



# Digital Migration in ASEAN

## Case study and recommendations

*Manila, 21<sup>st</sup> August 2017*

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# About the GSMA



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# The Digital Dividend – a Great Opportunity

AS TELEVISION BROADCASTING MOVES TO DIGITAL,  
MORE CAN BE DONE WITH LESS SPECTRUM

Unique opportunity to transition significant spectrum to mobile

Ideal for rural coverage and penetration into buildings

ITU 2015 deadline for switching off analog broadcasting has passed

470 MHz

Digital Broadcasting

694 MHz or 698 MHz

Mobile

803 MHz or 862 MHz

13th ASEAN Telmin meeting (Singapore, 2013):

- Harmonization of the 700MHz frequency band;
- Acceleration of the shift from analog to digital television broadcast;

[http://www.asean.org/storage/images/Statement/2013/04%20--%20final\\_telmin-13-jms%20\\_151113.pdf](http://www.asean.org/storage/images/Statement/2013/04%20--%20final_telmin-13-jms%20_151113.pdf)



## Digital Dividend in Asia-Pacific

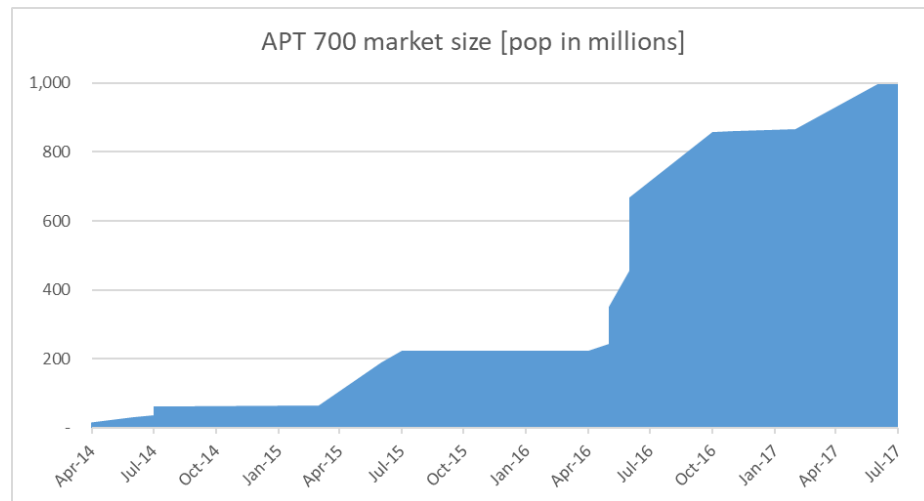
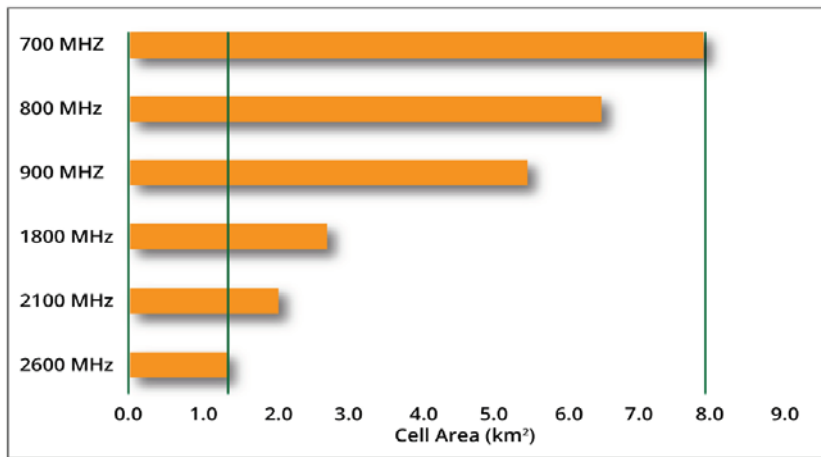
- **Harmonisation** – Adoption of the APT700 band plan across the region and beyond will contribute to equipment compatibility and economies of scale
- **4G and 5G** – 700 MHz provides desirable propagation and penetration characteristics for ongoing and future LTE and 5G deployments
- **Economic benefits** – Expanded mobile broadband coverage will improve overall economic productivity
- **Social benefits** – Improved broadband availability will narrow the digital gap between cities and rural areas, and improve education and health services





