



SMART SITE SAFETY SYSTEM · 智慧地盤安全

One platform for total site safety

SSSS — Smart Site Safety System. Unify people, plant and environment across your construction sites — turning sensors, cameras and wearables into real-time alerts, digital permits and live oversight.



Digital Permits

Paperless Permit-to-Work with e-signatures & full audit trail



Live Alerts

Gas, SOS, fall & PPE events pushed to phones in seconds



AI Cameras

PPE-in-zone detection & a multi-camera monitoring wall



Site Positioning

Territory-wide 3D map, indoor maps & live location

BUILT FOR

Construction sites

Confined-space work

Working at height

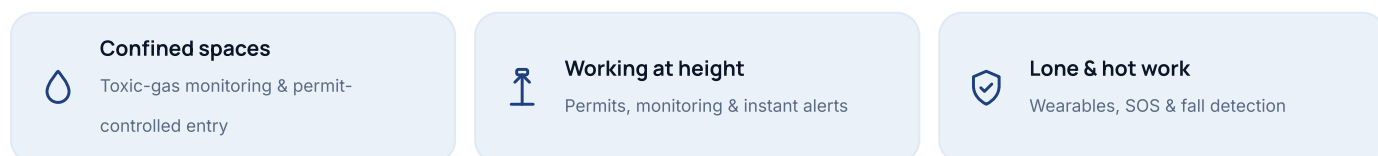
Tunnels & drainage

Multi-site contractors

Regulated high-risk work

People, plant and environment — in one real-time platform.

SSSS is the management and response layer that sits on top of the cameras, sensors, wearables and gateways you already have. It is hardware-neutral: devices feed data in, the rule engine and AI evaluate it, and the platform turns it into permits, alerts, dashboards and reports — so one main contractor can run many sites from a single, multi-tenant back office.



Everything a safe site needs — in one system.

From digital permits to AI cameras, gas monitoring and 3D site mapping, every module below is live in production on the same multi-tenant platform — trilingual (繁 / 简 / EN), Hong Kong-localised, and already deployed on real contractor sites.

- **Digital Permit-to-Work**

Template e-permits with a multi-step approval chain, on-screen e-signatures, authorisation-group countersign and a printable PDF for site posting — paperless, with a full audit trail.
- **AI Cameras**

Turn Dahua IP cameras into PPE checkpoints — helmet / vest / mask detection in defined zones, an RTSP-over-WebSocket live player and a multi-camera monitoring wall.
- **IoT Wearables**

Heart-rate smartwatches report SOS, fall, abnormal vitals, inactivity and low battery over MQTT; bulk CSV provisioning gets a whole crew online fast.
- **Patrol & Attendance**

BLE-beacon auto check-in and mobile photo sign-in/out, with travel-time windows that flag skipped (too fast) or late (too slow) points.
- **Control & Rule Engine**

A visual rule editor acts on threshold breaches automatically — e.g. cut power via a smart-plug — connecting detection straight to action, with every action logged.
- **Live Alert Centre**

A real-time list with blinking rows and an audible alarm, acknowledge & remark workflow and built-in drill simulation; pushed to phones within seconds.
- **Confined-Space & Gas**

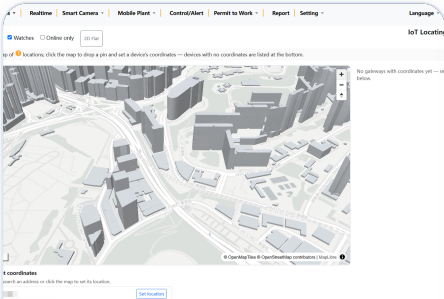
Real-time multi-gas dashboard — O₂ / CO / H₂S / explosive plus temperature, humidity, water & airflow — with historical time-series and two-level warning & danger thresholds.
- **Site Visualisation & Positioning**

A territory-wide 3D map with building extrusion, indoor floor-plan markers and BLE positioning — see who and what is on site right now.
- **Reports & Dashboards**

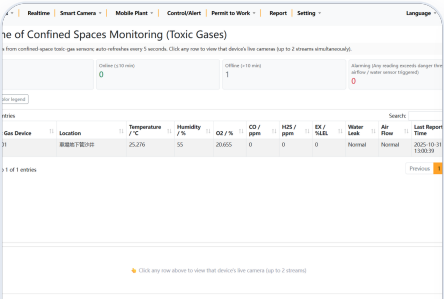
Self-serve alert reports in Excel with a month quick-pick, plus scheduled daily PDF reports delivered automatically by email.
- **Multi-tenant & RBAC**

One backend manages many sites and contracts; role-based access, signing authority and session control with repeat-login detection throughout.

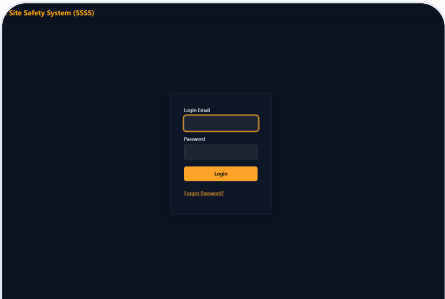
— INSIDE THE PLATFORM · 平台實況



3D site positioning
Live people & asset locations



Confined-space monitoring
Multi-gas dashboard, two-level thresholds



Secure, modern UI
Role-based access · accessible design

ROADMAP



Developed to customer needs: AI auto-import of legacy paper permits, camera-image AI trigger for mobile-plant proximity warning, and full HHDLINK e-lock integration are in active design and build (the e-lock data feed is already live).

Specifications, integrations & support.

Platform

Type	Web platform — site safety & IoT operations
Stack	PHP · MySQL · MQTT
Deployment	On-premise or hosted server
Architecture	Multi-tenant — many sites, one backend
Access control	Role-based (RBAC) · function permissions · signing authority
Languages	繁體中文 · 简体中文 · English
Time zone	Per-tenant (Hong Kong default)
Alerting	Real-time centre · audible alarm · mobile push
Mobile push	Firebase Cloud Messaging
Reporting	Self-serve Excel · scheduled PDF by email
Security	Parameterised queries · upload guards · CSRF · session control

Integrations & hardware

IP cameras	Dahua — PPE detection · RTSP-over-WebSocket live
Gas / environment	BLE / WiFi multi-gas & environment sensors
Wearables	Heart-rate smartwatches via MQTT (SOS / fall / vitals)
Positioning	AWB WiFi-bridge BLE positioning
Mapping	3D map (MapLibre, self-hosted tiles) · indoor plans
Control	TP-Link Tapo smart-plug · IR air-con
Electronic lock	HHDlink — data feed live, integration building
Connectivity	MQTT ingest · FCM push
Provisioning	Bulk CSV device import
Built for	Confined-space · height · hot · lone work
Configuration	Tailored per site & contract



Deployment & setup

Install, tenant configuration, device onboarding and rule setup, end to end.



Training & onboarding

Operator and administrator training in 繁中 / English; handover documentation.



Maintenance & support

Ongoing platform support, updates and integration upkeep.

Why New Forward · 為何選擇新科



Licensed & accountable

HK Security Company Licence No. 2327 — a real trust signal for government & tender work.



Proven on real sites

Deployed and running on live Hong Kong contractor sites (references on request).



One-stop integrator

Hardware-neutral — we integrate cameras, sensors, wearables & locks into one platform.

Build a real-time safety net for your site · 為你的地盤建立即時安全防線

From people to plant to environment — let us show you SSSS running on your site.



Book a demo · 預約示範



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