Development of a player impact ranking matrix in Super 14 rugby union

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Abstract

The aim of this study was to design and implement a Player Impact Ranking (PIR) matrix to objectively quantify the impact of players on team performance and game outcomes in rugby union. Game data from the Crusaders, Force and Lions in the 2006, 2007 and 2008 Super 14 competition seasons were used. A framework of game actions (GA) was developed for individual players and allocated positive and negative weightings to reflect each GA's relative importance to a team's winning performance. The weightings were applied to the frequencies of each game action to derive a total net game performance (NGP) score, which was then used to assess the teams' performances, utilising game results (i.e. win/loss), competition points and score margins (i.e. the difference in scores between two teams). NGP scores showed significant relationships with wins/losses, team scores and competition points ($p<0.05$). Moderate, positive correlations were recorded with NGP scores and score margins ($r=0.66$-0.76; $p<0.01$). Results suggested that the derived PIR matrix accurately reflected game results and team performances, making it a useful tool for post match analysis of performance. Further research into applying the PIR matrix developed here to in-match situations for real time analysis is recommended.

Keywords: performance indicators, performance analysis, game actions

1. Introduction

Greater professionalism in elite sport has prompted an increased emphasis on the examination of successful individual and team performances and overall results. As a result, many teams and athletes now use the information gathered from past matches to help prepare for future games (McGarry, Anderson, Wallace, Hughes, & Franks, 2002). This information is often channelled into the planning and execution of training drills in preparation for particular opponents. The overall aim of these processes is to better simulate the game demands of team sports by replicating, as closely as possible, the physiological, skill and decision-making requirements of actual competition. Previous studies (Konstadinidou & Tsigilis, 2005; Luhtanen, 1993; Stanhope & Hughes, 1997) have compared the different styles of play of successful and unsuccessful teams in many different sports, with a view to understanding the factors that may discriminate success from failure (Hughes & Franks, 2004).

Previously, teams relied heavily on a coach's ability to observe and recall all the incidents from a sports performance. However, Franks and Miller (1986) demonstrated that coaches could not accurately observe and recall all of the detailed information that is required for an objective interpretation of match performance. Although it was recently shown that experienced coaches demonstrated higher accuracy in recalling critical events than novice coaches (Laird & Waters, 2008), there was still limited recollection ability. Therefore, the use of detailed quantitative analyses can improve performance feedback (Franks, 1997) for both individual players and teams, possibly enhancing future performance.

Recent technological advances have enhanced the depth to which game play in sports such as rugby union can now be analysed. Initial studies using either hand or computer notation (Hughes & White, 1996; Hughes & Williams 1988) are now being replaced by more specialised team (Jones et al., 2004; van Rooyen, Lambert & Noakes, 2006) and position specific profiling techniques (James et al., 2005; Heasman et al., 2008).

Until recently, performance analysis research in rugby union had generally been confined to investigating limited aspects of the game, such as patterns of play or physiological estimates of positional work rates of individual players (Hughes & Williams, 1988; Hughes & White, 1996; Kearney & Rehrer, 2002). However, many researchers have now recognised the need to focus on the development and utilisation of key performance indicators (KPI). A KPI is referred to as 'a selection, or combination, of action variables that aims to define some or all aspects of a performance' (Hughes & Barlett, 2002, p. 739). The development of KPI allows for the creation of performance profiles, which describe a team or individual's pattern of performance, which then allows for the analysis of both successful and unsuccessful actions. These are typically created from the collected frequencies of a combination of KPI that offer some degree of prediction of future performance (Hughes, Evans & Wells, 2001).

2. Key Performance Indicators (KPI) in Rugby Union

Current literature reports various findings regarding the KPI of successful and unsuccessful teams in rugby union. Successful teams have been found to be more effective at rucking and kicking the ball into "dangerous" areas of the field (i.e. kicking into space, hence applying more pressure on the opposition to clear the danger), allowing them to launch attacks closer to their opponent's try line, thus increasing their scoring chances (Stanhope & Hughes, 1997). This is of importance, as points are usually scored when the attacking movement begins in the opposition's half (van Rooyen, Lambert & Noakes, 2006). Van Rooyen and Noakes (2006) supported this view when they found that teams that could better move possession from the defensive to the attacking half of the field were more successful in the 2003 Rugby World Cup. The higher placed nations also scored a greater number of points in the second half of the match compared to the lower placed teams. The reverse trend was observed with the number of points conceded (van Rooyen et al., 2006).

