



ASCENDI'S STUDIES AND MITIGATION MEASURES IN HIGHER ROAD ACCIDENTS RISK AREAS

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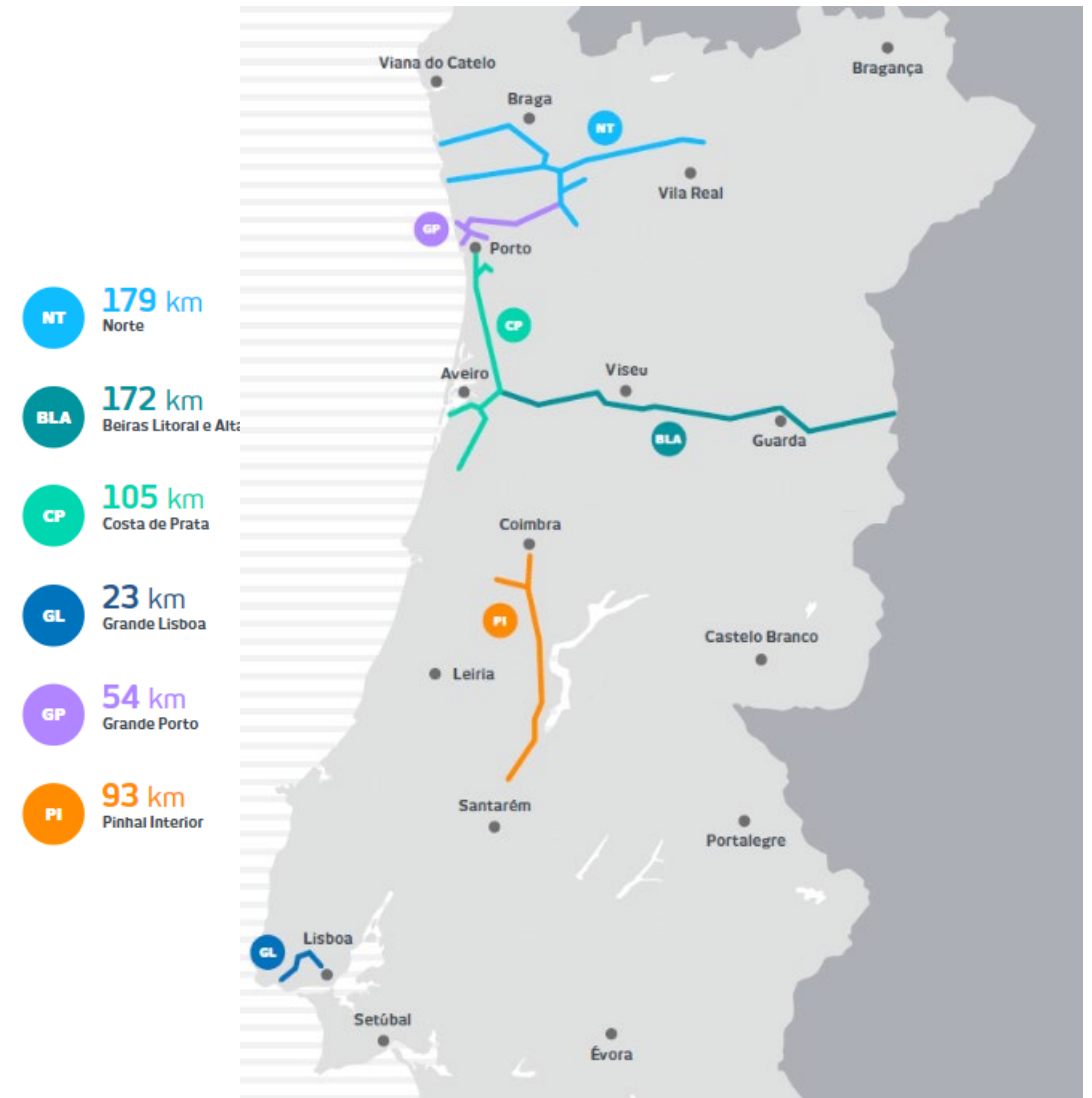
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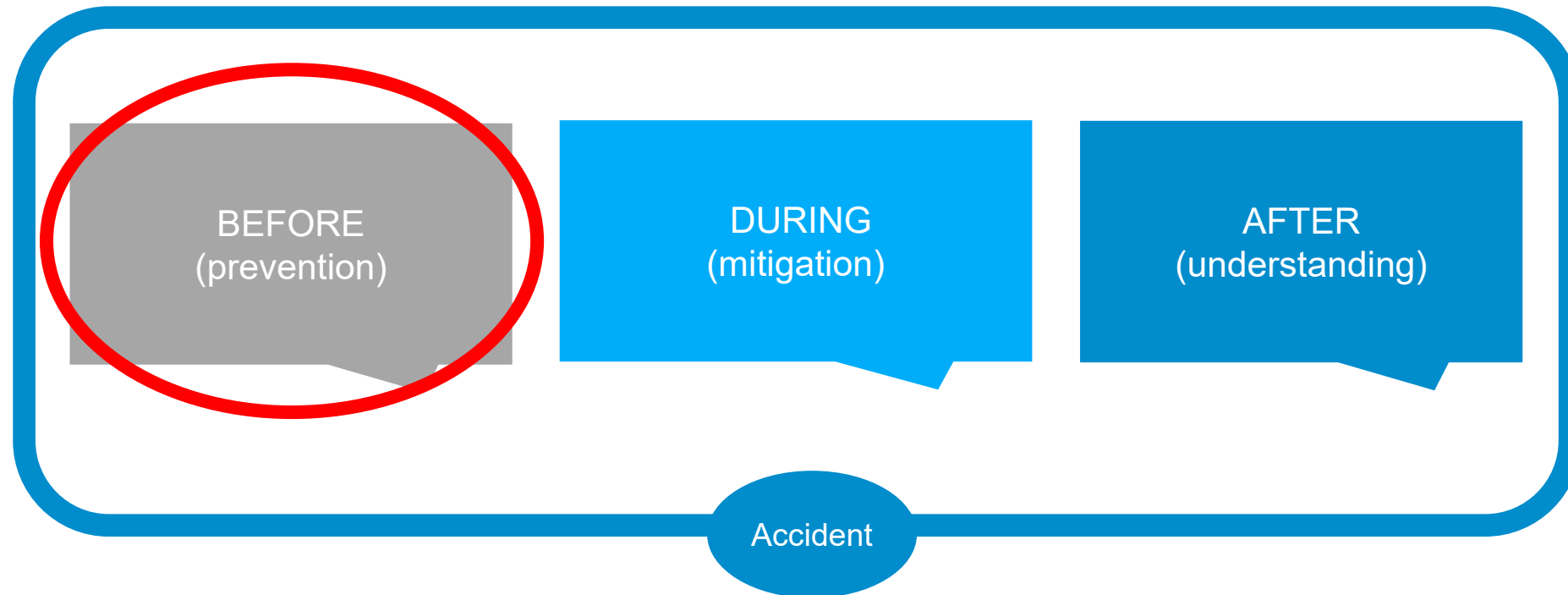
/01 Ascendi's Network

