

DISRUPTING FUTURE HEALTHCARE

#FuturesNow22

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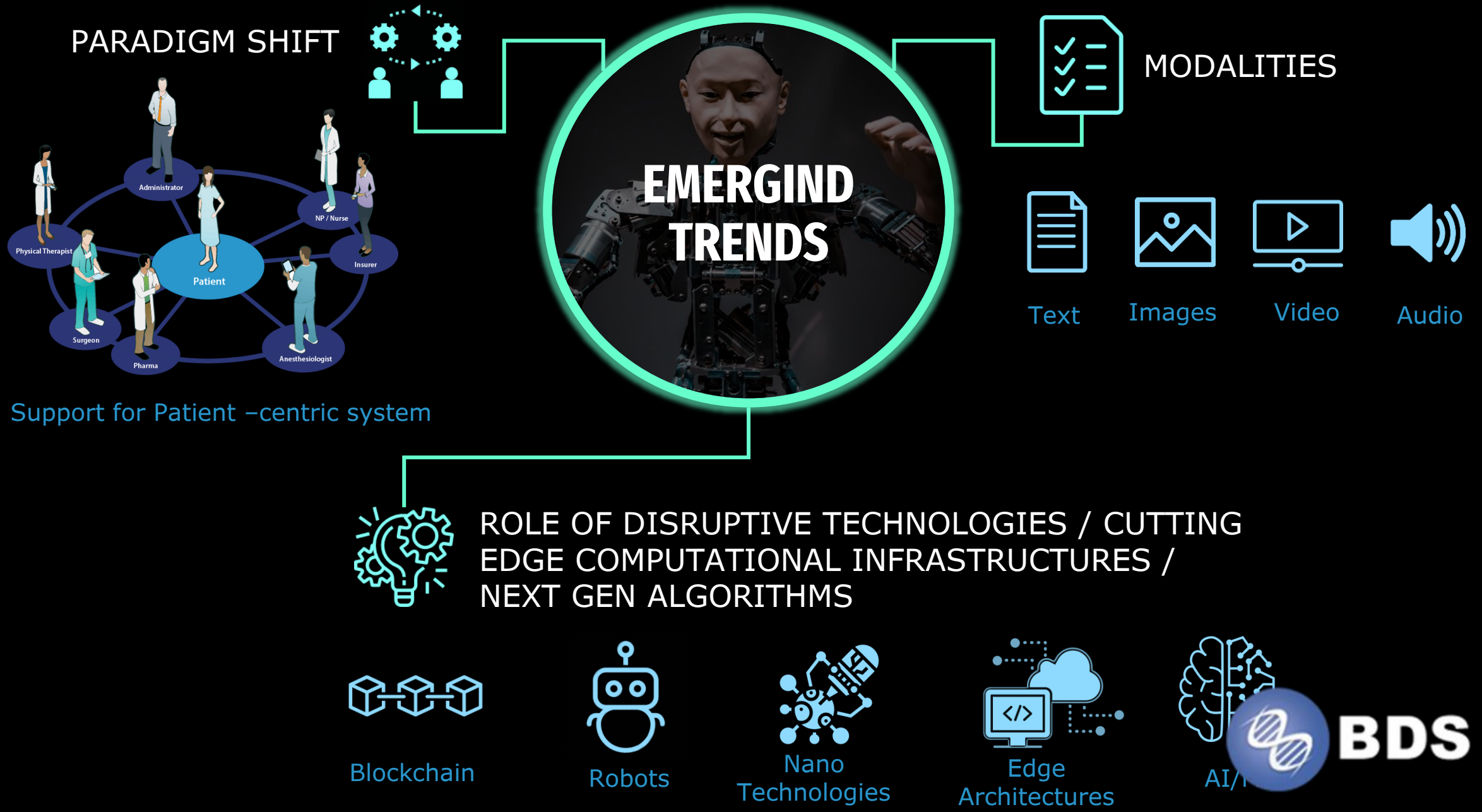
