# Measure and monitor the intangible asset; *team communication skills.*

I/ITSEC - Orlando USA
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Presentation by Conor Mc Kenna

Co-founder,CEO

- **State of the art:** Subjective assessment of communication skills.

- **Our Insights process;** using speech signal data.

- **Case study:** Irish Air Corps

- **Training impact:** How can it positively impact your high performance teams?
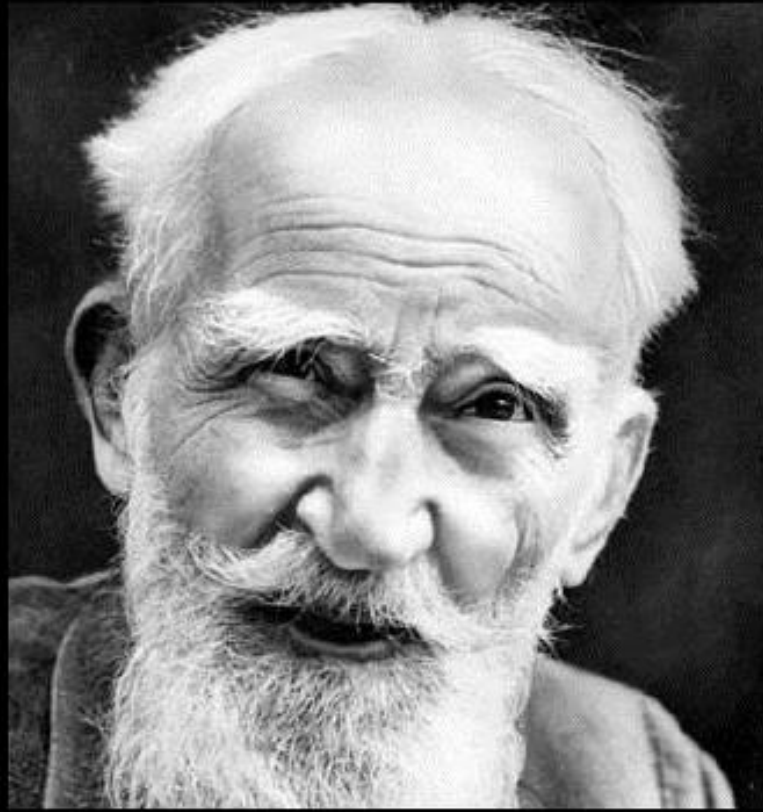
The single biggest problem in communication is the illusion that it has taken place.
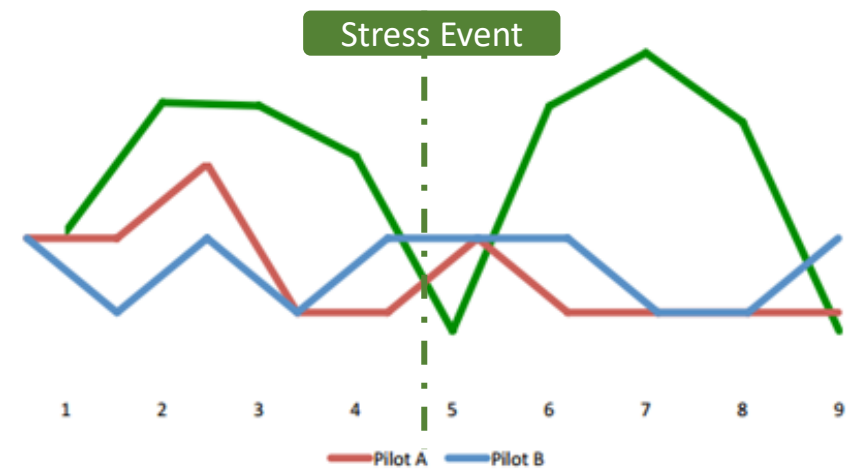
George Bernard Shaw

Instructor generated CRMI data alone is unreliable….

