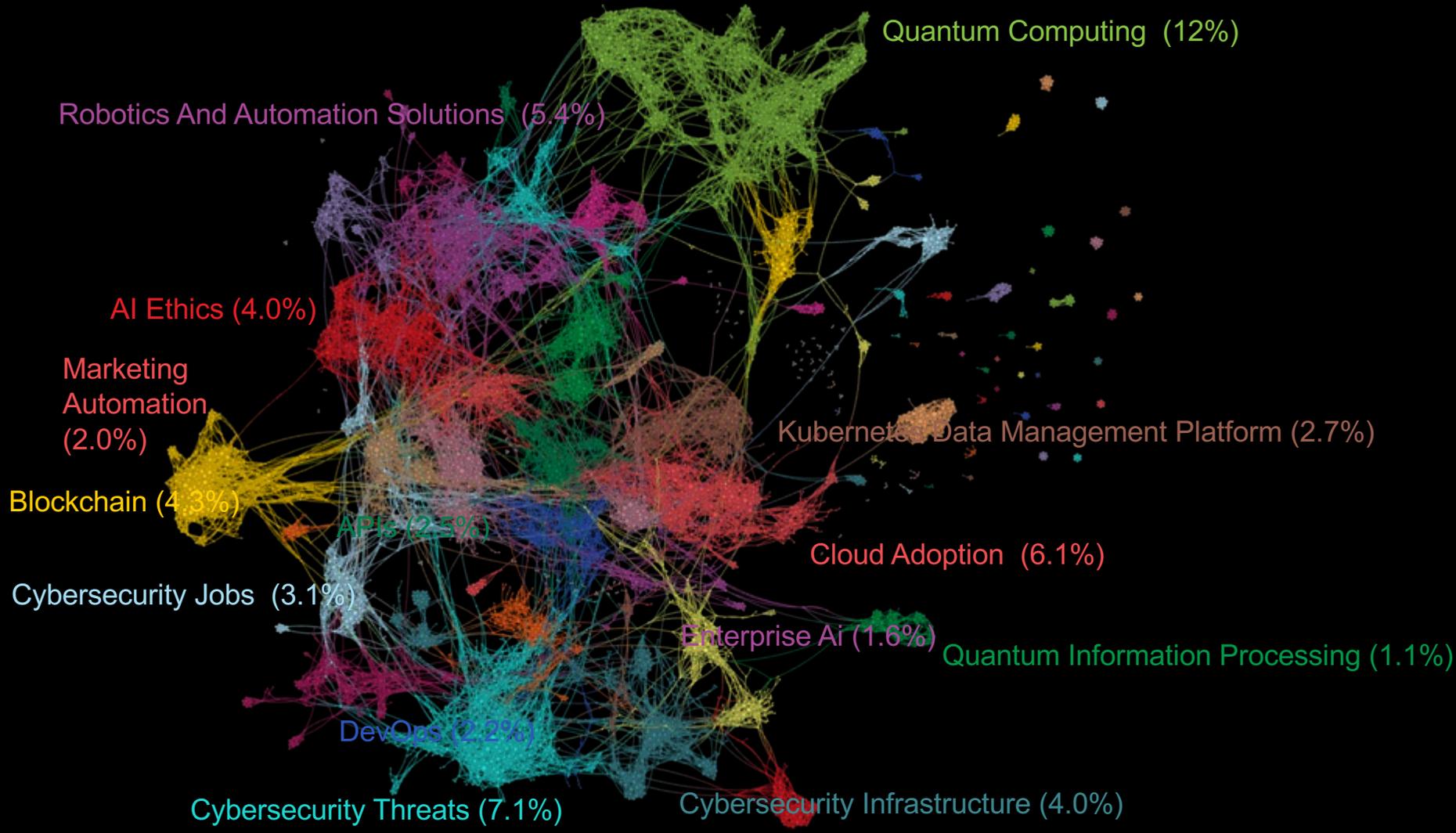


Quantum, Cybersecurity and Automation are the top 3 topics

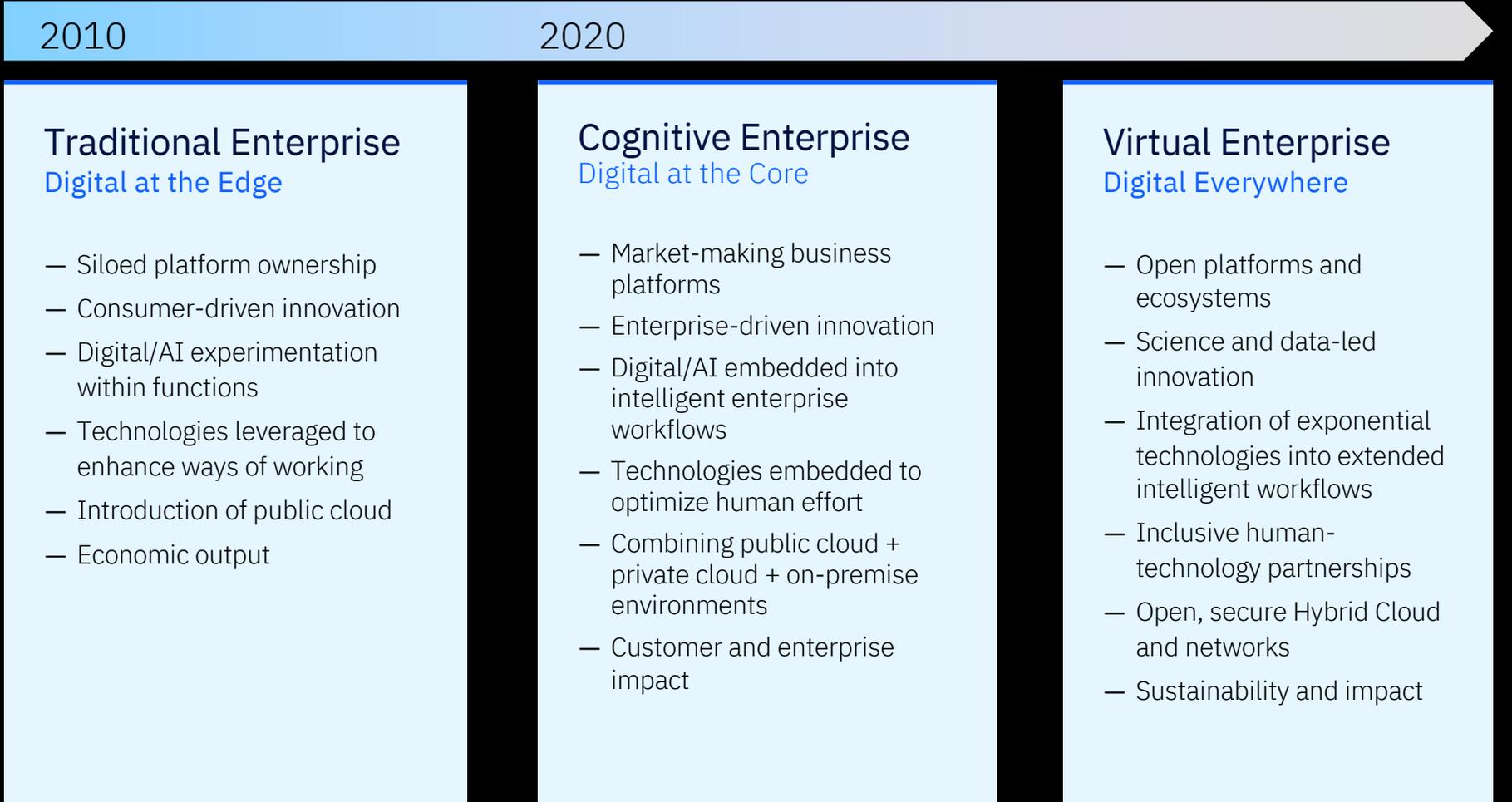
News Article Network Colored by clusters. Sized by degree. Labeled by clusters.



