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Portions of presentation from:

2015 – 1st Place Award Winning STL SABR Analytics Project

2024 – Updated with 2024 STL data, digital 4Base Scoring enhancements, & new paper scorecard

In June 2013 ... I asked myself what I thought was a simple question

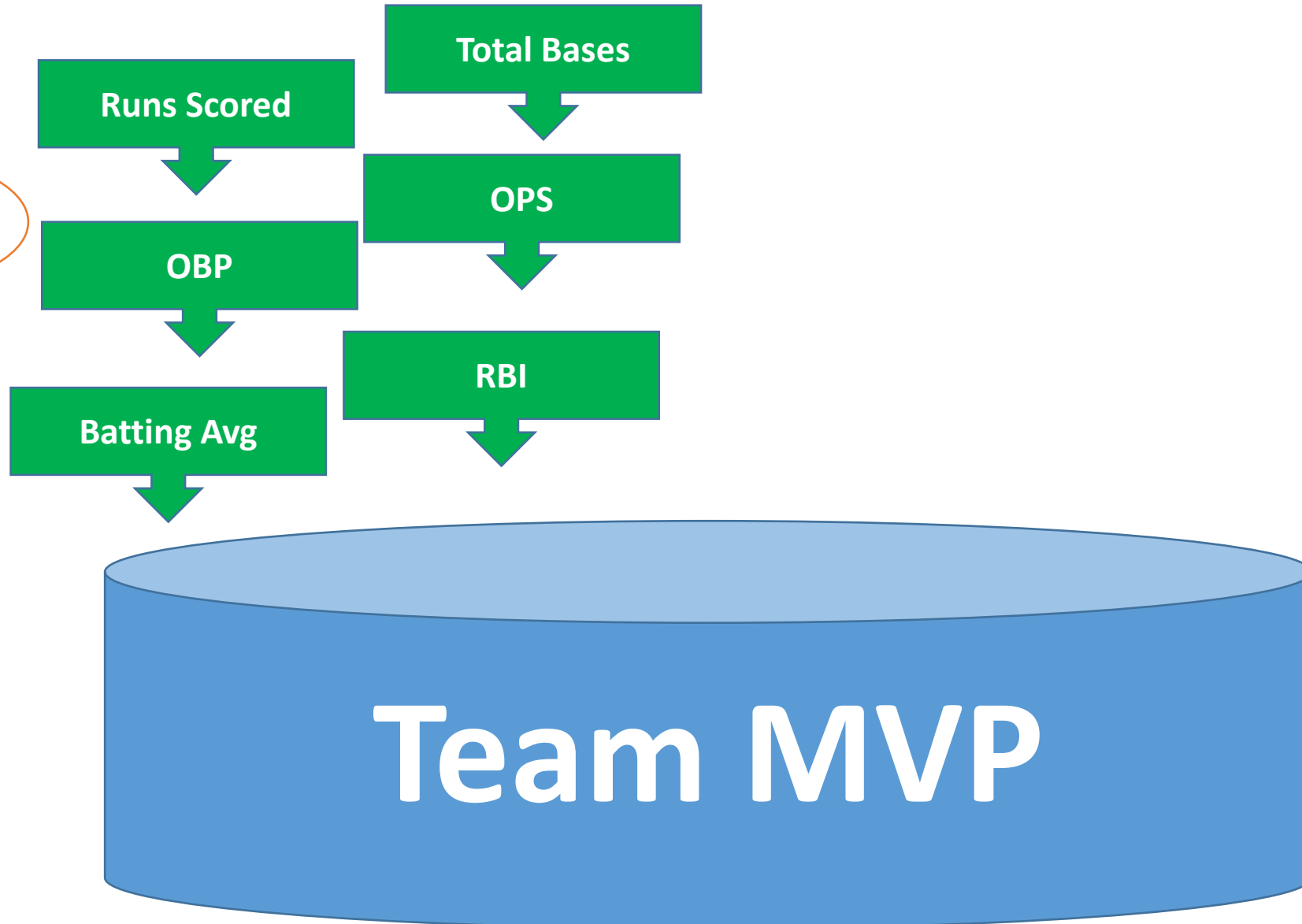
Who is my team's MVP ?



(Season mid-point)

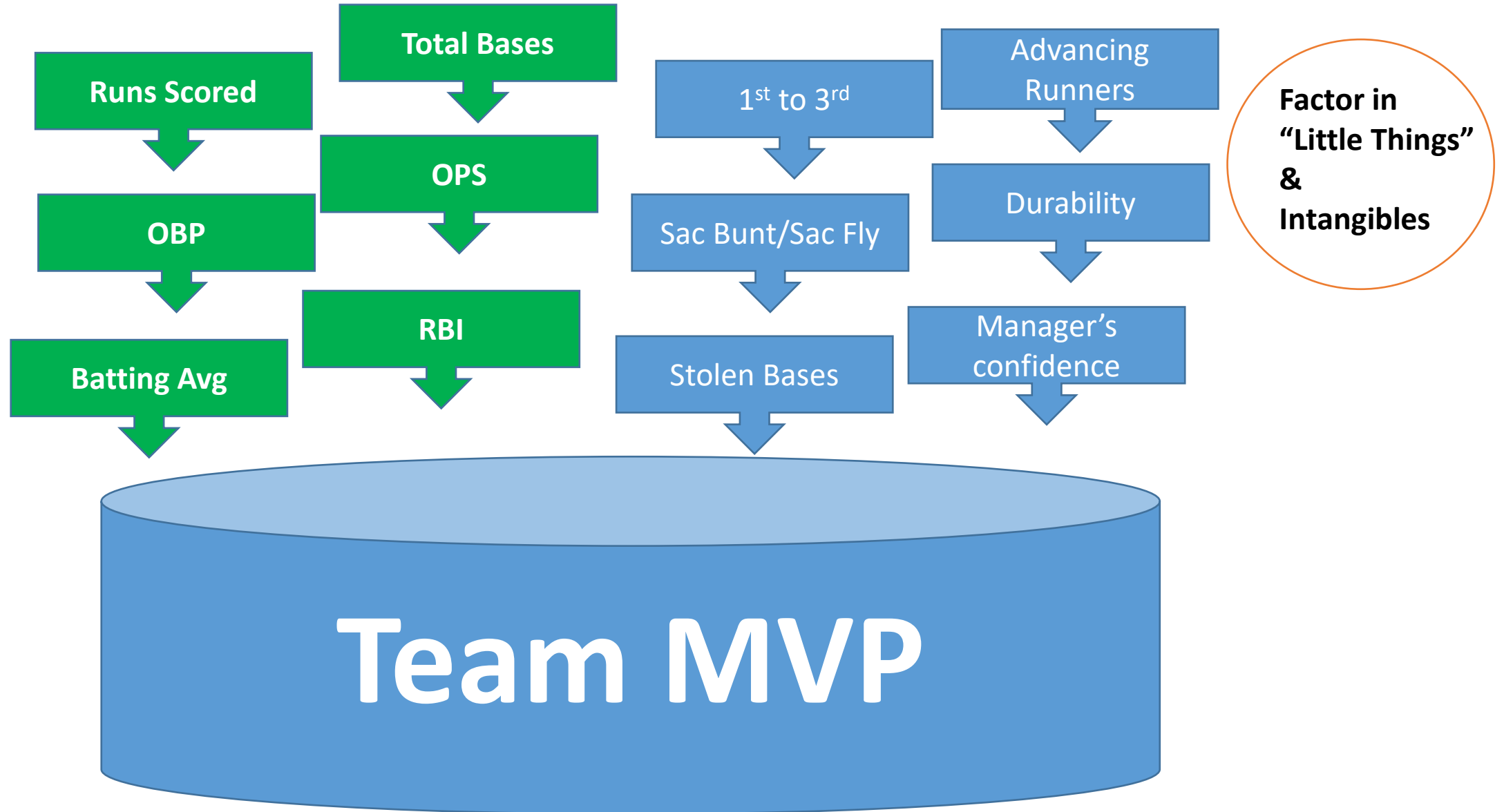
Which measure(s) should be used?

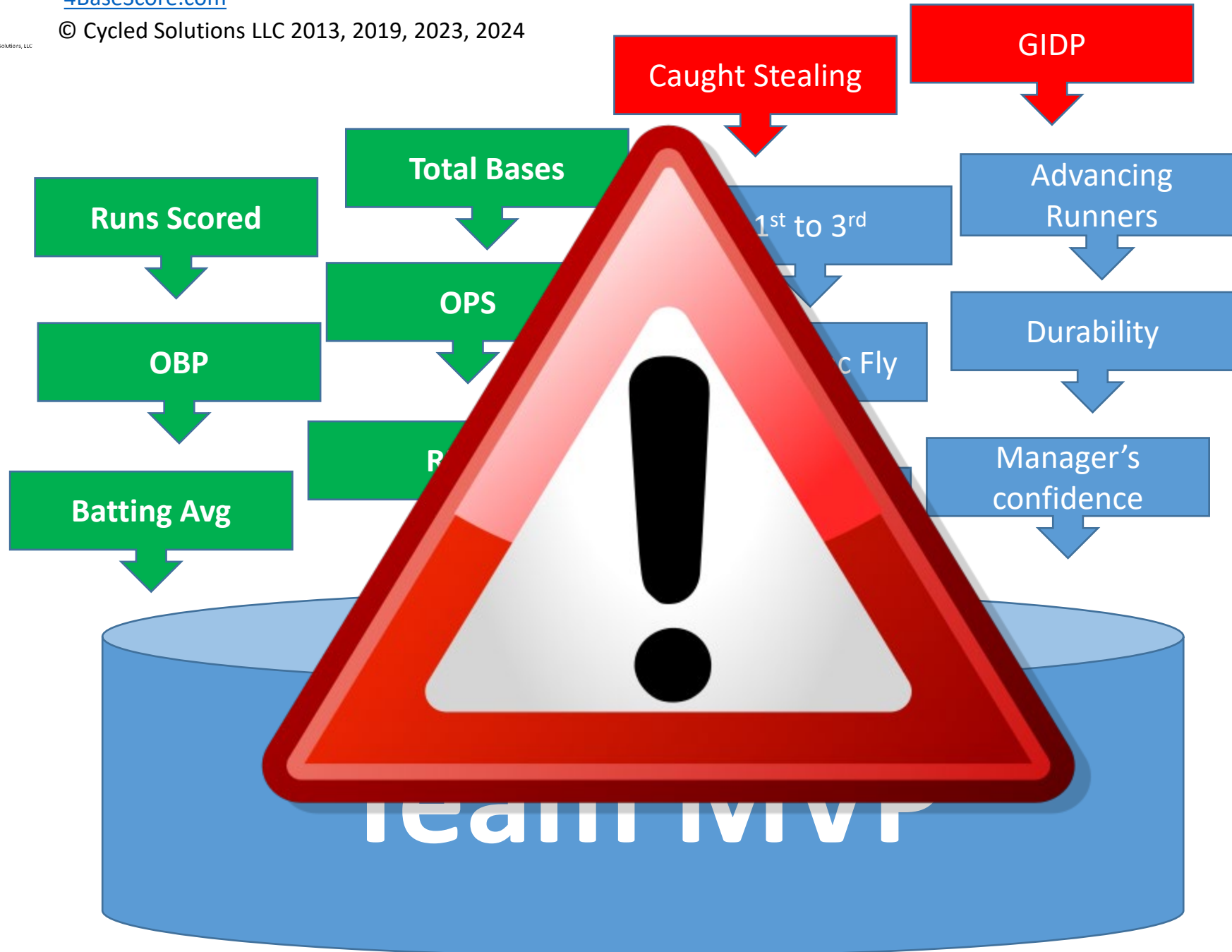
How to weight them?



Start with
Standard Stats

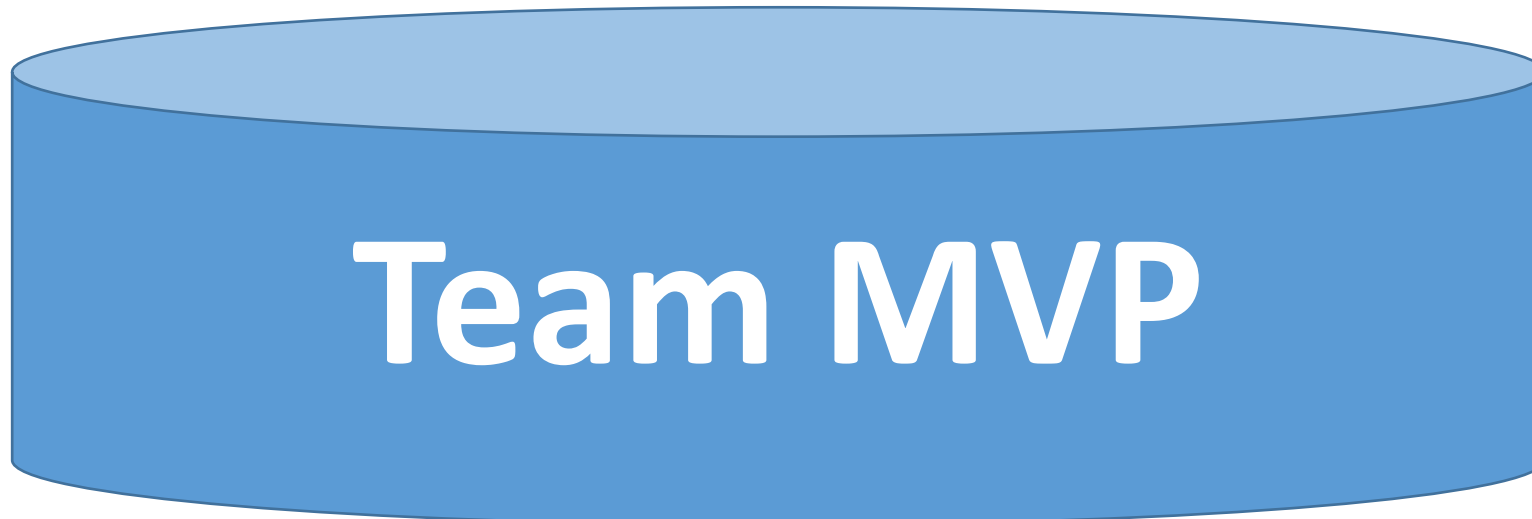
Team MVP





Wait a minute ... Much of the time ...

It's not clear who the Star of a single GAME is!



... because in baseball an in-game box score could show 8 guys as “1 for 3”

The image shows a large stadium scoreboard titled "IN-GAME BOX SCORE". It lists the following players and their statistics:

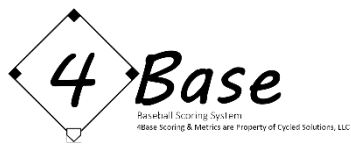
Position	Player Name	Stats	Key Event
CF	GREGOR BLANCO	1-3	SOLO HR
2B	JOE PANIK	1-3	SINGLE
C	BUSTER POSEY	1-3	SINGLE
3B	PABLO SANDOVAL	1-3	DOUBLE, RUN
RF	HUNTER PENCE	1-3	SINGLE
1B	BRANDON BELT	1-3	RBI DOUBLE
DH	MICHAEL MORSE	1-3	SINGLE
LF	TRAVIS ISHIKAWA	1-3	SINGLE
SS	BRANDON CRAWFORD	0-2	

The scoreboard is flanked by two vertical banners with "GLAN" visible. A "FOX" logo is in the top right, and a "GEICO" logo is at the bottom center. The background shows a baseball field at night.



How *can* we determine the Top Contributor of a single game?

(with currently available tools)



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Maybe the post game Box Score ...

Box Score:

- Too much information
- Not enough information
- Information poorly arranged

(i.e. footnotes, requires decipherring, etc.)

Scores for May 31, 2015

CIN 8 NYY 4 BAL 5 PHI 1 MIL 7 MIN 6 HOU 0 STL 3 CHC 2 TEX 4

Los Angeles Dodgers										
Hitters	AB	R	H	RBI	BB	SO	#P	AVG	OBP	SLG
Pederson CF	3	1	1	1	1	1	14	.258	.387	.546
Callaspo 3B	3	0	0	0	1	2	23	.205	.295	.250
García P	0	0	0	0	0	0	0	.000	.000	.000
González 1B	4	0	0	0	0	1	20	.324	.400	.591
Kendrick 2B	4	0	0	0	0	1	16	.290	.350	.430
Ethier RF	3	0	1	0	1	0	19	.305	.395	.519
Grandal C	3	0	0	0	1	0	20	.284	.402	.477
Barnes PR	0	0	0	0	0	0	0	.333	.333	.333
Guerrero LF	3	0	0	0	0	3	10	.290	.323	.656
Hatcher P	0	0	0	0	0	0	0	.000	.000	.000
Turner 3B	1	0	0	0	0	1	4	.303	.389	.525
Rollins SS	3	0	0	0	0	1	9	.202	.269	.339
Anderson P	1	0	0	0	1	1	9	.077	.333	.154
Hernández LF	1	0	0	0	0	1	3	.237	.275	.421
Totals	29	1	2	1	5	12	147			

BATTING
 HR: Pederson (13, 8th Inning off Siegrist 0 on, 2 Out)
 RBI: Pederson (24)
 2-out RBI: Pederson
 Dodgers RISP: 0-3 (Kendrick 0-1, Turner 0-1, González 0-1)
 Team LOB: 6

FIELDING
 DP: 2 (Ethier-González, Kendrick-Rollins-González).
 Outfield Assist: Ethier (Grichuk at 1st base); Hernández (Carpenter at Home).

