Hong Kong-Shenzhen Innovation and Technology Park Limited

Tender Document
Enterprise Network Infrastructure

Tender Reference:
FD-03-06-02(287)

Tender Closing Date:
27 August 2026
12:00 p.m. (HKSAR)

Hong Kong-Shenzhen Innovation and Technology Park Limited 港深創新及科技園有限公司
Unit 710, 7/F, 8 Science Park West Avenue, Hong Kong Science Park 香港科學園科技大道西8號7樓710室 | TEL 電話 +852 3189 1599

IMPORTANT NOTICE

This tender document is issued by Hong Kong-Shenzhen Innovation and Technology Park Limited ("**HSITPL**") and contains confidential information regarding the potential purchase by HSITPL as detailed in this tender document. The purpose of this tender document is to identify potential Tenderers. All information supplied by HSITPL in connection with this tender document shall be treated as confidential and strictly for the use by the recipients in response to this tender document only.

In consideration of receiving this tender document, the recipients agree and acknowledge that the tender document and any other information that may be provided to the recipients by or on behalf of HSITPL will be maintained in strict confidence and will not be disclosed to any third party. In particular, your attention is drawn to the fact that your receipt of this tender document and any discussions relating to its contents must be kept confidential at all times.

Please note that this is not an offer and it is only an invitation to interested parties to submit tenders to HSITPL for consideration.

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PART I: Terms of Tender

1. General

a) Recipients (each a "**Tenderer**") are invited to submit tenders for the design, procurement, delivery, installation, configuration, security hardening, testing, and commissioning of the enterprise network infrastructure for Hong Kong-Shenzhen Innovation and Technology Park ("**HSITP**", or the "**Park**") (the "**Services**") in accordance with the requirements of this Invitation to Tender ("**Tender Documents**"), in particular, Submission Requirements as set out in Part III of this Invitation to Tender.

b) All information provided by HSITPL or any other representatives or agents of HSITPL for the purpose of inviting a tender in response to the Tender Documents (the "**Tender**") shall be treated as private and strictly confidential and must not be disclosed or transferred to any other party without the prior written permission of HSITPL. The information provided in the Tender Documents is strictly for the use by the Tenderers in response to this Invitation to Tender only. Confidentiality must be maintained by all Tenderers even after the appointment of the successful Tenderer.

c) All costs and expenses incurred by the Tenderer in preparing a Tender shall be entirely borne by the Tenderer.

d) HSITPL reserves the right at its sole and absolute discretion to modify, amend, revise or cancel this Invitation to Tender without any liability for any cost, expenses and/or losses whatsoever which may be incurred by the Tenderers.

e) Tenders may not be considered if false or incorrect information is provided by the Tenderer.

f) This Invitation to Tender is merely an invitation and shall not in any way be construed as an offer by HSITPL nor constitute a contractual relationship between HSITPL and the Tenderers.

2. Accuracy and Validity of Offered Prices

a) Tenderers shall ensure that all information (including quoted prices) in the Tenders is accurate. Under no circumstances will HSITPL accept any request to amend or revise or modify any information (including price) in the Tender.

b) Tenderers are requested to submit its cost proposal in Hong Kong Dollars. All Tenders shall be valid for a period of **three (3)** months from the Tender Closing Date (the "**Tender Validity Period**"). The Tenderer agrees that, should HSITPL so request in writing, the Tenderer shall abide by this Invitation to Tender for a further **three (3)** months, and the Tender may be accepted by HSITPL at any time before the expiration of this extended period. If an award cannot be made within the Tender Validity Period (or extended Tender Validity Period), a request may be made to some or all of the Tenderers to further extend the Tender Validity Period, at which time they may elect to extend or withdraw their Tender or may agree a further extended Tender Validity Period with HSITPL in writing.

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c) Each and every Tender shall constitute an unconditional and irrevocable offer from the Tenderer capable of being accepted by HSITPL on the terms and conditions contained in the Tender Documents.

3. Tender Enquiries, Requests for Clarifications and Addenda

a) All enquiries or requests for clarifications relating to the Tender Documents should be submitted in writing at least one week (i.e., seven (7) calendar days) before the Tender Closing Date to:

Chris Lam – Manager, IT Infrastructure
Email: chris.lam@hsitp.org
Telephone No.: (852) 3189 5485

The Tenderer shall state in the email subject heading "Tender Enquiry – **Enterprise Network Infrastructure (Ref. No. FD-03-06-02(287))**" and provide full contact details in the email message. HSITPL reserves the right not to respond to any enquiry or request for clarification submitted after the deadline specified above.

b) Should HSITPL wish to clarify the Tender Documents in response to any enquiries or requests for clarifications, such clarifications will be made in writing and sent to all Tenderers by email. Such emails containing Tenderer's enquiries or requests for clarifications and HSITPL's answers will be bound in with, and shall become part of, the documents forming the contract for the appointment of the selected Tenderer (the "**Contract**"). Save as aforesaid and unless otherwise expressly stated by HSITPL, any other statement, whether oral or in writing, made and any action taken by HSITPL or its consultants or any of their officers in response to any query made by a Tenderer is for guidance and reference purposes only and will not be deemed to form part of the Tender or Contract or in any way alter, negate, waive or otherwise vary any of the terms and conditions contained in the Tender Documents.

c) Prior to the Tender Closing Date (which may be extended in accordance with the terms of the Tender Documents), addenda (each, an "**Addendum**") may be issued to clarify or modify the Tender Documents. A copy of each Addendum will be issued to every Tenderer via email and shall become a part of the Tender Documents.

4. Submission of Tender

a) The deadline for submitting a Tender ("**Tender Closing Deadline**") is **12:00 p.m. on 27 August 2026** (the "**Tender Closing Date**").

b) Tenderers shall follow a two-envelope system, as set out below, in submitting their Tenders:

(i) Technical Proposal

The front cover of the Technical Proposal envelope shall be clearly marked with the subject of the Tender and the tender reference:

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"Technical Proposal: Enterprise Network Infrastructure (Ref. No. FD-03-06-02(287))"

and the Tenderer's company name

(ii) Price Proposal

The front cover of the Price Proposal envelope shall be clearly marked with the subject of the Tender and the tender reference:

"Price Proposal: Enterprise Network Infrastructure (Ref. No. FD-03-06-02(287))"

and the Tenderer's company name

c) Tenderers shall ensure that their Technical Proposal and Price Proposal are prepared in accordance with the Submission Requirements provided in the Tender Documents.

d) Tenderers shall submit their Technical Proposal and Price Proposal separately in 2 sealed envelopes from 9:00 a.m. to 12:00 p.m. on the Tender Closing Date in the tender box located at:

Hong Kong-Shenzhen Innovation and Technology Park Limited
Unit 606-607, 6/F, Lakeside 1, 8 Science Park West Avenue, Hong Kong Science Park, Hong Kong

Attention: Procurement Department (Tender Box)

e) HSITPL reserves the right to disqualify any Tenderer if price information is disclosed in the Technical Proposal.

f) If the Tender contains any qualification and/or alternative proposal, HSITPL reserves the right to disqualify such Tender. Further, such qualifications and/or alternative proposals are generally not accepted.

g) Any late submissions or Tenders not submitted in accordance with the provisions in Clauses 4b) to f) above will not be accepted.

h) In the event that typhoon signal no. 8 or above or a black rainstorm warning is hoisted or announcement on extreme conditions is issued in Hong Kong between 9:00 a.m. and 12:00 p.m. (Hong Kong Time) on the Tender Closing Date, the Tender Closing Deadline will be extended to 12:00 noon (Hong Kong Time) on the next Business Day.

i) Tenderers may be required to make a formal presentation at their own cost of their Tenders on or about 28 August 2026 (tentative date). HSITPL shall advise the exact time, date and issue formal invitation to the Tenderers.

j) Each Tenderer can only submit one Tender. In the event that more than one Tender is submitted by the same Tenderer, all Tenders submitted by such Tenderer will not be considered.

k) All submitted documents and materials will not be returned to the Tenderers regardless of the results of the Tenders and all the said materials will become the property of HSITPL.

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5. Assessment Criteria

a) All Tenderers shall be evaluated according to the following criteria:

- 70 % Technical Capability (maximum technical score: 70)
- 30 % Pricing (maximum price score: 30)

b) As a prerequisite, all terms as set out in the Submission Requirements in the Tender Documents must be fulfilled before the Tender will be evaluated. Tenders which fail to comply with any of such terms will not be considered any further.

c) Tenders which comply with all the terms as set out in the Submission Requirements will be evaluated based on the following non-exhaustive criteria (which are not ranked in any order of importance). The Tenderer must demonstrate technical merits of the submitted Tender. Assessments will be based on all materials of the submitted Tender and any presentation or demonstration given by the Tenderer.

