

Real-time Tracking Service for ASEAN Transit Cargo

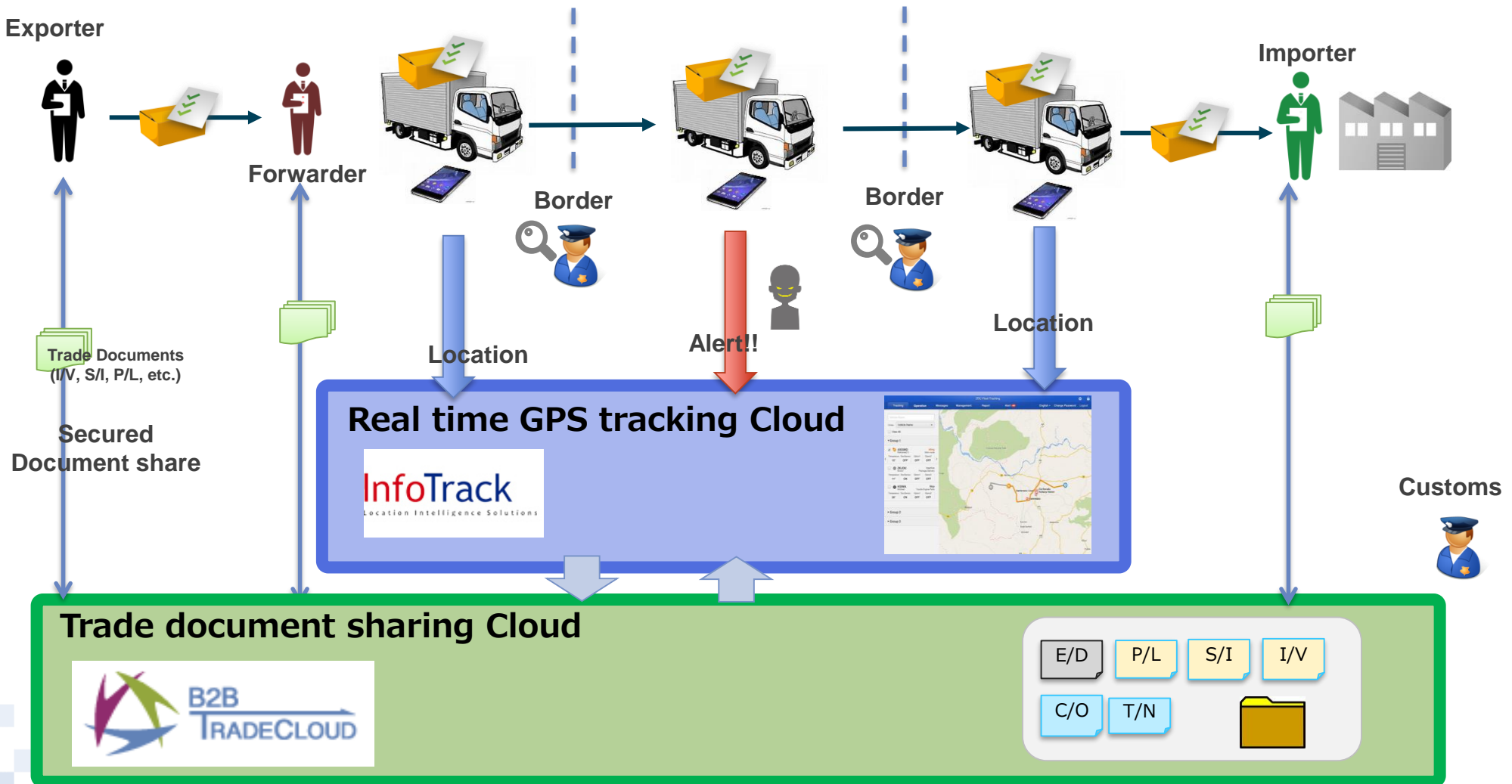
**Proof of Concept for
Business Improvement Cycles of Trade and Logistics in
ASEAN Region by Utilizing IoT and Measuring Accurate
Time of Transit Cargo**

30th ANNIVERSARY
50th

December, 2018
NTT DATA Corporation

Project: Trade Docs & GPS Tracking Cloud Service for Customs and Private Companies

We conducted Proof of Concept project with two cloud services.



