Datamation
Transforming Information

NEXPA

SMART PARKING AND

SMART CITY SOLUTION
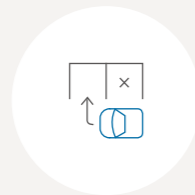
INTRODUCTION

NEXPA

NEXPA System Co., Ltd. is a leading company specializing in smart parking and traffic law enforcement solution with our proprietary video-analytics technology. The company was founded in February, 2004 in Seoul, South Korea. In the early years, NEXPA has focused on developing new technologies. With over 54 video analytic patents now, NEXPA offers comprehensive and market-proven Smart Parking Solutions (from PARCS to PGS and beyond) as well as state of art Smart Traffic Enforcement Systems, making NEXPA global leader in the industries. With great progress, we established our branch office in Singapore in 2015. Today, we have completed several large projects including airports and shopping malls and we are continuously adding global projects to our success stories.

WE PROVIDE OUR SOLUTION IN THE FOLLOWING AREAS

PARCS
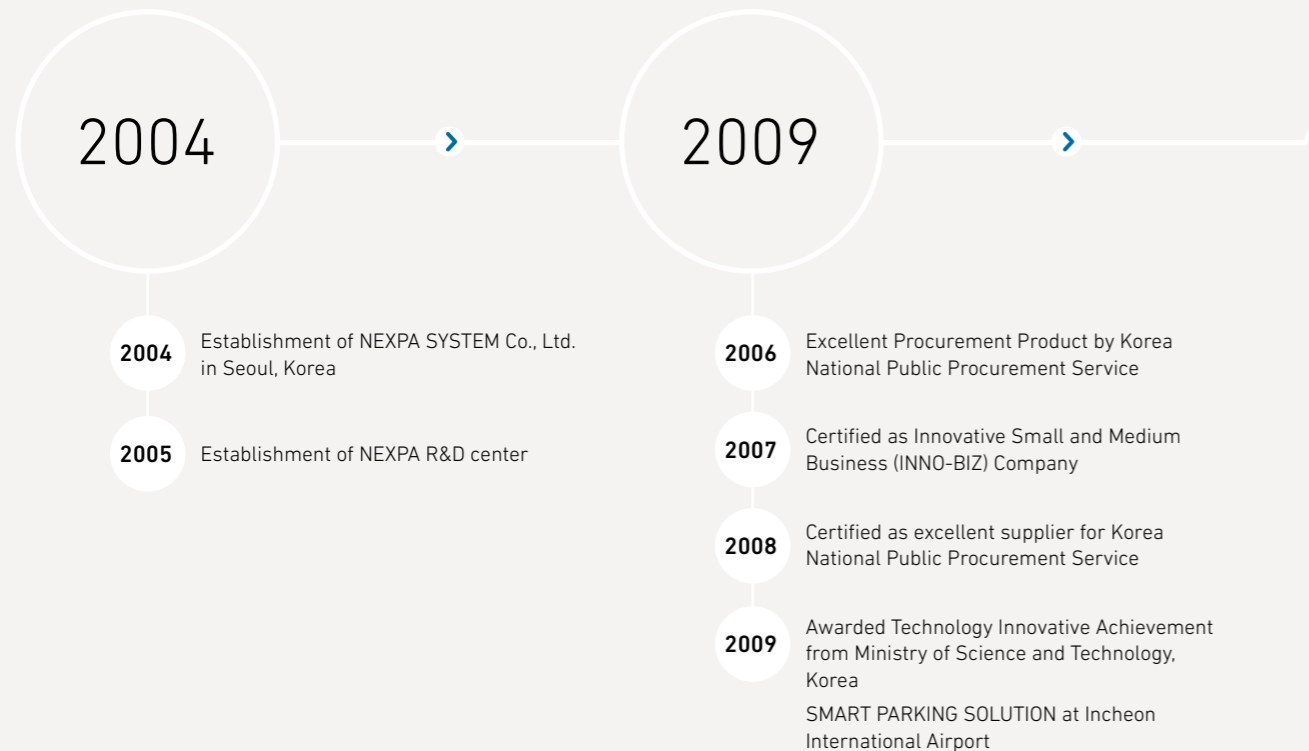Parking Access & Revenue Control Solution (PARCS)