A. Corporate experience, track record and project delivery capacity;

B. Resource qualifications and professional accreditations;

C. Network architecture, secure access service edge ("**SASE**") zero trust and security segregation;

D. Hardware redundancy and capacity optimization;

E. Log analytics, defect liability period ("**DLP**") warranties and service-level agreement ("**SLA**") commitments; and

F. Price offer

d) Technical Score shall be assessed by the tender assessment panel members based on the criteria below:

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Technical Capability Assessment		Technical Score (Points)
A. Corporate experience, track record and project delivery capacity	**Evaluation of the company's enterprise-grade network delivery capability within the past 5 years:** • Track record in deploying high-density enterprise routing, dual-tier firewalls, and campus-wide high-speed switching across grade-A offices. • Valid active gold-level or tier-1 integration credentials from proposed core network switching and firewall manufacturers. • Demonstrated engineering capability to deploy and support carrier-grade network platforms.	20%

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Technical Capability Assessment		Technical Score (Points)
B. Resource qualifications and professional accreditations	**Evaluation of the proposed execution team's technical competencies and certified profiles:** • Design leadership: direct curriculum vitae ("**CV**") verification and active certification proof of a Cisco Certified Network Professional ("**CCNP**") or Huawei certified information and communications technology (i.e., ICT) expert (i.e., HCIE) or Fortinet Certified Professional (FCP) leading the structural architecture, internet protocol ("**IP**") schema, routing policies, virtual local area network ("**VLAN**") configurations, and security zone designs. • Dedicated on-site project manager ("**PM**"): review of the proposed PM's CV, certified technical / project management credentials (e.g., Project Management Professional ("**PMP**"), Projects IN Controlled Environments ("**PRINCE2**"), and a mandatory written commitment ensuring 100% full-time, exclusive on-site presence at Building 1, HSITP (no multi-project sharing). • Technical team training certifications for the specific firewall, network access control ("**NAC**"), and switching platforms proposed.	20%

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Technical Capability Assessment		Technical Score (Points)
C. Network architecture, SASE zero trust and security segregation	**Evaluation of the comprehensive physical and logical design blueprint:** • Dual-tier multi-vendor firewall design: implementation of distinct first tier (perimeter) and second tier (core) firewalls from separate vendors to mitigate single-exploit zero-day vulnerabilities. Active / passive failover and throughput capacity metrics. • Cloud SASE-based zero trust virtual private network ("**VPN**"): implementation of a cloud-native security service edge ("**SSE**") and zero trust network access ("**ZTNA**") platform supporting continuous client device posture verification, dynamic authentication, and secure remote access for 200 full-time staff members without local hardware concentrator bottlenecks. • Closed-circuit television ("**CCTV**") and audiovisual ("**AV**") untrusted isolation: rigid design segregating all physical security / CCTV and AV endpoints onto dedicated untrusted segments, forcing all outbound flows through core layer 3 ("**L3**") switches and dual-tier firewalls to block lateral movement.	25%

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Technical Capability Assessment		Technical Score (Points)
D. Hardware redundancy and capacity optimization	**Evaluation of hardware architecture resiliency and node matching:** • Dual power supply guarantee: explicit technical mapping showing that *all* proposed switches (core and access) and firewalls are configured with redundant, hot-swappable dual power supplies connected to independent electrical source feeds. • 600-node scalable switching architecture: comprehensive switching grid configured to support 600 physical endpoints (to accommodate workstations, Wi-Fi access points ("**APs**"), CCTV / access control system ("**ACS**"), internet of things ("**IoT**") / energy management system ("**EMS**"), AV nodes) with seamless power over ethernet ("**PoE**") / PoE plus ("**PoE+**") distribution. • Brand-agnostic Wi-Fi 7 ecosystem: advanced 802.11be tri-band wireless deployment supporting multi-link operation ("**MLO**"), guest captive portals with electronic mail ("**email**") authentication, and localized or cloud-based orchestration.	20%

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Technical Capability Assessment		Technical Score (Points)
E. Log analytics, DLP warranties and SLA commitments	**Evaluation of logs preservation, audit mechanisms, and post-acceptance warranties:** • Log preservation: sizing of the centralized log analyzer to maintain *over 180 calendar days* of active hot storage logs. Integration of generative artificial intelligence ("**AI**") assistant features for security orchestration. • Official acceptance-linked DLP and licenses: signed commitment ensuring the 1-year DLP, hardware warranties, and software subscriptions / licenses for all network elements commence strictly from the date of official written sign-off acceptance, not delivery. • Support SLA commitment: guarantee of 24x7x365 support with 4-hour on-site hardware replacement.	15%
	Total Technical Score (A+B+C+D)	=100 (passing score: 60)

Remark: An overall passing score of 60 out of 100 of the Total Technical Score in the table above shall be attained. Otherwise, the Tender will be considered failed in the Technical Capability Assessment and will not be considered further.

e) Evaluation

An assessment panel ("**Tender Assessment Panel**") shall be formed by HSITPL to evaluate all Tenders received by HSITPL. The Tenders must meet all Mandatory Assessment Criteria (as defined in Part 1 of Tender Schedule 6) and attain a score equal or higher than the passing score in the Technical Capability Assessment abovementioned. Failure to declare and submit supporting documents confirming compliance with any of the Mandatory Assessment Criteria may result in **disqualification of the Tender**. HSITPL shall evaluate the Tenders in strict confidence.

f) Score Calculation Methodology

HSITPL shall adopt the following formula in calculating the overall score for each Tender:

(i) Technical Score

Tenderer's technical score = (Tenderer's point score / Highest point score among all Tenderers) x (Maximum technical score)

(ii) Price Score

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Tenderer's price score = (Lowest tender price among all Tenderers / Tenderer's tender price) x (Maximum price score)

Tender price refers to the Total Contract Amount as set out in Tender Schedule 4.

(iii) Overall Score = Technical Score + Price Score

6. Acceptance / Rejection of Tender

a) HSITPL is not bound to accept the Tender which is of the lowest price and/or has the highest overall score and reserves the right in its absolute discretion to decline any offer or cancel this Invitation to Tender at any time without any obligation to explain its decision.

b) HSITPL may, at its sole discretion, accept all or any terms proposed by the Tenderer in the Tender.

c) HSITPL shall not be responsible for or liable to any Tenderer for any cost and/or expense and/or disbursements incurred by the Tenderers in preparing the Tender and/or any presentation or demonstration given by the Tenderer.

7. Negotiation

HSITPL reserves the right to negotiate the terms proposed in the Tender with any Tenderer.

8. Acceptance Notification

a) The successful Tenderer shall receive a purchase order ("**PO**") generated from the system of HSITPL within the Tender Validity Period.

b) Tenderer(s) who do not receive any notification within the Tender Validity Period shall assume that their Tenders have not been accepted.

9. Cancellation of Invitation to Tender

Where there are changes in requirements after the Tender Closing Date for operational or whatever reasons, HSITPL is not bound to accept any conforming Tender and reserves the right to cancel this Invitation to Tender and/or re-issue a new invitation to tender on such other terms and conditions as HSITPL deems fit.

10. Intellectual Property Rights

By submitting the Tender, the Tenderer represents and warrants to HSITPL that none of the information or ideas in the Tender infringes the copyright, trade secrets, or intellectual property rights of any third party, and the Tenderer is deemed to have agreed to indemnify HSITPL against all costs, claims, demands, expenses and liabilities that may be incurred by HSITPL as a result of or in connection with any claim that any information or ideas provided or submitted by the Tenderer infringes the copyright, trade secrets or intellectual property rights

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of any third party.

11. Offering Gratuities

a) A Tenderer shall not, and shall procure that its directors, employees, agents involved in preparing the Tender shall not offer any financial or other advantage or benefit to any director or employee of HSITPL, or engage in any activity, practice or conduct which would be in violation of any applicable anti-bribery laws or regulations in connection with the Tender Documents and any matter contemplated herein.

b) Tenderers are warned that offering or giving any gratuity, bonus, discount, bribe, loan or any other gift or consideration as an inducement or reward to any employee or agent of HSITPL in relation to this Invitation to Tender may constitute an offence contrary to the Prevention of Bribery Ordinance (Cap. 201), and that if any Tenderer is found to have made such an offer, HSITPL shall be at liberty to cancel his Tender or terminate the Contract and shall hold such Tenderer liable for any losses or damages which HSITPL may suffer.

12. Non-collusion

a) Tenderers must ensure that the Tender is developed genuinely, independently and made with the intention to accept the Contract if awarded, and is prepared without any agreement, arrangement, communication, understanding, promise or undertaking with any other person (except as provided in paragraph 3 of the Non-collusive Tendering Certificate (as defined in Clause 12 d) below), including regarding price, Tender submission procedure or any terms of the Tender. In the event of any breach of this clause by any Tenderer, HSITPL reserves the right to invalidate the Tender submitted by the Tenderer and/or terminate the Contract entered with the Tenderer based on the Tender submitted by that Tenderer and seek damages.

b) All anti-competitive practices are strictly prohibited and the Tenderer's attention is drawn to its obligations under the Competition Ordinance (Cap. 619) (the "**Competition Ordinance**").

c) Bid-rigging is inherently anti-competitive and is considered serious anti-competitive conduct under the Competition Ordinance. Tenderers who engage in bid-rigging conduct may be liable for the imposition of pecuniary penalties and other sanctions under the Competition Ordinance.

d) Upon Tender submission, the Tenderer shall submit to HSITPL a non-collusive tendering certificate (in the form set out at Tender Schedule 2) (the "**Non-collusive Tendering Certificate**") duly signed by an authorised person on the Tenderer's behalf. The Contract is to be entered into in reliance on the statements made by the Tenderer in the Non-collusive Tendering Certificate and conditional upon the effectiveness and veracity of the Non-collusive Tendering Certificate. Any breach of any of the representations, warranties and/or undertakings given in the Non-collusive Tendering Certificate not only allows HSITPL to pursue damages and other forms of redress from the Tenderer but also is capable of amounting to a criminal offence and rendering the relevant personnel of the Tenderer liable

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to criminal prosecution (for instance, for the offence of conspiracy to defraud and upon conviction shall be liable to imprisonment for 14 years).

e) Notwithstanding any provisions regarding disclosure of documents and information, HSITPL may, at its discretion, report and provide documents and information regarding any suspected anti-competitive collusive conduct to the Competition Commission and/or other relevant authorities.

13. <u>Insurance</u>

a) The successful Tenderer shall, for the full term of the Contract, have in place the following insurance policies at its own cost with reputable insurer(s), on terms which are satisfactory to HSITPL, **in the joint names of HSITPL** as the insured party, and fully comply with the laws of the Hong Kong Special Administrative Region ("**HKSAR**"):

(i) Contactors' all risks insurance for the sum of at least HK$30,000,000 for any one accident and unlimited in the amount for the period of insurance;

(ii) Employees' compensation insurance in the sum of not less than HK$200,000,000 of any one event.

b) The insurance for the works shall cover the period from the commencement date of the Contract ("**Commencement Date**") until and extended to cover the date of expiry of the DLP and until such time as no further works as being carried out.

c) HSITPL may from time to time require the successful Tenderer to maintain any insurance policies against other insurable risks, which reasonable costs and expenses would be reimbursed by HSITPL provided that such costs and expenses are approved by HSITPL in writing.

d) In addition to maintaining the required insurance policies, the successful Tenderer shall hold HSITPL harmless from any loss, damage, cost, expense, liability etc. and (without prejudice to the obligations to indemnify HSITPL as stipulated in Clause 9 of the PO T&C as defined in Part II below) fully indemnify HSITPL and HSITPL's representatives for any loss, damage, cost, expense, liability etc. that may result directly or indirectly from the negligence of the successful Tenderer, its employees, agents, servants or any tiers of sub-contractors in the carrying out of its obligations under the Contract.

e) The successful Tenderer is liable for all policy excesses / deductibles under the insurance policies maintained pursuant to this clause.

f) The successful Tenderer should produce satisfactory evidence to HSITPL prior to the Commencement Date showing that the insurances referred to in this clause have been affected and are in force, including but not limited to, producing a certificate of insurance. If the successful Tenderer fails upon reasonable request to produce satisfactory evidence to HSITPL or HSITPL's representatives, HSITPL may affect and keep in force such insurance policies and pay such premium or premiums as may be necessary for that purpose, and from time to time deduct the amount so paid from any monies due or to become due to the successful Tenderer or recover such amount from the successful Tenderer. If the successful Tenderer fails to produce any such satisfactory evidence as requested by HSITPL

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or HSITPL's representatives, HSITPL reserves the right to terminate the Contract.

