EMERGING TECHNOLOGY IN INDIA

GROUP-3

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EMERGING TECHNOLOGIES

- Internet of Things and 5G
- 3D Printing
- Artificial Intelligence
- Block chain

Internet of Things

- The Internet of things (IoT) is a network of physical objects — devices, vehicles, appliances — embedded with sensors, software, network connectivity, and computing capability enabling them to collect, exchange, and act on data

Internet of Things

Advantages

- Helps people live and work smarter, as well as gain complete control over their lives.
- IoT enables companies to automate processes and reduce labour costs, reduce wastage and overall leading to reduce in cost of manufacturing or delivering any service or product

Risk/Challenges

- As flow of information increased data theft and privacy Issue increases
- If there's a bug in the system, it's likely that every connected device will become corrupted
- It will enhances requirement of energy, semiconductors

5G

- 5G enables a new kind of network that is designed to connect virtually everyone and everything together including machines, objects, and devices
- Features:

  1) Higher multi Gbps peak data speeds

  2) Ultra Low latency, greater bandwidth

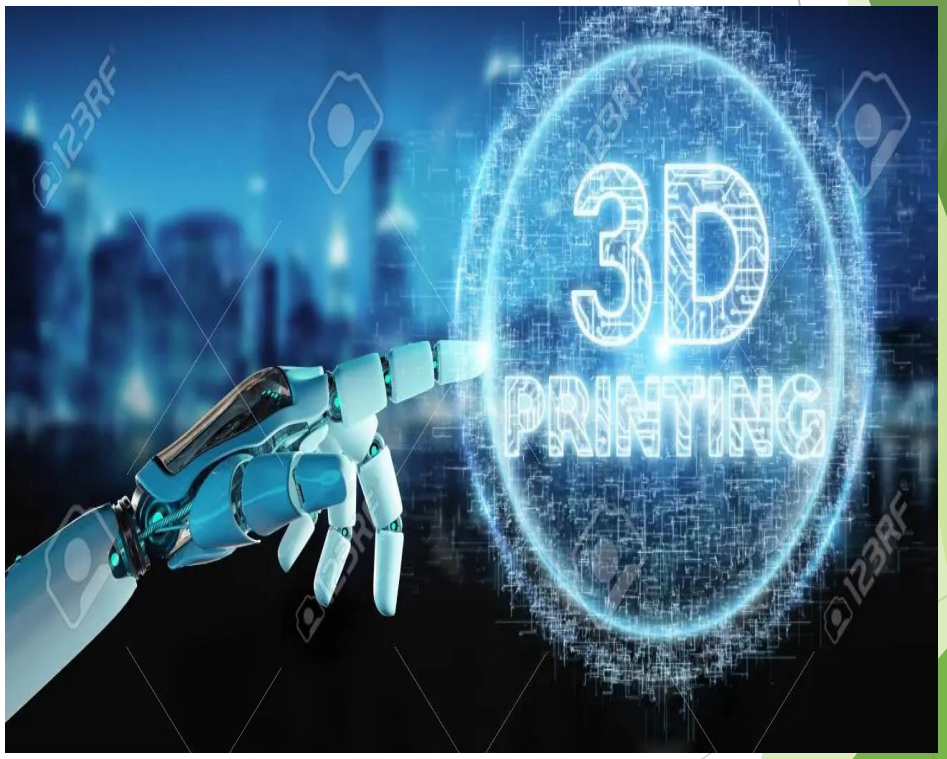
  3) Increased Capacity and Reliability

  4) Higher performance and improved efficiency

3D PRINTING TECHNOLOGY

- ***INTRODUCTION***
  - 3D Printing or
    Additive Manufacturing

- ***General Principle***
  - Modelling
  - Printing
  - Finishing



Types of 3D Printing