VPGS
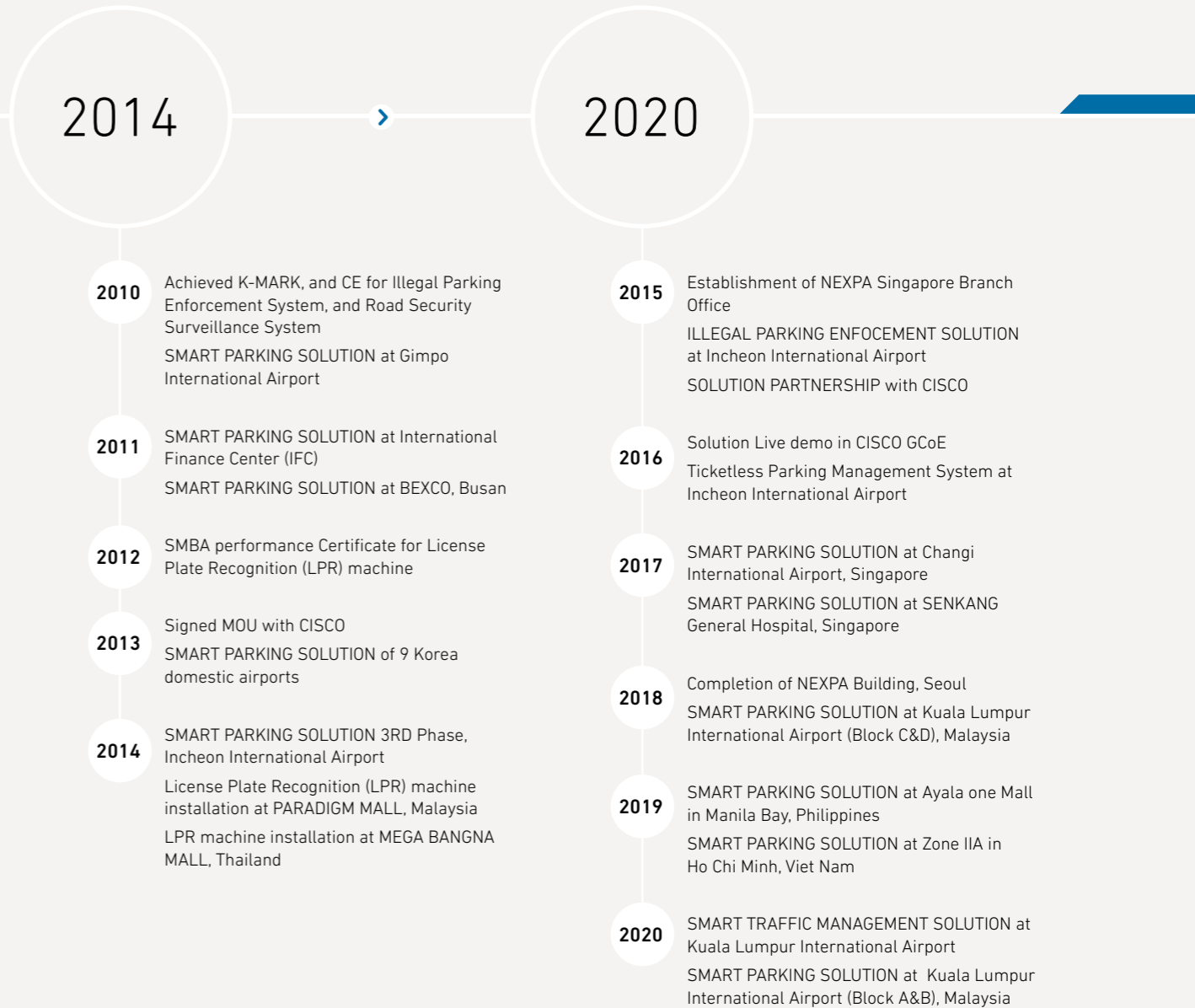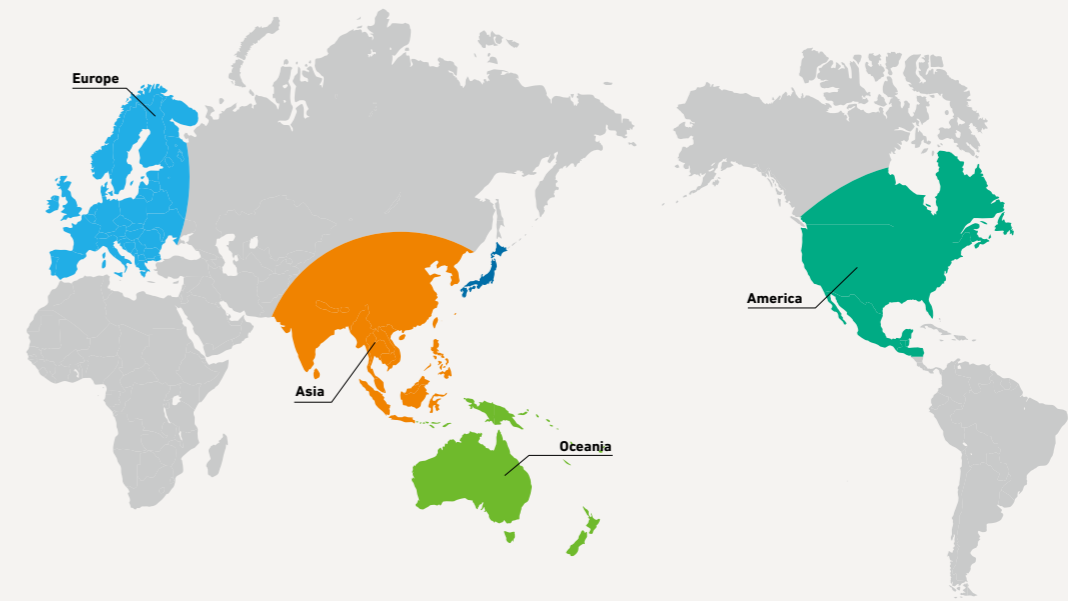Video-based Parking Guidance System (VPGS) for entire parking lots area

