Hong Kong-Shenzhen Innovation and Technology Park Limited

Tender Document
IT Structured Cabling and Server Room Infrastructure

Tender Reference:
FD-03-06-02(333)

Tender Closing Date:
16 September 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 information technology ("**IT**") structured cabling and server room infrastructure services 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.

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.

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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., three (3) 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 – **IT Structured Cabling and Server Room Infrastructure (Ref. No. FD-03-06-02(333))**" 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 16 September 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:

"Technical Proposal: IT Structured Cabling and Server Room Infrastructure (Ref. No. FD-03-06-02(333))"

and the Tenderer's company name

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(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: IT Structured Cabling and Server Room Infrastructure (Ref. No. FD-03-06-02(333))"

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 17 September 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.

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. Tenderer's corporate experience, track record and warranty commitments;

B. Resource qualifications, technical accreditations and project manager ("**PM**") dedication;

C. Proposed technical solution, rush implementation schedule and quality control ("**QC**");

D. Quality assurance, testing workflow and risk management; and;

E. Price offer

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

Technical Capability Assessment		**Technical Score (Points)**
A. Tenderer's corporate experience, track record and warranty commitments	**Evaluation of the Tenderer's institutional experience and structural warranty capabilities:** * **Structured cabling pedigree:** number of years operating as an enterprise-grade network infrastructure contractor with a verified track record in high-density server room fit-outs. * **Relevant reference cases:** depth and scale of successfully completed projects within the past 3 to 5 years that are comparable to this HSITP Building 1 headquarter ("**HQ**") project (e.g. multi-floor deployments or grade-A commercial spaces). * **System performance warranty certification:** provision of official authorisation letters or valid partnership certificates from major cabling manufacturers proving the Tenderer is a **certified / premium installer**. Capability to secure and deliver a **10 to 20-year extended product and applications performance warranty** covering the entire installed Category 6A ("**Cat 6A**") shielded and optical multimode 4 ("**OM4**") fibre ecosystem.	25

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Technical Capability Assessment		Technical Score (Points)
B. Resource qualifications, technical accreditations and PM dedication	**Evaluation of the proposed project team's technical competency, mandatory certifications, and dedicated manpower infrastructure:** * **Manufacturer and Cat 6A shielded accreditations:** verifiable individual training certificates from cabling manufacturers validating the field staff's capability to install, terminate, and test Cat 6A shielded systems and OM4 fibre components according to warranty validation guidelines. * **Dedicated full-time PM:** evaluation of the proposed PM's curriculum vitae, technical background, and a mandatory written commitment ensuring this individual is **100% assigned full-time on-site** exclusively for the HSITP Building 1 HQ project (no dual-hatting or shared accounts across other projects) to oversee day-to-day coordination, problem-solving, and direct reporting. * **Testing equipment compliance:** proof of ownership or formal leasing agreements for industry-standard testing tools, specifically including valid calibration certificates for Fluke networks cable analysers (or equivalent) capable of handling Cat 6A shielded frequency sweeps.	25

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Technical Capability Assessment		Technical Score (Points)
C. Proposed technical solution, rush implementation schedule and QC	**Evaluation of the Tenderer's conceptual layout, rush timeline feasibility, and stringent quality containment methods:** * **Accelerated implementation schedule:** adequacy and logical flow of the proposed master project schedule. Evaluation of the Tenderer's methodology to handle a **rush delivery timeline**, including resource ramping plans, overtime deployment strategy, critical path management, and lead-time buffering for hardware procurement (racks, fibre, cables) to ensure zero handover delays. * **Robust QC plan:** evaluation of the Tenderer's internal QC gates, including pre-installation spatial audits, active monitoring of data / power separation metrics (50--100mm), real-time workmanship checks to prevent exposed conductors, and immediate rectification logs for any cabling loops failing on-site parameters. * **Server room layout and smartcard strategy:** soundness of the proposed implementation approach for the server room racks (800mm and 600mm configurations), rail setbacks (200mm front / 700mm rear), and a foolproof integration statement to ensure rack handle locks match the existing HSITP smartcard access infrastructure.	30

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Technical Capability Assessment		Technical Score (Points)
D. Quality assurance, testing workflow and risk management	**Evaluation of the Tenderer's pre-handover verification protocols and fallback planning:** * **Testing and commissioning methodology:** soundness of the proposed end-to-end testing workflow, covering on-spool fibre testing, multi-wavelength bidirectional fibre audits (ANSI/TIA/EIA-568-B.3), and 10-parameter copper validation sweeps required for manufacturer warranty submission. * **Colour-coding and labelling governance:** operational plan to enforce the exact 6-tier RJ45 jack / patch port colour matrix alongside a dual-layer labelling strategy (Engraved plastic + Turn Tell tags). * **Defect management and fallback planning:** robustness of the vendor's risk management, change control, and roll-back workflows. Explicit commitment to zero-cost remediation for any fibre or copper runs failing to meet performance limits.	20
	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

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

(ii) Price Score

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

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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 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 that Tenderer and/or terminate the Contract entered with that 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-

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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 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. Insurance

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 Defect Liability Period (as defined in Paragraph 5.5.5 in Tender Schedule 5) 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.

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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 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: Server room infrastructure and core containment materials supply and delivery Supply and delivery to site of all cable racks, server racks, smartcard handle locks, overhead ladder racks, earthing busbars, and primary Cat 6A shielded purple cabling and OM4 fibre spools. Successful completion of on-spool optical cable testing.	28 September 2026	Item 1 of Schedule 4 of the Tender Documents to be made within 30 calendar days of the submission of an invoice.

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Milestone 2: Server room infrastructure and containment pathway installation, horizontal copper and inter-floor fibre cabling deployment Complete structural installation of all 42U racks with precise 200mm/700mm rail setbacks, overhead ladder rack pathways to plywood backboards, structural earthing individual runs (#6 AWG), and mounting of power trunking outlets (IEC 309/UK13A). Complete pulling and routing of all Cat 6A shielded cables and OM4 fibres inside flexible conduits through ELV trunking. Complete all structural terminations on information outlets and top-of-rack LC patch panels, ensuring strict power/data separation and loose conductor compliance.	10 October 2026	Item 2 of Schedule 4 of the Tender Documents to be made within 30 calendar days of the submission of an invoice.
Milestone 3: Testing, functional colour-coding, labelling and handover Successful completion of 100% copper validation testing via calibrated Fluke networks cable analysers (or equivalent) and multi-wavelength bidirectional fibre audits. Full implementation of the 6-tier RJ45 functional colour-coding matrix, unique dual-layer asset labelling (engraved + turn tell), and submission of all final test reports.	20 October 2026	Item 3 of Schedule 4 of the Tender Documents to be made within 30 calendar days of the submission of an invoice.
Milestone 4: Project final acceptance and cabling warranty issuance Successful closeout of the comprehensive QC rectification period and the formal handover of the certified **10-year extended product and applications performance warranty** directly from the cabling manufacturer.	30 October 2026	Item 4 of Schedule 4 of the Tender Documents to be made within 30 calendar days of the submission of an invoice.

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Optional Items: 1. Supply, installation, termination, and testing of extra horizontal Cat 6A shielded node; 2. Supply, installation, termination, and testing of extra OM4 fibre strand; or 3. Supply and delivery of extra Category 6A shielded modular equipment patch cords and/or OM4 duplex LC uniboot equipment patch cords (various lengths and colours).	As requested 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.

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.

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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" and presentation deck 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.

