CASE STUDY EXAMPLES (SIS Framework)

CASE STUDY 1

"The Fast Player Who Wasn't Impacting the Game"

Profile

- 21-year-old professional winger
- Rugby League
- Elite sprint profile
- Coaches report: "He's quick but not breaking games open."

Player 1 – Pro Winger (Fast but Not Impacting)

BODY: 9
BRAIN: 4
PLAY: 4.5

Shape: Huge physical spike. Flat cognitive + tactical layer.
Classic Speed Appearance Bias.

Initial SIS Profile

BODY

Metric	Result	Rating
10m Split	1.68s	Excellent
Max Velocity	9.4 m/s	Elite
Phase 1 Separation Index	High	Strong
Mechanical Integrity	Good	Stable

AIS: 8.5/10
VIS: 9/10
MIS: 7.5/10

BODY = Elite

BRAIN

Metric	Result
Scan-to-Act Ratio	0.42
Decision Latency	0.78 sec
Anticipation Window Entry	38% of opportunities
Under Fatigue Decision Drop-off	High

PIS: 4/10
LSI: 3.5/10

BRAIN = Reactive

PLAY

Metric	Result
Transition Speed Conversion Index	Low
Acceleration-to-Action Ratio	0.52
Line Breaks per 80 min	Below positional average

TIS: 4/10
CIS: 5/10

PLAY = Under-utilised

STC (Pre-Intervention)

Training max velocity ↑ 3%
Match separation ↑ 0.8%

STC = 0.27 (Poor transfer)

Diagnosis

This player had:

- High mechanical capacity
- Low perceptual timing
- Late Anticipation Window™ entry
- Heavy reliance on emergency sprinting

He looked fast.

He wasn't gaining time.

Classic **Speed Appearance Bias case.**

Intervention (6 Weeks)

BRAIN Focus: (Anticipation Window Framework)

- Scan timing audits
- Blindside scanning drills
- Reduced instruction load
- Transition games with live uncertainty

PLAY Focus: (Velocity Capacity Framework)

- Tactical trigger training
- Early break line timing work
- Conditioned transition games

BODY unchanged — already elite.

6-Week Outcome

Metric	Change
SAR	0.42 → 0.95
Anticipation Entry	38% → 71%

Line Breaks	34%
Emergency Sprint Volume	↓ 18%

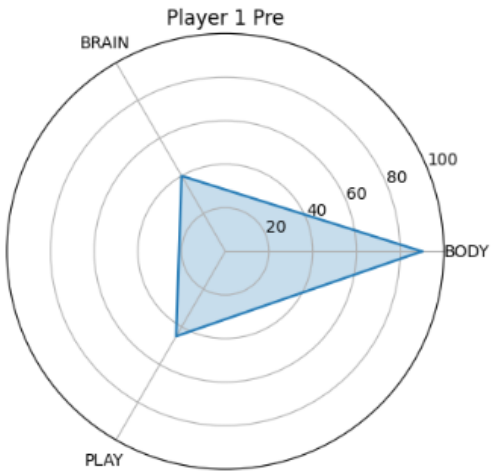
Training speed unchanged
Match separation ↑ 3.2%

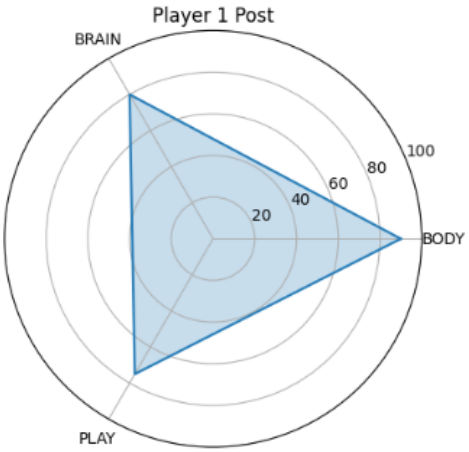
STC = 1.07 (Excellent)

Executive Summary

The athlete didn't need more speed. He needed earlier decisions. We used the Speed Transfer Coefficient App to check the transfer of our intervention.

SIS identified the bottleneck and corrected the transfer.