Research undertaken July 2015 at UK crew training facility; With assistance of pilots and instructors from leading European airline.

Session 2: Comparison

Stress Event

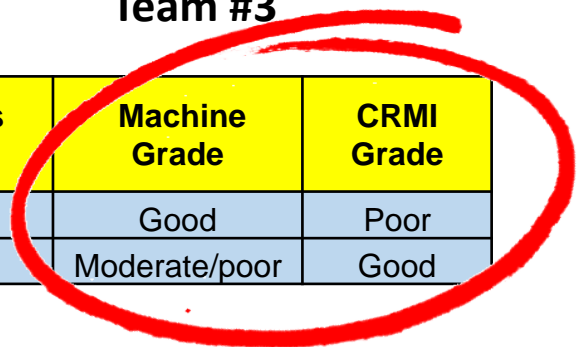**Session 3: Comparison**

Stress Event

Pilot A   Pilot B

Pilot A   Pilot B

Machine Score
CRMI Score
CRMI Score

Team #2

Team #3

TEAM	Communication effectiveness	Accommodation levels	Speak-Listen Quotient	Overlap	Comms Range	Machine Grade	CRMI Grade
2	.56	54/46	75/25	34%	Narrow	Good	Poor
3	.41	72|28	77/23	29%	Broad	Moderate/poor	Good

Comprehensive lab to market project

ENGAGE - MEASURE - STANDARDISE

Our Insights Process

BRIEFING AND TASK ZONE...
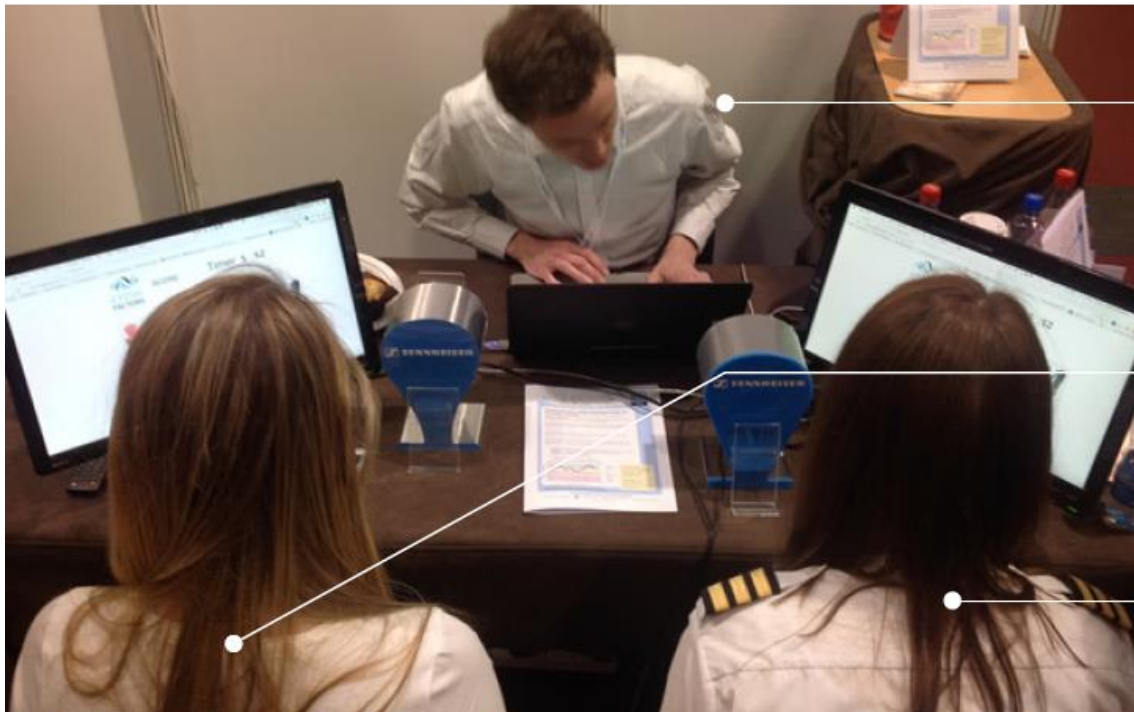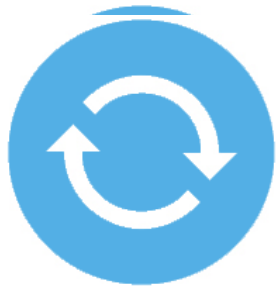

