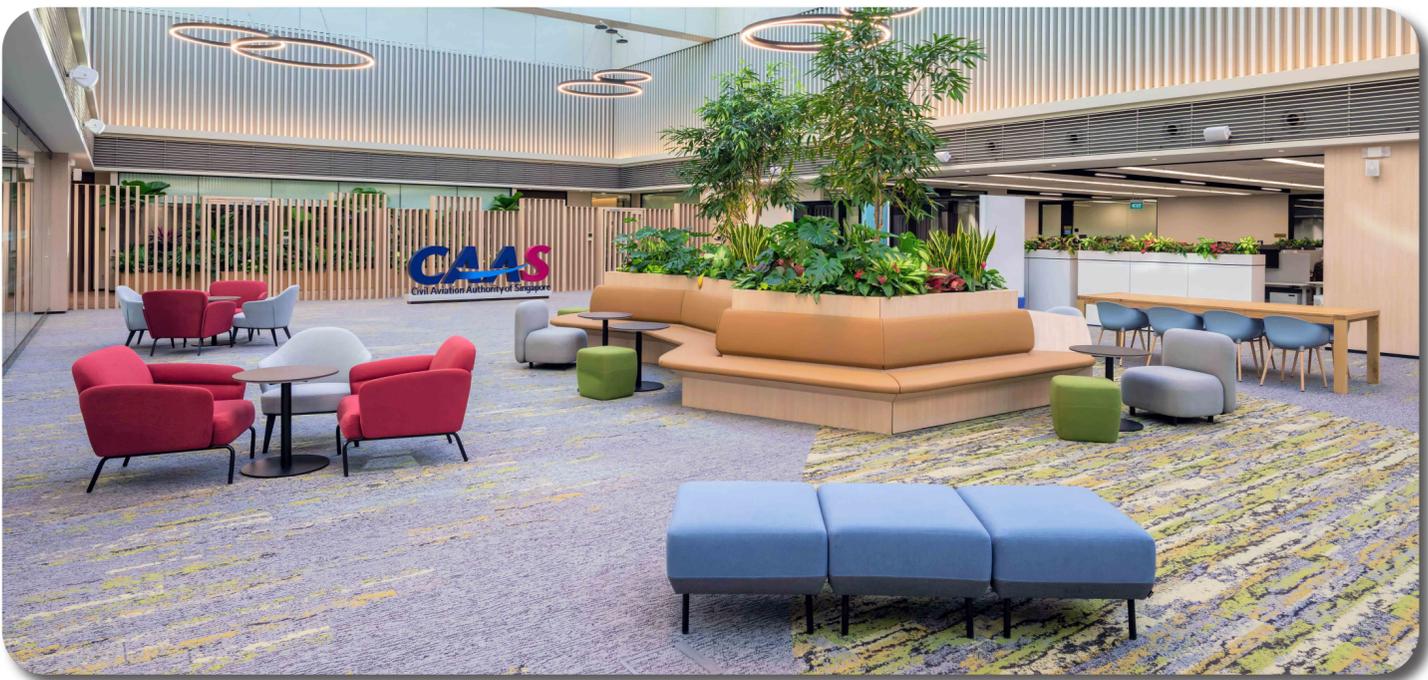


# MINISTER'S INNOVATION AWARD



## MERIT AWARD

### CAAS WORKPLACE TRANSFORMATION PROJECT



### PROJECT TEAM



#### Civil Aviation Authority of Singapore

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OVERVIEW

IMPETUS

INNOVATION

IMPACT

POTENTIAL

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## CAAS WORKPLACE TRANSFORMATION PROJECT

### IMPETUS FOR PROJECT



The impetus for the CAAS Workplace Transformation Project stems from a combination of operational inefficiencies, evolving work norms, strategic and culture enhancement goals. CAAS has adopted a comprehensive and innovative approach to creating a modern, collaborative, and employee-centric work environment. The new workspace consolidated our offices into a 13,300 sqm space at T2 to improve workplace synergy with innovative spatial design as well as flexible and modular furniture to cater for future growth, incorporating advanced digital technologies to support hybrid work arrangements.