A. Nozal Based Deposition System
B. Laser Based Writing System

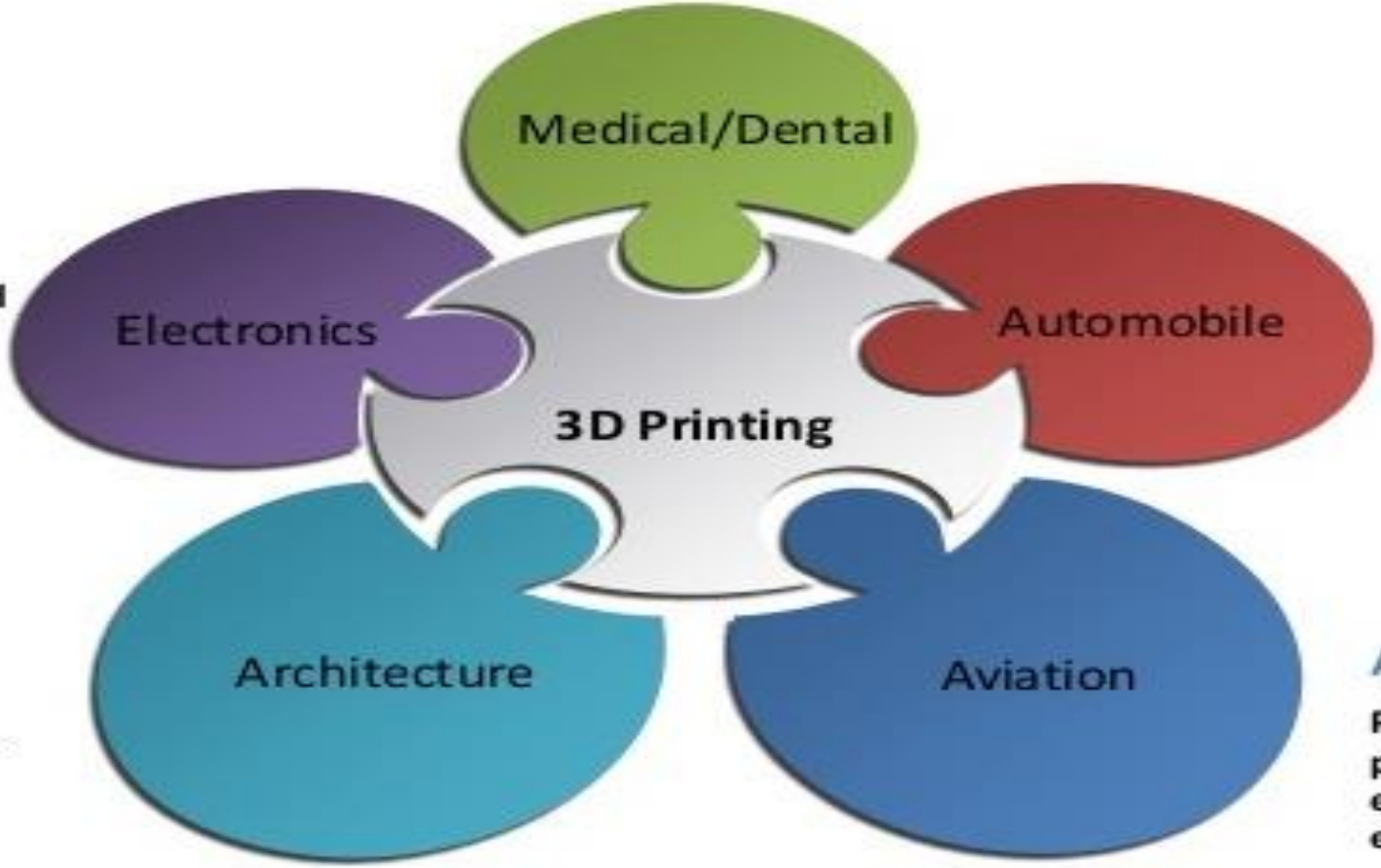
3D Printing Material

- Metals like Steel, Aluminium, Silver etc
- Plastics & Resin of different types

Applications of 3D Printing

Medical/Dental
Printing Prosthetic parts, organs, medical models, synthetic skin

Electronics
Printing jigs, fixtures, gauges, patterns, molds, and dies



Automobile
Printing Automotive prototypes, car parts and accessories

Architecture
Detailed architectural models in an array of materials

Aviation
Printing Aircraft parts like wings and engines, rocket engine parts

S-1
AVANT GARDE 3D CONCRETE PRINTED
PERMANENT FAMILY ACCN
IN DEFENCE SERVICES
AT HQ SWAC
INAUGURATED BY
AIR OFFICER COMMANDING-IN-CHIEF
IN THE PRESENCE OF
ENGINEER-IN-CHIEF | AOA, AIR HQ

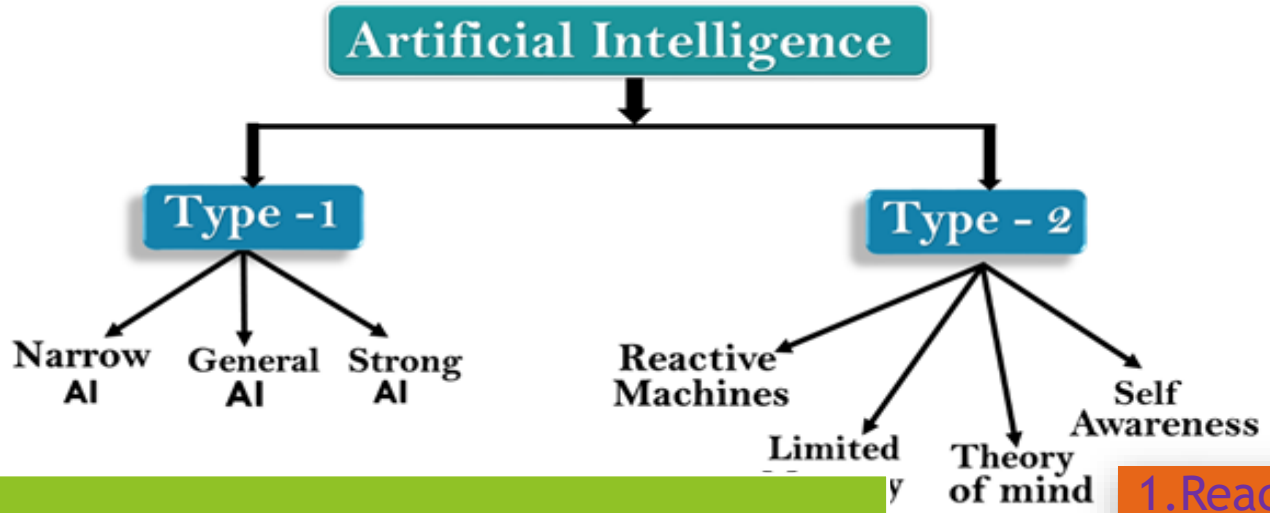
S-1

WHAT IS ARTIFICIAL INTELLIGENCE (AI)

- An intelligent entity created by humans.
- Capable of performing tasks intelligently without being explicitly instructed.
- Capable of thinking and acting rationally and humanely.

EXAMPLES OF ARTIFICIAL INTELLIGENCE?

1. Siri, Alexa and other smart assistants
2. Self-driving cars
3. Robo-advisors
4. Conversational bots
5. Email spam filters
6. Netflix's recommendations



1.Narrow AI- System designed for one specific task and whose capabilities are not easily transferable to other systems

2. General AI- Machine with human level or higher intelligence capable of abstracting concepts from limited experience and transferring knowledge between domains.