The ability to retain possession has also been suggested to be important for success in rugby union (van Rooyen & Noakes, 2006). This was demonstrated in the 2003 Rugby World Cup tournament where the top three teams were reported to have the greatest mean percentage possessions (van Rooyen et al., 2006). This finding supports those of

Hughes and White (1997), who found that successful teams won more scrums per match and had a greater variety of line out options, suggesting better ball retention. Another KPI that has been recently examined in rugby union is the ball recycle time (the time it takes for the ball to become available after the ball carrier has gone to ground). Recycle time has been positively associated with the ability to attack and it was reported that the winner of the 2005 Super 12 rugby competition had the lowest recycle times (Prim, van Rooyen & Lambert, 2006). In addition, the winning team committed no players to defensive tackle situations for over 25% of the time, thus sacrificing the possibility of a tackle turnover in favour of ensuring greater numbers in the defensive line.

Of particular relevance to this study is that the majority of the current literature describes performances of teams using data collected from only one or two matches. This increases the probability that potentially important factors in performance are being over shadowed by other factors, such as weather or home/away ground advantage/disadvantage. Thus, evaluating multiple performances of one team is required in order to better develop playing profiles for both winning and losing scenarios. Furthermore, the data analysed needs to reflect the context of the match situation. Hence, it is important that data is normalised to account for the number of successful or unsuccessful actions that occur as a percentage of the total actions observed.

Despite recent work on the development and measurement of such performance indicators in rugby union (James et al., 2005; Jones et al., 2004; van Rooyen et al., 2006), insufficient data exists. In particular, there is little research concerning position specific performance indicators and their subsequent performance profiles. The formation of position profiles, through the utilisation of KPI using a reliable computerised analysis system, is therefore an important area of future investigation (Hughes & Bartlett, 2002). Therefore, the aim of this study was to design and implement a Player Impact Ranking (PIR) matrix specific to rugby union that could objectively quantify the impact of players on team performance and the outcome of games by incorporating the analyses of positive and negative game actions (GA) of 3 team's data over 3 full seasons.

3. Methods

3.1. Study design and data sample

Data from three teams (Crusaders, Force and Lions) was sampled to reflect teams that finished near the top, middle and bottom of the Super 14 rugby union competition ladder in each season. Each team played 13 games per season during the home and away season, thus allowing for a total of 39 games to be analysed per team. No finals matches were included in the data set. Game data from the 2006, 2007 and 2008 Super 14 rugby competition seasons were collected for use in the study. Each individual player in each of these games was coded by a team of notational analysts from Verusco for their GAs and frequencies using TryMaker Pro (tm) (Verusco Technologies Limited, Palmerston North, New Zealand).

A framework of individual GA was developed and applied to assess team performance. Each individual GA was allocated a positive or negative weighting to reflect the action's relative importance to a team's winning performance. A highly weighted positive GA

was desirable and contributed more towards a team's winning performance. A negatively weighted GA was undesirable and a team would aim to minimise these negative GAs. Allocated weightings were applied to the frequencies of each game action to derive a total net game performance (NGP) score. The NGP scores were then used to assess the teams' performances, utilising game results (i.e. win/loss), competition points and score margins (i.e. the difference in scores between two teams) as a basis for comparison.

3.2. Identification of individual GA

The list of individual GA and their respective weightings was decided upon in conjunction with the coaching staff of a Super 14 rugby union team. As per the recommendations of James et al. (2005), the identification of performance indicators followed three stages. Firstly, a list of individual GAs based on playing knowledge of rugby union and the existing literature within the field was developed. This list was then presented to the coaches to comment upon, clarify or modify. Finally, operational definitions were created for each individual GA so to reduce any uncertainties. The list of actions, operational definitions and their respective weightings can be found in Appendix A.

