



Invitation for Proposal
for
Design, Implementation and Installation
of
ArchiNET System
for
Internet Professional Association (iProA)

Funded by
The CreateSmart Initiative (CSI)

PART I

LODGING OF PROPOSAL

To be acceptable as a Proposal, this Proposal shall be properly completed and enclosed in sealed plain envelopes. The envelope shall clearly state the subject of this Proposal "Proposal for ArchiNET System" and addressed to the Project Manager, Internet Professional Association, 27th Floor, 9 Wing Hong Street, Cheung Sha Wan, Hong Kong before 5:00 pm on **2 July 2010**. Late submission will not be accepted.

Closing Time in Case of Typhoon/Rainstorm

In case a rainstorm black warning or typhoon signal No. 8 or above is valid for any duration between 9:00 a.m. (Hong Kong Time) and 5:00 pm (Hong Kong Time), the closing time will be extended to 5:00 pm. (Hong Kong Time) on the next working day following Closing Date.

Lodging of Proposal

Interpretation

In the Proposal Documents, the following words and expressions shall have the following meanings, unless the context otherwise requires:

| | |
|---------------------------|--|
| “iProA” | Internet Professional Association |
| “HKIA” | The Hong Kong Institute of Architects |
| “Contractor” | The company or the business organization whose Proposal for this tender is accepted by iProA |
| “Contract” | The contract for the goods and services to be entered into between the Contractor and the iProA once proposal is accepted; |
| “Steering Committee” | Persons appointed by and acting for and on behalf of the iProA to oversee the project; |
| “Proposal” | The Proposal for the Proposal Subject Matter; |
| “Proposal Closing Date” | The latest date by which Proposal must be lodged as stated above; |
| “Proposal Price” | The price for the Proposal Subject Matter; |
| “Proposal Subject Matter” | The Proposal Subject Matter to be performed and/or supplied by the Contractor under the Contract; |
| “Tenderer” | The person or persons and/or the firm or the company who submit the documents to bid for the Proposal Subject Matter; |
| “Working Group” | Working Group on her Content & Information Standards |

PART II

TERMS OF PROPOSAL

1. Invitation to Proposal

Proposals are invited for Design, Implementation and Installation of ArchiNET, sponsored by The CreateSmart Initiative (CSI) under Create Hong Kong. Each Tenderer shall submit only one proposal.

2. Proposal

- (a) This Proposal relates to the Proposal Subject Matter.
- (b) The Tenderer must complete Part IV (Schedule).
- (c) The Proposal Documents are to be completed in permanent ink or typescript and submitted in the manner stipulated. Incomplete proposal may not be considered.
- (d) In the event that the Steering Committee determines that the clarification of any Proposal is necessary, it will advise the Tenderer of such fact and the Tenderer shall thereafter have five (5) working days or such further period as the Steering Committee may specify to submit such information in the form requested (if any).
- (e) Any enquiry from the Tenderer concerning this Proposal or relating to the specification up to the date of lodging its Proposal shall be submitted to the below address **no later than 28 June 2010:**

Project Manager,
Internet Professional Association
27th Floor, 9 Wing Hong Street
Cheung Sha Wan
Hong Kong

3. Proposal to be Remained Open

In consideration of iProA expending time and manpower in considering its Proposal, the Tenderer undertakes and agrees that its Proposal shall remain open for not less than 120 days after the Proposal Closing Date and the Tenderer agrees not to withdraw the offer constituted by such Proposal for this period. If a

Terms of Proposal

Tenderer is unable to comply with this requirement, the Tenderer shall clearly indicate in the Schedule the period for which its proposal is valid for acceptance.

4. Prices

- (a) The Tenderer must set out its Proposal Prices in Part IV.
- (b) The Proposal Prices quoted by the Tenderer in Part IV are to be in Hong Kong dollars. Such prices shall be the net prices allowing for all trade and cash discounts.
- (c) The Proposal Prices shall include all other costs incurred by the Contractor (the Tenderer whom the contract is awarded to) in performance of the Contract.

5. Accuracy of Proposal Prices

Tenderer should ensure that the Proposal Prices quoted are accurate before submitting their proposal. Under no circumstances will the iProA accept any request for price adjustment on grounds that a mistake has been made in the Proposal Prices quoted by a Tenderer.

6. Prices Quoted

Offers must be remained valid for the duration of the Contract unless Tenderer clearly stipulates otherwise.

7. Payment

All Payments will be made in Hong Kong dollars.

8. Company/Business Organization Status

- (a) Tenderer must provide the following details to iProA with their Proposals:
 - (i) Name and address of the company/business organization.
 - (ii) Length and nature of business experience including without limitation experience in the performance and/or supply of the Proposal Subject Matter.

Terms of Proposal

- (b) Tenderer must also provide information on the technical implementation team for the proposed solution, including the number of existing local technical staff with relevant qualification and experience for the implementation of the proposed solution.

