AutoPASS IP
SSA-T, Appendix 1 Annex 10
Functional Unit -
Pricing rules and agreement types

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1 About this document

This document describes AutoPASS pricing rules and agreement types.
New toll road projects can choose to implement rules among the rules and agreement types that are described in this document. Some rules and agreement types described in this document are not in use at present time.

Document history:

Version number	Creation/revision date	Written by	short description
1.0	05.07.17	JEM	RFP sent to Bidders

2 Toll project structure in Norway

Most of the toll projects in Norway have one group with toll stations, but some projects consist of several groups and sub-groups with toll stations.

Example of a project with one group (most common structure):
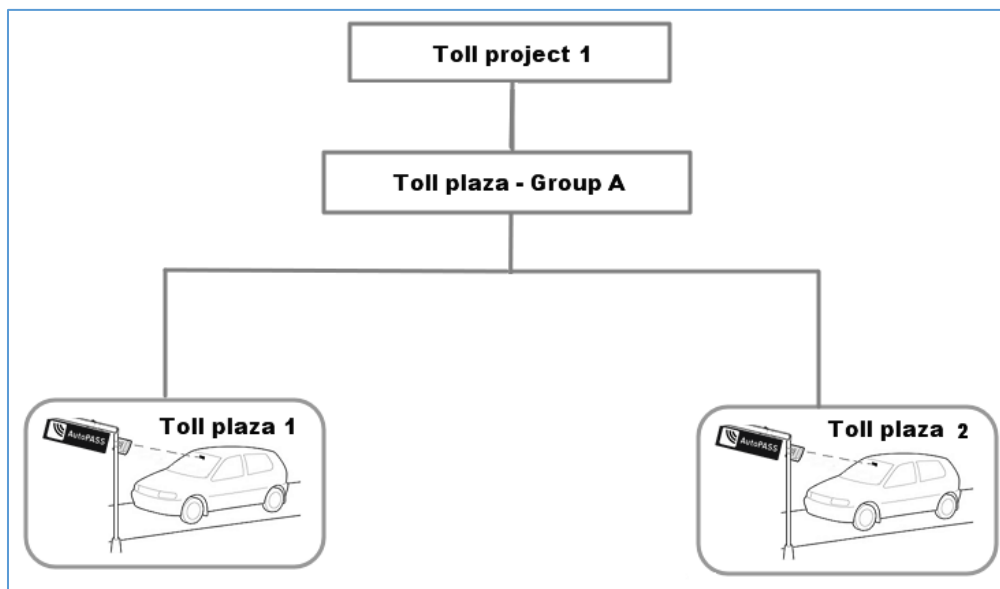
Example of a project with sub-groups:

3 Passage rates in general

In addition to AutoPASS agreement discount, AutoPASS IP should be able to use all the information in a car register like Autosys to calculate the passage rate. AutoPASS IP shall also be able to use external data from e.g air quality sensors in the calculation.

Example of information from a car register:

- Vehicle weight (Small vehicles <= 3,5tonnes, Large vehicles > 3,5tonnes)

- Number of axles

- Fuel group (gasoline, diesel, hydrogen, electric, hybrid, plugin hybrid and more)

- Vehicle group (truck, motor home, emergency vehicle, motorcycle, ATV and more)

