THE

Sweet Success

OF RISK MANAGEMENT

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Is your Safety Program Measuring Up?

Presented By:

Cindy Wilkerson, Executive Director – Redwood Empire Schools Insurance Group

Maria Brunel, Senior Vice President, Director of Risk Control Services – Poms & Associates

Ariel Jenkins, Assistant Vice President, Risk Services – Safety National

Tom Strasburger, Vice President, Strategic Alliances - PublicSchoolWORKS

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Safety Measurement Sentiment and Challenges

"No news is good news."

"It didn't work nothing happened."

How does your employer demonstrate their commitment to Safety?

- Do you encourage reporting of safety concerns?
- Are safety concerns tracked until resolved?

How are you measuring what it takes to achieve the desired outcomes?

- Outcome Metrics – Typically, we measure the lack of safety

- Process Metrics – Measures what it takes to get outcomes

Premise of the Loss Stream

Measure and Address Risky Acts and Conditions that Ultimately lead to $Losses.

Direct safety efforts resources upstream to reduce cost and impact cost further down the loss stream

Unsafe Acts and Conditions

The Loss Stream

Hazard
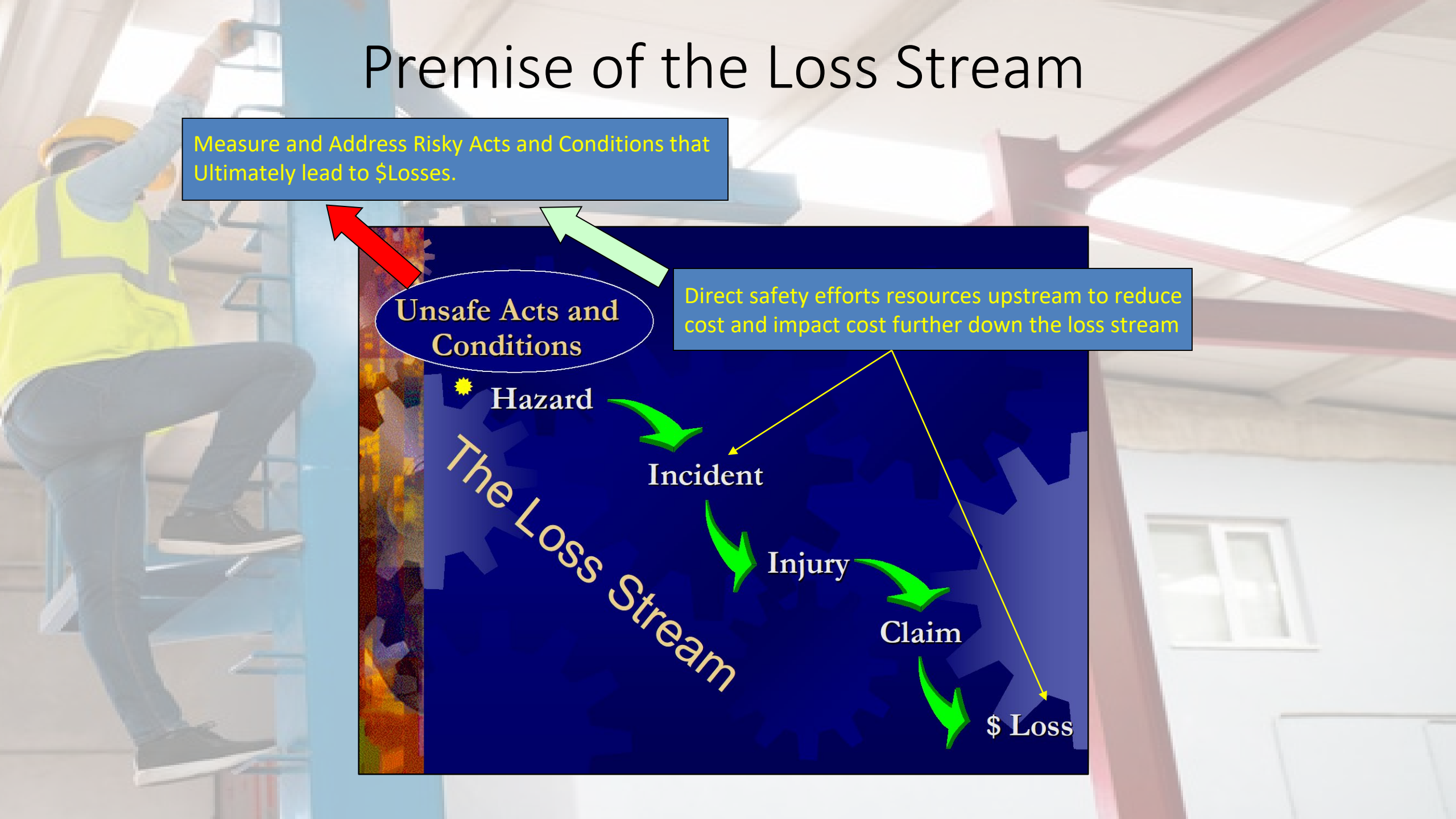
Incident

Injury

Claim

$ Loss

Examples of Safety Program Metrics

- % Completion on Trainings

- Safety Assessment/Audit Scores

- Number of Hazards corrected

- Correlate the above areas to Outcome Metrics Year-to-Year (injury frequency rates, DART rate, incurred claims costs, etc.)

Spearman's Rank Correlation Coefficient

Correlation between
Accident Rate per Staff Member
and
Compliance/Safety Tasks
Completed 2019-2021

0.70 Very strong positive relationship

Districts	Accident Rate per Staff Member Rank 2019-2021	Compliance/Safety Tasks Completed Rank 2019-2021
District 19	1	1
District 8	4	2
District 17	2	3
District 9	1	4
District 6	3	5
District 4	10	6
District 1	9	7
District 14	6	7
District 11	12	8
District 20	13	9
District 16	8	10
District 15	7	11
District 3	14	12
District 13	11	12
District 18	5	12

Risk Pools – "Rank and Categorize Your Members"

- This will help you manage and service your members more effectively
- Transparency
- Clarifies Best Practices (needs-based)
- Can influence members within the pool to collaborate
- Helps allocate resources
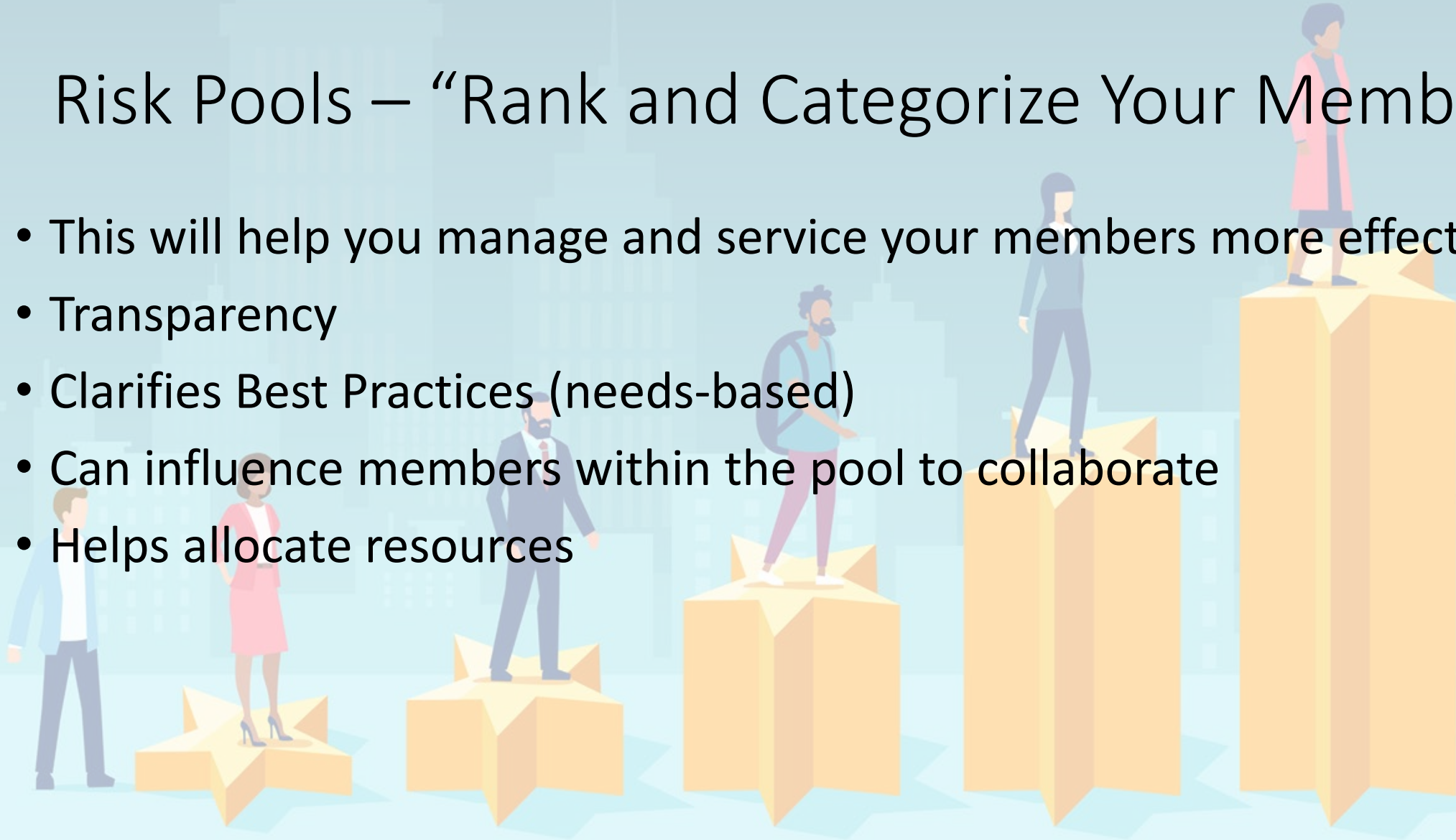
Emerging Risks and Leveraging Technology

