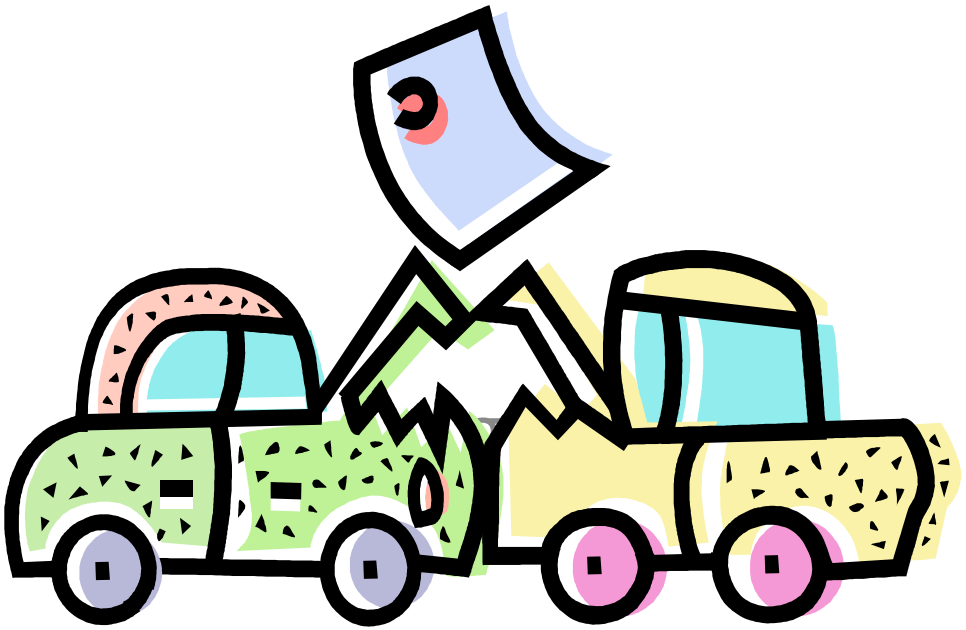
A Crash Course in the Terms and Definitions of Hockey Analytics



Corsi For %

- The number of on-ice shot attempts (on goal, missed, or blocked) taken by the player's team.
- Expressed as a percentage for a team/player, as a rate (per 20, 60 mins), or as a +/- (Corsi For minus Corsi Against).
- Why 5v5? 75% of all shots taken over the course of an NHL season are at Even-Strength. Players can be unduly penalized by including PK numbers.

Corsi Relative %

- The player's on-ice Corsi% minus the player's off-ice Corsi%; off-ice Corsi% is the percent of shot attempts taken by the player's team when the player is not on the ice (but in games where the player is in the lineup); also known as CF Rel%
- CorsiRel is a straight comparison of team performance when the player is on the ice versus when the player is off the ice.

Name	pos	team	Games	Corsi Rel%	Corsi%	Corsi%off	Corsi+/-
Patric.Hornqvist	R	PIT	12	13.01	59.87	46.86	59
Sidney.Crosby	C	PIT	12	11.37	58.69	47.32	53
Chris.Kunitz	L	PIT	12	11.12	58.64	47.52	51
Kris.Letang	D	PIT	12	8.66	56.05	47.39	46
Olli.Maatta	D	PIT	10	9.48	57.61	48.13	42
Evgeni.Malkin	C	PIT	12	-1.70	49.83	51.52	-1
Paul.Martin	D	PIT	12	-1.60	49.85	51.45	-1
Brandon.Sutter	C	PIT	12	-2.44	49.22	51.66	-4
Blake.Comeau	R	PIT	12	-3.12	48.63	51.75	-7
Pascal.Dupuis	L	PIT	12	-3.55	48.41	51.96	-8
Simon.Despres	D	PIT	12	-4.64	47.60	52.24	-11
Marcel.Goc	C	PIT	12	-5.82	45.95	51.77	-12

Thanks Andrew & Sam!

*Numbers as of 11/7/14

Fenwick For %

- The number of unblocked on-ice shot attempts (on goal or missed) taken by the player's team.
- Not used exclusively instead of Corsi because over smaller sample sizes, the larger Corsi number is more accurate in reflecting puck possession.
- Some believe shot-blocking is a skill and not a result of random events.

