

This is space, No rocket  
required, in association with

Lancaster University Management  
School.

What is space? My name? There is  
a new terminology coming out

that is not calling it space  
mining, it's calling it I SRU in

situ resource utilisation and  
it's a broader term that talks

about how we utilise resources  
in outer space.

In this episode I'm joined by  
Canadian entrepreneur Silage

Javad Salaza, mining and  
mechanical engineer with just

under 20 years experience in the  
mining industry. I recently had

the pleasure to meet Solar at  
the International Space

University on the Executive  
Space Programme and I was

fascinated to hear how Solar was  
pursuing his passion for space

by drawing upon his knowledge of  
terrestrial mining and applying

this to the space mining and  
exploration sector. And I really

wanted to find out more about  
what Solar was talking about in

terms of space.

Raining. So I am delighted today  
so that you agreed to join me on

this podcast. Thank you. Thank  
you, Sharon. It's a privilege of

mine. It was great meeting you  
as well. And you know, I think

it's a platform for making life

Lifetime friendships. So thank

you. Oh, 100%. I feel that I  
found my tribe at this space

university. What about you?  
That's it. I found my tribe,

Reiter. So before we get into  
the area of space mining, I

wonder if you could tell the  
audience a little bit about you,

Salal. Well, Sharon, I don't  
know what you want to know.

About me because we can either  
say it in one sentence. OK fine.

I'll give you a I'll give you  
the best version of me. Sharon,

I'm a as you said I'm a I'm an  
engineer by training. But I soon

realised that you know my dream  
lies in people related and

building and problem solving in  
different areas. So that was

soon after graduating university  
was clear to me that I didn't

want to be necessarily creating  
designs as an engineer and and

so on and early on in the years  
you know I got myself through

university going into mining.

Engineering by giving a  
justification. A reason of the

reason why I wanted to go into  
mining was to be in space.

Really. So. So that dream. Yeah,  
that dream actually set me

forward to be able to study.  
Yeah. So that dream was always

alive up until my early 20s. And  
then I got into the workforce. I

had the privilege to start my career in a highly technological

role. I worked for a company by name of Rio Tinto. I was a part

of one of the first remote developing establishing.

Designing and operating the first remote operating centre in

Mining So and that was about operating five different mines

from a central location. You'll see there's lots of parallels

between what I ended up doing and the dream of Space. So from

there on, I spent about 2 1/2 years in that company and then I

relocated back to Toronto. I worked for a company by the name

of Barrick Gold for their Mind of the Future programme. And

then later on I got into a lot of work with respect to taking

effect, taking advantage of the technology that was already

available.

So the effective use of technology became one of my go

to things. This and what what I was doing throughout my career

in Berwick was developing A programme to harness more

productivity and efficiency out of mining equipment with the use

of technology. That became the basis of my next venture, which

was an entrepreneurial one. I met my partner in the business

and we decided to develop a company that was going to offer

consulting services in mining and for nine years up until

January 1st of this year that was my journey.

I was the cofounder and CEO of the company called My Outliers

Mining Solutions. From there on, I'm looking to see what I can do

with the experience I've gained. And throughout these years I got

reminded again of my passion and dream in space. And it was, you

know, for that little period of time up until 2016, I had

totally lost why I had come into mining. I totally lost track of

it.

And it was an ad in the online about the Canadian Space Agency

needing 2 astronauts that kind of rejoiced me back into my

reality. At the time of saying, hey, solar, remember this was

your dream. You came into mining because you wanted to go to

space. So I applied in 2016, I applied and I made it some of

the way through. But now you're being bashful here. Yeah, you

made it quite far through. Not far enough. I wasn't one of the

two that was got selected, but but you know.

That that was a good reminder, a kick in the \*\*\*\* to remind me

that whatever I needed to do

going forward needed to have a

space element in it. It was a bad time. I went through a dark.

You know mental health was a challenge, but I came out of it

fairly swiftly, fairly quickly and and I made a pact to myself

that going forward I'm going to make sure that space, something

space related, is, is a part of my life. Space makes you happy.

