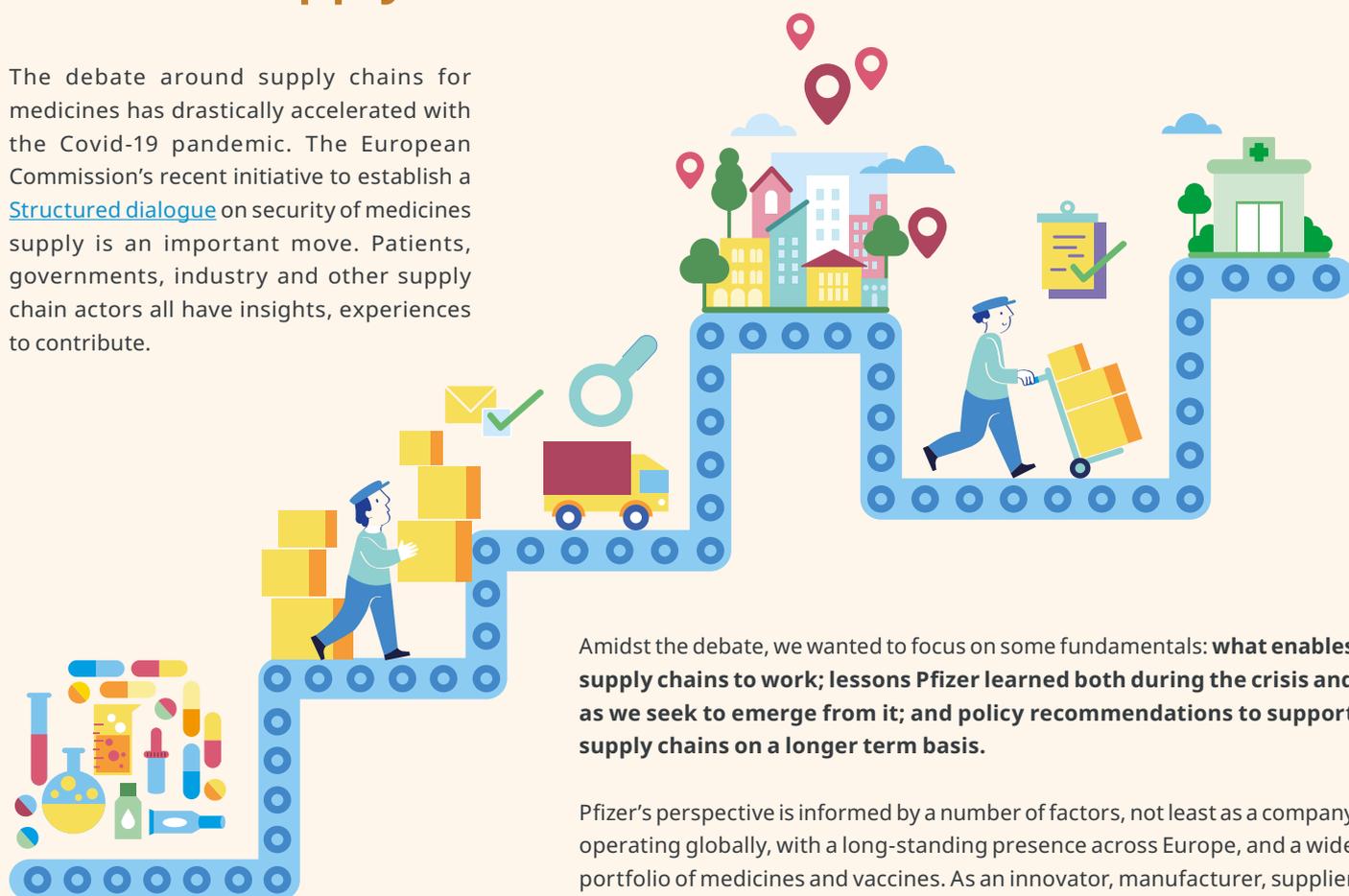


Ensuring flexible and resilient supply chains

The debate around supply chains for medicines has drastically accelerated with the Covid-19 pandemic. The European Commission's recent initiative to establish a [Structured dialogue](#) on security of medicines supply is an important move. Patients, governments, industry and other supply chain actors all have insights, experiences to contribute.



Amidst the debate, we wanted to focus on some fundamentals: **what enables supply chains to work; lessons Pfizer learned both during the crisis and as we seek to emerge from it; and policy recommendations to support supply chains on a longer term basis.**

Pfizer's perspective is informed by a number of factors, not least as a company operating globally, with a long-standing presence across Europe, and a wide portfolio of medicines and vaccines. As an innovator, manufacturer, supplier to Europe and an exporter globally, our ability to meet patient needs depends on highly calibrated supply chains.

