Chainlink

How to Build a Future-Proof Enterprise Blockchain Strategy

5 key considerations for outpacing competitors in the fast-growing smart contract economy

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The Benefits of Decentralized Networks

TOKENIZATION

Financial Assets	Gaming & Entertainment	Carbon Credits	Trademarks & Copyrights

TRANSPARENCY

Audits & Assurances	Accounting	Insurance

IMMUTABILITY

Contracts	Digital Identity	Supply Chain & Logistics

SETTLEMENT

Collateralized Lending	Payments & Remittances	Derivatives

SECURITY

IT Infrastructure	Backend Processes	Data Services	Internet of Things

Blockchains and Smart Contracts Are Disrupting Global Industries

But creating a long-term implementation plan is difficult.

Though the business advantages of using blockchains and smart contracts are widely known, enterprise adoption has not seen growth to the same scale as other verticals since the technology's introduction in 2008—mainly due to implementation hurdles, infrastructural barriers, and industry knowledge gaps.

"Blockchains are fundamentally changing the nature of doing business."

—Deloitte Insights, Tech Trends 2022

Deloitte.

1 Bridging External Data and Systems

Problem

By design, blockchains cannot pull data in from, or push data out to, external systems. This creates two challenges for enterprise blockchain integration strategies.

Lack of Data Connectivity

Companies need access to the same databases, analytics, and APIs used in their existing operations.

System Incompatibility

To avoid the cost of modifying existing infrastructure, companies require an integration platform that can adapt to workflows and communicate with their proprietary backend systems.

Solution

A Secure and Universal Integration Platform

Chainlink is a secure integration platform that enables companies to interact with blockchain networks using existing enterprise tools and internal databases. Chainlink abstracts away backend complexities so companies can prioritize immediate revenue generation and cost reduction.

Bank Payments

Market Data

Retail Payments

All Web APIs

Events Data

Other Blockchains
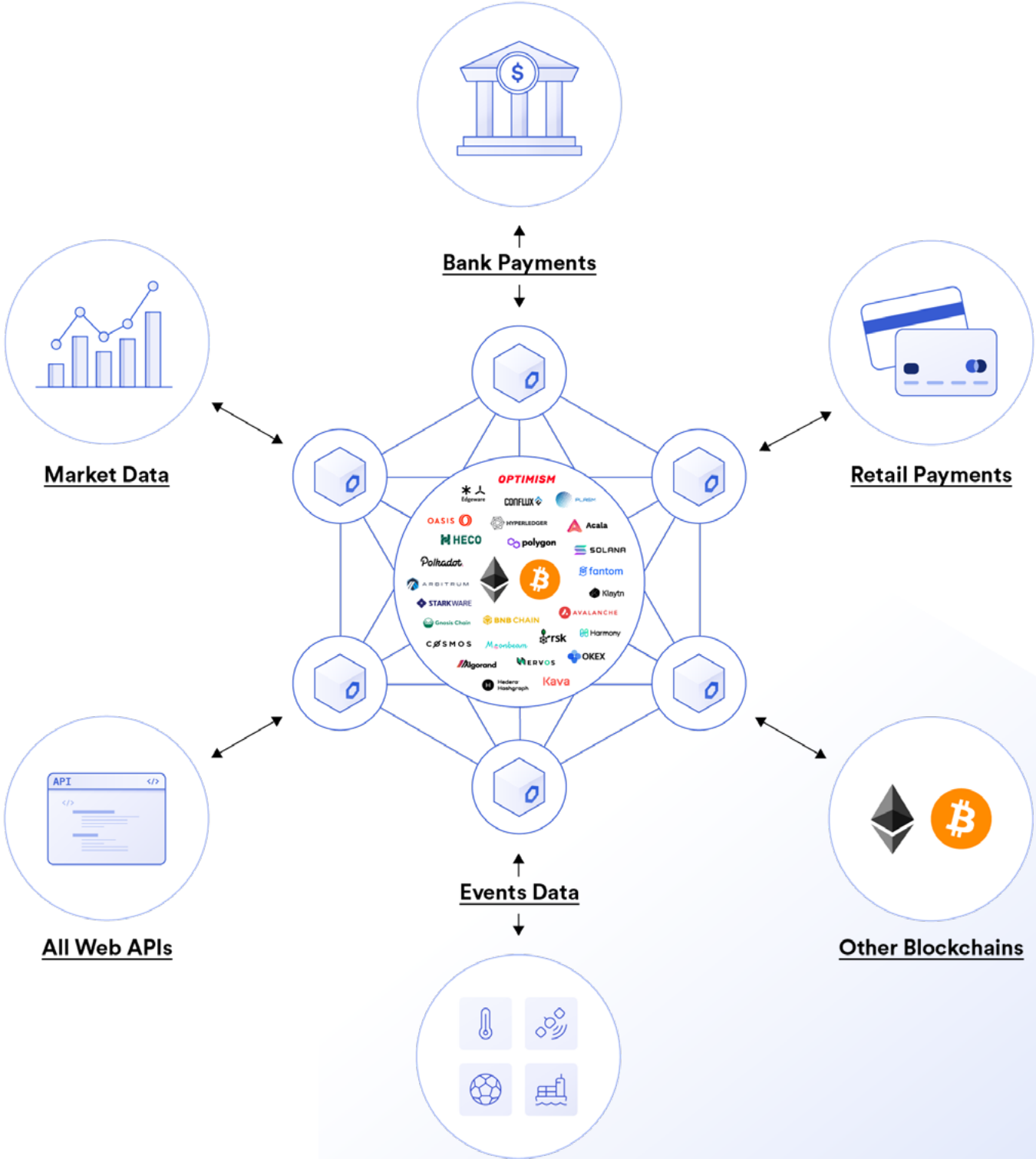
❷ Leveraging Developer Tools

