

# Dhanush



**DHANUSH Healthcare Systems**

Submitted to:

**TECH4SEVA – (Phase- 1)**

Submitted by:



**Dhanush Healthcare Systems**

**Corporate Office:**

**Dhanush Healthcare Systems Pvt Ltd.**  
#1-8-448, Lakshmi Building, 5<sup>th</sup> & 6<sup>th</sup> Floors,  
Begumpet, Secunderabad A.P.  
India, Pin - 500 003

Ph: +91 40 30145678  
Fax: +91 40 30586061

Email: [info@dhanushinfotech.com](mailto:info@dhanushinfotech.com)  
Website: [www.dhanushinfotech.com](http://www.dhanushinfotech.com)

---

## REVISION HISTORY

Date	Author	Version	Change reference	Reviewed
28/05/2024	Nikhil Bolli	5.0		Devi/Shashi

---

## Table of Content

### Contents

<b>1. Introduction.....</b>	<b>5</b>
1.1 Background .....	5
1.2 Purpose of the Document:- .....	6
1.2.1 Purpose of the project .....	6
<b>2) Architecture:- .....</b>	<b>7</b>
2.1.1 Process flow for the ERP .....	7
<b>3) Key Considerations for Branding and Hosting .....</b>	<b>9</b>
<b>4) Users and stakeholders .....</b>	<b>10</b>
4.1 Select functional flows of the Application .....	11
4.2 Identification of Issue and Solution Search.....	11
4.3 Problem Statement Registration and Analysis.....	11
4.4 Stakeholder Engagement and Public Distribution .....	12
4.5 Validation Process for Grassroots Solutions .....	12
4.6 Annual Hackathon .....	12
4.7 Implementing Solutions.....	12
4.8 Sharing Success Stories and Documentation .....	13
<b>5) Scope of the Work for Phase-1.....</b>	<b>13</b>
<b>6) Additional hardware and software requirement with budget implications .....</b>	<b>15</b>

---

## 1. Introduction

- **Tech4Seva** - "Tech" refers to technology applied to real-world purposes, and "Seva" means selfless service for societal betterment. The Tech4Seva ERP portal will operate as a multifaceted platform that brings and categorizes stakeholders into five distinct groups, each assigned specific roles to prioritize needs and foster knowledge exchange.
- It will serve as an accessible channel for individuals and community organizations to swiftly report challenges across various thematic areas. Tech4Seva will be founded with the goal of creating an integrated platform for societal development, embodying the principle that technology used for the greater good is a form of Seva. This unified platform will enhance communication and collaboration among all involved parties.
- Tech4Seva will showcase both commercially available and scientifically validated solutions to various problems, providing comprehensive information about each solution. It will offer a public forum for individuals to share issues that require technical and managerial solutions. By transforming these challenges into scientific problem statements and presenting them to relevant science and technology organizations, the platform will connect primary stakeholders with solution providers.
- Furthermore, it will evaluate the appropriateness of sustainable solutions and share success stories. The platform will include a robust multilingual search engine with voice command capabilities and will adhere to internationally recognized security protocols to protect data

### 1.1 Background

- Tech4Seva is a ground-breaking initiative dedicated to leveraging technology for social impact and community empowerment. Its goal is to bridge the gap between societal challenges and innovative solutions by offering a collaborative platform for stakeholders to share ideas, utilize established technologies, and promote positive change.
- Tech4Seva aims to establish stringent validation processes for technologies sourced from open-source contributors to ensure the quality and relevance of solutions for community needs.
- Through capacity-building initiatives such as workshops, hackathons, and training programs, Tech4Seva strives to equip stakeholders with the knowledge and skills required to effectively implement these solutions.
- The expected impact of Tech4Seva's projects is significant, with the potential to enhance the lives of millions by addressing crucial societal challenges like healthcare access, education, agriculture, and environmental sustainability. By promoting collaboration, innovation, and knowledge sharing, Tech4Seva believes it can catalyse transformative change and create a lasting impact in communities worldwide.

## What is TECH4SEVA

1. Platform that serve as a unified hub for collaboration and knowledge exchange between 5 Stake Holders.
2. through the platform ,stakeholders can access a repository proven solutions, collaboration validating pilot projects and engage in scaling successful initiatives across the nation.
3. A joint initiate between UBA, VIBHA to build infrastructure for inclusive & sustainable rural development

## Partners



## Branding and Infrastructure

VIBHA, UBA are Governance body's and UBA will TECH4SEVA Portal development Co-ordinators.

