

47TH ASECAP STUDY & INFORMATION DAYS




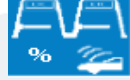










Tomorrow's Mobility...Is Here Today!

*First step towards tomorrow's tolling system
in Greece: the Olympia Odos Hybrid System*




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CEO of Olympia Odos S.A.
30/05/2019

Tolled motorway network of Greece

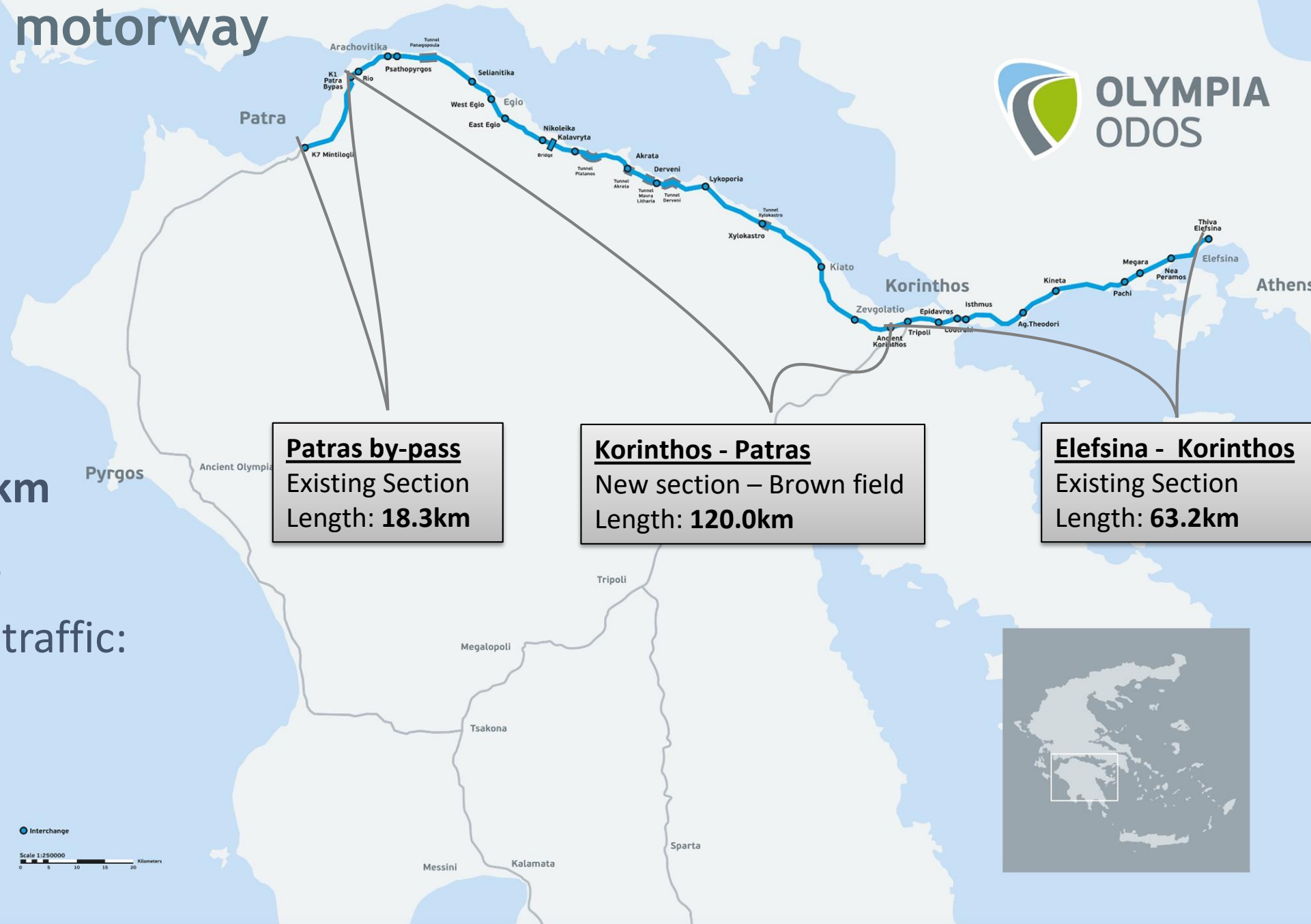


 Έτος/Year: 2018	 Length in Operation (Km)	 Total Annual Average Daily Traffic (*1)	 ETC Penetration	 STC Penetration	 MTC Penetration
	201,5	23.018	32,4%	16,9%	50,7%
	70	53.473	51,5%	0,0%	48,5%
	3,5	10.582	24,3%	0,0%	75,7%
	887,2	10.091	0,0%	0,0%	100,0%
	366,1	13.555	19,7%	8,3%	72,1%
	205	7.357	30,9%	0,0%	69,1%
	262,6	10.531	23,2%	4,3%	72,4%
	136,5	5.140	17,7%	8,5%	73,8%
HELLASTRON Total:	2.132,4	12.810	30,0%	5,0%	68,2%

