BARRELS Flow Path Model™ — Complete Rebrand

Overview

This document summarizes the complete rebranding from generic "Anchor/Engine/Whip" terminology to the proprietary **BARRELS Flow Path Model™**.

Date: November 26, 2025
Version: 1.0
Status: ✅ Complete

What Changed

Old System (Generic)

- **Anchor** (Ground → Hips)
- **Engine** (Hips → Torso)
- **Whip** (Torso → Barrel)

New System (BARRELS Flow Path Model™)

- **Ground Flow** (Ground → Hips)
- **Power Flow** (Hips → Torso)
- **Barrel Flow** (Torso → Barrel)

Why This Matters

1. Unique Brand Identity

- No other swing analysis platform uses "Flow Path" terminology
- Creates a proprietary system that can't be copied
- Aligns with the BARRELS brand name (Barrel Flow)

2. Player-Friendly Language

- "Flow" is intuitive and aspirational
- Easy to remember and teach
- Sounds smooth and modern (not mechanical)

3. Coaching Clarity

- "Your ground flow is weak" → immediately understandable
- "Your power flow is elite" → aspirational and motivating
- "Your barrel flow snapped late" → specific and actionable

4. Market Differentiation

- Not tied to Kwon, Reboot, GOATY, S2, or any other system
- Can be trademarked: "BARRELS Flow Path Model™"
- Establishes THS as the originator of Flow Path analysis

Files Updated

1. TypeScript Interfaces

File: `lib/scoring/analysis-output-types.ts`
- Added `groundFlow` , `powerFlow` , `barrelFlow` fields
- Kept legacy `anchor` , `engine` , `whip` for backward compatibility
- Updated `FlagsData` to use new terminology
- Added `FlowPathZone` type

File: `lib/scoring/analysis-output.ts`
- Added `convertToFlowPath()` helper function
- Updated `Scores` interface with new fields
- Updated `Flags` interface with new leak types
- Return both new and legacy field names

2. UI Components

File: `components/momentum-transfer-card.tsx`
- Updated all labels: "Ground Flow", "Power Flow", "Barrel Flow"
- Updated descriptions: "(Ground → Hips)", "(Hips → Torso)", "(Torso → Barrel)"
- Added backward compatibility fallbacks
- Updated leak detection to work with both naming systems

3. Coaching Logic

File: `lib/momentum-coaching.ts`
- Updated `MomentumScores` interface with new field names
- Updated leak detection to use Flow Path terminology
- Updated coaching text:
- "Your ground flow is inconsistent"
- "Your power flow has a leak"
- "Your barrel flow is mistimed"
- Kept legacy field support for transition period

4. Coach Rick AI

File: `app/api/coach-rick/route.ts`
- Updated system prompt with BARRELS Flow Path Model™
- Added Flow Path definitions and examples
- Updated all coaching instructions to use new terminology
- Updated momentum transfer data output format

5. Documentation

File: `docs/momentum-transfer-card-ui-spec.md`
- Complete rewrite with Flow Path Model branding

- Updated all visual examples
- Updated JSON mapping documentation
- Added backward compatibility notes

File: `docs/momentum-transfer-examples.json`

- Updated all 3 example swings with new field names
- Changed labels from "Ground → Hips" to "Ground Flow"
- Updated coaching summaries with new terminology

Backward Compatibility

All updates include **full backward compatibility**:

