

Intro to Validating Assumptions:

Adding value at any stage of the product
life cycle

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Assumptions overview

Intro to Validating Assumptions

As designers we have to watch out for risky assumptions and be sure we are testing them. We must help others understand the importance of doing so as well.

Testing & validating assumptions is part of our learning mindset. It adds value fast by helping us uncover the highest value user problems to solve and the biggest risks to project success. Everyone, not just designers, can practice this, at any stage of an engagement or project.

What is an assumption?

An assumption is a best guess despite a lack of proof. It is commonly biased in some way. We can't know everything before starting a project, so some assumptions are usually necessary to shape our initial outcome or product goals.

Why untested assumptions are dangerous



The trouble with assumptions is that **they are often treated as facts** later in the project when team members forget that the assumptions have a shaky base. But **decisions based on incorrect assumptions can have disastrous outcomes.**

Why “validated” assumptions can be dangerous



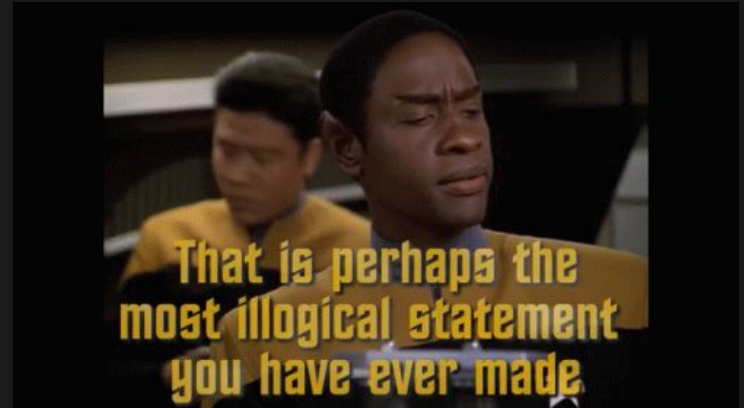
We should be careful with the word “validated” after testing a design to ensure it’s not thought of as done. Testing designs are a great way to *partially* derisk and gather information to help us decide to pivot or persevere. It helps us get a good start. **But, testing working software released to end-users is always the best way to truly validate.**

Great, so how can we identify assumptions?

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By actively listening, **asking questions**, and talking to end-users of the product.

Is this logical?
How do we know?



What if we identify a lot of assumptions ?

How do we know which are the riskiest ones to test?

Do we test everything?

Ask more questions to understand risk



How do we identify all the assumptions?



Honestly, we probably can't.

But we can assumption storm together...

Even still... **working software released to the end-users is the best way to help us know the unknowns.**

TIP: USE A SPECIFIC PROMPT

“Is there anything we don't know that could make the whole thing explode?”

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**Testing & validating assumptions
helps de-risk, and course correct
nebulous projects**

Speaking of nebulas....



Speaking of nebulas....



Problem

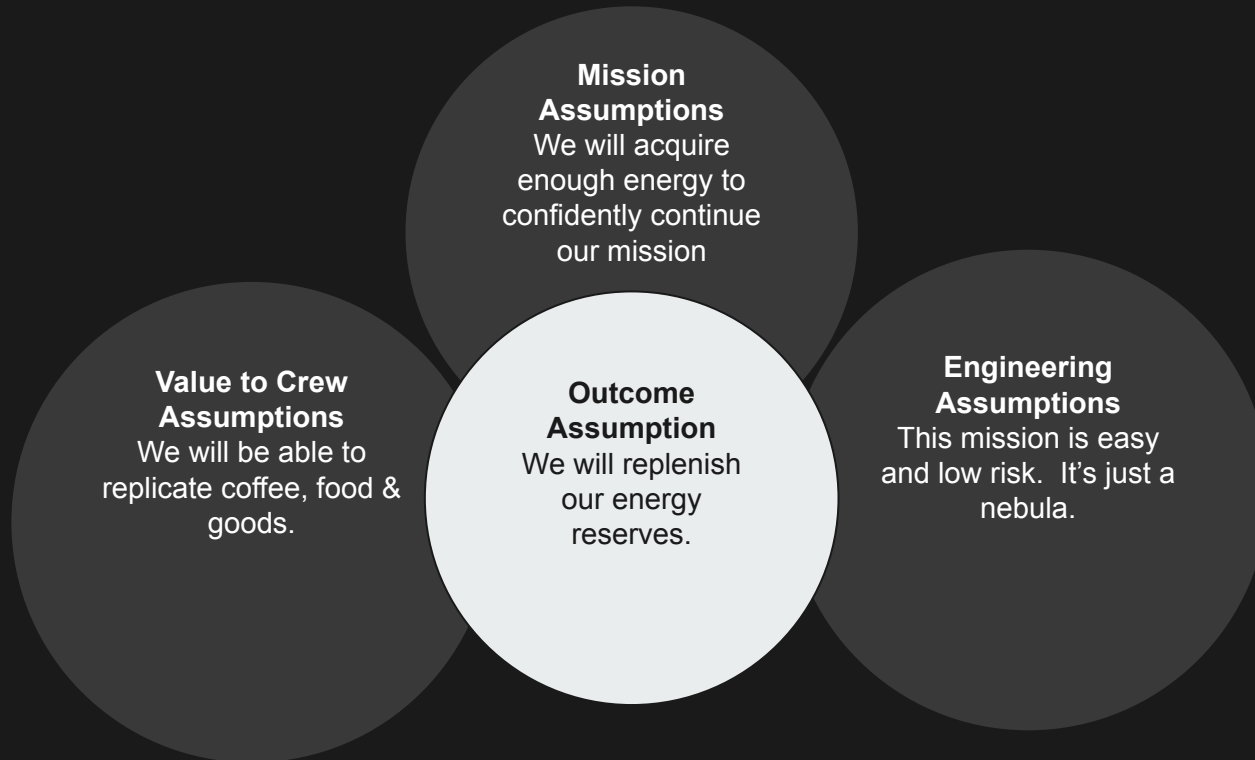
Voyager's energy reserves were rapidly depleting and they needed a new energy source.