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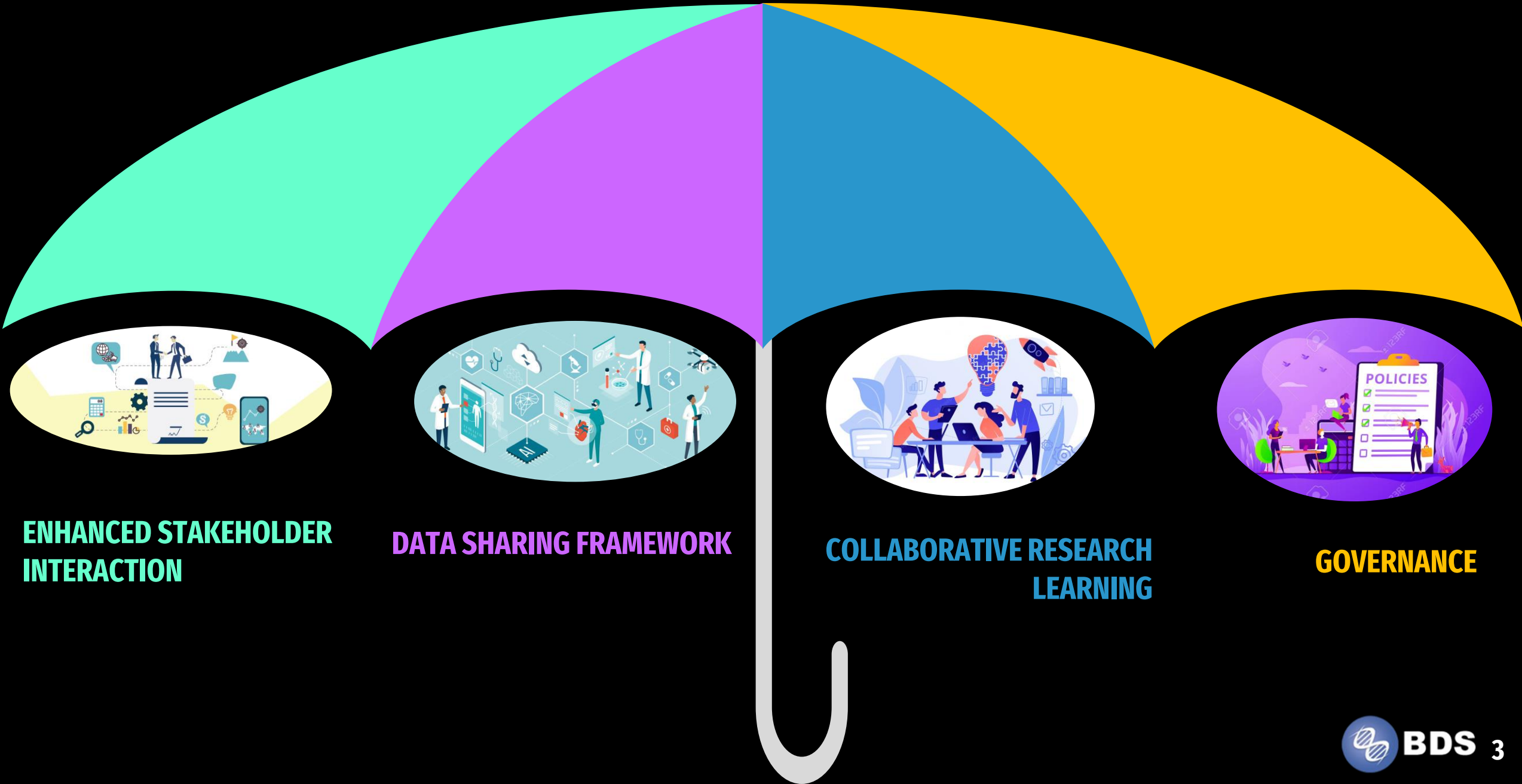
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DISRUPTIVE HEALTHCARE



