
THE NATIONAL
PRESS CLUB
RESS.ORG
NATIONAL
SS CLUB
.ORG

1
00:00:08,419 --> 00:00:06,349
good morning all my name is sage in

2
00:00:12,620 --> 00:00:08,429
there saying I'm the chair for the

3
00:00:15,230 --> 00:00:12,630
newsmakers committee it's a pleasure to

4
00:00:18,500 --> 00:00:15,240
welcome you all on behalf of the

5
00:00:22,880 --> 00:00:18,510
national press club with more than 3,500

6
00:00:27,040 --> 00:00:22,890
members worldwide please do visit NPC

7
00:00:31,339 --> 00:00:27,050
dot org our website for more details and

8
00:00:35,229 --> 00:00:31,349
i will not like to take a lot of your

9
00:00:38,450 --> 00:00:35,239
time as we have this newsmakers event

10
00:00:42,920 --> 00:00:38,460
bore new developments in nasa's civil

11
00:00:47,660 --> 00:00:42,930
space effort and we have speakers dr.

12
00:00:50,889 --> 00:00:47,670
John Holdren director of the White House

13
00:00:56,119 --> 00:00:50,899

Office of Science and Technology and

14
00:01:05,210 --> 00:00:56,129
NASA Administrator Charles Bolden I will

15
00:01:07,609 --> 00:01:05,220
now pass to mr. Holdren thank you very

16
00:01:09,740 --> 00:01:07,619
much it's my distinct privilege this

17
00:01:12,530 --> 00:01:09,750
morning to introduce you to a man who

18
00:01:14,780 --> 00:01:12,540
has excelled as a Marine pilot and a

19
00:01:17,719 --> 00:01:14,790
leader of his peers in that demanding

20
00:01:20,960 --> 00:01:17,729
and dangerous profession as an astronaut

21
00:01:23,810 --> 00:01:20,970
as a manager of high-tech agencies and

22
00:01:26,359 --> 00:01:23,820
enterprises as an advisor to businesses

23
00:01:28,789 --> 00:01:26,369
universities and philanthropies and now

24
00:01:30,130 --> 00:01:28,799
as the visionary leader of the National

25
00:01:32,899 --> 00:01:30,140
Aeronautics and Space Administration

26
00:01:35,660 --> 00:01:32,909
which he is restructuring into the

27
00:01:37,999 --> 00:01:35,670
science centered technology advancing

28
00:01:40,280 --> 00:01:38,009
forward leaning institution it needs to

29
00:01:42,140 --> 00:01:40,290
be to meet the challenges and the

30
00:01:44,770 --> 00:01:42,150
opportunities of our country's

31
00:01:47,120 --> 00:01:44,780
activities in space in the 21st century

32
00:01:50,420 --> 00:01:47,130
but before I tell you a little more

33
00:01:52,700 --> 00:01:50,430
about major-general retired Charles F

34
00:01:54,889 --> 00:01:52,710
Bolden jr. I want to say a few words

35
00:01:58,249 --> 00:01:54,899
about those challenges and opportunities

36
00:02:01,249 --> 00:01:58,259
in space I start by noting that

37
00:02:03,469 --> 00:02:01,259
President Obama realizes I realize and

38
00:02:06,289 --> 00:02:03,479

general Bolden realizes that our

39
00:02:08,979 --> 00:02:06,299
activities in space represent not just a

40
00:02:11,029 --> 00:02:08,989
grand and inspiring adventure of

41
00:02:12,380 --> 00:02:11,039
exploration and discovery of the

42
00:02:15,860 --> 00:02:12,390
universe we inhabit

43
00:02:17,660 --> 00:02:15,870
but also an indispensable platform for

44
00:02:19,400 --> 00:02:17,670
observing what is happening in the

45
00:02:21,740 --> 00:02:19,410
environment of the earth below from the

46
00:02:24,530 --> 00:02:21,750
transformation of land and vegetation to

47
00:02:26,630 --> 00:02:24,540
melting ice and rising sea level to the

48
00:02:29,330 --> 00:02:26,640
tracks of hurricanes and typhoons a

49
00:02:31,250 --> 00:02:29,340
vantage point as well for monitoring

50
00:02:35,060 --> 00:02:31,260
potential threats to our national

51
00:02:37,070 --> 00:02:35,070
security an indispensable pillar of our

52
00:02:39,650 --> 00:02:37,080
communications infrastructure and geo

53
00:02:42,170 --> 00:02:39,660
positioning capability and a source of

54
00:02:45,080 --> 00:02:42,180
new products services businesses and

55
00:02:48,530 --> 00:02:45,090
jobs whose potential is barely beginning

56
00:02:51,170 --> 00:02:48,540
to be tapped us strength in space

57
00:02:53,720 --> 00:02:51,180
science and space technology stands as

58
00:02:55,580 --> 00:02:53,730
one of the pillars alongside the

59
00:02:57,800 --> 00:02:55,590
vitality of our research universities

60
00:02:59,509 --> 00:02:57,810
and National Laboratories the strengths

61
00:03:01,970 --> 00:02:59,519
of our education system from preschool

62
00:03:03,050 --> 00:03:01,980
to grad school and our information

63
00:03:05,360 --> 00:03:03,060

energy and transportation

64
00:03:08,000 --> 00:03:05,370
infrastructures the pillars that support

65
00:03:09,340 --> 00:03:08,010
this country's leadership across the

66
00:03:12,080 --> 00:03:09,350
range of science and engineering

67
00:03:13,960 --> 00:03:12,090
capabilities we need for economic

68
00:03:16,310 --> 00:03:13,970
competitiveness growth and job creation

69
00:03:18,530 --> 00:03:16,320
for clean energy and environmental

70
00:03:21,080 --> 00:03:18,540
sustainability for long and healthy

71
00:03:24,110 --> 00:03:21,090
lives for all of our citizens and for

72
00:03:26,350 --> 00:03:24,120
national and homeland security US

73
00:03:28,819 --> 00:03:26,360
leadership in human spaceflight

74
00:03:31,880 --> 00:03:28,829
compellingly asserted in the landing of

75
00:03:34,780 --> 00:03:31,890
humans on the moon in 1969 and in five

76
00:03:37,310 --> 00:03:34,790
more such landings through 1972 and

77
00:03:39,710 --> 00:03:37,320
convincingly continued through the space

78
00:03:41,690 --> 00:03:39,720
shuttle program and the central u.s.

