

**Global Strike National Security Fellowship Program**

**Focus Area 2: Knowledge Management**

Report of Findings from Interviews with the A5/8 Directorate

# March 15, 2022

**Introduction**

The KM initiative began with a discovery process to define the current state of KM operations within each Directorate. We started in the A3/6 to allow the team to address lethality and readiness and then moved to the A4 to address a more data-heavy Directorate at General Ray’s request. Following our time in the A4, we moved to the A5/8 per General Cotton’s direction to gain insight into the strategic programs and requirements for the Command. Forty-three interviews were conducted from 05 September 2021 to 6 January 2022, with a cross-section of military and civilian personnel from each Division. The 23 in-person and 20 remote interviews were conducted by two-person teams, with a LTARC Fellow as lead interviewer and a LTARC Fellow or a military member of the KM Cell as second chair.

Interviews were framed as conversations and participants were asked to devote 60 minutes to discussing the state of KM within the Directorate. To alleviate participants’ anxiety and elicit well-thought out and frank responses, each was sent a set of preliminary questions prior to the conversation, and confidentiality protections were extended to each participant. The focus of the conversations was on an analysis of people, processes, tools, and technology, both present and future, to improve the efficiency and effectiveness of information flow within the Command. The goal was to discover what's working, what’s not, and to identify potential corrections and enhancements. Most participants were highly engaged in the interviews and very willing to share their KM experiences. In fact, most conversations lasted well beyond the requested time limit, and participants often expressed gratitude for the opportunity to voice their concerns, preferences, and suggestions.

After findings and recommendations from the A5/8 have been collated and reported, the LTARC Fellows will pause to refine the process before resuming with another Directorate should it be beneficial to do so. The intention is to continue through the Command, one or two Directorates at a time, until a representative sample is achieved, or project resources are exhausted. Otherwise, the LTARC Fellows will continue working with the KM Cell to integrate the findings and process improvements from the previous Directorates in addition to focusing their efforts on aiding the KM Cell in the on-going development of Knowledge Management tools and process recommendations for the Command.

**Highlighted Strengths**

We consider the statements below to identify important and high performing assets within the A5/8. The Directorate should maintain and leverage these strengths when implementing additional recommendations for improvement.

* The AOs feel comfortable sharing both positive and negative information within their Divisions and rely on each other for help when needed.
* The AOs recognize the value of input and feedback from higher levels and desire more of it during the product/deliverable development phase.
* The AOs overwhelmingly welcome collaboration and are eager for additional tools and resources allowing them to work with others both within and outside the A5/8. They want to understand the processes utilized and work accomplished in other Directorates to help them identify those with equity on their projects.
* The AOs noted Divisional cross-representation and information sharing in WG meetings was a strength within the A5/8.
* There are AOs in the A5/8 that are currently developing tools in house with data management and project tracking capabilities similar to the Strategic Engagement Tool (SET) currently being developed by the Knowledge Management Cell.

# Executive Summary and Indicated Actions

Seven themes emerged from the interviews in the A5/8. Headline summaries of each theme and indicated actions follow, with key stakeholders identified in the parentheses. The criticality level of each indicated action is denoted by the following abbreviations: MC: Mission Critical; ME: Mission Enhancing; QPI: Quality Process Improvement.

