

GILGIT-BALTISTAN
IT & ITES
SECTOR
DIAGNOSTIC REPORT

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GOVERNMENT OF GILGIT-BALTISTAN

MESSAGE BY THE MINISTER FOR INFORMATION TECHNOLOGY,

The Government of Gilgit-Baltistan is proud to present this landmark IT & ITeS Sector Diagnostic Report, developed in collaboration with P@SHA and our industry partners. This report represents the first comprehensive effort to assess and strategize the digital transformation of GB. It offers a clear and data-driven understanding of where we stand today and how we can build a sustainable digital future for our people.

The Government's vision is to position Gilgit-Baltistan as a dynamic technology region – one that leverages its human capital, geographic connectivity, and entrepreneurial energy to create jobs, attract investment, and drive innovation. The insights and recommendations in this report will inform our roadmap for the next five

years: expanding broadband connectivity, developing IT parks, nurturing digital skills, and enabling women and youth to participate fully in the knowledge economy.

We deeply appreciate P@SHA's leadership and the commitment of the private sector to collaborate with us in building a vibrant IT ecosystem. Together, we are shaping a future where Gilgit-Baltistan's mountains echo not only with natural beauty but with the innovation and creativity of a thriving digital ecosystem. The Government remains steadfast in its commitment to translate this report's recommendations into action, ensuring that the digital revolution reaches every valley and every young mind in our region.



SURAIYA ZAMAN
MINISTER FOR IT, GB

MESSAGE BY THE SECRETARY FOR INFORMATION TECHNOLOGY,

The IT & ITeS Sector Diagnostic Report is a significant step toward realizing our vision of a digitally empowered Gilgit-Baltistan. Developed with P@SHA and our partners, this report provides valuable insights to guide evidence-based policies and accelerate our digital transformation journey.

The Department of Information Technology, GB, is dedicated to turning these insights into action – strengthening digital infrastructure, enhancing

connectivity, and building youth and women's capacity for future-ready skills.

Our goal is to position Gilgit-Baltistan as a hub of innovation where technology drives opportunity, inclusion, and sustainable growth. Through collaboration between government, academia, and industry, we are confident that GB will play a vital role in shaping Pakistan's digital future.



RIAZ AHMED
SECRETARY INFORMATION
TECHNOLOGY, GB



FOREWORD BY THE **CHAIRMAN, P@SHA**

It gives me great pleasure to present P@SHA's first-ever Gilgit-Baltistan IT & ITeS Sector Diagnostic Report. This milestone marks a defining step in our mission to ensure that Pakistan's digital transformation is inclusive, nationwide, and sustainable. The journey of Gilgit-Baltistan's IT industry represents a powerful story of human capital, determination, and untapped potential.

Gilgit-Baltistan is home to some of Pakistan's most educated and enterprising youth. Despite geographical constraints, this generation is eager to participate in the digital economy – building startups, freelancing for global clients, and creating value that transcends borders. This diagnostic study documents progress while identifying the key enablers – reliable infrastructure, skill development, access to finance, and institutional collaboration – that can help GB realize its potential as a thriving technology hub.

At P@SHA, we believe that the country's digital future depends on harnessing the innovation potential of all its regions. By extending our policy, advocacy, and ecosystem support to Gilgit-Baltistan, we reaffirm our commitment to a more connected and inclusive Pakistan. The findings of this report offer a strategic blueprint for government, industry, and development partners to jointly advance GB's IT sector over the next five years.

I would like to acknowledge the invaluable contributions of the Gilgit-Baltistan IT Department, the GB Software Houses Association, and our P@SHA CEC colleague from GB, whose leadership was instrumental in completing this report. Together, we have laid the foundation for a future where technology brings opportunity, growth, and empowerment to every corner of Pakistan.



**SAJJAD MUSTAFA
SYED**
CHAIRMAN

MESSAGE BY **MRS. NADIA IQBAL** (MEMBER CEC P@SHA)

It is with immense pride and deep personal satisfaction that I share this Gilgit-Baltistan IT & ITeS Sector Diagnostic Report – the first of its kind in our region and a defining milestone for both Gilgit-Baltistan and P@SHA. As the first-ever member of P@SHA's Central Executive Committee from GB, I am honored to have contributed to this effort that brings our region's voice, challenges, and aspirations to the center of Pakistan's technology dialogue.

This report is the result of collective hard work and dedication – countless discussions with local entrepreneurs, freelancers, educators, and policy-makers who believe that the people of Gilgit-Baltistan can compete globally if given the right tools and opportunities. It captures the determination of our youth, the entrepreneurial spirit of our women, and the optimism of a generation ready to shape a new digital future from the mountains of the north.

Leading the development of this report has been one of the most rewarding experiences of my professional journey. It reaffirms my conviction that progress in Pakistan's IT industry will only be complete when every region – no matter how remote – has the chance to thrive. Gilgit-Baltistan is ready to contribute, ready to innovate, and ready to lead in its own way.

I extend my heartfelt gratitude to P@SHA's leadership for their unwavering support, to the GB government for its collaboration, and to all local stakeholders who made this report possible. Together, we are not just documenting a sector – we are defining a vision for the future of Gilgit-Baltistan's digital economy.



NADIA IQBAL
MEMBER CEC

MESSAGE BY THE **SECRETARY GENERAL, P@SHA**

The Gilgit-Baltistan IT & ITeS Sector Diagnostic Report represents a historic milestone in P@SHA's ongoing efforts to promote regional inclusion within Pakistan's technology landscape. This is the first time a comprehensive, evidence-based study has been conducted to assess the digital ecosystem of GB – a region whose immense potential has long awaited recognition and structured support.

Through extensive surveys, interviews, and stakeholder consultations, this report captures the voice of Gilgit-Baltistan's tech community: young entrepreneurs, freelancers, educators, and policymakers united by a shared vision of progress. Their insights form the foundation for the actionable recommendations presented here – ranging from infrastructure upgrades and skills development to access-to-finance initiatives and public-private partnerships.

P@SHA's mission is to enable such ecosystems through collaboration, capacity-building, and advocacy. We aim to connect GB's IT professionals and startups with national markets, mentorship programs, and global opportunities. Our goal is not only to build an industry but to nurture a community of innovators who can drive socio-economic transformation across this region.

This report would not have been possible without the tireless efforts of our first-ever CEC member from Gilgit-Baltistan, whose leadership symbolizes the growing integration of GB's IT community within the national framework. P@SHA stands proud to have supported this important milestone and looks forward to building on it through sustained engagement and partnership.



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PREFACE

The Gilgit-Baltistan IT & ITeS Sector Diagnostic Report represents a landmark effort to understand and accelerate the digital transformation of one of Pakistan's most promising yet underexplored regions. It serves as the first comprehensive attempt to document the state of Gilgit-Baltistan's Information Technology (IT) and IT-enabled Services (ITeS) ecosystem – its strengths, constraints, and strategic opportunities.

The idea for this report was conceived earlier this year when a delegation of IT companies from Gilgit-Baltistan – sponsored by the Aga Khan Rural Support Programme (AKRSP) and facilitated by the Pakistan Software Houses Association for IT & ITeS (P@SHA) – visited Islamabad to engage with leading industry stakeholders. The visit aimed to provide these emerging firms with exposure to Pakistan's broader IT landscape, build networks with established players, and explore business opportunities within the national and international digital economy. Through a series of high-level meetings, roundtables, and institutional visits, the delegation successfully opened dialogue with key public and private sector organizations, laying the groundwork for future collaboration.

During these exchanges, it became clear that while Gilgit-Baltistan possessed immense human talent and entrepreneurial potential, a systematic understanding of its IT sector was still lacking. Both industry and government counterparts recognized the need for an evidence-based baseline study to inform policy design, investment decisions, and capacity-building interventions. Responding to this need, P@SHA – supported by stakeholders from Gilgit-Baltistan – initiated this diagnostic study to assess the current state of the region's digital ecosystem.

This report is both an assessment and a call to action. It reflects the collective aspiration of Gilgit-Baltistan's IT community to connect with Pakistan's national digital economy and the global marketplace. The findings of this study illuminate a clear direction for turning Gilgit-Baltistan's remoteness into an advantage, shaping it into a vibrant hub of innovation, enterprise, and digital opportunity.



Executive Summary

Gilgit-Baltistan (GB) is witnessing the nascent growth of its Information Technology (IT) and IT-enabled Services (ITeS) sector. A remote mountainous region in northern Pakistan, GB has a highly literate youth population and improving connectivity, which provide a foundation for digital development. This diagnostic report assesses the current state of GB's IT/ITeS ecosystem through a mixed-methods study, including an extensive **stakeholder survey (80 firms contacted, 35 responses) and consultations (interviews, focus groups)**. It identifies key challenges and opportunities and outlines **a strategic roadmap for the next five years**, targeting policymakers, industry stakeholders, and development partners.

Key Findings

01 Sector Profiling

The estimated annual revenue generated by Gilgit-Baltistan's tech sector ranges between USD 15 million and USD 18 million. About 110–120 active IT companies generate approximately USD 3.5 million collectively, while freelancers, numbering around 3,000 to 4,000, earn between USD 10 million and USD 15 million annually. The total tech workforce in the region is estimated at 6,000 to 7,000 individuals, combining freelancers and company employees. This highlights a growing but still modest digital economy.¹

02 Human Capital & Skills

GB boasts the highest literacy rate of any region in Pakistan and a motivated pool of young talent. However, there is a gap in advanced IT skills and mentorship. Over 90% of survey respondents agreed that mentorship from successful IT entrepreneurs would benefit GB startups. Many young professionals engage in freelancing as a gateway to the digital economy, highlighting the importance of structured skills training, internships, and continuous learning programs to fully harness this human capital.

03 Market Expansion Challenges

GB's tech companies face an uphill battle in reaching larger markets. Most firms are small and serve clients remotely. The biggest barrier to securing new clients is limited marketing and promotional reach (cited by 40% of companies), followed by lack of networking connections (23%). Expanding beyond local/freelance markets is further constrained by high business costs, limited market information, and talent shortages for scaling (each affecting 15–20% of firms). Regulatory and logistical hurdles also complicate expansion. These factors have kept many GB tech entrepreneurs confined to freelance or small-scale operations, underscoring the need for targeted support (e.g. marketing assistance, participation in trade fairs, business accelerators) to help companies scale up.

