



CONSOLIDATED NOTES FROM
TRANSPORT INFRASTRUCTURE BUSINESS DIALOGUE: ADVANCING
TRANSPORT INFRASTRUCTURE DEVELOPMENT IN ASEAN

24TH ASEAN Transport Ministers Meeting

1230 – 1400h November 8, 2018

Venue: Myanmar Room, Shangri-La Hotel, Bangkok, Thailand

Welcome and Opening Remarks

1230-1240h	<p>U.S. Private Sector Opening Remarks</p> <ul style="list-style-type: none"> • Amb. Michael W. <u>Michalak</u>, Senior Vice President and Regional Managing Director, US-ASEAN Business Council <ul style="list-style-type: none"> • Third consecutive business mission to the ASEAN Transport Ministers Meeting. For many years, the Council has had annual engagements with the ASEAN Finance Ministers, ASEAN Economic (Trade) Ministers, ASEAN Energy Ministers, ASEAN Agriculture and Forestry Ministers; so receiving an invitation/approval to participate this year is a testament to the Council's good relationship with the ASEAN Secretariat and ten ASEAN member states. • Strong delegation of six companies: 3M, Autodesk, Bechtel, Caterpillar, FedEx, and UPS • We applaud the work of the ASEAN Transport Ministers in advancing important transport facilitation initiatives that are critical to realizing the ASEAN Economic Community. • The Council has 20+ members from a broad range of industries that all depend on transport connectivity to do what they do, and all the work ASEAN is doing is critical in supporting this. • For instance, signing of the ASEAN Framework Agreement on the Facilitation of Cross-Border Transport of Passengers by Road Vehicles (CBTP) to facilitate cross-border mobility of passengers will help enhance tourism, one of the main economic growth drivers in the region. • In terms of movement of goods, we are pleased to see progress on the ASEAN Customs Transit System pilots in both the North-South and East-West corridors. As you know, seamless movement of goods is critical to many industries in the region and will go a long way to helping ASEAN double intra-ASEAN trade between 2017 and 2025, and reduce trade transaction costs in the AEC by 10% by 2020. 	Amb. Michael W. <u>Michalak</u>
	Opening Remarks by Chair of 24 th ASEAN Transport Ministers Meeting, His Excellency, Minister Arkhom Termpittayapaisith, Minister of Transport, Thailand	Minister Arkhom Termpittayapaisith
	Dialogue Introductions	All Attendees

Session 1: Exclusive Briefing by US Private Sector: Advancing Transport Infrastructure Safety for the 21st Century

1240-1300h

RECENT ROAD AND RAILWAY INCIDENTS IN ASEAN, TRENDS AND PREDICTIONS OF SAFETY CHALLENGES IN NEXT 12 MONTHS *(PLEASE SEE ATTACHED POSITION PAPER)

Moderator: Amb. Michael W. Michalak

- ASEAN transport ministers are on right track in recognizing safety as a major issue and challenge in the transportation sectors
- Safety should be addressed holistically in all phases of infrastructure projects from planning, design, construction, turnover, operations and maintenance – U.S. companies can help in all phases
- Council has prepared a position paper which specifically outlines how U.S. companies can support ASEAN governments to elevate safety in road transport and railway infrastructure projects through sharing of knowledge, expertise and best practices. This first session today highlights some of these recommendations.

Overview:

- **Jannik B. Termansen, Regional Head of Asia Government Affairs & Market, 3M; Vice Chair of US-ASEAN Business Council Infrastructure Committee**
- Safety is critical component of larger road & rail infrastructure projects. Improving Safety in infrastructure projects can help save lives, sustain positive GDP growth, and enhance “bankability” of infrastructure projects in the eyes of MDBs and other financiers.
- We commend the ASEAN Governments for having identified clear road safety targets and putting in place practical measures that can help improve Safety in road & rail projects and bring down the number of accidents and fatalities.
- However, more needs to be done by all of us to really tackle the problem in ASEAN. If we work together on improving Safety in larger infrastructure projects, everybody stands to gain
- Let us briefly point to a few facts:
- First, the number of fatalities in ASEAN in 2011 was estimated to be 75,000, in addition to other severe injuries and accidents (Source: ASEAN Secretariat: ASEAN Regional Road Safety Strategy, 2016). Although this number may have declined in recent years, it is still at a very high level that would need to be brought down.
- Second, an OECD study from 2008 shows that for every \$1 invested in targeted road safety projects, there can be a return of up to \$60 in terms of crash-related costs saved (Source: As quoted in Safe Roads for Development, World Bank Global Road Safety Facility). That implies that there is a rational business case, a Return of Investments, by doing more to save lives on the roads.
- Third, according to a very recent study by the World Bank Group from, there are significant estimated net benefits to GDP per capita income growth in reducing the number of road fatalities and accidents. The World Bank estimates that these net benefits can be in the range of 7-22% (Source: The High Toll of Traffic Injuries: Unacceptable and Preventable,