TRAFFIC ENFORCEMENT SYSTEM
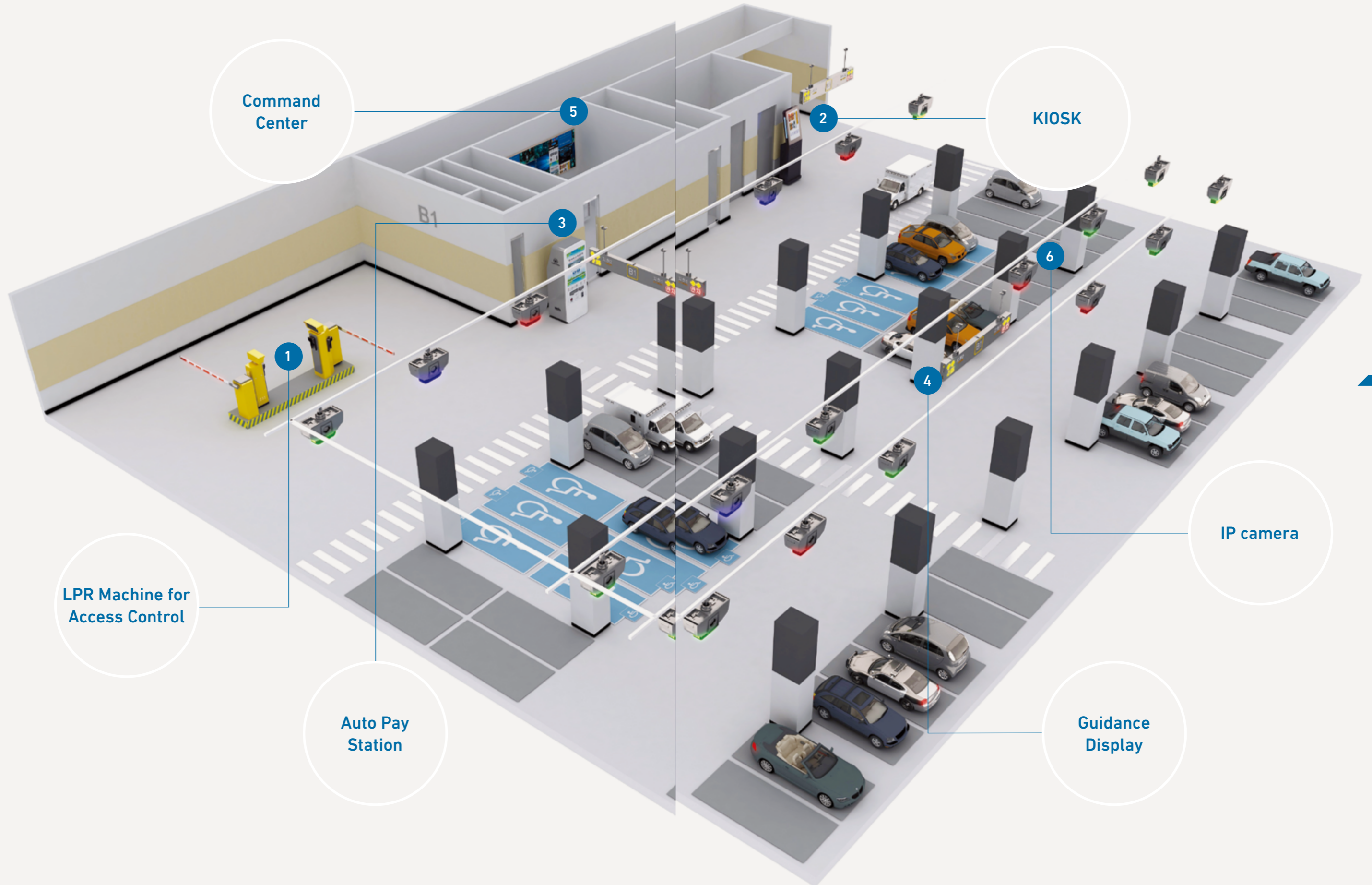Traffic Law Enforcement System for public sector