Los Angeles Dodgers										
Pitchers	IP	H	R	ER	BB	SO	HR	PC-ST	ERA	
Anderson (L, 2-3)	6.0	5	2	2	3	5	1	102-61	3.42	
Hatcher	1.1	1	1	1	2	0	0	21-12	6.89	
García	0.2	2	0	0	0	1	0	12-9	2.91	
Totals	8.0	8	3	3	5	6	1	135-82		

PITCHING
 First-pitch strikes/Batters faced: Anderson 16/23; Hatcher 5/6; García 1/3
 Called strikes-Swinging strikes-Foul balls-In Play strikes: Anderson 23-5-18-15; Hatcher 3-0-5-4; García 1-2-4-2
 Ground Balls-Fly Balls: Anderson 7-3; Hatcher 2-2; García 0-0
 Game Scores: B Anderson 8

St. Louis Cardinals										
Hitters	AB	R	H	RBI	BB	SO	#P	AVG	OBP	SLG
Bourjos CF	4	0	1	0	0	0	10	.258	.323	.393
Carpenter 3B	3	1	1	0	1	1	20	.318	.398	.559
Peralta SS	3	1	2	3	1	1	19	.310	.373	.519
Grichuk LF	4	0	1	0	0	1	19	.286	.318	.556
Molina C	4	0	1	0	0	0	13	.284	.330	.337
Reynolds 1B	3	0	1	0	0	0	8	.250	.319	.389
Heyward RF	3	0	1	0	0	1	12	.251	.303	.398
Kozma 2B	1	0	0	0	1	1	11	.116	.174	.116
a-Wong PH-2B	1	0	0	0	0	0	5	.310	.385	.473
Martínez P	1	0	0	0	1	1	11	.100	.143	.100
Siegrist P	0	0	0	0	0	0	0	.000	.000	.000
b-Wong PH	0	1	0	0	1	0	7	.257	.342	.276
Rosenthal P	0	0	0	0	0	0	0	.000	.000	.000
Totals	27	3	8	3	5	6	135			

a-grounded to shortstop for P Kozma in the 7th
 b-walked for K Siegrist in the 8th

BATTING
 HR: Peralta (8, 1st Inning off Anderson 1 on, 1 Out)
 RBI: Peralta 3 (30)
 GIDP: Wong
 Cardinals RISP: 2-5 (Grichuk 0-1, Bourjos 0-1, Molina 1-2, Peralta 1-1)
 Team LOB: 5

BASERUNNING
 CS: Heyward (1, 2nd base by Anderson); Bourjos (5, 2nd base by Anderson)
 Picked Off: Heyward (1st base by Anderson); Bourjos (1st base by Anderson)

St. Louis Cardinals										
Pitchers	IP	H	R	ER	BB	SO	HR	PC-ST	ERA	
Martínez (W, 5-2)	7.0	1	0	0	3	8	0	108-72	3.13	
Siegrist (H, 8)	1.0	1	1	1	0	3	1	13-11	2.08	
Rosenthal (S, 15)	1.0	0	0	0	2	1	0	26-15	0.74	
Totals	9.0	2	1	1	5	12	1	147-98		

PITCHING
 First-pitch strikes/Batters faced: Martínez 17/25; Siegrist 4/4; Rosenthal 3/5
 Called strikes-Swinging strikes-Foul balls-In Play strikes: Martínez 17-18-23-14; Siegrist 4-2-4-1; Rosenthal 6-1-7-1
 Ground Balls-Fly Balls: Martínez 9-4; Siegrist 0-0; Rosenthal 1-1
 Game Scores: C Martínez 8



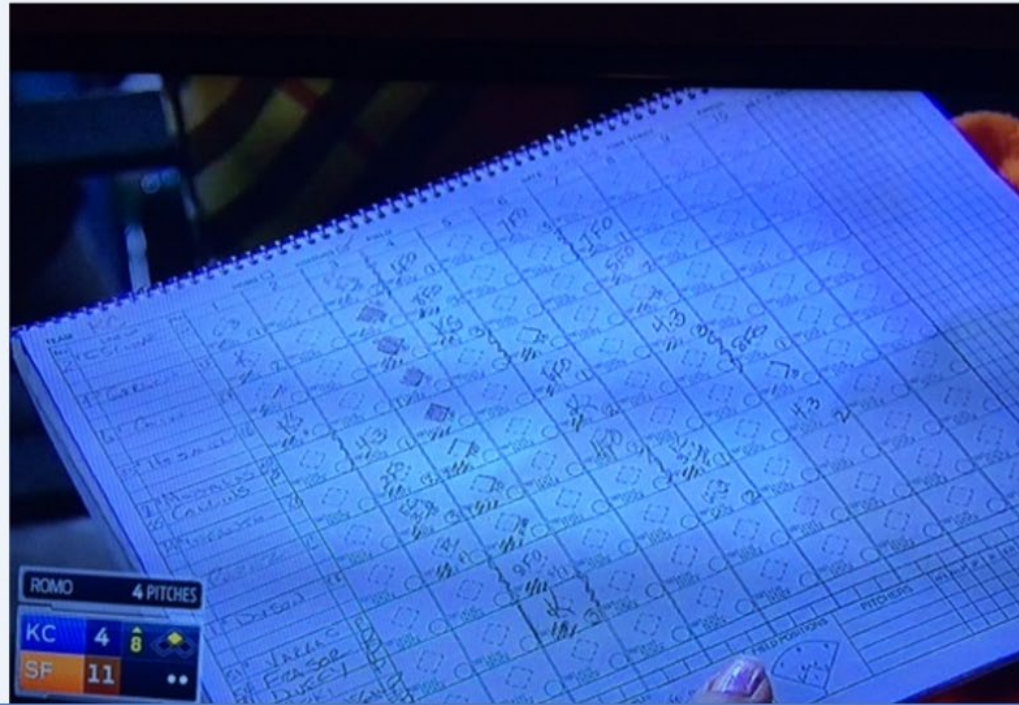
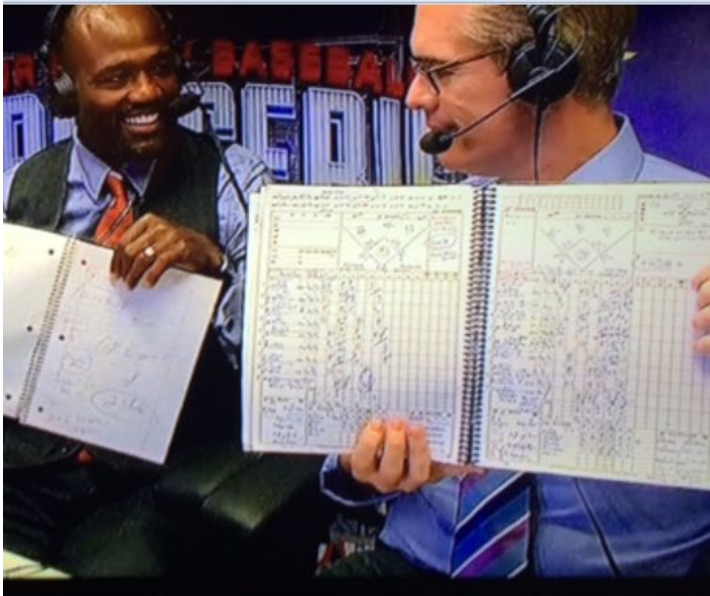
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Well ... there's always the Scorecard!

Ah yes ... baseball *hieroglyphics*

Do we have Game MVP clarity?



Traditional Scorecard:

- Too confining – issues with extra innings, player substitutions, text on a complicated play
- Too much information pushed out to the margins
- Need for reader to match pitchers to batters

Left Page (Dodgers vs. Cardinals):
 Date: 5/31/15
 Time: 2:07
 Score: 3-1
 Pitchers: Carlos Martinez (W, 4-2), Brett Anderson (L, 2-3), Travis Robinson (S, 15)
 Fielding: C. Martinez (4-2, 3.07), Y. Gonzalez (37% AB, 1.00), N. L. Johnson (1.00), M. L. Johnson (1.00), M. L. Johnson (1.00)
 Batters: J. P. Rodriguez (L), A. Gonzalez (S), A. Gonzalez (L), H. Kendrick (2B), A. Estrada (L), V. Gonzalez (S), A. Gonzalez (L), J. Rodriguez (S), A. Gonzalez (L)

Right Page (Cardinals vs. Dodgers):
 Date: 5/31/15
 Time: 2:07
 Score: 3-1
 Pitchers: Matt Holloman (W, 4-2), Brett Anderson (L, 2-3), Travis Robinson (S, 15)
 Fielding: M. L. Johnson (1.00), M. L. Johnson (1.00), M. L. Johnson (1.00)
 Batters: P. Bourgeois (CF), M. Gonzalez (L), J. P. Rodriguez (S), R. Gonzalez (LF), Y. Molina (C), M. Rodriguez (1B), J. Hernandez (L), P. Bourgeois (S), J. Hernandez (L)

As a long time consumer of next day baseball information

I was frustrated with what was available.

And ...

**As an occasional scorecard keeper, I always finished the task with ... well
... a shrug**

Let's review:

I want to know Player of the Game ... maybe 3 Stars of the Game? ... who might've contributed "under the radar"?

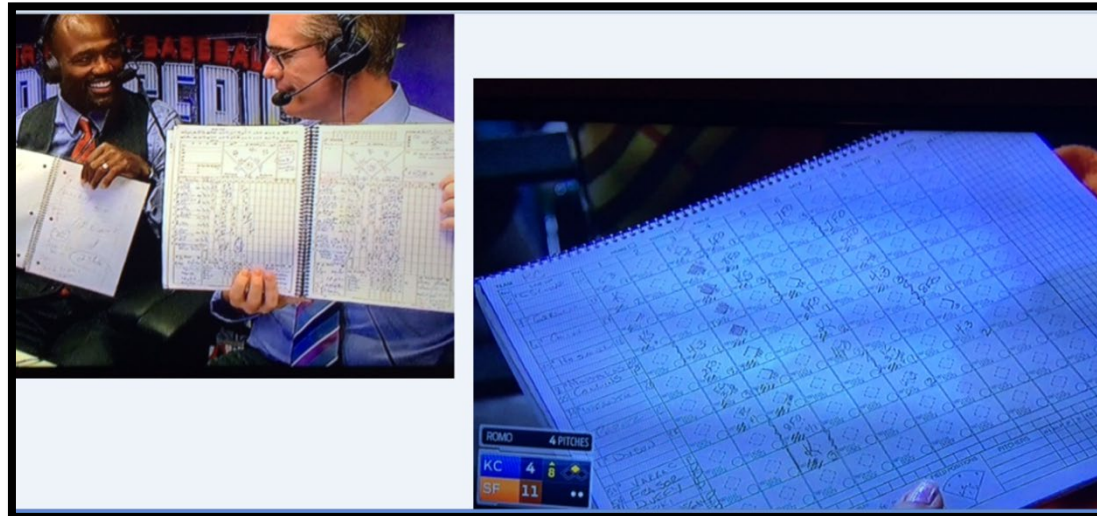
- One source gives me columns of numbers but no context of the game (no story).

- Another source gives me some of the story (assuming you can read it) but no aggregated numbers.

Kansas City										San Francisco									
AB	R	H	RBI	BB	SO	LOB	AVG	AB	R	H	RBI	BB	SO	LOB	AVG				
Escobar, A. SS	5	0	1	0	0	1	0	393	Bianco, G. CF	5	3	2	0	1	0	3	267		
Gordon, A. LF	5	1	1	0	0	1	1	125	Pank, 2B	4	2	2	2	0	0	2	239		
Cain, J. RF	5	1	2	0	0	1	1	257	Posey, C	3	1	1	1	2	0	2	188		
Hopkins, 1B	5	1	3	1	0	1	2	267	Pence, RF	5	2	3	3	0	0	4	467		
Houston, 3B	3	1	0	0	1	0	2	231	Sanctoi, 3B	5	0	2	2	0	2	4	333		
Collins, P	0	0	0	0	0	0	0	000	Belt, 1B	3	0	1	1	2	1	0	236		
Infante, 2B	4	0	1	2	0	1	1	231	Perez, J. LF	4	0	1	1	0	1	4	143		
Perez, S. C	4	0	3	1	0	0	1	357	Crawford, B. SS	5	1	1	0	0	2	3	286		
Dyson, J. CF	3	0	1	0	1	0	2	236	Vogelsong, P	0	0	0	0	0	0	0	000		
Vargas, P	2	0	0	0	0	1	3	000	Machi, P	0	0	0	0	0	0	0	000		
Frasor, P	0	0	0	0	0	0	0	000	a-Duffy, PH	1	1	1	0	0	0	0	1000		
Duffy, P	0	0	0	0	0	0	0	000	Pett, Y. P	1	0	1	0	0	0	0	1000		
a-Nick, PH	1	0	0	0	0	0	1	000	b-Valis, PH	1	0	1	0	0	0	0	500		
Finnegan, P	0	0	0	0	0	0	0	000	Affelt, P	0	0	0	0	0	0	0	000		
Nix, J. 3B	1	0	0	0	0	1	1	000	c-Klose, PH	0	1	0	0	1	0	0	333		
Totals	35	4	12	4	2	7	16	242	Romo, P	0	0	0	0	0	0	0	000		

a-Grounded into a double play for Duffy in the 6th.
b-Struck out for Machi in the 3rd. c-Singled for Pett, Y in the 6th. c-Walked for Affelt in the 7th. a-Linked out for Romo in the 8th.

Kansas City										San Francisco									
IP	H	R	ER	BB	SO	HR	ERA	IP	H	R	ER	BB	SO	HR	ERA				
Vargas	4.0	6	3	3	2	3	6.75	Vogelsong	2.2	7	4	4	1	2	6	15.80			
Frasor	0.1	1	1	1	0	0	6.75	Machi	0.1	0	0	0	1	0	27.00				
Duffy	0.2	1	0	0	1	1	4.91	Pett, Y (W, 1-0)	3.0	2	0	0	0	2	0.00				
Finnegan (L, 0-1)	1.0	5	5	5	2	0	27.00	Affelt (W, 1-1)	1.0	1	0	0	0	0	0.00				
Collins	2.0	3	2	2	1	2	4.50	Romo	1.0	1	0	0	0	1	0.00				
Totals	8.0	16	11	11	6	6	6.88	Strickland	1.0	1	0	0	0	1	9.00				



I've wondered ...

Why can't a Scorecard be more logically arranged?

Provide a deliverable to the Scorecard Keeper?

I've wondered ...

Why can't a Scorecard be more logically arranged?

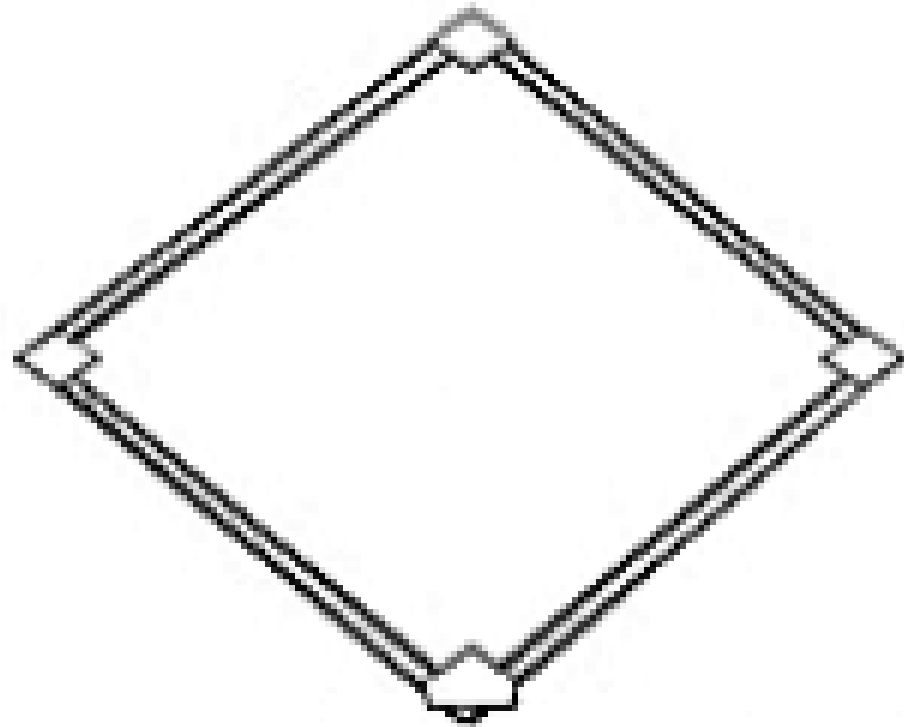
Provide a deliverable to the Scorecard Keeper?