1. **Communication: Preferred communication methods vary by Division and level of personnel. Challenges arise from uncertainty in determining Point of Contacts (POCs) outside of each Division and the difficulty experienced in adequately conveying information up and down the chain of Command.**
   * Establish preferred communication methods both within and outside of the Command (AFGSC)
   * Populate an electronically accessible and searchable repository of POCs listing each employee’s name, phone number, role, and duties (KM)
   * Encourage a climate of transparency in communicating how Senior Leaders utilize data, reports, and presentations to inform their decision making at higher levels (i.e., feedback on the effectiveness and utility of deliverables provided by AOs) (AFGSC, A5/8)
   * Communicate how individual and team tasks at lower levels contribute to overall mission success (AFGSC, A5/8)
2. **Knowledge Management: The A5/8 would benefit from an increased awareness of the meaning of knowledge management and its impact on the transfer and flow of information within the Command. Potential avenues for increasing KM understanding and buy-in include training, a centralized POCs repository, processes for increased senior leadership feedback, and improved task prioritization.** 
   * Increase the visibility of the KM cell within the Command as an access point for resources and tools in creating optimal performance in communication, collaboration, and mission success (AFGSC, KM)
   * Provide resource materials and training on the benefits, functions, and possible outcomes of an effective KM system to ensure appropriate utilization for improved cross-collaboration and communication (KM)
   * Re-emphasize the KM Manual to increase awareness of KM best practices across the Command (AFGSC, KM)
3. **Culture: The A5/8 culture is viewed as collaborative, helpful, and friendly within each Division. Outside of each Division, the prevailing sentiment is that the culture is insulated or “stovepiped.” This separation creates weak points in the informational chain through ambiguity of POCs, misinformed understanding of Divisional roles, and lack of access to information.** 
   * Encourage intra-divisional transparency in communicating what is occurring in each Division and individual role, creating a shared understanding of what roles and Divisions hold equity in projects and their specific contribution to these projects (A5/8)
   * Communicate the specific short- and long-term goals of each Division and how they affect the Command’s success by defining their contributions towards achieving these goals (A5/8)
   * Increase visibility and maintain up-to-date contact information for POCs to facilitate efficient transfer of information across individuals and Divisions, especially for geographically isolated individuals (A5/8)
   * Streamline access to mission-critical information by creating and maintaining a central repository of information with a systematized naming convention (AFGSC, A5/8)
4. **Data Management: There is a need for consolidation of the many tools and databases within the Command into a more centralized system with improved data tracking and management capabilities.**
   * Reduce duplication of effort by centralizing processes for data collection, tracking, and dissemination (AFGSC, KM, A5/8)
   * Develop a consolidated system for raw data capture and collection for "unofficial" internal work and a centralized system that is vetted with data to be reported out (AFGSC, KM)
   * Establish a common nomenclature to support the integration and utilization of this tool with other systems within the Command (i.e., shared terms and labels for the same processes across platforms) (AFGSC, A5/8, KM)
5. **Technology and Tools: While there is a wide array of tools available to the A5/8 there is a sense of confusion in how to most efficiently interact with them. However, there is a desire to learn by attending trainings and using a set of standardized, interoperable tools. This confusion extends to understanding how to effectively operate when network issues such as speed and access arise.**
   * Consolidate the number of internally available tools (i.e., phase out legacy tools) to those that work reliably across all networks while acknowledging the lack of control over externally used tools (AFGSC, A5/8)
   * Remain committed to new and existing tools to allow individuals to develop confidence and skill in utilizing the tools to their full potential before deploying a new tool (HAF, AFGSC)
   * Provide additional support and training for core tools and promote the availability of existing training materials (HAF, AFGSC, KM, A5/8)
   * Demonstrate the value of tools by showcasing its potential impact in facilitating more efficient working procedures (A5/8, KM)
   * Reduce the number of TMT assignments to those with low perceived equity by targeting specific groups and individuals for whom the tasker is relevant (AFGSC, A5/8)
   * Investigate the possibility of developing and implementing mobile tools to enable non-VPN based methods of communication and information sharing (KM)
   * Provide equipment (e.g., headsets) and physical space to aid teleworking processes both at classified (VTC) and unclassified levels (Teams) (AFGSC)
6. **Battle Rhythm: Battle Rhythm: Participants appreciate the underlying purpose of Working Groups (WGs) and Boards but acknowledge opportunities for improvement by increasing situational awareness and providing a central repository of information relevant to meetings, critical tasks, and future timelines.**
   * The organization should revisit the roles and expectations of the WGs, OPTs, and WSTs and communicate the intent to lower levels to keep the purposes of these meetings and workloads from overlapping unnecessarily for the AOs (AFGSC, A5/8)
   * Leaders should reemphasize the level, type, and expectations of involvement for those involved in the WGs (A5/8)
   * Develop and emphasize a memorandum of understanding which maintains standard meeting procedures such as sharing pre-meeting information and documents, defining critical talking points, recording meeting minutes, and uploading post-meeting status updates with notes (KM, AFGSC)
7. **Strategic Engagement Tool (SET): A Command staff project management tool developed by the KM Cell for improved cross-functional collaboration and increased coordination of staff operations.**
   * Introduce AOs to the Strategic Engagement Tool (SET) and it’s intended implementation for the Command (KM, AFGSC)

# Detailed Findings

## Communication: Preferred communication methods vary by Division and by level of personnel. Challenges arise from uncertainty in determining Point of Contacts (POCs) outside of each Division and the difficulty experienced in adequately conveying information up and down the chain of Command.

There is currently no commonly agreed upon method for communicating within the Directorate. This leads each Division to rely on its individually chosen method for communication which often works well internally. However, issues arise when communicating with others outside of the Division regarding how to best communicate with them. Bottlenecks in the flow of information are exacerbated because many do not know who to contact outside their immediate functional area

Contributing Factors: Participants acknowledge the reality of Air Force life: personnel are always moving in and out of roles, whether due to being reassigned to new positions or going on TDY assignments. In the broadest sense, this churn means no individual is irreplaceable. But the impact on day-to-day functioning has many struggling to figure out who to contact and how best to reach them. The time wasted is substantial. Without “one best way to communicate” or a tool to find who they need quickly; personnel often spend hours searching for who has the information that they need to complete their tasks. The problem is multiplied when input from and collaboration with multiple stakeholders is necessary, as is often the case. Participants commonly referred to this struggle as “the telephone game” because they make multiple calls trying to track down who will have the answer they need. As many said, “You just keep going until you finally find the right person.” When they finally connect with who they think is the right person, several participants said they “get different information about projects depending on who they talk to.” The dilemma becomes whose information to trust. Depending on the criticality of the activity, some will seek confirmation from multiple sources. The result is poor flow of information and an atmosphere of uncertainty.

Regarding the effectiveness of the chosen communication methods, other participants mentioned that the effectiveness of the method of communication varies, depending on the level from which the information is requested. For example, one participant noted that “Action Officers tend to communicate more effectively through phone calls and emails while requests for information from higher levels often comes from taskers.” While these communication methods are individually effective, issues arise from their inconsistent use across levels in that AOs struggle to “be upon email, Teams, and TMT taskers” regarding requests for information.