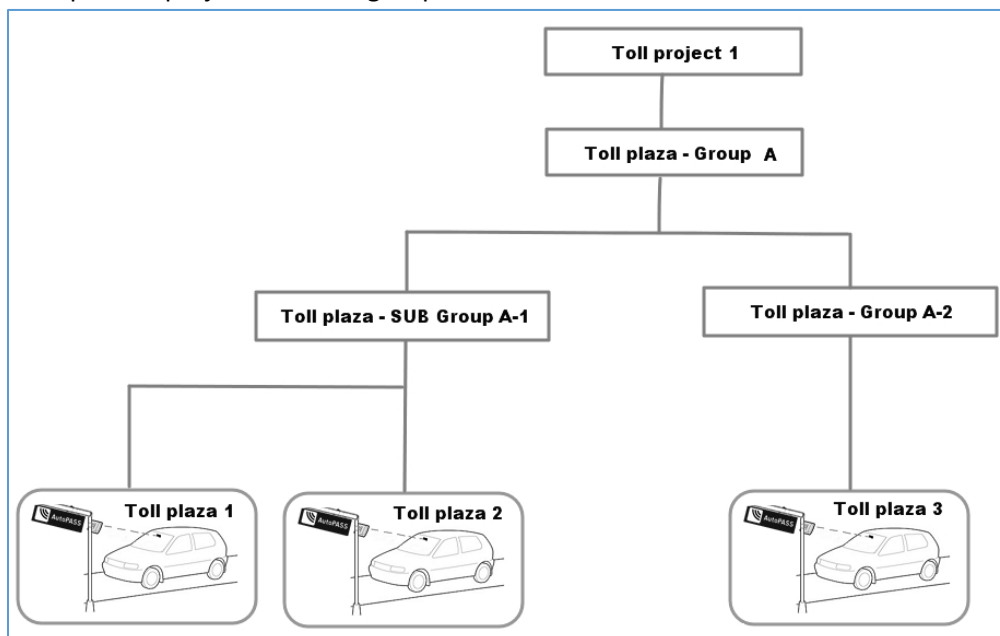- Euro Class

- NOX, CO, PM, HC, NO2

- Private / Company vehicle owner

AutoPASS IP should also be able to use information from car registers other than Autosys to calculate a transit rate. Example: military car registry, foreign car registry and Eucaris.

Below is an example of multiple information that can be used from the vehicle register to price the passage. The passage rates are listed in hexagons in the drawing:
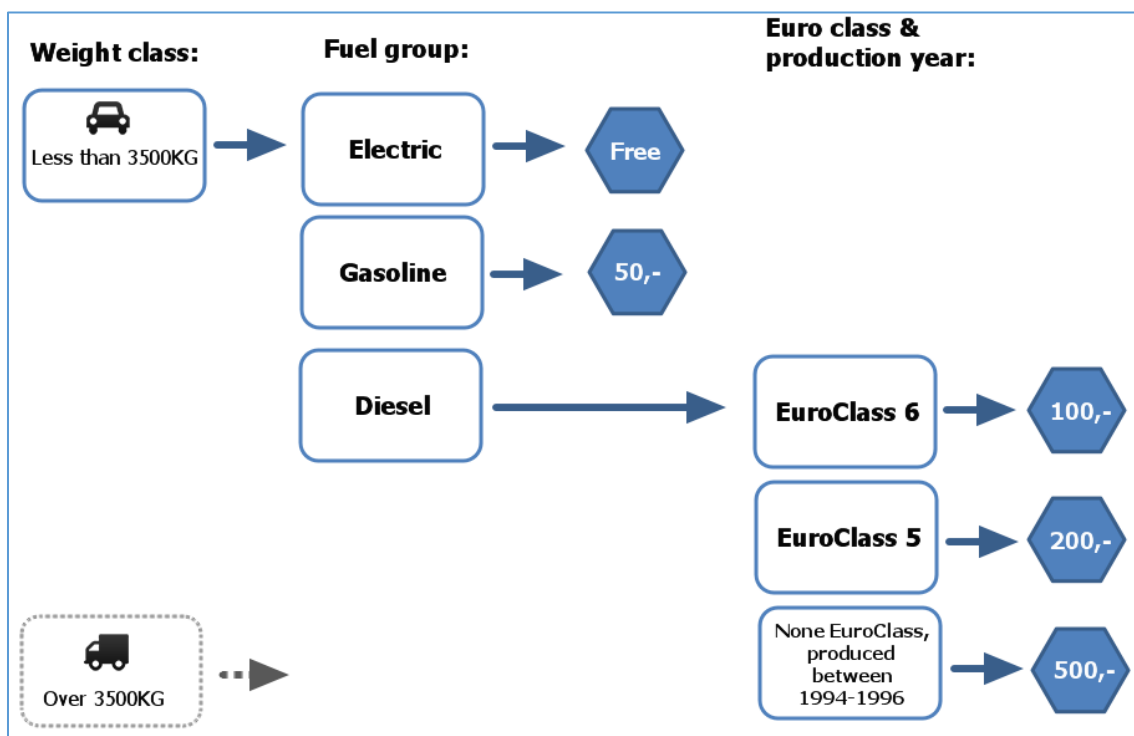
Rate groups

Autopass IP shall be able to use Rate groups when pricing passages.

