WEBVTT

1
00:00:00.025 --> 00:00:02.045
I'd like to move forward now to the next paper.

2
00:00:02.265 --> 00:00:05.125
Uh, I'm going to introduce Eric Kinney, who comes

3
00:00:05.125 --> 00:00:08.325
to us from the FAA, where he's a flight test, uh,

4
00:00:09.005 --> 00:00:10.885
supervisory technical advisor.

5
00:00:11.695 --> 00:00:14.635
Uh, his background, uh, originally started in, uh,

6
00:00:14.815 --> 00:00:17.775
Cessna aircraft, uh, where he is moved

7
00:00:17.775 --> 00:00:19.735
through multiple positions from, uh,

8
00:00:19.735 --> 00:00:22.335
flight test performance engineer to flight test engineer

9
00:00:22.475 --> 00:00:23.735
to copilot to pilot.

10
00:00:24.975 --> 00:00:28.475
And then he moved on to Ergen, followed by the, uh,

11
00:00:28.685 --> 00:00:31.695
employment at the FAA, where he's currently,

12
00:00:32.535 --> 00:00:35.825
he's got an undergraduate degree from Emory, Emory Riddle,

13
00:00:36.125 --> 00:00:39.665
as well as a master in science from, uh, Emory Riddle.

14
00:00:40.365 --> 00:00:44.345
So, with that, uh, Eric, I'd like to have you produ

15
00:00:44.405 --> 00:00:47.185
or, uh, present your flight test,

16
00:00:47.385 --> 00:00:50.785
CRMA dedicated approach to training paper.

17
00:00:50.835 --> 00:00:51.835
Thank you.

18
00:00:53.785 --> 00:00:55.115
Very good. Thanks for having me today.

19
00:00:55.415 --> 00:00:58.635
Um, let me get into presentation mode here.

20
00:01:01.625 --> 00:01:06.255
There we go. And, uh, yeah, thanks for having me today.

21
00:01:06.475 --> 00:01:08.015
Um, so we're gonna, uh,

22
00:01:08.015 --> 00:01:11.415
dive into a very specific small piece of, um,

23
00:01:11.755 --> 00:01:12.775
safety promotion.

24
00:01:13.715 --> 00:01:15.095
And I'm gonna click through some

25
00:01:15.095 --> 00:01:16.415
of the obligatory slides here.

26
00:01:17.195 --> 00:01:18.335
Uh, agenda for the day.

27
00:01:18.445 --> 00:01:20.015

Some of the things we're gonna talk about.

28
00:01:20.375 --> 00:01:22.695
A lot of my presentation today is gonna focus

29
00:01:23.395 --> 00:01:26.575
on the course development piece and, uh, some trial runs,

30
00:01:26.755 --> 00:01:29.095
and then, uh, what our views are for future state.

31
00:01:31.145 --> 00:01:32.925
So I'm sure we're gonna see, uh,

32
00:01:32.925 --> 00:01:34.485
several versions of this diagram.

33
00:01:34.705 --> 00:01:36.485
We already saw one earlier from Rod.

34
00:01:37.065 --> 00:01:41.685
Um, since today's our focus is on the safety promotion, uh,

35
00:01:41.685 --> 00:01:44.685
pillar of SMS, uh, I do want to

36
00:01:45.225 --> 00:01:47.005
depart from my notes here a little bit

37
00:01:47.585 --> 00:01:49.645
and, uh, point out one of the bullets

38
00:01:49.645 --> 00:01:50.925
that I have there on the right side

39
00:01:50.925 --> 00:01:52.565
that we haven't really talked much about today.

40
00:01:52.585 --> 00:01:54.805
But I think Flight Test Safety Committee does a really good

41
00:01:54.825 --> 00:01:57.765
job of, and that's an awards program, uh,

42
00:01:57.805 --> 00:01:59.005
with the Tony Vere Award.

43
00:01:59.505 --> 00:02:02.405
So, um, that, that's an important piece that I think needs

44
00:02:02.405 --> 00:02:04.125
to be mentioned and, and highlighted

45
00:02:04.345 --> 00:02:05.805
in everyone's SMS program.

46
00:02:05.905 --> 00:02:07.605
And hopefully those that are establishing

47
00:02:07.605 --> 00:02:09.885
or already have an SMS program out there have a really

48
00:02:10.215 --> 00:02:11.485
successful awards program.

49
00:02:12.865 --> 00:02:14.445
Uh, but beyond that, I am gonna be

50
00:02:14.685 --> 00:02:15.765
focusing on training today.

51
00:02:16.025 --> 00:02:20.595
And, and one specific piece in particular, um, for,

52
00:02:20.775 --> 00:02:23.795
for my organization within the FAA Flight test, uh, group,

53
00:02:24.295 --> 00:02:26.075
uh, we are very deep in the process

54
00:02:26.175 --> 00:02:28.675

of implementing a part five compliant, uh,

55
00:02:28.675 --> 00:02:29.835
voluntary SMS program.

56
00:02:30.555 --> 00:02:33.535
Uh, as part of that, and in parallel, we started several

57
00:02:34.055 --> 00:02:38.015
strategic teams, uh, that were launched internally, uh,

58
00:02:38.015 --> 00:02:40.215
to not only address SMS holistically,

59
00:02:40.835 --> 00:02:44.655
but also look at individual supporting areas like, like SRM.

60
00:02:44.715 --> 00:02:48.535
And it was already mentioned, uh, FA order 40 40 26 is going

61
00:02:48.535 --> 00:02:51.535
through a revision that's one of the teams, uh, a team

62
00:02:51.535 --> 00:02:53.535
around our safety equipment, uh,

63
00:02:53.555 --> 00:02:56.335
and requirements, uh, a communications group.

64
00:02:56.385 --> 00:02:58.855
Again, another key component is safety promotion,

65
00:02:59.025 --> 00:03:00.045
and then of course, training.

66
00:03:00.945 --> 00:03:04.245
Uh, I was a champion for our training team and still am.

67
00:03:05.305 --> 00:03:08.605
Uh, the team was com compiled of, uh, several pilots

68
00:03:08.605 --> 00:03:10.885
and FTEs, names that you'll certainly recognize.

69
00:03:11.385 --> 00:03:15.205
Uh, Ron McElroy, uh, Ray Gutter, John Ed Ano, uh,

70
00:03:15.205 --> 00:03:17.045
Mike Meto, Derek Barons.

71
00:03:17.045 --> 00:03:19.045
And we did have some fantastic, uh,

72
00:03:19.045 --> 00:03:22.405
administrative officer support from, uh, our ao, uh, one

73
00:03:22.405 --> 00:03:23.485
of our ao, Susan Haas.

74
00:03:24.845 --> 00:03:27.065
Uh, the training team identified several areas

75
00:03:27.445 --> 00:03:30.145
for improvement in our training program, both at,

76
00:03:30.285 --> 00:03:31.385
at a global level

77
00:03:31.445 --> 00:03:33.785
and specific level, not the least of which is

78
00:03:33.785 --> 00:03:36.785
that it'd be really valuable to take some

79
00:03:36.785 --> 00:03:40.545
of our larger courses and break them into pieces so

80
00:03:40.545 --> 00:03:43.265
that we can more deliberately focus on some areas.

81
00:03:43.965 --> 00:03:45.785

And one of those areas is CRM.

82
00:03:47.045 --> 00:03:48.945
Uh, for the next portion of the presentation,

83
00:03:49.045 --> 00:03:51.345
I'm gonna ask several questions on these slides.

84
00:03:51.525 --> 00:03:54.025
Not really intended to generate responses from you,

85
00:03:54.345 --> 00:03:55.465
although I'm sure some will,

86
00:03:56.125 --> 00:03:58.305
but more to get you thinking like we did about

87
00:03:58.525 --> 00:04:00.385
how we approached our CRM training.