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

Tender Schedule 1: Tender Submission Information

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

Dear Sir / Madam,

"IT Structured Cabling and Server Room Infrastructure (Ref. No. FD-03-06-02(333))"

We provide the contact information below for this tender:

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

Hong Kong-Shenzhen Innovation and Technology Park Limited 港深創新及科技園有限公司
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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 **"IT Structured Cabling and Server Room Infrastructure (Ref. No. FD-03-06-02(333))"** (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 arrangement 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.

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

   (For a company other than a listed company or exempted company[1])

[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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[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.

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Signed 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.

Hong Kong-Shenzhen Innovation and Technology Park Limited 港深創新及科技園有限公司
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Tender Schedule 3: Form of Tender

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

Dear Sir / Madam,

"IT Structured Cabling and Server Room Infrastructure (Ref. No. FD-03-06-02(333))"

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.

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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.

Hong Kong-Shenzhen Innovation and Technology Park Limited 港深創新及科技園有限公司

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Tender Schedule 4: Price Schedule

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

Dear Sir / Madam,

"IT Structured Cabling and Server Room Infrastructure (Ref. No. FD-03-06-02(333))"

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:
   a) provisioning, licensing, and maintenance of required infrastructure; and
   b) any application / software fees required to operate the Services.

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. We acknowledge that the quantities stated below for Optional Items are provided for quotation purposes only. HSITPL has sole discretion to determine whether, and to what extent, any Optional Item will be procured and does not guarantee any minimum quantity. We acknowledge that HSITPL is not obliged to engage the successful Tenderer to provide any Optional Item.

7. Unless otherwise terminated, the Contract for our provision of the Services to HSITPL shall remain in force from the Commencement Date until the last day of the Defect Liability Period (as defined in Paragraph 5.5.5 in Tender Schedule 5) ("**Service Period**").

8. We acknowledge that the price information provided in Schedule 4 shall remain fixed and binding throughout the Service Period.

9. 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.

10. 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	Server room infrastructure and core containment materials supply and delivery	Set	1		
2	Server room infrastructure and containment pathway installation, horizontal copper and inter-floor fibre cabling deployment	Set	1		
3	Testing, functional colour-coding, labelling and handover	Set	1		
4	Project final acceptance and cabling warranty issuance	Set	1		
				Total Contract Amount:	

Optional Items		Price (HK$)			
Item	**Description**	**Unit**	**Quantity**	**Unit Price**	**Amount**
1	Supply, installation, termination, and testing of extra horizontal Cat 6A shielded node	Node	1		
2	Supply, installation, termination, and testing of extra OM4 fibre strand	Strand	1		
3	Extra Cat 6A Shielded Patch Cord – 1 metre	Piece	1		
4	Extra Cat 6A Shielded Patch Cord – 3 metres	Piece	1		
5	Extra Cat 6A Shielded Patch Cord – 10 metres	Piece	1		
6	Extra OM4 LC-LC Duplex Uniboot Patch Cord – 1 metre	Piece	1		
7	Extra OM4 LC-LC Duplex Uniboot Patch Cord – 3 metres	Piece	1		
8	Extra OM4 LC-LC Duplex Uniboot Patch Cord – 10 metres	Piece	1		

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.

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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")

"IT Structured Cabling and Server Room Infrastructure (Ref. No. FD-03-06-02(333))"

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 procurement, delivery, installation, testing, and commissioning of IT structured cabling and server room infrastructure. The scope of works is to be executed across the HQ office footprint located at 10/F, Building 1, HSITP, the 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 infrastructure contractor to supply, deploy, optimize, and manage our physical network backbone and critical facilities infrastructure. The successful Tenderer shall provide all specialized labour, equipment, and certified system components required for the full implementation, rigorous performance testing, and long-term structural warranty validation of the cabling and server room footprint for the designated project duration.

To ensure continuous, high-performance network reliability, the successful Tenderer will establish strict physical media segregation, eliminate environmental and workmanship risks through precise spatial rack alignment, and maintain accurate, up-to-date as-built technical documentation, cable patching schedules, and detailed network topologies to guarantee seamless, secured daily operations across the Building 1 10/F HQ.

5.4 Purposes of Services

The objective of the Tender is to engage a qualified network infrastructure and critical facilities contractor to deliver the following core services over the project implementation and handover period:

I. **Core operational objective:** provide complete project management, site coordination, procurement, and high-fidelity installation to deliver a reliable, scalable, and highly efficient physical layer network backbone and server room infrastructure.

II. **Scope of infrastructural services:** deliver comprehensive implementation, structural assembly, physical media patching, high-density distribution routing, and end-to-end cable identification.

III. **Safety and physical containment continuity:** implement rigorous containment isolation protocols, data/power separation metrics, and strict adherence to structural earthing guidelines (IEE regulations) to maximize physical safety and mitigate operational signal interference.

IV. **Unified infrastructure governance:** integrate multi-tier subsystem endpoints (Workstations, Wi-Fi, CCTV, Audio-Visual ("**AV**"), Inter-Rack, and IoT/ Environmental Monitoring Systems ("**EMS**")) into a standardized, colour-coded topological layout to guarantee seamless, secure daily administrative operations.

V. **Elimination of configuration anomalies:** mitigate workmanship errors, structural deviations, and exposed media vulnerabilities by utilizing strict pre-approved rack elevations, locked equipment rail setbacks, and dedicated metal containment separators.

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VI. **Comprehensive testing and dynamic as-built documentation:** perform 100% component-level certification sweeps using analytical testing instrumentation, culminating in the submission of verified test packages and detailed Operation & Maintenance ("**O&M**") manuals.

5.5 Scope of Services / Deliverables

The successful Tenderer shall take immediate operational ownership, deployment responsibility, and technical administration of the infrastructure footprint at **HSITPL's Building 1, 10/F HQ Office and critical facility spaces (relevant floor plans may be available to Tenderer upon request)**:

5.5.1 Server Room & Hub Room Heavy Infrastructure

A. **Cable rack systems deployment:** supply and install new 42U Cable Racks, strictly matching the following hardware configurations:

i. **Physical dimensions:** 800mm(W) $\times$ 1072mm(D) $\times$ 2035mm(H), 42U capacity.

ii. **Structural core:** enhanced main frame supporting $\geq$ 1000kg static loading capacity, equipped with heavy-duty castors and adjustable levelling feet (set of 4).

iii. **Interior rail architecture:** front and rear pairs of 19" rails complete with clear unit rack marks. Front rails must be set back exactly 200mm from the door interface to allow optimal side wire routing and clear door closure. Rear rack rails must be set back and securely locked at 700mm from the front rails prior to any equipment mounting.

iv. **Door and side configurations:** front and rear perforated middle split doors integrated with smartcard handle locks (100% compatible with existing HSITP smartcards, for reference only, please note that the "ARMATURA" smart card is currently being used, however the smart card model will be updated). Includes one pair of lockable side panels and a plain top cover with integrated brush-access entries for cable drops.

v. **Cable management systems:** one pair of 150mm full-height cable trays. Front rack management must feature 42U finger guides on both sides complete with front cable cover panels. Rear rack management must include vertical ring cable managers with a ring profile dimension of 80mm $\times$ 180mm.

vi. **Fixings and grounding:** provision of a dynamic earthing kit alongside M6 screw fixings (minimum two packs of 50 screws per cabinet). Standard colour finish must be dark (RAL-9005).

vii. **Internal accessories:** one heavy-duty fixed shelf with a depth of 580mm.

viii. **Power subsystems:** dual vertical metered Power Distribution Units ("**PDU**s"), each configured with 20-way 13A UK plug outputs and an IEC 60309 16A input line. Include one 1U Rackmount Automatic Transfer Switch ("**ATS**") supporting 230V, 13A UK plug input, and 8x C13 outlets.

