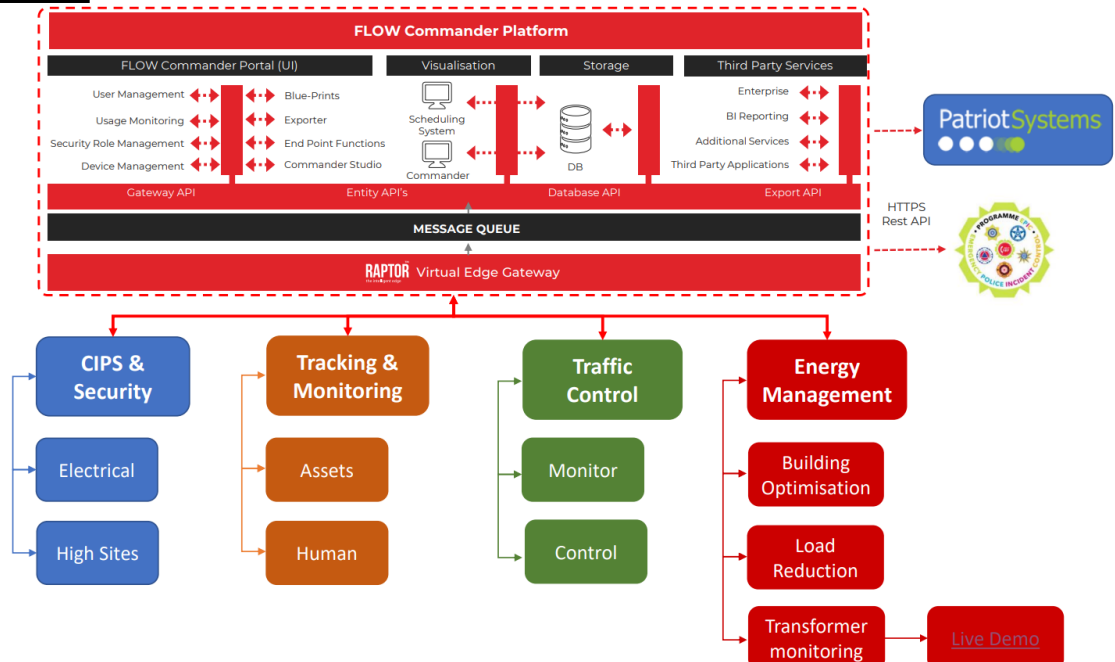




Think **Fast** | Think **Flow**

CoCT IoT Architecture



The diagram illustrates the Raptor Virtual Edge Gateway architecture, showing the flow of data and control between various components.

FLOW Commander Platform:

- FLOW Commander Portal (UI):** User Management, Usage Monitoring, Security Role Management, Device Management, Blue-Prints, Exporter, End Point Functions, Commander Studio.
- Visualisation:** Scheduling System, Commander.
- Storage:** DB.
- Third Party Services:** Enterprise, BI Reporting, Additional Services, Third Party Applications.
- APIs:** Gateway API, Entity API's, Database API, Export API.
- MESSAGE QUEUE**
- RAPTOR Virtual Edge Gateway**

External Integrations:

- LoRa** and **Sigfox** (via Webhook).
- Patriot Systems** (via HTTPS Rest API).
- PROGRAMME 100 POLICE INCIDENTS** (via HTTPS Rest API).
- net Client** (via net Client).
- CoCT LoRa Network** (via LoRa).
- GSM(Dual SIM) / Fibre** (via GSM(Dual SIM) / Fibre).

Edge Raptor and Sensors:

- Edge Raptor** (RAPTOR) is connected to various sensors via LoRa, GPIO TTL, and Serial - Modbus.
- Sensors:** Puffadder Sensor, Kinetic Sensor, Landmine Sensor, Magnetic Sensor, TTL Sensor, Wireless Camera, Paradox EVO192 Alarm Panel, Super Sensor.
- Networks:** Ethernet, LENEL S2, ZITON.

CoCT Patriot Systems Platform (Goodwood)

- Database, analytics and reporting
- Artificial Intelligence (AI)
- Business Intelligence (BI)

SigFox Cloud

CoCT EPIC Platform

Temp Tracking Platform

Asset Tracking

- Streetlights
- Mobile Tracking
- Batteries & Systems
- Communication Sites

Human Safety with Panic Facility

- Human
- Healthcare
- Paramedic
- Firefighter

Additional Tracking

- Weapon
- Law Enforcement

FLOW Smart Traffic Control Schematic Diagram

FLOW Commander Platform

- Database, analytics and reporting
- Artificial Intelligence (AI)
- Business Intelligence (BI)