Participants frequently stated that the most effective method of communication was having face-to-face conversations especially within the different Divisions. This was true for AOs across divisions and Senior Leaders across levels. Face-to-face conversations often allow people an opportunity for “tying faces to names and to programs with side bar discussions.” However, participants also acknowledged that face-to-face conversations are not always possible, especially with COVID-19 and the geographical separation of some of the units within the A5/8. Unfortunately, participants noted preferences for the tools used to communicate differ substantially. Some prefer phone calls and face-to-face conversations, and others rely heavily on MS Teams and email. The inconsistency means it takes longer to communicate. For example, several participants stated that “they are moving to Teams, but they still regularly use email. So, now they have to check both tools to make sure they aren’t missing information.” Other participants commented on the fact that they “can’t have WICR and Teams open at the same time.” Still others commented more generally on the VPN issues associated with some of the different methods such as lengthy logon times and connectivity issues.

In addition to issues with the various communication methods, participants also noted difficulties in how information is translated up and down the chain regarding the accuracy and clarity of that information. The most common suggestion from participants was for more feedback on the products and deliverables they create for leaders at higher levels, such as presentations, talking papers, etc. Specifically, AOs desire clarity on how well they met the expectations of General Cotton and other Senior Leaders. For example, several participants noted that “a lot of information goes up the chain, but you never see what comes out of it”. Others said, they are “constantly asked to send things up, but don't understand the why or what becomes of the information.” Another participant lamented that they “don’t know exactly what gets briefed to the 4-star, because things go to the 2-star first, and the 2-star determines criticality and what to send up.” The feedback loop back to them is missing, as is the opportunity to learn how to improve the quality of their work products.

Suggestions from Participants: To minimize the loss of time and resources spent playing the telephone game, participants would like access to a Point of Contacts repository with regularly updated job and personnel information that includes background information on their position, names, locations, and phone numbers. Having this repository would better support their ability to answer senior leadership’s questions by enabling them to pinpoint the right personnel with the relevant and correct information faster and more accurately. In addition, participants expressed a desire for increased senior leadership feedback on the deliverables that they provide the Command. Such feedback would allow them to better understand the end goal and how to get there as well as how their work translates to the overall mission.

Positive Indications: In recognition of the constraints COVID has placed on communication, participants are starting to see the value in relying on technology for improved communication and the importance of platforms like MS Teams for staying connected when face-to-face conversations aren’t always feasible. In addition, participants are eager to help overcome the challenges and barriers associated with information sharing and collaboration at all levels within the Command.

## Knowledge Management: The A5/8 would benefit from an increased awareness of the meaning of knowledge management and its impact on the transfer and flow of information within the Command. Potential avenues for increasing KM understanding and buy-in include training, a centralized POCs repository, processes for increased senior leadership feedback, and improved task prioritization.

Many participants reported lacking awareness of what Knowledge Management was or how it benefits them in their day-to-day work tasks. Indeed, several participants commented that they had to look up what KM was before the interview conversation. A couple participants even noted that they “didn't even know the KM Office existed at Barksdale.”

Some believed KM was just records management, some thought it was the tools used (e.g., Teams, SharePoint), some thought it was actively using electronic repositories to share information, others saw KM as how information was formatted and shared across the different levels of leadership, and some participants were not sure what KM was at all.

Contributing Factors: Several participants attributed the lack of understanding of KM and how it impacts daily operations to a lack of training. Others called for the consolidation and standardization of KM processes: “I don't know what it is because it’s used so many different ways.” One respondent even noted that they thought “most people equate KM with the idea of a SharePoint shop.”

In addition, multiple participants also commented on the challenges they currently face with KM. As mentioned in the section on Communication, many respondents stated that they would most benefit from access to a current POC repository and that “the repositories we have need updating. People's roles change, phone numbers and contact information changes.” In conjunction to a POC repository, many participants mentioned better training on what each Division in the Directorate does and what its responsibilities are. One participant summed it up best. When asked to name the one thing they would change to improve KM functioning in the Command, they said, “[improve the] interaction they have with the other Directorates: who they are, what do they do, what do they need which would help me better understand how to include other Divisions/Directorates when translating requirements.” Others suggested better onboarding to raise awareness of what other Directorates are doing as well as the focus areas for the various Divisions within A5/8. Better training on the different KM tools was also mentioned in this context and will be discussed in more detail in the Tools and Technology section.

Participants also connected better KM practices to their desire for more information flow and feedback from Senior Leaders. Namely, participants want a system or process that allows for “some type of acknowledgement” that the information they provided leadership had been received at the higher levels. Others commented that “general information about what is going on in the Command doesn't filter down to lower levels. Things happening such as people being hired that affect you and you never hear about it.” One participant expressed challenges with requests for information up the chain on project plans and approvals in that they pushed for information but didn’t hear any resolution of anything back. They were quoted saying, “turns out it was approved, but [I] didn’t find out from official channels, instead [I] heard it from a friend.”

In regard to KM processes, participants also highlighted a need for “a consolidated way of tracking events and issues” to minimize disorganization and duplication of effort. This is a topic that will be discussed in further detail in the Data Management section. However, it relates to the difficulties participants experience with task prioritization. Many participants recalled challenges in tracking and coordinating timelines for completing milestones for future programs and the acquisition of new capabilities. Such challenges strike at the heart of the A5/8 mission. For example, one respondent noted that they frequently have to balance their “10 to 20-year timeframe long-range target vs. what's in TMT this week.” Participants called this “[dealing with] the fire of the day.”

The participant was quoted saying, “I need a priority for looking at the long term, understanding the scale and scope of the timeline of priorities.” The importance of timelines for the A5/8 will also be further discussed in the Data Management section.

