

# PlayX

*Join. Play. Repeat*

## **Collaborators**

Tami Kabiawu

Azim Raheem

Kai Reed

Nalan Hove

## **Background/Problem Definition**

Casual sports players, particularly in pick-up basketball, lack a centralized platform that seamlessly integrates community engagement, real-time performance tracking, competitive play, and social connectivity. Currently, players rely on fragmented solutions—social media or group chats for finding games, manual scorekeeping for tracking performance, and informal betting without secure handling. Professional-level AI-powered analytics exist, but they require expensive multi-camera setups or wearable sensors, making them inaccessible to everyday players. This absence of an affordable, AI-driven sports tracking and social engagement platform limits players' ability to improve, compete, and connect within their local sports communities.

Our solution is a mobile app that revolutionizes pick-up sports by offering an all-in-one experience where users can organize and discover games, track their stats in real-time using AI-powered video analysis, share highlights, engage in competitive play that perfectly fits their skill level, and even optionally place wagers. By integrating social networking with sports-specific utilities like matchmaking and leaderboards, we aim to create a dynamic and engaging space that fosters competition, skill development, and stronger community ties. Advances in AI, edge computing, and cloud processing now make it possible to deliver this experience affordably using just a phone camera—eliminating barriers to performance tracking and structured competition. Starting with basketball, this technology has the potential to expand to other sports, redefining how amateur and casual athletes connect, compete, and improve their game.

## Stakeholder Personas

### 1. Competitive Player Using the App to Find High-Level Games and Training Opportunities – by Nalan Hove

User: Tobi, a sophomore at a local high school who just moved into the area

Tobi is a dedicated and competitive high school basketball player who recently moved to a new area. He is focused on improving his skills, competing against stronger players, and gaining exposure for potential high school team recruitment or future opportunities. An app that provides court information, high-level pickup game schedules, and access to competitive training will help him stay sharp, connect with skilled players, and integrate into the basketball community. Since he doesn't yet drive, having detailed location and transportation options is crucial, as well as knowing which courts host serious, competitive runs. He values training, competition, and growth and would benefit from features that allow him to track his progress, join invite-only games, and get exposure to scouts or coaches. By offering an easy way to discover elite-level games, schedule training sessions, and connect with serious players, the app can help Tobi establish himself in the new basketball scene.

#### Tobi's Needs

##### Find Competitive Games and Training Sessions

- Needs to locate courts with serious, high-level pickup games.
- Wants to identify open runs that attract skilled and competitive players.
- Seeks access to training sessions, drills, and player development programs.

##### Connect with Elite Players and Coaches

- Recently moved and doesn't yet know where the best competition plays.
- Looking to network with high-level players, trainers, and potential mentors.
- Interested in earning a reputation within the local basketball community.

##### Track Progress and Gain Exposure

- Wants tools to track performance metrics (e.g., points per game, shooting percentage).
- Would benefit from highlight-sharing features to showcase skills to coaches and scouts.
- Interested in joining competitive leagues or tournaments through the app.

#### Tobi's Constraints

##### Limited Local Knowledge of Competitive Courts

- Doesn't know where the most serious games happen or where scouts/coaches frequent.
- Needs a way to filter courts based on skill level and competitiveness.

### Transportation Constraints

- Might rely on public transit or family for rides, limiting game options.
- Needs an app feature that provides directions and travel time estimates.

### High Standards for Gameplay

- Prefers structured, competitive games over casual, unorganized play.
- Wants to avoid games with inconsistent skill levels or unreliable players.

### Balancing Training with School and Other Commitments

- Needs efficient scheduling tools to balance schoolwork and training.
- Wants notifications for last-minute elite pickup games so he can make quick decisions.

## How the App Helps

### Competitive Court & Game Finder

- Filters courts and games by skill level, intensity, and competition type.
- Highlight reviews and ratings of courts known for serious play.
- Notifications for high-level open runs happening nearby.

### Elite Player Networking & Exposure

- Profile-based matching to connect Tobi with players at his skill level.
- Invite-only game access, allowing skilled players to join serious matchups.
- Highlight-sharing features to showcase Tobi's progress.

### Scheduling & Performance Tracking

- Real-time alerts for last-minute games with top players.
- Training log to track progress, shooting percentages, and skills.
- Calendar integration to plan workouts, games, and school responsibilities.