Clusters		
●	Quantum Computing	12%
●	Cybersecurity Threats	7.1%
●	Cloud Adoption	6.1%
●	Robotics And Automation Solutions	5.4%
●	Crypto Tech Blockchain	4.3%
●	Cybersecurity Infrastructure	4.0%
●	AI Ethics	4.0%
●	Robotic Process Automation	3.3%
●	This SaaS Startup	3.3%
●	Cybersecurity Jobs	3.1%
●	Kubernetes Data Management Platform	2.7%
●	Cybersecurity Conference	2.7%
●	Cybersecurity Skills Gap	2.6%
●	Big Data Analytics	2.6%
●	APIs	2.5%
●	Robotics Students Win Gold	2.4%
●	Cybersecurity Experts - Simplifying Cybersecurity	2.4%
●	DevOps	2.2%
●	AI Enterprise	2.0%
●	Global Quantum Computing Market Size	2.0%
●	Marketing Automation	2.0%
●	Enterprise Ai	1.6%
●	Post Quantum Security Journey	1.4%
●	2021 Cybersecurity Breakthrough Awards Program	1.2%
●	AI and Open Source	1.2%
●	Govt Frames Cybersecurity Norms	1.1%
●	Edge Computing	1.1%

Our view of the market

In a post-pandemic world, companies are looking to become digital at the core

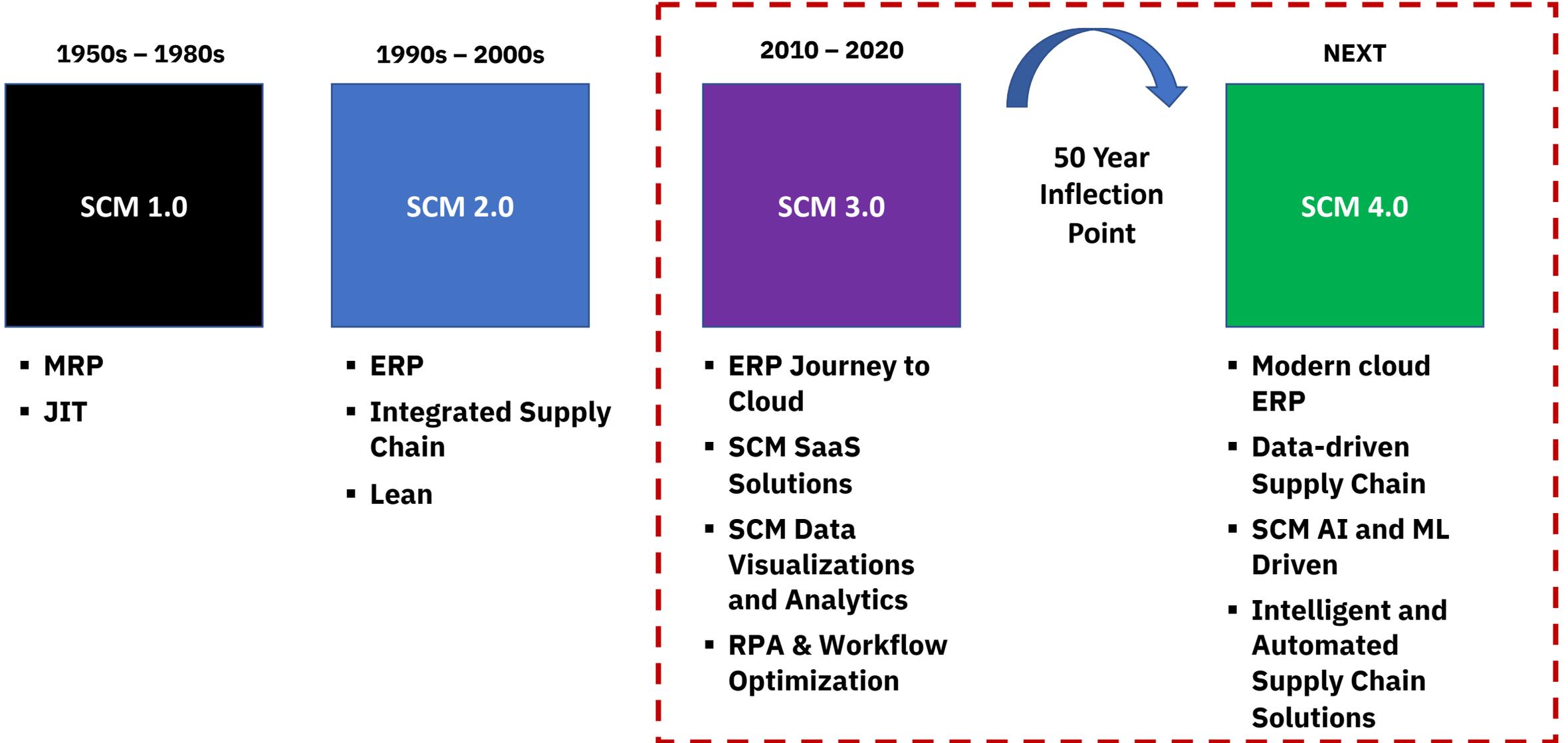


Welcome to 2030

- Covid fault lines have made supply chain a board level topic and investment priority
- Cloud adoption accelerating both supply chain app modernization and business transformation initiatives
- Drive to optimize performance in connected ecosystem networks with multi-party data, visualizations and predictive analytics
- Industry pivot to product-as-a-service, full lifecycle supply chain operating model
- Urgency to deliver sustainable, responsible, transparent and de-risked supply chain networks



Evolution of Supply Chain to Today



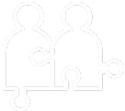
What is a Supply Chain Leader?