CASE STUDY 2

"The Improving Accelerator With Recurrent Hamstring Tightness"

Profile

- 24-year-old professional centre-back
- Football
- Strong acceleration profile
- 2 minor hamstring episodes in 12 months

Player 2 – Centre-Back (Hamstring Issues)

BODY: 5
BRAIN: 7
PLAY: 6

Shape: Stable brain/play. Suppressed body ceiling.
Governance failure profile.

Initial SIS Profile

BODY

Metric	Result
10m Split	1.82s
Max Velocity Exposure	Inconsistent
MVED Compliance	58%
Elastic Contribution Ratio	Low
Pelvic Control Integrity	Moderate

AIS: 6/10
VIS: 4.5/10
MIS: 4/10

BODY = Fragile at ceiling

BRAIN

Stable perceptual scores, No major deficits

PIS: 7/10

PLAY

Recovery speed acceptable, Transition engagement moderate

TIS: 6/10

STC (Pre-Intervention)

Acceleration ↑ 2%
Match recovery speed ↑ 1%

STC = 0.5 (Limited transfer)

But more importantly:

Injury risk remained.

Diagnosis

Velocity Exposure Governance failure.

- Did not consistently exceed 90% weekly.
- Mechanical integrity markers are unstable.
- The elastic system is underprepared.

This is an **SDS governance issue**, not a drill issue.

Intervention (8 Weeks)

BODY Focus: (Mex Velocity Calculator)

- Enforced MVED compliance (≥ 90% weekly)
- RSI monitoring
- Sprint video audits
- Isometric hamstring benchmark progression

BRAIN / PLAY unchanged.

8-Week Outcome

Metric	Change
MVED Compliance	58% → 96%

Elastic Contribution Ratio™	↑ 22%
Max Velocity	↑ 3%
Hamstring Incidents	0

Match recovery actions ↑ 4%

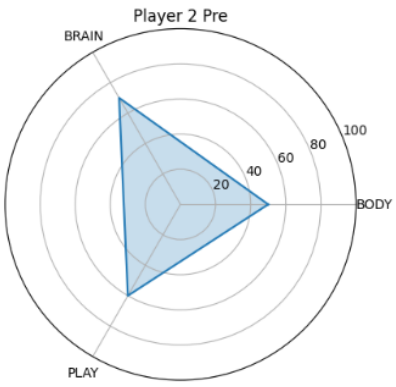
STC = 1.1 (Excellent transfer)

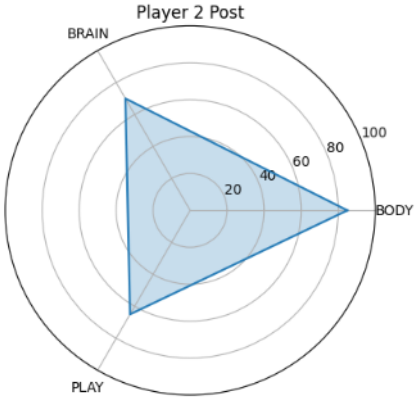
Executive Summary

The issue was not strength.

It was exposure governance.

SDS corrected resilience and transfer simultaneously.





CASE STUDY 3

"The Hard-Working Midfielder Who Looked Slow"

Profile

- 19-year-old academy midfielder
- High work rate
- Coaches: "Always chasing the game."

Player 3 – Academy Midfielder (Looks Slow)

BODY: 5
BRAIN: 3
PLAY: 3.5

Shape: Balanced but low across the board.
Perceptual bottleneck dominant.

Initial SIS Profile

BODY

Metric	Result
10m Split	1.90s
Max Velocity	Average
Mechanical Integrity	Good

AIS: 5.5/10
VIS: 5/10

BODY = Average

BRAIN

Metric	Result
SAR	0.38
Blindside Scan Frequency	Low
Decision Latency	0.92 sec
Anticipation Window Entry	31%

PIS: 3/10

PLAY

Metric	Result
Transition Positioning	Reactive
Sprint Count	High

Arrival First	Low

CIS: 3.5/10

Diagnosis

This athlete sprinted more than anyone.

But arrived late.

Classic Speed Appearance Bias™ profile.