Hypothesis

They encountered what they assumed was a nebula. Scientific readings showed it contained particles they could use for energy. Janeway decided to set a course into the nebula.



Captain Janeway's reasonable hypothesis **'This is a nebula that contains particles we can use for energy'** led to all these other assumptions



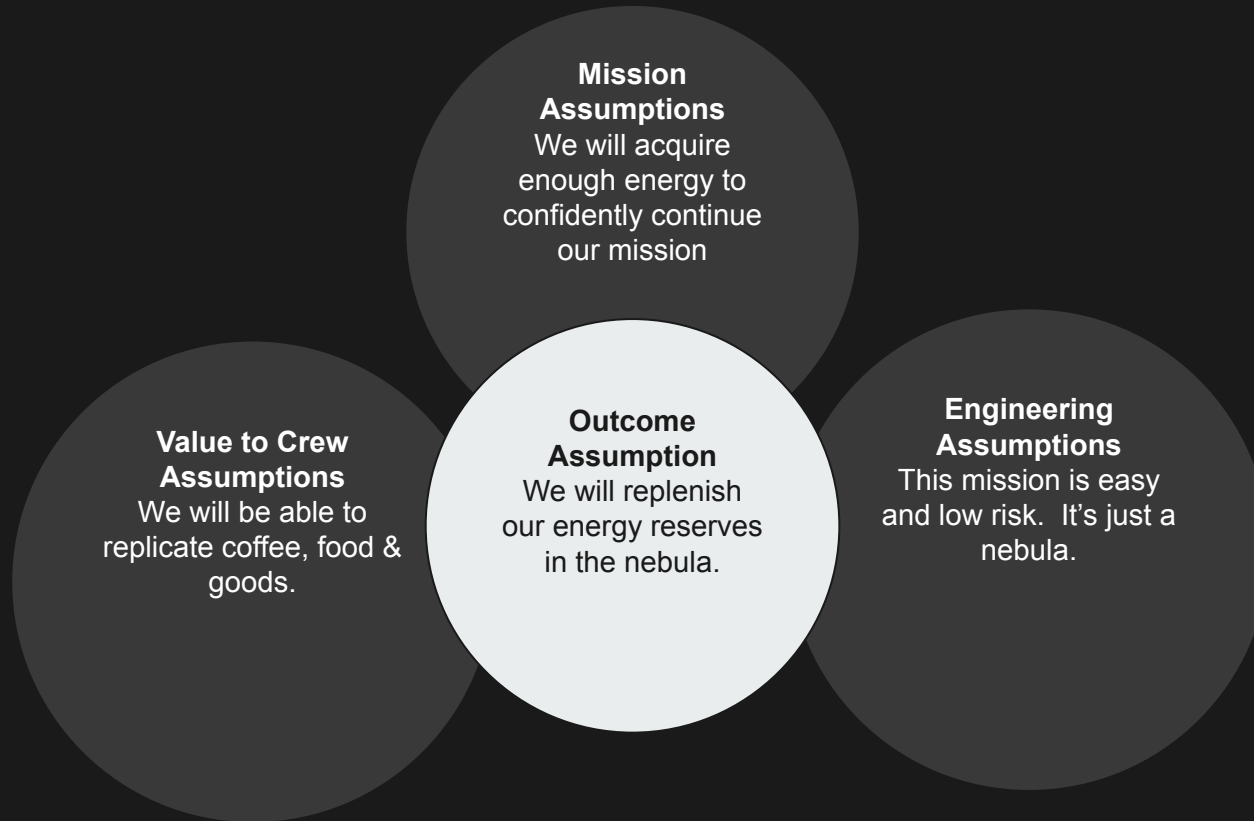
As the ship entered the nebula they encountered an unusual energy barrier.

Someone focused on testing assumptions might have thought, *‘Hm. A nebula wouldn’t have a barrier like this. I didn’t expect this to happen. Is there something we’re missing here?’*

