



## TECHNICAL WEBINAR ON ACCIDENT DATA ANALYSIS, ROAD SAFETY BAROMETERS AND OBSERVATORIES

*Wednesday 26<sup>th</sup> of January*



### **Monitoring Road Safety Indicators**

The case of the Ascendi's Road Safety and Speed Yearbooks

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TO SHOW TWO PRATICAL EXAMPLES OF REPORTS PRODUCED BY ASCENDI WHERE ROAD SAFETY KPI'S ARE CALCULATED AND MONITORED:

- **ACCIDENT AND VICTIMS**

ROAD SAFETY YEARBOOK



- **OPERATIONAL SPEED**

SPEED YEARBOOK



- ASCENDI is a transport infrastructure operator responsible for 868 km motorway network.
- The company's objective is to reduce the number of victims in its network (-5%/year) as stated in its Road Safety Action Plan (20-23).
- The Road Safety Unit directly supports accidents risk mitigation actions, both with studies/reports and with specific local measures.
- Road safety data (namely accidents, traffic and speed) are the main source of information for those analyzes and studies



THE PRODUCTION OF INFORMATION IS BASED ON THE COLLECTION AND TREATMENT OF DATA FROM:

### ■ ACCIDENT DATA

Accident data is collected on site by an Assistance and Surveillance Officer (ASO), who fills in the accident report with specific information and a brief description of the accident.



RELATÓRIO DE ACIDENTE				ascendi	
GRANDE PORTO					
ACIDENTE N.º 2021-LGP000166		DATA 25/09/2021			
Hora	08:45	AE	A4	Via	Via Esquerda
Participante	PSP	PK	0,1	Luminosidade	Pleno Dia
Hora Cheg. Local	08:52	Sentido	D	Meteorologia	Chuva
Hora de Regul.	10:30	Sublento	Semdim - Guilfoen		
Hora Prov. Acid.	08:30	Danco	Sem Danco		
Observações	OAV informa que quando chegou ao local a via estava fechada com o sentido de marcha invertido. O cc Pedro Hispano como tendo ligeiro. Não foi possível nem as causas do acidente. Não resultaram danos.				
VIATURA 1					
Matrícula		DANOS			
Marca	Renault	Para-Choques			
Modelo	Scenic	Tapalino			
Cor	Cinzentos	Vidros			
Obs. Cor		Capot			
Categoria	veículo ligeiro	Greha			
Estado Geral	Mau	Pneus			
Estado Pneus	Bom	Portas			
		Faróis			
		Rachador			
		Bridagem			
MEIOS					
Participante	Matrícula	Data Chan			
Ambulância - B.V. Leixões		25-09-202			
Viaturas ASCENDI - Vitor Alves (OAV GP)	29-ZA-86	25-09-202			
Bombeiros - B.V. Matosinhos/Lega		25-09-202			
AP's - PSPIDT Porto		25-09-202			
Retoque - Seprama/Procarmo		25-09-202			
DANOS CONCESSIONÁR					
Material	Quantidade	Unidade Medid			

RELATÓRIO DE ACIDENTE		ascendi	
GRANDE PORTO			
CROQUI			
Matosinhos		A4	
		PK 0+100	
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Custoias		A28	

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THE PRODUCTION OF INFORMATION IS BASED ON THE COLLECTION AND TREATMENT OF DATA FROM:

- **TRAFFIC DATA**

Traffic data can be obtained through electronic and traditional tolls, as well as automatic vehicle counting equipment (AVCs) that are spread across the network.





THE PRODUCTION OF INFORMATION IS BASED ON THE COLLECTION AND TREATMENT OF DATA FROM:

### ■ SPEED DATA

Speed data is continuously collected through Automatic Vehicle Counting equipment (AVCs) installed on the network that is stored in a Data Base. This data is used to produce monthly speed reports and provides information for local studies whenever possible and/or necessary.