Space is my dream. It's my happy spot. Yes, and quite right. You

need to have that in your life when we are another. So please,

please, please can you tell me a little bit about your journey

and your application to become an astronaut. I am so excited to

hear a little bit about that chronologically it.

Started in 2016. I read through the requirements and

there was a bunch of them I was meeting and there was a bunch of

them I wasn't one of them was was my weight. So I started

training really hard. In about 3 months I was able to hit the

mark and then go through the testing that they had devised.

There was a written test that you had to do for aptitude to

get in and then after that there was a series of tests that they

did by the time I was out, it's the application process

started in November or August of

2016.

They announced it almost a year later on Canada Day of 2017 of

who The Who the astronauts were by November. I knew that I

wasn't in the process. I actually made a trip up to

London to meet a friend of mine to kind of get through the

dark times. But it was a series of mental, physical and

challenges that they gave you. So it was it was really eye

opening. Yeah. So I was supposed to say, so we've gone through

that process. Did you get a greater understanding and

appreciation for what it actually takes to become an

astronaut?

And it's an obvious question, but yeah, there was a reason why

there's a very selected few come out of the philtre at the end.

And these people are really creme de la creme, you know, the

top notch people based on the philtres that they're looking

for. I can't, I can't. I can't say wrongly or rightly what

those philtres are, but, you know, these, these people are.

Really the the top notch people and I don't know if you know,

but the Artemis missions for Artemis 2, they just announced

the four astronauts that are going to be going around the

moon and one of them is a Canadian. Yeah, I know Kill

isn't it? So really what you're what you're really telling me is

that space has been a key part of who you are and it's kind of

that passion that's driven you forward. So although I can

understand the disappointment and not getting selected to

become an astronaut, you've kept going forward with your passion

for space and it's that it's that passion isn't it, that

you're trying to.

Fused together with your main inexperience to to explore,

explore space mining.

Yeah look it may sound like a cliché, but it's these types of

failures that we have or false. Let's just say that we have

throughout our life that really make us get back up and do

things differently. One of my pathways, that most extreme

pathway was to become an astronaut and go to space. But I

soon realised that I still can get, I can fulfil the that that

sense of the dream and the passion that's related to it by

doing things on the periphery of space. You know, if it's a

matter of studying about space, if it's a matter of taking part

in.

The course that you and I took part in, or even potentially,

you know, taking a leap of faith, leaving my company and

trying to figure out what I can do in this industry of space and

merging my professional skills with my passion, my my purpose,

my dream at the end of the day. And that's where I'm at right

now. You know, I have a high propensity for risk and I like.

I like to build and do problem solving and I'm thinking the

next, the next step is going to be finding the next venture is

going to be somewhere where I can mix all these my my passion

and skill set and my knowledge together. So and I think we'll

get into this a little bit more. I'm sure you have lots of

questions on that. But I think that's where that's where that

intersection is. It's in industrialization of space and

probably more specifically in mining in space. You've set that

question up perfectly for a minute. So for for most people.

It's our first some people that's listening. Can you

explain what space mining actually is and why as a two

point question and why it's important, Do you mind if I

actually split the question in three go for that and say what

is what is mining first? OK,  
yeah. Most people don't even

know what mining is or when they  
think about mining there is a

lot of negative connotations  
that it's associated with

mining. So the first thing I  
want to say is look a very

simple statement, whatever is  
not farmed is mined around you.

It's as simple as that. We  
cannot get away from it.

It's it's a it's a fact of life.  
We need it in our society. We

need to mine metals to be able  
to sustain our lives. Now with

that comes a level of  
responsibility that in the past

has been neglected and we are  
trying to get better at it as we

go. Mining is a necessity.  
Natural resources is something

that we need in our society to  
sustain ourselves. But that

question of sustainability is is  
one that most of us are trying

to struggle with and we have a  
hard time with. Which takes me

to the next layer of what mining  
is. Mining is a game of economy.

