

# FSD Layer 5: Feature Logic Specification

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

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## 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.