



2022 Season TWI[®] Markers

Overall Drivers of Performance: Key Cohesion Markers

Team Philosophy (Long-Term)

Cohesion created by the organisation through their long-term vision.

Driver: Organisation

► **Measure by TWI®**

Season-by-Season (Mid-Term)

Cohesion created through seasonal changes.

Driver: CEO/DoF/Recruitment/Academy

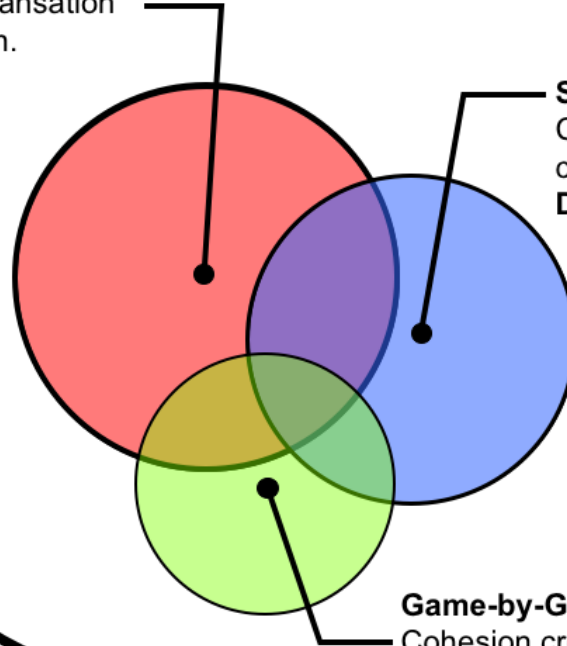
Game-by-Game (Short-Term)

Cohesion created in season.

Driver: Coach/Support Staff

► **Measure by In-Season Cohesion Markers**

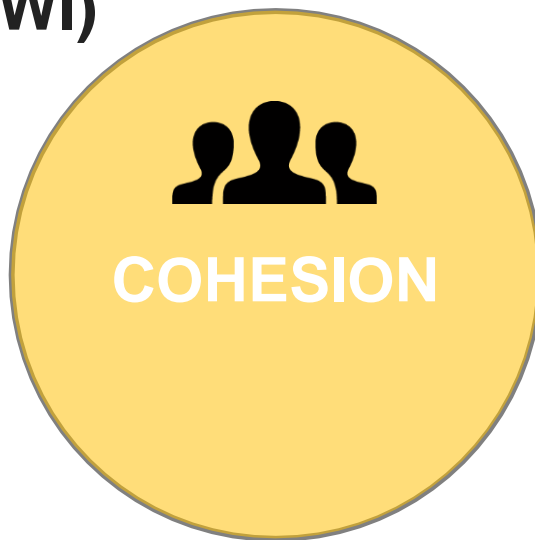
Long-Term → Mid-Term → Short-Term
TWI® drives In-Season Cohesion



Team Work Index (TWI)



An indicator of an organisation's philosophy and the best predictor of whether a club is going to be sustainably successful.



TWI is a long-term marker reflecting on whether the club is constructed using a “buy” or “build” strategy

TWI

People

Program

Position

Shape/Size

Structure

Time

Team Work Index (TWI) – Influences/Drivers/Constraints



People

Understanding between people e.g. players.
Influenced by stability/churn of squad.

Shape/Size

Understanding between specific sized
groups/formations within a team e.g. Tight
5 / Attack Spine.

Program

Understanding of program e.g. game plan.
Influenced by change of program/game
plan or change of coach and/or staff.

Structure

Understanding created via pathway system
e.g. singular or multiple alignment.

Position

Understanding of role/position and/or
relationship to other players in
role/position.

Time

Understanding created through time
together e.g. playing and/or together in a
team and/or program/system.

Team Work Index (TWI) – Influences/Drivers/Constraints



TWI is an indicator of long-term performance and driver of In-Season Cohesion Markers.

TWI is made up of a number of different Markers:

- Age Differential: The amount of time the squad as a whole has been together.

Driven by: Age of Signing – Measure of Age when players are signed to the team.
 Average Age of Squad – Measure of age of squad for that season.

The higher the Age Differential the longer the players have to develop understanding between teammates, roles and of the program.

Team Work Index (TWI) – Influences/Drivers/Constraints



TWI is an indicator of long-term performance and driver of In-Season Cohesion Markers.

TWI is made up of a number of different Markers:

- **Experience Differential**: The effective Internal Experience within the Squad (Total Internal Experience minus Total External Experience).

Drive by: **Internal Experience** – Experience created within the team/squad/pathway.
 External Experience – Experience created within another team/squad/pathway.

The higher the Experience Differential the more ingrained the normative behaviours/understanding and the less influence of External habits.

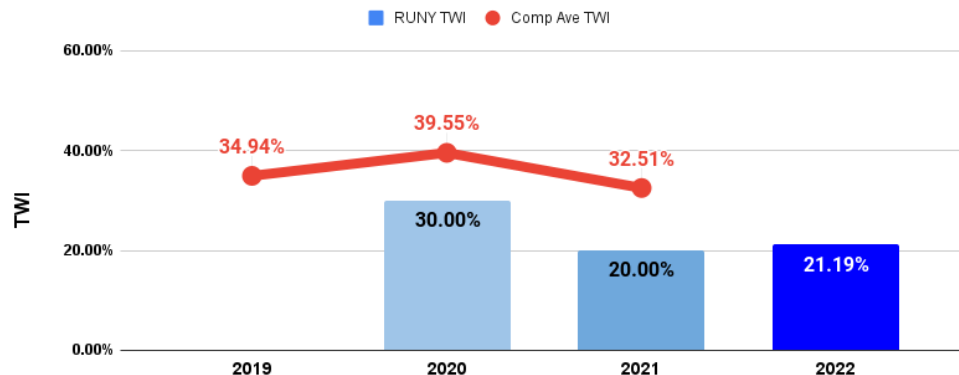
The higher the External Experience the more influence external habits have on the group and the more time is spent coaching/training out/unlearning old habits prior to imbedding new learning –”unlearning before learning”.

Team Work Index (TWI): RUNY 2022 Markers



- 2022 TWI Markers based on current available squad.

RUNY TWI Progression: 2019 - 2022



- 2022 TWI: 21.19% (↑ 1.19% from 2021).

- Marginal Positive development of TWI.

- Overall trend below competition average.

- High reliance on external experience.

- Short-term Skill focus.

- Note: MLR is very low TWI competition.