Problem

Enterprises need a broad collection of developer tools and services in order to both secure and enrich smart contract applications. Companies must either invest in building internal tooling or adopt external services that haven't been proven in production.

Need for Reserve Attestations

To tokenize real-world assets, carbon credits, and copyrights, companies need developer tools that can prove real-world asset ownership on blockchains.
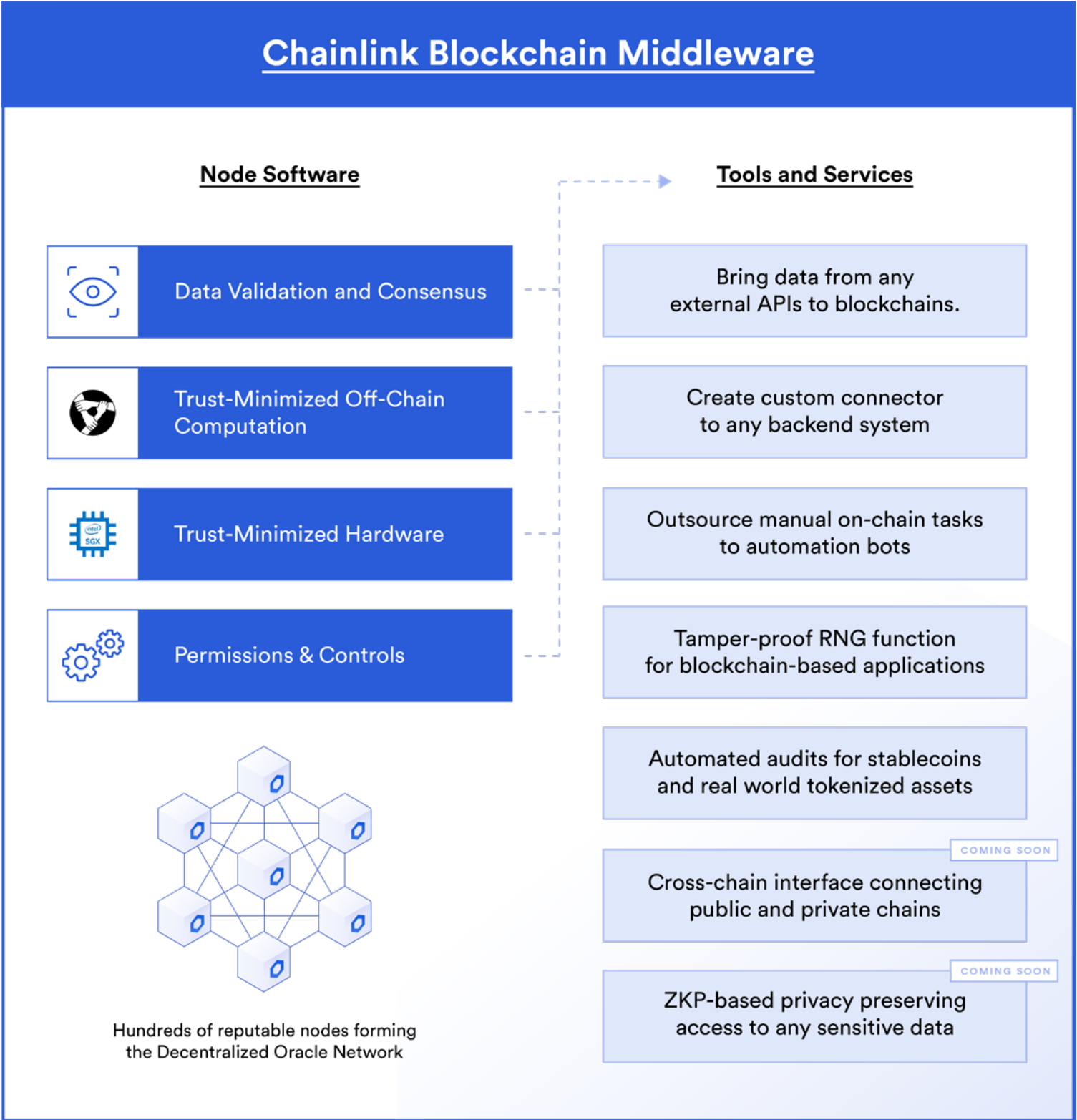
Lack of Secure Randomness Solution