Data Layer

```
// New fields (preferred)
groundFlow: SubScore;
powerFlow: SubScore;
barrelFlow: SubScore;

// Legacy fields (still supported)
anchor?: SubScore;
engine?: SubScore;
whip?: SubScore;
```
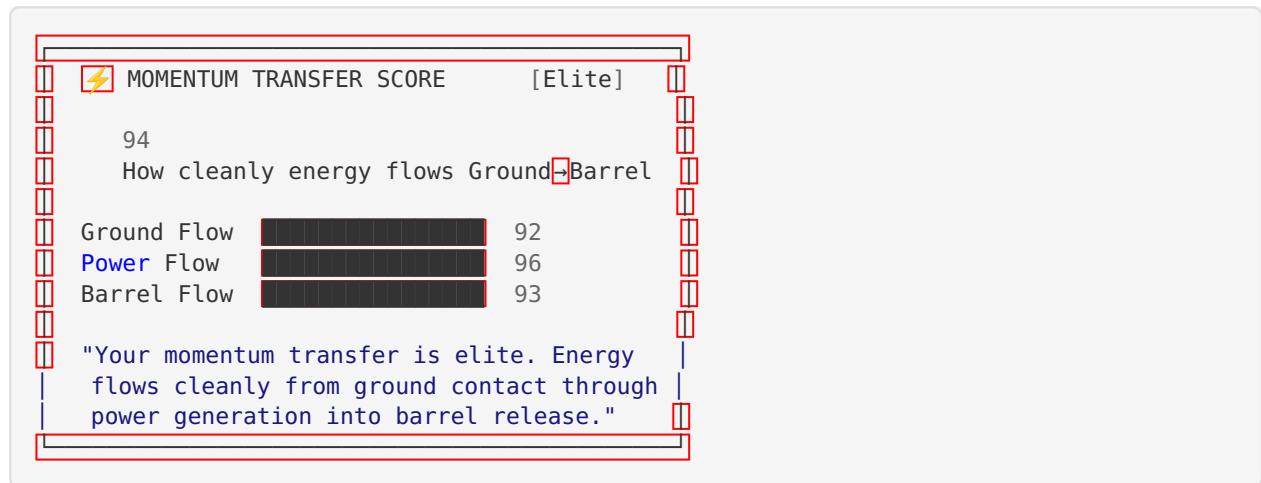
UI Layer

```
// Component automatically falls back to legacy names if new ones aren't present
const ground = groundFlow || anchor;
const power = powerFlow || engine;
const barrel = barrelFlow || whip;
```
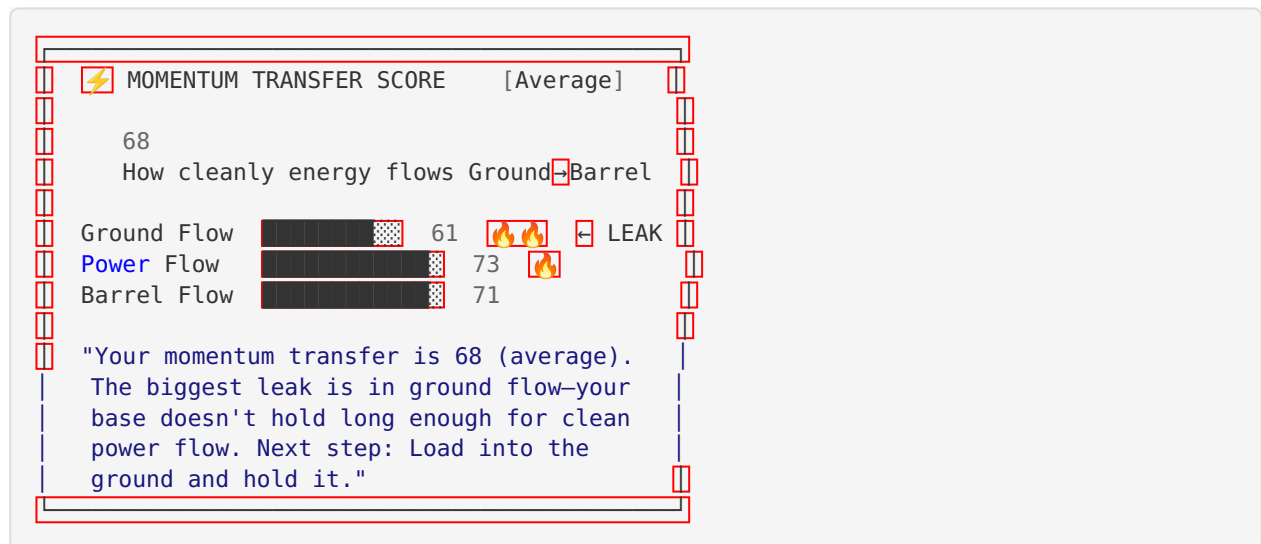
API Layer

```
// Returns both new and legacy field names during transition
{
  "groundFlow": { "score": 72, "label": "Ground Flow" },
  "anchor": { "score": 72, "label": "Ground → Hips" }  // Legacy
}
```