04 Infrastructure Constraints

Unreliable electricity and limited high-speed internet are the most pressing operational challenges. Approximately 88% of local IT firms report difficulties due to power outages, and patchy broadband coverage further hinders business operations. These deficits underscore the need for urgent upgrades in power supply and telecommunications in GB.

05 Access to Finance

Formal funding for GB's tech sector is very limited. There are no local venture capital investors; most firms rely on personal funds or small grants. Traditional bank financing is difficult to obtain. Government support is nascent but growing (public development budgets have begun earmarking funds for IT). Encouragingly, stakeholders are optimistic that the right incentives can attract investment – 78% believe establishing an IT Special Economic Zone (SEZ) in GB would help draw investors. Respondents also emphasized the need for financial support mechanisms like affordable loans and government grants to fuel business growth.

06 Policy and Ecosystem

There is strong appetite for an enabling environment and collaborative governance in GB's IT sector. Over 80% of surveyed stakeholders support creating a GB IT industry council or board to institutionalize public-private dialogue in policymaking. An even greater share (84%) are willing to participate in workshops or focus groups to shape IT policy. Stakeholders also welcome external partnerships; for instance, 72% agree that a business accelerator led by Pakistan's national IT association (P@SHA) would benefit GB's tech entrepreneurs. These findings reflect a community eager to co-create the ecosystem, leverage national initiatives, and ensure local policies address on-the-ground realities.



GB's nascent tech ecosystem has significant strengths (youthful talent, early government and private initiatives) as well as challenges (infrastructure gaps, skill and financing constraints, market isolation). The report's recommendations provide a focused action plan to address these issues.

¹ These calculations are based on the data from our survey and some external sources like: <https://www.arabnews.com/node/2475516/pakistan>

INTRODUCTION



Gilgit-Baltistan is a remote yet strategically important region at the crossroads of Central and South Asia. Long celebrated for its breathtaking mountain landscapes, GB is now turning attention to a different kind of elevation – the rise of a digital economy in its valleys. Over the past decade, Pakistan’s overall IT industry has grown rapidly, but GB has only recently begun to partake in this expansion. Historically, the region’s geographic isolation and underdeveloped infrastructure limited industrial growth, including the tech sector. However, a combination of factors – improved connectivity (new roads, 4G internet), a highly educated youth population, and supportive initiatives by government and development organizations – have started to unlock GB’s IT/ITeS potential.²

This report is commissioned to develop an evidence-based baseline for a five-year strategic road-map for GB’s IT sector. It comes at a time when policy-makers and industry leaders recognize that IT/ITeS could offer GB a pathway to economic diversification, job creation, and integration with national and global markets despite the region’s remoteness. Early signs of a digital transformation are visible: the introduction of mobile broadband, the establishment of the first technology parks, and the emergence of local tech startups and freelancer communities all signal the beginning of this shift.

The chapters that follow provide a comprehensive overview of GB’s IT/ITeS ecosystem. We begin by outlining the methodology of the study, then profile the sector’s size and market orientation. The core of the report examines key thematic areas – Infrastructure, Talent, Finance, Market Access, and Policy Support – analyzing the challenges in each domain and the aspirations of local stakeholders (as captured through surveys and consultations). Finally, the report offers actionable recommendations tailored to GB’s context. The aim is to furnish government, public and private stakeholders with clear insights and policy options to foster a thriving, sustainable tech sector that harnesses the ingenuity of GB’s people and connects them to opportunities in Pakistan and beyond.

Methodology

This diagnostic study employed a mixed-methods approach to gather both quantitative data and qualitative insights on the GB IT/ITeS sector. The primary instrument was a comprehensive survey distributed to stakeholders across Gilgit-Baltistan’s digital ecosystem. The survey targeted owners and executives of IT companies, tech entrepreneurs (startups) and other key players. It covered various facets of the sector – from company profiles and market focus to operational challenges, skill needs, and policy priorities. The questionnaire combined multiple-choice questions (to quantify common challenges and perceptions, with results visualized in figures throughout this report) and open-ended prompts (to capture nuanced suggestions and experiences). The survey was circulated among roughly 80 active IT/ITeS companies in GB, and received 35 responses, which form a foundational dataset for this report.

² <https://www.mofept.gov.pk/NewsDetail/M2Y5ZjdINzEtY2l2OC00ZDBiLWlxYTUTy2UINmi3NTFIZDFm>

In addition to the survey, the study team conducted key informant interviews and a focus group discussion to deepen understanding of the issues identified. As part of Accelerate Prosperity's Gilgit Start-up summit, P@SHA and GBSHA jointly arranged a roundtable discussion to receive input for this report from relevant stakeholders including those from government, industry, academia and donor agencies. Additionally, key informant interviews of C-Level local industry leaders, academicians and government officials were also being conducted. These discussions provided context to the survey findings, helping to uncover underlying causes and brainstorm potential solutions. Furthermore, the team reviewed secondary data sources – including government policy documents, project reports, industry studies, and relevant news articles – to triangulate information and incorporate comparative insights. By synthesizing these inputs, the analysis identifies major trends and priority areas for intervention. The findings and recommendations presented are informed directly by what GB's tech stakeholders expressed, ensuring that the resulting strategic roadmap is grounded in local realities and needs.



Sector Profile & Market Orientation

Ecosystem Overview:

Gilgit-Baltistan's IT/ITeS sector is currently small in scale but shows promising signs of growth. There are approximately 300 GB-based IT/ITeS companies registered with the Securities and Exchange Commission of Pakistan (SECP), of which only 100-120 are thought to be actively operating. A snapshot of the sector reveals a handful of formally registered IT companies in GB's main urban centers, alongside a larger number of independent freelancers and small informal teams. Notably, about 68% of GB's IT companies are based in Gilgit

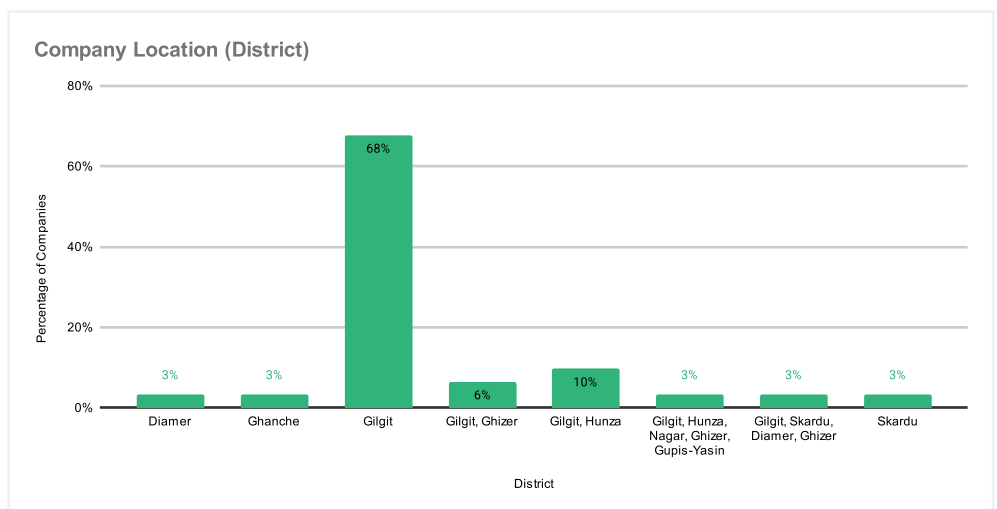


Figure 1: 68% of companies are based in Gilgit district, making it the undisputed hub of GB's IT ecosystem.

district, making that city the undisputed hub of the region's tech ecosystem. The remaining firms are scattered across other districts (such as Skardu and Hunza), which are also nurturing growing tech communities.

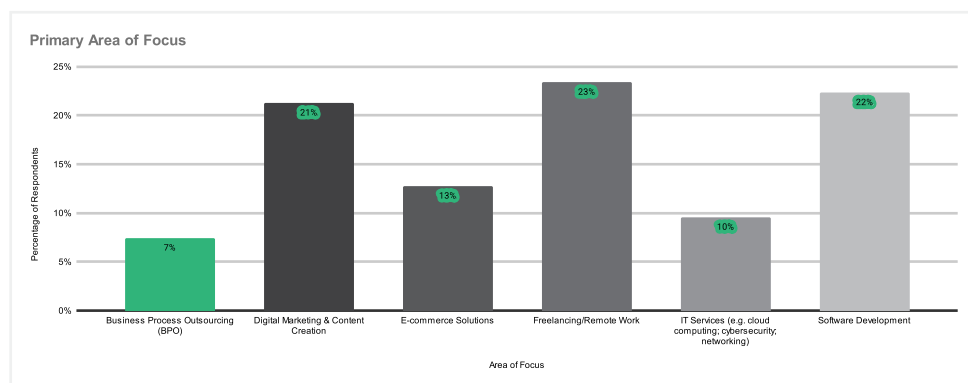


Figure 2: Survey results reveal that the talent is heavily engaged in global freelancing and low-barrier service sectors; more advanced verticals like cybersecurity and SaaS have yet to scale.

als providing services to global clients online. Popular freelancing platforms (such as Upwork and Fiverr) have attracted GB's youth, who leverage skills in graphic design, software development, content writing, digital marketing, and other areas. This remote work trend enables talented individuals to live in GB while engaging with international markets – an arrangement well-suited to the region's physical remoteness.

Current Outputs and Scale: Despite recent progress, GB's IT sector remains in an early-stage, formative phase. Total output – whether measured in revenue or IT export earnings – is still modest compared to Pakistan's established technology hubs like Karachi or Lahore. Figure 3 illustrates that GB's tech industry generates relatively low revenues, reflecting its limited market access, small project sizes, and early-stage business development.