## Tobi's Core Values

1. Competition & Growth
2. Networking & Exposure.
3. Efficiency & Structure.

## **Tobi's Value Tensions**

### Time Management vs. Training Goals

- Balancing schoolwork, family responsibilities, and rigorous basketball training.
- Needs to prioritize games that provide real competitive growth.

### Openness vs. Exclusive Access

- Wants to network and meet players, but prefers invite-only elite games.
- Must balance gaining exposure while avoiding unstructured games.

### Independence vs. Parental Oversight

- Wants freedom to travel for the best games, but may face parental restrictions.
- Needs a way to prove game locations and safety factors to his parents.

## 2. Advertising Partner (Nike) - by Tami Kabiawu

Nike Marketing Manager: Nico

About Nico:

Nico is a Senior Marketing Manager at Nike, focused on digital engagement and grassroots sports marketing. His role involves identifying high-potential platforms where Nike can build relationships with young, engaged athletes. He's responsible for driving brand loyalty, increasing customer engagement, and finding innovative ways to integrate Nike products into digital ecosystems. He is constantly on the lookout for new ways to connect with Gen Alpha, Z, and Millennials, particularly through sports, technology, and social media.

Nike's Needs & Interest in the App

- Targeted Digital Marketing & Brand Exposure
  - Nike wants to reach young, active users who are already passionate about sports.
  - The app's pickup game and social-sharing features provide a built-in, sports-focused audience that Nike can tap into for marketing and engagement.
- Product Integration & Athlete Engagement
  - Nike wants to embed exclusive sneaker drops, digital rewards, and apparel discounts within the app.
  - Imagine players earning Nike points for completing challenges (e.g., "Play 10 games this month" or "Hit 5 three-pointers in a row").
  - Gamified experiences that encourage loyalty and repeat engagement with Nike gear.
- Sponsorship & Tournament Branding
  - Nike could sponsor high-profile tournaments or city-wide leaderboards in the app, positioning itself as the leading brand for competitive and recreational athletes.
  - Exclusive Nike-branded courts or digital arenas could be promoted within the app, tying into real-world Nike-sponsored pickup events.
- High-Engagement Social Media Content
  - The app's highlight-sharing feature means users are constantly posting Nike-branded moments
  - Nike can integrate branded filters, stickers, and challenges that encourage organic sharing of Nike-related content.
- Expansion into Multiple Sports Markets
  - As the app grows beyond basketball to include soccer, volleyball, and pickleball, Nike can introduce sport-specific campaigns and activations.
  - Different sports communities allow Nike to tailor promotions for different audiences (e.g., basketball players getting sneaker rewards, soccer players getting cleat promotions).

Nike's Constraints & Concerns

- Brand Authenticity & Engagement
  - Nike must ensure that any integration feels natural, not forced—Gen Z and Alpha consumers are skeptical of traditional ads.

- The app needs to offer value to users, such as real-world benefits, exclusive content, or experiences, rather than just banner ads.
- Performance Tracking & ROI Measurement
  - Nike will need data analytics and engagement tracking to measure the success of in-app campaigns.
  - Key metrics include time spent in branded experiences, purchase conversion rates, and user interaction with Nike challenges.
- Competitive Positioning vs. Other Brands
  - If the app allows multiple brands (e.g., Adidas, Puma, Under Armour), Nike must ensure it has premium visibility and deeper engagement opportunities than competitors.
  - Nike may want exclusive sponsorship rights for certain features, events, or sports.

#### How the App Helps Nike

- Hyper-Targeted Advertising to Active Athletes
  - The app provides a direct line to young, engaged sports players—a highly valuable audience Nike is constantly seeking.
  - Unlike general social media, every user is an athlete, ensuring highly relevant advertising.
- Seamless Product & Brand Integration
  - Nike can sponsor virtual and real-world events, introduce rewards, and drive sneaker sales through in-game challenges.
  - Players engaging with Nike-branded challenges and earning real-world incentives (e.g., exclusive discounts, invites to Nike-sponsored games) ensures deep brand loyalty.
- Viral, User-Generated Content
  - Players naturally share highlight reels, game clips, and achievements—many of which will feature Nike shoes and apparel.
  - This turns regular users into brand ambassadors, driving Nike’s organic reach without the need for traditional paid ads.
- Expansion into New Sports Markets
  - As the app expands beyond basketball into soccer, volleyball, and pickleball, Nike gets access to new communities of athletes, helping them grow their brand across multiple sports.