A Rate group is a grouping of vehicle types based on information from the vehicle registry and whitelist. Below are example of Rate groups which are in use today:

New grouping:

- **Rate class 1:**
  Vehicles with GVW up to and including 3500 kg and cars in vehicle category M1 in Autosys.

- **Rate class 2:**
  Vehicles with GVW of 3501 kg and over, apart from passenger cars in vehicle category M1 in Autosys.

Old grouping:

- **Small vehicles:**
  Vehicles with GVW up to and including 3500 kg

- **Large vehicles:**
  Vehicles with GVW of 3501 kg and over

4   Rules in general

The objective of AutoPASS IP is that passages will be processed as quickly as possible.
Some toll road projects have only simple rules that allow immediately processing at Autopass IP,
while others have rules that cause AutoPASS IP to have to wait until all image processing is done
before the pricing process can start. Autopass IP must be configurable so that the processing takes
place as quickly as possible for each individual toll project.

A passage can only have one exemption.
We therefore have a priority order of exemption rules, see below. Rules not listed comes first.

Priority	Group	Rule
1	Processing exception	C1: Exception rule – Picture transit exception
2	Agreement-based exception rules	D5: Embassy exemption D5
3	Processing exception	C5: Exception rule – authorised vehicles exception
4	Rules based on the number of transits	B1: Counting rule 1 (month limit)
5	Rules based on the number of transits	B2: Counting rule 2 (month limit)
6	Time-Place Rule	A1: Time-Place Rule (hour rule)
7	Time-Place Rule	A2: Time-Place Rule (opposite hour rule)
8	Time-Place Rule	A4: Time-Place Rule (tverrgående løsning)
9	Time-Place Rule	A3: Time-Place Rule 3 (sequential rule)
10	Rules based on the number of transits	B3: Counting rule 3(opposite month limit)

5 Rules based on transit time and place

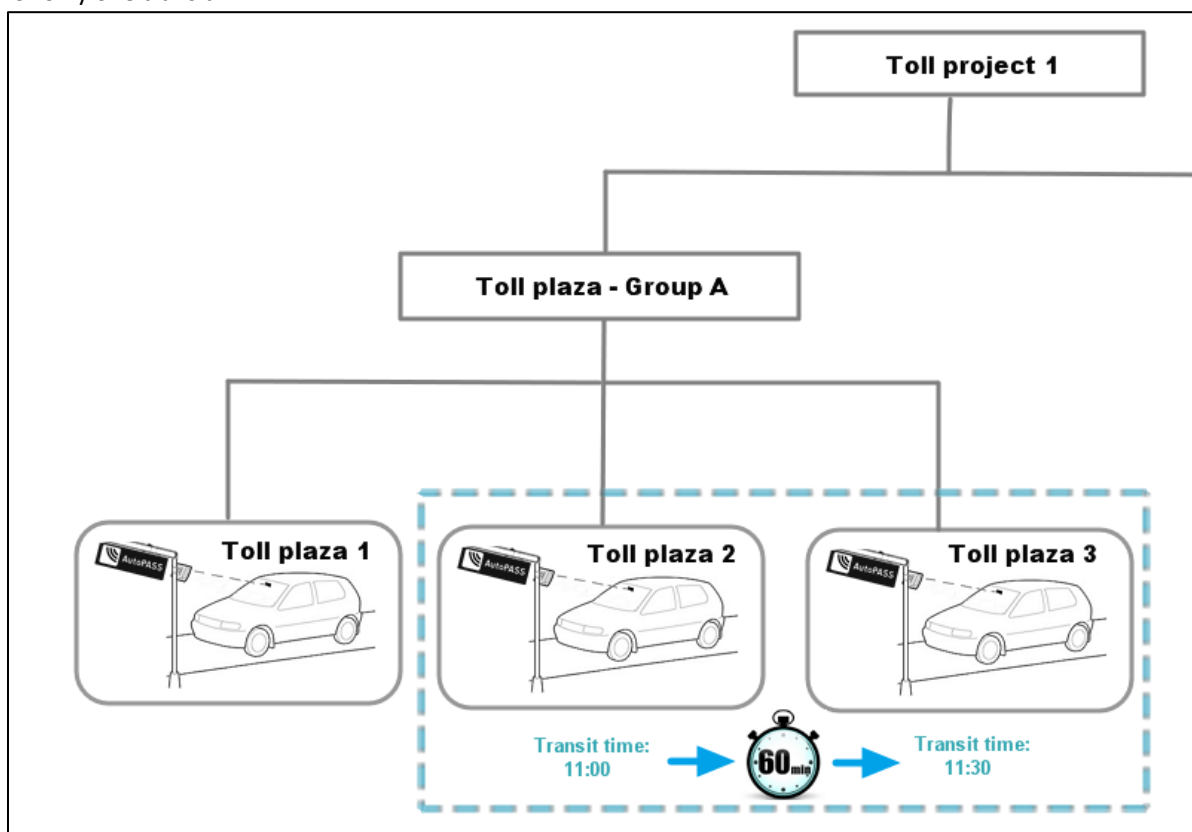## 5.1 Time-Place Rule A1 (hour rule)