3. Super AI- This is where machines become self aware and surpass the capacity of human intelligence and ability

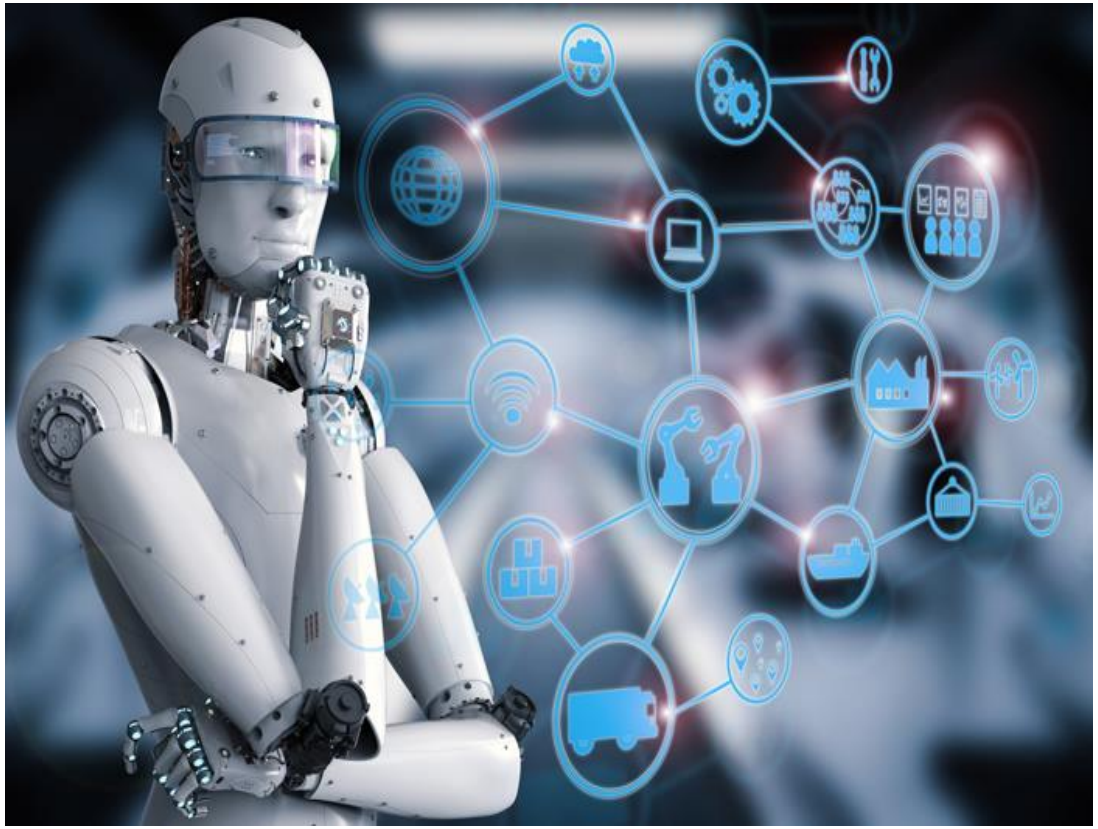
1.Reactive machine- Very limited capability that just produce an output based on input memory and no learning.

2. Limited memory – machines that are capable of learning from historical data and make better predictions .most current application falls into this category.

3.Theory of mind – machines that begin to interact with thoughts and emotions of humans. This is at conceptual stage and work in progress as we speak.

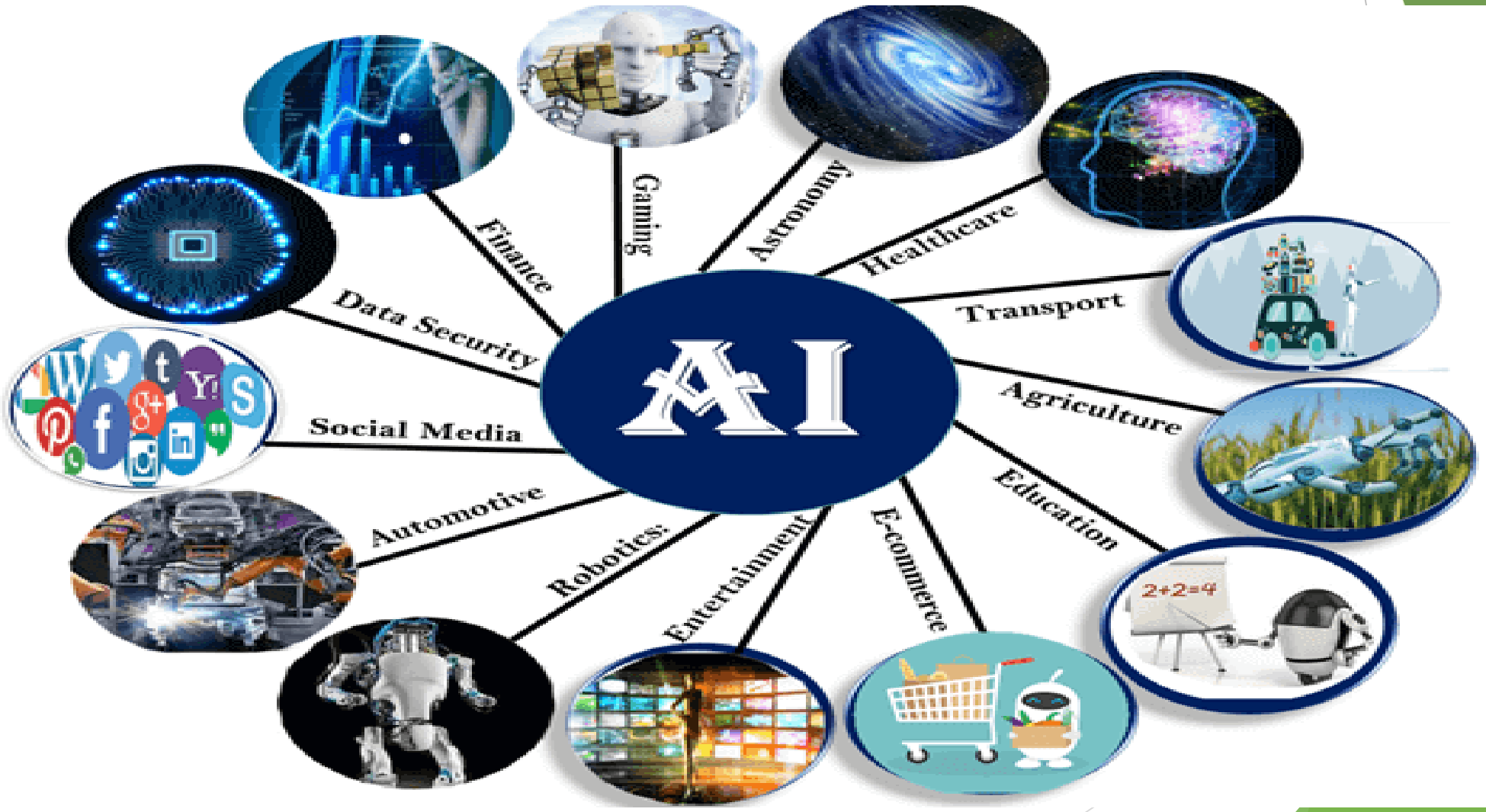
4. Self aware- the final stage of AI that has evolved to be human like with independent intelligence. we are far from this.

