

WEBVTT

1

00:00:00.900 --> 00:00:03.500

Our next presentation is also somebody from

2

00:00:03.500 --> 00:00:06.400

Sikorsky David Blair is our pilot office

3

00:00:06.400 --> 00:00:09.200

Chief safety pilot, and he will

4

00:00:09.200 --> 00:00:12.300

be providing you the next presentation. He is a wealth of experience

5

00:00:12.300 --> 00:00:15.600

in the helicopter world and with Sikorsky here. So,

6

00:00:15.600 --> 00:00:15.900

thank you.

7

00:00:22.800 --> 00:00:26.600

Well, good morning. Talk back to follow fantastic presentation.

8

00:00:26.600 --> 00:00:29.600

The last one that was really excellent thought in some really super

9

00:00:29.600 --> 00:00:29.900

key points.

10

00:00:30.900 --> 00:00:33.500

So good morning, and I want

11

00:00:33.500 --> 00:00:36.500

to say that I had an interesting observation yesterday. I

12

00:00:36.500 --> 00:00:39.100

got into the room and I did my normal check I said

13

00:00:39.100 --> 00:00:41.100

who in the room has the biggest watch?

14

00:00:42.100 --> 00:00:45.800

And I noticed that a lot of people don't have big Aviation

15

00:00:45.800 --> 00:00:48.600

watches anymore. A lot of Apple watches a lot of fitbits some

16

00:00:48.600 --> 00:00:51.800

Garmin watches things like that. And that reminded

17

00:00:51.800 --> 00:00:54.300

me, you know, what does that say about our culture? Is

18

00:00:54.300 --> 00:00:55.900

that change a little bit? Not really sure.

19

00:00:57.200 --> 00:01:00.600

But also reminded me, I went shopping for a watch not long ago and I

20

00:01:00.600 --> 00:01:03.100

decided to replace the watch and I got flight school and I said,

21

00:01:03.100 --> 00:01:06.100

you know, I need I need something a lot of features. So sure enough. I
got something with

22

00:01:06.100 --> 00:01:09.400

a lot of features. It's got countdown timer and

23

00:01:09.400 --> 00:01:12.100

a sweep hand and it's got Zulu time on it

24

00:01:12.100 --> 00:01:15.600

different time zones, and it's got alarms and it's got you know,

25

00:01:15.600 --> 00:01:18.100

a lighted bezel and it's got a

26

00:01:18.100 --> 00:01:21.200

circular slide rule on it and it was it was

27

00:01:21.200 --> 00:01:24.600
it was really fantastic. I mean, it's a great watch. I love this watch.
But

28
00:01:24.600 --> 00:01:27.900
one thing I failed to account for being a

29
00:01:27.900 --> 00:01:30.600
little bit more mature pilot now is that it didn't come

30
00:01:30.600 --> 00:01:33.400
with cheaters so I can't read it. All right.

31
00:01:35.800 --> 00:01:38.200
All right, many of

32
00:01:38.200 --> 00:01:41.300
you may have seen the movie Ford versus Ferrari that movie

33
00:01:41.300 --> 00:01:44.300
opens with a scene of Henry Ford the second

34
00:01:44.300 --> 00:01:47.500
standing on a balcony overlooking his Factory and

35
00:01:47.500 --> 00:01:50.600
berating his workers for not keeping forward as

36
00:01:50.600 --> 00:01:53.600
competitive as it should have been. I don't think that's the kind of
cultural we're

37
00:01:53.600 --> 00:01:56.300
looking for in flight test and and I'll get back to

38
00:01:56.300 --> 00:01:58.600
the Ford Company a little bit later, but

39
00:01:59.700 --> 00:02:02.200
All right question is can organizational culture play a

40

00:02:02.200 --> 00:02:04.500

factor in flight test and the answer of course is yes.

41

00:02:05.200 --> 00:02:08.800

Some might argue that the most important factor in flight test. It's critical

42

00:02:08.800 --> 00:02:11.200

to our safety. And as one of

43

00:02:11.200 --> 00:02:14.200

our speakers pointed out early this morning culture each strategy for

44

00:02:14.200 --> 00:02:16.400

breakfast. I fully believe that's true as well.

45

00:02:17.300 --> 00:02:20.800

So I'd like to do is talk briefly about a couple

46

00:02:20.800 --> 00:02:23.300

things through the lens of sikorski's flight test

47

00:02:23.300 --> 00:02:26.500

safety culture and really our overall company

48

00:02:26.500 --> 00:02:29.200

culture where that came from Mr. Sikorsky is

49

00:02:29.200 --> 00:02:35.100

our founder of course, and he left us a really terrific Legacy of his

50

00:02:32.100 --> 00:02:36.100

in

51

00:02:35.100 --> 00:02:36.400

the company.