As blockchain networks are deterministic, truly random numbers aren't natively available.

Manual DevOps Automation

Production-grade applications should have secure and reliable automation, but smart contracts require manual intervention or centralized servers to trigger their functions.
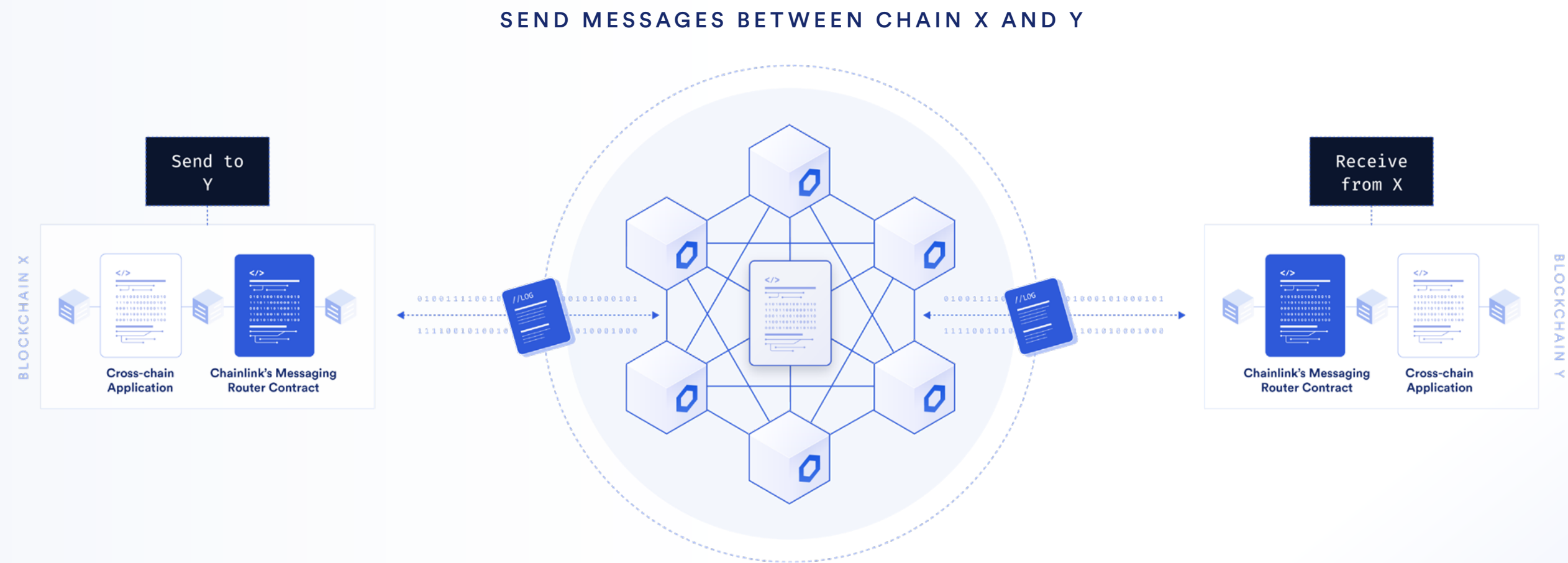
Solution