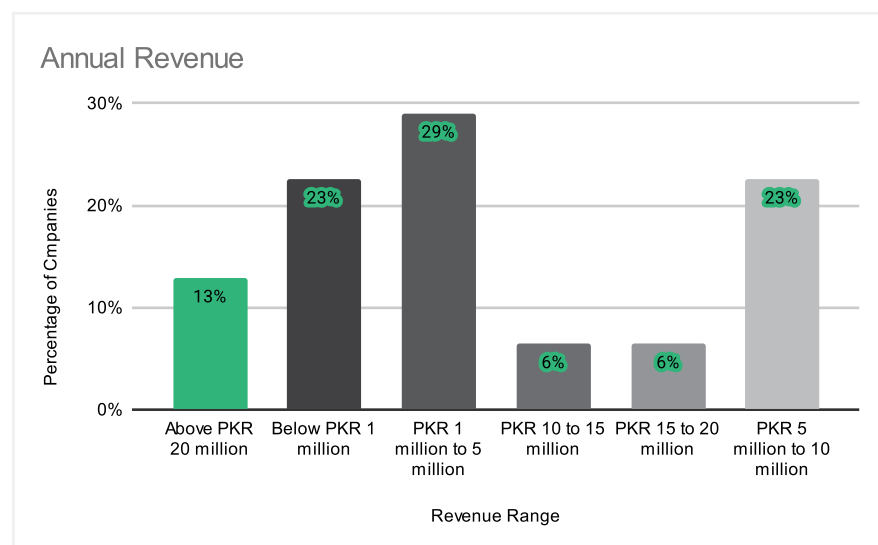


Figure 3: Revenue generation is modest, reflecting limited market access, small project sizes, and early-stage business development.

The vast majority of GB tech companies are small enterprises; many have fewer than 50 employees, and a large portion of the tech workforce consists of individual freelancers or gig workers. Consequently, the overall ecosystem is mid-sized but lacks scale – it has a foothold of activity, yet has not achieved the critical mass seen in larger Pakistani cities. There are clear opportunities for growth acceleration, clustering of firms, and the development of larger enterprises (see Figure 4). In short, while the building blocks of a tech economy exist in GB, the region is still on the cusp of realizing its full potential in terms of output and scale.³

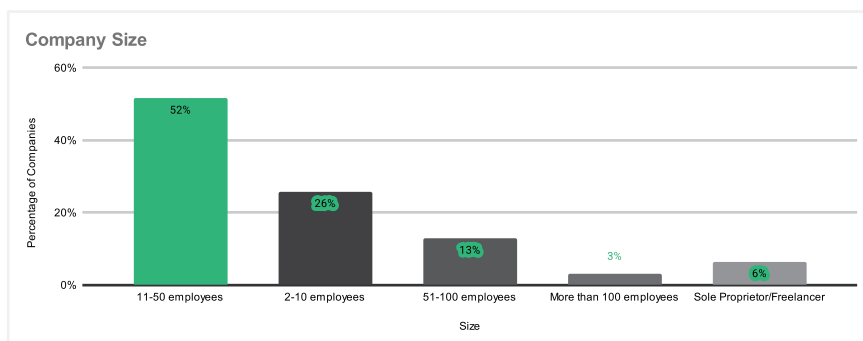


Figure 4: The ecosystem is mid-sized but lacks scale; opportunities exist for growth acceleration, clustering, and enterprise development.

³ A Comparison of Gilgit-Baltistan in terms of revenue generation and workforce with other developing high altitude regions around the world is attached as Annexure A at the end.

02 EMERGING ENABLERS

The development of physical and institutional infrastructure for the IT sector in Gilgit-Baltistan is a recent but rapidly evolving phenomenon, led by a combination of public sector initiatives, development organizations, and private stakeholders. Since 2018, targeted investments have begun to seed a vibrant digital ecosystem, with multiple actors playing complementary roles.



SCO-Led Infrastructure Development:

Prior to 2018, there were virtually no dedicated IT parks, co-working spaces, or incubation facilities in GB. This changed when the Special Communications Organization (SCO) launched initiatives to kickstart the tech ecosystem. Software Technology Parks (STPs) were established in Gilgit and Skardu, offering office space, reliable internet, and backup power. These facilities have already created 1,000+ jobs and provided training to over 3,000 IT students, while hosting some of GB's first formally registered IT companies.

SCO, in collaboration with the Aga Khan Development Network (AKDN), also opened a Freelancing Hub in Gilgit, which currently hosts 14 IT companies and 45 freelancers, acting as a nucleus for innovation and collaboration. These developments highlight the impact of targeted public investment on ecosystem growth.

Aga Khan Foundation (AKF) Tech Hubs:

The Aga Khan Foundation (AKF) has established three major Tech Hubs in different parts of GB. These hubs provide co-working spaces, training facilities, and incubation support, serving as focal points for local youth and startups. By offering shared infrastructure and connectivity, these hubs enable distributed participation in the digital economy, especially for those outside the main urban centers.

Government of GB – IT Department Initiatives:

The Government of Gilgit-Baltistan's IT Department has recently taken a more active and strategic role in shaping the region's digital ecosystem. A key milestone has been the establishment of the GB IT Board, which provides a structured governance mechanism and creates a formal platform for public-private dialogue on IT sector development. On the infrastructure side, the department has supported the expansion of broadband networks and worked to improve connectivity for educational institutions and government offices, laying the groundwork for a more connected region. Alongside these efforts, it has launched digital skills training initiatives to build local human capital and has begun early-stage planning for the development of a dedicated Tech Park/SEZ in Gilgit, which is expected to become a hub for innovation and entrepreneurship in the coming years. Collectively, these initiatives reflect the department's evolving strategic role as a coordinator of federal programs, donor projects, and local actors, aimed at accelerating the growth of the IT sector in GB.

NAVTTTC Initiatives: The National Vocational and Technical Training Commission (NAVTTTC) has rolled out multiple skills development projects in GB, targeting both in-demand IT skills and employability competencies. These include short-term certifications in areas such as web development, mobile application development, and digital marketing, delivered in collaboration with local training institutes. NAVTTTC programs have been instrumental in building foundational human capital for the IT sector and linking GB's youth with national job platforms.

Upskilling Initiatives by AKRSP and Tech Villages:

The Aga Khan Rural Support Programme (AKRSP) has pioneered Tech Village models across GB, focusing on bringing digital training and remote work opportunities to semi-urban and rural areas. Through a mix of in-person bootcamps and virtual programs, AKRSP has provided hundreds of youth with upskilling in freelancing, digital literacy, and specialized IT services. These Tech Villages also serve as local innovation centers, encouraging community-driven entrepreneurship.

Karakoram International University – Business Incubation Center:

The Business Incubation Center at Karakoram International University (KIU) has emerged as a local anchor institution for innovation. It provides students and early-stage entrepreneurs with space, mentorship, and access to industry experts. This university-led incubator has helped bridge the gap between academia and the market, nurturing student-led ventures and fostering a culture of entrepreneurship on campus.

Accelerators and Financing by Accelerate Prosperity (AP) – AKDN:

Accelerate Prosperity (AP), an AKDN initiative, has emerged as a major contributor to entrepreneurship development in Gilgit-Baltistan. It has launched incubation and acceleration programs specifically tailored to the needs of local startups, providing them with structured pathways to grow and scale. Beyond capacity-building, AP has also extended seed financing and equity investments to selected IT ventures, enabling them to expand operations and strengthen their business models. Through its mentorship programs and business development support, AP has successfully connected startups with national and international markets, broadening their exposure and opportunities. This combination of capital, mentorship, and market linkage has positioned AP as a key enabler of GB's emerging startup ecosystem, playing a pivotal role in bridging the gap between early-stage innovation and sustainable business growth.

INFRASTRUCTURE & CONNECTIVITY

Adequate infrastructure is the backbone of any IT industry, and in GB this remains a critical weakness. Power supply is unreliable across the region, causing frequent outages that disrupt IT business operations. According to the survey, a majority of GB IT firms experience difficulties due to electricity load-shedding or power instability. These power outages force companies to invest in generators or UPS backups, raising operational costs, and even then productivity is often hampered. Ensuring a stable electricity supply – through grid improvements or local solutions like solar backup systems – is an urgent priority recognized by both industry and government (discussions are underway to find solutions to this issue).

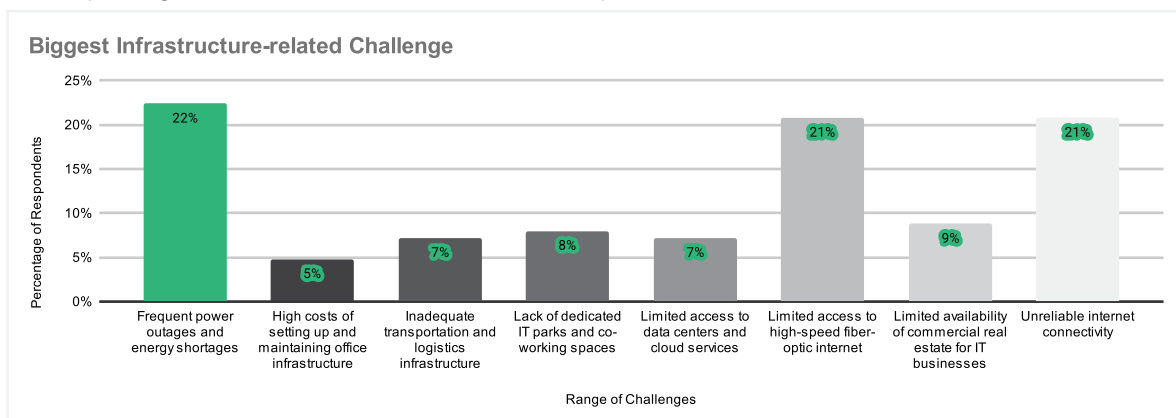


Figure 5: Energy and the internet are core bottlenecks, with the digital backbone of the region under severe strain. The perception of infrastructure unreliability is nearly universal.

Internet connectivity, while improved from a decade ago, is still not fully reliable or universal in GB. The expansion of fiber-optic backbone and 4G mobile networks has connected major towns, but high-speed broadband coverage in many areas remains limited. Businesses in secondary towns or rural areas struggle with slow or inconsistent internet, which severely limits remote work and online commerce. Even in Gilgit and Skardu, companies report that internet service can be patchy, with limited redundancy (backup links) to ensure uptime. The survey's policy wishlist reflects this concern: one of the top priorities stakeholders identified is the expansion of affordable, high-quality internet across all districts. Without reliable connectivity, GB's tech firms cannot effectively serve clients or participate in the global digital market.

