# MALAYSIAN AVIATION COMMISSION

## Benefits of Integrated Terminals

Malaysian
Aviation Commission
*Suruhanjaya Penerbangan Malaysia*

MAVCOM

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# Table of Abbreviations

| Abbreviations | Full Name |
|---|---|
| ACI | Airport Council International |
| AMS | Amsterdam Airport Schiphol |
| BKI | Kota Kinabalu International Airport |
| BKK | Suvarnabhumi Airport |
| CIQ | Customs, Immigration, and Quarantine |
| CPH | Copenhagen Airport |
| FSC | Full Service Carrier |
| HCI | Hub Connectivity Index |
| KUL | Kuala Lumpur International Airport |
| KUL-T1 | Kuala Lumpur International Airport Terminal 1 |
| KUL-T2 | Kuala Lumpur International Airport Terminal 2 |

| Abbreviations | Full Name |
|---|---|
| LCC | Low Cost Carrier |
| MAHB | Malaysia Airports Holdings Berhad |
| MAVCOM | Malaysian Aviation Commission |
| MCT | Minimum Connecting Time |
| OAG | Official Aviation Guide |
| PSC | Passenger Service Charges |
| SIN | Singapore Changi Airport |

# Integrated terminals (e.g. airside connectivity between KUL-T1 and KUL-T2) confers several benefits

- Reduce congestion at KUL-T1 without building additional terminal(s)
- Improve airport operational efficiency
- Facilitates interlining and self-connections
- Potentially improve traffic growth

# Airside connectivity can reduce congestion at KUL-T1 without building additional terminal(s)

| Airports | Terminal design capacity (mn pax) | 2016 | | 2017 | | 2018 | |
|---|---|---|---|---|---|---|---|
| | | Total pax (mn pax) | Terminal utilisation | Total pax (mn pax) | Terminal utilisation | Total pax (mn pax) | Terminal utilisation |
| KUL-T1 | 25 | 25.52 | 102% | 28.29 | 113% | 28.03 | 112% |
| KUL-T2 | 45 | 27.12 | 60% | 30.28 | 67% | 31.92 | 71% |
| Total | 70 | 52.64 | **75%** | 58.57 | **84%** | 59.95 | **86%** |

*Source: MAHB*

- KUL-T1 utilisation is more than 100% while KUL-T2 is only reaching 70%
- Discussions with stakeholders reveal that **airlines are reluctant to move to KUL-T2 as there is no connectivity** between KUL-T2 and KUL-T1
- Having airside connectivity between KUL-T1 and KUL-T2 can **reduce congestion in KUL-T1**

# Integrated terminals give airports better operational efficiency

| 2018 | MCT | Terminal capacity (mn pax) | No. of terminals | No. of incoming flights | Total average connections per incoming flight | Total Hub Connectivity Index (HCI) score |
|---|---|---|---|---|---|---|
| SIN | 45 | 82 | 4 | 3,684 | 65 | 241,213 |
| BKK | 55 | 45 | 3 | 3,594 | 78 | 281,645 |
| **KUL** | **60** | **70** | **2** | **3,969** | **24** | **96,725** |