#### Nico’s core values

- Financial

### 3. Amateur Player Looking to Connect and Improve his Skills – by Azim Raheem

User: Jason, a 23-year-old amateur basketball player looking to improve and meet new people

Jason is a recent college graduate who has always enjoyed basketball but never played at a competitive level. He moved to a new city for work and is looking for a way to stay active, make new friends, and improve his game. He enjoys pickup games but struggles to find consistent, well-matched runs where he can develop his skills. Jason wants an app that helps him easily discover local games, track his progress, and connect with other casual players who share his goals. He values fun, community, and personal growth and would benefit from features that allow him to track improvements, receive skill-building tips, and join casual yet structured games without feeling out of place.

#### Jason's Needs

##### Find Local Games and Players at His Skill Level

- Wants an easy way to find pickup games without having to rely on word-of-mouth.
- Prefers games with a mix of fun and competition, avoiding overly intense or disorganized runs.
- Would like to filter games by skill level to ensure he's not in over his head.
- Needs a way to track game schedules and availability to fit basketball into his busy work life.

##### Connect with Like-Minded Players

- Jason doesn't know many people in his new city and wants to use basketball as a social outlet.
- Prefers a friendly, welcoming environment where improvement is encouraged.
- Wants to meet players of similar ability who also want to improve together.

##### Improve His Basketball Skills

- Looking for casual skill development tips within the app.
- Would benefit from personalized stat tracking (e.g., shooting percentage, assists).
- Wants to set personal improvement goals and get feedback on progress.

#### Jason's Constraints

##### Limited Knowledge of Local Courts and Games

- Doesn't know which courts have reliable, well-organized games.
- Needs a court rating system to determine which spots suit his skill level.

##### Wants a Balance Between Fun and Challenge

- Jason enjoys competing but isn't looking for ultra-serious games.
- Needs a way to filter out overly aggressive or elite-level games.

##### Busy Work Schedule Limits Availability

- Needs game scheduling features to find games that fit his free time.
- Would benefit from notifications for last-minute nearby games.



## **How the App Helps**

### **Casual Game & Court Finder**

- Filters games by location, skill level, and time.
- Includes reviews and ratings to highlight welcoming and well-run courts.
- Map-based discovery for local games and active courts.

### **Social & Community Features**

- Connects Jason with players who have similar skill levels and goals.
- Includes a chat feature for coordinating games and meeting new players.
- Offers community challenges and local basketball events to encourage engagement.

### **Skill Development & Progress Tracking**

- Allows Jason to log personal stats and track improvement over time.
- Provides simple drills and improvement challenges for casual players.
- AI-generated highlight reels for fun, social sharing.

## **Jason's Core Values**

1. Community & Social Connection
2. Personal Improvement
3. Balanced Competition & Fun

## **Jason's Value Tensions**

### **Casual Play vs. Competitive Growth**

- Wants to improve but doesn't want pressure from ultra-competitive players.
- Needs games where beginners and intermediates can develop together.

### **Consistency vs. Flexibility**

- Wants a reliable group of players but also needs flexible game options.
- Would appreciate both structured and spontaneous games.

### **Self-Improvement vs. No Pressure**

- Enjoys tracking progress but doesn't want to be judged on stats.
- Needs optional performance tracking that's fun, and not stressful.

## 4. Basketball Enthusiast Engaging with Community - by Kai Reed

User: Larry, a college student who rarely plays but is deeply involved in basketball culture

Larry is a passionate basketball fan who rarely plays but stays deeply connected to the game through media, discussions, and local events. Whether it's watching NBA games, debating player stats, or following high school and streetball legends, basketball is a central part of his identity. While he may not be looking for competitive games himself, he is eager to engage with the community, attend exciting matchups, and contribute to discussions around the sport. An app that offers game discovery, social engagement, and content-sharing features will help Larry stay involved without needing to step onto the court. He values being an informed fan, networking with players, and having a way to contribute to the local basketball scene—whether that's through organizing games, filming highlights, or tracking key matchups. By providing an easy way to discover games, interact with players, and consume basketball-related content, the app allows Larry to immerse himself in the sport in a way that fits his interests.

### Larry's Needs

#### Stay Connected to Local Basketball Culture

- Wants to find and attend high-energy pickup games, tournaments, or streetball events.
- Enjoys following and discussing local basketball legends, high school prospects, and rising talent.
- Seeks a platform where he can engage with players and fans through debates, polls, and analysis.