Customizable Tools Run by a Proven Network

Chainlink leverages experienced and proven node operators to offer developers and companies plug-and-play access to time-tested infrastructure, tooling, services, and attestations that are customizable to any firm's unique needs.

Chainlink Blockchain Middleware

Node Software

Tools and Services

Data Validation and Consensus

Trust-Minimized Off-Chain Computation

Trust-Minimized Hardware

Permissions & Controls

Bring data from any external APIs to blockchains.

Create custom connector to any backend system

Outsource manual on-chain tasks to automation bots

Tamper-proof RNG function for blockchain-based applications

Automated audits for stablecoins and real world tokenized assets

COMING SOON
Cross-chain interface connecting public and private chains

COMING SOON
ZKP-based privacy preserving access to any sensitive data

Hundreds of reputable nodes forming the Decentralized Oracle Network

③ Navigating Competing Blockchain Networks

Problem   A growing number of public and private blockchains means companies risk investing resources into infrastructure and solutions that may become quickly obsolete.

SEND MESSAGES BETWEEN CHAIN X AND Y

Solution   ## Blockchain Interoperability

Chainlink is a blockchain-agnostic secure middleware that can securely connect to any private or public blockchain network. With the upcoming release of the Cross-Chain Interoperability Protocol (CCIP), Chainlink will solve the blockchain fragmentation problem through a universal messaging interface that enables enterprises to write once and deploy anywhere—a future-proof gateway that accounts for competing networks.
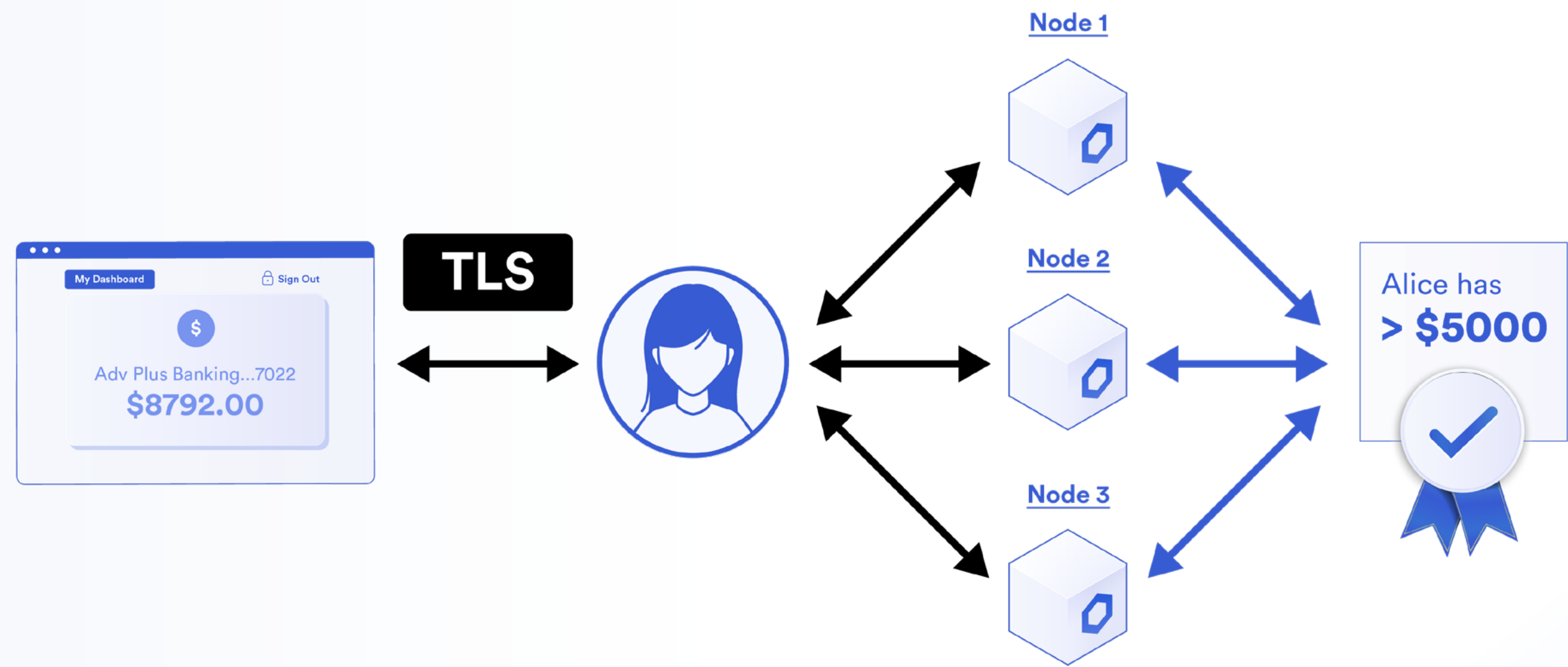
④ Solving Privacy and Compliance