I decided to build my own

I use the traditional scorecard as my guide

AND

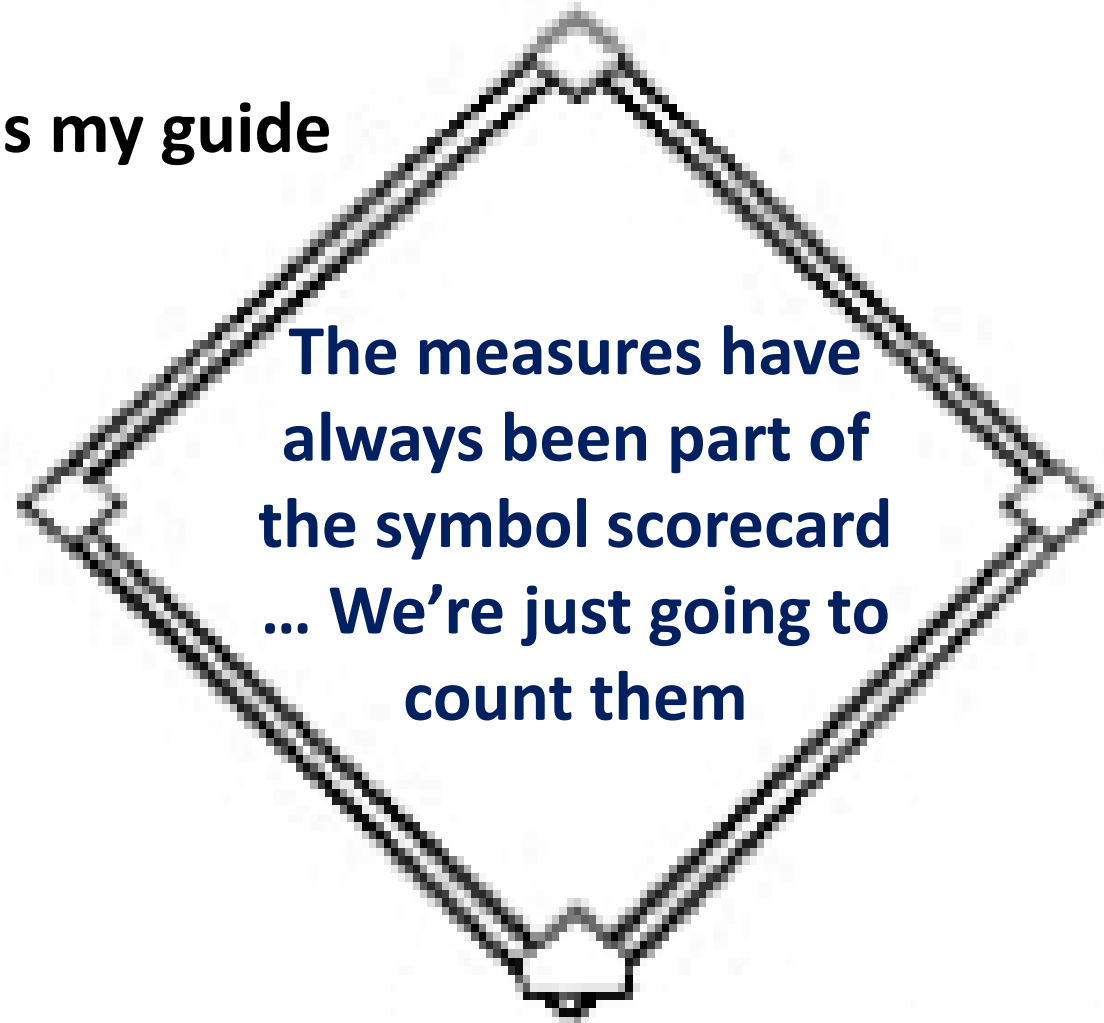
COUNT 4 Measures



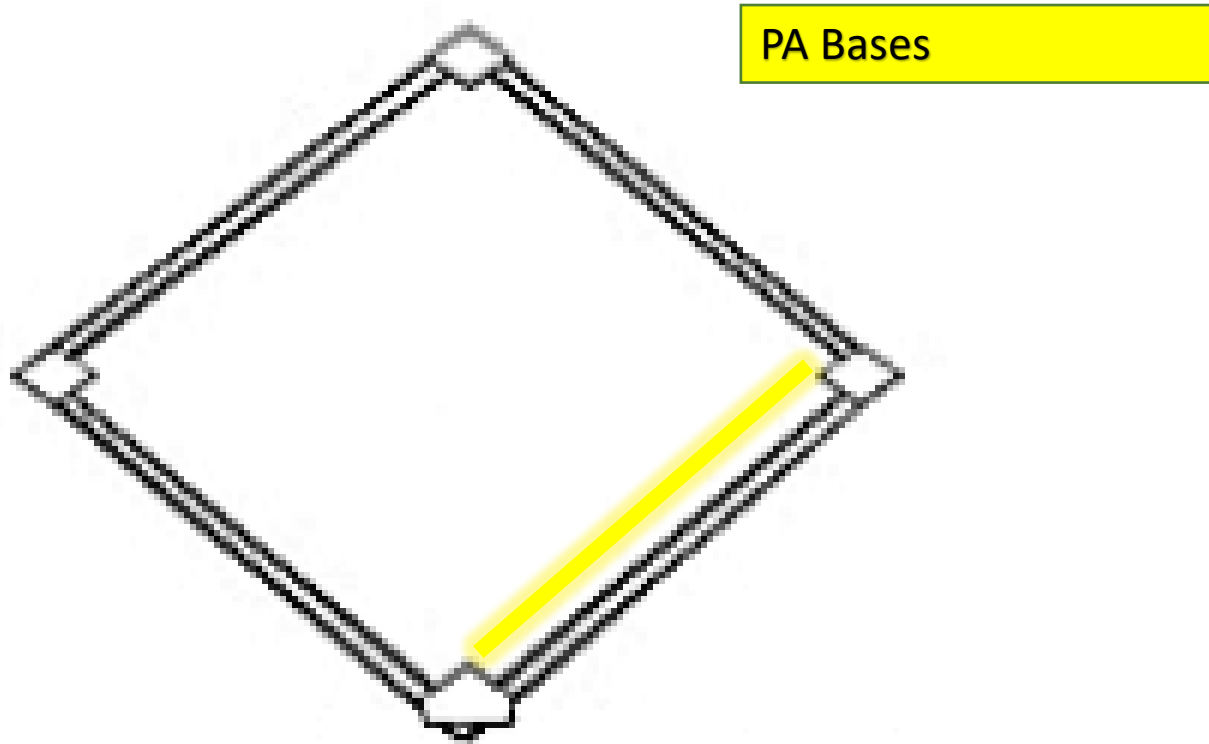
I use the traditional scorecard as my guide

AND

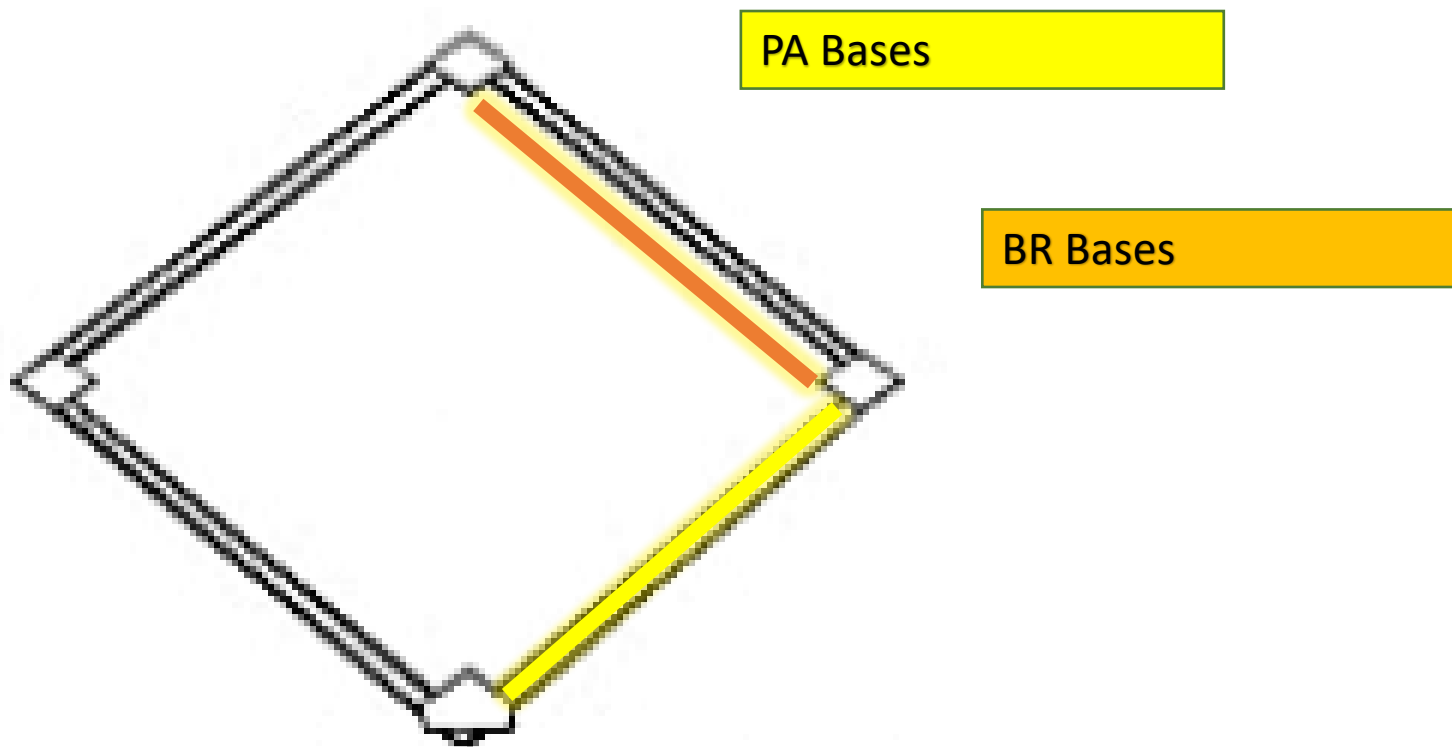
COUNT 4 Measures



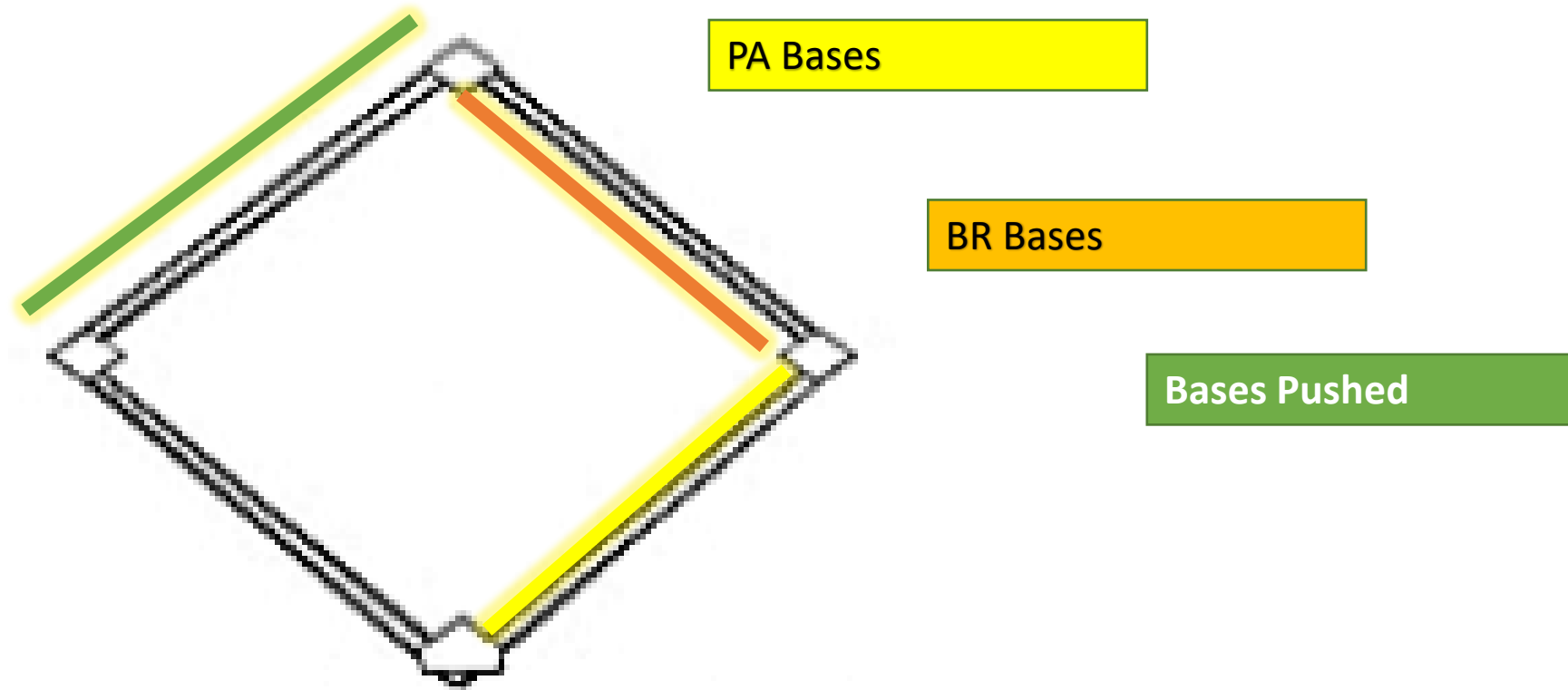
4 Measures:



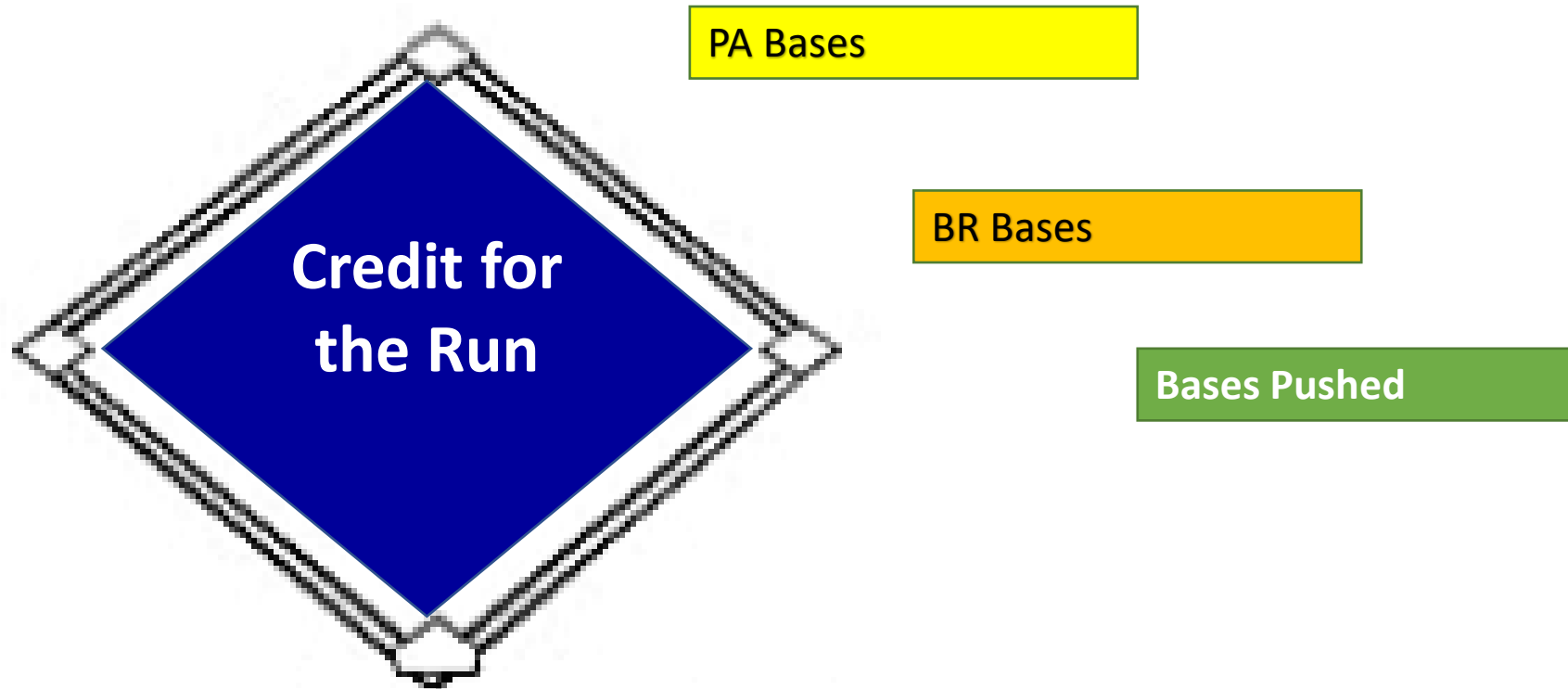
4 Measures



4 Measures

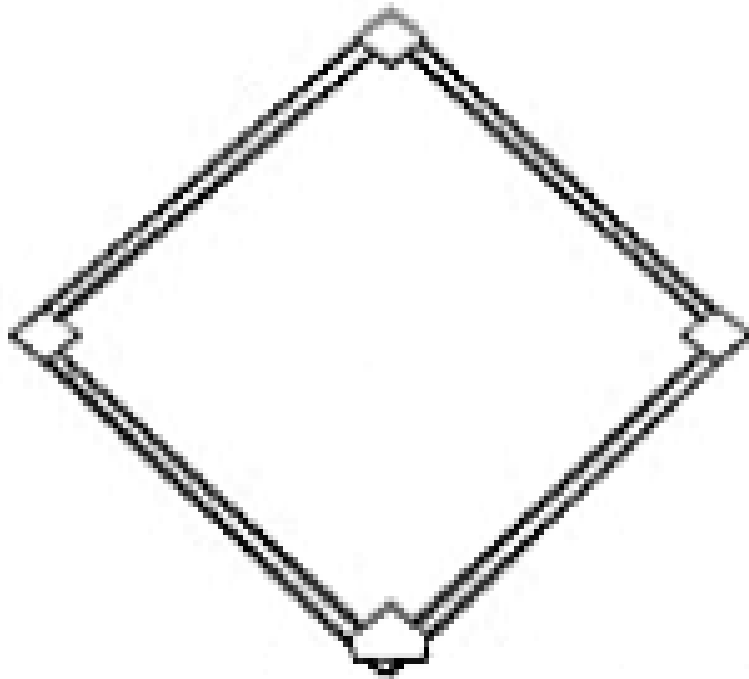


4 Measures



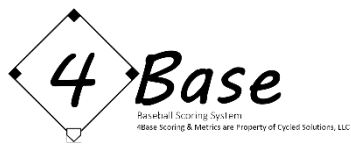
4 Base Scoring defined:

The extent each player contributes to advancing himself and/or lead runners around 4 Bases.



