
PAO
NASA
Sarah Waechter
PARTNER MGR., EXCALIBUR ALMAZ, INC.
COMMERCIAL CREW PROGRAM
Kyle Herring
NASA PUBLIC AFFAIRS

1
00:00:03,760 --> 00:00:08,260
>> Kyle Herring: Welcome back, inside mission control, now, into the flight control room.

2
00:00:08,260 --> 00:00:12,920
We're joined, once again, by one of the folks, one of the experts

3
00:00:12,920 --> 00:00:15,230
in the Commercial Crew Program, Sarah Waechter.

4
00:00:15,230 --> 00:00:20,720
She is the partner manager for Excalibur Almaz, Incorporated,

5
00:00:20,720 --> 00:00:25,310
which is one of the seven partners associated

6
00:00:25,310 --> 00:00:29,320
with the Commercial Crew Programs, the Space Acts Agreements and...

7
00:00:29,320 --> 00:00:34,870
Of course, Sarah, you know we had Ed Mango here, and we just had Brad Jones talking

8
00:00:34,870 --> 00:00:39,360
about the overall integration of it, but I wanted to take an opportunity to talk

9
00:00:39,360 --> 00:00:44,910
to all seven of the partner managers and you're based here at the Johnson Space Center.

10
00:00:44,910 --> 00:00:45,150
>> Sarah Waechter: Yes.

11
00:00:45,150 --> 00:00:48,730
>> Kyle Herring: But, start off by

telling us a little bit about yourself

12
00:00:48,730 --> 00:00:51,910
and how you got involved with
NASA and where you're from.

13
00:00:51,910 --> 00:00:56,360
>> Sarah Waechter: I'm originally from a small
town in southeast Ohio called Marietta, Ohio.

14
00:00:56,360 --> 00:00:58,390
I grew up in a farm.

15
00:00:58,390 --> 00:01:03,300
My dad was an engineer, so it helped
to encourage me to go down that path,

16
00:01:03,300 --> 00:01:08,940
so I went to Miami University in
Oxford, Ohio and I got a bachelor's

17
00:01:08,940 --> 00:01:13,480
in Manufacturing Engineering as well as
a bachelor's in Engineering Management.

18
00:01:13,480 --> 00:01:17,910
And then a few years later, I went to the
University of Florida and got a master's

19
00:01:17,910 --> 00:01:20,450
in Industrial Engineering Management.

20
00:01:20,450 --> 00:01:25,550
While I was in college, I had someone from the
Johnson Space Center come in and give us a talk

21
00:01:25,550 --> 00:01:30,020
about how she trained astronauts and she
is from the same university I was going to

22
00:01:30,020 --> 00:01:33,070
and that helped encourage me to
think that maybe I could do that.

23
00:01:33,070 --> 00:01:37,110
So I started looking into co-ops for
NASA and I ended up getting a co-op

24
00:01:37,110 --> 00:01:39,240
at Glenn Research Center in Cleveland

25
00:01:39,240 --> 00:01:42,610
and I worked there throughout college
and then after college as well.

26
00:01:42,610 --> 00:01:48,510
And then I transferred to Kennedy Space Center
in Florida where I worked on every major part

27
00:01:48,510 --> 00:01:53,500
of the space shuttle, from the SRBs
to the external tank to the orbiter.

28
00:01:53,500 --> 00:01:55,930
And then a year and a half
ago I transferred here

29
00:01:55,930 --> 00:01:58,580
to the Johnson Space Center and
the Commercial Crew Program.

30
00:01:58,580 --> 00:02:00,780
>> Kyle Herring: Great so, now
you started with NASA then.

31
00:02:00,780 --> 00:02:02,330
When at the Kennedy Space Center?

32
00:02:02,330 --> 00:02:08,720

>> Sarah Waechter: At Kennedy I started in
2006, but I started working for NASA in 2002.

33
00:02:08,720 --> 00:02:12,300
>> Kyle Herring: Okay, so you
co-oped during that time frame.

34
00:02:12,300 --> 00:02:15,120
So you've been here in Houston
now for about a year and a half.

35
00:02:15,120 --> 00:02:15,270
>> Sarah Waechter: Yes.

36
00:02:15,270 --> 00:02:19,350
>> Kyle Herring: And it was specifically
to join the Commercial Crew Program.

37
00:02:19,350 --> 00:02:20,070
>> Sarah Waechter: Yes.

38
00:02:20,070 --> 00:02:27,030
>> Kyle Herring: Well, first off, you know,
describe what a partner manager does because,

39
00:02:27,030 --> 00:02:29,790
you know, we talked about
the integration with Brad

40
00:02:29,790 --> 00:02:32,130
and Ed gave the overall program perspective.

41
00:02:32,130 --> 00:02:37,880
But as you're working, your focused
with one of these seven partners.