14. Payment Schedule

Subject to the work done to the satisfaction of HSITPL, payments due under the Contract will be made as per the following payment schedule (**"Payment Schedule"**). Please note the Payment Schedule is for reference only and does not amount to any representation and warranties. Tenderers shall not rely on any information set out in the Payment Schedule.

Any Deliverables by the successful Tenderer shall be reviewed and approved by HSITPL to ensure they meet HSITPL's satisfaction level, which is at the sole and final discretion of HSITPL.

Service Item	**Tentative Task Completion Date**	**Payment**
Milestone 1: network hardware and initial material delivery to site Supply, delivery to site, and verification of all network appliances, including core / access switches, perimeter / core firewalls, wireless Wi-Fi 7 APs, NAC controllers, and log analyzers.	15 October 2026	One-off payment of items 1 to 9 of Tender Schedule 4 of the Tender Documents to be made within 30 calendar days of the submission of an invoice.
Milestone 2: core design, rack mounting and infrastructure setup • Final sign-off of the detailed logical and physical network design architecture led and signed by CCNP and HSITPL Information Technology ("**IT**") Infrastructure Team. • Physical rack-mounting of switches and firewalls in server racks, with dual redundant power supplies connected to independent utility electrical paths. • Initial layer 2 ("**L2**") / L3 routing configuration, IP schema setup, and backbone link aggregation setup.	10 November 2026	One-off payment of item 10 of Tender Schedule 4 of the Tender Documents to be made within 30 calendar days of the submission of an invoice.

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Milestone 3: user acceptance testing ("UAT"), official sign-off and DLP commencement • Successful completion of full end-to-end UAT witnessed by the HSITPL IT Infrastructure Team. • Handover of all as-built network topology diagrams, configuration backups, log reports, and the operation and maintenance ("**O&M**") manual. • Official written sign-off acceptance triggering the commencement of the 1-year DLP, hardware warranties, and active software licenses / subscriptions. • Delivery of certified training sessions for HSITPL's internal teams.	30 November 2026	One-off payment of item 11 of Schedule 4 of the Tender Documents to be made within 30 calendar days of the submission of an invoice.
Optional Items 1. Supply, installation, termination, and testing of extra access switch 2. Supply, installation, termination, and testing of extra Wi-Fi access points	As required by HSITPL	One-off payment of the amount specified for the relevant Optional Item in Tender Schedule 4 of the Tender Documents, if ordered by HSITPL and completed by the successful Tenderer, to be made within 30 calendar days of the submission of an invoice upon completion of the ad-hoc task.

Note:
1. HSITPL shall have the sole and absolute discretion to determine the Commencement Date of the Services.
2. The successful Tenderer shall submit invoice(s) only after completion and acceptance of the service items to the satisfaction of HSITPL.

PART II: Purchase Order Terms and Conditions

HSITPL shall issue a PO to the successful Tenderer on the terms as set out in the General Terms and Conditions for Purchase Orders ("**PO T&C**") which is available on HSITPL's website or provided separately by HSITPL in PDF file format. Tenderers must read the PO T&C carefully before submitting the Tender.

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In the event that the Tenderer wishes to propose any revisions to the terms of the PO T&C, the Tenderer should set out such proposed revisions in the Technical Proposal of the Tender but HSITPL is not bound to accept any of such proposed revisions. For the avoidance of doubt, such proposed revisions shall not form part of the PO. In any event, HSITPL will not accept any proposed revisions to the PO T&C that are not submitted together with the Technical Proposal and/or come to HSITPL's attention after the Tender Closing Date.

HSITPL reserves the right to disqualify any Tenderer that submits any proposed revisions to the PO T&C in the Price Proposal or proposes revision to the PO T&C after the Tender Closing Date.

PART III: Submission Requirements

The Tenderer is required to return a complete set of the following documents to HSITPL before the Tender Closing Date in ***separate envelopes***.

Price Proposal		Tender Schedule No.
1.	Price Schedule	4

Technical Proposal		Tender Schedule No.
1.	Tender Submission Information	1
2.	Non-collusive Tendering Certificate	2
3.	Form of Tender	3
4.	Requirement Specifications	5
5.	Proposed Solution for Tender	6

Number of documents required:

a) 1 set of the "Technical Proposal" in hard copy;

b) A universal serial bus ("**USB**") drive with an electronic copy of the "Technical Proposal" without any price information in PDF format; and

c) 1 set of the "Price Proposal", i.e. the Price Schedule (Tender Schedule 4), in hard copies.

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Tender Schedule 1: Tender Submission Information

To: Hong Kong-Shenzhen Innovation and Technology Park Limited ("HSITPL")

Dear Sir / Madam,

"Enterprise Network Infrastructure (Ref. No. FD-03-06-02(287))"

We provide the contact information below for this tender:

Representative:	
Job Title:	
Contact Phone Number:	(Office)
	(Mobile)
Contact Email:	

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Tender Schedule 2: Non-collusive Tendering Certificate

To: Hong Kong-Shenzhen Innovation and Technology Park Limited ("HSITPL")

Dear Sir / Madam,

Non-collusive Tendering Certificate for **"Enterprise Network Infrastructure (Ref. No. FD-03-06-02(287))"** (the "**Contract**")

1. We, _____ of
(name(s) of the Tenderer(s))

_____

(address(es) of the Tenderer(s))

refer to the tender for the Contract (the "**Tender**") and our bid in relation to the Tender.

Non-collusion

2. We represent and warrant that in relation to the Tender:

a) Our bid was developed genuinely, independently and made with the intention to accept the Contract if awarded;

b) Our bid was not prepared with any agreement, arrangement, communication, understanding, promise or undertaking with any person (including any other tenderer or competitor) regarding:

(i) prices;

(ii) methods, factors or formulas used to calculate prices;

(iii) an intention or decision to submit, or not submit, a bid;

(iv) an intention or decision to withdraw a bid;

(v) the submission of a bid that does not conform with the requirements of the Tender;

(vi) the quality, quantity, specifications or delivery particulars of the products or services to which the Tender relates; and

(vii) the terms of the bid,

and we undertake that we will not, prior to the award of the Contract, enter into or engage in any of the foregoing.

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3. Paragraph 2(b) of this certificate shall not apply to agreements, arrangements, communications, understandings, promises or undertakings with:

   a) HSITPL;

   b) a joint venture partner, where joint venture arrangements relevant to the bid exist and which are notified to HSITPL;

   c) consultants or sub-contractors, provided that the communications are held in strict confidence and limited to the information required to facilitate that particular consultancy arrangement or sub-contract;

   d) professional advisers, provided that the communications are held in strict confidence and limited to the information required for the advisers to render their professional advice in relation to the Tender;

   e) insurers or brokers for the purpose of obtaining an insurance quote, provided that the communications are held in strict confidence and limited to the information required to facilitate that particular insurance arrangement; and

   f) banks for the purpose of obtaining financing for the Contract, provided that the communications are held in strict confidence and limited to the information required to facilitate that financing.

Disclosure of sub-contracting and beneficial ownership

4. We represent and warrant that there is no intended sub-contracting arrangement relating to the Tender, including those which are to be entered into after the Contract is awarded.

   OR*

   We represent and warrant that the following sub-contracting arrangements are all the intended sub-contracting arrangements relating to the Tender, including those which are to be entered into after the Contract is awarded:

   [Please set out the details of such sub-contracting arrangements here. Please use supplemental sheets where appropriate.]

   We understand that we are required to continue to disclose any of such sub-contracting arrangements to HSITPL as and when they arise.

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5. We represent and warrant that the following is our beneficial ownership:

   (For a company other than a listed company or exempted company[1])
   [Please disclose the significant controllers register here, as defined in the Companies Ordinance, Cap. 622. Please use supplemental sheets where appropriate.]

   OR*

   (For a sole proprietorship or partnership)
   [Please disclose details of beneficial owner(s) here, including their name and the nature of their control over the firm. Please use supplemental sheets where appropriate.]

   OR*

   (For listed company)
   We are a listed company in Hong Kong and our corporate ownership has already been disclosed in the public domain.

6. We understand that HSITPL may request us to disclose further details regarding our shareholders or parent companies, or any other related, associated or controlling entities, to HSITPL. We agree to disclose such details to HSITPL if so requested, subject to such requests being reasonable in the circumstances.

Consequences of breach or non-compliance

7. We understand that in the event of any breach or non-compliance with any representations, warranties and/ or undertakings in this certificate, HSITPL may, at its discretion, invalidate our bid, exclude us in future tenders, pursue damages or other forms of redress from us (including but not limited to damages for delay, costs and expenses of re-tendering and other costs incurred), and/or (in the event that we are awarded the Contract) terminate the Contract.

8. Under the Competition Ordinance, bid-rigging is serious anti-competitive conduct. Further, any breach of any of the representations, warranties and/or undertakings given in this certificate is capable of amounting to a criminal offence and rendering our relevant personnel liable to criminal prosecution (for instance, for the offence of conspiracy to defraud and upon conviction shall be liable to imprisonment for 14 years). We understand that, notwithstanding any provisions regarding disclosure of documents and information, HSITPL may, at its discretion, report all suspected instances of anti-competitive conduct to the Competition Commission (the "**Commission**") and/or other relevant authorities and provide the Commission and/or other relevant authorities with any relevant information, including but not limited to information on our bid and our personal or corporate information.

