1
00:00:10,030 --> 00:00:07,360
one of our greatest challenges we face

2
00:00:12,129 --> 00:00:10,040
today is climate change and in order to

3
00:00:13,720 --> 00:00:12,139
mitigate it we need to understand our

4
00:00:15,689 --> 00:00:13,730
planet better

5
00:00:18,700 --> 00:00:15,699
NASA is committed to advancing

6
00:00:20,499 --> 00:00:18,710
technologies and innovation that will

7
00:00:24,640 --> 00:00:20,509
bring solutions to address Earth's

8
00:00:26,620 --> 00:00:24,650
critical challenges the now famous image

9
00:00:28,569 --> 00:00:26,630
of the blue marble provides us all with

10
00:00:31,749 --> 00:00:28,579
the humbling epiphany that this tiny

11
00:00:34,150 --> 00:00:31,759
planet we share is our only home today

12
00:00:35,530 --> 00:00:34,160
at NASA we are continuing to provide the

13
00:00:38,470 --> 00:00:35,540

world with new ways to see and

14
00:00:40,869 --> 00:00:38,480
understand planet Earth at the NASA Ames

15
00:00:42,880 --> 00:00:40,879
Research Center in California Silicon

16
00:00:45,310 --> 00:00:42,890
Valley an exciting new project is

17
00:00:48,610 --> 00:00:45,320
underway that I think of is the first

18
00:00:50,830 --> 00:00:48,620
lunar outpost on earth just as a lunar

19
00:00:52,840 --> 00:00:50,840
outpost designed is optimized for unique

20
00:00:54,639 --> 00:00:52,850
environment of the moon this project

21
00:00:58,389 --> 00:00:54,649
will be tailored with unique location on

22
00:01:08,110 --> 00:00:58,399
earth we call it NASA's sustainability

23
00:01:08,120 --> 00:01:20,880
me

24
00:01:24,700 --> 00:01:23,140
leadership is often that described as

25
00:01:26,980 --> 00:01:24,710
being taken to some place you would

26
00:01:28,810 --> 00:01:26,990
never have gotten on your own the kind

27
00:01:31,480 --> 00:01:28,820
of leadership that NASA is exhibited in

28
00:01:34,540 --> 00:01:31,490
space is exactly the kind of leadership

29
00:01:36,250 --> 00:01:34,550
we need exhibited on the air the world

30
00:01:37,810 --> 00:01:36,260
needs a whole new way of thinking about

31
00:01:39,880 --> 00:01:37,820
the way we design and make things

32
00:01:41,920 --> 00:01:39,890
because the current designs are

33
00:01:43,600 --> 00:01:41,930
destructive to the earth and its systems

34
00:01:46,540 --> 00:01:43,610
and we need new designs that are

35
00:01:48,670 --> 00:01:46,550
positive to the Earthman systems to

36
00:01:50,800 --> 00:01:48,680
achieve this everything we use make and

37
00:01:53,260 --> 00:01:50,810
create needs to be optimized for the

38
00:01:56,320 --> 00:01:53,270

place that exists this is what we call

39
00:01:58,270 --> 00:01:56,330
being native to place and if we look at

40
00:02:00,640 --> 00:01:58,280
the sustainability base it's a design

41
00:02:03,940 --> 00:02:00,650
that would fit exactly in its local

42
00:02:07,210 --> 00:02:03,950
climate with local culture for comfort

43
00:02:08,770 --> 00:02:07,220
for civility and for enhancement of

44
00:02:10,480 --> 00:02:08,780
society

45
00:02:13,180 --> 00:02:10,490
farm

46
00:02:16,690 --> 00:02:13,190
this closed loop thinking that nASA has

47
00:02:19,600 --> 00:02:16,700
to do it just as by nature in trying to

48
00:02:21,430 --> 00:02:19,610
sustain life outside of litter ecosystem

49
00:02:24,430 --> 00:02:21,440
was something that we actually try to

50
00:02:26,260 --> 00:02:24,440
employ back in our designs here on earth

51
00:02:29,290 --> 00:02:26,270
and so there's a wonderful wedding of

52
00:02:31,840 --> 00:02:29,300
the NASA technologies and our approach

53
00:02:35,059 --> 00:02:31,850
to architecture and design and and

54
00:02:40,129 --> 00:02:37,699
our goal is to reduce energy demand

55
00:02:42,649 --> 00:02:40,139
through passive strategies and utilize

56
00:02:45,619 --> 00:02:42,659