Symbolising unity and excellence, the transformed workspace was designed to enhance operational integration and strengthen organisational cohesion. It embraces technology and connects our people and working partners through an open office concept with more meeting rooms, collaborative spaces, wellness areas, inspiring artworks and Instagrammable photo spots throughout the office to encourage teamwork, spontaneous interactions and innovative spirit, whilst enabling staff to recharge when needed.

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### CAAS WORKPLACE TRANSFORMATION PROJECT

#### IMPETUS FOR PROJECT

##### 1. Operational Challenges

- **Decentralized Office Locations:** CAAS offices were spread across Terminals 1 and 2, which hindered staff interaction and created confusion for external stakeholders.
- **Fragmented Public-Facing Services:** Services like MyPELHub and the CAAS Examination Centre were located in different parts of Singapore, reducing accessibility and efficiency.

##### 2. Workforce and Workplace Needs

- **Post-COVID Work Norms:** The rise of hybrid work arrangements necessitated flexible, scalable, and modular office designs to support both in-office and remote work, incorporating pandemic preparedness considerations.
- **Space Planning for Growth:** With a projected growth in manpower, existing office layouts were insufficient and outdated. With the design thinking concept, the new workplace was redesigned with flexible and modular furniture/spaces to cater for future growth.

##### 3. Strategic and Cultural Objectives

- **Fostering A OneCAAS Identity:** The transformation supports a unified organizational culture through the co-location of all CAAS offices at T2 and the creation of more collaborative spaces
- **Staff Engagement and Well-being:** The project emphasizes user-centric design, with the new office being co-created and shaped by staff feedback through surveys, focus groups, roadshows, mock-ups and cascade briefings of office planning and furniture selection.

##### 4. Outdated Office Infrastructure

- Former office was renovated in 2009 during corporatization and was segmented into different closed up offices with larger cubicle sizes that did not facilitate good collaboration and spontaneous discussion. There was a need to optimize space and future proof the corporate office.

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#### IMPETUS FOR PROJECT

##### Statement of Need:

The CAAS Workplace Transformation Project was initiated to address our operational, cultural and infrastructural challenges across CAAS' corporate office locations. The existing setup spread across Terminals 1 and 2 resulted in fragmented operations, reduced staff interaction, and confusion for external stakeholders. Post-pandemic shifts in work norms, including hybrid arrangements, further exposed the limitations of outdated office designs and decentralized services.

With projected manpower needs, CAAS required a future-ready, consolidated workspace that could support collaboration, agility, and digital enablement. The transformation also aimed to reinforce the OneCAAS identity, enhance staff well-being, and integrate sustainability through smart technologies and design innovations. These needs collectively underscored the urgency for a comprehensive spatial transformation and cultural reinvention.

Overall, the CAAS Workplace Transformation project exemplifies a forward-thinking approach to workplace design, prioritizing employee well-being, collaboration and sustainability for the organisation.

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#### EXTENT OF INNOVATIVENESS

The CAAS Workplace Transformation Project demonstrates a high degree of innovativeness through its spatial design, design thinking application, standardisation strategies, architectural and technology enhancements.

##### 1. Space Optimisation with Reduced Working Space Allocation

As we entered detailed design planning and changes to workstation requirements, there was scope to reduce the workstation space allocation, whilst keeping the working circulation area comfortable. This freed up space that was utilised to create more spacious collaboration areas as follows:

- More meeting rooms of various sizes
- Large collaboration spaces such as external collab area - Foyer and the internal community area (Courtyard with skylight)

##### 2. Design Thinking and Innovative Spatial Planning

###### a. Iconic Skylight Construction as a Signature Innovation Feature

- **Enclosed Courtyard with Skylight:** A double-glazed, acoustically treated skylight was constructed over the existing unusable outdoor courtyard and transforming the area into a vibrant enclosed communal and collaboration zone that is highly used by staff to organise various CAAS staff engagement events, including Townhalls. Its double volume ceiling makes it a standout architectural solution, creating an iconic and key design feature for the CAAS workplace transformation.
- **Natural Light Maximization:** This feature enhances energy efficiency and staff well-being by flooding the interior with daylight while minimizing heat and glare. The natural lighting also penetrates into external collaboration and certain internal working areas, which has made our new office brighter and more spacious.