Participants of Our Project

Government Organizations

- **General Department of Vietnam Customs**
- **The Thai Customs Department**
- **General Department of Customs and Excise of Cambodia**
- **Myanmar Customs Department**

Private Companies

- **LINTEC Corporation (ASEAN Subsidiaries of Japanese Manufacturer)**
- **Kamigumi Co., Ltd. (ASEAN Subsidiaries of Japanese Forwarder)**

Project Management

- **Infotrack Telematics Pvt. Ltd. (GPS Tracking Service based in Singapore)**
- **IC Net Limited**
- **NTT DATA Corporation**

Issues on cross-border logistics in ASEAN

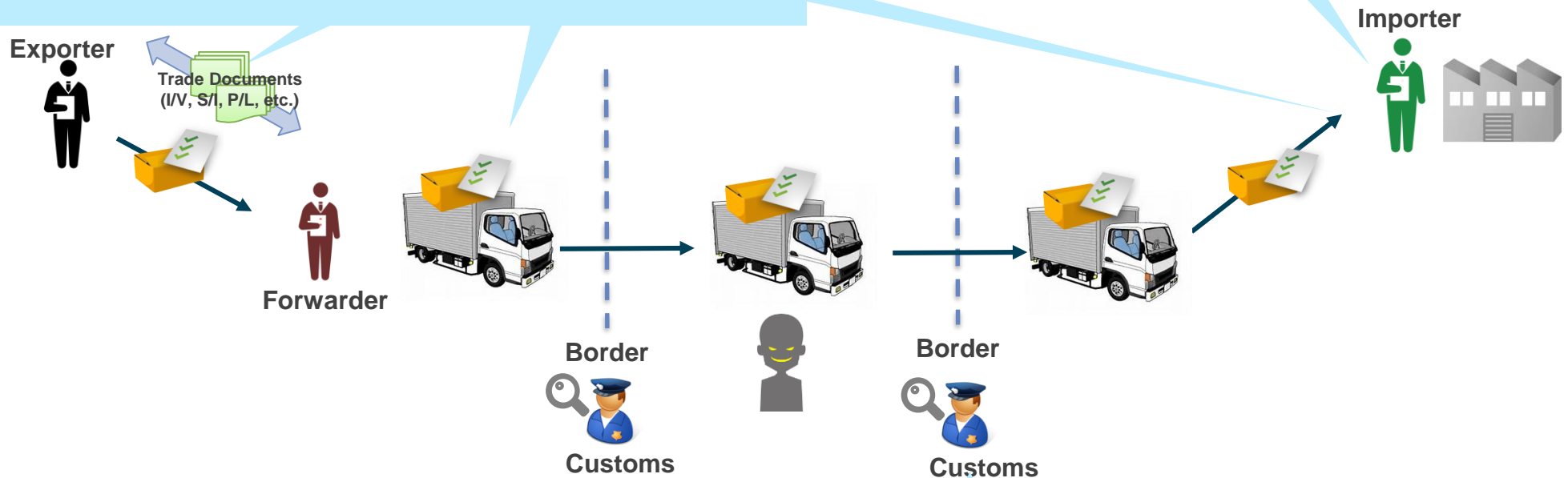
For regional smart logistics in ASEAN, we highlight 3 issues in cross-border transportation.

Issue 2 [Ineffective Trade Data Sharing]

- Too many emails to exchange trade docs
- Double work without reuse of data
- Non-automated document filing

Issue 1 [Lack of Cargo Location Visibility]

- Hard to know real time cargo location
- Hard to check ETA online



Issue 3 [Theft/Smuggling of Cargo]

Theft/Smuggling of cargo occurs together with data falsification in-between borders

Cargo Route (Bangkok – Ho Chi Minh City)

- LINTEC Corporation provides real cargo for this project
- Forwarder (Kamigumi) coordinated 3 countries' trucks and forwarders
- Transport cargo from Thailand to Vietnam through Cambodia
- We transported same goods 5 times between September and December for collecting accurate data and average duration.



