Predictive A

Predictive Indexes

This guide covers the Observer, Contractor and Project Indexes. The Indexes enable you to measure your observers, contractors and projects using key performance components such as participation, number of safe and unsafe observations per inspection and severity of observations.

Covered Topics:

- Observer Index Overview
- Contractor Index Overview
- Project Index Overview
- Index Components Definitions
- Predictive Model Introduced
 - For more detail see our white paper entitled: Predictive Analytics in the Workplace-The Four Safety
 Truths That Reduce Workplace Injuries. <u>http://www.predictivesolutions.com/reduce-workplace-injuries</u>

Observer Index Overview

- 1. Measure the quality of your observers based on participation and competencies in identifying safety and severity of at-risk conditions and behaviors.
- 2. Observer Index information is displayed in the **Observer Summary Report** (formerly known as the Utilization Report) as a percentile. Clicking on the percentile will display details for each index component in a separate pop-up window.

	Auditor	<u>Company</u>	Region	Inspections ,	<u>Observ</u>	ations	1	Last Inspec	ction Date	Index Perce	<u>entile</u>
Adrier	n Brody *	Giant Construction	South	44		4073	8 02/1	8/2012		***	(<u>96.2</u>)
Bill M	urray *	Giant Construction	South	40		4508	8 02/1	8/2012		****	(<u>91.2</u>)
Bob H	loskins *	Giant Construction	South	37		3697	02/1	8/2012		****	(<u>80.0</u>)
Ben K	ingsley *	Giant Construction	South	26		1363	3 02/1	8/2012		*****	(<u>36.3</u>)
Clint B	Eastwood *	Giant Construction	East	23		2551	02/1	7/2012		*****	(<u>68.8</u>)
Cathe	rine Deneuve *	Giant Construction	South	22		1430	02/1	8/2012		****	(<u>82.5</u>)
Const	ruction Executive	Giant Construction		21		126	5 02/1	B/2012		****	(<u>61.3</u>)
Antho	ny Hopkins *	Giant Construction	East	20		3312	2 02/1	5/2012		***	(<u>95.0</u>)
Anjeli	ca Huston *	Giant Construction	North	20		155	02/1	8/2012		****	(<u>62.5</u>)
w 🛙	Inde	ex Components 🛙		Index Perce	ntile 🛛	Actual		idex Average	Best		
5	Participation: Number of inspections per week	c.		****	r (97.5)	9.3	0.2	2.1	10.3		
0.1	Safe per Inspection: Number of safe observations pe	rinspection		****	(93.8)	108.7	0.0	47.9	171.0		
30	At-Risk per Inspection: Number of at-risk observations	per inspection		****	r (88.8)	4.0	0.0	1.6	5.5		
30	Severity: The relative severity of at-risk	observations		****	(88.8)	7.0	0.0	2.6	11.0		
10	Unsafe Observations With Com Number of Unsafe Observations		pection	****	(71.2)	0.4	0.0	0.3	1.0		
60	All Safe Observations per Inspe Number of All Safe Observation			***	r (56.2)	1.0	0.0	0.9	1.0		
	Overall:			****	(91.2)	334.0	-58.4	88.2	444.6		

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Contractor Index Overview

- 1. Assess contractor risk based on the safety and severity of at-risk conditions and behaviors.
- 2. Contractor Index information is displayed in the **Contractor Summary Report** as a percentile. Clicking on the percentile will display details for each index component in a separate pop-up window.

Contractor	#Inspections +	#Observations	<u># At-Risk</u>	# Safe	<u>%Safe</u>	Index Perce	ntile	Last Inspection	
Giant Construction	1055	23420	600	22820	97.4%	****	(45.7%)	02/21/2012 01:30 PM	[View Summary]
49ers Commerical	479	10704	157	10547	98.5%	****	(53.3%)	02/18/2012 03:44 PM	[View Summary]
Angels Contractors	231	3756	261	3495	93.1%	****	(65.2%)	02/18/2012 01:35 PM	[View Summary]
76'ers Industrial	212	4643	101	4542	97.8%	****	(40.2%)	02/21/2012 01:30 PM	[View Summary]
Bears International	188	4998	143	4855	97.1%	****	(47.8%)	02/18/2012 03:44 PM	[View Summary]
Bengals Electrical	177	2039	101	1938	95.0%	****	(67.4%)	02/18/2012 02:45 PM	[View Summary]
Athletics Corp	153	2588	98	2490	96.7%	***	(29.3%)	02/21/2012 01:30 PM	[View Summary]
Astros Inc.	138	1792	48	1744	97.3%	****	(80.4%)	02/18/2012 01:49 PM	[View Summary]
Bills Consolidated	128	1306	41	1265	96.9%	****	(71.7%)	02/21/2012 01:30 PM	[View Summary]
Bulls Consolidated	128	1147	86	1061	92.5%	****	(17.4%)	02/18/2012 02:45 PM	[View Summary]
Broncos Corp	123	2160	55	2105	97.5%	****	(<u>97.8%</u>)	02/18/2012 10:37 AM	[View Summary]
Blues Industrial	116	2570	32	25	98.8%	****	(59.8%)	02/18/2012 09:59 AM	[View Summary]