#### Engage in Basketball Content & Discussions

- Interested in watching highlight reels from local games and professional leagues.
- Loves breaking down stats, analyzing player performances, and sharing insights.
- Wants an app where he can follow local players, keep up with rankings, and discuss games in real time.

#### Support the Basketball Community Without Playing

- Enjoys filming and capturing great plays at pickup games, acting as an unofficial content creator.
- Interested in helping organize games, setting up matchups, or promoting local talent.
- Wants an easy way to track and compare player stats to fuel conversations and friendly debates.

### Larry's Constraints

#### Doesn't Actively Play but Still Wants to Be Involved

- Might feel left out in apps that only cater to active players.
- Needs alternative engagement methods beyond game participation.

#### Finding the Right Social Circles & Discussions

- Wants to be part of basketball conversations but without needing to prove on-court skills.
- Needs ways to connect with players, coaches, and fans through shared content and insights.

#### Access to High-Level Basketball Events

- May not always know where the most exciting games, tournaments, or scouting events are happening.
- Wants to track and follow elite players, even if he's not participating.

### How the App Helps

#### Basketball Community & Event Discovery

- Provides a feed of high-level local games, tournaments, and streetball events Larry can attend.
- Highlights the most competitive matchups and trending games happening nearby.
- Allows users to RSVP to games as spectators and interact with players before and after matches.

#### Social & Content Engagement

- A built-in forum for discussions, debates, and analysis around local and pro-level basketball.
- Trending player rankings, polls, and stats breakdowns to fuel engaging discussions.
- The ability to follow players, teams, and leagues to stay updated on key matchups.

#### Content Creation & Game Promotion

- Features that let Larry film and upload highlight reels of local games, helping players get noticed.
- Leaderboards and player performance tracking, giving him insights into top local talent.
- Tools to help organize games, set up matchups, and coordinate with players, making him a key figure in the basketball community even if he doesn't play.

### Larry's Core Values

- Community & Engagement – He thrives on basketball conversations, debates, and event participation.
- Basketball Knowledge & Analysis – He enjoys breaking down stats, following rankings, and scouting emerging players.
- Content & Storytelling – He loves capturing, sharing, and amplifying great basketball moments.

### Larry's Value Tensions

#### Watching vs. Participating

- Loves being around the game but doesn't always want to play.
- Needs an app experience that lets him contribute without stepping onto the court.

#### Casual Engagement vs. In-Depth Analysis

- Wants a mix of lighthearted discussions and deep analytical breakdowns.
- Needs to balance fun basketball content with meaningful insights and serious player tracking.

#### Independence vs. Social Validation

- Values his own opinions and basketball knowledge, but still seeks recognition and engagement from the community.
- Needs a space where he can share insights and be part of the conversation without being dismissed as a non-player.

## User Journey - by Azim Raheem

Amateur Player Looking to Connect and Improve – Jason

### Awareness & Discovery

#### How Jason Discovers the App

- **Social Media & Word of Mouth** – Sees Instagram or TikTok ads showcasing local pickup games and player stories.
- **Friends & Local Community** – Hears about it from a coworker who uses it to find casual games.
- **Gyms & Parks** – Notices a QR code flyer at his local recreation center advertising easy game matchmaking.

#### Value Tensions:

- Jason wants free access to find games, but the app needs monetization via premium features.
- He prefers a casual approach, while the app also caters to serious players.

### Onboarding & First Use

#### Sign-Up Process

- Registers using Google or email login.
- Creates a profile with:
  - **Skill level** (Beginner, Intermediate, Advanced).
  - **Preferred position** (Guard, Forward, Center, Flexible).
  - **Game style** (Casual, Semi-Competitive, Competitive).

#### First-Time User Experience

- Walkthrough explaining how to:
  - **Join a game** (filters for location, skill level, and availability).
  - **Meet new players** through group invites and chat.
  - **Track progress** (optional stats tracking).
- Earns a welcome badge and a free trial of premium features (e.g., enhanced player matching, skill tracking).

#### Value Tensions:

- Casual players like Jason want quick, easy onboarding, but others may want detailed customization.

- Some users may not care about stats tracking, while others might want more performance insights.