Customers with a valid AutoPASS agreement will only be charged for one passage within a given time interval in the same toll project.

- Time between transits must be configurable for each project, default is 60 min.
- The most expensive or the first transit shall be charged (configurable for each project).
- The rule applies to tag transits or both picture and tag transits (configurable for each project).
- The rule may apply regardless of transit direction or only to a specific transit direction (configurable for each project).
- Requires a valid AutoPASS agreement.
- The rule can apply within a group of tolls or even across groups/sub-groups within the same project (configurable for each project).

Example:
This project is configured so that customers with a valid AutoPASS agreement will only be charged for one transit per 60 min (same transit rate on all toll stations in this example).
This customer is driving through "Toll plaza 2" at 11:00 and "Toll plaza 3" at 11:30, the customer will be charged for only one transit.

5.2   Time-Place Rule A2 (opposite hour rule)

Customers with a valid AutoPASS agreement will only be charged for the passage if he/she passes several toll plazas within a given time interval in the same toll project.

- Time between transits must be configurable for each project.
- The most expensive or the first transit shall be charged (configurable for each project).
- The rule applies to tag transits or both picture and tag transits (configurable for each project).
- The rule may apply regardless of transit direction or only to a specific transit direction (configurable for each project).
- Requires a valid AutoPASS agreement.
- The rule can apply within a group of tolls or across groups/sub-groups within the same project (configurable for each project).

Example:

This customer is driving through "Toll plaza 1" at 11:00 and "Toll plaza 2" at 11:10, the customer will be charged for both transits. If the customer only had one transit (either station 1 or 2) he will not be charged for the transit.
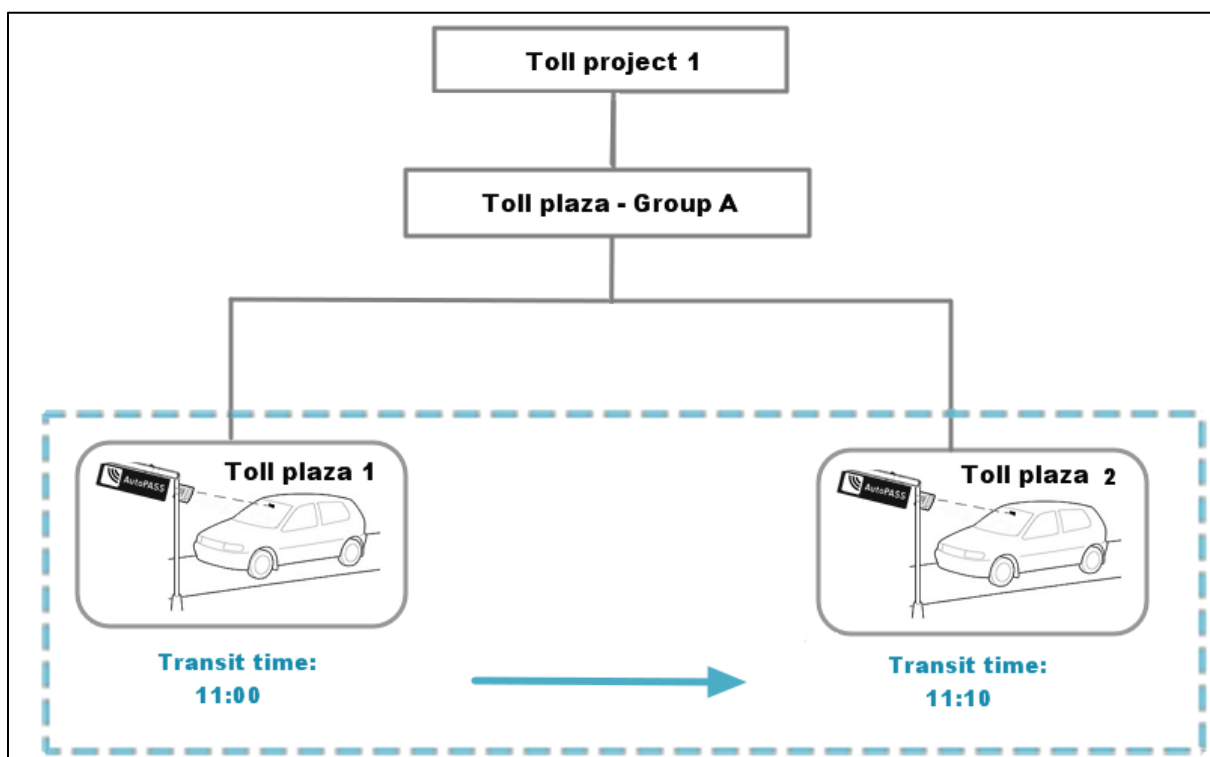
5.3 Time-Place Rule A3 (equalisation passage)