79
00:03:44,509 --> 00:03:41,700
role in the international space station

80
00:03:46,600 --> 00:03:44,519
has brought forth the bravest among us

81
00:03:49,789 --> 00:03:46,610
to venture into this ultimate frontier

82
00:03:52,190 --> 00:03:49,799
has engaged some of the cleverest among

83
00:03:54,319 --> 00:03:52,200
us to develop the technologies by which

84
00:03:56,390 --> 00:03:54,329
they could do so and has inspired

85
00:03:58,729 --> 00:03:56,400
countless of our young people to study

86
00:04:01,850 --> 00:03:58,739
science and engineering so that they too

87
00:04:04,370 --> 00:04:01,860
could reach for the stars President

88
00:04:06,920 --> 00:04:04,380

Obama understands all this with crystal

89
00:04:09,410 --> 00:04:06,930
clarity he said so clearly and

90
00:04:12,620 --> 00:04:09,420
repeatedly in his campaign and he has

91
00:04:14,599 --> 00:04:12,630
done so repeatedly since the decisions

92
00:04:16,640 --> 00:04:14,609
that were unveiled yesterday about the

93
00:04:19,099 --> 00:04:16,650
direction of the u.s. human spaceflight

94
00:04:21,850 --> 00:04:19,109
program and NASA's other important

95
00:04:24,890 --> 00:04:21,860
programs of innovation exploration

96
00:04:27,020 --> 00:04:24,900
observation and discovery going forward

97
00:04:30,010 --> 00:04:27,030
were made with the greatest appreciation

98
00:04:32,659 --> 00:04:30,020
for the importance of getting this right

99
00:04:34,939 --> 00:04:32,669
they were made after a process of

100
00:04:37,219 --> 00:04:34,949
extensive consultation with experts

101
00:04:39,770 --> 00:04:37,229
inside and outside the administration

102
00:04:41,810 --> 00:04:39,780
the commissioning of new analyses of the

103
00:04:44,270 --> 00:04:41,820
pros and cons of alternative strategies

104
00:04:46,820 --> 00:04:44,280
and the study of these new analyses and

105
00:04:49,310 --> 00:04:46,830
previous ones alike and the most careful

106
00:04:52,070 --> 00:04:49,320
reflection on the inevitable trade-offs

107
00:04:55,340 --> 00:04:52,080
not excluding job losses and drop gains

108
00:04:56,960 --> 00:04:55,350
in all the affected states and I want to

109
00:04:59,659 --> 00:04:56,970
take a moment here to thank publicly

110
00:05:01,939 --> 00:04:59,669
norm Augustine one of our country's most

111
00:05:03,920 --> 00:05:01,949
distinguished aerospace engineers and

112
00:05:05,960 --> 00:05:03,930
the other nine members of the

113
00:05:08,090 --> 00:05:05,970

independent Augustine committee to

114
00:05:10,430 --> 00:05:08,100
review the u.s. human space flight plans

115
00:05:12,590 --> 00:05:10,440
which was formed to advise me the NASA

116
00:05:14,840 --> 00:05:12,600
Administrator and the President on the

117
00:05:17,390 --> 00:05:14,850
pros and cons of the program of record

118
00:05:19,730 --> 00:05:17,400
and alternatives to it the Augustine

119
00:05:21,890 --> 00:05:19,740
committee was an all-star group that

120
00:05:24,260 --> 00:05:21,900
included three other aerospace industry

121
00:05:27,080 --> 00:05:24,270
leaders in addition to norm two former

122
00:05:28,580 --> 00:05:27,090
astronauts a retired four-star Air Force

123
00:05:30,439 --> 00:05:28,590
general who chaired the National

124
00:05:32,960 --> 00:05:30,449
Research Council's recent study of the

125
00:05:35,240 --> 00:05:32,970
rationale and goals of the US civil

126
00:05:37,279 --> 00:05:35,250
space flight program the former chair of

127
00:05:39,020 --> 00:05:37,289
mi tease Department of aeronautics and

128
00:05:40,909 --> 00:05:39,030
astronautics my home department by the

129
00:05:43,339 --> 00:05:40,919
way and the chair of the National

130
00:05:45,529 --> 00:05:43,349
Research Council Space Studies board as

131
00:05:47,330 --> 00:05:45,539
well as the Princeton University space

132
00:05:49,520 --> 00:05:47,340
scientist who serves on President

133
00:05:54,320 --> 00:05:49,530
Obama's committee of Advisors on science

134
00:05:56,149 --> 00:05:54,330
and technology this group supported by

135
00:05:58,580 --> 00:05:56,159
analysts at NASA and the Aerospace

136
00:06:01,460 --> 00:05:58,590
Corporation worked tirelessly from June

137
00:06:03,409 --> 00:06:01,470
through October holding 14 meetings and

138
00:06:06,320 --> 00:06:03,419

three site visits in that period and

139
00:06:08,659 --> 00:06:06,330
receiving extensive input from members

140
00:06:11,300 --> 00:06:08,669
of Congress former astronauts and NASA

141
00:06:13,279 --> 00:06:11,310
officials professional societies and the

142
00:06:15,980 --> 00:06:13,289
public their hundred and fifty page

143
00:06:17,510 --> 00:06:15,990
report was immensely valuable to me to

144
00:06:19,640 --> 00:06:17,520
administrator Bolden and to the

145
00:06:22,310 --> 00:06:19,650
president in clarifying the choices

146
00:06:23,899 --> 00:06:22,320
before us and many of its key findings

147
00:06:25,790 --> 00:06:23,909
are reflected in the new approach

148
00:06:29,180 --> 00:06:25,800
announced with the president's fy11

149
00:06:30,920 --> 00:06:29,190
budget yesterday but that approach is

150
00:06:32,330 --> 00:06:30,930
what administrator Bolden is here to

151
00:06:35,360 --> 00:06:32,340
talk about this morning and I'm not

152
00:06:37,790 --> 00:06:35,370
going to steal his thunder let me say

153
00:06:38,420 --> 00:06:37,800
only that I am convinced and President

154
00:06:40,550 --> 00:06:38,430
Obama

155
00:06:41,930 --> 00:06:40,560
is convinced that the new approach on

156
00:06:44,000 --> 00:06:41,940
which administrator bolden will be

157
00:06:46,480 --> 00:06:44,010
elaborating in a moment is the right

158
00:06:50,180 --> 00:06:46,490
approach for this time these challenges

159
00:06:52,220 --> 00:06:50,190
these opportunities it is not a retreat

160
00:06:55,100 --> 00:06:52,230
from US leadership in human space flight

161
00:06:57,500 --> 00:06:55,110
as some are asserting but rather an

162
00:07:00,800 --> 00:06:57,510
exciting and promising path forward that

163
00:07:03,200 --> 00:07:00,810

invests in new ideas new technologies

164
00:07:05,810 --> 00:07:03,210
and the complementary strengths of NASA

165
00:07:08,480 --> 00:07:05,820
and the private sector in order to make

166
00:07:11,900 --> 00:07:08,490
human access both to low-earth orbit and

167
00:07:14,300 --> 00:07:11,910
beyond to deep space faster safer and

168
00:07:17,600 --> 00:07:14,310
more affordable than it could ever have

169
00:07:19,250 --> 00:07:17,610
been on the old paths before I turn it

170
00:07:21,440 --> 00:07:19,260
over to general Bolden to say more about

171
00:07:23,630 --> 00:07:21,450
that just a few more words about him

172
00:07:25,700 --> 00:07:23,640
born and raised in Columbia South

173
00:07:27,650 --> 00:07:25,710
Carolina Charlie graduated from

174
00:07:30,560 --> 00:07:27,660
Annapolis with the degree in electrical

175
00:07:32,120 --> 00:07:30,570
science in 1968 and was commissioned a

176
00:07:34,940 --> 00:07:32,130
second lieutenant in the United States

177
00:07:37,370 --> 00:07:34,950
Marine Corps he became a naval aviator

178
00:07:39,440 --> 00:07:37,380
flying more than 100 combat sorties in

179
00:07:42,860 --> 00:07:39,450
the a 6a intruder over north and south

180
00:07:44,810 --> 00:07:42,870
of Vietnam Laos and Cambodia earning a

181
00:07:46,820 --> 00:07:44,820
Distinguished Flying Cross and air medal

182
00:07:50,030 --> 00:07:46,830
and a defense meritorious service medal

183
00:07:52,730 --> 00:07:50,040
among other awards before being selected

184
00:07:55,460 --> 00:07:52,740
by NASA as an astronaut at the beginning

185
00:07:57,830 --> 00:07:55,470
of the 1980s he worked in a stint as a

186
00:08:00,370 --> 00:07:57,840
naval test pilot and earned a master's

187
00:08:03,650 --> 00:08:00,380
degree in systems management from USC as

188
00:08:07,190 --> 00:08:03,660

an astronaut he flew for Space Shuttle

189
00:08:10,400 --> 00:08:07,200
missions between 1986 and 1994 to his

190
00:08:12,710 --> 00:08:10,410
pilot and to as commander these included

191
00:08:14,180 --> 00:08:12,720
the 1990 space shuttle discovery mission

192
00:08:17,030 --> 00:08:14,190
that deployed the Hubble Space Telescope

193
00:08:19,130 --> 00:08:17,040
the 1992 flight of space shuttle

194
00:08:21,140 --> 00:08:19,140
Atlantis that was the first devoted to

195
00:08:24,260 --> 00:08:21,150
NASA's mission to Planet Earth and the

196
00:08:26,090 --> 00:08:24,270
historic 1994 space shuttle discovery

197
00:08:28,850 --> 00:08:26,100
mission the first with the participation

198
00:08:31,550 --> 00:08:28,860
of a Russian cosmonaut as a mission

199
00:08:34,460 --> 00:08:31,560
specialist crew member in other roles in

200
00:08:36,550 --> 00:08:34,470
NASA besides spaceflight itself Charlie

201
00:08:39,230 --> 00:08:36,560
served as astronaut chief Safety Officer

202
00:08:40,940 --> 00:08:39,240
lead astronaut for vehicle test and

203
00:08:42,830 --> 00:08:40,950
check out at the Kennedy Space Center

204
00:08:45,290 --> 00:08:42,840
chief of the safety division at the

205
00:08:46,760 --> 00:08:45,300
Johnson Space Center special assistant

206
00:08:49,400 --> 00:08:46,770
to the director of the Johnson center

207
00:08:50,950 --> 00:08:49,410
and assistant deputy administrator at

208
00:08:52,780 --> 00:08:50,960
NASA headquarters

209
00:08:54,610 --> 00:08:52,790
in june nineteen ninety-four he left

210
00:08:56,800 --> 00:08:54,620
NASA and returned active duty in the

211
00:08:59,350 --> 00:08:56,810
Marine Corps initially serving as deputy

212
00:09:01,900 --> 00:08:59,360
commandant of Midshipmen at the Naval

213
00:09:04,690 --> 00:09:01,910

Academy subsequently he served as deputy

214
00:09:07,540 --> 00:09:04,700
command and deputy commanding general of

215
00:09:09,160 --> 00:09:07,550
marine forces in the Pacific commanding

216
00:09:11,440 --> 00:09:09,170
general in charge of the marine forces

217
00:09:14,320 --> 00:09:11,450
in support of Operation Desert thunder

218
00:09:16,930 --> 00:09:14,330
and Kuwait deputy commander of all US

219
00:09:18,820 --> 00:09:16,940
forces in Japan and commanding general

220
00:09:21,970 --> 00:09:18,830
of the third Marine Aircraft wing he

221
00:09:24,970 --> 00:09:21,980
retired in August 2004 with the rank of

222
00:09:26,500 --> 00:09:24,980
major-general thereafter he served in a

223
00:09:27,910 --> 00:09:26,510
couple of management positions in the

224
00:09:29,560 --> 00:09:27,920
private sector and on a number of

225
00:09:32,050 --> 00:09:29,570
corporate academic and philanthropic

226
00:09:34,660 --> 00:09:32,060
boards before being nominated by

227
00:09:36,640 --> 00:09:34,670
President Obama last year and confirmed

228
00:09:38,710 --> 00:09:36,650
by the United States Senate as the

229
00:09:41,710 --> 00:09:38,720
administrator of NASA he began his

230
00:09:44,290 --> 00:09:41,720
duties at the NASA helm last July

231
00:09:46,900 --> 00:09:44,300
seventeenth all I can say is what a

232
00:09:49,180 --> 00:09:46,910
career and there is more to come this is

233
00:09:51,880 --> 00:09:49,190
an individual who has demonstrated again

234
00:09:54,370 --> 00:09:51,890
and again that he well and truly has the

235
00:09:56,980 --> 00:09:54,380
right stuff and I have no doubt whatever

236
00:10:00,130 --> 00:09:56,990
that what he is bringing to NASA is

237
00:10:02,020 --> 00:10:00,140
change we can believe in I give you the

238
00:10:12,469 --> 00:10:02,030

NASA Administrator General Charles

239
00:10:17,460 --> 00:10:14,849
John let me thank you very much for the

240
00:10:20,519 --> 00:10:17,470
undeserved compliments in the

241
00:10:22,949 --> 00:10:20,529
introduction John and I have become very

242
00:10:26,519 --> 00:10:22,959
fast friends in my time here in

243
00:10:29,699 --> 00:10:26,529
Washington DC and I think he liked me in

244
00:10:33,779 --> 00:10:29,709
many respects we're kind of strangers in

245
00:10:37,679 --> 00:10:33,789
this town so understand things when I

246
00:10:40,469 --> 00:10:37,689
say them sometime because I some of them

247
00:10:42,359 --> 00:10:40,479
will come off wrong and it's just

248
00:10:44,279 --> 00:10:42,369
because I'm going to talk to you the way

249
00:10:48,059 --> 00:10:44,289
that I would if we were in Columbia

250
00:10:50,129 --> 00:10:48,069
South Carolina or in houston texas or if

251
00:10:51,419 --> 00:10:50,139
you came and visited me at the marine

252
00:10:52,619 --> 00:10:51,429
corps air station miramar when i was

253
00:10:57,509 --> 00:10:52,629
there in Brewster Shaw's down here

254
00:10:58,979 --> 00:10:57,519
looking at me like I'm crazy I want to

255
00:11:01,019 --> 00:10:58,989
thank all of you for joining us this

256
00:11:04,049 --> 00:11:01,029
morning and I want to thank the national

257
00:11:05,549 --> 00:11:04,059
press club for hosting us we truly

258
00:11:07,049 --> 00:11:05,559
appreciate this opportunity to share

259
00:11:09,749 --> 00:11:07,059
more details with you about the

260
00:11:12,449 --> 00:11:09,759
president's plans for NASA and America's

261
00:11:14,069 --> 00:11:12,459
path forward in space and before i go

262
00:11:16,259 --> 00:11:14,079
any father i want to take an opportunity

263
00:11:19,439 --> 00:11:16,269

to publicly acknowledge a group of

264
00:11:21,659 --> 00:11:19,449
people that I that I think sometimes

265
00:11:23,899 --> 00:11:21,669
don't get thanked enough and

266
00:11:26,249 --> 00:11:23,909
particularly over the last few days

267
00:11:29,279 --> 00:11:26,259
depending on how you read what you've

268
00:11:31,079 --> 00:11:29,289
read you know if some people could say

269
00:11:33,389 --> 00:11:31,089
have been bashed a little bit over the

270
00:11:36,210 --> 00:11:33,399
last over the last few days and that's

271
00:11:39,599 --> 00:11:36,220
the the team that has been working

272
00:11:43,249 --> 00:11:39,609
constellation for a number of years I

273
00:11:45,599 --> 00:11:43,259
happen to call most of them friends and

274
00:11:47,939 --> 00:11:45,609
and I consider them a member of the

275
00:11:49,619 --> 00:11:47,949
family and so I want to take this

276
00:11:52,409 --> 00:11:49,629
opportunity to thank them for their

277