- ASCENDI is a motorway operator that currently provides toll collection and operation & maintenance services on 707 km.
- Its Road Safety Action Plan (RSAP 2020-2023) sets the target of annually reducing the number of victims by 5% is presently under implementation.
- The company works actively on accidents risk mitigation by developing studies and implementing specific site measures.
- The main source of information for the assessment and analysis are:
 - Accidents;
 - Traffic;
 - Speed;
 - Infrastructure characteristics (road design).



/02 Ascendi's RSAP 2020-2023

- RSAP set quantitative reduction targets and a roadmap of 13 operational Actions to improve Road Safety in the network.
- “Action A2”: *Studies and mitigation measures in higher road accidents risk areas* is one of those actions.



MEASURE:

➤ **A2 - Studies and mitigation measures in higher road accidents risk areas**

Description	Elaboration of studies to reduce the risk of road accidents in Blackspots, Accident Accumulation Zones (AAZ)* and other areas with high risk of accidents involving casualties. Implementation and monitoring of approved measures (target: 10 locations/year)
External entity to be involved	GRANTOR(IMT/IP, SA) and ANSR (National Agency for Road Safety)
Start date	01/01/2020
End date	31/12/2023

* Black Spot – Section of 200m, with at least 5 accidents with victims, whose sum of Gravity Indicators > 20;
AAZ - Section of 500m, with at least 5 accidents (covering the previous 5 years).

/03 Development Process

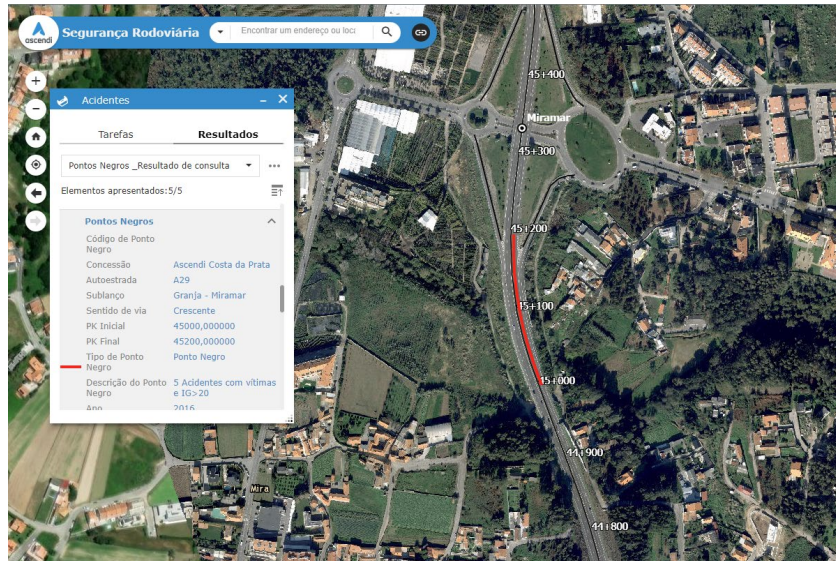
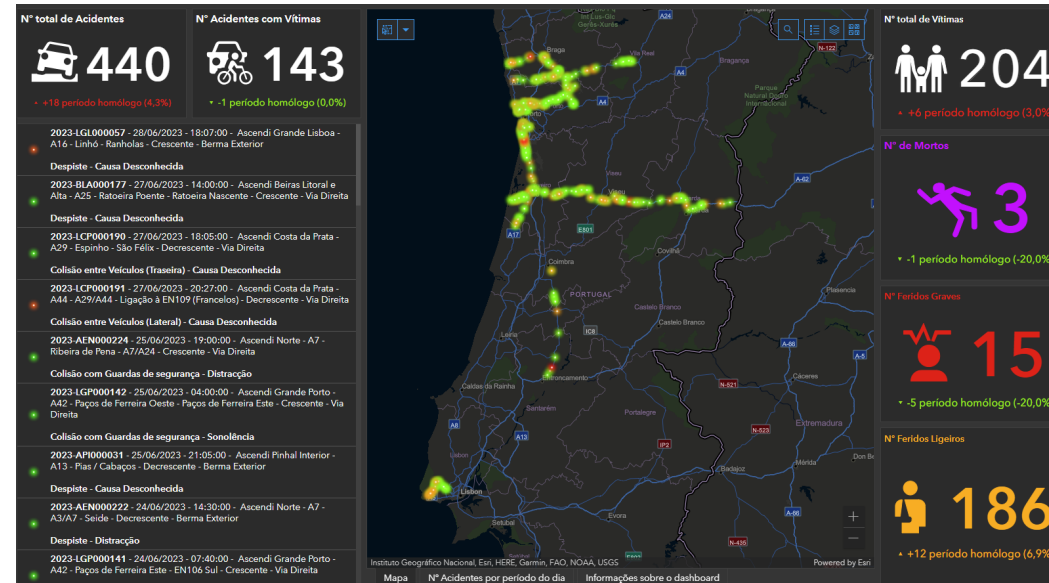