9. Tenderer's Commitment

- (a) All Proposal, information and responses from each Tenderer must be submitted in writing. The relevant provisions of this invitation to proposal and such documents so submitted shall become the representation of the Tenderer and may at iProA sole option be incorporated into and be made part of the Contract between the iProA and the successful Tenderer.
- (b) Tenderer must not disclose or transfer the information and data provided in this proposal which belongs to the iProA to a third party without the prior permission from the iProA

10. Acceptance

The successful Tenderer will receive a notification of acceptance of the Proposal and awarded a contract by the iProA. Tenderer who does not receive any notification within 30 days of the Proposal Closing Date shall assume that their Proposal have not been accepted. On receiving written requests from unsuccessful Tenderer, the Steering Committee shall have the right to disclose the name of the successful Tenderer, the accepted Proposal prices and the reason(s) for rejecting their offers to the unsuccessful Tenderer.

11. Contract

Subject to iProA's notification to the Tenderer of its acceptance, iProA shall award a contract to the Tenderer on the basis of Proposal, the Tenderer (hereafter referred to as "Contractor") shall be bound to forthwith comply with the terms and conditions of the Contract which will replace and supersede the terms of the Proposal.

12. Saving

The iProA is not bound to accept the lowest price of Proposal and reserves the right to accept all or any category of any Proposal at any time within the period mentioned in this Part. The award will be made to the Tenderer who is determined

Terms of Proposal

by the iProA to be fully capable of undertaking the Contract and whose Proposal is determined by the iProA to be most advantageous.

13. Statement of Compliance

The software and materials offered by the Tenderer shall comply with all requirements stipulated in Part V - Project Specifications. Tenderer shall provide a section-by-section Statement of Compliance in Part E of Part IV. If any of the hardware, software and materials does not conform to the said requirements, Tenderer shall provide full details of its counter offer(s) to meet the said requirements. However, the iProA reserves the right to accept or reject any such offer.

14. Cancellation

Without prejudice to the iProA's right to cancel the invitation for proposal, where there are changes of requirement after the Proposal Closing Date for operational or whatever reasons, the iProA is not bound to accept any conforming proposal and reserves the right to cancel the invitation.

15. Criteria for Proposal Evaluation

Proposal will be assessed with the following procedures:

(a) Stage 1 - Requirements Assessment

Full compliance with the proposal requirements as stipulated in Part V – Project Specifications. Tenderer should fill in Part E of Part IV - Statement of Compliance.

(b) Stage 2 - Technical & Price Assessment

A marking scheme for technical & price assessment will be used for evaluating the proposal offers. Offers meeting the requirements will be evaluated in terms of price, experience of the company in technical design and implementation, quality of the proposed solution, training and project management.

PART III

PROPOSAL SUBJECT MATTER

Introduction

- (a) This proposal is intended for the design, implementation and installation of a Web information Platform (hereafter referred to as "the System"), development of related e-learning kit, project management and associated marketing, user training and users' satisfaction evaluation.
- (b) The Tenderer must bid all items as specified in Part V – Project Specifications, and be the single point of contact for all related activities.
- (c) Contractor's Representatives
The Contractor is required to appoint a person as the Project Manager within its organization who will have the responsibility and commensurate iProA for the overall progress of the work and to whom all questions by the iProA regarding the Contract can be referred. The Contractor shall ensure that the Project Manager can reasonably be contacted in and beyond normal office hours.

Payment Schedule

Payments will be made according to the progress of the project.

Tenderer's Proposal

The proposal of the Tenderer should include a detailed project plan within the framework of the action plan supplied in Part F of Part IV. The project plan would need to include milestones in the stages of development and the deliverables. Tenderer must provide their ideas in potential problems and challenges in Part B of Part IV in the development of the ArchiNET System according to the project specifications

Part IV

PROPOSAL SCHEDULE

Design, Implementation and Installation of the ArchiNET System

To: Project Manager,
Internet Professional Association.
27th Floor, 9 Wing Hong Street,
Cheung Sha Wan, Hong Kong

Proposal FOR design, implementation and installation of the ArchiNET System

We agree to supply the above material and service in accordance with the specifications for a total contract price of HK\$_____ within the period specified in the invitation for proposal.

| | |
|-------------------|---|
| _____ | _____ |
| (Company Chop) | (Signed by _____ For and on behalf of the Company) |
| _____ | _____ |
| (Name of Company) | (Date) |

Proposal Schedule

Part A: Job Reference

Tenderer must provide job references in software development, project management and user training for projects in similar capacity.

