



Practical Recommendations to Digital Migration in ASEAN

Vietnam case study and
regional comparisons

August 2017

Report written by
Telecommunications Management Group, Inc

Copyright © 2017 GSMA



The GSMA represents the interests of mobile operators worldwide, uniting nearly 800 operators with more than 300 companies in the broader mobile ecosystem, including handset and device makers, software companies, equipment providers and internet companies, as well as organisations in adjacent industry sectors. The GSMA also produces industry-leading events such as Mobile World Congress, Mobile World Congress Shanghai, Mobile World Congress Americas and the Mobile 360 Series of conferences.

For more information, please visit the GSMA corporate website at www.gsma.com

Follow the GSMA on Twitter: [@GSMA](https://twitter.com/GSMA)



TMG is a consulting firm that provides assistance to clients in the information and communication technologies (ICT) sector. Since its inception in 1992, TMG's talented and experienced staff has developed regulatory, legal, economic, and technical strategies to assist public and private entities around the world on ICT matters. TMG has established solid relationships with telecommunications regulators, relevant government ministries, and regional and international telecommunications entities worldwide, and has developed toolkits and other resources related to topics including broadband and connectivity strategies, the legal and institutional aspects of ICTs, and convergence.

For more information, please visit www.tmgtelecom.com

Contents

EXECUTIVE SUMMARY	2
Report overview	3
Key challenges and how to address them	4
Digital migration process in Vietnam and its relevance for ASEAN	6
Recommendations	8



Executive Summary

Digital migration is an enormous spectrum management undertaking in both scale and scope. It involves the transition from analogue to digital broadcasting, as well as the release of the digital dividend for new mobile services. It is a monumental change that impacts broadcasters, mobile operators, and, most importantly, end users of broadcast and broadband services. The digital migration affects not only the broadcasts viewed by households every day, but restructures markets and frees additional spectrum resources that can be redirected to uses providing greater value to consumers.



Report overview

This report presents practical recommendations for the Association of Southeast Asian Nations (ASEAN) members based on the lessons learned from undertaking digital migration processes in the Asia-Pacific region. Vietnam is highlighted as a strong example of a Southeast Asian country that is implementing a careful plan for this transition. Although Vietnam's digital migration is not scheduled to be completed until 2020—with the digital dividend to be licensed for mobile at some point after that—the country has made sufficient progress to identify certain key lessons.

Vietnam's digital migration experience is compared and contrasted against examples from other countries in the Asia-Pacific region, including ASEAN members Indonesia and Thailand. The three countries exhibit a mix of similarities in their approaches (e.g., choice of a phased migration plan) and some differences (e.g., the mechanism for awarding broadcasting licences).

A review of digital migration plans and progress in these countries is timely. The 700 MHz digital dividend will enable mobile broadband providers to improve coverage, with excellent propagation characteristics allowing coverage of a wide area with fewer base stations than in higher frequency bands, while its penetration characteristics also enable better in-building service. In 2013, the ASEAN Telecommunications and Information Technology Ministers Meeting highlighted the harmonisation of the 700 MHz band and the acceleration of the shift from analogue to digital television as two key areas for regional cooperation.¹ Most recently, Singapore identified the provisional winning bidders of its 700 MHz auction in May 2017.²

Lessons learned in Vietnam are identified in the report, accompanied by a checklist of relevant issues and questions to be addressed by governments planning their digital migrations.

1. ASEAN, "Joint Media Statement of the 13th ASEAN Telecommunications and IT Ministers Meeting (TELMIN) and its Related Meetings," (November 15, 2013), available at http://www.asean.org/uploads/2013/11/04%20--%20final_telmin-13-jms%20__151113.pdf.

2. Infocomm Media Development Authority (IMDA), "700 MHz Spectrum Rights (2016), 900 MHz Spectrum Rights (2016), 2.3 GHz Spectrum Rights (2016) and 2.5 GHz Spectrum Rights (2016) Auction ("2016 Spectrum Auction")," available at <https://www.imda.gov.sg/regulations-licensing-and-consultations/frameworks-and-policies/spectrum-management-and-coordination/spectrum-rights-auctions-and-assignment/700-mhz-spectrum-rights-900-mhz-spectrum-rights-2-3-ghz-spectrum-rights>

Key challenges and how to address them

While the digital dividend holds great promise for expanding and improving mobile broadband coverage, governments and regulators in ASEAN and beyond need to carefully and strategically plan for its use. To varying degrees, experiences in Vietnam, Thailand, Indonesia, Australia, and Japan demonstrate the challenges that policymakers face when preparing for the digital migration and releasing the digital dividend for mobile broadband use. These challenges typically include the following four key issues:



Digital migration planning: A key prerequisite for access to the digital dividend for mobile broadband is a clear and well-planned digital television migration plan. As seen in Indonesia, for example, the uncertainty surrounding migration means that the digital dividend access timeline is also unclear.



