

CAREL DE JAGER

Founder & CEO, Sixpence
CTO, Bitmach

Blockchain engineer, crypto-asset compliance architect, and energy strategist bridging power infrastructure and digital asset innovation across Africa and globally. Over a decade of engineering experience and 100+ speaking engagements on five continents.

EDUCATION M.Eng (cum laude), B.Eng Chemical — North-West University

VENTURES Sixpence (CEO) · Bitmach (CTO) · Idatco (Co-founder) · CSIR (Former Lead)

EXPERTISE Blockchain forensics · Crypto auditing · Bitcoin mining · Compliance

MEDIA CNBC Africa · Radio 702 · RSG Geldsake · Moneyweb · Daily Maverick



SHORT BIO

At a Glance



Carel de Jager is a South African blockchain engineer, crypto-asset compliance specialist, and energy strategist. He is the Founder and CEO of Sixpence, a blockchain intelligence firm serving global institutions, and the CTO of Bitmach, Africa's largest Bitcoin mining venture in partnership with Eskom. With dual engineering degrees from North-West University and a decade of experience spanning power generation, forensic blockchain analytics, and regulatory technology, Carel has delivered over 100 public presentations across five continents and is regularly featured on CNBC Africa, Radio 702, and RSG Geldsake as a leading authority on digital assets in Africa.

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EXTENDED BIO

Professional Profile

Carel de Jager holds a Master's degree in Engineering Management (cum laude) and a Bachelor's degree in Chemical Engineering, both from North-West University. He began his career as an Asset Care Engineer at Eskom's Lethabo Power Station, where he spent nearly a decade managing plant reliability, maintenance strategies, and capital projects for one of Africa's largest coal-fired power stations.

In 2016, Carel transitioned into the blockchain industry. As a senior consultant for the Blockchain Academy, he developed and delivered multi-day training courses for executives across law firms, insurance providers, commercial banks, and financial regulators — both in South Africa and internationally, including engagements in Oman and at the World Youth Forum in Egypt. He also led the Distributed Ledger Technology Research Group at the Council for Scientific and Industrial Research (CSIR), spearheading the development of blockchain compliance and surveillance products for financial regulators.

Today, Carel is the Founder and CEO of Sixpence, a blockchain intelligence firm whose LedgerCore analytics engine serves global institutions including Coinbase, Nedbank, Mazars, and the South African Reserve Bank. The company builds forensic investigation tools, proof-of-reserves software, crypto tax reporting systems, and transaction monitoring APIs. Sixpence was awarded a Coinbase grant for its proof-of-reserves R&D, selected from over 50 international proposals.

He is also the CTO of Bitmach, a demand-response Bitcoin mining venture co-founded with Rob Hersov and Stafford Masie, operating in partnership with Eskom to monetise surplus electricity and stabilise the national grid. Carel first proposed the concept publicly in 2018, and his simulation demonstrating that Eskom could have mined over 406,000 BTC since 2020 — enough to eliminate the utility's R422 billion debt — has been widely covered by the Daily Maverick, Moneyweb, and The Citizen.

As a public speaker with over 100 documented engagements, Carel has presented at the Blockchain Africa Conference (six consecutive years), Adopting Bitcoin Cape Town, Crypto Fest, the Collision Conference in Toronto, the Hamburg Sustainability Conference in Germany, and the World Youth Forum in Egypt. He is a regular expert commentator on CNBC Africa, Radio 702's The Money Show, RSG Geldsake, and the Moneyweb Crypto Podcast. He is co-founder of Idatco, an institutional-grade automated cryptocurrency trading platform, and has co-authored a book published by Palgrave Macmillan on blockchain evidence frameworks.

COMPREHENSIVE PROFILE

The Full Story

Career Timeline

Period	Role	Organisation	Key Focus
2025–Present	Chief Technology Officer	Bitmach	Demand-response Bitcoin mining with Eskom; grid stabilisation
2020–Present	Founder & CEO	Sixpence	Blockchain forensics, compliance (LedgerCore), proof-of-reserves, crypto tax
2020–Present	Co-Founder	Idatco	Institutional automated crypto & stablecoin trading for wealth managers
2019–2024	DLT Research Group Leader	CSIR (EDT4IR)	Blockchain R&D for regulators; self-sovereign identity; Exochain
2017–2023	Senior Consultant	Blockchain Academy	Developed 7+ courses; coached executives at banks, law firms, regulators
2013–2022	Asset Care Engineer	Eskom (Lethabo)	Plant reliability; maintenance strategy; bulk materials; outage management

