



Terence Kok Wai Chuen

AI & Smart City Systems Leader | Chief AI & Innovation Officer | Delivering Resilient, Data-Driven Urban Infrastructure

linkedin.com/in/terence-kok-waichuen terencekok.com

Twenty-five years of driving large-scale digital transformation across Asia and the Middle East has reinforced a single principle: the most resilient systems are built around people, not just platforms. I lead strategic integration of Generative and Deterministic AI, Smart City frameworks, and Advanced Security Architectures, working on some of the region's most complex, high-stakes infrastructure programmes. The environments I operate in, including airports, cities, and critical national assets, demand architectures that are not only technically sound but also resilient, auditable, and precisely governed.

Beyond delivery, I invest in the broader ecosystem, advising deep-tech founders at NUS National GRIP, serving on IMDA's GenAI Sandbox evaluation panel, and contributing to global AI policy as a member of the AI for Developing Countries Forum. I am a regularly invited speaker and panellist at regional and international forums on AI, digital transformation, and smart cities, including CDO Vision Singapore, InteracTech Asia, and the AI for Developing Countries Forum in Bangkok. I was honoured to receive the CDO Vision 2026 Award, recognising leaders driving measurable impact through AI and enterprise transformation, as well as the Google Trailblazer Transformation Award 2024 for innovation in AI-driven digital ecosystems.

AI & Digital Transformation

Building enterprise-grade AI ecosystems, including LLMs, Vector/Graph/Hybrid RAG, and deterministic frameworks, deployed in production at scale.

Smart Cities & Infrastructure

Designing city-scale ICT and IoT platforms where physical infrastructure and digital systems converge, including IOCCs and digital twins.

Security & Governance

Certified Counter Terrorism Practitioner integrating strategic risk management with AI-driven threat intelligence and governance design.

Professional Experience

2018 – 2026	Meinhardt (Singapore) Pte Ltd
2025 – 2026 Jul	Chief AI and Innovation Officer
2024 – 2025	Executive Director
2021 – 2023	Associate Director
2018 – 2020	Technical Director
2016 – 2018	Chief Technology Officer , Brandenburg UK Ltd
2014 – current	Strategic Advisor & Co-Founder , Orion Five Engineering Pte Ltd
2010 – 2013	Research & Development Lead , EV World Pte Ltd
2003 – 2025	Co-Founder , Cool N Lite Solar Film
2002 – 2004	Director, Technology , Pesthunters Pte Ltd
1999 – 2002	Innovation Manager , VoIUM Communications Pte Ltd

PATENTS FILED	— Detection Apparatus for Identifying the Presence of a Targeted Warm-Blooded Animal in a Detection Zone. US-20240081652-A1 · Issued Mar 14, 2024
	— Method And Apparatus for Determining The Occurrence Of Animal Incidence. US-20050151653-A1 · Issued Jul 15, 2004

Key Projects, Milestones & Experience

Meinhardt AI Center of Excellence

MANAGING DIRECTOR

Established and lead Meinhardt's global AI Centre of Excellence — a production-oriented capability integrating AI governance, MLOps/LLMOps pipelines, and federated delivery across heterogeneous enterprise and OT systems. Targets: 20–30% reduction in rework, 15–25% faster RFI processing, and ≥70% of AI use cases delivering validated ROI within three years.

Global AI Governance for Meinhardt Group

PROJECT DIRECTOR

Designed the enterprise governance framework for Autonomous Agentic AI deployment across AEC operations — a lifecycle-based model covering Discover, Operate, and Retire phases. Six pillars: risk assessment, human accountability, technical controls, responsible user enablement, supply chain provenance, and frontier risk management. Aligned with IMDA Model AI Governance Framework, NIST AI RMF, and multi-jurisdictional data privacy laws.

The Meinhardt Online ERP System

PROJECT DIRECTOR

Directed development of Meinhardt's enterprise ERP platform integrating project management, timesheets, payment milestones, and claims processing, with an AI-enabled HR chatbot and real-time SBU performance dashboards.

Saudi Royal Aviation New Terminal Development

SECURITY LEAD

Led integrated security design for new terminal land and airside operations — access control, surveillance, sensor fusion, and perimeter intrusion systems. Conducted security risk assessments aligned with ICAO and GACA requirements; coordinated with airport authorities, military, and civil aviation units.

Dubai International Financial Center Enterprise Campus Network — Low Level Design

PEER REVIEW

Peer reviewed network architecture, segmentation, security controls, and regulatory compliance (DIFC ICT Law, UAE/TDRA, DESC, SIRA UAE). Translated findings into RFP-ready requirements for a regulator-aligned infrastructure baseline for DIFC 2.0.

Domain-Specific Enterprise AI Development for AEC Industry

MEINHARDT · PROJECT DIRECTOR

Built Meinhardt's proprietary on-premises RAG platform, enabling 6,000+ engineers to access 30+ years of institutional knowledge across global offices. Outcomes: 20%+ reduction in engineer time on routine tasks, AI-assisted design review, zero security incidents.