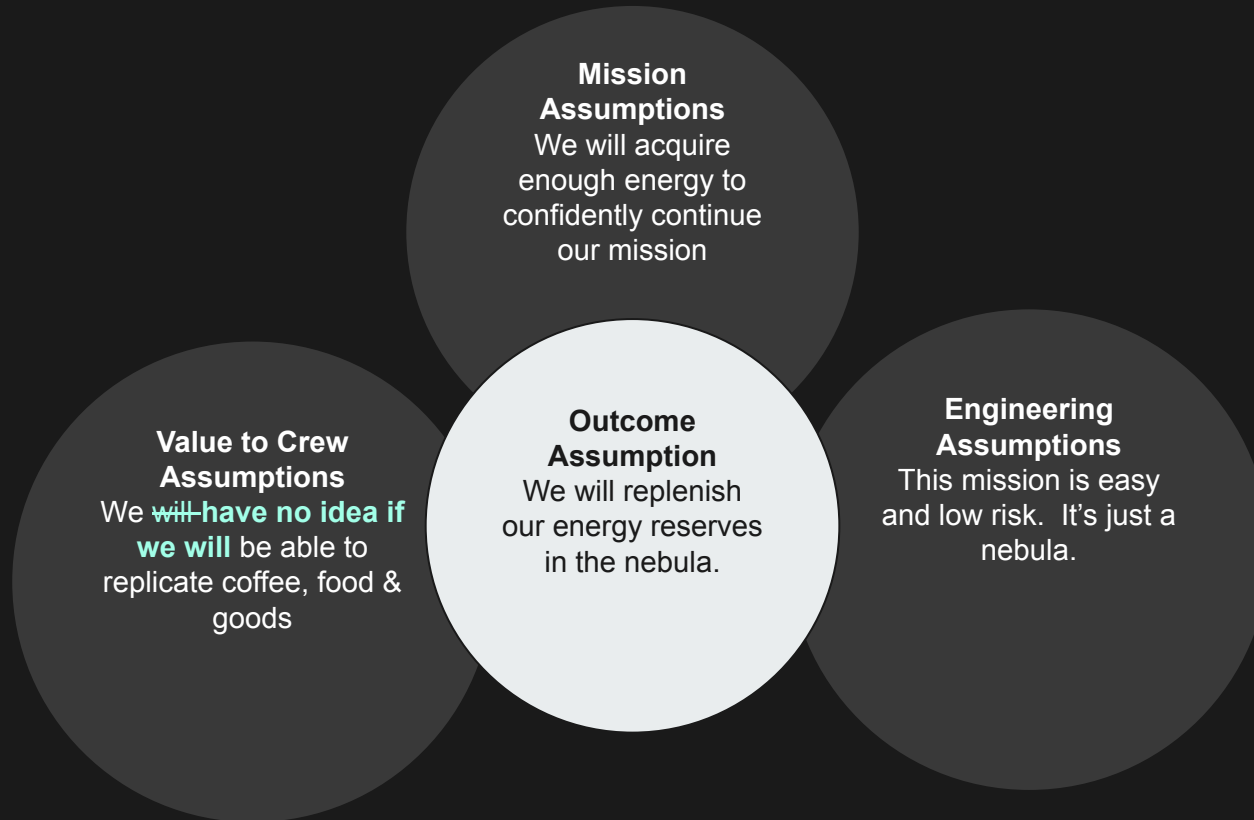
They might have asked at that key moment,

“How do we know this is a nebula? Is it possible it’s not? If so, what’s the risk?”

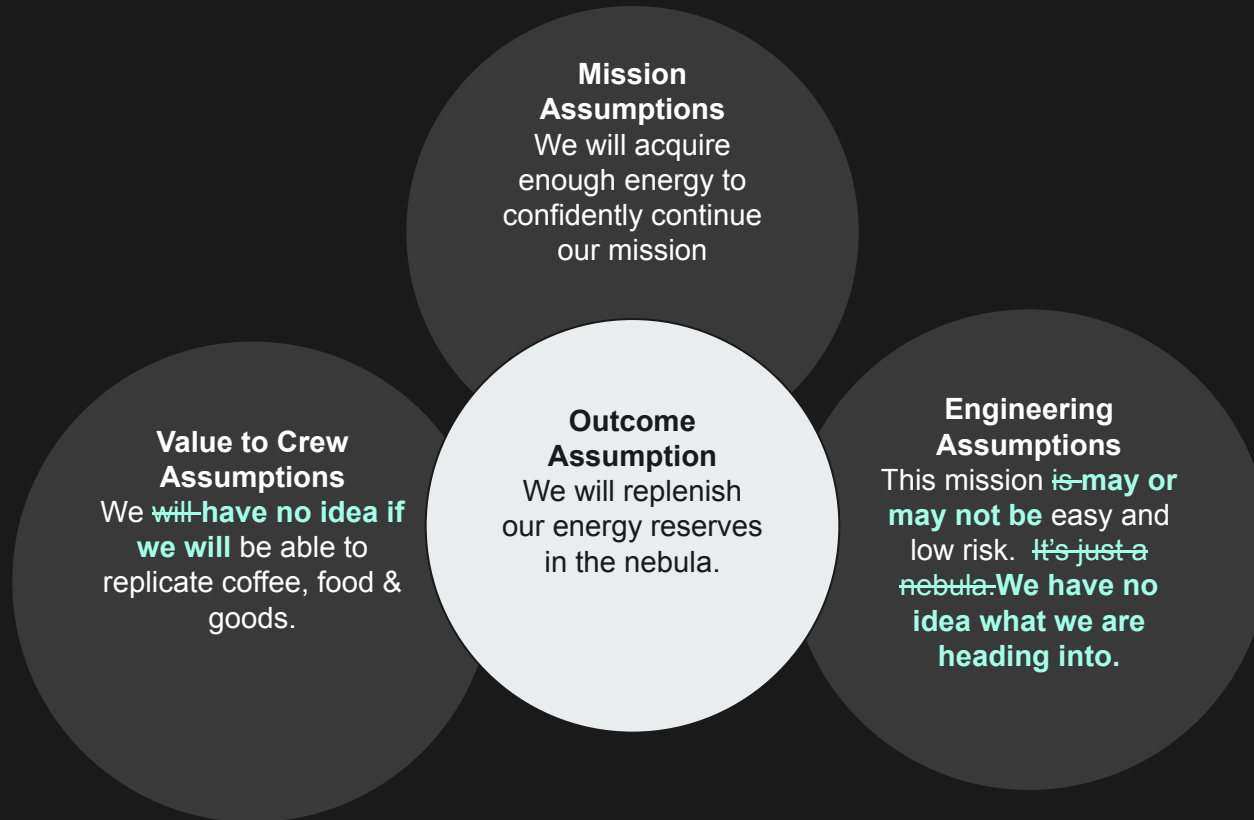
Let's play that out. **What if it's not a nebula?** **What's the risk?**