3.3. Competition points

The Super 14 rugby union competition ladder is based on a 13 game round-robin home and away season (where each team plays all other teams once), followed by a finals series. Competition points are allocated during the home and away season to reflect game results and team performances. The top four teams with the most competition points at the end of the home and away season qualify for the finals series. The competition point's allocation is four points for a win, two points for a draw and no points for a loss. A bonus point is also allocated to a team under two circumstances; losing by seven or less game points or scoring four or more tries.

3.4. Positive vs Negative GA Ratio

A team could possibly perform a large number of GAs in a game, thus leading to the appearance of high game involvement, high possession and expectation of better performance. However, it is important to identify that both positive and negative GAs make up a team's total number of game actions. Therefore, the ratio of positive to negative GAs by a team was examined, with the aim of identifying whether a team that had better game results was associated with a higher positive GA ratio. The GA ratio was calculated as per the equation:

GA ratio = number of positive GAs/number of negative GAs

Thus for example, if the GA ratio was 10, it would imply that for every 10 positive GAs a team performs, it performs 1 negative GA.

3.5. Positional differences

This study also analysed positional differences in rugby union. Players were divided into seven commonly used categories of playing positions as illustrated in Table 1. These sub-categories were decided upon in conjunction with the coaching staff of a Super 14 rugby union team and also represent a commonly used classification system for rugby union positions.

Table 1. Player position categories

Position Categories	Player positions
Front row forwards	Loosehead prop (1), Hooker (2), Tighthead prop (3)
Second row forwards	Second rows (4 and 5)
Loose forwards	Blindside flanker (6), Openside flanker (7), Number 8 (8)
Scrum half	Scrum half (9)
Fly half	Fly half (10)
Centres	Inside centre (12), Outside centre (13)
Wings and Full back	Left wing (11), Right wing (14), Full back (15)

3.6. Reliability

Verusco Technologies Limited provides notational analyses services to 13 of the 14 Super 14 teams, the All Blacks, the Wallabies, the Canadian Rugby Union and a host of other teams in various competitions internationally. The level of coding is maintained and performance of coders is regularly reviewed via both specific and randomly selected data. Coders undergo training and clearly defined actions and events are set. Verusco Technologies Limited currently report that instances of critical error during coding vary from 0.06% to 0.48% of tasks coded, depending on coder's experience, with the average reported instances of errors being 0.24%.

3.7. Statistical analysis

A linear regression was used to predict score margin from team NGP scores while controlling for team effects. By analysing score margins, we were able to analyse win/loss situations (positive margin for wins and negative margins for losses) and the degree of wins or losses. Pearson's product-moment correlation coefficients (r) were used to assess the strength and direction of the relationship between team NGP margins and score margins. A one-way ANOVA (with Tukey's post-hoc comparisons) was used to test for differences between team NGP scores and competition points, team NGP score comparisons across different seasons, positive vs negative GA ratios and playing position comparisons. Statistical significance was set at $p < 0.05$.

4. Results

The Crusaders finished 1st in the 2006, 2007 and 2008 seasons. The Force finished 14th in 2006 but 7th and 9th in the 2007 and 2008 seasons, and the Lions finished 13th in 2006, 10th in 2007 and 14th in 2008.

4.1. Team NGP scores predicting Score Margins

Table 2 presents the results for the linear regression of score margin predictions from team NGP scores. After controlling for team ranking/ability effects, team NGP was shown to be a significant predictor of score margin (adjusted $R^2 = 0.49$, $F = 53.05$, $p < 0.01$). Due to the low number of draw results (6 out of 117 games), these games were left out of the analyses.

4.2. Team NGP score comparisons

Table 3 presents the results for the comparison of NGP scores between teams. There were significant differences [$F(2,114) = 26.63$, $p < 0.01$], in team NGP scores over the 2006, 2007 and 2008 seasons, with the Crusaders having the highest team NGP score

(1957 ± 419), followed by the Force (1755 ± 384) and the Lions (1368 ± 265). In each season for 2006-2008, the Crusaders, who finished first, had significantly greater ($p < 0.05$) NGP scores than the Lions (near bottom). This was also the case for the Crusaders compared to the Force in 2006, but not for the 2007 or 2008 seasons. When compared to the Lions, the NGP score recorded by the Force was significantly greater ($p < 0.05$) in 2008, but not in 2006 or 2007.

