

FSD Layer 5: Feature Logic Specification

Project: Amafor Gladiators Digital Ecosystem **Compliance:** ISO 27001:2022 **Source:** User-Provided SRS & PRD Aggregation

1. TALENT PROMOTION & PROFESSIONAL SCOUT PORTAL

Feature: `manage_player_profile`

Slice: `features/talent/profile_management` **Sources:** F-001, NF-006

- **Logic (Edit Guard):**
 - **Guard:** User role MUST be `Data Steward` OR `Super Admin`.
 - **UI State:** If `User.Role` != authorized, Edit Interface = `Hidden`.
- **Logic (Audit):**
 - **Trigger:** On `SAVE` action.
 - **Action:** Write to `audit_log` table.
 - **Payload:** `{ user_id, table_name: 'player_profiles', record_id, action: 'UPDATE', old_value, new_value, timestamp: UTC_NOW }`.
 - **Constraint:** Record is **Immutable** (No delete).
- **Logic (Verification Documents):**
 - **Input:** File (Birth Certificate).
 - **Storage:** Upload to `s3://private-records` (Non-Public Bucket).
 - **Access:** `INTERNAL_ONLY`.
- **Data Transformation:**
 - **Field:** `Last Verified`.
 - **Logic:** Update timestamp automatically when specific fields (Age, Height) are modified.

Feature: `register_scout`

Slice: `features/talent/scout_registration` **Sources:** F-002, US 1.2

- **State Machine:** `IDLE` → `PENDING_VERIFICATION` → `APPROVED` | `REJECTED`.
- **Logic (Submission):**
 - **Input:** Email, Club/Agency, LinkedIn/Website, Reason.
 - **Validation:** Check mandatory fields.

- **Effect:** Create **ScoutUser** entity with status **PENDING**.
 - **Notification:** Trigger alert to **Commercial Manager** dashboard.
- **Logic (Approval):**
 - **Trigger:** Commercial Manager action.
 - **Effect:** Update status to **APPROVED**.
 - **Side Effect:** Enable "Pro View" permissions.

Feature: **access_pro_portal**

Slice: **features/talent/pro_view_access** Sources: F-002, US 1.2

- **Logic (Authentication):**
 - **Session Type:** Session-based.
 - **Timeout:** Invalidate session after **30 minutes** inactivity.
- **Logic (Access Control):**
 - **Route Guard:** Intercept requests to **/pro-view/*** or direct URL access.
 - **Condition:** If **Session.IsValid == False** OR **User.Tier != VerifiedScout**
→ Redirect to Login.
- **Data Scope:**
 - **Query Filter:** Return **Full Match Archive, Email, Phone, Advanced Stats**.

Feature: **generate_profile_pdf**

Slice: **features/talent/pdf_export** Sources: F-003, US 1.3

- **Logic (Generation):**
 - **Guard:** Authorized User only.
 - **Input:** **PlayerID, IncludeContactInfo** (Boolean Toggle).
 - **Composition:**
 - Fetch Public Data + Verification Timestamps.
 - Inject Club Logo + Brand Colors.
 - **IF IncludeContactInfo == True** → Render Email/Phone.
 - **ELSE** → Redact.
- **Logic (Audit):**
 - **Action:** Log event **PDF_GENERATED** with **{ UserID, Timestamp }**.

2. FAN ENGAGEMENT & CONTENT HUB

Feature: **manage_cms_content**

Slice: `features/content/cms_editor` **Sources:** F-004, US 2.1

- **Logic (Editor):**
 - **Format:** WYSIWYG (Text, Image, Links).
 - **Embed:** Parse `YouTube` or `Vimeo` URL → Render Preview Thumbnail.
 - **Media:** Upload Image → Crop/Resize → Store in Media Library.
- **Logic (Scheduling):**
 - **Input:** `PublishDate`.
 - **State:**
 - If `PublishDate` > `Now` → `SCHEDULED`.
 - If `PublishDate` <= `Now` → `PUBLISHED`.

Feature: `manage_league_data`

Slice: `features/content/league_data` **Sources:** F-005, US 2.2

- **Logic (League Table):**
 - **Input:** CSV Import OR Form Entry.
 - **Fields:** Pos, Team, P, W, D, L, GF, GA, GD, Pts.
 - **Validation:** Verify `Pts` calculation ($3*W + D$).
- **Logic (Fixtures):**
 - **Input:** Date, Opponent, Venue, Result.
 - **Linking:** If `Result` is set → Link to `Match Report` page.

Feature: `share_to_whatsapp`

Slice: `features/engagement/social_share` **Sources:** F-006, US 2.3

- **Logic (Deep Linking):**
 - **Mobile Trigger:** Open `whatsapp://send`.
 - **Desktop Trigger:** Open `https://web.whatsapp.com/send`.
 - **Payload:** "Check this out: [Title] - [URL]".
- **Logic (Tracking):**
 - **Action:** Increment `Share Count` in DB.
 - **Constraint:** Must work on Android, iOS, Desktop.