These individuals work in organizations that prioritize their product value chains, ensuring that the supply chain and its related functions are fully integrated with organizational strategy. This elite group of respondents—approximately 12% of our 1,000-strong survey sample—have more resilient supply chains, higher levels of innovation, customer and employee satisfaction, and growth numbers than other respondents.

Fig. 1: What makes a Supply Chain Leader?



The next generation of collaboration will be agile, transparent, sustainable and beneficial to all stakeholders



Supply Chain Flexibility

- Disruption Management
- Real time consensus and visibility



Network Value

- Multi Tier Visibility
- Collaborative & Shared economy

Business Model Reinvention

Unlocking potential through Modern Supply Chain technologies such as AI, ML, Visual Analytics, Blockchain, IoT etc. allows companies to drive transparency, market and supplier insights and automate the business processes in a sustainable way

Operational Excellence

Increasing efficiency through increase supply chain visibility and adapting to changing conditions, decreasing OpEx and CapEx costs, optimizing resources and increasing manpower productivity, and ensuring preferred buyer position with your suppliers and enable collaboration with workforce of future.

Reduce Friction with Suppliers .. to simulate supply chain processes and eliminate bottle necks

Ease of Business .. to optimize raw material supply and production schedules

Some Examples

Extracting multipurpose Insight from Contracts

Requires a multi-technology approach

Use AI and machine learning to understand, reason, and act on information from complex formats to radically shorten processing times, improve accuracy, enable insights generation and fuel Intelligent Automation.

Understand and identify contract hierarchies across various contract types and formats

Detect nuances of legal language with high accuracy

Extract key concepts and entities from legal clauses

Check for compliance and conformance against enterprise standards

Driving value with IBM Contract Associate



Audit

Complete audit reviews faster and cost effectively and reduce audit risk by reviewing more comprehensive sample sets.



Mergers & Acquisitions

A rapid and easy way of reviewing thousands of internal and external contracts, analyzing non-standard terms as part of the complex M&A process, allowing legal teams to create mitigation plans.



Vendor Negotiation

Speed up the vendor negotiation process by highlighting non-standard clauses and extract complex metadata from within in the contracts.



Due Diligence

Transform the due diligence process from the initial data room download to the final report. Identify provisions such as change of control, assignment, exclusivity, license grants and indemnity.



Legal Review

Reduce the time for legal reviews by identifying and isolating deviations from acceptable contract language – enabling review by exception.



ESG & Regulatory Compliance

Have confidence that all contracts contain the required standard clauses to comply with regulatory, internal, and external commitments. Respond quickly to any regulatory changes.



Cash Flow

Ensure that all contracts contain up-to-date and compliant pay terms to help ensure correct and timely invoicing and improve cash flow.



Procurement Forecasting

Mine contracts for complex pay terms to feed sophisticated price prediction model and forecast with confidence, avoiding costly downstream errors.

IBM Royalty & Procurement

The IBM Royalty management and Procurement teams are using Contract Associate allowing them to free their SME's from manual extraction of contract metadata and tedious review of contracts, to spend more time on IBM's overarching goal of driving revenue via transaction advisory services.

