

Block chain [23rd July Induction class]

What problem block chain is solving?

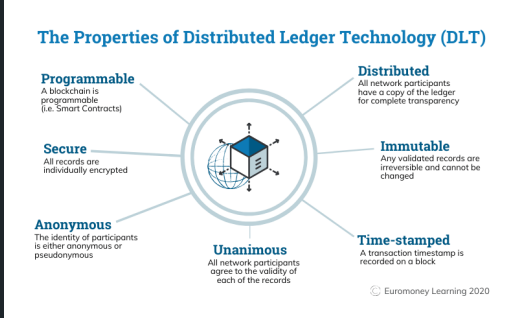
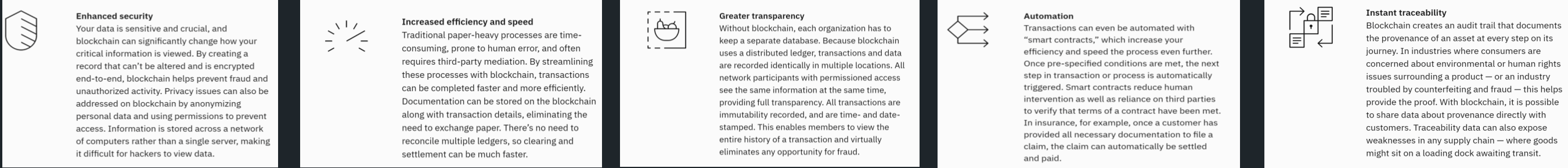
Trust - [we buy products from amazon, flipkart, ... but not something like delivery.in. --]

Since data is generally mutable & no privacy

Privacy - what we are facing now? [No 100% control over data, fb-photos owned by fb not by individuals, we access data ideally, it should be the opposite. we should own the data & fb. can be allowed to access it]

cross border payments: currently the power is with the banks. [moving from central to decentralized authority]

Some improvement areas:

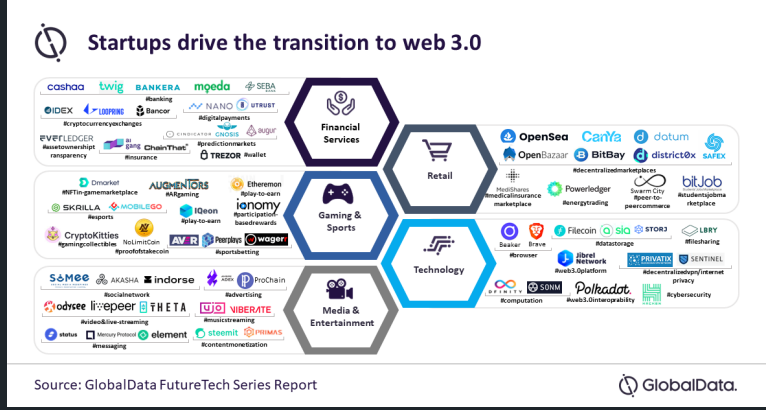
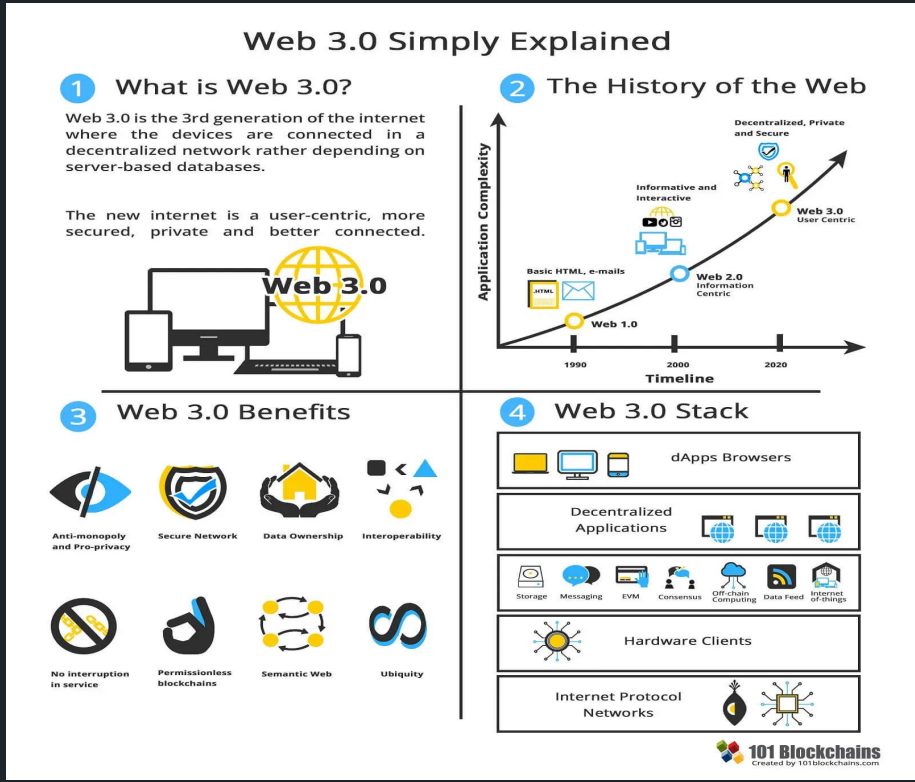