A tool in the hands of the scorecard keeper:

The objective is to numerically represent the
Traditional Symbol Scorecard!



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4 Base Scorecard:

#1

Read Top to Bottom



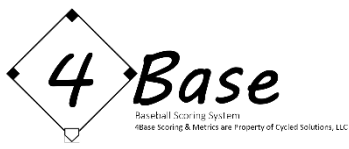
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4 Base Scorecard:

#2

Match Pitcher to Batter



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4 Base Scorecard:

#3

Numerically Tally

4 Game metrics

(simple Add/Subtract)

Using the 4Base measures + the Traditional Scorecard as my Guide ...

PA Bases

BR Bases

Bases Pushed



Transform the Hieroglyphics into Stats

So the symbolic view on the left – 1st inning of a LAA vs MIN game from 2014 - translates to the numeric representation on the right:

BATTER	PO	1
CALHOUN .274 RF	3	SB
	3	1B
TROUT .310 CF		K
PUJOLS .262 DH	5	SB
	5	1B
HAMILTON .321 LF		X
AYBAR .284 SS		
		2B
KENDRICK .278 3B		



		Player Filter	RBI - or - Non-RBI Run Scored		On Bs Status & PA/ BR Bases	Bases Pushed	Player 4Score	
Inning	Opp Pitcher	Ro.	Bat Order	(All)	(All)	Play		
1	Nolasco, R.	1	1	Calhoun	GB	6-8.Single+2ndSB		4
		2	2	Trout		K		
		3	3	Pujols	GB	7.Single+2ndSB	1	7
		4	4	Hamilton		K		
		5	5	Aybar	PU	7.Double	1	5
		6	6	Kendrick	LD	8		



PA Bases

BR Bases

Bases Pushed

4Base Scorecard

Reads Top to Bottom

Matches Pitcher to Batter

Room for Play Text

							RBI - or - Non-RBI Run Scored	On Bs Status & PA/BR Bases	Bases Pushed	Player 4Score
Inning	Opp Pitcher	Ro..	Bat Ord..	Player	BIP Ty..	Play Text				
1	Guthrie, J.	5	1	Wong	GB	3.Single+2ndSB		3 PA 2 BR		3
		6	2	Carpenter	GB	1-3		0 PA BR	1	1
		7	3	Peralta		K		PA BR		0
		8	4	Reynolds		K		PA BR		0
2	Guthrie, J.	15	5	Molina	GB	8.Single+FO'd-5U		1 PA BR		1
		16	6	Heyward	GB	5U-FO-E5		2 PA BR	-1	1
		17	7	Grichuk	GB	1-3		PA BR		0
		18	8	Jay		IBB		1 PA BR		1
		19	9	Lyons		K		PA BR		0
23	1	Wong	LD		9.Triple		3 PA 1 BR		4	
24	2	Carpenter	LD		9.Single-Out2nd-9-6	1	1 PA -1 BR	1	2	
25	3	Peralta	LD		8		PA BR			



PA Bases
BR Bases

Bases
Pushed

4Base Scorecard

Simply Tallies game action

Each line = Player's full
Offensive Appearance

(From batters box back to
dugout)

RBI - or - Non-RBI Run Scored							On Bs Status & PA/BR Bases		Bases Pushed		Player 4Score	
Inning	Opp Pitcher	Ro..	Bat Ord..	Player	BIP Ty..	Play Text	PA	BR	PA	BR	PA	BR
1	Guthrie, J.	5	1	Wong	GB	3.Single+2ndSB	3		1 PA			3
		6	2	Carpenter	GB	1-3			0 PA	1		1
		7	3	Peralta		K			PA			0
		8	4	Reynolds		K			PA			0
		15	5	Molina	GB	8.Single+FO'd-5U			1 PA			1
2	Guthrie, J.	16	6	Heyward	GB	5U-FO-E5	2		2 PA	-1		1
		17	7	Grichuk	GB	1-3			PA			0
		18	8	Jay		IBB		1		1 PA		1
		19	9	Lyons		K				PA		0
		23	1	Wong	LD	9.Triple		R		3 PA		
		24	2	Carpenter	LD	9.Single-Out2nd-9-6	1		1 PA	1		2
		25	3	Peralta	LD	8			PA			



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Let's look at specific elements 4Base Scorecard captures/tallies

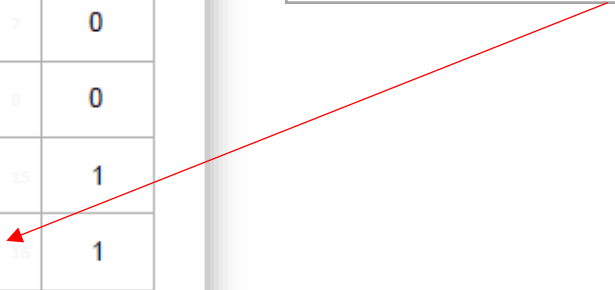
Count all productive outs –

RBI - or - Non-RBI Run Scored							On Bs Status & PA/BR Bases	Bases Pushed	Player 4Score
Inning	Opp Pitcher	Ro.	Bat Ord..	Player	BIP Ty..	Play Text	On Bs	Bases	Player
1	Guthrie, J.	5	1	Wong	GB	3.Single+2ndSB	3	1 PA 2 BR	3
		6	2	Carpenter	GB	1-3	0 PA BR	1	1
		7	3	Peralta		K	PA BR		0
		8	4	Reynolds		K	PA BR		0
2	Guthrie, J.	15	5	Molina	GB	8.Single+FO'd-5U	1 PA BR		1
		16	6	Heyward	GB	5U-FO-E5	2 PA BR	-1	1
		17	7	Grichuk	GB	1-3	PA BR		0
		18	8	Jay		IBB	1 PA BR		1
		19	9	Lyons		K	PA BR		0
		23	1	Wong	LD	9.Triple	3 PA 1 BR		4
		24	2	Carpenter	LD	9.Single-Out2nd-9-6	1 PA -1 BR	1	2
		25	3	Peralta	LD	8	PA BR		

RBI - or - Non-RBI Run Scored

Inning	Opp Pitcher	Ro..	Bat Ord..	Player	BIP Ty..	Play Text	RBI	On Bs Status & PA/BR Bases		Bases Pushed		Player 4Score			
								Ro..	PA	BR	Ro..	PA	BR	Ro..	PA
1	Guthrie, J.	5	1	Wong	GB	3.Single+2ndSB		5	3	1 PA	2 BR	5		5	3
		6	2	Carpenter	GB	1-3		6		0 PA	BR	6	1	6	1
		7	3	Peralta		K		7		PA	BR	7		7	0
		8	4	Reynolds		K		8		PA	BR	8		8	0
2	Guthrie, J.	15	5	Molina	GB	8.Single+FO'd-5U		15		1 PA	BR	15		15	1
		16	6	Heyward	GB	5U-FO-E5		16	2	2 PA	BR	16	-1	16	1
		17	7	Grichuk	GB	1-3		17		PA	BR	17		17	0
		18	8	Jay		IBB		18	1	1 PA	BR	18		18	1
		19	9	Lyons		K		19		PA	BR	19		19	0
		23	1	Wong	LD	9.Triple		23	R	3 PA	1 BR	23		23	4
		24	2	Carpenter	LD	9.Single-Out2nd-9-6	1	24	X	1 PA	-1 BR	24	1	24	2
		25	3	Peralta	LD	8		25		PA	BR	25		25	

**Conversely ...
Count (as negative)
all "Predator" outs**



Let's stop and Note ...

In Standard Stats/Box Scores:

A Productive Out = A Predator Out → DP or force out of lead runner(s)
It's simply an Out

4Base Scoring appropriately tallies the True Impact:

Typical Predator Out = -1 (or worse)

Productive Out = +1 (or more)

BR Bases

BR BASES

4Base scoring captures good base running

A player who typically goes 1st to 3rd, 1st to home, etc.

Will end up with good BR Bases number

*** In 2013 & 2014 Jon Jay was the poster child for an under the radar Good BR Bases guy**

Likewise – Negative base running is captured

Critical element in the context of the game.

4Base-Score numerically tallies base running
outs

And

Visually shows where player was prior to
Negative BR Out.

STL-Game050 - 05-31-15 - LAD-1-STL-3

STL - Win (33-17) - W: Lyons (1-0) - L: Guthrie (4-4) - Sv: Rosenthal (21) - Reynolds is Top Contributor in STL Win

4 Base Score		RBI - or - Non-RBI Run Scored		On Bs Status & PA/BR Bases		Ba Pus		
Inning	Opp Pitcher	Ro..	Bat Ord..	Player	BIP Ty..	Play Text	Ro..	Pa BR
		1	1	Bourjos	GB	1-3		PA BR
		2	2	Carpenter	LD	8.Single		1 PA 3 BR
1	Anderson, B.	3	3	Peralta	FB	7.HomeRun	2	4 PA BR
		4	4	Grichuk	LD	8		PA BR
		5	5	Molina	GB	6-3		PA BR
		6	6	Reynolds	GB	4.Single+FO'd-3-6		1 PA 1 BR
		7	7	Heyward	GB	3-6-FC+CS-1-3-6		1 PA -1 BR

4Base-Scoring:

Captures Negative BR Bases

During 1 STL game alone Negative BR happened:

In the 2nd Inning

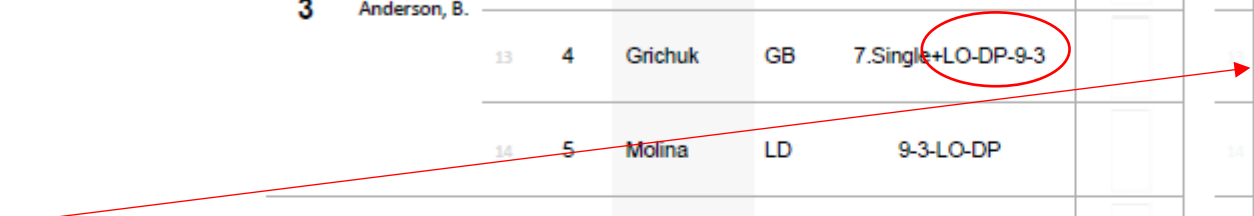
STL-Game050 - 05-31-15 - LAD-1-STL-3							On Bs Status & PA/BR Bases		Bases Pushed	Player 4Score
STL - Win (33-17) - W: Lyons (1-0) - L: Guthrie (4-4) - Sv: Rosenthal (21) - Reynolds is Top Contributor in STL Win							RBI - or - Non-RBI Run Scored			
Inning	Opp Pitcher	Ro..	Bat Ord..	Player	BIP Ty..	Play Text	Ro..	PA/BR		
		1	1	Bourjos	GB	1-3		PA BR		0
		2	2	Carpenter	LD	8.Single		1 PA 3 BR		4
1	Anderson, B.	3	3	Peralta	FB	7.HomeRun	2	4 PA BR	7	13
		4	4	Grichuk	LD	8		PA BR		0
		5	5	Molina	GB	6-3		PA BR		0
		6	6	Reynolds	GB	4.Single+FO'd-3-6		1 PA 1 BR		2
		7	7	Heyward	GB	3-6-FC+CS-1-3-6		1 PA -1 BR	-1	-1
2	Anderson, B.	8	8	Kozma		Walk		1 PA 1 BR		2
		9	9	Martinez		Walk		1 PA BR	1	2
		10	1	Bourjos	GB	6-4		PA BR		0

STL-Game050 - 05-31-15 - LAD-1-STL-3

STL - Win (33-17) - W: Lyons (1-0) - L: Guthrie (4-4) - Sv: Rosenthal (21) - Reynolds is Top Contributor in STL Win

4 Base Score		RBI - or - Non-RBI Run Scored					On Bs Status & PA/BR Bases		Bases Pushed		Player 4Score		
Inning	Opp Pitcher	Ro..	Bat Ord..	Player	BIP Ty..	Play Text	Ro..		Ro..		Ro..		
3	Anderson, B.	11	2	Carpenter	FB	8	11		PA BR	11		11	0
		12	3	Peralta		Walk	12		1 PA 1 BR	12		12	2
		13	4	Grichuk	GB	7.Single+LO-DP-9-3	13		1 PA -1 BR	13	1	13	1
		14	5	Molina	LD	9-3-LO-DP	14		PA BR	14		14	0
4	Anderson, B.	15	6	Reynolds	GB	5-3	15		PA BR	15		15	0
		16	7	Heyward		K	16		PA BR	16		16	0
		17	8	Kozma		K	17		PA BR	17		17	0
5	Anderson, B.	18	9	Martinez		K	18		PA BR	18		18	0
		19	1	Bourjos	GB	7.Single+CS-1-3-6	19		1 PA -1 BR	19		19	0
		20	2	Carpenter		K	20		PA BR	20		20	0

And the 3rd Inning ...

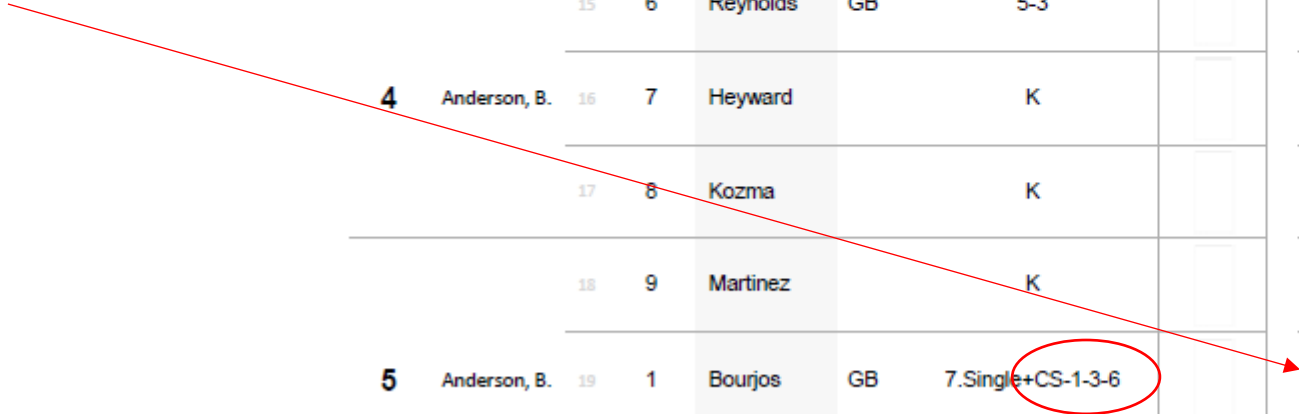


STL-Game050 - 05-31-15 - LAD-1-STL-3

STL - Win (33-17) - W: Lyons (1-0) - L: Guthrie (4-4) - Sv: Rosenthal (21) - Reynolds is Top Contributor in STL Win

4 Base Score		RBI - or - Non-RBI Run Scored					On Bs Status & PA/BR Bases		Bases Pushed		Player 4Score		
Inning	Opp Pitcher	Ro..	Bat Ord..	Player	BIP Ty..	Play Text	Ro..		Ro..		Ro..		
3	Anderson, B.	11	2	Carpenter	FB	8	11		PA BR	11		11	0
		12	3	Peralta		Walk	12		2 1 PA 1 BR	12		12	2
		13	4	Grichuk	GB	7.Single+LO-DP-9-3	13		1 PA -1 BR	13	1	13	1
		14	5	Molina	LD	9-3-LO-DP	14		PA BR	14		14	0
4	Anderson, B.	15	6	Reynolds	GB	5-3	15		PA BR	15		15	0
		16	7	Heyward		K	16		PA BR	16		16	0
		17	8	Kozma		K	17		PA BR	17		17	0
5	Anderson, B.	18	9	Martinez		K	18		PA BR	18		18	0
		19	1	Bourjos	GB	7.Single+CS-1-3-6	19		1 PA -1 BR	19		19	0
		20	2	Carpenter		K	20		PA BR	20		20	0







And the 5th inning ...