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B. **Server rack systems deployment:** supply and install new 42U Server Racks, strictly matching the following hardware configurations:

I. **Physical dimensions:** 600mm(W) $\times$ 1072mm(D) $\times$ 2035mm(H), 42U capacity.

II. **Structural core:** enhanced main frame supporting $\geq$ 1000kg static loading capacity, equipped with heavy-duty castors and adjustable levelling feet (set of 4).

III. **Interior rail architecture:** front and rear pairs of 19" rails complete with clear unit rack marks. Front rails must be set back exactly 200mm from the door interface. Rear rack rails must be set back and securely locked at 700mm from the front rails prior to any equipment mounting.

IV. **Door and side configurations:** front and rear perforated middle split doors integrated with smartcard handle locks (100% compatible with existing HSITP smartcards). Includes one pair of lockable side panels and a plain top cover with integrated brush-access entries for cable drops.

V. **Cable management systems:** one pair of 150mm full-height cable trays. Rear rack management must include vertical ring cable managers with a ring profile dimension of 80mm $\times$ 120mm.

VI. **Fixings and grounding:** provision of a dynamic earthing kit alongside M6 screw fixings (minimum two packs of 50 screws per cabinet). Standard colour finish must be dark (RAL-9005).

VII. **Internal accessories:** one heavy-duty fixed shelf with a depth of 580mm.

VIII. **Power subsystems:** dual vertical metered PDUs, each configured with 20-way 13A UK plug outputs and an IEC 60309 16A input line. Include one 1U Rackmount ATS supporting 230V, 13A UK plug input, and 8x C13 outlets.

C. **Access control and integration management:** all supplied front and rear perforated middle split doors for both Cable and Server rack systems must be built with integrated smartcard handle locks. Tenderers must guarantee explicit physical and cryptographic credential cross-compatibility to ensure seamless operation with the existing site-wide HSITP smartcard infrastructure.

D. **Spatial rail alignment compliance:** implement rigid cabinet interior configurations by setting the front 19" equipment mounting rails back exactly **200mm** from the front door interface to allow patches / wires around the sides and full door closure under loaded patch conditions. Rear rack rails must be set back and locked exactly **700mm** away from the front rails before installing any equipment, network devices, or copper / fibre patch panels.

E. **Overhead containment pathways:** supply and install heavy-duty black rectangular steel tubing Cable Ladders to form an overhead runway network.

I. **Physical dimensions:** 18"W $\times$ 1.5"H $\times$ 9.96'L per section, finished in black paint with a certified cable capacity factor of 1,421.

II. **Structural composition:** constructed of $3/8" \times 1\text{-}1/2" \times .065"$ ($9.53mm \times 38mm \times 1.65mm$) wall rectangular steel tubing, featuring solid cross-members welded at uniform $12"$ ($300mm$) intervals.

III. **Support and loading parameters:** the overhead runway must be physically supported every $5'$ ($1.5m$) at a minimum, guaranteeing a maximum load capacity of 132 lb/ft (59.9 kg/m) with minimal structural deflection.

IV. **Routing and grounding:** pathways must be routed spanning directly above all server room racks, UPS enclosures, and extend to terminate securely onto the plywood backboards as illustrated in the server room layout plans. The runway structure must be U.L. classified for suitability as an equipment grounding conductor.

F. **Power trunking and secondary distribution outlets:** supply and mount industrial-grade electrical outlets directly on the server room power trunking panels to facilitate PDU connections as detailed in the server room diagrams. This deployment must include dedicated **IEC 309 16A 2P** and **UK 13A** sockets, wired and positioned in strict alignment with the layout engineering schematics

G. **Dedicated environmental monitoring and UPS failover:**

I. **Environmental monitoring system (EMS):** provision a centralized, IP-enabled Environmental Monitoring System equipped with a 10/100BASE-T Ethernet port for upstream internet connectivity. The system must be fully configurable for secure remote administrative access via a native web interface and dedicated mobile applications for iOS and Android platforms. The EMS must support real-time ingestion from a comprehensive suite of sensor types: Temperature (with localized digital display), Water Leak Detection, Smoke Detection, Fire Signal integration, Fan Coil status tracking, and Power Failure sensing relays. Upon any sensor state change or threshold alarm, the system must immediately execute an automated multi-recipient notification process, generating detailed email alerts detailing the exact alarm parameters and spatial location.

II. **Uninterruptible power supply (UPS) system:** Every individual Cable and Server rack deployment must be equipped with a dedicated, standalone 3kVA / 2.7kW double-conversion online pure sine wave 2U rackmount UPS system. Each system must include one external battery pack, a flexible rack/tower convertible rail kit, and support the scalability to attach up to 10 external battery packs for extended runtime buffers. Power distribution from the UPS must provide $230V$ output via 8x C13 and 2x C19 IEC outlets. For remote management, the UPS must be populated with a Network Management Card (NMC3) occupying an integrated SmartSlot, providing browser-accessible tracking, real-time event notifications, proactive troubleshooting diagnostics, and full historical log data over a secure network.

5.5.2 Inter-Floor Fibre Optic Backbone Infrastructure

5.5.2.1 Core Backbone Routing & Structural Cable Architecture

A. **Inter-floor connection pathway:** supply, route, and pull optical backbone connections establishing an interconnect system between the main IT Server Room and the IT Hub Room.

The layout requires two separate runs of 2x 12-core OM4 multimode fibre completely isolated along independent separate path channels to ensure continuous structural redundancy. Cables must be run entirely enclosed within flexible conduit inside the ELV data cable trunking.

B. **Standards and code compliance:** in addition to meeting the baseline specifications outlined in ANSI/TIA-568.3-E and ISO/IEC 11801-1, all indoor multimode optical fibre products must comply fully with: ISO/IEC 11801:2002 OM3, ISO/IEC 11801:2002 Amendment 2 OM4, ANSI/TIA/EIA-568.3-D, ANSI/TIA-598-D, ANSI/TIA-492 AAAD, IEC 60793-2-10 Fibre Type A1a.3, Telcordia GR-409-CORE, and Low Smoke Zero Halogen ("**LSOH**") IEC 60332-3 flammability parameters. All backbone cables must hold a certified Riser OFNR rating.

C. **Physical characteristics and inner core geometry:** the multimode fibre strands must conform to the following geometric dimensional limits:
   I. *Core Size:* $50 \pm 3\mu$m
   II. *Cladding Size:* $125 \pm 2\mu$m
   III. *Coating Size:* $245 \pm 10\mu$m
   IV. *Buffer Size:* $900 \pm 50\mu$m
   V. *Core-Cladding Concentricity:* $\leq 3.0\mu$m

D. **Cable jacket construction:** the fibre cable must incorporate a round, lead-free jacket built using LSOH materials available in an Erika Violet or Aqua colour profile. The jacket must feature high-visibility sequential length markings stamped in 2-foot increments.

E. **Internal structural elements:** to prevent micro-bending and core damage during accelerated installation timelines, the cable must contain a lightweight Central Strength Member placed directly in the centre of the fibre bundles along with a longitudinal Rip Cord under the outer jacket to facilitate smooth stripping. Colour-coded buffered fibres must be protected inside matching colour-coded buffer tubes.