## Active Engagement & Usage

### Finding & Joining Games

- Opens the home screen, which shows:
  - **Map view** of active pickup games nearby.
  - **List view** with game details (players, skill level, game type).
- Uses filters to find games based on:
  - **Location** (near home or work).
  - **Skill level** (to avoid overly competitive games).
  - **Game type** (2v2, 3v3, full court, drills).
- Clicks “Join Game” and sees:
  - **Game details** (players signed up, court location).
  - **Group chat** to coordinate with players.
  - **Directions** to the court (Google Maps integration).

### Connecting with Players & Community

- After a few games, Jason:
  - Adds frequent teammates to his friend list.
  - Joins a local basketball group chat within the app.
  - Starts seeing game invites from other casual players.

### Improving His Skills

- Logs his game results manually (games played, wins, points scored).
- Gets personalized skill improvement challenges (e.g., “Improve Your Shooting Accuracy”).
- Watches short training videos in the app on dribbling and shooting mechanics.

### Value Tensions:

- Jason wants fun, structured games, but not overly competitive matches.
- He’s interested in improving skills, but doesn’t want a heavy training focus.

## Growth & Community Engagement

### Engaging with Challenges & Social Features

- **Community Challenges** – Joins a “Weekend Hoopers” challenge where players earn badges for playing three times in a week.
- **Highlight Sharing** – Posts a game recap in the app’s social feed, earning likes and comments.
- **Game Streaks & Leaderboards** – Sees his ranking in the “Most Active Casual Players” leaderboard.

## Building a Basketball Network

- Joins a regular weekly pickup game organized by local players.
- Starts getting invited to skill clinics and semi-organized leagues.
- Tries a local beginner-friendly tournament hosted through the app.

### Value Tensions:

- Jason enjoys the social aspect, but doesn't want an overwhelming social media feel.
- He likes gamification, but doesn't want it to become too competitive.

## Retention & Monetization

### Why Jason Stays Engaged

- **Game Notifications** – The app reminds him of upcoming games he's joined.
- **Personal Progress** – He checks his improvement over time with simple stat tracking.
- **Friends & Social Motivation** – Keeps playing because of friendships formed in the app.

### How the App Monetizes While Keeping Jason Engaged

- **Freemium Model:**
  - Free tier includes game matchmaking and basic stats.
  - Premium (\$4.99/month) offers advanced analytics and exclusive event invites.
- **Sponsored Content** – Jason sees an Adidas-sponsored "Casual Hoopers League" and signs up.
- **In-App Purchases** – He buys a custom jersey for his profile avatar.

### Value Tensions:

- Jason prefers free features, but the app needs monetization for growth.
- Some casual players love community challenges, while others just want games.

## Success Criteria

To define success, we will measure key aspects of user engagement, security, privacy, and overall system performance. Below are the measurable success criteria aligned with the primary goals of the app.

### 1. User Engagement and Growth

**Goal:** Ensure a growing and active user base.

**Success Criteria:**

- Increase the number of monthly active users by a set percentage.
- Maintain a consistent user retention rate over time.
- Achieve a target number of game RSVPs and active sessions per user.
- Grow the number of new user sign-ups per month.

### 2. Court and Game Participation

**Goal:** Help users find and participate in games easily.

**Success Criteria:**

- Reduce the average time users spend searching for a game.
- Increase the number of scheduled and completed pickup games.
- Improve the accuracy of court availability data through user feedback.

### 3. Security and Privacy

**Goal:** Protect user data and ensure a safe environment.

**Success Criteria:**

- Implement strong authentication measures to reduce account fraud.
- Maintain a low rate of security incidents and unauthorized access attempts.
- Provide clear privacy settings and ensure a high percentage of users configure them.
- Ensure compliance with data protection regulations such as GDPR and CCPA.

### 4. Community Safety and Moderation

**Goal:** Create a positive and inclusive user experience.

**Success Criteria:**

- Reduce reports of harassment or inappropriate behavior through active moderation.
- Implement and maintain a quick response time for handling user reports.
- Increase the number of users who positively rate their game experience.

### 5. Technical Performance and Reliability



**Goal:** Ensure the app functions smoothly and efficiently.

**Success Criteria:**

- Maintain high system uptime with minimal downtime.
- Reduce app crash rates to an acceptable threshold.
- Improve app load times and response speeds.

## **6. Ethical and Inclusive Design**

**Goal:** Ensure fairness and accessibility for all users.

**Success Criteria:**

- Improve algorithm transparency and fairness in matchmaking.
- Provide accessible features for users with disabilities.
- Increase user satisfaction with inclusivity features, based on surveys and feedback.