52

00:02:37.500 --> 00:02:40.400

I want to talk about some test goods and others that we've had in

53

00:02:40.400 --> 00:02:43.300

our company and then also talk about

54

00:02:43.300 --> 00:02:46.800

how we can manage culture how we do that in a

55

00:02:46.800 --> 00:02:50.200

flight test safety realm in

56

00:02:50.200 --> 00:02:53.700

our company. But also how we can manage the overall culture of our organizations.

57

00:02:55.100 --> 00:02:58.500

All right, so I won't talk much about defining organizational culture,

58

00:02:58.500 --> 00:03:01.100

but I'll call your attention to the diagram in the upper right

59

00:03:01.100 --> 00:03:04.100

hand corner of the slide. I think it's a really good way to look at

60

00:03:04.100 --> 00:03:07.600

culture starting with the founders philosophy. Right?

61

00:03:07.600 --> 00:03:10.400

That's the person who really sets the the standard for

62

00:03:10.400 --> 00:03:13.800

the company for the organization and then he or

63

00:03:13.800 --> 00:03:16.300

she gets to select people to help them with that Vision

64

00:03:16.300 --> 00:03:19.300

with that philosophy. Those people are probably chosen to

65

00:03:19.300 --> 00:03:22.200

be emblematic of that same philosophy that

66

00:03:22.200 --> 00:03:23.900

same culture that the founder had

67

00:03:25.100 --> 00:03:28.700

And then those people the top management get to then imbue

68

00:03:28.700 --> 00:03:31.000

those cultural traits via some kind

69

00:03:31.700 --> 00:03:34.100

of socialization to the entire organization. And that's really how you

70

00:03:34.100 --> 00:03:37.300

arrive at an organizational culture. Pretty pretty simple.

71

00:03:37.300 --> 00:03:40.100

I really like that diagram things to keep

72

00:03:40.100 --> 00:03:43.200

away or take away from this slide are that the the founder really

73

00:03:43.200 --> 00:03:47.000

is the ultimate source of an organization's culture. They

74

00:03:46.300 --> 00:03:49.300

provide the vision, they're not constrained by

75

00:03:49.300 --> 00:03:52.800

previous Norms of any other organization necessarily

76

00:03:52.800 --> 00:03:55.500

and the goal of our culture in

77

00:03:55.500 --> 00:03:58.700

Flight tests really in any other venue in

78

00:03:58.700 --> 00:04:01.500

our in our organizations is to do the right thing when

79

00:04:01.500 --> 00:04:02.500

nobody else is looking.

80

00:04:05.200 --> 00:04:09.400

So on the left of the slide are some attributes of culture that

81

00:04:09.400 --> 00:04:12.300

many business people will

82

00:04:12.300 --> 00:04:16.100

study and call these the measures potentially and

83

00:04:15.100 --> 00:04:18.600

on the right side are some that I think mature flight

84

00:04:18.600 --> 00:04:19.800

test organizations exhibit.

85

00:04:23.100 --> 00:04:26.500

Flight test organization are designed or defined by a kind

86

00:04:26.500 --> 00:04:29.900

of a unique set of attributes, I

87

00:04:29.900 --> 00:04:30.100

think.

88

00:04:31.100 --> 00:04:33.300

They're especially critical for us. Obviously.

89

00:04:35.800 --> 00:04:38.100

Risk-averse clearly is a good one

90

00:04:38.100 --> 00:04:41.300

Innovation is clearly something that we're very strong in. I

91

00:04:41.300 --> 00:04:44.200

mean for obviously flight test is by its very

92

00:04:44.200 --> 00:04:45.100

nature innovative.

93

00:04:45.900 --> 00:04:48.900

I think we're very much learning organizations as

94

00:04:48.900 --> 00:04:51.400

well. And one that I want to keep coming

95

00:04:51.400 --> 00:04:54.300

back to is humility. I think our flight

96

00:04:54.300 --> 00:04:57.500

test organizations should be by necessity

97

00:04:57.500 --> 00:05:00.200

humble. We shouldn't be Cowboys out there and we need to look ourselves

98

00:05:00.200 --> 00:05:03.400

in the mirror every day and see how we can do better and how

99

00:05:03.400 --> 00:05:06.600

we may have made mistakes but move on and correct

100

00:05:06.600 --> 00:05:07.000

those mistakes.

101

00:05:08.400 --> 00:05:11.500

All right with that Igor Sikorski is our chief pilot. He was

102

00:05:11.500 --> 00:05:14.500

also a chief engineer and he said in those early days. The chief engineer

103

00:05:14.500 --> 00:05:17.400

was almost always the chief pilot as well. This had

104

00:05:17.400 --> 00:05:20.300

the automatic result of eliminating poor engineering very early

105

00:05:20.300 --> 00:05:21.100

in aviation.

106

00:05:24.100 --> 00:05:27.800

He sets the standard right there, right? It's it's it. He

107

00:05:27.800 --> 00:05:28.800
was a consummate engineer.