Suggestions from Participants: One participant suggested enforcement of the KM Manual across the Command, and was quoted saying, “a lack of awareness leads AOs to come up with their own independent solutions in house because they don't know KM exists.” Other participants commented saying, “The KM Office needs more exposure from leadership.” One participant said, “[you have to] educate the community” on how to implement KM effectively and suggested “embedding KM SMEs within each Directorate to provide training and expertise on a temporary basis.”

Positive Indications: Overall, many participants expressed a desire to better understand KM and were eager to help improve existing processes. They clearly bought into the benefits of storing and sharing information efficiently within the Divisions and across the Directorates to facilitate cross-functional collaboration.

**Culture: The A5/8 culture is viewed as collaborative, helpful, and friendly within each Division. Outside of each Division, the prevailing sentiment is that the culture is insulated or “stovepiped.” This separation creates weak points in the informational chain through ambiguity of POCs, misinformed understanding of Divisional roles, and lack of access to information.**

The A5/8 culture varies between Divisions, but is consistently described as “helpful,” “familial,” and “open” within the same working group or Division. However, these formally defined groups are insulated from others, leading to communication bottlenecks between geographically separated positions, when onboarding individuals, and when the POC is unclear. The net effect of informational bottlenecks has led Divisions to be disjointed in their understanding of each other’s roles, tasks, and struggles in onboarding. More concerning, the bottlenecks create potential points of failure, as one individual becomes an informal lynchpin between Divisions. Counter to this description, individuals reported a cultural inclination and willingness to collaborate and share information, if asked directly.

Contributing Factors:Participants reported a “stovepipe” flow of information from “working bubbles” which isolate Divisions from one another. This stovepipe reflects a lack of knowledge about other Division’s roles and their contribution to the mission. This has led to missing information about cross-Division POCs creating redundant work and informational strain. Due to this ambiguity in POCs, responsibility for information dissemination is delegated to informal “go-to persons” who must balance completing their official tasks with ensuring information is transmitted through this informal system. —This system creates the possibility of single points of failure in the communication of mission critical information.

Suggestions from Participants:Participants suggested more transparent communication across Divisions and inclusion of all Divisions in updates to facilitate a shared understanding of what work is occurring in which offices. This transparency includes having access to relevant information across Divisions, getting to, and remaining on the same page as it pertains to the mission. Some participants referenced Microsoft Teams as aiding this process; however, there were also comments which suggested Teams is only as reliable as the IT systems it is run upon. Other suggestions included increasing the visibility of leaders and systemizing or indexing POCs, specifically for geographically isolated roles.

Positive Indications:The A5/8 culture was consistently praised as being composed of individuals who trust and rely upon one another who help the team complete their tasks and maintaining a focus on the long-term mission. To this point, participants stated they have created positive relationships with their coworkers and leaders by taking advantage of the open-door policy within many of the A5/8 Divisions.

These relationships have led to inter-Division open communication, collaboration, and confidence in each individual’s ability to complete quality work which meets the standards called for working on matters of national security**.**

## Data Management: There is a need for consolidation of the many tools and databases within the Command into a more centralized system with improved data tracking and management capabilities.

As described in the Knowledge Management section, the A5/8 Directorate is heavily focused on strategic programs and future requirements. As a result, the A5/8 actively relies on its data management processes for storing and sharing information and data as it pertains to future programs and the requirements of these programs. However, many participants reported a need for the consolidation of information systems and processes. The consolidation of such processes is important because it allows for the Command to maintain continuity of operations irrespective of shifting priorities and the transition of personnel to different positions across the Command.

Contributing Factors: Several participants mentioned the difficulties they experienced with data management within their Divisions. One participant was quoted saying, “we have issues with continuity and sharing information across people.” Another participant noted the importance of an effective data management system for “maintaining a history of past actions.” Yet another respondent reflected on the need for capturing historical data. They were quoted saying, “things you need to document so that new people can pick up the torch and run with the information to continue the mission.” In addition to maintaining continuity of operations, the consolidation of the many data management tools and standardization of best practices for tracking that data also allows for the clarification of stakeholders and personnel with equity in the different aspects of a project. For example, one respondent explained that they felt that “the biggest challenge is figuring out who is working on what line of effort and in what Division or Directorate. Sometimes we don't know who is involved.”

Another reason for a more centralized system with improved data tracking and management capabilities is the minimization of redundant work and the duplication of effort. Regarding duplication of effort, one participant was quoted saying, “we need to input data in one place and deliver multiple products; shouldn't have to enter the same information multiple times.” In addition, multiple participants mentioned issues with version control. One participant commented that there’s “lots of email with version control issues; can't tell if you're looking at the most recent version of a document. Shared Drive is over the storage limit, and there’s 9 versions of the same thing.” Another respondent stated we “need version control of docs. There’s no spot that all most recent docs go. We need to have standardized titles.” Likewise, several respondents also mentioned the need for the standardization of their processes for storing data and files. One participant commented “we use SharePoint and Shared Drive, but there's issues with disorganization.” Another respondent described the need for improved KM processes regarding data management in more detail stating that there’s “not a standardized process to filing documents. One Division will track modifications in a spreadsheet on a desktop while another person has a whole Teams page dedicated to tracking their Division's modifications while another Division uses SharePoint with a dashboard.”