4.3. Team NGP scores vs Competition points

Results for team NGP scores in relation to competition points can be found in Table 4. For the three teams combined, the NGP scores were significantly higher with the more competition points achieved within a game, $F(5,111) = 16.07$, $p < 0.01$. Post hoc analysis showed that the scoring of 5 competition points had a significantly greater ($p < 0.05$) NGP score than scoring 0 points, 1 point, 2 points and 4 points, but not for 3 points. Scoring 4 competition points also had a significantly greater NGP score than scoring 0 points ($p < 0.01$).

Table 2. Team NGP as a predictor of score margin

	B (SE)	*β*
Constant	-30.08 (9.43)	
Team	-5.90 (2.01)	-.25[a]
Team NGP	0.02 (0.00)	.53[a]

[a] $p < 0.05$

Note: $R^2 = 0.31$ for Step 1, $\Delta R^2 = 0.19$ for Step 2 ($p < 0.01$)

Table 3. Mean (±SD) team net game performance (NGP) score across the 2006, 2007 and 2008 seasons.

	2008		2007		2006	
	N	NGP score	N	NGP score	N	NGP score	N	NGP score
Crusaders	39	1957 ± 419 [a, b]	13	1966 ± 419 [b]	13	1815 ± 427 [b]	13	2090 ± 397 [a, b]
Force	39	1755 ± 384 [b]	13	1958 ± 354 [b]	13	1735 ± 431	12	1571 ± 272
Lions	39	1368 ± 265	13	1264 ± 213	13	1447 ± 208	13	1394 ± 337

[a.] Significantly different to Force, $p < 0.05$

[b.] Significantly different to Lions, $p < 0.05$

Table 4. Mean (±SD) team net game performance (NGP) scores and competition points for the Crusaders, Force and Lions

Competition points	N	NGP score
0 (Loss)	39	1398 ± 305 [a, b]
1 (Loss with less than 7 points difference OR 4 or more tries scored)	18	1596 ± 325 [a]
2 (Draw OR a loss with less than 7 points difference AND 4 or more tries scored)	5	1531 ± 302 [a]
3 (Draw with 4 or more tries scored)	2	1895 ± 344
4 (Win)	29	1786 ± 368 [a]
5 (Win with 4 or more tries scored)	23	2167 ± 369

[a.] Significantly lower NGP score than 5 competition points

[b.] Significantly lower NGP score than 4 competition points

4.4. Team NGP Score Margins vs Score Margin

Moderate, positive (r = 0.66-0.76; $p < 0.01$) correlations were recorded between team NGP score margins and game score margins. Results are shown in Table 5.

Table 5. Pearson's product-moment correlation coefficient (r) between team net game performance (NGP) score margins and game score margin, and mean (±SD) NGP and score margins

	N	NGP score Margin	Score Margin	r	r^2	p
Crusaders, Force and Lions	117	-9 ± 675	-1 ± 19	0.76	0.58	0.00
Crusaders	39	366 ± 648	14 ± 17	0.75	0.56	0.00
Force	39	13 ± 662	-5 ± 16	0.66	0.44	0.00
Lions	39	-406 ± 475	-12 ± 15	0.68	0.47	0.00

4.5. Positive vs Negative GA Ratio comparisons

Table 6 presents the results for positive vs negative GA ratio comparisons to game results. For the Crusaders and the Force, the positive GA ratio for a win was significantly higher ($p < 0.05$) than for a loss, but not for the Lions.