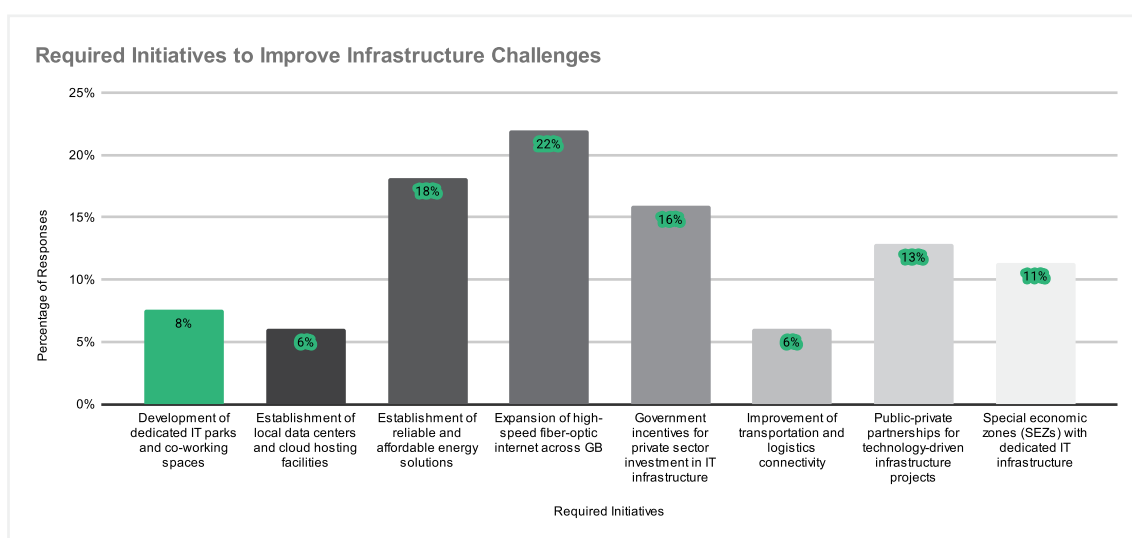
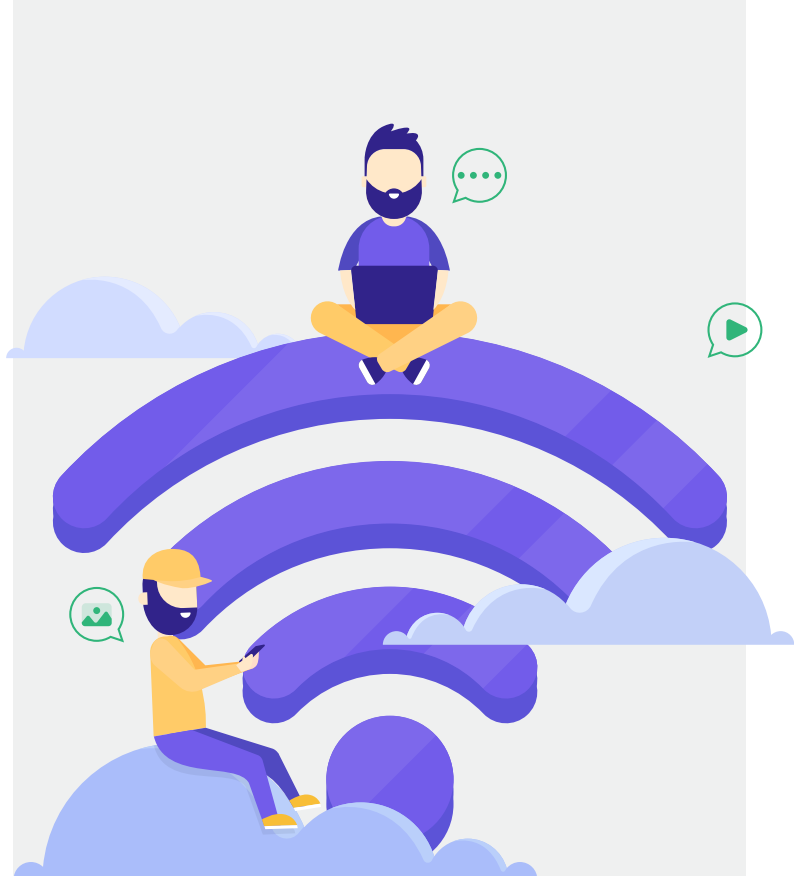
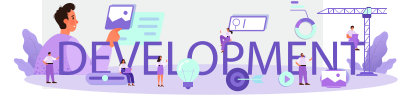


Figure 6: Fiber-optic expansion and reliable and affordable energy are the top priority areas.

Beyond power and telecom, other aspects of infrastructure are nascent. Transport and logistics infrastructure (roads, courier services) have improved with the Karakoram Highway upgrades, but shipping hardware or accessing physical markets is still more cumbersome from GB than from Pakistan's urban centers. Physical office space and IT parks, as noted, have begun to appear, but outside the new STPs most entrepreneurs work from small offices or homes that may lack modern facilities.

03 TALENT & WORKFORCE DEVELOPMENT

The development of physical and institutional infrastructure for the IT sector in Gilgit-Baltistan is a recent but rapidly evolving phenomenon, led by a combination of public sector initiatives, development organizations, and private stakeholders. Since 2018, targeted investments have begun to seed a vibrant digital ecosystem, with multiple actors playing complementary roles.



While formal education in IT and related fields is available in GB, building a sustainable digital economy starts with early exposure to technology. Interestingly, Ed-Tech companies in GB are already playing a vital role by introducing coding, entrepreneurship, AI, and robotics camps/programs for school-going children in Gilgit-Baltistan. These efforts are helping children develop computational thinking and creative problem-solving skills at a young age that are foundational for the future workforce. As far as formal education is concerned, Karakoram International University (KIU) in Gilgit offers undergraduate programs in Computer Science and Information Technology, graduating dozens of students each year. Morning and evening sessions offer four-years bachelors in Computer Science, Software Engineering and Information Technology degrees. Every six months about one hundred students get enrolled in each of these degree offerings. KIU has also introduced bachelors degrees in

Data Science and Artificial Intelligence from fall 2025. Likewise, University of Baltistan, Skardu also offers undergraduate programs in Computer Science, Software Engineering and Artificial Intelligence and graduates about hundred students in each of these disciplines every six months.

There are also a few other colleges and technical institutes in the region with IT courses. That said, many of the more advanced or specialized IT professionals from GB obtained their education outside the region (in major Pakistani cities or abroad) or are self-taught via online resources. The survey and interviews indicate that while basic programming or IT literacy is not uncommon among GB youth, there is a shortage of advanced skills (e.g. in emerging areas like data science, enterprise software development, cybersecurity, etc.).

Required Technical Skills

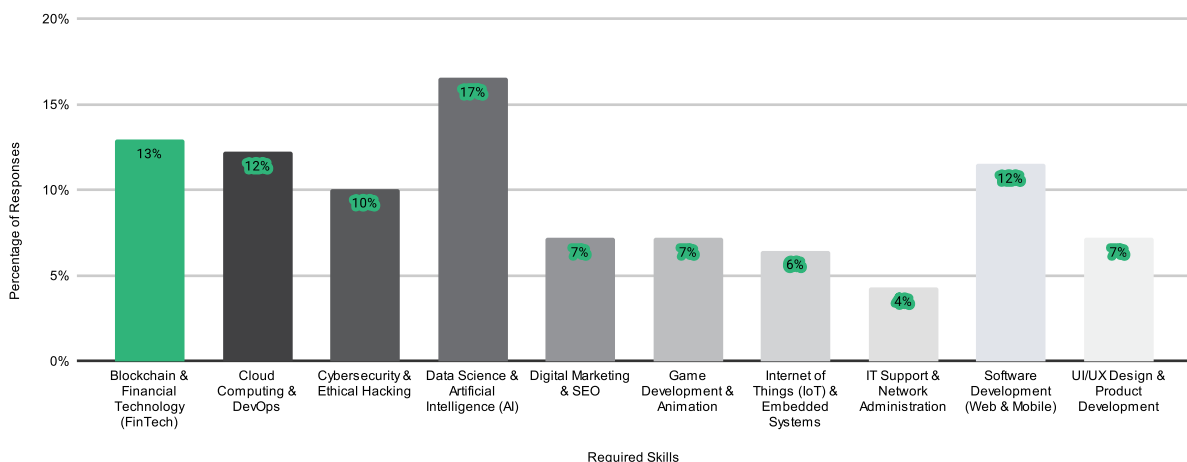


Figure 7: According to the survey results, the demand leans heavily toward advanced and emerging tech domains, indicating a future-facing sector with limited availability of such niche skills locally.



Additionally, soft skills like business communication and client management, which are crucial for success in freelancing or IT entrepreneurship, are areas needing improvement. Recognizing this, some initiatives have started. The government, local tech companies, AKDN and local NGOs are actively contributing to skill development in GB, most of these efforts remain concentrated in central hubs like Gilgit city, parts of Ghizer, Skardu, and selected areas of Hunza. As per GB IT department data, over 2,300 youth have been trained across multiple schemes such as the E-Rozgar Program, entrepreneurial training, and high-impact digital skills (AI, Data Science, Blockchain).⁴ Initiatives targeting women, including the Nano Influencer Program and Women Peace Technocrats, have trained over 600 women in digital and leadership skills.⁵ AKDN's employer-led upskilling via AKRSP, and Accelerate Prosperity's short-term entrepreneurship modules have also created opportunities for youth.⁶ Local tech companies and NGOs frequently organize bootcamps and freelancing trainings on their own.

However, the majority of youth in remote districts and villages remain excluded due to geographic inaccessibility, unreliable electricity, weak internet infrastructure, and lack of public digital workspaces. These are not just logistical issues, they create a digital divide between urban and rural youth. The Government Departments, AKRSP and GBRSP have already established capacity-building centers in all districts. These underutilized spaces could become key enablers if they are opened up for digital skills training, bootcamps, and remote facilitation by both public and private training providers. It is important that a formal mechanism be developed to grant shared access to these government-built spaces for companies, accredited tech trainers, NGOs, and startups, especially for programs targeting women and youth in underserved areas. This would ensure a more inclusive and geographically equitable approach to workforce development in GB's IT ecosystem.