Customers with a valid AutoPASS agreement will not be charged for the passage if he/she passes several toll plazas within a given time interval in the same toll project.

- Time between transits must be configurable for each project.
- The rule applies to tag transits or both picture and tag transits (configurable for each project).
- The rule may apply regardless of transit direction or only to a specific transit direction (configurable for each project).
- Requires a valid AutoPASS agreement.
- The rule can apply within a group of tolls or even across groups/sub-groups within the same project (configurable for each project).

Example:
This customer is driving through "Toll plaza 1" at 11:00 and "Toll plaza 2" at 11:01, the customer will not be charged for either of the transits. If the customer only had one transit (either station 1 or 2) he had been charged for the transit.
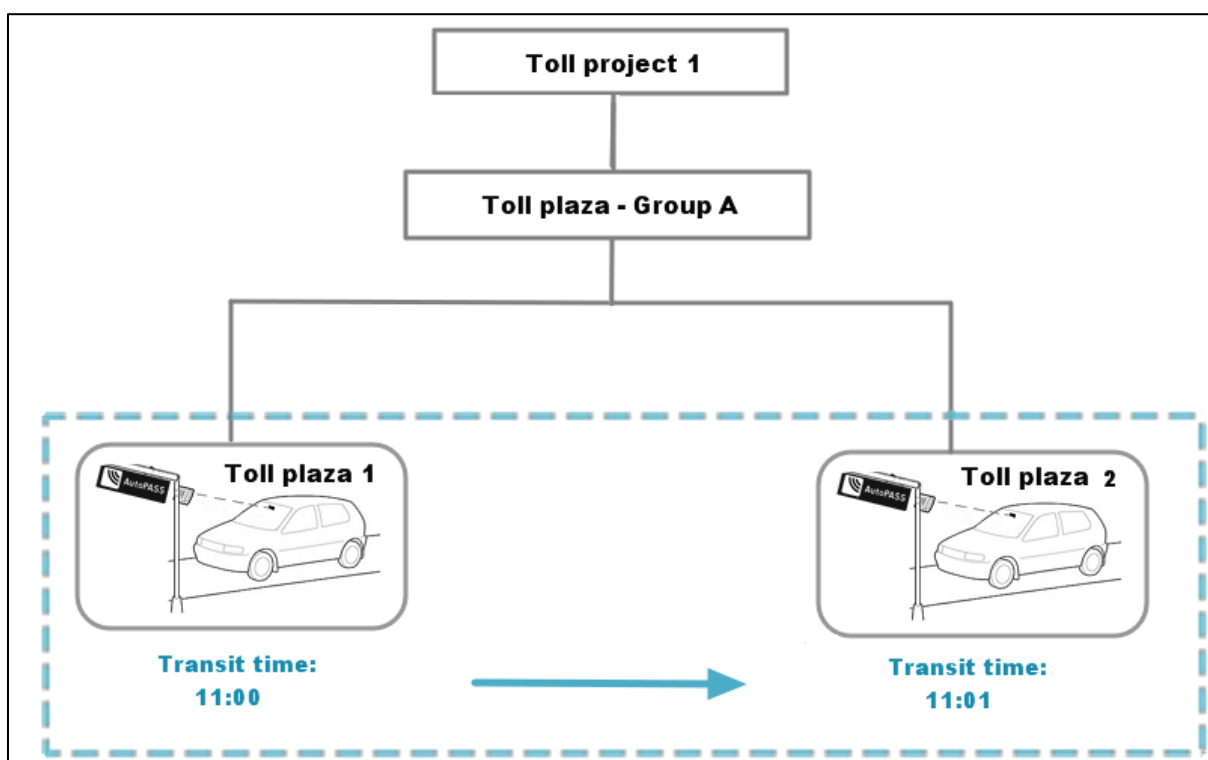
5.4 Time-Place Rule A4

