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# Contactless payment & multi-application: *Pay*pass for Transit

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# Summary

- **Some payment/transit combination Cases**
- **Identified Banks / Operators Objectives**
- **Where does the solution come from?**
- **A way forward**



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# Some payment/transit combination Cases

# New-York City Consumer Trial

- Metropolitan Transportation Authority and CitiBank
- 28 Subway Stations' display at entry dedicated signs on 78 turnstiles where *Pay***pass** mag-stripe profile devices are accepted for **payment**.
- Single ticket “pay-per-ride” option only, with 20% bonus (incentive)
- 90'000 MasterCard *Pay***pass** devices, also accepted for payment in non-transit shops





- Fully integrated retail and transport solution
- Combined Credit and Transport on same chip, both using *Pay**pass* M/Chip *payment* application
- 120'000 “TaiwanMoney” / MasterCard *PayPass* cards
- 1'800 buses, 2'000 retail outlets

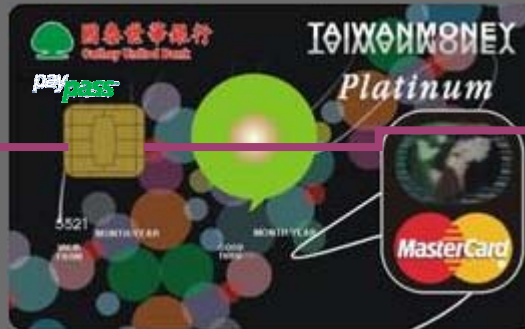
## Combined Credit & Transport Card



MasterCard  
credit branded

‘Powered by’  
**M/Chip 4**

Optionally  
equipped with  
**paypass**



‘Transport  
Payment’ brand  
(example)  
- typically on back of card

‘Powered by’ **M/Chip 4**  
the industry leading EMV  
program from MasterCard

Personalised as  
**OneSMART Pre-Authorized**  
profile for small payments

Equipped with **paypass**  
the global standard  
for contactless payments



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# Identified Banks / Operators Objectives

# OneSMART™ PayPass for Transit : the possible views

TARGET	→ Occasional Travelling Consumer.
ISSUING BANK OBJECTIVE	→ Propose Transit Operators with e-ticketing environment a bank-issued alternative to single ticket, to be used by their common customers, thus increasing flow per card, and leading to “top-of-wallet”.
OPERATORS' OBJECTIVE	→ Propose to their occasional customers a seamless solution to urban mobility, using a technology consistent with their e-ticketing solution to further save money.
Cardholder OBJECTIVE	ALWAYS be in a position to Quickly board Public Transport services
PRODUCT	<ul style="list-style-type: none"><li>→ PayPass for Transit, derived from MasterCard's leading Paypass Contactless offer</li><li>→ Using same standard (ISO 14443) than current e-ticketing solutions.</li><li>→ Combining “contact” and “contactless” modes of operation on same card.</li></ul>





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# Where does the solution come from?

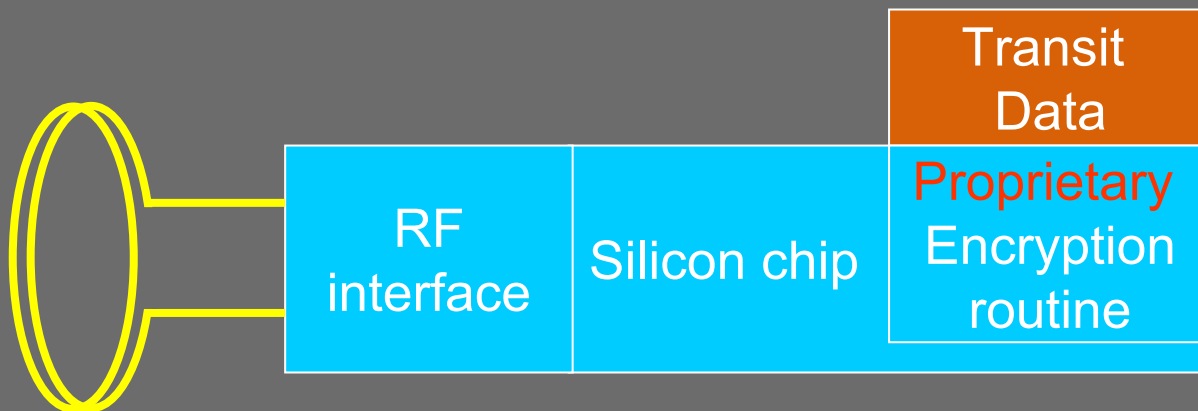
# Mifare-basic configuration

## Colour Key

Hardware

ROM/E<sup>2</sup>PROM  
Data

Most spread chip platform !