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	<p>World Bank Group, 2017). Conversely, if nothing is done to remedy the current situation, this range can also be seen as the cost to societies of inaction.</p> <ul style="list-style-type: none"> • If we can find ways of working even closer together on improving Safety in larger infrastructure, road & rail projects, everybody stands to gain. Private and Public partnerships in different shapes will be required. • US companies stand ready to assist. Collectively, US companies are keen to share our best practice and experience from other countries, regions, and industry sectors. We are keen to identify specific areas of collaboration with ASEAN and ASEAN Ministries of Transport that can bring about a step change and programs of unique public value. We have outlined potential areas of collaboration in the US-ABC Position Paper. We are keen to discuss these and other proposals for how industry and governments can best collaborate on tackling some of these challenges that affect us all • We are keen to further develop our collaboration with ASEAN institutions and ASEAN Ministries of Transport – individually and collectively. • To give a practical example of how such collaboration could look like for a project aimed at increasing public awareness of Road Safety, 3M has decided to sponsor a Road Safety Awards program solely led by ASEAN Road Safety Center (ARSC/MIROS) • This program is just one out of potentially many other types of Public-Private Partnerships and collaboration. • Other potential areas of collaboration could be within: Capacity building, Harmonization of Standards, Rules & Legislation (e.g. through best practice sharing workshops), and Knowledge Development (e.g. sharing of Macro-Economic Modelling Tools to help calculate societal net benefits of Road Safety investments and costs of inaction & technology demonstration programs). • In the following section, more U.S. companies will be sharing with you their sectoral insights, views, and specific proposals. • We look forward to a fruitful and productive discussion – and hope, by the end of our session today, that we can jointly identify a few specific areas that we together can start work on. <p>Sectoral Insights:</p> <ul style="list-style-type: none"> • Rail - Jeffrey Hardee, Executive Director Asia Pacific Government & Corporate Affairs, and Singapore Country Manager • The US-ABC position paper highlighted several ways US companies can help improve safety in rail projects and operations. These include using technology and change management to monitor and mitigate against operator fatigue and distraction; collecting and analyzing big data to improve operational efficiency of locomotives and detect potential catastrophic failures before they occur; offering safety solutions through innovative use of material science; and sharing regulatory best practices for rail operations and construction. • Caterpillar, through its Progress Rail division and iconic Electro-Motive Diesel (EMD) brand, has a long history in ASEAN. Progress Rail provides rolling stock, including 	
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	<p>locomotives and transit and freight cars, and infrastructure, including tracks and signaling.</p> <ul style="list-style-type: none"> • Progress Rail is committed to enhancing the safety, efficiency and productivity of rail operations through both supply of our latest products, services and technology as well as training and development of maintenance and operations of personnel in ASEAN countries. • An example of our safety products is a Driver Fatigue and Distraction Monitoring System. It has demonstrated the potential to reduce fatigue and distraction events by up to 80 percent, thereby enabling safer and more reliable service. • Another example is Machine Vision software, which can detect actual or potential track buckling from thermal misalignment and, with real time monitoring, can slow the train to prevent derailment. • Progress Rail works in partnership with local players in the rail industry in ASEAN and continue to seek further opportunities to work collaboratively to grow the rail business and improve safety. Caterpillar also has a safety consultancy that provides safety services. <ul style="list-style-type: none"> • Perspectives from Engineering, Procurement, and Construction (EPC) -Michael Patterson, Infrastructure Marketing & Business Development Manager, Bechtel <ol style="list-style-type: none"> a. Safety is critical in the early planning, engineering and construction (EPC) phases of any road/rail infrastructure project. Improved safety in the planning and implementation phases delivers safer transportation networks and creates a positive legacy with the public and users. b. Bechtel has extensive experience in safety management around the world in all its business sectors; Infrastructure (Road, Rail, Aviation, Ports and Power), Oil & Gas, Mining & Metals and NS&E (Nuclear, Security and Environment). In our experience safety processes and performance in the transport sectors substantially lags other sectors, especially Oil & Gas and Nuclear where there is already a path to follow. c. Some Bechtel best practices and lessons learned in safety include; <ul style="list-style-type: none"> ○ Safety, for improvement, needs to be embraced as a core value and reinforced from the top of any organization ○ It has been demonstrated that good safety programs and processes also lead to improved quality and efficiency (cost and schedule) ○ Key elements of Bechtel’s safety programs include behavioral-based safety processes, core safe work procedures and safety absolute rules – we apply these across all projects and all contractors ○ Our safety programs work effectively in all countries, with only minor to moderate adjustments for language and culture d. Recommendations – “turn up the volume on safety”; <ul style="list-style-type: none"> ○ Recognize safety, and the cost of good safety programs, as a strategic investment with huge social and economic returns, compared with the cost of recoveries and reputational repairs with poor safety performance 	
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	<ul style="list-style-type: none"> ○ Make safety a key buying factor and evaluation criteria in selecting contractors – not just a “pass/fail” assessment in bid requests ○ Glean best practices and lessons learned in safety from other regions and sectors like O&G ○ Harmonize the best core safety processes and procedures and apply them consistently across all projects and with all contactors ○ Rigorously and consistently capture safety metrics (leading and lagging) across all projects - benchmark the performance aiming for steady improvement <ul style="list-style-type: none"> ● Safety by Design- Daniel Green, Head of APAC Government Affairs, Autodesk <ol style="list-style-type: none"> a. Global/Regional/Local Best Practices can be incorporated into road and rail design from the very beginning of the design process. The data captured can be used throughout the entire project life cycle. b. Virtual Reality and Augmented Reality allow for “Seeing Before Building” to eliminate mistakes, reduce change-orders and reduce waste to deliver projects under budget, as promised and faster. c. Properly Designed and Presented infrastructure projects have enhanced “bankability” in the eyes of the MDB’s, Private Equity and Pension Funds per the World Bank meeting in Bali last month. 	
	<p>Open discussion:</p> <ul style="list-style-type: none"> ● Comments from ASEAN ministers and other private sector participants 	All

