

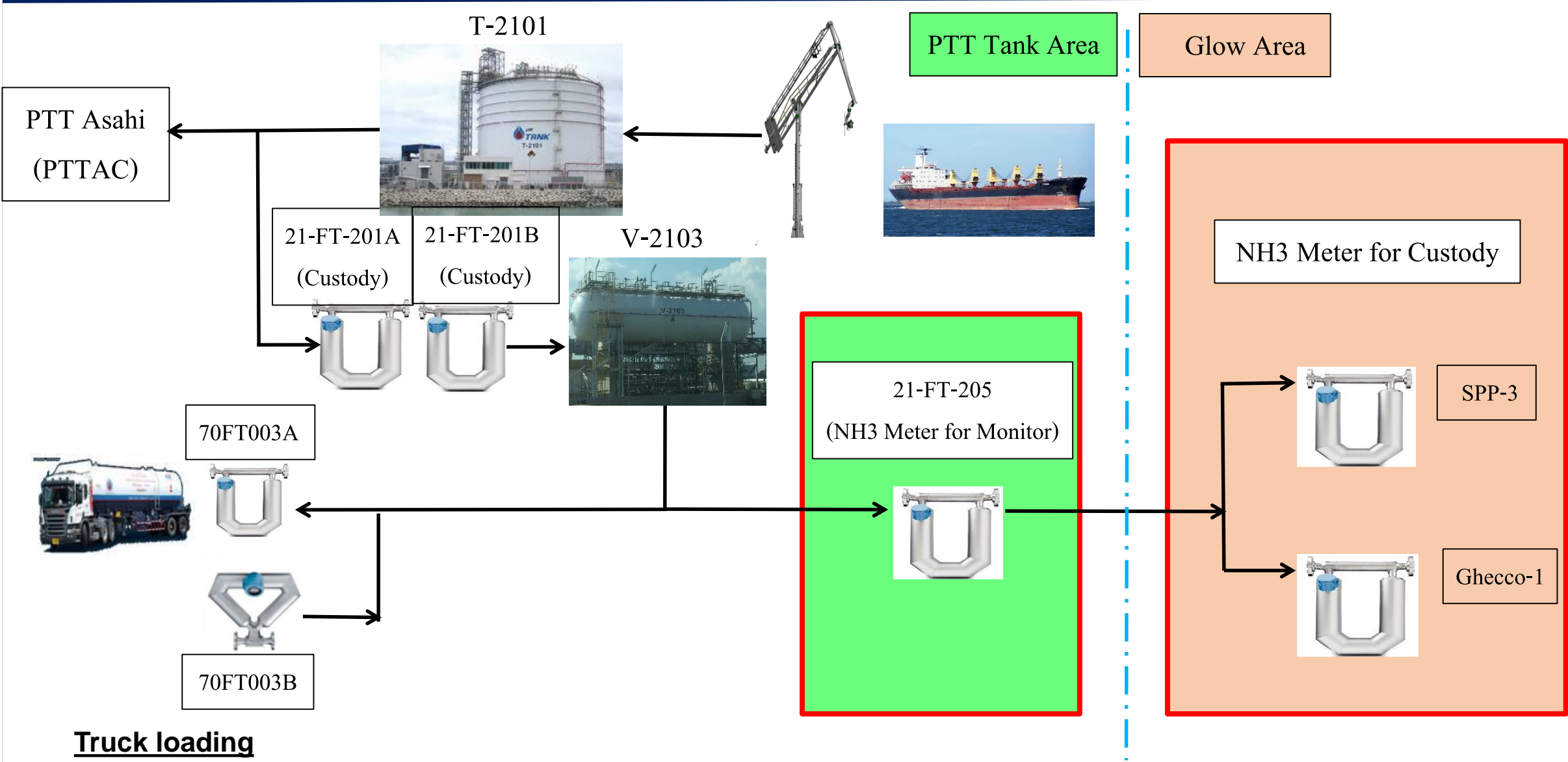


# Productivity Improvement Preventive Maintenance Optimization of Ammonia Flow Meter (21-FT-205)



- To optimize preventive maintenance program for ammonia ( $\text{NH}_3$ ) flow meter (21-FT-205)

Process Flow Diagram



## As-Is Process



The imported liquid Ammonia is kept in Refrigerated Double-wall Tank (T-2101) which is provided to serve the major customer, PTT Asahi (PTTAC). To sell the ammonia to other local customers (such as Glow), the batch of ammonia will be transferred from T-2101 to Ammonia Bullet Tank (V-2103) and then, be transferred to Glow in batch, accordingly. The custody meter is located in Glow's area, however, PTT Tank provides Meter (21-FT-205) for monitoring purpose.

Preventive Maintenance Program for 21-FT-205 is to be calibrated annually. So far, it was bundle to 21-FT-201 A/B, which are other ammonia custody meters being used in PTT Tank, for annual calibration service by third party .

The calibration expense for each is 95,000 THB.

### Cost Structure

1. Meter Calibration	25,000 THB
2. Witness by W&M	12,000 THB
3. Adjust Flow Computer	6,000 THB
4. Instrument Calibration PT, TT	14,500 THB
5. Labor cost for remove & install	9,500 THB
6. Gasket	1,500 THB
7. Special PPE	23,000 THB
8. Portable Gas Detector	3,500 THB
Total 95,000 THB	

## Opportunity for Optimization



- Ammonia Meter (21-FT-205) is used for monitor purpose only ( Not for Sale purpose ). Therefore, the witness of Government is considered as “NOT REQUIRED”.
- PTT Tank’s Maintenance personal have skills & experience in instrument calibration (Pressure & Temperature Transmitters), therefore, these activities can be removed from third party’s responsibility.
- Some tools & equipment (such as portable gas detector) to be used in this activity are available at PTT Tank which can be shared with Third Party during working in the field for free of charge.

### Potential Cost Structure

1. Meter Calibration	25,000 THB
3. Adjust Flow Computer	6,000 THB
5. Labor cost for remove & install	9,500 THB
6. Gasket	1,500 THB
7. Special PPE	23,000 THB
Total	65,000 THB

## Summary



<b><i>Meter</i></b>	<b><i>Expense Before Improve (THB)</i></b>	<b><i>Expense After Improve (THB)</i></b>	<b><i>Saving (THB)</i></b>
21-FT-205	95,000	65,000	30,000

- To update preventive maintenance program in SAP by adding Pressure Transmitter and Temperature Transmitter calibration activities.

# THE END

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