I wanted to share with you the impact of the war in Ukraine on supplier networks. As you can see in this image, there are 2,550 large U.S. companies that have a Tier 1 supplier from Russia or Ukraine. It's hard to do business with Russia today because of sanctions, and Ukraine because it's a war zone. So, you can't work with those suppliers anymore. There actually are more U.S. companies impacted with a Tier 1 supply base from this region than European companies. And this is very counterintuitive to what people would think. Most people would say the war is a European regional issue. It's at the borders of the European community and not necessarily a big event for the rest of the world. But it is a big event because of that Tier 1 supplier connection.

But let's now talk about the Russian and Ukrainian suppliers that deliver to the Tier 1 suppliers—the Tier 2 and Tier 3 suppliers further up the supply chain—and the number of companies impacted. That's 80,000 US companies when looking at Tier 2 and 340,000 US companies when you go all the way to Tier 3. This is a massive impact. And the reason this is the case is that Ukraine and Russia are home to many companies that deliver quite early upstream in supply chains. They are close to natural resources, to ingredients used everywhere. So, let's talk about these items. I selected the biggest items or categories of impact. I'm not talking about minor things. I'm talking about goods where Ukraine and Russia are in the top three producers in the world. I'll call out a few. Neon gas, for example. Do you know that 70% of the world's production of neon is from Ukraine? And 90% of the neon gas used for semiconductor production comes from Ukraine—with 50% coming from just two suppliers. All those suppliers are now not operating, which means there is not a single element of neon gas coming out of Ukraine. If the situation lasts for a couple more months, we are going to add yet another set of years before the semiconductor situation impacting so many industries actually stabilizes. Do you know that today people are actually buying washing machines just to take the semiconductors out? That's how scarce they are. And then there are agricultural products: Barley, sunflower oil, and potatoes are all from Ukraine, and the shortage of these goods is driving food prices completely through the roof.

Regarding Russia, it's oil and gas. Russia is number two in gas production in the world and number three in oil production. And here's the supply chain impact.
All of a sudden, the prices go through the roof, and we have tipping points in terms of the networks. Will I regionalize the supply chain? Will I electrify some of my lanes? As a business, can I continue? What we’re now seeing is quite a number of smaller companies just simply stopping to do business. They do not have the cash to continue operations with these sorts of energy costs. It's adding an enormous amount of supply disruptions that are starting to mirror what we saw during COVID—and we hadn’t even stabilized supply chains after COVID. So, the bullwhip effect is now being fueled by yet another event. And then last but not least, ocean freight. It's a very little-known fact that almost 16% of all seafarers are either Russian or Ukrainian people. Think about an ocean freight provider with enormous but scarce capacity, already struggling tremendously from the pandemic, now being hit by 16% less labor availability because of this particular event. So, you see that the impact is quite widespread.