/03 Development Process

Stage 1 – Defining the intervention areas

1.1 - Selection

- The first step is ranking the areas with higher number of injury accidents.



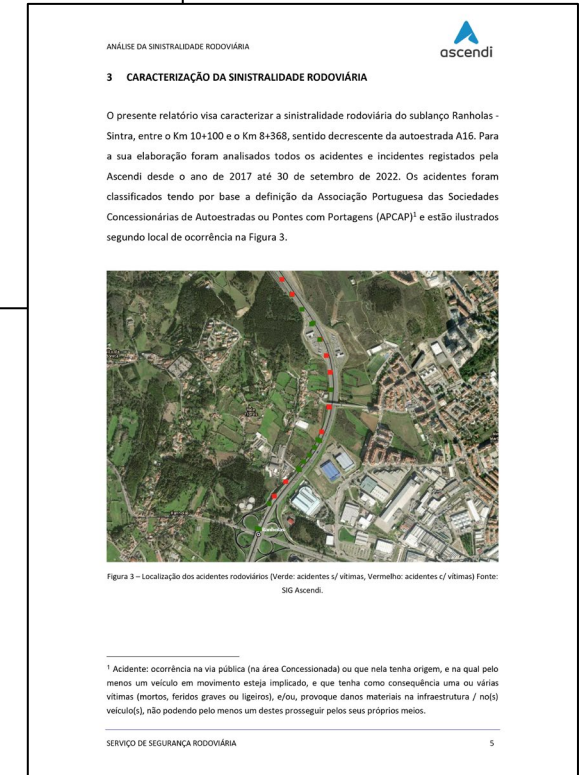
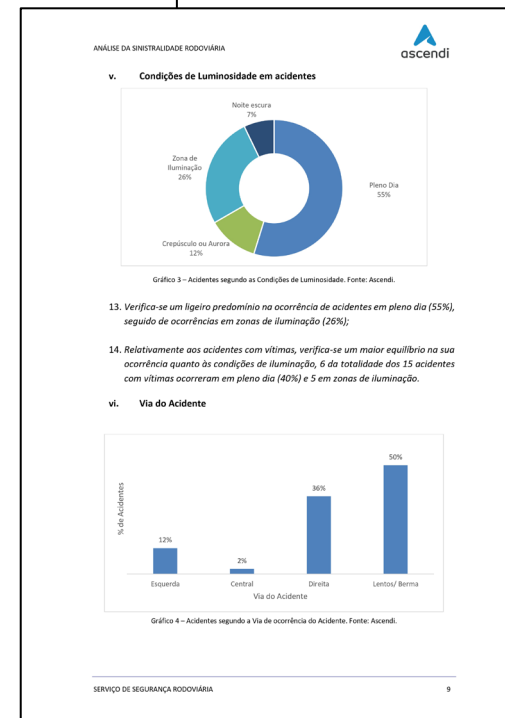
ESTUDOS ZAA'S 2022/2023									
Concessão	Auto-Estrada	Sublâção	Intervalo de PK's	Sentido	2017-2022		Análise sinistralidade	Link	Estado
					Nº Acidentes c/ Víctima	Nº Acidentes			
GL	A16	Nó CREL - Ramo B	-	C	3	30	0	A16 NóCreil_RamoB	Feita
GL	A16	Nó CREL - Ramo D	-	C	2	13	0	A16 NóCreil_RamoD	Feita
GP	A41	Alfena - Santo Tirso	17+600 - 19+300	C	10	19	1	A41 Alfena - Santo Tirso (SC)	Feita
GL	A16	Ranholas - Sintra	10+100 - 8+368	D	15	42	2	A16 Ranholas - Sintra (SD)	Feita
GP	A4	Nó de Sendim - Ramo G	-	C	11	30	3	A4 Nó de Sendim_RamoG	Feita
BLA	A25	Caçador - Fagilde	97+700 - 98+300	C	10	20	4	Caçador - Fagilde (Pk 97+700-98+300) 24.10.22	Feita
GP	A42	P. Ferreira Oeste - P. Ferreira Este	7+800 - 9+300	C	9	16	5	A42 PaçosFerreiraOeste-PaçosFerreiraEste (SC)	Feita
BLA	A25	Nó de Fail - Ramos A, E, F e Ligação	-	C	3	26	6	A25 Nó de Fail_RamoE 27.10.22	Feita
GP	A41	Nó da Maia (A3) - Ramo E	-	C	5	19	7	A41 Nó da Maia - Ramo E (02-11-22)	Feita
GP	A41	Alfena - Santo Tirso	16+700 - 14+800	D	8	18	8	A41 Alfena - Santo Tirso (SD)	Feita
GP	A41	Nó de Perafita/Freixeiro - Ramo A	-	C	7	16	9	A41 Nó de Perafita-Freixeiro	Feita
NT	A11	Celeirós - Guimarães Oeste	38+900 - 37+200	D	5	10	11	A11 Celeirós-Guimarães Oeste (38+900-37+200)	Feita