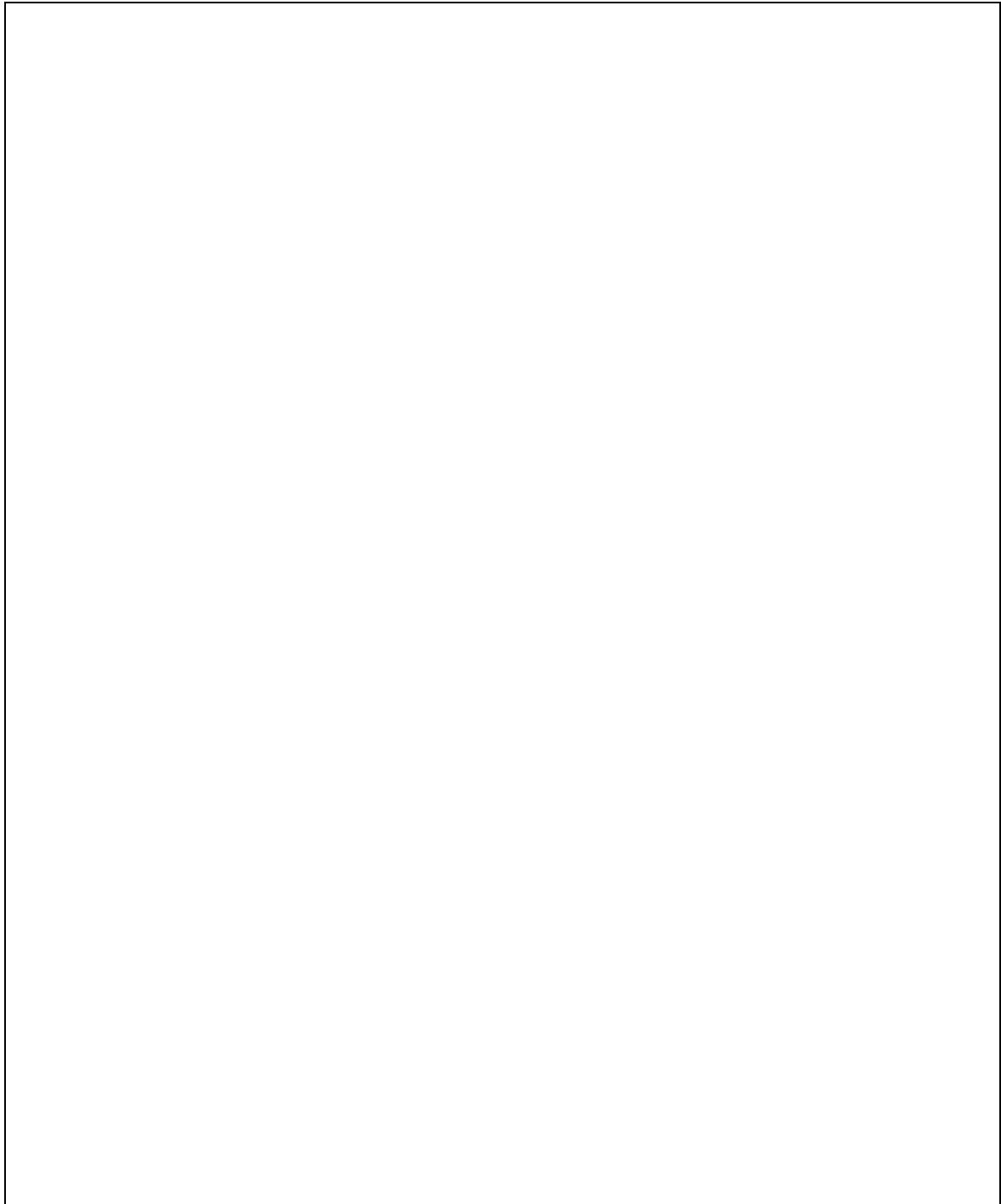
(Authorized Signature)

(Company Chop)

Proposal Schedule

Part B: Potential Problems and Challenges

Tenderers must provide their ideas in potential problems and challenges in the implementation of this ArchiNET System according to the project specifications



(Authorized Signature)

(Company Chop)

Proposal Schedule

Part C: Information Summary of the Tenderer

| | |
|---|--|
| Company Name (English & Chinese Name) | |
| Local Office Address | |
| | |
| | |
| Company Website | |
| Company Email Address | |
| Telephone Number | |
| Fax Number | |
| Contact Person (Name & Title) | |

(Authorized Signature)

(Company Chop)

Proposal Schedule

Part D: Outline of Personnel Deployed

Tenderers must provide the qualification / skill / responsibility / man-days / man-months / experience of the personnel proposed to be deployed to the work assignment.