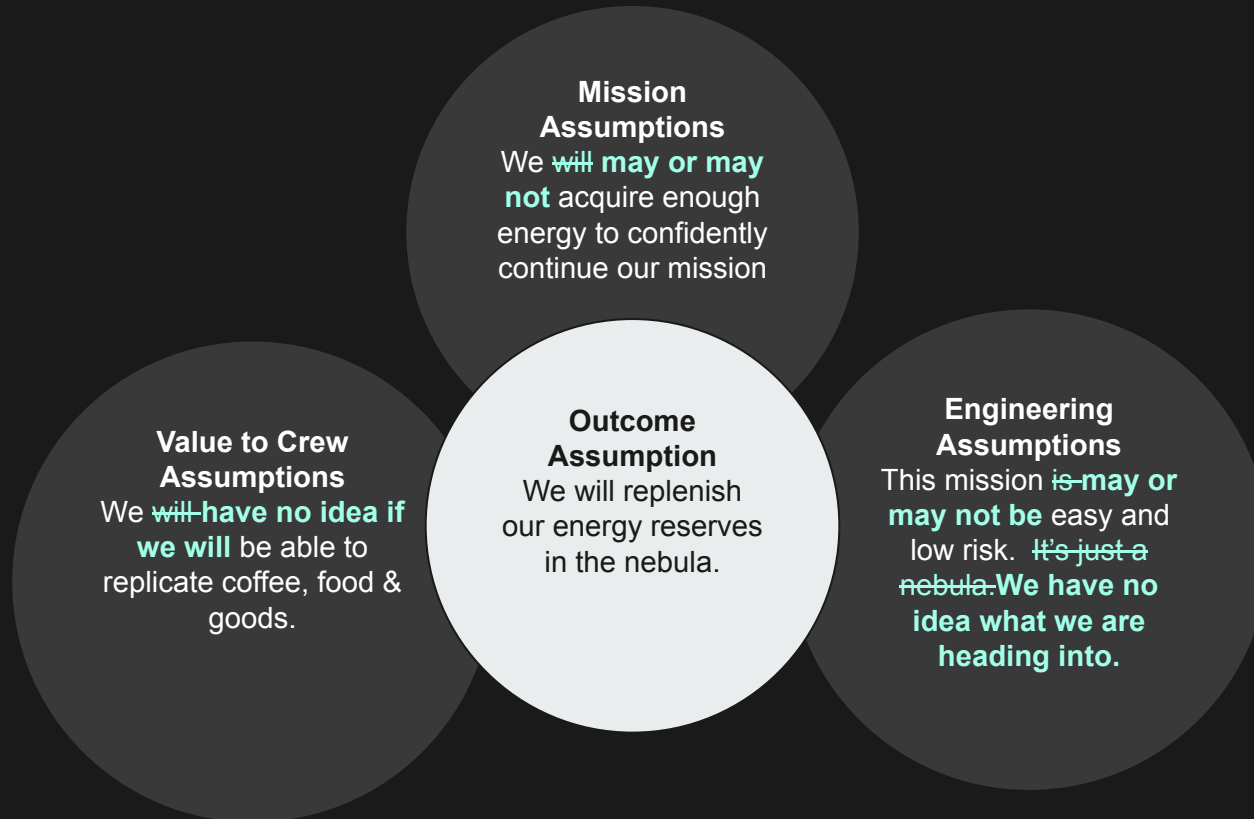
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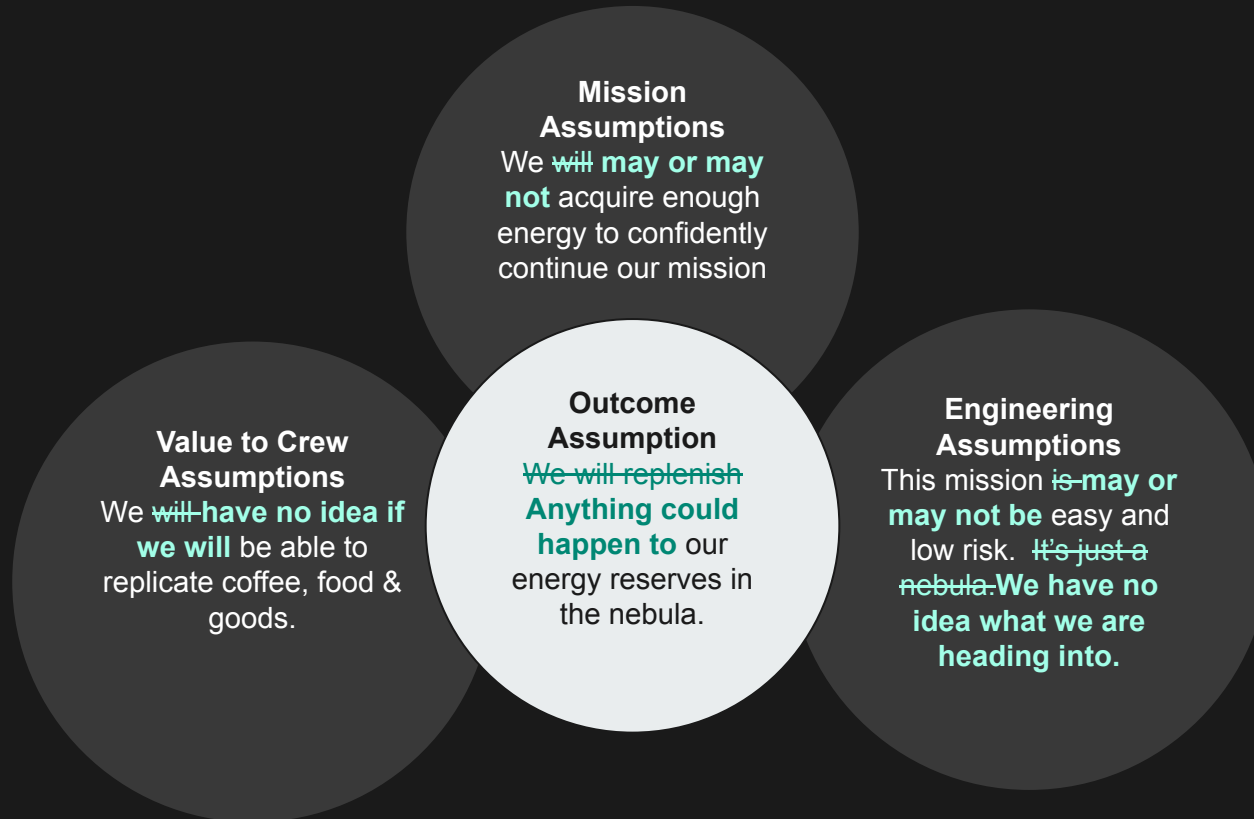
Let's play that out. **What if it's not a nebula? What's the risk?**