Forget about the science.

The engineering and all that  
stuff goes behind it. At the end

of the day it's an economic  
proposition. A piece of dirt is

not, it is a piece of dirt until  
there is an economic value

towards it. OK. So and and  
that's where in the mining

industry we call that or  
mineable or we go through a lot

of different techniques to  
figure out what the amount of

the specific metal for example  
that we're mining or whatever

commodity we are mining in that  
in situ is in the ground is. And

then we find out is it  
economical to mine it, is it

economical to extract it.

The process that I make it final  
product out of it and it's only

then we actually start the  
active mining and there needs to

be of course profits associated  
with it. This is a really

important point. When we  
actually tie this back to base

mining, it's a lot of design and  
engineering challenges,

sustainability, human resources  
and environmental challenges and

it's also a game of economy.  
It's actually quite a

multidisciplinary industry.  
Having said all of that, why

space mining and what is space  
mining? What is space mining?

There was a new terminology  
coming out that is not calling

it space mining, it's calling it  
I SRU in situ resource

utilisation. And it's a broader  
term that talks about how we

utilise resources in outer

space. In a very layman's term,

we're going to be mining these,  
extracting these resources, and

it really falls into two  
different categories as of now,

where people are going after one  
of them is mining asteroids,

yeah? Yep. And the other one is  
mining the moon. Hmm. And then

there's a subset of.

That that is about mining, slash  
recycling the orbit. What? Yeah,

right. That. Yeah, I was  
following you right up until

that point. And then my, my, my  
brain just went computer and it

went kapoot because I  
purposefully used the word

orbit, you know, all that space  
junk that we got up there. Yeah.

So one of the ways to remedy the  
problem with traffic management

and the extra stuff that we have  
up there is instead of burning

it in our atmosphere as as they  
go through, they end their life

these satellites or these probes  
that we've put into.

Into orbit is actually taking  
them back and recycling the the

metal, OK, that's inside them.  
And one of the use cases for

that is you recycle the metal,  
for example the aluminium that's

there, you create aluminium rods  
which is used for ionic

propulsion for satellites. So  
you can actually use the recycle

the metal and create a fuel source to create more

sustainability for these satellites that are going out of

Commission because they're running out of fuel. OK, that

makes sense. So we talk about, so we talk about.

Sustainability. That's an element of sustainability there.

Yeah, that can. So, yes, look, I, I, I wanted to get a rise out

of you. It's not mining per se. It's recycling and it's

recycling satellites and debris in orbit. And look, there's a

lot of people are up in arms right now saying why are we

getting rid of the International Space Station? Why, why are we

burning it up in the atmosphere? Like there was a lot of other

use cases for it. Yeah. So, you know, one of them could be

recycling it. One of them could be using it as a platform for

other work. So that's the answer that question. But.

What is space mining? Space mining is getting it, taking

advantage of the resources that are in the outer space. If you

remember the analogy that I drew with with terrestrial mining,

there is a lot of technical challenges we can dive into that

if you want. There's a lot of sustainability challenges. And

then there's a there's the idea  
of the economy of it. The

economics of asteroid mining or  
lunar mining is heavily

dependent on the market that we  
create and what the price

associated with it is. Today.  
We're willing to pay, let's say

\$2000.00 an ounce for gold. OK,  
That means the miner.

Needs to take it out of the  
ground for less than that to be

profitable. If if the miner for  
some reason came up with, you

know, two tonnes, 3 tonnes, 4 \*  
100 tonnes of gold all the

sudden and they want to flood  
the market with it, what does

that do to the price of gold? It  
tanks it. So we have to be very

cognizant the whole supply chain  
and the supply and demand aspect

of commodities and their pricing  
when they're, when they're not,

when they're traded, you know  
it's it's a big aspect of the

way our economy is running.  
Economics plays a huge role in

in in space mining. One of them  
is.