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### EXTENT OF INNOVATIVENESS



#### b. Standardisation for Space Optimisation

- **Meeting Room/ Furniture Standardisation:** The workplace transformation has increased the collaboration space and the number of meeting spaces, introducing a range of different sized meeting rooms and enclosed discussion pods. This standardisation ensures efficient space usage and supports varied meeting needs for formal and informal collaboration with internal staff and external stakeholders. This also creates meeting rooms and collaboration areas with furniture mobility with the decision to use similar-design meeting chairs and modular soft seatings.
- **Flexi- Use Rooms:** Modular rooms with demountable aluminium frames and single-glazed partitions allow easy reconfiguration for different usage such as director's room, project room and huddle spaces.



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### EXTENT OF INNOVATIVENESS

#### c. Business Process Re-engineering of Corporate Services

The centralisation of pantries and utilities across CAAS, transitioning from Division level pantries/utilities, has streamlined operations and improved efficiency. Additionally, the consolidation of various division registries into a single OneCAAS Registry has significantly reduced the original space required by 40%, showcasing a remarkable optimization of space and resources.

#### d. Efficient Space Utilisation

The CAAS new office has implemented several space optimisation strategies to enhance workflow and efficiency. This includes defining clear way-finding paths, circulation areas that are optimized, creating a natural path for intended stop points for conversation and a “spark” of innovation. The reception area, storage rooms, compactus rooms, and IT infrastructure rooms have been scaled down, consolidating many into lesser rooms. Additionally, the rectangular floorplate of the T2 main office on a single level maximizes space utilization and simplifies overall planning by eliminating the need for additional common areas typically required for multi-level office fit-outs.

### 3. Strategic Zoning for Enhanced Functionality

a. **Dedicated Zones:** The office layout is strategically zoned into different areas for executive, visitor, staff, different Groups/Divisions and collaboration areas at external and internal office, etc has improved wayfinding, operational flow and integrated workflow for various Groups/Divisions.

b. **Integrated External and Internal Collaboration Areas:** Flexible and modular soft seatings and a movable glass panel was designed between the external collaboration and internal community area. This allows CAAS to reconfigure the collaboration spaces into different styles to organise various type of key events for international/external/internal stakeholders based on the event requirement. This saves organisation's cost for hosting or organising such events at hotels or outside venues in the past.

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#### EXTENT OF INNOVATIVENESS



c. **Flexible Work Areas:** Staff can choose between assigned desks and various collaboration spaces based on their job nature, including lounge seating, high tables, quiet pods and co-working spaces supporting diverse staff working styles.



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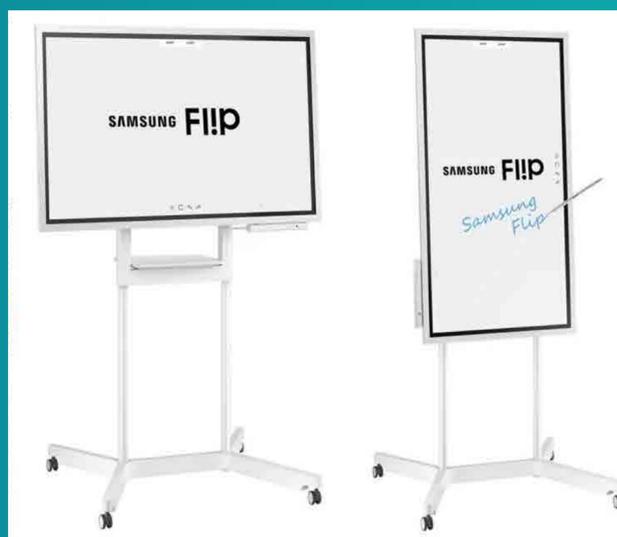
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### EXTENT OF INNOVATIVENESS

#### 4. Smart Workplace with a Seamless Experience

- a. **Audio and Acoustic Enhancements:** To support hybrid collaboration and improve communication clarity and virtual meetings for international/ external/internal stakeholders, the project implemented voice-lift systems of our video conference system in large meeting rooms. These systems amplify speech naturally, allowing participants to hear clearly without straining, especially during hybrid-meeting settings. Additionally, sound masking technologies were deployed in staff working and collaboration areas to reduce ambient noise and protect speech privacy, creating a more focused and comfortable work environment that addressed staff concerns about working in an open concept office.
  