STL-Game050 - 05-31-15 - LAD-1-STL-3

STL - Win (33-17) - W: Lyons (1-0) - L: Guthrie (4-4) - Sv: Rosenthal (21) - Reynolds is Top Contributor in STL Win

And the 8th Inning

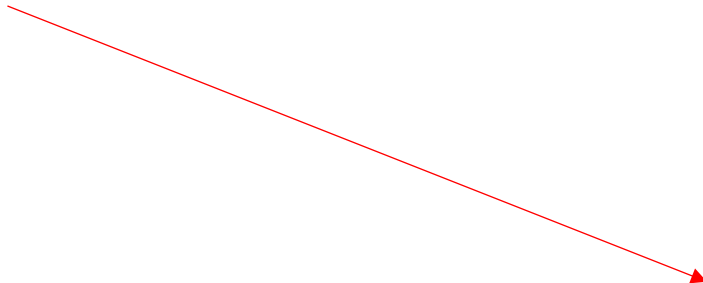
4 Base Score		RBI - or - Non-RBI Run Scored					On Bs Status & PA/BR Bases	Bases Pushed	Player 4Score		
Inning	Opp Pitcher	Ro..	Bat Ord..	Player	BIP Ty..	Play Text	Ro..	PA/BR	Bases	Player	
		27	9	Jay		Walk	27	 1 PA 3 BR		27	4
	Hatcher, C.	28	1	Bourjos	PU	3	28	 PA BR		28	0
8		29	2	Carpenter		Walk--OutHome-7-2	29	 1 PA -1 BR	1	29	1
		30	3	Peralta	FB	9.Single	30	 1 PA 1 BR	3	30	6
	Garcia, Y.	31	4	Grichuk		K	31	 PA BR		31	0
		32	5	Molina	GB	7.Single	32	 1 PA BR	2	32	3

Note: 4Base Scorecard highlights all 4 Negative BR Occurrences –

Box Score

2 BR outs are shown in footnote text outside the box score

Grichuk's BR Mistake - caught off 1st on a LO-DP and Carpenter's failed attempt to score - Aren't noted at all in the Box Score



St. Louis Cardinals										
Hitters	AB	R	H	RBI	BB	SO	#P	AVG	OBP	SLG
<u>Bourjos</u> CF	4	0	1	0	0	0	10	.258	.323	.393
<u>Carpenter</u> 3B	3	1	1	0	1	1	20	.318	.398	.559
<u>Peralta</u> SS	3	1	2	3	1	1	19	.310	.373	.519
<u>Grichuk</u> LF	4	0	1	0	0	1	19	.286	.318	.556
<u>Molina</u> C	4	0	1	0	0	0	13	.284	.330	.337
<u>Reynolds</u> 1B	3	0	1	0	0	0	8	.250	.319	.389
<u>Heyward</u> RF	3	0	1	0	0	1	12	.251	.303	.398
<u>Kozma</u> 2B	1	0	0	0	1	1	11	.116	.174	.116
<u>a-Wong</u> PH-2B	1	0	0	0	0	0	5	.310	.365	.473
<u>Martínez</u> P	1	0	0	0	1	1	11	.100	.143	.100
<u>Siegrist</u> P	0	0	0	0	0	0	0	.000	.000	.000
<u>b-Jay</u> PH	0	1	0	0	1	0	7	.257	.342	.276
<u>Rosenthal</u> P	0	0	0	0	0	0	0	.000	.000	.000
Totals	27	3	8	3	5	6	135			

a-grounded to shortstop for P Kozma in the 7th
b-walked for K Siegrist in the 8th

BATTING
HR: Peralta (3, 1st Inning off Anderson 1 on, 1 Out)
RBI: Peralta 3 (30)
GIDP: Wong
Cardinals RISP: 2-5 (Grichuk 0-1, Bourjos 0-1, Molina 1-2, Peralta 1-1)
Team LOB: 5

BASERUNNING
CS: Heyward (1, 2nd base by Anderson); Bourjos (5, 2nd base by Anderson)
Picked Off: Heyward (1st base by Anderson); Bourjos (1st base by Anderson)



4BaseScore.com

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**Credit for
the Run**

Credit for the Run

4Base Scoring always assigns Credit For the Run

If not the batter – then it's the Base Runner

4Base Score							RBI - or - Non-RBI Run Scored	On Bs Status & PA/BR Bases	Bases Pushed	Player 4Score
Inning	Opp Pitcher	Ro..	Bat Ord..	Player	BIP Ty..	Play Text	Ro..	Pa/BR	Ro..	Score
3	Bettis, C.	10	1	Wong	LD	9.Single++HomeWP	1	10 R 1 PA 3 BR	10 2	10 7

Game 120 – 08-19-15 – SF-3 @ STL-4

STL – Win (77-43) – W: Siegrist (5-0) – L: Strickland (2-3) – Sv: Rosenthal (38) –

Molina is Top Contributor in STL Win (Crawford for SF in Loss)

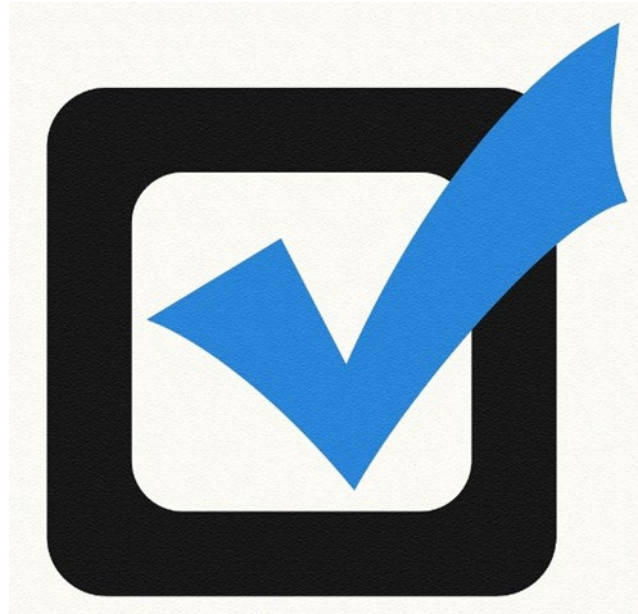
Post game 4Base scorecard looks like this

The image displays two 4Base scorecards for Game 120, held on August 19, 2015, at STL-4. The left scorecard represents the STL team's performance, and the right represents the SF team's performance. Each scorecard includes columns for player name, position, and various statistics such as runs, hits, errors, and bases pushed. STL scored 77 runs, while SF scored 43 runs. STL won the game. The scorecards also indicate the winning pitcher (Siegrist) and losing pitcher (Strickland) for STL, and the save pitcher (Rosenthal) for SF. The top contributor for STL is noted as Molina.

There's always a clear Top Contributor (occasionally – but rarely - a tie for Top)

Player-Game 4Score	
Player	
Molina	13
Piscotty	9
Pham	5
Carpenter	4
Moss	4
Peralta	4
Reynolds	3
Bourjos	2
Wong	2
Garcia	0
Heyward	0

“Determine the Top Contributor of a Single Game”





4BaseScore.com

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So ... How does the 4Base *Game* scoring data set look when Aggregated?

At Season End

1st let's look at some Standard Stats and Player Ranks

OPS

Rank	Player	OPS
1	Grichuk	.877
2	Carpenter	.871
3	Heyward	.797
4	Peralta	.745
5	Wong	.707

BA

Rank	Player	Batting Avg
1	Heyward	.293
2	Grichuk	.276
3	Peralta	.275
4	Carpenter	.272
5	Wong	.262

**WAR
(Per Baseball Reference)**

Rank	Player	WAR (per Baseball Reference)
1	Heyward	6.5
2	Carpenter	3.9
3	Grichuk	3.1
4	Wong	2.2
5	Peralta	1.8

2015 Season End
4Base Scores

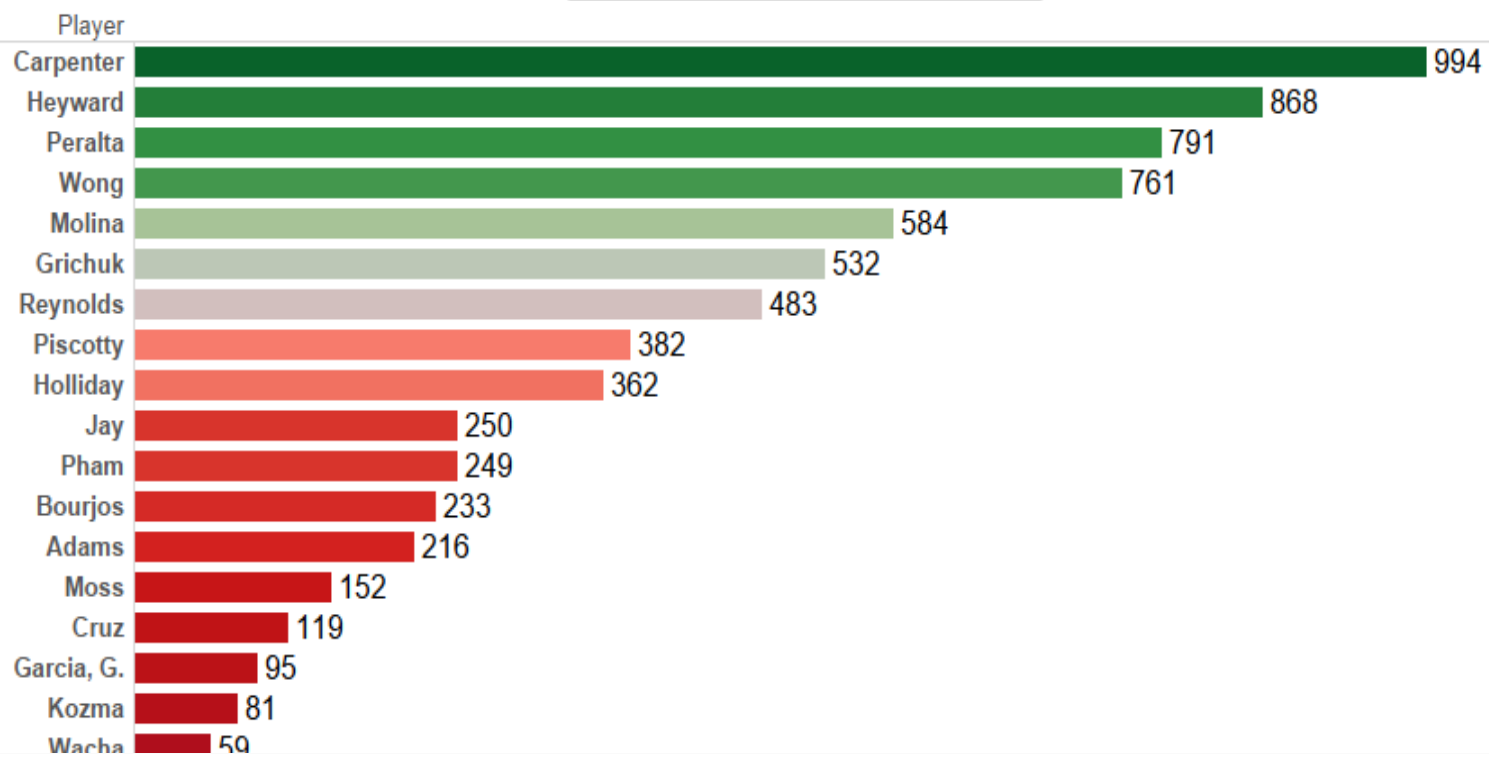
4BaseScore Player Contribution Summaries - 2015



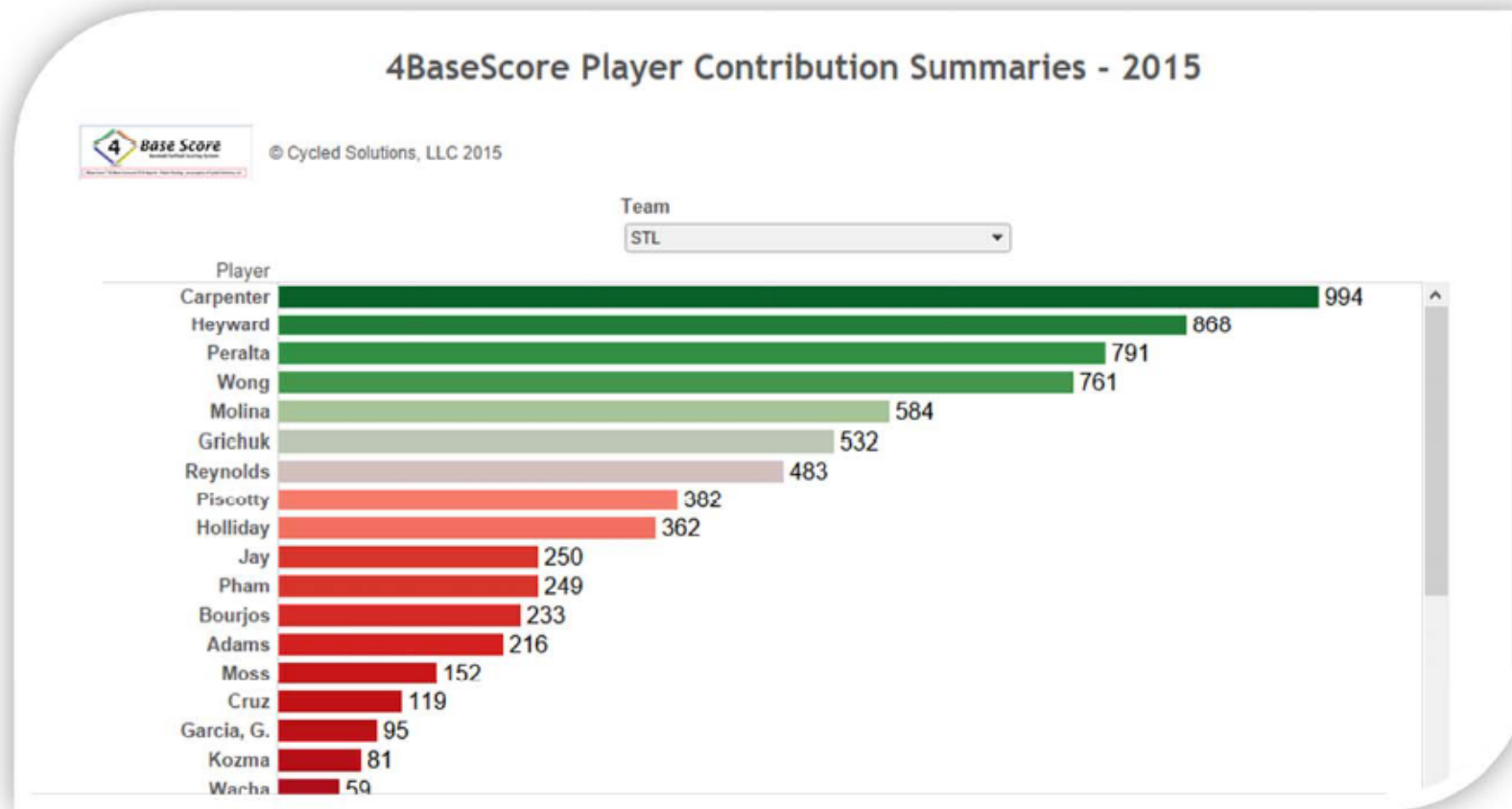
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Team

STL



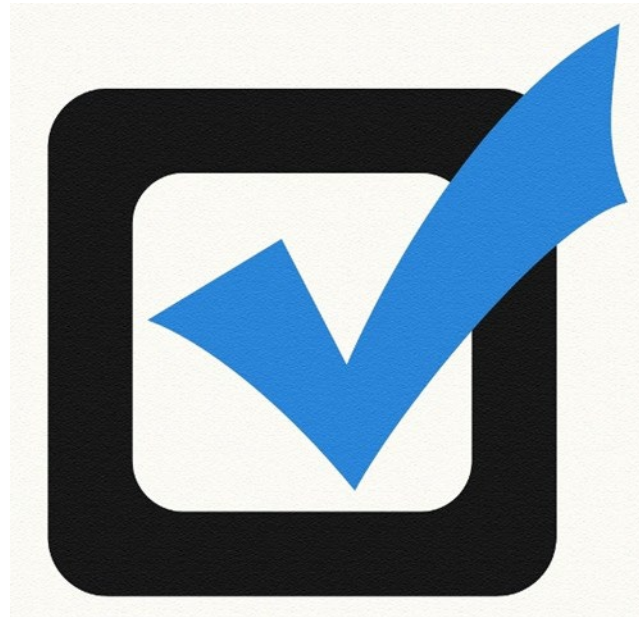
There is a clear 2015 MVP in 4Base Score aggregate results: **Matt Carpenter**



- An interesting note is that Heyward who came in 2nd was in 4th place as late in the season as August 19. His late surge in the final 5-6 weeks of the season, combined with declines by both Peralta – who was in 2nd place for much of the season - and Wong resulted in Heyward's 2nd place 4Base Score finish.
- Note also that Grichuk, who was in the top 3 of the standard stats measures, comes in 6th in 4Base aggregate results. Because 4Base is cumulative the measure organically factors in durability. Grichuk's 2015 games played was only 103 so he'd have to produce a lot to overcome the basic fact that he appeared in fewer games ... the fact that he's a slugger helped him greatly in 4Base (as it does in standard stats).

Remember the original question: “Who is my Team MVP”?

Have we answered that?