solar and other systems to supply enough

57
00:02:49,190 --> 00:02:45,629
power so that the building will have net

58
00:02:52,099 --> 00:02:49,200
zero energy consumption it fits with the

59
00:02:55,520 --> 00:02:52,109
idea of self-sufficiency goals of a

60
00:02:57,580 --> 00:02:55,530
lunar base from its innovative

61
00:03:00,319 --> 00:02:57,590
environmentally friendly materials and

62
00:03:02,690 --> 00:03:00,329
efficient design to its real-time

63
00:03:04,190 --> 00:03:02,700

intelligent control systems this

64
00:03:06,440 --> 00:03:04,200
structure will exceed today's

65
00:03:08,980 --> 00:03:06,450
expectations for high-performance

66
00:03:11,620 --> 00:03:08,990
building

67
00:03:14,020 --> 00:03:11,630
we will take sensor technologies

68
00:03:16,300 --> 00:03:14,030
originally developed for NASA space

69
00:03:19,480 --> 00:03:16,310
missions and incorporate them into the

70
00:03:21,760 --> 00:03:19,490
new building a dynamic web connecting

71
00:03:25,180 --> 00:03:21,770
these sensors will continuously monitor

72
00:03:27,700 --> 00:03:25,190
all subsystems we are designing a system

73
00:03:29,980 --> 00:03:27,710
that could be likened to biofeedback for

74
00:03:34,350 --> 00:03:29,990
buildings this will truly be an

75
00:03:37,240 --> 00:03:34,360
intelligent intuitive cognitive system

76
00:03:39,460 --> 00:03:37,250
today NASA and its partners are working

77
00:03:41,290 --> 00:03:39,470
to develop the tools that will redefine

78
00:03:43,810 --> 00:03:41,300
the way that we visualize and think

79
00:03:46,000 --> 00:03:43,820
about our home planet projects such as

80
00:03:48,190 --> 00:03:46,010
Google Earth and our planetary skin

81
00:03:49,810 --> 00:03:48,200
partnership with Cisco represent

82
00:03:51,430 --> 00:03:49,820
technologies that can visualize and

83
00:03:53,770 --> 00:03:51,440
track changes to the environment from

84
00:03:56,980 --> 00:03:53,780
global to regional and down to

85
00:03:58,450 --> 00:03:56,990
neighborhood scales by linking the

86
00:04:00,910 --> 00:03:58,460
choices of an individual to the

87
00:04:03,010 --> 00:04:00,920
performance of a building to the energy

88
00:04:04,780 --> 00:04:03,020

consumption of a city to the carbon

89
00:04:07,560 --> 00:04:04,790
footprint of a region we can better

90
00:04:09,970 --> 00:04:07,570
understand and manage climate change

91
00:04:12,340 --> 00:04:09,980
creating and testing new decision

92
00:04:13,840 --> 00:04:12,350
support tools like these will be an

93
00:04:17,010 --> 00:04:13,850
essential component of the

94
00:04:20,410 --> 00:04:17,020
sustainability based project

95
00:04:23,320 --> 00:04:20,420
just as the lunar landing on tranquility

96
00:04:26,680 --> 00:04:23,330
base represented a giant leak during the

97
00:04:29,620 --> 00:04:26,690
space race so sustainability base will

98
00:04:32,080 --> 00:04:29,630
stand as an icon symbolizing masses

99
00:04:35,710 --> 00:04:32,090
dedication to solving the environmental

100
00:04:37,660 --> 00:04:35,720
challenges we face on earth we are proud

101
00:04:41,070 --> 00:04:37,670
that this project will be unique

102
00:04:43,540 --> 00:04:41,080
developed in a way that only NASA can

103
00:04:46,050 --> 00:04:43,550
showcasing what can be accomplished

104
00:04:48,660 --> 00:04:46,060
today while serving as a living

105
00:04:51,100 --> 00:04:48,670
experimental platform for new

106
00:04:54,010 --> 00:04:51,110
energy-efficient technologies as they

107
00:04:56,140 --> 00:04:54,020
evolve in the future this effort will

108
00:04:58,300 --> 00:04:56,150
also serve as an engine for

109
00:05:00,400 --> 00:04:58,310
public-private partnerships to

110
00:05:04,030 --> 00:05:00,410
accelerate the development of earth

111
00:05:06,760 --> 00:05:04,040
friendly innovations it's time for the