What is the cost of actually  
going to space and extracting an

ounce of gold or an ounce of,  
you know what, for example, our

friends at Astro Forge are going  
through, you know, to bring down

some precious metals like  
platinum and so on and so forth.

And what is the cost of actually doing that and then?

What is the profitability and what will happen if they bring

that material to Earth and use that? So there's two markets

that are created in reality, one of them is the Earth market. So

if you bring this material back to Earth for the use on on

planet Earth or its orbits, let's not forget about that as a

subset or do we extract material or minerals for the use in our

space itself. So when we talked about why space and why space

mining, we're going to be addressing two different

markets.

Which are not fully developed yet. One of them is for the use

of these rare earth elements or whatever we're going to be

mining on planet Earth and the other one is for the use in

outer space. I personally think the use case of for our space is

actually a lot more viable than for the use cases on Earth. And

it's because it's more of a integrated chain of capabilities

that are going to be needed for us to sustain some form of an

occupation of space, let's say lunar lunar activities on as as

we're coming ahead.

With, you know, trying to send

more and more resources to the moon and in reality it's a combination of bringing together

power construction and mining and these three different

industries or three different activities need to support each

other. If one of them doesn't exist, the other one cannot work

and we're going to need that on the moon. If we're going to

build infrastructure out there, we're going to need

construction, we're going to need mining and we're going to

need power. Mining is going to feed construction and power

power.

Or is going to feedback mining and construction and it's going

to be a symbiotic relationship for lack of a better word

between the between the three different activities. That to me

is a is a sound business model, a sound market. But that

requires us wanting to build something else outside of

outside of the earth. And at the end of the day then mining

becomes about mining water for fuel to be able to get back, you

know to be able to get off of the moon and propel ourselves.

To back to the earth, and so on and so forth.

So that's that's a little bit about mining and why mining and

a little bit of the  
justification of it in in the

near future. It sounds like a  
very expensive area to get into

though it is yeah what we're  
talking about what kind of money

it it's in the billions and  
trillions of dollars because we

we have to think about it as an  
integrated activity. And I think

the whole venture of setting up  
something in the moon is going

to be a trillion dollar venture  
and is there investors at the

moment looking to invest.

And and space mining companies,  
you know the history of space

mining has actually been quite  
tumultuous. Back early 2000s

there was a lot of activity  
based around a few companies

that were established to do  
asteroid mining and they were it

was a great idea just a little  
bit too early. Some of our keep

it some of the capabilities that  
we have today with being able to

launch heavy payloads into into  
space for fraction of the cost

was not there. These these  
companies are one of their

examples of.

Planetary Resources and they got  
bought over and they're for all

intents and purposes they don't  
exist anymore. However there is

uh companies that have come

around in the last couple of years. I mentioned one of them Astro Forged and there is a

bunch of different companies created in the whole ecosystem

of trying to serve this complex industry industrialization of

space that I told you about that are looking at from anywhere

from storage hosting platforms to be able to put robots in

there that can refuel satellites and.

You know there is a a forges and smelters and so on and so forth

that are coming along to be able to support this area. So there

is more many, many companies out there. So the question is, is

there investment happening? Yes, there is investment happening.

The fact that we are able to launch things into orbit for a

lot cheaper as really had a massive shift in in the in our

capabilities and and what we can do and I feel like that's only

going to get better and it's only going to get cheaper. So

that economic aspect of as the cost pressures reduce this act

becomes.

More and more viable. OK, so here I've got a question for you

Controversial possibly but sure. And I'm asking a space someone

that's interested in space mining this question. But should

we actually be mining in space ethically, responsibly? Should

we be doing that? I think I have that answered in my to myself.

So creating an argument for it is only through a parallel I can

draw and is and is the same question should be remaining on

Earth I think if we answer that question to ourselves which I

believe at the end of the day.

It's a need, needs based question. We cannot sustain our

society without mining. So it's a need. Now the question

becomes, well, if this stuff is available on earth, why don't we

just do it responsibly and better before we go into space?