A consolidated data management system not only reduces duplication of effort and improves the processes for standardizing the storage of documents but also allows for better tracking of issues and events over time. A common issue frequently mentioned by participants given that AOs in the A5/8 are regularly tracking the status of future programs over longer timelines was a need for project management tools with the ability to track and visualize tasks, progress, and milestones. One participant commented that they have products that “currently give them information on milestones but it’s all in separate systems.” Another respondent mentioned the need to be able to “compare current state to future end-state objectives” across related projects.

Suggestions from Participants: Several participants suggested training and the “need to educate personnel on the proper etiquette for how to organize and update the drive.” Others commented on the importance of “having the ability to retain information and pull it up when you need it; being able to apply the knowledge you need.” Indeed, multiple participants mentioned the need for a “one stop shop” data management system with standardized repositories for storing files and data. In addition, participants expressed interest in the data management system having a dashboard capability with the ability to visualize the data which has direct implications for helping AOs “build a common site picture” for understanding Command operations. Tying many of the participant suggestions together, one respondent commented “[we need to] make sure that we have the top-down approach to organizing and sharing information in the organization e.g., records keeping, repositories with templates that have naming conventions for files that allow a person to quickly locate POCs.”

Positive Indications: Many participants recognize the benefits of having a consolidated data management system and are eager for its implementation for improved Command staff operations. In addition, the KM Cell has been working on the development and design of the Strategic Engagement tool (SET) which is intended to function as a consolidated project management tool for day-to-day staff operations. Notably, SET allows for tracking project milestones and status updates in real time with a dashboard capability for displaying data, project objectives, and timelines across lines of effort, thereby addressing many of the issues highlighted by participants above. More detail on participants’ thoughts regarding the design of SET will be provided in its own section.

## Technology and Tools: While there is a wide array of tools available to the A5/8 there is a sense of confusion in how to most efficiently interact with them. However, there is a desire to learn by attending trainings and using a set of standardized, interoperable tools. This confusion extends to understanding how to effectively operate when network issues such as speed and access arise.

Participants reported access to an abundance of tools for communication, file storage, and video-teleconferencing (VTC) such as Microsoft Teams, SharePoint, Shared Drive, TMT, and Email. A common opinion voiced by participants was the presence of “too many systems on both the classified and unclassified side.” This sentiment was further informed by participants who felt frustrated in the lack of interoperability between new and old systems, not “sticking with” or maintaining systems, and insufficient training resources or time to learn new systems. Additionally, some participants expressed that their use of AF tools is limited as difficulties arise when using the tools in communications with contractors, typically resulting in the use of contractor networks and tools. Lastly, there was a common desire for increased adoption of mobile tools to stay up to date on information without having to go through the VPN for access to communications, files, and calendars.

When speaking about physical technology and network access, participants stated that there are issues in the speed of the NIPR and SIPR networks due to high traffic, VPN connections, lack of access to secure spaces for VTC, and outdated or missing equipment necessary within their roles. This opinion was reiterated across Divisions, rank, and geographic location. One participant commented “computer tools are mission critical…[if] they go down we’re at a standstill.” This comment is indicative of the general recognition of the importance of technology in completing tasks, leading to a desire for “reliable systems” and “cloud-based backups” to ensure that networks can be quickly accessed, files shared, and communication facilitated without the barrier of an inefficient network.

## SharePoint: SharePoint was referred to as “a good tool if people work on it,” a statement which summarizes the majority of comments on its utility. SharePoint was spoken positively of when it is maintained with current POC information. Maintenance was considered “half the battle,” and varied across Directorates and Divisions leading to communication hurdles when there is outdated, incorrect, or no information posted to SharePoint. Participants stated that current POC information being posted led to less time playing “the telephone game.” However, some individuals reported frequent crashes, difficulty accessing when at home, and a perception that head offices are not using it, which leads to a lack of incentive for staff to maintain or use the tool.

## Shared Drive: Overall, most participants reported using Shared Drive previously or on an ongoing basis, with mixed impressions of its effectiveness. The most common hindrance in the effective use or positive perception of Shared Drive was a lack of standardized filing procedures. Due to redundancy in uploading files to maintain current information without deleting older files and having a non-standardized naming protocol, most participants reported slow operating speeds, difficulties finding current file versions, and receiving warnings that their server was full. A shared suggestion was to codify a naming convention and maintain a lean server by deleting files which no longer serve a purpose or have been on the server for a pre-determined number of years. Generally, Shared Drive was viewed positively and having the potential to be a useful tool, functioning as a central repository of critical information in which real-time collaboration, immediate information access, and information sharing could occur.

## Teams: The increased use of Microsoft Teams beginning after the start of the COVID-19 pandemic was generally viewed as a positive implementation of a new KM tool. The consistently praised features of Teams include instant messaging (chat), being able to see who is and is not online, ease of holding unclassified meetings, mobile accessibility, collaboration, file sharing ability, and teleworking. Of the benefits listed above, the ease of which unclassified meetings could be held was reiterated across participants. However, some reported a desire for headsets or cameras to avoid having to dial into meetings via phone and computer for audio purposes when using their secure machines. The main detractors from adopting a supportive position towards Teams were classification level, network connectivity issues, and training. Participants who frequently work on NIPR and SIPR stated that Teams was useful for their unclassified communications, and they want to see a version of Teams at the higher levels, but at its current capacity its adoption created more work because they had to log into multiple accounts to ensure they received all communications directed to them. Another hurdle in supporting teams was network and connectivity issues, reported to increase delays in connecting to meetings, sharing slides and documents, and slowing chat functionality. These delays were specifically mentioned in tandem with calls that had a large number of participants. Lastly, there was a desire for additional training, coming from a recognition that Teams is “not used to its full capacity,” while also expressing that the Command should increase its future usage.