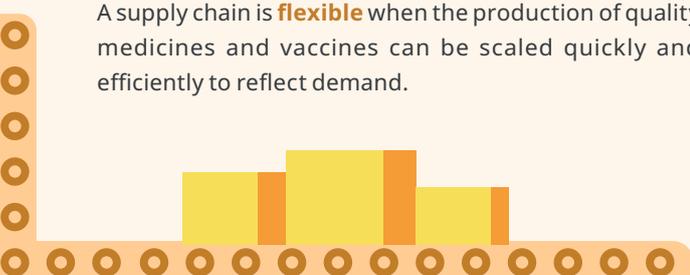
What enables supply chains to work

Stepping back, supply chains enable goods – in our case, medicines and vaccines – to reach from their production all the way to the patient. Supply chains also cover the many early and intermediate stages needed to manufacture a medicine.

The basic rule for a supply chain is to deliver the good needed where it is needed in the quantity needed. And just as the intrinsic value of an everyday chain is in both its strength, and its ability to move (be it a chain on a bike, or powering a conveyor belt), fundamental qualities for supply chains are resilience and flexibility.

A supply chain is **flexible** when the production of quality medicines and vaccines can be scaled quickly and efficiently to reflect demand.

Resilience of these supply chains depends on the ability to reposition inventories according to need and across borders to maintain supply. This is delivered by a global value chain of more than one source which can be adjusted to accommodate regional supply disruptions.



A supply chain that is both flexible and resilient can reduce or eliminate unexpected impacts to patients and healthcare systems; it is also at less risk of disruption from outside events, be they natural disasters such as earthquakes or, as seen so acutely today, a global pandemic.

Lessons From COVID-19

Ahead of the first wave in Europe in Spring 2020, and considering experience gained in Asia just before, Pfizer implemented a comprehensive preparedness plan to enable our sites to meet the huge surge in demand – of 200%+ – for some of our most needed medicines, particularly those for use in intensive care units (ICU). During the first wave, we shipped 17 critical medicines at over 150% of forecast across Europe.

Our network of manufacturing sites was able to meet patient needs during this situation because of a number of factors, including:



GOVERNMENT-INDUSTRY DIALOGUE

Tackling a critical situation requires a clear and shared understanding of problems, causes and solutions. In this case, close dialogue allowed for better insight into projected patient numbers, focus on regulatory flexibility, and urgent action to allow the movement of critical goods and workers, such as through 'green lanes'.

EFFECTIVE FORWARD PLANNING

As Covid-19 first struck Asia, companies activated existing contingency planning, allowing a ramp up in production with global impact: as the virus subsequently spread to Europe and beyond, this allowed us to better manage demand as hospital beds here began to fill. This depends on effective forecasting and demand planning.

AGILITY IN REALLOCATING SUPPLY

Where we observed 200% plus demand spikes, we needed to be able to reallocate supply fast: increases across Europe differed in timing, scale and duration. This agility was also needed for importing and exporting: Pfizer redirected available supply of ICU medicines from both the Americas and Asia-Pacific to benefit patients in the EU.

AND WHAT DIDN'T WORK

Export and other restrictions in Europe in Wave 1 impacted the reallocation of excess inventory to countries and patients in need. Likewise national measures to stockpile medicines, however well intended, are not likely to help patient supply: no medicines supplier would have capacity to stock build across all Member States; rather it would impede flexibility and prevent us from being able to evaluate trends.

And as we all seek to come out of the pandemic, enabling vaccines supply chains to function globally is front and centre. The Pfizer-BioNTech vaccine contains 280 different components, manufactured in 86 different sites across 19 different countries. Our ability to both run clinical trials, and to quality test vaccines throughout the manufacturing process also depends on exporting. Therefore open supply chains are as critical to the basic ability to develop and manufacture a vaccine in Europe as they are to distributing to patients.



Policy Recommendations to support flexible and resilient supply chains

Given the range of issues at play, there is perhaps no single solution to supporting supply chain resilience and flexibility. Nonetheless, there are a range of policies that can have a significant positive impact: those in the 'here and now', those that create an innovative and open environment, and others that tackle vulnerabilities.

1 PROMOTE INFORMATION TRANSPARENCY

The ability to respond to changing supply needs can benefit from greater access to real-time data. Promptly communicating the best information possible can enable efficient and appropriate reactions to changing conditions, helping to meet patient needs.

2 STRATEGICALLY MANAGE INVENTORY

Distortions in the supply chain can occur when demand for medicines does not represent true patient need, or when excessive buffers of stock are kept to avoid potential future shortages. These distortions can inhibit demand forecasting and the ability to build excess capacity and reserves.

3 ENCOURAGE REGULATORY FLEXIBILITY

Pharmaceutical companies can respond quickly to patient needs with support from regulatory agencies if those agencies have sufficient capacity to handle increased demand in fast-tracking product reviews and/or approvals, as well as streamlining reviews of manufacturing process changes.

4 FACILITATE TRADE

Policies should promote flexible global supply chains. Delays can be avoided at the border and medicines kept moving to the patients who need them by removing export restrictions and other trade barriers, adopting efficient customs clearance procedures for vital goods and removing tariffs on medicines and other medical goods.

5 SUPPORT MARKET-BASED APPROACHES THAT FOSTER INNOVATION

Governments should adopt market-based policies that facilitate favourable conditions to achieving investment in innovation rather than mandating local sourcing. Mandatory local sourcing raises costs of operations and limits companies' ability to optimise global supply chains and deliver medicines in the most efficient manner.