[1] An exempted company is one which is not required to keep a register of its significant controllers (see further sections 653A (definition of "applicable company") and 653H of the Companies Ordinance).

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For and on behalf of: _____
(Company Name)

Signature with Company Chop: _____
(Authorized Signature)

Name & Position: _____

Date: _____

Additional signature blocks will need to be used where the Tenderer is comprised of multiple parties.

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Tender Schedule 3: Form of Tender

To: Hong Kong-Shenzhen Innovation and Technology Park Limited ("HSITPL")

Dear Sir / Madam,

"Enterprise Network Infrastructure (Ref. No. FD-03-06-02(287))"

1. We undertake that if our Tender is accepted, to commence the Services and complete and deliver the Services within the times stated in the Tender Documents.

2. We agree that this Tender shall be valid for a period of **three (3)** months from the Tender Closing Date specified in the Tender Documents. We agree that, should HSITPL so request in writing, we shall abide by this Invitation to Tender for a further **three (3)** months, and the Tender may be accepted by HSITPL at any time before the expiration of this extended period. If an award cannot be made within the Tender Validity Period (or extended Tender Validity Period), a request may be made to some or all of the Tenderers to further extend the Tender Validity Period, at which time they may elect to extend or withdraw their Tender or may agree a further extended Tender Validity Period with HSITPL in writing.

3. We confirm that this Tender has taken into consideration all tender addenda issued to us (if any) prior to the date hereof.

4. Unless and until a purchase order is issued by HSITPL to us, this Tender, together with your written acceptance thereof, shall constitute a binding agreement between us. The Tender should always form part of the binding agreement between HSITPL and us, while the order of precedence will be lower than the purchase order. We undertake to abide by the PO T&C enclosed with the Tender Documents in the event that our proposed revisions (if any) the PO T&C are not accepted by HSITPL.

5. We understand and agree that HSITPL is not bound to accept the lowest or any tender you may receive.

6. We understand and agree that HSITPL is not responsible for any cost or expense incurred for and in connection with preparing the Tender and/or any presentation or demonstration given by us.

7. We confirm that we are not subject to any actual or potential conflict of interest save to the extent already expressly disclosed by us to HSITPL and we undertake to notify HSITPL immediately should any conflict arise.

8. We certify that, to the best of our knowledge and belief, all information and documents provided in and submitted with the Technical Proposal are true, accurate, and complete. Further, we understand and agree that if any information or document provided in or submitted with the Technical Proposal is found to be untrue, inaccurate, incomplete or misleading, HSITPL may, without limiting HSITPL's rights and remedies therein or at law, invalidate, reject and/or disqualify our Tender.

For and on behalf of: _____

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(Company Name)

Signature with Company Chop: _____
(Authorized Signature)

Name & Position: _____

Date: _____

Additional signature blocks will need to be used where the Tenderer is comprised of multiple parties.

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Tender Schedule 4: Price Schedule

To: Hong Kong-Shenzhen Innovation and Technology Park Limited ("HSITPL")

Dear Sir / Madam,

"Enterprise Network Infrastructure (Ref. No. FD-03-06-02(287))"

1. The quotation shall be valid for **three (3)** months from the Tender Closing Date specified in the Tender Documents. We agree that, should HSITPL so request in writing, we shall abide by this Invitation to Tender for a further **three (3)** months, and the Tender may be accepted by HSITPL at any time before the expiration of this extended period.
2. The price indicated in the tables below covers all the items specified in the Requirement Specifications of the Tender Documents.
3. HSITPL reserves the right to modify, amend or revise any Requirement Specifications and/or terms and conditions stated in the Tender Documents.
4. The Total Contract Amount is inclusive of all costs or charges which we will incur in the provision of the goods or services, including but not limited to provisioning, licensing, and maintenance of the required infrastructure from the Commencement Date until the expiry of the DLP.
5. We acknowledge that only the Total Contract Amount in this Tender Schedule 4 will be assessed for the purpose of price score calculation for this Tender, whereas HSITPL will not consider any pricing information in "Optional Items" in this Tender Schedule 4 for the purpose of assessing the Tender.
6. Unless otherwise terminated, the Contract for our provision of the Services to HSITPL shall remain in force from the Commencement Date until the expiry of the DLP ("**Service Period**").
7. We acknowledge that the price information provided in this Tender Schedule 4 shall remain fixed and binding throughout the Service Period.
8. We acknowledge that (i) HSITPL will not accept any proposed revisions to the PO T&C that are not submitted together with the Technical Proposal and/or come to HSITPL's attention after the Tender Closing Date and (ii) HSITPL is not bound to accept any of such proposed revisions.
9. We acknowledge that HSITPL reserves the right to disqualify any Tenderer that submits any proposed revisions to the PO T&C in the Price Proposal or proposes revision to the PO T&C after the Tender Closing Date.

Items		**Price (HK$)**			
Item	**Description**	**Unit**	**Quantity**	**Unit Price**	**Amount**
1	L3 core switching infrastructure	Set	2		
2	High-density L2 48ports PoE access switch	Set	10		

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3	Perimeter and core firewalls (multi-vendor high availability ("**HA**") strategy): • First tier perimeter firewall appliance with dual power (set of 2) • Dual vendor brands configured in active / passive HA, including comprehensive threat protection subscriptions.	Set	1		
4	Perimeter and core firewalls (multi-vendor high availability ("**HA**") strategy): • Second tier core firewall appliance with dual power (set of 2) Dual vendor brands configured in active / passive HA, including comprehensive threat protection subscriptions.	Set	1		
5	Cloud-based SASE zero trust remote access subscription	License	200		
6	Centralized log analyzer appliance	Set	1		
7	NAC appliance	Set	2		
8	Enterprise Wi-Fi 7 access points	Unit	24		
9	Cloud Base Wi-Fi Controller	Unit	1		
10	Design, network configuration, implementation and full-time on-site PM services	Lot	1		
11	Testing, commissioning, UAT, and handover documentation	Lot	1		
				Total Contract Amount:	

Optional Items		**Price (HK$)**			
Item	**Description**	**Unit**	**Quantity**	**Unit Price**	**Amount**
1	Supply, installation, termination, and testing of extra access switch	Set	1		
2	Supply, installation, termination, and testing of extra Wi-Fi access points	Set	1		
3	Supply, installation, termination and testing of extra Cloud-Based SASE	License	10		

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	Zero Trust License				

We offer to provide the goods and/or services to HSITPL at the prices quoted above and in accordance with the Requirement Specifications and the terms and conditions stated in the Tender Documents. Acceptance of this offer shall be evidenced by the issuance of a purchase order by HSITPL.

_____

Authorised Signature (with company chop)

Name & Position: _____

Company Name: _____

Date: _____

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Tender Schedule 5: Requirement Specifications

To: Hong Kong-Shenzhen Innovation and Technology Park Limited ("HSITPL")

"Enterprise Network Infrastructure (Ref. No. FD-03-06-02(287))"

The scope and specific requirements of the goods/services which the Tenderer should provide are listed below.

5.1 Statement of Purpose

HSITPL hereby invites qualified and experienced tenderers to submit comprehensive, sealed technical and financial proposals for the design, procurement, delivery, installation, configuration, security hardening, testing, and commissioning of the enterprise network infrastructure. The scope of works is to be executed across the head office ("**Head Office**") footprint located at 10/F, Building 1, HSITP, Lok Ma Chau Loop, Hong Kong.

5.2 About HSITP

HSITPL, a wholly owned subsidiary of Hong Kong Science and Technology Parks Corporation, is vested with the responsibility to develop, operate, maintain, and manage HSITP.

HSITP envisions to serve as the world's knowledge hub and innovation & technology ("**I&T**") centre, converging enterprises, research & development ("**R&D**") institutions and higher education institutions from local, Mainland and overseas, which can connect upstream and midstream research to downstream market, further enhancing collaboration among industry, academic and research sectors.

HSITP focuses on six I&T pillar industries including life and health technology, artificial intelligence and data science, new materials, new energy, robotics and microelectronics.

The Park covers an area of approximately 87 hectares and the development is divided into two phases. The estimated total floor area of the first phase will be approximately 1 million square metres, which will provide R&D (Wet Lab / Advanced Manufacturing) buildings, Dry Lab / Office buildings, Research, Academic and Industry buildings, Talent Accommodation, Visitor Lodges, Commercial and Ancillary facilities, etc. Apart from Batch 1, the remaining land in the first phase of the Park will be developed through enterprises investment, aiming to enhance the speed and quantity of project development by leveraging market forces to build high-quality research and industrial infrastructure.

Phase 1 will be developed by three batches, i.e., Batch 1, Batch 2 and Batch 3. The first development batch, Batch 1, has been further sub-divided into Batch 1A, Building 1, Batch 1B and Batch 1C. Batch 1 is being developed by HSITPL which consists of eight buildings with a total gross floor area of approximately 116,000 square metres. Batch 1A consists of three buildings: Buildings 8 & 9 (wet laboratory enabled) and Building 11 (Talent Accommodation).

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5.3 The Brief

HSITPL seeks a highly experienced and certified network systems integrator to design, supply, deploy, optimize, and manage our active enterprise network infrastructure and unified security posture. The successful Tenderer shall provide all specialized labour, equipment, and certified active software subscriptions required for the full implementation, rigorous vulnerability validation, and comprehensive manufacturer-backed protection of the L3 core / L2 access switching fabric, dual-tier next-generation firewall gateways, NAC engine, and cloud-native security ecosystems for the designated project duration.

5.4 Purposes of Services

The objective of the Tender is to engage a qualified enterprise network systems integrator to deliver the following core active network engineering, cloud security orchestration, and system maintenance services over the project implementation and handover period:

I. Core active network objective: provide complete, dedicated on-site project management, site coordination, procurement, and high-fidelity logical design to deliver a reliable, highly resilient, and scalable L2/L3 switching fabric and high-speed enterprise Wi-Fi 7 wireless network sized to support 600 physical endpoints.