Digital migration implementation: Even a carefully considered plan can encounter unexpected obstacles or delays, such as the delays witnessed in Vietnam and Indonesia (described in Section 3.4.2).



Stakeholder buy-in: Any technology migration or spectrum refarming initiative has its greatest chance of success if the majority of stakeholders support the proposed plan. Vietnam, for example, established a steering committee composed of multiple stakeholders to develop the migration plan.



Appropriate assignment mechanisms: Regulators are responsible for developing a digital dividend assignment mechanism – including pricing – that is well-suited to the market and stakeholders, typically through an auction due to the high value of the digital dividend spectrum. In the case of Australia, for example, the first 700 MHz auction did not garner substantial interest, which was likely caused by a high reserve price.

However, governments can take proactive steps to minimise the impact of such challenges.



Consultation with stakeholders is an important tool that can be used to address multiple challenges, including the development of achievable digital migration plans and increased stakeholder buy-in, with such feedback improving the chances of success for the sector.



More generally, **transparency** with respect to development of policies and regulatory instruments helps to ensure that policymakers and regulators are accountable and not discriminating in favour or against any particular groups or parties.



In addition, **studying and learning from other countries** that have already executed their plans to free up the digital dividend can help countries in earlier stages of the process, such as identifying the best order of events or milestones, avoiding common obstacles, and understanding the benefits and drawbacks of different approaches to various issues.



Finally, it is important to **balance government policy and overarching goals with market situations**. The release of digital dividend spectrum has the potential to significantly impact the mobile sector in ASEAN nations. As such, policymakers should carefully consider expected spectrum demand, the likely impacts of releasing new spectrum, and appropriate rules for spectrum pricing.



Digital migration process in Vietnam and its relevance for ASEAN

Vietnam's digital migration process largely exemplifies how other ASEAN members can plan and carry out their respective migration processes. Comparisons with Indonesia, Thailand, Australia, and Japan illustrate similarities and differences in approaches to key aspects of the process.

In Vietnam, as in other countries, the digital migration process includes several core components:

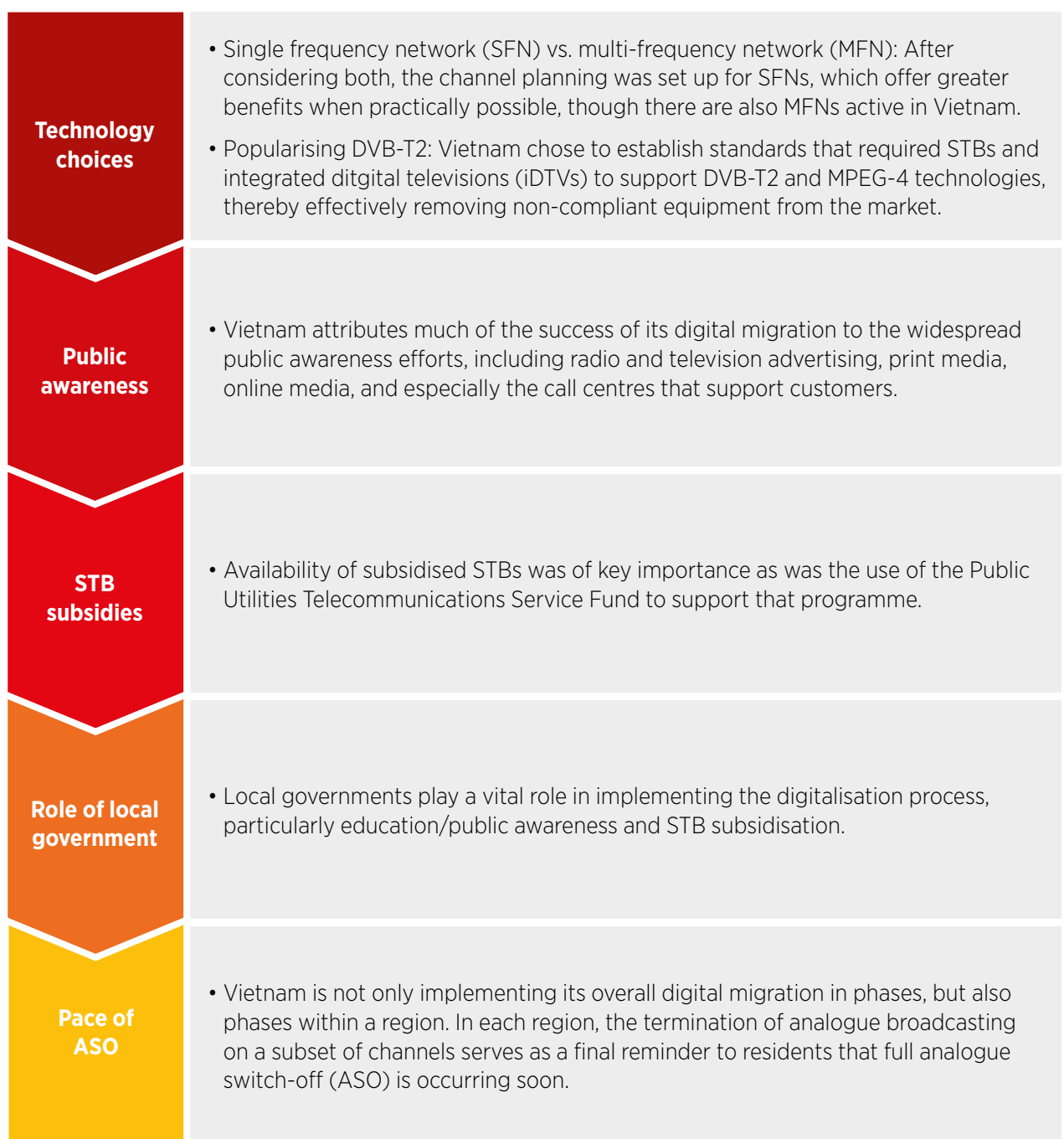
- **Digital switchover and digital dividend planning**, including consideration of the appropriate transition model, desired market structure, migration timing, and use of the digital dividend. The plan should enable efficiency improvements that result from a reduction in the number of transmission towers, all using less spectrum than analogue equivalents.
- **Digital television network decisions**, such as technology choice, human capacity building, coordination with neighbouring countries, and how to fund the transition.
- **Consumer awareness and support**, including educating consumers about the impact of the transition, assisting viewers during the transition, and ensuring availability of digital television reception equipment.
- **Plan implementation**, in which the government, broadcasters, and other stakeholders execute the plan and address challenges that arise. In a phased plan, stakeholders can apply lessons learned in early phases to improve later phases.

