

# SUCCESS STORY OF PROJECT COMPLETED FOR THE GOVERNMENT

11 JUN 2020

## **Project Owner:**

OGCIO

## **Project Name (in English):**

Holistic Security Assessment for The Pilot Multi-functional Smart Lampposts Scheme

## **Project Name (in Chinese):**

N/A

## **Project Description:**

Within the context of the Hong Kong Smart city project, the OGCIO team was readying the launch of the lamppost project. This state-of-the-art project introduced significant advancements in terms of deploying new sets of applications for the benefit of the Hong Kong community. Given the novelty of these solutions, a primary focus was to ensure that the security risks were understood, analyzed, mitigation strategies put in place, for this specific project as well as the overall Smart City project over time. Within this specific context, the goal of this study was to provide a holistic analysis of the end-to-end security architecture and design for the lamppost project.

In terms of scope, this security assessment covered network communications including fixed-line access (fiber and IP network) and mobile access (3G/4G, WiFi), and endpoint (IoT) devices including environmental sensors, Bluetooth traffic detectors, various video cameras, RFID tags, Geo-markers, and various communications and monitoring modules. The backend processing platform was also covered.

## **Means of Service Acquisition:**

Open Tender

## **Contractor Name:**

Actel Limited

## **Subcontractor Name:**

N/A

## **Project Commenced on:**

5 Jun 2019

## **Project Completed on:**

27 Aug 2019

## **Team Members**

The key factor to success in this project was our team members, who boast extensive experience in

Notes: The success story is provided by the Contractor.

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ICT and information security. The team's background is summarized as below

Team Member	Summary
Claude Achcar	Claude has proven management and leadership skills developed over 30 years of ICT and consulting experience. In addition, having founded Actel Consulting in Hong Kong since 2002, Claude is very familiar with the Hong Kong ICT ecosystem.
Dr Riad Hartani	Dr Hartani has over 20 years ICT experience including executive positions at leading Silicon Valley Startups, lead positions in various multinationals, and lead researcher in prestigious research organizations. He is also a founding member of technology startups in Silicon Valley and a technical advisor /consultant to several major national smart city projects around the world.
Trinh Ngo	Trinh Ngo over 30 years of consulting and product development experience for the networking segments including public service provider, network security, IoT networks, and smart city ecosystems. He has conducted multiple holistic security assessment projects for major telecom service providers.
Romney Ng	Romney has 20 years of experience in various disciplines of ICT, including cybersecurity, telecom networks, IT infrastructure, and data centers. He is PMP-trained with years of project management experience in ICT.

### Approach & Methodology

- A comprehensive multi-dimensional data gathering, leveraging best practices, technology baselines, state of the art security solutions, up to data security threats databases as well as a direct analysis of the OGCIO security framework
- A review and comparison of the existing designs, audits and risks assessment versus the existing and evolving IoT security best practices, and specifically those of the IoT security foundation, ENISA, OWASP, NIST and CSA, with specific sets of guidelines considered for the detailed analysis
- A review of the detailed network, cloud and application architecture, via an analysis of the data, control and management data flows, as an input into the prioritization of the security zones and demarcation interfaces
- A review of the studies done for vulnerability and penetration testing done by independent third party teams, as well as their reports as it relates to security risk assessment
- A consideration of best practices as defined by third party smart cities and cybersecurity

solution providers.

### **Outcome and Benefits**

- Extensive insight into the holistic, end-to-end security posture of the smart lamppost ecosystem
- A detailed security playbook that addresses immediate security concerns as well as long-term, strategic security requirements
- Detailed recommended remedial actions to address all identified security shortcomings