## Security, Privacy, and Ethical Considerations for the App - by Nalan Hove

As our basketball app connects players, facilitates pickup games, and provides location-based services, it inherently touches on critical areas of **security, privacy, and ethics**. Users will rely on the app to find safe courts, engage with new people, and manage their game schedules, which means we must be proactive in safeguarding their data, ensuring their safety, and maintaining an ethical user experience. To address these concerns, we are committed to implementing responsible data practices, designing security measures to prevent misuse, and fostering a community that prioritizes inclusivity and respect. Below, we outline key concerns in these areas and our approach to mitigating them as we continue to develop and refine the app.

### 1. What Are We Working On? (Assess Scope)

Our basketball app helps players find local pickup games, connect with other players, and track court availability. The app includes location-based services, social features (chat, game invites, and RSVPs), and profile management for users to showcase skill levels and preferences. It is designed for a diverse user base, including casual players, competitive players, coaches, and event organizers.

Key Features in Scope for Threat Modeling:

- **User Authentication & Profiles** – Login, player stats, game history
- **Location Services** – Court discovery, real-time check-ins, player proximity
- **Social Features** – Messaging, game invites, RSVP system
- **Data Collection & Storage** – User preferences, gameplay history, app analytics
- **Moderation & Reporting System** – Flagging inappropriate behavior

These features introduce security, privacy, and ethical risks that must be analyzed.

## 2. What Can Go Wrong? (Identify Threats)

Using **STRIDE** (Spoofing, Tampering, Repudiation, Information Disclosure, Denial of Service, Elevation of Privilege), we identify major threats:

### Security Threats

Threat	Description	Impact
<b>Spoofing</b>	Attackers may create fake accounts or impersonate other players	Trust issues, scams, unsafe interactions
<b>Tampering</b>	Malicious users could manipulate game invites or ratings	Misinformation, unfair gameplay
<b>Denial of Service (DoS)</b>	Bots could spam invites or messages, disrupting app use	Service unavailability, performance issues
<b>Unauthorized Access</b>	Weak authentication could allow unauthorized access to user profiles	Privacy violations, identity theft

### Privacy Threats

Threat	Description	Impact
<b>Location Tracking Abuse</b>	Players' real-time locations could be misused	Stalking, harassment, personal safety risks
<b>Data Exposure</b>	Poor data protection could lead to personal information leaks	Identity theft, legal repercussions
<b>Unwanted Contact</b>	Users could receive unsolicited messages from strangers	Harassment, safety concerns

## Ethical Concerns

Concern	Description	Impact
<b>Bias in Matchmaking</b>	If algorithms prioritize certain skill levels unfairly, it may exclude new players	Lack of inclusivity, frustration
<b>Toxicity in Community</b>	Lack of moderation could enable cyberbullying or discrimination	Negative user experience, safety issues
<b>Parental Concerns</b>	Young players could unknowingly interact with adults in pickup games	Ethical concerns, legal risks

## 3. What Are We Going to Do About It? (Mitigation & Risk Management)

### Security Mitigations

Threat	Mitigation Strategy
Spoofing (Fake Accounts)	Require email verification & optional 2FA
Tampering (Game Invites, Ratings)	Implement audit logs & validation checks
Denial of Service (DoS)	Rate-limit requests & detect spam activity
Unauthorized Access	Use OAuth-based authentication with secure password policies

### Privacy Protections

Threat	Mitigation Strategy
Location Tracking Abuse	Allow users to hide location or only share with friends
Data Exposure	Encrypt sensitive data, ensure GDPR/CCPA compliance
Unwanted Contact	Enable user-controlled privacy settings and block/report functions

### Ethical Safeguards

Concern	Mitigation Strategy
Bias in Matchmaking	Regularly audit and refine algorithm fairness
Toxicity in Community	Implement AI-assisted moderation and community reporting
Parental Concerns	Introduce parental controls & verification for minors

#### 4. Did We Do a Good Job? (Validation & Continuous Improvement)

Threat modeling is an ongoing process(esp at this point of the project). To assess the effectiveness of our security, privacy, and ethical measures, we will:

- Conduct security audits every quarter to test vulnerabilities.
- Monitor user feedback and reports for emerging issues.
- Adapt our policies and mitigations as new threats arise.
- Maintain transparency by publishing security updates and ethical considerations.

