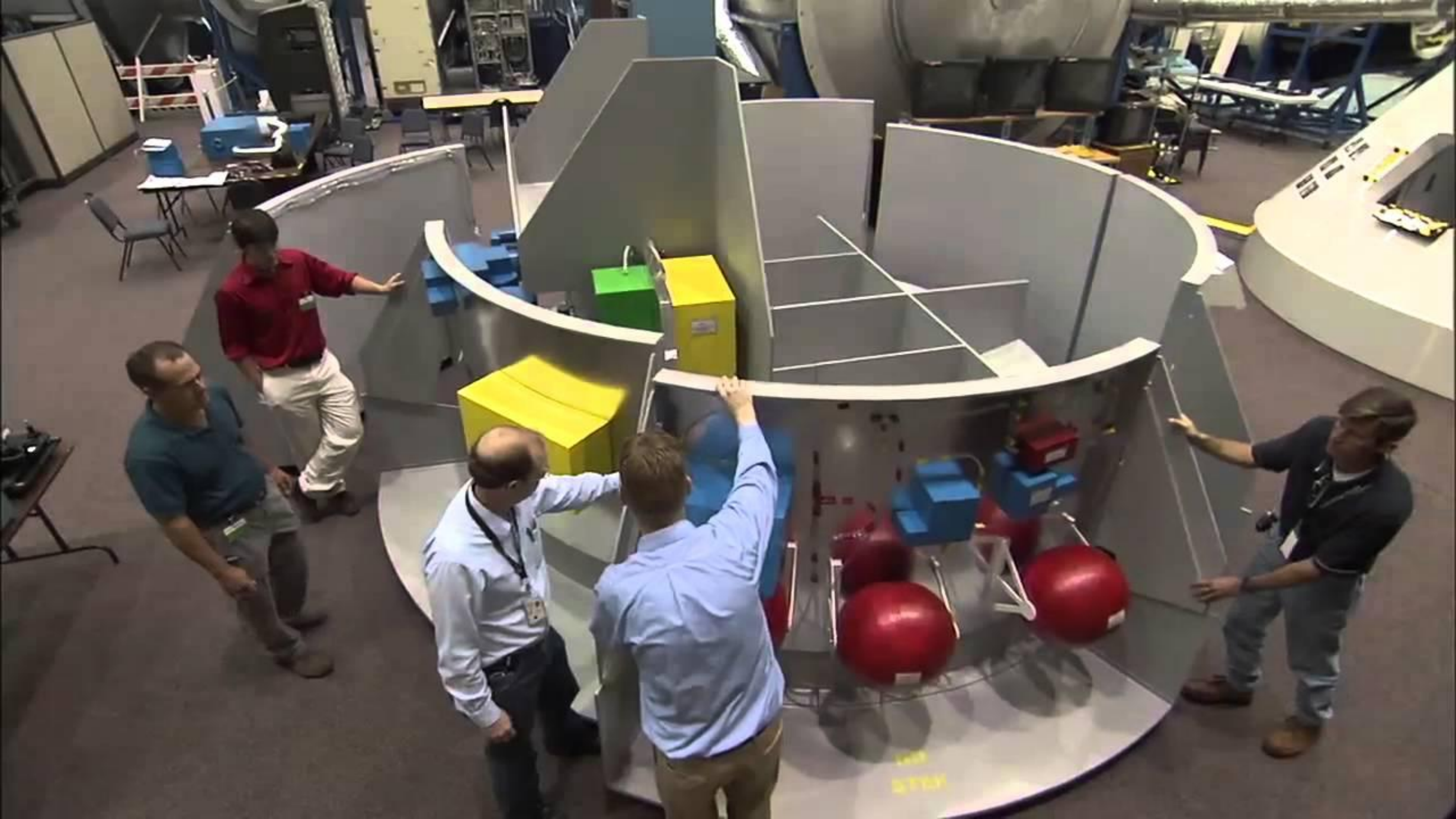

1
00:00:05,430 --> 00:00:03,750
hi my name is alan ladwig head of public

2
00:00:07,829 --> 00:00:05,440
outreach at nasa

3
00:00:10,310 --> 00:00:07,839
you might be wondering why are nasa and

4
00:00:12,629 --> 00:00:10,320
lego here together well let me tell you

5
00:00:15,669 --> 00:00:12,639
about our really cool partnership you

6
00:00:18,950 --> 00:00:15,679
see both nasa and lego value excellence

7
00:00:20,630 --> 00:00:18,960
creativity learning and teamwork by

8
00:00:23,109 --> 00:00:20,640
combining the wonders of space

9
00:00:25,670 --> 00:00:23,119
exploration with those fabulous lego

10
00:00:28,390 --> 00:00:25,680
bricks we intend to do projects together

11
00:00:31,029 --> 00:00:28,400
to inspire kids of all ages and yes even

12
00:00:32,709 --> 00:00:31,039
you older kids and bring those values

13
00:00:35,350 --> 00:00:32,719

through innovative activities and

14
00:00:37,190 --> 00:00:35,360
projects but before you jump into those

15
00:00:39,350 --> 00:00:37,200
lego bricks and start launching your

16
00:00:41,670 --> 00:00:39,360
ideas let me tell you about the lego

17
00:00:44,389 --> 00:00:41,680
bricks that are now up in orbit yep

18
00:00:46,630 --> 00:00:44,399
that's right in may the space shuttle

19
00:00:48,709 --> 00:00:46,640
endeavor transported lego kits to the

20
00:00:50,950 --> 00:00:48,719
international space station to be

21
00:00:52,709 --> 00:00:50,960
assembled by the astronauts

22
00:00:55,029 --> 00:00:52,719
children and student groups around the

23
00:00:57,350 --> 00:00:55,039
world will be able to see how they did

24
00:00:59,349 --> 00:00:57,360
it and how different it is to assemble

25
00:01:01,270 --> 00:00:59,359
the same ones here on earth

26
00:01:03,910 --> 00:01:01,280
maybe assembling these in microgravity

27
00:01:08,390 --> 00:01:03,920
is a little more challenging but check

28
00:01:12,789 --> 00:01:10,149
for more information

29
00:01:15,030 --> 00:01:12,799
but wait there's more are you here to

30
00:01:17,350 --> 00:01:15,040
see the last space shuttle launch well

31
00:01:18,870 --> 00:01:17,360
that's great but what's next for the

32
00:01:21,830 --> 00:01:18,880
space program

33
00:01:24,070 --> 00:01:21,840
nasa is not ending human space flight we

34
00:01:26,469 --> 00:01:24,080
are recommitting ourselves to it to

35
00:01:28,710 --> 00:01:26,479
ensure america's leadership and human

36
00:01:29,990 --> 00:01:28,720
space flight for years to come

37
00:01:32,069 --> 00:01:30,000
in addition to sporting the

38
00:01:34,550 --> 00:01:32,079

international space station we'll

39
00:01:37,109 --> 00:01:34,560
continue to conduct world-class science

40
00:01:39,510 --> 00:01:37,119
missions to observe and understand our

41
00:01:42,550 --> 00:01:39,520
home planet we'll send robotics

42
00:01:44,870 --> 00:01:42,560
spacecraft to other planets such as mars

43
00:01:47,270 --> 00:01:44,880
travel through the solar system and peer

44
00:01:49,510 --> 00:01:47,280
even deeper into the universe we'll

45
00:01:52,710 --> 00:01:49,520
advance aeronautics research so we can

46
00:01:53,830 --> 00:01:52,720
