

Technology Enabling Center

Scope of work

Present website of Technology Enabling Center (TEC), Panjab University, Chandigarh can be explored at www.tecpu.in. It enables the academia to connect with industrial experts and help solve industrial problems. Bidding system is set for fair pricing and rewarding. New website for TEC has to be developed while taking insights from www.tecpu.in and while adhering to following requirements:-

- Create a Simple user interface design that can connect easily with a range of visitors and enable easy and meaningful navigation.
- Develop a responsive and device independent to enable the website to be accessible on multiple devices with lossless design perfection, simplicity and usability.
- The design should have high levels of functionality and usability and achieve search engine friendliness and visibility
- The portal has to be developed keeping in mind the target audience ie. the industrial experts and the academicians
- The portal should be publicly accessible by all, Everyone should be able to register and login into the system
- Direct login using the google as well as login using the individual profile creation should be available
- Separate section to create profiles for industrial experts and the academicians should be there
- Portal should be well equipped with features to
 - Add and transfer technologies developed by academicians
 - Add detailed problems faced by industries
 - Add and promote the skill set of expert academicians which will act as consultants to the industrial experts
 - Community feature should be there to post, reply, create threads and discuss innovations and everyday technical problems faced during research work
- Portal should consist of screens as per the main features section.
- Admin will have to right to approve or deny all the listings
- Admin will have to right to remove and restrict the existing user profile
- Admin will have to right to view all the analytics and reports
- Admin will have to right to download all the analytics and reports
- Admin will have to right to remove the existing listings
- Admin will have the right to add special categorisations like vetted etc
- Reports in the form of excel and pdf should be generated

MAIN FEATURES:

1. A web-based solution has to be developed wherein anyone can upload video as well as text corresponding to his/her:
 - a. Patent
 - b. Innovation
 - c. Proof of concept
 - d. Prototype
 - e. Pilot-build
 - f. Technology

- g. Design
- h. Knowledge

Uploader of content can:

- A. attach base price for sale corresponding to his/her Intellectual property, as per his/her wisdom.
 - B. make available his/her Intellectual Property for online bidding.
 - C. fix a time-bracket during which his/her Intellectual Property will be available for online bidding.
 - D. give online consultations to clients against consultation charges as per his/her wisdom.
 - E. Download his/her resume from this website that should automatically get created based upon individual data uploaded by the uploader.
2. On this platform, people from Industry can upload:
- 1. Problems being faced by his/her Industry for which he/she desires support from outside world
 - 2. Futuristic products for which his/her Industry wants support from the outside world.

Uploader of Industrial issue can:

- 1. make available his/her problem for innovation through online bidding.
- 2. make available his/her futuristic product for development through online bidding.
- 3. fix a time-bracket during which a bid corresponding to his/her industry will be available for bidding.
- 3. This platform should connect all the 9 TECs of our Nation
- 4. User interface should be very simple that should easily connect with a range of visitors and should enable easy and simple navigation. The entire website should be viewable on all browsers, computers, laptops, tabs, mobiles etc.
- 5. Payment Gateway Integration.
- 6. Website can handle heavy elements and requests withease without showing any lag or glitch to users.
- 7. Data and information can be made confidential and secured, preventing the cropping up for vulnerabilities and online threats.
- 8. Works on Plug and Play model - New features can be separately developed and then integrated with the existing system
- 9. Server- Pay as you use the services and space
- 10. Highly secure system no need for annual maintenance except for the basic domain and server renewals
- 11. Every element is individual only the changed area will be affected
- 12. Vendor has to maintain the website for 1 year after the launch of the website (error free working 24X7, complaint resolution within 4 hours of reporting).
- 13. Code of the platform should be nicely documented and has to be delivered to TEC, PU, Chandigarh. Code should be such that through it new dynamic features can be independently added by TEC in future.
- 14. Should be Hybrid compatible and should be easily scalable to mobile app when need arises.
- 15. Secure Dashboard rights and admin privileges to be provided.
- 16. Facility to create Paywall levels
- 17. Provision for Advertising space.

MAIN FEATURES:

- 1. **Home Page**

- Search Feature Section for recent posted work. the user can search all through the entire website according to his requirements
- Separate section for Featured Technologies where users get to see the best technologies listed on the portal
- Separate section for Featured Projects where users get to see the best projects listed on the portal
- User will have a option to subscribe to newsletter so that all the updates are constantly reaching the users
- Mandatory signup for the users will be there following which they have to login into the portal to access it
- Header and footer will be present on the portal with all the relevant and important links
- Generic CTA for user to contact and send his concerns to the admin

2. Technology Transfer

- Cards of technology transfer along with image, description and view more with the complete detail for the best understanding
- CTA for user to contact and send his concerns to the admin regarding Technology Transfer
- Section to bid the amount
- Section to display important notice or notification within the portal
- Detailed Page of Problem which will contain multiple images, detailed description links etc
- Multiple option to add images in the form of carousel will be there
- Listing ID to mark individuality of every listing
- Previous and Next Option to go the next and previous problems from the details page without actually going back to the main page
- Constant reminder in real time to mention Time left to bid
- Current Bid Amount should be mentioned so that users are aware of the bid amount
- Section to place bid Provision to add special tags like “featured”, “vetted” etc
- Filters and Sorting for easy of user in the following way
 - Ascending
 - Descending
 - Date
 - Most Popular
 - Least popular
 - Newest Oldest
- User can search the listing or content within the listing
- Short introductory Video to explain the problem in a better way using visual aid
- Short Audio Note to explain the problem in a better way using Audio aid
- Support of Various Formats and Dimension so that there is no limitation on the format and methods to upload the image video or audio