MILESTONES

2004

2004 Establishment of NEXPA SYSTEM Co., Ltd. in Seoul, Korea

2005 Establishment of NEXPA R&D center

2009

2006 Excellent Procurement Product by Korea National Public Procurement Service

2007 Certified as Innovative Small and Medium Business (INNO-BIZ) Company

2008 Certified as excellent supplier for Korea National Public Procurement Service

2009 Awarded Technology Innovative Achievement from Ministry of Science and Technology, Korea

SMART PARKING SOLUTION at Incheon International Airport

GLOBAL NETWORK

Datamation
Transforming Information

Europe
Asia
Oceania
America

2014

2010 Achieved K-MARK, and CE for Illegal Parking Enforcement System, and Road Security Surveillance System

SMART PARKING SOLUTION at Gimpo International Airport

2011 SMART PARKING SOLUTION at International Finance Center (IFC)

SMART PARKING SOLUTION at BEXCO, Busan

2012 SMBA performance Certificate for License Plate Recognition (LPR) machine

2013 Signed MOU with CISCO

SMART PARKING SOLUTION of 9 Korea domestic airports

2014 SMART PARKING SOLUTION 3RD Phase, Incheon International Airport

License Plate Recognition (LPR) machine installation at PARADIGM MALL, Malaysia

LPR machine installation at MEGA BANGNA MALL, Thailand

2020

2015 Establishment of NEXPA Singapore Branch Office

ILLEGAL PARKING ENFOCEMENT SOLUTION at Incheon International Airport

SOLUTION PARTNERSHIP with CISCO

2016 Solution Live demo in CISCO GCoE

Ticketless Parking Management System at Incheon International Airport

2017 SMART PARKING SOLUTION at Changi International Airport, Singapore

SMART PARKING SOLUTION at SENKANG General Hospital, Singapore

2018 Completion of NEXPA Building, Seoul

SMART PARKING SOLUTION at Kuala Lumpur International Airport (Block C&D), Malaysia

2019 SMART PARKING SOLUTION at Ayala one Mall in Manila Bay, Philippines

SMART PARKING SOLUTION at Zone IIA in Ho Chi Minh, Viet Nam

2020 SMART TRAFFIC MANAGEMENT SOLUTION at Kuala Lumpur International Airport

SMART PARKING SOLUTION at Kuala Lumpur International Airport (Block A&B), Malaysia

PARKING SOLUTION OVERVIEW

Datamation
Transforming Information

Command Center — 5

KIOSK — 2

3

B1

6

4

1

LPR Machine for Access Control

IP camera

Auto Pay Station

Guidance Display

PARKING ACCESS & REVENUE CONTROL SOLUTION (PARCS)

How it works

Entry → License Plate Recognition → Parking lots Access Data Management → Gate Control

Access Control

Track and Identify Vehicle Activities

Collect and Display Real-time Availability Data

Improve Security

Parking Access & Revenue Control Solution (PARCS)

NEXPA's LICENSE PLATE RECOGNITION (LPR) based Parking Access & Revenue Control Solution (PARCS) enables parking lots to minimize traffic congestion at the entrance and exit of parking lots by automated non-stop operation and save inefficient expenses, such as surplus labors and consumables. PARCS uses plate numbers as identification method to charge parking fee and security purposes. So that, it implemented fully automated ticketless SMART PARKING SOLUTION.

Product line up

Dual camera LPR Machine
- Recognize front and rear license plates
- Built-in LED display
- IR/White LED light

Single camera LPR machine
- Recognize front license plates
- Built-in LED display
- IR/White LED light

Automatic Barrier Gate
- Open/Close gate
- Auto re-bound
- High-brightness LED Bar
- RS232/RS485/Dry-contact

Gate built-in LPR machine
- Recognize front and rear license plates
- Built-in barrier gate
- Built-in LED display
- IR/White LED light

Gate built-in LPR machine
- Recognize front and rear license plates
- Built-in barrier gate
- Built-in LED display
- IR/White LED light

Gate built-in LPR machine (Spin-Type)
- Recognize front and rear license plates
- Built-in damage free barrier gate
- Built-in LCD display
- IR/White LED light

Mini LPR
- Recognize front or rear license plates
- Designated to restricted installing environment
- IR/White LED light

Auto Pay Station
- Various payment types : Cash/Card/e-wallet
- Optional Find my Car function with vPGS
- 10.5 / 15 / 21.5 / 42 inches screen size

VIDEO-BASED PARKING GUIDANCE SOLUTION

How it works

Parking → License Plate Recognition → Update Parking Availability → Surveillance

Product line up

Uni-directional camera
- Indicate parking availability
- Detect 3 slots with 1 camera
- 12 mega-pixel
- Multi-streaming
- Built-in 256 color LED indicator