/03 Development Process

Stage 1 - Defining the intervention areas

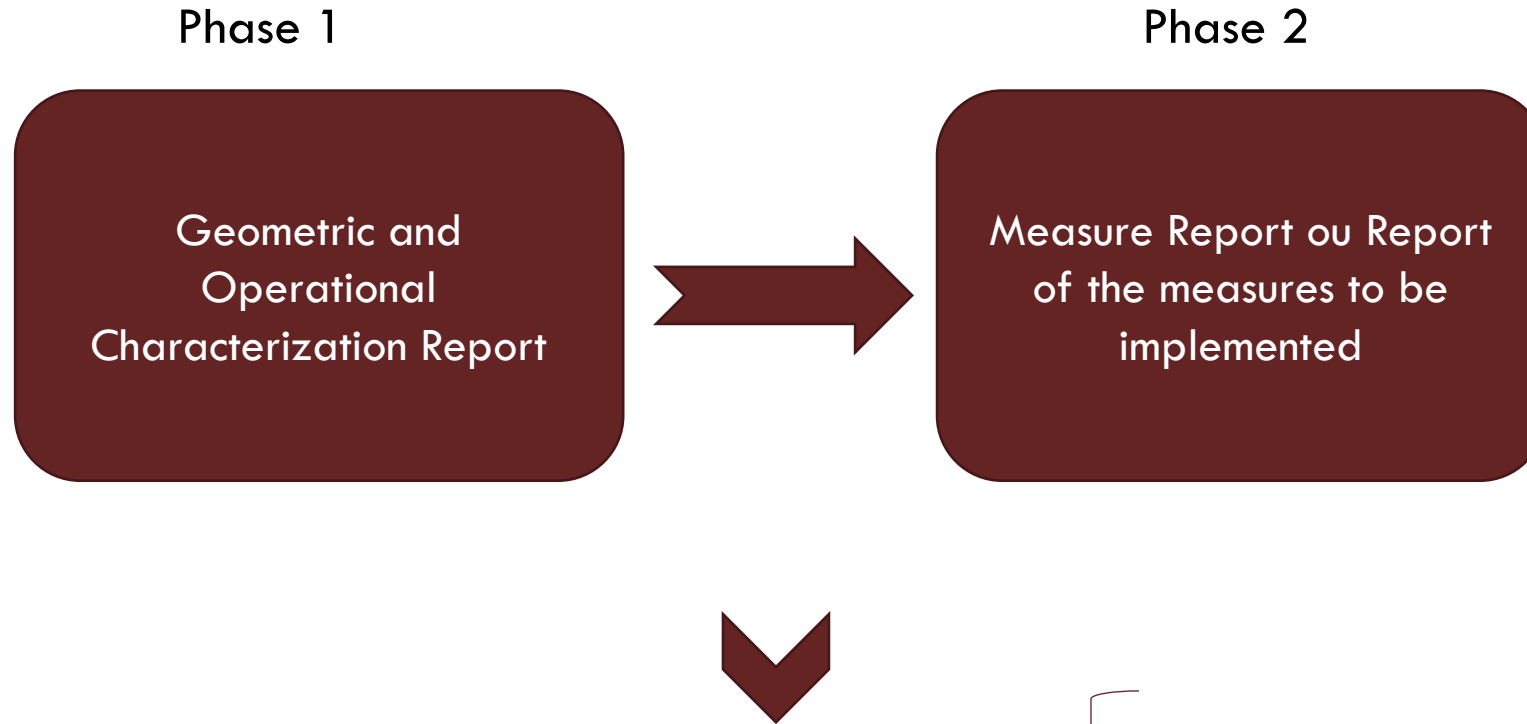
1.2 - Confirmation

- After the preliminary selection, the team develops an Accident Analysis Report that encloses:
 - Number and trends of accidents and casualties;
 - Weather conditions;
 - State of the pavement;
 - Time of the accident;
 - Type of vehicle involved;
 - Cause and nature of accident;
 - Number of incidents;
 - Accident description.
- This report acts as a support/confirmation document for the following stage



