition

Ignite plans to organize a national Esports competition that will span major cities across Pakistan, highlighting the growing interest and investment in the gaming industry. This competition will engage teams in a series of regional qualifying rounds, allowing them to showcase their skills in popular Esports games, including both mobile-based and PC games. The regional winners will then advance to the Grand Finale, where they will compete for the national title. This initiative not only aims to promote competitive gaming as a legitimate sport but also seeks to cultivate a vibrant community of gamers, enhance digital literacy, and foster a spirit of teamwork and strategic thinking among participants. By

providing a platform for local talent to flourish, Ignite is setting the stage for Pakistan to emerge as a key player in the global Esports arena.

7.23 Gaming and Animation Development Fund

Ignite is set to establish the Gaming and Animation Development Fund, a dedicated financial resource amounting to 750 million PKR, distributed at 250 million PKR annually. This fund will be allocated in a competitive manner to participants who demonstrate potential and innovation in the gaming and animation sectors. Participants will receive funding based on their adherence to specific terms and conditions designed to ensure that projects align with the industry's highest standards and developmental goals. Additionally, any royalties generated from funded projects will be reinvested into the central pool, creating a sustainable funding cycle. This reinvestment strategy not only maximizes the fund's impact but also supports ongoing commercialization efforts, fostering a robust ecosystem for gaming and animation development in Pakistan. This initiative reflects Ignite's commitment to nurturing creative talent and advancing the technological capabilities of the gaming and animation industries.

7.24 Challenge Driven Innovation Fund

Ignite Challenge-driven Innovation Fund aims to build on new, cutting-edge directions in information and communication technology to disrupt a field and a market or create new opportunities by realizing innovative technological solutions grounded in high-risk/high-gain research and development. With each specific challenge, the IGNITE will establish a portfolio of projects that explore different perspectives, competing approaches or complementary aspects of the challenge. The complexity and high-risk nature of this research will require multidisciplinary collaborations.

The Challenge-driven Innovation fund support collaborative research and innovation from consortia (university/ research organization and industry). The budgets for Challenge-driven Innovation projects are anticipated to range between Rs. 10 million – 100 million, with a maximum project duration of 3 years. Co-financing – including in kind and cash contributions – by industry partners will be considered a merit and is an indicator of industry support.

The selection of Challenge-driven Innovation Grant awards will be made through an open, rigorous, transparent, competitive and merit-based process consistent with international standards for funding research and innovation projects.

7.25 Technology Transition Fund

Technology Transition Fund supports innovation activities that go beyond the experimental proof of concept in laboratory. It supports both the maturation and validation of novel technology in the lab and in relevant application environments (by making use of prototyping, formulation, models, user testing or other validation tests) as well as the development of a business case and business model towards the innovation's future commercialization. The anticipated result is the development of products or services that are marketable and can generate positive cash flows.

The Technology Transition fund support collaborative research and innovation from consortia (Industry/Academia). The budgets for TTF projects are anticipated to be up to Rs. 30 million, with a maximum project duration of 2 years. Co-financing – including in kind and cash contributions – by industry partners will be mandatory and is an indicator of industry support.

The selection of Technology Transition Grant awards will be made through an open, rigorous, transparent, competitive and merit-based process consistent with international standards for funding research and innovation projects.

7.26 Competitions/Hackathons

IGNITE will be conducting competitions such as Hackathons or Awards on emerging challenges. The purpose for the competitions is to recognize and reward excellence in innovation, contributions to intellectual development and social welfare. The award may include a certificate and a cash prize. The Competitions will be open for students, academics, and professionals.

- Digital Pakistan Cybersecurity Hackathon
- Digital Pakistan Speed Programming Competition
- Digital Pakistan Artificial Intelligence Challenge

