

Tom Wells

Co-founder & Technology Executive (CTO), Synthesis Software Technologies · Chief Disruption Officer, Araxi



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TL;DR

I co-founded **Synthesis** and grew it from 5 to over 350 engineers, data scientists and specialists, and serve as Chief Disruption Officer at its JSE-listed parent Araxi, where I own the technology workstream in group M&A. I lead AI adoption at organisational scale, taking ~80% of Synthesis delivery to AI and agentic engineering within eight months, while staying hands-on: I build and run production agentic systems myself.

25 years building hyper-scale, realtime and data-driven platforms for banks, insurers and global enterprises, and working with generative AI since 2020, with a track record of bridging engineering and the business.

EXPERIENCE

2021 – present	Chief Disruption Officer Araxi Ltd (JSE-listed, formerly Capital Appreciation) Strategic technology adviser to the group CEO and leadership team, shaping technology and strategy across a portfolio spanning payments, fintech and software services. Member of the group M&A team across ~10 transactions, owning the technology workstream throughout and leading technical due diligence on around half, including the completed acquisitions of Pay@, Dariel and Responsive.
2005 – present	Co-founder & Technology Executive (CTO) Synthesis Software Technologies - Created the specialist practices in information security, cloud and data while scaling the team to 350+. ~ZAR 450 million (EUR 25 million) revenue, FY2026. - First AWS partner in Africa, and still Africa's largest AWS Premier partner; a practice I built and led. - Opened the Amsterdam office in 2021 as the base for European expansion. - Led Synthesis through its 2017 acquisition by Araxi and was part of the team that drove its integration into the group.
2001 – 2004	Senior Software Developer African Defence Systems, Midrand Military-grade fire control and naval simulation software under MIL-STD-498.

AGENTIC SOFTWARE ENGINEERING

I lead AI and agentic adoption across an engineering organisation, and I build with agents myself: I prove the approach first-hand, then scale it out.

Adoption at scale	Led AI and agentic adoption across Synthesis delivery to ~80% of client projects within 8 months, including the SDLC process, tooling and commercial model. Held as a personal KPI.
In production	A network of agentic workflows running in production at Synthesis on kynn: scheduled, typed workflows curate knowledge bases from unstructured data and signals across the business, which are compiled into structured sales, productivity, training and licence-usage reports for executive and management teams.
Client solutions	Shaped the upfront architecture of AI and agentic solutions for financial services clients, across fraud detection, corporate credit and lending, vehicle tracking and personalisation.
Hands-on	I run several agent harnesses in parallel through my own orchestration layer, with a shared work queue and agent-to-agent hand-off, under an SDLC designed for agents and humans alike: architecture decisions as desired state, evidence-carrying pull requests, independent review as the merge gate, and automated scoring of how far the build has drifted from the plan (see battlestation and kynn under Open source below). 5,000+ GitHub contributions in the past year, including five maintained open source projects.

EXPERTISE

Enterprise AI	Agentic systems in production, multi-agent orchestration, model evaluation and calibrated judgement, MCP tooling; AI adoption and agentic SDLC at organisational scale.
Platforms & architecture	Hyper-scale, realtime and data platforms: event streaming (Kafka, Flink), public cloud and Kubernetes since 2015, multi-region and multi-cloud; secure payments systems (EMV, HSMs, PCI DSS).
Leadership & commercial	Building and scaling delivery organisations and specialist practices; pre-sales and programme shaping; partner ecosystems (AWS Premier); technical due diligence and post-acquisition integration.
Engineering	Functional programmer: Rust, Haskell, PureScript, Scala, F#, Elm; fluent in C#, Java, JavaScript, Go, Python and C.

NOTABLE PROJECTS

Semiconductor OEM	Core configuration management platform, 2024 – 2025 Lead and specialist architect for the rebuild of a business-critical configuration management system spanning the full product lifecycle. Bootstrapped the architecture and a six-person team over the first six months, then handed technical leadership to a successor and moved into executive sponsorship, overseeing delivery and change management through to operation alongside a global systems integrator and client stakeholders. Rebuilt in flight while the business continued to run.
Container shipping, Singapore	End-to-end systems replacement, 2022 – 2024 Shaped the programme from the outset during pre-sales, working with a local Singapore partner, then served as executive sponsor and one of the lead architects for the replacement of the operator's entire systems estate, from booking and vessel operations to local port agents and the wider operational stack. Synthesis delivered at a peak of ~60 engineers. The platform is live and has been fully handed over to the client's own technology teams.
Dynata	Generative survey programming proof of concept, 2020 Built a proof of concept, sponsored by Dynata executive leadership, that generated executable survey programs from plain-English client specifications: first on GPT-2, then GPT-3 with early access from OpenAI, two years before ChatGPT. It was used to secure stakeholder buy-in for further investment in the approach.
GovChat	National-scale citizen messaging, 2019 – 2020 Executive sponsor and hands-on architect for rebuilding GovChat's prototype into a production platform, delivered by a dedicated Synthesis team after Araxi took a stake in the startup. During COVID-19 the platform handled over 200 million messages in two months, enabling millions of South Africans to apply for the Social Relief of Distress grant. govchat.org
Nedbank Avo	Super-app founding architecture, 2018 – 2019 Member of the founding architecture team working directly with Nedbank's Chief Digital Officer, rapidly defining the initial architecture for Avo: micro-services plus realtime streaming, containerised on AWS. Synthesis then took the lead infrastructure and data platform role in a 6-month multi-vendor build across the bank. The platform launched in 2020 and grew to 2M+ users and 20k+ merchants. avo.africa
Discovery Vitality	Global platform infrastructure, 2018 Lead architect and hands-on builder of the infrastructure underpinning the global Vitality platform: Kubernetes, Kafka event streaming and a multi-cloud estate spanning 11 data centres across AWS, Azure and VMware colo. Led a core team of four, embedded in a ~30-person operations organisation, establishing the platform and the deployment and operational patterns on which multiple partner markets were onboarded. Still in production today.
Earlier	Banking and payments, 2005 – 2019 Afgri internet banking; Investec EMV issuer scripting (F# on Thales nShield HSMs) and Mauritius online banking, first code to live client in six months; ABSA Zero Knowledge of PIN, securing 1.3 million users; HALOdor L2-certified tap-on-phone payments kernel.

OPEN SOURCE

mcp-server	Build Model Context Protocol servers in Haskell from plain data types: declare tools, prompts and resources as ADTs and the library derives the schemas, decoding and wire protocol. On Hackage. github.com/drshade/haskell-mcp-server
agentic	Typed, composable agentic workflows in Haskell: a flow is a value you can inspect and draw before spending a token, mixing Claude and OpenAI with TypeSafe's Jev for calibrated judgements. On Hackage. github.com/drshade/haskell-agentic
linguist	GitHub's Linguist for Rust: programming language detection by filename, extension, editor modelines and content heuristics, with no setup. github.com/drshade/linguist
battlestation	Desktop orchestration layer for running many agent harnesses in parallel: a Rust runtime with a shared attention queue for triaging questions, review requests and completion reports, and a message plane over which agents hand off work. github.com/drshade/battlestation
kyyn.io	The executable knowledge-base runtime behind the production workflows above. kyyn.io · github.com/drshade/kyyn-v2

EDUCATION

1997 – 2000	BSc Honours (Information Systems) Rhodes University, South Africa BSc, double major in Computer Science and Information Systems.
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OUTSIDE OF WORK

Husband and father of two daughters. Endurance cyclist and triathlete: two Ironman finishes, Joberg2c (1,000 km), Expedition Africa 2019 (380 km), and always a next event planned.