w 🖻	N	Index Percentile 🗵	Index			
vv	Index Components 2	Index Percentile 🚥	Actual	Worst	Average B	lest
1	Severity, Designee: The relative severity of at-risk observations for this contractor, as noted by designees	🛊 🛊 🛊 🛊 🛊 (66.3)	0.0	0.1	0.0	0.0
1	At-Risk per Inspection, Designee: Number of at-risk observations per inspection, as noted by designees	* * * * * (57.3)	0.4	5.2	0.8	0.0
1	Severity, Non-Designee: The relative severity of unsafe observations for this contractor, as noted by non-designees	****** (42.4)	0.0	0.1	0.0	0.0
1	At-Risk per Inspection, Non-Designee: Number of at-risk observations per inspection, as noted by non-designees	* * * * * (41.2)	0.3	2.0	0.4	0.0
1	Safe per Inspection: Number of safe observations per inspection	* * * * * * (38.0)	0.5	0.1	0.6	1.4
	Overall:	☆ ☆ ☆ ☆ ☆ (53.3)	-0.2	2.0	-0.0 -:	1.0

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Project Index Overview

- 1. Assess project risk based on participation and the safety and severity of at-risk conditions and behaviors.
- 2. Project Index information is displayed in the Project Summary Report as a percentile.
- 3. Clicking on the percentile will display details for each index component in a separate pop- up window.

Project	<u>Owner</u>	#Inspections	#Observations	# At-Risk	# Safe	<u>% Safe</u>	Index Perc	entile 🗸	Last Inspection	
Atomium 🏲	Giant Construction	126	11178	333	10845	97.0%	****	(100.0%)	02/24/2012 08:40 PM	[View Analysis]
<u>Bajrakli Mosque</u>	Giant Construction	63	2601	46	2555	98.2%	****	(96.4%)	02/24/2012 01:01 PM	[View Analysis]
CHUM-City Building	Giant Construction	51	1094	67	1027	93.9%	***	(92.9%)	02/24/2012 02:54 PM	[View Analysis]
Chrysler Building	Giant Construction	40	2585	116	2469	95.5%	****	(<u>89.3%</u>)	02/24/2012 04:03 PM	[View Analysis]
Bankers Hall Towers	Giant Construction	41	1476	63	1413	95.7%	****	(85.7%)	02/24/2012 05:29 PM	[View Analysis]
Capital Tower	Giant Construction	9	943	21	922	97.8%	****	(82.1%)	02/21/2012 11:45 AM	[View Analysis]
Dubailand	Giant Construction	8	549	4	545	99.3%	****	(78.6%)	02/24/2012 01:10 PM	[View Analysis]
Chateau de Boisclaireau	Giant Construction	24	1151	63	1088	94.5%	****	(<u>75.0%</u>)	02/24/2012 02:35 PM	[View Analysis]
Bank of China Tower	Giant Construction	34	2689	138	2551	94.9%	****	(71.4%)	02/24/2012 01:27 PM	[View Analysis]
El Escorial	Giant Construction	23	1075	28	1047	97.4%	****	(67.9%)	02/20/2012 06:11 PM	[View Analysis]
Donglin Temple	Giant Construction	15	1028	11	1017	98.9%	****	(<u>64.3%</u>)	02/19/2012 12:08 PM	[View Analysis]
Easter Road Stadium	Giant Construction	2	151	1	15	99.3%	****	(<u>60.7%</u>)	02/24/2012 10:16 AM	[View Analysis]
City Gate	Giant Construction	6	499	6	493	98.8%	****	(57.1%)	02/12/2012 09:54 AM	[View Analysis]
Brihadeeswara Temple	Giant Construction	3	81	2	79	97.5%	****	(53.6%)	02/21/2012 02:31 PM	[View Analysis]

