
APRIL 2013

1
00:00:13,749 --> 00:00:11,190
my name is carol tober i work at the

2
00:00:16,070 --> 00:00:13,759
nasa glenn research center i manage the

3
00:00:18,230 --> 00:00:16,080
manufacturing innovation project for the

4
00:00:20,630 --> 00:00:18,240
office of the chief technologist it's

5
00:00:23,590 --> 00:00:20,640
under game changing it's a tri-center

6
00:00:26,550 --> 00:00:23,600
project so i manage

7
00:00:27,990 --> 00:00:26,560
task leads from nasa glenn nasa langley

8
00:00:29,830 --> 00:00:28,000
and nasa marshall

9
00:00:32,389 --> 00:00:29,840
i've been an employee of nasa glenn

10
00:00:33,750 --> 00:00:32,399
since 1991. we're working in a very

11
00:00:35,990 --> 00:00:33,760
exciting area right now it's called

12
00:00:38,069 --> 00:00:36,000
manufacturing innovation but it's

13
00:00:39,830 --> 00:00:38,079

additive manufacturing additive

14
00:00:41,830 --> 00:00:39,840
manufacturing turns out a product that's

15
00:00:42,869 --> 00:00:41,840
lighter weight sometimes in traditional

16
00:00:44,950 --> 00:00:42,879
machining

17
00:00:46,069 --> 00:00:44,960
so as we learn more and more about it

18
00:00:47,830 --> 00:00:46,079
we're looking for more and more

19
00:00:50,150 --> 00:00:47,840
opportunities to implement it so

20
00:00:51,750 --> 00:00:50,160
employees are becoming familiar with how

21
00:00:54,150 --> 00:00:51,760
it works and what can be done with it

22
00:00:55,590 --> 00:00:54,160
its capabilities and limitations

23
00:00:58,069 --> 00:00:55,600
ultimately what nasa would like to be

24
00:01:00,389 --> 00:00:58,079
able to do is use additive manufacturing

25
00:01:02,630 --> 00:01:00,399
on orbit and what that would do is it

26
00:01:04,229 --> 00:01:02,640
would reduce the number of parts we'd

27
00:01:05,830 --> 00:01:04,239
have to carry up if there are things

28
00:01:07,429 --> 00:01:05,840
that break hopefully you could make them

29
00:01:09,109 --> 00:01:07,439
right there on orbit if there are things

30
00:01:11,750 --> 00:01:09,119
that need to be replaced we can actually

31
00:01:13,830 --> 00:01:11,760
make it right there in space also if we

32
00:01:15,830 --> 00:01:13,840
had a base somewhere and we needed to go

33
00:01:17,190 --> 00:01:15,840
from the moon to someplace else

34
00:01:19,030 --> 00:01:17,200
ultimately we'd like to be able to use

35
00:01:20,630 --> 00:01:19,040
something like additive manufacturing

36
00:01:22,310 --> 00:01:20,640
along with the regolith that's already

37
00:01:24,070 --> 00:01:22,320
on the surface of the moon to be able to

38
00:01:27,030 --> 00:01:24,080

construct things that we need rather

39
00:01:28,789 --> 00:01:27,040
than carrying everything up daily my job

40
00:01:31,030 --> 00:01:28,799
includes understanding where the

41
00:01:33,429 --> 00:01:31,040
technology is going how we're meeting

42
00:01:35,990 --> 00:01:33,439
our milestones how we're meeting our

43
00:01:37,429 --> 00:01:36,000
schedule staying on budget and just

44
00:01:39,270 --> 00:01:37,439
making sure that we progress the

45
00:01:40,950 --> 00:01:39,280
technology to where it needs to be for

46
00:01:42,469 --> 00:01:40,960
future nasa missions

47
00:01:44,550 --> 00:01:42,479
as a student in school my favorite

48
00:01:45,990 --> 00:01:44,560
subjects were always science it was

49
00:01:47,910 --> 00:01:46,000
always science because it answers the

50
00:01:49,990 --> 00:01:47,920
question why and that was important to

51
00:01:53,030 --> 00:01:50,000
me i always wanted to know why so

52
00:01:54,710 --> 00:01:53,040
biology chemistry physics were always my

53
00:01:57,190 --> 00:01:54,720
favorite subjects and you can't do those

54
00:01:59,109 --> 00:01:57,200
without math so i had to work hard at

55
00:02:00,469 --> 00:01:59,119
math i worked very hard to make sure

56
00:02:01,590 --> 00:02:00,479
that i had the math that would allow me

57
00:02:02,550 --> 00:02:01,600
to do what i like to do which was

58
00:02:04,709 --> 00:02:02,560
science

59
00:02:05,510 --> 00:02:04,719
throughout my career i've been inspired

60
00:02:07,830 --> 00:02:05,520
by

61
00:02:09,990 --> 00:02:07,840
a variety of people starting with my

62
00:02:11,750 --> 00:02:10,000
parents my brothers my relatives the

63
00:02:13,110 --> 00:02:11,760

community i grew up in

64
00:02:14,949 --> 00:02:13,120
and the various people i've met along

65
00:02:17,430 --> 00:02:14,959
the way who've been encouraging

66
00:02:20,150 --> 00:02:17,440
supportive and helpful

67
00:02:22,710 --> 00:02:20,160
i try to inspire as many people as i can

68
00:02:24,949 --> 00:02:22,720
as i go along i've been inspired by many