[SQUEAKING]

[RUSTLING]

[CLICKING]

LUIS PEREZ-BREVA: Episode 8, are you sure that's a risk? If something can go wrong, it will go wrong. This is what's known as Murphy's law, and it is one of those awkward rules of thumb that every engineer has had to wrestle with. Just keep it in mind for now.

The common advice given to innovators and entrepreneurs is that you should focus. You're told to pick one idea, or one market, or one user, whatever, and work on it. The advice makes it seem like this is only your choice to make. The more focused you are, the lower the risk. But you are not being advised to focus, per se. Rather, you're being told to narrow your options. There is a difference.

Remember the analogy we drew between working on the problem and what Chris Hadfield said about the way astronauts prepare for missions to the International Space Station? The way you're being asked to focus is similar to telling astronauts to pay attention only to problems in some parts of the rocket and ignore everything else. The problem with that advice is Murphy's law. It always stands in the way. If something can go wrong, it will.

And, as Chris Hadfield put it, you just decided to not pay attention to many things that can kill you. The same might be true for your innovating. Narrowing your options at the start to just the one idea increases your risk and gives you a false sense of certainty. That's exactly the opposite of what you want.

Focusing and narrowing are not the same thing. This is easy to see in a camera. When you zoom, you narrow the field of view. When you focus the image, the image gains sharpness and clarity, but the field of view stays the same. Whether you are the innovator or the capital, you want to reduce risk by increasing clarity around what you are doing. Narrowing your options only increases risks.

Like Murphy's law and the distinction between focus and narrowing, in the new mindset, we avail ourselves of several finance and general engineering principles, like preventing error accumulation, diversification, the difference between precision and accuracy, and many more that fall beyond the scope of this introductory course. Those principles help innovators make informed decisions without wasting time or inadvertently increasing risk.

In the MIT mindset, students do this by keeping at least three distinct options open throughout their explorations. They focus on coming up with next steps and actions that will help them advance in all three at the same time. Which three they focus on might change as they gain understanding of the problem, but keeping three options open helps them keep Murphy's law at bay.

Chances are, this is not the first time you heard about Murphy's law, but it might be the first time you hear it connected with innovation. We hear so many things about innovation that sometimes we forget what should be obvious. The way I typically summarize this for my students is that there is a lot of things you need to learn about innovation. You can actually use the skills you already have. The next video tells you all there is to unlearn so you can actually truly start innovating.

[MUSIC PLAYING]