F. **Component minimum performance parameters:** all qualified fibre lots must meet or exceed the following optical performance criteria:
   I. *Minimum Bandwidth (850 nm):* Laser: 4,700 MHz · km / OFL: 3,500 MHz · km
   II. *Minimum Bandwidth (1300 nm):* OFL: 500 MHz · km
   III. *Maximum Attenuation Rate (850 nm):* 3.0 dB/km
   IV. *Maximum Attenuation Rate (1300 nm):* 1.0 dB/km
   V. *Group Index of Refraction:* 1.483 at 850 nm / 1.479 at 1300 nm

G. **Application distance guarantees:** the underlying optical core must support standard transmission protocols without degradation across the following minimum distances:
   I. 10GBASE-SX (850 nm): 500 meters
   II. 10GBASE-LX4 (1300 nm): 300 meters
   III. 1000BASE-SX (850 nm): 1,100 meters
   IV. 1000BASE-LX (1300 nm): 600 meters
   V. Fibre Channel 266 (1300 nm): 1,500 meters

VI. ATM 155 (1300 nm) / ATM 52 (1300 nm): 2,000m to 3,000m
VII. FDDI / 100BASE-FX (1300 nm): 2,000 meters

5.5.2.2 High-Density Premium Equipment Patch Cords

A. **Termination boot mechanical design:** all fibre equipment patch cords must utilize an integrated push-pull boot configuration that controls the connector latch, facilitating clean access and damage-free removal within highly congested patch environments.

B. **Polarity and frame management:** cords must feature UniClick™ uniboot technology with a unified one-piece body design. This assembly must incorporate rotating latches and an integrated switch mechanism allowing field technicians to change fibre polarity safely without exposing or twisting glass strands.

C. **Core optimization and airflow:** patch cords must be manufactured using bend-insensitive glass elements packaged inside a minimized diameter uni-tube cable chassis to lower containment pathway congestion, maximize airflow velocity within the 42U racks, and drive facility energy efficiency.

D. **End-face geometry polish:** connectors must exhibit a precision polish compliant with Telcordia and ISO/IEC specifications for end-face geometry, surpassing standard ANSI/TIA and ISO/IEC insertion and return loss boundaries.

E. **Patch cord performance specifications:** all patch leads must be 100% optically factory-tested to maintain the following parameters across duplex LSOH assemblies (available in Aqua or Erika Violet):
   i. *Operating Wavelengths:* 850 nm / 1300 nm / 850 nm
   ii. *Minimum Cable Bandwidth:* 1500 / 3500 MHz · km at 850 nm || 2000 / 4700 MHz · km at 850 nm
   iii. *Maximum Allowable Insertion Loss:* 0.15 dB (0.10 dB typical performance tier)
   iv. *Minimum Allowable Return Loss:* 30 dB (35 dB typical performance tier)

5.5.2.3 Modular Fibre Rack-Mount Enclosures

A. **Chassis architecture:** supply and mount 1U modular sliding-drawer fibre interconnect enclosures configured with 4 independent adapter plate openings. The chassis must fulfil cross-connect, interconnect, and fusion splicing termination pathways within a single footprint while managing internal jumper slack.

B. **Density support:** the enclosure framework must support up to 96 terminated fibre lines per 1U space, providing plug-and-play modular layout interfaces across all termination modes (pre-terminated, field-terminated, or splice-terminated assemblies).

C. **Visibility and structural features:** built with a high-contrast white sliding tray to maximize

spatial visibility for technicians during MAC works; the tray must slide forward into two locking positions, backward into one position, or be fully removable from the drawer rails. The enclosure door must incorporate translucent, magnetically latched hinged front and rear covers to isolate components from contaminants.

D. **Slack and bend radius protection:** enclosures must possess a specialized rear cable bracket and a guided, fully detachable fibre management bracket localized at the bulk fibre entry point. This setup must guarantee appropriate loop slack is maintained, eliminating cable stretching when the white tray is extended forward or backward.

E. **Jumper routing and faceplate labelling:** front cable management must utilize dual-hinging molded finger managers capable of routing all 96 fibre cords cleanly to one or both sides of the rack vertical channels. The housing must incorporate an integrated, dropdown label holder that remains fully accessible for network auditing even when the protective front enclosure doors are closed.

F. **Security and fastening rigor:** enclosures must feature open screw mounting holes on the external ears, allowing a single installer to pre-mount the chassis onto the rack face using the bottom two pre-installed screws. Mounting brackets must support positional adjustments across three distinct depth settings along the 19" rails. Front doors must be tamper-resistant, fully removable, and supplied with matching lock keys. Rear routing must feature snap-in, two-tier cable management clips for custom pathway layout configurations.

5.5.2.4 Integrated Fibre Fusion Splice Cassettes

A. **Splice tray elimination:** all modular fibre enclosures must deploy integrated fusion splice cassettes configured to contain and protect bare splices, completely removing the requirement for standalone, external splice trays.

B. **Adapter interfaces and density capacity:** cassettes must provide direct internal interfaces to standard LC connectors, holding a high-density footprint option of 12, 16, or 24-fibre capacities for LC multimode OM4 infrastructure loaded with coloured pigtails.

C. **Safety shutter integration:** when utilizing Quad LC adapter patterns, the cassettes must be equipped with integrated LC Shuttered protection options to isolate un-mated ports and eliminate external laser exposure risks.

D. **Maintenance and protection:** each splice cassette must feature an integrated rear tether mechanism, allowing maintenance technicians to unlock and slide the cassette cleanly out from the rear of the enclosure. Every cassette kit must include premium heat-shrink splice protection sleeves matching the maximum strand count of the module.

5.5.3 Horizontal Copper Distribution Network

5.5.3.1 Media Procurement, Node Counts & Information Outlets

A. **Media procurement and information outlets:** Sourcing and installation of Category 6A S/FTP Purple LSOH balanced twisted-pair cables for a total network footprint of 600 physical nodes, broken down strictly into the following functional infrastructure deployment:

   I. **Workstation / general user data ports:** (terminated across dedicated 24-Port Patch Panels labelled inside the Hub Room).

   II. **Wireless access points (Wi-Fi):** (terminated across dedicated 24-Port Patch Panels labelled inside the Hub Room).

   III. **Security / CCTV / access control systems ("ACS"):** (terminated into dedicated 24-Port Patch Panel labelled inside the Server Room).

   IV. **IoT / EMS:** (Terminated into dedicated 24-Port Patch Panel labelled inside the Server Room).

   V. **AV Endpoints:** (Quantity as per final layout plan, routed separately using dedicated green jacks, estimate around 54 Nodes).

   VI. Note: All office-side drops must terminate onto standard British Standard ("**BS**") 85mm x 85mm faceplates containing high-performance Category 6A shielded information outlets with spring doors.

B. **Information Outlets Performance Metrics:** All Category 6A shielded outlets designed for the termination of the 4-pair balanced twisted-pair Category 6A S/FTP copper infrastructure must exceed Category 6A component compliance parameters throughout the extended frequency sweep range of **1 to 500 MHz**.

C. **Shielding Integration & Safety:** Outlets must provide 360-degree integration of the cable shielding throughout the mechanical termination process. Outlets must be UL listed for use within plenum environments, featuring a bezel constructed of high-impact, glass-reinforced nylon.

D. **Workmanship & Ergonomics:** All jack positions must support universal mounting configurations to allow flat or angled orientations. Systems must terminate utilizing an ergonomic, single-motion high-fidelity tool (Z-tool or equivalent) to guarantee uniform pair alignment. The assembly must feature a lacing module supporting linear lacing and zero-cross termination to prevent internal pair crossing during field assembly. One termination tool must be natively packaged inside each commercial box of 20 outlets.

E. **Mating Contact Integrity under PoE Load:** Information outlets must incorporate a patented curved or "crowned" contact shape designed to eliminate permanent contact deformation

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caused by repetitive mechanical stress. This crown profile must ensure that the electrical arcing occurring during mating and unmating procedures under maximum Power-over-Ethernet ("**PoE**") load will take place away from the final mated contact surfaces, fully maintaining signal integrity across a minimum of 5 full re-terminations and 2,500 lifecycle operations. Outlets must comply with IEC 60512-99-002 standards, backed by third-party verification report submittals.