SERIOUS GAME
- **2 min brief**
- **10min task**
- **Collaborative task with focus on team communications.**
- **Decision making required.**
- **Some planned stress points introduced.**

ENGAGE - MEASURE - STANDARDISE

LEARNING FOCUS
- **Communications**
- **Leadership**
- **Adaptability**
- **Teamwork**
- **Resilience**

Energy_std_T	F0_median_S	F0_std_SIG_A	Energy_medi	Energy_std_S	F0_median_S	F0_std_SIG_E
0.7	57.6969	67.6483	73.3476	28.0304	42.3031	32.3517
-0.371429	60.0285	69.1853	51.6947	29.6737	39.9715	30.8147
0.257143	53.0326	59.9687	54.1554	29.2997	46.9674	40.0313
-0.0857143	55.9941	60.5519	56.5886	34.0055	44.0059	39.4481
0.942857	55.4627	64.2987	64.7358	42.893	44.5373	35.7013
0.257143	50.8427	64.5024	36.6595	42.1923	49.1573	35.4976
0.771429	49.4306	55.2378	48.9035	26.1823	50.5694	44.7622
0.885714	39.9615	56.1056	46.107	29.4184	60.0385	43.8944
10.5438	10.8578	56.8226	32.0454	12.5	13.3333	12.0833
						11.25
						8.33333
						3.75
0	0	0	44.0239	7.08333	15.8333	2.91667

Speech signal data is analysed and objective team performance metrics are generated; for use in an evidence based debrief.

DEBRIEFING ZONE WITH ENGAGING PERFORMANCE DATA

crew FACTORS
performance metrics

CREWFACTORS PERFORMANCE METRICS ENGAGE PARTICIPANTS.

Science based and complement current training methods.

POWERED BY VOCAVIO

ENGAGE - MEASURE - STANDARDISE

**With kind permission of
GOC Irish Air Corps,
Gen. Paul Fry**

3mins >>

7mins >>

We use short simulations that require team decision making; under moderate pressure.

Comms	0.41
Balance	81/19
Speak/Listen	62/38
Overlap	7%
Grade	Poor

Operational Unit XYZ – Standards Table

CREW ID	Role	Comms	Balance A/B	Speaking/Listening	Overlap	CrewFactors Grade
H	Pilots	64	46/54	70/30	5	Good/Excellent
G	Pilots	62	56/44	88/12	8	Good/Excellent
B	Crew	62	87/13	61/39	7	Good/Excellent
A	Pilots	57	52/48	72/28	11	Good
D	Crew	56	70/30	65/35	7	Good
I	Crew	54	63/37	64/36	4	Good
C	Crew	49	63/37	77/23	7	Moderate
E	Pilots	47	45/55	74/26	3	Moderate
F	Pilots	46	59/41	72/28	8	Moderate
j	Pilots	41	81/19	62/38	7	Poor
	Median	**54**	**61/39**	**70/30**	**6.6**	**Good**
	Optimal	65	50/50	70/30	20	

Impact on team performance…

Survey of command upgrade pilots

(10 days post CrewFactors training).

- 65% are **more aware** of applying effective team communication skills on the flight deck.

- 75% of crew **would recommend** the training experience (assess, coach, learn)

- 100% **used their CRM skills**.

- 100% **learned about** team dynamics, communicating under pressure and their own personal communications style.

- 85% **found it engaging** and fun.

- **Most utilised CRM skills** during scenarios; communication, teamwork, decision making and situational awareness.

Any questions?