Education

Degree	Institution	Year	Details
M.Eng Engineering Management	North-West University	2013–2015	Cum laude. Dissertation: "Measuring the Job Satisfaction of Young Engineers at Eskom Power Stations"
B.Eng Chemical Engineering	North-West University	2008–2012	Four-year undergraduate engineering degree

Companies & Ventures

Sixpence (Silver Sixpence Intelligence) — Founded 2020, Pretoria. Blockchain intelligence firm. Proprietary LedgerCore engine powers **LedgerWatch** (investigations/compliance), **LedgerTax** (crypto tax), **Ledgernalysis** (exchange auditing), and **ReserveX** (proof-of-reserves). Awarded Coinbase grant for PoR R&D (selected from 50+ proposals). Co-authored open-source PoR software with Coinbase. Published 'The Universal KYT API' specification. Clients: Coinbase, Nedbank, Mazars, SARB, Kraken, Binance, Crypto.com, BCX, FSCA, FIC Namibia, ACFE, TRA (UAE).

Bitmach — Co-founded 2025 with Rob Hersov and Stafford Masie. Demand-response Bitcoin mining with Eskom. Monetises surplus off-peak electricity via dynamic hashrate, stabilising the national grid. Carel serves as CTO. His 2018 Eskom mining proposal — refined through CSIR research — showed 406,000+ BTC could have been mined since 2020, enough to eliminate Eskom's R422 billion debt. Covered by Daily Maverick, Moneyweb, and The Citizen.

Idatco — Co-founded c. 2020, registered in Mauritius. Institutional-grade automated cryptocurrency trading platform for regulated businesses. Cross-currency/cross-exchange momentum trading, portfolio rebalancing, and arbitrage strategies. Supports Bybit, Kraken, CapeCrypto, Luno, VALR, and Xago. Features for wealth managers: streamlined onboarding, comprehensive reporting, API-key custody control. Also launching the Nova Investment Strategy (algorithmic trading fund) with a licensed FSP for SA HNW investors. (idatco.co)

CSIR — DLT Research Group (2019–2024). Research Group Leader, EDT4IR. Blockchain compliance/surveillance products for regulators. Exochain on-chain investigation tool. Self-sovereign identity, cross-chain forensics, DLT/metaverse. Featured in BusinessTech, Hypertext, CSIR Conference 2022.

Blockchain Academy (2017–2023). Senior consultant/lead instructor. Courses: Advanced Blockchain, Blockchain for Executives, Financial Institutions, Insurance, Crypto Storage & Inheritance, 20-day graduate course. Clients: JCCI, Werksmans, Discovery, SAICA. International: Muscat, Oman.

Areas of Expertise

- **Blockchain Forensics & On-Chain Intelligence:** Address clustering, behavioural analysis, transaction graph analysis, cross-chain tracking, privacy mixer deobfuscation. Tracked the North Korean Lazarus Group; exposed R5bn in illegal SA capital outflows.
- **Crypto-Asset Auditing & Compliance:** Proof-of-reserves, exchange solvency auditing, real-time KYT, AML/CFT protocols. Built tools used by Coinbase, Kraken, Binance, Crypto.com.
- **Bitcoin Mining & Energy Economics:** Demand-response load balancing, stranded energy monetisation, grid stabilisation. Modelled Eskom mining 406,000+ BTC.
- **Automated Trading:** Co-founded Idatco — cross-exchange momentum, stablecoin arbitrage, portfolio rebalancing for wealth managers and regulated businesses.
- **Regulatory Technology & Policy:** Advising FSCA, SARB, international regulators. Published KYT API specs, stablecoin frameworks. Palgrave Macmillan co-author.
- **Technical Education:** 7+ blockchain courses, hundreds of executives trained across 3 continents. Bilingual (English/Afrikaans).

Conference & Speaking Highlights

Event	Location	Year(s)	Topic / Role
Blockchain Africa Conf.	Johannesburg	2019–2025	Keynote (2023, 2025): forensics, DeFi, compliance, mining
Adopting Bitcoin CT	Cape Town	2025–2026	"Bitcoin: The SA Journey" with Stafford Masie; Eskom simulation
Crypto Fest	Cape Town	2025	"BTC & ETH as Strategic Reserves" — 51% attack modelling
Collision Conference	Toronto, Canada	2024	AI digital health & blockchain infra (Canadian Trade Commissioner)
Hamburg Sustainability	Hamburg, Germany	2024	Blockchain in green finance; tokenised asset integrity risks
World Youth Forum	Sharm El Sheikh	2019	Blockchain entrepreneurship — 7,000 delegates
TCI-SA Payments	South Africa	2026	GENIUS Act implications on stablecoin AML/reserves
DeFi Conference	Cape Town	2020	"Practical Look at DeFi: Decentralization vs. Governance"
CSIR Conference	Pretoria	2022, 2024	"Money as a Science" — monetary system underpinnings
Global Blockchain Congress	Johannesburg	2018	Early blockchain adoption education
Seamless Southern Africa	South Africa	2019	Payments and fintech innovation
Finance Indaba	Johannesburg	2019	Blockchain for financial services

Additional: Muscat (Oman) training, Reserve Bank Project Khoka (2018), Western Cape Government blockchain meetings, SABC1 (Daily Thetha), SABC3 (Real Talk with Anele), KykNet (WinslynTV).