Project Manager

| | |
|-----------------|--|
| Name | |
| Qualification | |
| Past Experience | |
| | |
| | |

Other members of the Technical Implementation Team

| | | | |
|-----------------|--|------|--|
| Name | | Role | |
| Qualification | | | |
| Past Experience | | | |
| | | | |
| | | | |
| | | | |
| Name | | Role | |
| Qualification | | | |
| Past Experience | | | |
| | | | |
| | | | |
| | | | |

(Authorized Signature)

(Company Chop)

Proposal Schedule

Part E: Statement of compliance

Tenderers must provide a compliance table with section-by-section statement of compliance corresponding to the Project Specifications:

| |
|--|
| |
|--|

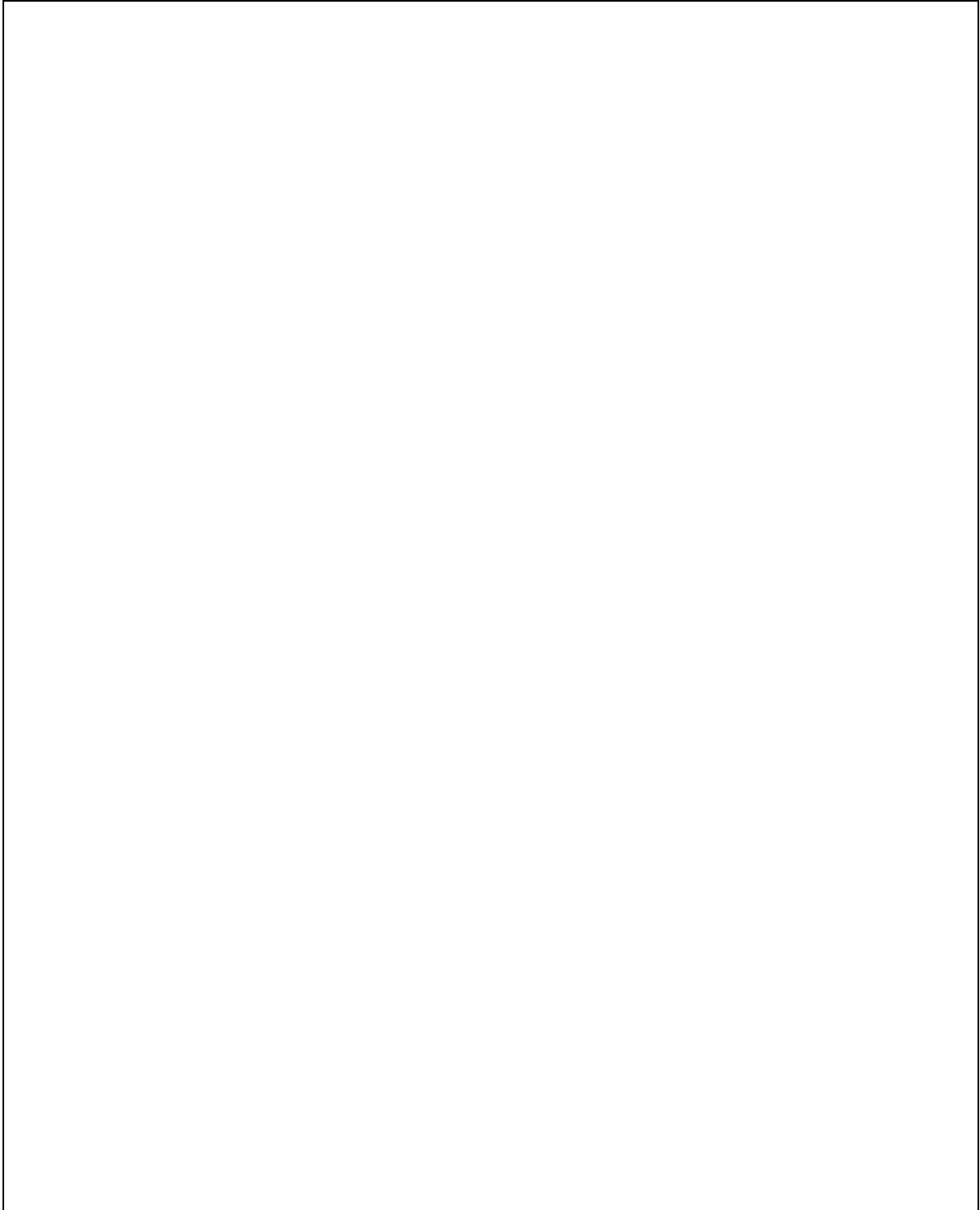
(Authorized Signature)

(Company Chop)

Proposal Schedule

Part F: Technical Outline of Proposed Solution

Tenderers must provide an outline on their proposed technical approach to the system.

A large, empty rectangular box with a thin black border, intended for the tenderer to provide a technical outline of their proposed solution.

(Authorized Signature)

(Company Chop)

Proposal Schedule

Notice for submission of proposal

Please read the following notice carefully before submitting any Personal Data.