Arranged 3 Driver and 3 Trucks for Each Transportation

Cambodia



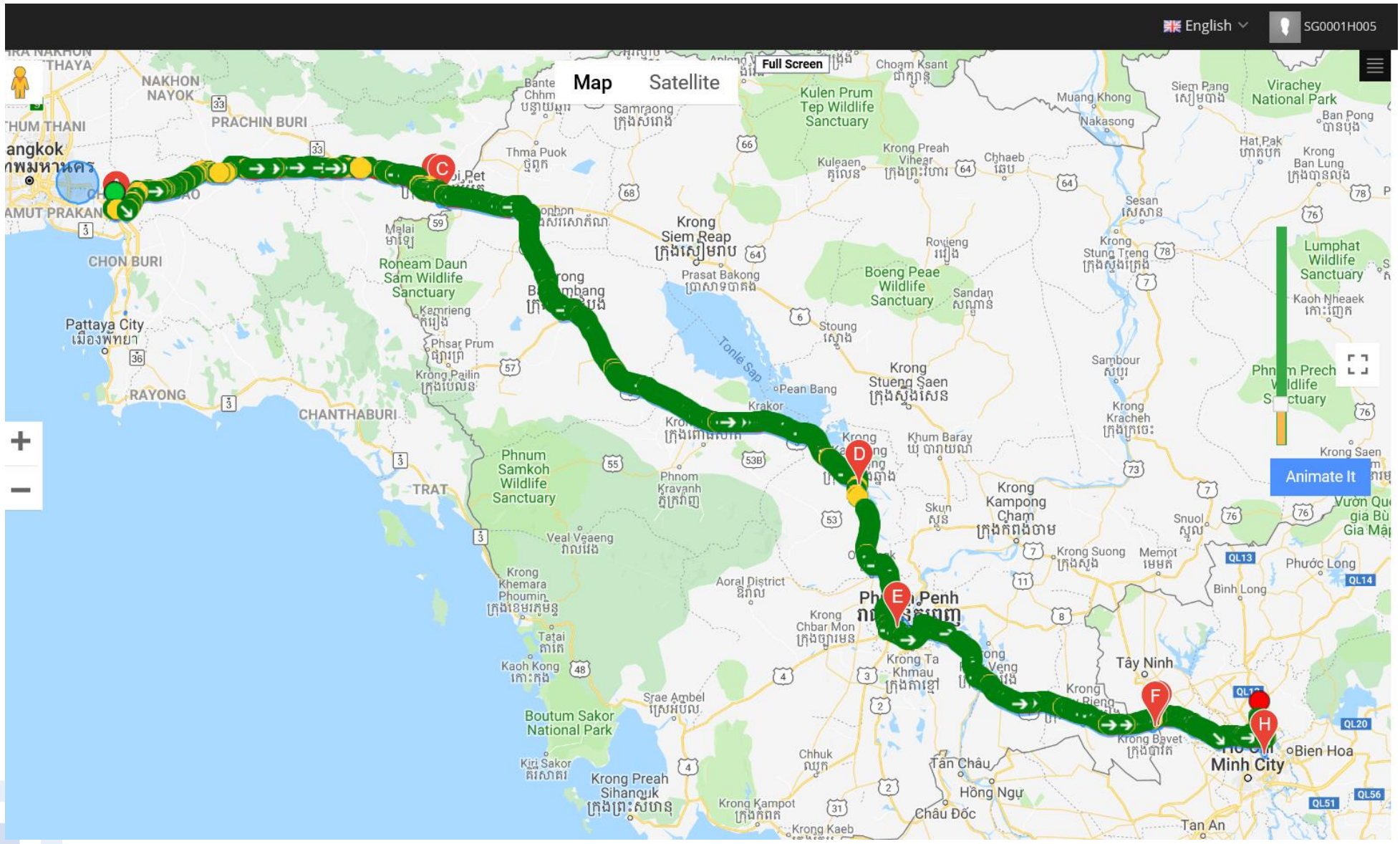
Vietnam



Thailand



GPS Tracking Results of 1st Transportation



Findings through the POC

Finding 1: Long queue for the exit gate from Thailand



- The queue for the exit gate from Thailand was around four km at the time of customs export permit, 10 a.m., in the weekend (Saturday)
- The completion of both process of exit from Thailand and entry into Cambodia is compulsory. Otherwise, truck is not allowed to queue. In case of breach, the driver is fined (1,000 Baht).
- Customs officer and Immigration officer separately examine customs and immigration documents and truck license number at the border gate (only one lane). Five minutes are needed per truck. Only 12 trucks can pass through the border.