108
00:05:30.100 --> 00:05:33.700
So it was literally his skin on the line. He designed the the vehicle

109
00:05:33.700 --> 00:05:36.000
he flew the vehicle and then it was

110
00:05:36.300 --> 00:05:40.200
his name on the on the front of the building that described this. This

111
00:05:39.200 --> 00:05:43.100
is my company. This is my organization. So

112
00:05:42.100 --> 00:05:45.600
really he was the chief that started

113
00:05:45.600 --> 00:05:46.300
Us in this way.

114
00:05:46.900 --> 00:05:49.300
The company logo here. The wing desk

115
00:05:49.300 --> 00:05:52.300
has a lot of Deep Roots and we're still very proud

116
00:05:52.300 --> 00:05:55.300
and very happy that Lockheed Martin decided to keep this course key name

117
00:05:55.300 --> 00:05:58.500
after they bought the company and keep the company logo as

118
00:05:58.500 --> 00:05:58.500
well.

119
00:06:03.500 --> 00:06:04.900
All right. He also sums it up.

120
00:06:06.300 --> 00:06:09.300
to design a new type of flying machine without knowing how to design it

121
00:06:09.300 --> 00:06:12.500
then build it Without Really knowing how to build it and then

122
00:06:12.500 --> 00:06:15.300
try to test flight without ever having flown in a helicopter

123
00:06:15.300 --> 00:06:15.500
before

124
00:06:16.300 --> 00:06:17.700
that is a challenge for certain.

125
00:06:18.400 --> 00:06:21.300
So part of his culture that he's

126
00:06:21.300 --> 00:06:24.700
left us was that he was very patient and very

127
00:06:24.700 --> 00:06:27.600
methodical in his testing and his design. It took

128
00:06:27.600 --> 00:06:30.600
him 30 years to realize his dream of vertical Aviation.

129
00:06:30.600 --> 00:06:33.400
He started in 1909 and finally flew the

130
00:06:33.400 --> 00:06:37.100
first really practical helicopter in 1939.

131
00:06:36.100 --> 00:06:39.100
That was the from the H1 to the

132
00:06:39.100 --> 00:06:42.300
vs 300 the picture on the on the upper part of

133
00:06:42.300 --> 00:06:45.600
the slide. There is actually not the H1. That's the H2 in

134

00:06:45.600 --> 00:06:48.200

1910 and the vs. 300 is the

135

00:06:48.200 --> 00:06:51.400

one on the bottom picture there. So that's Igor on the left and that's Henry Ford

136

00:06:51.400 --> 00:06:51.900

on the right.

137

00:06:52.600 --> 00:06:55.200

And this is kind of an interesting picture that apparently they

138

00:06:55.200 --> 00:06:58.200

were pretty good friends, but I did

139

00:06:58.200 --> 00:07:01.900

a bunch of reading and and read a bunch about Igor

140

00:07:01.900 --> 00:07:04.200

prior to this presentation and read some letters

141

00:07:04.200 --> 00:07:07.300

that he had written to people and discovered a lot about the man and

142

00:07:07.300 --> 00:07:10.500

how humble he was and what a what a real people person

143

00:07:10.500 --> 00:07:13.500

he was as well not so with Henry

144

00:07:13.500 --> 00:07:16.600

Ford Henry Ford had a reputation for being very

145

00:07:16.600 --> 00:07:20.200

hierarchical very demanding kind

146

00:07:19.200 --> 00:07:23.500

of a bully in many ways and and just

147

00:07:22.500 --> 00:07:25.900

a very different culture from the

148

00:07:25.900 --> 00:07:28.100

two companies in the two men, but yet they were good friends.

149

00:07:29.300 --> 00:07:32.900

So one of the things that I think is emblematic of the cultural

150

00:07:32.900 --> 00:07:35.700

differences between the two companies is in the

151

00:07:35.700 --> 00:07:38.300

Ford Motor Company Henry Ford. The second's office was on

152

00:07:38.300 --> 00:07:41.200

the very top floor of a building was called

153

00:07:41.200 --> 00:07:44.200

The Glass House. It was a huge office suite that

154

00:07:44.200 --> 00:07:47.700

had its own private dining room and had its own chef and was well

155

00:07:47.700 --> 00:07:50.800

away from the manufacturing and the engineering

156

00:07:50.800 --> 00:07:53.600

folks in his company on the other hand Igor

157

00:07:53.600 --> 00:07:56.100

secorski has his office and is still there to

158

00:07:56.100 --> 00:07:59.100

this day. Hope you can come visit someday and see his office as the way he left

159

00:07:59.100 --> 00:08:02.900

it right on the same level and right

160

00:08:02.900 --> 00:08:06.000

adjacent to all the engineering folks in the company easily

161

00:08:05.500 --> 00:08:08.600

accessible and a very good

162

00:08:08.600 --> 00:08:11.000

symbol I think of his humility and his

163

00:08:11.900 --> 00:08:14.600

Desire to be with the people who were making

164

00:08:14.600 --> 00:08:17.900

the products that he so so

165

00:08:17.900 --> 00:08:18.200

loved.