00:11:55,049 --> 00:11:52,419
years of dedicated effort you know

278
00:11:57,149 --> 00:11:55,059
they're not hobby shoppers as some of

279
00:11:59,399 --> 00:11:57,159
you in the media have called them

280
00:12:02,159 --> 00:11:59,409
occasionally and that in the past few

281
00:12:05,249 --> 00:12:02,169
days they're really dedicated civil

282
00:12:07,169 --> 00:12:05,259
servants and contractors who have

283
00:12:09,719 --> 00:12:07,179
committed their lives and there have

284
00:12:14,489 --> 00:12:09,729
been focused on a dream of aggressive in

285
00:12:17,039 --> 00:12:14,499
bold exploration yesterday we unveiled

286
00:12:20,210 --> 00:12:17,049
President Obama's historic budget that

287
00:12:22,700 --> 00:12:20,220
launched NASA on an ambitious effort

288
00:12:25,550 --> 00:12:22,710

to help us realize these dreams of the

289
00:12:28,400 --> 00:12:25,560
people in the constellation team in a

290
00:12:30,470 --> 00:12:28,410
more sustainable manner however and we

291
00:12:33,320 --> 00:12:30,480
could go into why we're doing this but

292
00:12:34,940 --> 00:12:33,330
but you can read numbers as well as I

293
00:12:37,790 --> 00:12:34,950
can and I don't think I need to dwell on

294
00:12:40,370 --> 00:12:37,800
that you know when you have a program

295
00:12:44,600 --> 00:12:40,380
that's that's just going to cost a

296
00:12:46,460 --> 00:12:44,610
fortune to resurrect and in schedules

297
00:12:49,730 --> 00:12:46,470
are getting harder to make without much

298
00:12:53,530 --> 00:12:49,740
more money than wisdom says you'd pick a

299
00:12:56,300 --> 00:12:53,540
new course and so that's what we've done

300
00:12:58,040 --> 00:12:56,310
we want to explore new worlds we want to

301
00:13:00,230 --> 00:12:58,050
develop more innovative technologies we

302
00:13:01,940 --> 00:13:00,240
want to foster new industries and we

303
00:13:04,900 --> 00:13:01,950
want to increase our understanding of

304
00:13:07,700 --> 00:13:04,910
Earth our solar system in the universe

305
00:13:09,110 --> 00:13:07,710
among the many fresh proposals is an

306
00:13:12,050 --> 00:13:09,120
enhanced focus on commercial

307
00:13:14,720 --> 00:13:12,060
partnerships today we have with us some

308
00:13:16,850 --> 00:13:14,730
pioneers in that field who we will be

309
00:13:20,060 --> 00:13:16,860
working with and I'll tell you more

310
00:13:22,100 --> 00:13:20,070
about them in a moment but first I'd

311
00:13:24,650 --> 00:13:22,110
like to say how excited we are to have

312
00:13:26,890 --> 00:13:24,660
direction from our president to launch a

313
00:13:29,270 --> 00:13:26,900

new era of innovation and discovery

314
00:13:33,050 --> 00:13:29,280
reaching and living in space is

315
00:13:35,780 --> 00:13:33,060
complicated it's dangerous and it's full

316
00:13:37,820 --> 00:13:35,790
of unknowns the technology we need to

317
00:13:40,390 --> 00:13:37,830
sustain our leadership as a spacefaring

318
00:13:42,860 --> 00:13:40,400
nation is going to take our ingenuity

319
00:13:45,110 --> 00:13:42,870
but the president has now given us

320
00:13:47,720 --> 00:13:45,120
resources including six billion dollars

321
00:13:50,030 --> 00:13:47,730
of new funds over the next five years

322
00:13:52,760 --> 00:13:50,040
for significantly increased technology

323
00:13:56,690 --> 00:13:52,770
research and development a long term

324
00:13:58,970 --> 00:13:56,700
plan to think big to grow to imagine and

325
00:14:02,270 --> 00:13:58,980
to move us vigorously toward the dreams

326
00:14:04,490 --> 00:14:02,280
for tomorrow tough budget choices in the

327
00:14:06,320 --> 00:14:04,500
past have led to decades of

328
00:14:08,960 --> 00:14:06,330
underinvestment in space technology

329
00:14:11,320 --> 00:14:08,970
development we have experienced cuts to

330
00:14:13,490 --> 00:14:11,330
other NASA critical NASA programs

331
00:14:16,340 --> 00:14:13,500
including earth science Earth

332
00:14:20,120 --> 00:14:16,350
Observation Aeronautics robotic space

333
00:14:23,750 --> 00:14:20,130
exploration science education and more

334
00:14:25,580 --> 00:14:23,760
and we would have cut the cut short the

335
00:14:27,950 --> 00:14:25,590
operational life of the International

336
00:14:31,040 --> 00:14:27,960
Space Station at the height of its

337
00:14:33,020 --> 00:14:31,050
promise potential we believe that the

338
00:14:34,070 --> 00:14:33,030

technology shortfall we face is so

339
00:14:36,620 --> 00:14:34,080
fundamental

340
00:14:39,290 --> 00:14:36,630
that incremental change or tinkering on

341
00:14:42,530 --> 00:14:39,300
the margins will not be sufficient to

342
00:14:44,690 --> 00:14:42,540
address current or future needs rather a

343
00:14:46,570 --> 00:14:44,700
fundamental rebase lining of our

344
00:14:49,400 --> 00:14:46,580
nation's exploration efforts is needed

345
00:14:52,370 --> 00:14:49,410
we must invest in fundamentally new

346
00:14:54,680 --> 00:14:52,380
innovations for space technology and new

347
00:14:56,300 --> 00:14:54,690
ways of doing business if we are to

348
00:14:58,310 --> 00:14:56,310
develop a space exploration and

349
00:15:02,240 --> 00:14:58,320
development program that is truly

350
00:15:04,580 --> 00:15:02,250
sustainable over the long term this plan

351
00:15:06,890 --> 00:15:04,590
gives us a road map to even more

352
00:15:09,920 --> 00:15:06,900
historic achievements as it Spurs

353
00:15:13,310 --> 00:15:09,930
innovation employees Americans and

354
00:15:16,970 --> 00:15:13,320
exciting jobs and engages people around

355
00:15:19,910 --> 00:15:16,980
the world it pledges us to a renewed

356
00:15:22,640 --> 00:15:19,920
commitment to invention and development

357
00:15:25,280 --> 00:15:22,650
and the creative and entrepreneurial

358
00:15:28,100 --> 00:15:25,290
spirit that is at the core of our

359
00:15:30,380 --> 00:15:28,110
country's character the president has

360
00:15:32,990 --> 00:15:30,390
asked us to develop a detailed strategy

361
00:15:35,840 --> 00:15:33,000
for it for executing this plan in the

362
00:15:39,980 --> 00:15:35,850
weeks to come our goal is to revitalize

363
00:15:42,290 --> 00:15:39,990

NASA and introduce the reforms needed to

364
00:15:44,090 --> 00:15:42,300
lay a long-term foundation for the

365
00:15:47,630 --> 00:15:44,100
agency's continued excellence and

366
00:15:49,400 --> 00:15:47,640
success to do all of this the president

367
00:15:52,130 --> 00:15:49,410
has increased NASA's budget over the

368
00:15:54,940 --> 00:15:52,140
next five years an extraordinary show of

369
00:15:57,710 --> 00:15:54,950
support in these tough budgetary times

370
00:16:00,080 --> 00:15:57,720
today several of our key partners in

371
00:16:02,990 --> 00:16:00,090
this future effort have traveled to

372
00:16:05,930 --> 00:16:03,000
Washington to be with us we asked them

373
00:16:07,910 --> 00:16:05,940
for their boldest ideas and concepts the

374
00:16:11,360 --> 00:16:07,920
things that we would truly need to make

375
00:16:14,660 --> 00:16:11,370
Commercial Crew a reality they gave us

376
00:16:17,300 --> 00:16:14,670
some great proposals this is by no means

377
00:16:20,270 --> 00:16:17,310
the end of this process but it's a

378
00:16:22,880 --> 00:16:20,280
fantastic start I'll let them tell you

379
00:16:25,430 --> 00:16:22,890
briefly in their own words about what's

380
00:16:27,770 --> 00:16:25,440
on the drawing boards in their shops but

381
00:16:30,200 --> 00:16:27,780
lets me also try to answer the question

382
00:16:32,390 --> 00:16:30,210
that many of you are asking what will

383
00:16:36,650 --> 00:16:32,400
NASA gain from increased partnerships

384
00:16:38,810 --> 00:16:36,660
with industry to fly humans to space the

385
00:16:41,090 --> 00:16:38,820
initiative supports and fosters the

386
00:16:43,220 --> 00:16:41,100
commercial spaceflight industry and it's

387
00:16:44,990 --> 00:16:43,230
growing capabilities by leveraging

388
00:16:47,750 --> 00:16:45,000

private investment and reducing

389
00:16:49,580 --> 00:16:47,760
development costs to the taxpayer

390
00:16:53,000 --> 00:16:49,590
it endures the commercial that

391
00:16:56,090 --> 00:16:53,010
commercial systems can safely it ensures

392
00:16:58,460 --> 00:16:56,100
that that commercial systems can safely

393
00:17:00,860 --> 00:16:58,470
and reliably transport humans to

394
00:17:02,840 --> 00:17:00,870
low-earth orbit and draws on our

395
00:17:05,660 --> 00:17:02,850
existing NASA Space Flight experience

396
00:17:09,020 --> 00:17:05,670
and makes our specialists available to

397
00:17:11,120 --> 00:17:09,030
provide insight and expertise with many

398
00:17:13,610 --> 00:17:11,130
bright minds working on our problems we

399
00:17:16,460 --> 00:17:13,620
may soon have the prospect of multiple

400
00:17:19,480 --> 00:17:16,470
providers of space transportation this

401
00:17:23,150 --> 00:17:19,490
would ensure that we have safe reliable

402
00:17:25,970 --> 00:17:23,160
redundant domestic capability we do not

403
00:17:27,860 --> 00:17:25,980
have this today which is the crux of our

404
00:17:31,100 --> 00:17:27,870
dependence on our Russian partners and

405
00:17:32,780 --> 00:17:31,110
the Soyuz spacecraft and the reason we

406
00:17:35,240 --> 00:17:32,790
will have a gap in domestic human

407
00:17:38,480 --> 00:17:35,250
spaceflight capability when the shuttle

408
00:17:40,400 --> 00:17:38,490
retires later this year we want robust

409
00:17:43,180 --> 00:17:40,410
backup capability in human space flight

410
00:17:45,470 --> 00:17:43,190
and we want it to be made in America

411
00:17:47,840 --> 00:17:45,480
we're departing from the model of the

412
00:17:50,810 --> 00:17:47,850
past in which the government funded all

413
00:17:52,400 --> 00:17:50,820

human space activities this represents

414
00:17:55,430 --> 00:17:52,410
the entrance of the entrepreneurial

415
00:17:59,330 --> 00:17:55,440
mindset into a field that is poised for

416
00:18:01,610 --> 00:17:59,340
rapid growth in new jobs and NASA will

417
00:18:04,270 --> 00:18:01,620
be driving competition opening new

418
00:18:06,440 --> 00:18:04,280
markets and access to space and

419
00:18:09,530 --> 00:18:06,450
catalyzing the potential of American

420
00:18:13,190 --> 00:18:09,540
industry this is a good investment for

421
00:18:15,440 --> 00:18:13,200
America remember that we already depend

422
00:18:17,240 --> 00:18:15,450
on commercial companies to launch all

423
00:18:19,900 --> 00:18:17,250
our nation's most precious military and

424
00:18:21,830 --> 00:18:19,910
national security satellites today

425
00:18:23,330 --> 00:18:21,840
commercial companies launch all

426
00:18:25,640 --> 00:18:23,340
government communications weather

427
00:18:27,770 --> 00:18:25,650
imaging navigation and intelligence

428
00:18:31,700 --> 00:18:27,780
satellites upon which our lives depend

429
00:18:34,190 --> 00:18:31,710
at home and abroad a major benefit of

430
00:18:36,520 --> 00:18:34,200
this new partnership is the potential

431
00:18:39,440 --> 00:18:36,530
for thousands of new high-tech jobs and

432
00:18:41,750 --> 00:18:39,450
spin-offs of other businesses that can

433
00:18:44,050 --> 00:18:41,760
support this industry and also take

434
00:18:47,080 --> 00:18:44,060
advantage of affordable access to space

435
00:18:50,020 --> 00:18:47,090
there will be jobs and propulsion

436
00:18:52,700 --> 00:18:50,030
communications and other industries

437
00:18:55,730 --> 00:18:52,710
exploration programs drive innovation

438
00:18:57,440 --> 00:18:55,740

throughout our economy and NASA will be

439
00:19:01,040 --> 00:18:57,450
leading this economic competitiveness

440
00:19:01,550 --> 00:19:01,050
and growth there's a misconception that

441
00:19:04,040 --> 00:19:01,560
commerce

442
00:19:07,370 --> 00:19:04,050
so crew means putting our astronauts in

443
00:19:09,890 --> 00:19:07,380
the care of untested providers quite the

444
00:19:11,840 --> 00:19:09,900
contrary these will be the same

445
00:19:14,110 --> 00:19:11,850
providers who will be transporting our

446
00:19:16,760 --> 00:19:14,120
multi-billion dollar satellites

447
00:19:20,660 --> 00:19:16,770
America's largest aerospace firms have

448
00:19:23,780 --> 00:19:20,670
for decades established expertise in

449
00:19:26,320 --> 00:19:23,790
human space flight and they too would be

450
00:19:28,670 --> 00:19:26,330
eligible to compete for this program

451
00:19:30,950 --> 00:19:28,680
even the new entrants will have

452
00:19:32,780 --> 00:19:30,960
demonstrated successful flights by the

453
00:19:35,840 --> 00:19:32,790
time they would carry astronauts in

454
00:19:38,900 --> 00:19:35,850
addition to cargo all of us travel on

455
00:19:40,520 --> 00:19:38,910
airplanes and we feel safe because we

456
00:19:43,250 --> 00:19:40,530
know the government has set standards

457
00:19:46,010 --> 00:19:43,260
and oversees periodic inspections for

458
00:19:48,560 --> 00:19:46,020
spaceflight safety concerns are even

459
00:19:50,300 --> 00:19:48,570
more serious these commercial flights

460
00:19:53,350 --> 00:19:50,310
will have to follow the same safety

461
00:19:56,690 --> 00:19:53,360
assurances to which NASA holds itself as

462
00:19:58,790 --> 00:19:56,700
most of you know I'm a former astronaut

463
00:20:01,040 --> 00:19:58,800

and it flown four times on the space

464
00:20:03,080 --> 00:20:01,050
shuttle I know personally the great

465
00:20:05,690 --> 00:20:03,090
challenges involved in sending humans

466
00:20:09,860 --> 00:20:05,700
into orbit and have lost friends in

467
00:20:11,990 --> 00:20:09,870
trying to do so I pledge to you that I

468
00:20:13,970 --> 00:20:12,000
will make it my job every day to ensure

469
00:20:16,670 --> 00:20:13,980
that everything is done efficiently and

470
00:20:19,100 --> 00:20:16,680
safely I'm blessed to lead a team of

471
00:20:21,920 --> 00:20:19,110
NASA employees who are the best and

472
00:20:24,590 --> 00:20:21,930
brightest and government and when my

473
00:20:27,710 --> 00:20:24,600
team commits itself to a goal we have

474
00:20:31,190 --> 00:20:27,720
the will the know-how and the commitment

475
00:20:33,980 --> 00:20:31,200
to attain it we are also committed to do

476
00:20:36,170 --> 00:20:33,990