- "Data is everywhere. We can use technology to inform us of incidents/risks we otherwise wouldn't know or find out too late."

- Asset Tags for property and equipment

- Useful for leading indicators of emerging risks and risk under the surface such as ASM
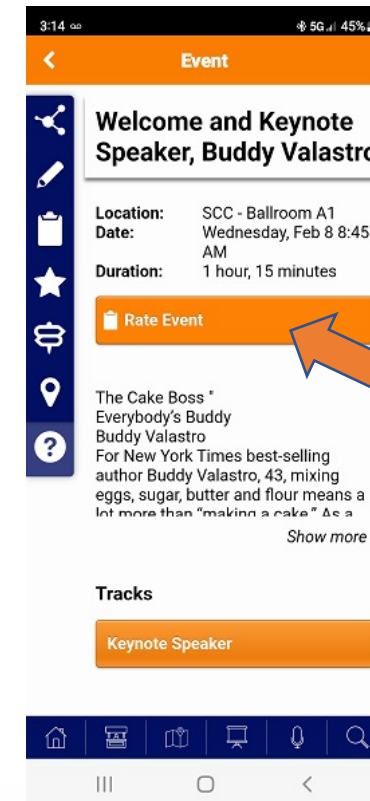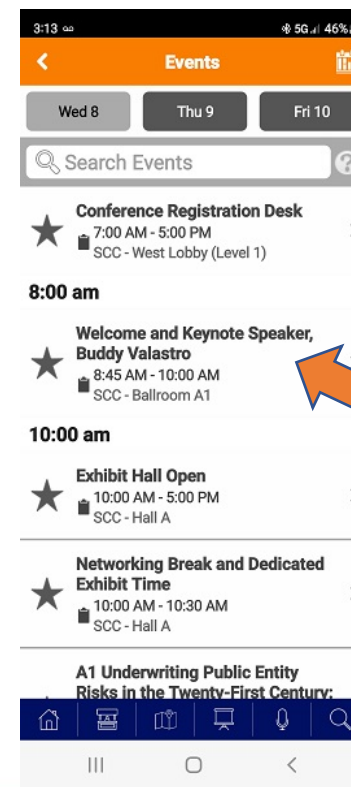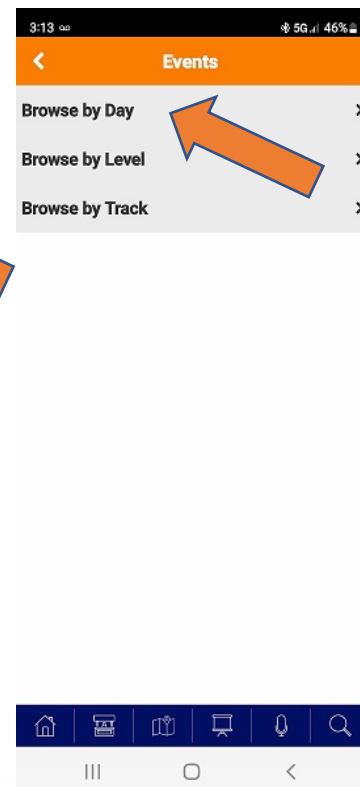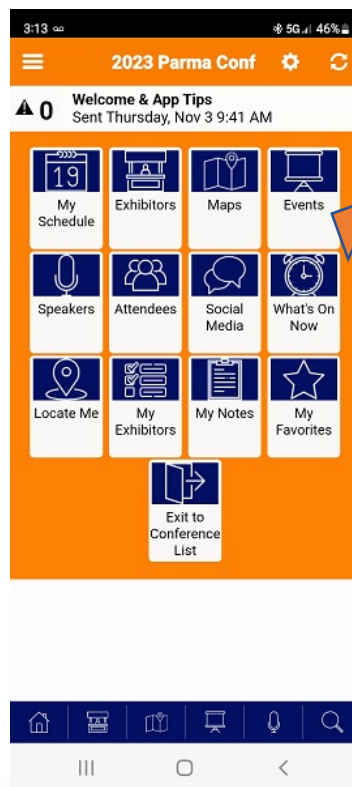
Proactively and Confidently show the progress and positive results of your Safety Program Efforts

- This will put you in a positive light with your insurers and others that have a stake in your success.