Customers with a valid AutoPASS agreement will only be charged for one passage within a given time interval if he/she has transits between given tolls and in a given order.

- Time window between first and last transit must be configurable for each project.
- The most expensive or the first transit shall be charged (configurable for each project).
- The rule applies to tag transits or both picture and tag transits (configurable for each project).
- Requires a valid AutoPASS agreement.
- The rule can apply within a group of tolls or even across groups/sub-groups within the same project (configurable for each project).
- The rule applies on configurable number of stations.

Example:

This project is configured so that customers with a valid AutoPASS agreement will only be charged for one transit if he/she transits first station 1, then station 5 and the last transit at station 20 within 15 mins. (same transit rate on all toll stations in this example).
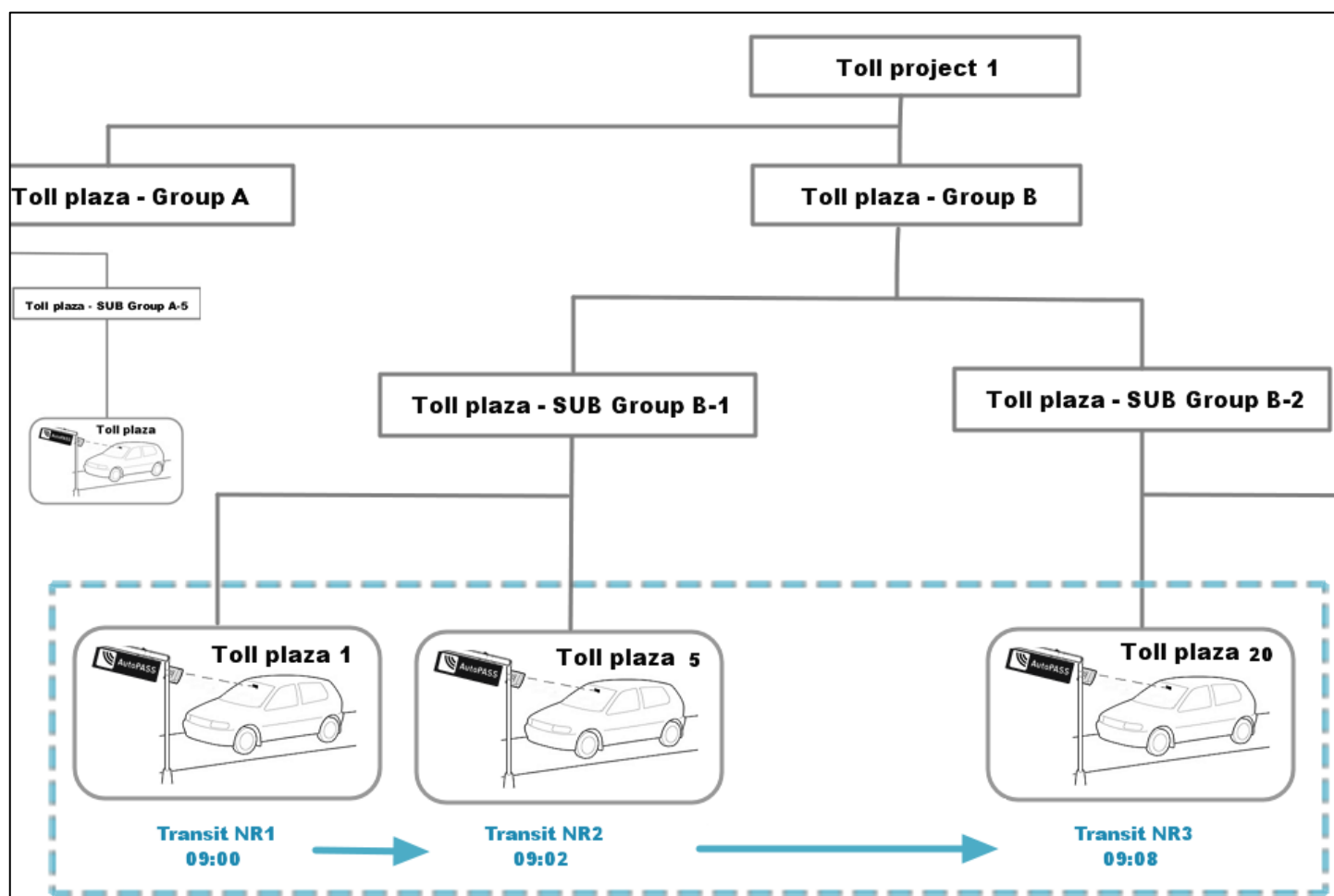
5.5   Time-Place Rule A5