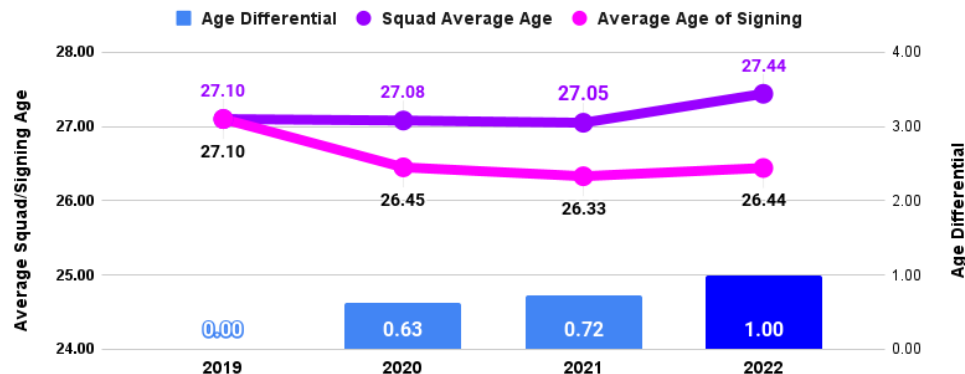
- Note: With current maturity of the competition, majority of performance is be driven by In-Season dynamics – however a long-term competitive advantage can be gained by developing TWI.

Team Work Index (TWI): RUNY 2022 Markers

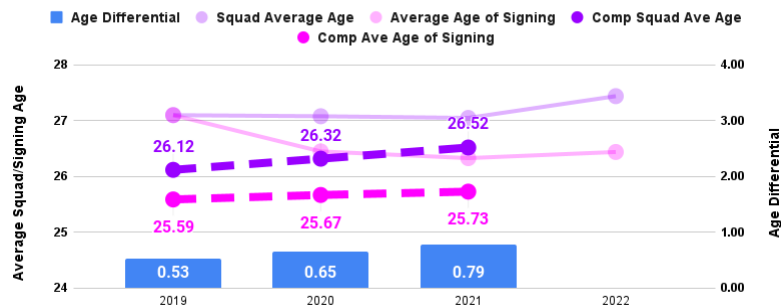


- 2022 TWI Markers based on current available squad.

RUNY Age Marker Progression: 2019 - 2022



MLR Comp Average Age Marker Progression: 2019 - 2022



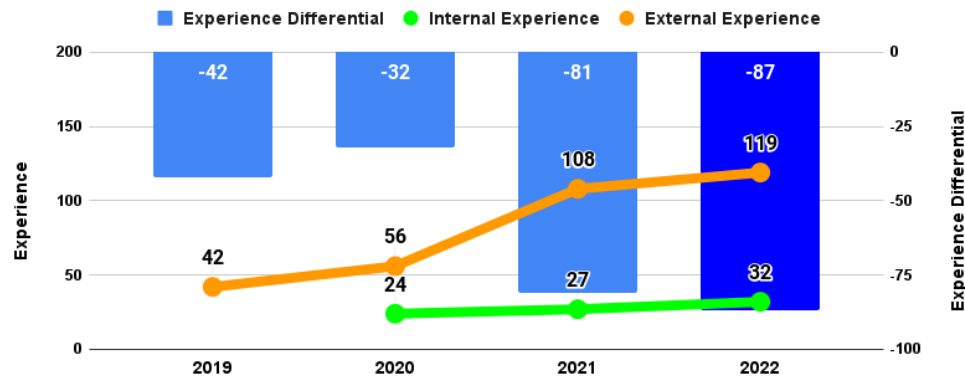
- 2022 Age Differential: 1 (↑ 0.18 from 2021).
- Marginal Positive development of Age Differential.
- Overall trend below competition average for Age Differential.
- High Age of Signing & Average Squad Age – above competition average.
- Currently reliant on externally developed players.
- Low ability to develop strong normative behaviors.

Team Work Index (TWI): RUNY 2022 Markers



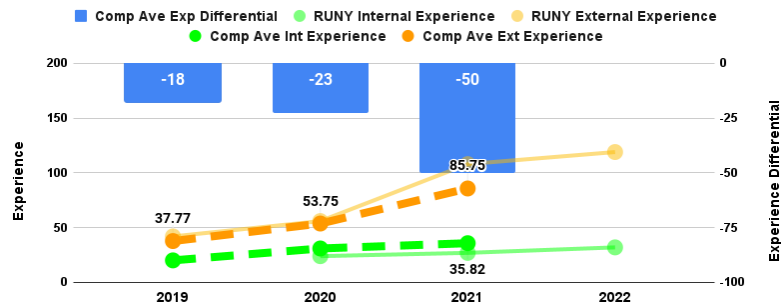
- 2022 TWI Markers based on current available squad.

RUNY Experience Marker Progression: 2019-2022



- 2022 Exp Differential: -87 (↓ 6 from 2021).
- Marginal Negative development of Exp Differential.
- Overall trend not as optimal as competition trend.
- High levels of External Experience offsetting moderate positive development of Internal Experience.
- Currently reliant on externally developed players.
- High levels of multiple External influence.

MLR Comp Average Experience Marker Progression: 2019-2022



Team Work Index (TWI) – Influences/Drivers/Constraints



TWI is an indicator of long-term performance and driver of In-Season Cohesion Markers.

TWI is made up of a number of different Markers:

- **Age of Signing Profile**: Indicator of signing age trend.

The more “left shifted” the Age of Signing Profile the greater ability to create high Age Differential.

- **Internal Tenure Breakdown**: Indicator of consistency of understanding across a squad

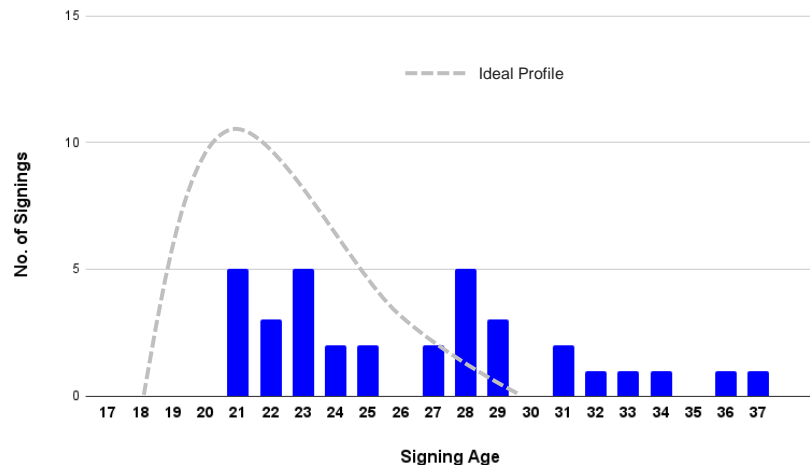
“Flatter” the Internal Tenure the less likely to have “gaps” amongst the squad and greater opportunity to transition players through the squad.

