

WEBVTT

1

00:00:00.300 --> 00:00:03.400

Wonderful briefing earlier today. So looking forward to your second briefing and really appreciate

2

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

took you away from your students, but really appreciate you coming

3

00:00:06.300 --> 00:00:07.100

and doing this for us.

4

00:00:07.600 --> 00:00:08.200

It's about fun.

5

00:00:16.400 --> 00:00:19.700

So this is going to be very different than this morning's discussion.

6

00:00:23.300 --> 00:00:26.100

It's a a discussion and this is all going

7

00:00:26.100 --> 00:00:30.400

to be storytelling and then how particularly

8

00:00:29.400 --> 00:00:32.900

as I moved into a role and teaching particularly

9

00:00:32.900 --> 00:00:35.500

engineering leadership getting exposed to

10

00:00:35.500 --> 00:00:38.700

some of the academic literature of organizations. And

11

00:00:38.700 --> 00:00:41.700

then me post processing my

12

00:00:41.700 --> 00:00:44.300

experienced on this incredible team.

13

00:00:45.200 --> 00:00:48.600

The story really is that of super-order's development integrated

14

00:00:48.600 --> 00:00:51.800
test team at Pax River 1995 to

15

00:00:51.800 --> 00:00:54.800
1999 and the Tail

16

00:00:54.800 --> 00:00:57.800
of Two cultures. I grew

17

00:00:57.800 --> 00:01:00.600
up in Saint Louis. I was born in St. Louis. So I grew up looking across

18

00:01:00.600 --> 00:01:03.900
Lambert Field at this iconic sign

19

00:01:03.900 --> 00:01:06.200
on the opposite side of the field from the

20

00:01:06.200 --> 00:01:09.200
terminal at the right here is Patuxent River

21

00:01:09.200 --> 00:01:12.500
along the Chesapeake at the intersection of the Patuxent River

22

00:01:12.500 --> 00:01:13.300
with the Chesapeake Bay.

23

00:01:15.400 --> 00:01:18.400
Apologies to Charles Dickens. It's

24

00:01:18.400 --> 00:01:18.900
actually not.

25

00:01:19.900 --> 00:01:22.500
Two cultures, it's five cult.

26

00:01:22.500 --> 00:01:22.800
Well.

27

00:01:24.400 --> 00:01:25.800
Maybe it was six cultures.

28
00:01:26.900 --> 00:01:29.400
because in the middle of the program Boeing bought

29
00:01:29.400 --> 00:01:30.300
McDonnell Douglas

30
00:01:33.800 --> 00:01:36.900
the Naval Air Station and navair one

31
00:01:36.900 --> 00:01:39.900
of the things that was really popular in the 1990s was

32
00:01:39.900 --> 00:01:42.300
the government moving to compressed work schedules or

33
00:01:42.300 --> 00:01:43.000
CWS.

34
00:01:43.900 --> 00:01:46.100
We were on for that

35
00:01:46.100 --> 00:01:49.200
four years. We likewise. We're on CWS. It was

36
00:01:49.200 --> 00:01:50.200
called come to work on Saturday.

37
00:01:54.800 --> 00:01:57.300
Again candidly my wife would

38
00:01:57.300 --> 00:02:00.400
like to forget the four years that I was on Super Hornet. It was a

39
00:02:00.400 --> 00:02:03.200
stressful time. My youngest of

40
00:02:03.200 --> 00:02:07.500
my our four boys was born right

41

00:02:06.500 --> 00:02:09.500
smackdab in the campaign for First

42

00:02:09.500 --> 00:02:12.300
Flight and the flight. I gave my the flight

43

00:02:12.300 --> 00:02:15.300
from St. Louis to Pax River for

44

00:02:15.300 --> 00:02:18.100
ship one to my Deputy because I wanted to make sure

45

00:02:18.100 --> 00:02:21.800
that I was in the delivery room for that boy. He told

46

00:02:21.800 --> 00:02:24.600
me he goes knockers. I feel like I'm steal. I'm

47

00:02:25.500 --> 00:02:28.900
Isaac stealing or Jacob stealing the birthright, but

48

00:02:28.900 --> 00:02:31.200
it's you're on you Tom. It's

49

00:02:31.200 --> 00:02:31.800
better that I be here.

50

00:02:33.100 --> 00:02:36.300
Others another peer recently called it his

51

00:02:36.300 --> 00:02:39.300
a professionally a four year Camelot experience.

52

00:02:40.200 --> 00:02:44.100
And so we want to kind of understand. How is that given the challenges
first?

53

00:02:43.100 --> 00:02:47.100
Let's look at some of those challenges and that is the circumstances

54
00:02:46.100 --> 00:02:49.600
of super Hornets birth in January

55
00:02:49.600 --> 00:02:52.700
1991 Iraq invaded Kuwait

56
00:02:52.700 --> 00:02:55.400
in that same month the Navy pulled from

57
00:02:55.400 --> 00:02:58.800
the yf-22 and yf-23 program a couple

58
00:02:58.800 --> 00:03:01.200
of weeks before I was supposed to fly the yf-23

59
00:03:02.800 --> 00:03:05.200
A 12 sec def

60
00:03:05.200 --> 00:03:08.400
Cheney canceled the a12 program. I was also read into that program at

61
00:03:08.400 --> 00:03:09.400
the time as a young lieutenant.

62
00:03:10.600 --> 00:03:14.200
The previous year's secdef had canceled the Tomcat

63
00:03:13.200 --> 00:03:17.700
are terminated the Tomcat interestingly in

64
00:03:16.700 --> 00:03:19.100
the law. It was written. The

65
00:03:19.100 --> 00:03:22.400
tooling would be destroyed after the last Tomcat D

66
00:03:22.400 --> 00:03:25.400
was made. I mean they wanted to make sure this airplane never came

67
00:03:25.400 --> 00:03:26.100

back to life.

68

00:03:28.300 --> 00:03:31.800

And where else in a lot do you do that destroy the tooling? Okay, and

69

00:03:31.800 --> 00:03:34.600

then very abruptly the A6 was

70

00:03:34.600 --> 00:03:35.400

yanked from service.