Passages will only be charged within a given period of the day.

Example:
Passages in the period 6:00 until 18:00 will be charged.
Passages outside this timeframe are free.

5.6   Time-Place Rule A6

All passages on weekends and / or holidays are free.
(NB! Some holidays in Norway have different dates each year)

5.7   Time-Place Rule A7

The passage rate increases or decreases during a given time period.

Example:
This rule can be used at rush time.
Passages in the period 07:00 - 09:00 and 15:00 - 17:00 have a higher rate.

5.8   Time-Place Rule A8

The discount level changes during a given time period (Requires a valid AutoPASS agreement).

Example:
This rule can be used at rush time.
No discount in the period 07:00-09:00 and 15:00-17:00.

5.9   Time-Place Rule A9 (Duplicate)

Customers will only be charged for one passage within a given time interval in the same toll station or lane.

Example:
This rule can be used to avoid duplicate passages in the same lane.

6 Rules based on the number of transits

6.1 Counting rule B1 (month limit)

Passages over a given number of passages in the same month are free.
There shall be an option to include / exclude exemption passages (passage price = 0, -) in the calculation of the monthly limit. Default option is to exclude exemption passages from the monthly limit calculation.

Example:
All passages from the 61st in the same calendar month is free.

6.2 Counting rule B2 (month limit)

Passages over a given number of passages in one or several toll groups / sub-groups
in the same month are free.
There shall be an option to include / exclude exemption passages (passage price = 0, -) in the calculation of the monthly limit. Default option is to exclude exemption passages from the monthly limit calculation.

Example:
All passages from the 61st done in "Toll station group A" in the same calendar month are free.

6.3 Counting rule B3 (opposite month limit)

Passages under a given number of passages in the same month are free or have different rate.
There shall be an option to include / exclude exemption passages (passage price = 0, -) in the calculation of the monthly limit. Default option is to exclude exemption passages from the monthly limit calculation.

Example:
All passages below the 20th in the same calendar month are free or have a different rate.

7   Processing exception

7.1   Exception rule C1 – Picture transit exception

Passages that are marked as not chargeable from the service provider of image handling should not be processed (pictures of snow, road ++).

7.2   Exception rule C2 – road work exception

Passages in a given period of time and on certain tolls/lanes shall not be processed (roadworks).

7.3   Exception rule C3 – vehicle exception

Passages of a given vehicle registration number shall not be processed.
This rule can apply only in one project or several projects.

7.4   Exception rule C4 – vehicle list exception

Passages with a group of given vehicles shall not be processed.
This rule can apply only in one project or several projects.

7.5   Exception rule C5 – authorized vehicles exception

Passages with vehicles in a defined vehicle group or based on other information from Autosys shall not be processed.

This rule for authorised vehicles is mandatory for all toll project as of 2017.

7.6   Exception rule C6 – MC exception

Passages with vehicle in the vehicle group MC shall not be processed.

This rule is mandatory for all toll project as of 2017.

8 Agreement-based rules

We have AutoPASS agreements with 100 % discount on some or all passages.
Below are examples of these exception.

8.1 Disability exemption D1

Disabled customers are entitled to exemption from passages within a "Bomring".
The exemption requires an agreement and applies only to a given numbers of vehicles.

"Bomring" = These are a specific type of toll project. Characterised such as all main roads to the city centre having a toll station. There is a specified application that must be used when applying for approval of a toll project to the government such that the project becomes a "Bomring".