*Source: MAVCOM Analysis, OAG Analyser*

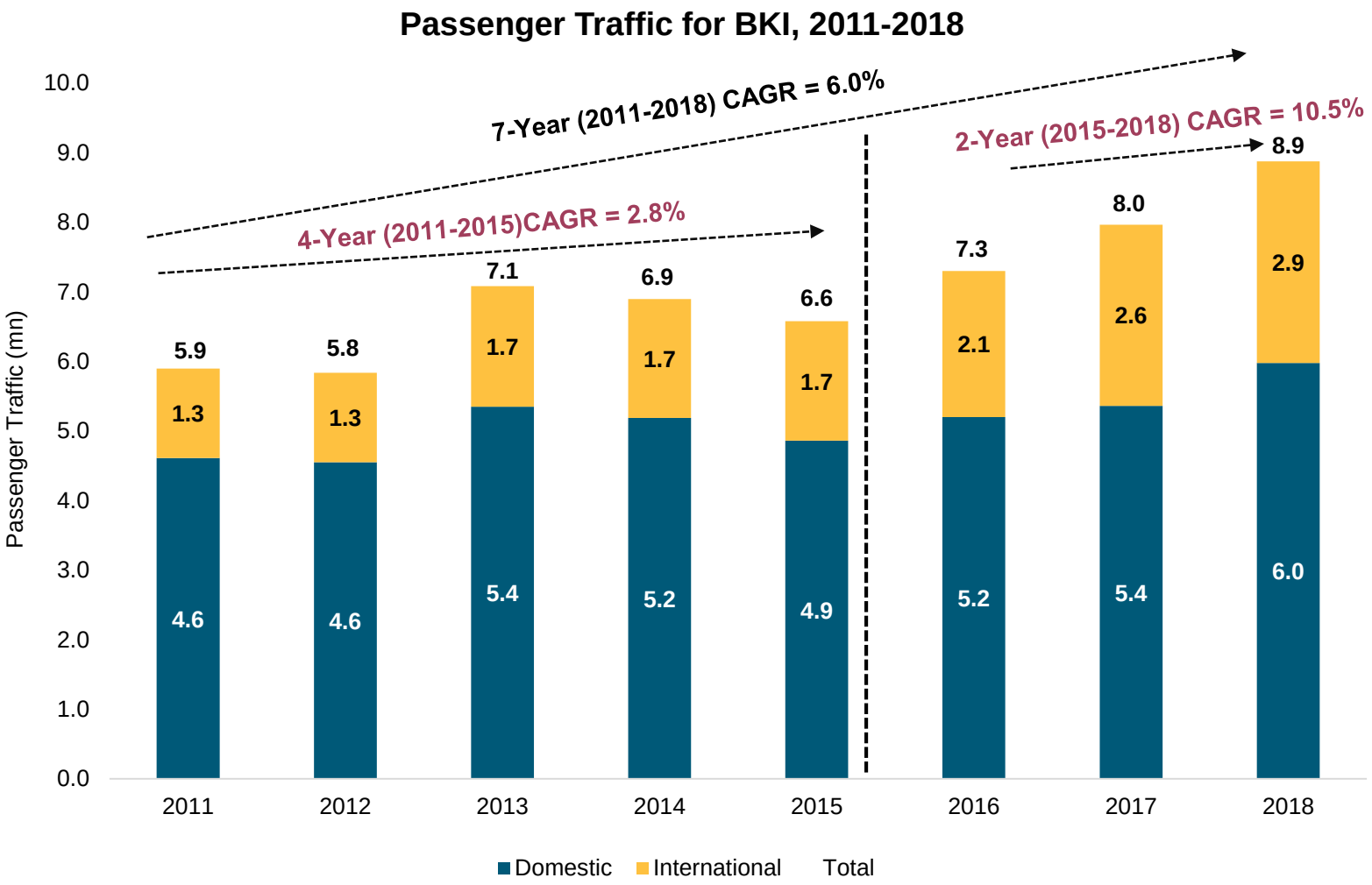
- **Integrated terminals** in SIN and BKK enable **shorter connecting times**
- **KUL's substantially lower hub connectivity** (measured by HCI) **is partly due to its higher minimum connecting time**
- In cases where terminals are integrated within one building (e.g. finger pier configurations), there are also **cost-savings** as facilities like CIQ and baggage-handling systems do not need to be duplicated

# Integrated terminals provide opportunities for interlining and self-connection, improving connectivity

- Integrated and/or connected terminals allow **seamless interlining and transfer connection facilities** between FSCs, and also between FSCs and LCCs