it right as the Augustine committee

477
00:20:38,600 --> 00:20:36,180
reminded us in the recent report to the

478
00:20:41,630 --> 00:20:38,610
president American commercial aerospace

479
00:20:44,600 --> 00:20:41,640
industry has always built the nation's

480
00:20:47,000 --> 00:20:44,610
crude launch vehicles over its nearly 50

481
00:20:48,650 --> 00:20:47,010
two-year life nASA has built a deep

482
00:20:51,860 --> 00:20:48,660
foundation of experience and knowledge

483
00:20:54,080 --> 00:20:51,870
with a ride range of companies these

484
00:20:57,110 --> 00:20:54,090
companies have been essential to all our

485
00:20:59,690 --> 00:20:57,120
successes from Mercury to shuttle as

486
00:21:01,730 --> 00:20:59,700
well as with our robotic missions in

487
00:21:04,520 --> 00:21:01,740
multi-billion dollar scientific

488
00:21:07,520 --> 00:21:04,530

satellites they have long demonstrated

489
00:21:09,530 --> 00:21:07,530
they can do the job the Augustine

490
00:21:11,450 --> 00:21:09,540
committee also said there is little

491
00:21:14,730 --> 00:21:11,460
doubt that the US aerospace industry

492
00:21:16,860 --> 00:21:14,740
from historic from historical builders

493
00:21:19,470 --> 00:21:16,870
to the new entrance has the technical

494
00:21:21,900 --> 00:21:19,480
capability to build and operate a crew

495
00:21:24,750 --> 00:21:21,910
taxi to low-earth orbit and they

496
00:21:27,240 --> 00:21:24,760
believed as do we that they have they

497
00:21:30,870 --> 00:21:27,250
have the capability to do this by as

498
00:21:32,760 --> 00:21:30,880
early as 2016 NASA itself has been

499
00:21:35,700 --> 00:21:32,770
mulling this idea for some time believe

500
00:21:37,410 --> 00:21:35,710
it or not in fact I was personally

501
00:21:39,450 --> 00:21:37,420
involved in working the concept of

502
00:21:42,090 --> 00:21:39,460
commercial operation of our space

503
00:21:44,010 --> 00:21:42,100
transportation system as far back as my

504
00:21:47,940 --> 00:21:44,020
early days as a fledgling astronaut in

505
00:21:51,630 --> 00:21:47,950
the early 80s so it's not a new idea but

506
00:21:54,510 --> 00:21:51,640
rather an idea whose time has come the

507
00:21:57,330 --> 00:21:54,520
future is unfolding before us now and it

508
00:22:00,210 --> 00:21:57,340
couldn't be more exciting with low-cost

509
00:22:02,070 --> 00:22:00,220
and safe transport to space more people

510
00:22:04,700 --> 00:22:02,080
will be able to have the transformative

511
00:22:07,080 --> 00:22:04,710
experience with which I've been blessed

512
00:22:09,270 --> 00:22:07,090
kids will be able to realistically

513
00:22:13,470 --> 00:22:09,280

envision a career that involves space

514
00:22:16,020 --> 00:22:13,480
either going there or using it as more

515
00:22:18,060 --> 00:22:16,030
of us travel into space more will look

516
00:22:21,030 --> 00:22:18,070
back on our home planet with the special

517
00:22:24,450 --> 00:22:21,040
perspective that only space travel can

518
00:22:27,030 --> 00:22:24,460
provide we will expand the global bonds

519
00:22:28,919 --> 00:22:27,040
we are already developing through the

520
00:22:31,590 --> 00:22:28,929
multinational partnership that has built

521
00:22:34,380 --> 00:22:31,600
and is sustaining the International

522
00:22:35,850 --> 00:22:34,390
Space Station and with commercial

523
00:22:39,180 --> 00:22:35,860
companies providing transportation

524
00:22:41,090 --> 00:22:39,190
services NASA will be able to focus on

525
00:22:44,370 --> 00:22:41,100
the greatest challenges that lie ahead

526
00:22:46,680 --> 00:22:44,380
in areas where we already have a stellar

527
00:22:49,260 --> 00:22:46,690
track record advancing cutting-edge

528
00:22:51,720 --> 00:22:49,270
technology and scientific discovery and

529
00:22:54,960 --> 00:22:51,730
pushing the boundaries of new frontiers

530
00:22:56,910 --> 00:22:54,970
on providing future explorers with

531
00:23:00,240 --> 00:22:56,920
dramatically greater capabilities than

532
00:23:04,740 --> 00:23:00,250
we have today we start down that path

533
00:23:06,900 --> 00:23:04,750
now we have with us today our two funded

534
00:23:09,870 --> 00:23:06,910
participants in the commercial orbital

535
00:23:11,850 --> 00:23:09,880
transportation services program SpaceX

536
00:23:15,090 --> 00:23:11,860
of California and Orbital Sciences

537
00:23:17,100 --> 00:23:15,100
Corporation of Virginia they are both

538
00:23:18,960 --> 00:23:17,110

well on their way to demonstrations of

539
00:23:21,030 --> 00:23:18,970
cargo transport to the International

540
00:23:24,810 --> 00:23:21,040
Space Station and we look forward to

541
00:23:27,450 --> 00:23:24,820
their continued progress today I'm also

542
00:23:28,549 --> 00:23:27,460
pleased to give you more details about

543
00:23:31,470 --> 00:23:28,559
the 50 mil

544
00:23:33,779 --> 00:23:31,480
that NASA is awarding 25 companies

545
00:23:35,639 --> 00:23:33,789
through an open competition for funds

546
00:23:39,119 --> 00:23:35,649
from the american recovery and

547
00:23:41,759 --> 00:23:39,129
reinvestment act of 2009 to support

548
00:23:44,609 --> 00:23:41,769
Commercial Crew development efforts each

549
00:23:46,979 --> 00:23:44,619
awardee has also proposed significant

550
00:23:49,919 --> 00:23:46,989
investment from other sources to

551
00:23:52,919 --> 00:23:49,929
leverage the taxpayer investment it's a

552
00:23:54,930 --> 00:23:52,929
bold first step and while there are many

553
00:23:57,359 --> 00:23:54,940
vibrant companies out there with which

554
00:23:59,940 --> 00:23:57,369
we hope to partner in the future these

555
00:24:03,060 --> 00:23:59,950
five and our two cots participants are

556
00:24:05,669 --> 00:24:03,070
at the starting gate they specialize in

557
00:24:08,639 --> 00:24:05,679
vertical takeoff and landing life

558
00:24:11,580 --> 00:24:08,649
support systems low-cost satellites and

559
00:24:13,859 --> 00:24:11,590
miniaturized avionics they are payload

560
00:24:16,560 --> 00:24:13,869
specialists and builders of robotic

561
00:24:19,320 --> 00:24:16,570
spacecraft and new rockets that have

562
00:24:21,090 --> 00:24:19,330
never before existed here's some more

563
00:24:24,899 --> 00:24:21,100

about five companies getting grants

564
00:24:27,539 --> 00:24:24,909
today Blue Origin located in Kent

565
00:24:29,820 --> 00:24:27,549
Washington is developing new Shepherd a

566
00:24:31,830 --> 00:24:29,830
rocket-propelled vehicle designed to

567
00:24:33,989 --> 00:24:31,840
routinely fly multiple astronauts into

568
00:24:36,479 --> 00:24:33,999
space and to offer frequent

569
00:24:38,840 --> 00:24:36,489
opportunities for researchers to fly

570
00:24:42,419 --> 00:24:38,850
experiments in space and microgravity

571
00:24:44,849 --> 00:24:42,429
Blue Origin will receive 3.7 million for

572
00:24:47,039 --> 00:24:44,859
risk mitigation activities related to

573
00:24:49,710 --> 00:24:47,049
its development of its pusher launch

574
00:24:52,919 --> 00:24:49,720
escape system and to produce a composite

575
00:24:55,109 --> 00:24:52,929
crew module for structural testing the

576
00:24:57,200 --> 00:24:55,119
space exploration division of the boeing

577
00:24:59,759 --> 00:24:57,210
company headquartered in houston texas

578
00:25:02,070 --> 00:24:59,769
has been involved in the development of

579
00:25:05,340 --> 00:25:02,080
a new spacecraft systems including the

580
00:25:07,279 --> 00:25:05,350
x-15 Gemini Apollo Skylab space shuttle

581
00:25:10,349 --> 00:25:07,289
and the International Space Station

582
00:25:11,849 --> 00:25:10,359
Boeing will receive 18 million dollars

583
00:25:14,279 --> 00:25:11,859
to develop its space transportation

584
00:25:16,950 --> 00:25:14,289
system which includes a seven-person

585
00:25:20,159 --> 00:25:16,960
capsule that may launch on medium class

586
00:25:22,950 --> 00:25:20,169
expendable launch vehicles Paragon space

587
00:25:24,899 --> 00:25:22,960
Development Corporation is a woman-owned

588
00:25:28,399 --> 00:25:24,909

small business headquartered in Tucson

589
00:25:32,220 --> 00:25:28,409
Arizona Paragon has directly supported

590
00:25:34,129 --> 00:25:32,230
with spaceflight hardware more than 70

591
00:25:35,999 --> 00:25:34,139
successful spaceflight missions

592
00:25:39,690 --> 00:25:36,009
involving the International Space

593
00:25:41,510 --> 00:25:39,700
Station the MIR space station the space

594
00:25:43,790 --> 00:25:41,520
shuttle and Sai youths

595
00:25:45,800 --> 00:25:43,800
they will receive 1.4 million for a

596
00:25:47,720 --> 00:25:45,810
development unit of an environmental

597
00:25:50,600 --> 00:25:47,730
control and life support air

598
00:25:52,540 --> 00:25:50,610
revitalization system Sierra Nevada

599
00:25:55,400 --> 00:25:52,550
Corporation of Centennial Colorado

600
00:25:57,380 --> 00:25:55,410
manufacture satellites spacecraft

601
00:25:59,810 --> 00:25:57,390
components and rocket propulsion systems

602
00:26:01,640 --> 00:25:59,820
the company will receive 20 million

603
00:26:03,980 --> 00:26:01,650
dollars to further develop its space

604
00:26:07,160 --> 00:26:03,990
transportation system including the

605
00:26:10,240 --> 00:26:07,170
dream chaser seven-person spacecraft to

606
00:26:13,220 --> 00:26:10,250
be launched on an atlas 5402 vehicle and

607
00:26:15,860 --> 00:26:13,230
finally United Launch Alliance located

608
00:26:17,690 --> 00:26:15,870
in Colorado is a joint venture of

609
00:26:20,630 --> 00:26:17,700
lockheed martin corporation and the

610
00:26:22,400 --> 00:26:20,640
boeing company ula launches the Atlas

611
00:26:25,070 --> 00:26:22,410
and Delta expendable launch vehicle

612
00:26:27,860 --> 00:26:25,080
families and will receive 6.7 million

613
00:26:30,680 --> 00:26:27,870

for an emergency detection system to

614
00:26:34,010 --> 00:26:30,690
monitor vehicle health of Atlas 5 and

615
00:26:37,010 --> 00:26:34,020
Delta four rockets courtesy of President

616
00:26:39,050 --> 00:26:37,020
Barack Obama it's my pleasure to

617
00:26:41,690 --> 00:26:39,060
introduce to you in person these space

618
00:26:43,820 --> 00:26:41,700
pioneers I'd like to ask the

619
00:26:47,500 --> 00:26:43,830
representatives of each of the companies

620
00:26:50,720 --> 00:26:47,510
to join me on stage and say a few words

621
00:26:54,170 --> 00:26:50,730
ladies and gentlemen these are the faces

622
00:26:56,390 --> 00:26:54,180
of the new frontier the Vanguard we will

623
00:26:58,670 --> 00:26:56,400
certainly be adding this group adding to

624
00:27:00,830 --> 00:26:58,680
this group in the near future the work

625
00:27:04,220 --> 00:27:00,840
has already started and we advance it

626
00:27:06,650 --> 00:27:04,230
one more step today congratulations to

627
00:27:08,990 --> 00:27:06,660
all the winners I'd like to ask each of

628
00:27:14,030 --> 00:27:09,000
our commercial pioneers to say a word or

629
00:27:19,110 --> 00:27:14,040
two Robert Millman of Blue Origin Bruce

630
00:27:23,500 --> 00:27:21,700
hold your applause until I give all the

631
00:27:25,509 --> 00:27:23,510
names than that I want you to hear their

632
00:27:27,940 --> 00:27:25,519
names as we do this I know you know most

633
00:27:31,180 --> 00:27:27,950
of them Brewster Shaw vice president and

634
00:27:34,029 --> 00:27:31,190
general manager NASA systems booing Jane

635
00:27:36,610 --> 00:27:34,039
Poynter pointer I'm sorry Jane after you

636
00:27:38,769 --> 00:27:36,620
told me Jane Poynter president and share

637
00:27:42,090 --> 00:27:38,779
Paragon space Development Corporation

638
00:27:45,490 --> 00:27:42,100

Mike gasps president and chief executive

639
00:27:48,580 --> 00:27:45,500
United Space Alliance mark sir Angelo

640
00:27:50,879 --> 00:27:48,590
vice president and chair S&C Space

641
00:27:54,220 --> 00:27:50,889
Systems board sierra nevada corporation

642
00:27:57,039 --> 00:27:54,230
david thompson CEO orbital science

643
00:28:02,320 --> 00:27:57,049
corporation and Ken Bowersox Vice

644
00:28:13,659 --> 00:28:02,330
President astronaut safety SpaceX can I

645
00:28:17,529 --> 00:28:13,669
give them this oh there you go good

646
00:28:20,889 --> 00:28:17,539
morning dr. Holdren administrator Bolden

647
00:28:22,899 --> 00:28:20,899
thank you so much for hosting this great

648
00:28:24,519 --> 00:28:22,909
event this morning my name is Michael

649
00:28:26,830 --> 00:28:24,529
gasps I am the president and CEO of

650
00:28:28,029 --> 00:28:26,840
United Launch Alliance on behalf of the

651
00:28:30,759 --> 00:28:28,039
women and men of United Launch Alliance

652
00:28:33,600 --> 00:28:30,769
we are credibly excited to participate

653
00:28:37,169 --> 00:28:33,610
in this bold new error with the our NASA

654
00:28:39,970 --> 00:28:37,179
partners United Launch Alliance has been

655
00:28:42,039 --> 00:28:39,980
supporting our nation for expendable

656
00:28:44,830 --> 00:28:42,049
launch vehicles with over 50 years of

657
00:28:46,539 --> 00:28:44,840
experience our current generation of

658
00:28:48,490 --> 00:28:46,549
Atlas and Delta launch vehicles we

659
00:28:50,379 --> 00:28:48,500
started with a 5 billion dollar private

660
00:28:52,779 --> 00:28:50,389
investment to develop these new

661
00:28:54,879 --> 00:28:52,789
expendable launch vehicles and the Atlas

662
00:28:57,250 --> 00:28:54,889
and Delta will be utilized to support

663
00:28:59,830 --> 00:28:57,260

hopefully Commercial Crew in the future

664
00:29:01,750 --> 00:28:59,840
this new project that we're starting to

665
00:29:04,299 --> 00:29:01,760
get the emergency detection system is

666
00:29:06,460 --> 00:29:04,309
all about crew safety to make sure we

667
00:29:08,080 --> 00:29:06,470
understand our system fully and to be

668
00:29:11,649 --> 00:29:08,090
able to give the appropriate signal for

669
00:29:13,360 --> 00:29:11,659
a potential abort if necessary this at

670
00:29:14,919 --> 00:29:13,370
work will not only support our

671
00:29:16,269 --> 00:29:14,929
commercial crew but will be synergistic

672
00:29:18,820 --> 00:29:16,279
with our current mission of delivering

673
00:29:20,560 --> 00:29:18,830
highly reliable products for all of our

674
00:29:23,649 --> 00:29:20,570