88
00:04:02.555 --> 00:04:05.135
So how many people have taken a CRM course

89
00:04:05.265 --> 00:04:06.735
where they showed this video?

90
00:04:08.445 --> 00:04:11.335
Yep, me too. And, and we couldn't cut that out.

91
00:04:11.335 --> 00:04:12.975
We had to leave that. There's some staples

92
00:04:12.975 --> 00:04:14.375
that you just can't do without.

93
00:04:14.675 --> 00:04:16.175
So that's still in, don't worry.

94
00:04:18.735 --> 00:04:21.785
What about a course like this where you're stuck in a box

95
00:04:21.805 --> 00:04:24.705
for four hours with an instructor just throwing failure

96
00:04:24.835 --> 00:04:26.785
after failure after failure at you?

97
00:04:27.325 --> 00:04:30.225
You're elbows deep in checklist paper flying everywhere.

98
00:04:31.045 --> 00:04:34.305
Um, I'm sure we've all been a part of that course.

99
00:04:38.125 --> 00:04:41.585
So how do we really teach crews to work together as a team?

100
00:04:41.695 --> 00:04:43.705
Well, specifically with flight test,

101
00:04:43.975 --> 00:04:45.625
it's a very different animal

102
00:04:46.135 --> 00:04:49.785
than your typical operational flight where checklists

103
00:04:49.885 --> 00:04:51.465
and approach briefings

104
00:04:51.525 --> 00:04:54.345
and things like that are the most important piece.

105
00:04:55.205 --> 00:04:57.705
Um, flight test is very, very different

106
00:04:57.805 --> 00:04:59.985
as we are all distinctly aware.

107
00:05:01.805 --> 00:05:05.585
So how about, um, where you have an organization like,

108
00:05:05.655 --> 00:05:08.265

like the one I'm a part of in our current national model,

109
00:05:09.005 --> 00:05:12.745
uh, FA flight test has been significantly increasing our

110
00:05:12.745 --> 00:05:15.625
abilities to share resources across the

111
00:05:15.625 --> 00:05:16.785
country on project work.

112
00:05:17.445 --> 00:05:20.785
Uh, this results in several potential crew pairings

113
00:05:20.955 --> 00:05:23.185
where people may have never flown together before.

114
00:05:23.945 --> 00:05:25.845
Uh, not to mention the likelihood

115
00:05:25.845 --> 00:05:27.565
that an FAA crew has never flown

116
00:05:27.565 --> 00:05:28.925
with the given applicant crew.

117
00:05:29.435 --> 00:05:30.605
That happens all the time.

118
00:05:35.985 --> 00:05:38.285
The first question here is, is an important one.

119
00:05:38.305 --> 00:05:42.125
We, we approached it very deliberately to make it truly

120
00:05:42.705 --> 00:05:44.005
flight test centric.

121
00:05:44.725 --> 00:05:49.365
Um, we had actual flight cards, risk management review, um,

122
00:05:50.485 --> 00:05:52.325
CRM being the focus throughout.

123
00:05:54.055 --> 00:05:57.635
Uh, another important part about making, uh, the course

124
00:05:58.535 --> 00:06:00.795
really meaningful is to make it realistic.

125
00:06:02.355 --> 00:06:03.455
To make it realistic.

126
00:06:04.155 --> 00:06:06.655
Um, you can't just make it about the failures

127
00:06:06.955 --> 00:06:08.975
or the approaches or the checklists.

128
00:06:09.525 --> 00:06:11.775
It's all important. Uh, but the,

129
00:06:11.955 --> 00:06:14.295
but to get this training, you get that type

130
00:06:14.295 --> 00:06:16.175
of training in several other arenas.

131
00:06:16.475 --> 00:06:20.135
We really wanted a deliberate focus around flight test. CRM.

132
00:06:22.275 --> 00:06:24.935
Uh, the role of the instructor is another one. Don't worry.

133
00:06:24.995 --> 00:06:27.135
I'm gonna come back to that. And, uh,

134
00:06:27.135 --> 00:06:29.615
there are several other questions that you've seen already

135
00:06:29.615 --> 00:06:31.295

that I'm gonna come back to in more detail.

136
00:06:37.155 --> 00:06:40.055
So, sorry about the sound of freedom in the background here.

137
00:06:40.115 --> 00:06:42.335
I'm on, uh, departure at Oceania.

138
00:06:44.195 --> 00:06:46.775
Um, we already said we wanted

139
00:06:46.775 --> 00:06:48.455
to make this a flight test centric class.

140
00:06:50.395 --> 00:06:53.335
So, um, to make it really valuable and realistic,

141
00:06:53.555 --> 00:06:54.975
and not just flying around,

142
00:06:54.995 --> 00:06:57.175
but actually executing a test mission.

143
00:06:58.115 --> 00:07:00.135
So then we had to decide what mission.

144
00:07:01.395 --> 00:07:03.495
Um, these were several questions

145
00:07:03.495 --> 00:07:05.295
that the team en endeavored to answer.

146
00:07:05.435 --> 00:07:07.815
So we're gonna circle back here in just a second, including

147
00:07:07.815 --> 00:07:11.015
that first one about the level of crew that you trained for.

148
00:07:15.355 --> 00:07:17.575
So, wouldn't it be better if a course started out

149
00:07:17.575 --> 00:07:20.655
with several people saying, so there I was, yeah.

150
00:07:20.655 --> 00:07:21.975
Sorry, turbo, I couldn't help myself.

151
00:07:25.545 --> 00:07:26.885
And then became, so here we are.

152
00:07:28.555 --> 00:07:31.495
So rather than a traditional ground school lecture, uh,

153
00:07:31.495 --> 00:07:33.775
where wouldn't it be better if we started

154
00:07:33.775 --> 00:07:38.145
with personal stories, relatable experiences, um,

155
00:07:38.165 --> 00:07:41.105
things like that will always make lessons more meaningful

156
00:07:41.175 --> 00:07:43.545
with longer lasting results and more memorable.

157
00:07:44.545 --> 00:07:47.045
But then we wanted to facilitate those stories becoming,

158
00:07:47.145 --> 00:07:49.725
so here we are, meaning here we are together today.

159
00:07:50.355 --> 00:07:51.965
What did we experience together?

160
00:07:52.455 --> 00:07:55.525
Those shared experiences will boost the value even higher.

161
00:07:55.785 --> 00:07:57.805
So that was one of the really key points

162
00:07:58.465 --> 00:07:59.805

of the course we developed.

163
00:08:04.495 --> 00:08:05.835
So the where, so we're gonna,

164
00:08:05.885 --> 00:08:07.155
we're gonna start building here,

165
00:08:08.675 --> 00:08:11.215
and, uh, we'll hit a few of the basics, the logistics,

166
00:08:11.215 --> 00:08:14.175
the stereotypical who, what, where, why, how.

167
00:08:14.875 --> 00:08:19.055
Um, so for us, within the FAA in Oklahoma City,

168
00:08:19.115 --> 00:08:21.015
we have a facility with several simulators

169
00:08:21.515 --> 00:08:24.615
and flight training devices ranging everything from, uh,

170
00:08:24.915 --> 00:08:26.215
non motion light airplanes

171
00:08:26.215 --> 00:08:28.495
and helicopters, all the way up to Level D Sims

172
00:08:29.075 --> 00:08:31.135
for the 7 37 and the A three 30.

173
00:08:32.155 --> 00:08:35.575
Um, for the start of this class, for the initial launch,

174
00:08:35.635 --> 00:08:36.855
we determined the seven three

175
00:08:36.855 --> 00:08:41.695
and the A three 30 were, um, the best fit for what we wanted

176
00:08:41.695 --> 00:08:42.855
to do in our class format.