Findings through the POC

Finding 2: Transshipment of container at dry port (border)

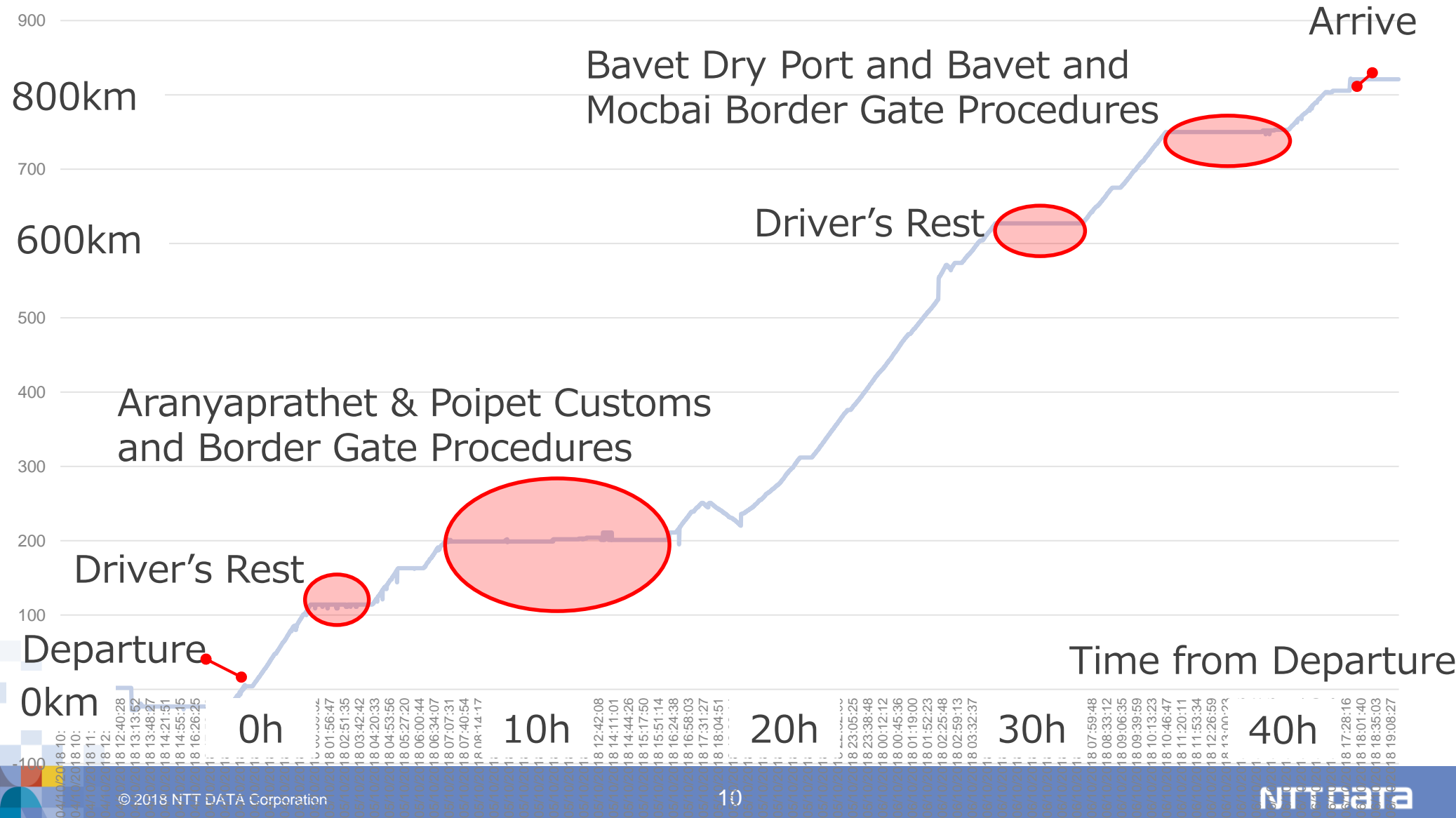


- Many transporting companies have not obtained cross border license, so-called truck passport or double license despite CBTA has been valid. Transporting companies need to transship containers at each border because one truck can not run through Thailand, Cambodia and Vietnam. Container must be transshipped at each border.
- Waiting time may be needed in case the other truck has not arrived before a truck arrives at a dry port (border). It is difficult to adjust the time of transshipment because a transporting company handles many cargoes/containers.
- Land transporting cost with transshipment is supposed to be higher than the one without transshipment because transshipment at each border is needed.

