## Chapter 2: Project Results

The problem

The team has noticed a growing trend among players who actively track their in-game performance across multiple competitive titles. These players often juggle stats from different games, switching between third-party stat websites, forums, and spreadsheets to monitor progress, compare metrics, and decide what to focus on next. The experience is fragmented, inconsistent, and lacks meaningful cross-game insights.

What makes the problem even worse is that there’s no single tool that pulls all this data together and makes sense of it, like by game genre, play style, or personal goals. Players often don’t notice when their performance starts to drop or when they've been playing for way too long. Plus, there's no personalized, mobile-friendly experience that fits how they play or what games they focus on.

### Solution

To meet this growing need, the team will design and develop a cross-game stat tracking mobile application, built specifically for Android using Kotlin, by June 20th. The goal is to give players a centralized and responsive interface to monitor performance, manage their game profiles, and receive alerts based on custom stat thresholds.

**The app allows users to:**

* Browse and search a curated list of supported games, filterable by genre.
* Add and manage usernames per game, with real-time validation.
* View detailed stats per game, genre-level performance, and global aggregates.
* Receive push notifications when performance dips below or rises above personalized thresholds.
* Customize their profile with display names, avatars, and genre preferences.

**Behind the scenes, the backend:**

* Is built using scalable technologies such as Spring Boot, FastAPI, or Express.
* Integrates securely with game-specific APIs to fetch user stats.
* Uses PostgreSQL with encryption and Redis for fast stat caching.
* Serves a clean RESTful API structure for user management, game data, and notifications.

**Boundaries & Ethical Scope**

* The application is strictly read-only with respect to game data; it cannot alter any in-game progression or real-time match data.
* It collects only essential user data (usernames and preferences), ensuring high privacy standards with AES-256 encryption and TLS 1.2+ transport security.
* It does not handle financial transactions or health-related data.

Value Proposition  
By offering this centralized and customizable experience, the app not only empowers players with data-driven insights into their performance but also supports healthier play habits through proactive alerts. Whether a casual player trying to improve or a competitive gamer optimizing strategy, the app serves as a useful tool.

## Chapter 4: Intermediate Results

* **Sprint 1**
  + Focus: MVP scope definition, system and architecture planning.
  + Security Activities:
    - Initial threat modeling
    - GitLab repository and CI setup
    - Planning cryptographic use
  + Deliverables & Report Chapters:
    - Project plan
    - Product backlog
    - Draft threat model
    - Report Chapters: Introduction, Project Planning
* **Sprint 2**
  + Focus: Implementation of core user persona management.
  + Security Activities:
    - Cryptographic implementation
    - Static code analysis
  + Deliverables & Report Chapters:
    - Working persona module
    - Encrypted local storage
    - CI/CD pipeline foundation
    - Report Chapters: Concise Summary, Research, Secure Programming, Cryptography
* **Sprint 3**
  + Focus: Development of social features and secure login/auth.
  + Security Activities:
    - Secure communication implementation
    - Authentication logic
    - Expanded test coverage
  + Deliverables & Report Chapters:
    - Friend comparison functionality
    - Authentication system
    - Test reports
    - Report Chapters: Threat Modeling, Code Review, Secure SDLC
* **Sprint 4**
  + Focus: Final UI polish, integrations, and documentation.
  + Security Activities:
    - Secure UI review
    - Final threat model update
  + Deliverables & Report Chapters:
    - Final production-ready app version
    - Complete documentation
    - Code review summary
    - Report Chapters: Conclusions, References, Appendices