Web 1.0 vs Web 2.0 vs Web 3.0

1.0 : One way communication (Like read-only)

2.0 : Two way " - but data entered by the user are owned by the websites

3.0 : " " " - but data will be owned by user



Course contents :

Course Introduction

Web Development

HTML

CSS

Javascript

The JavaScript Standard Library

Iterators and Generators

Asynchronous JavaScript

Working with Web Browsers

Node js

React JS

Javascript Projects

Bitcoin Blockchain

Probable attacks in Bitcoin blockchain

Bitcoin Project

Ethereum Blockchain

Ethereum 2.0

Solidity

Solidity Value Types

Solidity Reference Types

Solidity Units and Global Variables

Solidity Control Structures

ABI Encoding and Decoding Functions

Cryptographic Functions

Smart Contracts

Solidity Programming Applications

Common Ethereum Blockchain Hacks and Loopholes

Introduction to Blockchain Development Frameworks

Truffle Suite

Hardhat

Web3.js

Ethers.js

Ethers.js Providers

Smart Contract Interaction

Ethereum Blockchain Projects

Oracles

Chainlink overview

Data Feeds

Custom Data Feeds

Oracle Projects

The Graph

GraphQL API

The Graph Networking

AssemblyScript API for The Graph

Project

Decentralized Autonomous Organisations(DAO)

Creating a Custom DAO Project

NFT Platforms

NFT Transaction Fees

NFT project

Polygon Blockchain(MATIC)

Polygon Projects

Polkadot

Substrate Fundamentals

Runtime Development

Development Integration

Development Tools

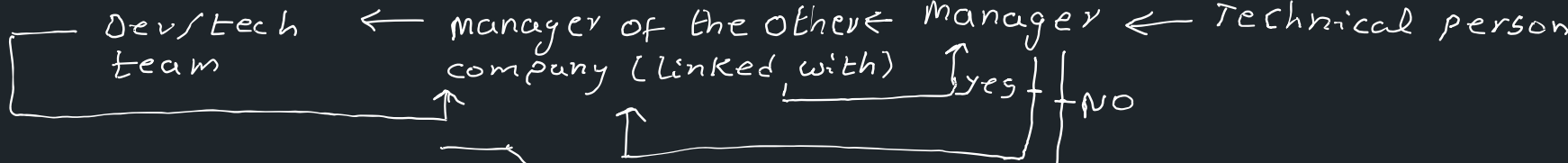
Advanced topics in Polkadot

Interesting Q/A :

→ one general use case

• supply chain → If user receives an damaged/fake product, its hard to find where the problem started.

≈ In my opinion, it the time which plays a key role. I have seen multiple cases (especially logistics) where it takes decades to trace where the problem is. [mail from customer → representative → representative company



≈ As a tech team mem. of some logistic middleware company, I have seen one priority-I bug [price calculation] took nearly 15 days to identify the issue (to & fro mails) & 1 month to resolve it.

• with blockchain, all companies in the logistics (supply chain) will have a common decentralized database kind of thing.

≈ why a company will agree to share its data??

≈ If it is like {shared data}, even with traditional db we can achieve the same right??
{(some part)}

other company manager
↓
Tech team
! & goes on.