KIOSK
- Find my car function
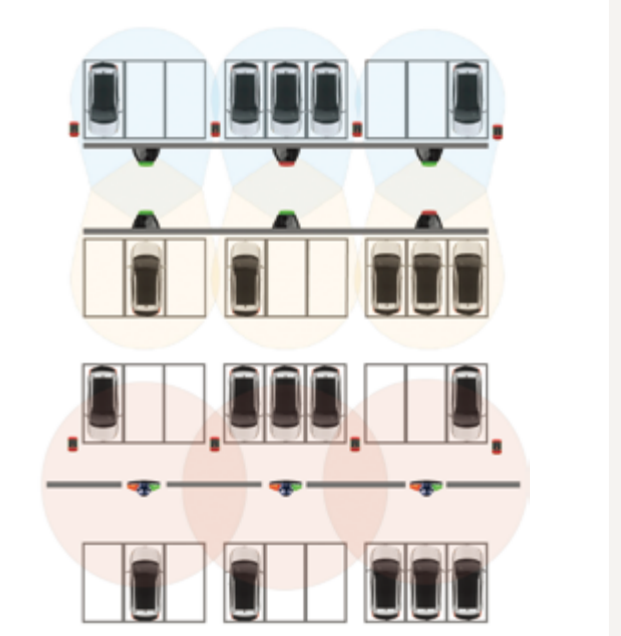- 32" touch screen
- Side LED beam

Omni-directional camera
- Indicate parking availability
- Detect 6 slots with 1 camera
- 12 mega-pixel
- Multi-streaming
- Built-in 256 color LED indicator
- Fish-eye lens

Guidance Displays
- Provide optimal parking route
- Dynamic LED display
- Customizable design

Parking Space Utilization

Efficiently Enforce Parking Policy

Reduce Traffic

Enhance Security

Video-Based Parking Guidance Solution

NEXPA's IP camera based PARKING GUIDANCE SOLUTION (PGS) enables parking lots to minimize traffic congestion by guide drivers to available spaces efficiently. NEXPA offers comprehensive parking guidance and car park surveillance systems through the single framework and enables virtually unmanned day to day operations. It also forms the basis for "Find My Car" and other kiosk or mobile applications. Through the common interfaces of the Central Car-park Management Server, all data from the sub-components are collected, processed and presented in the form of overall, detailed parking status, reports, graphical representation of the most updated car-park status on the floor maps with different colors.

Camera view image

License Plate Number is recognized once a car is detected in the coverage area. Images / video from camera streams recording using proprietary NVR technologies. Also it carries out security functions (surveillance) without blind spots recording 12 mega pixel images.

vPGS-OUTDOOR SOLUTION

TRAFFIC ENFORCEMENT SYSTEM
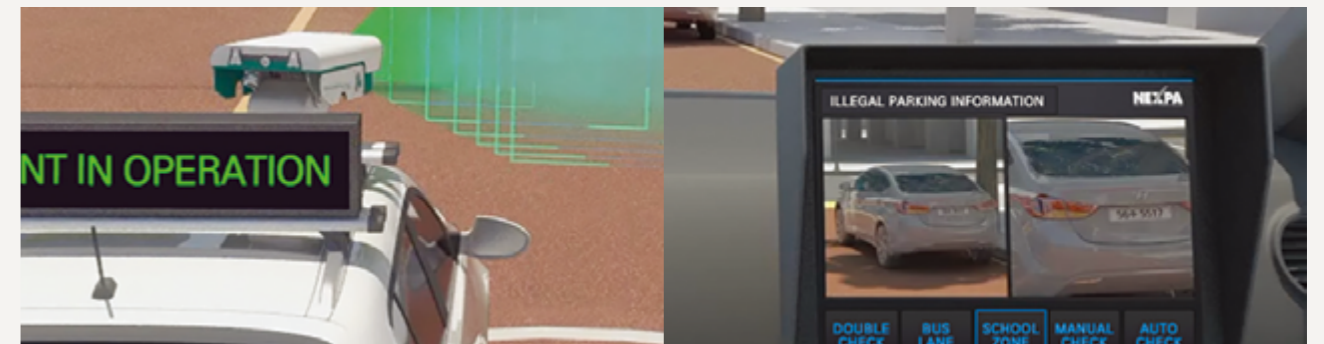
Datamation
Transforming Information