Concessão: LCP AE: A29  
GAV 302 (Canelas - IC2 (Arrábida)) A29 PK 51+000  
Mês: 2 Ano: 2020  
VLegal Crescente: 100 km/h VLegal Decrescente: 100 km/h

	VBS (km/h)		Média Velocidades (km/h)		Desvio Padrão (km/h)		Velocidade Máxima (km/h)		Velocidade Mínima (km/h)		Passagens acima Velocidade Máxima / N (%)		veículos/Dia		Amostra (N) / Contagem (%)		% de vel. circula 10% acima da VLegal		Velocidade Média (01:00 - 02:00)	
Dia	Cresc.	Decr.	Cresc.	Decr.	Cresc.	Decr.	Cresc.	Decr.	Cresc.	Decr.	Cresc.	Decr.	Cresc.	Decr.	Cresc.	Decr.	Cresc.	Decr.	Cresc.	Decr.
1	116	118	97,18	95,16	28,3	20,1	217	159	42	43	34	42	862	902	26,45	40,58	6,96	8,87	95,6	93,3
2	120	117	104,39	97,15	22,4	20,3	220	158	43	58	36	39	806	774	26,05	36,95	8,19	8,79	92,71	90,5
3	118	117	101,76	97,19	32,8	19,6	227	164	41	56	37	44	1294	1250	25,66	35,36	7,57	10,24	113,33	76,33
4	119	119	95,31	98,03	27,4	22,4	146	220	41	48	35	45	990	1062	19,39	37,85	6,87	11,3	76	115
5	120	121	99,89	103,98	27,9	17,4	222	155	41	61	35	50	1164	1054	23,71	33,4	7,39	11,01	108	121
6	120	122	100,83	103,65	28,1	17	222	145	41	61	35	48	1328	1084	22,44	32,29	7,68	9,78	106	
7	122	128	99,94	106,97	36,4	19,7	223	155	42	41	31	54	702	726	22,22	32,78	7,98	14,33	94	78
11	128	114	104,62	92,98	37,3	17,5	228	140	47	69	32	33	400	336	19,5	29,76	8,5	6,55		
12	125	118	107,02	97,58	35	18,6	217	148	43	55	33	41	578	586	22,15	37,54	8,65	9,9	111	98
13	116	117	99,73	96,62	25,9	19,6	211	145	42	56	31	41	728	644	21,15	33,23	7,14	8,39	90	88,5
14	115	118	98,22	100,66	21,7	19,7	147	150	41	53	31	39	804	726	16,67	28,65	3,98	7,99		
15	136	124	110,24	107,74	42,5	15,8	222	146	42	73	32	39	706	568	18,96	19,01	9,35	8,8	109	113,75
16	119	148	100,2	118	37,2	19,3	218	156	42	82	25	34	354	300	16,95	15,33	6,78	8,67	180	