Yeah, that is a fair question. But again, it's a question of

economy. It's an economic conundrum and also a social

responsibility problem. If we come, if we become more socially

responsible, there is unfortunately a cost associated

with it. You know, we want to become carbon neutral. We want

to have less.

Impact on the land we want to have and these are these are

things that we should strive for. Don't get me wrong I'm not

saying that we shouldn't be doing this but all of these

things come at a cost. And

remember when I told you what  
are the economics of mining  
something is worth something as  
long as the cost of it is lower  
and it makes it economic then  
it's extractable then it's  
minable and then it can go into  
the market. So it's a cost  
pressure at the end of the day  
if the commodity prices if they  
become more scarce and the  
prices go higher than those cost  
pressures can be withstood  
and.

We can do the mining and the  
same thing applies in space, in  
my opinion and and and more of a  
visionary question is, do we  
want to be species that are just  
on the Earth? You know, Elon  
Musk has a has a vision of  
making human humankind A  
multiplanetary species. And if  
that is about to come true or if  
that's the general goal of our  
species, we're going to need to  
do that. I don't know. Are you  
convinced? No. No. Tell me, tell  
me, what is it that is holding  
you back and what?

Why are you not convinced about  
it? I think it's I, if I'm  
honest, I don't know enough  
about about it to really form a  
really good argument. But to me,  
it just kind of, it worries me  
that we are depleting so much  
from Earth and we're then going

to deplete so much from the space sector. So it just feels

like we're constantly taking so much out. Maybe thinking,

wishful thinking, but I just wish we could think of a

different approach to it. I'm open to keep on listening and

learning and and yeah.

Yeah, I can understand the commercial value, the commercial

value, but look there it is a societal value as the microphone

that we're using to talk to one another today, the electronics

that are in front of us. Are we willing to give those up? I

don't have an answer necessarily for for for that, for that

philosophical question, but I think the answer lies a little

bit into what we kind of touched them on before, which is the

responsibility and the, the responsibility that comes with

doing something like this.

OK. And also the responsibility with having that power to do

this as as a species, as, as, as, as humankind and learning

from our past. Yes, I think I would be disappointed in us if

we were did not learn from the chaos that we created in the

past about exploiting our natural resources. Take that

same approach in space. Can I

come at it from a different  
perspective than our can?  
Absolutely. China has the same  
question, but different.

Well I I hear you. I hear your  
point. So if if we're saying  
that you know the sector is  
going to grow and and there  
there's a there's money to be  
made in it. How do we encourage  
responsible leadership and how  
do we get entrepreneurs looking  
to capitalise on this market.  
How do we try to create an  
ecosystem where they do so  
responsibly? Amazing question.

Thank you. I know you, I know I  
know you teach our  
entrepreneurship and at  
Lancaster University. So I don't  
need to be preaching.

To the choir, but one of the  
biggest tenants of  
entrepreneurship.

Is understanding if there is  
market for something. The other  
one is, am I the best person to  
do it? Yeah. So when it comes to  
space mining, I think we need to  
take those into account. As an  
entrepreneur you need to be  
asking yourself is there a

market And we've talked about  
the iciness of the market and  
the not the not fully existent  
Ness of the market in on space.

It's a little bit of wishful

thinking that it will come. You

know there's people like myself  
that believe that it will come

that the timing of it is up for  
for debate, but the part of it

becomes am I the right person to  
do it.

And that's that's that's a very  
introspective question and

something that you can judge  
yourself for it but other people

will judge you throughout your  
career for it as well. So I

think I believe if I have the  
right intent to mining or any

venture responsibly that gives  
me a licence to operate and then

from there on my peers and the  
market will be the best judge of

that. And as I said if the  
governments, if the society says

that it's not being done  
responsibly in most cases

companies you know.