71

00:03:36.600 --> 00:03:39.300

So I was on a

72

00:03:39.300 --> 00:03:42.100

bike ride in Monterey with Dave Dunaway decoy went on

73

00:03:42.100 --> 00:03:45.100

to command to navair, but decoy and I were on a training ride.

74

00:03:45.100 --> 00:03:46.400

We were racing bicycles together.

75

00:03:49.200 --> 00:03:53.300

And I can remember this conversation on the bike trail north of the campus. What

76

00:03:52.300 --> 00:03:54.600

is our leadership thinking?

77

00:03:55.800 --> 00:03:58.400

You know where the airplane is going to come from there to fill

78

00:03:58.400 --> 00:03:59.900

the flight Decks that we're going to fly in the future.

79

00:04:00.700 --> 00:04:02.300

What are these dudes thinking?

80

00:04:03.300 --> 00:04:06.800

We felt both felt that Naval aviations

81

00:04:06.800 --> 00:04:08.600

tactical future looked bleak.

82

00:04:09.400 --> 00:04:12.600

And two years later. I was in Saint Louis preparing for the Futures first

83

00:04:12.600 --> 00:04:12.800

flight.

84

00:04:15.200 --> 00:04:18.400

Yeah, these things at all just gone away in a very brief short period

85

00:04:18.400 --> 00:04:19.200

of time in 91.

86

00:04:20.700 --> 00:04:23.200

I'd been assigned to Super Hornets integrated test team.

87

00:04:23.200 --> 00:04:26.500

Alongside Mac Air's Fred maddenwald

88

00:04:26.500 --> 00:04:29.400

my Naval Academy and test pilot

89

00:04:29.400 --> 00:04:32.400

school classmate Tom Gurney was my Deputy my bicycle

90

00:04:32.400 --> 00:04:35.400

racing partner Dave Dunaway from Monterey would be my OT

91

00:04:35.400 --> 00:04:38.500

pilot. He and I would have to keep secrets the secret

92

00:04:38.500 --> 00:04:42.000

for years that we had once shaved our legs. We didn't

93

00:04:41.200 --> 00:04:42.800

want the Marines knowing that.

94

00:04:43.800 --> 00:04:46.500
Every leadership role in the ITT in

95
00:04:46.500 --> 00:04:50.400
the integrated test team was shared government and contractor and

96
00:04:49.400 --> 00:04:52.400
Pete Pilcher

97
00:04:52.400 --> 00:04:55.400
Burt word. They alone could not sign for one

98
00:04:55.400 --> 00:04:55.500
another.

99
00:04:57.100 --> 00:04:59.800
Everyone else the roles were absolutely interchangeable.

100
00:05:01.500 --> 00:05:04.800
Fred and I had flown together previously five years

101
00:05:04.800 --> 00:05:07.300
earlier, I'd been the young Duty safety Chiefs pilot

102
00:05:07.300 --> 00:05:10.300
and Tomcat chasing Fred on flutter flights and

103
00:05:10.300 --> 00:05:11.000
a legacy hornet.

104
00:05:11.600 --> 00:05:14.200
And what followed in the over the next couple years was the

105
00:05:14.200 --> 00:05:16.100
most demanding and rewarding years of our professional lives?

106
00:05:17.300 --> 00:05:19.300
When the integrated test team was formed.

107
00:05:20.300 --> 00:05:24.100
all kinds of objections and obstacles arose

108

00:05:23.100 --> 00:05:26.600
a ghost of Legacy F-18 testing

109

00:05:26.600 --> 00:05:29.700
company government DT and operational testers

110

00:05:29.700 --> 00:05:32.300
made no secret of the fact that they kept data secret

111

00:05:32.300 --> 00:05:32.900
from one another

112

00:05:33.700 --> 00:05:36.700
That was just you just did not share data across within the

113

00:05:36.700 --> 00:05:38.200
government. We didn't share data with one another.

114

00:05:38.900 --> 00:05:39.500
intentionally

115

00:05:40.900 --> 00:05:43.100
Fred warned me at lunch one day in Saint Louis.

116

00:05:43.100 --> 00:05:45.700
We were Chevy's just south of the Lambert. He said

117

00:05:47.500 --> 00:05:48.500
the company

118

00:05:49.800 --> 00:05:52.400
my leadership is convinced. We cannot trust

119

00:05:52.400 --> 00:05:53.700
the day the inside our fence.

120

00:05:54.500 --> 00:05:55.400
after a 12

121

00:05:56.200 --> 00:05:58.500
they're waiting for you to screw us.

122
00:06:00.600 --> 00:06:03.200
The lawsuit for a 12 was not this was

123
00:06:03.200 --> 00:06:06.400
1991 or 1995 at this point lawsuit was not settled until

124
00:06:06.400 --> 00:06:07.100
2013.

125
00:06:09.500 --> 00:06:13.600
Pat Pax River maybe developmental testers insisted

126
00:06:12.600 --> 00:06:15.300
that Navy operational testers could

127
00:06:15.300 --> 00:06:16.700
not be trusted inside our fence.

128
00:06:17.500 --> 00:06:20.100
Contractor and government lawyers were in a

129
00:06:20.100 --> 00:06:21.500
tizzy about shared offices.

130
00:06:22.900 --> 00:06:25.100
I had Legacy baggage from a history with

131
00:06:25.100 --> 00:06:27.900
another Prime who's every action was transactional.

132
00:06:29.200 --> 00:06:33.200
Vice collaborative I had grown up thinking that lion cheat

133
00:06:32.200 --> 00:06:34.600
and thieves in contractor was one word.

134
00:06:36.200 --> 00:06:39.600
Navier's Engineers didn't believe government flight

135

00:06:39.600 --> 00:06:42.300

test Engineers could safely function without intrusive control,

136

00:06:42.300 --> 00:06:45.100

but they also didn't want to work the hours. We were going to have to work

137

00:06:45.100 --> 00:06:45.800

on the Itt

138

00:06:46.700 --> 00:06:49.500

Northrop members had really good

139

00:06:49.500 --> 00:06:52.200

histories a good experience with yf-23 on

140

00:06:52.200 --> 00:06:55.900

the integrated testing but disasters disaster

141

00:06:55.900 --> 00:06:58.600

toxic memories from another Edwards program

142

00:06:58.600 --> 00:07:00.100

that claimed integration.