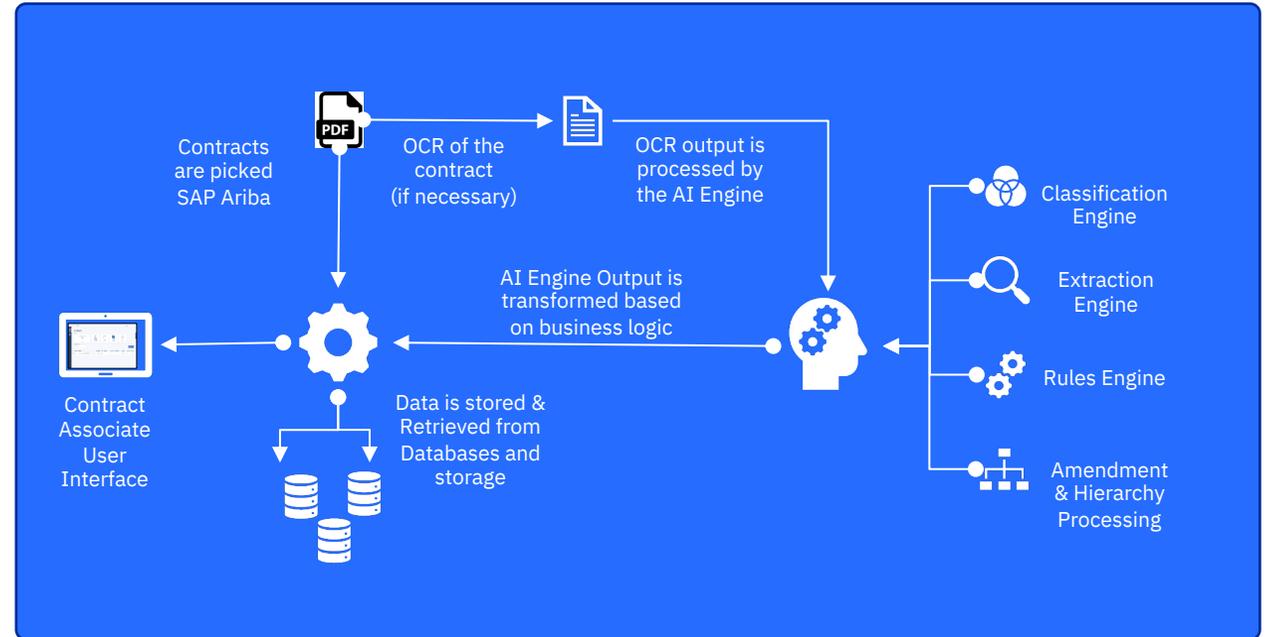
Benefits

85% reduction
in time spent reviewing
contracts

40% reduction
human error related
liabilities

**From Hours to
Minutes**
time spent on agreement
review

3-year
workflow transformation
impacting billion-dollar
operation



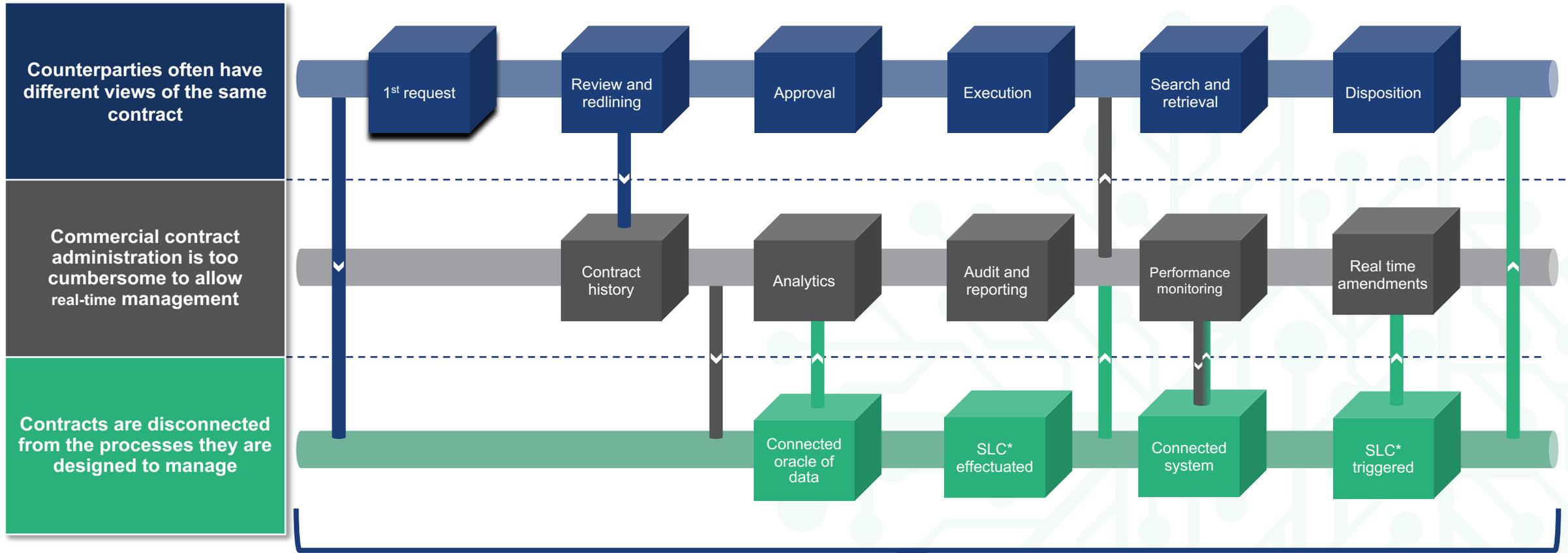
Key Challenges Addressed:

- No single view of all related contract documents
- Too much time spent extracting data and reviewing/comparing contracts
- No standard contract review process

Key Functionalities Delivered:

- Metadata Extraction
- Contract analysis in context of document hierarchy
- Methodology to document latent SME knowledge into AI ready language
- Comparison of contemplated agreements against IBM standards

ANB addresses these challenges by creating a common platform that gives life to your contracts



Rapid contracting **Single source of truth** **Risk reduction** **Automation** **Insights and analytics**

*SLC = Smart Legal Contract

The ANB is not just a blockchain solution for the legal industry – the ANB is a solution for business

Rapid contracting

Simplify the work/data flow between parties and considerably reducing cost of operation

Single source of truth

By creating a single source of truth, reduce risk and remove unnecessary friction in contract management and legal proceedings.

Secure by design

Ensure your contract privileges by using enterprise grade encryption standards, access control tools and the latest technological innovations

Automation

Give life to your contracts and start harnessing the power of Smart Legal Contracts to unlock uncovered business value

Insights and analytics

Powerful analytics will allow new ways of contract interactions and create new business opportunities.

Contracting Parties

Benefit: Keep contracts and policy documents on the ANB to enable codification of clauses, enhance visibility with counterparties and improve compliance.

Government Departments

Benefit: Connect legislation, policy and industry with easy-to-adopt rules that reduce barriers to compliance and facilitate business.

Law Firms

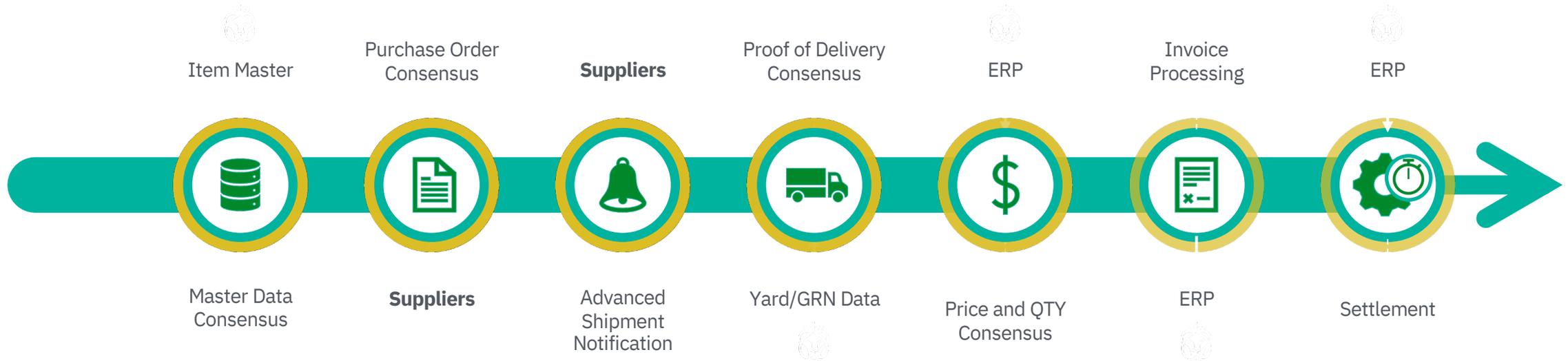
Benefit: Understand and assess their clients' entire contract ecosystem to make the right recommendations in a timely manor and extend their services into business processes

Regulators

Benefit: Simplify and enhance compliance management using Smart Policy Documents and Smart Legal Contracts to reduce the cost and increase effectiveness of audit.

Technology Providers

Benefit: Enable integration between existing data sources or systems with the ANB, as well as building third-party modules and industry-specific add-ons.