Session 2: Contemporary Issues for Transport Infrastructure Development		
1300-1320h	<p>ISSUE I: Access to Infrastructure Projects</p> <p>Moderator: Amb. Michael W. <u>Michalak</u></p> <p>Rapid urbanization and increased mobility have raised demand for transport infrastructure and more efficient networks. The availability of such infrastructure opportunities raises the question of whether the tender process are matched with suitable and quality infrastructure bidders.</p> <p><i>Guiding Questions</i></p> <ul style="list-style-type: none"> - <i>Life Cycle Cost Analysis</i> - <i>Alternative Delivery Approach</i> - <i>How can private sector play more of a role to collaborate with government to address gaps in the government procurement process?</i> 	
	<p>Introduction:</p> <ul style="list-style-type: none"> ● Jeffrey Hardee, Executive Director Asia Pacific Government & Corporate Affairs, and Singapore Country Manager, Caterpillar; Chair of US-ASEAN Business Council Infrastructure Committee 	Caterpillar

- There is a tremendous need for transportation infrastructure investment in ASEAN and indeed globally. The ASEAN Investment Report 2015 on Infrastructure Investment and Connectivity looked at the needs through 2025.
- Given the current spending by ASEAN Member States, it is clear the infrastructure investment gap is large and resources need to be found if the gap is to be filled and future demand is to be met.
- US-ABC recognizes that ASEAN governments alone cannot deliver the enormous resources needed, and that the engagement of private sector infrastructure firms and investors is necessary.
- Projects need to be structured to encourage private sector participation and also to achieve outcomes so they are completed on time and within budget, are of high quality to ensure safety and longevity, and meet environmental considerations.
- However, there are various constraints within the overall ecosystem for infrastructure project development and execution that may prevent these outcomes and the participation of highly qualified companies.
- We would like to address several areas where we see opportunities for ASEAN governments to attract private sector participation and achieve high quality results.

Company Interventions:

- **Life Cycle Cost Analysis- Jeffrey Hardee, Executive Director Asia Pacific Government & Corporate Affairs, and Singapore Country Manager**
- The tendering process is very important and can have a major impact on the final project. Some ASEAN governments rely on least-cost procurement practices that may not have the desired outcome. It is not uncommon for least-cost procured projects to subsequently face unexpected operational, support, and maintenance costs that were not anticipated at the point of procurement, resulting in higher overall costs and delay in project execution and completion.
- The advancement of Life-Cycle Cost Assessment in procurement decision making criteria can accelerate adoption of highest and best technology solutions available.
- There can be immense financial and socio-economic benefits to the government in terms of cost savings in infrastructure projects through productivity and efficiency gains with the use of products and services that provide superior value and benefits through their extended life cycle.
- US-ABC recommends that governments consider the total cost of ownership when making procurement decisions, including the acquisition and operating costs over the life time of the equipment, as well as the net of resale proceeds at the end of the project.
- The ADB understands the merits of life-cycle costs. In July, ADB released Guidance Notes that elaborate on the provisions of new ADB procurement policy and regulations, including on taking into consideration life cycle costs and total cost of ownership. The document provides guidance on addressing value for money. (<https://www.adb.org/documents/guidance-notes-on-procurement>).