## 1.2 Purpose of the Document:-

The purpose of this document is to provide a concise yet informative overview of Tech4Seva Portal Development, covering all its modules and detailing the essential business rules and logic required for the application's implementation.

### 1.2.1 Purpose of the project

- **To create a solution repository and bring all stakeholders onto one platform.**
- Tech4Seva was established to create a unified platform that promotes inclusive development within communities. When technology—the practical application of scientific knowledge—is used for the greater good, it is known as Seva.
- Tech4Seva acts as a bridge between key players in social progress, including higher educational institutions, corporations, scientific and research institutions, and non-governmental organizations. Its primary focus is on creating a technology knowledge platform that brings together technology providers, funders, and implementation entities to serve marginalized groups. This enables these groups to access improved education, reduced hardships, increased income, and an overall better quality of life. Through Tech4Seva, the innovative capabilities of technology experts are harnessed to provide sustainable and scientific solutions to grassroots issues, ultimately driving positive change in society.

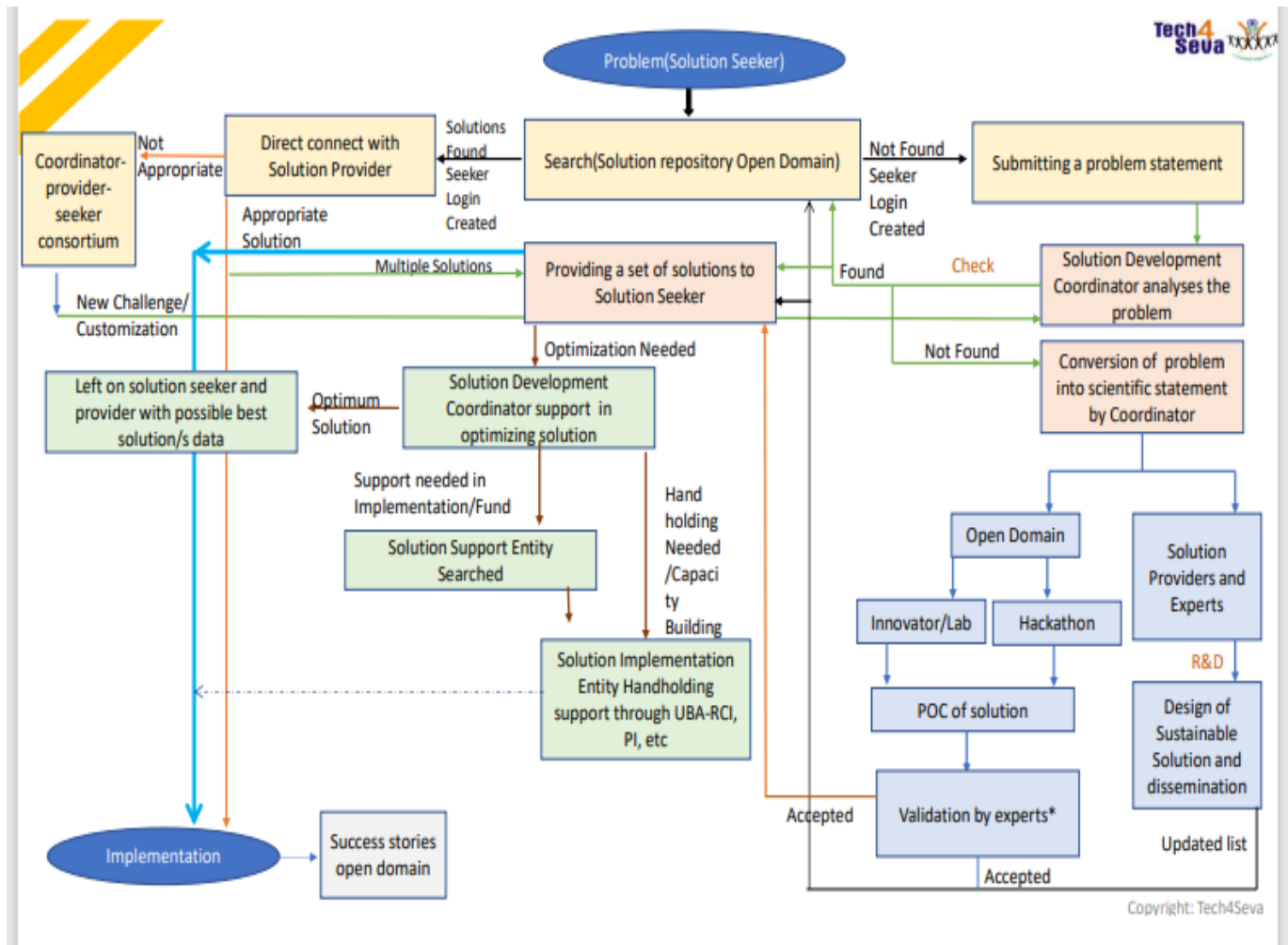
---

## 2) Architecture:-

- **To create a solution repository and bring all stakeholders onto one platform.**
- Tech4Seva was established to create a unified platform that promotes inclusive development within communities. When technology— the practical application of scientific knowledge—is used for the greater good, it is known as Seva.
- Tech4Seva acts as a bridge between key players in social progress, including higher educational institutions, corporations, scientific and research institutions, and non-governmental organizations. Its primary focus is on creating a technology knowledge platform that brings together technology providers, funders, and implementation entities to serve marginalized groups. This enables these groups to access improved education, reduced hardships, increased income, and an overall better quality of life. Through Tech4Seva, the innovative capabilities of technology experts are harnessed to provide sustainable and scientific solutions to grassroots issues, ultimately driving positive change in society.