Internet Professional Association is an association incorporated under the laws of Hong Kong whose registered office is at 27th Floor, 9 Wing Hong Street, Cheung Sha Wan, HONG KONG. Our staff may ask you to provide your Personal Data for purposes related to evaluation of your proposal/offer of contract.

When you provide Personal Data to us, please make sure that the data is accurate and complete. If you fail to provide the required information or if the information provided is inaccurate or incomplete, our consideration on your proposal/offer may be affected.

Please also note that your Personal Data may be made available to:

- Project Sponsors of this projects including members from CreateSmart Initiatives (CSI);
- Steering Committee of this projects including members from the iProA and HKIA;
- appropriate persons in the Working Group including members from the iProA and HKIA; and
- Any other relevant people/parties/organizations involved in the evaluation of the proposal.

who require it for matters related to evaluation of your proposal/offer of contract.

We will only use, disclose or transfer the Personal Data provided:

- for those purposes relating to evaluation of your proposal/offer of contract; or
- directly related purposes; or
- where permitted by law.

We will obtain your consent before using your Personal Data for any other purposes.

If you wish to access and/or correct your Personal Data, you may do so, under the authority provided by Personal Data (Privacy) Ordinance, in writing to:

Project Manager,
Internet Professional Association
27th Floor, 9 Wing Hong Street, Cheung Sha Wan, Hong Kong

PART V

PROJECT SPECIFICATIONS

1. Introduction

Background

In the information age, the internet had redefined the means of information transfer and knowledge acquisition which differentiate from the legacy media like television, magazine and newspaper by its interactiveness and collaborativeness. Different profession, particularly of the creative industries, had been opened to new challenge and new opportunities. The architect profession is provided with new channels to promote architecture.

“Seeing is believing.” This quote represents the importance of visual communication and presentation to architects and becomes the core system requirement of the Virtual Hong Kong Project. Currently, there is no such a system to serve Hong Kong architects and architecture industry. The traditional face to face, customer referral and word of mouth business practices create limitations for Hong Kong architects to reach out and to be reached. Business growth and professional improvement will soon become difficult to the whole industry.

This project is more than just 3D demonstration on the map. It will serve multi purpose as an effective communication channel for showcasing excellent design profile and building art, a collaboration platform of worldwide talents and professional knowledge, an innovation machine/new idea generator, and an industry incubation of new blood.

The project is aimed to develop a showcase platform on an online map environment and open up a bigger door for world wide public and potential clients to understand the quality and standard of Hong Kong Architects that is critical at the moment. It also served as a vehicle for transforming Hong Kong to be a creative city and help establishing one of its creative industries.

Project Specifications

Items and Services Under This Proposal

Tenderers are invited to bid for the design, implementation and installation of the ArchiNET system.

Tenderers shall bid for all items and services in this Project Specification and be the single point of contact for all related activities. iProA reserves the right to accept all or any part of the proposed items or services from the Tenderers.

Tenderers shall ensure that the proposed solution is secure and scalable which will provide flexible, reliable, efficient and cost effective means to achieve the project objectives.

Methodologies and Standards

The Contractor should adopt, where applicable, the government standards and guidelines or equivalent for the implementation of the system. Brief descriptions on these standards and guidelines are available for reference in the web site of "Office of the Government Chief Information Officer" <http://www.ogcio.gov.hk>. These standards and guidelines will be regarded as the major references to ensure the quality of the deliverables.

Tenderers shall provide detailed description in Part F of Part IV – 'Technical outline of proposed solution' to show their understanding of the implementation requirement, the methodologies and tools to be used and adoption of such methodologies and tools in similar projects, if any.

2. Project Objectives

The key objectives of the Project is to promote Hong Kong architecture and architectural services through demonstrating the architectural works in Hong Kong done by both local as well as overseas renowned architects on the online platform. It would on one hand help local architectural industry to showcase their works and explore new markets, and on the other hand provide a user-friendly database for potential clients and the public to get easy access in searching for Hong Kong's architectural excellence

The platform is in both English and Chinese (Simplified and Traditional) at the first stage. Will add other languages in the later stage if needed. This project is more than just 3D demonstration on the map. It will serve multipurpose as an effective communication channel for showcasing excellent design profile and building art, a collaboration platform of worldwide talents and professional knowledge, an innovation machine/new idea generator, and an industry incubation of new blood.

The project is aimed to develop a showcase platform on an online map environment and open up a bigger door for worldwide public and potential clients to understand the quality and standard of Hong Kong Architects that is critical at the moment. It also served as a vehicle for transforming Hong Kong to be a creative city and help establishing one of its creative industries.

The platform will be divided into different sections:

- Section for finding HK architects
- Section for finding HK Young Architects/Graduates
- Section for finding overseas architects(who wants to enter Hong Kong Talent Pool)
- General Public can able to access the above sections

The aim of this platform is to showcase Hong Kong Architects work and design for the world, no matter the viewer is general public or property developer, viewers are welcome to find out Hong Kong Architects or even China Architects for free in this platform.