Highly visible effort.
Low temporal advantage.

Intervention (6 Weeks)

BRAIN:

- Pre-reception scanning targets
- Reduced instruction cognitive load
- Video freeze Anticipation Window™ training

PLAY:

- Tactical positioning micro-adjustments
- “Move before move” constraints

BODY unchanged initially.

6-Week Outcome

Metric	Change
SAR	0.38 → 0.88
Anticipation Entry	31% → 69%
Sprint Volume	↓ 14%
Arrival First	↑ 41%

Match coach feedback:
“He suddenly looks quicker.”

Sprint time unchanged.

STC (Perceptual Transfer) = 1.2

Executive Summary

He didn’t become faster.

He became earlier.

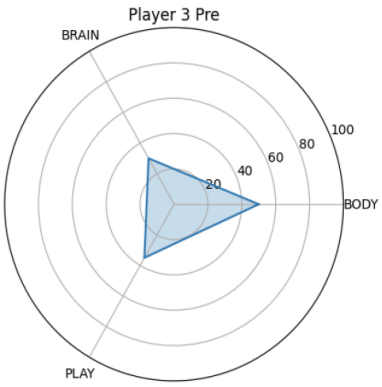
SIS reframed the problem from conditioning to cognition.

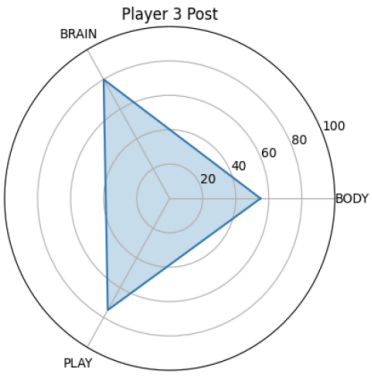
Strategic Takeaway From All Three

SIS identifies:

- Mechanical bottlenecks
- Perceptual bottlenecks
- Transfer bottlenecks
- Governance failures

Most systems only see the first. Elite performance requires seeing all three.





CASE STUDY 4

“Full-Back With Elite Top Speed But Defensive Exposure Issues”

Profile

- 25-year-old Full-back
- Elite max velocity (9.7 m/s)
- High-speed distance consistently top 3 in squad
- The team is conceding transitions down his channel

Player 4 – Full-Back

BODY: 8.5
BRAIN: 5
PLAY: 5

Shape: Elite speed masking anticipation deficit.

Initial SIS Profile

BODY

Metric	Result
Max Velocity	Elite
10m Split	Above Average
MVED Compliance	100%
Mechanical Integrity	Strong

AIS: 7.5/10
VIS: 9/10
MIS: 8/10

BODY = Elite ceiling

BRAIN

Metric	Result
Anticipation Window Entry	42%
Defensive Scan Timing	Late
Decision Under Fatigue	Degraded late game

PIS: 5/10
LSI: 4.5/10

PLAY

Metric	Result
Recovery Run Success	61%
Transition Speed Conversion Index™	Moderate
Acceleration-to-Action Ratio™	0.48

TIS: 5/10
CIS: 4.5/10

Diagnosis

Not a speed problem.

A **tactical timing + anticipation problem**.

He relied on recovery speed instead of early positioning.

Classic example of:

Speed masking positional anticipation deficit.

Intervention (6 Weeks)

- Anticipation Window video freeze sessions
- Blindside trigger recognition

- Transition-conditioned 7v7 with delayed-release attackers
- Reduced cognitive instruction load

Outcome

Metric	Change
Anticipation Entry	42% → 76%
Recovery Success	61% → 82%
Emergency Sprint Volume	↓ 21%

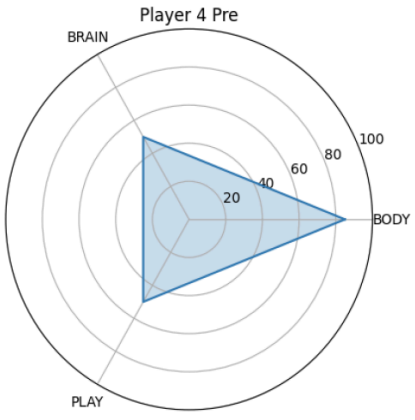
Sprint speed unchanged.

