

GOVERNMENT OF KHYBER PAKHTUNKHWA



Revised PC-I

ADP: 2020-2021

NAME OF THE PROJECT	“1321/150747-ESTABLISHMENT OF CENTRALIZED GIS FACILITIES”
APPROVED COST	267.967 Million (PDWP Dated 10.01.2019)
REVISED COST	554.317 Million
DURATION	2015 to June 2025
APPROVAL FORUM	PDWP

**PREPARED BY:
PLANNING AND DEVELOPMENT DEPARTMENT
GOVERNMENT OF KHYBER PAKHTUNKHWA**

S. No.	Description	Detail
1	Name of the project	“150747-Establishment of Centralized GIS Facilities”
2	Location	Khyber Pakhtunkhwa
3	<p>Authorities responsible for:</p> <p>i. Sponsoring</p> <p>ii. Execution</p> <p>iii. Operation and maintenance</p>	<p>Government of Khyber Pakhtunkhwa.</p> <p>P&D Department</p> <p>P&D Department</p>
4	<p>a- <u>Plan provision:</u></p> <p>i. If the project is included in the medium term/five-year plan, specify actual allocation.</p> <p>ii. If not included in the current plan, what warrants its inclusion and how is it now proposed to be accommodated.</p> <p>iii. If the project is proposed to be financed out of block provision, indicate:</p> <p>i) Total block provision</p> <p>ii) Amount already committed</p> <p>iii) Amount proposed for this project</p> <p>iv) Balance available</p> <p>b- Provision in the current year ADP 2020-21</p>	<p>The project has been revised third time by PDWP Forum on 10-01-2019 with the cost of 267.967 Million with an allocation of 66.045 Million for current fiscal year.</p> <p>66.045 Million</p>
5	Project objectives and its relationship with sector objectives	<p>1. Establishing a centralized uniform GIS system (Provincial GIS Hub) for improved decision-making in governance, especially Development, Planning and Monitoring.</p>

		<ol style="list-style-type: none"> 2. To develop integrated, consolidated and updated GIS Repository for effective and reliable decision making and easing the appraisal process at different public organizations. 3. Establishment of Centralized GIS Control Room at P&DD, Civil Secretariat and GIS Cells at 35 Districts (Staff & Equipment) of the province. 4. Avoid duplication of work through the availability of timely and accurate on-line information from a centralized spatial database. 5. Contribution to Socio Economic Development by establishing a GIS HUB of all the GIS data of provincial departments & transferring GIS technology and data to users of Government departments.
6	<p>Description, technical parameters, technology transfer aspects, required equipment and physical infrastructure:</p>	<p>With the new orientation towards a performance-based and results-oriented public service and also in view of reforms initiatives put in place, Geographic Information System is called upon to adopt a more strategic approach and bring added value to any department for quick decision making. In this regard, few Provincial Government Departments has developed their own GIS systems at their Department level but still large amount of Departments / Directorates / District Offices lacks such facilities.</p> <p>The Planning & Development Department is the major policy decision-making stakeholder especially in the field of development in the Province. This department is responsible for the implementation and monitoring of the overall development plans of the Province.</p> <p>In order to perform the functions, the use of technology is imperative. The ongoing project is yet another step towards the planning & monitoring through Geographic Information System (GIS) as a Spatial Decision Support System for the departments.</p> <p>The developed Centralized GIS desktop application would contribute to better monitoring and planning system by bridging with the existing DPMS and PCFMS system of P&D department which, will help the provincial government effectively in planning and monitoring of the projects.</p> <p>Planning and Development Department has already completed District-wise GIS penetration and GIS Analysts are deputed across all the districts of Khyber Pakhtunkhwa. The deputed GIS Analysts are providing assistance to the district administration in GIS related</p>

activities and accomplishing the project tasks too. Establishment of GIS Control Cell for the following Districts are completed and mapping of the public assets and ADP's is started:

S. No.	Name of District
1.	Abbottabad
2.	Bajaur
3.	Bannu
4.	Battagram
5.	Buner
6.	Charsadda
7.	DI Khan
8.	Hangu
9.	Haripur
10.	Karak
11.	Khyber
12.	Kohat
13.	Kolai Palas Kohistan
14.	Kurram
15.	Lakki Marwat
16.	Lower Chitral
17.	Lower Dir
18.	Lower Kohistan
19.	Malakand
20.	Manshera
21.	Mardan
22.	Mohmand
23.	North Waziristan
24.	Nowshera
25.	Orakzai
26.	Peshawar
27.	Swabi
28.	Shangla
29.	South Waziristan
30.	Swat
31.	Tank
32.	Tor Ghar
33.	Upper Chitral
34.	Upper Dir
35.	Upper Kohistan

i. Describe the project and indicate existing facilities in the area and summary of total cost