## ROAD SAFETY YEARBOOK

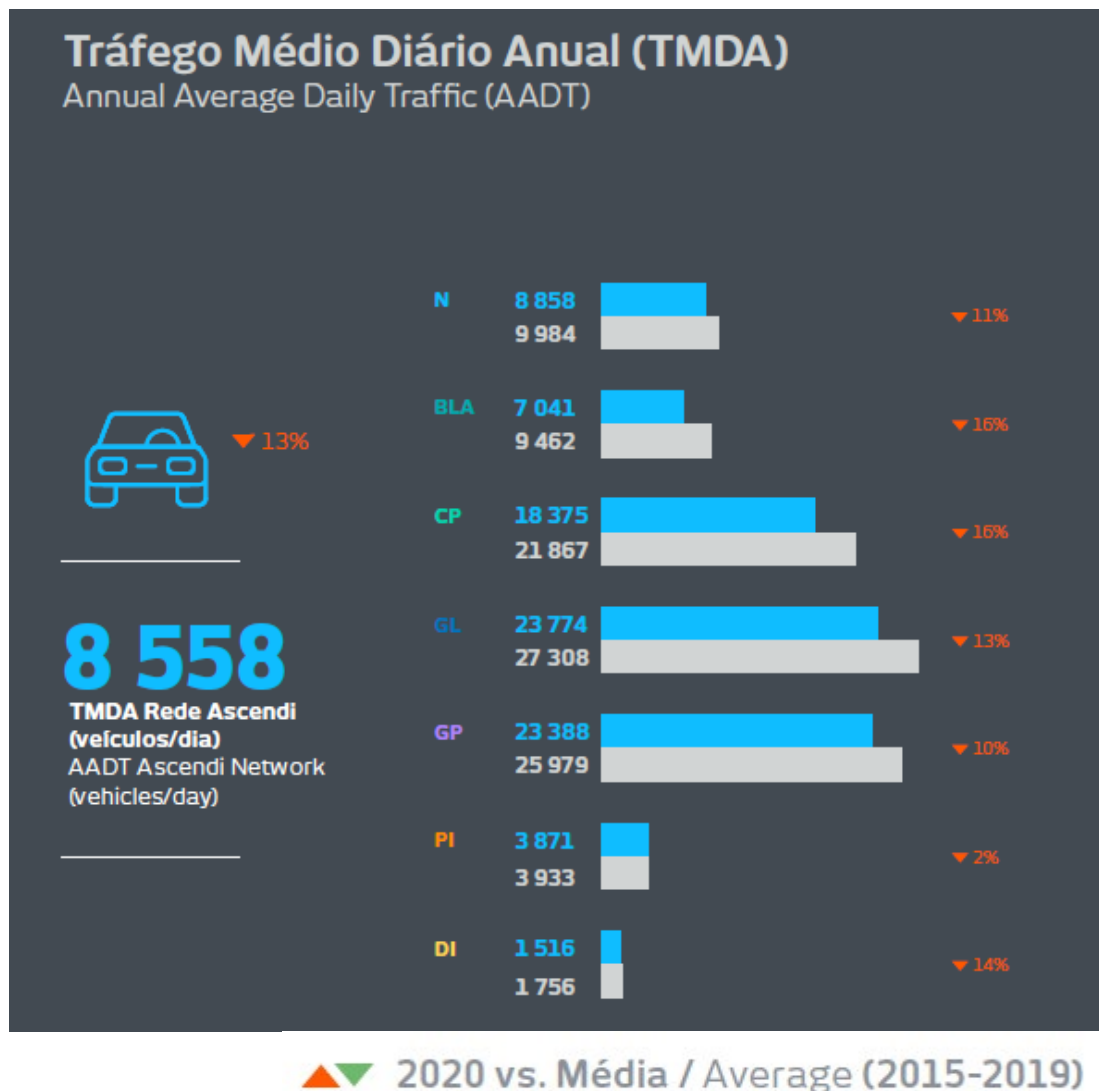
- Since 2018, Ascendi decided to produce and publicly disseminate its Road Safety Yearbook
- The yearbook intends to show the annual trends of road safety indicators, compare them with different years, and disclose the main road safety actions carried out by the company.





## ROAD SAFETY YEARBOOK

- The Ascendi's objective is to reduce the number of victims in its network (-5%/year).
- In 2020, 873 accidents were recorded on the network, of which 265 involved injuries:
  - 336 Slightly Injured
  - 26 Seriously Injured
  - 13 Fatalities
- Annual Average Daily Traffic (AADT) was 8.558 vehicles/day, a decrease of 21% compared to the previous year largely due to the covid-19 pandemic.