Data Ingested:

- 1 Master Data
- 2 PO Data
- 3 Contract Agreement Data
- 4 Supplier Information (ASN etc.)
- 5 Good Receipt Data (including Adjustments)
- 6 Invoice

Key Functions:

- 1 End to End Traceability
- 2 Smart Contracts based Agreements
- 3 Early warning and discrepancy detection (Predictive)
- 4 Supplier and Retailer reports
- 5 Identifying potential receipts

Supplier Collaboration Platform

SEE (Near Real Time)

- Real time discrepancies in data
- Alerts for delays and stoppages
- Changes in key supply chain KPIs
- Visibility of parts maintenance
- Billing Accuracy
- Supplier performances

ACT (TACTICAL)

- Act on discrepancies in product deliveries
- Act on product recall
- Act on new orders to avoid any impact on production lines
- Act on contingency suppliers
- Act on maintenance schedules

REACT (STRATEGIC)

- Analyze Logistics Supplier Performance
- Improve inventory Planning
- Optimize wastage
- Demand & production planning
- Achieve sustainability targets



Larry (Procurement Manager, OEM):

- View of what shipments will be delivered late
- Suppliers should be flexible
- Agreement on quantities to be delivered



Katy (Account Manager, ATCO):

- Billing needs to be accurate
- Create strong relationship with OEM
- Become preferred Supplier

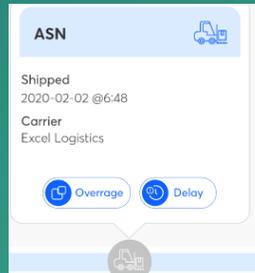


Ryan (Plant Head, OEM):

- Real time visibility of multi tier suppliers
- Steady production
- Strong ATCO relationship

Item ID	Carrier	PO Qty	Sup ASN Qty	Buyer Received Qty	EDD	ADD	Discrepancy
Power Tools - Drills	Essar	9100	9800	9800	2021-02-24	2021-02-24	Overage
							No Dispute

Larry gets real time alert for higher quantity coming in next shipment from Atco



Larry looks at the discrepancy and:

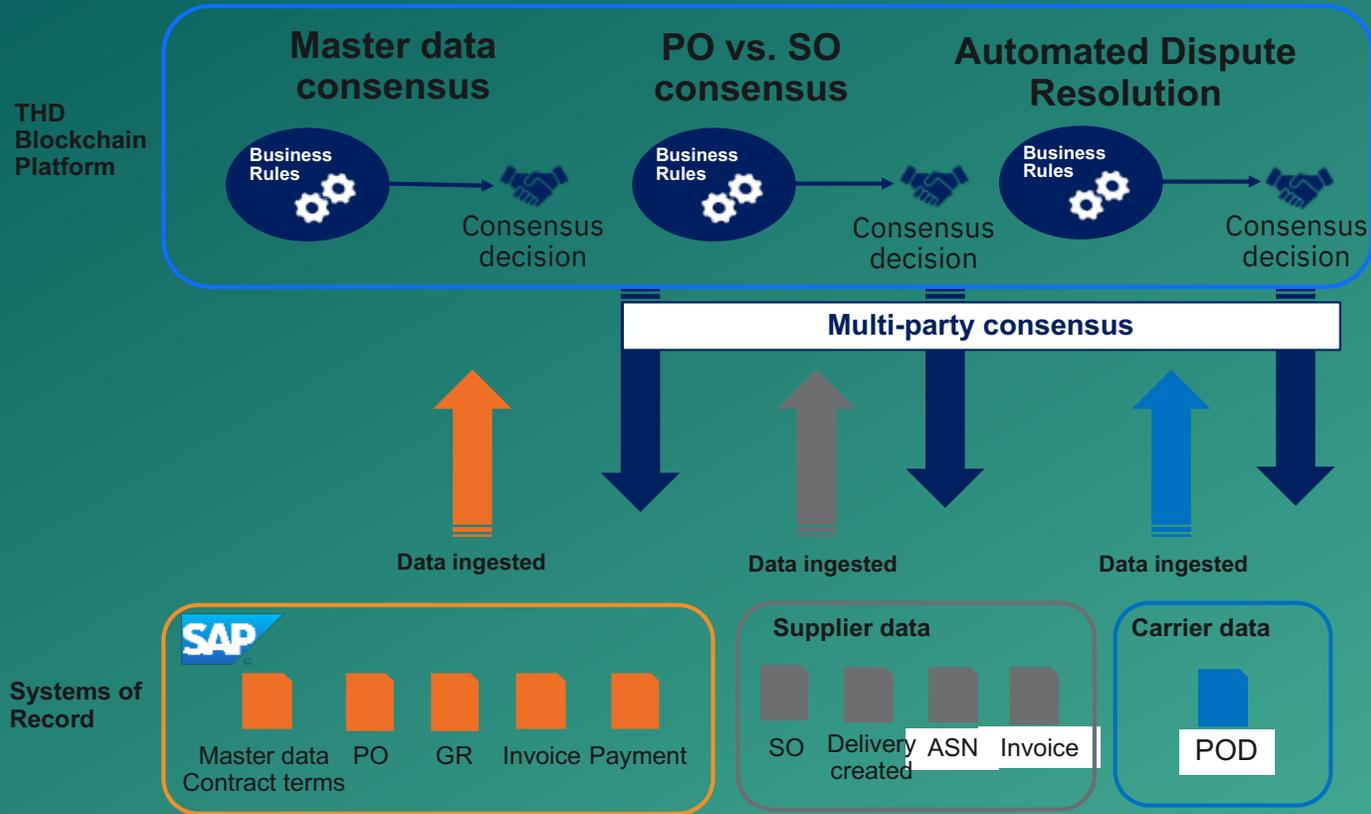
- Accepts the discrepancy for overage and notifies supplier
- Informs the warehouse to be ready to accept a higher shipment

Katy gets a real time alert on acceptance of discrepancy. Invoice gets updated on the revised quantities automatically. Katy gets a real time visibility on Revenue target.

Ryan gets insight on supplier performance, reviews production plan based on incoming supplies, gets visibility of inventory carrying cost and demand fulfilment

Dashboard					
From Supplier ASN to IFC Inbound			From IFC Inbound to IFC Outbound		Wrong RDC
1 Pallet Not Scanned <small>Out of 9 total Missing pallets</small>	1 Additional Pallet Scanned <small>Out of 9 total Additional pallets</small>	1 Missing pallets <small>Out of 9 total Missing pallets</small>	0 Additional pallets <small>Out of 0 total Additional pallets</small>	0 Missing pallets <small>Out of 0 total Missing pallets at the RDC</small>	1 of 404 Orders destined for the wrong RDC <small>Out of 0 total orders shipped</small>
See all discrepancies →					

ERP Integration for Enabling the Next-gen Collaboration



Blockchain driving consensus externally, while SAP is the system of record

Data is taken directly from the source

- ERP is kept as system of record
- Partner data to be fed in Blockchain directly using APIs
- EDI integration protocols can help fill in gaps
- Ability to work in parallel with One Finance