	<ul style="list-style-type: none"> • Alternative Delivery Approach- Michael Patterson, Infrastructure Marketing & Business Development Manager, Bechtel • <u>Context:</u> • Transport infrastructure projects are becoming larger and more complex while there are capacity limitations in some countries in the region; both on the owner side and the contractor side • Some projects are currently not financeable because they lack robust feasibility assessment, project baselining and/or implementation planning • Projects are often implemented independently or serially, even when part of a larger longer-term network or program (such as a metro rail network) • <u>Alternative Approaches for Consideration:</u> • Engage a strong capable and motivated PM with experienced personnel and established processes and procedures, rather than self-manage • Engage the PM early to ensure effective project baselining and implementation planning • Establish the right level of management depending on the scope, contracting complexity and contractor capabilities – PM level ranges from Control, to Monitor, to Observe • Ensure PM's core safety, quality, cost, schedule and risk management or oversight processes are applied across the project for greater surety of outcome • “Right-size” the subcontracting plan to suit expected market conditions – to reflect capacity, capability and appetite of contractors • Allow direct participation of local tier 2 companies, in addition to tier 1 companies, including assistance from PM to build future capability • Employ a Program Management approach to multiple similar projects or a series of projects to create additional value including lower overall cost, shorter schedule and reduced execution risks • The War Against Paper, Waste and Cash- Daniel Green, Head of APAC Government Affairs, Autodesk • Going digital is the first and most critical step in creating a design, build and operate ecosystem for infrastructure that eliminates paper (change orders), reduces waste (supply chain excellence) and allows for fintech developments to remove case from the system. • Building Information Modelling (BIM) is being rapidly adopted across ASEAN and APEC and is being considered by the World Bank, IDB and Private Equity leaders as a requirement in the lending term and conditions. • ASEAN Cooperation on Sustainable Transport-Fatimah Alsagoff, Public Affairs Lead, UPS • We applaud ASEAN's focus on sustainable transport in the ASEAN Transport Strategic Plan 2016-2025 (KLTSP), in particular the plans to develop a regional framework for green freight and logistics. • As industry this objective is important to us as well. One of the ways that we support this is through organizations like Green Freight Asia, which UPS is a founding member of. This is a 	
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1320-1345h	<p>non-profit, industry-led network that provides capacity-building on green freight measures such as eco-driving training, especially for many small business trucking companies in Asia. We also have a green certification program that recognizes companies' committed to reducing their carbon footprint.</p> <ul style="list-style-type: none"> We would love the opportunity to help ASEAN meet sustainability goals in the KLTSP. For instance, we would be happy to organize a capacity-building or sharing workshop on the sidelines of one the ASEAN Transport-related meetings next year. If welcome, we will coordinate with the ASEAN Secretariat on when to do this. 	
	<p>Open Discussion:</p> <ul style="list-style-type: none"> Comments from ASEAN Ministers and Senior Officials 	All
	<p>ISSUE II: THE WAY FORWARD – INTERNATIONAL AND PUBLIC-PRIVATE PARTNERSHIPS</p> <p>Moderator: Amb. Michael W. Michalak</p> <p><i>Guiding Questions</i></p> <ul style="list-style-type: none"> <i>Perspectives on U.S. Japan Infrastructure Cooperation</i> <i>China's Belt and Road Initiative</i> <i>U.S. Indo-Pacific Strategy</i> 	
	<p>Introduction</p> <ul style="list-style-type: none"> Jeffrey Hardee, Executive Director Asia Pacific Government & Corporate Affairs, and Singapore Country Manager, Caterpillar; Chair of US-ASEAN Business Council Infrastructure Committee ASEAN governments are fully funding some infrastructure projects while other projects may be funded in whole or in part by loans from the ADB, the World Bank, AIIB and private banks. China's Belt & Road Initiative launched several years ago is an ambitious undertaking to connect countries in Asia, Europe, Africa and even South America. ASEAN members have been the recipients of Chinese investment in the BRI. At present, the transport and logistics sector has the highest concentration of BRI investments and projects since 2013. The Chinese government has demonstrated that it wants to attract additional financing through third party public and private sources. US-ABC thinks it is important for B&R projects to be open to participation by all companies, including local companies in recipient countries. Last year, the United States and Japan announced a joint infrastructure initiative to support third countries to secure high quality infrastructure that meets sustainable social and economic goals. This initiative is meant to bring together the public and private sectors to work together. There is a lot of interest in ASEAN. On July 30, US Secretary of State Pompeo unveiled the US Indo-Pacific Strategy which calls for cooperation between the US, Japan, Australia and India with ASEAN as the key link to promote free, fair and reciprocal trade and investment in the region. Subsequently, the US Congress passed and President Trump signed The Build Act. This establishes the International Development Finance Corporation (IDFC), successor of the 	Caterpillar