My original objectives

- * Create a data visualized scorecard
- * with Game Top Contributor
- * Aggregate for Team MVP



STL-Game120 - 08-19-15 - SF-3-STL-4
STL - Win (77-43) - W: Siegrist (5-0) - L: Strickland (2-3) - Sv: Rosenthal (38) - Molina is Top Contributor in STL Win (Crawford for SF in Loss)

Inning	Opp Pitcher	Ro.	Bat Ord.	Player	BIP Ty.	Play Text	RBI - or - Non-RBI Run Scored	On Bs Status & PA/BR Bases	Bases Pushed	Player 4Score
1	Cain, M.	4	1	Carpenter	GB	6-3		PA BR		0
		5	2	Piscotty	LD	8		PA BR		0
		6	3	Peralta	LD	8.Double		2 PA 2 BR		4
		7	4	Molina	LD	9.Single-Out2nd-9-2-6	1	1 PA -1 BR	2	3
2	Cain, M.	11	5	Reynolds	LD	8.Single		1 PA 1 BR		2
		12	6	Wong	LD	7.Single		1 PA BR	1	2
		13	7	Pham		K		PA BR		0
		14	8	Moss	PU	6		PA BR		0
		15	9	Garcia		K		PA BR		0
3	Cain, M.	19	1	Carpenter	FB	8		PA BR		0
		20	2	Piscotty	FB	7.HomeRun	1	4 PA BR	4	9
		21	3	Peralta		k		PA BR		0
		22	4	Molina	GB	9.Single		1 PA BR		1
4	Cain, M.	23	5	Reynolds	FB	9		PA BR		0
		28	6	Wong	GB	5-3		PA BR		0
		29	7	Pham	LD	9		PA BR		0
		30	8	Moss		K		PA BR		0

Player	Score
Molina	13
Piscotty	9
Pham	5
Carpenter	4
Moss	4
Peralta	4
Reynolds	3
Bourjos	2
Wong	2
Garcia	0
Heyward	0

Inning	STL
1	1
2	
3	1
4	

4BaseScore & 4BaseScore.com: © Cycled Solutions LLC 2015

10 years later!

2024 enhancements:

- * Paper 4Base Scorecard (PDF available for download)
- * Improved digital 4Base Scorecard & Game Wrap

Let's take a look at aggregate 2024 STL ...

Given 4 Standard stats (ESPN) – Who is STL 2024 Top Contributor?

	SLG
Willson Contreras C	0.468
Ivan Herrera C	0.428
Alec Burleson RF	0.42
Brendan Donovan LF	0.417
Lars Nootbaar RF	0.417
Masyn Winn SS	0.416
Paul Goldschmidt 1B	0.414
Nolan Gorman 2B	0.4
Luken Baker 1B	0.4
Nolan Arenado 3B	0.394
Total	0.392
Pedro Pages C	0.376
Matt Carpenter DH	0.372
Tommy Pham RF *	0.368
Jordan Walker RF	0.366
Thomas Saggese 2B	0.306
Michael Siani CF	0.285
Victor Scott II CF	0.283
Brandon Crawford SS	0.282
Dylan Carlson LF *	0.24
Jose Fermin 2B	0.197

	OPS
Willson Contreras C	0.848
Ivan Herrera C	0.8
Brendan Donovan LF	0.759
Lars Nootbaar RF	0.758
Alec Burleson RF	0.735
Masyn Winn SS	0.73
Nolan Arenado 3B	0.719
Paul Goldschmidt 1B	0.716
Total	0.703
Matt Carpenter DH	0.686
Luken Baker 1B	0.686
Nolan Gorman 2B	0.671
Pedro Pages C	0.657
Tommy Pham RF *	0.653
Jordan Walker RF	0.619
Michael Siani CF	0.57
Thomas Saggese 2B	0.556
Brandon Crawford SS	0.544
Dylan Carlson LF *	0.515
Victor Scott II CF	0.502
Jose Fermin 2B	0.438

	WAR
Masyn Winn SS	4.9
Willson Contreras C	2.9
Brendan Donovan LF	2.6
Nolan Arenado 3B	2.5
Ivan Herrera C	1.7
Lars Nootbaar RF	1.4
Paul Goldschmidt 1B	1.3
Alec Burleson RF	1.2
Pedro Pages C	0.8
Michael Siani CF	0.7
Nolan Gorman 2B	0.3
Matt Carpenter DH	-0.1
Luken Baker 1B	-0.2
Thomas Saggese 2B	-0.2
Brandon Crawford SS	-0.2
Tommy Pham RF *	-0.3
Victor Scott II CF	-0.5
Jose Fermin 2B	-0.6
Jordan Walker RF	-0.9
Dylan Carlson LF *	-1

	AVG
Ivan Herrera C	0.301
Brendan Donovan LF	0.278
Nolan Arenado 3B	0.272
Alec Burleson RF	0.269
Masyn Winn SS	0.267
Willson Contreras C	0.262
Total	0.248
Paul Goldschmidt 1B	0.245
Lars Nootbaar RF	0.244
Pedro Pages C	0.238
Matt Carpenter DH	0.234
Michael Siani CF	0.228
Tommy Pham RF *	0.206
Thomas Saggese 2B	0.204
Nolan Gorman 2B	0.203
Jordan Walker RF	0.201
Dylan Carlson LF *	0.198
Victor Scott II CF	0.179
Luken Baker 1B	0.175
Brandon Crawford SS	0.169
Jose Fermin 2B	0.155

4Base Top Contributor: Brendan Donovan → Total 4Base Score = 882

1st - PA Bases

2nd (tied) – BR Bases

1st (tied) – Bases Pushed

2nd - CFR



4Base Components by Player - Player Contributions - 2024



4Base Scoring & Metrics owned by Cycled Solution..

4Base Components - Team Totals - Player Contributions - 2024 - STL

Team	Player4Score	PA Bases	BR Bases	Bases Pushed	Credit For Run	Plate App	Productivity Rate
STL	7,749	2,869	1,879	2,330	671	6,114	1.267

Total 4BaseScore Components by Player - 2024 -

Player	Player4Score	PA Bases	BR Bases	Bases Pushed	Credit For Run	Plate App	Productivity Rate
Donovan	882	329	202	274	77	651	1.355
Burleson	821	281	187	274	79	589	1.394
Arenado	814	286	202	253	73	633	1.286
Winn	808	311	222	212	63	638	1.266
Goldschmidt	804	322	192	223	67	653	1.231
Nootbaar	540	210	112	171	47	404	1.337
Gorman	522	184	96	188	54	401	1.302
Contreras	497	201	114	144	38	358	1.388
Herrera	386	133	120	104	29	259	1.490
Siani	333	117	107	88	21	335	0.994
Pages	265	91	56	90	28	218	1.216
Walker	202	74	42	65	21	177	1.141
Carpenter	185	67	44	59	15	153	1.209
Scott	156	59	46	40	11	155	1.006
Carlson	120	46	29	33	12	138	0.870
Pham	105	35	21	37	12	77	1.364
Baker	66	23	8	25	10	48	1.375
Crawford	62	29	13	16	4	79	0.785
Fermin	58	26	22	6	4	79	0.734
Saggese	57	21	16	16	4	52	1.096

Let's take a look at a 2024 STL real game example ...

STL Game 147 - 09-13-24 - STL 3 @ TOR 4 – 11 innings

Comparison Game → Using Traditional Scorecard & Standard Box Score

Who is the Player of the Game?

Wrap		Box	Video					
Batters - STL	AB	R	H	RBI	BB	K	AVG	OPS
Winn SS	6	1	2	0	0	1	.273	.732
Burleson DH	5	1	2	0	0	0	.271	.747
Goldschm... 1B	4	0	2	0	1	0	.248	.722
Arenado 3B	5	0	1	1	0	0	.266	.713
1-Fermin PR-3B	0	0	0	0	0	0	.145	.437
Donovan LF	5	0	1	0	0	1	.271	.739
Saggese 2B	5	1	1	2	0	1	.188	.563
Nootbaar RF	3	0	1	0	1	1	.247	.740
a-Baker PH	1	0	0	0	0	0	.167	.791
Walker, J RF	0	0	0	0	0	0	.173	.522
Pagés, P C	5	0	2	0	0	0	.249	.678
Siani CF	5	0	0	0	0	2	.243	.586
Totals	44	3	12	3	2	6		

Batters - TOR	AB	R	H	RBI	BB	K	AVG	OPS
Springer DH	4	1	1	0	1	1	.221	.683
Lukes LF	5	1	1	0	0	1	.333	.819
Guerrero Jr. 3B-1B	4	2	1	1	1	1	.320	.940
Horwitz 1B	3	0	1	1	0	0	.278	.831
1-Jiménez PR-SS	1	0	1	0	0	0	.231	.720
Wagner 2B	5	0	1	0	0	1	.305	.788
Kirk C	5	0	2	2	0	0	.246	.659
Barger RF	3	0	1	0	1	1	.208	.639
Clement SS-3B	4	0	1	0	0	1	.267	.709
Loperfido, J CF	4	0	0	0	0	1	.226	.644
Totals	38	4	10	4	3	7		

a-Grounded out for Nootbaar in the 10th;
1-Ran for Arenado in the 10th;

Batting
2B Winn (27, Gausman); Goldschmidt (30, Nance).
HR Saggese (1, 8th inning off Cabrera, G, 0 on, 1 out).
TB Arenado; Burleson 2; Donovan; Goldschmidt 3; Nootbaar; Pagés, P 2; Saggese 4; Winn 3.
RBI Arenado (66); Saggese 2 (3).
Runners left in scoring position, 2 out Arenado; Baker; Winn; Nootbaar; Siani 5.
GIDP Arenado.
Team RISP 2-for-19.
Team LOB 12.

Baserunning
SB Pagés, P (2, 2nd base off Cabrera, G/Kirk).

Fielding
DP 2 (Saggese-Goldschmidt; Saggese-Winn-Goldschmidt).

1-Ran for Horwitz in the 8th;

Batting
2B Guerrero Jr. (41, Fedde).
TB Barger; Clement; Guerrero Jr. 2; Horwitz; Jiménez; Kirk 2; Lukes; Springer; Wagner.
RBI Guerrero Jr. (95); Horwitz (36); Kirk 2 (46).
2-out RBI Kirk.
Runners left in scoring position, 2 out Springer; Lukes.
SF Horwitz.
GIDP Loperfido, J.
Team RISP 5-for-11.
Team LOB 9.

Baserunning
SB Springer (15, 2nd base off Fedde/Pagés, P).

Fielding
Outfield assists Barger (Arenado at 2nd base).
DP (Wagner-Clement-Horwitz).

4Base Digital Scorecard: Saggese is Player of the Game in STL loss

STL-147-09-13-24-STL 3 @ TOR 4

W: Swanson - L: Fernandez - S: - STL rec 74-73 - Top Player: Saggese in STL loss

Team	1	2	3	4	5	6	7	8	9	10	11
STL	2	0	0	0	0	0	0	1	0	0	0
TOR	0	0	0	3	0	0	0	0	0	0	1

Inning	Pitcher	Batter # - Player Name	Outs Status	B/P Type - Primary Play	Secondary Play	Outs for Run	PA	BB	Base	Errors	4Base Score
01	Gauman, K.	1 Winn	GS	9.Single			1	2	1	4	0
		2 Burlson	LD	7.Single			1	3	1	5	0
		3 Goldschmidt	FB	8.Single			1	2	2	5	0
		4 Arenado	FB	8.Single	RO-d		1	0	3	5	0
		5 Donovan		K						0	0
		6 Saggese	GS	9-4-FO			1	0	2	4	0
		7 Nootbaar	PU	6						0	0
02	Gauman, K.	8 Pages	FB	8						0	0
		9 Siani		K						0	0
		1 Winn	GS	3-1						0	0
03	Gauman, K.	2 Burlson	FB	8						0	0
		3 Goldschmidt	GS	4-3						0	0
		4 Arenado	GS	6-3						0	0
04	Gauman, K.	5 Donovan	FB	8						0	0
		6 Saggese	GS	4-3						0	0
		7 Nootbaar	LD	9.Single			1	2	3	3	0
		8 Pages	LD	8.Single	2nd-OT		2	0	2	4	0
		9 Siani	LD	1						0	0
05	Gauman, K.	1 Winn	PU	4						0	0
		2 Burlson	LD	9.Single			1	1	2	2	0
		3 Goldschmidt	Walk		DP-4		1	0	1	2	0
		4 Arenado	GS	4-6-3-DP			0	0	-1	-1	0
06	Gauman, K.	5 Donovan	LD	8.Single	WP-2nd		1	2	0	3	0
		6 Saggese	FB	8						0	0
		7 Nootbaar	Walk				1	1	2	2	0
		8 Pages	GS	3U	ProfOut		0	0	2	2	0
		9 Siani		K						0	0
07	Gauman, K.	1 Winn	LD	9.Double	BB-Out-GU		2	-2	0	0	0
		2 Burlson	GS	4-3	ProfOut		0	0	1	1	0
		3 Goldschmidt	GS	SU-FC			1	1	1	1	0
		4 Arenado	LD	7						0	0
08	Cabrera, G.	5 Donovan	FB	7						0	0
		6 Saggese	FB	Homenun	LF		4	0	4	9	0
		7 Nootbaar		K						0	0
		8 Pages	LD	9.Single	Sb-2nd		1	1	0	2	0
		9 Siani	GS	3U						0	0
09	Nanco, T.	1 Winn	FB	7						0	0
		2 Burlson	GS	4-3						0	0
		3 Goldschmidt	FB	8.Double			2		2	2	0
		4 Arenado	GS	3-1						0	0
10	Utkin, B.	4 GR-Fermin	GS-Adv		ProfOut		0	3	0	3	0
		5 Donovan	GS	4-3	ProfOut		1	1	1	1	0
		6 Saggese		K						0	0
		7 Baker	GS	3-1						0	0
11	Swanson, E.	7 GR-Walker	GR-NoAdv				0	2	0	2	0
		8 Pages	LD	8						0	0
		9 Siani	GS	3-1						0	0
		1 Winn		K						0	0

Game Notes: [Empty]

12 2 6 3 3 3 3 4Base CFB PA BB Pushed 4Score

4Score Summary STL

Bat#-Player 4Score

6 Saggese 13

2B

3 Goldschmidt 10

1B

8 Pages 8

C

2 Burlson 8

DH

7 Nootbaar 5

RF

1 Winn 4

SS

5 Donovan 4

LF

4 Arenado 4

3B

GR-Fermin 3

GR-PR-3B

7 GR-Walker 2

GR

9 Siani 0

CF

7 Baker 0

PH

Team 4Score 61

STL-147-09-13-24-STL 3 @ TOR 4

W: Swanson - L: Fernandez - S: - STL rec 74-73 - Top Player: Saggese in STL loss

Team	1	2	3	4	5	6	7	8	9	10	11
STL	2	0	0	0	0	0	0	1	0	0	0
TOR	0	0	0	3	0	0	0	0	0	0	1

4Base Scorecard for TOR

Inning	Pitcher	Batter # - Player Name	Outs Status	B/P Type - Primary Play	Secondary Play	Outs for Run	PA	BB	Base	Errors	4Base Score
01	Fadda, E.	1 Springer	LD	8.Single	PUP-4-3		1	-1	0	0	0
		2 Lukes	PU	4-3						0	0
		3 Guerrero		K						0	0
02	Fadda, E.	4 Horwitz	GS	4-3						0	0
		5 Wagner	LD	9						0	0
		6 Kirk	LD	4						0	0
03	Fadda, E.	7 Barger	LD	9.Single	DP-4		1	0	0	1	0
		8 Clement	FB	7						0	0
		9 Loperfido	GS	4-6-3-DP			0	0	-1	-1	0
04	Fadda, E.	1 Springer		Walk	Sb-2nd		1	3	0	4	0
		2 Lukes	GS	7.Single			1	3	1	5	0
		3 Guerrero	LD	7.Double			2	2	3	8	0
		4 Horwitz	FB	7-Safly			0	0	1	2	0
		5 Wagner	FB	8						0	0
		6 Kirk	LD	9.Single			1	0	1	3	0
		7 Barger		K						0	0
05	Fadda, E.	8 Clement	GS	7.Single			1		1	1	0
		9 Loperfido	LD	7						0	0
		1 Springer	FB	8						0	0
		2 Lukes		K						0	0
06	King, I.	3 Guerrero	FB	8						0	0
		4 Horwitz	FB	8						0	0
		5 Wagner	GS	9.Single			1		1	1	0
		6 Kirk	FB	8						0	0
07	Liberatore, M.	7 Barger		Walk			1	1	2	2	0
		8 Clement	FB	9						0	0
		9 Loperfido	GS	4-3	ProfOut		0	0	1	1	0
		1 Springer		K						0	0
08	Liberatore, M.	2 Lukes	GS	6-3						0	0
		3 Guerrero	GS	4-3						0	0
		4 Horwitz	LD	7.Single			1		1	1	0
		5 Wagner		K						0	0
09	Liberatore, M.	6 Kirk	FB	7						0	0
		7 Barger	GS	4-3						0	0
		8 Clement		K						0	0
10	Fernandez, R.	8 GR-Clement		GR-NoAdv			0	0	0	0	0
		9 Loperfido		K						0	0
		1 Springer	GS	5-3						0	0
		2 Luke	PU	5						0	0
11	Fernandez, R.	2 GR-Lukes	GS-Adv	RO-d			0	1	0	1	0
		3 Guerrero	Walk				1	3	0	4	0
		4 Horwitz	GS	2.Single			1	2	2	5	0
		5 Wagner	GS	4-3-FO			1	1	-1	1	0
		6 Kirk	FB	7.Single			1	0	3	5	0

Game Notes: TOR walk off win in the 11th.

