
GREENWICH MEAN TIME
COUNTDOWN
ELAPSED TIME
CTN HAW CAL GYM TEX CNV BDA ATS CYI
KNO WOM

1
00:00:01,470 --> 00:00:07,010
Narrator: Before one small step for man, and one giant leap for mankind,

2
00:00:07,010 --> 00:00:12,740
a team of daring space pioneers embarked on a pair of experimental rocket projects to

3
00:00:12,740 --> 00:00:16,210
study the Earth and the heavens.

4
00:00:16,210 --> 00:00:18,820
With the eyes on the sky and the future of

5
00:00:18,820 --> 00:00:24,910
space exploration, flight controllers inside NASA's Mercury Control Center watched

6
00:00:24,910 --> 00:00:33,620
the American space program take flight. And so here, the story of American space exploration began.

7
00:00:33,620 --> 00:00:37,170
Scott Carpenter: I feel the lift-off, the clock is started.

8
00:00:37,170 --> 00:00:38,250
Flight Controller: Roger

9
00:00:43,400 --> 00:00:48,960
Narrator: In the late 1950's the earliest chapters of American space exploration were written along

10
00:00:48,960 --> 00:00:53,840
Florida's central Atlantic coast. Later known as the Mission Control Center,

11
00:00:53,840 --> 00:00:59,600
NASA's Mercury Control Center was the United States' first mission control for both unmanned and

12
00:00:59,600 --> 00:01:02,570
manned space programs.

13
00:01:02,570 --> 00:01:06,330

Narrator: The Mercury Control Center controlled the flights of three different vehicles from three

14
00:01:06,330 --> 00:01:10,440
different sea side launch pads at the Cape.

15
00:01:10,440 --> 00:01:16,440
Narrator: The MCC housed the programs' critical launch equipment. Inside the unassuming 30,000

16
00:01:16,440 --> 00:01:22,550
square foot building known to NASA as Building 1385, flight controllers monitored and controlled the

17
00:01:22,550 --> 00:01:27,820
Project Mercury launches and the first three flights of the Gemini Program.

18
00:01:27,820 --> 00:01:32,610
The Mercury/Gemini programs set the stage for the highly technical challenges and accomplishments

19
00:01:32,610 --> 00:01:36,050
later executed by NASA Kennedy Space Center.

20
00:01:36,050 --> 00:01:38,840
Charlie Mars/Power&Sequential Engineering/Project Mercury: The Mercury program was absolutely

21
00:01:38,840 --> 00:01:44,950
essential to all of our space programs that followed. And the main reason being,

22
00:01:44,950 --> 00:01:49,960
it was proof of the pudding that we could launch into space, we could put a man in there,

23
00:01:49,960 --> 00:01:55,020
we could guide throughout a mission, we could bring him back safely, and from there,

24
00:01:55,020 --> 00:02:01,500
Mercury led into Gemini, going into the Apollo Program where we went to the moon.

25
00:02:01,500 --> 00:02:07,670
Narrator: Florida's mild climate, vast undeveloped land surrounding the Cape and its proximity to water

26
00:02:07,670 --> 00:02:13,090
made it a good choice for launching rockets. And so the Mercury Control Center was designed

27
00:02:13,090 --> 00:02:17,960
by the Army Corps of Engineers and built in stages on Cape Canaveral Air Force Station

28
00:02:17,960 --> 00:02:21,940
between 1956 and 1963.

29
00:02:21,940 --> 00:02:25,510
Narrator: The modest looking building faced east, toward the ocean,

30
00:02:25,510 --> 00:02:32,010
though thick vegetation hid it from view. The MCC had an inset floor and a flat roof.

31
00:02:32,010 --> 00:02:37,510
The exterior was designed with a pair of light metal swing doors that opened onto covered entrances.

32
00:02:37,510 --> 00:02:42,310
Later, the famous NASA logo graced a west facing exterior wall.

33
00:02:42,310 --> 00:02:46,180
Floodlights and speakers were placed along the upper roof edge.

34
00:02:55,800 --> 00:03:02,060
Narrator: Project Mercury began in 1958, one week after NASA was enacted and three days before the

35
00:03:02,060 --> 00:03:05,760
one year anniversary of the Soviet’s launch of Sputnik.