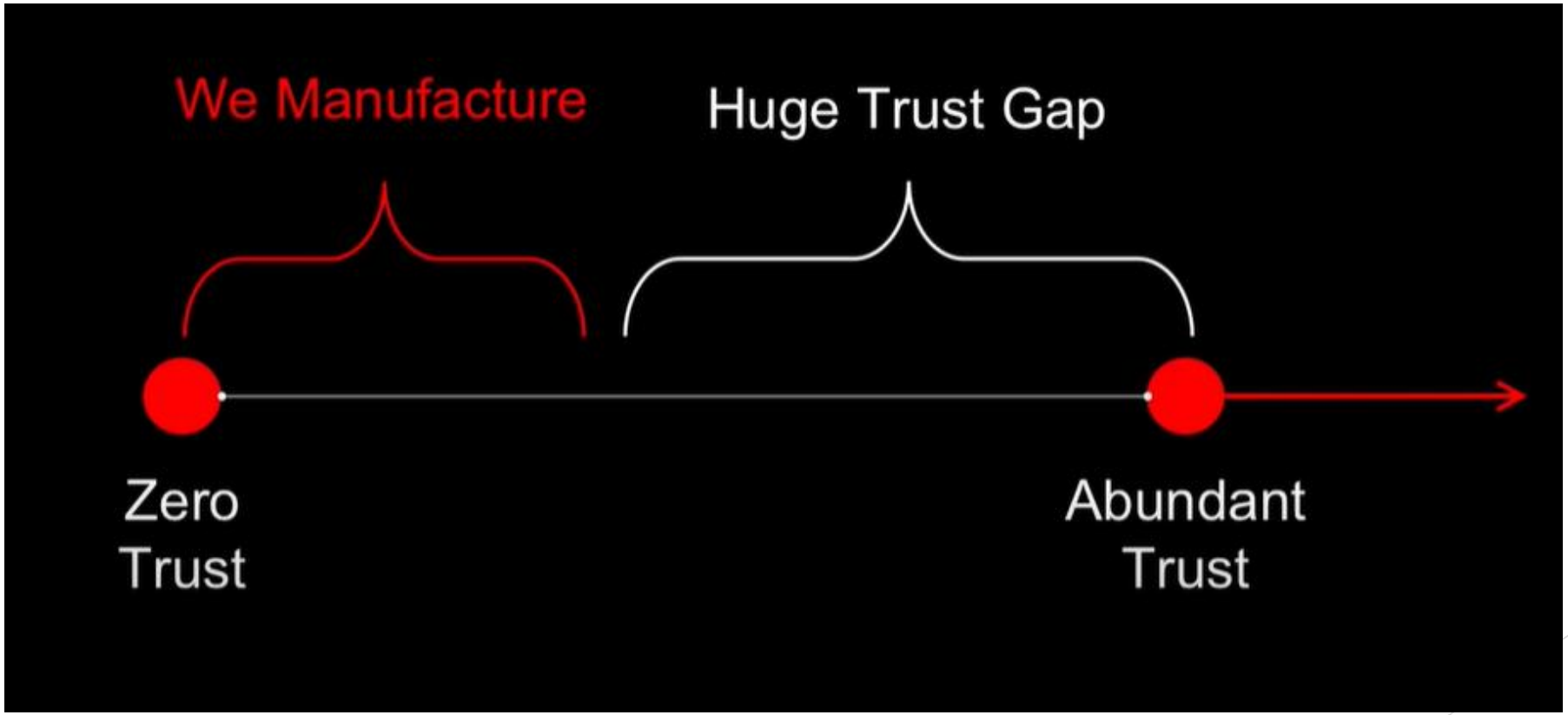
How does AI works



- AI systems work by combining large sets of data with intelligent, iterative processing algorithms to learn from patterns and features in the data that they analyze.
- Each time an AI system runs a round of data processing, it tests and measures its own performance and develops additional expertise.