143

00:07:01.600 --> 00:07:04.100

My partner Fred who's no longer with us

144

00:07:04.100 --> 00:07:07.200

Fred had a reputation for being an

145

00:07:07.200 --> 00:07:10.300

overbearing marine and my boss had a reputation as

146

00:07:10.300 --> 00:07:13.300

incendiary. I had flag officers tell me, you know

147

00:07:13.300 --> 00:07:15.500

knockers his call sign used to be fuse.

148

00:07:16.500 --> 00:07:17.600
as in short

149

00:07:19.300 --> 00:07:20.900
Yes, sir. I've heard that before.

150

00:07:22.500 --> 00:07:25.200
Why on the team? I had it I had a government

151

00:07:25.200 --> 00:07:28.500
lawyer approach me and tell me I was going to be supinated for the a12 lawsuit.

152

00:07:29.200 --> 00:07:33.000
It's like oh my word. First of all, I don't know anything and second

153

00:07:32.900 --> 00:07:35.300
you are about to sink the if you

154

00:07:35.300 --> 00:07:38.500
do that, you're going to sink the only program that now really matters.

155

00:07:39.600 --> 00:07:42.200
But I was too excited by the job to realize how badly the deck

156

00:07:42.200 --> 00:07:42.800
was stacked.

157

00:07:44.500 --> 00:07:47.300
My boss and I flew a hornet to St. Louis for our area

158

00:07:47.300 --> 00:07:50.200
fam before First Flight again. I had grown up

159

00:07:50.200 --> 00:07:52.600
in St. Louis. My dad was born there. I was born there.

160

00:07:53.800 --> 00:07:56.200
I left St. Louis for the Naval Academy

161

00:07:56.200 --> 00:07:58.600
in 1977 expecting to drive submarines for a living.

162
00:07:59.200 --> 00:08:01.800
And now I'm the Navy's oldest active pilot.

163
00:08:02.600 --> 00:08:05.400
I had watched I'd grown up watching the Arch

164
00:08:05.400 --> 00:08:08.300
built covered by the stainless plate my dad

165
00:08:08.300 --> 00:08:11.000
at engineered. I'd left St. Louis at 17.

166
00:08:12.700 --> 00:08:16.300
Saint superhernet brought me back as a fighter test pilot bird asked

167
00:08:16.300 --> 00:08:18.900
me during this flight. Do you know how you got this job I go well, you know

168
00:08:19.100 --> 00:08:22.000
I presumed it was my Tomcat work my developmental work. You know,

169
00:08:22.300 --> 00:08:25.200
I was alone Navy pilot with a PhD at the time he goes no,

170
00:08:25.200 --> 00:08:25.500
no.

171
00:08:26.500 --> 00:08:29.000
He goes your reputation for brokering calm.

172
00:08:30.600 --> 00:08:33.700
Bert and I a Fred and I have a reputation

173
00:08:33.700 --> 00:08:36.500
and a history for battles with one another I needed

174
00:08:36.500 --> 00:08:39.300

somebody calm to be the buffer between the two of

175

00:08:39.300 --> 00:08:39.400

us.

176

00:08:40.500 --> 00:08:40.700

but

177

00:08:41.600 --> 00:08:44.700

great. Why didn't

178

00:08:44.700 --> 00:08:47.100

you Burt was a hockey player? I got why didn't you

179

00:08:47.100 --> 00:08:49.500

just give me the black and white jersey on day one?

180

00:08:51.500 --> 00:08:54.000

Brian's not in his head because his dad was one of my mentors.

181

00:08:56.200 --> 00:09:00.100

Our leadership is what spelled the difference Joe

182

00:08:59.100 --> 00:09:02.200

Dyer second from right here here. He's a

183

00:09:02.200 --> 00:09:05.000

three-star flying going flying with some Joes on a Super Hornet.

184

00:09:07.300 --> 00:09:10.400

He was a program manager for enmd a southern

185

00:09:10.400 --> 00:09:12.900

gentleman with this lincoln-esque way for witticisms.

186

00:09:13.700 --> 00:09:16.200

I once heard him complain to our three-star working with

187

00:09:16.200 --> 00:09:19.200

navcomp is like death by a thousand hin picks.

188

00:09:19.900 --> 00:09:22.200

It's like wow and each of those things just kind of

189

00:09:22.200 --> 00:09:23.400

rolled off his tongue.

190

00:09:24.100 --> 00:09:28.300

Captain Dyer then Captain Dyer. He retired as a three-star. He

191

00:09:27.300 --> 00:09:31.800

was strident about a couple things no secrets.

192

00:09:32.700 --> 00:09:34.300

No walls.

193

00:09:35.700 --> 00:09:37.300

everyone's voice counts

194

00:09:38.300 --> 00:09:39.500

I mean straightened.

195

00:09:40.600 --> 00:09:43.400

His openness got him in so much trouble. He promoted

196

00:09:43.400 --> 00:09:46.400

a year late to Admiral because of security official

197

00:09:46.400 --> 00:09:49.300

filed an IG complaint against him for

198

00:09:49.300 --> 00:09:50.500

being too honest.

199

00:09:52.700 --> 00:09:53.900

At still stings him.

200

00:09:54.900 --> 00:09:57.500

But he looks he looks at the success.

201

00:10:00.200 --> 00:10:03.200

He sat Fred and I went down one day and he said I don't

202

00:10:03.200 --> 00:10:06.300

care how badly the two of you argue in your office when you come out there

203

00:10:06.300 --> 00:10:07.600

needs to be One Pilot opinion.

204

00:10:08.400 --> 00:10:11.000

The suits will try to drive us a wedge between you.

205

00:10:12.400 --> 00:10:15.100

And you can't let it happen. Nothing is important to be

206

00:10:15.100 --> 00:10:17.500

that this airplane be a great Pilot's airplane.

207

00:10:18.300 --> 00:10:20.900

And your relationship with one another is going to be indispensable.