F. **Jack Features & Port Identification:** Outlets must be backwards compatible to allow lower-performing cable layers or old connecting hardware to function at full native capacities. Jack modules must support industry-standard T568A or T568B wiring pinouts. Outlets must permit installation from the front or rear of faceplates, passing through without re-termination requirements. Outlets must include built-in spring doors supporting single-handed operation and accept colour-coded, snap-in icons for quick circuit identification. As an optional variant, jacks must support mounting directly into standard IEC 60603-7 compliant keystone openings. Outlets must be certified by Underwriters Laboratories to United States standards and C22.2 Canadian Telecommunications standards. Outlets must be sourced in colours aligned to the system designation scheme, including:

I. **Blue:** Workstation / General Data Port
II. **White:** Wireless Access Points
III. **Yellow:** Security / CCTV / Access Control Systems
IV. **Green:** AV Endpoints
V. **Red:** Inter-Rack Trunking Connections
VI. **Orange:** IoT / EMS

5.5.3.2 Workstation Faceplate Specifications

A. **Unified Application Chassis:** All faceplates deployed across the project footprint must possess common layout mechanics applicable to both fibre optic and copper endpoints.

B. **Sizing & Configurations:** Faceplates must be available in 1-, 2-, 3-, and 4-port single-gang configurations, engineered to mount cleanly onto BS 85mm × 85mm junction backboxes.

C. **Technician Operations & Aesthetics:** The faceplate design must allow modules to be safely unmounted and removed from the front side without removing the backbox frame. An aesthetically pleasing, snap-on cosmetic cover must hide all mounting screws from view. Faceplates must feature integrated write-on designation label tracks for circuit numbering, protected by a clear plastic cover, and include colour-matched screw caps. Technician access to label tracks must feature tool-less removable label covers.

D. **Material Durability:** Faceplates must be manufactured using UV-resistant, high-impact thermoplastic to prevent structural colour fading or yellowing over extended lifecycles.

5.5.3.3 High-Density Category 6A Shielded Modular Equipment Cords

- **Standards Performance Limits:** All Category 6A shielded modular equipment patch cords

must exceed ANSI/TIA-568.2-D and ISO/IEC 11801-1 28AWG performance parameters.

- **Factory Certification Rigor:** All cords must be factory-assembled and 100% transmission tested using laboratory-grade network analysers to verify zero defects up to 500 MHz. Cords must provide full backwards compatibility with lower performance categories.

- **Mechanical Plugs & Core Shielding:** Cords must be populated with identical modular 8-position plugs on both ends, wired straight-through using standard compliant wiring layouts. The chassis must implement premium shielded S/FTP architecture to optimize NEXT performance parameters, coupled with a 360-degree factory termination crimp for excellent plug-to-cable strain relief. Internal wiring tracks must use an integrated load bar to preserve ideal pair geometry and consistent terminations.

- **Physical Metrics & Airflow Footprint:** Cords must utilize 28 AWG 7×36 stranded bare copper conductors. To prevent cable congestion behind active switches and drive rack cooling efficiency, the nominal cable outer diameter (i.e., O.D.) must be strictly limited to 0.22 in. **(**5.5 mm**)**.

- **Routing Protections:** Cords must feature an integrated latch guard to shield the plug clip from snagging when pulling through tight horizontal managers or overhead runways. Plugs must use an ultra-slim boot footprint facilitating ultra-high-density patch maps, accepting clip-on coloured tags for field colour-coding without disconnecting active patches.

- **Fire Rating & Length Profiles:** Cable jackets must satisfy dual flame-resistance criteria for both CM and LSOH classifications. Cords must be provisioned in standard factory lengths of 3, 5, 7, 10, 15, and 20 feet, with customized run lengths available upon request. Sourced jacket colours must match proper circuit identification standards, including black, white, red, grey, yellow, blue, green, violet, and orange. Cords must fulfil the following operational parameters:
    - *Operating Temperature:* -20 to 75 ˚C
    - *Remote Powering Capability:* Confirmed for PoE Type 1, 2, 3, 4, and PoH
    - *Green Compliance:* Certified RoHS-compliant, lead-free, halogen-free, and PVC-free
    - *Plug Durability:* Rated for $\geq$ 2,500 insertion cycles with a minimum retention force of 50N

5.5.3.4 Category 6A Shielded Termination Patch Panels

A. **Chassis Architecture & Earthing:** All Category 6A shielded patch panels must facilitate cross-connection and interconnection using modular patch cords, satisfying standard 19-inch relay rack mounting boundaries. Panels must be supplied in complete kit form including premium panel outlets. Panels must be constructed of lightweight, high-strength steel finished in a durable black coating, available in 24-port and 48-port 1U densities (1RMS = 44.5 mm / 1.75 in.).

B. **Instant Grounding Mechanics:** Panel outlets must implement quick snap-in installation, whereby individual jacks automatically ground to the chassis frame upon installation without secondary manual earthing steps. Panels must incorporate an integrated quick-release lever, allowing individual outlet ports to be unmounted and removed from the front face even in tight, fully loaded configurations.

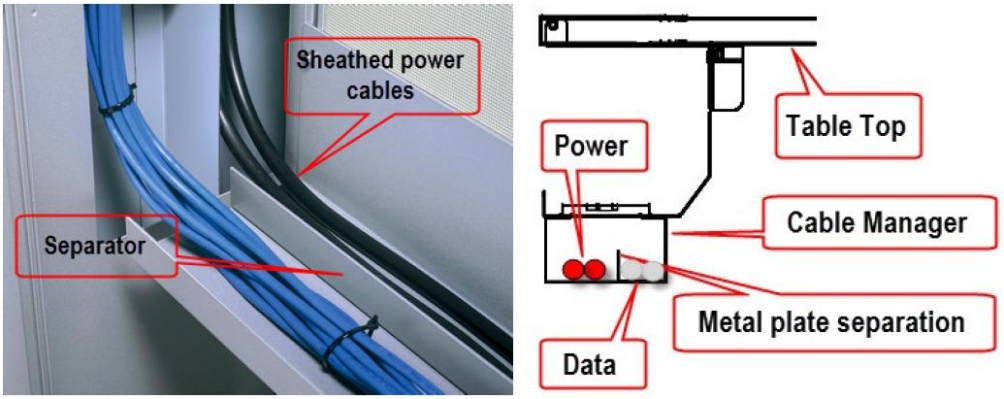
C. **Operational Footprint & Auditing:** Panels must be available in flat and angled chassis form factors, featuring clear pre-stamped port identification numbers on the front face. Every panel must come equipped with an integrated rear wire management tray. Front port frames must possess high-visibility, snap-on magnifying label tracks containing paper labels or premium icons for quick node auditing.

5.5.3.5 Horizontal Cable Managers

A. **Sizing Metrics:** Horizontal cable managers must be mounted directly above and below each active termination patch panel, provisioned in 1U, 2U, and 4U chassis profiles.

B. **Density Accommodations:** Managers must be available in 4-inch and 6-inch depth profiles, wherein the 6-inch deep variant must be structurally verified to route over 48 Category 6A cables simultaneously to match high-density copper panel switches.

C. **Workmanship & Cable Guarding:** Management fingers must be manufactured with smooth, radiused edges to eliminate pinches or stress deformation on copper jackets. Every unit must include dual-hinged front covers to completely conceal and protect internal patch corridors.



