AVIATION WEEK
PROGRAM EXCELLENCE AWARDS

INTELLECTUAL PROPERTY

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Thank you for participating,

Gregory Hamilton
President
Aviation Week Network

Acknowledged, agreed, and submitted by

Paula Miziara 6/30/2026

Nominee's Signature Date

Nominee's Name (please print): Paula Miziara

Title (please print): Senior Program Manager

Company (please print): Honeywell Aerospace

NOMINATION FORM

Name of Program: Honeywell Avionics update for E190 Embraer Freighter Aircraft

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☑ Customer Approved

- Date: 6/27/2025
- Customer Contact (name/title/organization/phone): Marcelo Tocci / Program Director / Embraer / +55 12 98236-0057

☐ Supplier Approved (if named in this nomination form)

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

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

SECTION 1: EXECUTIVE SUMMARY

Make the Case for Excellence

Value: 10 points

Use 12 pt. Times Roman typeface.

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

[LIMIT YOUR NARRATIVE TO THIS PAGE.]

The E190 Embraer Freighter Aircraft Program, launched in early 2022, was conceived to meet the fast-growing global demand for express cargo delivery driven by the e-commerce growth experienced in the post-covid environment. By converting E1 passenger jets into freighter version, the program delivers significant operational advantages to Cargo operators: up to 40% more volume capacity and three times the range of typical large turboprop freighters, all while offering up to 30% lower operating costs than traditional narrowbody aircraft.

To enable this transformation, Honeywell played a key role by updating the EPIC Avionics software to support freighter-specific functionalities for the E1 platform. This required overcoming complex challenges: breaking down high-level requirements, addressing legacy hardware limitations, securing aircraft for certification flight tests, and delivering within an aggressive 18-month timeline to achieve TSO by December 2023.

Our responded with agility and innovation:

- **Internally:** We adopted a unified "one-team" execution strategy, minimizing handoffs, and streamlining systems integration across multi-site, multi-culture teams, including a high skilled Applications Engineering and Program Management teams co-located at Embraer's Campus.
- **Externally:** Collaboration with Embraer was elevated through continuous joint development and testing of mature requirements and product specifications.
- **Technically:** Creative engineering solutions overcame hardware limitations, minimizing rework and protecting the original certification schedule.
- **Customer Engagement:** Joint Build Wave Load testing was performed, enabling rapid issue resolution by both Engineering teams, resulting in a high-quality Red Label software acceptance by Embraer, before the final certification software.

This program didn't just deliver a software upgrade – it delivered proof that strategic collaboration between OEM and supplier can redefine the standards of avionics sustainment. By converting complexity into clarity, and requirements into results, the team delivered a clean Red Label software, fully accepted by the customer and integrated with zero findings – a clear testament to what focused, high-trust collaboration can achieve.

DIRECTIONS

- **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.
- Use 12 pt. Times Roman typeface throughout.
- Include graphics and photos if appropriate; do not change margins.

SECTION 2: VALUE CREATION

Value: 15 points

Please respond to the following prompt:

➢ **Clearly define the value of this program/project for the corporation; quantify appropriately**

The Primus Epic avionics suite is an advanced avionics solution developed by Honeywell, specifically tailored for use in Embraer aircraft platforms, including the Embraer 190 launched in 2004. This suite integrates a wide range of functions to enhance pilot efficiency, improve situational awareness, and ensure safety in flight operations.

Updating the Primus Epic for Embraer E1 platform, particularly in support of the E1 freighter conversion program, represents a strategic opportunity for Honeywell that goes far beyond a one-time technical deliverable.

From a partnership standpoint, it strengthens our longstanding relationship with Embraer by demonstrating our continued commitment to supporting the full lifecycle of their aircraft, including fleet evolution and aftermarket transformation. This collaboration positions Honeywell as a proactive and reliable partner capable of responding to real-world operator demands, market evolution and regulatory changes.

From a commercial perspective, the development and certification of this new load enables Honeywell to capitalize on growing aftermarket opportunities. As more E1 aircraft are converted for cargo operations, each unit represents a potential upgrade package. Embraer´s Freighter sales forecasted a market of 600 aircraft, with a potential of USD 3 billion, and reinforces our presence in the high-margin aftermarket segment.

Furthermore, this effort serves as a powerful proof point of Honeywell's technical capability, agility, and relevance in today's dynamic aviation landscape. Successfully delivering a tailored Avionics solution for a freighter application showcases our ability to adapt complex flight management systems and safety-critical software to new mission profiles, which is a competitive differentiator that can be leveraged across other OEMs and operators evaluating Honeywell as a trusted supplier for future upgrades, conversions, or platform integrations.