166

00:08:19.100 --> 00:08:22.900

Again back to that methodical methodical test process and the

167

00:08:22.900 --> 00:08:23.700

humility of the man.

168

00:08:26.600 --> 00:08:29.200

All right back to Igor secorski again

169

00:08:29.200 --> 00:08:32.100

in December of

170

00:08:32.100 --> 00:08:35.200

1925. He was flying the s-29a pictured here

171

00:08:35.200 --> 00:08:39.100

in the bottom. He was coming back to Long Island. It was almost
nighttime.

172

00:08:38.100 --> 00:08:41.000

They had lanterns out on the field where he was supposed to

173

00:08:41.300 --> 00:08:44.600

land and on his approach to Landing. He clipped a

174

00:08:44.600 --> 00:08:47.300

tree with the aircraft and it embedded a piece

175

00:08:47.300 --> 00:08:50.800

of that tree in the wing. That's the piece on

176

00:08:50.800 --> 00:08:53.200

the right. It's not a small piece of wood, by the way. It's probably three or

177

00:08:53.200 --> 00:08:56.200

four feet long. So it's a I guess a testament to his

178

00:08:56.200 --> 00:08:59.600

engineering in the first place that he survived that that the aircraft survived

179

00:08:59.600 --> 00:09:00.200

and

180

00:09:01.500 --> 00:09:04.300

Again a testament to his humility. He had that

181

00:09:04.300 --> 00:09:07.300

piece of wood taken out of the wing mounted on a plaque and

182

00:09:07.300 --> 00:09:08.400

it's still in his office today.

183

00:09:09.200 --> 00:09:12.300

That shows a lot I think and I'm not

184

00:09:12.300 --> 00:09:15.400

sure how many of us would have that kind of humility to be able to to do

185

00:09:15.400 --> 00:09:18.200

that as a constant reminder of how you know,

186

00:09:18.200 --> 00:09:21.600

how close he came and how how kind of fragile we

187
00:09:21.600 --> 00:09:21.900
all are.

188
00:09:23.400 --> 00:09:26.200
What's pictured up here also or the test values or for the score ski

189
00:09:26.200 --> 00:09:29.600
test engineering core ideology notice the first three bullets talk

190
00:09:29.600 --> 00:09:32.400
about people. I think that's again emblematic of

191
00:09:32.400 --> 00:09:35.900
this. This man's philosophy his culture

192
00:09:35.900 --> 00:09:38.000
and the way that he like to run

193
00:09:38.100 --> 00:09:41.200
his company. So people are the focus and really if you

194
00:09:41.200 --> 00:09:44.300
look at all those values people are

195
00:09:44.300 --> 00:09:44.900
the focus on

196
00:09:45.600 --> 00:09:48.200
The core Purpose By the way is to plan an

197
00:09:48.200 --> 00:09:51.500
execute effective developmental qualification tests that result in

198
00:09:51.500 --> 00:09:54.100
safe and competitive helicopters that meets needs of our customers.

199
00:09:57.200 --> 00:10:00.200
All right, test event goods and others. This is a this is

200
00:10:00.200 --> 00:10:03.400

a other we were testing a new propeller that

201

00:10:03.400 --> 00:10:06.400

was going to go on one of our aircraft and had done

202

00:10:06.400 --> 00:10:09.300

quite a bit of time on the test stand in West Palm

203

00:10:09.300 --> 00:10:13.200

Beach here. That was performing pretty well in between

204

00:10:13.200 --> 00:10:15.900

some test runs one of the QA.

205

00:10:17.300 --> 00:10:19.300

Inspectors came out and took a look at the propeller.

206

00:10:19.800 --> 00:10:23.000

He had by the way a background in civil

207

00:10:22.500 --> 00:10:25.900

aviation racing props. He took

208

00:10:25.900 --> 00:10:28.500

a look at it and really didn't like something he saw some kind

209

00:10:28.500 --> 00:10:31.400

of additional play in the blades that that just

210

00:10:31.400 --> 00:10:34.200

didn't sit right with him. He couldn't really necessarily quantify it,
but he didn't

211

00:10:34.200 --> 00:10:38.200

like it. He brought that to the attention to test director the test

212

00:10:37.200 --> 00:10:40.700

director then took it to engineering engineering took

213

00:10:40.700 --> 00:10:43.200

a look at it. And the bottom line was they said well, let's

214

00:10:43.200 --> 00:10:43.900

proceed with the test.

215

00:10:44.900 --> 00:10:47.200

To to everyone's amazement on the

216

00:10:47.200 --> 00:10:48.900

next test run that propeller came apart.

217

00:10:50.300 --> 00:10:53.000

So what does that say about our culture?