## Launch Plan - by Kai Reed

To ensure a successful rollout and adoption of our app, we will phase our launch through multiple stages: Dogfood, Alpha, Beta, Restricted Launch, and General Availability. Each phase will focus on gathering valuable user feedback, refining our technology, and strategically positioning the app for maximum engagement and growth.

The first stage, “dogfood”, will involve internal testing among our team, close partners, and select basketball enthusiasts. This will allow us to validate core functionality, ensuring that game discovery, stat tracking, and AI performance analysis work seamlessly in real-world settings. We will focus on identifying critical bugs, refining the user experience, and stress-testing our AI-powered tracking in different environments. This stage will be limited to internal team members and a small group of trusted basketball players who can provide detailed feedback before expanding to a broader audience. Once we’ve refined the core experience, we will move into the Alpha phase, an invite-only period where we will strategically onboard highly engaged basketball players, trainers, and influencers. These early adopters will provide insights on AI-driven stat accuracy, game scheduling, matchmaking, and social engagement. This phase will be a proving ground for how well our community features drive interaction.

We will leverage influencers and local basketball communities to generate buzz by encouraging users to share their experiences, post highlight reels, and invite others to exclusive pickup games. By seeding the platform with competitive and engaged players, we will ensure a strong foundation for organic growth. Following Alpha, the Beta phase will induce more scale. We will open the app to thousands of users, carefully managing sign-ups to balance system constraints and testing how our platform deals with large scale. The focus will be on testing scalability, monitoring engagement data, and optimizing features that drive retention. This phase will also introduce early monetization concepts such as premium features, sponsored challenges, and in-app rewards to gauge user interest in different revenue models. To accelerate adoption, we will partner with high schools, local recreational leagues, and youth basketball organizations, offering them early access and exclusive perks, such as leaderboard rankings and branded challenges from major brands like Nike. Referral incentives will play a major role in driving viral growth, rewarding users who bring in their friends and teammates.

As momentum builds, we will enter the Restricted Launch phase, strategically rolling out the app in key basketball hotspots such as New York City, Los Angeles, Chicago, and Atlanta. At this stage, partnerships with major sports brands and tournament organizers will be in full effect, allowing us to integrate real-world competitions and exclusive sponsored events. We will work with Nike, Adidas, and Under Armour to introduce branded pickup tournaments where players can compete for gear, prizes, and leaderboard recognition. Additionally, we will establish connections with esports communities like NBA 2k, to create cross-platform incentives that link digital and real-world basketball experiences. This phase will ensure strong adoption in key urban markets and position the app as a must-have for serious and casual players alike.

Finally, after months of refinement and strategic rollout, we will move into General Availability, opening the app to a mass market. Large-scale advertising campaigns featuring NBA stars, influencers, and

gaming personalities will drive mainstream awareness, promoting the app as the premier platform for pick-up sports. Simultaneously, we will expand our partnerships with schools and youth sports organizations to integrate the app into training programs and community sports initiatives. By this point, we will also begin our expansion beyond basketball, introducing support for other pick-up sports such as pickleball, racquetball, soccer, and volleyball, ensuring that we capture an even broader audience. By methodically phasing our launch—starting with internal validation, building an engaged early community, leveraging strategic brand partnerships, and culminating in a full-scale national expansion—we will position the app as the go-to platform for pickup sports worldwide. Combining AI-powered analytics, social engagement, and competitive play, our app will redefine the way athletes of all levels track their games, connect with their communities, and take their skills to the next level.

## The “lucky break” - by Tami Kabiawu

If we were a huge success in five years, we imagine that we’d need to reach several milestones to get us there.

The first would be mass adoptions. We’d need millions of downloads worldwide, driven by the app’s ability to seamlessly connect local players, organize games, and track performance in ways never before possible. The app would become a household name for pick-up sports, with word-of-mouth spreading as users share their in-game highlights, win streaks, and leaderboard rankings. Viral moments—insane buzzer-beaters, unexpected underdog wins, and jaw-dropping individual performances—would field organic growth as players post their best plays across Instagram, TikTok, and Twitter, turning our app into the go-to platform for sports content sharing.

To scale beyond an organic user base, we’d also need major brand partnerships. Collaborating with Nike, Adidas and Under Armour, for example, we could integrate in-app challenges, branded gear rewards, and sponsored tournaments that give players tangible incentives to keep engaging. We imagine exclusive player jerseys, sneaker drops, or real-world experiences tied directly to user performance, transforming casual pick-up games into a path toward recognition, rewards and even sponsorship opportunities. NBA teams and national tournament organizers could even use the app to scout undiscovered talent, making it a potential launchpad for aspiring athletes, as well.