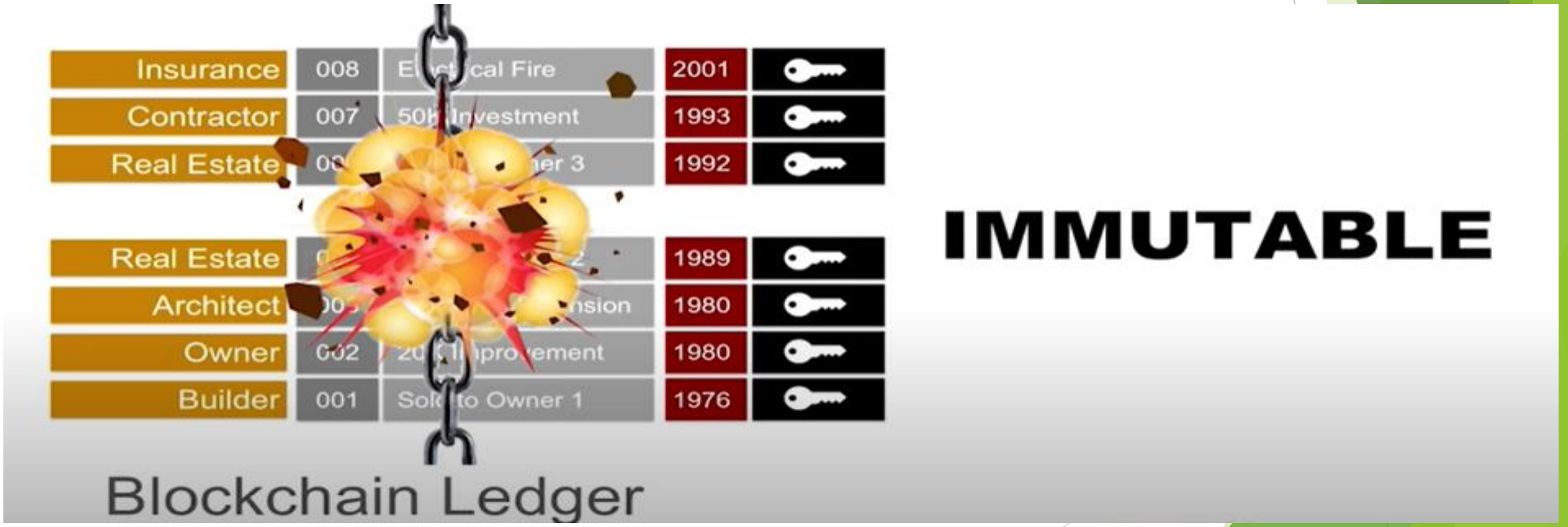
USE OF ARTIFICIAL INTELLIGENCE



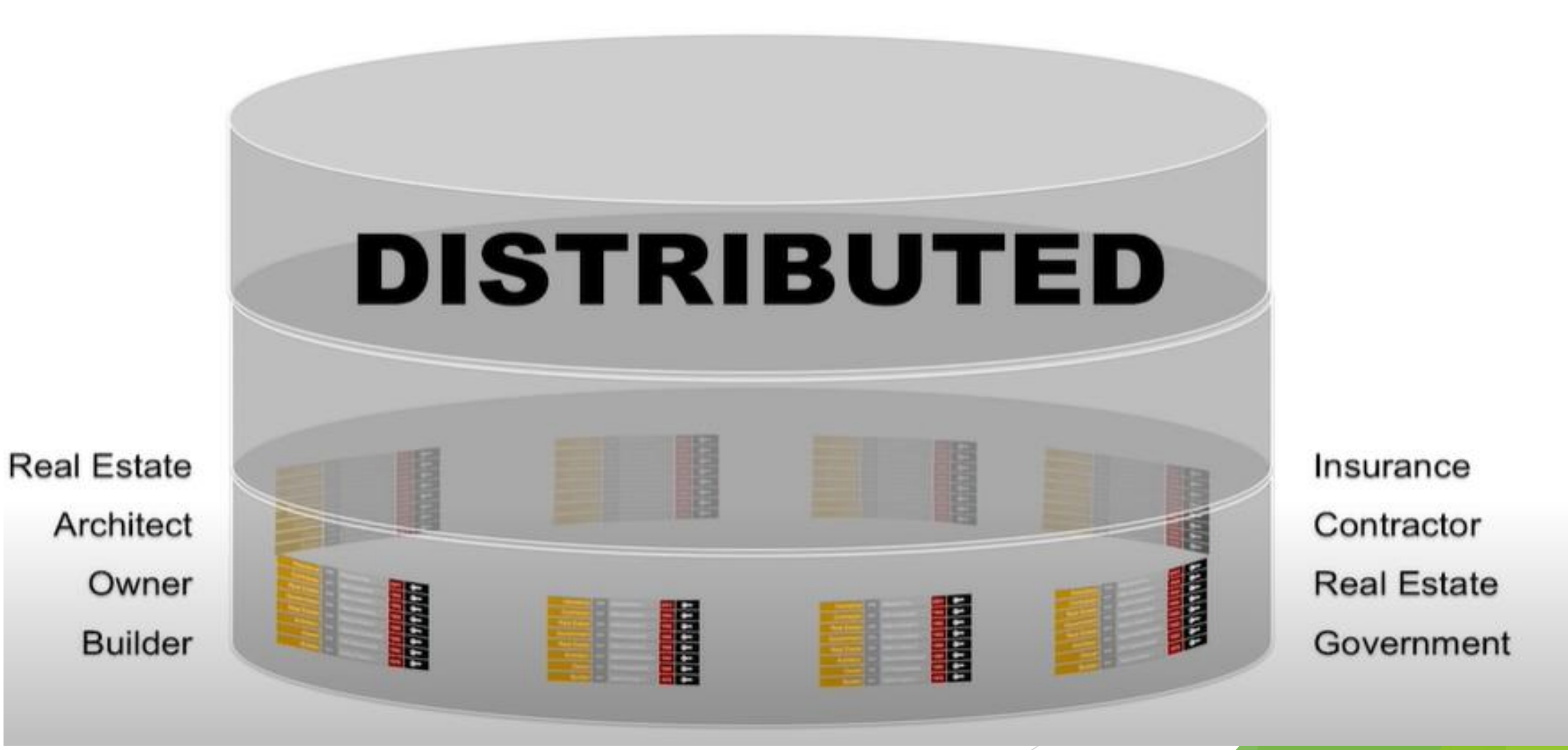

We Manufacture