218

00:10:53.900 --> 00:10:56.800

Did we fail our culture or

219

00:10:56.800 --> 00:10:59.400

did our culture fail us clearly something

220

00:10:59.400 --> 00:11:02.400

we needed to to look at. We're pretty engineering

221

00:11:02.400 --> 00:11:05.700

heavy company, right? We tend to rely on our engineering know-how and

222

00:11:05.700 --> 00:11:09.000

they tend to be the top dogs in the company. But

223

00:11:08.200 --> 00:11:11.100

in this case our culture, maybe

224

00:11:11.100 --> 00:11:14.500

you should have overweighed the desire to trust our

225

00:11:14.500 --> 00:11:14.700

engineering.

226

00:11:16.900 --> 00:11:21.100

All right. Test event good ch-148 Benjamin

227

00:11:20.100 --> 00:11:23.100

Williamson is here. It's quite involved in this

228

00:11:23.100 --> 00:11:27.100

program as well. So maybe he can fill in some of the blanks on this further details,

229

00:11:26.100 --> 00:11:29.400

but after we had turned over some of

230

00:11:29.400 --> 00:11:32.200

our aircraft to the customer they were out flying not on a test

231

00:11:32.200 --> 00:11:36.300

event, but just I think normal pattern flying and on

232

00:11:35.300 --> 00:11:38.400

a downwind leg of that flight. They felt a severe

233

00:11:38.400 --> 00:11:42.000

bump in the aircraft it lasted less than a second. No further

234

00:11:41.700 --> 00:11:44.500

indications. Everybody composed themselves

235

00:11:44.500 --> 00:11:47.700

landed shut the aircraft down and and no

236

00:11:47.700 --> 00:11:50.300

further incident in the investigation. It was

237

00:11:50.300 --> 00:11:53.600

discovered that the fly-by-wire flight control computers

238

00:11:53.600 --> 00:11:56.700

had experienced a triple reset all three reset at

239

00:11:56.700 --> 00:11:59.800

the same time, which was pretty much thought to be impossible prior to

240

00:11:59.800 --> 00:12:00.000

this.

241

00:12:00.700 --> 00:12:03.400

So a lot of head scratching

242

00:12:03.400 --> 00:12:06.300

going on and the customer put a lot of pressure on us

243

00:12:06.300 --> 00:12:09.700

to continue to fly. They had a test schedule and a

244

00:12:09.700 --> 00:12:12.400

training schedule and a deployment schedule. They

245

00:12:12.400 --> 00:12:15.400

really had to meet but Sikorsky and

246

00:12:16.500 --> 00:12:20.400

Pretty much said we don't think that's safe and insisted they

247

00:12:20.400 --> 00:12:23.600

not fly. So that grounded the aircraft the entire fleet

248

00:12:23.600 --> 00:12:26.200

for a decent amount of time caused a lot of embarrassment and

249

00:12:26.200 --> 00:12:29.400

obviously cost to the company cost to the customer. But in

250

00:12:29.400 --> 00:12:32.800

this case our culture of safety and caution clearly worked

251

00:12:32.800 --> 00:12:35.200

for us that obviously was rectified and

252

00:12:35.200 --> 00:12:38.000

and the the aircraft has gone on to do

253

00:12:38.600 --> 00:12:39.500

decent things since then so

254

00:12:40.900 --> 00:12:42.400

Our culture doing the right thing.

255

00:12:44.800 --> 00:12:47.200

Let's talk briefly about some of the risk barriers, right? We

256

00:12:47.200 --> 00:12:50.300

got this great culture from Mr. Sikorsky some of the things that we continue to

257

00:12:50.300 --> 00:12:53.600

do that keep us in this kind of his good graces.

258

00:12:53.600 --> 00:12:56.900

If you will or we have independent organizational structure

259

00:12:56.900 --> 00:12:59.400

for our test organizations for

260

00:12:59.400 --> 00:13:02.700

our engineering and for our programs. So for instance

261

00:13:02.700 --> 00:13:05.400

our Pilots are part of engineering they're always accountable to

262

00:13:05.400 --> 00:13:08.500

the chief pilot not to the program manager or

263

00:13:08.500 --> 00:13:11.500

to others in the organization who

264

00:13:11.500 --> 00:13:14.700

might have kind of a conflict of interest always accountable the

265

00:13:14.700 --> 00:13:18.500

chief pilot our safety professionals from our Aviation

266

00:13:17.500 --> 00:13:20.200

and product Safety Division or

267

00:13:20.200 --> 00:13:23.800
independent as well. They work for the vice president of safety and

268
00:13:23.800 --> 00:13:26.700
quality. They're not part of the engineering organization.

269
00:13:26.700 --> 00:13:30.700
So again kind of a check and balance then and somebody

270
00:13:29.700 --> 00:13:32.700
talked about representation here.

271
00:13:32.700 --> 00:13:36.100
We've got a pretty good representation from secorsky our

272
00:13:35.100 --> 00:13:38.200
director of Aviation product safety. Mike cernek is

273
00:13:38.200 --> 00:13:41.500
here as well. And he's got quite a few people with his organization or

274
00:13:41.500 --> 00:13:42.900
from his organization. They're here as well.