Problem

Public blockchains are transparent but pseudonymous ledgers, making it challenging for enterprises to ensure user privacy around sensitive datasets.

Public Addresses

Putting data on a blockchain gives all network participants read-access, creating challenges around maintaining user and company privacy.

Compliance

For specific applications, institutions must comply with AML and KYC requirements and therefore need custom solutions and additional software modules on top of their existing blockchain tech stack.

Solution

Privacy-Preserving Oracles and Zero-Knowledge Technologies

DECO, a privacy-preserving oracle protocol, enables companies and users to make trustworthy assertions regarding private data in existing systems without revealing the data directly. Any participant can then consume, utilize, or monetize private data on-chain while meeting compliance requirements.

5 Accessing Industry Expertise and Talent

Problem   Because the talent pool of Web3 experts and engineers is relatively small, a knowledge gap has opened up between industry participants and existing companies.

~200-300K
BLOCKCHAIN DEVELOPERS

26.2 MILLION DEVELOPERS
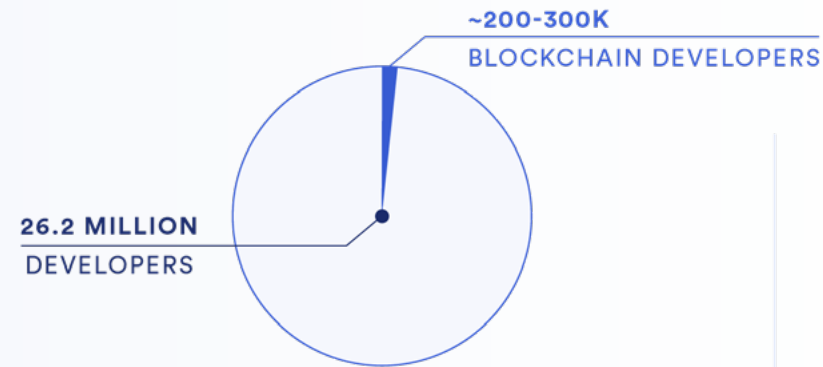
Blockchain developers are estimated to make up less than 2% of all software developers.

U.S. job listings for crypto-related roles grew by 395% from 2020-2021.