# Mifare MicroProcessor configuration

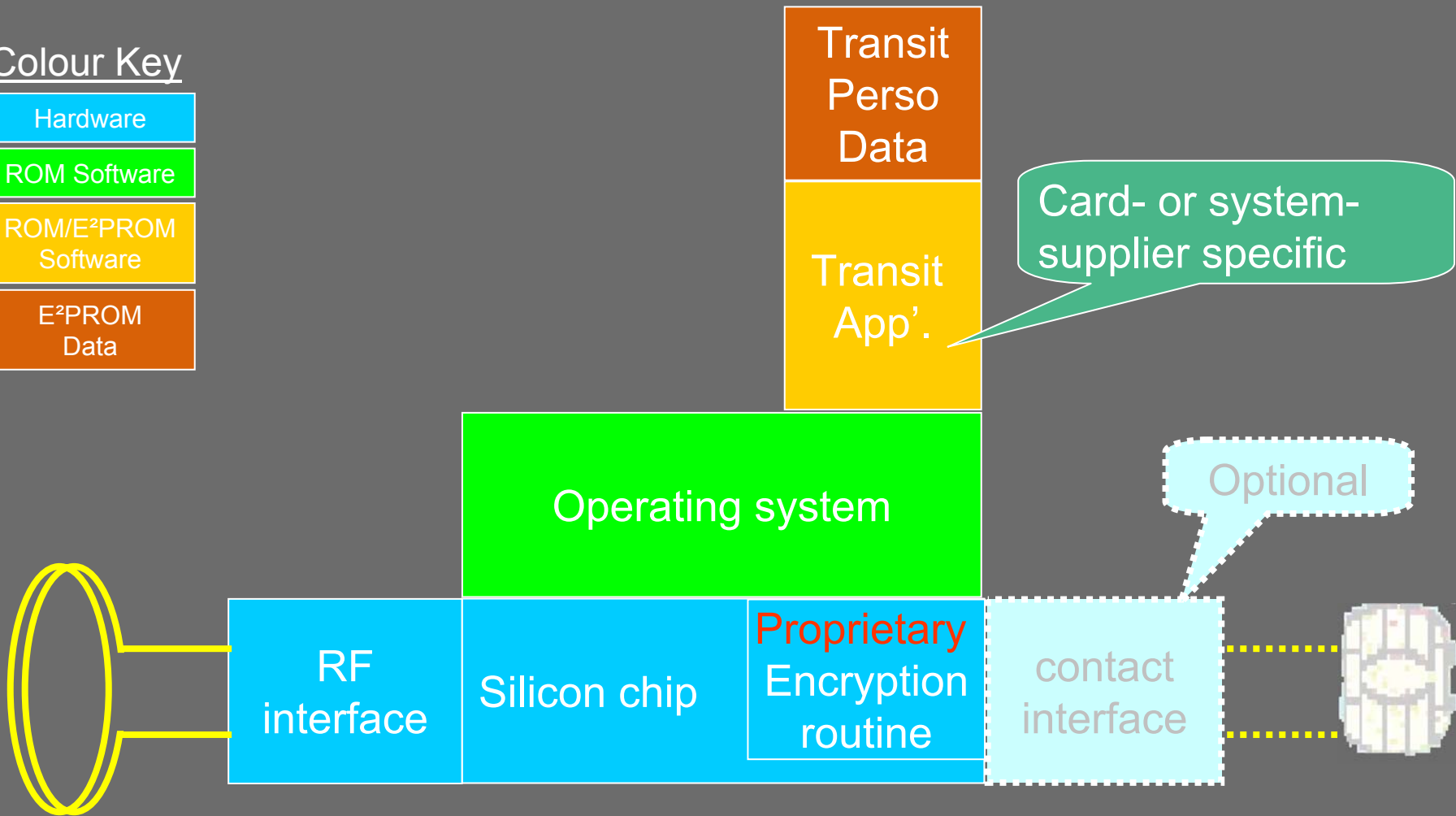
## Colour Key

Hardware