36
00:03:05,760 --> 00:03:07,430
Jack King/NASA Public Information Officer/Apollo Launch Commentator: To steal from Dickens, it was

37
00:03:07,430 --> 00:03:11,350
the best of times and the worst of times for the space program. Because, of course,

38
00:03:11,350 --> 00:03:19,180

the Russians had put up the first satellite, we had put a satellite on January 31st of 1958,

39
00:03:19,180 --> 00:03:25,760
and the space race was on. Before that time, the missile race was on, and the Soviet Union was rattling

40
00:03:25,760 --> 00:03:30,650
their rockets at the United States, and it was a very tough time for our nation.

41
00:03:30,650 --> 00:03:36,150
But now we were in the space race at the same and it appeared, once again, we were behind.

42
00:03:36,150 --> 00:03:38,200
Don Phillips/Aerospace Technologist/Project Mercury: I'd have to say that nothing was more exciting

43
00:03:38,200 --> 00:03:44,520
than working on the Mercury Program, because we were doing things for the first time. It was new.

44
00:03:44,520 --> 00:03:49,500
Narrator: The project’s goals were straightforward: Orbit a manned spacecraft around Earth,

45
00:03:49,500 --> 00:03:57,240
investigate the pilot’s ability to function in space and to recover both the pilot and the spacecraft safely.

46
00:03:57,240 --> 00:04:01,440
Narrator: A Flight Control Room was added to the existing building beginning in 1959

47
00:04:01,440 --> 00:04:04,050
for the upcoming Mercury flights.

48
00:04:04,050 --> 00:04:09,490
The upgrade included a viewing area that was built by Bell Telephone, Inc. A second addition,

49
00:04:09,490 --> 00:04:14,160
along the west elevation, provided additional space for support equipment.

50
00:04:14,160 --> 00:04:18,480
The Flight Control Room occupied just 10 percent of the entire building.

51
00:04:18,480 --> 00:04:23,460
Christopher Kraft would be the very first flight director and he was key in the development of the flight

52
00:04:23,460 --> 00:04:29,520
control operations and the first flight control team. Chris gave final launch approval.

53
00:04:29,520 --> 00:04:33,810
His console was equipped with a black and white monitor and he had access to every

54
00:04:33,810 --> 00:04:37,380
communication circuit, called “loops”.

55
00:04:37,380 --> 00:04:40,740
Andy Anderson/Ground Communication Coordinator/Project Mercury: In the final analysis, that had to

56
00:04:40,740 --> 00:04:47,090
be the gentleman right here, Chris Kraft, as flight director running the entire show, and that's what

57
00:04:47,090 --> 00:04:54,230
made it work. Chris was an amazing person. He's the only person, I'm a communicator, and he's the only

58
00:04:54,230 --> 00:05:02,710
person I ever saw that could listen and understand eight intercom nets simultaneously,

59
00:05:02,710 --> 00:05:07,940
we always teased him about that, but he's the only person I know of who could do that.

60
00:05:07,940 --> 00:05:11,650
Dr. Christopher Kraft/Flight Director/Project Mercury: So the combination of the two, between the guys

61
00:05:11,650 --> 00:05:20,560
on the ground and crew in space really was a phenomenal thing in its time.

62
00:05:20,560 --> 00:05:28,320
I think we were able to get a lot done, more done than had we not had a control center.

63
00:05:28,320 --> 00:05:30,060

Jack King/NASA Public Information Officer/Apollo Launch Commentator: We had the Mercury Control

64
00:05:30,060 --> 00:05:36,010
Center right there, right adjacent to the press site, actually. And Chris Kraft, who was the flight director,

65
00:05:36,010 --> 00:05:41,610
Walt Williams, who was the operations director, and you had a number of other key people who grew

66
00:05:41,610 --> 00:05:47,130
up in that program and carried us all the way to the moon, as far as flight control was concerned.

67
00:05:47,130 --> 00:05:52,940
They had a fantastic worldwide map in there because they wanted to cover the orbital flights that would

68
00:05:52,940 --> 00:05:56,850
follow on the Mercury Atlas.

69
00:05:56,850 --> 00:06:00,830
Narrator: The MCC was part of the Spaceflight Tracking and Data Network.

70
00:06:00,830 --> 00:06:05,240
The tracking network provided communication between the capsule and mission control with an

71
00:06:05,240 --> 00:06:11,290
impressive system of ships on three oceans and eighteen ground stations on three continents.