II. Scope of security and active services: deliver comprehensive deployment, network zone routing, dynamic NAC policy integration, and dual-vendor gateway configurations to support seamless daily operational workflows for 200 concurrent full-time staff members.

III. Cloud SASE-based zero trust remote access: establish a cloud-native SASE ZTNA remote connectivity platform. Access rules must discard legacy hardware-bound internet protocol security ("**IPsec**") client-to-site VPN tunnels, relying instead on identity-centric credentials, dynamic endpoint posture checking, and granular application-level segmentation to protect corporate assets.

IV. Logical traffic segregation and untrusted CCTV / AV isolation: implement rigid logical segmentation policies to isolate all physical security / CCTV, ACS, and AV endpoints onto dedicated untrusted zones. Direct lateral communication between these systems and internal corporate segments must be strictly blocked, forcing all outbound flows through core L3 switches and dual-tier next-generation firewalls for inspection and audit logging.

V. Fault tolerance hardware redundancy: eliminate single points of hardware failure across the entire campus backbone by enforcing mandatory dual, hot-swappable power supply configurations across all core switches, access switches, and firewall appliances, backed by automated link aggregation (multi-chassis link aggregation ("**M-LAG**") / virtual switch unit ("**VSU**")) and sub-second cluster failover replication.

VI. Log preservation, validation, and sign-off linked warranties: execute 100% systematic failover, throughput validation, dynamic NAC role-mapping, and load-stress simulation testing in the presence of the HSITPL IT Infrastructure Team. Configure the centralized log analyzer to preserve active security logs for over 180 calendar days. Handover all final O&M manuals to trigger the official written sign-off acceptance, which shall serve as the sole contractual start date for the

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one (1) year DLP, hardware warranties, and active cloud software subscription / licensing packages.

5.5 Scope of Services / Deliverables

The successful Tenderer shall take immediate operational ownership, deployment responsibility, and technical administration of the active network infrastructure across the Head Office footprint. The scope of services and project deliverables is structured across the following core active engineering and management categories:

5.5.1 Core L3 Switching Infrastructure

The Tenderer shall supply, install, configure, and integrate a high-performance, high-density backbone switching grid within the server room cabinets. This core L3 switching fabric must meet the following hardware and software specifications:

Physical Architecture and Redundancy

I. **Form factor:** standard 1 rack unit ("**U**") rackmount chassis designed to occupy dedicated slots in the 42U server cabinets.
II. **Switching units:** deployed as a high-availability active-active cluster containing two identical physical switches.
III. **Power redundancy:** equipped with hot-swappable dual alternating current ("**AC**") power supply modules configured in an active-active (1+1) load-sharing setup.
IV. **Cooling redundancy:** equipped with a minimum of four hot-swappable, smart fan modules configured in (3+1) redundancy, supporting automated speed adjustment based on real-time internal thermal sensors.

Port Density and Performance Metrics

I. **Interfaces:** minimum of 48x 25 gigabit ("**GE**") small form-factor pluggable 28 ("**SFP28**") high-speed optical ports and 8x 100GE quad small form-factor pluggable 28 ("**QSFP28**") uplink ports per switch.
II. **Switching capacity:** minimum of 4.0 terabits per second ("**Tbps**") switching capacity per switch, executing line-rate forwarding across all ports.
III. **Packet forwarding rate:** minimum of 2,000 million packets per second ("**Mpps**") forwarding rate based on standard 64-byte packets.
IV. **Buffer memory:** minimum of 32MB dedicated packet buffer memory complete with dynamic buffer scheduling to eliminate congestion during micro-burst traffic periods.

L2 and L3 Protocols

I. **Virtualization and clustering:** support for hardware-level VSU and M-LAG to logically aggregate both core switches, enabling load sharing across physical paths and sub-second link failover.
II. **Routing protocols:** native support for hardware-forwarded IPv4 and IPv6 dual-stack routing, executing static routing, open shortest path first version 2 (i.e., OSPFv2), open shortest path first version 3, (i.e., OSPFv3), border gateway protocol version 4 ("**BGP4**"), and BGP4+. Virtualization tunneling: hardware-accelerated virtual extensible local area network (i.e., VXLAN) and multiprotocol border gateway protocol ethernet virtual private network (i.e., MP-BGP EVPN) for flexible overlay network partitioning.
III. **Remote direct memory access** ("**RDMA**") **performance:** support for lossless ethernet parameters, utilizing RDMA over converged ethernet (i.e., RoCE) with priority flow control (i.e., PFC) and explicit congestion notification (i.e., ECN) to ensure zero packet loss.

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IV. **Telemetry and monitoring:** Support for Google remote procedure call (i.e., gRPC)-based network telemetry, sampled flow ("**sFlow**"), sFlow v5, and standard switch port analyzer ("**SPAN**") / remote SPAN (i.e., RSPAN) port mirroring.

5.5.2 High-Density Access Switching Grid

The Tenderer shall deploy a resilient, high-density PoE+ L2 access switching layer across the server room and hub room racks, structured to directly connect all 600 physical endpoints as shown on the floor plans of the Head Office (relevant floor plans may be made available to Tenderer upon request). The access switches must meet the following technical criteria:

Physical Architecture and Sizing

I. **Form factor:** 1U rackmount chassis.
II. **Deployment quantity:** sized at ten (10) separate access switches to guarantee dedicated physical ports for all workstation, wireless, security, AV, and IoT connections with a minimum 15% expansion buffer.
III. **Power redundancy:** every switch must contain hot-swappable dual AC power supply modules configured in a 1+1 failover layout.
IV. **PoE budget:** configured with dual 1000W AC power modules per switch to deliver a continuous, aggregate PoE/PoE+ budget of over 740W per chassis, supporting IEEE 802.3af and IEEE 802.3at protocols of the Institute of Electrical and Electronic Engineers ("**IEEE**") across all 48 ports simultaneously.

Port Density and Performance Metrics

I. **Interfaces:** minimum of 48 x 10/100/1000Base-T registered jack 45 ("**RJ45**") ethernet ports and 4 x 10GE SFP+ optical uplink ports per switch.
II. **Switching capacity:** minimum of 787Gbps system switching capacity.
III. **Forwarding rate:** minimum of 586Mpps packet forwarding rate.

Security and Quality of Service (i.e., QoS)

I. **Central processing unit** ("**CPU**") **protection:** native hardware CPU protection policies (i.e., CPP) and network foundation protection policies (i.e., NFPP) to dynamically rate-limit and filter malicious broadcast storm, address resolution protocol (i.e., ARP) spoofing, and distributed denial of service ("**DDoS**") traffic before CPU saturation occurs.
II. **Virtualization:** support for VSU stacking to simplify management boundaries across multiple access switches.
III. **Management integration:** native support for simple network management protocol ("**SNMP**") v1/v2c/v3, remote network monitoring (i.e., RMON), syslog, command line interface (i.e., CLI), Telnet, Secure Shell ("**SSH**") v2, and direct integration with a unified visual management platform to enable centralized configuration backup and zero-touch deployment.

5.5.3 Next-Generation Firewalls (Dual-Tier, Multi-Vendor Architecture)

The perimeter of the Head Office must be secured utilizing a highly resilient, defense-in-depth security gateway model. Tenderer must propose a dual-tier firewall architecture consisting of two separate tiers. To prevent a single software vulnerability or zero-day compromise from exposing the entire network, the first tier perimeter firewall and the second tier core firewall must be sourced from different hardware manufacturers. Both firewall clusters must meet the following technical specifications:

Perimeter Firewall (First Tier - External Facing)

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I. **Operational Role:** Sit directly at the Wide Area Network ("**WAN**") edge. Handle heavy perimeter filtering, Network Address Translation ("**NAT**"), high-speed routing, DDoS mitigation, and geo-blocking.

II. **Form Factor and Redundancy:** 1U rack-mountable hardware appliance containing dual, redundant power supplies (AC 100–240V, 80 PLUS compliant for 1+1 power redundancy). Deployed as an Active/Passive high-availability cluster containing two (2) physical engines.

III. **Throughput and Speed Specifications:**

a. **Firewall Throughput:** Minimum **39 Gbps** for 512 byte packets

b. **IPsec VPN Throughput:** Over **36 Gbps** for high-speed secure site-to-site WAN tunneling.

c. **Concurrent Session Sizing:** Minimum of **11,000,000 (11 Million)** concurrent TCP sessions with a connection rate of over **400,000 new TCP sessions per second**.

d. **Deep Security Inspection Throughput:**

i. **IPS Throughput:** >= 9Gbps

ii. **Next-Generation Firewalls** ("**NGFW**") **Throughput:** >=7 Gbps

iii. **Threat Protection Throughput:** >=6 Gbps

IV. **WAN Options:** Supports native integration of cellular WAN USB interfaces compliant with 4G Long-Term Evolution (i.e., LTE) Category ("**CAT**") 6/12 and 5G cellular communication standards for redundant WAN backup.

V. **Storage:** Integrated onboard **1x 480 GB SSD** storage for local event logging, packet captures, threat reporting, and system audit logs.

Core Firewall (Second Tier - Internal Segmentation)

I. **Operational Role:** Sit between internal Local Area Network ("**LAN**") zones, Demilitarized Zone (i.e., DMZ), L3 core switches, untrusted IoT / CCTV segments, and user access VLANs. Focus on internal lateral threat movement, deep packet inspection (i.e., DPI), user-identity security enforcement, application control, and gateway antivirus.

II. **Form Factor and Redundancy:** 1U rack-mountable hardware appliance containing dual, 1+1 redundant internal AC power supplies. Deployed as an Active/Passive High-Availability ("**HA**") cluster comprising two (2) physical firewall engines with automatic stateful failover.