Investing in avionics software updates for the Embraer E1 Freighter program is not only a necessary enabler of operational and regulatory success but also a strategic move that amplifies Honeywell's brand value, customer loyalty, and growth potential in both the OEM and aftermarket domains.

➢ **Clearly define the value of this program/project to your customer**

The E190 Freighter program strategically positions Embraer to meet rising demand for air cargo transport worldwide, driven by the expansion of e-commerce and the need for faster, decentralized deliveries. With a projected market of approximately 600 aircraft in this segment over the next 20 years, Embraer is poised to capture significant value. The program also extends the lifecycle of the E-Jet fleet by 10 to 15 years, preserving asset value for existing aircraft owners and creating new revenue streams from aircraft conversions.

For the operators, the E1 Freighter offers major operational benefits, including 50% more cargo volume in its segment, three times the range of turboprop competitors, and up to 30% lower operating costs compared to traditional narrowbody freighters. These advantages enable more efficient logistics networks and faster delivery models, which are critical in the age of same-day and next-day shipping.

Delivering the EPIC load software on time and with high quality supported Embraer to perform first flight in April 2024 and get the triple full certification (FAA, ANAC and EASA) just 8 months later.

➢ **Clearly define the value of this program/project to members of your team; quantify if possible**

Updating the avionics software for a legacy platform like the Embraer E1 presented a unique professional challenge — and opportunity — for the Honeywell team. Technically, it allowed engineers to preserve and deepen their expertise on mature systems while adapting them to an entirely new operational profile. The task required balancing backward compatibility with modern cargo operations, refining legacy architectures, and ensuring safety-critical performance — all under certification scrutiny.

This real-world complexity became a training ground in agility. Teams worked within tight margins to deliver innovative solutions, often stretching the capabilities of the existing platform while maintaining certification integrity. These experiences sharpened core skills in systems integration, software adaptation, and certification planning — competencies directly transferable to next-gen programs.

Beyond the technical domain, the project became a catalyst for workforce engagement and talent retention. Local engineering teams embedded at Embraer remained connected to the aircraft's evolution, solving meaningful problems that tied their work directly to real-world outcomes. Meanwhile, the program environment fostered mentoring, systems thinking, and collaboration across generations and regions — reinforcing Honeywell's commitment to building deep expertise and a resilient, future-ready workforce.

➢ **Clearly define the contribution of this program/project to the greater good (society, security, etc.)**

The program modernizes the industry´s freighter fleet with the utilization of more fuel-efficient and right-size aircraft, supporting environmental goals. By enabling rapid and regional cargo distribution, especially in developing markets, it fosters regional economic development and logistics modernization.

From a product perspective, the required implementation of changes in environmental control for Freighter utilization , including additional checklists procedures and new CAS messages for Main Deck Cargo Door, Smoke Detection, Emergency Battery, and Cargo Air Management systems will increase flight safety and reduce pilot's workload, contributing to a safer and more efficient air travel.

Additionally, by enabling the conversion of in-service E1 aircraft into efficient freighters, the program reduces the need for new aircraft production, contributing to lower lifecycle emissions.

From a social perspective, this program included effective collaboration across diverse and globally distributed engineering teams, fostering cross-cultural technical integration and leveraging talent from multiple geographies to build a more inclusive and resilient workforce.

SECTION 3: ORGANIZATIONAL BEST PRACTICES AND TEAM LEADERSHIP

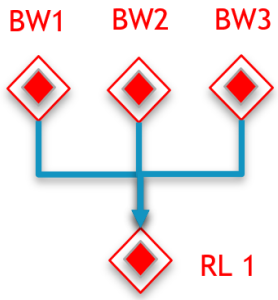
Value: 35 points

Use 12 pt. Times Roman typeface

Please respond to the following prompts:

- ***15 points:*** **Describe the innovative tools and systems used by your team, how they contributed to performance and why**

To ensure timely and high-quality delivery of the E1 Freighter load, the team implemented an innovative program management framework with a real 'one program team' approach with Embraer:

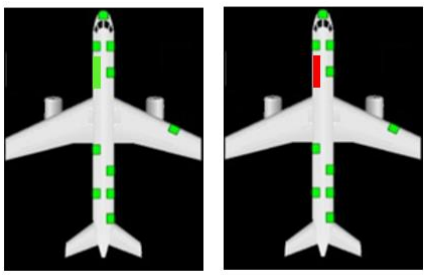


Build Wave Development Model: The new Avionics software was developed through a structured series of build waves releases, each serving as an incremental engineering load version to validate specific functions and features of the new software. These intermediate builds enabled continuous integration and early verification & testing of critical features and system behaviors, while making full use of resources and benches availability for tests. This methodology allowed the development team to significantly reduce technical risks and prevented unexpected findings from occurring during the final software integration activities. Eventually, this approach resulted in a high-quality software version to be flight tested and certified without corrections or rework.