Table 6. Mean (±SD) positive vs negative GA ratio and game results for 2006-2008

		N	GA Ratio [1]
Crusaders			
	Loss	8	10 ± 2
	Draw	1	15
	Win	30	12 ± 2 [a]
Force			
	Loss	22	10 ± 2
	Draw	3	9 ± 1
	Win	14	13 ± 2 [a]
Lions			
	Loss	27	9 ± 2
	Draw	2	12 ± 3
	Win	10	10 ± 1

[a.] Significantly higher GA ratio than for a loss, $p < 0.05$

[1.] Expressed as number of positive actions per negative action

4.6. Playing position comparisons

Table 7 shows the results for number of GAs performed by each position group. Scrum halves (84 ± 51) had more GAs ($p < 0.01$) than every other position except for loose forwards (82 ± 37) and fly halves (81 ± 36), who were also similar to each other. Front row forwards (53 ± 27) had more GAs than wings and fullbacks but less than other positions ($p = 0.00$), except for centres (48 ± 21). The number of GAs for second row forwards (66 ± 33), wings and fullbacks (40 ± 19) were significantly different to every other position ($p < 0.05$).

Table 8 shows the contribution of each position group toward the NGP score. Front row forwards (61 ± 43) had significantly lower ($p < 0.05$) NGP scores than all positions,

except centres (66 ± 57), and wings and fullbacks (71 ± 69). Second row forwards (77 ± 53) had higher NGP scores than front row forwards ($p < 0.05$), but lower ($p < 0.01$) NGP scores than loose forwards (104 ± 63) and fly halves (178 ± 133). Fly halves had the highest NGP scores ($p < 0.01$) and loose forwards were also higher than all other positions except fly halves ($p < 0.05$).

Table 7. Mean (±SD) number of GAs performed by each position grouping

Position Grouping	N	Game Actions
Front row forwards	537	53 ± 27 [a, b, c, f, g]
Second row forwards	328	66 ± 33 [a, b, c, d, e, g]
Loose forwards	470	82 ± 37 [d, e, f, g]
Scrum Half	194	84 ± 51 [d, e, f, g]
Fly Half	144	81 ± 36 [d, e, f, g]
Centres	277	48 ± 21 [a, b, c, f, g]
Wings and Fullback	415	40 ± 19 [a, b, c, d, e, f]

[a.] Significantly different to loose forwards, $p = 0.00$
[b.] Significantly different to scrum halves, $p = 0.00$
[c.] Significantly different to fly halves, $p = 0.00$
[d.] Significantly different to front row forwards, $p = 0.00$
[e.] Significantly different to centres, $p = 0.00$
[f.] Significantly different to second row forwards, $p = 0.00$
[g.] Significantly different to wings and fullbacks, $p < 0.05$

Table 8. Mean (±SD) net game performance (NGP) scored by each position grouping

Position Grouping	N	NGP Score	% NGP/Total
Front row forwards	537	61 ± 43 [b, c, d]	10
Second row forwards	328	77 ± 53 [a, c, d]	12
Loose forwards	470	104 ± 63 [a, b, d]	16
Scrum half	194	84 ± 60 [a, c, d]	13
Fly Half	144	178 ± 133 [a, b, c,]	28
Centres	277	66 ± 57 [c, d]	10
Wings and Fullback	415	71 ± 69 [c, d]	11

[a.] Significantly different to front row forwards
[b.] Significantly different to second row forwards
[c.] Significantly different to loose forwards
[d.] Significantly different to fly halves

5. Discussion

The aim of this study was to develop and implement a PIR matrix specific to rugby union. Data from three teams that reflected a team's finishing position on the competition ladder – near top (Crusaders), middle (Force) or bottom (Lions) were chosen for analysis. Whilst previous studies on performance analysis have only looked at one season or one tournament (James, Mellalieu & Jones, 2005; Prim, van Rooyen & Lambert, 2006; van Rooyen & Noakes, 2006), this study examined the data of 3 teams over 3 seasons.

In our study, team NGP scores were found to be a significant predictor of score margin, indicating that a higher team NGP score yields a higher probability of winning. The association of team NGP scores and scoring more competition points from each round of competition also serves to emphasise the usefulness of the PIR matrix. As expected, the team that finished higher had greater mean NGP scores than the team that finished near bottom, whilst the team that finished in the middle of the standings had mixed results and did not always win games in which they had higher NGP scores.