customers thank you again for this

675
00:29:25,539 --> 00:29:23,659
opportunity and good morning and thank

676
00:29:27,430 --> 00:29:25,549
you also for the opportunity to speak

677
00:29:30,159 --> 00:29:27,440
here I'm Robert Millman with Blue Origin

678
00:29:32,200 --> 00:29:30,169
tableau origin is a small team

679
00:29:32,649 --> 00:29:32,210
headquartered in Kent Washington we also

680
00:29:35,259 --> 00:29:32,659
have

681
00:29:37,719 --> 00:29:35,269
flight facilities in West Texas and the

682
00:29:39,879 --> 00:29:37,729
team is dedicated to creating

683
00:29:42,369 --> 00:29:39,889
technologies for an enduring human

684
00:29:44,320 --> 00:29:42,379
presence in space and with working with

685
00:29:47,200 --> 00:29:44,330
NASA will be working on two technologies

686
00:29:49,359 --> 00:29:47,210
in particular we're developing a pusher

687
00:29:51,639 --> 00:29:49,369
escape system you may be familiar that a

688
00:29:55,239 --> 00:29:51,649

traditional tractor escape system

689
00:29:57,669 --> 00:29:55,249
involves the tower Jetta Singh so we'll

690
00:30:00,690 --> 00:29:57,679
be developing an escape motor at the

691
00:30:04,119 --> 00:30:00,700
back of the capsule which will avoid the

692
00:30:06,129 --> 00:30:04,129
jettison events and also because it will

693
00:30:08,979 --> 00:30:06,139
avoid consuming it on a nominal launch

694
00:30:10,389 --> 00:30:08,989
at a lower operating costs the other

695
00:30:12,960 --> 00:30:10,399
technology we're working on is a

696
00:30:16,389 --> 00:30:12,970
composite pressure vessel this will be a

697
00:30:19,479 --> 00:30:16,399
all composite structure for containing

698
00:30:21,879 --> 00:30:19,489
the astronauts it will improve the

699
00:30:24,099 --> 00:30:21,889
durability over conventional technology

700
00:30:27,729 --> 00:30:24,109
and also lower weight so again thank you

701
00:30:30,700 --> 00:30:27,739
very much for the opportunity thank you

702
00:30:32,560 --> 00:30:30,710
gentlemen thank you and thanks to all of

703
00:30:35,969 --> 00:30:32,570
you for being here and for your interest

704
00:30:38,560 --> 00:30:35,979
in America's human exploration program

705
00:30:40,599 --> 00:30:38,570
Boeing and our principal teammate

706
00:30:43,029 --> 00:30:40,609
Bigelow Aerospace are looking forward to

707
00:30:45,339 --> 00:30:43,039
advancing the state of our our project

708
00:30:48,190 --> 00:30:45,349
of course we've been working with big

709
00:30:51,639 --> 00:30:48,200
low on our own because Bigelow

710
00:30:54,549 --> 00:30:51,649
represents the most probable near-term

711
00:30:56,379 --> 00:30:54,559
market for a need for crew

712
00:30:59,019 --> 00:30:56,389
transportation to low-earth orbit of

713
00:31:02,310 --> 00:30:59,029

other than NASA and so we've been

714
00:31:05,109 --> 00:31:02,320
working together on on this concept to

715
00:31:07,029 --> 00:31:05,119
satisfy both Bigelow's needs and now

716
00:31:09,460 --> 00:31:07,039
with the ability and the opportunity to

717
00:31:11,919 --> 00:31:09,470
work with NASA to also role in NASA's

718
00:31:14,139 --> 00:31:11,929
requirements so that the system that we

719
00:31:16,509 --> 00:31:14,149
develop does the best job at can of

720
00:31:19,570 --> 00:31:16,519
satisfying all of the market needs for

721
00:31:22,749 --> 00:31:19,580
transportation to low-earth orbit you

722
00:31:25,869 --> 00:31:22,759
know a hundred or so years ago a young

723
00:31:29,950 --> 00:31:25,879
entrepreneur named bill Boeing was able

724
00:31:32,619 --> 00:31:29,960
to develop products that enabled the

725
00:31:34,330 --> 00:31:32,629
transfer transfer of mail across the

726
00:31:37,089 --> 00:31:34,340
country and in airplanes and now that's

727
00:31:39,279 --> 00:31:37,099
grown into any of you who flew into DC

728
00:31:42,369 --> 00:31:39,289
probably wrote on one of Bill Boeing's

729
00:31:44,619 --> 00:31:42,379
products so we've grown up that way and

730
00:31:46,570 --> 00:31:44,629
for the last 50 years or so we've been

731
00:31:49,060 --> 00:31:46,580
involved in every human space

732
00:31:51,580 --> 00:31:49,070
expiration program that was executed by

733
00:31:53,740 --> 00:31:51,590
the US of A we have a vested interest in

734
00:31:56,019 --> 00:31:53,750
course in the international space

735
00:31:59,139 --> 00:31:56,029
station being NASA's prime teammate on

736
00:32:01,960 --> 00:31:59,149
that and we we so much want to see ISS

737
00:32:04,480 --> 00:32:01,970
live up to its potential and part of

738
00:32:08,950 --> 00:32:04,490

that is having a robust logistics train

739
00:32:12,370 --> 00:32:08,960
with the delivery of cargo and crew in

740
00:32:14,649 --> 00:32:12,380
order to complete the research that will

741
00:32:16,810 --> 00:32:14,659
be enabled on the International Space

742
00:32:19,060 --> 00:32:16,820
Station so we've been in this game for a

743
00:32:21,310 --> 00:32:19,070
long time and with our teammate Bigelow

744
00:32:25,750 --> 00:32:21,320
we intend to be in it for a long time

745
00:32:29,169 --> 00:32:25,760
more thank you for the opportunity thank

746
00:32:32,529 --> 00:32:29,179
you and good morning everybody and I

747
00:32:34,629 --> 00:32:32,539
know that back at Paragon I certainly

748
00:32:37,899 --> 00:32:34,639
have a lot of cheering staff who are

749
00:32:40,840 --> 00:32:37,909
very excited about this moment we have

750
00:32:44,080 --> 00:32:40,850
invested in and are developing with NASA

751
00:32:47,350 --> 00:32:44,090
an array of technologies that are for

752
00:32:50,769 --> 00:32:47,360
use on international space station on

753
00:32:54,430 --> 00:32:50,779
the moon on Mars and really a whole

754
00:32:57,159 --> 00:32:54,440
array of settings applications in space

755
00:32:59,889 --> 00:32:57,169
our air revitalization system that we're

756
00:33:01,480 --> 00:32:59,899
developing under this program is really

757
00:33:05,080 --> 00:33:01,490
one of it's the first of its kind

758
00:33:07,600 --> 00:33:05,090
because it will be a turnkey system that

759
00:33:10,240 --> 00:33:07,610
can be used on an array of missions on

760
00:33:12,250 --> 00:33:10,250
pretty much any spacecraft so we're

761
00:33:14,110 --> 00:33:12,260
looking forward to working with the

762
00:33:18,490 --> 00:33:14,120
spacecraft developers are making sure

763
00:33:22,690 --> 00:33:18,500

that it fits their needs I also wanted

764
00:33:25,840 --> 00:33:22,700
to say that of course at Paragon we're

765
00:33:28,990 --> 00:33:25,850
deeply committed to the development of

766
00:33:31,990 --> 00:33:29,000
space for human exploration both in a

767
00:33:36,279 --> 00:33:32,000
commercial way and of course over the

768
00:33:38,320 --> 00:33:36,289
years a Paragon has been involved in the

769
00:33:41,289 --> 00:33:38,330
commercial development of space from our

770
00:33:44,139 --> 00:33:41,299
inception from inside biosphere to the

771
00:33:46,570 --> 00:33:44,149
first regenerative life support system

772
00:33:52,590 --> 00:33:46,580
by regenerative life-support system

773
00:33:54,700 --> 00:33:52,600
developed we had the very first

774
00:33:56,919 --> 00:33:54,710
commercial experiment on the

775
00:33:59,970 --> 00:33:56,929
International Space Station which was

776
00:34:02,760 --> 00:33:59,980
really exciting for us and I

777
00:34:07,289 --> 00:34:02,770
today at Paragon we're incredibly proud

778
00:34:09,659 --> 00:34:07,299
to be here and to be part of the

779
00:34:16,649 --> 00:34:09,669
nation's space program thank you very

780
00:34:18,149 --> 00:34:16,659
much good morning I'm mark sir Angela

781
00:34:20,099 --> 00:34:18,159
from the Sierra Nevada Corporation on

782
00:34:22,200 --> 00:34:20,109
behalf of the two thousand or so

783
00:34:24,000 --> 00:34:22,210
employees of our company I'd like to say

784
00:34:25,770 --> 00:34:24,010
thank you to NASA and for all this

785
00:34:28,919 --> 00:34:25,780
effort that has gone into this program

786
00:34:31,409 --> 00:34:28,929
we have been on over 300 space missions

787
00:34:33,599 --> 00:34:31,419
in our career and as an organization and

788
00:34:35,609 --> 00:34:33,609

what we've learned is that space is hard

789
00:34:36,899 --> 00:34:35,619
this is not an easy thing to do and it

790
00:34:38,550 --> 00:34:36,909
takes a lot of effort in a lot of

791
00:34:40,530 --> 00:34:38,560
cooperation and a lot of teamwork we

792
00:34:42,750 --> 00:34:40,540
have a great group of companies that are

793
00:34:43,800 --> 00:34:42,760
involved with us on our program one of

794
00:34:45,780 --> 00:34:43,810
the things I'd like to say though is

795
00:34:47,550 --> 00:34:45,790
that we had the experience of coming

796
00:34:49,230 --> 00:34:47,560
through an unfunded Space Act agreement

797
00:34:51,419 --> 00:34:49,240
with NASA for the last two years which

798
00:34:52,859 --> 00:34:51,429
was a rather unusual vehicle that I

799
00:34:54,570 --> 00:34:52,869
think has worked very well we've

800
00:34:56,280 --> 00:34:54,580
received tremendous support from the

801
00:34:59,640 --> 00:34:56,290
team and from the organization all

802
00:35:01,920 --> 00:34:59,650
throughout the NASA agency and as a

803
00:35:05,250 --> 00:35:01,930
result of that we have now advanced our

804
00:35:07,560 --> 00:35:05,260
program to to be very successful in our

805
00:35:09,870 --> 00:35:07,570
view very successful start our program

806
00:35:12,330 --> 00:35:09,880
is based on a NASA vehicle that was

807
00:35:14,849 --> 00:35:12,340
originated many years ago called the HL

808
00:35:17,160 --> 00:35:14,859
20 it's a runway landing lifting body

809
00:35:18,990 --> 00:35:17,170
concept and we've now brought that

810
00:35:20,370 --> 00:35:19,000
concept forward in a very thrilled to be

811
00:35:22,650 --> 00:35:20,380
part of this group and to be able to

812
00:35:26,130 --> 00:35:22,660
move that that idea next to the next

813
00:35:27,570 --> 00:35:26,140

level thank you very much good morning

814
00:35:30,300 --> 00:35:27,580
I'm Dave Thompson chairman and chief

815
00:35:32,460 --> 00:35:30,310
executive officer of orbital sciences

816
00:35:35,609 --> 00:35:32,470
corporation a company that two friends

817
00:35:38,510 --> 00:35:35,619
and I started 28 years ago to develop

818
00:35:41,250 --> 00:35:38,520
the full commercial potential of space

819
00:35:45,750 --> 00:35:41,260
with the perspective of about three

820
00:35:49,590 --> 00:35:45,760
decades in this business my my judgment

821
00:35:51,450 --> 00:35:49,600
is during its first turn at bat the

822
00:35:54,810 --> 00:35:51,460
Obama administration really hit it out

823
00:35:57,599 --> 00:35:54,820
of the park with its proposal for NASA's

824
00:36:00,390 --> 00:35:57,609
new approach to our civil space program

825
00:36:04,910 --> 00:36:00,400
this new approach which represents the

826
00:36:08,099 --> 00:36:04,920
most dramatic change in our civil space

827
00:36:11,280 --> 00:36:08,109
activity in at least the last 20 years

828
00:36:12,990 --> 00:36:11,290
is very consistent with what we've seen

829
00:36:13,650 --> 00:36:13,000
both in this country and around the

830
00:36:16,559 --> 00:36:13,660
world

831
00:36:19,950 --> 00:36:16,569
the past several decades an increased

832
00:36:26,910 --> 00:36:19,960
reliance on an ever more capable private

833
00:36:30,150 --> 00:36:26,920
sector in this case to deliver people to

834
00:36:32,520 --> 00:36:30,160
and from low Earth orbit this is an area

835
00:36:35,940 --> 00:36:32,530
that across a variety of applications

836
00:36:41,520 --> 00:36:35,950
ranging from satellite communications to

837
00:36:44,819 --> 00:36:41,530
space imagery collection launch orbital

838
00:36:47,000 --> 00:36:44,829

launch services and now commercial cargo

839
00:36:49,890 --> 00:36:47,010
delivery to the space station already

840
00:36:53,370 --> 00:36:49,900
represents an annual investment of about

841
00:36:55,650 --> 00:36:53,380
five billion dollars a year by the US

842
00:36:59,069 --> 00:36:55,660
government and other governments in

843
00:37:01,680 --> 00:36:59,079
spacefaring countries in Europe Asia and

844
00:37:03,980 --> 00:37:01,690
elsewhere so it seems like this is the

845
00:37:08,270 --> 00:37:03,990
right time this is the right direction

846
00:37:10,620 --> 00:37:08,280
for the agency to take in this new era

847
00:37:12,599 --> 00:37:10,630
one of the reasons that I'm confident

848
00:37:14,609 --> 00:37:12,609
that the private sector is up to the

849
00:37:18,630 --> 00:37:14,619
challenges that are ahead of us in this

850
00:37:21,450 --> 00:37:18,640
new era of commercial astronaut taxi

851
00:37:23,069 --> 00:37:21,460
services to and from low Earth orbit is

852
00:37:25,370 --> 00:37:23,079
because of the progress that we've made

853
00:37:28,769 --> 00:37:25,380
over the last couple of years in

854
00:37:31,500 --> 00:37:28,779
developing private cargo transportation

855
00:37:35,069 --> 00:37:31,510
systems for the International Space

856
00:37:37,589 --> 00:37:35,079
Station two of these systems will make

857
00:37:40,079 --> 00:37:37,599
their first flights to the station

858
00:37:42,329 --> 00:37:40,089
within the next year and I think that

859
00:37:44,880 --> 00:37:42,339
will pave the way not too many years

860
00:37:49,260 --> 00:37:44,890
later for the first launches of

861
00:37:52,529 --> 00:37:49,270
astronauts to low-earth orbit these

862
00:37:56,400 --> 00:37:52,539
challenges are ones that we welcome and

863
00:37:59,760 --> 00:37:56,410

I would also in addition to this new

864
00:38:01,589 --> 00:37:59,770
element of NASA's program complement the

865
00:38:05,549 --> 00:38:01,599
Obama administration and the space

866
00:38:09,059 --> 00:38:05,559
agency for strengthening our scientific

867
00:38:10,859 --> 00:38:09,069
programs that NASA carries out most of

868
00:38:13,740 --> 00:38:10,869
you that have studied the budget will

869
00:38:15,750 --> 00:38:13,750
note about a thirty percent increase in

870
00:38:17,819 --> 00:38:15,760
the budget for NASA science programs

871
00:38:19,710 --> 00:38:17,829
over the next five years and almost

872
00:38:22,200 --> 00:38:19,720