72
00:06:11,290 --> 00:06:16,490
As part of this world-wide network of tracking stations, a two-dimensional world map and two large

73
00:06:16,490 --> 00:06:21,050
projector boards dominated the front wall of the flight control room.

74
00:06:21,050 --> 00:06:25,490
The map used a series of circles to pinpoint tracking stations.

75
00:06:25,490 --> 00:06:31,240
To keep continuous track of the Mercury spacecraft, a mini spacecraft model suspended by wires traced

76
00:06:31,240 --> 00:06:37,970
its orbit. The projector boards were used to display flight measurements plotted by sliding beads.

77
00:06:37,970 --> 00:06:43,930
Trend charts displayed the astronaut's condition. Goddard Space Flight Center in Greenbelt, Maryland

78
00:06:43,930 --> 00:06:49,190
was the link between the remote stations and the MCC.

79
00:06:49,190 --> 00:06:53,790
Narrator: As Project Mercury took shape, so too did the first astronaut corps.

80
00:06:53,790 --> 00:06:55,530
Leroy Gordon Cooper,

81
00:06:55,530 --> 00:06:56,790
Virgil "Gus" Grissom,

82
00:06:56,790 --> 00:06:58,030
Alan Shepard,

83
00:06:58,030 --> 00:06:59,960
Walter "Wally" Schirra,

84
00:06:59,960 --> 00:07:01,330
Donald "Deke" Slayton,

85
00:07:01,330 --> 00:07:02,590
Scott Carpenter

86
00:07:02,590 --> 00:07:03,620
and John Glenn

87
00:07:03,620 --> 00:07:07,090
became known as the Mercury 7.

88
00:07:07,090 --> 00:07:10,720

They were in training as teams prepared for the upcoming flights.

89
00:07:10,720 --> 00:07:17,020
Inaugural operations inside the MCC supported the first Mercury-Redstone launch attempt.

90
00:07:17,020 --> 00:07:23,710
The MR-1 launch on November 21, 1960 from launch pad 6 was classified unsuccessful,

91
00:07:23,710 --> 00:07:28,310
but proved many of the systems designed for the vehicle and capsule worked.

92
00:07:28,310 --> 00:07:33,940
MR1-A successfully launched a few weeks later on December 19, 1960.

93
00:07:33,940 --> 00:07:37,070
The same spacecraft was used.

94
00:07:37,070 --> 00:07:42,100
Narrator: About six months later, astronaut Alan Shepard made history with his suborbital ballistic flight

95
00:07:42,100 --> 00:07:45,970
on May 5, 1961.

96
00:07:45,970 --> 00:07:48,380
Ike Rigell/Electrical Network Systems Chief/Project Mercury: So this was a very significant flight,

97
00:07:48,380 --> 00:07:54,750
because the county needed this. The whole free world needed this flight at this time.

98
00:08:06,840 --> 00:08:08,270
Flight Controller: Lift-off.

99
00:08:08,270 --> 00:08:12,620
Alan Shepard: Ahh roger lift-off and the clock is started.

100
00:08:12,620 --> 00:08:18,910
Narrator: A Mercury Redstone rocket, MR-3, known as Freedom 7 lifted off from Launch Complex 5/6

101
00:08:18,910 --> 00:08:21,690
at 9:34 a.m. eastern.

102
00:08:21,690 --> 00:08:27,700
It was the first manned flight controlled by teams inside the MCC and it last 15 minutes.

103
00:08:27,700 --> 00:08:29,520
Andy Anderson/Ground Communication Coordinator/Project Mercury: It was a beautiful,

104
00:08:29,520 --> 00:08:31,290
beautiful May morning.

105
00:08:31,290 --> 00:08:40,080
I was in charge also of the telephone, the intercom service for the control center and I was also in charge

106
00:08:40,080 --> 00:08:47,960
of the air-to-ground, so I had a fairly busy time during all of the launches.

107
00:08:47,960 --> 00:08:55,080
But obviously there was an air of excitement in the control center on that first manned flight you

108
00:08:55,080 --> 00:08:58,920
couldn’t duplicate anywhere in the world.

109
00:08:58,920 --> 00:09:02,170
Robert Cabana/Kennedy Space Center Director/Space Shuttle Astronaut: That very first flight on that

110
00:09:02,170 --> 00:09:06,610
Mercury Redstone going up into space and coming back down, even though he didn’t orbit the Earth,

111
00:09:06,610 --> 00:09:09,840
that set the stage for everything else that we’ve done.