3. System Overview

In order to achieve the project purpose, the system should address several major function directions including easy to use and deploy 3D modeling on map environment, able to unload, edit and manage related information, to provide enhance user experience through smooth layer searching and 3D model rendering, to offer flexible event and project management and development, and to enable workgroup and education function rooms for collaboration and education.

This web based system will handle 2D model, 3D model, audio, video, photo, searching, text, layer presentations, tag, GPS etc. It can be accessed through Internet from different devices such as personal computers and mobile devices such as smart phones.

This web-based system should be scalable, stable, and extendable. It serves not only several thousand architects and hundred architecture firms from Hong Kong and China but also visitors from all around the world. It aims to provide a smooth user experience all the time and peak transaction period on real time viewing hundred to thousand 3D models, GSP navigation on mobile devices, and video achieves as well as real times collaborations and attention on events, exhibitions, and projects over the web based system through internet access.

Several major system functions are shown below:

- Interface development on virtual map environment
- Hardware and bandwidth management
- User registration and access control
- Security management
- Membership and payment management
- Content and profile management
- 3D modeling deployment and management
- Layer searching and result presentation
- File management
- Workgroup and event management
- Fail over and back up management

4. System Description

This System shall be built on an open-platform architecture with the following sectors:-

4.1 Platform

The platform refers to hardware, database software, networking and a web-based virtual map.

4.1.1 The Web-based virtual map of HK to provide the basic reference information for other application layers, the platform should be :-

- Include detail mapping information up to the HK Land Department 1:5000 scale mapping, such as street name, building name in bi-lingual formats
- Web-based map with automatic scaling and generalization. More detail mapping information should be automatically scaled and display when the drawing scale increase. These functions should be handled by a webGIS services/application installed in the server.
- Mapping platform should be automatically tiled and cached in the server to minimize the bandwidth and CPU consumption.
- Accessible 7 day x 24 hours at anywhere.

4.1.2 Hardware includes all the computers, backup and networking devices to support the project for at least 3 years of operation time in a datacenter. Requirements of the hardware should be:-

- Provide sufficient storage for 3 years operation
- Provide sufficient computing power for at least 100 concurrent users
- Provide sufficient computing power for the backend enterprise database system
- Provide bandwidth control and network balancing functions
- Provide protection from DDoS or similar attacked from internet
- Provide sufficient room for weekly incremental backup and monthly completed backup
- Include application software for database backup proposed

4.1.3 Data Center.

In order to provide a 7 days x 24 hours data access, the system is recommended to be implemented/installed in data center. The data center should:-

- Allow 7 x 24 hours access for authorized personnel
- Provide unlimited GbE connection locally based on at least 2 class C public IPs
- Provide at least 2Mbps overseas connection
- Provide sufficient protection on fire and out of electricity hazard
- Provide sufficient security for hardware protection
- Provide free reboot and online help desk

Project Specifications

4.1.4 Backend database software system is required for the data layers, membership system, authorization and authentication system. Microsoft SQL server Spatial (Enterprise version) is suggested.

The database should include at least the following information:-

- Profiles of HKIA registered members
- Profiles of HKIA registered company
- 3D building spatial objects designed by HKIA members / company
- Video and photos of a building designed by HKIA members / company
- 3D building spatial objects designed by HK architect students/ graduates / under-graduates
- Profile of student members
- Member payment status
- Authentication and Authorization rights of members
- Building information from building department, such as GFA

4.2 Data Structure

Application layers are based on the system database software. Data are stored in database tables and related to become database views. These database views are presented as layers and plotted on the platform.

The system should have at least 5 data layers to show different information, tentative named as architect layer, student layer, public layer, exhibition layer and event layer. Each layer should be independent and searchable with the application interface.

The ArchiNET should provide tools to create, manage and display these data layer on the platform.

4.2.1 Architect layer(s) is used to present the work done by local architects. This layer models reality and used building object as unique reference object to link with architects' profile. This layer should:-

- Use buildings object as unique reference object.
- Include a geo-referenced building objects to allow the plotting of this buildings onto the web-map platform (Point, 3D symbol or a polygon)
- Include a downloadable 3D model of the building of different formats, if available, e.g. 3DDWF, 3DPDF, GML
- Include video and photos of the building objects, if available
- Include the profile of the architects
- include the profile of the architect company

4.2.2 Student layer(s) is used to present the work done by local students. This is an imaginary layer of HK talents and will be using student ID as unique reference object to link with his/her profile. This layer should:-

- Use student ID as unique reference object.
- Include the profiles of the students
- Include building objects designed by the talents
- Include a geo-referenced building objects to allow the plotting of this buildings onto the web-map platform (Point, 3D symbol or a polygon)

4.2.3 Public layer(s) is used to promote HK as a creative place of architecture design.

Project Specifications

This is a mixture of student and architect layers, with sensitive personal information removed from the layer. Buildings should be the unique reference object for searching and retrieving further data. This layer should:-

- Used building as unique reference object
- Include limited information of the architects and their company
- Include limited information of the students and their university
- Include video and photos of the building objects, if available
- Include a geo-referenced building objects to allow the plotting of this buildings onto the web-map platform (Point, 3D symbol or a polygon)
- Include public building information available from Building department

4.2.4 Exhibition layer(s) is a used for exhibition of conceptual design of government projects, revitalization projects, suitability design or winners of public competition. This layer is similar to the architect layer but with different contents.