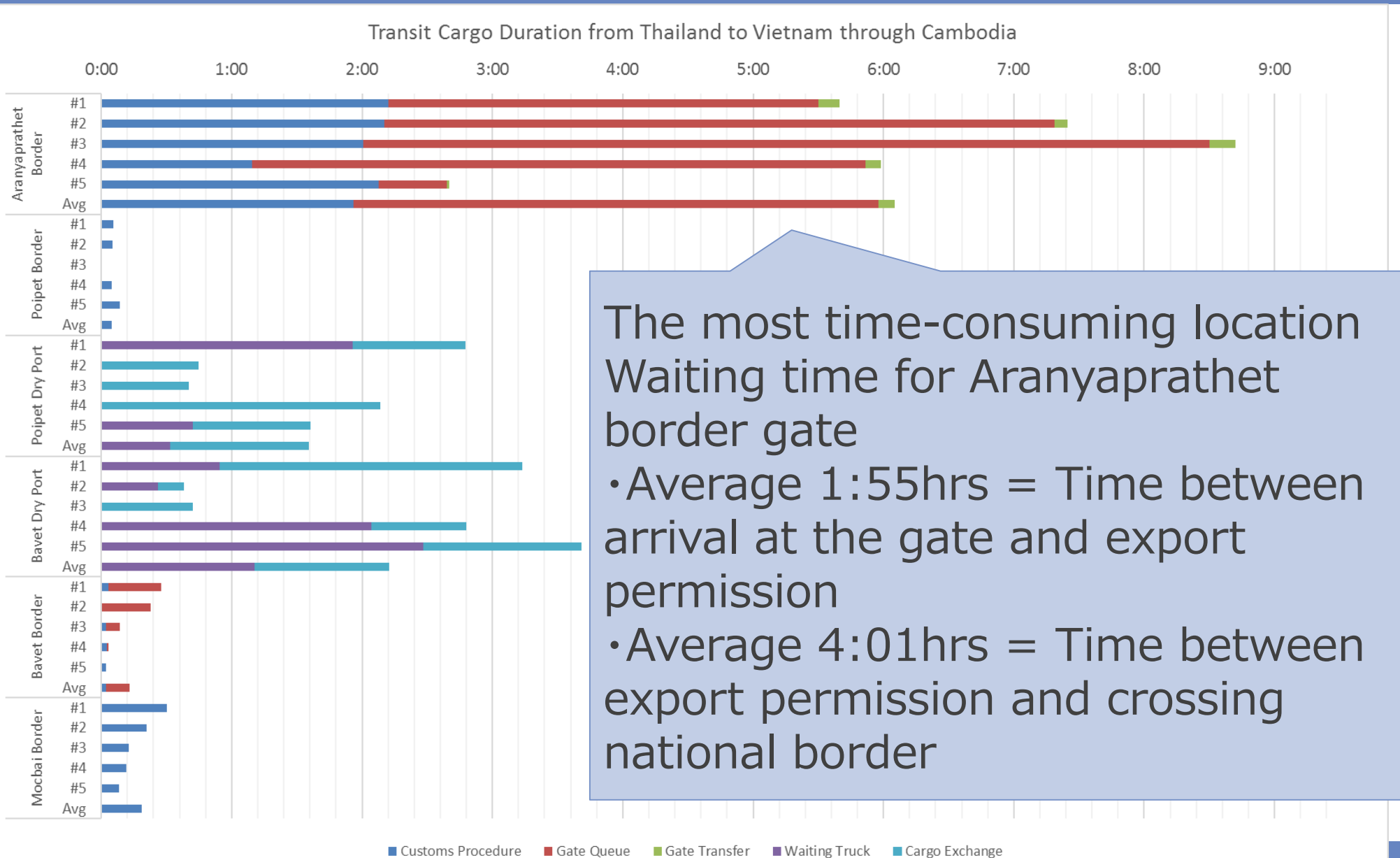
Time and distance data for the 1st shipment