Framework and Toolkit Development

CLIENT: PUBLIC INVESTMENT FUND (PIF), KSA · PROJECT DIRECTOR

Delivered a four-phase technical capability diagnostic across six infrastructure domains. Produced benchmarking scorecards, gap reports (20+ opportunities), and a real-time executive dashboard, enabling prioritisation of over US\$60 billion in improvement investments.

Sultan Haitham City Design Consultancy — Integrated Operations and Control Center, Oman

TECHNICAL ADVISOR

Technical Advisor for the IOCC within Sultan Haitham City, a 1,540-ha greenfield smart city in Oman. Scope: governance strategy, data sharing policies, smart infrastructure, interoperability, IoT integration, full-lifecycle design from concept to construction.

Detailed Infrastructure Master Plan for Magna, NEOM, KSA

SMART CITY LEAD

Delivered the infrastructure master plan for MAGNA — a 406 km² coastal district along the Gulf of Aqaba. Scope: city-wide digital infrastructure including ICT/connectivity, smart mobility, safety and security, smart utilities, and environmental management.

NEOM Bay Airport Expansion, KSA — Smart Airport Digitisation Strategy & Roadmap

PROJECT DIRECTOR

Led the smart airport digitisation strategy for NEOM Bay Airport (6M passenger capacity). Defined digital responsibilities across GACA/Matarat; developed ICT infrastructure requirements aligned with IATA NEXTT and NEOM digital standards.

8 Shenton Way, Singapore (GM2021 Intelligence)

GM2021 INTELLIGENCE SECTION LEAD

Contributed smart technology and systems advisory for Singapore's tallest skyscraper (63 storeys, 305m). Scope: smart building integration covering energy optimisation, health and wellness, spatial management, and occupant experience.

NEOM Customs Infrastructure Design Prototype

PROJECT DIRECTOR

Designed detailed operational workflows and land boundary port infrastructure for NEOM Customs Administration (NCA), across six land entry/exit points, including a Smart Border Wizard analytical tool.

SM Super City, Pasay 360 Detailed Master Plan, Manila, Philippines

SMART CITY LEAD

Led smart city systems design for a 396-ha mixed-use development (3 reclaimed islands, 10.85M m² GFA): communications/connectivity, smart transport, waste, energy, water management, and security risk assessment.

Suntec City Office Towers ACMV Upgrading Works with Digital Twin Integration, Singapore

SMART SYSTEMS LEAD

Designed smart control and monitoring systems for ACMV upgrading, including digital twin integration (IT/OT), predictive ML-based airflow balancing, CO₂ demand-controlled ventilation, and open-protocol BMS integration.

Concept Master Planning for Lim Chu Kang Food Hub, Singapore

SMART CITY AND SECURITY LEAD

Led concept master planning for Singapore's Lim Chu Kang high-tech agri-food zone. Projected to deliver 3× current food production capacity, supporting Singapore's 30-by-30 food security goal.

Sultan Haitham City, Oman

SMART CITY LEAD

Led smart city infrastructure engineering for Sultan Haitham City (1,540 ha, greenfield). Full lifecycle engagement: data collection, gap analysis, concept, preliminary and detailed design.

King Saud University, KSA

SMART CITY LEAD

Delivered smart city concept design inputs for KSA's largest university: transport/mobility, sustainability, landscape, signage, lighting, and water utilities. Aligned with KSA Vision 2030.

Islamic Civilization Village Project, KSA

SMART CITY LEAD

Led smart city infrastructure planning for the first-of-its-kind ICV development in Al-Madinah, calibrated to the unique cultural requirements of the Al-Madinah context. Aligned with KSA Vision 2030.

NEOM Airport Digital Strategy, KSA (Brownfield & Greenfield)

TECHNOLOGY LEAD

Developed the digital strategy and technical roadmap for both NEOM Bay Airport (brownfield) and NEOM International Airport (greenfield): IoT/sensor infrastructure, AI/robotics rollout, remote control tower, and predictive maintenance.

Project Raha, Jeddah, KSA (13,500 ha)

TECHNOLOGY AND SECURITY LEAD

Delivered integrated smart-sustainable infrastructure concept for a Red Sea waterfront development supporting KSA Vision 2030: mobility, ICT infrastructure, data centre design, and safety/security assessment.

Digital Blueprint for 5,000-Acre Smart Airport City — IGIA, India

TECHNICAL LEAD

Designed and delivered the end-to-end digital blueprint for IGIA Smart Airport City: IoT/sensor infrastructure, digital twin with 3D holographic command centre, smart transport/energy/water/waste/security, and a multi-disciplinary super-app.

New Jeddah Downtown, KSA

SMART CITY AND SECURITY LEAD

Developed pre-master planning concept for a 5M m² mixed-use downtown (36,000 jobs) across six smart city pillars: governance, economy, utilities, mobility, community, environment.