10 3 7 4 4 1 4Base CFB PA BB Pushed 4Score

4Score Summary TOR

Bat#-Player 4Score

3 Guerrero 12

3B-1B

6 Kirk 8

C

4 Horwitz 8

1B

2 Lukes 5

LF

1 Springer 4

DH

7 Barger 3

RF

5 Wagner 2

2B

2 GR-Lukes 1

GR

8 Clement 1

SS-3B

9 Loperfido 0

CF

8 GR-Clement 0

GR

Team 4Score 44

4Base Game Wrap

Box Score for STL STL-147 - 09-13-24 - STL 3 @ TOR 4 W: Swanson - L: Fernandez - S: - STL rec 74-73 - Top Player: Saggese in STL loss

Batting Order-Player		Pos.	AB	Run	Hits	RBI	BB	SO	Key 4Base Scoring Stats				Plate App	Prod	Outs	
									PA Bases	BR Bases	Bases Pushed	Credit for Run	Player 4Score	4BRate		
1	Winn	SS	6	1	2	0	0	1	3	1	0	0	4	0.67	6	0
2	Burleson	DH	5	1	2	0	0	0	2	4	2	0	8	1.60	5	1
3	Goldschmidt	1B	4	0	2	0	1	0	5	2	3	0	10	2.00	5	0
4	Arenado	3B	5	0	1	1	0	0	1	0	2	1	4	0.80	5	0
	GR-Fermin	GR-PR-3B	0	0	0	0	0	0	0	3	0	0	3	-	0	0
5	Donovan	LF	5	0	1	0	0	1	1	2	1	0	4	0.80	5	1
6	Saggese	2B	5	1	1	2	0	1	5	0	6	2	13	2.60	5	0
7	Nootbaar	RF	3	0	1	0	1	1	2	3			5	1.25	4	0
	Baker	PH	1	0	0	0	0	0	0	0	0	0	0	0.00	1	0
	GR-Walker	GR	0	0	0	0	0	0	0	2	0	0	2	-	0	0
8	Pages	C	5	0	2	0	0	0	3	1	4	0	8	1.60	5	1
9	Siani	CF	5	0	0	0	0	2	0	0	0	0	0	0.00	5	0
			44	3	12	3	2	6	22	18	18	3	61	1.33	46	3

Box Score for TOR STL-147 - 09-13-24 - STL 3 @ TOR 4 W: Swanson - L: Fernandez - S: - STL rec 74-73 - Top Player: Saggese in STL loss

Batting Order-Player		Pos.	AB	Run	Hits	RBI	BB	SO	Key 4Base Scoring Stats				Plate App	Prod	Outs	
									PA Bases	BR Bases	Bases Pushed	Credit for Run	Player 4Score	4BRate		
1	Springer	DH	4	1	1	0	1	1	2	2	0	0	4	0.80	5	0
2	Lukes	LF	5	1	1	0	0	1	1	3	1	0	5	1.00	5	0
	GR-Lukes	GR	0	0	0	0	0	0	0	1	0	0	1	-	0	0
3	Guerrero	3B-1B	4	2	1	1	1	1	3	5	3	1	12	2.40	5	0
4	Horwitz	1B	4	0	2	1	0	0	2	2	3	1	8	1.60	5	0
5	Wagner	2B	5	0	1	0	0	1	2	1	-1	0	2	0.40	5	0
6	Kirk	C	5	0	2	2	0	0	2	0	4	2	8	1.60	5	0
7	Barger	RF	3	0	1	0	1	1	2	1	0	0	3	0.75	4	0
8	Clement	SS-3B	4	0	1	0	0	1	1				1	0.25	4	0
	GR-Clement	GR	0	0	0	0	0	0	0	0	0	0	0	-	0	0
9	Loperfido	CF	4	0	0	0	0	1	0	0	0	0	0	0.00	4	1
			38	4	10	4	3	7	15	15	10	4	44	1.05	42	1

Key 4Base Scoring Stats

Pos.	AB	Run	Hits	RBI	BB	SO	PA Bases	BR Bases	Bases Pushed	Credit for Run	Player 4Score	4BRate	Plate App	Prod	Outs	
SS	6	1	2	0	0	1	3	1	0	0	4	0.67	6	0		
DH	5	1	2	0	0	0	2	4	2	0	8	1.60	5	1		
1B	4	0	2	0	1	0	5	2	3	0	10	2.00	5	0		
3B	5	0	1	1	0	0	1	0	2	1	4	0.80	5	0		
GR-PR-3B	0	0	0	0	0	0	0	3	0	0	3	-	0	0		
LF	5	0	1	0	0	1	1	2	1	0	4	0.80	5	1		
2B	5	1	1	2	0	1	5	0	6	2	13	2.60	5	0		
3B	5	0	1	0	1	1	2	3			5	1.25	4	0		
PH	1	0	0	0	0	0	0	0	0	0	0	0.00	1	0		
GR	0	0	0	0	0	0	0	2	0	0	2	-	0	0		
C	5	0	2	0	0	0	3	1	4	0	8	1.60	5	1		
CF	5	0	0	0	0	2	0	0	0	0	0	0.00	5	0		
Report:			44	3	12	3	2	6	22	18	18	3	61	1.33	46	3

F-Player Name	Inning	Pitcher	Onits Status	BP Type - Primary Play	Secondary Play	Outs for Run	PA	BR	BB	Beam	Beam	Beam
1	01	Swanson, E.	LD	8.Single			1	3	1	5		
2	01	Swanson, E.	LD	7.Single			1	3	1	5		
3	01	Swanson, E.	LD	8.Single			1	3	1	5		
4	01	Swanson, E.	LD	8.Single			1	3	1	5		
5	01	Swanson, E.	LD	8.Single			1	3	1	5		
6	01	Swanson, E.	LD	8.Single			1	3	1	5		
7	01	Swanson, E.	LD	8.Single			1	3	1	5		
8	01	Swanson, E.	LD	8.Single			1	3	1	5		
9	01	Swanson, E.	LD	8.Single			1	3	1	5		

Box Score for TOR STL-147 - 09-13-24 - STL 3 @ TOR 4 W: Swanson - L: Fernandez - S: - STL rec 74-73 - Top Player: Saggese in STL loss

Batting Order-Player		Pos.	AB	Run	Hits	RBI	BB	SO	Key 4Base Scoring Stats				Plate App	Prod	Outs	
									PA Bases	BR Bases	Bases Pushed	Credit for Run	Player 4Score	4BRate		
1	Springer	DH	4	1	1	0	1	1	2	2	0	0	4	0.80	5	0
2	Lukes	LF	5	1	1	0	0	1	1	3	1	0	5	1.00	5	0
	GR-Lukes	GR	0	0	0	0	0	0	0	1	0	0	1	-	0	0
3	Guerrero	3B-1B	4	2	1	1	1	1	3	5	3	1	12	2.40	5	0
4	Horwitz	1B	4	0	2	1	0	0	2	2	3	1	8	1.60	5	0
5	Wagner	2B	5	0	1	0	0	1	2	1	-1	0	2	0.40	5	0
6	Kirk	C	5	0	2	2	0	0	2	0	4	2	8	1.60	5	0
7	Barger	RF	3	0	1	0	1	1	2	1	0	0	3	0.75	4	0
8	Clement	SS-3B	4	0	1	0	0	1	1				1	0.25	4	0
	GR-Clement	GR	0	0	0	0	0	0	0	0	0	0	0	-	0	0
9	Loperfido	CF	4	0	0	0	0	1	0	0	0	0	0	0.00	4	1
			38	4	10	4	3	7	15	15	10	4	44	1.05	42	1

Batter # - Player Name	Inning	Pitcher	Onits Status	BP Type - Primary Play	Secondary Play	Outs for Run	PA	BR	BB	Beam	Beam	Beam
1	01	Fedda, E.	LD	8.Single			1	-1	0	0		
2	01	Fedda, E.	LD	8.Single			1	-1	0	0		
3	01	Fedda, E.	LD	8.Single			1	-1	0	0		
4	01	Fedda, E.	LD	8.Single			1	-1	0	0		
5	01	Fedda, E.	LD	8.Single			1	-1	0	0		
6	01	Fedda, E.	LD	8.Single			1	-1	0	0		
7	01	Fedda, E.	LD	8.Single			1	-1	0	0		
8	01	Fedda, E.	LD	8.Single			1	-1	0	0		
9	01	Fedda, E.	LD	8.Single			1	-1	0	0		

2024 Enhancements – Paper Scorecard – Easily determine Player of the Game

4Base Scorecard		STL Game 147																			
Player of the Game <u>Saggese - 13</u>		Team Top Contributor <u>Guttschmidt - 10</u>																			
Date: <u>9/13/24</u> Team: <u>A - STL</u> Inn: <u>STL-3 @ TOR-4</u> Team Total 4Base Score: <u>57</u>																					
Batter #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	Total Runs	Hits	Errors
Pitcher	STL: <u>STL</u> TOR: <u>TOR</u>																				
Player	STL: <u>STL</u> TOR: <u>TOR</u>																				
Primary Play	STL: <u>STL</u> TOR: <u>TOR</u>																				
OB Status	STL: <u>STL</u> TOR: <u>TOR</u>																				
PA / BR Bases	STL: <u>STL</u> TOR: <u>TOR</u>																				
Bases Pushed / Credit for Run	STL: <u>STL</u> TOR: <u>TOR</u>																				
Player 4Score	STL: <u>STL</u> TOR: <u>TOR</u>																				
Addl Info	STL: <u>STL</u> TOR: <u>TOR</u>																				
Pitcher	STL: <u>STL</u> TOR: <u>TOR</u>																				
Player	STL: <u>STL</u> TOR: <u>TOR</u>																				
Primary Play	STL: <u>STL</u> TOR: <u>TOR</u>																				
OB Status	STL: <u>STL</u> TOR: <u>TOR</u>																				
PA / BR Bases	STL: <u>STL</u> TOR: <u>TOR</u>																				
Bases Pushed / Credit for Run	STL: <u>STL</u> TOR: <u>TOR</u>																				
Player 4Score	STL: <u>STL</u> TOR: <u>TOR</u>																				
Addl Info	STL: <u>STL</u> TOR: <u>TOR</u>																				
Pitcher	STL: <u>STL</u> TOR: <u>TOR</u>																				
Player	STL: <u>STL</u> TOR: <u>TOR</u>																				
Primary Play	STL: <u>STL</u> TOR: <u>TOR</u>																				
OB Status	STL: <u>STL</u> TOR: <u>TOR</u>																				
PA / BR Bases	STL: <u>STL</u> TOR: <u>TOR</u>																				
Bases Pushed / Credit for Run	STL: <u>STL</u> TOR: <u>TOR</u>																				
Player 4Score	STL: <u>STL</u> TOR: <u>TOR</u>																				
Addl Info	STL: <u>STL</u> TOR: <u>TOR</u>																				
Pitcher	STL: <u>STL</u> TOR: <u>TOR</u>																				
Player	STL: <u>STL</u> TOR: <u>TOR</u>																				
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Pitcher	STL: <u>STL</u> TOR: <u>TOR</u>																				
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Bases Pushed / Credit for Run	STL: <u>STL</u> TOR: <u>TOR</u>																				
Player 4Score	STL: <u>STL</u> TOR: <u>TOR</u>																				
Addl Info	STL: <u>STL</u> TOR: <u>TOR</u>																				
Pitcher	STL: <u>STL</u> TOR: <u>TOR</u>																				
Player	STL: <u>STL</u> TOR: <u>TOR</u>																				
Primary Play	STL: <u>STL</u> TOR: <u>TOR</u>																				
OB Status	STL: <u>STL</u> TOR: <u>TOR</u>																				
PA / BR Bases	STL: <u>STL</u> TOR: <u>TOR</u>																				
Bases Pushed / Credit for Run	STL: <u>STL</u> TOR: <u>TOR</u>																				
Player 4Score	STL: <u>STL</u> TOR: <u>TOR</u>																				
Addl Info	STL: <u>STL</u> TOR: <u>TOR</u>																				
Pitcher	STL: <u>STL</u> TOR: <u>TOR</u>																				
Player	STL: <u>STL</u> TOR: <u>TOR</u>																				
Primary Play	STL: <u>STL</u> TOR: <u>TOR</u>																				
OB Status	STL: <u>STL</u> TOR: <u>TOR</u>																				
PA / BR Bases	STL: <u>STL</u> TOR: <u>TOR</u>																				
Bases Pushed / Credit for Run	STL: <u>STL</u> TOR: <u>TOR</u>																				
Player 4Score	STL: <u>STL</u> TOR: <u>TOR</u>																				
Addl Info	STL: <u>STL</u> TOR: <u>TOR</u>																				
Pitcher	STL: <u>STL</u> TOR: <u>TOR</u>																				
Player	STL: <u>STL</u> TOR: <u>TOR</u>																				
Primary Play	STL: <u>STL</u> TOR: <u>TOR</u>																				
OB Status	STL: <u>STL</u> TOR: <u>TOR</u>																				
PA / BR Bases	STL: <u>STL</u> TOR: <u>TOR</u>																				
Bases Pushed / Credit for Run	STL: <u>STL</u> TOR: <u>TOR</u>																				
Player 4Score	STL: <u>STL</u> TOR: <u>TOR</u>																				
Addl Info	STL: <u>STL</u> TOR: <u>TOR</u>																				
Pitcher	STL: <u>STL</u> TOR: <u>TOR</u>																				
Player	STL: <u>STL</u> TOR: <u>TOR</u>																				
Primary Play	STL: <u>STL</u> TOR: <u>TOR</u>																				
OB Status	STL: <u>STL</u> TOR: <u>TOR</u>																				
PA / BR Bases	STL: <u>STL</u> TOR: <u>TOR</u>																				
Bases Pushed / Credit for Run	STL: <u>STL</u> TOR: <u>TOR</u>																				
Player 4Score	STL: <u>STL</u> TOR: <u>TOR</u>																				
Addl Info	STL: <u>STL</u> TOR: <u>TOR</u>																				
Pitcher	STL: <u>STL</u> TOR: <u>TOR</u>																				
Player	STL: <u>STL</u> TOR: <u>TOR</u>																				
Primary Play	STL: <u>STL</u> TOR: <u>TOR</u>																				
OB Status	STL: <u>STL</u> TOR: <u>TOR</u>																				
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Key 4Base Stats – 2024 Season - STL Cardinals

All Outs are not the same



4Base Score Productive Outs Analysis

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4Base Productive Outs Team Totals - 2024 - STL		
Team	Prod Outs	Bases Pushed
STL	134	154

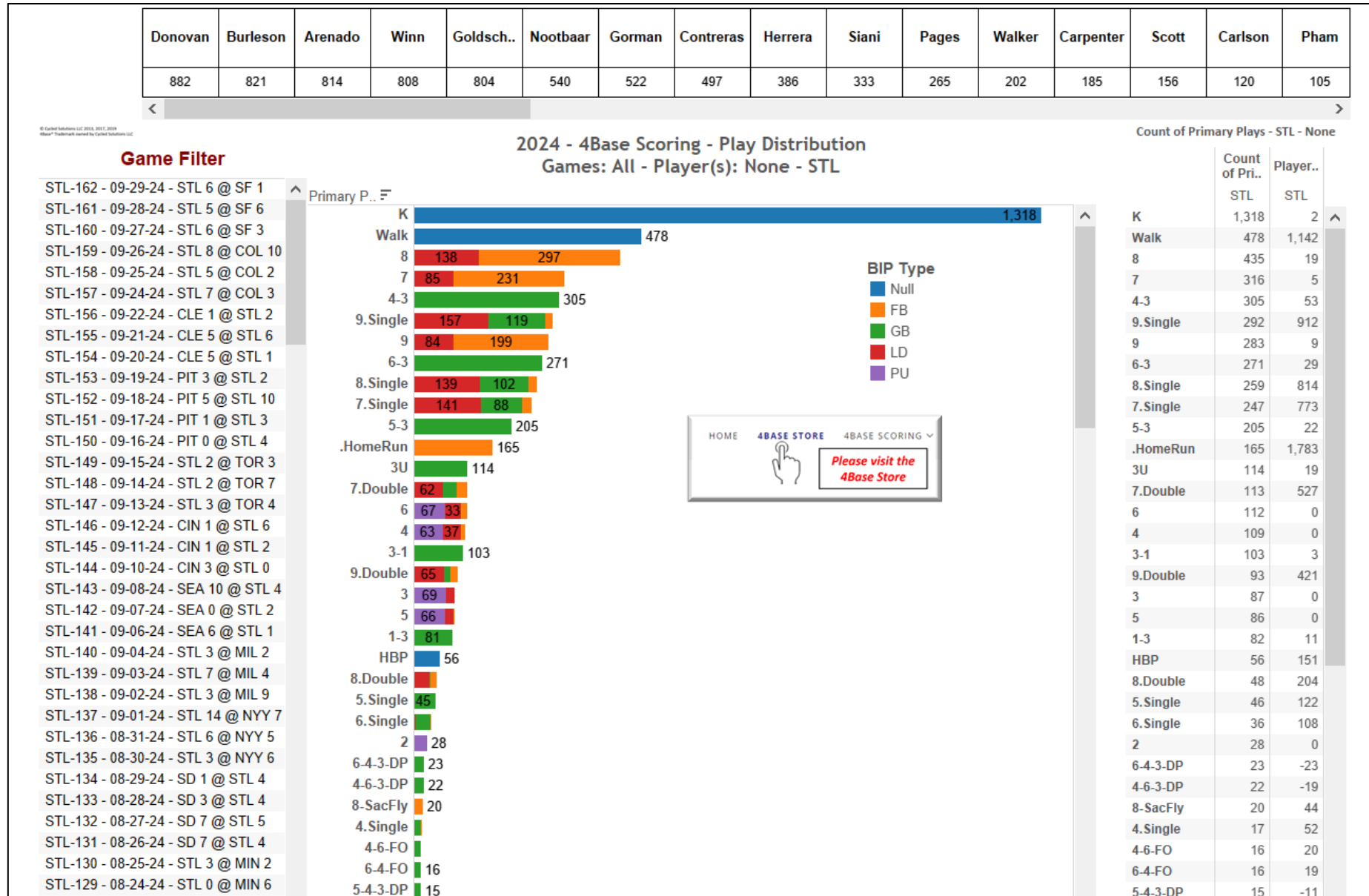
Official Sacrifices - 2024 - STL		Non-Sac Productive Outs - 2024 - STL		Bases Pushed on Non-Sac Productive Outs - 2024 - STL	
Player	#	Player	#	Player	#
Siani	12	Donovan	19	Burleson	20
Winn	8	Burleson	18	Donovan	19
Arenado	7	Goldschmidt	16	Goldschmidt	19
Burleson	7	Gorman	11	Nootbaar	14
Donovan	5	Winn	11	Gorman	12
Nootbaar	4	Arenado	9	Winn	12
Carlson	3	Nootbaar	9	Arenado	9
Pages	3	Herrera	8	Herrera	8
Baker	2	Contreras	6	Contreras	7
Carpenter	2	Pages	5	Pages	7
Goldschmidt	2	Siani	5	Siani	7
Gorman	2	Carpenter	4	Carpenter	5
Herrera	2	Pham	3	Pham	5
Scott	2	Baker	2	Baker	2
Walker	2	Fermin	2	Fermin	2
Pham	1	Scott	2	Scott	2
		Carlson	1	Carlson	1
		Crawford	1	Crawford	1
		Saggese	1	Saggese	1
		Walker	1	Walker	1
Grand Total	64	Grand Total	134	Grand Total	154