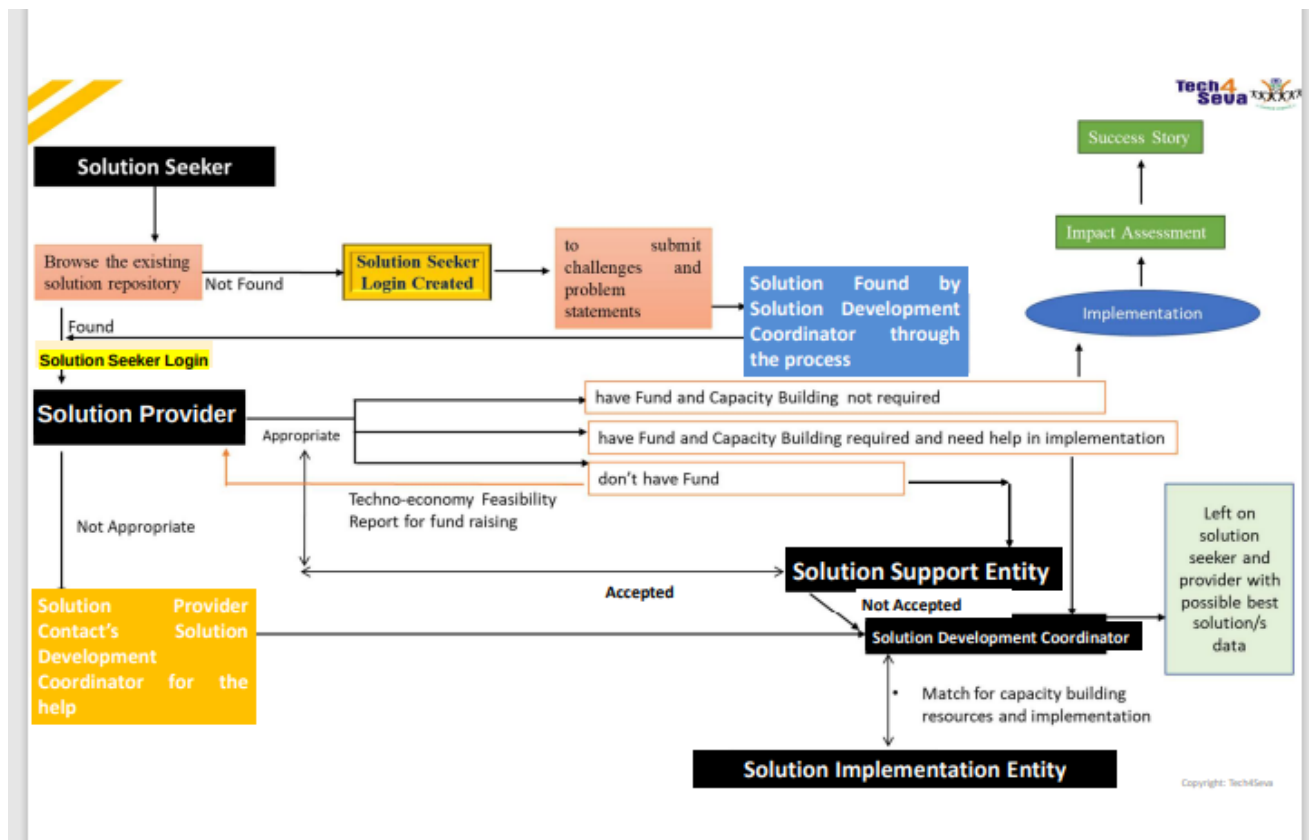
### 2.1.1 Process flow for the ERP

- Accessibility
- Security
- Deployment and DevOps
- Testing and Quality Assurance
- Reporting and Data Visualization
- Project Management and Collaboration Platforms
- Communication and Collaboration
- Authentication and Authorization
- Database Management
- Web Development



Copyright: Tech4Seva





### 3) Key Considerations for Branding and Hosting

Several important initial decisions must be addressed:

- **Branding:** Moving forward, Tech4Seva will serve as the main platform for all collaboration. It is recommended to integrate past initiatives, such as the Tech4Seva conference, into this overarching brand.
- **Proposed Domains to be Blocked:**
  - [Tech4Seva.com](http://Tech4Seva.com)
  - [Tech4Seva.org](http://Tech4Seva.org)
- **Hosting Servers:** Approval is needed to use the same servers currently used by UBA.
- **SMTP:** Approval is required for the SMTP configuration.

**SMS Gateway:** Approval is necessary for the SMS gateway integration.

#### 4) Users and stakeholders

Below are the proposed user groups and stakeholders in the TECH4SEVA System.

Sr. No.	Stakeholders	Roles	Potential Collaborators
1	Solution Seeker	<ol style="list-style-type: none"> <li>1. Identifying local challenges and providing a problem statement</li> <li>2. Opting solutions from existing repositories, providing feedback on appropriateness and putting Success Stories</li> </ol>	Individuals, PRIs, Field & social organizations, Govt. Authorities, UBA PIs, Students
2	Solution Provider	<ol style="list-style-type: none"> <li>1. Sustainable solutions based on appropriateness</li> <li>2. Transferring, validation, and customization of solutions as per the field requirements</li> <li>3. To take up an unresolved challenge to the lab</li> <li>4. To do capacity building</li> <li>5. To provide best