	<p>Overseas Private Investment Corporation (OPIC), provides \$60B in funding and its mission is to facilitate “sustainable, broad-based economic growth, poverty reduction and development.” It is directed to follow high standards of transparency and environmental and social safeguards. IDFC will be able to take equity positions in investments. This provides opportunities for funding for infrastructure investment in the Indo-Pacific.</p> <ul style="list-style-type: none"> Given the different initiatives in the region, we would like to provide some perspectives on opportunities we see and get your views on opportunities you see for American companies to work with your governments on transportation infrastructure projects. <p>Company Interventions:</p> <ul style="list-style-type: none"> Infrastructure Financing in the context of China’s BRI (Bankability)- Daniel Green, Head of APAC Government Affairs, Autodesk Properly Designed and Presented infrastructure projects have enhanced “bankability” in the eyes of the MDB’s, Private Equity and Pension Funds per the World Bank meeting in Bali last month. Being able to share digital designs increases regional supply chain integration and management with unparalleled transparency. Building Information Modelling tools integrate seamlessly into the digital tools like SOURCE that the MDB’s are using to prepare infrastructure projects for review and funding consideration. Cooperating on Solutions for Urban Logistics- Fatimah Alsagoff, Public Affairs Lead, UPS Rapid urbanization and growth in the ASEAN region has given rise to vibrant and dynamic mega-cities. These cities have become important centers for commerce and even tourism. However, this growth has brought with it challenges due to population growth and crowding of the road systems. We know that resolving the issues of congestion and pollution remain top of mind for the ASEAN Transport Ministers. While much is already being done in the public transportation space, we believe that impact can be made in the freight transportation space as well. We would be very interested to host on the sidelines of any future working group meetings a workshop/seminar on alternative urban logistics delivery solutions that are being trialed around the world. We do recognize that solutions must always be tailored to the environment, but we believe that it would still be interesting for ASEAN to hear about these initiatives, such as mobile consolidation hubs in cities, walkers, and e-bike delivery. ASIAN Road Network- Ying Hui Tng, Government Affairs Advisor, Fedex Express FedEx Express, the express delivery part of our business. We have the world’s largest fleet of cargo aircraft, which we use to offer 1 to 3 days-time definite delivery almost anywhere in the world with a money-back guarantee. 	
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	<ul style="list-style-type: none"> • In 2016, we acquired TNT Express, which complements our global air network with a pan-Asian road express trucking service that extends from Singapore to Guangzhou, China, within 8 days. This service, ARN, combined with our network allows us to develop seamless air-road connectivity, a multi-modal express cargo service. It is cheaper than air, faster than sea. • ARN expands our service offerings and provides more options and flexibility to meet our customers' shipping needs. ARN offers more ways to integrate SMEs into global supply chains, with connectivity to 220 countries and territories worldwide. • We have 90 trailers travelling on the road spanning 7,000 KM, 6 countries, 125 cities and we make 100 scheduled departures weekly. This gives you an idea of the extent of our network in terms of infrastructure but also our increasing investments in ASEAN to meet the rapidly growing demand from customers in your countries for such a service. • Our continued investment in the region and abilities to serve our customers rely on a sound physical infrastructure of safe and secure roads. Just as important is the customs clearance process that allows goods to travel as quickly as possible across countries in the shortest route possible. This requires allowing transshipments without restrictive barriers. It also means bonded warehouses at the inland clearing depot, uncongested borders, a customs transit system, simplified customs clearance for low-value shipments. • Unlocking the potential of such a solution requires all ASEAN countries' support while working with Customs. Such a network is a step towards the objectives outline in the ASEAN Framework Agreement on the Facilitation of Goods in Transit, particularly to simplify and harmonize transport, trade and customs regulations and requirements for the purpose of facilitation of goods in transit; and to establish an effective, efficient, integrated and harmonized transit transport system in ASEAN. FedEx will continue to invest in ASEAN. We already employ more than 10,000 members in the region and we would be happy to have further discussions including both transport and customs officials on what good looks like for ASEAN. <p>Open discussion:</p> <p>Comments from ASEAN ministers and other private sector participants</p>	
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