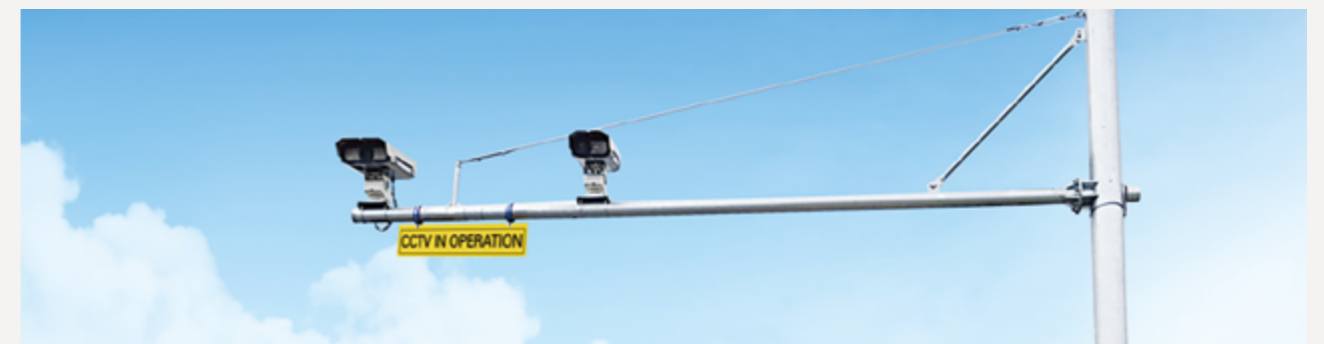## Illegal Parking Enforcement System

Pole Type

Pole type illegal parking enforcement solution can be deployed on the road to identify illegal parking. Information on the occurrence, location, and time of traffic violation will be delivered to the center and saved on the data base. The recorded image and the recognized license plate number can be used as evidence.
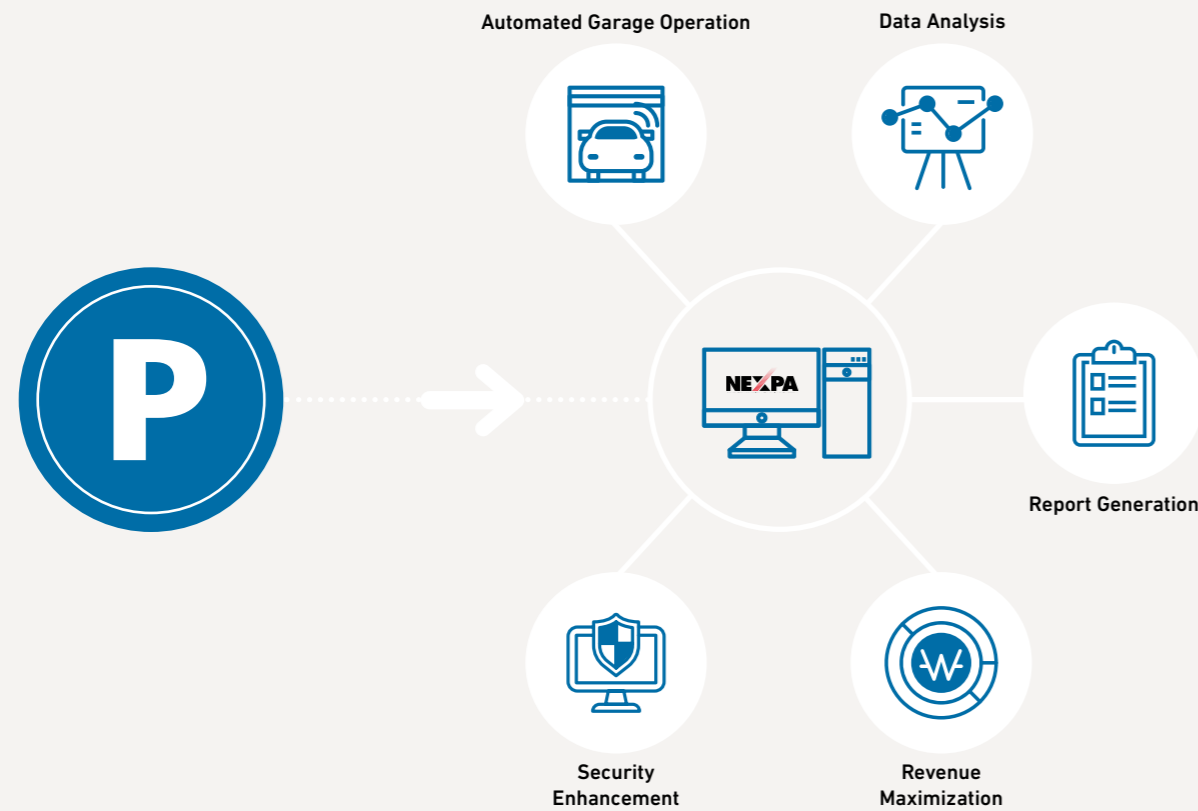
Car-mounted Type

Car-mounted illegal parking enforcement solution is to identify illegal parking while driving to solve traffic congestion with high mobility. Waterproof and anti-vibration housing helps to improve performance in moving condition.