practices</li> </ol>	Higher Education Institutions, UBA-SEG, R&D organizations like CSIR laboratories, RUTAG, DST, DBT, ISRO, DRDO, BARC, TRIFED, NECTAR, CKVI, grassroot Scientists and innovators, field organizations, grassroot innovators, and anyone with validated technology, Individuals, Relevant NGOs
3	Solution Development Coordinator	<ol style="list-style-type: none"> <li>1. Creating a Repository of sustainable solutions and Case Studies on ERP Portal</li> <li>2. Coordination among stakeholders</li> <li>3. Creating scientific statements from field problem statements</li> <li>4. Overall ownership and management of Portal</li> </ol>	Tech4Seva Team

4	Solution Support Entity	<ol style="list-style-type: none"> <li>1. Helping in Field implementation</li> <li>2. Replication of good practices and case studies</li> <li>3. Capacity Building</li> <li>4. Funds mobilization, Non Funding resource</li> <li>5. Product commercialization</li> </ol>	UBA Network, Field Organizations, Foundations like, Philanthropist individuals & Social Organizations, Govt Agencies, Ministry and Ministerial Schemes, Impact Funds, Corporate Grants, Social Stock Exchange, High Net worth Individuals, IIT Alumni
5	Solution Implementation Entity	<ol style="list-style-type: none"> <li>1. Linkage between Solution Provider and Seeker for grassroots implementation</li> <li>2. Hand Holding during solution implementation</li> </ol>	UBA PIs, NGOs, Field Agencies and Corporate Agencies

#### 4.1 Select functional flows of the Application

Tech4Seva ERP portal is a flexible platform that classifies stakeholders into five unique groups, each with their own designated roles in prioritizing needs and promoting the sharing of knowledge. Moreover, it offers a user-friendly avenue for individuals and community organizations to promptly report any issues they come across in various thematic areas.