208

00:10:21.800 --> 00:10:24.100

Fred and I started well, we were in

209

00:10:24.100 --> 00:10:27.600

St. Louis and negotiating how we divvy up the seven airplanes among five company

210

00:10:27.600 --> 00:10:30.800

pilots and five Navy Pilots. My PhD

211

00:10:30.800 --> 00:10:33.400

is flight controls, and he was fine with me flying spins, and

212

00:10:33.400 --> 00:10:35.500

he did not want me flying flutter.

213

00:10:36.900 --> 00:10:39.500

Spend testing wins kenshlows. He told

214

00:10:39.500 --> 00:10:39.500

me.

215

00:10:40.700 --> 00:10:41.900
flutter testing kills you

216

00:10:43.800 --> 00:10:46.500
I realized at the time I was

217

00:10:46.500 --> 00:10:48.300
seeing a marine caring for his own.

218

00:10:49.200 --> 00:10:52.400
Though he was eight years older we both had young Sons

219

00:10:52.400 --> 00:10:56.400
at home. My wife was pregnant with our fourth as I mentioned. He
wholeheartedly

220

00:10:55.400 --> 00:10:58.800
believe that it was the company's responsibility

221

00:10:58.800 --> 00:11:01.800
and a company Pilots responsibility to accept

222

00:11:01.800 --> 00:11:04.200
the risk of flutter and he hated the idea

223

00:11:04.200 --> 00:11:06.300
that a customer might be exposed to that risk.

224

00:11:08.500 --> 00:11:11.100
My safety and Welfare was his priority and and I

225

00:11:11.100 --> 00:11:12.100
was really touched by that.

226

00:11:14.200 --> 00:11:17.300
I showed up in Saint Louis one evening for two weeks of ground testing

227

00:11:17.300 --> 00:11:18.200
before first flight.

228

00:11:19.700 --> 00:11:22.300
24/7 three shifts operation it

229

00:11:22.300 --> 00:11:25.300
was around 2100 and third shift was just coming on and Fred said hey, why

230

00:11:25.300 --> 00:11:28.200
don't you go to your hotel and get a good night sleep and I'll see you in
the morning and I'll take third

231

00:11:28.200 --> 00:11:31.600
shift. No. No, I slept on the airplane. I'll take

232

00:11:31.600 --> 00:11:34.900
third shift you go home. You're home you

233

00:11:34.900 --> 00:11:37.300
go home spend the night with your wife and kids and I

234

00:11:37.300 --> 00:11:38.200
got third shift.

235

00:11:39.900 --> 00:11:41.600
Fred chuckled and feigned amazement he goes

236

00:11:42.100 --> 00:11:43.300
The government's here to help.

237

00:11:46.200 --> 00:11:47.100
Then I blew it.

238

00:11:49.400 --> 00:11:52.700
We had we had a bleed air caution

239

00:11:52.700 --> 00:11:55.500
light shortly after takeoff on ship one out of Saint Louis. I was

240

00:11:55.500 --> 00:11:58.200
Fred's Chase pilot. Actually Sandy was

241
00:11:58.200 --> 00:12:00.000
in the safety Chase. I was in the photo Chase.

242
00:12:01.300 --> 00:12:04.400
Fred just cycled the bleeder switch and pressed ahead

243
00:12:04.400 --> 00:12:07.700
without consulting anyone and the chase. I was stunned, you

244
00:12:07.700 --> 00:12:10.200
know in my world in the Tomcat world of bleed airs

245
00:12:10.200 --> 00:12:13.600
in different from a fire light and

246
00:12:15.300 --> 00:12:18.100
It came back about 15 minutes later. And then at

247
00:12:18.100 --> 00:12:19.300
that point Fred aborted the flight.

248
00:12:20.300 --> 00:12:21.100
My sin.

249
00:12:22.100 --> 00:12:25.400
Was I went straight to my boss and said we need a government-only meeting.

250
00:12:30.500 --> 00:12:33.100
We emerged from our caucus to find Fred sitting on

251
00:12:33.100 --> 00:12:33.300
the couch.

252
00:12:34.500 --> 00:12:37.700
I'd robbed him of the Triumph of an important

253
00:12:37.700 --> 00:12:40.400
day in the life of the program and in his professional life.

254

00:12:41.400 --> 00:12:43.200
First Flight of a brand new design

255
00:12:44.800 --> 00:12:47.700
contrite he agreed he'd aired and

256
00:12:47.700 --> 00:12:48.800
then the daggered my heart.

257
00:12:49.700 --> 00:12:51.100
If we're an integrated team.

258
00:12:53.400 --> 00:12:55.100
What's the role of government only meetings?

259
00:12:59.100 --> 00:13:00.500
It was my turn for contrition.

260
00:13:01.300 --> 00:13:04.300
I'd conjured up a ghost of programs past.

261
00:13:05.100 --> 00:13:06.300
Were such meetings were the norm.

262
00:13:07.200 --> 00:13:08.800
We would never do that again.

263
00:13:11.800 --> 00:13:14.500
Part of Joe Dyer's

264
00:13:14.500 --> 00:13:17.400
strategy was to force Mac your leadership to listen to their own Pilots.

265
00:13:19.400 --> 00:13:19.700
He's still proud of that.

266
00:13:21.300 --> 00:13:25.100
He did this by convening chalk talks and my ready room every month

267
00:13:24.100 --> 00:13:27.400
expecting Saint Louis managers to fly into Pax

268

00:13:27.400 --> 00:13:30.500

River during one such meeting. I stridently

269

00:13:30.500 --> 00:13:33.100

insisted that our data entry screen was dangerous and needed

270

00:13:33.400 --> 00:13:37.400

urgent fix one of the suits in the room angrily demanded.

271

00:13:36.400 --> 00:13:40.100

Well, what are the company Pilots think and

272

00:13:39.100 --> 00:13:42.300

Fred just kind of exactly what

273

00:13:42.300 --> 00:13:42.600

he said.

