#### 案號: STIA-2022-22

## 數位北捷。創新北捷 Digital Metro

Digital Train Smart Display Innovative Operation Experimental Project

Innolux Corporation Sophia Cheng – Director, Business Development Division 2023.04.26



The growth of the railway management system market is attributed to high demographic growth and hyperurbanization, government initiatives and partnership models, and the emergence and IOT technology.

#### **Global Railway Management System Market Trend**

### 2020

# 40.8 USD Billion

#### CAGR



The global railway management system market is expected to be worth USD61,850million by 2025, growing at CAGR of 8.7% during 2020-2025.

2025

The growing need for advanced transportation infrastructure is expected to offer growth opportunities for the market during the forecast period.

The European market is projected to grow due to the early adoption of technology and ongoing high-speed railway projects. Agreements, collaborations, and partnerships would be key growth strategies for market players in the next five years.

61.9 USD Billion

The highest CAGR of APAC can be attributed to high government investments and rapid growth in railway infrastructure.

Line	Code Name	Car Manufacturer
Muzha Line	VAL256	France/馬特拉 Martra
Wenhu Line	BT370	Canada/龐巴迪 Bombardier
Danshui Line	C301	USA/聯合車輛URC
Ban-Nan Line	C321, C341	Germany/西門子 Siemens
Xinzhu Line	C371三系	Japan/川崎重工 Kawasaki
Xinzhu Line	C371 四系, 381	Japan /川崎重工+台灣車輛中心
Cycle Line	Cycle Line	Japan/軌道義大利 Hitachi+台灣車輛中心
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#### **Digital Train Innovative Plan**

#### As Is

Replacement of in-carriage advertising with new graphics and involving hundreds of people for cleaning and replacement."

> "Monthly rental system for print advertisements"

"Poor signal reception on Taipei Metro train carriages running underground."

"The train carriages have been in service for 18 years and their structure cannot be modified."

"Unable to understand train schedule information in real time."

Goal

"Reducing labor and manpower in Taipei Metro"

10.1

Boosting advertising earnings for Taipei Metro

Enhancing signal reception and transmission quality."

"Not making significant changes to the train carriage mechanical structure."

"Providing real-time train schedule information."

### To Be

"Cloud-based TV advertisement distribution to reduce the hiring of temporary personnel."

Advertising revenue jumped from NT\$200,000 to 2-2.5 million per train carriage.

"Strengthening image transmission speed with 5G technology"

"Train regulations: fire-resistant, earthquake-resistant, and safe. Giving a new look to the old train body."

"GPS communication positioning for tracking and locating Taipei Metro trains via Taipei Metro GO."















Microsoft Surface L



# INNOLUX

## 成果

- 1. "Since the first voyage of the Pokémon-themed Taipei Metro digital train on January 26, 2021, the Taipei Metro digital trains have rewritten the 25-year history of Taipei Metro."
- 2. From the past paper sticker advertisement to the digital transformation of LCD dynamic advertisement.
- 3. Transforming from the traditional manual sticker advertisement to cloud-based uploading advertisement, it reduces the labor and error issues when replacing the advertisements.
- 4. The digital trains have generated millions of advertising revenue in a year, exceeding expectations.
- 5. Transformation from one-way communication to interaction with consumers.
- 6. The Taipei Metro App allows users to track the digital trains, enhancing the digital image.
- 7. Giant advertising screens provide clear guidance on arrival information.
- 8. The digital trains on the Banqiao Line remain the world's first and leading application of intelligent displays.
- 9. The digital trains have generated over one million views on YouTube, making them the preferred choice for advertisers to place outdoor advertisements.
- 10. Digital trains create marketing value and collaborate with advertisers to create innovative marketing campaigns.
- 11. Digital trains are connected to the Taipei Metro Operations Control Center, enhancing the operational capabilities of older Taipei Metro trains.
- 12. Taipei Metro maintenance and operation personnel have improved their operational skills and become a model for rail transit in Asia.