Complete Session Surveys on the App

Find the App, Click on <u>Events</u>, Click on <u>Browse by Day</u>, Click on the <u>Specific Session</u>, Click on <u>Rate Event</u>.

Measuring Return on Investment in Risk Control
Formula Sheet

Forecasting Methods

	A	B	C
1		Incurred Losses	Year
2		$ 1,000,023	2006
3		$ 987,000	2007
4		$ 990,520	2008
5		$ 1,018,523	2009
6		$ 895,423	2010
7		$ 1,053,267	2011
8		$ 1,023,000	2012
9		$ 998,562	2013
10		$ 942,300	2014
11	=FORECAST(C11,B2:B10,C2:C10)	$ 981,805	2015
12		4.2%	Increase from 2014 to 2015

Simple ROI Risk Control Measures

Basic ROI = (Gain from Investment-Cost of Investment)/Cost of Investment

Payback Period (In Years) = Cost of Project/Annual Cash Inflows

% Change = (New Value – Old Value)/ Old Value

Ariel Jenkins

ariel.jenkins@safetynational.com
(314) 692-1385

Formula Breakdown for NPV, IRR, and MIRR

	A	B	C
1	Year	Required Return	12%
2	2015	2015 Cash Outlay	$ (50,000)
3	2016	2016 Cash Inflow	$ 48,500
4	2017	2017 Cash Inflow	$ 36,955
5	2018	2018 Cash Inflow	$ 26,364
6	2019	2019 Cash Inflow	$ 16,625
7	2020	2020 Cash Inflow	$ 7,646
		NPV	$ 56,432.92
		IRR	68%
		MIRR	30%

NPV= NPV(C1,C3:C7)+C2

IRR= IRR(C2:C7)

MIRR = MIRR(C2:C7,C1,C1)

Ariel

Jenkins

ariel.jenkins@safetynational.com
(314) 692-1385

Pearson's Correlation

	A	B	C
1	Quarter	Safety Audit Scores	Employee Retention
2	1st - 2012	68%	$ 0.55
3	2nd - 2012	70%	$ 0.60
4	3rd - 2012	72%	$ 0.62
5	4th - 2012	75%	$ 0.63
6	1st - 2013	77%	$ 0.59
7	2nd - 2013	79%	$ 0.60
8	3rd - 2013	81%	$ 0.61
9	4th - 2013	82%	$ 0.58
10	1st - 2014	83%	$ 0.70
11	2nd - 2014	84%	$ 0.68
12	3rd - 2014	86%	$ 0.81
13	4th - 2014	88%	$ 0.85
14	Very Strong Positive Correlation	0.751312348	
15	Formula	=CORREL(B2:B13,C2:C13)	

Correlation Scale Range

If r = +.70 or higher Very strong positive relationship
+.40 to +.69   Strong positive relationship
+.30 to +.39   Moderate positive relationship
+.20 to +.29   weak positive relationship
+.01 to +.19   No or negligible relationship
-.01 to -.19   No or negligible relationship
-.20 to -.29   weak negative relationship
-.30 to -.39   Moderate negative relationship
-.40 to -.69   Strong negative relationship
-.70 or higher Very strong negative relationship

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Spearman's Rank Correlation Coefficient

	A	B	C	D	E	F
1			Operation	Safety Assessment Score Rank	Frequency Rate of Injuries	Severity (Cost Per Claim) Rank
2			F	1	3	2
3			H	2	1	3
4			F	3	2	1
5			C	4	5	9
6			B	5	4	4
7			I	6	8	6
8			E	7	10	10
9			A	8	6	8
10			J	9	7	5
11			G	10	9	7
12		Spearman's Rank Correlation Coefficient				
13	=CORREL(D2:D11,E2:E11)	Frequency Rate of Injuries Correlation to Safety Audit Score	0.82	Very strong positive relationship		
14	=CORREL(D2:D11,F2:F11)	Severity (Cost Per Claim) Rank Correlation to Safety Assessment Score	0.60	Strong positive relationship		

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