Acquisition of data without any interference with the actual operation

Distance



Tracking data for 5 transportations



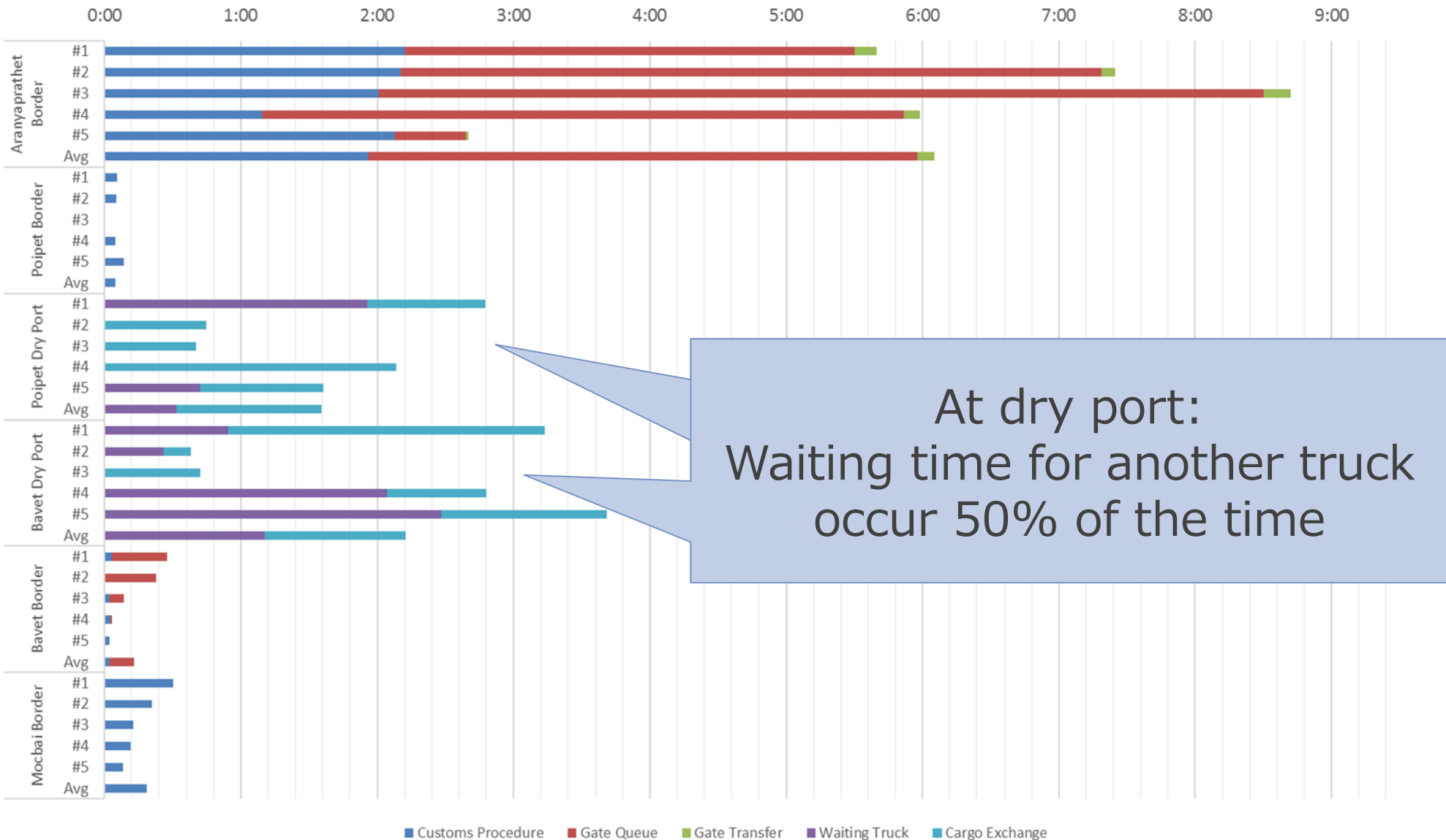
The most time-consuming location
Waiting time for Aranyaprathet border gate