177
00:08:44.285 --> 00:08:48.625
And what really emphasized this is when we saw some

178
00:08:48.625 --> 00:08:51.945
of the capabilities that this research facility had, um,

179
00:08:52.045 --> 00:08:54.705
within our own organization that we, many

180
00:08:54.705 --> 00:08:55.820
of us didn't even know about.

181
00:08:56.955 --> 00:08:58.295
Uh, and we'll come back to that.

182
00:08:58.355 --> 00:08:59.895
So you can see those shortly here.

183
00:09:00.865 --> 00:09:02.325
Um, the, when,

184
00:09:03.075 --> 00:09:05.125
when do we fit this into everybody's schedule?

185
00:09:05.485 --> 00:09:08.365
I think that's a, that's an important piece to highlight.

186
00:09:08.745 --> 00:09:11.965
Uh, it's always very difficult to try to schedule a group

187
00:09:11.965 --> 00:09:13.725
of people for training, uh,

188
00:09:13.725 --> 00:09:16.845
but it was actually probably one of the easiest pieces.

189
00:09:19.025 --> 00:09:22.925

Um, we already travel our folks to Oak City, uh,

190
00:09:22.985 --> 00:09:26.485
to work at CAMI for physiological and survival training.

191
00:09:27.185 --> 00:09:29.245
Um, it's on a recurring basis

192
00:09:29.435 --> 00:09:31.565
that training is typically two and a half days.

193
00:09:33.025 --> 00:09:37.125
And, um, what the course we're proposing for flight test,

194
00:09:37.285 --> 00:09:39.925
CRM added a day and a half to that travel week.

195
00:09:40.545 --> 00:09:42.685
And you'll see kind of a snapshot of what

196
00:09:42.685 --> 00:09:45.205
that week looks like a little bit later here in the slides.

197
00:09:46.255 --> 00:09:48.235
But this course would match the same initial

198
00:09:48.235 --> 00:09:49.275
and recurrence schedule,

199
00:09:50.095 --> 00:09:54.875
and, um, would have minimal travel time and, and impact.

200
00:09:55.295 --> 00:09:58.075
So it was determined to be, uh, the best path.

201
00:10:00.875 --> 00:10:02.655
So how do you build a CRM course

202
00:10:02.655 --> 00:10:05.495
that isn't like every other course you've ever taken?

203
00:10:06.235 --> 00:10:09.135
Uh, our, our approach quickly became hands-on.

204
00:10:09.595 --> 00:10:11.175
We wanted a hands-on exercise

205
00:10:11.665 --> 00:10:14.495
where we utilized mock certification, flights

206
00:10:14.995 --> 00:10:17.175
and crews got to practice all aspects

207
00:10:17.355 --> 00:10:18.615
of the day of flight effort.

208
00:10:19.215 --> 00:10:21.435
Uh, instead of the normal training sims

209
00:10:21.435 --> 00:10:24.675
or classroom lectures, uh, it was actually going

210
00:10:24.675 --> 00:10:28.075
through all the motions of a typical cert flight day.

211
00:10:33.935 --> 00:10:35.355
So, making the course realistic,

212
00:10:35.355 --> 00:10:38.185
if we're only gonna use a classroom in a sim, um,

213
00:10:38.285 --> 00:10:39.545
you gotta have the right people.

214
00:10:40.325 --> 00:10:43.825
You gotta have people that have the background, um,

215
00:10:44.055 --> 00:10:45.625
that have the creds, right, that,

216
00:10:45.625 --> 00:10:47.585

that was mentioned earlier, I think in Rod's

217
00:10:47.585 --> 00:10:49.265
presentation, rod and Tom.

218
00:10:50.085 --> 00:10:53.865
Um, so having the right people is key. The right tools.

219
00:10:54.645 --> 00:10:57.745
So multiple aircraft, we have two as part of this

220
00:10:57.815 --> 00:10:59.425
with full motion sims for now.

221
00:10:59.525 --> 00:11:02.585
The vision, of course, is more, uh, unfamiliar,

222
00:11:02.725 --> 00:11:04.105
we felt is actually best

223
00:11:04.105 --> 00:11:08.785
because, uh, unlike a lot of our manufacturing partners

224
00:11:08.785 --> 00:11:12.105
that we fly with a lot, we don't get to spend a lot of time

225
00:11:13.005 --> 00:11:14.545
in an individual model.

226
00:11:14.615 --> 00:11:17.305
Usually just about the time we're feeling really comfortable

227
00:11:17.305 --> 00:11:18.425
in something is when it's time

228
00:11:18.425 --> 00:11:19.585
to move on to the next project.

229
00:11:20.565 --> 00:11:22.265
So, uh, that unfamiliarity,

230
00:11:22.265 --> 00:11:24.785
that adaptability is a key component for us.

231
00:11:25.635 --> 00:11:28.535
Uh, having real test cards, a real risk assessment

232
00:11:28.555 --> 00:11:29.775
and risk management plan.

233
00:11:30.515 --> 00:11:34.095
Um, and planned routes, uh,

234
00:11:34.245 --> 00:11:36.655
execute the sorting just like you would a real test flight.

235
00:11:37.525 --> 00:11:40.305
So the information's provided to the students in advance.

236
00:11:41.165 --> 00:11:43.265
Uh, there's an actual pre-flight briefing

237
00:11:43.265 --> 00:11:46.865
where we follow the, uh, 40 40 26 briefing guide.

238
00:11:47.735 --> 00:11:49.435
We fly the flight, uh,

239
00:11:49.435 --> 00:11:52.475
have a really in-depth post-flight brief with some great,

240
00:11:52.945 --> 00:11:56.005
uh, opportunities, uh, to show lessons learned.

241
00:11:56.835 --> 00:11:59.455
And then a really key component for us is very limited

242
00:11:59.755 --> 00:12:02.215
or no randomly injected failures.

243
00:12:02.955 --> 00:12:05.615

And I'm gonna go into that a little bit more here shortly,

244
00:12:06.235 --> 00:12:07.495
but that one's really important.

245
00:12:07.755 --> 00:12:11.455
We didn't want to this to be the stereotypical SIM session.

246
00:12:11.845 --> 00:12:13.455
Like I said before, pitching failure

247
00:12:13.505 --> 00:12:16.615
after failure, we really wanted it to be valuable.

248
00:12:17.475 --> 00:12:20.575
So I'll highlight a couple of things there, um, as we go.

249
00:12:23.675 --> 00:12:25.495
So, right now, our, our library

250
00:12:25.635 --> 00:12:27.495
of profiles is a little shallow, uh,

251
00:12:27.495 --> 00:12:31.135
but we are still working on building additional options, uh,

252
00:12:31.195 --> 00:12:32.375
as much as possible.

253
00:12:32.905 --> 00:12:36.415
We've tried to keep the profiles independent of the type

254
00:12:36.475 --> 00:12:40.495
of aircraft being used, uh, and adaptable to many airframes.

255
00:12:40.515 --> 00:12:42.335
But especially when you start construct

256
00:12:42.895 --> 00:12:43.895
constructing flight cards,

257
00:12:44.555 --> 00:12:48.615
and in some cases the risk management plans, um, you have

258
00:12:48.735 --> 00:12:52.295
to identify speeds and altitudes and configurations.

259
00:12:52.955 --> 00:12:54.575
So at some point, we do have

260
00:12:54.575 --> 00:12:56.895
to bring the aircraft into the fold.

261
00:12:57.595 --> 00:13:01.335
But the overall structure of a profile we've tried to make,

262
00:13:01.555 --> 00:13:05.055
um, independent of, of a specific aircraft,

263
00:13:06.875 --> 00:13:10.575
um, that said, we've made some very deliberate decisions

264
00:13:10.745 --> 00:13:13.015
concerning the test cards and the risk management.