Team Work Index (TWI): RUNY 2022 Markers

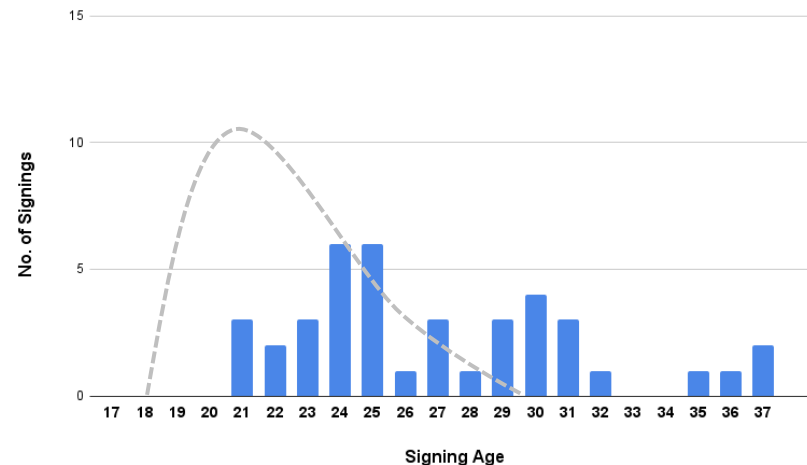


- 2022 TWI Markers: Age of Signing.

RUNY 2022 Season Squad Age of Signing Profile



RUNY 2021 Season Squad Age of Signing Profile



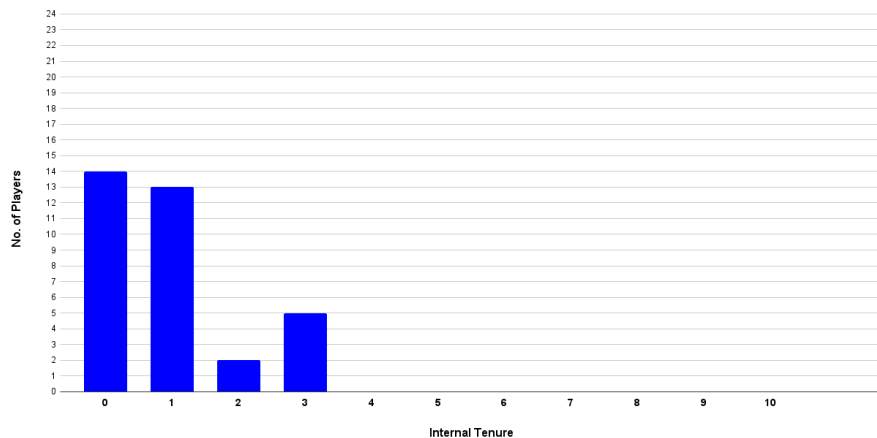
- RUNY 2022 Age of Signing profile is heavily “right shifted” but showing some movement to the left against 2021.
- “Right Shifted” Age of Signing profile doesn’t allow efficient long-term development of TWI and In-Season Cohesion – indicative of high squad turn-over.

Team Work Index (TWI): RUNY 2022 Markers

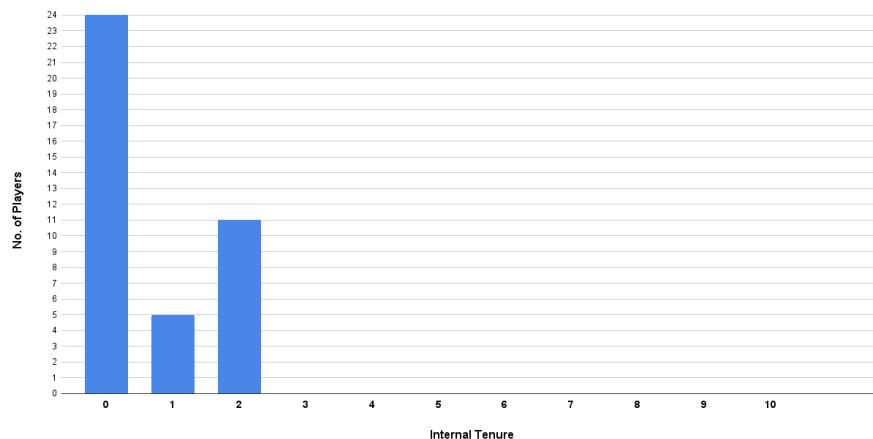


- 2022 TWI Markers: Internal Tenure Breakdown.

RUNY 2022 Internal Tenure Breakdown



RUNY 2021 Internal Tenure Breakdown

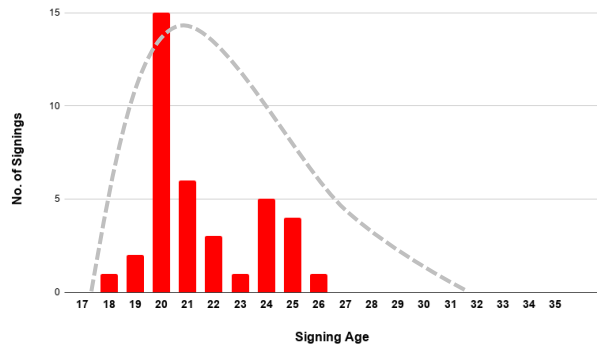


- Internal tenure still remains limited but becoming flatter compared to 2021 – more spread amongst squad.
- Ability to create “0”/High Gaps reduced when tenure spread across squad.
- Will always have Gaps with introduction of “0” Tenure players.

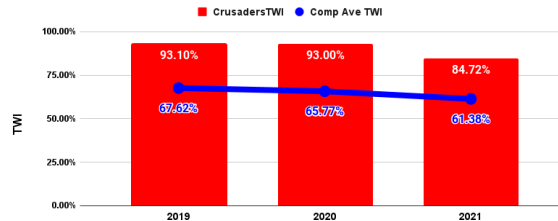
Team Work Index (TWI): Benchmark



Crusaders 2020 Season Squad Age of Signing Breakdown

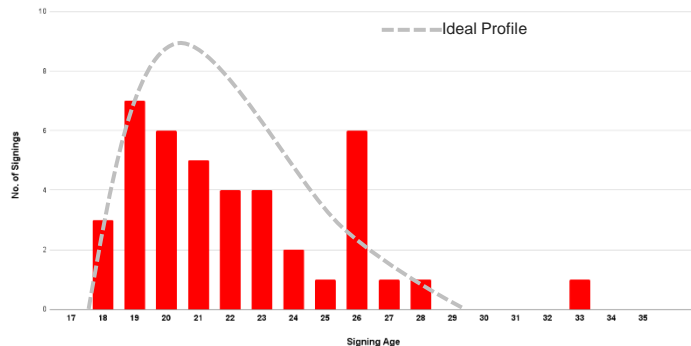


Crusaders TWI Progression: 2019 - 2021

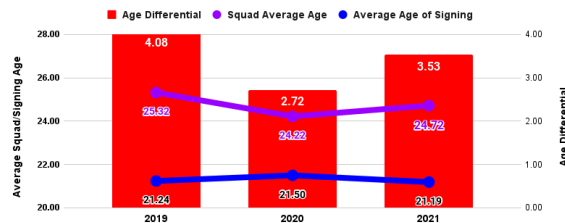


- Significant competitive advantage against the competition.
- Can absorb limited external recruitment.