42
00:02:37,880 --> 00:02:42,710
So describe what your role is
with the Excalibur Almaz, Inc.

43
00:02:42,710 --> 00:02:42,930
>> Sarah Waechter: Alright.

44
00:02:42,930 --> 00:02:47,870
As a partner manager is my job to do the
day-to-day integration with my specific partner,

45
00:02:47,870 --> 00:02:52,420
so I'm in regular communication
with the Excalibur Almaz.

46
00:02:52,420 --> 00:02:54,570
As well as, I help to...

47
00:02:54,570 --> 00:02:58,060
I'm supposed to be the expert
within the program on their designs.

48
00:02:58,060 --> 00:03:03,970
So I do daily insight or
communication with also my team.

49
00:03:03,970 --> 00:03:08,450
And we mentioned earlier that PIT Teams,
which is our Partner Integration Teams

50
00:03:08,450 --> 00:03:10,720
or the PIT Crews as we like to call them.

51
00:03:10,720 --> 00:03:15,340
And so I lead a team, a PIT Crew
that helps support Excalibur Almaz,

52
00:03:15,340 --> 00:03:17,460
Incorporated in their development.

53
00:03:17,460 --> 00:03:22,310
And so, it's a mutual benefit where we
can help them further their development

54
00:03:22,310 --> 00:03:24,410
as well as we learn about their design.

55
00:03:24,410 --> 00:03:28,490
And they teach us a little bit something
different than what we've done before.

56
00:03:28,490 --> 00:03:32,600
>> Kyle Herring: Right, and, of course
you talked about the integration part

57
00:03:32,600 --> 00:03:35,530
with the company, but, so how
have you all been received?

58
00:03:35,530 --> 00:03:37,930
You know, you working with
them, them working with you.

59
00:03:37,930 --> 00:03:40,500
>> Sarah Waechter: We've
been received very well.

60
00:03:40,500 --> 00:03:43,600
Particularly for Excalibur.

61
00:03:43,600 --> 00:03:50,530
They are a company that has a lot of people that
used to work on programs that NASA supported.

62
00:03:50,530 --> 00:03:52,990
So they're very familiar with NASA, in general.

63
00:03:52,990 --> 00:03:57,600
But they also know all the experience
and knowledge that we have within NASA

64
00:03:57,600 --> 00:04:01,020

and they greatly appreciate
anything we can do to help them

65
00:04:01,020 --> 00:04:04,720
and so this Agreement's worked
out best for both of us.

66
00:04:04,720 --> 00:04:07,160
We can both learn and at the same time.

67
00:04:07,160 --> 00:04:11,740
>> Kyle Herring: So the Space Act
Agreements, the way it's laid out is...

68
00:04:11,740 --> 00:04:15,740
Of course, EAI is an unfunded
Space Act Agreement.

69
00:04:15,740 --> 00:04:15,830
>> Sarah Waechter: Yes.

70
00:04:15,830 --> 00:04:19,010
>> Kyle Herring: But they still
have milestones just like the...

71
00:04:19,010 --> 00:04:21,270
all the other six partners, right?

72
00:04:21,270 --> 00:04:27,950
So, can you talk about kind of, what kind
of milestones they have, what they've met,

73
00:04:27,950 --> 00:04:31,800
and what's kind of in store
for them or down the road here?

74
00:04:31,800 --> 00:04:32,580
>> Sarah Waechter: That's a good point.

75

00:04:32,580 --> 00:04:36,900
We have our seven partners, and some of
them are funded and some are unfunded

76
00:04:36,900 --> 00:04:40,880
through the Space Act Agreement, so the
difference between funded and unfunded is...

77
00:04:40,880 --> 00:04:46,220
The Space Act Agreements are set up as a series
of milestones that we've agreed to upfront

78
00:04:46,220 --> 00:04:51,870
and so if it's funded when they accomplish that
milestone they get funding associated with that.

79
00:04:51,870 --> 00:04:54,740
But for an unfunded agreement,
there's no funding coming

80
00:04:54,740 --> 00:04:56,950
from NASA, so what ends up being is...

81
00:04:56,950 --> 00:04:59,710
It's, again, a mutual agreement between the two.

82
00:04:59,710 --> 00:05:05,540
There's also a mutual benefit, so we both
can provide knowledge and experience and kind

83
00:05:05,540 --> 00:05:08,910
of learn and grow together, and
so at the end of our agreement,

84
00:05:08,910 --> 00:05:11,840
we're both further than where we started.

85
00:05:11,840 --> 00:05:16,100
>> Kyle Herring: I think you gave us
a couple of photos to sort of show.

86
00:05:16,100 --> 00:05:18,870
Maybe we can show the first one
for you and you can describe it.

87
00:05:18,870 --> 00:05:20,990
This looks like the capsule itself.