They let the companies know and  
can I ask a silly question or in

fact there's no such thing as a  
silly question. I tell my

students that all the time. Is  
there any industry standards for

for this emerging market for  
mining in space 0. Right. Okay

blank slate and and that's  
that's scary as well it it's

scary because from a policy and  
law perspective yeah there isn't

anything. So I think you should  
be president of a global space

mining organisation that actually looks.

There's sponible entrepreneurs.

You up for the challenge?

I'm up for the challenge and and you know why? That resonates

even further with me. My, my purpose, my defined purpose is

very human centric one. It's about making a positive impact

on the people around me.

And if the people around me start with the first layer of

the onion being my kids and my family, my wife's relatives, you

know, and the bigger the bigger society. I think if I were to

extend that purpose of mine out and if this is truly a passion

and a dream of mine, I think you might have a, you might have a

point to say that that those Venn diagrams of, you know,

passion, purpose, dream and my skill set may may align really

properly there.

I'm going to think about that. I think you should because

although I I got the pleasure of spending the week with, Yeah,

what I learned about you was that you were really organised.

You're really, you've got that criticality, you really like to

problem size the issues and you like to kind of almost do a 360

appraisal of it, don't you? And you're coming at it from a

multidisciplinary perspective. So some of the cool questions

that you asked, you know, they weren't just coming from an

engineering perspective, they were really looking at the

problem. So I would vote for you to be the president.

Of this you our conversation that you're going to set up.

Alright, well, listen, I think I'm gonna take that up. I'm

gonna take that up as a challenge. I'm gonna, I'm gonna

come back to you to see if there is anything I can find on that

area. I ask you to be my advocate and if you come across

any opportunities like that, you let me know 100% a deal. Just

remember, just remember that we came up with that idea here, OK?

So if we're gonna make any, if we're gonna make any money out

of it, I'll definitely keep in you in mind. And if we get

famous, we'll get famous together. Ohh, that sounds

perfect. No worries. But but if there if it's a massive failure,

you can just blame it all on me. Well, intention.

Don't worry, I didn't. Did you say that? Yeah.

So you've kind of touched on it and I guess, but we're joking

alike here. But really what I'm getting from you and what I

learned about you during that one week is that you're very

much about collaboration and about bringing people and

sectors together and looking at integration within the space

sector. Would that be a kind of a fair point? That's fair. I

verbalise it a little bit differently. I think in the

past, you know, there was the era of the specialist that, you

know, in this Stone Age or in the Bronze Age, you know, we had

people that were that took a specific vocation.

Up and they became farmers or Tanners or, and then from there

that was their business and their specialty altogether,

these people really, who were the earliest of entrepreneurs,

but the earliest of the specialists and the earliest of

the generalist.

Soon after when the world became a little bit more complex, all

those things needed to divide out. You know, we had then there

was the industrialization came and specialist got a lot of

airtime with the steam engine. Now you needed an engineer to be

able to run a steam engine that you just needed a horse to do

that before, you know, as

industrialization went on, you  
know, we decided holy moly, we  
need generalists to come and you  
know bring some of these things  
together to do some of the work  
that the specialist can't do and  
the entrepreneurs are not going  
to do. So there was an.

Introduction and the flux of  
generalists coming into the  
market. Specialists were always  
there, entrepreneurs were always  
there, business people were  
always there. And now all of a  
sudden we created these silos.  
And this is, this is not. I'm

not talking about too long ago.  
This is starting probably in the  
early 70s and the 80s where we  
we realised that we needed a  
different breed of people. We  
needed people that are going to  
be able to integrate, or I like  
to call them bridgers bridge the  
gap between culture, language,  
technical values of people in  
society.

Another word for it is an  
integrator and I think this age  
and especially in space is the  
era of the integrator is the era  
of the bridger's a good example  
of it and I think it would be a  
really amazing case study for  
you in your, in your class is  
how was what was the inception  
of MRI technology. Do you think

if we put a bunch of, you know,  
medical doctors and biologists

and engineers, electrical  
engineers and physicists

together, they would have come  
up with MRI magnetic resonance?

I don't think so. No, I don't  
neither. Yeah. So you're right.