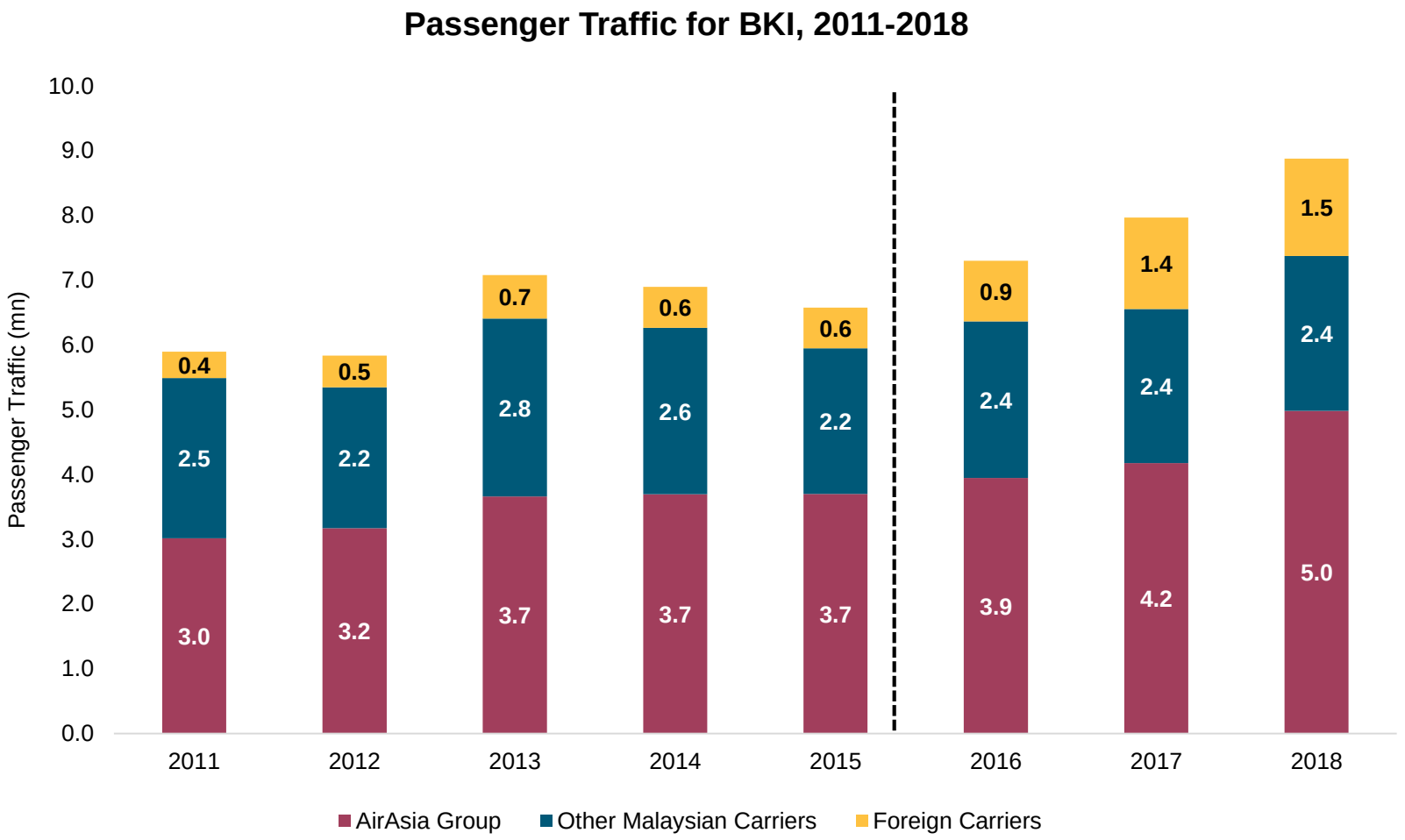
- Integrated terminals allows **self-connection** (e.g. AMS and CPH):
  - **Separate piers for fast-turnaround flights that are integrated** within a single terminal building
  - Passengers for all airlines are charged the **same PSC**
  - **Single** CIQ and baggage-handling facilities
  - **Allows for airside transfer** of passengers even between non-interlined flights

