

**Punjab State e-Governance Reform Society**

**Directorate of Governance Reforms**

**D241, Sector 74, Phase 8B**

**Industrial Area, Mohali (Punjab)**

1. Applications are invited for **One** Chief Technology Officer and **fifteen** Technology Experts on a contract basis initially for a period of 3 years. The same may be extendable beyond 3 years.
2. A candidate must use the copy of the application form available at [www.dgrpunjab.gov.in](http://www.dgrpunjab.gov.in) and create a similar MS Word Template to fill in his information digitally. Printed, signed and scanned copy of that form be sent in PDF format on the email id [dgr@punjab.gov.in](mailto:dgr@punjab.gov.in) with a copy of [techexpertsunjab@gmail.com](mailto:techexpertsunjab@gmail.com) by **07/10/2019** before **5:00 PM**. Applications sent by post will not be entertained.
3. Only eligible candidates will be invited to participate in the selection process. Intimation in this regard will be given via emails and a notice in this regard will also be uploaded on website [www.dgrpunjab.gov.in](http://www.dgrpunjab.gov.in)

**The Background**

1. Although government has achieved considerable success in the implementation of front end e-Governance projects, departments, in general, lack the technical capacity to undertake Enterprise Level Process/ Administrative Reforms and backend computerization initiatives.
2. The Government of Punjab has constituted a State Advisory council, with stalwarts from Industry and Academia, to aid and advise the State in defining and implementing such transformational Governance Reforms.
3. In addition, the government has envisioned “Digital Punjab” project to transform the State into a digitally empowered society and knowledge economy by transforming the old established physical ways of doing business and providing government services through new modes that are optimized around real-time systems.
4. Digital Punjab project/ transformational agenda will be governed by following principles: -
  - i. Citizen Centred Approach (Hassle free online/ mobile based platform for the citizen to discover and avail government services with ease)
  - ii. Services on demand (Services that best suit the citizen needs, such as service availability from anywhere, anytime)

- iii. ONE Integrated Government (with a platform for all departments to collaborate and work in a cohesive manner)
- iv. Social & Economic Empowerment of citizens ( through effective e-governance solutions to help them avail schemes, benefits, services, employment, skill development services from the government in a seamless manner)
- v. The Enterprise platform/architecture ( That would consists of re-usable blocks or micro-services, would utilise/ integrate with already available software developed by the Government of India and/ or other agencies).
- vi. Solution design for interconnectedness (using API as a policy that would make transactions easier and cheaper).
- vii. Data Ownership and Single Source of truth (Each department/ government entity would have independent ownership of its IT infrastructure but would simultaneously allow the legitimate sharing of the information amongst others to resolve the inter departmental dependencies. They will maintain their data attributes as a single source of truth for which they would be the final authority.

The concerned department shall ensure quality, standardization and sharing of data with per Sectors. All the departments will document their data in the format/ schema prescribed by DoGR. Digital ID to the residents and Interoperability of the departments would be the main keys of the solution. The large number of datasets in the State Government may be clubbed into three broad data categories: -

- i. **Citizen:** including Health, Education, Social Security, Social Justice, Food & Supplies, Elections, Driver's Licenses, Vehicles.
  - ii. **Properties:** including Land Revenue, Local Government, Housing and Urban Development, Rural Development and Panchayats.
  - iii. **Economic:** including Taxation, State Excise, Power, Environment, Industries, Labour, Agriculture, Cooperation.
- viii. Reorganized service and technical architecture (data available from different sources may be analysed and used for delivery of other services).
  - ix. Continual re-engineering and feedback loops (The system would start with business process re-engineering with simplified forms, processes, outputs, SLAs and would be strengthened by a feedback loop mechanism from direct user/citizen for continual improvement.
  - x. Citizen touch points and delivery channels (Special focus would be given to citizen touch points, payment ( UPI/ Cards/ Online/ wallets/ QR codes or new options

available) and delivery channels (Web/Mobile/Kiosk/ new options available) for convenient service delivery.

- xi. Technological transformation supported by required legislations (various laws/ policies required to govern such a digital platform needs to issued/ legislated).
2. As part of Digital Punjab, the government is already in the process of implementation of Punjab Enterprise Architecture (PunEA) whereby a single interface would be offered to the citizens and departmental official cutting across the departmental boundaries. Under Punjab Enterprise Architecture (PunEA), all the Departments shall be grouped on the basis of similarity in their business functions and target audience with specific focus on performance management, common business processes and applications. This group of departments would be named Sector.
  3. The proposed Sectors are :-
    - i. Primary
    - ii. Social Benefits / Justice
    - iii. Education and Skill
    - iv. Urban Development
    - v. Industrial
    - vi. Infrastructure
    - vii. Services
    - viii. Financial Sector Reforms
    - ix. Rural Development
    - x. Health

### **Ten Technology Experts**

1. Technology Experts would be expected to drive the e-Governance projects and Punjab Enterprise Architecture initiatives in respective sectors.
2. A Technology Expert is expected have a **broad IT Project implementation experience** and is not expected to be an expert of any of the specific sectors mentioned above. He will coordinate with multiple departments, propose new collaborative solutions and get the decisions implemented.