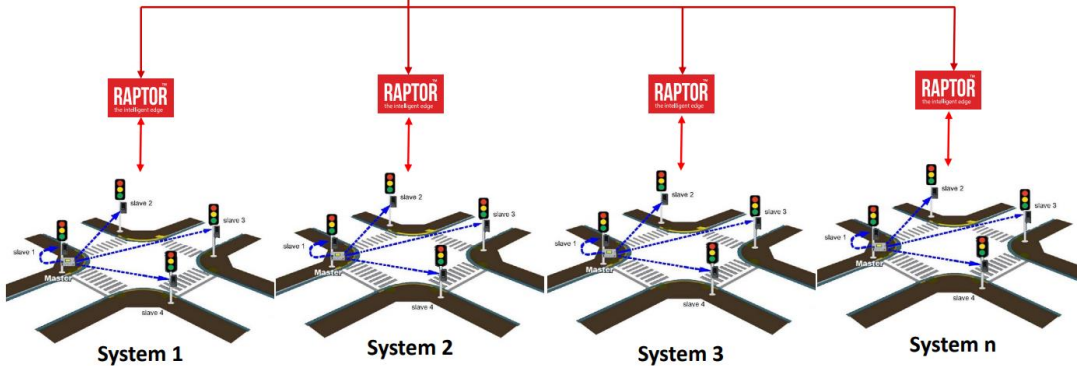
CoCT EPIC Platform

- Situational Awareness
- Monitoring and control
- Resource dispatch



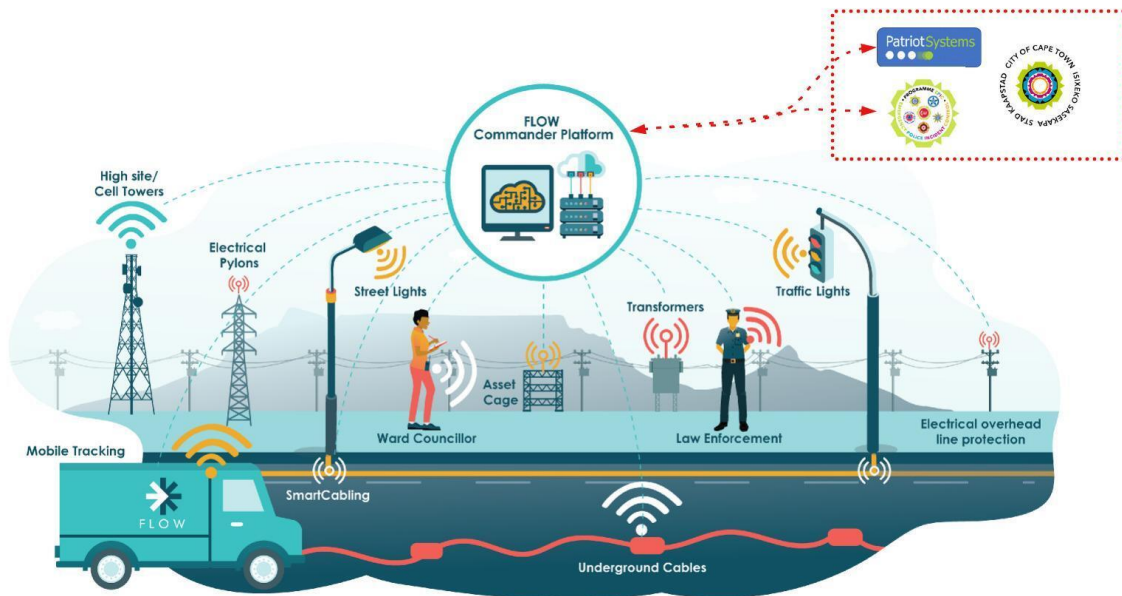
CoCT Patriot Systems Platform

- Security related monitoring
- Theft & vandalism



FLOW Smart Traffic Control Parameters

Phase 1 - PoV	Phase 2 - Future
1. Monitoring 1. Is the system online & operational? Visualize on EPIC 2. Security tamper alert to Patriot System (equipment enclosure, battery box etc.) 3. Correct time scheduling (time and traffic flow dependent)? 4. Measure electrical supply voltage to system 5. Measure electrical load measurement 6. Monitor UPS battery status 7. Measure overall health status of system 2. Command & Control 1. All control and measurements displayed on Commander in real-time 2. Offline intersection reported to EPIC as an alarm condition 3. Security (theft and vandalism) threat transmitted to Patriot Systems	1. Future Control 1. Remote control of an intersection via external data feeds such as CCTV, vehicle monitoring systems, radar or any external data source. 2. Scalable and integrated network topology based on priority and traffic congestion 3. AI interface based on external data sources – Google Maps, GARMIN, traffic incidents etc. 4. Priority access to public transport (MyCity, public transport etc) 5. Emergency override facility



We thank you for the opportunity to quote, and look forward to your further advices. Should you require any further details please contact me.

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