Saracens 2021/22 Season Squad Age of Signing Breakdown

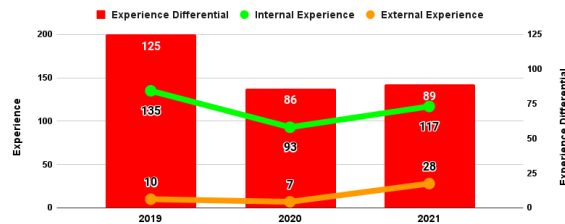


Crusaders Age Marker Progression: 2019 - 2021



- Age differential drives long-term understanding of system/program.
- Program becomes habit/normative behaviors.

Crusaders Experience Marker Progression: 2019-2021



- Significant Internal Experience.
- Limited External Experience to influence and un-learn.

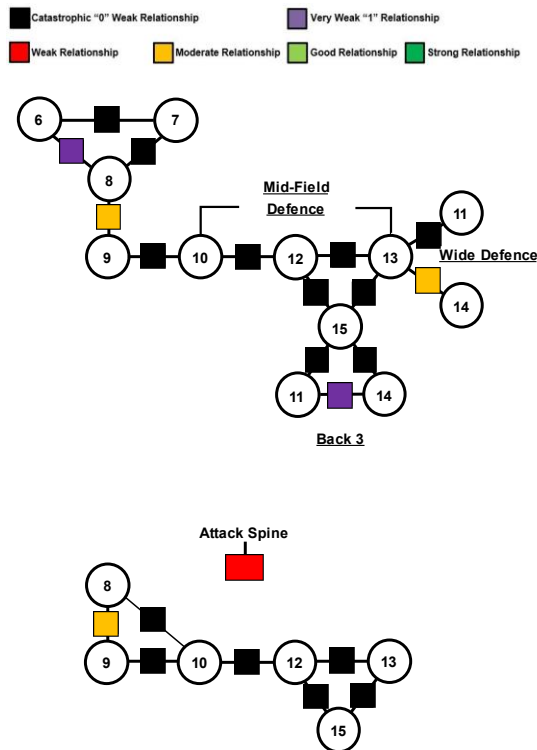
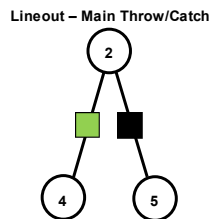
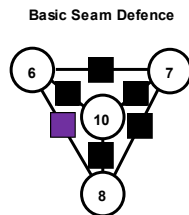
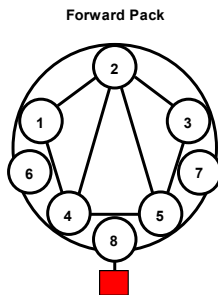
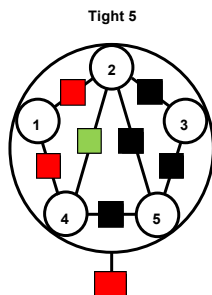
Team Work Index (TWI): Benchmark



- Crusaders are a Benchmark of a long-term sustainable high performing team.
- The signals in their Markers are similar to other high performing teams (Saracens, Exeter, Leinster, Melbourne Storm etc).
- The Crusaders Markers are also driven by the structure and system they are “housed” within.
- The aim of RUNY is to become the Benchmark team of the MLR.
- This doesn't mean having to have the same Markers as other Benchmark teams but Markers that give a significant competitive advantage against the competition.

Gaps: 0-5: 85 / 0-10: 88 / “0s”: 17

Gaps: 0-5: 94 / 0-10: 99 / "0s": 16



Wenglewski	Chance	1
Fawsitt	Dylan	2
Mayhew	Nic	3
Brakeley	Nate	4
Tucker	Will	5
Bonasso	Benjamin	6
O'Connor	Brendon	7
Pryor	Kara	8
Ellis	Andrew	9
Windsor	Sam	10
Fidow	Ed	11
Emery	Jason	12
Ngawati	Quinn	13
Fuatai	Fa'asii	14
Heighton	Jack	15

RD 1* 2022:

Total: 503 / Tight 5: 35 / Attack Spine: 54

Gaps: 0-5: 85 / 0-10: 88 / "0s" 17

RD 1 2021: Competition Average

Total: 331 / Tight 5: 21 / Attack Spine: 59

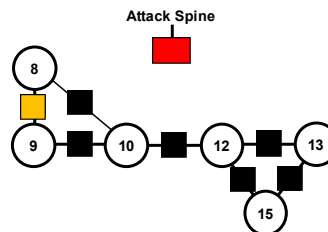
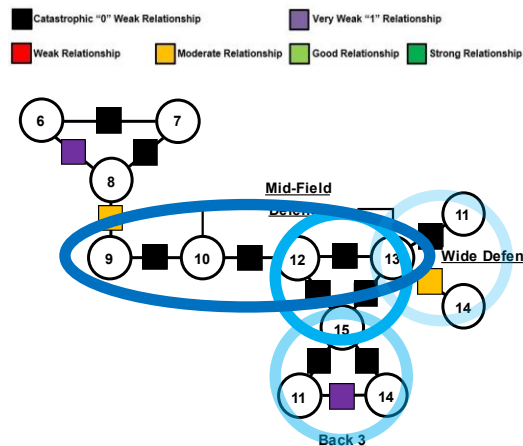
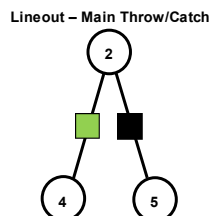
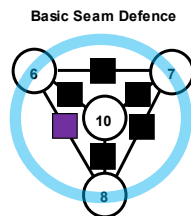
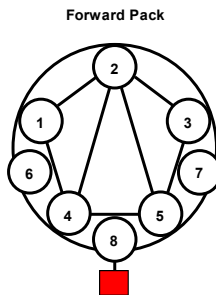
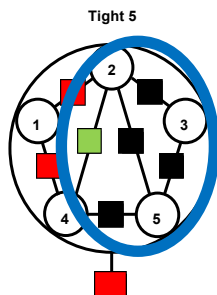
Gaps: 0-5: 94 / 0-10: 99 / "0s": 16



Primary
Pre-Season
Focus

Secondary
Pre-Season
Focus

**Dependent on
Game Plan/Playing
Style**



Wenglewski	Chance	1
Fawsitt	Dylan	2
Mayhew	Nic	3
Brakeley	Nate	4
Tucker	Will	5
Bonasso	Benjamin	6
O'Connor	Brendon	7
Pryor	Kara	8
Ellis	Andrew	9
Windsor	Sam	10
Fidow	Ed	11
Emery	Jason	12
Ngawati	Quinn	13
Fuatai	Fa'asiu	14
Heighton	Jack	15