"Blockchain" was LinkedIn's 2020 most in-demand skill

Solution

Choose the Right Industry Partner

Chainlink Labs has a world-class team of researchers, executives, advisors, and blockchain developers that can help your company strategize, design, and build a future-proof blockchain strategy. Providing a universal gateway for companies to securely and seamlessly connect to blockchain networks, Chainlink is used by top applications and is the market leader in the decentralized oracle network and blockchain middleware vertical.

Sergey Nazarov
Co-Founder of Chainlink
Founder & CEO of Chainlink Labs

Kemal El Moujahid
Chief Product Officer
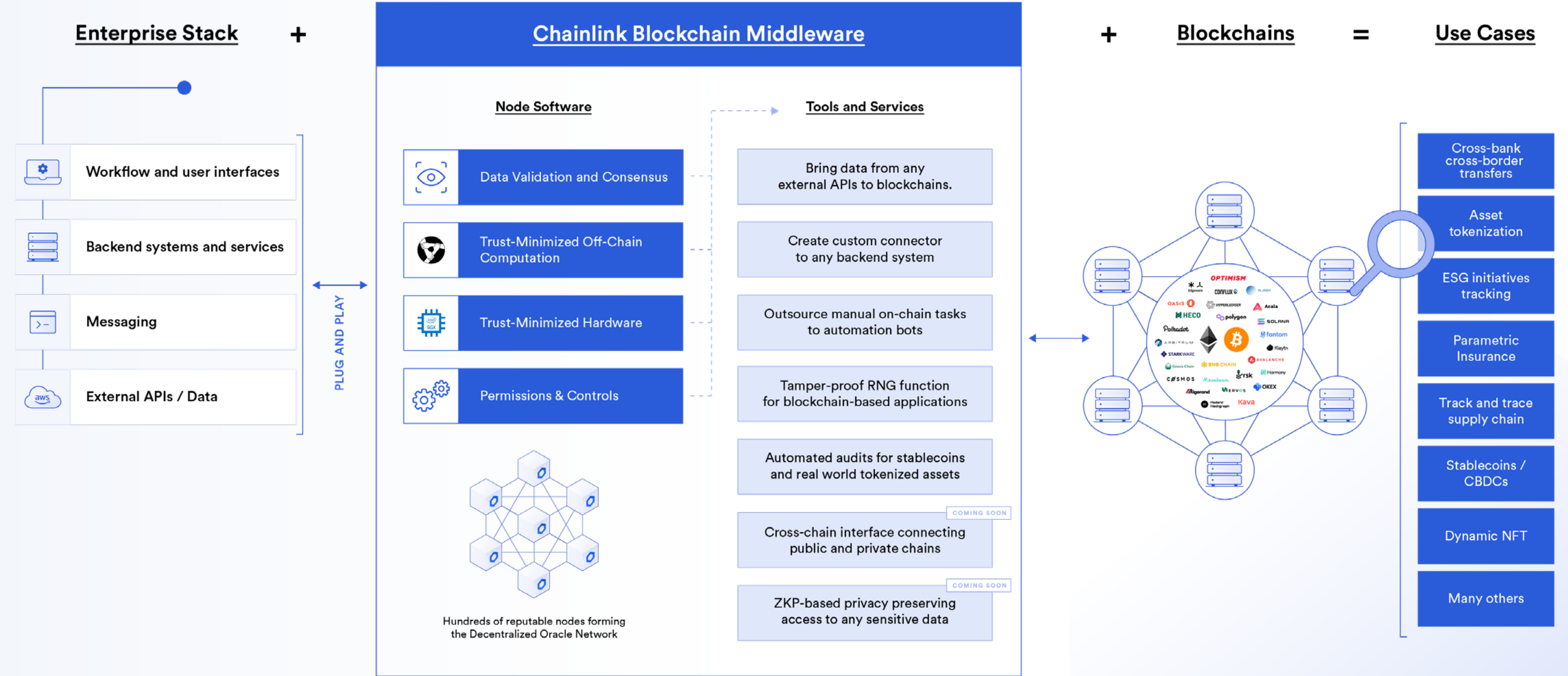Former Director of Product Management for Google's TensorFlow