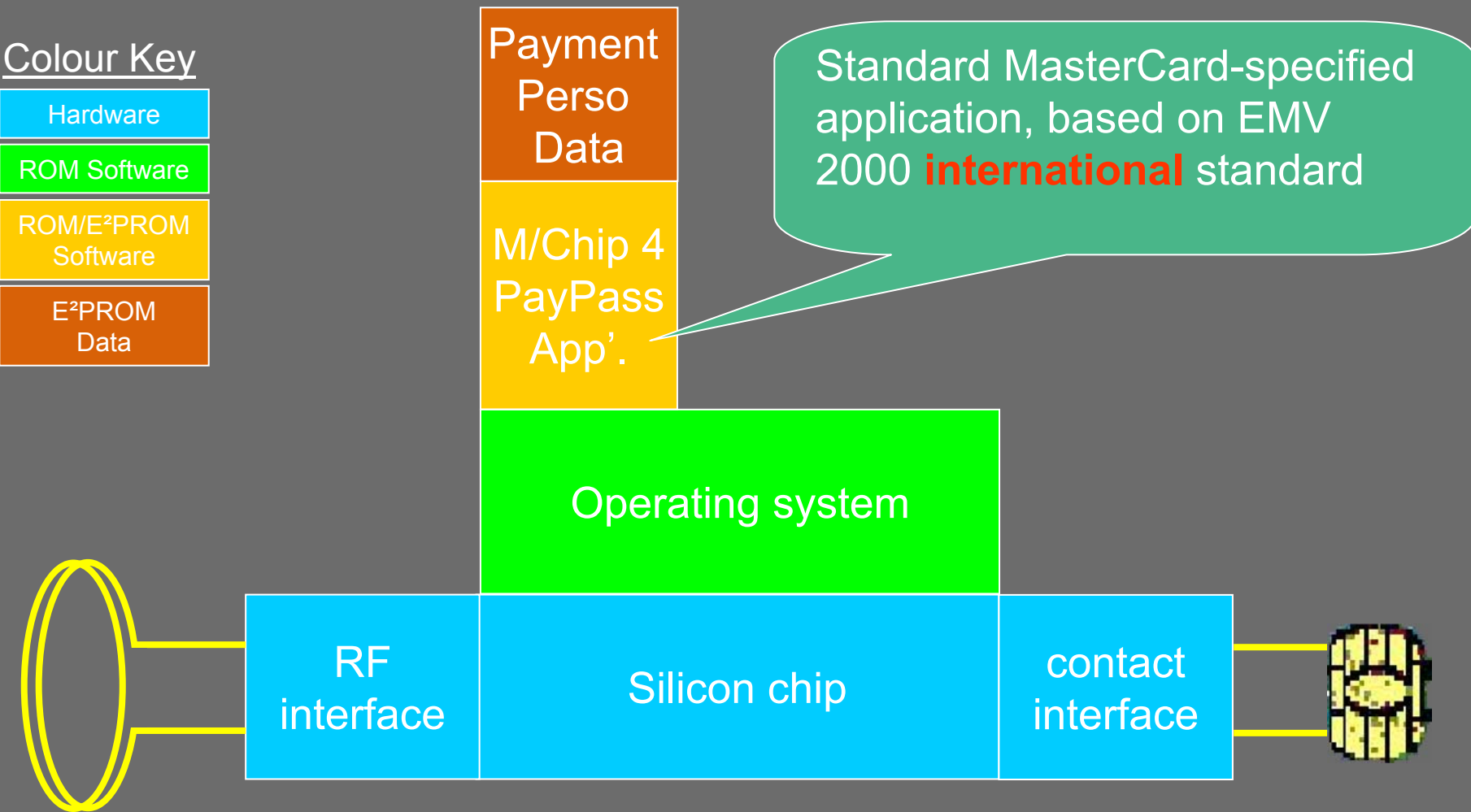
ROM Software

ROM/E<sup>2</sup>PROM  
Software

E<sup>2</sup>PROM  
Data

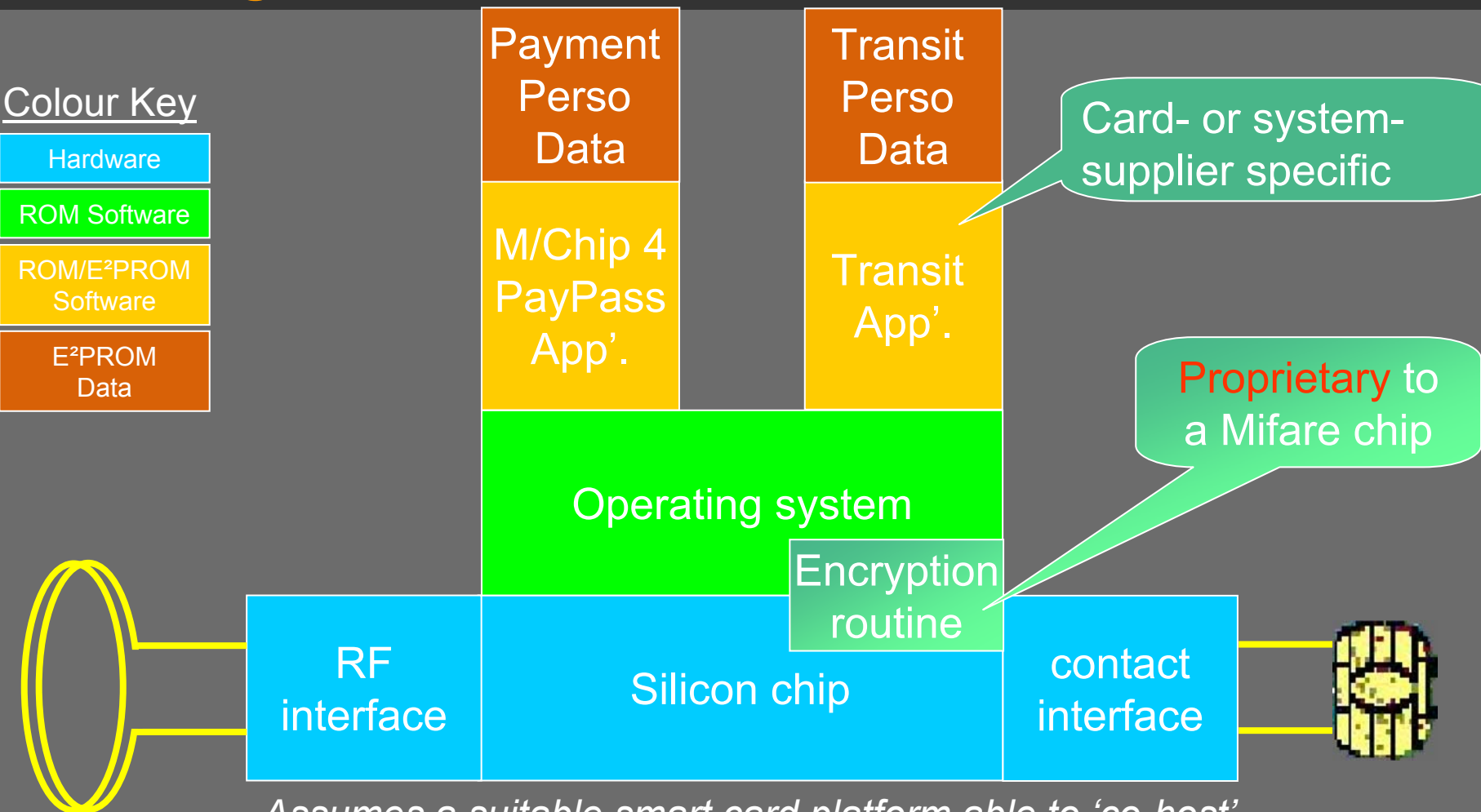