Brain Drain vs. Retention

One concern common to developing regions is the migration of talented individuals to bigger cities or abroad in search of better opportunities. GB has experienced a degree of brain drain; many top students in IT or engineering have historically moved to Islamabad, Karachi or overseas for employment, given the paucity of local IT jobs until recently. However, an encouraging trend is emerging: as remote work and freelancing opportunities grow, more professionals are finding they can live in GB and still work for global companies or clients. The creation of local IT companies and startups (even if small) also provides some graduates a reason to stay. To further improve retention, stakeholders stress the importance of creating career development pathways within GB – through mentorship, internships, and clear prospects for advancement. If people see that they can have a fulfilling IT career without leaving Gilgit-Baltistan, they are more likely to remain and contribute to the local ecosystem.

Required Incentives to Retain Skilled Professionals

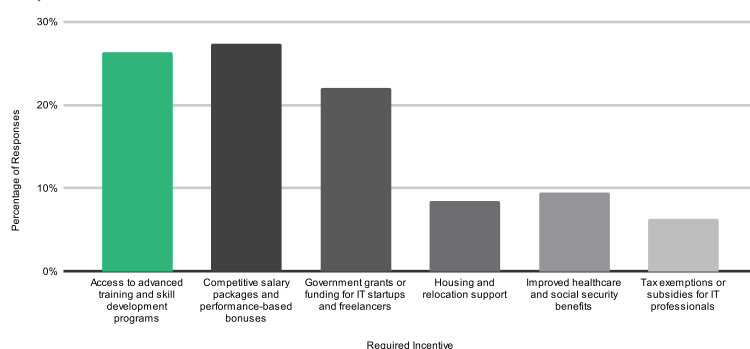


Figure 8: Talent retention hinges on both financial and learning opportunities, with companies recognizing the need for career growth paths and supportive state policies.

⁴ <https://gbit.gov.pk/pages/projects>

⁵ Ibid.

⁶ <https://the.akdn/en/resources-media/multimedia/photographs/accelerate-prosperity-enabling-young-entrepreneurs-emerging-regions>

Mentorship and Exposure A recurring theme in the survey responses was the need for mentorship and exposure to best practices. Because GB's IT community is young and relatively inexperienced, guidance from seasoned IT entrepreneurs and professionals (from other parts of Pakistan or GB natives who have found success elsewhere) is seen as invaluable. In fact, an overwhelming 90.6% of respondents said "Yes" – mentorship programs by successful IT entrepreneurs would help startups in GB, indicating a strong desire for such knowledge-sharing.

Mentorship can take many forms: regular coaching sessions, guest lectures, startup bootcamps, or a formal "adopt a startup" scheme by established firms. Currently, these opportunities are ad-hoc; for instance, a few GB startups have received mentoring through Pakistan's national incubator programs or via P@SHA's network, but there isn't a structured local program in GB yet. Establishing a mentorship

network (potentially coordinated by the IT Department or industry association) could rapidly accelerate skills and business know-how transfer. Similarly, exposure trips and internships in established tech companies (in Islamabad/Lahore, etc.) for GB youth could build their professional skills and networks.

Gender Inclusivity and Diversity Finally, gender inclusion in the tech workforce requires attention. Women in GB face cultural and societal barriers in pursuing IT careers, resulting in their underrepresentation in the sector. There are encouraging examples of female-led startups and women freelancers from GB, but they remain exceptions. Stakeholders noted that many women have IT education or interest but lack access to necessary resources (like training or equipment) or face family pressures. Addressing this will require dedicated programs to support women in tech – from scholarships and women-only training batches to safe workspace environments and mentorship by female role models. Building a more diverse talent pool will not only enhance equity but also expand the available human capital to drive GB's tech growth.



Would mentorship programs by successful IT entrepreneurs help startups in GB?

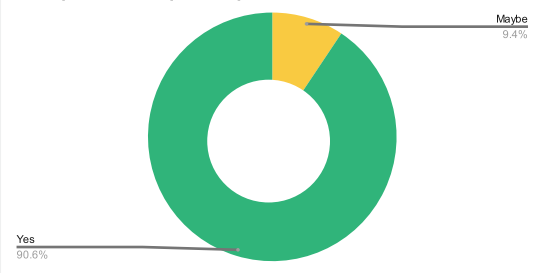


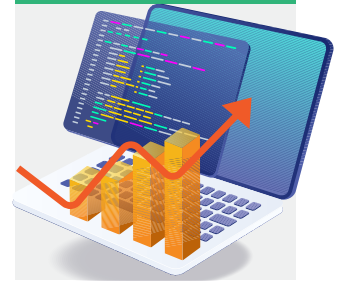
Figure 9: Perceived benefit of mentorship programs for GB startups – Over 90% of respondents agree that mentorship from successful IT entrepreneurs would help.



04 ACCESS TO FINANCE & INVESTMENT

Access to finance is a pivotal issue for GB's IT/ITeS companies. The funding landscape in GB is currently very narrow. There are no venture capital (VC) firms or angel investor networks based in the region, and few outside investors have shown interest so far. Consequently, most tech entrepreneurs rely on personal savings, family funds, or the occasional small grant to start and run their businesses. The survey data confirms that the ecosystem is largely bootstrapped – formal external investment is almost absent, which inherently limits the scale and experimentation possible for local startups (see Figure 10). Without risk capital, companies struggle to develop innovative products, hire aggressively, or expand into new markets.

Traditional banking and credit services in GB have also not catered well to the IT sector. Local banks typically require collateral and have little experience lending to software or services companies that lack tangible assets. As a result, even medium-sized IT firms or successful freelancers find it hard to obtain business loans. Government financial support for IT in GB has only begun in recent years. On the federal level, Pakistan has various incentives for IT exports (such as tax exemptions and rebate schemes), and GB firms should in theory avail these; however, administrative ambiguities due to GB's semi-autonomous status have sometimes created confusion on applicability. Locally, the GB government's development budget has started to include allocations for IT initiatives, but those funds are modest. For example, in FY2023 a portion of the GB development budget was dedicated to setting up IT labs and training programs.⁷ Such steps are positive but not yet at a scale to significantly address the funding gap.



How do you currently fund your business?

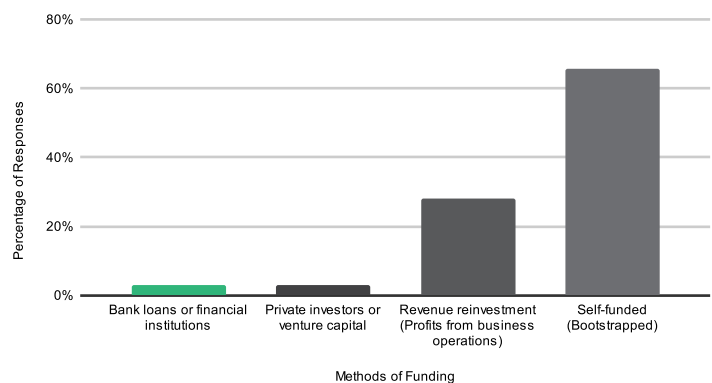


Figure 10: The ecosystem is largely bootstrapped, with very limited formal financial support or risk capital involved. This limits scale, experimentation, and R&D.

Do you think establishing an IT Special Economic Zone in GB would attract investment?

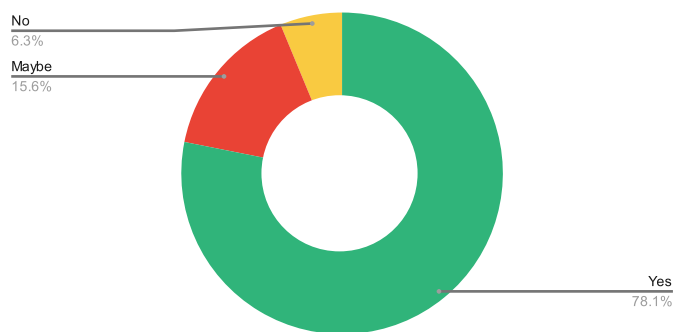


Figure 11: There is strong confidence in SEZs as a catalyst for economic uplift, suggesting high support for spatially focused IT infrastructure with fiscal and operational benefits.

Encouragingly, stakeholders exhibit optimism about attracting investment if the right conditions are created. 78% of survey respondents believe that establishing an IT Special Economic Zone (SEZ) or a dedicated Tech Park in GB (with infrastructure and business incentives) would help draw investors to the region. The idea is that an SEZ could offer world-class facilities and perhaps fiscal incentives to offset GB's locational disadvantages, thereby making it more appealing for both local entrepreneurs to scale up and for outside companies to set up satellite offices.

⁷ <https://www.dawn.com/news/1841840>

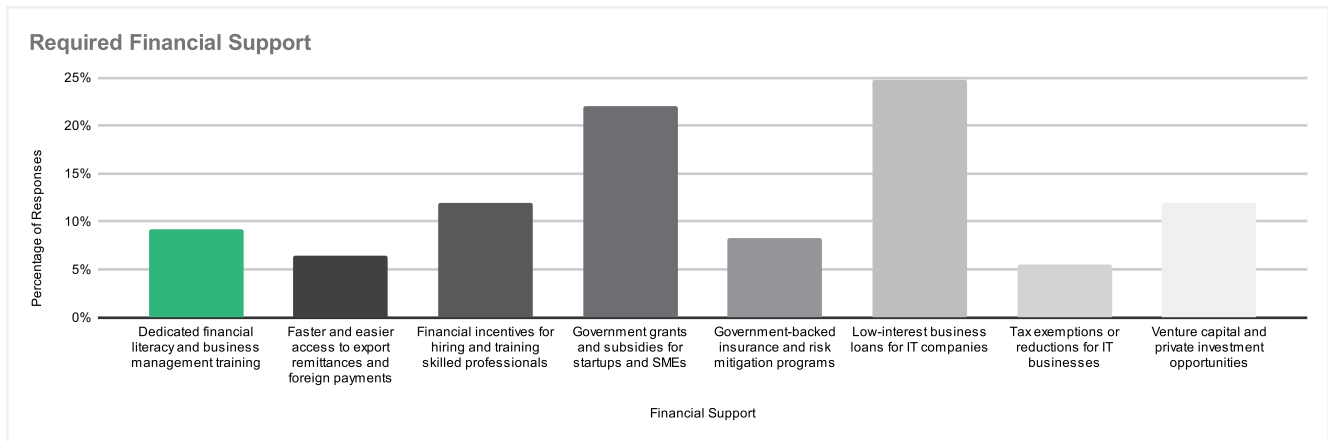


Figure 12: Most desired support includes – Low-interest business loans (25%) & Government grants (22%).