#### 4.2 Identification of Issue and Solution Search

- The person facing a problem looks for solutions in a public database. If they find a solution that matches their problem, they contact the appropriate technology provider.
- The technology provider assesses the compatibility of the solution and outlines the necessary steps for implementation.
- If the individual lacks the skills to implement the solution, they can request help from solution coordinators.
- Access to the Tech4Seva portal requires mandatory registration for individuals, NGOs, or entities, promoting accountability and simplifying user management.

#### 4.3 Problem Statement Registration and Analysis

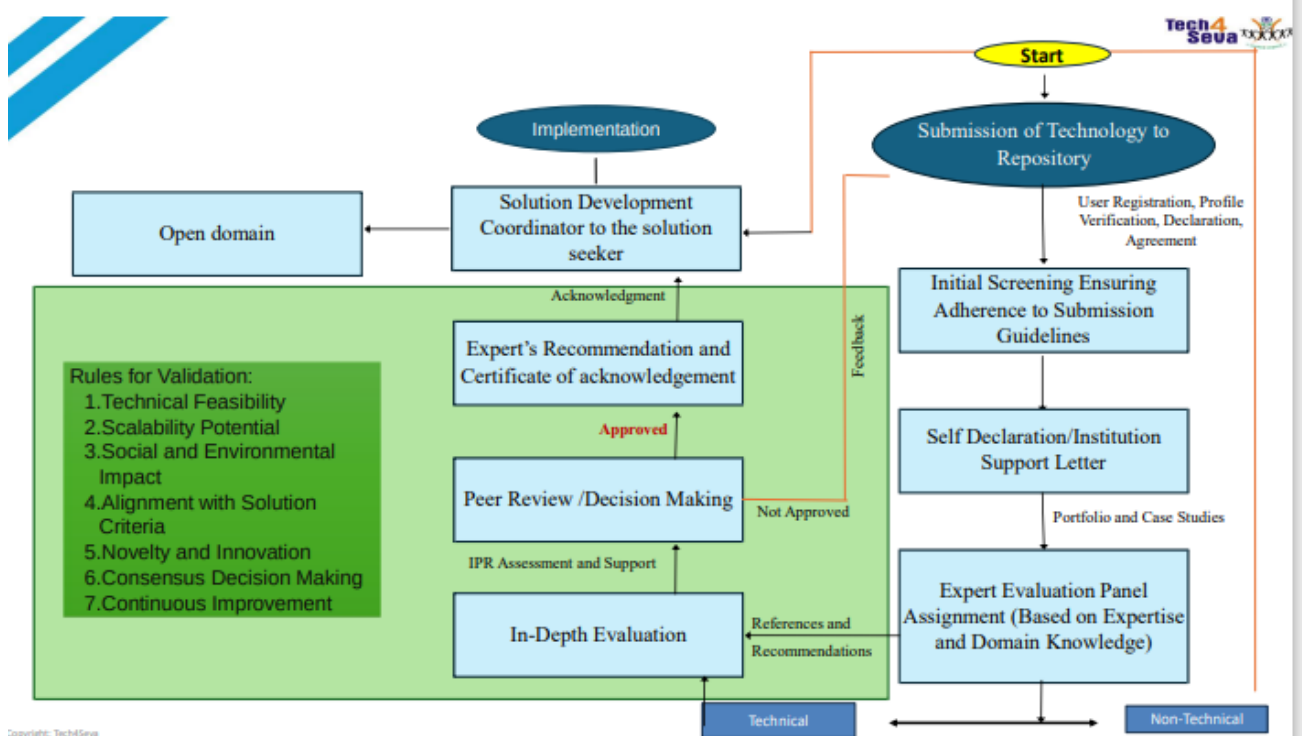
- In the event that the seeker is unable to find a relevant solution, they proceed to officially register the problem statement.
- Once the registration process is completed, the necessary credentials for tracking are provided.
- Solution Development Coordinator diligently examines the problem statement in comparison to the contents of the repository.
- When a solution is found, the problem statement is transformed into scientific statements

#### 4.4 Stakeholder Engagement and Public Distribution

- Scientific statements are shared with stakeholders and made available to the public.
- Solutions obtained from the public domain are subjected to thorough validation procedures.

#### 4.5 Validation Process for Grassroots Solutions

- When known registered Solution Providers do not provide a solution, a validation process is undertaken. Innovators or laboratories have the opportunity to upload relevant solution data. A panel of experts then will conduct a thorough evaluation. Approved solutions will be recognized and shared with relevant entities.



#### 4.6 Annual Hackathon

- An annual hackathon will be with the main goal of addressing unresolved scientific issues.