- b. **High Tech Video Conferencing System:** All external and internal meeting rooms are equipped with MS Teams-enabled video conferencing systems featuring speaker tracking capabilities and digital flipboards. These tools enable seamless remote collaboration, reduce setup time, and enhance engagement during hybrid and virtual meetings. The integration of resource booking systems further streamlines scheduling and meeting rooms utilization, improving operational efficiency for meeting arrangements.



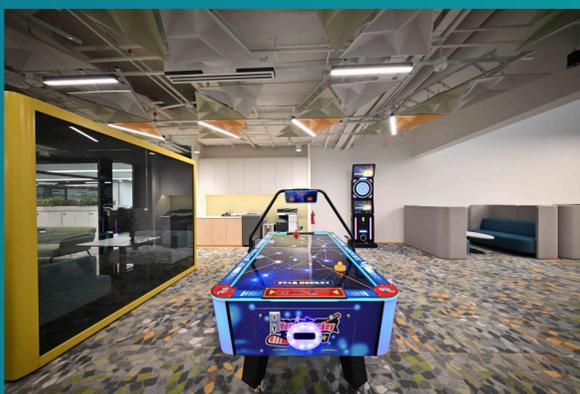
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## CAAS WORKPLACE TRANSFORMATION PROJECT

### EXTENT OF INNOVATIVENESS

#### 5. Fostering a Supportive and Engaging Work Environment

- Contemporary Minimalist Theme:** The design embraces simplicity, clean lines, and pastel tones, integrated with indoor greenery and aviation theme-inspired elements to create a timeless and calming environment.
- Ergonomic System Furniture for Staff:** Height-adjustable workstations and ergonomic chairs promote comfort for our diverse staff demographic and working style.
- Wellness-Oriented Features:** The workplace design prioritizes staff well-being through dedicated wellness zones and quiet pods. These spaces offer employees areas to recharge, focus, or engage in informal interactions, contributing to a healthier and more supportive and staff wellbeing work culture. Recreational elements such as games corners and the Zen Den add vibrancy and promote mental wellness for staff.



- Integration of Art Pieces and Instagrammable Spots into New Office:** The commission of the aviation-themed art pieces, reframed and curated displays of our existing painting collections, and moss walls adds identity and create staff inspiration at the workplace, while Instagrammable spots such as the courtyard logo, oversized ring ceiling lights and nature-themed installations create visual appeal and pride of place. These elements not only enhance aesthetics of our new office but also contribute to a vibrant and inclusive workplace experience.

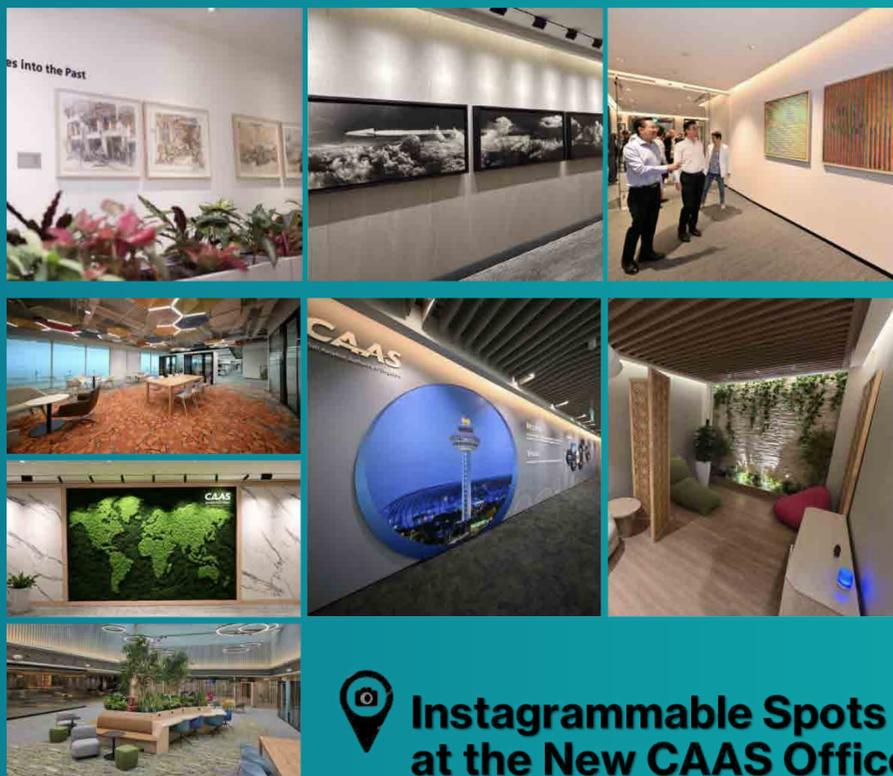
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### CAAS WORKPLACE TRANSFORMATION PROJECT