RD 1 2021:

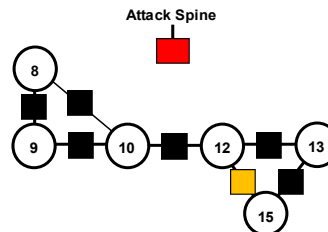
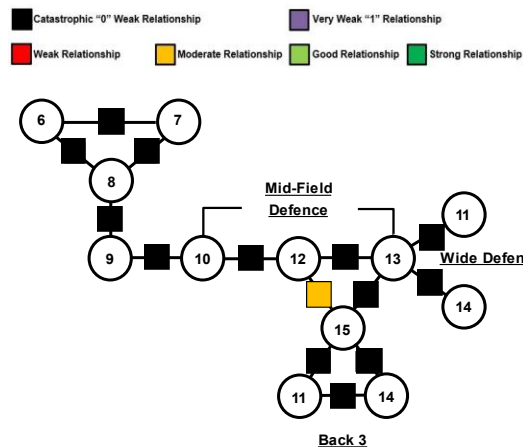
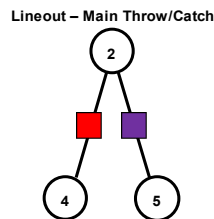
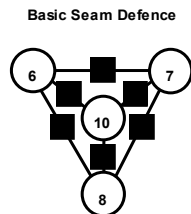
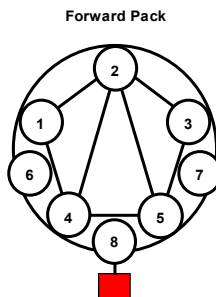
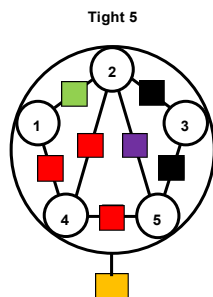
Total: 261 / Tight 5: 56 / Attack Spine: 23

Gaps: 0-5: 93 / 0-10: 95 / "0s": 18

RD 1 2021: Competition Average

Total: 331 / Tight 5: 21 / Attack Spine: 59

Gaps: 0-5: 94 / 0-10: 99 / "0s": 16



Rochford	James	1
Fawsitt	Dylan	2
Taulafo	Sakaria	3
Brakeley	Nate	4
Hewitt	Charlie	5
Germishuys	Hanco	6
Pryor	Kara	7
Mintern	Evan	8
Ellis	Andrew	9
Hollinshead	Dan	10
Cakaubalavu	Apenisa	11
Leonard	Will	12
Fuatai	Fa'asiu	13
Ngawati	Quinn	14
Foden	Ben	15

In-Season Markers: “0” Gaps

- “0” Gaps impact a teams ability to function both in Attack and Defence – a measure of high/catastrophic weaknesses.
- Removing “0” Gaps is critical to In-season Success.
- Ideally removing “0” Gaps should be done outside of the 1st Team/In-Competition environment – pathway/structure.

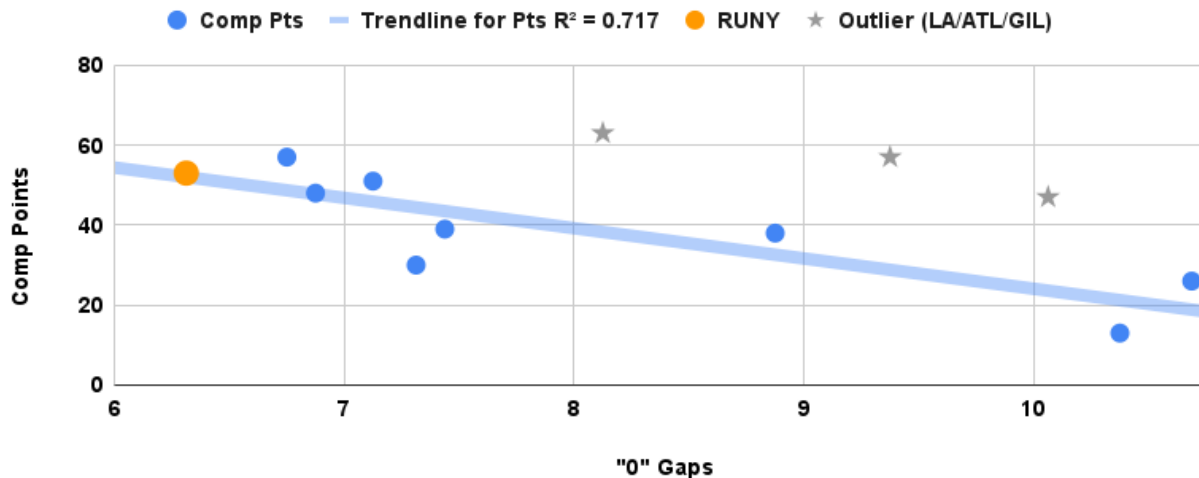


In-Season Markers: “0” Gaps



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- Removing “0” Gaps is critical to In-season Success.
- Ideally removing “0” Gaps should be done outside of the 1st Team/In-Competition environment – pathway/structure.

MLR2021: Competition Points vs "0" Gaps

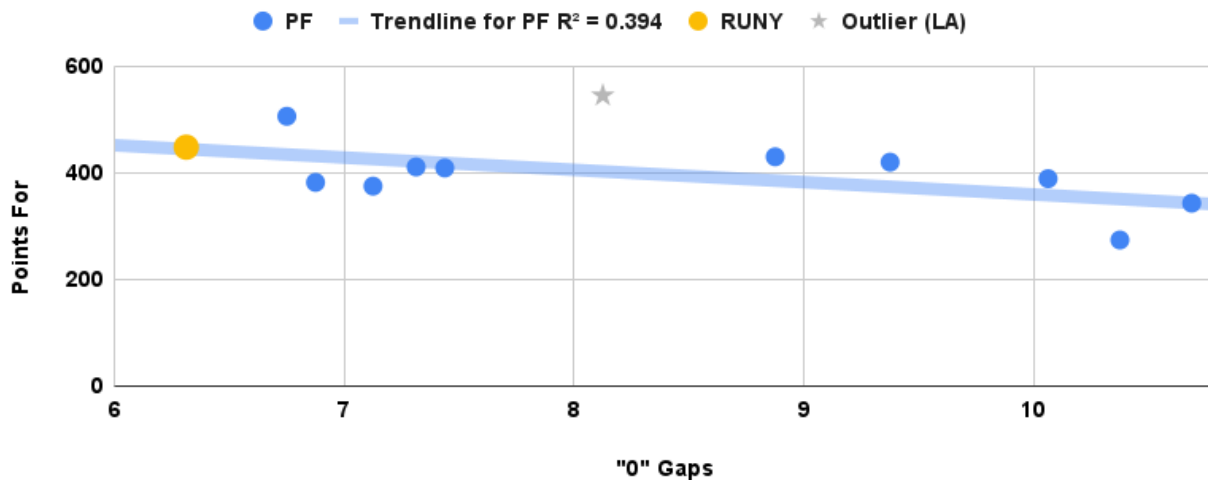


- While some outliers 2021 “0” Gaps had a good relationship to overall performance.
- The lower (less) “0” Gaps, the stronger the performance.
- RUNY had strong “0” Gaps – driven by in-season stability.
- Note: LA started from low base so Gaps exaggerated / ATL & AUSTIN GIL with “singular”/Tier 3 pathway has extra levels of Cohesion not captured.