III. **Deep Security Inspection Throughput:**

i. **IPS Throughput:** >= 5 Gbps

ii. **NGFW Throughput:** >=5 Gbps

iii. **Threat Protection Throughput:** >=3 Gbps

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5.5.4 Centralized Log Analyzer & Reporting System

To facilitate continuous compliance auditing and rapid threat hunting across all security boundaries, the Tenderer shall supply and configure a centralized logging platform matching the following parameters:

Centralized Log Management & Analytics Appliance

- **Operational Role:** Centralized log aggregation, security event analytics, event correlation, automated threat hunting, compliance auditing, and security reporting engine integrated across all perimeter and core NGFW and virtual instances.
- **Form Factor and Hardware:** 1U rack-mountable hardware appliance containing internal AC power supply.
- **Performance and Ingestion Sizing:**
  - **Daily Log Ingestion Rate:** Engineered to ingest, parse, and store up to 100GB/day of new log data.
  - **Analytical Sustained Rate:** Minimum continuous analytical processing throughput of 2000 logs per second.
  - **Collector Sustained Rate:** Minimum continuous log collection ingestion rate of 3000 logs per second.
  - **Device & Tenant Sizing:** Capable of collecting, aggregating, and parsing logs from up to 180 distinct physical firewalls or virtual security instances (i.e., VDOMs) over encrypted transmission channels.
- **Storage & RAID Architecture:**
  - **Storage Capacity:** Minimum raw storage capacity of 2x4 TB
  - **Redundancy & Usable Storage:** Factory configured with hardware/software **RAID 1** mirroring yielding 4TB of net usable fault-tolerant storage (also supporting RAID 0 configuration).
  - **Log Retention:** Sized to maintain active, indexed, and searchable online analytical logs for real-time compliance auditing and historical threat hunting.
- **Analytical, AI, and Operational Capabilities:**
  - **Generative AI Security Assistant :** Native integration of a Generative AI security assistant enabling SOC analysts and administrative staff to query log repositories using natural language, execute rapid incident forensics, generate automated threat summaries, and receive guided remediation playbooks.
  - **Unified Security Fabric & Threat Intelligence:** Real-time multi-layered event correlation, automated Indicator of Compromise ("**IOC**") matching via continuous cloud threat intelligence feeds, pre-built regulatory compliance reporting (e.g., ISO 27001, PCI-DSS, GDPR), and centralized SOC dashboard visibility.
  - **SIEM / SOAR & Automated Incident Alerting:** Real-time security incident detection with automated alert notifications via Email, SNMP traps, and Syslog outbound streams based on custom threshold rules, supplemented by automated response playbooks and automation stitches.

5.5.5 Cloud SASE-based Zero Trust Remote Access (ZTNA) System

The network architecture must completely bypass legacy client-to-site IPsec termination on hardware gateways. Remote access must utilize a cloud-native SASE architecture to establish secure connections:

I. **Centralized cloud SSE gateway:** remote traffic from staff endpoints must terminate onto a globally distributed, cloud-native SSE gateway fabric. This architecture ensures that the corporate internet edge is shielded from direct brute-force scanning and eliminates local server room bandwidth bottlenecks.

II. **Continuous endpoint posture verification:** the SASE client agent must execute continuous,

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dynamic posture assessments on the remote device before and during active session connections. Posture rules must verify: active anti-virus status, operating system security patch compliance, active corporate domain enrollment, localized firewall settings, and the absence of blacklisted processes.

III. **Granular application segmentation:** enforce strict zero-trust least-privileged access. Once authenticated, remote users are dynamically connected only to the specific internal enterprise applications allowed for their role, rather than being dropped into a broad, flat internal network segment.

IV. **Authentication integration:** direct identity synchronization with Microsoft Entra ID (Azure AD). Supports mandatory multi-factor authentication (i.e., MFA) and dynamic single sign-on (i.e., SSO).

V. **Licensing sizing:** sized and delivered with active client agent licenses for 200 concurrent full-time staff members, with all remote access security features fully active for a period of one (1) year starting strictly from the date of official written sign-off acceptance.

5.5.6 NAC Solution

The Tenderer shall deliver a comprehensive physical appliance-based NAC system to manage wired, wireless, and VPN endpoint onboarding:

Hardware Specifications

I. **Chassis and redundancy:** hardware appliance configured in an active-active high-availability cluster, equipped with dual, hot-swappable redundant power supplies.

II. **Processor:** Intel Xeon E-2278GE 8-Core processor (3.3GHz base frequency).

III. **Memory and storage:** minimum of 16GB of RAM and 2 x 960GB SSDs configured in hardware RAID 1.

IV. **Interfaces:** minimum of 4 x 1GE RJ45 ports.

V. **Scalability:** sized and licensed to support up to 15,000 simultaneous active endpoints.

Logical and Policy Orchestration

I. **Dynamic segmentation:** native support for IEEE 802.1x authentication for managed enterprise endpoints, media access control ("**MAC**") authentication bypass (i.e., MAB) for legacy devices, and remote authentication dial-in user service ("**RADIUS**") change of authorization (i.e., CoA). Upon device connection, the NAC must dynamically assign RADIUS attributes (VLAN ID and access control lists ("**ACLs**")) to place the device into its designated production segment (e.g., human resources, finance, IT) based on user directory attributes.

II. **Agentless device profiling:** dynamic device fingerprinting and categorization without requiring endpoint software installation, utilizing dynamic host configuration protocol (i.e., DHCP) fingerprint queries, hypertext transfer protocol ("**HTTP**") / hypertext transfer protocol secure ("**HTTPS**") headers, SNMP, SSH, Windows Management Instrumentation (i.e., WMI), ONVIF, and NetFlow protocols to discover operating system, hostnames, and MAC addresses.

III. **Guest onboarding captive portal:** features a customizable web captive portal natively integrated with SMS and email gateway application programming interface ("**APIs**"). When a guest or visitor requests access, the portal executes a self-registration workflow and dynamically distributes randomized secure credentials via SMS or email, strictly limiting the guest to an isolated, internet-only VLAN.

5.5.7 Enterprise Wi-Fi 7 Wireless Grid

To provide high-density, gigabit wireless coverage across the Head Office footprint, the Tenderer shall supply and mount 24 enterprise-grade, brand-agnostic Wi-Fi 7 APs matching the following technical requirements:

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1. **100% Seamless Coverage Mandate:** The wireless grid must deliver 100% complete signal coverage across all functional areas within the office footprint, including but not limited to open-plan workstations, executive suites, meeting rooms, boardrooms, reception areas, phone booths, corridors, pantries, and server room/IT zones. No dead zones or signal dropouts will be accepted (relevant floor plans may be made available to Tenderer upon request).

2. **Minimum Received Signal Strength Indicator** ("**RSSI**") **Standard:** The deployed solution must guarantee a minimum RSSI of -65 dBm or better across both 5 GHz and 6 GHz frequency bands (and -60 dBm or better across primary user and meeting zones) with a Signal-to-Noise Ratio ("**SNR**") exceeding 25 dB.

3. **RF Heatmap Submission Deliverables:**
   Pre-Deployment (Predictive RF Heatmap): The Tenderer must submit a comprehensive predictive 3D RF heatmap simulation during the design phase. This heatmap must model exact wall materials, structural obstacles, and attenuation factors to prove optimal AP placement, channel allocation, and signal overlap prior to physical installation.
   Post-Implementation (On-Site Verification Heatmap): Following physical installation, the Tenderer must perform an active on-site walkthrough RF survey utilizing enterprise survey tools (e.g., Ekahau or AirMagnet) and deliver a finalized, certified post-implementation heatmap verifying signal coverage, SNR, secondary signal overlap, and co-channel interference (i.e., CCI) thresholds.

Wireless Capabilities & Channels

I. **Wireless standard:** Wi-Fi 7 (IEEE 802.11be) executing concurrent tri-band operation across 2.4 GHz, 5GHz, and 6GHz spectrums.
II. **Spatial streams and multiple-input and multiple-output** (i.e., MIMO)**:** tri-radio architecture configured with a minimum of 2 x 2 x 2 streams in 2.4GHz, 4 x 4 x 4 streams in 5GHz, and 2 x 2 x 2 streams in 6GHz (total of 8 spatial streams).
III. **Maximum combined physical layer** ("**PHY**") **rate:** sized to deliver a minimum combined PHY rate of over 12.22Gbps.
IV. **Channel bandwidths:** supports 20MHz, 40MHz, 80MHz, 160MHz, and 320MHz channel configurations.
V. **Advanced Wi-Fi 7 features:** must support MLO to allow endpoints to transmit and receive across multiple bands simultaneously, preamble puncturing to maximize spectrum utilization under interference, and 4K quadrature amplitude modulation (i.e., QAM).
VI. **Client capacity:** sized to support up to 1,024 concurrent active clients per AP, with capability to host up to 36 Service Set Identifiers (i.e., SSIDs) simultaneously.

Antennas and Physical Backhaul

I. **Antenna technology:** multi-element smart adaptive antenna arrays utilizing polarization diversity. The AP must dynamically generate over 4,000 unique directional antenna patterns in real-time to mitigate radio frequency ("**RF**") interference and optimize signal coverage.
II. **Interfaces:** minimum of 1 x 1/2.5/5/10GbE RJ45 multi-gigabit ethernet port to prevent wired uplink bottlenecks, and 1 x 1GbE RJ45 secondary ethernet port.
III. **IoT convergence:** onboard bluetooth low energy (i.e., BLE) and Zigbee radios, with built-in hardware support for Matter and Thread protocols to enable unified smart office IoT integration.

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IV. **PoE:** Supports IEEE 802.3at (PoE+) and IEEE 802.3bt (PoE++).

Centralized Cloud Management Architecture

I. **Cloud-native management plane:** all APs must be managed under a unified, brand-agnostic cloud-native management platform. This platform must provide a secure, browser-accessible "single pane of glass" web-based dashboard and native mobile application interfaces to monitor, orchestrate, and audit the entire wireless network topology remotely.

II. **Zero-touch provisioning** ("**ZTP**")**:** Support for secure, seamless ZTP. Upon physical connection to the L2 PoE+ access switched grid, each AP must automatically establish an encrypted secure tunnel (such as via HTTPS / control and provisioning of wireless access points (i.e., CAPWAP)) to the cloud management platform, download the latest approved firmware, and dynamically apply localized configuration parameters without requiring on-site manual terminal configuration.

