Classification Matrix & Sensitivity Analysis for Validating Licensing Key indicator Systems
Technical Research Note (Fiene, 2017)

	1	2	3	5	7	8	10	Comments
A	1.00	1.00	1.00	0.00	0.00	1.00	1.00	Perfect
B	0.52	0.52	0.52	0.48	0.48	0.52	0.04	Random
C	0.71	0.96	0.94	0.04	0.29	0.84	0.70	False (-)
D	0.94	0.78	0.71	0.22	0.06	0.81	0.70	False (+)
E	------	0.00	0.00	1.00	------	0.00	------	False +100%
F	0.00	0.00	0.00	1.00	1.00	0.00	-1.00	False+-100
H	0.45	0.46	0.40	0.54	0.55	0.46	-0.08	Random

Measures:

1 = Sensitivity *TPR = TP / (TP + FN)*
2 = Specificity *SPC = TN / (FP + TN)*
3 = Precision *PPV = TP / (TP + FP)*
5 = False Positive *FPR = FP / (FP + TN)*
7 = False Negative *FNR = FN / (FN + TP)*
8 = Accuracy *ACC = (TP +TN) (P + N)*
10 = Correlation *((TP)(TN)) - ((FP)(FN)) / SQRT((TP + FP)(TP + FN)(TN + FP)(TN + FN))*

PP = Predicted Positive = CI+
PN = Predicted Negaive = CI-
TP= True Positive = KI+
TN = True Negative =KI-

	TRUE POSITIVE (TP)(KI+)	TRUE NEGATIVE (TN)(KI-)
PREDICTED POSITIVE (PP)(CI+)	++	+-
PREDICTED NEGATIVE (PN)(CI-)	-+	--

CI+/CI-/KI+/KI-

A = 25/0/0/25 – Perfect match between CI and KI.
B = 13/12/12/13 – Random matching between CI and KI.
C = 17/7/1/25 – KI+ x CI- (False-)
D = 17/1/7/25 – KI- x CI+ (False+)
E = 0/0/50/0 – KI- x CI+ unlikely
F = 0/25/25/0 - False + & - 100% unlikely
H = 20/24/30/26 – Random matching between CI and KI.