# Bringing Down the Cost of Mobile Broadband

Figure 1: Typical 3-sector LTE coverage areas in different frequency bands



Source: GSA - 700 & 800 MHz Ecosystem Evolution



# Digital Migration Process in Vietnam



## Context

- Digital TV trials began in 2001
- Digital migration plan approved in 2011, expecting to complete migration in 2020
- Currently midway through implementation period



## Goals

- Digital migration viewed as tool to improve quality and support economic, cultural and social development
- More efficient spectrum use, freeing spectrum for other uses
- Support new mobile services, including 4G, bringing significant benefits to consumers



# Policy Issues and Specific Targets

## Policy Considerations

- Transition timing
- Spectrum planning
- Technology choice
- Migration funding
- Social impacts
- Market structure

### Specific Targets in Vietnam's Digital Migration Plan

**2015**

- 80% household penetration of digital TVs
- 60% population coverage of DTTV channels
- uniform application of DTTV standards based on Digital Video Broadcasting-Terrestrial (DVB-T) and its later iterations
- uniform application of audio and video coding standards (MPEG-2 or MPEG-4).

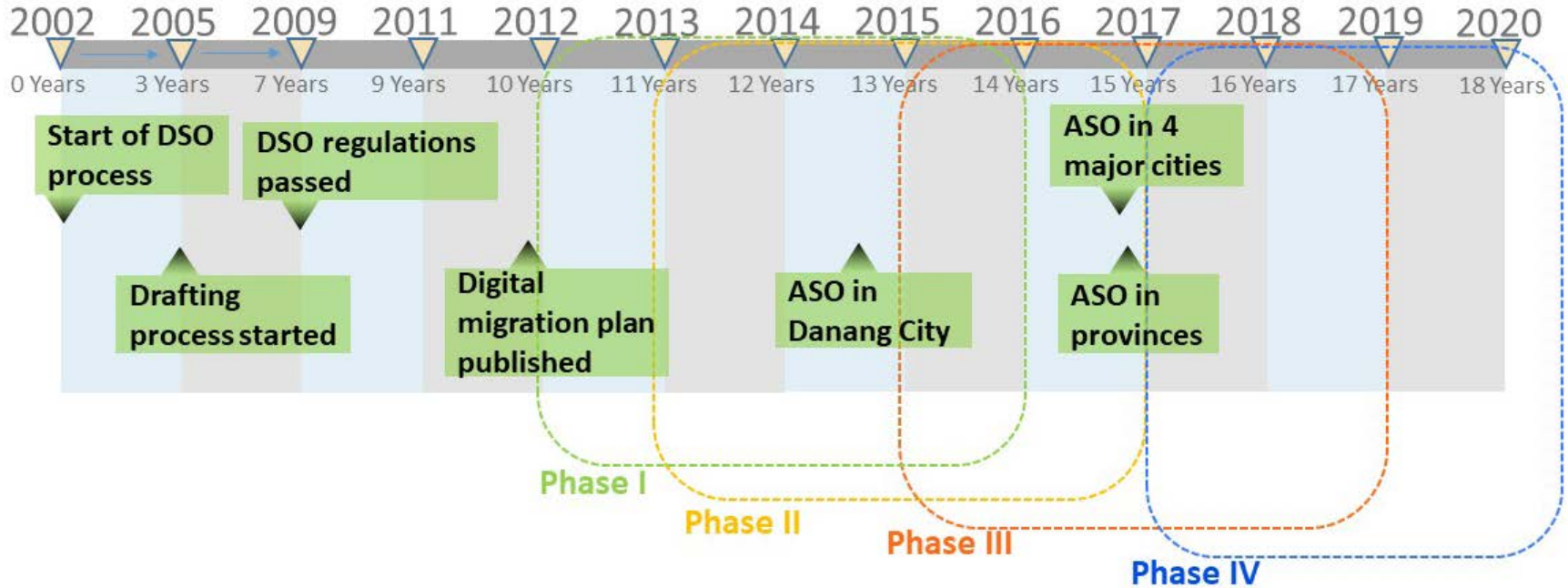
**2020**

- 100% household penetration of digital TVs
- 80% population coverage of DTTV channels
- uniform application of MPEG-4 audio and video coding beginning 1 January 2016