DIAL AeroCity, India — 230-Acre Smart Commercial District

SMART TECHNOLOGY LEAD

Delivered concept master plan and schematic design for a 30M sq ft smart commercial district (400,000 workforce): smart traffic/transport, ICT infrastructure, smart city management, and IT infrastructure.

Command Center Integration, Singapore

PROJECT LEAD

Deployed large-scale video-wall command centres integrating drones, autonomous robotics, IoT devices, body-worn cameras, and GPS asset tracking. Delivered Singapore's first landmark LEDS project supported by e2i, WSG, and ESG.

EARLIER CAREER HIGHLIGHTS

- **IoT & Embedded Systems R&D (2014–2020):** Designed and deployed commercial IoT sensor platforms (rodent detection, fly traps, smart bins, air quality, thermal imaging) using Sigfox, BLE, and LTE, adopted by UK MNCs and the Singapore government; up to 9-year battery operation. Developed COVID-19 thermal scanner adopted by the Singapore government (2020). Autonomous surveillance robotics deployment with Singapore MHA, including Chingay 2018 operations.
- **EV Drivetrain R&D (2010–2013):** Joint development with MIT/NUS; LTA-authorised electric conversions of Porsche 911, BMW 5 Series, and Renault Kangoo; national media coverage.
- **M2M/Mobile Platforms (1999–2004):** Lead developer of one of the world's first WAP media-sensitive mobile platforms, adopted within 3 months by Singtel, M1, and StarHub; co-developed early mobile Microsoft Exchange with MobileONE and Microsoft.

Qualifications & Certifications

ACADEMIC QUALIFICATIONS

- Doctor of Business Administration (DBA), Digital Leadership — Candidate. Golden Gate University, California (2024–2027)
- Bachelor of Business in Business Administration (Distinction). Royal Melbourne Institute of Technology, Australia (1996–1999)
- Diploma in Airport Operations (2023). Airports Council International
- Diploma in Electronics & Computer Engineering (Integrated Circuit Design Technology). Ngee Ann Polytechnic, Singapore (1991–1994)
- Diploma in Computer Studies (Business Computing). National Computing Center, UK (1991–1994)

PROFESSIONAL CERTIFICATIONS



- ISO/IEC 42001:2023 Certified Lead Auditor (BSI)
- AI Governance Professional (SMU)
- Certified Data Center Professional® (CDCP)
- Certified Counter Terrorism Practitioner (CCTP)
- Certified Physical Security Consultant (CPSC)
- Certified Security Specialist – EC-Council (Cyber Security)
- Certified Scrum Master® (CSM)
- Certified Advanced Scrum Product Owner® (A-CSPO)
- Certified Scrum Product Owner® (CSPO)
- Certified Generative AI Expert (Blockchain Council)
- Certified Metaverse Expert (Blockchain Council)
- Certified NFT Expert (Blockchain Council)
- Security Risk Management Professional – Country (SRMP-C)
- Security Risk Management Professional – Regional (SRMP-R)
- Certificate in Airport Business Operations (ACI)
- Certificate in Airside Operations (ACI)
- Certificate in Terminal and Landside Operations (ACI)
- AI4I® Project Life Cycle (AI Singapore)
- AI4I® Literacy in AI (AI Singapore)
- BSAFE — UN Department of Safety & Security
- Preparing & Responding to Active Shooter Incidents — UN DSS
- R1 Certification — Ionising Radiation Safety (NEA)
- ISO 14064 Lead Auditor, Greenhouse Gas Lead Verifier (SGS)
- SMP Robotics Engineer Level 4
- E-Series CORE Training (Universal Robotics)

PROFESSIONAL AFFILIATIONS & ACTIVITIES

- Registered Management Consultant (RMC) — Enterprise Singapore recognised certification, SS 680:2021 Management Consultant Standards
- CPSC Advisory Board, Counter Terrorism Certification Board

COMMUNITY WORK & SERVICE

- Commercial Champion for National Graduate Research Innovation Programme (2026–current)
- Lee Kuan Yew Technology Award, Panel Member (2014–2020)
- Singapore Business Federation, SME Committee (Technology), EXCO (2018–present)
- 2019 National Day Parade, Deputy Contingent Commander (SME Contingent)
- 2021 National Day Parade, Contingent Commander (SME Contingent)

CIVILIAN AWARDS

- CDO Vision Award 2026
- Google Trailblazer Award 2024
- National Day Parade Awards, Silver Award, 2021 (Ministry of Defense)
- National Day Parade Awards, Silver Award, 2019 (Ministry of Defense)

MILITARY SERVICE & AWARDS

- Certificate of Appreciation — Chief of Army, Singapore Armed Forces
- Letter of Commendation — Commander 9th Division, Chief Infantry Officer
- National Service Medal — Ministry of Defense
- Brigade Commander Coin — Commander 10th Singapore Infantry Brigade
- Chief Infantry Officer Coin — Commander 9th Division / Chief Infantry Officer
- US Air Force Division Commander Coin — US Air Force
- SAF Good Service Medal — Ministry of Defense
- Platoon Best Trainee, 41st Singapore Armour Regiment — Ministry of Defense