## TMT: The TMT system was regarded as both helpful and as a hindrance to communication efforts. In support of TMT, participants stated that taskers should go out to all Directorates and Divisions to “build an awareness of what others are working on” across the Command. Additionally, those individuals who have access to sending out taskers found the system to be useful in tracking tasker progress by person from beginning to end. That is, the AOs responsible for sending taskers appreciated the ability to see and track individual progress. However, many of the participants found TMT to be largely ineffective as they typically do not hold equity in the taskers they receive. Lastly, TMT was considered by one participant to “stifle communication because of its overuse on small tasks,” along with the statement that it was said to create a focus of time onto a simple task which forces other tasks to be overlooked in the meantime. When providing suggestions to improve the current TMT system, participants shared several thoughts. First, to improve the process by which taskers are sent out. This suggestion was reiterated in a number of ways which included being more specific in who receives each tasker to ensure the recipients have equity, making sure the individual responsible for distributing taskers and their backup are aware of the protocol in sending them out, and having newly appointed executives talk to each Directorate so they have a better understanding of what information needs to go where. Second, some participants suggested removing the TMT system altogether and replacing it with a “more efficient” medium.

## Email: Email was reported as a “thing of the past” due to its slow speed in conveying information relative to instant messaging via Teams. Further, participants stated that emails are missed due to having to check multiple inboxes across classification levels and having to prioritize time to sort and read all emails.

## Network: Network infrastructure was a recurring discussion point by participants who reported that network speed, bandwidth, and physical access to resources are limiting progress and innovation. In these reports, the network speed and bandwidth were pointed to as limiting progress because high network volume slows boot up speeds, connection to VPN and Teams, and file-sharing, collaborative efforts. The second point of interest from these reports is the strong desire for system interoperability to facilitate information sharing without having to log onto or keep track of multiple levels of conversation about a similar topic. As stated earlier, participants felt they had an abundance of tools at their disposal, but felt frustration in having to repeat sharing, collaboration, and communication processes because these tools did not communicate with one another. Lastly, lack of physical spaces for confidential VTC was reported as limiting as they are needed to talk to HQ or MAJCOMs which has resulted in forced TDY on occasion.

Contributing Factors: Network infrastructure and having too many tools were reported as the main factors contributing to a negative perception of the tools and technology participants interacted with. Network infrastructure was repeatedly cited as having an impact on the time it took to complete tasks ranging from logging to computers to working collaboratively to attending meetings. Having access to too many tools was also commonly reported as the tools were useful but created redundancies in working processes, sharing files, communication, and task completion due to their inability to communicate with one another across networks, levels, and locations.

Suggestions from Participants: Participants suggested sticking with one tool for a long enough period of time that they could attend training, learn the system, and operate it to its full capacity. Additionally, it was reported that individuals “need to see the impact of the tool, not just have access to it.” This is highlighted in comments about Microsoft Teams, which was generally viewed positively as a medium for instant communication, unclassified meetings, and real-time collaboration. Teams was heralded for these abilities while also recognized for being a complex system for which many individuals need and want additional training. Further, participants would like to streamline the TMT system by targeting who receives taskers and ensuring more than one person within each Directorate knows how to push taskers in an efficient manner. The last suggestion concerning existing tools was to create a common naming convention for shared files to reduce backlog and ensure everyone has access to the most updated files needed within applications like Teams, SharePoint, and Shared Drive.

Another group of suggestions focused on network infrastructure. One suggestion was to increase the availability of mobile tools, allowing individuals to stay up to date without having to access a computer-based VPN. Secondly, participants suggested increasing the physical spaces or resources available to conduct classified meetings in the form of conference rooms and secure devices. Lastly, to bring innovation programs back which encourage “outside the box” problem solving of these issues when providing new equipment or space is not an option.

Positive Indications: Positively, most participants recognize the potential inherent within the tools they have access to, both old and new. With this recognition also came a desire to learn how to harness this potential and use the tools to their full capability through training, endorsement from their supervisors, and repeated, long-term use. Additionally, while they did highlight downsides within tools and processes, they provided practical solutions which they were open to exploring.

## Battle Rhythm: Participants appreciate the underlying purpose of Working Groups and Boards but acknowledge opportunities for improvement by increasing situational awareness and providing a central repository of information relevant to meetings, critical tasks, and future timelines.

Participants reported that Working Group and Board meetings are an important factor in strategically aligning the Command but noted that these meetings are sometimes ineffective in their execution. The determination on whether a meeting was effective or ineffective was largely attributed to the sharing of relevant information before and after a meeting, defining critical talking points, and having a representative constituency present. Additionally, there were reports of a desire to increase the situational awareness of the Directorate, that is, understanding what role each Division maintains and preserving working processes through leadership transitions. A common suggestion addressing both of these concerns was the creation of a central repository of information which contained previous leadership directives and relevant meeting information such as current stakeholders, previous minutes, and pre-meeting materials and discussion points.