- Used building as unique reference object
- Include limited information of the modeler/winner and their profile
- Include video and photos of the building objects, if available
- Include a geo-referenced building objects to allow the plotting of this buildings onto the web-map platform
- include a downloadable 3D model of the building of different formats, if available, e.g. 3DDWF, 3DPDF, GML

4.2.5 Event layer(s) is a “create on-demand” layers used for particular event, such as competition. This layer is similar normally focus on a particular small region of “clean layer”, such as Kai Tak Airport. Event participates may upload designs into this layer, while the host could compare different designs against nearby environment through the portal.

4.3 Application interface and Membership System

The application interface should be on a web-based portal. With authentication and authorization modules, users are authorized as system administrator, paid member, subsidized member, public or event members. They are redirected to different interfaces for different data layer. Function accessible by different group of users as described as follow:-

4.3.1 System administrator

- has all function of the below groups
- protected by strong hold password
- create, access and manage all member information and access rights
- setup and manage users storage size and rights
- create, access and manage all building data and model
- create/edit/manage architect company data
- access/manage/approve the user registration
- backup/restore system data

4.3.2 Paid Member

- mainly serve for professional architects and members of the HKIA

Project Specifications

- has all function of the non-paid and public
- protected by password
- allow self-service reset password
- has a personal profile page, with options to enter limited and full profile (limited profile is displayed in the public layer, full profile is only searchable architect layer)
- options to select their company
- has functions to upload design model on his own to students or architect layers (must clarified IP issue and agree to the terms of usage)
- Before upload 3D models, options to “dis-allow” others to download their 3D model without approval
- has function to upload video and photos of the building he/she own
- Access and search within Architect, student and public layer
- Validation of uploaded data to specific version and format
- Generation of temp. password for their client to access his/her full profile, download the full 3D model

4.3.3 Subsidied member

- mainly serve for young architects/ graduates and undergraduates in HK
- has all functions of public
- protected by password
- allow self-service reset password
- has a personal profile page, with options to enter limited and full profile (limited profile is displayed in the public layer, full profile is only searchable architect layer)
- must include their university information in personal profile
- allow the model upload
- voting system of uploaded model (the model with highest votes will be display on portal)
- Access and search within student and public layer

4.3.4 Public member

- mainly for public
- password protected
- ability to search architect and students limited profile
- allow to surfing on the portal
- Access and search within to public layer only
- Select and AutoZoom to function

4.3.5 Event Member

- Create on request by professional bodies
- Access and search within to respective event layer only

5. System Requirements

The ArchiNET system shall include, but not limited to the following features:-

5.1 Web Browsing and Navigation

The system is accessible through a standard web browser, including Internet Explorer 7, Firefox 3.5, Safari 4, etc. It shall provide the following functions on these standard browser:-

- Pan and Zoom on the web map platform
- Zoom to Rectangle, previous and initial view
- Turn on/off of different data layer
- Zoom to a particular feature
- Carry out distance measurement
- Printing of the displayed map
- Provide searching and editing interfaces
- Automatic scaling of reference base maps, including all symbol and text
- Automatic generalization of reference base maps, including all symbol and text
- Allow the plotting of the 3D Building block onto the web map layer with orientation and location information stored in the content management system
- Include the searching/query function for searching building data in the data tables/data layers
- Selected building information should be displayed as tool tips or similar popups, by mouse over the building blocks on the web interface.

5.2 Membership, Authentication and Authorization

The system should be protected by password-based security system, with the following features:-

- Store all the user name, password, private information and public information (user profile) in a central database system
- store the payment history of each users
- Each users is assigned into one of the groups, known as Paid, Subsidies, public, event or administrator
- Provide authentication through a web based portal on standard web browser, including Internet Explorer 7, Firefox 3.5, Safari 4, etc. Upon authentication, different users shall be directed to differ data layers, based on the user group and profile
- Include history log for user login and usage history
- Include a web interface for each users, to manage his personal profile, or upload data
- Automatically suspends user after 5 continuous authentication failure
- Include web management portal for system administrator to retrieve user login history, payment record, reset password, and reactive users
- Include web management portal for system administrator to monitor user usage record, assign privilege, storage limit.