Additionally, respondents highlighted the importance of access to finance programs: the survey showed strong interest in low-interest business loans (25% of respondents ranked this as a top need) and government-backed grants (22% ranked this highly) to support startups (see Figure 12). Stakeholders also called for investor matchmaking efforts – for instance, events or platforms to connect GB startups with venture capitalists and angel investors from major cities. Tapping into the GB diaspora was another suggestion, as many successful tech professionals originally from GB may be willing to mentor or invest in local ventures if a mechanism existed.

Bridging the financing gap will likely require a combination of public and private initiatives: public-sector interventions (e.g. seed funds, credit guarantee schemes, or extending federal IT investment incentives to GB), along with efforts to mobilize private investment (e.g. networking GB startups with national investor forums, and leveraging donor programs to de-risk investment in GB). Without improved access to capital, even the best business ideas in GB may fail to grow, so this area is critical for the sector's advancement.



05 MARKET EXPANSION AND SCALABILITY

Reaching customers beyond GB's small local market is essential for the growth of its IT sector, yet doing so is fraught with challenges. Most GB tech companies and freelancers serve clients remotely, often in Islamabad, Karachi, or overseas. While this online outreach is necessary given GB's limited local demand, it also means GB firms must compete in wider markets without physically being present or well-connected there. The survey results on market expansion paint a clear picture: the single greatest challenge GB companies face in securing new clients is limited marketing and promotional capability (nearly 40% of firms identified this). Simply put, GB entrepreneurs struggle to effectively market their services and network with potential clients outside their region. The second major challenge is a lack of networking and connections (noted by 23% of respondents) – unlike companies in Lahore or Karachi, GB firms often lack industry contacts, referrals, or partnership opportunities that lead to new business.

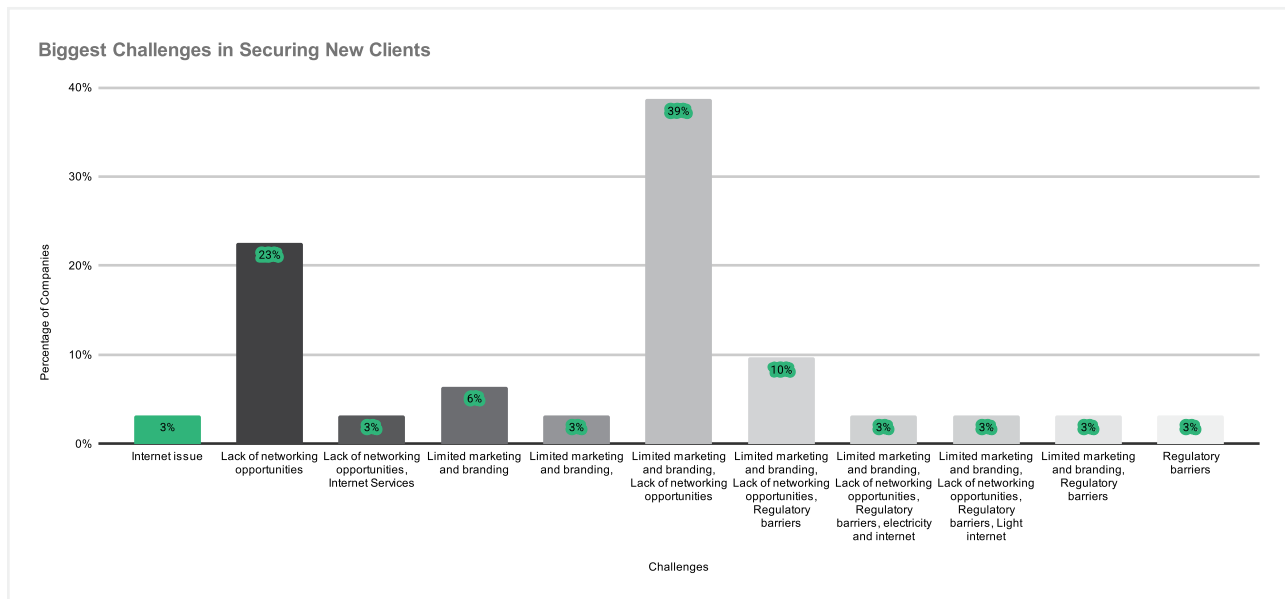


Figure 13: A lack of market-facing infrastructure—whether digital branding, in-person networking, or promotional support—is severely limiting client acquisition potential.

Expanding into international markets adds another layer of difficulty. Besides marketing constraints, survey respondents noted practical hurdles such as the high costs of doing business abroad, limited access to market information, and shortages of specialized talent needed for scaling up (each of these factors was cited by roughly 15–20% of companies as an obstacle; see Figure 14). For example, attending an overseas tech conference or setting up a small representative office in a big city can be prohibitively expensive for a GB startup. Similarly,

navigating foreign regulations or client requirements can be challenging without prior experience. Logistical and regulatory barriers also play a role – shipping products or hardware from GB, dealing with international payment and banking processes, and complying with different countries' legal requirements can all complicate global business for GB firms.

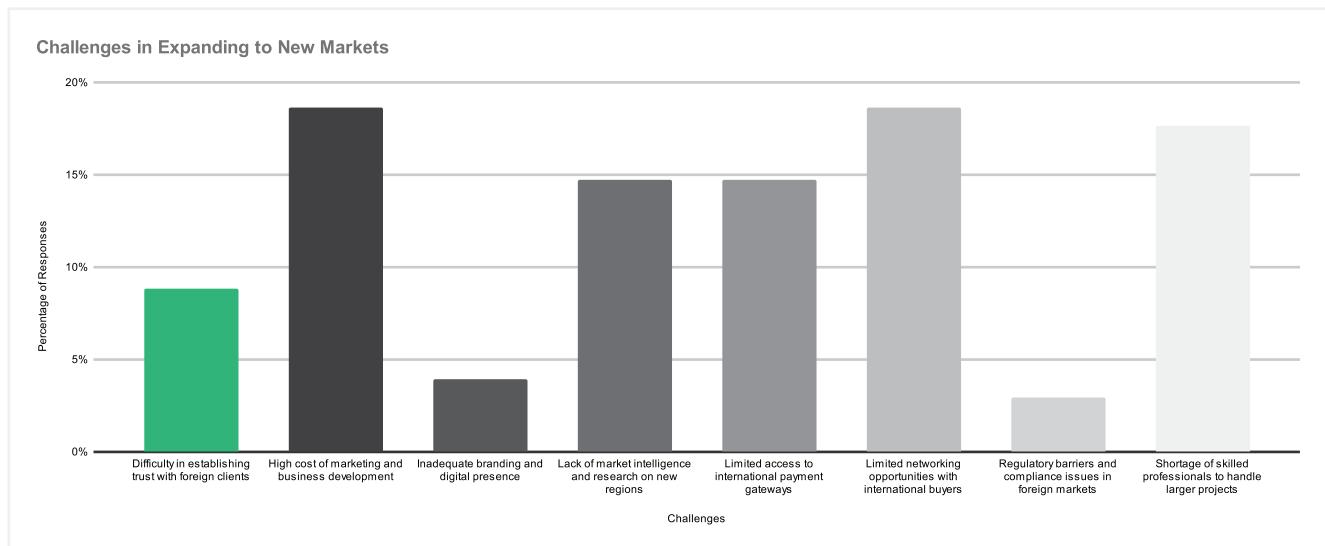


Figure 14: Companies face both strategic and operational limitations in scaling—particularly financial risk, talent capacity, and intelligence to engage new markets.

These constraints mean that, currently, many GB tech entrepreneurs remain stuck in a cycle of small projects and freelancing gigs, without scaling into larger enterprises. They are ambitious and capable, as evidenced by the myriad of freelancers successfully delivering work globally, but structural barriers restrain their growth. To overcome this, stakeholders themselves have emphasized the need for external support and ecosystem-building to enable scalability. They called for initiatives such as marketing and branding assistance for GB tech companies

(helping them create a professional presence and reach clients outside GB), opportunities to participate in national and international tech events or trade fairs, and business partnerships that can integrate GB firms into larger projects. Training in areas like international business development, client communication, and export regulations was also highlighted as important (18% of survey respondents specifically said training in business development and exports is a top requirement).

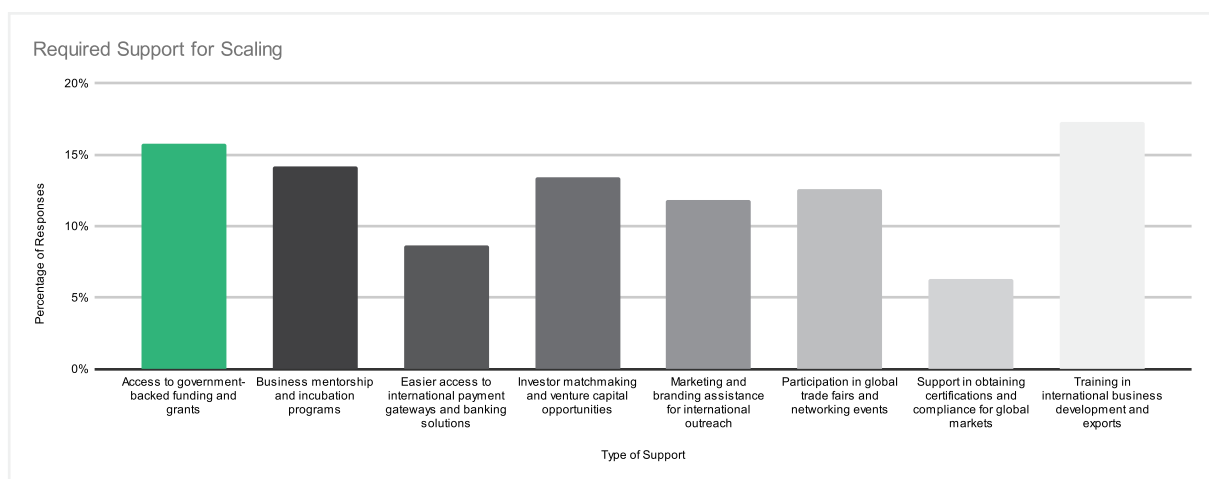


Figure 15: Companies are not only seeking capital, but capacity-building programs and strategic guidance to support their internationalization efforts.