#### 4.7 Implementing Solutions

- Competent individuals can implement suitable solutions directly.
- Solution catalysers assist in securing funding and facilitating partnerships.
- Optimization efforts are made as needed, with additional support provided through various channels.

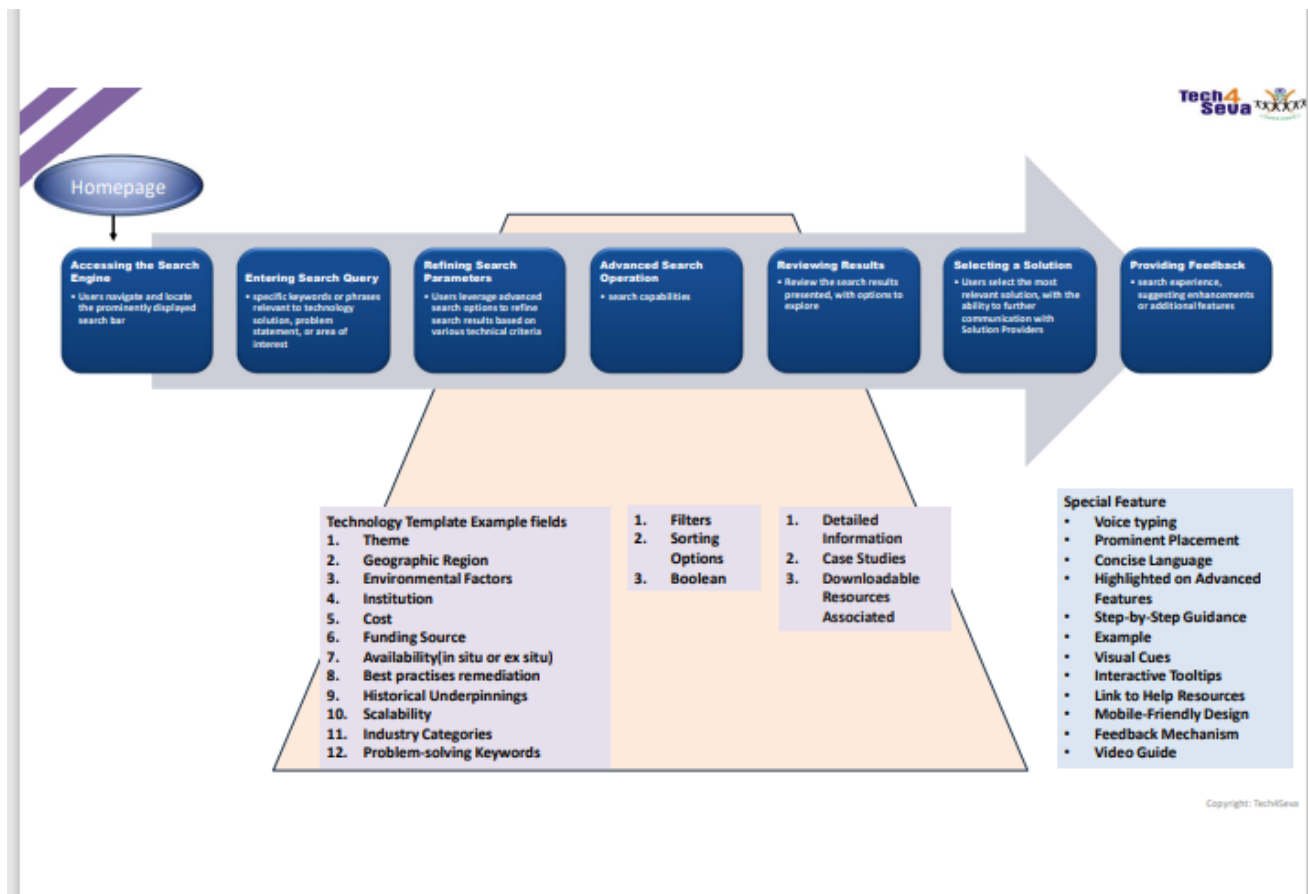
---

## 4.8 Sharing Success Stories and Documentation

- Successful solution implementations are documented and shared as open domain success stories.