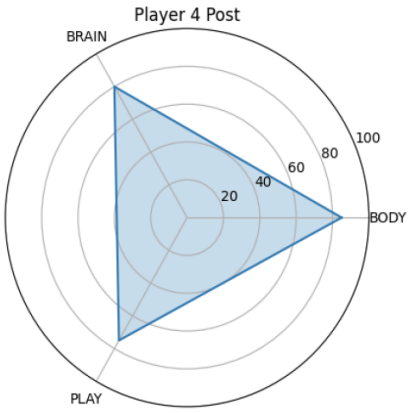
STC (Tactical Transfer) = 1.15

Executive Insight

Defensive stability improved without adding physical speed.

Brain & Play layers unlocked Body.





CASE STUDY 5

“Prop With Acceleration Gains But Limited Line Speed Impact”

Profile

- 27-year-old front-rower
- 10m acceleration improved 4% in pre-season
- GPS showed increased high-intensity efforts
- Defensive line speed unchanged in match review

Player 5 – NRL Prop (Accel Gains, No Match Impact)

BODY: 8
BRAIN: 4
PLAY: 4.5

Shape: Acceleration spike. Poor contextual coupling.

Initial SIS Profile

BODY

AIS: 8/10
Acceleration improved significantly.

BRAIN

Metric	Result
Reaction Timing Off Ruck	Late
Visual Trigger Recognition	Inconsistent
Decision Latency	0.82 sec

PIS: 4/10

PLAY

Metric	Result
Line Speed Efficiency	Low
First Contact Win %	Stable
Acceleration-to-Contact Ratio	Poor

TIS: 4.5/10

STC (Pre)

Training acceleration ↑ 4%
Match line speed ↑ 0.9%

STC = 0.22 (Poor)

Diagnosis

Acceleration was not aligned with defensive trigger cues.

High Information Tax™ in conditioning drills.

Acceleration trained in isolation.

Intervention

- Defensive trigger timing sessions
- Live ruck reaction integration
- Reduced cone-based acceleration
- Position-specific cue recognition

Outcome

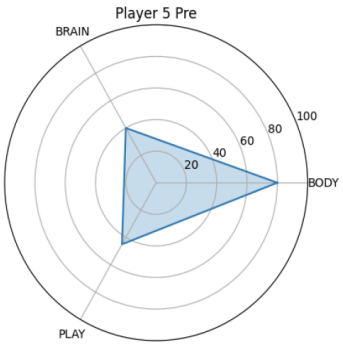
Metric	Change
Defensive Line Speed	6%
First Contact Win	8%
Ruck Reaction Timing	Improved 0.3 sec

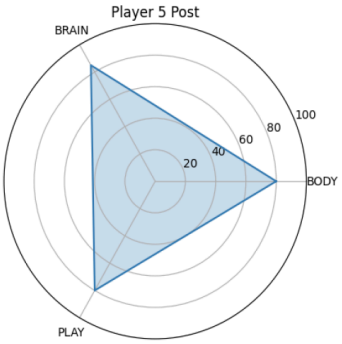
STC = 1.5

Executive Insight

Acceleration must be coupled to context.

Otherwise, it is theatre.





CASE STUDY 6

"Academy Striker With Average Speed But Elite Separation"

Profile

- 18-year-old academy striker
- Below-average sprint profile
- High goal involvement

Player 6 – Academy Striker (Average Speed, Elite Output)

BODY: 5
BRAIN: 9
PLAY: 8.5

Shape: Inverted profile.
Brain-led separation.

SIS Profile

BODY

AIS: 5/10
VIS: 4.5/10

BRAIN

Metric	Result
SAR	1.2
Anticipation Entry	83%
Decision Latency	0.41 sec

PIS: 9/10

PLAY

Metric	Result
2m Separation in Box	Elite
Transition Impact	High
Acceleration-to-Action Ratio	1.3

TIS: 8.5/10

Diagnosis

He is not physically elite.

He is perceptually elite.

He enters the Anticipation Window™ early.

Intervention

Minor mechanical improvements only.