5.5.3.6 Component-Level High-Performance Category 6A Shielded Cable Specifications

I. **Surpassing Industry Standards:** All qualified copper infrastructure cabling must surpass standard Category 6A / Class E industrial benchmarks (in accordance with ANSI/TIA-568.2-D Category 6A and ISO/IEC 11801 Class E standards) by meeting or exceeding the worst-case transmission performance criteria listed in the matrix below across all specified frequencies up to 500 MHz.

II. **Shielding & Interference Isolation:** The cabling solution must utilize shielded twisted-pair construction (F/UTP, U/FTP, or S/FTP) featuring individual foil shielding and/or overall tinned copper braid shielding. This infrastructure must provide 100% protection against Alien Crosstalk (ANEXT and PS-ANEXT) and electromagnetic interference (i.e., EMI) to reliably support 10GBASE-T High-Speed Data transmission and 90W IEEE 802.3bt Power over Ethernet

(PoE++) deployments.

5.5.3.7 Manufacturer Governance & Quality Assurance Locks

A. **Corporate Accreditations:** The underlying system components must be sourced from an enterprise infrastructure manufacturer holding active, certified compliance parameters for ISO 9001:2015, ISO 14001:2015, and ISO 45001:2018 corporate standards. The manufacturer must possess a verified Environmental, Social, and Corporate Governance (i.e., ESG) report published natively on their public corporate portal.

B. **System Extended Warranty:** Upon successful closeout of the testing phase, the Tenderer must deliver a formal, manufacturer-backed min **10-year Extended Product Warranty and System Assurance Certificate** covering all components, performance margins, and application bandwidth channels across the entire copper and fibre layer ecosystem.

C. **Independent third-party verification reports:** As a mandatory technical submittal requirement, the Tenderer must supply independent **Intertek (ETL) third-party test reports** validating unified channel solution compliance matching ISO/IEC 11801-1:2017 parameters. These test records must explicitly confirm that the Category 6A S/FTP copper cable, Category 6A shielded outlets, Category 6A shielded patch cords, and Category 6A shielded panels have been evaluated together as a single end-to-end component channel. Separate component listings from mismatched manufacturers will be rejected.

5.5.4 Mandatory Testing and Commissioning (i.e., T&C) Deliverables

No infrastructure elements shall be provisioned into active production until the contractor has executed a 100% end-to-end testing cycle witnessed by the HSITP IT Infrastructure Team.

A. **Pre-Installation Quality Assurance Spool Test:** Execute mandatory optical testing on all fibre spools using a light source and power meter on-site prior to installation to rule out transit damage.

B. **Standard-Compliant Fibre Performance Audits:** Perform end-to-end connector-to-connector bidirectional optical testing on locked, final-location fibre cables matching ANSI/TIA/EIA-568-B.3 standards. Tests must span both 850nm and 1300nm wavelengths, verifying the following budget tolerances:
   a. Average bidirectional splice loss: ≤ 1.5 dB to 2.9 dB.
   b. Mated pigtail bidirectional loss: < 0.5dB.
   c. MPO bidirectional loss: < 0.35dB.
   d. Optical Return Loss (ORL): ≥ 32dB (PC reflectance at -45dB).

C. **Analytical Copper Certification Sweeps:** Execute 100% copper link sweeps using a currently calibrated Fluke networks cable analyser (or approved equivalent analyser) for Category 6A parameters. Tenderers must generate and export direct database files proving zero failure parameters across: Attenuation, Capacitance, Ambient Noise, Wire Map, Impedance, Cable Length, Resistance, NEXT, FEXT, and Propagation Delay. Any failed line must be completely replaced and re-tested at zero additional cost.

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D. **Shielding & System Earthing Integrity Tests:** Audit all rack bonding, overhead ladder runs, and patch panels to prove a 12 AWG green grounding wire bonds every panel's dedicated lug to the Rack Busbar ("**RBB**"). Prove all hinged doors are wired back to earth studs.

5.5.5 Defect Liability Period

The defect liability period ("**Defect Liability Period**") shall commence from the date immediately after Project completion and acceptance by HSITPL and 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 1 Business Day when called upon to carry out any defect's rectification works during the Defect Liability Period.

5.5.6 Living Documentation & O&M Manual Handover

Documentation is considered an integral part of this project. The contract will not be deemed complete or eligible for practical completion closeout until the following clean, concise English-language documentation is received and approved by the HISTP IT Infrastructure Team:

A. **As-Built Engineering Drawings:** Detailed architectural floor plans mapping out exact cable routes, floor outlet positioning, and final cabinet layout elevations.

B. **Comprehensive Connectivity Spreadsheets:** Full patching tables detailing unique, end-to-end cable identities (utilizing engraved plastic labels on panels/outlets and wrap-around Turn Tell labels on physical jackets).

C. **Circuit Records & Detailed Network Topologies:** High-level system interaction maps, logical network flowcharts, and infrastructure inter-connectivity schemas.

D. **Component Inventory & Compliance Records:** Detailed listing of all installed line items with model part numbers and serial numbers. Submissions must include third-party Intertek testing certificates, manufacturer ISO credentials, and the final certified min **10-year Extended Product Warranty and System Assurance Certificate**

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

Following the physical installation, cable termination, OTDR / Fluke testing, and server room staging of all cabling infrastructure 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 IT Structured Cabling and Server Room Infrastructure. The successful Tenderer must comply with the following strict technical and physical security audit parameters:

- **Technical & Physical Cooperation Framework:** The successful Tenderer must provide active, immediate engineering and technical resources to fully facilitate the external SRAA auditor. This includes delivering complete floor-by-floor cabling topology schematics, patch panel and outlet labelling schedules, server room rack layout diagrams, cable pathway and riser riser-lock documentation; providing active configuration and readout logs for intelligent PDUs, UPS network management cards, and environmental monitoring devices; and participating in physical site walkthroughs, containment assessments, and physical access security review sessions.

- **Mandatory Finding Remediation:** Any physical security vulnerabilities, exposed or unsecured cable containment routes in public/unrestricted areas, unlabelled or mislabelled drop points, physically accessible unpatched wall ports in client-facing zones without port lockouts, unencrypted management channels or weak SNMP settings on UPS/PDU management interfaces, unsealed wall/riser penetrations, or physical installation deviations from enterprise structured cabling security baselines and TIA/EIA-568 standard isolation guidelines 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 physical cabling re-routes, patch panel re-terminations, port physical lock/cap installations, UPS/PDU network card firmware patching and interface hardening, labelling corrections, and physical containment adjustments at no additional cost to HSITPL. Full physical verification and a successful re-test by the SRAA auditor must be achieved before final User Acceptance Testing ("**UAT**") project sign-off can be granted.

5.5.8 Optional Supply of Equipment Patch Cords (Copper & Fibre)

In addition to the baseline project scope of works, the Tenderer shall provide fixed unit prices in Tender Schedule 4 (Optional Items) for the ad-hoc supply and delivery of additional factory-certified equipment patch cords. HSITPL is not obliged to procure any Optional Item. If ordered by HSITPL, all supplied optional patch cords must fully comply with the following technical benchmarks:

- **Category 6A shielded patch cords:** must strictly satisfy all requirements defined in **Paragraph 5.5.3.3** in this Tender Schedule 5, including 28 AWG stranded bare copper conductors, slim outer diameter ($\leq$ 5.5 mm), dual CM/LSOH flame resistance rating, 100% factory transmission test records up to 500 MHz, and matching the functional colour matrix (blue, white, yellow, green, red, orange, grey, black) with snagless latch protection.
- **OM4 multimode duplex LC patch cords:** must strictly satisfy all requirements defined in **Paragraph 5.5.2.2** in this Tender Schedule 5, including bend-insensitive OM4 glass, push-pull boot mechanism, UniClick™ or equivalent tool-less polarity-reversal uniboot design, LSOH round outer jacket, and factory optical insertion loss < 0.15dB.
- All optional patch cords ordered under this provision must come from the same certified system manufacturer and be covered under the mandatory 10-year system extended warranty mentioned in Paragraph 5.5.3.7 in this Tender Schedule 5.

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5.6 Project Timeline (tentative)

Tender invitation	10 September 2026
Tender submission deadline	16 September 2026
Presentation	17 September 2026
Contract award	18 September 2026
Project kick-off (i.e., Commencement Date)	18 September 2026
Project completion	1 November 2026
Last day of the Defect Liability Period	1 November 2027

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")

"IT Structured Cabling and Server Room Infrastructure (Ref. No. FD-03-06-02(333))"

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)
1. Certified cabling partnership and warranty capability	The Tenderer must hold active, premium / certified installer partnership status with a major, globally recognized structured cabling manufacturer. The Tenderer must be fully authorized by the manufacturer to issue a certified **10-year extended product and applications performance warranty** covering the entire proposed Cat 6A shielded copper and OM4 fibre installation.	
2. Operational experience	The Tenderer must have a minimum of **five (5) years** of continuous operation in providing enterprise-grade structured cabling network deployment, fit-out services, and server room infrastructure construction in Hong Kong.	
3. Relevant project track record	The Tenderer must have successfully completed a minimum of **three (3) local projects** of a similar nature and scale (grade-A commercial office or high-density data centre / server room structured cabling deployments) within the past five (5) years in Hong Kong.	

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4. Dedicated on-site project management	The Tenderer must assign a **dedicated, full-time PM** exclusively to the Services. This PM must be stationed on-site throughout the Contract period and cannot be shared with or assigned to any other project simultaneously.	
5.Calibrated testing equipment access	The Tenderer must possess or have direct legal access to industry-standard copper analytical test equipment. The vendor must guarantee that all copper runs will be tested using a **currently calibrated Fluke networks cable analyser** (or equivalent) configured specifically for Cat 6A shielded standard frequency sweeps.	

Part 2: Company Background & Cloud Credentials

Please provide details of any hardware, installation, or manufacturer partner certifications currently held by your company (with special focus on high-performance Class F / Category 6A copper systems, OM4 optical networks, and server room facilities engineering). For each partnership, state the significance for this project and the consecutive years your company has maintained enlistment.

Certified Partnership (e.g., Premium Installer, Certified Tier-1 Integrator)	**Certified Period (From/To)**	**Significance for this Structured Cabling & Server Room Project**

Tenderers must also attach copies of corporate certifications demonstrating that the manufacturer or installer processes comply with the following international quality controls: **ISO 9001**. Additionally, the Tenderer must note if their chosen manufacturing partners maintain a published **Environmental, Social, and Corporate Governance (ESG) report** natively on their public corporate portal.

Part 3: Past Case Reference

Please briefly describe past reference cases similar to the nature and scope of this project (specifically enterprise multi-floor commercial headquarters, high-density server room rack builds, strict data/power path segregation distribution, and calibrated Fluke Cat 6A shielded testing certification). For each case, please detail the technical scope, node counts, client name, contact person, and contact telephone number for verification.

Reference Client	**Project Period**	**Technical Scope and Implementation Details (Include Node Counts, Containment Types, and Testing Standards Met)**	**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., BICSI RCDD, Certified Manufacturer Installer, ITILv4, Safety Officer)**	**Years of Relevant Experience**

Part 5: Details of Design and Technical Implementation

Please describe in detail your technical solution design, physical configuration, and equipment selection blueprints for this project in terms of system function, bandwidth capacity, fire safety, path segregation, long-term durability, and facility availability. The Tenderer must explicitly address how they plan to design, deploy, and guarantee the following components:

1. **Server Room & Hub Room Hardware Architecture:** Detailed layout approach for 42U Cable Racks (800mm width) and Server Racks (600mm width). Specify framework static loads ($\geq$ 1000kg), unit marking alignment, lockable side panels, and integration of front/rear perforated split doors with smartcard handle locks matching existing site credentials. Address interior rail sets (200mm front set back / 700mm locked rail-to-rail gap).

2. **Power Distribution & Environmental Safeguards:** Layout of vertical 20-way metered 13A UK PDUs and 1U ATS. Execution plan for standalone 3kVA/2.7kW double-conversion online pure sine wave 2U UPS modules deployed with Network Management Cards (NMC3) for secure browser tracking across all racks. Configuration of the IP-enabled Environmental Monitoring System (EMS) via mobile applications and sensing relays.

3. **Overhead Containment Pathways (Cable Ladders):** Implementation of 18"W × 1.5"H black rectangular steel tubing runway supported every 5' to hold up to 132 lb/ft load limits, detailing direct routing above racks, UPS assets, and structural plywood backboards.

4. **Inter-Floor Fibre Optic Backbone Infrastructure:** Complete layout plans for pulling dual 12-core OM4 $50/125\mu$m multimode riser-rated (OFNR) cables inside flexible conduits along separate pathways through the ELV data trunking. Specify component performance criteria

(maximum attenuation ≤ 3.0 dB/km at 850nm / ≤ 1.0 dB/km at 1300nm). Detail push-pull uniboot patch cords and 1U sliding-drawer enclosures supporting up to 96 fibre lines per 1U space with integrated fusion splice cassettes.

5. **Horizontal Copper Distribution Network:** Sourcing and containment configuration of Category 6A S/FTP Purple LSOH copper balanced twisted-pair cables supporting a total network footprint of **600 physical endpoints**. The Tenderer must explicitly address how their technical solution handles the requested node configuration:

    I. **Workstation / General User Data Ports**
    II. **Wireless Access Points (Wi-Fi)**
    III. **Security / CCTV / ACS**
    IV. **IoT / EMS**

6. **Component-Level Premium Electrical Transmission performance:** Explicitly confirm compliance with the worst-case 100-meter electrical parameters and transmission bandwidth reaching a minimum frequency of 850 MHz to prevent noise anomalies:
    I. *Max Insertion Loss:* ≤ 47.1 dB at 600 MHz
    II. *Min NEXT performance:* ≥ 66.7 dB at 600 MHz
    III. *Min Power Sum NEXT:* ≥ 63.7 dB at 600 MHz
    IV. *Min Return Loss:* ≥ 17.3 dB at 600 MHz

7. **Contact Geometry and PoE Durability:** Technical description of the Category 6A shielded outlets featuring a patented curved or "crowned" contact shape designed to prevent permanent deformation under mechanical stress and protect mated pin connections from PoE mating arcing wear under load.

Part 6: Proposed Project Implementation Plan

Please provide a comprehensive project master installation plan, supplemented with Gantt charts, detailing the execution steps, task breakdowns, resource allocations, buffering matrices, timelines, and technical dependencies.

The submission **must explicitly address deployment plans to manage a highly compressed, non-negotiable execution timeline** based on a target **Contract Award date at the mid of September 2026**, on-site physical cabling mobilization in **late September 2026**, and **100% project completion and handover in late November 2026** without delay.

Tenderers must structurally outline their execution methodology across the following mandatory operational requirements:

6.1 Full-Time Dedicated On-Site Project Manager (PM) Mandate

The Tenderer must provide a detailed resource management strategy confirming that the assigned, certified Project Manager (PM) will be **100% dedicated to this project and physically stationed on-site full-time** throughout the entire construction footprint. The PM's primary responsibilities shall include:

- **Multi-Party Communication Protocols:** Serving as the central, single point of contact (SPOC) to orchestrate daily technical briefings and resolve structural interface conflicts with HSITPL, the main contractor, the professional design team, and the physical security and AV trades.
- **Site Interface Management:** Coordinating real-time site access dependencies directly with HSITPL's nominated representatives and managing spatial boundary clearances with adjacent

facility installations.

- **Consultant Verification Liaison:** Directly managing on-site quality benchmarks and physical checkpoints in tandem with the HSITP IT Infrastructure Team, who will oversee execution progress, respond to written Requests-for-Information (RFIs), and audit all mandatory technical submittals.

6.2 Critical Acceleration & Procurement Lead-Time Buffering

To eliminate the risk of late-stage delivery failures under the accelerated timeline, the full-time PM must implement an aggressive supply chain management matrix:

- **Immediate Stock Lock-In:** Upon contract award in late September 2026, the contractor must execute immediate parts verification and lock down factory orders for all long-lead items, including server/cable cabinets in standard RAL-9005 dark finish, 3kVA UPS modules, OM4 fibre kits, and Purple Class F Category 6A Shielded cables.
- **Continuous Logistics Verification:** The PM must conduct weekly log updates and systematic status checks with all hardware suppliers to dynamically verify that early component delivery dates remain valid, proactively adjusting shipping pipelines to prevent site delays.

6.3 Phased Milestone Execution Blueprint

The proposed implementation roadmap must be aligned with the following time-bound phases:

Phase 1: Project Initiation, Onboarding & Procurement (September 2026)

- **Timeline:** Initiated immediately upon formal contract award at the mid of September 2026.
- **Core Tasks:** Total mobilization of the dedicated on-site PM, establishment of multi-party communication matrices, architectural concept review, and formal submission of all initial document formats, product lists, and technical submittals to the IT Consultant for approval.
- **Material Buffering:** Finalizing manufacturing pipelines and bulk staging of all primary containment, heavy rack enclosures, copper reels, and fibre spools in secure local storage hubs.

Phase 2: Site Preparation, Spatial Audits & Heavy Containment (September 2026)

- **Timeline:** Execution through September 2026, preparing the physical site layer ahead of cable pulling.
- **Core Tasks:** High-fidelity site acceptance audits of architectural layout plans and rack elevations shared by HSITP. Complete assembly and physical mounting of the 42U Cable and Server Racks, ensuring front equipment rails are set back exactly 200mm and rear rails are locked at 700mm.
- **Pathway Construction:** Installation of the $18"W \times 1.5"H$ black rectangular steel tubing Cable Ladders supported at maximum $5'$ intervals spanning directly above all equipment frames, UPS bays, and grounding plywood backboards.
- **Earthing Setup:** Supply, placement, and bonding of the main server room earth ground busbar, configuring the framework to support independent grounding runs for all structural assets.

Phase 3: Accelerated Cabling Pulling & Technical Termination (Late September 2026 – October 2026)

- **Timeline:** Commencing on-site cable pulling in late September 2026 with 100% completion of physical termination by the end of October 2026.
- **Core Tasks (Fibre backbone):** Pulling dual 12-core OM4 $50/125\mu$m multimode riser-rated fibre lines through independent separate path channels covered with flexible conduit inside the ELV trunking. Complete top-of-rack terminations into 1U sliding enclosures via integrated fusion splice cassettes and LC connectors.
- **Core Tasks (Copper horizontal):** Pulling and deploying all 600 nodes of Category 6A S/FTP Purple LSOH station lines. Technical termination of drops onto high-performance Category 6A

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shielded outlets with single-handed spring doors and matching patch panel ports.

- **QC Enforcement:** The full-time PM must conduct daily site inspections to ensure strict compliance with segregation rules: data paths must maintain a 50mm to 100mm physical separation interval from sheathed power cords, travel through separate desk legs, and utilize solid metal plate separators anywhere they share a single cable manager. Tenderers must guarantee a zero-tolerance policy for loose or exposed conductors.

Phase 4: Testing, Commissioning, Labelling & Handover (November 2026)

- **Timeline:** Commencing November 1, 2026, with absolute **Practical Completion and Handover achieved in late November 2026**.
- **Core Tasks:** 100% end-to-end certification sweeps witnessed by HSITP IT Infrastructure team. Execute standard-compliant fibre bidirectional power meter tests matching ANSI/TIA/EIA-568-B.3 parameters, alongside 10-parameter copper validation sweeps using calibrated Fluke networks cable analysers (or equivalent). Any failing runs must be replaced and re-tested immediately at zero additional cost.
- **Final Deliverables:** Enforcement of the 6-tier RJ45 functional colour matrix (blue, white, yellow, green, red, orange) and dual-layer engraved plastic and turn tell labelling. Delivery of concise English-language as-built documentation packs (floor maps, patching spreadsheets, serial lists, third-party Intertek reports) and the signed **10-year manufacturer system assurance warranty** to achieve formal project sign-off.

Part 7: Project Management and Quality Assurance

With reference to recognized project management frameworks (e.g., PMP, PRINCE2) and IT technical implementation standards (e.g., ITILv4), describe how the execution quality, site safety, and physical deployment will be managed, audited, and controlled to ensure absolute client acceptance of all system assets:

1. **Rigorous Quality Control (QC) for Cable Routing & Power Segregation:** Detail your internal site audit protocols to systematically enforce the following technical parameters during daily cable routing:
    - **Zero Overlap:** Absolute prevention of data cables entering or overlapping onto electrical trays.
    - **Pathway Separation:** Maintenance of a continuous 50mm **to** 100mm **physical separation interval** between data lines and sheathed power cables across all common raceways.
    - **Desk Leg Segregation:** Isolation of parallel data and power lines by running them through entirely separate leg paths inside furniture risers or desk spines.
    - **Metal Separators:** Mandatory installation of continuous metal plate separators anywhere data and power channels are forced to share a single cable manager enclosure.

2. **Workmanship & Loose Conductor Zero-Tolerance Policy:** Details of internal supervisory containment checks ensuring zero loose or exposed conductor lines across the entire office fit-out and server room footprint.

3. **Earthing Infrastructure Quality Assurance:** Audit processes to verify that every patch panel is individually bonded via a 12 AWG **green grounding wire** from its dedicated lug to RBB and that all racks/ladder runways use continuous wire bonding back to the common building earth ground busbar.

4. **Functional Termination Colour Matrix Governance:** Quality checks to ensure that the fields match the required colours without exception:
    - **Blue:** Workstation / General Data Port | **White:** Wireless Access Points | **Yellow:** Security / CCTV / ACS
    - **Green:** AV Drops | **Red:** Inter-Rack Links | **Orange:** IoT / EMS Nodes

5. **Parameter Copper Link Certification:** Testing protocols using calibrated Fluke analytical gear to capture and log database records for: *Attenuation, Capacitance, Ambient Noise, Wire Map, Impedance, Cable Length, Resistance, NEXT, FEXT, and Propagation Delay*. Detail your prompt replacement and re-testing workflow for any lines failing standard parameters at zero cost.

6. **Dual-Layer Asset Labeling Framework:** Implementation plan for installing engraved plastic labels on all faceplates and patch panels combined with wrap-around Turn Tell identity tags on physical cable jackets to deliver unique, end-to-end circuit mapping.

7. **UAT & O&M Manual Handover:** Detailed guidelines for final inspection walkthroughs with the HSITP IT Infrastructure Team. Provide a sample template index of your final O&M documentation pack, covering as-built CAD drawings, patching tables, circuit records, third-party Intertek component reports, and the final certified **min 10-year manufacturer system assurance warranty**.

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