Integrated Program Governance: Ensured a solid Program Management operating rhythm with weekly schedule reviews, tracked RAIL (Risks, Actions, Issues, and Lessons Learned), and facilitated milestone health checks to anticipate blockers.

Regular Change Control Board (CCB) and Joint CCB sessions helped contain scope creep and protected the program from late-stage disruptions. Regular joint meetings were held to review and validate any potential changes, ensuring that new items were not introduced without a thorough impact assessment on schedule and resources. These governance mechanisms proved essential to preserving program integrity and maintaining delivery commitments.

Enhanced Stakeholder Collaboration: Established enhanced internal communication routines (weekly team meetings) and customer touchpoints (bi-weekly reviews and bi-monthly Program planning workshops), which created transparency and enabled fast decision-making during the execution of each phase of the project. Honeywell´s Engineering leaders located in different countries traveled to Brazil to support planned joint system testing activities with Embraer team, allowing for rapid 'real time' issue resolution and ensuring Red Label 1 was delivered and accepted with zero findings. On top of that, the Program Management team embraced the Critical Chain methodology proposed by Embraer, which proved to be key for efficient schedule buffer creation and management.



MDCD STATUS: CLOSED MDCD STATUS: OPEN

Simulation and Early Validation: The Honeywell team proactively decoupled the Avionics software development from the Freighter aircraft readiness by performing early bench tests and system simulation. This allowed system validation to proceed in parallel with the required aircraft lay-up, ensuring Honeywell was prepared for the joint test windows regardless of external dependencies.

Creative Engineering Solutions: When the Avionics hardware throughput issues surfaced, the team implemented targeted architectural adjustments and optimized existing software pathways to overcome the limitations without requiring extensive redesign or delaying milestones. This would have a huge impact on the committed certification schedule. These actions transformed a highly constrained and ambiguous initiative into a high-performance program. The outcome was not only a technically robust solution delivered on schedule, but also strengthened trust and alignment with Embraer, setting a benchmark for future collaborative development efforts.

- ***10 points:*** **Define the unique practices and process you used to develop, lead and manage people?**

The Program cultivated a strong culture of collaboration through consistent engagement, distributed responsibility, recognition, team-spirit and real-time visibility into progress and risks. Internal teams operated under a unified execution strategy that emphasized cross-functional ownership and minimized handoffs. By working as one team across functions and regions, we maximized agility and team empowerment, while coaching leaders to operate in a flat, responsive structure aligned to program outcomes.

As the Program Manager, my MOS included weekly schedule and milestone reviews, ensuring all team members remained aligned with key deliverables and critical paths. These sessions also included risk reviews and RAIL (Risks, Actions, Issues, and Lessons Learned) tracking, which enabled early identification of potential blockers and proactive mitigation planning. This cadence was essential to maintain momentum and accountability across the execution lifecycle.

Honeywell's system leads also worked closely with Embraer throughout the development process, including co-located testing of build wave releases at Embraer´s benches. This proximity allowed both sides to identify and resolve issues quickly, avoiding delays and rework. The frequent technical interactions, especially during joint system tests in Brazil, created an environment of trust and transparency, resulting in the clean acceptance of Red Label 1 with best quality and zero findings—a direct outcome of shared ownership and mutual technical engagement.

- ***10 points:*** **How did you leverage skills and technologies of your suppliers?**

Although no external suppliers were involved in the avionics load update for the E1 Freighter, the Program team strategically leveraged Honeywell's extensive internal expertise and legacy systems knowledge. Cross-functional collaboration between software engineering, systems integration, and certification teams enabled the reuse of proven architecture and accelerated alignment on evolving requirements. This integration of internal capabilities helped minimize development cycle time while ensuring compliance with certification standards.

The team capitalized on mature internal tools and development processes to adapt existing software to the freighter configuration, maintaining consistency and reducing integration risks. Furthermore, early bench testing and simulation of avionics performance, conducted independently of aircraft modification timelines, allowed Honeywell to validate key functionalities in advance. This proactive approach reduced dependencies on aircraft-level milestones and ensured readiness for joint testing with Embraer.

While Honeywell was not directly responsible for managing external suppliers within the E1 Freighter program, our ability to operate autonomously and in parallel with aircraft modifications demonstrated technical agility and contributed to maintaining overall program schedule integrity.