III. **Continuous Cloud Synchronization & Resiliency:** The wireless network must maintain high availability. In the event of a WAN link failure or loss of cloud controller connectivity, the APs must continue to switch and route local traffic, authenticate existing users, and enforce local security rules natively without interruption. All localized logs, client session audits, and performance telemetry must be cached locally on-device and automatically synchronized back to the cloud upon WAN path restoration.

IV. **Dynamic Radio Resource Management** ("**RRM**") **& Auto-RF:** The cloud management plane must leverage centralized AI-driven analytics to execute continuous, real-time RRM. This must include automated optimization of channel allocations, automatic adjustments to AP transmit power, and dynamic load-balancing of client densities across the tri-band arrays to dynamically mitigate on-site RF interference.

V. **Integrated Guest Wi-Fi Portal Management:** The cloud management platform must include a native or fully integrated guest lifecycle management engine. This engine must support the configuration and hosting of secure captive portals, with built-in API integration to major SMS and email gateways for automated passcode distribution and real-time session audit compliance tracking.

5.5.8 Comprehensive Scope of Professional Services & Handover Deliverables

The successful Tenderer shall execute the following professional services, coordinated and managed by their assigned full-time on-site PM.

I. Led Architectural Design, VLAN Partitioning & Subnet Allocation

The Tenderer must assign a certified, active CCNP to lead and sign off on all network designs. Key deliverables include:

1) **Topology Blueprint:** Submission of detailed logical and physical network diagrams illustrating active-active core layouts, dual-tier multi-vendor firewalls, and campus-wide access paths.
2) **IP Schema & VLAN Allocation:** Designing a consistent enterprise-wide IP subnet allocation map, carving out dedicated VLAN partitions for:
    a. Corporate Workstations (Data)
    b. Voice (IP Phones)
    c. Wireless Enterprise (Staff Wi-Fi)
    d. Wireless Guest (Captive Portal)
    e. Network Management (In-band/Out-of-band)
    f. Isolated CCTV Segment (Untrusted)
    g. Isolated Audio-Visual Segment (Untrusted)
3) **OSPF & BGP Routing Policies:** Setting up redundant L3 core routing configurations complete

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with sub-second convergence metrics and path metrics optimization.

II. Strict CCTV & AV Network Isolation

To secure the enterprise core from lateral threat vectors, the Tenderer must implement strict logical boundary controls over security and multimedia networks:

1) **Logical Segregation:** Configure dedicated, isolated VLAN segments specifically for CCTV cameras, Network Video Recorders (i.e., NVRs), ACS, and AV multimedia matrices.
2) **Zero Lateral Communication:** Enforce ACLs on the core L3 switches to completely block any direct lateral communication between the CCTV/AV untrusted networks and internal corporate database or workstation networks.
3) **Firewall Inspected Transit:** Configure policy-based routing to intercept and force all outbound and inbound CCTV/AV traffic through the core switches and the dual-tier firewalls. The firewalls must apply stateful inspection, application verification, and auditing on all CCTV/AV traffic before granting transit to external internet destinations.

III. Equipment Rack-Mounting, Dual Power Quality Control & Patching

The Tenderer is responsible for the physical installation and patching of all active network devices inside the Server Room and Hub Room 42U cabinets:

1) **Physical Rack Mounting:** Securely mount all core/access switches, firewalls, NAC controllers, and log databases, maintaining a neat, structured elevation layout.
2) **Redundant Power Cabling:** Verify and wire the dual redundant power supplies equipped on every single switch and firewall. The primary power cable and secondary power cable must be run through separate cable management channels and terminated into entirely separate, independent power source feeds (PDU-A and PDU-B) backed by distinct UPS circuits to ensure zero-downtime operation.
3) **Logical Fiber & Copper Patching:** Execute neat fiber backbone patching between racks utilizing the push-pull uniboot OM4 patch leads, and route CAT6A shielded equipment cords to the corresponding access switches, adhering strictly to the color-coding standards (Blue: general data, White: Wi-Fi, Yellow: Security/CCTV, Green: AV, Orange: IoT).

IV. Dual-Tier Multi-Vendor Firewall Policy Synchronization

1) **HA cluster pairing:** install and pair the first tier perimeter firewall cluster and the second tier core firewall cluster in active / passive configurations.
2) **Stateful session synchronization:** configure real-time session state replication between the HA units to ensure sub-second failover with zero packet loss or connection drops during a hardware fault.
3) **Deep packet inspection rules:** configure next-generation security policies, application signatures, gateway antivirus, and URL filtering. Natively integrate the second tier core firewall with Microsoft Entra ID (formerly Azure Active Directory) to enable user group-based security filtering.

V. Cloud SASE ZTNA & NAC Portal Integration

1) **SASE remote client onboarding:** provision, configure, and push the cloud SASE client agent profiles to all 200 staff workstations. Configure ZTNA context-assessment rules (verifying OS compliance, antivirus state, and user identity) to grant granular application-level remote access.
2) **NAC dynamic RADIUS mapping:** integrate the NAC hardware controllers with internal directory services. Configure IEEE 802.1X policies to dynamically assign VLANs to corporate machines.
3) **Captive Portal Design:** Design the landing page for the guest portal, styling the interface with

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HSITP branding. Integrate the portal with localized SMS and email gateway APIs to execute secure visitor registration.

VI. Log Analyzer Retention Sizing & AIOps Optimization

1) **Storage Optimization:** Configure RAID disk arrays and optimize database indices to handle continuous log ingestion.
2) **Preservation Lock-In:** Set up automated archival policies to ensure all system, traffic, and threat logs are preserved in active searchable hot storage for over 180 calendar days.
3) **Generative AI Assistant Activation:** Set up the Generative AI security dashboard, training and testing the model to recognize internal network subnets and execute natural language threat query lookups.

VII. Comprehensive Testing & Commissioning ("**T&C**")

All active equipment must undergo rigorous on-site testing witnessed by the HSITPL IT Infrastructure team:

1) **Redundancy and Failover Simulations:** Simulate active utility power outages by disconnecting PDU-A and PDU-B feeds alternately, proving that switches and firewalls continue normal operations on the secondary power module with zero packet loss.
    a. Execute physical cable disconnection tests on the active firewall cluster to verify that stateful sessions fail over to the passive unit in < 1 second.
    b. Simulate switch stacking link breaks to verify M-LAG automatic loop-free recovery.
2) **Security Boundaries Audit:** Execute penetration and connectivity sweep tests from the CCTV and AV untrusted VLAN segments, verifying that any attempt to communicate laterally with internal corporate assets is immediately blocked and logged by the firewalls and NAC.
3) **Throughput and Performance Validation:** Run RFC 2544 network throughput, latency, and packet loss tests across the L2/L3 switching grid to verify maximum line-rate performance.
4) **DLP, Warranty, and Licensing Commencement Agreement:** Following successful completion of all T&C cycles, the Tenderer shall deliver as-built network diagrams, device configuration backups, and user manuals to HSITPL. The issuance of the written sign-off acceptance certificate by HSITPL shall serve as the sole contractual trigger to activate the one (1) year DLP, full manufacturer hardware warranties, and the 12-month cloud software / SASE ZTNA license subscriptions. Thereafter, the DLP shall continue for a period of 12 calendar months. The successful Tenderer shall be responsible for replacement of consumable parts/spare parts of normal wear during the Defect Liability Period and shall respond within one (1) Business Day when called upon to carry out any defect's rectification works during the Defect Liability Period.

5.5.9 Security Risk Assessment and Audit (SRAA) Support & Remediation Mandate

Following the operational setup and staging of all network hardware and before final written sign-off acceptance can be initiated, HSITPL will arrange an independent external cybersecurity firm to conduct a mandatory Security Risk Assessment and Audit (SRAA) across the newly deployed Enterprise Network Infrastructure. The successful Tenderer must comply with the following strict technical audit parameters:

- **Technical Cooperation Framework:** The successful Tenderer must provide active, immediate engineering resources to fully facilitate the external SRAA auditor. This includes delivering complete configuration readouts and rulebase exports for all NGFW, Core/Distribution/Access Switches, Wireless LAN Controllers (i.e., WLC), Wi-Fi Access Points, and Log Management Systems; active encryption and authentication validation logs (e.g., verifying WPA3-Enterprise, 802.1X, IPsec/SSL-VPN TLS parameters); OS and firmware vulnerability status verification; and participating in technical architecture, routing topology, and firewall rule review sessions.

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- **Mandatory Finding Remediation:** Any network security vulnerabilities, unencrypted management channels (e.g., HTTP, Telnet, weak SNMP strings), default credential remnants, insecure switchport configurations, overly permissive firewall rules, firmware defects, or configuration deviations from enterprise network security baseline guidelines and VLAN isolation rules identified in the external SRAA report must be systematically resolved.
- **Zero-Cost Close-Out Clause:** The successful Tenderer holds sole contractual liability to execute all required vulnerability patching, network infrastructure security hardening (including switch port security enforcement, disabling unused services/ports, SSHv2 lockouts), firewall policy tightening, and network operating system upgrades at no additional cost to HSITPL. Full verification and a successful re-test by the SRAA auditor must be achieved before final UAT project sign-off can be granted.

5.6 Project Timeline

Tender invitation	14 August 2026
Tender submission deadline	27 August 2026
Presentation	28 August 2026
Contract award	31 August 2026
Project kick-off (i.e., Commencement Date)	1 September 2026
Project completion	1 December 2026
Commencement of the DLP	The date of issuance of the written sign-off acceptance certificate by HSITPL
Last day of the DLP	One (1) year after the commencement of the DLP

Remark: The above schedule is tentative and will be adjusted based on actual project circumstances at the sole and absolute discretion of HSITPL.

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Tender Schedule 6: Proposed Solution for Tender

To: Hong Kong-Shenzhen Innovation and Technology Park Limited ("HSITPL")

"Enterprise Network Infrastructure (Ref. No. FD-03-06-02(287))"

This section contains Parts 1 to 7 and should be duly completed by the Tenderer and included in tender proposal. The Tenderer is required to present all details of his/her proposed solution according to the guidelines specified under each Part.

Tenderers are reminded that no price information should be included in the Technical Proposal. Tenderers are expected to provide the following information in an A4-sized document.