It's it's, it's there needs to  
be someone that can cross those

chasms and boundaries and I  
think space needs that more than

ever because of this new  
industrial revolution that is

going to be happening within it.  
Is that not one of the biggest

kind of challenges facing the  
space sector just now is that

the space sector historically  
has been about collaboration,

but we are living in a more  
divisive, fractured geopolitical

climate and within within the  
space.

Victor, so how do we try and  
harness that? As you know, we've

got a commercial space sector  
and as a space entrepreneur, I'm

allowed to call you that I have  
to earn that first. But an

aspiring space entrepreneur, how  
do we encourage our inspiring

space entrepreneurs to really  
move forward with that

collaboration? Because I know  
that you're good at that, I've

seen you, you're really good at  
that collaboration and

inclusivity, but how do we encourage that across the

sector? One of them is to make sure that.

Or the amount of energy that we put in to breeding and uh you

know flourishing that space the rocket scientist you know for

lack of a better word that the very technical person we put an

equitable amount of time and resources to dedicate that to

people that are going to be those types of innate. You know

it it's a space is not just about the Rockets the Rockets

the other the other thing is we need to be able to attract

different type of people into the industry. It's really.

Amazing to see engineers going and learning about law

programmes developed by universities that have a dual

engineering and law. To give the students a different point of

view of cultures. I I did a study abroad programme that was

based around mining and to be honest with you, no offence to

the programme. I didn't learn anything about engineering

there. I I spent about a year and a half in Europe, four

different countries, and what I learned was how to deal with

people. I learned collaboration, I learned the differences in

culture. What?

What divides us and what brings us together. I have a funny

story in when I was living in Holland and Germany and going to

a going to university in both those places and I had my

classmates were from Germany and Holland and we would go to the

when when we were going to university in Germany the German

people have hot lunches and cold dinners.

In Holland it's the other way around. They like to have cold

lunches and hot dinners and the guys were just up in arms like,

ohh, what is this? I can't live with these people or I can't do

this. Their whole their whole culture and at whatever they

knew. Their tradition was based around that and all I saw was

opportunity. I'm like we can have hot lunches every day.

Or or hot lunches and hot dinners every day so so you know

that's the that's the type of people that we need that look

past the problem and past the technical parts of it and and we

actually put more emphasis on this integration and and and

bridging as we do in courses or in topics that we teach and we

promote early on in the.

Yeah, in in schools and education within our families

and so on and so forth. So I think it's a long term process

that starts from from day one. But collaboration, integration

is also something that can be taught and muscle that can be

trained, something that once people see value in, they will

gravitate towards.

Perfect. So given that you've picked up on the fact that

people are really important and we're talking about

collaboration and different skill sets, we really learned a

lot about that when we were out at the International Space

University, didn't we? Because we met so many wonderful people

from so many different countries with different interests and

space and we were united by our passion. Can I ask you, what did

you think about you the the week and do you have any kind of

memories or or favourite parts that you think will help you?

Move forward, taking your passion for space to the next

stage. I'm gonna sound like a broken record because we've kind

of talked about this and this resonates well with me as a

person. Look at the different backgrounds. Look at the

different. You know, we had 42 different individuals. And what

I mean individuals, amazing individuals with, you know,

highly capable individuals, People that have made a

difference in their own lives and the lives of others coming

together under that united passion, learning.

The same cause, but with their own flavour and with their own,

with their own lens. And my fascination was not only in what

I was learning, but in the people that I was meeting and

the network that I was generating. Look, I would have

never thought I would be in this podcast with you.

For what it's worth, it's the last thing I expected, and it's

the most amount of fun I've had in many decades. So, so, so you

asked me what it was I took away. I took a lot of technical

stuff and educational stuff away. It made me appreciate the

space sector as a whole rather than its parts, OK?

Perfect. I think that's that's that's that's one thing and then

the and I think we've been we've been saying this is the people

and the network that I've created and and looking at space

through other people's eyes. Yeah, yeah yeah yeah that that

was you know we we have we had our friends that are in the you

know policy and law.