4Base Scoring - Predator Outs Analysis

Negative Bases Pushed by Player - STL	
Goldschmidt	-23
Arenado	-16
Burleson	-14
Nootbaar	-13
Donovan	-12
Winn	-11
Contreras	-8
Fermin	-7
Pages	-6
Walker	-6
Herrera	-5
Scott	-5
Gorman	-4
Pham	-4
Siani	-4
Carlson	-2
Baker	-1
Burleson-Pham	-1
Crawford	-1
Grand Total	-143

STL Cardinals 2024 Productive Outs far exceeded official Sacrifice Outs Impact on key players Batting Average

												Tot Sacs-PO's		SAC %	ProdOut %
												198	32.3%	67.7%	
													64	134	
Team	STL	672	7,835	6,114	1,363	5,507	1,318	478	639	64	134	0.248	5373	0.254	0.006
Row Labels	Sum of PABases	Sum of CreditForRun	Sum of Player4Score	Sum of PlateApp	Sum of Hit	Sum of AtBat	Sum of StrikeOut	Sum of Walk	Sum of RBI	Sum of Sac	Sum of ProdOutCntr				
Donovan	329	77	882	651	162	586	81	47	73	5	19	0.276	567	0.286	0.009
Burleson	281	79	821	589	142	542	76	34	77	7	18	0.262	524	0.271	0.009
Arenado	286	73	814	633	156	577	92	44	71	7	9	0.270	568	0.275	0.004
Winn	311	63	808	638	157	588	109	41	57	8	11	0.267	577	0.272	0.005
Goldschmidt	322	67	804	653	146	598	173	47	65	2	16	0.244	582	0.251	0.007
Nootbaar	210	47	540	404	85	348	79	51	45	4	9	0.244	339	0.251	0.006
Gorman	184	54	522	401	74	365	151	33	50	2	11	0.203	354	0.209	0.006
Contreras	201	38	497	358	79	301	96	45	36	0	6	0.262	295	0.268	0.005
Herrera	133	29	386	259	69	229	53	25	27	2	8	0.301	221	0.312	0.011
Siani	117	21	333	335	68	299	93	21	20	12	5	0.227	294	0.231	0.004
Pages	91	28	265	218	48	202	58	13	27	3	5	0.238	197	0.244	0.006
Walker	74	21	202	177	32	163	50	10	20	2	1	0.196	162	0.198	0.001
Carpenter	67	15	185	153	30	133	50	15	14	2	4	0.226	129	0.233	0.007

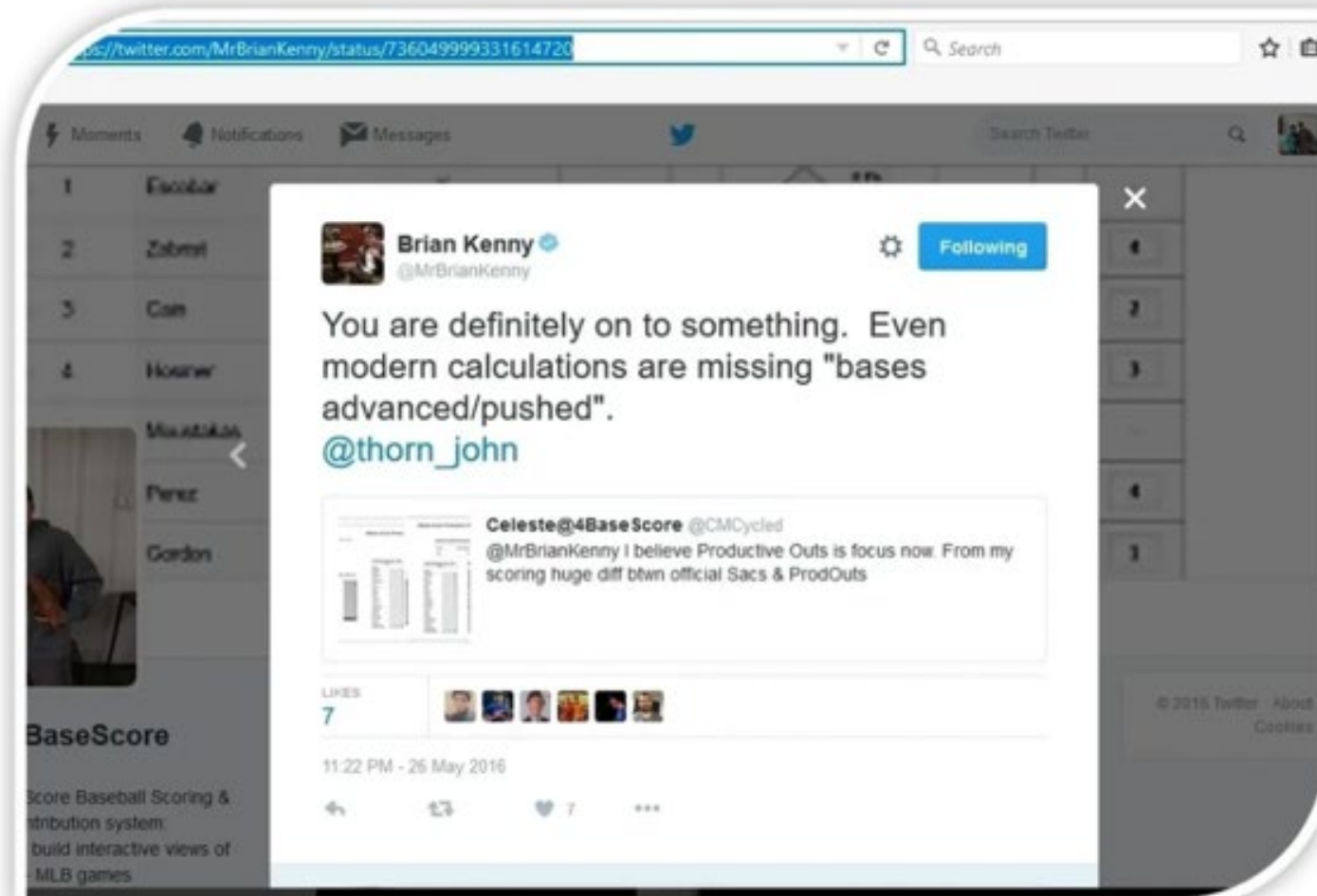


Example of In Season report: Play Distribution

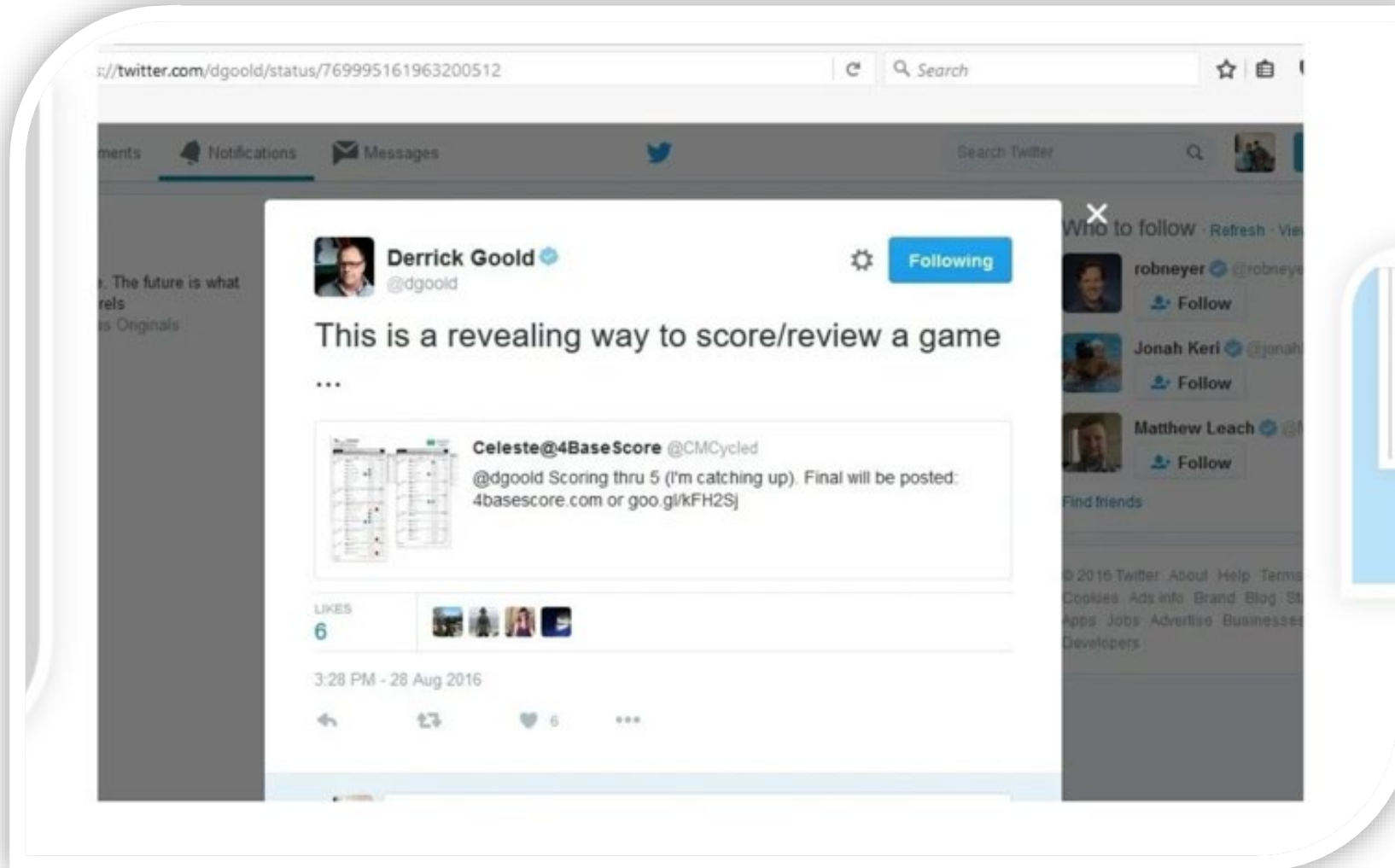
Accolades from baseball media/professionals – Brian Kenny MLB Network



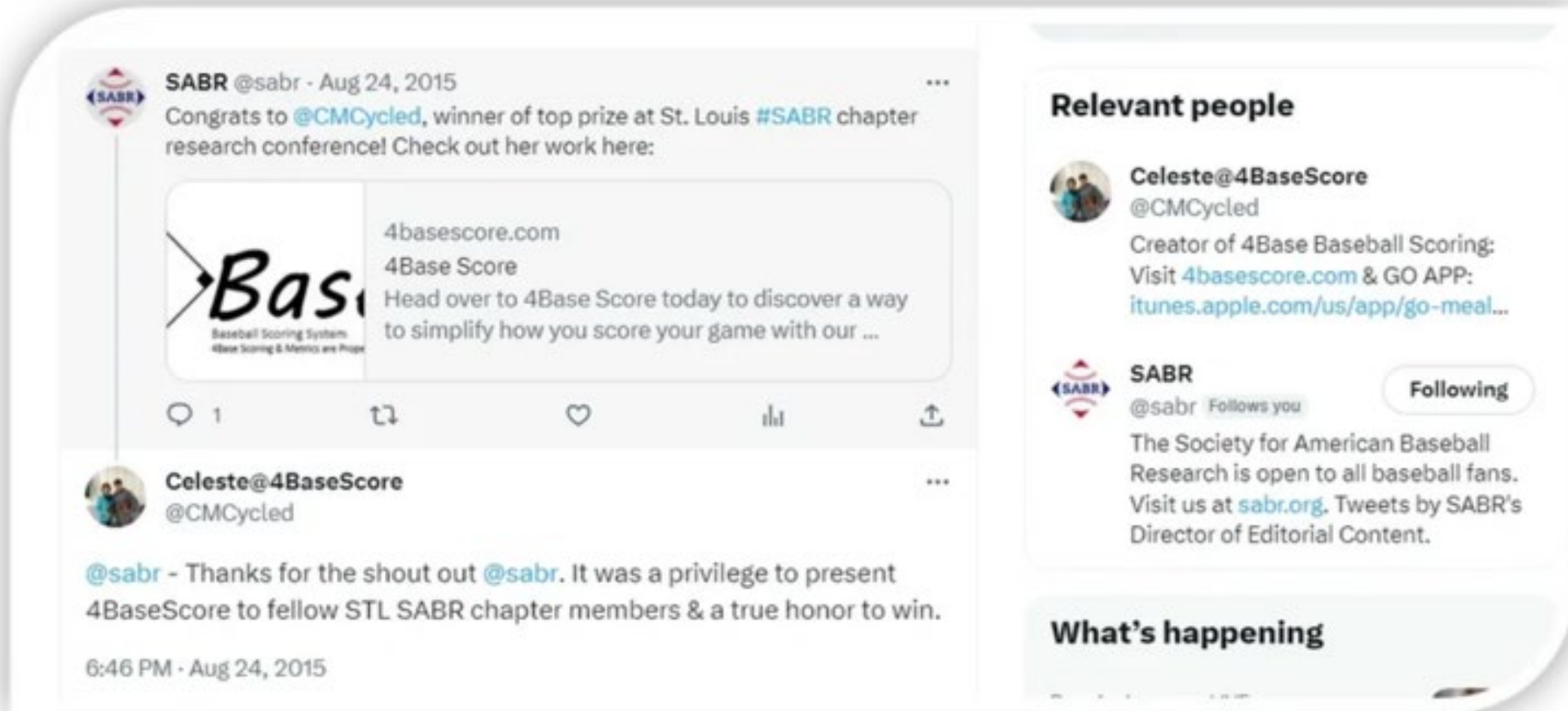
Accolades from baseball media/professionals – Brian Kenny MLB Network



Accolades from baseball media/professionals – Derrick Goold - STLToday




Accolades from baseball media/professionals – SABR



SABR @sabr · Aug 24, 2015

Congrats to @CMCycled, winner of top prize at St. Louis #SABR chapter research conference! Check out her work here:



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Celeste@4BaseScore @CMCycled

@sabr - Thanks for the shout out @sabr. It was a privilege to present 4BaseScore to fellow STL SABR chapter members & a true honor to win.

6:46 PM · Aug 24, 2015

Relevant people

Celeste@4BaseScore @CMCycled
Creator of 4Base Baseball Scoring:
Visit 4basescore.com & GO APP:
itunes.apple.com/us/app/go-meal...

SABR @sabr Follows you **Following**
The Society for American Baseball Research is open to all baseball fans. Visit us at sabr.org. Tweets by SABR's Director of Editorial Content.

What's happening

Accolades from baseball media/professionals



Celeste@4BaseScore
@CMCycled

Favorably reviewed by Retired MLB Player (10 yr career), a former MLB coach, print & broadcast media members, SABR STL Chapter (1st place award)

We definitely see how this shows the value of a player that a traditional scoring method does not.



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Questions, Comments, Feedback

are welcome

Thank you!