The moderate to strong positive associations between NGP margins and score margins for each game, coupled with the analyses of GA ratios, shows further evidence of the veracity of the PIR. However, a team with higher NGP scores did not always emerge as a winner. This could be due to a team's playing style and quality of play. For example, a team may have had a high number of possessions but may have been unable to translate this into point scoring opportunities, thus inflating the team's NGP scores. Further, the GA ratios suggest that for a team to win it needed to perform a higher number (more than 10) of positive GAs for every negative GA recorded, with this being more important than total GA's recorded.

The significant relationships between NGP scores and our testing variables suggest that the PIR matrix is a useful and accurate post-match tool for both team and individual performance assessment in Super 14 rugby. As noted by James et al. (2005), a valid player impact ranking that shows both individual and team performance profiles can be used to gain an enhanced understanding of the critical performance factors for success.

The findings from this study have potentially significant implications for coaches and team analysts. Critical or weak areas of play could be identified using the PIR developed here and appropriate training drills devised to target and improve on these areas. For example, if a coach or analyst thought that tackling was critical to a team's success, or that a team had poor tackle rates, they could then objectively quantify this and provide feedback to players and implement interventions through training.

The PIR matrix could also be used to track individual player performances. Previous studies have highlighted coaches' subjectivity and memory as potential errors to accurately rating performance (Franks & Miller, 1986; Hughes & Franks, 2004). The PIR provides coaches and analysts with a means to not only objectively rate player performance but also to identify which GAs a player might need to improve upon.

The PIR could also be potentially utilised in real time match analysis. This could be applicable to both home and opposition teams. Real time analysis of individual and team performances would enable coaches to make objective decisions during games on player substitutions and strategy changes. However, due to the high amount of manpower that would currently be needed to implement such an analysis tool, more research should be done to assess the efficacy of implementing the PIR matrix in real time for the use of a coach during a game. A possible alternative would be to develop a shorter and condensed version of the PIR developed here.

Results from this study also showed that there were differences in NGP scores when comparing playing positions. The "link" positions between the backs and forwards; namely the loose forwards, scrum halves and fly halves, typically had more game involvement (higher number of GAs) than any other positions. These three positions

were the only positions to score a mean of over 80 actions, which is in stark contrast to the mean number of actions of wings and fullbacks, and centres (40 and 48 respectively). These "link" players also contributed to the majority of the team NGP score in a game. Fly halves contributed 28% towards the total team NGP score, loose forwards contributed 16% and scrum halves contributed 13%, combining to a total contribution of 57% of the total team NGP score. These findings indicate that when comparing individual player impact scores, comparisons should only be made between players of the same positions and not across positions. This is in agreement with previous research (James et al., 2005; Heasman et al., 2008).

Our results also offer both physiological and skill execution implications for training and game strategy. Traditionally, the backs and forwards have operated as two somewhat separate units. Forwards perform drills tailored specifically for the forward pack such as line outs, rucking and mauling. Backs typically train using drills targeting quick ball movement, running angles and moves to break the opposition defensive line. The findings of this study suggest different training drills for the "link players" by highlighting the importance of training them as a unit, considering their close proximity of involvement to one another on the playing field and their high impact on a team's NGP score and hence, team success. Further investigation should be performed to analyse the amount of distance covered and the critical types of GA performed by each position so as to enable coaches to better tailor training programs and game strategies based on physiological and skill execution expectations.

The PIR also allows for the creation of positional profiles and benchmark values for each position. This has positive implications for coaches and players in terms of goal setting and also for administration in terms of talent scouting and player recruitment.

In summary, the PIR matrix developed in this study for rugby union has the potential to be used as an informative, objective and reliable tool for coaches and performance analysts alike in game analysis of both team and individual players. The PIR matrix offers a range of practical uses, such as setting a team or individual performance benchmarks, highlighting performance discrepancies between teams of different calibre, and the preparation for future games in terms of providing the necessary information for the planning of training drills and appropriate game strategies. The PIR matrix also allows for the analysis of the opposition, allowing for the analysis of opposition tactics, weaknesses, strengths and key players.

6. Conclusions

The following conclusions were made from this study:

- The PIR matrix developed is an objective and reliable method for the assessment of both team and individual performance in Super 14 rugby union.
- Player performance comparisons should only be made between players in the same position.
- Team and individual performance profiles can be created for coaching and talent scouting purposes.
- Future research should look into the application of such a tool in real time game situations.