Contributing Factors: Situational awareness was cited as an area for improvement as members of different working groups often do not know or understand what is occurring across Divisions or Directorates. Due to this dissonance, there is a perception that meetings are inefficient, leading to information being lost in communications and redundant work being done. Awareness was conveyed as an understanding what occurs within the Command, and specifically within the divisions comprising the A5/8. Additionally, it was reported that there is a lack of preparation before meetings such as Boards or WGs which limits the effectiveness of these meetings as critical talking points and materials must be identified within, rather than before, the meeting. This point was reiterated as meetings taking place with too many, too few, or without the necessary stakeholders were pointed to as ineffective. Further, some of these meetings were considered to be taking place for the sake of having a meeting, rather than with a specific purpose. To the point that information is potentially being lost in communications, participants shared that meeting minutes are taken and shared at the discretion of the meeting leader, cross-Directorate collaboration must be forced, and former briefs or pre-meeting information is not available. Due to the lack of current and available pre-meeting information and post-meeting minutes, stakeholders and attendees readdress talking points for the appearance of having completed tasks, or to provide information which could have been shared before the meeting.

When asked specifically about the B2C2WG, participants noted that it was a great idea strategically in creating alignment within the Command and allowing for decision making by appropriate parties. Along with these comments, the participants suggested that “it started off well with a lot of steam,” but has since slowed down due to “military movement” and “everyone working in their own lane.” These reasons were supplemented by stating that as the routine change occurs in positions many processes are lost because the leader at the time endorses a tool, process, or communication style which is lost with transitions in leadership.

Suggestions from Participants: It was suggested that creating a lasting guide in meeting processes, historical findings and developments, or repository of information could ameliorate some of these concerns by providing a perpetually updated “memorandum of understanding”. This was especially applicable to the A5/8 which works on 5-, 10-, or 20-year timelines in which “programs last, but people do not.” This repository was not mentioned only because of persisting timelines, but also to address the lack of available and current pre-meeting documents and post-meeting minutes which allow individuals to come prepared to participate, adding valuable contributions to pre-defined critical discussion points. The last suggestions centered around identifying and maintaining a list of stakeholders, POCs, and workflow distributors within working groups to ensure that they are appropriately contacted, invited, and responsible for attending WG meetings.

Positive Indications: Participants saw the value inerrant within the B2C2WG, recognizing its potential to strategically align the Command via WGs. Along with this recognition several participants noted that internal, Divisional cross-representation and lateral information sharing is a strength which can be mirrored to external cross-representation, information sharing, and knowledge preservation.

**Strategic Engagement Tool (SET): A Command staff project management tool developed by the KM Cell for improved cross-functional collaboration and increased coordination of staff operations.**

The Strategic Engagement Tool (SET) is a project management tool tailored for Air Force Global Strike Command that has been designed by the KM Cell in collaboration with Microsoft and the LTARC Fellows. The intent of SET is to overcome many of the issues currently facing AOs with respect to communication, coordination of knowledge management practices, and consolidation of the command’s data management methods as highlighted in this report.

Contributing Factors: Specifically, as a collaborative project management and assessment tool, SET was developed with the express purpose of helping AOs track project objectives and milestones in real-time while evaluating the status of those objectives for each line of effort based on priorities identified by senior leadership. In addition to the findings and recommendations provided in this report, the interviews were used to collect feedback from AOs regarding the functionality and features a tool like SET should possess in order to be useful to AOs in the management of their day-to-day tasks.

As such, SET was designed using a dashboard format with project tracking, assessment, and data display capabilities in mind. SET allows AOs to track the status of each project and search and sort each project by line of effort, objectives, milestones, and individual tasks. In addition, SET also has a timeline feature that allows AOs to visualize the interaction of milestones and tasks of related projects and assess the impact of upcoming events upon the completion of those project milestones.

Participants were decidedly receptive to the utility of the data management and display capabilities that SET’s dashboard format allows. Multiple participants said they “see the value in the tool” and were quoted saying “this is what we need for the Command.” Others frequently asked, “how soon until we get this?” When asked about their thoughts on the project tracking functionality, several participants said they liked being able to visualize project objectives and milestones broken down into individual tasks. One respondent commented that the “milestone feature is useful in that it gives a quick visual of where the program is in the process and what’s coming up.” Another participant noted that their boss is “always creating a series of timelines for approval.” One participant even noted that they “like the milestones and timelines feature because they currently are regularly tracking visits to Vandenburg on a whiteboard in their office.”

In addition to project tracking, SET functions as a continuity log of past actions and allows AOs to import and export historical data as well as project templates and other related documents. The continuity log not only allows new AOs to pick up where the AO before them left off but also enables cross-communication between an AO and senior leaders via a notes and comments section. Senior leaders can leave comments regarding acknowledgement that project materials have been received or provide additional direction and support in the completion of project milestones using this feature.

Several respondents commented on the benefits of the continuity that SET provides as a project management tool. One participant commented that they like that the historical data is more closely tied to individual objectives, milestones, and tasks. Specifically, the participant drew a comparison between Shared Drive and SET. They were quoted saying, “the Shared Drive folder system currently gives a log for continuity and is broken down by year and control number and holds all documents from that modification.” However, “coming into this role they can go through the folders, but they have no idea what’s next or what’s needed. They have to figure out what to do.” In addition to the ability for AOs to receive feedback from Senior Leaders within the system, participants also liked that the continuity log allows for a built-in POC repository. Specifically, they liked that they could see not only recent actions taken with regard to completed tasks within the tool but also the POCs responsible for those individual objectives and milestones. As highlighted throughout this report, multiple participants acknowledged that the importance of having a POC repository. Several participants commented on how “helpful” the POC repository feature was. One participant said they liked that individual POCs were “associated with individual tasks and projects” rather than just a list of names by duty title.