KEY ISSUES



OUR ONGOING RESEARCH: BUILDING INTELLIMEDCHAIN

A permissioned Ethereum based network enabling data sharing and collaborative learning through exchange of confidential smart contracts amongst stakeholders, maintaining data privacy through blockchains and thus encouraging the adoption of a personalized patient-centric healthcare system.

INTELLIMEDCHAIN DRIVERS

BLOCKCHAIN

Data privacy and
collaboration



KNOWLEDGE GRAPHS

Wholistic view of
an individual
/patient



AGENTS

Automatic
combining
different modalities



UI/UX INTERFACE

Web based
interface



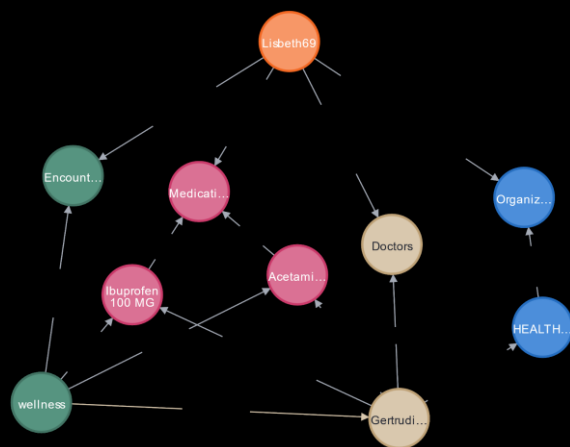
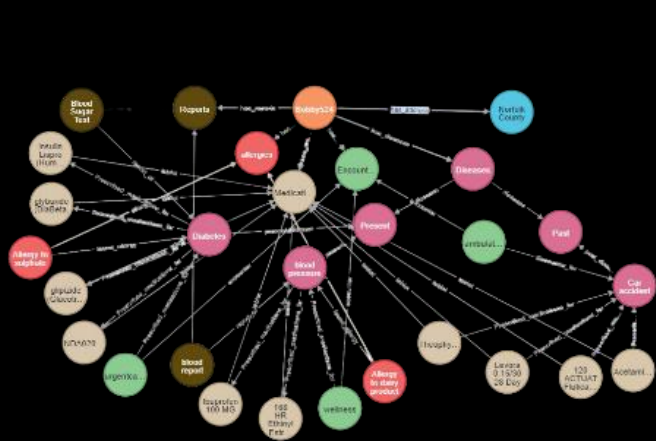
Yao Y, Kshirsagar M, Vaidya G, Ducrée J and Ryan C (2021) Convergence of Blockchain, Autonomous Agents, and Knowledge Graph to Share Electronic Health Records. *Front. Blockchain* 4:661238. doi: 10.3389/fbloc.2021.661238

SMART CONTRACTS AND KNOWLEDGE GRAPHS

Contract Details	
Hash of previous block:	0xacc2dfd919441badb37d166b6ba187a88569fb7f156e17b48016aff7abd052
Smart Contract deployment hash:	0xc8474d35f43c485a193f4619ad5dfc13e6ef7670
Gas limit:	6721975
Gas price:	20000000000
Transaction Details (encrypted as transaction hash)	
Requester address:	D102922 //unique identifier of a doctor as a stakeholder
Request to:	P346574 // unique identifier of a patient
Type of request:	Data Access Request
Authorization and Authentication: SUCCESS	
Request data access timestamp:	Mon Sep 20 2021 11:00:34 GMT+0530 (India Standard Time)
Notification received timestamp:	Mon Sep 20 2021 11:01:00 GMT+0530 (India Standard Time)
Data access granted timestamp:	Mon Sep 20 2021 11:02:10 GMT+0530 (India Standard Time)
Knowledge Graph hash:	0x02b89fa11b666be2c24327ad8faa7619a65c4182e511bfac3b1106e2d3b56f55
Session Time:	30 mins
Updated Knowledge Graph hash:	0xfcb6bb06130dc7659cedbe6162fb1cd75f625883fd3cc394b29a350223d
Transaction Details (public)	
Request from:	0x36dc56a959b3b15df50542b587f7882570adfc420c97f514e7ccaed6bd962
Request to:	0xbe45fe6a4a6b357657565b7f46165a01eafaea97a14458b20b5f2c43611905f
Gas Usage:	39407
Timestamp:	Mon Sep 20 2021 11:39:47 GMT+0530 (India Standard Time)
Transaction hash:	0xc2ee3e35e394426df4e771b28bad1910709d7696ec08e7fa84f698eddf60be7