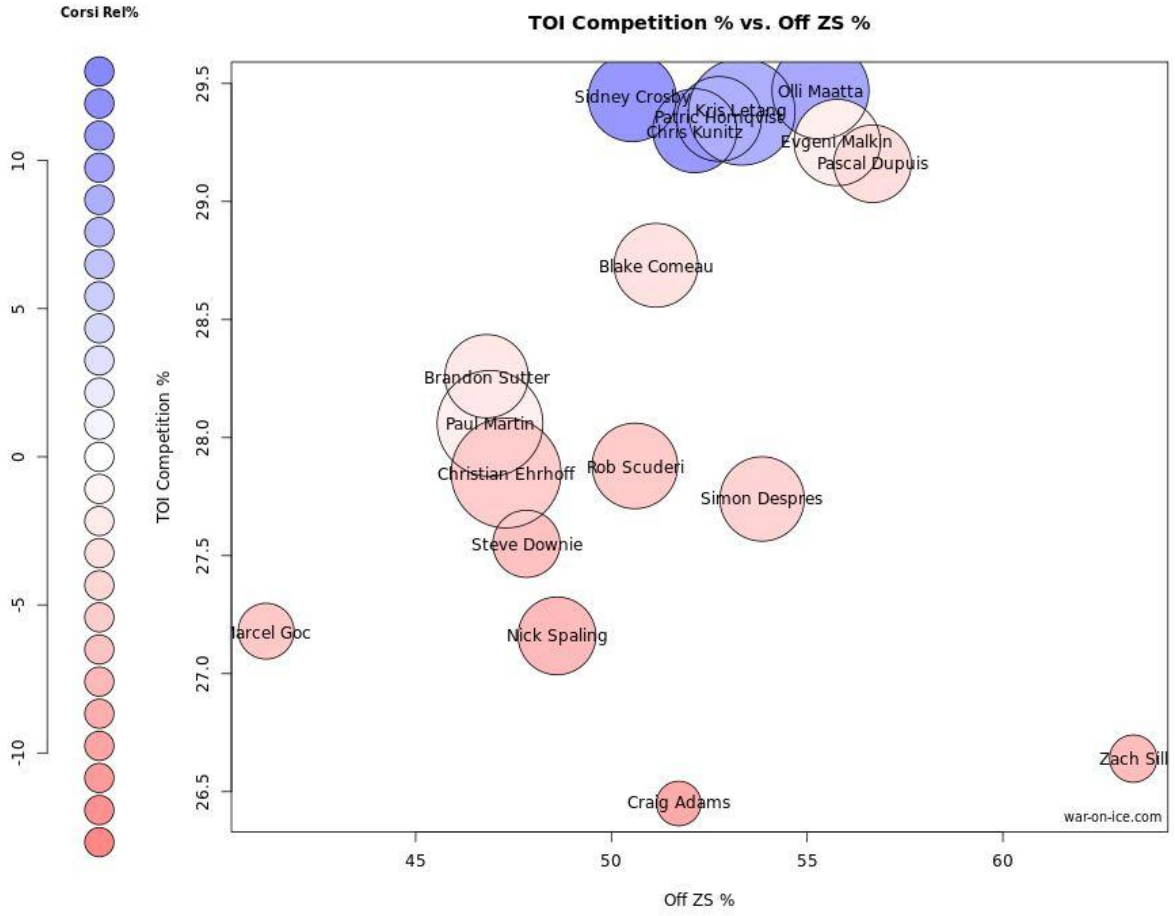
Why are these metrics important?

- They’re reliable statistics for possession.
- Shots directed at net = time with the puck.
- Scorer bias in NHL registering shot totals? No way!
- Attempts directed at the net give us a greater sample size and remove bad luck from the equation completely.
- Forecasting future results

Offensive Zone Starts

- The percent of all non-neutral zone on-ice faceoffs taken in the offensive zone
- Provides context to shot-based metrics.
- OZS% - NZS% - DZS%
- Offensive zone faceoffs are often followed by a shot attempt.
- How are players used in in-game situations?

Pittsburgh Penguins Offensive ZS%



Score Close

- Refers to situations when the game is within 1 goal (1st and 2nd periods) or tied (3rd period or overtime)
- Teams with a 3 goal lead will generally change their approach within the game.
- Removes the “defensive muck” situations.

Visualizing Score Close

All Situations

Name	pos	team	Games	Corsi Rel%	Corsi%	Corsi%off	Corsi+/-
Patric.Hornqvist	R	PIT	12	13.01	59.87	46.86	59
Sidney.Crosby	C	PIT	12	11.37	58.69	47.32	53
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Close

Name	pos	team	Games	Corsi Rel%	Corsi%	Corsi%off	Corsi+/-
Chris.Kunitz	L	PIT	12	14.02	62.87	48.85	43
Patric.Hornqvist	R	PIT	12	12.56	61.71	49.16	41
Sidney.Crosby	C	PIT	12	12.17	61.49	49.33	40
Kris.Letang	D	PIT	12	4.53	56.28	51.75	27
Olli.Maatta	D	PIT	10	4.69	56.46	51.77	19
Rob.Scuderi	D	PIT	12	2.80	55.96	53.17	13
Simon.Despres	D	PIT	12	-0.44	53.47	53.91	7
Blake.Comeau	R	PIT	12	-2.47	52.00	54.47	5
Paul.Martin	D	PIT	12	-3.58	51.50	55.08	5
Brandon.Sutter	C	PIT	12	-3.04	51.59	54.62	4
Pascal.Dupuis	L	PIT	12	-3.24	51.49	54.73	4
Evgeni.Malkin	C	PIT	12	-3.97	51.05	55.02	3

PDO

- The sum of a team's 5v5 shooting percentage (the number of goals they score divided by the number of shots on goal they generate) and their 5v5 save percentage (the number of shots their goalies stop divided by the number of shots on goal they allow).
- It’s the NHL’s version of the stock market.
- Seems to revert back towards the mean of 1000 for all teams.

PDO Continued

- Save percentage from season to season shows a correlation of just .098.
- Shot Conversion's R2 value is only .150.
- We're accounting for luck over skill.
- Separates the lucky from the unlucky.

THANK YOU!

- Andrew & Sam
- Lyle Kossis
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- @Jay32600 & TDS_71