- Average 1:55hrs = Time between arrival at the gate and export permission

- Average 4:01hrs = Time between export permission and crossing national border

Tracking data for 5 transportations

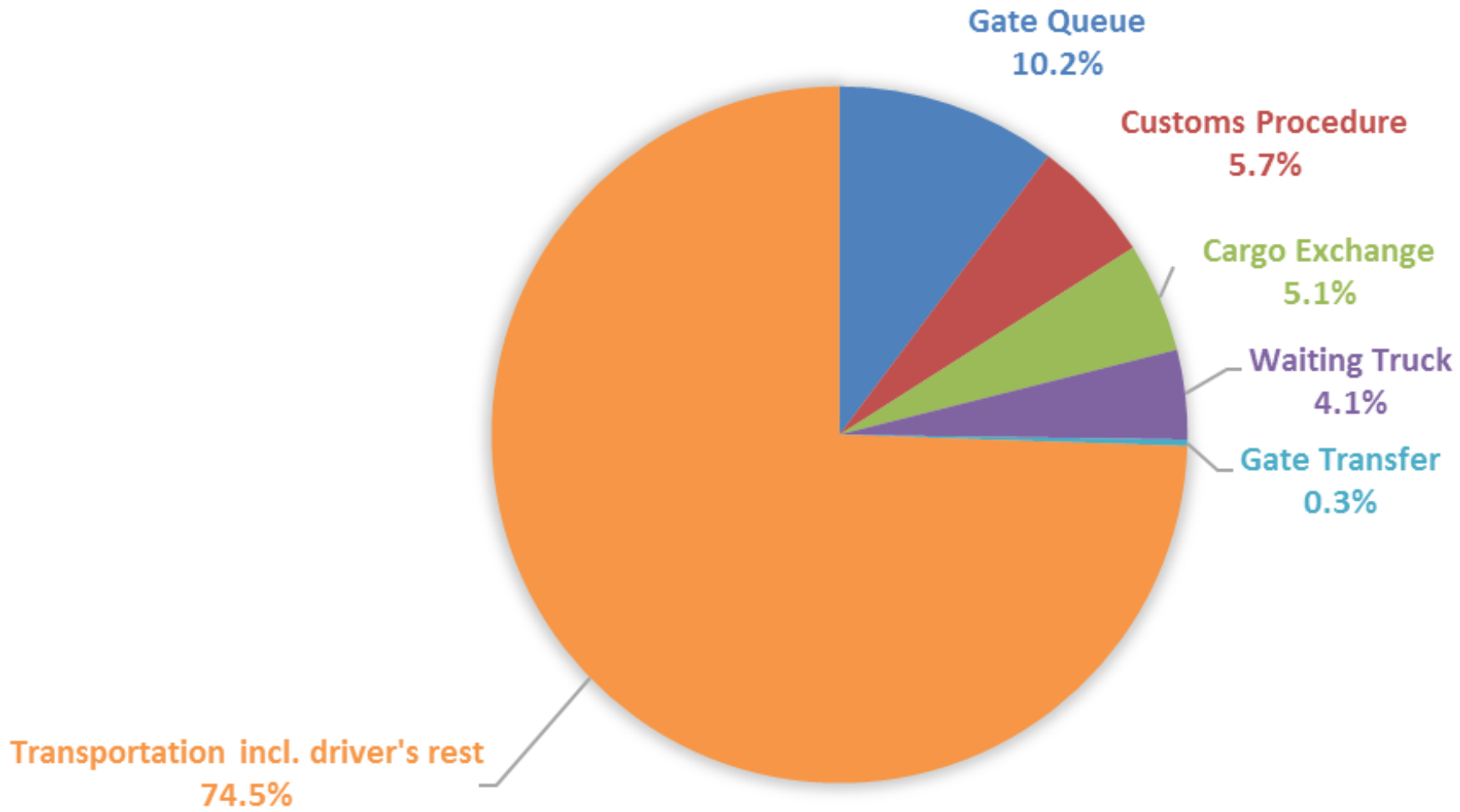
Transit Cargo Duration from Thailand to Vietnam through Cambodia



At dry port:
Waiting time for another truck
occur 50% of the time

Transit Cargo Transportation Time

1/4 of transportation time should be reduced to minimum for trade facilitation.



Findings through the POC

Finding 3: Many trade related documents are required.

Documents and procedures required for transport from Thailand to Vietnam through Cambodia

- Certificate of Origin: Apply prior to the departure of truck. Truck driver transports the original copy together with cargoes.
- Aranyaprathet customs house
 - ✓ Details of export is recorded on declaration book and declaration with supporting documents is submitted.
 - ✓ Permit at the customs house by paper.
 - ✓ The paper (permit) is examined by customs officer at the border checkpoint.
- Poipet customs station for transit declaration
 - ✓ Transit declaration is lodged through ASYCUDA in Poipet customs station
 - ✓ Documents are required in case the channel is yellow or red.
 - ✓ Transit permit at the customs station by paper
 - ✓ Entry procedure into Poipet dry port
 - ✓ Permit of bonded transportation to Bavet
- Bavet customs station for arrival declaration
 - ✓ Arrival declaration is lodged through ASYCUDA in Bavet customs station
 - ✓ Documents are required in case the channel is yellow or red. Container is scanned by large x-ray scanner.
 - ✓ Copy of transit permit is submitted to Bavet customs border checkpoint.
 - ✓ Copy of transit permit is submitted to Bavet customs head office.
 - ✓ Original of transit permit is returned to Poipet customs station on the other day.
- Moc Bai customs branch
 - ✓ Import declaration is lodged through VNACCS.
 - ✓ No document is required in case of green. Documents are required to present at the Moc Bai border customs checkpoint in case the channel is yellow or red. Cargo is inspected in case of red channel.
 - ✓ Verification of documents and cargo at Moc Bai customs checkpoint.
 - ✓ Permit ...etc.