88
00:05:20,990 --> 00:05:26,390
>> Sarah Waechter: Yes, so, Excalibur, they have
purchased Heritage Hardware and they're using

89
00:05:26,390 --> 00:05:33,480
that for both ISS transportation as
well as tourism and cargo development.

90
00:05:33,480 --> 00:05:38,300
And, so far within our program, we've
accomplished two of the milestones.

91
00:05:38,300 --> 00:05:42,850
We accomplished kickoffs, so that
kind of gave our whole team a summary

92
00:05:42,850 --> 00:05:46,540
of what they've already done because they're
already down their path of development.

93
00:05:46,540 --> 00:05:52,730
As well as the systems requirements development
discussion and so where we plan to take it

94
00:05:52,730 --> 00:05:58,080
from here is they have that purchased capsule
and they're going to continue to develop it

95
00:05:58,080 --> 00:06:02,330
by adding a service module to
the aft end of it and on then

96
00:06:02,330 --> 00:06:07,270
on the fore end they have the parachutes
and they have a lounging board system

97
00:06:07,270 --> 00:06:09,180
and everything, so that's
what's in those pictures...

98
00:06:09,180 --> 00:06:11,160
>> Kyle Herring: I think
that's what the third image...

99
00:06:11,160 --> 00:06:14,550
There it is for you.

100
00:06:14,550 --> 00:06:15,990
>> Sarah Waechter: And so the...

101
00:06:15,990 --> 00:06:21,900
we're working with Excalibur on their feature
milestones, which is a test status review

102
00:06:21,900 --> 00:06:26,710
as well as the design status review, so
we'll be working on tracking their testing

103
00:06:26,710 --> 00:06:28,460
as they accomplish it, as well as their design.

104
00:06:28,460 --> 00:06:33,550
And then also, they have a milestone to
work on, their launch vehicle compatibility,

105
00:06:33,550 --> 00:06:36,610
so looking at a rocket that's
going to get them to space,

106
00:06:36,610 --> 00:06:38,870
and which rocket would work

best for their capsule.

107
00:06:38,870 --> 00:06:43,490
>> Kyle Herring: And you mentioned Excalibur
has a number of people that obviously work,

108
00:06:43,490 --> 00:06:47,040
you know, with the shuttle program
or other programs on the NASA side,

109
00:06:47,040 --> 00:06:52,450
so and I asked Brad this, but I assumed
that they have the same type of excitement.

110
00:06:52,450 --> 00:06:57,060
You know, working on this
project as anyone else would.

111
00:06:57,060 --> 00:06:59,440
>> Sarah Waechter: Oh, yes, we
definitely share the same passion

112
00:06:59,440 --> 00:07:03,410
for human space flight and it was very exciting.

113
00:07:03,410 --> 00:07:06,650
This is a new program for NASA, but many
of these companies have been working

114
00:07:06,650 --> 00:07:08,670
on their development for several years.

115
00:07:08,670 --> 00:07:13,420
So to join them and their design and
development has been exciting on both sides.

116
00:07:13,420 --> 00:07:16,890
And also, it's kind of exciting
to learn something new

117
00:07:16,890 --> 00:07:19,830
and how they can do it a little bit different.

118
00:07:19,830 --> 00:07:23,040
>> Kyle Herring: So I'll
wrap up with one question.

119
00:07:23,040 --> 00:07:24,740
It may be easy, it may be not.

120
00:07:24,740 --> 00:07:28,200
But, you now, how do you describe
your job to family and friends

121
00:07:28,200 --> 00:07:33,310
that may not really fully understand what we're
headed to now that the space shuttle is retired,

122
00:07:33,310 --> 00:07:38,370
that we're looking toward a new transport
system for crews to and from low earth to orbit

123
00:07:38,370 --> 00:07:40,770
and an international space station.

124
00:07:40,770 --> 00:07:44,690
>> Sarah Waechter: I try to
explain that I'm working for NASA,

125
00:07:44,690 --> 00:07:49,050
that we're trying to help commercial
companies develop spacecrafts that are going

126
00:07:49,050 --> 00:07:53,820
to take astronauts to a international space
station, but also some day they may take anyone

127
00:07:53,820 --> 00:07:57,870
of us into space for our spring

break or for our summer vacation.

128
00:07:57,870 --> 00:08:01,790
[laughing] So, it's an exciting
development and a new frontier

129
00:08:01,790 --> 00:08:05,020
for all of us, not just our astronauts.

130
00:08:05,020 --> 00:08:05,490
>> Kyle Herring: Well, great.

131
00:08:05,490 --> 00:08:09,020
I appreciate you joining us, Sarah
Waechter, the Commercial Program...

132
00:08:09,020 --> 00:08:13,160
The Commercial Crew Program Partner
Manager for Excalibur, Almaz, Inc.

133
00:08:13,160 --> 00:08:17,020
EAI. We appreciate you dropping by
and talking to us for a few minutes.