How it works

Parking → License Plate Recognition → Update Parking Availability → Surveillance

B2 · Spaces Avaible · 35

vPGS- Outdoor Solution

Pole type

Gantry type

Outdoor Parking Solution uses Omni-directional and PTZ(Pan Tilt Zoon) cameras installed on the pole to guide and monitor parking lots. The Omni-directional cameras detect cars in parking bays then PTZ cameras recognize the license plate numbers. Each camera also works as surveillance camera for 24/7 without additional CCTV installation.

As premium line-up model NEXPA used full cover LED indicator as gantry-type. The indicating light is designated for driver to find available spaces easily, and shows status of whole line parking spaces (RED: Occupied, GREEN: Available)

Product line up

Omni-directional camera

- Detect 16 parking slots
- 12 mega-pixel
- Multi-streaming

PTZ camera

- Recognize License Plate
- 12 mega-pixel
- Multi-streaming
- DOL HDR (Digital Over Lab High Dynamic Range)

Road Security System

Pole type road security solution is to detect security threats and prevent any crimes. The system recognizes the license plate number of crime-related vehicles and gives an alert to the center automatically. It enables collection of evidence, tracking of the route and allows for a prompt action that will lead to more effective corrective measures.

CLOUD-BASED PARKING MANAGEMENT SOLUTION

Automated Garage Operation

Data Analysis

P

NEXPA

Report Generation

Security Enhancement

Revenue Maximization

Future-proof your garage space with our data-driven solution

Efficient

- Eliminate any manual labor or paperwork
- Accurately evaluate current operation through data
- Aggregate data beyond parking for future developments
- Reduce traffic in garages and streets
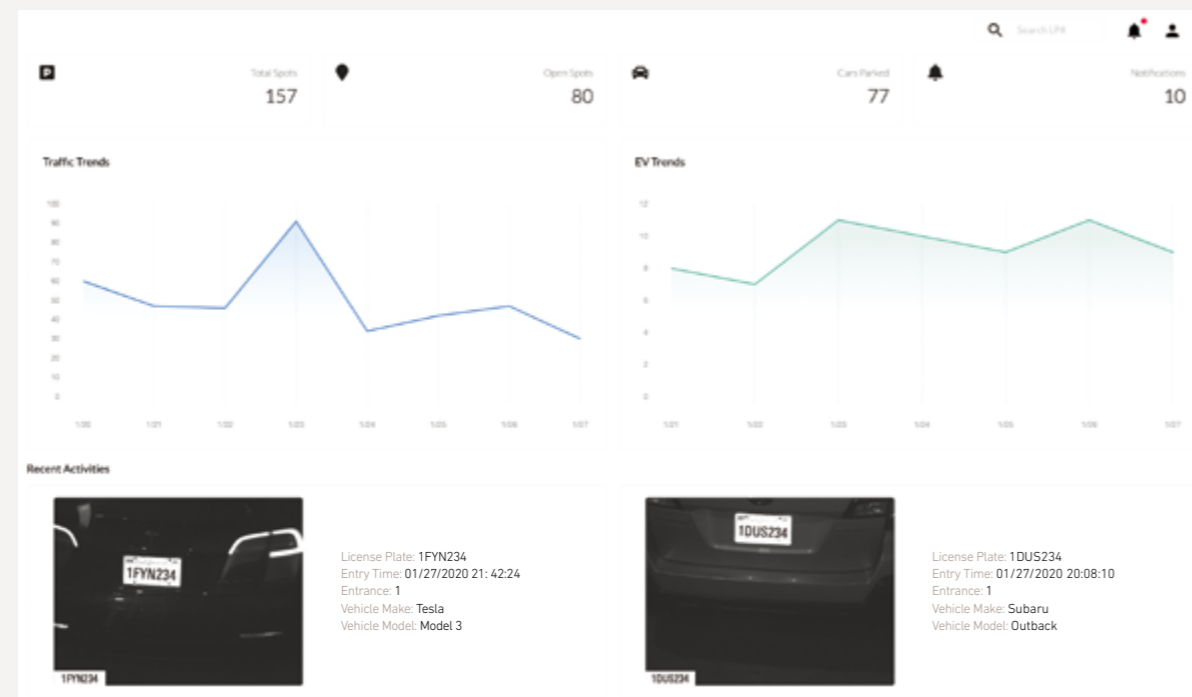
Profitable

- Increase inventory utilization
- Significantly lower operational cost
- Adopt different types of parking. From monthly to transient parking and event parking depending on live data without any additional cost
- Apply dynamic pricing
- Attract more vehicles through data distribution to popular navigation & parking apps

Future-proofed

- Update existing infrastructures for both today and tomorrow
- Accommodate all vehicles from level 0 to 5 autonomy
- Be the leader in creating the smart city infrastructure
- Become the hub that connects vehicles, users, and various on-demand vehicle services

	Total Spots		Open Spots		Cars Parked		Notifications
	157		80		77		10

Traffic Trends

EV Trends

Recent Activities

License Plate: **1FYN234**
Entry Time: **01/27/2020 21: 42:24**
Entrance: **1**
Vehicle Make: **Tesla**
Vehicle Model: **Model 3**

License Plate: **1DUS234**
Entry Time: **01/27/2020 20:08:10**
Entrance: **1**
Vehicle Make: **Subaru**
Vehicle Model: **Outback**

We deliver a solution that tightly integrates parking hardware system and software platform that is capable of aggregating and distributing data for smart cities.