# PayPass M/Chip standard configuration





# Combined PayPass-Transit configuration

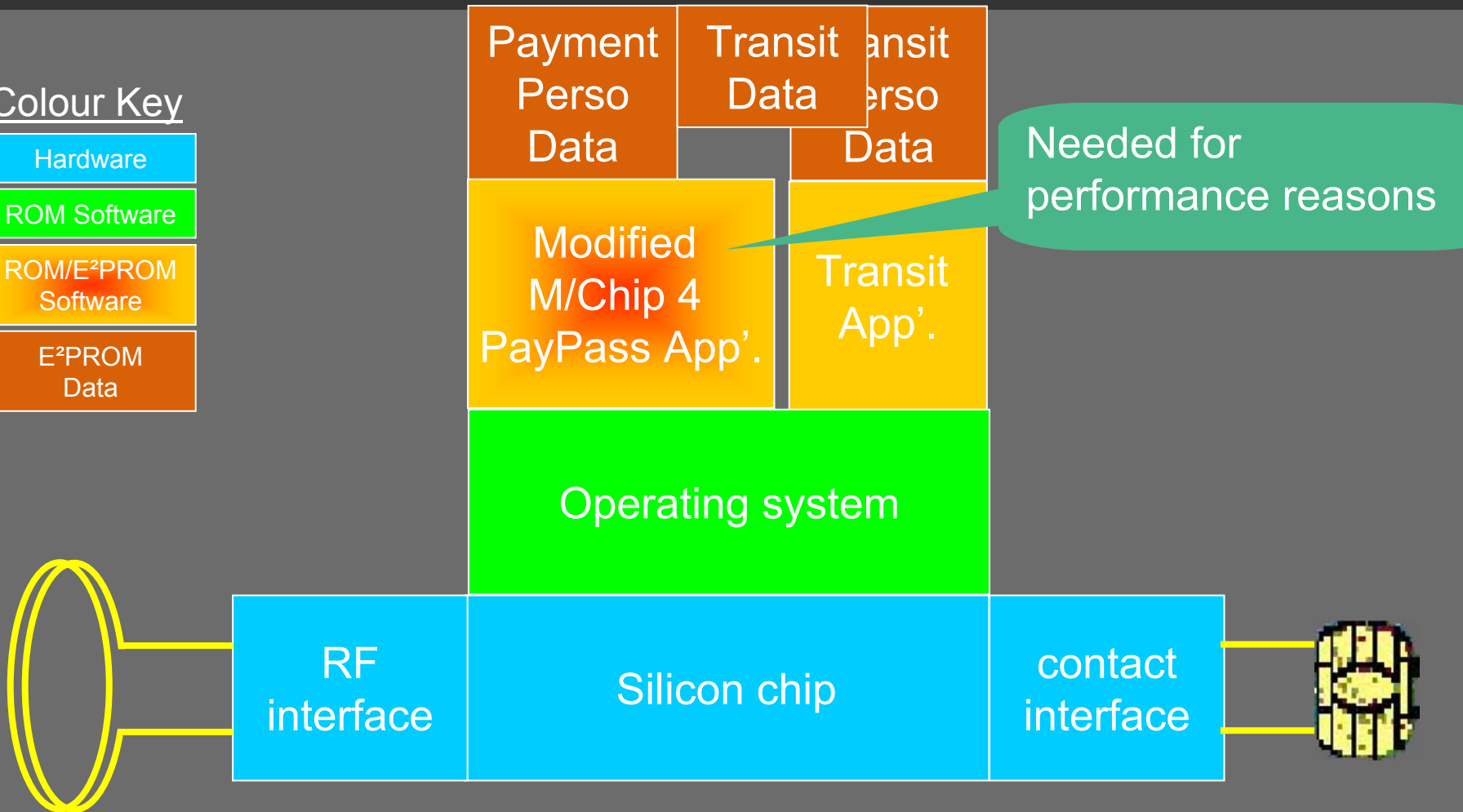


*Assumes a suitable smart card platform able to 'co-host' both OneSmart PayPass and Transit Application.*