Contract Details	
Hash of previous block:	0xacc2dfda919441ba0b37d166beba187a885697bf1156e17f848016affa7ab0d05
Smart Contract deployment hash:	0xc8474d35f43c485e1934619ed5dfc13e6ef7670
Gas limit:	6721975
Gas price:	20000000000
Transaction Details (encrypted as transaction hash)	
Requester address:	PH102922 //unique identifier of a pharmacist as a stakeholder
Request to:	P346574 // unique identifier of a patient
Type of request:	Data Access Request
Authorization and Authentication: SUCCESS	
Request data access timestamp:	Mon Sep 20 2021 11:40:23 GMT+0530 (India Standard Time)
Notification received timestamp:	Mon Sep 20 2021 11:40:50 GMT+0530 (India Standard Time)
Data access granted timestamp:	Mon Sep 20 2021 11:41:21 GMT+0530 (India Standard Time)
Knowledge Graph hash:	0xfcbbebbd6130dbc7659cedbcee162bf1cd75f625883M3cc394b29a35f0223d4
Session Time:	12 mins
Updated Knowledge Graph hash:	0x55eebd064cae2dea97f6e553632b28a97712ce5d02d06aafc5d37433d3d072d1
Transaction Details (public)	
Request from:	0xdcba1a31df3abe863970e74cd81a00ae023cae8907b557a98954e0d128f694a89
Request to:	0xbe45fe6a4a6b357657565bf46165ba01eafeea97415458b20bf52c43611905f
Gas Usage:	54407
Timestamp:	Mon Sep 20 2021 11:39:47 GMT+0530 (India Standard Time)
Transaction hash:	0x7e5499e47b1043802e65a2d5b06708c05073efacda28d7f849edc6bd13ca39b7c

Contract Details	
Hash of previous block:	0xacc2d9d919441bad37d166beba167a88569fb7f156e17b84016a7abd052
Smart Contract deployment hash:	0xc8474d35f43c485a19344619d5dfc13eef67f0
Gas limit:	6721975
Gas price:	20000000000
Transaction Details (encrypted as transaction hash)	
Requester address:	IP102922 //unique identifier of an insurance provider as a stakeholder
Request to:	P346574 // unique identifier of a patient
Type of request: Data Access Request	
Authorization and Authentication: SUCCESS	
Request data access timestamp:	Wed Sep 22 2021 17:40:23 GMT+0530 (India Standard Time)
Notification received timestamp:	Wed Sep 22 2021 17:40:39 GMT+0530 (India Standard Time)
Data access granted timestamp:	Wed Sep 22 2021 17:41:21 GMT+0530 (India Standard Time)
Knowledge Graph hash:	0x5eebd084cae2daaa97be553632b28a97712ce5d02d06aaf6537433d3d072d1
Session Time:	50 mins
Updated Knowledge Graph hash:	0x9f11c949406993b2035fd81c5a73786e52b80bd301ef153c66ced9287e347456
Transaction Details (public)	
Request from:	0x6ba44f67bdeef1e46165ac076472b56ed25e90bfc437e7c39316f55ec61039
Request to:	0xbe45fe6a4a6b357657565bf746165ab01eaf6ea97a14458b20bf52c43611905f
Gas Usage:	98017
Timestamp:	Wed Sep 22 2021 17:50:47 GMT+0530 (India Standard Time)
Transaction hash:	0xba257c2163338d6ed8087ad6ee38f44c6507f7be43ca0b7195369f159e1bc0



EMBRACING THE FUTURE WITH INTELLIMEDCHAIN



Federated blockchain for collaborative learning & research



Real time recommendations from AI/ML algorithms leading to precision medicine



Improved Wellbeing of individuals



Dramatic savings by avoiding cyberattacks, data leakage, medical errors, regulatory breach and ease of governance etc.



THANK YOU