112
00:09:09,840 --> 00:09:14,160
Narrator: As the command center, the MCC had eight primary functions.

113
00:09:14,160 --> 00:09:19,890

To direct all aspects of the capsule’s flight, monitor the health of the astronaut and the system status of

114
00:09:19,890 --> 00:09:25,450
the capsule, make decisions to abort a mission, determine the proper procedures following

115
00:09:25,450 --> 00:09:31,140
an abort procedure, command the reentry of the capsule, keep the astronauts and all the tracking

116
00:09:31,140 --> 00:09:35,930
stations informed of the mission’s progress, coordinate and maintain the flow of communication

117
00:09:35,930 --> 00:09:40,890
between all tracking stations and inform the recovery forces when the capsule would

118
00:09:40,890 --> 00:09:43,370
reenter the atmosphere.

119
00:09:43,370 --> 00:09:47,150
It would take fourteen flight controllers to meet these mission objectives.

120
00:09:47,150 --> 00:09:54,110
The first critical row of flight control seats was coined “the trench.” One of those important positions

121
00:09:54,110 --> 00:09:59,890
was the capsule communicator, or, CAPCOM position, one held only by an astronaut.

122
00:09:59,890 --> 00:10:02,070
Robert Cabana/Kennedy Space Center Director/Space Shuttle Astronaut: I think the Capcom today is

123
00:10:02,070 --> 00:10:07,180
very much the same as it was back during the early Mercury days.

124
00:10:07,180 --> 00:10:09,530
It's that point-of-contact with the crew.

125
00:10:09,530 --> 00:10:15,480
It provides the crew perspective to the control team. Yeah, very similar.

126
00:10:15,480 --> 00:10:19,980
Narrator: Public interest in the space program and the astronauts grew as Project Mercury

127
00:10:19,980 --> 00:10:22,190
realized much success.

128
00:10:22,190 --> 00:10:23,630
Ed Harrison/NASA Photography and Audio Visual/KSC Public Affairs Chief: Because the beaches were

129
00:10:23,630 --> 00:10:32,640
loaded. The program was pretty small; it was only about 350, 400 people, and it was real excitement.

130
00:10:32,640 --> 00:10:40,350
The cities around here were growing. The center was really on its way.

131
00:10:40,350 --> 00:10:44,390
Narrator: News of the Mercury missions was in the papers and on TV.

132
00:10:44,390 --> 00:10:47,270
Jay Barbree/NBC News Space Reporter: I've had the pleasure of covering every launch of American

133
00:10:47,270 --> 00:10:51,310
astronauts from Cape Canaveral, Florida.

134
00:10:51,310 --> 00:10:54,970
Narrator: Shorty Powers was the first Public Information Officer for NASA.

135
00:10:54,970 --> 00:10:57,710
He was the voice of mission control.

136
00:10:57,710 --> 00:11:02,290
Jay Barbree/NBC News Space Reporter: We had a red light that would come on on our desks,

137
00:11:02,290 --> 00:11:08,810
and that red light was a signal that Mercury Control would have a report in 30 seconds.

138
00:11:08,810 --> 00:11:12,760

Narrator: Some employees at the Cape were just as excited about the astronauts and the missions

139
00:11:12,760 --> 00:11:14,430
as the public.

140
00:11:14,430 --> 00:11:18,250
Nancy Gunter/Secretary/Project Mercury: I met all the original seven astronauts because they would

141
00:11:18,250 --> 00:11:25,860
come into the ready room. They were excited like everyone else, and everything was new to them.

142
00:11:25,860 --> 00:11:31,470
And they would all come through because each one was interested, of course, wouldn't just one come

143
00:11:31,470 --> 00:11:34,390
through, they would all come through.

144
00:11:34,390 --> 00:11:40,390
Narrator: The Mercury Atlas and Mercury Redstone vehicles flew 26 missions as part of Project Mercury.

145
00:11:40,390 --> 00:11:49,220
Six of those were manned flights. The first orbital flight for the Mercury Program was MA-6.

146
00:11:49,220 --> 00:11:51,580
John Glenn: Roger backup clock is started.

147
00:11:51,580 --> 00:11:57,270
Astronaut John Glenn performed it on February 20, 1962.