You know, we had people in banking. We have people looking

at it from a government's point of view, you know, from

different space agencies that are about to get created. We had

jet fighters, tonnes and lieutenants and wow And from,

you know, South America to South Korea. So it's like where,

where, where do you get that, where where did you get these

types of people. And and you know, what was more interesting

is that there was a point where all these boundaries what who we

were, the experiences we've had.

The cultural differences all melted away when we were all

singing at the top of the lines. You know badly, badly 0

boundaries and and you know that was that was a true human

experience. So I I really commend ISU for that experience

as a whole because it wasn't just educational for the sake of

education. I think it was a very human experience and it just

added tremendous amount of value. My cup was full at the

end of it. Yeah. I loved it as well so.

Reflects They were coming to the end of this podcast. I could

speak to you all day. You know that and we chatterbox and I was

always asking you lots of questions. But as you know I I

always have a quote for people that take part in the podcast

and I picked this one for you. So I hope you like it and it's

I'd like to get your thoughts on what this quote means for you.

So the quote is Earth is the best planet in our solar system.

We go to space to save Earth and it was by Jeff Bezos.

It resonates on a very primal level with me.

Because, you know, when we, when when I think about my affinity

towards, and I'm living in, when I look at the affinity or the

nationalism I have for being a Canadian or you know all of that

is very raw emotion and a sense of belonging that talks about

sense of belonging. And many of our stories, stories that we

tell ourselves, our stories about not belonging. A lot of

the challenges that we have are could be distilled down to the

root cause of not belonging.

And I think Earth is the common denominator for that. And when

we actually were to look above and beyond the problems the the

differences. You know the the only common denominator between

all of us is is is is this planet is is the planet that has

given us the chance to to thrive  
is the chance to become life

become beings and the  
responsibility that comes along

with making sure we we preserve  
it the right way, the most

responsible way. So you are  
right or.

The, the, the, the quote. It  
hits home in a very on a primal,

instinctual level.

How does that sound? Very, very  
philosophical. Wasn't where I

was thinking you were going  
because I picked it for you

because I was thinking about the  
mining. So, so, so you gave me a

different answer, which is  
always really nice. A question I

always ask towards the end is if  
you could go to space, would you

go and why? No questions asked.  
The only thing that will give me

any type of hesitation would be  
the impact of that on my family,

which is something I had to deal  
with.

In 2016 I told you about and the  
question that I needed to get

answered. But as I go through  
life, the affinity and that

level of risk taking does become  
lower. But there is that the the

chance of not being able to  
return home for whatever reason,

not being able to see my kids  
does become and my wife does

become problematic. But

primarily I think as much as we  
are, we want to belong, we also  
want to explore. So there is  
that dichotomy and that paradox  
that's that's driven.

Humankind to do extraordinary  
things. And I think I I battled

that within me and the answer  
would be yes, I would go. Can I

just say it's been a pleasure  
chatting to you? Thank you so

much for coming in the podcast.  
And genuinely, I cannot wait to

hear what's next for you. And  
I'm looking forward to hopefully

being a part of that journey.  
And yeah, you've got everybody

from the International Space  
University Executive programme

behind you 100%. I'm sure I'm  
going to pick you up on that.

I'm gonna be committed.

To keep you up to speed about  
what happens and how how things

transpire with me I I couldn't  
thank you more for giving me the

opportunity to be on your  
podcast and and have a chat with

you formally like this and just  
wanted to let you know that we

all have dreams and our dreams  
somehow if we try our best we'll

come into and flourish into  
reality. So I'm not going to

give up on that you know as as  
we're speaking actively I'm

looking at different  
opportunities and hopefully

maybe the next time you and I  
talk formally is.

Based around the next venture  
and I'm so excited. I hope so.

Don't ever give up. Thank you so  
much and you take care. Awesome.

Thank you. Bye, bye.