## **One Chief Technology Officer**

1. Since IT will provide the backbone to the whole transformation, a Chief Technology Officer is required to conceptualize and implement the technology vision and IT architecture for the State.

## **Five Specialized Technology Domain experts**

1. Five Specialised Consultants/ domain experts would be required to support the CTO in Specialized Technology Domains.

## **Role and Responsibilities/ Job Description**

### **The CTO would be expected to:**

1. Create the technology vision and architecture roadmap for the State that would provide one Integrated Government experience to citizens for anywhere, anytime service delivery and grievance redressal with the scope for continual re-engineering and improvement.
2. Assist the State Advisory Council and departments in bringing required legislations/ process reforms to support the technological transformation and change management
3. Conceptualize, Document and implement Technology, Application, Data, Security and other standards recommended by India Enterprise Architecture (IndEA) and/ or other National Frameworks/ Policy Standards.
4. Implement Unique Identity as well as Data Standards across the government for ensuring data driven decisions with clear data ownerships and single source of truth by leveraging new and emerging technologies like AI/ ML/ Robotics/ Blockchain/ IoT
5. Conceptualize and implement Enterprise Solutions with plug and play/ Microservices options to readily integrate with available software developed by the Government of India and/ or other agencies using APIs
6. Foster the collaborations to promote IT Technology adoption by actively participating in various forums and develop technology investment strategies that align with the business priorities of the State.
7. Conceptualize and implement technology solutions to increase the citizen touch points and delivery channels for service delivery/ access to the government.

8. Ensure management and security of all the IT assets of the State (network, data, applications, hardware etc.) to keep them in contemporary state
9. Steer the process to create required human resource capacities in the State to bring the IT transformation and forecast funding needs for IT staffing, equipment, materials, and supplies.

**Technology Experts would be expected to:**

1. Identify the major policy issues/ objectives associated with in each Sector area as per the vision delineated by State Advisory Council.
2. Recommend the process/ legislative reforms for the whole Sector Area after studying the best practices on the basis of similarity in functioning, target audience, business functions, citizen centricity, and touch points.
3. Define the competence required in the departments to achieve the objectives.
4. Identify specific technologies relevant for each department/ sector in his Sector and train them for relevant tasks with a focus on performance management, monitoring methodologies, common business processes/ applications.
5. Coordinate with departments for designing project scope and objectives and ensure achievement of same within required timeframe and monitor completion of all projects.
6. Support the departments/ sector for implementation of Enterprise Architecture.
7. Assist Sector departments in the creation/ acquisition of IT Infrastructure/ Solutions

**Specialized Technology experts would be expected to:**

1. Be professionals with exceptional expertise
2. Have experience in handling Enterprise Level Solutions/ stacks/ micro-service platforms across multiple domains including E-Governance/ Public Service Delivery/ Healthcare/ Agriculture/ Financial Inclusion etc.
3. have demonstrated requisite skills for minimum 5 years at senior role (with in respective field i.e. Data/ Security / Infrastructure/ Technology/ Enterprise). The indicative experience for the Specialized Technology experts is as under: -
  - a. **Data Architect:** - Experience in Large scale IT implementation with focus on Databases Development, Database design, Data Analysis, Data Modelling,

Enterprise Data Architecture, Data Warehousing, Data Migration, Master Data Management, DBA experience in RDBMS, Performance tuning of databases and Project Management experience.

- b. **Technology Architect:**- Experience in large scale IT implementation with focus on large enterprise, assessment of current applications, Application portfolio optimization, Application Development, Application design and Development strategy and migration.
- c. **Security Architect:** - Experience in design, building, testing, and implementation of security systems, Information Security, IT Risk Management with focus on security, performance and reliability. Solid understanding of security protocols, cryptography, authentication, authorization and security. Experience in implementation of security solutions, multi-factor authentication, single-sign on, identity management. Further experience in assessment of IT security measures, network security etc.
- d. **Infrastructure Architect:**- IT Infrastructure practice experience managing multi-site enterprise ERP environment, application hosting, voice and data networks, security and information protection. Experience of leading overall infrastructure for a complex organization including multi-geographic setup, VLAN setup for regulatory requirement, managing data protection, etc. Working knowledge of Managing Large Data Centre include, not limited to, Storage Area Network (SAN) and related technologies, Cisco-based network communications technology, high availability and disaster recovery architecture, communication and related technologies. Experience and proven credentials building and deploying Cloud solutions using reputed Cloud Service Providers at a minimum, is a key requirement. Experience with open source technologies, DevOps, IaaS, PaaS to help create next gen cloud solutions for clients will be an added advantage.
- e. **Enterprise Architect:**- Experience in large scale IT implementations with focus on enterprise architecture design, development and implementation. Hands on experience with SOA, ESB and designing Web Services. Hands on experience with SOA, ESB and designing Web Services. Should have demonstrated a high level of expertise in conducting assessments.