Existing Toll System Status

- Open Toll System: Mainly with FTS charging by zones
- For LV the cost is 6,035c/km with VAT if someone travel the full zone.
What if the travel distance is less than the corresponding zones payed?
- Means of payments:
 - cash (manual lanes, APM lanes)
 - credit cards (manual and APM lanes), 
 - ETC (DSRC)  
- Two Interoperability network exists (5 motorways, 2 motorways, EOAE)

Olympia Odos motorway

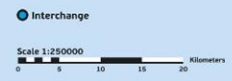


Patras by-pass
Existing Section
Length: **18.3km**

Korinthos - Patras
New section – Brown field
Length: **120.0km**

Elefsina - Korinthos
Existing Section
Length: **63.2km**

- Total length: **201,5km**
- EPC cost: **1,338 m€**
- Date of opening to traffic:
March 2017



Key Operational features



- 5 Frontal Toll Stations & 9 Ramp Toll Stations

- 29 Interchanges

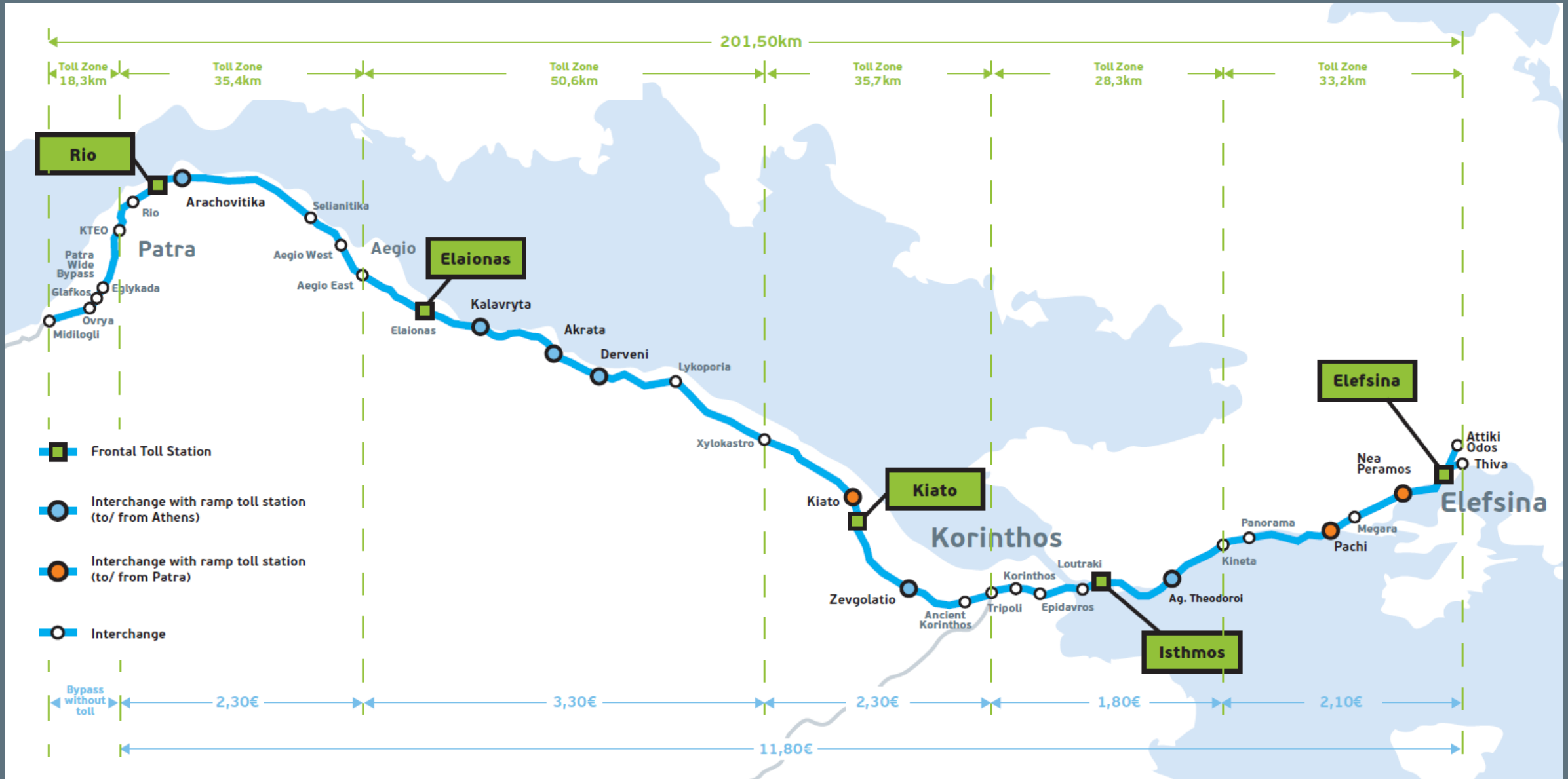
- 11 Motorway Service Stations

- 4 Customer Service Stations