w 🖻	Index Components 🛛	Index Percentile 🗵	Index				
··· ··	Index Components	index Percentile 🗆	Actual W	orst Average	Best		
1	Safe per Inspection: Number of safe observations per inspection	ቱ ቱ ቱ ቱ ቱ (96.4)	5.5	0.4 2.9	5.6		
1	At-Risk per Inspection, Non-Designee: Number of at-risk observations per inspection, as noted by non-designees	★ ★ ★ ★ ★ (89.5)	0.3	2.5 0.9	0.0		
1	At-Risk per Inspection, Designee: Number of at-risk observations per inspection, as noted by designees	☆ ☆ ☆ ☆ ☆ (88.9)	0.6	6.7 2.3	0.0		
1	Severity, Designee: The relative severity of at-risk observations for this project, as noted by designees	☆ ☆ ☆ ☆ ☆ (85.2)	0.0	0.2 0.0	0.0		
1	Severity, Non-Designee: The relative severity of at-risk observations for this project, as noted by non-designees	☆ ☆ ☆ ☆ ☆ (84.2)	0.0	0.0 0.0	0.0		
1	Difference in Severity: Quantifies the difference in how designees and non-designees view the severity of at-risk observations for this project	******* (77.8)	0.0	0.1 0.0	-0.0		
1	Difference in At-Risk per Inspection: Quantifies the difference in how designees and non-designees view at-risk observations for this project	☆☆☆☆☆ (72.2)	0.3	4.8 1.2	-1.3		
1	Participation: Number of inspections per week	🛊 🛊 🛊 🛊 🛊 (46.4)	2.8	0.8 6.6	41.8		
	Overall	삶 ☆ ☆ ☆ ☆ (78.6)	-7.5	1.2 -6.7	-39.8		

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Index Component Definitions

- Index Percentile: a value on a scale of one hundred that indicates the percent of a distribution (of your company's observers/contractors/projects) that is equal to or below it (a *percentile* of 95 is a score equal to or better than 95 percent of all scores). The index percentile is graphically represented by 1-5 stars—the more stars, the better the performance. Each star represents 20 percentile points.
- 2. **Designee**: the individual observer whose observation patterns have been designated by the company as the (benchmark/basis/reference point) for comparison to all other observers.
- 3. Difference Unsafe/Severity: Comparing designee observations against non-designee observations allows you to identify discrepancies that may exist among your observers and to focus resources on creating observation consistency. For example, the difference between designees and non-designees for the "severity" component quantifies the gap between how designees observe and record severe unsafe observations on their sites as compared to non-designees.
- 4. Weight (indicated by "W" in the first column): A factor multiplied to a number in a computation to represent that component's relative importance for the overall index. In addition, weights may be assigned to specific elements of the severity component to indicate the relative importance of different levels of severity such as low, medium, high and life-threat.
- 5. **Severity:** This component considers the range of unsafe observations recorded by an individual, accounting for the level of severity (low, medium, high and life-threat) and the weight (relative importance) that has been assigned to that level.
- 6. **Unsafe w/Comments:** Tracks the percentage of unsafe observations with comments. More comments will raise an observer's score.
- 7. All Safe Inspections: Tracks the number of inspections that are 100% safe. More 100% safe inspections will lower an observer's score.

Predictive Model Introduced

- 1. Identify your most at-risk projects/sites using predictive models that measure and compare your observations against thousands of observation metrics from sites that have historically produced claims.
- 2. Flags projects that are at risk for claims so that you can focus resources now on your most at-risk sites.
- **3.** Flagged projects are displayed in the **Project Summary Report** and are automatically updated once a month.
- 4. By clicking on the red flag, you can learn more information on why a site was chosen, and can provide feedback for your predictive modeling results, which we use to improve the accuracy and reliability of future results.

Project	Owner	#Inspections	#Observations	# Unsafe	# Safe	Index Per	entile:	Last Inspection	
Willie's Bar and Grill	Big Tex Steel Erection	10	375	10	365	****	(5.3%)	04/12/2007 04:55 PM	[View Analysis]
Andover Community Center 🏊 🔶	Ark Builders	36	578	253	325	****	(<u>10.5%</u>)	04/12/2007 04:37 PM	[View Analysis]
Downtown Shopping Center 🏴 🛛 🕇 🕇	<u>Wiser Company</u>	95	2403	396	2007	****	(<u>15.8%</u>)	04/13/2007 01:25 PM	[View Analysis
24 Hour Fitness	Pacific Contractors	20	740	33	707	****	(21.1%)	04/13/2007 02:59 AM	[View Analysis]
Columbus Chip Fab	Bolt Corporation	10	686	125	561	****	(26.3%)	04/16/2007 02:43 PM	[View Analysis]
175 Prudential Tower 🏓	DPR Construction, Inc.	20	402	47	355	****	(31.6%)	03/27/2007 05:45 PM	[View Analysis]