Feature: `track_content_views`

Slice: `features/engagement/view_tracking` **Sources:** US 2.4

- **Logic (Counting):**
 - **Mechanism:** Server-side API.
 - **Uniqueness:** **Session-Based** (Do not count Page Refreshes).
- **Logic (Display):**

- **Format:** "1.2K views".
 - **Disclosure:** If Video → Display "Video views powered by [Provider]; count may update with delay".
 - **Logic (Persistence):**
 - **Constraint:** Data must persist across server restarts.
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3. ACADEMY OPERATIONS

Feature: **donate_academy**

Slice: **features/academy/donation** Sources: US 3.2

- **Logic (Display):**
 - **Content:** Bank Details (Account Name, Number, Bank, SWIFT).
 - **Explanation:** Fund usage (Equipment, Scholarships).

Feature: **contact_academy_whatsapp**

Slice: **features/academy/support_chat** Sources: US 3.3

- **Logic (Widget):**
 - **Visibility:** Always visible in viewport (Mobile/Desktop).
 - **Position:** Bottom-Right (Floating).
 - **Action:** Open chat with Club Business Number.
 - **Payload:** "Hello Amafor Gladiators, I have a question about..."
 - **Info:** Tooltip displays "Mon-Fri, 9am-5pm".
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4. SELF-SERVICE ADVERTISING PLATFORM

Feature: **register_advertiser**

Slice: **features/ads/registration** Sources: F-007, US 4.1

- **Logic (Registration):**
 - **Input:** Business Name, Contact Person, Email, Phone, Business Type.
 - **State:** **PENDING_VERIFICATION**.
 - **Notification:** Alert Commercial Manager.
- **Logic (Access):**
 - **Constraint:** Data Segregation (User sees ONLY their own campaigns).
 - **Post-Approval:** Send Welcome Email.

Feature: **create_campaign**

Slice: **features/ads/campaign_management** Sources: F-007, US 4.2

- **Logic (Validation):**
 - **Input:** Creative File.
 - **Check:** Match dimensions/filesize against **Position Specs** (C4 Constraint).
- **Logic (Costing):**
 - **Formula:** $\text{Total Cost} = \text{Target Views} \times \text{Per-View Rate}$.
 - **Output:** Display Total Cost.

Feature: **process_payment**

Slice: **features/ads/payment_gateway** Sources: F-008, US 4.3

- **Logic (Transaction):**
 - **Provider:** PayPal (REST API).
 - **Trigger:** "Pay with PayPal" button.
 - **Constraint:** No Credit Card/PCI data in frontend.
- **Logic (Activation):**
 - **Input:** PayPal Server-to-Server Notification (Webhook).
 - **Action:** Verify Payment → Set Status **ACTIVE**.
 - **Notification:** Send Invoice Email.

Feature: **deliver_ads**

Slice: **features/ads/serving_engine** Sources: F-009, US 4.4, US 4.6

- **Logic (Injection):**
 - **Target:** `div#ad-zone-[ID]`.
 - **Selection:** Active Campaign for Zone.
 - **Rotation:** Even rotation if multiple campaigns active.
 - **Fallback:** If No Ad → Show Default Club Promo.
- **Logic (Counting):**
 - **Trigger:** Ad Rendered.
 - **Action:** Server-side API increment **Delivered Views**.
 - **Constraint:** Session-based unique identifier.
- **Logic (Lifecycle):**
 - **Check:** Hourly Job.
 - **Condition:** If **Delivered Views** \geq **Purchased Views**.
 - **Action:** Set Status **COMPLETED**.
 - **Notification:** Email "Campaign Complete" + "Buy More" link.

Feature: **moderate_ads**

Slice: `features/ads/moderation` Sources: US 5.4

- **Logic (Upload):**
 - **Storage:** `Quarantine` area.
 - **Scan:** Malware/Integrity Check.
 - **Logic (Approval):**
 - **State:** `PENDING_REVIEW` until Admin Manual Approval.
 - **Logic (Takedown):**
 - **Action:** "Emergency Takedown" Button.
 - **Effect:** Immediate Deactivation.
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5. SECURITY & COMPLIANCE

Feature: `audit_system_activity`

Slice: `features/security/audit_logging` Sources: NF-005, C-001, US 5.1

- **Logic (Logging):**
 - **Triggers:** `INSERT`, `UPDATE` on Key Tables.
 - **Schema:** `user_id`, `table_name`, `record_id`, `action`, `old_value`, `new_value`, `timestamp`.
- **Logic (Integrity):**
 - **Constraint:** `DELETE` permission revoked for Application User on `audit_log` table.
- **Logic (View):**
 - **Interface:** Admin CMS "Audit Trail" (Filterable).