#### EXTENT OF INNOVATIVENESS



 **Instagrammable Spots at the New CAAS Office**

These innovations collectively reflect CAAS's forward-thinking approach to workplace transformation – balancing aesthetics, functionality and sustainability, while fostering a collaborative and adaptive work culture.

#### Innovation Highlights:

The CAAS Workplace Transformation Project showcases a bold reimagining of the workplace through spatial planning innovation, architectural breakthrough at the airport office, standardisation and sustainability. The design adopts a contemporary minimalist theme with strategic zoning for executive, visitor, staff, and collaboration areas, enhancing wayfinding path, operational and integrated workflow. Collaboration spaces and meeting rooms were increased and standardised across various capacities, complemented by modular and flexi rooms with demountable partitions to support dynamic space usage and future adaptability.

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### EXTENT OF INNOVATIVENESS

A standout innovation is the construction of a double-glazed, acoustically treated skylight roofing over the enclosed courtyard, converting previously unusable space into a vibrant and comfortable collaboration zone with natural lighting which is the key feature for the CAAS Workplace Transformation project. This feature maximizes natural light, improves energy efficiency and supports staff well-being. The courtyard has allowed CAAS to organise various internal engagement events and improve the collaboration culture among staff and our key stakeholders. Combined with smart workplace technologies like voice lift systems and smart film for key meeting rooms, MSTeams-enabled video conferencing systems and resource booking tools for all meeting rooms, the transformation reflects CAAS's commitment to a future-ready, agile, and inspiring work environment.

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## CAAS WORKPLACE TRANSFORMATION PROJECT

### IMPACT AND VALUE-CREATION

#### 1. Productivity and Efficiency Gains:

The project delivered substantial gains in productivity and efficiency through spatial consolidation, business process re-design and digital enablement.

- a. **Spatial Consolidation** - By centralizing operations at Changi Terminal 2, CAAS has improved its service to customers, integrating operations and enhancing work synergy for staff while keeping the renovation costs below public and private sector norms.
- b. **Business Process Re-design** - Improved efficiency through the consolidation of offices and centralized services (e.g., pantries, utilities and registry), which enhanced internal service delivery and achieved positive user experience.



- c. **Digitization and hybrid work support** - Enabled by smart technologies like MS Teams VC systems, voice lift, and resource booking system - streamlined operations and reduced reliance on physical infrastructure (e.g., desk phones and LAN points). The transformation tripled the number of collaboration and meeting spaces, increasing capacity for team interactions and external/international engagements with our business partners and aviation communities. These changes not only improved cycle times and operational responsiveness but also built new competencies in hybrid work, virtual meeting, digital collaboration and agile space management.