A Provincial GIS Hub is already established at the Planning and Development Department for integrating existing MIS/GIS facilities being operational in various sectors and to oversee and control the district level GIS

	<p><u>Problem with the existing system</u></p>	<p>cells. The project will consist of the following components:</p> <ul style="list-style-type: none"> • Financing the existing setup already undertaken under the approved project. • Re-Vamping of the existing desktop applications and development of android applications. • Purchase and installation of hardware for district GIS Cells (Demand of the GIS cells). • Capacity building of the provincial as well as district level officers and officials in using GIS for improving governance and service delivery optimization. <ol style="list-style-type: none"> a. District Activities will report to GIS Central Hub at Planning and Development Department. Central hub will work under administrative assistance of Planning and Development department, Government of Khyber Pakhtunkhwa. b. Overall GIS Technical Supervision, Operation and Maintenance will be responsibility of P&D Department. c. Technical Assistant on project activities will be supervised by P&D Department <p>One of the major predicaments of the public sector is the absence of a geo-spatial data and analysis to help the decision makers for evidence-based and effective decision making as well monitor the performance of the government agencies and institutions. There been dispersed and proliferated initiatives of establishing GIS systems but a comprehensive and holistic approach was lacking in all the initiatives for GIS. The development of GIS HUB for Government of Khyber Pakhtunkhwa was thus badly needed to collocate and analyze information geo-specially and provide a comprehensive GIS information system. The limited information that is available with the departments is neither complete nor up-to-date and is often found in scattered and fragmented paper maps. This reduces decision-makers ability to access and use accurate and timely data to efficiently use GIS data for improved service delivery.</p> <p>Lack of continuous comprehensive, reliable, and up-to-date GIS data and an absence of commonly agreed definitions, projections and analytical tools make the task of accurate and fruit-full decision making all the more difficult. Planning and Development Department have initiated a project to develop a GIS HUB for P&D department, Government of Khyber Pakhtunkhwa. The project is delivering its best to Planning and Development department being the core development department of the province. The main purpose of this project was centralizing the existing developed/available</p>
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	<p><u>Proposed Solution</u></p>	<p>and new GIS data of provincial departments for common usage/interest of provincial departments. The most effective method to bring together such scattered GIS data is in web-based GIS information system, which is already developed at the GIS Hub at P&D Department. The acquired GIS layers are placed in a web base environment, placing server at Data Center and IT Cell, P&D Department and give access to each and every public organization, which is in-need of GIS data through user name and password for using their required GIS data. Continues GIS data feeding the system is helpful to streamline the appraisal process at different sections of P&D department.</p> <p>However, various departments use a variety of approaches for digitizing GIS data like different projections and geography, so before placing the acquired GIS data on web for use of other departments commonly agreed definitions and projections is added to the data for easily access of the acquired data. Quality assurance/testing of the acquired latest GIS data is of most importance, so for this purpose a team is looking after into the quality of acquired data before uploading it to web server.</p> <p>A wide range of activities depend on digital geographic data and geo processing, and these information resources are rapidly becoming more important as commerce expands, information technology advances, and environmental problems demand resolution. Unfortunately, non-interoperability severely limits the use of digital geographic information. Spatial data exist in a wide range of incompatible and often vendor-proprietary forms, and geographic information systems (GIS) usually exist in organizations as isolated collections of data, software, and user expertise.</p> <p>The centralized GIS System is assisting the Government of KP to design and establish a spatial data infrastructure to which all departments would have a secure and highly available access. Each department would be able to apply further processing and modeling to fit their unique needs.</p> <p>Another perspective using GIS is a dynamic and versatile technology capable of analysis and providing visual information to management for efficient planning, implementation and monitoring. GIS combines layers of information to give a better understanding in planning phase of projects. These layers of information can be queried to give in-depth sight of situation.</p> <p>With the help of this solution, those departments that do not have the requisite capacity to develop and maintain</p>