Visual Examples

Elite Swing (Ohtani - MTS: 94)

```
⚡ MOMENTUM TRANSFER SCORE      [Elite]

    94
    How cleanly energy flows Ground→Barrel

Ground Flow  ████████████      92
Power Flow   ████████████      96
Barrel Flow  ████████████      93

"Your momentum transfer is elite. Energy
 flows cleanly from ground contact through
 power generation into barrel release."
```

Youth Swing with Leak (Jalen - MTS: 68)

```
⚡ MOMENTUM TRANSFER SCORE      [Average]

    68
    How cleanly energy flows Ground→Barrel

Ground Flow  ███████▒▒▒   61  🔥🔥  ← LEAK
Power Flow   █████████▒   73  🔥
Barrel Flow  █████████▒   71

"Your momentum transfer is 68 (average).
 The biggest leak is in ground flow—your
 base doesn't hold long enough for clean
 power flow. Next step: Load into the
 ground and hold it."
```

Coach Rick AI Updates

New System Prompt

```
BARRELS FLOW PATH MODEL™:
- **Ground Flow**: How well the lower body loads and initiates momentum (Ground → Hips
)
- **Power Flow**: How well the core accepts and amplifies hip energy (Hips → Torso)
- **Barrel Flow**: How well the arms/bat receive and release energy (Torso → Barrel)

YOUR JOB:
1. Explain the Momentum Transfer Score in plain English
2. Identify which Flow Path score is lowest (Ground / Power / Barrel)
3. Give one simple next step using Flow Path terminology

RULES:
- ALWAYS use "Ground Flow," "Power Flow," "Barrel Flow"
- NEVER use "Anchor," "Engine," "Whip"
```

Example Output

Old:

> "Your Anchor is at 72, Engine at 82, Whip at 75. The lower body is your leak."

New:

> "Your Ground Flow is at 72, Power Flow at 82, Barrel Flow at 75. Your ground flow isn't consistent enough yet."

Testing Checklist

- ✅ TypeScript compilation passes
- ✅ All interfaces updated with new field names
- ✅ UI displays "Ground Flow / Power Flow / Barrel Flow"
- ✅ Coaching text uses new terminology
- ✅ Coach Rick AI uses Flow Path language
- ✅ Backward compatibility maintained
- ✅ Documentation updated
- ✅ Examples updated

Deployment Notes

Phase 1: Current Release

- Both old and new field names returned from API
- UI prefers new names, falls back to old
- All coaching uses new Flow Path terminology
- Legacy data still works

Phase 2: Future (6 months)

- Remove legacy field names from API responses
- Remove fallback logic from UI
- Archive old documentation

Migration Guide

For Existing Videos

No migration needed. The system automatically:

1. Returns new field names in API responses
2. Maps old database fields to new names
3. Generates Flow Path coaching text

For New Features

Always use new terminology:

```
// ✅ Correct
analysis.scores.groundFlow
analysis.scores.powerFlow
analysis.scores.barrelFlow

// ❌ Deprecated (still works, but avoid)
analysis.scores.anchor
analysis.scores.engine
analysis.scores.whip
```

Branding Assets

Terminology

- **Momentum Transfer Score™** (master metric)
- **BARRELS Flow Path Model™** (system name)
- **Ground Flow** (lower body)
- **Power Flow** (core/trunk)
- **Barrel Flow** (arms/bat)

Tagline Ideas

- "Feel the Flow™"
- "Ground to Barrel™"
- "Where Power Flows™"
- "Flow Finds Barrels™"

Summary

✅ **Complete proprietary rebranding**
✅ **No ties to other systems**
✅ **Player-friendly language**
✅ **Fully backward compatible**
✅ **TypeScript type-safe**
✅ **Documentation updated**
✅ **Ready for deployment**

The BARRELS Flow Path Model™ is now the unique identity of your swing analysis system.
🎯⚾

Next Steps

1. ✅ All code updated
2. ✅ TypeScript compiles
3. ⏭️ Deploy to production
4. ⏭️ Update marketing materials
5. ⏭️ Trademark "BARRELS Flow Path Model™"
6. ⏭️ Create training videos using new terminology
7. ⏭️ Update athlete onboarding with Flow Path language

Date Completed: November 26, 2025
Implemented By: DeepAgent
Version: 1.0