Huge Trust Gap
Zero
Trust
Abundant
Trust

Block Chain Technology Applications

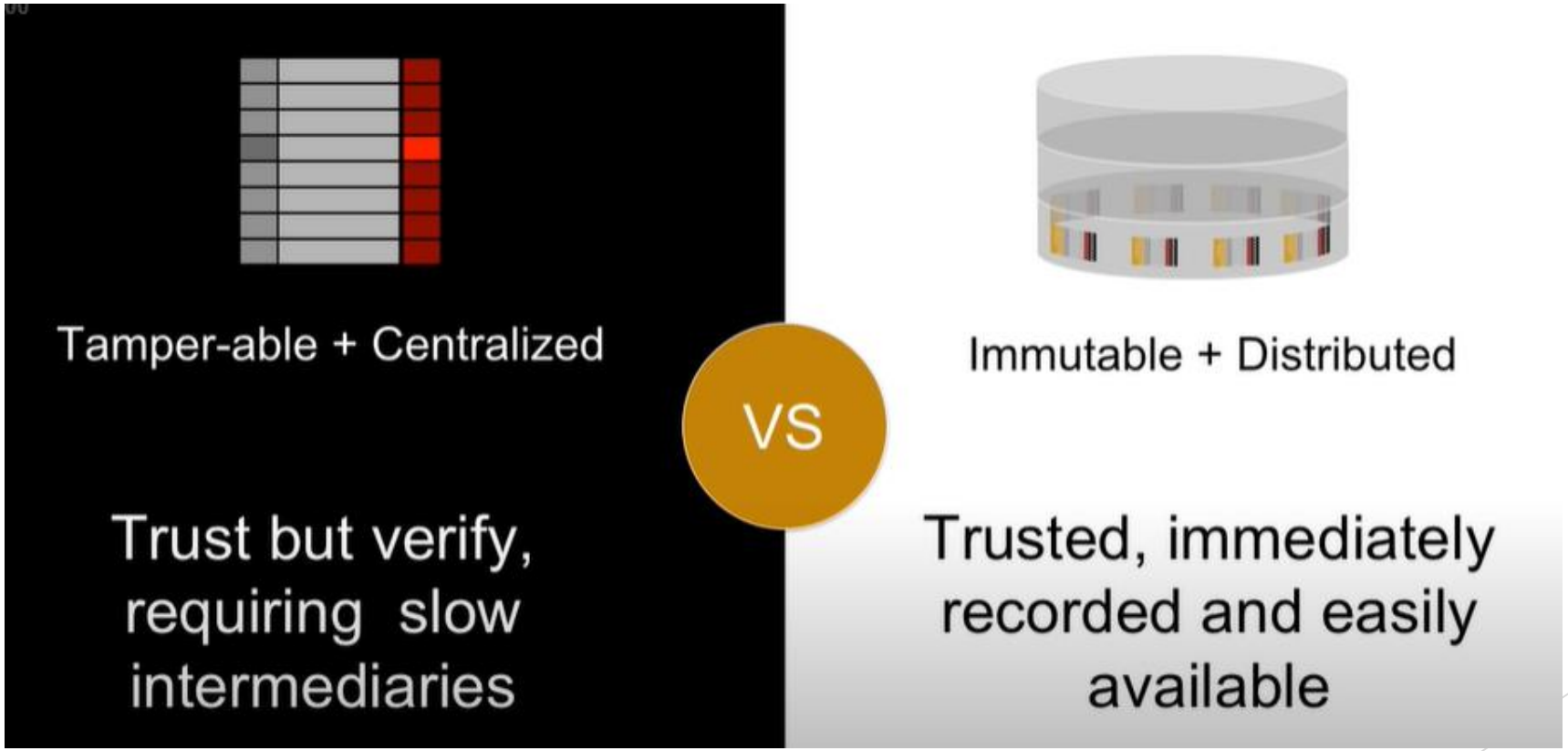
- Property registration:

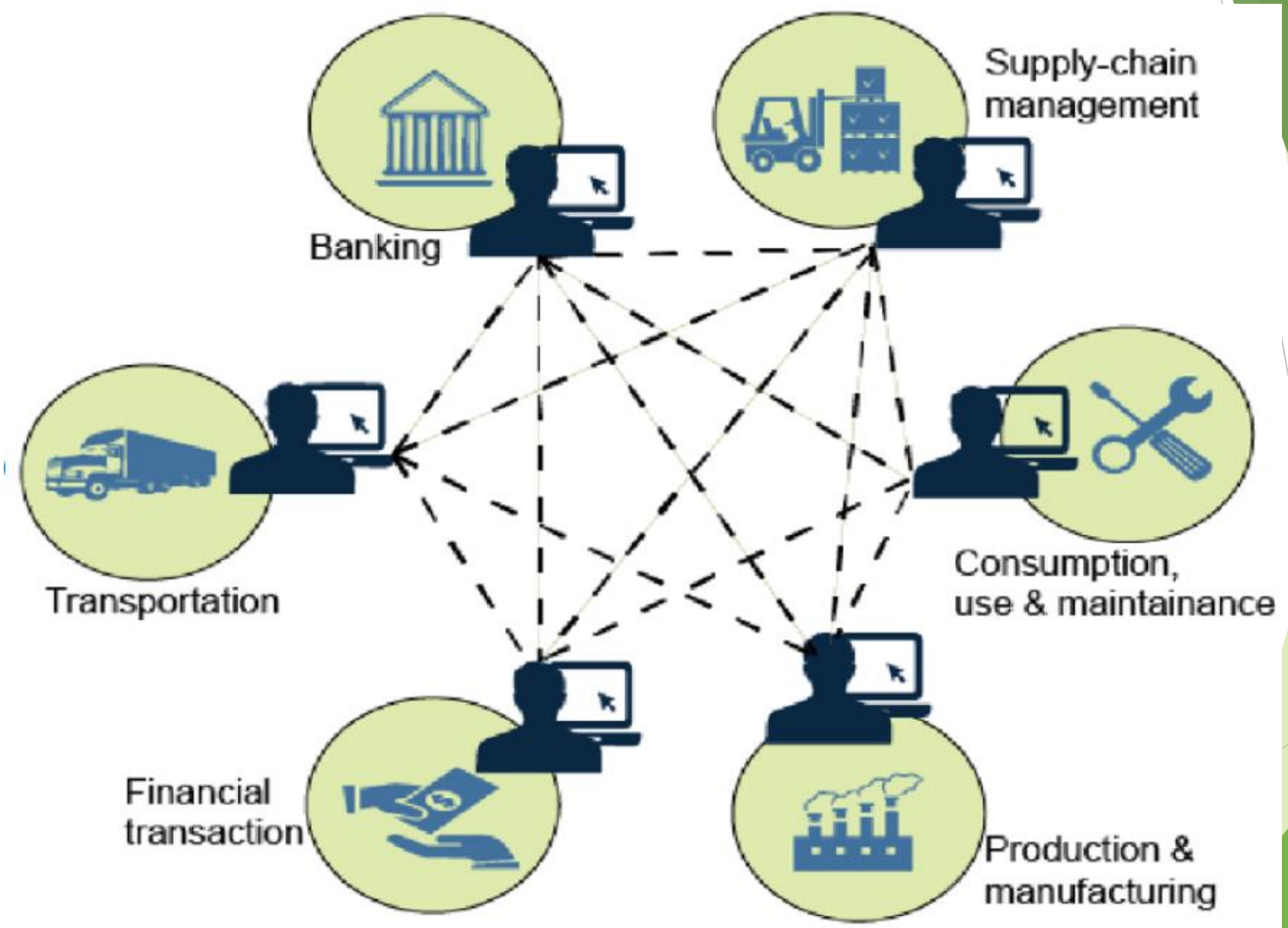


Block Chain Technology



Block Chain Technology




Supply-chain management
Banking
Transportation
Consumption, use & maintainance
Financial transaction
Production & manufacturing