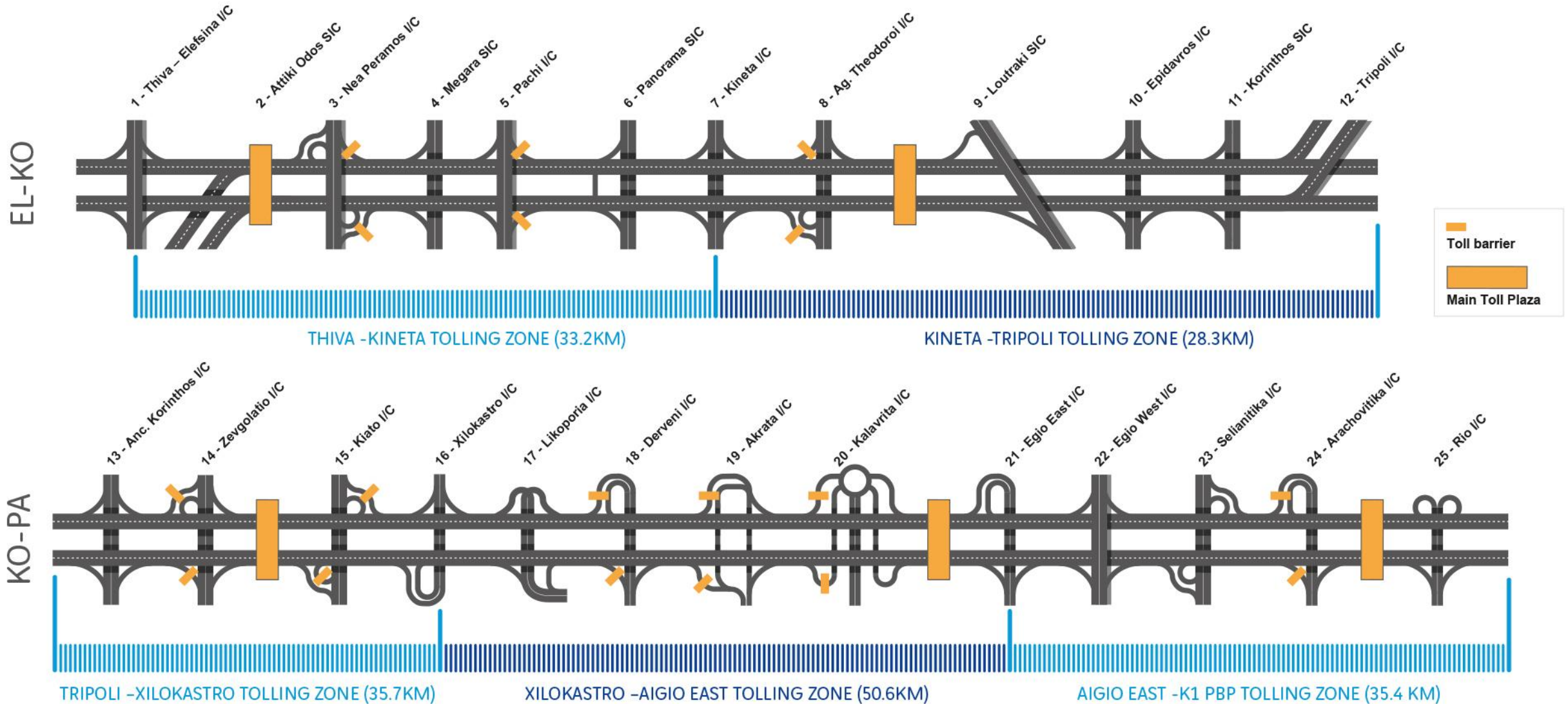
- 2 Traffic Management Centers

- 4 Technical Bases

TODAY: 5 Tolling Zones on OLYMPIA ODOS motorway



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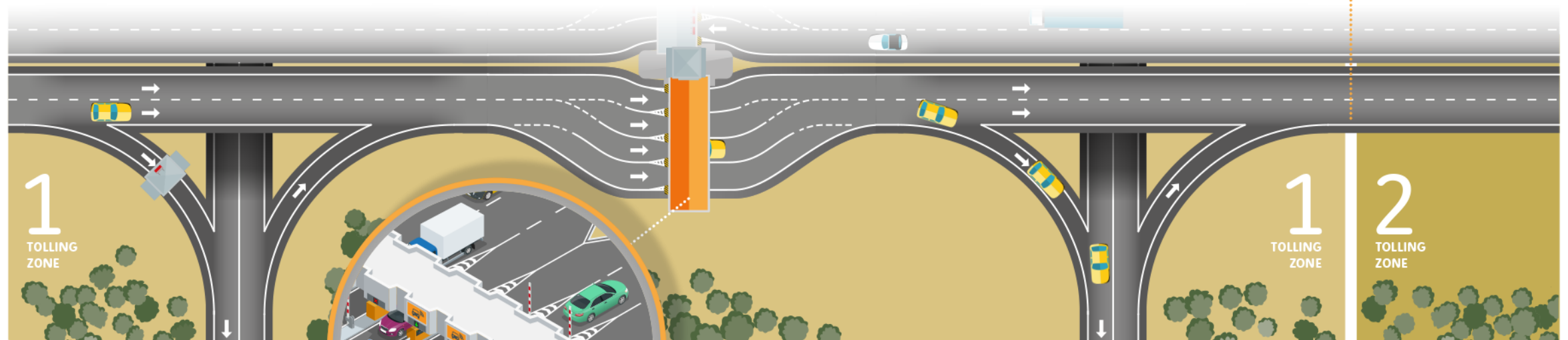


TODAY: Tolling by zone

DISTANCE PAID



DISTANCE TRAVELLED



06.00 €

€

€

06.00 €

The expectation - the commitment

Strong commitment from Olympia Odos to identify a tolling solution that would provide fairer charges to ETC users



in order to increase the acceptance of tolling principle among Greek users of the motorway.

Installation of new functionalities

The CNR is currently proceeding with all designs and works required to implement the **Hybrid Tolling System** on Olympia Odos motorway

Scope of works: -Infrastructure works

Design- Equipment procurement- Civil works-
Electromechanical works- Data Comm. works

-System works

Hybrid Central System implementation- DRS extension-
Roadside Equipment (Gantry) Installations

- STARTING DATE OF THE SYSTEM : **Spring 2020**

Why “Hybrid”?

The concept:

To enhance the current zone based system with traditional plazas, by adding ETC gantries in strategically selected ramps, creating a **combined** or “Hybrid” system which is:

- kilometric distance based for ETC customers and
- remains zone based for Cash and bank card customers.



Hybrid Tolling System components

After a preliminary technical pilot on Pachi interchange next month, **30 gantries** will be installed including 3 main sub systems :

- **DSRC** (Dedicated Short Range Communication) for detection and control of customer's transponder
- **ANPR** (Automatic Number Plate Recognition): in case of problem with transponder communication and to avoid fraud
- **VDC** (Vehicle Detection & Classification): to insure transponder and license plate association with the proper vehicle

