

VACANCY: Engineering Development Manager — Traffic Controllers & Remote Management

Syntell is a leading South African technology company with a proven track record in providing practical, innovative services and systems, including end-to-end traffic law enforcement services and systems; and **state-of-the-art road traffic management systems offering complete turnkey solutions for intersection installations**. In addition, we offer local authorities a complete outsource model for prepaid electricity vending and revenue enhancement services.

Build the brain and backbone of South Africa's intersections

Help build and operate the technology that keeps South Africa moving—across a **~750,000 km** national road network (the largest in Africa, top-10 globally). In Cape Town alone there are **~1,650+ signalised intersections**, and Johannesburg manages **~2,000+**—a massive, real-world canvas for embedded control and city-scale RMS analytics. Your work will directly improve congestion, safety, and uptime at the country's most critical junctions.

Join Syntell's Traffic Systems business to lead the teams that design, build, and operate modern traffic signal controllers (embedded hardware/firmware/software) and a city-scale **RMS (Remote Management System)** that monitors, configures, and optimises intersections—including **AI (Artificial Intelligence)**-powered "green-wave" optimisation via specialist partners. We specify the hardware, outsource PCB manufacture and component kitting, **assemble in our own production facility**, and design/maintain our **test jigs** end-to-end. Your remit spans embedded **MCU (Microcontroller Unit)** firmware, **OS (Operating System)** drivers, backend, frontend, and cloud—working shoulder-to-shoulder with Field Technicians and Production - and **leading innovation streams** that solve uniquely South African challenges (low-power/green energy, low-cost products, vandalism and cable-theft resilience).

Syntell seeks an **Engineering Development Manager** who is an **experienced people leader and manager of engineers**—equally comfortable mentoring juniors and coaching **Senior/Staff/Principal Engineers**. You will set the technical and leadership bar, design the organisation (teams, ownership boundaries, succession), and land predictable releases that municipalities can trust—while coordinating multiple stakeholders (Field Operations, Production, Supply Chain, Quality, Product, Sales/Tenders, Compliance, AI partners, outsourced hardware designers/manufacturers). and **third-party vendors such as Sensys, FLIR, Bytefuse AI, Swarco and others**. You will ensure all integrations fit a **coherent, documented architecture** and **lead innovation programs** tailored to South Africa's challenges.

Location: Cape Town

Reporting Line Manager: Senior Manager Product & Technology Ops

Contract Type: Permanent

Impact You'll Have (Outcomes)

1. **Predictable releases** across controllers and RMS with clear objectives and service targets (SLA – Service Level Agreement; SLO – Service Level Objective).
2. **Reliability and safety:** higher availability, lower MTTR (Mean Time To Repair), robust fail-safe behaviours, and field-proven diagnostics.
3. **Platform fundamentals:** security, codebase consistency, disciplined releases, observability, and crisp runbooks.

4. **Manufacturing readiness:** high first-pass yields via DFM/DFA (Design for Manufacturing/Assembly), validated HIL/SIL (Hardware/Software-in-the-Loop) testing, and tight engineering change control.
5. **Partner integrations that work:** third-party sensors, detection, and optimisation services integrated via stable contracts and conformance tests.
6. **Innovation that matters** in the South African context: low-power/green energy, cost-down designs, anti-vandalism/anti-theft resilience—measured by tangible reliability and cost wins.
7. **Talent density and succession:** clear levels, growth paths, coaching for junior and senior engineers, and reduced key-person risk.
8. **Stakeholder trust:** Field Operations, Production, Supply Chain, Product, and Customers experience Engineering as predictable, responsive, and easy to work with.

What You'll Do (Scope)

Strategy & Planning

- Execution of a rolling roadmap and a quarterly release train in partnership with product management team.
- Make trade-offs explicit; align plans with tenders, pilots, and municipal rollouts.
- Publish written plans with risks, mitigations, and exit criteria; maintain a single visible backlog.

Product & Architecture

- Guide architecture for controllers and RMS; ensure coherent interfaces and data contracts.
- Balance new features with platform health (security, performance, maintainability).
- Promote simple, well-documented interfaces and sensible defaults.

Engineering Excellence

- Establish fit-for-purpose CI/CD (Continuous Integration/Continuous Delivery), automated testing, and one-command rollback.
- Implement observability (structured logs, metrics, health endpoints) and incident management with clear ownership.
- Define upgrade/rollback procedures for field hardware and software.

Manufacturing & Test

- Ensure production-grade test strategies, fixtures/jigs, and maintenance plans.
- Drive accurate BOMs (Bill of Materials), component lifecycle management, and supplier readiness.
- Partner closely with Production and Quality to improve yields and reduce escapes.

Integrations & Partnerships

- Land third-party integrations via explicit contracts, conformance suites, and versioning policies.
- Co-own operational readiness (runbooks, SLAs, escalation paths) with partners.
- Support commercial reviews with technical input (risk, obsolescence, second-source options).

Innovation & Localisation

- Lead low-power/green energy initiatives (energy budgets, autonomy targets).
- Champion cost-down engineering and total cost of ownership (TCO) gains.
- Specify anti-vandalism/anti-theft measures and graceful degradation.
- Run pilots with clear success criteria → scale what works.

People Leadership

- Design team topology and ownership boundaries; set on-call/rotation practices where needed.

- Coach across levels (Junior → Principal), run effective reviews, and author growth plans.
- Calibrate performance, remove blockers decisively, celebrate bar-raising behaviours.

Minimum Qualifications & Experience

- B.Eng (Electrical & Electronic) preferred but open to other Engineering disciplines if pivoted to software systems in career path. M.Eng/MSc.Eng advantageous.
- 8–12+ years in embedded/industrial/transport systems plus cloud-connected backends; 3–5+ years managing multi-disciplinary teams, including Senior/Staff/Principal Engineers.
- Previous experience in C/C++/Go/Java for embedded systems and solid exposure to real-time constraints. (Not expected to write code, but at least have prior experience as a software engineer)
- Track record integrating third-party systems at scale (contracts, versioning, conformance, support SLAs).
- Proven record shipping safety- or availability-critical systems; strong written communication; readiness to travel locally/abroad.
- 5+ years People management – proven experience in leading and managing people, career pathways and talent development.

Strengths We Value (Nice-to-Haves)

- Modern backend services and web application stacks; practical Linux operations and cloud familiarity.
- Messaging/streaming patterns; telemetry pipelines and data models.
- Experience with Hardware design & manufacturing vendor relationships.
- Test engineering for production lines (ICT/FCT jigs), fixture design, and factory diagnostics.
- Intelligent Transportation Systems (ITS) domain knowledge (signal timing strategies, adaptive control).
- Security in Operational Technology/Internet of Things (OT/IoT) environments.

Syntell is an equal-opportunity employer. We value rigorous systems thinking, practical delivery, and leaders who raise the bar for both people and product—while inventing for South Africa's unique operating realities.

Salary

- Market related

How to apply:

EMAIL your CV to applications@syntell.co.za.

If you do not hear from us in 2 weeks after your application, please consider your application unsuccessful.

Closing Date: 11 February 2026