Source data drives immutable multi-party consensus

- Upon ingestion, data is combined and fed into business rules
- Rules are based on agreements between all parties
- Consensus decisions are fed back externally to all parties

The resultant collaboration enables transformation

- Eliminate disputes between A/P and A/R
- Eliminate back and forth communication over PO consensus
- Vendor receives an invoice that is accurate and trusted

Monetizing the network and data

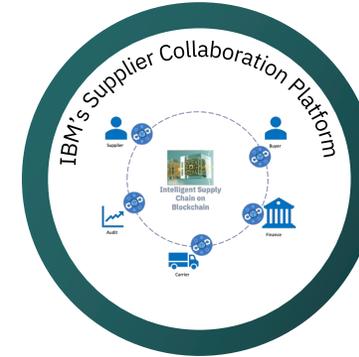
- Leverage untapped data as a source of monetization
- Continue to generate ROI as network expands

Driving Consensus and Outcomes – Supplier & THD

As-Is Process



Consensus Based Platform



Key Challenges



Untimely Resolution

60 – 90 days lag in data



Inaccurate Data

Incorrect PO “Fishing”



Manual Process

Multiple sources of data, Unstructured vendor communications



Lack of Visibility

Vendor, Carrier and Buyer not on the same page. “Siloed data”.



Disputes can take up to 60 days



Significant Effort on Dispute Resolution



Incorrect or limited auditability of transactions

Key Benefits



Timely Resolution

Immediate visibility of data



Accurate Data

Insights into gaps



Automated Process

Standardized vendor communication



LE2E Visibility

Vendor, Carrier and Buyer are on the same page.



Prevent Disputes and enable quicker resolution of disputes



Focus on addressing discrepancies

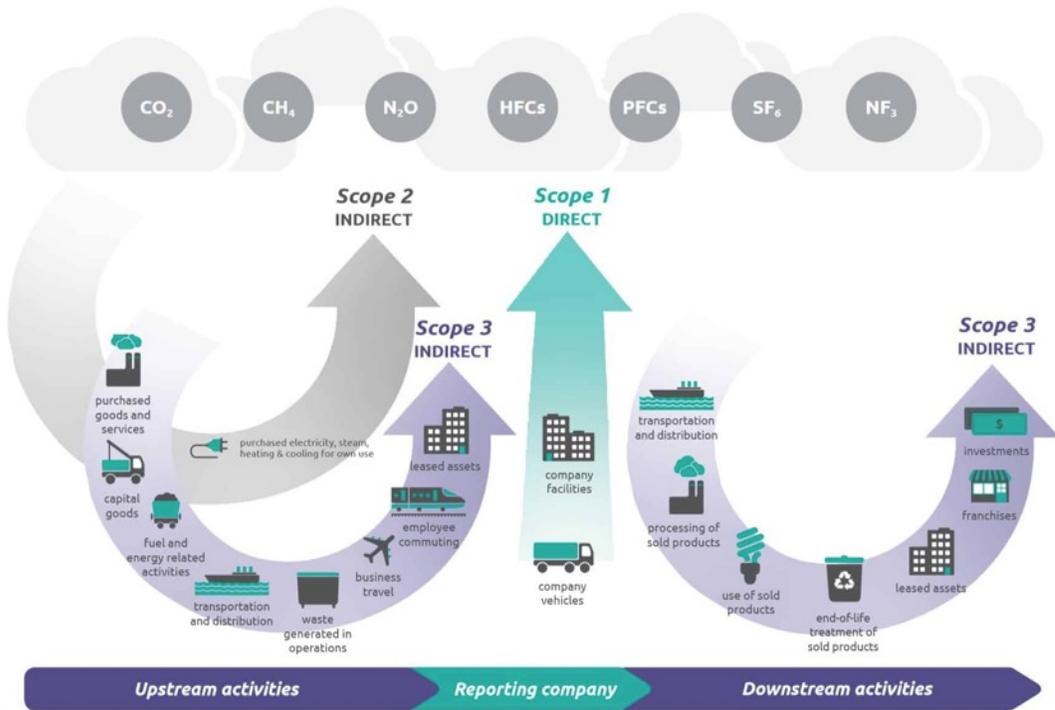


Auditability of transactions

Carbon Accounting

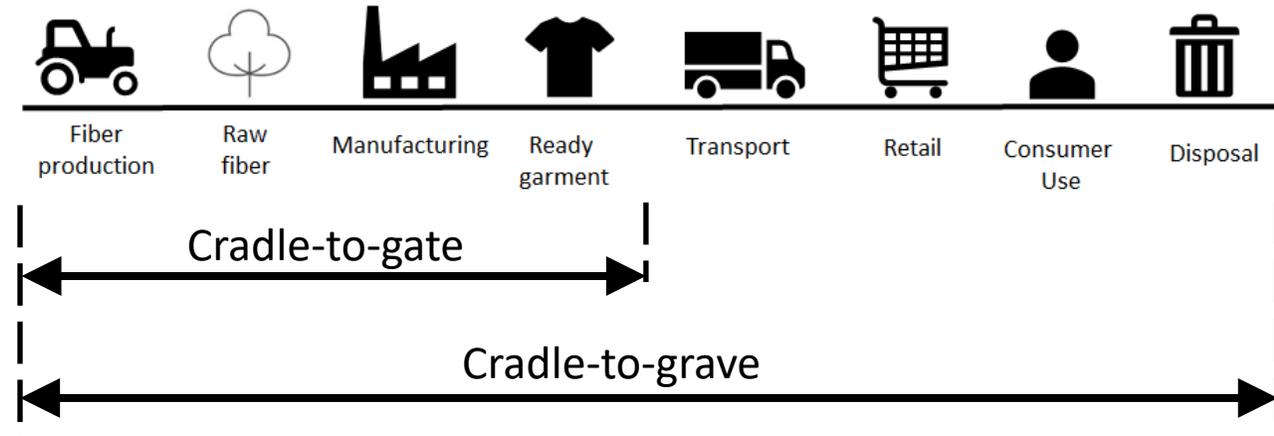
- Accounting for the *total carbon footprint* of all emission-producing activities at a given *level*
 - Two types of accounting of interest: *Corporate* and *product lifecycle*

Corporate accounting



- Organization specific:
 - Scope 1: Direct emissions
 - Scope 2: Indirect emissions
 - Scope 3: Indirect emissions in value-chain not considered in Scopes 1 and 2