7.27 Projects Calendar

2024-25	2025-26	2026-27	2027-28
Codiskills	Codiskills	Codiskills	
CEGA	CEGA	CEGA	CEGA
VPS	VPS	VPS	VPS
Startup Portal	Startup Portal	Startup Portal	Startup Portal
Accelerator	Accelerator	Accelerator	Accelerator
	Cellular Training	Cellular Training	Cellular Training
	Early Age Programming	Early Age Programming	Early Age Programming
	Industry Collaboration	Industry Collaboration	Industry Collaboration
	K-12 Entrepreneurship	K-12 Entrepreneurship	K-12 Entrepreneurship
	Investor Awareness	Investor Awareness	Investor Awareness
Technology Transition Fund	Technology Transition Fund	Technology Transition Fund	Technology Transition Fund
AI/HealthTech Incubator	AI/HealthTech Incubator	AI/HealthTech Incubator	AI/HealthTech Incubator
	Enertech	Enertech	Enertech
	Freelancers Marketplace	Freelancers Marketplace	Freelancers Marketplace

NIC Women	NIC Women	NIC Women	NIC Women
NIC Sialkot	NIC Sialkot	NIC Sialkot	NIC Sialkot
Pakistan Startup Fund and BrigeStart Pakistan	Pakistan Startup Fund and BrigeStart Pakistan		
Civic Innovation and Technology Labs	Civic Innovation and Technology Labs	Civic Innovation and Technology Labs	Civic Innovation and Technology Labs
National eSports Competition			
Gaming and Animation Development Fund	Gaming and Animation Development Fund	Gaming and Animation Development Fund	
National Speed Programming	National Speed Programming	National Speed Programming	National Speed Programming
Urdu Screen Reader			
National Cyber Security Hackathon	National Cyber Security Hackathon	National Cyber Security Hackathon	National Cyber Security Hackathon
Challenge Driven Innovation Fund	Challenge Driven Innovation Fund	Challenge Driven Innovation Fund	Challenge Driven Innovation Fund

8 Mapping to Ignite's Key Priority Areas

To align with the strategic objectives outlined in its governing rules, Ignite's initiatives for the coming years are meticulously designed to advance the key priority areas defined under these rules. Each project under Ignite's banner reflects this alignment, supporting the overarching goal to foster innovation and drive economic growth within Pakistan's technology sector. Following is the alignment of these projects with Ignite's Key Priority Areas:

8.1.1 HR Capacity Building
- **Specialized IT Trainings**: Includes initiatives like Digiskills 3.0 and Codiskills, aimed at upskilling the youth in highly demanded languages and frameworks.
- **Early Age Programming and K-12 Entrepreneurship**: Programs designed to foster early technical skills and entrepreneurial mindsets among school-aged children.

8.1.2 National Productivity Enhancement
- **NIC Sialkot and NIC for Women**: Focus on supporting startups in regional industrial hubs and promoting women entrepreneurs.
- **Freelancers Marketplace**: Aims to enhance the visibility and opportunities for Pakistani freelancers in global markets.

8.1.3 ICT Market Development
- **CEGA (Center of Excellence in Gaming and Animation)**: Supports the development of the gaming and animation sectors through specialized training and incubation.

- **Virtual Production Studio (VPS):** Provides state-of-the-art facilities for content creators, enhancing Pakistan's capacity in digital production.
- **National eSports Competition:** Promotes competitive gaming as a legitimate sport, cultivates a vibrant community of gamers, enhances digital literacy, and fosters teamwork and strategic thinking among participants.

8.1.4 ICT Product Development

- **AI/HealthTech Incubator and Enertech Incubator:** Focus on developing market-ready products and innovations in AI, health technologies, and sustainable energy solutions.
- **Technology Commercialization Fund (TCF):** Supports the commercialization of R&D products, driving revenue generation through technological innovation.
- **Gaming and Animation Development Fund:** Supports the development and commercialization of gaming and animation projects, enhancing the technological capabilities of these industries.
- **National Speed Programming:** Encourages the creation of new software solutions and innovations through competitive programming.

8.1.5 Multisectoral Support Program

- **Industry Collaboration:** Engages with various industries to foster innovation and apply ICT solutions broadly, including agriculture, healthcare, and education.
- **Investor Awareness:** Programs to educate and attract more investors towards tech and innovation sectors, improving the funding landscape for startups.
- **Urdu Screen Reader:** Enhances accessibility for visually impaired individuals, supporting inclusivity in various sectors such as education and employment.

8.1.6. Review of Programs

- The Ignite's Board of Directors while approving the Business Plan of FY 2024/25 has also decided that a comprehensive review exercised through an independent consultant will be carried out so as to assess the efficacy of the programs so as to decide continuation of the same for successive years.

