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موضوع البحث:

digital transforming

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Introduction:

Not so long ago, businesses kept records on paper. Whether handwritten in ledgers or typed into documents, business data was analog. If you wanted to gather or share information, you dealt with physical documents — papers and binders, xeroxes, and faxes.

Then computers went mainstream, and most businesses started converting all of those ink-on-paper records to digital computer files. This is called digitization: the process of converting information from analog to digital.

Definition:

Digital transformation is the process of using digital technologies to create new — or modify existing — business processes, culture, and customer experiences to meet changing business and market requirements. This re-imagining of business in the digital age is digital transformation

So important concept:

Digitalization isn't about changing how you do business, or creating new types of businesses. It's about keeping on keeping on, but faster and better now that your data is instantly accessible and not trapped in a file cabinet somewhere in a dusty archive.

Example:

Think of customer service, whether in retail, field ops, or a call center. Digitalization changed service forever by making customer records easily and quickly retrievable via computer. The basic methodology of customer service didn't change, but the process of fielding an inquiry, looking up the relevant data, and offering a resolution became much more efficient when searching paper ledgers was replaced by entering a few keystrokes on a computer screen or mobile device.

How digital transformation became familiar to users:

Finding and sharing information became much easier once it had been digitized, but the ways in which businesses used their new digital records largely mimicked the old analog methods. Computer operating systems were even designed around icons of file folders to feel familiar and less intimidating to new users.

Digital transformation in business:

Similarly, digital transformations have reshaped how companies approach customer service. The old model was to wait for customers to come find you, whether in person or by calling an 800 number. But the rise of social media has changed service much like it's changed advertising, marketing, and even sales and customer service. Progressive companies embrace social media as a chance to extend their service offerings by meeting customers on their platforms of choice.

Importance of digital transformation :

1) it made it easy for people to do their needs with less cost and effort.
2) getting or storing information is easier in databases that makes things faster and better.
3) data comes from digitalization is easy to be stored , searched, analyzed and used.
4) working from home in hard times like time of covid19

Egypt directs to digital transformation:

Egypt understands digital transformation is imperative. It came to this realisation even before the pandemic. The trend was included in Egypt's Vision 2030. The vision was an initiative launched by Egypt's President Abdel-Fattah El-Sisi in February 2016 to align the country with the Sustainable Development Goals (SDGs) set by the United Nations (UN).

Digitalization includes coins and financial dealing like using digital coins as bitcoin:

Bitcoin difinition :
Bitcoin is an open source censorship-resistant peer-to-peer immutable network. Trackable digital gold.
Bitcoin is an innovative payment network and a new kind of money based on block chain concept.
Bitcoin is the most trusted digital coin .

Concept:
Bitcoin uses peer-to-peer technology to operate with no central authority or banks; managing transactions and the issuing of bitcoins is carried out collectively by the network. Bitcoin is open-source; its design is public, nobody owns or controls Bitcoin and every one can take part. Through many of its unique properties, Bitcoin allows exciting uses that could not be covered by any previous payment system.

Description:
Launched on Jan. 3, 2009, by an anonymous computer programmer (or group of programmers) under the pseudonym “Satoshi Nakamoto”, the Bitcoin network (with an uppercase “B”) is a peer-to-peer electronic payment system that uses a native cryptocurrency called bitcoin (lower case “b”) to transfer value over the internet or act as a store of value like gold and silver.

Each bitcoin is made up of 100,000,000 satoshis (the smallest units of bitcoin), making individual bitcoin divisible up to 8 decimal places. This allows people to purchase fractions of a bitcoin with as little as one U.S. dollar.

Bitcoin and other cryptocurrencies are like the email of the financial world. The currency does not exist in physical form, value is transacted directly between the sender and the receiver, and there is no need for banking intermediaries to facilitate the transaction. Everything is done publicly through a transparent, immutable, distributed ledger technology called blockchain.

Bitcoin users send and receive coins over the network by inputting the public-key information attached to each person’s digital wallet.

In order to incentivize the distributed network of people verifying bitcoin transactions (miners), a fee is attached to each transaction. The fee is awarded to whichever miner adds the transaction to a new block. Fees work on a first-price auction system, where the higher the fee attached to the transaction, the more likely a miner will process that transaction first.

Bitcoin mining

Every single bitcoin transaction that takes place has to be permanently committed to the Bitcoin blockchain ledger through a process called “mining.” Bitcoin mining refers to the process where miners compete using specialized computer equipment known as Application-Specific Integrated Circuit (ASIC) chips to unlock the next block in the chain.

Unlocking blocks works as follow;

This method of requiring miners to use machines and spend time and energy trying to achieve something is known as a Proof-of-Work system and is designed to deter malicious agents from spamming or disrupting the network.

Whoever successfully unlocks the next block is rewarded with a set amount of bitcoin known as “block rewards” and gets to add a number of transactions to the new block. They also earn any

transaction fees attached to the transactions they add to the new block. A new block is discovered roughly once every ten minutes.

Bitcoin block rewards decrease over time. Every 210,000 blocks (or roughly four years), the number of bitcoins in each block reward is halved to gradually reduce the number of bitcoins entering the space over time. As of 2021, miners receive 6.25 bitcoins each time they mine a new block. The next bitcoin halving is expected to occur in 2024 and will see bitcoin block rewards drop to 3.125 bitcoins per block. As the supply of new bitcoin entering the market gets smaller it will make buying bitcoin more competitive – assuming demand for bitcoin remains high.

Bitcoin's energy consumption

This process of requiring network contributors to dedicate time and resources to creating new blocks ensures the network remains secure. But this security comes at a price. The Bitcoin network currently consumes around 93 Terawatt Hours (TWh) of electricity per year – around the same energy consumed by the 34th largest country in the world.

This appetite for electricity has drawn widespread criticism from celebrities such as Tesla CEO Elon Musk to government bodies such as China's State Council and the United States Senate over Bitcoin's impact on climate change. But while these figures are alarmingly high, it's important to note that Bitcoin mining at most accounts for 1.29% of any single country's energy consumption. Not to mention, Bitcoin is a complete financial system whose energy consumption can be measured and tracked, unlike the fiat system which cannot be accurately measured and requires a range of additional layers to function, including ATMs, card machines, bank branches, security vehicles, storage facilities and huge data centers.

There are also a number of initiatives including the Crypto Climate Accord and the Bitcoin Mining Council that aim to improve Bitcoin's carbon footprint by encouraging miners to use renewable sources of energy.

Resources :

1) https://www.coindesk.com/price/bitcoin/
2) https://english.ahram.org.eg/NewsContent/3/12/418543/Business/Economy/Digital-transformation-Egypt%E2%80%99s-means-to-build-back.aspx
3) https://www.salesforce.com/products/platform/what-is-digital-transformation/