275
00:13:44.200 --> 00:13:46.000
and our model development Safety Committee is another

276
00:13:46.800 --> 00:13:49.200
organization within Sikorsky that we

277
00:13:49.200 --> 00:13:51.600
think has a independent view they're strict.

278
00:13:52.300 --> 00:13:55.900
Mandate is to look at technical risk and advise

279
00:13:55.900 --> 00:13:59.100
on any test plan and

280
00:13:58.100 --> 00:14:01.400
any test event whether that's technically

281

00:14:01.400 --> 00:14:04.500

feasible and safe or not. No other mandates not

282

00:14:04.500 --> 00:14:07.800

looking at schedule not looking at costs strictly technical feasibility.

283

00:14:08.800 --> 00:14:11.600

So we're pretty happy about that Independence.

284

00:14:11.600 --> 00:14:14.200

There's a lot of tight coupling that goes on as well

285

00:14:14.200 --> 00:14:17.900

between our Pilots our Aviation and product safety engineering and

286

00:14:17.900 --> 00:14:20.300

our programs that really helps

287

00:14:20.300 --> 00:14:21.700

us keep that balance between

288

00:14:23.500 --> 00:14:24.000

test

289

00:14:25.700 --> 00:14:27.600

pressures and test safety

290

00:14:30.100 --> 00:14:33.400

All right. Well the good news is that culture can be managed.

291

00:14:34.100 --> 00:14:37.100

We're lucky in Sikorsky that

292

00:14:37.100 --> 00:14:40.200

we have this fantastic Legacy and culture that we were by

293

00:14:40.200 --> 00:14:43.600

our founder. We try and Foster that at every turn

294

00:14:43.600 --> 00:14:46.200
I think and quite frankly, I think

295
00:14:46.200 --> 00:14:49.700
some people were concerned about how Lockheed Martin's

296
00:14:49.700 --> 00:14:52.700
influence on that was going to be when they bought the company but so

297
00:14:52.700 --> 00:14:55.400
far so good and we're continuing to to try and Foster

298
00:14:55.400 --> 00:14:58.400
the culture that we were given and and

299
00:14:58.400 --> 00:15:02.200
make that even better. So first any organization

300
00:15:01.200 --> 00:15:04.000
has to recognize the culture that they have

301
00:15:05.800 --> 00:15:08.500
These surveys we've talked about are a great way to do that. See

302
00:15:08.500 --> 00:15:11.600
where you stand then select people that are

303
00:15:11.600 --> 00:15:15.100
going to Foster and encourage the culture that you want and then

304
00:15:15.100 --> 00:15:18.400
first further socialize those folks with all kinds of things.

305
00:15:18.400 --> 00:15:22.000
I'm not going to go into some of the ways we can do that but lots

306
00:15:21.200 --> 00:15:24.800
and lots of ways to socialize people and incentivize people

307
00:15:24.800 --> 00:15:28.100
to have that culture of safety that really Fosters

308

00:15:27.100 --> 00:15:29.100

safe test.

309

00:15:29.800 --> 00:15:32.700

And simply put it's kind of like trying

310

00:15:32.700 --> 00:15:36.900

to legislate morality, right? You can't legislate morality. Same

311

00:15:35.900 --> 00:15:38.500

thing in flight test and organization.

312

00:15:38.500 --> 00:15:41.100

You just want people to act safely and do the right

313

00:15:41.100 --> 00:15:42.100

thing when nobody's looking.

314

00:15:42.900 --> 00:15:44.300

With that I'll take questions.

315

00:15:46.700 --> 00:15:47.200

Yes, sir.

316

00:16:08.900 --> 00:16:12.800

Somebody saw

317

00:16:12.800 --> 00:16:15.400

a problem reported. It went down the chain. The

318

00:16:15.400 --> 00:16:18.900

engineers looked at it just like you're supposed to now maybe your

319

00:16:18.900 --> 00:16:20.400

analysis in your modeling wasn't good.

320

00:16:20.900 --> 00:16:23.500

But from what you said it sounded like everything was fine, and

321

00:16:23.500 --> 00:16:24.600
they were just wrong.

322
00:16:25.400 --> 00:16:28.100
It wasn't really a culture problem or is it just a technical problem?

323
00:16:28.600 --> 00:16:30.300
Well, so fair point, absolutely.

324
00:16:31.900 --> 00:16:33.900
I can't speak to the technical issues about

325
00:16:34.200 --> 00:16:34.400
it but

326
00:16:35.300 --> 00:16:38.500
there's a stand over here can't speak to the technical issues. But

327
00:16:38.500 --> 00:16:41.400
I think had our culture of caution been

328
00:16:41.400 --> 00:16:44.200
fully exercising itself. We would

329
00:16:44.200 --> 00:16:47.600
have gone to the the right the least common denominator and

330
00:16:47.600 --> 00:16:50.200
said somebody has a problem with this somebody wants to say

331
00:16:50.200 --> 00:16:53.900
no and we should heed that somebody with experience in

332
00:16:53.900 --> 00:16:57.200
that you know in that propeller Realm.