Product lifecycle accounting



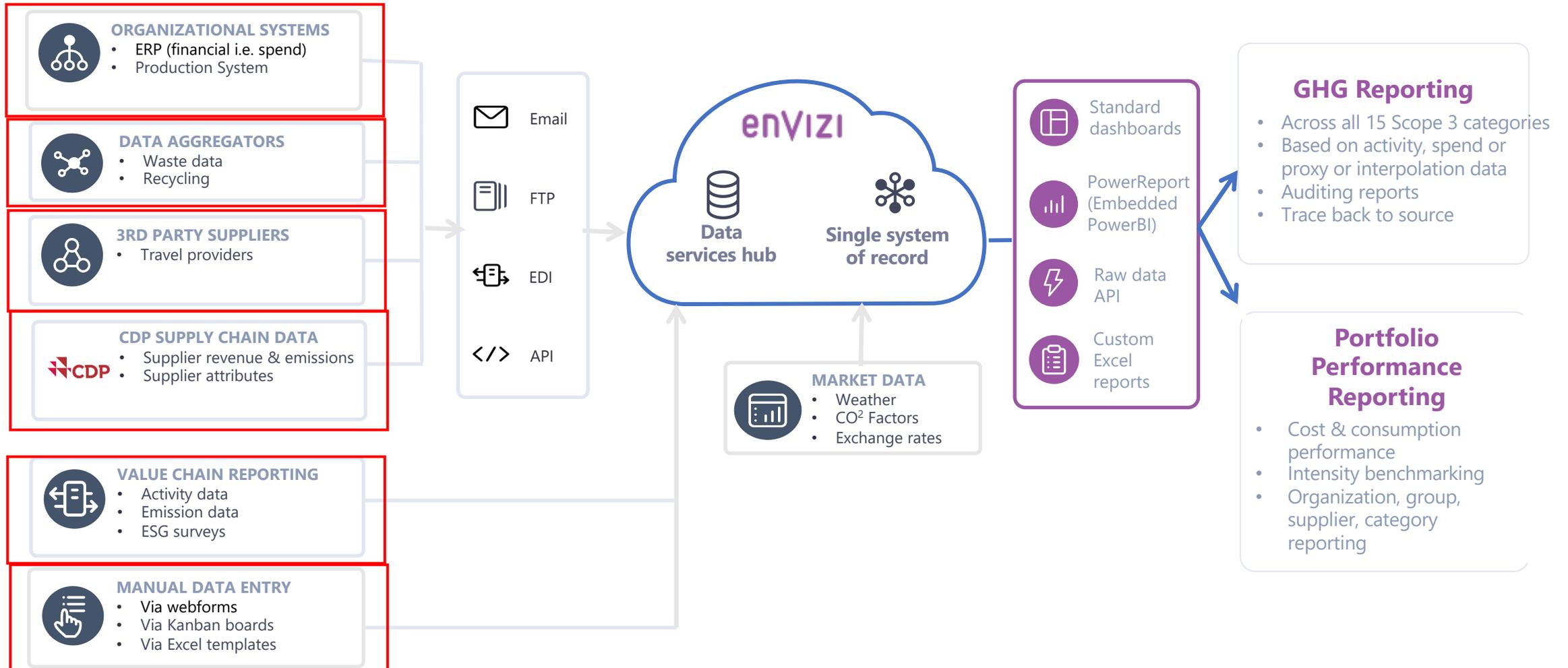
- Product specific (per functional product unit):
 - Cradle-to-gate:* Cumulative emissions from *cradle* (e.g. fiber production) to the reporting-company's *gate*
 - Cradle-to-grave:* Cumulative emissions from *cradle* to *grave* (disposal)

Overview: Scope 3 GHG Accounting + Reporting

Automate Scope 3 Data Capture From Multiple Sources And Distributed Stakeholders

Consolidate Into Single Auditable Data Foundation

Streamline Scope 3 GHG & Performance Reporting



The Plastic Bank

Tackling ocean plastic and global poverty with blockchain-based token rewards.

