

AVIATION WEEK

Program Excellence Awards 2022

November 2, 2022

The Watergate Hotel • Washington, DC

Nomination Form

INTELLECTUAL PROPERTY

(This section must be signed)

Individuals **outside your company**, including the companies listed above and other third parties, potentially including your competitors and others in your industry, may receive and/or review award submissions. All information submitted should address the program's management, leadership, and processes in a manner that you are comfortable sharing with third parties freely and without restriction, and may not include any classified or proprietary information or materials. Do not include any materials marked Confidential or Proprietary or bearing any similar legend. All responses and other submissions, whether in whole or in part ("Submissions"), shall be deemed not to be confidential, proprietary, and/or nonpublic information of any sort for any purpose.

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Thank you for participating,



Gregory Hamilton
President
Aviation Week Network

Acknowledged, agreed, and submitted by



Nominee's Signature

____5/4/2022____
Date

Nominee's Name (please print): **KENNA MARCELO**

Title (please print): **SR SPEC, PROJECT MANAGEMENT**

Company (please print): L3Harris Technologies, Inc.

NOMINATION FORM

Name of Program: **Philippines C4ISTAR**

Name of Program Leader: **Kenna Marcelo**

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Customer Approved

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Supplier Approved (if named in this nomination form)

- Date: _____
- Supplier Contact (name/title/organization/phone): _____

**PLEASE REFER TO PROGRAM EXCELLENCE DIRECTIONS
AS YOU COMPLETE THIS FORM.**

EXECUTIVE SUMMARY: Make the Case for Excellence *(Value: 10 pts)*

What is the vision for this program/project? What unique characteristics and properties qualify this program for consideration?

(12 pt. Times New Roman) LIMIT YOUR NARRATIVE TO THIS PAGE.

Despite several challenges, the Philippines C4ISTAR Team successfully completed key program deliveries including site installations across the Philippines and the Final Operational Capabilities Demonstration with key end user leadership. Successfully navigating end-user driven changes and delays as well as logistical challenges driven by COVID-19, required the team to focus on early risk identification and mitigation and working with the customer to develop a consistent and collaborative approach. The team's success is an example of the importance of keeping all stakeholders engaged and how collaboration plays a key role in problem solving. It is meant to inspire other project managers to develop a more efficient and effective team by working as one and understanding different functional groups' motivators and priorities.

Do not exceed 10 pages in responding to the following four descriptions; allocate these 10 pages as you deem appropriate, but it is important that you respond to all four sections. DO NOT REMOVE THE GUIDANCE PROVIDED FOR EACH SECTION.

VALUE CREATION (Value: 15 pts)

Please respond to the following prompt:

- Clearly define the value of this program/project for the corporation
- Clearly define the value of this program/project to your customer
- Clearly define the value of this program/project to members of your team
- Clearly define the contribution of this program/project to the greater good (society, security, etc.)

The Armed Forces of the Philippine's Modernization efforts started in 1995 through a Modernization Act, it was amended in 2012 with the aim to start building a defense system capable of addressing outside and territorial threats. The revised AFP modernization program is divided into three horizons. The Philippines C4ISTAR was awarded to L3Harris in 2018 under a Foreign Military Sales (FMS) contract between the U.S. Government through NAVWAR and the AFP as part of Horizon 1 and 2.

The Philippines C4ISTAR program was awarded to L3Harris in 2018 under a Foreign Military Sales (FMS) contract between the U.S. Government through NAVWAR and the Armed Forces of the Philippines (AFP). The end-user (AFP)'s goal is to modernize its communication infrastructure for the purpose of improving its defense capabilities. L3Harris was the prime contractor providing design and development of the upgraded communication infrastructure, all material procurement and logistics, installation in the Philippines as well as System Operational Verification Testing and Final Operational Capabilities Demonstration. The system provides operational data capability to AFP's individual/joint services command centers and service headquarters.

The program scope and structure required the program team not only to navigate the needs of the customer that was providing the contract (NAVWAR), the end user ultimately using the system (AFP) but also multiple L3Harris subcontractors providing key capability on the program and the AFP's subcontractors providing onsite construction.

All command centers, upon completion had a microwave backbone and/or Metro E service that will be used as the primary means of long-haul communications between sites with one (1) primary data center and one (1) backup, geographically redundant data center.