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	<p>Progress till 30th December, 2020:</p>	<p>their own GIS to gain access to various GIS applications through a centralized portal. This will ensure optimum use of government resources through sharing developed spatial data assets and shared GIS infrastructure.</p> <p>The project was approved by the PDWP meeting held on 10.01.2019 with the total approved cost of 267.967 Million. Revised Administrative Approval has been issued on 06th February 2019. Following is the progress made so far:</p> <ol style="list-style-type: none"> 1. Establishment of 35 GIS Cells at all districts of Khyber Pakhtunkhwa. 2. Hiring of 52 project staff. 3. Purchasing and Handing over of Hardware/Furniture to districts. 4. Mapping of Districts Jurisdictional Boundaries of 25 districts (Districts = 35, Tehsils = 138, UC = 1021, VC/NC = 3295). 5. Mapping of E&SE (GHSS = 680, GHS = 2250, GMS = 2502, GPS = 21692, MOSQUES = 785) and Health facilities (Hospitals Cat-A, B, C, D = 123, Rural Health Centers = 108, Basic Health Units = 751, Civil Dispensaries = 423, Sub Health Centers = 23, Mother Child Centers = 58, Leprosy = 30, TB Clinics = 36) of Khyber Pakhtunkhwa. 6. Development of Web based GIS System. 7. Integration of PCFMS, IMU (Edu) & HED with GIS application. 8. Digitization & Rectification of C&W, PKHA Roads, Bridges, Culverts & other roads. (C&W PKHA Roads = 14567 KM, C&W PKHA Culverts = 13632, C&W PKHA Bridges = 430) 9. Geotagging of COVID-19 situation of the Province, Preparation of more than 1467 COVID-19 maps for District Administration. 10. Completed Mapping of: <ol style="list-style-type: none"> i. ADP 2017-18, 7680 Sub schemes ii. ADP 2018-19, 10097 Sub schemes iii. ADP 2019-20, 11551 Sub schemes iv. ADP 2020-21, 1863 Sub schemes 11. Technical assistance to different departments and District Administration. 12. Mapping of public facilities of the following departments: <ol style="list-style-type: none"> i. Higher Education (Universities = 53, Commerce + Degree + Management + P.G. Colleges = 265, Public Libraries = 16) & Technical Education (Technical Colleges = 30, Training Centres = 17) ii. Population Welfare Department (FWC = 632, RHSC-A = 30, MSU = 34, Dist PWD = 28, RTI = 03)
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	<p>Provide details of equipment, machinery required for the project.</p> <p>Provide detail of physical infrastructure required for the project</p>	<ul style="list-style-type: none"> iii. Police Department (Police Stations = 292, Police Posts = 343) iv. State Land Encroached area in KP (78,733,294 Sq. Kanal) v. Public Health Engineering (Tube wells = 5563) vi. Irrigation (Canals = 2250, Canal Patrol Roads = 664) vii. Food Department (Godowns = 70) viii. Wildlife (Govt, Private, Community Game Reserves = 137, National Parks = 06 of Area =777,463 (Acres) Wildlife Parks = 08, Wildlife Sanctuaries = 03) ix. Livestock & Dairy Development (Veterinary Centres = 207, Veterinary Dispensaries = 427, Veterinary Hospitals = 127, Farms = 03) x. Mineral & Minerals (Minerals Sites = 266, Marble Factories = 287) xi. District Administration offices = 35 xii. KPOGCL Blocks & Wells xiii. Housing Department (Active Schemes = 17, Land Bank Schemes = 03) xiv. Rescue 1122 (Rescue Stations = 31) xv. Auqaf (Auqaf Properties = 290) <p>13. GIS & GPS Training of different Departments.</p> <p>14. The project has proved its efficiency and the data bank of KP GIS is appreciated by NDMA, Prime Minister Office and they have asked for provision of GIS data (Annexure-VIII) and (Annexure-IX).</p> <p>15. District Administration and Deputy Commissioners across the province have appreciated the work done under the project for planning, appraisal and monitoring (Annexure-X) and (Annexure-XI).</p> <p>16. Acknowledging the worth of the project the District Administration is of the opinion to extend the services of GIS in their respective districts (Annexure-XII).</p> <p>17. Different departments and agencies of the Government have approached this department for access to the GIS data bank (Annexure-XIII), (Annexure-XIV), (Annexure-XV).</p> <p>18. Revenue department of Peshawar district was trained on GPS (Annexure-XVI).</p> <p>See Annexure-II</p> <p>See Annex-II and Annexure – III</p>
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	Justification for Revision	<ol style="list-style-type: none"> 1. Mapping of the Annual Development Plan and public assets is an ongoing and evolving domain. 2. The revised PC-1 is prepared to upgrade 39 positions of GIS Analysts from BPS-16 to BPS-17 in the light of project policy Annexure-XVIII. Furthermore, one position of Admin and Account Officer from BPS-16 to BPS-17, one position of Junior Clerk from BPS-09 to BPS-11, One position of Driver from BPS-05 to BPS-06, three positions of Naib Qasid from BPS-01 to BPS-03 and one position of Sweeper from BPS-01 to BPS-03 is also upgraded in the revised PC-I. 3. Hiring of the project staff and Procurement of Hardware was delayed due to COVID-19 situation in the country. 4. It was decided to enrich the efficiency of the existing web-based GIS application and develop a mobile application equivalent to the Web-based GIS application. 5. As hiring of the staff was delayed due to COVID-19 situation therefore mapping of the newly merged district is started late, now the GIS mapping needs to be extended to NMD's.
7	Cost estimates a) i. Indicate date of estimation of Project cost. ii. Basis of determining the capital cost be provided. It includes market survey, schedule rates, estimation on the basis of previous work done etc. b) In case of revised projects, provide: i. History of project approval, cost and ADP number. ii. Item-wise, year-wise actual expenditure and Physical progress done. ii. Provide revised year-wise estimation of physical activities and cost.	<p>The costing has been done through extensive market survey and on previous work done.</p> <p style="text-align: center;">N/A</p> <p style="text-align: center;">See Annexure-I</p>
8	Annual operating and maintenance cost after completion of the project: (Item-wise annual operating cost)	Annual recurrent establishment cost including HR, operations, R&M. <ul style="list-style-type: none"> • Rs. 50 million
9	Vehicle	01 GLI 1.3 is purchased while 01 number of Toyota Hilux REVO 4x4 V Up Spec is needed for field Surveys