Creates

secure asset-backed rewards to underpin the exchange of plastic waste for goods

Sparks

massive expansion from startup to global platform for cleaner oceans

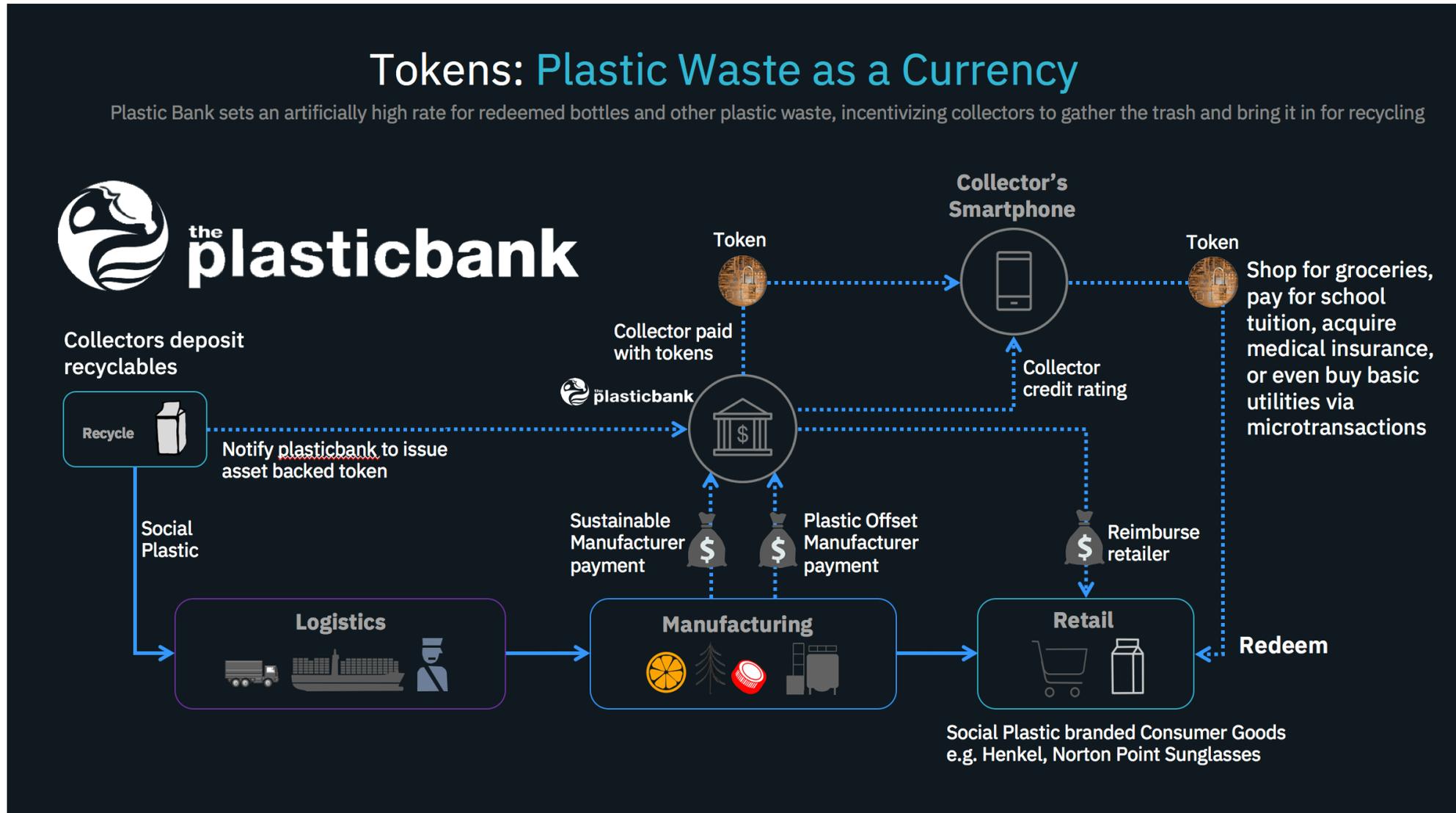
Enables

the most disadvantaged to transcend poverty as recycling entrepreneurs

11,301,621 KG RECOVERED

287 COLLECTION POINTS

19,626 REGISTERED MEMBERS



Metaverse elements



Immersion

Navigate 3D environments on mobile, desktop, VR, MR & AR using natural user interactions.



Decentralization

The Metaverse isn't owned by any one company or group.
Ex: Blockchain, Web3



Persistence

Digital identity's public actions affect shared worlds and users. They are never off or reset.



Virtual Economy

Defined by a P2P economy, digital goods, exchanges, and 'play to earn' gamification



Communities

Shared spaces, worlds, events & locations encourage, content, collaboration and co-creation.

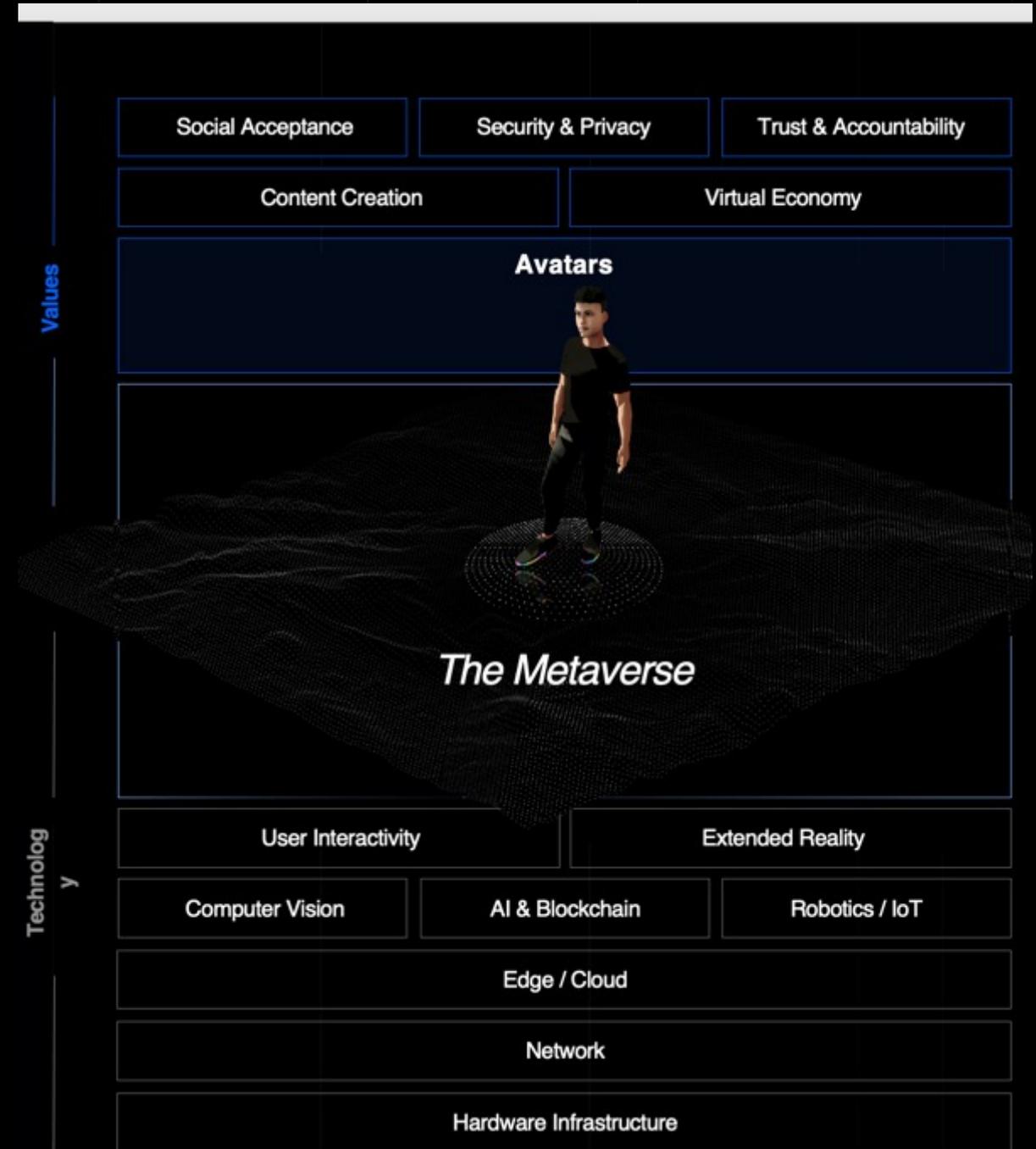


Interoperability

Technical standards, formats, interfaces, and protocols for cross-world asset sharing

Values

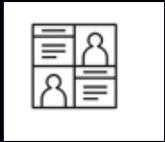
Technology



Some Examples

What is Blockchain?

Key Elements of Blockchain



Distributed Ledger Technology (DLT)



Consensus Mechanisms



Immutable Records



Smart Contracts

How Blockchain Works?



As each transaction occurs, it is recorded as a “block” of data



Each block is connected to the ones before and after it



Transactions are blocked together in an irreversible chain: a blockchain

Types of Blockchain



Public blockchain networks

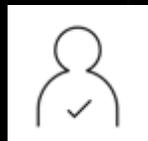
A public blockchain is one that anyone can join and participate in, such as Bitcoin.



Permissioned blockchain networks

Businesses who set up a private blockchain will generally set up a permissioned blockchain network.

Benefits of Blockchain



Greater Trust and Transparency



Greater Security



More efficiencies