twice that much about a sixty percent

873
00:38:24,089 --> 00:38:22,210
increase in the agency's proposed

874
00:38:26,970 --> 00:38:24,099
spending on earth science which i think

875
00:38:27,780 --> 00:38:26,980
is one of the most important one of the

876
00:38:30,180 --> 00:38:27,790
most important here

877
00:38:35,130 --> 00:38:30,190
areas that NASA carries out thank you

878
00:38:37,320 --> 00:38:35,140
very much yeah I'm Ken Bowersox today

879
00:38:41,460 --> 00:38:37,330
it's an honor for me to be representing

880
00:38:43,440 --> 00:38:41,470
the 880 employees of SpaceX we've got a

881
00:38:46,200 --> 00:38:43,450
main construction facility out in

882
00:38:48,270 --> 00:38:46,210
Hawthorne California a test facility in

883
00:38:50,730 --> 00:38:48,280
McGregor Texas and then to launch sites

884
00:38:54,870 --> 00:38:50,740
one in Kwajalein out in the Marshall

885
00:38:56,760 --> 00:38:54,880
Islands and a launch site in Florida one

886
00:38:59,850 --> 00:38:56,770
of the most exciting things to me about

887
00:39:01,860 --> 00:38:59,860
the 2011 NASA budget is that it

888
00:39:04,830 --> 00:39:01,870

acknowledges one of the biggest barriers

889
00:39:08,640 --> 00:39:04,840
to exploring space and that barrier is

890
00:39:10,080 --> 00:39:08,650
how you pay for it one of the things

891
00:39:13,680 --> 00:39:10,090
that you have to work in order to fix

892
00:39:15,890 --> 00:39:13,690
that that issue is the relationships

893
00:39:19,290 --> 00:39:15,900
between the government and the

894
00:39:21,900 --> 00:39:19,300
contractors that provide the services

895
00:39:25,200 --> 00:39:21,910
the government hopefully we'll set the

896
00:39:28,020 --> 00:39:25,210
destination the contractors with their

897
00:39:29,940 --> 00:39:28,030
flexibility and creativity should be

898
00:39:33,690 --> 00:39:29,950
able to come up with new and innovative

899
00:39:35,580 --> 00:39:33,700
ways to get that job done SpaceX has had

900
00:39:38,430 --> 00:39:35,590
the privilege of working with NASA in a

901
00:39:40,440 --> 00:39:38,440
partnership agreement since 2006 to

902
00:39:42,600 --> 00:39:40,450
provide cargo services to the

903
00:39:45,360 --> 00:39:42,610
International Space Station and I can

904
00:39:48,300 --> 00:39:45,370
tell you from firsthand experience that

905
00:39:51,450 --> 00:39:48,310
it's a really great thing to watch what

906
00:39:53,880 --> 00:39:51,460
happens when you blend the skills that

907
00:39:56,070 --> 00:39:53,890
are only available in the government

908
00:40:00,870 --> 00:39:56,080
with the flexibility and creativity of

909
00:40:02,610 --> 00:40:00,880
private industry folks if we could do

910
00:40:06,270 --> 00:40:02,620
one thing before we I was going to ask

911
00:40:09,930 --> 00:40:06,280
yes apps absolutely get one Greg shot

912
00:40:41,589 --> 00:40:09,940
this is the face these are the faces of

913
00:40:46,190 --> 00:40:44,210

let me thank all of you again for coming

914
00:40:49,490 --> 00:40:46,200
in and thanks to all of you who have

915
00:40:51,020 --> 00:40:49,500
come out today mr. Singh in spite of the

916
00:40:53,030 --> 00:40:51,030
fact that I think this is probably the

917
00:41:01,900 --> 00:40:53,040
wrong thing to say I think I'm ready for

918
00:41:05,570 --> 00:41:01,910
questions thank you thank you very much

919
00:41:09,970 --> 00:41:05,580
please identify yourself and the

920
00:41:30,320 --> 00:41:15,790
please it's only for journalists please

921
00:41:32,810 --> 00:41:30,330
thank you yes hi Ken sharing from New

922
00:41:34,579 --> 00:41:32,820
York Times um so the budgets asking for

923
00:41:36,200 --> 00:41:34,589
18 billion dollars over fires for

924
00:41:38,180 --> 00:41:36,210
research with a lot of money to ask

925
00:41:41,060 --> 00:41:38,190
Congress for when you haven't spread out

926
00:41:42,829 --> 00:41:41,070
a specific goal I was wondering do you

927
00:41:45,230 --> 00:41:42,839
have a destination and timetable for

928
00:41:47,150 --> 00:41:45,240
where you want to send astronauts or and

929
00:41:49,490 --> 00:41:47,160
if not when was do you think you will

930
00:41:53,510 --> 00:41:49,500
come up with the timetable when you tie

931
00:41:56,210 --> 00:41:53,520
all this technology into an architecture

932
00:41:58,880 --> 00:41:56,220
destination and tight and con tables is

933
00:42:01,730 --> 00:41:58,890
it a couple weeks next year or after the

934
00:42:02,900 --> 00:42:01,740
fire yeah Oh kid it's it's it's more

935
00:42:05,480 --> 00:42:02,910
than a couple of weeks but it's less

936
00:42:07,370 --> 00:42:05,490
than years you know we we already are

937
00:42:09,339 --> 00:42:07,380
starting to form form Tiger teams that

938
00:42:12,380 --> 00:42:09,349

will help us come up with a schedule for

939
00:42:15,770 --> 00:42:12,390
how we're going to go about developing a

940
00:42:17,359 --> 00:42:15,780
new plan a bold plan for exploration if

941
00:42:18,500 --> 00:42:17,369
you ask me about destinations I get in

942
00:42:20,290 --> 00:42:18,510
trouble when I say it but I'll tell you

943
00:42:22,099 --> 00:42:20,300
anyway anybody who talks about

944
00:42:23,780 --> 00:42:22,109
exploration beyond low Earth orbit

945
00:42:26,839 --> 00:42:23,790
there's some places that naturally come

946
00:42:29,480 --> 00:42:26,849
to mind the moon Mars asteroids you know

947
00:42:31,520 --> 00:42:29,490
other near-earth objects so so I would

948
00:42:33,829 --> 00:42:31,530
say those are some of the the definite

949
00:42:36,800 --> 00:42:33,839
destinations I have Laura lashing down

950
00:42:39,079 --> 00:42:36,810
here who is one of my executives keeps

951
00:42:41,870 --> 00:42:39,089
reminding me that I'm limiting us when I

952
00:42:43,700 --> 00:42:41,880
talk about Mars instead of places other

953
00:42:45,620 --> 00:42:43,710
than the solar system but I'm I'm just

954
00:42:47,990 --> 00:42:45,630
talking about in my lifetime so so I

955
00:42:49,970 --> 00:42:48,000
will limit it to moon Mars asteroids and

956
00:42:51,530 --> 00:42:49,980
things like that and we hope very soon

957
00:42:54,410 --> 00:42:51,540
to be able to give you a very definitive

958
00:42:56,480 --> 00:42:54,420
time schedule on which we we hope to

959
00:42:59,450 --> 00:42:56,490
eat some of these destinations I will

960
00:43:01,160 --> 00:42:59,460
tell you that right now as we are

961
00:43:04,039 --> 00:43:01,170
talking about today with the people

962
00:43:06,230 --> 00:43:04,049
we're honoring here and I as I talked to

963
00:43:08,930 --> 00:43:06,240

them they were asking what can we do to

964
00:43:10,970 --> 00:43:08,940
help and I said the number one thing

965
00:43:12,770 --> 00:43:10,980
that we all can do is pull together work

966
00:43:15,500 --> 00:43:12,780
together and make sure that we deliver

967
00:43:17,630 --> 00:43:15,510
things on schedule meet our milestones

968
00:43:19,400 --> 00:43:17,640
and make sure that we come in on the

969
00:43:20,930 --> 00:43:19,410
cost that we see it because that's

970
00:43:22,789 --> 00:43:20,940
what's going to be different and if I

971
00:43:29,690 --> 00:43:22,799
can't deliver that then you all ought to

972
00:43:32,569 --> 00:43:29,700
throw me out okay Seth Borenstein

973
00:43:35,450 --> 00:43:32,579
Associated Press general intern

974
00:43:36,829 --> 00:43:35,460
following up on that if you're looking I

975
00:43:39,530 --> 00:43:36,839
believe in yesterday's budget

976
00:43:43,280 --> 00:43:39,540
announcements do you made a lot of talk

977
00:43:45,559 --> 00:43:43,290
about the inn in orbit fueling I know

978
00:43:48,500 --> 00:43:45,569
still early are you looking at primarily

979
00:43:50,809 --> 00:43:48,510
when you're the new type vehicles at

980
00:43:52,900 --> 00:43:50,819
launching from a space station or some

981
00:43:56,329 --> 00:43:52,910
place in orbit to wherever you're going

982
00:44:00,020 --> 00:43:56,339
is that sort of the primary role or you

983
00:44:02,030 --> 00:44:00,030
looking at more the traditional from

984
00:44:05,960 --> 00:44:02,040
Earth there you know when you talk about

985
00:44:07,460 --> 00:44:05,970
in orbit refueling this is a question we

986
00:44:10,430 --> 00:44:07,470
have talked about internally among

987
00:44:13,490 --> 00:44:10,440
ourselves we're talking about going from

988
00:44:15,079 --> 00:44:13,500

a space station to some other place in

989
00:44:17,059 --> 00:44:15,089
the solar system we're talking about

990
00:44:19,190 --> 00:44:17,069
being able to launch with a lighter

991
00:44:21,109 --> 00:44:19,200
vehicle than we would otherwise be

992
00:44:23,390 --> 00:44:21,119
required because if if you think about

993
00:44:25,970 --> 00:44:23,400
it the reason for the weight and the

994
00:44:28,039 --> 00:44:25,980
size of a lot of vehicles is getting out

995
00:44:29,900 --> 00:44:28,049
of the gravity well if we have a place

996
00:44:32,539 --> 00:44:29,910
that we can go once we get out of the

997
00:44:35,230 --> 00:44:32,549
gravity well refuel it means you don't

998
00:44:37,490 --> 00:44:35,240
have to have the types of complex heavy

999
00:44:40,370 --> 00:44:37,500
costly vehicles that we have today so

1000
00:44:43,579 --> 00:44:40,380
that's one thing I would ask you to not

1001
00:44:46,809 --> 00:44:43,589
don't be misguided though by by our

1002
00:44:50,599 --> 00:44:46,819
desire to have on orbit refueling sites

1003
00:44:53,289 --> 00:44:50,609
that implies hydrocarbon and other types

1004
00:44:56,480 --> 00:44:53,299
of propulsion systems when I talk about

1005
00:44:57,980 --> 00:44:56,490
game-changing propulsion we're talking

1006
00:44:59,510 --> 00:44:57,990
about going back to some stuff that nASA

1007
00:45:01,069 --> 00:44:59,520
has on the shelf and some of our

1008
00:45:03,559 --> 00:45:01,079
commercial partners have on the shelf

1009
00:45:05,750 --> 00:45:03,569
whether it's ion engines VASIMR all

1010
00:45:07,609 --> 00:45:05,760
these other kinds of things that you all

1011
00:45:08,460 --> 00:45:07,619
know better than I do and you know

1012
00:45:11,490 --> 00:45:08,470
they're going to bring our

1013
00:45:14,040 --> 00:45:11,500

it's in the coming months because if

1014
00:45:16,050 --> 00:45:14,050
you're a VASIMR fan then you don't like

1015
00:45:17,730 --> 00:45:16,060
I on if you're an eye on fan you don't

1016
00:45:20,040 --> 00:45:17,740
like Vaz Murr and I think what's

1017
00:45:21,720 --> 00:45:20,050
exciting you know I I've had people tell

1018
00:45:23,820 --> 00:45:21,730
me please don't say it's exciting one

1019
00:45:25,770 --> 00:45:23,830
more time but i will tell you what's

1020
00:45:28,440 --> 00:45:25,780
exciting is that we are now going to

1021
00:45:30,060 --> 00:45:28,450
have the national debate about where we

1022
00:45:32,849 --> 00:45:30,070
should be going in terms of space

1023
00:45:35,460 --> 00:45:32,859
exploration and scientists and engineers

1024
00:45:38,339 --> 00:45:35,470
who have not had the opportunity perhaps

1025
00:45:40,020 --> 00:45:38,349
in the last decade or more to have these

1026
00:45:43,400 --> 00:45:40,030
discussions in public are going to have

1027
00:45:46,260 --> 00:45:43,410
them I hope if we do nothing but but

1028
00:45:48,900 --> 00:45:46,270
facilitate public discussion on where we

1029
00:45:50,790 --> 00:45:48,910
should be going and how we go there then

1030
00:46:01,950 --> 00:45:50,800
then we'll we will have accomplished a

1031
00:46:06,690 --> 00:46:01,960
lot call on people Dave Ahern I'm a

1032
00:46:08,820 --> 00:46:06,700
press club member on the announcement

1033
00:46:12,510 --> 00:46:08,830
from the president has been greeted with

1034
00:46:15,870 --> 00:46:12,520
dismay in some areas that we are

1035
00:46:18,870 --> 00:46:15,880
abandoning a manned spaceflight that we

1036
00:46:21,599 --> 00:46:18,880
are leaving it to the Chinese to perhaps

1037
00:46:24,660 --> 00:46:21,609
the Indians and others other nations to

1038
00:46:28,650 --> 00:46:24,670

take the lead in exploring our own solar

1039
00:46:31,829 --> 00:46:28,660
system how do you respond to that when

1040
00:46:35,480 --> 00:46:31,839
we were the nation that was in the

1041
00:46:38,280 --> 00:46:35,490
forefront and did land men on the moon

1042
00:46:39,810 --> 00:46:38,290
what do you say to those people we are

1043
00:46:41,700 --> 00:46:39,820
still the nation that is in the

1044
00:46:44,250 --> 00:46:41,710
forefront we are still the nation to

1045
00:46:47,310 --> 00:46:44,260
which everyone looks and when with whom

1046
00:46:50,160 --> 00:46:47,320
everyone wants to partner as I travel

1047
00:46:51,900 --> 00:46:50,170
around the world that that message comes

1048
00:46:54,780 --> 00:46:51,910
through loud and clear from all of our

1049
00:46:56,670 --> 00:46:54,790
international partners if i go back to

1050
00:46:58,410 --> 00:46:56,680
you know saying people thinking that

1051
00:47:00,720 --> 00:46:58,420
that we're turning away from human

1052
00:47:03,390 --> 00:47:00,730
spaceflight i will share with you a

1053
00:47:06,060 --> 00:47:03,400
story that i got from from from jeff

1054
00:47:07,530 --> 00:47:06,070
Hanley this morning who is the the

1055
00:47:09,510 --> 00:47:07,540
program manager for the constellation

1056
00:47:11,370 --> 00:47:09,520
program and he had gotten a message from

1057
00:47:14,130 --> 00:47:11,380
a little girl named Chrissy that he had

1058
00:47:16,859 --> 00:47:14,140
actually semi adopted had invited her

1059
00:47:18,870 --> 00:47:16,869
family to the Ares 1x launch it was the

1060
00:47:20,400 --> 00:47:18,880
greatest thing she had ever seen you

1061
00:47:21,850 --> 00:47:20,410
know she went through the scrub and she

1062
00:47:26,950 --> 00:47:21,860
came back the next day and saw it

1063
00:47:29,260 --> 00:47:26,960

and to Chrissy without anyone explaining

1064
00:47:31,630 --> 00:47:29,270
anything to her she thought we were

1065
00:47:33,370 --> 00:47:31,640
turning away Jeff took the time to

1066
00:47:36,400 --> 00:47:33,380
explain to Chrissy look we're not

1067
00:47:38,710 --> 00:47:36,410
abandoning anything you know we're we're

1068
00:47:41,380 --> 00:47:38,720
probably on a new course but human