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## CAAS WORKPLACE TRANSFORMATION PROJECT

### IMPACT AND VALUE-CREATION



#### 2. Value-Creation Through Co-creation With Staff

- a. **Fostered A Sense Of Ownership And Pride** - The transformation prioritized staff well-being, inclusivity and adaptability with flexible layouts and modular spaces that cater to diverse work styles. It ensured workplace design reflected employee needs and preferences; enhanced staff retention through inclusive design for staff comfort.
- b. **Extensive Staff engagement Activities** - The WT team developed extensive engagement and consultation activities with staff and senior management at various stages of planning, design, transition and shift management and execution of renovation works.
- c. **Staff Engagements Approaches** - Staff engagements were done through surveys, focus group discussions, cascade briefings, roadshows and office tours for furniture selection, equipping of collaboration zones and wellness areas etc were based on staff feedback. This co-creation approach not only addressed existing challenges but also strengthened the OneCAAS culture and enhanced staff morale and retention.

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### CAAS WORKPLACE TRANSFORMATION PROJECT

#### IMPACT AND VALUE-CREATION



#### Outcome:

The CAAS Workplace Transformation Project delivered significant value by consolidating operations into a centralized 13,300 sqm office at Changi Terminal 2 and was completed timely and within the approved budget. Workflow efficiency was enhanced through centralized services and tripled meeting room/collaboration space capacity, while digital infrastructure supported hybrid work and reduced reliance on physical assets like desk phones and LAN points. These improvements translated into faster cycle times, increased operational responsiveness, and strengthened CAAS's capability to support Singapore's aviation ecosystem.

The CAAS Workplace Transformation was co-created and deeply shaped by staff inputs and feedback through surveys, focus groups, roadshows, mock-ups, cascade briefings, transition & shift management and office tours in ensuring the workplace design reflected employee needs and preferences. This co-creation approach fostered a sense of ownership and pride, resulting in a user-centric, adaptive environment that supports well-being, collaboration and retention of staff. The transformation not only addressed existing challenges but also built new competencies in agile space management, digital collaboration, spatial planning and inclusive workplace design.

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### CAAS WORKPLACE TRANSFORMATION PROJECT

#### FEASIBILITY AND SCALABILITY

##### Blueprint for Modernizing Workplaces – Scalability and Cross-Domain Design Features for WOG Application

- 1. User Centric Design Creating Operational Agility** - The CAAS Workplace Transformation Project can serve as a blueprint for modernising workplaces as it is highly feasible and flexible, leveraging on the current technologies and readily available resources. Its implementation was grounded in practical design, including modular and flexible furniture and user-centric systems.
- 2. Highly Adaptable Across domains** - The project's design and strategy are highly adaptable across domains. Its spatial planning, hybrid work enablement, and smart infrastructure can be readily scaled or tailored for other government agencies and sectors such as aviation, land transport and maritime sector, while maintaining operational agility supporting both in-person and remote work models and ready for activity-based working arrangement.
- 3. Smart Technology Infrastructure is commercially Available and Scalable** - MS Teams VC systems, smart film and digital resource booking tools for meeting rooms -etc, all of which are commercially available and scalable to supports both in-person and remote work models.
- 4. New Workplace Design for WOG Adoption** - The emphasis on co-creation, ergonomic design, and digital integration makes this new workplace suitable for Whole-of-Government (WOG) adoption, especially in efforts to modernize public sector workplaces and enhance inter-agency collaboration.
- 5. Practical Implementation** - The CAAS Workplace Transformation Project was completed within the approved project timeline and budget, demonstrating the strong execution capability and alignment with public sector procurement and operational standards.

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## CAAS WORKPLACE TRANSFORMATION PROJECT

### FEASIBILITY AND SCALABILITY

#### Potential of Project:

The CAAS Workplace Transformation Project presents a highly adaptable model that can be scaled and implemented across other government agencies and sectors. Its modular spatial design, smart workplace technologies, and hybrid work-enabling infrastructure are not aviation-specific and can be readily tailored to the operational needs of land transport, maritime, and other public sector domains. The project's emphasis on user-centricity, sustainability, and digital integration aligns with broader Whole-of-Government (WOG) transformation goals.

By demonstrating how to consolidate fragmented office spaces, optimize resource use, and enhance employee experience through co-creation, the project offers a replicable blueprint for agencies seeking to modernize their workplaces. Its success in creating efficiency, operational agility, and staff well-being makes it a compelling reference for cross-domain application in both public and private sector organizations.