274

00:13:45.600 --> 00:13:48.200

That was on Friday Monday morning at six

275

00:13:48.200 --> 00:13:51.600

o'clock. I got to work and there were two Mac Air avionics engineer

276

00:13:51.600 --> 00:13:53.800

standing. Maybe that's waiting for me to come to work. It's like

277

00:13:54.500 --> 00:13:55.200

this works

278

00:13:56.100 --> 00:13:59.400

another scene was the following year was represented what unfolded I

279

00:13:59.400 --> 00:14:02.200

insisted I insisted I was insistent about fixing some issues and

280

00:14:02.200 --> 00:14:05.500

I don't remember what it was and my boss was repeatedly downplaying my

281

00:14:05.500 --> 00:14:06.800
concern. Oh, it's just not that big a deal.

282
00:14:07.500 --> 00:14:10.500
Fred came to my defense. Yes Bert Rob's, right?

283
00:14:11.500 --> 00:14:14.100
It really is a big deal now. It was

284
00:14:14.100 --> 00:14:16.100
the two of them going at it and I could sit back.

285
00:14:16.900 --> 00:14:19.900
And then Fred exclaimed the company.

286
00:14:20.700 --> 00:14:21.300
Screw this up.

287
00:14:22.400 --> 00:14:25.800
The company needs to pay to fix it and my boss.

288
00:14:26.700 --> 00:14:29.300
A ratchet he knows by the way. I'm telling the story

289
00:14:29.300 --> 00:14:32.300
ratcheted up the tone as was his bent.

290
00:14:32.900 --> 00:14:35.300
And gets angry or an angrier and I finally

291
00:14:35.300 --> 00:14:38.600
had to put the white black and white jersey on step into the breach and

292
00:14:38.600 --> 00:14:39.700
go boss.

293
00:14:40.900 --> 00:14:43.800
The company just said the company

294
00:14:43.800 --> 00:14:46.600
screwed this up and the company needs

295

00:14:46.600 --> 00:14:47.100

to fix it.

296

00:14:48.300 --> 00:14:49.300

Well, then, what are we arguing about?

297

00:14:51.000 --> 00:14:51.700

precisely

298

00:14:54.900 --> 00:14:55.100

so

299

00:14:56.700 --> 00:15:00.100

Edgar Schein literally wrote the book on organizational

300

00:14:59.100 --> 00:15:02.200

cultures. I'm surprised we haven't heard his name yet

301

00:15:02.200 --> 00:15:05.100

notice. This is fifth edition. There's a whole lot of

302

00:15:05.100 --> 00:15:08.100

business school professors assigning this book to get to fifth edition.

303

00:15:09.600 --> 00:15:12.400

And he talks about culture organizational culture

304

00:15:12.400 --> 00:15:16.400

really having three layers. The first ones are artifacts behaviors

305

00:15:15.400 --> 00:15:19.300

processes documentation below

306

00:15:18.300 --> 00:15:21.200

that are espoused values

307

00:15:21.200 --> 00:15:24.400

and we heard that discussed a little bit yesterday is it's the

308

00:15:24.400 --> 00:15:27.800
spouse values that inform behaviors and processes

309
00:15:27.800 --> 00:15:30.400
and what's in policies.

310
00:15:31.600 --> 00:15:35.400
What is deep line and hard to see is underlying

311
00:15:34.400 --> 00:15:38.100
beliefs or assumptions and

312
00:15:37.100 --> 00:15:40.600
shine would contend that's where

313
00:15:40.600 --> 00:15:44.000
culture really lies at the level of assumptions

314
00:15:43.700 --> 00:15:47.200
what is tacit and unsaid and

315
00:15:46.200 --> 00:15:49.200
when we you know, our last speaker just

316
00:15:49.200 --> 00:15:52.200
talked about onboarding people and a lot of what people do in the

317
00:15:52.200 --> 00:15:55.500
onboarding is their their feeling out. What

318
00:15:55.500 --> 00:15:55.800
are

319
00:15:57.300 --> 00:15:57.900
the assumptions

320
00:15:58.900 --> 00:16:01.200
and tacit things that people take for

321
00:16:01.200 --> 00:16:02.200
granted an organization.

322

00:16:05.400 --> 00:16:08.100

This one we've not mentioned the last two days and it's kind of surprised me

323

00:16:08.100 --> 00:16:10.100

in our case. It took about a year.

324

00:16:10.900 --> 00:16:13.500

About six months before and after first flight to

325

00:16:13.500 --> 00:16:16.300

synchronize a vocabulary it took me months to understand

326

00:16:16.300 --> 00:16:19.200

Mac Air's Legacy mental model of

327

00:16:19.200 --> 00:16:22.900

a test plan was different than mine in my mind. Test plan

328

00:16:22.900 --> 00:16:25.000

was a contract between leadership in the test team.

329

00:16:26.900 --> 00:16:28.600

Mac here had a looser version of that.

330

00:16:29.400 --> 00:16:30.900

And I kind of saw that on first flight.

331

00:16:32.300 --> 00:16:35.200

These for me it was quite shocking to

332

00:16:35.200 --> 00:16:38.600

learn Professionals in the same field could have the same word and mean

333

00:16:38.600 --> 00:16:42.400

such different things by the same word those disconnects.

334

00:16:41.400 --> 00:16:44.600

Sometimes occurred in the test planning process, but

335

00:16:44.600 --> 00:16:47.500
more distressingly during a debrief

336

00:16:47.500 --> 00:16:49.700
when we try to understand what one another had been thinking

337

00:16:51.700 --> 00:16:55.100
They abated with time and we entered with some dogmatism and

338

00:16:54.100 --> 00:16:57.500
because we all entered with some dogmatism rather with respect

339

00:16:57.500 --> 00:17:00.300
to our Legacy approach an example of the

340

00:17:00.300 --> 00:17:03.700
Navy actually yielding to Mac. Air's experience was conducting

341

00:17:03.700 --> 00:17:06.200
spend testing. So Fred and I shared

342

00:17:06.200 --> 00:17:08.000
this airplane E4 the spenbird.