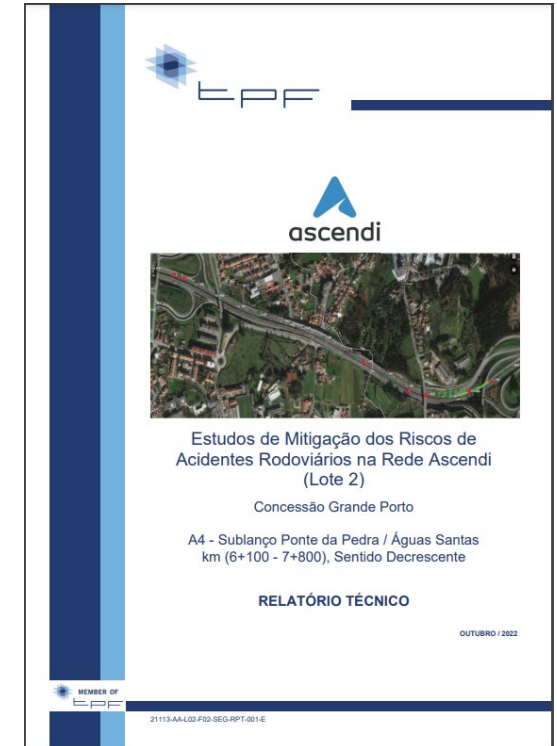
/03 Development Process

Stage 2 – Technical Study



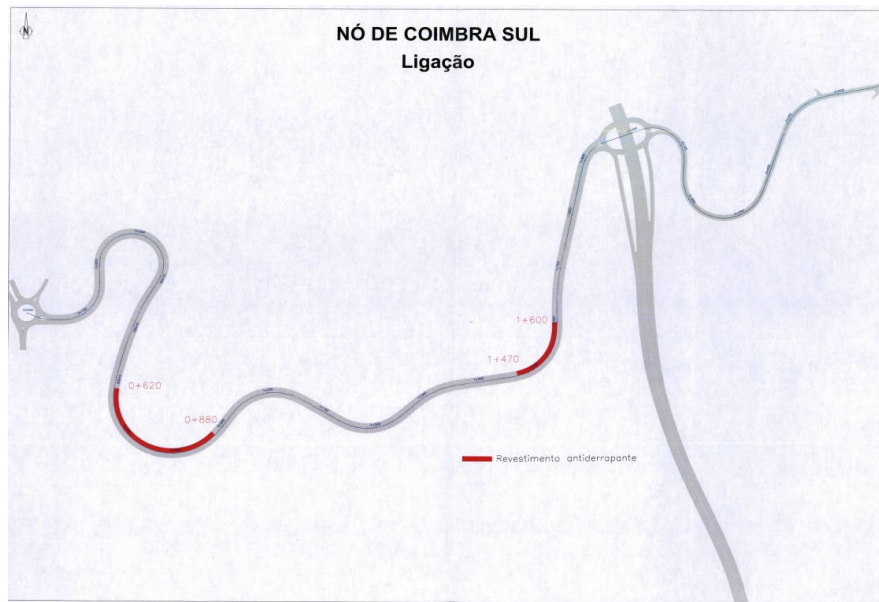
Stage 3 – Internal and External Approvals

- Acendi's Road Safety and Operational Departments (internal)
- Grantor (IMT) (external)
- ...



Stage 4 – Implementation

Technical Study



Coimbra's Node (A13)

Instalation



Coimbra's Node (A13)

Stage 5 – Monitoring

- Before and After indicators

/04 Examples of Studies

Before



After