Notably, there is a strong appetite for accelerators and networking platforms: 72% of respondents agreed that having a business accelerator program (for example, facilitated by P@SHA) would be helpful for mentoring GB startups on how to grow and connect with bigger markets.

In essence, scaling up will require a multi-pronged approach. As stakeholders suggested, concerted action is needed to lower the cost of expansion (perhaps through subsidies or shared resources), bridge network gaps (through industry associations and government facilitation), improve business development skills, and remove regulatory frictions that hinder commerce. The next section on policy and support explores mechanisms to achieve some of this, and the subsequent recommendations outline specific actions to help GB's IT businesses not only start up, but also grow and thrive on larger stages.

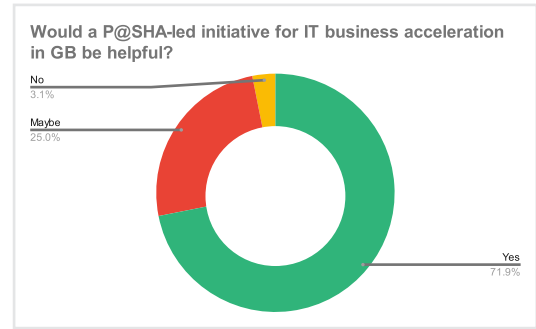


Figure 14: There is trust in industry-led capacity-building models. A P@SHA-led intervention is perceived as valuable, signaling the need for structured, local business development programs.

06 FUTURE POLICY & INDUSTRY SUPPORT

Other than the required policy interventions in infrastructure, skills, funding and scalability as discussed in above sections, one notable policy focus is improving market access for local firms via public procurement. Often, government IT contracts in GB (even those for the GB government's own needs) end up being awarded to larger companies from Islamabad or Karachi. Local stakeholders are urging policies to reserve or favor a portion of government technology contracts for GB-based companies. This could involve set-aside quotas, relaxed eligibility criteria for small firms, or capacity-building programs to help GB companies meet the requirements of public tenders. Ensuring that the GB government acts as a catalyst client for the local IT industry, a steady stream of business can be created for GB firms, helping them build portfolios and experience.

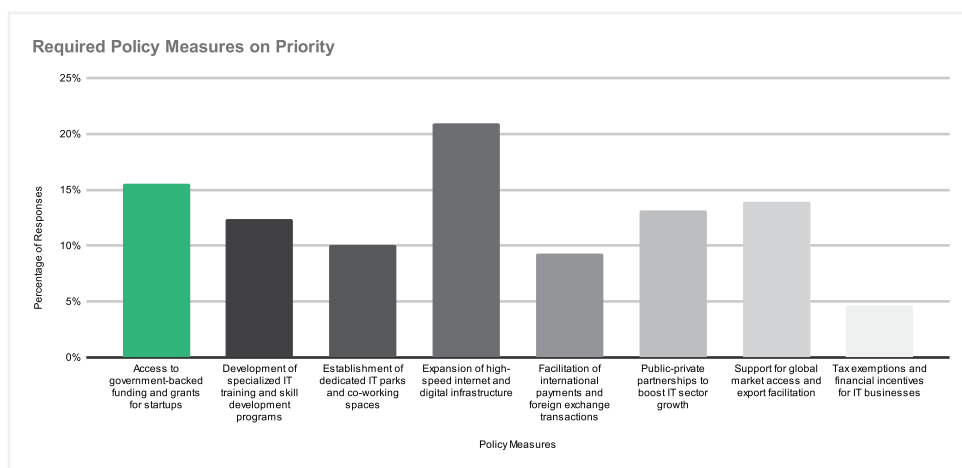


Figure 17: The policy wish list is clear: connectivity, funding access, and international enablement are seen as transformative levers.

Public-Private Partnerships (PPPs)

also featured among top suggestions. Respondents envision PPPs that combine government support with private expertise to establish technology centers, training programs, or incubators. A successful example often cited is the partnership between SCO, the GB government, and AKDN that established the Hunza Innovation Center – a project that demonstrates how pooling resources can create valuable tech platforms in the region.⁸ Expanding such collaborations (for instance, setting up innovation labs or IT training academies through government-donor-private sector partnerships) is seen as a practical way to build ecosystem capacity.

Additionally, stakeholders seek support for integration into national and global markets. They recommend that GB be included in national-level IT initiatives and events: e.g., ensuring GB startups can join trade delegations, receive subsidies to attend tech expos, or be featured in Pakistani IT export marketing efforts. Facilitating business-to-business matchmaking (connecting GB companies with potential clients/partners elsewhere) and streamlining any export-related procedures for GB firms are other areas where policy can help.

Institutional Framework: Governance of the IT sector in GB is still taking shape. Currently, the GB Information Technology Department (a government body) leads public initiatives, and there

Overall, the policy and institutional support findings highlight that GB's IT sector stakeholders know what they need and are ready to actively participate in achieving it. They have identified connectivity, infrastructure, skills, market linkages, and inclusive governance as key levers. And they are not only asking the government for help but also signaling a willingness to co-own solutions (through participation in councils, PPPs, etc.). With this groundwork laid, the stage is set for actionable steps. The following section distills these insights into a set of concrete recommendations and a roadmap for implementation.

are emerging industry groups such as the GB Software Houses Association (GBSHA). A critical insight from the survey is the overwhelming support for more institutionalized industry representation in policymaking. Over 81% of respondents agreed that an IT industry council or board should be established in GB to formalize the dialogue between the government and the tech community. In fact, the GB government has recently formed an IT Board comprising government officials, local IT company representatives, academia, and other stakeholders. However, this board has remained largely inactive since its inception. Activating this body is a high priority – it could serve as the central platform for advising on policy decisions, identifying sector needs, and ensuring continuity of initiatives beyond political cycles. The strong mandate (survey support) for the IT board indicates that stakeholders are eager to have a voice in shaping their future, moving away from ad-hoc or top-down decisions. In line with inclusive policymaking, there is also a call for broad stakeholder engagement in shaping policies and programs. An overwhelming 84% of companies expressed willingness to participate in focus groups or workshops to contribute to IT policy formulation (Figure 17). This suggests that if the government organizes regular consultative sessions – say, biannual policy roundtables or working groups on specific issues – the industry will enthusiastically take part. Such engagement would ensure that policies address on-the-ground realities and would also build trust between the public and private sectors.

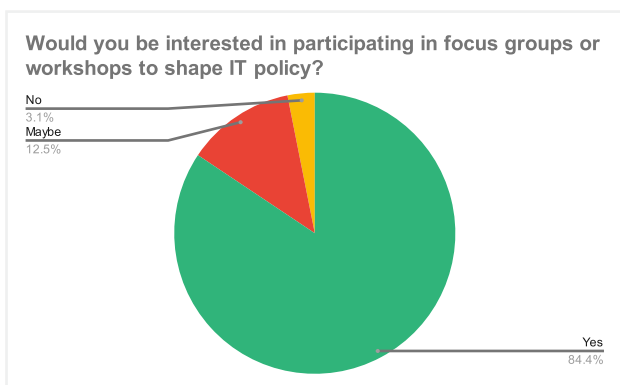


Figure 18: Companies want to co-create the ecosystem and contribute meaningfully to future reforms. There's readiness for collaborative governance models.

⁸ <https://www.dawn.com/news/1838738>

07 FIVE YEARS RECOMMENDATIONS ROADMAP

Below is a consolidated roadmap of policy recommendations for developing GB's digital economy, organized by thematic area. Actions are divided into Immediate (0–1 year), Medium-Term (2–3 years), and Long-Term (4–5 years) priorities, with the Lead Stakeholder(s) and supporting stakeholders indicated for each initiative.



07 INFRASTRUCTURE & BUSINESS ENVIRONMENT

Strengthening digital infrastructure is the top immediate priority. Initial actions focus on ensuring reliable electricity and high-speed internet for tech businesses. Over the medium term, efforts center on developing a dedicated Tech Park/SEZ, and by the long term, the goal is to achieve urban-level service standards across districts.



Immediate (0–12 months)

- Declare IT as an essential industry like it is in other cities of Pakistan.
- Provide subsidized backup power (e.g., solar UPS) to IT parks, co-working spaces, and registered IT firms to mitigate outages.
- Identify IT company clusters and provide them with priority connection, 24/7 dedicated customer support, for both Power and Internet.
- Extend fiber-optic broadband to all district headquarters and begin improving network redundancy for stable connectivity.

Medium-Term (1–3 years)

- Plan and initiate construction of a Tech Park/SEZ in Gilgit (with Skardu as a secondary site), offering quality infrastructure, fast-track permits, and a one-window facilitation service.

Long-Term (3–5 years)

- Achieve urban-equivalent power and internet reliability in Gilgit and Skardu, with better connectivity across smaller towns.
- Fully operationalize and market the Tech Park/SEZ to attract national IT firms and investors, and to support local entrepreneurs.

Lead Stakeholders

GB Government (IT & Power Departments)

Supporting Stakeholders

MoITT, SCO & private ISPs, Private Sector, Development Partners

07 SKILLS DEVELOPMENT & ENTREPRENEURSHIP

GB has a youthful, educated population that can be turned into a competitive digital workforce with the right training, soft skills, and mentorship. Immediate priorities include launching targeted training and soft skills programs, followed by institutionalized academies, women's inclusion programs, and incubation support.



Immediate (0–12 months)

- Roll out targeted technical and business skills training (e.g., AI, Software development, cybersecurity, web development, digital marketing, client communication).
- One of the top priorities of many C-Level industry leaders is to conduct short soft-skill workshops and integrate these modules into technical programs.
- Launch a Women in Tech – GB initiative, targeting 30% female participation in all IT programs, with stipends/childcare support where needed.
- Establish a GB Mentorship Portal to pair local entrepreneurs with experienced mentors (including diaspora).
- Ensure GB's inclusion in federal digital upskilling programs (e.g., NAVTTC, DigiSkills, Ignite) through dedicated cohorts, localized delivery hubs, and targeted outreach to rapidly expand the regional talent base.

Medium-Term (1–3 years)

- Establish a dedicated National Incubation Center like in other cities of Pakistan.
 - Establish a GB IT Skills Academy to provide blended learning across GB.
 - Scale mentorship programs, organize annual "Tech Retreats," and launch the first local incubator/accelerator cohort.
 - Offer device assistance programs for women and increase outreach to educational institutions.
- Establish a venture studio on a priority basis to help accelerate entrepreneurship in GB.