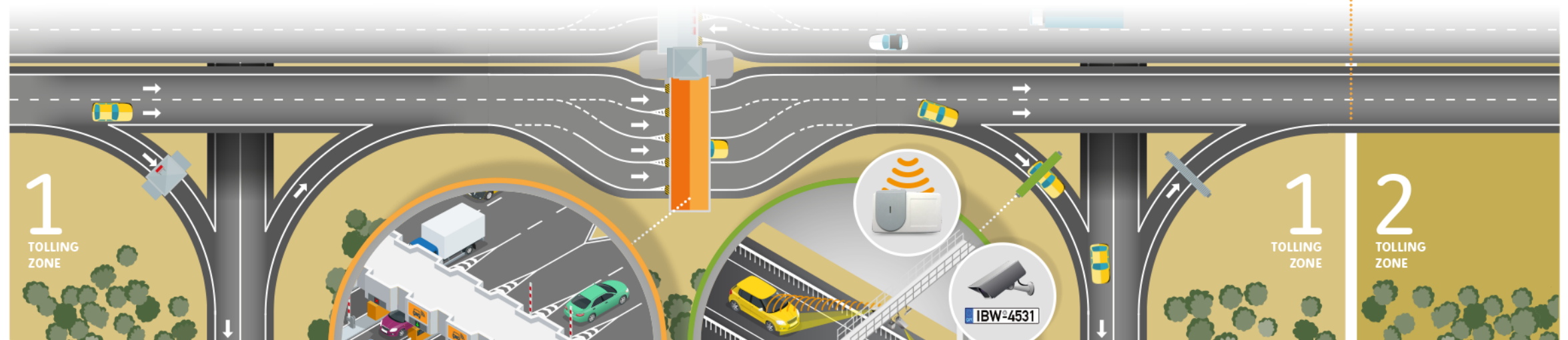
ETC HYBRID: Rebate point

DISTANCE PAID



REBATE

DISTANCE TRAVELLED



06.00 €

-02.00 €

€

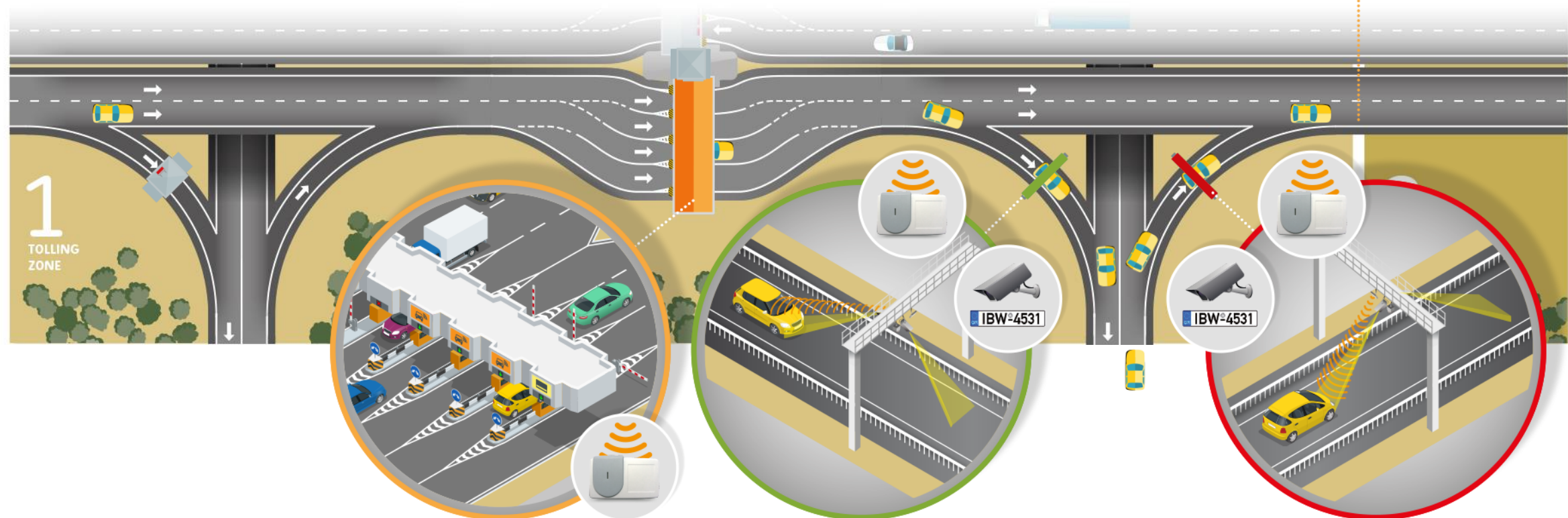
04.00 €

ETC HYBRID: Void Rebate point

DISTANCE PAID



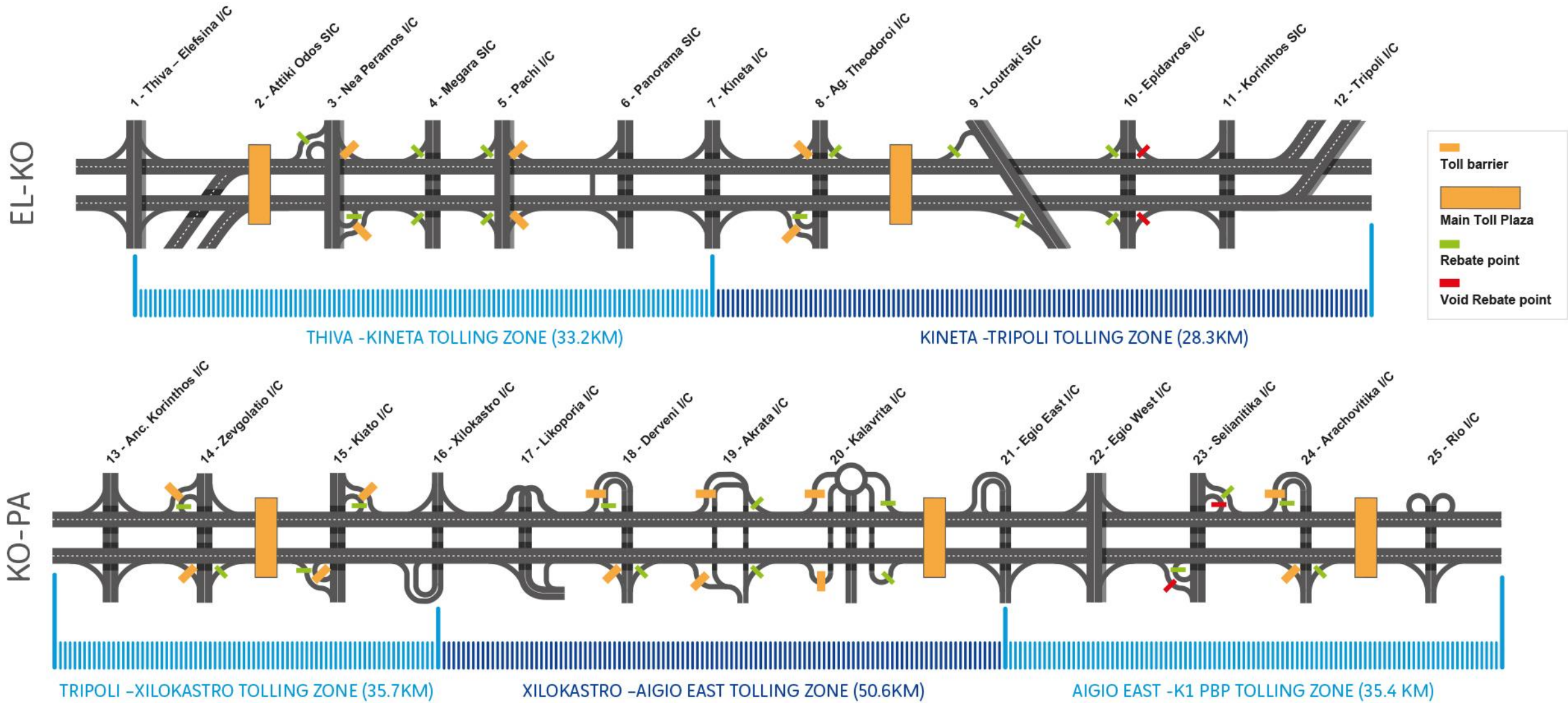
DISTANCE TRAVELLED



REBATE
VOID REBATE

06.00 €
-02.00 €
02.00 €
06.00 €

TOMORROW: ETC Hybrid Configuration



Project targets

This project will be the first step for Olympia Odos SA to deal with free flow issues & has different targets:

- Meet the users' expectation for fair price
- Increase the tolling acceptance by applying fairer prices (shorting the paid distance)
- Increase the O-pass penetration
- Attract local frequent customers which are using today the national road



The main challenges

- Provide a High level of technical performances in order to:
 - Ensure the Customer's satisfaction (30 gantries/ 26 points of rebate)
 - Avoid as much as possible the fraud
 - Minimize the human and manual operations
- Implement and start the system in a very tight schedule

It will be the first distance based tolling system in Greece, and probably the first step before a multi lane free flow or similar system in the future.

Thank you!

See more of what we offer at:
www.olympiaodos.gr



 **YouTube**
Olympia Odos AE