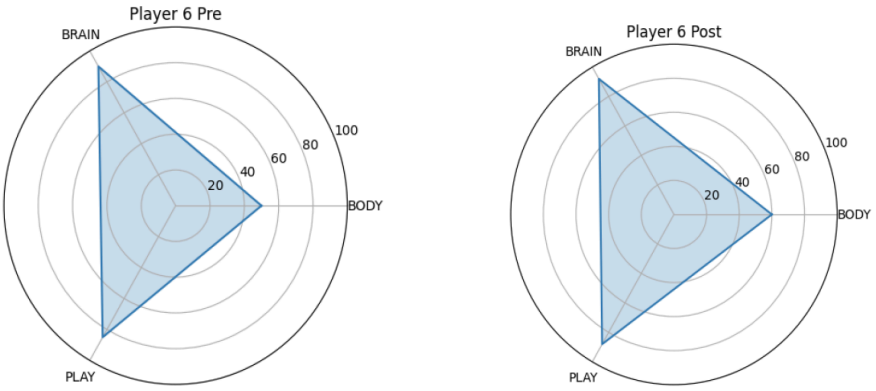
Focus on maintaining perceptual advantage under fatigue.

Outcome

Sprint speed ↑ 2%
Goal contribution ↑ 18%
STC = 1.1

Executive Insight

Speed Intelligence beats raw speed.



CASE STUDY 7

"Rugby League Outside Back With Repeated Hamstring Strain"

Profile

- 23-year-old outside back
- Two hamstring strains in 18 months
- Max velocity rarely exposed in training

Player 7 – Outside Back (Repeated Hamstring Strain)

BODY: 3.5
BRAIN: 6 (assumed neutral)
PLAY: 6 (assumed neutral)

Shape: Body instability profile.

SIS Diagnosis

MEVD compliance: 52%
Elastic Contribution Ratio™ : Low
Pelvic Control Integrity: Poor

MIS: 3/10
VIS: 4/10

Intervention

- Enforced ≥90% weekly exposure
- RSI tracking
- Sprint audit every fortnight
- Isometric hamstring strength progression

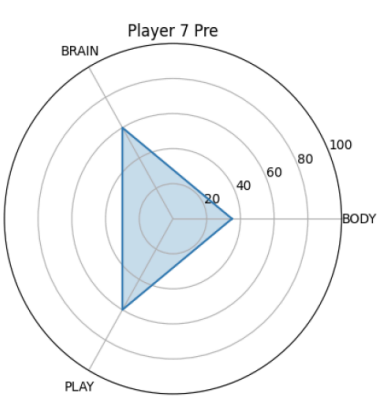
10-Week Outcome

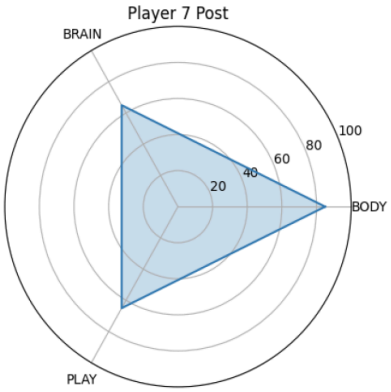
MEVD compliance → 97%
Max velocity ↑ 4%
Hamstring recurrence → 0

STC (Physical Transfer) = 1.2

Executive Insight

Injury prevention requires governance, not caution.





CASE STUDY 8

"Championship Midfielder With High Sprint Volume But Low Impact"

Diagnosis

Sprint Count: Highest in squad
Arrival First: 3rd lowest

Speed Appearance Bias™ case.

Intervention

- Position-specific anticipation training
- Reduced redundant sprint exposure
- Transition games with cognitive layering

Player 8 – Championship Midfielder (High Volume, Low Impact)