The Performance Work Statement (PWS) involved:

- Eleven (11) Unified Commands, eight (8) mobile sites with Flyaway Kits, four (4) Mobile C2 Centers, nine (9) Fixed Communication System (FCS) and seven (7) Major Services Sites.
- an IP Enterprise Network (Commercial Solutions for Classified Program (CSfC) standard) - 20+ switches, routers, load balancers, storage, firewalls and 100+ C2PC and admin workstations, VTC and VOIP systems.
- An IP Microwave network of twenty-six (26) links
- Eleven (11) Metro-ethernet connections
- Facilities and services including 19 diesel generators and 3 solar power systems, 14 environmental control units (ECU)
- Two (2) communication towers
- Three (3) Mobile C2 Shelters designed and developed to fit on the AFP's existing KM450 vehicles.
- Five (5) private fiber optic cabling between operation and command centers
- Eleven (11) VSATs and two (2) satellite hubs

A program and customer team of various cultural backgrounds and personalities, geographical and time zone differences and differing priorities can make a complex program such as Philippines C4ISTAR challenging. In order to efficiently navigate these challenges, the team went back to the basics and employed fundamental Project Management principles to enable the team to better control scope, ensure accountability and manage changes and stakeholder expectations effectively.

METRICS (Value: 15 pts)

Please respond to the following prompt:

-
- What are your predictive metrics?
 - How did you perform against these metrics?
 - How do your predictive metrics drive action toward program excellence? Please provide examples.
- (12 pt. Times Roman)

To navigate through end user driven changes and delays as well as logistical challenges due to the pandemic, we focused on advanced risk identification and mitigation and worked closely with the customer and end user to develop a consistent, collaborative structured approach. In addition, structured documentation was put in place to capture these end user changes in real time.. Due to the scale, complexity and other external factors, amore agile approach to change management was required.

Advanced Risk Identification

- Construction Delays

The team identified construction delays as a critical risk early in the program. The two (2) data centers and four (4) command centers where L3Harris would be installing equipment were still under construction during contract award.. While the original construction timeline was within the program schedule; the contractor completing the construction was outside the program and therefore not within any influence of L3Harris nor NAVWAR. Once the first deadline was missed, the team quickly arranged a meeting with the end-user including the third-party contractor to monitor the progress and identify a plan to better manage impacts to the program. To assist the AFP's project management team (who was responsible for third-party contract), L3Harris facilitated meetings on behalf of NAVWAR with the AFP and its building contractor to better identify and mitigate impacts of these parallel activities to the Philippines C4ISTAR program. In addition, regular monitoring of the under-construction sites was put in place to realistically and accurately track the progress; site visits were scheduled and conducted in parallel to completing the System Operational Verification Tests (SOVTs) activities in order to minimize cost and schedule impacts as well as increase program situation awareness.

The construction of the building and utilities was delayed by over a year and its completion continued to lag throughout the entire in-country implementation phase of the program. Given that construction was occurring at one of the datacenters, all other remote sites communications capability were impacted and it was critical to program success that L3Harris work with all stakeholders to resolve. To accomplish this L3Harris worked with NAVWAR and the AFP to identify both a nearer term solution to enable the

program team to continue making progress as well as a longer-term solution for the final datacenter equipment and location. In order to set up a series of decision points with NAVWAR and the AFP, the team initiated a survey of location options for the datacenter equipment. The following were some of the actions taken by the team to ensure the progress on the implementation of the different subsystems remain unhampered.

- An old radio room was identified by L3Harris and the AFP as the temporary location of the main data center. The old radio room contained old and unused racks and equipment which needed to be removed carefully first.
- The room had no power nor cooling capability that meets the requirement of our data center. The team conducted electrical and mechanical surveys and studies to retrofit the room with the power and cooling system that will satisfy the equipment needs.
- The team worked together to develop a statement of work for our electrical subcontractor, issue a change order and complete the requirement within 15 days. This ensured that the program would be completed within the program schedule.
- A biometric system was deployed in addition to sealing the old room and bringing in temporary furniture.



Status of new data center on Day 1 of our in-country implementation phase



The temporary location for the data center

- Change Requests Handling

As the team moved from design activities to in country activities additional control documentation outside of the baseline program scope was identified including documentation required for equipment accountability and documentation to capture real time end-user change requests as installations completed. Several examples of the documentation are discussed below and while relatively straightforward for a single equipment installation, when spanned across multiple geographically dispersed sites within the Philippines all with different requirements, multiple subcontractors and months of program schedule, the impact can quickly become cumbersome if controls are not put in place. Several examples that the team implemented are outlined below.

- Notice to proceed – a document from the end-user notifying the customer and the prime (L3Harris) that the site is in an acceptable condition and meets the install conditions. No installation on an under-construction site can be started without a Notice to Proceed with the AFP clearly mentioning the readiness of the site including the safety and security of both our subcontractors and equipment. This helped the end-user become more accountable to the delays caused to the program of the buildings under construction.