Dahlia Malkhi
Chief Research Officer
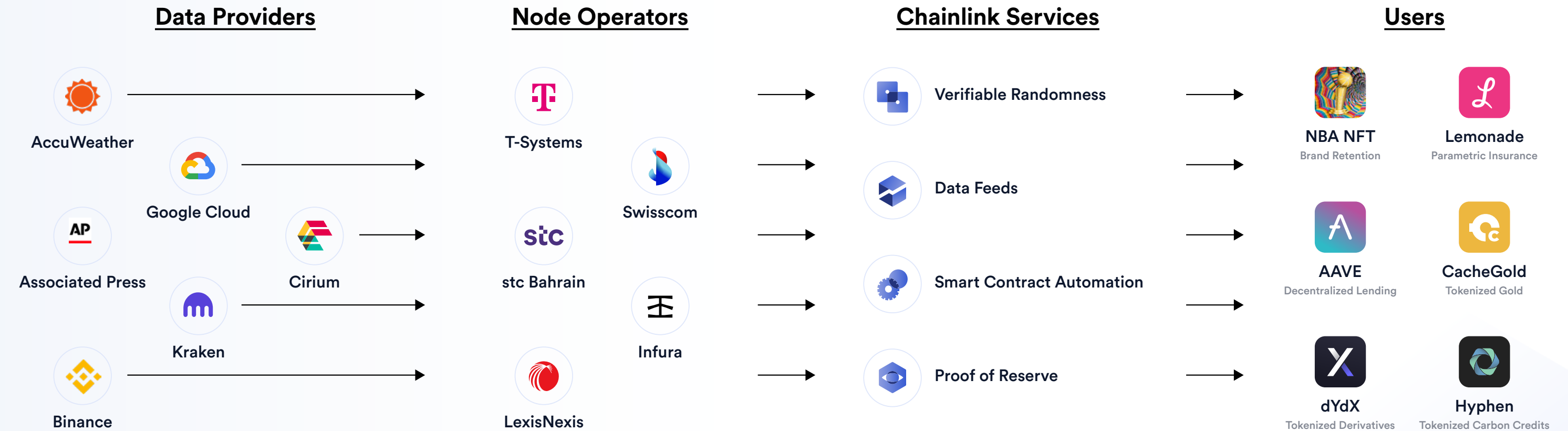Former CTO at Diem Association

Mike Derezin
Chief Operating Officer
Former LinkedIn VP

Chainlink: The Gateway for Enterprise Blockchain Adoption

There are numerous possibilities for existing companies to leverage the power of blockchain technology and smart contracts to expand their offerings, attract new customers, and differentiate themselves from their competitors.

Enterprise Stack +

- Workflow and user interfaces
- Backend systems and services
- Messaging
- External APIs / Data

PLUG AND PLAY

Chainlink Blockchain Middleware

Node Software

- Data Validation and Consensus
- Trust-Minimized Off-Chain Computation
- Trust-Minimized Hardware
- Permissions & Controls

Hundreds of reputable nodes forming the Decentralized Oracle Network

Tools and Services

- Bring data from any external APIs to blockchains.
- Create custom connector to any backend system
- Outsource manual on-chain tasks to automation bots
- Tamper-proof RNG function for blockchain-based applications
- Automated audits for stablecoins and real world tokenized assets
- Cross-chain interface connecting public and private chains   COMING SOON
- ZKP-based privacy preserving access to any sensitive data   COMING SOON

+ **Blockchains** = **Use Cases**

- Cross-bank cross-border transfers
- Asset tokenization
- ESG initiatives tracking
- Parametric Insurance
- Track and trace supply chain
- Stablecoins / CBDCs
- Dynamic NFT
- Many others

The Chainlink Network Today

Data Providers

- AccuWeather
- Google Cloud
- Associated Press
- Cirium
- Kraken
- Binance

Node Operators

- T-Systems
- Swisscom
- stc Bahrain
- Infura
- LexisNexis

Chainlink Services

- Verifiable Randomness
- Data Feeds
- Smart Contract Automation
- Proof of Reserve