SECTION 4: DEALING WITH PROGRAM COMPLEXITY

(VOLATILITY, UNCERTAINTY, COMPLEXITY, AMBIGUITY, or VUCA)

Value: 25 points

Use 12 pt. Times Roman typeface

Please respond to the following prompts:

- ***10 points: Describe UNIQUE areas of VUCA faced by your program and why. (Please avoid the issues surrounding Covid-19 pandemic, which was faced by all programs.)***

The E1 Freighter program presented a distinct combination of volatility, uncertainty, complexity, and ambiguity rarely encountered at this scale within legacy avionics updates.

Ambiguity & Uncertainty: As typically happens in the early stages of a new development, the initial requirements from the customer were often high-level, evolving, or incomplete. This led to shifting technical baselines and design ambiguity, particularly regarding freighter-specific functionalities being integrated into a pre-existing avionics architecture. These uncertainties demanded iterative alignment and close coordination with Embraer team to converge on a stable set of deliverables.

Complexity & Volatility: Integrating new freighter-related features into the legacy EPIC avionics software environment introduced technical complexity - especially related to data throughput, timing constraints, and certification requirements. Adapting legacy software to a new operational domain required deep system-level reengineering and risk mitigation across multiple subsystems. The program was governed by a highly compressed and non-negotiable timeline: 18-months Program, with nine months from the project kick-off to the Red Label software delivery. This timeline had no margin for delays, even from minor technical or coordination missteps.

- ***15 points:*** **Explain how your team responded to these challenges. What changes did you make, what were the results?**

The team responded to the VUCA environment with a combination of agile execution, governance discipline, sense of accountability, team spirit, and proactive stakeholder engagement.

The right engagement and motivation were built though the implementation of a robust Management Operating System (MOS), where program milestones status was reviewed, and critical paths recalculated to maintain alignment with the aggressive TSO certification schedule. This allowed the team to anticipate bottlenecks by improving predictability and resilience.

Communication was always perceived as key to our success, and it was implemented at multiple levels through weekly internal meetings, bi-weekly customer reviews, and bi-monthly Program planning workshops, creating a transparent and synchronized execution rhythm across stakeholders. This cadence enabled rapid decision-making, minimized delays in issue resolution, and ensured all parties had real-time visibility into program status.

By combining agile planning cycles, iterative system integration, rigorous scope control, and structured collaboration between Honeywell and Embraer teams, the Program team created an execution model that was both innovative and highly effective in encouraging teamwork and sense of accomplishment.

Additionally, the team's ability to adapt to new requirements and absorb lessons learned – such as the introduction of additional build wave and real-time resources reallocation – demonstrated resilience and continuous improvement. Ultimately, these practices not only ensure on-time, high quality delivery but also strengthened the team's capability to tackle future VUCA challenges with confidence.

SECTION 5: METRICS

Value: 15 points
Use 12 pt. Times Roman typeface

Please respond to the following prompts, where predictive metrics indicate items that provide a view of how yestrday's actions and today's actions will affect the future timeline, cost or other requirement.

Provide charts/graphs that illustrate performance to these metrics:

- **What are your predictive metrics?**

The program tracked two primary predictive metrics:
1. **Earned Value Management (EVM):** Used to monitor project performance in terms of cost and schedule adherence. EVM allowed the team to anticipate deviations early and implement corrective actions before they impacted delivery.
2. **Milestone Achievement Rate:** A milestone-based control system tracked key deliverables and phase completions, ensuring that planning and execution remained synchronized. Milestones were structured in three levels based on the criticality on the program schedule:
   - Level 1: Critical deliveries to the Customer, as Red Labels and FTSO submittal
   - Level 2: Internal critical deliveries prior to Level 1, as Red Labels and Documentation internal approvals
   - Level 3: Deliveries prior to Level 2, as Build Waves deliveries and documents submittal

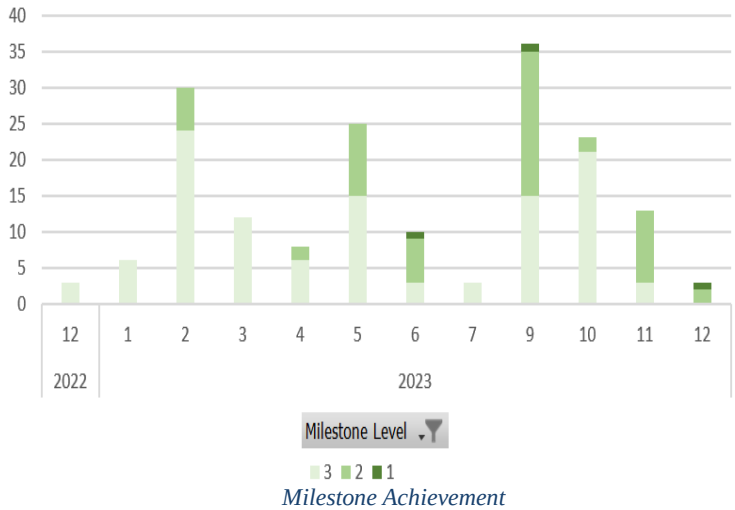
- **How did you perform against these metrics?**

1. **EVM remained SPI and CPI consistently close to 1 throughout the program**.