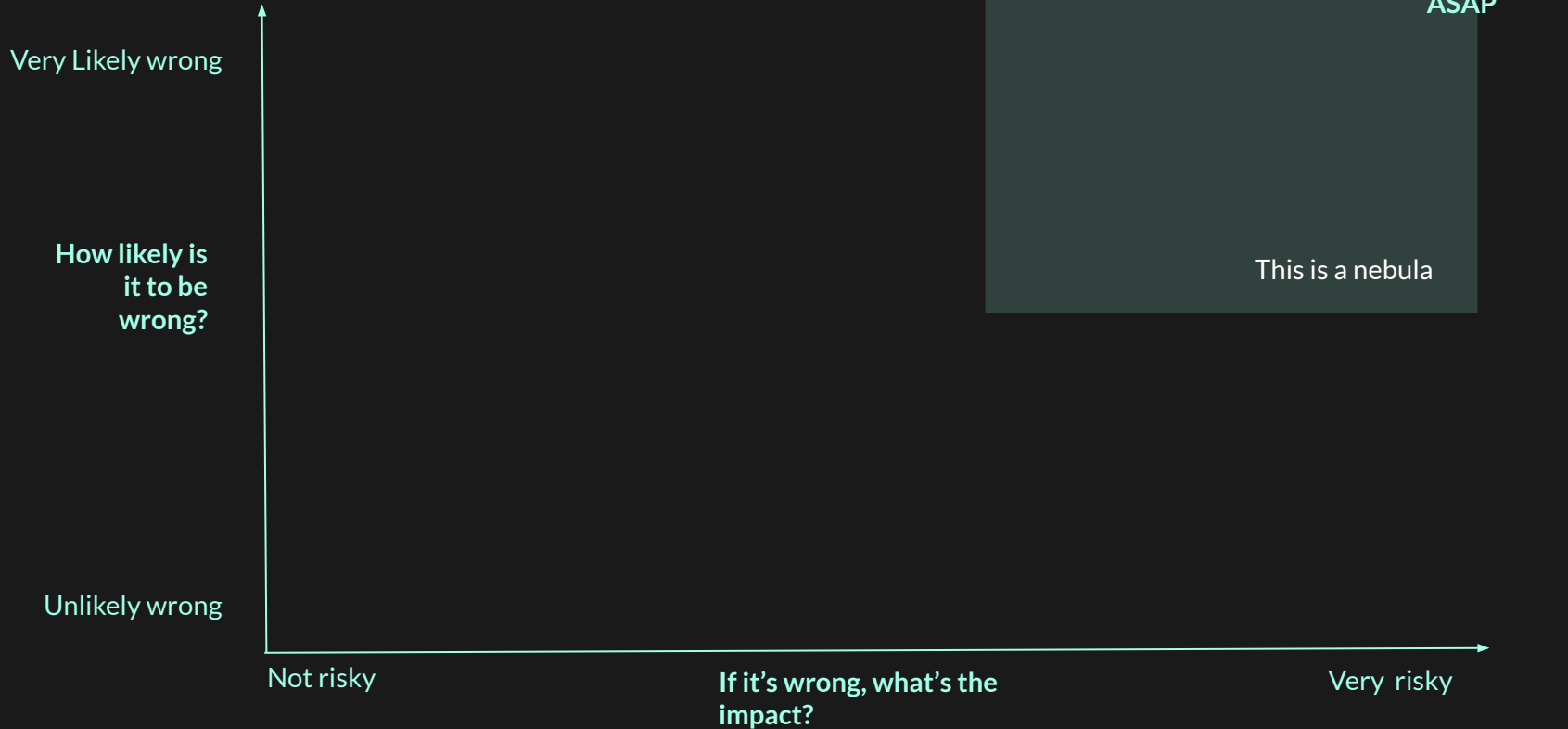
Let's play that out. **What if it's not a nebula? What's the risk?**



Let's play that out. **What if it's not a nebula? What's the risk?**



Should we get more info? Probably....