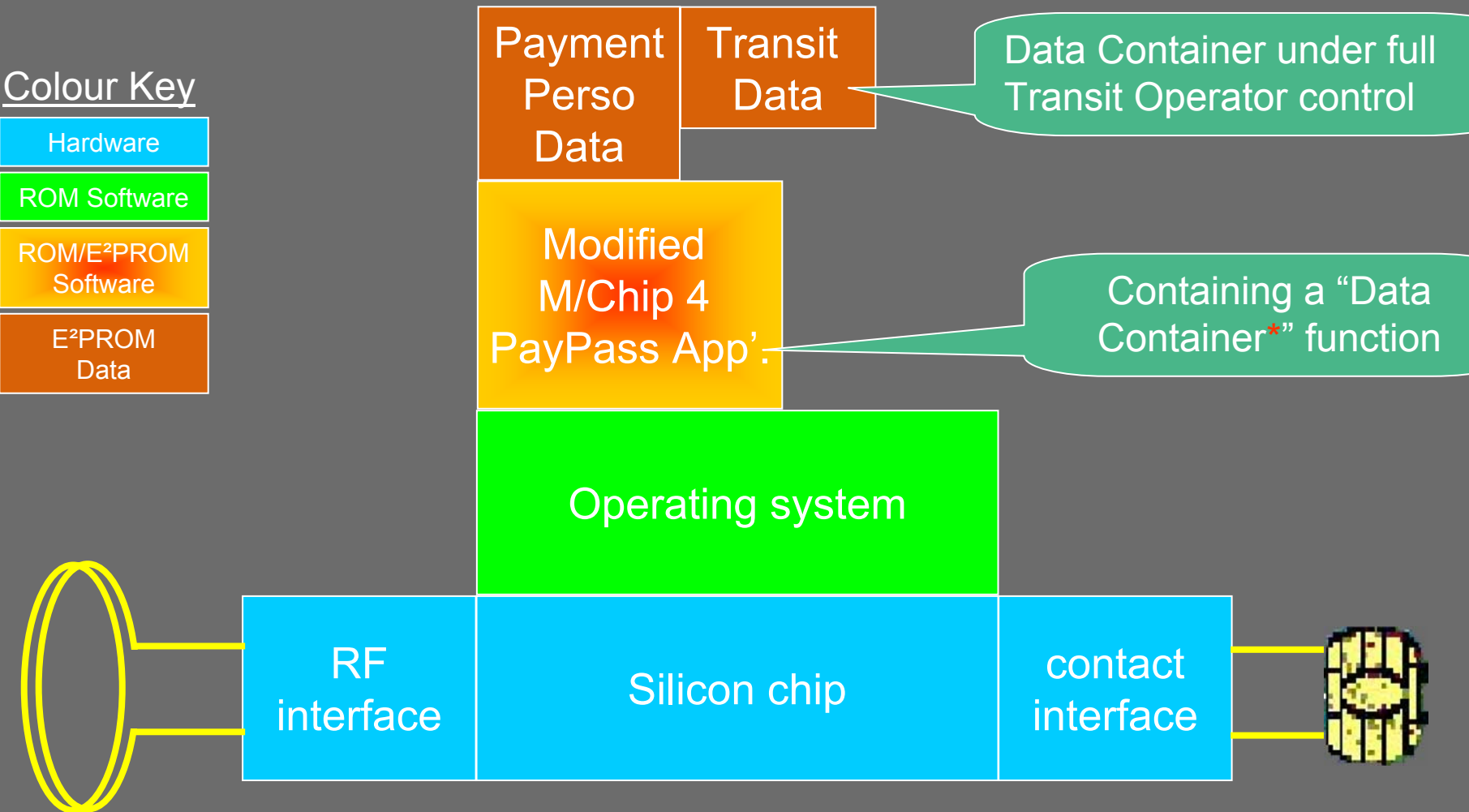
# Taiwan Combined configuration

## Colour Key

Hardware
ROM Software
ROM/E <sup>2</sup> PROM Software
E <sup>2</sup> PROM Data



# Leading to *Pay*pass for Transit



\* MasterCard Open Data Storage feature

# Advantages of *Pay*pass for Transit

- Banks are long time card issuers
- *Pay*pass is the world leading contactless payment solution
- *Pay*pass is based on Transit operators-defined **ISO 14443** contactless communication standard
- Relies on **EMV**, world standard for payment applications (availability of low cost EMV cards & equipment)
- Gives full control of Transit application to operator, who can choose his Transit application (no recognised world standard yet)
- “**Single ticket**” has a seamless **GLOBAL** solution

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# A way forward?

# Openings brought forward by *Pay*pass for Transit

- Transit operators would **no longer depend** on suppliers' proprietary solutions
- Transit operators could externalize card issuing / **distribution**
- Validators would need to accept *Pay*pass, thus the internationally-recognised **EMV payment standard**
- Transit operators do need to work towards an internationally-recognised **Transit Application Standard**

**Thank you for your attention.**