265
00:13:13.425 --> 00:13:15.495
Let's just say in many cases, they're not ideal.

266
00:13:16.475 --> 00:13:17.535
Uh, there are gaps

267
00:13:17.675 --> 00:13:21.095
and holes that, if not addressed, could cause some issues.

268
00:13:21.845 --> 00:13:23.825
Um, that's why I said earlier,

269
00:13:23.965 --> 00:13:26.625
the instructors really aren't there to be failure injectors,

270
00:13:26.855 --> 00:13:28.465

because sometimes the failures

271
00:13:28.465 --> 00:13:31.945
or abnormals become self-induced depending on

272
00:13:31.945 --> 00:13:33.425
how the profiles are executed.

273
00:13:34.275 --> 00:13:36.295
And that's really where the CRM

274
00:13:36.295 --> 00:13:39.335
and the crew interaction piece becomes a key component.

275
00:13:44.635 --> 00:13:47.415
So what's the real role of the flight instructor?

276
00:13:48.275 --> 00:13:49.415
Uh, there are lots

277
00:13:49.415 --> 00:13:52.295
of roles the instructor can take in this type of class.

278
00:13:52.475 --> 00:13:54.215
We probably touch on each one

279
00:13:54.215 --> 00:13:55.575
of the ones that I have listed here.

280
00:13:56.475 --> 00:14:01.055
Um, but really, our, our main role is out

281
00:14:01.055 --> 00:14:02.895
of the facilitator throughout the experience

282
00:14:02.895 --> 00:14:06.375
to keep the crews on task, to foster the discussions

283
00:14:06.875 --> 00:14:08.775
and emphasize the key learning points.

284
00:14:09.155 --> 00:14:11.495
We do touch all of them at one point

285
00:14:11.555 --> 00:14:12.975
or another that are listed there.

286
00:14:13.715 --> 00:14:17.815
But, um, really the key one is to facilitate the exercise.

287
00:14:19.355 --> 00:14:20.935
Uh, who are instructors? It's us.

288
00:14:21.555 --> 00:14:24.855
Um, we have a small cadre of, uh, flight test pilots

289
00:14:24.855 --> 00:14:27.375
and flight test engineers from within our organization

290
00:14:27.375 --> 00:14:28.815
that are gonna be teaching this course.

291
00:14:33.475 --> 00:14:35.615
So what crew composition do we train for?

292
00:14:35.675 --> 00:14:37.135
So we're gonna come back to that question.

293
00:14:37.195 --> 00:14:39.135
Do we train, pilot and co-pilot only?

294
00:14:39.795 --> 00:14:44.575
Uh, what about one onboard FTE test test director, maybe two

295
00:14:45.435 --> 00:14:49.055
or an onboard, uh, FTE test director and somebody in tm?

296
00:14:50.145 --> 00:14:52.905
Um, ultimately what we decided to do

297
00:14:53.885 --> 00:14:56.825

is we're focusing on, um,

298
00:14:57.205 --> 00:15:00.585
the onboard FTE test director and tm.

299
00:15:01.125 --> 00:15:04.145
Uh, we have the ability to do more than that in the cab,

300
00:15:04.485 --> 00:15:06.665
but quarters can get kind of cramped.

301
00:15:07.285 --> 00:15:10.105
Um, and we really felt like that the,

302
00:15:10.165 --> 00:15:12.905
the TM exercise was a really valuable component.

303
00:15:13.005 --> 00:15:15.265
So that's the direction we decided to go in.

304
00:15:18.745 --> 00:15:21.325
So the course content itself, how do we start?

305
00:15:21.465 --> 00:15:22.805
So the class kicks off

306
00:15:22.895 --> 00:15:27.005
after lunch, um, immediately following the conclusion

307
00:15:27.025 --> 00:15:29.885
of the survival course, uh, that we put our folks through.

308
00:15:30.515 --> 00:15:32.045
It's half a day of classroom time.

309
00:15:32.785 --> 00:15:37.605
Uh, we hit all the required stuff, uh, for logistics, uh,

310
00:15:37.665 --> 00:15:41.685
the end brief for the sim sim familiarity expectations

311
00:15:41.685 --> 00:15:44.285
of the course, uh, followed by the real meat

312
00:15:44.285 --> 00:15:46.845
of the classroom time, which is the discussion periods.

313
00:15:48.985 --> 00:15:51.365
Uh, the point here is that we really aren't trying

314
00:15:51.385 --> 00:15:52.765
to teach or lecture.

315
00:15:53.185 --> 00:15:55.765
Uh, we very purposefully didn't call it the lecture

316
00:15:55.765 --> 00:15:57.245
portion of, of the course.

317
00:15:58.025 --> 00:15:59.485
Uh, the overwhelming majority

318
00:15:59.485 --> 00:16:01.165
of our crew members have significant

319
00:16:01.165 --> 00:16:02.405
experience in flight test.

320
00:16:03.065 --> 00:16:05.165
Uh, and the ground portion here is really meant

321
00:16:05.165 --> 00:16:07.485
to capitalize on those experiences and stories

322
00:16:07.625 --> 00:16:09.325
and learn collectively as a unit.

323
00:16:12.855 --> 00:16:15.235
Uh, from there we go to two sim sessions.

324
00:16:15.335 --> 00:16:16.595

Uh, they'll be the next day.

325
00:16:17.955 --> 00:16:19.375
And, uh, the sessions are,

326
00:16:19.445 --> 00:16:21.775
each crew will get two sessions back to back.

327
00:16:22.195 --> 00:16:24.615
Uh, you switch aircraft, uh, at lunchtime.

328
00:16:26.645 --> 00:16:29.345
Uh, in general, our plan is to have two crews

329
00:16:29.345 --> 00:16:30.985
of four working at the same time.

330
00:16:31.325 --> 00:16:32.745
One crew in the seven three sim

331
00:16:33.125 --> 00:16:34.945
and the TM screens, uh,

332
00:16:34.945 --> 00:16:36.665
which you can see there in the picture on the right.

333
00:16:37.565 --> 00:16:40.505
And another crew, uh, in the A three 30 sim

334
00:16:40.615 --> 00:16:42.185
with separate TM screens.

335
00:16:42.845 --> 00:16:45.915
And you can see the type of environment there, uh,

336
00:16:46.105 --> 00:16:48.915
that we have the ability to capture and train with.

337
00:16:49.585 --> 00:16:52.045
Uh, the, the photo on the left is

338
00:16:52.605 --> 00:16:55.045
actually not an iPhone picture, uh,

339
00:16:55.045 --> 00:16:56.645
over the shoulder from the instructor.

340
00:16:56.995 --> 00:16:59.525
It's the actual, uh, recording camera

341
00:16:59.595 --> 00:17:03.445
that we have in the cab so that we can, uh, use that as part

342
00:17:03.445 --> 00:17:04.845
of our playback features.

343
00:17:10.735 --> 00:17:12.755
Oh, I think I skipped a slide.

344
00:17:15.745 --> 00:17:18.485
Let me back up here. There we go.

345
00:17:20.585 --> 00:17:22.925
All right. Uh, so debrief, uh,

346
00:17:22.925 --> 00:17:25.005
the debrief is, you know, is key.

347
00:17:25.665 --> 00:17:27.365
Uh, this is where many of the benefits

348
00:17:27.365 --> 00:17:28.725
of this course are gonna be realized.

349
00:17:28.945 --> 00:17:31.485
The plan for the debrief is

350
00:17:31.545 --> 00:17:34.685
to use the published 40 40 26, uh, checklist.

351
00:17:35.625 --> 00:17:37.885

Uh, use those items to spur conversation.