- Many and duplicated trade related documents are required for cross border trade among three countries. The financial burden with regard to transport among three countries are big because waiting time at customs is needed without advance declaration.

Findings through the POC

Others

- Transit procedure for Cambodia customs
 - Large x-ray scan was not required because of transit cargo. Import cargoes are required to be inspected by the scanner.
- Estimated time of transportation was appropriate.
 - Total transport time from Thailand to Vietnam is in average 41 hours.
 - The time is shorter than the one by air because four days are needed in case of the air.
- No damage and losses
 - No problem of road condition in the whole section although lashing in container must be careful

Feedbacks from Four Customs

Impressions and next steps

- Solution can be applicable to customs procedures.
- Combination of both documents and location are useful and convenient. Customs officers can have sufficient time for inspection if the relevant documents are available in advance of cargo arrival.
- Introduce to other government agencies concurrently because it takes long time at any government agencies when they introduce new policies or change rules.
- Should introduce the solution to forwarder associations to deploy to private sectors

Improvement suggestion of the prototype

- If the tracking device is eSeal or eLock which are familiar to customs officers, more reliable and secure.
- For customs officers or truck drivers to use easily, a smartphone application should be developed.
- If documents can be retrieved by declaration number, it is more useful.

Findings through the POC

Advantage of land transport

- Alternative means of transportation than sea and air :
Effective way to transport express consignment in cheap and secure instead of air.
- Period of transportation is almost fixed :
Convenience is higher than air or sea because truck can scheduled based on request of consignee or consigner. No waiting time for schedule of airplane or vessel. It is easy to schedule factory operation.



Challenges of land transportation

- Low volume because of land transport is not so activated. As a result, return load is empty. Cargoes are loaded from Thailand to Vietnam but no cargo is loaded from Vietnam to Thailand. Therefore, transportation charge is high (Round trip cost is charged.)
- Transshipment is required at the border. One truck can not run in the other countries. One truck (and a driver) needs to be arranged in each country. It require time and cost.
- Risk of loss and damage is considered. Fortunately no loss and damage is reported through this POC. Transporters need to take care of it in their own responsibility.

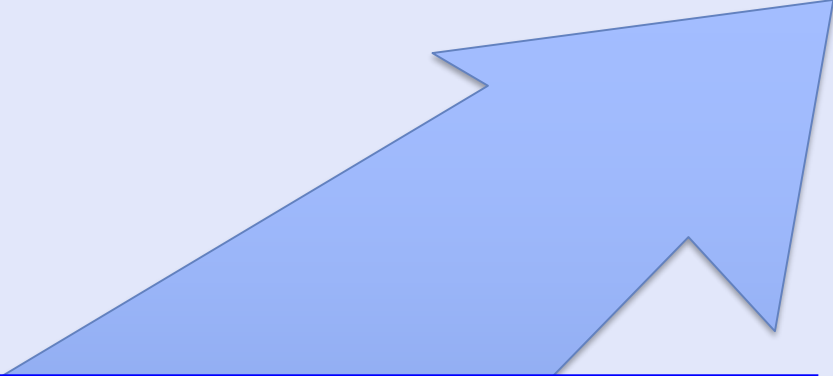
Our Proposals

**Proposal 1:
Expand B2B TradeCloud to ASEAN and trade
facilitation by prioritizing B2BTC Users**

**Proposal 2:
Strengthen the framework of CBTA and TAD
and increase the number of license**

**Proposal 3:
Streamline border gate procedures and
efficiency as soon as possible**

Roadmap of B2B TradeCloud in ASEAN



NTT DATA plans to expand B2B TradeCloud service to ASEAN countries' private companies and customs for the region's trade facilitation and economic growth.



NTT DATA

Trusted Global Innovator