Feature: `manage_consent`

Slice: `features/security/privacy_consent` Sources: C-003, US 5.3

- **Logic (UI):**
 - **Trigger:** First Visit.
 - **Display:** Fixed/Pop-up Banner.
 - **Options:** `Accept All`, `Reject All`, `Customize`.
- **Logic (Enforcement):**
 - **Condition:** Load Analytics Scripts **ONLY IF** `Analytics Consent == True`.
 - **Link:** Privacy Policy in Footer.

Feature: `gate_video_content`

Slice: `features/security/content_gating` Sources: US 5.2

- **Logic (Tagging):**
 - **Tags:** `public_highlight` OR `full_match`.
 - **Logic (Query):**
 - **Public Gallery:** Query `WHERE tag = 'public_highlight'`.
 - **Pro Gallery:** Query `WHERE tag = 'full_match'`.
 - **Logic (API):**
 - **Guard:** Check Authentication/Role.
 - **Direct Access:** Return `403 Forbidden` if unauthenticated user hits `full_match` URL.
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6. SYSTEM PERFORMANCE & USABILITY (NFR Logic)

Feature: `optimize_mobile_experience`

Slice: `features/system/ui_optimization` Sources: NF-002, US 6.1

- **Logic (Responsive):**
 - **Breakpoints:** 320px, 768px, 1024px.
 - **Constraint:** No Horizontal Scroll at 320px.
 - **Table Logic:** Fixed First Column + Horizontal Scroll for League Table.
 - **Touch:** Min Target Size `44x44px`.

Feature: `optimize_video_playback`

Slice: `features/system/video_delivery` Sources: NF-001, US 6.2

- **Logic (Streaming):**
 - **Config:** Use Adaptive Bitrate (YouTube/Vimeo Native).
 - **Assets:** WebP Thumbnails (Lazy Loaded).
 - **Target:** Start < 5s on 1 Mbps connection.
 - **UI:** Show Loading Spinner.

Feature: `reconcile_ad_stats`

Slice: `features/system/data_integrity` Sources: NF-006, US 6.4

- **Logic (Accuracy):**
 - **Constraint:** `Delivered Views` MUST NOT exceed `Purchased Views`.
 - **Job:** Daily Reconciliation Log (Compare Paid vs Delivered).
 - **Tolerance:** < 0.1% discrepancy.

7. ADMIN & BACK-OFFICE OPERATIONS

Feature: **view_audit_logs**

Slice: **features/admin/audit_viewer** Sources: US 5.1 (AC 5.1.5), NF-005, C-001

- **Logic (Query):**
 - **Guard:** User Role MUST be **SUPER_ADMIN** or **DATA_STEWARD**.
 - **Input:** Filters (**DateRange**, **UserID**, **ActionType**, **TableName**).
 - **Fetch:** Select from **audit_log** table.
 - **Constraint:** Read-Only access (No delete/edit buttons allowed).
- **Logic (Display):**
 - **Format:** Tabular view.
 - **Detail:** Expand row to show JSON Diff (**old_value** vs **new_value**).

Feature: **view_content_analytics**

Slice: **features/admin/analytics_dashboard** Sources: US 2.4 (AC 2.4.3), BR-CE-05

- **Logic (Aggregation):**
 - **Guard:** User Role MUST be **MEDIA_MANAGER** or **PRODUCT_OWNER**.
 - **Sorting:** Sort content by **view_count** (Descending).
 - **Filtering:** Toggle between **All-Time** and **Date Range**.
- **Logic (Visualization):**
 - **Output:** List/Table of Articles and Videos with metrics.

Feature: **manage_approval_queue**

Slice: **features/admin/approvals** Sources: US 1.2 (AC 1.2.2), US 4.1 (AC 4.1.4), US 5.4 (AC 5.4.4)

- **Logic (Aggregation):**
 - **Guard:** User Role MUST be **COMMERCIAL_MANAGER**.
 - **Fetch:** Query entities with **status = PENDING_VERIFICATION** or **PENDING_REVIEW**.
 - **Sources:** **ScoutUser**, **AdvertiserAccount**, **AdCampaign**.
- **Logic (Action):**
 - **Approve:** Trigger state transition to **VERIFIED/APPROVED** + Send Notification Email.
 - **Reject:** Trigger state transition to **REJECTED** + Require **Reason** input.

Feature: **manage_ad_takedown**

Slice: **features/admin/moderation** Sources: US 5.4 (AC 5.4.5)

- **Logic (Emergency Action):**
 - **Guard:** User Role MUST be `COMMERCIAL_MANAGER` or `SUPER_ADMIN`.
 - **Trigger:** "Emergency Takedown" button on Active Ads.
 - **Effect:** Immediate state change to `DEACTIVATED`.
 - **Cache Clear:** Force invalidation of the Ad Delivery cache to remove it from the site immediately.