5.3 Data management system

All the data layer shall be stored in a central data management system, with the following features:-

- all data are stored in a central relational database, such as Microsoft SQL Spatial enterprise in the form of data tables
- able to store data files objects, such as video, photographs, 3D building block into database records
- able to manage spatial data, including point, line and polygon features objects
- the data tables should be properly design and generalized for generating data views for different data layers as described in the system requirements and authorization requirements
- the data tables must be retrievable through the web interface
- provide a data entry/editing interface for all data layer preparation
- interface with the web browser for data uploading, download and editing
- interface with the web browser for data searching
- support voting functions

5.4 Building model management

A set of functions is required to allow users to upload/edit the building model or its information from his/her local computer to the content management system and stored in the database. Authorized users may also search/download/view the model through the web browser interface. The functions should be:-

- incorporate with the user profile and membership system, only authorized users can upload building model through the web interface
- Validation and verification process should be included during model upload process. The validation and verification process refers to a group of specific formats and version of building models, such as 3DPDF, 3DDWF, GML, KMZ.
- a interface should be included for the owner to edit/add the attribute information during the data upload process
- the users must agree to share the model to public before the upload process.
- the 3D building model and its information are stored in the database of the content management system when upload completed.
- incorporate with the user profile and membership system, only model owner can edit building model information/attribute through the web interface
- incorporate with the user profile and membership system, paid member may generated a temporary password for the access of their full 3D model files.
- incorporate with the user profile and membership system, only authorized users can view the full 3D model .

5.5 Data backup

A web user interface shall included for the system administrator to backup and restore the user information, 3D building blocks, 3D building models, and the data inside the content management system. The backup and restore options should include:-

- Incremental
- full backup
- By specified schedule

5. Service Requirement

The Tenderer shall:

- a. Coordinate, organize and work in collaboration with the Steering Committee and the funding parties;
- b. Perform the activities and provide deliverables as shown in below table in a period of 9 months:-

| Stage | Activities | Output / Deliverable / Result |
|-------|--|--|
| 1 | <ul style="list-style-type: none"> ● Project Initiation ● User Requirement Collection (Data Standardization) | <ul style="list-style-type: none"> ● Inception Report ● User Requirement Specification |
| 2 | <ul style="list-style-type: none"> ● System Design and Analysis ● Procurement and Installation of Hardware and Software ● Interface with external systems | <ul style="list-style-type: none"> ● System Design Report ● Installed Hardware and Software |
| 3 | <ul style="list-style-type: none"> ● Program Development and System Testing | <ul style="list-style-type: none"> ● Custom Application ● Test Plan, System Integration Test, UAT Plan |
| 4 | <ul style="list-style-type: none"> ● User Acceptance Test ● Documentation ● Training | <ul style="list-style-type: none"> ● Technical Manual ● User Manual |

- c. The Tenderer is required to build 2000 units (approximate) of the building data in the ArchiNET System within the first year. These data includes:-
 - 1,630 works from the 163 Registered Practice
 - 190 HKIA Annual Awards winning projects from 1965 to 2008
 - 100 heritage buildings (Development Bureau and Antiques and Monument Office)
 - 80 winning projects of students from the Virtual Concept Competitions
- d. Host the entire ArchiNET system hardware and software within appropriate premises for the whole development period until completion of warranty period;
- e. Provide user support, trouble shooting, problem fixing, maintenance and system upgrade for the ArchiNET System within the one year warranty period;
- f. Perform regular system and data backup;
- g. Perform system restore as request;
- h. Provide 12 months free warranty of the ArchiNET System.

Project Specifications

- i. Handover all the source codes, hardware, software and documentation of the ArchiNET System to iProA within a agreed reasonable period. Hardware will be relocated by the Contractor to a premises specified by iProA.
- j. Participate in Publicity Activities include, but not limited to:
 - i) Attend press conference and promote the ArchiNET in road-shows, exhibitions, seminars or other events as appropriate,
 - ii) Assist in the design, production and distribution of publicity materials.
- k. Perform Project Management, activities include, but not limited to:
 - i) Define and monitor project schedule and milestones;
 - ii) Manage the project and ensure that the project is implemented properly to fulfill and achieve the targets, actions/deliverables, budget and schedule set out in the action and payment schedule;
 - iii) Review and report the progress to iProA periodically;
 - iv) Attend Working Group (WG) meetings; and
 - v) Attend Steering Committee meeting on major issues or upon achieving major milestones, or as appropriate.
- l. Perform Administration Support includes, but not limited to:
 - i) Handle enquires related to the project;
 - ii) Conduct all necessary logistics work throughout the project period;
 - iii) Follow instructions of the Project Manager from iProA and carry out assigned tasks as deemed appropriate; and
 - iv) Attend regular meetings and taking minutes if necessary.