Long-Term (3–5 years)

- Maintain a steady talent pipeline with recurring training cohorts.
- Institutionalize mentorship and incubation as ongoing programs that continually nurture new entrepreneurs.
- Strengthen women's participation and leadership in the tech ecosystem.

Lead Stakeholders	Supporting Stakeholders
GB Government, (IT, Education & Social Development Departments)	HEC, Karakorum International University (KIU), P@SHA & GBSHA, MoITT, Donors/NGOs, GB diaspora

07 MARKET DEVELOPMENT & ACCESS

Expanding beyond GB's limited local market is essential. The strategy focuses on exposure and networking in the immediate term, building market linkages and events in the medium term, and achieving sustained integration into national and international markets over the long term.



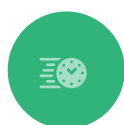
Immediate (0–12 months)

- Sponsor GB companies to participate in national tech events (cover booth fees, travel).
- Coordinate with P@SHA for inclusion in national trade delegations and host virtual roadshows to pitch to international clients.
- Plan a “GB Digital Expo” to showcase local talent.



Medium-Term (1–3 years)

- Host the first annual GB Digital Expo in Gilgit or Skardu.
- Regularly send delegations to national/international tech expos.
- Organize quarterly networking meetups with industry leaders from major cities.



Long-Term (3–5 years)

- Establish GB's IT brand with a public directory/portal.
- Ensure sustained presence in trade shows and digital marketplaces.
- Enable local firms to secure regular national and international contracts.

Lead Stakeholders	Supporting Stakeholders
GB Government (IT & Trade/Tourism Departments)	MoITT, Trade Bodies, P@SHA & GBSHA, Donors

07 POLICY & INSTITUTIONAL SUPPORT

Effective governance and responsive policies will determine the long-term success of GB's IT sector. The focus should be on activating institutions, simplifying regulations, and monitoring progress transparently.



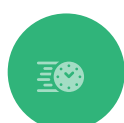
Immediate (0–12 months)

- Operationalize the GB IT Industry Board and hold regular stakeholder workshops to set priorities.
- Establish an IT One-Window Facilitation Cell to streamline registration, NOCs, and compliance processes.
- Define IT sector KPIs and set up a small M&E unit within the IT Department.



Medium-Term (1–3 years)

- Convene regular IT Board meetings and bi-annual stakeholder forums for ongoing policy input.
- Update labor and business regulations to support flexible, remote work arrangements.
- Launch annual GB Digital Economy Reports tracking sector progress.

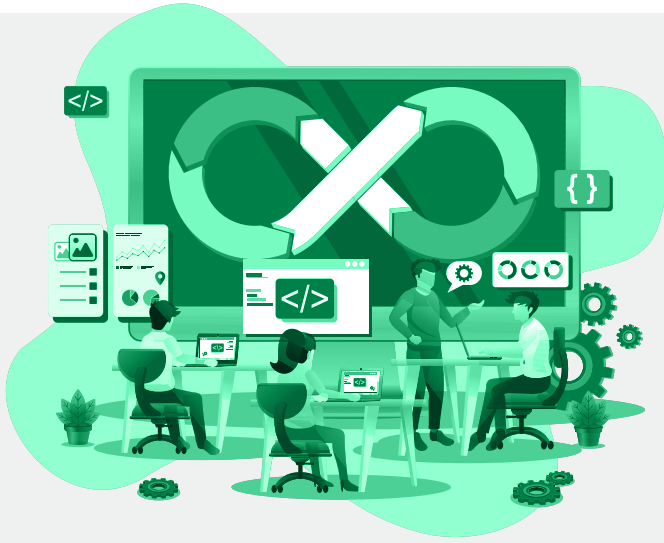


Long-Term (3–5 years)

- Position GB as a business-friendly, low-friction environment for IT firms and freelancers.
- Use M&E data to continuously refine and adapt programs.

Lead Stakeholders	Supporting Stakeholders
GB Government (IT & Industries Departments)	GB IT Board, Federal Authorities (policy alignment), Donors, Private Sector

08 CONCLUSION



Gilgit-Baltistan's journey into the digital age is just beginning, but it holds tremendous promise for transforming the region's socio-economic landscape. This IT & ITeS Sector Diagnostic has shown that GB possesses several fundamental ingredients for success: a young and educated population eager to engage in IT; nascent infrastructure like technology parks and hubs that have started to bear fruit; and a growing realization among both public and private sectors that the digital economy could be a key driver of GB's future. The challenges mapped out – from power outages and patchy internet to skills gaps and funding shortages – are significant but not insurmountable. For each challenge, the report has identified a clear set of solutions, many of which were articulated by the stakeholders themselves through the survey and consultations.

A recurring theme throughout this report is collaboration. The path forward requires a concerted effort by all stakeholders: the GB government must provide an enabling environment and critical public goods; the private sector (both local entrepreneurs and national industry players) must bring innovation, investment, and mentorship; and development partners or donor agencies can fill resource gaps and offer technical assistance where needed. Encouragingly, there are already examples of this



collaborative model taking shape – for instance, the partnership between the telecom sector (SCO), government, and AKDN in establishing tech facilities in GB demonstrates what public-private cooperation can achieve. By institutionalizing such partnerships (for example, through the IT Board and formal PPP frameworks), GB can ensure that these efforts have a sustainable impact going forward.

The next five years will be critical. If the recommendations in this report are pursued with commitment, Gilgit-Baltistan can set itself on a trajectory to become a vibrant, inclusive digital economy. The region's youthful talent and entrepreneurial spirit, once fully empowered with the right infrastructure, skills, and support, can drive innovation at 8,000 feet and beyond. With sustained focus and shared responsibility among government, industry, and development partners, GB's nascent tech sector can mature into a significant engine of jobs and growth – one that not only transforms GB itself, but also integrates the region as an active contributor to Pakistan's and the broader region's technological advancement. The opportunity is great, and the time to act on this roadmap is now.

Annex A

A Comparison of Gilgit-Baltistan in terms of Revenue generation and workforce with other developing high altitude regions around the world.

Sr. No	Region / Country	Terrain / Altitude	Estimated Annual IT Revenue (USD)	Estimated IT Workforce (People)	Key Characteristics / Notes
1.	Tbilisi & Caucasus Region, Georgia	Caucasus Mountains (1,700–2,000 m)	\$600 million	20,000 – 35,000	Strong national IT exports; digital-nomad and outsourcing hub; mountainous terrain nearby.
2.	Gilgit-Baltistan, Pakistan	Karakoram / Himalayas (2,500 – 4,700 m)	\$15 – 18 million	6,000 - 7,000	Remote freelancers; rising youth tech participation; limited infra but expanding connectivity.
3.	Bishkek & Issyk-Kul, Kyrgyzstan	Tien Shan Mountains (800 – 1,600 m)	\$1 – 8 million	500 – 2,500	UNDP & gov. digital-skills programs; mountainous workforce entering global freelance markets.
4.	Leh-Ladakh, India	Western Himalayas (3,500 m)	\$3 – 15 million	500 – 3,000	Skill-development missions; small but growing remote-work economy.
5.	Pokhara, Nepal	Himalayan Foothills (1,400 m)	\$2 – 12 million	700 – 3,000	Tourism + digital freelancing hub; emerging startup scene.
6.	Cusco, Peru	Andes Mountains (3,400 m)	\$1 – 8 million	300 – 1,500	Tourism-heavy region now attracting digital nomads & freelance tech talent.
7.	Thimphu & Paro, Bhutan	Eastern Himalayas (2,300 – 2,600 m)	\$0.5 – 6 million	200 – 1,200	Government-led “Digital Bhutan”; limited scale but strong potential.
8.	Chitral, Pakistan	Hindu Kush (1,500 – 3,000 m)	\$0.5 – 3 million	200 – 1,000	Similar to GB; freelancers and micro-IT firms active under provincial programs.

Annex B

Objectives & Key Results (OKR) Framework for GB IT & ITeS Sector (2025–2030)

Sr. No	Objective	Key Results
1.	Upgrade Power and Connectivity Infrastructure	- Provide backup power solutions (e.g., solar UPS systems) to at least 100 IT firms, co-working spaces, and training centers in Gilgit and Skardu by mid-2026. - Establish at least 5 micro or mini-grids dedicated to IT clusters in priority urban centers by 2027. - Extend fiber-optic broadband to 100% of district headquarters and achieve urban-level internet speeds in Gilgit and Skardu by 2027. - Upgrade SCO and private ISP networks to include redundant links in at least two main districts by the end of 2026 to minimize downtime during outages. - Set up temporary high-speed internet hubs (with uninterrupted power and broadband) in at least four key districts by 2026 to support freelancers, startups, and training activities while long-term infrastructure projects are underway. - Establish and operationalize one fully functional Tech Park/SEZ in Gilgit by 2028.
2.	Build Digital Talent	- Train 10,000 youth in priority digital skills through federal and local programs by 2030. - Establish a GB IT Skills Academy and deliver at least 30 specialized training cohorts across GB by 2028. - Ensure 30% female participation in all IT training and incubation programs by 2027. - Launch a structured mentorship and incubation program, supporting 100 startups/freelancers annually by 2027.
3.	Expand Access to Finance	- Launch a GB Tech Seed Fund by 2026, disbursing at least 50 seed grants over 3 years. - Enable 200 freelancers/SMEs to access tailored microfinance and credit products by 2028. - Organize at least two annual investment matchmaking events, connecting 100+ startups with national and diaspora investors.
4.	Improve Market Access	- Facilitate participation of GB companies in at least 10 national and 5 international tech events by 2030. - Establish an annual GB Digital Expo attracting national companies and investors starting 2026. - Launch and maintain a GB IT Sector Directory/Portal by 2026 to promote service visibility. - Ensure that 20% of provincial IT procurement is awarded to GB-based firms by 2027.
5.	Strengthen Policy & Institutions	- Fully operationalize the GB IT Board and convene quarterly meetings with private sector and development partners starting 2025. - Establish an M&E unit within the GB IT Department and publish an annual GB Digital Economy Report starting 2026. - Set up an IT One-Window Facilitation Cell by 2026 to streamline registration, compliance, and business support. - Adopt at least five policy or regulatory reforms by 2028 to improve the ease of doing IT business in GB.



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