fly safer quieter more fuel efficient

47
00:01:55,670 --> 00:01:53,840
airplanes

48
00:01:58,469 --> 00:01:55,680
we'll pursue two critical building

49
00:02:01,030 --> 00:01:58,479
blocks for future human exploration the

50
00:02:03,670 --> 00:02:01,040
orion crew vehicle and the heavy lift

51
00:02:06,310 --> 00:02:03,680
rocket to let us send astronauts on long

52
00:02:08,869 --> 00:02:06,320
journeys into deep space hey maybe

53
00:02:10,710 --> 00:02:08,879
you'll build one of those for us today

54
00:02:13,190 --> 00:02:10,720
we will also promote the commercial

55
00:02:15,830 --> 00:02:13,200
space industry to provide transportation

56
00:02:17,670 --> 00:02:15,840
and services not only the space station

57
00:02:20,070 --> 00:02:17,680
but to low earth orbit

58
00:02:22,630 --> 00:02:20,080
in the meantime we can't wait to see

59
00:02:25,830 --> 00:02:22,640
what your creativity and imagination

60
00:02:28,550 --> 00:02:25,840
will design for us today so get ready

61
00:02:31,589 --> 00:02:28,560
learn while you have fun and inspire us

62
00:02:49,750 --> 00:02:31,599
on how you envision the future of space

63
00:02:53,830 --> 00:02:52,309

change is inevitable as much as people

64
00:02:56,869 --> 00:02:53,840
don't like change it's the only thing

65
00:03:00,309 --> 00:02:56,879
that's constant in our lives

66
00:03:02,790 --> 00:03:00,319
we have to transition from shuttle uh to

67
00:03:11,110 --> 00:03:02,800
a new future which we're going to define

68
00:03:14,869 --> 00:03:13,190
for the first time in my career

69
00:03:17,350 --> 00:03:14,879
working on vehicles

70
00:03:18,710 --> 00:03:17,360
that will leave low earth orbit again

71
00:03:21,270 --> 00:03:18,720
we're looking at a vehicle that can

72
00:03:23,670 --> 00:03:21,280
eventually carry a 130 metric tons or so

73
00:03:25,509 --> 00:03:23,680
to low earth orbit that's a pretty big

74
00:03:27,110 --> 00:03:25,519
rocket it's on the order of what we had

75
00:03:28,789 --> 00:03:27,120
back in the saturn program the heavy

76
00:03:30,789 --> 00:03:28,799
lift vehicle allows us to put large

77
00:03:33,110 --> 00:03:30,799
masses in space that are required to go

78
00:03:35,030 --> 00:03:33,120
to these destinations outside of low

79
00:03:37,270 --> 00:03:35,040
earth orbit and then we'll have this

80
00:03:38,949 --> 00:03:37,280
capsule that'll go along with this for

81
00:03:40,789 --> 00:03:38,959
the for the trip to where we're going

82
00:03:43,030 --> 00:03:40,799
and it's based off of the orion capsule

83
00:03:44,869 --> 00:03:43,040
that we were working on before

84
00:03:46,789 --> 00:03:44,879
it seats about four crew members and

85
00:03:49,270 --> 00:03:46,799
that's the basic capsule that will go

86
00:03:50,949 --> 00:03:49,280
out into space and in this capital will

87
00:03:53,670 --> 00:03:50,959
serve as a re-entry vehicle back into

88
00:03:56,630 --> 00:03:53,680

the earth when we come home

89
00:03:59,830 --> 00:03:56,640
anything that we do in terms of space

90
00:04:03,350 --> 00:03:59,840
exploration is worth the expense

91
00:04:06,550 --> 00:04:03,360
because it gives us an opportunity to

92