# Passenger traffic improved markedly for BKI after AirAsia moved to Terminal 1 in December 2015



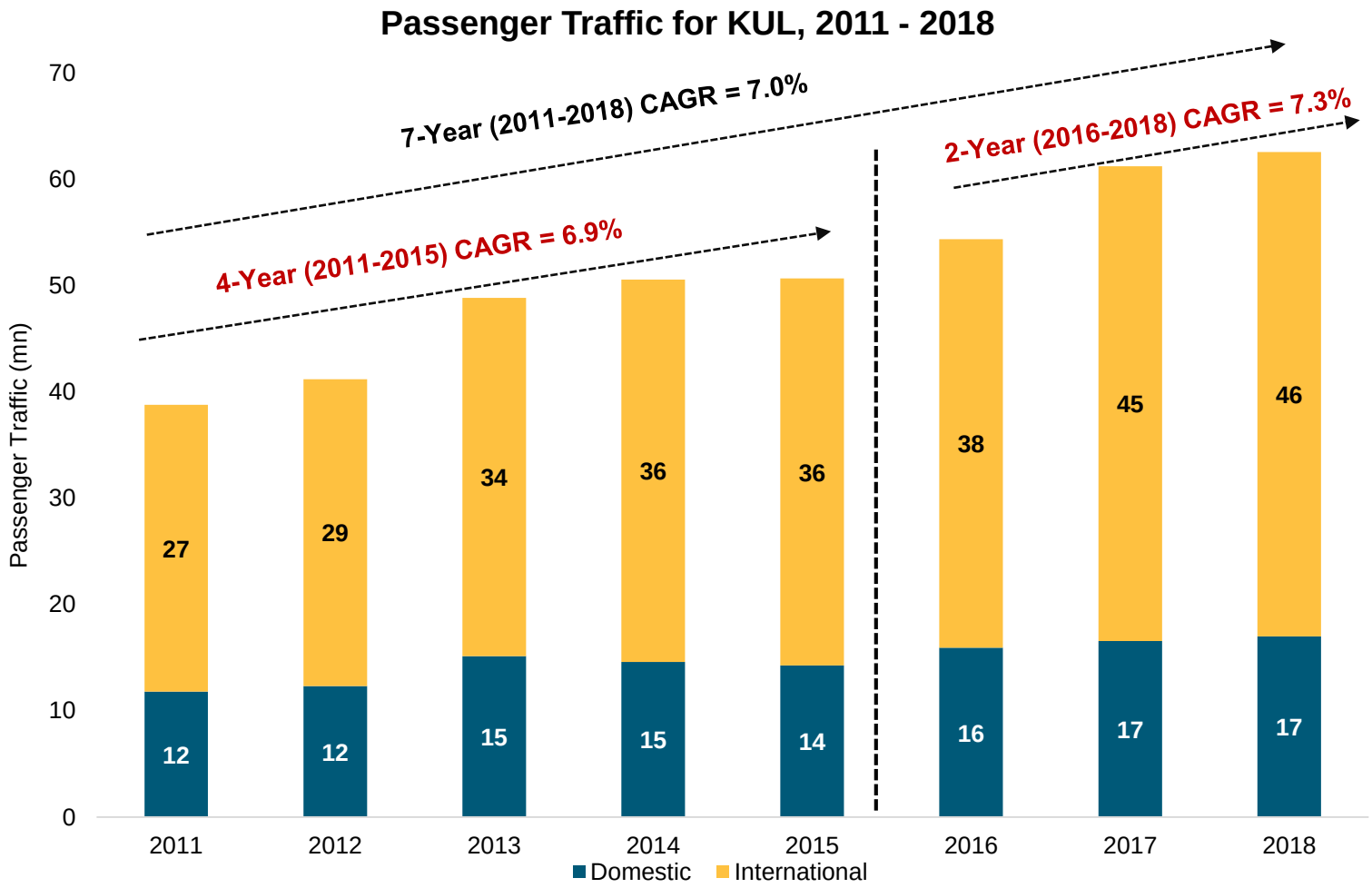

*Source: AirportIS*

# All airlines have benefited from being in an integrated terminal




*Source: MAVCOM Analysis, AirportIS*

# Arguably, KUL's traffic could have grown faster if its terminals were integrated, similar to BKI's case




*Source: MAVCOM Analysis, AirportIS*

# THANK YOU

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