To further drive the growth of our audience, we would secure in-game collaborations with top-tier video game franchises like Fortnite and NBA 2K. Imagine wearing in-game skins, boosts or exclusive gear by dominating real-world pick-up games tracked through the app. By bridging the gap between virtual and physical sports, we could capture the attention of both gamers and athletes, cementing the app’s place in mainstream pop culture.

Another major milestone would be deep social media integration. We envision the app evolving into the Instagram or TikTok of pick-up sports, where players can not only track their stats but also create highlight clips, and entertainment such as memes and ‘lowlights,’ and engage in sports-driven social interactions. A thriving in-app social community, complete with game invites, direct messaging and group chats, and even local rivalries, would turn the app into a daily destination for users—even when they’re not on the court. Time spent on the app would be driven by watching game replays, checking leaderboards, interactive challenges, messaging, and potentially even AI-generated personalized coaching tips based on past performance.

On a broader scale, we’d need large-scale national campaigns that emphasize fun, fitness, and community—particularly targeting children and young athletes. Working with schools, after-school programs, and major sports leagues, the app would encourage youth participation in sports, gamifying fitness in a way that makes casual competition exciting and rewarding. Commercials featuring NBA stars, esports influencers, and social media icons would push our brand into the mainstream, making it a cultural touchpoint for anyone who loves to play, compete, and improve.

For ultimate longevity, we’d need to expand beyond basketball. Pickleball, racquetball, soccer, and volleyball would be natural extensions—each sport bringing in new demographics, fresh engagement



opportunities, and more ways to monetize the platform. The app would become a universal hub for amateur sports, offering the same seamless AI tracking and community-driven competition across multiple disciplines.

Finally, to achieve true long-term success, the app would need to establish a financial model that enhances competition while ensuring fairness and accessibility. A secure, trusted competitive play-for-money system could allow users to wager on games, enter tournaments, and win real-world prizes, further fueling engagement while maintaining integrity through automated score tracking and fraud prevention.

If all these things happen—mass adoption, major brand partnerships and deals, video game integrations, viral content sharing, national campaigns, multi-sport expansion, and a thriving competitive economy—our app won't just be successful. It will be the undisputed leader in the future of pick-up sports, shaping how people play, compete, and engage with their favorite sports worldwide.

## **Pre-Mortem: Five Years Later - by Nalan Hove**

### **1. Rapid but Unsustainable Growth**

In the early stages, the app experienced explosive growth through viral highlights, brand collaborations, and social media campaigns. However, the team struggled to retain new users once the initial excitement died down. Frequent app updates introduced features faster than users could adopt them, resulting in a fragmented user experience that discouraged ongoing engagement.

### **2. Monetization Missteps**

Although big-brand sponsorships initially poured in, the premium features introduced heavy paywalls that alienated the core audience. The free tier gradually lost essential features, causing casual users—who formed the majority—to flee to competitor apps offering similar functionality without costly upgrades. Meanwhile, power users found the advanced analytics insufficiently compelling or well-supported to justify monthly fees, further eating into recurring revenue.

### **3. Overreliance on Brand Partnerships**

Major partnerships with Nike, Adidas, and other sports giants briefly boosted the app's visibility, but these relationships also drove development priorities away from user needs. The pivot toward gamified merchandising and sponsored tournaments neglected core matchmaking improvements and reliable scheduling tools. The product's identity slowly morphed into a marketing vehicle rather than a community-driven sports platform, dulling its original promise of bringing local players together.

### **4. Social Community Fatigue**

The app's social features expanded quickly, aiming to become the "TikTok of pickup sports." But poor moderation tools, an overly competitive culture, and spammy notifications led to toxic interactions on the platform. Users seeking casual, friendly play no longer felt safe or welcome. By the time better moderation and user-blocking features were introduced, many players had already moved on to more positive communities.

### **5. Neglected Core Tech & Data Security**

Efforts to capture market share in multiple sports—basketball, soccer, pickleball—stretched engineering resources thin. Meanwhile, the platform's core technology for stat tracking, geolocation, and chat experienced mounting technical debt and neglected bug fixes. A major data breach compromised user stats, private messages, and location data, leading to massive trust issues and negative press. Many users uninstalled the app and never returned.

*FIN*