148
00:11:57,270 --> 00:12:01,400
Narrator: Astronaut Scott Carpenter followed Glenn’s successful mission with his own orbit of the Earth

149
00:12:01,400 --> 00:12:04,010
later that year.

150
00:12:04,010 --> 00:12:07,320
Scott Carpenter/Mercury 7 Astronaut/Project Mercury: Climbing into that spacecraft and sitting on the

151
00:12:07,320 --> 00:12:14,900
top of the rocket was something we had simulated time and time and time again.

152
00:12:14,900 --> 00:12:22,680
So, in a certain sense, it was just another day at the office, except this time,

153
00:12:22,680 --> 00:12:27,670
you realized that it was for real.

154
00:12:27,670 --> 00:12:34,170
Narrator: MA-9 was the last flight of Project Mercury piloted by Gordon Cooper on May 15, 1963

155
00:12:34,170 --> 00:12:37,050
in his spacecraft named “Faith 7.”

156
00:12:37,050 --> 00:12:40,100
He was the last American to orbit the Earth solo,

157
00:12:40,100 --> 00:12:45,730
the mission lasted one day, 10 hours, 19 minutes and 49 seconds.

158
00:12:45,730 --> 00:12:52,950
Gordon Cooper/Faith 7 Astronaut/Project Mercury: I named my spacecraft Faith 7 for three reasons:

159
00:12:52,950 --> 00:13:05,070
One because of belief in God and country, two because of the loyalty to the organization, to the two

160
00:13:05,070 --> 00:13:16,200
organizations actually to which I belong, and three because of the confidence in the entire space team.

161
00:13:16,200 --> 00:13:20,810
Narrator: The Mercury Program was ending and America’s second human spaceflight program was soon

162
00:13:20,810 --> 00:13:25,590
to begin, in support of one very clear mission.

163
00:13:25,590 --> 00:13:30,710

President John F. Kennedy: We choose to go to the moon in this decade and do the other things,

164
00:13:30,710 --> 00:13:34,750
not because they are easy, but because they are hard.

165
00:13:34,750 --> 00:13:48,290
Music

166
00:13:48,290 --> 00:13:53,030
Narrator: Bridging the gap between Mercury and Apollo was the Gemini Program.

167
00:13:53,030 --> 00:13:58,140
Following the Mercury Program, Gemini subjected astronauts to long duration flights in support of the

168
00:13:58,140 --> 00:14:01,060
upcoming Apollo moon missions.

169
00:14:01,060 --> 00:14:06,680
Gemini accomplished 10 manned missions and 2 unmanned, each on a Titan II launch vehicle from

170
00:14:06,680 --> 00:14:12,560
Launch Complex 19. Two astronauts flew in the capsule which is how it got its moniker,

171
00:14:12,560 --> 00:14:15,560
“Gemini” or “twin”.

172
00:14:15,560 --> 00:14:23,420
Renovations to the MCC were completed in 1962 and in 1963 in support of the Gemini missions.

173
00:14:23,420 --> 00:14:28,850
An addition wrapped around the east, north, and most of the west and south sides of the MCC.

174
00:14:28,850 --> 00:14:32,270
New areas included space for flight control briefing,

175
00:14:32,270 --> 00:14:36,730
data analysis and room for a new Gemini spacecraft trainer.

176
00:14:36,730 --> 00:14:42,650
The old trend charts on either side of the world map were replaced by rear projection screens.

177
00:14:42,650 --> 00:14:47,130
The world map displayed new tracking stations and one clock above the map changed

178
00:14:47,130 --> 00:14:49,610
to estimated lift-off time.

179
00:14:49,610 --> 00:14:54,870
A desk for a Public Affairs Officer was also added along with a pair of consoles on the left side of the

180
00:14:54,870 --> 00:15:00,790
room facing inward for the support control coordinator and the display coordinator.

181
00:15:00,790 --> 00:15:06,690
After the conclusion of Gus Grissom and John Young’s flight of Gemini 3 in March 1965,

182
00:15:06,690 --> 00:15:13,940
NASA transferred mission control to Houston, Texas, where it still resides today.

183
00:15:13,940 --> 00:15:19,290
After mission control functions were relocated to Houston, TX, the Mercury Control Center provided

184
00:15:19,290 --> 00:15:24,350
backup for the initial launch and trajectory for the remaining Gemini missions.