Several lessons applicable to other ASEAN members can be learned from Vietnam's digital migration process, ranging from technology choice to migration implementation to public awareness.

Figure 1

Source: GSMA

Lessons learned so far in Vietnam's digital migration



Each of the lessons identified has played an important role in improving Vietnam's digital migration process, and avoiding potential problems.

Recommendations

As discussed in this report, key recommendations can be drawn from the digital migration experiences of Vietnam, Indonesia, Thailand, Australia, and Japan. These recommendations highlight crucial points to address in forming and executing both digital migration plans and digital dividend plans. The recommendations are followed by a checklist highlighting potential approaches to address these key issues.

- **Recommendation 1: Develop a comprehensive migration plan.** Migration plans should include a combination of overall policy goals and priorities, technology guidance, and an implementation strategy and schedule. The plan should incorporate relevant stakeholders and their roles, consumer awareness plans, and consideration of regional or global harmonisation.
- **Recommendation 2: Address key costs and identify funding sources.** Digital migration plans should take into account costs of the transition, as well as consider available funding resources and the best uses for them.
- **Recommendation 3: Outline a clear spectrum usage plan.** The digital migration plan should have a clear vision of spectrum arrangements both during and after the migration period. The plan should consider the spectrum to be

used for DTTV, harmonisation and coordination, the channel restacking plan, and the size and arrangement of the digital dividend. The digital dividend plan provides an important input to mobile operators planning for expansion of mobile broadband coverage and services.

- **Recommendation 4: Plan for licensing of operators, broadcasters, and digital dividend users.** The digital migration process should include a clear, workable licensing framework for the various types of service providers, including transmitters of DTTV signals, content aggregators and producers, and users of digital dividend spectrum. The specific licensing model for DTTV may need to consider the existing legal framework, existing licence obligations, and market structure goals. Governments should carefully determine appropriate values for digital dividend spectrum, as well as develop suitable competitive safeguards and licensing mechanisms.
- **Recommendation 5: Ensure consumer awareness.** Governments should ensure that appropriate consumer awareness and education programmes are implemented in order to minimise the disruption to consumer viewing habits.



[gsma.com](https://www.gsma.com)



GSMA HEAD OFFICE

Floor 2
The Walbrook Building
25 Walbrook
London EC4N 8AF
United Kingdom
Tel: +44 (0)20 7356 0600
Fax: +44 (0)20 7356 0601