- **A41/A42 – Lordelo Section (A42)**
 - Horizontal and vertical signaling



- **Seide – Ave Section (A7)**
 - Instalation of Speeding radar

/04 Examples of Studies

Before

After



- **A5's Node (A16)**
 - Lane Suppression in junctions



- **Sendim's Node (A4)**
 - Lane Suppression in junctions

/04 Examples of Studies

Before



After



- **Carvoeiro – Talhadas**
Section (A25)

➤ Pavement improvements

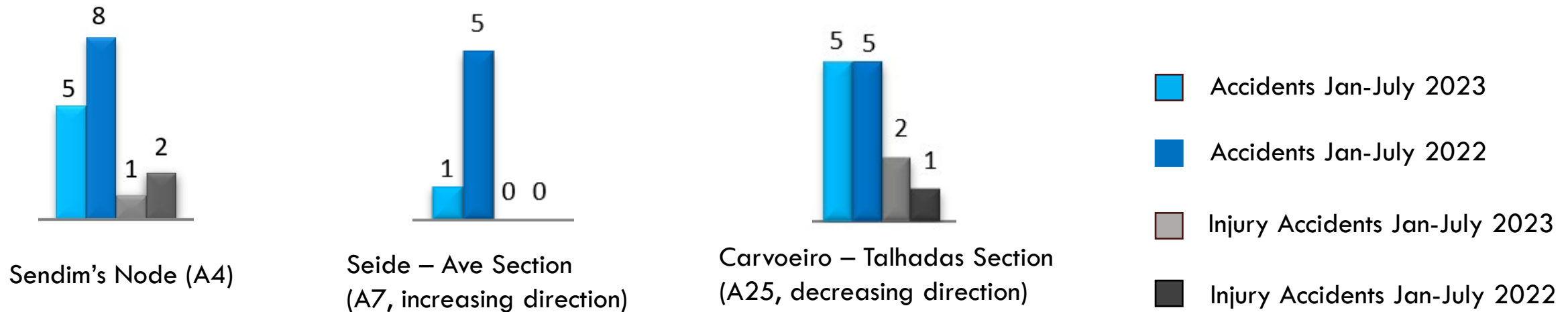


- **Seide – Ave**
Section (A7)