352
00:17:39.065 --> 00:17:42.165
Uh, many of the items are expected to be discussed, like

353
00:17:42.165 --> 00:17:43.765
how the test cards can be ordered

354
00:17:43.865 --> 00:17:45.685
or organized, better holes

355
00:17:45.715 --> 00:17:49.215
that people saw in the risk management plan, um,

356
00:17:49.635 --> 00:17:53.605
how more aircraft familiarity would've been beneficial, uh,

357
00:17:53.695 --> 00:17:55.565
along with potential holes in the

358
00:17:55.565 --> 00:17:56.605
test technique proficiency.

359
00:17:57.265 --> 00:18:01.525
Um, that's always a, a, a concern or an item to discuss,

360
00:18:01.525 --> 00:18:04.525
because as we all know, flight test is a perishable skill.

361
00:18:06.385 --> 00:18:08.485
So all this can be reinforced with some

362
00:18:08.485 --> 00:18:10.285
of the great tools we have at our disposal.

363
00:18:11.025 --> 00:18:12.645
And frankly, some of the holes

364
00:18:12.745 --> 00:18:14.285
and items that are mentioned in the

365
00:18:14.285 --> 00:18:15.765
debrief are very purposeful.

366
00:18:16.345 --> 00:18:18.085
Uh, that was part of the course design.

367
00:18:20.695 --> 00:18:23.995
So this screen is a screenshot of the playback video, uh,

368
00:18:23.995 --> 00:18:26.355
that we have available from the 7 37 sim.

369
00:18:26.375 --> 00:18:30.655
You can see that, um, we can view the crew actions.

370
00:18:30.875 --> 00:18:33.255
Uh, there is audio that goes along with it.

371
00:18:34.005 --> 00:18:36.345
Uh, we can see the indications on the PFD

372
00:18:36.345 --> 00:18:40.415
and the nd, the engine indications, the cast messages, um,

373
00:18:40.675 --> 00:18:42.415
flight control movements there in,

374
00:18:42.435 --> 00:18:44.175
in the lower right of the playback.

375
00:18:44.985 --> 00:18:47.085
Uh, we can also see the pilot's viewpoint

376
00:18:49.175 --> 00:18:50.875
and the view of the aircraft from

377
00:18:50.875 --> 00:18:52.195
outside there in the upper left.

378
00:18:52.895 --> 00:18:56.155

Uh, the instructors can make notes, uh, during the events

379
00:18:56.495 --> 00:19:00.115
of the flight, and we can actually fast forward, rewind,

380
00:19:00.175 --> 00:19:02.155
do whatever we need to to get directly to

381
00:19:02.155 --> 00:19:03.835
that event in this post-flight playback.

382
00:19:04.335 --> 00:19:06.065
So really, really valuable tool.

383
00:19:07.085 --> 00:19:10.625
Um, we did learn some lessons from our trial runs,

384
00:19:10.625 --> 00:19:12.745
which we'll talk about here in just a second.

385
00:19:15.045 --> 00:19:16.265
Uh, so this is, uh,

386
00:19:16.385 --> 00:19:18.385
a screenshot from the A three 30 playback.

387
00:19:18.965 --> 00:19:21.105
Um, you can see there are some differences.

388
00:19:21.105 --> 00:19:23.785
They're not identical. So as instructors, we need

389
00:19:23.785 --> 00:19:26.305
to be really cognizant of that, uh, to think about

390
00:19:26.545 --> 00:19:28.345
what we wanna capture in the briefings.

391
00:19:28.925 --> 00:19:31.385
Uh, the couple lessons learned that I wanted to focus on,

392
00:19:31.815 --> 00:19:33.585
that the trial runs really taught us,

393
00:19:33.685 --> 00:19:36.705
you can see this picture of the flight deck in the middle,

394
00:19:37.445 --> 00:19:38.705
um, is really dark.

395
00:19:39.575 --> 00:19:41.075
So we do have the ability

396
00:19:41.075 --> 00:19:42.595
to control the lighting in the sim.

397
00:19:43.255 --> 00:19:47.235
So the idea that, that we, uh, had to employ was

398
00:19:47.235 --> 00:19:49.395
to actually increase the lighting level in the sim

399
00:19:49.455 --> 00:19:51.995
so we can better see the crew interactions

400
00:19:51.995 --> 00:19:54.715
and the pilot actions, uh, throughout the flight.

401
00:19:55.095 --> 00:19:58.155
So it's a delicate balance of where to set it so that it's

402
00:19:58.205 --> 00:20:00.595
where we need it to be from an instructional standpoint,

403
00:20:00.855 --> 00:20:03.035
but not distracting to the crew in,

404
00:20:03.215 --> 00:20:04.315
in conducting the mission.

405
00:20:05.895 --> 00:20:09.555

Uh, another piece is, uh, the airplane noise.

406
00:20:10.055 --> 00:20:11.715
So, as we all know, in these sims,

407
00:20:11.715 --> 00:20:15.355
there is piped in aircraft noise, artificial aircraft noise.

408
00:20:16.095 --> 00:20:19.235
Um, our only audio capture for this course

409
00:20:19.375 --> 00:20:21.035
for playback is an area mic.

410
00:20:21.905 --> 00:20:24.685
So if you have the airplane noise dialed up too much,

411
00:20:24.905 --> 00:20:27.085
it really masks some of the conversations.

412
00:20:27.865 --> 00:20:31.565
So we have preset levels, uh, that we're gonna use, uh,

413
00:20:31.785 --> 00:20:35.165
in the course going forward to help us, uh, prevent that

414
00:20:35.385 --> 00:20:37.645
and allow us, uh, full benefit of the tools

415
00:20:37.645 --> 00:20:38.685
that we have at our disposal.

416
00:20:41.775 --> 00:20:43.315
Uh, an added benefit is

417
00:20:43.315 --> 00:20:44.795
that we can have additional crew members

418
00:20:44.895 --> 00:20:47.565
or observers present in the briefing room, uh,

419
00:20:47.565 --> 00:20:51.085
to observe real time what's happening in the flying crews,

420
00:20:51.585 --> 00:20:53.765
uh, for both, uh, simulators.

421
00:20:54.425 --> 00:20:57.405
So kind of a learn by watching type of situation.

422
00:20:58.075 --> 00:20:59.335
And you can see, um,

423
00:20:59.675 --> 00:21:02.735
big displays there in a conference room setting, uh,

424
00:21:02.735 --> 00:21:06.655
that we can use to as, uh, additional teaching aids.

425
00:21:08.795 --> 00:21:11.575
So the trial run, uh, the team started

426
00:21:11.605 --> 00:21:14.255
with course development on paper, then we transitioned

427
00:21:14.255 --> 00:21:15.975
to a full week of course development,

428
00:21:16.235 --> 00:21:18.335
taking those paper plans into the sims

429
00:21:18.335 --> 00:21:19.615
and testing out our scenarios.

430
00:21:20.365 --> 00:21:23.785
Uh, that extensive work was then put through a trial run as,

431
00:21:24.005 --> 00:21:26.305
as we're describing here on, on the slide.

432
00:21:27.145 --> 00:21:29.845

Uh, we took a full crew from an ongoing physiological

433
00:21:30.245 --> 00:21:32.285
survival recurrent course and asked 'em to stay a couple

434
00:21:32.285 --> 00:21:33.365
of days to work with us.

435
00:21:34.185 --> 00:21:37.525
And, uh, as we launched the course officially, uh,

436
00:21:37.665 --> 00:21:38.685
unlike the official course,

437
00:21:38.705 --> 00:21:40.925
we did not run the full ground school portion.

438
00:21:41.425 --> 00:21:45.525
We only accomplished the logistics and, uh, the tour and,

439
00:21:45.585 --> 00:21:47.845
and all the safety items of operating the sim.