343

00:17:09.100 --> 00:17:12.600
Dave sits had learned with Strike Eagle that aggravated input

344

00:17:12.600 --> 00:17:15.300
art aggravated departures eventually find themselves

345

00:17:15.300 --> 00:17:18.100
and spends. So why don't we start with spins and understand that so that

346

00:17:18.100 --> 00:17:21.600
when you do aggravated inputs and you wind up into spend you're actually
back on familiar

347

00:17:21.600 --> 00:17:22.200
Terrain.

348

00:17:22.800 --> 00:17:25.200

Made a whole lot of sense had not been done before I think

349

00:17:25.200 --> 00:17:28.300

Dave did that on to Strike Eagle worked super

350

00:17:28.300 --> 00:17:31.300

there was a number of occasions in which we did things where which we did

351

00:17:31.300 --> 00:17:34.800

not expect to even lose control of the airplane where oh, I'm back

352

00:17:34.800 --> 00:17:37.300

in a spin. Okay. Now I'm in for mail your turn rain,

353

00:17:37.300 --> 00:17:38.100

and I know how to get out of this.

354

00:17:39.400 --> 00:17:42.400

This was why it was so invaluable to have the lead OT

355

00:17:42.400 --> 00:17:45.400

pilot with us from almost the start. This was there were

356

00:17:45.400 --> 00:17:49.000

actually my boss resisted. This decoy had

357

00:17:49.100 --> 00:17:52.500

been in culture to our vocabulary and then brought the his OT

358

00:17:52.500 --> 00:17:55.100

buddies along when it came time for them to fly our airplanes.

359

00:17:56.300 --> 00:18:00.100

Peter sengi another Sloan MIT Prof introduced

360

00:17:59.100 --> 00:18:01.600

me the role mental models play.

361

00:18:02.400 --> 00:18:05.600

I Now understand how disparate undisclosed mental

362

00:18:05.600 --> 00:18:08.600

models can Propel cultural dysfunction and

363

00:18:08.600 --> 00:18:09.000

conflict

364

00:18:09.700 --> 00:18:12.200

that's what I witnessed, but I did not then have a name for it.

365

00:18:13.200 --> 00:18:17.000

I now know to look for it as an organizational as

366

00:18:16.800 --> 00:18:19.600

organizations collaborate or Collide as

367

00:18:19.600 --> 00:18:22.300

their mental models. These tacit assumptions are

368

00:18:22.300 --> 00:18:23.500

just below the surface.

369

00:18:25.300 --> 00:18:28.800

Ultimately and profoundly parental organization

370

00:18:28.800 --> 00:18:31.400

Lines Blurred several of us have stories

371

00:18:31.400 --> 00:18:33.800

working with an engineer for months before realizing. Oh my gosh.

372

00:18:34.600 --> 00:18:38.000

Your government guy I didn't even know that because it just didn't

373

00:18:37.000 --> 00:18:38.100

matter.

374

00:18:40.600 --> 00:18:43.200

The five airplanes are seven airplanes. We

375

00:18:43.200 --> 00:18:46.200
just took turns carrier suit airplane was flown by the Navy and the

376

00:18:46.200 --> 00:18:49.200
loads airplane by the company. We finished the program with the company
Pilots having

377

00:18:49.200 --> 00:18:53.300
55% of the hours and the Navy Pilots having 55%

378

00:18:52.300 --> 00:18:55.700
of the sorties carrier suit and websep

379

00:18:55.700 --> 00:18:56.500
or shorter flights. So we

380

00:18:57.200 --> 00:19:00.400
Engineers reported their team lead the watermark on

381

00:19:00.400 --> 00:19:01.400
their paycheck was irrelevant.

382

00:19:02.200 --> 00:19:05.200
Government contractor Pilots could sub for one another

383

00:19:05.200 --> 00:19:08.200
any Engineers could sub for one another on any given

384

00:19:08.200 --> 00:19:08.300
day.

385

00:19:09.300 --> 00:19:12.400
And only are the contractor and

386

00:19:12.400 --> 00:19:15.200
government flight test director could not sign for one another a
concession to

387

00:19:15.200 --> 00:19:16.600
the lawyers and contracts officers.

388

00:19:17.700 --> 00:19:20.200

One of our senior ftees recently told me this

389

00:19:20.200 --> 00:19:23.500

was less doubt. The first thing that comes to mind looking back

390

00:19:23.500 --> 00:19:27.100

on. Our experience is the total elimination of organizational boundaries

391

00:19:26.100 --> 00:19:29.400

and barriers. We were completely integrated.

392

00:19:30.300 --> 00:19:33.700

On a day-to-day basis. I never thought about who worked for Boeing Northrop GE

393

00:19:33.700 --> 00:19:37.000

Navy Etc. It was transparent in My Level less was

394

00:19:36.100 --> 00:19:39.500

one of the one of the Northrop Grumman

395

00:19:39.500 --> 00:19:42.300

ftee's on the team his Deputy was a Navy

396

00:19:42.300 --> 00:19:45.400

guy and when less had a

397

00:19:45.400 --> 00:19:48.400

day of leave or took the day off or was sick has Navy guide

398

00:19:48.400 --> 00:19:51.300

took for him and he had Mac Air people working for

399

00:19:51.300 --> 00:19:54.600

him and GE people working and you know again Watermark just

400

00:19:54.600 --> 00:19:57.900

didn't matter. This was a really severe contrast

401

00:19:57.900 --> 00:20:00.800

to other itts particularly the other Boeing

402

00:20:00.800 --> 00:20:02.300

Navy program at Pax River at the time.

403

00:20:04.200 --> 00:20:07.200

Which after Super Hornet while down Fred was sent over

404

00:20:07.200 --> 00:20:08.100

there to fix that?

405

00:20:09.300 --> 00:20:12.700

Winning commitment from the full team was decisive to

406

00:20:12.700 --> 00:20:13.200

outcomes.

407

00:20:14.300 --> 00:20:19.900

Early in the program our Navy and Mac Air directors work

408

00:20:18.900 --> 00:20:21.300

Pete Pilcher announced the team would not

409

00:20:21.300 --> 00:20:21.900

work Sunday.

