Think, Build, Test
Do it Again

That’s the process engineers use when they tackle a problem. Engineers don’t have official rules telling them to follow this set of steps. But, over time they’ve learned that they get the best results this way.

They think and brainstorm about a problem and factors they have to consider to solve it. They come up with an idea and build a prototype. They test the prototype. And, then they repeat the process to improve their results.

It Takes a Lot of Back and Forth

Engineers often move back and forth within the loop, repeating steps over and over again before moving forward. It’s a key to engineering success. Sometimes, engineers will focus on one specific step, and when complete, pass the project off to another team with a different skill set.

Astronaut Barry “Butch” Wilmore experienced the design process firsthand, when he had to 3D print a necessary part for space station repair.