440
00:21:49.445 --> 00:21:51.785
Uh, we also talked about course development

441
00:21:51.785 --> 00:21:52.985
with the trial run group.

442
00:21:54.045 --> 00:21:56.025
Uh, we then ran two different scenarios.

443
00:21:56.285 --> 00:21:57.305
Uh, one in each sim.

444
00:21:57.965 --> 00:22:00.345
Uh, we conducted the thorough post-flight briefs.

445
00:22:00.345 --> 00:22:02.865
We got a bunch of fantastic feedback.

446
00:22:03.485 --> 00:22:06.785
Um, a lot of this test card was bad.

447
00:22:06.785 --> 00:22:10.305
This risk management missed, missed this, uh, et cetera.

448
00:22:10.405 --> 00:22:14.225
We, we also got some feedback on things that we missed

449
00:22:14.525 --> 00:22:16.585
as part of the development or didn't anticipate.

450
00:22:17.125 --> 00:22:19.905
Uh, it was those areas where we really made changes

451
00:22:20.045 --> 00:22:21.105
to the course material.

452
00:22:21.845 --> 00:22:24.585
Uh, the, the test card was bad.

453
00:22:24.585 --> 00:22:27.865
The risk management plat was bad piece. We didn't change.

454
00:22:27.915 --> 00:22:29.105
Those were purposeful.

455
00:22:29.915 --> 00:22:32.475
Um, so, uh,

456
00:22:33.735 --> 00:22:36.075
we really loved getting that feedback

457
00:22:36.075 --> 00:22:40.275
because it re, it emphasized to us some of the tasks

458
00:22:40.275 --> 00:22:43.675
that we had put forth in this course, uh, we accomplished.

459
00:22:44.215 --> 00:22:47.355

But then the things that we missed were super valuable in

460
00:22:47.355 --> 00:22:50.275
making the course even better for as we launch it for,

461
00:22:50.375 --> 00:22:51.435
for all of our crews.

462
00:22:52.625 --> 00:22:54.965
Uh, overall, the feedback we received about the course on

463
00:22:54.965 --> 00:22:56.285
whole was really, really positive.

464
00:22:56.825 --> 00:22:59.285
So, off we went with implementation.

465
00:23:00.185 --> 00:23:04.145
Um, I glossed

466
00:23:04.145 --> 00:23:05.185
over this a little bit earlier.

467
00:23:05.685 --> 00:23:09.065
Uh, so here's kind of a, a snapshot of how the course, uh,

468
00:23:09.425 --> 00:23:12.145
structure works for us for our week in Oklahoma City now.

469
00:23:12.645 --> 00:23:17.585
Um, much of this launch happened at the onset of COVID-19.

470
00:23:18.525 --> 00:23:21.865
So the academy has, uh, been shut down, uh, throughout.

471
00:23:22.085 --> 00:23:25.145
So we've had many of our courses put on hold.

472
00:23:25.805 --> 00:23:29.065
Uh, and we have quite a backlog now of crews needing to get

473
00:23:29.065 --> 00:23:31.065
through this process and get caught up in training.

474
00:23:31.565 --> 00:23:33.905
But this is, uh, this is the look of,

475
00:23:34.205 --> 00:23:35.265
of our training program.

476
00:23:39.265 --> 00:23:40.725
So what's next? Um,

477
00:23:41.115 --> 00:23:43.685
working the course into the training cycle for our folks,

478
00:23:43.875 --> 00:23:46.085
obviously, uh, getting caught up

479
00:23:46.085 --> 00:23:50.415
because of this challenging time that we've all been facing.

480
00:23:51.275 --> 00:23:52.975
Um, so getting a, getting folks

481
00:23:52.975 --> 00:23:54.735
through this is definitely a priority.

482
00:23:55.275 --> 00:23:57.535
And then, uh, as we progress through that,

483
00:23:57.545 --> 00:23:59.295
developing additional scenarios.

484
00:23:59.295 --> 00:24:00.695
So the course doesn't become stale.

485
00:24:00.695 --> 00:24:03.095
We want it to be valuable long term,

486
00:24:03.275 --> 00:24:06.415

and the only way to do that is to con, continue

487
00:24:06.415 --> 00:24:10.905
to make it new, uh, future state.

488
00:24:11.125 --> 00:24:13.905
Uh, the academy does have the two full motion sims,

489
00:24:13.905 --> 00:24:15.585
but they also have training devices

490
00:24:15.965 --> 00:24:19.785
for a beach barren citation Mustang, uh, EC 1 35 helicopter.

491
00:24:20.705 --> 00:24:23.325
Uh, we'd love to eventually be adaptable enough

492
00:24:23.675 --> 00:24:26.605
that the course could be given on demand in almost any

493
00:24:26.605 --> 00:24:27.725
simulator platform,

494
00:24:28.425 --> 00:24:32.165
but some of those really excellent, uh, capabilities

495
00:24:32.195 --> 00:24:36.205
that we talked about with the playback and the audio and,

496
00:24:36.465 --> 00:24:38.885
and all those items, the TM capability,

497
00:24:39.385 --> 00:24:43.525
we wouldn't have in your stereotypical, um, flight safety

498
00:24:43.585 --> 00:24:44.925
or semi flight simulator.

499
00:24:45.385 --> 00:24:48.045
So that would definitely be something we'd have to consider.

500
00:24:48.585 --> 00:24:52.365
Um, and it would be a loss as far as the overall, uh,

501
00:24:52.495 --> 00:24:53.525
scope of the program.

502
00:24:54.385 --> 00:24:57.925
But, um, still I think there could be some real value in,

503
00:24:58.145 --> 00:25:00.645
in executing it in different sims.

504
00:25:01.435 --> 00:25:06.255
Um, another option is, uh, some of the applicants we work

505
00:25:06.255 --> 00:25:09.095
with have really advanced, uh, integrated test labs

506
00:25:09.315 --> 00:25:12.015
or crew error labs that have, uh,

507
00:25:12.015 --> 00:25:13.735
similar capabilities with playback.

508
00:25:14.195 --> 00:25:16.775
So there could be some great collaborative opportunities

509
00:25:16.785 --> 00:25:18.655
there for training between the FAA

510
00:25:18.655 --> 00:25:21.895
and our, our manu major manufacturers that we deal with, uh,

511
00:25:21.895 --> 00:25:23.015
using that technology.

512
00:25:26.495 --> 00:25:27.535
I think that's pretty much it.

513
00:25:27.835 --> 00:25:30.815

Um, I ha I included my email address there at the

514
00:25:30.815 --> 00:25:31.975
bottom of the question slide.

515
00:25:32.035 --> 00:25:33.095
So if we don't get a chance

516
00:25:33.095 --> 00:25:35.495
to answer everybody's questions today, I'm happy

517
00:25:35.495 --> 00:25:36.735
to take those offline.

518
00:25:37.475 --> 00:25:40.015
If I don't answer you right away, don't be offended.

519
00:25:40.195 --> 00:25:43.175
I'm not ignoring you, uh, following the workshop today.

520
00:25:43.455 --> 00:25:44.695
I am taking some leave.

521
00:25:45.195 --> 00:25:47.695
So, um, I'll leave you guys with that

522
00:25:47.795 --> 00:25:49.895
and I'm happy to answer any questions that you have.

523
00:25:52.165 --> 00:25:54.695
Okay, Eric. Um, coming from Rod,

524
00:25:55.115 --> 00:25:56.695
how do you handle repositioning

525
00:25:56.695 --> 00:25:59.415
to say time versus a, a real flight?

526
00:26:00.615 --> 00:26:02.355
So there is no repositioning.

527
00:26:02.375 --> 00:26:05.155
We do it as a real flight take off to landing.