333
00:16:57.800 --> 00:17:00.600
Our Engineers aren't necessarily we're scores

334
00:17:00.600 --> 00:17:03.800

the aircraft right? We're all about rotors. Not necessarily propellers.
So

335

00:17:04.800 --> 00:17:07.700

What did what did we miss? What did our Engineers Miss? I

336

00:17:07.700 --> 00:17:10.200

think our culture failed us in a way that we should

337

00:17:10.200 --> 00:17:13.200

have heated more that person's advice. It's a

338

00:17:13.200 --> 00:17:13.300

fair.

339

00:17:16.200 --> 00:17:18.800

I think so or go ahead.

340

00:17:28.600 --> 00:17:29.500

hearing story

341

00:17:30.200 --> 00:17:33.700

did that was he the one that also bought

342

00:17:33.700 --> 00:17:36.500

into it or was he excluded and was

343

00:17:36.500 --> 00:17:38.700

engineering just convincing themselves that they were, okay.

344

00:17:39.500 --> 00:17:42.100

Good question, and and I can't answer that question.

345

00:17:43.800 --> 00:17:46.200

I don't I don't really know honestly, so go ahead

346

00:17:46.200 --> 00:17:46.500

bill.

347

00:18:05.700 --> 00:18:07.300

evolving manager also

348

00:18:23.600 --> 00:18:24.100
on his agreement

349

00:18:25.600 --> 00:18:28.800
and sentences from the Hands-On crew that we

350

00:18:28.800 --> 00:18:30.900
should raise it to a higher level to get the

351

00:18:38.100 --> 00:18:40.800
appropriate right default to the most conservative response. Yes, sir.

352

00:18:56.800 --> 00:18:59.600
Yeah, good question. I would say risk aware is

353

00:18:59.600 --> 00:19:02.200
the first step in risk-averse is the second step to

354

00:19:02.200 --> 00:19:05.100
that right? You got to become risk-aware in order

355

00:19:05.100 --> 00:19:05.700
to make yourself.

356

00:19:06.800 --> 00:19:09.100
Mitigate and and get rid of

357

00:19:09.100 --> 00:19:10.000
some of those risk. I'm

358

00:19:10.700 --> 00:19:13.600
Probably not explaining this very well, but I think I think awareness

359

00:19:13.600 --> 00:19:16.400
clearly is the first step and and then mitigating after

360

00:19:16.400 --> 00:19:19.200
that is kind of the risk of verse step. My boss actually

361

00:19:19.200 --> 00:19:22.500
gave me a hard time about that same bullet and said, we're not risk
averse.

362
00:19:22.500 --> 00:19:25.100
We're you know, we're risk mitigators. We're you know, get it

363
00:19:25.100 --> 00:19:28.900
down. But but I think risk averse in my opinion really

364
00:19:28.900 --> 00:19:31.200
describes. Well how we should

365
00:19:31.200 --> 00:19:34.400
be looking for risk to your point of risk aware and

366
00:19:34.400 --> 00:19:35.800
then trying to mitigate those things.

367
00:19:37.400 --> 00:19:38.200
Yes, sir. Yes, sir.

368
00:19:49.600 --> 00:19:53.400
Get certified

369
00:19:52.400 --> 00:19:55.400
but then later in service something comes

370
00:19:55.400 --> 00:19:58.200
up that is an issue. So your little story about the

371
00:19:59.400 --> 00:20:02.200
Flight control computer reset I'm just kind of curious how

372
00:20:02.200 --> 00:20:04.400
long that was a latent defect.

373
00:20:05.200 --> 00:20:08.200
and had that gone through the certification process and

374
00:20:09.900 --> 00:20:10.100

You know.

375

00:20:11.400 --> 00:20:14.500

In hindsight did you it was

376

00:20:14.500 --> 00:20:16.500

it I guess you had to understand it to fix it, right?

377

00:20:17.200 --> 00:20:20.300

Well, yeah, absolutely. And I and I think it was several months. The aircraft

378

00:20:20.300 --> 00:20:24.800

were down during that Discovery process clearly Discovery

379

00:20:24.800 --> 00:20:27.500

was surprised to everybody right and it was outside of

380

00:20:27.500 --> 00:20:29.400

tests that the discovery was made so

381

00:20:30.200 --> 00:20:32.700

Boy, good good question. Yeah.

382

00:20:37.500 --> 00:20:40.300

But theoretically triple reset was

383

00:20:40.300 --> 00:20:43.200

never supposed to occur. We had tested it many

384

00:20:43.200 --> 00:20:48.100

times in the Sim never tested it obviously in the air vehicle and the

385

00:20:47.100 --> 00:20:50.900

results were really a non-event.