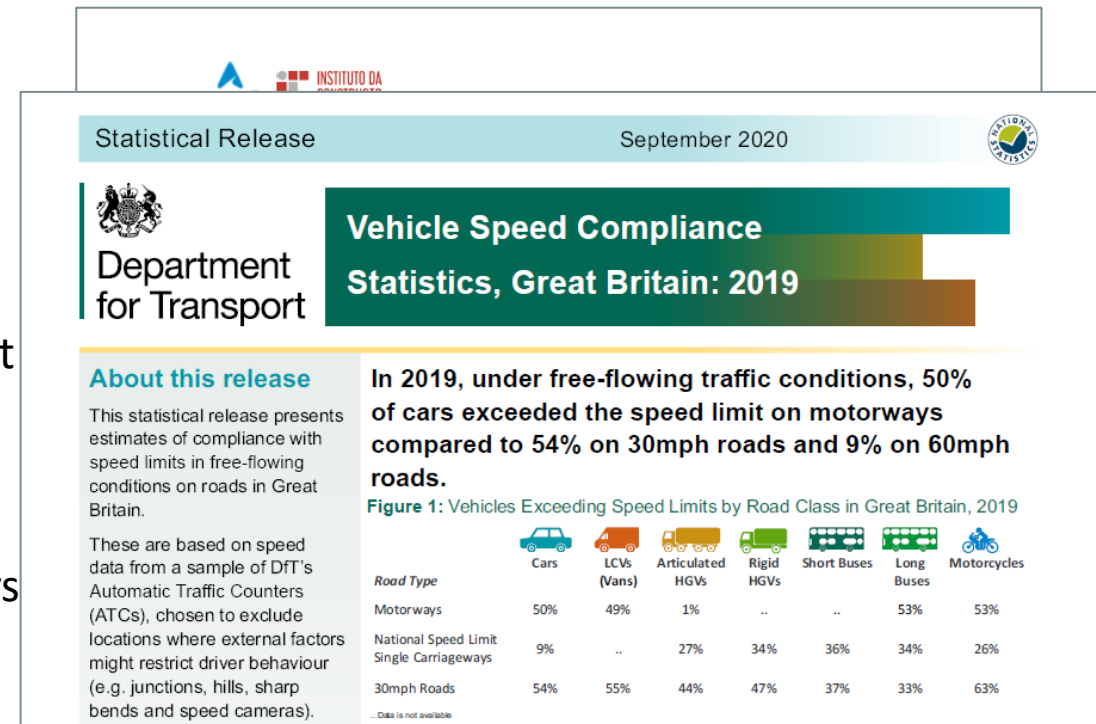
## ROAD SAFETY YEARBOOK

- The Road Traffic Injury Rate (RTIR) was 9,75 - below the value presented by APCAP (10,0).
- Run-off-road represent half of the accidents recorded in 2020, and 22% of the accident causes were assigned to the driver.
- Main Road Safety activities (qualitative information):
  - Development and implementation of the Ascendi's Safety Barrier Upgrading Program;
  - Development of risk mitigation studies;
  - Development, testing and certification an innovative safety barrier solution applied to viaducts and bridges;
  - Setting of the Road Safety GIS module and production of the monthly RS dashboards.



## SPEED YEARBOOK

- The Speed Yearbook aims to annually characterize the speed on Ascendi's network, namely by quantifying average speed and speeding.
- This yearbook was based on the UK Department for Transport (DoT) document "Vehicle Speed Compliance Statistics".
- The first edition was produced in 2021 and refers to 2020 data – Speed Yearbook 2020.
- The document analyzes the speed indicators for the network and also for the concessions and highways.



# SPEED YEARBOOK








- The Average Speed on the network in 2020 was 102,5 km/h and the average speeding reached 36%.
- Ascendi's motorway network has 107 active AVCs, corresponding to a coverage of about 38%.
- The PI concession was the one with the highest Average Speed (110,5 km/h), as well as speeding (49%) - corresponding to the A13 motorway.
- Speed limits range from 80 km/h to 120 km/h, and higher speeding is in zones where it is set to 100 and 90 km/h.