Buuut... Janeway **did not test the assumption** in that key moment when Voyager really could have used more information.

Instead she broke out the photon torpedoes.





Can we test the assumption yet?
What. Is. Happening?

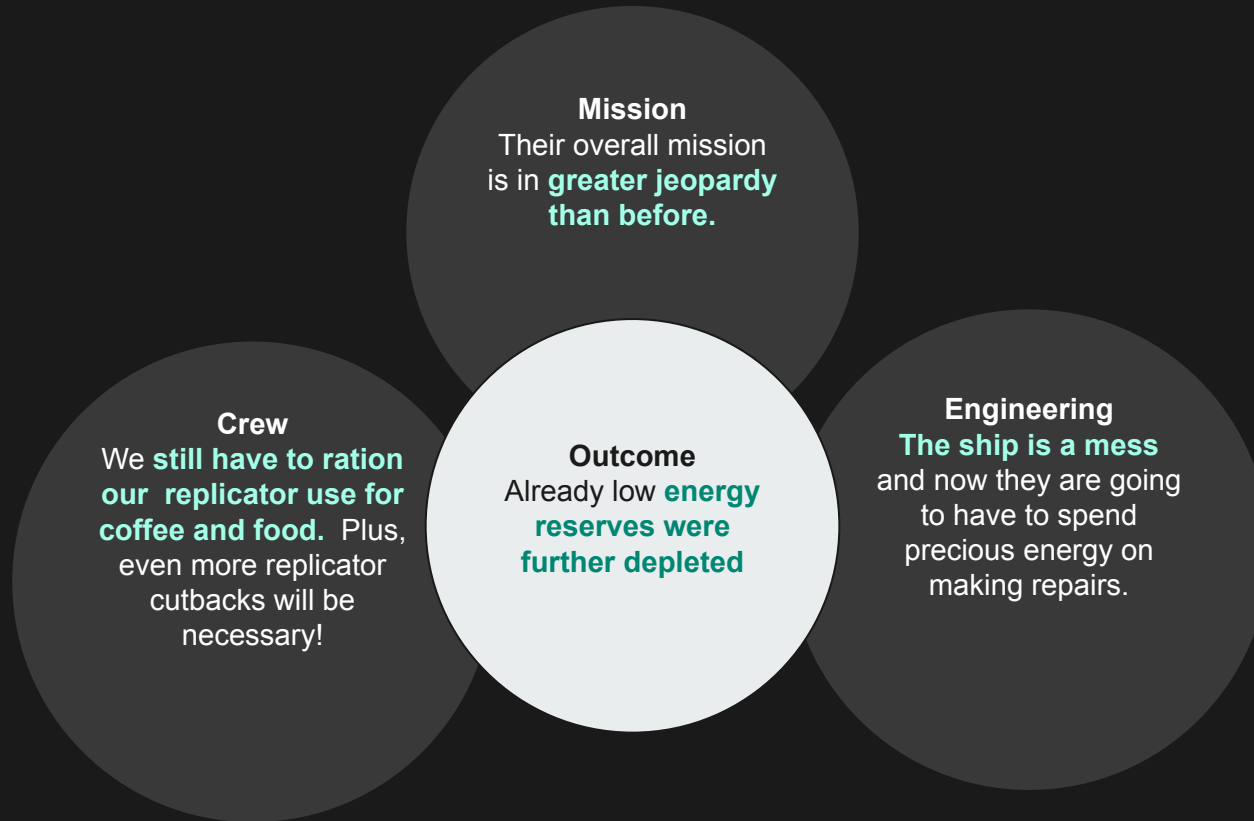
Voyager got into trouble. These things
definitely shouldn't be happening in a Nebula!

Oops....

this is not a nebula.