In-Season Markers: “0” Gaps



MLR2021: Points For vs “0” Gaps

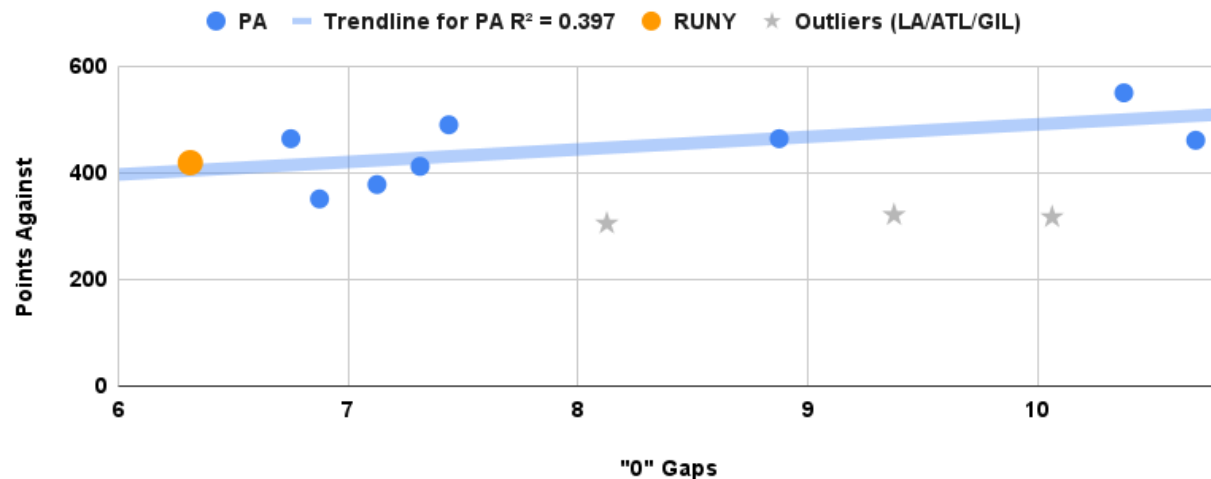


- “0” Gaps had a good relationship to overall Points For (Attack Performance) – LA overperformed driven by top heavy high experience/external shared experience.
- The lower (less) “0” Gaps, the stronger the performance.
- RUNY had strong “0” Gaps – indicative of overall Points For.

In-Season Markers: “0” Gaps



MLR 2021: Points Against vs “0” Gaps



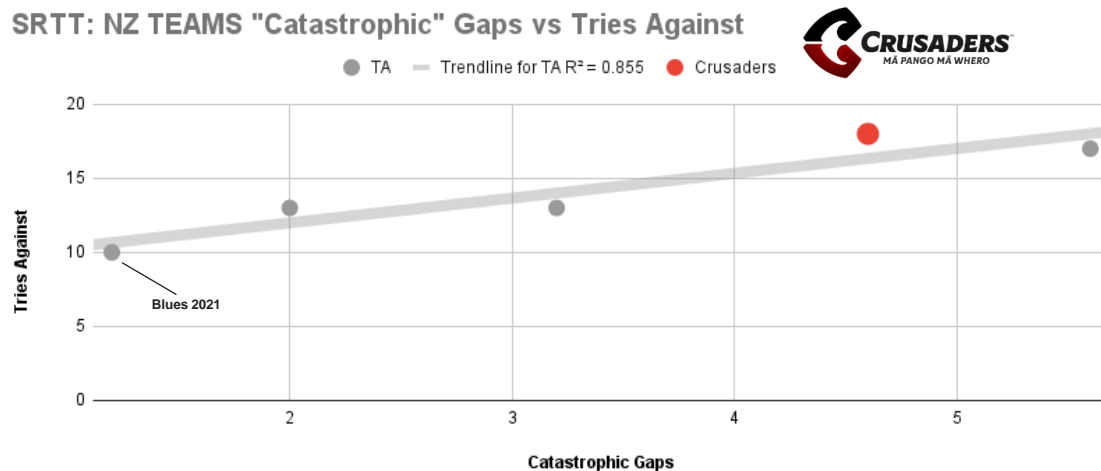
- “0” Gaps had a moderate-good relationship to overall Points Against (Defence Performance) – some overperformance outliers.
- The lower (less) “0” Gaps, the stronger the performance i.e. Defend better.
- RUNY had strong “0” Gaps – indicative of overall Points Against (offset against moderate 0-5 Defensive Gaps).

In-Season Markers: “0” Gaps Benchmark

- “0” Gap Markers in High Cohesion environment significantly stronger.



SRTT: NZ TEAMS "Catastrophic" Gaps vs Tries Against



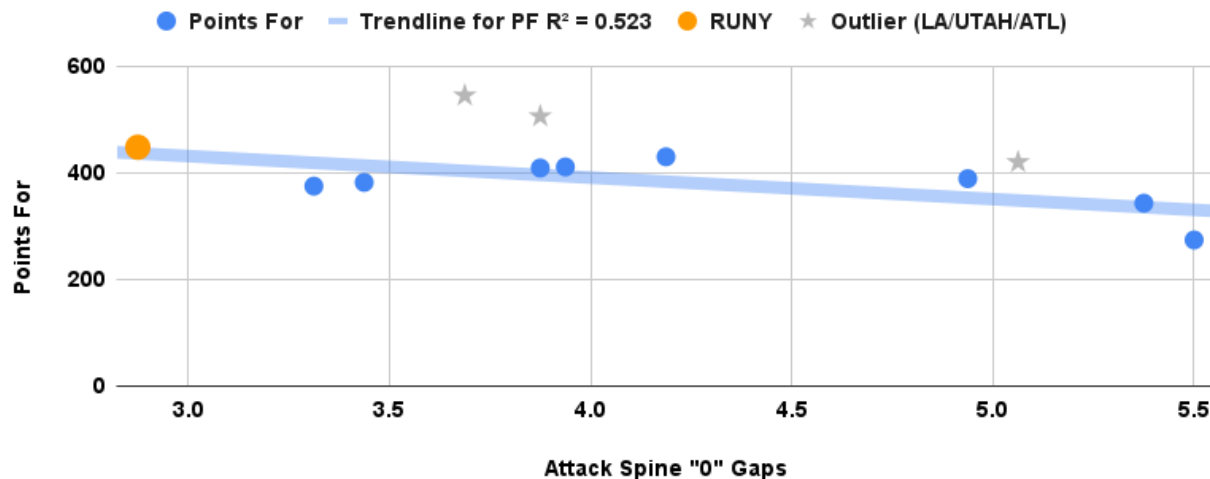
- Crusaders had 2nd weakest Defensive Markers for Super Rugby Trans Tasman.
- Crusaders conceded most Tries/Points Against.
- Blues had strongest Markers and conceded the least.