## Destaque 2020

## Limites de Velocidade

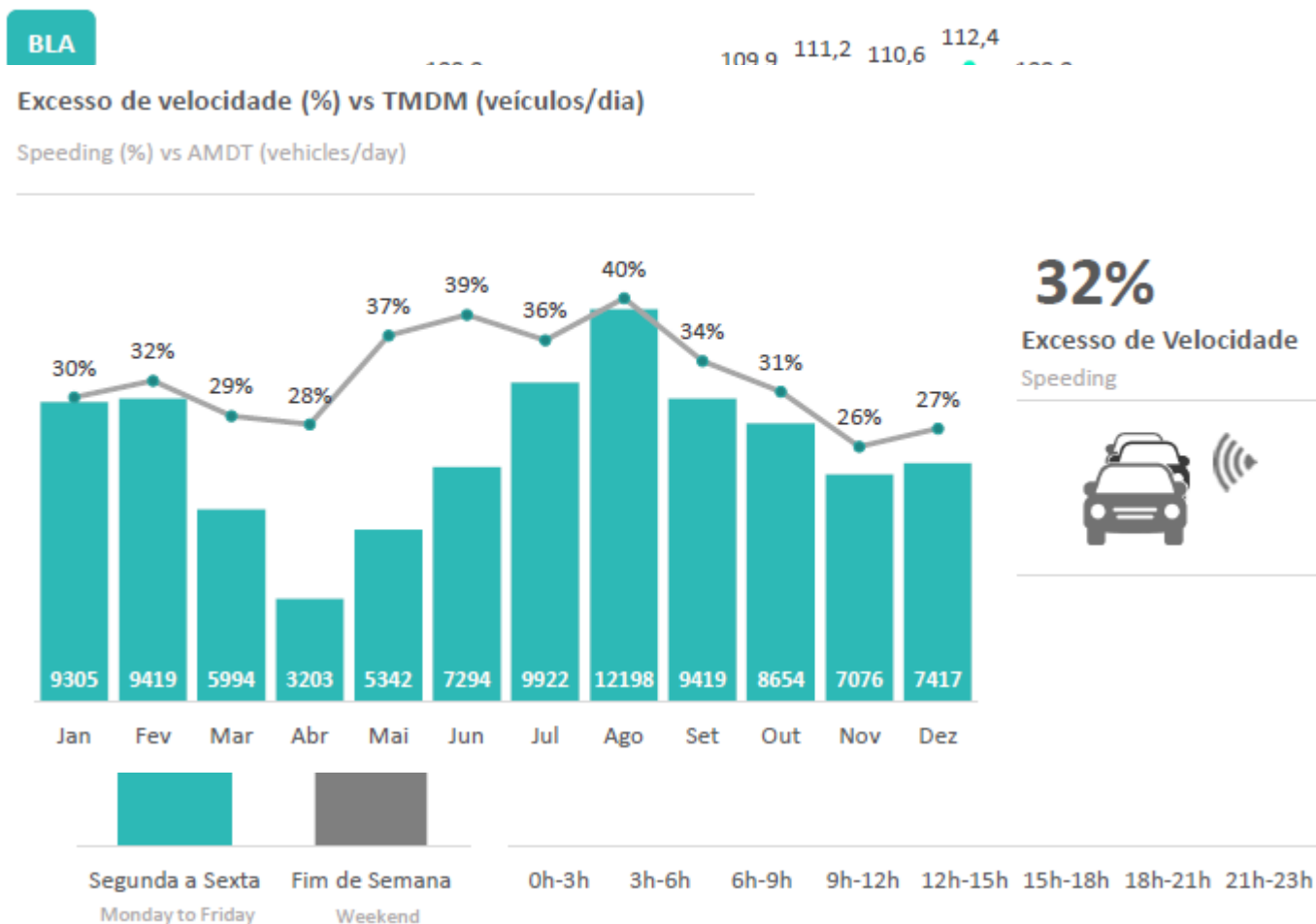
## Speed Limits



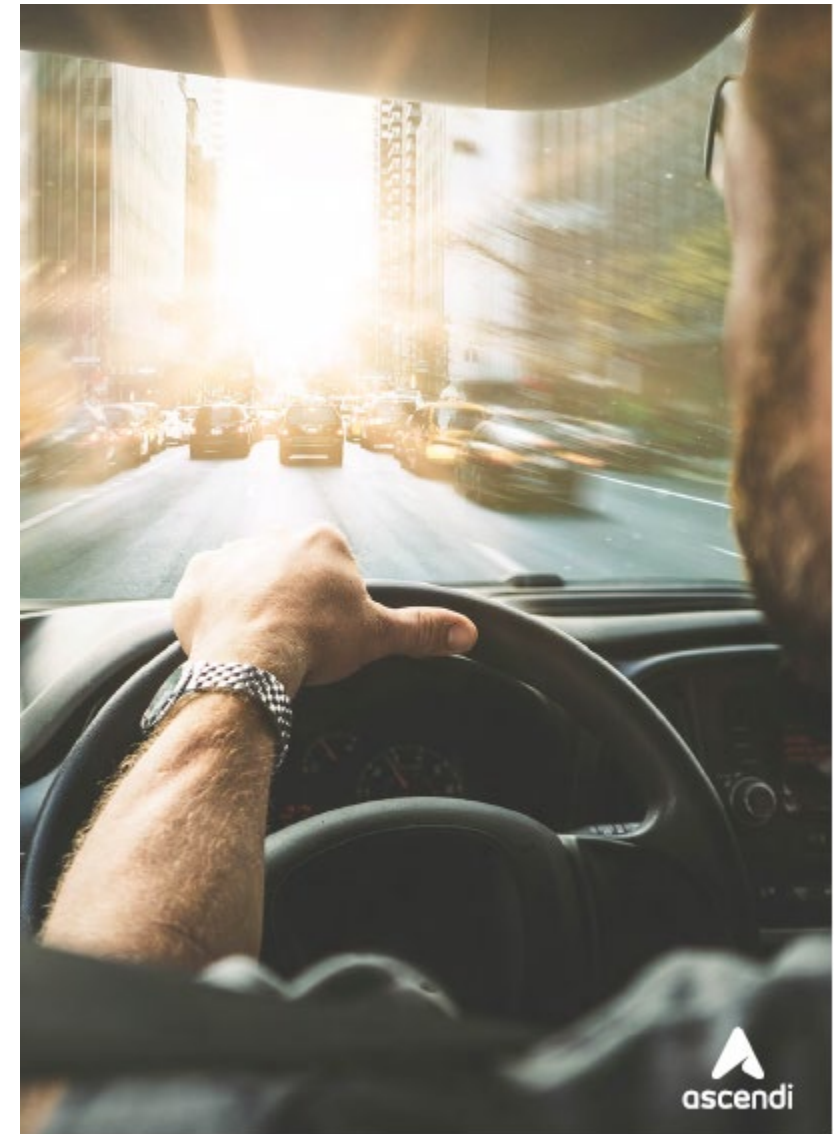
	 <b>Número de CAVs</b> Number of AVCs	 <b>Velocidade Média</b> Average Speed	 <b>Excesso de Velocidade</b> Speeding
	35 CAVs	110,3 km/h	32%
	38 CAVs	101,3 km/h	46%
	1 CAVs	72,6 km/h	32%
	3 CAVs	79,3 km/h	45%

## AS AN EXAMPLE OF ANALYSIS BY CONCESSION – BLA

- The BLA concession has 1 highway: A25 (Aveiro – Viseu).
- The Speed Limit vary between 100 and 120 km/ in some parts of the motorway.
- The average speed in 2020 was 108,4 km/h, with the highest records being on weekends.
- There was a drop in traffic in April (covid-19 lockdown) however, speeding suffered a slight decrease.



- Data-driven decisions are the (only?) way to consistently reduce road accidents.
- Therefore, collecting information and producing road safety indicators are a key instrument to any road operator.
- The public dissemination of this information is advantage because it quantifies the problem (both internally and externally) as also opens the way to improvements on:
  - Quality of data and indicators.
  - Compare and benchmark the best examples.
  - Setting the problem of road safety on an operator's strategic level.





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