9 Projected Financial Plan 2024-28

Following is the projected Financial Plan for Ignite Funded Project for 2024-28:

IGNITE-National Technology Fund						
Summary - Projected Payment Plan 2024-28 (Rs. million)						
	Actual	**Revised estimates**	**Budget**	**Projected**		
	2022-23	**2023-24**	**2024-25**	**2025-26**	**2026-27**	**2027-28**
Research & Innovation	53.17	119.01	262.12	273.53	365.26	446.85
Incubator	703.29	673.50	993.03	1,431.67	1,207.42	1,295.94
Accelerator	-	-	150.00	491.27	491.27	491.27
DigiSkills.pk and Codi Skills	204.77	224.00	466.25	710.25	835.25	933.25
CeGA and VPS	-	0.38	681.50	491.82	535.22	578.61
Industry Collaboration & Trainings	-	-	-	199.75	235.00	258.50
NGIRI	63.81	71.28	96.00	104.00	114.40	125.84
National eSports competition	-	-	200.00	-	-	-
Gaming & Animation Development Fund	-	-	250.00	250.00	250.00	-
Events	38.58	106.57	230.00	241.50	253.58	266.25
Programs Support Expenditure	47.13	64.97	70.21	65.26	71.59	78.43
Total Programs	1,110.75	1,259.70	3,399.10	4,259.05	4,358.98	4,474.95
Salaries and benefits	205.46	299.08	353.47	436.23	497.14	565.65
Operational expense	77.28	88.87	186.36	205.00	225.50	248.05
Capital expenditure	9.94	8.67	21.98	16.61	14.66	15.25
Salaries, Opex & Capex	292.68	396.62	561.81	657.84	737.30	828.95
Total - Ignite	1,403.43	1,656.31	3,960.92	4,916.89	5,096.28	5,303.90
PC-1 Projects						
Pakistan Startup Fund-PC-1 project	-	10.42	882.00	2,108.00	-	-
Civic Innovation and Technology Labs (DEEP project)	-	-	185.80	741.15	593.35	605.90
Total - PC-I projects	-	10.42	1,067.80	2,849.15	593.35	605.90
Grand Total	1,403.43	1,666.74	5,028.72	7,766.04	5,689.63	5,909.80

IGNITE-National Technology Fund
Projected Payment Plan 2024-28 (Rs. million)

	Actual	Revised estimates	Budget	Projected		
	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Research & Innovation	53.17	119.01	262.12	273.53	365.26	446.85
Challenge Driven Innovation	0.40	-	-	30.80	73.00	122.90
Technology Transition / R&I	6.16	-	-	20.00	58.40	78.40
Development of an Urdu Screen Reader for Differently Abled Persons	-	-	50.00	-	-	-
Competitions	3.80	-	-	-	-	-
National Cyber Security Hackathon	42.81	119.01	192.62	202.25	212.36	222.98
National Speed Programming	-	-	19.50	20.48	21.50	22.57
Incubator	703.29	673.50	993.03	1,431.67	1,207.42	1,295.94
NIC Islamabad	93.26	55.85	81.87	68.82	71.98	75.46
NIC Lahore	93.47	106.86	168.51	55.97	60.78	66.07
NIC Karachi	106.27	61.24	165.12	75.84	81.01	87.02
NIC Peshawar	54.81	82.90	104.35	87.26	92.63	97.48
NIC Quetta	65.97	83.70	55.00	65.72	73.15	88.15
NIC Faisalabad	80.19	65.83	64.60	64.96	64.20	66.73
NIC Hyderabad	98.88	88.72	87.50	81.01	81.67	83.96
NIC Aerospace Technologies	93.18	126.89	96.00	130.97	128.61	134.85
NIC Sialkot	-	-	82.71	81.25	87.84	94.47
NIC for Women	-	-	55.37	69.35	74.89	80.47
Healthtech Incubator	-	-	10.00	136.00	104.64	113.42
Vertical Incubators	-	-	-	396.52	192.33	208.33
Industry Research Center	-	-	-	93.00	68.70	74.52
Graduation incentive for NICs	-	1.50	2.00	5.00	5.00	5.00
Others	17.26	-	20.00	20.00	20.00	20.00
Accelerator	-	-	150.00	491.27	491.27	491.27
DigiSkills.pk and Codi Skills	204.77	224.00	466.25	710.25	835.25	933.25
DigiSkills 2.0	204.77	125.13	95.00	-	-	-
DigiSkills Southern Balochistan	-	90.00	-	-	-	-
IT equipment for DigiSkills Lab	-	8.87	-	-	-	-
DigiSkills 3.0	-	-	121.25	210.25	210.25	183.25
CodiSkills	-	-	250.00	500.00	625.00	750.00
CeGA and VPS	-	0.38	681.50	491.82	535.22	578.61
Centre of Excellence in Gaming and Animation (CeGA)	-	0.38	256.12	392.08	426.67	461.27
Virtual Production Studio (VPS)	-	-	425.38	99.74	108.54	117.34
Industry Collaboration & Trainings	-	-	-	199.75	235.00	258.50
Industry Collaboration	-	-	-	4.25	5.00	5.50
Investor Awareness	-	-	-	17.00	20.00	22.00
Cellular Training	-	-	-	59.50	70.00	77.00
K-12 Entrepreneurship	-	-	-	59.50	70.00	77.00
Early Age Programming	-	-	-	42.50	50.00	55.00
Freelancers Marketplace	-	-	-	8.50	10.00	11.00
Open Data Portal	-	-	-	8.50	10.00	11.00
NGIRI	63.81	71.28	96.00	104.00	114.40	125.84
National eSports competition	-	-	200.00	-	-	-
Gaming & Animation Development Fund	-	-	250.00	250.00	250.00	-