185
00:15:33,360 --> 00:15:40,410
In 1967, the MCC became a tour stop for guests visiting NASA’s Kennedy Space Center Visitor Complex.

186
00:15:40,410 --> 00:15:45,910
A bus tour provided the public an opportunity to look through the glass panels of the viewing room and

187
00:15:45,910 --> 00:15:50,100
see were the first chapters of American space history were written.

188
00:15:50,100 --> 00:15:56,170

It was a popular attraction from 1967-1995.

189
00:15:56,170 --> 00:15:59,980
In the late 90’s, the building began to show signs of aging.

190
00:15:59,980 --> 00:16:04,080
In an effort to preserve what remained inside the deteriorating structure,

191
00:16:04,080 --> 00:16:07,190
NASA removed the artifacts inside.

192
00:16:07,190 --> 00:16:12,230
Later, a plan was developed to create an authentic MCC flight control room exhibit

193
00:16:12,230 --> 00:16:14,850
at the KSC Visitor Complex.

194
00:16:14,850 --> 00:16:18,360
Luis Berrios/NASA Artifacts and Display Manager: The opportunity for relocating this amazing room full

195
00:16:18,360 --> 00:16:23,240
of history was to offer it to many, many more people.

196
00:16:23,240 --> 00:16:30,370
Accessibility to the actual facility was becoming more and more challenging, and it allowed for the

197
00:16:30,370 --> 00:16:36,220
consoles throughout the room to be displayed and preserved.

198
00:16:36,220 --> 00:16:42,170
Had they been left in the building all those years, they’d be in terrible condition right now.

199
00:16:42,170 --> 00:16:49,250
Narrator: The exhibit is inside an 8,500 square foot building dedicated to early space exploration.

200
00:16:49,250 --> 00:16:52,070
Luis Berrios/NASA Artifacts and Display Manager: One piece at a time we carefully removed it and

201
00:16:52,070 --> 00:16:59,390
brought it over. So what you see here is duplication of the actual MCC, Mission Control Center,

202
00:16:59,390 --> 00:17:06,640
with the screens, the consoles, the flooring, the finishes and, of course, the tracking board.

203
00:17:06,640 --> 00:17:12,690
The consoles themselves are completely authentic; the tracking map is completely authentic.

204
00:17:12,690 --> 00:17:17,130
Narrator: Guests get memorable and authentic experience.

205
00:17:17,130 --> 00:17:20,200
Luis Berrios/NASA Artifacts and Display Manager: I think it's an amazing opportunity for our guests to

206
00:17:20,200 --> 00:17:29,130
look through the glass and step back in time and honor the heroic first years of our space program.

207
00:17:29,130 --> 00:17:33,230
Narrator: The MCC was designated by the National Park Service as a contributing structure

208
00:17:33,230 --> 00:17:37,380
to a National Historic Landmark district in 1984.

209
00:17:37,380 --> 00:17:40,410
The district consists of seven other contributing properties.

210
00:17:40,410 --> 00:17:42,370
Launch Complex 5/6,

211
00:17:42,370 --> 00:17:43,280
13,

212
00:17:43,280 --> 00:17:44,100
14,

213
00:17:44,100 --> 00:17:44,800

19,

214
00:17:44,800 --> 00:17:45,920
26,

215
00:17:45,920 --> 00:17:48,240
34.

216
00:17:48,240 --> 00:17:52,540
NASA determined the Mercury Control Center was no longer needed for NASA missions

217
00:17:52,540 --> 00:17:55,520
and had deteriorated beyond repair.

218
00:17:55,520 --> 00:18:00,340
Final artifact preservation efforts for demolition preparation began in 2009.

219
00:18:00,340 --> 00:18:04,360
The Mercury Control Center controlled the flights of three launch vehicles from three launch pads

220
00:18:04,360 --> 00:18:06,730
during its years of service.

221
00:18:06,730 --> 00:18:11,430
In March 2010 heavy equipment operated by NASA contractors leveled

222
00:18:11,430 --> 00:18:15,950
the concrete block and metal building.

223
00:18:15,950 --> 00:18:18,230
Robert Cabana/Kennedy Space Center Director/Space Shuttle Astronaut: It’s a transition, that we have

224
00:18:18,230 --> 00:18:20,870
to be energy efficient, you have to prepare for the future.

225
00:18:20,870 --> 00:18:25,870
You've got to prepare for going beyond low Earth orbit and doing bigger and better things.