1069
00:47:43,150 --> 00:47:41,390
spaceflight is in our DNA so you know

1070
00:47:45,430 --> 00:47:43,160
it's important for you all to help us

1071
00:47:47,290 --> 00:47:45,440
explain to people who will look at the

1072
00:47:50,530 --> 00:47:47,300
headline because you write the headline

1073
00:47:52,780 --> 00:47:50,540
so make it accurate we are not

1074
00:47:54,910 --> 00:47:52,790
abandoning human spaceflight by any

1075
00:47:57,520 --> 00:47:54,920
stretch of the imagination we have 10

1076
00:47:59,470 --> 00:47:57,530
more years of involvement on the

1077
00:48:02,050 --> 00:47:59,480
international space station that is that

1078
00:48:04,090 --> 00:48:02,060
is exciting you know we just hired some

1079
00:48:05,890 --> 00:48:04,100
astronauts in Houston who are somewhat

1080
00:48:08,740 --> 00:48:05,900
offended that people think that they

1081
00:48:10,270 --> 00:48:08,750
have nothing to do we have crews that we

1082
00:48:13,180 --> 00:48:10,280
just named who are going to be spending

1083
00:48:15,580 --> 00:48:13,190
a year of their life training in Moscow

1084
00:48:18,160 --> 00:48:15,590
just to get ready to go spend six months

1085
00:48:20,380 --> 00:48:18,170
of their lives on orbit that's

1086
00:48:23,170 --> 00:48:20,390
exploration and that's human spaceflight

1087
00:48:25,090 --> 00:48:23,180
and I can count on that until 2020 I've

1088
00:48:27,250 --> 00:48:25,100

got seven companies represented right

1089
00:48:29,320 --> 00:48:27,260
here who are telling me that they're

1090
00:48:31,540 --> 00:48:29,330
excited about finding ways to get humans

1091
00:48:34,150 --> 00:48:31,550
off this planet and into low-earth orbit

1092
00:48:35,620 --> 00:48:34,160
that's human spaceflight so for any of

1093
00:48:37,870 --> 00:48:35,630
you who think we're abandoning human

1094
00:48:40,450 --> 00:48:37,880
spaceflight I just respectfully disagree

1095
00:48:43,300 --> 00:48:40,460
I think we're going to get there perhaps

1096
00:48:45,610 --> 00:48:43,310
quicker than we would have done before

1097
00:48:49,330 --> 00:48:45,620
if you look at flights to Mars for

1098
00:48:53,830 --> 00:48:49,340
example game-changing technology enables

1099
00:48:56,020 --> 00:48:53,840
us to go to Mars in days not months by

1100
00:48:57,670 --> 00:48:56,030
doing the things that we're about to do

1101
00:49:00,310 --> 00:48:57,680
by taking the money that President Obama

1102
00:49:02,260 --> 00:49:00,320
has given us in our NASA budget for the

1103
00:49:04,390 --> 00:49:02,270
next five years to use technology

1104
00:49:05,770 --> 00:49:04,400
development now that you know don't I'm

1105
00:49:08,290 --> 00:49:05,780
not trying to fool anybody that this is

1106
00:49:09,760 --> 00:49:08,300
going to be easy I've still got to go to

1107
00:49:12,340 --> 00:49:09,770
the other end of Capitol Hill I mean to

1108
00:49:15,130 --> 00:49:12,350
the other end of Pennsylvania Avenue and

1109
00:49:18,190 --> 00:49:15,140
but I'm excited about the opportunity to

1110
00:49:20,050 --> 00:49:18,200
do that I now have a budget that that

1111
00:49:22,060 --> 00:49:20,060
allows me to walk to that end of

1112
00:49:25,000 --> 00:49:22,070
Pennsylvania Avenue and say this is the

1113
00:49:26,920 --> 00:49:25,010

program that I want all of us to work on

1114
00:49:28,690 --> 00:49:26,930
together it's got to be a partnership

1115
00:49:30,430 --> 00:49:28,700
some of you may have heard my comments

1116
00:49:33,580 --> 00:49:30,440
yesterday on the budget rolled out this

1117
00:49:35,079 --> 00:49:33,590
is a wee thing this is not a this is not

1118
00:49:38,229 --> 00:49:35,089
a NASA thing this is a

1119
00:49:40,660 --> 00:49:38,239
this is the nation and working Congress

1120
00:49:43,690 --> 00:49:40,670
in the administration nasa and industry

1121
00:49:46,630 --> 00:49:43,700
nasa in an industry and academia we've

1122
00:49:47,829 --> 00:49:46,640
got academia represented here i won't

1123
00:49:49,989 --> 00:49:47,839
call the name of the school because i

1124
00:49:54,249 --> 00:49:49,999
don't want to advertise them but they're

1125
00:49:57,459 --> 00:49:54,259
here these are exciting times anybody

1126
00:50:00,039 --> 00:49:57,469
who was ever on a college campus over

1127
00:50:03,009 --> 00:50:00,049
the last 10 years and walked into an

1128
00:50:06,489 --> 00:50:03,019
engineering school and saw the dearth of

1129
00:50:08,380 --> 00:50:06,499
research going on on space science and

1130
00:50:10,989 --> 00:50:08,390
earth science and other things because

1131
00:50:14,229 --> 00:50:10,999
there was no research money i think

1132
00:50:16,089 --> 00:50:14,239
that's going to change so help us help

1133
00:50:20,769 --> 00:50:16,099
us tell this story because i think it is

1134
00:50:23,109 --> 00:50:20,779
exciting i'm very boring with aviation

1135
00:50:25,390 --> 00:50:23,119
week general as you well know yesterday

1136
00:50:28,029 --> 00:50:25,400
was the anniversary of the Columbia

1137
00:50:31,719 --> 00:50:28,039
accident and it's my understanding that

1138
00:50:34,209 --> 00:50:31,729

the constellation program was assembled

1139
00:50:36,640 --> 00:50:34,219
as a direct response to that accident

1140
00:50:39,099 --> 00:50:36,650
the young the findings of the Columbia

1141
00:50:44,799 --> 00:50:39,109
accident investigation board for example

1142
00:50:46,209 --> 00:50:44,809
which mentioned the absence of a believe

1143
00:50:48,819 --> 00:50:46,219
they used the term national mandate

1144
00:50:51,130 --> 00:50:48,829
prior to the accident and also the fact

1145
00:50:53,469 --> 00:50:51,140
that NASA was stretched too thin how do

1146
00:50:58,630 --> 00:50:53,479
you incorporate the lessons of Columbia

1147
00:51:01,420 --> 00:50:58,640
in this new venture particularly the

1148
00:51:04,450 --> 00:51:01,430
part that they identified as being a

1149
00:51:08,259 --> 00:51:04,460
lack of a national mandate maybe Frank

1150
00:51:10,930 --> 00:51:08,269
if I can you know you limit the sources

1151
00:51:13,349 --> 00:51:10,940
of lessons learned our lessons learned

1152
00:51:17,109 --> 00:51:13,359
in NASA go all the way back to Apollo 1

1153
00:51:21,489 --> 00:51:17,119
that was when we we had the first I

1154
00:51:24,459 --> 00:51:21,499
opening alert that maybe we didn't know

1155
00:51:27,190 --> 00:51:24,469
everything we thought we knew and then

1156
00:51:31,180 --> 00:51:27,200
we felt really good about ourselves in

1157
00:51:32,799 --> 00:51:31,190
1986 i can tell you i landed in in the

1158
00:51:34,749 --> 00:51:32,809
middle of the desert i landed at edwards

1159
00:51:38,709 --> 00:51:34,759
air force base in the middle of the

1160
00:51:40,509 --> 00:51:38,719
night on january 18th you know went back

1161
00:51:42,700 --> 00:51:40,519
to went back home to houston and going

1162
00:51:45,999 --> 00:51:42,710
through my debriefs and my very last day

1163
00:51:48,009 --> 00:51:46,009

of debrief we took a break to watch the

1164
00:51:48,760 --> 00:51:48,019
space shuttle challenger launch and 73

1165
00:51:51,280 --> 00:51:48,770
seconds into flight

1166
00:51:53,820 --> 00:51:51,290
I lost seven dear friends and we once

1167
00:51:55,990 --> 00:51:53,830
again were awakened that this is hard

1168
00:51:58,350 --> 00:51:56,000
and that you've really got to stay on

1169
00:52:02,290 --> 00:51:58,360
the top of your game and then again

1170
00:52:03,940 --> 00:52:02,300
January first two thousand three at the

1171
00:52:06,610 --> 00:52:03,950
end of a mission when everybody is

1172
00:52:07,630 --> 00:52:06,620
celebrating because nobody thinks you

1173
00:52:10,960 --> 00:52:07,640
know that you're going to have a problem

1174
00:52:13,150 --> 00:52:10,970
during reentry I mean except us who are

1175
00:52:14,860 --> 00:52:13,160
in the game who know that it's not over

1176
00:52:16,450 --> 00:52:14,870
till it's over you know and and that's

1177
00:52:19,030 --> 00:52:16,460
why you call wheel stopped because

1178
00:52:20,890 --> 00:52:19,040
everybody can then breathe and once

1179
00:52:24,700 --> 00:52:20,900
again we were reminded that this is

1180
00:52:26,170 --> 00:52:24,710
tough stuff so I think their lessons to

1181
00:52:29,320 --> 00:52:26,180
be learned from Columbia challenger

1182
00:52:31,480 --> 00:52:29,330
Apollo 1 and other accidents and

1183
00:52:33,790 --> 00:52:31,490
incidents that we had along the way that

1184
00:52:36,570 --> 00:52:33,800
that didn't get the press that those did

1185
00:52:39,430 --> 00:52:36,580
I think the president has set a bold

1186
00:52:42,520 --> 00:52:39,440
challenge for us he you know we are not

1187
00:52:44,440 --> 00:52:42,530
drifting I I think I heard I've had

1188
00:52:47,170 --> 00:52:44,450

friends from Houston who write me when

1189
00:52:50,260 --> 00:52:47,180
you talk about flexible path and I admit

1190
00:52:53,650 --> 00:52:50,270
okay flexible path is hard to grasp but

1191
00:52:55,060 --> 00:52:53,660
let me help you okay they sent me a

1192
00:52:57,490 --> 00:52:55,070
thing and I think it was they said you

1193
00:52:58,780 --> 00:52:57,500
know this is like alison wonderland when

1194
00:53:01,290 --> 00:52:58,790
you're going everywhere you're going

1195
00:53:04,090 --> 00:53:01,300
nowhere well we're not going everywhere

1196
00:53:05,350 --> 00:53:04,100
we have defined destinations that we

1197
00:53:08,080 --> 00:53:05,360
want to go and we will go there

1198
00:53:09,900 --> 00:53:08,090
incrementally and through our technology

1199
00:53:13,120 --> 00:53:09,910
development that will help determine

1200
00:53:15,100 --> 00:53:13,130
where you go first we want to take

1201
00:53:18,430 --> 00:53:15,110
advantage of opportunities that come as

1202
00:53:20,320 --> 00:53:18,440
the tip the technology develops so I

1203
00:53:21,730 --> 00:53:20,330
think Frank I hope that answers your

1204
00:53:30,520 --> 00:53:21,740
question about how we're taking the

1205
00:53:32,560 --> 00:53:30,530
lessons of the past Tammy Lydell from

1206
00:53:34,750 --> 00:53:32,570
AOL news you said to judge you by how

1207
00:53:36,490 --> 00:53:34,760
well you keep this on track given the

1208
00:53:38,770 --> 00:53:36,500
cost of Iran's and the delays on

1209
00:53:40,810 --> 00:53:38,780
constellation and previous NASA programs

1210
00:53:42,550 --> 00:53:40,820
why is this going to be different it's

1211
00:53:45,100 --> 00:53:42,560
going to be different because for one

1212
00:53:47,620 --> 00:53:45,110
thing the president has set out a budget

1213
00:53:50,410 --> 00:53:47,630

that supports where we think we want to

1214
00:53:52,450 --> 00:53:50,420
go and we're building programs based on

1215
00:53:55,210 --> 00:53:52,460
the budget that we have and not building

1216
00:53:58,210 --> 00:53:55,220
programs based on a dream now dreams are

1217
00:54:00,970 --> 00:53:58,220
really important dreams are critical

1218
00:54:02,440 --> 00:54:00,980
because without a dream what in Proverbs

1219
00:54:05,290 --> 00:54:02,450
what's it say

1220
00:54:07,750 --> 00:54:05,300
without a vision of people perish so I'm

1221
00:54:11,410 --> 00:54:07,760
a I'm a visionary if you want to call me

1222
00:54:13,390 --> 00:54:11,420
that I dream but I want to be a

1223
00:54:16,630 --> 00:54:13,400
realistic dreamer and the president has

1224
00:54:19,030 --> 00:54:16,640
laid out a pretty healthy budget that we

1225
00:54:21,250 --> 00:54:19,040
feel we can plan to that budget and

1226
00:54:25,630 --> 00:54:21,260
stick to it if you go all the way back

1227
00:54:27,430 --> 00:54:25,640
to the days of the of the STS the space

1228
00:54:30,190 --> 00:54:27,440
transportation system I see some people

1229
00:54:32,560 --> 00:54:30,200
shaking their heads at that time it is

1230
00:54:34,960 --> 00:54:32,570
told to me that that the brief was given

1231
00:54:36,760 --> 00:54:34,970
to President Nixon he said I love it go

1232
00:54:38,140 --> 00:54:36,770
do it and the next morning somebody

1233
00:54:39,760 --> 00:54:38,150
called and said well what the president

1234
00:54:41,829 --> 00:54:39,770
really meant to say was you're going to

1235
00:54:43,540 --> 00:54:41,839
get this amount of money you know and

1236
00:54:46,420 --> 00:54:43,550
then we struggled for the rest of the

1237
00:54:48,550 --> 00:54:46,430
program this president has said here's

1238
00:54:50,829 --> 00:54:48,560

what I want you to do here's the money

1239
00:54:53,050 --> 00:54:50,839
that you're going to have to do it let

1240
00:54:56,290 --> 00:54:53,060
me know if this supports that vision and

1241
00:54:58,150 --> 00:54:56,300
we have said yes what you have told us

1242
00:55:00,460 --> 00:54:58,160
you want us to do is supported by the

1243
00:55:03,339 --> 00:55:00,470
budget you have given us and so that's

1244
00:55:05,380 --> 00:55:03,349
why I say hold me responsible I have

1245
00:55:07,240 --> 00:55:05,390
sufficient funds to do the things that I

1246
00:55:09,280 --> 00:55:07,250
think we need to do for this nation and

1247
00:55:11,319 --> 00:55:09,290
so you need to hold me responsible i

1248
00:55:20,589 --> 00:55:11,329
can't say that the president has not

1249
00:55:22,809 --> 00:55:20,599
given me sufficient funds okie count yes

1250
00:55:25,300 --> 00:55:22,819
watch calm to the issue of flying

1251
00:55:26,800 --> 00:55:25,310
astronauts and commercial vehicles after

1252
00:55:28,960 --> 00:55:26,810
all the talk yesterday I sort of SAT

1253
00:55:30,790 --> 00:55:28,970
around last night doing a mental totally

1254
00:55:33,730 --> 00:55:30,800
unscientific poll in my head of people

1255
00:55:35,020 --> 00:55:33,740
I've talked to and Ken Bowersox and

1256
00:55:38,349 --> 00:55:35,030
people who work for these companies and

1257
00:55:41,140 --> 00:55:38,359
I came up with a number sixty astronauts

1258
00:55:43,059 --> 00:55:41,150
sixty percent say I wouldn't do it 40

1259
00:55:44,980 --> 00:55:43,069
would and then I thought well what's

1260
00:55:46,960 --> 00:55:44,990
behind this and it's emotional it's like

1261
00:55:48,730 --> 00:55:46,970
this emotional latter-day right stuff

1262
00:55:50,440 --> 00:55:48,740
thing it's they use logic to say why