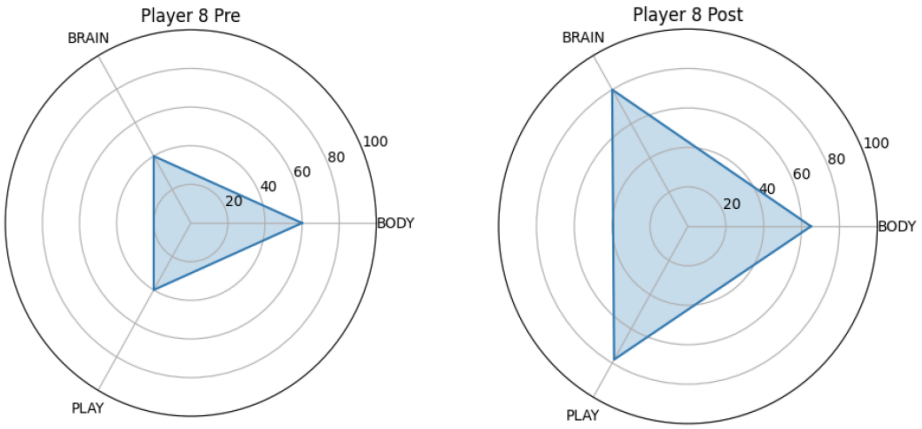
BODY: 6
BRAIN: 4
PLAY: 4

Shape: Effort-heavy. Timing-poor.

Outcome

Sprint Volume ↓ 19%
Arrival First ↑ 36%
Decision Latency ↓ 0.4 sec

STC (Perceptual Transfer) = 1.3



CASE STUDY 9

"Elite Halfback – Late Game Decision Degradation"

Profile

- Elite NRL halfback
- Strong early game performance
- Late-game decision errors

Player 9 – Elite Halfback (Late Game Drop-Off)

BODY: 7
BRAIN: 4
PLAY: 7

Shape: Fatigue-driven cognitive dip.

SIS Diagnosis

Neuromuscular Load Density™ spikes late
Cognitive degradation under sprint clusters

LSI: 4/10

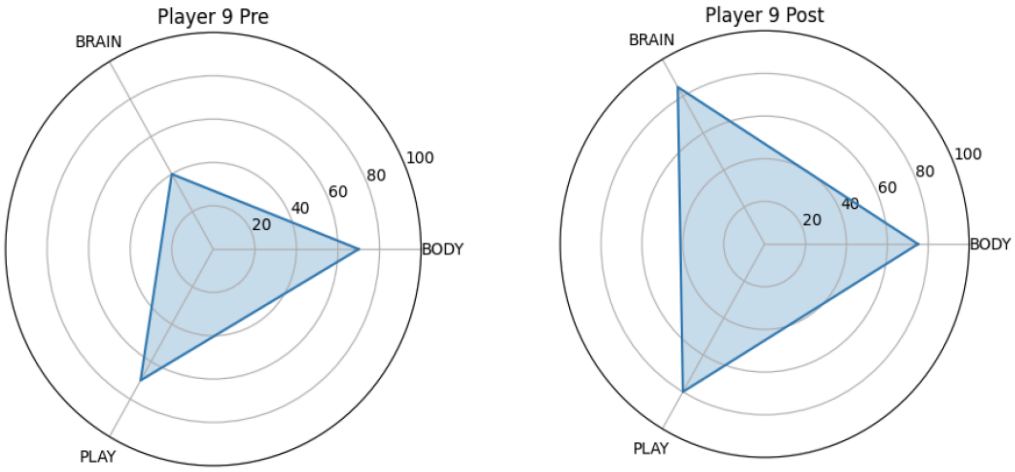
Intervention

- Sprint clustering training
- Cognitive layering under fatigue
- High-velocity event clustering exposure

Outcome

Late-game decision accuracy ↑ 22%
Line break assists ↑ 15%

STC (Cognitive Transfer) = 1.05



CASE STUDY 10

“Centre-Back With Strong Testing But Weak Recovery Runs”

Diagnosis

10m acceleration: Good
Max velocity: Strong
Recovery Run Success: 48%

Anticipation Window Entry: 37%

Player 10 – Centre-Back (Poor Recovery Runs)

BODY: 7.5
BRAIN: 4
PLAY: 5

Shape: Physical capacity not converting to recovery success.

Intervention

- Defensive line drop timing drills
- Opponent body-shape cue training
- Transition-conditioned games

Outcome

Recovery Run Success → 78%
Emergency sprint volume ↓
Goals conceded in transition ↓

STC = 1.25