3. Industrial Problems

- Cards of industrial Problem along with image, description and view more with the complete detail for the best understanding
- CTA for user to contact and send his concerns to the admin regarding Industrial Problems
- Detailed Page of Problem which will contain multiple images, detailed description links etc
- Multiple option to add images in the form of carousel will be there
- Listing ID to mark individuality of every listing

- Previous and Next Option to go the next and previous problems from the details page without actually going back to the main page
- Provision to add special tags like “featured”, “vetted” etc
- Filters and Sorting for easy of user in the following way
 - Ascending
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4. Hire Expertise

- Segregation based on
 - Consultation
 - Expert Area
- Cards of expert area along with image, description and view more
- CTA for user to contact and send his concerns to the admin regarding Hire Expert
- Section to display important notice or notification
- Detailed Page of Problem which will contain multiple images, detailed description links etc
- Card of expert with interactive buttons as when someone clicks on the below mentioned button they are redirected to
 - Email
 - Mobile Number
 - location
 - linkedin Account
- Expert Area will be clearly mentioned so that the expertise is clearly visible
- Provision to add special tags like “featured”, “vetted” etc
- Filters and Sorting for easy of user in the following way
 - Ascending
 - Descending
 - Date
 - Most Popular
 - Least popular
 - Newest Oldest
- User can search the experts or content within the expert description
- Short introductory Video to explain the problem in a better way using visual aid
- Short Audio Note to explain the problem in a better way using Audio aid
- Support of Various Formats and Dimension so that there is no limitation on the format and methods to upload the image video or audio

5. Login/Signup

- Separate option to login and signup as a academia and industrialist for better understanding and seamless user experience
 - One click OTP Signup provision will be there for quick and easy login
 - Google signup/login provision will also be there for one step signup reducing the time and effort of the users
6. Chat Bot: Semi-Automated with human escalation
 7. Chat functionality when approaching Academia, Industry or Consultancy. so that the users can communicate with each other personally and help each other better
 8. Community Section
 - Posting of research ideas, queries and questions related to industrial problems and solutions
 - Forums to continue long discussions and solutions where all the users can interact and share their ideas
 - Creation of threads replies under the main thread in the form of sub thread
 - Provision to add images and attach pdf for better understanding
 - User will have provision to filter the content based on there requirement
 - User can search the thread and content within
 - Date wise segregation of the thread and replies
 - Separate section after login so that user can check what all he has posted in community

Technology Stack Used -

- MERN STACK
 - MongoDB (Database) a No SQL database should be used to store the data of the portal
 - Express (BackEnd Framework) should be used to build and smoothen the process and API integration
 - React (Frontend Library) should be used to design and develop the front end of the portal
 - Nest js should be used to in accordance with react in the frontend so that the SEO should not be an issue
 - Next Js should be used to in accordance in the Backend so that the SEO should not be an issue
 - Node (JS Runtime Environment) should be used in the backend to develop the portal and maintain all the functionality.

Dashboards

- Admin
 - Admin can view all sort of analytics about the number of visitors, bounce rate, conversions etc
 - Admin can create, remove, update and delete the profiles
 - Verification all the various listings on the portal so that a level of quality is maintained
 - Profiles
 - Projects
 - Technologies
 - Transfers
 - Admin will have a section where he can mark the listing as vetted or give other level to highlight the listing
 - Admin will have a separate section where he/she can view the bids

- Admin will have a section where he/she can view the CTA form submissions
- User
 - Will have the provision to create own listing comprising of the following
 - Queries
 - Technology
 - Projects
 - Provision to add images, videos description and various other details will be mentioned so as to give a complete understanding of the listing

Community Section

- Users can post their queries on the portal
- The posted queries will have a separate thread of replies
- Users can search the specific query or reply or thread as per his requirement
- User can filter the specific query or reply or thread as per his requirement
- Department wise listing will be made
- Every thread will be separate in itself and not associated with the other
- Addition of text and images will be a provision
- Users can tag each other in the threads to better associate
- Provision to add links and hyperlinks will be there
- Various User profiles will have the following features
 - History of posted comments
 - History of posted reviews

API

- Provision to Post on behalf of the admin on the following platforms as and when once the admin approves the listing for the website it automatically gets published
 - Facebook
 - Instagram
 - Whatsapp
 - Twitter
 - Linkedin
 - Youtube

Chat Features

- Real time communication, it should be live and both the users should be able to reply in real time
- there should be no lag between the messages sent and received from the users
- No 3rd party service or paid server for real time communications

CTA

- Backend Dashboard to view all the CTA's which are submitted so that the admin gets the information and convert the lead
- On Email - similarly the CTA's will be sent to email as well for the admin to get information on email
- Toll Free (optional) user can directly call on the toll free number and solve any of his problems or queries

Additional

- Real time backend dashboard to update important information on frontend like notice etc

- User Ticket based customer support
- Highly shareable on Social Media - Individual listing will have share button
- Easily linkable with marketing tools