Blockchain For Government

Shared service models

Secure Data Entry

Customs

Digital Currencies

Transparent Budget

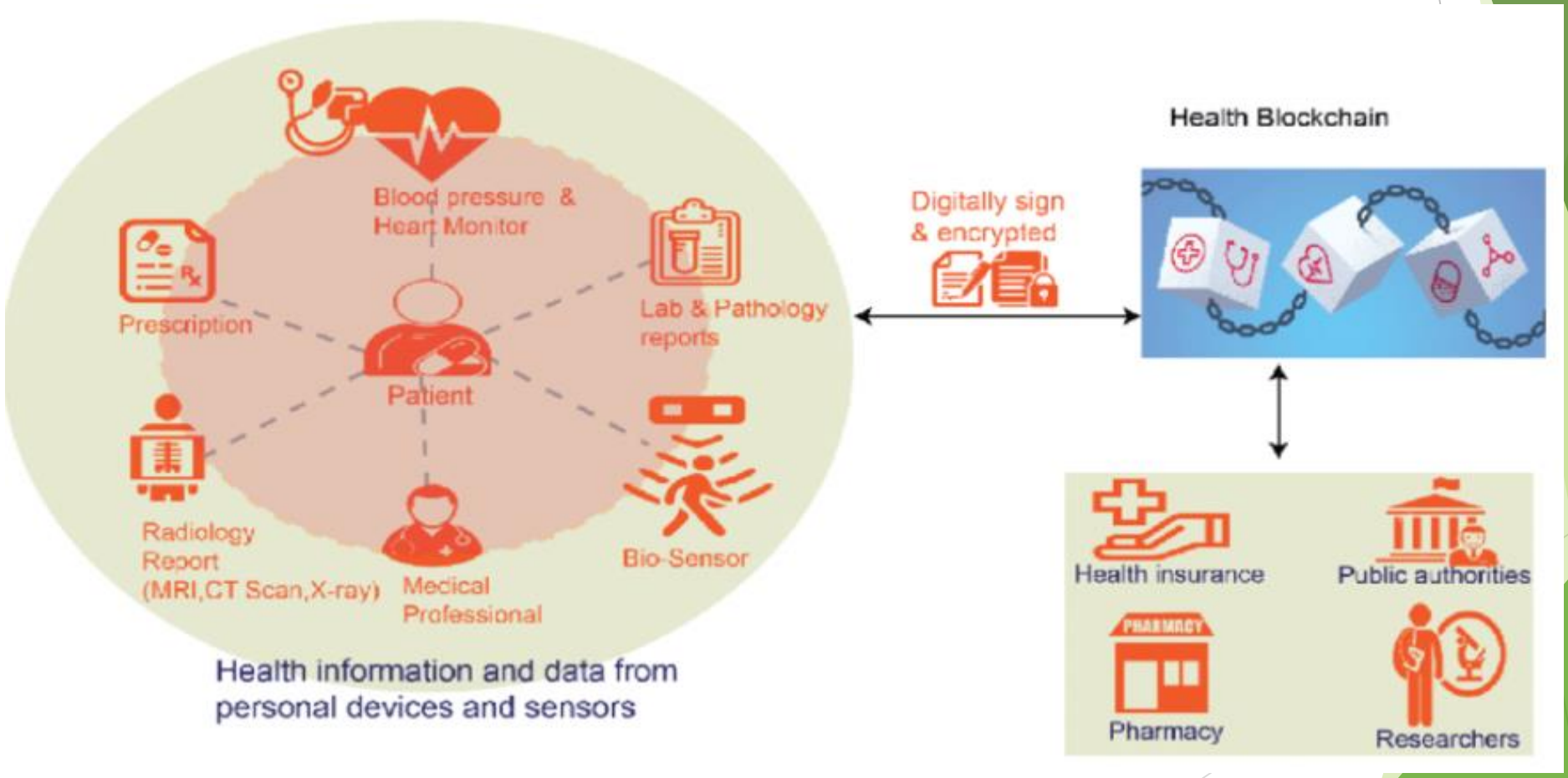
Paper-based system substitute

Voting

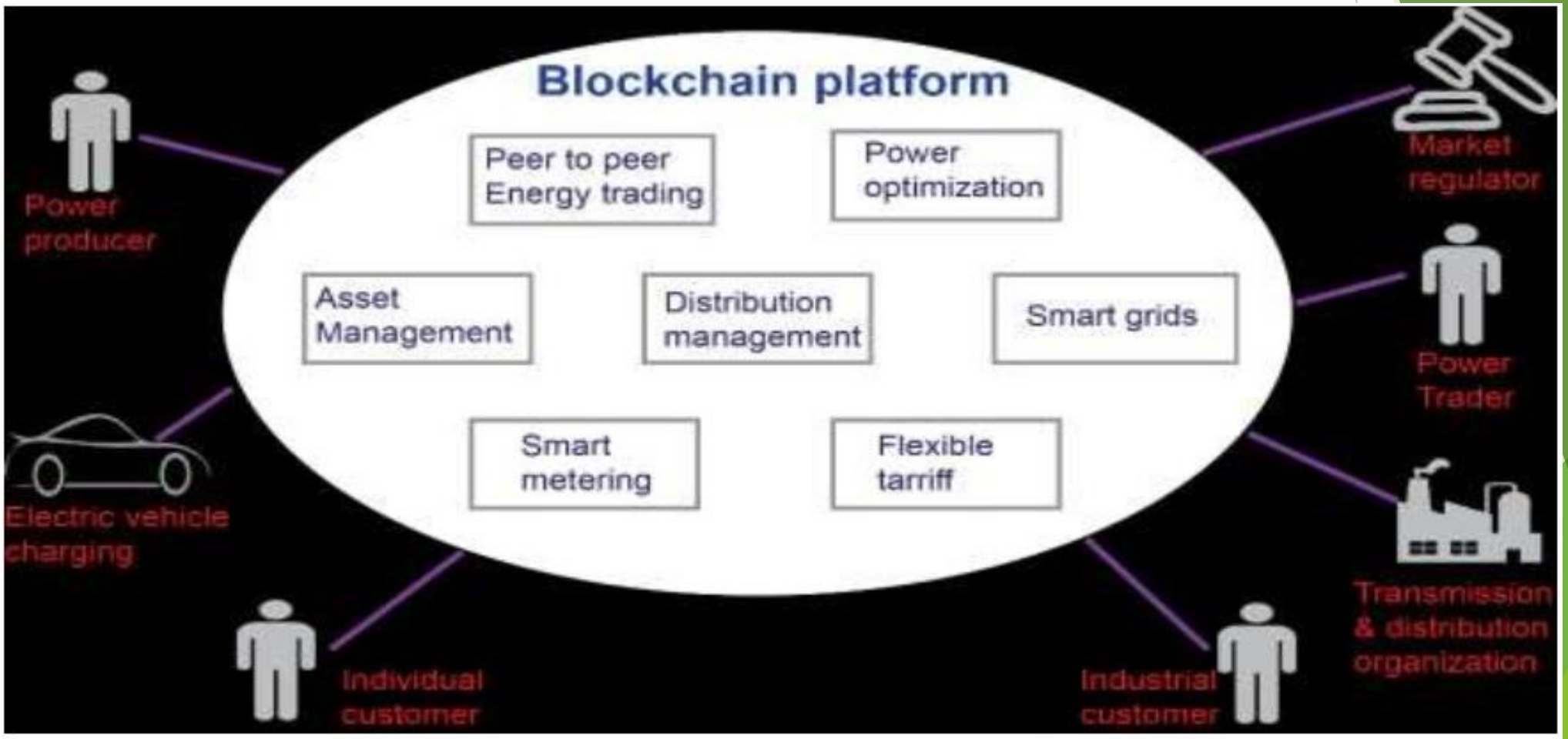
Combating Corruption

Data management

Block Chain Technology- health Sector



Block Chain Technology- energy sector



Block Chain Technology- Govs In India

STATE	PROJECT	STATUS
TELANGANA	LAND REGISTRATION	POC completed
	DATA PROTECTION	POC completed
ANDHRA PRADESH	LAND RECORDS	Completed experiment at Amaravati. Further implementation across state being explored.
	EDUCATIONAL CERTIFICATES	RFP issued. Full deployment by end of the year.
	ROAD TRANSPORT LICENSE	RFP issued. Full deployment by end of the year.
	KYC FOR HOTEL RECORDS	
MAHARASHTRA	LAND RECORDS	POC ongoing
KARNATAKA	IP MANAGEMENT	POC to begin later this year
GOA	LAND REGISTRY	Exploring the feasibility
UTTAR PRADESH	LAND AND REVENUE RECORDS	Announced
GUJARAT	E-GOVERNANCE	Announced

THANK
YOU