Users

- NBA NFT — Brand Retention
- Lemonade — Parametric Insurance
- AAVE — Decentralized Lending
- CacheGold — Tokenized Gold
- dYdX — Tokenized Derivatives
- Hyphen — Tokenized Carbon Credits

DATA PROVIDERS

3,600,000,000+ data points delivered to blockchains

NODE OPERATORS

1,000+ oracle networks providing services to blockchain applications

CHAINLINK SERVICES

In-development: Privacy-preserving protocol and cross-chain communications standard

USERS

1,600+ blockchain applications using Chainlink services

Set your company up for success and outpace the competition by consulting a blockchain expert from Chainlink Labs today.

Consult a blockchain expert

Who we are

A global team of blockchain experts who advance enterprise adoption of Web3 technology.

Sergey Nazarov
Co-Founder

Sergey is the Co-founder of Chainlink, the leading decentralized oracle network used by global enterprises and projects at the forefront of the blockchain space. Working with leading banks, insurance companies, and large technology firms on the creation of universally connected smart contracts gives Nazarov a unique perspective on what is required to drive mainstream adoption of blockchain technology.

Ari Juels
Chief Scientist

Ari is the Weill Family Foundation and Joan and Sanford I. Weill Professor in the Jacobs Technion-Cornell Institute at Cornell Tech and the Technion and a Computer Science faculty member at Cornell University. He is a Co-Director of the Initiative for CryptoCurrencies and Contracts (IC3). He was the Chief Scientist of RSA, Director of RSA Laboratories, and a Distinguished Engineer at EMC (now Dell EMC), where he worked until 2013.

Dahlia Malkhi
Chief Research Officer

Dahlia is Chief Research Officer at Chainlink Labs. She has been the CTO at the Diem Association, lead researcher at Novi, co-founder of VMWare Research, principal partner researcher at Microsoft Research, and a tenured professor at the Hebrew University of Jerusalem. She has also co-invented numerous innovations, including HotStuff, CorfuDB, Flexible Paxos, and Vertical Paxos.

Kemal El Moujahid
Chief Product Officer

Kemal is the Chief Product Officer at Chainlink Labs. He was the director of product management for TensorFlow at Google, the world's #1 open-source machine learning platform, where he scaled it to 300 million downloads and some of the largest enterprise use cases for AI. Prior to his work on TensorFlow, El Moujahid was at Facebook (Meta) where he launched the Messenger platform and Facebook's virtual assistant.

Mike Derezin
Chief Operating Officer

Mike is the Chief Operating Officer at Chainlink Labs. He spent more than a decade at LinkedIn, the world's largest professional network, where he helped lead and scale two businesses, Learning Solutions and Sales Solutions, which became leaders in their respective markets. He has more than 20 years of experience in the technology sector, including as a co-founder of two startups, one of which was acquired by Thomson Reuters.

Key Advisors

Eric Schmidt
Advisor

Eric previously served as Google's chief executive officer, where he grew the startup into one of the most important technology companies on the planet. Eric has served on the boards of Alphabet, Apple, Princeton University, Carnegie Mellon University, and the Mayo Clinic.

Jeff Weiner
Advisor

Jeff built LinkedIn into the world's largest professional network, currently serving as its executive chairman. He specializes in growing technology companies and mentoring top technology leaders, serving on various advisory boards including Intuit and DonorsChoose.

Tom Gonser
Advisor

Tom is the founder of DocuSign, the leading e-signature company that revolutionized digital contracts. He is a seasoned entrepreneur, executive, and board member who has created billions of dollars in enterprise value by enabling contracts to work over the Internet.

About Chainlink Labs

Chainlink Labs is the leading provider of secure and reliable open-source blockchain oracle solutions, enhancing smart contracts by connecting them to a wide range of off-chain data sources and computations, such as asset prices, web APIs, IoT devices, payment systems, and more. We are dedicated to the development and integration of Chainlink as the standard decentralized oracle framework used by smart contracts across any blockchain.

Chainlink Labs is a world-class team of 500+ developers, researchers, and enterprise experts with deep experience in cryptography, decentralized systems, and smart contracts.

Chainlink Labs