Part 1: Mandatory Assessment Criteria

The Tenderer acknowledges and agrees that participation in this Tender requires compliance with the mandatory assessment criteria outlined in this Part 1 ("**Mandatory Assessment Criteria**"). By response with "Y", the Tenderer hereby declares and confirms that he/she meets the Mandatory Assessment Criteria. Failure to declare and submit supporting documents confirming compliance with any of the Mandatory Assessment Criteria may result in the **disqualification of the Tender**.

Item	Description / Proven Experience	Declaration with supporting document(s) Yes (Y) / No (N)
System integrator status	The Tenderer must hold active gold-level or tier-1 integration credentials from the proposed core network switching and firewall manufacturers, with formal letters of authorization.	
Operational experience	The Tenderer must have a minimum of five (5) years of continuous operation in providing enterprise-grade network design, security implementation, and infrastructure engineering in Hong Kong. (Submit copy of business registration certificate.)	

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Relevant project track record	The Tenderer must have successfully completed a minimum of three (3) local projects of a similar scale (enterprise campus routing / switching and firewall networks with 500 nodes) in the past five (5) years in Hong Kong. (Submit client reference letters or handover certificates.)	
Dedicated on-site project management	The Tenderer must commit a certified, full-time PM dedicated exclusively on-site to the HSITP Building 1 HQ project. This PM cannot be shared with other active accounts. (Submit PM's CV and legally binding letter of commitment.)	
Design lead assignment	The Tenderer must assign a full-time, active, and certified expert-level network architect to lead, validate, and sign off on the comprehensive network, VLAN, IP routing, and firewall architectural design. The designated engineer must hold at least one of the following active certifications: CCNP or Huawei certified information and communications technology (i.e., ICT) expert (i.e., HCIE) or Fortinet Certified Professional (FCP).	

Part 2: Company Background & Cloud Credentials

Please provide details of active hardware, security, or network integrator certifications held by your company.

Part 3: Past Case Reference

Describe past reference cases similar in nature (specifically high-density core switching, dual-tier multi-vendor firewalls, cloud-managed Wi-Fi, and enterprise segmentation).

Reference Client	**Project Period**	**Technical Scope and Implementation Details**	**Contact Person (optional)**	**Contact Telephone No. (optional)**

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Part 4: Qualification of Project Team Members

Please list the key team members and their roles in the proposed project team structure. For each member, provide their certified qualifications and briefly describe how their engineering background will directly contribute to successful project implementation.
Note: It is the Tenderer's contractual responsibility to assemble and maintain a replacement team with identical or superior qualifications in the event of personnel movement during the project period.

Name	Proposed Project Role	Professional Qualifications (e.g., CCNP, PMP, HCIE)	Years of Relevant Experience

Part 5: Details of Design and Technical Implementation

Please describe in detail your technical design and implementation blueprints, addressing each of the following components:

1. **Hardened Core Switching Topology:** Explain your high-availability core layout (VSU/M-LAG) utilizing the redundant core switches, focusing on sub-second link aggregation recovery and buffer sizing.
2. **600 physical nodes supporting 200 full-time staff:** Provide the physical subnetting, VLAN allocation, and IP distribution plan to support the 600 physical endpoints. Ensure the L2 Access switches PoE budgets are mapped to handle the density safely.
3. **Cloud-Based SASE Zero Trust Remote Access Solution:** Provide a complete architectural description of the cloud-native SASE ZTNA client deployment for the 200 full-time staff members. Explain how the client agents execute continuous security posture validation, active threat containment, and Entra ID (Azure AD) user group security sync.
4. **Multi-Vendor Firewall Strategy:** Map out your structural design separating the First Tier Perimeter Firewall (Brand A) and Second Tier Core Firewall (Brand B), illustrating high-throughput filtering, stateful session replication, and the active-passive clustering configuration.
5. **CCTV and AV Network Isolation:** Provide a detailed routing and security policy blueprint showing how CCTV and AV traffic is separated as an **untrusted zone**. Explain the access list (ACL) definitions and firewall policies that enforce complete isolation while permitting inspected internet transport.
6. **Wi-Fi 7 Architecture & Captive Portal Integration:** Detail your wireless deployment strategy utilizing Wi-Fi 7 (802.11be) APs. Address Multi-Link Operation (MLO), channel allocation across 2.4/5/6 GHz, cloud management, and the automated SMS/email captive portal registration workflow.
7. **Centralized Audit Log Analyzer Sizing:** Provide log ingestion estimates and storage capacity sizing to guarantee preservation of security, audit, and connection logs for **over 180 days** (Hot Storage), including AI-assisted query configurations.
8. **NAC Policies:** Map out your endpoint posture-checking and dynamic VLAN assignment matrices for corporate, BYOD, guest, and IoT devices.

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Part 6: Proposed Project Implementation Plan

Provide a comprehensive master project installation plan, accompanied by a Gantt chart. Your submission **must explicitly address deployment plans to manage a highly compressed, non-negotiable execution timeline** based on a target Tender Award date at the end of August 2026, on-site hardware mobilization in late September 2026, and 100% project completion and handover in late November 2026.

6.1 Full-Time Dedicated On-Site PM Mandate

Confirm how your assigned on-site PM will manage daily site-level operational dependencies:

A. **Multi-Party Communication:** Define communication flows between HSITPL, Consultant, main contractors, and adjacent fit-out teams.
B. **Site Interface Management:** Detail the PM's process to coordinate physical installation spaces, resolve spatial interface conflicts in ELV pathways, and secure site access authorization.
C. **Consultant Verification Liaison:** Coordinate technical submittals, request for information (RFI) logs, and physical on-site checkpoint audits with HSITP IT Infrastructure Team to confirm compliance with quality standards.

6.2 Led Architectural Design & Configuration Pipeline

Provide details of how the assigned CCNP will lead the design, verification, and engineering execution:

A. **Core Engineering Authority:** Describe the CCNP's role in planning the IP address distribution, core OSPF/BGP routing protocols, physical port allocations, switch stack rings, and high-availability session sync boundaries.
B. **VLAN Partitioning and Subnet Planning:** Provide your plan to allocate separate VLAN blocks for corporate users, administration, management, IP phones, Wi-Fi guest networks, and **isolated CCTV and AV segments** to support 600 nodes and 200 staff.
C. **Firewall Hardening Framework:** Outline the CCNP's design for security policies, perimeter NAT routing, IPS signature sets, and multi-vendor firewall zone mappings.

6.3 Accelerated Procurement & Supply Chain Buffer Management

Provide details of your supplier network coordination to eliminate delivery delays:

A. **Immediate Stock Lock-In:** Detail steps to place immediate, binding factory orders upon award (late July 2026) for switches, multi-vendor firewalls, NAC controllers, log analyzers, and Wi-Fi 7 Access Points.
B. **Continuous Logistics Tracking:** Explain how the PM will verify shipping statuses weekly with key suppliers, adjusting logistics pathways to maintain scheduled deliveries.

6.4 Phased Implementation Phase Milestones

- **Phase 1: Initiation & Procurement (Late August2026):** Project onboarding, setup of PM workspace, mobilization of the CCNP design lead, and submission of initial IP schemas and product lists for approval.
- **Phase 2: Spatial Audit & Hardware Rack-Mounting (September 2026):** Spatial audits of server rooms, physical mounting of Core/Access switches, dual-tier firewalls, NAC, and Log Analyzers in 42U racks, and connection of dual power lines to separate A/B feeds.
- **Phase 3: Core Configurations, Segregation & Access Point Deployment (Late September – October 2026):** Cabling patch connections, deployment of the CCNP-approved IP routing design, installation of 24 Wi-Fi 7 Access Points, and logical isolation of CCTV and AV networks as untrusted zones.
- **Phase 4: Functional Testing, Portal Setup, SASE Client Onboarding, UAT & Handover (November 2026):** Captive portal activation, deployment and testing of SASE cloud policies for 200 staff members, testing security rules, verifying log preservation of **over 180 days**,

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completing CCNP-signed UAT witnessed by HSITP IT Infrastructure Team, delivering user manuals and technical training, and official system handover.

Part 7: Project Management and Quality Assurance

With reference to recognized project management frameworks (e.g., PMP, PRINCE2) and IT implementation standards (e.g., ITILv4), describe how the execution quality, site safety, and physical configuration will be managed, audited, and controlled:

1. **Dual Power Quality Assurance Audits:** Detail your systematic process to audit and verify that *every* core/access switch and firewall has its primary and secondary power cables routed to separate power distribution circuits.
2. **Acceptance-Linked DLP & Licenses Audits:** Detail your internal tracking protocol to guarantee that no software license or hardware maintenance package is activated prematurely, providing automated verification logs showing that the 1-year operational support contract starts on the day of the HSITPL Sign-Off.
3. **SASE Client Security & Cloud Flow Audits:** Outline the diagnostic testing plan to confirm SASE agents correctly execute continuous health-state assessments, auto-quarantine unsafe endpoints, and successfully intercept traffic without bypass.
4. **600-Node/200-Staff Capacity and Load Stress Verification:** Describe the testing methodology to simulate active corporate traffic across all 600 nodes, including the active simultaneous session generation of 200 concurrent full-time staff members.
5. **CCTV and AV Isolation Verification:** Describe the testing protocol to verify that the CCTV and AV isolated untrusted zones are completely blocked from lateral communications into corporate networks.
6. **NAC Policy Dynamic Segmentation Verification:** Detail your validation workflow to confirm that corporate, guest, BYOD, and IoT devices are dynamically moved to their correct VLAN segments upon connection.
7. **Log Preservation and AI Search Audits:** Explain the verification methods to confirm that the Log Analyzer is actively storing and indexing logs with **over 180 days of active retention**.
8. **Failure Mode Redundancy Simulation:** Detail your plan to simulate core network failures during commissioning witnessed by HSITP IT Infrastructure Team, including:
    - Disconnecting primary power lines on switches/firewalls (verifying zero packet loss on the secondary feed).
    - Simulating perimeter link failures to verify sub-second active-passive firewall failovers.
    - Simulating Core Switch stack link breaks to verify M-LAG automatic recovery.
9. **Final UAT & O&M Manual Handover:** Outline the walkthrough inspection procedures and provide a sample index of the final O&M manual.

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