		in hard areas while the approved 20 Number of Motor Cycles will be surrendered.
10	<p>Financial plan and mode of financing:</p> <p>a) Equity:</p> <p>Indicate the amount of equity to be financed from each source :</p> <ul style="list-style-type: none"> i. Sponsors own resources ii. Federal government iii. Provincial government iv. DFI's/banks v. General public vi. Foreign equity vii. NGO's/beneficiaries viii. Others 	(100% financed by Provincial Government)
11	<p>Benefits of the project:</p> <p>a) Employment generation (direct and indirect)</p>	<p>Following are the benefits of the project:</p> <ol style="list-style-type: none"> 1. Rapid access to current and accurate digital information, enabling more efficient performance of daily job functions. 2. The ability for any government department/organization to deploy sectoral data. Spatial Decision Support System web applications capable of building on the GIS layers and integrating them into their sectoral datasets and workflows. 3. Provincial GIS will support as a single gateway access - with detailed modules of Metadata search, data access and applications access by integrating the Applications. 4. Increased decision support capabilities 5. Improved accuracy of existing information. 6. Increased data query, reporting and map production capabilities at district level. GIS training to different departments and user groups can be taken up. <p>Direct: There is a direct generation of employment in the project. The staff will be hired for smooth and efficient running of the project through publication in the national newspaper.</p> <p>In Direct: Outsourcing of Hardware and others for district offices and GIS Hub.</p>

<p>12</p>	<p>Implementation schedule (Indicate starting and completion date of the project)</p> <p>Implementation Methodology</p>	<p>(i) Date of Initial Start: November, 2015</p> <p>(ii) Date of Completion: 30th June, 2025</p> <ol style="list-style-type: none"> 1. Existing System acquisition tactics 2. Data requirements 3. Database design; 4. Initial data loading requirements 5. System installation tactics, timetable, 6. System life cycle and replacement 7. Day-to-day operating procedures 8. Staffing requirements 9. User training 10. Application development <p>Project Work Flow diagram is on (Annexure-XVII).</p>
<p>13</p>	<p>Management structure and manpower requirements:</p> <ol style="list-style-type: none"> i. Administrative arrangements for implementation of project. ii. The manpower requirements by skills during execution and operation of the project are provided. iii. Detail job description of Man Power required iv. Justification for increase in salaries of the current working staff v. Justification of new staff required 	<p>See Annexure – V</p> <p>See Annexure – V</p> <p>See Annexure – VI</p> <p>See Annexure – V</p> <p>N/A</p> <p>(See Organogram at Annex-VII, TOR's at Annex-VI)</p>
<p>14</p>	<p>Additional projects/decisions required to maximize socio-economic benefits from the proposed project</p>	<ol style="list-style-type: none"> 1. Results yield signifies that the project is beneficial in the appraisal process and it is helpful for sub-judice resource allocation of the public money therefore after completion of the project, the GIS Hub should be made part of the current budget as Geo-tagging of ADP and public assets is an ongoing activity.

		<p>2. To retain specialists from the market, the special GIS allowance needs to be approved.</p> <p>3. In case of delays in shifting of project to current side, the same should be revised for further 3 years.</p> <p>4. To support the project through foreign funding in case of availability of donors in future.</p>
15	<p>Certified that the project proposal has been prepared on the basis of instructions provided by the Planning Commission for the preparation of PC-I for Socio Sector projects.</p>	<p>Prepared by: _____ Asghar Ali Khan, GIS Specialist P&D Department</p> <p>Checked by: _____ Nauman Afzal Afridi, Chief Economist P&D Department</p> <p>Forwarded for Approval from PDWP Forum by:</p> <p>_____ Amer Sultan Tareen, Secretary to Govt. of Khyber Pakhtunkhwa P&D Department</p>