1263
00:55:51,819 --> 00:55:50,450

they wouldn't how do you get beyond that

1264
00:55:53,440 --> 00:55:51,829
what are you going to say to the

1265
00:55:55,000 --> 00:55:53,450
astronaut corps like this is how it is

1266
00:55:56,620 --> 00:55:55,010
or how are you going to work with them

1267
00:55:58,210 --> 00:55:56,630
and it's not just the core it's a larger

1268
00:55:59,829 --> 00:55:58,220
group of people who support the how are

1269
00:56:00,910 --> 00:55:59,839
you going to work at that my message to

1270
00:56:02,770 --> 00:56:00,920
the workforce it did everybody

1271
00:56:05,440 --> 00:56:02,780
understand keys question first of all

1272
00:56:07,809 --> 00:56:05,450
and and he hit the nail on the head this

1273
00:56:11,470 --> 00:56:07,819
is all emotional and the reason that i

1274
00:56:14,859 --> 00:56:11,480
started my comments by thanking the

1275
00:56:16,030 --> 00:56:14,869
constellation team is because you've got

1276
00:56:20,710 --> 00:56:16,040
to understand it

1277
00:56:22,480 --> 00:56:20,720
everybody's had a death in the family to

1278
00:56:26,440 --> 00:56:22,490
people who are working on these programs

1279
00:56:29,230 --> 00:56:26,450
this is like a death in the family so

1280
00:56:31,420 --> 00:56:29,240
you know everybody needs to understand

1281
00:56:33,610 --> 00:56:31,430
that and we need to give them time to

1282
00:56:36,370 --> 00:56:33,620
grieve and then we need to give them

1283
00:56:38,710 --> 00:56:36,380
time to recover I have an incredible

1284
00:56:40,750 --> 00:56:38,720
work force of civil servants and

1285
00:56:43,930 --> 00:56:40,760
civilians they have been through this

1286
00:56:47,380 --> 00:56:43,940
before you know it this is just part of

1287
00:56:49,360 --> 00:56:47,390
the life of being in NASA and every time

1288
00:56:52,150 --> 00:56:49,370

we managed to pull through it and we

1289
00:56:53,950 --> 00:56:52,160
managed to recover and we go off and we

1290
00:56:55,630 --> 00:56:53,960
do great things and this time will be no

1291
00:56:58,360 --> 00:56:55,640
different now that doesn't that doesn't

1292
00:56:59,890 --> 00:56:58,370
make you know an employee at the Kennedy

1293
00:57:01,870 --> 00:56:59,900
Space Center or the johnson space center

1294
00:57:03,730 --> 00:57:01,880
or a marshall space flight center or a

1295
00:57:05,830 --> 00:57:03,740
contractor that any of these seven

1296
00:57:07,680 --> 00:57:05,840
people represent that doesn't give them

1297
00:57:11,650 --> 00:57:07,690
a you know a great sense of Solace

1298
00:57:14,080 --> 00:57:11,660
because they're facing reality but what

1299
00:57:16,390 --> 00:57:14,090
I tell them is look we're going to get

1300
00:57:19,870 --> 00:57:16,400
through this you know kind of stick

1301
00:57:21,880 --> 00:57:19,880
stick with us if you can some of you

1302
00:57:23,590 --> 00:57:21,890
will decide that this just isn't

1303
00:57:25,870 --> 00:57:23,600
exciting enough for you and you want to

1304
00:57:28,240 --> 00:57:25,880
go do other things and and I appreciate

1305
00:57:30,970 --> 00:57:28,250
the service you've given allow us to

1306
00:57:33,670 --> 00:57:30,980
help you in your transition and if at

1307
00:57:34,960 --> 00:57:33,680
all possible let us help you find some

1308
00:57:37,150 --> 00:57:34,970
work somewhere else that's gonna that's

1309
00:57:39,850 --> 00:57:37,160
going to be passionate to you I'm a big

1310
00:57:41,770 --> 00:57:39,860
person for passion I'm here because I'm

1311
00:57:43,870 --> 00:57:41,780
passionate about space and exploration

1312
00:57:45,400 --> 00:57:43,880
otherwise I'd be sitting in houston

1313
00:57:47,770 --> 00:57:45,410

texas or I'd be in San Diego with my

1314
00:57:50,230 --> 00:57:47,780
three grand owners I am here because I'm

1315
00:57:57,990 --> 00:57:50,240
passionate about this I cry about it

1316
00:58:03,490 --> 00:57:58,000
sometimes so so what this is my life

1317
00:58:06,070 --> 00:58:03,500
this is their lives and give them a

1318
00:58:08,170 --> 00:58:06,080
little time they'll come back and

1319
00:58:10,990 --> 00:58:08,180
they're going to be as great as they

1320
00:58:22,559 --> 00:58:11,000
have always been so just bear with them

1321
00:58:31,319 --> 00:58:26,219
eco tuna legs and rafa in fox TV russia

1322
00:58:34,989 --> 00:58:31,329
as nasa actively partners with aerospace

1323
00:58:38,049 --> 00:58:34,999
industry in the US do you have any plans

1324
00:58:40,599 --> 00:58:38,059
to involve russian companies in any way

1325
00:58:43,839 --> 00:58:40,609
in the future after shuttle retirement

1326
00:58:48,519 --> 00:58:43,849
and could you please specify the process

1327
00:58:50,799 --> 00:58:48,529
of delivering astronauts to ISS in terms

1328
00:58:53,829 --> 00:58:50,809
of Russian participation in it again

1329
00:58:55,239 --> 00:58:53,839
after shuttle retirement thank you thank

1330
00:58:57,130 --> 00:58:55,249
you very much for the question I just

1331
00:59:00,069 --> 00:58:57,140
had a long conversation with a dear

1332
00:59:01,419 --> 00:59:00,079
friend Anna Tomac Anatoly permit off who

1333
00:59:03,159 --> 00:59:01,429
is the head of the Russian space agency

1334
00:59:05,049 --> 00:59:03,169
yesterday morning to make sure that he

1335
00:59:08,319 --> 00:59:05,059
understood that where the president

1336
00:59:10,239 --> 00:59:08,329
wants us to go he was excited as were

1337
00:59:12,549 --> 00:59:10,249
all of our international partners about

1338
00:59:14,079 --> 00:59:12,559

the president's support of extending the

1339
00:59:16,539 --> 00:59:14,089
life of the International Space Station

1340
00:59:19,870 --> 00:59:16,549
to 2020 they're all excited actually

1341
00:59:22,479 --> 00:59:19,880
about about the funding that's going to

1342
00:59:25,959 --> 00:59:22,489
commercial to the entry of commercial

1343
00:59:27,880 --> 00:59:25,969
space into exploration and lower Earth

1344
00:59:29,620 --> 00:59:27,890
orbit the Russians have been an

1345
00:59:32,049 --> 00:59:29,630
incredible partner through the years and

1346
00:59:33,699 --> 00:59:32,059
they will remain so I think most of you

1347
00:59:35,890 --> 00:59:33,709
know that when shuttle retires at the

1348
00:59:38,049 --> 00:59:35,900
end of this year our primary means of

1349
00:59:40,149 --> 00:59:38,059
getting astronauts to the International

1350
00:59:43,299 --> 00:59:40,159
Space Station in anywhere else will be

1351
00:59:45,579 --> 00:59:43,309
the Soyuz spacecraft I love the

1352
00:59:51,130 --> 00:59:45,589
spacecraft I've never flown on it Sox

1353
00:59:54,309 --> 00:59:51,140
has but the bad part about it is it it

1354
00:59:57,069 --> 00:59:54,319
leaves us without redundancy I think if

1355
01:00:00,009 --> 00:59:57,079
you talk to any astronaut no matter what

1356
01:00:03,939 --> 01:00:00,019
they think you know keith mentioned the

1357
01:00:06,399 --> 01:00:03,949
pole of 60 40 40 60 or whatever most of

1358
01:00:08,890 --> 01:00:06,409
us will tell you what we think is

1359
01:00:13,299 --> 01:00:08,900
critical for the nation is reliable

1360
01:00:15,069 --> 01:00:13,309
redundant access to space when when we

1361
01:00:16,809 --> 01:00:15,079
retire shuttle and it is the right thing

1362
01:00:19,419 --> 01:00:16,819
to do by the way for those of you who

1363
01:00:21,189 --> 01:00:19,429

might want to ask me that question it is

1364
01:00:22,809 --> 01:00:21,199
definitely the right thing to do so when

1365
01:00:25,779 --> 01:00:22,819
we retire shuttle at the end of this

1366
01:00:29,509 --> 01:00:25,789
year we will no longer have a reliable

1367
01:00:33,589 --> 01:00:29,519
redundant way to get humans into space

1368
01:00:36,380 --> 01:00:33,599
the sooner our industrial partners can

1369
01:00:39,019 --> 01:00:36,390
deliver the sooner we will at least have

1370
01:00:42,729 --> 01:00:39,029
some redundancy in our ability to get

1371
01:00:46,189 --> 01:00:42,739
there you know two is better than one

1372
01:00:59,149 --> 01:00:46,199
several is much better than two so we'll

1373
01:01:08,419 --> 01:00:59,159
get there have one last question at the

1374
01:01:11,239 --> 01:01:08,429
end at the end the lady there thank you

1375
01:01:14,839 --> 01:01:11,249
I'm Melina Caruso with ABC owns TV

1376
01:01:18,049 --> 01:01:14,849
stations our Houston station Katie RK is

1377
01:01:20,779 --> 01:01:18,059
very interested in the civil space

1378
01:01:23,569 --> 01:01:20,789
program basically because Boeing's

1379
01:01:25,159 --> 01:01:23,579
headquartered in houston now one of the

1380
01:01:27,769 --> 01:01:25,169
things they're mostly concerned about is

1381
01:01:30,039 --> 01:01:27,779
jobs and as we all know one of the

1382
01:01:33,229 --> 01:01:30,049
president's main goals is job creation

1383
01:01:35,899 --> 01:01:33,239
so is there any possibility is there any

1384
01:01:38,479 --> 01:01:35,909
plan that some of the money awarded to

1385
01:01:41,389 --> 01:01:38,489
these companies not just bowing will go

1386
01:01:44,419 --> 01:01:41,399
towards job creation I think if you look

1387
01:01:47,959 --> 01:01:44,429
at you know when you look at dollars

1388
01:01:51,289 --> 01:01:47,969

planned for a program those dollars can

1389
01:01:54,379 --> 01:01:51,299
usually translate into jobs the more

1390
01:01:56,449 --> 01:01:54,389
money on a program as a general rule the

1391
01:01:58,279 --> 01:01:56,459
more jobs that will be involved the

1392
01:02:02,389 --> 01:01:58,289
exciting thing I think I would have to

1393
01:02:04,609 --> 01:02:02,399
ask our partners to say but the more

1394
01:02:09,469 --> 01:02:04,619
money they got the more jobs that means

1395
01:02:11,179 --> 01:02:09,479
did I get it right okay so when people

1396
01:02:13,309 --> 01:02:11,189
ask me why am I excited about the

1397
01:02:16,219 --> 01:02:13,319
president's budget well it's six billion

1398
01:02:18,709 --> 01:02:16,229
dollars over the next five years that we

1399
01:02:21,439 --> 01:02:18,719
otherwise we're not going to get so that

1400
01:02:26,599 --> 01:02:21,449
says that the net there should be a net

1401
01:02:29,329 --> 01:02:26,609
gain in jobs now let me not fool anybody

1402
01:02:31,189 --> 01:02:29,339
it is as I mentioned to somebody who

1403
01:02:33,529 --> 01:02:31,199
asked the question earlier we are now

1404
01:02:35,809 --> 01:02:33,539
formulating our plans we are making some

1405
01:02:40,309 --> 01:02:35,819
big changes and I don't think anybody

1406
01:02:42,469 --> 01:02:40,319
can expect that we will have details you

1407
01:02:43,069 --> 01:02:42,479
know specifics all laid out here

1408
01:02:44,299 --> 01:02:43,079
overnight

1409
01:02:46,130 --> 01:02:44,309
it's going to take us a little while

1410
01:02:48,079 --> 01:02:46,140
we're going to have to figure out how we

1411
01:02:50,630 --> 01:02:48,089
draw down the constellation program in

1412
01:02:53,569 --> 01:02:50,640
cooperation with with with our partners

1413
01:02:55,940 --> 01:02:53,579

in Congress so we've got a lot of work

1414
01:02:58,009 --> 01:02:55,950
to do but I'm confident we can get there

1415
01:03:00,259 --> 01:02:58,019
but but when I look at the amount of

1416
01:03:02,959 --> 01:03:00,269
money that President Obama has put in

1417
01:03:04,579 --> 01:03:02,969
the NASA budget specifically for human

1418
01:03:07,370 --> 01:03:04,589
spaceflight commercial space flight and

1419
01:03:11,569 --> 01:03:07,380
other things technology development that

1420
01:03:14,209 --> 01:03:11,579
we didn't even have before to me in with

1421
01:03:17,239 --> 01:03:14,219
my simple brain that translates to jobs

1422
01:03:22,370 --> 01:03:17,249
now I can't tell you you know whether

1423
01:03:25,400 --> 01:03:22,380
it's going to be 1200 for 5000 or 1200

1424
01:03:28,459 --> 01:03:25,410
for 600 I don't have that granularity

1425
01:03:30,620 --> 01:03:28,469
yet but but my little brain tells me

1426
01:03:32,779 --> 01:03:30,630
that with more money we have the

1427
01:03:35,180 --> 01:03:32,789
potential to increase the number of jobs

1428
01:03:37,160 --> 01:03:35,190
in our in our in our field of endeavor

1429
01:03:41,690 --> 01:03:37,170
let me let me thank you all for coming

1430
01:03:45,499 --> 01:03:41,700
and look be tough on us but be fair and

1431
01:03:47,299 --> 01:03:45,509
be honest and you know and and human

1432
01:03:50,029 --> 01:03:47,309
spaceflight is something that is

1433
01:03:53,209 --> 01:03:50,039
critical to President Obama and to me

1434
01:03:55,420 --> 01:03:53,219
and this nation it our leadership is

1435
01:04:00,199 --> 01:03:55,430
critical to our international partners

1436
01:04:02,390 --> 01:04:00,209
you know I i had a representative from

1437
01:04:05,689 --> 01:04:02,400
the Chinese embassy in Israel come up to

1438
01:04:08,120 --> 01:04:05,699

me last week when when the Chinese and

1439
01:04:10,009 --> 01:04:08,130
US are you know kind of not talking

1440
01:04:14,569 --> 01:04:10,019
about other things and say are you still

1441
01:04:16,789 --> 01:04:14,579
planning to come to China and I said are

1442
01:04:20,479 --> 01:04:16,799
you sure that the invitation still

1443
01:04:23,839 --> 01:04:20,489
stands he said why of course we're

1444
01:04:27,489 --> 01:04:23,849
talking about space and science so you

1445
01:04:31,849 --> 01:04:27,499
know while anything could could happen

1446
01:04:33,620 --> 01:04:31,859
there is something that draws people of

1447
01:04:35,630 --> 01:04:33,630
different cultures and different

1448
01:04:38,569 --> 01:04:35,640
characters and everything together and

1449
01:04:40,239 --> 01:04:38,579
space is one of those things and I have

1450
01:04:43,279 --> 01:04:40,249
found that in traveling around the world

1451
01:04:45,739 --> 01:04:43,289
everybody wants to work with us and we

1452
01:04:48,469 --> 01:04:45,749
intend to keep it that way so it's a

1453
01:04:50,569 --> 01:04:48,479
good start today you know keep your eye

1454
01:04:55,970 --> 01:04:50,579
on us and see how we do and hold our

1455
01:05:03,360 --> 01:05:01,650
thank you very much and as we say thank

1456
01:05:05,960 --> 01:05:03,370
you very much for your attendance and