00:04:09,190 --> 00:04:06,560
explore and to investigate and to

93
00:04:10,710 --> 00:04:09,200
experiment on things that we just have

94
00:04:12,949 --> 00:04:10,720
no way to fathom

95
00:04:14,630 --> 00:04:12,959
here on earth when you put things in the

96
00:04:16,870 --> 00:04:14,640
microgravity environment you take them

97
00:04:19,030 --> 00:04:16,880
away from gravity

98
00:04:21,030 --> 00:04:19,040
you learn a lot of different things what

99
00:04:22,870 --> 00:04:21,040
we're doing is we're investing in a

100
00:04:24,629 --> 00:04:22,880
broad portfolio

101
00:04:26,710 --> 00:04:24,639
of technologies some of those

102
00:04:28,790 --> 00:04:26,720
technologies are risky some of them will

103
00:04:30,310 --> 00:04:28,800
pan out others will not

104
00:04:32,390 --> 00:04:30,320
but in the end we'll have the

105
00:04:34,790 --> 00:04:32,400
technological capabilities to go to

106
00:04:36,469 --> 00:04:34,800
places and to explore

107
00:04:38,230 --> 00:04:36,479
both with robots and humans that we

108
00:04:39,990 --> 00:04:38,240
can't do today what we've done is we

109
00:04:41,830 --> 00:04:40,000
built kind of just a basic path or a

110
00:04:43,510 --> 00:04:41,840
basic architecture of all the

111
00:04:45,189 --> 00:04:43,520
destinations we could go and now we're

112
00:04:47,189 --> 00:04:45,199
starting to define all the capabilities

113
00:04:49,350 --> 00:04:47,199

to go to those destinations this is

114
00:04:51,030 --> 00:04:49,360
called a flexible path because

115
00:04:53,110 --> 00:04:51,040
with these capabilities we'll be able to

116
00:04:56,070 --> 00:04:53,120
go to multiple destinations such as back

117
00:04:57,990 --> 00:04:56,080
to the moon to near-earth objects to to

118
00:04:59,350 --> 00:04:58,000
mars and its moons and to lagrange

119
00:05:00,950 --> 00:04:59,360
points

120
00:05:03,990 --> 00:05:00,960
these are all places that we can

121
00:05:06,629 --> 00:05:04,000
feasibly go to with people in the in the

122
00:05:09,670 --> 00:05:06,639
foreseeable future we are an exploring

123
00:05:12,230 --> 00:05:09,680
species nasa is leading that exploration

124
00:05:14,550 --> 00:05:12,240
effort for humankind as we go forward

125
00:05:17,270 --> 00:05:14,560
can we do this absolutely is it going to

126
00:05:19,909 --> 00:05:17,280
be a challenge you bet it is but i know

127
00:05:23,029 --> 00:05:19,919
that this team is capable of making it

128
00:05:25,430 --> 00:05:23,039
happen not only happen but happen in a

129
00:05:28,390 --> 00:05:25,440
superb way that sets the standard for

130
00:05:31,270 --> 00:05:28,400
everyone else i look forward to the days

131
00:05:33,909 --> 00:05:31,280
ahead when when we actually do

132
00:05:34,710 --> 00:05:33,919
send people out to these places to touch

133
00:05:35,510 --> 00:05:34,720
them

134
00:05:40,150 --> 00:05:35,520
and

135
00:05:42,629 --> 00:05:40,160
we don't even have a clue of future that

136
00:05:45,749 --> 00:05:42,639
allows us to explore beyond our home

137
00:05:47,909 --> 00:05:45,759
planet to seek our destiny to to learn

138
00:05:49,830 --> 00:05:47,919

what we couldn't possibly learn if we