This performance is particularly significant given that the project was structured without dedicated schedule buffer. This meant that any deviation had to be absorbed within the core plan, requiring strict discipline in scope management, continuous risk assessment, and proactive decision-making.
Another remarkable result that made CPI positive was the productive savings claimed by the technical team that saved 7% of the total engineering hours estimated. This productive claim was only possible due to the team involvement on the program metrics that created a sense of responsibility on everyone involved with the program health.

2. **100% of program milestones were achieved on schedule, of a total of 70**

To achieve this result, milestones were closely monitored on a weekly basis during both internal and external meetings. With the 30-60-90 forecast overview of the upcoming milestones, we had time to proactively work on risk mitigation.
Build waves strategy proved to be an excellent strategy to keep fidelity on the milestones achievement while it permits flexibility in the scope of the software development for each build wave delivery. It represents the perfect union between the agility of software development practices and the fixed contractual milestones typical of a waterfall approach.



Milestone Achievement

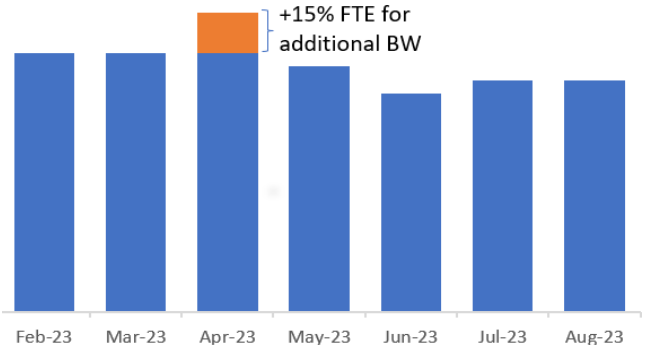
How do your predictive metrics drive action toward program excellence? Please provide examples.

Behind every successful program, there's more than just good planning — there's rhythm, alignment, and trust. For us, metrics were not simply tools for tracking progress — they were the foundation that kept the entire team, across Embraer and Honeywell, moving together in the same direction.

The structure of our three-tier milestone system created clarity and confidence. Each technical milestone paved the way towards the goal. It wasn't just about meeting dates, it was about building a teamwork, where every achievement reinforced the next.

But the path wasn't easy. The program was designed with no buffer so every decision, every delay, every new requirement had immediate consequences. And one of those moments came when a critical new requirement for the E-Freighter was introduced, something that could not have been anticipated during initial planning.

Faced with this, we had no room to absorb delays. Instead, the team leveraged EVM and milestone control not just to track the problem, but to design the solution: we introduced an additional, intermediate build wave. This allowed us to validate the new requirement early, mitigate risks, and still protect the overall program timeline.



Engineering hours

Throughout this process, EVM signaled a shift in effort allocation in May 2023. Approximately 15% of the engineering hours initially planned for downstream activities had to be redirected to address this new build wave. Having this visibility in real time allowed us to anticipate potential impacts and secure additional resources, keeping the program on track.

At the same time, these metrics created a strong mindset within the team to protect scope. In programs like this where legacy software is updated, it is common for new requests to appear, small improvements or fixes that may seem harmless but, if left unchecked, can trigger scope creep and jeopardize the entire project. By using clear performance indicators and structured milestones, we ensured that the team stayed focused on what truly mattered.

It turned EVM more than a project management metric, it was our early warning system and negotiation tool. It enabled us to identify risks, secure resources, and make real-time decisions to keep the program on track.

In the end, the metrics themselves didn't create Program Excellence — but they created the conditions for it. They kept the orchestra playing in sync, motivated people to stay focused, and gave everyone confidence that we would deliver together a high-quality software that met all technical objectives and was accepted by the customer with no findings, validating the effectiveness of our performance-driven governance model.

That spirit, and the results it brought, were recognized with the Honeywell Top Flyer Award — a testament to how discipline, collaboration, and shared purpose turn metrics into excellence. Program was also recognized by Embraer as the best load performed by Honeywell to Embraer, considering time, quality and scope management.

TOP FLYER AWARD

Honeywell