IGNITE-National Technology Fund
Projected Payment Plan 2024-28 (Rs. million)

	Actual	Revised estimates	Budget	Projected		
	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Events	**38.58**	**106.57**	**230.00**	**241.50**	**253.58**	**266.25**
National Events	4.79	28.44	40.00	42.00	44.10	46.31
International events	33.79	78.13	190.00	199.50	209.48	219.95
Programs Support Expenditure	**47.13**	**64.97**	**70.21**	**65.26**	**71.59**	**78.43**
External Evaluation, third party advisory, Consultancies	9.91	3.95	4.00	4.40	4.84	5.32
Travel, monitoring & solicitation visits	18.69	40.47	43.00	47.30	52.03	57.23
Audit, Impact assessment	2.89	1.01	3.60	3.96	4.36	4.79
R&I Grants Management Portal	7.75	7.83	9.61	1.00	1.00	1.00
Pakistan Startup Portal	5.47	10.47	3.00	1.00	1.00	1.00
NGIRI Portal	-	0.32				
Project launch and advertisements	2.42	0.91	6.00	6.60	7.26	7.99
PPRA advertisement cost	-	-	1.00	1.00	1.10	1.10
Total Programs	**1,110.75**	**1,259.70**	**3,399.10**	**4,259.05**	**4,358.98**	**4,474.95**
Salaries and benefits	**205.46**	**299.08**	**353.47**	**436.23**	**497.14**	**565.65**
Payroll	161.53	204.95	301.21	357.60	410.64	470.51
Employee benefits	43.93	94.13	52.26	78.63	86.49	95.14
Operational expense	**77.28**	**88.87**	**186.36**	**205.00**	**225.50**	**248.05**
Rent and Utilities	48.40	51.39	117.19	128.91	141.80	155.98
Marketing and Outreach	4.07	1.44	4.50	4.95	5.45	5.99
Professional fee & consultancies	3.83	6.26	8.98	9.88	10.86	11.95
IT & Communication Support	3.49	2.68	4.91	5.41	5.95	6.54
Directors' Fee & Training	3.44	10.47	29.85	32.84	36.12	39.73
Recruitment, OD & Learning	2.64	3.63	5.80	6.38	7.02	7.72
Stationery, printing and supplies	3.23	2.88	3.24	3.56	3.92	4.31
Janitorial and general repairs & maintenance	4.76	6.31	7.28	8.01	8.81	9.69
Internships	0.64	1.00	1.50	1.65	1.82	2.00
Employee motivational activities	0.28	0.52	1.00	1.10	1.21	1.33
General expense & contingencies	2.50	2.29	2.11	2.32	2.55	2.81
Capital expenditure	**9.94**	**8.67**	**21.98**	**16.61**	**14.66**	**15.25**
Laptops, IT equipment and accessories	8.58	7.42	10.58	11.11	11.66	12.25
IT Infrastructure	0.32	-	5.90	1.00	1.00	1.00
HRMS	0.23	0.47	1.00	-	-	-
AC Units (two units of 4 tons)		0.34	2.00	2.00	2.00	2.00
Furniture and Fixtures	0.81	0.43	2.50	2.50	-	-
Salaries, Opex & Capex	**292.68**	**396.62**	**561.81**	**657.84**	**737.30**	**828.95**
Total - Ignite	**1,403.43**	**1,656.31**	**3,960.92**	**4,916.89**	**5,096.28**	**5,303.90**
PC-1 Projects						
Pakistan Startup Fund-PC-1 project	-	10.42	882.00	2,108.00	-	-
Civic Innovation and Technology Labs (DEEP project)	-	-	185.80	741.15	593.35	605.90
Total - PC-I projects	**-**	**10.42**	**1,067.80**	**2,849.15**	**593.35**	**605.90**
Grand Total	**1,403.43**	**1,666.74**	**5,028.72**	**7,766.04**	**5,689.63**	**5,909.80**