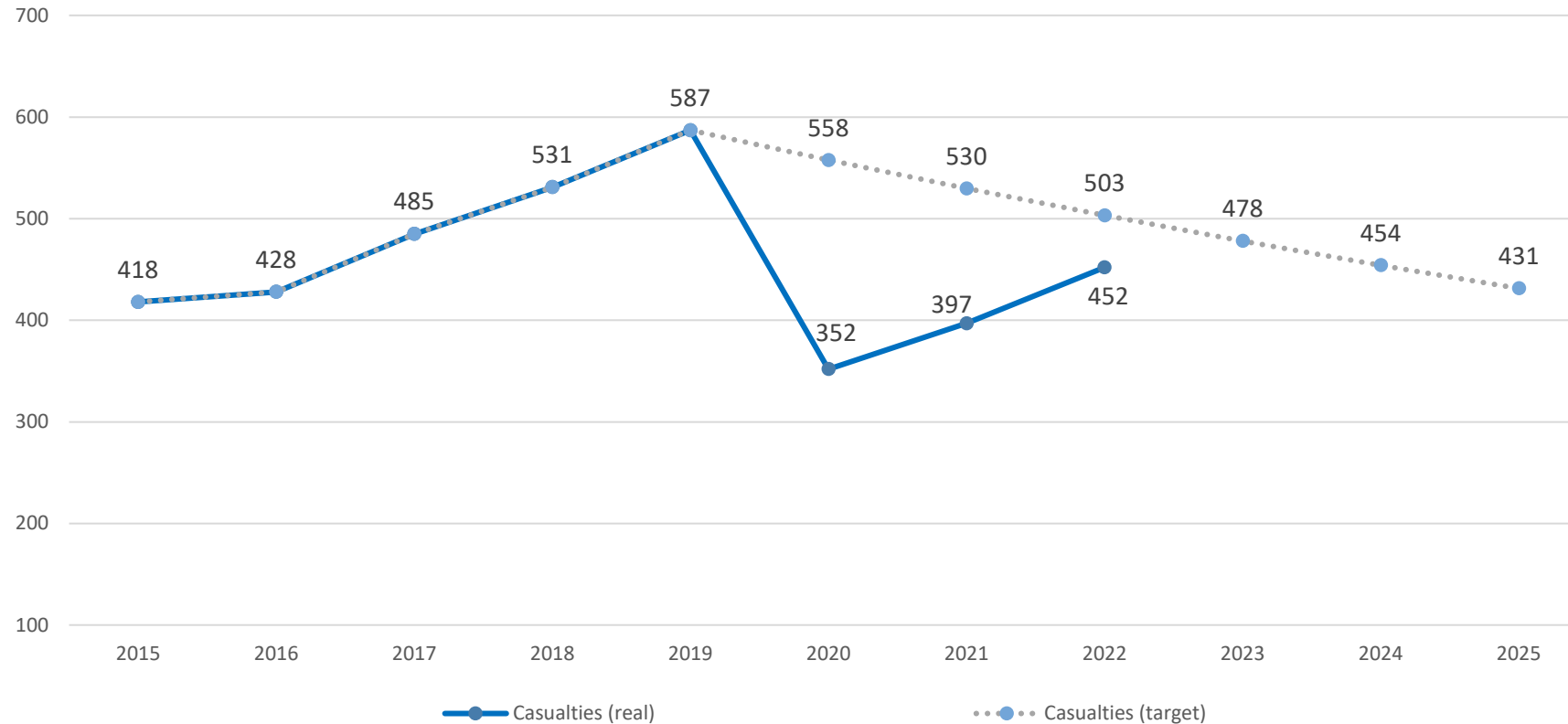
➤ Reducing the speed limit

/05 Preliminary Results

- Since 2020 ASCENDI has developed 23 studies and has an extra 9 under development.
- The investment in specific engineering measures will reach 2.3M€ by the end of 2023.
- Although preliminary, the results seem to show some level of reduction in accidents in the intervention areas



/05 Preliminary Results – RSAP 2020-23



- In the year 2022 (first post-covid), the reduction target was achieved by - 51 casualties (452 Vs 503);
- Despite having a +4% traffic demand, 2022 registered a reduction of 23% in casualties (-135) when compared against 2019.

THANK YOU

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