528
00:26:05.425 --> 00:26:06.755
It's a two hour sortie

529
00:26:06.945 --> 00:26:09.035
with flight test cards, missions, the whole deal.

530
00:26:11.115 --> 00:26:13.285
Okay. And, uh, Robert would like

531
00:26:13.285 --> 00:26:15.125
to know if you're interested in participants from other

532
00:26:15.125 --> 00:26:16.165
federal organizations?

533
00:26:18.115 --> 00:26:20.085
Yeah, so, um, as I said,

534
00:26:20.085 --> 00:26:23.485
right now we have a pretty massive backlog

535
00:26:23.985 --> 00:26:25.765
and a very small instructor pool.

536
00:26:25.905 --> 00:26:30.725
So, um, I'd say in the very near term, um, we really need

537
00:26:30.725 --> 00:26:32.645
to focus on getting our folks through the course,

538
00:26:33.145 --> 00:26:36.965
but I definitely future state, uh, envision, uh,

539
00:26:37.165 --> 00:26:39.045
bringing other organizations in, uh,

540
00:26:39.105 --> 00:26:40.365

to participate in our course

541
00:26:40.505 --> 00:26:43.005
or maybe even taking it on the road, like I said, to,

542
00:26:43.385 --> 00:26:44.885
to work with applicants and,

543
00:26:45.065 --> 00:26:48.205
and potentially do, um, uh, combined classes.

544
00:26:48.545 --> 00:26:50.565
So I would love to do that, uh, down the road.

545
00:26:52.945 --> 00:26:55.745
Question from Dan. This training, uh, appears to be more

546
00:26:55.745 --> 00:26:58.145
of a how to properly conduct certain flight tests.

547
00:26:58.685 --> 00:27:01.225
If you're not injecting failure failures,

548
00:27:01.225 --> 00:27:03.465
how are you addressing flight test crm?

549
00:27:04.655 --> 00:27:07.545
Yeah, so, um, it's a lot of the interaction

550
00:27:07.775 --> 00:27:11.865
between the test directors, the TM and, uh, the air

551
00:27:11.965 --> 00:27:14.345
and the, the flight deck crew, the pilots.

552
00:27:14.805 --> 00:27:18.905
Um, so just executing a test mission is a dance in itself.

553
00:27:18.905 --> 00:27:21.185
Working your way through flight cards, you may

554
00:27:21.185 --> 00:27:22.505
or may not have ever seen before

555
00:27:22.725 --> 00:27:24.625
or have only seen in short order.

556
00:27:25.325 --> 00:27:28.825
Um, as we've all experienced, some flight cards are really,

557
00:27:28.825 --> 00:27:32.185
really good and ordered really well, and some really aren't.

558
00:27:32.895 --> 00:27:37.555
And, uh, the error injection is built into those cards.

559
00:27:38.495 --> 00:27:40.635
Um, so you,

560
00:27:40.735 --> 00:27:43.275
you don't go the whole flight without any abnormals

561
00:27:43.275 --> 00:27:44.435
or errors, let me say that.

562
00:27:46.255 --> 00:27:48.715
Do you have a specific pass fail criteria?

563
00:27:49.885 --> 00:27:51.305
Um, no, there really isn't.

564
00:27:51.405 --> 00:27:53.705
Uh, it, it's not a pass fail type of class.

565
00:27:53.935 --> 00:27:55.625
It's a, it's a participation class,

566
00:27:55.925 --> 00:27:59.025
and there's no way to not participate in this class.

567
00:27:59.175 --> 00:28:00.785

It's so hands-on and involved.

568
00:28:01.365 --> 00:28:03.545
Uh, you can't be static in this class.

569
00:28:03.845 --> 00:28:05.905
It, it, the class doesn't allow it.

570
00:28:06.645 --> 00:28:09.305
So, um, very involved on all fronts

571
00:28:10.105 --> 00:28:12.845
and, uh, um, we're, we're excited to,

572
00:28:12.905 --> 00:28:13.965
to roll it out to the group.

573
00:28:15.175 --> 00:28:18.195
Do you, uh, coming from Don, do you,

574
00:28:18.495 --> 00:28:20.035
do you inject flight tests,

575
00:28:20.205 --> 00:28:22.795
unexpected results versus failures?

576
00:28:24.775 --> 00:28:28.035
Um, there, I, I'm trying not to, to throw

577
00:28:28.575 --> 00:28:30.675
all great questions and I'm happy to answer some

578
00:28:30.675 --> 00:28:31.835
of these offline, but I'm trying not

579
00:28:31.835 --> 00:28:33.435
to give too many tricks away here.

580
00:28:33.595 --> 00:28:35.995
'cause I have a lot of FAA people on the call here

581
00:28:36.345 --> 00:28:37.995
that haven't been through the class yet.

582
00:28:38.615 --> 00:28:41.515
So, um, try not to give away too many tricks of the trade.

583
00:28:41.615 --> 00:28:45.715
But, um, there, there are, uh, some failures

584
00:28:45.715 --> 00:28:46.835
that we do inject.

585
00:28:47.615 --> 00:28:49.915
Um, just we really limit it.

586
00:28:50.575 --> 00:28:52.515
The, the way that the cards are built

587
00:28:53.085 --> 00:28:55.875
leads you down a path, let me say that.

588
00:28:58.565 --> 00:29:03.015
Okay. Uh, as an applicant trying

589
00:29:03.015 --> 00:29:04.095
to improve test cards

590
00:29:04.115 --> 00:29:07.495
and risk processes, I would love

591
00:29:07.495 --> 00:29:09.455
to review the training cards you've created.

592
00:29:10.525 --> 00:29:11.525
Are those available?

593
00:29:12.765 --> 00:29:14.985
Um, we can certainly make them available. Yeah.

594
00:29:15.025 --> 00:29:16.425

I don't have any problem with that at all.

595
00:29:16.925 --> 00:29:19.585
Um, you know, some of the key components that,

596
00:29:19.695 --> 00:29:24.465
that the cards, um, focus on is, is test order, right?

597
00:29:24.525 --> 00:29:26.545
You can have really great cards

598
00:29:26.695 --> 00:29:28.345
with the procedures written really well,

599
00:29:29.085 --> 00:29:32.465
really great descriptions of the test configuration

600
00:29:32.465 --> 00:29:33.465
that you need to be in.

601
00:29:34.005 --> 00:29:35.905
But if you don't order things correctly,

602
00:29:36.175 --> 00:29:38.385
that can paint you into a corner as well, right?

603
00:29:38.645 --> 00:29:41.025
Uh, whether it be from a weight and balance standpoint

604
00:29:41.225 --> 00:29:44.365
or configuration or systems management.

605
00:29:44.905 --> 00:29:46.365
Uh, take, take your pick.

606
00:29:46.505 --> 00:29:49.485
So, uh, yeah, it isn't just about how they're written,

607
00:29:49.795 --> 00:29:51.085
it's about how you use 'em.

608
00:29:55.255 --> 00:29:58.745
Okay. Uh, Joe asked, do you connect this CRM

609
00:29:58.745 --> 00:30:01.065
with human factors error management training?

610
00:30:02.135 --> 00:30:05.065
Yeah, so, um, one of the scenarios that we're actually,

611
00:30:05.365 --> 00:30:09.105
um, that we actually have on tap to be built is, uh,

612
00:30:09.455 --> 00:30:13.345
very much around human factors, uh, certification, uh,

613
00:30:13.345 --> 00:30:17.655
flying, um, those crew workload flights and, um,

614
00:30:18.355 --> 00:30:21.015
and other aspects of, of human factors.

615
00:30:21.075 --> 00:30:23.975
So we're working, uh, really close with some

616
00:30:23.975 --> 00:30:26.375
of our human factor specialists, uh, to get

617
00:30:26.375 --> 00:30:27.775
that profile built as well.