410

00:20:22.900 --> 00:20:25.800

To meet unable to team sustained effort

411

00:20:25.800 --> 00:20:28.400

for four years and some months later. They published

412

00:20:28.400 --> 00:20:31.300

a list with one Saturday per month. We would not work so that

413

00:20:31.300 --> 00:20:33.300

people could plan for a family events.

414

00:20:34.100 --> 00:20:36.200

This provided some some measured.

415

00:20:37.600 --> 00:20:41.100

Work-life balance for all 400 Navy and contractor employees both

416

00:20:40.100 --> 00:20:43.100

Pete and Burke took heat from their

417

00:20:43.100 --> 00:20:43.500

leadership.

418

00:20:44.300 --> 00:20:47.300

So what do you mean? You're not going to work seven days a week like no.

This

419

00:20:47.300 --> 00:20:50.200

is a four year campaign with a seven most expensive airplanes in

420

00:20:50.200 --> 00:20:52.200

the Navy. We're not going to do that to our people.

421

00:20:52.900 --> 00:20:55.100

After four years, there were two Sundays. We won the

422

00:20:55.100 --> 00:20:55.300

working.

423

00:20:56.700 --> 00:21:00.100

And and it was peten Burt

424

00:20:59.100 --> 00:21:02.300

were protecting us and there was

425

00:21:02.300 --> 00:21:03.300

that was really important.

426

00:21:04.500 --> 00:21:07.300

You know, I've spent a couple weeks now peeling back memories of

427

00:21:07.300 --> 00:21:07.900

diverse.

428

00:21:09.600 --> 00:21:12.500
Navy and macular leaders trying to stand how this arose

429
00:21:12.500 --> 00:21:15.400
ultimately they pointed at 12 days in August in 1992.

430
00:21:16.100 --> 00:21:19.300
The same summer that Lieutenant Commander Dunaway and

431
00:21:19.300 --> 00:21:22.100
knee owner were complaining on our bikes about our leadership's lack of vision.

432
00:21:22.800 --> 00:21:25.800
During those 12 days, they literally locked

433
00:21:25.800 --> 00:21:28.800
government and navy and and contract

434
00:21:28.800 --> 00:21:32.300
macular employees in a hotel in St. Louis and we're

435
00:21:32.300 --> 00:21:34.700
told not to come out until they merged with an executable program.

436
00:21:35.700 --> 00:21:38.800
Elimination of duplicative testing and slashing

437
00:21:38.800 --> 00:21:41.300
team Manpower jointly to staff the effort were key to

438
00:21:41.300 --> 00:21:42.000
that executability.

439
00:21:42.900 --> 00:21:45.000
By the time we were arranging up for the first

440
00:21:45.300 --> 00:21:48.300
flight senior leaders had built deep levels of trust and

441
00:21:48.300 --> 00:21:51.200

collaboration by the time I joined eight months prior to First Flight

442

00:21:51.200 --> 00:21:52.000

the pattern been set.

443

00:21:53.600 --> 00:21:56.700

The other thing I noticed during these conversations with you

444

00:21:56.700 --> 00:21:59.300

know, my peers and Senior leaders as I've kind

445

00:21:59.300 --> 00:22:02.600

of researched my prep for this was how quick

446

00:22:02.600 --> 00:22:04.200

everyone is to deflect credit.

447

00:22:06.200 --> 00:22:09.300

You know, they all say, you know, I was just so privileged to be on that team.

448

00:22:09.300 --> 00:22:12.800

But you know when I talked to Craig steidle, he was like, oh Jerry

449

00:22:12.800 --> 00:22:15.400

can and my Deputy Jocko Chino Vive

450

00:22:15.400 --> 00:22:18.400

that this success of Superwoman is about them when he

451

00:22:18.400 --> 00:22:21.200

talked to Joe. Everybody was deflecting the credit. This was just really

452

00:22:21.200 --> 00:22:24.900

beautiful to listen to everybody deflecting the credit despite describing

453

00:22:24.900 --> 00:22:26.800

this as you know, a Camelot experience and

454

00:22:27.900 --> 00:22:29.100

Um, yeah.

455
00:22:30.500 --> 00:22:32.600
We'd like a mulligan on one decision.

456
00:22:34.700 --> 00:22:35.600
toad pylons

457
00:22:36.600 --> 00:22:39.800
I I had a spectacular indecision engine.

458
00:22:41.700 --> 00:22:44.500
Engine failure during a flutter flight test grounding the

459
00:22:44.500 --> 00:22:47.400
fleet for two months and to recoup the time. We rushed

460
00:22:47.400 --> 00:22:50.200
the airplanes into a wing mod to incorporate the fix for a predicted

461
00:22:50.200 --> 00:22:52.600
problem before confirming. We actually had a real problem.

462
00:22:53.300 --> 00:22:55.300
expediency trumped quality

463
00:22:56.200 --> 00:22:57.800
Schedule anxiety drowned the question.

464
00:22:58.600 --> 00:23:01.000
And the fleet's been dragging around our impatience for 20 years.

465
00:23:04.800 --> 00:23:07.200
Some real Frameworks and this one

466
00:23:07.200 --> 00:23:10.500
has to go quick because of worry. I'm time several Frameworks have

467
00:23:10.500 --> 00:23:13.700
been helpful cats and both and Smith at a

468

00:23:13.700 --> 00:23:16.600

hard Business review the discipline of teams, you know,

469

00:23:16.600 --> 00:23:20.200

they describe this as what team flow looks like and wow.

470

00:23:19.200 --> 00:23:22.000

I saw this in spades on

471

00:23:22.400 --> 00:23:25.600

each of the sub teams that I worked on whether it was flutter or

472

00:23:25.600 --> 00:23:28.100

spend departure or just the

473

00:23:28.100 --> 00:23:32.400

team broadly. I saw these five here's more

474

00:23:31.400 --> 00:23:34.200

important one for me and that

475

00:23:34.200 --> 00:23:34.300

is

476

00:23:35.100 --> 00:23:38.400

Oh, it wasn't all seriousness. So I

477

00:23:38.400 --> 00:23:41.300

spent time on the flutter team. And for those of you who've

478

00:23:41.300 --> 00:23:44.300

done some flutter or familiar with flooding. Have you ever noticed that flutter guys just can't

479

00:23:44.300 --> 00:23:47.200

put on weight. They're all just skinny really skinny, dudes.

