

I picked the supply chain industry. In this industry, there are some problems with the centralized approach, worth mentioning:

- The goods are going on a path to reach the hands of the customer. These paths are not transparent.
- In the path mentioned above, some costs are added to the price of the goods. These costs are not transparent.
- The origin of the goods is not clear and transparent.
- Whether the goods are original, high copy, or fake is not clear to the customer.

Blockchain can help transparentizing all of these while keeping the costs lower than the centralized approach.

Using a blockchain can ensure the customer about the origin, the costs, and the path it took to reach the hands of the customer. This can give the opportunity of picking the best-suited goods.

To answer the questions, let's take an example of the supply chain industry. Let's say a Nike white Air Force shoe.

1. *For what item (physical or virtual) would the blockchain be used to track changes of ownership?*

Here, the main item is the shoe. In some cases, even the leather that is used to make the shoe can be traced on the blockchain, if it is available.

2. *From whom and to whom would ownership be transferred?*

At any point, the customer can check the ownership of the shoe, which is minted by the company itself, then given to the transport company or even the truck or the plane, after that it is given to the store, and finally, it reaches the hands of the customer. All the way, the status of the shoe's ownership is transparent on the blockchain.

3. *What kinds of new transactions that currently don't exist might emerge if blockchain concepts were applied to this business?*

Actually, the NFT transaction is available on the blockchain. In the real world, instead of using in-company ledgers or signing off a

paper, people can use their mobile phones and scan a QR code to create a transaction on the public blockchain ledger.

4. *What are potential roadblocks to using a blockchain for your selected business?*

At first, it is possible that the costs of using such a public ledger become greater than the centralized ledger. But, when the technology becomes popular enough, the costs depreciate to a level that centralized ledgers cannot let you imagine.

5. *Under what circumstances might a centralized approach be better?*

If the company doesn't like transparency and wants to stay shady for its customers, it is best for it to stay centralized. Not to mention that staying centralized can cost much more in the long run since the maintenance costs of the servers and keeping them secure are all on the company, while going decentralized on a public blockchain allows them to keep the costs less.