10 Key Performance Indicators

The Key Performance Indicators for the year 2024/25 are as under:

Goal Description	Target
Number of Startups Inducted	250 plus startups per year
Number of Startups Graduated	60% of startups incubated
Female Representation at NIC Startups	30% of startups incubated
Mentoring sessions (one to one, group and vertical-wise mentoring)	For each incubated startup
Investor readiness summits	8
Investment summits	16 (2 per NIC annually)
DigiSkills Participants Enrolment	500,000 plus per annum
National Cybersecurity Hackathon	Hands-on Training Workshops in 15 cities targeting 3000 participants, Hackathon in 6 cities
Establishment of Center of Excellence in Gaming and Animation	Launch and execution of the program
Civic Innovation and Technology Labs Program under Digital Economy Enhancement Project	Hiring of the Project Team and Conducting Thematic Areas Identification Study
Codiskills	Launch and execution of the program
Virtual Production Studio	Launch and execution of the program
Pakistan Startup Fund and BridgeStart Pakistan	Hiring of the Project Team and issuance of at least 2 grants under PSF and 5 grants under BridgeStart Pakistan
National Speed Programming Competition	Launch and execution of the program
Development of an Urdu Screen Reader for Differently-abled Persons	To be developed in FY 2024-2025.
DigiSkills 3.0	Launch and execution of the program
Accelerator Program	Launch and execution of the program
NIC for Women	Launch and execution of the program
NIC Sialkot	Launch and execution of the program

11 Conclusion and Future Outlook

Ignite's strategic initiatives over the past years and its plans for the future underscore its pivotal role in catalyzing Pakistan's transition into a knowledge-based economy. The organization's focused efforts in areas such as infrastructure development, capacity building, research and development, and entrepreneurship have laid a solid foundation for sustainable technological advancement and economic growth. Through projects like the National Incubation Centers, DigiSkills training, and the Pakistan Startup Fund, Ignite has not only boosted the ICT sector but also created a fertile environment for innovation and enterprise.

Looking ahead, Ignite is poised to continue its impactful work with a series of ambitious projects planned from 2024 to 2028. These projects, aligned with key priority areas, are designed to address both immediate needs and long-term strategic goals, ranging from enhancing digital literacy to fostering cutting-edge technological research. By investing in state-of-the-art facilities, launching targeted training programs, and supporting startups through various stages of growth, Ignite aims to cultivate a robust ecosystem where technology entrepreneurs thrive.

Moreover, Ignite's commitment to implementing recommendations from significant studies conducted by respected entities such as Arthur D. Little and Iconsult indicates a data-driven approach to policy and development. This not only ensures that its initiatives are well-grounded in empirical research but also attests to its dedication to adopting global best practices and innovations. As Ignite moves forward, its continuous drive to implement and adapt strategic initiatives will undoubtedly play a critical role in shaping a prosperous digital future for Pakistan, making it a beacon of technological progress in the region.