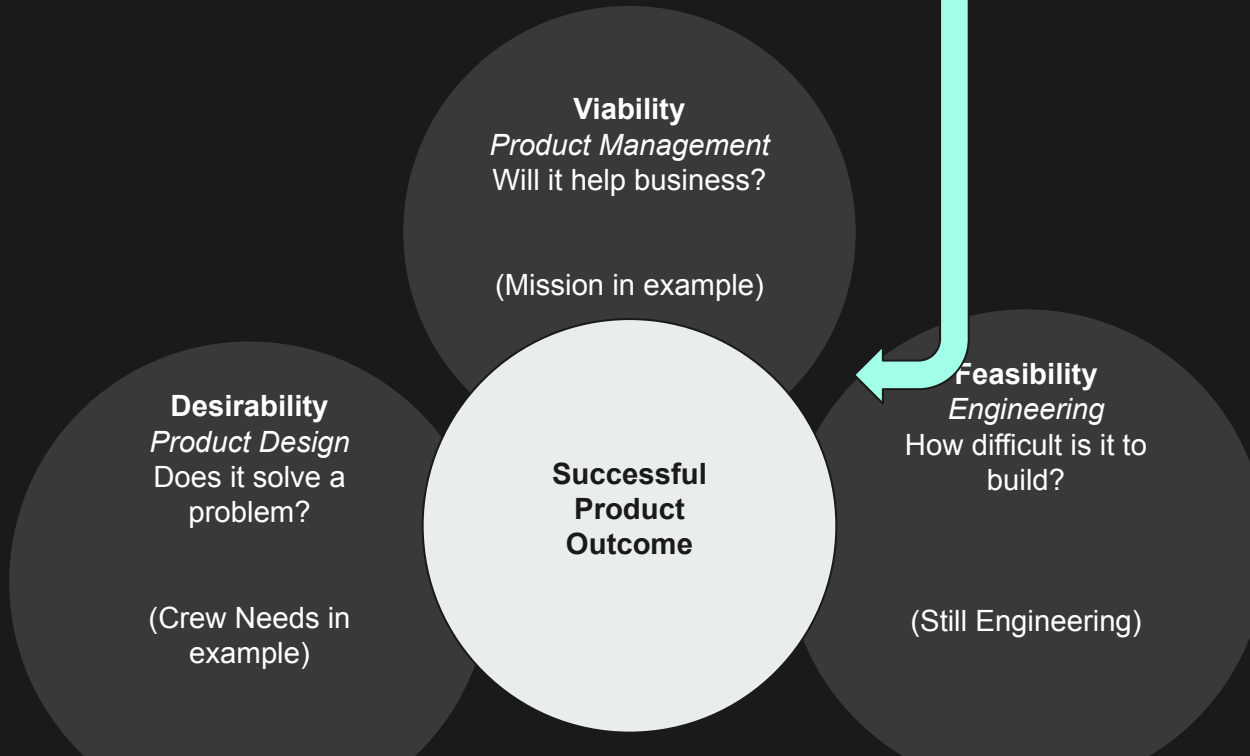
Outcome: Worse off than before the mission began



**Skeptics may be thinking...but if they tested the assumption earlier,
Voyager still wouldn't have found more energy?**

What did we learn?
(Not so metaphorically)

Successful product outcomes happen at **this intersection**, as long as assessments are grounded in tested assumptions.



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**Testing & validating assumptions
empowers teams to deliver better
outcomes**

Here's the scenario:

Validated Problem: Frankie has money and would like to take short weekend trips out of the city, but doesn't have the time to research and plan.

What we know about Frankie:

- New Yorker
- Likes amenities & nice hotels
- Loves the great outdoors

Frankie's Constraints:

- Must keep travel to 2 hrs each way (4 hrs roundtrip)
- Only has strictly weekend time

Proposed Outcome

We arrive mid project and are asked to help implement the following story:

As Frankie,

I want to drive 2 hours to a luxe historic hotel located Upstate and right on the Appalachian Trail

So that ... 🙌

Let's identify possible untested assumptions

(The team has already completed similar packages but nothing has been released to the public yet)

As Frankie,
I **want** to drive 2 hours to a luxe historic hotel located Upstate and right on the Appalachian Trail

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As Frankie,
I **want** to drive 2 hours to a luxe historic hotel located Upstate and right on the Appalachian Trail

So that ... 🙌

A few assumptions:

- Frankie wants take this trip
- Frankie is able and willing to drive
- Frankie wants to stay in a luxe historic hotel
- Frankie wants to hike the Appalachian trail
- Frankie wants to go Upstate

Possible assumptions >> Questions to team

Let's understand if assumptions have been tested yet by asking questions ... nicely :)

Assumptions:

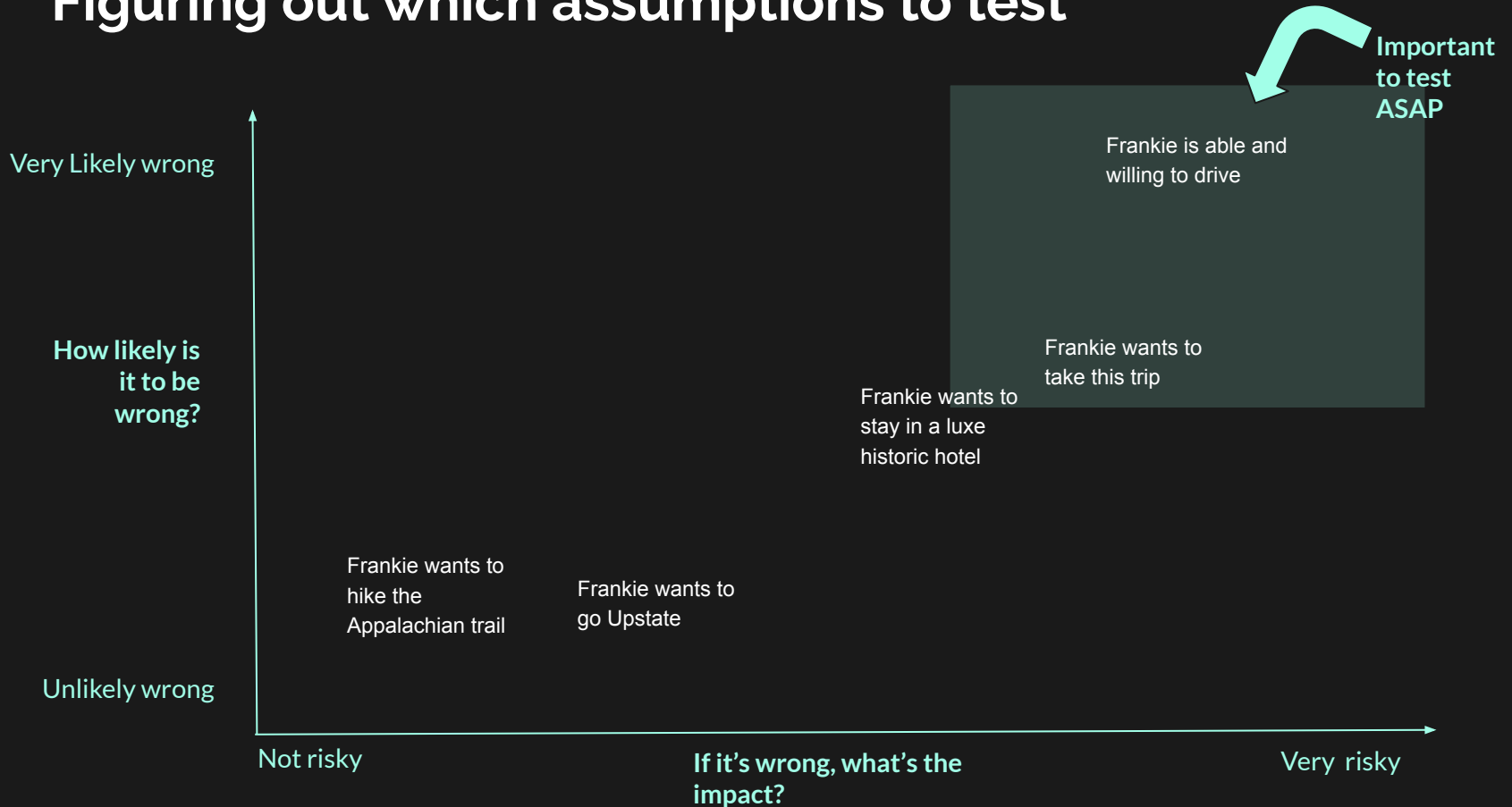
1. Frankie wants take this trip
2. Frankie is able and willing to drive
3. Frankie wants to stay in a luxe historic hotel
4. Frankie wants to hike the Appalachian trail
5. Frankie wants to go Upstate



Questions we might raise with the team:

1. I know I'm new on this project so bear with me as I learn. I'm curious, what is Frankie interested in doing on this trip?
2. I've heard not a lot of New Yorkers have cars. Does Frankie drive?
3. Interesting, does Frankie like luxe modern hotels too? I'm curious about our options.
4. I've had some friends do the Appalachian trail, but they did multi-day or week hikes? Are there spots on that trail that are great for shorter ones? Is hiking Frankie's favorite outdoor activity?
5. How did we decide on the Upstate area?

Figuring out which assumptions to test



What did we learn?

What does Frankie think?

Frankie wants to take
this trip

“I prob wouldn’t book this trip. I don’t really want to stay on the trail in the middle of nowhere. I want to hike but also shop for antiques. Sometimes I have difficult work weeks and low energy. It seems like a big commitment.”

Frankie is able and willing to drive

“Drive!? No. Rental cars are astronomical and the traffic increases the travel time by almost double every time.”

Frankie wants to stay in
a luxe historic hotel

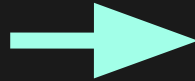
“Yeahhh. I like historic hotels. I don’t really care as long as they are nice. But honestly my aesthetic is more modern. It would depend on the cost though. I might go with historic if it was very nice and a good deal cheaper”

Let's iterate a better outcome

As Frankie,

I want to drive 2 hours to a luxe historic hotel located Upstate and right on the Appalachian Trail

So that ... 🙌



As Frankie,

I want to take the train 2 hours to a luxe modern hotel with cab/shuttle services located in a small town on the Hudson River

So that I can go hiking, antique shopping, or out to dinner, depending on my energy level and mood.

**Let's test it...what does
Frankie think about
this?**

**“That would be a good option! I
would never have enough time to
plan something like this on my
own!”**

Let's see what happens....

**Frankie chooses to book a trip
but doesn't sign up for the
subscription service.**

Wrap up: Serious

Testing & validating assumptions is part of our learning mindset which we adopt across disciplines and practices. It helps us uncover the highest value user problems to solve and the biggest risks to project success.

Remember to:

- Actively listen and ask questions to uncover assumptions
- Evaluate the risk of assumptions to understand what to test
- Keep an eye on the prize (working software)!
 - Testing assumptions help us get enough information to de-risk and build working MVP that is valuable to the user
 - True validation and uncovering the unknown-unknowns happen when we test and release working software to end-users

Wrap up: Whimsical!

The Socratic Method Poem

“Oh Socratic Method, oh how you inspire,
A way to question, to delve and inquire.
A process so simple, yet oh so wise,
A tool for Product Designers, to analyze and theorize.
You guide us to find what we don't yet know,
And through inquiry, a solution will grow.
To understand the problem, before we start to design,
And create products that truly shine.
With questions asked and answers sought,
We delve deeper, and our thoughts are brought,
To the forefront, and we see what's true,
And in this way, our products are improved.
So dear Product Designers, let us embrace,
The Socratic Method, with a smile on face.
For with its guidance, our creations will soar,
And delight users forever more.”

Concept by jhoard

Written by chat.open.ai

[Prompt] “As a poet, write a whimsical poem using the “Socratic Method” as the subject. Poem should be directed towards Product Designers.”

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Let's discuss