MySquad – Squad Analytics & Counseling Tool

Project Scope & Impact:
MySquad was designed for junior NCOs to quickly access squad-level analytics and perform administrative tasks. It featured surface-level readiness statuses, task management (including creation, completion, and accountability), and a QR-based transactional signing system for counseling sessions. The tool supported leadership accountability and readiness tracking and was showcased at AUSA 2021 under SMA Grinston's high-priority initiatives conference.

Design Process & Execution:

- **User Research & Usability Testing:** Conducted regular user interviews and usability sessions to capture firsthand feedback from junior NCOs. This research directly influenced the feature set and user flows. User research was grounded in a variety of units (18^{th} ABN, 160^{th} SOAR, 75^{th} Ranger BN). Types of interviews consisted of 1-on-1, focus group and group interviews

- **Prototyping & Iteration:** Developed detailed wireframes and high-fidelity prototypes using industry-standard tools (e.g., Figma, Dovetail). Iterated designs based on test session feedback and data analysis to optimize the user interface and workflows.

- **Collaboration & Deployment:** Worked closely with developers and stakeholders to ensure a seamless frontend overhaul. The application transitioned to maintenance mode after a successful debut, proving its reliability and user acceptance.

Tesseract – Starter App for Internal Teams

Project Scope & Impact:
This internal project aimed to create a boilerplate application framework for rapid product development across the Army Software Factory. The goal was to enable teams to start new projects quickly while maintaining consistency and high usability.

Design Process & Execution:

- **User Research:**
  Extensive user interviews and testing sessions with internal teams helped capture diverse requirements and pain points.
- **Agile Prototyping & Iteration:**
  Leveraged agile methodologies to produce detailed wireframes, flow diagrams, and interactive prototypes. This ensured that the final product met the operational needs of various teams.
- **Outcome:**
  The starter application significantly reduced project setup times, enabling rapid deployment of new products without compromising on security or user experience

Atlas – Dashboard Data Visualization for Multinational Supply Logistics

Project Scope & Integration Challenges:
Prior to launching, USAREUR-AF did not have reliable visibility into allied host nation supply systems and statuses. Atlas was built to bridge USAREUR-AF's logistics data with NATO's proprietary LOGFAS system, providing secure, real-time dashboards within a CPCE environment. The solution offered multiple views including:

- **Database-Grounded List View:** For raw data analysis with sorting and filtering by supply classes (e.g., Class I, Class II).
- **Dynamic Dashboard & Map View:** Enabling tactical decision-making by displaying user created, unit-specific data and geographic information.
- **Admin Interface:** To manage and rework data connections.

User-Centric Design & Prototyping Under Constraints:

- **Detailed Prototypes in SCIF environment:**
  Because deploying our plug-in in Germany from the USA prevented access to a live staging environment, I created highly detailed prototypes that emulated real-world experiences and scenarios. These prototypes provided near-production simulations, enabling realistic user testing and effective feedback collection.
- **SCIF Environment & Rapid Iteration:**
  Operating within a Sensitive Compartmented Information Facility (SCIF) required stringent security measures. I revised frontend designs in real time as issues arose. Notably, during an active exercise, I collaborated with developers to mock up, user test, and deploy a revised feature set in under 90 minutes from the back of a SUV.

Outcome & Impact:
Atlas has become a critical tool during Europe-wide exercises. Its secure integration with LOGFAS and dynamic visualizations support rapid, informed decision-making at the 4 star level while maintaining compliance with data integrity and security requirements. Further integrations are underway with MAVEN to further execute supply missions effectively.

LOGTAK – TAK Environment Supply Logistics Integration

Project Scope & Integration Challenges:
LOGTAK was developed to capture and integrate supply logistics data directly from ATAK and WINTAK devices. It allowed squad leaders to input data via a custom TAK plug-in, which was then aggregated up through command echelons and integrated with the ATLAS system.

User-Centric Design & Rapid Prototyping:

- **End-to-End Workflow Analysis:**
  Conducted in-depth interviews and shadowing sessions with users from squad leaders to brigade commanders. This research defined the end-to-end data collection and aggregation process from squad leaders on a mobile device to senior leadership on PCs within TOCs.
- **Interactive Prototypes & Iteration:**
  Quickly developed interactive prototypes to demonstrate key functionalities, including the TAK plug-in interface, dashboards for LOGSTAT data, and clear user flows for data hand-offs. Rapid iteration during multinational exercises (e.g., SABER STRIKE) allowed immediate validation and refinement of design concepts.
- **Integration & Security Focus:**
  Collaborated closely with technical teams to brainstorm and ensure compliance with strict cross-domain security protocols. The design was robust enough to manage real-time data connectivity issues without compromising data integrity.

Outcome & Impact:
LOGTAK's successful deployment during high-stakes multinational exercises provided real-time, actionable logistics data to support mission-critical decision-making. The product effectively balanced technical integration challenges with a user-friendly design that incorporated on-the-ground use by squads for analysis within high-level Command Centers.