Information about this exemption follows the agreement record in the whitelist from the TSP.

8.2 Location exemption D2

Some customers are entitled to exemption in some toll stations / lanes due to the home address / location and the toll station location.

Information about this exemption follows the agreement record in the whitelist.
It is TC that manage this exemption on agreements records belonging to the TSP in the whitelist.

8.3 Scheduled bus exemption D3

Scheduled public transport is entitled to an exemption in some toll stations / lanes.

Information about this exemption follows the agreement record in the whitelist.
It is TC that manage this exemption on agreements records belonging to the TSP in the whitelist.

8.4 Vehicle group exemption D4

Passages with vehicles in a defined vehicle group or based on other information from Autosys shall have 100 % discount.

Information about this exemption follows the agreement record in the whitelist from the TSP.

8.5 Embassy exemption D5

Embassy vehicles are entitled to exemption in some toll projects.

Information about this exemption follows the agreement record in the whitelist and applies only to the passages in toll projects that use this rule.

It is TC that manage this exemption on agreements records belonging to the TSP in the whitelist.

8.6 Minibus vehicles with a taxi license D6

Minibus vehicles with a taxi license are entitled to exemption in some toll projects.

Information about this exemption follows the agreement record in the whitelist and applies only to the passages in toll projects that use this rule.

It is TC that manage this exemption on agreements records belonging to the TSP in the whitelist.

8.7 Vehicle with weight over 3500kg and have vehicle category M1- D7

These vehicles are entitled to pay the rate for vehicles under 3500 kg (small vehicles).

Information about this exemption follows the agreement record in the whitelist from the TSP.

9 Fee for studded tyres

If the roadside can detect whether the vehicle uses studded tyres or not, information about this shall be included in the transaction file to TSP/TC.

10 AutoPASS Agreements

It is mandatory for most vehicles with a total permitted weight of more than 3.500 kg to have a toll tag when driving in Norway. For vehicles with a total permitted weight of less than 3.500 kg it is optional to have a toll tag when driving in Norway.

10.1 Post payment Agreements

This is the most common agreement type. The discount varies between 0-30%.
The agreements can have some exemptions, see the "Agreement-based exception rules"

10.2 Prepayment Agreements

The discount varies between 0-50%.
The agreements can have some exemptions, see the "Agreement-based exception rules"

10.3 Supplementary Agreement (Post- or Prepayment)

When a customer has an Autopass agreement with a TSP the customer may choose to sign supplementary local agreements with a TC with the same tag that the costumer received from the TSP. A supplementary local agreement only applies in the toll project that the customer sign the supplementary local agreement with. The purpose of a supplementary agreement, is to achieve a higher discount or to obtain passage exemptions. A customer can have several supplementary local agreements.

Customers who has one or more supplemental local agreements will have multiple entries with the same car registration number and tag number in the whitelist (with different TSP/TC).

When pricing the passage the Autopass IP must first check if the customer has a local supplementary agreement in the toll road project he passed in, then check if the customer has a global agreement*.

Example:
A customer signs an agreement with Fjellinjen TSP and get 20% discount on all toll road projects in Norway. But the Customer often has passages in the toll road project in Bergen too.
Bergen TC offer 50% discount if the customer signs a supplementary local agreement with them.

The customer chooses to sign a local supplementary agreement with Bergen TC with the tag he received from Fjellinjen TSP. If the local supplementary agreement is for any reason not valid the passage will be charged to the agreement with Fjellinjen TSP.

If the costumer has passages in the Bergen toll road project and the supplementary agreement is valid the passage will by charged to the supplementary local agreement.

All passages in other toll road projects that the customer does not have a supplementary agreement with will be charged to the agreement that the customer has with Fjellinjen TSP.

*Global agreement = the agreement with the TSP that has issued the tag.

11 ASB discount

Most toll road projects give a discount to all customers with an agreement regardless of which TSP the customers have an agreement with; this is called ASB discount. The ASB-discount may be different in each toll project.

ASB = AutoPASS cooperation payment

12 Tag types

Brief information about tag types that are in use as of 2017.

12.1 AutoPASS tag

Purchase of this tag type was terminated in 2014.
The tag will still be in use.

12.2 EN15509 tag

This is the tag standard as of 2017 in these collection systems:

- AutoPASS
- Easygo
- Easygo+

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