Media Appearances

Carel is one of South Africa's most frequently consulted blockchain experts in mainstream media, with over 70 distinct online references across television, radio, podcasts, and print.

Television

CNBC Africa — Regular expert. "Crypto Currencies 2026 Outlook" (Jan 2026): predicted BTC could reach \$200K within 18 months. "Bitcoin Rebounds After Huge Sell-Off" (Nov 2025): MicroStrategy/MSCI, Fed rate cuts, quantum threats. Earlier: SABC1 (Daily Thetha, c.2018), SABC3 (Real Talk with Anele), KykNet (WinslynTV, 2019).

Radio

Radio 702 — The Money Show (7+ appearances): NFTs, crypto-sanctions (Russia-Ukraine), CBDCs, Bitcoin ETF, SARS crypto enforcement, exchange hacks.

RSG Geldsake met Moneyweb (8+): Preeminent Afrikaans crypto commentator. Topics: Satoshi Nakamoto, Interpol/Angola, Eskom mining, SARS compliance. Dedicated segment: "Van Eskom-ingenieur tot kriptokenner."

EWN/Primedia (2+): Bybit hack, FSCA anti-fraud.

Podcasts

Moneyweb Crypto Podcast (8+ episodes, Ciaran Ryan): "Why Eskom Should Consider Bitcoin Mining" (2023), "Crypto Scammers Have Met Their Match" (2023), "Is BTC Mining About to Take Off in SA?" (2024), "SARS Doubles Down" (2025), "Crypto Outflows of R5bn" (2025), "Why Hasn't BTC Followed Gold?" (2026).

Print & Digital Journalism

20+ articles: **Daily Maverick** (3 — Bitmach, Crypto Fest, surplus monetisation), **Moneyweb** (8+ — Eskom simulation, scam investigation, BTC vs gold), **Mail & Guardian** (regulation, 2021), **ITWeb** (4 — NFTs, mining, trade, theft), **CoinGeek**, **The Citizen**, **MyBroadband**, **BusinessTech**, **Hypertext**, **The Writer's Room**.

Publications & Research

- **Book (Palgrave Macmillan):** Co-authored with Prof Pieter W. Buys on blockchain evidence and digital asset assurance. Foreword for Olivier & Buys' blockchain evidence publication.
- **MEng Dissertation:** "Measuring the Job Satisfaction of Young Engineers at Eskom Power Stations" — NWU (cum laude). 48 engineers, Minnesota Satisfaction Questionnaire.
- **Sixpence Reports:** "Evolution of Blockchain Forensics," "Know Your Transactions," "Proof of Reserves Guide," "Global Crypto Regulation," "Universal KYT API."
- **Medium (2018–2020):** "BTC Mining as Revenue for Eskom" (founding Bitmach thesis), "Power Requirements for BTC Majority Attack," "BIS Report: Critical Analysis," "What is DeFi?"
- **LinkedIn:** "Egyptian Pyramids: The Original Proof of Work," "You Are Probably Wrong About Everything." 7 articles, 79 posts, 1,484 followers.
- **Coinbase Co-Publication:** Open-source PoR software with Shashank Agrawal.

In Action



Professional portrait



Headshot



Speaking at the World Youth Forum, Sharm El Sheikh, Egypt (2019)

CLIENTS & INSTITUTIONAL PARTNERS

COINBASE Proof-of-Reserves Grant	NEDBANK Blockchain Innovation	MAZARS Crypto Auditing	SARB Reserve Bank Advisory
KRAKEN Exchange Compliance	BINANCE Audit & Verification	CRYPTO.COM Compliance Tools	BCX Enterprise Blockchain
FSCA Financial Sector Conduct	FIC NAMIBIA Financial Intelligence	ACFE Fraud Examiners	TRA (UAE) Telecom Regulatory
ESKOM Bitcoin Mining (Bitmach)	CSIR DLT Research	BLOCKCHAIN ACADEMY Training & Education	IDATCO Automated Trading

Additional: JCCI, Werksmans Attorneys, Discovery, SAICA, CyberCrypt, African Payment Solutions.

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