General Competencies & Design Expertise

- **Agile Development & Iterative Prototyping:**
  Demonstrated expertise in agile methodologies, rapidly iterating on designs to deliver high-fidelity prototypes and functional updates. Operating on business-needs, with a user-first context, I am able to move rapidly while also providing value to all involved parties.
- **User-Centric Design Thinking:**
  Leveraged extensive user research—including interviews, shadowing, and usability testing—to translate complex operational workflows into actionable UI requirements. This ensured that all designs were grounded in real-world user needs.
- **Integration & Security:**
  Engineered solutions that securely integrated data from disparate systems (e.g., LOGFAS, TAK devices, ATLAS) without compromising user experience. Collaborated with cross-functional teams to meet strict security protocols, particularly within SCIF environments. Heavy amount of experience working within the Tactical Server Infrastructure (TSI), Mission Partner Environment (MPE) and IL4, IL5, IL6 contexts.
- **Rapid Problem Solving & Collaboration:**
  Excelled in high-pressure situations by working closely with developers and end-users to quickly identify and resolve issues. Successfully balanced business objectives with user needs, ensuring that design solutions provided tactical and strategic value.
- **Comprehensive Documentation & Reporting:**
  Produced detailed wireframes, flow diagrams, storyboards, and prototypes to effectively

communicate design intent. Maintained robust documentation of usability testing and data analysis to support continuous improvement and stakeholder reporting.

END

The following provide more context into my work on both Atlas and LOGTAK as these two projects were my primary focus during my time working at ASWF:

Atlas Scope and Impact:

Atlas was conceived as a SCIF secure, MPE-based, real-time dashboard solution designed to bridge the gap between USAREUR-AF's internal logistics data and NATO's supply systems housed within an externally located LOGFAS system of record. My role as Product Designer included crafting a customizable, user-centric interface but also in ensuring that complex data integrations were seamlessly embedded into a secure CPCE environment.

Detailed Prototyping Under Constraints:

- **Prototyping Without a Live Environment:**
  Due to the complexities and security restrictions associated with deploying our plug-in in Germany while based in the USA, we were unable to provide a live staging environment for user testing. To overcome this challenge, I developed highly detailed prototypes that emulated real-world experiences, enabling stakeholders and end-users to interact with a near-production simulation of the dashboard.
- **User-Centric Design Process:**
  By engaging in thorough user research and feedback sessions remotely, I ensured that the prototypes accurately reflected the user workflows and operational demands. This approach not only provided a realistic testing ground but also facilitated the rapid incorporation of user insights into iterative design improvements.

Rapid Design Iteration in a SCIF Environment:

- **On-the-Fly Frontend Redesigns:**
  Working within a Sensitive Compartmented Information Facility (SCIF) added an extra layer of complexity to our operations. Despite these constraints, I consistently delivered high-quality design revisions in real time. During an active exercise, unforeseen issues with the frontend design emerged. Collaborating closely with the development team, I quickly mocked up a new feature set, conducted impromptu user tests, and deployed a revised design—all in under 90 minutes.

Balancing Business & User Needs:

- **Aligning Operational Demands:**
  Throughout the project, I maintained a careful balance between delivering a user-friendly interface and meeting the stringent data integrity and security requirements. My design process was always driven by the dual mandate of satisfying the end-user experience while also ensuring that the dashboard provided real value to stakeholders by enabling rapid, informed decision-making in high-pressure scenarios.

LOGTAK Scope and Impact:
LOGTAK was engineered to transform the way supply logistics data is captured and analyzed by integrating TAK devices into the supply chain workflow. By enabling squad leaders to input supply data directly from their ATAK devices, the product created a multi-tiered data collection process that aggregated information up the command chain. The integration challenges were substantial, involving cross-domain data flows, real-time updates, and the need to work within a highly secure environment. As the Product Designer, I played a central role in ensuring these integrations were seamless and robust.

User-Centric Design & Rapid Prototyping:

- **Deep Dive into User Workflows:** I began by conducting extensive interviews and shadowing sessions with end-users—from squad leaders to brigade-level commanders—to map out the entire data collection and usage journey. This research highlighted key areas where the user experience could be optimized, such as reducing the steps required for data entry and streamlining the process for data aggregation.
- **Agile Prototyping:** Leveraging rapid prototyping methods, I quickly transformed initial sketches into interactive prototypes. These prototypes showcased the functionality of the TAK plug-in, the dashboard for aggregating LOGSTAT data, and the integration pathway to the ATLAS environment. Rapid iteration allowed us to test multiple design hypotheses in real time during exercises, leading to a robust final design that was both intuitive and effective under operational pressures.
- **Integration-Focused Design Decisions:** Recognizing the importance of secure and reliable data transfer, I worked closely with technical teams to ensure that the design accommodated strict cross-domain security protocols. This included designing clear user flows that allowed for smooth hand-offs between TAK devices and centralized dashboards, as well as ensuring that any disruptions in connectivity did not compromise data integrity.

Outcome:
LOGTAK's success was underscored during its deployment in high-stakes, multinational exercises. The product not only enhanced the ability of frontline leaders to input and access supply data in real time but also provided a reliable pipeline for aggregating and analyzing logistics data across command echelons. This project highlighted our capability to integrate complex systems quickly and securely while keeping the end-user experience at the forefront of design decisions. The integration of TAK data into the broader ATLAS system further amplified the strategic value of our work, making it an exemplary case of user-centric design that delivers on both operational and business fronts.