- Visual Inspection – the end-user requires an inspection of the equipment upon arrival in country. To document the event, a visual inspection document was developed in order to ensure the equipment passed the end-users requirements, visually. To ensure commitment, increase program awareness and accountability specially from on-site AFP personnel, they were invited to attend the visual inspections and have taken an active role in inventory upon arrival of the equipment in country.
- Delivery notes – since delivery of the equipment requires delivery from a rented warehouse to multiple location all over the Philippines, this document recorded the dates and actual recipients and ensured equipment accountability.



DEALING WITH PROGRAM COMPLEXITY (VOLATILITY, UNCERTAINTY, COMPLEXITY, AMBIGUITY, OR VUCA) (Value: 25 pts)

Please respond to the following prompts:

- 10 pts: Describe areas of VUCA faced by your program and why.
- 15 pts: Explain how your team responded to these challenges.

(12 pt. Times Roman)

A common feature of programs of this scale is the high occurrence of changes that require not only immediate response but also understanding of strategic and longer-term impacts. The changes came from multiple sources including programmatic issues as described above, but also from environmental and cultural factors that required the team to think differently in order to accomplish program tasks.

The team completed site surveys, equipment shipment, installation, training and testing while navigating ever changing COVID restrictions across multiple countries, natural disasters as well as cultural differences. The following provide several examples of the team's solution to each of these potential issues.

- Natural disasters: Originally, the program was to the installations within the National Capital Region and the South Luzon, however, due to a volcanic eruption, the team had to quickly change plans to start begin installations in the South requiring significant logistics and planning efforts to ensure no impact to the overall schedule.
- COVID-19 Impacts: The team employed a COVID-19 entry restriction tracker to monitor the entry and travel requirements within the Philippines both to ensure the team's health and safety but also to mitigate impacts to the overall program schedule.
- Use of secured voice and video teleconferencing modes of communication, virtual site inspections were also practiced to reduce the delays due to travel restrictions as well continue to provide guidance on operation and maintenance activities.
- Equipment Shipment – In order for the required inspections to commence and prevent delays to the program schedule, the team facilitated the virtual visual inspections with DCMA and the Technical Inspection team from the end-user upon delivery.



- Training – The team, including multiple subcontractor teams, was able to provide training to 80 students over a 13-week period covering key Networking capabilities, use of SATCOM equipment, Microwave Equipment, and MCC and FAK training. The end user training in the Philippines was successfully delivered by employing a hybrid-approach where local representatives provided aid to online-teachers. Training a class size of 20 students many of whom did not begin the class with required technical prerequisites and whose native language is not English is difficult in the best of circumstances. With the added constraints brought about by the pandemic including social distancing of 2 meters (6 feet) in place in addition to wearing of face masks and face shields, the difficulty increased exponentially. By employing technically adept local support who spoke the native language and were able to act as a bridge between the Subject Matter Experts (SME) who were providing the training virtually, significantly reduced the risk of students not comprehending or absorbing the subject matter.



ORGANIZATIONAL BEST PRACTICES AND TEAM LEADERSHIP (Value: 35 pts)

Please respond to the following prompts

- 15 pts: Describe the innovative tools and systems used by your team
- 10 pts: Define how you developed, led and managed people
- 10 pts: How did you leverage skills and technologies of your suppliers?
(12 pt. Times Roman)

The AFP's organization is subject to continual changes in leadership which impacts the program in a multitude of ways. Since the contract award, there have been three (3) J6's Chief and two (2) Project Management Team Chairman. Given this program was a significant initiative for the end-user impacting multiple organizations, a more assistive approach was required to ensure success despite the leadership changes. The team conducted onboarding sessions twice due to change in AFP leadership including conducting project status presentations to all eleven (11) unified commands and three (3) major services. The team used this request as an opportunity to get as many people as possible in the organization informed and ready for the system's operation and sustainment. L3Harris also facilitated question and answer portions during these briefings. This helped the AFP leadership and L3Harris have a better understanding of the gaps in the organization in terms of operating the system. The results were documented and shared with NAVWAR and the AFP for their consideration after the system handover.



In addition to these onboarding presentations, static displays and system demonstrations were used to promote the system and its eventual operational use.

The program remained on schedule by employing a more agile approach to managing change. The program was completed satisfactorily by implementing efficient communication, stakeholder management, ensuring an understanding of the end users culture and using change to create opportunities including using customer requested demonstrations as an opportunity to spread awareness of the system and capabilities.