480

00:23:47.800 --> 00:23:50.800

I think it's their anxiety level that there's oh

481

00:23:50.800 --> 00:23:52.000

they're always amped up.

482

00:23:53.600 --> 00:23:56.700

You know, I bills bill Moody's seriousness about

483

00:23:56.700 --> 00:23:59.200

my safety just really endeared him

484

00:23:59.200 --> 00:24:03.200

to me and that was a big part of my confidence was his seriousness, but sometimes

485

00:24:04.700 --> 00:24:06.800

You know, I walked into a brief one day and said, you know Bill.

486

00:24:08.400 --> 00:24:10.200

Sometimes I feel like I'm talking to Eeyore.

487

00:24:12.200 --> 00:24:14.300

Well, at least the wings didn't fall off today.

488

00:24:17.300 --> 00:24:19.600

The next warning six o'clock, we're briefing.

489

00:24:20.300 --> 00:24:24.100

And there's a stuffed Eeyore had his place. Somebody has

490

00:24:23.100 --> 00:24:25.900

gone out and bought an ER for him.

491

00:24:27.300 --> 00:24:30.400

Became the mascot and was at every flutter

492

00:24:30.400 --> 00:24:31.600

brief thereafter in the program.

493

00:24:32.900 --> 00:24:35.200

You know on another occasion. Ron Harney was told Hey, listen,

494

00:24:35.200 --> 00:24:38.200

you know the it's just too loose in the control rooms. You really need

495

00:24:38.200 --> 00:24:41.100

to kind of suppress some of the levity too much of that

496

00:24:41.100 --> 00:24:44.500

going on. And so Ron gets up and tries to give us really serious

497

00:24:44.500 --> 00:24:47.200

brief to all the engineers about how serious the work is

498

00:24:47.200 --> 00:24:50.100

in the data station and he says, you know, we just really need to

499

00:24:50.100 --> 00:24:53.100

clamp down on the jocularity at which point

500

00:24:53.100 --> 00:24:56.200

one of the engineers answers. I think Walgreens sells a cream

501

00:24:56.200 --> 00:24:56.500

for that.

502

00:24:59.400 --> 00:25:01.800

completely undid his purpose

503

00:25:06.100 --> 00:25:06.900

Wow, here's one.

504

00:25:08.600 --> 00:25:11.600

One of my favorite Harvard Business Review articles Gavin and

505

00:25:11.600 --> 00:25:14.100

Roberto's what you don't know about making decisions.

506

00:25:15.100 --> 00:25:17.200

I'll let you process this for a moment.

507

00:25:24.400 --> 00:25:28.100

And this difference between advocacy and if

508

00:25:27.100 --> 00:25:30.400
you've been in this business five years, you've seen these cultures on

509
00:25:30.400 --> 00:25:30.700
the left.

510
00:25:32.200 --> 00:25:33.100
You've seen them.

511
00:25:34.500 --> 00:25:37.500
You know, this is the this is what you read in Vaughn's

512
00:25:37.500 --> 00:25:38.600
book about Challenger.

513
00:25:39.300 --> 00:25:42.600
Accident, this is what you read in chapter 6 of The Cave

514
00:25:42.600 --> 00:25:46.200
is that column on the left and I've been in the might the

515
00:25:45.200 --> 00:25:47.800
department. I'm in right now. We have been there.

516
00:25:49.300 --> 00:25:52.500
Super horn it was profoundly and inquiry culture

517
00:25:52.500 --> 00:25:54.000
and Joe Dyer drove it.

518
00:25:54.600 --> 00:25:57.500
If you disagreed with the skipper, he turned the

519
00:25:57.500 --> 00:26:00.500
volume up on you and then he circled back later to

520
00:26:00.500 --> 00:26:03.600
tell you how much he prized descent.

521
00:26:05.200 --> 00:26:08.900
I don't know anyone I've ever worked for was as good as fostering inquiry

522

00:26:08.900 --> 00:26:09.900

culture as Joe Dyer.

523

00:26:10.800 --> 00:26:13.100

So I really commend that article.

524

00:26:14.100 --> 00:26:16.800

Okay. Yeah, I'm out of time running out of sections.

525

00:26:17.400 --> 00:26:20.200

My takeaways don't call it integrated unless you go all

526

00:26:20.200 --> 00:26:20.700

in.

527

00:26:21.900 --> 00:26:24.600

We succeeded in doing that despite the obstacles when

528

00:26:24.600 --> 00:26:27.500

merging cultures. This is back to shine make the

529

00:26:27.500 --> 00:26:28.900

implicit explicit.

530

00:26:29.600 --> 00:26:32.500

Because it's the assumptions that really just

531

00:26:32.500 --> 00:26:33.400

cause the dysfunction.

532

00:26:34.600 --> 00:26:37.600

And learning culture means and Cory culture

533

00:26:37.600 --> 00:26:40.400

which goes back to my previous presentation on the subject of

534

00:26:40.400 --> 00:26:44.100

curiosity and the role of here something I

535

00:26:43.100 --> 00:26:47.500
meant to mention that kind of but last the

536
00:26:47.500 --> 00:26:50.900
flight to safety working groups the last couple sessions have been
focused on

537
00:26:50.900 --> 00:26:53.400
stamp and cast stpa. There's

538
00:26:53.400 --> 00:26:56.600
been I think that stamped for which I really thank Tom

539
00:26:56.600 --> 00:27:01.100
Huff for introducing me to that institutionalizes. It's

540
00:27:00.100 --> 00:27:03.100
a means by creating institutional.

541
00:27:03.800 --> 00:27:06.800
Curiosity because of those feedbacks of

542
00:27:06.800 --> 00:27:09.800
the right hand side. So I'm out

543
00:27:09.800 --> 00:27:12.600
of time. I know that now it's break and and I'll

544
00:27:12.600 --> 00:27:14.600
you know, get the chance to re-engage on some of these things.

545
00:27:15.700 --> 00:27:18.200
So Bill, you're sick.