Source: Government of Vietnam



# Timeline



Source: Government of Vietnam

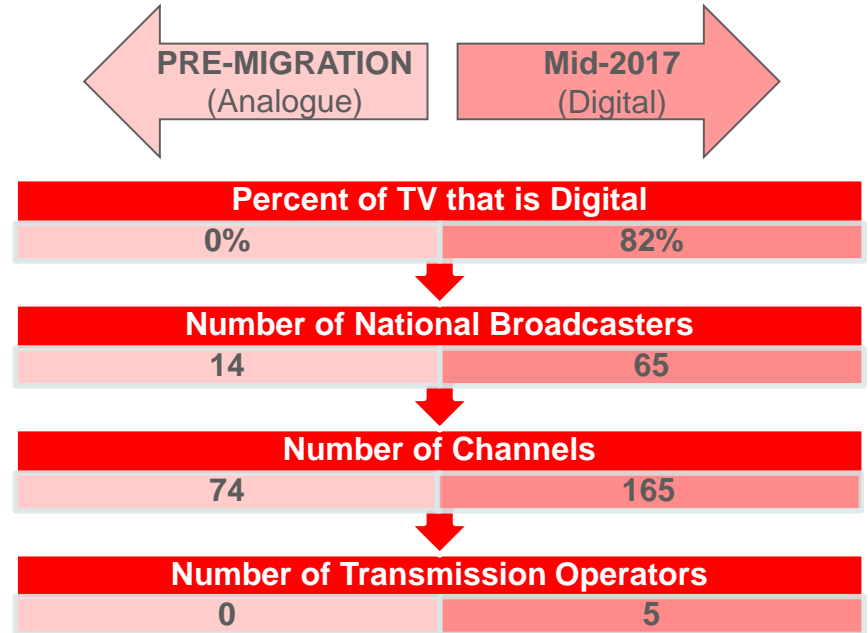




# Results in Vietnam's Broadcasting Market

## Vietnam's Migration Plan Goals:

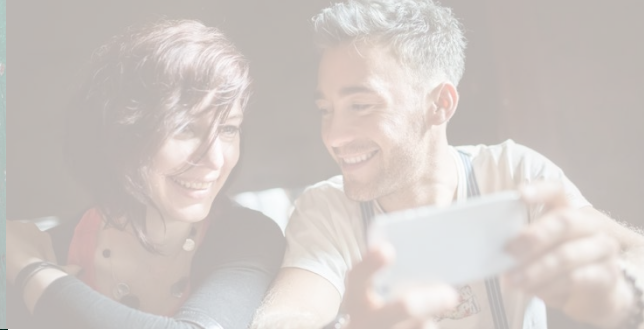
- Separate transmission and content ✓
- Establish 3 national transmission operators/broadcasters ✓
- Establish up to 5 regional transmission operators ✓
- Increase the number of channels available ✓



Source: Government of Vietnam



# Lessons from Vietnam



## Technology

Consider single-frequency network vs. multi-frequency network

Choice of widely used DVB-T2 standard



## Public awareness

Widespread public awareness responsible for digital migration success

Radio, TV, print, online, and support centres



## Subsidies

Subsidised set-top boxes via universal service fund



## Local government

Key to education/public awareness and subsidisation programmes





# Main Challenges and Recommendations

Category	Issues/Challenges	Approaches/Targets
<b>Migration Planning</b>	<ul style="list-style-type: none"><li>• Plan</li><li>• Technology</li><li>• Implementation</li></ul>	<ul style="list-style-type: none"><li>• Identify key priorities/goals</li><li>• Compare technologies</li><li>• Involve stakeholders</li></ul>
<b>Financing</b>	<ul style="list-style-type: none"><li>• Funding</li><li>• Subsidies/affordability</li></ul>	<ul style="list-style-type: none"><li>• Identify sources of funding</li><li>• Targeted government support</li></ul>
<b>Spectrum</b>	<ul style="list-style-type: none"><li>• Broadcasting band planning</li><li>• Digital channel restacking</li><li>• Digital dividend band planning</li></ul>	<ul style="list-style-type: none"><li>• Consider broadcasting band plan impact</li><li>• Regional harmonisation</li><li>• Arrange channels efficiently</li><li>• Maximise digital dividend</li></ul>
<b>Licensing</b>	<ul style="list-style-type: none"><li>• Transmission operators</li><li>• Broadcasters/content providers</li><li>• Digital dividend</li></ul>	<ul style="list-style-type: none"><li>• Consider award mechanisms</li><li>• Set market structure goals</li><li>• Determine digital dividend value</li><li>• Consider competitive safeguards</li></ul>
<b>Consumer awareness</b>	<ul style="list-style-type: none"><li>• Consumer awareness efforts</li></ul>	<ul style="list-style-type: none"><li>• Identify multiple approaches</li><li>• Support during transition</li></ul>