## Proposed Qualification and Experience:

### A. CTO

1. Minimum Qualification: B.E./B.Tech./ MCA along with an MBA.
  - a. B.E./B.Tech. in CS/ IT will be an added advantage
  - b. Qualifications can be relaxed in case of exceptional candidates
2. Minimum 15 year experience in IT field, preferably with software development background or EA implementation.
3. Out of above experience, minimum 5 years must be at senior executive level positions.
4. Experience should be post minimum educational qualification. (Training & Teaching experience will not be counted towards eligibility)

### B. Technology Experts:

Level	Qualification Criteria (Can be relaxed in case of exceptional candidates)	No	Monthly Fee Rate (in INR)
Senior Level Consultants/ Technology experts	<ol style="list-style-type: none"><li>1. Professionals with high level of specialization and experience Education: Masters/Doctorate in the required discipline and from an eminent institution</li><li>2. Essential Experience: More than 12 years at top management level with good institutions</li><li>3. Required Experience: 6+ years of Consultancy exposure to projects of high value and impact.</li></ol>	4	1,50,000- 2,40,000
Middle Level Consultants/ Technology experts	<ol style="list-style-type: none"><li>1. Professionals with middle level experience in relevant sector/function. Education: Graduate/Post Graduate in the required discipline</li><li>2. Essential Experience: 6 to 10 years at middle management level from reputed (National/State) institutions</li><li>3. Required Experience: 3-4 years of Independent Consultancy experience.</li></ol>	6	75000 – 1,50,000
Specialised Consultants/ Technology experts	<ol style="list-style-type: none"><li>1. Professionals with high level of specialization and experience Education: Masters/Doctorate in the required discipline and from an eminent institution</li><li>2. Exceptional expertise in the required sector/function.</li></ol>	5	2,40,000 – 5,00,000

1. **Remuneration:**

**A. CTO:**

Indicative CTC: Rs. 50 lakhs (Negotiable for a suitable candidate)

**B. Sector/ Domain Experts:**

As above mentioned in the table above

2. **Nature of Engagement:**

Contractual Engagement for a period of 3 years, with yearly performance review. The same may be extendable beyond 3 years.

3. **Selection Process:** Mode of selection will be interview by the selection panel notified by PSeGS. The candidates will be shortlisted for interview in the ratio 1:5 based on their qualification and experience. The final appointment will be based on the decision of the Selection Panel constituted for the purpose. Deputation from Government organizations/ private and public companies would be allowed.

4. **Selection based on secondment (For CTO Only):** Selection panel may identify a resource (to be hired as CTO) from a reputed private/ public companies or from amongst the freelancers having sufficient expertise and experience required for purposes and objectives defined for CTO by PSeGS.

There should not be any conflict of interest or any interest in generating business for employer of candidate selected under secondment. The Employee shall notify the Employer and the Director Governance Reforms (or the appropriate person of any successor body) if the selected candidate identifies any actual or potential conflict of interest between the Employer and the State Government/PSeGS during the Secondment Period.

Selected candidate shall remain an employee of the Employer throughout the Secondment Period and shall not be deemed to be an employee of the PSeGS by virtue of this Agreement and that the selected candidate shall not be entitled to any bonus or other fringe benefits from the PSeGS



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Affix passport size  
latest self-signed  
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**Application Form**

Position Applied for : \_\_\_\_\_

Name of the Candidate : \_\_\_\_\_

Date of Birth (DD/MM/YYYY) : \_\_\_\_\_

Email ID : \_\_\_\_\_

Mobile No. : \_\_\_\_\_

Qualifications (12 <sup>th</sup> Grade onward in reverse order)				
S. No	Qualification/Degree/Diploma	Name of the University/ Institution	Year of Passing	%age / Grade
Certifications if any (in reverse order)				
1.				
2.				
3.				

Brief Description of requisite experience			
S. No	Name of the Organization	Duration	Brief Description of projects handled

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**Experience in years & months:**

Detailed description of Projects handled, the stakeholders involved, the problems faced and the lesson learnt

1. Project 1
2. Project 2
3. ....

The skillsets you are proud of and how will they be relevant to the current assignment

1. Skillset 1
2. Skillset 2
3. ....

Certified that all the information finished above by me is correct to the best of my knowledge.  
Certified that I am not involved in any criminal activity and no criminal case is pending against me in any court of law in India. If at any time it is found that the above information is incorrect, my services are liable to be terminated without any notice.

Place:

(Signature of the

Candidate)

Date: