ASTRONOT

Answer to Big Company

RFP for the Low-cost CubeSat Constellation for Global IoT Connectivity

Submitted to:
Big Company LLP
Singapore

Attention:
Mr Bruno Destrez
Category Buyer
E-mail: bdestrez@gmail.com

Submitted by:
AstroNot SA
Japan

Proposal Manager:
Davia Franceschini

VOLUME 3 – COST PROPOSAL

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Contents

1 Introduction

AstroNot SA is proud to submit this technical proposal for a low-cost CubeSat constellation providing global IoT connectivity. This document constitutes the cost proposal of AstroNot's response to the request for proposal entitled "Low-cost CubeSat Constellation for Global IoT Connectivity".

2 Financial information

The total Fixed Price in 2024 economic for the Low-cost CubeSat Constellation for Global IoT Connectivity is **$90,647,814.16** including a **5%** contingency fee and a **10%** margin. AstroNot commits to return the contingency to Big Company at the end of the project in case that it was not used. The prices included in this document are valid from the **November 22, 2024**, until **March 24, 2025** (submission date + 122 days).

2.1 Project breakdown costs

2.1.1 Design costs

This following table outlines the design costs:

Identifier	Phase	Type of expense	OBS breakdown	Cost ($)
3.1.1.1	A	Labor	Project Management (45.6%), Design (54.4%)	887,500.00
3.1.1.2	B	Labor	Project Management (45.6%), Design (54.4%)	2,450,000.00
3.1.1.3	B	Group IB (35%)	/	700,000.00
3.1.1.4	B	App4Space (35%)	/	70,000.00
3.1.1.5	C	Labor	Project Management (41.6%), Design (58.4%)	3,767,500.00
3.1.1.6	C	Group IB (65%)	/	1,300,000.00

3.1.1.7	C	App4Space (65%)	/	130,000.00
Total Design cost				**9,305,000.00**

Table 1: Design breakdown costs

2.1.2 Manufacturing costs

This following table outlines the manufacturing costs:

Identifier	Phase	Type of expense	OBS breakdown	Cost ($)
3.1.2.1	D	Labor	Project Management (43.6%), Design (8.5%), AIT (47.9%)	14,575,750.00
3.1.2.2	D	Procurement	/	7,152,994.23
Total manufacturing costs				**21,728,744.23**

Table 2: Manufacturing breakdown costs

The satellite unit production cost is $310,410.63 including the materials.

2.1.3 Launch costs

This following table outlines the cost of shipping the CubeSats to the launch site and the cost of lunch:

Identifier	Phase	Type of expense	OBS breakdown	Cost ($)
3.1.3.1	E	Labor	Project Management (72.4%), Launch & Deployment (27%), Operational services (0.6%)	4,169,450.00
3.1.3.2	E	Shipping (inc. insurance)	/	1,050,000.00
3.1.3.3	E	Launch strategy 1 (SpaceX)	/	2,122,092.00
Total launch costs (with Launch strategy 1)				**7,341,542.00**
3.1.3.4	E	Launch strategy 2 (SpaceX & ISRO)	/	6,063,120.00
Total launch costs (with Launch strategy 2)				**11,282,570.00**

Table 3: Launch breakdown costs

The base line price includes the launch strategy 1. The launch strategy 2 is an option. The selection of the launch strategy 2 will result in an additional charge of 3,941,028.00 $.

2.1.4 Operations costs

This following table outlines the operations cost:

Identifier	Phase	Type of expense	OBS breakdown	Yearly Cost ($)	Total phase cost ($)
3.1.4.1	F	Labor	Project Management (13.8%), Operational services (86.2%)	4,135,200.00	28,946,400.00
3.1.4.2	F	Ground Stations leasing	\	1,087,500.00	7.612.500.00
3.1.4.3	F	Group IB solution maintenance	\	500,000.00	3,500,000.00
3.1.4.4	F	App4Space solution maintenance	\	30,000.00	210,000.00
Total operations costs				**5,752,700.00**	**40,268,900.00**

Table 4: Operations breakdown costs

2.2 Project recurring and non-recurring costs

This following table outlines the recurring and non-recurring costs:

Company	Total for non-recurring costs ($)	Total for recurring costs ($)	Total per company ($)
AstroNot	7,105,000.00	65,629,186.23	72,734,186.23
Group IB	2,000,000.00	3,500,000.00	5,500,000.00
App4Space	200,000.00	210,000.00	410,000.00

Table 5: recurring and non-recurring breakdown costs

2.3 Project founding profile

This following table outlines the project's year by year founding profile:

Year	Percentage of Total (%)	Payment amount to AstroNot ($)
T0	7.08	6,420,450.00
T0 + 1 year	4.72	428,030.00
T0 + 2 years	16.54	14,992,833.52
T0 + 3 years	8.27	7,496,416.759
T0 + 4 years	21.56	19,545,625.89
T0 + 5 years	18.19	16,487,761.6
T0 + 6 years	7.97	7,225,914.6
T0 + 7 years	4.09	3,704,738.8
T0 + 8 years	4.09	3,704,738.8
T0 + 9 years	2.55	2,315,461.75
T0 + 10 years	0	0
T0 + 11 years	4.94	4,473,572.45
Total	100	90,647,814.16

Table 6: Year by year founding profile

2.4 Travel expenses

A total of 20 trips are planned (quarterly for phases A/B/C and every 6 months for phases D/E) for reviews and follow-up meetings. For every trip 3 persons (Project manager, Technical lead, Product and Quality assurance specialist) will travel from Japan to Singapore for 2 days. No visa is required for the travel to Singapore. The following table outlines the travel costs:

Type of expense	Amount per person ($)
Airplane tickets	1,500
Hotel	500
Local Transport	400
Food	600
Total per person	3,000
Total travel expenses	180,000

Table 7: Travel expenses

2.5 Camera option

The camera option costs an additional $3,300,000.00. This option makes the price of the solution $94,247,814.16.

2.6 Assumptions and methodologies

For the bellow costs, quotes were obtained for the cost of procurement, shipping, launch and travel expenses. The price of the Ground Stations and subcontractors is based on analogy models from previous projects. Finally, the bellow daily rates were assumed as it is standard within the aerospace industry:

Job role	Daily rate inc. 24% overhead ($)
Project Manager	800
Risk Manager, QA Specialist, Technical Lead, Cost Manager, Senior Systems Engineer, Ground Station Architect, Operations Manager	750
Customer Liaison Officer	700
Certification & Compliance Officer, Financial Analyst, Engineer, AIT Coordinator, Quality Control Inspector, Data Analyst, Customer Support & Reporting Specialist	600
Developer, Manufacturing supervisor	500
Procurement specialist	550
Technician, Operator	400

Table 8: Daily rates

3 Pricing model

AstroNot proposes a pricing model with three subscription plans to accommodate a wide range of client needs:

Plan	Price per device			Data available (per device)
	1st year (Degraded Operation)	2nd year (Degraded Operation)	Full operation	
Classic	**$1 / month**	**$2 / month**	**$3 / month**	1GB
Advanced	**$3 /month**	**$6 /month**	**$10 /month**	5GB
Premium	**/**	**/**	**$30 /month**	Unlimited

Table 9: Subscription plans

The optional camera is expected to make a 5-million-dollar cash flow per year. Below are the expected performances within the 7-year lifetime of the constellation.

Year	Number of devices	Revenue from Classic ($)	Revenue from Advanced ($)	Revenue from Premium ($)	With option ($)	Total Revenue ($)	Total Revenue with Option ($)
Year 1	10 000	5,000.00	15,000.00	/	/	20,000.00	20,000.00
Year 2	50 000	50,000.00	150,000.00	/	/	200,000.00	200,000.00
Year 3	100 000	1,200,000.00	4,000,000.00	12,000,000.00	5,000,000.00	17,200,000.00	22,200,000.00
Year 4	150 000	1,800,000.00	6,000,000.00	18,000,000.00	5,000,000.00	25,800,000.00	30,800,000.00
Year 5	225 000	2,700,000.00	9,000,000.00	27,000,000.00	5,000,000.00	38,700,000.00	43,700,000.00
Year 6	292 500	3,510,000.00	11,700,000.00	35,100,000.00	5,000,000.00	50,310,000.00	55,310,000.00
Year 7	380,250.00	4,563,000.00	15,210,000.00	45,630,000.00	5,000,000.00	65,403,000.00	70,403,000.00
Over 7 years	/	13,828,000.00	46,075,000.00	137,730,000.00	25,000,000.00	**197,633,000.00**	**222,633,000.00**

Table 10: Pricing model