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Appendix A. List of individual game actions, operational definitions and weightings.

Individual GA	Operational Definition	Weighting
Try Scored	5 points awarded to the scoring team when the ball is placed down in the try area	+75
Try Conversion	Additional 2 points awarded when the ball is kicked between the posts after a try is scored	+30
Penalty Conversion	3 points awarded when the ball is kicked between the posts from a penalty	+45
Drop Goal	3 points awarded when the ball is drop kicked between the posts from open play	+45
Tactical Kick Regained	Team regains possession after a tactical kick	+6
Breach	Carrying the ball through the opposition defensive line resulting in at least one opposition player having to turn around to make the tackle	+6
Field Kick > 40m	Successfully kicking the ball over a distance of 40m or more	+3
Offload	Passing the ball on to a supporting player when being tackled, thus maintaining the forward flow of play	+6

Ball Placement (Fast)	Quick placement (<3s) of ball when tackled, making the ball available for quick recycling	+3
Attack Support	First supporting player to arrive in a tackle situation to lend attacking support	+3
Set Piece (Score)	5 points awarded to the scoring team when the ball is placed down in the try area directly off a set piece play (i.e. scrum or line out)	+3
Ball Carry	Carrying the ball into the opposition defensive line causing more than one opposition players to commit to a tackle situation	+2
Pass/catch (Under Pressure)	Passing/catching the ball under opposition pressure. Includes picking the ball from base of ruck.	+2
Field Kick (Under Pressure)	Successfully kicking the ball under opposition pressure	+2
Ball Placement (Medium)	Medium speed (3-5s) placement of ball when tackled, allowing for average recycling of the ball	+2
First Arrival (Ruck)	First player to arrive in a tackle situation to clear out the ruck	+2
Second Arrival	Second player to arrive and secure the ruck	+2
Set Piece (Good Platform)	Set piece won, unless driven backwards	+2
Ball Carry (No Fight)	Carrying the ball into the opposition defensive line requiring only one opposition player to commit to the tackle situation	+1
Pass/catch (No Pressure)	Passing/catching the ball under no opposition pressure	+1
Field Kick (No Pressure)	Successfully kicking the ball under no opposition pressure	+1
Ball Placement (Slow)	Slow placement (>5s) of ball when tackled, causing slow recycling of the ball	+1
Third and Fourth Arrival	Third and fourth players to arrive to the ruck	+1
Set Piece (Untidy)	Set piece won, but driven backwards or wheeled to disadvantage	+1
Try Saving Tackle	A tackle that directly results in preventing a certain try from being scored by the opposition	+25
Kick Receipt (Contested)	Receiving a kick under a contested situation	+3

Turnover Tackle	A tackle that results in turnover of possession	+10
Set Piece Turnover	Turnover of possession from a set piece situation	+2
Dominant Tackle	Tackle that drives opposition player backwards	+2
Jackal	Attempt to steal the ball from a tackle situation in a turnover attempt	+2
Set Piece (Disrupt)	Driving the opposition set piece backwards or wheeling them into a disadvantageous situation	+1
Kick Receipt (No Pressure)	Receiving a kick under no pressure	+1
Passive Tackle	Tackling of opposition player	+1
Tackle Assist	Assisting in a tackle situation	+1
Set Piece (Opposition Platform)	Engaging in set piece but still allowing the opposition to have a good platform to attack from	0
Error in play	Errors made in play (e.g. handling errors etc)	-2
Game Law Infringement	Infringement of the laws of the game resulting in free kick or penalty	-10
Turnover Event	Error in play that directly results in turnover of possession to the opposition	-10
Set Piece Lost/Infringement	Lost own set piece or infringement of set piece rules	-2
Missed tackle	Missing a tackle	-6
Set Piece Opposition Score	Opposition score from a set piece	-3
Yellow Card	Results in carded playing being sent off to the sin bin for 10 minutes, leaving their team one player down for that duration	-45
Red Card	Results in carded player being sent off, having no further participation in the game, leaving their team one player down for the rest of the game	-75