386

00:20:51.400 --> 00:20:54.500

Other than maybe a small transient which which did occur

387

00:20:54.500 --> 00:20:57.200

we didn't expect it to occur. But then we had to go back

388

00:20:57.200 --> 00:21:00.100

with our vendors who built the software go back and try to

389

00:21:00.100 --> 00:21:03.300

dig them to see it dig through the Control software and figure

390

00:21:03.300 --> 00:21:04.700

out whether where the glitch was.

391

00:21:05.300 --> 00:21:08.200

And with the Bae and hands would support the

392

00:21:08.200 --> 00:21:09.300

engineering we're able to figure out.

393

00:21:11.300 --> 00:21:12.700

A part of the code that is either correction.

394

00:21:15.800 --> 00:21:17.700

so performed as design but

395

00:21:28.500 --> 00:21:31.500

best we can but until you find that needle in the haystack

396

00:21:31.500 --> 00:21:34.900

or until you know, where to push for that needle in the haystack. There are

397

00:21:34.900 --> 00:21:36.400

likely to be some lat.

398

00:21:36.600 --> 00:21:39.900

Failure modes in that software that hopefully you

399

00:21:39.900 --> 00:21:42.400

found them all. Hopefully, they're not a big deal. If you

400

00:21:42.400 --> 00:21:45.900

do find them subsequently, but I wouldn't be

401
00:21:45.900 --> 00:21:48.300
confident that my level a software

402
00:21:48.300 --> 00:21:49.600
Qualcomm everything.

403
00:21:50.800 --> 00:21:52.900
That could potentially be wrong with that software.

404
00:21:53.900 --> 00:21:55.600
Great Point. Thank you Bill. Yes, sir.

405
00:21:57.200 --> 00:22:00.300
So your Commodore at the founders philosophy and how

406
00:22:00.300 --> 00:22:03.400
Sikorsky has kept that really strong

407
00:22:03.400 --> 00:22:04.900
and resilient through the years.

408
00:22:05.900 --> 00:22:08.600
I think there's a lot of evidence both in aviation and

409
00:22:08.600 --> 00:22:11.200
outside of companies where that

410
00:22:11.200 --> 00:22:14.400
hasn't quite been the case where either a merger or

411
00:22:14.400 --> 00:22:17.900
forceful CEO or something has come in and change

412
00:22:17.900 --> 00:22:21.100
the culture not necessarily for the better. So what

413
00:22:20.100 --> 00:22:23.900
do you think's Sikorsky does right the

414
00:22:23.900 --> 00:22:25.600

other companies could pick up on

415

00:22:26.600 --> 00:22:27.700

It's a great question. So.

416

00:22:29.100 --> 00:22:32.100

So I work out of Stratford, Connecticut where you know Sikorsky is

417

00:22:32.100 --> 00:22:35.600

very strong. It's been strong there. Literally. We're about ready to celebrate our 100th anniversary

418

00:22:35.600 --> 00:22:38.500

next year. It's interesting to

419

00:22:38.500 --> 00:22:41.300

walk out in town and go to a restaurant or something and

420

00:22:41.300 --> 00:22:44.300

be wearing a flight suit and somebody say, oh you

421

00:22:44.300 --> 00:22:45.300

work at sikorski's.

422

00:22:46.200 --> 00:22:49.200

And and I thought well is that just an East Coast thing where people are saying

423

00:22:49.200 --> 00:22:50.100

sikowski's?

424

00:22:52.100 --> 00:22:56.000

Or do they really mean apostrophe s and I think I'm choosing

425

00:22:55.200 --> 00:22:58.900

to keep it as apostrophe s people

426

00:22:58.900 --> 00:23:01.500

really see it as Igor sikorski's company.

427

00:23:02.100 --> 00:23:06.000

And we have a strong Legacy. I just talked to our vice

428

00:23:05.100 --> 00:23:09.300

president engineering day before yesterday. I'm sorry

429

00:23:09.300 --> 00:23:12.700

Friday and his father worked

430

00:23:12.700 --> 00:23:15.500

at Sikorsky. He is clearly vice

431

00:23:15.500 --> 00:23:18.300

president there and his son is going to be starting with Sikorsky in

432

00:23:18.300 --> 00:23:21.500

engineering capacity in the next few years. So there's a

433

00:23:21.500 --> 00:23:25.500

really strong sense of family in the company. Not

434

00:23:24.500 --> 00:23:27.200

everybody can do that. But you

435

00:23:27.200 --> 00:23:30.500

know, we're lucky enough to have that I think so, that's just one one example

436

00:23:30.500 --> 00:23:33.200

of how we're able to keep that but I think there is a strong sense of

437

00:23:33.200 --> 00:23:36.300

Sikorsky, even though we were part of the United Technologies and now

438

00:23:36.300 --> 00:23:40.100

part of Lockheed Martin, we've sort of been left alone to be sikorski's company

439

00:23:39.100 --> 00:23:41.000

sikorskies.

440

00:23:42.700 --> 00:23:43.400

more questions

441

00:23:44.600 --> 00:23:46.200

out of time great. Thank you very much everybody.