Suggestions from Participants: Participants also made suggestions for ways of improving the functionality of SET. For example, one participant suggested adding “a tool tip/ POC Contact card like in email with the person's email and phone number” for improving the accessibility of POC information. Others suggested the addition of different search and sort features for the tool such as filtering the objectives by individual Working Groups or different orientations for displaying the timeline and milestones within the dashboard. In addition to design features, many participants expressed apprehensions with regard to getting buy-in for the tool and commented on the need for training for how to use the tool. One participant was quoted saying, “The tool is great for people who know how to use it. We need an introduction to the tool and how it works. We need people in place to actually help make the tool useful (e.g., an advanced training person in each Division as a resource).” Another respondent was quoted saying, “we need everyone to embrace it and know how to use it. You can't have a section in the middle who knows nothing about its capabilities or how to use it.” Other participants commented “it's only as good as what you put in it. You need real buy-in for using and sticking with it.” One participant noted the importance of Senior Leaders adopting the tool and enforcing its use and stated that “if they don't have to change; they won’t.”

Positive Indications: Many participants see the value of SET for improved project tracking and project management as well as its role in reducing many of the challenges and barriers they currently experience in terms of communication and knowledge management. Participants are ready and willing to adopt the tool provided they receive training and Senior Leader support in doing so.

## Indicated Next Steps

Although each of the recommendations in the Executive Summary are important, we consider the actions listed below as quick wins based on the following criteria: a) a relatively near-term win that will help gain traction and show more immediate results, b) a foundational aspect of the development and implementation of other recommendations, or c) a force enabler that can create a broadly felt impact across the Command.

These critical next steps are organized by key stakeholder. As would be expected given the aims of the project, many of the actions are assigned to the KM Cell and their counterparts embedded in the Directorates. The extent of the work assigned to the KM Cell underscores the level of effort and work remaining for the KM Cell to accomplish. Further, the full range of KM functions have not been fully implemented within the Directorates. The recommendations in this report are indicative of the need to get the Command-wide KM program up and running and should not be interpreted as a failure by A5/8.

The implementation of a successful KM program with widely felt benefits across the Command will require a joint effort between AFGSC leadership, Directorate leaders and personnel, as well as the KM Cell and their KM counterparts embedded throughout the AFGSC. The recommendations below should serve as a starting point to these efforts.

## KM Cell:

* + Communicate benefits and efficiency gains of new tools to quantify the need for them
  + Provide additional support and training for core tools and promote the availability of existing training materials
  + Streamline access to mission-critical information by creating and maintaining a central repository of information with a systematized naming convention
  + Populate an electronically accessible and searchable repository of POCs listing each employee’s name, phone number, role, and duties
  + Develop and emphasize a memorandum of understanding which maintains standard meeting procedures such as sharing pre-meeting information and documents, defining critical talking points, recording meeting minutes, and uploading post-meeting status updates with notes
  + Introduce AOs to the Strategic Engagement Tool (SET) and it’s intended implementation for the Command

## AFGSC Senior Leadership:

* + Encourage a climate of transparency in communicating how Senior Leaders utilize data, reports, and presentations to inform their decision making at higher levels (i.e., feedback on the effectiveness and utility of deliverables provided by AOs)
  + Communicate how individual and team tasks at lower levels contribute to overall mission success
  + Communicate benefits and efficiency gains of new tools to quantify the need for them
  + Reevaluate the degree of cross-functional, cross-Directorate representation in the WGs
  + Increase the visibility of the KM cell within the Command as an access point for resources and tools in creating optimal performance in communication, collaboration, and mission success

## A5/8 Leadership:

* + Encourage intra-divisional transparency in communicating what is occurring in each Division and individual role, creating a shared understanding of what roles and Divisions hold equity in projects and their specific contribution to these projects
  + Leaders should reemphasize the level, type, and expectations of involvement for those involved in the WGs
  + Encourage a climate of transparency in addressing questions from Senior Leadership (i.e., speaking frankly when a simple answer is not sufficient) and reliance on SMEs for their expertise and knowledge sharing when more information is needed
  + Communicate how data at lower levels feeds decision making at higher levels (i.e., where the data leads and how it connects to the larger mission)

## KM Cell in Collaboration with the A5/8 Directorate:

* + Decrease the number of available tools to those that work reliably across all networks by phasing out legacy tools
  + Provide more support and training for the core set of tools
  + Reduce duplication of effort by centralizing processes for data collection, tracking, and dissemination
  + Develop and emphasize a memorandum of understanding which maintains standard meeting procedures such as sharing pre-meeting information and documents, defining critical talking points, recording meeting minutes, and uploading post-meeting status updates with notes

## A5/8 Directorate:

* + Increase visibility and maintain up-to-date contact information for POCs to facilitate efficient transfer of information across individuals and Divisions, especially for geographically isolated individuals
  + Reduce duplication of effort by centralizing processes for data collection, tracking, and dissemination
  + Support the KM implementations and work to enhance collaboration and communication across the Command

## For Additional Information

Additional information on the content of this report may be obtained by contacting a member of the project team.

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