618
00:30:27.875 --> 00:30:29.855
So yeah, there's definitely a desire for that.

619
00:30:29.855 --> 00:30:31.535
That was one of the very early ideas.

620
00:30:37.365 --> 00:30:40.295
Okay. Um, this was a very targeted

621
00:30:40.295 --> 00:30:41.335

change to your training.

622
00:30:41.515 --> 00:30:42.615
Are you looking at other changes?

623
00:30:43.355 --> 00:30:45.415
Oh, yeah. Yeah. This is, this was step,

624
00:30:45.805 --> 00:30:47.295
this was probably step two.

625
00:30:47.835 --> 00:30:50.655
Um, there are other parts of courses that we broke out

626
00:30:50.655 --> 00:30:51.855
to be individual courses.

627
00:30:52.395 --> 00:30:56.255
And, uh, one of the really exciting pieces that we're toying

628
00:30:56.255 --> 00:30:59.255
with, um, the complexities fairly high.

629
00:30:59.355 --> 00:31:02.535
So we're, we're being really slow and deliberate about it.

630
00:31:02.595 --> 00:31:04.295
But one of the other pieces we're towing

631
00:31:04.295 --> 00:31:07.015
with is actually looking at a continuing education plan.

632
00:31:07.795 --> 00:31:11.175
Um, something very similar to, to what professional nurses

633
00:31:11.755 --> 00:31:13.455
and, uh, and lawyers

634
00:31:13.555 --> 00:31:14.775
and teachers have to go through

635
00:31:15.185 --> 00:31:17.815
where they have continuing education credits that they earn.

636
00:31:18.315 --> 00:31:20.655
Uh, we're looking at something along that path

637
00:31:21.205 --> 00:31:24.135
that utilizes a lot of the training that we already have,

638
00:31:24.875 --> 00:31:27.535
um, but also provides some opportunity for us

639
00:31:27.555 --> 00:31:30.535
to expand our horizons to other training, uh,

640
00:31:30.535 --> 00:31:31.695
that's available out there

641
00:31:32.195 --> 00:31:33.735
and still allow, we'll,

642
00:31:33.735 --> 00:31:36.015
we'll say credit towards a training plan.

643
00:31:36.155 --> 00:31:38.855
So, um, we're really excited about that,

644
00:31:39.035 --> 00:31:40.815
but as you can imagine, that can grow

645
00:31:40.815 --> 00:31:42.495
to be really complex really quickly.

646
00:31:42.715 --> 00:31:45.335
So we're being pretty deliberate about that change.

647
00:31:47.485 --> 00:31:50.455
Okay. Uh, Glen asked, do you allow the crews

648
00:31:50.455 --> 00:31:51.775

to preview the test cards?

649
00:31:52.155 --> 00:31:53.935
And are they involved in ordering it,

650
00:31:54.375 --> 00:31:55.775
reordering it, updating it?

651
00:31:56.445 --> 00:31:59.015
Yeah. So what we do is, as part of

652
00:31:59.015 --> 00:32:00.455
that first day ground school,

653
00:32:00.455 --> 00:32:01.935
that first afternoon ground school,

654
00:32:01.935 --> 00:32:04.415
they'll have the cards at least at that point,

655
00:32:04.595 --> 00:32:06.295
if not even prior to that, uh,

656
00:32:06.295 --> 00:32:07.695
before they show up on campus.

657
00:32:08.395 --> 00:32:11.375
Uh, so they do have plenty of opportunity, uh,

658
00:32:11.375 --> 00:32:15.455
to discuss order, look at, uh, red line mark,

659
00:32:15.735 --> 00:32:18.335
whatever they need to do, uh, highlight areas that

660
00:32:18.445 --> 00:32:20.135
that could be potential pitfalls.

661
00:32:20.355 --> 00:32:21.355
So, yes.

662
00:32:23.075 --> 00:32:26.575
Uh, follow up with, uh, Don, do you involve the, um,

663
00:32:26.965 --> 00:32:28.895
test director and TM crew and,

664
00:32:28.895 --> 00:32:30.415
and making any of these decisions?

665
00:32:30.415 --> 00:32:34.655
Are they, are they, are they into failures also?

666
00:32:34.715 --> 00:32:36.855
Do they get some curves thrown at them?

667
00:32:37.765 --> 00:32:39.685
Yeah, so, um, the,

668
00:32:40.435 --> 00:32:44.285
this entire operation is 100% as a crew.

669
00:32:44.945 --> 00:32:49.045
Um, just like you would participate in any type of medium

670
00:32:49.065 --> 00:32:51.885
or high risk tests where you've involved tm, um,

671
00:32:52.155 --> 00:32:53.445
they are part of this crew.

672
00:32:53.445 --> 00:32:55.245
They are part of the decision making process.

673
00:32:55.465 --> 00:32:58.565
So if they see something that they feel needs to be changed,

674
00:32:58.565 --> 00:33:01.205
including at briefing time, um,

675
00:33:01.415 --> 00:33:03.445

maybe a risk management piece that was missed,

676
00:33:03.955 --> 00:33:06.485
they're absolutely involved in the process, uh,

677
00:33:06.485 --> 00:33:08.445
throughout the entire, uh, experience.

678
00:33:12.475 --> 00:33:15.085
What about using VR instead of a simulator?

679
00:33:15.135 --> 00:33:17.285
Could you see benefit in taking that approach?

680
00:33:18.225 --> 00:33:21.045
Um, honestly, I hadn't thought about that,

681
00:33:21.185 --> 00:33:23.525
but that's, there's definitely a potential there.

682
00:33:24.085 --> 00:33:28.685
I, uh, at this point, I don't think we have any,

683
00:33:28.945 --> 00:33:33.805
um, significant capabilities in vr, uh, within our own, uh,

684
00:33:33.865 --> 00:33:35.485
use, but that doesn't mean others don't.

685
00:33:35.585 --> 00:33:37.165
So yeah, that's something

686
00:33:37.165 --> 00:33:38.405
that definitely could be looked at.

687
00:33:41.485 --> 00:33:43.705
Is there an instructor qualification training

688
00:33:43.935 --> 00:33:44.985
requirement for this?

689
00:33:46.285 --> 00:33:48.625
Uh, is there, or should there be two different

690
00:33:48.785 --> 00:33:49.945
questions now?

691
00:33:50.005 --> 00:33:53.545
No, there, there is not. Uh, it's kind of ad hoc as we need.

692
00:33:53.805 --> 00:33:58.065
Um, unfortunately, um, one of our primary instructors,

693
00:33:58.265 --> 00:34:00.545
ed Ano, has decided to up and retire on us.

694
00:34:01.125 --> 00:34:04.985
So, um, we're already looking to move on, um,

695
00:34:06.125 --> 00:34:08.465
uh, to an additional instructor beyond ed.

696
00:34:08.845 --> 00:34:11.065
Uh, but there'll definitely need to be some time spent

697
00:34:11.065 --> 00:34:12.185
with any new instructors.

698
00:34:12.605 --> 00:34:15.625
Uh, if for no other reason safety is sim operations

699
00:34:15.765 --> 00:34:19.425
and what the, uh, behind the scenes goals of the course are,

700
00:34:24.605 --> 00:34:28.025
Any possible benefit of an S-E-S-E-T-P

701
00:34:28.045 --> 00:34:30.785
and FAA collaboration at a symposium

702
00:34:30.785 --> 00:34:33.105

or a workshop, do you see making that work?

703
00:34:34.445 --> 00:34:35.865
That'd be phenomenal.

704
00:34:35.885 --> 00:34:37.385
If we could pull something off like that,

705
00:34:37.565 --> 00:34:38.945
I'd be happy to entertain that.

706
00:34:42.445 --> 00:34:42.735
Okay.