## 5) Scope of the Work for Phase-1

- **Prominent Placement:** Ensure that the search bar is prominently placed within the user interface, making it easily accessible and visible on every page of the platform.
- **Clear and Concise Language:** Use concise language and clear labelling for search prompts and instructions to streamline user interaction and make it more efficient.
- **Highlight Advanced Features:** Showcase advanced search features prominently, such as filters, sorting options, and Boolean search capabilities, empowering users with precise control over their search parameters.
- **Systematic Guidance:** Provide comprehensive systematic guidance through tooltips, instructional guides, and contextual help features to assist users in effectively utilizing the advanced search functionalities.
- **Tutorials:** Offer illustrative examples of complex search queries and refinement techniques to demonstrate the full potential of the search engine and help users make the most out of it.
- **Visual Cues:** Utilize intuitive visual cues like icons, buttons, and color-coded indicators to enhance user understanding and navigation of the search options, making it easier for them to find what they are looking for.
- **Interactive Tooltips:** Implement interactive tooltips that dynamically provide contextual information and guidance as users interact with different search elements and features, ensuring they have the necessary information readily available.
- **Link to Help Resources:** Integrate links to comprehensive help resources, including FAQs, user guides, and video tutorials, so that users have access to additional assistance and support whenever they need it.
- **Mobile-Friendly Design:** Ensure that the search engine interface is fully responsive and optimized for seamless performance across various mobile devices and screen sizes, maintaining consistency and usability regardless of the device being used.
- **Help:** If users are unable to perform the search on their own, provide a FAQ section and an option to ask for help, allowing them to seek assistance in resolving their search-related issues.
- **Feedback Mechanism:** Incorporate a robust feedback mechanism that allows users to submit suggestions, report issues, and provide input for continual improvement and optimization of the search engine, ensuring that their feedback is valued and taken into consideration.
- **Advanced Search Engine Specification for Tech4Seva ERP Platform.**



## 6) Technology & Data requirements:-

Web Application Development	
Type	Technologies
Back-End	PHP 8.0, Code Ignitor 4.0 Framework
Front-End	HTML,CSS, Bootstrap Framework, Java Script Libraries
DB	PostgreSQL
NoSQL DB	Mongo DB
Reporting	Power BI
Data Visualization	D3.js
Authentication:	JSON Web Tokens (JWT)
Authorization:	Role-based access control (RBAC)
Project Management	JIRA
Task Management	JIRA
Document Sharing	Google Drive API
Version Control:	GIT

Mobile Application	
React Native for iOS and Android	
Testing and Quality Assurance	
Unit Testing	Jest or Mocha
Integration Testing	Selenium
Load Testing	Load Testing: Apache JMeter
Deployment and DevOps:	
Cloud Platforms	Amazon Web Services (AWS)
Continuous Integration/Continuous Deployment (CI/CD)	Jenkins
Containerization and Orchestration	Docker, Kubernetes
Security	
Web Application Firewall (WAF)	AWS WAF
Security Headers	Content Security Policy (CSP)
Penetration Testing	OWASP ZAP

## 7) Additional hardware and software requirement with budget implications

- System requirements but beyond MVP.

Category	Description	Cost implication (approx.)
SMS gateway	Users to collaborate, get notifications, to get login OTPS, customer support	\$ annual cost
WhatsApp gateway	OTPs, Customer support	\$annual cost
Support for multi languages		

## 8) Wireframe :-

[Page 1 - Tech4seva \(figma.com\)](#)

*Thank  
you*

# Dhanush



● India

● Kenya

● Australia

#### INDIA

Hyderabad  
#1-8-448, Lakshmi Building,  
5th & 6th Floors, Begumpet,  
Secunderabad, Telangana,  
India. Pin-500 003,  
Ph: +91 40 49135000

New Delhi  
M2K Suites, Lala Lajpat  
Rai Road, Block A-57,  
Kailash Colony, Greater Kailash,  
New Delhi, Delhi 110048

Noida  
C-88, 2nd Floor, Sector-2,  
Noida-201301 Delhi,  
Delhi 110048

Uttarakhand  
9-A(new no 92/2) Pritam Road,  
Dalanwala, Dehradun -248001,  
Uttarakhand

#### AUSTRALIA

Brisbane  
Level 21, 345 Queen Street,  
Brisbane, QLD 4000,  
Australia. Ph: +61 73376 6176

#### KENYA

Nairobi  
P.O. Box 29839 00202 KNH. 9th Floor,  
Azure Towers, Beside Hotel Royal Orchid,  
Lantana Road, Off Raphta Road,  
West Lands, Nairobi, Kenya. Ph: +254 20 271 4486.