GLOBAL LANDMARK REFERENCES

Changi International Airport, Singapore

Jewel Shopping Center, Singapore

Sengkang Hospital, Singapore

Republic Polytechnic, Singapore

Parramatta Club, Australia

Kuala Lumpur International Airport, Malaysia

Incheon International Airport, Korea

Encanto tower, Mongolia

Ayala mall Manila Bay, Philippines

Zone IIA, Vietnam

Bujairi Park Riyadh, Saudi Arabia

Aeon Mall, Japan

Welcia Drug Store, Japan

The Landing Village California, U.S.A

Laksong MRT, Thailand

CASE STUDY

Singapore Changi Airport & Changi Jewel Mall

The best airport in the world and its unique shopping mall 'Changi Jewel' became one of the most attractive major aviation hub in the Asia-Pacific. The Changi Jewelreceives over 300,000 visitors a day. Changi Airport Group selected NEXPA SMART PARKING SOLUTION for Changi Jewel and its airport terminal 1,2, and 3 to provide premium parking experiences to their visitors. Based on NEXPA's advanced technology, Changi Jewel provides Find My Car service through user-friendly KIOSK everywhere in shopping mall.

PROJECT SCALE
No. of parking bay : **Total 6,646 bays**
• Terminal 1 : 1,021 bays
• Terminal 2 : 1,321 bays
• Terminal 3 : 1,718 bays
• Jewel : 2,586 bays

PROJECT DETAILS
• Uni-Directional IP Camera
• Individual LED Indicator
• License Plate Recognition Machine
• Mobile Application Integration
• Find My Car Kiosk
• EPS Integration

Kuala Lumpur International Airport

Kuala Lumpur International Airport (KLIA) is the largest and the busiest airport in Malaysia and one of major airports in Southeast Asia. The airport is operated by Malaysia Airports (MAHB) and MAHB selected NEXPA's SMART PARKING SOLUTION for KLIA one Parking lots. KLIA conceived to become the world best airport. As the part of becoming the world best airport, KLIA adopted the most advanced technology for its parking lots.

PROJECT SCALE
No. of parking bay : **Total 5,810 bays**
• Block A & B : 3,082 bays
• Block C & D : 2,728 bays

PROJECT DETAILS
• Omni-Directional IP Camera
• Dynamic LED Display
• License Plate Recognition Machine
• Find My Car Kiosk
• PARCS Integration

CASE STUDY

Datamation
Transforming Information

Incheon International Airport

Incheon International Airport is No. 2 ranked airport in the World's top 100 Airports 2019 and has won ASQ Awards for 12 consecutive years. Incheon International Airport considers parking lots service is one of the important factors to give a good impression to the customers and improve their loyalty. The parking lots in Incheon International Airport has been innovated every year reflecting the technology development.

PROJECT SCALE
No. of parking bay : **Total 30,982 bays**
• Terminal 1 : 22,919 bays
• Terminal 2 : 8,063 bays

PROJECT DETAILS
• Uni-Directional IP Camera
• Individual LED Indicator
• License Plate Recognition Machine
• Mobile Application Integration
• Find My Car Kiosk
• High Pass EXIT System
• Valet Parking

Ayala Malls Manila Bay

Ayala Malls Manila Bay is the largest Complex mall in the Philippines, and one of the biggest in the world. Ayala Malls Manila Bay is owned by Ayala Land Inc. under the Ayala Malls brand. They selected NEXPA's SMART PARKING SOLUTION for their convenient operation of large parking bay. SMART PARKING SOLUTION implemented transformed the mall into one of the first SMART PARKING enabled sites in the country.

PROJECT SCALE
No. of parking bay : **Total 3,896 bays**

PROJECT DETAILS
• Uni-Directional IP Camera
• RFID Integration
• License Plate Recognition Machine
• Find My Car Kiosk
• Auto Payment Station
• Mobile Parking Reservation

NEXPA

Distributor

Datamation
Transforming Information

Datamation (M) Sdn Bhd

Unit 18.2, Level 18, CP Tower, Pusat Dagang Seksyen 16

46350 Petaling Jaya, Selangor Darul Ehsan, Malaysia

Tel   : +603 7660 2222

Fax   : +603 7660 2323

Email: Sales@datamationgroup.com

Website: www.datamationgroup.com