In-Season Markers: Attack Spine “0” Gaps



- Attack Spine “0” Gaps impact a teams ability to create Attack e.g. Points For.

MLR 2021: Points For vs. Attack Spine “0”



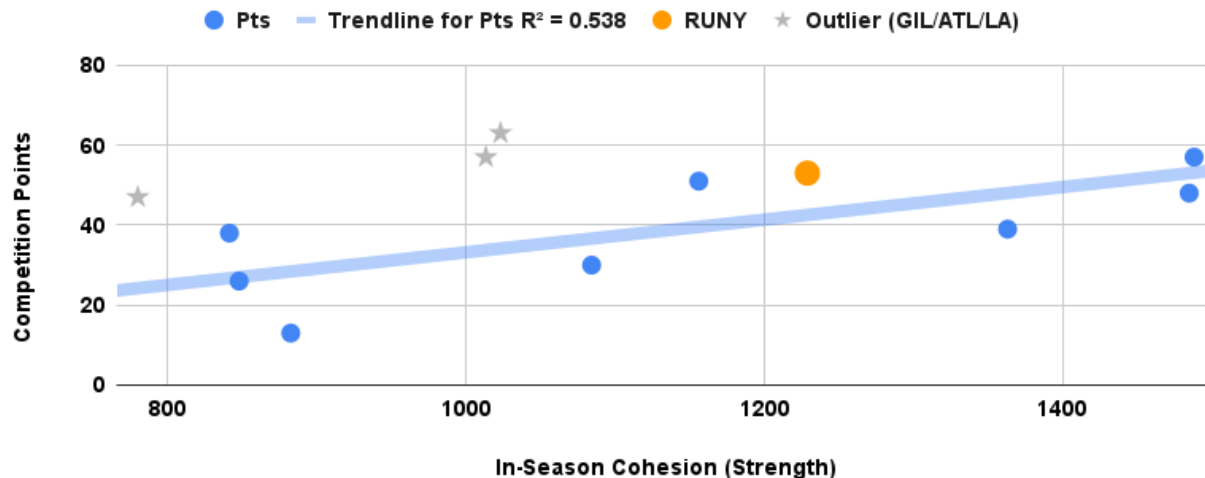
- Attack Spine “0” Gaps had a good relationship to overall Points For (Attack Performance) – some outlier over-performance.
- The lower (less) “0” Gaps, the stronger the performance.
- RUNY had strong “0” Gaps – indicative of overall Points For.

In-Season Markers: In-Season Cohesion



- In-Season Cohesion is a measure of a Team overall Strength

MLR 2021: Competition Points vs In-Season Cohesion (Team Strength)



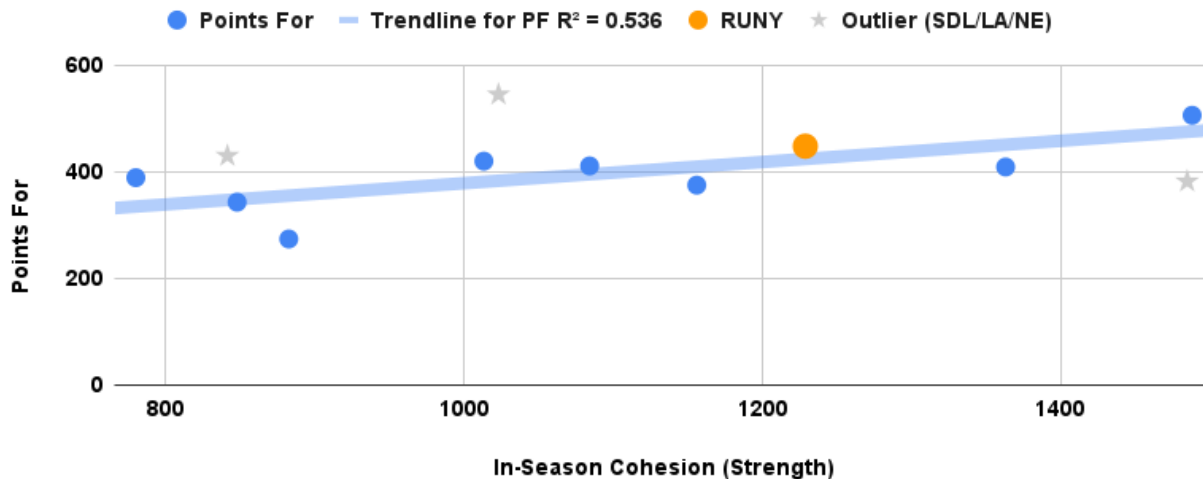
- In-Season Cohesion has a good relationship to overall performance – some overperforming outliers.
- The higher In-Season Cohesion the stronger the performance.
- RUNY had moderate-good In-Season Cohesion – indicative of overall Competition Points.

In-Season Markers: In-Season Cohesion



- In-Season Cohesion is a measure of a Team overall Strength

MLR 2021: Points For vs In-Season Cohesion (Team Strength)



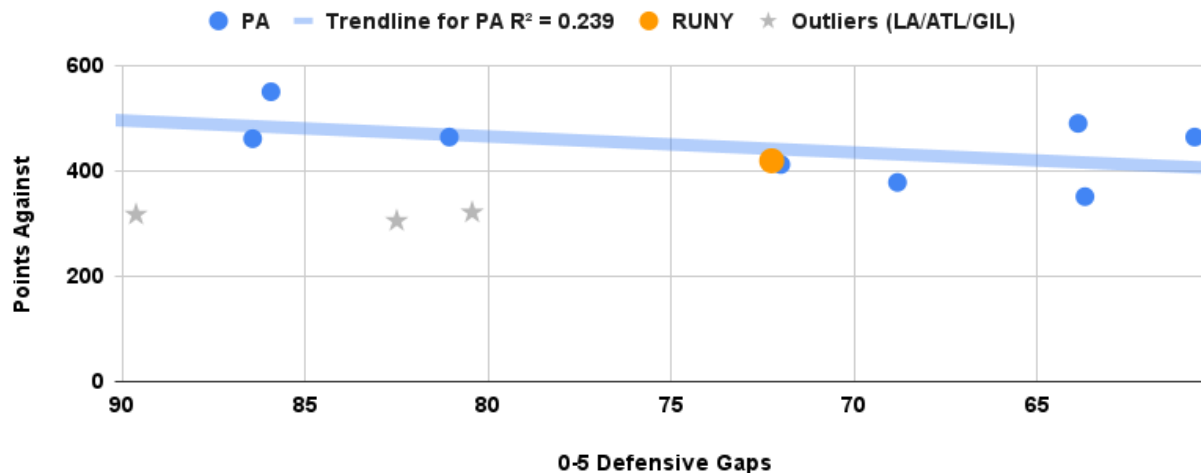
- In-Season Cohesion has a good relationship to overall performance – some over/underperforming outliers.
- The higher In-Season Cohesion the stronger the performance i.e higher Points For.
- RUNY had moderate-good In-Season Cohesion – indicative of overall Points For.
- Note: NE high In-Season Cohesion driven by very high stability but of a very low base.

In-Season Markers: 0-5 Defensive Gaps

- 0-5 Defensive Gaps are a measure of Team Weakness.



MLR 2021: Points Against vs 0-5 Defensive Gaps (Team Weaknesses)



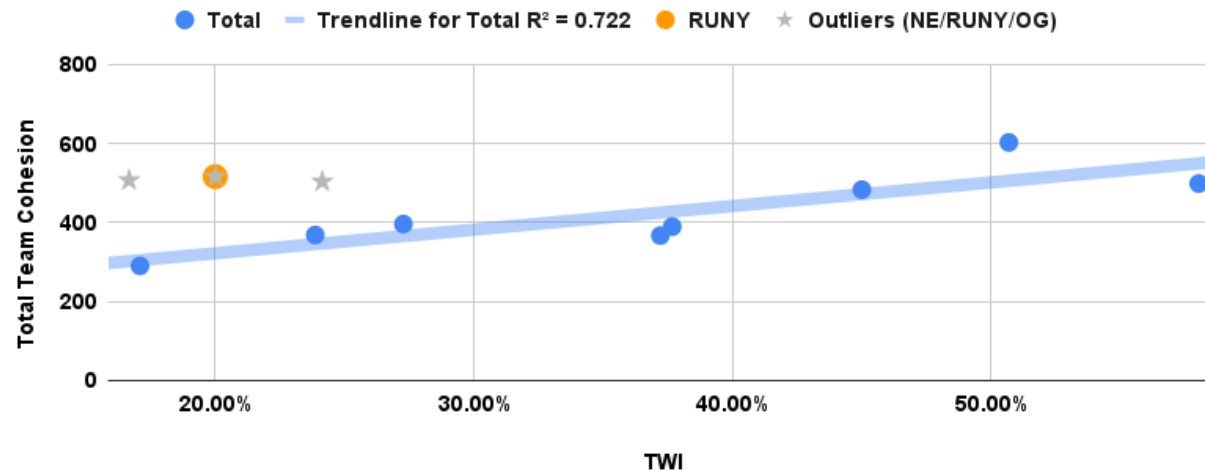
- In-Season Cohesion has a moderate-good relationship to overall performance – some overperforming outliers.
- Note: With a very low Cohesion competition Defensive Markers show less relationship as “everybody is poor”.
- The lower the 0-5 Defensive Gaps the stronger the performance i.e lower Points Against.
- RUNY had moderate 0-5 Defensive Gaps – indicative of overall Points Against.

In-Season Markers: Marker Development Efficiency



- Marker Development Efficiency – The relationship between Team TWI and In-Season Cohesion.

MLR 2021: Total Team Cohesion vs TWI



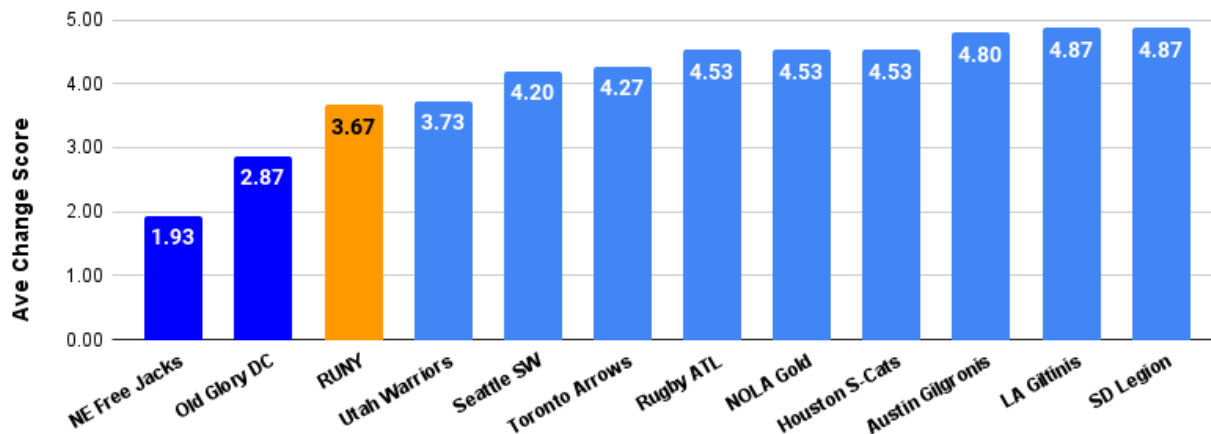
- There is a strong relationship between team TWI and In-season Cohesion in 2021.
- Outlier teams (high In-Season Cohesion vs TWI) are driven by high in-season stability.
- High in-season stability can not always be guaranteed season on season.
- RUNY In-Season Cohesion driven by high stability.
- **Increasing TWI will drive higher In-season Markers.**

In-Season Markers: Change Score

- Measure of change per game to starting team.



MLR 2021: Average Change Score (Change per Game)



- 3 outlier teams for In-Season Cohesion vs TWI efficiency (NE/OG/RUNY) has lowest changes during season.
- High efficiency driven by high stability.

In-Season Markers: Summary



- MLR is a low Cohesion competition so overall Cohesion vs Performance relationships will not be significantly high.
- Overall moderate to good relationship between Key Cohesion Markers and Performance.
- RUNY showed strong stability in 2021 driving relatively good Markers from a low TWI base.
- RUNY's Team In-Season Cohesion and Defensive Gap Markers were not significantly strong and indicative of overall performance.
- RUNY's "0" Gap Markers enhanced performance through consistency of relationships – driven by strong in-season stability.
- RUNY were -2 Game against the Markers in 2021 showing no significant level of over/under-performance
- Note: LA Giltinis were +1 Game for 2021 indicating they performed to expectation regardless of recruitment practice.

In-Season Markers: Summary



- **General Observation:**
 - Consideration needs to be given to the style of play.
 - Playing a “New Zealand style” of game potentially requires a New Zealand level of Cohesion.
 - Execution is a function of the level of Cohesion within a team.



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